

# Addendum No. 01



March 3, 2023

## Shields & Brawley Elementary School

Prepared By SIM-PBK Architects, Inc.; 7790 N. Palm Avenue; Fresno, California 93711

SIM-PBK Architects Project Number 17-67

### Notice to Bidders

- A. Receipt of this Addendum shall be acknowledged on the Proposal Form. Failure to acknowledge receipt of each addendum may subject bidder to disqualification.
- B. This Addendum forms part of the Contract Documents for the above referenced project and shall be incorporated integrally therewith.
- C. Each proposer shall make necessary adjustments and submit their proposal with full knowledge of all modifications, clarifications, and supplemental data included therein. Where provisions of the following supplemental data differ from those of the original Contract Documents, this Addendum shall govern.

### **GENERAL**

Item No. 1-01 **BUBBLES or CLOUDS and/or DELTA 1 TAGS**, indicates changes / revisions / modifications within the document, no changes to remaining of DSA approval set.

### **CLARIFICATIONS**

Item No. 1-02 All civil sheets that were not affected by addendum, **DELETE "PRELIMINARY NOT FOR CONSTRUCTION"** at lower-right corner of Drawing Sheet Title block.

Item No. 1-03 **REVISE ALL REFERENCES STATING GENERAL CONTRACTOR** to either Contractor or Prime Contractor or Construction Manager. Contact Kitchell Corporation if further clarification required.

### **SPECIFICATIONS**

Item No. 1-04 **00 01 01 TABLE OF CONTENTS**  
**REPLACE** in its entirety, see attached AD 1-04a

Item No. 1-05 **00 20 00 DIVISION 00 (Front-End), INSTRUCTIONS FOR PROCUREMENT**  
**REPLACE** in its entirety, see attached AD 1-05a.

Item No. 1-06 **00 31 32 GEOTECHNICAL ENGINEERING INVESTIGATION (Soils Report)**  
**ADDED** in its entirety, see attached AD 1-06a

Item No. 1-07 **00 72 00 GENERAL CONDITIONS for CONTRACT CONSTRUCTION**  
**ADDED** in its entirety, see attached AD 1-07a

Item No. 1-08 **01 10 00 SUMMARY, Part 1, 1.02, 1,; B, 1; C**  
**REPLACE** in its entirety, see attached AD 1-08a

Item No. 1-08.1 **01 10 00.13 CONSTRUCTION MANAGER's SUMMARY & BID PACKAGES**  
**ADD** in its entirety, see attached AD 1-08.1a

Item No. 1-08.2 **01 23 00 ALTERNATES**  
**REPLACE** in its entirety, see attached AD 1-08.2a

# Addendum No. 01



March 3, 2023

## Shields & Brawley Elementary School

- Item No. 1-09            **01 25 00 SUBSTITUTION PROCEDURES**  
**REPLACE** in its entirety, see attached AD 1-09a
- Item No. 1-10            **01 33 00 SUBMITTAL PROCEDURES**  
**REPLACE** in its entirety, see attached AD 1-10a
- Item No. 1-11            **01 57 23 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)**  
**ADDED** in its entirety, see attached AD 1-11a
- Item No. 1-12            **01 74 23 CLEANING, Part 1, 1.02, A**  
**REPLACE** in its entirety, see attached AD 1-12a
- Item No. 1-13            **05 73 00 DECORATIVE METAL RAILING, Part 2, A; Part 3, A, 1**  
**REPLACE** in its entirety, see attached AD 1-13a
- Item No. 1-14            **07 54 23 MEMBRANE ROOFING, Part 2, 2.04, C, 1 & 2**  
**REPLACE** in its entirety, see attached AD 1-14a
- Item No. 1-15            **08 80 00 GLASS AND GLAZING, Part 2, B, 2, b**  
**REPLACE** in its entirety, see attached AD 1-15a
- Item No. 1-16            **08 87 13 SOLAR CONTROL FILM**  
**ADDED** in its entirety, see attached AD 1-16a
- Item No. 1-17            **09 51 23 ACOUSTICAL WOOD FIBER PANELS, Part 2, 2.01, A & B**  
**REPLACE** in its entirety, see attached AD 1-17a
- Item No. 1-18            **09 67 00 EPOXY FLOORING**  
**CHANGE SECTION 09 96 56 to read 09 67 00.**  
**REPLACE** in its entirety, see attached AD 1-18a
- Item No. 1-19            **10 17 00 TOILET PARTITIONS - SOLID COLOR REINFORCED**  
**COMPOSITE, Part 2, 2.03, F**  
**REPLACE** in its entirety, see attached AD 1-19a
- Item No. 1-20            **10 44 13 FIRE EXTINGUISHERS AND CABINETS, Part 2, 2.03, A, 1 & 2**  
**REPLACE** in its entirety, see attached AD 1-20a
- Item No. 1-21            **10 50 00 METAL LOCKERS AND BENCHES, Part 2, 2.01, 1 & 2**  
**DELETE SECTION 10 51 00, ADDED SECTION 10 50 00.**  
**REPLACE** in its entirety, see attached AD 1-21a
- Item No. 1-22            **10 75 00 FLAG POLES, part 2, 2.01, B, 1, 2, 3, 4, 5; E, 1**  
**REPLACE** in its entirety, see attached AD1-22a



# Addendum No. 01



March 3, 2023

## Shields & Brawley Elementary School

- Item No. 1-23      **11 50 00 - MISCELLANEOUS SPECIALTIES, Part 2, 2.01, C**  
**REPLACE** in its entirety, see attached AD 1-23a
- Item No. 1-24      **12 24 13 ROLLER WINDOW SHADES**  
**DELETE** SECTION 12 21 16, **ADDED** SECTION 12 24 13  
**REPLACE** in its entirety, see attached AD 1-24a
- Item No. 1-25      **32 31 20 DECORATIVE GALVANIZED METAL FENCES AND GATES**  
**CHANGE** SECTION 32 31 19 to read 32 31 20.  
**REPLACE** in its entirety, see attached AD 1-25a
- Item No. 1-26      **32 84 00 PLANTING IRRIGATION**  
**REPLACE** in its entirety, see attached AD 1-26a
- Item No. 1-27      **32 84 13 IRRIGATION APPENDIX**  
**ADDED** in its entirety, see attached AD 1-27a
- Item No. 1-28      **32 93 00 PLANTS**  
**REPLACE** in its entirety, see attached AD 1-28a

### **DRAWINGS**

- Item No. 1-29      **Refer to PRE-BID BULLETIN 01**  
These sheets ARE NOT part of the DSA approved plans. The intent of these sheets are to help the contractor to identify their discipline simpler.  
**ADDED** see attached AD 1-29a; 1-29b; 1-29c; 1-29d
- Item No. 1-30      **SHEET C2.1, SITE PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-30a
- Item No. 1-31      **SHEET C2.2, SITE STRIPING AND SIGNAGE**  
**REPLACE** sheet in its entirety, see attached AD 1-31a
- Item No. 1-32      **SHEET C4.1, GRADING PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-32a
- Item No. 1-33      **SHEET C5.1, SITE PLUMBING PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-33a
- Item No. 1-34      **SHEET C5.2, STORM DRAIN PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-34a

# Addendum No. 01



March 3, 2023

## Shields & Brawley Elementary School

- Item No. 1-35      **OFF-SITE, CITY OF FRESNO PUBLIC WORKS PLANS, Curbs & Gutters**  
**ADDED** sheet in its entirety, see attached AD 1-35a, AD 1-35b, AD 1-35c, AD 1-35d, AD 1-35e.
- Item No. 1-36      **OFF-SITE, CITY OF FRESNO PUBLIC WORKS PLANS, Traffic & Street Lights**  
**ADDED** sheet in its entirety, see attached AD 1-36a, AD 1-36b. Plans not approved by local jurisdiction.
- Item No. 1-37      **OFF-SITE, CITY OF FRESNO PUBLIC WORKS PLANS, Landscape & Irrigation**  
**ADDED** sheet in its entirety, see attached AD 1-37a, AD 1-37b. Plans not approved by local jurisdiction.
- Item No. 1-38      **SHEET LS.1.0, OVERALL IRRIGATION PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-38a
- Item No. 1-39      **SHEET LS.2.0, OVERALL PLATING PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-39a
- Item No. 1-40      **SHEET LS.3.1, OVERALL IRRIGATION PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-40a
- Item No. 1-41      **SHEET LS.3.2, PARTIAL (NORTHEAST) IRRIGATION PLAN,**  
**REPLACE** sheet in its entirety, see attached AD 1-41a
- Item No. 1-42      **SHEET LS.4.1 PARTIAL (NORTHWEST) PLANTING PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-42a
- Item No. 1-43      **SHEET LS.4.2, PARTIAL (NORTHEAST) PLANTING PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-43a
- Item No. 1-44      **SHEET LS.5.1, IRRIGATION & PLANTING DETAILS**  
**REPLACE** sheet in its entirety, see attached AD 1-44a
- Item No. 1-45      **SHEET K1.0, FOODSERVICE EQUIPMENT FLOOR PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-45a
- Item No. 1-46      **SHEET K2.0, FOODSERVICE EQUIPMENT ELECTRICAL PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-46a
- Item No. 1-47      **SHEET K3.0, FOODSERVICE EQUIPMENT PLUMBING PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-47a

# Addendum No. 01



March 3, 2023

## Shields & Brawley Elementary School

- Item No. 1-48      **SHEET K4.0, FOODSERVICE EQUIPMENT BUILDING CONDITIONS, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-48a
- Item No. 1-49      **SHEET K5.0, FOODSERVICE EQUIPMENT PLUMBING PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-49a
- Item No. 1-50      **SHEET K5.1, FOODSERVICE EQUIPMENT PLUMBING PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-50a
- Item No. 1-51      **SHEET K6.0, FOODSERVICE EQUIPMENT PLUMBING PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-51a
- Item No. 1-52      **SHEET K6.1, FOODSERVICE EQUIPMENT ELEVATIONS, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-52a
- Item No. 1-53      **SHEET S2.4R FOUNDATION PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-53a
- Item No. 1-54      **SHEET S2.5R STAGE FRAMING PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-54a
- Item No. 1-55      **SHEET S5.4R LOW ROOF FRAMING PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 155a
- Item No. 1-56      **SHEET S5.5R HIGH ROOF FRAMING PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-56a
- Item No. 1-57      **SHEET S5.6R CEILING FRAMING PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-57a
- Item No. 1-58      **SHEET S6.1R BUILDING SECTIONS, MAIN BLDG**  
**REPLACE** sheet in its entirety, see attached AD 1-58a
- Item No. 1-59      **SHEET S6.2R BUILDING SECTIONS, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-59a
- Item No. 1-60      **SHEET S7.3R FRAMING ELEVATIONS, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-60a
- Item No. 1-61      **SHEET S8.7R FRAMING DETAILS**  
**REPLACE** sheet in its entirety, see attached AD 1-61a
- Item No. 1-62      **STRUCTURAL SUPPLEMENTAL CALCULATIONS**  
**ADDED** supplemental calculations pages due to Delta 1 changes, see attached AD 1-62a

# Addendum No. 01



March 3, 2023

## Shields & Brawley Elementary School

- Item No. 1-63      **SHEET FP4, FIRE SPRINKLER PIPING PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-63a
- Item No. 1-64      **SHEET FP7, FIRE SPRINKLER PIPING PLAN, 1ST FLOOR(WEST)**  
**REPLACE** sheet in its entirety, see attached AD 1-64
- Item No. 1-65      **SHEET FP8, FIRE SPRINKLER PIPING PLAN, 1ST FLOOR (EAST)**  
**REPLACE** sheet in its entirety, see attached AD 1-65a
- Item No. 1-66      **SHEET FP11, FIRE SPRINKLER PIPING PLAN, 2ND FLOOR(WEST)**  
**REPLACE** sheet in its entirety, see attached AD 1-66a
- Item No. 1-67      **SHEET FP12, FIRE SPRINKLER PIPING PLAN, 2ND FLOOR (EAST)**  
**REPLACE** sheet in its entirety, see attached AD 1-67a
- Item No. 1-68      **SHEET T1, COVER SHEET, BUILDING DATA OF WORK**  
**REPLACE** sheet in its entirety, see attached AD 1-68a
- Item No. 1-69      **SHEET T3, CODE ANALYSIS**  
**REPLACE** sheet in its entirety, see attached AD 1-69a
- Item No. 1-70      **SHEET T4, EXIT ANALYSIS**  
**REPLACE** sheet in its entirety, see attached AD 1-70a
- Item No. 1-71      **SHEET T5, EXIT ANALYSIS**  
**REPLACE** sheet in its entirety, see attached AD 1-71a
- Item No. 1-72      **SHEET A0.1, OVERALL SITE PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-72a
- Item No. 1-73      **SHEET A0.2, ENLARGED SITE PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-73a
- Item No. 1-74      **SHEET A0.3, ENLARGED SITE PLAN**  
**REPLACE** sheet in its entirety, see attached AD 1-74a
- Item No. 1-75      **SHEET A1.2, 1ST FLOOR PLAN, MAIN, (CENTER)**  
**REPLACE** sheet in its entirety, see attached AD 1-75a
- Item No. 1-76      **SHEET A1.3, 1ST FLOOR PLAN, MAIN, (WEST)**  
**REPLACE** sheet in its entirety, see attached AD 1-76a
- Item No. 1-77      **SHEET A1.12, FLOOR PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-77a

# Addendum No. 01



March 3, 2023

## Shields & Brawley Elementary School

- Item No. 1-78      **SHEET A1.13, ENLARGED RAMPS & PLATFORM PLANS, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-78a
  
- Item No. 1-79      **SHEET A2.2, DOOR SCHEDULE, MAIN, 1ST FLOOR**  
**REPLACE** sheet in its entirety, see attached AD 1-79a
  
- Item No. 1-80      **SHEET A2.3, WINDOW SCHEDULE, MAIN, 2ND FLOOR**  
**REPLACE** sheet in its entirety, see attached AD 1-80a
  
- Item No. 1-81      **SHEET A2.7, FINISH, DOOR AND WINDOW SCHEDULE, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-81a
  
- Item No. 1-82      **SHEET A3.2 REFLECTED CEILING PLAN, 1ST FLOOR, MAIN,**  
**(CENTER)**  
**REPLACE** sheet in its entirety, see attached AD 1-82a
  
- Item No. 1-83      **SHEET A3.3 REFLECTED CEILING PLAN, 2ND FLOOR, MAIN,**  
**(WEST)**  
**REPLACE** sheet in its entirety, see attached AD 1-83a
  
- Item No. 1-84      **SHEET A3.4 REFLECTED CEILING PLAN, 1ST FLOOR, MAIN, (WEST)**  
**REPLACE** sheet in its entirety, see attached AD 1-84a
  
- Item No. 1-85      **SHEET A3.5 REFLECTED CEILING PLAN, 2ND FLOOR, MAIN,**  
**(CENTER)**  
**REPLACE** sheet in its entirety, see attached AD 1-85a
  
- Item No. 1-86      **SHEET A3.6 REFLECTED CEILING PLAN, 2ND FLOOR, MAIN,**  
**(WEST)**  
**REPLACE** sheet in its entirety, see attached AD 1-86a
  
- Item No. 1-87      **SHEET A3.7, REFLECTED CEILING PLAN, MPR**  
**REPLACE** sheet in its entirety, see attached AD 1-87a
  
- Item No. 1-88      **SHEET A4.4, ROOF PLAN, 2ND FLOOR, MAIN (EAST)**  
**REPLACE** sheet in its entirety, see attached AD 1-88a
  
- Item No. 1-89      **SHEET A4.5, ROOF PLAN, 2ND FLOOR, MAIN (CENTER)**  
**REPLACE** sheet in its entirety, see attached AD 1-89a
  
- Item No. 1-90      **SHEET A4.6, ROOF PLAN, 2ND FLOOR, MAIN (WEST)**  
**REPLACE** sheet in its entirety, see attached AD 1-90a

# Addendum No. 01

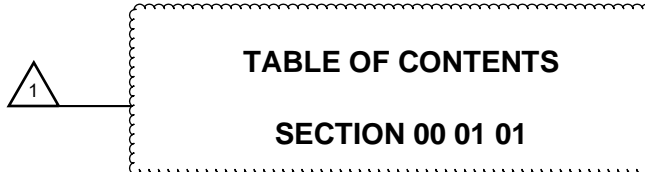


March 3, 2023

## Shields & Brawley Elementary School

- |               |  |
|---------------|--|
| Item No. 1-91 | <b>SHEET A4.7, ROOF PLAN, MPR</b><br><b>REPLACE</b> sheet in its entirety, see attached AD 1-91a                 |
| Item No. 1-92 | <b>SHEET A5.17, INTERIOR ELEVATIONS, MPR</b><br><b>REPLACE</b> sheet in its entirety, see attached AD 1-92a      |
| Item No. 1-93 | <b>SHEET A5.18, INTERIOR ELEVATIONS, MPR</b><br><b>REPLACE</b> sheet in its entirety, see attached AD 1-93a      |
| Item No. 1-94 | <b>SHEET A5.19, INTERIOR ELEVATIONS, MPR</b><br><b>REPLACE</b> sheet in its entirety, see attached AD 1-94a      |
| Item No. 1-95 | <b>SHEET A6.4, EXTERIOR ELEVATIONS, MPR</b><br><b>REPLACE</b> sheet in its entirety, see attached AD 1-95a       |
| Item No. 1-96 | <b>TRUCKING PLAN, CONSTRUCTION SITE DELIVERIES</b><br><b>ADDED</b> in its entirety, see attached AD 1-96a, 1-96b |

**END OF ADDENDUM**



Division	Section Title
----------	---------------

## **DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS**

**00 00 02**      *Table of Contents*

**00 10 00**      *Central Unified School District "Shields & Brawley Elementary School, Bid Packet with Notice Inviting Bids"*

**00 31 32**      *Geotechnical Data*

**00 72 00**      *General Conditions*

### **SPECIFICATIONS GROUP**

#### *General Requirements Subgroup*

## **DIVISION 01 GENERAL REQUIREMENTS**

**01 10 00**      **SUMMARY**

**01 10 00.13**      **CONSTRUCTION MANAGER'S SUMMARY and BID PACKAGES**

**01 23 00**      **ALTERNATES**

**01 25 00**      **SUBSTITUTION PROCEDURES**

01 29 73      SCHEDULE OF VALUES

01 31 19      PROJECT MEETINGS

01 32 00      CONSTRUCTION PROGRESS DOCUMENTATION

**01 33 00**      **SUBMITTAL PROCEDURES**

01 40 00      QUALITY REQUIREMENTS

01 50 00      TEMPORARY FACILITIES AND CONTROLS

**01 57 23**      **STORM WATER POLLUTION PREVENTION PLAN (SWPPP)**

**01 74 23**      **CLEANING**

01 77 01      GUARANTEE FORM

**01 91 00**      **COMMISSIONING**

#### *Facility Construction Subgroup*

## **DIVISION 02 EXISTING CONDITIONS**

02 30 00      SUBSURFACE INVESTIGATION

## **DIVISION 03 CONCRETE**

03 11 00      CONCRETE FORMING

03 20 00      CONCRETE REINFORCEMENT

**AD 1-04a  
S&B Elementary  
02-116800**

03 30 00 CAST-IN-PLACE CONCRETE  
 03 33 00 ARCHITECTURAL CONCRETE

**DIVISION 04 MASONARY**

04 22 00 CONCRETE UNIT MASONARY

**DIVISION 05 METALS**

05 12 00 STRUCTURAL STEEL FRAMING  
 05 31 00 STEEL DECKING  
 05 40 00 COLD-FORMED METAL FRAMING  
 05 50 00 METAL FABRICATIONS  
 05 52 00 METAL RAILINGS  
**05 73 00 DECORATIVE METAL RAILINGS**

**DIVISION 06 WOOD, PLASTICS, AND COMPOSITES**

06 10 00 ROUGH CARPENTRY  
 06 20 00 FINISH CARPENTRY  
 06 40 00 ARCHITECTURAL WOODWORK  
 06 41 16 LAMINATED PLASTIC CASEWORK

*Facility Construction Subgroup*

**DIVISION 7 THERMAL AND MOISTURE PROTECTION**

07 21 10 THERMAL BATT INSULATION  
 07 26 00 CONCRETE MOISTURE VAPOR EMISSION CONTROL  
 07 42 13 METAL WALL PANELS  
 07 42 13.23 METAL COMPOSITE MATERIAL WALL PANELS  
 07 52 00 MODIFIED BITUMINOUS SHEET ROOFING  
**07 54 23 MEMBRANE ROOFING**  
 07 62 00 SHEET METAL FLASHING AND TRIM  
 07 72 00 ROOF HATCH  
 07 72 36 SMOKE VENTS  
 07 84 13 PENETRATION FIRESTOPPING  
 07 90 00 JOINT PROTECTION

**DIVISION 8 DOORS AND WINDOWS**

08 11 13 HOLLOW METAL DOORS AND FRAMES  
 08 14 23.16 PLASTIC LAMINATE FACED WOOD DOORS  
 08 31 13 ACCESS DOORS AND FRAMES  
 08 33 20 OVERHEAD COILING COUNTER DOORS  
 08 51 13 ALUMINUM SERVING WINDOWS



<b><u>08 71 00</u></b>	<b>DOOR HARDWARE</b>
<b><u>08 80 00</u></b>	<b>GLASS AND GLAZING</b>
<b><u>08 87 13</u></b>	<b>SOLAR CONTROL FILM</b>

### **DIVISION 9 FINISHES**

09 22 36.23	METAL LATH
09 24 00	CEMENT PLASTERING
09 29 00	GYPSUM BOARD
09 30 00	TILING
09 51 13	ACOUSTICAL PANEL CIELINGS
<b><u>09 51 23</u></b>	<b>ACOUSTICAL WOOD FIBER PANELS</b>
09 64 66	WOOD ATHLETIC FLOORING
09 65 13	RESILIENT BASE AND ACCESSORIES
<b><u>09 67 00</u></b>	<b>EPOXY FLOOR COATING</b>
09 68 18	TILE CARPETING
09 72 00	PROTECTIVE WALL PANELS
09 77 20	DECORATIVE FIBERGLASS REINFORCED WALL PANELS
09 91 23	PAINTING

### **DIVISION 10 SPECIALTIES**

10 11 16	MARKERBOARDS
10 11 23	TACKBOARDS
10 12 00	TROPHY AND POSTER CASES
10 14 00	SIGNAGE
10 14 16	PLAQUES
<b><u>10 17 00</u></b>	<b>TOILET PARTITIONS – SOLID COLOR REINFORCED COMPOSITE</b>
10 21 23	CUBICLE CURTAINS AND TRACK
10 26 13	CORNER GUARDS
10 28 13.13	ELECTRIC HAND DRYERS
<b><u>10 44 13</u></b>	<b>FIRE EXTINGUISHERS AND CABINETS</b>
<b><u>10 51 00</u></b>	<b>HEAVY DUTY VENTILATED LOCKERS</b>
10 56 13	METAL STORAGE SHELVING
<b><u>10 75 00</u></b>	<b>FLAGPOLES</b>
10 80 00	TOILET AND BATH ACCESSORIES

### **DIVISION 11 EQUIPMENT**

11 06 20	STAGE CURTAINS
11 31 00	RESIDENTIAL APPLIANCES
<b><u>11 40 00</u></b>	<b>FOOD SERVICE EQUIPMENT</b>
11 41 27	WALK-IN COOLER AND FREEZER
<b><u>11 50 00</u></b>	<b>MISCELLANEOUS SPECIALTIES</b>
11 52 13.52	ELECTRIC PROJECTION SCREENS

### **DIVISION 12 FURNISHINGS**

**12 24 13 ROLLER WINDOW SHADES****DIVISION 14 CONVEYING SYSTEM**

14 24 00 HYDRAULIC ELEVATOR  
 14 42 00 WHEELCHAIR LIFTS

**DIVISION 21 FIRE SUPPRESSION**

21 00 00 GENERAL FIRE PROTECTION PROVISIONS  
 21 00 01 FIRE PROTECTION SYSTEM

**DIVISION 22 PLUMBING**

22 00 00 GENERAL PLUMBING PROVISIONS  
 22 00 01 PLUMBING

**DIVISION 23 HEATING, VENTILATING AND AIR CONDITIONING**

23 00 00 GENERAL MECHANICAL PROVISIONS  
 23 00 01 HEATING, VENTILATING AND AIR CONDITIONING

**DIVISION 26 ELECTRICAL**

26 00 00 ELECTRICAL  
 26 05 00 COMMON WORK RESULTS FOR ELECTRICAL  
 26 50 00 LIGHTING

**DIVISION 27 COMMUNICATIONS**

27 00 00 COMMUNICATIONS  
 27 10 00 STRUCTURED CABLING  
**27 41 00 MPR AUDIO-VIDEO SYSTEM**  
**27 42 00 CLASSROOM AV SYSTEM**  
**27 51 13 PAGING SYSTEMS**

**DIVISION 28 ELECTRONIC SAFETY AND SECURITY**

28 00 00 ELECTRONIC SAFETY AND SECURITY  
 28 16 00 INTRUSION DETECTION  
 28 31 00 FIRE DETECTION AND ALARM

***Site and Infrastructure Subgroup***

**DIVISION 31 EARTHWORK**

31 11 00	SITE CLEARING, STRIPPING AND GRUBBING
31 23 00	EARTHWORK
31 23 01	STORM WATER POLLUTION PREVENTION PLAN
31 23 16	TRENCHING, BACKFILL, AND COMPACTION

**DIVISION 32 SITE IMPROVEMENTS**

32 11 23	AGGREGATE BASE COURSES
32 12 16	ASPHALT PAVING, STRIPING, AND MARKINGS
32 16 13	SIDEWALKS, CURBS, GUTTERS, AND DRIVEWAYS
32 31 13	CHAIN LINK FENCES AND GATES
<b><u>32 31 20</u></b>	<b>DECORATIVE GALVANIZED METAL FENCES AND GATES</b>
<b><u>32 84 00</u></b>	<b>PLANTING IRRIGATION</b>
<b><u>32 84 13</u></b>	<b>PLANTING IRRIGATION APPENDIX</b>
<b><u>32 93 00</u></b>	<b>PLANTS</b>

**DIVISION 33 UTILITIES**

33 01 32	SEWER AND MANHOLE TESTING
33 05 13	MANHOLES AND STRUCTURES
33 05 16	UTILITY STRUCTURES
33 05 17	PRECAST CONCRETE VAULTS
33 12 13	WATER SERVICE CONNECTIONS
33 13 00	DISINFECTING WATER DISTRIBUTION SYSTEM
33 31 13	SANITARY SEWER PIPE
33 41 13	STORM DRAIN PIPING

**END OF SECTION**



**INSTRUCTIONS FOR PROCUREMENT**

**SECTION 00 20 00**

**CENTRAL UNIFIED SCHOOL  
DISTRICT**

**BID PACKAGE FOR**

**SHIELDS AND BRAWLEY ELEMENTARY SCHOOL**

Ketti Davis  
Superintendent

CENTRAL UNIFIED SCHOOL DISTRICT  
Fresno, California

**AD 1-05a  
S&B Elementary  
02-116800**



**CENTRAL UNIFIED SCHOOL DISTRICT****BIDDING PACKAGE TABLE OF CONTENTS**

## DESCRIPTION

1. Notice To Contractors
2. Instructions To Bidders
  
- 3. To be included with bid submittal**
  - a. Bid Proposal Form
  - b. Bid Security
  - c. Non-Collusion Affidavit
  - d. Iran Contracting Act Certification
  - e. Roof Project Certificate
  - f. Prime Bidder Certification of DVBE (and Good Faith Worksheet, if applicable)
  - g. List of Sub-Contractors
  - h. Job References
  - i. Insurance Rating Submittal Form
  - j. Student Safety Declaration
  - k. Sufficient Funds Declaration
  - l. Worker's Compensation Certification
  - m. Proof of Registration per Labor Code § 1725.5
  
- 4. To be submitted after bid by Low responsible contractor**
  - a. Payment and Performance Bonds
  - b. Drug Free Workplace Certification
  
5. Form of Contract
  
6. Addenda
  
7. General Conditions
  
8. Specifications
  
9. Drawings



## NOTICE TO CONTRACTORS

Notice is hereby given that **CENTRAL UNIFIED SCHOOL DISTRICT**, (hereinafter referred to as "Owner") will receive sealed bids prior to the date and time stated for the Bid Opening for construction of:

### **SHIELDS AND BRAWLEY ELEMENTARY SCHOOL**

as per drawings and specifications which may be obtained from the Owner's construction manager:

**Kitchell Corporation**  
 2344 Tulare Street, STE 102  
 Fresno, CA 93721  
 Attn: Luz Gonzalez  
 email: [lgonzalez@kitchell.com](mailto:lgonzalez@kitchell.com)



Upon receipt of the contract documents provide the following information:

1. Organization/Contact Person for each Prime Contractor
2. Mailing address or P.O. Box Number for each Prime Contractor
3. Phone Number for each Prime Contractor
4. Email for each Prime Contractor

Digital PDF Drawings and Specifications can also be obtained at Fresno Reprographics:

<https://www.fresnorepro.com/jobs/public>

**The project will be bid as multiple prime contracts according to the list below:**

Bid Form Bid	Bid Package	Contractor License
Package #	Description	Requirement (, = or)
SB 1	SITE WORK/UNDERGROUND UTILITIES	A or B
SB 2	GENERAL TRADES/BUILDING STRUCTURE	B
SB 3	ROOFING	C-39
SB 4	ELEVATOR	C-11
SB 5	FIRE PROTECTION	C-16
SB 6	PLUMBING	C-36
SB 7	MECHANICAL	C-20
SB 8	ELECTRICAL/LOW VOLTAGE	C-7/C-10
SB 9	LANDSCAPE & IRRIGATION	C-27
SB 10	SURVEYING/STAKING	PROFESSIONAL LAND SURVEYOR
SB 11	SWPPP	C-61/D64
SB 12	METAL/IRON FENCING, GATE & HANDRAILS	C-13

This contract is subject to prequalification pursuant to Public Contract Code section 20111.6.

**Mandatory Pre-Bid Conferences:**

**Bidders must attend at least one pre-bid conference in order to be eligible to submit a bid for this project.**

**Mandatory Pre-bid conferences will be held on: May 11, 2023 at 10:00AM, and May 17, 2023 at 10:00AM,** The project is located on the north west corner of the intersection of Shields & Brawley



Avenues in Fresno Ca. The address is: 4108 West Shields Avenue, Fresno, California 93722. We will meet on the 4000 block of Fountain Way (west of Brawley Avenue) in front of the site.

Time of completion for this project shall be **575 calendar days (per construction manager's bid schedule)** from the start of the project as established within the Owner's Notice to Proceed. All procurement, coordination, milestones, durations, activities, and sequences *for the bid packages* shall be performed as shown in the Construction Management Bid Schedule and Section 01320 of the specification and as modified by a monthly schedule update, if any.

All questions must be made in written form, and submitted to Kitchell Corporation, attention: **Luz Gonzalez** via email at [lgonzalez@kitchell.com](mailto:lgonzalez@kitchell.com) by no later than **May 23, 2023, at 2:00 p.m.**, -Contractor to confirm receipt of email. A response will not be provided to any late questions, or requests for explanation. All addenda and clarifications will be distributed at least 72 hours before the bid due date.

**Bids will be sealed and filed at the following address:**

**Central Unified School District**  
5652 W. Gettysburg  
Room: #4  
Fresno, CA 93722

on no later than **Tuesday, May 30, 2023, at 2:00 p.m.**, -on the clock designated by the Owner as the bid clock. No bids will be accepted after this time.

**Bids will be opened in public.**

Bids must be accompanied by a bidder's bond, cashier's check, or certified check for at least ten per cent (10%) of the amount of the base bid and made payable to the Owner, issued by an Admitted Surety (an insurance organization authorized by the Insurance Commissioner to transact business of insurance in the State of California during this calendar year), which shall be given as a guarantee that the bidder will enter into a contract if awarded the work and will be declared forfeited, paid to, or retained by the Owner as liquidated damages if the bidder refuses or neglects to enter into the contract provided by the Owner after being requested to do so.

This Contract is subject to prequalification pursuant to Public Contract Code section 20111.6. If a bidder is not prequalified to bid on the Contract, Owner will not accept the bid. Any subcontractors the bidder lists for work requiring **A or B License, C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, and C-46** licenses must have current pre-qualified status with the Owner. Contractors not currently prequalified by the Owner must submit the prequalification application to the Owner by the date specified in the application. Bidders may obtain the prequalification application from the Owner. The Owner's current approved contractor prequalification list is posted on the Central Unified School District Facilities Planning webpage.

The Contractor shall be required to satisfy the conditions set forth in the contract and Education Code section 45125.2 regarding fingerprinting requirements and student safety prior to permitting any contact with students. Upon award of the contract and before beginning work, the Contractor shall be required to provide a verification of compliance with the student safety provisions of the contract and Education Code section 45125.2.

The Owner will require the successful Bidder to achieve the minimum goal of 3% DVBE (Disabled Veteran Business Enterprises) established in the bidding documents or to provide acceptable evidence of good faith efforts to do so accompanying the bid.

The successful bidder will be required to furnish a Payment (Labor and Material) Bond in the amount of one hundred per cent (100%) of the contract price, and a Faithful Performance Bond in the amount of one hundred per cent (100%) of the contract price, said bonds to be secured from an Admitted Surety (an insurance organization authorized by the Insurance Commissioner to transact business of insurance in the State of California during this calendar year), and satisfactory to the Owner. The surety insurers must, unless otherwise agreed to by Owner in writing, at the time of issuance of the bonds, have a rating not lower than "A-" as rated by A.M. Best Company, Inc. or other independent rating companies. Owner reserves the right to approve or reject the surety insurers selected by the successful bidder and to require the successful bidder to obtain bonds from surety insurers satisfactory to the Owner. The bidder will be required to furnish insurance as set forth in the Contract Documents.

The successful bidder will be allowed to substitute securities or establish an escrow in lieu of retainage, pursuant to Public Contract Code Section 22300, and as described in the General Conditions.

The Owner will not consider or accept any bids from contractors who are not licensed to do business in the State of California, in accordance with the California Public Contract Code, providing for the licensing of contractors. In accordance with Section 3300 of said Code, the Contractor shall have a license classification as described in the MULTIPLE PRIME CONTRACT SCHEDULE.

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. Bidder shall state the public works contractor registration number on the designation of subcontractors form for each subcontractor performing more than one-half of one percent (0.5%) of the bidder's total bid. No bid will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a Contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project. In bidding on this project, it shall be the Bidder's sole responsibility to evaluate and include the cost of complying with all labor compliance requirements under this contract and applicable law in its bid.

The lowest bid shall be determined as follows: The lowest total of the prime bid on the base contract and the bids on all additive items and all deductive items. (Public Contract Code section 20103.8, subd. (b).) The District reserves the right to add or deduct any of the additive or deductive items from the project or contract after the lowest responsible and responsive bidder is determined.

The Director of the Department of Industrial Relations of the State of California, in the manner provided by law, has ascertained the general prevailing rate per diem wages and rate for legal holidays and overtime work as set forth in the Agreement. The Contractor must pay for any labor therein described or classified in an amount not less than rates specified. Copies of the required rates are on file at the Owner's business office and are available to any interested party on request.

The Owner reserves the right to waive any irregularity and to reject any or all bids. Unless otherwise required by law, no bidder may withdraw its bid for a period of 60 days after date set for the opening thereof.

Dated: May 5, 2023

Advertise: May 5, 2023  
May 16, 2023

Authorized by: John Rodriguez  
Director, Facilities Planning

**INSTRUCTIONS TO BIDDERS****SECURING DOCUMENTS:**

Drawings and Specifications are available at:

**Kitchell Corporation**  
2344 Tulare Street, STE 101  
Fresno, CA 93721  
Attn: Luz Gonzalez  
lgonzalez@kitchell.com

Digital PDF Drawings and Specifications can also be obtained at Fresno Reprographics:

<https://www.fresnorepro.com/jobs/public>

**PRE-BID CONFERENCES:**

***Bidders must attend at least one pre-bid conference in order to be eligible to submit a bid for this project.***

**Mandatory Pre-bid conferences will be held on: May 11, 2023 at 10:00AM, and May 17, 2023 at 10:00AM.** The project is located on the north west corner of the intersection of Shields & Brawley Avenues in Fresno Ca. The address is: 4108 West Shields Avenue, Fresno, California 93722. We will meet on the 4000 block of Fountain Way (west of Brawley Avenue) in front of the site.

Time of completion for this project shall be **575 calendar days (per construction manager's bid schedule)** from the start of the project as established within the Owner's Notice to Proceed. All procurement, coordination, milestones, durations, activities, and sequences *for the bid packages* shall be performed as shown in the Construction Management Bid Schedule and Section 01320 of the specification and as modified by a monthly schedule update, if any.

**PREQUALIFICATION:**

This Contract is subject to prequalification pursuant to Public Contract Code section 20111.6. If a bidder is not prequalified to bid on the Contract, Owner will not accept the bid. Any subcontractors the bidder lists for work requiring **A or B License, C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, and C-46** licenses must have current pre-qualified status with the Owner. Contractors not currently prequalified by the Owner must submit the prequalification application to the Owner by the date specified in the application. Bidders may obtain the prequalification application from the Owner. The Owner's current approved contractor prequalification list is posted on the Central Unified School District Facilities Planning webpage.

**REGISTRATION:**

For all projects over Twenty-Five Thousand Dollars (\$25,000), the Owner shall not accept any bid or enter into any contract without proof of the bidder's current registration to perform public work under Labor Code section 1725.5.

For all projects over Twenty-five Thousand Dollars (\$25,000), the bidder shall not accept any subbid or enter into any subcontract without proof of the subcontractor's current registration to perform public work under Labor Code section 1725.5.

**BID PROPOSALS:**

Bid proposals to receive consideration shall be made in accordance with the following instructions:

1. Bid proposals shall be made on a form therefor, obtained from the Construction Manager or Architect or Owner. Bids not made on the proper form shall be disregarded. Numbers must be stated in words and figures, and the signatures of all individuals must be in longhand. The completed form should be without interlineation, alterations, or erasures.
2. No bid proposal will be considered which makes exceptions, changes, or in any manner makes reservations to the terms of the drawings or specifications, except that explanations or alternate proposals may be made on a separate sheet attached to the bid form. They will not, however, be considered in determining low bid.

3. Questions regarding documents, discrepancies, omissions, or doubt as to meanings shall be referred immediately to the Architect who will send written instructions clarifying such questions to each bidder.
4. Each bid must give the full business address of the bidder, and the name of each person signing shall also be typed or printed below the signature. Bids by individuals must be signed by the individual. Bids by partnerships must furnish the full names of all partners and must be signed in the partnership name by one of the partners, or by an authorized representative, followed by the signature and designation of the person signing. Bid by corporations must be signed with the legal name of the corporation, followed by the name of the state of incorporation and by the signature and designation of the president, secretary, or other person authorized to bind the corporation in the matter. Satisfactory evidence of the authority of the officer signing on behalf of a corporation shall be attached.
5. Pursuant to the provisions of Sections 4100 to 4114, inclusive, of the Public Contract Code of the State of California, which are hereby incorporated and made a part hereof, every bidder shall set forth in its bid:
  - A. The name and location of the place of business of each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the work or improvement, or a subcontractor licensed by the State of California who, under subcontract to the bidder, specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the plans and specifications, in an amount in excess of one-half (1/2) of one percent (1%) of the bidder's total bid.
  - B. The portion of the work which will be done by each such subcontractor. If the bidder fails to specify a subcontractor for any portion of the work to be performed under the contract in excess of one-half (1/2) of one percent (1%) of the bidder's total bid, the bidder agrees to perform that portion itself. The successful bidder shall not, without the consent of the Owner:
    - 1) Substitute any person as subcontractor in place of the subcontractor designated in the original bid.
    - 2) Permit any subcontract to be assigned or transferred or allow it to be performed by anyone other than the original subcontractor listed in the bid.
    - 3) Sublet or subcontract any portion of the work in excess of one-half (1/2) of one percent (1%) of the total bid as to which the original bid did not designate a subcontractor.
6. The Director of the Department of Industrial Relations of the State of California, in the manner provided by law, has ascertained the general prevailing rate of per diem wages and rate for legal holidays and overtime work as set forth in Article IX of the Agreement. The Contractor must pay for any labor therein described or classified in an amount not less than the rates specified. Copies of the required rates are on file at the Owner's business office and are available to any interested party on request.

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to bid on, be listed in a bid proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. No bid will be accepted, nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a Contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project. To this end, Bidder shall sign and submit with its Bid the Public Works Contractor Registration Certification on the form provided, attesting to the facts contained therein. Failure to submit this form may render the Bid non-responsive. In addition, each Bidder shall provide the registration number for each listed subcontractor in the space provided in the Designation of Subcontractors Form.
7. All proposals must be accompanied by a completed Non-Collusion Declaration. The bidder must certify that the Bid is genuine and is not sham or collusive, or made in the interest of or on behalf of any bidder not named in the bid, and that the bidder has not directly or indirectly induced or solicited any other bidder to put in a sham bid, or any other possible bidder to refrain from bidding, and that the bidder has not in any manner sought by collusion to secure for itself an advantage over any other bidder.
8. Proposals must be accompanied by a certified check, cashier's check, or bidder's bond, for an amount not less than ten percent (10%) of the amount of the base bid, made payable to the order of the Owner. If a bidder's bond accompanies the proposal, said bond shall be secured by an Admitted Surety (an insurance organization authorized by the Insurance Commissioner to transact business of insurance in the State of California during this calendar year) and satisfactory to the Owner. Said check or bond shall be given as a guarantee that the bidder will enter into the contract if awarded the work, and in case of refusal or failure to enter into said contract, the check or bond, as the case may be, shall be payable to the Owner and retained as liquidated damages.

9. Proposals shall be sealed and filed as indicated in the Notice to Contractors. Note regarding facsimiles: EXCEPT FOR BID SECURITY, all submitted before the bid opening documents may be in the form of facsimiles which have been sent elsewhere and sealed before filing with the Owner. (Any bidder who uses or attempts to use the Owner's facsimile equipment will be disqualified immediately.) The originals of the faxed documents must be mailed to the Owner, postmarked the same as the bid opening, via certified mail, return receipt requested, or hand-delivered to the Owner before 2:00 p.m. on the day of the bid opening.

Facsimiles of the bid security are not acceptable – the original of the check or bond must be submitted before the bid opening.

**10. THIS CONTRACT IS SUBJECT TO THE DVBE REQUIREMENTS OF EDUCATION CODE SECTION 17076.11.**

11. Bidders shall possess a valid California Contractors License as listed in the Notice to Bidders. A General Building Contractors License (B) shall be acceptable in accordance with the California Business and Professional Code Section 7057, paragraph (b): A general building contractor may take a prime contract or a subcontract for framing or carpentry project. However, a general building contractor shall not take a prime contract for any project involving trades other than framing or carpentry unless the prime contract requires at least two unrelated building trades or crafts other than framing or carpentry, or unless the general building contractor holds the appropriate specialty license or subcontracts with an appropriately licensed specialty contractor to perform the work. Owner reserves the right to reject any bid as nonresponsive if a listed subcontractor is not licensed at the time the bidder's bid is submitted to Owner, whether or not the bidder listed the unlicensed subcontractor inadvertently. Owner reserves the right to reject any bid as nonresponsive if a listed subcontractor is not licensed to perform the work for which it is listed at the time the bidder's bid is submitted to Owner, whether or not the bidder listed the subcontractor for that particular work inadvertently

**WITHDRAWAL OF PROPOSALS:**

Proposals may be withdrawn by the bidder prior to the time and date fixed for the submittal of bids. A successful bidder shall not be relieved of the bid unless by consent of the Owner or bidder's recourse to Public Contract Code § 5100 et seq.

Unless otherwise required by law, no bidder may withdraw its bid for a period of sixty (60) days after the date set for the opening thereof or any extension thereof. The owner reserves the right to take more than sixty (60) days to make a decision regarding rejection of the bid or award of the Contract.

**OPENING OF PROPOSALS:**

Opening of proposals shall be as soon after the hour set as will be possible; opening and declaration to be as set forth in the Notice to Contractors. Any and all bidders will be permitted to attend.

**EXAMINATION OF CONTRACT DOCUMENTS AND SITE:**

Before submitting a proposal, bidders shall examine the drawings, read the specifications, the form of contract, and other contract documents. They shall visit the site of the proposed work to the extent required in the Pre-Bid Conferences sections of this Instructions to Bidders. They shall fully inform themselves of all conditions, in, at, and about the site, the building or buildings, if any, and any work that may have been done thereon.

Pursuant to Public Contract Code section 1104: 1) bidders shall not be required to assume responsibility for the completeness and accuracy of architectural or engineering plans and specifications, except on clearly designated design build projects; 2) however, bidders shall be required to review architectural or engineering plans and specifications prior to submission of their bids and to report any errors and omissions to the Architect or Owner; and 3) the review shall be confined to the bidder's capacity as a bidder and not as a licensed design professional.

**FORM OF CONTRACT:**

The form of contract which the successful bidder will be required to execute, if awarded the work, is attached hereto, and is made a part hereof.

**ADDENDA OR BULLETINS:**

Any addenda or bulletins, issued during the time of bidding, shall form a part of the drawings and specifications loaned to the bidder for the preparation of its proposal, shall be covered in the proposal, and shall be made a part of the Contract Documents. All addenda or bulletins shall be signed by the Architect and approved by the Division of State Architect.

**HEALTH SCREENING:**

During the Work, the Contractor shall ensure that all Work, including but not limited to Work performed by Subcontractors, is performed in compliance with all applicable legal, contractual, and local government requirements related to pandemics, including "social distancing," masks, and hygiene as may be ordered by the State or local authorities and as may be directed in the Contract Documents.

**RUSSIA: COMPLIANCE WITH IMPOSED ECONOMIC SANCTIONS**

On March 4, 2022, Governor Gavin Newsom issued Executive Order N-6-22 (EO) regarding sanctions in response to Russian aggression in Ukraine. The EO is located at <https://www.gov.ca.gov/wp-content/uploads/2022/03/3.4.22-Russia-Ukraine-Executive-Order.pdf>. Contract shall comply with the economic sanctions imposed in response to Russia's actions in Ukraine, including with respect to, but not limited to, the federal executive orders identified in the EO and the sanctions identified on the U.S. Department of the Treasury website (<https://home.treasury.gov/policy-issues/financial-sanctions/sanctions-programs-and-country-information/ukraine-russia-related-sanctions>). Failure to comply may result in the termination of the Contract.

**EVIDENCE OF RESPONSIBILITY:**

Upon the request of Owner, a bidder shall submit promptly to the Owner or its designee satisfactory evidence showing the bidder's financial resources, the bidder's experience in the type of work required by the Owner, the bidder's organization available for the performance of the Contract, and any other required evidence of the bidder's or its subcontractor's qualifications to perform the proposed Contract. The Owner may consider such evidence before making its decision awarding the proposed Contract. Failure to submit evidence of the bidder's or its subcontractors' responsibility to perform the proposed Contract may result in rejection of the bid.

**AWARD OF CONTRACT:**

Rejection of any or all proposals, to contract work with whomever and in whatever manner, to abandon work entirely, and/or to waive any informality in receiving of bids is reserved as the right of the Owner. Before the contract or contracts are awarded, the Owner may at its sole discretion require from the proposed Contractor on each project further evidence of the reasonable qualifications of such contractor to faithfully, capably, and reasonably perform such proposed contract and may consider such evidence before making its decision on the award of such proposed contract.

The lowest bid shall be determined as follows: The lowest total of the prime bid on the base contract and the bids on all additive items and all deductive items. The District reserves the right to add or deduct any of the additive or deductive items from the project or contract after the lowest responsible and responsive bidder is determined.

The contract shall be awarded to the lowest and most responsible bidder as interpreted by the Owner and specified herein and shall be entered into by the successful bidder within ten (10) days after being notified by the Owner. Identity of lowest bidder will be determined by adding to or subtracting from the base bid the cost of such alternatives as Owner decides to include in the work and contract. The award, if made, will be made within approximately sixty (60) days after the opening of proposals.

**EXECUTION OF CONTRACT:**

The Contract shall be signed by the successful bidder in as many originals as the Owner deems necessary and returned, together with the contract bonds and insurance certificates, within ten (10) days after the bidder has received notice that the contract has been awarded.

**CONTRACT BONDS:**

Two bonds, as itemized below and in the forms presented in these contract documents, shall be furnished by the successful bidder at the time of entering into the contract and filed with the Owner. They shall be in the form of surety bonds issued

by an Admitted Surety (an insurance organization authorized by the Insurance Commissioner to transact business of insurance in the State of California during this calendar year) and satisfactory to the Owner.

**Performance Bond** in the amount of one hundred percent (100%) of the contract sum to insure Owner during construction and for one year after completion against faulty or improper materials or workmanship and to assure Owner of full and prompt performance of the contract.

**Payment Bond** (Labor and Material) in the amount of one hundred percent (100%) of the contract sum in accordance with the laws of the State of California to secure payment of any and all claims for labor and materials used or consumed in performance of this contract.

#### **SUBSTITUTION OF MATERIALS:**

All materials are mentioned as standards. Should a Contractor desire to substitute materials or methods for those specified, the Contractor shall follow the guidelines stated herein, and in accordance with Section 01-640. Each review of a substitution request by the Architect or its consultants will be billed to the Contractor at an hourly rate as indicated in Section 01-640.

Substitutions. The Contractor must insure that proposed substitutions of materials by the Contractor or its subcontractors are submitted to the Architect's office a **minimum of seven (7) calendar days** prior to the Bid Opening for review and possible approval of any equipment or materials thought to be equal to or better than those specified in the drawings or specifications. An Addendum will be issued 72 hours prior to Bid Opening including all equipment and materials deemed equivalent to those specified and approved by the Architect. Submittals must include comparative spec-data of that specified equipment or material and the proposed substitution as indicated on the completed "Substitution Request Form" in accordance with Section 01-640. Submittals without this information will be automatically rejected.

#### **PAYMENTS:**

Payments to the Contractor on account of the contract shall be made in accordance with the terms of the contract.

#### **TAXES:**

The Owner is exempt from payment of Federal Excise Tax on materials. Upon request and within five (5) business days or confirmed receipt, the Owner will furnish exemption certificates to the Contractor to be used to obtain materials ordinarily subject to Federal Excise Tax without payment of the tax. Bidders shall deduct Federal Excise Taxes from their bid prices before submitting bids, so that such taxes will not be included in the Contract Sum.

#### **EARLY TERMINATION:**

Notwithstanding any provision herein to the contrary, if for any fiscal year of this Contract the governing body of the Owner fails to appropriate or allocate funds for future periodic payments under the Contract after exercising reasonable efforts to do so, the Owner may upon thirty (30) days' notice, order work on the Project to cease. The Owner will remain obligated to pay for the work already performed but shall not be obligated to pay the balance remaining unpaid beyond the fiscal period for which funds have been appropriated or allocated and for which the work has not been done.

#### **TIME OF COMPLETION AND LIQUIDATED DAMAGES:**

Time of completion for this project shall be **575 calendar days (per construction manager's bid schedule)** from the start of the project as established within the Owner's Notice to Proceed. All procurement, coordination, milestones, durations, activities, and sequences *for the bid packages* shall be performed as shown in the Construction Management Bid Schedule and Section 01320 of the specification and as modified by a monthly schedule update, if any.

Should said work not be completed within the time limit as may be extended as herein provided, damages will be sustained by the Owner. It is understood and agreed that it is and will be impracticable or extremely difficult to determine the actual amount of damages which the Owner will sustain in the event of and by reason of such delay, and it is therefore agreed that the Contractor will pay the Owner the sum of **Seven Hundred Fifty (\$750.00) Dollars per calendar day** for each and every day's delay beyond the time specified as and for liquidated damages; in case the Contractor fails to make such payment, the Owner may deduct the amount thereof from any money due or that may become due the Contractor under the contract. Should such money not be sufficient to cover the agreed liquidated damages, the Owner shall have the right to

recover the balance from the Contractor or his sureties. The Contractor shall be required to satisfy the conditions set forth in the contract and Education Code section 45125.2 regarding fingerprinting requirements and student safety prior to permitting any contact with students. Upon award of the contract and before beginning work, the Contractor shall be required to provide a verification of compliance with the student safety provisions of the contract and Education Code section 45125.2.

Upon award of the bid, require signature on the enclosed declaration to ensure compliance with the general Conditions and the Education Code.

***END OF SECTION***  
***REV. 3.97 (8.98)***



**BID PROPOSAL FORM**

Date \_\_\_\_\_, 2023

Company Name \_\_\_\_\_

Bid Package Number and Title \_\_\_\_\_

**CENTRAL UNIFIED  
SCHOOL DISTRICT  
5652 W. GETTYSBURG  
FRESNO, CALIFORNIA 93722**

The undersigned doing business under the firm name of \_\_\_\_\_ hereby propose and agree to enter into an agreement, to furnish any and all labor, materials, equipment, and services for the completion of work described hereinafter and in the contract documents entitled construction of:

**SHIELDS AND BRAWLEY ELEMENTARY SCHOOL**

for the sum(s) quoted below.

**Base Bid** \_\_\_\_\_

**Dollars \$** \_\_\_\_\_

*In addition to the above base bid, the undersigned bidder proposes and agrees to perform the Contract with the following alternate scope(s) of work for the listed price adjustment(s):*

**[MUST FILL-OUT DUE TO DEDUCTIVE ALTERNATES ARE NOT INCLUDED IN BID DOCUMENTS]**

**DEDUCTIVE ALTERNATE ITEM NO. 1:** \_\_\_\_\_ *for the sum of \$* \_\_\_\_\_.

**TOTAL BID \$** \_\_\_\_\_ *[sum of Base Bid and Deductive Alternate Item(s), if any]*

If written notice of the acceptance of this bid is mailed, telegraphed, or delivered to the undersigned within sixty (60) days after the date of opening of the bids, or any time thereafter before this bid is withdrawn, the undersigned will, within ten (10) days after the date of such mailing, telegraphing, or delivering of such notice, execute and deliver a contract in the form of agreement present in these contract documents and give Performance and Payment Bonds in accordance with the specifications and bid as accepted.

The undersigned hereby designates as the office to which such notice of acceptance may be mailed, telegraphed, or delivered:

\_\_\_\_\_  
\_\_\_\_\_

Our Public Liability and Property Damage Insurance is placed with:

---

---

Our Workers' Compensation Insurance is placed with:

---

---

The following must be completed without exception:

1. Name of Foreman / Superintendent for this Project \_\_\_\_\_
2. Acknowledge receipt and review of full set of bid documents \_\_\_\_\_ (Initial)
3. Crewing for this Project - Minimum Crew \_\_\_\_\_ Maximum Crew \_\_\_\_\_
4. Summary of Work has been reviewed and is included \_\_\_\_\_ (Initial)
5. Bid Schedule has been reviewed and accepted \_\_\_\_\_ (Initial)
6. The following items are attached to this bid form
  - a. Bid Bond \_\_\_\_\_ (Initial)
  - b. Non-Collusion Affidavit \_\_\_\_\_ (Initial)
  - c. Iran Contracting Act Certification \_\_\_\_\_ (Initial)
  - d. Roof Project Certificate \_\_\_\_\_ (Initial)
  - e. Prime Bidder Certification of DVBE \_\_\_\_\_ (Initial)
  - f. Subcontractor Listing \_\_\_\_\_ (Initial)
  - g. Job References \_\_\_\_\_ (Initial)
  - h. Insurance Rating Submittal form \_\_\_\_\_ (Initial)
  - i. Student Safety Declaration \_\_\_\_\_ (Initial)
  - j. Sufficient Funds Declaration \_\_\_\_\_ (Initial)
  - k. Worker's Compensation Certification \_\_\_\_\_ (Initial)
  - l. Proof of Registration per Labor Code § 1725.5 \_\_\_\_\_ (Initial)
  - m. Bid Packages/Scope of Work \_\_\_\_\_ (Initial)
7. Proper Prevailing wages included in this bid \_\_\_\_\_ (Initial)  
\*2015-2024 requirements for Certified Payroll Reporting is acknowledged.



Circular letters, bulletins, addenda, etc., bound with specifications or issued during the time of bidding are included in the proposal, and, in completing the contract, they are to become part thereof.

The receipt of the following addenda to the specifications is acknowledged:

Addendum No. _____ Dated: _____	Addendum No. _____ Dated: _____
Addendum No. _____ Dated: _____	Addendum No. _____ Dated: _____
Addendum No. _____ Dated: _____	Addendum No. _____ Dated: _____

**Note: Any exclusion to the scope of work or items noted in this bid form will be considered as cause to deem this bid non-responsive.**

This bid may be withdrawn at any time prior to the scheduled time for the opening of bids or any authorized postponement thereof.

NOTE: Each bid must give the full business address of the bidder and be signed by him with his usual signature. Bids by partnerships must furnish the full name of all partners and must be signed by one of the members of the partnership, or by an authorized representative, followed by the signature and designation of the person signing. Bid by corporations must be signed with the legal name of the corporation, followed by the name of the state of incorporation and by the signature and designation of the president, secretary, or other person authorized to bind it in the matter. The name of each person signing shall also be typed or printed below the signature. Satisfactory evidence of the authority of the officer signing on behalf of a corporation shall be furnished.

Dated \_\_\_\_\_, 2023

Signed \_\_\_\_\_

Print or Type Name \_\_\_\_\_

Business Address \_\_\_\_\_  
\_\_\_\_\_

Phone # \_\_\_\_\_

Fax # \_\_\_\_\_

License # \_\_\_\_\_

Email Address to send contracts \_\_\_\_\_

DIR NUMBER \_\_\_\_\_

Additional Signature Lines if Applicable:

Signed \_\_\_\_\_

Print or Type Name \_\_\_\_\_

Business Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signed \_\_\_\_\_

Print or Type Name \_\_\_\_\_

Business Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signed \_\_\_\_\_

Print or Type Name \_\_\_\_\_

Business Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

State of Incorporation if Applicable \_\_\_\_\_

( ) Evidence of authority to bind corporation is attached.

Print or Type Name \_\_\_\_\_

Business Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone Number: \_\_\_\_\_

FAX Number: \_\_\_\_\_

Contractor's License Number \_\_\_\_\_

Email Address \_\_\_\_\_

# **Do not substitute Bid Bond Form**

**The Bid Bond Form in this packet  
must be used.**

**Failure to use the Bid Bond form in  
this bid packet may result in rejection  
of bid.**





Attest:

\_\_\_\_\_  
(Corporate Principal)

\_\_\_\_\_  
(Business Address)

By: \_\_\_\_\_

(Affix Corporate Seal)

Attest:

\_\_\_\_\_  
(Corporate Principal)

\_\_\_\_\_  
(Business Address)

By: \_\_\_\_\_

(Affix Corporate Seal)

The rate or premium on this bond is \_\_\_\_\_ per thousand.

Total amount of premium charged, \$ \_\_\_\_\_  
(The above must be filled in by Corporate Surety)

*END OF SECTION*  
*lf:10/97 (8.98)*







**IRAN CONTRACTING ACT CERTIFICATION**  
**(Public Contract Code sections 2202-2208)**

As required by Public Contract Code (“PCC”) section 2204 for contracts of \$1,000,000 or more, please insert bidder’s or financial institution’s name and Federal ID Number (if available) and complete **one** of the options below. Please note that California law establishes penalties for providing false certifications, including civil penalties equal to the greater of \$250,000 or twice the amount of the contract for which the false certification was made; contract termination; and three-year ineligibility to bid on contracts. (PCC §2205.)

**OPTION #1 - CERTIFICATION**

I, the official named below, certify I am duly authorized to execute this certification on behalf of the bidder/financial institution identified below, and the bidder/financial institution identified below is **not** on the current list of persons engaged in investment activities in Iran created by California Department of General Services (“DGS”) and is not a financial institution extending twenty million dollars (\$20,000,000) or more in credit to another person/bidder, for 45 days or more, if that other person/bidder will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS. (PCC §2204(a).)

<i>Bidder Name/Financial Institution (Printed)</i>	<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>	
<i>Printed Name and Title of Person Signing</i>	
<i>Date Executed</i>	<i>Executed in</i>

**OPTION #2 – EXEMPTION**

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a bidder/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a proposal for, or enters into or renews, a contract for goods and services. If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below, and attach documentation demonstrating the exemption approval.

<i>Bidder Name/Financial Institution (Printed)</i>	<i>Federal ID Number (or n/a)</i>
<i>By (Authorized Signature)</i>	
<i>Printed Name and Title of Person Signing</i>	<i>Date Executed</i>



**ROOF PROJECT CERTIFICATION**  
**(Public Contract Code §3006(a) and (b))**

I, \_\_\_\_\_ [name], \_\_\_\_\_ [name of employer], certify that I have not offered, given, or agreed to give, received, accepted, or agreed to accept, any gift, contribution, or any financial incentive whatsoever to or from any person in connection with the roof project contract. As used in this certification, "person" means any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals. Furthermore, I, \_\_\_\_\_ [name], \_\_\_\_\_ [name of employer], certify that I do not have, and throughout the duration of the contract, I will not have, any financial relationship in connection with the performance of this contract with any architect, engineer, roofing, consultant, materials manufacturer, distributor, or vendor that is not disclosed below.

I, \_\_\_\_\_ [name], \_\_\_\_\_ [name of employer], have the following financial relationships, with an architect, engineer, roofing consultant, materials manufacturer, distributor, or vendor, or other person in connection with the following roof project contract:

\_\_\_\_\_  
[name and address of building, contract date and number]

\_\_\_\_\_  
[name and address of building, contract date and number]

\_\_\_\_\_  
[name and address of building, contract date and number]

\_\_\_\_\_  
[name and address of building, contract date and number]

I certify that to the best of my knowledge, the contents of this disclosure are true, or are believed to be true.

\_\_\_\_\_ Signature \_\_\_\_\_ Date

\_\_\_\_\_ Print Name

\_\_\_\_\_ Print Name of Employer



**PRIME BIDDER CERTIFICATION OF DISABLED VETERAN  
BUSINESS ENTERPRISE PARTICIPATION**

To be completed by the Prime Bidder

PAGE 1 OF 2

<b>PART I – IDENTIFICATION INFORMATION</b>		
BIDDER'S NAME	BUSINESS ADDRESS	TELEPHONE NUMBER
SCHOOL DISTRICT	COUNTY	APPLICATION NO.

**PART II – METHOD OF COMPLIANCE WITH DVBE PARTICIPATION GOALS** – Include this form and any other applicable documents listed in this table with your bid/proposal. Read the three columns in the table below as sentences from left to right. Check the appropriate box to indicate your method of committing the contract dollar amount.

**NOTE:** Architectural, engineering, environmental, land surveying or construction management firms must indicate their method of compliance by marking the appropriate box A, B, C, or D after selection by the District and before the contract is signed.

<b>YOUR BUSINESS ENTERPRISE</b>	<b>AND YOU</b>	<b>AND YOU</b>
<b>A.</b> <input type="checkbox"/> is Disabled Veteran owned and your forces, will perform at least 3 percent of this contract	will include a copy of your DVBE letter from the Office of Small Business and Disabled Veteran Business Enterprise Services (OSDS).	
<b>B.</b> <input type="checkbox"/> is Disabled Veteran owned <b>but is unable</b> to perform the 3 percent of this contract with your forces	<b>will use DVBE subcontractors/ suppliers to bring the contract participation to at least 3 percent</b>	will include a copy of each DVBE's letter from OSDS (including yours, if applicable).
<b>C.</b> <input type="checkbox"/> is <b>not</b> Disabled Veteran owned	<b>will use DVBE subcontractors/ suppliers for at least 3 percent of this contract</b>	
<b>D.</b> <input type="checkbox"/> is unable to meet the required participation goals	<b>will complete a Good Faith Effort to obtain DVBE participation</b>	will include the Prime Bidder's Good Faith Effort Worksheet.

**Note:** An Office of Small Business and Disabled Veteran Business Enterprise Services (OSDS) letter must be attached for each DVBE participating in the contract. The DVBE letter is obtained by application through the OSDS and must be provided at the time of bid opening. If the letter is not provided, the bid may be deemed nonresponsive and may be ineligible for award of the contract.

Continued on reverse side

**PART III – DVBE DOLLAR PARTICIPATION OF BID/PROPOSAL** – *Architectural, engineering, environmental, land surveying or construction management firms complete this part after selection by the district and before the contract is signed.*

Show deductive alternate(s) in parenthesis. For more alternates/base bids, use a separate page to show items.

- A. If your business enterprise is a DVBE, list in the appropriate column the total dollar amount of your bid to be performed by your own participation.
- B. List all your DVBE subcontractors/suppliers. Enter in the appropriate column the dollar amount for each of your subcontractors/suppliers.
- C. Enter the total of Lines A and B for each column.
- D. Enter the dollar amount of the bid/proposal to be performed by **non-DVBE** firms. Note: This line is the sum of the prime and subcontractor(s) **non-DVBE** dollar participation.
- E. Enter the sum of the column totals from Line C and Line D. Note: Please be aware that the final determination of DVBE compliance is made based on the contract amount resulting from the district’s acceptance or rejection of alternates.

	<b>BASE BID/PROPOSAL</b>	<b>DEDUCTIVE ALTERNATE #1</b>	-	-	-	-
A. Prime Bidder, <i>if DVBE (own participation)</i>	\$	\$	\$	\$	\$	\$
B. DVBE Subcontractor or Supplier						
1.						
2.						
3.						
4.						
C. Subtotal (A & B)						
D. Non-DVBE						
E. Total Bid						



**PRIME BIDDER GOOD FAITH EFFORT WORKSHEET  
PAGE 1 OF 2**

*This worksheet is to be used to assist the Prime Bidder in meeting the 3% DVBE participation goal \_\_\_\_\_*

BIDDER'S NAME	BUSINESS ADDRESS	CONTACT PERSON
TELEPHONE NUMBER	OWNER	COUNTY

**GENERAL INSTRUCTIONS:**

This worksheet is to be used to assist you in meeting the 3 percent DVBE participation goal. If specific information is not provided for Parts I through III, you do not meet the test of the "Good Faith Effort" and cannot so certify. If you are qualifying based on a "Good Faith Effort" you must include this form with your bid/proposal to the Owner.

**PART I – CONTACTS**

To identify DVBE subcontractors/suppliers for participation in your bid/proposal, contact must be made with each of the following categories. It is recommended that you contact several DVBE organizations.

CATEGORY	TELEPHONE NUMBER	DATE CONTACTED	PERSON CONTACTED
<b>1. Owner</b>			
<b>2. Office of Small Business and Disabled Veteran Business Enterprise Services (OSDS). OSDS provides assistance locating DVBEs at <a href="https://caleprocure.ca.gov/pages/PublicSearch/supplier-search.aspx">https://caleprocure.ca.gov/pages/PublicSearch/supplier-search.aspx</a>.</b>	(916) 375-4940		
<b>3. DVBE Organizations (List):</b>			
<b>4. Write "recorded message" in this column, if applicable.</b>			



**PRIME BIDDER GOOD FAITH EFFORT WORKSHEET  
PAGE 2 OF 2**

**PART II – ADVERTISEMENTS** You must make at least two (2) advertisements, one (1) in a paper that focuses on DVBE and one (1) in a trade paper. Advertisements should be published at least 14 days prior to bid/proposal opening; if you cannot advertise 14 days prior, advertise as soon as possible and provide an explanation. (Advertisements must be published in time to allow for a reasonable response). Advertisements must include that your firm is seeking DVBE participation, the project name and location, your firm’s name, your firm’s contact person, and phone number.

*Attach copies of advertisements to this form.*

FOCUS/TRADE PAPER NAME	CHECK	ONE	DATE OF ADVERTISEMENT
	TRADE FOCUS		

**PART III – DVBE SOLICITATIONS** List DVBE subcontractors/suppliers that were invited to bid. Use the following instructions to complete the remainder of this section (read the three columns as a sentence from left to right). If you need additional space to list DVBE solicitations, please use a separate page and attach to this form.

IF THE DVBE.....	THEN.....	AND.....
Was selected to participate	Check "yes" in the "SELECTED" column, include the applicable dollar amount in Part III of the Prime Bidder Certification	Include a copy of their DVBE letter from OSDS.
Was <b>not</b> selected to participate	Check "no" in the "SELECTED" column	State why in the "REASON NOT SELECTED" column.
Did not respond to your solicitation	Check the "NO RESPONSE" column	

DISABLED VETERANS BUSINESS ENTERPRISES CONTACTED	SELECTED		REASON NOT SELECTED <b>This section must be completed</b>	NO RESPONSE
	YES	NO		

**IMPORTANT NOTE:**

Please be aware that certification of the "Good Faith Effort" may only be made if you fully complete Parts I, II, and III on both sides of this form. A copy of this form must be retained by you and may be subject to a future audit.

**CERTIFICATION**

I, \_\_\_\_\_ certify that I am the bidder's Chief Executive Officer and that I have made a diligent effort to ascertain the facts with regard to the representations made herein. In making this certification, I am aware of Section 12650 et seq. of the Government Code providing for the imposition of treble damages for making false claims.

---

SIGNATURE OF CHIEF EXECUTIVE OFFICER \_\_\_\_\_ DATE \_\_\_\_\_



**DESIGNATION OF SUBCONTRACTORS**

**Bidder** \_\_\_\_\_

In compliance with the provisions of Sections 4100 to 4114, inclusive, of the Public Contract Code of the State of California, and any amendments thereof, each bidder shall set forth below the name and the location of the mill, shop or office of each subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the work or improvement to be performed under these specifications, in an amount in excess of one-half of 1 percent (0.5%) of the bidder’s total bid, and the portion of the work which will be done by each subcontractor.

If the Contractor fails to specify a subcontractor for any portion of the work to be performed under the contract, the Contractor shall be deemed to have agreed to perform such portion itself and shall not be permitted to subcontract that portion of the work except under the conditions hereinafter set forth.

Subletting or subcontracting of any portion of the work as to which no subcontractor was designated in the original bid shall only be permitted in cases of public emergency or necessity, and then only after a finding reduced to writing as a public record of the legislative body of the Owner.

**Note:        Reproduce for additional listings needed beyond the length of this form.**

Portion of Work	Name of Subcontractor	Location & <u>License #</u> of Subcontractor*	DIR registration #

\* *If there are similarly named subcontractors in a particular location, list enough information in this column to differentiate. LOCATION OF SUBCONTRACTOR MUST BE PROVIDED IN BID RESPONSE*

**Listing Subcontractors.** As required pursuant to the Subletting and Subcontracting Fair Practices Act, each bidder shall submit with its bid a list of the names, license numbers, DIR registration numbers, and locations of the places of business of each subcontractor that will perform work or labor or render service to the bidder in or about the Project, or that, under subcontract to the bidder, will specially fabricate and install a portion of the work, in an amount in excess of one-half of 1 percent of the total amount of the bidder’s bid. A bidder may not list more than one subcontractor for any one portion of the work. A bidder that fails to list a subcontractor for any portion of the work represents that it is fully qualified to and shall perform such work using its own forces. If the bid documents require the bidder to submit alternate bids and the bidder intends to use different or additional subcontractors for the alternates, the bidder must submit a separate list of subcontractors for each such alternate. A bidder shall submit the lists of subcontractors only on the form included in the bid documents.



**JOB REFERENCES**

**CENTRAL UNIFIED SCHOOL DISTRICT  
SHIELDS AND BRAWLEY ELEMENTARY SCHOOL**

Bidders must submit a list of at least three (3) projects of similar dollar volume completed within the last 24 months for reference purposes.

<b>DATE</b>	<b>JOB SITE</b>	<b>CONTACT PERSON</b>	<b>TELEPHONE NUMBER</b>

**NAME OF BIDDER** \_\_\_\_\_

END OF SECTION  
3.97 (8.98)





**INSURANCE RATING SUBMITTAL FORM**

**SHIELDS AND BRAWLEY ELEMENTARY SCHOOL**

Attach report of Insurance Rating to this form. AM Best rating requirement of A- or better. Rating Report information to be obtained from A.M. Best Company – <http://www.ambest.com>

Name of Bidder: \_\_\_\_\_

**This form and needed report to be submitted with bid proposal at due date and time established in**



**STUDENT SAFETY DECLARATION**  
Construction, Rehabilitation or Repair  
Contractors (Education Code section  
45125.2)

I, \_\_\_\_\_, declare as follows:

1. I am a representative of \_\_\_\_\_ and am authorized to make this declaration on its behalf.

2. Pursuant to Education Code section 45125.2, I shall not permit any employee, agent, or subcontractor to have more than limited contact with pupils without taking protective steps as set forth in that section and this declaration.

3. I declare that I have taken one or more of the following protective measures pursuant to Education Code section 45125.2:

a. Neither I, my employees, agents nor subcontractors will have more than limited contact with students.

b. I have installed or will install a physical barrier at the worksite such that no employee, agent or subcontractor will have more than limited contact with students.

c. An employee, agent or subcontractor will continually monitor and supervise all employee(s), agent(s) and subcontractor(s) who will have more than limited student contact. I have submitted fingerprints to the Department of Justice for the supervisory employee(s), agent(s), or subcontractor(s). I have received a response from the Department of Justice, and I certify that none of these supervisory employees, agents or subcontractors have been convicted of a felony as defined in Education Code section 45122.1. A list of these supervisors is attached hereto.

I know the above of my own personal knowledge and if called as a witness could competently testify thereto. I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on \_\_\_\_\_, \_\_\_\_\_, at \_\_\_\_\_, California.

\_\_\_\_\_  
Name of Contractor

By : \_\_\_\_\_



**Sufficient Funds Declaration (Labor  
Code section 2810)**  
**To Be Executed by Bidder and Submitted with Bid**

Owner: \_\_\_\_\_  
Contract for: \_\_\_\_\_ Project

I, \_\_\_\_\_, declare that I am the \_\_\_\_\_ of \_\_\_\_\_, the entity making and submitting the bid for the above Project that accompanies this Declaration, and that such bid includes sufficient funds to permit \_\_\_\_\_ [insert name of entity] to comply with all local, state or federal labor laws or regulations during the performance of the Contract for the Project, including payment of prevailing wage, and that \_\_\_\_\_ [the entity] will comply with the provisions of Labor Code section 2810(d) if awarded the Contract.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and executed on \_\_\_\_\_ 2023 , at \_\_\_\_\_ [city], \_\_\_\_\_ [state].

Date: \_\_\_\_\_

\_\_\_\_\_ Signature

Print Name: \_\_\_\_\_

Print Title: \_\_\_\_\_



**WORKERS' COMPENSATION CERTIFICATE**

Labor Code Section 3700, in relevant part, provides:

"Every employer except the state shall secure the payment of compensation in one or more of the following ways:

(a) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state.

(b) By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer or as one employer in a group of employers. Said certificate may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his or her employees, ... "

I am aware of the provisions of the Labor Code Section 3700 which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract. I shall supply the Owner with certificates of insurance evidencing that Workers' Compensation Insurance is in effect and providing that the Owner will receive thirty (30) days' notice of cancellation.

\_\_\_\_\_  
Name of Contractor

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

(In accordance with Article 5 (commencing at Section 1860), Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and filed with the awarding body prior to performing any work under the contract.)

[Proof of Registration]

SIM-PBK  
SCHOOL

17-67 SHIELDS & BRAWLEY ELEMENTARY



**PAYMENT BOND  
(Labor and Material)**

**KNOW ALL MEN BY THESE PRESENTS:**

That **WHEREAS**, \_\_\_\_\_ and \_\_\_\_\_, hereinafter designated as the "Principal," have entered into a contract for the furnishing of all materials and labor, services, and transportation, necessary, convenient, and proper to construct

**SHIELDS AND BRAWLEY ELEMENTARY SCHOOL**

Which said agreement dated \_\_\_\_\_, 2023, and all of the contract documents attached to or forming a part of said agreement, are hereby referred to and made a part hereof; and

WHEREAS, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by whom the contract is awarded to secure the claims arising under said agreement.

**NOW, THEREFORE, THESE PRESENTS WITNESSETH:**

That the said Principal and the undersigned \_\_\_\_\_ ("Surety") are held and firmly bound unto all laborers, material men, and other persons referred to in said statutes in the sum of \_\_\_\_\_ Dollars (\$) \_\_\_\_\_) which sum well and truly be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, by these presents.

The condition of this obligation is that if the said Principal or any of its subcontractors, or the heirs, executors, administrators, successors, or assigns of any, all, or either of them, shall fail to pay for any materials, provisions, provender or other supplies, or teams, used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind or for amounts due under the Unemployment Insurance Act with respect to such work or labor, that said Surety will pay the same in an amount not exceeding the amount hereinabove set forth, and also in case suit is brought upon this bond, will pay a reasonable attorney's fee to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void, otherwise it shall be and remain in full force and effect.

And the said Surety, for value received, thereby stipulates, and agrees that no change, extension of time, alteration, or addition to the terms of said contract or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety

this \_\_\_\_\_ day of \_\_\_\_\_, 2023.

(To be signed by )  
(Principal and Surety, )  
(and acknowledged and )  
(Notarial Seal attached )

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Surety

SIM-PBK

17-67 SHIELDS & BRAWLEY ELEMENTARY SCHOOL

---

By:  
Attorney-in-Fact

---

The above bond is accepted and approved this \_\_\_\_\_ day of \_\_\_\_\_,  
2023 .

END OF SECTION

**PERFORMANCE BOND**

**KNOW ALL MEN BY THESE PRESENTS THAT WE** \_\_\_\_\_ as Principal, and \_\_\_\_\_ as Surety, are held and firmly bound unto **CENTRAL Unified School District**, in the County of Fresno, State of California, hereinafter called the "Owner", acting on behalf of the State Allocation Board, State of California, in the sum of \_\_\_\_\_ **Dollars (\$ \_\_\_\_\_)** for the payment of which sum well and truly made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

The condition of this obligation is such, that whereas the Principal entered into a certain contract with the Owner, dated \_\_\_\_\_, 2023 for construction of

**SHIELDS AND BRAWLEY ELEMENTARY SCHOOL**

**NOW, THEREFORE**, if the Principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Owner, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, then this obligation to be void, otherwise to remain in full force and virtue.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same, shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, or to the work, or to the specifications.

**IN WITNESS WHEREOF**, the above-bounden parties have executed this instrument under their several seals this \_\_\_\_\_ day of \_\_\_\_\_, 2023 hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

(To be signed by )  
(Principal and Surety, )  
(and acknowledged and )  
(Notarial Seal attached )

(Affix Corporate Seal) \_\_\_\_\_  
(Individual Principal)

\_\_\_\_\_  
(Business Address)

(Affix Corporate Seal) \_\_\_\_\_  
(Corporate Principal)

\_\_\_\_\_  
(Business Address)

(Affix Corporate Seal) \_\_\_\_\_  
(Corporate Surety)

\_\_\_\_\_  
(Business Address)

By: \_\_\_\_\_

SIM-PBK  
SCHOOL

17-67 SHIELDS & BRAWLEY ELEMENTARY

The rate or premium on this bond is \_\_\_\_\_ per thousand.

The total amount of premium charged is \_\_\_\_\_ .

The above must be filled in by Corporate Surety.

**DRUG-FREE WORKPLACE CERTIFICATION**

This Drug-Free Workplace Certification is required pursuant to Government Code Sections 8350 *et seq.*, the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or services from any State agency must certify that it will provide a drug-free workplace by doing certain specified acts. In addition, the Act provides that each contract awarded by a State agency may be subject to suspension of payments or termination of the contract, or both, and the contractor may be subject to debarment from future contracting if the state agency determines that specified acts have occurred.

Pursuant to Government Code Section 8355, every person or organization awarded a contract or grant from a State agency shall certify that it will provide a drug-free workplace by doing all of the following:

- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance is prohibited in the person's or organization's workplace and specifying actions which will be taken against employees for violations of the prohibition;
- (b) Establishing a drug-free awareness program to inform employees about all of the following:
  - (1) The dangers of drug abuse in the workplace;
  - (2) The person's or organization's policy of maintaining a drug-free workplace;
  - (3) The availability of drug counseling, rehabilitation and employee-assistance programs;
  - (4) The penalties that may be imposed upon employees for drug abuse Violations;
- (c) Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required by subdivision (a) and that, as a condition of employment on the contractor grant, the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code Section 8355 listed above and will publish a statement notifying employees concerning (a) the prohibition of controlled substance at the workplace, (b) establishing a drug-free awareness program, and (c) requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required by Section 8355(a) and requiring that the employee agree to abide by the terms of that statement.

I also understand that if the Owner determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of Section 8355, that the contract or grant awarded herein is subject to suspension of payments, termination, or both. I further understand that should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of Section 8350 *et seq.*

I acknowledge that I am aware of the provisions of Government Code Section 8350 *et seq.* and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990.

\_\_\_\_\_  
Name of Contractor

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date



**FORM OF CONTRACT**

**AGREEMENT BETWEEN OWNER AND CONTRACTOR**

THIS AGREEMENT, dated the \_\_\_\_\_ day of \_\_\_\_\_, 2023, in the County of Fresno, State of California, is by and between CENTRAL Unified School District (hereinafter referred to as "DISTRICT"), and \_\_\_\_\_ (hereinafter referred to as "CONTRACTOR").

The DISTRICT and the CONTRACTOR, for the consideration stated herein, agree as follows:

- 1. The complete contract includes all of the Project documents described in the General Conditions. The Project documents are complementary, and what is called for by anyone shall be as binding as if called for by all.
- 2. CONTRACTOR shall perform within the time set forth in Paragraph 4 of this Agreement everything required to be performed, and shall provide and furnish all the labor, materials, necessary tools, expendable equipment, and all utility and transportation services as described in the complete contract and required for construction of

**SHIELDS AND BRAWLEY ELEMENTARY SCHOOL**

**BID PACKAGE NO. \_\_\_\_\_**

All of said work to be performed and materials to be furnished shall be completed in a good workmanlike manner in strict accordance with the plans, drawings, specifications, and all provisions of the complete contract as hereinabove defined. The CONTRACTOR shall be liable to the DISTRICT for any damages arising as a result of a failure to fully comply with this obligation, and the CONTRACTOR shall not be excused with respect to any failure to so comply by any act or omission of the Architect, Engineer, Inspector, Division of State Architect, or representative of any of them, unless such act or omission actually prevents the CONTRACTOR from fully complying with the requirements of the Project documents, and unless the CONTRACTOR protests at the time of such alleged prevention that the act or omission is preventing the CONTRACTOR from fully complying with the Project documents. Such protest shall not be effective unless reduced to writing and filed with the DISTRICT within three (3) working days of the date of occurrence of the act or omission preventing the CONTRACTOR from fully complying with the Project documents.

3. DISTRICT shall pay to the CONTRACTOR, as full consideration for the faithful performance of the contract, subject to any additions or deductions as provided in the Project documents, the sum of \_\_\_\_\_ (\$ \_\_\_\_\_).

4. The work shall be commenced on or before the fifth (5th) business day after receiving the DISTRICT's Notice to Proceed – total project shall be completed within **575 calendar days (per Construction Management Bid Schedule)**. Individual project trades to be completed in accordance with construction manager’s work schedule. All procurement, coordination, milestones, durations, activities, and sequences for this bid package shall be performed as shown in the Construction Management Bid Schedule and Section 01320 of the specification and as modified by a monthly schedule update, if any.

5. Time is of the essence. If the work is not completed in accordance with Paragraph 4 above, it is understood that the DISTRICT will suffer damage. It being impractical and infeasible to determine the amount of actual damage, in accordance with Government Code Section 53069.85, it is agreed that CONTRACTOR shall pay to DISTRICT as fixed and liquidated damages, and not as a penalty, the sum **Seven Hundred Fifty Dollars (\$750.00)** for each calendar day of delay until work is completed in accordance with the Construction Management Bid Schedule. This amount shall be deducted from any payments due to or to become due to CONTRACTOR. CONTRACTOR and CONTRACTOR'S surety shall be liable for the amount thereof. Time extensions may be granted by the DISTRICT as provided in the General Conditions.

6. In the event CONTRACTOR for a period of ten (10) calendar days after receipt of written demand from DISTRICT to do so, fails to furnish tools, equipment, or labor in the necessary quantity or quality,

or to prosecute said work and all parts thereof in a diligent and workmanlike manner, or after commencing to do so within said ten (10) calendar days, fails to continue to do so, then the DISTRICT may exclude the CONTRACTOR from the premises, or any portion thereof, and take possession of said premises or any portion thereof, together with all material and equipment thereon, and may complete the work contemplated by this Agreement or any portion of said work, either by furnishing the tools, equipment, labor or material necessary, or by letting the unfinished portion of said work, or the portion taken over by the DISTRICT to another contractor, or by a combination of such methods. In any event, the procuring of the completion of said work, or the portion thereof taken over by the DISTRICT, shall be a charge against the CONTRACTOR, and may be deducted from any money due or to become due to CONTRACTOR from the DISTRICT, or the CONTRACTOR shall pay the DISTRICT the amount of said charge, or the portion thereof unsatisfied. The sureties provided for under this Agreement shall become liable for payment should CONTRACTOR fail to pay in full any said cost incurred by the DISTRICT.

7. The CONTRACTOR agrees to and does hereby indemnify and hold harmless the DISTRICT, its governing board, officers, agents, and employees from every claim or demand made, and every liability, loss, damage, or expense, of any nature whatsoever, which may be incurred by reason of:

(a) Liability for damages for (1) death or bodily injury to persons; (2) injury to, loss or theft of property; or (3) any other loss, damage or expense arising under either (1) or (2) above, sustained by the CONTRACTOR upon or in connection with the work called for in this Project, except for liability resulting from the sole active negligence, or willful misconduct of the DISTRICT.

(b) Any injury to or death of any person(s) or damage, loss or theft of any property caused by any act, neglect, default or omission of the CONTRACTOR, or any person, firm, or corporation employed by the CONTRACTOR, either directly or by independent contract, arising out of, or in any way connected with the work covered by this Agreement, whether said injury or damage occurs on or off District property.

The CONTRACTOR, at CONTRACTOR's own expense, cost, and risk shall defend any and all actions, suits, or other proceedings that may be brought or instituted against the DISTRICT, its governing board, officers, agents, or employees, on any such claim, demand, or liability, and shall pay or satisfy any judgment that may be rendered against the DISTRICT, its governing board, officers, agents or employees in any action, suit, or other proceedings as a result thereof.

8. CONTRACTOR shall provide the insurance set forth in the General Conditions. The amount of general liability insurance shall be not less than \$2,000,000 per occurrence for bodily injury, personal injury and property damage and the amount of automobile liability insurance shall be not less than \$4,000,000 per accident for bodily injury and property damage combined single limit. By this statement, the Contractor represents that it has secured the payment of Workers' Compensation in compliance with the provisions of the Labor Code of the State of California and during the performance of the work contemplated herein will continue so to comply with said provisions of said Code. The Contractor shall supply the Owner with certificates of insurance evidencing that Workers' Compensation Insurance is in effect and providing that the Owner will receive thirty (30) days' notice of cancellation.

9. Public Contract Code Section 22300 permits the substitution of securities for any monies withheld by a public agency to ensure performance under a contract. At the request and expense of the CONTRACTOR, securities equivalent to the amount withheld shall be deposited with the public agency, or with a state or federally chartered bank in California as the escrow agent, who shall then pay such monies to the CONTRACTOR. The DISTRICT retains the sole discretion to approve the bank selected by the CONTRACTOR to serve as escrow agent. Upon satisfactory completion of the contract, the securities shall be returned to the CONTRACTOR. Securities eligible for investment shall include those listed in Government Code Section 16430 or bank or savings and loan certificates of deposit. The CONTRACTOR shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

In the alternative, under Section 22300, the CONTRACTOR may request DISTRICT to make payment of earned retentions directly to the escrow agent at the expense of the CONTRACTOR. Also at the



CONTRACTOR's expense, the CONTRACTOR may direct investment of the payments in securities, and the CONTRACTOR shall receive interest earned on such investment upon the same conditions as provided for securities deposited by CONTRACTOR. Upon satisfactory completion of the contract, CONTRACTOR shall receive from the escrow agent all securities, interest and payments received by escrow agent from DISTRICT pursuant to the terms of Section 22300. CONTRACTOR shall pay to each subcontractor, not later than 20 days after receipt of such payment, the respective amount of interest earned, net of costs attributed to retention withheld from each subcontractor, on the amount of retention withheld to insure performance of the CONTRACTOR.

10. Each and every provision of law and clause required by law to be inserted in this Agreement shall be deemed to be inserted herein and the Agreement shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not currently inserted, then upon application of either party the Agreement shall forthwith be physically amended to make such insertion or correction.

11. The complete contract as set forth in Paragraph 1 of this Agreement constitutes the entire Agreement of the parties. No other agreements, oral or written, pertaining to the work to be performed, exists between the parties. This Agreement can be modified only by an amendment in writing, signed by, authorized agents, of both parties and pursuant to action of the Governing Board of the District.

12. CONTRACTOR shall comply with those provisions of the Labor Code requiring payment of prevailing wages, keeping of certified payroll records, overtime pay, employment of apprentices, and workers' compensation coverage, as further set forth in the General Conditions, and shall file the required workers' compensation certificate before commencing work.

The CONTRACTOR and each subcontractor shall furnish a certified copy of all payroll records directly to the Labor Commissioner. Submittal of said records to meet DIR submittal process instructions and requirements.

For public works contracts awarded on and after January 1, 2015, those public works projects shall be subject to compliance monitoring and enforcement by the Department of Industrial Relations.

As of March 1, 2015, a contractor or subcontractor shall not be qualified to submit a bid or to be listed in a bid proposal subject to the requirements of Public Contract Code section 4104 unless currently registered and qualified under Labor Code section 1725.5 to perform public work as defined by Division 2, Part 7, Chapter 1 (§§1720 et seq.) of the Labor Code.

As of April 1, 2015, a contractor or subcontractor shall not be qualified to enter into, or engage in the performance of, any contract of public work (as defined by Division 2, Part 7, Chapter 1 (§§1720 et seq.) of the Labor Code) unless currently registered and qualified under Labor Code section 1725.5 to perform public work.

13. The Project is a public work, the work shall be performed as a public work and pursuant to the provisions of Section 1770 et seq. of the Labor Code of the State of California, which are hereby incorporated by reference and made a part hereof, the Director of Industrial Relations has determined the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which the work is to be performed, for each craft, classification or type of worker needed to execute this Agreement. Per diem wages shall be deemed to include employer payments for health and welfare, pension, vacation, apprenticeship or other training programs, and similar purposes. Copies of the rates are on file at the District's principal office. The rate of prevailing wage for any craft, classification or type of workmanship to be employed on this Project is the rate established by the applicable collective bargaining agreement which rate so provided is hereby adopted by reference and shall be effective for the life of this Agreement or until the Director of the Department of Industrial Relations determines that another rate be adopted. It shall be mandatory upon the CONTRACTOR and on any subcontractor to pay not less than the said specified rates to all workers employed in the execution of this Agreement.

The CONTRACTOR and any subcontractor under the CONTRACTOR as a penalty to the DISTRICT shall forfeit not more than Two Hundred Dollars (\$200.00) for each calendar day or portion thereof for each worker paid less than the stipulated prevailing rates for such work or craft in which such worker is employed. The difference between such stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the CONTRACTOR.

The CONTRACTOR and each Subcontractor shall keep or cause to be kept an accurate record for work on this Project showing the names, addresses, social security numbers, work classification, straight time and overtime hours worked and occupations of all laborers, workers and mechanics employed by them in connection with the performance of this Agreement or any subcontract thereunder, and showing also the actual per diem wage paid to each of such workers, which records shall be open at all reasonable hours to inspection by the DISTRICT, its officers and agents and to the representatives of the Division of Labor Law Enforcement of the State Department of Industrial Relations. The CONTRACTOR and each subcontractor shall furnish a certified copy of all payroll records directly to the Labor Commissioner.

14. In accordance with the provisions of Sections 1810 to 1815, inclusive, of the Labor Code of the State of California, which are hereby incorporated and made a part hereof, the time of service of any worker employed by the CONTRACTOR or a Subcontractor doing or contracting to do any part of the work contemplated by this Agreement is limited and restricted to eight hours during any one calendar day and forty hours during any one calendar week, provided, that work may be performed by such employee in excess of said eight hours per day or forty hours per week provided that compensation for all hours worked in excess of eight hours per day, and forty hours per week, is paid at a rate not less than one and one-half (1½) times the basic rate of pay. The CONTRACTOR and every Subcontractor shall keep an accurate record showing the name of and the actual hours worked each calendar day and each calendar week by each worker employed by them in connection with the work. The records shall be kept open at all reasonable hours to inspection by representatives of the DISTRICT and the Division of Labor Law Enforcement. The CONTRACTOR shall as a penalty to the DISTRICT forfeit Twenty-five Dollars (\$25.00) for each worker employed in the execution of this Agreement by the CONTRACTOR or by any subcontractor for each calendar day during which such worker is required or permitted to work more than eight hours in any one calendar day, and forty hours in any one calendar week, except as herein provided.

15. The CONTRACTOR agrees to comply with Chapter 1, Part 7, Division 2, Sections 1777.5 and 1777.6 of the California Labor Code, which are hereby incorporated and made a part hereof. These sections require that contractors and subcontractors employ apprentices in apprenticeable occupations in a ratio of not less than one hour of apprentice's work for each five hours of work performed by a journeyman (unless an exemption is granted in accordance with Section 1777.5) and that contractors and subcontractors shall not discriminate among otherwise qualified employees as indentured apprentices on any public works solely on the ground of sex, race, religious creed, national origin, ancestry or color. Only apprentices as defined in Labor Code Section 3077, who are in training under apprenticeship standards and who have signed written apprentice agreements, will be employed on public works in apprenticeable occupations. The responsibility for compliance with these provisions is fixed with the CONTRACTOR for all apprenticeable occupations.

16. The CONTRACTOR must comply with the applicable requirements of the Division of State Architect ("DSA") Construction Oversight Process ("DSA Oversight Process"), including but not limited to (a) notifying the Owner's Inspector of Record/Project Inspector ("IOR") upon commencement and completion of each aspect of the work as required by DSA (b) coordinating the Work with the IOR's inspection duties and requirements; (c) submitting verified reports required by DSA and (d) coordinating with the DISTRICT, DISTRICT's Architect, any Construction Manager, any laboratories, and the IOR to meet the DSA Oversight Process requirements without delay or added costs to the Project.

CONTRACTOR shall be responsible for any additional DSA fees related to review of proposed changes to the DSA-approved construction documents, to the extent the proposed changes were caused by CONTRACTOR's wrongful act or omissions. If inspected work is found to be in non-compliance with the DSA-approved construction documents or the DSA-approved testing and inspection program, then it must be

removed and corrected. Any construction that covers unapproved or uninspected work is subject to removal and correction, at CONTRACTOR's expense, in order to permit inspection and approval of the covered work in accordance with the DSA Oversight Process.

17. If any provision of the Agreement shall be held invalid or unenforceable by a court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision hereof. The Agreement shall be governed by the laws of the State of California. Any action or proceeding seeking any relief under or with respect to this Agreement shall be brought solely in the Superior Court of the State of California for the County of Fresno, subject to transfer of venue under applicable State law.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed.

**DISTRICT**

By: \_ Signature

Ketti Davis  
Superintendent  
Title

**CONTRACTOR**

By: \_ Signature\* (see next p.)

\_\_\_\_\_ Title

(Second signature required only for corporation)

By: \_ Signature\*\* (see next p.)

\_\_\_\_\_ Print Name

\_\_\_\_\_ Title

(CORPORATE SEAL OF CONTRACTOR, if corporation)

\_\_\_\_\_ Contractor's License No.

\_\_\_\_\_ Tax ID/Social Security No.

*\*If CONTRACTOR is a corporation, the first signature must be by one of the following officers of the corporation: Chairman of the Board, President, or any Vice President.*

*\*\*If CONTRACTOR is a corporation, the second signature must be by a different person from the first signature and must be by one of the following officers of the corporation: Secretary, any Assistant Secretary, the Chief Financial Officer, or any Assistant Treasurer.*



SIM-PBK  
SCHOOL

17-67 SHIELDS & BRAWLEY ELEMENTARY

[Addenda]

SIM-PBK  
SCHOOL

17-67 SHIELDS & BRAWLEY ELEMENTARY

[General Conditions]

SIM-PBK  
SCHOOL

17-67 SHIELDS & BRAWLEY ELEMENTARY

[Specifications]

SIM-PBK  
SCHOOL

17-67 SHIELDS & BRAWLEY ELEMENTARY

[Drawings]





**SALEM**  
engineering group, inc.

SECTION 00 31 32

**GEOTECHNICAL ENGINEERING  
INVESTIGATION WITH  
GEOLOGIC HAZARDS  
EVALUATION**



**PROPOSED NEW ELEMENTARY SCHOOL  
CENTRAL UNIFIED SCHOOL DISTRICT  
NWC OF W. SHIELDS AVENUE & N. BRAWLEY AVENUE  
FRESNO, CALIFORNIA**

**SALEM PROJECT NO. 1-216-1084  
OCTOBER 31, 2016**

***PREPARED FOR:***

**MR. JOSEPH MARTINEZ  
CENTRAL UNIFIED SCHOOL DISTRICT  
4605 NORTH POLK AVENUE  
FRESNO, CA 93657**

***PREPARED BY:***

**SALEM ENGINEERING GROUP, INC.  
4729 W. JACQUELYN AVENUE  
FRESNO, CA 93722  
P: (559) 271-9700  
F: (559) 275-0827  
[www.salem.net](http://www.salem.net)**

**AD 1-06a  
S&B Elementary  
02-116800**



4729 W. Jacquelyn Avenue  
Fresno, CA 93722  
Phone (559) 271-9700  
Fax (559) 275-0827

October 31, 2016

Project No. 1-216-1084

Mr. Joseph Martinez  
Central Unified School District  
4605 North Polk Avenue  
Fresno, CA 93657

**Subject: Geotechnical Engineering Investigation with  
Geologic Seismic Hazards Evaluation  
Proposed New Elementary School  
Central Unified School District  
NWC of W. Shields Avenue & N. Brawley Avenue  
Fresno, California**

Dear Mr. Martinez:

At your request and authorization, SALEM Engineering Group, Inc. (SALEM) has prepared this Geotechnical Engineering Investigation and Geologic Seismic Hazards Evaluation Report for the Proposed New Elementary School to be located at the subject site.

The accompanying report presents our findings, conclusions, and recommendations regarding the geotechnical aspects of designing and constructing the project as presently proposed. In our opinion, the proposed project is feasible from a geotechnical viewpoint provided our recommendations are incorporated into the design and construction of the project.

We appreciate the opportunity to assist you with this project. Should you have questions regarding this report or need additional information, please contact the undersigned at (559) 271-9700.

Respectfully Submitted,

**SALEM ENGINEERING GROUP, INC.**

Bruce E. Myers, GE, CEG  
Sr. Engineer / Engineering Geologist  
RGE 3014 / CEG 2102



R. Sammy Salem, MS, PE, GE  
Principal Managing Engineer  
RCE 52762 / RGE 2549



## TABLE OF CONTENTS

1. PURPOSE AND SCOPE.....	1
2. PROJECT DESCRIPTION.....	1
3. SITE LOCATION AND DESCRIPTION .....	2
4. FIELD EXPLORATION .....	2
5. LABORATORY TESTING .....	3
6. GEOLOGIC SETTING .....	3
7. GEOLOGIC HAZARDS .....	4
7.1 Faulting and Seismicity.....	4
7.2 Surface Fault Rupture .....	4
7.3 Ground Shaking.....	4
7.4 Seismicity and Calculation of Historical Earthquake Ground Motion.....	5
7.5 Liquefaction.....	5
7.6 Seismic Densification .....	6
7.7 Lateral Spreading.....	6
7.8 Landslides.....	6
7.9 Other Geologic Hazards or Adverse Site Conditions .....	6
8. SOIL AND GROUNDWATER CONDITIONS .....	7
8.1 Subsurface Conditions .....	7
8.2 Groundwater .....	7
8.3 Soil Corrosion Screening .....	8
9. CONCLUSIONS AND RECOMMENDATIONS .....	9
9.1 General .....	9
9.2 Seismic Design Criteria .....	10
9.3 Soil and Excavation Characteristics .....	11
9.4 Materials for Fill .....	12
9.5 Grading.....	13
9.6 Shallow Foundations .....	15
9.7 Concrete Slabs-on-Grade .....	16
9.8 Lateral Earth Pressures and Frictional Resistance .....	18
9.9 Retaining Walls .....	19
9.10 Temporary Excavations .....	19
9.11 Underground Utilities .....	21
9.12 Surface Drainage .....	21
9.13 Pavement Design .....	22
10. PLAN REVIEW, CONSTRUCTION OBSERVATION AND TESTING .....	23
10.1 Plan and Specification Review.....	23
10.2 Construction Observation and Testing Services .....	23
11. LIMITATIONS AND CHANGED CONDITIONS.....	23
REFERENCES .....	23

## **TABLE OF CONTENTS (cont.)**

### **FIGURES**

- Figure 1, Vicinity Map
- Figure 2, Site Plan
- Figure 3, Regional Geologic Map
- Figure 4, Regional Fault Map
- Figure 5, Historical Seismicity Map
- Figure 6, Geologic Hazard Zone Map
- Figure 7, Flood Zone Map
- Figure 8, Dam Inundation Map

### **APPENDIX A – FIELD INVESTIGATION**

- Figures A-1 thru A-24, Logs of Exploratory Soil Borings B-1 thru B-24  
Liquefaction & Dry-Sand Settlement Analysis

### **APPENDIX B – LABORATORY TESTING**

- Consolidation Test Results
- Direct Shear Test Results
- Gradation Curves
- Plasticity Index Test Results
- Corrosivity Test Results
- R-Value Test Results
- Maximum Density and Optimum Moisture Proctor Test Results

### **APPENDIX C – EARTHWORK AND PAVEMENT SPECIFICATIONS**

### **APPENDIX D– GEOHAZARDS DATA**

**GEOTECHNICAL ENGINEERING INVESTIGATION  
PROPOSED NEW ELEMENTARY SCHOOL  
CENTRAL UNIFIED SCHOOL DISTRICT  
NWC OF W. SHIELDS AVENUE & N. BRAWLEY AVENUE  
FRESNO, CALIFORNIA**

**1. PURPOSE AND SCOPE**

This report presents the results of our Geotechnical Engineering Investigation for the Proposed New Elementary School for the Central Unified School District to be located at the northwest corner of the intersection of W. Shields Avenue & N. Brawley Avenue within the City of Fresno, County of Fresno, California (see Figure 1, Vicinity Map).

The purpose of our geotechnical engineering investigation was to observe and sample the subsurface conditions encountered at the site, and provide conclusions and recommendations relative to the geotechnical aspects of constructing the project as presently proposed.

The scope of this investigation included a field exploration, laboratory testing, engineering analysis and the preparation of this report. Our field exploration was performed on October 12 and 13, 2016 and included the drilling of twenty four (24) small-diameter soil borings to a maximum depth of approximately 50.5 feet at the site. The locations of the soil borings are depicted on Figure 2, Site Plan. A detailed discussion of our field investigation and exploratory boring logs are presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to evaluate pertinent physical properties for engineering analyses. Appendix B presents the laboratory test results in tabular and graphic format.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions.

If project details vary significantly from those described herein, SALEM should be contacted to determine the necessity for review and possible revision of this report. Earthwork and Pavement Specifications are presented in Appendix C. If text of the report conflict with the specifications in Appendix C, the recommendations in the text of the report have precedence.

**2. PROJECT DESCRIPTION**

We understand that the project involves the construction of a new Elementary School on a 10 acre site. The site will be located at the northwest corner of the intersection of W. Shields Avenue and N. Brawley Avenue in Fresno, California. Based on the site plan provided to us by the client, the development of the site is anticipated/reported to consist of the construction of a new  $\pm 46,339$  square-foot Classroom/Admin

building, a new ±8,635 square-foot multi-purpose building. We also understand that the development will include six additional new buildings, including a theater, and a service yard. The referenced site plan indicates that a portion of the site will include a drop-off / bus access lane, and parking areas. In addition, a portion of the site will be supporting grass play fields. Maximum interior column loading will be 30 kips and maximum exterior wall load will be 2 kips per lineal foot. Floor slab soil bearing pressure is expected to be on the order of 150 psf. Maximum total and differential settlement shall be 1 inch and ½ inch, respectively.

A site grading plan was not available at the time of preparation of this report. As the existing project area is essentially level, we anticipate that cuts and fills during earthwork will be minimal and limited to providing a level building pad and positive site drainage. In the event that changes occur in the nature or design of the project, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and the conclusions of our report are modified. The site configuration and locations of proposed improvements are shown on the Site Plan, Figure 2.

### **3. SITE LOCATION AND DESCRIPTION**

The subject site consists of a 10-acre rectangular parcel located at the northwest corner of the intersection of W. Shields Avenue and N. Brawley Avenue, within the city limits of Fresno, Fresno County, California (see Site Plan, Figure 2). At the time of field reconnaissance, the project area consisted of a vacant, recently tilled surface supporting a moderate growth of seasonal vegetation. Portions of the site were observed to support concrete debris and end-dump stockpiles. The site is relatively flat with no major changes in grade. Google Earth imagery indicates the site lies at a relative elevation of 290' above mean sea level.

### **4. FIELD EXPLORATION**

Our field exploration consisted of site surface reconnaissance and subsurface exploration. The exploratory test borings (B-1 thru B-24) were drilled on October 12 and 13, 2016 in the area shown on the Site Plan, Figure 2. The test borings were advanced with 8-inch diameter hollow stem auger rotated by a truck-mounted CME 55 drill rig. The test borings were extended to a maximum depth of approximately 50.5 feet below existing grade.

The materials encountered in the test borings were visually classified in the field, and logs were recorded by a field engineer and stratification lines were approximated on the basis of observations made at the time of drilling. Visual classification of the materials encountered in the test borings were generally made in accordance with the Unified Soil Classification System (ASTM D2487). A soil classification chart and key to sampling is presented on the Unified Soil Classification Chart, in Appendix "A." The logs of the test borings are presented in Appendix "A." The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The location of the test borings were determined by measuring from features shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted.

Soil samples were obtained from the test borings at the depths shown on the logs of borings. The MCS samples were recovered and capped at both ends to preserve the samples at their natural moisture content; SPT samples were recovered and placed in a sealed bag to preserve their natural moisture content. The borings were backfilled with soil cuttings after completion of the drilling.

## **5. LABORATORY TESTING**

Laboratory tests were performed on selected soil samples to evaluate their physical characteristics and engineering properties. The laboratory-testing program was formulated with emphasis on the evaluation of natural moisture, density, shear strength, consolidation potential, plasticity index, R-value, maximum density and optimum moisture determination, and gradation of the materials encountered.

In addition, chemical tests were performed to evaluate the corrosivity of the soils to buried concrete and metal. Details of the laboratory test program and the results of laboratory test are summarized in Appendix "B." This information, along with the field observations, was used to prepare the final boring logs in Appendix "A."

## **6. GEOLOGIC SETTING**

The project site is in San Joaquin Valley, which is a topographic and structural basin that is bounded on the east by the Sierra Nevada geomorphic province and on the west by the Coast Ranges geomorphic province. The San Joaquin (Great Valley) is an alluvial plain about 50 miles wide and 400 miles long in the central part of California (California Geologic Survey (CGS) Note 36). The Great Valley is an elongated trough in which sediments have been deposited almost continuously for the last approximately 160 million years (Jurassic). The Great Valley reaches depths of about 10,000 m at its southern end, and is filled with a large volume of sediments of Mesozoic through Recent age. Recent alluvium covers nearly the entire valley floor, and has largely been derived from the adjacent Sierra Nevada except in the westernmost portions of the valley floor.

The Sierra Nevada, a fault block dipping gently southwestward, is composed of igneous and metamorphic rocks of pre-Tertiary age that comprise the basement complex beneath the Valley. The Coast Ranges contain folded and faulted sedimentary rocks of Mesozoic and Cenozoic age, which are similar to those rocks that underlie the Valley at depth and non-conformably overlie the basement complex; gently dipping to nearly horizontal sedimentary rocks of Tertiary and Quaternary age overlie the older rocks. These younger rocks are mostly of continental origin, and in the west-Fresno area, they were derived from the Sierra Nevada. The Coast Ranges evolved as a result of folding, faulting and accretion of diverse geologic terrains. They are composed chiefly of sedimentary and metamorphic rocks that are sharply deformed into complex structures. The Coast Ranges are broken by numerous faults, the San Andreas Fault being the most notable feature.

The subject site is mapped by the CGS (Fresno geologic sheet) as underlain by Pleistocene age non-marine sediments (Qc). The sediments in the project area exposed during our recent subsurface exploration indicate the surface soils consist of silty sand with varying amounts of cementation.

## 7. GEOLOGIC HAZARDS

### 7.1 Faulting and Seismicity

The Great Valley in general, has historically been a province of relatively low seismic activity. There are no known active fault traces in the project vicinity. The project area is not within an Alquist-Priolo Earthquake Fault (Special Studies) Zone and will not require a special site investigation by an Engineering Geologist. Soils on site are classified as Site Class D in accordance with Chapter 16 of the California Building Code. The proposed structures are determined to be in Seismic Design Category D.

To determine the distance of known active faults within 100 miles of the site, we used the United States Geological Survey (USGS) web-based application *2008 National Seismic Hazard Maps - Fault Parameters*. Site latitude is 36.3801° North; site longitude is 119.8638° West. The ten closest active faults are summarized below in Table 7.1. Please refer to Figure 4 for a regional fault map that shows these features.

**TABLE 7.1  
REGIONAL FAULT SUMMARY**

<b>Fault Name</b>	<b>Distance to Site (miles)</b>	<b>Maximum Earthquake Magnitude, <math>M_w</math></b>
Great Valley 11	37.98	6.6
Great Valley 12	38.12	6.4
Great Valley 13 (Coalinga)	40.24	7.1
Great Valley 10	44.68	6.5
Great Valley 14 (Kettleman Hills)	47.28	7.2
Great Valley 9	49.18	6.8
Ortogonalita	57.39	7.1
San Andreas fault - creeping segment	64.45	6.7
Great Valley 8	65.97	6.8
S. San Andreas; PK+CH+CC+BB+NM	66.24	7.7

*The faults tabulated above and numerous other faults in the region are sources of potential ground motion. However, earthquakes that might occur on other faults throughout California are also potential generators of significant ground motion and could subject the site to intense ground shaking.*

### 7.2 Surface Fault Rupture

The site is not within a currently established State of California Alquist-Priolo Earthquake Fault Zone (APEFZ) for surface fault rupture hazards. No active faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low.

### 7.3 Ground Shaking

We used the USGS web-based application *US Seismic Design Maps* to estimate the peak ground acceleration adjusted for site class effects ( $PGA_M$ ). Because of the proximity to the subject site and the maximum probable events for these faults, it appears that a maximum probable event along the fault zones could produce a peak horizontal acceleration of approximately **0.324g** (2% probability of being



exceeded in 50 years). While listing PGA is useful for comparison of potential effects of fault activity in a region, other considerations are important in seismic design, including frequency and duration of motion and soil conditions underlying the site.

#### **7.4 Seismicity and Calculation of Historical Earthquake Ground Motion**

A map of historical seismicity within 80 miles of the subject site is presented in Figure 5. The associated data table showing epicentral distances and associated estimated ground accelerations is presented in Appendix D. The data and map were generated using the computer program EQSearch (Blake, 2000).

The nearest earthquake with instrumental records was a M4.5 event approximately 47 kilometers from the subject site in November 1963, resulting in an estimated site ground acceleration of 0.04g. The largest earthquake with instrumental records within the search radius was the 1983 Mw 6.7 Coalinga Earthquake. This event had an estimated subject site ground acceleration (0.09g) and was located approximately 73 kilometers away. The highest estimate ground acceleration (0.10g) is associated with an estimated 5.5 magnitude event during 1864 located 11 km away.

Central California is moderately seismically active and will experience future earthquakes that will affect the project site. The earthquakes are predominately generated by periodic slip along the northwesterly trending faults associated with the San Andreas Fault system and the northwesterly trending low-angle thrust system of the Great Valley Fault System along eastern side of the Coast Ranges. Because of the proximity to the subject site and the maximum probable events for these faults, it appears that a maximum probable event along these fault zones could produce a peak horizontal acceleration of approximately 0.32g (2% probability of being exceeded in 50 years). With respect to this hazard, the site is comparable to others in this general area within similar geologic settings.

#### **7.5 Liquefaction**

Soil liquefaction is a state of soil particles suspension caused by a complete loss of strength when the effective stress drops to zero. Liquefaction normally occurs under saturated conditions in soils such as sand in which the strength is purely frictional. Primary factors that trigger liquefaction are: moderate to strong ground shaking (seismic source), relatively clean, loose granular soils (primarily poorly graded sands and silty sands), and saturated soil conditions (shallow groundwater). Due to the increasing overburden pressure with depth, liquefaction of granular soils is generally limited to the upper 50 feet of a soil profile. However, liquefaction has occurred in soils other than clean sand.

In general, the soils within the depth of exploration consisted alluvium deposits predominately of medium dense to very dense silty sand with varying amounts of cementation (hardpan), underlain by alternating layers of medium dense silty sand without cementation, medium dense to very dense silty sand/sandy silt, loose to dense sand, dense silty sand with trace clay and gravel, hard sandy silt, and medium dense silty sand/ sandy silt with trace clay, to the maximum depth of exploration, approximately 50.5 feet below surrounding grade surface. Free groundwater was not encountered during our field exploration; groundwater study was not a part of this investigation. Review of available recent records indicate groundwater depths were observed to exceed 100 feet bgs (below grade surface). See Section 8.2 for additional groundwater information.

A seismic hazard, which could cause damage to the proposed development during seismic shaking, is the post-liquefaction settlement of the liquefied sands. According to the State of California, Seismic Hazard Zonation Program, the site is NOT located within the potential liquefaction zone (see Figure 6). The liquefaction analysis indicated that the soils had a low potential for liquefaction under seismic conditions. Therefore, no mitigation measures are warranted. Detailed geotechnical engineering recommendations are presented in the remaining portions of the text. The recommendations are based on the properties of the materials identified during our investigation.

## 7.6 Seismic Densification

One of the most common phenomena during seismic shaking accompanying any earthquake is the induced settlement of loose unconsolidated soils. Based on site subsurface conditions and the moderate seismicity of the region, any loose granular materials at the site could be vulnerable to this potential hazard.

Our analysis of dynamic densification of “dry” soil in the upper 50 feet of existing soil profile was performed. For the analysis, a maximum earthquake magnitude of 6.09  $M_w$  and a peak horizontal ground surface acceleration of 0.324g (with a 2 percent probability of exceedance in 50 years) were considered appropriate for the analysis. The seismic densification of dry to damp alluvial sandy soils due to onsite seismic activity were calculated and are presented in the table below. The settlement analyses are attached to this addendum.

### SEISMIC DENSIFICATION ANALYSES RESULTS

Boring	Settlement (inches)
B-4	0.21

## 7.7 Lateral Spreading

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, topography, and free face geometry. Due to a depth to historical high groundwater exceeding 100 feet, we judge the likelihood of lateral spreading to be low.

## 7.8 Landslides

The site vicinity is flat. There are no known landslides at the site, nor is the site in the path of any known or potential landslides. We do not consider the potential for a landslide to be a hazard to this project (see Figure 6).

## 7.9 Other Geologic Hazards or Adverse Site Conditions

Based on FEMA Flood Insurance Rate Map No. 06019C1565H dated February 18, 2009, the subject site area is labeled Zone X, which designates areas of minimal flood hazard that are outside of a Special Flood Hazard Area (SFHA) and higher than the elevation of the 0.2-percent-annual-chance flood has (see Figure 7).

The subject site is not located within a dam inundation zone (Figure 8) as presented in the background report conducted for the Fresno County General Plan.

The site is not located within a coastal area. Therefore, tsunamis (seismic sea waves) are not considered a significant hazard at the site. Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Flooding from a seismically-induced seiche is considered unlikely.

## **8. SOIL AND GROUNDWATER CONDITIONS**

### **8.1 Subsurface Conditions**

The subsurface conditions encountered appear typical of those found in the geologic region of the site. In general, the soils within the depth of exploration consisted alluvium deposits of predominately of medium dense to very dense silty sand with varying amounts of cementation (hardpan), underlain by alternating layers of medium dense silty sand without cementation, medium dense to very dense silty sand/sandy silt, loose to dense sand, dense silty sand with trace clay and gravel, hard sandy silt, and medium dense silty sand/ sandy silt with trace clay, to the maximum depth of exploration, to the maximum depth of exploration, approximately 50.5 feet below surrounding grade surface.

Fill soils may be present onsite between our test borings. Verification of the extent of fill should be determined during site grading. Field and laboratory tests suggest that the deeper native soils are moderately strong and slightly compressible. These soils extended to the termination depth of our borings.

The soils were classified in the field during the drilling and sampling operations. The stratification lines were approximated by the field engineer on the basis of observations made at the time of drilling. The actual boundaries between different soil types may be gradual and soil conditions may vary. For a more detailed description of the materials encountered, the Boring Logs in Appendix "A" should be consulted.

The Boring Logs include the soil type, color, moisture content, dry density, and the applicable Unified Soil Classification System symbol. The locations of the test borings were determined by measuring from feature shown on the Site Plan, provided to us. Hence, accuracy can be implied only to the degree that this method warrants.

### **8.2 Groundwater**

The test boring locations were checked for the presence of groundwater during and after the drilling operations. Free Groundwater was not encountered within the depth of exploration, 50.5 feet below surrounding grade (bsg). The California Department of Water Resources "Lines of Equal Elevation in Water Wells," spring 2016, indicates the current depth to groundwater exceeds 100 feet bsg. Based on review of California Department Water Resources website (<http://www.water.ca.gov/>) for recent groundwater readings indicate the nearest Station (13S19E23E001M), located 1-mile northwest of the project site, indicated a recent depth to groundwater at approximately 103 feet bsg in March, 2016. Historical data in this well indicates a shallow groundwater depth of 80 feet bsg in March, 2012. However, upon further review of water level data from wells within a two (2) mile radius of the site, it appears groundwater levels were at relatively shallow depths (as shallow as 45 feet bsg in the late 1940's

within 1.25 miles of the subject site). We note that a steady decline in the depth to groundwater can be observed to current depths, which typically range from 117 to 168 feet below bsg.

Based on past discussions with CGS, SALEM understands that during the time period of the early to mid-1970, reservoir management practices lead to noticeably increased groundwater levels in the Central Valley. Based on the depth to groundwater data, the water surface elevation is shown to significantly decline after previous reservoir practices resumed. Relatively high groundwater levels were also observed in the mid to late 1980's and 1990's, which has been attributed to higher than normal precipitation.

Considering the groundwater data obtained from the DWR website and the boring data from the project site, it is our belief that any significant increase in regional groundwater levels is unlikely. Reservoir management practices have been shown to produce higher groundwater levels in the valley. However, short of a major shift in reservoir management (e.g. removal of up-stream dams), and considering the decline of groundwater levels, it is highly unlikely that the groundwater levels would return to the shallow pre-reservoir groundwater levels of the 1950's and earlier.

It is possible that groundwater conditions at the site could change at some time in the future due to variations in rainfall, groundwater withdrawal, regional agricultural production, construction activities, or other factors not apparent at the time our test borings were made. However, groundwater is not anticipated to impact design or construction. It is suggested that a high groundwater depth of 45 feet bsg be used for design.

It should be recognized that water table elevations may fluctuate with time, being dependent upon seasonal precipitation, irrigation, land use, localized pumping, and climatic conditions as well as other factors. Therefore, water level observations at the time of the field investigation may vary from those encountered during the construction phase of the project. The evaluation of such factors is beyond the scope of this report.

### **8.3 Soil Corrosion Screening**

Excessive sulfate in either the soil or native water may result in an adverse reaction between the cement in concrete and the soil. The 2011 Edition of ACI 318 (ACI 318) has established criteria for evaluation of sulfate and chloride levels and how they relate to cement reactivity with soil and/or water.

A soil sample was obtained from the project site and was tested for the evaluation of the potential for concrete deterioration or steel corrosion due to attack by soil-borne soluble salts and soluble chloride. The water-soluble sulfate concentration in the saturation extract from the soil sample was detected to be 120 mg/kg.

ACI 318 Tables 4.2.1 and 4.3.1 outline exposure categories, classes, and concrete requirements by exposure class. ACI 318 requirements for site concrete based upon soluble sulfate are summarized in Table 8.3 below.

**TABLE 8.3**  
**WATER SOLUBLE SULFATE EXPOSURE REQUIREMENTS**

<b>Water Soluble Sulfate (SO<sub>4</sub>) in Soil, Percentage by Weight</b>	<b>Exposure Severity</b>	<b>Exposure Class</b>	<b>Maximum w/cm Ratio</b>	<b>Minimum Concrete Compressive Strength</b>	<b>Cementations Materials Type</b>
0.012	Not Applicable	S0	N/A	2,500 psi	No Restriction

The water-soluble chloride concentration detected in saturation extract from the soil samples was 20 mg/kg. This level of chloride concentration is considered low. It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, applicable manufacturer's recommendations for corrosion protection of buried metal pipe be closely followed.

## **9. CONCLUSIONS AND RECOMMENDATIONS**

### **9.1 General**

- 9.1.1 Based upon the data collected during this investigation, and from a geotechnical engineering standpoint, it is our opinion that the site is suitable for the proposed construction of improvements at the site as planned, provided the recommendations contained in this report are incorporated into the project design and construction. Conclusions and recommendations provided in this report are based on our review of available literature, analysis of data obtained from our field exploration and laboratory testing program, and our understanding of the proposed development at this time.
- 9.1.2 The primary geotechnical constraints identified in our investigation is the presence of potentially compressible material at the site. Recommendations to mitigate the effects of these soils are provided in this report.
- 9.1.3 Fill materials may be present onsite between our boring locations. Undocumented fill materials are not suitable to support any future structures and should be replaced with Engineered Fill. The extent and consistency of the fills should be verified during site construction. Prior to fill placement, Salem Engineering Group, Inc. should inspect the bottom of the excavation to verify the fill condition.
- 9.1.4 Site demolition activities shall include removal of all surface obstructions not intended to be incorporated into final site design. In addition, underground buried structures and/or utility lines encountered during demolition and construction should be properly removed and the resulting excavations backfilled with Engineered Fill. After demolition activities, it is recommended that disturbed soils be removed and/or recompacted.
- 9.1.5 The near-surface onsite soils are moisture-sensitive and are moderately compressible (collapsible soil) under saturated conditions. Structures within the project vicinity have experienced excessive post-construction settlement, when the foundation soils become near

saturated. The collapsible or weak soils should be removed and recompacted according to the recommendations in the Grading section of this report (Section 9.5).

- 9.1.6 Based on the subsurface conditions at the site and the anticipated structural loading, we anticipate that the proposed building may be supported using conventional shallow foundations provided that the recommendations presented herein are incorporated in the design and construction of the project.
- 9.1.7 Provided the site is graded in accordance with the recommendations of this report and foundations constructed as described herein, we estimate that total settlement due to static loads utilizing conventional shallow foundations for the proposed buildings will be less than 1-inch and corresponding differential settlement will be less than ½-inch.
- 9.1.8 All references to relative compaction and optimum moisture content in this report are based on ASTM D 1557 (latest edition).
- 9.1.9 The shrinkage of recompacted soil and fill placement is estimated at 10 to 20 percent. This value is an estimate and may vary significantly depending on several items including soil conditions, compaction effort, weather, etc. Subsidence within building areas, below the Engineered Fill, is anticipated to be less than 0.05 foot, due to the recommended over-excavation. Subsidence within parking areas, below the 12-inch recompaction depth, is estimated at 0.1 foot.
- 9.1.10 SALEM shall review the project drainage plans, foundation plans, and structural plans and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required. If SALEM is not provided plans and specifications for review, we cannot assume any responsibility for the future performance of the project.
- 9.1.11 SALEM shall be present at the site during site demolition and preparation to observe site clearing/demolition, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.
- 9.1.12 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

## **9.2 Seismic Design Criteria**

- 9.2.1 For seismic design of the structures, and in accordance with the seismic provisions of the 2013 CBC, our recommended parameters are shown below. These parameters are based on Probabilistic Ground Motion of 2% Probability of Exceedance in 50 years. The Site Class was determined based on the results of our field exploration.

**TABLE 9.2.1  
2013 CBC SEISMIC DESIGN PARAMETERS**

Seismic Item	Symbol	Value	2010 ASCE 7 or 2013 CBC Reference
Site Coordinates (Datum = NAD 83)		36.7801 Lat -119.8638 Lon	
Site Class	--	D	ASCE 7 Table 20.3
Soil Profile Name	--	Stiff Soil	ASCE 7 Table 20.3
Risk Category	--	II	CBC Table 1604.5
Site Coefficient for PGA	$F_{PGA}$	1.301	ASCE 7 Table 11.8-1
Peak Ground Acceleration (adjusted for Site Class effects)	$PGA_M$	0.324 g	ASCE 7 Equation 11.8-1
Seismic Design Category	SDC	D	ASCE 7 Table 11.6-1 & 2
Mapped Spectral Acceleration (Short period - 0.2 sec)	$S_S$	0.674 g	CBC Figure 1613.3.1(1-6)
Mapped Spectral Acceleration (1.0 sec. period)	$S_1$	0.266 g	CBC Figure 1613.3.1(1-6)
Site Class Modified Site Coefficient	$F_a$	1.261	CBC Table 1613.3.3(1)
Site Class Modified Site Coefficient	$F_v$	1.867	CBC Table 1613.3.3(2)
MCE Spectral Response Acceleration (Short period - 0.2 sec) $S_{MS} = F_a S_S$	$S_{MS}$	0.849 g	CBC Equation 16-37
MCE Spectral Response Acceleration (1.0 sec. period) $S_{M1} = F_v S_1$	$S_{M1}$	0.497 g	CBC Equation 16-38
Design Spectral Response Acceleration $S_{DS} = \frac{2}{3} S_{MS}$ (short period - 0.2 sec)	$S_{DS}$	0.566 g	CBC Equation 16-39
Design Spectral Response Acceleration $S_{D1} = \frac{2}{3} S_{M1}$ (1.0 sec. period)	$S_{D1}$	0.332 g	CBC Equation 16-40

9.2.2 Conformance to the criteria in the above table for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

### 9.3 Soil and Excavation Characteristics

9.3.1 Based on the soil conditions encountered in our soil borings, the onsite soils can be excavated with moderate effort using conventional excavation equipment.

9.3.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable Occupational Safety and Health Administration (OSHA) rules and regulations to maintain safety and maintain the stability of adjacent existing improvements.



- 9.3.3 The upper soils are moisture-sensitive and moderately collapsible under saturated conditions. These soils, in their present condition, possess moderate risk to construction in terms of possible post-construction movement of the foundations and floor systems if no mitigation measures are employed. Accordingly, measures are considered necessary to reduce anticipated collapse potential. Mitigation measures will not eliminate post-construction soil movement, but will reduce the soil movement. Success of the mitigation measures will depend on the thoroughness of the contractor in dealing with the soil conditions.
- 9.3.4 The near surface soils identified as part of our investigation are, generally, moist to wet due to the absorption characteristics of the soil. Earthwork operations may encounter very moist unstable soils which may require removal to a stable bottom. Exposed native soils exposed as part of site grading operations shall not be allowed to dry out and should be kept continuously moist prior to placement of subsequent fill.

**9.4 Materials for Fill**

- 9.4.1 Excavated soils generated from cut operations at the site are suitable for use as general Engineered Fill in structural areas, provided they have an Expansion Index of 20 or less, do not contain deleterious matter, organic material, or rock material larger than 3 inches in maximum dimension.
- 9.4.2 Import soil shall be well-graded, slightly cohesive silty fine sand or sandy silt, with relatively impervious characteristics when compacted. A clean sand or very sandy soil is not acceptable for this purpose. This material should be approved by the Engineer prior to use and should typically possess the soil characteristics summarized below in Table 9.4.2.

**TABLE 9.4.2  
IMPORT FILL REQUIREMENTS**

Minimum Percent Passing No. 200 Sieve	15
Maximum Percent Passing No. 200 Sieve	50
Maximum Particle Size	3"
Maximum Plasticity Index	12
Maximum CBC Expansion Index	20

- 9.4.3 The preferred materials specified for Engineered Fill are suitable for most applications with the exception of exposure to erosion. Project site winterization and protection of exposed soils during the construction phase should be the sole responsibility of the Contractor, since they have complete control of the project site.
- 9.4.4 Environmental characteristics and corrosion potential of import soil materials should also be considered.



9.4.5 Proposed import materials should be sampled, tested, and approved by SALEM prior to its transportation to the site.

## **9.5 Grading**

9.5.1 A SALEM representative should be present during all site clearing and grading operations to test and observe earthwork construction. This testing and observation is an integral part of our service as acceptance of earthwork construction is dependent upon compaction of the material and the stability of the material. The Geotechnical Engineer may reject any material that does not meet compaction and stability requirements. Further recommendations of this report are predicated upon the assumption that earthwork construction will conform to recommendations set forth in this section as well as other portions of this report.

9.5.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer and geotechnical engineer in attendance.

9.5.3 Site preparation should begin with removal of existing surface/subsurface structures, underground utilities (as required), any existing uncertified fill, and debris. Excavations or depressions resulting from site clearing operations, or other existing excavations or depressions, should be restored with Engineered Fill in accordance with the recommendations of this report.

9.5.4 Surface vegetation consisting of grasses and other similar vegetation should be removed by stripping to a sufficient depth to remove organic-rich topsoil. The upper 2 to 4 inches of the soils containing, vegetation, roots and other objectionable organic matter encountered at the time of grading should be stripped and removed from the surface. Deeper stripping may be required in localized areas. In addition, existing concrete and asphalt materials shall be removed from areas of proposed improvements and stockpiled separately from excavated soil material. The stripped vegetation, asphalt and concrete materials will not be suitable for use as Engineered Fill or within 5 feet of building pads or within pavement areas. However, stripped topsoil may be stockpiled and reused in landscape or non-structural areas or exported from the site.

Where not to remain, existing trees should be removed and their root systems should be thoroughly cleared of root balls as well as isolated roots greater than 1/4-inch in diameter. The root system removal may disturb a significant quantity of soil. Following tree removal, all loose and disturbed soil should be removed from the resulting wells. Grading should include a reasonable search to locate soil disturbed by any necessary demolition and vine removal, existing foundations, any undocumented fill soils, abandoned underground structures, or existing utilities (e.g. irrigation) that may exist within the area of construction. Any subsurface obstructions should be removed from the project area. Any areas or pockets of soft or loose soils, void spaces made by burrowing animals, undocumented fill, or other disturbed soil (i.e. soil disturbed by root removal) that are encountered, should be excavated to expose approved firm native material. Care should be taken during site grading to mitigate (e.g. excavate and recompact) all soil disturbed by demolition and tree removal activities.

9.5.5 Structural building pad areas should be considered as areas extending a minimum of 5 feet horizontally beyond the outside dimensions of buildings, including footings and non-cantilevered overhangs carrying structural loads.

- 9.5.6 To minimize post-construction soil movement and provide uniform support for the proposed structures, it is recommended that the overexcavation and recompaction within the proposed building area be performed to a minimum depth of **three (3) feet below existing grade or two (2) foot below proposed footing bottom**, whichever is deeper. The overexcavation and recompaction should also extend laterally to a minimum of 5 feet beyond the outer edges of the proposed footings
- 9.5.7 Any fill materials encountered during grading should be removed and replaced with engineered fill. The actual depth of the overexcavation and recompaction should be determined by our field representative during construction.
- 9.5.8 Prior to placement of fill soils, the upper 8 to 10 inches of native subgrade soils should be scarified, moisture-conditioned to no less than the optimum moisture content and recompacted to a minimum of 95% of the maximum dry density based on ASTM D1557-07 Test Method.
- 9.5.9 All Engineered Fill (including scarified ground surfaces and backfill) should be placed in thin lifts to allow for adequate bonding and compaction (typically 6 to 8 inches in loose thickness).
- 9.5.10 Engineered Fill soils should be placed, moisture conditioned to near optimum moisture content, and compacted to at least 95% relative compaction.
- 9.5.11 An integral part of satisfactory fill placement is the stability of the placed lift of soil. If placed materials exhibit excessive instability as determined by a SALEM field representative, the lift will be considered unacceptable and shall be remedied prior to placement of additional fill material. Additional lifts should not be placed if the previous lift did not meet the required dry density or if soil conditions are not stable.
- 9.5.12 Within pavement areas if any, it is recommended that scarification, moisture conditioning and recompaction be performed to at least 12 inches below existing grade or finish grade, whichever is deeper. In addition, the upper 12 inches of final pavement subgrade, whether completed at-grade, by excavation, or by filling, should be uniformly moisture-conditioned to no less than the optimum moisture content and compacted to at least 95% relative compaction.
- 9.5.13 Final pavement subgrade should be finished to a smooth, unyielding surface. We further recommend proof-rolling the subgrade with a loaded water truck (or similar equipment with high contact pressure) to verify the stability of the subgrade prior to placing aggregate base.
- 9.5.14 The most effective site preparation alternatives will depend on site conditions prior to grading. We should evaluate site conditions and provide supplemental recommendations immediately prior to grading, if necessary.
- 9.5.15 We do not anticipate groundwater or seepage to adversely affect construction if conducted during the drier months of the year (typically summer and fall). However, groundwater and soil moisture conditions could be significantly different during the wet season (typically winter and spring) as surface soil becomes wet; perched groundwater conditions may develop. Grading during this time period will likely encounter wet materials resulting in possible excavation and fill placement difficulties. Project site winterization consisting of placement of aggregate base and protecting

exposed soils during construction should be performed. If the construction schedule requires grading operations during the wet season, we can provide additional recommendations as conditions warrant.

- 9.5.16 The wet soils may become non conducive to site grading as the upper soils yield under the weight of the construction equipment. Therefore, mitigation measures should be performed for stabilization. Typical remedial measures include: discing and aerating the soil during dry weather; mixing the soil with dryer materials; removing and replacing the soil with an approved fill material or placement of crushed rocks or aggregate base material; or mixing the soil with an approved lime or cement product.

The most common remedial measure of stabilizing the bottom of the excavation due to wet soil condition is to reduce the moisture of the soil to near the optimum moisture content by having the subgrade soils scarified and aerated or mixed with drier soils prior to compacting. However, the drying process may require an extended period of time and delay the construction operation. To expedite the stabilizing process, crushed rock may be utilized for stabilization provided this method is approved by the owner for the cost purpose.

If the use of crushed rock is considered, it is recommended that the upper soft and wet soils be replaced by 6 to 24 inches of  $\frac{3}{4}$ -inch to 1-inch crushed rocks. The thickness of the rock layer depends on the severity of the soil instability. The recommended 6 to 24 inches of crushed rock material will provide a stable platform. It is further recommended that lighter compaction equipment be utilized for compacting the crushed rock. A layer of geofabric is recommended to be placed on top of the compacted crushed rock to minimize migration of soil particles into the voids of the crushed rock, resulting in soil movement. Although it is not required, the use of geogrid (e.g. Tensar BX 1100 or TX 160) below the crushed rock will enhance stability and reduce the required thickness of crushed rock necessary for stabilization.

Our firm should be consulted prior to implementing remedial measures to provide appropriate recommendations.

## **9.6 Shallow Foundations**

- 9.6.1 The site is suitable for use of conventional shallow foundations consisting of continuous footings and isolated pad footings bearing in properly compacted Engineered Fill.
- 9.6.2 The bearing wall footings considered for the structure should be continuous with a minimum width of 15 inches and extend to a minimum depth of 18 inches below the lowest adjacent grade. Isolated column footings should have a minimum width of 24 inches and extend a minimum depth of 18 inches below the lowest adjacent grade. The bottom of footing excavations should be maintained free of loose and disturbed soil. Footing concrete should be placed into a neat excavation.
- 9.6.3 Footings proportioned as recommended above may be designed for the maximum allowable soil bearing pressures shown in the table below.

Loading Condition	Allowable Bearing
Dead Load Only	2,500 psf
Dead-Plus-Live Load	3,000 psf
Total Load, Including Wind or Seismic Loads	4,000 psf

- 9.6.4 For design purposes, total settlement due to static loading on the order of 1 inch may be assumed for shallow footings. Differential settlement due to static loading, along a 20-foot exterior wall footing or between adjoining column footings, should be ½ inch, producing an angular distortion of 0.002. Most of the settlement is expected to occur during construction as the loads are applied. However, additional post-construction settlement may occur if the foundation soils are flooded or saturated. The footing excavations should not be allowed to dry out any time prior to pouring concrete.
- 9.6.5 Resistance to lateral footing displacement can be computed using an allowable coefficient of friction factor of 0.40 acting between the base of foundations and the supporting native subgrade.
- 9.6.6 Lateral resistance for footings can alternatively be developed using an ultimate equivalent fluid passive pressure of 400 pounds per cubic foot acting against the appropriate vertical native footing faces. The frictional and passive resistance of the soil may be combined without reduction in determining the total lateral resistance. An increase of one-third is permitted when using the alternate load combination in Section 1605.3.2 of the 2013 CBC that includes wind or earthquake loads.
- 9.6.7 Minimum reinforcement for footings should consist of four No. 4 steel reinforcing bars; two placed near the top of the footing and two near the bottom or be designed by the project structural engineer.
- 9.6.8 Underground utilities running parallel to footings should not be constructed in the zone of influence of footings. The zone of influence may be taken to be the area beneath the footing and within a 1:1 plane extending out and down from the bottom edge of the footing.
- 9.6.9 The foundation subgrade should be sprinkled as necessary to maintain a moist condition without significant shrinkage cracks as would be expected in any concrete placement. Prior to placing rebar reinforcement, foundation excavations should be evaluated by a representative of SALEM for appropriate support characteristics and moisture content. Moisture conditioning may be required for the materials exposed at footing bottom, particularly if foundation excavations are left open for an extended period.

## 9.7 Concrete Slabs-on-Grade

- 9.7.1 Slab thickness and reinforcement should be determined by the structural engineer based on the anticipated loading. We recommend that non-structural slabs-on-grade be at least 4 inches thick and underlain by six (6) inches of compacted granular aggregate subbase material compacted to at least 95% relative compaction.

- 9.7.2 Granular aggregate subbase material shall conform to ASTM D-2940, Latest Edition (Table 1, bases) with at least 95 percent passing a 1½-inch sieve and not more than 8% passing a No. 200 sieve to prevent capillary moisture rise.
- 9.7.3 We recommend reinforcing slabs, at a minimum, with No. 3 reinforcing bars placed 18 inches on center, each way.
- 9.7.4 Slabs subject to structural loading may be designed utilizing a modulus of subgrade reaction K of 180 pounds per square inch per inch. The K value was approximated based on inter-relationship of soil classification and bearing values (Portland Cement Association, Rocky Mountain Northwest).
- 9.7.5 The spacing of crack control joints should be designed by the project structural engineer. In order to regulate cracking of the slabs, we recommend that full depth construction joints or control joints be provided at a maximum spacing of 15 feet in each direction for 5-inch thick slabs and 12 feet for 4-inch thick slabs.
- 9.7.6 Crack control joints should extend a minimum depth of one-fourth the slab thickness and should be constructed using saw-cuts or other methods as soon as practical after concrete placement. The exterior floors should be poured separately in order to act independently of the walls and foundation system.
- 9.7.7 It is recommended that the utility trenches within the structure be compacted, as specified in our report, to minimize the transmission of moisture through the utility trench backfill. Special attention to the immediate drainage and irrigation around the structures is recommended.
- 9.7.8 Moisture within the structure may be derived from water vapors, which were transformed from the moisture within the soils. This moisture vapor penetration can affect floor coverings and produce mold and mildew in the structure. To minimize moisture vapor intrusion, it is recommended that a vapor retarder be installed in accordance with manufacturer's recommendations and/or ASTM guidelines, whichever is more stringent. In addition, ventilation of the structure is recommended to reduce the accumulation of interior moisture.
- 9.7.9 In areas where it is desired to reduce floor dampness where moisture-sensitive coverings are anticipated, construction should have a suitable waterproof vapor retarder (a minimum of 15 mils thick polyethylene vapor retarder sheeting, Raven Industries "VaporBlock 15, Stego Industries 15 mil "StegoWrap" or W.R. Meadows Sealtight 15 mil "Perminator") incorporated into the floor slab design. The water vapor retarder should be decay resistant material complying with ASTM E96 not exceeding 0.04 perms, ASTM E154 and ASTM E1745 Class A. The vapor barrier should be placed between the concrete slab and the compacted granular aggregate subbase material. The water vapor retarder (vapor barrier) should be installed in accordance with ASTM Specification E 1643-94.
- 9.7.10 The concrete maybe placed directly on vapor retarder. The vapor retarder should be inspected prior to concrete placement. Cut or punctured retarder should be repaired using vapor retarder material lapped 6 inches beyond damaged areas and taped.

- 9.7.11 The recommendations of this report are intended to reduce the potential for cracking of slabs due to soil movement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to soil movement. This is common for project areas that contain expansive soils since designing to eliminate potential soil movement is cost prohibitive. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.
- 9.7.12 Proper finishing and curing should be performed in accordance with the latest guidelines provided by the American Concrete Institute, Portland Cement Association, and ASTM.

**9.8 Lateral Earth Pressures and Frictional Resistance**

- 9.8.1 Active, at-rest and passive unit lateral earth pressures against footings and walls are summarized in the table below:

<b>Lateral Pressure Conditions</b>	<b>Ultimate Equivalent Fluid Pressure, pcf</b>
Active Pressure, Drained	35
At-Rest Pressure, Drained	55
Passive Pressure	400
<b>Related Parameters</b>	
Allowable Coefficient of Friction	0.40
In-Place Soil Density (lbs/ft <sup>3</sup> )	120

- 9.8.2 Active pressure applies to walls, which are free to rotate. At-rest pressure applies to walls, which are restrained against rotation. The preceding lateral earth pressures assume sufficient drainage behind retaining walls to prevent the build-up of hydrostatic pressure. The top one-foot of adjacent subgrade should be deleted from the passive pressure computation.
- 9.8.3 The foregoing values of lateral earth pressures and frictional coefficients represent ultimate soil values and a safety factor consistent with the design conditions should be included in their usage.
- 9.8.4 For stability against lateral sliding, which is resisted solely by the passive pressure, we recommend a minimum safety factor of 1.5. For stability against lateral sliding, which is resisted by the combined passive and frictional resistance, a minimum safety factor of 2.0 is recommended. For lateral stability against seismic loading conditions, we recommend a minimum safety factor of 1.1.
- 9.8.5 For dynamic seismic lateral loading the following equation shall be used:

<b>Dynamic Seismic Lateral Loading Equation</b>
Dynamic Seismic Lateral Load = $\frac{3}{8}\gamma K_h H^2$
Where: $\gamma$ = In-Place Soil Density
$K_h$ = Horizontal Acceleration = $\frac{2}{3}PG_{AM}$
H = Wall Height

**9.9 Retaining Walls**

- 9.9.1 Retaining and/or below grade walls should be drained with either perforated pipe encased in free-draining gravel or a prefabricated drainage system. The gravel zone should have a minimum width of 12 inches wide and should extend upward to within 12 inches of the top of the wall. The upper 12 inches of backfill should consist of native soils, concrete, asphaltic-concrete or other suitable backfill to minimize surface drainage into the wall drain system. The gravel should conform to Class II permeable materials graded in accordance with the current CalTrans Standard Specifications.
- 9.9.2 Prefabricated drainage systems, such as Miradrain®, Enkadrain®, or an equivalent substitute, are acceptable alternatives in lieu of gravel provided they are installed in accordance with the manufacturer’s recommendations. If a prefabricated drainage system is proposed, our firm should review the system for final acceptance prior to installation.
- 9.9.3 Drainage pipes should be placed with perforations down and should discharge in a non-erosive manner away from foundations and other improvements. The top of the perforated pipe should be placed at or below the bottom of the adjacent floor slab or pavements. The pipe should be placed in the center line of the drainage blanket and should have a minimum diameter of 4 inches. Slots should be no wider than 1/8-inch in diameter, while perforations should be no more than 1/4-inch in diameter.
- 9.9.4 If retaining walls are less than 5 feet in height, the perforated pipe may be omitted in lieu of weep holes on 4 feet maximum spacing. The weep holes should consist of 2-inch minimum diameter holes (concrete walls) or unmortared head joints (masonry walls) and placed no higher than 18 inches above the lowest adjacent grade. Two 8-inch square overlapping patches of geotextile fabric (conforming to the CalTrans Standard Specifications for "edge drains") should be affixed to the rear wall opening of each weep hole to retard soil piping.
- 9.9.5 During grading and backfilling operations adjacent to any walls, heavy equipment should not be allowed to operate within a lateral distance of 5 feet from the wall, or within a lateral distance equal to the wall height, whichever is greater, to avoid developing excessive lateral pressures. Within this zone, only hand operated equipment ("whackers," vibratory plates, or pneumatic compactors) should be used to compact the backfill soils.

**9.10 Temporary Excavations**

- 9.10.1 We anticipate that the majority of the sandy site soils will be classified as Cal-OSHA “Type C” soil when encountered in excavations during site development and construction. Excavation



sloping, benching, the use of trench shields, and the placement of trench spoils should conform to the latest applicable Cal-OSHA standards. The contractor should have a Cal-OSHA-approved “competent person” onsite during excavation to evaluate trench conditions and make appropriate recommendations where necessary.

- 9.10.2 It is the contractor’s responsibility to provide sufficient and safe excavation support as well as protecting nearby utilities, structures, and other improvements which may be damaged by earth movements. All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load.
- 9.10.3 Temporary excavations and slope faces should be protected from rainfall and erosion. Surface runoff should be directed away from excavations and slopes.
- 9.10.4 Open, unbraced excavations in undisturbed soils should be made according to the slopes presented in the following table:

**RECOMMENDED EXCAVATION SLOPES**

Depth of Excavation (ft)	Slope (Horizontal : Vertical)
0-5	1:1
5-10	2:1

- 9.10.5 If, due to space limitation, excavations near property lines or existing structures are performed in a vertical position, slot cuts, braced shorings or shields may be used for supporting vertical excavations. Therefore, in order to comply with the local and state safety regulations, a properly designed and installed shoring system would be required to accomplish planned excavations and installation. A Specialty Shoring Contractor should be responsible for the design and installation of such a shoring system during construction.
- 9.10.6 Braced shorings should be designed for a maximum pressure distribution of 25H, (where H is the depth of the excavation in feet). The foregoing does not include excess hydrostatic pressure or surcharge loading. Fifty percent of any surcharge load, such as construction equipment weight, should be added to the lateral load given herein. Equipment traffic should concurrently be limited to an area at least 3 feet from the shoring face or edge of the slope.
- 9.10.7 The excavation and shoring recommendations provided herein are based on soil characteristics derived from the borings within the area. Variations in soil conditions will likely be encountered during the excavations. SALEM Engineering Group, Inc. should be afforded the opportunity to provide field review to evaluate the actual conditions and account for field condition variations not otherwise anticipated in the preparation of this recommendation. Slope height, slope inclination, or excavation depth should in no case exceed those specified in local, state, or federal



safety regulation, (e.g. OSHA) standards for excavations, 29 CFR part 1926, or Assessor's regulations.

## **9.11 Underground Utilities**

- 9.11.1 Underground utility trenches should be backfilled with properly compacted material. The material excavated from the trenches should be adequate for use as backfill provided it does not contain deleterious matter, vegetation or rock larger than 3 inches in maximum dimension. Trench backfill should be placed in loose lifts not exceeding 8 inches and compacted to at least 95% relative compaction at or above optimum moisture content.
- 9.11.2 Bedding and pipe zone backfill typically extends from the bottom of the trench excavations to approximately 6 to 12 inches above the crown of the pipe. Pipe bedding and backfill material should conform to the requirements of the governing utility agency.
- 9.11.3 It is suggested that underground utilities crossing beneath new or existing structures be plugged at entry and exit locations to the building or structure to prevent water migration. Trench plugs can consist of on-site clay soils, if available, or sand cement slurry. The trench plugs should extend 2 feet beyond each side of individual perimeter foundations.
- 9.11.4 The contractor is responsible for removing all water-sensitive soils from the trench regardless of the backfill location and compaction requirements. The contractor should use appropriate equipment and methods to avoid damage to the utilities and/or structures during fill placement and compaction.

## **9.12 Surface Drainage**

- 9.12.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change to important engineering properties. Proper drainage should be maintained at all times.
- 9.12.2 The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than 5 percent for a minimum distance of 10 feet.
- 9.12.3 Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the building and drainage gradients maintained to carry all surface water to collection facilities and off site. These grades should be maintained for the life of the project. Ponding of water should not be allowed adjacent to the structure. Over-irrigation within landscaped areas adjacent to the structure should not be performed.
- 9.12.4 Roof drains should be installed with appropriate downspout extensions out-falling on splash blocks so as to direct water a minimum of 5 feet away from the structures or be connected to the storm drain system for the development.

**9.13 Pavement Design**

9.13.1 Based upon the site soil conditions and the R-Value test results, the minimum sections required by Dollar General presented in the table below, are recommended for flexible asphaltic concrete pavement design. One (1) Resistance Value (R-Value) tests RV-1, was performed at the locations as indicated on the attached Site Plan, corresponding to areas proposed for pavement. RV-1 had a test result of 43. An R-value of 43 was utilized for design of project pavements.

9.13.2 The pavement design recommendations provided herein are based on the State of California Department of Transportation (CALTRANS) design manual. The asphaltic concrete (flexible pavement) is based on a 20-year pavement life utilizing 1200 passenger vehicles, 10 single unit trucks, and 2 multi-unit trucks. The following table shows the recommended pavement sections for various traffic indices.

**TABLE 9.13.2.1  
ASPHALT CONCRETE PAVEMENT THICKNESSES**

<b>Traffic Area</b>	<b>Asphalt Concrete (inches)</b>	<b>Class II Aggregate Base* (inches)</b>	<b>Compacted Subgrade* (inches)</b>
Light Duty TI=5.0	3.0	4.0	12.0
Heavy Duty (Bus Areas) TI=6.5	4.0	5.5	12.0

*\*95% compaction based on ASTM D1557-07 Test Method*

The following recommendations are for light-duty and heavy-duty Portland Cement Concrete pavement sections.

**TABLE 9.13.2.2  
PORTLAND CEMENT CONCRETE PAVEMENT THICKNESSES**

<b>Traffic Area</b>	<b>Portland Cement Concrete* (inches)</b>	<b>Class II Aggregate Base** (inches)</b>	<b>Compacted Subgrade** (inches)</b>
Standard Duty TI=5.0	4.5	4.0	12.0
Heavy Duty (Bus Areas) TI=6.5	6.0	4.0	12.0

*\* Minimum Compressive Strength of 4,000 psi  
\*\* 95% compaction based on ASTM D1557-07 Test Method or Cal 216*

## **10. PLAN REVIEW, CONSTRUCTION OBSERVATION AND TESTING**

### **10.1 Plan and Specification Review**

10.1.1 SALEM should review the project plans and specifications prior to final design submittal to assess whether our recommendations have been properly implemented and evaluate if additional analysis and/or recommendations are required.

### **10.2 Construction Observation and Testing Services**

10.2.1 The recommendations provided in this report are based on the assumption that we will continue as Geotechnical Engineer of Record throughout the construction phase. It is important to maintain continuity of geotechnical interpretation and confirm that field conditions encountered are similar to those anticipated during design. If we are not retained for these services, we cannot assume any responsibility for others interpretation of our recommendations, and therefore the future performance of the project.

10.2.2 SALEM should be present at the site during site preparation to observe site clearing, preparation of exposed surfaces after clearing, and placement, treatment and compaction of fill material.

10.2.3 SALEM's observations should be supplemented with periodic compaction tests to establish substantial conformance with these recommendations. Moisture content of footings and slab subgrade should be tested immediately prior to concrete placement. SALEM should observe foundation excavations prior to placement of reinforcing steel or concrete to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report.

## **11. LIMITATIONS AND CHANGED CONDITIONS**

The analyses and recommendations submitted in this report are based upon the data obtained from the test borings drilled at the approximate locations shown on the Site Plan, Figure 2. The report does not reflect variations which may occur between borings. The nature and extent of such variations may not become evident until construction is initiated.

If variations then appear, a re-evaluation of the recommendations of this report will be necessary after performing on-site observations during the excavation period and noting the characteristics of such variations. The findings and recommendations presented in this report are valid as of the present and for the proposed construction.

If site conditions change due to natural processes or human intervention on the property or adjacent to the site, or changes occur in the nature or design of the project, or if there is a substantial time lapse between the submission of this report and the start of the work at the site, the conclusions and recommendations contained in our report will not be considered valid unless the changes are reviewed by SALEM and the conclusions of our report are modified or verified in writing. The validity of the recommendations contained in this report is also dependent upon an adequate testing and observations program during the construction phase. Our firm assumes no responsibility for construction compliance with the design concepts or recommendations unless we have been retained to perform the on-site testing and review during

construction. SALEM has prepared this report for the exclusive use of the owner and project design consultants

SALEM does not practice in the field of corrosion engineering. It is recommended that a qualified corrosion engineer be consulted regarding protection of buried steel or ductile iron piping and conduit or, at a minimum, that manufacturer's recommendations for corrosion protection be closely followed. Further, a corrosion engineer may be needed to incorporate the necessary precautions to avoid premature corrosion of concrete slabs and foundations in direct contact with native soil. The importation of soil and or aggregate materials to the site should be screened to determine the potential for corrosion to concrete and buried metal piping. The report has been prepared in accordance with generally accepted geotechnical engineering practices in the area. No other warranties, either express or implied, are made as to the professional advice provided under the terms of our agreement and included in this report.

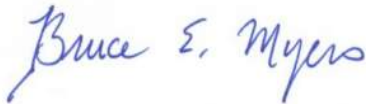
If you have any questions, or if we may be of further assistance, please do not hesitate to contact our office at (559) 271-9700.

Respectfully Submitted,

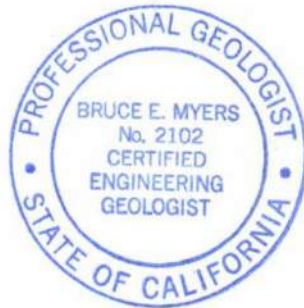
**SALEM ENGINEERING GROUP, INC.**



Shaun Reich, EIT  
Geotechnical Project Engineer  
Central / Northern California



Bruce E. Myers, GE, CEG  
Sr. Engineer / Engineering Geologist  
RGE 3014 / CEG 2102



R. Sammy Salem, MS, PE, GE  
Principal Managing Engineer  
RCE 52762 / RGE 2549



## REFERENCES

Blake, Thomas F. 2000. EQSearch – A Computer Program for the Estimation of Peak Horizontal Acceleration from California Historical Earthquake Catalogs (catalog updated through 6/15/2011).

California Division of Mines and Geology staff, 1965, Geologic Map of California, Fresno Sheet.

California Geological Survey, Staff, 2003, Official Seismic Hazard Zone Map, Official Map of Seismic Hazard Zones, scale 1:24,000.

County of Fresno General Plan, 2010, Background Report; available at <http://generalplan.co.Fresno.ca.us>

U.S. Dept. Homeland Security; FEMA Flood Hazard Mapping; <https://msc.fema.gov/portal>










**SITE PLAN**  
**GEOTECHNICAL ENGINEERING INVESTIGATION**  
 Proposed New Elementary School  
 Central Unified School District  
 NWC W. Shield Avenue & N. Brawley Avenue  
 Fresno, California

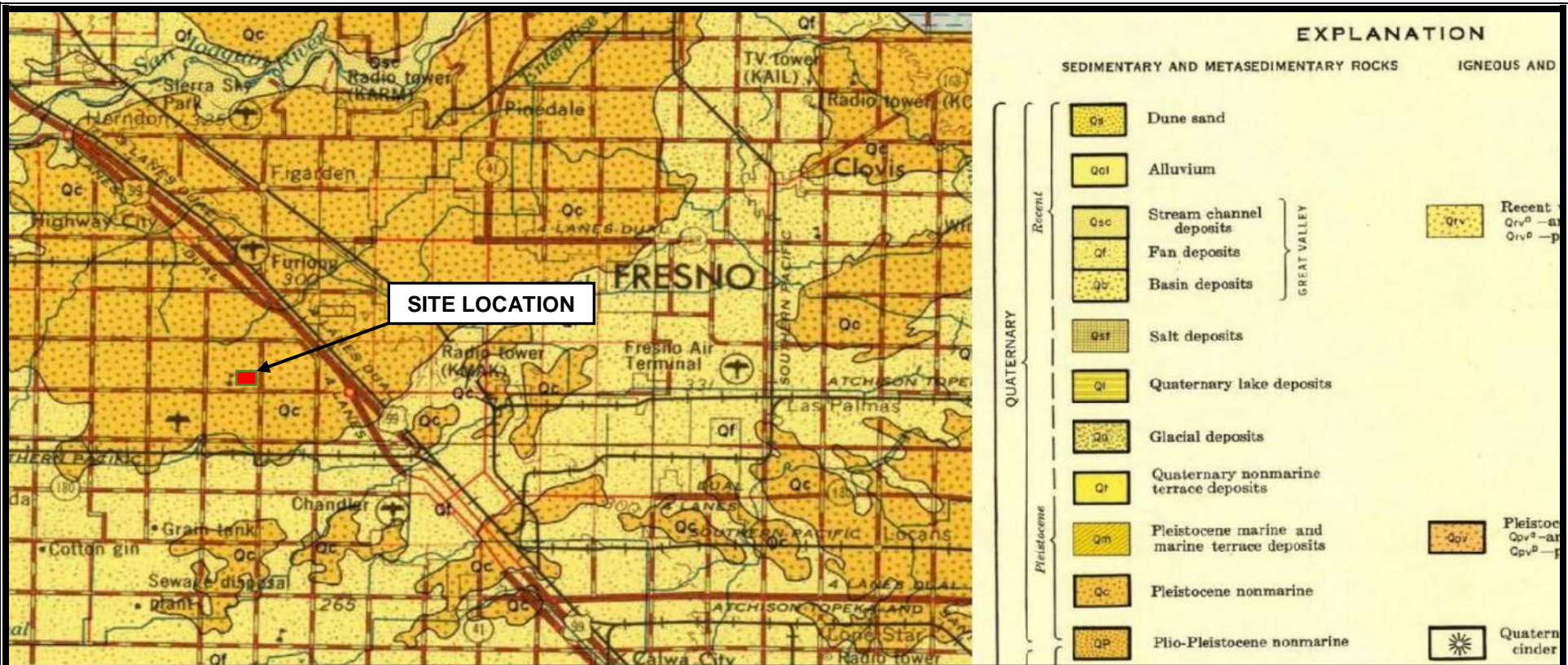
SCALE:  
 NOT TO SCALE  
 DRAWN BY:  
 AW  
 PROJECT NO.  
 1-216-1084

DATE:  
 10/2016  
 APPROVED BY:  
 SR  
 FIGURE NO.  
 2

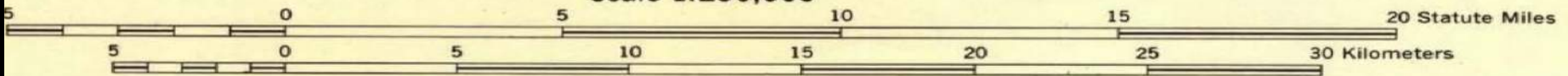
LEGEND:  
 B-1 Soil Boring Location  
 All Locations Approximate







Scale 1:250,000



CONTOUR INTERVAL 200 FEET  
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS

# GEOLOGIC MAP OF CALIFORNIA

OLAF P. JENKINS EDITION

## FRESNO SHEET

COMPILATION BY ROBERT A. MATTHEWS AND JOHN L. BURNETT, 1965



<b>REGIONAL GEOLOGIC MAP</b> <b>GEO TECHNICAL ENGINEERING INVESTIGATION</b> Proposed New Elementary School Central Unified School District NWC W. Shield Avenue & N. Brawley Avenue Fresno, California	SCALE: Not to Scale	DATE: 10/2016	LEGEND:	
	DRAWN BY: SR	APPROVED BY: BEM		
	PROJECT NO. 1-216-1084	FIGURE NO. 3		





Source Image: Modified from: <http://earthquake.usgs.gov/hazards/qfaults/map/hazfault2014.html>

**REGIONAL FAULT MAP**  
**GEOTECHNICAL ENGINEERING INVESTIGATION**  
 Proposed New Elementary School  
 Central Unified School District  
 NWC W. Shield Avenue & N. Brawley Avenue  
 Fresno, California

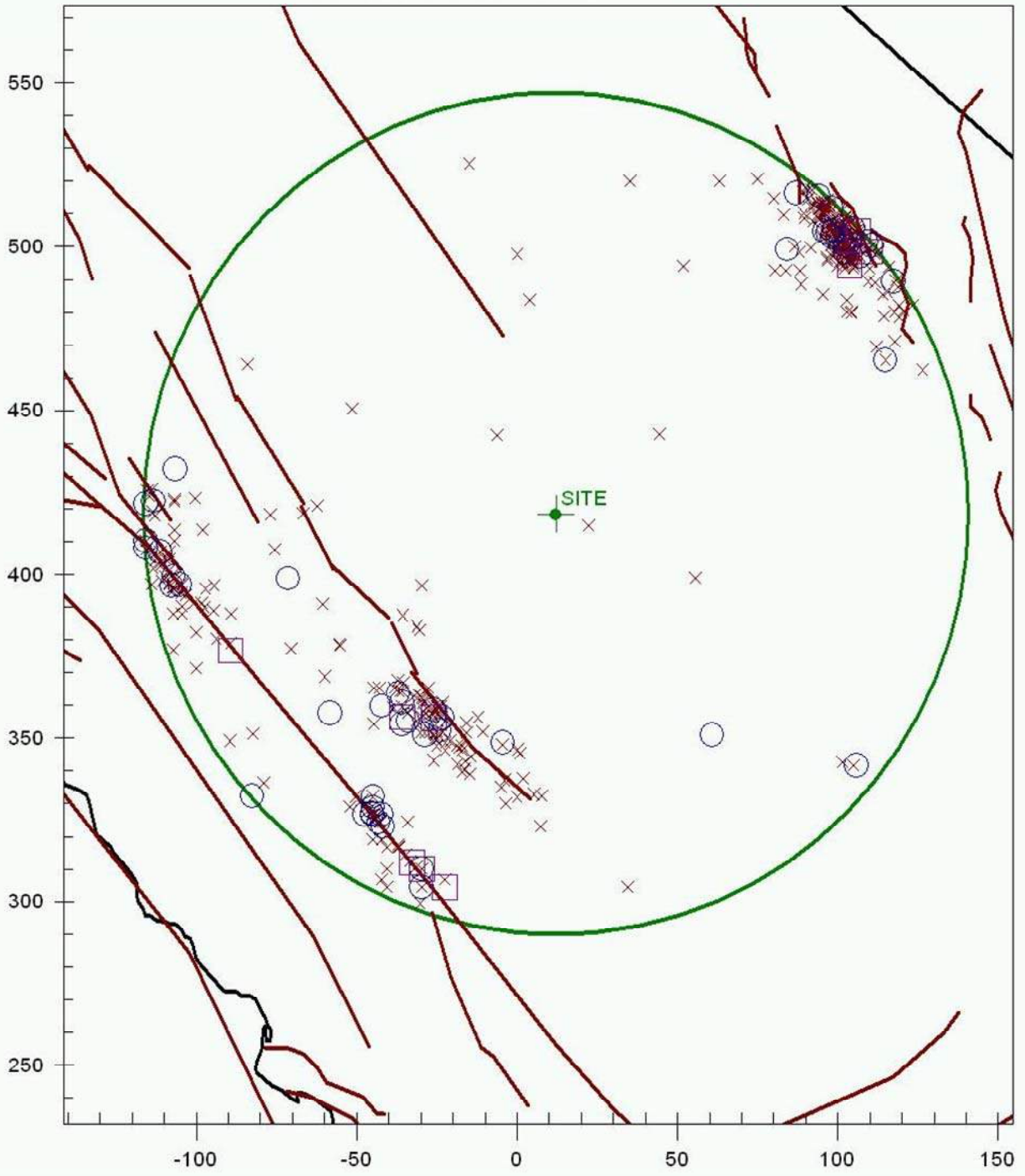
SCALE: NOT TO SCALE	DATE: 10/2016
DRAWN BY: SR	APPROVED BY: BEM
PROJECT NO. 1-216-1084	FIGURE NO. 4





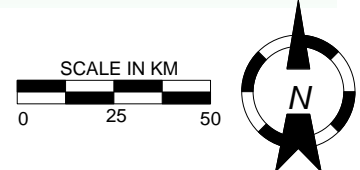
# EARTHQUAKE EPICENTER MAP

CUSD Elem School-Brawley & Shields



EARTHQUAKE MAGNITUDE  
SYMBOLS

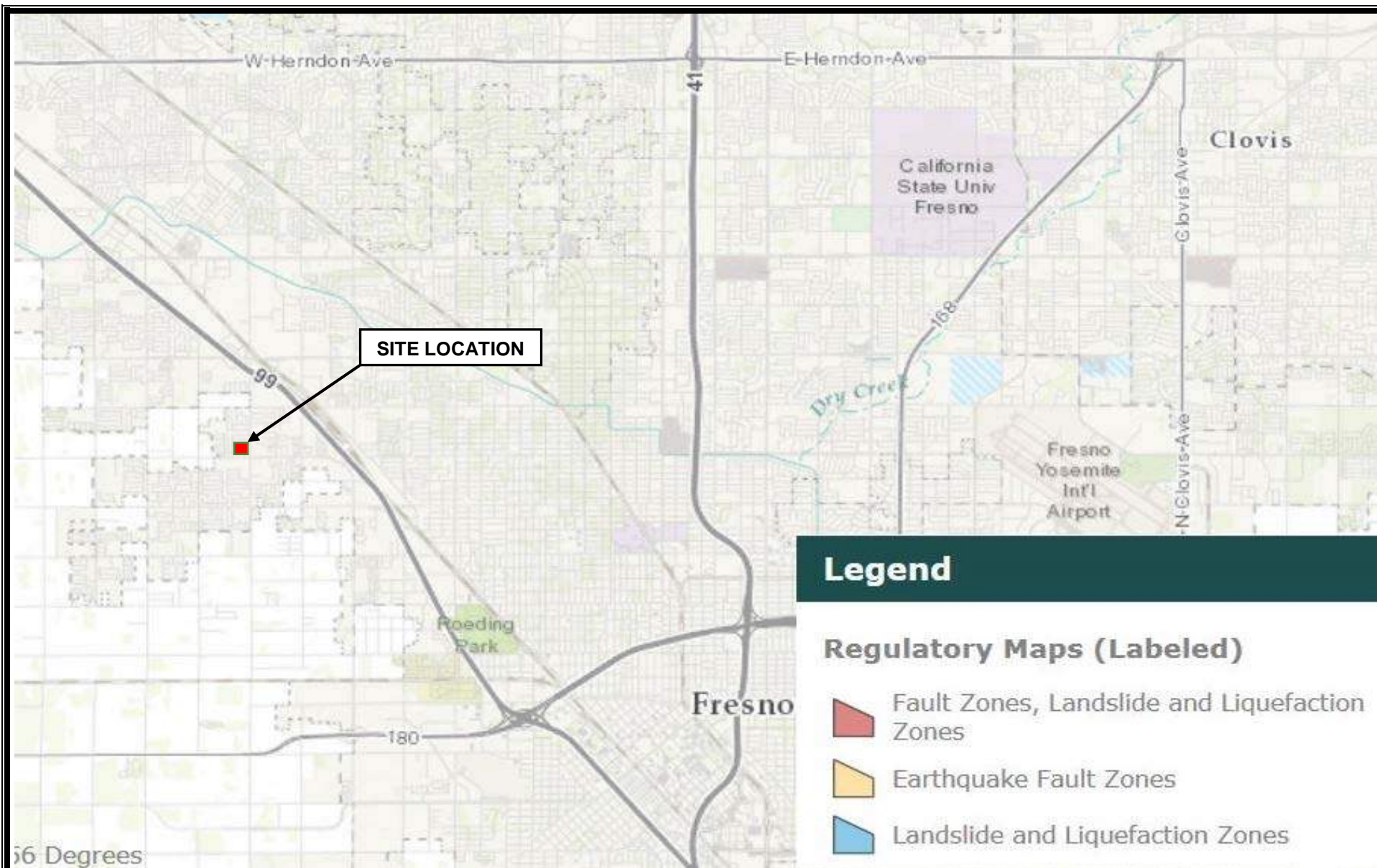
x	M=4	△	M=7
O	M=5	◇	M=8
□	M=6		



**HISTORICAL SEISMICITY MAP (1800-2011)**  
**GEOTECHNICAL ENGINEERING INVESTIGATION**  
 Proposed New Elementary School  
 Central Unified School District  
 NWC W. Shields & N. Brawley Aves.  
 Fresno, California

SCALE: AS SHOWN	DATE: Oct 2016
DRAWN BY: MB	APPROVED BY: BEM
PROJECT NO. 1-216-1084	FIGURE NO. <b>5</b>





**Source Image:** Modified from: California Geologic Survey, Seismic Hazard Zonation Program, Seismic Hazards Mapping, Last updated May 12, 2003

**GEOLOGIC HAZARD ZONE MAP**  
**GEOTECHNICAL ENGINEERING INVESTIGATION**  
 Proposed New Elementary School  
 Central Unified School District  
 NWC W. Shield Avenue & N. Brawley Avenue  
 Fresno, California

SCALE:  
 NOT TO SCALE  
 DRAWN BY:  
 SR  
 PROJECT NO.  
 2-216-1084

DATE:  
 10/2016  
 APPROVED BY:  
 BEM  
 FIGURE NO.  
 6







**LEGEND**

**OTHER AREAS**

Areas determined to be outside the 0.2% annual chance floodplain.

Areas in which flood hazards are undetermined, but possible.

**FIRM**  
**FLOOD INSURANCE RATE MAP**

**FRESNO COUNTY,  
 CALIFORNIA  
 AND INCORPORATED AREAS**

**PANEL 1565 OF 3525**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS**

COMMUNITY	NUMBER	PANEL	SUFFIX
FRESNO COUNTY	060029	1565	H
FRESNO, CITY OF	060048	1565	H

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



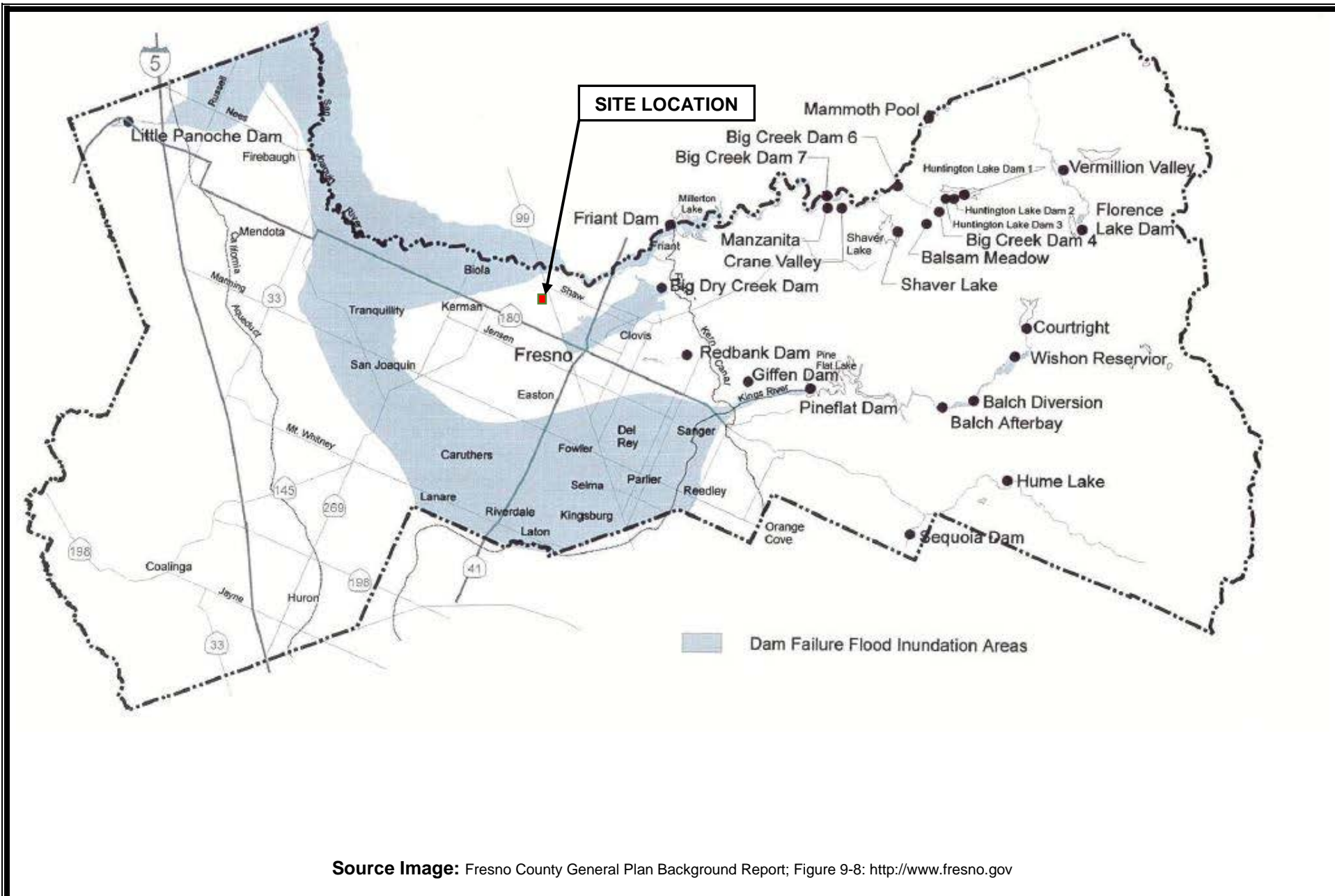
**MAP NUMBER**  
 06019C1565H

**MAP REVISED**  
 FEBRUARY 18, 2009

Source Image: U.S. Dept. Homeland Security; FEMA Flood Hazard Mapping; <https://msc.fema.gov/portal>

<p align="center"><b>FLOOD ZONE MAP</b></p> <p align="center"><b>GEOTECHNICAL ENGINEERING INVESTIGATION</b></p> <p align="center"><b>Proposed New Elementary School</b></p> <p align="center"><b>Central Unified School District</b></p> <p align="center"><b>NWC W. Shield Avenue &amp; N. Brawley Avenue</b></p> <p align="center"><b>Fresno, California</b></p>	SCALE:	DATE:
	NOT TO SCALE	10/2016
	DRAWN BY:	APPROVED BY:
SR	BEM	
PROJECT NO.	FIGURE NO.	
1-216-1084	7	





**DAM INUNDATION MAP**  
**GEOTECHNICAL ENGINEERING INVESTIGATION**  
 Proposed New Elementary School  
 Central Unified School District  
 NWC W. Shield Avenue & N. Brawley Avenue  
 Fresno, California

SCALE:  
 NOT TO SCALE  
 DRAWN BY:  
 SR  
 PROJECT NO.  
 1-216-1084

DATE:  
 10/2016  
 APPROVED BY:  
 BEM  
 FIGURE NO.  
 8



# A



## **APPENDIX A FIELD EXPLORATION**

Fieldwork for our investigation (drilling) was conducted on October 12 and 13, 2016 and included a site visit, subsurface exploration, and soil sampling. The locations of the exploratory borings are shown on the Site Plan, Figure 2. Boring logs for our exploration are presented in figures following the text in this appendix. Borings were located in the field using existing reference points. Therefore, actual boring locations may deviate slightly.

In general, our borings were performed using a truck-mounted CME-55 drill rig equipped with 8.0-inch hollow stem auger. Sampling in the borings was accomplished using a hydraulic 140-pound hammer with a 30-inch drop. Samples were obtained with a 3-inch outside-diameter (OD), split spoon (California Modified) sampler, and a 2-inch OD, Standard Penetration Test (SPT) sampler. The number of blows required to drive the sampler the last 12 inches (or fraction thereof) of the 18-inch sampling interval were recorded on the boring logs. The blow counts shown on the boring logs should not be interpreted as standard SPT “N” values; corrections have not been applied. Upon completion, the borings were backfilled with drill cuttings.

Subsurface conditions encountered in the exploratory borings were visually examined, classified and logged in general accordance with the American Society for Testing and Materials (ASTM) Practice for Description and Identification of Soils (Visual-Manual Procedure D2488). This system uses the Unified Soil Classification System (USCS) for soil designations. The logs depict soil and geologic conditions encountered and depths at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, drill rig penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the field logs were revised based on subsequent laboratory testing.

# Boring No. B-1

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-1

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level	
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count						
0		Ground Surface											
	[Symbol]	<b>Silty SAND (SM) [Hardpan]</b> Very dense; brown; moist; medium to fine-grained; cemented.	121.5	6.5	MCS	[Blue Bar]	60						
5		Grades as above; loose to medium dense; no cementation.	119.0	4.4	MCS	[Blue Bar]	14						
	[Symbol]	<b>Silty SAND/Sandy SILT (SM/ML)</b> Medium dense; dark brown; moist; medium to fine-grained.	95.7	13.1	MCS	[Blue Bar]	32						
15		<b>SAND (SP)</b> Loose to medium dense; brown; moist; medium to fine-grained.	--	1.9	SPT	[Blue Bar]	9						
		End of Borehole											
20													
25													

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.





# Boring No. B-2

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-2

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<p><b>Silty SAND (SM) [Hardpan]</b> Very dense; brown; moist; medium to fine-grained; cemented.</p>	129.4	4.9	MCS		87		
5		Grades as above; medium dense; with trace gravel; no cementation.	121.6	3.7	MCS		33		
		<p><b>SAND (SP)</b> Medium dense; brown; moist; medium to fine-grained.</p>	107.6	2.1	MCS		34		
15		Grades as above; light brown.	--	1.9	SPT		21		
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-3

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-3

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count	20	40	60	80	
0	[Ground Surface Symbol]	Ground Surface										
	[Silty SAND (SM) [Hardpan] Symbol]	<b>Silty SAND (SM) [Hardpan]</b> Very dense; brown; moist; medium to fine-grained; cemented.	121.8	5.0	MCS	[Penetration Bar]	60					
5	[Grades as above Symbol]	Grades as above; medium dense; with trace gravel; no cementation.	119.2	3.1	MCS	[Penetration Bar]	23					
	[SAND (SP) Symbol]	<b>SAND (SP)</b> Medium dense; brown; moist; medium to fine-grained.	95.5	1.3	MCS	[Penetration Bar]	38					
15	[Grades as above Symbol]	Grades as above; light brown.	--	1.6	SPT	[Penetration Bar]	17					
	[End of Borehole Symbol]	End of Borehole										
20												
25												

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-4

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-4

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count					
0		Ground Surface						20 40 60 80				
		<b>Silty SAND (SM) with trace of Clay</b> Very dense; brown; moist; medium to fine-grained; cemented.	121.0	3.9	MCS		80					
5		Grades as above; medium dense; without cementation.	123.8	3.1	MCS		24					
		<b>Silty SAND/Sandy SILT (SM/ML)</b> Very dense; gray; moist; medium to fine-grained.	97.8	20.7	MCS		60					
15		<b>SAND (SP)</b> Dense; light brown; moist; medium to fine-grained.	--	1.4	SPT		32					
20		Grades as above; medium dense.	--	2.0	SPT		12					
25		Grades as above.	--	1.7	SPT		12					

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 2

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-4

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-4

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count					
30		Grades as above; brown.	-	1.7	SPT	13	13					
35		Grades as above; light brown.	-	1.7	SPT	12	12					
40		<b>Silty SAND (SM) with trace of Clay and Gravel</b> Dense; brown; moist; coarse to fine-grained.	--	10.2	SPT	36	36					
45		<b>Sandy SILT (ML) with Clay</b> Hard; brown; moist; medium to fine-grained sand.	-	17.2	SPT	46	46					
50		<b>Silty SAND/Sandy SILT (SM/ML) with trace of Clay</b> Medium dense; brown; moist; medium to fine-grained.	-	27.0	SPT	17	17					
End of Borehole												

**Drill Method:** Hollow Stem Auger

**Drill Rig:** CME 55

**Driller:** Salem Engineering Group, Inc.

**Sheet:** 2 of 2

**Drill Date:** 10/12/2016

**Borehole Size:** 8 Inches

**Hammer Type:** Auto Trip

**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-5

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-5

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<p><b>Silty SAND (SM) [Hardpan]</b> Very dense; brown; moist; medium to fine-grained; cemented.</p>	118.5	4.4	MCS		60		
5		Grades as above; medium dense; with trace of gravel.	117.7	3.7	MCS		35		
		<p><b>Sandy SILT/Silty SAND (ML/SM)</b> Hard; gray; moist; medium to fine-grained.</p>	98.7	17.2	MCS		75		
15		<p><b>SAND (SP)</b> Medium dense; brown; moist; medium to fine-grained.</p>	--	1.7	SPT		13		
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-6

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-6

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b style="color: red;">Silty SAND (SM) [Hardpan]</b> Very dense; brown; moist; medium to fine-grained; cemented.	119.1	3.0	MCS		60		
5		Grades as above; medium dense.	115.8	3.5	MCS		25		
10		<b style="color: red;">SAND (SP)</b> Medium dense; brown; moist; medium to fine-grained.	98.2	1.8	MCS		28		
15		Grades as above; loose to medium dense; light brown.	--	2.1	SPT		10		
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-7

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-7

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test 20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
	[Symbol]	<b style="color: red;">Silty SAND (SM)</b> Dense; brown; moist; medium to fine-grained.	101.7	5.2	MCS		56		
5		Grades as above; loose to medium dense; with trace of gravel.	118.1	3.2	MCS		14		
	[Symbol]	<b style="color: red;">Silty SAND/Sandy SILT (SM/ML)</b> Very dense; brown; moist; medium to fine-grained.	89.0	11.2	MCS		60		
15		<b style="color: red;">SAND (SP)</b> Medium dense; brown; moist; medium to fine-grained.	--	1.8	SPT		21		
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-8

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-8

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b style="color: red;">Silty SAND (SM)</b> Very dense; brown; moist; medium to fine-grained.	127.4	3.9	MCS		80		
5		Grades as above; medium dense; with trace of gravel.	124.8	4.1	MCS		23		
		<b style="color: red;">Silty SAND/Sandy SILT (SM/ML)</b> Very dense; gray; moist; medium to fine-grained.	106.1	12.5	MCS		108		
15		<b style="color: red;">SAND (SP)</b> Medium dense; brown; moist; medium to fine-grained.	--	2.0	SPT		30		
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.





# Boring No. B-9

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-9

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM) [Hardpan]</b> Very dense; brown; moist; medium to fine-grained.	118.9	3.8	MCS		60		
5		Grades as above; medium dense; with trace of gravel.	127.3	3.6	MCS		36		
		<b>Silty SAND/Sandy SILT (SM/ML)</b> Very dense; brown; moist; medium to fine-grained.	106.1	19.6	MCS		99		
10									
		<b>SAND (SP)</b> Medium dense; brown; moist; medium to fine-grained.	--	2.6	SPT		13		
15		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-10

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-10

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test				Water Level	
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count						
0		Ground Surface											
	[Symbol]	<b>Silty SAND (SM) [Hardpan]</b> Very dense; brown; moist; medium to fine-grained.	117.3	4.6	MCS	[Bar]	60						
5		Grades as above; dense.	123.0	4.0	MCS	[Bar]	51						
	[Symbol]	<b>Silty SAND/Sandy SILT (SM/ML)</b> Very dense; light gray; moist; medium to fine-grained.	105.2	15.8	MCS	[Bar]	87						
15		<b>SAND (SP)</b> Loose to medium dense; brown; moist; medium to fine-grained.	--	3.3	SPT	[Bar]	8						
		End of Borehole											
20													
25													

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-11

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 1-216-1084

**Figure No.:** A-11

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM) with trace of Clay</b> Medium dense; brown; moist; medium to fine-grained.	122.9	6.7	MCS		28		
5		<b>Silty SAND/Sandy SILT (SM/ML)</b> Medium dense; brown; moist; medium to fine-grained.	109.0	10.9	MCS		37		
10		<b>SAND (SP)</b> Medium dense; dark brown; moist; medium to fine-grained.	92.4	13.4	MCS		21		
15		Grades as above; gray.	--	1.5	SPT		11		
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/13/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-12

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-12

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM)</b> Dense; brown; moist; medium to fine-grained.	110.5	4.4	MCS		47		
5		<b>Silty SAND/Sandy SILT (SM/ML)</b> Dense; brown; moist; medium to fine-grained.	117.5	6.1	MCS		58		
10		<b>SAND (SP)</b> Medium dense; light brown; moist; medium to fine-grained.	96.5	1.6	MCS		21		
15		Grades as above.	--	2.0	SPT		14		
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-13

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-13

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM) [Hardpan]</b> Very dense; brown; moist; medium to fine-grained.	112.6	6.6	MCS		60	●	
5		<b>Silty SAND/Sandy SILT (SM/ML)</b> Dense; brown; moist; medium to fine-grained.	114.3	7.8	MCS		58	●	
10		<b>SAND (SP)</b> Medium dense; brown; moist; medium to fine-grained.	102.7	3.2	MCS		23	●	
15		Grades as above; loose to medium dense.	--	1.3	SPT		8	●	
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-14

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-14

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM) [Hardpan]</b> Very dense; brown; moist; medium to fine-grained.	106.4	4.4	MCS		60	60	
5		<b>Sandy SILT (ML)</b> Hard; dark brown; moist; medium to fine-grained sand.	90.6	24.3	MCS		66	50	
10		<b>SAND (SP)</b> Medium dense; brown; moist; medium to fine-grained.	96.5	5.7	MCS		30	30	
15		Grades as above.	--	1.3	SPT		11	15	
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/13/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-15

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-15

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
	[Symbol]	<b style="color: red;">Silty SAND (SM)</b> Dense; brown; moist; medium to fine-grained.	111.8	4.7	MCS		46	46	
5		Grades as above; [Hardpan]; very dense; cemented.	111.9	6.6	MCS		60	60	
10	[Symbol]	<b style="color: red;">SAND with Silt (SP-SM)</b> Medium dense; brown; moist; medium to fine-grained.	107.9	4.3	MCS		23	23	
15		Grades as above.	--	4.6	SPT		17	17	
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/13/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-16

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-16

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM) [Hardpan]</b> Very dense; brown; moist; medium to fine-grained.	107.9	7.3	MCS		60	60	
5		<b>Silty SAND/Sandy SILT (SM/ML)</b> Dense; brown; moist; medium to fine-grained.	97.1	15.4	MCS		42	42	
10		<b>SAND (SP)</b> Medium dense; light brown; moist; medium to fine-grained.	105.5	1.8	MCS		32	32	
15		Grades as above.	--	1.7	SPT		15	15	
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/13/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.





# Boring No. B-17

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-17

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM)</b> Medium dense; brown; moist; medium to fine-grained.	111.7	4.1	MCS		23		
5		Grades as above.	124.0	2.1	MCS		32		
		<b>Sandy SILT/Silty SAND (ML/SM)</b> Very stiff; gray; moist; medium to fine-grained sand.	98.8	24.7	MCS		36		
15		<b>SAND (SP)</b> Medium dense; dark brown; moist; medium to fine-grained.	--	1.3	SPT		13		
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-18

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 1-216-1084

**Figure No.:** A-18

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b style="color: red;">Silty SAND (SM)</b> Medium dense; brown; moist; medium to fine-grained.	122.5	3.5	MCS		37		
5		Grades as above.	120.8	4.4	MCS		28		
		<b style="color: red;">SAND (SP)</b> Medium dense; dark brown; moist; medium to fine-grained.	101.3	7.1	MCS		21		
15		Grades as above; loose; light brown.	--	1.3	SPT		8		
		End of Borehole							
20									
25									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/12/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-19

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No:** 1-216-1084

**Figure No.:** A-19

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface						20 40 60 80	
		<b>Silty SAND (SM) [Hardpan]</b> Very dense; brown; moist; medium to fine-grained.	--	5.3	SPT		60		
5		Grades as above; medium dense.	--	4.6	SPT		11		
		<b>Clayey SILT</b> Very stiff; gray; moist; medium to fine-grained sand.	--	22.3	SPT		27		
10		End of Borehole							
15									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/13/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-20

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 1-216-1084

**Figure No.:** A-20

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM)</b> Very dense; brown; moist; medium to fine-grained.	--	5.8	SPT		65		
5		Grades as above; loose to medium dense.	--	5.0	SPT		7		
10		Grades as above; loose to medium dense.	--	7.6	SPT		8		
		End of Borehole							
15									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/13/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-21

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 1-216-1084

**Figure No.:** A-21

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM)</b> Dense; brown; moist; medium to fine-grained.	--	5.9	SPT		32		
5		Grades as above; medium dense; with trace of gravel.	--	4.0	SPT		12		
		<b>Sandy SILT (ML)</b> Hard; dark brown; moist; medium to fine-grained sand.	--	5.4	SPT		30		
10		End of Borehole							
15									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/13/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-22

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 1-216-1084

**Figure No.:** A-22

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM)</b> Dense; brown; moist; medium to fine-grained.	--	5.0	SPT		36		
5		Grades as above; medium dense.	--	3.7	SPT		19		
		<b>SAND (SP)</b> Medium dense; brown; moist; medium to fine-grained.	--	1.3	SPT		12		
10		End of Borehole							
15									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/13/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-23

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 1-216-1084

**Figure No.:** A-23

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM)</b> Medium dense; brown; moist; medium to fine-grained.	--	5.0	SPT		27		
5		Grades as above; dark brown; with trace of gravel.	--	2.5	SPT		18		
		<b>Sandy SILT/Silty SAND (ML/SM)</b> Hard; light brown; moist; medium to fine-grained sand.	--	4.5	SPT		33		
10		End of Borehole							
15									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/13/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.



# Boring No. B-24

**Project:** Proposed New Elementary School

**Client:** Central Unified School District

**Location:** NWC W. Shields Avenue & N. Brawley Avenue, Fresno, CA

**Grnd. Surf. Elev. (Ft. MSL)** N/A

**Project No.:** 1-216-1084

**Figure No.:** A-24

**Logged By:** SMG

**Initial:** None

**Depth to Water**>

**At Completion:** None

SUBSURFACE PROFILE			SAMPLE					Penetration Test  20 40 60 80	Water Level
Depth (ft)	Symbol	Description	Dry Density (pcf)	Moisture Content (%)	Sampler Type	Penetration	Blow Count		
0		Ground Surface							
		<b>Silty SAND (SM)</b> Dense; brown; moist; medium to fine-grained.	--	5.0	SPT		33		
5		Grades as above; medium dense.	--	3.9	SPT		12		
		<b>Sandy SILT (ML) with Clay</b> Very stiff; gray; moist; medium to fine-grained sand.	--	11.8	SPT		29		
10		End of Borehole							
15									

**Drill Method:** Hollow Stem Auger  
**Drill Rig:** CME 55  
**Driller:** Salem Engineering Group, Inc.  
**Sheet:** 1 of 1

**Drill Date:** 10/13/2016  
**Borehole Size:** 8 Inches  
**Hammer Type:** Auto Trip  
**Weight & Drop:** 140 lbs/30 in.









APPENDIX

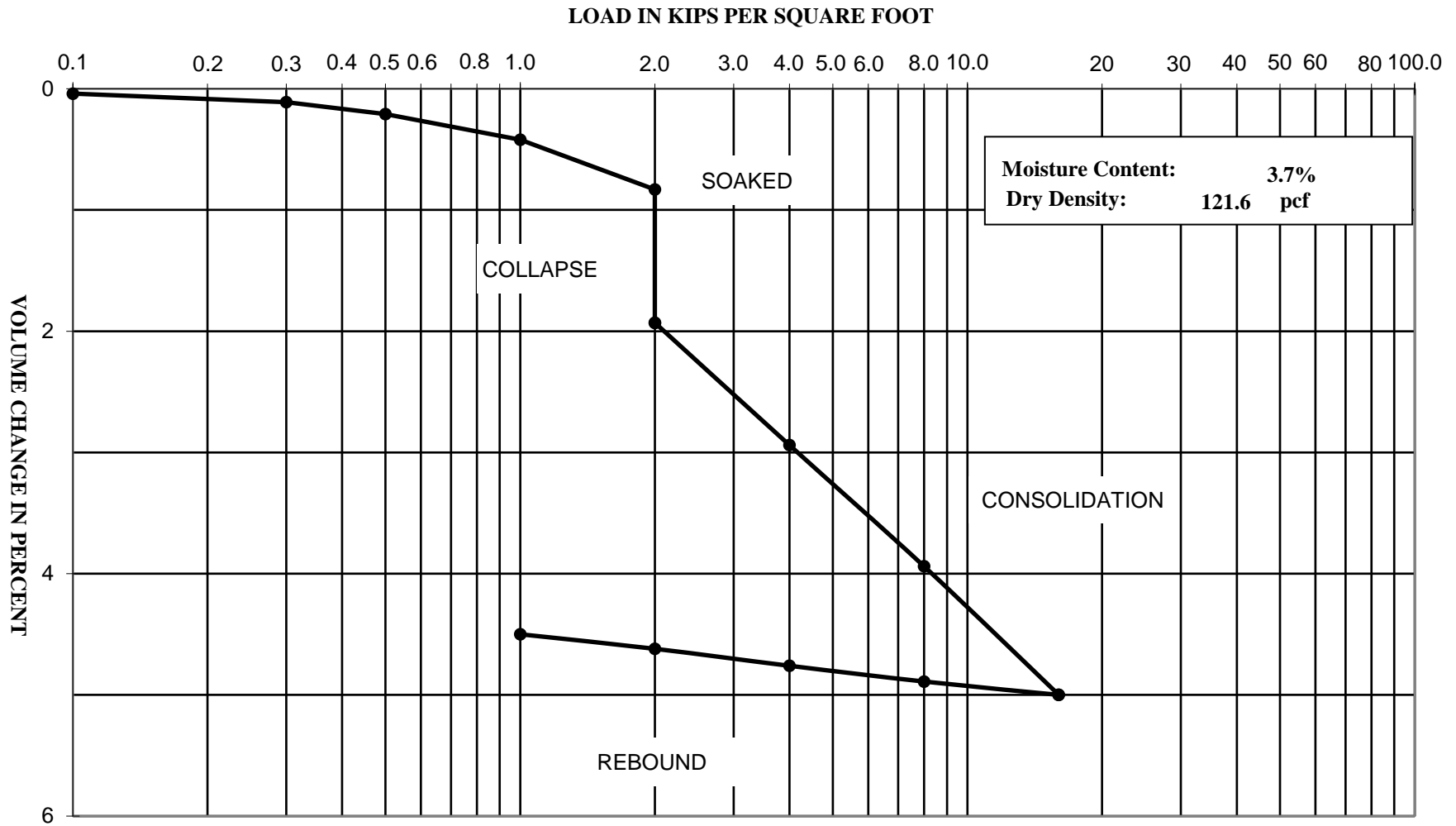
# B



## **APPENDIX B LABORATORY TESTING**

Laboratory tests were performed in accordance with generally accepted test methods of the American Society for Testing and Materials (ASTM), Caltrans, or other suggested procedures. Selected samples were tested for in-situ dry density and moisture content, corrosivity, consolidation, shear strength, plasticity index, laboratory compaction, and grain size distribution. The results of the laboratory tests are summarized in the following figures.

# CONSOLIDATION - PRESSURE TEST DATA ASTM D 2435



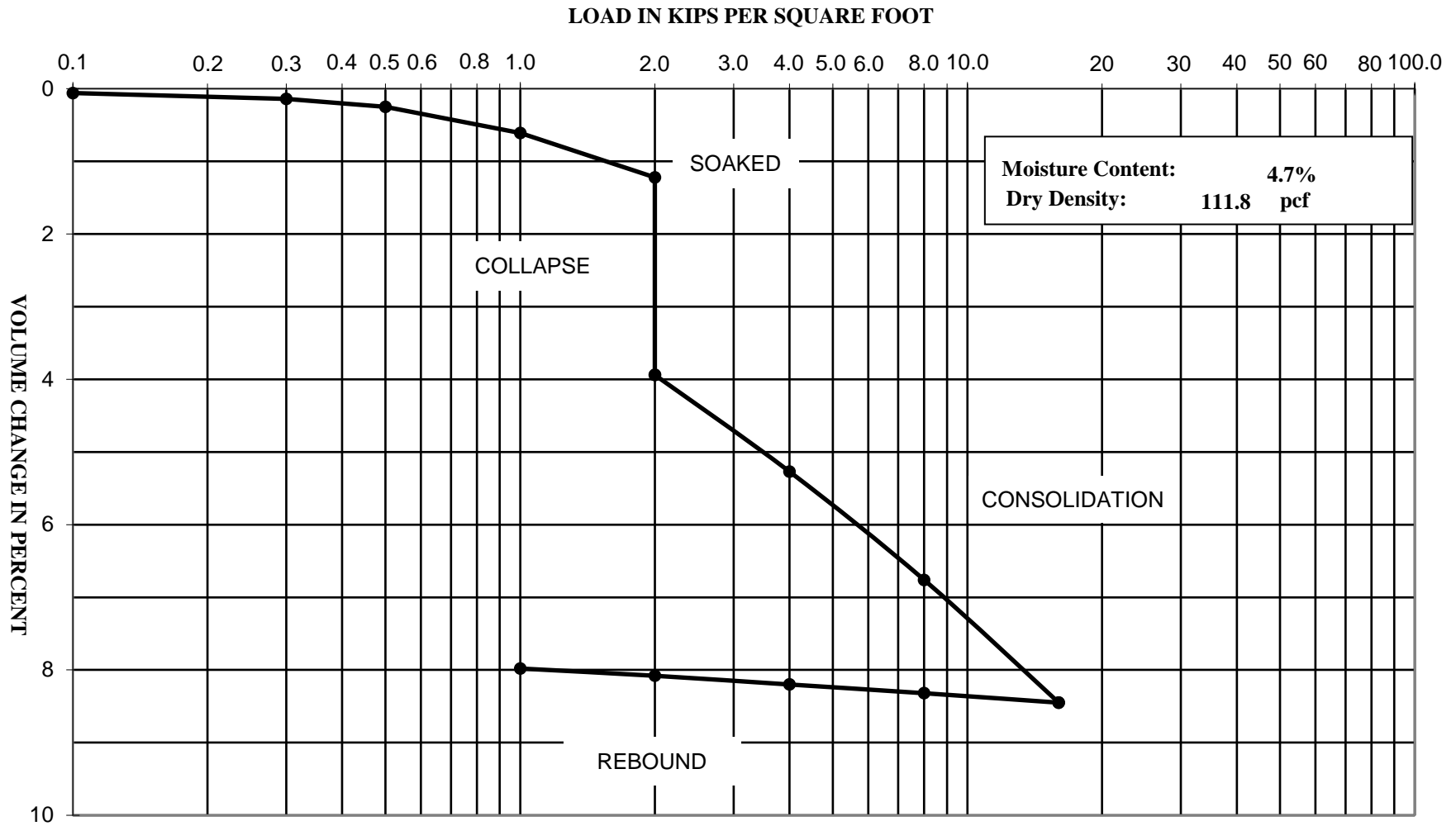
Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA

Project Number: 1-216-1084

Boring: B-2 @ 5'



# CONSOLIDATION - PRESSURE TEST DATA ASTM D 2435



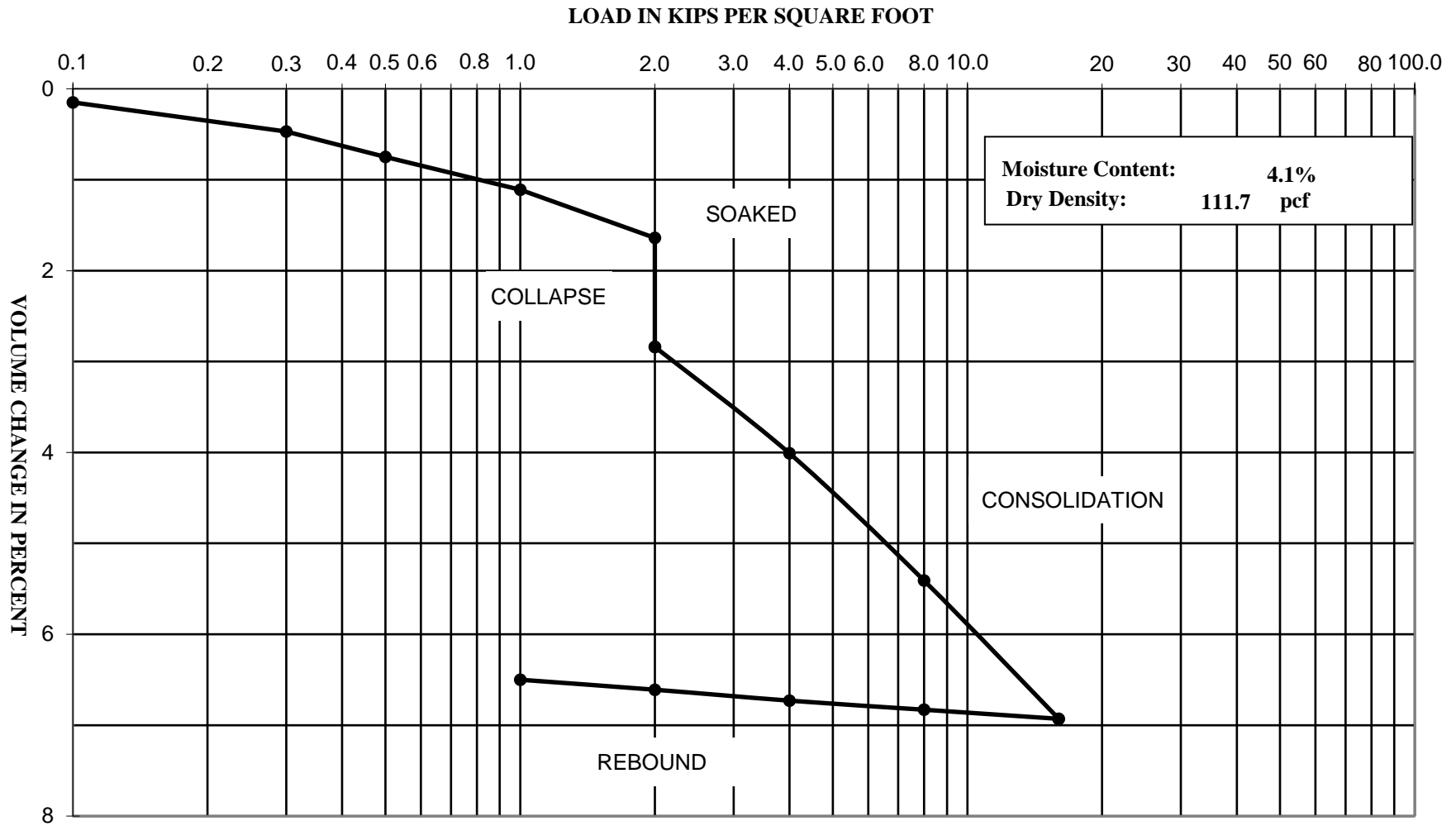
Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA

Project Number: 1-216-1084

Boring: B-15 @ 2'



# CONSOLIDATION - PRESSURE TEST DATA ASTM D 2435

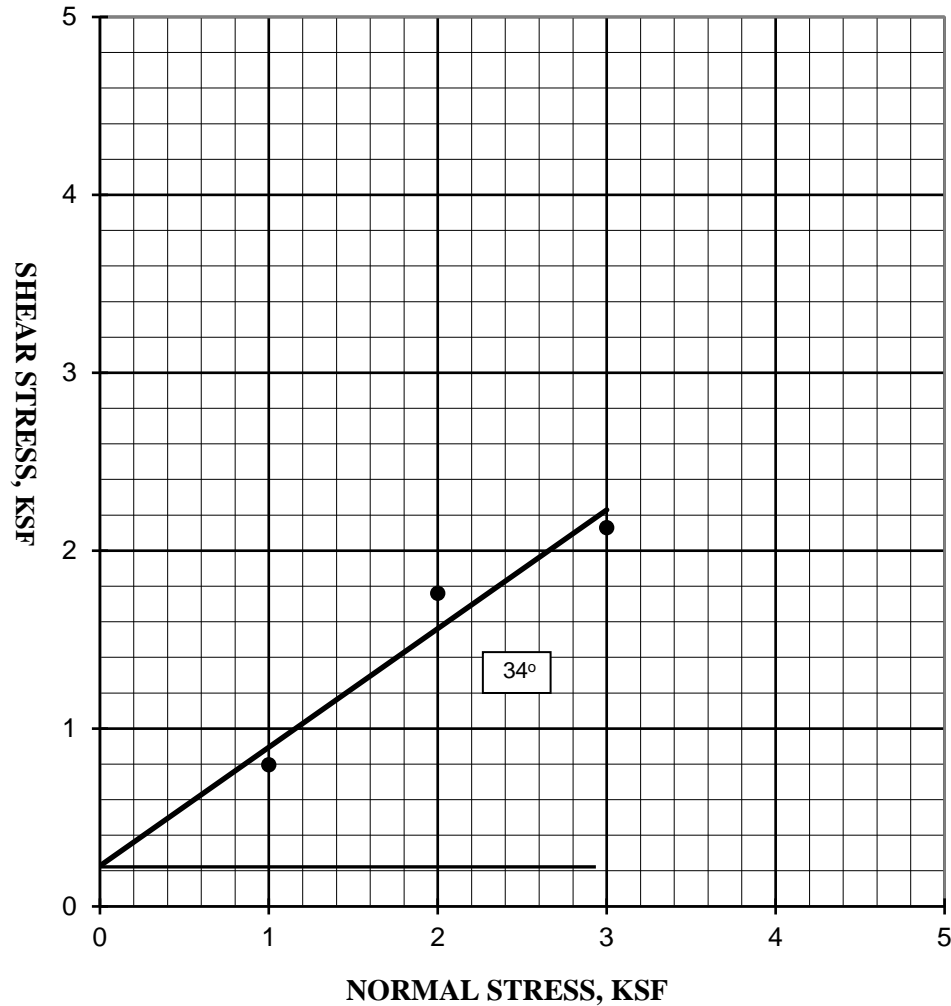


Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA

Project Number: 1-216-1084

Boring: B-17 @ 2'

**SHEAR STRENGTH DIAGRAM  
(DIRECT SHEAR)  
ASTM D - 3080**



**Prop. New CUSD Elem. School\_NWC W. Shields  
& N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-2 @ 2'  
Soil Type: Silty SAND (SM)**

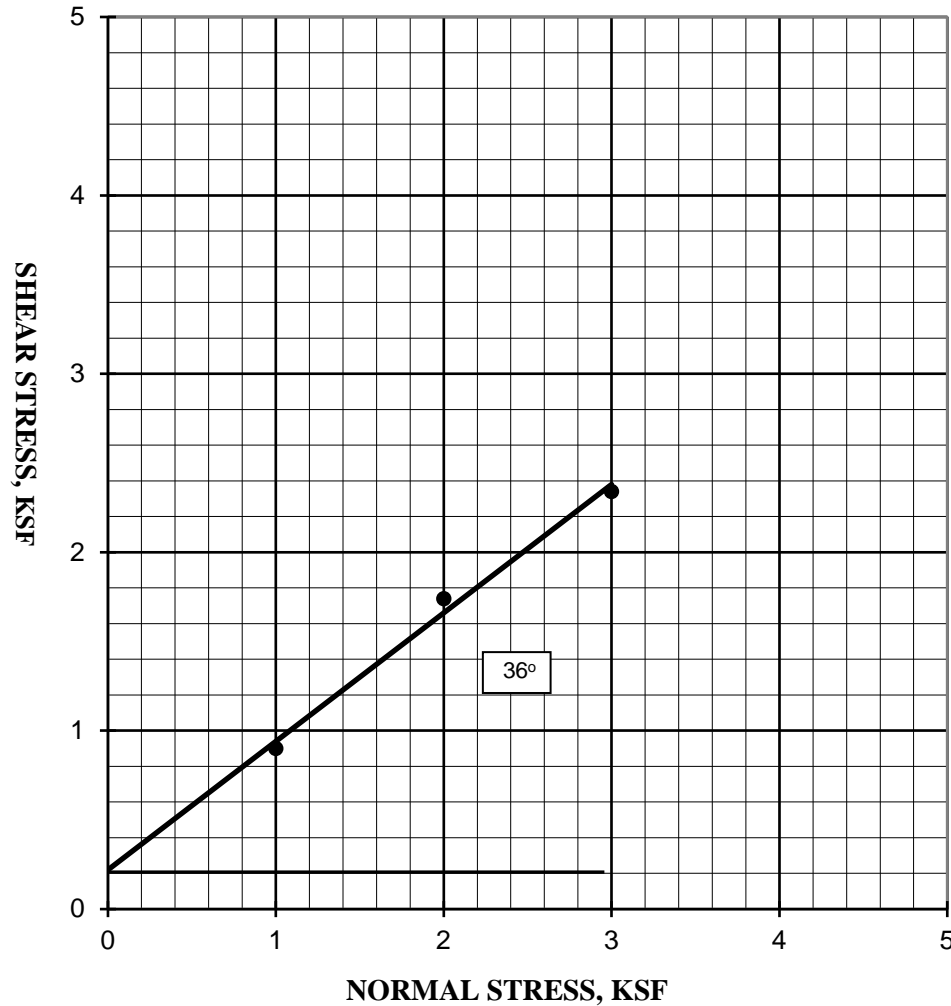
**Friction Angle: 34 degrees  
Cohesion: 230 psf**

**Moisture Content 4.9%  
Dry Density 129.4 pcf**





**SHEAR STRENGTH DIAGRAM  
(DIRECT SHEAR)  
ASTM D - 3080**



**Prop. New CUSD Elem. School\_NWC W. Shields  
& N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

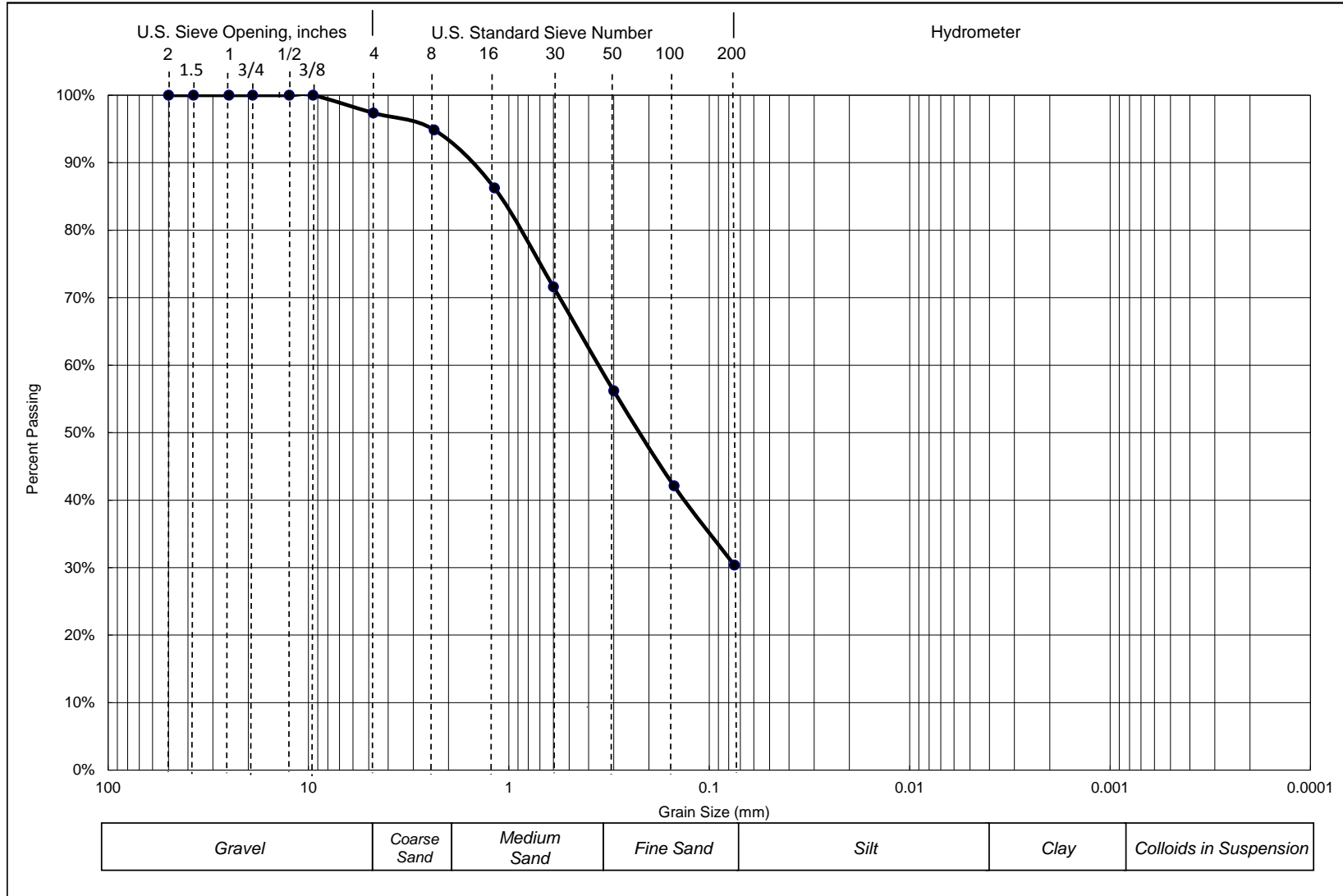
**Boring: B-17 @ 5'  
Soil Type: Silty SAND (SM)**

**Friction Angle: 36 degrees  
Cohesion: 220 psf**

**Moisture Content 2.1%  
Dry Density 124.0 pcf**



**PARTICLE SIZE DISTRIBUTION DIAGRAM  
GRADATION TEST - ASTM C136**



**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-2 @ 2'**



**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	97.4%
No. 8	2.36	94.9%
No. 16	1.18	86.2%
No. 30	0.6	71.6%
No. 50	0.3	56.2%
No. 100	0.15	42.1%
No. 200	0.075	30.37%

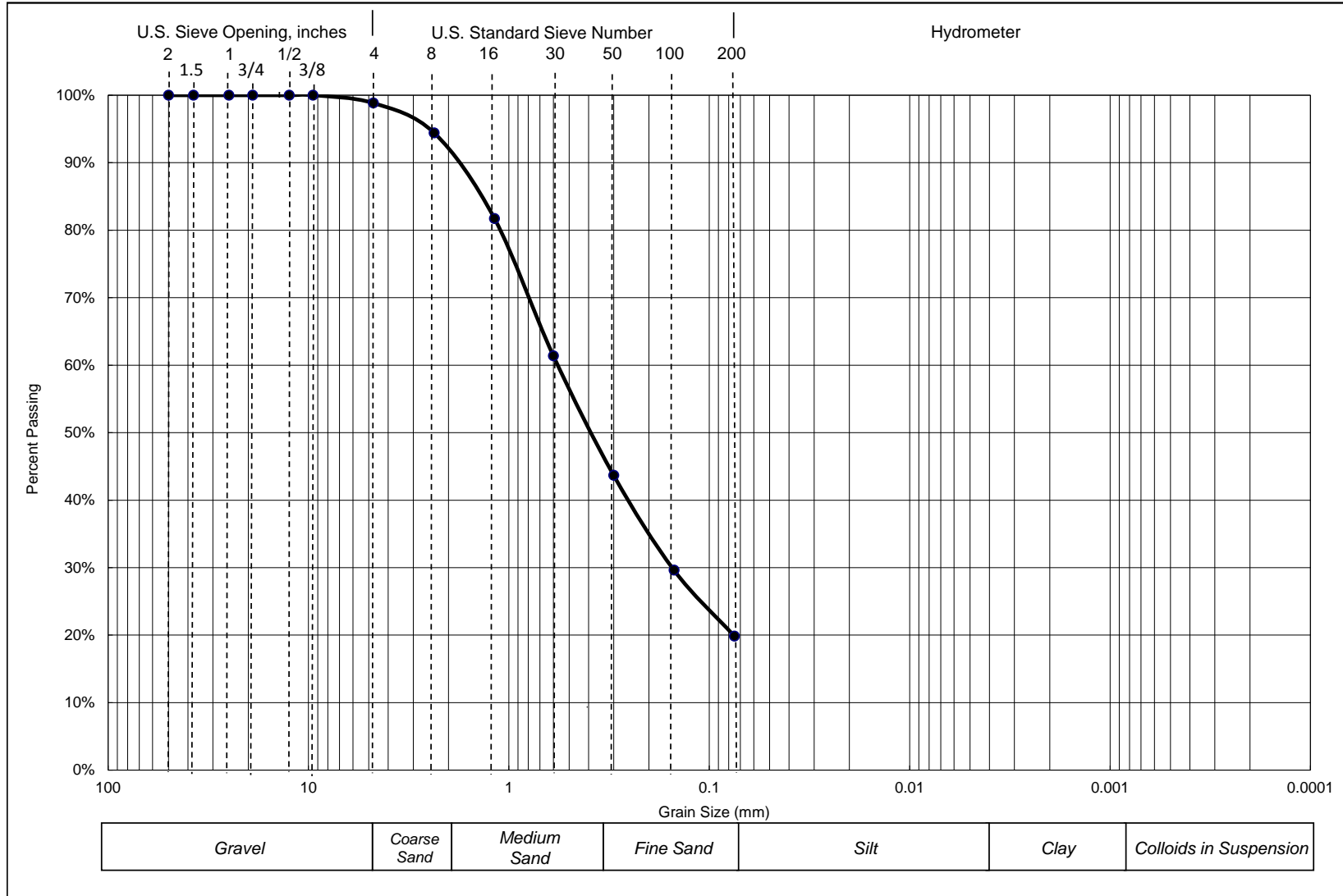
**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-2 @ 2'**



**PARTICLE SIZE DISTRIBUTION DIAGRAM  
GRADATION TEST - ASTM C136**



**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-2 @ 5'**



**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	98.8%
No. 8	2.36	94.4%
No. 16	1.18	81.7%
No. 30	0.6	61.4%
No. 50	0.3	43.7%
No. 100	0.15	29.6%
No. 200	0.075	19.86%

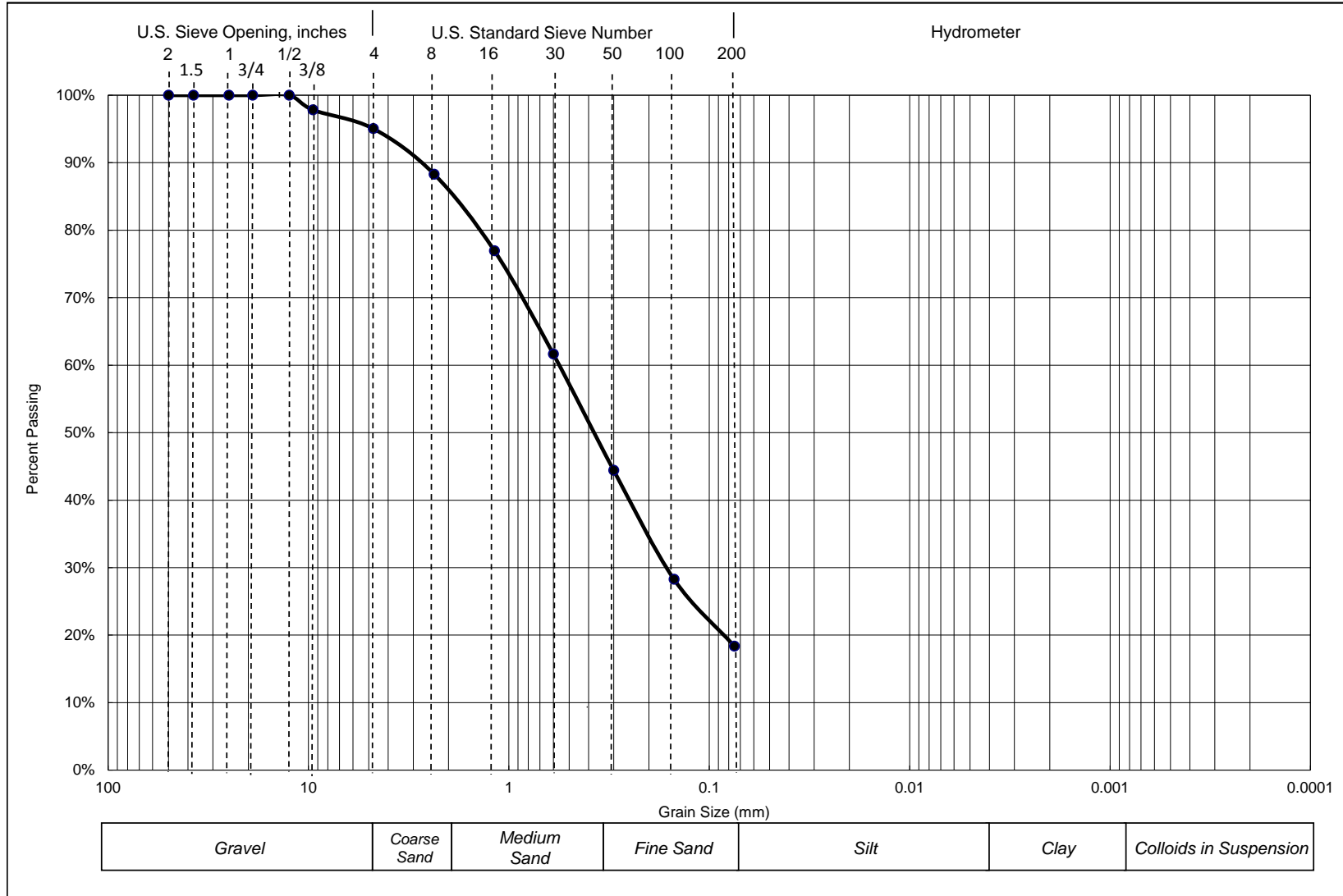
**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-2 @ 5'**



**PARTICLE SIZE DISTRIBUTION DIAGRAM  
GRADATION TEST - ASTM C136**



**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-4 @ 5'**



**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	97.8%
No. 4	4.75	95.0%
No. 8	2.36	88.3%
No. 16	1.18	76.9%
No. 30	0.6	61.6%
No. 50	0.3	44.4%
No. 100	0.15	28.3%
No. 200	0.075	18.37%

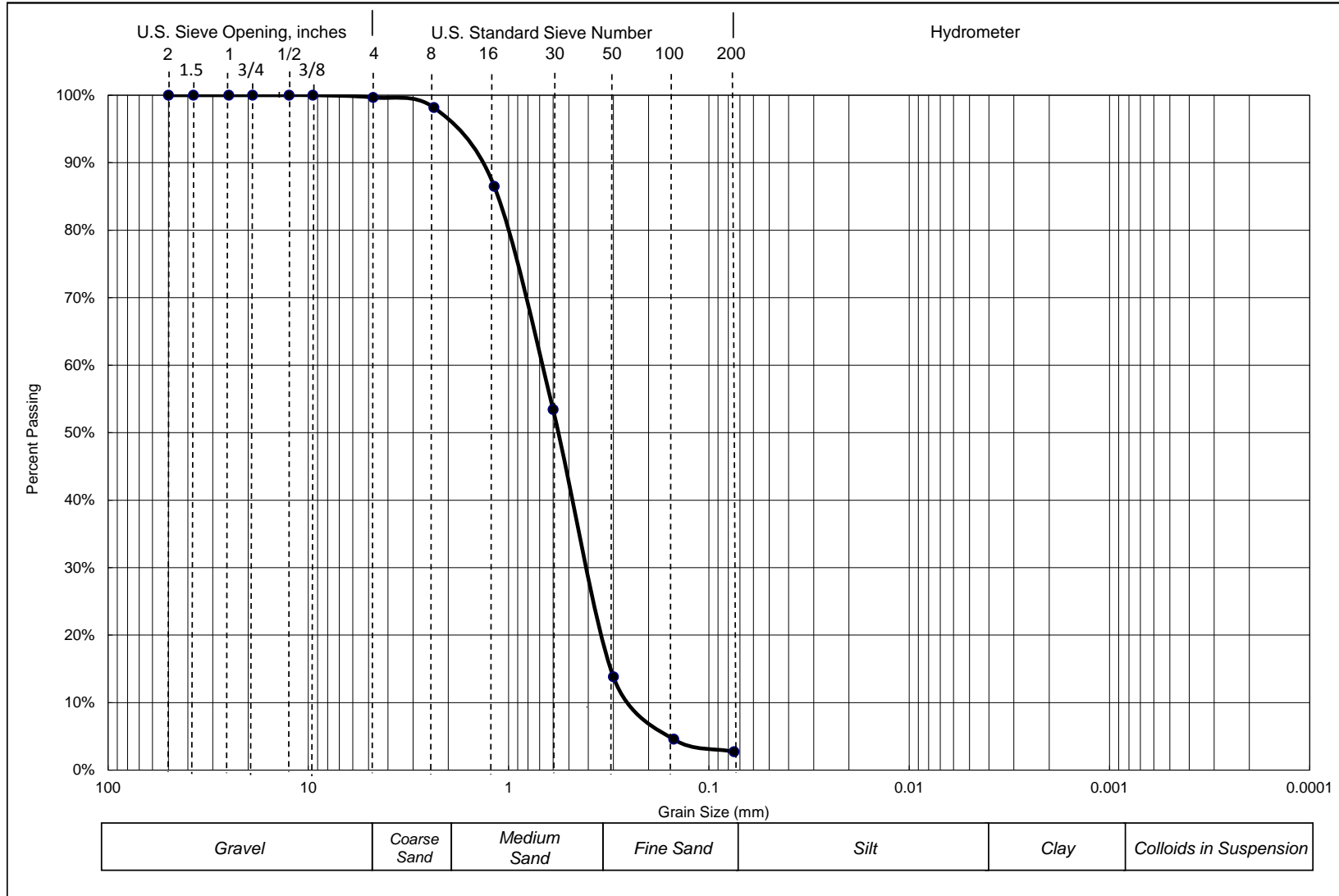
**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-4 @ 5'**



**PARTICLE SIZE DISTRIBUTION DIAGRAM**  
**GRADATION TEST - ASTM C136**



**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-4 @ 20'**





**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	99.7%
No. 8	2.36	98.2%
No. 16	1.18	86.5%
No. 30	0.6	53.4%
No. 50	0.3	13.8%
No. 100	0.15	4.6%
No. 200	0.075	2.72%

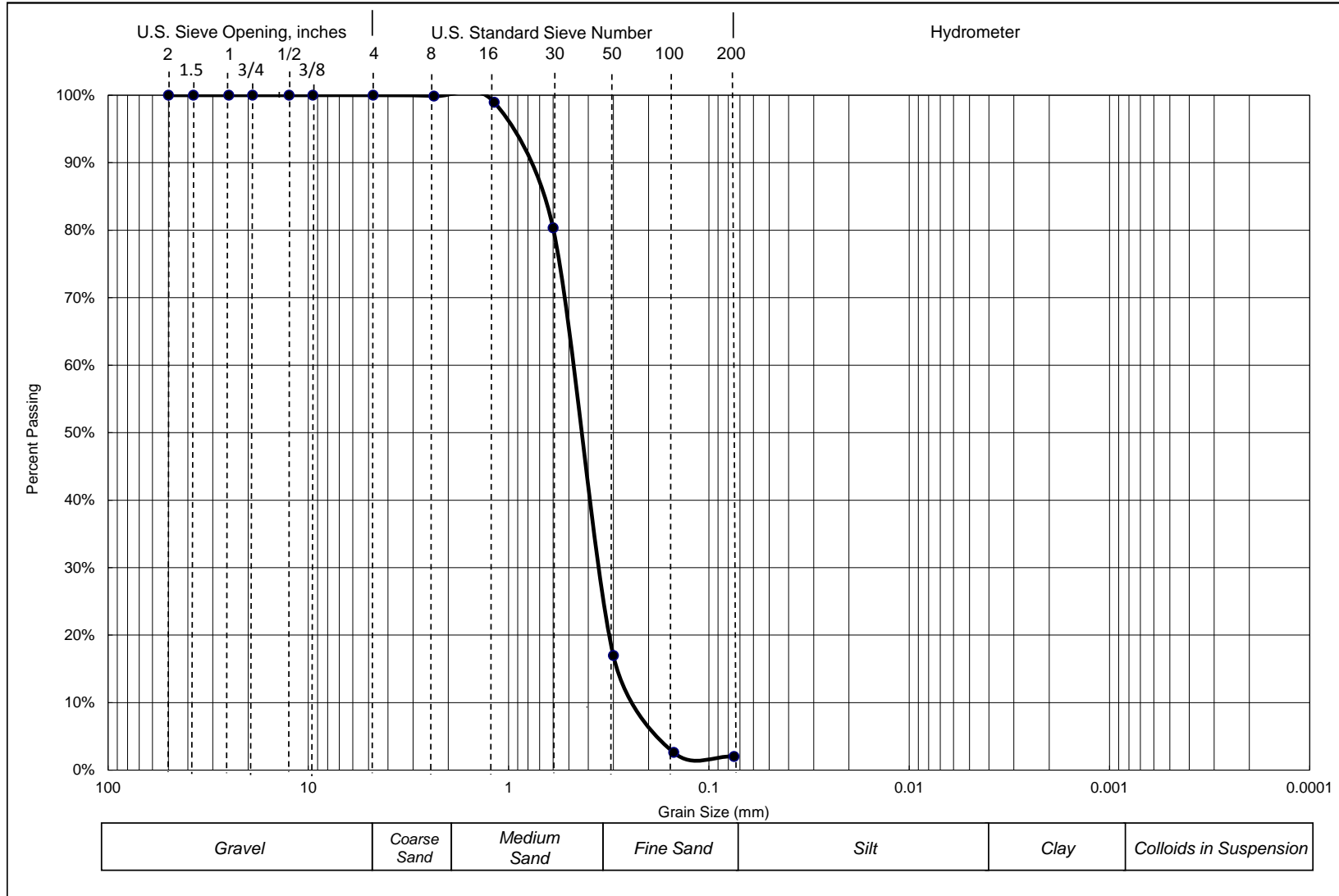
**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-4 @ 20'**



**PARTICLE SIZE DISTRIBUTION DIAGRAM  
GRADATION TEST - ASTM C136**



**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-4 @ 35'**



**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	100.0%
No. 8	2.36	99.9%
No. 16	1.18	98.9%
No. 30	0.6	80.3%
No. 50	0.3	17.0%
No. 100	0.15	2.6%
No. 200	0.075	2.02%

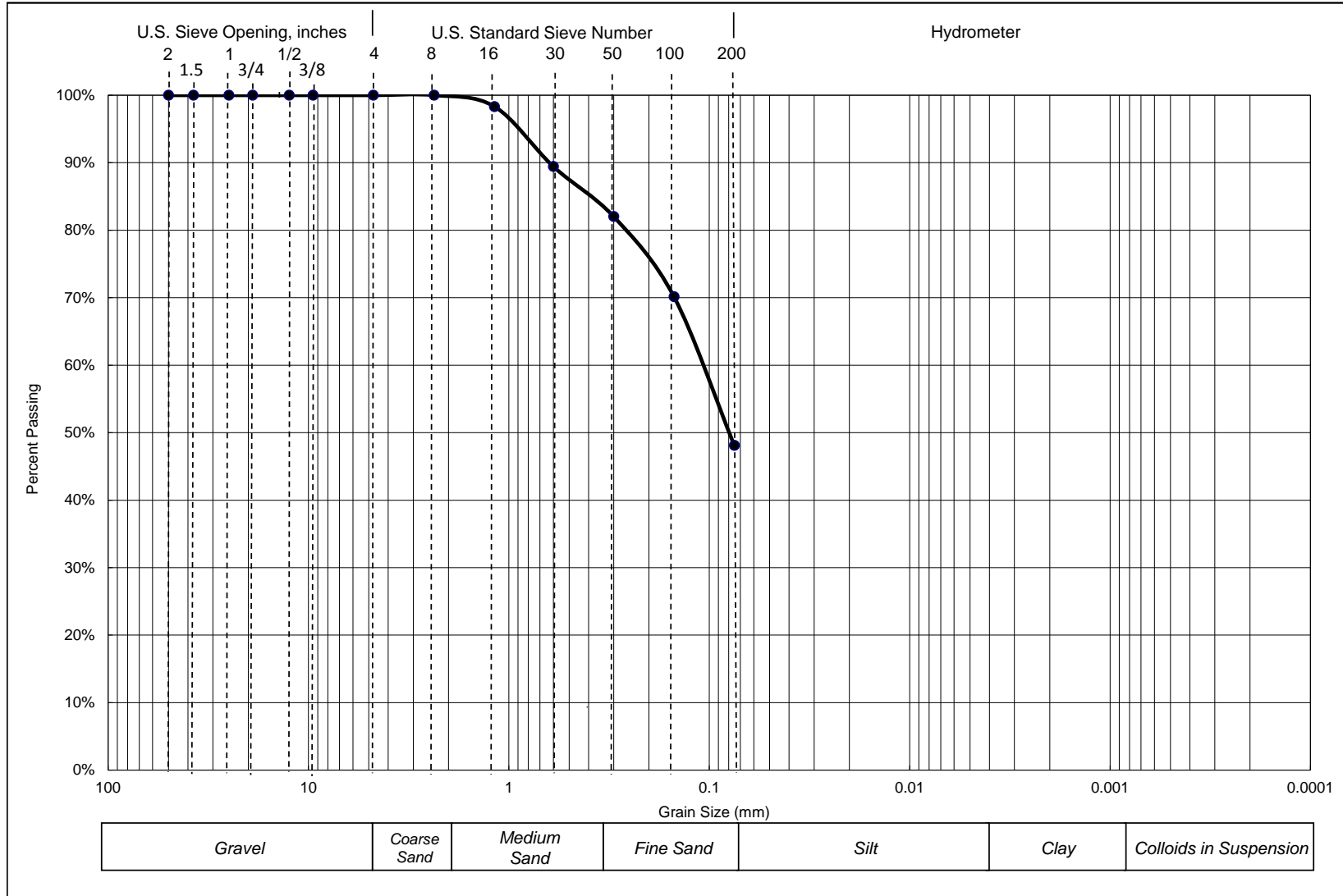
**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-4 @ 35'**



**PARTICLE SIZE DISTRIBUTION DIAGRAM**  
**GRADATION TEST - ASTM C136**



**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-4 @ 50'**



**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	100.0%
No. 8	2.36	100.0%
No. 16	1.18	98.3%
No. 30	0.6	89.4%
No. 50	0.3	82.0%
No. 100	0.15	70.1%
No. 200	0.075	48.11%

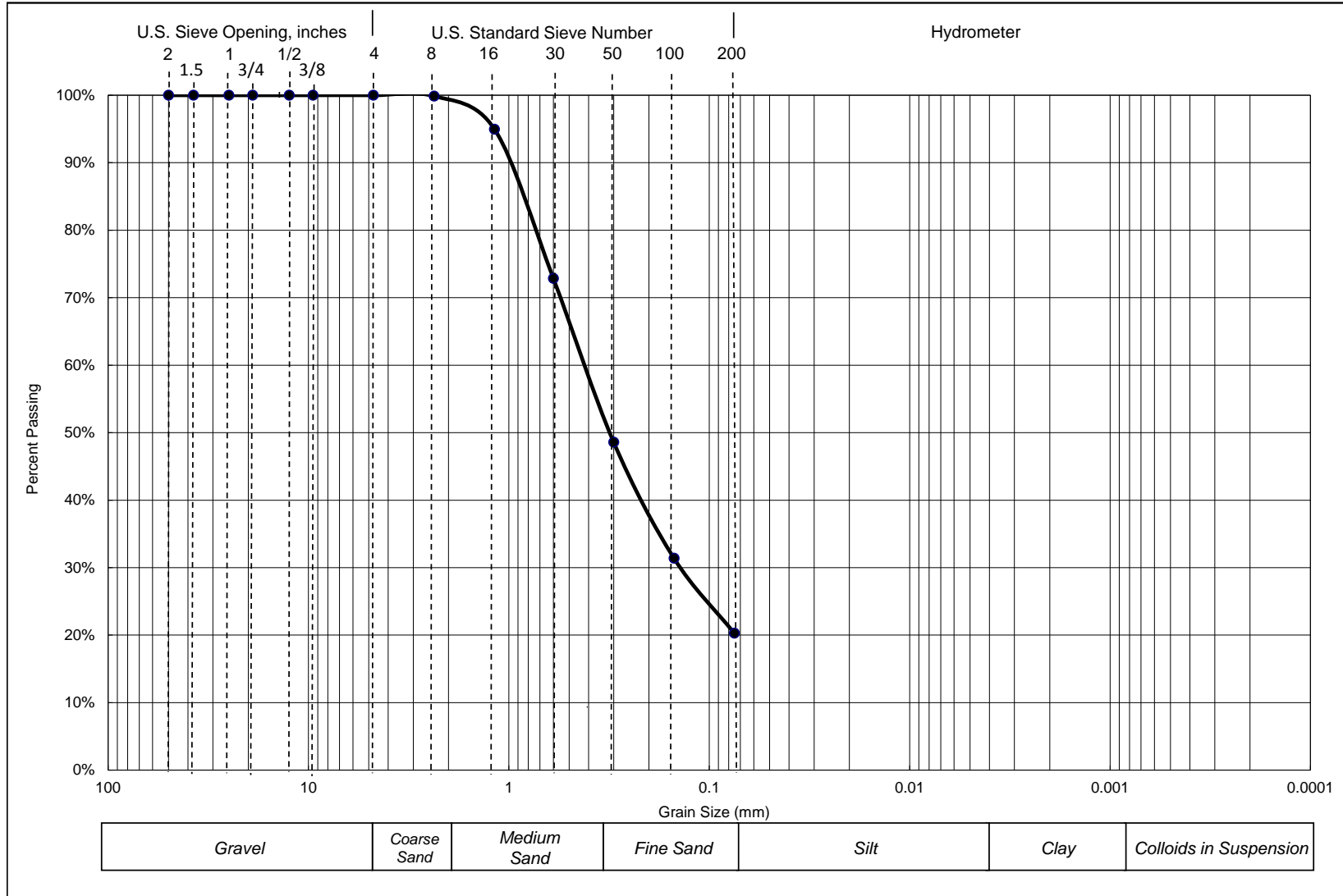
**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-4 @ 50'**



**PARTICLE SIZE DISTRIBUTION DIAGRAM**  
**GRADATION TEST - ASTM C136**



**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues Fresno, CA**

**Project Number: 1-216-1084**

**Boring: B-15 @ 2'**



**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

<b>Sieve Size</b>	<b>Particle Size, mm</b>	<b>Percent Passing</b>
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	100.0%
No. 8	2.36	99.9%
No. 16	1.18	95.0%
No. 30	0.6	72.9%
No. 50	0.3	48.6%
No. 100	0.15	31.4%
No. 200	0.075	20.28%

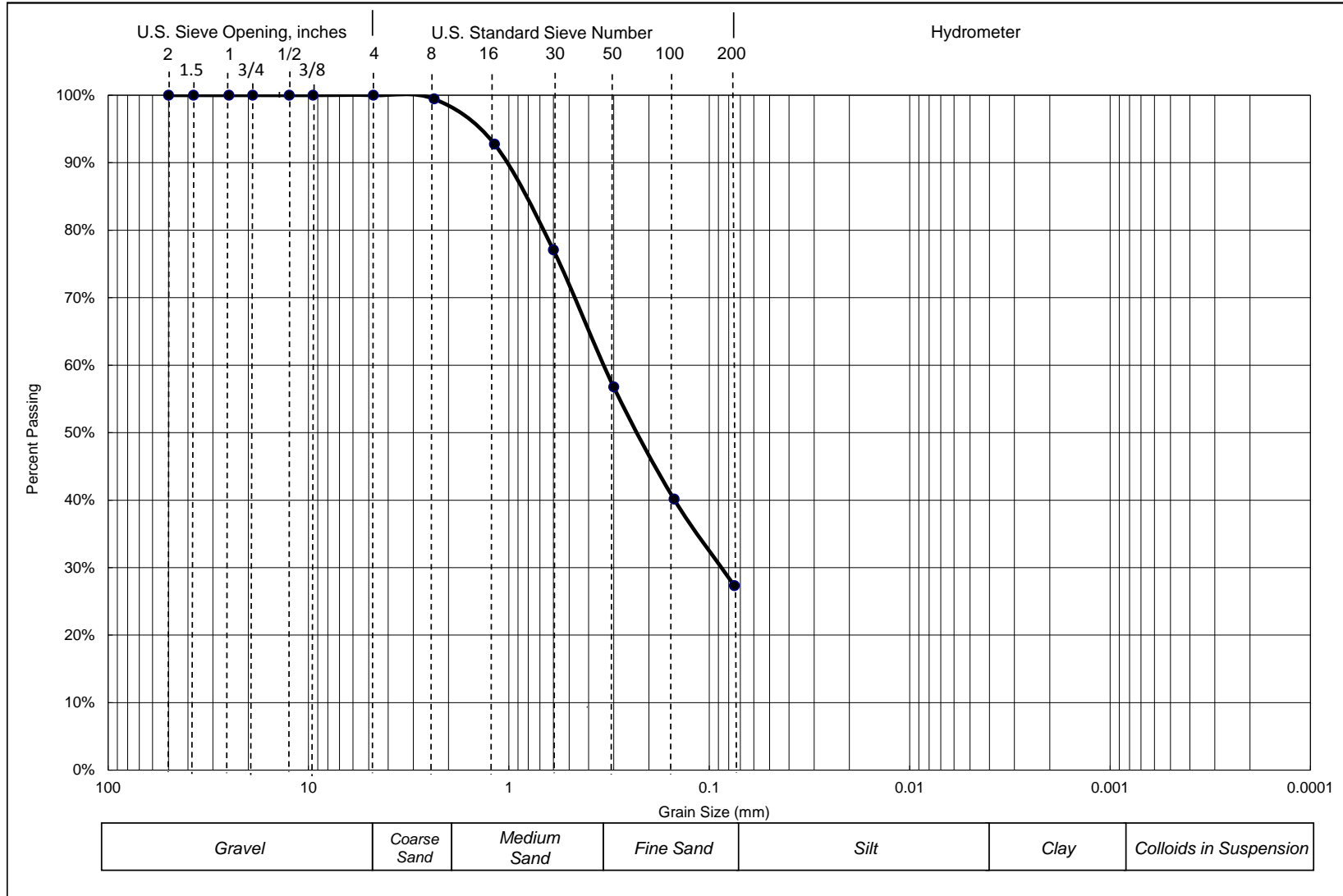
**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-15 @ 2'**



**PARTICLE SIZE DISTRIBUTION DIAGRAM  
GRADATION TEST - ASTM C136**



**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-17 @ 2'**





**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	100.0%
No. 8	2.36	99.4%
No. 16	1.18	92.7%
No. 30	0.6	77.1%
No. 50	0.3	56.8%
No. 100	0.15	40.2%
No. 200	0.075	27.33%

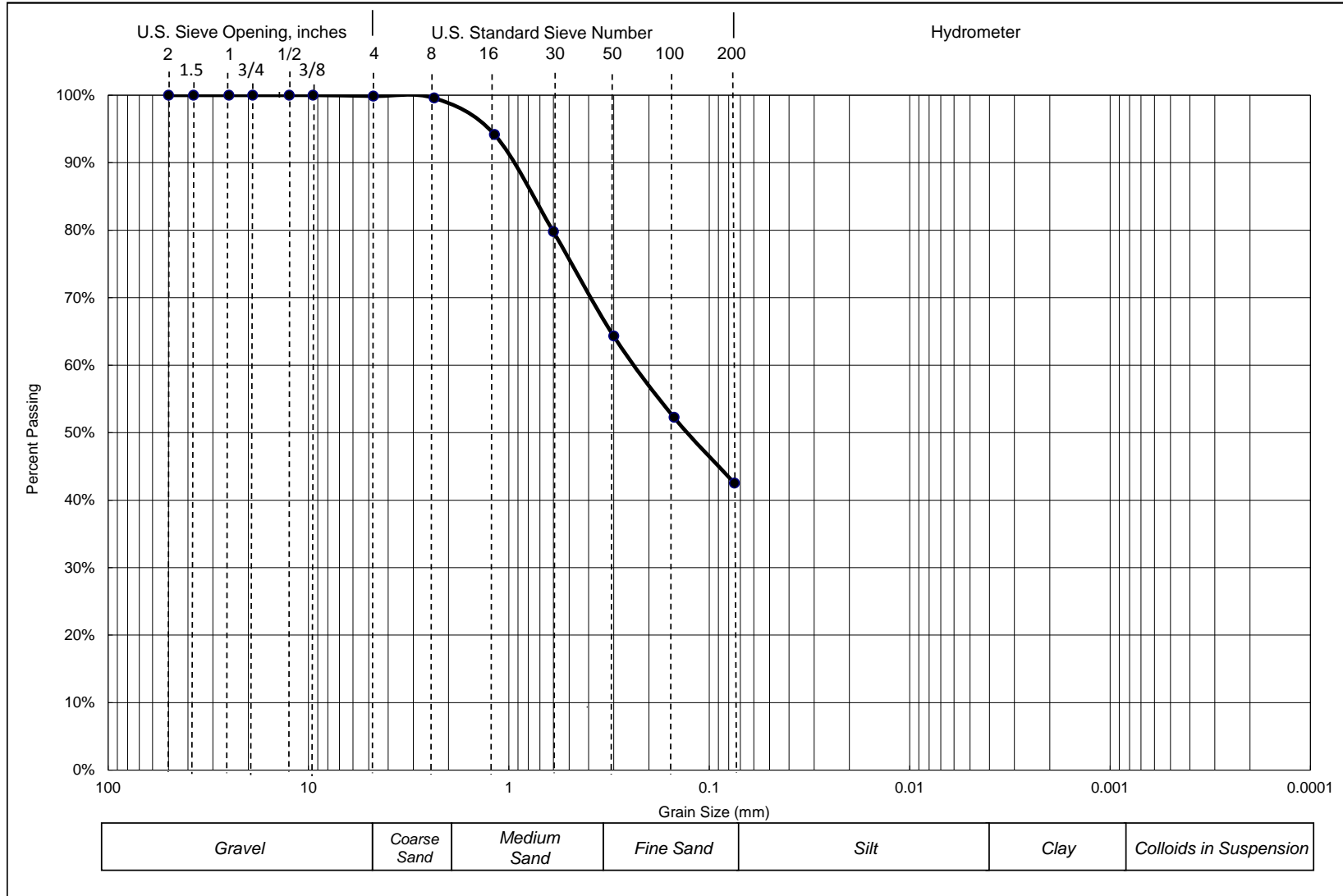
**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-17 @ 2'**



**PARTICLE SIZE DISTRIBUTION DIAGRAM  
GRADATION TEST - ASTM C136**



**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-17 @ 5'**



**DRY SIEVE ANALYSIS**  
**ASTM C136 (without Hydrometer)**

Sieve Size	Particle Size, mm	Percent Passing
1 1/2-in.	37.5	100.0%
1-in.	25	100.0%
3/4-in.	19	100.0%
1/2-in.	12.5	100.0%
3/8-in.	9.5	100.0%
No. 4	4.75	99.9%
No. 8	2.36	99.6%
No. 16	1.18	94.2%
No. 30	0.6	79.8%
No. 50	0.3	64.3%
No. 100	0.15	52.3%
No. 200	0.075	42.54%

**Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA**

**Project Number: 1-216-1084**

**Boring: B-17 @ 5'**



# Resistance R - Value and Expansion Pressure of Compacted Soils

ASTM D2844-94, Cal 301

Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA

Project Number: 1-216-1084

Sample Date: 10/13/2016

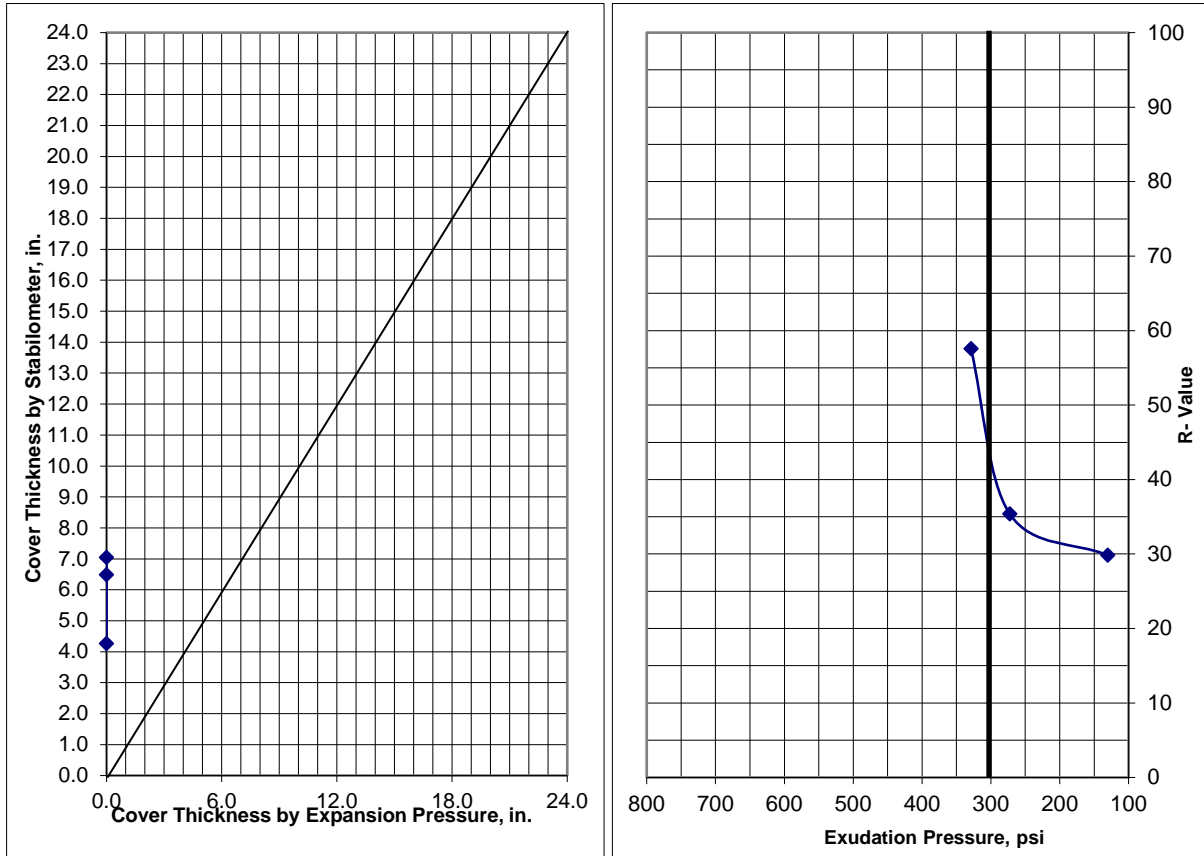
Date Tested: 10/19/16

Sampled By: SEG

Tested By: VT

Sample Location: B-21 @ 0' - 3'

Material Description: Silty SAND (SM)



Specimen	1	2	3
Exudation Pressure, psi	328.9	272.6	130.3
Moisture at Test, %	5.9	6.4	6.8
Dry Density, pcf	134.4	133.7	132.3
Expansion Pressure, psf	0	0	0.0
Thickness by Stabilometer, in.	4.3	6.5	7.0
Thickness by Expansion Pressure, in	0.0	0.0	0.0
R-Value by Stabilometer	58	35	30
R-Value by Expansion Pressure	NA		
R-Value at 300 psi Exudation Pressure	43		

<b>Controlling R-Value</b>	<b>43</b>
----------------------------	-----------

# LABORATORY COMPACTION CURVE

**ASTM - D1557, D698**

Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA

Project Number: 1-216-1084

Date Tested: 10/17/16

Sample Location: B-4 @ 0' - 3'

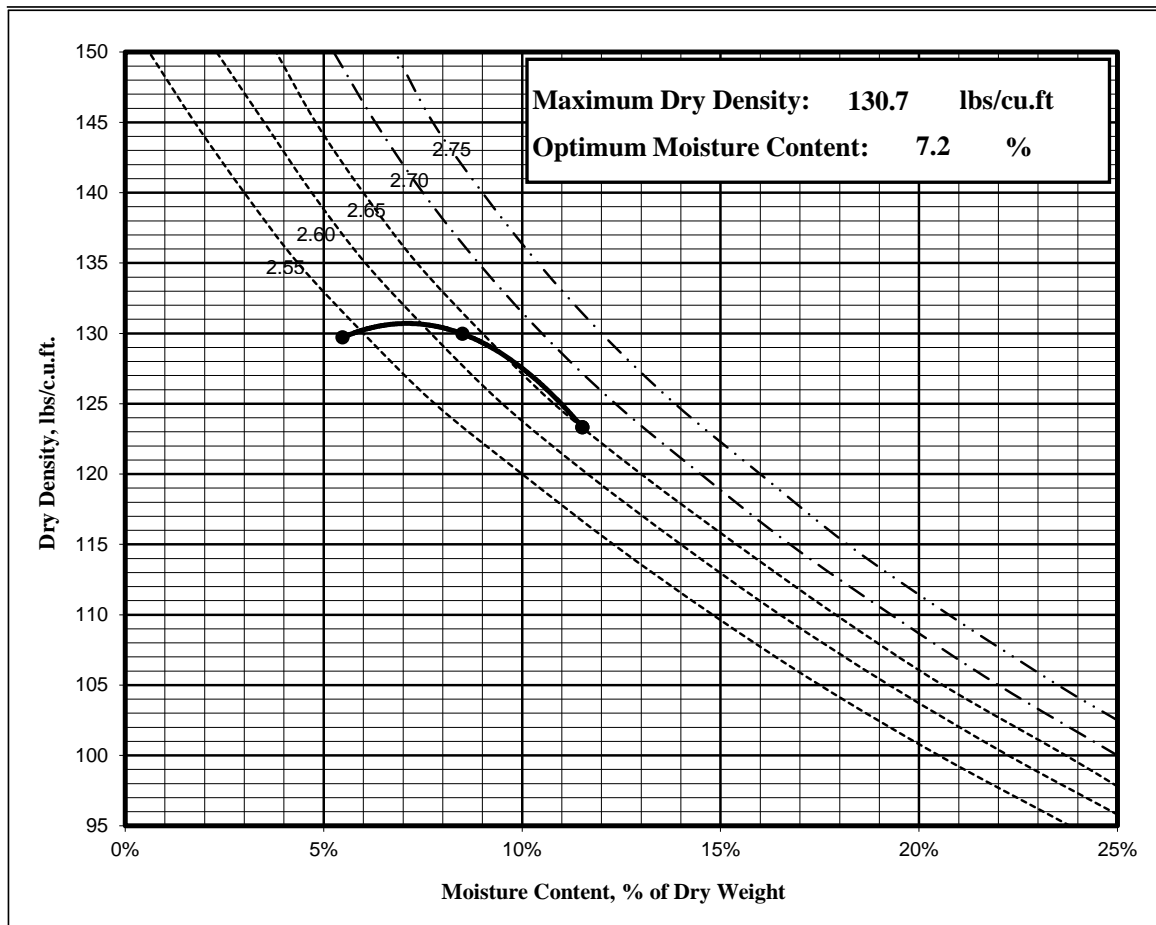
Soil Classification: Silty SAND (SM), Brown, Non-Cohesive

0

Sample/Curve Number: 1

Test Method: 1557 A

	1	2	3
Weight of Moist Specimen & Mold, gm	4073.2	4136.7	4082.3
Weight of Compaction Mold, gm	2004.9	2004.9	2004.9
Weight of Moist Specimen, gm	2068.4	2131.9	2077.4
Volume of mold, cu. ft.	0.0333	0.0333	0.0333
Wet Density, lbs/cu.ft.	136.8	141.0	137.5
Weight of Wet (Moisture) Sample, gm	340.9	340.9	340.9
Weight of Dry (Moisture) Sample, gm	323.2	314.2	305.7
Moisture Content, %	5.5%	8.5%	11.5%
Dry Density, lbs/cu.ft.	129.7	130.0	123.3



# CHEMICAL ANALYSIS

## SO<sub>4</sub> - Modified Caltrans 417 & Cl - Modified Caltrans 417/422

Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA

Project Number: 1-216-1084

Date: 10/20/16

Soil Classification: Silty SAND (SM)

Sample Number	Sample Location	Soluble Sulfate SO <sub>4</sub> -S	Soluble Chloride Cl	pH
1a.	B-4 @ 0' - 3'	120 mg/Kg	20 mg/Kg	7.4
1b.	B-4 @ 0' - 3'	120 mg/Kg	20 mg/Kg	7.4
1c.	B-4 @ 0' - 3'	120 mg/Kg	21 mg/Kg	7.4
<b>Average:</b>		<b>120 mg/Kg</b>	<b>20 mg/Kg</b>	<b>7.4</b>

## Atterberg Limits Determination

### ASTM D - 4318

Project Number: 1-216-1084

Prop. New CUSD Elem. School\_NWC W. Shields & N. Brawley Avenues\_Fresno\_CA

Date: 10/24/16

Sample location/ Depth: B-4 @ 0' - 3'

Sample Number:

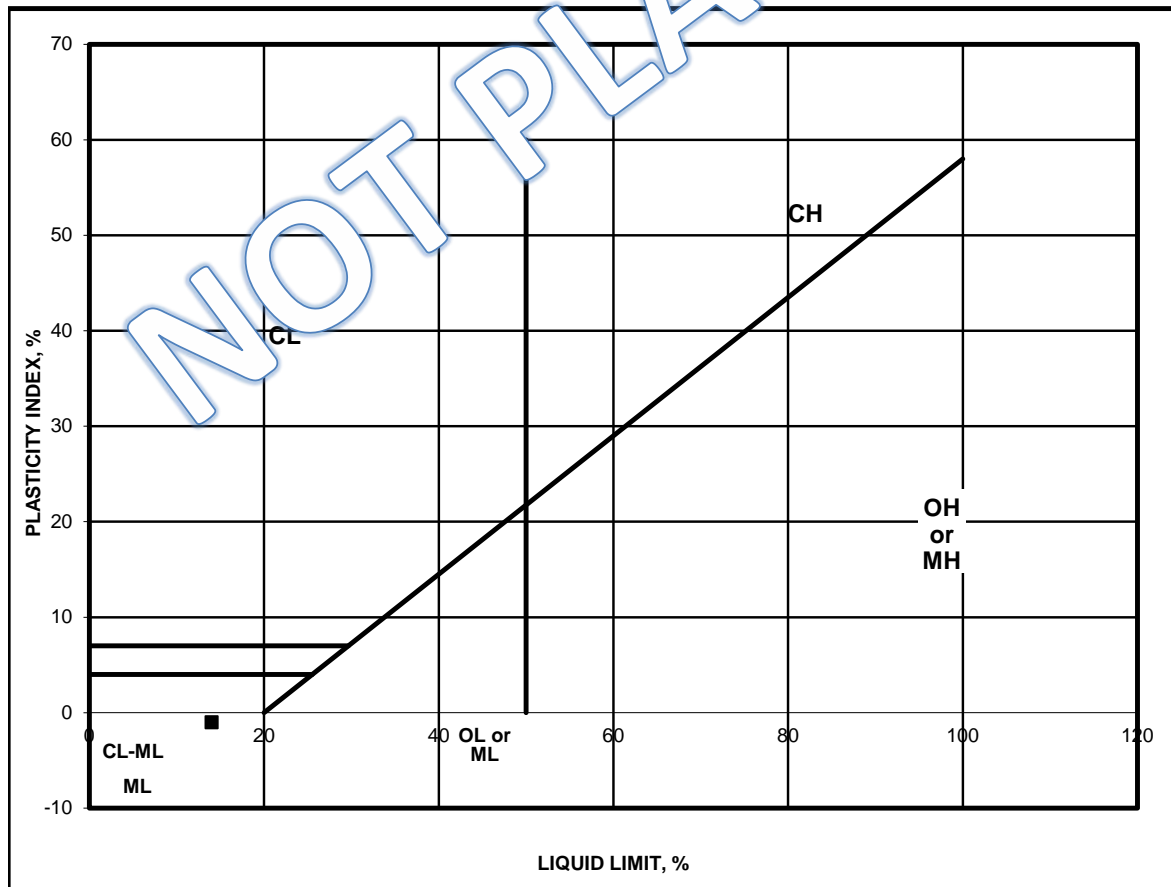
Run Number	Plastic Limit			Liquid Limit		
	1	2	3	1	2	3
Weight of Wet Soil & Tare	27.08	27.09	27.27	38.94	38.80	40.75
Weight of Dry Soil & Tare	26.27	26.26	26.49	36.79	36.55	38.27
Weight of water	0.81	0.83	0.78	2.15	2.25	2.48
Weight of Tare	20.76	20.81	21.13	21.08	20.65	21.10
Weight of Dry Soil	5.51	5.45	5.36	15.71	15.90	17.17
Water Content	14.7	15.2	14.6	14.4	14.4	14.4
Number of Blows				31	22	18

Plastic Limit : 15

Liquid Limit : 14

Plasticity Index : -1

Unified Soil Classification : ML



APPENDIX

C





## APPENDIX C GENERAL EARTHWORK AND PAVEMENT SPECIFICATIONS

When the text of the report conflicts with the general specifications in this appendix, the recommendations in the report have precedence.

**1.0 SCOPE OF WORK:** These specifications and applicable plans pertain to and include all earthwork associated with the site rough grading, including, but not limited to, the furnishing of all labor, tools and equipment necessary for site clearing and grubbing, stripping, preparation of foundation materials for receiving fill, excavation, processing, placement and compaction of fill and backfill materials to the lines and grades shown on the project grading plans and disposal of excess materials.

**2.0 PERFORMANCE:** The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications. This work shall be inspected and tested by a representative of SALEM Engineering Group, Incorporated, hereinafter referred to as the Soils Engineer and/or Testing Agency. Attainment of design grades, when achieved, shall be certified by the project Civil Engineer. Both the Soils Engineer and the Civil Engineer are the Owner's representatives. If the Contractor should fail to meet the technical or design requirements embodied in this document and on the applicable plans, he shall make the necessary adjustments until all work is deemed satisfactory as determined by both the Soils Engineer and the Civil Engineer. No deviation from these specifications shall be made except upon written approval of the Soils Engineer, Civil Engineer, or project Architect.

No earthwork shall be performed without the physical presence or approval of the Soils Engineer. The Contractor shall notify the Soils Engineer at least 2 working days prior to the commencement of any aspect of the site earthwork.

The Contractor shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify and hold the Owner and the Engineers harmless from any and all liability, real or alleged, in connection with the performance of work on this project, except for liability arising from the sole negligence of the Owner or the Engineers.

**3.0 TECHNICAL REQUIREMENTS:** All compacted materials shall be densified to no less than 95 percent of relative compaction (90 percent for cohesive soils) based on ASTM D1557 Test Method (latest edition), UBC or CAL-216, or as specified in the technical portion of the Soil Engineer's report. The location and frequency of field density tests shall be determined by the Soils Engineer. The results of these tests and compliance with these specifications shall be the basis upon which satisfactory completion of work will be judged by the Soils Engineer.

**4.0 SOILS AND FOUNDATION CONDITIONS:** The Contractor is presumed to have visited the site and to have familiarized himself with existing site conditions and the contents of the data presented in the Geotechnical Engineering Report. The Contractor shall make his own interpretation of the data contained in the Geotechnical Engineering Report and the Contractor shall not be relieved of liability for any loss sustained as a result of any variance between conditions indicated by or deduced from said report and the actual conditions encountered during the progress of the work.

**5.0 DUST CONTROL:** The work includes dust control as required for the alleviation or prevention of any dust nuisance on or about the site or the borrow area, or off-site if caused by the Contractor's operation either during the performance of the earthwork or resulting from the conditions in which the Contractor leaves the site. The Contractor shall assume all liability, including court costs of codefendants, for all claims related to dust or wind-blown materials attributable to his work. Site preparation shall consist of site clearing and grubbing and preparation of foundation materials for receiving fill.

**6.0 CLEARING AND GRUBBING:** The Contractor shall accept the site in this present condition and shall demolish and/or remove from the area of designated project earthwork all structures, both surface and subsurface, trees, brush, roots, debris, organic matter and all other matter determined by the Soils Engineer to be deleterious. Such materials shall become the property of the Contractor and shall be removed from the site.

Tree root systems in proposed improvement areas should be removed to a minimum depth of 3 feet and to such an extent which would permit removal of all roots greater than 1 inch in diameter. Tree roots removed in parking areas may be limited to the upper 1½ feet of the ground surface. Backfill of tree root excavations is not permitted until all exposed surfaces have been inspected and the Soils Engineer is present for the proper control of backfill placement and compaction. Burning in areas which are to receive fill materials shall not be permitted.

**7.0 SUBGRADE PREPARATION:** Surfaces to receive Engineered Fill and/or building or slab loads shall be prepared as outlined above, scarified to a minimum of 12 inches, moisture-conditioned as necessary, and recompacted to 95 percent relative compaction (90 percent for cohesive soils).

Loose soil areas and/or areas of disturbed soil shall be moisture-conditioned as necessary and recompacted to 95 percent relative compaction (90 percent for cohesive soils). All ruts, hummocks, or other uneven surface features shall be removed by surface grading prior to placement of any fill materials. All areas which are to receive fill materials shall be approved by the Soils Engineer prior to the placement of any fill material.

**8.0 EXCAVATION:** All excavation shall be accomplished to the tolerance normally defined by the Civil Engineer as shown on the project grading plans. All over-excavation below the grades specified shall be backfilled at the Contractor's expense and shall be compacted in accordance with the applicable technical requirements.

**9.0 FILL AND BACKFILL MATERIAL:** No material shall be moved or compacted without the presence or approval of the Soils Engineer. Material from the required site excavation may be utilized for construction site fills, provided prior approval is given by the Soils Engineer. All materials utilized for constructing site fills shall be free from vegetation or other deleterious matter as determined by the Soils Engineer.

**10.0 PLACEMENT, SPREADING AND COMPACTION:** The placement and spreading of approved fill materials and the processing and compaction of approved fill and native materials shall be the responsibility of the Contractor. Compaction of fill materials by flooding, ponding, or jetting shall not be permitted unless specifically approved by local code, as well as the Soils Engineer. Both cut and fill shall be surface-compacted to the satisfaction of the Soils Engineer prior to final acceptance.

**11.0 SEASONAL LIMITS:** No fill material shall be placed, spread, or rolled while it is frozen or thawing, or during unfavorable wet weather conditions. When the work is interrupted by heavy rains, fill operations shall not be resumed until the Soils Engineer indicates that the moisture content and density of previously placed fill is as specified.

**12.0 DEFINITIONS** - The term "pavement" shall include asphaltic concrete surfacing, untreated aggregate base, and aggregate subbase. The term "subgrade" is that portion of the area on which surfacing, base, or subbase is to be placed.

The term "Standard Specifications": hereinafter referred to, is the most recent edition of the Standard Specifications of the State of California, Department of Transportation. The term "relative compaction" refers to the field density expressed as a percentage of the maximum laboratory density as determined by ASTM D1557 Test Method (latest edition) or California Test Method 216 (CAL-216), as applicable.

**13.0 PREPARATION OF THE SUBGRADE** - The Contractor shall prepare the surface of the various subgrades receiving subsequent pavement courses to the lines, grades, and dimensions given on the plans. The upper 12 inches of the soil subgrade beneath the pavement section shall be compacted to a minimum relative compaction of 95 percent based upon ASTM D1557. The finished subgrades shall be tested and approved by the Soils Engineer prior to the placement of additional pavement courses.

**14.0 AGGREGATE BASE** - The aggregate base material shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate base material shall conform to the requirements of Section 26 of the Standard Specifications for Class II material, ¾-inch or 1½-inches maximum size. The aggregate base material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216. The aggregate base material shall be spread in layers not exceeding 6 inches and each layer of aggregate material course shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

**15.0 AGGREGATE SUBBASE** - The aggregate subbase shall be spread and compacted on the prepared subgrade in conformity with the lines, grades, and dimensions shown on the plans. The aggregate subbase material shall conform to the requirements of Section 25 of the Standard Specifications for Class II Subbase material. The aggregate subbase material shall be compacted to a minimum relative compaction of 95 percent based upon CAL-216, and it shall be spread and compacted in accordance with the Standard Specifications. Each layer of aggregate subbase shall be tested and approved by the Soils Engineer prior to the placement of successive layers.

**16.0 ASPHALTIC CONCRETE SURFACING** - Asphaltic concrete surfacing shall consist of a mixture of mineral aggregate and paving grade asphalt, mixed at a central mixing plant and spread and compacted on a prepared base in conformity with the lines, grades, and dimensions shown on the plans. The viscosity grade of the asphalt shall be PG 64-10, unless otherwise stipulated or local conditions warrant more stringent grade. The mineral aggregate shall be Type A or B, ½ inch maximum size, medium grading, and shall conform to the requirements set forth in Section 39 of the Standard Specifications. The drying, proportioning, and mixing of the materials shall conform to Section 39. The prime coat, spreading and compacting equipment, and spreading and compacting the mixture shall conform to the applicable chapters of Section 39, with the exception that no surface course shall be placed when the atmospheric temperature is below 50 degrees F. The surfacing shall be rolled with a combination steel-wheel and pneumatic rollers, as described in the Standard Specifications. The surface course shall be placed with an approved self-propelled mechanical spreading and finishing machine

APPENDIX

# D



\*\*\*\*\*  
\*  
\* E Q S E A R C H \*  
\*  
\* Version 3.00 \*  
\*  
\*\*\*\*\*

ESTIMATION OF  
PEAK ACCELERATION FROM  
CALIFORNIA EARTHQUAKE CATALOGS

JOB NUMBER: 1-216-1084

DATE: 10-31-2016

JOB NAME: CUSD Elem School-Brawley & Shields

EARTHQUAKE-CATALOG-FILE NAME: ALLQUAKE.DAT

MAGNITUDE RANGE:

MINIMUM MAGNITUDE: 4.00  
MAXIMUM MAGNITUDE: 9.00

SITE COORDINATES:

SITE LATITUDE: 36.7801  
SITE LONGITUDE: 119.8638

SEARCH DATES:

START DATE: 1800  
END DATE: 2011

SEARCH RADIUS:

80.0 mi  
128.7 km

ATTENUATION RELATION: 3) Boore et al. (1997) Horiz. - NEHRP D (250)  
UNCERTAINTY (M=Median, S=Sigma): M Number of Sigmas: 0.0  
ASSUMED SOURCE TYPE: BT [SS=Strike-slip, DS=Reverse-slip, BT=Blind-thrust]  
SCOND: 0 Depth Source: A  
Basement Depth: 5.00 km Campbell SSR: Campbell SHR:  
COMPUTE PEAK HORIZONTAL ACCELERATION

MINIMUM DEPTH VALUE (km): 0.0

-----  
EARTHQUAKE SEARCH RESULTS  
-----

Page 1

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME	DEPTH	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE	
				H M Sec					(km)	mi
T-A	36.7500	119.7500	08/16/1864	553 0.0	0.0	4.30	0.099	VII	6.6	( 10.7)
MGI	37.0000	120.0700	09/12/1928	120 0.0	0.0	4.60	0.056	VI	19.0	( 30.5)
T-A	37.0000	119.5000	07/14/1894	450 0.0	0.0	4.30	0.038	V	25.2	( 40.5)
DMG	36.5830	120.3330	11/30/1963	225548.0	0.0	4.50	0.038	V	29.3	( 47.2)
DMG	36.6020	119.3750	09/15/1973	1 315.4	8.0	4.40	0.036	V	29.7	( 47.8)
BRK	36.4700	120.3500	08/03/1975	55717.0	0.0	4.00	0.026	V	34.4	( 55.4)
BRK	36.4600	120.3400	08/03/1975	63516.0	0.0	4.90	0.041	V	34.4	( 55.4)
BRK	36.4600	120.3400	08/03/1975	638 0.0	0.0	4.40	0.032	V	34.4	( 55.4)
BRK	36.5000	120.4000	08/15/1975	222751.0	0.0	4.60	0.035	V	35.4	( 57.0)
UNR	37.3730	119.9560	08/10/1975	51640.5	5.5	4.40	0.028	V	41.2	( 66.4)
BRK	36.3000	120.3100	05/03/1983	93947.0	0.0	4.00	0.022	IV	41.4	( 66.6)
PAS	36.2200	120.1360	09/24/1980	8 839.1	6.7	4.40	0.027	V	41.5	( 66.8)
PAS	36.2600	120.2590	05/03/1983	142656.0	1.2	4.10	0.023	IV	42.1	( 67.7)
PAS	36.2500	120.2670	05/03/1983	01629.1	9.0	4.50	0.028	V	42.9	( 69.0)
BRK	36.2500	120.2800	05/03/1983	018 1.0	0.0	4.40	0.027	V	43.3	( 69.6)
PAS	36.2050	120.1760	05/03/1983	0 022.1	9.0	4.00	0.022	IV	43.3	( 69.7)
BRK	36.2800	120.3400	05/04/1983	161120.0	0.0	4.30	0.025	V	43.5	( 70.0)
PAS	36.2740	120.3310	02/19/1984	94310.6	7.4	4.40	0.027	V	43.5	( 70.0)
BRK	36.2500	120.2900	05/03/1983	154142.0	0.0	4.80	0.033	V	43.6	( 70.1)
BRK	36.2700	120.3300	05/03/1983	05745.0	0.0	4.80	0.033	V	43.7	( 70.3)
PAS	36.3130	120.3960	10/25/1982	231217.8	6.0	4.30	0.025	V	43.7	( 70.4)
BRK	36.1800	120.1200	08/12/1983	22 236.0	0.0	4.00	0.021	IV	43.8	( 70.5)
BRK	36.2400	120.2800	05/03/1983	05034.0	0.0	4.00	0.021	IV	43.9	( 70.6)
PAS	36.3210	120.4160	10/25/1982	231554.2	6.0	4.00	0.021	IV	44.1	( 70.9)
USG	36.2380	120.2850	05/03/1983	21514.9	8.8	4.08	0.022	IV	44.1	( 71.0)
BRK	36.2400	120.2900	05/09/1983	24912.0	0.0	5.20	0.040	V	44.2	( 71.1)
BRK	36.2800	120.3600	05/05/1983	102045.0	0.0	4.60	0.029	V	44.2	( 71.1)
BRK	36.2500	120.3100	05/24/1983	9 219.0	0.0	4.60	0.029	V	44.2	( 71.1)
USG	36.2300	120.2710	05/19/1983	11 530.1	12.9	4.16	0.023	IV	44.2	( 71.1)
BRK	36.2600	120.3300	05/04/1983	72840.0	0.0	4.70	0.031	V	44.3	( 71.2)
BRK	36.2600	120.3300	05/03/1983	43233.0	0.0	4.30	0.025	V	44.3	( 71.2)
DMG	37.0700	120.5800	11/01/1954	64240.0	0.0	4.00	0.021	IV	44.3	( 71.3)
BRK	36.2300	120.2800	09/09/1983	92133.0	0.0	4.00	0.021	IV	44.4	( 71.5)
BRK	36.2200	120.2600	09/09/1983	91614.0	0.0	5.40	0.044	VI	44.5	( 71.6)
PAS	36.1510	120.0490	08/04/1985	12 156.0	6.0	5.80	0.054	VI	44.6	( 71.8)
PAS	36.2190	120.2640	05/08/1984	192113.1	15.3	4.20	0.023	IV	44.7	( 71.9)
USG	36.2320	120.2990	05/03/1983	15546.4	6.9	4.00	0.021	IV	44.9	( 72.2)
USG	36.2910	120.4010	08/12/1983	11441.1	9.8	4.04	0.021	IV	45.0	( 72.5)
PAS	36.1450	120.0520	08/04/1985	112915.4	6.0	4.30	0.024	V	45.1	( 72.5)
PAS	36.1770	120.1750	05/03/1983	635 3.1	5.0	4.00	0.021	IV	45.1	( 72.5)
BRK	36.2200	120.2900	05/02/1983	234239.0	0.0	6.70	0.086	VII	45.3	( 72.9)
BRK	36.2200	120.2900	05/02/1983	2346 6.0	0.0	5.60	0.048	VI	45.3	( 72.9)
BRK	36.2900	120.4100	08/14/1983	124337.0	0.0	4.20	0.023	IV	45.4	( 73.1)
PAS	36.1310	119.9970	08/05/1985	144538.3	6.0	4.30	0.024	V	45.4	( 73.1)
GSB	36.3000	120.4270	04/21/1994	163715.3	10.0	4.50	0.027	V	45.5	( 73.3)
BRK	36.2200	120.3000	05/09/1983	32638.0	0.0	4.40	0.026	V	45.6	( 73.4)
DMG	36.2300	120.3200	08/13/1940	22 729.0	0.0	4.00	0.021	IV	45.6	( 73.5)
PAS	36.2860	120.4130	10/25/1982	2226 4.0	6.0	5.60	0.048	VI	45.7	( 73.6)
PAS	36.1190	119.9890	08/04/1985	12 841.8	6.0	4.10	0.022	IV	46.2	( 74.3)
DMG	36.8000	120.7000	12/05/1937	137 0.0	0.0	4.00	0.020	IV	46.3	( 74.4)
DMG	36.2200	120.3300	10/22/1955	7 413.0	0.0	4.20	0.023	IV	46.5	( 74.9)
BRK	36.2600	120.4000	07/09/1983	74052.0	0.0	5.30	0.040	V	46.6	( 75.0)
USG	36.1800	120.2600	05/03/1983	13 914.6	12.5	4.04	0.021	IV	46.9	( 75.5)

-----  
EARTHQUAKE SEARCH RESULTS  
-----

Page 2

FILE CODE	LAT.	LONG.	DATE	TIME	DEPTH	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE	
	NORTH	WEST		H M Sec					(km)	mi
PAS	36.1820	120.2680	02/14/1987	72650.8	6.0	5.10	0.036	V	47.0	( 75.6)
GSB	36.1920	120.2930	02/02/1997	022020.3	9.0	4.10	0.021	IV	47.1	( 75.8)
BRK	36.2500	120.4000	05/03/1983	6 447.0	0.0	4.30	0.024	IV	47.2	( 75.9)
PAS	36.2400	120.3900	07/22/1983	24910.7	8.7	4.20	0.022	IV	47.4	( 76.2)
PAS	36.2400	120.3900	07/22/1983	24910.7	8.7	4.20	0.022	IV	47.4	( 76.2)
USG	36.1800	120.2800	07/18/1983	1928 5.4	10.9	4.16	0.022	IV	47.4	( 76.3)
BRK	36.2300	120.3800	09/11/1983	1148 7.0	0.0	4.30	0.023	IV	47.6	( 76.6)
BRK	36.3000	120.4800	08/26/1983	32118.0	0.0	4.00	0.020	IV	47.6	( 76.6)
BRK	36.2100	120.3500	05/03/1983	03947.0	0.0	4.20	0.022	IV	47.7	( 76.8)
BRK	36.1400	120.1900	05/22/1983	83923.0	0.0	4.00	0.020	IV	47.8	( 76.9)
USG	36.1540	120.2320	05/02/1983	235529.1	8.6	4.24	0.023	IV	47.8	( 76.9)
GSP	36.1810	120.3010	03/31/1994	195959.7	10.0	4.40	0.025	V	48.0	( 77.2)
GSB	36.1740	120.2920	12/16/2006	061405.0	9.0	4.20	0.022	IV	48.1	( 77.4)
GSB	36.1720	120.2880	03/31/1994	200229.7	9.0	4.20	0.022	IV	48.1	( 77.5)
BRK	36.1400	120.2100	06/07/1983	51839.0	0.0	4.00	0.020	IV	48.2	( 77.6)
DMG	36.5300	120.6800	08/19/1974	124719.1	0.0	4.40	0.024	V	48.4	( 77.9)
BRK	36.1300	120.1900	05/03/1983	14147.0	0.0	4.50	0.026	V	48.4	( 77.9)
DMG	36.3000	120.5000	11/30/1943	215718.0	0.0	4.00	0.020	IV	48.4	( 77.9)
USG	36.1340	120.2040	05/05/1983	43748.6	11.2	4.01	0.020	IV	48.4	( 78.0)
BRK	36.1500	120.2500	05/12/1983	1341 8.0	0.0	4.50	0.026	V	48.5	( 78.0)
PAS	36.2450	120.4310	07/22/1983	329 2.3	3.0	4.10	0.021	IV	48.5	( 78.1)
PAS	36.2450	120.4310	07/22/1983	329 2.3	3.0	4.10	0.021	IV	48.5	( 78.1)
GSB	36.1630	120.2870	04/24/1984	045251.5	10.0	4.00	0.020	IV	48.7	( 78.3)
BRK	36.2100	120.3800	07/25/1983	223140.0	0.0	5.10	0.035	V	48.7	( 78.3)
DMG	36.4170	120.6170	04/15/1963	841 2.3	0.0	4.70	0.028	V	48.7	( 78.4)
DMG	36.4200	120.6200	04/15/1962	841 2.3	21.0	4.70	0.028	V	48.7	( 78.4)
GSB	36.1580	120.2800	05/11/1985	085923.8	5.0	4.00	0.020	IV	48.8	( 78.5)
BRK	36.2200	120.4000	07/22/1983	23955.0	0.0	6.00	0.056	VI	48.8	( 78.5)
PAS	36.1760	120.3220	01/03/1985	112228.0	7.8	4.30	0.023	IV	48.9	( 78.6)
DMG	36.7800	120.7500	04/22/1932	0 816.0	0.0	4.00	0.020	IV	49.0	( 78.9)
BRK	36.1100	120.1600	01/14/1976	214359.0	0.0	4.90	0.031	V	49.1	( 79.0)
DMG	36.1700	120.3200	12/27/1926	919 0.0	0.0	5.00	0.033	V	49.1	( 79.1)
PAS	36.1760	120.3370	01/03/1985	104522.8	6.0	4.10	0.021	IV	49.3	( 79.3)
BRK	36.2500	120.4700	06/11/1983	3 954.0	0.0	5.10	0.035	V	49.7	( 80.0)
BRK	36.1300	120.2500	05/03/1983	855 3.0	0.0	4.50	0.025	V	49.7	( 80.0)
BRK	36.1400	120.2800	05/03/1983	0 924.0	0.0	4.00	0.019	IV	49.9	( 80.3)
BRK	36.2000	120.4000	07/22/1983	343 2.0	0.0	5.00	0.033	V	49.9	( 80.3)
BRK	36.1000	120.1800	05/03/1983	01537.0	0.0	4.20	0.021	IV	50.1	( 80.7)
BRK	36.1000	120.1800	05/03/1983	01557.0	0.0	4.00	0.019	IV	50.1	( 80.7)
T-A	37.5000	120.0000	01/22/1857	0 0 0.0	0.0	4.30	0.022	IV	50.3	( 80.9)
DMG	37.5000	120.0000	08/23/1937	032 0.0	0.0	4.00	0.019	IV	50.3	( 80.9)
PAS	36.0520	119.9780	08/04/1985	151539.5	6.0	4.40	0.024	IV	50.7	( 81.5)
PAS	36.0910	120.2080	08/04/1985	112924.5	6.0	4.30	0.022	IV	51.3	( 82.5)
GSG	36.0460	120.0420	01/28/2005	130326.3	10.0	4.00	0.019	IV	51.6	( 83.1)
PAS	36.0760	120.1820	05/03/1983	6 456.2	5.0	4.10	0.020	IV	51.7	( 83.2)
T-A	36.1700	119.3200	07/25/1868	230 0.0	0.0	5.00	0.032	V	51.8	( 83.4)
BRK	36.0700	120.1900	12/21/1983	18 4 9.0	0.0	4.20	0.021	IV	52.3	( 84.1)
PAS	36.0620	120.1630	01/14/1976	214259.4	7.0	4.70	0.027	V	52.3	( 84.1)
BRK	36.1000	120.2900	06/12/1983	13128.0	0.0	4.00	0.019	IV	52.6	( 84.6)
PAS	36.0270	120.0560	08/07/1985	016 3.5	6.0	4.40	0.023	IV	53.1	( 85.4)
DMG	36.6000	120.8000	07/25/1926	175749.0	15.0	5.00	0.031	V	53.3	( 85.8)
DMG	36.2000	120.5000	02/25/1947	114518.0	0.0	4.20	0.020	IV	53.4	( 85.9)
UNR	37.4650	119.4120	11/18/1981	161548.5	10.1	4.20	0.020	IV	53.4	( 86.0)

-----  
EARTHQUAKE SEARCH RESULTS  
-----

Page 3

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME	DEPTH	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE	
				H M Sec					(km)	mi
GSB	36.0070	119.9400	09/27/1992	165914.1	13.0	4.00	0.018	IV	53.5	( 86.2)
GSB	36.0030	119.9160	09/16/1992	061433.4	11.0	4.30	0.021	IV	53.7	( 86.5)
DMG	36.0000	120.0000	11/08/1964	11919.0	14.0	4.00	0.018	IV	54.4	( 87.5)
MGI	36.3300	120.6700	07/31/1919	2131 0.0	0.0	4.00	0.018	IV	54.4	( 87.6)
BRK	36.6800	120.8500	02/05/1983	12 127.0	0.0	4.20	0.020	IV	55.0	( 88.5)
GSB	36.7770	120.8670	01/06/1988	224948.3	6.0	4.20	0.020	IV	55.5	( 89.3)
DMG	35.9800	120.0400	09/19/1965	1542 7.8	0.0	4.80	0.027	V	56.1	( 90.3)
GSB	36.4050	120.7880	01/12/1990	091023.1	14.0	4.20	0.019	IV	57.4	( 92.4)
DMG	36.2300	120.6500	02/05/1947	614 0.0	0.0	5.00	0.029	V	57.8	( 93.1)
DMG	35.9170	119.9170	07/14/1947	540 6.0	0.0	4.00	0.017	IV	59.7	( 96.0)
PAS	37.4510	119.0880	05/25/1980	44938.0	4.0	4.00	0.016	IV	63.0	(101.4)
MGI	37.4500	119.0500	01/31/1934	1945 0.0	0.0	4.30	0.019	IV	64.4	(103.6)
DMG	36.0000	120.5000	12/14/1961	115115.0	0.0	4.00	0.016	IV	64.4	(103.7)
DMG	36.0000	120.5000	03/03/1901	745 0.0	0.0	5.50	0.035	V	64.4	(103.7)
DMG	36.0000	120.5000	02/02/1881	011 0.0	0.0	5.60	0.037	V	64.4	(103.7)
PAS	37.4120	118.9940	06/13/1980	1457 3.6	5.0	4.00	0.016	IV	64.8	(104.3)
MGI	37.7000	119.6000	05/26/1905	250 0.0	0.0	4.00	0.016	IV	65.1	(104.8)
DMG	35.9300	120.3800	06/22/1953	152235.0	0.0	4.30	0.018	IV	65.3	(105.1)
DMG	36.5000	121.0000	02/10/1946	11 119.0	0.0	4.20	0.017	IV	65.8	(106.0)
DMG	36.5000	121.0000	06/16/1934	23 3 0.0	0.0	4.00	0.016	IV	65.8	(106.0)
DMG	35.9700	120.5000	06/28/1966	4 856.2	0.0	5.10	0.028	V	66.2	(106.5)
BRK	37.1900	120.9500	06/18/1975	175019.0	0.0	4.10	0.016	IV	66.3	(106.6)
GSB	35.9880	120.5380	09/30/2004	185428.9	10.0	4.90	0.025	V	66.3	(106.7)
BRK	36.0000	120.5600	09/13/1975	212059.0	0.0	4.80	0.024	IV	66.3	(106.7)
DMG	37.4500	119.0000	04/03/1939	710 0.0	0.0	4.00	0.015	IV	66.3	(106.8)
DMG	35.9500	120.4700	11/16/1956	323 9.0	0.0	5.00	0.026	V	66.5	(107.0)
PAS	35.9620	120.5000	06/25/1982	35823.8	6.0	4.10	0.016	IV	66.6	(107.2)
DMG	37.3830	118.9170	05/16/1935	325 0.0	0.0	4.50	0.020	IV	66.7	(107.4)
GSP	35.9700	120.5250	11/12/2002	164825.1	8.0	4.20	0.017	IV	66.9	(107.7)
GSB	35.9530	120.4940	11/14/1993	122534.9	11.0	4.90	0.025	V	67.0	(107.8)
GSB	35.9530	120.5020	09/29/2004	171004.0	11.0	5.10	0.027	V	67.2	(108.2)
GSB	35.9460	120.4900	02/26/1999	152556.7	10.0	4.10	0.016	IV	67.3	(108.3)
DMG	35.9500	120.5000	06/28/1966	42613.4	0.0	5.50	0.034	V	67.3	(108.4)
DMG	35.9500	120.5000	06/28/1966	42836.0	0.0	4.50	0.020	IV	67.3	(108.4)
BRK	35.9600	120.5200	01/06/1975	111712.0	0.0	4.40	0.019	IV	67.4	(108.4)
GSB	35.9450	120.4920	11/29/2004	015414.5	10.0	4.20	0.017	IV	67.4	(108.5)
PAS	37.5090	119.0430	06/11/1980	441 1.1	14.1	5.00	0.026	V	67.6	(108.8)
PDP	35.9420	120.4940	04/07/2010	224029.9	10.0	4.30	0.018	IV	67.6	(108.9)
BRK	36.5800	121.0600	08/08/1983	1313 9.0	0.0	4.00	0.015	IV	67.7	(108.9)
DMG	36.4200	121.0000	11/26/1929	8 5 0.0	0.0	4.50	0.020	IV	67.7	(109.0)
GSB	35.9400	120.4940	04/04/1993	052125.3	7.0	4.30	0.018	IV	67.8	(109.0)
GSB	35.9280	120.4730	10/20/1992	052808.9	9.0	4.30	0.018	IV	67.9	(109.2)
GSB	35.9290	120.4770	05/16/2005	072437.5	10.0	4.50	0.020	IV	67.9	(109.3)
DMG	35.9300	120.4800	11/22/1938	1530 0.0	0.0	4.50	0.020	IV	68.0	(109.4)
DMG	35.9300	120.4800	12/22/1941	054 9.0	0.0	4.00	0.015	IV	68.0	(109.4)
DMG	35.9300	120.4800	10/22/1935	1837 0.0	0.0	4.00	0.015	IV	68.0	(109.4)
DMG	35.9300	120.4800	12/24/1934	1626 0.0	0.0	5.00	0.026	V	68.0	(109.4)
DMG	35.9300	120.4800	01/06/1935	4 4 0.0	0.0	4.00	0.015	IV	68.0	(109.4)
DMG	35.9300	120.4800	01/06/1935	440 0.0	0.0	4.00	0.015	IV	68.0	(109.4)
DMG	35.9300	120.4800	05/02/1939	1849 0.0	0.0	4.00	0.015	IV	68.0	(109.4)
DMG	35.9300	120.4800	02/20/1937	958 0.0	0.0	4.00	0.015	IV	68.0	(109.4)
DMG	36.4000	121.0000	04/12/1885	4 5 0.0	0.0	6.20	0.048	VI	68.2	(109.8)
DMG	35.9500	120.5300	06/29/1966	195325.9	0.0	5.00	0.026	V	68.2	(109.8)



-----  
EARTHQUAKE SEARCH RESULTS  
-----

Page 4

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME	DEPTH	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE	
				H M Sec					(km)	mi
GSB	35.9170	120.4650	12/20/1994	102747.2	8.0	5.00	0.026	V	68.3	(110.0)
DMG	37.3330	118.8330	02/03/1933	148 0.0	0.0	4.00	0.015	IV	68.4	(110.1)
DMG	35.9300	120.5000	10/10/1958	13 516.0	0.0	4.50	0.020	IV	68.5	(110.3)
PAS	36.7330	121.1020	11/28/1985	151354.7	6.0	4.90	0.024	V	68.6	(110.3)
DMG	35.9700	120.5800	12/02/1934	16 7 0.0	0.0	4.00	0.015	IV	68.7	(110.5)
DMG	37.5000	119.0000	11/06/1962	115717.0	0.0	4.10	0.016	IV	68.8	(110.7)
BRK	36.5100	121.0600	06/19/1982	101733.0	0.0	4.10	0.016	IV	68.8	(110.8)
DMG	37.3300	118.8200	08/24/1932	9 838.0	0.0	4.00	0.015	IV	68.9	(110.9)
DMG	37.5170	119.0170	11/06/1963	115720.4	0.0	4.00	0.015	IV	69.0	(111.0)
MGI	37.7500	120.1700	08/12/1918	1630 0.0	0.0	4.00	0.015	IV	69.0	(111.1)
DMG	37.3330	118.8170	08/24/1932	9 838.3	0.0	4.00	0.015	IV	69.2	(111.3)
BRK	36.5700	121.0900	10/13/1980	24654.0	0.0	4.00	0.015	IV	69.4	(111.7)
DMG	37.3670	118.8330	05/18/1946	64548.0	0.0	4.00	0.015	IV	69.8	(112.3)
DMG	37.3670	118.8330	05/18/1946	355 0.0	0.0	4.10	0.016	IV	69.8	(112.3)
DMG	37.2370	118.7320	04/17/1966	7 419.1	-0.2	4.00	0.015	IV	69.9	(112.5)
GSB	35.8670	120.4120	09/06/2002	072822.6	9.0	4.00	0.015	IV	70.0	(112.7)
DMG	36.4300	121.0500	11/17/1969	204919.5	0.0	4.40	0.018	IV	70.0	(112.7)
BRK	36.8200	121.1300	03/17/1976	4 152.0	0.0	4.30	0.017	IV	70.1	(112.7)
GSB	35.8610	120.4120	05/22/2007	113412.2	9.0	4.00	0.015	IV	70.4	(113.3)
DMG	37.2000	118.7000	06/07/1948	15 522.0	0.0	4.20	0.016	IV	70.4	(113.3)
DMG	37.2000	118.7000	09/30/1889	520 0.0	0.0	5.60	0.034	V	70.4	(113.3)
GSG	36.5190	121.0930	04/01/2006	122559.8	1.0	4.30	0.017	IV	70.4	(113.3)
GSG	35.8590	120.4090	09/28/2004	171906.8	9.0	4.20	0.016	IV	70.5	(113.4)
DMG	35.8800	120.4700	12/11/1956	105653.0	0.0	4.10	0.016	IV	70.7	(113.8)
DMG	36.5290	121.1030	02/27/1972	2213 8.4	11.4	4.62	0.020	IV	70.8	(113.9)
UNR	37.5130	118.9590	05/26/1980	103953.0	9.3	4.10	0.015	IV	71.0	(114.2)
DMG	37.7000	119.2800	06/21/1957	04125.0	0.0	4.60	0.020	IV	71.2	(114.5)
GSB	35.8390	120.3870	09/28/2004	193127.8	9.0	4.10	0.015	IV	71.2	(114.6)
DMG	35.8600	120.4500	06/30/1966	11736.1	0.0	4.10	0.015	IV	71.4	(114.9)
DMG	35.8800	120.5000	05/28/1953	35113.0	0.0	4.30	0.017	IV	71.5	(115.1)
UNR	37.4780	118.9000	07/29/1980	191714.0	0.9	4.10	0.015	IV	71.7	(115.3)
UNR	37.4830	118.9000	10/01/1981	071 4.7	1.4	4.30	0.017	IV	71.9	(115.7)
GSB	35.8190	120.3640	09/28/2004	171524.2	8.0	6.00	0.042	VI	72.0	(115.8)
DMG	35.8200	120.3700	07/31/1961	0 7 8.0	0.0	4.70	0.021	IV	72.0	(115.9)
DMG	36.1700	120.9200	05/23/1936	441 0.0	0.0	4.00	0.015	IV	72.2	(116.2)
DMG	36.5300	121.1300	11/03/1960	65024.0	0.0	4.10	0.015	IV	72.2	(116.2)
PAS	37.6040	119.0530	07/03/1980	21933.5	5.0	4.40	0.018	IV	72.3	(116.3)
PAS	37.4620	118.8660	06/01/1980	64736.9	8.2	4.20	0.016	IV	72.3	(116.4)
DMG	35.7500	119.6170	04/15/1950	115632.0	0.0	4.60	0.020	IV	72.4	(116.6)
GSB	35.8060	120.3480	09/28/2004	172415.3	6.0	4.80	0.022	IV	72.5	(116.6)
DMG	35.8000	120.3300	06/05/1934	2148 0.0	0.0	5.00	0.024	V	72.5	(116.6)
DMG	35.8000	120.3300	06/08/1934	2323 0.0	0.0	4.00	0.014	IV	72.5	(116.6)
DMG	35.8000	120.3300	12/28/1939	121538.0	0.0	5.00	0.024	V	72.5	(116.6)
MGI	35.8000	120.3300	06/05/1934	2130 0.0	0.0	4.30	0.017	IV	72.5	(116.6)
DMG	35.8000	120.3300	06/08/1934	542 0.0	0.0	4.50	0.019	IV	72.5	(116.6)
DMG	35.8000	120.3300	06/08/1934	430 0.0	0.0	5.00	0.024	V	72.5	(116.6)
DMG	35.8000	120.3300	06/14/1934	1455 0.0	0.0	4.00	0.014	IV	72.5	(116.6)
MGI	35.8000	120.3300	06/05/1934	2330 0.0	0.0	4.30	0.017	IV	72.5	(116.6)
DMG	35.8000	120.3300	06/10/1934	8 3 0.0	0.0	4.50	0.019	IV	72.5	(116.6)
DMG	35.8000	120.3300	06/05/1934	2252 0.0	0.0	4.00	0.014	IV	72.5	(116.6)
DMG	35.8000	120.3300	06/08/1934	930 0.0	0.0	4.00	0.014	IV	72.5	(116.6)
DMG	35.8000	120.3300	06/08/1934	447 0.0	0.0	6.00	0.041	V	72.5	(116.6)
DMG	35.8000	120.3300	06/14/1934	1554 0.0	0.0	4.00	0.014	IV	72.5	(116.6)

-----  
EARTHQUAKE SEARCH RESULTS  
-----

Page 5

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME	DEPTH	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE	
				H M Sec					(km)	mi
DMG	35.8000	120.3300	06/14/1934	1926 0.0	0.0	4.50	0.019	IV	72.5	(116.6)
UNR	37.4880	118.8810	10/01/1981	225 7.8	0.9	4.00	0.014	IV	72.9	(117.3)
DMG	36.0900	118.8700	02/11/1948	32928.3	11.7	4.60	0.020	IV	72.9	(117.3)
DMG	35.7700	120.2500	10/31/1942	105113.0	0.0	4.00	0.014	IV	73.0	(117.4)
UNR	37.4730	118.8600	06/18/1980	115820.8	0.9	4.90	0.023	IV	73.1	(117.6)
GSB	37.4540	118.8390	03/13/2005	220912.8	7.0	4.00	0.014	IV	73.1	(117.7)
DMG	36.4500	121.1200	10/11/1959	2 3 9.0	0.0	4.10	0.015	IV	73.2	(117.9)
UNR	37.4630	118.8450	05/28/1980	141822.3	8.9	4.30	0.017	IV	73.3	(117.9)
UNR	37.4970	118.8800	06/04/1980	545 4.6	2.9	4.10	0.015	IV	73.4	(118.1)
DMG	36.5500	121.1600	05/13/1964	121837.2	0.0	4.00	0.014	IV	73.5	(118.3)
DMG	37.2500	118.6670	10/06/1936	1233 0.0	0.0	4.00	0.014	IV	73.5	(118.3)
DMG	37.2500	118.6670	10/07/1936	3 1 0.0	0.0	4.00	0.014	IV	73.5	(118.3)
PAS	37.6490	119.0890	02/05/1984	105846.9	6.0	4.10	0.015	IV	73.6	(118.4)
PAS	37.4740	118.8490	05/25/1980	17 627.2	5.0	4.90	0.023	IV	73.6	(118.4)
DMG	36.5800	121.1700	10/22/1949	214520.0	0.0	4.70	0.021	IV	73.6	(118.5)
UNR	37.5020	118.8780	05/29/1980	55543.9	4.4	4.00	0.014	IV	73.7	(118.6)
USG	37.4970	118.8710	07/16/1980	1125 3.1	0.4	4.26	0.016	IV	73.7	(118.6)
GSB	36.5840	121.1740	10/11/1993	071945.2	6.0	4.10	0.015	IV	73.8	(118.8)
GSB	36.5770	121.1750	09/27/1995	164442.3	9.0	4.20	0.016	IV	73.9	(119.0)
UNR	37.3200	118.7040	10/26/1978	19038.1	9.2	4.10	0.015	IV	74.0	(119.1)
DMG	36.7300	121.2000	01/07/1945	222533.0	0.0	4.70	0.021	IV	74.0	(119.1)
PAS	37.5400	118.9150	01/31/1983	101341.5	6.0	4.00	0.014	IV	74.0	(119.1)
UNR	37.5180	118.8880	06/17/1980	122639.5	1.6	4.60	0.020	IV	74.0	(119.1)
UNR	37.5040	118.8710	05/29/1980	165656.7	6.3	4.00	0.014	IV	74.0	(119.2)
GSB	36.5770	121.1770	08/30/2004	043057.0	9.0	4.00	0.014	IV	74.1	(119.2)
GSB	36.8100	121.2030	08/28/1994	012236.7	7.0	4.00	0.014	IV	74.1	(119.2)
GSB	36.8150	121.2030	09/22/1995	160618.1	7.0	4.30	0.017	IV	74.1	(119.2)
DMG	36.7000	121.2000	02/17/1937	333 0.0	0.0	4.50	0.018	IV	74.1	(119.3)
DMG	36.5800	121.1800	07/29/1951	105345.0	0.0	5.00	0.024	V	74.2	(119.4)
DMG	37.5930	118.9820	10/07/1973	173053.4	8.0	4.00	0.014	IV	74.2	(119.4)
UNR	37.5460	118.9180	05/28/1980	42211.3	3.4	4.30	0.017	IV	74.2	(119.4)
GSB	36.5580	121.1750	07/26/1988	032655.9	2.0	4.70	0.021	IV	74.2	(119.4)
PAS	37.4640	118.8230	05/27/1980	145057.1	2.4	6.30	0.048	VI	74.2	(119.5)
DMG	36.9000	121.2000	03/06/1882	2145 0.0	0.0	5.70	0.035	V	74.3	(119.6)
DMG	35.7500	120.2500	03/10/1922	112120.0	0.0	6.50	0.053	VI	74.3	(119.6)
PAS	37.4850	118.8430	06/08/1980	232220.7	1.9	4.20	0.016	IV	74.3	(119.6)
GSB	37.4900	118.8480	05/15/1999	214010.5	6.0	4.00	0.014	IV	74.4	(119.7)
PAS	37.5350	118.9000	01/07/1983	14541.0	5.0	4.10	0.015	IV	74.4	(119.7)
PAS	37.4550	118.8100	05/25/1980	164159.0	5.0	4.20	0.016	IV	74.4	(119.7)
PAS	37.5060	118.8640	10/18/1980	1649 5.6	5.0	4.10	0.015	IV	74.4	(119.8)
PAS	37.4970	118.8530	06/13/1980	232320.6	6.0	4.30	0.017	IV	74.5	(119.8)
DMG	36.5200	121.1700	03/27/1954	154331.0	0.0	4.40	0.017	IV	74.5	(120.0)
GSB	37.5270	118.8850	08/11/1993	054821.0	5.0	4.70	0.020	IV	74.6	(120.0)
PAS	37.4940	118.8450	05/25/1980	164528.7	5.0	4.00	0.014	IV	74.7	(120.1)
UNR	37.4780	118.8270	05/28/1980	1013 2.5	14.2	4.20	0.016	IV	74.7	(120.2)
PAS	37.5090	118.8590	09/08/1982	184218.7	6.0	4.00	0.014	IV	74.8	(120.3)
UNR	37.5460	118.9020	06/20/1980	1724 7.6	2.4	4.20	0.016	IV	74.8	(120.4)
UNR	37.4610	118.8060	06/06/1980	171615.2	10.2	4.20	0.016	IV	74.8	(120.4)
GSB	36.5930	121.1960	07/12/1995	215800.5	7.0	4.00	0.014	IV	74.9	(120.5)
UNR	37.4640	118.8080	06/30/1980	2 943.6	16.5	4.00	0.014	IV	74.9	(120.5)
DMG	36.5000	121.1700	05/27/1936	1955 0.0	0.0	4.50	0.018	IV	74.9	(120.5)
PAS	37.6080	118.9830	06/11/1980	171024.7	6.2	4.00	0.014	IV	74.9	(120.6)
PAS	37.5850	118.9500	07/16/1984	101423.2	6.0	4.20	0.016	IV	74.9	(120.6)

-----  
EARTHQUAKE SEARCH RESULTS  
-----

Page 6

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME	DEPTH	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE	
				H M Sec					(km)	mi
PAS	37.4700	118.8120	05/28/1980	115437.9	6.4	4.20	0.016	IV	75.0	(120.7)
PAS	37.5550	118.9090	01/25/1983	101041.5	8.0	4.70	0.020	IV	75.0	(120.7)
DMG	36.6000	121.2000	06/11/1948	82811.0	0.0	4.00	0.014	IV	75.0	(120.7)
DMG	36.6000	121.2000	03/17/1936	155 0.0	0.0	4.00	0.014	IV	75.0	(120.7)
UNR	37.5290	118.8760	06/19/1980	44532.1	2.0	4.90	0.023	IV	75.0	(120.7)
PAS	37.4780	118.8190	05/27/1980	154146.9	1.4	4.10	0.015	IV	75.0	(120.7)
PAS	37.7040	119.1450	05/28/1980	54827.9	7.7	4.80	0.021	IV	75.0	(120.7)
GSB	36.6030	121.2010	04/23/1995	084136.6	7.0	5.00	0.024	IV	75.0	(120.7)
PAS	37.4970	118.8390	05/26/1980	64347.9	1.9	4.10	0.015	IV	75.0	(120.8)
UNR	37.5580	118.9110	06/19/1980	71931.5	0.4	5.00	0.024	IV	75.0	(120.8)
DMG	36.0800	118.8300	05/29/1915	830 0.0	0.0	4.50	0.018	IV	75.1	(120.8)
DMG	35.8000	120.4500	08/12/1967	185740.4	0.0	4.10	0.015	IV	75.1	(120.9)
USG	37.4980	118.8380	06/06/1980	141817.2	2.0	5.27	0.027	V	75.1	(120.9)
UNR	37.5330	118.8780	06/04/1980	19 921.5	7.2	4.10	0.015	IV	75.1	(120.9)
USG	37.5220	118.8650	06/18/1980	131515.0	1.7	4.29	0.016	IV	75.1	(120.9)
PAS	37.4180	118.7580	05/25/1980	221036.6	5.4	4.10	0.015	IV	75.2	(120.9)
PAS	37.4780	118.8160	05/26/1980	143732.4	0.9	4.20	0.016	IV	75.2	(120.9)
USG	37.5320	118.8760	08/01/1980	164254.6	4.1	4.10	0.015	IV	75.2	(121.0)
PAS	37.4970	118.8330	09/23/1982	328 0.3	6.0	4.20	0.016	IV	75.3	(121.2)
UNR	37.5080	118.8450	11/21/1980	231042.7	9.7	4.10	0.015	IV	75.3	(121.2)
UNR	37.5160	118.8530	03/16/1983	152528.2	7.3	4.13	0.015	IV	75.3	(121.2)
UNR	37.5600	118.9060	06/19/1980	72226.1	0.4	4.80	0.021	IV	75.3	(121.2)
USG	37.5420	118.8830	06/05/1980	20 452.3	1.6	5.05	0.024	V	75.4	(121.3)
GSB	36.6070	121.2080	11/24/2004	020604.5	6.0	4.40	0.017	IV	75.4	(121.3)
PAS	37.5540	118.8970	08/01/1980	163856.3	4.7	5.40	0.029	V	75.4	(121.3)
UNR	37.5220	118.8580	11/23/1983	63958.1	6.3	4.05	0.014	IV	75.4	(121.4)
DMG	36.6700	121.2200	04/16/1932	184810.0	0.0	4.50	0.018	IV	75.4	(121.4)
PAS	37.5160	118.8500	10/16/1982	125413.7	5.0	4.00	0.014	IV	75.5	(121.4)
DMG	36.0800	118.8200	05/29/1915	646 0.0	0.0	5.00	0.024	IV	75.5	(121.5)
UNR	37.4770	118.8070	06/04/1980	83420.1	10.4	4.10	0.015	IV	75.5	(121.5)
GSB	36.5730	121.2030	10/05/1984	161630.0	9.0	4.00	0.014	IV	75.5	(121.5)
PAS	37.4950	118.8250	09/28/1982	04149.9	6.0	4.10	0.015	IV	75.5	(121.6)
PAS	37.5230	118.8560	12/08/1979	213853.8	4.9	4.30	0.016	IV	75.5	(121.6)
DMG	36.6500	121.2200	01/14/1942	94440.0	5.0	4.20	0.016	IV	75.6	(121.7)
GSB	36.5720	121.2050	01/14/1986	030936.3	7.0	4.70	0.020	IV	75.6	(121.7)
PAS	37.5300	118.8600	05/26/1980	1924 9.9	4.6	4.20	0.016	IV	75.7	(121.8)
DMG	35.7500	120.3300	08/18/1922	512 0.0	0.0	5.00	0.024	IV	75.7	(121.8)
DMG	35.7500	120.3300	03/16/1922	2310 0.0	0.0	4.50	0.018	IV	75.7	(121.8)
DMG	36.3500	121.1200	09/21/1958	72455.0	0.0	4.60	0.019	IV	75.7	(121.9)
PAS	37.4910	118.8160	05/27/1980	17 958.6	6.0	4.30	0.016	IV	75.7	(121.9)
GSB	37.5070	118.8330	05/15/1999	175408.8	8.0	4.60	0.019	IV	75.7	(121.9)
DMG	36.5630	121.2050	06/22/1973	12912.2	9.6	4.16	0.015	IV	75.8	(121.9)
DMG	36.5780	121.2090	02/24/1972	155651.0	7.5	5.10	0.025	V	75.8	(122.0)
PAS	37.4960	118.8200	05/27/1980	213454.3	4.7	4.50	0.018	IV	75.8	(122.0)
GSB	37.5080	118.8330	05/15/1999	133806.2	6.0	4.40	0.017	IV	75.8	(122.0)
PAS	37.5610	118.8940	05/26/1980	057 4.2	4.4	4.40	0.017	IV	75.9	(122.1)
DMG	36.6200	121.2200	08/06/1951	9 5 2.0	0.0	4.90	0.022	IV	75.9	(122.1)
GSB	37.5380	118.8640	06/12/2007	072343.2	10.0	4.60	0.019	IV	75.9	(122.2)
PAS	37.5140	118.8360	05/29/1980	1721 1.3	4.2	4.00	0.014	IV	75.9	(122.2)
UNR	37.5500	118.8780	07/26/1980	172247.0	3.9	4.20	0.015	IV	75.9	(122.2)
UNR	37.5360	118.8610	05/25/1980	183415.0	0.2	4.60	0.019	IV	75.9	(122.2)
USG	37.5900	118.9290	03/15/1980	153048.0	0.5	4.31	0.016	IV	76.0	(122.2)
UNR	37.5160	118.8370	06/18/1980	185537.7	6.3	5.30	0.028	V	76.0	(122.3)

-----  
EARTHQUAKE SEARCH RESULTS  
-----

Page 7

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME	DEPTH	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE	
				H M Sec					(km)	mi
UNR	37.5930	118.9320	05/27/1980	64642.0	2.1	4.00	0.014	IV	76.0	(122.3)
UNR	37.5300	118.8520	05/27/1980	1327 8.0	0.5	4.30	0.016	IV	76.0	(122.3)
USG	37.5560	118.8820	08/01/1980	172821.4	1.2	4.79	0.021	IV	76.1	(122.4)
PAS	37.3810	118.7050	11/26/1984	163122.5	6.0	4.40	0.017	IV	76.1	(122.5)
DMG	36.6500	121.2300	10/19/1956	1232 3.0	0.0	4.10	0.015	IV	76.1	(122.5)
UNR	37.5670	118.8930	05/30/1980	154158.1	3.3	4.50	0.018	IV	76.2	(122.6)
DMG	37.3330	118.6670	10/25/1932	328 0.0	0.0	4.50	0.018	IV	76.2	(122.6)
PAS	37.4930	118.8070	05/25/1980	171731.7	5.0	4.00	0.014	IV	76.2	(122.6)
PAS	37.4150	118.7320	12/26/1979	8 9 6.6	4.7	4.10	0.015	IV	76.2	(122.6)
GSB	36.5830	121.2180	11/07/1987	150601.2	8.0	4.00	0.014	IV	76.2	(122.6)
GSB	37.5110	118.8260	05/17/1999	063719.1	3.0	4.00	0.014	IV	76.2	(122.6)
PAS	37.4810	118.7940	05/25/1980	205924.9	4.7	4.90	0.022	IV	76.2	(122.7)
MGI	37.1700	118.5700	06/03/1918	16 5 0.0	0.0	4.00	0.014	IV	76.3	(122.7)
PAS	37.4890	118.8010	05/25/1980	181359.9	4.2	4.00	0.014	IV	76.3	(122.7)
UNR	37.5820	118.9090	05/28/1980	6 743.4	0.2	4.50	0.018	IV	76.3	(122.8)
PAS	37.6020	118.9360	06/02/1980	102221.1	4.3	4.10	0.015	IV	76.3	(122.8)
PAS	37.5440	118.8610	05/26/1980	185756.3	2.8	4.90	0.022	IV	76.3	(122.8)
UNR	37.5360	118.8510	06/20/1980	152459.6	8.7	5.30	0.028	V	76.3	(122.9)
DMG	36.5800	121.2200	10/10/1966	65346.0	0.0	4.10	0.015	IV	76.4	(122.9)
BRK	36.5800	121.2200	12/15/1977	111528.0	0.0	4.20	0.015	IV	76.4	(122.9)
UNR	37.5250	118.8380	07/02/1980	41352.7	7.7	4.30	0.016	IV	76.4	(122.9)
PAS	36.0360	120.8810	11/24/1985	192139.8	6.0	4.40	0.017	IV	76.4	(122.9)
DMG	37.3170	118.6500	01/13/1946	163115.0	0.0	4.70	0.020	IV	76.5	(123.1)
UNR	37.5440	118.8570	06/08/1980	62527.4	9.3	4.00	0.014	IV	76.5	(123.1)
PAS	37.5080	118.8160	05/27/1980	151346.8	4.2	4.10	0.015	IV	76.5	(123.1)
DMG	36.5000	121.2000	09/18/1937	1329 0.0	0.0	4.00	0.014	IV	76.5	(123.1)
PAS	37.5770	118.8970	06/05/1980	1941 2.1	4.1	4.00	0.014	IV	76.5	(123.1)
USG	37.5180	118.8260	07/10/1980	143053.9	4.2	4.93	0.023	IV	76.5	(123.2)
UNR	37.4980	118.8040	07/13/1980	105536.0	11.0	4.00	0.014	IV	76.5	(123.2)
PAS	37.5670	118.8830	07/12/1983	1839 6.0	4.8	4.00	0.014	IV	76.6	(123.2)
PAS	37.4990	118.8040	11/09/1979	1747 0.4	4.7	4.10	0.015	IV	76.6	(123.3)
PAS	37.5540	118.8660	08/01/1980	17 917.3	0.2	4.10	0.015	IV	76.6	(123.3)
USG	37.5610	118.8740	08/01/1980	164745.9	1.9	5.15	0.025	V	76.6	(123.3)
MGI	36.1500	121.0000	11/03/1937	10 0 0.0	0.0	4.30	0.016	IV	76.6	(123.3)
GSB	37.5700	118.8850	03/08/2003	153501.7	5.0	4.10	0.015	IV	76.6	(123.3)
UNR	37.6020	118.9270	05/31/1980	142050.7	0.3	4.20	0.015	IV	76.6	(123.3)
PAS	37.5050	118.8090	08/01/1980	164856.0	3.0	4.40	0.017	IV	76.6	(123.3)
PAS	37.5630	118.8760	12/31/1983	223940.6	6.0	4.10	0.015	IV	76.6	(123.3)
DMG	36.6000	121.2300	09/28/1957	21 439.0	0.0	4.50	0.018	IV	76.7	(123.4)
PAS	37.5080	118.8120	05/26/1980	13 420.6	1.6	4.10	0.015	IV	76.7	(123.4)
PAS	37.5710	118.8840	11/22/1980	02116.8	4.8	4.00	0.014	IV	76.7	(123.5)
UNR	37.5190	118.8220	07/15/1980	71611.8	12.1	4.00	0.014	IV	76.7	(123.5)
DMG	37.5000	118.8000	11/08/1955	24052.0	0.0	4.20	0.015	IV	76.8	(123.6)
UNR	37.4860	118.7850	10/04/1980	164217.9	2.8	4.00	0.014	IV	76.8	(123.6)
PAS	37.5560	118.8630	06/28/1980	05843.1	5.1	4.10	0.015	IV	76.8	(123.6)
PAS	37.5220	118.8230	05/25/1980	194125.1	4.2	4.50	0.018	IV	76.8	(123.7)
PAS	37.6250	118.9530	01/07/1983	33023.8	5.0	4.50	0.018	IV	76.9	(123.7)
PAS	37.4520	118.7500	05/25/1980	19 437.4	6.1	4.30	0.016	IV	76.9	(123.7)
USG	37.5600	118.8660	08/01/1980	173153.5	8.7	4.99	0.023	IV	76.9	(123.7)
PAS	37.4860	118.7830	05/25/1980	164930.3	4.7	5.80	0.036	V	76.9	(123.8)
PAS	37.4960	118.7920	05/25/1980	174833.8	4.5	4.60	0.019	IV	77.0	(123.8)
GSB	37.6000	118.9150	12/29/1997	200232.7	8.0	4.10	0.015	IV	77.0	(123.9)
UNR	37.5720	118.8780	05/30/1980	1949 2.5	8.6	4.30	0.016	IV	77.0	(123.9)

-----  
EARTHQUAKE SEARCH RESULTS  
-----

Page 8

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME	DEPTH	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE	
				H M Sec					(km)	mi
PAS	37.6640	119.0080	01/07/1983	32419.1	5.0	5.60	0.032	V	77.1	(124.0)
DMG	36.6700	121.2500	08/06/1916	1938 0.0	0.0	5.50	0.030	V	77.1	(124.0)
DMG	36.6700	121.2500	06/27/1916	1343 0.0	0.0	4.00	0.014	IV	77.1	(124.0)
T-A	36.6700	121.2500	04/01/1857	1135 0.0	0.0	5.00	0.023	IV	77.1	(124.0)
PAS	37.5800	118.8860	05/28/1980	51623.4	3.3	4.80	0.021	IV	77.1	(124.1)
UNR	37.5430	118.8400	05/27/1980	63654.4	0.1	4.00	0.014	IV	77.1	(124.1)
GSB	37.3880	118.6890	09/11/1998	143842.7	12.0	4.20	0.015	IV	77.1	(124.1)
PAS	37.5560	118.8550	03/20/1980	11 544.0	3.8	4.00	0.014	IV	77.1	(124.1)
USG	37.5480	118.8450	07/03/1983	1840 7.7	9.0	4.25	0.016	IV	77.2	(124.2)
PAS	37.5430	118.8370	05/26/1980	55628.1	11.0	4.60	0.019	IV	77.2	(124.3)
PAS	37.6060	118.9150	05/25/1980	165613.3	4.4	4.20	0.015	IV	77.3	(124.4)
BRK	36.5900	121.2400	08/10/1982	21129.0	0.0	4.50	0.018	IV	77.3	(124.4)
PAS	37.5590	118.8540	05/27/1980	2341 3.9	5.7	4.00	0.014	III	77.3	(124.4)
GSB	37.5650	118.8610	02/10/1997	232628.9	9.0	4.60	0.019	IV	77.3	(124.4)
UNR	37.5570	118.8510	06/02/1980	63947.7	9.7	4.10	0.014	IV	77.3	(124.5)
UNR	37.6190	118.9310	11/13/1981	030 0.0	7.9	4.00	0.014	III	77.4	(124.5)
GSB	36.6410	121.2510	12/28/2001	211402.0	6.0	4.60	0.019	IV	77.4	(124.5)
GSG	37.5290	118.8170	05/15/1999	132210.7	5.0	5.60	0.032	V	77.4	(124.6)
UNR	37.6190	118.9300	11/13/1981	03747.6	7.8	4.20	0.015	IV	77.4	(124.6)
PAS	37.5560	118.8480	05/31/1980	8 520.1	5.8	4.10	0.014	IV	77.4	(124.6)
UNR	37.5390	118.8280	08/02/1980	17917.4	8.5	4.00	0.014	III	77.4	(124.6)
DMG	36.6300	121.2500	11/03/1945	155022.0	0.0	4.20	0.015	IV	77.4	(124.6)
DMG	35.7700	120.4700	11/09/1929	23042.1	0.0	4.40	0.017	IV	77.5	(124.7)
PAS	37.6470	118.9680	02/04/1983	71510.6	5.0	4.40	0.017	IV	77.5	(124.7)
UNR	37.5710	118.8630	06/02/1980	203413.8	6.5	4.60	0.019	IV	77.5	(124.8)
PAS	37.5940	118.8920	12/24/1980	154833.8	6.0	4.70	0.020	IV	77.6	(124.8)
DMG	37.3500	118.6500	08/04/1959	74133.0	0.0	4.20	0.015	IV	77.6	(124.9)
GSB	37.6360	118.9490	11/22/1997	181059.4	8.0	4.80	0.021	IV	77.6	(124.9)
GSB	37.6340	118.9460	11/30/1997	211705.4	7.0	4.90	0.022	IV	77.6	(124.9)
UNR	37.5420	118.8250	05/30/1980	23 232.4	9.5	4.00	0.014	III	77.7	(125.0)
UNR	37.6130	118.9140	06/30/1980	14914.6	5.3	4.00	0.014	III	77.7	(125.0)
PAS	37.5380	118.8200	05/25/1980	195153.3	4.0	4.00	0.014	III	77.7	(125.0)
UNR	37.5870	118.8790	07/25/1980	64419.2	3.7	4.10	0.014	IV	77.7	(125.0)
UNR	37.5160	118.7950	12/26/1978	8 8 4.3	9.9	4.20	0.015	IV	77.7	(125.1)
DMG	36.7700	121.2700	04/27/1948	202225.0	0.0	4.40	0.017	IV	77.8	(125.1)
DMG	36.7700	121.2700	04/27/1948	1641 8.0	0.0	4.00	0.014	III	77.8	(125.1)
PAS	37.6100	118.9070	09/30/1981	1450 7.0	6.0	4.00	0.014	III	77.8	(125.2)
DMG	37.3330	118.6330	06/06/1959	163046.0	0.0	4.00	0.014	III	77.8	(125.2)
PAS	37.5520	118.8330	10/04/1980	163822.4	5.0	4.20	0.015	IV	77.8	(125.2)
DMG	37.6250	118.9260	10/03/1969	131010.3	-2.0	4.90	0.022	IV	77.9	(125.3)
PAS	37.5500	118.8290	05/25/1980	165950.2	5.0	4.00	0.014	III	77.9	(125.3)
GSB	37.5240	118.7990	12/17/1998	103212.9	6.0	4.10	0.014	IV	77.9	(125.4)
PAS	37.5830	118.8680	11/11/1980	53012.5	5.0	4.00	0.014	III	77.9	(125.4)
GSB	37.5710	118.8520	02/24/1997	181325.5	9.0	4.00	0.014	III	78.0	(125.5)
PAS	37.5580	118.8360	09/30/1983	1614 0.9	6.0	4.50	0.018	IV	78.0	(125.5)
PAS	37.6670	118.9850	01/07/1983	63825.8	6.0	4.10	0.014	IV	78.0	(125.5)
UNR	37.5330	118.8060	06/03/1980	173412.0	16.0	4.00	0.014	III	78.0	(125.6)
GSB	36.8100	121.2750	01/26/1986	192051.2	7.0	5.50	0.030	V	78.0	(125.6)
PAS	37.5670	118.8450	08/17/1975	02426.9	8.0	4.10	0.014	IV	78.1	(125.6)
UNR	37.5430	118.8160	05/29/1980	41852.5	12.5	4.20	0.015	IV	78.1	(125.7)
GSB	37.5260	118.7970	12/14/1998	055409.0	6.0	4.20	0.015	IV	78.1	(125.7)
USG	37.6190	118.9110	03/20/1980	164248.8	2.7	4.12	0.015	IV	78.1	(125.7)
GSB	37.5270	118.7970	12/14/1998	041403.0	8.0	4.00	0.014	III	78.1	(125.7)

-----  
EARTHQUAKE SEARCH RESULTS  
-----

Page 9

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME	DEPTH	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE	
				H M Sec					(km)	mi
UNR	37.6330	118.9290	02/24/1983	1951 0.7	6.6	4.25	0.016	IV	78.2	(125.8)
DMG	37.5000	118.7670	12/03/1938	1757 0.0	0.0	4.00	0.014	III	78.2	(125.8)
DMG	37.5000	118.7670	12/03/1938	2217 0.0	0.0	4.00	0.014	III	78.2	(125.8)
DMG	37.5000	118.7670	12/04/1938	1849 0.0	0.0	4.00	0.014	III	78.2	(125.8)
DMG	37.5000	118.7670	12/03/1938	1745 0.0	0.0	4.00	0.014	III	78.2	(125.8)
DMG	37.5000	118.7670	12/03/1938	2220 0.0	0.0	4.00	0.014	III	78.2	(125.8)
UNR	37.6200	118.9090	07/01/1980	142512.4	4.2	4.20	0.015	IV	78.2	(125.9)
GSB	37.6380	118.9340	11/22/1997	172035.2	7.0	4.90	0.022	IV	78.2	(125.9)
DMG	35.7500	120.4500	12/31/1967	234813.5	0.0	4.30	0.016	IV	78.2	(125.9)
PAS	37.5720	118.8460	05/31/1980	101131.7	6.9	4.00	0.014	III	78.3	(125.9)
GSB	36.6470	121.2680	01/18/1999	084836.7	11.0	4.30	0.016	IV	78.3	(125.9)
GSB	37.5370	118.8050	06/03/1999	213627.7	3.0	4.30	0.016	IV	78.3	(125.9)
BRK	36.7800	121.2800	08/14/1981	124959.0	0.0	4.20	0.015	IV	78.3	(126.0)
DMG	37.6120	118.8930	05/03/1963	21444.1	-2.0	4.20	0.015	IV	78.4	(126.2)
UNR	37.5220	118.7840	05/28/1980	14 630.2	4.5	4.30	0.016	IV	78.5	(126.2)
PAS	37.5480	118.8120	11/10/1979	94510.7	4.7	4.20	0.015	IV	78.5	(126.3)
GSB	36.8400	121.2830	04/30/1987	192422.2	7.0	4.10	0.014	IV	78.6	(126.4)
DMG	36.4000	121.2000	07/22/1961	18 155.0	0.0	4.00	0.014	III	78.6	(126.5)
DMG	36.4000	121.2000	09/16/1938	611 0.0	0.0	4.00	0.014	III	78.6	(126.5)
PAS	37.5720	118.8360	03/27/1980	226 5.9	4.4	4.40	0.017	IV	78.7	(126.6)
PAS	37.6350	118.9170	09/24/1979	13 5 4.8	5.0	4.30	0.016	IV	78.7	(126.7)
GSB	37.6350	118.9170	11/22/1997	120656.0	8.0	4.60	0.019	IV	78.7	(126.7)
DMG	35.7050	120.3350	06/28/1966	43522.0	1.2	4.10	0.014	IV	78.7	(126.7)
DMG	36.6250	121.2740	09/04/1972	18 440.8	5.7	4.63	0.019	IV	78.8	(126.8)
PAS	37.6360	118.9160	09/07/1979	94348.5	3.5	4.40	0.017	IV	78.8	(126.8)
PAS	37.5530	118.8100	05/08/1982	35715.2	4.9	4.00	0.014	III	78.8	(126.8)
UNR	37.5300	118.7830	05/30/1980	1549 2.3	5.6	4.30	0.016	IV	78.9	(126.9)
USG	36.8230	121.2900	01/26/1986	234654.5	4.8	4.20	0.015	IV	78.9	(127.0)
UNR	37.5360	118.7880	12/12/1982	2059 8.5	0.1	4.00	0.014	III	78.9	(127.0)
DMG	37.5000	118.7500	09/18/1927	2 7 7.0	0.0	6.00	0.039	V	78.9	(127.0)
UNR	37.6300	118.9040	09/23/1979	13 5 4.9	0.0	4.10	0.014	IV	78.9	(127.0)
UNR	37.6250	118.8970	06/01/1980	1459 5.3	1.5	4.10	0.014	IV	78.9	(127.0)
PAS	37.6730	118.9670	11/25/1980	05949.5	6.0	4.10	0.014	IV	78.9	(127.0)
PAS	37.6220	118.8920	12/24/1984	192229.9	6.0	4.30	0.016	IV	79.0	(127.1)
PAS	37.6800	118.9740	01/29/1983	15 6 1.8	6.0	4.10	0.014	IV	79.1	(127.3)
UNR	37.6280	118.8970	06/07/1980	13145.5	6.8	4.40	0.017	IV	79.1	(127.3)
UNR	37.6380	118.9090	07/26/1980	2143 1.5	8.9	4.10	0.014	IV	79.1	(127.4)
GSB	37.5560	118.8030	05/26/1999	035353.4	4.0	4.40	0.017	IV	79.2	(127.5)
DMG	37.4170	118.6670	02/02/1961	0 742.0	0.0	5.10	0.024	V	79.2	(127.5)
PAS	37.4000	118.6530	12/20/1984	8 3 6.9	6.0	4.00	0.013	III	79.2	(127.5)
UNR	37.6280	118.8910	06/14/1980	54747.8	3.5	4.10	0.014	IV	79.3	(127.6)
PAS	37.5750	118.8220	03/18/1985	183231.3	6.0	4.10	0.014	IV	79.3	(127.7)
PAS	37.6560	118.9290	01/07/1983	13810.6	5.7	5.70	0.033	V	79.4	(127.7)
PAS	37.6300	118.8920	04/28/1984	224821.3	6.0	4.80	0.021	IV	79.4	(127.7)
PAS	37.6220	118.8810	09/30/1981	115327.0	6.0	5.80	0.035	V	79.4	(127.7)
PAS	37.5920	118.8420	07/05/1980	115859.7	4.6	4.50	0.018	IV	79.4	(127.7)
GSB	36.8390	121.2980	09/02/1998	112407.2	7.0	4.00	0.013	III	79.4	(127.7)
PAS	37.6720	118.9520	05/25/1980	171212.6	5.0	4.00	0.013	III	79.4	(127.8)
UNR	37.5860	118.8340	10/03/1981	12037.3	1.3	4.20	0.015	IV	79.4	(127.8)
PAS	37.4930	118.7310	12/06/1979	193241.4	5.0	4.30	0.016	IV	79.4	(127.8)
UNR	37.6330	118.8940	06/07/1980	13158.0	7.5	4.40	0.017	IV	79.4	(127.8)
UNR	37.5480	118.7880	07/16/1980	91111.1	3.4	4.20	0.015	IV	79.5	(127.9)
PAS	37.5120	118.7490	05/26/1980	102032.8	0.5	4.10	0.014	IV	79.5	(127.9)

-----  
 EARTHQUAKE SEARCH RESULTS  
 -----

Page 10

FILE CODE	LAT. NORTH	LONG. WEST	DATE	TIME (UTC) H M Sec	DEPTH (km)	QUAKE MAG.	SITE ACC. g	SITE MM INT.	APPROX. DISTANCE mi [km]
GSG	37.5640	118.8050	07/15/1998	045319.2	6.0	5.10	0.024	V	79.5(128.0)
GSB	36.8030	121.3020	02/20/1988	083957.5	9.0	5.30	0.027	V	79.5(128.0)
GSB	37.5910	118.8360	03/05/1995	024847.4	11.0	4.40	0.017	IV	79.6(128.0)
DMG	36.5800	121.2800	06/07/1944	123538.0	0.0	4.00	0.013	III	79.6(128.1)
DMG	36.7000	121.3000	04/09/1961	72541.0	0.0	5.50	0.030	V	79.7(128.2)
DMG	36.7000	121.3000	03/31/1885	756 0.0	0.0	5.50	0.030	V	79.7(128.2)
DMG	36.7000	121.3000	09/11/1959	18 5 3.0	0.0	4.00	0.013	III	79.7(128.2)
PAS	37.4200	118.6600	11/24/1984	202533.1	6.0	4.10	0.014	IV	79.7(128.2)
DMG	36.0000	120.9200	11/02/1955	1940 6.0	0.0	5.20	0.025	V	79.7(128.2)
PAS	37.5560	118.7910	05/25/1980	194452.2	6.4	6.50	0.050	VI	79.7(128.3)
USG	37.5270	118.7590	06/08/1980	61139.6	1.3	5.12	0.024	V	79.7(128.3)
GSB	36.6760	121.2990	03/23/1999	183640.4	6.0	4.20	0.015	IV	79.7(128.3)
DMG	36.6800	121.3000	04/09/1961	72316.0	0.0	5.60	0.031	V	79.8(128.4)
UNR	37.4970	118.7270	07/27/1980	165531.2	3.6	4.10	0.014	IV	79.8(128.4)
PAS	37.5560	118.7890	10/30/1980	34524.6	5.0	4.30	0.016	IV	79.8(128.4)
UNR	37.6100	118.8540	11/07/1979	62723.9	8.5	4.10	0.014	IV	79.8(128.4)
PAS	37.4550	118.6870	11/25/1984	161520.3	6.0	4.10	0.014	IV	79.8(128.4)
GSB	36.6750	121.3000	12/21/2008	173536.6	7.0	4.00	0.013	III	79.8(128.4)
PAS	37.3500	118.6030	11/28/1984	162326.7	6.0	4.70	0.019	IV	79.8(128.5)
UNR	37.5810	118.8170	06/28/1980	05734.0	2.6	4.00	0.013	III	79.8(128.5)
GSB	37.6150	118.8590	04/01/1996	041336.5	10.0	4.10	0.014	IV	79.9(128.5)
GSB	37.5970	118.8360	03/05/1995	000703.1	11.0	4.50	0.017	IV	79.9(128.5)
GSB	37.6460	118.8990	11/13/1997	194222.1	6.0	4.10	0.014	IV	79.9(128.6)
UNR	37.5830	118.8170	07/01/1980	63813.6	13.8	4.30	0.016	IV	79.9(128.6)
UNR	37.5680	118.7990	06/01/1980	31743.9	0.6	4.00	0.013	III	79.9(128.6)
PAS	37.5170	118.7430	05/26/1980	122427.3	2.0	5.20	0.025	V	80.0(128.7)
UNR	37.5840	118.8170	05/31/1980	131340.5	2.8	4.10	0.014	IV	80.0(128.7)
UNR	37.5610	118.7900	05/28/1980	32636.4	7.3	4.00	0.013	III	80.0(128.7)

\*\*\*\*\*  
 -END OF SEARCH-      505 EARTHQUAKES FOUND WITHIN THE SPECIFIED SEARCH AREA.

TIME PERIOD OF SEARCH: 1800 TO 2011

LENGTH OF SEARCH TIME: 212 years

THE EARTHQUAKE CLOSEST TO THE SITE IS ABOUT 6.6 MILES (10.7 km) AWAY.

LARGEST EARTHQUAKE MAGNITUDE FOUND IN THE SEARCH RADIUS: 6.7

LARGEST EARTHQUAKE SITE ACCELERATION FROM THIS SEARCH: 0.099 g

COEFFICIENTS FOR GUTENBERG & RICHTER RECURRENCE RELATION:

a-value= 3.765

b-value= 0.854

beta-value= 1.966

-----  
TABLE OF MAGNITUDES AND EXCEEDANCES:  
-----

Earthquake Magnitude	Number of Times Exceeded	Cumulative No. / Year
4.0	505	2.38208
4.5	159	0.75000
5.0	67	0.31604
5.5	27	0.12736
6.0	9	0.04245
6.5	3	0.01415



[FOR USE WITH MULTIPLE PRIME PROJECTS]



**Section 00 72 00**  
**GENERAL CONDITIONS**  
**for**  
**CONTRACT OF CONSTRUCTION**

**For the Bid Packages for**  
**SHIELDS AND BRAWLEY ELEMENTARY SCHOOL PROJECT**

**Central Unified School District (OWNER)**

\_\_\_\_\_  
(date)

**AD 1-07a**  
**S&B Elementary**  
**02-116800**

**SUMMARY OF CONTENTS**

ARTICLE 1: GENERAL CONDITIONS.....1

ARTICLE 2: OWNER.....6

ARTICLE 3: THE CONTRACTOR.....10

ARTICLE 4: ADMINISTRATION OF THE CONTRACT.....25

ARTICLE 5: SUBCONTRACTORS.....40

ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS.....46

ARTICLE 7: CHANGES IN THE WORK.....48

ARTICLE 8: TIME.....56

ARTICLE 9: PAYMENTS AND COMPLETION.....60

ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY.....7

ARTICLE 11: INSURANCE AND BONDS.....75

ARTICLE 12: UNCOVERING AND CORRECTION OF WORK.....80

ARTICLE 13: MISCELLANEOUS PROVISIONS.....83

ARTICLE 14: TERMINATION OR SUSPENSION OF THE CONTRACT.....94



## TABLE OF CONTENTS

ARTICLE 1	
<b>GENERAL CONDITIONS</b> .....	14
1.1 <b>BASIC DEFINITIONS</b> .....	14
1.1.1 <b>THE CONTRACT DOCUMENTS</b> .....	14
1.1.2 <b>THE CONTRACT</b> .....	14
1.1.3 <b>THE WORK</b> .....	14
1.1.4 <b>THE PROJECT</b> .....	15
1.1.5 <b>THE DRAWINGS</b> .....	15
1.1.6 <b>THE SPECIFICATIONS</b> .....	15
1.1.7 <b>THE PROJECT MANUAL</b> .....	15
1.1.8 <b>OR</b> .....	15
1.1.9 <b>COMPLETION</b> .....	15
1.1.10 <b>COMPLETION OF THE PROJECT</b> .....	15
1.2 <b>EXECUTION, CORRELATION AND INTENT</b> .....	16
1.2.1 <b>CORRELATION AND INTENT</b> .....	16
1.2.1.1 <i>Documents Complementary and Inclusive</i> .....	16
1.2.1.2 <i>Coverage of the Drawings and Specifications</i> .....	16
1.2.1.3 <i>Conflicts</i> .....	17
1.2.1.4 <i>Conformance With Laws</i> .....	17
1.2.1.5 <i>Ambiguity</i> .....	17
1.2.1.6 <i>Execution</i> .....	18
1.2.2 <b>ADDENDA AND DEFERRED APPROVALS</b> .....	18
1.2.2.1 <i>Addenda</i> .....	18
1.2.2.2 <i>Deferred Approvals</i> .....	18
1.2.3 <b>SPECIFICATION INTERPRETATION</b> .....	18
1.2.3.1 <i>Titles</i> .....	18
1.2.3.2 <i>As Shown, Etc</i> .....	18
1.2.3.3 <i>Provide</i> .....	18
1.2.3.4 <i>General Conditions</i> .....	18
1.2.3.5 <i>Abbreviations</i> .....	19
1.2.3.6 <i>Plural</i> .....	19
1.2.3.7 <i>Metric</i> .....	19
1.2.3.8 <i>Standard Specifications</i> .....	19
1.2.3.9 <i>Absence of Modifiers</i> .....	19
1.3 <b>OWNERSHIP AND USE OF ARCHITECT'S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS</b> .....	19
<b>ARTICLE 2</b> .....	20
<b>OWNER</b> .....	20
2.1 <b>DEFINITION</b> .....	20
2.2 <b>INFORMATION AND SERVICES REQUIRED OF THE OWNER</b> .....	20

2.2.1	<b>[INTENTIONALLY LEFT BLANK]</b> .....	20
2.2.2	<b>SITE SURVEY</b> .....	20
2.2.3	<b>SOILS</b> .....	20
2.2.3.1	<i>Owner Furnished Services</i> .....	20
2.2.3.2	<i>Contractor Reliance</i> .....	20
2.2.4	<b>UTILITY SURVEY</b> .....	21
2.2.5	<b>INFORMATION</b> .....	21
2.2.6	<b>EXISTING UTILITY LINES; REMOVAL, RELOCATION</b> .....	21
2.2.6.1	<i>Removal, Relocation</i> .....	21
2.2.6.2	<i>Assessment</i> .....	21
2.2.6.3	<i>Notification</i> .....	22
2.2.6.4	<i>Underground Utility Clearance</i> .....	22
2.2.7	<b>EASEMENTS</b> .....	22
2.2.8	<b>REASONABLE PROMPTNESS</b> .....	22
2.2.9	<b>COPIES FURNISHED</b> .....	22
2.2.10	<b>DUTIES CUMULATIVE</b> .....	22
2.3	<b>OWNER'S RIGHT TO STOP THE WORK</b> .....	23
2.4	<b>OWNER'S RIGHT TO CARRY OUT THE WORK</b> .....	23
	<b>ARTICLE 3</b> .....	23
	<b>THE CONTRACTOR</b> .....	23
3.1	<b>DEFINITION</b> .....	23
3.2	<b>SUPERVISION AND CONSTRUCTION PROCEDURES</b> .....	23
3.2.1	<b>CONTRACTOR</b> .....	23
3.2.2	<b>CONTRACTOR RESPONSIBILITY</b> .....	24
3.2.3	<b>Obligations not Changed by Others' Actions</b> .....	24
3.2.4	<b>CONTRACTOR RESPONSIBILITY FOR READINESS FOR WORK</b> .....	25
3.2.5	<b>PROJECT MEETINGS</b> .....	25
3.3	<b>SUPERINTENDENT</b> .....	25
3.3.1	<b>FULL TIME SUPERINTENDENT</b> .....	25
3.3.2	<b>STAFF</b> .....	25
3.3.3	<b>RIGHT TO REMOVE</b> .....	25
3.4	<b>LABOR AND MATERIALS</b> .....	26
3.4.1	<b>CONTRACTOR TO PROVIDE</b> .....	26
3.4.2	<b>QUALITY</b> .....	26
3.4.3	<b>REPLACEMENT</b> .....	26
3.4.4	<b>DISCIPLINE</b> .....	26
3.5	<b>WARRANTY</b> .....	26
3.6	<b>TAXES</b> .....	27
3.7	<b>PERMITS, FEES AND NOTICES</b> .....	27
3.7.1	<b>PAYMENT</b> .....	27
3.7.2	<b>COMPLIANCE</b> .....	27
3.7.3	<b>CONTRACT DOCUMENTS</b> .....	27
3.7.4	<b>RESPONSIBILITY</b> .....	27
3.8	<b>ALLOWANCES</b> .....	27
3.8.1	<b>CONTRACT</b> .....	28

3.8.2	<b>SCOPE</b> .....	28
3.8.2.1	<i>Prompt Selection</i> .....	28
3.8.2.2	<i>Cost</i> .....	28
3.8.2.3	<i>Cost Included in Contract Sum</i> .....	28
3.8.2.4	<i>Contract Sum Adjustment</i> .....	28
3.9	<b>CONTRACTOR'S CONSTRUCTION SCHEDULES</b> .....	28
3.9.1	<b>REQUIREMENTS</b> .....	28
3.9.2	<b>DSA OVERSIGHT PROCESS</b> .....	30
3.9.3	<b>FAILURE TO MEET REQUIREMENTS</b> .....	31
3.10	<b>DOCUMENTS AND SAMPLES AT THE SITE</b> .....	31
3.11	<b>SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES</b> .....	31
3.11.1	<b>SUBMITTALS DEFINED</b> .....	31
3.11.1.1	<i>Shop Drawings</i> .....	31
3.11.1.2	<i>Samples</i> .....	31
3.11.1.3	<i>Contractor's Responsibility</i> .....	32
3.11.1.4	<i>Extent of Review</i> .....	32
3.11.2	<b>DRAWING SUBMISSION PROCEDURE</b> .....	33
3.11.2.1	<i>Transmittal Letter and Other Requirements</i> .....	33
3.11.2.2	<i>Copies Required</i> .....	33
3.11.2.3	<i>Corrections</i> .....	33
3.11.2.4	<i>Approval Prior to Commencement of Work</i> .....	33
3.11.3	<b>SAMPLE SUBMISSIONS PROCEDURE</b> .....	33
3.11.3.1	<i>Samples Required</i> .....	33
3.11.3.2	<i>Labels and Instructions</i> .....	34
3.11.3.3	<i>Architect's Review</i> .....	34
3.11.3.4	<i>Record Drawings and Annotated Specifications</i> .....	34
3.11.3.5	<i>Equipment Manuals</i> .....	34
3.11.3.6	<i>Owner's Property</i> .....	35
3.11.4	<b>SUBSTITUTIONS</b> .....	35
3.11.4.1	<i>One Product Specified</i> .....	35
3.11.4.2	<i>Two or More Products Specified</i> .....	35
3.11.4.3	<i>Substitution Request Form</i> .....	35
3.11.4.4	<i>List of Manufacturers and Products Required</i> .....	36
3.11.5	<b>DEFERRED APPROVALS</b> .....	36
3.12	<b>CUTTING AND PATCHING</b> .....	36
3.12.1	<b>SCOPE</b> .....	36
3.12.2	<b>CONSENT</b> .....	36
3.12.3	<b>STRUCTURAL MEMBERS</b> .....	36
3.12.4	<b>SUBSEQUENT REMOVAL</b> .....	37
3.13	<b>CLEANING UP</b> .....	37
3.13.1	<b>CONTRACTOR'S RESPONSIBILITY</b> .....	37
3.13.2	<b>FAILURE TO CLEANUP</b> .....	37
3.13.3	<b>CONSTRUCTION BUILDINGS</b> .....	37
3.14	<b>ACCESS TO WORK</b> .....	37
3.15	<b>ROYALTIES AND PATENTS</b> .....	38
3.15.1	<b>PAYMENT AND INDEMNITY</b> .....	38
3.15.2	<b>REVIEW</b> .....	38

3.16	<b>INDEMNIFICATION</b> .....	38
3.16.1	<b>SCOPE: CONTRACTOR</b> .....	38
3.16.2	<b>SCOPE: SUBCONTRACTORS</b> .....	39
3.16.2.1	<i>Indemnity</i> .....	39
3.16.2.2	<i>Joint and Several Liability</i> .....	39
3.16.3	<b>NO LIMITATION</b> .....	40
3.17	<b>OWNER AS INTENDED BENEFICIARY</b> .....	40
3.18	<b>NOTICE OF EXCUSE FOR NONPERFORMANCE</b> .....	40
3.19	<b>RECOVERY OF DAMAGES FROM OWNER</b>	
	<b>ARTICLE 4</b> .....	41
	<b>ADMINISTRATION OF THE CONTRACT</b> .....	41
4.1	<b>ARCHITECT</b> .....	41
4.1.1	<b>DEFINITION</b> .....	41
4.1.2	<b>MODIFICATION</b> .....	41
4.1.3	<b>TERMINATION</b> .....	41
4.2	<b>ARCHITECT'S ADMINISTRATION OF THE CONTRACT</b> .....	41
4.2.1	<b>STATUS</b> .....	41
4.2.2	<b>SITE VISITS</b> .....	41
4.2.3	<b>LIMITATIONS OF CONSTRUCTION RESPONSIBILITY</b> .....	42
4.2.4	<b>COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION</b> .....	42
4.2.5	<b>PAYMENT APPLICATIONS</b> .....	42
4.2.6	<b>REJECTION OF WORK</b> .....	42
4.2.7	<b>CHANGE ORDERS</b> .....	42
4.2.8	<b>WARRANTIES UPON COMPLETION</b> .....	42
4.2.9	<b>INTERPRETATION</b> .....	43
4.2.10	<b>ADDITIONAL INSTRUCTIONS</b> .....	43
4.2.10.1	<i>Architect's Interpretations and Decisions</i> .....	43
4.2.10.2	<i>Typical Parts and Sections</i> .....	43
4.2.10.3	<i>Dimensions</i> .....	43
4.3	<b>INSPECTOR OF RECORD</b> .....	43
4.3.1	<b>GENERAL</b> .....	43
4.3.2	<b>INSPECTOR OF RECORD'S DUTIES</b> .....	43
4.3.3	<b>Inspector's Authority to Reject or Stop Work</b> .....	44
4.3.4	<b>INSPECTOR OF RECORD'S FACILITIES</b> .....	44
4.4	<b>RESPONSIBILITY FOR ADDITIONAL CHARGES INCURRED BY THE OWNER FOR PROFESSIONAL SERVICES</b> .....	44
4.5	<b>NOTICES OF POTENTIAL CHANGE, CHANGE ORDER REQUESTS, AND CLAIMS</b> .....	45
4.5.1	<b>NOTICE OF POTENTIAL CHANGE</b> .....	45
4.5.2	<b>CHANGE ORDERS REQUESTS</b> .....	46
4.5.3	<b>DEFINITION OF CLAIM</b> .....	47
4.5.4	<b>TIME FOR SUBMITTING CLAIM; WAIVER</b> .....	48
4.5.5	<b>CONTENT OF CLAIM</b> .....	49
4.5.5.1	<i>Claim Format; Waiver</i> .....	49
4.5.5.2	<i>Claims for Additional Money</i> .....	50
4.5.5.3	<i>Claims for Additional Time</i> .....	50
4.5.5.3.1	<i>Notice of Extent of Claim</i> .....	50

4.5.5.3.2	Unusually Severe Weather <i>Claims</i> .....	51
4.5.5.4	<i>"Pass Through" Claims</i> .....	51
4.5.6	Procedures for Claims ( <b>Public Contract Code section 9204</b> ) .....	51
4.5.6.1	<i>Claims</i> .....	52
4.5.6.2	<i>Meet and Confer</i> .....	52
4.5.6.3	<i>Government Code Claim</i> .....	53
4.5.7	Continuing Contract <b>PERFORMANCE</b> .....	53
4.5.8	Claims for Concealed or Unknown <b>CONDITIONS</b> .....	53
4.5.8.1	Trenches or Excavations Less Than Four Feet Below the Surface.....	54
4.5.8.2	Trenches or Excavations Greater Than Four Feet Below the Surface.....	54
4.5.9	Injury or Damage to Person or <b>PROPERTY</b> .....	55
	<b>ARTICLE 5</b> .....	55
	<b>SUBCONTRACTORS</b> .....	55
5.1	<b>DEFINITIONS</b> .....	55
5.1.1	<b>SUBCONTRACTOR</b> .....	55
5.1.2	<b>SUB-SUBCONTRACTOR</b> .....	55
5.1.3	<b>SPECIALTY CONTRACTORS</b> .....	55
5.2	<b>AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK</b> .....	56
5.2.1	Assignment or Substitution - <b>CONSENT OF OWNER</b> .....	56
5.2.2	<b>GROUNDS FOR SUBSTITUTION</b> .....	56
5.2.2.1	<i>No Change in Contract</i> .....	57
5.2.2.2	<i>Substitution Due to Clerical Error</i> .....	57
5.3	<b>SUBCONTRACTUAL RELATIONS</b> .....	57
5.4	<b>CONTINGENT ASSIGNMENT OF SUBCONTRACTS</b> .....	58
5.5	<b>SUBCONTRACTOR'S RESPONSIBILITIES</b> .....	58
5.5.1	<b>SUPERVISION BY SUBCONTRACTORS</b> .....	58
5.5.2	<b>DISCIPLINE AND ORDER</b> .....	59
5.5.3	<b>DEFECTS DISCOVERED</b> .....	59
5.5.4	<b>SUBCONTRACTOR INFORMATION</b> .....	59
5.5.5	<b>TEMPORARY STRUCTURES</b> .....	59
5.5.6	<b>CHARGES TO SUBCONTRACTOR</b> .....	59
5.5.7	<b>FINES IMPOSED</b> .....	60
5.5.8	<b>PROJECT SIGNS</b> .....	60
5.5.9	<b>REMEDIES FOR FAILURE TO PERFORM</b> .....	60
5.5.10	<b>DISPUTES NOT TO AFFECT WORK</b> .....	60
5.5.11	<b>APPLICATION FOR PAYMENT</b> .....	61
5.5.12	<b>COMPLIANCE WITH PROCEDURES</b> .....	61
5.5.13	<b>ON-SITE RECORD KEEPING</b> .....	61
5.5.14	<b>NON-EXCLUSIVE OBLIGATIONS</b> .....	61
	<b>ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS ...</b>	<b>61</b>
6.1	<b>OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS</b> .....	61
6.1.1	<b>OWNER'S RIGHTS</b> .....	61
6.1.2	<b>DESIGNATION AS CONTRACTOR</b> .....	61



6.1.3	<b>CONTRACTOR DUTIES</b> .....	62
6.1.4	<b>OWNER OBLIGATIONS</b> .....	62
6.2	<b>MUTUAL RESPONSIBILITY</b> .....	62
6.2.1	<b>DELIVERY AND STORAGE</b> .....	62
6.2.2	<b>NOTICE BY CONTRACTOR</b> .....	62
6.2.3	<b>COSTS INCURRED</b> .....	63
6.2.4	<b>CORRECTION OF DAMAGE</b> .....	63
6.3	<b>OWNER'S RIGHT TO CLEAN UP</b> .....	63
	<b>ARTICLE 7</b> .....	63
	<b>CHANGES IN THE WORK</b> .....	63
7.1	<b>CHANGES</b> .....	63
7.1.1	<b>No Changes Without AUTHORIZATION</b> .....	63
7.1.2	<b>Architect Authority to Order Minor CHANGES</b> .....	64
7.2	<b>CHANGE ORDERS ("CO")</b> .....	64
7.3	<b>CONSTRUCTION CHANGE DIRECTIVES ("CCD")</b> .....	64
7.3.1	<b>DEFINITION</b> .....	64
7.3.2	<b>USE TO DIRECT CHANGE</b> .....	65
7.4	<b>REQUEST FOR INFORMATION ("RFI")</b> .....	65
7.4.1	<b>DEFINITION</b> .....	65
7.4.2	<b>SCOPE</b> .....	65
7.4.3	<b>RESPONSE TIME</b> .....	65
7.4.4	<b>COSTS INCURRED</b> .....	66
7.5	<b>REQUEST FOR PROPOSAL ("RFP")</b> .....	66
7.5.1	<b>DEFINITION</b> .....	66
7.5.2	<b>SCOPE</b> .....	66
7.6	<b>CHANGE ORDER REQUEST ("COR")</b> .....	66
7.6.1	<b>DEFINITION</b> .....	66
7.6.2	<b>CHANGES IN PRICE</b> .....	66
7.6.3	<b>CHANGES IN TIME</b> .....	66
7.7	<b>PRICE OF CHANGE ORDERS</b> .....	67
7.7.1	<b>SCOPE</b> .....	67
7.7.2	<b>DETERMINATION OF COST</b> .....	67
7.7.3	<b>FORMAT FOR PROPOSED COST CHANGE</b> .....	69
7.7.4	<b>DISCOUNTS, REBATES, AND REFUNDS</b> .....	56
7.7.5	<b>ACCOUNTING RECORDS</b> .....	71
7.7.6	<b>NOTICE REQUIRED</b> .....	71
7.7.7	<b>APPLICABILITY TO SUBCONTRACTORS</b> .....	71
7.8	<b>Waiver of Right to Claim Money or TIME</b> .....	71
	<b>ARTICLE 8</b> .....	58
	<b>TIME</b> 72	
8.1	<b>DEFINITIONS</b> .....	72
8.1.1	<b>CONTRACT TIME</b> .....	72
8.1.2	<b>NOTICE TO PROCEED</b> .....	72
8.1.3	<b>DAYS</b> .....	72
8.2	<b>HOURS OF WORK</b> .....	72
8.2.1	<b>SUFFICIENT FORCES</b> .....	72

8.2.2	Performance During Working HOURS.....	72
8.2.3	<b>LABOR CODE APPLICATION.....</b>	72
8.2.4	<b>COSTS FOR AFTER HOURS INSPECTIONS.....</b>	73
8.2.5	<b>TIME FOR COMMENCEMENT BY SUBCONTRACTORS.....</b>	73
8.3	<b>PROGRESS AND COMPLETION.....</b>	73
8.3.1	<b>TIME OF THE ESSENCE.....</b>	73
8.3.2	<b>NO COMMENCEMENT WITHOUT INSURANCE.....</b>	73
8.3.3	<b>EXPEDITIOUS COMPLETION.....</b>	74
8.4	<b>EXTENSIONS OF TIME - LIQUIDATED DAMAGES.....</b>	74
8.4.1	<b>Conditions Allowing for Extensions of Time to Complete the Work ONLY (EXCUSABLE DELAY).....</b>	74
8.4.2	<b>Compensable Delay (Time and MONEY).....</b>	74
8.4.3	<b>Notice by Contractor Required; Procedures for Demanding Additional Time or Money 61</b>	
8.4.4	<b>EARLY COMPLETION.....</b>	75
8.4.5	<b>LIQUIDATED DAMAGES.....</b>	75
8.5	<b>GOVERNMENT APPROVALS.....</b>	76
	<b>ARTICLE 9.....</b>	76
	<b>PAYMENTS AND COMPLETION.....</b>	76
9.1	<b>CONTRACT SUM.....</b>	76
9.2	<b>COST BREAKDOWN.....</b>	76
9.2.1	<b>REQUIRED INFORMATION.....</b>	76
9.2.2	<b>OWNER ACCEPTANCE REQUIRED.....</b>	77
9.3	<b>APPLICATIONS FOR PAYMENT.....</b>	77
9.3.1	<b>PROCEDURE.....</b>	77
9.3.2	<b>PURCHASE OF MATERIALS AND EQUIPMENT.....</b>	78
9.3.3	<b>WARRANTY OF TITLE.....</b>	78
9.4	<b>REVIEW OF PROGRESS PAYMENT.....</b>	79
9.4.1	<b>OWNER ACCEPTANCE.....</b>	79
9.4.2	<b>OWNER'S REVIEW.....</b>	79
9.5	<b>DECISIONS TO WITHHOLD PAYMENT.....</b>	79
9.5.1	<b>REASONS TO WITHHOLD PAYMENT.....</b>	79
9.5.3	<b>PAYMENT AFTER CURE.....</b>	82
9.5.3	<b>OVERPAYMENT AND/OR FAILURE TO WITHHOLD.....</b>	82
9.6	<b>PROGRESS PAYMENTS.....</b>	82
9.6.1	<b>PAYMENTS TO CONTRACTOR.....</b>	82
9.6.2	<b>PAYMENTS TO SUBCONTRACTORS.....</b>	82
9.6.3	<b>PERCENTAGE OF COMPLETION OR PAYMENT INFORMATION.....</b>	83
9.6.4	<b>NO OBLIGATION OF OWNER FOR SUBCONTRACTOR PAYMENT.....</b>	83
9.6.5	<b>PAYMENT TO SUPPLIERS.....</b>	83
9.6.6	<b>PAYMENT NOT CONSTITUTING APPROVAL OR ACCEPTANCE.....</b>	83
9.6.7	<b>JOINT CHECKS.....</b>	83
9.7	<b>COMPLETION OF THE WORK.....</b>	83
9.7.1	<b>CLOSE-OUT PROCEDURES.....</b>	83
9.7.2	<b>COSTS OF MULTIPLE INSPECTIONS.....</b>	84
9.8	<b>PARTIAL OCCUPANCY OR USE.....</b>	84

9.9	<b>FINAL PROGRESS PAYMENT AND RELEASE OF RETENTION</b>	85
9.9.1	<b>FINAL APPLICATION FOR PROGRESS PAYMENT</b>	85
9.9.2	<b>Procedures for Application for Final Progress Payment</b>	85
9.9.3	<b>RELEASE OF RETAINAGE</b>	86
9.10	<b>SUBSTITUTION OF SECURITIES</b>	86
	<b>ARTICLE 10</b>	87
	<b>PROTECTION OF PERSONS AND PROPERTY</b>	87
10.1	<b>SAFETY PRECAUTIONS AND PROGRAMS</b>	87
10.1.1	<b>CONTRACTOR RESPONSIBILITY</b>	87
10.1.2	<b>SUBCONTRACTOR RESPONSIBILITY</b>	87
10.1.3	<b>COOPERATION</b>	87
10.1.4	<b>ACCIDENT REPORTS</b>	87
10.1.5	<b>FIRST-AID SUPPLIES AT SITE</b>	88
10.2	<b>SAFETY OF PERSONS AND PROPERTY</b>	88
10.2.1	<b>THE CONTRACTOR</b>	88
10.2.2	<b>CONTRACTOR NOTICES</b>	88
10.2.3	<b>SAFETY BARRIERS AND SAFEGUARDS</b>	88
10.2.4	<b>USE OR STORAGE OF HAZARDOUS MATERIAL</b>	89
10.2.5	<b>FINGERPRINTING</b>	89
10.3	<b>PROTECTION OF WORK AND PROPERTY</b>	89
10.3.1	<b>PROTECTION OF WORK</b>	89
10.3.2	<b>PROTECTION FOR ELEMENTS</b>	89
10.3.3	<b>SHORING AND STRUCTURAL LOADING</b>	89
10.3.4	<b>CONFORMANCE WITHIN ESTABLISHED LIMITS</b>	90
10.3.5	<b>SUBCONTRACTOR ENFORCEMENT OF RULES</b>	90
10.3.6	<b>SITE ACCESS</b>	90
10.3.7	<b>PROTECTION OF MATERIALS</b>	90
10.4	<b>EMERGENCIES</b>	90
10.4.1	<b>EMERGENCY ACTION</b>	90
10.4.2	<b>ACCIDENT REPORTS</b>	90
10.5	<b>HAZARDOUS MATERIALS</b>	91
10.5.1	<b>Discovery of Hazardous MATERIALS</b>	91
10.5.2	<b>HAZARDOUS MATERIAL WORK LIMITATIONS</b>	91
10.5.3	<b>Indemnification By Owner for Hazardous Material Not Caused by Contractor</b>	91
10.5.4	<b>NATURALLY OCCURRING ASBESTOS</b>	91
10.5.5	<b>Indemnification by Contractor for Hazardous Material Caused by Contractor</b>	92
10.5.6	<b>TERMS OF HAZARDOUS MATERIAL PROVISION</b>	92
10.5.7	<b>ARCHEOLOGICAL MATERIALS</b>	92
	<b>ARTICLE 11</b>	92
	<b>INSURANCE AND BONDS</b>	92
11.1	<b>CONTRACTOR'S LIABILITY INSURANCE</b>	92
11.1.1	<b>Liability Insurance REQUIREMENTS</b>	92
11.1.2	<b>SUBCONTRACTOR INSURANCE REQUIREMENTS</b>	94
11.1.3	<b>OWNER'S INSURANCE</b>	94
11.1.4	<b>ADDITIONAL INSURED ENDORSEMENT REQUIREMENTS</b>	94
11.1.5	<b>Workers' Compensation INSURANCE</b>	94

11.1.6	<b>Builder's Risk/"All Risk" Insurance</b>	95
11.1.6.1	<b>COURSE-OF-CONSTRUCTION INSURANCE REQUIREMENTS</b>	95
11.1.7	<b>CONSENT OF INSURER FOR PARTIAL OCCUPANCY OR USE</b>	95
11.1.8	<b>FIRE INSURANCE</b>	95
11.1.9	<b>OTHER INSURANCE</b>	95
11.1.10	<b>PROOF OF CARRIAGE OF INSURANCE</b>	95
11.1.11	<b>COMPLIANCE</b>	96
11.2	<b>PERFORMANCE AND PAYMENT BONDS</b>	96
11.2.1	<b>BOND REQUIREMENTS</b>	96
11.2.2	<b>SURETY QUALIFICATION</b>	97
<b>ARTICLE 12</b>		97
<b>UNCOVERING AND CORRECTION OF WORK</b>		97
12.1	<b>UNCOVERING OF WORK</b>	97
12.1.1	<b>UNCOVERING WORK FOR REQUIRED INSPECTIONS</b>	97
12.1.2	<b>Costs for Inspections not REQUIRED</b>	97
12.2	<b>CORRECTION OF WORK; WARRANTY</b>	97
12.2.1	<b>CORRECTION OF REJECTED WORK</b>	97
12.2.2	<b>Removal of Nonconforming WORK</b>	98
12.2.3	<b>Owner's Rights if Contractor FAILS TO CORRECT</b>	98
12.2.4	<b>COST OF CORRECTING THE WORK</b>	98
12.2.5	<b>Warranty Corrections (INCLUDES REPLACEMENT)</b>	98
12.2.6	<b>NO TIME LIMITATION</b>	99
12.3	<b>NONCONFORMING WORK AND WITHHOLDING THE VALUE OF IT</b>	99
<b>ARTICLE 13</b>		99
<b>MISCELLANEOUS PROVISIONS</b>		99
13.1	<b>GOVERNING LAW</b>	99
13.2	<b>SUCCESSORS AND ASSIGNS</b>	99
13.3	<b>WRITTEN NOTICE</b>	99
13.4	<b>RIGHTS AND REMEDIES</b>	100
13.4.1	<b>Duties and Obligations CUMULATIVE</b>	100
13.4.2	<b>NO WAIVER</b>	100
13.5	<b>TESTS AND INSPECTIONS</b>	100
13.5.1	<b>COMPLIANCE</b>	100
13.5.2	<b>INDEPENDENT TESTING LABORATORY</b>	100
13.5.3	<b>ADVANCE NOTICE TO INSPECTOR OF RECORD</b>	100
13.5.4	<b>TESTING OFF-SITE</b>	101
13.5.5	<b>ADDITIONAL TESTING OR INSPECTION</b>	101
13.5.6	<b>COSTS FOR RETESTING</b>	101
13.5.7	<b>COSTS FOR PREMATURE TEST</b>	101
13.5.8	<b>Tests or Inspections Not to DELAY WORK</b>	101
13.6	<b>[INTENTIONALLY LEFT BLANK]</b>	89
13.7	<b>TRENCH EXCAVATION</b>	102
13.7.1	<b>Trenches Greater Than Five FEET</b>	102
13.7.2	<b>EXCAVATION SAFETY</b>	102
13.7.3	<b>NO TORT LIABILITY OF OWNER</b>	102
13.7.4	<b>NO EXCAVATION WITHOUT PERMITS</b>	102

13.8	<b>WAGE RATES</b> .....	102
13.8.1	<b>WAGE RATES</b> .....	102
13.8.2	<b>HOLIDAY AND OVERTIME PAY</b> .....	102
13.8.3	<b>WAGE RATES NOT AFFECTED BY SUBCONTRACTS</b> .....	103
13.8.4	<b>Change in Prevailing Wage DURING BID OR CONSTRUCTION</b> .....	103
13.8.5	<b>FORFEITURE AND PAYMENTS</b> .....	103
13.8.6	<b>MINIMUM WAGE RATES</b> .....	103
13.8.7	<b>PER DIEM WAGES</b> .....	104
13.8.8	<b>Posting of Wage Rates and Other Required Job Site Notices</b> .....	104
13.9	<b>RECORD OF WAGES PAID: INSPECTION</b> .....	104
13.9.1	<b>APPLICATION OF LABOR CODE</b> .....	104
13.10	<b>APPRENTICES</b> .....	106
13.10.1	<b>APPRENTICE WAGES AND DEFINITIONS</b> .....	106
13.10.2	<b>APPRENTICE LABOR POOL</b> .....	106
13.10.3	<b>JOURNEYMAN/APPRENTICE RATIO; COMPUTATION OF HOURS</b> .....	107
13.10.4	<b>JOURNEYMAN/APPRENTICE RATIO</b> .....	107
13.10.4.1	<i>Apprenticeable Craft or Trade</i> .....	108
13.10.5	<b>RATIO EXEMPTION</b> .....	108
13.10.6	<b>APPRENTICE FUND</b> .....	108
13.10.7	<b>PRIME CONTRACTOR COMPLIANCE</b> .....	109
13.10.8	<b>Decisions of Joint APPRENTICESHIP COMMITTEE</b> .....	109
13.10.9	<b>NO BIAS</b> .....	109
13.10.10	<b>VIOLATION OF LABOR CODE</b> .....	109
13.11	<b>ASSIGNMENT OF ANTITRUST CLAIMS</b> .....	110
13.11.1	<b>APPLICATION</b> .....	110
13.11.2	<b>ASSIGNMENT OF CLAIM</b> .....	110
13.12	<b>AUDIT</b> .....	110
13.13	<b>STORM WATER DISCHARGE PERMIT</b> .....	111
	<b>ARTICLE 14</b> .....	111
	<b>TERMINATION OR SUSPENSION OF THE CONTRACT</b> .....	111
14.1	<b>TERMINATION BY THE CONTRACTOR FOR CAUSE</b> .....	111
14.2	<b>TERMINATION BY THE OWNER FOR CAUSE</b> .....	111
14.2.1	<b>GROUND FOR TERMINATION</b> .....	112
14.2.2	<b>NOTIFICATION OF TERMINATION</b> .....	112
14.2.3	<b>PAYMENTS WITHHELD</b> .....	112
14.2.4	<b>PAYMENTS UPON COMPLETION</b> .....	112
14.2.5	<b>INCLUSION OF TERMINATION FOR CONVENIENCE</b> .....	113
14.3	<b>SUSPENSION OR TERMINATION BY THE OWNER FOR CONVENIENCE</b> 113	
14.3.1	<b>SUSPENSION BY OWNER</b> .....	113
14.3.1.1	<i>Adjustments</i> .....	113
14.3.1.2	<i>Adjustments for Fixed Cost</i> .....	113
14.3.2	<b>TERMINATION BY THE OWNER FOR CONVENIENCE</b> .....	113
14.4	<b>NOT A WAIVER</b> .....	114
14.5	<b>MUTUAL TERMINATION FOR CONVENIENCE</b> .....	114
14.6	<b>EARLY TERMINATION</b> .....	114

## **ARTICLE 1**

### **GENERAL CONDITIONS**

#### **1.1 BASIC DEFINITIONS**

##### **1.1.1 THE CONTRACT DOCUMENTS**

The “Contract Documents” consist of the Agreement between Owner and Contractor (hereinafter the Agreement), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, addenda issued prior to bid, Instructions to Bidders, Notice to Bidders, the Bid Form, Payment Bond, Performance Bond, required insurance certificates, additional insured endorsement and declarations page, Designation of Subcontractors, Noncollusion Declaration, Roof Project Certification (where applicable), Sufficient Funds Declaration (Labor Code section 2810) and the Fingerprinting Notice and Acknowledgment and Independent Contractor Student Contact Form, other documents referred to in the Agreement, and Modifications issued after execution of the Agreement. A Modification is a written amendment to the Contract signed by both parties, a Change Order, a Construction Change Directive, Order to Proceed, or a written order for a change in the Work issued by the Owner. The Contract Documents are complementary, and each obligation of the Contractor, Subcontractors, material or equipment suppliers in any one shall be binding as if specified in all.

##### **1.1.2 THE CONTRACT**

The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a written Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Architect and Contractor, between the Construction Manager and Contractor, between the Owner and any Subcontractor or Sub-subcontractor, or between any persons or entities other than the Owner and the Contractor. The terms of the Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever except by written agreement signed by the parties and approved or ratified by the Governing Board.

##### **1.1.3 THE WORK**

The “Work” shall include all labor, materials, services and equipment necessary for the Contractor to fulfill all of its obligations pursuant to the Contract Documents for the Bid Package designated in the Contract, including but not limited to punch list items and submission of documents. It shall include the initial obligation of any Contractor or Subcontractor, who performs any portion of the Work, to visit the Site of the proposed Work with Owner’s representatives, a continuing obligation after the commencement of the Work to fully acquaint and familiarize itself with the conditions as they exist and the character of the operations to be carried on under the Contract Documents, and make such investigation as it may see fit so that it

shall fully understand the facilities, physical conditions, and restrictions attending the Work under the Contract Documents. Each such Contractor or Subcontractor shall also thoroughly examine and become familiar with the Drawings, Specifications, and associated bid documents. The Work also includes coordination with the Construction Manager and other prime contractors performing work. The "Site" refers to the grounds of the Project as defined in the Contract Documents and such adjacent lands as may be directly affected by the performance of the Work. The Work shall constitute a "work of improvement" under Civil Code section 8050 and Public Contract Code section 7107.

#### 1.1.4 **THE PROJECT**

The "Project" is the total construction of the Work performed in accordance with the Contract Documents plus construction by separate contractors. Where applicable, the Project may also include construction by the Owner or by separate contractors.

#### 1.1.5 **THE DRAWINGS**

The "Drawings" are graphic and pictorial portions of the Contract Documents prepared for the Work and approved changes thereto, wherever located and whenever issued, showing the design, location, and scope of the Work, generally including plans, elevations, sections, details, schedules, and diagrams as drawn or approved by the Architect.

#### 1.1.6 **THE SPECIFICATIONS**

The "Specifications" are that portion of the Contract Documents consisting of the written requirements for material, equipment, construction systems, instructions, quality assurance standards, workmanship, and performance of related services.

#### 1.1.7 **THE PROJECT MANUAL**

The "Project Manual" is the volume usually assembled for the Work which may include, without limitation, the bidding requirements, sample forms, Agreement, Conditions of the Contract, and Specifications.

#### 1.1.8 **OR**

"Or" shall include "and/or."

#### 1.1.9 **COMPLETION**

Statutory definitions of "completion" and "complete" shall apply for those statutory purposes. For accrual of liquidated damages, Claim and warranty purposes, "completion" and "complete" mean the point in the Project where (1) Contractor and Construction Manager have fully and correctly performed all Work in all parts and requirements, including corrective and punch list work, and (2) Owner's representatives have conducted a final inspection that confirmed this

performance. Substantial, or any other form of partial or non-compliant, performance of the Work shall not constitute “completion” or “complete” under the Contract Documents.

#### **1.1.10 COMPLETION OF THE PROJECT**

For purposes of accrual of liquidated damages for delays to the Project, *completion* shall mean the point in the Project where (1) all contractors and Owner have fully and correctly performed all work of the entire Project in all parts and requirements, including corrective and punch list work, and (2) Owner’s representatives have conducted a final inspection of the entire Project that confirmed this performance. Substantial, or any other form of partial or non-compliant, performance of the entire Project shall not constitute *completion* or *complete*.

#### **1.1.11 CONSTRUCTION MANAGER**

The “Construction Manager” shall refer to the firm or individual designated by the Owner to plan, coordinate, and manage the Project. The Contractor agrees to work with both the Owner and the Construction Manager as directed.

#### **1.1.12 PRIME CONTRACTORS**

Contractor understands that this Project will be performed using the multiple prime delivery method. Contractor has been selected as the prime contractor for this Bid Package. Contractor shall coordinate with other prime contractors under the direction of the Construction Manager and the Owner in completion of the entire Project.

### **1.2 EXECUTION, CORRELATION AND INTENT**

#### **1.2.1 CORRELATION AND INTENT**

1.2.1.1 *Documents Complementary and Inclusive.* The Contract Documents are complementary and are intended to include all items required for the proper execution and completion of the Work. Any item of work mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be provided by Contractor as if shown or mentioned in both.

1.2.1.2 *Coverage of the Drawings and Specifications.* The Drawings and Specifications generally describe the work to be performed by Contractor. Generally, the Specifications describe work which cannot be readily indicated on the Drawings and indicate types, qualities, and methods of installation of the various materials and equipment required for the Work. It is not intended to mention every item of Work in the Specifications, which can be adequately shown on the Drawings, or to show on the Drawings all items of Work described or required by the Specifications even if they are of such nature that they could have been shown. All materials or labor for Work, which is shown on the Drawings or the Specifications (or is reasonably inferable therefrom as being necessary to complete the Work), shall be provided by the Contractor whether or not the Work is expressly covered in the Drawings or the Specifications. It is intended that the Work be of sound, quality construction, and the Contractor shall be



responsible for the inclusion of adequate amounts to cover installation of all items indicated, described, or implied in the portion of the Work to be performed by Contractor.

1.2.1.3 **Conflicts.** Without limiting Contractor's obligation to identify conflicts for resolution by the Owner, it is intended that the more stringent, higher quality, and greater quantity of Work shall apply.

1.2.1.4 **Conformance With Laws.** Each and every provision of law required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon application of either party the Contract shall be amended in writing to make such insertion or correction.

Before commencing any portion of the Work, Contractor shall check and review the Drawings and Specifications for such portion for conformance and compliance with all laws, ordinances, codes, rules and regulations of all governmental authorities and public utilities affecting the construction and operation of the physical plant of the Project, all quasi-governmental and other regulations affecting the construction and operation of the physical plant of the Project, and other special requirements, if any, designated in the Contract Documents. In the event Contractor observes any violation of any law, ordinance, code, rule or regulation, or inconsistency with any such restrictions or special requirements of the Contract Documents, Contractor shall promptly notify Owner, Architect and the Construction Manager in writing of same and shall ensure that any such violation or inconsistency shall be corrected in the manner provided hereunder prior to the construction of that portion of the Work. Where requirements of the Contract Documents exceed those of the applicable building codes and ordinances, the Contract Documents shall govern. Contractor shall comply with all applicable Federal, State and local laws.

If, as and to the extent that Public Contract Code section 1104 is deemed to apply after the award of the Contract, Contractor shall not be required to assume responsibility for the completeness and accuracy of architectural or engineering plans and specifications, notwithstanding any other provision in the Contract Documents, except to the extent that Contractor discovered or should have discovered and reported any errors and omissions to the Owner, Architect and Construction Manager, including but not limited to as the result of any review of the plans and specifications by Contractor required by the Instructions to Bidders or other Contract Documents, whether or not actually performed by Contractor.

1.2.1.5 **Ambiguity.** Before commencing any portion of the Work, Contractor shall carefully examine all Drawings and Specifications and other information given to Contractor as to materials and methods of construction and other Work requirements. Contractor shall immediately notify the Construction Manager, Architect and Owner in writing of any perceived or alleged error, inconsistency, ambiguity, or lack of detail or explanation in the Drawings and Specifications in the manner provided herein. If the Contractor or its Subcontractors, material or equipment suppliers, or any of their officers, agents, and employees performs, permits, or causes the performance of any Work under the Contract Documents, which it knows or should have known to be in error, inconsistent, or ambiguous, or not sufficiently detailed or explained,

Contractor shall bear any and all costs arising therefrom including, without limitation, the cost of correction thereof without increase or adjustment to the Contract Sum or the time for performance. If Contractor performs, permits, or causes the performance of any Work under the Contract Documents prepared by or on behalf of Contractor which is in error, inconsistent or ambiguous, or not sufficiently detailed or explained, Contractor shall bear any and all resulting costs, including, without limitation, the cost of correction, without increase to or adjustment in the Contract Sum or the time for performance. In no case shall any Subcontractor proceed with the Work if uncertain without the Contractor's written direction and/or approval.

1.2.1.6 **Execution.** Execution of the Agreement Between Owner and Contractor by the Contractor is a representation that the Contractor has visited the Site, become familiar with the local conditions under which the Work is to be performed and has correlated personal observations with the requirements of the Contract Documents.

## 1.2.2 ADDENDA AND DEFERRED APPROVALS

1.2.2.1 **Addenda.** Subsequent addenda issued shall govern over prior addenda only to the extent specified. In accordance with Title 24, California Code of Regulations, addenda shall be approved by the Division of the State Architect ("DSA").

1.2.2.2 **Deferred Approvals.** The requirements approved by the DSA on any item submitted as a deferred approval in accordance with Title 24, California Code of Regulations, shall take precedence over any previously issued addenda, drawing or specification.

## 1.2.3 SPECIFICATION INTERPRETATION

1.2.3.1 **Titles.** The Specifications are separated into titled sections for convenience only and not to dictate or determine the trade or craft involved. Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of work to be performed by any trade.

1.2.3.2 **As Shown, Etc.** Where "as shown," "as indicated," "as detailed," or words of similar import are used, reference is made to the Drawings accompanying the Specifications unless otherwise stated. Where "as directed," "as required," "as permitted," "as authorized," "as accepted," "as selected," or words of similar import are used, the direction, requirement, permission, authorization, approval, acceptance, or selection by Architect is intended unless otherwise stated.

1.2.3.3 **Provide.** "Provide" means "provided complete in place," that is, furnished, installed, tested, and ready for operation and use.

1.2.3.4 **General Conditions.** The General Conditions and any supplementary general conditions are a part of each and every section of the Specifications.

1.2.3.5 **Abbreviations.** In the interest of brevity, the Specifications are written in an abbreviated form and may not include complete sentences. Omission of words or phrases such as “Contractor shall,” “shall be,” etc., are intentional. Nevertheless, the requirements of the Specifications are mandatory. Omitted words or phrases shall be supplied by inference in the same manner as they are when a “note” occurs on the Drawings.

1.2.3.6 **Plural.** Words in the singular shall include the plural whenever applicable or the context so indicates.

1.2.3.7 **Metric.** The Specifications may indicate metric units of measurement as a supplement to U.S. customary units. When indicated thus: 1” (25 mm), the U. S. customary unit is specific, and the metric unit is nonspecific. When not shown with parentheses, the unit is specific. The metric units correspond to the “International System of Units” (SI) and generally follow ASTM E 380, “Standard for Metric Practice.”

1.2.3.8 **Standard Specifications.** Any reference to standard specifications of any society, institute, association, or governmental authority is a reference to the organization’s standard specifications, which are in effect as of the date the Notice to Bidders is first published. If applicable specifications are revised prior to completion of any part of the Work, the Contractor may, if acceptable to Owner and Architect, perform such Work in accordance with the revised specifications. The standard specifications, except as modified in the Specifications for the Work, shall have full force and effect as though printed in the Specifications. Architect will furnish, upon request, information as to how copies of the standard specifications referred to may be obtained.

1.2.3.9 **Absence of Modifiers.** In the interest of brevity, the Contract Documents frequently omit modifying words such as “all” and “any” and articles such as “the” and “an,” but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

**1.3 OWNERSHIP AND USE OF ARCHITECT’S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS.** The Drawings, Specifications, and other documents prepared on behalf of the Owner are instruments of the services of the Architect and its consultants and are the property of the Owner. The Contractor may retain one contract record set. Neither the Contractor nor any Subcontractor, Sub-subcontractor, or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by the Architect, and unless otherwise indicated the Architect shall be deemed the author of them. All copies of them, except the Contractor’s record set, shall be returned or suitably accounted for to the Owner or the Construction Manager, upon request upon completion of the Work. The Drawings, Specifications, and other documents prepared by the Architect, and copies thereof furnished to the Contractor, are for use solely with respect to this Work. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor, or material or equipment supplier on other contracts or projects or for additions to this Contract or Project outside the scope of the Work without the specific written consent of the Owner and the Architect. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers are granted a limited license to use and reproduce applicable portions of the Drawings, Specifications, and other

documents prepared by the Architect appropriate to and for use in the execution of their Work under the Contract Documents. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Work is not to be construed as publication in derogation of the Owner's property interest or other reserved right. All copies made under this license shall bear appropriate attribution and the statutory copyright notice, if any, shown on the Drawings, Specifications and other documents prepared by the Architect.

## **ARTICLE 2**

### **OWNER**

#### **2.1 DEFINITION**

The term "Owner" means the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Owner" means the Owner and/or the Owner's authorized representative, including but not limited to architects and construction managers. To the extent the Contract Documents indicate that Owner has assigned duties to particular representatives of the Owner (such as the Architect, or any construction manager), Owner reserves the right at all times to reassign such duties to different Owner representatives.

#### **2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER**

##### **2.2.1 [INTENTIONALLY LEFT BLANK]**

##### **2.2.2 SITE SURVEY**

When required by the scope of the Work, the Owner will furnish, at its expense, a legal description or a land survey of the Site, giving, as applicable, grades and lines of streets, alleys, pavements, adjoining property, rights-of-way, restrictions, easements, encroachments, zoning, deed restrictions, boundaries, and contours of the Site. Surveys to determine locations of construction, grading, and Site work shall be provided by the Owner.

##### **2.2.3 SOILS**

2.2.3.1 ***Owner Furnished Services.*** When required by the scope of the Work, the Owner will furnish, at its expense, the services of geotechnical engineers or consultants when reasonably required or as required by local or state codes. Such services with reports and appropriate professional recommendations shall include test boring, test pits, soil bearing values, percolation tests, air and water pollution tests, and ground corrosion and resistivity tests, including necessary operations for determining subsoil, air, and water conditions.

2.2.3.2 ***Contractor Reliance.*** Test borings and soils reports for the Project have been made for the Owner to indicate the subsurface materials that might be encountered at particular locations on the Project. The Owner has made these documents available to the Contractor and the Contractor has studied the results of such test borings and information that it

has as to the subsurface conditions and Site geology as set forth in the test borings and soils reports. The Owner does not assume any responsibility whatsoever with respect to the sufficiency or accuracy of the borings made, or of the logs of the test borings, or of other investigations, or of the soils reports furnished pursuant hereto, or of the interpretations to be made beyond the location or depth of the borings. There is no warranty or guarantee, either express or implied that the conditions indicated by such investigations, borings, logs, soil reports or other information are representative of those existing throughout the Site of the Project, or any part thereof, or that unforeseen developments may not occur. At the Owner's request, the Contractor shall make available to the Owner the results of any Site investigation, test borings, analyses, studies or other tests conducted by or in the possession of the Contractor of any of its agents. Nothing herein contained shall be deemed a waiver by the Contractor to pursue any available legal right or remedy it may have at any time against any third party who may have prepared any report and/or test relied upon by the Contractor.

#### 2.2.4 UTILITY SURVEY

When required by the scope of the Work, the Owner will furnish, at its expense, all information regarding known existing utilities on or adjacent to the Site, including location, size, inverts, and depths.

#### 2.2.5 INFORMATION

Upon the request of the Contractor, Owner or the Construction Manager will make available such existing information regarding utility services and Site features, including existing construction, related to the Work as is available from Owner's records. The Contractor may not rely upon the accuracy of any such information, other than that provided under Sections 2.2.2 and 2.2.4 (except that the Contractor may not rely upon and must question in writing to the Owner, Architect and the Construction Manager any information which appears incorrect based upon Contractor's Site inspection, knowledge of the Work and Project, and prior experience with similar projects), unless specifically stated in writing that the Contractor may rely upon the designated information.

#### 2.2.6 EXISTING UTILITY LINES; REMOVAL, RELOCATION

2.2.6.1 **Removal, Relocation.** Pursuant to Government Code section 4215, the Owner assumes the responsibility for removal, relocation, and protection of trunkline utilities located on the Site at the time of commencement of construction under this Contract with respect to any such utility facilities which are not identified in the drawings and specifications made part of the invitation to bid. The Contractor shall not be assessed for liquidated damages for delay in Completion of the Work caused by failure of the Owner to provide for removal or relocation of such utility facilities. Owner shall compensate the Contractor for the costs of locating, repairing damage not due to the failure of the Contractor to exercise reasonable care, removing or relocating such utility facilities, and for equipment necessarily idle during such work.

2.2.6.2 **Assessment.** These subparagraphs shall not be construed to preclude assessment against the Contractor for any other delays in Completion of the Work. Nothing in

these subparagraphs shall be deemed to require the Owner to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Site can be inferred from the presence of other visible facilities, such as buildings, or meter junction boxes on or adjacent to the Site.

2.2.6.3 **Notification.** If the Contractor, while performing work under this Contract, discovers utility facilities not identified by the Owner in the Contract plans or specifications, Contractor shall immediately notify the Owner and the utility in writing.

2.2.6.4 **Underground Utility Clearance.** It shall be Contractor's sole responsibility to timely notify all public and private utilities serving the Site prior to commencing work. The Contractor shall notify and receive clearance from any cooperative agency, such as Underground Service Alert, in accordance with Government Code section 4216, et seq. Contractor shall promptly provide a copy of all such notifications to the Construction Manager and the Owner.

#### 2.2.7 **EASEMENTS**

Owner shall secure and pay for easements for permanent structures or permanent changes in existing facilities, if any, unless otherwise specified in the Contract or Contract Documents.

#### 2.2.8 **REASONABLE PROMPTNESS**

Information or services under Owner's control will be furnished by the Owner with reasonable promptness. The Owner shall not be liable for any delays caused by factors beyond the Owner's control including but not limited to DSA's or any other local, State or federal agency's review of bids, change order requests, RFI's or any other documents.

#### 2.2.9 **COPIES FURNISHED**

The Contractor will be furnished an electronic and two full-size hard copies of Drawings and Project Manuals as are stated in the Contract Documents.

#### 2.2.10 **DUTIES CUMULATIVE**

The foregoing are in addition to other duties and responsibilities of the Owner enumerated herein, and especially those in Article 6 (Construction by Owner or by Separate Contractors), Article 9 (Payments and Completion), and Article 11 (Insurance and Bonds).

### **2.3 OWNER'S RIGHT TO STOP THE WORK**

If the Contractor fails to correct Work which is not in accordance with the requirements of the Contract Documents, or persistently fails to carry out Work in accordance with the Contract Documents, the Owner, after providing Notice pursuant to paragraph 2.4, may order the Contractor to stop the Work or any portion thereof, until the Contractor corrects the deficiencies. The right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Article 6.

### **2.4 OWNER'S RIGHT TO CARRY OUT THE WORK**

If the Contractor fails or refuses to carry out the Work in accordance with the Contract Documents, the Owner may correct such deficiencies by whatever reasonable method the Owner may deem expedient without prejudice to other remedies the Owner may have, including but not limited to having another contractor perform some or all of the Work without terminating the Contract with Contractor. Owner may exercise this right at any time during the Contractor's Work.

Owner shall first provide written notice to Contractor of Contractor's failure or refusal to perform. The notice will provide the time period within which Contractor must begin correction of the failure or refusal to perform. If the Contractor fails to begin correction within the stated time, or fails to continue correction, the Owner may proceed to correct the deficiencies. In the event the Owner bids the work, Contractor shall not be eligible for the award of the contract. The Contractor may be invoiced the cost to Owner of the work, including compensation for additional professional and internally generated services and expenses made necessary by Contractors' failure or refusal to perform. Owner may withhold that amount from the retention or progress payments due the Contractor pursuant to Section 9.5. If retention and payments withheld then or thereafter due the Contractor are not sufficient to cover that amount, the Contractor shall pay the difference to the Owner.

## **ARTICLE 3**

### **THE CONTRACTOR**

#### **3.1 DEFINITION**

The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Contractor" means the Contractor or the Contractor's authorized representative. To the extent that any portion of the Work is provided with the Contractor's own forces, any reference to Subcontractors shall be equally applicable to the Contractor.

#### **3.2 SUPERVISION AND CONSTRUCTION PROCEDURES**

##### **3.2.1 CONTRACTOR**

The Contractor shall supervise and direct the Work using the Contractor's best skill and attention, which shall meet or exceed the standards in the industry. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, procedures, and coordinating all portions of the Work under the Contract, unless Contract Documents give other specific instructions concerning these matters.

Contractor shall be responsible for the coordination and sequencing of its Work with other prime contractors under the direction of the Owner and the Construction Manager so as to avoid any impact on the Contract schedule pursuant to the requirements of Article 6. If Contractor fails to fulfill these obligations, Owner may exercise its rights under section 2.4. The right of Owner to carry out the Work under section 2.4 shall not give rise to a duty on the part of Owner to exercise this right for the benefit of Contractor or any other person or entity, except to the extent required by section 6.1.4.

The Owner and Construction Manager shall schedule and coordinate the activities of Contractor with the other contractors and Owner through periodic prime contractor meetings. Contractor agrees to accept the Owner's, and any Construction Manager's, construction schedules, schedule updates, overall sequence and coordination of construction for the Project.

Contractor realizes that work by other contractors or Owner will occur simultaneously with Contractor's Work in any given area. Contractor is responsible for its own sequences within a given activity or set of activities. Contractor shall not commit, or permit, any act which will adversely affect the work of any other contractor or Owner. Contractor shall provide layout of its Work at the request of any other contractor or Owner.

Specific duties of the Contractor shall be in accordance with Title 24 of the California Code of Regulations. Contractor shall fully comply with any and all reporting requirements of Education Code sections 17309 and 81141 in the manner prescribed by Title 24.

### **3.2.2 CONTRACTOR RESPONSIBILITY**

The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors, material and equipment suppliers, and their agents, employees, invitees, and other persons performing portions of the Work under direct or indirect contract with the Contractor or any of its Subcontractors.

### **3.2.3 OBLIGATIONS NOT CHANGED BY OTHERS' ACTIONS**

The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents by the activities or duties of the Owner's representatives, including but not limited to the Construction Manager, the Architect, or the Inspector of Record, or by tests, inspections, or approvals required or performed by persons other than the Contractor.



### **3.2.4 CONTRACTOR RESPONSIBILITY FOR READINESS FOR WORK**

The Contractor shall be responsible for inspection of Work already performed under the Contract Documents to determine that such portions are in proper condition to receive subsequent work.

### **3.2.5 PROJECT MEETINGS**

During its Work, Contractor shall attend Owner's prime contractor Project meetings as scheduled by the Contract Documents, or as otherwise instructed by Owner, to discuss the current status of the Work and the Project the future progress of the Work and the Project. Contractor shall have five (5) days after receipt of Owner's Project meeting minutes to provide written objections and suggested corrections.

## **3.3 SUPERINTENDENT**

### **3.3.1 FULL TIME SUPERINTENDENT**

The Contractor shall provide a competent superintendent and assistants as necessary, all of whom shall be reasonably proficient in speaking, reading and writing English and, who shall be in attendance at the Project Site during performance of the Work. Before commencing the work herein, Contractor shall give written notice to Construction Manager of the name, qualifications and experience of such superintendent. If the superintendent is found unsatisfactory by Owner, Contractor shall replace the superintendent with one acceptable to the Owner. Superintendent shall not be changed or removed from the work except with written consent of the Owner, unless a superintendent proves to be unsatisfactory to the Contractor and ceases to be in its employ, in which case, Contractor shall notify the Construction Manager in writing and replace said superintendent with one acceptable to the Owner. Superintendent shall represent Contractor and all directions given to superintendent shall be as binding as if given to Contractor..

### **3.3.2 STAFF**

The Contractor and each Subcontractor shall: furnish a competent and adequate staff as necessary for the proper administration, coordination, supervision, and superintendence of its portion of the Work; organize the procurement of all materials and equipment so that the materials and equipment will be available at the time they are needed for the Work; and keep an adequate force of skilled workers on the job to Complete the Work in accordance with all requirements of the Contract Documents.

### **3.3.3 RIGHT TO REMOVE**

Owner shall have the right, but not the obligation, to require the removal from the Work of any superintendent, staff member, agent, or employee of any Contractor, Subcontractor, material or equipment supplier, etc., for cause.

### 3.4 **LABOR AND MATERIALS**

#### 3.4.1 **CONTRACTOR TO PROVIDE**

Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, material, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and Completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work. Owner has builder's risk insurance on all insurable work included under the Contract Documents. Contractor shall be responsible for its proportionate share of the deductible in the event of a claim for damages as determined by the Owner in its sole discretion.

#### 3.4.2 **QUALITY**

Unless otherwise specified, all materials and equipment to be permanently installed in the Work shall be new and shall be of such quality as required to satisfy the standards of the Contract Documents. The Contractor shall, if requested, promptly furnish satisfactory evidence as to kind and quality of all materials and equipment. All labor shall be performed by workers skilled in their respective trades, and the quality of their work shall meet whichever is the higher standard for their work: the standard in the industry or the standard in the Contract Documents.

#### 3.4.3 **REPLACEMENT**

Any work, materials, or equipment, which does not conform to these standards may be disapproved and rejected by the Owner, in which case, they shall be removed and replaced by the Contractor at no cost to the Owner.

#### 3.4.4 **DISCIPLINE**

The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract in accordance with paragraph 5.5.1 including, but not limited to, Subcontractors, and material or equipment suppliers retained for the Work.

### 3.5 **WARRANTY**

For the period of one (1) year after Completion of the Work (see Sections 9.7.1, 12.2.5 and 12.2.6), the Contractor warrants to the Owner that material and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty does not cover damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

### 3.6 **TAXES**

Contractor will pay all applicable Federal, State, and local taxes on all materials, labor, or services furnished by it, and all taxes arising out of its operations under the Contract Documents. Owner is exempt from Federal Excise Tax, and a Certificate of Exemption shall be provided upon request.

### 3.7 **PERMITS, FEES AND NOTICES**

#### 3.7.1 **PAYMENT**

The Contractor shall secure and pay for all permits and governmental fees, licenses, and inspections necessary for proper execution and Completion of the Work which are customarily secured after execution of the Contract and are legally required by any authority having jurisdiction over the Project, except those required by the Division of the State Architect (DSA). Owner shall be responsible for all testing and inspection as required by the DSA on-Site or within the distance limitations set forth in paragraph 13.5.2, unless a different mileage range is specified in the Contract Documents.

#### 3.7.2 **COMPLIANCE**

The Contractor shall comply with and give notices required by any law, ordinance, rule, regulation, and lawful order of public authorities bearing on performance of the Work.

#### 3.7.3 **CONTRACT DOCUMENTS**

It is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with any applicable law, statute, ordinance, building codes, rule, or regulation. However, if the Contractor knew, or should have known, or observes that portions of the Contract Document are at variance therewith, the Contractor shall promptly notify the Architect, the Construction Manager and Owner in writing, and necessary changes shall be accomplished by appropriate modification.

#### 3.7.4 **RESPONSIBILITY**

If the Contractor performs work that it knows, or should have known, is contrary to any law, statute, ordinance, building code, rule or regulation, the Contractor shall assume full responsibility for such work, and shall bear the attributable cost of correction and delays to the Work, other contractors' work, and the Project.

### 3.8 **ALLOWANCES**

### 3.8.1 CONTRACT

The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities against whom the Contractor makes reasonable and timely objection.

### 3.8.2 SCOPE

3.8.2.1 **Prompt Selection.** Materials and equipment under an allowance shall be selected promptly by the Owner to avoid delay to the Work.

3.8.2.2 **Cost.** Allowances shall cover the cost to the Contractor of materials and equipment delivered at the Site and all required taxes, less applicable trade discounts, etc., as delineated in paragraph 7.7.4.

3.8.2.3 **Cost Included in Contract Sum.** Contractor's costs for unloading and handling at the Site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum and not in the allowances.

3.8.2.4 **Contract Sum Adjustment.** Whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect the difference between actual cost and the allowances under paragraph 3.8.2.2 and the change in the Contractor's costs under paragraph 3.8.2.3.

## 3.9 CONTRACTOR'S CONSTRUCTION SCHEDULES

### 3.9.1 REQUIREMENTS

Contractor shall cooperate in the Owner and the Construction Manager's development of a master schedule for the Project based on Contractor's preliminary schedule for the Work and the preliminary schedules submitted by the other contractors on the Project. When presented by the Owner with a baseline master schedule for the Project that incorporates, to the extent reasonably possible, the Contractor's preliminary schedule, or with an updated master schedule for the Project that incorporates, to the extent reasonably possible, the Contractor's updated schedule, Contractor shall review and approve the master schedule within three business days.

The schedule and updates shall conform, at a minimum, to industry standards for critical path scheduling and shall facilitate Owner's Work and Project management and evaluation of Contractor Claims for additional money or time. Contractor will exchange scheduling information with Subcontractors and suppliers. Contractor will order work, equipment and materials with sufficient lead-time to avoid interruption of the Work.

The schedule and updates shall not exceed time limits (including milestone deadlines) under the Contract Documents and shall comply with the Contract Documents scheduling requirements and with any scheduling requirements the Owner provides to the Contractor at the beginning of the Work. The original schedule and all updates shall accurately reflect work performed to date, all construction tasks (including procurement), the critical path schedule for Completion of the

remainder of the Work, and the percentage of the Work completed. The original schedule and updates shall include all delay days for weather not unusually severe, even though that weather will not entitle Contractor to additional time or money.

The construction schedule shall be in the form of either a tabulation, chart, or graph, unless otherwise stated in Division 1 of the Specifications, and shall be in sufficient detail to show the chronological relationship of all activities of the Work including, but not limited to, estimated starting and completion dates of various activities, (including early and late dates and reasonable float for each activity), procurement of materials, the critical path, and scheduling of equipment. Float suppression techniques such as preferential sequencing, special lead/lag logic restraints, extended activity durations, or imposed dates shall be apportioned for the benefit of the Work. Whenever in the Contract Documents Contractor is required to provide a schedule and/or schedule updates, the Contractor shall provide the schedule and updates in electronic format as well as hard copy. Contractor shall be solely responsible for the accuracy, utility and reasonableness of all of its schedules. Owner's acceptance, approval or non-rejection of Contractor's schedules shall not affect Contractor's responsibility for its schedules.

The Contractor and Owner shall use any float on a "first come, first served" basis. The original schedule and updates shall reflect Contractor's and Owner's use of float. Float is not for the exclusive use or benefit of either Owner or Contractor, but it is a jointly owned expiring Work resource available to both parties as needed to meet schedule milestones. For the original schedule and updates, Contractor shall use a critical path network format with the critical paths clearly indicated. Contractor shall use an MS Project, Primavera, or an equivalent or better program. Contractor shall include reports that sort and list the activities in order of increasing float and by early and late start dates. Contractor shall endeavor to label ten to thirty percent (10-30%) of the tasks as critical, but shall not label less than five (5%) or more than fifty (50%) as critical. Contractor shall use calendar days.

If any change in Contractor's method of operations will cause a change in the construction schedule, Contractor shall submit to Owner, Architect and the Construction Manager, a revised construction schedule within seven (7) days of the change, unless a different time period is stated in Division 1 of the Specifications.

If, in the Owner's opinion, the Contractor is not prosecuting the Work at a rate sufficient to meet the Work schedule or a contractual milestone, or to Complete the Work within the Contract Time (as adjusted by change orders), or if the Contractor's actual progress falls behind the Work schedule or it is apparent to Owner or Contractor that Contractor will not meet contractual milestones or Complete the Work within the Contract Time (as adjusted by change orders), the Owner may require that the Contractor prepare and submit a recovery plan. Contractor must submit a recovery plan within seven (7) days of a demand for the plan, unless a different time period is stated in Division 1 of the Specifications. At a minimum, the recovery plan must include a revised schedule that gets the Work back on schedule and Completes all Work by the contractual milestones and within the Contract Time (as adjusted by change orders) or by other dates Owner specifies in the demand for a recovery plan. The recovery plan shall state the corrective actions Contractor will undertake to implement it. The recovery plan shall also list any additional money that Contractor believes it should receive if Owner orders Contractor to fully or partially implement the recovery plan. If the Owner orders Contractor to implement the recovery plan, Contractor shall do so, but the order shall not constitute an admission by Owner

that Contractor is entitled to additional money. To recover additional money, Contractor must comply with General Conditions Articles 4.5, 7 and 8.

All schedules Contractor submits shall be certified as true and correct, as follows:

I, \_\_\_\_\_ [name of declarant], declare the following:

\_\_\_\_\_ [Contractor company name] has entered into a Contract with \_\_\_\_\_ [public entity name] on the \_\_\_\_\_ [name of project] Project. \_\_\_\_\_ [Contractor company name] authorized me to prepare the schedules for \_\_\_\_\_ [public entity name] for \_\_\_\_\_ [Contractor company name] Work on the Contract, and I prepared the attached schedule. I am the most knowledgeable person at \_\_\_\_\_ [Contractor company name] regarding the scheduling of the Work for this Contract.

The attached schedule does not breach the Contract between \_\_\_\_\_ [Contractor company name] and \_\_\_\_\_ [public entity name] for this Project, does not violate any applicable law, satisfies all provisions of the Contract applicable to submission of schedules, only contains truthful and accurate as-built and as-planned dates of work on the Contract (including supporting data), and is not a false claim.

The attached schedule is submitted in compliance with all laws applicable to submission of a Claim, including but not limited to California Penal Code section 72 (Fraudulent Claims), Government Code sections 12650 et seq. (False Claims Act; for example, Government Code section 12651(a)(7)), and Business and Professions Code sections 17200 et seq. (Unfair Business Practices Act). I am aware that submission or certification of false claims, or other Claims that violate law or the Contract, may lead to fines, imprisonment, and/or other serious legal consequences for myself and/or \_\_\_\_\_ [Contractor company name].

While preparing this declaration and schedule I consulted with others (including attorneys, consultants, or others who work for \_\_\_\_\_ [Contractor company name]) when necessary to ensure that the statements were true and correct.

I declare under the penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed \_\_\_\_\_, 20 , at \_\_\_\_\_, California.

\_\_\_\_\_ [name of declarant]

### 3.9.2 DSA OVERSIGHT PROCESS

In connection with the DSA Construction Oversight Process which includes inspection cards and review of changes to the DSA-approved construction documents, the Contractor must (a) include specific tasks in its baseline schedule to take into account these procedures since they are critical path issues; and (b) include a reasonable amount of float in the baseline schedule to accommodate the additional time required by these DSA procedures.

### 3.9.3 FAILURE TO MEET REQUIREMENTS

Failure of the Contractor to provide proper schedules may, at the sole discretion of Owner, constitute either grounds to withhold, in whole or in part, progress payments to the Contractor, or a breach of contract allowing Owner to terminate the Contract.

### 3.10 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the Site for the Owner and the Construction Manager one applicable copy of Titles 19 and 24 and record copy of the Drawings, Specifications, Addenda, Change Orders, and other Modifications, in good order and marked currently to record changes and selections made during construction. In addition, the Contractor shall maintain at the Site approved Shop Drawings, Product Data, Samples, and similar required submittals. These documents shall be available to the Owner and the Construction Manager and shall be delivered to the Owner, or the Construction Manager for delivery to the Owner, upon completion of the Work.

### 3.11 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

#### 3.11.1 SUBMITTALS DEFINED

3.11.1.1 *Shop Drawings.* The term "shop drawings" as used herein means drawings, diagrams, schedules, and other data, which are prepared by Contractor, Subcontractors, manufacturers, suppliers, or distributors illustrating some portion of the Work, and includes: illustrations; fabrication, erection, layout and setting drawings; manufacturer's standard drawings; schedules; descriptive literature, instructions, catalogs, and brochures; performance and test data including charts; wiring and control diagrams; and all other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that the materials, equipment, or systems and their position conform to the requirements of the Contract Documents. The Contractor shall obtain and submit with the shop drawings all seismic and other calculations and all product data from equipment manufacturers. "Product data" as used herein are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the Work. As used herein, the term "manufactured" applies to standard units usually mass-produced, and "fabricated" means items specifically assembled or made out of selected materials to meet individual design requirements. Shop drawings shall: establish the actual detail of all manufactured or fabricated items, indicate proper relation to adjoining work, amplify design details of mechanical and electrical systems and equipment in proper relation to physical spaces in the structure, and incorporate minor changes of design or construction to suit actual conditions.

3.11.1.2 *Samples.* The term "samples" as used herein are physical examples furnished by Contractor to illustrate materials, equipment, or quality and includes natural materials, fabricated items, equipment, devices, appliances, or parts thereof as called for in the Specifications, and any other samples as may be required by the Owner to determine whether the

kind, quality, construction, finish, color, and other characteristics of the materials, etc., proposed by the Contractor conform to the required characteristics of the various parts of the Work. All Work shall be in accordance with the approved samples.

3.11.1.3 ***Contractor's Responsibility.*** Contractor shall obtain and shall submit to the Architect and the Construction Manager all required shop drawings and samples in accordance with Contractor's "Schedule for Submission of Shop Drawings and Samples" provisions in Division 1 of the Specifications in accordance with the Construction Manager's original and updated schedules, and with such promptness as to cause no delay in its own Work or in that of any other contractor, Owner or subcontractor but in no event later than ninety (90) days after the execution of the Agreement or so as not to delay the schedule. Contractor may be assessed \$100 a day for each day it is late in submitting a shop drawing or sample. No extensions of time will be granted to Contractor or any Subcontractor because of its failure to have shop drawings and samples submitted in accordance with the Schedule. Each Subcontractor shall submit all shop drawings, samples, and manufacturer's descriptive data for the review of the Owner, the Contractor, the Architect, and the Construction Manager through the Contractor. By submitting shop drawings, product data, and samples, the Contractor or submitting party (if other than Contractor) represents that it has determined and verified all materials, field measurements, field conditions, catalog numbers, related field construction criteria, and other relevant data in connection with each such submission, and that it has checked, verified, and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents. At the time of submission, any deviation in the shop drawings, product data, or samples from the requirements of the Contract Documents shall be narratively described in a transmittal accompanying the submittal. However, submittals shall not be used as a means of requesting a substitution, the procedure for which is defined in paragraph 3.11.4, "Substitutions." Review by Owner, the Construction Manager and Architect shall not relieve the Contractor or any Subcontractor from its responsibility in preparing and submitting proper shop drawings in accordance with the Contract Documents. Contractor shall stamp, sign, and date each submittal indicating its representation that the submittal meets all of the requirements of the Contract Documents. Any submission, which in Owner's or Architect's opinion is incomplete, contains numerous errors, or has been checked only superficially by Contractor will be returned unreviewed for resubmission by the Contractor.

3.11.1.4 ***Extent of Review.*** In reviewing shop drawings, the Owner will not verify dimensions and field conditions. The Architect will review and approve shop drawings, product data, and samples for aesthetics and for conformance with the design concept of the Work and the information given in the Contract Documents. The Architect's review shall neither be construed as a complete check nor relieve the Contractor, Subcontractor, manufacturer, fabricator, or supplier from responsibility for any deficiency that may exist or from any departures or deviations from the requirements of the Contract Documents unless the Contractor has, in writing, called the Architect's attention to the deviations at the time of submission and the Architect has given specific written approval. The Architect's review shall not relieve the Contractor or Subcontractors from responsibility for errors of any sort in shop drawings or schedules, for proper fitting of the Work, or from the necessity of furnishing any Work required by the Contract Documents, which may not be indicated on shop drawings when reviewed. Contractor and Subcontractors shall be solely responsible for determining any quantities,



whether or not shown on the shop drawings.

### 3.11.2 **DRAWING SUBMISSION PROCEDURE**

3.11.2.1 ***Transmittal Letter and Other Requirements.*** All shop drawings must be properly identified with the name of the Project and bid package and dated, and each lot submitted must be accompanied by a letter of transmittal referring to the name of the Project and bid package and to the Specification section number for identification of each item clearly stating in narrative form, as well as "clouding" on the submissions, all qualifications, departures, or deviations from the Contract Documents, if any. Shop drawings, for each section of the Work, shall be numbered consecutively, and the numbering system shall be retained throughout all revisions. All Subcontractor submissions shall be made through the Contractor. Each drawing shall have a clear space for the stamps of Architect and Contractor. Only shop drawings required to be submitted by the Contract Documents shall be reviewed.

3.11.2.2 ***Copies Required.*** Each submittal shall include an electronic version and two legible prints of each drawing, including fabrication, erection, layout and setting drawings, and such other drawings as required under the various sections of the Specifications until final acceptance thereof is obtained. Subcontractor shall submit copies, in an amount as requested by the Contractor, of: manufacturers' descriptive data for materials, equipment, and fixtures, including catalog sheets showing dimensions, performance, characteristics, and capacities; wiring diagrams and controls; schedules; all seismic calculations and other calculations; and other pertinent information as required.

3.11.2.3 ***Corrections.*** The Contractor shall make any corrections required by Architect and shall resubmit as required by Architect the required number of corrected copies of shop drawings or new samples until approved. Contractor shall direct specific attention in writing or on resubmitted shop drawings to revisions other than the corrections required by the Architect on previous submissions. Professional services required for more than one (1) re-review of required submittals of shop drawings, product data, or samples are subject to charge to the Contractor pursuant to paragraph 4.4.

3.11.2.4 ***Approval Prior to Commencement of Work.*** No portion of the Work requiring a shop drawing or sample submission shall be commenced until the submission has been reviewed by Owner and approved by Architect unless specifically directed in writing by the Owner. All such portions of the Work shall be in accordance with approved shop drawings and samples.

### 3.11.3 **SAMPLE SUBMISSIONS PROCEDURE**

3.11.3.1 ***Samples Required.*** In case a considerable range of color, graining, texture, or other characteristics may be anticipated in finished products, a sufficient number of samples of the specified materials shall be furnished by the Contractor to indicate the full range of characteristics, which will be present in the finished products; and products delivered or erected without submittal and approval of full range samples shall be subject to rejection. Except for range samples, and unless otherwise called for in the various sections of the Specifications,

samples shall be submitted in duplicate. All samples shall be marked, tagged, or otherwise properly identified with the name of the submitting party, the name of the Project and Bid Package, the purpose for which the samples are submitted, and the date and shall be accompanied by a letter of transmittal containing similar information, together with the Specification section number for identification of each item. Each tag or sticker shall have clear space for the review stamps of Contractor and Architect.

3.11.3.2 **Labels and Instructions.** Samples of materials, which are generally furnished in containers bearing the manufacturers' descriptive labels and printed application instructions, shall, if not submitted in standard containers, be supplied with such labels and application instructions.

3.11.3.3 **Architect's Review.** The Architect will review submissions and Architect or the Construction Manager will return them to the Contractor with the Architect's stamp and signature applied thereto, indicating the appropriate action in compliance with the Architect's standard procedures.

3.11.3.4 **Record Drawings and Annotated Specifications.** The Contractor will prepare and maintain on a current basis an accurate and complete set of Record Drawings showing clearly all changes, revisions, and substitutions during construction, including, without limitation, field changes and the final location of all mechanical equipment, utility lines, ducts, outlets, structural members, walls, partitions, and other significant features, and Annotated Specifications showing clearly all changes, revisions, and substitutions during construction. A copy of such Record Drawings and Annotated Specifications will be delivered to Owner and the Construction Manager in accordance with the schedule prepared by the Construction Manager. In the event of a specification that allows Contractor to elect one of several brands, makes, or types of material or equipment, the annotations shall show which of the allowable items the Contractor has furnished. The Contractor will update the Record Drawings and Annotated Specifications as often as necessary to keep them current but no less often than weekly. The Record Drawings and Annotated Specifications shall be kept at the Site and available for inspection by the Owner, Inspector of Record, the Construction Manager, and the Architect. On Completion of the Contractor's portion of the Work and prior to Application for Final Progress Payment, the Contractor will provide one complete set of Record Drawings and Annotated Specifications to Owner or to the Construction Manager, certifying them to be a complete and accurate reflection of the actual construction conditions of the Work.

3.11.3.5 **Equipment Manuals.** Contractor shall obtain and furnish to the Owner and the Construction Manager an electronic version and two hard copy complete sets of manuals containing the manufacturers' instructions for maintenance and operation of each item of equipment and apparatus furnished under the Contract Documents and any additional data specifically requested under the various sections of the Specifications for each division of the Work. The manuals shall be arranged in proper order, indexed, and placed in three-ring binders. At the Completion of its Work, the Contractor shall certify, by endorsement thereon, that each of the manuals is complete, accurate, and covers all of its Work. Prior to submittal of Contractor's Application for Final Progress Payment, and as a further condition to its approval by the Architect, each Subcontractor shall deliver the manuals, arranged in proper order, indexed,

endorsed, and placed in three-ring binders, to the Contractor, who shall assemble these manuals for all divisions of the Work, review them for completeness, and submit them to the Owner through the Architect or the Construction Manager.

3.11.3.6 ***Owner's Property.*** All shop drawings and samples submitted shall become the Owner's property.

#### 3.11.4 SUBSTITUTIONS

3.11.4.1 ***One Product Specified.*** Unless the Specifications state that no substitution is permitted, whenever in the Contract Documents any specific article, device, equipment, product, material, fixture, patented process, form, method, or type of construction is indicated or specified by name, make, trade name, or catalog number, with or without the words "or equal," such specification shall be deemed to be used for the purpose of facilitating description of material, process, or article desired and shall be deemed to be followed by the words "or equal." Contractor may, unless otherwise stated, offer any material, process, or article, which shall be substantially equal or better in every respect to that so indicated or specified and will completely accomplish the purpose of the Contract Documents.

3.11.4.2 ***Two or More Products Specified.*** When two or more acceptable products are specified for an item of the Work, the choice will be up to the Contractor. Contractor shall utilize the same product throughout the Work. If a timely substitution request as set forth in Section 3.11.4.3 is not provided and an "or equal" substitution is requested, the Owner may consider the substitution if the product specified is no longer commercially available. If the Owner allows the substitution to be proposed pursuant to such an untimely request, the Contractor will be responsible for the professional fees incurred by the Architect or Architect's consultants in reviewing the proposed substitution which fees may be withheld from progress payments and/or retention.

3.11.4.3 ***Substitution Request Form.*** Requests for substitutions of products, materials, or processes other than those specified must be made on the Substitution Request form available from the Owner and the Construction Manager prior to the date of the bid opening. Any Requests submitted less than fourteen (14) days prior to the date of the bid opening will not be considered, except as noted in paragraph 3.11.4.2. A Substitution Request must be accompanied by evidence as to whether or not the proposed substitution: is equal in quality and serviceability to the specified item; will entail no changes in detail and construction of related work; will be acceptable in consideration of the required design and artistic effect; will provide no cost disadvantage to Owner; and will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts. The burden of proof of these facts shall be upon the Contractor. The Contractor shall furnish with its request sufficient information to determine whether the proposed substitution is equivalent including but not limited to all drawings, specifications, samples, performance data, calculations, and other information as may be required to assist the Architect and the Owner in determining whether the proposed substitution is acceptable. The final decision shall be the Owner's. The written approval of the Owner, consistent with the procedure for Change Orders, shall be required for the use of a proposed substitute material. Owner may condition its approval of the substitution upon delivery

to Owner or the Construction Manager of an extended warranty or other assurances of adequate performance of the substitution. If Contractor requests substitutions that require approval by the Division of the State Architect (“DSA”) or another governmental entity with jurisdiction, Contractor shall bear all risks of delay.

3.11.4.4 **List of Manufacturers and Products Required.** The Subcontractor shall prepare and submit to the Contractor within thirty (30) days of execution of the Subcontract comprehensive lists, in quadruplicate, of the manufacturers and products proposed for the Work, including information on materials, equipment, and fixtures required by the Contract Documents, as may be required for Contractor's or Architect's preliminary approval. Approval of such lists of products shall not be construed as a substitute for the shop drawings, manufacturer's descriptive data, and samples, which are required by the Contract Documents, but rather as a base from which more detailed submittals shall be developed for the final review of the Contractor and the Architect.

### 3.11.5 **DEFERRED APPROVALS**

Deferred approvals shall be submitted and processed pursuant to the requirements of Division 1 of the Specifications.

## 3.12 **CUTTING AND PATCHING**

### 3.12.1 **SCOPE**

The Contractor shall be responsible for cutting, fitting, or patching required to Complete the Work or to make its parts fit together properly.

### 3.12.2 **CONSENT**

The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or a separate contractor by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or separate contractors except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's consent to cutting or otherwise altering the Work. All cutting shall be done promptly, and all repairs shall be made as necessary.

### 3.12.3 **STRUCTURAL MEMBERS**

New or existing structural members and elements, including reinforcing bars and seismic bracing, shall not be cut, bored, or drilled except by written authority of the Architect. Work done contrary to such authority is at the Contractor's risk, subject to replacement at its own expense and without reimbursement under the Contract. Agency approvals shall be obtained by the Architect, not by the Contractor.

#### 3.12.4 **SUBSEQUENT REMOVAL**

Permission to patch any areas or items of the Work shall not constitute a waiver of the Owner's or the Architect's right to require complete removal and replacement of the areas or items of the Work if, in the opinion of the Architect or the Owner, the patching does not satisfactorily restore quality and appearance of the Work or does not otherwise conform to the Contract Documents. Any costs caused by defective or ill-timed cutting or patching shall be borne by the person or entity responsible.

#### 3.13 **CLEANING UP**

##### 3.13.1 **CONTRACTOR'S RESPONSIBILITY**

The Contractor shall keep the Site and surrounding area free from accumulation of waste material or rubbish caused by operations under the Contract. The Site shall be maintained in a neat and orderly condition. All crates, cartons, paper, and other flammable waste materials shall be removed from Work areas and properly disposed of at the end of each day. The Contractor shall continuously remove from and about the Site the waste materials, rubbish, tools, construction equipment, machinery, and materials no longer required for the Work.

##### 3.13.2 **FAILURE TO CLEANUP**

If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so, without prior notice to the Contractor and the cost thereof shall be invoiced to the Contractor and withheld from progress payments and/or retention. Each Subcontractor shall have the responsibility for the cleanup of its own Work. If the Subcontractor fails to clean up, the Contractor must do so.

##### 3.13.3 **CONSTRUCTION BUILDINGS**

When directed by the Owner or the Architect, Contractor and Subcontractor shall dismantle temporary structures, if any, and remove from the Site all construction and installation equipment, fences, scaffolding, surplus materials, rubbish, and supplies belonging to Contractor or Subcontractor. If the Contractor does not remove the tools, equipment, machinery, and materials within fifteen (15) days after Completion of its Work, then they shall be deemed abandoned, and the Owner can dispose of them for its own benefit in whatever way it deems appropriate. Contractor shall pay for any costs to dispose of the items.

#### 3.14 **ACCESS TO WORK**

The Contractor shall provide the Owner, Architect, Construction Manager, Inspector of Record, and separate contractors access to the Work in preparation and progress wherever located.

### 3.15 **ROYALTIES AND PATENTS**

#### 3.15.1 **PAYMENT AND INDEMNITY**

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims of infringement of patent rights and shall hold the Owner and the Architect harmless and indemnify them, to the extent not caused by the Owner's active negligence, sole negligence or willful misconduct, from loss on account thereof but shall not be responsible for such defense or loss when a particular design, process, or product of a particular manufacturer is required by the Contract Documents. However, if the Contractor has reason to believe the required design, process, or product is an infringement of a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect, Owner and the Construction Manager.

#### 3.15.2 **REVIEW**

The review by the Owner or Architect of any method of construction, invention, appliance, process, article, device, or material of any kind shall be for its adequacy for the Work and shall not be an approval for the use by the Contractor in violation of any patent or other rights of any person or entity.

### 3.16 **INDEMNIFICATION**

#### 3.16.1 **SCOPE: CONTRACTOR**

To the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the Owner, the Construction Manager, Architect, Architect's consultants, the Inspector of Record, the State of California, and their respective agents, employees, officers, volunteers, Boards of Trustees, members of the Boards of Trustees, and directors ("Indemnitees"), from and against claims, actions, damages, liabilities, losses (including but not limited to injury or death of persons, property damage, and compensation owed to other parties), and expenses (including but not limited to attorneys' fees and costs including fees of consultants) alleged by third parties against Indemnitees arising out of or resulting from the following: Contractor's, its Subcontractors', or its suppliers' performance of the Work, including but not limited to the Contractor's or its Subcontractors' use of the Site; the Contractor's or its Subcontractors' construction of the Work, or failure to construct the Work, or any portion thereof; the use, misuse, erection, maintenance, operation, or failure of any machinery or equipment including, but not limited to, scaffolds, derricks, ladders, hoists, and rigging supports, whether or not such machinery or equipment was furnished, rented, or loaned by any of the Indemnitees; or any act, omission, negligence, or willful misconduct of the Contractor or its Subcontractors or their respective agents, employees, material or equipment suppliers, invitees, or licensees but only to the extent caused in whole or in part by the acts or omissions of the Contractor, its Subcontractors, its suppliers, anyone directly or indirectly employed by any of them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity, which would

otherwise exist as to a party, person, or entity described in this paragraph. The obligation to defend, indemnify and hold harmless includes any claims or actions by third parties arising out of or resulting from Labor Code section 2810. Contractor shall have no obligation to defend or indemnify the Indemnitees against claims, actions, damages, liabilities, losses, and expenses caused by the active negligence, sole negligence or willful misconduct of Indemnitees. This indemnification shall apply to all liability, as provided for above, regardless of whether any insurance policies are applicable, and insurance policy limits do not act as a limitation upon the amount of the indemnification to be provided by the Contractor.

### 3.16.2 **SCOPE: SUBCONTRACTORS**

3.16.2.1 ***Indemnity.*** The Subcontractors shall defend, indemnify, and hold harmless the Indemnitees from and against claims, actions, damages, liabilities, and losses (including but not limited to injury or death of persons, property damage, and compensation owed to other parties), and expenses (including but not limited to attorneys' fees and costs including fees of consultants) alleged by third parties against Indemnitees arising out of or resulting from the following: Subcontractors' performance of the Work, including but not limited to the Subcontractors' use of the Site; the Subcontractors' construction of the Work or failure to construct the Work or any portion thereof; the use, misuse, erection, maintenance, operation, or failure of any machinery or equipment, including, but not limited to, scaffolds, derricks, ladders, hoists, and rigging supports, whether or not such machinery or equipment was furnished, rented, or loaned by any of the Indemnitees; or any act, omission, negligence, or willful misconduct of the Subcontractors or their respective agents, employees, material or equipment suppliers, invitees, or licensees but only to the extent caused in whole or in part by the acts or omissions of the Subcontractors, anyone directly or indirectly employed by any of them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity, which would otherwise exist as to a party, person, or entity described in this paragraph. This obligation to defend, indemnify and hold harmless includes any claims or actions by third parties arising out of or resulting from Labor Code section 2810. Subcontractors shall have no obligation to defend or indemnify the Indemnitees against claims, actions, damages, liabilities, losses, and expenses caused by the active negligence, sole negligence or willful misconduct of Indemnitees. This indemnification shall apply to all liability, as provided for above, regardless of whether any insurance policies are applicable, and insurance policy limits do not act as a limitation upon the amount of the indemnification to be provided by the Subcontractors.

3.16.2.2 ***Joint and Several Liability.*** In the event more than one Subcontractor is connected with an accident or occurrence covered by this indemnification, then all such Subcontractors shall be jointly and severally responsible to each of the Indemnitees for indemnification, and the ultimate responsibility among such indemnifying Subcontractors for the loss and expense of any such indemnification shall be resolved without jeopardy to any Indemnitee. The provisions of the indemnity provided for herein shall not be construed to indemnify any Indemnitee for its own negligence if not permitted by law or to eliminate or reduce any other indemnification or right which any Indemnitee has by law or equity.

### **3.16.3 NO LIMITATION**

The Contractor's and the Subcontractor's obligation to indemnify and defend the Indemnitees hereunder shall include, without limitation, any and all claims, damages, and costs: for injury to persons and property (including loss of use), and sickness, disease or death of any person; for breach of any warranty, express or implied; for failure of the Contractor or the Subcontractor to comply with any applicable governmental law, rule, regulation, or other requirement; and for products installed in or used in connection with the Work.

### **3.17 OWNER AS INTENDED BENEFICIARY**

The Owner is an intended beneficiary of any architectural or engineering work secured by, or performed by, the Contractor to fulfill its obligations under the Contract. Contractor shall state in its contracts with architectural or engineering consultants that their work is for the intended benefit of the Owner.

### **3.18 NOTICE OF EXCUSE FOR NONPERFORMANCE**

If Contractor believes that acts or omissions of Owner (including but not limited to Owner caused delay) have prevented Contractor from performing the Work as required by the Contract Documents and Contractor intends to rely on Owner's acts or omissions and Civil Code section 1511(1) as reasons to excuse Contractor's nonperformance or to support, among other things, Contractor's requests for time extensions under section 4.5, below, Contractor shall provide written notice of the excuse within five (5) days of the Owner's acts or omissions. If Contractor fails to timely submit the written notice, Contractor shall have waived any right to later rely on the acts or omissions as a defense to Contractor's nonperformance or as the basis for a time extension, regardless of the merits of the defense or time extension. Contractor will not have satisfied a condition precedent or exhausted administrative remedies. Contractor acknowledges that these written notices are of critical importance to the Owner's management of the Work and Project and the mitigation of costs and delays to the Work and Project.

### **3.19 RECOVERY OF DAMAGES FROM OWNER.**

Notwithstanding any other provisions of the Contract Documents, Contractor expressly waives its right to recover any special, consequential, or indirect damages from Owner in relation to this Contract or the Project. Contractor may only recover general (also known as direct) damages from Owner to the extent allowed by the Contract Documents.



## **ARTICLE 4**

### **ADMINISTRATION OF THE CONTRACT**

#### **4.1 ARCHITECT**

##### **4.1.1 DEFINITION**

The Architect is the person lawfully licensed to practice architecture or an entity lawfully practicing architecture identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The term "Architect" means the Architect or the Architect's authorized representative, and shall also refer to all consultants under the Architect's direction and control.

##### **4.1.2 MODIFICATION**

To the extent the Contract Documents indicate that Owner has assigned duties or responsibilities to the Architect, Owner reserves the right at all times to reassign such duties or responsibilities to different Owner representatives.

##### **4.1.3 TERMINATION**

In the case of the termination of the Architect, the Owner may appoint an architect or another construction professional or may perform such functions with its own licensed professional personnel. The status of the replacement Architect under the Contract Documents shall be that of the former architect.

#### **4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT**

##### **4.2.1 STATUS**

The Architect will provide administration of the Contract and may be one of several Owner's representatives during construction, through release of all retention, and during the one (1) year period following the commencement of any warranties. The Architect will advise and consult with the Owner. The Architect will have authority to act on behalf of the Owner only to the extent set forth in the Owner/Architect agreement. The Architect will have all responsibilities and power established by law, including California Code of Regulations, Title 24, to the extent set forth in the Owner/Architect agreement.

##### **4.2.2 SITE VISITS**

The Architect will visit the Site at intervals necessary in the judgment of the Architect or as otherwise agreed by the Owner, Construction Manager, and the Architect in writing to become generally familiar with the progress and quality of the completed Work and to determine in general if the Work is being performed in a manner indicating that the Work, when Completed, will be in accordance with the Contract Documents.

#### 4.2.3 **LIMITATIONS OF CONSTRUCTION RESPONSIBILITY**

The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract Documents, or by tests, inspections, or approvals required or performed by persons other than the Contractor.

#### 4.2.4 **COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION**

The Owner and the Contractor shall communicate through the Construction Manager or as the Owner otherwise directs. Communications between Owner and Subcontractors or material or equipment suppliers shall be through the Contractor. Communications with other contractors shall be through the Construction Manager or as the Owner otherwise directs.

#### 4.2.5 **PAYMENT APPLICATIONS**

The Contractor shall submit payment applications to the the Construction Manager or as the Owner directs otherwise.

#### 4.2.6 **REJECTION OF WORK**

The Architect, Inspector of Record, Construction Manager and others may recommend to the Owner that the Owner reject Work which does not conform to the Contract Documents or that the Owner require additional inspection or testing of the Work in accordance with paragraph 13.5.5, whether or not the Work is fabricated, installed, or completed. However, no recommendation shall create a duty or responsibility to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.

#### 4.2.7 **CHANGE ORDERS**

The Architect will prepare change orders and construction change directives and may authorize minor changes in the Work.

#### 4.2.8 **WARRANTIES UPON COMPLETION**

The Architect in conjunction with the Inspector of Record, or as otherwise directed by Owner, will conduct field reviews of the Work to determine the date of Completion, shall receive and forward to the Owner, and the Construction Manager, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor. The handling by the Architect of such warranties, maintenance manuals, or similar documents shall not diminish or transfer to the Architect any responsibilities or liabilities required by the Contract Documents of the Contractor or other entities, parties, or persons performing or supplying the Work.

Except as may be otherwise directed by Owner, the Architect will conduct a field review of the Contractor's comprehensive list of items to be completed or corrected for development of a punch list and one (1) follow-up field review if required. The cost incurred by the Owner for further field reviews or the preparation of further punch lists by the Architect shall be invoiced to the Contractor and withheld from payment and/or retention.

#### 4.2.9 **INTERPRETATION**

The Architect, Inspector of Record, Construction Manager, the Owner or any independent consultant of Owner, as Owner deems appropriate, will interpret and decide matters concerning performance under and requirements of the Contract Documents on written request of the Contractor. The Owner's response to such requests will be made with reasonable promptness, while allowing sufficient time to permit adequate review and evaluation of the request.

#### 4.2.10 **ADDITIONAL INSTRUCTIONS**

4.2.10.1 ***Architect's Interpretations and Decisions.*** Interpretations and decisions of the Architect will be consistent with the intent of and reasonably inferable from the Contract Documents and will be in writing or in the form of drawings. When making such interpretations of and decisions regarding the Contract Documents, the Architect will endeavor to secure faithful performance under the Contract Documents by both the Owner and the Contractor and will not show partiality to either. The Work shall be executed in conformity with, and the Contractor shall do no work without, approved drawings, Architect's clarifying instructions, and/or submittals.

4.2.10.2 ***Typical Parts and Sections.*** Whenever typical parts or sections of the Work are completely detailed on the Drawings, and other parts or sections which are essentially of the same construction are shown in outline only, the complete details shall apply to the Work which is shown in outline.

4.2.10.3 ***Dimensions.*** Dimensions of Work shall not be determined by scale or rule. Figured dimensions shall be followed at all times. If figured dimensions are lacking on Drawings, Architect shall supply them on request. The Owner's decisions on matters relating to aesthetic effect will be final if consistent with the Contract Documents.

### 4.3 **INSPECTOR OF RECORD**

#### 4.3.1 **GENERAL**

One or more Project inspectors ("Inspector of Record") employed by the Owner and approved by the Division of the State Architect will be assigned to the Work in accordance with the requirements of Title 24 of the California Code of Regulations. The Inspector of Record's duties will be as specifically defined in Title 24.

#### 4.3.2 **INSPECTOR OF RECORD'S DUTIES**

All Work shall be under the observation of or with the knowledge of the Inspector of Record. The Inspector of Record shall have free access to any or all parts of the Work at any time. The Contractor shall furnish the Inspector of Record and Construction Manager such information as may be necessary to keep the Inspector of Record fully informed regarding progress and manner of work and character of materials. Such observations shall not, in any way, relieve the Contractor from responsibility for full compliance with all terms and conditions of the Contract, or be construed to lessen to any degree the Contractor's responsibility for providing efficient and capable superintendence. The Inspector of Record is not authorized to make changes in the drawings or specifications nor shall the Inspector of Record's approval of the Work and methods relieve the Contractor of responsibility for the correction of subsequently discovered defects, or from its obligation to comply with the Contract Documents.

#### 4.3.3 **INSPECTOR'S AUTHORITY TO REJECT OR STOP WORK**

The Inspector of Record shall have the authority to reject work that does not comply with the provisions of the Contract Documents. In addition, the Inspector of Record may stop any work which poses a probable risk of harm to persons or property. The Contractor shall instruct its employees, Subcontractors, material and equipment suppliers, etc., accordingly. The absence of any Stop Work order or rejection of any portion of the Work shall not relieve the Contractor from any of its obligations pursuant to the Contract Documents.

#### 4.3.4 **INSPECTOR OF RECORD'S FACILITIES**

Within seven (7) days after notice to proceed, the Contractor shall provide the Inspector of Record with temporary facilities, including any requirements stated in Division 1 of the Specifications.

#### 4.4 **RESPONSIBILITY FOR ADDITIONAL CHARGES INCURRED BY THE OWNER FOR PROFESSIONAL SERVICES**

If at any time prior to the Completion of the requirements under the Contract Documents, through no fault of its own, the Owner is required to provide or secure additional professional services for any reason by any act or omission of the Contractor, the Contractor shall be invoiced by the Owner for any actual costs incurred for any such additional services, which costs may, among other remedies, be withheld from the progress payments and/or retention. Such invoicing shall be independent from any other Owner remedies, including but not limited to liquidated damages. If payments then or thereafter due to the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. Additional services shall include, but shall not be limited to, the following:

- A. Services made necessary by the default of the Contractor.
- B. Services made necessary due to the defects or deficiencies in the Work of the Contractor.

- C. Services required by failure of the Contractor to perform according to any provision of the Contract Documents.
- D. Services in connection with evaluating substitutions of products, materials, equipment, Subcontractors proposed by the Contractor, and making subsequent revisions to drawings, specifications, and providing other documentation required (except for the situation where the specified item is no longer manufactured or available).
- E. Services for evaluating and processing Claims submitted by the Contractor in connection with the Work outside the established Change Order process.
- F. Services required by the failure of the Contractor to prosecute the Work in a timely manner in compliance within the specified time for Completion.
- G. Services in conjunction with the testing, adjusting, balancing and start-up of equipment other than the normal amount customarily associated for the type of Work involved.
- H. Services in conjunction with more than one (1) re-review of required submittals of shop drawings, product data, and samples.

#### **4.5 NOTICES OF POTENTIAL CHANGE, CHANGE ORDER REQUESTS, AND CLAIMS**

If the Contractor identifies the potential for extra work, delay in the critical path schedule, or the need for additional money or time, or if the Contractor requests additional money or time, or if the Contractor believes that Owner has failed to pay amounts due or otherwise breached the Contract, or otherwise believes that it is entitled to a modification of the Contract terms and conditions, then Contractor shall follow the procedures in this Section 4.5 and Article 7, otherwise Contractor shall have waived its rights to pursue those issues and any later attempts to recover money or obtain a modification shall be barred. Contractor specifically acknowledges the Owner's and public's interest in, and need to know of, potential changes and disputes as early as possible so Owner can investigate, mitigate and resolve adverse cost and time impacts, if any. It is Contractor's obligation to know and comply with the requirements of Section 4.5 and Article 7, and Owner has no obligation to notify Contractor of any failure to comply with those requirements.

##### **4.5.1 NOTICE OF POTENTIAL CHANGE**

Contractor shall submit a written Notice of Potential Change for extra work, critical path delay, or additional money or time. Contractor shall submit written Notices of Potential Change to Owner or the Construction Manager within five (5) days of Contractor becoming aware of the issues creating the potential for change, unless the issues are, or may soon be, adversely affecting the costs or critical path of the Work, in which case the Contractor must submit the written notice without delay so the Owner may take immediate action to mitigate cost and schedule impacts of

the change, if any. The written notice shall explain the nature of the potential change so the Owner may take action to mitigate costs and schedule impacts, if necessary.

When submitting a written Notice of Potential Change based on extra work, Contractor shall not perform the extra work until directed in writing to do so by Owner. When submitting a written Notice of Potential Change for an issue of critical path delay, Contractor shall proactively mitigate the effects of the alleged delay as much as reasonably possible so as to minimize any impact to the schedule, until otherwise directed by Owner. If Contractor intends to rely on Owner's acts or omissions in support of a request for a time extension, then Contractor must also provide the notice set forth in section 3.18, above.

Failure to timely submit a written Notice of Potential Change shall constitute a complete waiver by Contractor of any right to later submit a change order request or pursue a Claim on that issue, or to later pursue any additional money or time extensions in any manner related to that issue, regardless of the merits. Contractor will not have satisfied a condition precedent or exhausted administrative remedies. Contractor acknowledges that these written notices are of critical importance to the Owner's Work and Project management and the mitigation of Work and Project costs and delays.

#### **4.5.2 CHANGE ORDERS REQUESTS**

If, after submitting a written Notice of Potential Change pursuant to Section 4.5.1, Contractor continues to believe that it is entitled to additional money or time (including but not limited to grant of a time extension; payment of money or damages arising from work done by, or on behalf of, the Contractor, payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to; or an amount the payment of which is disputed by the Owner) based on an issue, then Contractor shall submit a Change Order Request ("COR") to Owner and the Construction Manager within twenty (20) days of (i) becoming aware of the issues creating a potential change, or (ii) the date by which it should have become aware of the issues creating a potential change. A rejection at any time or a lack of a rejection by Owner of a Notice of Potential Change does not affect the timeline for submitting a COR.

Failure to timely submit a COR related to an issue, or failure to comply with any of the COR requirements in the Contract shall constitute a complete waiver by Contractor of any right to later submit a COR or Claim on that issue, or to later pursue any additional money (including time extensions) in any manner related to that issue, regardless of the merits. Contractor will not have satisfied a condition precedent or exhausted administrative remedies.

The COR shall state the grounds for the additional money or time requested and the amount of money or time requested, and Contractor shall include all information and documentation supporting the COR, including but not limited to calculations and analysis that demonstrate that the requested money or time is allowed by the applicable Contract provisions and law. Contractor will have completely waived its rights to recover any additional time or money other than that time or money specifically requested in the COR. If the COR requests time, then the COR must identify the number of days of time being requested and must include some critical path schedule analysis to support the number of days requested. Contractor may not reserve its

rights, whether in a COR or other document, to submit a COR at a later time or in a manner other than as required by the Contract Documents. Any inclusion of a reservation of rights in a COR shall be grounds for rejection of the COR.

In the event that costs or delay are continuing to accrue at the time that a COR is required to be submitted, Contractor must still timely submit the COR with all available information and documentation supporting the COR as described above, and Contractor shall identify the costs or delay that are continuing. For continuing costs, the COR must include an estimate of when the extra work is expected to conclude and the total costs that will be incurred by the time that the extra work is expected to conclude. For continuing delay, the COR must include a schedule and delay analysis of when Contractor estimates that the delay will cease, what the final time extension request is estimated to be, and an estimate of the total delay of damages, if any, that will be requested. When the continuing cost or delay ends, within ten (10) days Contractor shall submit an updated COR that states the final dollar amount and/or time extension requested and that includes all required information and documentation. Failure to submit such final COR shall act as a waiver as described above.

Contractor shall certify each COR that it submits, including the initial COR and final COR for a continuing cost or delay, using the form set forth in Section 4.5.5.1, except that every reference to "Claim" shall be changed to "COR." If a COR is submitted without certification, a certification can still be submitted within the timelines set forth in the first paragraph of section 4.5.2. If the COR is not timely certified, Contractor will have completely waived its rights to any money or time for that issue. Contractor will not have satisfied a condition precedent or exhausted administrative remedies. A certification of an initial COR for a continuing cost or delay shall include a statement that "Any estimates in the attached initial COR for a continuing cost or delay are based on true and correct facts and reasonable assumptions, as explained in the initial COR."

The Owner may accept the entire COR, accept part of the COR and reject the remainder, reject the entire COR, or request additional information. If the Owner does not respond within thirty (30) days of the submission of the COR by accepting the entire COR, accepting part of the COR and rejecting the remainder, or requesting additional information, the entire COR shall be deemed rejected as of the thirtieth (30th) day. In the case of continuing costs or delay, the 30-day timeline will not begin to run until a final COR has been submitted. If the Owner requests additional information within thirty (30) days of submission, then the Contractor shall submit the information within fifteen (15) days of the date of the request and the Owner shall have fifteen (15) days after the receipt of the additional information to accept or reject (in whole or in part) the COR. If the Owner fails to respond within fifteen (15) days after the submission of additional information, the entire COR shall be deemed rejected as of the fifteenth (15th) day.

#### **4.5.3 DEFINITION OF CLAIM**

A "Claim" is a separate demand by the Contractor sent by registered mail or certified mail, return receipt requested, for (a) a time extension, including, without limitation, a request for relief from damages or penalties for delays assessed by Owner under the Contract Documents; (b) payment by Owner of money or damages arising from work done by, or on behalf of, the

Contractor pursuant to the Contract Documents, payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to; or (c) an amount the payment of which is disputed by the Owner. A Claim includes any claim within the scope of Public Contract Code section 20104 et seq. Resubmittal in any manner of a COR which was previously rejected under Section 4.5.2 constitutes a Claim, whether the COR was rejected in whole or in part, and whether the COR was rejected expressly or deemed rejected by Owner inaction. A Claim includes any dispute Contractor may have with the Owner, including one which does not require a Notice of Potential Change or COR under Sections 4.5.1 and 4.5.2, and includes an alleged breach of contract by the Owner. A Claim under this Article 4.5 shall also constitute a claim for purposes of the California False Claims Act. In the event of a conflict between a Claims provision in Division 1 of the Specifications and Section 4.5, Section 4.5 shall take precedence.

The Notice of Potential Change and COR procedures above are less formal procedures which precede the more formal Claim. A Notice of Potential Change does not constitute a Claim. A COR does not constitute a Claim; **except that** if insufficient time remains before the Claim deadline (see Article 4.5.4) for Contractor to submit a COR and for Owner to process and reject the COR under Article 4.5.2, then either (1) Contractor may submit a COR which Owner shall treat as a Claim, but only if the COR complies with all requirements in this Article 4.5 and Article 7 for COR's and Claims, or (2) a COR is not required so long as a Claim complying with this Article 4.5 is timely submitted.

A Claim does not include vouchers, invoices, progress payment applications, or other routine or authorized forms of requests for progress payments on the Contract; however, those documents remain "claims" for purposes of the California False Claims Act. A Claim does not include a Government Code Claim. ("Government Code Claim" means a claim under Government Code sections 900 et seq. and 910 et seq.)

#### **4.5.4 TIME FOR SUBMITTING CLAIM; WAIVER**

Contractor shall submit a Claim to the Owner's Construction Manager within fifteen (15) days of the earliest of the following events: (a) The Completion of the Work; (b) the thirtieth (30th) continuous day without labor by Contractor; or (c) Contractor's submission of a final progress payment application. The deadline for filing a Claim is the "Claim Deadline." Owner's rejection, or lack of rejection, of a COR at any time does not affect the requirement to submit a claim by the Claim Deadline.

In addition, on or before the Claim Deadline, Contractor shall submit to Owner, in writing, a list and a summary of all Claims for money or time extensions under or arising out of this Contract, which were timely filed and fully compliant with the Contract's requirements for Claims, and which the Contractor wishes to pursue in whole or in part. This Claim summary requirement shall not extend the time for submitting a Claim.

Failure to timely submit a Claim, failure to include a Claim in the Claim summary, or failure to comply with any of the Claim requirements in the Contract, including but not limited to this Article 4, will act as a complete waiver of Contractor's rights to (a) recover money or time on the issues for which a Claim was required, (b) submit a Government Code Claim for the money or



time (see Section 4.5.6.3), and (c) initiate any action, proceeding or litigation for the money or time, regardless of the merits. Contractor will not have satisfied a condition precedent or exhausted administrative remedies. Owner does not have an obligation to reject the Claim for a failure to comply with any of the Claim requirements in the Contract, including the lack of certification, and any failure by Owner to reject, or any delay in rejecting, a Claim on that basis does not waive the Owner's right to reject the Claim on that basis at a later time. In no event may the Contractor reserve its rights to assert a Claim for a time extension or additional money beyond the timelines set forth in this provision unless the Owner agrees in writing to allow the reservation.

#### 4.5.5 CONTENT OF CLAIM

##### 4.5.5.1 *Claim Format; Waiver*

Every Claim shall be in writing. All money or time extensions sought must be stated and itemized in the Claim at the time submitted. The responsibility to substantiate Claims shall rest with the Contractor, and the Contractor shall furnish reasonable documentation to support each Claim, including as applicable, that documentation set forth in sections 4.5.5.2 through 4.5.5.4.

In addition, the Contractor shall include a certification with each and every Claim at the time of submission, as follows:

I, \_\_\_\_\_ [name of declarant], declare the following:

\_\_\_\_\_ [Contractor company name] has entered into a Contract with \_\_\_\_\_ [public entity name] on the \_\_\_\_\_ [name of project] Project. \_\_\_\_\_ [Contractor company name] authorized me to prepare the attached Claim for money and/or time extension) for \_\_\_\_\_ [public entity name] regarding \_\_\_\_\_ [Contractor company's name] Work on the Contract, and requesting \$ \_\_\_\_\_ and/or \_\_\_\_\_ additional days), and I prepared the attached Claim. I am the most knowledgeable person at \_\_\_\_\_ [Contractor company name] regarding this Claim.

The attached Claim complies with all laws applicable to submission of a Claim, including but not limited to California Penal Code section 72, Government Code sections 12650 et seq. (False Claims Act), and Business and Professions Code sections 17200 et seq. (Unfair Business Practices Act). I am aware that submission or certification of false claims, or other claims that violate law or the Contract, may lead to fines, imprisonment, and/or other serious legal consequences for myself or \_\_\_\_\_ [Contractor company name].

The attached Claim does not breach the Contract between \_\_\_\_\_ [Contractor company name] and \_\_\_\_\_ [public entity name] for this Project, is not a false claim, does not violate any applicable law, satisfies all provisions of the Contract applicable to submission of the Claim, only contains truthful and accurate supporting data, and only requests money and/or time extensions that accurately reflect the adjustments to money and time for which I believe that \_\_\_\_\_ [public entity name] is responsible under its Contract with \_\_\_\_\_ [Contractor company name].

While preparing this declaration and Claim, I consulted with others (including attorneys, consultants, or others who work for \_\_\_\_\_ [Contractor company name]) when necessary to ensure that the statements were true and correct.

Contractor understands and agrees that any Claim submitted without this certification does not meet the terms of the Contract Documents; that Owner, or Owner's representatives, may reject the Claim on that basis; and that unless Contractor properly and timely files the Claim with the certification, Contractor cannot further pursue the Claim in any forum and all rights to additional money or time for the issues covered by the Claim are waived due to a condition precedent not having been satisfied.

I declare under the penalty of perjury under the laws of the State of California that the foregoing is true and correct. Executed \_\_\_\_\_, 20\_\_\_\_, at \_\_\_\_\_, California.

\_\_\_\_\_  
\_\_\_\_\_ [name of declarant]

Contractor's failure to timely submit a certification will constitute a complete waiver of Contractor's rights to (a) recover money or time on the issues for which a Claim was required, (b) submit a Government Code Claim (see Section 4.5.6.3) for the money or time, and (c) initiate any action, proceeding or litigation for the money or time. Contractor will not have satisfied a condition precedent or exhausted administrative remedies.

#### ***4.5.5.2 Claims for Additional Money***

Each Claim for additional money (including but not limited to those described in (b) and (c) of the first paragraph of Section 4.5.3) must include all facts supporting the Claim, including but not limited to all supporting documentation plus a written analysis as to (a) why the claimed cost was incurred, (b) why Contractor could not mitigate its costs, (c) why the claimed cost is the responsibility of the Owner, and (d) why the claimed cost is a reasonable amount. In no event will the Contractor be allowed to reserve its rights, whether in a Claim or other document, to assert a Claim for money at a later time or in a manner other than as required by the Contract Documents. Any inclusion of a reservation of rights in a Claim shall be grounds for rejection of the Claim. Any costs not asserted shall be waived. A Claim may not include any costs incurred in preparation of the Claim or in preparation of any underlying COR, including but not limited to costs of delay analysis.

#### ***4.5.5.3 Claims for Additional Time***

##### ***4.5.5.3.1 Notice of Extent of Claim***

If the Contractor wishes to make a Claim for an increase in the Contract Time (including but not limited to Section 4.5.3(a)), the Claim shall include, but not be limited to, all facts supporting the Claim, all documentation of such facts, all information required by the Contract Documents, and a current schedule and delay analysis explaining (a) the nature of the delay, (b) the Owner's responsibility for the claimed delay, (c) the claimed delay's impact on the critical path, (d) the

claimed delay's impact on the date of Completion (including an analysis of any float still remaining and whether the alleged delay in work exceeds such remaining float), and (e) why Contractor could not mitigate the delay impacts.

In no event will the Contractor be allowed to reserve its rights, whether in a Claim or other document, to assert a Claim for a time extension at a later time or in a manner other than as required by the Contract Documents. Any inclusion of a reservation of rights in a Claim shall be grounds for rejection of the Claim. Any time extension not timely asserted in a certified Claim shall be waived.

#### 4.5.5.3.2 *Unusually Severe Weather Claims*

If unusually severe weather is the basis for a Claim for additional time, Contractor must provide Owner data and facts showing that the weather conditions were abnormal for the period of time, could not have been reasonably anticipated or mitigated, and had an adverse effect on the critical path of the scheduled construction consistent with Division 1 of the Specification.

#### 4.5.5.4 *"Pass Through" Claims*

A Subcontractor or supplier to Contractor may not submit a request for additional time or money directly to the Owner. If a subcontractor or supplier submits a request for additional money or time to Contractor and Contractor wishes to pass it through to Owner, then Contractor must comply with all requirements of Section 4.5, including Notices of Potential Change, Change Order Requests, and Claims, and Public Contract Section 9204, subd. (d)(5). Contractor must prepare and submit its own analysis of the Subcontractor's request, and the Claim must include a copy of the Subcontractor's request along with any other necessary supporting documentation.

In addition to other requirements in the Contract Documents, including but not limited to this Section 4.5, the Contractor's analysis of the Subcontractor's request must include Contractor's detailed explanation as to why the Subcontractor or supplier's request is the Owner's responsibility, including Contractor's analysis of (a) why the amount of damages the Subcontractor or supplier requests is justified and appropriate, (b) how Contractor's breach of the subcontract caused the Subcontractor or supplier to incur these damages, and (c) how the Owner's breach of the Contract caused the Contractor's breach of the subcontract. Any Contractor Claim that fails to include the above information, or that states that Owner is responsible for the Subcontractor's request only in the event that Contractor is found to owe money to Subcontractor, shall act as a complete waiver of Contractor's rights to (a) recover money or time on the issues for which a Claim was required, (b) submit a Government Code Claim (see Section 4.5.6.3) for the money or time, and (c) initiate any action, proceeding or litigation for the money or time. Contractor will not have satisfied a condition precedent or exhausted administrative remedies.

#### 4.5.6 **PROCEDURES FOR CLAIMS (PUBLIC CONTRACT CODE SECTION 9204)**

Claims are subject to this section 4.5.6, the separate procedures and substantive provisions of Sections 4.5.1 through 4.5.5, all other applicable provisions in the Contract Documents, and

Public Contract Code section 9204. In addition, for claims that are \$375,000 or less, the provisions of Public Contract Code section 20104 et. seq. also apply, to the extent they do not conflict with Public Contract Code section 9204.

#### 4.5.6.1 *Claims*

Owner shall conduct a reasonable review of the Claim and shall respond in writing to any written Claim within 45 days of receipt of the Claim. During that 45 day period, plus any extension, Owner may request, in writing additional documentation supporting the Claim or relating to defenses to the Claim the Owner may have against the Contractor. Owner shall review any additional documentation Contractor supplies in response to that request within the 45 day period plus any extension, timeline.

After receipt of a Claim, the 45-day period may be extended by Owner and Contractor. The written response shall identify which portion of the Claim is disputed and what portion is undisputed. If Owner needs approval from its governing board to provide the written response, and the governing board does not meet within the 45 days or any extended period of time, then the Owner shall have up to three days after the next publicly noticed meeting of the governing board to provide the written response. Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) days after the Owner issues the written response. Owner's failure to respond to a Claim within the above time periods or to otherwise meet the above time requirements shall result in the Claim being deemed rejected in its entirety.

#### 4.5.6.2 *Meet and Confer*

If the Contractor disputes the Owner's written response, or the Owner fails to respond within the time prescribed, the Contractor may so notify the Owner, in writing, either within 15 days of receipt of the Owner's response or within 15 days of the Owner's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a written demand sent by registered mail or certified mail return receipt requested, the Owner shall schedule a meet and confer conference for settlement of the dispute, which shall take place within 30 days of the demand. Upon written agreement of the Owner and Contractor, the conference may take place during regularly scheduled Project meetings.

If Contractor fails to timely notify the Owner that it wishes to meet and confer pursuant to the previous paragraph, then Contractor will have waived all rights to (a) recover money or time on the issues for which a Claim was required, (b) submit a Government Code Claim (see Section 4.5.6.3) for such money or time, and (c) initiate any action, proceeding or litigation for such money or time. Contractor will not have satisfied a condition precedent or exhausted administrative remedies.

Within ten (10) business days after the conclusion of the meet and confer conference, the Owner shall give a written statement to the Contractor identifying the portion of the Claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) days after the Owner issues the written

statement. Within ten (10) business days of issuance of Owner's written statement, Contractor shall identify in writing the disputed portion of the Claim that shall be submitted to non-binding mediation (which may consist of any nonbinding process, including but not limited to neutral evaluation or a dispute review board), with the Owner and Contractor sharing the costs equally. The Owner and Contractor shall mutually agree to a mediator within ten (10) business days after the Contractor has identified in writing the disputed portion of the Claim. If they cannot agree upon a mediator, then each shall select a mediator and those two mediators shall select a qualified neutral third party to mediate the disputed portion of the Claim. (Each party shall bear the fees and costs its respective mediator charged in connection with the selection of the neutral mediator). The parties may mutually waive in writing the requirement for mediation. If Contractor fails to timely notify the Owner in writing that it wishes to mediate pursuant to this paragraph, Contractor will have waived all right to further pursue the Claim pursuant to section 4.5.4. The parties shall reasonably cooperate to schedule and attend a mediation as soon as reasonably possible. Owner's failure to respond to the Claim within the above time periods or to otherwise meet the above time requirements shall result in the Claim being deemed rejected in its entirety.

#### **4.5.6.3 *Government Code Claim***

If the Claim or any portion remains in dispute after the mediation and Contractor wishes to pursue it, the Contractor **must** file a timely and proper Government Code Claim. The filing of a Government Code Claim is specifically required in addition to all contractual procedures described in Sections 4.5 through 4.5.6.2. The above contractual procedures do not act as a substitute for the Government Code Claim process, and the two sets of procedures shall be sequential with the contractual procedures coming first.

Failure to timely file a Government Code Claim shall act as complete waiver of Contractor's rights to (a) recover money or time on the issues for which a Government Code Claim was required, and (b) initiate any action, proceeding or litigation for such money or time. Contractor will not have satisfied a condition precedent or exhausted administrative remedies.

Owner and Contractor shall proceed with the Government Code Claim according to Government Code, Section 900 et seq., and as otherwise permitted by law. For purposes of the applicable Government Code provisions, and as provided in Public Contract Code section 20104.2(e), the running of the time period within which a Contractor must file a Government Code Claim shall be tolled from the time the Contractor submits a written Claim under Article 4.5 until the time that the Claim is denied, in whole or in part, as a result of the meet and confer process in Section 4.5.6.2, including any period of time utilized by the meet and confer process.

#### **4.5.7 CONTINUING CONTRACT PERFORMANCE**

Despite submission or rejection of a Notice of Potential Change, COR or Claim, the Contractor shall proceed diligently with performance of the Contract as directed by Owner, and the Owner shall continue to make any undisputed payments in accordance with the Contract.

#### **4.5.8 CLAIMS FOR CONCEALED OR UNKNOWN CONDITIONS**

#### 4.5.8.1 *Trenches or Excavations Less Than Four Feet Below the Surface*

If Contractor encounters conditions at the Site which are subsurface or otherwise concealed physical conditions, which differ materially from those indicated in the Contract Documents, or unknown physical conditions of an unusual nature, which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall give notice to the Owner promptly before conditions are disturbed and in no event later than ten (10) days after first observance of the conditions. If Contractor believes that such conditions differ materially and will cause an increase in the Contractor's cost of, time required for, or performance of any part of the Work, Contractor must comply with the provisions above for Notice of Potential Change, Change Order Request, and Claims (beginning with Section 4.5.1).

#### 4.5.8.2 *Trenches or Excavations Greater Than Four Feet Below the Surface*

Pursuant to Public Contract Code section 7104, when any excavation or trenching extends greater than four feet below the surface:

4.5.8.2.1 The Contractor shall promptly, and before the following conditions are disturbed, notify the public entity, in writing, of any:

(1) Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with the provisions of existing law.

(2) Subsurface or latent physical conditions at the site differing from those indicated by information about the site made available to bidders prior to the deadline for submitting bids.

(3) Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

4.5.8.2.2 The public entity shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work shall issue a change order under the procedures described in the Contract.

4.5.8.2.3 In the event that a dispute arises between the public entity and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from the deadline for Completion provided for by the Contract, but shall proceed

with all Work to be performed under the Contract. The Contractor shall retain any and all rights provided either by Contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

#### **4.5.9 INJURY OR DAMAGE TO PERSON OR PROPERTY**

If either party to the Contract suffers injury or damage to person or property because of an act or omission of the other party, any of the other party's employees or agents, or others for whose acts such party is legally liable, written notice of such injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding ten (10) days after first observance. The notice shall provide sufficient detail to enable the other party to investigate the matter. For a Notice of Potential Change, COR and Claim for additional cost or time related to this injury or damage, Contractor shall follow Section 4.5.

### **ARTICLE 5**

#### **SUBCONTRACTORS**

##### **5.1 DEFINITIONS**

###### **5.1.1 SUBCONTRACTOR**

A Subcontractor is a person or entity, who has a contract with the Contractor to perform a portion of the Work at the Site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a separate contractor or subcontractors of a separate contractor.

###### **5.1.2 SUB-SUBCONTRACTOR**

A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the Site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

###### **5.1.3 SPECIALTY CONTRACTORS**

If a Subcontractor is designated as a "Specialty Contractor" as defined in section 7058 of the Business and Professions Code, all of the Work outside of that Subcontractor's specialty shall be performed in compliance with the Subletting and Subcontracting Fair Practices Act, Public Contract Code sections 4100, et seq.

## **5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK**

### **5.2.1 ASSIGNMENT OR SUBSTITUTION - CONSENT OF OWNER**

In accordance with Public Contract Code sections 4107 and 4107.5, no Contractor whose bid is accepted shall, without the written consent of the Owner: substitute any person or entity as a Subcontractor in place of the Subcontractor designated in the original bid; permit any such Subcontract to be assigned or transferred, or allow it to be performed by any person or entity other than the original Subcontractor listed in the original bid; sublet or subcontract any portion of the Work in excess of one-half of one percent (0.5%) of the Contractor's total bid as to which its original bid did not designate a Subcontractor. Any assignment or substitution made without the prior written consent of the awarding authority shall be void, and the assignees shall acquire no rights in the Contract. Any consent, if given, shall not relieve Contractor or its Subcontractors from their obligations under the terms of the Contract Documents.

### **5.2.2 GROUNDS FOR SUBSTITUTION**

Pursuant to Public Contract Code section 4107 and the procedure set forth therein, no Contractor whose bid is accepted may request to substitute any person or entity as a Subcontractor in place of a Subcontractor listed in the original bid except in the following instances:

- A. When the Subcontractor listed in the bid after having a reasonable opportunity to do so, fails or refuses to execute a written contract for the scope of work specified in the subcontractor's bid and at the price specified in the subcontractor's bid, when that written contract, based upon the general terms, conditions, plans and specifications involved or the terms of that Subcontractor's written bid, is presented to the Subcontractor by the Contractor;
- B. When the listed Subcontractor becomes insolvent or the subject of an order for relief in bankruptcy;
- C. When the listed Subcontractor fails or refuses to perform his or her Subcontract;
- D. When the listed Subcontractor fails or refuses to meet the bond requirements of the prime contractor set forth in Public Contract Code section 4108.
- E. When the Contractor demonstrates to the awarding authority, or its duly authorized officer, subject to the further provisions of Public Contract Code section 4107.5, that the name of the Subcontractor was listed as the result of inadvertent clerical error;
- F. When the listed Subcontractor is not licensed pursuant to the Contractors License Law; or



- G. When the awarding authority, or its duly authorized officer, determines that the Work being performed by the listed Subcontractor is substantially unsatisfactory and not in substantial accordance with the plans and specifications, or the Subcontractor is substantially delaying or disrupting the progress of the Work.
- H. When the listed Subcontractor is ineligible to work on a public works project pursuant to Section 1777.1 of the Labor Code.
- I. When the awarding authority determines that a listed Subcontractor is not a responsible contractor.

5.2.2.1 **No Change in Contract.** Any substitutions of Subcontractors shall not result in any increase in the Contract Sum or result in the granting of any extension of time for the Completion of the Work.

5.2.2.2 **Substitution Due to Clerical Error.** The Contractor, as a condition of asserting a claim of inadvertent clerical error in the listing of a Subcontractor, shall, pursuant to Public Contract Code section 4107.5, within two (2) working days after the time of the prime bid opening by the awarding authority, give written notice to the awarding authority and copies of such notice to both the Subcontractor it claims to have listed in error, and the intended Subcontractor who had bid to the Contractor prior to bid opening. Any listed Subcontractor who has been notified by the Contractor in accordance with the provisions of this section as to an inadvertent clerical error, shall be allowed six (6) working days from the time of the prime bid opening within which to submit to the awarding authority and to the Contractor written objection to the Contractor's claim of inadvertent clerical error.

In all other cases, the Contractor must make a request in writing to the awarding authority for the substitution of a subcontractor, giving reasons therefor. The awarding authority shall mail a written notice to the listed Subcontractor giving reasons for the proposed substitution. The listed Subcontractor shall have five (5) working days from the date of such notice within which to file with the awarding authority written objections to the substitution.

Failure to file written objections pursuant to the provisions of this section within the times specified herein shall constitute a complete waiver of objection to the substitution by the listed Subcontractor and, where the ground for substitution is an inadvertent clerical error, an agreement by the listed Subcontractor that an inadvertent clerical error was made.

If written objections are filed, the awarding authority shall give five (5) days notice to the Contractor and to the listed Subcontractor of a hearing by the awarding authority on the Contractor's request for substitution as provided in Public Contract Code section 4107. The determination by the awarding authority shall be final.

### 5.3 SUBCONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be

bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all obligations and responsibilities, which the Contractor, by the Contract Documents, assumes toward the Owner. Each subcontract agreement shall preserve and protect the rights of the Owner under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound. Upon written request of the Subcontractor, the Contractor shall identify to the Subcontractor the terms and conditions of the proposed subcontract agreement, which may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

#### **5.4 CONTINGENT ASSIGNMENT OF SUBCONTRACTS**

Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner provided that:

- A. Assignment is effective only after termination of the Contract with the Contractor by the Owner for cause pursuant to Article 14 and only for those subcontract agreements which the Owner accepts by notifying the Subcontractor in writing; and
- B. Assignment is subject to the prior rights of the surety, if any, obligated under any bond relating to the Contract.

#### **5.5 SUBCONTRACTOR'S RESPONSIBILITIES**

Every Subcontractor is bound to the following provisions, unless specifically noted to the contrary in the Subcontractor's contract subject to the limitations of section 5.3.

##### **5.5.1 SUPERVISION BY SUBCONTRACTORS**

Subcontractors shall efficiently supervise their Work, using their best skill and attention. Each of them shall carefully study and compare all Drawings, Specifications, and other instructions, shall at once report to Contractor any error or omission which any of them may discover, and shall subsequently proceed with the Work in accordance with instructions from the Contractor concerning such error or omission. Each Subcontractor shall be fully responsible for and shall bear the full risk of loss of all of its property.

#### **5.5.2 DISCIPLINE AND ORDER**

Each Subcontractor shall at all times enforce strict discipline and good order among its Subcontractors, material or equipment suppliers, or their agents, employees, and invitees, and shall establish and maintain surveillance over the activities of each of the foregoing to minimize any disturbance, damage, pollution, or unsightly conditions relative to property areas adjacent to or in the vicinity of the Site. The Contractor shall have the right to remove from the Work any employee of a Subcontractor for any reason including, without limitation, incompetence or carelessness.

#### **5.5.3 DEFECTS DISCOVERED**

Should the proper and accurate performance of the Work depend upon the proper and accurate performance of other work not included in its Contract, each Subcontractor shall use all necessary means to discover any defect in such other work and shall allow the Contractor, the Owner and Architect or other Subcontractors as Contractor elects, a reasonable amount of time to remedy such defects. If the Subcontractor should proceed with its Work, it shall be considered to have accepted such other work, unless the Subcontractor shall have proceeded pursuant to instructions in writing by the Contractor over its written objection.

#### **5.5.4 SUBCONTRACTOR INFORMATION**

Each Subcontractor shall submit to the Owner, the Contractor, or the Architect, as the case may be, promptly when requested by any of the foregoing, information with respect to the names, responsibilities, and titles of the principal members of its staff, the adequacy of the Subcontractor's equipment and the availability of necessary materials and supplies. Subcontractor shall fully cooperate with Contractor in its periodic review of the adequacy of Subcontractor's supervision, personnel, and equipment, and the availability of necessary materials and supplies and shall promptly comply with the requirements of the Contractor with respect thereto.

#### **5.5.5 TEMPORARY STRUCTURES**

Each Subcontractor shall furnish at its expense its own temporary facilities and storage except those specifically agreed to be furnished to it by the Contractor in the Subcontract Agreement. Subcontractor's material storage rooms and field offices, etc., will be placed in locations coordinated and approved by the Owner and Construction Manager. When it becomes necessary due to the progress of the Work for the Subcontractor to relocate its field operations, it will do so in an expeditious manner and at no additional cost to Contractor or Owner. The construction of material storage rooms and field offices, etc., will be of fire resistive material only, such as concrete or gypsum block, rated drywall, or sheet metal.

#### **5.5.6 CHARGES TO SUBCONTRACTOR**

Each Subcontractor may be subject to the Contractor's reasonable charges for hoisting, repair to other work caused by the fault or negligence of Subcontractor, removal of Subcontractor's rubbish, and clean-up occasioned by Subcontractor.

#### **5.5.7 FINES IMPOSED**

Subcontractor shall comply with and pay any fines or penalties imposed for violation of any applicable law, ordinance, rule, regulation, Environmental Impact Report mitigation requirement, and lawful order of any public authority, including, without limitation, all OSHA and California OSHA requirements and those of other authorities having jurisdiction of the safety of persons or property.

#### **5.5.8 PROJECT SIGNS**

Contractor and each Subcontractor shall be prohibited from displaying on or about the Work any sign, trademark, or other advertisement.

#### **5.5.9 REMEDIES FOR FAILURE TO PERFORM**

Without limitation of any other right or remedy available to Contractor under the Contract Documents or at law, should: the Subcontractor fail to perform its portion of the Work in a skilled and expeditious manner in accordance with the terms of the Contract Documents with sufficient labor, materials, equipment, and facilities; delays the progress of the job or otherwise fail in any of its obligations; or either a receiver is appointed for the Subcontractor or the Subcontractor is declared to be bankrupt or insolvent, and such appointment, bankruptcy, or insolvency proceedings or declaration is not set aside within thirty (30) days, then the Contractor, upon three (3) days notice to the Subcontractor (subject to the requirements of Pub. Contracts Code, § 4107), may provide such labor, materials, or perform such work and recover the cost plus profit and overhead from monies due or to become due thereafter to the Subcontractor. The Contractor may terminate the employment of the Subcontractor, taking possession of its tools, materials, and equipment related to the Work and cause the entire portion of the Subcontractor's Work to be finished either by another Subcontractor or through the Contractor's own forces.

#### **5.5.10 DISPUTES NOT TO AFFECT WORK**

In the event of any dispute as to whether or not any portion of the Work is within the scope of the Work to be performed by a Subcontractor, or any dispute as to whether or not the Subcontractor is entitled to a Change Order for any Work requested of it or entitled to payment, the Subcontractor shall continue to proceed diligently with the performance of the Work. Regardless of the size or nature of the dispute, the Subcontractor shall not under any circumstances cease or delay performance of its portion of the Work during the existence of the dispute. The Contractor shall continue to pay the undisputed amounts called for under the Subcontract Agreement during the existence of the dispute. Any party stopping or delaying the progress of the Work because of a dispute shall be responsible in damages to the Owner, the Architect, and the Contractor for any losses suffered as a result of the delay.

#### **5.5.11 APPLICATION FOR PAYMENT**

Contractor agrees to advise the Subcontractor if any documentation in connection with the Subcontractor's application for payment has not been accepted or is in any way unsatisfactory.

#### **5.5.12 COMPLIANCE WITH PROCEDURES**

Each Subcontractor shall comply with all procedures established by the Contractor for coordination among the Owner, the Owner's consultants, Architect, Construction Manager, Contractor, and the various Subcontractors for coordination of the Work with all local municipal authorities, government agencies, utility companies, and any other agencies with jurisdiction over all or any portion of the Work. The Subcontractor shall cooperate fully with all of the foregoing parties and authorities.

#### **5.5.13 ON-SITE RECORD KEEPING**

Subcontractor shall comply with all on-Site record keeping systems established by the Contractor and shall, upon the request of the Contractor, provide the Contractor with such information and reports as the Contractor may deem appropriate. Without limitation of the foregoing, the Subcontractor shall assemble all required permits and certificates so that they are readily accessible at the Site.

#### **5.5.14 NON-EXCLUSIVE OBLIGATIONS**

The specific requirements of Article 5 are not intended to exclude the obligation of the Subcontractor to comply with any of the other provisions of the General Conditions and the other Contract Documents which are relevant to the proper performance of its portion of the Work.

### **ARTICLE 6**

#### **CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

##### **6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS**

###### **6.1.1 OWNER'S RIGHTS**

The Owner reserves the right to perform Project work with the Owner's own forces, or to award separate contracts in connection with such other work or other construction or operations on the Site under contract conditions identical or substantially similar to these including those portions related to insurance. Upon the election to perform such work with its own forces or by separate contracts, the Owner shall notify the Contractor. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall proceed pursuant to Section 4.5 in the Contract Documents.

###### **6.1.2 DESIGNATION AS CONTRACTOR**

When separate contracts are awarded for different portions of the Project or other construction or operations on the Site, the term “Contractor” in the Contract Documents in each of those contracts shall mean the contractor who executes each separate Owner/Contractor agreement.

### **6.1.3 CONTRACTOR DUTIES**

The Contractor shall have overall responsibility for coordination and scheduling of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule and Contract Sum deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors, and the Owner until subsequently revised. If Contractor fails to fulfill these obligations, Owner may exercise its rights under section 2.4. The right of Owner to carry out the Work under section 2.4 shall not give rise to a duty on the part of Owner to exercise this right for the benefit of Contractor or any other person or entity, except to the extent required by section 6.1.4.

### **6.1.4 OWNER OBLIGATIONS**

Unless otherwise provided in the Contract Documents, when the Owner performs work related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations, and to have the same rights, which apply to the Contractor under the General Conditions, including, without excluding others, those stated in Article 3, this Article 6 and Articles 10 and 12.

## **6.2 MUTUAL RESPONSIBILITY**

### **6.2.1 DELIVERY AND STORAGE**

The Contractor shall afford the Owner and separate contractors reasonable opportunity for delivery and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the separate contractors' construction and operations with theirs as required by the Contract Documents.

### **6.2.2 NOTICE BY CONTRACTOR**

If part of the Contractor's Work depends upon proper execution or results from work by the Owner or separate contractors, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Owner and Construction Manager patent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor to so report shall constitute an acknowledgment that the Owner's or separate contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

### **6.2.3 COSTS INCURRED**

Costs, expenses, and damages caused by delays, improperly timed activities, defective construction, or damages to another's work/Work or property shall be borne by the party responsible. Should Contractor cause damage to the work or property of any other contractor on the Project, or to the Project or property of a third party, or cause any delay to any such contractor or third party, the Contractor shall defend, indemnify and hold Owner harmless for such damage or delay under Section 3.16, above. Owner may withhold from progress payments and/or retention the cost of delay or damage to another contractor's work or damage to another contractor's property or to the property of Owner caused by Contractor.

### **6.2.4 CORRECTION OF DAMAGE**

The Contractor shall promptly remedy damage wrongfully caused by the Contractor to completed or partially completed construction or to property of the Owner or separate contractors.

### **6.3 OWNER'S RIGHT TO CLEAN UP**

If a dispute arises among the Contractor, separate contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Section 3.13, the Owner may clean up and allocate the cost among those responsible as the Owner determines to be just.

## **ARTICLE 7**

### **CHANGES IN THE WORK**

#### **7.1 CHANGES**

##### **7.1.1 NO CHANGES WITHOUT AUTHORIZATION**

The Owner reserves the right to change the Work by making such alterations, deviations, additions to, or deletions from the plans and specifications, as may be deemed by the Owner to be necessary or advisable for the proper Completion or construction of the Work contemplated, and Owner reserves the right to require Contractor to perform such work. No adjustment will be made in the Contract unit price of any Contract item regardless of the quantity ultimately required.

Owner shall compensate Contractor with money or grant extra time for any extra work ordered by the Owner to be performed. Contractor shall follow the provisions of 7.6 and 7.7 when requesting additional money or additional time. Contractor shall expeditiously perform all extra work upon direction, even if no agreement has been reached on extra time or money. For all such changes resulting in a credit to Owner, Contractor shall follow 7.5 and 7.7 in providing the credit to Owner. Contractor shall bring all potential credits to the Owner's attention.

There shall be no change whatsoever in the drawings, specifications, or in the Work or payments under the Contract Documents without an executed Change Order, Construction Change Directive, or order by the Owner pursuant to Section 7.1.2. Owner shall not be liable for the cost of any extra work or any substitutions, changes, additions, omissions, or deviations from the Drawings and Specifications unless the same shall have been properly requested under Section 4.5 and authorized by, and the cost thereof approved in writing by, Change Order or Construction Change Directive. No extension of time for performance of the Work shall be allowed hereunder unless request for such extension is properly made under Section 4.5 and such time is thereof approved in writing by Change Order or Construction Change Directive. The provisions of the Contract Documents shall apply to all such changes, additions, and omissions with the same effect as if originally embodied in the Drawings and Specifications.

#### **7.1.2 ARCHITECT AUTHORITY TO ORDER MINOR CHANGES**

The Owner has authority to order minor changes in the Work not involving any adjustment in the Contract Sum, an extension of the Contract Time, or a change which is inconsistent with the intent of the Contract Documents. Such changes shall be effected by written Construction Change Directive and shall be binding on the Owner. The Contractor shall carry out such written orders promptly.

#### **7.2 CHANGE ORDERS ("CO")**

A CO is a written instrument signed by the Owner and the Contractor, stamped (or sealed) and signed by the Architect, and approved by the Owner's Governing Board and DSA, stating the agreement of Owner and Contractor upon all of the following:

- A. A change in the Work;
- B. The amount of the adjustment in the Contract Sum, if any; and
- C. The extent of the adjustment in the Contract Time, if any.

Unless expressly stated otherwise in the CO, any CO executed by Owner and Contractor constitutes and includes full and complete money and time (including but not limited to, adjustments to money and time) for all costs and effects caused by any of the changes described within it. Unless expressly stated otherwise in the CO, in consideration for the money received for the changes described in the CO, Contractor waives all Claims for all costs and effects caused by any of the changes, including but not limited to labor, equipment, materials, delay, extra work, overhead (home and field), profit, direct costs, acceleration, disruption, impaired productivity, time extensions, and any the costs and effects on Subcontractors and suppliers of any tier.

#### **7.3 ORDER TO PROCEED ("OTP")**

##### **7.3.1 DEFINITION**



A OTP is a written unilateral order signed by the Owner, and if necessary by the Architect, directing a change in the Work and stating an adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by OTP, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions pursuant to Section 7.1.1.

#### 7.3.2 **USE TO DIRECT CHANGE**

A OTP shall be used in the absence of agreement on the terms of a CO. If Contractor disagrees with the terms of a OTP, it shall nevertheless perform the work directed by the OTP, but it may pursue the Notice of Potential Change, COR and Claim procedures of Section 4.5 if Contractor believes it is entitled to changes in the Contract Sum or Contract Time.

### 7.4 **REQUEST FOR INFORMATION ("RFI")**

#### 7.4.1 **DEFINITION**

An RFI is a written request prepared by the Contractor asking the Owner and Construction Manager to provide additional information necessary to clarify an item which the Contractor feels is not clearly shown or called for in the drawings or specifications, or to address problems which have arisen under field conditions.

#### 7.4.2 **SCOPE**

The RFI shall reference all the applicable Contract Documents including specification section, detail, page numbers, drawing numbers, and sheet numbers, etc. The Contractor shall make suggestions and/or interpretations of the issue raised by the RFI. An RFI cannot modify the Contract Sum, Contract Time, or the Contract Documents.

#### 7.4.3 **RESPONSE TIME**

Unless Owner expressly directs otherwise in writing, Contractor shall submit RFIs directly to the Construction Manager, with copies forwarded to the Owner. Contractor shall submit a revised and updated priority schedule with each RFI. The Architect shall endeavor to follow the Contractor's requested order of priorities. The Owner and Contractor agree that an adequate time period for the Architect (or other designated recipient of the RFI) to respond to an RFI is generally fourteen (14) days after the Architect's receipt of an RFI, unless the Owner and Contractor agree otherwise in writing. However, in all cases, the Architect shall take such time, whether more or less than 14 days, as is necessary in the Architect's professional judgment to permit adequate review and evaluation of the RFI. If Contractor informs the Architect that it needs a response to an RFI expedited to avoid delay to the critical path, the Architect shall provide a response as quickly as reasonably possible. The total time required for the Architect to respond is subject to the complexity of the RFI, the number of RFI's submitted concurrently and the reprioritization of pending RFI's submitted by the Contractor, among other things. If Contractor believes that the Architect's response results in a change in the Work that warrants additional money or time, or that Architect's response was unreasonably delayed and caused

delay to the Work's critical path, Contractor shall follow the procedures for additional money or time under Section 4.5. No presumption shall arise as to the timeliness of the response if the response is more than fourteen (14) days after the Architect's receipt of the RFI. Contractor shall review the Contract Documents before submitting an RFI to ensure that the information is not already in the Contract Documents. To compensate the Owner for time and costs incurred for each time the information was already in the Contract Documents, Owner may withhold \$100 from progress payments or retention in addition to any other remedies which Owner may have the right to pursue.

#### **7.4.4 COSTS INCURRED**

The Contractor shall be invoiced by the Owner for any costs incurred for professional services, which shall be withheld from progress payments or retention, if an RFI requests an interpretation or decision of a matter where the information sought is equally available to the party making such request.

#### **7.5 REQUEST FOR PROPOSAL ("RFP")**

##### **7.5.1 DEFINITION**

An RFP is Owner's written request asking the Contractor to submit to the Owner and Construction Manager an estimate of the effect, including credits, of a proposed change on the Contract Sum and the Contract Time.

##### **7.5.2 SCOPE**

An RFP shall contain adequate information, including any necessary drawings and specifications, to enable Contractor to provide the cost breakdowns required by section 7.7. The Contractor shall not be entitled to any additional money for preparing a response to an RFP, whether ultimately accepted or not.

#### **7.6 CHANGE ORDER REQUEST ("COR")**

##### **7.6.1 DEFINITION**

A COR is a written request prepared by the Contractor asking the Owner and Construction Manager for additional time or money.

##### **7.6.2 CHANGES IN PRICE**

A COR shall include breakdowns per section 7.7 to validate any proposed change in Contract Sum.

##### **7.6.3 CHANGES IN TIME**

Where a change in Contract Time is requested, a COR shall also include delay analysis to validate any proposed change to the Contract Time, and shall meet all requirements in these General Conditions, including but not limited to Section 8.4. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Work schedule as defined in section 3.9 and Division 1 of the Specifications.

## 7.7 **PRICE OF CHANGE ORDERS**

### 7.7.1 **SCOPE**

Any COR shall provide in writing to the Owner, Architect and Construction Manager, the effect of the proposed CO upon the Contract Sum and the actual cost of construction, which shall include a complete itemized cost breakdown of all labor and material showing actual quantities, hours, unit prices, wage rates, required for the change, and the effect upon the Contract Time of such CO.

### 7.7.2 **DETERMINATION OF COST**

The amount of the increase or decrease in the Contract Sum resulting from a CO, if any, shall be determined in one or more of the following ways as applicable to a specific situation:

- A. Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- B. Unit prices stated in the Contractor's original bid, the Contract Documents, or subsequently agreed upon between the Owner and the Contractor;
- C. Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- D. By cost of material and labor and percentage of overhead and profit. If the value is determined by this method the following requirements shall apply:

#### 1. **Daily Reports by Contractor.**

a) General: At the close of each working day, the Contractor shall submit a daily report to the Inspector of Record and any Construction Manager, on forms approved by the Owner, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day, the location of the work, and for other services and expenditures when authorized concerning extra work items. An attempt shall be made to reconcile the report daily, and it shall be signed by the Inspector of Record and the Contractor. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved immediately. Each party shall retain a signed copy of the report. Reports by Subcontractors or others shall be submitted through the Contractor.

- b) Labor: Show names of workers, classifications, and hours worked.
- c) Materials: Describe and list quantities of materials used.
- d) Equipment: Show type of equipment, size, identification number, and hours of operation, including, if applicable, loading and transportation.
- e) Other Services and Expenditures: Describe in such detail as the Owner may require.

2. **Basis for Establishing Costs.**

a) Labor will be the actual cost for wages prevailing locally for each craft or type of workers at the time the extra work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State, or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. The use of a labor classification, which would increase the extra work cost, will not be permitted unless the Contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

b) Materials shall be at invoice or lowest current price at which such materials are locally available and delivered to the Site in the quantities involved, plus sales tax, freight, and delivery.

The Owner reserves the right to approve materials and sources of supply or to supply materials to the Contractor if necessary for the progress of the Work. No markup shall be applied to any material provided by the Owner.

c) Vehicle, Tool and Equipment Rental. No payment will be made for the use of personal vehicles or tools which have a replacement value of \$250 or less.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental agencies or distributors at the time the work is performed.

The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.

Necessary loading and transportation costs for equipment used on the extra work shall be included. If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the Owner

than holding it at the work Site, it shall be returned unless the Contractor elects to keep it at the work Site at no expense to the Owner.

All equipment shall be acceptable to the Inspector of Record, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and modifications shall be used to classify equipment, and equipment shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

d) Other Items. The Owner may authorize other items which may be required on the extra work. Such items include labor, services, material, and equipment which are different in their nature from those required by the Work, and which are of a type not ordinarily available from the Contractor or any of the Subcontractors. Invoices covering all such items in detail shall be submitted with the Application for Payment.

e) Invoices. Vendors' invoices for material, equipment rental, and other expenditures shall be submitted with the COR. If the Application for Payment is not substantiated by invoices or other documentation, the Owner may establish the cost of the item involved at the lowest price which was current at the time of the Daily Report.

f) Overhead, premiums and profit. For overhead, including direct costs, submit with the COR and include: home office overhead, off-Site supervision, CO preparation/negotiation/research for Owner initiated changes, time delays, project interference and disruption, additional guaranty and warranty durations, on-Site supervision, additional temporary protection, additional temporary utilities, additional material handling costs, and additional safety equipment costs.

### 7.7.3 **FORMAT FOR PROPOSED COST CHANGE**

The following format shall be used as applicable by the Owner and the Contractor to communicate proposed additions and deductions to the Contract.

	<b><u>EXTRA</u></b>	<b><u>CREDIT</u></b>
A. Material (attach itemized quantity and unit cost plus sales tax, invoices, receipts, truck tags, etc., for force account work)	_____	_____

B.	Labor (attach itemized hours and rates, daily logs, certified payroll, etc.)	_____	_____
C.	Equipment (attach any invoices)	_____	_____
D.	Subtotal	_____	_____
E.	If Subcontractor performed Work, add Subcontractor's overhead and profit to portions performed by Sub-contractor, not to exceed fifteen percent (15%) of item D.	_____	_____
F.	Liability and Property Damage Insurance, Worker's Compensation Insurance, Social Security, and Unemployment Taxes, not to exceed twenty-five percent (25%) of Item B.	_____	_____
G.	Subtotal	_____	_____
H.	General Contractor's Overhead and Profit, not to exceed fifteen percent (15%) of Item G; and for work performed by subcontractors, not to exceed five percent (5%).	_____	_____
I.	Subtotal	_____	_____
J.	Bond not to exceed one percent (1%) of Item I.	_____	_____
K.	TOTAL		

It is expressly understood that the value of such extra work or changes, as determined by any of the aforementioned methods, expressly includes (1) any and all of the Contractor's costs and expenses resulting from additional time required on the project or resulting from delay to the Work, and (2) any costs of preparing a COR, including but not limited to delay analysis. Any costs or expenses not included are deemed waived.

#### **7.7.5 DISCOUNTS, REBATES, AND REFUNDS**

For purposes of determining the cost, if any, of any change, addition, or omission to the Work hereunder, all trade discounts, rebates, refunds, and all returns from the sale of surplus materials and equipment shall accrue and be credited to the Contractor, and the Contractor shall make provisions so that such discounts, rebates, refunds, and returns may be secured, and the amount thereof shall be allowed as a reduction of the Contractor's cost in determining the actual cost of construction for purposes of any change, addition, or omissions in the Work as provided herein.

#### **7.7.5 ACCOUNTING RECORDS**

With respect to portions of the Work performed by COs and OTPs on a time-and-materials, unit-cost, or similar basis, the Contractor shall keep and maintain cost-accounting records satisfactory to the Owner, which shall be available to the Owner and Construction Manager on the same terms as any other books and records the Contractor is required to maintain under the Contract Documents.

#### **7.7.6 NOTICE REQUIRED**

Contractor shall submit a written Notice of Potential Change for additional money or time pursuant to section 4.5.1.

#### **7.7.7 APPLICABILITY TO SUBCONTRACTORS**

Any requirements under this Article 7 shall be equally applicable to COs or OTPs issued to Subcontractors by the Contractor to the same extent required of the Contractor.

#### **7.8 WAIVER OF RIGHT TO CLAIM MONEY OR TIME**

Failure to demand money based on costs, or time extensions, as part of a COR constitutes a complete waiver of Contractor's right to claim the omitted money or time. All money or time for an issue must be included in the COR at the time submitted.

## **ARTICLE 8**

### **TIME**

#### **8.1 DEFINITIONS**

##### **8.1.1 CONTRACT TIME**

Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Completion of the Work.

##### **8.1.2 NOTICE TO PROCEED**

Contractor shall not commence the Work until it receives a Notice to Proceed from Owner. The date of commencement of the Work is the date established in the Notice to Proceed. The date of commencement shall not be postponed by the failure to act of the Contractor or of persons or entities for whom the Contractor is responsible.

##### **8.1.3 DAYS**

The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

#### **8.2 HOURS OF WORK**

##### **8.2.1 SUFFICIENT FORCES**

Contractors and Subcontractors shall furnish sufficient forces to ensure the prosecution of the Work in accordance with the Construction Schedule.

##### **8.2.2 PERFORMANCE DURING WORKING HOURS**

Work shall be performed during regular working hours except that in the event of an emergency or when required to complete the Work in accordance with job progress, work may be performed outside of regular working hours with the advance written consent of the Owner.

##### **8.2.3 LABOR CODE APPLICATION**

As provided in Article 3 (commencing at § 1810), Chapter 1, Part 7, Division 2 of the Labor Code, eight (8) hours of labor shall constitute a legal day's work. The time of service of any worker employed at any time by the Contractor or by any Subcontractor on any subcontract under this Contract, upon the work or upon any part of the work contemplated by this Contract, is limited and restricted to eight (8) hours during any one calendar day and forty (40) hours during any one calendar week, except as hereinafter provided. Notwithstanding the provision hereinabove set forth, work performed by employees of Contractors in excess of eight (8) hours per day and forty (40) hours during any one week shall be permitted upon this public work with



compensation provided for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1-1/2) times the basic rate of pay.

Contractor or subcontractor shall pay to the Owner a penalty of Twenty-five Dollars (\$25.00) for each worker employed in the execution of this Contract by the Contractor, or by any Subcontractor, for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any calendar day and forty (40) hours in any one (1) calendar week, in violation of the provisions of Article 3 (commencing at § 1810), Chapter 1, Part 7, Division 2 of the Labor Code, unless compensation for the workers so employed by Contractor is not less than one and one-half (1-1/2) times the basic rate of pay for all hours worked in excess of eight (8) hours per day.

#### **8.2.4 COSTS FOR AFTER HOURS INSPECTIONS**

If the work done after hours is required by the Contract Documents to be done outside the Contractor's or the Inspector of Record's regular working hours, the costs of any inspections, if required to be done outside normal working hours, shall be borne by the Owner.

If the Owner allows the Contractor to do work outside regular working hours for the Contractor's own convenience, the costs of any inspections required outside regular working hours, among other remedies, shall be invoiced to the Contractor by the Owner and withheld from progress payments and/or retention unless the inspection is directed or authorized in advance by Owner or its representatives. Contractor shall give Owner and Construction Manager at least 48 hours notice prior to working outside regular working hours.

If the Contractor elects to perform work outside the Inspector of Record's regular working hours, costs of any inspections required outside regular working hours, among other remedies, may be invoiced to the Contractor by the Owner and withheld from progress payments and/or retention.

#### **8.2.5 TIME FOR COMMENCEMENT BY SUBCONTRACTORS**

Unless otherwise provided in the Contract Documents, all Subcontractors shall commence their Work within two (2) consecutive business days after notice to them by the Contractor and shall prosecute their Work in accordance with the progress of the Work.

### **8.3 PROGRESS AND COMPLETION**

#### **8.3.1 TIME OF THE ESSENCE**

Time limits stated in the Construction Manager's schedule are of the essence of the Contract. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

#### **8.3.2 NO COMMENCEMENT WITHOUT INSURANCE**

The Contractor shall not knowingly, except by agreement or instruction of the Owner, in writing, commence operations on the Site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor. The date of commencement of the Work shall not be changed by the effective date of such insurance.

### 8.3.3 EXPEDITIOUS COMPLETION

The Contractor shall proceed expeditiously to perform the Work with adequate forces, labor, materials, equipment, services and management, and shall achieve Completion within the Contract Time.

## 8.4 EXTENSIONS OF TIME - LIQUIDATED DAMAGES

### 8.4.1 CONDITIONS ALLOWING FOR EXTENSIONS OF TIME TO COMPLETE THE WORK, ONLY (EXCUSABLE DELAY)

If Contractor exercises due diligence, but the critical path schedule of the Work is unavoidably delayed due to acts of God, acts of public enemy, acts of the Government, acts of the Owner or anyone employed by it, acts of another contractor in performance of a contract (other than this Contract) with the Owner, fires, floods, epidemics, quarantine restrictions, labor disputes, unusually severe weather, or delays of subcontractors due to such causes, the Owner shall extend the Contract Time if Contractor complies with Section 4.5 and Article 7. Owner shall take into consideration other relevant factors such as concurrent delays. Contractor has the burden of proving that any delay was excusable.

### 8.4.2 COMPENSABLE DELAY (TIME AND MONEY)

Compensable delays are those excusable delays for which Contractor is also entitled to money. To be compensable, an excusable delay must be one for which the Owner is responsible, where the delay was unreasonable under the circumstances involved, and where the delay was not within the contemplation of the parties; *however*, Contractor shall not be entitled to monetary compensation when (a) Contractor could have reasonably anticipated the delay and avoided or minimized the cost impacts of it, (b) there was a concurrent delay which does not qualify for monetary compensation under this paragraph, (c) the cause of the delay was reasonably unforeseen by the Owner or the delay was caused by factors beyond the control of the Owner, including but not limited to a delay under Section 2.2.8 above or a delay caused by a utility company's failure to perform despite Owner's reasonable arrangements for such performance; or (d) any other defense available to Owner under law or equity applies. Contractor has the burden of proving that any delay was excusable and compensable, including an analysis that establishes non-concurrency.

### 8.4.3 NOTICE BY CONTRACTOR REQUIRED; PROCEDURES FOR DEMANDING ADDITIONAL TIME OR MONEY

For notice and other required procedures related to requests by Contractor for additional time or money related to delay, Contractor shall comply with the Contract Documents, including but not limited to Sections 3.18 and 4.5, and Article 7, above.

#### 8.4.4 EARLY COMPLETION

Regardless of the cause therefore, the Contractor may not maintain any Claim or cause of action against the Owner for damages incurred as a result of its failure or inability to Complete its Work in a shorter period than established in the Contract Documents, the parties stipulating that the period set forth in the Contract Documents is a reasonable time within which to perform the Work.

#### 8.4.5 LIQUIDATED DAMAGES

Failure to Complete the Work within the time and in the manner provided for by the Contract Documents shall subject the Contractor to liquidated damages in the amount, and as described, in Article III of the Contractor's Agreement. The actual occurrence of damages and the actual amount of the damages which the Owner would suffer if the Work were not Completed within the Contract Time are dependent upon many circumstances and conditions which could prevail in various combinations and, from the nature of the case, it is impracticable and extremely difficult to fix the actual damages. Damages which the Owner would suffer in the event of such delay include, but are not limited to, loss of the use of the Work, disruption of activities, costs of administration and supervision, and the incalculable inconvenience and loss suffered by the public.

Accordingly, the parties agree that the amount set forth in the Contractor's Agreement shall be presumed to be the amount of damages which the Owner shall directly incur as a result of each calendar day by which Completion of the Work is delayed beyond the Contract Time as adjusted by Change Orders.

If Contractor causes delay to any other contractor's work on the Project that results in delayed *completion* of the Project, Contractor shall be subject to liquidated damages for the delay in *completion* of the Project for each calendar day of delay in the amount set forth in Article III of the Contractor's Agreement. The actual occurrence of damages and the actual amount of the damages which the Owner would suffer for such delayed *completion* of the Project are dependent upon many circumstances and conditions which could prevail in various combinations and, from the nature of the case, it is impracticable and extremely difficult to fix the actual damages. Damages which the Owner would suffer in the event of such delay include, but are not limited to, loss of the use of the other contractor's work and the Project, disruption of activities, costs of administration and supervision, and the incalculable inconvenience and loss suffered by the public.

Accordingly, the parties agree that the amount set forth in the Contractor's Agreement shall be presumed to be the amount of damages which the Owner shall directly incur as a result of each calendar day that *completion* of the Project is delayed as a result of Contractor caused delays to any other contractor's completion of their work.

For Contractor's obligations regarding claims against Owner from other contractors on the Project alleging that Contractor caused delays to their work, see sections 3.7.4, 3.16 and 6.2.3 herein.

If liquidated damages accrue as described above, the Owner, in addition to all other remedies provided by law, shall have the right to assess the liquidated damages at any time, and to withhold liquidated damages (and any interest thereon) at any time from any and all retention or progress payments, which would otherwise be or become due the Contractor. In addition, if it is reasonably apparent to the Owner before liquidated damages begin to accrue that Contractor cannot or will not complete the Work within the Contract Time, Owner may assess and withhold, from retention or progress payments, the estimated amount of liquidated damages that will accrue in the future. If the retained percentage or withheld progress payments are not sufficient to discharge all liabilities of the Contractor incurred under this Section, the Contractor and its sureties shall continue to remain liable to the Owner until all such liabilities are satisfied in full.

If Owner accepts any work or makes any payment under the Contract after a default by reason of delays, the payment or payments shall in no respect constitute a waiver or modification of any Contract provisions regarding time of Completion and liquidated damages.

#### **8.5 GOVERNMENT APPROVALS**

Owner shall not be liable for any delays or damages related to the time required to obtain government approvals.

### **ARTICLE 9**

#### **PAYMENTS AND COMPLETION**

##### **9.1 CONTRACT SUM**

The Contract Sum is stated in the Agreement, later adjusted by Change Orders and Construction Change Directives, and is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

##### **9.2 COST BREAKDOWN**

###### **9.2.1 REQUIRED INFORMATION**

On forms approved by the Owner, the Contractor shall furnish to the Owner and Construction Manager the following:

- A. Within ten (10) days of the mailing, faxing or delivering of the Notice of Award of the Contract, a detailed breakdown of the Contract Sum (Schedule of Values) for the Work. Each item in the schedule of values shall include its proper share of the overhead and profit.

- B. Within ten (10) days of the mailing, faxing or delivering of the Notice of Award of the Contract, a schedule of estimated monthly payment requests (cash flow) due the Contractor showing the values and construction time of the various portions of the Work to be performed by it and by its Subcontractors or material and equipment suppliers containing such supporting evidence as to its correctness as the Owner may require;
- C. Five (5) days prior to the submission of a pay request, an itemized breakdown of work done for the purpose of requesting partial payments;
- D. Within ten (10) days of the mailing, faxing or delivering of the Notice of Award of the Contract, the name, address, telephone number, fax number, license number, and classification and, for all projects over Twenty-five Thousand Dollars (\$25,000) the public works contractor registration number, of all of its Subcontractors and of all other parties furnishing labor, material, or equipment for its Contract, along with the amount of each such subcontract or the price of such labor, material, and equipment needed for its entire portion of the Work.

#### 9.2.2 **OWNER ACCEPTANCE REQUIRED**

The Owner shall review all submissions received pursuant to paragraph 9.2.1 in a timely manner. All submissions must be accepted by the Owner before becoming the basis of any payment.

### 9.3 **APPLICATIONS FOR PAYMENT**

#### 9.3.1 **PROCEDURE**

On or before the fifth (5th) day of each calendar month during the progress of the portion of the Work for which payment is being requested, the Contractor shall submit to Construction Manager or as the Owner otherwise directs, an itemized Application for Payment for operations completed in accordance with the Schedule of Values through the end of the previous calendar month. Such application shall be notarized, if required, and supported by the following or such portion thereof as the applicable entity requires:

- A. The amount paid to the date of the Application to the Contractor, to all its Subcontractors, and all others furnishing labor, material, or equipment for its Contract;
- B. The amount being requested with the Application for Payment by the Contractor on its own behalf and separately stating the amount requested on behalf of each of the Subcontractors and all others furnishing labor, material, and equipment under the Contract;
- C. The balance that will be due to each of such entities after said payment is made;

- D. A certification that the Record Drawings and Annotated Specifications are current;
- E. The Owner approved additions to and subtractions from the Contract Sum and Time;
- F. A summary of the retentions (each Application shall provide for retention, as set out in Article 9.6);
- G. Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the Owner may require from time to time;
- H. The percentage of Completion of the Contractor's Work by line item;
- I. A statement showing all payments made by the Contractor for labor and materials on account of the Work covered in the preceding Application for Payment. Such applications shall not include requests for payment of amounts the Contractor does not intend to pay to subcontractors or others because of a dispute or other reason; and
- J. Contractor's monthly reports, daily reports, and monthly schedule updates for all months of Work prior to the Application for Payment that Contractor has not previously submitted.

### 9.3.2 **PURCHASE OF MATERIALS AND EQUIPMENT**

As the Contractor is required to order, obtain, and store materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from Owner, to assure that there will be no delays, payment by the Owner for approved stored material. If payments are to be made on account of materials and equipment not incorporated in the Work, but delivered and suitably stored at the Site or at some other location agreed upon in writing by the Owner, the payments shall be conditioned upon submission by the Contractor, Subcontractor, or vendor to the Owner or Construction Manager of bills of sale and such other documents satisfactory to the Owner to establish the Owner's title to such materials or equipment free of all liens and encumbrances, and otherwise protect the Owner's interest, including, without limitation, provision of applicable insurance and transportation to the Site. All stored items shall be inventoried, specified by identification numbers (if applicable), released to the Owner by sureties of the Contractor and the Subcontractor and, if stored off-Site, stored only in an approved storage facility with adequate insurance coverage.

### 9.3.3 **WARRANTY OF TITLE**

The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or

encumbrances in favor of the Contractor, Subcontractors, material and equipment suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work. Transfer of title to Work does not constitute a waiver by Owner of any defects in the Work.

#### **9.4 REVIEW OF PROGRESS PAYMENT**

##### **9.4.1 OWNER ACCEPTANCE**

The Owner will, within seven (7) days after receipt of the Contractor's Application for Payment, either accept such payment or notify the Contractor in writing of the Owner's reasons for withholding acceptance in whole or in part as provided in paragraph 9.5.1.

##### **9.4.2 OWNER'S REVIEW**

The review of the Contractor's Application for Payment by the Owner will be based, at least in part, on the Owner's observations at the Site and the data comprising the Application for Payment that the Work has progressed to the point indicated. The review is also subject to an evaluation of the Work for conformance with the Contract Documents, to results of subsequent tests and inspections, to minor deviations from the Contract Documents correctable prior to Completion, and to specific qualifications expressed by the Owner. The Owner may reject the Application for Payment if it is not complete under section 9.3. The issuance of a Certificate for Payment will constitute a representation that the Contractor is entitled to payment in the amount certified, subject to any specific qualifications Owner expresses in the Certificate for Payment. However, Contractor's entitlement to payment may be affected by subsequent evaluations of the Work for conformance with the Contract Documents, test and inspections and discovery of minor deviations from the Contract Documents correctable prior to Completion. The issuance of a Certificate for Payment will not be a waiver by the Owner of any defects in the Work covered by the Application for Payment, nor will it be a representation that the Owner has:

- A. Made exhaustive or continuous on-Site inspections to check the quality or quantity of the Work;
- B. Reviewed construction means, methods, techniques, sequences, or procedures;
- C. Reviewed copies of requisitions received from Subcontractors, material and equipment suppliers, and other data requested by the Owner to substantiate the Contractor's right to payment; or
- D. Made an examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

#### **9.5 DECISIONS TO WITHHOLD PAYMENT**

##### **9.5.1 REASONS TO WITHHOLD PAYMENT**

The Owner may withhold from a progress payment, in whole or in part, to such extent as may be necessary to protect the Owner due to any of the following:

- A. Defective or incomplete Work not remedied;
- B. Stop Payment Notices. For any stop payment notice, the Owner shall withhold the amount stated in the stop payment notice, the stop notice claimant's anticipated interest and court costs and an amount to provide for the public entity's reasonable cost of any litigation pursuant to the stop payment notice. For any stop payment notice action the parties resolve before judgment is entered, Owner has the right to permanently withhold for any reasonable cost of litigation for that stop payment notice, even if it exceeds the amount originally withheld by Owner for the estimated reasonable cost of litigation. However, if (1) the Contractor at its sole expense provides a bond or other security satisfactory to the Owner in the amount of at least one hundred twenty-five percent (125%) of the claim, in a form satisfactory to the Owner, which protects the Owner against such claim, and (2) the Owner chooses to accept the bond, then Owner would release the withheld stop payment notice funds to the Contractor, except that Owner may permanently withhold for any reasonable cost of litigation. Any stop payment notice release bond shall be executed by a California admitted, fiscally solvent surety, completely unaffiliated with and separate from the surety on the payment and performance bonds, that does not have any assets pooled with the payment and performance bond sureties.
- C. Liquidated damages against the Contractor, whether already accrued or estimated to accrue in the future;
- D. Reasonable doubt that the Work can be Completed for the unpaid balance of any Contract Sum within the Contract Time;
- E. Damage to the property or work of the Owner, another contractor, or subcontractor;
- F. Unsatisfactory prosecution of the Work by the Contractor;
- G. Failure to store and properly secure materials;
- H. Failure of the Contractor to submit on a timely basis, proper and sufficient documentation required by the Contract Documents, including, without limitation, monthly progress schedules, shop drawings, submittal schedules, schedule of values, product data and samples, proposed product lists, executed change orders, and verified reports;
- I. Failure of the Contractor to maintain record drawings;



- J. Erroneous estimates by the Contractor of the value of the Work performed, or other false statements in an Application for Payment;
- K. Unauthorized deviations from the Contract Documents;
- L. Failure of the Contractor to prosecute the Work in a timely manner in compliance with established progress schedules and Completion deadlines.
- M. Subsequently discovered evidence or observations nullifying the whole or part of a previously issued Certificate for Payment;
- N. Failure by Contractor to pay Subcontractors or material suppliers as required by Contract or law, which includes but is not limited to Contractor's failure to pay prevailing wage and any assessment of statutory penalties;
- O. Overpayment to Contractor on a previous payment;
- P. Credits owed to Owner for reduced scope of work or work that Contractor will not perform;
- Q. The estimated cost of performing work pursuant to Section 2.4;
- R. Actual damages related to false claims by Contractor;
- S. Breach of any provision of the Contract Documents;
- T. Owner's potential or actual loss, liability or damages caused by the Contractor; and
- U. As permitted by other provisions in the Contract or as otherwise allowed by law, including statutory penalties Owner or other entities assessed against Contractor. (See e.g., Labor Code section 1813 (working hours) or Public Contract Code section 4110 (subcontractor listings and substitutions))

Owner may, but is not required to, provide to Contractor with the progress payment written notice of the items for which Owner is withholding amounts from the payment. To claim wrongful withholding by the Owner, or if Contractor otherwise disputes any amount being withheld, Contractor must submit an inquiry in writing to Owner within thirty (30) days of receipt of the notice, and Owner shall respond within fifteen (15) days of receipt of the inquiry. If any disputed issues remain unresolved after Owner's response, Contractor shall timely submit a Claim pursuant to Section 4.5.

For any withhold amount based on an estimate where the actual amount later becomes known and certain, no later than the final accounting for the Contract the Owner will release any amount withheld over that certain and known amount. If the certain and known amount exceeds the amount previously withheld, Owner may withhold additional amounts from Contractor to cover

the excess amount. If available funds are not sufficient, Contractor shall pay Owner the difference.

#### **9.5.2 PAYMENT AFTER CURE**

When the Contractor removes or cures the grounds for withholding amounts, payment shall be made for amounts withheld because of them. No interest shall be paid on any retainage or amounts withheld due to the failure of the Contractor to perform in accordance with the terms and conditions of the Contract Documents.

#### **9.5.3 OVERPAYMENT AND/OR FAILURE TO WITHHOLD**

Neither Owner's overpayment to Contractor, nor Owner's failure to withhold an amount from payment that Owner had the right to withhold, shall constitute a waiver by Owner of its rights to withhold those amounts from future payments to Contractor or to otherwise pursue recovery of those amounts from Contractor.

### **9.6 PROGRESS PAYMENTS**

#### **9.6.1 PAYMENTS TO CONTRACTOR**

Unless otherwise stated in the Contract Documents, within thirty (30) days after receipt of an undisputed and properly submitted Application for Payment, Contractor shall be paid a sum equal to ninety-five percent (95%) of the undisputed value of the Work performed up to the last day of the previous month, less the aggregate of previous payments; and Owner shall retain the other five percent (5%) of the undisputed value of the Work. The value of the Work completed shall be an estimate only, no inaccuracy or error in said estimate shall operate to release the Contractor, or any bondsman, from damages arising from such Work or from enforcing each and every provision of this Contract, and the Owner shall have the right subsequently to correct any error made in any estimate for payment. Contractor shall base an Application for Payment only on the original Contract Sum plus any fully executed and Board-approved Change Orders. Contractor shall not include Notices of Potential Claims, CORs, Claims or disputed amounts

The Contractor shall not be entitled to have any payment requests processed, or be entitled to have any payment made for work performed, so long as any lawful or proper direction given by the Owner concerning the Work, or any portion thereof, remains uncomplished with. Payment shall not be a waiver of any such direction.

#### **9.6.2 PAYMENTS TO SUBCONTRACTORS**

No later than ten (10) days after receipt of payment from Owner, pursuant to Business and Professions Code section 7108.5, the Contractor shall pay to each Subcontractor, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of such Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor

to make payments to Sub-subcontractors in a similar manner.

#### **9.6.3 PERCENTAGE OF COMPLETION OR PAYMENT INFORMATION**

The Owner will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of Completion or amounts applied for by the Contractor, and action taken thereon by the Owner, on account of portions of the Work done by such Subcontractor.

#### **9.6.4 NO OBLIGATION OF OWNER FOR SUBCONTRACTOR PAYMENT**

The Owner shall have no obligation to pay, or to see to the payment of, money to a Subcontractor except as may otherwise be required by law.

#### **9.6.5 PAYMENT TO SUPPLIERS**

Payment to material or equipment suppliers shall be treated in a manner similar to that provided in paragraphs 9.6.2, 9.6.3 and 9.6.4.

#### **9.6.6 PAYMENT NOT CONSTITUTING APPROVAL OR ACCEPTANCE**

An accepted Application for Payment, issuance of a Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Work by the Owner shall not constitute acceptance or approval of any portion of the Work, especially any work not in accordance with the Contract Documents.

#### **9.6.7 JOINT CHECKS**

Owner shall have the right, if necessary for the protection of the Owner, to issue joint checks made payable to the Contractor and Subcontractors and/or material or equipment suppliers. The joint check payees shall be responsible for the allocation and disbursement of funds included as part of any such joint payment. However, Owner has no duty to issue joint checks. In no event shall any joint check payment be construed to create any contract between the Owner and a Subcontractor of any tier, any obligation from the Owner to such Subcontractor, or rights in such Subcontractor against the Owner.

### **9.7 COMPLETION OF THE WORK**

#### **9.7.1 CLOSE-OUT PROCEDURES**

When the Contractor considers that the Work is Complete and submits a written notice to Owner or Construction Manager requesting an inspection of the Work, the Owner shall review the Work and prepare and submit to the Contractor a comprehensive list of items to be completed or corrected (the "Punch List"). The Punch List shall include all outstanding obligations of Contractor, including training, start-up, testing, and submission to Owner of all required documentation (e.g., written guarantees, warranties, invoices, as-built drawings, manuals, bonds, and the documents described in Section 9.3 and 9.9). The Contractor and/or its Subcontractors

shall proceed promptly to complete and correct items on the Punch List. Failure to include an item on the Punch List does not alter the responsibility of the Contractor to Complete all Work (including the omitted item) in accordance with the Contract Documents, and to Complete or correct the Work so long as the statute of limitations (or repose) has not run.

When the Contractor believes the Punch List Work is complete and in accordance with the Contract Documents, it shall then submit a request for an additional inspection by the Owner to determine Completion. Owner shall again inspect the Work and inform the Contractor of any items that not complete or correct. Contractor shall promptly complete or correct items until no items remain.

After the Work, including all Punch List Work, is inspected and informally deemed by the Owner to be Complete, the Owner's governing body may formally accept the Work as Complete at a meeting of the governing body. Warranties required by the Contract Documents shall commence on the date of Contractor's Completion of the Work see Sections 3.5, 12.2.5 and 12.2.6).

#### **9.7.2 COSTS OF MULTIPLE INSPECTIONS**

More than two (2) requests by Contractor to make inspections to confirm Completion as required under paragraph 9.7.1 shall be considered an additional service of Owner, and all subsequent costs will be invoiced to Contractor and withheld from remaining payments.

#### **9.8 PARTIAL OCCUPANCY OR USE**

The Owner may occupy or use any completed, or partially completed, portion of the Work at any stage prior to acceptance, or prior to Completion if there is no formal acceptance. Occupancy or use of any portion of the Work, or the whole Work, shall not constitute approval or acceptance of it, nor shall such occupancy or use relieve Contractor of any of its obligations under the Contract Documents regarding that portion of, or the whole, Work.

The Owner and the Contractor shall agree in writing to the responsibilities assigned to each of them for payments, security, maintenance, heat, utilities, damage to the Work, insurance, the period for correction of the Work, and the commencement of warranties required by the Contract Documents. When the Contractor considers a portion complete, the Contractor may request an inspection of that portion and preparation of a Punch List by the Owner, or Construction Manager, for that portion, as set forth for the entire Work under paragraph 9.7.1; however, such inspection and Punch List shall not act as any form of approval or acceptance of that portion of the Work, or of any Work not complying with the requirements of the Contract, and that portion shall be subject to subsequent inspections and Punch Lists.

Immediately prior to such partial occupancy or use, the Owner, the Architect, Construction Manager and the Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

## 9.9 FINAL PROGRESS PAYMENT AND RELEASE OF RETENTION

### 9.9.1 FINAL APPLICATION FOR PROGRESS PAYMENT

When, pursuant to Section 9.7.1, the Owner finds all of the Work is Completed in accordance with the Contract Documents, it shall so notify Contractor, who shall then submit to the Owner its final Application for Payment.

Upon receipt and approval of such final Application for Payment, the Owner shall issue a final Certificate of Payment, based on its knowledge, information, and belief, and on the basis of its observations, inspections, and all other data accumulated or received by the Owner in connection with the Work, that such Work has been Completed in accordance with the Contract Documents. If required to do so under Labor Code section 1773.3, subd.(d), Owner shall withhold final payment.

### 9.9.2 PROCEDURES FOR APPLICATION FOR FINAL PROGRESS PAYMENT

The Application for Final Progress Payment pursuant to Section 9.9.1 shall be accompanied by the same details as set forth in paragraph 9.3, and in addition, the following conditions must be fulfilled:

- A. The Work shall be Complete, and the Contractor shall have made, or caused to have been made, all corrections to the Work which are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and ordinances, or to fulfill any of the orders or directions of Owner required under the Contract.
- B. Each Subcontractor shall have delivered to the Contractor all written guarantees, warranties, applications, and bonds required by the Contract Documents for its portion of the Work, and Contractor delivered them to the Owner.
- C. The Contractor shall deliver to the Owner (i) reproducible final Record Drawings and Annotated Specifications showing the Contractor's Work "as built," with the Contractor's certification of the accuracy of the Record Drawings and Annotated Specifications, (ii) all warranties and guarantees, (iii) operation and maintenance instructions, manuals and materials for equipment and apparatus, and (iv) all other documents required by the Contract Documents.
- D. Contractor shall provide extensive assistance in the utilization of any equipment or system such as initial start-up or testing, adjusting and balancing, preparation of operation and maintenance manuals and training personnel for operation and maintenance.

Acceptance of Final Progress Payment shall constitute a complete waiver of Claims except for those previously identified in writing and identified by that payee as unsettled at the time of Final Progress Payment.

### 9.9.3 **RELEASE OF RETAINAGE**

Owner may withhold from release or payment of retainage (or “retention”) up to 150% of disputed amounts listed in Section 9.5. If retainage is held in an escrow account pursuant to an escrow agreement under Public Contract Code section 22300 (see Section 9.10) and Owner withholds from release of retainage based on a breach of the Contract, or other default, by Contractor, Owner may withdraw the withheld retainage from the escrow account. Owner shall release the undisputed retainage within sixty (60) days after Completion of the Project. For this purpose, “Completion” is defined in Public Contract Code section 7107(c). No interest shall be paid on any retainage, or on any amounts withheld, except as provided to the contrary in any Escrow Agreement and General Conditions between the Owner and the Contractor under Public Contract Code section 22300.

### 9.10 **SUBSTITUTION OF SECURITIES**

In accordance with section 22300 of the Public Contract Code, the Owner will permit the substitution of securities for any retention monies withheld by the Owner to ensure performance under the Contract. At the request and expense of the Contractor, securities equivalent to the amount withheld shall be deposited with the Owner, or with a state or federally chartered bank as the escrow agent, who shall then pay such retention monies to the Contractor. Upon Completion of the Contract, the securities shall be returned to the Contractor if Owner has no basis to withhold under the Contract Documents.

Securities eligible for investment under this section shall include those listed in Government Code section 16430, bank or savings and loan certificates of deposit, interest-bearing, demand-deposit accounts, standby letters of credit, or any other security mutually agreed to by the Contractor and the Owner.

The Contractor shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

Any escrow agreement entered by Owner and Contractor pursuant to Public Contract Code section 22300 shall be substantially similar to the form set forth in Public Contract Code section 22300.

## **ARTICLE 10**

### **PROTECTION OF PERSONS AND PROPERTY**

#### **10.1 SAFETY PRECAUTIONS AND PROGRAMS**

##### **10.1.1 CONTRACTOR RESPONSIBILITY**

The Contractor shall have responsibility for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. Contractor shall designate a responsible member of its organization whose duties shall include loss and accident prevention, and who shall have the responsibility and full authority to enforce the program. This person shall attend meetings with the representatives of the various Subcontractors employed to ensure that all employees understand and comply with the programs. Contractor will ensure that his employees and Subcontractors cooperate and coordinate safety matters with other contractors on the Project to form a joint safety effort.

##### **10.1.2 SUBCONTRACTOR RESPONSIBILITY**

Subcontractors have the responsibility for participating in, and enforcing, the safety and loss prevention programs established by the Contractor, which will cover all Work performed by the Contractor and its Subcontractors. Each Subcontractor shall designate a responsible member of its organization whose duties shall include loss and accident prevention, and who shall have the responsibility and full authority to enforce the program. This person shall attend meetings with the representatives of the various Subcontractors employed to ensure that all employees understand and comply with the programs.

##### **10.1.3 COOPERATION**

All Subcontractors and material or equipment suppliers, shall cooperate fully with Contractor, the Owner, and all insurance carriers and loss prevention engineers.

##### **10.1.4 ACCIDENT REPORTS**

Subcontractors shall promptly report in writing to the Contractor all accidents whatsoever arising out of, or in connection with, the performance of the Work, whether on or off the Site, which caused death, personal injury, or property damage, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported immediately by telephone or messenger. Contractor shall thereafter promptly report the facts in writing to the Owner and Construction Manager giving full details of the accident.

### 10.1.5 **FIRST-AID SUPPLIES AT SITE**

The Contractor will provide and maintain at the Site first-aid supplies for minor injuries.

## 10.2 **SAFETY OF PERSONS AND PROPERTY**

### 10.2.1 **THE CONTRACTOR**

The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury, or loss to:

- A. Employees on the Work and other persons who may be affected thereby;
- B. The Work, material, equipment, tools, construction equipment, and machinery to be incorporated therein or necessary for the proper execution and Completion of the Work, whether in storage on or off the Site, under the care, custody, or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and
- C. Other property at the Site or adjacent thereto such as trees, shrubs, lawns, walks, pavement, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

### 10.2.2 **CONTRACTOR NOTICES**

The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on the safety of persons or property or their protection from damage, injury, or loss.

### 10.2.3 **SAFETY BARRIERS AND SAFEGUARDS**

Contractor shall take, and require Subcontractors to take, all necessary precautions for the safety of workers and shall comply with all applicable federal, state, local and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to the work site and to provide a safe and healthful place of employment. Contractor shall furnish, erect, properly maintain at all times, and remove as required by other scheduled activities, as directed by Construction Manager or Architect or as required by the conditions and progress of work, all necessary safety devices, safeguards, construction canopies, signs, audible devices for protection of the blind, safety rails, belts and nets, barriers, lights, and watchmen for protection of workers and the public and shall post danger signs warning against hazards created by such features in the course of construction, as it relates to the Contractor's scope of work. Contractor shall designate a responsible employee, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety requirements, and to protect the life, safety and health of workers. Contractor shall report the name and position of the person so designated in writing to Owner. Contractor shall correct any violations of safety laws, standards, orders, rules, or regulations. Upon the issuance of a citation



or notice of violation by the Division of Occupational Safety and Health, the Contractor at Contractor's expense shall correct such violation immediately

#### **10.2.4 USE OR STORAGE OF HAZARDOUS MATERIAL**

When use or storage of explosives, other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel. The Contractor shall notify the Owner and Construction Manager any time that explosives or hazardous materials are expected to be stored on Site. Location of storage shall be coordinated with the Owner and local fire authorities.

#### **10.2.5 FINGERPRINTING**

At its own expense, Contractor shall comply with all fingerprinting requirements under law and Contract, including but not limited to the requirements of Education Code section 45125.2 and the Independent Contractor Student Contact Form which is a part of the Contract. Contractor shall hold harmless, defend and indemnify the Owner under section 3.16, for any costs, including attorneys' fees, Owner incurs from Contractor's failure to comply.

### **10.3 PROTECTION OF WORK AND PROPERTY**

#### **10.3.1 PROTECTION OF WORK**

The Contractor and Subcontractors shall continuously protect the Work, the Owner's property, and the property of others, from damage, injury, or loss until the earlier of formal acceptance of the Work, or Completion of the Work. The Contractor and Subcontractors shall make good any such damage, injury, or loss, except such as may be solely due to, or caused by, agents or employees of the Owner.

#### **10.3.2 PROTECTION FOR ELEMENTS**

The Contractor will remove all mud, water, or other elements as may be required for the proper protection and prosecution of its Work. The Contractor shall at all times provide heat, coverings, and enclosures necessary to maintain adequate protection against weather so as to preserve the Work, materials, equipment, apparatus, and fixtures free from injury or damage.

#### **10.3.3 SHORING AND STRUCTURAL LOADING**

The Contractor shall not impose structural loading upon any part of the Work under construction or upon existing construction on or adjacent to the Site in excess of safe limits, or loading such as to result in damage to the structural, architectural, mechanical, electrical, or other components of the Work. The design of all temporary construction equipment and appliances used in construction of the Work and not a permanent part thereof, including, without limitation, hoisting equipment, cribbing, shoring, and temporary bracing of structural steel, is the sole responsibility of the Contractor. All such items shall conform to the requirements of governing codes and all laws, ordinances, rules, regulations, and orders of all authorities having jurisdiction. The

Contractor shall take special precautions, such as shoring of masonry walls and temporary tie bracing of structural steel work, to prevent possible wind damage during construction of the Work. The installation of such bracing or shoring shall not damage or cause damage to the Work in place or the Work installed by others. Any damage which does occur shall be promptly repaired by the Contractor at no cost to the Owner.

#### 10.3.4 CONFORMANCE WITHIN ESTABLISHED LIMITS

The Contractor and Subcontractors shall confine their construction equipment, the storage of materials, and the operations of workers to the limits indicated by laws, ordinances, permits, and the limits established by the Owner, and shall not unreasonably encumber the premises with construction equipment or materials.

#### 10.3.5 SUBCONTRACTOR ENFORCEMENT OF RULES

Subcontractors shall enforce the Owner's and the Contractor's instructions, laws, and regulations regarding signs, advertisements, fires, smoking, the presence of liquor, and the presence of firearms by any person at the Site.

#### 10.3.6 SITE ACCESS

The Contractor and the Subcontractors shall use only those ingress and egress routes designated by the Owner, observe the boundaries of the Site designated by the Owner, park only in those areas designated by the Owner, which areas may be on or off the Site, and comply with any parking control program established by the Owner such as furnishing license plate information and placing identifying stickers on vehicles.

#### 10.3.7 PROTECTION OF MATERIALS

The Contractor and the Subcontractors shall receive, count, inspect for damage, record, store, and protect construction materials for the Work and Subcontractors shall promptly send to the Contractor evidence of receipt of such materials, indicating thereon any shortage, change, or damage (failure to so note shall constitute acceptance by the Subcontractor of financial responsibility for any shortage).

### 10.4 EMERGENCIES

#### 10.4.1 EMERGENCY ACTION

In an emergency affecting the safety of persons or property, the Contractor shall take any action necessary, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional money or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Section 4.5 and Article 7.

#### 10.4.2 ACCIDENT REPORTS

The Contractor shall promptly report in writing to the Owner and Construction Manager all accidents arising out of or in connection with the Work, which caused death, personal injury, or property damage, giving full details and statements of any witnesses. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported immediately by telephone or messenger to the Owner.

## **10.5 HAZARDOUS MATERIALS**

### **10.5.1 DISCOVERY OF HAZARDOUS MATERIALS**

In the event the Contractor encounters or suspects the presence on the Site material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), or any other material defined as being hazardous by section 25249.5 of the California Health and Safety Code, which (a) has not been rendered harmless, and (b) the handling or removal of which is not within the scope of the Work, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner, and Construction Manager and the Architect in writing, whether such material was generated by the Contractor, another contractor or the Owner. The Work in the affected area shall not thereafter be resumed, except by written agreement of the Owner and the Contractor, if in fact the material is asbestos, polychlorinated biphenyl (PCB), or other hazardous material, and has not been rendered harmless. The Work in the affected area shall be resumed only in the absence of asbestos, polychlorinated biphenyl (PCB), or other hazardous material, or when it has been rendered harmless by written agreement of the Owner and the Contractor.

### **10.5.2 HAZARDOUS MATERIAL WORK LIMITATIONS**

In the event that the presence of hazardous materials is suspected or discovered on the Site, the Owner shall retain an independent testing laboratory to determine the nature of the material encountered and whether corrective measures or remedial action is required. The Contractor shall not be required pursuant to Article 7 to perform without consent any Work in the affected area of the Site relating to asbestos, polychlorinated biphenyl (PCB), or other hazardous material, until any known or suspected hazardous material has been removed, or rendered harmless, or determined to be harmless by Owner, as certified by an independent testing laboratory and/or approved by the appropriate government agency.

### **10.5.3 INDEMNIFICATION BY OWNER FOR HAZARDOUS MATERIAL NOT CAUSED BY CONTRACTOR**

In the event the presence of hazardous materials on the Site is not caused by the Contractor, Owner shall pay for all costs of testing and remediation, if any, and shall compensate Contractor for any delay or additional costs incurred in accordance with the applicable provisions of Articles 7 and 8 herein. Owner shall defend, indemnify and hold harmless the Contractor and its agents, officers, directors and employees from and against any and all claims, damages, losses, costs and expenses incurred in connection with or arising out of, or relating to, the performance of the Work in the area affected by the hazardous material, except to the extent the claims, damages, losses, costs, or expenses were caused by Contractor's active negligence, sole negligence or willful misconduct.. By providing this indemnification, Owner does not waive any immunities.

#### **10.5.4 NATURALLY OCCURRING ASBESTOS**

If the Site is found to contain naturally occurring asbestos (asbestos naturally contained in rocks which can become airborne when released “NOA”), in addition to complying with applicable provisions in sections 10.5.1-10.5.3 above, Contractor shall comply with, and be solely responsible for, all applicable NOA requirements of the California Air Resources Board (CARB), California Department of Industrial Relations, California Division of Occupational Safety and Health (Cal/OSHA), any local air quality management district with jurisdiction over the Site, the County, and all other applicable federal, State and local governmental entities. This compliance and responsibility includes, but is not limited to, dust control mitigation measures and a monitoring plan.

#### **10.5.5 INDEMNIFICATION BY CONTRACTOR FOR HAZARDOUS MATERIAL CAUSED BY CONTRACTOR**

In the event the presence of hazardous materials on the Site is caused by Contractor, Subcontractors, materialmen or suppliers, the Contractor shall pay for all costs of testing and remediation, if any, and shall compensate the Owner for any additional costs incurred as a result of the generation of hazardous material on the Project Site. In addition, the Contractor shall defend, indemnify and hold harmless Owner and its agents, officers, and employees from and against any and all claims, damages, losses, costs and expenses incurred in connection with, arising out of, or relating to, the presence of hazardous material on the Site, except to the extent the claims, damages, losses, costs, or expenses were caused by Owner’s active negligence, sole negligence or willful misconduct..

#### **10.5.6 TERMS OF HAZARDOUS MATERIAL PROVISION**

The terms of this Hazardous Material provision shall survive Completion of the Work and/or any termination of this Contract.

#### **10.5.7 ARCHEOLOGICAL MATERIALS**

In the event the Contractor encounters or reasonably suspects the presence on the Site of archeological materials, the Contractor shall immediately stop Work in the area affected and report the condition to the Owner and the Architect in writing. The Work in the affected area shall not thereafter be resumed, except after Contractor’s receipt of written notice from the Owner.

### **ARTICLE 11**

#### **INSURANCE AND BONDS**

##### **11.1. CONTRACTOR'S LIABILITY INSURANCE**

##### **11.1.1 LIABILITY INSURANCE REQUIREMENTS**

11.1.1 By the earlier of the deadline set forth in the Instructions to Bidders or, the commencement of the Work, and within limits acceptable to the Owner, the Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in California as admitted carriers with a financial rating of at least A+, Class XII status as rated in the most recent edition of Best's Insurance Reports such commercial general liability insurance per occurrence for bodily injury, personal injury and property damage as set forth in the Agreement and automobile liability insurance per accident for bodily injury and property damage combined single limit as set forth in the Agreement as will protect the Contractor from claims set forth below, which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations are by the Contractor, by a Subcontractor, by Sub-subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- 11.1.1.1 claims for damages because of bodily injury (including emotional distress), sickness, disease, or death of any person other than the Contractor's employees. This coverage shall be provided in a form at least as broad as Insurance Services Office (ISO) Form CG 0001 11188;
- 11.1.1.2 claims for damages arising from personal or advertising injury in a form at least as broad as ISO Form CG 0001 11188;
- 11.1.1.3 claims for damages because of injury or destruction of tangible property, including loss of use resulting therefrom, arising from operations under the Contract Documents; and
- 11.1.1.4 claims for damages because of bodily injury, death of a person, or property damage arising out of the ownership, maintenance, or use of a motor vehicle, all mobile equipment, and vehicles moving under their own power and engaged in the Work; and
- 11.1.1.5 claims involving blanket contractual liability applicable to the Contractor's obligations under the Contract Documents, including liability assumed by and the indemnity and defense obligations of the Contractor and the Subcontractors; and
- 11.1.1.6 claims involving Completed Operations, Independent Contractors' coverage, and Broad Form property damage, without any exclusions for collapse, explosion, demolition, underground coverage, and excavating. (XCU)

If commercial general liability insurance or another insurance form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the project location (with the ISO CG 2501 or insurer's equivalent endorsement provided to the Owner) or the general aggregate limit shall be twice the required occurrence limit.

Any deductible or self-insured retention must be declared to and approved by the Owner. At the option of the Owner, either the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the Owner, its Board of Trustees, members of its Board of Trustees, officers, employees, agents and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses.

#### 11.1.2 **SUBCONTRACTOR INSURANCE REQUIREMENTS**

The Contractor shall require its Subcontractors and any Sub-subcontractors to take out and maintain similar public liability insurance and property damage insurance, in a company or companies lawfully authorized to do business in California as admitted carriers with a financial rating of at least A+, Class XII status as rated in the most recent edition of Best's Insurance Reports, in like amounts and scope of coverage.

#### 11.1.3 **OWNER'S INSURANCE**

The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance. Optionally, the Owner may purchase and maintain other insurance for self protection against claims which may arise from operations under the Contract. The Contractor shall not be responsible for purchasing and maintaining this optional Owner's liability insurance unless specifically required by the Contract Documents.

#### 11.1.4 **ADDITIONAL INSURED ENDORSEMENT REQUIREMENTS**

The Contractor shall name, on any policy of insurance, the Owner, Construction Manager and the Architect as additional insureds. Subcontractors shall name the Contractor, the Owner, Construction Manager and the Architect as additional insureds. The Additional Insured Endorsement included on all such insurance policies shall state that coverage is afforded the additional insured with respect to claims arising out of operations performed by or on behalf of the insured. If the additional insureds have other insurance which is applicable to the loss, such other insurance shall be excess to any policy of insurance required herein. The amount of the insurer's liability shall not be reduced by the existence of such other insurance.

#### 11.1.5 **WORKERS' COMPENSATION INSURANCE**

During the term of this Contract, the Contractor shall provide workers' compensation insurance for all of the Contractor's employees engaged in Work under this Contract on or at the Site of the Project and, in case any of the Contractor's work is sublet, the Contractor shall require the Subcontractor to provide workers' compensation insurance for all the Subcontractor's employees engaged in Work under the subcontract. Any class of employee or employees not covered by a Subcontractor's insurance shall be covered by the Contractor's insurance. In case any class of employees engaged in Work under this Contract on or at the Site of the Project is not protected under the Workers' Compensation laws, the Contractor shall provide or cause a Subcontractor to provide adequate insurance coverage for the protection of those employees not otherwise

protected. The Contractor shall file with the Owner certificates of insurance as required under this Article and in compliance with Labor Code section 3700.

If the contractor fails to maintain such insurance, the Owner may take out compensation insurance which the Owner might be liable to pay under the provisions of the Act by reason of an employee of the Contractor being injured or killed, and withhold from progress payments and/or retention the amount of the premium for such insurance.

#### **11.1.6 BUILDER'S RISK/"ALL RISK" INSURANCE**

##### **11.1.6.1 COURSE-OF-CONSTRUCTION INSURANCE REQUIREMENTS**

Owner will maintain Builder's Risk/Course-of-Construction insurance satisfactory to the Owner. Contractor shall comply with all requirements of the Owner's surety that may be imposed as a condition of coverage.

The Contractor shall submit to the Owner for its approval all items deemed to be uninsurable under the Builder's Risk/Course-of Construction insurance.

##### **11.1.7 CONSENT OF INSURER FOR PARTIAL OCCUPANCY OR USE**

Partial occupancy or use in accordance with the Contract Documents shall not commence until the insurance company providing property insurance has consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company and shall, without mutual consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of the insurance.

##### **11.1.8 FIRE INSURANCE**

Owner will maintain fire insurance on all Work included under the Contract Documents. Contractor shall comply with all requirements of the Owner's surety that may be imposed as a condition of coverage.

##### **11.1.9 OTHER INSURANCE**

The Contractor shall provide all other insurance required to be maintained under applicable laws, ordinances, rules, and regulations.

##### **11.1.10 PROOF OF CARRIAGE OF INSURANCE**

The Contractor shall not commence Work nor shall it allow any Subcontractor to commence Work under this Contract until all required insurance, certificates, and an Additional Insured Endorsement and Declarations Page have been obtained and delivered in duplicate to the Owner for approval subject to the following requirements:

- (a) Certificates and insurance policies shall include the following clause:

This policy shall not be non-renewed, canceled, or reduced in required limits of liability or amounts of insurance until notice has been mailed to the Owner. Date of cancellation or reduction may not be less than thirty (30) days after the date of mailing notice.

- (b) Certificates of insurance shall state in particular those insured, the extent of insurance, location and operation to which the insurance applies, the expiration date, and cancellation and reduction notices.
- (c) Certificates of insurance shall clearly state that the Owner and the Architect are named as additional insureds under the policy described and that such insurance policy shall be primary to any insurance or self-insurance maintained by Owner and any other insurance carried by the Owner with respect to the matters covered by such policy shall be excess and non-contributing.
- (d) The Contractor and its Subcontractors shall produce a certified copy of any insurance policy required under this Section upon written request of the Owner.

#### 11.1.11 COMPLIANCE

In the event of the failure of any contractor to furnish and maintain any insurance required by this Article, the Contractor shall be in default under the Contract. Compliance by Contractor with the requirement to carry insurance and furnish certificates, policies, Additional Insured Endorsement and Declarations Page evidencing the same shall not relieve the Contractor from liability assumed under any provision of the Contract Documents, including, without limitation, the obligation to defend and indemnify the Owner and the Architect.

### 11.2 PERFORMANCE AND PAYMENT BONDS

#### 11.2.1 BOND REQUIREMENTS

Unless otherwise specified in the Contract Documents, prior to commencing any portion of the Work, the Contractor shall apply for and furnish Owner separate payment and performance bonds for its portion of the Work which shall cover 100% faithful performance of and payment of all obligations arising under the Contract Documents and/or guaranteeing the payment in full of all claims for labor performed and materials supplied for the Work. All bonds shall be provided by a corporate surety authorized and admitted to transact business in California. All bonds shall be submitted on the Owner's approved form.



To the extent, if any, that the Contract Sum is increased in accordance with the Contract Documents, the Contractor shall cause the amount of the bonds to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to the Owner. To the extent available, the bonds shall further provide that no change or alteration of the Contract Documents (including, without limitation, an increase in the Contract Sum, as referred to above), extensions of time, or modifications of the time, terms, or conditions of payment to the Contractor will release the surety. If the Contractor fails to furnish the required bond, the Owner may terminate the Contract for cause.

#### **11.2.2 SURETY QUALIFICATION**

Only bonds executed by admitted Surety insurers as defined in Code of Civil Procedure section 995.120 shall be accepted. The surety insurers must, unless otherwise agreed to by Owner in writing, at the time of issuance of the bonds, have a rating not lower than "A-" as rated by A.M. Best Company, Inc. or other independent rating companies. Owner reserves the right to approve or reject the surety insurers selected by Contractor and to require Contractor to obtain bonds from surety insurers satisfactory to the Owner.

### **ARTICLE 12**

#### **UNCOVERING AND CORRECTION OF WORK**

##### **12.1 UNCOVERING OF WORK**

###### **12.1.1 UNCOVERING WORK FOR REQUIRED INSPECTIONS**

If a portion of the Work is covered contrary to the Owner's request or to requirements specifically expressed in the Contract Documents, Contractor must, if required in writing by the Owner, uncover it for the Owner's observation and replace the removed work at the Contractor's expense without change in the Contract Sum or Time.

###### **12.1.2 COSTS FOR INSPECTIONS NOT REQUIRED**

If a portion of the Work has been covered which the Owner has not specifically requested to observe prior to its being covered, the Owner may request to see such work, and it shall be uncovered by the Contractor. If such work is in accordance with the Contract Documents, costs of uncover and replacement shall, by appropriate Change Order, be paid by the Owner. If such work is not in accordance with Contract Documents, the Contractor shall pay such costs, unless the condition was caused by the Owner or a separate contractor, in which event the Owner shall be responsible for payment of such costs to the Contractor.

##### **12.2 CORRECTION OF WORK; WARRANTY**

###### **12.2.1 CORRECTION OF REJECTED WORK**

The Contractor shall promptly correct the work rejected by the Owner for failing to conform to

the requirements of the Contract Documents, until the statutes of limitation (or repose) and all warranties have run, as applicable, and whether or not fabricated, installed or completed. The Contractor shall bear costs of correcting the rejected work, including additional testing, inspections, and compensation for the Owner's expenses and costs incurred.

#### **12.2.2 REMOVAL OF NONCONFORMING WORK**

The Contractor shall remove from the Site portions of the Work which are not in accordance with the requirements of the Contract Documents and are not corrected by the Contractor or accepted or approved by the Owner.

#### **12.2.3 OWNER'S RIGHTS IF CONTRACTOR FAILS TO CORRECT**

If the Contractor fails to correct nonconforming work within a reasonable time, the Owner may correct it in accordance with Section 2.4. As part of Owner's correction of the work, the Owner may remove any portion of the nonconforming Work and store any salvageable materials or equipment at the Contractor's expense. If the Contractor does not pay costs of such removal and storage within ten (10) days after written notice, the Owner may upon ten (10) additional days written notice sell such material or equipment at auction or at private sale and shall account for the proceeds thereof, after deducting costs and damages that should have been borne by the Contractor, including compensation for the Architect's and other professionals and representatives' services and expenses, made necessary thereby. If such proceeds of sale do not cover costs which the Contractor should have borne, the Contractor shall be invoiced for the deficiency or Owner may withhold such costs from payment pursuant to Section 9.5. If progress payments or retention then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the Owner.

#### **12.2.4 COST OF CORRECTING THE WORK**

The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or separate contractors, whether completed or partially completed, caused by the Contractor's correction or removal of the nonconforming work.

#### **12.2.5 WARRANTY CORRECTIONS (INCLUDES REPLACEMENT)**

Pursuant to the warranty in Section 3.5, if within one (1) year after the Completion of the Work or within a longer time period for an applicable special warranty or guarantee required by the Contract Documents, any of the Work does not comply with the Contract Documents, the Contractor shall correct it after receipt of Owner's written notice to do so, unless the Owner has previously waived in writing such right to demand correction. Contractor shall correct the work promptly, and passage of the applicable warranty period shall not release Contractor from its obligation to correct the Work if Owner provided the written notice within the applicable warranty period. Contractor's obligation to correct the warranty item continues until the correction is made. After the correction is made to Owner's satisfaction, a new warranty period of the same length as the original warranty period shall run on the corrected work. The

obligations under this paragraph 12.2.5 shall survive acceptance of the Work under the Contract and termination of the Contract.

#### **12.2.6 NO TIME LIMITATION**

Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the time period of one (1) year as described in Sections 3.5 and 12.2.5 relates only to the specific warranty obligation of the Contractor to correct the Work after the date of commencement of warranties, and has, for example, no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, or to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

#### **12.3 NONCONFORMING WORK AND WITHHOLDING THE VALUE OF IT**

If it is found at any time before Completion of the Work that the Contractor has varied from the Contract Documents in materials, quality, form, finish, or in the amount or value of the materials or labor used, the Owner may, in addition to other remedies in the Contract Documents or under law and as allowed by law, accept the improper Work. The Owner may withhold from any amount due or to become due Contractor that sum of money equivalent to the difference in value between the Work performed and that called for by the Drawings and Specifications. The Owner shall determine such difference in value. No structural related work shall be accepted that is not in conformance with the Contract Documents.

### **ARTICLE 13**

#### **MISCELLANEOUS PROVISIONS**

##### **13.1 GOVERNING LAW**

The Contract shall be governed by the law of the place where the Project is located.

##### **13.2 SUCCESSORS AND ASSIGNS**

The Owner and the Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole or in part without written consent of the other. If either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

##### **13.3 WRITTEN NOTICE**

In the absence of specific notice requirements in the Contract Documents, written notice shall be

deemed to have been duly served if delivered in person to the individual, member of the firm or entity, or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified or overnight mail to the last business address known to the party giving notice. Owner shall, at Contractor's cost, timely notify Contractor of Owner's receipt of any third party claims relating to the Contract pursuant to Public Contract Code section 9201.

#### **13.4 RIGHTS AND REMEDIES**

##### **13.4.1 DUTIES AND OBLIGATIONS CUMULATIVE**

Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

##### **13.4.2 NO WAIVER**

No action or failure to act by the Inspector of Record, Owner, Construction Manager or Architect shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in a written amendment to the Contract.

#### **13.5 TESTS AND INSPECTIONS**

##### **13.5.1 COMPLIANCE**

Tests, inspections, and approvals of portions of the Work required by the Contract Documents will comply with Title 24, and with all other laws, ordinances, rules, regulations, or orders of public authorities having jurisdiction.

##### **13.5.2 INDEPENDENT TESTING LABORATORY**

The Owner will select and pay an independent testing laboratory to conduct all tests and inspections, including shipping or transportation costs or expenses (mileage and hours). Selection of the materials required to be tested shall be made by the laboratory and not by the Contractor. However, if Contractor requests that the Owner use a different testing laboratory and Owner chooses to approve such request, Contractor shall reimburse the Owner for any additional shipping or transportation costs or expenses (mileage and hours). Owner may invoice such costs or expenses to the Contractor or withhold such costs or expenses from progress payments and/or retention.

##### **13.5.3 ADVANCE NOTICE TO INSPECTOR OF RECORD**

The Contractor shall notify the Inspector of Record and Construction Manager a sufficient time in advance of its readiness for required observation or inspection so that the Inspector of Record and Construction Manager may arrange for same. The Contractor shall notify the Inspector of Record and Construction Manager a sufficient time in advance of the manufacture of material to

be supplied under the Contract Documents which must, by terms of the Contract Documents, be tested in order that the Inspector of Record may arrange for the testing of the material at the source of supply.

#### **13.5.4 TESTING OFF-SITE**

Any material shipped by the Contractor from the source of supply, prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said Inspector of Record that such testing and inspection will not be required, shall not be incorporated in the Work.

#### **13.5.5 ADDITIONAL TESTING OR INSPECTION**

If the Inspector of Record, the Architect, the Owner, or public authority having jurisdiction determines that portions of the Work require additional testing, inspection, or approval not included under section 13.5.1, the Inspector of Record will, upon written authorization from the Owner, make arrangements for such additional testing, inspection, or approval. The Owner shall bear such costs except as provided in section 13.5.6.

#### **13.5.6 COSTS FOR RETESTING**

If such procedures for testing, inspection, or approval under sections 13.5.1, 13.5.2 and 13.5.5 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs arising from such failure, including those of re-testing, re-inspection, or re-approval, including, but not limited to, compensation for the Architect's services and expenses. Any such costs shall be paid by the Owner, invoiced to the Contractor, and, among other remedies, can be withheld from progress payments and/or retention.

#### **13.5.7 COSTS FOR PREMATURE TEST**

In the event the Contractor requests any test or inspection and is not completely ready for the inspection, the Contractor shall be invoiced by the Owner for all costs and expenses resulting from that testing or inspection, including, but not limited to, the Architect's fees and expenses, and the amount of the invoice can among other remedies, be withheld from progress payments and/or retention.

#### **13.5.8 TESTS OR INSPECTIONS NOT TO DELAY WORK**

Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

13.6 **[INTENTIONALLY LEFT BLANK]**

13.7 **TRENCH EXCAVATION**

13.7.1 **TRENCHES GREATER THAN FIVE FEET**

Pursuant to Labor Code section 6705, if the Contract Sum exceeds \$25,000 and involves the excavation of any trench or trenches five (5) feet or more in depth, the Contractor shall, in advance of excavation, submit to the Owner, or a registered civil or structural engineer employed by the Owner, and Construction Manager a detailed plan showing the design of shoring for protection from the hazard of caving ground during the excavation of such trench or trenches.

13.7.2 **EXCAVATION SAFETY**

If such plan varies from the Shoring System Standards established by the Construction Safety Orders, the plan shall be prepared by a registered civil or structural engineer, but in no case shall such plan be less effective than that required by the Construction Safety Orders. No excavation of such trench or trenches shall be commenced until said plan has been accepted by the Owner or by the person to whom authority to accept has been delegated by the Owner.

13.7.3 **NO TORT LIABILITY OF OWNER**

Pursuant to Labor Code section 6705, nothing in this Article shall impose tort liability upon the Owner or any of its employees.

13.7.4 **NO EXCAVATION WITHOUT PERMITS**

The Contractor shall not commence any excavation work until it has secured all necessary permits including the required CAL OSHA excavation/shoring permit. Any permits shall be prominently displayed on the Site prior to the commencement of any excavation.

13.8 **WAGE RATES**

13.8.1 **WAGE RATES**

Pursuant to the provisions of Article 2 (commencing at § 1770), Chapter 1, Part 7, Division 2, of the Labor Code, the governing board of the Owner has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this public work is to be performed for each craft, classification, or type of worker needed for this Project from the Director of Industrial Relations ("Director"). These rates are on file with the Clerk of the Owner's Governing Board, and copies will be made available to any interested party on request. The Contractor shall post a copy of such wage rates at the Site.

13.8.2 **HOLIDAY AND OVERTIME PAY**

Holiday and overtime work, when permitted by law, shall be paid for at a rate of at least one and

one-half (1½) times the above specified rate of per diem wages, unless otherwise specified. Holidays shall be defined in the Collective Bargaining Agreement applicable to each particular craft, classification, or type of worker employed.

### **13.8.3 WAGE RATES NOT AFFECTED BY SUBCONTRACTS**

The Contractor shall pay and shall cause to be paid each worker engaged in the Work not less than the general prevailing rate of per diem wages determined by the Director, regardless of any contractual relationship which may be alleged to exist between the Contractor or any Subcontractor and such workers.

### **13.8.4 CHANGE IN PREVAILING WAGE DURING BID OR CONSTRUCTION**

If during the period this bid is required to remain open, the Director of Industrial Relations determines that there has been a change in any prevailing rate of per diem wages in the locality in which this public work is to be performed, such change shall not alter the wage rates discussed in the Notice to Bidders or the Contract subsequently awarded.

### **13.8.5 FORFEITURE AND PAYMENTS**

Pursuant to Labor Code section 1775, the Contractor and any subcontractor under the Contractor shall as a penalty to the Owner, forfeit not more than Two Hundred Dollars (\$200.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing rate of per diem wages, determined by the Director, for such craft or classification in which such worker is employed for any public work done under the Agreement by the Contractor or by any Subcontractor under it. Minimum penalties shall apply, as also provided in Civil Code section 1775. The amount of the penalty shall be determined by the Labor Commissioner and shall be based on both of the following: (1) whether the failure of the contractor or subcontractor to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily corrected upon being brought to the attention of the contractor or subcontractor; and (2) whether the contractor or subcontractor has a prior record of failing to meet its prevailing wage obligations. The difference between such prevailing rate of per diem wage and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing rate of per diem wage shall be paid to each work by the Contractor or subcontractor. Labor Code section 1777.1 shall also apply.

### **13.8.6 MINIMUM WAGE RATES**

Any worker employed to perform Work on the Contract, which Work is not covered by any craft or classification listed in the general prevailing rate of per diem wages determined by the Director, shall be paid not less than the minimum rate of wages specified therein for the craft or classification which most nearly corresponds to the Work to be performed by them, and such minimum wage rate shall be retroactive to time of initial employment of such person in such craft or classification.

### 13.8.7 **PER DIEM WAGES**

Pursuant to Labor Code section 1773.1, per diem wages includes employer payments for health and welfare, pension, and vacation pay.

### 13.8.8 **POSTING OF WAGE RATES AND OTHER REQUIRED JOB SITE NOTICES**

The Contractor shall post at appropriate conspicuous points on the Site, a schedule showing all determined minimum wage rates and all authorized deductions, if any, from unpaid wages actually earned and all other required job site notices as prescribed by regulation.

## 13.9 **RECORD OF WAGES PAID: INSPECTION**

### 13.9.1 **APPLICATION OF LABOR CODE**

Pursuant to section 1776 of the Labor Code:

(a) Each Contractor and subcontractor shall keep accurate payroll records, showing the name, address, social security number, work classification, and straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by him or her in connection with the public work. Each payroll record shall contain or be verified by a written declaration that is made under penalty of perjury, stating both of the following:

- (1) The information contained in the payroll record is true and correct.
- (2) The employer has complied with the requirements of sections 1771, 1811 and 1815 for any work performed by his or her employees on the public works project.

(b) The payroll records enumerated under subdivision (a) shall be certified and shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following basis:

- (1) A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.
- (2) A certified copy of all payroll records enumerated in subdivision (a) shall be made available for inspection or furnished upon request to a representative of the Owner and the Division of Labor Standards Enforcement of the Department of Industrial Relations ("DIR") and as may be required by the Labor Commissioner under Labor Code section 1771.4). The Contractor and each subcontractor shall furnish a certified copy of all payroll records directly to the Labor Commissioner monthly or more frequently, if so



specified in the Agreement and in a format the Labor Commissioner prescribes.

- (3) A certified copy of all payroll records enumerated in subdivision (a) shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through either the body awarding the contract or the Division of Labor Standards Enforcement of the DIR. If the requested payroll records have not been provided pursuant to paragraph (2), the requesting party shall, prior to being provided the records, reimburse the costs of the preparation by the contractor, subcontractors, and the entity through which the request was made. The public may not be given access to such records at the principal office of the Contractor.

(c) Unless required as of January 1, 2015, to be furnished directly to the Labor Commissioner under Labor Code section 1771.4(a)(3), the certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement (of the DIR) or shall contain the same information as the forms provided by the division. The payroll records may consist of printouts of payroll data that are maintained as computer records, if the printouts contain the same information as the forms provided by the division and the printouts are verified in the manner specified in (a) above.

(d) A Contractor or subcontractor shall file a certified copy of the records enumerated in subdivision (a) with the entity that requested such records within 10 days after receipt of a written request.

(e) Except as provided in subdivision (f), any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the awarding body or the Division of Labor Standards Enforcement (of the DIR) shall be marked or obliterated to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor awarded the Contract or the subcontractor performing the Contract shall not be marked or obliterated. Any copy of records made available for inspection by, or furnished to, a multiemployer Taft-Hartley trust fund (29 U.S.C. Sec. 186(c)(5) that requests the records for the purposes of allocating contributions to participants shall be marked or obliterated only to prevent disclosure of an individual's full social security number, but shall provide the last four digits of the social security number. Any copy of records made available for inspection by, or furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (29 U.S.C. Sec. 175a) shall be marked or obliterated only to prevent disclosure of an individual's social security number.

(f) Notwithstanding any other provision of law, agencies that are included in the Joint Enforcement Strike Force on the Underground Economy established pursuant to Section 329 of the Unemployment Insurance Code and other law enforcement agencies investigating violations of law shall, upon request, be provided nonredacted copies of

certified payroll records. Any copies of records or certified payroll made available for inspection and furnished upon request to the public by an agency included in the Joint Enforcement Strike Force on the Underground Economy or to a law enforcement agency investigating a violation of law shall be marked or redacted to prevent disclosure of an individual's name, address, and social security number. An employer shall not be liable for damages in a civil action for any reasonable act or omission taken in good faith in compliance with this subsection.

(g) The contractor shall inform the body awarding the contract of the location of the records enumerated under subdivision (a), including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.

(h) The contractor or subcontractor has 10 days in which to comply subsequent to receipt of written notice requesting the records enumerated in subdivision (a). In the event that the Contractor or subcontractor fails to comply within the 10-day period, he or she shall, as a penalty to the state or political subdivision on whose behalf the contract is made or awarded, forfeit One Hundred Dollars (\$100.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Labor Standards Enforcement (of the DIR)], these penalties shall be withheld from progress payments then due. A contractor is not subject to a penalty assessment pursuant to this section due to the failure of the subcontractor to comply with this section.

## 13.10 **APPRENTICES**

### 13.10.1 **APPRENTICE WAGES AND DEFINITIONS**

All apprentices employed by the Contractor to perform services under the Contract shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which he or she is employed, and shall be employed only at the work of the craft or trade to which he or she is registered. Only apprentices, as defined in section 3077 of the Labor Code, who are in training under apprenticeship standards and written apprenticeship agreements under Chapter 4 (commencing with § 3070) of Division 3, are eligible to be employed under this Contract. The employment and training of each apprentice shall be in accordance with the apprenticeship standards and apprentice agreements under which he or she is training. Contractor shall pay apprentices for any preemployment activities, as set forth in Labor Code section 1777.5.

### 13.10.2 **APPRENTICE LABOR POOL**

When the Contractor to whom the Contract is awarded by the Owner, or any Subcontractor under him or her, in performing any of the Work under the Contract or subcontract, employs workers in any apprenticeable craft or trade, the Contractor and Subcontractor shall employ registered apprentice(s), as defined by the Labor Code Section 3077, during the performance of the public work project in accordance with the required one hour of work performed by an apprentice for every five hours of labor performed by a journeyman, unless covered by one of the exemptions

enumerated in Labor Code 1777.5. Contractors who are not already employing sufficient registered apprentices (as defined by Labor Code Section 3077) to comply with the one-on-five ratio must request the dispatch of required apprentices from the apprenticeship committees administering the apprenticeship standards of the craft or trade in the area of the Site of the Project, for a certificate approving the Contractor or Subcontractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected, as required by California Code of Regulations Title 8 section 230.1. However, approval as established by the joint apprenticeship committee or committees shall be subject to the approval of the Administrator of Apprenticeship. The apprenticeship committee or committees, subsequent to approving the subject Contractor or Subcontractor, shall arrange for the dispatch of apprentices to the Contractor or Subcontractor in order to comply with this section. Before commencing work, every Contractor and Subcontractor shall submit the contract award information to the applicable apprenticeship committee which shall include an estimate of journeyman hours to be performed under the Contract, the number of apprentices to be employed, and the approximate dates the apprentices will be employed. There shall be an affirmative duty upon the apprenticeship committee or committees administering the apprenticeship standards of the crafts or trade in the area of the Site of the public work, to ensure equal employment and affirmative action and apprenticeship for women and minorities. The ratio of work performed by apprentices to journeymen, shall conform to the apprenticeship standards and ratios required by the Department of Industrial Relations. (See <https://www.dir.ca.gov/das/das.html>).

#### **13.10.3 JOURNEYMAN/APPRENTICE RATIO; COMPUTATION OF HOURS**

Any ratio shall apply during any day or portion of a day when any journeyman, or the higher standard stipulated by the joint apprenticeship committee, is employed at the job Site and shall be computed on the basis of the hours worked during the day by journeymen so employed, except for the land surveyor classification. The Contractor shall employ apprentices for the number of hours computed as above before the end of the Contract. However, the Contractor shall endeavor, to the greatest extent possible, to employ apprentices during the same time period that the journeymen in the same craft or trade are employed at the job Site. Where an hourly apprenticeship ratio is not feasible for a particular craft or trade, the Division of Apprenticeship Standards, upon application of a joint apprenticeship committee, may order a minimum ratio of not less than one (1) apprentice for each five (5) journeymen in a craft or trade classification.

#### **13.10.4 JOURNEYMAN/APPRENTICE RATIO**

The Contractor or Subcontractor, if he or she is covered by this section upon the issuance of the approval certificate, or if he or she has been previously approved in the craft or trade, shall employ the number of apprentices or the ratio of apprentices to journeymen stipulated in the apprenticeship standards. Upon proper showing by the Contractor that he or she employs apprentices in the craft or trade in the state on all of his or her contracts on an annual average of not less than one (1) hour of apprentice work for every five (5) hours of labor performed by a journeyman, or in the land surveyor classification, one (1) apprentice for each five (5) journeymen, the Division of Apprenticeship Standards may grant a certificate exempting the Contractor from the 1-to-5 hourly ratio as set forth in this section. This section shall not apply to

contracts of general contractors or to contracts of specialty contractors not bidding for work through a general or prime contractor, when the contracts of general contractors or those specialty contractors involve less than Thirty Thousand Dollars (\$30,000) or twenty (20) working days. Any work performed by a journeyman in excess of eight (8) hours per day or forty (40) hours per week, shall not be used to calculate the hourly ratio required by this section.

#### 13.10.4.1 *Apprenticeable Craft or Trade.*

"Apprenticeable craft or trade" as used in this Article means a craft or trade determined as an apprenticeable occupation in accordance with the rules and regulations prescribed by the California Apprenticeship Council. The joint apprenticeship committee shall have the discretion to grant a certificate, which shall be subject to the approval of the Administrator of Apprenticeship, exempting a Contractor from the 1-to-5 ratio set forth in this Article when it finds that any one of the following conditions is met:

- A. Unemployment for the previous three-month period in the area exceeds an average of fifteen percent (15%).
- B. The number of apprentices in training in such area exceeds a ratio of 1-to-5.
- C. There is a showing that the apprenticeable craft or trade is replacing at least one-thirtieth (1/30) of its journeymen annually through the apprenticeship training, either on a statewide basis or on a local basis.
- D. Assignment of an apprentice to any work performed under this contract would create a condition which would jeopardize his or her life or the life, safety, or property of fellow employees or the public at large or if the specific task to which the apprentice is to be assigned is of such a nature that training cannot be provided by a journeyman.

#### 13.10.5 **RATIO EXEMPTION**

When exemptions are granted to an organization which represents Contractors in a specific trade from the 1-to-5 ratio on a local or statewide basis, the member Contractors will not be required to submit individual applications for approval to local joint apprenticeship committees, if they are already covered by the local apprenticeship standards.

#### 13.10.6 **APPRENTICE FUND**

A Contractor to whom the Contract is awarded or any Subcontractor under him or her, who, in performing any of the work under the Contract, employs journeymen or apprentices in any apprenticeable craft or trade and who is not contributing to a fund or funds to administer and conduct the apprenticeship program in any such craft or trade in the area of the Site of the Project, to which fund or funds other contractors in the area of the Site of the Project are contributing, shall contribute to the fund or funds in each craft or trade in which he or she employs journeymen or apprentices on the Project in the same amount or upon the same basis

and in the same manner as the other contractors do, but where the trust fund administrators are unable to accept the funds, contractors not signatory to the trust agreement shall pay a like amount to the California Apprenticeship Council. The Contractor or Subcontractor may add the amount of the contributions in computing his or her bid for the contract. The Division of Labor Standards Enforcement is authorized to enforce the payment of the contributions to the fund or funds as set forth in the Labor Code section 227.

#### **13.10.7 PRIME CONTRACTOR COMPLIANCE**

The responsibility of compliance with section 13.10 and section 1777.5 of the Labor Code for all apprenticeable occupations is with the Prime Contractor.

#### **13.10.8 DECISIONS OF JOINT APPRENTICESHIP COMMITTEE**

All decisions of the joint apprenticeship committee under this section 13.10 and Labor Code section 1777.5 are subject to Labor Code section 3081.

#### **13.10.9 NO BIAS**

It shall be unlawful for an employer or a labor union to refuse to accept otherwise qualified employees as registered apprentices on any public works on the grounds of race, religious creed, color, national origin, ancestry, sex, or age, except as provided in the Labor Code section 3077.

#### **13.10.10 VIOLATION OF LABOR CODE**

Pursuant to Labor Code sections 1777.1 and 1777.7, in the event a Contractor or Subcontractor fails to comply with the provisions of this section 13.10 and Labor Code section 1777.5, among other things:

(a) If a Contractor or Subcontractor willfully fails to comply, the Labor Commissioner may deny to the contractor or subcontractor, and to its responsible officers, the right to bid on, or be awarded or perform work as a subcontractor on, any public works project for a period of up to one year for the first violation and for a period of up to three years for the second and subsequent violation. Each period of debarment shall run from the date the determination of noncompliance by the Labor Commissioner becomes a final order.

(b) A contractor or subcontractor who violates section 1777.5 shall forfeit as a civil penalty an amount not exceeding the sum of one hundred dollars (\$100) for each full calendar day of noncompliance. Upon receipt of a determination that a civil penalty has been imposed, the awarding body shall enforce the penalty, which includes withholding the amount of the civil penalty from the contract progress payments or retention then due or to become due.

(c) In lieu of the penalty provided, the Labor Commissioner may for a first time violation and with the concurrence of an applicable apprenticeship program, order the

contractor or subcontractor to provide apprentice employment equivalent to the work hours that would have been provided for apprentices during the period of noncompliance.

(d) Any funds withheld by the awarding body pursuant to this section shall be deposited in the General Fund.

(e) The interpretation and enforcement of section 1777.5 and this section shall be in accordance with the regulations of the California Apprenticeship Council.

Pursuant to Public Contract Code section 6109, no contractor or subcontractor may bid on, be awarded, or perform work as a subcontractor on a public works project if ineligible to bid or work on, or be awarded, a public works project pursuant to section 1777.1 of the Labor Code.

### **13.11 ASSIGNMENT OF ANTITRUST CLAIMS**

#### **13.11.1 APPLICATION**

Pursuant to Public Contract Code section 7103.5 and Government Code section 4552, in entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the Contractor or Subcontractor offers and agrees to assign to the Owner all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act, (15 U.S.C. § 15) or under the Cartwright Act (Chapter 2 [commencing with § 16700] of Part 2 of Division 7 of the Bus. & Prof. Code), arising from the purchase of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders Final Progress Payment to the Contractor, without further acknowledgment by the parties. If the Owner receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under Chapter 11 (commencing with § 4550) of Division 5 of Title 1 of the Government Code, the assignor may, upon demand, recover from the Owner any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the Owner as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.

#### **13.11.2 ASSIGNMENT OF CLAIM**

Upon demand in writing by the assignor, the Owner shall, within one (1) year from such demand, reassign the cause of action assigned pursuant to this Article if the assignor has been or may have been injured by the violation of law for which the cause of action arose and the Owner has not been injured thereby or the Owner declines to file a court action for the cause of action.

### **13.12 AUDIT**

Pursuant to and in accordance with the provisions of Government Code section 8546.7, or any amendments thereto, all books, records, and files of the Owner, the Contractor, or any Subcontractor connected with the performance of this Contract involving the expenditure of state

funds in excess of Ten Thousand Dollars (\$10,000.00), including, but not limited to, the administration thereof, shall be subject to the examination and audit of the Office of the Auditor General of the State of California for a period of three (3) years after release of all retention under this Contract. Contractor shall preserve and cause to be preserved such books, records, and files for the audit period. During the progress of the Work and for three (3) years after release of all retention under the Contract, Owner shall also have the right to an audit of Contractor's books, records, subcontracts, material and equipment contracts, files, and information related to the project, and Contractor must cooperate by producing all requested items within seven (7) days.

### **13.13 STORM WATER DISCHARGE PERMIT**

If applicable, the Contractor shall file a Notice of Intent to comply with the terms of the general permit to discharge storm water associated with construction activity (WQ Order No. 920-08-DWQ). The Notice of Intent must be sent to the following address along with the appropriate payment (warrant to be furnished by the Owner upon request by the Contractor, allow warrant processing time.): California State Water Resources Control Board, Division of Water Quality, Storm Water Permit Unit, P.O. Box 1977, Sacramento, CA 95812-1977. The Contractor may also call the State Water Board's Construction Activity Storm Water Hotline at (916) 657-1146. The Notice of Intent shall be filed prior to the start of any construction activity.

## **ARTICLE 14**

### **TERMINATION OR SUSPENSION OF THE CONTRACT**

#### **14.1 TERMINATION BY THE CONTRACTOR FOR CAUSE**

Contractor may not terminate for convenience. Contractor may only terminate for cause if the Work is stopped by others for a period of one hundred eighty (180) consecutive days through no act or fault of the Contractor, a Subcontractor of any tier, their agents or employees, or any other persons performing portions of the Work for whom the Contractor is contractually responsible, **and** the Work was stopped by others for one of the following reasons: (A) Issuance of an order of a court or other public authority having jurisdiction which requires Owner to stop all Work; or (B) an act of government, such as a declaration of national emergency, making material unavailable which requires Owner to stop all Work. If such grounds exist, the Contractor may serve written notice of such grounds on Owner and demand a meet-and-confer conference to negotiate a resolution in good faith within twenty (20) days of Owner's receipt of such notice. If such conference does not lead to resolution and the grounds for termination still exist, Contractor may terminate the Contract and recover from the Owner payment for Work executed and for reasonable verified costs with respect to materials, equipment, tools, construction equipment, and machinery, including reasonable overhead, profit, and damages for the Work executed, but excluding overhead (field and home office) and profit for (i) Work not performed and (ii) the period of time that the Work was stopped.

#### **14.2 TERMINATION BY THE OWNER FOR CAUSE**

#### 14.2.1 **GROUNDS FOR TERMINATION**

The Owner may terminate the Contract if the Contractor:

- A. Refuses or fails to supply enough properly skilled workers or proper materials, or refuses or fails to take steps to adequately prosecute the Work toward Completion within the Contract Time;
- B. Fails to make payment to Subcontractors for materials or labor in accordance with Public Contract Code section 10262 or Business and Professions Code section 7108.5, as applicable;
- C. Disregards laws, ordinances, rules, regulations, or orders of a public authority having jurisdiction;
- D. Violates Labor Code section 1771.1(a), subject to the provisions of Labor Code section 1771.1(f); or
- E. Otherwise is in breach of the Contract Documents.

#### 14.2.2 **NOTIFICATION OF TERMINATION**

When any of the above reasons exist, the Owner may, without prejudice to any other rights or remedies of the Owner, give notice to Contractor of the grounds for termination and demand cure of the grounds within seven (7) days (a “Notice of Intent to Terminate”). If Contractor fails to **either** (a) completely cure the grounds for termination within seven (7) days **or** (b) reasonably commence cure of the grounds for termination within seven (7) days and reasonably continue to cure the grounds for termination until such cure is complete, then Owner may terminate the Contract effective immediately upon service of written Notice of Termination and may, subject to any prior rights of Contractor’s surety on the performance bond (“Surety”):

- A. Take possession of the Site and of all material, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- B. Accept assignment of subcontracts pursuant to section 5.4; and
- C. Complete the Work by whatever reasonable method the Owner may deem expedient.

#### 14.2.3 **PAYMENTS WITHHELD**

If the Owner terminates the Contract for one of the reasons stated in section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is Complete.

#### 14.2.4 **PAYMENTS UPON COMPLETION**



If the unpaid balance of the Contract Sum exceeds costs of Completing the Work, including compensation for professional services and expenses made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. This payment obligation shall survive Completion of the Contract.

#### 14.2.5 INCLUSION OF TERMINATION FOR CONVENIENCE

Any purported termination by Owner for cause under this section 14.2, which is revoked or determined to not have been for cause, shall be deemed to have been a termination for convenience effective as of the same date as the purported termination for cause.

### 14.3 SUSPENSION OR TERMINATION BY THE OWNER FOR CONVENIENCE

#### 14.3.1 SUSPENSION BY OWNER

The Owner may, without cause, order the Contractor in writing to suspend, delay, or interrupt the Work in whole or in part for such period of time as the Owner may determine.

14.3.1.1 *Adjustments.* An adjustment shall be made for increases in the cost of performance of the Contract, including profit on the increased cost of performance caused by suspension, delay, or interruption. No adjustment shall be made to the extent:

- A. That performance is, was or would have been so suspended, delayed, or interrupted by another cause for which the Contractor is responsible; or
- B. That an equitable adjustment is made or denied under another provision of this Contract.

14.3.1.2 *Adjustments for Fixed Cost.* Adjustments made in the cost of performance may have a mutually agreed fixed or percentage fee.

#### 14.3.2 TERMINATION BY THE OWNER FOR CONVENIENCE

14.3.2.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

14.3.2.2 Upon receipt of written notice from the Owner of such termination for the Owner's convenience, the Contractor shall:

1. Cease operations as directed by the Owner in the notice;
2. Take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and

3. Except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

14.3.2.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination.

#### **14.4 NOT A WAIVER**

Any suspension or termination by Owner for convenience or cause under this Article 14 shall not act as a waiver of any claims by Owner against Contractor or others for damages based on breach of contract, negligence or other grounds.

#### **14.5 MUTUAL TERMINATION FOR CONVENIENCE**

The Contractor and the Owner may mutually agree in writing to terminate this Contract for convenience. The Contractor shall receive payment for all Work performed to the date of termination in accordance with the provisions of Article 9.

#### **14.6 EARLY TERMINATION**

Notwithstanding any provision herein to the contrary, if for any fiscal year of this Contract the governing body of the Owner fails to appropriate or allocate funds for future periodic payments under the Contract after exercising reasonable efforts to do so, the Owner may upon thirty (30) days' notice, order work on the Project to cease. The Owner will remain obligated to pay for the work already performed but shall not be obligated to pay the balance remaining unpaid beyond the fiscal period for which funds have been appropriated or allocated and for which the work has not been done.

**SECTION 01 10 00**  
**SUMMARY**



**PART 1 - GENERAL**

1.01 SUMMARY

A. Section Includes:

1. Project information.
2. Work covered by Contract Documents.
3. Phased construction.
4. Work under separate contracts.
5. Access to site.
6. Coordination with occupants.
7. Work restrictions.
8. Specification and drawing conventions.
9. Miscellaneous provisions.

B. Related Requirements:

1. Section 01 50 00 - Temporary Facilities and Controls for limitations and procedures governing temporary use of Owner's facilities.

1.02 PROJECT INFORMATION

A. Project Identification: New Elementary School, Central Unified School District.



Project Location: Northwest corner of Shields & Brawley Avenue, Fresno, California 93722

B. Owner: Central Unified School District.



Owner's Representative: John Rodriguez



Architect: John Smith, SIM-PBK.

D. Project Web Site: A project Web site administered by Architect will be used for purposes of managing communication and documents during the construction stage.

1.03 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of Project is defined by the Contract Documents and consists of the following:

1. New Elementary School campus under 2016 CBC Requirements.

- B. Type of Contract.
  - 1. Project will be constructed with one Construction Manager & Multi-prime contractors deemed lowest responsible bidder.
  - 2. All specification sections stating "General Contractor or (GC)" shall be identified as Construction Manager or Multi-prime contractor which ever applies.

#### 1.04 ACCESS TO SITE

- A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- C. Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
  - 1. Limits: Confine construction operations to as directed by District.
  - 2. Driveways, Walkways and Entrances: Keep driveways and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
    - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
    - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.

#### 1.05 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
  - 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
  - 1. Notify Owner not less than two days in advance of proposed utility interruptions.
  - 2. Obtain Owner's written permission before proceeding with utility interruptions.

- C. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
  - 1. Notify Owner not less than two days in advance of proposed disruptive operations.
  - 2. Obtain Owner's written permission before proceeding with disruptive operations.
- D. Nonsmoking Building/Site: Smoking is not permitted within the building or within the construction site.
- E. Controlled Substances: Use of tobacco products and other controlled substances on Project site is not permitted.

#### 1.06 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
  - 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
  - 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
  - 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
  - 2. Abbreviations: Materials and products are identified by abbreviations scheduled on Drawings.
  - 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.
  - 4. drawings are diagrammatic u.n.o.

#### **PART 2 - PRODUCTS (Not Used)**

#### **PART 3 - EXECUTION (Not Used)**

#### **END OF SECTION**





01 10 00.13

AD 1-08.1a  
S&B Elementary  
02-116800

**SUMMARY of WORK**

Construction of a new elementary school campus for the Central Unified School District. Project includes off-site improvements to North Brawley and West Shields Avenues, Play fields, and 73,541 sf of new building construction that includes a main education/classroom building, a multi-purpose building, and a pre-fabricated pre-school building.

**The following chart summarizes the twelve bid scopes for the prospective prime contracts.**

	<b>Bid Package</b>	<b>Contractor License</b>
	<b>Description</b>	<b>Requirement (, = or)</b>
SB 1	SITE & OFF SITE WORK/UNDERGROUND UTILITIES	A or B
SB 2	GENERAL TRADES/BUILDING STRUCTURE	B
SB 3	ROOFING	C-39
SB 4	ELEVATOR	C-11
SB 5	FIRE PROTECTION	C-16
SB 6	PLUMBING	C-36
SB 7	MECHANICAL	C-20
SB 8	ELECTRICAL/LOW VOLTAGE	C-7/C-10
SB 9	LANDSCAPE & IRRIGATION	C-27
SB 10	SURVEYING/STAKING	PROFESSIONAL LAND SURVEYOR
SB 11	SWPPP	C-61/D64
SB 12	METAL/IRON FENCING, GATE & HANDRAILS	C-13

Following, are extended descriptions of the above bid scopes for 12ea of the prospective prime contracts for constructing this project.

THE *FINAL SECTIONS* OF EACH BID PACKAGES ARE IDENTICAL AND DESCRIBES RESPONSIBILITIES AND ITEMS OF WORK THAT ARE INCLUDED IN ALL BID PACKAGES

**End of Summary Section**

## **SB-1 SITE & OFF-SITE WORK & UNDERGROUND UTILITIES**

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor's License Board for the work in which the Subcontractor would perform. Bidder's will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

### **A. Specifications:**

Division 1

023000 Subsurface Investigation

003132 Geotechnical Investigation Report

311100 Site Clearing

312300 Earthwork

Refer to additional related specification sections for work specifically included in this contract.

### **INCLUSIONS:**

1. All onsite site clearing and earthwork including but not limited to any and all necessary dewatering, over-excavation, importing (if required), exporting, compaction and sub grade preparation for a complete job and as outlined in the plans and specifications.
2. Provide protection for all items (fencing, trench plates, etc.) as noted on the drawings to be, "protected in place".
3. Drawing C1.1 – Note 3 – *power poles* to be removed and disposed of by this bid package.
4. Remove and properly dispose of all trees/shrubs/vegetation/roots, signage, fencing, debris, unsuitable material, asphalt paving, concrete, landscaping and irrigation indicated on the contract drawings.
5. Provide excavation, over-excavation, backfill, compaction, rough and final grading for building pads, Preschool, future rels, service yard, hardcourts, play fields, including pitchers mound(s), ramps, amphitheater, stairs, sidewalks, curb and gutter, inlets, swales, flatwork and paving areas, planters and landscape areas, swales and other site and frontage road improvements. All *off site grading* as outlined in the contract documents. (C4.1). Reference the drawings for "Zone of Excavation" and recompaction at building locations.

Bid Package 1  
Sitework

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



6. Over-excavate as shown or required on contract documents. Replace with engineered fill per specifications.
7. Processing, handling and/or removal from site of any rock and/or wet soil as required.
8. Import materials as necessary to balance the site and comply with project plans and specifications requirements. If import material is needed, obtain approval for all import material prior to import operations.
9. Provide temporary driveways to lay down area. Provide grading at lay down area, parking and temporary office locations. Furnish and place base rock at Fire Lane as indicated on site plan C2.1, Parking Lot B, and temporary office location as indicated on Site Logistics Plan.
10. At the completion of construction activities or when instructed by the CM, remove and dispose of all base rock, fabric, asphalt, etc. at location where temporary construction offices and material were staged during construction activities.
11. Provide maintenance of grades and compaction requirements until pad certification. Trade Contractor to provide pad certification once final grading operations are complete.
12. Finish site grading at +/- 1/10th of a foot for appropriate grade.
13. Provide proper shoring/trench safety required for own work.
14. Provide trench plates if required to maintain access for all scopes of work for other trade contractor's work.
15. Trade Contractor must hire an *Underground Utility Locating service to locate existing underground utility pathways in areas affected by the scope of work* for excavations, trenching, grading, potholing and any earthwork. An as built drawing is required with multiple-colored lines indicating separate utilities located. Underground locating and submitted as built drawing must occur before any demo, grading or trenching activities can start.
16. Coordinate with landscape contractor for any irrigation installation and planting after preparation of rough grade to receive topsoil and final grades by landscape contractor.

**B. Specifications:**

Division 1

- 312316 Trenching Backfill and Compaction
- 330132 Sewer and Manhole Testing
- 330513 Manholes and Structures
- 330516 Utility Structures
- 330517 Precast Concrete Vaults
- 331213 Water Service Connections
- 331300 Disinfecting Water Distribution System
- 333113 Sanitary Sewer Pipe

Bid Package 1  
Sitework

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- 334113 Storm Drain Piping
- 210000 General Fire Protection Provisions
- 210001 Fire Protection System (as applies)
- 003132 Geotechnical Investigation Report\

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install all domestic water, sanitary sewer, storm drain, water meter and valves and fire water protection system work complete per Contract Documents. This bid package is responsible for installing tie-ins at the main or capped points of connection. Bring all services to within 5' of all buildings, PREschool building and all future relocatable buildings as referenced on the drawings. Provide all required services/systems to future relocatable buildings/future build out of the campus. Systems to be brought to within 5' of the future buildings or as shown on the contract documents. Fire Service work to include but not limited to, traffic rated boxes/vaults, meters, valves, detector check, hardware, miscellaneous accessories.
2. Install all underground site gas piping, including excavation and backfill. Provide and install underground gas lines, meter, etc. for complete system. Coordinate location of new gas meter with PG & E.
3. Backfill at all planters to within 2" from top of planter curb. The Irrigation/Landscape contractor will provide and place topsoil at all planters.
4. If this scope of work is being performed during the rainy season, this contractor is to provide proper protection of all excavations/trenches, so they don't fill with water and/or collapse. Dewatering if required by this bid package.
5. This bid package is responsible for furnishing and installation of backflow preventers including irrigation backflow preventer, booster pump systems both domestic and irrigation.
6. Coordinate installation of any underground utilities with Construction Manager that crosses public paths of travel. Any work affecting public paths of travel must be done on Saturday to avoid path of travel disruptions.
7. Furnish and installation of fire service water lines, fire hydrants, backflow preventers, detector check valves and vault, post indicator valves, FDC, and pressure regulating/reducing valves per the contract documents, Civil Drawings, Fire Department Plan, Fire Protection Drawings.
8. Bring fire risers into rooms and service yard outlined on the drawings. Coordinate location of stub-up with the Fire Protection contractor
9. Supply and provide all drain lines, under sidewalk drains, gravel beds, concrete structures, catch basins, trench drains, drains at apparatus yard and filter fabric as required including connection to existing storm drain,

Bid Package 1  
Sitework

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

drain inlets, drain box, sloping and grates for a complete system and as outlined on the Contract Documents. Coordinate with the Roofing and Plumbing Contractor to provide final connection of downspouts to drains. Drains for down spouts are to be placed within 3' of the finish grade and marked with a 2'-6" post in front of point of connection.

10. Furnish and install all utility structures and vaults as required. All excavation and backfill needed for the utilities scope of work is by this bid package. Grout, concrete topping, bituminous interior coating at utility structures, covers, frames are to be included in this package. Follow City of Fresno Standard details.
11. Furnish and install cleanouts and water valves complete per plans and specifications.
12. All flushing, testing (and retesting if needed), inspection, disinfection, balancing and maintenance of own work and connecting work until accepted by the Construction Manager/IOR. This includes vacuum and mandrel testing as outlined in the contract documents.
13. Include all patch back and repairs of all existing surfaces required to be removed for installation of underground work, this includes temporary patch backs/trench plates if needed.
14. Prior to any *work within the existing public right-of-way*, encroachment or easements, the Trade Contractor shall pay for and obtain all permits and bonds required by the City of Fresno. Contractor will be reimbursed by the District for the permit cost, no markup will be added just a direct reimbursement.

**C. Specifications:**

Division 1

321123 Aggregate Base Courses

321216 Asphalt Paving, Striping and Markings

003132 Geotechnical Investigation Report

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install all asphalt concrete paving work noted on the Contract Documents. Asphalt paving to be provided over AB on compacted subgrade. Not necessarily will all asphalt be placed at the one time, Contractor to include pricing based on project phasing and sequencing of work.
2. During the course of construction, paving will be performed in two (2) separate mobilizations. Parking Lot A and adjacent driveway will be paved

Bid Package 1  
Sitework

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

during the first paving mobilization. All remaining paving will be done during the second paving mobilization, including repairs and addition of slurry coat to Parking Lot A and its' driveway.

3. Provide paving patch back for area required by the Contract Documents, frontage improvement areas and any other patch back areas that need to be addressed.
4. Asphalt paving to be provided per the contract documents. Thoroughly clean asphalt surface prior to painting.
5. All exposed asphalt edges shall have header boards.
6. Provide water and flood testing in the presence of the project inspector and Construction Manager. Perform necessary corrections to achieve proper drainage.
7. All concrete markings, playfield/hardcourt markings, striped clear accessible path and stenciling as required in Contract Documents. Coordinate with the Construction Manager for final colors and details.
8. Furnish and install all parking/traffic/ADA related pavement markings as indicated on drawings. Pavement markings is to include but not limited to, fire lane, bus turn-around, no parking, loading/unloading zones, curbs, arrows, etc. Disabled and Van Accessible parking, Parking Lot Entrance Signage are to be included in this bid package. Include footings, concrete and all other accessories for a complete install. Comply with City of Fresno standard details for sign posts.

**D. Specifications:**

Division 1

321613 Sidewalks, Curbs, Gutters, and Driveways

107500 Flag Pole

115000 Miscellaneous Specialties

079000 Joint Protection (as it applies)

003132 Geotechnical Investigation Report

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install playground equipment as indicated in the Contract Documents including but not limited to footing excavation, footing concrete, sleeves/sockets, and all accessories for basketball backstops/poles/rims/nets, funnel ball, volleyball, tetherball equipment, soccer, softball and baseball equipment, trash receptacles and bicycle racks. This includes the equipment, home/base plates, aluminum benches, backstop posts/rails, goalies, etc... at the baseball, softball and soccer fields.

Bid Package 1  
Sitework

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

Work includes, sleeves, anchors, caps, posts, etc. for a complete installation. Work in this bid package should include all concrete painting, which is to include exterior sport/game lines, compass, etc.

2. Furnish and install all site concrete as required by the Contract Documents. This includes but is not limited to all fine grading, base rock, forming, reinforcements, embeds, curbs, aprons, valley gutters, site stem-walls, retaining walls, hardcourt, flatwork, stairs, ramps, trash can wash area, mow strips, concrete paving, contrast stripe/score lines including color at steps, any necessary accessories, truncated domes, color, coatings, temperature control measures, patching, curing, control / expansion joint material, sealants/caulking. All building concrete foundations and slab on grade is covered by the General Trades bid package but must be coordinated where any site concrete meets the building concrete.
3. Construct Fiber Play Areas complete per plans.
4. Footings for bicycle racks and flag pole are part of this bid package. Work to include steel plate, corrugated tube and sand at flagpole footing. Provide concrete finish at flag pole as indicated on the drawings.
5. Furnish and install joint sealants at flatwork and perimeter of buildings
6. Truncated domes are to be furnished and installed by this contractor.
7. Furnish and install all floor grates and trench drains. Include in pricing mock-ups as required by the specifications.
8. Furnish and install, including excavation, of all concrete footings, curbs, walls, reinforcing, drains, drain rock, etc. at hardcourt playground areas.
9. Furnish and install all bollards (removable and permanent) as shown including any required footings, gravel base, concrete, rebar, pipe cap, U-bolts/chain and padlocks. Painting of bollard by painting contractor.
10. Provide and install protection for all exposed rebar, including caps for masonry dowels and formwork stakes.
11. Shop priming and painting, galvanization of own work as required by plans or specifications.

**E. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES**

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents, Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.
4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required. Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.

Bid Package 1  
Sitework

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard, lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
8. If a particular item of work appears to be included in more than one bid package, the bidder shall ensure they have covered this item(s) of work and shall not assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
10. Storm Water Pollution control as required including conformance with erosion control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.
11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
12. Provide traffic control (vehicular and pedestrian) as required when on or off-loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.
13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate

Bid Package 1  
Sitework

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- specification sections, including requirements for closeout submission.
15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
  16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
  17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
  18. The electrical trade contractor will provide for temporary electrical power and or temporary power supply infrastructure from Public Utilities. Electrical trade contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).
  19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.
  20. Coordination and protection of own work with other trades is the responsibility of each Trade Contractor.
  21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.
  22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.
  23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..
  24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.
  25. Each Prime Contractor shall include eight (8) hours (while on site) within their

Bid Package 1  
Sitework

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- cost proposal to participate in the weekly composite cleanup efforts scheduled by the Construction Manager.
26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
  27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.
  28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
  29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.
  30. Safety requirements for own work, shall be in compliance with most recent CAL OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the Project. Failure to comply with any Safety Regulations will be grounds for removal of personnel from the jobsite. See also Supplemental General Conditions.
  31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
  32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
  33. Flammable products must be continually stored per OSHA regulations.
  34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
  35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
  36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the Construction Manager.
  37. Parking for own employees, equipment, suppliers and sub-tier contractors shall be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
  38. Compliance with specified warranty and guarantee requirements, both standard and special.
  39. Provide at a minimum one qualified superintendent or one lead foreman for the

Bid Package 1  
Sitework

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed.

Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.

40. Attendance at jobsite weekly progress meeting, coordination, scheduling and safety meetings is MANDATORY.
41. Sealants and caulking for own work as per Division 7.
42. Provide relocation of staging area as necessary due to construction progress and as directed by Construction Manager.
43. Procurement of business license as needed.
44. Conformance with project manual, specifications, Construction Documents, and project time.
45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground work. Trade Contractor shall not rely on any representation made by anyone other than those individuals duly authorized to survey, locate and stake existing utilities.
46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.
47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.
51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
52. Fire-stopping at own penetrations as required.
53. Additional testing costs as required should initial tests fail.
54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.
55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.
56. All project record documents as required per plans and specifications. Weekly

Bid Package 1  
Sitework

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers direction for said work.
  58. Multiple move-ons to comply with Construction Manager's Master Schedule.
  59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
  60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
  61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will participate in a project badge identification system if instituted by the Construction Manager and the District.
  62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits, insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
  63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
  64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 1  
Sitework

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



**SB-2 GENERAL TRADES/BUILDING STRUCTURE**

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor’s License Board for the work in which the Subcontractor would perform. Bidder’s will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

**A. Specification Sections:**

Division 1

- 031100 Concrete Forming
- 032000 Concrete Reinforcement
- 033000 Cast-In-Place Concrete
- 033300 Architectural Concrete
- 055000 Metal Fabrications (entire section applies except for site fencing and gates)
- 072600 Concrete Moisture Vapor Emission Control
- 061000 Rough Carpentry (as applies)
- 079000 Joint Protection (as applies)
- 142400 Hydraulic Elevators (as applies)
- 144200 Wheelchair Lifts (as applies)
- 312316 Trenching,
- 321123 Backfilling and Compaction and Aggregate Base Course (as applies)
- 003132 Geotechnical Investigation Report

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

1. This Trade Contractor is to include all project building concrete including but not limited to building footings, spread footings, structural foundations, slab on grade, depressed slabs, thickened slabs, slab adjustments at planter areas, stepped footings, fill at pad footing bump outs and MEP housekeeping pads (interior and exterior), mow strips, and curbs in and around buildings that are not provided by Sitework contractor.
2. Concrete and reinforcing steel at steel columns is part of this bid package. Prior to placing this concrete, coordinate roof and overflow drains with the Plumbing Contractor.
3. Off haul of spoils generated by this bid package.
4. This package also includes concrete at the baseball and softball fields, mow strips, concrete at dugouts, etc. Coordinate with play equipment contractor for concrete at team benches.
5. Foundations for the Preschool are to be included in this bid package. This includes forming, concrete footings, reinforcing steel, metal grating for vent/crawl space including the grates, plywood/structo-crete, gravel base. The slurry and mow strip listed as "Optional" on the drawings is to be included. In lieu of slurry provide concrete. Coordinate piping through footings with all other applicable Contractors.
6. Coordinate, install and provide all dowels, reinforcement, control and expansion joints where building concrete meets site concrete. Do not place expansion joint material at exterior door ways.
7. Work includes, but is not limited to, all structural excavation, spoil removal, waterproofing and structural backfill, rough and fine grading, aggregate sub-base, rock dust, vapor barrier, forming, reinforcing steel, block outs, concrete. concrete over at baseplates, placing, finishing, curing, pumping, distribution, and special architectural finishes for all building concrete. This bid package includes saw cutting of construction joints.

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

8. At Toilet Rooms, furnish depressed slabs and install copper flashing as noted in detail 117/A8.6.
9. At concrete steps, provide inlaid or score line at each step per contract documents.
10. As required by the drawings, provide chamfer edges at Stage and Ramps.
11. Where required, application of concrete moisture vapor emission control is to be part of this bid package. This includes concrete subfloors on or below grade footings, stem walls, slabs.
12. This bid package shall turn over to the Wood Athletic Flooring contractor a level condition. Any and all leveling for low and high spots shall be the responsibility of this bid package.
13. All excavation, dewatering and backfill of own work.
14. All excavations at **elevator**, concrete slab and walls at elevator pit. Prior to pouring walls, roughen and/or sandblast slab surface. Coordinate work with other applicable contractors. Coordinate all work around the elevator shaft with the Elevator Contractor. Thoroughly read and understand the scope of work required by this bid package for work at the elevators and wheelchair lifts. The work includes but is not necessarily limited to the work not provided by the Elevator contractor namely specification 14 24 00 C items 1 through 13, 16 through 27 and items 32 & 33.
15. Provide excavation, base rock, vapor barrier, rigid insulation and protective slip sheet over insulation and depressed freezer slab. Provide grout fill at panel to floor connection. Reference Kitchen drawings for complete outline of scope. Protect open footings, building pads and other compacted areas from rain events. Trade Contractor to repair damage caused by failure to protect these areas, at Trade Contractor's expense.
16. Provide and install all Class II Base Rock or aggregate for own work, including subgrade preparation, placement and compaction if required.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

17. Coordinate all elevations and layout of all concrete with all applicable Trade Contractors. For sloped slabs at drains, coordinate work with applicable subcontractor.
18. Concrete trucks to be washed out at an area as designated by Construction Manager. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite.
19. Layout, furnish and install all anchor bolts/templates, post installed anchors and hold downs bolts for framing as required. Including added anchor bolts at MEP risers.
20. Notify Construction Manager a minimum of 72 Hours (not including weekends and holidays) in advance of concrete pour of any embedded items that have not been provided by the other Trade Contractors.
21. All non-shrink grout and dry packing as required for your work and under base plates for all steel base plates and grout at steel angle sill and around entrances of elevator.
22. Furnish and install all wood nailers as applies to your work.
23. Furnish and install all reinforcing steel, mesh, dowels, curb dowels, cages, weldable bar, keyways, etc. as required, including layout, installation, welding if required, blocking, etc. If rebar is to be welded to steel members, provide rebar FOB for steel contractor to weld to beams/columns.
24. Provide and install protection for all exposed rebar, including caps for masonry dowels, formwork stakes and anchor bolts.
25. Certified mill test reports as required.
26. Install embedded materials provided by others that are integral with concrete systems. This includes bolts at housekeeping pads.

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

27. Furnish, install and maintain construction “batter boards”, allowing other Trade Contractors to complete their own layout off one set of reference points.
28. Install all steel that is integral with concrete footings, including tube steel columns, c-channels, angles, etc.
29. Coordinate encasement and sleeving of utility pipes under slab and through footings with other Trade Contractors as required. Other Trade Contractors to provide sleeves for installation by General Trades Contractor. Coordinate placement of concrete around other Trade Contractor’s work that may be protruding through slab-on-grade and footings.
30. Sack and patch as necessary.
31. This bid package to familiarize themselves with varied slab conditions and thicknesses.

**B. Specification Section:**

Division 1

042200 Concrete Masonry Units at locations including but not limited to the West property line wall, Service Yard and at the Multi-Purpose

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install all CMU as indicated in the Contract Documents, including but not limited to, footing excavation, footing concrete, reinforcement, ties and anchors, CMU block, grouting, mortar/concrete caps, associated miscellaneous metals, weep holes, joint sealants, control and control joints and sealant including elastomeric control joints. CMU color and pattern as shown on the drawings. As noted on the drawings, the block wall shall comply with City of Fresno Standard Details.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions



2. All CMU under cement plaster.
3. Roughen surface/sandblast at concrete under CMU is to be included in the bid package.
4. Coordination with other contractors for any "thru wall" systems. Comply with specifications for built in items.
5. Protect in place the existing private wooden fence (located along the West property line) during the work to construct the foundation and 6ft block wall. Refer to C2.1 and Addendum item AD 2-45a.

**C. Specification Section:**

Division 1

051200 Structural Steel Framing

053100 Steel Decking

055000 Metal Fabrications (entire section applies except for site fencing and gates)

079000 Joint Protection (as applies)

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install all structural steel, metal decking (including nelson studs, supports, welding, openings in deck or roof), and steel ladders (exterior and interior) as outlined in the drawings and specifications. All HSS, HSSR, WF Beams/Columns, lintels, wind girts, canopies/awnings, mechanical screen, deck support plates, bent plate are included complete with base/top/side plates, stiffeners and fasteners in this bid package.
2. Work at canopies/awnings to include steel, steel angle, fiberglass grating, and sealant. Sheet metal cover by Metal Paneling contractor.
3. Concrete slab closures are to be included with the metal deck installation.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

4. Furnish and install all structural steel and miscellaneous metals per plans and specifications, including support brackets for projection screens as required.
5. This bid package is responsible for all shop and field primers on steel members. This bid package is also responsible for the capability of the primer with finish paint.
6. If applicable, welding rebar to structural members is included in the bid package. Rebar to be provided to this bid package by the Concrete contractor.
7. Steel at elevator is to be included in the bid package. Work includes but not limited to, safety hoist beam, ladder, rail bracket supports, steel supports, guide rail, posts and brackets. Also included in this bid package is steel angle at the entrance sill. Grout at sill and entrance by Concrete bid package. This bid package is responsible for preparation and submission of the Deferred submittal as required for the Elevator Guide Rails and Support Brackets. Deferred submittal shall include structural calculations, stamp and signature by the design professional.
8. Furnish and install countertop bracket support/tube steel for specified countertops, reference detail 69/A8.4. Coordinate with casework subcontractor for quantity, location and size. Coordinate with the framing contractor for sequencing of this work.
9. Furnish and install all steel supports, L angle at overhead/coiling doors.
10. Furnish and install all safety cabling at landings, stairs and other openings that present fall exposures, this also includes safety cable at the perimeter at the roof levels. Cleanly cut and removal of safety cabling when instructed to do so.
11. All cutting, shaping, welding by certified welders, fasteners, adhesives, steel-to-wood connections and any accessories required for a complete installation.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

12. Coordinate with Mechanical, Electrical and Plumbing Trade Contractors as to the dimensions, layout, plumbing and electrical requirements of roof framing at HVAC units to ensure proper opening size, curb layout, flashing and roofing.
13. Supply of miscellaneous metal items embedded in concrete including anchor bolt templates. All anchor bolts to be installed in templates and provided to the steel contractor for installation.
14. Cleaning as required of any materials scheduled to receive paint or other finishes.
15. Shop priming of own work as required by plans or specifications.
16. Galvanization of own work as required by plans or specifications.
17. This trade contractor is responsible for crane, hoists, lifts and all required equipment for a complete installation. This includes temporary power or generators as required for their own welding operations. Verification of items installed by others prior to concrete pour. A qualified representative from this Trade Contractor's company shall be onsite during all concrete pours to ensure that embedded items are properly placed and are not disturbed during the pour.

**D. Specification Section:**

Division 1

062000 Finish Carpentry

064000 Architectural Woodwork

064116 Laminated Plastic Casework

097200 Protective Wall Panels

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

097720 Decorative Fiberglass Reinforced Wall Panels

079000 Joint Protection

061000 Rough Carpentry (as applies)

078413 Penetration Firestopping, (as applies)

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install all Plastic Laminate Casework complete, including interior trim and associated hardware complete per plans and specifications.
2. Furnish and install all glazing, shelves including glass and fixed shelving, swing gates at millwork, and lighting, grommets, hardware, metal support brackets, access panels, filler panels, mirrors, wardrobe bars, garment hooks, and accessories, etc. contained in casework items per plans and specifications.
3. Cutout for sinks, and faucets. Coordinate with the Plumbing contractor.
4. All anchors, fasteners, accessories, trim and items as required for a complete installation.
5. All finish carpentry work sills, caps (PL caps at Stairs), stair trim, shelving etc.), including pine edges/cleats, pine stool at window sills is included in this bid package. Site applied treatment, finishing, painting and wood fillers for work within the bid package.
6. Plywood blocking at underside of countertops as required for installation of accessories or hardware. Provide quantities and lengths of steel supports to miscellaneous metals contractor.
7. Furnish detailed casework layout and coordinate placement and installation of backing required for complete and accurate installation of casework.
8. Ensure proper storage of materials prior to installation per manufacturer's recommendations to avoid damage or interference with progress of work.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

9. Verify all field dimensions necessary for proper fitting and completion of work.
10. Anchorage for all cabinets/casework as outlined on the drawings.
11. Coordinate grommet locations with owner prior to installation. Provide the number of grommets as specified on the drawings.
12. Caulking of own work. Firestopping at all rated walls. Caulking to include undercounter caulking as required.
13. Cleaning and touch up of installed material finishes.
14. Coordination of own work with other Trade Contractors whose work adjoins, combines or aligns with same.
15. Verify location of all appliances and coordinate dimensions to ensure correct size openings are provided.
16. Coordinate installation casework adjacent to markerboards, if necessary.
17. Coordinate installation of electrical raceways, outlets, etc. in casework with the Electrical contractor.
18. Furnish and install all hardware, locks, keys, bolts, etc. as required.
19. Turn over all casework keys to the Contraction Manager separated by room and building along with a key metric's identifying room and building. Keys to be identified by a unique mark. Keys are not to be left in casework at any time.
20. Furnish and install seismic restraints, as required for your work.
21. Furnish and install all miscellaneous accessories and materials required for your work.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

22. Compliance with the "Manual of Millwork" of the Woodwork Institute of California. Certification on shop drawings is required. WIC conformance applies to the Architectural Woodwork and Laminated Plastic Casework.
23. Ensure all moving or operating parts are adjusted to operate smoothly and correctly.
24. Furnish and install all fiberglass reinforced plastic wall paneling (FRP), including trim.

**E. Specification Section:**

Division 1

081113 Hollow Metal Doors and Frames

081423.16 Plastic Laminate Faced Wood Doors

083113 Access Doors and Frames

087100 Door Hardware

088000 Glass and Glazing (as applies)

079000 Joint Protection (as applies)

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install all metal doors and frames, solid core, plastic laminate faced wood doors, and finish hardware work associated with this project in its entirety. Scope includes such items as, but not limited to all hollow metal doors, plastic laminate faced wood doors and hardware including locks, padlocks, panic hardware, doors stops, door seal, thresholds, vision frames, sidelights, and windows integral with doors and frames.
2. Furnish and install access doors, panels and frames as shown in the Contract Documents, and as required to access all equipment requiring maintenance, replacement or inspection including but not limited to  

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

smoke/heat detectors, fire dampers, clean-outs, valves, etc. MEP contractors will provide access doors for their specific requirements.

3. Furnish and install magnetic hold opens at fire doors. Coordinate backing with metal Framing Contractor and location of mag hold opens with the Fire Alarm Contractor.
4. Furnish and install Dutch door including stainless steel shelf.
5. Furnish and install door at Library Reception Desk.
6. Provide all "rated" assemblies as noted in the Contract Documents.
7. All interior and exterior sealants at door frames, required for a complete installation.
8. All shop coatings specified. Coordinate with painting contractor on timing of frames and doors that require field paint.
9. All adjusting, protection, and cleaning of all doors, frames and hardware.
10. Furnish and install all finish hardware.
11. Provide and install all door louvers/glazing as required for wood/solid core doors.
12. All keys and keying as required by specifications and manufacturer. Scope to include all meetings with the Owner and delivery of quantities of keys and cylinders as specified, including all visual key identification and key control systems, key control cabinets with index system sized for additional capacity as specified. Provide key cabinet to accommodate, at a minimum, 100 keys.
13. Construction and control keying and keys. Provide temporary construction locks until such time as determined by Construction Manager at which time permanent locks will be installed. Construction locks and keys for all exterior doors and electrical room door at the minimum.
14. All adjusting and cleaning as specified and dictated by bid documents.

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

15. Furnish and install Knox box at each building. Coordinate with the Construction Manager for exact location. Coordinate with local jurisdiction for type of Knox box and core required. City of Fresno emergency services X1 cores can be purchased through Sierra Lock and Glass, Fresno, CA.
16. All work performed over 6', employees must be 100% tied off.

**F. Specification Section:**

Division 1

083320 Overhead Coiling Counter Doors

079000 Joint Sealants (as applies)

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install all overhead coiling counter doors, including but not limited to – all curtains, grilles, frames, jambs, guides endlocks, windlocks, coiling door/grille, hood, locking, safety systems for a complete and fully operational system.
2. Provide fire rating as required.
3. All counterbalancing devices, barrels, spring balancers, torsion rods and brackets.
4. Furnish and install aluminum break metal flashing as called out in the architectural details.
5. All adjusting, lubrication and demonstration to train District's Maintenance Personnel to operate and maintain overhead coiling doors and side coiling grilles.
6. Coordinate and provide layout of backing and ensure proper anchorage for your work.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions



7. All sealants at frame perimeter as specified.
8. All work performed over 6', employees must be 100% tied off.

**G. Specification Section:**

Division 1

085113 Aluminum Service Windows

088000 Glass and Glazing

076200 Sheet Metal Flashing and Trim (as applies)

079000 Joint Sealants (as applies)

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install all aluminum serving windows, storefront windows, glass and glazing, spandral, tempered glass complete, including but not limited to frames, glass, hardware, spacers, shims, weather stripping, fasteners, adhesives and any items required for a complete installation.
2. Furnish and install all glass and glazing per plans and specifications, including but not limited to glass, screens, sealants/caulking of window and curtain wall systems, primers, self-adhered membrane flashing, setting blocks, edge blocks, finish hardware, spacers, shims, clips, pre-formed gaskets, compressible filler rods, sill flashing, drip flashing with end dams at windows, mastic, weather stripping, fasteners, adhesives, and any items required for a complete installation.
3. This bid package is responsible for preparation and submission of the Deferred submittal as required for the Windows and Storefront Systems. Deferred submittal shall include structural calculations, stamp and signature by the design professional.

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

4. Follow flashing sequence as referenced in the contract documents, 97/A8.5.
5. Fiberglass window as referenced in details 94 and 98/A8.5 are included in the bid package.
6. At head of roll up door, furnish and install aluminum break metal flashing as outlined in details 118/A8.6 and 312/A8.17.
7. Furnish all deferred submittals as required by the contract documents.
8. Furnish and install all clear glass, sealed insulated glass, tinted glass, wire glass, heat treated glass, tempered float glass, monolithic tempered glass, mirrored glass, fire rated glass and any other glazing required for a complete installation.
9. Provide certifications by third party independent testing laboratory.
10. Removal of all labels, signs, tape, protection paper, etc. after installation.
11. Provide and install all caulking for own work, including caulking of aluminum frames to adjacent surfaces for weather tight seal, interior and exterior, including and/all fire caulking if required.
12. Trade Contractor to furnish and install all flashings and flashing membranes, sill plates, required for own work.
13. Interior and Exterior joint sealants for own work.
14. Leave window at each end of the building out for trash chute. Coordinate installation of window with Construction Manager.
15. Provide coordination with other Trade Contractors as needed for layout.
16. Protection of installed glazing and all materials until acceptance by Owner.
17. Turn over all door keys to the Construction Manager separated by building and door number along with a key metric's identifying door and building. Keys are not to be left in doors at any time.

**H. Specification Section:**

Division 1

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

072100 Thermal Batt Insulation

092236.23 Metal Lath (Expansion and Contraction Joints- per paragraph 3.05)

078413 Penetration Firestopping (as applies)

079000 Joint Protection (as applies)

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Installation of all exterior/interior expansion and contraction joints for complete finished system. Include J-molding at expansion joint in this bid package. Color to be selected by Architect.
2. Provide all thermal, batt, and sound/acoustic insulation within walls (exterior and interior), ceilings, above t-bar ceiling, under stage platform, roof deck per the Contract Documents. Provide all insulation with proper R-values as required at all locations.
3. Furnish and install all fire rated expanding form at the metal deck, as outlined in the drawings.
4. Furnish and install all adhesives, fasteners, tape, stickpins, wires, rods, wire mesh and accessories. Insulation to be kept inside wall cavity without failure, use means to hold insulation in place.
5. Penetration fire stopping and joint protection as it relates to work within this bid package.

**I. Specification:**

Division 1

074213 Metal Wall Panels

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

074213.23 Metal Composite Material Wall Panels

076200 Sheet Metal Flashing and Trim (as applies),

079000 Joint Protection (as applies)

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install preformed metal panel systems complete per contract documents. Furnish anchor and panel clips, fasteners, furring strips, foam closures, underlayment, wood shims for this work, flashing and trim at/under metal panels, for construction of a complete system.
2. Prior to taking ownership of substate, inspect it carefully for buckling, waves, warping, etc... If these conditions exist, notified the Construction Manager immediately. Starting installation of metal panel systems indicates all substate conditions are accepted.
3. Schedule periodic inspections from manufacture's rep. as outlined in the specifications.
4. Caulking and sealant as required for the metal panel systems.
5. Rigid board insulation under metal panels will be installed by the plaster/metal framing/gyp board contractor's scope of work.
6. Provide all pre-finished continuous cap/flashing, as a reference use 277/A8.14. All pre-finished metal indicated to match metal panel system is by this contractor.
7. Furnish and install galvanized sheet metal covers and sealant at canopies/awnings.
8. Specification section 074213 – Metal Wall Panels, a three (3) year warranty is to be provided. Specification Section 0784213.23 – Metal Composite Material Wall Panels – language pertaining to ICC ESR-1185 shall be followed.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

**J. Specification:**

Division 1

054000 Cold-Formed Metal Framing

092236.23 Metal Lath

092400 Cement Plastering

092900 Gypsum Board

083113 Access Doors and Frames

061000 Rough Carpentry (as applies)

078413 Penetration Firestopping (as applies)

079000 Joint Protection, (as applies)

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install lathing including metal lath, underlayment, water, weather resistive barrier and air barrier, sheathing/felt paper, beads, screeds, vents, soffits, casings, reinforcement mesh, fasteners, adhesives, control and expansion joints, wires, reveals, reglet and sheet metal flashings etc. as required for a complete system. Coordinate this work with all other trades that have systems at the plaster walls, e.g. lights, louvers, access panels, expansion joints, etc. Exterior access panels are to be provided by the metal framing contractor and installed with the lath/plaster system by this plaster contractor.

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

2. Furnish and install all building paper, densglass/gold board at exterior of building as indicated on the drawings. Where indicated on the drawings, furnish and install all rigid insulation board with specified R-value.
3. Styrofoam plant-on at exterior walls is to be included in this scope of work.
4. Furnish and install Portland cement plaster including lath, scratch, brown and integral color coat, sealers as indicated on the contract documents for a complete job per plans, specifications, sequencing and cure requirements.
5. This Trade Contractor to furnish and install all sheet metal trim at plaster, windows, doors and louvers that is integral to the plaster system. Prefinished metal trim at plaster system is to be included in this bid package, reference details on A8.13, (Foam Plant-On Detail).
6. Coordination and layout of weep screeds to ensure that proper elevation is maintained with relations to adjoining concrete, asphalt and landscaping.
7. Per ASTM C-1063, it is recommended that Control Joints be used to delineate stucco areas not greater than 144sf or a maximum distance of 18 feet between Controls Joints. It is the responsibility of the Lath/Plaster Contractor to identify if modifications to the Controls Joints are required.
8. Protection of adjacent surfaces to prevent overspray, water or debris from contacting surface.
9. Remove and dispose of excess plaster left on the ground. Rake clean and return grade to original surface.
10. Inspect all surfaces to receive own work. Promptly notify Construction Manager of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.
11. All exterior and interior cold formed metal framing for a complete system.
12. Furnish and install all gypsum board, gypsum liner panels, draft stops, fasteners, joint treatment material, metal trim, texture and accessories. Walls not covered with panels or other coverings shall receive a finish as

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

required by the plans and specifications. Walls covered with Tackboard to have joints taped and depressions filled for a smooth finish surface.

13. The Construction Manager may opt to use, Mold and Abuse gyp board in order to keep the project on schedule.
14. Drywall enclosure of structural members to achieve fire resistant rating per plans and specifications.
15. Dust all taped, textured walls following completion of work and before turnover to the painter.
16. Framing of all recessed pockets, curtain tracks, metal stud curbs, as required.
17. Furnish and install gypsum board fire rated enclosures for recessed light fixtures, electrical panels, and fire extinguisher enclosures as required.
18. Acoustical sealant at gyp walls and for own work to be included in this bid package.
19. Furnish and install required wood framing which is to include all plywood sheathing and Type A plywood at Stage Floor. Mortar bedding at sill plates is to be included in this bid package.
20. Thoroughly read and understand the scope of work required by this bid package for work at the elevator and wheelchair lift. This includes sequence of work, rated walls, firestopping, cutouts, access panel, etc.... Framing to achieve two (2) hour fire rating and maintain fire resistance rating per contract documents. Provide opening at Elevator Machine Room for oil line and wiring duct. Coordinate location with the Elevator contractor.
21. Provide backing and blocking (metal and/or wood including fire rated blocking if required) for work on other trade contractors. Provide all framed openings and supports as required for the installation of light fixtures, electrical units, mechanical equipment, access panels, casework, special

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

equipment, etc... Roof cants and curbs for MEP, as shown. Use of high pressure-treated Douglas Fir for Mechanical curbs. Coordinate location and layout with other contractors.

22. This bid package is to provide ¾" plywood temporary covers at all roof penetrations at the time of framing. Covers are to remain in place until equipment is ready for placement. Spray paint on plywood cover, "Do Not Step or Remove".
23. Frame all draft and fire stopping as shown on the contract drawings.
24. Clean and prepare all surfaces to receive own work.
25. Primers, sealers, fillers and surface preparations required for own work.
26. Repair damaged drywall as necessary after installation of all finishes, but before punch list.
27. Ensure all testing, field observations and curing requirements are performed per specifications.
28. Protect work from weather damage and other hazards during course of installation. Provide temporary building enclosure measures as necessary based on weather conditions anticipated per Preliminary/Master Construction Schedule.

**K. Specification:**

Division 1

095113 Acoustical Panel Ceilings

079000 Joint Protection, (as applies)

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install acoustical panel ceilings, including but not limited to all grids/ main runners/tracks, cross and sub tees, acoustical lay-in ceiling  
Bid Package 2  
General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions



panels, acoustical tiles, hanger wires for the ceiling system, seismic, compression struts, trim, wall angle/molding, etc. for a complete installation per plans, specifications and all applicable code requirements. This pricing to include ceiling tiles at the Preschool building.

2. Allow for two Ceiling tile drops. The first after MEP initial installation to grid before balancing and fire alarm testing. The second drop when all above ceiling testing/work complete.
3. Layout of lights, registers, fire sprinkler, grilles by MEP contractors. Cutting of tile for these items by this bid package.
4. Coordinate t-bar ceiling and projector lift and screen installation with General Trades contractor.
5. Provide 15 hours in bid for replacement of damaged tiles. Time will be tracked by the Construction Manager.
6. Cleanup of installed work, including removal of tape, labels, protective coatings, smudges, fingerprints, etc.
7. Delivery materials to the project site and store in the building for a minimum of 24 hours prior to installation of material.

**L. Specifications:**

Division 1

093000 Tiling

096466 Wood Athletic Flooring

096513 Resilient Base and accessories

096610 Safety Floor Covering

096818sf Tile Carpeting,

099656 Epoxy Floor Coating,

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

079000 Joint Protection (as applies)

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install all floor covering, including but not limited to carpeting, resilient flooring and accessories, tiling, wood athletic flooring, epoxy flooring, vapor dissipation system, waterproofing membrane, base, transitions, etc. for a complete and operable installation. Wood Athletic Flooring to include vapor barrier, subfloor, sanding, finishing including game lines and vented base.
2. Furnish and install all base, caulking, transitions, reducers, adapters, and trim accessories as required for your work. Reference detail 78/A8.4 for various transitions.
3. Provide grouting, joints, crack protection, and waterproofing membranes as required. This includes joint filler at all cracks, control joints at finished floor slabs. Product specified for joint filler is referenced on the Structural drawings.
4. Tile at walk-in refrigerator(s) to be by this bid package.
5. Coordinate floor drain elevations, sloping and location with the Concrete and Plumbing contractors. Furnish all materials required to achieve permanent, watertight installation of flooring at drains and floor sinks. If protection needs to be removed from the floor drain for grout and tile work, coordinate this with the plumber. Avoid scrapping and disposing grout and debris in the floor drains.
6. Elevator floor finishes are included in this bid package.
7. Provide leveling coats where required to eliminate variations relevant to floor tolerance requirements.
8. Verify all field dimensions necessary for proper fitting and completion of work.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

9. Ensure project conditions are optimal for flooring installation per specifications, including ambient temperature and material acclimation requirements.
10. Verify surfaces to receive flooring are smooth and level with no more than 1/8 inch in 10ft variation from level.
11. Floor preparation as required for own work, including filling, patching, scraping, sweeping, vacuuming and cleaning.
12. Provide and install all moisture/vapor barrier material under flooring as required.
13. Provide warning stripes at steps and platform edges as required. This applies if stripes is made from flooring material.
14. Wood cap trim at hardwood floor to be included in this bid package.
15. Expansion/contraction joints shall be clear of grout. Caulk or seal all expansion joints as required.
16. Cleaning, curing, waxing, sealing and covering of installed work including ventilation and temperature control.
17. Protection of own work after installation including paper protection, (ram board, kraft paper, seekure, rosin paper) and access restriction measures in traffic areas.

**M. Specifications:**

Division 1

099123 Painting

079000 Joint Protection (as applies)

Refer to additional related specification sections for work specifically included in this contract.

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

**INCLUSIONS:**

1. Furnish and install all exterior and interior priming, painting, staining and coatings complete per contract documents. This pricing to include all painting required at the Preschool building. Pavement markings and game lines at the flatwork is not included in the bid package.
2. All interior caulking around doors, windows, etc. is part of this bid package.
3. Inspect all surfaces to receive own work. Promptly notify Construction Manager of any unsuitable substrate conditions. Commencement of installation implies acceptance and ownership of all substrate conditions.
4. Protection and cleanup of adjacent surfaces to prevent overspray, water or debris from contacting surface.
5. Paint interior of all mechanical grilles flat black. Paint angle iron at mechanical roof supports flat black.
6. Clean and prepare all surfaces as needed to receive own work.
7. Primers, sealers, fillers and surface preparations required for own work, including pickling/etching of galvanized steel as required.
8. Prime/paint all unpainted or unfinished exposed building and site components including but not limited to wood curbs, pipes and conduit, including sprinkler piping, exposed insulation covered piping, galvanized fixed pipe bollards, and metal ductwork, which run exposed across finished or painted surfaces.
9. Paint all fire-resistant plywood in Telecom and Electrical rooms. Paint around fire resistant labeling. Coordinate this work with the Electrical contractor.
10. Provide painted warning stripes at steps and platform edges as required. Concrete Contractor will provide score lines.
11. Paint material visible through screens, grilles, louvers, etc.
12. Paint mechanical louvers and vents if required.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

13. Prime/paint access doors as required.
14. Prime/paint access ladders, hatches, stairs and stair rails as required.
15. Field finish of steel doors, frames, handrails, and guardrails.
16. Provide all touch-up of all painted surfaces prior to punchlist (i.e., nicks, dings, scrapes, etc.). Complete final paint touch-up upon completion of punch list and prior to occupancy.
17. Include within this scope of work 60 hours for touch-up. All touch-up work to be approved and tracked by the Construction Manager.
18. Store paint and coating materials in a single suitable place in compliance with health, fire regulations and OSHA compliance.
19. Place waste cloths and used painting materials that may constitute a fire hazard in closed OSHA approved metal containers and remove daily from site.
20. Furnish washout bin as needed to comply with SWPPP requirements. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite.

**N. Specifications:**

Division 1

101116 Markerboards

101123 Tackboards

101200 Trophy and Poster Cases

101400 Signage

101416 Plaques

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

- 101700 Toilet Partitions
- 102123 Cubicle Curtains and Track
- 102613 Corner Guards
- 102813.13 Electric Hand Dryers
- 104413 Fire Extinguishers and Cabinets
- 105100 Heavy Duty Ventilated Lockers
- 105613 Metal Storage Shelving
- 108000 Toilet and Bath Accessories
- 115213.52 Electric Projection Screens
- 122116 Vertical Louver Blinds
- 079000 Joint Protection (as applies)

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install all markerboards and tackboards. Scope to include all sliding panels, hardware, trim, trim moulding, rails, chalk trays, end stops, map hooks, fasteners/adhesives, and accessories as specified. Coordinate all markerboard installation with completion of tackboard.
2. Trophy and poster cases are included in this bid package. Coordinate recess pocket and backing requirement with metal framing contractor. Case lighting is part of this bid package. Coordinate power requirements with the Electrical contractor. Glass shelving is provided by this bid package.
3. Signage
4. Provide and install cast bronze building plaque as outlined in the contract documents. Coordinate layout and installation with other contractors. Work

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

includes all fasteners and anchors. Protection of plaque until building is ready for turn-over to the District.

5. Furnish and install all Solid Color Reinforced Composite Toilet Compartments. Scope to include all partitions and urinal screens, panels, screens, pilasters, and doors; stirrup brackets, hinges, coat hooks, mounting brackets, latches, keepers, door bumpers, hardware and accessories, anchorages and fasteners, and overhead bracing for a completely installed system. Partitions to have Graffiti, Scratch, Impact and Fire Resistance properties. Coordinate all layout and backing requirements with the framing contractor.
6. Furnish and install all signage, including but not limited to plastic room signage, toilet room signs, plastic accessible symbol signs, dimensional letters and numbers (metal letters/polished aluminum letters). Provide all backing, adhesives, fasteners, anchors, paint touch up and accessories as required for a complete installation. All code related signs to be compliance with DSA, CBC and/or ADA requirements. Exterior parking, disabled and van accessible parking signages are not included in this scope of work.
7. All cubicle curtains and track are to be included in this bid package. Provide fire resistant fabric as outlined in the specification. Scope to include track, guides, chain drop, end stops, splicers, supports, anchorage and all other accessories for a complete install.
8. Furnish and install complete per plans and specifications stainless steel corner guards.
9. All electrical hand dryers are to be included in this bid package. Coordinate backing requirements with the metal framing contractor. Coordinate all power requirements with the electrical contractor.
10. Furnish and install all Fire Extinguishers and Cabinets as outlined in the contract documents. Scope to include, but not limited to, all fire extinguishers, fire rated and non-rated cabinets, recessed and surface

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

mounted cabinets, tempered glass, mounting brackets, door hardware, anchors, fasteners, adhesives, certifications and accessories as required for a complete installation. Coordinate recessed opening sizes and backing requirements with metal framing contractor.

11. Heavy Duty Ventilated Lockers are to be included in this bid package. All lockers shall be installed with pre-locking device. All recessed handles to be ADA compliant. All lockers to be provided with shelving, finish paint, number plates, latching and locking device(s). Coordinate backing requirements with metal framing contractor. Installation includes adequately securing lockers to the wall and/or floor.
12. Furnish and install all Metal Storage Shelving per contract documents. Work includes all shelving and accessories (T and Box post uprights, shelf clips, shelves, cross braces, backs, holders, bases, etc...) for a complete shelving system. Anchorage to wall and floor as outlined in the contract documents.
13. Furnish and install all Toilet Accessories as shown in the Contract Documents, including but not limited to all outlined toilet accessories, baby changing station/table, installation fasteners, adhesives, etc. Price to include installation of District Supplied accessories. Coordinate recessed and backing requirements with the metal framing contractor. Coordinate power requirements with the electrical contractor.
14. The Electronic Projection Screen is to be included in this bid package. Coordinate with the electrical contractor for wiring needs and location of remote control switches. Coordinate with framing contractor for backing needed, recessed pocket and ceiling contractor for location of installation.
15. Furnish and install flame retardant vertical louver blinds. The framing contractor to provide backing per layout from the vertical blind subcontractor/installer.
16. Initial cleaning of installed work for entire scopes of work, including removal of tape, labels, protective coatings, smudge, fingerprints, etc.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions



17. This bid package is responsible for any/all sealants including firestopping sealant as required for a complete professional install.

**O. Specifications:**

Division 1

110620 Stage Curtains

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. Furnish and install the stage curtain complete per plans and specifications. Work included is to include all hardware and accessories for a complete install.
2. Coordination and provide layout for any and all backing/blocking required for this scope of work.
3. It is the responsibility of this bid package to field verify site conditions for installation tolerances that may affect your work. If conditions are unsatisfactory, notify the Construction Manager immediately.

**P. Specifications:**

Division 1

114000 Food Service Equipment

114127 Walk In Cooler and Freezer

078413 Penetration Firestopping, (as applies)

079000 Joint Protection

Refer to additional related specification sections for work specifically included in this contract.

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

**INCLUSIONS:**

1. Furnish all labor and material required to provide and deliver all Food Service Equipment as specified into the building, uncrate, assemble, set in place, level and completely install, exclusive of final utility connections. This work shall be in strict accordance with the plans and specifications with all dimensions verified in the field prior to any fabrication. Work to include but not limited to all equipment, counters, cabinets, wall paneling, shelving, finishes, trim/closure panels, grease drains, monitors and controls, control screens, back and side splashes, filters, drawers, steel plate at walk in box refrigeration unit(s), insulation of refrigerant lines, controls and T-stat installation and wiring, insert pans, filters, SS cove base, and seismic wiring and bracing, hardware, accessories, anchors/rods/clips, etc. Furnish and install all light fixtures that are integral to the Food Service Equipment and/or Walk-In Freezer/Cooler.
2. Any and all rooftop mounted food service equipment shall be by this Contractor. This includes curbs, flashing, sealant/caulking as required for a complete installation. Coordinate opening of metal deck with the Steel and Roofing Contractors.
3. Wrap freezer drain lines with electrical heater tape to be by this bid package. Furnish and install floor troughs and drip pans.
4. Provide piping, valves and plumbing accessories that are integral within and for the kitchen equipment.
5. Provide wiring, wiring devices, controls and mechanical accessories that are integral to and for the kitchen equipment.
6. Provide ventilating ducts, flues, controls and mechanical accessories that are integral to and for the kitchen equipment.
7. This Contractor is to assist in providing layout for depressed slabs to the Concrete contractor.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

8. Support all other contractors on the project to include the furnishing of information in the form of drawings, wiring diagrams and other data.
9. All food service equipment shall be installed per the "Guidelines for Seismic Restraints of Kitchen Equipment" by the Sheet Metal and Air Conditioning Contractors National Association (SMACNA).
10. Installation cooperation, details and scheduling of the Kitchen Equipment will be coordinated that the work with other contractors may progress without unnecessary delay, interference or damage. Kitchen Equipment Contractor shall do all fitting, joining, fastening, scribing, caulking and adjusting necessary to install any fixed item of equipment in its designated locations.
11. Provide layout for backing/blocking, this also includes layout for any recessed or semi-recessed items.
12. Provide layout of items located in concrete and framing prior to installation of concrete and framing. In the event layout does not occur in a timely manner, this Contractor becomes responsible for all rework, reframing, coring, cutting etc required to install own work including patch and repair to like new condition. Provide cut sheets indicating layout dimensions.
13. Store portable, non-fixed items as directed by the Construction Manager with due regard for the security and protection from damage of the items involved.
14. Perform a preconstruction inspection of all equipment prior to installation.
15. Provide equipment start-up by a Factory Authorized service dealer. Demonstration and training of equipment to be performed for the operation team and another demonstration and training for the maintenance personnel.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

16. Equipment is to be inspected, tested, calibrated and adjusted for normal operation conditions. If inspection or testing indicated defects, such defects shall be corrected and the inspection and test repeated to insure all equipment is operating as designed and constructed.
17. Commissioning and operation test as required for this scope of work.
18. All equipment shall be thoroughly cleaned prior to final turnover to the District. This to include removal of all stains, protective wrapping and coatings, tapes, grease, etc. Cleaning to be verified by the Construction Manager.
19. All fire safing, fire caulking, joint penetration sealants/caulking as it applies to this scope of work.
20. This contractor is responsible for the coordination and scheduling of all inspections by the Health Department.
21. Turn over all keys to the Construction Manager. Keys are not to be left in the doors at any time.

**Q. INCLUSIONS:**

**Scaffolding**

1. Furnish and erect scaffolding at perimeter of buildings for work by all other trades. This is to include multiple work levels, railing, toe boards, and access ladders.
2. Provide a stair tower at each end of the main building for access to the roof tops. Stair towers are required for roof levels that exceed 20'
3. Provide a stair tower at Multi-Purpose building for roof levels that exceed 20'.
4. Furnish and place trash chute at each end of main building for trash removal by all trades.

**Miscellaneous, Carpentry and Final Cleaning**

1. This bid package is responsible for applying and pulling the OSHA project permit.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

2. Pull and pay for all necessary permits required. The District will reimburse the Contractor for the actual permit cost, with no markup.
3. Furnish, install and maintain railing at stairways, safety railing (as directed by the Construction Manager), during construction. Temporary railing should include railing at the 2<sup>nd</sup> Floor, top of Stair 1 until metal guard rail system is in place.
4. Protection of all stained and sealed (exposed) concrete floors.
5. Rough cleaning prior to punch walk. Final cleaning for occupying the building. Bidder should include a total of two (2) cleanings of the buildings, roof tops and exterior.
6. Exterior cleaning of windows, flatwork, removal of debris from roof tops, etc.
7. Interior cleaning to include removal of debris from the building, dusting, vacuuming, cleaning windows.

**A. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES**

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents, Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.
4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.

5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard, lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
8. If a particular item of work appears to be included in more than one bid package, the bidder shall ensure they have covered this item(s) of work and shall not assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
10. Storm Water Pollution control as required including conformance with erosion

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.

11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
12. Provide traffic control (vehicular and pedestrian) as required when on or off-loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.
13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate specification sections, including requirements for closeout submission.
15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
18. The electrical trade contractor will provide for temporary electrical power and or

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

temporary power supply infrastructure from Public Utilities. Electrical trade contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).

19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.
20. Coordination and protection of own work with other trades is the responsibility of each Trade Contractor.
21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.
22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.
23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..
24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions



to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.

25. Each Prime Contractor shall include eight (8) hours (while on site) within their cost proposal to participate in the weekly composite cleanup efforts scheduled by the Construction Manager.
26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.
28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.
30. Safety requirements for own work, shall be in compliance with most recent CAL OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the Project. Failure to comply with any Safety Regulations will be grounds for removal of personnel from the jobsite. See also Supplemental General Conditions.

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
33. Flammable products must be continually stored per OSHA regulations.
34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the Construction Manager.
37. Parking for own employees, equipment, suppliers and sub-tier contractors shall be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
38. Compliance with specified warranty and guarantee requirements, both standard and special.
39. Provide at a minimum one qualified superintendent or one lead foreman for the duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed. Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.
40. Attendance at jobsite weekly progress meeting, coordination, scheduling and

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

safety meetings is MANDATORY.

41. Sealants and caulking for own work as per Division 7.
42. Provide relocation of staging area as necessary due to construction progress and as directed by Construction Manager.
43. Procurement of business license as needed.
44. Conformance with project manual, specifications, Construction Documents, and project time.
45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground work. Trade Contractor shall not rely on any representation made by anyone other than those individuals duly authorized to survey, locate and stake existing utilities.
46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.
47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade

Bid Package 2

General Trades

Initial\_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.

51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
52. Fire-stopping at own penetrations as required.
53. Additional testing costs as required should initial tests fail.
54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.
55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.
56. All project record documents as required per plans and specifications. Weekly updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers direction for said work.
58. Multiple move-ons to comply with Construction Manager's Master Schedule.
59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions

participate in a project badge identification system if instituted by the Construction Manager and the District.

62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits, insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 2

General Trades

Initial \_\_\_\_\_

Acceptance of Entire Bid Package,

No Additions, No Omissions



## **SB-3 ROOFING**

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor's License Board for the work in which the Subcontractor would perform. Bidder's will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

### **A. Specification Sections:**

Division 1

07 52 00 Modified Bituminous Sheet Roofing

07 54 23 Membrane Roofing

07 62 00 Sheet Metal Flashing and Trim (as applies)

07 72 00 Roof Hatch

07 90 00 Joint Protection (as applies)

Refer to additional related specification sections for work specifically included in this contract.

### **INCLUSIONS:**

1. Furnish and install complete roofing systems, including all insulation, base and cap sheets, walkway pads and underlayment necessary for a complete waterproof system for all Modified Bituminous Sheet Roofing, Membrane Roofing per manufacturer and plans and specifications.
2. Two (2) weeks prior to work, conduct a pre-roofing conference. Prime Contractor to include roofing manufacturer, Construction Manager, Design team in pre-roofing conference.
3. Furnish and install all roofing and flashing accessories including but not limited to all gutters, top closures, reglets & counter flashings, prefinished, galvanized, ridge flashings, fascia, cant angle and strips, all parapet caps including prefinished parapet caps, metal wall rake wall gutter flashing, rake supports, scuppers, composite base flashing, end dams & closures, copings, eave and rake flashing, metal fascia covers, foam crickets, tapered insulation, ridge cap, copping, and wall panels for own work. Make watertight all roof penetrations as required by manufacturer and plans and specifications.

Bid Package 3  
Roofing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

4. All underlayment board, rigid and tapered insulation, fire resistant barrier over underlayment for the roofing systems is included in this bid package.
5. Pre-finished metal roofing, flashing and standing seam metal roofing, parapet caps are included.
6. Furnish and install all crickets as outlined in Contract Documents and in order to achieve proper slope.
7. Roofing, curb cover, cant strips at Mechanical Platforms is included in this bid package. Roofing, collars, lead wrap, sealant at all roof penetrations.
8. Provide and install all items as required per manufacturer specifications to secure manufacturer's warranty. Furnish roof bond/warranty for roofing as specified and pay all costs associated therewith.
9. Furnish and install roof access hatches and ladders including telescoping posts as outlined in the Contract Documents. Provide opening layout to the framing contractor.
10. At completion of roofing and prior to issuance of Manufacturer's Warranty, Roofing Trade Contractor shall arrange for a site inspection of the completed installation by the Manufacturer's Representative.
11. Responsibility for cleaning and preparing surfaces to receive own work. Cleaning prior to application of roofing.
12. Protection of surfaces which are not to receive roofing materials.
13. Removal of surplus material and debris to a legal disposal site, including payment of all fees.
14. Coordinate with all other trades that are penetrating the roof. Coordination to include layout and dimensions of roof framing at all mechanical equipment, downspouts, rain water leaders. This coordination is to ensure proper opening size, equipment curb layout, flashing and roofing.
15. Protection of exposed finishes from the elements.
16. Visual inspection of surfaces to receive own work. Advise Construction Manager of conditions preventing commencement of roofing operation. Commencement of roof installation constitutes acceptance of substrate.
17. Infill all pitch pockets as required.
18. Provide anti-skid yellow/black tape compatible with the roofing system at all piped utility crossings over roof walkways.
19. Coordinate with Bid Package #6- Plumbing Trade Contractor the location and installation of the RWL and downspouts. Ensure that roof drains and overflow drains are properly protected during roofing operation.
20. Coordinate with Bid Package #7 - Mechanical Trade Contractor as to the dimensions and layout of roof framing at HVAC units to ensure proper opening size, curb layout, flashing and roofing.
21. Caulking of your own work.
22. Pull and pay for all necessary permits required. The District will reimburse the Contractor for the actual permit cost, with no markup.
23. All work performed over 6', employees must be 100% tied off.
24. Protect work from weather damage and other hazards during course of installation. Provide temporary building enclosure measures as necessary based on weather conditions anticipated per Preliminary Construction Schedule.

Bid Package 3  
Roofing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



25. Do not expose materials vulnerable to water or sun damage in quantities that exceed those that can be waterproofed or weatherproofed in same day. Provide temporary dry-in methods as necessary when finish work is being installed.
26. Prior to occupancy, thoroughly wash dust and dirt from all metal roofing surfaces.

**B. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES**

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents, Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.
4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required. Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.
5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard, lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
8. If a particular item of work appears to be included in more than one bid package, the bidder shall ensure they have covered this item(s) of work and shall not assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures

Bid Package 3  
Roofing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
10. Storm Water Pollution control as required including conformance with erosion control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.
  11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
  12. Provide traffic control (vehicular and pedestrian) as required when on or off-loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.
  13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
  14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate specification sections, including requirements for closeout submission.
  15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
  16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
  17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
  18. The electrical trade contractor will provide for temporary electrical power and or temporary power supply infrastructure from Public Utilities. Electrical trade contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).
  19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.
  20. Coordination and protection of own work with other trades is the responsibility of each Trade Contractor.
  21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.

Bid Package 3  
Roofing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.
23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..
24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.
25. Each Prime Contractor shall include eight (8) hours (while on site) within their cost proposal to participate in the weekly composite cleanup efforts scheduled by the Construction Manager.
26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.
28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.
30. Safety requirements for own work, shall be in compliance with most recent CAL OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the Project. Failure to comply with any Safety Regulations will be grounds for

Bid Package 3  
Roofing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

removal of personnel from the jobsite. See also Supplemental General Conditions.

31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
33. Flammable products must be continually stored per OSHA regulations.
34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the Construction Manager.
37. Parking for own employees, equipment, suppliers and sub-tier contractors shall be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
38. Compliance with specified warranty and guarantee requirements, both standard and special.
39. Provide at a minimum one qualified superintendent or one lead foreman for the duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed. Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.
40. Attendance at jobsite weekly progress meeting, coordination, scheduling and safety meetings is MANDATORY.
41. Sealants and caulking for own work as per Division 7.
42. Provide relocation of staging area as necessary due to construction progress and as directed by Construction Manager.
43. Procurement of business license as needed.
44. Conformance with project manual, specifications, Construction Documents, and project time.
45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground work. Trade Contractor shall not rely on any representation made by anyone other than those individuals duly authorized to survey, locate and stake existing utilities.
46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.

Bid Package 3  
Roofing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.
51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
52. Fire-stopping at own penetrations as required.
53. Additional testing costs as required should initial tests fail.
54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.
55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.
56. All project record documents as required per plans and specifications. Weekly updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers direction for said work.
58. Multiple move-ons to comply with Construction Manager's Master Schedule.
59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will participate in a project badge identification system if instituted by the Construction Manager and the District.
62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits, insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases

Bid Package 3  
Roofing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
  64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 3  
Roofing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



## **SB-4 ELEVATOR**

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor's License Board for the work in which the Subcontractor would perform. Bidder's will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

### **A. Specifications:**

Division 1

142400 Hydraulic Elevator

144200 Wheelchair Lifts

0788413 Penetration Firestopping (as applies)

079000 Joint Protection (as applies)

003132 Geotechnical Investigation Report

Refer to additional related specification sections for work specifically included in this contract.

### **INCLUSIONS:**

1. Furnish and install hydraulic elevators per contract documents for a complete functioning system. It is the responsibility of this bid package to confirm and achieve required clearances as noted in the contract documents.
2. The elevator equipment shall be manufactured and installed as a complete system by a single source manufacturer/installer who is regularly engaged in the engineering, design, manufacturing and installation of electric elevators as described within the specifications.
3. Provide all cab finishes as required per plans and specifications. Exception: Cab finish flooring to be provided and installed by Flooring Contractor.
4. This bid package is responsible for aluminum threshold, sealant, grout at elevator sill. This also includes support angle iron and plates.
5. Coordinate layout of all concrete with applicable Trade Contractor. Coordinate walls, rated wall and cutouts/access panels with Metal Framing Contractor.

Bid Package 4  
Elevator

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



6. Coordinate layout of Structural Steel with applicable Trade Contractor. To include hoist beam at top of elevator shaft, ladders, etc...
7. Coordinate all power and low voltage pathways for Elevators as shown on the plans and specifications with Electrical Contractor.
8. Electrical Trade Contractor to furnish and install conduit, cable, and disconnect to deliver power to wall mounted disconnect in elevator control room. Scope to include empty conduit from disconnect to a J-box mounted adjacent the Elevator controller. Elevator subcontractor to make final wire terminations to disconnect. Furnish and install light fixture and outlet at Elevator pit.
9. Furnish and install conduit and cable for cab light and ventilation to J-box with empty conduit extending from J-box to elevator controller. Final switch controls, wire, and terminations from elevator controller to J-box by Elevator vendor.
10. Electrical Trade Contractor to furnish and install all conduit, cable, light fixtures, and switch controls for light in elevator pit. Coordinate layout and interface with General Trade Contractor and Elevator vendor.
11. Traveling cable for elevator to be furnished and installed by elevator vendor; final connections by Electrical Trade Contractor.
12. This bid package is to furnish and install wall protection.
13. Elevator Contractor will closely coordinate delivery timing of elevator equipment with install.
14. Furnish and install wheelchair lift complete per plans and specifications. Coordinate power requirements with the Electrical contractor.
15. Coordinate encasement and sleeving of utility pipes under slab and through footings with appropriate Trade Contractors.
16. Inspect all surfaces to receive own work. Promptly notify the Construction Manager of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.
17. Elevator Contractor to furnish at their expense, all necessary inspections, permits, and tests as required by local regulations and authorities. The District will reimburse the Contractor for the cost of the permit(s), with no markup by the Contractor. Tests to be made in the presence of authorized representatives of such authorities.
18. Provide and install a set of fitted protective blankets. Blankets will remain with the school after the project.

**B. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES**

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents,

Bid Package 4  
Elevator

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.
4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required. Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.
  5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard, lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
  6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
  7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
  8. If a particular item of work appears to be included in more than one bid package, the bidder shall ensure they have covered this item(s) of work and shall not assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
  9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
  10. Storm Water Pollution control as required including conformance with erosion control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.
  11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
  12. Provide traffic control (vehicular and pedestrian) as required when on or off-

Bid Package 4  
Elevator

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.
13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
  14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate specification sections, including requirements for closeout submission.
  15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
  16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
  17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
  18. The electrical trade contractor will provide for temporary electrical power and or temporary power supply infrastructure from Public Utilities. Electrical trade contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).
  19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.
  20. Coordination and protection of own work with other trades is the responsibility of each Trade Contractor.
  21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.
  22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.
  23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..

Bid Package 4  
Elevator

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.
25. Each Prime Contractor shall include eight (8) hours (while on site) within their cost proposal to participate in the weekly composite cleanup efforts scheduled by the Construction Manager.
26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.
28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.
30. Safety requirements for own work, shall be in compliance with most recent CAL OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the Project. Failure to comply with any Safety Regulations will be grounds for removal of personnel from the jobsite. See also Supplemental General Conditions.
31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
33. Flammable products must be continually stored per OSHA regulations.
34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the

Bid Package 4  
Elevator

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- Construction Manager.
37. Parking for own employees, equipment, suppliers and sub-tier contractors shall be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
  38. Compliance with specified warranty and guarantee requirements, both standard and special.
  39. Provide at a minimum one qualified superintendent or one lead foreman for the duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed. Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.
  40. Attendance at jobsite weekly progress meeting, coordination, scheduling and safety meetings is MANDATORY.
  41. Sealants and caulking for own work as per Division 7.
  42. Provide relocation of staging area as necessary due to construction progress and as directed by Construction Manager.
  43. Procurement of business license as needed.
  44. Conformance with project manual, specifications, Construction Documents, and project time.
  45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground work. Trade Contractor shall not rely on any representation made by anyone other than those individuals duly authorized to survey, locate and stake existing utilities.
  46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.
  47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
  48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
  49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
  50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.
  51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
  52. Fire-stopping at own penetrations as required.
  53. Additional testing costs as required should initial tests fail.

Bid Package 4  
Elevator

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.
55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.
56. All project record documents as required per plans and specifications. Weekly updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers direction for said work.
58. Multiple move-ons to comply with Construction Manager's Master Schedule.
59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will participate in a project badge identification system if instituted by the Construction Manager and the District.
62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits, insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 4  
Elevator

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



## **SB-5 FIRE PROTECTION**

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor's License Board for the work in which the Subcontractor would perform. Bidder's will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

### **A. Specifications:**

Division 1

21 00 00 General Fire Protection Provisions

21 00 01 Fire Protection System

07 84 13 Penetration Firestopping (as applies)

07 90 00 Joint Protection (as applies)

08 31 13 Access Doors and Frames (as applies)

Refer to additional related specification sections for work specifically included in this contract.

### **General Items:**

1. It is the general intent of this bid package that the Prime Contractor includes all fire protection for the project complete, including but not limited to; pipe material, clamps and fittings, sprinklers, valves, flow and tamper switches, shop drawings coordinated with Ceiling and MEP Trade Contractors layouts, testing and inspections, and fire safing for work completed in this bid package. All work shall comply with contract documents. This bid package is to include the fire sprinkler system in the attic space.
2. Included in this bid package is the fire suppression/ansul system for all required kitchen equipment, complete per plans and specifications. Review Food Service Equipment specifications for Fire Protection System requirements.
3. Signage, labeling and bells shall be provided and installed per NFPA 13.
4. Coordinate installation of any work with Construction Manager that crosses public pathways of travel during construction. Any work affecting public paths of travel must be done after hours or on Saturday to avoid path of travel disruptions.

Bid Package 5  
Fire Protection

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



5. Furnish and install fire protection system infrastructure to future relas as outlined in the project documents.
6. Connection of the fire service water to the Preschool building is included in this bid package. Fire water will be brought to within 5' of the PRE bldg. location by the Sitework Contractor.
7. Provide layout for fire riser stub-ups to sitework contractor. The continuation of the fire service water within 5' of the building to the Fire Riser Room are part of this bid package. All fire riser equipment/material is part of this bid package.
8. For pipes/piping that cross through footings, provide sleeving and sealant as indicated on the drawings.
9. Layout of all required inserts at metal decking/roofing is to be by this bid package.
10. At ceiling tile ceilings, locate sprinkler heads as outlined on the fire protection drawings. If this cannot be achieved, notify the Construction Manager prior to continuation of work.
11. Provide and install all fire/penetration stopping for fire sprinkler piping at rated walls.
12. Fire Protection Trade Contractor shall be responsible for coordinating inspections by the IOR and/or Local Fire Authority.
13. Fire Protection Trade Contractor shall coordinate the layout of all flow and tamper switches with the Electrical/Fire Alarm Contractor.
14. Fire Protection Trade Contractor to install all necessary plugs, caps, fittings for hydro testing and/or flushing of the system.
15. Provide all fire safing, fire stopping, fire caulking and sealants as it applies to your work and at all rated walls and through rated walls.
16. Provide all seismic/sway bracing, gravity hangers and supports required for your work. Reference the structural drawings for supporting requirements from metal deck/steel beams.
17. Install auxiliary drain valves for trapped lines per NFPA 13.
18. Access doors required for this scope of work to be provided by this contractor. Layout size and location of access door and furnish door to the framing contractor for install.
19. Commissioning and operation test required as part of this work.
20. Provide and install sheet metal flashing associated with own work where/if required.
21. Furnish extra material as outlined on the contract documents, FP2 – Note 4. Extra material to be turned over to the Construction Manager.
22. Fire Protection Trade Contractor must coordinate all training and operation instruction sessions per the specification requirements.
23. Layout of items located in concrete, masonry and framing prior to installation of concrete, masonry, and framing. In the event layout does not occur in a timely manner, Trade Contractor becomes responsible for all rework, reframing, coring, cutting, etc. required to install own work including patch and repair to like new condition. Provide cut sheets indicating layout dimensions.
24. Pull and pay for all necessary permits required. The District will reimburse the Contractor for the actual permit cost, with no markup.

Bid Package 5  
Fire Protection

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

## B. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents, Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.
4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required. Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.
5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard, lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
8. If a particular item of work appears to be included in more than one bid package, the bidder shall ensure they have covered this item(s) of work and shall not assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
10. Storm Water Pollution control as required including conformance with erosion control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is

Bid Package 5  
Fire Protection

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.
11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
  12. Provide traffic control (vehicular and pedestrian) as required when on or off-loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.
  13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
  14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate specification sections, including requirements for closeout submission.
  15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
  16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
  17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
  18. The electrical trade contractor will provide for temporary electrical power and or temporary power supply infrastructure from Public Utilities. Electrical trade contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).
  19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.
  20. Coordination and protection of own work with other trades is the responsibility of each Trade Contractor.
  21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.
  22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.

Bid Package 5  
Fire Protection

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..
24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.
25. Each Prime Contractor shall include eight (8) hours (while on site) within their cost proposal to participate in the weekly composite cleanup efforts scheduled by the Construction Manager.
26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.
28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.
30. Safety requirements for own work, shall be in compliance with most recent CAL OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the Project. Failure to comply with any Safety Regulations will be grounds for removal of personnel from the jobsite. See also Supplemental General Conditions.
31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas

Bid Package 5  
Fire Protection

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
33. Flammable products must be continually stored per OSHA regulations.
  34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
  35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
  36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the Construction Manager.
  37. Parking for own employees, equipment, suppliers and sub-tier contractors shall be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
  38. Compliance with specified warranty and guarantee requirements, both standard and special.
  39. Provide at a minimum one qualified superintendent or one lead foreman for the duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed. Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.
  40. Attendance at jobsite weekly progress meeting, coordination, scheduling and safety meetings is MANDATORY.
  41. Sealants and caulking for own work as per Division 7.
  42. Provide relocation of staging area as necessary due to construction progress and as directed by Construction Manager.
  43. Procurement of business license as needed.
  44. Conformance with project manual, specifications, Construction Documents, and project time.
  45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground work. Trade Contractor shall not rely on any representation made by anyone other than those individuals duly authorized to survey, locate and stake existing utilities.
  46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.
  47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
  48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
  49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
  50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade

Bid Package 5  
Fire Protection

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.
51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
  52. Fire-stopping at own penetrations as required.
  53. Additional testing costs as required should initial tests fail.
  54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.
  55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.
  56. All project record documents as required per plans and specifications. Weekly updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
  57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers direction for said work.
  58. Multiple move-ons to comply with Construction Manager's Master Schedule.
  59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
  60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
  61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will participate in a project badge identification system if instituted by the Construction Manager and the District.
  62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits, insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
  63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
  64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's

Bid Package 5  
Fire Protection

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 5  
Fire Protection

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions





## **SB-6 PLUMBING**

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor's License Board for the work in which the Subcontractor would perform. Bidder's will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

### **A. Specifications:**

Division 1

- 220000 General Plumbing Provisions
- 220001 Plumbing
- 113100 Residential Appliances
- 076200 Sheet Metal Flashing & Trim (as applies)
- 078413 Penetration Firestopping (as applies)
- 079000 Joint Protection (as applies)
- 083113 Access Doors & Frames (as applies)
- 312316 Trenching, Backfilling and Compaction (as applies)
- 331213 Water Service Connections (as applies)
- 331300 Disinfecting of Water Distribution (as applies)
- 003132 Geotechnical Investigation Report

Refer to additional related specification sections for work specifically included in this contract.

### **INCLUSIONS:**

1. It is the general intent of this bid package that the Trade Contractor includes all plumbing for the project complete, including but not limited to; all sewer, water, gas, floor drains and cleanouts, condensate drains, hose bibs, roof drains, rain water leaders, downspouts, fire safing, insulations for this bid package. Final connections for piped utilities and to be included in this bid package. The Sitework Contractor will bring services to within 5' of the building for this bid package to take forward to final destination.
2. Sump pit and oil separator are to be included in this bid package. Coordinate with Sitework and Elevator contractors.

Bid Package 6  
Plumbing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

3. Furnish and install all required final connections (water, sewer, etc) to the Preschool building. Infrastructure to be provided to all future relo locations. Utilities for these buildings will be brought within 5' of the location.
4. Furnish and install Residential Appliances as indicated. Plumbing rough-in and final hook-up for Residential Appliances is to be included in the bid package.
5. Provide layout and templates to the Millwork contractor for sink/faucet cut outs.
6. Furnish and install gas valve for kitchen fire protection system and gas final connections for kitchen equipment.
7. Furnish and install GSM roof gutters, roof and overflow drains and downspouts and rain water leaders. Installation of roof drains at steel columns prior to concrete. Provide catch basin/splash blocks/lambs tongue at rain leader. For exposed downspouts, provide downspout to the painter for painting prior to installation. Coordinate connection of downspout drain with the Sitework contractor.
8. Rough plumbing and final connections include waste lines, condensate drains, water and gas supply, floor sinks and drains, etc and all food service equipment, walk in coolers and freezers, grease interceptor.
9. Pressure Regulating Valve (PRV) as required for this scope of work.
10. Coordination of utility service providers related to your work.
11. All shutdowns and tie-ins to the existing system will be fully coordinated with Construction Manager.
12. Coordinate installation of any work with Construction Manager that crosses public pathways. If work impedes the path of travel for other trades, furnish and place trench plates.
13. All flushing, testing, inspection, disinfection, sterilization, balancing and maintenance of own work and connecting work until accepted by the Construction Manager/IOR.
14. Prior to work of any within the existing public right-of-way or easements, the Trade Contractor shall pay for and obtain all permits and bonds required by the City of Fresno.
15. For pipes/piping that cross through footings, provide sleeving and sealant as indicated on the drawings.
16. Coordinate all roof penetrations with Roofing contractor.
17. Provide and install water heater platforms/shelf and supports/strapping as specified and detailed in the Contract Documents. Coordinate any backing requirements with the framing contractor.
18. Furnish and install all drinking fountains. Provide layout to confirm all ADA compliance is achieved.
19. It is the responsibility of this bid package to protect the floor drains (from concrete, grout, debris, etc.) during the duration of construction activities.
20. All fire safing, fire caulking, sealants, fire barrier duct wrap, etc as it applies to your work. Furnish and install all fire caulking through fire rated walls for your own work.

Bid Package 6  
Plumbing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

21. All seismic bracing, expansion and/or anchorage, hangers, supports, bracing, rod stiffeners required for your work. Reference the structural drawings for supporting requirements from metal deck/steel beams.
22. Access doors shown in Architectural drawings will be furnished by this trade contractor and installed by General Trades Contractor. This Trade Contractor is responsible for providing any additional access doors as required for a complete installation of own scope of work, including additional access doors to meet code and proper maintenance of the system that may not be shown in drawings. Coordinate and layout openings with framing contractor. Coordinate manufacturer of access doors with other MEP and Trade contractors so that all access doors on the project are from the same manufacturer and all access doors are keyed alike throughout the project. All keys are to be turned over to the Construction Manager. Keys are not to be left in door at any time.
23. Commissioning and operation testing as required for this work.
24. Excavation, trench plates for access, dewatering, bedding material, backfill and compaction for own work, including shoring and lagging if required.
25. Trade Contractor must coordinate all training and operation instruction sessions per the specification requirements. Provide video recording for all training sessions.
26. Turn over all keys to the Construction Manager separated by building and door number along with a key metric's identifying door and building. Keys are not to be left in doors at any time.
27. Provide layout of items located in concrete, concrete footings, masonry and framing prior to installation of concrete, masonry, and framing. In the event layout does not occur in a timely manner, this Trade Contractor becomes responsible for all rework, reframing, coring, cutting, etc. required to install own work including patch and repair to like new condition. Provide cut sheets indicating layout dimensions.
28. Provide layout and field measurements for own work from line and grade coordinates supplied by Owner. Any additional survey work requested other than that provided by Owner will be the responsibility of the affected / requesting Trade Contractor.
29. Pull and pay for all necessary permits required. The District will reimburse the Contractor for the actual permit cost, with no markup.
- 30.

**B. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES**

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents, Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.

Bid Package 6  
Plumbing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required. Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.
5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard, lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
8. If a particular item of work appears to be included in more than one bid package, the bidder shall ensure they have covered this item(s) of work and shall not assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
10. Storm Water Pollution control as required including conformance with erosion control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.
11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
12. Provide traffic control (vehicular and pedestrian) as required when on or off-loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.

Bid Package 6  
Plumbing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate specification sections, including requirements for closeout submission.
15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
18. The electrical trade contractor will provide for temporary electrical power and or temporary power supply infrastructure from Public Utilities. Electrical trade contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).
19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.
20. Coordination and protection of own work with other trades is the responsibility of each Trade Contractor.
21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.
22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.
23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..
24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible

Bid Package 6  
Plumbing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.
25. Each Prime Contractor shall include eight (8) hours (while on site) within their cost proposal to participate in the weekly composite cleanup efforts scheduled by the Construction Manager.
  26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
  27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.
  28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
  29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.
  30. Safety requirements for own work, shall be in compliance with most recent CAL OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the Project. Failure to comply with any Safety Regulations will be grounds for removal of personnel from the jobsite. See also Supplemental General Conditions.
  31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
  32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
  33. Flammable products must be continually stored per OSHA regulations.
  34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
  35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
  36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the Construction Manager.
  37. Parking for own employees, equipment, suppliers and sub-tier contractors shall

Bid Package 6  
Plumbing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
38. Compliance with specified warranty and guarantee requirements, both standard and special.
  39. Provide at a minimum one qualified superintendent or one lead foreman for the duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed.  
Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.
  40. Attendance at jobsite weekly progress meeting, coordination, scheduling and safety meetings is MANDATORY.
  41. Sealants and caulking for own work as per Division 7.
  42. Provide relocation of staging area as necessary due to construction progress and as directed by Construction Manager.
  43. Procurement of business license as needed.
  44. Conformance with project manual, specifications, Construction Documents, and project time.
  45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground work. Trade Contractor shall not rely on any representation made by anyone other than those individuals duly authorized to survey, locate and stake existing utilities.
  46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.
  47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
  48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
  49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
  50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.
  51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
  52. Fire-stopping at own penetrations as required.
  53. Additional testing costs as required should initial tests fail.
  54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.

Bid Package 6  
Plumbing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.
56. All project record documents as required per plans and specifications. Weekly updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers direction for said work.
58. Multiple move-ons to comply with Construction Manager's Master Schedule.
59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will participate in a project badge identification system if instituted by the Construction Manager and the District.
62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits, insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 6  
Plumbing

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions





## **SB-7 MECHANICAL**

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor's License Board for the work in which the Subcontractor would perform. Bidder's will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

### **A. Specifications:**

Division 1

- 230000 General Mechanical Provisions
- 230001 Heating, Ventilating and Air Conditioning
- 076200 Sheet metal Flashing and Trim (as applies)
- 078413 Penetration Firestopping
- 079000 Joint Protection (as applies)
- 083113 Access Doors & Frames (as applies)

Refer to additional related specification sections for work specifically included in this contract.

### **INCLUSIONS:**

1. It is the general intent of this bid package that the Trade Contractor includes all HVAC for the project complete. Furnish and install complete heating, ventilation, cooling systems and controls including all mechanical equipment, fans (time clock for exhaust fans), kitchen hood, acoustic lining, piping, equipment flues, ducting, exhaust duct, flexible duct connection, grease filter, grease duct drop, duct wrap, ventilators, dampers (including remote and backdraft dampers as required), vanes, connectors, hardware, grilles, duct access doors, diffusers, registers, sensors, T-stats, VAV boxes, pumps, drain pan, finish material, etc. as required to meet the performance criteria specified and for a complete and operating system.
2. Furnish and install mechanical louvers and vents as shown in Mechanical drawings. Provide layout (size and location) and coordination with the framing contractor. Joint sealant at wall louvers and vents to be performed by this Trade Contractor. Reference architectural and mechanical drawings for locations.

Bid Package 7  
Mechanical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

3. Furnish and install fly fan complete per Fly Fan Schedule. Coordinate backing/blocking needs with the Framing contractor.
4. All sheet metal, flashing, covers and caps for mechanical equipment and duct connections, roof supports, etc. shall be part of this bid package.
5. Furnish and install metal cover for T-stats and CO2 sensors as outlined on the drawings.
6. Final connections to all food service equipment as it relates to your work.
7. Coordinate installation of any work with Construction Manager that crosses public pathways of travel during construction. Any work affecting public-right-of-way must be done on Saturday to avoid path of travel disruptions.
8. Provide all fire safing, fire caulking, sealants and fire barrier duct wrap as it applies to your work and at penetrations through rated walls.
9. Provide all seismic bracing, expansion, and/or anchorage, gravity hangers, hangers, supports, Unistrut, and bracing required for your work. Reference the structural drawings for supporting requirements from metal deck/steel beams.
10. Provide and install mechanical insulation as required for your work.
11. Provide and install all equipment curbs/platforms and platforms as required for your work. Reference typical mechanical curb/platform details outlined in the contract documents. This work includes but is not limited to, platform, angle iron (painted black), sheet metal flashing, blocking/wood nailer, hardware, platform cover, neoprene pads, caulking and sealants, Provide spring isolators as required
12. Access doors required for work of this bid package. Coordinate layout and size with the framing contractor.
13. Conduit pathway and wiring requirements for HVAC controls and elsewhere as it applies to your work.
14. This bid package is responsible for the Installation of all duct smoke detectors. The Electrical contractor will purchase and furnish to the mechanical contractor and the Electrical Contractor will complete wiring and final termination.
15. Provide and install all labeling and identification signs required for your work.
16. Turn over properly labeled panel door keys to the Contraction Manager. Keys are not to be left in doors at any time.
17. Coordinate dimensions and layout with Roofing contractor, to ensure proper opening size, curb layout, flashing and roofing. Verify roof openings, curbs, pipes, sleeves, ducts and vents through roof are solidly set.
18. Commissioning and preliminary operation test required as part of this work. Testing includes a smoke detector shutoff test.
19. Perform testing of all systems outlined in the contract documents. Hire a qualified, TABB certified Test and Balance contractor. Follow all Test and Balance procedures as outlined in the specifications. All testing reports to be included with the O & M manual.
20. Perform Commissioning of Mechanical Systems.
21. Mechanical contractor must coordinate all training and operation instruction sessions per the specification requirements. An authorized representative of the equipment manufacturer shall train Owner-designated personnel in

Bid Package 7  
Mechanical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

maintenance and adjustment of equipment. The representative may be an employee of the equipment manufacturer, or a manufacturer-certified contractor. Submit written certification from the manufacturer stating that the representative is qualified to perform the Owner training for the equipment installed.

22. Pull and pay for all necessary permits required. The District will reimburse the Contractor for the actual permit cost, with no markup.
23. Provide layout of items located in concrete, masonry and framing prior to installation of concrete, masonry, and framing. In the event layout does not occur in a timely manner, this prime contractor becomes responsible for all rework, reframing, coring, cutting, etc. required to install own work including patch and repair to like new condition. Provide cut sheets indicating layout dimensions.

**B. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES**

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents, Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.
4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required. Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.
5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard, lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
8. If a particular item of work appears to be included in more than one bid package,

Bid Package 7  
Mechanical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- the bidder shall ensure they have covered this item(s) of work and shall not assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
  10. Storm Water Pollution control as required including conformance with erosion control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.
  11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
  12. Provide traffic control (vehicular and pedestrian) as required when on or off-loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.
  13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
  14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate specification sections, including requirements for closeout submission.
  15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
  16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
  17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
  18. The electrical trade contractor will provide for temporary electrical power and or temporary power supply infrastructure from Public Utilities. Electrical trade contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).
  19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.

Bid Package 7  
Mechanical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

20. Coordination and protection of own work with other trades is the responsibility of each Trade Contractor.
21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.
22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.
23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..
24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.
25. Each Prime Contractor shall include eight (8) hours (while on site) within their cost proposal to participate in the weekly composite cleanup efforts scheduled by the Construction Manager.
26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.
28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.

Bid Package 7  
Mechanical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

30. Safety requirements for own work, shall be in compliance with most recent CAL OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the Project. Failure to comply with any Safety Regulations will be grounds for removal of personnel from the jobsite. See also Supplemental General Conditions.
31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
33. Flammable products must be continually stored per OSHA regulations.
34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the Construction Manager.
37. Parking for own employees, equipment, suppliers and sub-tier contractors shall be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
38. Compliance with specified warranty and guarantee requirements, both standard and special.
39. Provide at a minimum one qualified superintendent or one lead foreman for the duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed. Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.
40. Attendance at jobsite weekly progress meeting, coordination, scheduling and safety meetings is MANDATORY.
41. Sealants and caulking for own work as per Division 7.
42. Provide relocation of staging area as necessary due to construction progress and as directed by Construction Manager.
43. Procurement of business license as needed.
44. Conformance with project manual, specifications, Construction Documents, and project time.
45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground

Bid Package 7  
Mechanical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- work. Trade Contractor shall not rely on any representation made by anyone other than those individuals duly authorized to survey, locate and stake existing utilities.
46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.
  47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
  48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
  49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
  50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.
  51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
  52. Fire-stopping at own penetrations as required.
  53. Additional testing costs as required should initial tests fail.
  54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.
  55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.
  56. All project record documents as required per plans and specifications. Weekly updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
  57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers direction for said work.
  58. Multiple move-ons to comply with Construction Manager's Master Schedule.
  59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
  60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
  61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will

Bid Package 7  
Mechanical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



- participate in a project badge identification system if instituted by the Construction Manager and the District.
62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits, insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
  63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
  64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 7  
Mechanical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



## **SB-8 ELECTRICAL, OFF-SITE & SITE ELECTRICAL & LOW VOLTAGE**

Switch Gear has been purchased by Central USD. The ship date is anticipated for February 2024. The receiving, handling, installation, and *testing required* of the Switch Gear is the responsibility this contractor. Refer to sheet numbers enclosed in this bid package identified as "FQ-37877293-10812977-01" (two sheets) and "OQ-37877293-108129577-01" (two sheets). Specifically, the items purchased by the district are:

- MSB

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor's License Board for the work in which the Subcontractor would perform. Bidder's will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

### **A. Specifications:**

Division 1

Division 3 Site Concrete (as it applies)

Division 14 Elevators and Wheelchair Lifts (as it applies)

260000 Electrical

260500 Common Work Results for Electrical,

265000 Lighting

270000 Communications

271000 Structured Cabling

275113 Paging Systems

280000 Electronic Safety and Security

281600 Intrusion Detection

The **Intrusion Detection** scope of work for SB-8 will be *limited* to 1.3B3 (power supply), 1.3B6 (wiring), 1.3B7 (conduit) & 1.3B8 (back boxes).

283100 Fire Detection and Alarm

312316 Trenching, Backfilling and Compaction (as it applies)

Bid Package 8  
Electrical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- 079200 Joint Sealants (as it applies)
- 083113 Access Door and Frames (as it applies)
- 003132 Geotechnical Investigation Report  
Off-Site plans and specifications

Refer to additional related specification sections for work specifically included in this contract.

**INCLUSIONS:**

1. It is the general intent of this bid package that the Trade Contractor includes all electrical for the project complete, including but not limited to; all Off-Site and On-Site electrical and fixtures, electrical work for future build out, including trenching, conduits, backfilling and compaction. Furnish and install complete power, lighting, (including lighting, maintenance switch and conduit runs, j-hook cable supports in the attic space, Key note 4/E3.1, General Note 25/E0.1), Off-Site traffic signal light controls and fixtures per the drawings, theatrical lighting, data and sound communication, safety and security, intrusion and fire detection/alarm Systems. Work includes all light fixtures, emergency lighting, exterior building lighting, lighting controls, low voltage, transformers, electrical panels, conduit, wiring, receptacles, j-boxes, light fixtures, racks, firestop for electrical and low voltage systems, etc. per plans and specifications needed to complete the project. Contractor must include all electrical work included in Contract Documents.
2. The kitchen hood extinguishing system must be interconnected to the building alarm system.
3. All final connections (power, lighting, low voltage, security) for the Preschool building are to be included in this bid package.
4. Installation of power for all kitchen equipment is included in this bid package. Exhaust hood lights provided by Kitchen Vendor, installed by this bid package. Coordinate all power requirements with the Kitchen vendor. Provide electrical shut offs for Kitchen equipment as outlined in the contract documents.
5. Provide electrical and low voltage and security infrastructure to all relocatable / future buildings. All services to be brought to within 5' of location shown on the contract documents. There will be services to each relocatable / future building, install large enough conduits to accommodate for all services.
6. Furnish and install main electrical, low voltage, telecommunication connections to the Construction Manager/IOR temporary offices, to include overhead power and conduit pathways between buildings. Disconnection and removal of temporary systems to be included in this bid package.
7. Provide temp lighting outside at Construction Manager/IOR Temporary Project Offices and other areas of the laydown yard. Temp lighting should have the capabilities to be on/off and timer switch. Removal of power and poles/conduit at the end of the project. (See items 21 – 30 herein for further requirements for temp power.)

Bid Package 8  
Electrical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

8. Theatrical lighting systems to include all equipment, e.g. processors, receivers, transceiver, controller, etc...
9. Furnish and install all Wireless Area Controllers as outlined on the contract documents.
10. All electrical connections to Food Service Equipment and Walk In Freezer as indicated on the drawings. This is to include inter-wiring between the freezer condensing units and freezer blower coils and all power to disconnects on condensing units and racks.
11. All power, lighting, fire alarm, low voltage/telephone at elevator/wheelchair lift by this bid package. Provide a feeder and branch wiring circuits including main line switch for car light and fan. Thoroughly read and understand the scope of work required by this bid package for work at the elevator and wheelchair lift and in the control rooms. Coordinate with the Elevator contractor for placement of equipment in order to maintain required distances.
12. Coordination with utility service provider(s) related to your work.
13. All tie-ins related to electrical will be fully coordinated with Construction Manager.
14. Coordinate installation of any work with Construction Manager that crosses public pathways of travel during construction. Any work affecting public paths of travel must be done on Saturday to avoid path of travel disruptions.
15. For pipes/piping that cross through footings, provide sleeving and sealant as indicated on the drawings. Include all slurry backfill at conduits at footings, if not poured in unison with footings.
16. Install electrical/low voltage and final terminations required for landscaping/irrigation scopes (e.g. Irrigation Booster Pump, Irrigation Controller, etc.) of work. Reference Landscape drawings for electrical scope.
17. Furnish and install site lighting (parking lot and pedestrian), including pole footings/concrete/base, rebar, anchors, grout, pole light, covers/closure piece, pull boxes for complete system. Pull boxes to include crush rock, tar paper, grout as outlined in the details. Layout and surveying for site lighting is the responsibility of this bid package.
18. All power and data for Marquee signs to be included in this bid package. Bring services to within 3' of Marquee signs, that will be installed at a later date.
19. Theatrical lighting is part of this bid package and includes but not limited to, controls, controller, DMX processor, transceiver, console, battens are to be part of this bid package. Provide batten theatrical lights as outlined on the drawings.
20. Refer to 015000 – Temporary Facilities and Controls, for electrical requirements related to temporary facilities.
21. *Temporary Power (Items 21 – 30)* Electrical Trade Contractor shall provide a complete Temporary Electrical distribution system to service the Project, until such time as the permanent electrical distribution system is available for use.
22. Temporary power shall include the following:
23. Installation of underground conduit and primary feeders from an existing PG&E Primary Splice Box or existing ground mounted transformer located across West Fountain Way to the location of the future new PG&E Transformer as shown on Sheet E2.2. or unless noted otherwise.

Bid Package 8  
Electrical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

24. Electrical Trade Contractor shall then construct an above ground Temporary Power Center adjacent to the future location of the permanent PG&E Transformer.
25. Temporary Power Center to consist of a suitably sized dry-type step down transformer, and a distribution panel sized to accommodate the required loads. Panel shall have sufficient circuitry to provide OSHA required general temporary lighting throughout all areas of the new construction; sufficient circuitry to provide spider boxes to within one hundred (100) feet of any area of the new construction, including any roof areas. Sufficient spider boxes shall be provided by this contractor to accommodate work by the various trades that will be working simultaneously on the site. Electrical Trade Contractor shall be responsible for providing the power cords to spider boxes as noted previously to accommodate the needs of other trades or as directed by Kitchell. Power cords from the spider boxes shall be provided by the trade requiring same.
26. From the Power Center, Electrical Trade Contractor shall run temporary overhead power lines to the Construction Trailer Complex. Overhead lines shall be supported by temporary power poles arranged in such a manner as to avoid conflict with construction of the building pad and future permanent site concrete and paving work. Assume a maximum of a three hundred (300) foot run to the trailer complex.
27. Electrical Trade Contractor shall provide fiber data lines running overhead to Kitchell's temporary office trailer and the Inspector of Record's trailer, located adjacent to the Kitchell trailer.
28. Electrical Trade Contractor shall provide all temporary light strings, warehouse lights, or other temporary light sources necessary to provide temporary lighting, until such time as permanent lights are available. All temporary lighting shall feed from a dedicated circuit at the power center. Lighting is not to be fed from a spider box.
29. Electrical Trade Contractor shall provide all power cords from the power center to the spider boxes; and all required spider boxes. Electrical Trade Contractor shall be responsible for all maintenance and storage of same.
30. When permanent power is ready to be activated and temporary power no longer required, Trade Contractor shall remove the entire temporary power distribution system and all temporary lighting. Trade Contractor shall have the permanent electrical distribution system completely serviceable before scheduling a shutdown to remove temporary feeders.
31. All fire safing work completed in this package including fire caulking, fire sealants, putty pads, at all electrical penetrations through fire rated barriers. Follow fire rating details in the contract documents,
32. All seismic bracing and/or anchorage required for your work - anchorage, Unistrut, all-thread, supports, embeds, inserts, hanger, backing plates, and bracing. Reference the structural drawings for supporting requirements from metal deck/steel beams.
33. This bid package is responsible for all required electrical clearances at panels, equipment, etc.

Bid Package 8  
Electrical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

34. Furnish and install all required access panels for work outlined in this bid package. Provide location and layout to the framing contractor for backing/blocking needed.
35. Trenching for own work is to be part of this bid package. Compliance with all trenching details is required.
36. Furnish and install flashing associated with own work where required.
37. All labeling and identification signs required for your work.
38. Equipment furnished by others: Contractor shall make electrical connections to all equipment furnished and installed by others. Specific requirements shall be obtained from contractor providing the equipment and used to perform electrical work. Contractor's responsibility is limited to having correctly installed and connected electrical work in accordance with diagrams and specifications furnished by the appropriate equipment contractor.
39. This bid package is responsible for all conduit pathway requirements for power, line voltage, low voltage, audio visual, theatrical lighting, fire alarm, security. Conduit for control wiring is responsibility of the Mechanical contractor.
40. Verify low voltage labeling with the Construction Manager. The District may have a template to follow to keep labeling uniform throughout their school district.
41. Layout of items located in concrete, masonry and framing prior to installation of concrete, masonry, and framing. In the event layout does not occur in a timely manner, Trade Contractor becomes responsible for all rework, reframing, coring, cutting, etc. required to install own work including patch and repair to like new condition. Provide cut sheets indicating layout dimensions. Contractor to provide competent person onsite during all concrete pours to monitor own work and ensure components in concrete are not disturbed and are at proper elevation and configuration.
42. Concrete associated with own work including precast, cast-in-place, reinforcing, encasements, etc. excluding equipment pads shown in Contract Documents. Layout of equipment pads by this bid package. This bid package is to provide the Concrete Contractor all hardware at pads, which includes, bolts, mounting frame, etc.  
Equipment pads to be coordinated with the Sitework and General Trades contractors. Transformer equipment pads that are not concrete are to be included in this bid package. This includes but not limited to the roof mounted transformer(s). Roof curb, blocking, flashing, sealant is part of this bid package. Coordinate work with the Structural Steel/Metal Deck and Roofing Contractors.
43. Excavation, dewatering, bedding material, backfill and compaction for own work, including shoring and lagging if required. During the winter months, provide protection of trenches so they do not collapse and/or only trench what can be installed, inspected and backfilled during the day.
44. Provide trench plates if required to maintain access for all scopes of work for other trade contractor's work.
45. Trade Contractor must coordinate all training and operation instruction sessions per the specification requirements.
46. Provide layout and field measurements for own work from line and grade coordinates provided. Any additional survey work requested other than that provided by District will be the responsibility of the affected contractor.

Bid Package 8  
Electrical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

47. Furnish and install infrastructure (power, low voltage) to location of future marquis sign.
48. Installation of all electrical/low voltage at casework and motorized screen. Coordinate with General Trades contractor.
49. Electrical Trade Contractor to cover scope as indicated in HVAC drawings and notes calling out Electrical Contractor and/or Div 26.
50. Furnish duct/fire/smoke detectors as indicated in the contract documents to the Mechanical contractor, for install. Power and wiring of duct/fire/smoke detectors and cabling to test switch, to be part of this bid package.
51. Furnish and install fire treated plywood backboards in electrical and telecom rooms as shown on the drawings. Coordinate painting of plywood with the painting contractor.
52. Provide data drops and 120V power to HVAC control panel locations. Reference HVAC drawings for locations.
53. All power/low voltage for mechanical equipment. Coordinate power and low voltage requirements with the mechanical contractor.
54. Turn over all panel door keys to the Contraction Manager separated by building and room number and panel name along with a key metric's identifying key's to doors and rooms. Keys are not to be left in doors at any time.
55. All testing and support for your work, including any testing required by the Utility companies. Work includes all mandrel pulls required for the underground conduits. All testing reports to be included in the O & M manual.
56. Trade Contractor must coordinate all training and operation instruction sessions per the contract documents.
57. Commissioning and operation test required as part of this work. This includes all Title 24 documentation.
58. Pull and pay for all necessary permits required. The District will reimburse the Contractor for the actual permit cost, with no markup.

**B. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES**

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents, Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.
4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required. Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.
5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard,

Bid Package 8  
Electrical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



- lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
  7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
  8. If a particular item of work appears to be included in more than one bid package, the bidder shall ensure they have covered this item(s) of work and shall not assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
  9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
  10. Storm Water Pollution control as required including conformance with erosion control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.
  11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
  12. Provide traffic control (vehicular and pedestrian) as required when on or off-loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.
  13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
  14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate specification sections, including requirements for closeout submission.

Bid Package 8  
Electrical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
18. The electrical trade contractor will provide for temporary electrical power and or temporary power supply infrastructure from Public Utilities. Electrical trade contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).
19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.
20. Coordination and protection of own work with other trades is the responsibility of each Trade Contractor.
21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.
22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.
23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..
24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.
25. Each Prime Contractor shall include eight (8) hours (while on site) within their cost proposal to participate in the weekly composite cleanup efforts scheduled

Bid Package 8  
Electrical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- by the Construction Manager.
26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
  27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.
  28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
  29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.
  30. Safety requirements for own work, shall be in compliance with most recent CAL OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the Project. Failure to comply with any Safety Regulations will be grounds for removal of personnel from the jobsite. See also Supplemental General Conditions.
  31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
  32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
  33. Flammable products must be continually stored per OSHA regulations.
  34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
  35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
  36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the Construction Manager.
  37. Parking for own employees, equipment, suppliers and sub-tier contractors shall be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
  38. Compliance with specified warranty and guarantee requirements, both standard and special.
  39. Provide at a minimum one qualified superintendent or one lead foreman for the

Bid Package 8  
Electrical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed.  
Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.
40. Attendance at jobsite weekly progress meeting, coordination, scheduling and safety meetings is MANDATORY.
  41. Sealants and caulking for own work as per Division 7.
  42. Provide relocation of staging area as necessary due to construction progress and as directed by Construction Manager.
  43. Procurement of business license as needed.
  44. Conformance with project manual, specifications, Construction Documents, and project time.
  45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground work. Trade Contractor shall not rely on any representation made by anyone other than those individuals duly authorized to survey, locate and stake existing utilities.
  46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.
  47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
  48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
  49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
  50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.
  51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
  52. Fire-stopping at own penetrations as required.
  53. Additional testing costs as required should initial tests fail.
  54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.
  55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.

Bid Package 8  
Electrical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

56. All project record documents as required per plans and specifications. Weekly updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers direction for said work.
58. Multiple move-ons to comply with Construction Manager's Master Schedule.
59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will participate in a project badge identification system if instituted by the Construction Manager and the District.
62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits, insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 8  
Electrical

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

REV	DESCRIPTION	BY	DATE						
-	----	--	---/---/---	-	----	--	---/---/---	-	----

T-bus 19.5 in                      T-bus 19.5 in                      T-bus 19.5 in

**SWITCHBOARD GENERAL NOTES**

**PRODUCT DESCRIPTION & RATINGS**

**Power System Data**

480Y/277V 3Ph 4W 60Hz / 3 Phase Wye  
 Solidly Grounded  
 System Short Circuit Current Rating: 65kA RMS  
 Incoming Section 1 Cable Through the Bottom Left of Lineup

**Bus System Data**

2000A Silver Plated Copper Main Bus  
 (4) .25x1.50 IN/6x38 mm Cu Bus Bar Per Phase/Neutral  
 (1) .25x.875 IN/6x22 mm Cu Ground Bus

**Enclosure Data**

Type 3R Free Standing  
 Exterior Paint Color: ANSI 49  
 Front Accessibility Only Required  
 Handling: Rollers  
 Rodent barriers  
 1.5H Corrosion Resist Base Channels  
 Steel Bottom Closure Plate  
 Base channels cannot be removed from EUSERC switchboard line-ups  
 Utility sealing hardware installed for unmetred bus compartments

**Estimated Shipping Weight**

Shipping Split 1 1771.00 lbs / 803.33 kgs  
 Shipping Split 2 1273.00 lbs / 577.43 kgs  
 Complete Lineup 3044.00 lbs / 1380.76 kgs

**Code Standards**

U.L. Deadfront and suitable for use as Service Entrance  
 when not more than six (6) disconnecting means are provided.

**Rating Nameplates**

ST1- Deadfront - Section Bus 2000A  
 ST2- Service Entrance - Section Bus 2000A  
 ST3- Deadfront - Section Bus 2000A

**PRODUCT INFORMATION**

**Wiring**

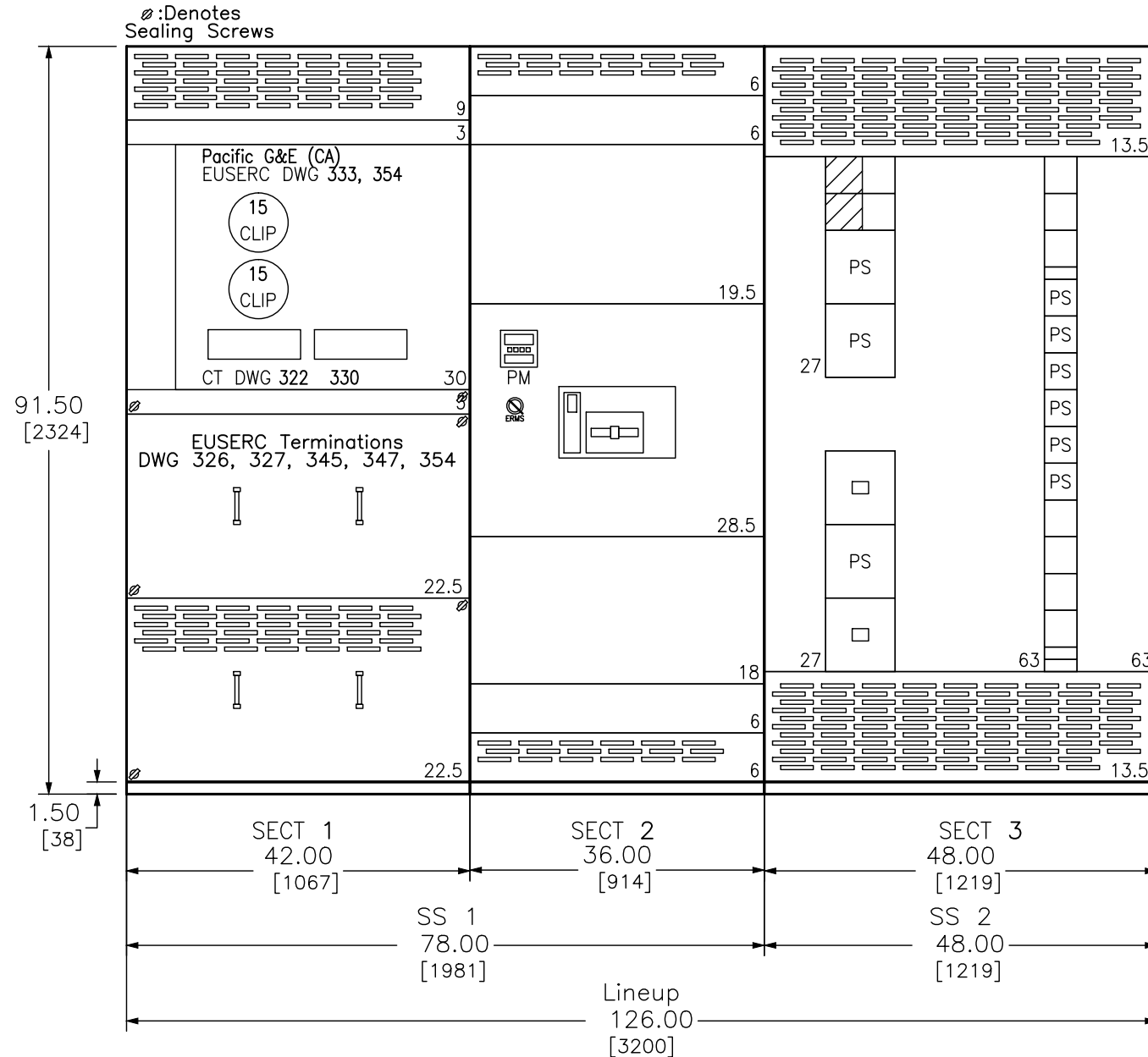
All wiring to be Machine Tool Wire type

**Instruction Bulletins**

Reference 80043-055 For Handling, Installation,  
 Anchoring, Inspection And Maintenance Information

**Product Accessories/Options**

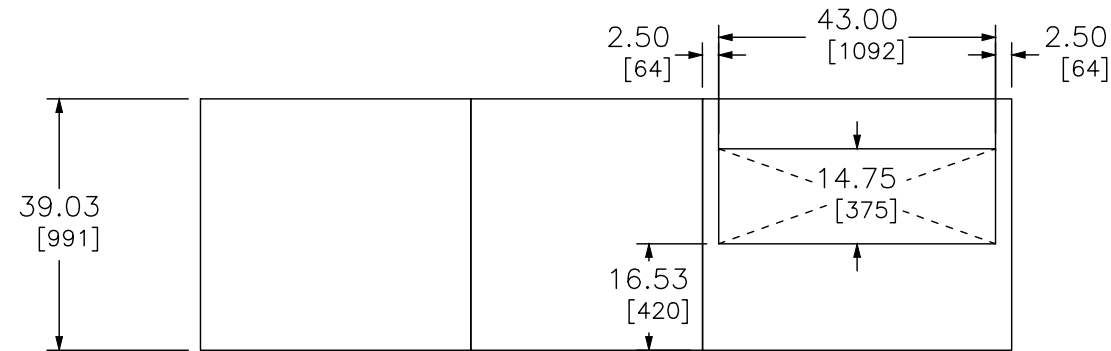
Seismic Qualified  
 24V Trip Unit Display Power  
 Locally Mounted ERMS Switch



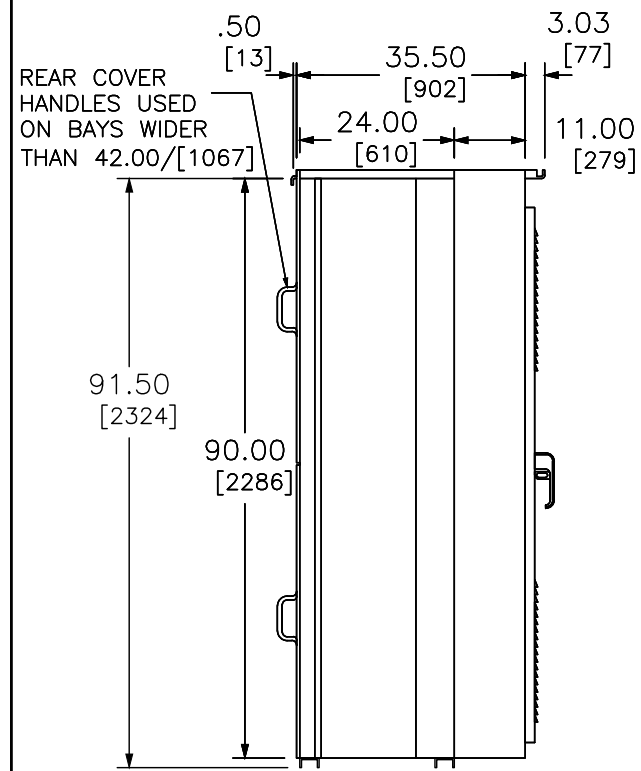
DUAL DIMENSIONS: INCHES  
 MILLIMETERS

JOB NAME: Shields & Brawley Elem School	EQUIPMENT DESIGNATION: MSB
JOB LOCATION:	EQUIPMENT TYPE: QED-2 Switchboard
DRAWN BY: (Q2C)	DRAWING TYPE: GENERAL NOTES
ENGR:	<b>SQUARE D</b> by Schneider Electric
DATE: December 20 2022	
DRAWING STATUS: QUOTE	DWG# FQ-3787293-108129577-01 PG 1 OF 2 REV -

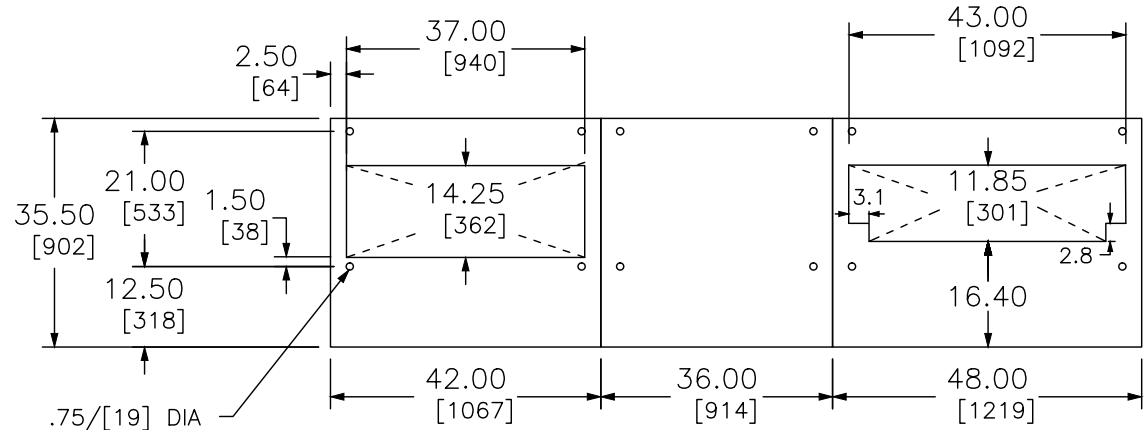
REV	DESCRIPTION	BY	DATE						
-	----	--	--/--/--	-	----	--	--/--/--	-	----



**TOP VIEW - FRONT**



**LEFT SIDE VIEW**



**FLOOR PLAN - FRONT**

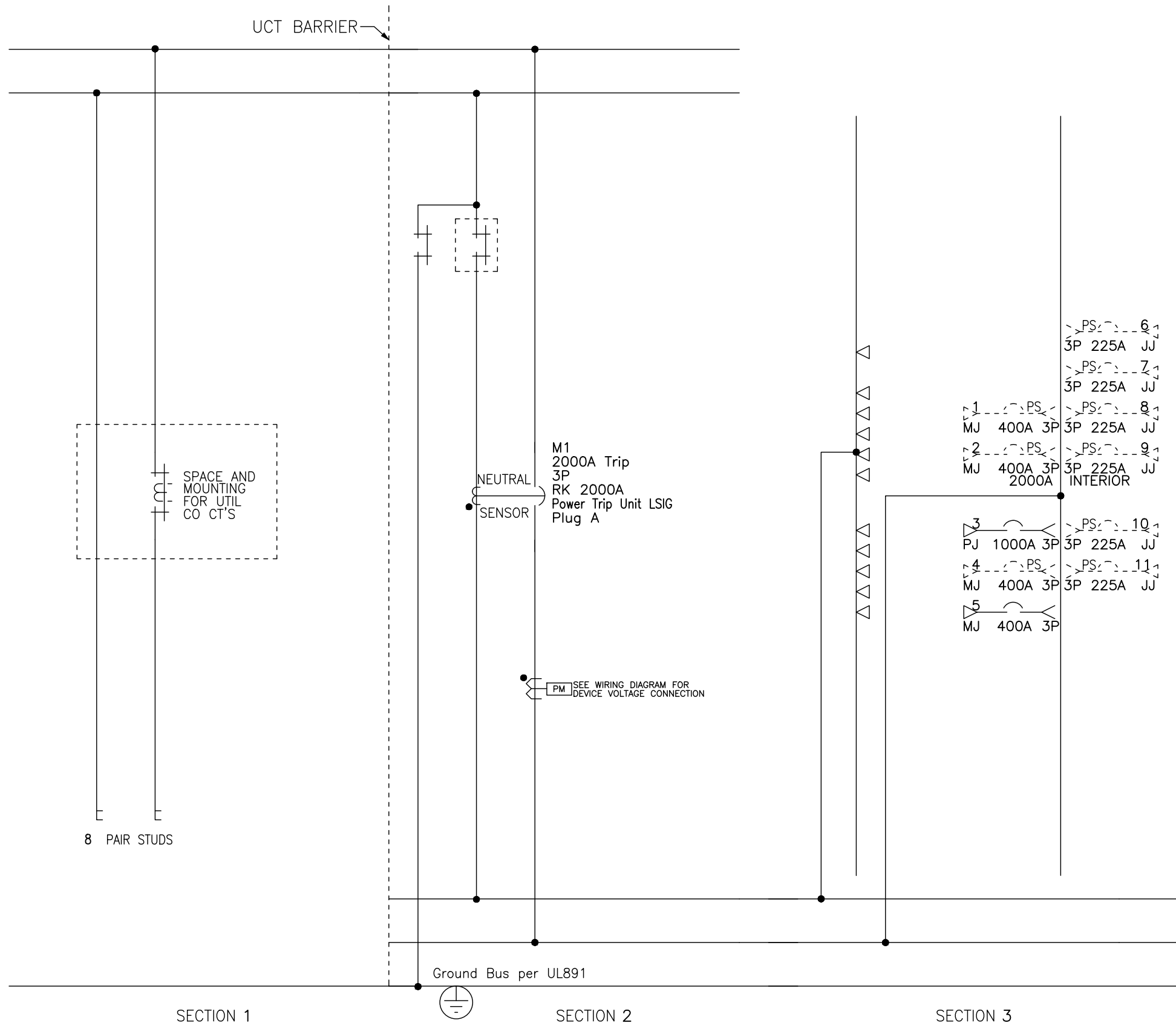
NOTE: ALL DEVICES REQUIRING DRILLING OR INSERTION IN MOUNTING PAD SUCH AS CONDUIT, ANCHORING STUDS, SLEEVE INSERTS, ETC. SHOULD BE INSTALLED BEFORE SETTING EQUIPMENT IN PLACE.

DUAL DIMENSIONS: INCHES  
MILLIMETERS

NOTE:  
A MINIMUM OF 2.00/[51] CLEARANCE BEHIND THE SWITCHBOARD IS REQUIRED FOR TOP COVER OVERHANG.

JOB NAME:	Shields & Brawley Elem School	EQUIPMENT DESIGNATION:	MSB
JOB LOCATION:		EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:	(Q2C)	DRAWING TYPE:	SIDE, TOP VIEW & FLOOR PLAN
ENGR:		<b>SQUARE D</b> by Schneider Electric	
DATE:	December 20 2022	DWG#	FQ-3787293-108129577-01
DRAWING STATUS:	QUOTE	PG	2 OF 2
		REV	-

REV	DESCRIPTION	BY	DATE						
-	----	--	---/---/---	-	----				



JOB NAME:	Shields & Brawley Elem School	EQUIPMENT DESIGNATION:	MSB
JOB LOCATION:		EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:	(Q2C)	DRAWING TYPE:	ONE LINE
ENGR:		<b>SQUARE D</b> by Schneider Electric	
DATE:	December 20 2022	DWG#	OQ-3787293-108129577-01
DRAWING STATUS:	QUOTE	PG	1 OF 2
		REV	-




REV	DESCRIPTION	BY	DATE										
-	----	--	--/--/--	-	----								

POWER STYLE QED-2 SWITCHBOARD

SECT NO	CKT NO	IMD /GMD CONFIG	DEVICE/FRAME RATING	TRIP AMP	FUSE/TRIP	#P	DESIGNATION	N/P	LUG/WIRE INFORMATION				ACCESSORIES / NOTES
									QTY	PHASE WIRE RANGE	QTY	NEUT WIRE RANGE	
1	UCT	-	2000A	-	-	-	Pacific G&E (CA)	No	8	Pair Studs	8	Pair Studs	
2	M1	FIX	RK 2000A Plug A	2000A	P-LSIG	3P		No	-	-	-	-	GF PLA,PM5K,ERMS,TU
3	1	9 in	MJ (PS)	(400A)	-	3P		No	2	3/0 - 250 kcmil	2	3/0 - 250 kcmil	
3	2	9 in	MJ (PS)	(400A)	-	3P		No	2	3/0 - 250 kcmil	2	3/0 - 250 kcmil	
3	3	9 in	PJ	1000A	-	3P		No	4	3/0 - 500 kcmil	4	3/0 - 500kcmil	
3	4	9 in	MJ (PS)	(400A)	-	3P		No	2	3/0 - 250 kcmil	2	3/0 - 250 kcmil	
3	5	9 in	MJ	400A	-	3P		No	2	3/0 - 250 kcmil	2	3/0 - 250 kcmil	
3	6	4.5 in	JJ (PS)	(225A)	-	3P		No	1	3/0 - 350 kcmil	1	3/0 - 350kcmil	
3	7	4.5 in	JJ (PS)	(225A)	-	3P		No	1	3/0 - 350 kcmil	1	3/0 - 350kcmil	
3	8	4.5 in	JJ (PS)	(225A)	-	3P		No	1	3/0 - 350 kcmil	1	3/0 - 350kcmil	
3	9	4.5 in	JJ (PS)	(225A)	-	3P		No	1	3/0 - 350 kcmil	1	3/0 - 350kcmil	
3	10	4.5 in	JJ (PS)	(225A)	-	3P		No	1	3/0 - 350 kcmil	1	3/0 - 350kcmil	
3	11	4.5 in	JJ (PS)	(225A)	-	3P		No	1	3/0 - 350 kcmil	1	3/0 - 350kcmil	

LEGEND	
ERMS	Energy Reduction Maintenance SW
GF	Ground Fault
PLA	Padlock Attachment-Fixed
PM5K	Power Meter PM55XX
TU	24V Trip Unit Display Power

JOB NAME:	Shields & Brawley Elem School	EQUIPMENT DESIGNATION:	MSB
JOB LOCATION:		EQUIPMENT TYPE:	QED-2 Switchboard
DRAWN BY:	(Q2C)	DRAWING TYPE:	SCHEDULE
ENGR:		 <small>by Schneider Electric</small>	
DATE:	December 20 2022		
DRAWING STATUS:	QUOTE	DWG#	OQ-3787293-108129577-01
		PG	2 OF 2
		REV	-



## **SB-9 IRRIGATION AND LANDSCAPE**

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor's License Board for the work in which the Subcontractor would perform. Bidder's will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

### **A. Specifications:**

Division 1

328400 Planting Irrigation

328400.13 Planting Irrigation Appendix

329300 Plants

312316 Trenching, Backfill, and Compaction

003132 Geotechnical Investigation Report

Refer to additional related specification sections for work specifically included in this contract.

### **INCLUSIONS:**

1. Furnish all labor, materials, tools, equipment and transportation required to perform and complete and full installation of an automatic sprinkler irrigation system including all piping, sprinkler heads, sleeves, valves, air release/relief valves, gate valves, flow sensors, controller including pedestal, control valves, control wiring, valve boxes including bricks and pea gravel, thrust blocks for your own work, connection from water meter, programing and testing, etc. per the Contract Documents.
2. If necessary, it is the responsibility of this bid package to have sleeves under hardscape/flatwork in place prior to placement of concrete. If this is not done and rework is required, all associated costs to be borne by this bid package contractor.
3. Furnish and install EZ-flo fertilizing system complete per contract documents.
4. Furnish and install all labor, material, tools, transportation and testing required for a full installation of a landscape system including all trees, plants, sod, turf, finish grading, topsoil, fertilizer, mulch, staking, header

Bid Package 9  
Irrigation and Landscape

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- boards, root barrier, weed control, accessories, etc. per the Contract Documents.
5. Furnish and place compacted decomposed granite including filter fabric and stabilizer. This contractor is responsible to compacted subgrade as indicated in G/LS.5.1.
  6. Layout and provide blackout for trees, reference detail N/LS5.0. It is the responsibility of this bid package to achieve compaction as indicated under all landscaping work.
  7. All tree grates (furnish and install) are to be included in this bid package.
  8. Construct planting pits to test soil percolation per Contract Documents.
  9. Provide plant material as indicated on landscape plans. Contractor shall verify required plant quantities.
  10. Protect irrigation and landscape materials before, during and after installation and protect related work and materials.
  11. Planting areas to have at a minimum of 6" of rock free top soil as required by the contract documents.
  12. Perform irrigation and central control system start-up including startup of booster pump and testing of all system functions and settings including flow, pressure, electrical currents, wire connections, flow sensors, grounding, bypass, etc.
  13. Furnish and install all components and accessories required for a fully functional installation of the central control system regardless if they are specifically shown on the drawings.
  14. Verify grading, soil conditions, field conditions and field measurements of all areas related to own work are in conformance with Contract Documents prior to commencing work.
  15. Furnish and install clean fill for trench backfill.
  16. Coordinate Ethernet and electrical connections with the Electrical Contractor.
  17. Erosion control measures as necessary to prevent erosion, displacement, runoff for work outlined in this bid package.
  18. Coordinate and schedule pre-construction meetings and inspections with District personnel and design consultants as required per Contract Documents.
  19. Confirm prior to submitting pricing that specified plants are available. Plant substitutions are not ideal.
  20. No planting of type two Bermuda grass outside the planning window, reference the specifications.
  21. Water coverage and find grade water test to be included in this pricing.
  22. Price to include "Bidding Allowance" as outlined in the specifications. If allowance is unused, it will be returned to the District.
  23. Furnish a 90 Day Landscape Maintenance Period as required by the Contract Documents.
  24. Maintain turf until Final Completion and acceptance by the District.
  25. Pull and pay for all necessary permits required. The District will reimburse the Contractor for the actual permit cost, with no markup.

Bid Package 9  
Irrigation and Landscape

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

26. **Schedule Phase 1:** Irrigation and Planting for the Baseball, Softball, and Soccer play fields.
27. **Schedule Phase 2:** Irrigation and Planting for the remaining campus.
28. **Schedule Phase 3:** Irrigation and Planting in the area of the Construction Manager/IOR trailer and temporary construction entrance.

**B. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES**

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents, Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.
4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required. Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.
5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard, lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
8. If a particular item of work appears to be included in more than one bid package, the bidder shall ensure they have covered this item(s) of work and shall not assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures

Bid Package 9  
Irrigation and Landscape

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
10. Storm Water Pollution control as required including conformance with erosion control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.
  11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
  12. Provide traffic control (vehicular and pedestrian) as required when on or off-loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.
  13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
  14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate specification sections, including requirements for closeout submission.
  15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
  16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
  17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
  18. The electrical trade contractor will provide for temporary electrical power and or temporary power supply infrastructure from Public Utilities. Electrical trade contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).
  19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.
  20. Coordination and protection of own work with other trades is the responsibility of each Trade Contractor.
  21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.

Bid Package 9  
Irrigation and Landscape

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.
23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..
24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.
25. Each Prime Contractor shall include eight (8) hours (while on site) within their cost proposal to participate in the weekly composite cleanup efforts scheduled by the Construction Manager.
26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.
28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.
30. Safety requirements for own work, shall be in compliance with most recent CAL OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the Project. Failure to comply with any Safety Regulations will be grounds for

Bid Package 9  
Irrigation and Landscape

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- removal of personnel from the jobsite. See also Supplemental General Conditions.
31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
  32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
  33. Flammable products must be continually stored per OSHA regulations.
  34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
  35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
  36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the Construction Manager.
  37. Parking for own employees, equipment, suppliers and sub-tier contractors shall be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
  38. Compliance with specified warranty and guarantee requirements, both standard and special.
  39. Provide at a minimum one qualified superintendent or one lead foreman for the duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed. Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.
  40. Attendance at jobsite weekly progress meeting, coordination, scheduling and safety meetings is MANDATORY.
  41. Sealants and caulking for own work as per Division 7.
  42. Provide relocation of staging area as necessary due to construction progress and as directed by Construction Manager.
  43. Procurement of business license as needed.
  44. Conformance with project manual, specifications, Construction Documents, and project time.
  45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground work. Trade Contractor shall not rely on any representation made by anyone other than those individuals duly authorized to survey, locate and stake existing utilities.
  46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.

Bid Package 9  
Irrigation and Landscape

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.
51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
52. Fire-stopping at own penetrations as required.
53. Additional testing costs as required should initial tests fail.
54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.
55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.
56. All project record documents as required per plans and specifications. Weekly updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers direction for said work.
58. Multiple move-ons to comply with Construction Manager's Master Schedule.
59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will participate in a project badge identification system if instituted by the Construction Manager and the District.
62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits, insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases

Bid Package 9  
Irrigation and Landscape

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 9  
Irrigation and Landscape

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



## **SB-10 SURVEYING/STAKING**

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor's License Board for the work in which the Subcontractor would perform. Bidder's will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

### **A. Specifications:**

Division 1

xxxxxx Surveying

Refer to additional related specification sections for work specifically included in this contract.

### **INCLUSIONS:**

1. Verify for horizontal and vertical position of the site and buildings from Project Control Plan. Provide one (1) permanent horizontal and vertical control point at the building including the PRE-RELOC and Future Relos.
2. Rough Grade – Provide stakes at approximate 50' intervals. Radius points and at grade breaks for the perimeter of the paved areas including the entrance drives. Ridge lines, swales and DI locations will be set for the entire site. Set stakes and grades for building pads. Provide final pad certification for building elevations and pad placement. This letter is to be signed, stamped by a registered land surveyor.
3. Sanitary Sewer System – Provide stakes at approximate 50' intervals along the mainline of the sewer system. Double offset stakes will be set at the point of connection, cleanouts and manhole and at the building service locations. Grades will be marked to invert of pipe and rim.
4. Storm Drain - Stakes will be set at approximate 50' intervals along the mainline, at angle points, valves, tees and grade breaks for the water system. Grades will be marked to invert of pipe or finish surface as appropriate.
5. Finish Grade - Stakes will be set at approximate 50' intervals, at angle points, grade breaks and at radius points for the perimeter curbs, the valley gutter and the entrance drives. Grades will be marked to top of curb, flow line, edge of pavement or finished grade as applicable.
6. Structures - One set of stakes will be set for the building gridlines. Grades will be marked to finish floor.

Bid Package 10  
Surveying

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

7. One set of stakes will be provided for each item noted above. The staking will be performed with six (6) move-ins. Surveyor will provide digital files for calculations and layout purposes.
8. Pull and pay for all necessary permits required. The District will reimburse the Contractor for the actual permit cost, with no markup.

**B. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES**

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents, Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.
4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required. Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.
5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard, lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
8. If a particular item of work appears to be included in more than one bid package, the bidder shall ensure they have covered this item(s) of work and shall not assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures

Bid Package 10  
Surveying

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
10. Storm Water Pollution control as required including conformance with erosion control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.
  11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
  12. Provide traffic control (vehicular and pedestrian) as required when on or off-loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.
  13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
  14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate specification sections, including requirements for closeout submission.
  15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
  16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
  17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
  18. The electrical trade contractor will provide for temporary electrical power and or temporary power supply infrastructure from Public Utilities. Electrical trade contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).
  19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.
  20. Coordination and protection of own work with other trades is the responsibility of each Trade Contractor.
  21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.

Bid Package 10  
Surveying

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.
23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..
24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.
25. Each Prime Contractor shall include eight (8) hours (while on site) within their cost proposal to participate in the weekly composite cleanup efforts scheduled by the Construction Manager.
26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.
28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.
30. Safety requirements for own work, shall be in compliance with most recent CAL OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the

Bid Package 10  
Surveying

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

Project. Failure to comply with any Safety Regulations will be grounds for removal of personnel from the jobsite. See also Supplemental General Conditions.

31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
33. Flammable products must be continually stored per OSHA regulations.
34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the Construction Manager.
37. Parking for own employees, equipment, suppliers and sub-tier contractors shall be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
38. Compliance with specified warranty and guarantee requirements, both standard and special.
39. Provide at a minimum one qualified superintendent or one lead foreman for the duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed. Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.
40. Attendance at jobsite weekly progress meeting, coordination, scheduling and safety meetings is MANDATORY.
41. Sealants and caulking for own work as per Division 7.
42. Provide relocation of staging area as necessary due to construction progress and as directed by Construction Manager.
43. Procurement of business license as needed.
44. Conformance with project manual, specifications, Construction Documents, and project time.
45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground work. Trade Contractor shall not rely on any representation made by anyone other than those individuals duly authorized to survey, locate and stake existing utilities.
46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation

Bid Package 10  
Surveying

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



- implies acceptance of all substrate conditions.
47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
  48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
  49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
  50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.
  51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
  52. Fire-stopping at own penetrations as required.
  53. Additional testing costs as required should initial tests fail.
  54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.
  55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.
  56. All project record documents as required per plans and specifications. Weekly updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
  57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers direction for said work.
  58. Multiple move-ons to comply with Construction Manager's Master Schedule.
  59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
  60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
  61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will participate in a project badge identification system if instituted by the Construction Manager and the District.
  62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits,

Bid Package 10  
Surveying

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 10  
Surveying

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



## **SB-11 SWPPP**

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor's License Board for the work in which the Subcontractor would perform. Bidder's will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

### **A. Specifications:**

Division 1

01 57 23 Storm Water Pollution Prevention Plan

Refer to additional related specification sections for work specifically included in this contract.

### **INCLUSIONS:**

1. Furnish, install and maintain all BMP's which includes materials, labor and equipment required per the project Storm Water Pollution Prevention Plan (SWPPP) per section 01 57 23 Erosion Control. Coordination of SWPPP must be coordinated with all other Trades Contractors and implemented at the beginning of the project.
2. Furnish, install and maintain two stabilized construction entrances and also a stabilized access to the laydown area. At end of project or as directed by the Construction Manager, removal of all BMPs and rock placed at laydown yard and stabilized drive.
3. Furnish, install and maintain protection for all DIs within the limits of construction as required for the duration of the project.
4. Furnish and properly install straw wattles at the perimeter of the project. Maintain all BMP materials throughout the duration of the project. This includes refreshing or cleaning the stabilized drive, DI protection, wattles, gravel at laydown yard as required.
5. Clean sweep roadways/public right-of-ways/sidewalks, etc. at the end of each day or more frequently as necessary and/or as directed by the Construction Manager.
6. During the course of work, provide dust control as necessary and/or as directed by Construction Manager.
7. Provide updates to the SWPP plan during the course of construction and as conditions change.

Bid Package 11  
SWPPP

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

8. Perform and provide weekly inspections/reporting SWPPP documents to the Construction Manager. Testing discharge if required. These documents can be grouped together and provided on a monthly basis.
9. At the conclusion of construction, complete and provide all post construction required documents to the Construction Manager. This includes documentation for the Notice of Termination.
10. Maintain adequate stockpile of clean unused material in case of emergencies. This should include but not limited to straw wattles, DI bags, sand bags, filter fabric, etc.
11. Pull and pay for all necessary permits required for this bid package. The District will reimburse the Contractor for the actual permit cost, with no markup.

**B. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES**

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents, Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.
4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required. Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.
5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard, lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
8. If a particular item of work appears to be included in more than one bid package, the bidder shall ensure they have covered this item(s) of work and shall not

Bid Package 11  
SWPPP

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
  10. Storm Water Pollution control as required including conformance with erosion control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.
  11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
  12. Provide traffic control (vehicular and pedestrian) as required when on or off-loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.
  13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
  14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate specification sections, including requirements for closeout submission.
  15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
  16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
  17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
  18. The electrical trade contractor will provide for temporary electrical power and or temporary power supply infrastructure from Public Utilities. Electrical trade contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).
  19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.
  20. Coordination and protection of own work with other trades is the responsibility of

Bid Package 11  
SWPPP

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- each Trade Contractor.
21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.
  22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.
  23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..
  24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.
  25. Each Prime Contractor shall include eight (8) hours (while on site) within their cost proposal to participate in the weekly composite cleanup efforts scheduled by the Construction Manager.
  26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
  27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.
  28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
  29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.
  30. Safety requirements for own work, shall be in compliance with most recent CAL

Bid Package 11  
SWPPP

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the Project. Failure to comply with any Safety Regulations will be grounds for removal of personnel from the jobsite. See also Supplemental General Conditions.

31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
33. Flammable products must be continually stored per OSHA regulations.
34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the Construction Manager.
37. Parking for own employees, equipment, suppliers and sub-tier contractors shall be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
38. Compliance with specified warranty and guarantee requirements, both standard and special.
39. Provide at a minimum one qualified superintendent or one lead foreman for the duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed. Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.
40. Attendance at jobsite weekly progress meeting, coordination, scheduling and safety meetings is MANDATORY.
41. Sealants and caulking for own work as per Division 7.
42. Provide relocation of staging area as necessary due to construction progress and as directed by Construction Manager.
43. Procurement of business license as needed.
44. Conformance with project manual, specifications, Construction Documents, and project time.
45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground work. Trade Contractor shall not rely on any representation made by anyone

Bid Package 11  
SWPPP

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



- other than those individuals duly authorized to survey, locate and stake existing utilities.
46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.
  47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
  48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
  49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
  50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.
  51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
  52. Fire-stopping at own penetrations as required.
  53. Additional testing costs as required should initial tests fail.
  54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.
  55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.
  56. All project record documents as required per plans and specifications. Weekly updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
  57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers direction for said work.
  58. Multiple move-ons to comply with Construction Manager's Master Schedule.
  59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
  60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
  61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will participate in a project badge identification system if instituted by the Construction Manager and the District.

Bid Package 11  
SWPPP

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits, insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 11  
SWPPP

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



## **SB-12 METAL/IRON FENCING, GATE & HANDRAILS**

The work of this Bid Package includes the fabrication, delivery, unloading, hoisting, distribution, setting, and installation complete of the work described by the documents including, but not limited to, the following:

Perform a complete job of all work associated with the project Plans and Specifications, all for a lump sum bid price, including all taxes, as indicated and in accordance with the Bid Documents, Project Manual, Technical Specifications and as described below, to complete the intended scope of work.

Bidders will be required to have the appropriate current license issued by the State of California Contractor's License Board for the work in which the Subcontractor would perform. Bidder's will also be required to have a valid DIR number, provided by the Department of Industrial Relations.

### **A. Specifications:**

Division 1

323113 Chain Link Fences & Gates

323119 Wrought Iron Fences & Gates,

055200 Metal Railings

057300 Decorative Metal Railings

055000 Metal Fabrications (as applies to fencing and gates)

087100 Door Hardware (as applies for fencing and gates)

Refer to additional related specification sections for work specifically included in this contract.

### **General Items:**

1. Furnish and install chain link fencing, gates, posts, fabric, wheels and all other components and accessories relating to this work. Reference detail A/C6.3 for a clear understanding of this work. This work includes fencing/posts/backstops at the baseball and softball fields.
2. Furnish and install wrought iron fencing, gates, metal screen, tube/privacy slats and all other components, kickplates, accessories relating to this work. Fence shall be all-welded construction. Fence and gate components shall be hot galvanized.
3. This bid package is responsible for all post holes, concrete and rebar required of their work.
4. All Decorative Metal Railings are to be included in this bid package. Work includes layout, cores, anchors, plates, railings, posts, etc. for a complete package. Access for anchors that require through bolting either vertically/horizontally to be by this bid package.
5. All hardware including ADA compliant hardware for metal, service and chain link, roof screen gates to be provided by this bid package.

Bid Package 12  
Metal/Iron, Fencing, Gate & Handrails

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

6. Metal, stainless steel and aluminum handrails and guardrails for stairs, sidewalks and ramps (both interior and exterior) to be provided and installed by this contractor. This contractor is responsible for layout of any/all backing needs for their work. Using detail 47/A8.3 where polished aluminum is called out, this should be priced/provided for polish 320/400 grit with a finish of 600.
7. Furnish and install stainless steel escutcheons at railing per contract details. Coordinate wood curb cap with General Trades contractor.
8. Any spoils from post holes should be disposed of or graded with other adjacent finish grades and landscaping areas. Coordinate fencing post and fencing/gate installations where site concrete, paving and utilities, landscaping/irrigation have been or will be installed. Coordinate, locate and mark all underground utilities prior to post-hole digging. Review layout, underground utility indicators and paint on ground location of all utilities within a 10' radius of any post hole then review with Construction Manager prior to post-hole digging and installations.
9. Furnish and install all finish hardware included in section 087100 as applies to sections 323113 and 323119.

**B. THE FOLLOWING ITEMS OF WORK ARE INCLUDED IN ALL BID PACKAGES**

1. The regular hours of work are 7:00 AM to 5:00 PM, Monday through Friday unless specifically controlled by local municipalities. Any other working hours must have prior written approval from the Construction Manager.
2. Specification sections as noted in the above descriptions of each specific Bid Package.
3. This Bid Package may contain Scope of Work items and/or related items of work that are not customarily performed by Trade Contractor. If such work is required to be performed by Trade Contractor pursuant to the Bid Package Documents, Trade Contractor will provide this work either by its own forces or by contracting such work in accordance with local trade practice.
4. Construction Manager will provide temporary construction power, sanitation facilities, construction trash removal, and segregation site fencing, as required. Trade contractors are to provide and pay for their own, drinking water, phones, and security, etc.
5. Trade Contractors are responsible for storage and security of own materials and/or equipment located on and off the jobsite property. Work shed, yard, lighting and security fence if required for storage shall be the responsibility of the Trade Contractor. Location of storage/staging area to be determined / approved by Construction Manager.
6. All Trade Contractors shall furnish to the Construction Manager on a weekly basis, completed daily reports of the total number of its workers, by classification, employed on the project (including any sub-tier subcontractors' workers), and a description of work performed, (refer to General Conditions and Supplemental General Conditions for required information). Daily reports shall be on a form

Bid Package 12  
Metal/Iron, Fencing, Gate & Handrails

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- acceptable to the Construction Manager. Current daily reports are a condition of release of monthly payment to each trade contractor.
7. There will be multiple prime contractors for the project and there will be work by others occurring simultaneously with the work of this trade contractor. It is the responsibility of this trade contractor to be aware of the other operations and coordinate their work accordingly.
  8. If a particular item of work appears to be included in more than one bid package, the bidder shall ensure they have covered this item(s) of work and shall not assume it is covered by another bid package. Bidders are responsible for all items of work listed in their specific scope of work.
  9. Provide and maintain dewatering operation as required to eliminate the ponding of water immediately after rainfall has occurred in order to allow these areas to dry out as quickly as possible. Dewatering to be done by whatever means necessary, including mechanical pumps, siphons, etc. Any SWPPP measures defeated or removed in the dewatering process shall be replaced per the posted SWPPP plan by the removing Contractor. Dewatering for grading operation, trenches, footings, pits, slab areas, etc, shall be done immediately by affected Trade Contractor.
  10. Storm Water Pollution control as required including conformance with erosion control plan and protection of own work as applies. **Bid package #11** Trade Contractor is responsible to initially furnish, install and implement the Storm Water Pollution Prevention Plan complete per plans and specifications. Work is to include all sandbags, hay bales, swales, etc. as required to complete a system in compliance with all Federal, State, and Local requirements. All trade contractors are responsible for repair and replacement of SWPPP control measures disturbed by or required by their own operations. All trade contractors shall follow all directions given by the Construction Manager. All requested work shall be at no extra cost to the owner or construction manager.
  11. Offloading, scaffolding, ladders, rigging, hoisting and moving of materials and/or equipment for own work.
  12. Provide traffic control (vehicular and pedestrian) as required when on or off-loading materials and/or equipment. Include flag person, cones, signs, and additional safeguards as necessary.
  13. Submittal preparation and material procurement shall begin immediately upon award or letter of intent. Reference the master schedule to review when material is needed on site. Submittals shall be bookmarked and a searchable document.
  14. Submittals, including product data, shop drawings, mock-ups, samples and as-built drawings as specified. See submittal requirements of appropriate specification sections, including requirements for closeout submission.
  15. Identify all long lead items and develop a procurement schedule. Submit a copy to the Construction Manager at the Pre-Construction Meeting.
  16. Submit all deferred approvals as specified on plans and specifications within 30 days of the Notice to Proceed.
  17. Each bid package contractor is responsible for temporary power, portable lighting and extension cords necessary to complete work that is not within 100' of buildings.
  18. The electrical trade contractor will provide for temporary electrical power and or temporary power supply infrastructure from Public Utilities. Electrical trade

Bid Package 12  
Metal/Iron, Fencing, Gate & Handrails

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- contractor will supply all necessary 100-amp spider boxes in each building location. Each bid package contractor is responsible to furnish any additional items required for their work, (i.e., extension cords, adaptors, task lighting, etc.).
19. Electrical trade contractor will provide general lighting in the structures. Each bid package contractor shall provide their own task lighting, including any extension cords as may be required.
  20. Coordination and protection of own work with other trades is the responsibility of each Trade Contractor.
  21. Trade Contractor is to provide all temporary protection (against dust, for safety, etc.) for exposures which are created or generated by or associated with, this Work. Protection of existing surfaces scheduled to remain to prevent damage while performing the work of this bid package.
  22. Dumpsters will be provided for the Trade Contractor's use. Trade Contractor to dispose of all debris onsite as directed by the Construction Manager. Trade Contractor to be responsible for all continuous cleanup and segregation of all debris generated by the work of this Bid Package into the proper dumpsters as required by Waste Management and directed by the Construction Manager. If this item is not performed consistently, the Construction Manager may elect to have the work done on behalf of the Trade Contractor and monies deducted to cover this expense. Debris typically not discarded in dumpsters, i.e., soils, spoils, stripping's, tree shrubs, concrete, demolished materials, etc, will be disposed of offsite by the Trade Contractor.
  23. Trade Contractor shall be responsible for preparing and submitting to the Construction Manager a detailed Contractor's Waste and Recycling Plan as it is related specifically to Trade Contractor's scope of work within ten (10) calendar days of award of contract. The Construction Manager will consolidate Trade Contractors' Plans into a Master Construction Waste & Recycling Plan to be issued and adhered to at all times during the course of construction. This Trade Contractor is responsible for supplying bins and removal of washout debris and any other hazardous waste generated by its operations to a legal dumpsite offsite. This includes but not limited to, concrete, grout, taping mud, paint, etc..
  24. Daily cleanup of own debris, packing materials and boxes, and placement into owner supplied dumpster each day. Each Trade Contractor shall be responsible to remove off site at their own expense any and all concrete, concrete residue, or hazardous materials generated by their work operations. Jobsite to be kept in a "broom-swept" condition at all times.
  25. Each Prime Contractor shall include eight (8) hours (while on site) within their cost proposal to participate in the weekly composite cleanup efforts scheduled by the Construction Manager.
  26. Upon failure by trade contractor to provide sufficient cleanup, and after 48-hour Notice, Construction Manager will perform the cleanup and assess all costs against the trade contractor requiring the cleanup.
  27. Each Trade Contractor is responsible for control of their own environmental conditions (i.e. temperature control, moisture control, etc) affecting their own work.

Bid Package 12  
Metal/Iron, Fencing, Gate & Handrails

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

28. Provide layout and field measurements for own work from line and grade coordinates supplied by Construction Manager. Survey provided by Bid Package 10. Any additional survey work requested other than that provided by BP 10 will be the responsibility of the affected / requesting Trade Contractor.
29. Should re-staking be required due to stakes damaged or removed by trade contractor, said re-staking shall be performed at the expense of that Trade Contractor. Each Trade Contractor is responsible for protection of stakes placed for own work.
30. Safety requirements for own work, shall be in compliance with most recent CAL OSHA regulations and in accordance with Trade Contractors Safety Program, of which a copy shall be provided to the Construction Manager for its reference only. Hardhats, boots, eye protection, long pants and shirts with sleeves, and 100% tie off are required for all personnel at all times during construction of the Project. Failure to comply with any Safety Regulations will be grounds for removal of personnel from the jobsite. See also Supplemental General Conditions.
31. Include in the Bid Price, all personnel costs for safety related meetings, etc., for all Trade Contractor's and subcontractor's labor forces working on this jobsite, regardless of tier. Safety meetings may be scheduled by the Construction Manager and may last approximately one-half hour per week.
32. Comply with all applicable Construction Safety Standards, Cal OSHA, Federal, State, and Local safety rules and regulations. Protect life and property, which is not to be injured, damaged, disturbed or blemished. Trade Contractor will conduct his operations at all times and confine equipment and personnel to areas within the limits of the work. Provide copy of any required OSHA permits to the Construction Manager.
33. Flammable products must be continually stored per OSHA regulations.
34. Compliance with regulatory agency, trade organization, and governing body requirements having jurisdiction over own work.
35. Each Trade Contractor shall submit a Job Hazard Analysis report to Construction Manager prior to commencement of work.
36. Trade Contractor to comply with all ordinances regarding parking, hours of work and routing of delivery trucks to the project site, and as required by the Construction Manager.
37. Parking for own employees, equipment, suppliers and sub-tier contractors shall be in areas designated by Construction Manager. Provide off site parking for same if adequate space is not available on or convenient to jobsite.
38. Compliance with specified warranty and guarantee requirements, both standard and special.
39. Provide at a minimum one qualified superintendent or one lead foreman for the duration of own work on project, including punch list corrections at completion of project. Foreman must be on-site when work is being performed. Superintendent/Foreman is subject to approval by the Construction Manager and shall not be changed without Construction Manager's approval.
40. Attendance at jobsite weekly progress meeting, coordination, scheduling and safety meetings is MANDATORY.
41. Sealants and caulking for own work as per Division 7.
42. Provide relocation of staging area as necessary due to construction progress and

Bid Package 12  
Metal/Iron, Fencing, Gate & Handrails

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions



- as directed by Construction Manager.
43. Procurement of business license as needed.
  44. Conformance with project manual, specifications, Construction Documents, and project time.
  45. Trade Contractor has primary responsibility for locating existing utilities prior to commencing underground work. Trade Contractor must make own notification to required agencies and hold a pre-dig conference prior to starting underground work. Trade Contractor shall not rely on any representation made by anyone other than those individuals duly authorized to survey, locate and stake existing utilities.
  46. Inspect all surfaces to receive own work. Promptly notify Construction Manager in writing, of any unsuitable substrate conditions. Commencement of installation implies acceptance of all substrate conditions.
  47. Responsibility to provide Construction Manager with all backing requirements for own work prior to wall framing operations. Each Trade Contractor will layout backing required and verify installation prior to covering. Failure to provide backing requirements transfers backing responsibility to each trade contractor for their own work.
  48. Dust control as applies to own work and the performance thereof. Any fines for violations for non-compliance will be the Trade Contractor's responsibility.
  49. Protection of own work including barricades, traffic control, and/or flagmen for traffic control.
  50. Public travel shall not be needlessly inconvenienced, nor shall it be wholly obstructed at any point without the Construction Manager's approval. Trade Contractor shall furnish necessary lanterns, barricades and other devices to protect the public fully, including the requirements of the Specification and local codes. All work in the public right-of-way shall be done in full conformance with the (requirements of local and State authorities.
  51. All welding required for own work. Submit current and valid welder's certifications prior to beginning any welding installation on site for IOR, Owner or Construction Managers review and retention. Provide any needed ventilation equipment.
  52. Fire-stopping at own penetrations as required.
  53. Additional testing costs as required should initial tests fail.
  54. Contractors to provide minimum 48 hours written notice to Construction Manager for testing/inspection, and staking and survey requests/requirements.
  55. Re-inspection costs due to failure of Trade Contractor to notify the Construction Manager 48 hours prior to canceling an inspection will be charged to the responsible Trade Contractor.
  56. All project record documents as required per plans and specifications. Weekly updates of as-built documents on Construction Manager's plan set, and transfer to digital format at end of project as required by specifications. Update as-built drawing before own work is covered up.
  57. Trade Contractors shall at no extra cost to the Owner or Construction Manager provide the required crew sizes and or work as required to meet the project schedule. Trade Contractor agrees to accept the Construction Managers

Bid Package 12  
Metal/Iron, Fencing, Gate & Handrails

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions

- direction for said work.
58. Multiple move-ons to comply with Construction Manager's Master Schedule.
  59. Each trade contractor is responsible for coordination onto the site for own work (i.e. cranes, concrete trucks, etc.)
  60. Smoking, tobacco, and vaping is prohibited anywhere on the project site.
  61. When required - All Trade Contractors shall comply with fingerprinting requirements at own expense (including Contractor Fingerprinting Certification) in accordance with Education Code 45125. Additionally, Trade Contractor will participate in a project badge identification system if instituted by the Construction Manager and the District.
  62. Labor rates to be used in pricing any extra work that may be required are to be submitted within 10 days from the Notice to Proceed. Rates are to be complete billing rates and are to include wages, taxes, fringe benefits, insurance, small tools and incidentals. Base price on current rates in effect at time of bid. As labor agreement wages and fringes change, these increases will be added to the labor rates at actual cost. List all rates by submitting the Wage Rate Breakdown Form for each classification of worker anticipated.
  63. All utility or public agency fees will be paid by the District, unless otherwise noted. Any and all other permit and/or service fees, assessment or bonding required in conjunction with the work of this Bid Package shall be the responsibility of Trade Contractor. All notifications with various agencies required in the performance of the work shall remain the responsibility of Trade Contractor.
  64. Trade Contractor shall furnish all general conditions and support services it requires for the satisfactory performance of the work of this Bid Package. If a project trailer or central work location is established, items such as trailer facilities, water, power, phones, toilets, disposal services, security, etc., are the Trade Contractor's responsibility. Refer to General Conditions and the Specification for further definition.

**END OF SECTION**

Bid Package 12  
Metal/Iron, Fencing, Gate & Handrails

Initial \_\_\_\_\_  
Acceptance of Entire Bid Package,  
No Additions, No Omissions





**SECTION 01 23 00**  
**ALTERNATES**

**AD 1-08.2a**  
**S&B Elementary**  
**02-116800**

## **PART 1 - GENERAL**

### 1.01 SUMMARY

Section includes administrative and procedural requirements for alternates.

### 1.02 DEFINITIONS

- Alternate: An amount proposed by bidders and **stated on the Bid Form** for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
  1. **Alternates described in this Section are part of the Work only if enumerated in the Agreement.**
  2. **The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.**

### 1.03 PROCEDURES

Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. **Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.**

"Notification" Paragraph below for most projects. Failure to require notification could create problems later.

Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

Execute accepted alternates under the same conditions as other work of the Contract.

Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

## **PART 2 - PRODUCTS (Not Used)**

## **PART 3 - EXECUTION**

### 3.01 ADDITIONAL BASE BID CLARIFICATION DUE TO DEDUCTIVE ALERNATE

Base Bid: Trades to provide and install in bid approximately +18,700 square feet of turf area and irrigation flush to top of concrete curbs per specifications. Trades to provide and install landscape and trees within concrete curb (finger) (southwest)

of bus entrance and irrigation, provide & install bus vehicle gates with bollard latches. Trades to provide and install underground utilities infrastructure for future relocatable buildings per plans.

### 3.02 DEDUCTIVE ALTERNATES

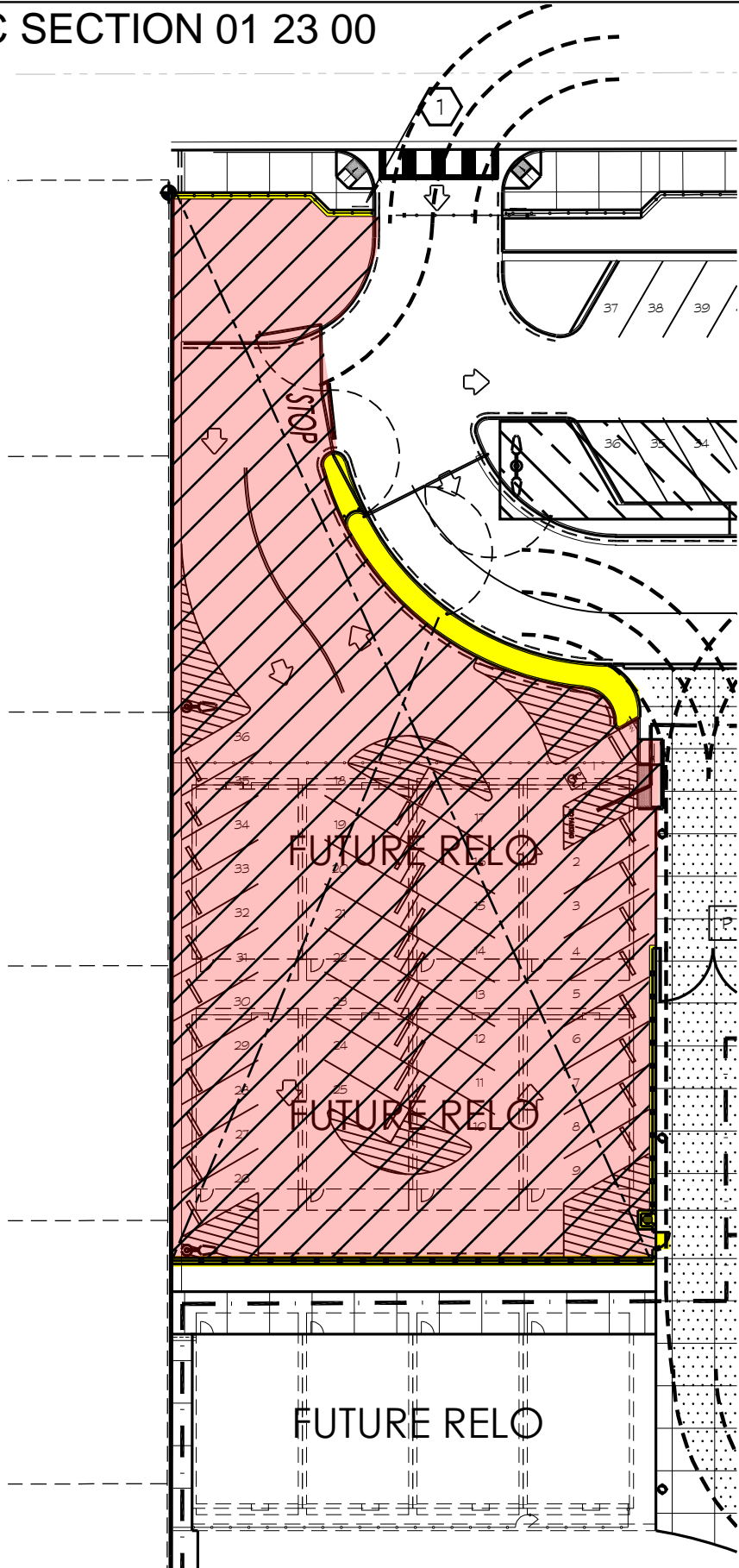
DEDUCTIVE ALTERNATE No. 1: PROVIDE DEDUCTION TO OMIT PARKING LOT B from scope of work.

OMIT including but not limited to earthwork; prep work; base rock; asphalt pavement; parking striping; lane striping; parking arrows; parking lettering; wheel bumpers; accessible parking sign & pole with fine sign; accessible ramp with truncated warning domes ; TWO (2) site light fixtures at west parcel perimeter by residential property line; parking lot B vehicle gates and bollard latches.


**END OF SECTION**

# PARKING LOT B DEDUCTIVE BID ALTERNATE #1-MAP

## SEE SPEC SECTION 01 23 00



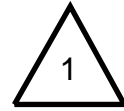
 HATCHING INDICATES TURF WITH IRRIGATION.

 HATCHING INDICATES FENCING, MOW STRIP, CONCRETE CURB(FINGER), AND GATE NOT PART OF DEDUCTIVE BID ALTERNATE.

NOTE: DEDUCT EARTHWORK; PREP WORK; BASE ROC; ASPHALT PAVEMENT; PARKING STRIPING; LANE STRIPING; PARKING ARROWS; PARKING LETTERING; WHEEL BUMPERS; ACCESSIBLE PARKING SIGN AND POLE WITH FINE SIGN; ACCESSIBLE RAMP WITH TRUNCATED WARNING DOMES; TWO(2) SITE LIGHT FIXTURES AT WEST PARCEL PERIMETER BY RESIDENTIAL PROPERTY LINE; PARKING LOT B VEHICLE GATES AND BOLLARD LATCHES.

NOTE: NO IRRIGATION PLANS PROVIDED FOR DEDUCTIVE ALTERNATE #1.

**SECTION 01 25 00**  
**SUBSTITUTION PROCEDURES**



**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section includes the following:
1. Work that is substituted for Work specified in DIVISIONS 02 through 33 shall meet the requirements of this Section.
  2. Provide all material, labor, equipment and services necessary to completely install all approved substituted materials, accessories and other related items necessary to complete the Project as indicated by the Contract Documents.
  3. Changes to the approved drawings and specifications shall be made by an Addendum, Change Order or Construction Change Document (CCD, DSA form 140), approved by DSA.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
1. Drawings and general provisions of the Contract, including GENERAL and Division 01 Specification Sections, apply to this Section.

**1.2 DEFINITIONS**

- A. Contractor's or Bidder's options to specified products or systems:
1. Product, system or design specified only by reference standards:
    - a. Select any product, system or design meeting standards.
  2. Product, system or design specified by naming several products, systems, designs and/or manufacturers:
    - a. Select any product, system, design and/or manufacturer named.
  3. Product, system or design specified by naming several products, systems and/or manufacturers and reference standards:
    - a. Select any of the named manufacturer's products, systems or designs meeting standards.
    - b. Products, systems, designs and/or manufacturer names indicate products, systems, designs and/or manufacturers which [in the Architect's opinion] meets the standards.

4. Product, system or design specified by naming only one product, system or design:
    - a. Select product, system or design specified.
  5. Product, system or design specified by naming one or more products, systems, designs and stating "or equal to" or "approved equivalent" with the specified products, systems or designs:
    - a. Select any product, system or design named subject to the requirements of the specified product or system requirements or submit request for substitution for any product, system or design specifically named in accordance with Specification Section SUBSTITUTION PROCEDURES.
- B. Cost to Contractor or Bidder for review of Substitution Request:
1. Each review of a Substitution Request by the Architect and/or its Consultant(s) will be billed to the Contractor or Bidder at an hourly rate of \$120.00 an hour, two hour minimum for each review, whether approved or rejected.

### 1.3 SUBMITTALS

- A. Submit in accordance with Specification Sections INSTRUCTIONS TO BIDDERS and SUBMITTAL PROCEDURES:
1. Content of Request:
    - a. Complete the attached **SUBSTITUTION REQUEST FORM** substantiating compliance of proposed substitution with Contract Documents. **NO OTHER FORMS WILL BE ACCEPTED.**
    - b. For products or systems, attach to the SUBSTITUTION REQUEST FORM:
      - 1) Product, system or design identification, including manufacturer's name and address.
      - 2) Manufacturer's literature including product, system or design description, performance and test data and reference standards. **INFORMATION MUST BE HIGHLIGHTED AND PROJECT SPECIFIC - SUBMITTALS NOT ADEQUATELY MARKED-UP ACCORDING TO PROJECT SPECIFICS WILL BE REJECTED.**
      - 3) Samples marked-up to be project specific.
    - c. For construction methods, attach to the SUBSTITUTION REQUEST FORM:
      - 1) Detailed description of proposed methods.



- 2) Drawings illustrating methods.
- d. Attach to the SUBSTITUTION REQUEST FORM an itemized comparison of proposed substitution with product, system or design specified.
- 2. Submit three [3] copies of substitution request and all attached data.
  - a. The Contractor shall submit three [3] copies of substitution request and all attached data prior to submittals required in accordance with Specification Section SUBMITTAL PROCEDURES.

#### 1.4 QUALITY ASSURANCE

##### A. Qualifications:

- 1. Product, system or design qualifications:
  - a. In making a request for substitution, Contractor or Bidder that:
    - 1) Contractor or Bidder has personally investigated proposed product, system or design, and determined that it is equal or superior in all respects to that specified.
    - 2) Contractor or Bidder will provide the same guarantee or warranty for substitution as for product, system or design specified.
    - 3) Contractor or Bidder will coordinate installation of accepted substitution into the Project, making such changes as may be required for the Project to be complete in all respects.
    - 4) Contractor or Bidder waives all claims for additional costs related to substitution which subsequently become apparent for integrating the substituted product, system or design into the Project.

##### B. Regulatory Requirements:

- 1. In accordance with Division 1 Section REGULATORY REQUIREMENTS, and the following:
  - a. Products [and installation standards], systems or methods used for this Project shall comply with CARB standards in effect at the Project Site, and at the time of installation.

##### C. Acceptance of Substitutions:

- 1. Procedures:
  - a. The Contract is based on products, systems or designs described in the Contract Documents.

- b. Architect will consider proposals submitted in accordance with Specification Section INSTRUCTIONS TO BIDDERS.
  - c. Architect is solely responsible for judging the acceptance of substitutions.
    - 1) Acceptance of a substitution does not waive the product manufacturer's responsibility for product liability. The Architect will judge (based on the substitution submission data) for function and use – product liability shall remain the responsibility of the product manufacturer.
  - d. Substitute products, systems or designs shall not be used unless such substitution has been specifically approved for this Project by the Architect.
    - 1) Substitute products, systems or designs that are related to structural, fire and life safety or access compliance shall not be used unless such substitution has been specifically approved for this Project by the Architect and DSA.
2. Substitutions will not be considered if:
- a. They are indicated or implied on product submittals in accordance with Specification Section SUBMITTAL PROCEDURES, without formal request submitted in accordance with Specification Section SUBSTITUTION PROCEDURES.
  - b. Acceptance will require substantial revision of Contract Documents.
  - c. They are submitted after the date the Contract is signed, unless:
    - 1) The specified or drawing item has been verified to be discontinued or is otherwise unavailable.
    - 2) The Owner desires a cost savings for the product, system or method.
    - 3) The Owner desires early occupancy, and the proposed substitution allows for that convenience.

## **PART 2: PRODUCTS**

(Not Applicable)

## **PART 3: EXECUTION**

### **3.1 SCHEDULES**

#### **A. Substitution Request Form:**

- 1. See the form attached to the end of this section.

2. The attached two page form will be reproduced (and sequentially numbered by the Contractor after the award of the Contract) by the Contractor or Bidder for any and all proposed substitutions. **NO OTHER FORMS WILL BE ACCEPTED.**

**END OF SECTION**

**(Attachment)**

**(The rest of this page is left intentionally blank)**

# SUBSTITUTION REQUEST FORM

TO:

**PLEASE CHECK THE APPROPRIATE BOX BELOW:**

- Substitution Request Prior to Award (During Bid Period)
  - Product or System Substitution
  - Design Change Substitution
  
- Substitution Request After Award of the Contract
  - Product or System Substitution
  - Design Change Substitution

(Contractor Awarded the Contract for this Project shall assign the numbers below - leave blank if submitted during the Bid Period.)

## SUBSTITUTION REQUEST # \_\_\_\_\_

**WE HEREBY SUBMIT FOR YOUR CONSIDERATION THE FOLLOWING PRODUCT OR METHOD AS SUBSTITUTION FOR THE SPECIFIED OR DRAWING ITEM FOR THIS PROJECT:**

PROJECT: \_\_\_\_\_

**SPECIFIED ITEM:** \_\_\_\_\_

Specification	Section #	Page #	Paragraph #	Description

- OR -

**DRAWING ITEM:** \_\_\_\_\_

Drawing Number	Detail Cut Number	Description

**PROPOSED CREDIT IF ANY:** \_\_\_\_\_

The undersigned requests consideration of the following:

**PROPOSED SUBSTITUTION:**

---



---

---



---



---

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents which the proposed substitution will require for its proper installation.

**The undersigned certifies:** (Modifications by the submitter to the following list is cause for automatic rejection without further review)

1. The proposed substitution does not affect dimensions shown on drawings or code requirements indicated.
2. The undersigned will compensate the Architect at a rate of \$120.00 an hour for review, investigation and comments whether or not the request is approved for changes required to the building design, including engineering design, detailing, and construction costs caused by the requested substitution. The Architect is herein defined as any of those firms or individuals listed by reference on the Drawings, including all Consultants identified herein.
3. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.
5. Attach information for a minimum of three projects where the substitution has been used locally within a 200 mile distance of this project, including names, addresses and telephone numbers of Owners who have accepted this product into their projects.
6. Attach all cost data with explanations if different from Specified or Drawing item. Include in that explanation a discussion on quality of proposed substitution and cost differential.
7. The undersigned will pay for any subsequent changes in incorporating the proposed substitution that were not apparent at the time of approval into the Work, including compensation to the Architect as described in item 2 above.

**The undersigned states that the function, appearance and quality are equivalent or superior to the specified or drawing item.**

**Submitted By (Bidder, Contractor or Sub-Contractor):**

Signature\_\_\_\_\_

Firm\_\_\_\_\_

Address\_\_\_\_\_

\_\_\_\_\_

**Below is  
for Use by Design Consultant only**

- Accepted
- Accepted as Noted
- Not Accepted
- Received Pass Time Period Allowed by Public Contract Code #3400.

Date \_\_\_\_\_

By \_\_\_\_\_

Telephone \_\_\_\_\_

Date \_\_\_\_\_

**Additional Signature Required:  
(The Contractor if submitted after the Award):**

Remarks \_\_\_\_\_

Signature \_\_\_\_\_

\_\_\_\_\_

Firm \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

END OF SUBSTITUTION REQUEST FORM

**SECTION 01 33 00**  
**SUBMITTAL PROCEDURES**



## **PART 1 - GENERAL**

### **1.01 SUMMARY**

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
  - 1. Section 01 25 00 - Substitution Procedures
  - 2. Section 01 32 00 - Construction Progress Documentation for submitting schedules and reports, including Contractor's construction schedule.
  - 3. Section 01 78 23 - Operation and Maintenance Data for submitting operation and maintenance manuals.
  - 4. Section 01 78 39 - Project Record Documents for submitting record Drawings, record Specifications, and record Product Data.

### **1.02 DEFINITIONS**

- A. Action Submittals: Written and graphic information and physical samples that require Architect's responsive action.
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's responsive action. Submittals may be rejected for not complying with requirements.

### **1.03 ACTION SUBMITTALS**

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

### **1.04 SUBMITTAL ADMINISTRATIVE REQUIREMENTS**

- A. Architect's Digital Data Files: Electronic copies of digital data files of the Contract Drawings will be provided by Architect for Contractor's use in preparing submittals.
  - 1. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing Shop Drawings and Project record drawings.

- a. Architect makes no representations as to the accuracy or completeness of digital data drawing files as they relate to the Contract Drawings.
  - b. Contractor shall execute a data licensing agreement in the form of AIA Document C106, Digital Data Licensing Agreement, Agreement included in Project Manual.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
    - a. Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
  2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
  3. Resubmittal Review: Allow 15 days for review of each resubmittal.
- D. Paper Submittals: Place a permanent label or title block on each submittal item for identification.
1. Indicate name of firm or entity that prepared each submittal on label or title block.
  2. Provide a space approximately 6 by 8 inches on label or beside title block to record Contractor's review and approval markings and action taken by Architect.
  3. Include the following information for processing and recording action taken:
    - a. Project name.
    - b. Date.
    - c. Name of Architect.
    - d. Name of Contractor.
    - e. Name of subcontractor.
    - f. Name of supplier.
    - g. Name of manufacturer.



- h. Submittal number or other unique identifier, including revision identifier.
    - 1) Submittal number shall use Specification Section number followed by a decimal point and then a sequential number (e.g., 06 10 00.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., 06 10 00.01.A).
  - i. Number and title of appropriate Specification Section.
  - j. Drawing number and detail references, as appropriate.
  - k. Location(s) where product is to be installed, as appropriate.
  - l. Other necessary identification.
4. Additional Paper Copies: Unless additional copies are required for final submittal, and unless Architect observes noncompliance with provisions in the Contract Documents, initial submittal may serve as final submittal.
- a. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect.
5. Transmittal for Paper Submittals: Assemble each submittal individually and appropriately for transmittal and handling. Transmit each submittal using a transmittal form. Architect will return without review submittals received from sources other than Contractor.
- a. Transmittal Form for Paper Submittals: Use AIA Document G810.
  - b. Transmittal Form for Paper Submittals: Provide locations on form for the following information:
    - 1) Project name.
    - 2) Date.
    - 3) Destination (To:).
    - 4) Source (From:).
    - 5) Name and address of Architect.
    - 6) Name of Contractor.
    - 7) Name of firm or entity that prepared submittal.
    - 8) Names of subcontractor, manufacturer, and supplier.
    - 9) Category and type of submittal.
    - 10) Submittal purpose and description.
    - 11) Specification Section number and title.
    - 12) Drawing number and detail references, as appropriate.
    - 13) Indication of full or partial submittal.
    - 14) Signature of transmitter.
- E. Options: Identify options requiring selection by Architect.
- F. Deviations: Identify deviations from the Contract Documents on submittals.
- G. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.

1. Note date and content of previous submittal.
  2. Note date and content of revision in label or title block and clearly indicate extent of revision.
  3. Resubmit submittals until they are marked with approval notation from Architect's action stamp.
- H. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- I. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's action stamp.

## **PART 2 - PRODUCTS**

### **2.01 SUBMITTAL PROCEDURES**

- A. General Submittal Procedure Requirements:
1. Action Submittals: G.C. to review and stamp submittal prior to submitting to Architect for General Conformance to the drawings and specifications. Submit 1 paper copies and 1 electronic copy of each submittal unless otherwise indicated. Architect will 1 electronic copy.
  2. Informational Submittals: Submit 1 paper copies and 1 electronic copy of each submittal unless otherwise indicated. Architect will not return copies.
  3. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
    - a. Provide a notarized statement on original paper copy certificates and certifications where indicated.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
  2. Mark each copy of each submittal to show which products and options are applicable.
  3. Include the following information, as applicable:
    - a. Manufacturer's catalog cuts.
    - b. Manufacturer's product specifications.
    - c. Standard color charts.
    - d. Statement of compliance with specified referenced standards.
    - e. Testing by recognized testing agency.
    - f. Application of testing agency labels and seals.

- g. Notation of coordination requirements.
      - h. Availability and delivery time information.
  - 4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams showing factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
  - 5. Submit Product Data before or concurrent with Samples.
  - 6. Submit Product Data in the following format:
    - a. 1 paper and 1 electronic copies of Product Data unless otherwise indicated. Architect will return 1 electronic copy.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
  - 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    - a. Identification of products.
    - b. Schedules.
    - c. Compliance with specified standards.
    - d. Notation of coordination requirements.
    - e. Notation of dimensions established by field measurement.
    - f. Relationship and attachment to adjoining construction clearly indicated.
    - g. Seal and signature of professional engineer if specified.
  - 2. Sheet Size: Except for templates, patterns, and similar full-size drawings, submit Shop Drawings on sheets at least 8-1/2 by 11 inches, but no larger than 30 by 42 inches.
  - 3. Submit Shop Drawings in the following format:
    - a. 1 opaque (bond) copies of each submittal. Architect will 1 electronic copy.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
  - 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
  - 2. Identification: Attach label on unexposed side of Samples that includes the following:

- a. Generic description of Sample.
  - b. Product name and name of manufacturer.
  - c. Sample source.
  - d. Number and title of applicable Specification Section.
3. For projects where electronic submittals are required, provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
  4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
    - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
    - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
  5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
    - a. Number of Samples: Submit 2 full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect will return submittal with options selected.
  6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
    - a. Number of Samples: Submit 2 sets of Samples. Architect will retain 1 Sample sets; remainder will be returned.
      - 1) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
1. Submit product schedule in the following format:

- a. One paper copies of product schedule or list unless otherwise indicated. Architect will return 1 electronic copy.
- F. Contractor's Construction Schedule: Comply with requirements specified in Section 01 32 00 - Construction Progress Documentation.
- G. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 01 77 00 - Closeout Procedures.
- H. Maintenance Data: Comply with requirements specified in Section 01 78 23 - Operation and Maintenance Data.
- I. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- J. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.
- K. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- L. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- M. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- N. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- O. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- P. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- Q. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project.

- R. Schedule of Tests and Inspections: Comply with requirements specified in Section 01 40 00 - Quality Requirements.
- S. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- T. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- U. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- V. Design Data: Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and design criteria and a summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Include page numbers.

### **PART 3 - EXECUTION**

#### **3.01 CONTRACTOR'S REVIEW**

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 01 77 00 - Closeout Procedures.
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

#### **3.02 ARCHITECT'S ACTION**

- A. General: Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Architect will review each submittal, make marks to indicate corrections or revisions required, and return it. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action.

- C. Informational Submittals: Architect will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect will forward each submittal to appropriate party.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Submittals not required by the Contract Documents may not be reviewed and may be discarded.

**END OF SECTION**

SECTION 01 57 23



**STORM WATER POLLUTION PREVENTION PLAN**  
for

**West Shields Elementary School**

**WDID:** \_\_\_\_\_

**RISK LEVEL 1**

**Legally Responsible Person (LRP):**  
CENTRAL UNIFIED SCHOOL DISTRICT  
4605 N. POLK AVE  
FRESNO, CA 93722  
KELLY PORTERFIELD  
(559) 274-4700

**Project Address:**  
4108 West Shields Avenue  
Fresno, CA

**SWPPP Prepared by:**



901 E. Main Street  
Visalia, CA 93291  
Monique Mello, PE, QSD/QSP

**SWPPP Preparation Date**  
6/26/2018

**AD 1-11a**  
**S&B Elementary**  
**02-116800**

**Estimated Project Dates:**

Start of Construction: 7-1-2019

Completion of Construction: 7-15-2020



## **Table of Contents**

---

<b>Table of Contents .....</b>	<b>i</b>
<b>Qualified SWPPP Developer (QSD).....</b>	<b>1</b>
<b>Amendment Log.....</b>	<b>2</b>
<b>Section 1 SWPPP Requirements .....</b>	<b>3</b>
1.1 Introduction.....	3
1.2 Permit Registration Documents .....	3
1.3 SWPPP Availability and Implementation.....	4
1.4 SWPPP Amendments.....	4
1.5 Retention of Records.....	5
1.6 Required Non-Compliance Reporting .....	5
1.7 Annual Report.....	6
1.8 Changes to Permit Coverage.....	6
1.9 Notice of Termination.....	6
<b>Section 2 Project Information .....</b>	<b>7</b>
2.1 Project and Site Description.....	7
2.1.1 Site Description.....	7
2.1.2 Existing Conditions.....	7
2.1.3 Existing Drainage.....	7
2.1.4 Geology and Groundwater .....	7
2.1.5 Project Description.....	8
2.1.6 Developed Condition .....	8
2.2 Permits and Governing Documents .....	8
2.3 Stormwater Run-On from Offsite Areas.....	8
2.4 Findings of the Construction Site Sediment and Receiving Water Risk Determination	8
2.5 Construction Schedule .....	9
2.6 Potential Construction Activity and Pollutant Sources.....	9
2.7 Identification of Non-Stormwater Discharges .....	9
2.8 Required Site Map Information .....	10
<b>Section 3 Best Management Practices .....</b>	<b>11</b>
3.1 Schedule for BMP Implementation .....	11
3.2 Erosion and Sediment Control.....	11

3.2.1	Erosion Control.....	12
3.2.2	Sediment Controls.....	13
3.3	Non-Stormwater Controls and Waste and Materials Management .....	15
3.3.1	Non-Stormwater Controls.....	15
3.3.2	Materials Management and Waste Management.....	16
3.4	Post Construction Stormwater Management Measures .....	17
<b>Section 4</b>	<b>BMP Inspection and Maintenance .....</b>	<b>19</b>
4.1	BMP Inspection and Maintenance .....	19
4.2	Rain Event Action Plans .....	19
<b>Section 5</b>	<b>Training .....</b>	<b>20</b>
<b>Section 6</b>	<b>Responsible Parties and Operators .....</b>	<b>21</b>
6.1	Responsible Parties .....	21
6.2	Contractor List .....	22
<b>Section 7</b>	<b>Construction Site Monitoring Program.....</b>	<b>23</b>
7.1	Purpose.....	23
7.2	Applicability of Permit Requirements .....	23
7.3.	Weather and Rain Event Tracking.....	23
7.3.1	Weather Tracking.....	23
7.3.2	Rain Gauges.....	23
7.4	Monitoring Locations.....	24
7.5	Safety and Monitoring Exemptions .....	24
7.6	Visual Monitoring.....	24
7.6.1	Routine Observations and Inspections .....	25
7.6.1.1	Routine BMP Inspections .....	25
7.6.1.2	Non-Stormwater Discharge Observations .....	25
7.6.2	Rain-Event Triggered Observations and Inspections .....	26
7.6.2.1	Visual Observations Prior to a Forecasted Qualifying Rain Event.....	26
7.6.2.2	BMP Inspections During an Extended Storm Event.....	26
7.6.2.3	Visual Observations Following a Qualifying Rain Event.....	26
7.6.3	Visual Monitoring Procedures.....	27
7.6.4	Visual Monitoring Follow-Up and Reporting .....	27
7.6.5	Visual Monitoring Locations.....	27
7.7	Water Quality Sampling and Analysis.....	27

7.7.1	Sampling and Analysis Plan for Non-Visible Pollutants in Stormwater Runoff Discharges.....	27
7.7.1.1	Sampling Schedule.....	28
7.7.1.2	Sampling Locations .....	28
7.7.1.3	Monitoring Preparation .....	28
7.7.1.4	Analytical Constituents.....	29
7.7.1.5	Sample Collection.....	31
7.7.1.6	Sample Analysis.....	32
7.7.1.7	Data Evaluation and Reporting.....	34
7.7.2	Sampling and Analysis Plan for pH and Turbidity in Stormwater Runoff Discharges.....	34
7.7.3	Additional Monitoring Following an NEL Exceedance .....	34
7.7.4	Sampling and Analysis Plan for Non-Stormwater Discharges .....	34
7.7.5	Sampling and Analysis Plan for Other Pollutants Required by the Regional Water Board.....	34
7.7.6	Training of Sampling Personnel .....	34
7.7.7	Sample Collection and Handling .....	35
7.7.7.1	Sample Collection.....	35
7.7.7.2	Sample Handling.....	36
7.7.7.3	Sample Documentation Procedures .....	36
7.8	Active Treatment System Monitoring .....	37
7.9	Bioassessment Monitoring.....	37
7.10	Watershed Monitoring Option .....	37
7.11	Quality Assurance and Quality Control .....	37
7.11.1	Field Logs .....	37
7.11.2	Clean Sampling Techniques .....	38
7.11.3	Chain of Custody .....	38
7.11.4	QA/QC Samples.....	38
7.11.4.1	Field Duplicates.....	38
7.11.5	Data Verification.....	38
7.12	Records Retention.....	39
	<b>CSMP Attachment 1: Weather Reports.....</b>	<b>41</b>
	<b>CSMP Attachment 2: Monitoring Records .....</b>	<b>42</b>
	<b>CSMP Attachment 3: Example Forms.....</b>	<b>43</b>

<b>Section 8</b>	<b>References</b> .....	<b>50</b>
<i>Appendix A:</i>	<i>Calculations</i> .....	<b>51</b>
<i>Appendix B:</i>	<i>Site Map</i> .....	<b>52</b>
<i>Appendix C:</i>	<i>Permit Registration Documents</i> .....	<b>53</b>
<i>Appendix D:</i>	<i>SWPPP Amendment Certifications</i> .....	<b>55</b>
<i>Appendix E:</i>	<i>Submitted Changes to PRDs</i> .....	<b>57</b>
<i>Appendix F:</i>	<i>Construction Schedule</i> .....	<b>59</b>
<i>Appendix G:</i>	<i>Construction Activities, Materials Used, and Associated Pollutants</i> .....	<b>61</b>
<i>Appendix H:</i>	<i>CASQA Stormwater BMP Handbook Portal: Construction Fact Sheets</i> .....	<b>64</b>
<i>Appendix I:</i>	<i>BMP Inspection Form</i> .....	<b>65</b>
<i>Appendix J:</i>	<i>Project Specific Rain Event Action Plan</i> .....	<b>72</b>
<i>Appendix K:</i>	<i>Training Reporting Form</i> .....	<b>73</b>
<i>Appendix L:</i>	<i>Responsible Parties</i> .....	<b>75</b>
<i>Appendix M:</i>	<i>Contractors and Subcontractors</i> .....	<b>78</b>
<i>Appendix N:</i>	<i>Construction General Permit</i> .....	<b>79</b>

## Qualified SWPPP Developer (QSD)


---

Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name: WEST SHIELDS ELEMENTARY SCHOOL

Project Number/ID: \_\_\_\_\_

“This Stormwater Pollution Prevention Plan and Attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Order No. 2009-009-DWQ as amended by Order 2010-0014-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below.”




---

*QSD Signature*

---

*Date*

---

Monique C. Mello, P.E.

*QSD Name*

---

22554

*QSD Certificate Number*

---

Senior Associate Engineer, QSD/QSP

*Title and Affiliation*

---

(559) 733-0440

*Telephone Number*

---

[Monique.Mello@qkinc.com](mailto:Monique.Mello@qkinc.com)

---



## **Amendment Log**

---

Project Name: WEST SHEILDS ELEMENTARY SCHOOL

Project Number/ID : \_\_\_\_\_

<b>Amendment No.</b>	<b>Date</b>	<b>Brief Description of Amendment, include section and page number</b>	<b>Prepared and Approved By</b>
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#

## **Section 1 SWPPP Requirements**

---

### **1.1 INTRODUCTION**

The West Shields Elementary School project is comprised of approximately 10 acres which consists of a main school building, parking lot, baseball field, softball field, soccer field, a multipurpose building, and an amphitheater. The project is located at the northwest corner of West Shields Avenue and North Brawley Avenue, in Fresno, California. The property is owned and being developed by the Central Unified School District. The project location is shown on the Site Map in Appendix B.

This Stormwater Pollution Prevention Plan (SWPPP) is designed to comply with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order No. 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ (NPDES No. CAS000002) issued by the State Water Resources Control Board (State Water Board). This SWPPP has been prepared following the SWPPP Template provided on the California Stormwater Quality Association Stormwater *Best Management Practice Handbook Portal: Construction* (CASQA, 2010). In accordance with the General Permit, Section XIV, this SWPPP is designed to address the following:

- Pollutants and their sources, including sources of sediment associated with construction, construction site erosion and other activities associated with construction activity are controlled;
- Where not otherwise required to be under a Regional Water Quality Control Board (Regional Water Board) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard;

Calculations, design details, and BMP controls are included in the Appendices.

### **1.2 PERMIT REGISTRATION DOCUMENTS**

Required Permit Registration Documents (PRDs) shall be submitted to the State Water Board via the Stormwater Multi Application and Report Tracking System (SMARTS) by the Legally Responsible Person (LRP), or authorized personnel (i.e., Approved Signatory) under the direction of the LRP. The project-specific PRDs include:

1. Notice of Intent (NOI);
2. Risk Assessment (Construction Site Sediment and Receiving Water Risk Determination);
3. Site Map;
4. Annual Fee;
5. Signed Certification Statement (LRP Certification is provided electronically with SMARTS PRD submittal); and
6. SWPPP.



Site Map can be found in Appendix B. A copy of the submitted PRDs shall also be kept in Appendix C along with the Waste Discharge Identification (WDID) confirmation.

### **1.3 SWPPP AVAILABILITY AND IMPLEMENTATION**

The discharger shall make the SWPPP available at the construction site during working hours (see Section 7.5 of CSMP for working hours) while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone. (CGP Section XIV.C)

The SWPPP shall be implemented concurrently with the start of ground disturbing activities.

### **1.4 SWPPP AMENDMENTS**

The SWPPP should be revised when:

- If there is a General Permit violation.
- When there is a reduction or increase in total disturbed acreage (General Permit Section II Part C).
- BMPs do not meet the objectives of reducing or eliminating pollutants in stormwater discharges.

Additionally, the SWPPP shall be amended when:

- There is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
- When there is a change in the project duration that changes the project's risk level; or
- When deemed necessary by the QSD. The QSD has determined that the changes listed in Table 1.1 can be field determined by the QSP. All other changes shall be made by the QSD as formal amendments to the SWPPP.

The following items shall be included in each amendment:

- Who requested the amendment;
- The location of proposed change;
- The reason for change;
- The original BMP proposed, if any; and
- The new BMP proposed.

Amendment shall be logged at the front of the SWPPP and certification kept in Appendix D. The SWPPP text shall be revised replaced, and/or hand annotated as necessary to properly convey the amendment. SWPPP amendments must be made by a QSD. The following changes have been designated by the QSD as "to be field determined" and constitute minor changes that the QSP may implement based on field conditions.

**Table 1.1 List of Changes to be Field Determined**

<b>Candidate changes for field location or determination by QSP<sup>(1)</sup></b>	<b>Check changes that can be field located or field determined by QSP</b>
Increase quantity of an Erosion or Sediment Control Measure	✓
Relocate/Add stockpiles or stored materials	✓
Relocate or add toilets	✓
Relocate vehicle storage and/or fueling locations	✓
Relocate areas for waste storage	✓
Relocate water storage and/or water transfer location	✓
Changes to access points (entrance/exits)	✓
Change type of Erosion or Sediment Control Measure	✓
Changes to location of erosion or sediment control	✓
Minor changes to schedule or phases	✓
Changes in construction materials	✓
<i>(1) Any field changes not identified for field location or field determination by QSP must be approved by QSD</i>	

## 1.5 RETENTION OF RECORDS

Paper or electronic records of all documents required by this SWPPP shall be retained for a minimum of three years from the date generated or date submitted, whichever is later. These records shall be available at the Site until construction is complete. Records assisting in the determination of compliance with the General Permit shall be made available within a reasonable time, to the Regional Water Board, State Water Board or U.S. Environmental Protection Agency (EPA) upon request. Requests by the Regional Water Board for retention of records for a period longer than three years shall be adhered to.

## 1.6 REQUIRED NON-COMPLIANCE REPORTING

If a discharge violation occurs the QSP shall immediately notify the LRP and the LRP shall file a violation report electronically to the Regional Water Board within 30 days of identification of non-compliance using SMARTS. Corrective measures will be implemented immediately following the discharge or written notice of non-compliance from the Regional Water Board. Discharges and corrective actions will be documented on the NAL/NEL Exceedance Site Evaluation Report Form in CSMP Attachment 3 “Example Forms.”

The report to the LRP and to the Regional Water Board will contain the following items:

- The date, time, location, nature of operation and type of unauthorized discharge.
- The cause or nature of the notice or order.

- The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order.
- The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence.

## **1.7 ANNUAL REPORT**

The General Permit requires that permittees prepare, certify, and electronically submit an Annual Report no later than September 1<sup>st</sup> of each year. Reporting requirements are identified in Section XVI of the General Permit. Annual reports will be filed in SMARTS and in accordance with information required by the on-line forms.

## **1.8 CHANGES TO PERMIT COVERAGE**

The General Permit allows for the reduction or increase of the total acreage covered under the General Permit when: a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs shall be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit covered acreage is to be sought. The SWPPP shall be modified appropriately, shall be logged at the front of the SWPPP and certification of SWPPP amendments are to be kept in Appendix D. Updated PRDs submitted electronically via SMARTS can be found in Appendix E.

## **1.9 NOTICE OF TERMINATION**

A Notice of Termination (NOT) must be submitted electronically by the LRP via SMARTS to terminate coverage under the General Permit. The NOT must include a final Site Map and representative photographs of the project site that demonstrate final stabilization has been achieved. The NOT shall be submitted within 90 days of completion of construction. The Regional Water Board will consider a construction site complete when the conditions of the General Permit, Section II.D have been met.

## **Section 2 Project Information**

---

### **2.1 PROJECT AND SITE DESCRIPTION**

#### **2.1.1 Site Description**

The West Shields Elementary School project will be composed of a main school building, a parking lot, baseball field, softball field, a soccer field, a multipurpose building, and an amphitheater on roughly 10 acres of property, located on the northwest corner of West Shields Avenue and North Brawley Avenue in Fresno, California. The project site is located roughly 1 mile north of McKinley Ave, 1 mile east of Cornelia Ave, 1 mile south of Ashlan Ave, and 1 mile west of CA HWY 99. The project site is located at latitude 36.779457 and longitude -119.863729 and can be identified on the Site Map in Appendix B.

#### **2.1.2 Existing Conditions**

As of the initial date of this SWPPP the project area consisted of a vacant, recently tilled surface supporting moderate growth of seasonal vegetation. Portions of the site contain concrete debris and end-dump stockpiles. The site is relatively flat with no major changes in grade and is approximately 294 feet above mean sea level.

#### **2.1.3 Existing Drainage**

The project site is relatively level, with an approximate elevation of 294 feet above mean sea level (msl). Currently the highest point of the site is located in the center of the project site and directs the flow in the, northeast, southeast, southwest, and northwest direction. Based on the FEMA Flood Insurance Rate Map No. 090619C1565H dated February 18, 2009, the project site area is labeled Zone X, which designates areas of minimal flood hazard that are outside of a Special Flood Hazard Area (SFHA) and higher than the elevation of the 0.2-percent-annual-chance flood has.

#### **2.1.4 Geology and Groundwater**

The soils encountered generally consisted primarily of medium dense to very dense silty sand with varying amounts of cementation (hardpan), underlain by alternating layers of medium dense silty sand without cementation, medium dense to very dense silty sand/sandy silt, loose to dense sand, dense silty sand with trace clay, to the maximum depth of exploration approximately 50.5 feet below surrounding ground surface.

Groundwater was not encountered within the depth of exploration (50.5 feet) at the time of the geotechnical investigation (dated October 31, 2016). The California Department of Water Resources "Lines of Equal Elevation in Water Wells" spring of 2016, indicated the current depth of groundwater exceeds 100 feet bsg.

For additional information, please reference the project geotechnical report dated October 31, 2016, prepared by Salem Engineering Group, Inc. (Project Number 1-216-1084).

### **2.1.5 Project Description**

Project grading will occur on all 10 acres of this project site. The limits of the project are shown in Appendix B. Grading will include both cut and fill activities. No fill is expected to complete grading activities; however, if soils is imported, it will be placed immediately, or stockpiled in conformance with this document and the Construction General Permit requirements. At the time this document was prepared, construction was not intended to be phased.

### **2.1.6 Developed Condition**

Post construction surface drainage will be directed to drain inlets, located within new street curb and gutters. The surface drainage will first flow, and then be collected through a stormwater conveyance system and will drain in accordance with the County of Tulare's Storm Water Management Plan.

## **2.2 PERMITS AND GOVERNING DOCUMENTS**

In addition to the General Permit, the following documents have been taken into account while preparing this SWPPP:

- Regional Water Board requirements
- Basin Plan requirements
- Contract Documents
- Air Quality Regulations and Permits
- Federal Endangered Species Act
- National Historic Preservation Act/Requirements of the State Historic Preservation Office
- State of California Endangered Species Act
- Clean Water Act Section 401 Water Quality Certifications and 404 Permits
- CA Department of Fish and Game 1600 Streambed Alteration Agreement

## **2.3 STORMWATER RUN-ON FROM OFFSITE AREAS**

There is no anticipated offsite run-on to this construction site because the properties located to the North and East are already developed and currently drain to the same discharge location. Any modifications that would impact these patterns will be done in compliance with the construction documents, the General Construction Permit, and this document.

## **2.4 FINDINGS OF THE CONSTRUCTION SITE SEDIMENT AND RECEIVING WATER RISK DETERMINATION**

A construction site risk assessment has been performed for the project and the resultant risk level is Risk Level 1.

The risk level was determined through the use of the K, LS provided in SMARTS. The risk level is based on project duration, location, proximity to impaired receiving waters and soil conditions. A copy of the Risk Level determination submitted on SMARTS with the PRDs is included in Appendix C.

Risk Level 1 sites are subject to the narrative effluent limitations specified in the General Permit. The narrative effluent limitations require stormwater discharges associated with construction activity to minimize or prevent pollutants in stormwater and authorized non-stormwater through the use of controls, structures, and best management practices. This SWPPP has been prepared to address Risk Level 1 requirements (General Permit Attachment C).

## **2.5 CONSTRUCTION SCHEDULE**

The site sediment risk was determined based on construction taking place between 07/01/2019 and 7/15/2020. Modification of extension of the schedule (start and end dates) may affect risk determination and permit requirements. The LRP shall contact the QSD if the schedule changes during construction to address potential impact to the SWPPP. The estimated project schedule for planned work can be found in Appendix F.

## **2.6 POTENTIAL CONSTRUCTION ACTIVITY AND POLLUTANT SOURCES**

Appendix G includes a list of construction activities and associated materials that are anticipated to be used onsite. These activities and associated materials will or could potentially contribute pollutants, other than sediment, to stormwater runoff.

The anticipated activities and associated pollutants were used in Section 3 to select the Best Management Practices for the project. Location of anticipated pollutants and associated BMPs are shown on the Site Map in Appendix B.

For sampling requirements for non-visible pollutants associated with construction activity please refer to Section 7.7.1. For a full and complete list of onsite pollutants, refer to the Material Safety Data Sheets (MSDS), which are retained onsite at the construction trailer.

## **2.7 IDENTIFICATION OF NON-STORMWATER DISCHARGES**

Non-stormwater discharges consist of discharges which do not originate from precipitation events. The General Permit provides allowances for specified non-stormwater discharges that do not cause erosion or carry other pollutants.

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit and listed in the SWPPP, or authorized under a separate NPDES permit, are prohibited.

Non-stormwater discharges that are authorized from this project site include the following:

- NONE

These authorized non-stormwater discharges will be managed with the stormwater and non-stormwater BMPs described in Section 3 of this SWPPP and will be minimized by the QSP.

Activities at this site that may result in unauthorized non-stormwater discharges include:

- NONE

Steps will be taken, including the implementation of appropriate BMPs, to ensure that unauthorized discharges are eliminated, controlled, disposed, or treated on-site.

Discharges of construction materials and wastes, such as fuel or paint, resulting from dumping, spills, or direct contact with rainwater or stormwater runoff, are also prohibited.

## 2.8 REQUIRED SITE MAP INFORMATION

The construction project's Site Map(s) showing the project location, surface water boundaries, geographic features, construction site perimeter and general topography and other requirements identified in Attachment B of the General Permit is located in Appendix B. The following table identifies Map and/or Sheet Nos. where required elements are illustrated.

**Table 2.8 Required Map Information**

<b>Included on Map/Plan Sheet No. <sup>(1)</sup></b>	<b>Required Element</b>
Appendix B	The project's surrounding area (vicinity)
Appendix B	Site layout
Appendix B	Construction site boundaries
Appendix B	Drainage areas
Appendix B	Discharge locations
Appendix B	Areas of soil disturbance (temporary or permanent)
Appendix B	Active areas of soil disturbance (cut or fill)
Appendix B	Locations of runoff BMPs
Appendix B	Locations of erosion control BMPs
Appendix B	Locations of sediment control BMPs
N/A	ATS location (if applicable)
N/A	Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
Appendix B	Locations of all post construction BMPs
Appendix B	Waste storage areas
Appendix B	Vehicle storage areas
Appendix B	Material storage areas
Appendix B	Entrance and Exits
Appendix B	Fueling Locations

Notes: (1) Indicate maps or drawings that information is included on (e.g., Vicinity Map, Site Map, Drainage Plans, Grading Plans, Progress Maps, etc.)

## Section 3 Best Management Practices

### 3.1 SCHEDULE FOR BMP IMPLEMENTATION

Table 3.1 BMP Implementation Schedule

	BMP	Implementation	Duration
Erosion Control	EC-1, Scheduling	Prior to Construction	Entirety of Project
	EC-2, Preservation of Existing Vegetation	Start of Construction	Entire Project / As Needed
Sediment Control	SE-1, Silt Fence	Start of Construction	Entire Project / As Needed
	SE-3m, Curb Grading	Start of Construction	Entire Project / As Needed
	SE-5, Fiber Rolls	Start of Construction	Entire Project / As Needed
	SE-6, Gravel Bag Berm	Start of Construction	Entire Project / As Needed
	SE-7, Street Sweeping and Vacuuming	Start of Construction	Entire Project / As Needed
	SE-10, Storm Drain Inlet Protection	Start of Construction	Entire Project
Tracking Control	TC-1, Stabilized Construction Entrance/Exit	Start of Construction	Entirety of Project
Wind Erosion	WE-1, Wind Erosion Control	Start of Construction	Entirety of Project

### 3.2 EROSION AND SEDIMENT CONTROL

Erosion and sediment controls are required by the General Permit to provide effective reduction or elimination of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges from the Site. Applicable BMPs are identified in this section for erosion control, sediment control, tracking control, and wind erosion control.



### 3.2.1 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles.

This construction project will implement the following practices to provide effective temporary and final erosion control during construction:

1. Preserve existing vegetation where required and when feasible.
2. The area of soil disturbing operations shall be controlled such that the Contractor is able to implement erosion control BMPs quickly and effectively.
3. Stabilize non-active areas within 14 days of cessation of construction activities or sooner if stipulated by local requirements.
4. Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding or alternate methods.
5. Prior to the completion of construction, apply permanent erosion control to remaining disturbed soil areas.

Sufficient erosion control materials shall be maintained onsite to allow implementation in conformance with this SWPPP. The following temporary erosion control BMP selection table indicates the BMPs that shall be implemented to control erosion on the construction site. Fact Sheets for temporary erosion control BMPs are provided in Appendix H.

**Table 3.2.1 Temporary Erosion Control BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP Used		If not used, state reason
			YES	NO	
EC-1	Scheduling	✓	✓		
EC-2	Preservation of Existing Vegetation	✓	✓		
EC-3	Hydraulic Mulch	✓ <sup>(2)</sup>		✓	Not Necessary
EC-4	Hydroseed	✓ <sup>(2)</sup>		✓	Not Necessary
EC-5	Soil Binders	✓ <sup>(2)</sup>		✓	Not Necessary
EC-6	Straw Mulch	✓ <sup>(2)</sup>		✓	Not Necessary
EC-7	Geotextiles and Mats	✓ <sup>(2)</sup>		✓	Not Necessary
EC-8	Wood Mulching	✓ <sup>(2)</sup>		✓	Not Necessary
EC-9	Earth Dike and Drainage Swales	✓ <sup>(3)</sup>		✓	Not Necessary
EC-10	Velocity Dissipation Devices			✓	Not Necessary
EC-11	Slope Drains			✓	Not Necessary
EC-12	Stream Bank Stabilization			✓	Not Necessary
EC-14	Compost Blankets	✓ <sup>(2)</sup>		✓	Not Necessary
EC-15	Soil Preparation-Roughening			✓	Not Necessary
EC-16	Non-Vegetated Stabilization	✓ <sup>(2)</sup>		✓	Not Necessary
WE-1	Wind Erosion Control	✓	✓		

**Table 3.2.1 Temporary Erosion Control BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP Used		If not used, state reason
			YES	NO	
<b>Alternate BMPs Used:</b>					<b>If used, state reason:</b>
<sup>(1)</sup> Applicability to a specific project shall be determined by the QSD. <sup>(2)</sup> The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements. <sup>(3)</sup> Run-on from offsite shall be directed away from all disturbed areas, diversion of offsite flows may require design/analysis by a licensed civil engineer and/or additional environmental permitting					

### 3.2.2 Sediment Controls

Sediment controls are temporary or permanent structural measures that are intended to complement the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water.

The following sediment control BMP selection table indicates the BMPs that shall be implemented to control sediment on the construction site. Fact Sheets for temporary sediment control BMPs are provided in Appendix H.

**Table 3.2.2 Temporary Sediment Control BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP used		If not used, state reason
			YES	NO	
SE-1	Silt Fence	✓ <sup>(2) (3)</sup>	✓		
SE-2	Sediment Basin			✓	Not Necessary
SE-3	Sediment Trap			✓	Not Necessary
SE-4	Check Dams			✓	Not Necessary
SE-5	Fiber Rolls	✓ <sup>(2)(3)</sup>	✓		
SE-6	Gravel Bag Berm	✓ <sup>(3)</sup>	✓		
SE-7	Street Sweeping	✓	✓		
SE-8	Sandbag Barrier			✓	Not Necessary
SE-9	Straw Bale Barrier			✓	Not Necessary
SE-10	Storm Drain Inlet Protection	✓ RL2&3	✓		
SE-11	ATS			✓	Not Necessary
SE-12	Temporary Silt Dike			✓	Not Necessary
SE-13	Compost Sock and Berm	✓ <sup>(3)</sup>		✓	Not Necessary
SE-14	Biofilter Bags	✓ <sup>(3)</sup>		✓	Not Necessary
TC-1	Stabilized Construction Entrance/Exit	✓	✓		

**Table 3.2.2 Temporary Sediment Control BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP used		If not used, state reason
			YES	NO	
TC-2	Stabilized Construction Roadway			✓	Not Necessary
TC-3	Entrance Outlet Tire Wash			✓	Not Necessary
<b>Alternate BMPs Used:</b>					<b>If used, state reason:</b>
<p><sup>(1)</sup> Applicability to a specific project shall be determined by the QSD</p> <p><sup>(2)</sup> The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements</p> <p><sup>(3)</sup> Risk Level 2 &amp; 3 shall provide linear sediment control along toe of slope, face of slope, and at the grade breaks of exposed slope</p>					

### 3.3 NON-STORMWATER CONTROLS AND WASTE AND MATERIALS MANAGEMENT

#### 3.3.1 Non-Stormwater Controls

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit, are prohibited. Non-stormwater discharges for which a separate NPDES permit is required by the local Regional Water Board are prohibited unless coverage under the separate NPDES permit has been obtained for the discharge. The selection of non-stormwater BMPs is based on the list of construction activities with a potential for non-stormwater discharges identified in Section 2.7 of this SWPPP.

The following non-stormwater control BMP selection table indicates the BMPs that shall be implemented to control sediment on the construction site. Fact Sheets for temporary non-stormwater control BMPs are provided in Appendix H.

**Table 3.3.1 Temporary Non-Stormwater BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP used		If not used, state reason
			YES	NO	
NS-1	Water Conservation Practices	✓	✓		
NS-2	Dewatering Operation			✓	Not Necessary
NS-3	Paving and Grinding Operations		✓		
NS-4	Temporary Stream Crossing			✓	Not Necessary
NS-5	Clear Water Diversion			✓	Not Necessary
NS-7	Potable Water Irrigation Discharge Detection			✓	Not Necessary
NS-8	Vehicle and Equipment Cleaning	✓	✓		
NS-9	Vehicle and Equipment Fueling	✓	✓		
NS-10	Vehicle and Equipment Maintenance	✓	✓		
NS-11	Pile Driving Operation			✓	Not Necessary
NS-12	Concrete Curing		✓		
NS-13	Concrete Finishing		✓		
NS-14	Material and Equipment Use Over Water			✓	Not Necessary
NS-15	Demolition Removal Adjacent to Water			✓	Not Necessary
NS-16	Temporary Batch Plants			✓	Not Necessary

**Table 3.3.1 Temporary Non-Stormwater BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirem ent <sup>(1)</sup>	BMP used		If not used, state reason
			YES	NO	
Alternate BMPs Used:	If used, state reason:				
<sup>(1)</sup> Applicability to a specific project shall be determined by the QSD					

### 3.3.2 Materials Management and Waste Management

Materials management control practices consist of implementing procedural and structural BMPs for handling, storing and using construction materials to prevent the release of those materials into stormwater discharges. The amount and type of construction materials to be utilized at the Site will depend upon the type of construction and the length of the construction period. The materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as soil binders for temporary stabilization.

Waste management consist of implementing procedural and structural BMPs for handling, storing and ensuring proper disposal of wastes to prevent the release of those wastes into stormwater discharges.

Materials and waste management pollution control BMPs shall be implemented to minimize stormwater contact with construction materials, wastes and service areas; and to prevent materials and wastes from being discharged off-site. The primary mechanisms for stormwater contact that shall be addressed include:

- Direct contact with precipitation
- Contact with stormwater run-on and runoff
- Wind dispersion of loose materials
- Direct discharge to the storm drain system through spills or dumping
- Extended contact with some materials and wastes, such as asphalt cold mix and treated wood products, which can leach pollutants into stormwater.

A list of construction activities is provided in Section 2.6. The following Materials and Waste Management BMP selection table indicates the BMPs that shall be implemented to handle materials and control construction site wastes associated with these construction activities. Fact Sheets for Materials and Waste Management BMPs are provided in Appendix H.

**Table 3.3.2 Temporary Materials Management BMPs**

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement <sup>(1)</sup>	BMP used		If not used, state reason
			YES	NO	
WM-1	Material Delivery and Storage	✓	✓		
WM-2	Material Use	✓	✓		
WM-3	Stockpile Management	✓	✓		
WM-4	Spill Prevention and Control	✓	✓		
WM-5	Solid Waste Management	✓	✓		
WM-6	Hazardous Waste Management	✓	✓		
WM-7	Contaminated Soil Management		✓		Only if Needed
WM-8	Concrete Waste Management	✓	✓		
WM-9	Sanitary/Septic Waste Management	✓	✓		Only if Needed
WM-10	Liquid Waste Management		✓		Only if Needed
<b>Alternate BMPs Used:</b>				<b>If used, state reason:</b>	
<sup>(1)</sup> Applicability to a specific project shall be determined by the QSD.					

### 3.4 POST CONSTRUCTION STORMWATER MANAGEMENT MEASURES

Post construction BMPs are permanent measures installed during construction, designed to reduce or eliminate pollutant discharges from the site after construction is completed.

This site is located in an area subject to a Phase I or Phase II Municipal Separate Storm Sewer System (MS4) permit approved Stormwater Management Plan.  Yes  No

Post construction runoff reduction requirements have been satisfied through the MS4 program, this project is exempt from provision XIII A of the General Permit.

The following source control post construction BMPs to comply with General Permit Section XIII.B and local requirements have been identified for the site:

- Street cleaning and maintenance will be done by the LRP until such time that the improvements are accepted by the City. Once accepted, the City or their designated contractor will provide the required cleaning and maintenance.

- Solid waste containers will be provided and picked up by the City of Tulare or their designated waste management contractor.
- Landscape maintenance will be done by the LRP until such time that the improvements are accepted by the City. Once accepted, the City or their designated contractor will provide the required landscape maintenance.

The post construction BMPs that are described above shall be funded and maintained by the LRP, unless otherwise applicable.

## **Section 4 BMP Inspection and Maintenance**

---

### **4.1 BMP INSPECTION AND MAINTENANCE**

The General Permit requires routine weekly inspections of BMPs, along with inspections before, during, and after qualifying rain events. A BMP inspection checklist must be filled out for inspections and maintained on-site with the SWPPP. The inspection checklist includes the necessary information covered in Section 7.6. A blank inspection checklist can be found in Appendix I. Completed checklists shall be kept in CSMP Attachment 2 “Monitoring Records.

BMPs shall be maintained regularly to ensure proper and effective functionality. If necessary, corrective actions shall be implemented within 72 hours of identified deficiencies and associated amendments to the SWPPP shall be prepared by the QSD.

Specific details for maintenance, inspection, and repair of Construction Site BMPs can be found in the BMP Factsheets in Appendix H.

### **4.2 RAIN EVENT ACTION PLANS**

Rain Event Action Plans (REAPs) are not required for Risk Level 1 projects.



## **Section 5 Training**

---

Appendix L identifies the QSPs for the project. To promote stormwater management awareness specific for this project, periodic training of job-site personnel shall be included as part of routine project meetings (e.g. daily/weekly tailgate safety meetings), or task specific trainings as needed.

The QSP shall be responsible for providing this information at the meetings, and subsequently completing the training logs shown in Appendix K, which identifies the site-specific stormwater topics covered as well as the names of site personnel who attended the meeting. Tasks may be delegated to trained employees by the QSP provided adequate supervision and oversight is provided. Training shall correspond to the specific task delegated including: SWPPP implementation; BMP inspection and maintenance; and record keeping.

Documentation of training activities (formal and informal) is retained in SWPPP Appendix K.

## **Section 6 Responsible Parties and Operators**

---

### **6.1 RESPONSIBLE PARTIES**

Approved Signatories who are responsible for SWPPP implementation and have authority to sign permit-related documents are listed below. Written authorizations from the LRP for these individuals are provided in Appendix L. The Approved Signatories assigned to this project are:

Name	Title	Phone Number
Kelly Porterfield	CBO	(559) 274-4700

QSPs identified for the project are identified in Appendix L. The QSP shall have primary responsibility and significant authority for the implementation, maintenance and inspection/monitoring of SWPPP requirements. The QSP will be available at all times throughout the duration of the project. Duties of the QSP include but are not limited to:

- Implementing all elements of the General Permit and SWPPP, including but not limited to:
  - Ensuring all BMPs are implemented, inspected, and properly maintained;
  - Performing non-stormwater and stormwater visual observations and inspections;
  - Performing non-stormwater and storm sampling and analysis, as required;
  - Performing routine inspections and observations;
  - Implementing non-stormwater management, and materials and waste management activities such as: monitoring discharges; general Site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than stormwater are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.;
- The QSP may delegate these inspections and activities to an appropriately trained employee but shall ensure adequacy and adequate deployment.
- Ensuring elimination of unauthorized discharges.
- The QSPs shall be assigned authority by the LRP to mobilize crews in order to make immediate repairs to the control measures.
- Coordinate with the Contractor(s) to assure all of the necessary corrections/repairs are made immediately and that the project complies with the SWPPP, the General Permit and approved plans at all times.
- Notifying the LRP or Authorized Signatory immediately of off-site discharges or other non-compliance events.

## **6.2 CONTRACTOR LIST**

The contractor and subcontractors are not known at this time. The list will be updated when the information is available.

## **Section 7 Construction Site Monitoring Program**

---

### **7.1 PURPOSE**

This Construction Site Monitoring Program was developed to address the following objectives:

1. To demonstrate that the site is in compliance with the Discharge Prohibitions of the Construction General Permit;
2. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
3. To determine whether immediate corrective actions, additional Best Management Practices (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in stormwater discharges and authorized non-stormwater discharges;
4. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges.

### **7.2 APPLICABILITY OF PERMIT REQUIREMENTS**

This project has been determined to be a Risk Level 1 project. The General Permit identifies the following types of monitoring as being applicable for a Risk Level 1 project.

Risk Level 1

- Visual inspections of Best Management Practices (BMPs);
- Visual monitoring of the site related to qualifying storm events;
- Visual monitoring of the site for non-stormwater discharges;
- Sampling and analysis of construction site runoff for non-visible pollutants when applicable; and
- Sampling and analysis of construction site runoff as required by the Regional Water Board when applicable.

### **7.3. WEATHER AND RAIN EVENT TRACKING**

Visual monitoring and inspections requirements of the General Permit are triggered by a qualifying rain event. The General Permit defines a qualifying rain event as any event that produces ½ inch of precipitation. A minimum of 48 hours of dry weather will be used to distinguish between separate qualifying storm events.

#### **7.3.1 Weather Tracking**

The QSP should daily consult the National Oceanographic and Atmospheric Administration (NOAA) for the weather forecasts. These forecasts can be obtained at <http://www.srh.noaa.gov/>. Weather reports should be printed and maintained with the SWPPP in CSMP Attachment 1 “Weather Reports”.

#### **7.3.2 Rain Gauges**

One rain gauge shall be installed on the project site by the developer. Locate the gauge in an open area away from obstructions such as trees or overhangs. Mount the gauge on a post at a height of

3 to 5 feet with the gauge extending several inches beyond the post. Make sure that the top of the gauge is level. Make sure the post is not in an area where rainwater can indirectly splash from sheds, equipment, trailers, etc.

The rain gauge shall be read daily during normal site scheduled hours. The rain gauge should be read at approximately the same time every day and the date and time of each reading recorded. Log rain gauge readings in CSMP Attachment 1 “Weather Records”. Follow the rain gauge instructions to obtain accurate measurements.

Once the rain gauge reading has been recorded, accumulated rain shall be emptied, and the gauge reset.

#### **7.4 MONITORING LOCATIONS**

Monitoring locations are shown on the Site Maps in Appendix B. Monitoring locations are described in the Sections 7.6 and 7.7.

Whenever changes in the construction site might affect the appropriateness of sampling locations, the sampling locations shall be revised accordingly. All such revisions shall be implemented as soon as feasible and the SWPPP amended. Temporary changes that result in a one-time additional sampling location do not require a SWPPP amendment.

#### **7.5 SAFETY AND MONITORING EXEMPTIONS**

Safety practices for sample collection will be in accordance with all local, state and federal requirements.

This project is not required to collect samples or conduct visual observations (inspections) under the following conditions:

- During dangerous weather conditions such as flooding and electrical storms.
- Outside of scheduled site business hours.

If monitoring (visual monitoring or sample collection) of the site is unsafe because of the dangerous conditions noted above then the QSP shall document the conditions for why an exception to performing the monitoring was necessary. The exemption documentation shall be filed in CSMP Attachment 2 “Monitoring Records”.

#### **7.6 VISUAL MONITORING**

Visual monitoring includes observations and inspections. Inspections of BMPs are required to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Visual observations of the site are required to observe storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources.

Table 7.6 identifies the required frequency of visual observations and inspections. Inspections and observations will be conducted at the locations identified in Section 7.6.3.

**Table 7.6 Summary of Visual Monitoring and Inspections**

<b>Type of Inspection</b>	<b>Frequency</b>
<i>Routine Inspections</i>	
BMP Inspections	
SE-1, Silt Fence	Weekly <sup>1</sup>
SE-2, Preservation of Existing Vegetation	Weekly <sup>1</sup>
SE-5, Fiber Rolls	Weekly <sup>1</sup>
SE-6, Gravel Bag Berm	Weekly <sup>1</sup>
SE-7, Street Sweeping	As Necessary
SE-10, Storm Drain Inlet Protection	Weekly <sup>1</sup>
TC-1, Stabilized Construction Entrance/Exit	Daily
WE-1, Wind Erosion Control	Daily
Concrete Washout	Weekly <sup>1</sup>
Non-Stormwater Discharge Observations	Quarterly during daylight hours
<i>Rain Event Triggered Inspections</i>	
Site Inspections Prior to a Qualifying Event	Within 48 hours of a qualifying event <sup>2</sup>
BMP Inspections During an Extended Storm Event	Every 24-hour period of a rain event <sup>2</sup>
Site Inspections Following a Qualifying Event	Within 48 hours of a qualifying event <sup>2</sup>
<sup>1</sup> Most BMPs must be inspected weekly; those identified below must be inspected more frequently. <sup>2</sup> Inspections are only required during scheduled site operating hours. Note however, these inspections are required daily regardless of the amount of precipitation.	

### **7.6.1 Routine Observations and Inspections**

Routine site inspections and visual monitoring are necessary to ensure that the project is in compliance with the requirements of the Construction General Permit.

#### **7.6.1.1 Routine BMP Inspections**

Inspections of BMPs are conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

#### **7.6.1.2 Non-Stormwater Discharge Observations**

Each drainage area will be inspected for the presence of or indications of prior unauthorized and authorized non-stormwater discharges. Inspections will record:

- Presence or evidence of any non-stormwater discharge (authorized or unauthorized);
- Pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.); and
- Source of discharge.

### **7.6.2 Rain-Event Triggered Observations and Inspections**

Visual observations of the site and inspections of BMPs are required prior to a qualifying rain event; following a qualifying rain event, and every 24-hour period during a qualifying rain event. Pre-rain inspections will be conducted after consulting NOAA and determining that a precipitation event with a 50% or greater probability of precipitation has been predicted.

#### **7.6.2.1 Visual Observations Prior to a Forecasted Qualifying Rain Event**

Within 48-hours prior to a qualifying event a stormwater visual monitoring site inspection will include observations of the following locations:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- BMPs to identify if they have been properly implemented;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

Consistent with guidance from the State Water Resources Control Board, pre-rain BMP inspections and visual monitoring will be triggered by a NOAA forecast that indicates a probability of precipitation of 50% or more in the project area.

#### **7.6.2.2 BMP Inspections During an Extended Storm Event**

During an extended rain event BMP inspections will be conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

If the construction site is not accessible during the rain event, the visual inspections shall be performed at all relevant outfalls, discharge points, downstream locations. The inspections should record any projected maintenance activities.

#### **7.6.2.3 Visual Observations Following a Qualifying Rain Event**

Within 48 hours following a qualifying rain event (0.5 inches of rain) a stormwater visual monitoring site inspection is required to observe:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- BMPs to identify if they have been properly designed, implemented, and effective;
- Need for additional BMPs;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard; and
- Discharge of stored or contained rain water.

**For bid purposes only-Pending Approval**

### **7.6.3 Visual Monitoring Procedures**

Visual monitoring shall be conducted by the QSP or staff trained by and under the supervision of the QSP.

The name(s) and contact number(s) of the site visual monitoring personnel are listed below and their training qualifications are provided in Appendix K.

Assigned inspector: Monique Mello Contact phone: (559) 733-0440

Alternate inspector: \_\_\_\_\_ Contact phone: \_\_\_\_\_

Stormwater observations shall be documented on the *Visual Inspection Field Log Sheet* (see CSMP Attachment 3 “Example Forms”). BMP inspections shall be documented on the site specific BMP inspection checklist. Any photographs used to document observations will be referenced on stormwater site inspection report and maintained with the Monitoring Records in Attachment 2.

The completed reports will be kept in CSMP Attachment 2 “Monitoring Records”.

### **7.6.4 Visual Monitoring Follow-Up and Reporting**

Correction of deficiencies identified by the observations or inspections, including required repairs or maintenance of BMPs, shall be initiated and completed as soon as possible.

If identified deficiencies require design changes, including additional BMPs, the implementation of changes will be initiated within 72 hours of identification and be completed as soon as possible. When design changes to BMPs are required, the SWPPP shall be amended to reflect the changes.

Deficiencies identified in site inspection reports and correction of deficiencies will be tracked on the *Inspection Field Log Sheet* or *BMP Inspection Report* and shall be submitted to the QSP and shall be kept in CSMP Attachment 2 “Monitoring Records”.

The QSP shall within 5 days of the inspection submit copies of the completed *Inspection Field Log Sheet* or *BMP Inspection Report* with the corrective actions to the QSD (if applicable).

Results of visual monitoring must be summarized and reported in the Annual Report.

### **7.6.5 Visual Monitoring Locations**

The inspections and observations identified in Sections 7.6.1 and 7.6.2 will be conducted at the locations identified in this section. BMP locations are shown on the Site Maps in SWPPP Appendix A.

## **7.7 WATER QUALITY SAMPLING AND ANALYSIS**

### **7.7.1 Sampling and Analysis Plan for Non-Visible Pollutants in Stormwater Runoff Discharges**

This Sampling and Analysis Plan for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in stormwater runoff discharges from the project site.

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.



The following construction materials, wastes, or activities, as identified in Section 2.6, are potential sources of non-visible pollutants to stormwater discharges from the project. Storage, use, and operational locations are shown on the Site Maps in Appendix B.

- See Appendix G

#### **7.7.1.1 Sampling Schedule**

Samples for the potential non-visible pollutant(s) and a sufficiently large unaffected background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during the site's scheduled hours and shall be collected regardless of the time of year and phase of the construction.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during site inspections conducted prior to or during a rain event.

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents stormwater contact and runoff from the storage area.
- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- A construction activity, including but not limited to those in Section 2.6, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Stormwater runoff from an area contaminated by historical usage of the site has been observed to combine with stormwater runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

#### **7.7.1.2 Sampling Locations**

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, and personnel safety. Planned non-visible pollutant sampling locations are shown on the Site Maps in Appendix B.

#### **7.7.1.3 Monitoring Preparation**

Non-visible pollutant samples will be collected by:

Contractor             Yes             No

Consultant             Yes             No  
 Laboratory            Yes             No

Samples on the project site will be collected by the following contractor sampling personnel:

Name/Telephone Number: \_\_\_\_\_

Alternate(s)/Telephone Number: \_\_\_\_\_

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, clean powder-free nitrile gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, and *Effluent Sampling Field Log Sheets* and Chain of Custody (CoC) forms, which are provided in CSMP Attachment 3 “Example Forms”.

#### 7.7.1.4 Analytical Constituents

Table 7.7.1.4 lists the specific sources and types of potential non-visible pollutants on the project site and the water quality indicator constituent(s) for that pollutant.

**Table 7.7.1.4 Potential Non-Visible Pollutants and Water Quality Indicator Constituents**

<b>Common Non-Visible Pollutants and Water Quality Indicator Constituents Worksheet</b>	
<b>General Work Activity/Potential Pollutants</b>	<b>Water Quality Indicators of Potential Constituents</b> (Review product literature and Material Safety Data Sheets to confirm potential constituents)
<b>Adhesives</b>	COD, Phenols, SVOCs
<b>Asphalt Work</b>	VOCs
<b>Cleaning</b>	
Acids	pH
Bleaches	Residual chlorine
TSP	Phosphate
Solvents	VOCs, SVOCs
Detergents	MBAS
<b>Concrete / Masonry Work</b>	
Sealant (Methyl methacrylate)	SVOC
Curing compounds	VOCs, SVOCs, pH
Ash, slag, sand	pH, Al, Ca, Va, Zn

**Table 7.7.1.4 Potential Non-Visible Pollutants and Water Quality Indicator Constituents**

<b>Common Non-Visible Pollutants and Water Quality Indicator Constituents Worksheet</b>	
<b>General Work Activity/Potential Pollutants</b>	<b>Water Quality Indicators of Potential Constituents</b> (Review product literature and Material Safety Data Sheets to confirm potential constituents)
<b>Drywall</b>	Cu, Al, General Minerals
<b>Framing / Carpentry</b>	
Treated Wood	Cu, Cr, As, Zn
Particle board	Formaldehyde
Untreated wood	BOD
<b>Grading / Earthworks</b>	
Gypsum / Lime amendments	pH
Contaminated Soil	Constituents specific to known contaminants, check with Laboratory
<b>Heating, Ventilation, Air Conditioning</b>	Freon
<b>Insulation</b>	Al, Zn
<b>Landscaping</b>	
Pesticides/Herbicides	Product dependent, see label and check with Laboratory
Fertilizers	TKN, NO <sub>3</sub> , BOD, COD, DOC, Sulfate, NH <sub>3</sub> , Phosphate, Potassium
Aluminum sulfate	Al, TDS, Sulfate
<b>Liquid Waste</b>	Constituents specific to materials, check with Laboratory
<b>Painting</b>	
Resins	COD, SVOCs
Thinners	COD, VOCs
Paint strippers	VOCs, SVOCs, metals
Lacquers, varnishes, enamels	COD, VOCs, SVOCs
Sealants	COD
Adhesives	Phenols, SVOCs
<b>Planting / Vegetation Management</b>	
Vegetation stockpiles	BOD

**Table 7.7.1.4 Potential Non-Visible Pollutants and Water Quality Indicator Constituents**

<b>Common Non-Visible Pollutants and Water Quality Indicator Constituents Worksheet</b>	
<b>General Work Activity/Potential Pollutants</b>	<b>Water Quality Indicators of Potential Constituents</b> (Review product literature and Material Safety Data Sheets to confirm potential constituents)
Fertilizers	TKN, NO <sub>3</sub> , BOD, COD, DOC, sulfate, NH <sub>3</sub> , Phosphate, Potassium
Pesticides/Herbicides	Product dependent, see label and check with Laboratory
<b>Plumbing</b>	
Solder, flux, pipe fitting	Cu, Pb, Sn, Zn
<b>Pools and Fountains</b>	Residual chlorine, Cu, chloramines
<b>Removal of existing structures</b>	Zn, VOCs, PCBs (see also other applicable activity categories, e.g., grading, painting)
<b>Roofing</b>	Cu, Pb, VOCs
<b>Sanitary Waste</b> Sewer line breaks and Portable Toilets (using clear fluid – blue fluid is visible if discharged)	BOD, Total/Fecal coliform
<b>Soil Preparation / Amendments/Dust Control</b>	
Polymer/Co-polymers	TKN, NO <sub>3</sub> , BOD, COD, DOC, Sulfate, Ni
Lignin sulfate	TDS, alkalinity
Psyllium	COD, TOC
Guar/Plant Gums	COD, TOC, Ni
<b>Solid Waste (leakage)</b>	BOD
<b>Utility Line Testing and Flushing</b>	Residual chlorine, chloramines
<b>Vehicle and Equipment Use</b>	
Batteries	Sulfuric acid; Pb, pH

Adapted from *Attachment S, Caltrans SWPPP/WPCP Preparation Manual, February 2003*, and *CASQA Construction BMP Handbook, 2003*

### **7.7.1.5 Sample Collection**

Samples of discharge shall be collected at the designated non-visible pollutant sampling locations shown on the Site Map in Appendix B or in the locations determined by observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples shall be collected and preserved in accordance with the methods identified in the Table, “Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants” provided in Section 7.7.1.6. Only the QSP, or personnel trained in water quality sampling under the direction of the QSP shall collect samples.

Sample collection and handling requirements are described in Section 7.7.7.

**7.7.1.6          *Sample Analysis***

Samples shall be analyzed using the analytical methods identified in the Table 7.7.1.6. Samples will be analyzed by a qualified laboratory hired by the contractor or LRP as applicable.



#### **7.7.1.7 Data Evaluation and Reporting**

The QSP shall complete an evaluation of the water quality sample analytical results.

Runoff/downgradient results shall be compared with the associated upgradient/unaffected results and any associated run-on results. Should the runoff/downgradient sample show an increased level of the tested analyte relative to the unaffected background sample, which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

The General Permit prohibits the storm water discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities shall be immediately reported to the Regional Water Board and other agencies as required by 40 C.F.R. §§ 117.3 and 302.4.

Results of non-visible pollutant monitoring shall be reported in the Annual Report.

#### **7.7.2 Sampling and Analysis Plan for pH and Turbidity in Stormwater Runoff Discharges**

Sampling and analysis of runoff for pH and turbidity is not required for Risk Level 1 projects.

#### **7.7.3 Additional Monitoring Following an NEL Exceedance**

This project is not subject to NELs.

#### **7.7.4 Sampling and Analysis Plan for Non-Stormwater Discharges**

This project is not subject to the non-stormwater sampling and analysis requirements of the General Permit because it is a Risk Level 1 project.

#### **7.7.5 Sampling and Analysis Plan for Other Pollutants Required by the Regional Water Board**

The Regional Water Board has not specified monitoring for additional pollutants.

#### **7.7.6 Training of Sampling Personnel**

Sampling personnel shall be trained to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring program (SWAMP) 2008 Quality Assurance Program Plan (QAPrP). Training records of designated contractor sampling personnel are provided in Appendix K.

The stormwater sampler(s) and alternate(s) have received the following stormwater sampling training:

Name	Training
_____	_____
_____	_____

The stormwater sampler(s) and alternates have the following stormwater sampling experience:

Name	Experience
_____	_____
_____	_____

### **7.7.7 Sample Collection and Handling**

#### **7.7.7.1 Sample Collection**

Samples shall be collected at the designated sampling locations shown on the Site Maps and listed in the preceding sections. Samples shall be collected, maintained and shipped in accordance with the SWAMP 2008 Quality Assurance Program Plan (QAPrP).

Grab samples shall be collected and preserved in accordance with the methods identified in preceding sections.

To maintain sample integrity and prevent cross-contamination, sample collection personnel shall follow the protocols below.

- Collect samples (for laboratory analysis) only in analytical laboratory-provided sample containers;
- Wear clean, powder-free nitrile gloves when collecting samples;
- Change gloves whenever something not known to be clean has been touched;
- Change gloves between sites;
- Decontaminate all equipment (e.g. bucket, tubing) prior to sample collection using a trisodium phosphate water wash, distilled water rinse, and final rinse with distilled water. (Dispose of wash and rinse water appropriately, i.e., do not discharge to storm drain or receiving water). Do not decontaminate laboratory provided sample containers;
- Do not smoke during sampling events;
- Never sample near a running vehicle;
- Do not park vehicles in the immediate sample collection area (even non-running vehicles);
- Do not eat or drink during sample collection; and
- Do not breathe, sneeze, or cough in the direction of an open sample container.

The most important aspect of grab sampling is to collect a sample that represents the entire runoff stream. Typically, samples are collected by dipping the collection container in the runoff flow paths and streams as noted below.

- i. For small streams and flow paths, simply dip the bottle facing upstream until full.



- ii. For larger stream that can be safely accessed, collect a sample in the middle of the flow stream by directly dipping the mouth of the bottle. Once again making sure that the opening of the bottle is facing upstream as to avoid any contamination by the sampler.
- iii. For larger streams that cannot be safely waded, pole-samplers may be needed to safely access the representative flow.
- iv. Avoid collecting samples from ponded, sluggish or stagnant water.
- v. Avoid collecting samples directly downstream from a bridge as the samples can be affected by the bridge structure or runoff from the road surface.

Note, that depending upon the specific analytical test, some containers may contain preservatives. These containers should **never** be dipped into the stream, but filled indirectly from the collection container.

#### **7.7.7.2 Sample Handling**

Turbidity and pH measurements must be conducted immediately. Do not store turbidity or pH samples for later measurement.

Samples for laboratory analysis must be handled as follows. Immediately following sample collection:

- Cap sample containers;
- Complete sample container labels;
- Sealed containers in a re-sealable storage bag;
- Place sample containers into an ice-chilled cooler;
- Document sample information on the *Effluent Sampling Field Log Sheet*; and
- Complete the CoC.

All samples for laboratory analysis must be maintained between 0-6 degrees Celsius during delivery to the laboratory. Samples must be kept on ice, or refrigerated, from sample collection through delivery to the laboratory. Place samples to be shipped inside coolers with ice. Make sure the sample bottles are well packaged to prevent breakage and secure cooler lids with packaging tape.

Ship samples that will be laboratory analyzed to the analytical laboratory right away. Hold times are measured from the time the sample is collected to the time the sample is analyzed. The General Permit requires that samples be received by the analytical laboratory within 48 hours of the physical sampling (unless required sooner by the analytical laboratory).

Laboratory Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State Zip: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Point of Contact: \_\_\_\_\_

#### **7.7.7.3 Sample Documentation Procedures**

All original data documented on sample bottle identification labels, *Effluent Sampling Field Log Sheet*, and CoCs shall be recorded using waterproof ink. These shall be considered accountable

documents. If an error is made on an accountable document, the individual shall make corrections by lining through the error and entering the correct information. The erroneous information shall not be obliterated. All corrections shall be initialed and dated.

Duplicate samples shall be identified consistent with the numbering system for other samples to prevent the laboratory from identifying duplicate samples. Duplicate samples shall be identified in the Effluent Sampling Field Log Sheet.

Sample documentation procedures include the following:

Sample Bottle Identification Labels: Sampling personnel shall attach an identification label to each sample bottle. Sample identification shall uniquely identify each sample location.

Field Log Sheets: Sampling personnel shall complete the *Effluent Sampling Field Log Sheet* and *Receiving Water Sampling Field Log Sheet* for each sampling event, as appropriate.

Chain of Custody: Sampling personnel shall complete the CoC for each sampling event for which samples are collected for laboratory analysis. The sampler will sign the CoC when the sample(s) is turned over to the testing laboratory or courier.

## 7.8 ACTIVE TREATMENT SYSTEM MONITORING

An Active Treatment System (ATS) will be deployed on the site?

Yes       No

This project does not require a project specific Sampling and Analysis Plan for an ATS because deployment of an ATS is not planned.

## 7.9 BIOASSESSMENT MONITORING

This project is not subject to bioassessment monitoring because it is not a Risk Level 3 project.

## 7.10 WATERSHED MONITORING OPTION

This project is not participating in a watershed monitoring option.

## 7.11 QUALITY ASSURANCE AND QUALITY CONTROL

An effective Quality Assurance and Quality Control (QA/QC) plan shall be implemented as part of the CSMP to ensure that analytical data can be used with confidence. QA/QC procedures to be initiated include the following:

- Field logs;
- Clean sampling techniques;
- CoCs;
- QA/QC Samples; and
- Data verification.

Each of these procedures is discussed in more detail in the following sections.

### 7.11.1 *Field Logs*

The purpose of field logs is to record sampling information and field observations during monitoring that may explain any uncharacteristic analytical results. Sampling information to be

included in the field log include the date and time of water quality sample collection, sampling personnel, sample container identification numbers, and types of samples that were collected. Field observations should be noted in the field log for any abnormalities at the sampling location (color, odor, BMPs, etc.). Field measurements for pH and turbidity should also be recorded in the field log. A Visual Inspection Field Log and Effluent Sampling Field Log Sheet are included in CSMP Attachment 3 “Example Forms”.

### **7.11.2 Clean Sampling Techniques**

Clean sampling techniques involve the use of certified clean containers for sample collection and clean powder-free nitrile gloves during sample collection and handling. As discussed in Section 7.7.7, adoption of a clean sampling approach will minimize the chance of field contamination and questionable data results.

### **7.11.3 Chain of Custody**

The sample CoC is an important documentation step that tracks samples from collection through analysis to ensure the validity of the sample. Sample CoC procedures include the following:

- Proper labeling of samples;
- Use of CoC forms for all samples; and
- Prompt sample delivery to the analytical laboratory.

Analytical laboratories usually provide CoC forms to be filled out for sample containers. An example CoC is included in CSMP Attachment 3 “Example Forms”.

### **7.11.4 QA/QC Samples**

QA/QC samples provide an indication of the accuracy and precision of the sample collection; sample handling; field measurements; and analytical laboratory methods. The following types of QA/QC will be conducted for this project:

- Field Duplicates at a frequency of 5 percent or 1 duplicate minimum per sampling event (Required for all sampling plans with field measurements or laboratory analysis)

#### **7.11.4.1 Field Duplicates**

Field duplicates provide verification of laboratory or field analysis and sample collection. Duplicate samples shall be collected, handled, and analyzed using the same protocols as primary samples. The sample location where field duplicates are collected shall be randomly selected from the discharge locations. Duplicate samples shall be collected immediately after the primary sample has been collected. Duplicate samples must be collected in the same manner and as close in time as possible to the original sample. Duplicate samples shall not influence any evaluations or conclusion.

### **7.11.5 Data Verification**

After results are received from the analytical laboratory, the QSP shall verify the data to ensure that it is complete, accurate, and the appropriate QA/QC requirements were met. Data must be verified as soon as the data reports are received. Data verification shall include:

- Check the CoC and laboratory reports.  
*Make sure all requested analyses were performed and all samples are accounted for in the reports.*
- Check laboratory reports to make sure hold times were met and that the reporting levels meet or are lower than the reporting levels agreed to in the contract.
- Check data for outlier values and follow up with the laboratory.  
*Occasionally typographical errors, unit reporting errors, or incomplete results are reported and should be easily detected. These errors need to be identified, clarified, and corrected quickly by the laboratory. The QSP should especially note data that is an order of magnitude or more different than similar locations, or is inconsistent with previous data from the same location.*
- Check laboratory QA/QC results.  
*EPA establishes QA/QC checks and acceptable criteria for laboratory analyses. These data are typically reported along with the sample results. The QSP shall evaluate the reported QA/QC data to check for contamination (method, field, and equipment blanks), precision (laboratory matrix spike duplicates), and accuracy (matrix spikes and laboratory control samples). When QA/QC checks are outside acceptable ranges, the laboratory must flag the data, and usually provides an explanation of the potential impact to the sample results.*
- Check the data set for outlier values and, accordingly, confirm results and re-analyze samples where appropriate.  
*Sample re-analysis should only be undertaken when it appears that some part of the QA/QC resulted in a value out of the accepted range. Sample results may not be discounted unless the analytical laboratory identifies the required QA/QC criteria were not met and confirms this in writing.*

Field data including inspections and observations must be verified as soon as the field logs are received, typically at the end of the sampling event. Field data verification shall include:

- Check field logs to make sure all required measurements were completed and appropriately documented;
- Check reported values that appear out of the typical range or inconsistent;  
Follow-up immediately to identify potential reporting or equipment problems, if appropriate, recalibrate equipment after sampling;
- Verify equipment calibrations;
- Review observations noted on the field logs; and
- Review notations of any errors and actions taken to correct the equipment or recording errors.

## 7.12 RECORDS RETENTION

All records of stormwater monitoring information and copies of reports (including Annual Reports) must be retained for a period of at least three years from date of submittal or longer if required by the Regional Water Board.

Results of visual monitoring, field measurements, and laboratory analyses must be kept in the SWPPP along with CoCs, and other documentation related to the monitoring.

Records are to be kept onsite while construction is ongoing. Records to be retained include:

- The date, place, and time of inspections, sampling, visual observations, and/or measurements, including precipitation;
- The individual(s) who performed the inspections, sampling, visual observation, and/or field measurements;
- The date and approximate time of field measurements and laboratory analyses;
- The individual(s) who performed the laboratory analyses;
- A summary of all analytical results, the method detection limits and reporting limits, and the analytical techniques or methods used;
- Rain gauge readings from site inspections;
- QA/QC records and results;
- Calibration records;
- Visual observation and sample collection exemption records;
- The records of any corrective actions and follow-up activities that resulted from analytical results, visual observations, or inspections;

# **CSMP Attachment 1: Weather Reports**

---

## **CSMP Attachment 2: Monitoring Records**

---

## **CSMP Attachment 3: Example Forms**

---





<b>Risk Level 1, 2, 3 Visual Inspection Field Log Sheet</b>						
Date and Time of Inspection:				Report Date:		
Inspection Type:	<input type="checkbox"/> Weekly	<input type="checkbox"/> Before predicted rain	<input type="checkbox"/> During rain event	<input type="checkbox"/> Following qualifying rain event	<input type="checkbox"/> Contained stormwater release	<input type="checkbox"/> Quarterly non-stormwater
<b>Site Information</b>						
Construction Site Name: West Shields Elementary School						
Construction stage and completed activities:					Approximate area of exposed site:	
<b>Weather and Observations</b>						
Date Rain Predicted to Occur:				Predicted % chance of rain:		
Estimate storm beginning: _____	Estimate storm duration: _____		Estimate time since last storm: _____	Rain gauge reading: _____		
(date and time)	(hours)		(days or hours)	(inches)		
Observations: If yes identify location						
Odors	Yes <input type="checkbox"/>	No <input type="checkbox"/>				
Floating material	Yes <input type="checkbox"/>	No <input type="checkbox"/>				
Suspended Material	Yes <input type="checkbox"/>	No <input type="checkbox"/>				
Sheen	Yes <input type="checkbox"/>	No <input type="checkbox"/>				
Discolorations	Yes <input type="checkbox"/>	No <input type="checkbox"/>				
Turbidity	Yes <input type="checkbox"/>	No <input type="checkbox"/>				
<b>Site Inspections</b>						
<b>Outfalls or BMPs Evaluated</b>			<b>Deficiencies Noted</b>			
(add additional sheets or attached detailed BMP Inspection Checklists)						
Photos Taken:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Photo Reference IDs:			
<b>Corrective Actions Identified (note if SWPPP/REAP change is needed)</b>						
<b>Inspector Information</b>						
Inspector Name:				Inspector Title:		
Signature:					Date:	

<b>Risk Level 2 Effluent Sampling Field Log Sheets</b>			
Construction Site Name: West Shields Elementary School		Date:	Time Start:
Sampler:			
Sampling Event Type:	<input type="checkbox"/> Stormwater	<input type="checkbox"/> Non-stormwater	<input type="checkbox"/> Non-visible pollutant
<b>Field Meter Calibration</b>			
pH Meter ID No./Desc.: Calibration Date/Time:		Turbidity Meter ID No./Desc.: Calibration Date/Time:	
<b>Field pH and Turbidity Measurements</b>			
Discharge Location Description	pH	Turbidity	Time
<b>Grab Samples Collected</b>			
Discharge Location Description	Sample Type		Time
Additional Sampling Notes:			
Time End:			

NAL or NEL Exceedance Evaluation Summary Report		Page ___ of ___
<b>Project Name</b>		
<b>Project WDID</b>		
<b>Project Location</b>		
<b>Date of Exceedance</b>		
<b>Type of Exceedance</b>	NAL Daily Average <input type="checkbox"/> pH <input type="checkbox"/> Turbidity NEL Daily Average <input type="checkbox"/> pH <input type="checkbox"/> Turbidity  <input type="checkbox"/> Other (specify) _____	
<b>Measurement or Analytical Method</b>	<input type="checkbox"/> Field meter (Sensitivity: _____) <input type="checkbox"/> Lab method (specify) _____ (Reporting Limit: _____) (MDL: _____)	
<b>Calculated Daily Average</b>	<input type="checkbox"/> pH pH units <input type="checkbox"/> Turbidity ___ NTU	
<b>Rain Gauge Measurement</b>	_____ inches	
<b>Compliance Storm Event</b>	_____ inches (5-year, 24-hour event)	
<b>Visual Observations on Day of Exceedance</b>		

<b>NAL or NEL Exceedance Evaluation Summary Report</b>		<b>Page ___ of ___</b>
<b>Description of BMPs in Place at Time of Event</b>		
<b>Initial Assessment of Cause</b>		
<b>Corrective Actions Taken (deployed after exceedance)</b>		
<b>Additional Corrective Actions Proposed</b>		
<b>Report Completed By</b>	<hr/> <b>(Print Name, Title)</b>	
<b>Signature</b>	<hr/>	

**CHAIN-OF-CUSTODY****DATE:****Lab ID:**

<b>DESTINATION LAB:</b> ATTN: <b>ADDRESS:</b>  <b>Office Phone:</b> <b>Cell Phone:</b> <b>SAMPLED BY:</b> <input type="text"/> <b>Contact:</b> <input type="text"/>  <b>Project Name</b> <input type="text"/>  							<b>REQUESTED ANALYSIS</b>				<b>Notes:</b>	
							<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
							<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
							<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
							<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
<b>Client Sample ID</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Matrix</b>	<b>Container</b>								
				<b>#</b>	<b>Type</b>	<b>Pres.</b>						
<b>SENDER COMMENTS:</b>							<b>RELINQUISHED BY</b>					
							Signature:		<input type="text"/>			
							Print:		<input type="text"/>			
							Company:		<input type="text"/>			
							Date:		<input type="text"/>	TIME:		<input type="text"/>
<b>LABORATORY COMMENTS:</b>							<b>RECEIVED BY</b>					
							Signature:		<input type="text"/>			
							Print:		<input type="text"/>			
							Company:		<input type="text"/>			
							Date:		<input type="text"/>	TIME:		<input type="text"/>

## Section 8    References

---

1. Project Improvement Plans referencing West Shields Elementary School prepared by QK Engineering
2. State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Storm Water Discharge Associated with Construction and Land Disturbing Activities. Available on-line at: [http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml).
3. State Water Resources Control Board (2010). Order 2010-0014-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Storm Water Discharge Associated with Construction and Land Disturbing Activities. Available on-line at: [http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml).
4. CASQA 2009, *Stormwater BMP Handbook Portal: Construction*, November 2009, [www.casqa.org](http://www.casqa.org)
5. Geotechnical Engineering Investigation Report for West Shields Elementary (New Elementary School for Central Unified School District) prepared by Salem Engineering Group, Inc. dated October 31, 2016. Project number 1-216-1084.

## ***Appendix A: Calculations***

---



**Select a construction period****Start Date:** 

(Format: mm/dd/yyyy)

**End Date:** 

(Format: mm/dd/yyyy)

The start date is the date of initial earth disturbance. The end date is the date of final site stabilization.

**NOTE: If your construction project extends beyond the estimated end date, you will need to either recalculate the R factor based on a new end date, or apply for NPDES permit coverage.**

● **Please enter the Latitude/Longitude information of the project/site.**

**(Do not enter negative numbers)**

**Latitude**  °  '  " N

(Degrees/Minutes/Seconds)

**Longitude:**  °  '  " W

(Degrees/Minutes/Seconds)

**Latitude**  °  .  ' N

(Degrees/Minutes.Decimal Minutes)

**Longitude:**  °  .  ' W

(Degrees/Minutes.Decimal Minutes)

● **Latitude**  .  ° N

(Decimals)

**Longitude:**  .  ° W

## Facility Information

- Start Date: 02/01/2019
- End Date: 07/17/2020
- Latitude: 36.7794
- Longitude: -119.8637

## Erosivity Index Calculator Results

An erosivity index value Of **35.02** has been determined for the construction period of **02/01/2019 - 07/17/2020**.

A rainfall erosivity factor of 5.0 or greater has been calculated for your site and period of construction. **You do NOT qualify for a waiver from NPDES permitting requirements.**

[Start Over](#)

## ***Appendix B: Site Maps***

---

## ***Appendix C: Permit Registration Documents***

---

## Permit Registration Documents included in this Appendix

<b>Y/N</b>	<b>Permit Registration Document</b>
Y	Notice of Intent
Y	Risk Assessment, see Appendix A
Y	Certification
N	Post Construction Water Balance
N	Copy of Annual Fee Receipt
N	ATS Design Documents
Y	Site Map, see Appendix B

## ***Appendix D: SWPPP Amendment Certifications***

---

**SWPPP Amendment No.**

Project Name: West Shields Elementary School

Project Number: \_\_\_\_\_

**Qualified SWPPP Developer's Certification of the  
Stormwater Pollution Prevention Plan Amendment**

“This Stormwater Pollution Prevention Plan and attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Order No. 2009-009-DWQ as amended by 2010-0014-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below.”

\_\_\_\_\_  
QSD's Signature

Monique C Mello, P.E.

QSD Name

Senior Associate Engineer, QSD/QSP

Title and Affiliation

901 E. Main Street, Visalia CA 93292

Address

\_\_\_\_\_  
Date

22554

QSD Certificate Number

(559) 733-0440

Telephone

Monique.Mello@qkinc.com

Email

## ***Appendix E: Submitted Changes to PRDs***

---



### Log of Updated PRDs

The General Permit allows for the reduction or increase of the total acreage covered under the General Permit when a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs shall be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit covered acreage is to be sought. The SWPPP shall be modified appropriately, with revisions and amendments recorded in Appendix C. Updated PRDs submitted electronically via SMARTS can be found in this Appendix.

---

This appendix includes all of the following updated PRDs (check all that apply):

- Revised Notice of Intent (NOI);
- Revised Site Map;
- Revised Risk Assessment;
- New landowner's information (name, address, phone number, email address); and
- New signed certification statement.

Central Unified School District

---

Legally Responsible Person (organization)

---

Signature of Legally Responsible Person or  
Approved Signatory

Kelly Porterfield

---

Name of Legally Responsible Person or Approved  
Signatory

---

Date

(559) 274-4700

---

Telephone Number

## ***Appendix F: Construction Schedule***

---

THE CONSTRUCTION SCHEDULE WILL BE INCLUDED BY THE CONTRACTOR PRIOR TO CONSTRUCTION

***Appendix G: Construction Activities, Materials Used,  
and Associated Pollutants***

---

The following is a list of construction materials that may be used and construction activities that will have the potential to contribute to the discharge of pollutants to stormwater.

**Table G POLLUTANTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

<b>General Work Activity/ Products With Potential Stormwater Pollutants</b>	<b>Specific Work Activity/Products With Potential Stormwater Pollutants</b>	<b>Pollutant Categories</b>
Adhesives	<ul style="list-style-type: none"> <li>• Adhesives, glues, resins, epoxy synthetics, PVC cement</li> <li>• Caulks, sealers, putty, sealing agents and</li> <li>• Coal tars (naphtha, pitch)</li> </ul>	Oil and Grease, Synthetic Organics <sup>1</sup>
Asphalt paving/curbs	<ul style="list-style-type: none"> <li>• Hot and cold mix asphalt</li> </ul>	Oil and Grease
Cleaners	<ul style="list-style-type: none"> <li>• Polishes (metal, ceramic, tile)</li> <li>• Etching agents</li> <li>• Cleaners, ammonia, lye, caustic sodas, bleaching agents and chromate salts</li> </ul>	Metals, Synthetic Organics
Concrete / Masonry	<ul style="list-style-type: none"> <li>• Cement and brick dust</li> <li>• Colored chalks</li> <li>• Concrete curing compounds</li> <li>• Glazing compounds</li> <li>• Surfaces cleaners</li> <li>• Saw cut slurries</li> <li>• Tile cutting</li> </ul>	Metals, Synthetic Organics
Drywall	<ul style="list-style-type: none"> <li>• Saw-cutting drywall</li> </ul>	Metals
Framing/Carpentry	<ul style="list-style-type: none"> <li>• Sawdust, particle board dust, and treated woods</li> <li>• Saw cut slurries</li> </ul>	Metals, Synthetic Organics
Heating, Ventilation, Air Conditioning	<ul style="list-style-type: none"> <li>• Demolition or construction of air condition and heating systems</li> </ul>	Metals, Synthetic Organics
Insulation	<ul style="list-style-type: none"> <li>• Demolition or construction involving insulation, venting systems</li> </ul>	Metals, Synthetic Organics
Liquid waste	<ul style="list-style-type: none"> <li>• Wash waters</li> <li>• Irrigation line testing/flushing</li> </ul>	Metals, Synthetic Organics
Painting	<ul style="list-style-type: none"> <li>• Paint thinners, acetone, methyl ethyl ketone, stripper paints, lacquers, varnish, enamels, turpentine, gum spirit, solvents, dyes, stripping pigments and sanding</li> </ul>	Metals, Synthetic Organics
Planting / Vegetation Management	<ul style="list-style-type: none"> <li>• Vegetation control (pesticides/herbicides)</li> <li>• Planting</li> <li>• Plant maintenance</li> <li>• Vegetation removal</li> </ul>	Nutrients, Metals, Synthetic Organics
Plumbing	<ul style="list-style-type: none"> <li>• Solder (lead, tin), flux (zinc chloride), pipe fitting</li> <li>• Galvanized metal in nails, fences, and electric wiring</li> </ul>	Metals, Synthetic Organics
Pools/fountains	<ul style="list-style-type: none"> <li>• Chlorinated water</li> </ul>	Synthetic Organics
Removal of existing structures	<ul style="list-style-type: none"> <li>• Demolition of asphalt, concrete, masonry, framing, roofing, metal structures.</li> </ul>	Metals, Oil and Grease, Synthetic Organics

**Table G POLLUTANTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

<b>General Work Activity/ Products With Potential Stormwater Pollutants</b>	<b>Specific Work Activity/Products With Potential Stormwater Pollutants</b>	<b>Pollutant Categories</b>
Roofing	<ul style="list-style-type: none"> <li>• Flashing</li> <li>• Saw cut slurries (tile cutting)</li> <li>• Shingle scrap and debris</li> </ul>	Metals, Oil and Grease, Synthetic Organics
Sanitary waste	<ul style="list-style-type: none"> <li>• Portable toilets</li> <li>• Disturbance of existing sewer lines.</li> </ul>	Nutrients
Soil preparation/amendments	<ul style="list-style-type: none"> <li>• Use of soil additives/amendments</li> </ul>	Nutrients
Solid waste	<ul style="list-style-type: none"> <li>• Litter, trash and debris</li> <li>• Vegetation</li> </ul>	Gross Pollutants
Utility line testing and flushing	<ul style="list-style-type: none"> <li>• Hydrostatic test water</li> <li>• Pipe flushing</li> </ul>	Synthetic Organics
Vehicle and equipment use	<ul style="list-style-type: none"> <li>• Equipment operation</li> <li>• Equipment maintenance</li> <li>• Equipment washing</li> <li>• Equipment fueling</li> </ul>	Oil and Grease
<p><sup>1</sup> Synthetic Organics are defined in Table 1.2 of the CASQA <i>Stormwater BMP Handbook Portal: Construction</i> as adhesives, cleaners, sealants, solvents, etc. These are generally categorized as VOCs or SVOCs.</p>		

***Appendix H: CASQA Stormwater BMP Handbook  
Portal: Construction Fact Sheets***

---

## ***Appendix I: BMP Inspection Form***

---



**BMP INSPECTION REPORT**

Date and Time of Inspection:		Date Report Written:		
Inspection Type: (Circle one)	Weekly <i>Complete Parts I,II,III and VII</i>	Pre-Storm <i>Complete Parts I,II,III,IV and VII</i>	During Rain Event <i>Complete Parts I, II, III, V, and VII</i>	Post-Storm <i>Complete Parts I,II,III,VI and VII</i>
<b>Part I. General Information</b>				
<b>Site Information</b>				
Construction Site Name : West Shields Elementary School				
Construction stage and completed activities:			Approximate area of site that is exposed:	
Photos Taken: (Circle one)	Yes	No	Photo Reference IDs:	
<b>Weather</b>				
Estimate storm beginning: (date and time)		Estimate storm duration: (hours)		
Estimate time since last storm: (days or hours)		Rain gauge reading and location: (in)		
Is a "Qualifying Event" predicted or did one occur (i.e., 0.5" rain with 48-hrs or greater between events)? (Y/N) If yes, summarize forecast:				
Exemption Documentation (explanation required if inspection could not be conducted). Visual inspections are not required outside of business hours or during dangerous weather conditions such as flooding or electrical storms.				
<b>Inspector Information</b>				
Inspector Name:			Inspector Title:	
Signature:			Date:	

<b>Part II. BMP Observations. Describe deficiencies in Part III.</b>			
<b>Minimum BMPs for Risk Level _____ Sites</b>	<b>Failures or other short comings (yes, no, N/A)</b>	<b>Action Required (yes/no)</b>	<b>Action Implemented (Date)</b>
<b>Good Housekeeping for Construction Materials</b>			
Inventory of products (excluding materials designed to be outdoors)			
Stockpiled construction materials not actively in use are covered and bermed			
All chemicals are stored in watertight containers with appropriate secondary containment, or in a completely enclosed storage shed			
Construction materials are minimally exposed to precipitation			
BMPs preventing the off-site tracking of materials are implemented and properly effective			
<b>Good Housekeeping for Waste Management</b>			
Wash/rinse water and materials are prevented from being disposed into the storm drain system			
Portable toilets are contained to prevent discharges of waste			
Sanitation facilities are clean and with no apparent for leaks and spills			
Equipment is in place to cover waste disposal containers at the end of business day and during rain events			
Discharges from waste disposal containers are prevented from discharging to the storm drain system / receiving water			
Stockpiled waste material is securely protected from wind and rain if not actively in use			
Procedures are in place for addressing hazardous and non-hazardous spills			
Appropriate spill response personnel are assigned and trained			
Equipment and materials for cleanup of spills is available onsite			
Washout areas (e.g., concrete) are contained appropriately to prevent discharge or infiltration into the underlying soil			
<b>Good Housekeeping for Vehicle Storage and Maintenance</b>			
Measures are in place to prevent oil, grease, or fuel from leaking into the ground, storm drains, or surface waters			
All equipment or vehicles are fueled, maintained, and stored in a designated area with appropriate BMPs			
Vehicle and equipment leaks are cleaned immediately and disposed of properly			

<b>Part II. BMP Observations Continued. Describe deficiencies in Part III.</b>			
<b>Minimum BMPs for Risk Level 1 Sites</b>	Adequately designed, implemented and effective (yes, no, N/A)	Action Required (yes/no)	Action Implemented (Date)
<b>Good Housekeeping for Landscape Materials</b>			
Stockpiled landscape materials such as mulches and topsoil are contained and covered when not actively in use			
Erodible landscape material has not been applied 2 days before a forecasted rain event or during an event			
Erodible landscape materials are applied at quantities and rates in accordance with manufacturer recommendations			
Bagged erodible landscape materials are stored on pallets and covered			
<b>Good Housekeeping for Air Deposition of Site Materials</b>			
Good housekeeping measures are implemented onsite to control the air deposition of site materials and from site operations			
<b>Non-Stormwater Management</b>			
Non-Stormwater discharges are properly controlled			
Vehicles are washed in a manner to prevent non-stormwater discharges to surface waters or drainage systems			
Streets are cleaned in a manner to prevent unauthorized non-stormwater discharges to surface waters or drainage systems.			
<b>Erosion Controls</b>			
Wind erosion controls are effectively implemented			
Effective soil cover is provided for disturbed areas inactive (i.e., not scheduled to be disturbed for 14 days) as well as finished slopes, open space, utility backfill, and completed lots			
The use of plastic materials is limited in cases when a more sustainable, environmentally friendly alternative exists.			
<b>Sediment Controls</b>			
Perimeter controls are established and effective at controlling erosion and sediment discharges from the site			
Entrances and exits are stabilized to control erosion and sediment discharges from the site			
Sediment basins are properly maintained			
<b>Run-On and Run-Off Controls</b>			
Run-on to the site is effectively managed and directed away from all disturbed areas.			

<b>Other</b>			
Are the project SWPPP and BMP plan up to date, available on-site and being properly implemented?			

### Part III. Descriptions of BMP Deficiencies

Deficiency	Repairs Implemented: Note - Repairs must begin within 72 hours of identification and, complete repairs as soon as possible.	
	Start Date	Action
1.		
2.		
3.		
4.		

### Part IV. Additional Pre-Storm Observations. Note the presence or absence of floating and suspended materials, sheen, discoloration, turbidity, odors, and source(s) of pollutants(s).

	Yes, No, N/A
Do stormwater storage and containment areas have adequate freeboard? If no, complete Part III.	
Are drainage areas free of spills, leaks, or uncontrolled pollutant sources? If no, complete Part VII and describe below.	
Notes:	
Are stormwater storage and containment areas free of leaks? If no, complete Parts III and/or VII and describe below.	
Notes:	

**Part V. Additional During Storm Observations. If BMPs cannot be inspected during inclement weather, list the results of visual inspections at all relevant outfalls, discharge points, and downstream locations. Note odors or visible sheen on the surface of discharges. Complete Part VII (Corrective Actions) as needed.**

Outfall, Discharge Point, or Other Downstream Location

Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description

**Part VI. Additional Post-Storm Observations.** Visually observe (inspect) stormwater discharges at all discharge locations within two business days (48 hours) after each qualifying rain event, and observe (inspect) the discharge of stored or contained stormwater that is derived from and discharged subsequent to a qualifying rain event producing precipitation of  $\frac{1}{2}$  inch or more at the time of discharge. Complete Part VII (Corrective Actions) as needed.

Discharge Location, Storage or Containment Area	Visual Observation

**Part VII. Additional Corrective Actions Required.** Identify additional corrective actions not included with BMP Deficiencies (Part III) above. Note if SWPPP change is required.

Required Actions	Implementation Date

## **Appendix J: Project Specific Rain Event Action Plan**

## ***Appendix K: Training Reporting Form***

---



## Trained Contractor Personnel Log

### Stormwater Management Training Log and Documentation

Project Name West Shields Elementary School

WDID #: \_\_\_\_\_

Stormwater Management Topic: (check as appropriate)

- Erosion Control                       Sediment Control  
 Wind Erosion Control               Tracking Control  
 Non-Stormwater Management     Waste Management and Materials Pollution Control  
 Stormwater Sampling

Specific Training Objective: \_\_\_\_\_

Location: \_\_\_\_\_

Date: \_\_\_\_\_

Instructor: \_\_\_\_\_

Telephone: \_\_\_\_\_

Course Length (hours): \_\_\_\_\_

#### Attendee Roster (Attach additional forms if necessary)

Name	Company	Phone

As needed, add proof of external training (e.g., course completion certificates, credentials for QSP, QSD).

## ***Appendix L: Responsible Parties***

---

**Authorization of Approved Signatories**Project Name: West Shields Elementary School

WDID #: \_\_\_\_\_

Name of Personnel	Project Role	Company	Signature	Date
Kelly Porterfield	CBO	Central Unified School District		

\_\_\_\_\_  
LRP's Signature\_\_\_\_\_  
Date\_\_\_\_\_  
Kelly Porterfield-CBO  
LRP Name and Title\_\_\_\_\_  
(559) 274-4700  
Telephone Number

## Identification of QSP

Project Name: West Shields Elementary School

WDID #: \_\_\_\_\_

The following are QSPs associated with this project

Name of Personnel <sup>(1)</sup>	Company	Date

(1) If additional QSPs are required on the job site add additional lines and include information here

## ***Appendix M: Contractors and Subcontractors***

---

## ***Appendix N: Construction General Permit***

---

**SECTION 01 74 23**  
**CLEANING**



## PART 1 - GENERAL

### 1.01 DESCRIPTION

- A. Perform cleaning and disposal work as specified, complete. This Section forms a part of all other Sections of the specifications and shall be coordinated with such additional cleaning and disposal requirements as may be specified in other Sections.
- B. Related Requirements:
1. Section 00 72 00 - General Conditions of the Contract for Construction; Article 47, Cleaning Up.
  2. Section 01 74 19 - Construction Waste Management.
  3. Pertinent Specification Sections: Specific requirements for cleaning.

### 1.02 CLEANING IN GENERAL



- A. Contractor shall at all times keep premises free from accumulations of waste material or rubbish caused by Contractor's employees or work, or employees or work of subcontractors, and shall remove rubbish from and about areas of Work and Contractor's and subcontractors' tools, scaffolding and surplus materials and shall leave the Work "broom clean", or its equivalent, except as hereinafter specified. In case of dispute between Contractor and other contractors employed on or about the work areas, as to responsibility for removal of rubbish, etc., or in case debris is not promptly removed as herein required, the District may remove rubbish, etc., and backcharge **every Multi-prime Contractor the same full amount.**
- B. At all times, Project working area and site shall be kept clean and orderly. Dirt, debris, waste, rubbish and disused implements and equipment shall be removed frequently and not allowed to accumulate more than 24 hours. Flammable and toxic materials shall not be stored in structures>.

### 1.03 FINAL CLEANING

- A. Within Contract limits, clean interior and exterior surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
1. Clean equipment and fixtures to sanitary condition, clean or replace filters of mechanical equipment.
  2. Clean roofs, gutters, downspouts and drainage systems.
  3. Glass: Clean all glass, interior and exterior, affected by Work of this Project; including removal of foreign material from glass.

- B. Clean site: Sweep paved areas, rake clean other surfaces.
- C. Remove waste and surplus materials, rubbish and construction facilities from Project and from site.
- D. Dust, dirt, stains, hand marks, paint spots, and like defects shall be completely removed from surfaces. Metal surfaces shall be cleaned, using only non-corrosive and non-abrasive materials.
- E. Final Inspection: Deficient cleaning operations, as determined by the State, shall be immediately corrected as directed.

#### 1.04 DISPOSAL

- A. Under no circumstances shall rubbish or waste material be disposed of in site fills or backfills. Debris, rubbish, and waste or surplus material shall be removed from the State property daily and legally disposed of.

#### **PART 2 - PRODUCTS (Not Applicable)**

#### **PART 3 - EXECUTION (Not Applicable)**

**END OF SECTION**



**SECTION 05 73 00**  
**DECORATIVE METAL RAILINGS**



## **PART 1 - GENERAL**

### **1.01 SUMMARY**

- A. Section includes design-based Pre-engineered Circum™ Round stainless steel Railing System. All drawings, General Conditions including Division 01 specifications apply to this section.

### **1.02 PRODUCT REFERENCES AND DESIGN REQUIREMENTS**

- A. Principle items specified in this section are:
1. Stainless steel perforated, woven or welded infill panels.
- B. Design requirements are based on IBC/IRC and ADA standards:
1. Guardrails and handrails shall meet or exceed all applicable building codes.
  2. Railings shall have high strength stainless steel to comply with structural requirements with an appropriate safety margin.
  3. All internal members shall be stainless steel, aluminum or nylon to eliminate the possibility of rust.
  4. Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.
- C. Work Included
1. Provide all materials, labor and equipment necessary to fabricate and completely install handrails, guardrails, infill panels, and other railing options as shows on drawings or specific herein.
- D. Definitions
1. Terms and definitions from ASTM E985 and ISO/TC 59 for railing related items apply to this section.

### **1.03 SYSTEM PERFORMANCE REQUIREMENTS**

- A. Railings shall meet or exceed the requirements of all applicable building codes.
- B. Railings shall have high strength stainless steel in order to comply with 1.41 with adequate safety margin.
- C. All internal members shall be stainless steel, nylon or wood to eliminate the possibility of rust.

- D. Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

#### 1.04 SUBMITTALS

- A. Shop Drawings for architectural approval, showing fabrication and installation of handrails and railings including plans, elevations, sections, details of components and attachments to other units of work per Spec Section 01 33 00 - Submittal Procedures.
- B. Product data for stainless steel/wood products to be supplied by the manufacturer and/or trade.
- C. Structural computations or test data/evaluations, material properties, PE (professional engineering) calculations signed/sealed in the State of the project, and other information needed to ensure satisfactory structural compliance to applicable building codes to be supplied by the manufacture, based on final fabrication drawings and documents.
- D. Maintenance instructions: Provide design-based manufacturer's maintenance and cleaning instructions.
- E. Warranty: Provide manufacturer's and/or trade warranty effective from completion of work.
- F. Initial selection
  - 1. Provide 6" long handrail samples complete with supports and rosette covers to demonstrate stainless steel grade and finish. Nylon components to be includes if specified, color as indicated.
- G. Final verification
  - 1. Qualification data for authorized installers specified in Quality Assurance is to demonstrate their capabilities and experience. Include list of completed projects with project and architect names.
- H. Quality Assurance
  - 1. Single Source Responsibility: Materials shall be supplied and installed by one manufacturer.
    - a. Execution tolerance plus/minus 5/64".
- I. Storage

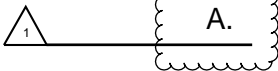
1. Store handrails and railing systems in clean, dry location, away from uncured concrete and masonry, protected against damage of any kind.
2. Materials must be kept in original packing until installation.
3. Materials to be stored at not lower than  $-40^{\circ}\text{C}$  ( $-104^{\circ}\text{F}$ ) or higher than  $100^{\circ}\text{C}$  ( $212^{\circ}\text{F}$ ).

### 1.05 PROJECT CONDITIONS

1. All measurements for handrails and railings should be taken from construction site elements to which railings are to fasten. This information to be recorded on final shop drawings.
2. Coordinate fabrication schedule with construction progress to avoid delay of work.

## PART 2 - PRODUCTS

### 2.01 SYSTEM DESCRIPTION



- A. Specification and design concept is based on HDI railing systems. All railing to be welded at all seams, grid, sand, and polish to match adjacent surface finish, remainder of specification section, omit all references of HDI except for design concept references. Regionally based employee installers. Other acceptable design-based manufacturers are Livers Bronze or equal. All substitutions shall be per Spec Section 01 25 00 - Substitution Procedures.
- B. Materials for Guardrails and Handrail System
- C. All rails and other tubular components shall be constructed using the following:
1. Stainless steel grade UNS 1.4305, type 304; surface to be 240 grain/grit finish; tubes 1-1/2" (38mm) outside diameter by 5/64" (2 mm) wall thickness.
- D. All posts and other components shall be constructed using the following:
1. Stainless steel grade UNS 1.4305, type 304, surface to be 240 grain/grit finish; tubes 1.9" diameter by 0.14" wall thickness.
  2. Stainless steel grade UNS 1.4305, type 304, surface to be 240 grain/grit finish for: end caps at top of posts. Hardware for handrail attachment to match finish of posts.

- E. Stainless steel grade UNS 1.4305, type 304, surface to be 240 grain/grit (#6) finish for post fastening base plate
- F. Fastening bolts to be stainless steel or other high strength material as determined by engineering requirements.
- G. Exterior and aggressive environments require stainless steel grade 316 or 316L to minimize maintenance requirement; surface to be 240 grain/grit (#6) finish.

## **2.02 STAINLESS PERFORATED METAL INFILL PANELS**

- A. Stainless steel perforated metal infill panels with continuous frame by design-based Systems. Installed post centers are required complete with sketch, to allow panel fabrication.
- B. Standard pattern to be 3/8" square holes on 1/2" centers surrounded by a continuous 3/8" x 1.5" 304 SS rectangular tube frame with hairline joints. Grain is 240 grit and polished longitudinally to the mitre cuts.

## **2.03 FASTENERS**

- A. Anchors shall be fabricated from stainless steel or other materials as determined by engineering requirements with capability to sustain, without failure, load imposed within a safety factor of 4, as determined by testing per ASTM E488.

## **2.04 2.5 FABRICATION**

- A. Fabricate railing system for compliance with structural requirements of applicable code.
- B. Pre-assemble railings prior to shipping to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations.
- C. Clearly mark units for re-assembly and for coordination with shop drawings.
- D. Stainless steel tubing cuts shall be square, without burrs and where exposed, rounded to produce smooth rigid and hairline joints.

## PART 3 - EXECUTION

### 3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify that reinforcement and anchoring devices are the correct type, have been located correctly, and have been installed properly.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.02 PREPARATION

- A. Provide information on fastening point locations for posts where necessary to relevant parties.

### 3.03 INSTALLATION

- A. Installation shall be by a qualified, authorized representative of the manufacturer



1.

Installation must be in accordance with standard or non-standard, yet applicable details (instructions) included on installation/shop drawings.

- 2. Install components plumb and in-line, accurately fitted, free from distortion or defects and securely anchored to structure.
- 3. Provide anchors, plates, angles, etc., necessary for connecting railings to structure.
- 4. Any and all field welding shall be by a certified welder.
- 5. Access for anchors that require through bolting either vertically or horizontally to be made available through General Contractor.
- 6. Erection tolerances
  - a. Maximum variation from plumb shall be 1/4".
- 7. Maximum offset from true alignment for every 50-foot of railing shall be 1/4", non-accumulative.

### 3.04 CLEANING AND PROTECTION

- A. Remove manufacturer's protective coverings from exposed surfaces after installation.
- B. Railings shall be cleaned, including infill panels, by contractor to the satisfaction of the owner.
- C. Wipe with moistened cloth only. Do not use cleaning agents with abrasive or acid/alkaline content.
- D. General contractor to provide protective covering on handrails and guardrails if construction is not yet finished in the area where the railings are installed.
- E. Railings shall be cleaned, including infill panels, by contractor to the satisfaction of the owner.
- F. Wipe with moistened cloth only. Do not use cleaning agents with abrasive or acid/alkaline content.

### **3.05 COREECTION OF DEFICIENCIES**

- A. All deficiencies in work and/or items not meeting specified requirements shall be corrected in order to meet specification requirements at no additional cost to owner.

**END OF SECTION**

**SECTION 07 54 23**  
**MEMBRANE ROOFING**



**PART 1 - GENERAL**

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including the Conditions of the Contract and Division 01 Specification Sections apply to this Section.

1.02 SUMMARY

- A. Section includes TPO Mechanically Attached roofing system. Roofing is applied at roof sections where there is NO MECHANICAL EQUIPMENT mounted and canopy sections.
- B. OWNER SUPPLIED MATERIALS thru CMAS CONTRACT.
- C. Related Work Specified Elsewhere:
1. Metal Roof Decks: Refer to Division 05 Section - Metal Decking.
  2. Rough Carpentry: Section 06 10 00 - Rough Carpentry.
  3. Sheet Metal Flashing and Trim: Section 07 62 00 - Sheet Metal Flashing and Trim.
  4. Sheet Metal Roof Accessories: Section 07 72 00 - Roof Hatch.

1.03 REFERENCES

- A. American Society of Civil Engineers (ASCE):
1. ASCE 7-05, Minimum Design Loads for Buildings and Other Structures.
- B. American Society for Testing and Materials (ASTM):
1. D 6754 – 02 Standard Specification for Keytone Ethylene Ester Based Sheet Roofing
  2. D 751 - Standard Test Methods for Coated Fabrics.
  3. E 108 - Standard Test Methods for Fire Testing of Roof Coverings.
  4. ASTM D451 Standard Test Method for Sieve Analysis of Granular Mineral Surfacing for Asphalt Roofing Products.
  5. ASTM D1079 Standard Terminology Relating to Roofing, Waterproofing and Bituminous Materials.
- C. Factory Mutual Research (FM):
1. Roof Assembly Classifications.
- D. National Roofing Contractors Association (NRCA):
1. Roofing and Waterproofing Manual.

E. Underwriters Laboratories, Inc. (UL):

1. Fire Hazard Classifications.

F. Warnock Hersey (WH):

1. Fire Hazard Classifications.

#### 1.04 SUBMITTALS FOR REVIEW

A. Product Data: Provide manufacturer's technical product data for each type of roofing product specified. Include data substantiating that materials comply with specified requirements.

B. Samples: Submit two (2) samples of the following:

1. Membrane
2. Fasteners
3. Insulation

C. Specimen Warranty: Provide an unexecuted copy of the warranty specified for this Project, identifying the terms and conditions required of the Manufacturer and the Owner.

D. Any material submitted as equal to the specified material must be accompanied by a report signed and sealed by a professional engineer licensed in the state in which the installation is to take place. This report shall show that the submitted equal meets the Design and Performance criteria in this specification. Substitution requests submitted without licensed engineer approval will be rejected for non-conformance.

#### 1.05 SUBMITTALS FOR INFORMATION

A. Manufacturer's Installation Instructions: Submit installation instructions and recommendations indicating special precautions required for installing the membrane.

B. Manufacturer's Certificate: Certify that roof system furnished is approved by Factory Mutual, Underwriters Laboratories, Warnock Hersey or approved third party testing facility in accordance with ASTM E108, Class A for external fire and meets local or nationally recognized building codes.

C. Manufacturer's Certificate: Certify that the roof system is adhered properly to meet or exceed the requirements of FM 1-90.

D. Manufacturer's Certificate: Certify that the roof system furnished is approved or accepted by Factory Mutual Approval Standard 4470.

E. Manufacturer's Certificate: Certify that materials are manufactured in the United States and conform to requirements specified herein, are chemically and physically



compatible with each other, and are suitable for inclusion within the total roof system specified herein.

- F. Manufacturer's Certificate: Submit a certified copy of the roofing manufacturer's ISO 9001 compliance certificate.
- G. Written certification from the roofing system manufacturer certifying the applicator is currently authorized for the installation of the specified roof system.
- H. Design Loads: Submit copy of manufacturer's minimum design load calculations according to ASCE 7-10, In no case shall the design loads be taken to be less than those detailed in Design and Performance Criteria article of this specification.
- I. Qualification data for firms and individuals identified in Quality Assurance Article below.

#### 1.06 CONTRACT CLOSEOUT SUBMITTALS

- A. General: Comply with Requirements of Division 01 Section - Closeout Submittals.
- B. Special Project Warranty: Provide specified warranty for the Project, executed by the authorized agent of the Manufacturer.
- C. Roofing Maintenance Instructions. Provide a manual of manufacturer's recommendations for maintenance of installed roofing systems.
- D. Insurance Certification: Assist Owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with fire and extended coverage insurance on roofing and associated work.
- E. Demonstration and Training Schedule: Provide a schedule of proposed dates and times for instruction of Owner's personnel in the maintenance requirements for completed roofing work. Refer to Part 3 for additional requirements.

#### 1.07 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this Section with not less than 12 years documented experience and have ISO 9001 certification.
- B. Installer Qualifications: Company specializing in roofing installation with not less than 5 years experience and authorized by roofing system manufacturer as qualified to install manufacturer's roofing materials.
- C. Installer's Field Supervision: Maintain a full-time Supervisor/Foreman on job site during all phases of roofing work while roofing work is in progress. Maintain proper supervision of workmen.
- D. Maintain a copy of the Contract Documents in the possession of the Supervisor/Foreman and on the roof at all times.

- E. Source Limitations: Obtain all components of roof system from a single manufacturer. Secondary products that are required shall be recommended and approved in writing by the roofing system Manufacturer.
  - 1. Upon request of the Architect or Owner, submit Manufacturer's written approval of secondary components in list form, signed by an authorized agent of the Manufacturer.
- F. Source Quality Control: Manufacturer shall have in place a documented, standardized quality control program such as ISO-9001.

#### 1.08 PRE-INSTALLATION CONFERENCE

- A. Pre-Installation Roofing Conference: Convene a pre-roofing conference approximately two (2) weeks before scheduled commencement of modified bituminous roofing system installation and associated work.
- B. Require attendance of installer of each component of associated work, installers of deck or substrate construction to receive roofing work, installers of rooftop units and other work in and around roofing that must precede or follow roofing work (including mechanical work if any), Architect, Owner, roofing system manufacturer's representative, and other representatives directly concerned with performance of the Work, including (where applicable) Owner's insurers, testing agencies and governing authorities. Objectives of conference include:
  - 1. Review foreseeable methods and procedures related to roofing work, including set up and mobilization areas for stored material and work area.
  - 2. Tour representative areas of roofing substrates (decks), inspect and discuss condition of substrate, roof drains, curbs, penetrations and other preparatory work performed by others.
  - 3. Review structural loading limitations of deck and inspect deck for loss of flatness and for required attachment.
  - 4. Review roofing system requirements (drawings, specifications and other contract documents).
  - 5. Review required submittals both completed and yet to be completed.
  - 6. Review and finalize construction schedule related to roofing work and verify availability of materials, installer's personnel, equipment and facilities needed to make progress and avoid delays.
  - 7. Review required inspection, testing, certifying and material usage accounting procedures.
  - 8. Review weather and forecasted weather conditions and procedures for coping with unfavorable conditions, including possibility of temporary roofing (if not mandatory requirement).
  - 9. Record discussion of conference including decisions and agreements (or disagreements) reached and furnish copy of record to each party attending. If substantial disagreements exist at conclusion of conference, determine how disagreements will be resolved and set date for reconvening conference.
  - 10. Review notification procedures for weather or non-working days.

- C. The Owner's Representative will designate one of the conference participants to record the proceedings and promptly distribute them to the participants for record.
- D. The intent of the conference is to resolve issues affecting the installation and performance of roofing work. Do not proceed with roofing work until such issues are resolved to the satisfaction of the Owner and Architect or Engineer of Record. This shall not be construed as interference with the progress of Work on the part of the Owner or Architect or Engineer of Record.

#### 1.09 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site with seals and labels intact, in manufacturer's original containers, dry and undamaged.
- B. Store and handle roofing sheets in a dry, well-ventilated, weather-tight place to prevent moisture exposure. Store rolls of felt and other sheet materials on pallets or other raised surface. Cover roll goods with a canvas tarpaulin or other breathable material (not polyethylene).
- C. Do not leave unused materials on the roof overnight or when roofing work is not in progress unless protected from weather and other moisture sources.
- D. Secure all material and equipment on the job site. If any material or equipment is stored on the roof, assure that the integrity of the deck is not compromised at any time. Damage to the deck caused by the Contractor's actions will be the sole responsibility of the Contractor, and the deck will be repaired or replaced at his expense.

#### 1.10 MANUFACTURER'S INSPECTIONS

- A. When the Project is in progress, the roofing system manufacturer will provide the following:
  - 1. Report progress and quality of the work as observed.
  - 2. Provide job site inspections a minimum of three days a week throughout the course of construction.
  - 3. Provide electronic inspection reports submitted weekly to the Owner and/or Architect.
  - 4. Report to the Architect and/or Owner in writing any failure or refusal of the Contractor to correct unacceptable practices called to the Contractor's attention.
  - 5. Confirm after completion that manufacturer has observed no application procedures in conflict with the specifications other than those that may have been previously reported and corrected.

#### 1.11 PROJECT CONDITIONS

- A. Proceed with roofing work only when existing and forecasted weather conditions will permit a unit of work to be installed in accordance with manufacturer's recommendations and warranty requirements.

- B. Do not apply roofing insulation or membrane to damp deck surface.
- C. Do not expose materials subject to water or solar damage in quantities greater than can be weatherproofed during same day.

#### 1.12 SEQUENCING AND SCHEDULING

- A. Sequence installation of roofing with related units of work specified in other Sections to ensure that roof assemblies, including roof accessories, flashing, trim and joint sealers, are protected against damage from effects of weather, corrosion and adjacent construction activity.

#### 1.13 WARRANTY

- A. Upon completion of installation, and acceptance by the Owner and Architect, the manufacturer will supply to the Owner (20)-year watertight warranty.
- B. Installer will submit a three (3)-year warranty to the membrane manufacturer with a copy directly to Owner.

#### 1.14 DESIGN AND PERFORMANCE CRITERIA

- A. Uniform Wind Uplift Load Capacity
  - 1. Installed roof system shall withstand negative (uplift) design wind loading pressures complying with the following criteria. Attachment shall be installed exactly as given in Part 3.
    - a. Design Code: ASCE 7-10, Method 2 for Components.
    - b. Max wind uplift pressure = 90 psf (strength level).

## **PART 2 - PRODUCTS**

#### 2.01 PRODUCTS, GENERAL

- A. Refer to Division 01 Section Common Product Requirements.
- B. Basis of Design: Materials, manufacturer's product designations, and/or manufacturer's names specified herein shall be regarded as the minimum standard of quality required for work of this Section. Comply with all manufacturer and contractor/fabricator quality and performance criteria specified in Part 1.
- C. Substitutions: Products proposed as equal to the products specified in this Section shall be submitted in accordance with Bidding Requirements and Division 01 provisions.
  - 1. Proposals shall be accompanied by a copy of the manufacturer's standard specification Section. That specification Section shall be signed and sealed by a professional engineer licensed in the state in which the installation is

to take place. Substitution requests containing specifications without licensed engineer certification shall be rejected for non-conformance.

2. Include a list of three (3) projects of similar type and extent, located within a one-hundred-mile radius from the location of the project. In addition, the three projects must be at least five (5) years old and be available for inspection by the Architect, Owner or Owner's Representative.
3. Equivalency of performance criteria, warranty terms, submittal procedures, and contractual terms will constitute the basis of acceptance.
4. The Owner's decision regarding substitutions will be considered final. Unauthorized substitutions will be rejected.

## 2.02 ACCEPTABLE MANUFACTURERS

- A. The design is based upon roofing systems by The Garland Company, Inc.

## 2.03 DESCRIPTION

### A. WELDTITE MEMBRANE

1. WeldTite Plus 60 Membrane (ASTM D 6754)
2. Membrane Thickness: (ASTM D 751) 60 mil nominal.
3. Thickness over Scrim (ASTM D 751): 0.33 inches
4. Breaking Strength (ASTM D 751): 508 lbf/in
5. Tearing Strength (ASTM D 751): 122 lbf/in
6. Elongation (ASTM D 751): 48 percent.
7. Factory Seam Strength (ASTM D 751) 459 lbf
8. Solar Reflectivity (ASTM E 903) .811
9. Emissivity (ASTM E 903) .919
10. SRI (ASTM E903) 109

### B. FLASHING MEMBRANE

1. Nominal 60-mil WeldTite membrane shall be used for all flashing requirements to match the field membrane and warranty expectations selected for the roofing system.
2. WeldTite Inside Corners: Pre-molded corner flashing for inside corners. 80 mil thickness. Color - White.
3. WeldTite Outside Corners: Pre-molded corner flashing for outside corners. 80 mil thickness. Color - White.
4. WeldTite T-Joint Covers: 40 mil thick non-reinforced PVC flashing cut into a 4.5 inch (114mm) diameter circle used to seal step-offs at splice intersections.
5. WeldTite Pipe Flashings: A pre-molded flashing and clamping ring used for pipe penetrations. Available for 1 inch to 6 inch (25 - 152mm) diameter pipes.
6. WeldTite Split Pipe Seals: Pre-fabricated flashing consisting of 60 mil thick reinforced Sure-Flex Membrane for pipes 1 inch to 6 inch (25 - 152mm) in diameter. A split (cut) and overlap tab are incorporated to allow the pipe seal to be opened and wrapped around the pipe when it is not possible to pull a standard pipe flashing over a round penetration.

7. WeldTite Non-Reinforced Flashing: 80 mil thick rolls 12 inches and 24 inches wide. Used for inside/outside corners and field fabricated pipe flashings when use of pre-molded accessories is not feasible.
8. WeldTite Heat Weldable Walkway Rolls: Sure-Flex Membrane offering superior tear, puncture and weather resistance and designed to protect Sure-Flex membrane in those areas exposed to repetitive foot traffic or other hazards. Walkway material may be heat welded to Sure-Flex membrane using an automated heat welder or hand held heat welder. Walkway Rolls are 36 inches (914mm) wide by 60 feet (18.3 M) long and are nominal 80 mils thick.

C. ACCEPTABLE SUBSTRATE (S)

1. Authorized rigid insulation, cover board or slip sheet.

D. WELDTITE ADHESIVES

1. WeldTite Bonding Adhesive: Solvent-based contact adhesive that allows bonding of Sure-Flex membrane to various porous and non-porous substrates.
  - a. Base: Synthetic Rubber.
  - b. Color: Pale Yellow.
  - c. Solids: 24.2 percent.

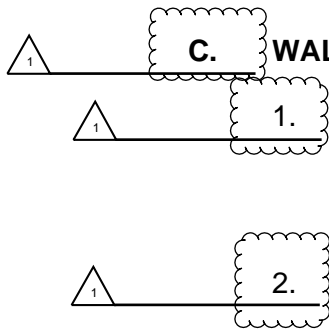
2.04 RELATED MATERIALS

A. INSULATION

1. Polyisocyanurate: Thickness on Drawings (Minimum R-4 per inch). Mechanically attached to FMI-90
2. Roof Insulation top layer: Dens Dek roof board 4' x 8'.
3. Thickness: ¼ inches
4. Attachment Method: Adhered with Insta-Stik by Dow Products.
5. Tapered Insulation (as required and shown on drawings for crickets, etc.)

B. FASTENERS

1. HP-X Fastener: A heavy duty #15 threaded fastener with a #3 Phillips drive used with Piranha Fastening Plate to secure Mechanically Fastened Roofing Systems. It is used on minimum 22-gauge steel decks or minimum 15/32" CDX plywood decks. It is also designed to offer an optimum combination of driving performance, back-out and corrosion resistance with excellent pullout performance.
2. Piranha Plate: A 2-3/8" diameter metal barbed fastening plate used with HP-X, CD-10 or HD 14-10 Fasteners for membrane or insulation securement. This plate can be used for membrane or insulation securement on Mechanically Fastened Roofing Systems.
3. Insulation Fastening Plate: A nominal 3-inch metal plate used for insulation attachment in conjunction with the appropriate fastener.



### C. WALKWAY PROTECTION

**1.** Plastex, Tread: A polyester reinforced, 0.096 inch (96 mil/2.4 mm), weldable membrane with surface embossment. Used as a protection layer from rooftop traffic. Tread is supplied in rolls of 39.3 inches (1.0 m) wide and 32.8 feet (10 m) long.

**2.** PLastex Crossgrip 20/20: A rolled-out walkway protection mat used to protect Sarnafil roofing membrane from mechanical abuse. Crossgrip Walkway is 9/16 inch (14 mm) thick flexible pvc with a heavily textured surface. Crossgrip Walkway is loose laid on top of completed Sarnafil roof assemblies. Where design windspeeds exceed 94 mph (150 km/h) the walkway must be secured with loops of Sarnafil membrane welded to the field sheet.

## PART 3 - EXECUTION

### 3.01 EXECUTION, GENERAL

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Clean surfaces thoroughly prior to installation.
- D. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- E. Do not commence Work until all other work trades have completed jobs that require them to traverse the deck on foot or with equipment.

### 3.02 SUBSTRATE PREPARATION

- A. Structural Concrete Deck:
  1. Minimum deck thickness for structural concrete is 4 inches (102 mm).
  2. Allow roof deck to cured prior to application of the roofing system. Where curing is in question, evaluate surface moisture and deck's dryness with the ASTM D 4263 or hot bitumen test procedures.
  3. Repair cracks greater than 1/8 inch (3 mm) in width in accordance with the deck manufacturer's recommendations.
  4. Sumps for the roof drains shall be provided in the casting of the deck.
  5. Where insulation is to be adhered with hot asphalt, prime the deck with asphalt/concrete primer, ASTM D 41 at the rate of one gallon per 100 square feet (0.4 l/sm). Allow the primer to dry prior to the application of the roofing system.
- B. Steel Deck:

1. Metal decks shall be a minimum uncoated thickness of 22 gauge and have a G-90 galvanized finish on all panels.
2. Decks must comply with the gauge and span requirements in the current Factory Mutual Approval Guide and be installed in accordance with Loss Prevention Data Sheet 1-28 or specific FM approval.
3. Remove any surface corrosion and repair severely corroded areas. Properly fasten loose or inadequately secured decking.

C. Wood Deck (Plank / Heavy Timber):

1. Wood boards shall be at least 1 inch (25 mm) nominal thickness and have a nominal width of 4 feet-6 inches (1372 mm).
2. All boards shall have a bearing on rafters at each end and be securely nailed.
3. Cover knotholes or cracks in excess of 1/4 inch (6 mm) with securely nailed sheet metal.

D. Wood Deck (Plywood Deck):

1. Plywood sheathing shall be CDX grade, minimum 4 ply, and not less than 15/32 inch (12 mm) thick.
2. Install deck over joists spaced 24 inches (610 mm) o.c. or less. Install deck with all sides bearing on and secured to joist and cross blocking.

E. Lightweight Insulating Concrete Deck:

1. Lightweight insulating concrete decks are required to have a minimum thickness of 2 inches (51 mm), a minimum compressive strength of 200 psi (1.38 MPa) and a minimum density of 22 pcf (352 kg/sm) for Adhered Roofing Systems.
2. Moisture content of existing Lightweight concrete must be under 20 percent when insulation is to be fastened directly to it.

### 3.03 WOOD NAILERS

- A. Install treated lumber at the same heights as insulation layer or adjacent construction  $\pm$  1/4 inch. Continuous treated wood nailers are to be installed at all perimeters, around roof projections and penetrations as shown in approved details. In re-cover applications, the surface under the wood nailers shall be FREE OF ALL GRAVEL and shall be as even as possible.
- B. Where wood nailers are installed directly on the substrate, the substrate shall be carefully examined to confirm that the entire area provides a suitable fastening surface. All defects shall be repaired by the appropriate trade prior to installation.
- C. Nailers shall be at least 3½ inch wide and 1.5 inch high and installed and anchored in such a manner to resist a force of 250 lbs. per linear foot of wood blocking in any direction.
- D. Nailers along parapets, curbs and expansion joints are recommended for insulated decking.



### 3.04 ROOF INSULATION

#### A. General

1. Install insulation or membrane underlayment over the substrate with boards butted tightly together with no joints or gaps greater than 1/4 inch (6 mm). Stagger joints both horizontally and vertically if multiple layers are provided.
2. Secure insulation to the substrate with the required mechanical fasteners or insulation adhesive in accordance with the manufacturer's current application guidelines.
3. Securely attach insulation to the roof deck for Adhered or Mechanically Fastened Roofing Systems. Attachment must have been successfully tested to meet or exceed the calculated uplift pressure required by the International Building Code (ASCE-7) or ANSI/SPRI WD-1.

### 3.05 INSTALLATION OF WELDTITE MEMBRANE

#### A. Quality Control

1. It will be the responsibility of the roofing contractor to initiate and maintain a QC program to govern all aspects of the installation of the WeldTite Roofing System.
2. The project foreman and or supervisor will be responsible for the daily execution of the QC program which will include but is not limited to the supervision, inspection and probing of all heat welding incorporated within the WeldTite Roofing System.
3. If inconsistencies in the quality of the application of the composite, membrane and/or welds are found, all work shall cease until corrective actions are taken to ensure the continuity the installation.

#### B. Mechanically Fastened WeldTite Roofing Systems

1. Unroll and position membrane without stretching. Provide and secure both perimeter and field membrane sheets in accordance with the manufacturer's most current specifications and details.
2. Secure the membrane with the required fasteners and plates centered over the pre-printed marks approximately 1 1/2 inches (39mm) from the edge of the membrane sheet.
3. Install adjoining membrane sheets in the same manner in accordance with the manufacturer's current application requirements.
4. Attachment Schedule:
  - a. Field (Zone 1) Fastener Density: 12 inches on center
  - b. Perimeter (Zones 2 and 3) Fastener Density: 6 inches on center
  - c. Perimeter (Half-width) Sheets: 2

#### C. WeldTite Fully Adhered Roofing Systems

1. Position WeldTite membrane over the acceptable substrate. Fold membrane sheet back lengthwise so half the underside of the membrane is exposed.
2. Apply WeldTite Bonding Adhesive in accordance with the manufacturer's published instructions, to the exposed underside of the membrane and the corresponding substrate area. Do not apply Bonding Adhesive along the splice edge of the membrane to be hot air welded over the adjoining sheet. Allow the adhesive to dry until it is tacky but will not string or stick to a dry finger touch.
3. Roll the coated membrane into the coated substrate while avoiding wrinkles. Brush down the bonded section of the membrane sheet immediately after rolling the membrane into the adhesive with a soft bristle push broom to achieve maximum contact.
4. Fold back the unbonded half of the sheet lengthwise and repeat the bonding procedures.
5. Position adjoining sheets to allow a minimum overlap of 2 inches (51mm).
6. Hot-air weld the WeldTite membrane sheets using the Automatic Hot Air Welding Machine or Hot Air Hand Welder in accordance with the manufacturer's hot air welding procedures.
7. Continue to install adjoining membrane sheets in the same manner, overlapping edges a minimum of 2 inches (51mm) and complete the bonding procedures as stated previously.

#### D. Hot Air Welding

##### 1. General

- a. All field seams exceeding 10 feet in length shall be welded with an approved automatic welder.
- b. All field seams must be clean and dry prior to initiating any field welding.
- c. Remove foreign materials from the seams (dirt, oils, etc.) with Acetone or authorized alternative. Use CLEAN WHITE COTTON cloths and allow approximately five minutes for solvents to dissipate before initiating the automatic welder. Do not use denim or synthetic rags for cleaning.
- d. All welding shall be performed only by qualified personnel to ensure the quality and continuity of the weld.
- e. Contaminated areas within a seam will inhibit proper welding and will require a membrane patch

##### 2. Hand Welding

- a. The lap or seam area of the membrane should be intermittently tack welded to hold the membrane in place.
- b. The back "interior" edge of the membrane shall be welded first, with a thin, continuous weld to concentrate heat along the exterior edge of the lap during the final welding pass.
- c. The nozzle of the hand held hot air welder shall be inserted into the lap at a 45° angle to the lap. Once the polymer on the material begins to flow, a hand roller shall be use to apply pressure at a right

angle to the tip of the hand welder. Properly welded seams shall utilize a 1-1/2 inch wide nozzle, to create a homogeneous weld, a minimum of 1-1/2 inches in width.

- d. Smaller nozzles may be used for corners, and other field detailing, maintaining a minimum 1 inch weld.

### 3. Automatic Machine Welding

- a. Follow all manufacturers' instructions for the safe operation of the automatic welder.
- b. Follow local code requirements for electric supply, grounding and surge protection.
- c. The use of a dedicated, portable generator is highly recommended to ensure a consistent electrical supply, without fluctuations that can interfere with weld consistency.
- d. Properly welded seams shall utilize a 1-1/2 inch wide nozzle, to create a homogeneous weld, a minimum of 1-1/2 inches in width.

### E. Inspection

- 1. The job foreman and/or supervisor shall initiate daily inspections of all completed work which shall include, but is not limited to the probing of all field welding with a dull pointed instrument to assure the quality of the application and ensure that any equipment or operator deficiencies are immediately resolved.
- 2. Ensure that all aspects of the installation (sheet layout, attachment, welding, flashing details, etc.) are in strict accordance with the most current WeldTite Roofing Systems Specifications and Details.
- 3. Excessive patching of field seams because of inexperienced or poor workmanship will not be accepted at time of FINAL INSPECTION FOR WARRANTY ACCEPTANCE.

## 3.06 FLASHING

- A. Clean all vents, pipes, conduits, tubes, walls, and stacks to bare metal. All protrusions must be properly secured to the roof deck with approved fasteners. Remove and discard all lead, pipes and drain flashing. Flash all penetrations according to approved details.
- B. Remove all loose and/or deteriorated cant strips and flashing.
- C. Flash all curbs, parapets and interior walls in strict accordance with approved WeldTite details.
- D. All flashing shall be adhered to properly prepared, approved substrate(s) with WeldTite Bonding Adhesive applied in sufficient quantity to ensure total adhesion.
- E. The base flange of all membrane flashing shall extend out on to the plane of the deck, beyond the wood nailers to a maximum width of 8 inches.

- F. Vertical flashing shall be terminated no less than 8 inch above the plane of the deck with approved termination bar and counter-flashing or metal cap flashing.
- G. When using adhesive, vertical wall flashing termination shall not exceed 30 inches without supplemental mechanical attachment of the flashing between the deck and the termination point of the flashing.
- H. Complete all inside and outside corner flashing details with pre-formed corners or an approved field fabrication detail.
- I. Probe all seams with a dull, pointed probe to ensure the weld has created a homogeneous bond.
- J. Install penetration accessories in strict accordance with approved details. Ensure penetration accessories have not impeded in any way the working specification.

### 3.07 METAL FLASHING

- A. All perimeter edge details are to be fabricated from WeldTite Clad Metal.
- B. Ensure all fascia extend a minimum of 2 inch lower than the bottom of the wood nailers.
- C. Fasten all metal flashing to wood nailers or approved substrate with approved fasteners 8 inches on center.
- D. Break and install WeldTite Clad metal in accordance with approved details, ensuring proper attachment, maintaining 1/2-inch expansion joints and the installation of a minimum 2 inch bond breaker tape prior to sealing the joint.
- E. Solidly weld WeldTite Clad expansion joints with a 6 inch strip of WeldTite membrane welded to the WeldTite Clad, covering the bond breaker tape (cover plates are optional).
- F. Roof Drains
  - 1. Flash all roof drains in accordance with WeldTite roof drain details.
  - 2. Replace all worn or broken parts that may cut the WeldTite membrane or prevent a watertight seal. This includes the clamping ring and strainer basket.
  - 3. Replace all drain bolts or clamps used to hold the drain compression ring to the drain bowl.
  - 4. WeldTite non-reinforced 60 mil membrane shall be used for flashing the drain assembly. Drain assemblies and basins or "sumps" must be free of any asphalt or coal tar pitch residue prior to installation.
  - 5. The drain target sheet should be sized and installed to provide for a minimum of 12 inch of exposed 60 mil on all sides of the drain.

### 3.08 TEMPORARY SEALS

- A. At the end of each working day or at the sign of rain, install temporary, 100% watertight seal(s) where the completed new roofing adjoins the uncovered deck or existing roof surface.
- B. The authorized roofing contractor shall create and maintain the temporary seal in such a manner to prevent water from traveling beneath the new and/or existing roof system.
- C. The use of plastic roofing cement is permissible when sealing to an existing built up roof.
- D. If water is allowed to enter beneath the newly completed roofing, the affected area(s) shall be removed and replaced at no additional expense to the building owner.
- E. Prior to the commencement of work, cut out and remove all contaminated membrane, insulation, roof cement or sealant and properly dispose off site.

### 3.09 WALKWAYS

- A. Plastex, Crossgrip 20/20 walkways shall be installed at staging areas for roof top equipment maintenance or areas subject to regular foot traffic such as roof top ladders, roof hatches, etc.
- B. Walkway Installation
  - 1. Roofing membrane to receive walkway material shall be clean and dry.
  - 2. Cut and position the Plastex walkway material as directed by the specifications.
  - 3. Hot air weld the entire perimeter of the walkway to the previously cleaned WeldTite roofing membrane. Avoid excessive heating of the walkway material to prevent scorching the underlying roofing membrane.

### 3.10 FIELD QUALITY

- A. Perform field inspection and testing as required under provisions of Division 01 Section Quality Requirements.
- B. Correct defects or irregularities discovered during field inspection.
- C. Require attendance of roofing materials manufacturers' representatives at site during installation of the roofing system. A copy of the specification should also be on site at all times.

### 3.11 CLEANING

- A. Remove adhesive drippings from all walls, windows, floors, ladders and finished surfaces.

- B. In areas where finished surfaces are soiled by asphalt or any other sources of soiling caused by work of this Section, consult manufacturer of surfaces for cleaning instructions and conform to their instructions.
- C. Repair or replace defaced or disfigured finishes caused by work of this Section.

### 3.12 CONSTRUCTION WASTE MANAGEMENT

- A. Remove and properly dispose of waste products generated during roofing procedures. Comply with requirements of authorities having jurisdiction.

### 3.13 FINAL INSPECTION

- A. At completion of roofing installation and associated work, meet with Contractor, Architect, installer, installer of associated work, Owner, roofing system manufacturer's representative, and other representatives directly concerned with performance of roofing system.
- B. Walk roof surface areas of the building, inspect perimeter building edges as well as flashing of roof penetrations, walls, curbs and other equipment. List all items requiring correction or completion and furnish copy of list to each party in attendance.
- C. The roofing system manufacturer reserves the right to request a thermographic scan of the roof during final inspection to determine if any damp or wet materials have been installed. The thermographic scan shall be provided by the Roofing Contractor.
- D. If core cuts verify the presence of damp or wet materials, the [Roofing] Contractor shall be required to replace the damaged areas at his own expense.
- E. Repair or replace deteriorated or defective work found at time above inspection as required to produce an installation which is free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- F. Notify the Contractor, Architect, Owner upon completion of corrections.
- G. Following the final inspection, provide written notice of acceptance of the installation from the roofing system manufacturer.
- H. Immediately correct roof leakage during construction. If the Contractor does not respond within twenty four (24) hours, the Owner will exercise rights to correct the Work under the terms of the Conditions of the Contract.

### 3.14 DEMONSTRATION AND TRAINING

- A. At a time and date agreed to by the Owner, instruct the Owner's facility manager, or other representative designated by the Owner, on the following procedures:
  - 1. Roof troubleshooting procedures.

2. Notification procedures for reporting leaks or other apparent roofing problems.
3. Roofing maintenance.
4. The Owner's obligations for maintaining the roofing warranty in effect and force.
5. The Manufacturer's obligations for maintaining the roofing warranty in effect and force.

**END OF SECTION**

**SECTION 08 80 00**  
**GLASS AND GLAZING**

**PART 1 - GENERAL**

## 1.01 DESCRIPTION

- A. Work Included: Provide all glass and glazing, complete, in place, as shown on the Drawings, specified herein, or needed for a complete and proper installation.

## 1.02 QUALITY ASSURANCE

- A. Qualifications of Installers: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

## 1.03 SUBMITTALS

- A. Product Data: Per the General Conditions - Submittals Procedures:
1. Complete materials list showing all items proposed to be furnished and installed under this Section.
  2. Sufficient data to demonstrate that all such materials meet or exceed the specified requirements.

## 1.04 PRODUCT HANDLING

- A. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all other trades.
- B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the review by the Architect and at no additional cost to the Owner.

**PART 2 - PRODUCTS**

## 2.01 MATERIALS

- A. General:
1. Conform to Codes, and additional requirements stated herein.
  2. Glazing:
    - a. Title 24, Chapter 24.
    - b. Glazing; Glass: Title 24, Section 2403 of CBC 2016, which is based on Federal Specifications DD-G-00451 b.



- c. Safety Glazing: Title 24, Section 2406, of 2013 CBC (which is based on ANSI Z97.1-1975, and CPSC 16CFR Part 1201).

B. Glass:

1. Acceptable Manufacturers: ASG Industries Company, Ford Glass Division, Globe-Amerada Glass Company, Libby-Owens-Ford and PPG Industries. Interior glazing is single glazed, exterior glazing is dual glazed insulating units. Thickness (unless otherwise noted): 3/16" thick for openings to 12 SF maximum, 7/32" thick for openings to 30 SF maximum, 1/4" for larger openings.
2. Types: Named manufacturer and product shall be a standard of quality:
  - a. Interior Glazing: Clear, transparent tempered or non-tempered glass.
  - b. Exterior Glazing: PPG Solarban 70 (2) glass Sloargray + Clear (formaly Solarban 70XL glass) low-e + tempered or non-tempered outside, clear tempered or non-tempered inside. (VLT = 32%, SHGC = 0.19, Winter U-Value 0.28)
  - c. 45 minute glazing, Superlite 1 XL glazing by Safti-First
  - d. 60 minute interior glazing, Superlite 2 XL 60 glazing by Safti-First
  - e. Refer to Spec Section 08 87 13 – Solar Control Films



C. Glazing Accessories:

1. Conform to FGMA "Glazing Sealing Systems Manual" and/or printed recommendations by glass or plastic glazing materials manufacturer, whichever is most stringent, for:
  - a. Setting blocks
  - b. Spacers
  - c. Glazing Points
  - d. Glazing Compound
  - e. Sealant
  - f. Glazing Tape

D. Aluminum Glazing Accessories: U.S. Aluminum products as a standard of quality.

1. Glazing Stops and H-Bars:
  - a. General:
    - 1) Material: Extruded aluminum, 6063-T5 alloy.
    - 2) Finish: Satin, anodized finish of specified color.
  - b. Glazing Stops: Arcadia No. 22-103, unless otherwise noted.
    - 1) Glazing Beads: Roll-in, non-stretch, high-shore vinyl with a 60# test fiberglass cord concealed-in and bonded to the vinyl.

2) No exposed screws in stop system.

E. Oversized Mirrors:

1. Mirrors: 1/4" tempered, clear, transparent flat glass of mirror quality (Type I, Class 1, quality q2), silvered with nitrate-of-silver, electro-plated with copper to completely seal silver from contact with air, painted with black hard composition paint. Grind and polish exposed edges.
2. Ledge Molding: Extruded anodized aluminum J-molding with "1/2" short and 1" long legs.

F. Acoustical Glazing

1. See section 08 56 70 Sound Control Windows.

## 2.02 FACTORY FABRICATION OF GLASS

A. General:

1. Factory fabricate to exact sizes required for each opening for all tempered glass.
2. Fabricate per Code, FGMA, SIGMA and manufacturer's printed recommendations.
  - a. Provide Code required edge clearances.
  - b. Tinted glass to have clean-cut edges.

- B. Labeling: Label glazing per Title 24, Section 2402. Tempered glass to have permanently etched label. Labeling of safety glazers to be per 2013 CBC Section 2406.3.

## PART 3 - EXECUTION

### 3.01 INSPECTION

- A. Examine the areas and conditions under which work of this Section will be installed. Correct conditions detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

### 3.02 INSTALLATION

- A. Selection of Glass: Where plate glass is indicated or specified, float glass may be used.
- B. Distortion: Cut and install glass with the visible lines or waves running with the horizontal direction.
- C. Fix movable items securely, or in a closed and locked position, until glazing compound has thoroughly set.
- D. Glass Setting:

1. Items to be glazed shall be shop-glazed or field-glazed with glass of the quality and thickness specified.
2. Prepare surrounds and glass, unless otherwise directed, in conformance with the details and general conditions governing glazing in the FGMA Glazing Manual.
3. Aluminum windows and wood doors may be glazed in conformance with one of the glazing methods described in the standards under which they are produced, except the face puttying method illustrated and described in CS 163 will not be permitted.
4. Use beads or stops furnished with the items to be glazed to secure the glass in place.

### 3.03 CLEANING

- A. Prior to acceptance of the work, thoroughly clean all glass and remove all labels, paint spots, putty, and other defacements.

**END OF SECTION**

**SECTION 08 87 13**  
**SOLAR CONTROL FILMS**

**PART 1 - GENERAL**

## 1.01 REFERENCES

- A. ASTM International (ASTM):
1. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
  2. ASTM E308 Standard Practice for Computing the Colors of Objects by Using the CIE System.
  3. ASTM E903 Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres.

## 1.02 DEFINITIONS

- A. Luminous Efficacy: The ratio of visible light transmission to shading coefficient.

## 1.03 SYSTEM DESCRIPTION

- A. Performance Requirements:
1. Fire Performance: Surface burning characteristics when tested in accordance ASTM E84:
    - a. Flamespread: 25, maximum.
    - b. Smoke Developed: 450, maximum.

## 1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Section 01 33 00 - Submittal Procedures.
- B. Product Data: Submit product data, including manufacturer's SPEC-DATA® sheet, for specified products.
- C. Samples: Submit 8 1/2 x 11-inch (216 x 279 mm) samples of specified film(s).
- D. Quality Control Submittals:
1. Certificates: Manufacturer's certification that the installer is acceptable.
  2. Manufacturer's Instructions: Manufacturer's installation instructions.

E. Closeout Submittals:

1. Warranty: Manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Acceptable to the manufacturer.
- B. Regulatory Requirements: In accordance with Section 01 41 00 – Regulatory Requirements

1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Section 01 61 00 - Common Product Requirements].
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.

1.07 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, in accordance with Section 01 78 36 Warranties for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.
  1. Warranty Period: 15-years commencing on Date of Substantial Completion.

**PART 2 - PRODUCTS**

2.01 SOLAR CONTROL FILMS

- A. Manufacturer: 3M™
  1. Contact: 3M™ Building Safety Solutions Window Film, 3M Center, Building 0223-02-5-24, Saint Paul, MN 55144- 1000; Telephone: (800) 430-1704, (651) 737-1053; website: [www.3m.com/windowfilm](http://www.3m.com/windowfilm).

Local Contact: Commercial Window Film Department  
U.S. Tint / Shadow Enterprises  
5619 N. Blackstone Avenue  
Fresno, CA 93710  
559-448-8468

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: Substitutions in accordance with Section 01 25 13 - Product Substitution Procedures. No substitutions permitted.

**PART 3 – EXECUTION**

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

3.02 CLEANUP

- A. Proceed in accordance with Section 01 74 23 – Final Cleaning.
- B. Upon completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools, and equipment.

END OF SECTION

**SECTION 09 51 23**  
**ACOUSTICAL WOOD FIBER PANELS**



**PART 1 - GENERAL**

1.01 SUMMARY

- A. Section Includes: Cementitious wood fiber plank acoustical panels.

1.02 REFERENCES

- A. ASTM International:
1. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
  2. ASTM E1264 Standard Classification for Acoustical Ceiling Products.
- B. Ceilings and Interior Systems Construction Association (CISCA):
1. CISCA Code of Practices.

1.03 SYSTEM DESCRIPTION

- A. Performance Requirements:
1. Provide acoustical assembly designed and tested to provide surface burning characteristics (ASTM E84) as follows:
    - a. Flamespread: 0.
    - b. Smoke Developed: 0.
  2. Provide acoustical ceiling system which has been manufactured, fabricated and installed to provide Noise Reduction Coefficient (NRC) rating as follows:
    - a. 0.700

1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Section 01 33 00 – Submittal Procedures.
- B. Product Data: Submit manufacturer's product data and installation instructions.
- C. Samples: Submit selection and verification samples: 6 inch x 6 inch sample for each wood fiber ceiling unit required, showing full range of exposed texture to be expected in completed work.
- D. Quality Assurance/Control Submittals: Submit the following:

1. Certificates: Submit manufacturer's certificate that products meet or exceed specified requirements.

#### 1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.
- B. Regulatory Requirements and Approvals: Comply with requirements below.
  1. International Code Council (ICC):
    - a. ICC-ES Evaluation Report ESR-1112.
  2. State of California:
    - a. DSA Number PA-008.
  3. Underwriters' Laboratories of Canada (ULC) label.
    - a. Structural Cement-Fiber Unit-535X

#### 1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Section 01 60 00 - Product Requirement.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
  1. Provide labels indicating brand name, style, size and thickness.
- C. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
  1. Prevent soiling, physical damage or wetting.
  2. Store cartons open at each end to stabilize moisture content and temperature.

#### 1.07 PROJECT/SITE CONDITIONS

- A. Environmental Requirements:
  1. Do not install ceiling panels until building is closed in and HVAC system is operational.
  2. Locate materials onsite at least 24 hours before beginning installation to allow materials to reach temperature and moisture content equilibrium.
  3. Maintain the following conditions in areas where acoustical materials are to be installed 24 hours before, during and after installation:
    - a. Relative Humidity: 65 - 75%.
    - b. Uniform Temperature: 55 - 70 degrees F.

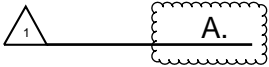


## 1.08 MAINTENANCE

- A. Provide new unopened cartons of extra materials, packaged with protective covering for storage and identified with appropriate labels.

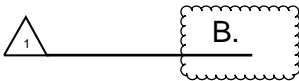
**PART 2 - PRODUCTS**

## 2.01 ACOUSTICAL PANELS



Basis of Design Manufacturer: Tectum Inc.

1. Contact: 105 South Sixth Street, Newark, OH 43055; Telephone: (888) 977-9691, (740) 345-9691; Fax: (800) 832-8869; E-mail: [info@tectum.com](mailto:info@tectum.com); website: [www.tectum.com](http://www.tectum.com).



Acoustical panel systems, including the following:

1. Tectum V-Line Wall Panels Direct Attach:
  - a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
  - b. Thickness and Reveal: 1 1/2 inch thick, 1/4 inch reveal.
  - c. Length: 96 inches.
  - d. Width: 47 3/4 inches.
  - e. Color: Custom Color to be determined
  - f. Mounting Style: "A" Provide all fasteners for a complete single source installation.
2. Tectum Lay-In Ceiling Panels
  - a. Thickness 1 1/2"
  - b. Size: 23 3/4" widths and 47 3/4" lengths
  - c. back-rabbetted to allow for easy installation in the ceiling grid
  - d. Color: Painted White
  - e. See 09 51 13 for grid
3. Tectum Direct Attach Ceiling Panels:
  - a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
  - b. Thickness and Reveal: 1 inch thick, 1/4 inch reveal.
  - c. Length: 96 inches.
  - d. Width: 47 3/4 inches.
  - e. Color: Custom Color to be determined
  - f. Mounting Style: "C-20" Provide all fasteners, hat channels and OCF 1" fiberglass insulation for a complete single source installation.

## 2.02 SUSPENSION SYSTEM(S)

### A. Manufacturers:

1. Armstrong; Product Prelude 15/16 inch.
2. Main Runners: heavy duty
3. Cross Runners: heavy duty
4. Substitutions: See Section 01 25 00 - Substitution Procedures.

- B. Suspension Systems - General: ASTM C 635; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.

## 2.03 ACCESSORIES

### A. Provide accessories as follows:

1. Tectum Painted Head Drywall Screws:
  - a. Material: Steel.
  - b. Length: 2¼ inches.
  - c. Color: to match panel color.
- B. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- C. Perimeter Moldings: Where suspended systems float (do not touch perimeter wall). Axiom-Classic, AX6STR, Same finish as grid. All other locations: shall be shadow profile with exposed flange same width as exposed runner.
- D. Gasket For Perimeter Moldings: Closed cell rubber sponge tape.
- E. Touch-up Paint: Type and color to match acoustical and grid units.

## PART 3 - EXECUTION

### 3.01 MANUFACTURER'S INSTRUCTIONS

- A. Comply with the instructions and recommendations of the ceiling system manufacturer.
- B. Install materials in accordance with governing regulations, fire resistance rating requirements and industry standards applicable to work.
  1. Comply with CISCA Code of Practices.

### 3.02 EXAMINATION

- A. Site Verification of Conditions:
  - 1. Examine surfaces scheduled to receive suspended or directly attached acoustical units for unevenness, irregularities and dampness that would affect quality and execution of work.
  - 2. Do not proceed with installation of ceiling system until unacceptable conditions are corrected.

### 3.03 INSTALLATION

- A. General: Do not begin installation until materials sufficient to complete an entire room are received and prepared for installation.
- B. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less-than-half width units at borders.
- C. Symmetrically locate grid layout in each space. Coordinate work with other trades so that lighting fixtures, grilles and other ceiling fixtures work with grid layout.
- D. Do not use universal splices or other splices that would obstruct passage of recessed lighting fixtures through grid openings or limit fixture relocation upon flanges of ceiling grids.
- E. Attachments not more than 6 inches from ends and not more than 4 feet on centers on runners.
- F. Field paint cut edges to match surface color and sheen.
- G. Arrange acoustical units and orient directionally patterned units, if any, in manner shown on reflected ceiling plans.
- H. All Tectum Interior Panels are to be mechanically attached unless they are installed in a grid system. The typical attachment uses screws spaced 24" o.c. or less.
- I. Tectum Interior Panels are typically installed over furring. The recommended method is for the furring to be spaced not over 24" o.c. and perpendicular to the panel direction. Furring is required at the panel ends. The attachment of the furring and the furring must be designed to support the weight of the panels.
- J. If furring must be installed parallel to the panel direction, the spacing must match the panel width. Panels 47 3/4" MUST HAVE MID WIDTH FURRING. Spacing shall be per manufacturer's recommendations.
- K. All Tectum Wall Panels should be supported by blocking on the bottom edge. The blocking is typically a continuous wood strip or a metal angle.

- L. When panels are to be butted end to end, an ashlar, or brick bond pattern is to be used. All edges that are butted together are to be beveled or covered with a batten. If more than two panel lengths are butted end to end, the panel length shall not exceed 96".
- M. Panel edges are not painted. When panel edges are to be exposed, special order panels with painted edges. Tectum Inc. does not recommend exposed Tectum Finalé panel edges.
- N. **SCREW ATTACHMENT**
  - 1. When attaching to furring use painted head drywall screws. For wall applications on 23  $\frac{3}{4}$ " wide panels, two screws per furring crossing are required; for 47  $\frac{3}{4}$ " wide panels, three screws per furring crossing are required. The screws are to be spaced 1" from the panel edges and where three are required, the third screw is centered. For ceiling applications using 47  $\frac{3}{4}$ " wide panels, five screws per furring crossing are required.

#### 3.04 CLEANING

- A. Clean exposed surfaces of acoustical ceilings, trim, edge moldings and suspension members to comply with manufacturer's instructions for cleaning.
- B. Touch up any minor finish damage.
- C. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

#### 3.05 PROTECTION

- A. Protect installed work from damage due to subsequent construction activity, including temperature and humidity limitations and dust control, so that the work will be without damage and deterioration at the time of acceptance by the Owner.

**END OF SECTION**

**SECTION 09 67 00  
EPOXY FLOORING**



**PART 1 GENERAL**

**A. RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

**B. SUMMARY**

- A. Section includes requirements including but not limited to:
1. Epoxy floor system.
  2. Accessories necessary for a complete installation.

**C. DEFINITIONS**

- A. Comparable Product: Product demonstrated and approved through submittal process, or where indicated as a produce substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.

**D. SUBMITTALS**

- A. Product Data: Technical data for each type of product indicated include manufacturer's technical data, application instructions, and recommendations for each flooring component required.
- B. Samples - Submit flooring system required, 6 inches (150 mm) square, applied to a rigid backing:
1. Two samples indicating range of slip resistant textures.
  2. Two samples of actual color and texture selected by the Architect.
- C. Reports and Certificates:
1. Installer Certificates: Signed by manufacturer certifying that installers comply with specified requirements.
- D. Maintenance Data: Submit data for flooring system to include in maintenance manuals.

**E. QUALITY ASSURANCE**

- A. Regulatory Requirements:
1. Building Code: Comply with applicable requirements of the CBC for interior floors.
  2. Fire Test Response Characteristics: Determined by testing identical products according to ASTM E648 or NFPA 253 by a qualified testing agency.
  3. Accessibility Requirements - Comply with applicable requirements:
    - a. U.S. Architectural and Transportation Barriers Compliance Board Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG).
    - b. 2010 ADA regulations.
    - c. ICC/ANSI A117.1 Accessible and Useable Building and Facilities.
  4. Flammability: Self-extinguishing according to ASTM D635.
- B. Installer Qualifications: Installer having minimum 5 years documented experience in the

installation of epoxy floors and who is a manufacturer authorized representative trained and approved for installation of flooring systems required. Engage installer certified in writing by floor manufacturer as qualified to apply flooring systems indicated.

- C. Source Limitations: Obtain primary flooring materials, including primers, resins, hardening agents, grouting coats, and topcoats, from single source from single manufacturer. Provide secondary materials, including patching and fill material, joint sealant, and repair materials, of type and from source recommended by manufacturer of primary materials.
- D. Pre-installation Conference: Conduct conference at site.

## F. WARRANTY

- A. Manufacturer shall furnish a single, written warranty covering both material and workmanship for a period of (1) full year from date of installation or provide a joint and several warranty signed on a single document by material manufacturer and applicator jointly and severally warranting the materials and workmanship for a period of (1) full year from date of installation. A sample warranty letter must be included with bid package or bid may be disqualified.

## G. DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original packages and containers, with seals unbroken, bearing manufacturer's labels indicating brand name and directions for storage and mixing with other components.

## PART 2 PRODUCTS

- A. Materials subject to compliance with requirements, provide products by:
  1. The Sherwin Williams Company, Cleveland, OH. [swflooring@sherwin.com](mailto:swflooring@sherwin.com)
- B. Basis of Design – **Sherman Williams, Resufloor Deco Quartz BC23 as manufactured by Sherman Williams Flooring**; subject to compliance with requirements, provide products by one of the following
  1. Sherman Williams
  2. Sika Corporation; Flooring.
  3. Stonhard
  4. BASF Corporation; Construction Systems.
  5. Crossfield Products Corp.
- C. **Resufloor Deco Quartz Bc23, 1/8" Nominal Thickness. Formerly Ceramic Carpet 400**
  1. Primer: Resuprime 3579 at 250 sq. ft. per gallon.
  2. 1<sup>st</sup> Receiver Coat: Resufloor 3561 at 140-145 sq. ft. per gallon
  3. 1<sup>st</sup> Broadcast: GP5900F to excess at 0.4 lbs. per sq. ft.
  4. 2<sup>nd</sup> Receiver Coat: Resufloor 3561 at 65-70 sq. ft. per gallon
  5. 2<sup>nd</sup> Broadcast: GP5900F to excess at 0.4 lbs. per sq. ft.
  6. Grout Coat: Resufloor 3746 at 100 sq. ft. per gallon.
  7. Topcoat: Resufloor 3746 at 200 sq. ft. per gallon.
- D. MATERIALS
  1. VOC Content of Resinous Flooring: Provide resinous flooring systems, for use inside the weatherproofing system, that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24)].
    - a. Resinous Flooring: 100 g/L.

2. HIGH-PERFORMANCE RESINOUS FLOORING
  - a. Resinous Flooring: Abrasion-, impact- and chemical-resistant, high-performance, resin-based, monolithic floor surfacing designed to produce a seamless floor.
- E. System Characteristics:
  1. Color and Pattern: As indicated from manufacturers listed above.
  2. Slip Resistance: Provide slip resistant finish.
- F. Antimicrobial Additive: Antimicrobial chemical additive to control growth of most bacteria, fungi, algae and actinomycetes.
- G. Primer/Waterproofing Membrane: Type recommended by flooring manufacturer for substrate and flooring system indicated.
- H. Patching and Fill Material: Resinous product approved by flooring manufacturer and recommended by manufacturer for application indicated.

### PART 3 EXECUTION

#### A. FIELD CONDITIONS

- A. Environmental Limitations: Comply with flooring manufacturer's written instructions for substrate temperature, ambient temperature, moisture, ventilation, and conditions affecting resinous flooring application.
- B. Lighting: Provide permanent lighting or, if permanent lighting is not in place, simulate permanent lighting conditions during resinous flooring application.
- C. Close spaces to traffic during flooring application and for 24 hours after application unless manufacturer recommends a longer period.

#### B. PREPARATION

- A. Inspection: Prior to commencing Work, thoroughly examine all underlying and adjoining work, surfaces and conditions upon which Work is in any way dependent for perfect results. Report all conditions which affect Work. No "waiver of responsibility" for incomplete, inadequate or defective underlying and adjoining work, surfaces and conditions will be considered, unless notice of such unsatisfactory conditions has been filed and agreed to in writing before Work begins. Commencement of Work constitutes acceptance of surfaces.
- B. Surface Preparation: Remove all surface contamination, loose or weakly adherent particles, laitance, grease, oil, curing compounds, paint, dust and debris by blast track method or approved mechanical means (acid etch not allowed). If surface is questionable, try a test patch. Create a minimum surface profile for the system specified in accordance with the methods described in ICRI No. 03732 to achieve profile numbers as follows:
 

1. Thin film, to 10 mils	CSP-1 to CSP-3
2. Thin and medium films, 10 to 40 mils	CSP-3 to CSP-5
3. <b>Self-leveling mortars, to 3/16"</b>	<b>CSP-4 to CSP-6</b>
4. Mortars and laminates, to 1/4" or more	CSP-5 to CSP-10
- C. Verify that concrete substrates are dry and moisture-vapor emissions are within acceptable levels according to manufacturer's written instructions.
  1. Moisture Testing: Perform tests indicated below.

- a) Calcium Chloride Test: Perform anhydrous calcium chloride test per ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lbs. of water/1000 sq. ft. in 24 hours. Perform tests so that each test area does not exceed 1000 sq. ft. and perform 3 tests for the first 1000 sq. ft. and one additional test for every additional 1000 sq. ft.
- b) In-Situ Probe Test: Perform relative-humidity test using in-situ probes per ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative-humidity-level measurement.

## 2. ENVIRONMENTAL CONDITIONS

- A. All applicators and all other personnel in the area of the RF installation shall take all required and necessary safety precautions. All manufacturers' installation instructions shall be implicitly followed.
- B. Repair damaged and deteriorated concrete according to resinous flooring manufacturer's written instructions.
- C. Alkalinity and Adhesion Testing: Verify that concrete substrates have pH within acceptable range. Perform tests recommended by manufacturer. Proceed with application only after substrates pass testing.
- D. Resinous Materials: Mix components and prepare materials according to resinous flooring manufacturer's written instructions.
- E. Use patching and fill material to fill holes and depressions in substrates according to manufacturer's written instructions.
- F. Treat control joints and other nonmoving substrate cracks to prevent cracks from reflecting through resinous flooring according to manufacturer's written instructions.

## 3. APPLICATIONS

- A. Install resinous floor over properly prepared concrete surface in strict accordance with the manufacturer's directions.
  1. Install the primer and/or base coats over thoroughly cleaned and prepared concrete.
  2. Install topcoat over flooring after excess aggregate has been removed.
  3. Maintain a slab temperature of 60°F to 80°F for 24 hours minimum before applying floor topping, or as instructed by manufacturer.
- B. Apply components of resinous flooring system according to manufacturer's written instructions to produce a uniform, monolithic wearing surface of thickness indicated.
  1. Coordinate application of components to provide optimum adhesion of resinous flooring system to substrate, and optimum intercoat adhesion.
  2. Cure resinous flooring components according to manufacturer's written instructions. Prevent contamination during application and curing processes.
  3. At substrate expansion and isolation joints, comply with resinous flooring manufacturer's written instructions.
- C. Sealant: Saw cut resinous floor topping at expansion joints in concrete slab. Fill sawcuts with sealant prior to final seal coat application. Follow manufacturer's written recommendations.
- D. Apply primer over prepared substrate at manufacturer's recommended spreading rate.
- E. Slip Resistant Finish: Provide grit for slip resistance.



- F. Apply topcoats in number indicated for flooring system and at spreading rates recommended in writing by manufacturer.

**END OF SECTION 09 67 00**

**SECTION 10 17 00****TOILET PARTITIONS - SOLID COLOR REINFORCED COMPOSITE****PART 1 - GENERAL****1.01 DESCRIPTION**

- A. Work Included: Provide all toilet partitions and urinal screens, complete, in place, as shown on the Drawings, specified herein, and needed for a complete and proper installation.
- B. Related Work Included in Other Sections:
1. Toilet Accessories (Section 10 80 00)

**1.02 QUALITY ASSURANCE**

- A. Qualifications of Manufacturers: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.
- B. Qualifications of Installers: use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

**1.03 SUBMITTALS**

- A. Product Data: Within 30 calendar days after award of the Contract, submit:
1. Complete materials list of all items proposed to be furnished and installed under this Section.
  2. Manufacturer's specifications and other data required to demonstrate compliance with specified requirements.
  3. Shop Drawings and sufficient dimensional data to enable proper coordination of installation of concealed items of support.
  4. Manufacturer's recommended installation procedures.

**1.04 PRODUCT HANDLING**

- A. Protection: Use all means necessary to protect materials of this Section before, during, and after installation and to protect work and materials of all other trades.
- B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the review of the Architect and at no additional cost to the Owner.

## 1.05 PERFORMANCE REQUIREMENTS

- A. Graffiti Resistance: Partition material shall have the following graffiti removal characteristics when tested in accordance with ASTM D6578-00 Standard Practice for Determination of Graffiti Resistance in accordance with Section 9, "Graffiti Removal Procedure Using Manual Solvent Rubs":
1. Cleanability: Five (5) required staining agents shall be cleaned off material.
- B. Scratch Resistance: Partition material shall have the following characteristics when tested in accordance with ASTM D2197-98(2002) Standard Test Method for Adhesion of Organic Coating by Scrape Adhesion, using Gardner Stock #PA-2197/ST pointed stylus attachment on scrape tester:
1. Scratch Resistance: Maximum Load Value shall exceed 10 kilograms.
- C. Impact Resistance: Partition material shall have the following characteristics when tested in accordance with ASTM D2794-93(1999)e1 Standard Test Method for Resistance of Organic Coating to the Effects of Rapid Deformation (Impact), using .625" hemispherical indenter with 2-lb impact weight:
1. Impact Resistance: Maximum Impact Force value shall exceed 30 inch-lbs.
- D. Fire Resistance: Partition material shall comply with the following requirements, when tested in accordance with ASTM E 84: Standard Test Method for Surface Burning Characteristics of Building Materials:
1. Smoke Developed Index: Not to exceed 450.
  2. Flame Spread Index: Not to exceed 75.
  3. Material Fire Ratings:
    - a. National Fire Protection Association (NFPA): Class B.
    - b. International Code Council (ICC): Class B.GUARANTEE:

## PART 2 - PRODUCTS

### 2.01 MANUFACTURERS

- A. Model numbers for toilet partitions manufactured by Bobrick Washroom Equipment, Inc., Sierra Series, are listed to establish a standard of quality for design, function, materials, workmanship, and appearance. Other manufacturers may be submitted for evaluation by the architect by following the conditions of the substitutions clause. Unless approval is obtained ten days prior to the bid date, all bids shall be based on the standard of quality. The architect shall be the sole judge as to the acceptability of all products submitted for substitution.
- B. Toilet partitions shall be the product(s) of a single manufacturer.

### 2.02 MOUNTING CONFIGURATIONS

A. Toilet Partitions/Shower Dividers/Dressing Compartments shall be:

1. Overhead-Braced (1092 Sierra™ Series)
2. Approved Equal
3. Toe Clearance of 12"

B. Urinal Screens shall be:

1. Post to Ceiling (1093 Sierra Series):
2. Approved Equal

C. Toe clearance requirement of 12" per CBC 11B-604.8.1.4" / 2.03.

### 2.03 COMPONENTS/MATERIALS

A. Stiles, Panels, Doors, and Screens

1. Stiles, Panels, Doors, and Screens shall be all be manufactured from Solid Color Reinforced Composite material.

B. Toilet Partition Material

1. Toilet partitions shall be constructed of Solid Color Reinforced Composite material, which is composed of dyes, organic fibrous material, and polycarbonate/phenolic resins. Material shall have a non-ghosting, graffiti-resistant surface integrally bonded to core through a series of manufacturing steps requiring thermal and mechanical pressure. Edges of material shall be the same color as the surface.

C. Finish Thickness

1. Stiles and doors shall be 3/4" (19 mm).
2. Panels and benches shall be 1/2" (13 mm).

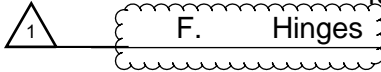
D. Hardware

1. All hardware to be 18-8, type-304 stainless steel with satin finish.
2. Hardware of chrome-plated "Zamak", aluminum, or extruded plastic is unacceptable.
3. Door pulls on each side at accessible compartments to be "U-shaped" and shall comply with CBC 11B-604.8.1.2

E. Latch

1. Sliding door latch shall be 14 gauge (2 mm) and shall slide on nylon track.
2. Sliding door latch shall require less than 5-lb force to operate. Twisting latch operation will not be acceptable.
3. Latch track shall be attached to door by machine screws into factory-installed threaded brass inserts.

4. Threaded brass inserts shall be factory installed for door hinge and latch connections and shall withstand a direct pull exceeding 1,500 lbs. per insert.
5. Through bolted, stainless steel, pin-in-head Torx sex bolt fasteners shall be used at latch keeper-to-stile connections and shall withstand direct pull force exceeding 1,500 lbs. per fastener.



1. Cam shall be adjustable (Barrel Type in the field to permit door to be fully closed or partially open when compartment is unoccupied.
  2. Hinges shall be attached to door and stile by theft-resistant, pin-in-head Torx stainless steel machine screws into factory-installed, threaded brass inserts.
  3. Fasteners secured directly into the core are not acceptable.
  4. Door shall be furnished with two 11-gauge (3-mm) stainless steel door stop plates with attached rubber bumpers to resist door from being kicked in/out beyond stile.
  5. Door stops and hinges shall be secured with stainless steel, pin-in-head Torx machine screws into threaded brass inserts.
  6. Threaded brass inserts shall withstand a direct pull force exceeding 1,500 lbs per insert.
- G. Coat Hook
1. Coat Hook shall be constructed of stainless steel and shall project no more than 1-1/8" (29 mm) from face of door.
  2. Coat hook shall be secured to door by through-bolted, theft-resistant, pin-in-head Torx stainless steel screws. Through-bolted fasteners shall withstand a direct pull force exceeding 1,500 lbs. per fastener.
- H. Mounting Brackets
1. Mounting Brackets shall be constructed of stainless steel and shall be mounted inside compartment.
  2. Fasteners at locations connecting panels-to-stiles shall utilize through bolted, stainless steel, pin-in-head Torx sex bolt fasteners. Through-bolted fasteners shall withstand direct pull force exceeding 1,500 lbs. per fastener.
  3. Wall mounted urinal screen brackets shall be 11 gauge (3 mm) double thickness.
- I. Leveling Device shall be 7-gauge, 3/16" (5-mm) hot rolled steel bar; chromate-treated and zinc-plated; through-bolted to base of solid color reinforced composite stile.
- J. Stile Shoe shall be one-piece, 4" (102-mm) high, type-304, 22-gauge (0.8-mm) stainless steel with satin finish. Top shall have 90° return to stile. Shoe will be composed of one-piece of stainless steel and capable of being fastened (by clip) to stiles starting at wall line.
- K. Headrail (Overhead Braced) shall be satin finish, extruded anodized aluminum (.125" / 3-mm thick) with anti-grip profile.

**PART 3 - EXECUTION****3.01 INSPECTION**

- A. Check area schedules to receive partitions for correct dimensions, plumbness of walls and soundness of surfaces that would affect installation of holding brackets.
- B. Verify spacing of plumbing fixtures to assure compatibility with installation of partitions.
- C. Do not begin installation of partitions until conditions are satisfactory.

**3.02 ERECTION**

- A. General:
  - 1. Install partition rigidly, straight, plumb, and level.
  - 2. Installation methods shall conform to manufacturer's recommendations for backing and proper support.
  - 3. Conceal evidence of drilling, cutting, and fitting to room finish.
- B. Overhead Braced partitions:
  - 1. Attach stile to supporting floor, anchored with minimum 2 in. (50mm) penetration into supporting floor system.
  - 2. Level, plumb, and tighten installation.
  - 3. Secure stile shoes in position.
  - 4. Set tops of doors parallel with over head brace when doors are in closed position.

**3.03 ADJUST AND CLEAN**

- A. Adjust hardware for proper operation after installation.
- B. Set hinges on inward swing doors to hold doors open approximately 15 degrees from closed position when unlatched.
- C. Set hinges on outward swing doors for physically handicapped compartments to hold doors in closed position when unlatched.
- D. Clean exposed surfaces of partitions, hardware, fittings, and accessories.

**END OF SECTION**

**SECTION 10 44 13**  
**FIRE EXTINGUISHER AND CABINETS**

**PART 1 - GENERAL**

## 1.01 REFERENCE

- A. Requirements in Addenda, Alternates, Conditions, and Division 1 collectively apply to this work.

## 1.02 DESCRIPTION

- A. Principal Work Items Are:
1. Fire extinguishers
- B. Related Work Specified Elsewhere:
1. Section 06 10 00 - Rough Carpentry.

## 1.03 SUBSTITUTIONS

- A. Only written approval of District will permit substitutions for materials specified. Refer to Section 01 25 00 – Substitution Procedures, for procedure.

## 1.04 SUBMITTALS

- A. Product Data: Four copies of manufacturer's printed data illustrating item and fully describing all features.

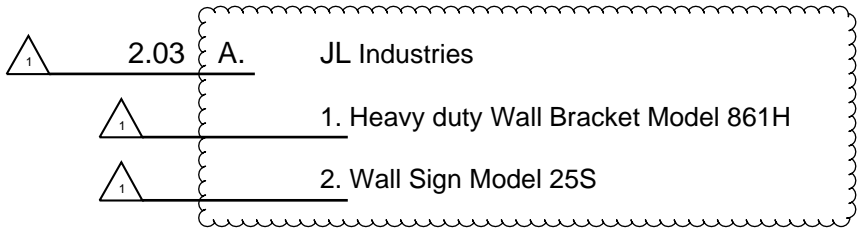
**PART 2 - PRODUCTS**

## 2.01 FIRE EXTINGUISHERS

- A. Portable fire extinguishers:
1. All classrooms, except as noted below, are: Amerex Model 500, Classification 2A:10BC steel tank dry chemical.
  2. All labs & lab prep rooms: Amerex Model 592, Classification 4A:80BC steel tank, high hazard

## 2.02 CABINETS, Rated Areas

- A. JL Industries Academy Series
1. Semi-Recessed, 1-hour rated at framed walls
  2. Surface Mount at block walls
  3. Tempered Glass
  4. Optional Vertical Decal
  5. Optional Clear Tempered 1827V17



**PART 3 - EXECUTION**

3.01 GENERAL

- A. In addition to the number shown on the drawings, provide two extinguishers of each type to be located as directed by District, all in accordance with California Fire Codes.

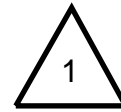
3.02 INSTALLATION

- A. Install on wall brackets typical at each location shown.
- B. Extinguishers to be filled and tagged by a licensed serviceman; ready for use.

**END OF SECTION**



**SECTION 10 50 00**  
**METAL LOCKERS AND BENCHES**

**PART 1 - GENERAL**

## 1.01 SCOPE OF WORK

- A. Description: Furnish and install factory-assembled Heavy-Duty All-Welded Metal Lockers, complete, as shown and specified per contract documents
- B. Related Work Specified Elsewhere:
  - 1. Section 06 10 00 - Rough Carpentry
  - 2. Section 06 20 00 - Finish Carpentry

## 1.02 QUALITY ASSURANCE

- A. Manufacturing Standard: Provide metal lockers that are standard products of a single manufacturer, with interchangeable like parts. Include necessary mounting accessories, fittings, and fastenings.
- B. Fabricator Qualifications: Firm experience (minimum 5 years) in successfully producing the type of metal lockers indicated for this project, with sufficient production capacity to produce required units without causing delay in the work.
- C. Installer Qualifications: Engage an experienced (minimum 2 years) installer who has successfully completed installation of the type of metal lockers and extent to that indicated for this project.
- D. Regulatory Requirements: Where metal lockers are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG)" and the California Building Code.
  - 1. Vertical Reach Range:
    - a. High Reach: The highest shelf or hook of an accessible locker shall not be more than 48-inches above the floor surface.
    - b. Low Reach: The locker bottom or lowest shelf of an accessible locker shall not be less than 15-inches above the floor surface.
  - 2. Operating Hardware: Operating hardware shall be located within the vertical reach ranges and shall not require tight grasping, pinching, or twisting of the wrist, and shall operate with a force of not more than 5 lbs.

1.03 SUBMITTALS

- A. General: Refer to Section 01 33 00 – Submittal Procedures.
- B. Shop Drawings: Submit drawings showing locker types, sizes, quantities, including all necessary details relating to anchoring, trim installation and relationship to adjacent surfaces.
- C. Color Charts: Provide color charts showing manufacturer's available colors (minimum 24). Provide metal samples if requested.
- D. Numbering: Locker numbering sequence will be provided by the approving authority and noted on approved shop drawings returned to the locker contractor.

1.04 PRODUCT HANDLING

- A. General: All work shall be fabricated in ample time so as to not delay construction process.
- B. Delivery: All materials shall be delivered to the site at such a time as required for proper coordination of the work. Materials are to be received in the manufacturer's original, unopened packages and shall bear the manufacturer's label.
- C. Storage: Store all materials in a dry and well ventilated place adequately protected from the elements.

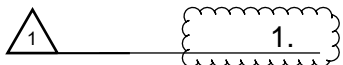
1.05 GUARANTEE

- A. **LIFETIME WARRANTY:** Submit upon completion of the work, in the form prescribed under section 00 72 00 – General Conditions, covering all defects in materials and workmanship excluding finish, damage resulting from deliberate destruction and vandalism under this section **for the lifetime of the facility.**

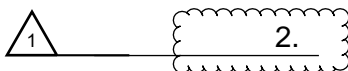
PART 2 - PRODUCTS

2.01 MATERIALS

- A. Available Manufacturers: Subject to compliance with the design, material, method of fabrication and installation as required in this specification section or modified as shown on drawings. The specification is based on the following manufacturer:



List Industries Inc. (Basis of Design)  
 REPUBLIC STORAGE PRODUCTS, LLC.”  
 Contact: Republic Storage Systems Company Inc.  
 (800) 477-1255



Other acceptable manufacturer's are Superior Lockers or DeBourgh Manufacturing Company or equal. Products by other manufacturers and or as listed above in #2 may be approved provided they meet the detailed specifications written below. Approval procedure shall be as specified in Spec Section 01 25 00 - Substitutions Procedures of these specifications.

- B. Steel:
1. Steel Sheet: All sheet steel used in fabrication shall be prime grade free from scale and imperfections and capable of taking a heavy coat of high gloss baked enamel.
  2. Expanded Metal: 1/2" mesh flattened carbon steel, 13 gauge minimum.
- C. Fasteners:
1. General: Cadmium, zinc or nickel plated steel; bolt heads, slotless type; self locking nuts or lock washers.
- D. Equipment:
1. Hardware: Hooks and hang rods of cadmium plated or zinc plated steel or cast aluminum.
  2. Handle: Seamless drawn stainless steel recessed handle.
  3. Number Plates: To be polished aluminum with not less than 3/8" high etched numbers attached to door with two aluminum rivets.
  4. Hat Shelves, Horizontal Intermediate Shelves and Bottoms: Shall be 16 gauge **galvanneal** sheet steel.

## 2.02 FABRICATION

- A. General: All lockers shall be factory-assembled, of all MIG welded construction, in multiple column units to meet job conditions. Assembly of locker bodies by means of bolts, screws, or rivets will not be permitted. **Welding of knockdown locker construction is not acceptable.** Grind exposed welds and metal edges flush and make safe to touch.
- B. Finishing: All locker parts to be cleaned and coated after fabrication with a seven stage zinc/iron phosphate solution to inhibit corrosion, followed by a coat of high grade enamel electrostatically sprayed and baked at 325 degrees Fahrenheit for a minimum of 30 minutes to provide a tough durable finish. Color to be selected from manufacturer's standard list of colors by Architect.
1. Two-Tone Color Combination: Shall be at no additional cost with the locker body, frame and trim chosen from one color and the doors may be one of any other color chosen from manufacturers standard selection.
- C. Locker Types – Ventilation Schedule:
1. General: Lockers shall be " FULLY-FRAMED ALL-WELDED VENTILATED LOCKERS" as manufactured by List Industries Inc. or pre-approved equal.
  2. Size Schedule:
    - 1) Food Service – Locker Room
      - a) Size: 18" wide x 18" deep x 72" high with 6" legs

- 2) Model
  - a) PDQ
3. Ventilation Schedule
  - a. Ventilation:
    - 1) Doors: Reinforced Door: On doors 15" and wider, tiered athletic doors shall be reinforced with a 16 gauge channel welded to the inside side of the door. Channel shall be 7/8" wide and shall be placed vertically in the center of the door to provide maximum stiffness. The diamond pattern shall be shifted to be a vertical band on the hinge side of the door. On doors with louvers, the channel shall be located near the hinge side of the door, so that the louvers are unobstructed
    - 2) Sides: 1/2" flattened 13 gauge expanded metal
    - 3) Bottoms, Horizontal tier dividers: Solid, **galvanneal**
    - 4) Backs, Tops: Solid 16 gauge.
- D. Frame / Vertical Side Panels: Shall be of 1/2" 13 gauge flattened expanded metal framed by 16 gauge hollow "T" tubular sections and channel frame members designed to enclose all four edges of the side panel with the entire assembly MIG welded to form a rigid frame for each locker. The channel frame members are welded to the front and rear vertical frame members to create and anchor bearing surface of 1-1/4 inches wide x the depth of the locker at each side panel.
- E. Integral Frame Locker Base: 14 gauge formed structural channels are MIG welded to the front and rear vertical side panel frame members to allow placement of locker bottom a minimum 2-3/4" above floor level. **Locker bottom shelf located less than 2" above floor level will not be acceptable.**
- F. Marquis Wardrobe and Box Doors: Outer door to be fabricated from single sheet prime 14 gauge with single bends at top and bottom and double bends at the sides with a full width 18 gauge inner door liner stiffener spot welded to the inside of door face and MIG welded to the hinge side of the door as well as to the left side of the door return bends to form a rigid torque-free box reinforcement for the door. All doors shall be right hand side hinged.
- G. Marquis Seamless Drawn Stainless Steel Recessed Locker Handle: All locker doors shall have a seamless drawn (not less than 304 stainless steel) recessed handle shaped to receive a padlock or built-in combination lock. The recess pan shall be deep enough to have the lock be completely flush with the outer door face. The pull handle shall be drawn into the top of the handle for easy opening of the locker door. Rear of pan shall be totally enclosed by embossed door liner.
- H. Marquis Latch Assembly: Shall be single point rigid non-moving positive latch by means of a heavy gage (minimum 11gage) latch securely welded to the framed vertical divider. The latch assembly must be made of a single piece of steel and have a padlock loop that inserts through the recess pan. The latch must be able to accept either a padlock or built-

in combination lock. A pry resistant lug which inserts into the door shall be an integral part of the 11 gage latch. Rubber bumpers shall be securely riveted to the door strike.

- I. Door Hinges: Hinges for wardrobe and gym doors shall not be less than 3-1/2" long 13 gauge seven knuckle pin type, securely riveted to frame and welded to the door. Doors are to be secured to frame with a minimum of two tamper resistant countersunk rivets per hinge. Provide 3 hinges for doors 48" and higher and 2 for doors shorter than 48". All doors shall be right hand side hinged.
- J. Flat Tops: Shall be formed of one piece of 16 gauge cold rolled sheet steel and shall be an integral part MIG welded to each vertical side panel frame member and be continuous to cover the full width of a multiple framed locker unit.
- K. Hat Shelves, Intermediate Shelves and Bottoms: Shall be 16 gauge **galvanneal** sheet steel, have double bends at front and shall engage slots in the Hollow "T" vertical frame members at all four corners and be securely welded to the frame and side.
- L. Backs: Shall be 18 gauge cold rolled sheet steel, be continuous to cover a multiple framed unit and be welded to each vertical side panel frame member.
- M. Locker Accessories:
  1. Locks - Master Lock #1525 Padlock - All lockers except PE Type A and Type B lockers.
  2. Equipment: Furnish each locker with the following items, unless otherwise shown.
  3. Hooks and Shelves:
    - a. Single tier lockers: Openings 60" and 72" shall include one **galvanneal** hat shelf, one double prong ceiling hook and a minimum of two single prong wall hooks.
    - b. Double Tier: Openings 20" thru 36" high shall include one double prong ceiling hook and a minimum of two single prong wall hooks.
    - c. Three Tier: One double prong ceiling hook only.
  4. Finished End Panels: Shall be "Boxed" type formed from 16 gauge cold rolled steel with 1" O.D. double bends on sides and a single bend at top and bottom with no exposed holes or bolts. If lockers have slope tops, end panels must be formed with slope at top to cover the ends of the slope tops. Finish to match lockers. Provide at all exposed ends. Back to back lockers to have one piece double wide end panel with built in slope.
  5. Continuous Slope Tops: Not less than 16 gauge sheet steel approximately 18 degrees pitch, in lengths as long as practical but not less than four lockers. **Sloped tops to be field installed only to insure a gap free fit between locker modules** in addition to the locker flat top with end closures for support and concealed fasteners. **Factory installed sloped tops are not acceptable.** Finish to match the lockers.
  6. Fillers: Provide where indicated, of not less than 16 gauge sheet steel, concealed fasteners and factory fabricated and finished to match lockers.
  7. Ridge Caps: Provide 16 gage ridge caps on all back to back lockers where needed.
  8. Attic Stock:

- a. Provide a minimum of 5% of all size doors with welded hinges attached and predrilled for riveting to the frame.
  - b. Provide a minimum of 5% of the following- Combination padlocks.
9. Lock Hole Cover Plate.
- N. Benches:
1. Bench Pedestals- List Industries #8032-Adjustable Steel Pedestal with cast aluminum base and concealed anchoring to the floor. Color-Parchment.
  2. Locker Bench Tops- 9-1/2" wide x 1-1/4" thick and made from laminated all white northern hard maple. They are finished with one coat deep penetrating hot sealer and two coats of heavy body high impact hot hydraulically applied lacquer.

### **PART 3 - EXECUTION**

#### **3.01 INSTALLATION**

- A. General: Installation shall be in strict conformance with referenced standards, the manufacturer's written directions, as shown on the drawings and as herein specified.
- B. Placement: Lockers shall be set in place, plumb, level, rigid, flush and securely attached to the wall (or bolted together if back-to-back) and anchored to the floor or base according to manufacturer's specifications.
- C. Anchorage: About 48" o.c., unless otherwise recommended by manufacturer, and apply where necessary to avoid metal distortion, using concealed fasteners. Friction cups are not acceptable.
- D. Trim: Sloping tops, metal fillers and end panels shall be installed using concealed fasteners. Provide flush, hairline joints against adjacent surfaces.

#### **3.02 ADJUSTMENT**

- A. General: Upon completion of installation, inspect lockers and adjust as necessary for proper door operation. Touch-up scratches and abrasions to match original finish.

**END OF SECTION**

**SECTION 10 75 00**  
**FLAGPOLES**

**PART 1 - GENERAL**

## 1.01 REFERENCE

- A. Requirements in Addenda, Alternates, Conditions and Division 01 collectively apply to this work.

## 1.02 DESCRIPTION

- A. Principal Work Items Are:
- a. Flagpole; complete assembly.
- B. Related Work Specified Elsewhere:
- 1. Concrete Base: Section 03 30 00 – Cast-in-place Concrete.

## 1.03 SUBSTITUTIONS

- A. Subject to the provisions of Section 01 25 00 – Substitution Procedures.

## 1.04 QUALITY ASSURANCE

- A. Design Criteria; Wind Loadings: Flagpole, base, foundation and anchoring devices to be designed to resist a 90 mph velocity minimum. Design for high loading where local Code wind charts indicate stronger winds.
- B. General: All parts to conform to Division of State Architect requirements.

## 1.05 SUBMITTALS

- A. Shop Drawings: Subject to the provisions of the General Conditions – Submittal Procedures.
- B. Calculations; two Copies: Provide when specifically requested by the District.

## 1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

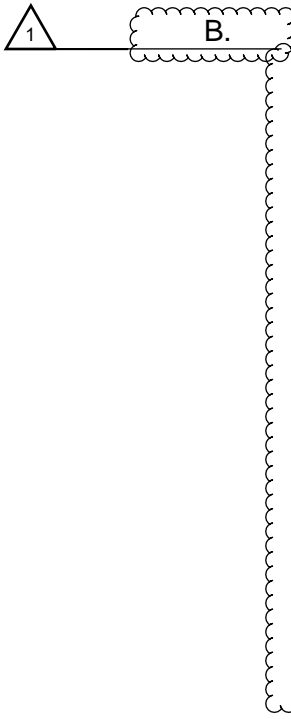
- A. Deliver in factory protective packaging. Store and handle to prevent damage.

## 1.07 JOB CONDITIONS

- A. Sequencing, Scheduling: Coordinate with related work of other Sections. Furnish foundation anchors to Concrete Section for setting.

**PART 2 - PRODUCTS****2.01 MANUFACTURERS**

- A. General: Provide flagpole as a complete unit, including base, anchor devices and all equipment and accessories.

-  B. Flagpole:
1. Type: HTJ35' Extra Heavy Ground Set Cone, Tapered Aluminum with Cam Cleat Concealed Halyard.
  2. Material: 6063-T6 alloy, seamless extruded aluminum tubing, satin brushed; 30,000 psi ultimate tensile strength.
  3. Dimensions:
    - a. Exposed Height: 35'.
    - b. Stationary non-fouling truck
    - c. Self aligning internal sleeve
    - d.
    - e. Embedment Length Into Foundation Sleeve: As required to resist wind loading and all other forces; but in no case less than 10% of the exposed pole height. See Contractor's option for anchor bolt type mounting.
    - f. Butt Diameter: 7" minimum.
    - g. Top Diameter: 3.5, nominal.
    - h. Wall Thickness: .188" minimum.
    - i. Taper: 1" per 5.5.
  4. Finish: Clear satin anodized, similar to Alcoa 204-R1.
  5. Joints: Poles to be one-piece wherever possible. Any joints must be internal sleeve splice type, self-aligning, with tight hairline joint.

- C. Equipment and Accessories: Provide for each pole.

1. Ball: 6" diameter; aluminum with flush seam, satin anodized gold color finish; mounted on 1/2" minimum diameter threaded rod screwed into truck.
2. Revolving Double Truck: Cast aluminum, non-fouling; revolving on ball bearings; with two 2 3/8" diameter sheaves.
3. Halyard: Provide one.
  - a. Cable: Stainless steel wire, with plastic coating.
  - b. Flag Snap Hooks: Chrome-plated bronze swivel type, with nylon covers. Provide four (for two flags.)
4. Cleat: 9" standard aluminum. Provide one.
5. Halyard Box (Cleat Cover): Cast aluminum, finish to match pole; tamper proof hinge; with hasp and staple for padlock.
6. Base Flash Collar: Aluminum; match pole finish; size to cover pole foundation anchorage completely.

- D. Foundation System:



1. Sleeve Type:
  - a. Sleeve: 16 gauge galvanized steel, with welded steel base plate and centering wedges; and setting plate.
  - b. Hardwood Wedges: For temporary centering of pole; four required.
  - c. Sand: Clean, fine, and dry.
  - d. Grout, Non-Shrink: Por-Rok, or Masterflow No. 713
  - e. Grounding Provisions: metal spike welded to sleeve; or separate spike and No. 6 bare copper wire connecting spike and sleeve.
2. Anchor Bolt System: Contractor may, at his option and expense, provide a welded base plate on pole and steel anchor bolt system (four bolts minimum), designed to resist all loads.
- E. Acceptable Manufacturers and Products: Standard products by the following manufacturers, conforming to the above Specifications, will be acceptable:



1. L.Ph. Bolander & Sons Inc, San Francisco, California
2. Outdoor Products Co., San Jose, California.
3. Hortie-Van Manufacturer Co., Pasadena, California.
4. American Flagpole.
5. Baartol Co., Inc.

### PART 3 - EXECUTION

#### 3.01 INSTALLATION

- A. General: Erect complete; install in concrete base, plumb and securely fastened; with all parts; and grounded for electrical discharge.
  1. Foundation Sleeve System: Install pole in sleeve; plumb pole using wedges. Fill void between pole and sleeve with sand, placed in layers and tamped or vibrated to compact it thoroughly. Remove wood wedges and fill top 2" with non-shrink grout.
  2. Install base flash collar. Check and adjust all parts for proper operation.

**END OF SECTION**

**SECTION 11 50 00**  
**MISCELLANEOUS SPECIALTIES**

**PART 1 - GENERAL**

## 1.01 SUMMARY AND SCOPE

- A. Section includes:
1. Specialty items required for this Work as indicated on the Drawings, including the following: bike racks, skateboard racks, trash cans
- B. Related Divisions:
1. Section 01 30 00 – Cast In Place Concrete
  2. Section 06 10 00 - Rough Carpentry
  3. Section 06 10 00 - Rough Carpentry

## 1.02 ACTION SUBMITTALS

- A. Supply all equipment in accordance with this specification.
- B. Submittals:
1. **Manufacturer's Data:** Submit manufacturer's data and installation instructions in accordance with Section 01 33 00 – Submittal Procedures. Provide data indicating compliance with ASHRAE Standard 110.1995.

**PART 2 - PRODUCTS**

## 2.01 SPECIALTY PRODUCTS (substitutions will be considered under the provisions of Section 01 25 00 – Substitution Procedures)

- A. Bicycle Racks:
1. Belson Outdoors, 111 North River Road, North Aurora, IL 60542.
    - a. (2) Model BRG36-G (bike capacity 36 each)
    - b. (2) Model BRG18-G (bike capacity 18 each)
    - c. Installation per manufacturer's instructions
- B. Trash Cans, each to have:
1. Belson Outdoors, 111 North River Road, North Aurora, IL 60542
    - a. Model PFT34-D
    - b. Dome top lid Model R32DC
    - c. Color to be selected by Architect

d. Installation per manufacturer's instructions



TV Bracket for 75-inch Monitors

- a. Chief Manufacturer  
6436 City West Parkway  
Eden Prairie, MN 55344
- b. Model PNRIWUB Large Low-Profile In-Wall Swing Arm Mount, 22-inch Series
- c. PAC501 In-Wall Accessory (Ordered separately)

### **PART 3 - EXECUTION**

#### **3.01 SITE EXAMINATION**

- A. The owner and/or his representative shall certify building conditions conducive to the installation of a finished goods product, including all critical dimensions.

#### **3.02 INSTALLATION**

- A. Preparation:
  1. Prior to beginning installation check and verify that no irregularities exist that would affect quality of execution of work specified.
- B. Coordination:
  1. Coordinate the work of the Section with the schedule and other requirements of other work being performed in the area at the same time both with regard to mechanical and electrical connections to and in the fume hoods and the general construction work.
- C. Adjust and Clean:
  1. After installations are complete, adjust all moving parts for smooth operation.
  2. Remove all packing materials and debris resulting from this work, and turn over the fume hoods to the Owner clean and polished both inside and out.
  3. Repair or remove and replace defective work, as directed by owner and/or his representative upon completion of installation.
- D. Protection:
  1. Provide reasonable protective measures to prevent casework and equipment from being exposed to other construction activity.
  2. Advise owner and/or his representative of procedures and precautions for protection of material, installed laboratory casework and fixtures from damage by work of other trades.

**END OF SECTION**

**SECTION 12 24 13**  
**ROLLER WINDOW SHADES**



## **PART 1 GENERAL**

### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### **1.2 SUMMARY**

- A. This Section includes window shades:
  - 1. Manual operation – Default.
  - 2. Motorized operation – Use with District permission only.

### **1.3 WARRANTY**

- A. Special Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace components of roller shades that fails in materials or workmanship within specified warranty period:
    - a. Warranty Period: Lifetime.
- B. Installer's Warranty: 1 year.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Roller shades are subject to compliance with requirements. Provide either the named product or an equal product by one of the other manufacturers specified:
  - 1. MechoShade Systems, Inc. (District Standard) Sonny Flink 818-346-0308:
    - a. Local Contact: Don 805-481-2761.
  - 2. Draper Inc.
  - 3. Silent Gliss USA, Inc.
  - 4. Hunter Douglas.
  - 5. Or approved equal.

### **2.02 ROLLER SHADES, MANUAL OPERATION AND ACCESSORIES**

- A. Shade System; General
  - 1. Components capable of being removed or adjusted without removing mounted shade brackets, or cassette support channel.
  - 2. Smooth operation raising or lowering shades.
  - 3. Cradle-to-Cradle certified for the complete shade system including operating hardware and shadechoth, Listed in C2C (DIR).

- B. Basis of Design
1. Description: Manually operated fabric window shades.
    - a. Shade Type: Single Roller.
    - b. Shade Type: Double Roller.
    - c. Universal drive capability to offset drive chain for reverse or regular roll shades.
    - d. Drop Position: Regular roll.
    - e. Drop Position: Reverse roll.
    - f. Mounting: Ceiling mounted.
    - g. Mounting: Recessed in ceiling pocket.
    - h. Mounting: Wall Mounted.
    - m. Fabric: As indicated under Shade Fabric article.
  2. Brackets and Mounting Hardware: As recommended by manufacturer for mounting indicated and to accommodate shade fabric roll-up size and weight.
    - a. Material: Steel, 1/8 inch (3 mm) thick.
    - b. Double Roller Brackets: Configured for light-filtering and room-darkening shades in one opening.
      - 1) Light-Filtering Fabric: Room-side of opening.
      - 2) Light-Filtering Fabric: Glass-side of opening.
      - 3) Room-Darkening Fabric: Room-side of opening.
      - 4) Room-Darkening Fabric: Glass-side of opening.
      - 5) Operating chain pulls for both fabrics configured for the same side of the window.
      - 6) Operating chain pulls for each fabric configured for opposite sides of the window.
    - c. Single Shade Operation Width: Up to 180 inches (4572 mm) dependent on fabric.
    - d. Multiple Shade Band Operation: Provide hardware as necessary to operate a maximum of six shade bands, totaling up to 50lbs hanging weight or 360 inches (9144 mm) wide; depending on fabric weight whichever is greater, using a single clutch operator.
    - e. Radiused Center Support Brackets: Provide brackets and connectors for radiused window applications.
      - 1) Maximum Offset: Eight degrees on each side for a 16 degree total offset.
  3. Roller Tubes:
    - a. Material: Extruded aluminum.
    - b. Size: As recommended by manufacturer; selected for suitability for installation conditions, span, and weight of shades.
    - c. Fabric Attachment: Utilize extruded channel in tube to accept vinyl spline welded to fabric edge. Shade band to be removable and replaceable without removing roller tube from brackets or inserting spline from the side of the roller tube.
    - d. Roller tubes to be capable of being removed and reinstalled without affecting roller shade limit adjustments.
  4. Hembars: Designed to maintain bottom of shade straight and flat.
    - a. Style: Full wrap fabric covered bottom bar, flat profile with heat sealed closed ends.
    - b. Color: To be selected by Architect from manufacturer's standard color selection.

5. Clutch Operator: Manufacturer's standard material and design integrated with bracket/brake assembly.
  - a. Heavy-duty, 1/8" steel mounting bracket and integrated steel brake, clutch and sprocket assembly rigidly affix the shade support and user control to the building structure fully independent of the roller tube components.
  - b. Permanently lubricated maintenance-free brake assembly employs an oil- impregnated steel hub with wrapped spring clutch.
  - c. Brake must withstand minimum pull force of 50 pounds (22.7 kg) in the stopped position.
  - d. Direct drive clutch requires no interstitial gear stages or plastic parts between the building structure and clutch ensuring reliable operation across the full range of shade sizes.
  - e. Maximum shade hanging weight of 30 pounds (13.6 kg).
6. Drive Chain: Continuous loop stainless steel beaded ball chain, 100 pound (45 kg) minimum breaking strength. Provide upper and lower limit stops.
  - a. Chain Retainer: Chain tensioning device complying with WCMA A100.1.
  - b. Limit stops: Bead stops affixed to the chain maintain consistent shadeband alignment at the top and bottom of shade travel across multiple shades, and help prevent shade damage resulting from unmanaged user control.
7. Mecho/5x, Managed Lift Force, Hardware: Lifts single band or multiband shade assemblies:
  - a. Lifting Force: 3 to 8.5 pounds (1.4 to 3.9 kg) max pull force to lift shade assemblies with a shade band hanging weight, not including mounting hardware, of 30 pounds (13.6 kg).
  - b. Direct drive clutch with Managed Lift Force provides the best user experience by managing the user pull force while using the fewest number of chain pulls to position a shade.
  - c. Backward compatible to Mecho/5 components including fascia, regular and reverse roll, pockets, and wall-mounting accessories.
  - d. Includes offset drive capability, left/right, front, or back to allow for utilization of blackout channels.
  - e. Allows for ease of operation when obstructions do not allow for direct drive chain access.
  - f. Offset chain drive shall not cause an increase of friction or pull force when operated up to a 26 degree angle from vertical.

## 2.03 ACCESSORIES

### A. Roller Shade Pocket:

1. For recessed mounting in acoustical tile, or drywall ceilings as indicated on the Drawings:
  - a. Product: 1-1/2" by 6" clear anodized aluminum.
  - b. Provide either extruded aluminum and or formed steel shade pocket, sized to accommodate roller shades, with exposed extruded aluminum closure mount, tile support and removable closure panel to provide access to shades:
    - 1) Provide "Vented Pocket" such that there will be a minimum of four 1-inch diameter holes per foot allowing the solar gain to

flow above the ceiling line.

c. Pocket Accessories: As indicated on the Drawings.

B. Fascia:

1. Continuous removable extruded aluminum fascia that attaches to shade mounting brackets without the use of adhesives, magnetic strips, or exposed fasteners.
2. Fascia shall be able to be installed across two or more shade bands in one piece.
3. Fascia shall fully conceal brackets, shade roller and fabric on the tube.
4. Provide bracket / fascia end caps where mounting conditions expose outside of roller shade brackets.
5. Notching of Fascia for manual chain shall not be acceptable.

C. Room Darkening Side and Sill Channels:

1. Extruded aluminum with polybond edge seals and SnapLoc-mounting brackets and with concealed fastening. Exposed fastening is not acceptable. Channels shall accept one-piece exposed blackout hembar with vinyl seal to assure side light control and sill light control.
  - a. MechoShade side channels, 1-15/16 inches wide by 1-3/16 inches deep, two-band center channels, 2-5/8 inches wide by 1-3/16 inches deep. The 2-5/8-inch double-center channels may be installed at center-support positions of multi-band-shade ElectroShades. MechoShade side channels 2-5/8 inch may be used as center supports for ElectroShades; shadebands up to 8 high. For shadebands over 8 feet, provide ElectroShade side channels.
  - b. ElectroShade side channels, 2-1/2 inches wide by 1-3/16 inches deep; two-band center channels 5 inches wide by 1-3/16 inches deep. The 2-5/8-inch double-center channels may be installed at center-support positions of multi-band-shade ElectroShades. MechoShade side channels 2-5/8 inches may be used as center supports for ElectroShades. Also provide for use with manually operated room darkening MechoShades over 8 feet in height.

## 2.03 SHADE BAND

A. Shade Bands:

1. Construction of shade band includes the fabric, the hem weight, hem-pocket, shade roller tube, and the attachment of the shade band to the roller tube. Sewn hems and open hem pockets are not acceptable:
  - a. Hem Pockets and Hem Weights: Fabric hem pocket with RF-welded seams (including welded ends) and concealed hem weights. Hem weights shall be of appropriate size and weight for shade band. Hem weight shall be continuous inside a sealed hem pocket. Hem pocket construction and hem weights shall be similar, for all shades within one room.
  - b. Shade Band and Shade Roller Attachment:
    - 1) Use extruded aluminum shade roller tube of a diameter and wall thickness required to support shade fabric without excessive deflection. Roller tubes less than 1.55 inch in diameter for manual shades, and less than 2.55 inches for motorize shades



- are not acceptable.
- 2) Provide for positive mechanical engagement with drive / brake mechanism.
  - 3) Provide for positive mechanical attachment of shade band to roller tube; shade band shall be made removable / replaceable with a "snap-on" snap-off" spline mounting, without having to remove shade roller from shade brackets.
  - 4) Mounting spline shall not require use of adhesives, adhesive tapes, staples, and/or rivets.
  - 5) Any method of attaching shade band to roller tube that requires the use of adhesive, adhesive tapes, staples, and/or rivets are not acceptable.

## 2.04 SHADE FABRICATION

- A. Fabricate units to completely fill existing openings from head to sill and jamb-to-jamb, unless specifically indicated otherwise.
- B. Fabricate shadecloth to hang flat without buckling or distortion. Fabricate with heat-sealed trimmed edges to hang straight without curling or raveling. Fabricate unguided shadecloth to roll true and straight without shifting sideways more than 1/8 inch in either direction per 8 feet of shade height due to warp distortion or weave design. Fabricate hem as follows:
  1. Standard concealed hem bar.

## 2.05 COMPONENTS

- A. Access and Material Requirements:
  1. Provide shade hardware allowing for the removal of shade roller tube from brackets without removing hardware from opening and without requiring end or center supports to be removed.
  2. Provide shade hardware that allows for removal and re-mounting of the shade bands without having to remove the shade tube, drive or operating support brackets.
  3. Use only Delrin engineered plastics by DuPont for all plastic components of shade hardware. Styrene based plastics, and /or polyester, or reinforced polyester will not be acceptable.
- B. Manual Operated Chain Drive Hardware and Brackets:
  1. Provide for universal, regular and offset drive capacity, allowing drive chain to fall at front, rear or non-offset for all shade drive end brackets. Universal offset shall be adjustable for future change.
  2. Provide hardware capable for installation of a removable fascia, for both regular and/or reverse roll, which shall be installed without exposed fastening devices of any kind.
  3. Provide shade hardware system that allows for removable regular and/or reverse roll fascias to be mounted continuously across two or more shade bands without requiring exposed fasteners of any kind.
  4. Provide shade hardware system that allows for operation of multiple shade bands (multi-banded shades) by a single chain operator, subject to manufacturer's design criteria. Connectors shall be offset to assure alignment

- from the first to the last shade band.
5. Provide shade hardware system that allows multi-banded manually operated shades to be capable of smooth operation when the axis is offset a maximum of 6 degrees on each side of the plane perpendicular to the radial line of the curve, for a 12 degrees total offset.
  6. Provide positive mechanical engagement of drive mechanism to shade roller tube. Friction fit connectors for drive mechanism connection to shade roller tube are not acceptable
  7. Provide shade hardware constructed of minimum 1/8-inch thick plated steel or heavier as required to support 150 percent of the full weight of each shade.
  8. Drive Bracket / Brake Assembly:
    - a. MechoShade Drive Bracket model shall be fully integrated with all MechoShade accessories, including, but not limited to: SnapLoc fascia, room darkening side / sill channels, center supports and connectors for multi-banded shades.
    - b. M5 drive sprocket and brake assembly shall rotate and be supported on a welded 3/8 inch steel pin.
    - c. The brake shall be an over-running clutch design which disengages to 90 percent during the raising and lowering of a shade. The brake shall withstand a pull force of 50 lbs. in the stopped position.
    - d. The braking mechanism shall be applied to an oil-impregnated hub on to which the brake system is mounted. The oil impregnated hub design includes an articulated brake assembly, which assures a smooth, non-jerky operation in raising and lowering the shades. The assembly shall be permanently lubricated. Products that require externally applied lubrication and or not permanently lubricated are not acceptable.
    - e. The entire M5 assembly shall be fully mounted on the steel support bracket, and fully independent of the shade tube assembly, which may be removed and reinstalled without effecting the roller shade limit adjustments.
    - f. Drive Chain: #10 qualified stainless steel chain rated to 90 lb. minimum breaking strength. Nickel plate chain shall not be accepted.

## 2.06 ROLLER-SHADE INSTALLATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, accurate locations of connections to building electrical system, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Install roller shades level, plumb, and aligned with adjacent units, according to manufacturer's written instructions:
  1. Opaque Shadebands: Located so shadeband is not closer than 2 inches (50 mm) to interior face of glass. Allow clearances for window operation hardware.
- D. Electrical Connections: Connect motor-operated roller shades to building electrical system.
- E. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

- F. Clean roller-shade surfaces after installation, according to manufacturer's written instructions.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify architect of unsatisfactory preparation before proceeding.
- C. Start of installation shall be considered acceptance of substrates.

#### **3.02 PREPARATION**

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using methods recommended by manufacturer for achieving best result for substrate under the project conditions.
- C. Coordinate with window installation and placement of concealed blocking to support shades.

#### **3.03 INSTALLATION**

- A. Install shades level, plumb, square, and true per manufacturer's instructions and approved shop drawings. Locate so shade band is at least 2 inches (51 mm) from interior face of glass. Allow proper clearances for window operation hardware. Use mounting devices as indicated.
- B. Replace shades exceeding specified tolerances at no extra cost to owner.
- C. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range. Adjust level, projection, and shade centering from mounting bracket. Verify there is no telescoping of shade fabric.
- D. Clean roller shade surfaces after installation, per manufacturer's written instructions.
- E. Demonstrate operation and maintenance of window shade system to owner's personnel.
- F. Manufacturer's authorized personnel are to train owner's personnel on operation and maintenance of system.
  - 1. Use operation and maintenance manual as a reference, supplemented with additional training materials as required.

3.04 PROTECTION AND CLEANING

- A. Protect installed products until completion of project.
  
- B. Touch-up, repair or replace damaged products before substantial completion.
  - 1. Clean soiled shades and exposed components as recommended by manufacturer.
  - 2. Replace shades that cannot be cleaned to "like new" condition.

**END OF SECTION 12 24 13**

**SECTION 32 31 20**  
**DECORATIVE GALVANIZED METAL FENCES AND GATES**



**PART 1 GENERAL 1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. Section includes requirements including but not limited to:
1. Decorative metallic coated steel tubular picket fences.
  2. Decorative steel fences.
  3. Decorative aluminum fences.
  4. Swing gates.
  5. Horizontal slide gates.
  6. Gate operators, including controls.
  7. Accessories necessary for a complete installation.
- B. Related Sections:
1. Section 03 30 00: Cast-In Place Concrete.
  2. Section 05 50 00: Metal Fabrications.
  3. Section 09 90 00: Painting and Coating.
  4. Division 26: Electrical.

**1.3 PERFORMANCE REQUIREMENTS**

- A. Lightning-Protection System: Maximum grounding resistance value of 25 ohms under normal dry conditions.
- B. Bonding to Lightning Protection System: If fence terminates at lightning-protected building or structure, ground the fence and bond the fence grounding conductor to lightning protection down conductor or lightning protection grounding conductor complying with NFPA 780.
- C. Gates that are part of the accessible route shall meet all the requirements of an accessible door in compliance with CBC Section 11B-404.

**1.4 SUBMITTALS**

- A. Product Data: Technical data for metal gates and accessory items.
- B. Shop Drawings - Submit plans, elevations, sections, details, and attachment of gate to adjacent work:
1. Indicate locations of footings, sizes of members, and construction details.
  2. Indicate gate post, foundation, and gate hinge details for the specific installation.
  3. Include diagrams for power, signal, and control wiring.
- C. Samples - For each fence material and for each color specified:
1. Provide Samples 12 inches (300 mm) in length for linear materials.

2. Provide Samples 12 inches (300 mm) square for bar grating and sheet or plate materials.
- D. Reports:
1. Field quality control reports.
  2. Product Test Reports: For decorative metallic coated steel tubular picket fences, including finish, indicating compliance with referenced standards.
- E. Maintenance Data: Submit data for gate operators to include in maintenance manuals.

## 1.5 QUALITY ASSURANCE

- A. Regulatory Requirements:
1. Accessibility Requirements - Comply with applicable requirements:
    - a. CBC 2019 California Building Code. CCR Title 24, Part 2, as adopted and amended by DSA.
    - b. U.S. Architectural and Transportation Barriers Compliance Board Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG) 2010.
- B. Accessibility Requirements for Fences, Gates, and Hardware:
1. Gates that are part of the accessible route shall meet all the requirements of an accessible door in compliance with CNC Section 11B-404.
  2. The levers of lever actuated latches or locks for accessible gates shall be curved with a return to within ½ inch of the gate surfaces to prevent catching on the clothing or persons. See California Referenced Standards Code T-24, Part 12, Section 12-10202, Item (F).
  3. Swing doors and gate surfaces within 10 inches of the finish floor or ground shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within 1/16 inch of the same plane as the other and be free of sharp or abrasive edges. Cavities created by added kick plates shall be capped. See CBC Section 11B-404.2.10.
- C. Installer Qualifications: Fabricator of products, having minimum 5 years documented experience.
- D. Mockups - Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for fabrication and installation:
1. Include 10-foot (3-m) length of fence complying with requirements.
  2. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion. E. Pre-installation Conference: Conduct conference at site.

## PART 2 PRODUCTS 2.1 MATERIALS

- A. Manufacturers are subject to compliance with requirements; provide products by one of the following:
1. Steel Fence:
    - a. Ameristar Fence Products.

- b. BetaFence USA LLC.
- c. Builders Fence Co.
- d. Fortress Iron.
- e. Iron Eagle Industries, Inc.
- f. Iron World Manufacturing, LLC.
- g. Master Halco.
- h. Monumental Iron Works/Master Halco Inc.
- i. Virginia Railing and Gates, LLC.

## 2.2 DECORATIVE METALLIC-COATED-STEEL TUBULAR PICKET FENCES

- A. Decorative Metallic Coated Steel Tubular Picket Fences: Comply with ASTM F2408 for light industrial (commercial) application (class) unless otherwise indicated.
- B. Posts:
  - 1. End and Corner Posts: Square tubes 2-3/8 inches by 2-3/8 inches formed from 0.108 inch (2.74 mm) nominal thickness, metallic coated steel sheet or formed from 0.105 inch (2.66 mm) nominal thickness steel sheet and hot dip galvanized after fabrication.
  - 2. Posts at Swing Gate Openings: Square steel tubing 4 - 6 inches by 4 - 6 inches with 3/16 inch (4.76 mm) wall thickness, hot dip galvanized with full non-shrink grout.
  - 3. Gate Framing Square steel tubing 2 inches by 2 inches (102 by 102 mm) with 3/16inch (4.76 mm) wall thickness (top rail), hot dip galvanized.
- C. Post Caps: Formed from steel sheet and hot dip galvanized after forming.
- D. Rails - Square tubes:
  - 1. Size: [3/4 inches by 3/4 inches, unless otherwise indicated on Drawings.
  - 2. Metal and Thickness: 0.079 inch (2.01 mm) nominal thickness, metallic coated steel sheet or 0.075 inch (1.90 mm) nominal thickness, uncoated steel sheet, hot dip galvanized after fabrication.
- E. Pickets - Square tubes:
  - 1. Refer pickets beyond top rail as indicated and terminate with galvanized steel caps.
  - 2. Picket Spacing: 4 inches clear, maximum.
- F. Fasteners: Tamperproof, corrosion resistant, color coated fasteners matching fence components with resilient polymer washers.
- G. Metallic Coated Steel Sheet: Galvanized steel sheet or aluminum zinc, alloy coated steel sheet.



H.

Barrel Hinges - ANSI A156.17, Grade 1, suitable for exterior use:

- 1. Heavy duty self-closing weld-on hinge. Minimum three hinges per leaf. Hinge to support minimum 1,000 lbs.

## 2.3 HORIZONTAL SLIDE GATES

- A. Gate Configuration - Single leaf (Refer to Drawings):

1. Type: Cantilever slide, with external roller assemblies.
- B. Gate Frame Height: Refer to Drawings.
- C. Gate Opening Width: Refer to Drawings.
- D. Automated vehicular gates shall comply with ASTM F2200, Class III.
- E. Galvanized Steel Frames and Bracing - Fabricate members from square tubing:
  1. Frame Members: Square tubes 2 inches by 3 inches formed from 0.108 inch nominal thickness, metallic coated steel sheet or formed from 0.105 inch nominal thickness steel sheet and hot dip galvanized after fabrication.
  2. Bracing Members: Square tubes 2 inches by 3 inches formed from 0.108 inch (2.74 mm) nominal thickness, metallic coated steel sheet or formed from 0.105 inch (2.66 mm) nominal thickness steel sheet and hot dip galvanized after fabrication.
- F. Frame Corner Construction:
  1. Welded frame with panels assembled with bolted or riveted corner fittings.
  2. Overhead Slide Gates: Welded or assembled with corner fittings.
- G. Additional Rails: Provide as indicated, complying with requirements for fence rails.
- H. Infill: Comply with requirements for adjacent fence.
- I. Picket Size, Configuration, and Spacing: Comply with requirements for adjacent fence.
  1. Treillage: Provide iron castings of pattern indicated between each pair of pickets. Finish as specified for adjacent fence.
- J. Overhead Track Assembly: Track, with overhead framing supports, bracing, and accessories, engineered to support size, weight, width, operation, and design of gate and roller assemblies.

 K. Heavy Duty Rolling Gate Stop at both ends

- L. Hardware - Latches permitting operation from both sides of gate, roller assemblies and stops fabricated from galvanized steel:
  1. Refer to Section 08 71 00: Door Hardware.
- M. Finish exposed welds to comply with NOMMA Guideline 1.
- N. Galvanizing: For items other than hardware that are indicated to be galvanized, hot dip galvanize to comply with ASTM A123/A123M. For hardware items, hot dip galvanize to comply with ASTM A153/A153M.
- O. Steel Finish: Shop [painted] [galvanized].

## 2.4 GATE OPERATORS

1. n/a



## 2.5 STEEL AND IRON

- A. Plates, Shapes, and Bars: ASTM A36/A36M.
- B. Bars (Pickets): Hot rolled, carbon steel complying with ASTM A29/A29M, Grade 1010.
- C. Tubing: ASTM A500/A500M, cold formed steel tubing.
- D. Bar Grating - NAAMM MBG 531:
  - 1. Bars: Hot rolled steel strip, ASTM A1011/A1011M, Commercial Steel, Type B.
  - 2. Wire Rods: ASTM A510.
- E. Galvanized Steel Sheet: ASTM A653/A653M, structural quality, Grade 50 (Grade 340), with G90 (Z275) coating.
- F. Castings - Either gray or malleable iron unless otherwise indicated:
  - 1. Gray Iron: ASTM A48/A48M, Class 30.
  - 2. Malleable Iron: ASTM A47/A47M.
  - 3.

## 2.6 COATING MATERIALS

- A. Shop Primer for Steel: Lead and chromate free, nonasphaltic, rust inhibiting primer complying with MPI#79 and compatible with topcoat.
- B. Epoxy Primer for Galvanized Steel: Epoxy primer recommended in writing by topcoat manufacturer.
- C. Intermediate Coat for Uncoated Steel: Epoxy or polyurethane intermediate recommended in writing by primer and topcoat manufacturer.

## 2.7 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Concrete: Normal weight, air entrained, ready mix concrete complying with requirements in Section 03 30 00: Cast-In-Place Concrete with a minimum 28 day compressive strength of 3000 psi (20 MPa), 3 inch (75 mm) slump, and 1 inch (25 mm) maximum aggregate size or dry, packaged, normal weight concrete mix complying with ASTM C387/C387M mixed with potable water according to manufacturer's written instructions.
- C. Nonshrink Grout: Factory packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M and specifically recommended by manufacturer for exterior applications.

## 2.8 GROUNDING MATERIALS

- A. Grounding Conductors - Bare, solid wire for No. 6 AWG and smaller; stranded wire for No. 4 AWG and larger:

1. Material above Finished Grade: Copper.
  2. Material on or below Finished Grade: Copper.
  3. Bonding Jumpers: Braided copper tape, 1 inch (25 mm) wide, woven of No. 30 AWG bare copper wire, terminated with copper ferrules.
- B. Grounding Connectors and Grounding Rods - Comply with UL 467:
1. Connectors for Below Grade Use: Exothermic welded type.
  2. Grounding Rods: Copper clad steel.
  3. Size: 5/8 by 96 inches (16 by 2440 mm).
  4. Color and Gloss: Selected by Architect.

## 2.9 STEEL FINISHES

- A. Surface Preparation - Clean surfaces according to SSPC-SP 5/NACE No. 1 White Metal Blast Cleaning or SSPC-SP 6/NACE No. 3 Commercial Blast Cleaning:
1. After cleaning, apply a conversion coating compatible with organic coating applied over it.
- B. Powder Coating - Immediately after cleaning, apply two coat finish consisting of epoxy primer and TGIC polyester topcoat, with a minimum total dry film thickness of not less than 8 mils (0.20 mm). Comply with coating manufacturer's written instructions:
1. Color and Gloss: Selected by Architect.
- C. Primer Application: Apply zinc rich epoxy primer immediately after cleaning, to provide a minimum dry film thickness of 2 mils (0.05 mm) per applied coat, to surfaces that are exposed after assembly and installation, and to concealed surfaces.

## 2.10 METALLIC COATED STEEL FINISHES

- A. Galvanized Finish: Clean welds, mechanical connections, and abraded areas, and repair galvanizing to comply with ASTM A780/A780M.
- B. Surface Preparation: Clean surfaces with nonpetroleum solvent so surfaces are free of oil and other contaminants. After cleaning, apply a zinc-phosphate conversion coating suited to the organic coating to be applied over it. Clean welds, mechanical connections, and abraded areas, and repair galvanizing to comply with ASTM A780/A780M.
- C. Powder Coating - Immediately after cleaning and pretreating, apply TGIC polyester powder coat finish, with a minimum dry film thickness of 2 mils (0.05 mm):
1. Color and Gloss: Selected by Architect.
  2. Immediately after cleaning and pretreating, apply two-coat finish consisting of [zinc rich] epoxy prime coat and TGIC polyester topcoat. Comply with coating manufacturer's written instructions to achieve a minimum total dry film thickness of 4 mils (0.10 mm).
  3. Comply with surface finish testing requirements in ASTM F2408 except change corrosion resistance requirement to 3000 hours without failure.

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Examine areas and conditions for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting performance of the work.
- B. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- C. Proceed with installation after correcting unsatisfactory conditions.

### **3.2 PREPARATION**

- A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet (152.5 m) or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

### **3.3 DECORATIVE FENCE INSTALLATION**

- A. Install fences according to manufacturer's written instructions.
- B. Post Setting - Set posts in concrete at indicated spacing into firm, undisturbed soil:
  - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
  - 2. Concrete Fill - Place concrete around posts and sleeves and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter:
    - a. Exposed Concrete: Extend 2 inches (51 mm) above grade. Finish and slope top surface to drain water away from post.
    - b. Concealed Concrete: Top 2 inches (51 mm) below grade, to allow covering with surface material. Slope top surface of concrete to drain water away from post.
  - 3. Posts Set in Concrete: Extend post to within 6 inches (150 mm) of specified excavation depth, but not closer than 3 inches (75 mm) to bottom of concrete.
  - 4. Posts Set into Concrete in Sleeves - Use galvanized steel pipe sleeves with inside diameter at least 3/4 inch (20 mm) larger than outside diagonal dimension of post, preset and anchored into concrete for installing posts:
    - a. Extend posts at least 5 inches (125 mm) into sleeve.
    - b. After posts have been inserted into sleeves, fill annular space between post and sleeve with nonshrink grout, mixed and placed to comply with grout manufacturer's written instructions; shape and smooth to shed water. Finish and slope top surface of grout to drain water away from post.
  - 5. Posts Set into Voids in Concrete - Form or core drill holes not less than 3/4 inch (20 mm) larger than outside diagonal dimension of post:
    - a. Extend posts at least 5 inches (125 mm) into concrete.
    - b. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink grout, mixed and placed to comply with grout manufacturer's written instructions. Finish and slope top surface of grout to drain water away from post.

6. Mechanically Driven Posts: Drive into soil to depth of 36 inches (914 mm). Protect post top to prevent distortion.
7. Space posts uniformly at 6 feet (1.83 m) o.c.

### **3.4 GATE INSTALLATION**

- A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach hardware using tamper resistant or concealed means. Install ground set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

### **3.5 GATE OPERATOR INSTALLATION**

- A. Install gate operators according to manufacturer's written instructions, aligned and true to fence line and grade.
- B. Excavation for Concrete Bases: Hand excavate holes for bases in firm, undisturbed soil to dimensions and depths and at locations as required by gate operator component manufacturer's written instructions and as indicated.
- C. Concrete Bases: Cast-in-place or precast concrete, depth not less than 18 inches (300 mm), dimensioned and reinforced according to gate operator component manufacturer's written instructions and as indicated on Drawings.
- D. Vehicle Loop Detector System: Bury and seal wire loop according to manufacturer's written instructions. Connect to equipment operated by detector.
- E. Comply with NFPA 70 and manufacturer's written instructions for grounding of electric powered motors, controls, and other devices.

### **3.6 GROUNDING AND BONDING**

- A. Fence Grounding - Install at maximum intervals of 1500 feet (450 m) except as follows:
  1. Fences within 100 Feet (30 m) of Buildings, Structures, Walkways, and Roadways: Ground at maximum intervals of 750 feet (225 m):
    - a. Gates and Other Fence Openings - Ground fence on each side of opening: 1) Bond metal gates to gate posts.
    - 2) Bond across openings, with and without gates, except at openings indicated as intentional fence discontinuities. Use No. 2 AWG wire and bury it at least 18 inches (460 mm) below finished grade.
- B. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a maximum distance of 150 feet (45 m) on each side of crossing.
- C. Fences Enclosing Electrical Power Distribution Equipment: Ground as required by IEEE C2 unless otherwise indicated.
- D. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches (150 mm) below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at grounding location.

- E. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.
- F. Connections - Make connections so possibility of galvanic action or electrolysis is minimized. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact are galvanically compatible:
  - 1. Use electroplated or hot tin coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
  - 2. Make connections with clean, bare metal at points of contact.
  - 3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
  - 4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
  - 5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.
- G. Bonding to Lightning Protection System: If fence terminates at lightning protected building or structure, ground the fence and bond the fence grounding conductor to lightning protection down conductor or lightning protection grounding conductor, complying with NFPA 780.

### 3.7 FIELD QUALITY CONTROL

- A. Testing Agency - Owner will engage a qualified testing agency to perform tests and inspections:
  - 1. Grounding Resistance Tests: Subject completed grounding system to a megger test at each grounding location. Measure grounding resistance not less than two full days after last trace of precipitation, without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural grounding resistance. Perform tests by two point method according to IEEE 81.
  - 2. Excessive Grounding Resistance: If resistance to grounding exceeds specified value, notify Architect promptly. Include recommendations for reducing grounding resistance and a proposal to accomplish recommended work.
  - 3. Report: Prepare test reports of grounding resistance at each test location certified by a testing agency. Include observations of weather and other phenomena that may affect test results.

### 3.8 ADJUSTING

- A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Automatic Gate Operators - Energize circuits to electrical equipment and devices. Adjust operators, controls, safety devices, alarms, and limit switches:
  - 1. Hydraulic Operators: Purge operating system, adjust pressure and fluid levels, and check for leaks.

2. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.
3. Test and adjust controls, alarms, and safeties. Replace damaged and malfunctioning controls and equipment.

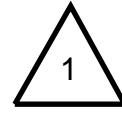
C. Lubricate hardware, gate operators, and other moving parts.

### **3.9 DEMONSTRATION**

- A. Train Owner's personnel to adjust, operate, and maintain gates.

**END OF SECTION 32 31 20**

**SECTION 32 84 00**  
**PLANTING IRRIGATION**



**PART I - GENERAL**

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Provide all materials, labor, equipment and services necessary to furnish and install Irrigation System, accessories and other related items necessary to complete the Project as indicated by the Contract Documents unless specifically excluded. The extent of the underground irrigation system is shown on the drawings. Point of Connection (P.O.C). and controller location are shown on the drawings.
- B. Related Work:
- 32 93 00 PLANTS

1.3 CODES AND REGULATIONS

- A. All work and materials shall be in full accordance with the following codes adopted and amended by the authority having jurisdiction. Nothing in these drawings or specifications is to be construed to permit work not conforming to these codes. The specifications shall govern in the event that the drawings or specifications call for material or methods of construction of higher quality or standard than required by these codes.
1. California Plumbing Code
  2. California Administrative Codes:
    - a. Title 8, Industrial Relations
    - b. Title 19, Public Safety
  3. California Electrical Code
  4. Standards and Regulations of other agencies or organizations as listed in this specification relating to products or procedures. For example, American Society for Testing and Materials.

**AD 1-26a**  
**S&B Elementary**  
**02-116800**

#### 1.4 EXPLANATION OF DRAWINGS

- A. The intent of the drawings and specifications is to indicate and specify a complete and efficient sprinkler irrigation system ready for use in accordance with the manufacturer's recommendations, and all applicable local codes and ordinances. Questions concerning interpretation of irrigation plans and specifications shall be submitted to the Landscape Architect.
- B. All plot dimensions are approximate. Before proceeding with any work, the Contractor shall carefully check and verify all dimensions and shall report any variations to the Landscape Architect.
- C. Due to the scale of the drawings, it is not possible to indicate all offsets, fittings, etc., which may be required. The Contractor shall carefully investigate the structural and finished conditions affecting all his work, and plan his work accordingly, furnishing such fittings, etc., as may be required to meet such conditions. Drawings are generally diagrammatic and indicative of the work to be installed in the most direct and workmanlike manner, so that conflicts between sprinkler systems, planting, utilities, and architectural features will be avoided.

Contractor shall provide and install any and all material, labor, operations necessary to provide a complete fully functional irrigation system as deemed acceptable by the Owner. No additional compensation will be given to the Contractor for work required by the Owner.

- D. All work called for on the drawings by notes shall be furnished and installed whether or not specifically mentioned in the specifications.
- E. The Contractor shall not willfully install the irrigation facilities as indicated on the drawings when it is obvious in the field that unknown obstructions might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the Landscape Architect.
- F. The Contractor shall examine carefully the site of work contemplated and the proposal, plans, specifications, and all other contract documents. It will be assumed that the Contractor has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantity of work to be performed and materials to be furnished, and as to the requirements of the specifications. The Contractor shall take necessary precautions to protect existing site conditions that are to remain. Should damage be incurred, the Contractor shall make the necessary repair or replacement to bring it back to its original condition at his own expense.
- G. Prior to cutting into the soil, the Contractor shall coordinate with the Project Inspector locate all cables, conduits, sewers, septic tanks, and other such utilities as are commonly encountered underground and Contractor shall take proper precaution not to damage or disturb such improvements. If a conflict exists between such obstacles, notify the Project Inspector who will consider realignment of the proposed work. The Contractor will proceed in the same manner if a rock layer or any other condition encountered underground makes



change advisable. Should utilities not shown on the plans be found during excavations, Contractor shall promptly notify the Project Inspector for instructions as to further action. Failure to do so will make Contractor liable for any and all damage thereto arising from his operations subsequent to discovery of such utilities not shown in plans.

- H. The Contractor shall verify the correctness of all finish grades within the work area in order to insure the proper soil coverage (as specified) of the sprinkler system pipes. The Contractor shall verify and be familiar with location and size of the proposed water supply (P.O.C.). He shall make approved type connection and install new work.
- I. The Contractor shall be responsible for notifying the Project Inspector in the event any equipment or methods indicated on the drawings or in the specifications conflict with local codes, are incompatible or an error is apparent, prior to installing. In the event the Contractor neglects to do this, he will accept full responsibility for any revisions necessary. No additional compensation will be given to the Contractor for necessary revisions resulting from this event.

#### 1.5 PERMITS AND INSPECTIONS

- A. The Contractor shall obtain and pay required fees to any governmental or public agency as required in General Conditions. Any permits for the installation or construction of any of the work included under this contract, which are required by any of the legally constituted authorities having jurisdiction, shall be obtained and paid for by the Contractor, each at the proper time. He shall also arrange for and pay all costs in connection with any inspections and examination required by these authorities.
- B. In all cases, where inspection of the irrigation system work is required and/or where portions of the work are specified to be performed under the direction and/or inspection of the Inspector of Record the Contractor shall notify the Inspector of Record at least 48 hours in advance of the time when such inspection and/or direction is required. Any necessary re-excavation or alterations to the system needed because of failure of the Contractor to have the required inspection, shall be performed at the Contractor's own expense.

#### 1.6 GUARANTEE

- A. Irrigation system shall be guaranteed for one year from date of final acceptance.

#### 1.7 OPERATIONS AND MAINTENANCE INSTRUCTIONS/RECORD DOCUMENTS

- A. The Contractor shall prepare and deliver to the District within ten (10) calendar days prior to completion of the construction, all required and necessary descriptive material in complete detail and sufficient quantity, properly prepared in three individually bound sets of Operating and Maintenance Manuals.
- B. These manuals shall describe the material installed and shall be in sufficient depth to permit operating personnel to understand, operate and maintain all

equipment. Spare part lists and related manufacturer identification shall be included for each installed equipment item. Each complete, bound manual shall contain the following information:

1. Index sheet stating Contractor's address and telephone number, duration of guarantee period, and list of equipment, with names and addresses of local manufacturer representatives.
  2. The Contractor to issue a "CERTIFICATE OF CONSTRUCTION COMPLIANCE" to the Project Inspector which indicates that all work done, materials and equipment used and installed are in compliance with the approved plans, specifications and all authorized revisions. The certificate shall be in form as required in the Project General Conditions.
  3. Complete operating and maintenance instruction on all major equipment.
  4. Complete set of manufacturer's literature and specifications of material installed, including parts list.
  5. Diagrams for all wiring of controller, controller valves, etc.
  6. Initial electrical data on each control valve.
    - a. Ohmmeter reading for each valve taken at the controller and valve.
    - b. Voltmeter reading for each valve.
- A. The contractor shall furnish one set of bond copies As-Built drawings, and one set of Autocad 2007 drawing files on compact disc of As Builts after all As Built information is transferred to the Auto Cad file as record documents.
1. Label first page of each document, or set of documents, "PROJECT RECORD" in neat large printed letters on lower right hand corner. Record information concurrently with construction progress. This set of drawings shall be kept on the site and shall be used only as a record set. Do not conceal any work until required information is recorded.

These drawings shall also serve as work in progress sheets, and the Contractor shall make neat and legible annotations thereon daily as the work progresses, showing the work as actually installed. These drawings shall be available at all times for inspection and shall be kept in a location designated by the Project Inspector.
  2. Drawings: Legibly mark to record actual construction:
    - a. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements. Give sufficient horizontal and vertical dimensions to accurately trace route and invert of each concealed line or item. Accurately locate each capped, plugged or stubbed line.

- b. Field changes of dimension and detail.
  - c. Changes made by Field Order, by Addenda, by RFI, or by Change Order.
  - d. Details not on original Contract Drawings.
3. Deliver all Record Documents (As-Builts) to Owner. Accompany submittal with transmittal letter in duplicate, containing:
- a. Date.
  - b. Project title.
  - c. Contractor's name and address.
  - d. Title and number of each Record Document (As-Built).
  - e. Signature of Contractor or his authorized representative.
- B. The Contractor shall provide one controller chart for each controller installed. The chart will show the area irrigated by the controller and shall be the maximum size the controller door will allow. The chart may be a reduced drawing of the actual plans. The chart shall be colored with a different color for each station. The chart shall be laminated or covered in a watertight envelope.
- C. The Contractor shall provide three (3) copies of laminated, typewritten legible controller programming charts for each individual controller. The chart shall show all stations on controller, run times, start times and program.

## 1.8 SUBMITTALS

- A. Contractor shall submit six (6) copies of complete lists of proposed materials to the Owner, including manufacturer's name and catalog numbers. No substitution will be allowed without prior written approval by the Landscape Architect.
- B. Shop drawings shall follow for all equipment, including dimensions, capacities, and other characteristics as listed in product specifications. Materials and equipment shall not be ordered until given written approval by the Landscape Architect.
- C. When specific name brands of equipment and materials are used, they are intended as preferred standards only. This does not imply any right upon the part of the Contractor to furnish other materials unless specifically approved in writing as equal in quality and performance by the Landscape Architect. Decisions by the Landscape Architect shall govern as to what name brands of equipment and materials are equal to those specified on the plans and his decisions shall be final.

- D. It shall be the responsibility of the prospective bidder to furnish proof as to equality of any proposed equipment or material.
- E. Approval of any item, alternate or substitute indicates only that the products apparently meet the requirements of the drawings and specifications on the basis of the information or samples submitted.
- F. Manufacturer's warranties shall not relieve the Contractor of his liability under the guarantee. Such warranties shall only supplement the guarantee.
- G. Acceptance of any submittals, deliverables, or other work product of the Contractor shall not be construed as assent that contractor has complied, nor in any way relieved the Contractor of, compliances with (i) the applicable standard of care of (ii) applicable statues, regulations, rules, guidelines and contract requirements.

#### 1.9 DEFINITIONS

- A. Piping: All pipe fittings, valves, and accessories as required for a complete piping system.
- B. PVC: Polyvinyl Chloride.
- C. Agencies and Organizations:
  - 1. ASTM- American Society for Testing and Materials
  - 2. AWWA- American Water Works Association
  - 3. IAPMO- International Association of Plumbing and Mechanical Officials
  - 4. NEC - National Electrical Code.
  - 5. UL - Underwriter's Laboratories

#### 1.10 REJECTION OF MATERIAL OR WORK

- A. The Landscape Architect reserves the right to reject any material or work which does not conform to the contract plans, specifications without any written approval from the Landscape Architect. The rejected material or work shall be removed or corrected by the Contractor at no additional cost to the Owner.

### **PART II - PRODUCTS**

#### 2.1 PIPING MATERIALS

- A. Piping:
  - 1. Pressure pipe/upstream of control valve:

- a. 2 ½" and larger: Bell end 'O' ring gasketed PVC 1120 Class 200 SDR 21 high impact pipe (ASTM D1784 and ASTM D2241).
  - b. 2" and smaller: Solvent weld bell end PVC 1120 Schedule 40 high impact pipe (ASTM D1785 and ASTM D1784).
2. Lateral line/downstream of control valve:
    - a. Solvent weld bell end PVC 1120 Class 200 low pipe (ASTM D1784 and ASTM D2241).
  3. Sleeving under paving:
    - a. Solvent weld bell end PVC 1120 Schedule 40 high impact pipe (ASTM D1784 and ASTM D2241).
  4. All pipe shall be continuously and permanently marked and conform with the following information:

Manufacturer's name or trademark, nominal pipe size, schedule and type of pipe, pressure rating in PSI and (NSF) seal of approval. Pipe shall be of improved white rigid polyvinyl chloride (PVC) compound manufactured by Lasco Industries or approved equal.
- B. Fittings:
1. For PVC plastic pipe: white rigid polyvinyl chloride (PVC) Schedule 40 type I and II grade 1, solvent weld socket fittings ASTM D2466 for all lateral lines. Harco Deep Bell Ductile Iron gasketed fittings, grade 65-45-12 in accordance with ASTM A-536, deep bell push on joints with gaskets meeting ASTM F-477 manufactured by The Harrington Corporation (804) 845-7094, or approved equivalent, for all mainline pipe. All fittings shall bear the manufacturer's name or trademark, material designation, size, applicable (IPS) schedule, and (NSF) seal of approval.
  2. All plastic fittings and connectors shall be injection molded of an improved polyvinyl chloride compound featuring high tensile strength, high chemical resistance and high impact strength in terms of current ASTM standards for such fittings and as manufactured by Lasco Industries or approved equal. Where threads are required in plastic fittings, these shall be injection molded also.
  3. For connections between main line fittings and electric control valves: Schedule 80 PVC ASTM D2464, threaded one end.
  4. Saddles shall be used for all connections between mainline and electric control valves, blow off valves, air release valves and quick coupling valves. Saddles shall be coated ductile iron with two (2) stainless steel straps. Romac Industries (800) 426-9341, #202NS or equivalent.

- C. Galvanized pipe and fittings:
1. Galvanized Pipe shall be hot dip galvanized continuous welded, seamless steel pipe SCH 40 conforming to applicable current (ASTM) standards.
  2. Galvanized Fittings shall be galvanized malleable iron ground joint SCH 40 conforming to applicable current (ASTM) standards.
- D. Solvent Weld Adhesive:
1. All socket type connections shall be joined with primer and PVC solvent cement which shall meet the requirements of ASTM F656 for primer and ASTM D2564, "Standard Specification for Solvent Cements for Polyvinyl Chloride (PVC) Plastic Pipe and Fittings." Solvent cement joints for plastic pipe and fittings will be made as prescribed by manufacturer. The high chemical resistance of the pipe and fitting compounds specified in the foregoing sections makes it mandatory that an aggressive colored primer, which is a true solvent for (PVC) be used in conjunction with a solvent cement designed for the fit of pipe and fittings of each size range specified. A medium bodied solvent cement to be used on pipe joints with interference fits only and not with Schedule 80 fittings. A heavy bodied solvent cement can be used for all classes and schedules of pipe and fittings.
- E. Pipe Thread Sealant:
1. A non-hardening all purpose sealant and lubricant similar to Permatex or Lasco blue pipe thread sealant which is certified by the manufacturer to be harmless to PVC pipe and fittings. Apply sealant to clean male threads, brushing into grooves and to the first three threads of the female threads. A good quality grade of teflon tape recommended by the manufacturer for use with plastics may also be used. Minimum width of tape to be used is 3/4". A minimum of two wraps and a maximum of three wraps to be used.

## 2.2 VALVES

- A. Electric Control Valves: Globe valves operated by low-power solenoid, normally closed, manual flow adjustment. Sizes and types as shown on drawings.
- B. Control Wire: Paige P7350 twisted pair solid core with polyethylene jacket, AWG-UF type UL approved for direct burial, minimum size #14.
- C. Control Wire Connectors: 3M DBR/Y-6 Direct Bury splice kit, and connectors or equivalent.
- D. Control Wire Marking: Christy wire marker or equivalent.

- E. Control Valve Boxes: Old Castle / Carson 1419 and 1220 with lockable green plastic covers or equivalent.
- F. Mainline and Quick Coupler valve boxes: Old Castle / Carson 910 with lockable green plastic covers or equivalent.
- G. Mainline valve: Nibco cast iron resilient wedge valve w/ operating nut. Conforming to AWWA C-509 or equivalent.
- H. Quick Coupling Valve: Two piece quick coupling valve as shown on plan.
- I. Control valve box marking: Heat imprinting on top of lid with 2" high letters showing controller letter and station number.

### 2.3 CONTROLLER

- A. Solid state controller, completely automatic in operation, which shall electrically start the sprinkler cycle and program and time the individual stations. Controller have attached instruction booklet, integral 24V transformer, clock indicating time of day and day of week, 24V master valve circuit and terminal connection strip. Controller shall be universal remote ready with pre-installed connectors.
- B. Controller shall be capable of receiving weather data and adjust controller schedules based upon evapotranspiration data. Possessing modular construction with input-output modules, self contained diagnostic, and capable of radio communications.

### 2.4 IRRIGATION HEADS

- A. Spray Head: Molded plastic body with plastic nozzles. Refer to schedule on drawings. Manufacturer's numbers are listed with description.
- B. Rotor Head: Molded plastic and stainless steel construction, Gear driven with memory arc, balanced nozzle sets. Refer to schedule on drawings. Manufacturer's numbers are listed with description.
- C. Dripline: Polyethylene tubing with inline emitter. Pre emergent herbicide impregnated self cleaning emitter welded to dripline wall. Refer to schedule on drawings. Manufacturers numbers are listed with description.

### 2.5 BOOSTER PUMP

- A. The prefabricated pump station shall have a minimum capacity and discharge pressure at skid edge as described in the technical specifications. Provide product as described in Specification Section 32 84 00 Planting Irrigation Appendix attached.

### 2.6 BACKFLOW PREVENTOR

- A. Reduced pressure type with resilient seated shut off valves as shown on plans. The backflow preventer shall be approved by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.
- B. After being installed at the project site, the backflow prevention unit must be tested and approved as functioning properly by the Water Provider's Representative. Approval of the backflow prevention unit must precede any final inspection of the irrigation system. All costs for the test to be the responsibility of the Contractor.

## 2.7 UNIVERSAL REMOTE

- A. Remote unit shall be able to have complete control over any solid state or electro/mechanical controllers. Unit shall have a range of one mile from receiver to transmitter located at controller.
- B. Remote unit shall be capable of coded FM transmissions which eliminate unwanted interference and works amid buildings or hilly terrain.

## 2.8 OTHER MATERIALS

- A. Materials not specifically indicated but necessary for proper execution of this work shall be of first quality as selected by the Contractor subject to the acceptance of Landscape Architect.
- B. All materials appearing in the legend and details of the irrigation drawings are part of this job. Contractor is responsible for installation according to plans and details. The system shall efficiently and uniformly irrigate all areas and perform as required by these plans and specifications.

# PART 3 - EXECUTION

## 3.1 SYSTEM DESIGN

- A. Design pressure and flow as indicated on drawings.
- B. Contractor shall verify design layout and specifications as specified on drawings and inform the Owner of discrepancies, errors or incompatibilities in writing prior to installation of irrigation system. Failure to inform the Owner of any discrepancy seven working days prior to beginning system installation will institute the responsibility of corrective action to the Contractor at no expense to the Owner.

## 3.2 PIPING INSTALLATION

- A. General:
  - 1. Any equipment installed by the Contractor and deemed to be for the use of the State in various situations (i.e., control valves, control panels, etc.) shall be so installed to be readily accessible and quickly operable. Equipment deemed by the Owner to be inoperable for its intended



purpose shall be reinstalled by the Contractor in an operable position before approval will be given. Any changes made by the Contractor shall be done without any additional cost to the Owner.

2. The Contractor shall be responsible for layout of proposed facilities and any minor adjustments required due to differences between site and drawings. Any such deviations in layout shall be within the intent of the original drawings, and without additional costs to the Owner. The Landscape Architect will indicate the proposed precise location of the control panels. Head spacing on drawings is diagrammatic. Head spacing and patterns shall be adjusted to provide complete and adequate coverage with a minimum spray on non-planted areas. Where head spacing is not noted, Contractor is to install sprinkler heads evenly along the irrigation area's perimeter. Flush all lines prior to installation of heads.
  3. Support piping without strain on joints or fittings and allow for piping expansion and contraction. "Snake" pipe into trench in accordance to manufacturer's recommendations to allow for expansion. Lay on solid sub-base, at uniform depth.
- B. The Contractor shall examine all other portions of working drawings and plan trenching and pipe lays so that no conflict will arise between irrigation and any other work. Any corrective action will be the Contractors responsibility at no further expense to the Owner.
- C. Excavations:
1. Excavations shall be open vertical construction, sufficiently wide to provide free working space around the work installed and to provide ample space for backfilling and tamping.
  2. The use of a vibratory plow or methods other than open vertical trenching will not be allowed without the written approval of the Landscape Architect. To obtain such approval, a field test must be performed, at the proposed site, with the equipment to be used in the presence of the Landscape Architect. The field test is to indicate if the proposed site is favorable to the plowing method. Approval for plowing at one location does not allow the use of plowing at another location. Approval for plowing must be obtained for each location where the use of plowing is proposed. If, at previously approved plowing locations, conditions for plowing become unfavorable as determined by the Project Inspector or Landscape Architect, plowing shall be terminated.
  3. Trenches for pipe and equipment shall be cut to required grade lines, and compacted to provide an accurate grade and uniform bearing for the full length of the line.
  4. When two pipes are to be placed in the same trench, it is required to maintain a minimum four inch (4") horizontal separation between pipes.

5. Depth of trenches shall be sufficient to provide a minimum cover above the top of the pipe as follows:
  - a. 24-inch over main lines.
  - b. 12-inch minimum over non-pressure lateral lines.
  - c. 24-inch minimum over lines located out in road surface area of paved streets.
6. Maximum cover above the top of the pipe shall not exceed twelve inches (12") greater than the required minimum cover.

D. Assemblies

1. Routing of pressure supply lines as indicated on drawings is diagrammatic. Install lines (and various assemblies) in such a manner as to conform with details on plans.
2. Install all assemblies specified herein according to the respective detail drawings or specifications pertaining to specific items required to complete the work. Perform work according to best standard practice, with prior approval.
3. Install no multiple assemblies on plastic lines. Provide each assembly with its own outlet.
4. All brass pipe and fittings shall be assembled using an approved teflon tape, or equivalent, applied to the male threads only. A minimum of two (2) wraps and a maximum of three (3) wraps of an approved teflon tape will be required.
5. All plastic and galvanized steel threaded pipe and fittings shall be assembled using an approved teflon tape applied to the male threads only. A minimum of two (2) wraps and a maximum of three (3) wraps of an approved teflon tape will be required.
6. No elbows, tees or valves are to be located closer than five (5') feet of each other without prior approval of the Project Inspector.

E. Line Clearance

1. All lines shall have a minimum clearance of four inches (4") from each other, and six inches (6") from lines of other trades. Parallel lines shall not be installed directly over one another.

F. Plastic to Steel Connections

1. At all plastic (PVC) pipe connections, the Contractor shall work the steel connections first. Connections shall always be plastic into steel, never

steel into plastic. An approved teflon tape shall be used on all threaded (PVC) to steel, never steel into plastic. An approved teflon tape shall be used on all thread (PVC) to steel pipe joints applied to the male threads only, and light wrench pressure is to be applied. A minimum of two (2) wraps and a maximum of three (3) wraps of an approved 3/4" wide teflon tape will be required.

2. A non-hardening sealant and lubricant similar to Permatex #51 or LASCO blue pipe sealant may be used in lieu of teflon tape. Apply sealant to clean male threads brushing into grooves and to the first three threads of the female threads.

G. Plastic Pipe

1. The Contractor shall exercise care in handling, loading, unloading, and storing plastic pipe and fittings. All plastic pipe and fittings shall be stored under a weatherproof roofed structure before using and shall be transported in a vehicle with a bed long enough to allow the length of pipe to lie flat so as not to be subject to undue bending or concentrated external load at any point.
  - a. All lumber, rubbish, rubble, concrete and rocks shall be removed from the trenches by the Contractor. Pipe shall have a firm uniform bearing for the entire length of each pipe line to prevent uneven settlement. Wedging or blocking under riser tees shall be done only if specified on the plans. Pad trenches with soil as necessary to provide uniform bearing surfaces.
  - b. Where extensive lengths of pipe are installed, snake pipe in trench from side to side to allow for expansion and contraction. One additional foot per one hundred (100) feet of pipe is the minimum allowance for snaking. Never lay pipe when there is water in the trench or when the temperature is 32 degrees F or below.
  - c. All changes in direction of pipe shall be made with fittings, not by bending.
  - d. Make solvent weld joints with a non-synthetic bristle brush in the following sequence:
    - 1) Make sure pipe is cut square and all rough edges and burrs are removed. All connecting surfaces are properly cleaned and dry prior to application of pipe primer.
    - 2) Apply an even coat of colored primer to pipe and fitting prior to application of solvent.
    - 3) Apply an even coat of solvent to the outside of the pipe, making sure that the coated area is equal to the depth of the fitting socket.

- 4) Apply an even light coat of solvent to the inside of the fitting.
- 5) Apply a second coat of solvent to the pipe.
- 6) Insert the pipe quickly into the fitting and turn pipe approximately one-eighth to one-quarter turn to distribute the solvent and remove air bubbles. Hold the joint for approximately fifteen seconds so the fittings do not push off the pipe.
- 7) Using a clean rag, make sure to wipe off all excess solvent to prevent weakening at joint.
- 8) Exercise care in going to the next joint so that pipe is not twisted, thereby disturbing the last completed joint.
- 9) Allow at least fifteen minutes setup time for each welded joint before moving.
- 10) Repairing plastic pipe when damaged shall be done by replacing the damaged portion of pipe.

H. Concrete Thrust Blocks:

1. Concrete anchors or thrust blocks shall be provided on main pipelines at abrupt changes in pipeline grade, changes in horizontal alignment (elbows, tees and crosses), reduction in pipe size (reducers, reducing tees or crosses), end-line caps or plugs, and in-line valve to absorb any axial thrust of the pipeline. The pipe manufacturer's recommendation for thrust control shall be followed. Thrust blocks must be formed against solid unexcavated earth (undisturbed). Do not enclose entire joint in concrete. Provide a minimum of three (3) cubic feet of 3,500 PSI concrete for each concrete thrust block.

3.3 HEAD INSTALLATION

- A. Equipment spacing on drawings is diagrammatic. Spacing shall be adjusted to provide complete and adequate coverage with a minimum water loss on non-planted areas. Flush all lateral and mainlines lines prior to installation of equipment.
- B. Rotary pop-up sprinkler heads adjacent to walks or mowstrips shall be set four inches (4") from edge of walk or mowstrips and pop-up spray heads adjacent to walks or mowstrips shall be set one inch (1") minimum/two inches (2") maximum from edge of walk or mowstrips or as noted otherwise on the plans and details.

- C. Upon completion of the installation, the Contractor shall adjust all individual systems to properly distribute water flow and shall place entire irrigation system in first-class operating condition.
- D. Adjustable heads shall be adjusted by fully opening the head furthest from the control valve. Adjust sprinkler heads which spray toward buildings in shrub / turf areas so that water does not contact sides of buildings.
- E. Install irrigation heads in accordance with details on plans.

#### 3.4 PIPE DEPTH AND BACKFILL

- A. Backfill shall not be placed until the installed system has been inspected and approved by the Project Inspector.
- B. Backfill material shall be approved soil. Unsuitable material, such as pipe remnants and wire including clods and rocks over two inches (2") in size, shall be removed from the premises and disposed of legally at no cost to the Owner. Backfill for first six inches (6") around mainline pipe and control wires shall be native soil.
- C. All backfilling shall be done carefully and shall be properly tamped. All soil shall be tamped and puddled to eliminate any voids.
- D. Surplus earth remaining after backfilling shall be disposed of off site.
- E. Backfilling for all pipe shall be carried out in two basic stages.

1. Stage One Backfilling:

This shall be accomplished as soon as possible after the pipe is laid. A bedding of uniform depth with no voids must be provided along the entire length of the pipe. The bedding dirt should be placed in the trench and tamped into the areas under the pipe, using a suitable tool. Joints should be left exposed until hydrostatic tests are completed. Cover only those portions of the pipe necessary to prevent movement or damage.

2. Stage Two Backfilling:

This shall be completed after all hydrostatic tests are completed and the piping system has been thoroughly checked for leaks or other defects. Continue to add backfill soil in four inch (4") layers and hand tamp to achieve density similar to adjacent soil. After twelve inches (12") in main line trenches and eight inches (8") in lateral line trenches of hand tamped soil is in place over the pipe and fittings, backfilling can be continued, using light machinery to place dirt in the trenches in six inch (6") layers and to compact the dirt to conform to adjacent soil. Extreme care should be taken to avoid damage to the pipe from machinery that is too heavy.

All trenches shall then be water jetted to assure uniform settling and compaction. Backfilling operations will not be considered complete until the top surface has been graded to conform to the adjacent soil. All rocks uncovered and not used as backfill must be collected and removed from the site.

- F. PVC piping and fittings shall not be backfilled during periods of extreme heat or when a sudden lowering of temperature of the pipe may cause separation of joints or fittings.

### 3.5 CONTROL WIRE

- A. Install control wires in PVC conduit. Provide long radius sweep elbows at all turns and control valve boxes. Provide minimum of six inches (6") separation to irrigation mainline. Minimum cover shall be 24 inches. Crimp wires together at valve manifold with wire connector. Seal splice with 3M DBR/Y-6 splice kit or approved equal. Tag all control wire splices and at control valve and controller with approved control wire markers.
- B. Wire size shall be determined by the number of valves operating on a given wire and the distance from the controller to the farthest valve, as specified by the charts furnished by the remote control valve manufacturer. Splices are not encouraged but allowed. All splice connections must be provided in a valve box.

### 3.6 ELECTRIC CONTROL VALVES

- A. Electric control valves shall be adjusted so the most remote heads operate at the pressure recommended by the head manufacturer. Electric control valves shall be adjusted so a uniform distribution of water is applied by the heads to the planting areas for each individual valve system. The Contractor shall make all necessary connections for operation. Where pressure regulating electric control valves are called for the Contractor shall adjust the valve so a uniform distribution of water is applied by the heads.
- B. Valve boxes and lids shall be set to finished grade or as indicated on the Construction Plans. Heat imprint electric control valve identification numbers on top of valve box with two inch (2") high letters. Not more than one electric control valve may be installed in each box.
- C. Electric control valves shall be connected and aligned to provide the most efficient flow of water to the irrigation heads. Each valve is to be enclosed in the specified valve box. The valve box shall be secured on firm soil clear of valves and wiring connections. Backfill carefully to prevent settlement and subsequent damage.
- D. A valve box must be provided at all underground irrigation control wire splice connections.

### 3.7 AUTOMATIC CONTROLLER

- A. Contractor shall be required to program and schedule the controller to maximize and utilize the design flow indicated. Programming and scheduling shall be compatible with controller on site. It shall be the complete responsibility of the Contractor to ensure that the controller provides for a fully functioning, smooth running irrigation system. Contractor shall provide all wiring and rewiring of irrigation controller necessary to accomplish programming and scheduling which utilizes the design flow indicated.
- B. Install controller, pedestal, and accessories per manufacturer's approved details, construction plans and contract requirements.
- C. Install automatic controller chart in laminated or watertight plastic envelope inside controller cover showing which valves are connected to which stations on controller.
- D. Controller Charts:
  - 1. The Contractor shall provide one controller chart for each controller supplied.
  - 2. The chart shall show the area controlled by the automatic controller and shall be the maximum size that the controller door will allow.
  - 3. The chart may be a reduced drawing of the actual as-built system. However, in the event the controller sequence is not legible when the drawing is reduced, it shall be enlarged to a size that will be readable when reduced.
  - 4. The chart shall be colored with a different color for each station.
  - 5. The chart shall be a permanent photo copy or approved equal and enclosed in a waterproof envelope or laminated.
- E. Provide three (3) copies of laminated, typewritten, legible programming charts for each controller. Charts shall show all stations on the controller, run times, start times for each individual program on the controller.

### 3.8 ELECTRICAL SERVICE

- A. Electrical service shall be provided to control panel, as indicated on the plans. All work shall be in conformance to all local ordinances, codes, regulations and requirements. All cost for the electrical service is to be the responsibility of the Contractor.

### 3.9 TESTING

- A. General: Unless otherwise directed, tests shall be witnessed by the Landscape Architect. Work to be concealed shall not be covered until prescribed tests are made. Should any work be covered before such tests, the Contractor shall, at his expense, uncover, test and repair his work and that of other contractors to

original conditions. Leaks and defects shown by tests shall be repaired and entire work re-tested. Tests may be made in sections, however, all connections between sections previously tested and new section must be included in the test.

- B. Piping Upstream of Control Valves: Maintain 100 PSI water pressure for a duration of four (4) hours. There shall be no drop in pressure during test except that due to ambient temperature changes (+ 5PSI).

### 3.10 INSPECTION

- A. Inspection of Work:

1. Installation and operations must be approved by the Project Inspector.
2. In no event shall the Contractor cover up or otherwise remove from view any work under this contract without prior approval of the Project Inspector. Any work covered prior to inspection shall be opened to view by the Contractor at his expense.

- B. General Inspection: Periodic inspections shall be required for basic operations and installations during progression of the project. Such inspections will include but not necessarily be limited to the following items:

1. Layout and flagging of sprinkler heads and system.
2. Trenching.
3. Wire placement.
4. Partial fill compaction of trenches.
5. Control valve installation.
6. Irrigation controller installation and operation.
7. Mainline sustained pressure check.

- C. Coverage Test: When the irrigation system is completed, the Contractor in the presence of the Project Inspector shall perform a coverage test of water afforded in the planting areas. Contractor is required to provide 100% complete coverage of all planting areas through the irrigation system. The Contractor shall furnish all materials and labor required to correct any inadequacies of coverage disclosed. The Contractor shall inform the Landscape Architect of any deviation from the plan required due to wind, planting, soil, or site conditions that bear on proper coverage. If such corrections or additions are required in the irrigation system, the Contractor shall make all adjustments and corrections without any extra cost to the Owner.

- D. Completion: The work will be accepted in writing when the entire project improvements have been completed satisfactorily to the Landscape Architect as



stated in Section 32 93 00 Plants, Part 3.8. In judging the work, no allowance for deviation from the original plans and specifications will be made unless already approved in writing at proper time. Should it become necessary, due to developed conditions, to occupy any portion of the work before the contract is fully completed, such occupancy shall not constitute acceptance. The Contractor will not be responsible for any damage caused by the Owner's work forces.

### 3.11 MAINTENANCE

- A. Adjustments: Irrigation system shall be maintained and adjusted as required to provide proper coverage throughout the 90 day maintenance period. Irrigation system maintenance shall commence upon general inspection following irrigation installation, planting operations and general clean-up. Maintenance shall be continued until final acceptance.

After the system has been completed, the Contractor shall instruct an authorized representative of the Owner in the operations and maintenance of the system and shall set the desired controller irrigation time for each station.

### 3.12 GUARANTEE

- A. The entire irrigation system shall be guaranteed by the Contractor to give satisfactory service and to the quality of materials equipment and workmanship including settling of backfilled areas below finish grade for a period of one (1) year following the date of the final acceptance of all the work by the Landscape Architect. If, within one year from the date of completion and final acceptance of all of the work, any trouble develops resulting from inferior or faulty materials or workmanship or settlement occurs and adjustments in pipes, valves, and heads, sod, or paving to the proper level of the permanent grades, the Contractor, as part of the work under his contract, shall make all adjustments and corrections without extra cost to the Owner, including the complete restoration of all damaged planting, paving, or other improvements of any kind.
- B. The Owner reserves the right to make temporary repairs as necessary to keep the irrigation system equipment in operating condition. The exercise of this right by the Owner shall not relieve the Contractor of his responsibilities under the terms of the guarantee as herein specified.
- C. Should any operational difficulties in connection with the irrigation system develop within the specified guarantee period which in the opinion of the Landscape Architect may be due to inferior material and/or workmanship, said difficulties shall be immediately corrected by the Contractor to the satisfaction of the Owner at no additional cost to the Owner including any and all other damage caused by such defects.

**END OF SECTION**





SECTION 32 84 00 .13

**PLANTING IRRIGATION APPENDIX IRRIGATION BOOSTER PUMP**



**Watertronics**  
 P.O. Box 530  
 Hartland, WI 53029  
 262-367-5000 PH  
 262-367-5551 FX

*WATERTRONICS Rep: Phil Vangene Sales, tel: 925-250-5885, EM: [pvangene@gte.net](mailto:pvangene@gte.net)*

**WATERMAX 5000 SERIES DESIGN PROPOSAL**  
**Booster Variable Speed Pumping System**

**All Watertronics control panels meet or exceed the Federal Communications Commission (FCC) Standard #15 for emitted and conducted noise**

<b>Customer:</b>	Robert Boro L.A, Fresno, CA	<b>Date:</b>	August 29, 2018
<b>Attn:</b>	Rich Vaillancour	<b>Quotation #:</b>	082918
<b>Phone #:</b>	559-266-4367	<b>Project Name:</b>	<b>Shields Brawley Elementary School</b>
<b>Fax #:</b>		<b>Location:</b>	Central USD, Fresno, CA
<b>Email:</b>	Rich-r_boro@comcast.net	<b>Quoted By:</b>	Peter Beaudoin
		<b>Sales Email:</b>	pvangene@gte.net

**STATION PERFORMANCE:**    300 GPM @ 43 PSI boost                      Dynamic Inlet Pressure = 37 PSI

**POWER REQUIREMENT:**    Power shall be 460 volt, 3 phase, 60 hertz.

**Note: See Power Supply in the Terms and Conditions Section below for further information.**

**MODEL DESCRIPTION: WMBV-5000-2-15-460-3-300-80**

- **Project Scope:** Prefabricated, self-contained, Variable speed, (VFD), **15 HP** horizontal centrifugal pump station with piping, valves, and enclosure. Controls will be an operator interface with software programming written specifically for this project. A formed and reinforced base platform and enclosure with lockable lid contains all manifolding, pumps, motors and control panels (disconnect mounted externally) to provide an integral unit ready for easy installation, anchored to a concrete pad. ***Full load amps = 32 (est). Relay start configuration (1) 24 vac start Relay (installer to provide a separate pair of 24vac signal wires to Watertronics supplied pump start relay located in the pump station outer disconnect box).***

**Note:** This Proposal was formulated to meet the customer supplied design specifications. Watertronics is not responsible for meeting any specifications that were not presented prior to submitting this proposal.

**STANDARD CONTROLS & EQUIPMENT INCLUDE:**

- External mounted NEMA 3R main disconnect panel
- U.L listed control panel
- Multi-line operator interface display featuring:
  - Flow readout
  - Pressure readout

**AD 1-27a**  
**S&B Elementary**  
**02-116800**

- Flow totalizer
- Elapsed run time display
- Alarm conditions with safety shutdown:
  - Low discharge pressure shutdown
  - High discharge pressure shutdown VFD fault shutdown
  - High pump temperature shutdown
- Overload, single phase, phase imbalance/low voltage protection
- Surge protection for main station and solid state controls
- Variable Frequency Drive pressure regulation
- Stainless steel pressure transducer
- Data Industrial 220B flow sensor mounted inside enclosure
- 1 ea. **15 HP**, 3600 RPM horizontal centrifugal pump and EISA compliant ODP motor. Pump to be cast iron with a bronze impeller and mechanical seal
- Silicone filled pressure gauges with isolation valve on suction and discharge piping
- Station discharge isolation valve
- Full flow by-pass piping with QTY (3) isolation valves inside station enclosure
- Baked and cured two part polyurethane ultraviolet insensitive paint
- Factory certified dynamic run testing of pump station up to full flow and pressure prior to shipment
- One operator and maintenance manual
- Two year limited warranty on mechanical and electrical components
- Access to Watertronics customer service technical phone support, technicians on call 24/7
- Access to Watertronics factory authorized service technician

**ADDITIONAL EQUIPMENT & SERVICES INCLUDED WITH PUMP STATION:**

- Forced fan air cooled ventilated **marine grade aluminum** pump station enclosure and **stainless steel** base, **un-painted**, with lockable access cover
- Relay start, 1 controller
- Dead-Front External Disconnect Panel
- Optical Isolator for sharing flow sensor signal
- Electrically Actuated Master Valve, Normally Open
- Internal Sound Dampening Insulation
- Qty. 2 – Site Service Calls w/ in the first 12 months (start-up + one additional)

Local Start-Up by Watertronics (one trip - one day)	Included
Crane To Off-Load and Set Pump Station	Not Included
<b>Domestic US Freight from Factory to Job Site: FOB Factory</b>	Included

**Shipment: A firm delivery date will be established and transmitted to purchaser when non-stocked material deliveries are confirmed. If no delays, estimated 5 weeks after receipt of signed submittal and drawing approval.**

DELIVERY AND SET-UP: (installer responsibility)

1. All reasonable efforts will be made to meet the requested delivery date after the receipt of a signed submittal however; Watertronics will not be liable for delays in delivery.
2. Pump station components shipped separately from the station, at the Customer's request, may incur additional freight charges, payable by the Customer.
3. Customer will be responsible for having job site readily accessible for station delivery.
4. Customer will provide the equipment and personnel required to unload and/or set the pump station.
5. Station Set-up, if included, reflect one day on site
6. Customer will be responsible for electrical permit if required.
7. Customer will be responsible for primary electrical hookup to pump station.
8. Customer will be responsible for making all piping connections.
9. Customer will be responsible for building modifications if required for installation.
10. Customer will be responsible for wet well, slab, or concrete work.
11. Customer will be responsible for piping any filter flush line to drain source – if applicable.

START-UP: Contact - PUMP SERVICE NETWORK at Watertronics 262-367-1000

1. Start-up included: one trip - one day on site
2. Purchaser will notify Watertronics two weeks in advance of the desired start-update.

WARRANTY:

1. Watertronics warrants its pump station products to be free of defects in materials and workmanship for a period of two (2) years from the date of startup, but not later than 27 (27) months from the date of invoice, unless modified by customer with the selection of the extended warranty option. Stations deemed delivery complete and invoiced accordingly, at Watertronics' factory and stored there, shall have the warranty period commence as of the invoice date. Should the system require storage before startup after leaving the Watertronics' facility, the system must be stored in a secured, climate controlled environment that will not allow for degradation of the system due to moisture, extreme temperature variations, or human negligence.
2. This warranty is limited to replacing or repairing any defective component supplied by Watertronics at Watertronics' sole discretion and does not apply to equipment that has been damaged, misapplied or has been modified in any way.
3. Any work performed on the pump station must be provided by a Watertronics recognized PSN (Pump Service Network) service provider and documentation of all work performed within the warranty period must be on file at the factory. Any maintenance or repairs done without the pre-authorization of Watertronics, or its recognized service providers shall void this warranty.
4. This warranty does not cover damages under the following conditions, unless otherwise specified in writing: (1) Misapplied or inappropriate incoming power, improper grounding, vandalism, or any incidental damage, consequential damage, or act of God, (2) repairs or replacements made without the pre-authorization of Watertronics, or its recognized service providers, (3) exposure to destructive gaseous or chemical solutions, (4) exposure to water pH levels of less than 6.0 which is typically the result of SO2 burner or sulfuric acid injection, (5) water salinity levels greater than 2000 parts per million, (6) water from a reverse osmosis process plant, (7) unusually high dirt load or abrasives in the water, or (8) pumping water not suitable for turf irrigation.
5. Watertronics will not accept liability for any costs associated with the removal or replacement of equipment in difficult to access locations. This includes, but is not limited to, the use of cranes larger than 15 tons, scuba divers, barges, helicopters, or other unusual means. These extraordinary costs shall be borne by the owner, regardless of the reason necessitating removal of the product from service.
6. THIS WARRANTY IS ABSOLUTELY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTIES. THIS INCLUDES ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY OTHER OBLIGATION ON THE PART OF WATERTRONICS.

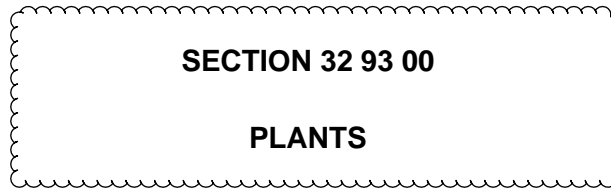
NO AGENT, EMPLOYEE OR REPRESENTATIVE OF WATERTRONICS HAS ANY AUTHORITY TO BIND WATERTRONICS TO AN AFFIRMATION, REPRESENTATION OR WARRANTY CONCERNING THE PRODUCT SOLD UNDER THIS WARRANTY. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF.

POWER SUPPLY:

1. **The pump station proposed herein is designed for 460 volt, WYE configured or closed delta balanced 3 phase power. The acceptable range of voltage is 455 volts (min) – 495 volts (max). Unless specifically stated under Optional Equipment, open delta, phase converter, or other forms of unbalanced three phase power are not acceptable.**
2. If the supply voltage is not within this acceptable range, the purchaser is responsible for making the necessary corrections. This may include re-tapping or replacing the primary transformer. If the supply voltage is outside the stated range, electrical components such as VFD's, fuses, breakers, overloads, motors, power supplies may intermittently trip or prematurely fail and will not be considered for warranty coverage.
3. The use of generator power is not recommended. If a generator is required as a temporary power supply, the pump station will be covered under Watertronics' limited warranty provided that their "Engine Driven Generator Power Warranty Policy and Operation Guidelines" document is strictly adhered to.
4. Proper electrical grounding of the pump station is a requirement. Station will not operate properly and could pose a health hazard if not properly grounded. Failures of any magnitude due to improper grounding will not be covered under warranty.

CHANGE ORDERS:

1. Change Orders initiated by parties outside of Watertronics, after an order has been entered, may require additional charges to the purchaser regardless of the reason or initiating party. A minimum administrative fee of \$ 150.00 will be charged.
  - a. Lost engineering and order administration time will be charged to the purchaser at \$150.00 per hour.
  - b. Purchase orders to vendors perfected by Watertronics made invalid by the Change Order will incur charges against the purchaser equal to any penalties levied against Watertronics. To include, re-stocking charges, lost freight charges or return goods freight charges and any vendor administrative costs.
  - c. Watertronics lost manufacturing time will be charged to the purchaser at \$100.00 per hour. Additional labor to satisfy the Change Order will be estimated at \$100.00 per hour and added to the total Change Order amount.
  - d. Materials made unusable or scrapped because of the Change Order will be changed to the purchaser at actual sale value as originally assigned to the job.  
Replacement materials or goods will be valued as required by the Change Order and be shown in its total.



## **PART I - GENERAL**

### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

### **1.2 SUMMARY**

- A. Provide all material, labor, equipment and services necessary to do all Landscape Work and other related items necessary to complete the Project as indicated by the Contract Documents unless specifically excluded.
- B. The landscape work includes, but is not necessarily limited to the following:
1. Fine grading, cross-ripping of compacted soil, soil preparation, topsoil and weed control.
  2. Planting and staking as per drawings and specifications.
  3. Tree hole boring for all trees on plan.
  4. Sodded and stolon turf planting.
  5. Ninety-day maintenance.
  6. Root Barriers.
  7. Decomposed Granite Surfacing
- C. All other requirements appear in the following sections: Part 1, Part 2 and Part 3.
- D. Related Work:
- 32 84 00 PLANTING IRRIGATION

### **1.3 DEFINITIONS**

- A. The term "approved" shall mean by the Architect, and only in writing.

### **1.4 QUALITY ASSURANCE**

- A. Landscape work shall be performed by a single firm specializing in landscape work.

- B. Plant measurements shall be as follows: 36" box size caliper shall be at least two and one half inches (2 ½") in diameter, measured six inches (6") from container soil level. 24" box size caliper shall be at least one and one half inches (1-1/2") in diameter, measured six inches (6") from container soil level, 15 gallon size caliper shall be at least three quarters inch (3/4") in diameter measured six inches (6") from container soil level. Where not shown, plants shall be of uniform, standard size, neither overgrown and root bound, nor too recently canned so that the root system is not thoroughly established through can. Pruning shall not be done prior to delivery except by prior approval.
- C. Inspection:
1. All landscape work and materials shall comply with applicable Federal, State, County and City regulations. All plant material shall conform to State of California Grading Code of Nursery Stock, No. 1 grade for quality and size and also ISA Standards. Use only nursery grown stock.
  2. All plant material shall be subject to inspection upon delivery by the Landscape Architect and/or Owner. Approval shall not limit the right of rejection during progress of the work for condition of the root ball, size, variety, latent defects or injuries. Rejected plants shall be removed from the site and replaced immediately by the Landscape Contractor at no additional cost to the Owner.
- D. Qualifications of Workmen
1. Employ skilled workmen who are thoroughly trained experienced in landscaping and who are completely familiar with specified requirements and methods needed for proper performance of the work in this section.
  2. Provide adequate supervision by a qualified foreman.
- E. Soil Fertility Analysis
1. The Contractor shall provide, and pay for, a fertility analysis of the existing soil on the project site after rough grading operations have been completed, but before any top soil is imported and placed on site. The samples shall be collected for the fertility analysis by collecting a minimum of 10 representative samples of the soil throughout the site. Each sample shall be a minimum of .25 cubic foot each, and shall be thoroughly mixed together to prepare a homogenous 2.5 cubic foot sample. A one cubic foot sample shall be submitted to the soil testing laboratory as a representative sample for fertility analysis. The Contractor shall submit to the Landscape Architect for review, the results of the soil testing investigations before proceeding with any soil improvement activities such as fertilizing, and/or adding of amendments.
  2. Recommendations for improvement of the soil conditions for plant growth shall be made by the testing laboratory, and at a minimum, shall include the following:

- a. A fertilizer and amendment application program (including macro and micro nutrients).
  - b. Treatments to improve soil PH for optimum plant growth.
- F. Bidding Allowance
1. The Contractor shall prepare his bid for the project based upon the type and quantities of soil amendment and fertilizer specified herein. The Contractor's bid price shall also include a \$8,000.00 bidding allowance for additional work and amendments/fertilizer required by the Owner to be provided for the project after review of the fertility analysis. If the amendment program is not revised after review of the fertility analysis the Contractor shall credit back to the Owner the full bidding allowance or portion agreed to if slight adjustment to amendment program is made.

## 1.5 SUBMITTALS

- A. Submit six (6) copies of:
1. A complete materials list of all items proposed to be furnished.
  2. Certificates of inspection as may be required by government agencies (providing duplicate copies for the Owner).
- B. Maintenance Instructions: Submit two (2) copies typewritten instructions recommending procedures to be established by the Owner for maintenance of landscape work of one full year. Submit prior to 90 day maintenance period. Maintenance instructions shall be a bound manual.
1. Maintenance Instruction shall include the following:
    - a. Detailed chart, graph or written description of monthly maintenance procedures for turf, shrubs and trees specific to the types called to be provided.
    - b. Description shall include detailed directions for pruning, fertilizing, pest and disease control for shrubs and trees; directions for fertilizing, pest and disease control, mowing, pre-emergent and post-emergent herbicide applications for turf.
- C. Soil amendment: Submit one (1) pint sample and analysis of soil amendment and mulch.
- D. Samples: When requested by the Landscape Architect.
- E. Submit invoices from material suppliers for all amendments, fertilizer, plants, mulch and any other materials provided for the landscape installation to the Landscape Architect.



- F. Contractor shall submit invoices at any stage of installation as requested by the Landscape Architect.

#### 1.6 AVAILABILITY

- A. The Landscape Contractor shall confirm availability of plants, supplies, and materials prior to submitting his landscape bid. Variety substitutions are not desired.
- B. If a plant is found not to be available, the Landscape Contractor is to notify the Owner before bidding. The Landscape Architect will then select a reasonable alternate and inform all those bidding of the availability of the original plant. If a substitute is selected it must be of the same size, value and quality as the original plant. Failure to inform the Landscape Architect of unavailable plants prior to bidding will result in assumption that all plants specified will be provided by the Landscape Contractor at time of installation. No substitution will be allowed after award of contract. Plants specified for the project that are susceptible to known plant disease shall be certified disease free by a certified horticulturalist prior to shipping to project site.
- C. Plant size listed on construction documents are minimum acceptable sizes. If plant material specified is not substituted prior to award of contract the minimum specified size shall be provided by the Contractor. If the Contractor can not provide the minimum specified size plant material at the time of installation, the Contractor shall be required to install a larger sized container of the plant specified at no additional cost to the Owner.

#### 1.7 PROJECT CONDITIONS

##### A. Existing Conditions

- A. The Landscape Contractor is to visit the job site to verify existing conditions including soils, vegetative growth, existing grade, subsurface conditions, drainage, etc. making allowances in his bid for any required work to provide the landscape installation as specified in the construction documents.
- B. The Landscape Contractor shall notify the General Contractor to locate underground lines prior to hole boring or trenching. Do not permit heavy equipment such as trucks, rollers, or tractors to damage utilities. Hand excavate as required to minimize possibility of damage to underground utilities. Maintain grade stakes set by others until removal is mutually agreed upon by all parties concerned. Prevent damage to temporary risers of underground irrigation system and similar obstructing work located in the landscape areas.
- C. If there is a conflict with the utilities and the planting, Contractor shall notify the Landscape Architect for instructions as to further action. Failure to do so will make Contractor liable for any and all damages thereto arising from his operation.

D. Environmental Requirements

1. No plants shall be planted in situations that show obvious poor drainage. Such situations shall be corrected by the Landscape Contractor as directed by the Owner Landscape Architect. Corrections shall be provided by the Landscape Contractor at no additional cost to the Owner.

E. Protection

1. The Landscape Contractor shall guarantee repair of damage to any part of the premises resulting from leaks, defects in materials, equipment or workmanship. The Landscape Contractor shall be liable for any and all accidents resulting from his work, including open holes and trenches during construction.
2. During landscape work, store materials and equipment where directed. Keep pavements clean and work area in an orderly condition.
3. Protect landscape work from theft, loss, damage and deterioration during storage, installation and maintenance periods. Protect from unauthorized persons (trespassers) as well as from operations by other contractors and tradesmen, and landscape operations. Protect all planted shrub areas from persons as well as operations of other contractors and the Owner. Cost for protection shall be borne by the Contractor. Means of protection such as temporary fencing shall be approved by the Landscape Architect.
4. Contractor shall repair or restore damaged work as identified by the Landscape Architect to an acceptable condition. No additional payment will be made to the Contractor for repair of unprotected material.

1.7 INSPECTION

- A. Periodic inspections will be made by the Landscape Architect during the installation for the project. Such inspections will include but not necessarily be limited to:
1. Stockpiled imported soil and soil amendments prior to installation.
  2. Weed control operations prior to other portions of work.
  3. Placement of plant material at the site prior to planting.
  4. Condition of plant material prior to placement.
  5. Auguring, digging and preparation of plant pits for trees and shrubs.
  6. Planting and staking of trees.
  7. Planting of shrubs and ground cover.

- B. Any corrective action called for by any of the above listed authorities shall be immediately performed by the Contractor.

## 1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Plant label shall identify each specie and variety. A label shall be attached to each individual plant or block of identical plants grouped together.
- B. Adequately protect plants from sun and wind prior to planting. Do not allow stored plant material to dry out at any time.

## PART II - PRODUCTS

### 2.1 MATERIALS

- A. Soil Amendment

1. Turf and Planting Areas: 'Harvest Premium' as supplied by Waste Management Fresno, CA. (559) 753-0040 or equivalent, and conforming to the following:
  - a. Derivative material - 50% chipped, shredded, composted and decomposed organic green waste material and 50% composted dairy manure.
  - b. Particle size - <math>< 3/8''</math>.
  - c. PH Value - 5.9/6.7.
  - d. Macro-nutrients - Minimum of 1.3% Nitrogen, 0.47% Phosphorus, 1.7% Potassium. Dry weight measurement.
  - e. Moisture holding capacity - 4 times by volume.
  - f. Composted to provide carbon: nitrogen ratio - 11:1 to 13:1 maximum.
  - g. Salinity / Cation Exchange - 13% / 541%.
2. Turf and Planting Areas: Super Cal 75 Gypsum as supplied by Waste Management Fresno, CA. (559) 753-0040. Gypsum shall be mined gypsum composed of no less than 75% pure CAS042H20 hydrated calcium sulfate or equivalent.
3. Turf and Planting Areas: Tri-C Enterprises 4011 Schaefer Avenue, Chino, CA 91710 (800) 927-3311. Tri-C Humate or equivalent containing 40% humic acid per CDFA testing method derived from Leonardite or equivalent.

4. Planting Areas: Tri-C Enterprises 4011 Schaefer Ave., Chino, CA 91710 (800) 927-3311. Tri-C Endo 120 Mycorrhizae containing 60,000 living propagules of glomus intraradices per one pound, or equivalent.
    5. Turf and Planting Areas: Quantum Growth, Quantum Light and Quantum Revive liquid organic soil amendments as supplied by Agro Natural Sciences, 352 West Bedford, Suite112, Fresno, CA. (866) 571-3277, or equivalent.
    6. Turf and Planting Areas: Ferrous Sulfate 20% and Manganese Sulfate 31% as supplied by Wilbur / Ellis (559) 442-1220, or equivalent.
- B. Imported Topsoil
1. Clean, friable, sandy loam with no noxious weeds, clods, or other extraneous material.
  2. The Landscape Architect reserves the right to take samples of imported topsoil have tested at Contractor's expense, and reject topsoil as deemed necessary.
  3. Particle size distribution.
    - a. Minimum 95% passing a 25.4 mm screen.
    - b. Minimum 85% passing a 9.5 mm screen.
    - c. Fraction passing a 9.5 mm screen shall contain a minimum of 15%, maximum 40% total silt and clay.
  4. Agricultural Suitability:
    - a. Salinity (exec 103) less than 4.0 at 25 degrees centigrade.
    - b. Sodium absorption ration (SAR) less than 10.
    - c. Boron in saturation extract less than 1.0 PPM.
- C. Fertilizer
1. Trees and Shrubs:
    - a. Fertilizer for all trees and shrubs to be Best-Paks (20-10-5) with Polyon by Simplot Turf (800) 992-6066 or equivalent. The Best-Pak tablets shall be applied at the following rates:

1 Gallon Can	-	1 Paks
5 Gallon Can	-	3 Paks

15 Gallon Can - 9 Paks  
24" Boxes - 18 Paks

2. Turf, Shrub / Ground Cover Areas:
  - a. The pre-plant fertilizer shall be commercial fertilizer Best (12-12-12) or equivalent.
  - b. The post-plant fertilizer shall be commercial fertilizer Best (15-15-15) analysis with minors or equivalent.

D. Mulch

1. "Gorilla Hair" shredded cedar bark, natural color, free of sticks, dirt, dust and other debris, as accepted by Landscape Architect.
2. Particle size:  $\frac{3}{4}$ " to 1" in general size.

E. Staking Material

1. 2 inch (2") diameter lodgepole Pine, pressure treated, pointed one end.
2. V.I.T. Cinch Tie, 32 inches long, V.I.T. Products, Inc. (619) 673-1760 or equivalent.

F. Plants

1. Plants shall be typical of their species and variety, shall have normal growth habits, well developed branches and be densely foliated, and shall have fibrous root systems. No substitutions will be allowed unless approved in writing by the Landscape Architect.
2. Plants shall be free from defects and injuries including disease, insects, insect eggs and larvae and girdled roots.
3. Quality and size of plants, spread or roots, caliper and size of balls shall be in accordance with ANSI Z60.1-1969, "American Standard for Nursery Stock".
4. Plants shall not be pruned before planting.
5. Plant material must be selected from nurseries that have been inspected by Landscape Architect or Federal Agencies.
6. Plants shall be nursery grown and shall have been transplanted or root pruned at least once in the past three (3) years. Plants shall have been grown under climatic conditions similar to those in the locality of the project.

7. Each bundle of plants shall be properly identified by weatherproof labels securely attached thereto before delivery to the project site. Label shall identify plant by name.
  8. Nomenclature shall be in accordance with Hortus III.
  9. No plants shall be delivered to the project site, except for required samples, until inspection has been made in the field or at the nursery, or unless specifically authorized in writing by the Landscape Architect.
  10. Collected plant material may be used only when approved. Approval shall not limit the right of rejection during work progress for conditions of the root ball, latent defects or injuries.
  11. Where shown as "MULTI" provide trees with branching starting close to the ground in the manner of a shrub.
  12. Plants are listed on the planting plan as the minimum acceptable sizes. The quantities listed are the Landscape Architect's estimate only. The Landscape Contractor is responsible for all material shown on the plan.
- G. Root Barrier
1. Deep Root Corporation #UB 24 PANEL, (714) 898-0563 or equivalent.
- H. Tree Trunk Protector
1. Arbor Guard polyethylene tree guard, (8" min. tall) or equivalent.
- I. Decomposed Granite Surfacing
1. ¼" to fine chipped angular stone, color to be 'California Gold' unless specified otherwise, as supplied by Rosenbalm's Rockery, Inc. (559) 256-3900 or approved equal. Finish depth of material shall be 3" deep after compacting to a minimum of 85%. Submit sample of decomposed granite and source for review before purchasing and delivery to the job site.
- J. Organic "Stabilizer"
1. Organic, non toxic, colorless, odorless organic binder derived from natural sources of Psyllium as distributed Rosenbalm's Rockery, Inc. (559) 256-3900, and known as "Stabilizer", or approved equal. "Stabilizer" shall be applied to the decomposed granite areas as designated on the plans which will receive the organic "Stabilizer".
  2. Blend 12 lbs. of "Stabilizer" per ton (2,000 lbs.) of decomposed granite per manufacturer's recommendations to stabilize subject surfacing to a depth of no less than three (3) inches below finish grade. The

decomposed granite areas shown to receive the "Stabilizer" shall be graded, prepared, mixed, wetted, and finished as further recommended by the manufacturer of the stabilizer so that the granite is uniformly hardened and the particles bound tightly together. Decomposed Granite areas shall be uniformly level, compacted and brought to a smooth level finish. Decomposed granite areas which are crusted over and/or loosely compacted will be considered unacceptable by the Owner.

#### K. Turf Sod / Turf Stolons

1. Sod and stolons shall be fresh and labeled in accordance with U. S. Department of Agriculture Rules and Regulations under the Federal Seed Act.

2. The type one turf sod shall be wide roll 'Celebration' variety of Hybrid Bermuda grass as supplied by AG Sod (888) 800-8483 or equivalent.

2. The type two turf stolons shall be 'Celebration' variety of Hybrid Bermuda grass as supplied by AG Sod (888) 800-8483 or equivalent.

#### L. Other Materials:

1. Materials not specifically indicated, but necessary for proper execution of the work, shall be of first quality as selected by the Contractor subject to approval of.

2. Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery and while stored at the site.

### **PART III - EXECUTION**

#### 3.1 INSPECTION

A. Examine the area and conditions under which the work in this section is to be performed. Correct conditions detrimental to the timely and proper completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

#### 3.2 ROUGH GRADING/SOIL COMPACTION

A. Rough grading has been performed by others to the extent of establishing drainage patterns. The Contractor is responsible for placement of topsoil and rough grading required to ensure positive drainage in all planting areas. Rough grading shall accommodate the addition of soil amendments in anticipation of proposed finish grades.

- B. During the course of earth work required in the project, compaction of soil in the planting areas will exceed an acceptable density. The Landscape Contractor is required to cross rip and cultivate (break up large clumps and clods) the soil within these areas so the soil is loose and friable. Ripping shall be to a depth of twelve inches (12") and shall be accomplished by approved means and methods as directed by the Landscape Architect. The Landscape Contractor shall review the completed ripping operation with the Owner Landscape Architect to determine compliance. The Contractor shall provide additional work as directed by the Landscape Architect after review.
- C. Do not work soil when moisture content is so great that excessive compaction will occur, nor when it is so dry that dust will form in air or that clods will not break readily. Apply water, if necessary, to bring soil to an optimum moisture content for tilling and planting. Maintain within 2 percent above or below optimum moisture content for soil type present at all times during the work.
- D. The soil shall be cleared of all construction debris, concrete, stones, roots, wire, sticks, foreign material and similar objects larger than one half inch (1/2") in general size.
- E. Spread approved type topsoil over accepted subgrade prior to incorporating amendments. Add topsoil where needed to bring grade to required elevation as referenced on the plans and specifications.

### 3.3 SOIL PREPARATION

- A. Before commencement of any soil preparation, all existing grasses and weeds on the site shall be killed by application of herbicide. All dead vegetation shall be removed from the site and disposed of in a lawful manner. The Contractor shall use and apply all weed control chemicals in accordance with the manufacturer's recommendations and all local codes and ordinances. The chemicals applied shall be done by a licensed applicator.
- B. Amend soil in turf and planting areas per the following:
  - 1. Turf and Planting Area
    - a. Apply "Harvest Premium" at a rate of two (2) tons (4,000 pounds) per 1,000 square feet. Incorporate into soil to a depth of six inches (6") prior to finish grading.
    - b. Tri-C Humate shall be applied at a rate of thirty-five (35) pounds per 1,000 square feet. Incorporate into soil to a depth of six inches (6") prior to finish grade.
    - c. GYPSUM shall be applied at a rate of 200 pounds per 1,000 square feet. Incorporate into soil to a depth of six inches (6") prior to finish grade.



- d. Tri-C Endo 120 Mycorrhizae shall be applied at a rate of one and one half (1 ½) pounds per 1,000 square feet. Incorporate into soil to a depth of six inches (6") prior to finish grade.
  - e. Quantum Light and Quantum Revive shall be applied at a rate of (1) gallon per acre for each product. Apply prior to installing turf seed and shrubs / ground cover after fine grade is accepted in all turf areas and planting areas.
  - f. Ferrous Sulfate 20% shall be applied at a rate of one hundred (100) pounds per acre. Incorporate into soil to a depth of six inches (6") prior to finish grading in turf areas and planting areas.
  - g. Manganese Sulfate 31% shall be applied at a rate of fifty (50) pounds per acre. Incorporate into soil to a depth of six inches (6") prior to finish grading in new turf areas and planting areas.
  - h. Pre-plant fertilizer shall be applied at a rate of five (5) pounds per 1,000 square feet. Apply to shrub bed only prior to installing plants after fine grade is accepted.
- C. Planting pits, prior to planting trees and shrubs mix 50% native soil and 50% "Harvest Premium" as backfill mix.
- D. Pre blended soil amendments will not be accepted. The Contractor shall provide soil amendments in individual containers delivered to the site separately and identified by the manufacturer's product label.

### 3.4 FINE GRADING

- A. Upon completion of soil preparation, grade all planting and turf areas to smooth and even slope conforming to grading plans and reestablishing drainage patterns. Grading shall eliminate all humps and hollows and promote positive drainage in all planting and turf areas.
- B. Tolerance of grade differential shall be plus or minus 0.05 foot from elevations shown on grading plans. The Contractor shall water test all turf and planting areas after the grading operations are completed in the presence of the Landscape Architect. The water test shall consist of applying water to the turf and planting areas to the point where water runs over the soil to show the drainage pattern. Make all corrections to the grading as required by the Landscape Architect and certify that fine grading has established drainage patterns shown on the grading plans. Certification shall be approved in writing by the Landscape Architect prior to proceeding with planting.
- C. During the finish grading process no relative compaction of the soil in turf and planting areas shall exceed 85% relative density. The reserves the right to require the Contractor to test for over compaction. The first test will be paid for by the Owner, all subsequent testing will be paid for by the Contractor.

- D. Finish grades shall be one half inch (1/2") for turf areas and two inches (2") for planting areas, below all walks and curbs.

### 3.5 WEED CONTROL

- A. The Contractor shall treat all proposed turf and planting areas with a post emergent contact systemic weed killer at manufacturer's approved rates prior to any commencement of work at the site. Desiccated and dead weed growth shall then be removed from the entire project site by scraping the vegetation growth off of the existing dirt. Dispose of removed vegetation matter lawfully. Disking in of vegetative materials is not acceptable.
- B. Weed eradication shall be ongoing throughout the course of the entire project construction from start to finish. The Contractor shall apply a post-emergent contact weed killer to eradicate all weeds that are existing or have germinated up to and throughout the 90 day maintenance period. At no time will weeds be allowed to become established. Contractor shall provide all weed control operations as directed by the Landscape Architect.

### 3.6 PLANTING

- A. Planting Procedures
  1. Planting shall be performed by workmen familiar with planting procedures and under the supervision of a qualified foreman. The planting foreman shall be on the job site at all times when planting is in progress.
  2. Planting operations shall not occur under unfavorable weather conditions.
  3. Large trees shall be planted first. Shrub planting shall be completed before groundcover is planted.
  4. Proceed and complete the landscape work as rapidly as portions of the site become available, working within the seasonal limitations for each kind of landscape work required.
  5. Cooperate with other contractors and trades working in and adjacent to the landscape work areas. Examine drawings which show the development of the entire site and become familiar with the scope of other work required.
- B. Planting Preparation and Operations
  1. Planting material shall be provided with adequate protection of root systems and balls from drying winds and sun. Do not bend or bind trees or shrubs in such a manner as to damage bark, break or destroy natural shape. Provide protective covering during delivery.
  2. Deliver trees and shrubs after preparations for planting have been completed, and plant immediately .If planting is delayed more than six (6)

hours after delivery, set trees and shrubs in shade, protect from weather and mechanical damage and keep roots moist. Do not remove container grown stock from containers until planting time.

3. All planting areas shall be smooth and even. Finish grades shall be established as indicated on the plans. Approval of Landscape Architect shall be secured before digging of holes.
4. Place all trees and shrubs in locations shown on the planting plan and obtain written field approval of the Inspector of Record before planting or digging planting pits. Inform the seven (7) days prior to placing the plants.
5. Carefully remove all canned stock from containers with tin snips or approved cutter. After removing plant from container, scarify the sides of the rootball to a depth of 1 inch at four to six equally spaced locations around the perimeter of the ball or at 12 inch intervals on sides of boxed materials. Cut and remove circling roots over 3/8 inch diameter.
6. Excavate holes of circular outline with vertical sides for all plants. The vertical sides and bottom of the holes shall be thoroughly scarified to promote union of backfill with existing soils. All tree holes shall be drilled with a twenty-four inch (24") diameter auger penetrating soil layers to sand or to a minimum depth of six (6) feet but in no case further than ten (10) feet. Precautions shall be exercised to avoid smooth sides on the holes. Offset augured hole eighteen inches (18") from planned tree location to avoid settling of tree after planting.
7. The Contractor shall test plant holes for drainage by flooding with water. If the water does not drain out within two (2) hours, excavating shall be carried down as required to achieve such drainage by breaking through the hardpan layer.
8. Tree and shrub holes shall be at least twice the width and depth of the plant container.
9. Set each plant in the center of the hole, plumb and straight. Set the crown of the plant at one inch (1") above finish grade (after settling). When ½ of the backfill mix has been placed, tamp-in, insert fertilizer and allow no air pockets as remainder of backfill is added.
10. Compact soil around the rootball of all plants and water in thoroughly.
11. Excess soil from plant holes shall be cultivated and raked to a smooth outline.
12. Shrubs and groundcovers shall be installed in relation to walks and paving to allow for future growth without obstructing traffic.
13. All plants shall be set in watering basin which shall be four feet (4') in diameter and four inches (4") deep for trees and two feet (2') in diameter

and three inches (3") deep for shrubs and vines four feet (4') in diameter and four (4") deep for trees in turf. Remove watering basins at end of maintenance.

14. Ground cover plants shall be planted at the spacing noted on the drawings in a triangular pattern. Not more than one hour shall elapse from the time any groundcover plant is planted until it is watered.
15. Upon completion of planting, the Landscape Contractor shall topdress the entire planting area with three inches (3") mulch and treat area with pre-emergent at a rate recommended by the manufacturer. Contractor shall coordinate application with the Owner and provide certificates of application to Inspector of Record. Provide one final application of pre-emergent seven (7) days prior to final acceptance.

C. Pruning

1. Prune plants in accordance with established horticultural practice and only when necessary. Shearing of any plants will not be acceptable.

D. Tree Staking

1. Trees shall be supported by three (3) tree stakes, unless otherwise noted.
2. Stake shall be set firmly in the ground on the northwest side of the plant, and equally space others around tree.
3. Trees shall be tied to upright stakes loosely with Tree Ties (see planting detail).

E. Root Barrier

1. Install root barrier per planting details.

F. Decomposed Granite Surfacing

1. Place decomposed granite after mixing in "Stabilizer" over compacted subgrade in areas designated on plans. Add light application of water to moisten material and roll to compact to 85% relative density. Provide smooth grade to drain.

G. Turf

1. The area to be planted shall be finish graded to present a smooth and even surface free of humps and hollows and conforming to the grading plans. Immediately prior to planting, the surface of the area to be planted shall be sufficiently loose and friable to receive the turf sod or stolons.

2. The Type One turf sodded grass variety to be planted shall be 'Celebration' variety of improved hybrid bermuda grass.
3. The minimum application rate for the Turf Type two 'Celebration' variety of hybrid Bermuda grass stolons to be used by the Contractor shall be eight (8) bushels per 1,000 square feet. The Contractor will be required to submit invoices for all Landscape material to document that the specified quantity of material has been supplied.

The standard unit of measurement for hybrid bermuda grass stolons shall be a bushel. A bushel is defined as 1.24 cubic feet loosely packed. The District reserves the right to check the bags or boxes of the shipped stolons to verify that their noted volume is accurate. They shall be produced in fields periodically inspected by the California Department of Food and Agricultural Nursery Section to insure high quality and freedom from diseases, insects and weeds. Chaff, soil or inert material shall compose no more than eight (8) percent by weight. Stolons shall be defined as fresh living sections of runners and stems of hybrid Bermuda grass having nodes (joints) which will produce growth when properly planted and maintained. For mechanical planting, the stolons to be only single cut minimum length to be 1-1/2" and maximum length of 3". For hydromulching, the stolons to be double cut.

Stolons may be held on site for only a maximum of twenty-four (24) hours if kept shaded, piled no more than two deep and continually saturated with water.

#### 4. Type Two Turf Stolon Planting

All weed control shall have been performed prior to turf application as specified previously in these Specifications.

The turf shall be planted by vegetative propagation methods such as stolonizing or hydromulching.

The turf shall be sown evenly at a minimum rate as specified previously in these Specifications.

Stolonizing refers to broadcasting shredded sprigs of stoloniferous grasses like bermuda grass. In stolonizing, the grass sod is chopped into sprigs (pieces of stolons and rhizomes) that are spread over a prepared seed bed. Stolons are shoots of grass that originate at the base of the plant and extend along the surface of the soil. Rhizomes are shoots like stolons that extend laterally below the surface of the soil. Spread the stolons evenly over the entire turf area. Soil must be kept moist until stolons are rooted.

The stolon beds shall be kept continually moist after stolonizing. The time interval between "water off and during "water on" irrigation is governed strictly by the amount of surface moisture. This means simply that the stolons should be kept damp at all times and irrigation should be adjusted accordingly. Each watering period should be regulated to just dampen the stolons without creating runoff. Once the process of germination begins and before a life sustaining root is thrust into the earth, the stolons are dependent on absorbing surface moisture alone. This is the critical germination period and during this period if the stolons dry out they will die. The Contractor is reminded that stolons are perishable and their well-being is his responsibility. When germination has progressed to the point where a root is thrust into the earth then the life sustaining moisture is picked up by the root and frequent irrigation is not as critical. Therefore, it is the responsibility of the Contractor to monitor the site conditions so he is able to alter the watering times and frequencies to keep the stolonized areas moist. Care shall be taken by the Contractor to avoid any erosion or "flotation" or "flowing" of the top surface of the soil.

Hydromulching is an approved method of planting hybrid bermuda grass. Hydromulching is the mixture of a prepared wood mulch, stolons, water, mulch binder and fertilizer sprayed through a hose onto a prepared turf bed. The site preparation needed for hydromulching is the same as stated previously.

Hydraulic equipment used for the application of the fertilizer, stolons and slurry of prepared wood mulch shall be of the "Super Hydroseeded" type. The equipment shall have a built-in agitation system and operating capacity sufficient to agitate, suspend and homogeneously mix a slurry.

The slurry distribution lines shall be large enough to prevent stoppage and shall be equipped with a set of hydraulic spray nozzles which will provide a continuous non-fluctuating discharge. The slurry tank shall have a minimum capacity of 1,000 gallons and shall be mounted on a traveling unit, either self-propelled or drawn by a separate unit, which will place the slurry tank and spray nozzle within sufficient proximity to the areas to be seeded.

The slurry preparation shall take place at the site of work and shall begin by adding water to the tank when the engine is at half throttle. When the water level has reached the height of the agitator shaft, good recirculation shall be established and at this time the stolons shall be added. The stolons shall be of quality and mixture as previously specified.

The engine throttle shall be opened to full speed when the tank is filled with water. All the wood pulp mulch shall be added by the time the tank is two-thirds to three-fourths full. Spraying shall commence immediately when the tank is full.

Application rate of hydromulching as follows:

Wood Mulch	=	35 .lbs/1,000 sq.ft.
Stolons	=	as specified

Mulch Binder (Mulch Tackifier) = 2 .lbs/1,000 sq. ft.

5. Type One Turf Sod Planting

Moisten prepared surface immediately prior to laying sod. Lay sod same day as delivery to prevent deterioration.

Lay sod tight with no open joints visible, and no overlapping; stagger end joints 12 inches minimum as in laying bricks. Do not stretch or overlap sod pieces. Lay smooth. Place sod so that final grade will match adjacent areas. Water lightly the sodded areas immediately after installation. After all sod is laid, roll sodded areas with 300 pound vibrating roller to provide good bond between sod and soil and to remove minor depressions and irregularities. Roller shall not leave any marks on sod. Immediately following installation, the soil should be moistened as much as necessary to keep it squishy wet. Avoid traffic on the new sodded areas until after first mowing.

6. The Contractor shall take note that the District's allowable planting window for Type two bermuda grass extends from May 1 to August 15 each year. If the contractor is unable to plant the specified bermuda grass Type Two turf variety within the allowable time period, he will then be required to come back the next following year to establish the specified Type Two turf variety. All additional costs associated with the call back to establish the specified Type Two turf variety shall be borne by the Contractor with no additional compensation. It is the Contractor's responsibility to schedule his work to meet the required planting schedule. If the Contractor is unable to establish the specified Type Two turf variety he will then be required to provide and establish an interim stand of turf in all of the Type Two turf areas. The contractor shall provide and plant five (5) pounds per 1,000 square feet of Annual Ryegrass as interim to specified variety in all the Type two turf areas. All costs associated with the Ryegrass establishment shall be borne by the Contractor with no additional compensation.

At the onset of the callback work to establish the specified Type Two Bermuda grass and prior to planting the Bermuda grass, all of the interim stand of annual ryegrass shall be fully eradicated by the use of herbicide as approved by the District. The dead ryegrass shall be removed from all of the turf areas so that the turf area dirt is fully exposed with no vegetative cover. All weeds present shall be eradicated at this time and removed from the project site.

The Contractor shall then proceed with establishing the Bermuda grass stolons. Provide a smooth, even, friable turf bed prior to placing stolons. Fine grade the entire turf areas to ensure that all humps and hollows are eliminated and drainage pattern meets the project grading plans. The Contractor may be required to water test the turf areas for drainage with visual inspection by the District. Eradicate weeds and scarify top one half inch (1/2") of bed in turf areas after fine grading. Bermuda grass stolons should then be applied as required in paragraph 32 93 00, 3.06-G of these specifications. The Contractor shall ensure that the specified materials are provided and submit all invoices for materials applied to the Project Inspector. Upon completion of the seeding the Contractor shall begin a ninety (90) calendar day maintenance period as required in Section 32 93 00, 3.09 of these specifications. The Contractor shall continue

maintenance of the turf area until accepted by the District.

#### 7. Watering

After acceptance by the Landscape Architect or inspector of the planting operations, the Contractor shall apply water, through the irrigation system, to make all planted areas moist, but not flooded. The areas shall not be watered to the extent of saturating the soil and causing "flotation" or "flowing" of the top surface of the soil. After water has once been applied, no portion of the planted areas shall be allowed to dry out during the entire maintenance period. The Contractor shall be responsible to monitor the site and alter the watering times and frequencies to meet site conditions.

### 3.7 CLEAN-UP

- A. All areas shall be maintained in a neat and orderly condition at all times. All reasonable precautions shall be taken to avoid damage to existing planting and structures.
- B. Damaged areas shall be restored to their original condition.
- C. After the planting operations are completed, the Landscape Contractor shall remove all trash, excess soil, tree protection barriers, empty containers or any other debris accumulated by the work from the site. All damage caused by the work shall be repaired at the Contractor's expense and the ground shall be left in a neat and orderly condition to the satisfaction of the Landscape Architect.

### 3.8 GENERAL INSPECTION

- A. A general inspection will be held upon conclusion of the planting operations, irrigation system installation and after clean-up has occurred (substantial completion). The Landscape Architect shall be informed in writing a minimum of seven (7) working days prior to the time the work is ready for inspection in order to arrange a suitable time and date for such inspection.
- B. At the time of inspection, Contractor shall have all planting areas free of weeds and neatly cultivated and topdressed with mulch. All plant basins shall be in good repair. All trees shall be properly staked.
- C. Work requiring corrective action or replacement in the judgment of the Landscape Architect shall be performed within five (5) days after the inspection. Corrective work and materials replacement shall be in accordance with the drawings and specifications and shall be made by the Contractor at no cost to the Owner. A subsequent inspection shall then be arranged.
- D. If, after the inspection, the Landscape Architect is of the opinion that all the work has been performed as per drawings and specifications, the Contractor will be given written notice of substantial completion.



### 3.9 MAINTENANCE

- A. The Contractor shall continuously maintain all areas included in the contract during the progress of the work, through the establishment period and until final acceptance of the work.

After all work indicated on the drawings or herein specified has been completed, inspected, and approved by the Landscape Architect, the Contractor shall commence a ninety (90) calendar day maintenance period.

Maintenance work includes monitoring the site to control all watering, replanting, fertilizing, mulching and cultivating necessary to bring the planted areas to a healthy growing condition, and any additional work needed to keep the areas neat and attractive. Any date when the Contractor fails to adequately water, replace unsuitable planted areas and other work determined to be necessary by the Landscape Architect, will NOT be credited as part of the Maintenance Period.

- B. The maintenance period shall commence immediately following the first mowing of the turf and continues for a period of ninety (90) calendar days as specified in these Specifications. No additional payment will be made for additional time necessary for plant establishment required by the Owner.
- C. During the progress of the maintenance period, the Contractor and the Landscape Architect shall conduct inspections at no less than 30 day intervals to determine that ongoing maintenance activities have been conducted by the Contractor. If in the opinion of the Landscape Architect, ongoing maintenance has not been conducted by the Contractor in a satisfactory manner the maintenance period shall be suspended. The Contractor shall provide remedial work as directed by the Owner to correct the found deficiencies and schedule another inspection. If after the reinspection the work is deemed acceptable the maintenance period shall resume.
- D. The Contractor shall fertilize the planted areas every three weeks with (15-15-15) fertilizer at a rate of 5 lbs. / 1,000 sq. ft. The Contractor shall continue the fertilizer application until the planted areas are accepted.

At no time will broadleaf and annual weeds be allowed to become established in the planted areas. At the earliest time possible the Contractor shall eradicate all weeds in the planted areas by application of herbicides and/or mechanical or hand labor means. The Contractor shall not proceed with any weed eradication without the written consent of the Owner.

All final inspection of the planting areas shall be made by the Landscape Architect in the presence of the Contractor at the end of the ninety (90) day maintenance period to determine if the planted areas are well established and healthy throughout the entire site. If the areas are determined by the as being unacceptable, the maintenance period will be extended to such time as the areas are brought up to the acceptable level.

- E. All trees, shrubs, ground cover shall be kept at a optimum growing condition by watering weeding, replanting, fertilizing, cultivating, tree stake repair, spraying for diseases and insects, replace dead or dying materials, pruning as directed, maintaining proper grades of plants, and providing any other reasonable operations of maintenance and protection required for successful completion of the project.
- F. The Contractor shall be responsible to replace all loss of plants due to theft, vandalism or any other causes till final acceptance of the work by the Landscape Architect.

### 3.10 FINAL ACCEPTANCE

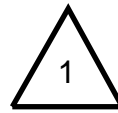
- A. Final inspection will be made at the end of the maintenance period, provided all deficiencies brought out during that time have been corrected. If these deficiencies have not been corrected by the end of the stated maintenance period, the Contractor shall continue to maintain the project at his own expense beyond the specified time. When all deficiencies have been corrected, the final inspection will be held with the Landscape Architect, and Contractor.
- B. If, after the final inspection, the Landscape Architect is of the opinion that the work is acceptable, the Contractor will be given written acceptance of the project.

### 3.11 WARRANTY AND REPLACEMENT

- A. All trees and plants provided under this Contract shall be in good, healthy and flourishing condition one growing year from the date of final acceptance. If deemed necessary for replacements; Quality, species and size of replacements to be determined by the Landscape Architect.
- B. Except for loss beyond control of the Landscape Contractor, replacement of trees and plants of comparable quality and size shall be made by the Landscape Contractor. Replacement trees and plants shall be installed and guaranteed as specified for original planting.
- C. The Landscape Contractor shall be held responsible for repair of damages resulting from the defects, materials equipment or workmanship during the execution of his contract.
- D. All trees, shrubs and all ground covers shall be guaranteed for one (1) calendar year from final project acceptance.

### **END OF SECTION**





# Pre-Bid Bulletin 01

PROJECT:	SHIELDS & BRAWLEY ELEMENTARY SCHOOL	DATE:	03/3/2023
LOCATION:	Shields & Brawley Elementary School 4108 W. SHIELDS AVE, FRESNO, CALIFORNIA 93722	DSA APP. NO.:	02-116800
		DSA FILE NO.:	10-23
TO:	Kitchell CEM	PBK NO.:	17-67

*The Client wishes to incorporate the following modification into the scope of construction for the subject project. Briefly stated, this modification is as follows:*

**SHIELDS & BRAWLEY: SITE, MAIN BUILDING, AND MPR MODIFICATIONS**

DESCRIPTION: DISTRICT REVISIONS AFTER DSA APPROVAL

Contractor to review all modifications made by the District on the Site, Main Building, and MPR Building. Contractor to provide costs for all modifications. These sheets are not part of the DSA approved plans. The intent of issuing these sheets are to help the contractors to identify their discipline simpler.

REQUESTED BY ARCHITECT:  
*Information for Contractors for bidding proposes only*

ATTACHMENTS:  
AD 1-29a; AD 1-29b; AD 1-29c; AD 1-29d

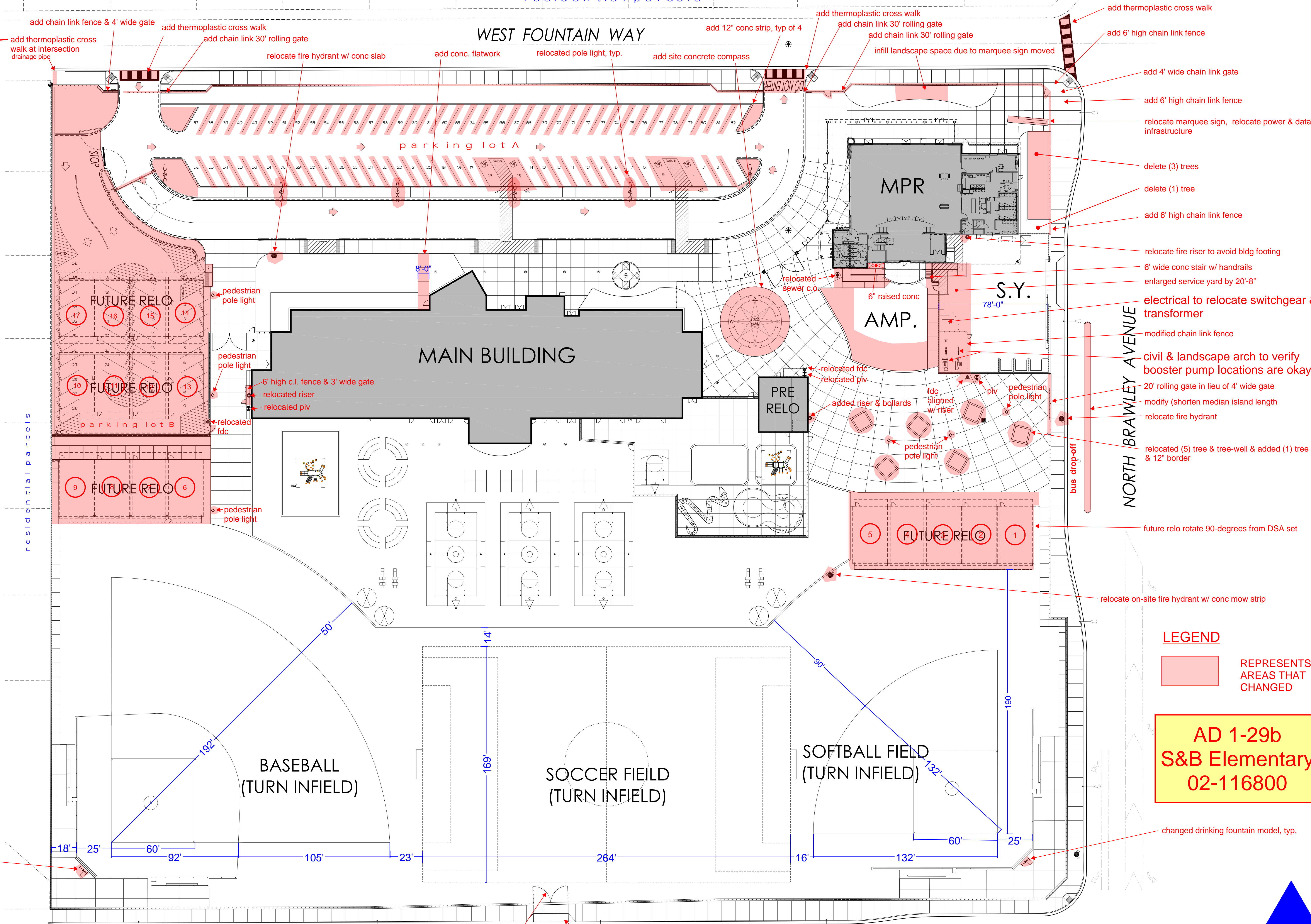
ACTION TO BE TAKEN:  
none

SUBMITTED BY: | PBK

**AD 1-29a  
S&B Elementary  
02-116800**



# WEST FOUNTAIN WAY

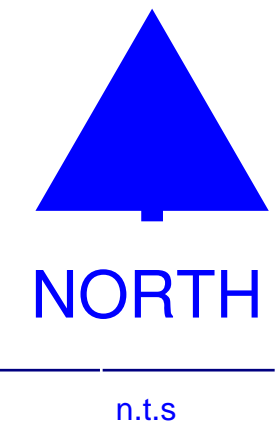


**LEGEND**  
 REPRESENTS AREAS THAT CHANGED

**AD 1-29b  
 S&B Elementary  
 02-116800**

## sheet A0.1, OVERALL SITE PLAN

### Shields & Brawley Elementary School



changed drinking fountain model, typ.

25' wide (pair) swing chain link gates 25' wide drive approach

WEST SHIELDS AVENUE

relocate on-site fire hydrant w/ conc mow strip

future relo rotate 90-degrees from DSA set

relocated (5) tree & tree-well & added (1) tree & 12" border

civil & landscape arch to verify booster pump locations are okay

electrical to relocate switchgear & transformer

enlarged service yard by 20'-8"

6' wide conc stair w/ handrails

relocate fire riser to avoid bldg footing

add 6' high chain link fence

delete (1) tree

delete (3) trees

relocate marquee sign, relocate power & data infrastructure

add 6' high chain link fence

add 4' wide chain link gate

add thermoplastic cross walk

infill landscape space due to marquee sign moved

add chain link 30' rolling gate

add thermoplastic cross walk

add 12" conc strip, typ of 4

add site concrete compass

relocated pole light, typ.

add conc. flatwork

relocate fire hydrant w/ conc slab

add thermoplastic cross walk

add chain link 30' rolling gate

add chain link fence & 4' wide gate

add thermoplastic cross walk at intersection drainage pipe

FUTURE RELO 17

FUTURE RELO 16

FUTURE RELO 15

FUTURE RELO 14

FUTURE RELO 13

FUTURE RELO 10

FUTURE RELO 9

FUTURE RELO 6

pedestrian pole light

pedestrian pole light

relocated fdc

pedestrian pole light

6' high c.l. fence & 3' wide gate

relocated riser

relocated piv

relocated fdc

relocated piv

added riser & bollards

fdc aligned w/ riser

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

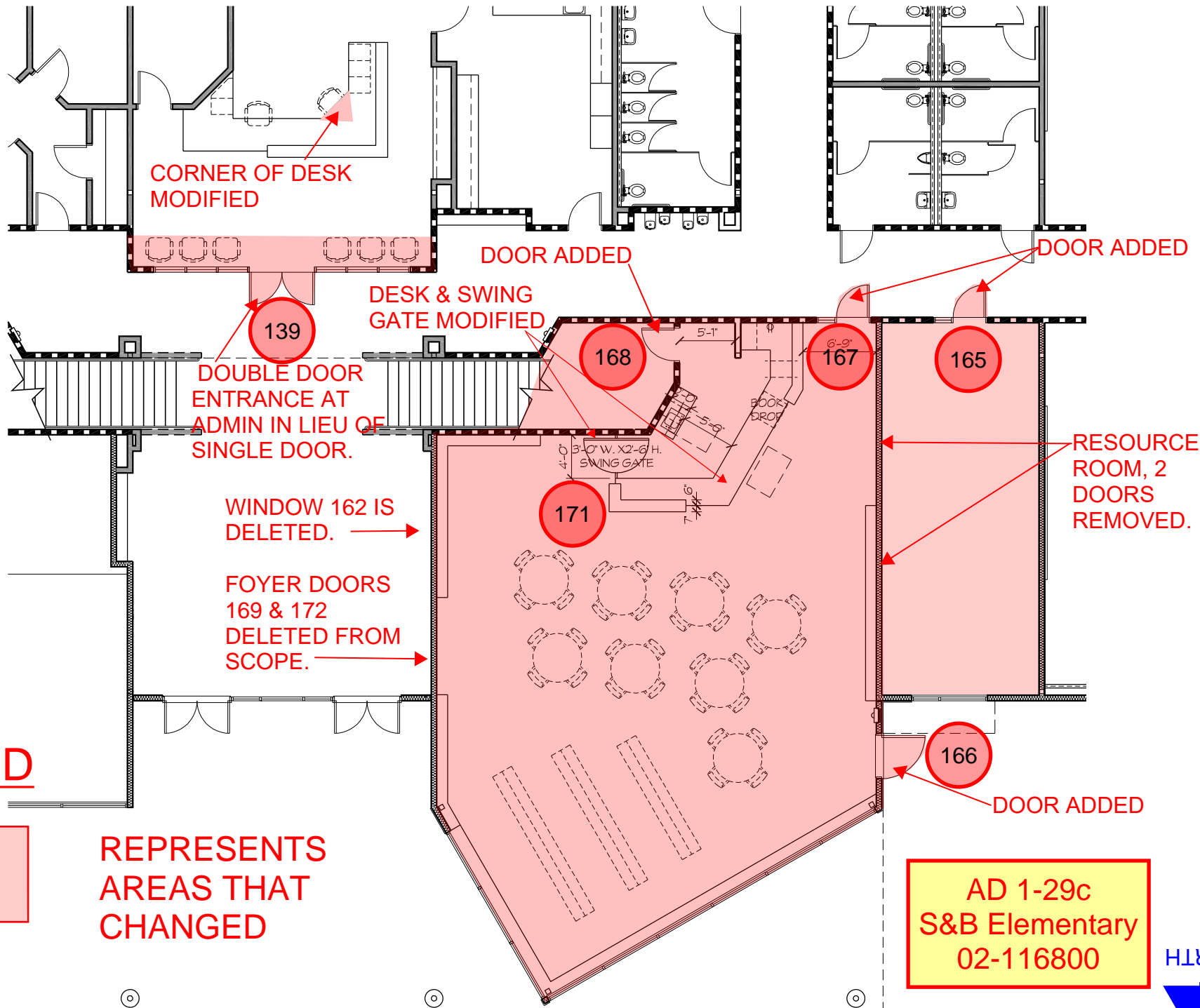
pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light

pedestrian pole light



**LEGEND**



REPRESENTS  
AREAS THAT  
CHANGED

AD 1-29c  
S&B Elementary  
02-116800

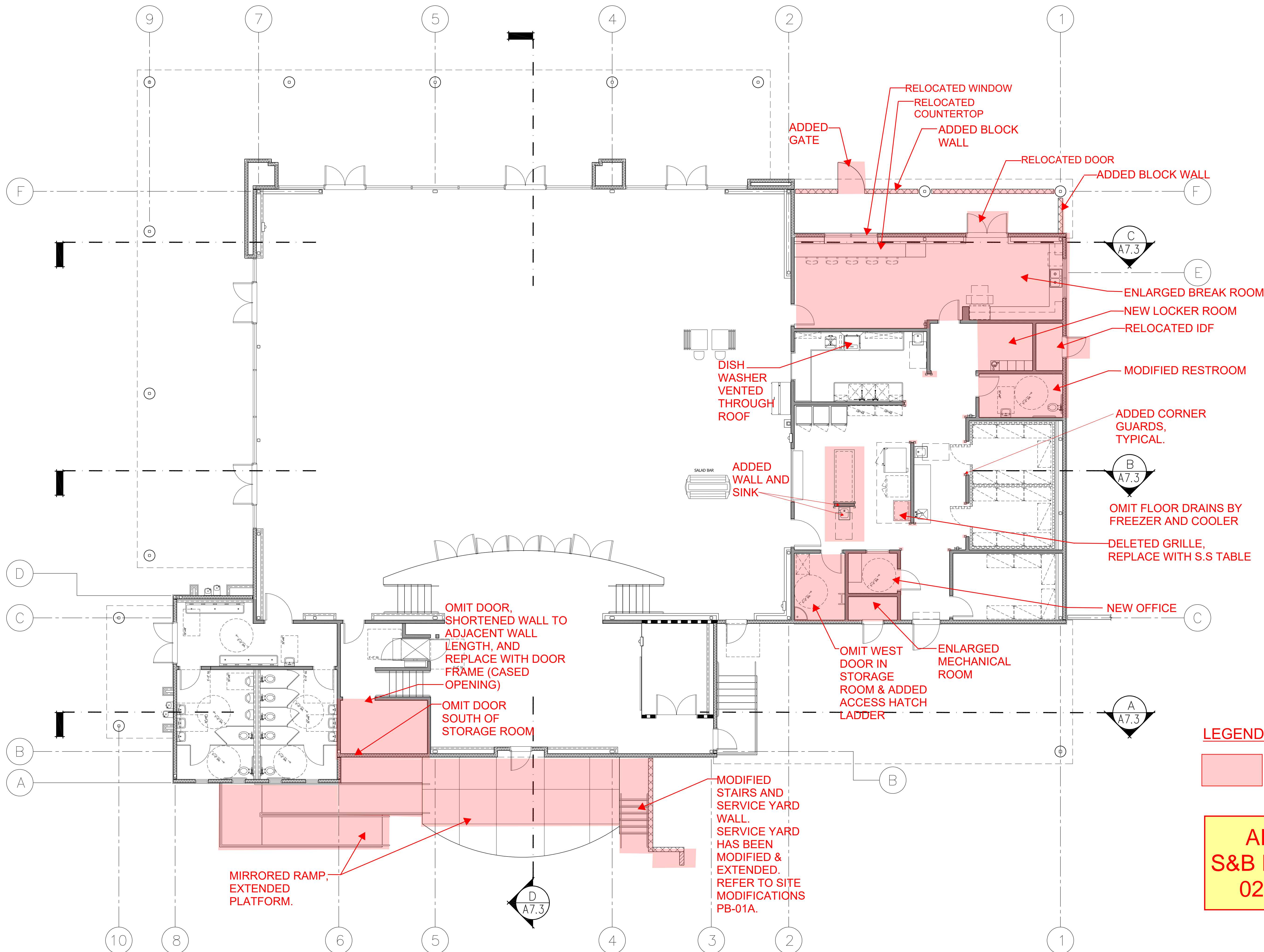


**SHEET A1.2 (Media Lab) PARTIAL FLOOR PLAN**

Shields & Brawley Elementary School

n.t.s





RELOCATED WINDOW  
 RELOCATED COUNTERTOP  
 ADDED BLOCK WALL  
 RELOCATED DOOR  
 ADDED BLOCK WALL

ENLARGED BREAK ROOM  
 NEW LOCKER ROOM  
 RELOCATED IDF

MODIFIED RESTROOM

ADDED CORNER GUARDS, TYPICAL.

OMIT FLOOR DRAINS BY FREEZER AND COOLER

DELETED GRILLE, REPLACE WITH S.S TABLE

NEW OFFICE

ENLARGED MECHANICAL ROOM  
 OMIT WEST DOOR IN STORAGE ROOM & ADDED ACCESS HATCH LADDER

DISH WASHER VENTED THROUGH ROOF

SALAD BAR  
 ADDED WALL AND SINK

OMIT DOOR, SHORTENED WALL TO ADJACENT WALL LENGTH, AND REPLACE WITH DOOR FRAME (CASED OPENING)

OMIT DOOR SOUTH OF STORAGE ROOM

MODIFIED STAIRS AND SERVICE YARD WALL. SERVICE YARD HAS BEEN MODIFIED & EXTENDED. REFER TO SITE MODIFICATIONS PB-01A.

MIRRORED RAMP, EXTENDED PLATFORM.

**LEGEND**

REPRESENTS AREAS THAT CHANGED

AD 1-29d  
 S&B Elementary  
 02-116800

**sheet A1.12, MPR FLOOR PLAN**  
 Shields & Brawley Elementary School





# CONSTRUCTION LEGEND

- (A) PLACE STANDARD DUTY ASPHALT CONCRETE PER DETAIL A ON SHEET C6.1 AFTER PAVEMENT CURING PERIOD, PLACE ASPHALT BASED SEAL COAT PER SPECIFICATIONS.
- (B) PLACE HEAVY DUTY ASPHALT CONCRETE PER DETAIL A ON SHEET C6.1 AFTER PAVEMENT CURING PERIOD, PLACE ASPHALT BASED SEAL COAT PER SPECIFICATIONS.
- (C) CONSTRUCT CONCRETE CURB AND GUTTER PER DETAIL P-9, SEE C6.7
- (D) CONSTRUCT CONCRETE CURB PER DETAIL E ON SHEET C6.7
- (E) CONSTRUCT CONCRETE MOWSTRIP PER DETAIL A ON SHEET C6.7
- (F) CONSTRUCT SOFTBALL BACKSTOP PER DETAILS ON SHEET C6.4
- (G) CONSTRUCT BASEBALL BACKSTOP PER DETAILS ON SHEET C6.5
- (H) CONSTRUCT CMU WALL PER CITY OF FRESNO STANDARD P-93 ON SHEET C6.9. SEE ARCHITECT'S PLAN FOR FINISH AND COLOR
- (I) FURNISH AND INSTALL SINGLE BASKETBALL GOAL, PER DETAIL J ON SHEET C6.2
- (J) FURNISH AND INSTALL VOLLEYBALL POSTS, POST GROUND & STORAGE GROUND SLEEVES, COMPRESSION CAPS AND NET PER DETAIL I ON SHEET C6.2
- (K) CONSTRUCT 8" CONCRETE CURB PER CITY OF FRESNO STANDARD P-9
- (L) FURNISH AND INSTALL TETHERBALL POST, BALL ASSEMBLY, STORAGE SLEEVES, FOOTING, AND COMPRESSION CAPS PER DETAIL H ON SHEET 6.2
- (M) REFER TO ARCHITECTURAL PLANS
- (N) FURNISH AND INSTALL WALK GATE OR DOUBLE DRIVE GATE PER DETAIL A ON SHEET C6.3
- (O) FURNISH AND INSTALL 6" HIGH CHAIN LINK FENCE PER DETAIL A ON SHEET 6.2
- (P) PAINT BASKETBALL COURT LINES PER DETAIL A ON SHEET C6.2
- (Q) PAINT VOLLEYBALL COURT LINES PER DETAIL C ON SHEET C6.2
- (R) PAINT TETHERBALL GAME COURT PER DETAIL F ON SHEET C6.2
- (S) PAINT FOURSQUARE GAME COURT PER DETAIL B ON SHEET C6.2
- (T) PAINT HOPSCOTCH GAME COURT PER DETAIL E ON SHEET C6.2
- (U) PAINT DODGEBALL GAME COURT PER DETAIL G ON SHEET 6.2
- (V) INSTALL BEST/X-1 POLICE/FIRE BYPASS LOCK
- (W) FIRE ACCESS
- (X) INSTALL UNDER SIDEWALK DRAIN, SEE SHEET C5.2
- (Y) INSTALL 6" HIGH WROUGHT IRON FENCE PER DETAIL ON ARCHITECT'S PLAN AND DETAIL
- (Z) INSTALL STEEL GATE OR WALK GATE PER ARCHITECT'S PLAN AND DETAIL
- (AA) INSTALL HEAVY DUTY CONCRETE FIRE LANE, 6-INCHES PCC OVER 4-INCHES CLASS 2 AGGREGATE BASE COURSE OVER 12-INCHES COMPACTED SUBGRADE

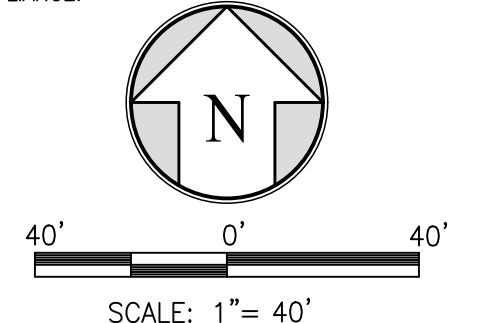
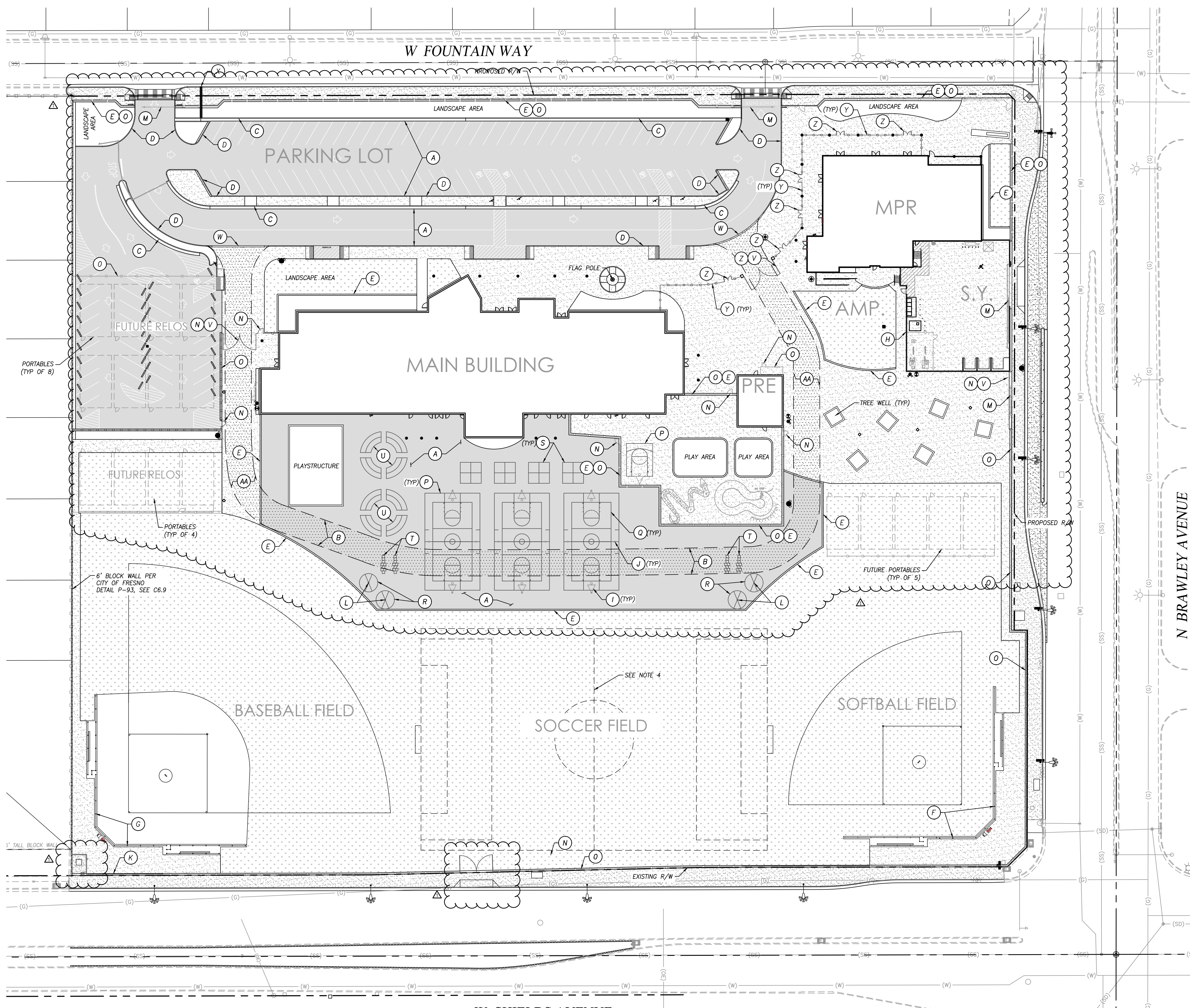
- STANDARD DUTY PAVEMENT STRUCTURAL SECTION PER DETAIL A, C6.1
- LIMIT OF NEW HEAVY-DUTY FIRE LANE PAVEMENT STRUCTURAL SECTION PER DETAIL A, C6.1
- CONCRETE FLAT WORK PER ARCHITECTURAL AND LANDSCAPE PLANS
- LIMIT OF REINFORCED CONCRETE FIRE LANE PER ARCHITECTURAL PLANS

# CONSTRUCTION NOTES

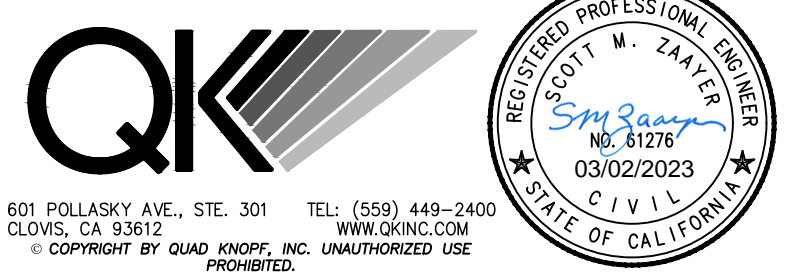
- ALL CONCRETE MOWSTRIPS, CURBS, GUTTERS AND VALLEY GUTTERS SHALL HAVE WEAKENED PLANE JOINTS AT 15 FEET (MAXIMUM) ON CENTER AND ONE-HALF INCH THICK PREMOULDED EXPANSION JOINTS AT 45 FEET ON CENTER.
- NO CONCRETE MAY BE POURED UNTIL ALL FORMS AND REINFORCEMENT HAVE BEEN REVIEWED AND APPROVED BY THE PROJECT INSPECTOR.
- SEE STREET IMPROVEMENT PLANS FOR OFF-SITE IMPROVEMENTS.
- THE DISTRICT SHALL PROVIDE STRIPING OF BALL FIELDS.
- SEE ARCHITECTURAL PLANS FOR RAMP AND TRUNCATED DOME DETAILS.
- SEE LANDSCAPE PLANS FOR PROPOSED LANDSCAPING.

# GENERAL NOTES

- ALL LABOR, MATERIALS AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS CONSISTING OF THESE PLANS AND SPECIFICATIONS, CITY OF FRESNO IMPROVEMENT STANDARDS, CALTRANS STATE STANDARD PLANS AND SPECIFICATIONS (2018), CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), AWWA SPECIFICATIONS, THE UNIFORM PLUMBING CODE, THE NATIONAL ELECTRIC CODE, LOCAL HEALTH DEPARTMENT AND PERMITS AS ISSUED BY OTHER AGENCIES. THE ORDER OF PRECEDENCE OF THE CONTRACT DOCUMENTS SHALL BE IN ACCORDANCE WITH SECTION 5-1.02 OF THE CALTRANS STATE STANDARD PLANS AND SPECIFICATIONS, EXCEPT AS SPECIFICALLY NOTED ON THE PROJECT PLANS OR SPECIFICATIONS OR AS REQUIRED BY PERMITS FROM OTHER AGENCIES AND/OR UTILITY COMPANIES INVOLVED IN THE WORK.
- ALL SIGNING AND STRIPING SHALL CONFORM TO THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD).
- THE CONTRACTOR SHALL BE LICENSED AS A CLASS "A" GENERAL ENGINEERING CONTRACTOR AND ALL SUBCONTRACTORS SHALL POSSESS THE APPROPRIATE CLASS "B" OR "C" OR OTHER SPECIALTY LICENSE AS REQUIRED BY THE CATEGORY OF WORK TO BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 9, DIVISION 3 OF THE BUSINESS AND PROFESSIONS CODE.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY AND ALL CONFLICTS BETWEEN CONTRACT DOCUMENTS AND THE ACTUAL SITE CONDITIONS PRIOR TO COMMENCING WORK IN ANY GIVEN AREA AND ALLOW TIME FOR THE ENGINEER TO ISSUE RESOLUTION TO ANY PROPOSED CONFLICTS. THE CONTRACTOR SHALL CONTINUE WORK IN OTHER AREAS OF THE PROJECT WITHOUT SUCH CONFLICTS UNTIL THE ENGINEER HAS ISSUED RESOLUTION BY CHANGE ORDER OR OTHER PROJECT APPROVED LINES OF COMMUNICATION.
- SHOULD IT APPEAR THAT THE WORK TO BE DONE OR ANY MATTER RELATIVE HERETO IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT OK AT (559) 733-0440 FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
- UNAUTHORIZED CHANGES AND USES: THE ENGINEER PREPARING THESE PLANS SHALL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS BY OTHERS. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER ANY PROPOSED MODIFICATIONS AND/OR CHANGES TO THE PLANS AND SPECIFICATIONS IN WRITING WITH SUFFICIENT DETAILED INFORMATION AND TIME TO ALLOW THE ENGINEER TO CONDUCT AN ANALYSIS OF THE PROPOSED CHANGE AND PREPARE A WRITTEN RESPONSE TO THE CONTRACTOR. APPROVED CHANGES AND/OR MODIFICATIONS TO THE PLANS AND SPECIFICATIONS SHALL BE ISSUED BY THE ENGINEER AS CHANGE ORDERS.
- THESE PLANS ARE THE PROPERTY AND COPYRIGHT OF THE ENGINEER AND SHALL NOT BE USED ON ANY OTHER WORK EXCEPT BY WRITTEN AGREEMENT WITH THE ENGINEER. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS AND FIELD DIMENSIONS SHALL BE VERIFIED ON THE JOB SITE. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE START OF ANY WORK.
- CONTRACTOR SHALL PROVIDE PEDESTRIAN, VEHICLE, WORKER AND TREE PROTECTION AS NECESSARY FOR THE FULL DURATION OF THE PROJECT.
- IN THE EVENT OVERHEAD ELECTRICAL LINES EXIST WITHIN THE LIMITS OF CONSTRUCTION, MAINTAIN PROPER CLEARANCE. CONTACT PACIFIC GAS AND ELECTRIC TO VERIFY WIRE LOCATION.
- CONTRACTOR SHALL MAINTAIN DUST CONTROL ABOUT THE SITE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR OTHER CONSEQUENCES RESULTING FROM HIS FAILURE TO DO SO.
- THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, SIGNS, BARRICADES, FLAGMEN OR OTHER DEVICES NECESSARY TO PROVIDE FOR SAFETY; TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO ANY WORK.
- CONTRACTOR SHALL NOTIFY PROJECT ENGINEER/SURVEYOR 3 WORKING DAYS (MINIMUM) PRIOR TO WORK REQUIRING STAKING FOR PROPER SCHEDULING.
- EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AND UTILITY COMPANIES AT LEAST 2 WORKING DAYS IN ADVANCE OF CONSTRUCTION TO FIELD LOCATE UTILITIES. CALL "UNDERGROUND SERVICE ALERT" (USA) AT 1-800-227-2600 OR 811. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATION SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED AND MERGED IN THE CONTRACT UNIT PRICE.
- CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF AN OWNER'S WRITTEN AUTHORIZATION AND/OR SIGNED USE AGREEMENT PRIOR TO THE START OF WORK FOR ANY TEMPORARY WORK AREA, STANDING AREA, OR EQUIPMENT STORAGE FACILITIES TO BE USED FOR THIS PROJECT. AT THE COMPLETION OF WORK, THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A COPY OF A WRITTEN RELEASE LETTER STATING THAT ALL TEMPORARY USES FACILITIES HAVE BEEN RESTORED BACK TO THE OWNER'S SATISFACTION.
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES AND/OR OTHER RELATED FACILITIES AS SHOWN ON THESE PLANS IS BASED ON THE AVAILABLE RECORD INFORMATION; HOWEVER, THE CITY OF FRESNO AND THE ENGINEER ASSUME NO RESPONSIBILITY FOR THE ACCURACY OF THE INFORMATION AS SHOWN ON THE PLANS OR FOR THE UNOBTAINMENT OR OMISSION OF ANY SUCH INFORMATION. THE CONTRACTOR SHALL POHOLE, EXPOSE AND FIELD VERIFY THE EXACT LOCATION OF ALL EXISTING UNDERGROUND UTILITIES, PIPELINES AND/OR STRUCTURES AND SUBMIT THE INFORMATION TO THE ENGINEER AS MARK-UP DRAWINGS AND LOGS WITH SUITABLE HORIZONTAL AND VERTICAL CONTROL FOR ALL AREAS AS SHOWN ON THE PLANS OR IDENTIFIED BY USA ALERTS IN THE VICINITY OF EXISTING UNDERGROUND FACILITIES.
- 2016 CALIFORNIA BUILDING CODE AND 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN APPLICABLE FOR COMPLIANCE.



# PROJECT: SHIELDS & BRAWLEY ELEMENTARY SCHOOL



THE FIRM OF SMITH, WATANABE, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER AVAILABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE ARCHITECT SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

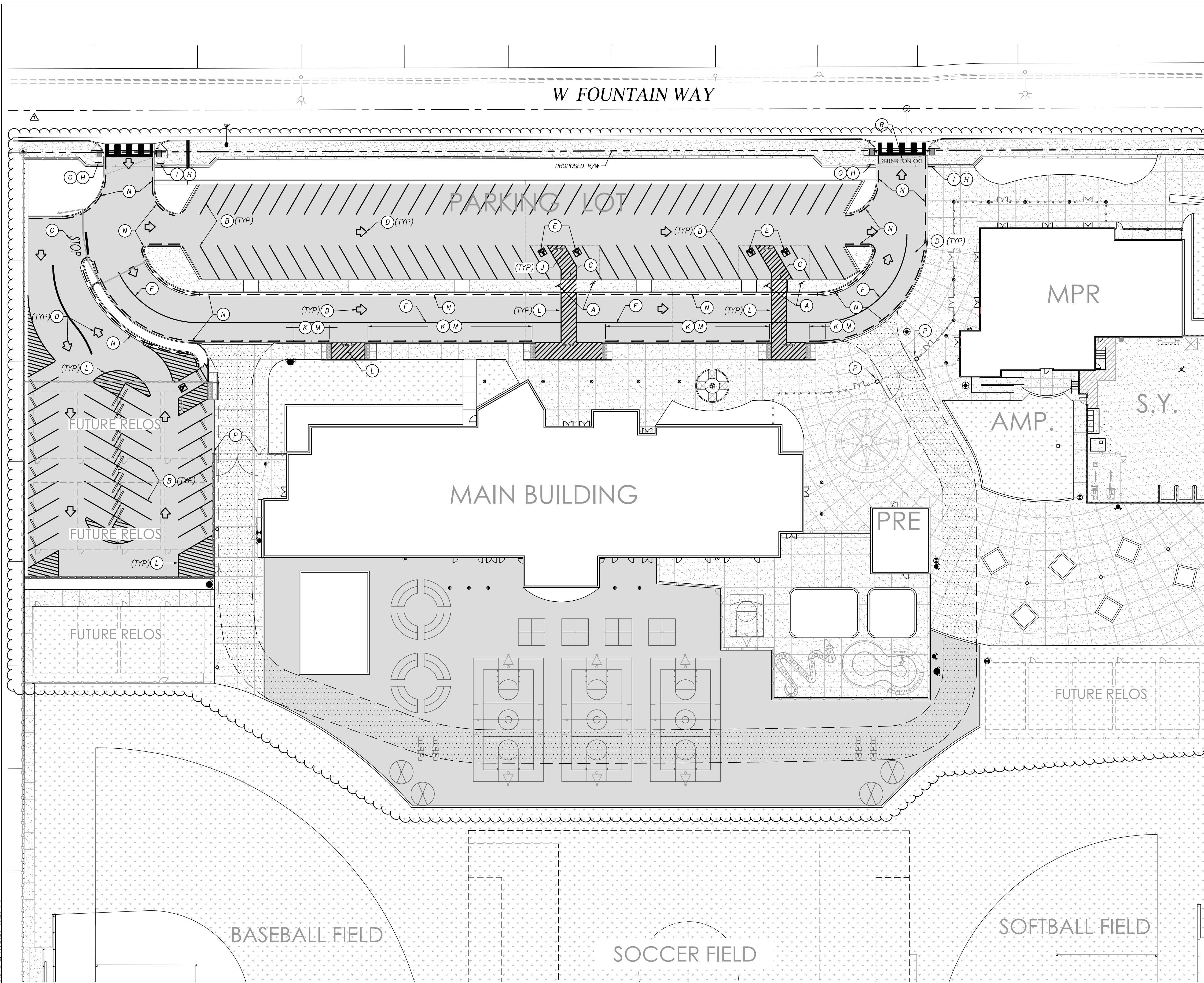
**AD 1-30a  
S&B Elementary  
02-116800**

REVISIONS		
No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION	
PROJECT COORDINATOR <b>JOHN SMITH</b>	SHEET No. <b>C2.1</b>
PROJECT NO. <b>17-67</b>	
DATE <b>1.27.23</b>	
SCALE <b>AS SHOWN</b>	

PROJECTS (2018) (B01655) (ACAD) (IMPROVEMENTS) (B01655) - SPR. M.DWG. 3/1/2023 4:45 PM





**CONSTRUCTION LEGEND**

- (A) FURNISH AND INSTALL ACCESSIBLE PARKING SIGN AND POST PER CA MUTCD FIGURE 3B-22 (CA) AND DETAIL P-88, SEE C6.10
- (B) PAINT 4" WIDE WHITE PARKING STALL STRIPING. USE BLUE PAINT FOR ACCESSIBLE STALLS.
- (C) PAINT DIAGONAL HATCHED AREA WITH 4" WIDE PARALLEL LINES SPACED AT 3" ON CENTER. USE BLUE BORDER WITH WHITE CROSS HATCH.
- (D) PAINT DIRECTIONAL ARROW PER DETAIL F ON SHEET C6.1
- (E) PAINT INTERNATIONAL ACCESSIBLE SYMBOL PER CA MUTCD FIGURE 3B-22 (CA)
- (F) PAINT 12" WIDE WHITE LINE
- (G) PAINT 48" HIGH WHITE "STOP" CONTROL LEGEND PER CALTRANS STANDARDS.
- (H) FURNISH AND INSTALL "UNAUTHORIZED VEHICLES" ENTRY SIGN AND POST PER DETAIL P-88, SEE C6.10
- (I) FURNISH AND INSTALL CALTRANS R1 "STOP" SIGN AND POST PER DETAIL P-88, SEE C6.10
- (J) PAINT 12" HIGH WHITE "NO PARKING" MESSAGE
- (K) PAINT 24" HIGH WHITE "DROP OFF ONLY" MESSAGE.
- (L) PAINT 12" WHITE WIDE CROSSWALK STRIPING
- (M) PAINT CURB YELLOW WITH 4" HIGH BLACK "LOADING ZONE" MESSAGE AT 35' ON CENTER.
- (N) PAINT CURB RED WITH 3" HIGH WHITE "FIRE LANE NO PARKING" MESSAGE AT 35' ON CENTER PER FRESNO FIRE DEPARTMENT DEVELOPMENT POLICY 403.005
- (O) INSTALL 17" X 22" SIGN WITH "WARNING-VEHICLES STOPPED, PARKED OR LEFT STANDING IN FIRE LANES WILL BE IMMEDIATELY REMOVED AT OWNER'S EXPENSE-22568(A) CALIFORNIA VEHICLE CODE-FRESNO POLICE DEPARTMENT 621-2300"
- (P) INSTALL SIGN WITH "FIRE LANE" (6" LETTERS), "VEHICLES REMOVED AT OWNERS EXPENSE" (2" LETTERS), AND "FRESNO POLICE DEPARTMENT @ (559) 621-7000" (1" LETTERS)
- (R) PAINT 48" HIGH WHITE "DO NOT ENTER" CONTROL LEGEND PER CALTRANS STANDARDS.

--- "LOADING ZONE"  
 --- "NO PARKING"

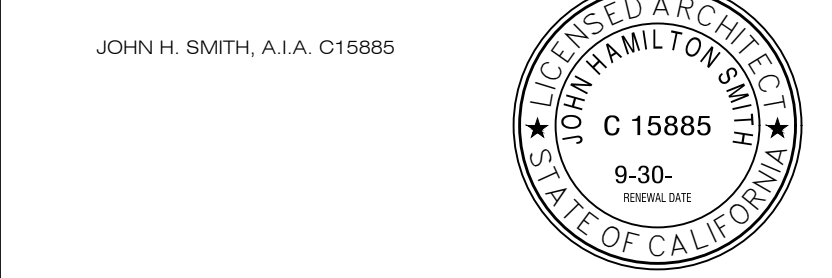
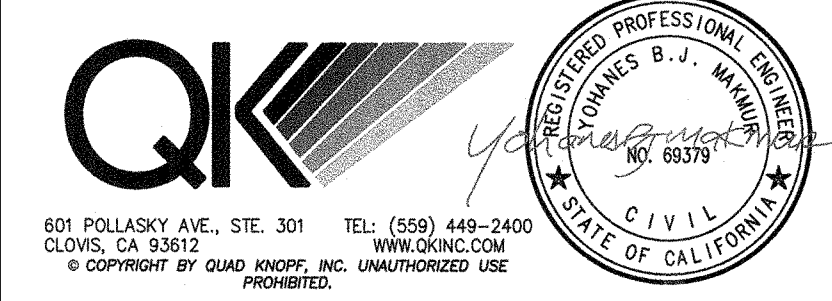
**CONSTRUCTION NOTES**

- 1. ALL MESSAGES ON CURBS SHALL BE PAINTED ON FACE OF CURB.



7790 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 T 559.448.8400 F 559.448.8467  
 www.sim-prk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



THE FIRM OF SMITH, WANAMBA, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER AVAILABLE PRIORITY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED RELEASE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

**AD 1-31a**  
**S&B Elementary**  
**02-116800**

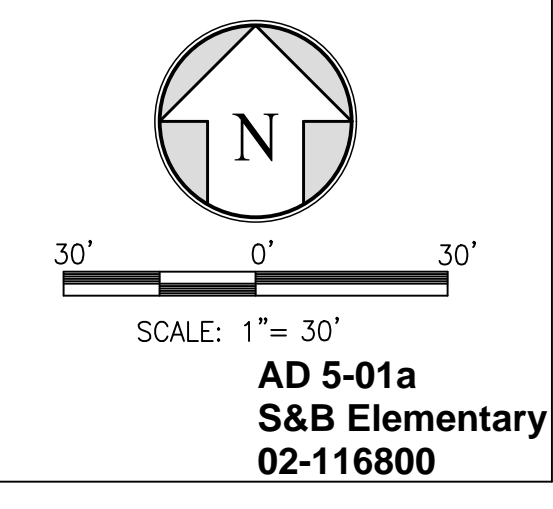
REVISIONS

No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

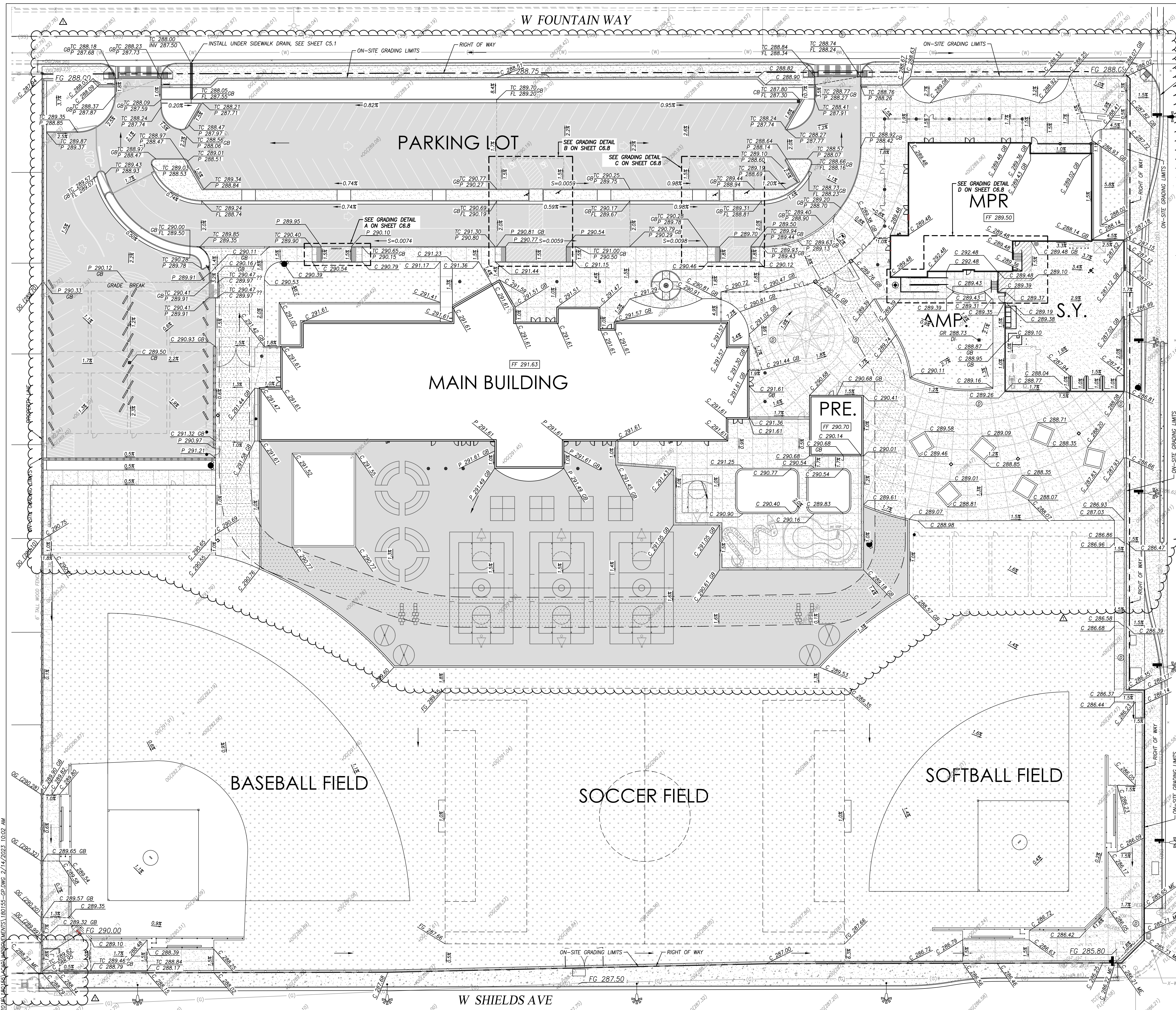
**SITE STRIPING AND SIGNAGE**

PROJECT COORDINATOR <b>JOHN SMITH</b>	SHEET No. <b>C2.2</b>
PROJECT NO. <b>17-67</b>	
DATE <b>1.27.23</b>	
SCALE <b>AS SHOWN</b>	



\A\PROJECTS\2018\180155\ACAD\IMPROVEMENTS\180155-SSM.DWG, 2/13/2023, 10:23 AM





**GRADING LEGEND**

- 280.00 FINISHED GRADE
- EXISTING GRADE
- C CONCRETE
- FF FINISHED FLOOR
- FL FLOW LINE
- GB GRADE BREAK
- GR GRATE
- P PAVEMENT
- TC TOP OF CURB
- STORM DRAIN INLET
- ⊙ STORM DRAIN MANHOLE
- ⊖ STORM DRAIN CLEANOUT
- GRADE BREAK
- AC PAVEMENT, SEE SITE PLAN
- CONCRETE, SEE SITE PLAN

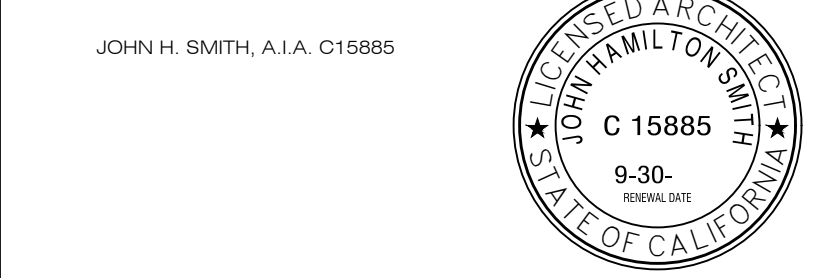
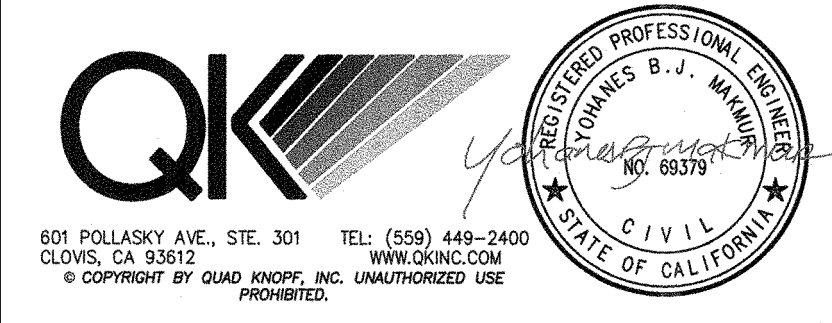
**GRADING NOTES**

1. OFF-SITE GRADING PER SEPARATE STREET IMPROVEMENT PLANS.



7790 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 T559.448.8400 · F559.448.8467  
 www.simprk.com

PROJECT:  
**SHIELDS & BRAWLEY  
 ELEMENTARY  
 SCHOOL**



THE FIRM OF BATH, INANAGA, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE INHERENT RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

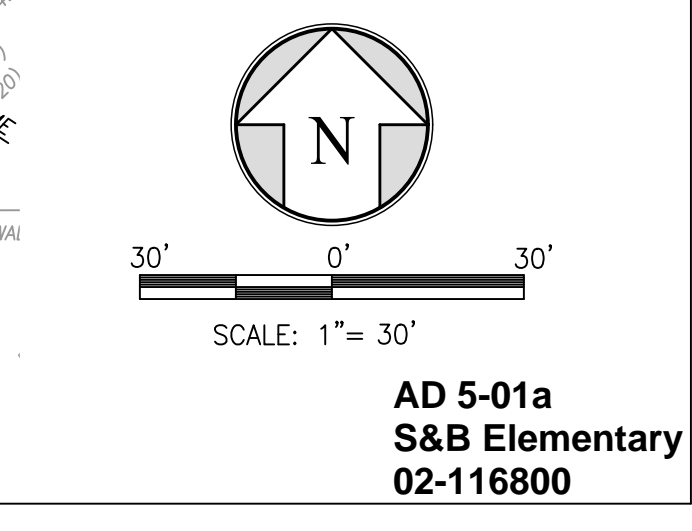
**AD 1-32a  
 S&B Elementary  
 02-116800**

REVISIONS		
No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

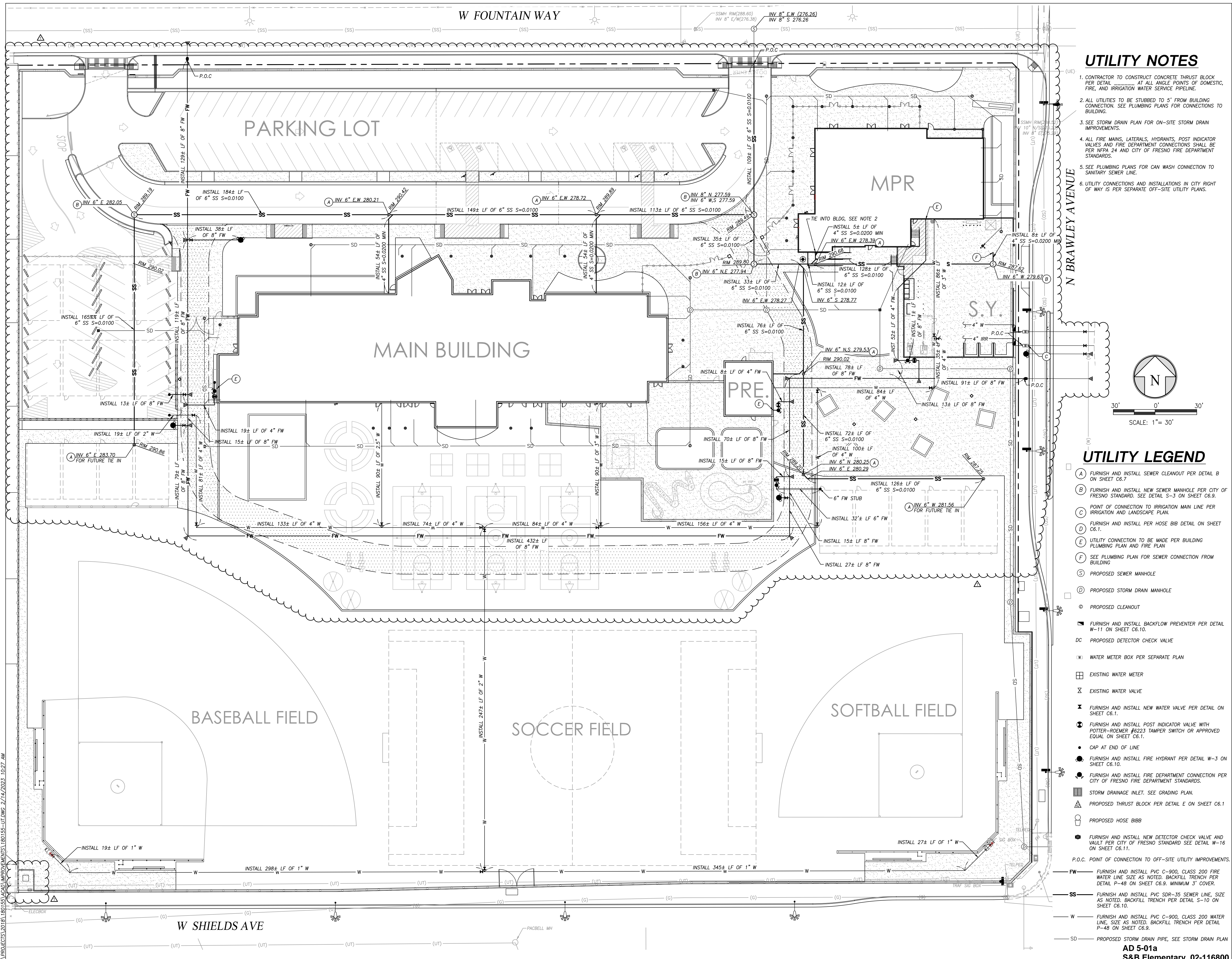
**GRADING PLAN**

PROJECT COORDINATOR <b>JOHN SMITH</b>	SHEET No.
PROJECT NO. <b>17-67</b>	<b>C4.1</b>
DATE <b>1.27.23</b>	
SCALE <b>AS SHOWN</b>	



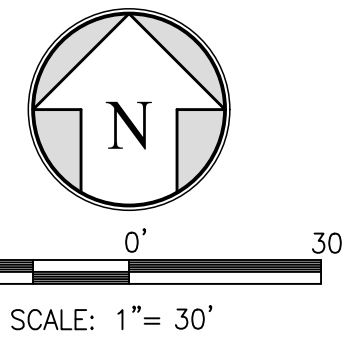
PROJECTS 2014 ARCHITECTURAL SERVICES 180155-GR.DWG 2/14/2023 10:02 AM





**UTILITY NOTES**

1. CONTRACTOR TO CONSTRUCT CONCRETE THRUST BLOCK PER DETAIL AT ALL ANGLE POINTS OF DOMESTIC, FIRE, AND IRRIGATION WATER SERVICE PIPELINE.
2. ALL UTILITIES TO BE STUBBED TO 5' FROM BUILDING CONNECTION. SEE PLUMBING PLANS FOR CONNECTIONS TO BUILDING.
3. SEE STORM DRAIN PLAN FOR ON-SITE STORM DRAIN IMPROVEMENTS.
4. ALL FIRE MAINS, LATERALS, HYDRANTS, POST INDICATOR VALVES AND FIRE DEPARTMENT CONNECTIONS SHALL BE PER NFPA 24 AND CITY OF FRESNO FIRE DEPARTMENT STANDARDS.
5. SEE PLUMBING PLANS FOR CAN WASH CONNECTION TO SANITARY SEWER LINE.
6. UTILITY CONNECTIONS AND INSTALLATIONS IN CITY RIGHT OF WAY IS PER SEPARATE OFF-SITE UTILITY PLANS.

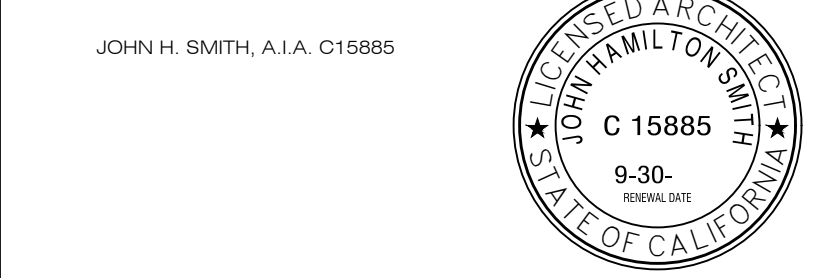
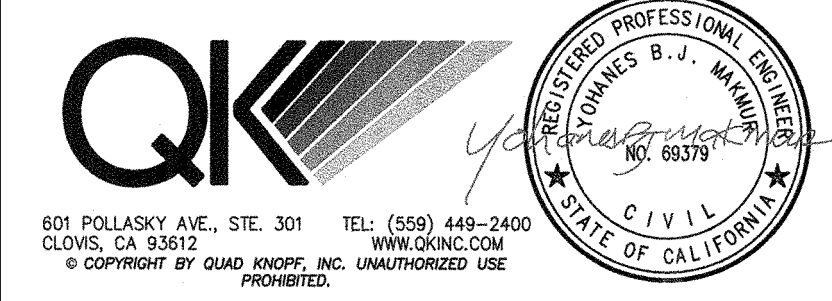


**UTILITY LEGEND**

- (A) FURNISH AND INSTALL SEWER CLEANOUT PER DETAIL B ON SHEET C6.7
- (B) FURNISH AND INSTALL NEW SEWER MANHOLE PER CITY OF FRESNO STANDARD. SEE DETAIL S-3 ON SHEET C6.9.
- (C) POINT OF CONNECTION TO IRRIGATION MAIN LINE PER IRRIGATION AND LANDSCAPE PLAN.
- (D) FURNISH AND INSTALL PER HOSE BIB DETAIL ON SHEET C6.1.
- (E) UTILITY CONNECTION TO BE MADE PER BUILDING PLUMBING PLAN AND FIRE PLAN
- (F) SEE PLUMBING PLAN FOR SEWER CONNECTION FROM BUILDING
- (S) PROPOSED SEWER MANHOLE
- (D) PROPOSED STORM DRAIN MANHOLE
- (C) PROPOSED CLEANOUT
- (B) FURNISH AND INSTALL BACKFLOW PREVENTER PER DETAIL W-11 ON SHEET C6.10.
- DC PROPOSED DETECTOR CHECK VALVE
- (M) WATER METER BOX PER SEPARATE PLAN
- (W) EXISTING WATER METER
- (V) EXISTING WATER VALVE
- (X) FURNISH AND INSTALL NEW WATER VALVE PER DETAIL ON SHEET C6.1.
- (P) FURNISH AND INSTALL POST INDICATOR VALVE WITH POTTER-ROEMER #6223 TAMPER SWITCH OR APPROVED EQUAL ON SHEET C6.1.
- (H) CAP AT END OF LINE
- (F) FURNISH AND INSTALL FIRE HYDRANT PER DETAIL W-3 ON SHEET C6.10.
- (D) FURNISH AND INSTALL FIRE DEPARTMENT CONNECTION PER CITY OF FRESNO FIRE DEPARTMENT STANDARDS.
- (I) STORM DRAINAGE INLET. SEE GRADING PLAN.
- (T) PROPOSED THRUST BLOCK PER DETAIL E ON SHEET C6.1
- (B) PROPOSED HOSE BIBB
- (D) FURNISH AND INSTALL NEW DETECTOR CHECK VALVE AND VAULT PER CITY OF FRESNO STANDARD SEE DETAIL W-16 ON SHEET C6.11.
- P.O.C. POINT OF CONNECTION TO OFF-SITE UTILITY IMPROVEMENTS.
- FW FURNISH AND INSTALL PVC C-900, CLASS 200 FIRE WATER LINE SIZE AS NOTED. BACKFILL TRENCH PER DETAIL P-48 ON SHEET C6.9. MINIMUM 3" COVER.
- SS FURNISH AND INSTALL PVC SDR-35 SEWER LINE, SIZE AS NOTED. BACKFILL TRENCH PER DETAIL S-10 ON SHEET C6.10.
- W FURNISH AND INSTALL PVC C-900, CLASS 200 WATER LINE. SIZE AS NOTED. BACKFILL TRENCH PER DETAIL P-48 ON SHEET C6.9.
- SD PROPOSED STORM DRAIN PIPE. SEE STORM DRAIN PLAN



PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



THE FIRM OF BATH, INANAGA, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER AVAILABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

**AD 1-33a  
S&B Elementary  
02-116800**

REVISIONS

No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

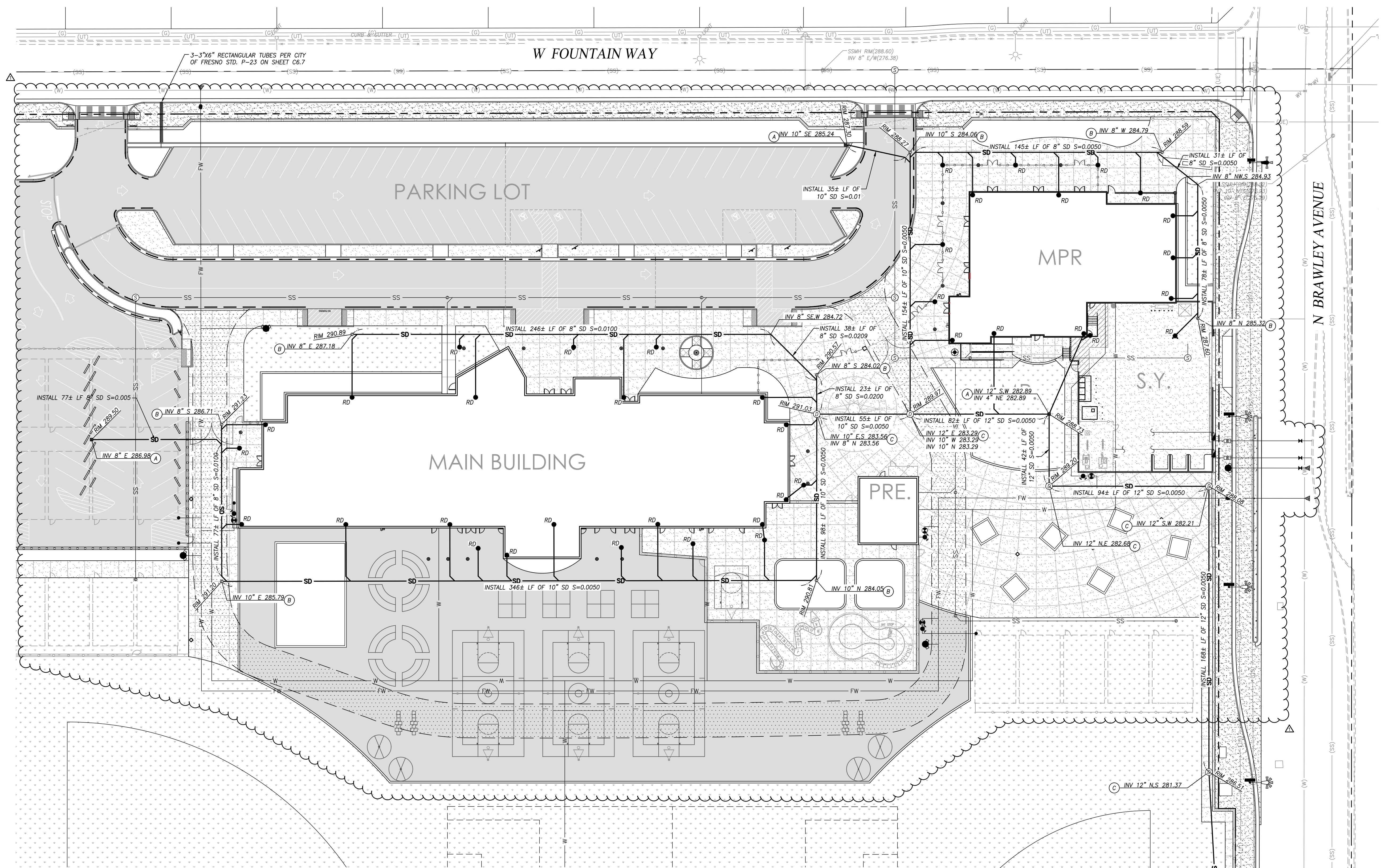
SHEET DESCRIPTION

**SITE PLUMBING PLAN**

PROJECT COORDINATOR <b>JOHN SMITH</b>	SHEET No. <b>C5.1</b>
PROJECT NO. <b>17-67</b>	
DATE <b>1.27.23</b>	
SCALE <b>AS SHOWN</b>	

LA PROJECTS (2018) (B0155) (CAD) IMPROVEMENTS 180155-IT.DWG 2/14/2023 10:27 AM





**STORM DRAIN NOTES**

1. ALL UTILITIES TO BE STUBBED TO 5' FROM BUILDING CONNECTION. SEE PLUMBING PLANS FOR CONNECTIONS TO BUILDING.
2. SEE SITE PLUMBING PLAN FOR ON-SITE WATER AND SEWER IMPROVEMENTS.
3. ALL CONNECTIONS FROM ROOF DRAINS TO STORM DRAIN LINE ARE TO BE 4" PVC HDPE PIPE SLOPED AT 2% MINIMUM AND SHALL MAINTAIN 1' CLEAR MINIMUM FOR ALL UTILITIES.

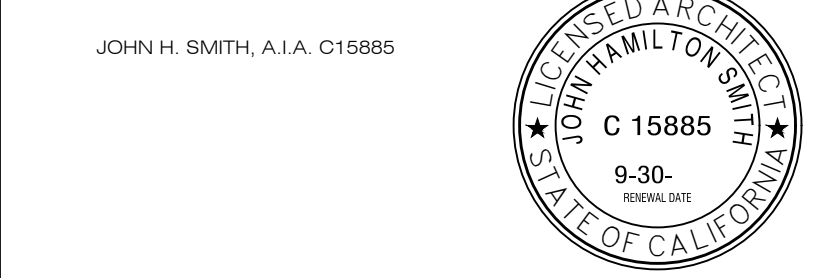
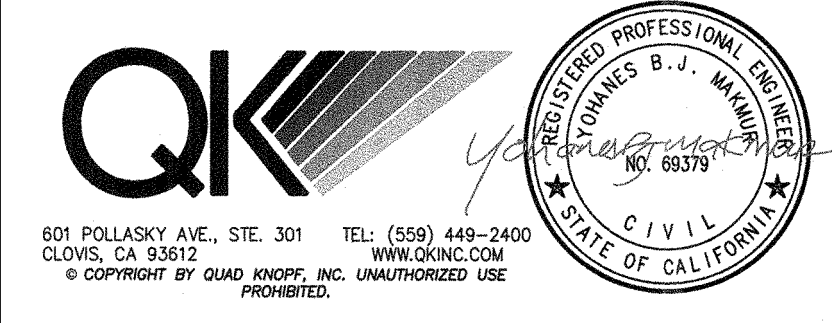
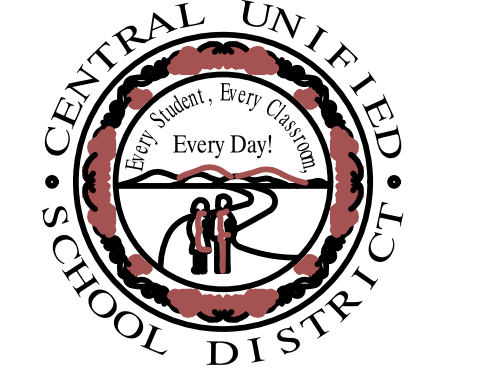
**STORM DRAIN LEGEND**

- |  |                                   |                                |  |   |
|--|-----------------------------------|--------------------------------|--|---|
| (A) FURNISH AND INSTALL STORM DRAIN INLET PER DETAIL C ON SHEET C6.7.  | (D) PROPOSED STORM DRAIN MANHOLE  | EXISTING WATER METER           | RD ROOF DRAIN. SEE MECHANICAL PLANS FOR EXACT LOCATION.      | SD FURNISH AND INSTALL PVC HDPE PIPE, SIZE AS NOTED. BACKFILL TRENCH PER DETAIL P-48 ON SHEET C6.9. |
| (B) FURNISH AND INSTALL STORM DRAIN CLEANOUT PER DETAIL ON SHEET C6.7. | (E) PROPOSED SURFACE CLEANOUT     | EXISTING WATER VALVE           | SD STORM DRAINAGE INLET. SEE GRADING PLAN                    |   |
| (C) FURNISH AND INSTALL STORM DRAIN MANHOLE PER DETAIL ON SHEET C6.7.  | (F) PROPOSED BACKFLOW PREVENTER   | PROPOSED WATER VALVE           | P.O.C. POINT OF CONNECTION TO OFF-SITE UTILITY IMPROVEMENTS. |   |
| (D) FURNISH AND INSTALL U23 DRAIN INLET PER DETAIL ON SHEET C6.7.      | (G) PROPOSED DETECTOR CHECK VALVE | PROPOSED POST INDICATION VALVE | (S) PROPOSED SEWER MANHOLE                                   |   |
|  | (H) PROPOSED WATER METER          | PROPOSED FIRE HYDRANT          |  |   |



7790 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 T559.448.8400 · F559.448.8467  
 www.sim-prk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



THE FIRM OF SMITH, IWANAGA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

**AD 1-34a  
 S&B Elementary  
 02-116800**

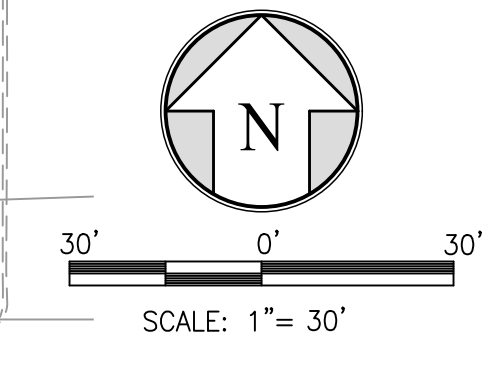
REVISIONS

No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

**STORM DRAIN PLAN**

PROJECT COORDINATOR <b>JOHN SMITH</b>	SHEET No. <b>C5.2</b>
PROJECT NO. <b>17-67</b>	
DATE <b>1.27.23</b>	
SCALE <b>AS SHOWN</b>	



**AD 5-01a  
 S&B Elementary  
 02-116800**

C:\PROJECTS\2018\180155\ACAD\IMPROVEMENTS\180155-IT - SD.DWG 2/14/2023 10:28 AM



**GENERAL NOTES FOR STREET PLANS:**

- THE WORK EMBRACED HEREIN SHALL BE DONE IN ACCORDANCE WITH THE APPROPRIATE PROVISIONS OF THE SPECIFICATIONS ENTITLED CITY OF FRESNO, STANDARD SPECIFICATIONS, FEBRUARY 2016 EDITION, INSOFAR AS THE SAME MAY APPLY, WHICH SPECIFICATIONS HEREINAFTER ARE REFERRED TO AS THE STANDARD SPECIFICATION.
- THE SANITARY SEWER SYSTEM AND HOUSE CONNECTIONS, TOGETHER WITH WATER MAIN, GAS MAINS, IF ANY, AND THEIR RESPECTIVE SERVICE CONNECTIONS SHALL BE COMPLETED IN THE STREET BEFORE INSTALLATION OF THE STREET SURFACING.
- INSTALL SIDEWALKS, CURBS, AND GUTTERS AS PER CITY OF FRESNO STANDARD DRAWING P-5 AND IN ACCORDANCE WITH DETAILS ON THESE DRAWINGS. CURBS AND GUTTERS SHALL BE CONSTRUCTED BEFORE PLACING THE STREET SURFACING AND BASE COURSE.
- PERMITS MUST BE OBTAINED AND FEES PAID IN ACCORDANCE WITH ORDINANCES OF THE CITY OF FRESNO.
- THE TYPICAL CROSS SECTIONS SHOWN SHALL BE USED ONLY FOR THE PAVEMENT STRUCTURAL SECTION, OVERLAY THICKNESS AND SIDE SLOPES. SEE PLAN AND PROFILE SHEETS FOR HORIZONTAL LIMITS AND LOCATIONS OF CURB AND GUTTER, MEDIAN ISLANDS, SAWCUTTING, GRINDING, OVERLAYS, SIDEWALKS, FENCES, ROW LINES, EXISTING FEATURES AND ANY OTHER PROPOSED IMPROVEMENTS. THE TYPICAL CROSS SECTION SHOULD NOT BE USED FOR STAKING OF PROPOSED IMPROVEMENTS.
- ALL STREETS SHALL BE SURFACED IN ACCORDANCE WITH THIS PLAN AND THE FOLLOWING SPECIFICATIONS:
  - 6-INCH SUBGRADE AND ALL FILLS IN EXCESS OF 6 INCHES WILL BE COMPACTED IN ACCORDANCE WITH THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION, SECTION 19 OF THE STANDARD SPECIFICATIONS, LATEST EDITION, UNLESS OTHERWISE NOTED.
  - AGGREGATE BASE SHALL CONFORM TO AND BE PLACED IN ACCORDANCE WITH SECTION 12 OF THE CITY STANDARDS SPECIFICATIONS, USING CLASS 2 AGGREGATE BASE, AND AGGREGATE SUB-BASE SHALL UTILIZE CLASS 2 AGGREGATE SUB-BASE MATERIAL (MINIMUM 50 R-VALUE).
  - PAINT BINDER WILL BE AS SPECIFIED BY THE CITY ENGINEER AND SHALL CONFORM TO AND BE APPLIED IN ACCORDANCE WITH SECTION 13 OF THE CITY STANDARD SPECIFICATIONS.
  - ASPHALT CONCRETE SURFACING SHALL BE TYPE A USING PG 64-10 ASPHALT BINDER, CONFORMING TO AND PLACED IN ACCORDANCE WITH SECTION 13 OF THE CITY SPECIFICATIONS.
- ALL BOUNDARY STREETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THIS PLAN.
- THE TRANSITION BETWEEN THE EDGE AND END OF THE REQUIRED STREET SURFACING AND THE EXISTING SURFACING OR GROUND SHALL NOT HAVE A SLOPE STEEPER THAN 5 PERCENT.
- ANY CONCRETE WORK TO BE CONSTRUCTED SHALL CONFORM TO CITY OF FRESNO STANDARDS ADOPTED BY RESOLUTION NO. 70-36, AS REVISED.
- INSTALL STREET LIGHTING SYSTEM IN ACCORDANCE WITH RESOLUTION NO. 78-522 AND 88-229. LOCATION OF LIGHTS TO BE DETERMINED AND APPROVED BY THE TRAFFIC ENGINEER, SERVICE LOCATION TO BE DETERMINED BY P.G.&E. THE STREETLIGHTS SHALL BE INSTALLED IN ACCORDANCE WITH PUBLIC WORKS STANDARDS E-1 THROUGH E-27.
- TRAFFIC REQUIREMENTS:
  - ALL SIGNING, DETOURING AND BARRICADING SHALL CONFORM TO THE LATEST REVISION OF 2014 CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES ISSUED BY THE STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION.
  - ALL SIGNS SHALL BE RETROREFLECTIVE PER CHAPTER 2A.08 OF THE LATEST REVISION OF 2014 MUTCD.
  - HIGH LEVEL WARNING DEVICES SHALL BE USED ON ALL APPROACHES TO THE CONSTRUCTION AREA.
  - SPECIAL ATTENTION IS CALLED TO SECTION 7-10.1 THROUGH 10.3 OF THE CITY STANDARD SPECIFICATIONS.
  - ONE (1) 12-FOOT DRIVING LANE MUST BE MAINTAINED IN EACH DIRECTION AT ALL TIMES.
  - NO PUBLIC STREET SHALL BE CLOSED WITHOUT PRIOR APPROVAL FROM THE CITY TRAFFIC ENGINEER.
  - STREET WORK PERMITS ISSUED TO ALLOW WORK IN THE PUBLIC RIGHT-OF-WAY SHALL BE REVOKED IF THE ABOVE REQUIREMENTS OF SUBPARAGRAPHS "A" THROUGH "G" ARE NOT STRINGENTLY COMPLIED WITH BY THE DEVELOPER'S FORCES DURING OFF-SITE STREET IMPROVEMENT CONSTRUCTION OPERATIONS. REVOKED PERMITS SHALL NOT BE RE-ISSUED UNTIL SUCH TIME AS THE PUBLIC WORKS DIRECTOR IS SATISFIED THAT THE DEVELOPER'S CONTRACTORS WILL PERFORM THEIR OPERATION IN COMPLIANCE WITH THE ABOVE REQUIREMENTS, INCLUDING THE CONDITIONS OF THE STREET WORK PERMIT.
- EXISTING PAVEMENT SHALL NOT BE REMOVED UNTIL SUCH TIME AS ALL UTILITIES ARE COMPLETED AND PAVING CONTRACTOR IS READY TO REPAIR WITHIN 5 DAYS.
- ALL STORM DRAINAGE FACILITIES ARE TO BE COMPLETED PRIOR TO START OF STREET WORK AND IN ACCORDANCE WITH FRESNO METROPOLITAN FLOOD CONTROL DISTRICT STANDARD SPECIFICATIONS AND STANDARD PLANS, APRIL 1, 2011 EDITION, AND REVISIONS THEREOF.
- CONTRACTOR WILL NOTIFY F.M.F.C.D. CONSTRUCTION MANAGER, AT (559) 456-3292, 48 HOURS PRIOR TO CONNECTING TO ANY STORM DRAIN FACILITY.
- CONSTRUCT ACCESSIBLE RAMPS AND FINISH RAMP SURFACES AS DIRECTED BY ENGINEER.
- ALL SEWER MANHOLES AFFECTED BY THIS PROJECT SHALL BE ADJUSTED TO GRADE AS NECESSARY AND INCLUDED IN THIS WORK.
- ALL EXISTING WATER MAIN VALVES (CAP AND LID) SHALL BE ADJUSTED TO GRADE BY CONTRACTOR. FOR COORDINATION WITH WATER DIVISION, CALL (559) 621-5360.
- TWO WORKING DAYS PRIOR TO COMMENCING EXCAVATION, THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT, TOLL FREE, AT 1-800-227-2600, OR 811.

- INITIAL COMPACTION TESTS SHALL BE PAID FOR BY THE DEVELOPER, ANY REQUIRED RETESTS SHALL BE PAID FOR BY THE CONTRACTOR.
- THE DEVELOPER SHALL OBTAIN POLE IDENTIFICATION NUMBERS FROM PG&E AND THE DEVELOPER SHALL INSTALL NUMBERS IN ACCORDANCE WITH CITY OF FRESNO STANDARD DRAWING E-25.
- ALL EXISTING OVERHEAD UTILITIES SHALL BE PLACED UNDERGROUND AS PER RESOLUTION NO. 78-522 AND 88-229. IF OVERHEAD UTILITIES ARE TO BE RELOCATED, THE RELOCATION SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE OF THE STREET IMPROVEMENTS BY THE CITY.
- APPROVAL OF STREET PLANS SHALL IN NO WAY BE CONSTRUED AS A GRANT BY THE CITY OF ANY RIGHTS TO THE SUBDIVIDER TO TRESPASS UPON LAND RIGHTFULLY IN THE POSSESSION OF, OR OWNED BY ANOTHER, WHETHER SUCH LAND IS PRIVATELY OR PUBLICLY OWNED. THE DEVELOPER SHALL OBTAIN WRITTEN AUTHORIZATION FROM ANY ADJACENT PROPERTY OWNER GIVING HIM PERMISSION TO ENTER HIS PROPERTY FOR PURPOSE OF CONSTRUCTING THE IMPROVEMENTS DELINEATED ON THESE PLANS AND TRANSITIONS THERETO. THE DEVELOPER SHALL PROVIDE THE CITY WITH A COPY OF OWNER'S PERMISSION PRIOR TO START OF WORK.
- AN ENCROACHMENT PERMIT IS REQUIRED FOR ANY WORK TO BE PERFORMED IN THE COUNTY OF FRESNO ROAD RIGHT-OF-WAY. CONTACT THE COUNTY PERMIT ENGINEER AT (559) 262-4107 TO OBTAIN PERMIT. IF AN ENCROACHMENT PERMIT HAS NOT BEEN OBTAINED WITHIN 12 MONTHS OF THE APPROVAL DATE OF THESE PLANS, ADDITIONAL REVIEW AND REVISIONS TO THE PLANS MAY BE REQUIRED BEFORE PERMIT IS ISSUED.
- DEVELOPER TO FURNISH AND INSTALL LOCAL STREET NAME SIGNS AT EACH INTERSECTION WITHIN SUBDIVISION PER CITY OF FRESNO STANDARD DRAWING P-92.

**ELECTRICAL NOTES:**

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTION 86 OF THE STATE OF CALIFORNIA STANDARD SPECIFICATIONS DATED AUGUST 2015, AND SECTIONS ES-1 THRU ES-160 OF THE STATE OF CALIFORNIA STANDARD PLANS.
- THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UNDERGROUND FACILITIES AND PROVIDE PROTECTION PRIOR TO AND DURING TRENCHING.
- POTENTIAL OVERHEAD CONFLICT WITH HIGH VOLTAGE LINES MAY EXIST. MAINTAIN PROPER CLEARANCE. CONTACT PG&E TO VERIFY WIRE LOCATION.
- POLES SHALL BE LOCATED IN THE FIELD BY THE CITY OF FRESNO. NOTIFY TRAFFIC ENGINEERING TWO WORKING DAYS IN ADVANCE AT 621-1312.
- PULL BOXES SHALL BE NO. 5(E), UNLESS OTHERWISE NOTED ON THE PLANS. PULL BOXES SHALL NOT BE INSTALLED IN CURB RAMPS. VANDAL RESISTANT LOCKING LIDS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AT FINAL INSPECTION OF THE TRAFFIC SIGNAL. CONTRACTOR SHALL PROVIDE TEMPORARY LIDS DURING CONSTRUCTION. LOCKING LIDS SHALL BE GALVANIZED STEEL DIAMOND PLATE, MINIMUM THICKNESS 3/16", WITH MINIMUM TWO (2) CLAMPING JAWS AND BE KEYPED TO THE CITY OF FRESNO KEY. ALL PULL BOXES SHALL BE AT A MAXIMUM OF 200' APART.
- ALL PULL BOXES INSTALLED IN NON-CONCRETE AREAS SHALL BE SURROUNDED BY A ONE (1) FOOT WIDE CONCRETE COLLAR, TO A DEPTH EQUAL TO THE PULL BOX AND EXTENSION, PER CITY OF FRESNO SPECIFICATIONS, AND SHALL HAVE A VANDAL RESISTANT (SEE NOTE ABOVE) LOCKING LID INSTALLED. ALL CONDUIT ENTRIES INTO ADVANCE DETECTION, INTERMEDIATE DETECTION, AND STREET LIGHTING PULL BOXES INSTALLED IN NON-CONCRETE AREAS SHALL ENTER THE PULL BOX FROM THE BOTTOM, USING 90 DEGREE ELBOWS AND EXTENDING 3 TO 5 INCHES ABOVE THE FINISHED GROUT.
- ALL CONDUITS SHALL HAVE BUSHINGS INSTALLED PRIOR TO INSTALLING CONDUCTORS. STEEL CONDUITS SHALL HAVE LAY IN STYLE LUGS THAT ARE CAST INTEGRAL WITH THE BUSHING.
- CONDUIT BENDS OF 90 DEGREES ARE PROHIBITED UNLESS OTHERWISE NOTED OR WRITTEN PERMISSION IS GIVEN BY THE CITY OF FRESNO ENGINEER.

**ASSESSOR'S PARCEL NUMBER:**

310-091-25

**RECORD OWNERSHIP:**

CENTRAL UNIFIED SCHOOL DISTRICT  
5652 WEST GETTYSBURG  
FRESNO, CA 93722

**IMPROVEMENTS BY:**

CENTRAL UNIFIED SCHOOL DISTRICT  
5652 WEST GETTYSBURG  
FRESNO, CA 93722

**PREPARED BY:**

QUAD KNOPF, INC (QK)  
601 POLLASKY AVENUE, SUITE 301  
CLOVIS, CA 93612  
(559) 449-2400

**TOPOGRAPHIC SURVEY:**

TOPOGRAPHIC INFORMATION WAS COLLECTED IN MARCH 2018.

**BENCHMARK:**

CITY OF FRESNO TBM 3496 - CHISELED SQUARE ON NORTHWEST CORNER OF DRIVEWAY, SOUTHEAST CORNER OF SHIELDS AND BLYTHE. ELEVATION = 287.50

**BASIS OF BEARING:**

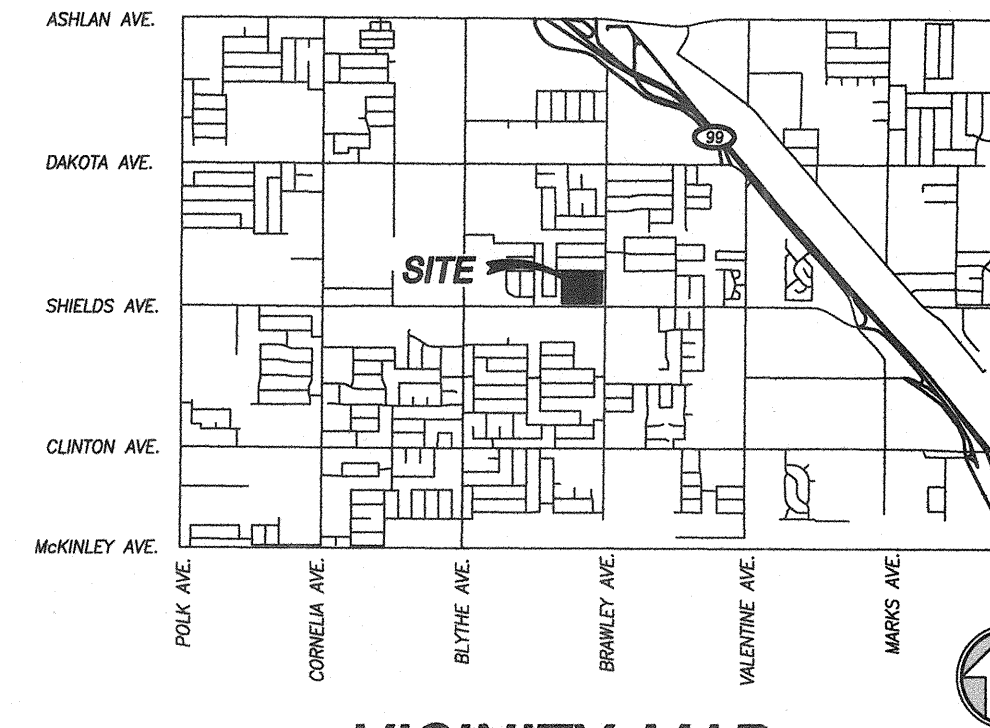
THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 13 SOUTH, RANGE 19 EAST (ALSO BEING THE CENTERLINE OF NORTH BRAWLEY AVENUE) IS TAKEN TO BE N0°04'06"E AS SHOWN ON THE MAP OF TRACT 5148, RECORDED IN VOLUME 69 OF PLATS, AT PAGES 68 AND 69, FRESNO COUNTY RECORDS.

**SHEET INDEX:**

No.	SHEET TITLE	DRAWING No.
1	COVER SHEET	15-C-19347
2	WEST SHIELDS AVENUE	15-C-19348
3	NORTH BRAWLEY AVENUE	15-C-19349
4	WEST FOUNTAIN WAY	15-C-19350
5	STRIPING PLAN	15-C-19351

**ASSOCIATED PLANS:**

No.	SHEET TITLE	DRAWING No.
1	STREETLIGHT COVER SHEET	4-C-1801
2	STREETLIGHT PLAN	4-C-1802



**VICINITY MAP**

NOT TO SCALE

**LEGEND:**

- PROPOSED BLOCK WALL
- - - CENTERLINE
- - - SECTION LINE
- . - . - PROPOSED RIGHT-OF-WAY
- . . - . EXISTING RIGHT-OF-WAY
- - - PUBLIC UTILITY EASEMENT
- - - LANDSCAPE EASEMENT
- - - PROPOSED SAWCUT
- OE — EXISTING OVERHEAD ELECTRIC LINE
- UE — EXISTING UNDERGROUND ELECTRIC
- - - EXISTING EDGE OF PAVEMENT
- == == EXISTING CURB AND GUTTER
- == == PROPOSED CURB AND GUTTER PER CITY STD. P-5
- PROPOSED VALLEY GUTTER PER CITY STD. P-10
- PROPOSED CONCRETE SIDEWALK PER CITY STD. P-5
- PROPOSED CURB RAMP PER CITY STD. P-28
- FMFCD TYPE 'D' INLET, PER SEPARATE PLAN
- PROPOSED DRIVE APPROACH PER CITY STD. P-1
- PROPOSED STREETLIGHT PER SEPARATE PLAN
- EXISTING STREETLIGHT
- MANHOLE, AS LABELED
- FIRE HYDRANT, AS LABELED
- FOUND SURVEY MONUMENT
- PROPOSED AC PAVEMENT
- PROPOSED STREET APPROACH PER CITY STD. P-76

**ABBREVIATIONS:**

- AP ANGLE POINT
- AC ASPHALTIC CONCRETE
- BC BEGIN CURVE
- BPLE BIKE, PED, LANDSCAPE EASEMENT
- BFP BACKLOW PREVENTER
- BOL BOLLARD
- BSW BACK OF SIDEWALK
- C CONCRETE
- C&G CURB AND GUTTER
- CL CENTERLINE
- CNS COMPACTED NATIVE SOIL
- CR PAVEMENT CROWN
- DI DROP INLET
- DWY DRIVEWAY
- EC END CURVE
- ELECBOX ELECTRIC PULL BOX
- EP EDGE OF PAVEMENT
- EX EXISTING
- FG FINISHED GRADE
- FH FIRE HYDRANT
- FL FLOW LINE
- FTG FOOTING
- G GUTTER
- GB GRADE BREAK
- GUY ANCHOR WIRE
- INV INVERT
- IRRWELL IRRIGATION WELL
- L LEFT
- LF LINEAL FEET
- LIP LIP OF GUTTER
- ME MATCH EXISTING
- NTS NOT TO SCALE
- OG ORIGINAL GROUND
- P PAVEMENT
- PACBELL PACIFIC BELL
- PI POINT OF INTERSECTION
- PL PROPERTY LINE
- PG&E PACIFIC GAS AND ELECTRIC
- PP POWER POLE
- PRC POINT OF REVERSE CURVE
- PUE PUBLIC UTILITY EASEMENT
- OE OVERHEAD ELECTRIC
- OG ORIGINAL GRADE
- R RIGHT
- R/W RIGHT-OF-WAY
- SD STORM DRAIN
- SOMH STORM DRAIN MANHOLE
- SS SANITARY SEWER
- SSMH SANITARY SEWER MANHOLE
- SSCO SANITARY SEWER CLEANOUT
- STA STATION
- STD STANDARD
- TC TOP OF CURB
- TD TELEPHONE PEDESTAL
- TLPED PAVEMENT CROWN
- TF TOP OF FOOTING
- TG TOP OF GRATE
- TBR TO BE REMOVED
- TW TOP OF WALL
- UNS UNLESS NOTED OTHERWISE
- VG VALLEY GUTTER
- W WATER
- WV WATER VALVE
- 000.00 PROPOSED ELEVATION
- [000.00] FUTURE ELEVATION
- (000.00) EXISTING ELEVATION
- S=0.000 SLOPE IN FOOT, PER FOOT
- DIRECTION OF SLOPE

AD 1-35a  
S&B Elementary  
02-116800

**APPROVED BY:**

*[Signature]*  
CITY OF FRESNO - TRAFFIC ENGINEERING  
DATE: 3/24/2023

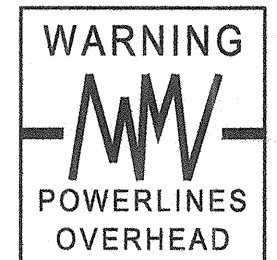
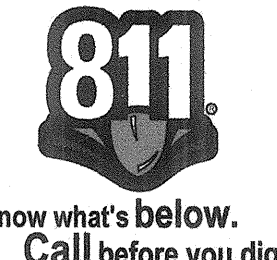
*[Signature]*  
Digitally signed by Gary Chapman  
Date: 2023.03.15 15:42:50-07'00'  
3/15/2023  
FRESNO METROPOLITAN FLOOD CONTROL DISTRICT  
DATE



**INITIAL PLAN REVIEW FEES (08/16/2019)**  
(C.M. No. PWT-8774) \$ 4,688

**REMAINING PLAN REVIEW FEES**  
(C.M. No. PWT-9853) \$ 11,161

**INSPECTION FEE:** \$ 34,211  
(C.M. No. PWT-9853)

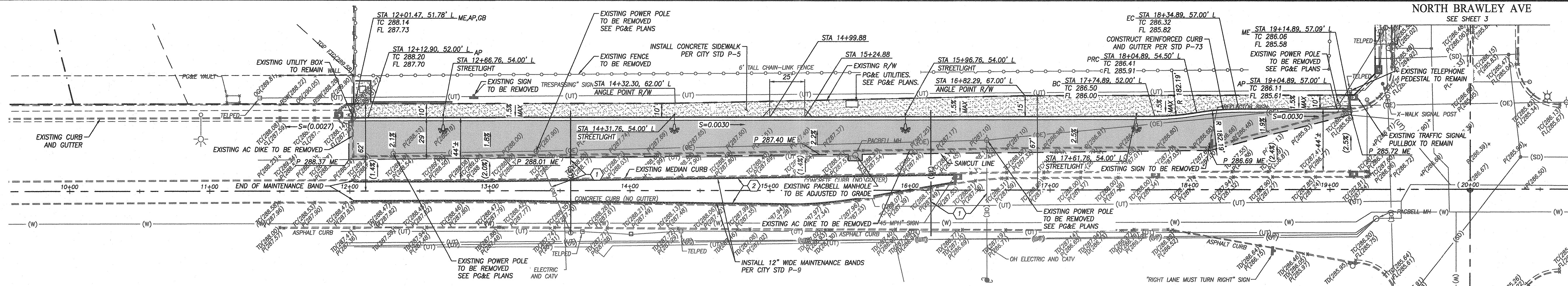


601 POLLASKY AVE., STE. 301 TEL: (559) 449-2400  
CLOVIS, CA 93612 WWW.QKINC.COM  
© COPYRIGHT BY QUAD KNOPF, INC. UNAUTHORIZED USE PROHIBITED.

**FMFCD CONTRACT AL-PVT-6-1**

PW FILE NO.	PROJ. ID.	FUND. NO.	ORG. NO.	REF. & REV.
<b>CITY OF FRESNO</b>				
<b>DEPARTMENT OF PUBLIC WORKS</b>				
<b>PLANS AND SPECIFICATIONS FOR THE DEVELOPMENT OF STREET'S WEST SHIELDS ELEMENTARY SCHOOL</b>				
<b>COVER SHEET</b>				
REVIEWED: OFFICE ENG. <i>ST</i>	CITY ENG. <i>[Signature]</i>	OK PROJECT : 180155		
DR. BY: SK	CH. BY:	DATE:	SHEET NO. 1 OF 5 SHEETS	15-C-19347
SCALE: AS NOTED				





**SAWCUT NOTE:**

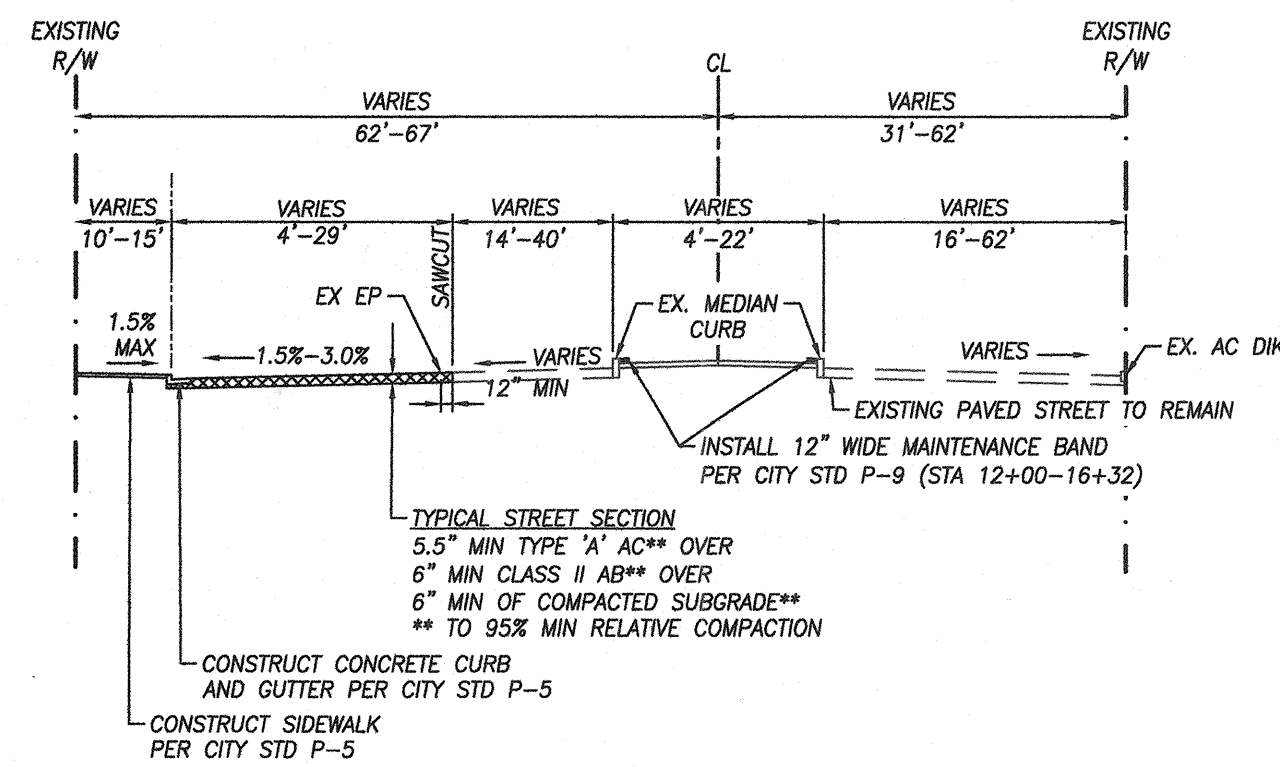
SAWCUT TO COMPETENT PAVEMENT SECTION. REMOVE DAMAGED OR FAILED PAVEMENT SECTION ADJACENT TO THE EDGE OF PAVEMENT AS NECESSARY TO PROVIDE A CLEAN JOIN LINE. CUT EDGES SHALL BE VERTICAL WITH SQUARE CORNERS AND SHALL BE STRAIGHT AND NEAT IN APPEARANCE.

# WEST SHIELDS AVENUE

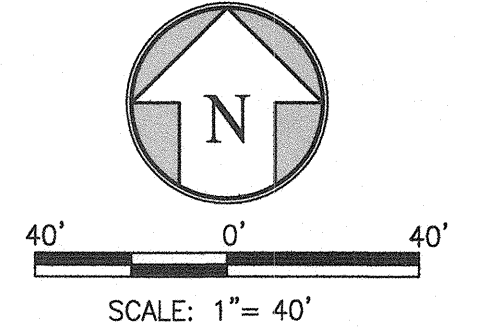
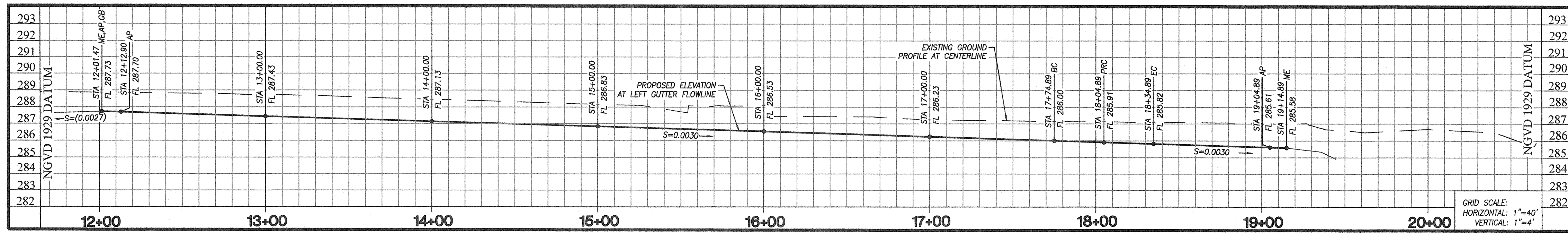
STA 12+00 - 20+00

**KEYNOTES:**

- 1 APPROXIMATE LOCATION OF UNDERGROUNDING OF OVERHEAD UTILITIES PER SEPARATE PG&E PLANS
- 2 PROPOSED 12" MAINTENANCE BAND PER CITY STD. P-9



**WEST SHIELDS AVENUE**  
TYPICAL CROSS SECTION  
(LOOKING EAST)  
R=43 TI=7.5



AD 1-35b  
S&B Elementary  
02-116800



QK PROJECT : 180155

PW FILE NO. _____	<b>CITY OF FRESNO</b>		DEPARTMENT OF PUBLIC WORKS
PROJ. ID. _____	<b>PLANS AND SPECIFICATIONS FOR</b>		
FUND. NO. _____	<b>THE DEVELOPMENT OF STREETS</b>		
ORG. NO. _____	<b>WEST SHIELDS ELEMENTARY SCHOOL</b>		
REF. & REV.	<b>WEST SHIELDS AVENUE</b>		REVIEWED: _____ CITY ENG. <i>SK</i>
			DR. BY: SK SHEET NO. 2
			CH. BY: _____ OF 5 SHEETS
			DATE: _____
			SCALE: AS NOTED 15-C-19348

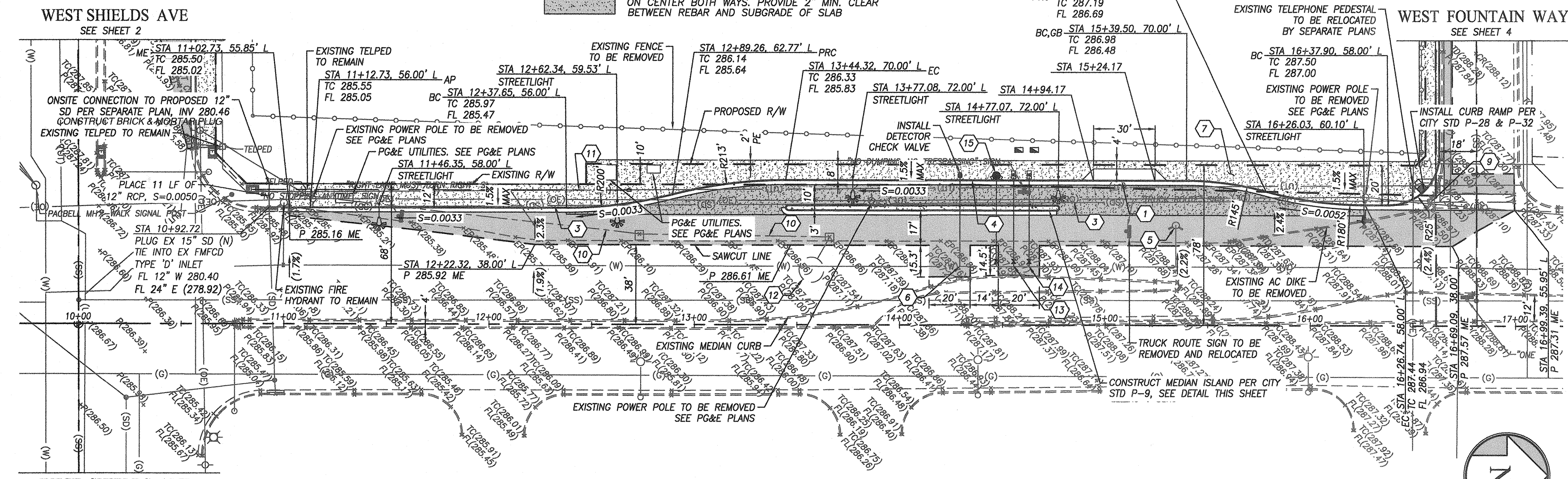
L:\PROJECTS\2018\180155-ACAD-IMPROVEMENTS\180155-OFFSITE.DWG 3/6/2023 3:56 PM



L:\PROJECTS\2018\180155\ACAD\IMPROVEMENTS\180155-OFFSITE.DWG 3/16/2023 4:04 PM

**LEGEND:**

PROPOSED CONCRETE BUS BAY  
8" THICK CONCRETE SLAB WITH #5 REBAR @ 14.5"  
ON CENTER BOTH WAYS. PROVIDE 2" MIN. CLEAR  
BETWEEN REBAR AND SUBGRADE OF SLAB

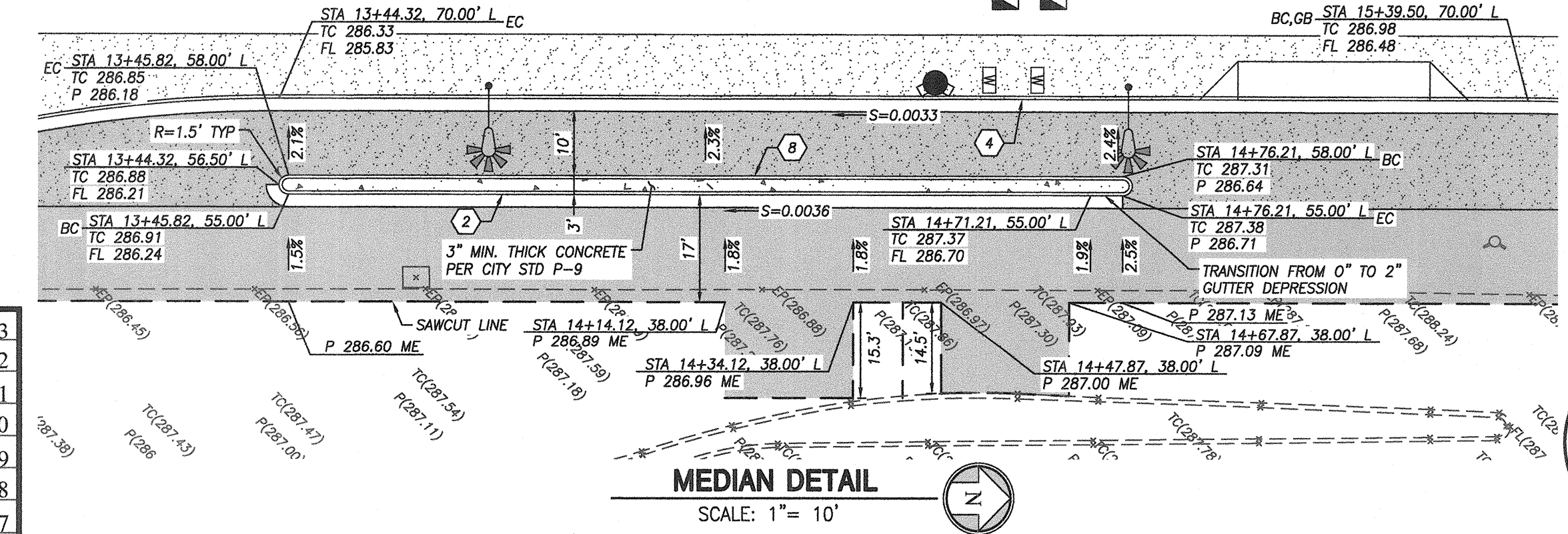
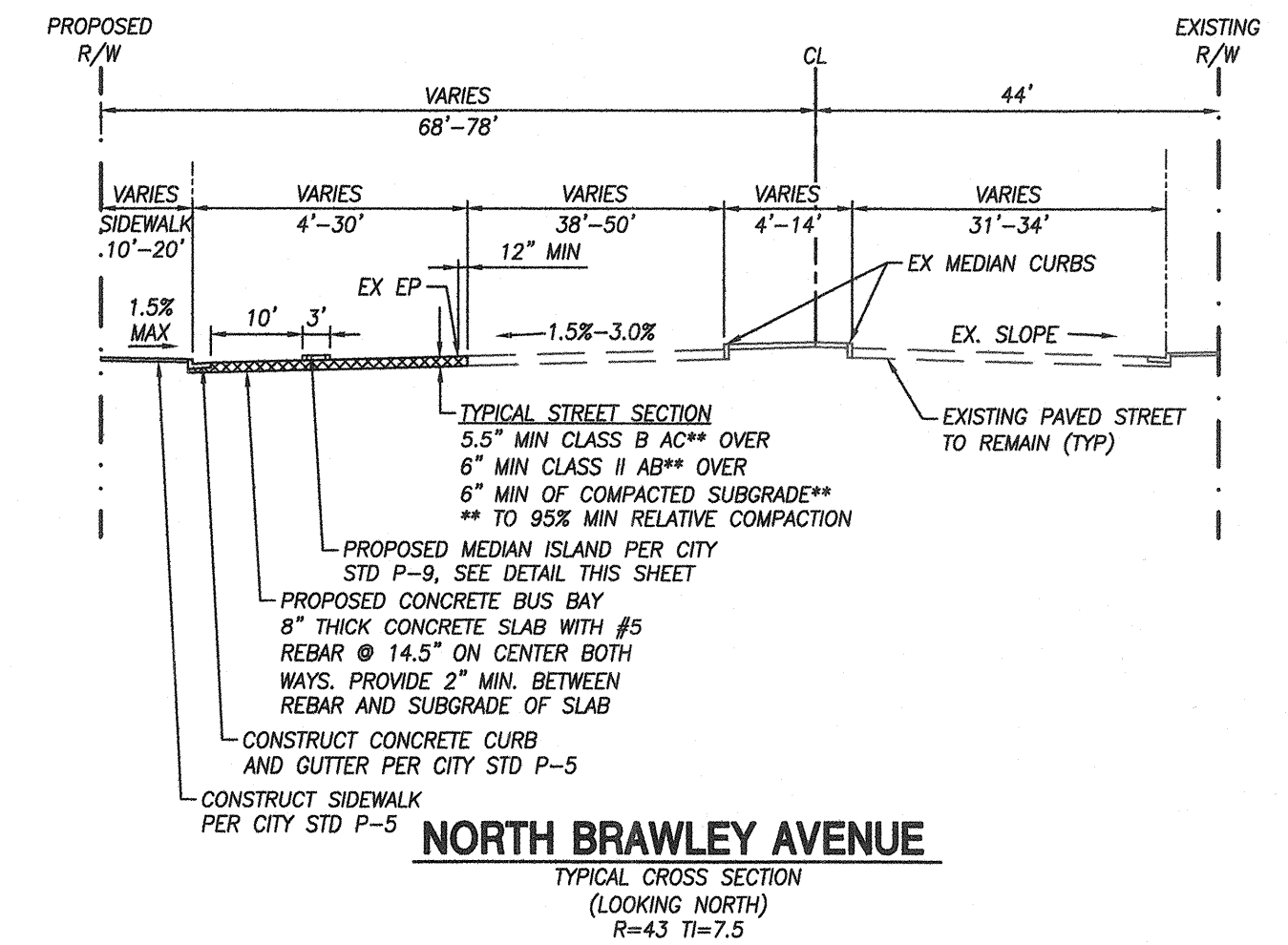


# NORTH BRAWLEY AVENUE

STA 10+00 - 17+00

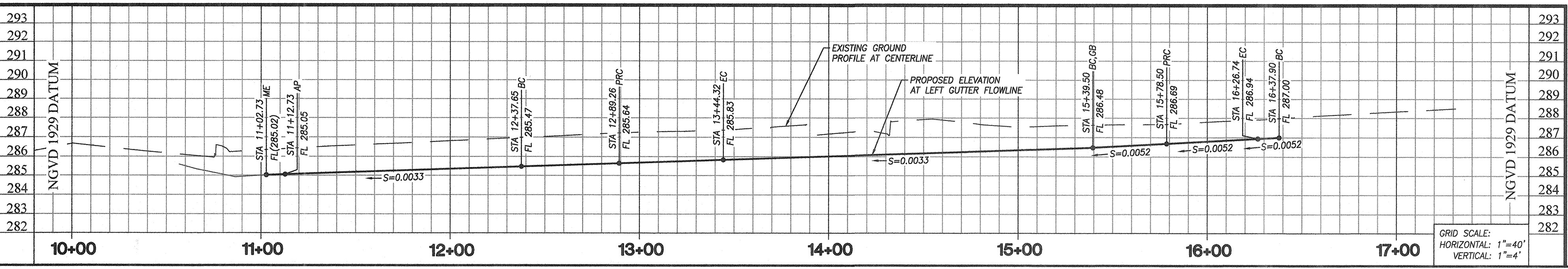
**KEYNOTES:**

- 1 PROPOSED DRIVEWAY PER CITY STD P-2
- 2 CONSTRUCT 8" MEDIAN ISLAND CURB & GUTTER PER CITY STD P-9 (SIMILAR)
- 3 EXISTING 15" PVC SD TO BE ABANDONED IN PLACE FROM EXISTING TYPE 'D' INLET TO REMAIN AT STA 10+93 TO EXISTING TYPE 'E' INLET TO BE REMOVED AT STA 16+37
- 4 REINFORCED CURB AND GUTTER PER CITY STD P-73
- 5 EXISTING FIRE HYDRANT TO BE RELOCATED BEHIND PROPOSED CURB AND GUTTER
- 6 INSTALL 14"x8" TEE AND 8" FIRE SERVICE LATERAL DETECTOR CHECK PER DETAIL W-18 AND W-16
- 7 INSTALL CONCRETE SIDEWALK PER CITY STD P-5
- 8 CONSTRUCT 8" MEDIAN ISLAND CURB PER CITY STD P-9
- 9 STA 16+59 EXISTING FMFCD TYPE 'E' INLET TO BE REMOVED. PLUG PIPE TO SOUTH AND SALVAGE LID TO FMFCD
- 10 EXISTING CONDUIT TO BE REMOVED
- 11 INSTALL 2" CONDUIT, 1 DLC, 1 #8 (GND) TO NEW PULLBOXES
- 12 REMOVE EXISTING LOOP
- 13 INSTALL 14"x4" TEE AND 4" IRRIGATION LATERAL METER BOX PER DETAIL W-41
- 14 INSTALL 14"x4" TEE AND 4" DOMESTIC LATERAL METER BOX PER DETAIL W-41
- 15 INSTALL FIRE HYDRANT PER DETAIL W-3



**SAWCUT NOTE:**

SAWCUT TO COMPETENT PAVEMENT SECTION. REMOVE DAMAGED OR FAILED PAVEMENT SECTION ADJACENT TO THE EDGE OF PAVEMENT AS NECESSARY TO PROVIDE A CLEAN JOIN LINE. CUT EDGES SHALL BE VERTICAL WITH SQUARE CORNERS AND SHALL BE STRAIGHT AND NEAT IN APPEARANCE.



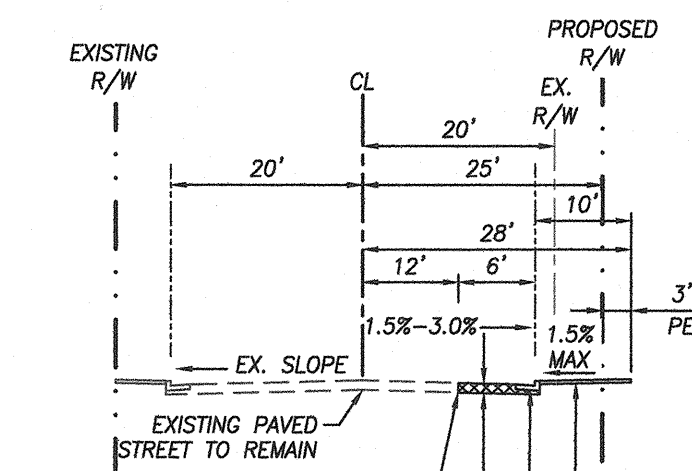
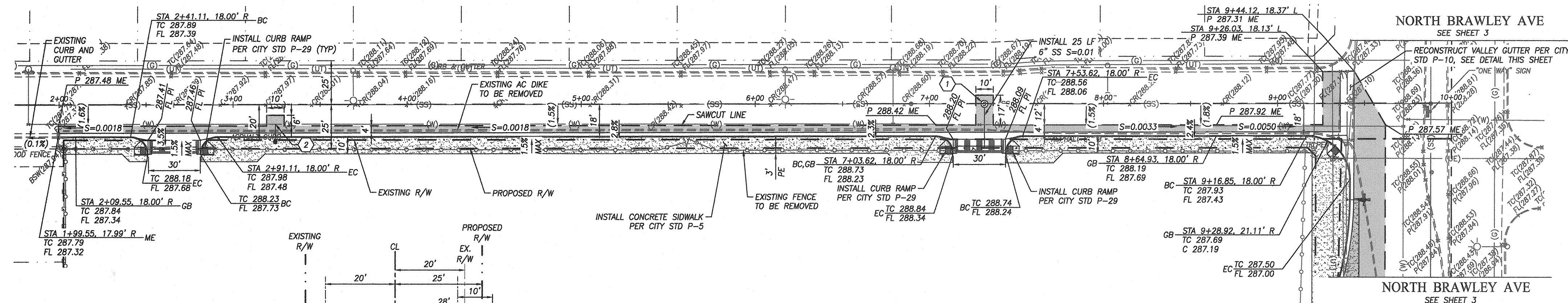
AD 1-35c  
S&B Elementary  
02-116800



<p><b>FMFCD CONTRACT AL-PVT-5-2</b></p>		<p>OK PROJECT : 180155</p>	
<p>PW FILE NO. _____ PROJ. ID. _____ FUND. NO. _____ ORG. NO. _____</p>	<p><b>CITY OF FRESNO</b></p>	<p>DEPARTMENT OF PUBLIC WORKS</p>	
<p>PLANS AND SPECIFICATIONS FOR THE DEVELOPMENT OF STREETS WEST SHIELDS ELEMENTARY SCHOOL NORTH BRAWLEY AVENUE</p>		<p>REVIEWED: _____ OFFICE ENG. <i>ST</i> CITY ENG. <i>ST</i></p>	<p>DATE: _____ SCALE: AS NOTED</p>
<p>REF. &amp; REV.</p>		<p>DR. BY: SK CH. BY: _____</p>	<p>SHEET NO. <i>3</i> OF <i>5</i> SHEETS 15-C-19349</p>

GRID SCALE:  
HORIZONTAL: 1"=40'  
VERTICAL: 1"=4'

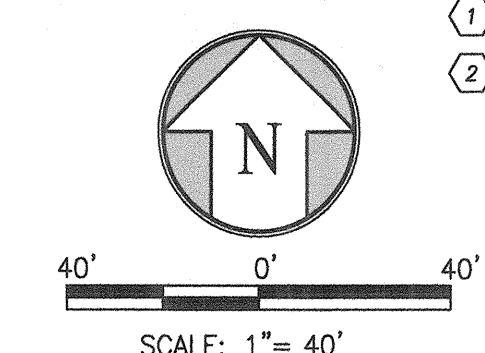




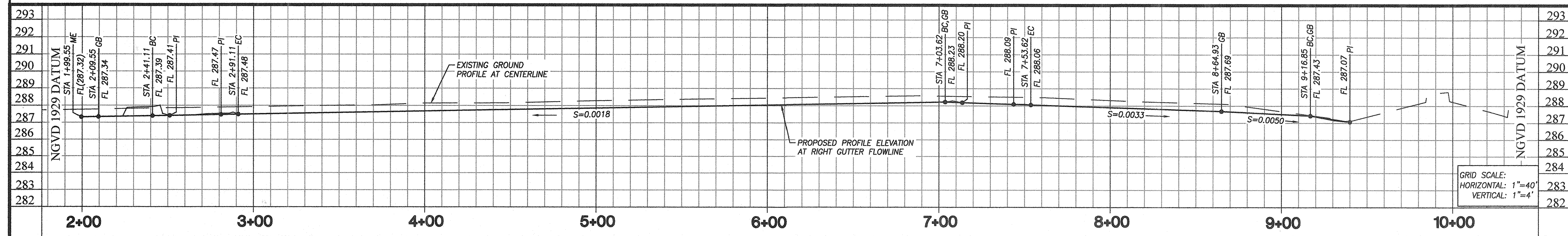
# WEST FOUNTAIN WAY

STA 2+00 - 10+00

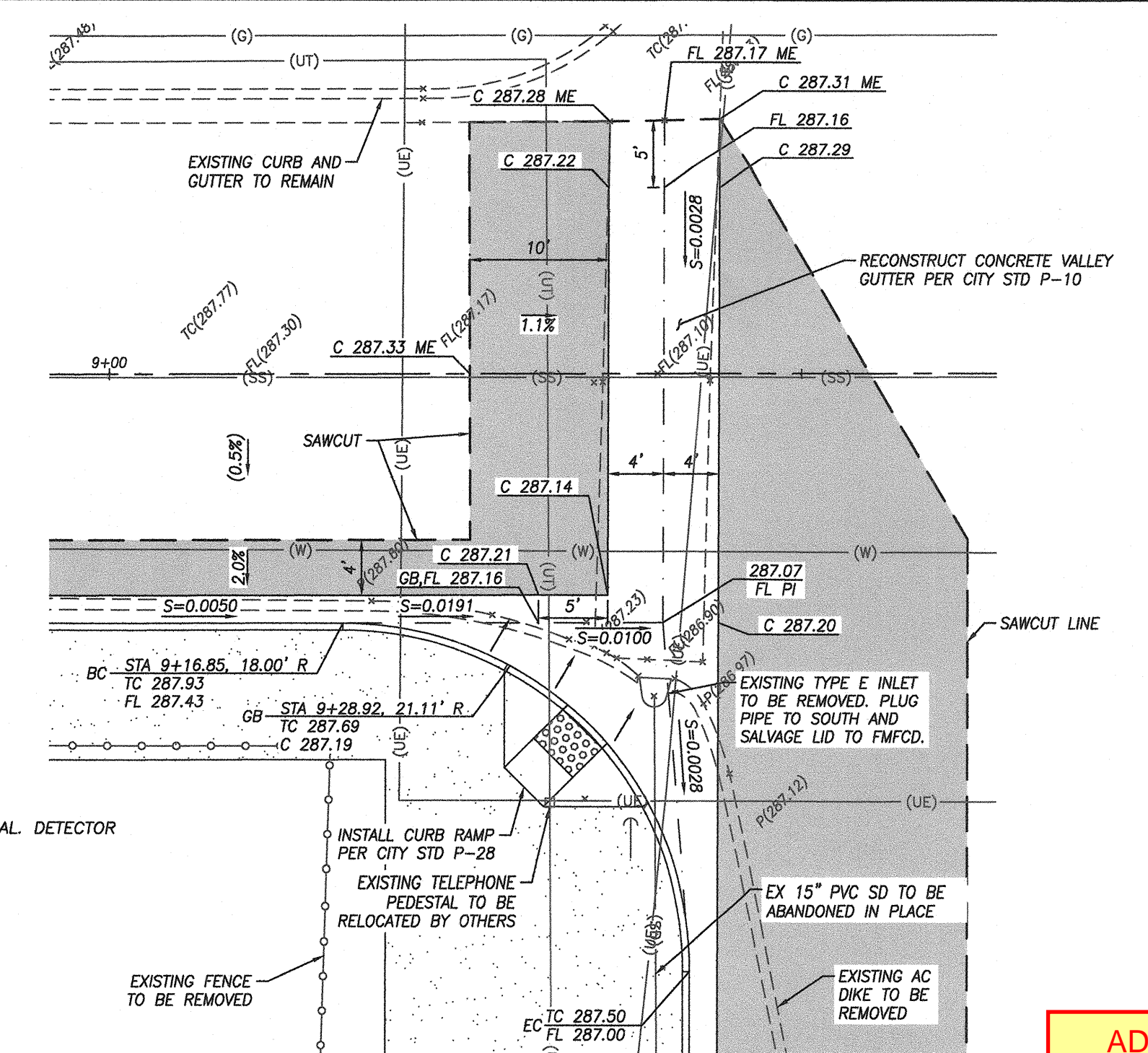
**SAWCUT NOTE:**  
SAWCUT TO COMPETENT PAVEMENT SECTION. REMOVE DAMAGED OR FAILED PAVEMENT SECTION ADJACENT TO THE EDGE OF PAVEMENT AS NECESSARY TO PROVIDE A CLEAN JOIN LINE. CUT EDGES SHALL BE VERTICAL WITH SQUARE CORNERS AND SHALL BE STRAIGHT AND NEAT IN APPEARANCE.



- KEYNOTES:**
- 1 INSTALL SANITARY SEWER PER DETAIL S-3
  - 2 INSTALL 8" TEE AND 8" FIRE SERVICE LATERAL. DETECTOR CHECK PER DETAIL W-18 AND W-16



GRID SCALE:  
HORIZONTAL: 1"=40'  
VERTICAL: 1"=4'



**VALLEY GUTTER DETAIL**  
SCALE: 1" = 10'

AD 1-35d  
S&B Elementary  
02-116800

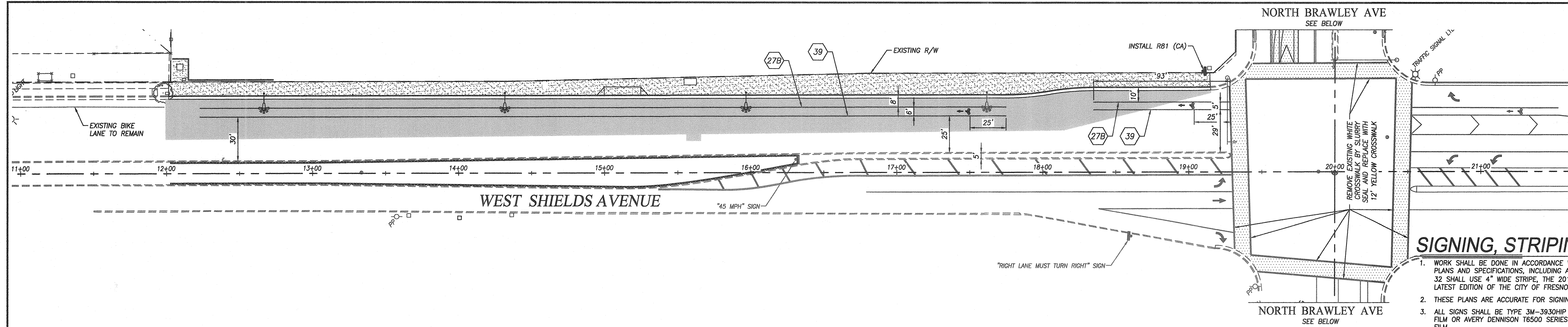


PW FILE NO. _____	<b>CITY OF FRESNO</b>	DEPARTMENT OF PUBLIC WORKS	
PROJ. ID. _____	<b>PLANS AND SPECIFICATIONS FOR THE DEVELOPMENT OF STREETS WEST SHIELDS ELEMENTARY SCHOOL WEST FOUNTAIN WAY</b>		REVIEWED: _____ CITY ENG. <i>SK</i>
FUND. NO. _____			DR. BY: SK
ORG. NO. _____			CH. BY: _____
REF. & REV.			DATE: _____
			SCALE: AS NOTED
			SHEET NO. <u>4</u> OF <u>5</u> SHEETS 15-C-19350

OK PROJECT : 180155



L:\PROJECTS\2018\180155\ACAD IMPROVEMENTS\180155-STRIPING.DWG 3/6/2023 3:56 PM

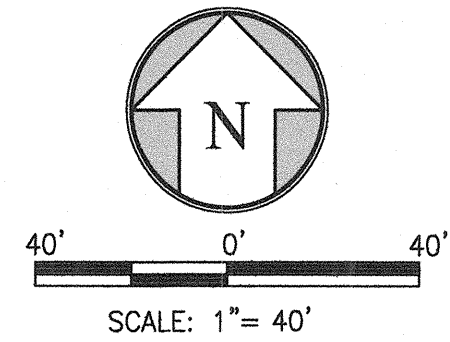


### CONSTRUCTION NOTES

- ① EXISTING STRIPING TO BE REMOVED USING SLURRY SEAL
- SLURRY SEAL
- INSTALL SHARROW ON GREEN BACKING (10'x4'), SPACED EVENLY PER CITY OF FRESNO STANDARD DETAIL P-81B
- GREEN BIKE LANE PAINT

### LEGEND

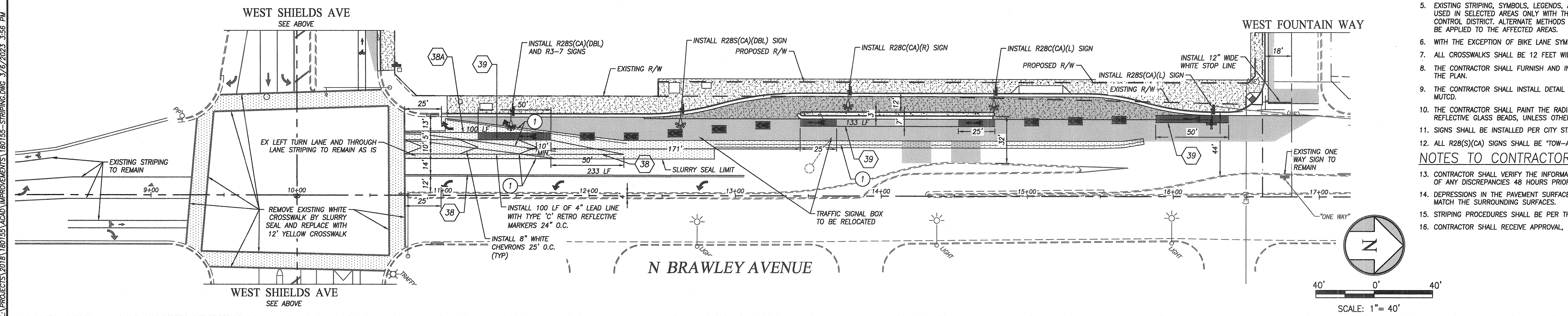
- TYPE IV ARROW, DIRECTION AS SHOWN ON PLANS
- BICYCLE LANE SYMBOL MARKING PER CALTRANS STD A24A AND A24C
- PROPOSED SIGN
- EXISTING TRAFFIC SIGNAL LOOP



### SIGNING, STRIPING, AND PAVEMENT MARKING NOTES

1. WORK SHALL BE DONE IN ACCORDANCE WITH THE 2015 EDITION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION STANDARD PLANS AND SPECIFICATIONS, INCLUDING ALL REVISIONS WITH EXCEPTION TO RSP A20A, RSP A20B, RSP A20C, AND RSP A20D, DETAIL 1 THROUGH 32 SHALL USE 4" WIDE STRIPE, THE 2014 CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (2014 CALIFORNIA MUTCD), AND THE LATEST EDITION OF THE CITY OF FRESNO STANDARD SPECIFICATIONS AND DRAWINGS, AND THE SPECIAL PROVISIONS.
2. THESE PLANS ARE ACCURATE FOR SIGNING AND STRIPING ONLY.
3. ALL SIGNS SHALL BE TYPE 3M-3930HIP III & IV SERIES REFLECTIVE SHEETING AND BE COVERED WITH 1160A PREMIUM OVERLAY ANTI-GRAFFITI FILM OR AVERY DENNISON T6500 SERIES REFLECTIVE SHEETING AND SHALL BE COVERED WITH AVERY DENNISON OL1000 ANTI-GRAFFITI OVERLAY FILM.
4. ALL SALVAGED MATERIALS SHALL BE DELIVERED TO THE CITY OF FRESNO CORPORATION YARD AT 2101 G. STREET, FRESNO. THE CONTRACTOR SHALL NOTIFY THE CITY SIGN SHOP, (559) 621-1492, AT LEAST TWO WORKING DAYS PRIOR TO DELIVERY.
5. EXISTING STRIPING, SYMBOLS, LEGENDS, AND MARKINGS TO BE REMOVED SHALL BE DONE BY WET SANDBLASTING. DRY SANDBLASTING MAY BE USED IN SELECTED AREAS ONLY WITH THE PERMISSION OF THE CITY TRAFFIC ENGINEER AND WITH THE APPROVAL OF THE AIR POLLUTION CONTROL DISTRICT. ALTERNATE METHODS OF REMOVAL REQUIRE APPROVAL OF THE CITY TRAFFIC ENGINEER. AFTER REMOVAL, SLURRY SEAL SHALL BE APPLIED TO THE AFFECTED AREAS.
6. WITH THE EXCEPTION OF BIKE LANE SYMBOLS, ALL STRIPING SHALL BE THERMOPLASTIC.
7. ALL CROSSWALKS SHALL BE 12 FEET WIDE, OUTSIDE EDGE TO OUTSIDE EDGE.
8. THE CONTRACTOR SHALL FURNISH AND INSTALL NEW TYPE K-1 (CA) MARKERS ON ALL MEDIAN ISLAND NOSES, UNLESS OTHERWISE NOTED ON THE PLAN.
9. THE CONTRACTOR SHALL INSTALL DETAIL 26 (RETRO-REFLECTIVE PAVEMENT MARKERS) ALONG ALL RAISED MEDIANS, AS PER 2014 CALIFORNIA MUTCD.
10. THE CONTRACTOR SHALL PAINT THE RADII OF ALL RAISED MEDIAN ISLAND NOSES WITH TWO COATS OF YELLOW TRAFFIC PAINT WITH RETRO REFLECTIVE GLASS BEADS, UNLESS OTHERWISE NOTED ON THE PLAN.
11. SIGNS SHALL BE INSTALLED PER CITY STANDARD DRAWING P-88, UNLESS OTHERWISE NOTED ON THE PLANS.
12. ALL R28(S)(CA) SIGNS SHALL BE "TOW-AWAY/NO STOPPING ANY TIME" SIGNS PER CITY STANDARD DRAWING P-91.

AD 1-35e  
S&B Elementary  
02-116800



### NOTES TO CONTRACTOR

13. CONTRACTOR SHALL VERIFY THE INFORMATION SHOWN ON THESE PLANS WITH THE REFERENCED DOCUMENTS AND NOTIFY THE CITY OF FRESNO OF ANY DISCREPANCIES 48 HOURS PRIOR TO COMMENCING WORK.
14. DEPRESSIONS IN THE PAVEMENT SURFACE RESULTING FROM THE REMOVAL OF RAISED PAVEMENT MARKERS SHALL BE PATCHED AS NECESSARY TO MATCH THE SURROUNDING SURFACES.
15. STRIPING PROCEDURES SHALL BE PER THE CITY OF FRESNO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
16. CONTRACTOR SHALL RECEIVE APPROVAL, FROM THE CITY OF FRESNO, FOR THE LAYOUT OF THE STREET NAME SIGNS PRIOR TO ORDERING.



PW FILE NO. _____	<b>CITY OF FRESNO</b>	DEPARTMENT OF PUBLIC WORKS	
PROJ. ID. _____	<b>PLANS AND SPECIFICATIONS FOR THE DEVELOPMENT OF STREETS WEST SHIELDS ELEMENTARY SCHOOL</b>		REVIEWED: OFFICE ENG. <i>ST</i> CITY ENG. <i>apb</i>
FUND. NO. _____	<b>STRIPING PLAN</b>		DR. BY: SK SHEET NO. 5
ORG. NO. _____			CH. BY: _____ OF 5 SHEETS
REF. & REV.			DATE: _____
			SCALE: AS NOTED 15-C-19351

OK PROJECT : 180155



**STREETLIGHT NOTES:**

- ALL WORK SHALL CONFORM TO APPLICABLE SECTIONS OF THE STATE OF CALIFORNIA "STANDARD SPECIFICATIONS", ISSUED BY THE CALIFORNIA DEPARTMENT OF TRANSPORTATION, THE NATIONAL ELECTRICAL CODE, AND THESE SPECIAL PROVISIONS:
- LUMINAIRE SHALL BE COBRA HEAD TYPE, 120V LIGHT EMITTING DIODE (LED) WITH QUICK ACTING PHOTOELECTRIC CELL AND SHALL BE SELECTED PURSUANT TO SECTION 23-3 OF THE CITY SPECIFICATIONS. INSTALL FUSE (KTK-5) AND FUSE HOLDER (BUS-HEB) IN LUMINAIRE. CONTRACTOR TO WELD HAND HOLD CLOSED AFTER FINAL INSPECTION.
- ALL STREETLIGHTS SHALL BE NUMBERED PER STD. DWG. E-25. NUMERICAL SEQUENCE TO BE OBTAINED FROM PG&E. NUMERALS SHALL BE 2-1/2" HIGH AND INSTALLED 10"-6" ABOVE FINISHED GRADE.
- ALL CONDUITS SHALL BE SCH. 80 P.V.C., OR SCH. 40 P.V.C., AS PER STD. DWG. NOS. E-1, E-2, AND E-6 (NOTE 1), EXCEPT THAT CONDUIT FOR MAJOR STREET CROSSINGS SHALL BE GALVANIZED RIGID CONDUIT. ALL PVC CONDUIT SHALL BE UNDER SIDEWALK. IF NOT UNDER SIDEWALK, GALVANIZED RIGID CONDUIT SHALL BE BACKFILLED IN A 4" WIDE TWO SACK CONCRETE SLURRY MIX.
- PULL BOX SPACING SHALL NOT EXCEED 200 FT. PULL BOXES SHALL BE REQUIRED AT ALL CONDUIT CHANGE OF DIRECTION AND ADJACENT TO EACH STREETLIGHT. INSTALL 6" 6 SACK CONCRETE CAP AND CLEAN PEA GRAVEL. STAMP THE LETTERS "SL" 2-1/2" TALL INTO THE FINISHED CONCRETE USING A STAMP DESIGNED FOR THAT PURPOSE. "POINT OF SERVICE" PULL BOX LID SHALL BE VANDAL RESISTANT LOCKING LIDS OR APPROVED EQUIVALENT WITH NO CONCRETE OR PEA GRAVEL. VANDAL RESISTANT LOCKING LIDS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AT FINAL INSPECTION. CONTRACTOR SHALL PROVIDE TEMPORARY LID DURING CONSTRUCTION. LOCKING LIDS SHALL BE GALVANIZED STEEL DIAMOND PLATE, MINIMUM THICKNESS 3/16", WITH TWO (2) CLAMPING JAWS AND BE KEYPED TO THE CITY OF FRESNO KEY. PULL BOXES IN NON-CONCRETE AREAS SHALL BE SURROUNDED BY A ONE-FOOT RING OF CONCRETE TO THE DEPTH OF THE PULL BOX AND EXTENSION, AND ALL CONDUITS SHALL ENTER THESE PULL BOXES THROUGH THE BOTTOM, USING 90 DEGREE ELBOWS, AND SHALL EXTEND 3 TO 5 INCHES ABOVE THE FINISHED GROUT. CONTRACTOR SHALL TIGHTEN DOWN ALL LOCKING LID(S) TO A MINIMUM TORQUE SPEC OF 25 FOOT POUNDS.
- IF THE SERVICE PEDESTAL IS EQUIPPED WITH A LIGHTING CONTACTOR AND NO MASTER PHOTO CONTROL IS INSTALLED, THE CONTRACTOR SHALL INSTALL A MASTER PHOTO CONTROL ATOP A 30' TALL SIGNAL POLE ADJACENT TO THE SERVICE PEDESTAL, OR ATOP THE NEAREST STREETLIGHT POLE. THE MASTER PHOTO CONTROL SHALL BE WIRED BACK TO THE SERVICE PEDESTAL USING THREE NO. 12 AWG STRANDED COPPER WIRES COLOR MATCHED TO THE PEC. THE PEC WILL BE MOUNTED USING HARDWARE MANUFACTURED FOR THAT PURPOSE, OR FABRICATED HARDWARE APPROVED BY THE TSSL SUPERVISOR. IF THE PEDESTAL IS NOT EQUIPPED WITH A LIGHTING CONTACTOR THE CONTRACTOR SHALL UPGRADE THE PEDESTAL TO MEET THE LATEST CITY OF FRESNO STANDARDS.
- ALL STREETLIGHTS AND SAFETY LIGHTS FED FROM A PEDESTAL EQUIPPED WITH A CONTACTOR SHALL BE SWITCHED BY THAT CONTACTOR, AND THEIR PEC'S REPLACED WITH SHORTING CAPS.
- ALL WORK SHALL COMPLY WITH CITY OF FRESNO STANDARD DRAWINGS NOS. E-1 THROUGH E-37, AND CITY OF FRESNO STANDARD SPECIFICATIONS.
- ALL STREETLIGHT MATERIALS (LUMINAIRES AND POLES) SHALL BE APPROVED IN WRITING BY CITY OF FRESNO TRAFFIC SIGNALS & STREETLIGHTS (TSSL) DIVISION PRIOR TO ORDERING OF MATERIAL. ALL MATERIAL NOT APPROVED PRIOR TO ORDERING SHALL BE SUBJECT TO REJECTION AT NO COST TO THE CITY.
- THE EXISTING STREET LIGHTING SYSTEM SHALL REMAIN OPERATIONAL DURING CONSTRUCTION, UNLESS OTHERWISE NOTED ON THESE PLANS.
- ANY STREET LIGHT OR TRAFFIC SIGNAL PULL BOX IN THE SCOPE OF WORK OR ACCESSED BY THE CONTRACTOR SHALL BE CLEANED COMPLETELY, GROUTED, AND DUCT SEAL SHALL BE INSTALLED IN CONDUITS.
- ANY BROKEN PULL BOX WITHIN THE PROJECT SHALL BE REPLACED BY THE CONTRACTOR.
- ANY PULL BOX ADJUSTED TO GRADE SHALL BE ABLE TO ACCEPT A CITY OF FRESNO APPROVED LOCKING LID, AND THE CONDUITS SHALL BE ADJUSTED TO MEET CITY STANDARDS AND SPECIFICATIONS.

**SPECIAL NOTE:**

WHERE UNDERGROUND AND SURFACE STRUCTURES ARE SHOWN ON THE PLANS, THE LOCATIONS, DEPTH AND DIMENSIONS OF STRUCTURES ARE BELIEVED TO BE REASONABLY CORRECT, BUT ARE NOT GUARANTEED. SUCH STRUCTURES ARE SHOWN FOR THE INFORMATION OF THE CONTRACTOR, BUT INFORMATION SO GIVEN IS NOT TO BE CONSTRUED AS A REPRESENTATION THAT SUCH STRUCTURES WILL, IN ALL CASES, BE FOUND WHERE SHOWN, OR THAT THEY REPRESENT ALL OF THE STRUCTURES WHICH MAY BE ENCOUNTERED.

CONTRACTOR SHALL NOTIFY "USA" (UNDERGROUND SERVICE ALERT) AT 811, 48 HOURS BEFORE COMMENCING EXCAVATION AND ALL UTILITY AUTHORITIES OR UTILITY COMPANIES HAVING POSSIBLE INTEREST IN THE WORK OF CONTRACTOR'S INTENTION TO EXCAVATE PROXIMATE TO EXISTING FACILITIES, AND CONTRACTOR SHALL VERIFY THE LOCATION OF ANY UTILITIES WITHIN THE WORK AREA.

**ASSESSOR'S PARCEL NUMBER:**

310-091-25

**RECORD OWNERSHIP:**

CENTRAL UNIFIED SCHOOL DISTRICT  
5652 WEST GETTYSBURG  
FRESNO, CA 93722

**IMPROVEMENTS BY:**

CENTRAL UNIFIED SCHOOL DISTRICT  
5652 WEST GETTYSBURG  
FRESNO, CA 93722

**PREPARED BY:**

QUAD KNOPF, INC (QK)  
601 POLLASKY AVENUE, SUITE 301  
CLOVIS, CA. 93612  
(559) 449-2400

**TOPOGRAPHIC SURVEY:**

TOPOGRAPHIC INFORMATION WAS COLLECTED IN MARCH 2018.

**BENCHMARK:**

CITY OF FRESNO TBM 3496 - CHISELED SQUARE ON NORTHWEST CORNER OF DRIVEWAY, SOUTHEAST CORNER OF SHIELDS AND BLYTHE AVENUES. ELEVATION = 287.50

**BASIS OF BEARING:**

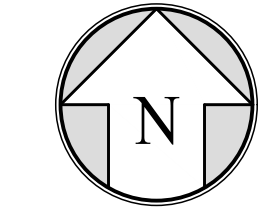
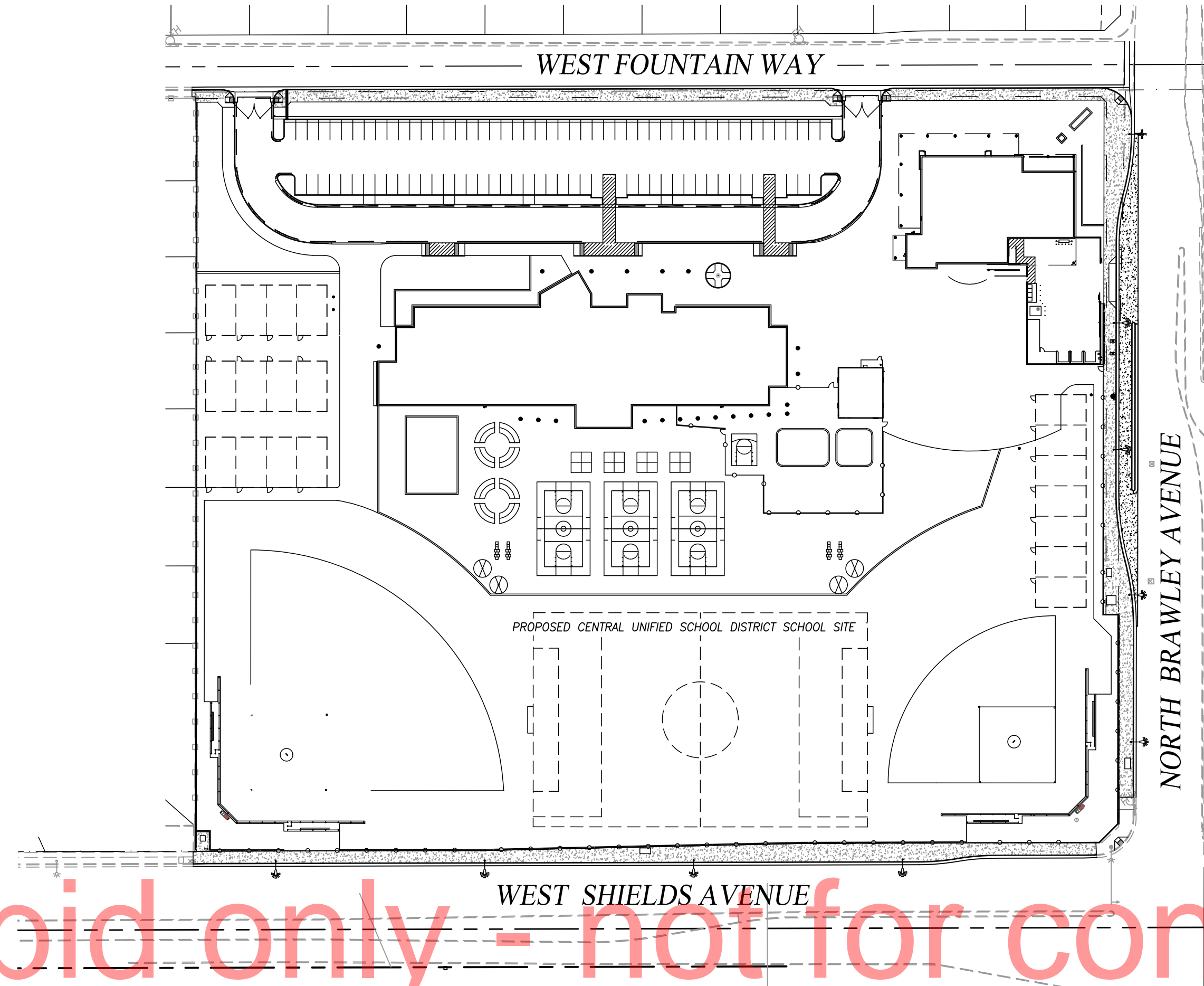
THE EAST LINE OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 13 SOUTH, RANGE 19 EAST (ALSO BEING THE CENTERLINE OF NORTH BRAWLEY AVENUE) IS TAKEN TO BE N0°04'06"E AS SHOWN ON THE MAP OF TRACT 5148, RECORDED IN VOLUME 69 OF PLATS, AT PAGES 68 AND 69, FRESNO COUNTY RECORDS.

**LEGEND:**

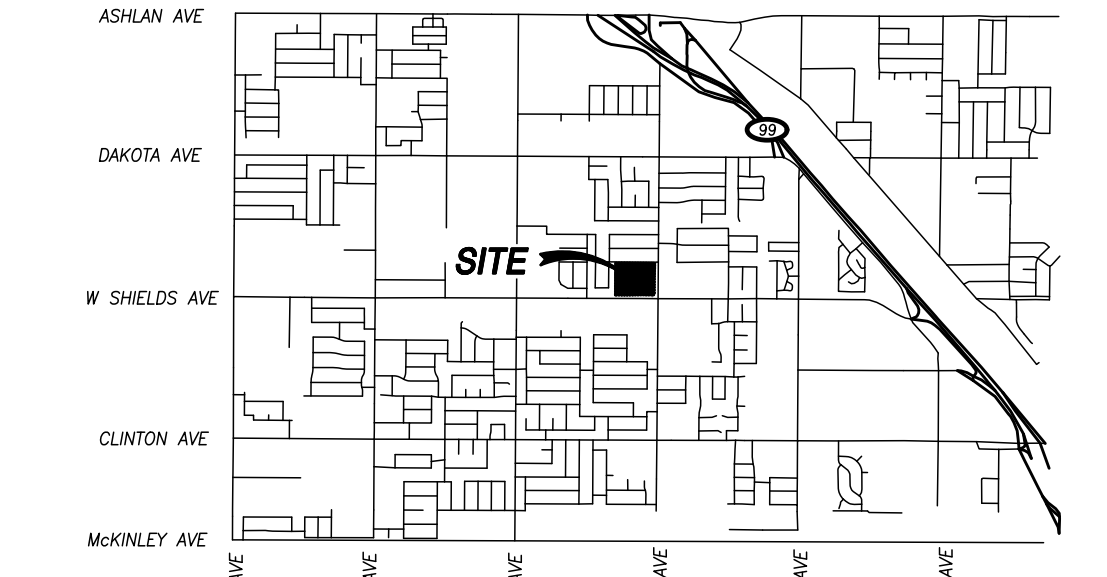
- EXISTING STREETLIGHT
- INSTALL 1-1/2" CONDUIT PER CITY STD. E-1
- INSTALL PULL BOX PER CITY STD. E-4A, E-4B
- EXISTING CONDUIT
- EXISTING TESCO
- EXISTING PULL BOX
- INSTALL STREETLIGHT PER CITY STANDARDS E-1 CREE LUMINAIRE (RSWS-A-HT-2ME-3L-40K8-UL-GY-N, FULL POWER; RATED: 29W, 3300 LUMEN, 4000K, CR180, B1-U0-G1) AND PER SECTION 23-1.23 OF CITY SPECIFICATIONS SKURWS9054&SP
- INSTALL STREETLIGHT PER CITY STANDARDS E-1 CREE LUMINAIRE (RSWM-A-HT-2LG-9L-40K8-UL-GY-N-X6; RATED: 75W, 8850 LUMEN, 4000K, CR180, B2-U0-G2) AND PER SECTION 23:1.23 OF CITY SPECIFICATIONS SKURWM9036&SP



Know what's below.  
Call before you dig.



SCALE: 1" = 80'



**VICINITY MAP**  
NOT TO SCALE

**SHEET INDEX:**

No.	SHEET TITLE:	DRAWING No.:
1	COVER SHEET	-C-
2	STREETLIGHT PLAN	-C-

**DESIGN ENGINEER:**

SCOTT M. ZAAYER, RCE 61276 DATE

**APPROVED BY:**

CITY OF FRESNO - TRAFFIC SIGNAL AND STREETLIGHT SUPERVISOR DATE  
CITY OF FRESNO - TRAFFIC ENGINEERING DATE

AD 1-36a  
S&B Elementary  
02-116800



QK PROJECT : 180155



601 POLLASKY AVE., STE. 301 TEL: (559) 449-2400  
CLOVIS, CA 93612 WWW.QKINC.COM  
© COPYRIGHT BY QUAD KNOPF, INC. UNAUTHORIZED USE PROHIBITED.

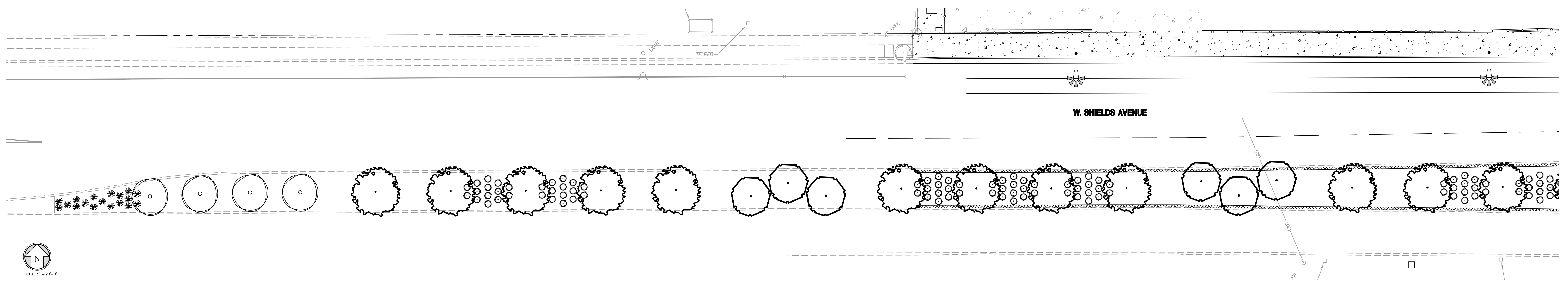
PW FILE NO. _____	CITY OF FRESNO	DEPARTMENT OF PUBLIC WORKS	REVIEWED: _____	CITY ENG. _____
PROJ. ID. _____			OFFICE ENG. _____	DR. BY: SK _____
FUND. NO. _____	PLANS AND SPECIFICATIONS FOR THE DEVELOPMENT OF STREETS WEST SHIELDS ELEMENTARY SCHOOL	COVER SHEET	CH. BY: _____	SHEET NO. 2 OF 2 SHEETS
ORG. NO. _____			DATE: _____	-C-
REF. & REV.			SCALE: AS NOTED	

L:\PROJECTS\2018\180155\ACAD\IMPROVEMENTS\STREETLIGHTS\180155-SI-COV.DWG 11/15/2022 10:40 AM





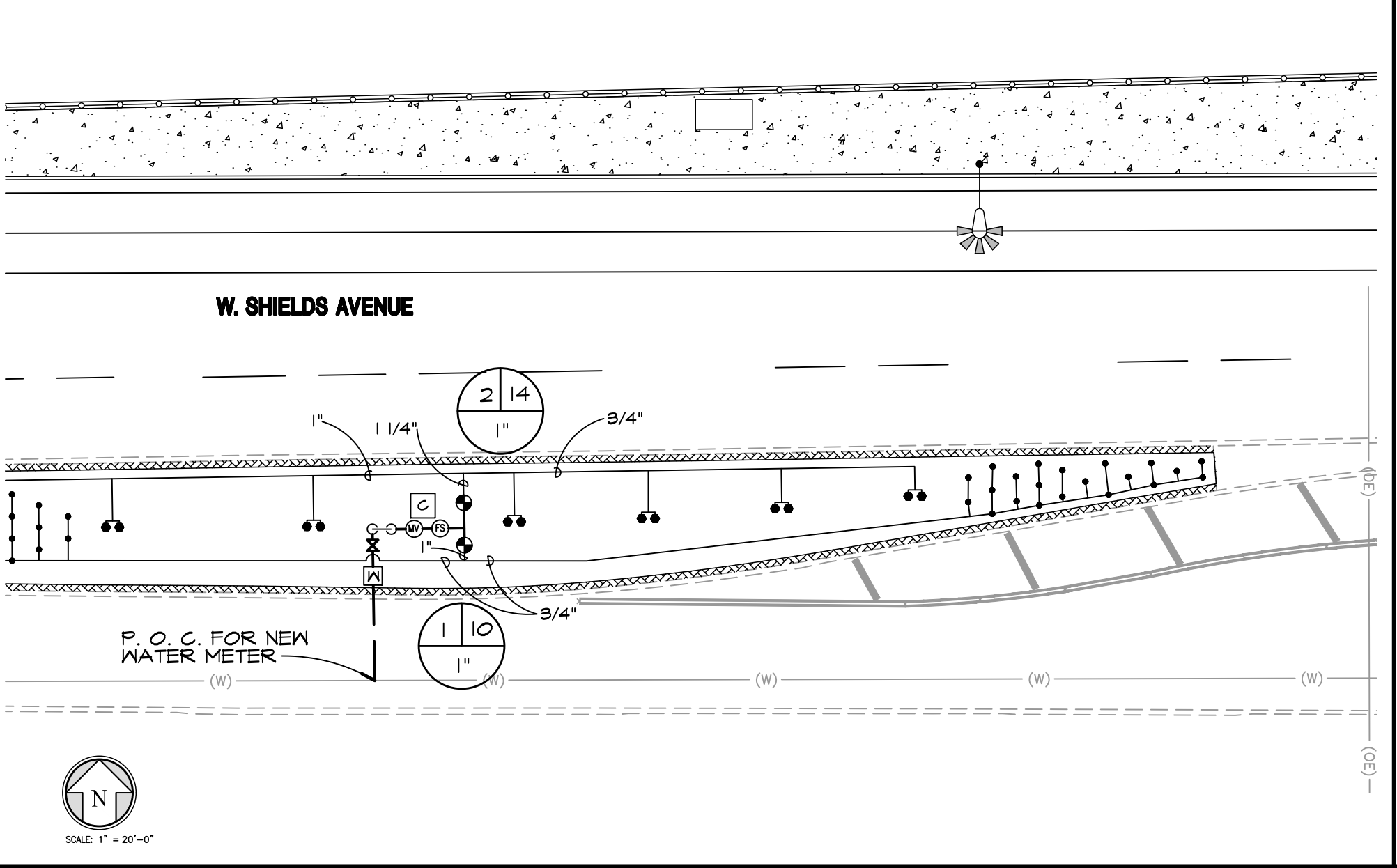
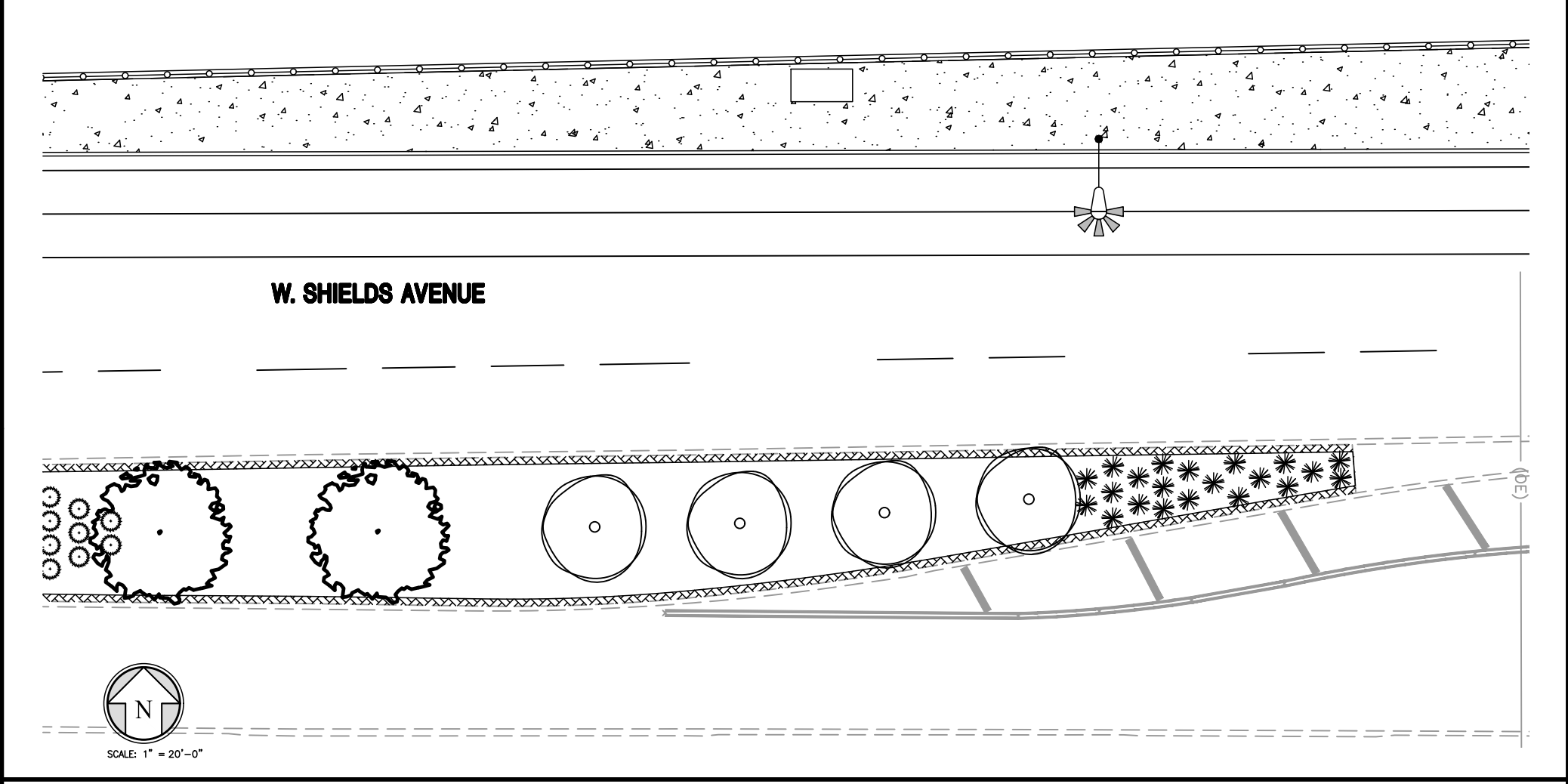




LANDSCAPE PLAN

11/15/22

I HAVE COMPLIED WITH THE CRITERIA OF THE ORDINANCE AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE AND IRRIGATION DESIGN.



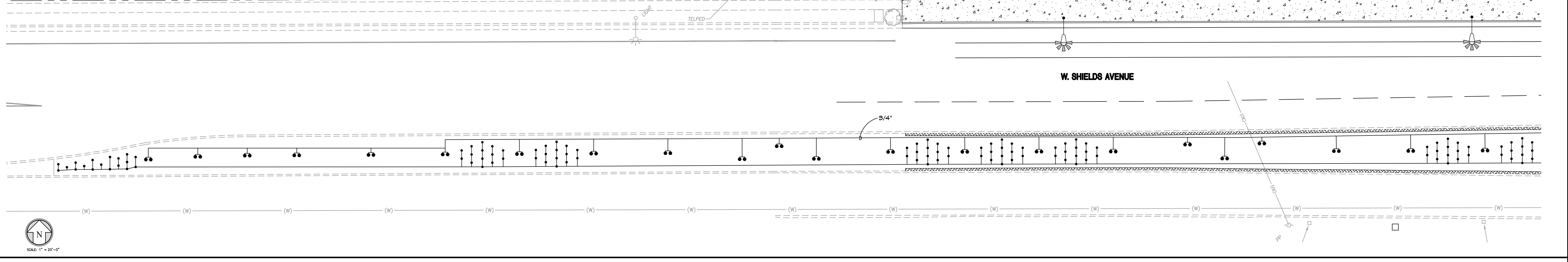
IRRIGATION PLAN

- 1 1/2" PVC SCHEDULE 40 MAIN PIPE
- PVC CLASS 200 LATERAL PIPE SEE PLAN FOR SIZE
- TORO LF40-PC PRESSURE COMPENSATING DRIP BUBBLER 4 GPH ON TORO SUPER FUNNY PIPE RISER, RE: 6/L-3
  - TORO PCB-25 PRESSURE COMPENSATING DRIP BUBBLER TWO PER TREE, 25 GPM, RE: 6/L-3
  - TORO T00DK-1-MF DRIP ZONE KIT, 1" T00 SERIES VALVE, WITH DCL LATCHING SOLENOID, RE: F/L-3
- 6/10 CIRCUIT NUMBER/HYDROZONE GALLONS PER MINUTE
- 1" VALVE SIZE
- CONTROLLER - IRRITROL IBOC-4PLUS WITH P-2B PEDESTAL AND R500 RAINSENSOR RE: D/L-3
  - ⊕ 1 1/2" BALL VALVE SPEARS TRUE UNION 2000, SR THREADED STYLE I821 SERIES
  - 1 1/2" FEBCO LF860 BACKFLOW PREVENTER, WITH PROTECTIVE CASE AND INSULATION BLANKET, RE: E/L-3
  - ⊕ 1 1/2" MASTER VALVE HUNTER IBV-201-FS, NORMALLY CLOSED WITH ICD-100 DECODER IF NEEDED. INSTALL PER MANUFACTURERS RECOMMENDATIONS
  - ⊕ 1" CST FLOW SENSOR WITH ICD-SEN DECODER IF NEEDED. INSTALL PER MANUFACTURERS RECOMMENDATION.
  - 1" WATER METER

IRRIGATION LEGEND

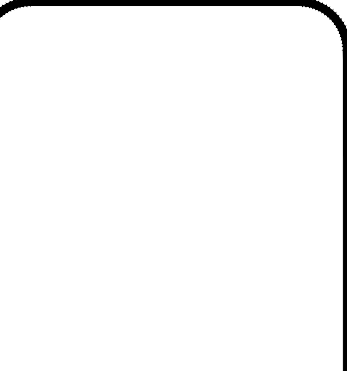
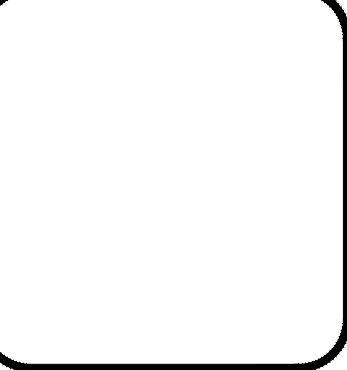
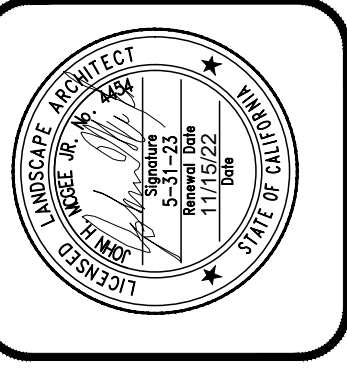
- BOTANICAL NAME, COMMON NAME (WATER USE)
- *CERCIS occidentalis*, WESTERN REDBUD, MULTI-TRUNK, (VL) 15 GALLON
  - *LAGERSTROEMIA indica* 'EBONY FIRE', GRAPE MYRTLE (L) 15 GALLON
  - *PISTACIA chinensis*, CHINESE PISTACHE (L) 15 GALLON
  - *DIETES bicolor*, Fortnight Lily (L), 5 GALLON
  - *CALLISTEMON citrinus* 'LITTLE JOHN', DWARF BOTTLEBRUSH (L), 1 GALLON

LANDSCAPE LEGEND

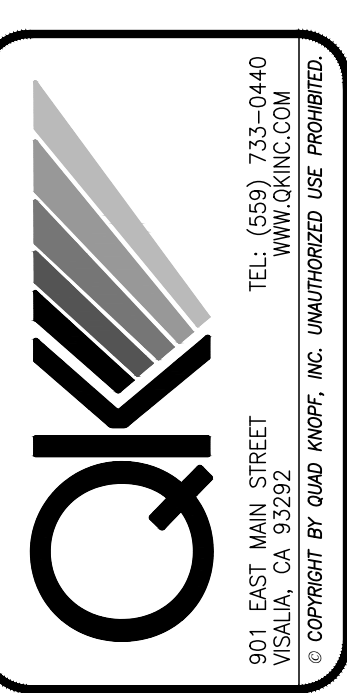


IRRIGATION PLAN

NO.	DATE	DESCRIPTION



AD 1-37a  
S&B Elementary  
02-116800



**SIM-PBK**  
7790 N. PALM AVENUE  
FRESNO, CA 93711  
(559) 448-8400

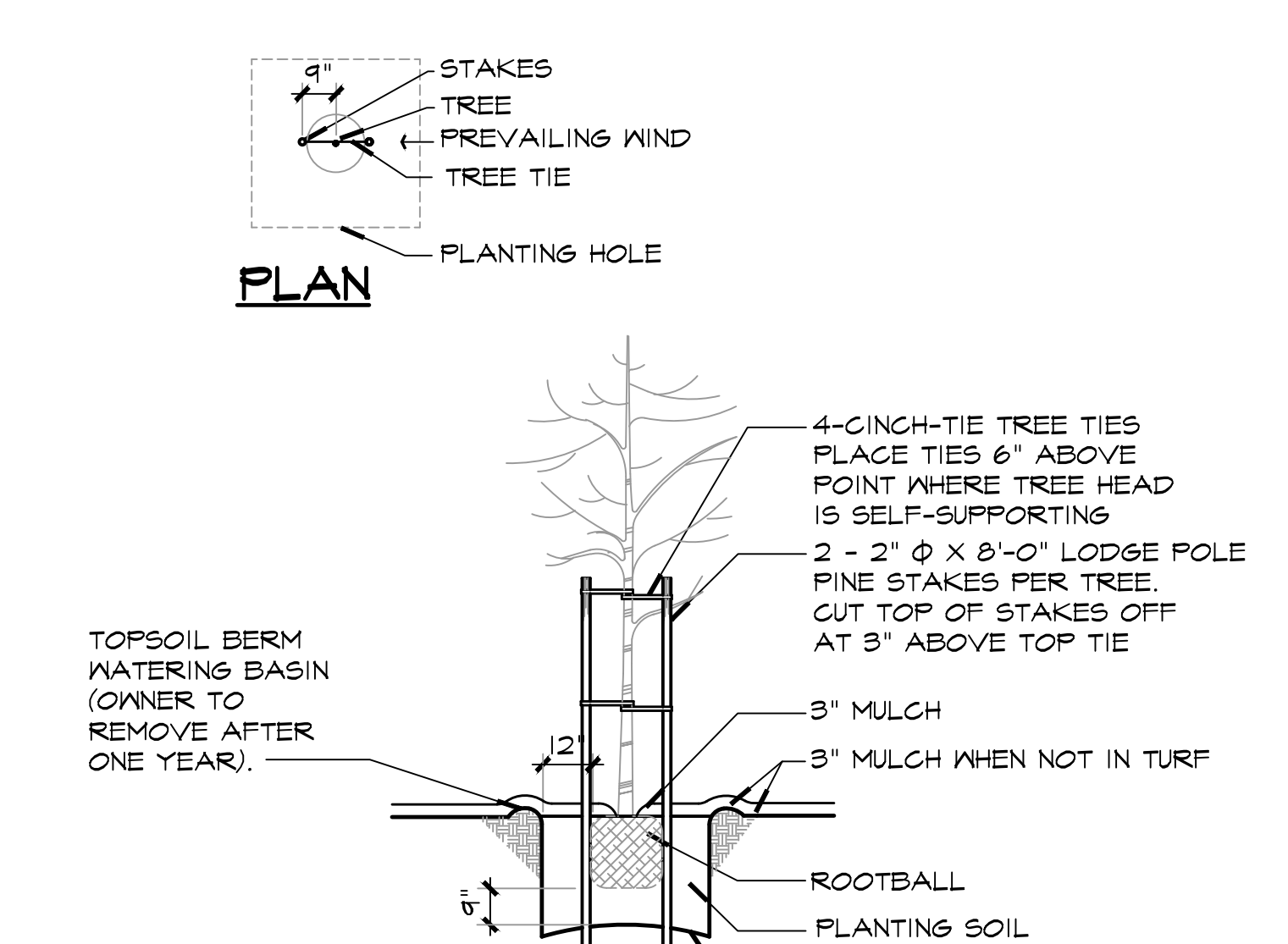
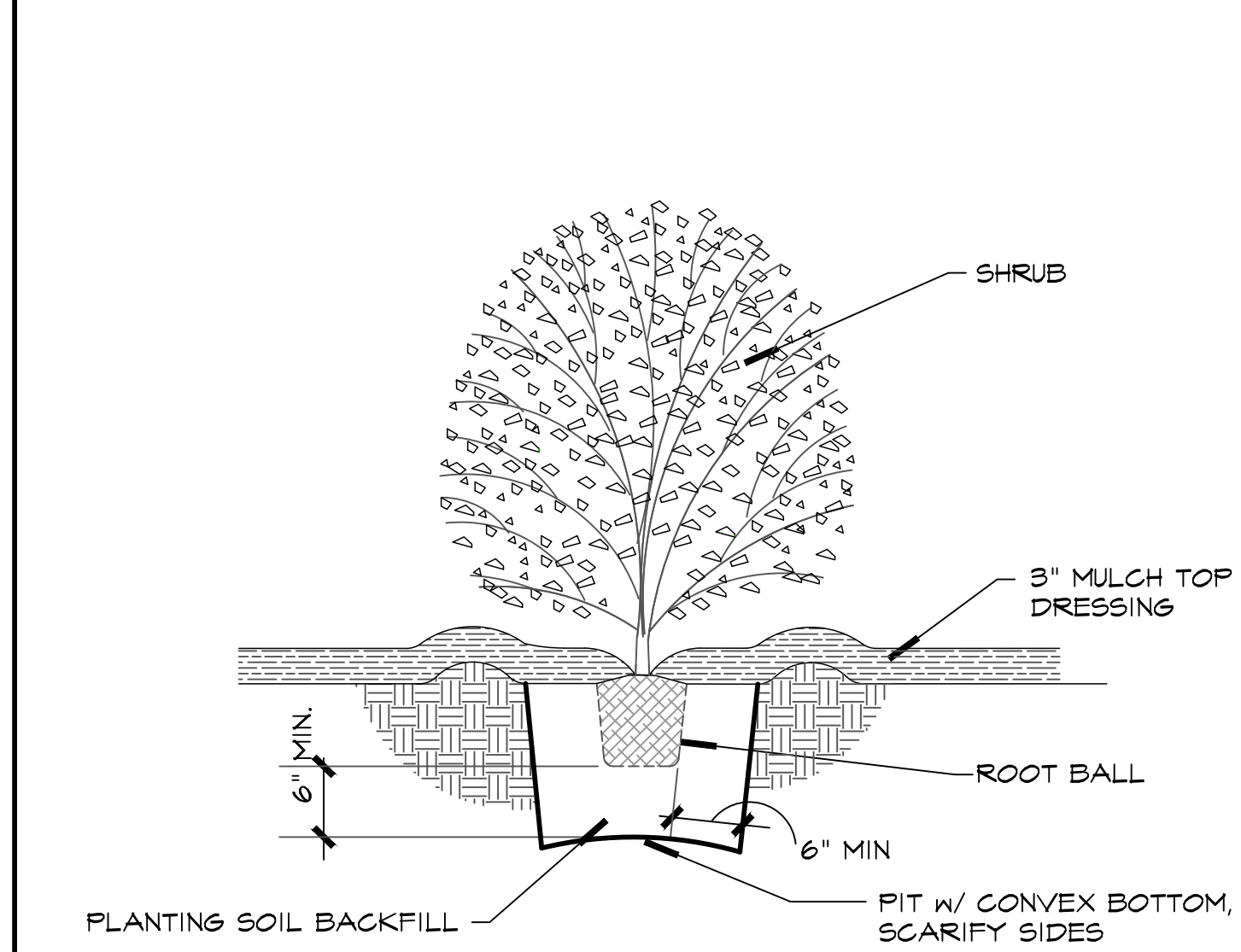
**NEW WEST SHIELDS ELEMENTARY  
LANDSCAPE AND IRRIGATION PLAN**

PROJECT NO.: 180155  
DRAWN BY: DWG  
QA/QC BY: SB  
SCALE: AS SHOWN  
SHEET NO.: L-1

L:\PROJECTS\2018\180155\ACAD\LANDSCAPE\180155\_LS.DWG 11/16/2022 8:09 AM



1. QUALITY: PROVIDE TREES, SHRUBS AND OTHER PLANTS OF SIZE, GENUS, SPECIES, AND VARIETY SHOWN AND SCHEDULED FOR LANDSCAPE WORK AND COMPLYING WITH RECOMMENDATIONS AND REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". 15 GALLON TREES TO BE A MINIMUM 1" CALIFER AT 6" ABOVE ROOT BALL.
2. LABEL EACH TREE AND SHRUB WITH SECURELY ATTACHED WATERPROOF TAG BEARING BOTANICAL & COMMON NAMES.
3. TOPSOIL: PROVIDE NEW TOPSOIL, AS REQUIRED, THAT IS FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL, REASON- ABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH, WEEDS, AND OTHER LITTER, AND FREE OF ROOTS, STUMPS, STONES LARGER THAN 1" IN ANY DIMENSION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH.
4. MULCH: 3" MINIMUM ORGANIC MULCH FREE FROM DELETERIOUS MATERIALS AND SUITABLE FOR TOP DRESSING OF TREES, SHRUBS OR PLANTS AND CONSISTING OF THE FOLLOWING:  
"SUPERIOR SOIL" RED FIR HUMUS, 1/8"-3/4".
5. PLANTING SOIL MIXTURE: BACKFILL FOR TREES AND SHRUBS PROVIDE SPECIFIED MATERIALS IN NOT LESS THAN THE FOLLOWING QUANTITIES:  
7 PARTS OF SCREENED TOPSOIL, SCREEN PASSING NOT LARGER THAN 1" IN ANY DIRECTION.  
3 PARTS OF SUPERIOR ALL GREEN COMPOST  
CONTROLLED RELEASE FERTILIZER TABLETS 20-10-5
6. CONTRACTOR IS RESPONSIBLE TO PROVIDE A SOILS REPORT FROM A CERTIFIED LAB WITH RECOMMENDED AMENDMENTS TO TILL INTO THE SOIL A MINIMUM OF 12". ADD AS A MINIMUM THE FOLLOWING AMENDMENTS:  
4 CUBIC YARDS OF SUPERIOR ALL GREEN COMPOST PER 1000 S.F.  
50 LBS. OF GYPSUM PER 1000 S.F.  
50 LBS. OF TERRA C HUMATE PER 1000 S.F.  
13 LBS. OF BEST TRIPLE-PRO 15-15-15 PER 1000 S.F.
7. MAINTENANCE: BEGIN MAINTENANCE IMMEDIATELY AFTER PLANTING IS COMPLETED, INCLUDING PUNCLISTED ITEMS. MAINTAIN TREES, SHRUBS, TURF AND OTHER PLANTS UNTIL FINAL ACCEPTANCE, BUT IN NO CASE, LESS THAN 60 DAYS AFTER COMPLETION, INCLUDING PUNCLISTED ITEMS. MAINTAIN TREES, SHRUBS AND OTHER BY PRUNING, CULTIVATING AND NEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS, TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS, SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE. MAINTAIN TURF BY MOWING, NEEDING AND FEEDING.
8. PROTECT EXISTING TREES DURING CONSTRUCTION. WATER ON WEEKLY INTERVALS. HAND DIG ONLY UNDER DRIP LINE FOR NEW IRRIGATION. DO NOT CUT ANY ROOTS LARGER THAN 2" IN DIAMETER. DO NOT EXPOSE ROOTS DURING GRADING OPERATIONS.

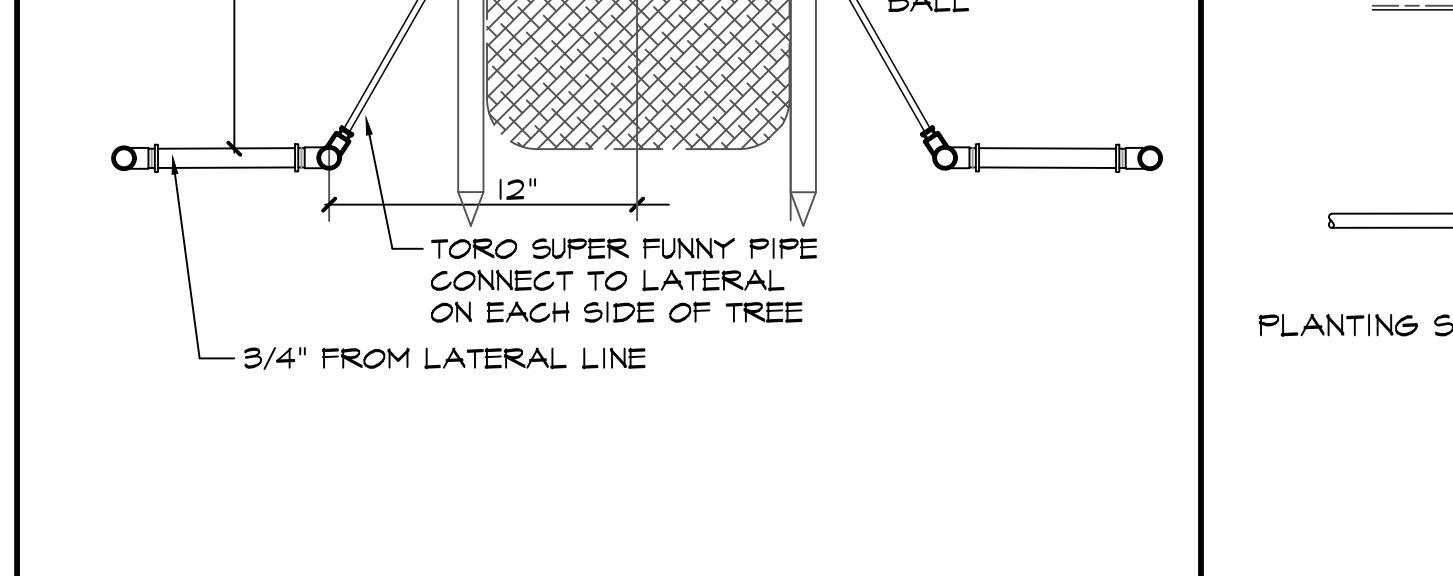


**LANDSCAPE NOTES**

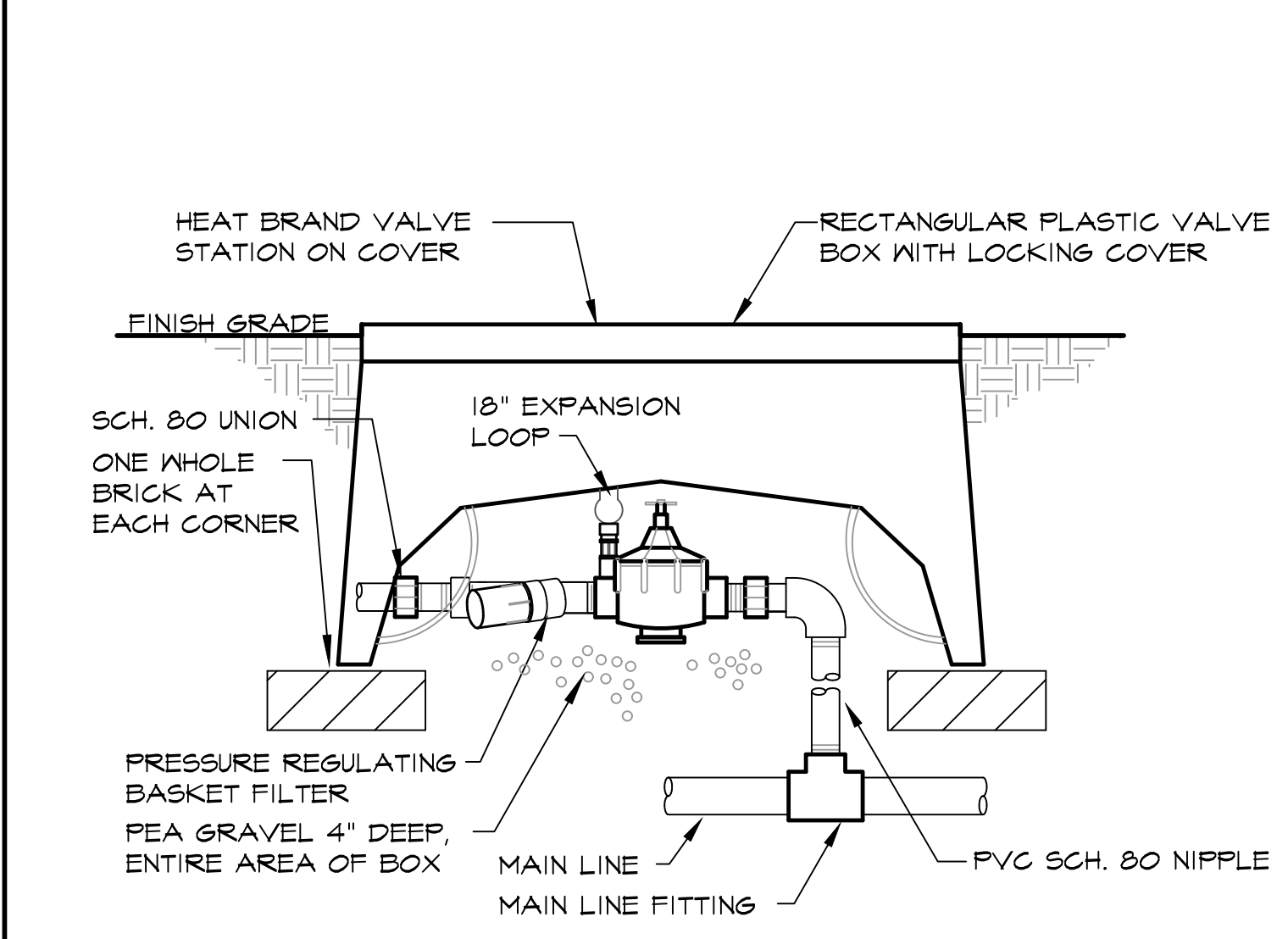
1. THIS DESIGN IS DIAGRAMATIC. EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARIFICATION ONLY AND IS TO BE INSTALLED WITHIN PLANTED AREAS.
2. SYSTEM DESIGNED ASSUMING 40 PSI.
3. BACKFLOW PREVENTER: PROVIDE UNION ON DOWNSTREAM SIDE. INSTALL TO COMPLY WITH REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION.
4. PRESSURE PIPE SHALL COMPLY WITH THE FOLLOWING:  
A. PVC PLASTIC PIPE, ASTM D 1785, PVC 1120, SCHED. 40, 160 psig.  
B. GALVANIZED STEEL PIPE, ASTM A 120, SCHEDULE 40.
5. LATERAL PIPE (DOWNSTREAM FROM CIRCUIT VALVES) SHALL COMPLY WITH THE FOLLOWING:  
A. PVC PLASTIC PIPE, ASTM D 2241, PVC 1120, SDR 21, 200 psig.  
B. VALVES: MANUFACTURER'S STANDARD, OF TYPE AND SIZE INDICATED, AND AS FOLLOWS:  
A. AUTOMATIC CIRCUIT VALVES: PLASTIC-BODIED GLOBE OR ANGLE VALVES OPERATED BY LOW-VOLTAGE SOLENOID, NORMALLY CLOSED, MANUAL FLOW ADJUSTMENT.  
B. VALVES TO HAVE 150 MESH SCREEN FILTER.
7. VALVE BOX: MANUFACTURER'S STANDARD PLASTIC UNIT, WITH LABELED COVER, FOR EACH GROUP OF VALVES.
8. CIRCUIT WIRES SHALL BE DIRECT BURIAL 14 ANG. CONNECTIONS SHALL BE MADE WITH DBRY-6 WATER PROOF CONNECTORS.
9. ALL ELECTRICAL WORK SHALL BE PERFORMED PER CURRENT CODES AND ORDINANCES.
10. INSTALLATION OF MASTER VALVE AND FLOW METER ARE PER MANUFACTURERS STANDARD INSTALLATION AND CONNECTIONS TO THE CONTROLLER.
11. IRRIGATION CONTRACTOR SHALL FLUSH ALL LINES AND ADJUST EMITTERS FOR MAXIMUM PERFORMANCE. EMITTERS SHALL BE PLACED ON THE HIGH SIDE OF THE PLANT.
12. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR ALL IRRIGATION TRENCHES THAT SETTLE, THE CONTRACTOR WILL FILL AND COMPACT THE TRENCHES TO LEVEL AND ADD MORE MULCH TO PROVIDE A MINIMUM TO 3" MULCH.

**A SHRUB PLANTING**

**A TREE PLANTING AND STAKING**

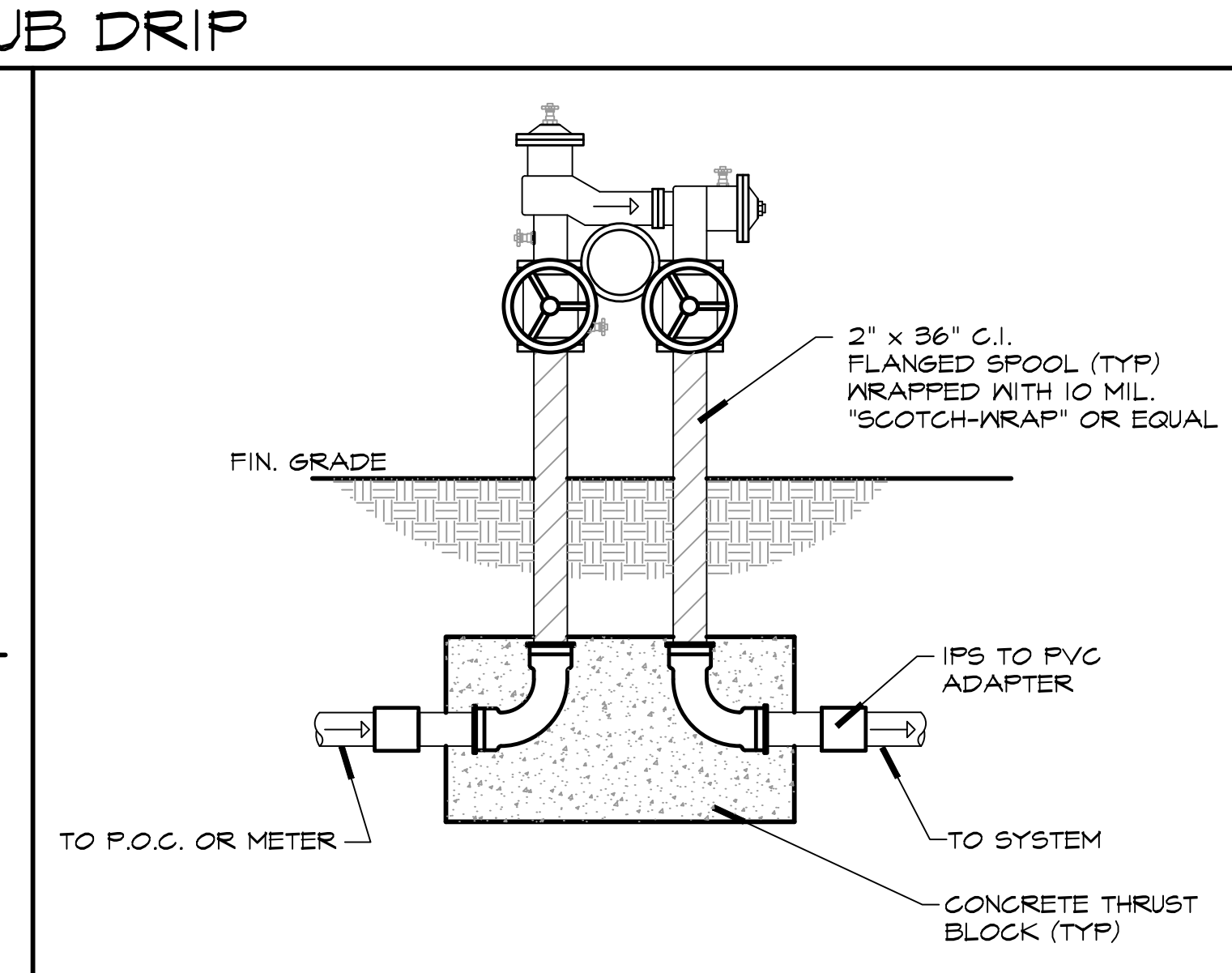
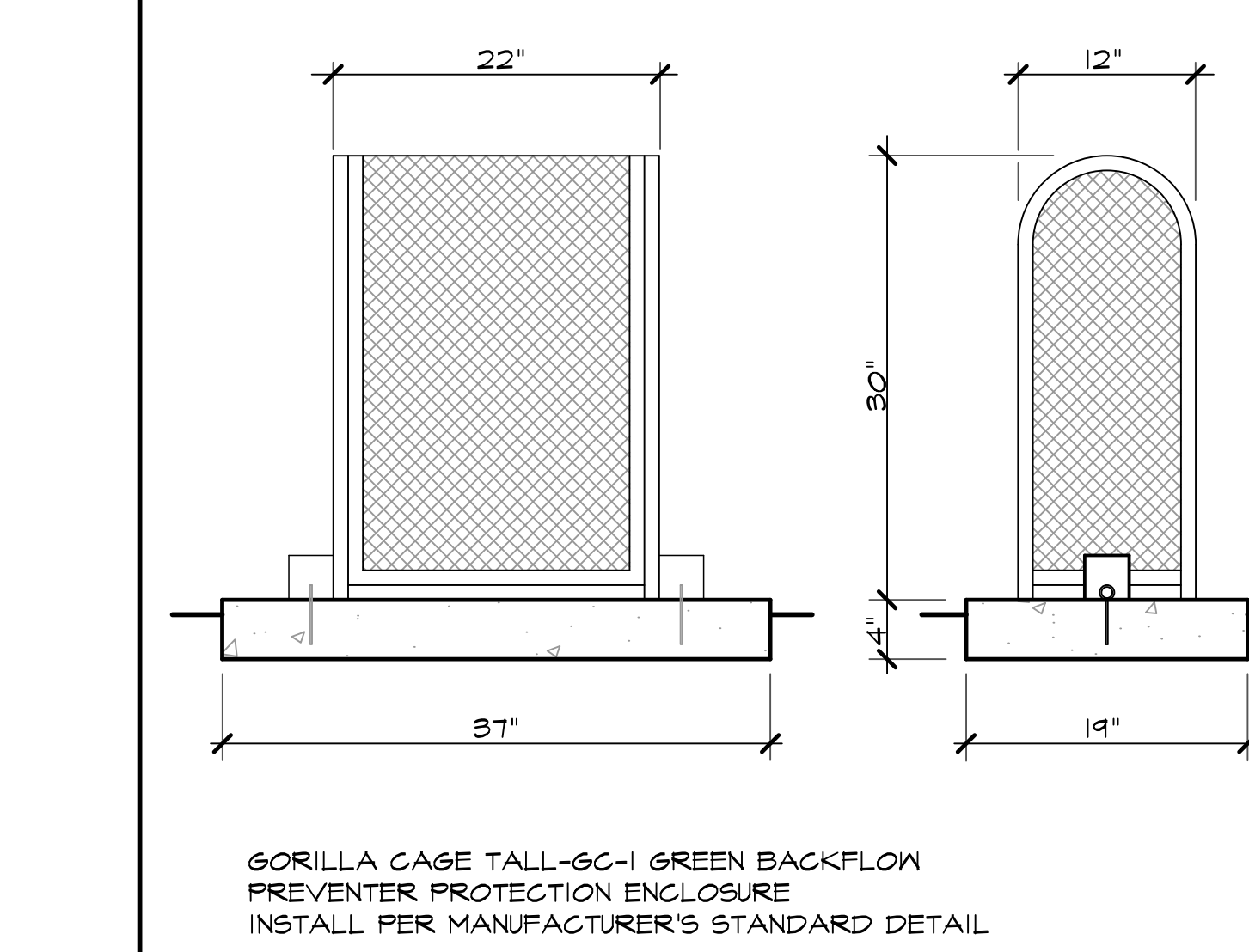


**IRRIGATION NOTES**



**A TREE DRIP**

**A SHRUB DRIP**



**A IRRIGATION VALVE AND BOX**

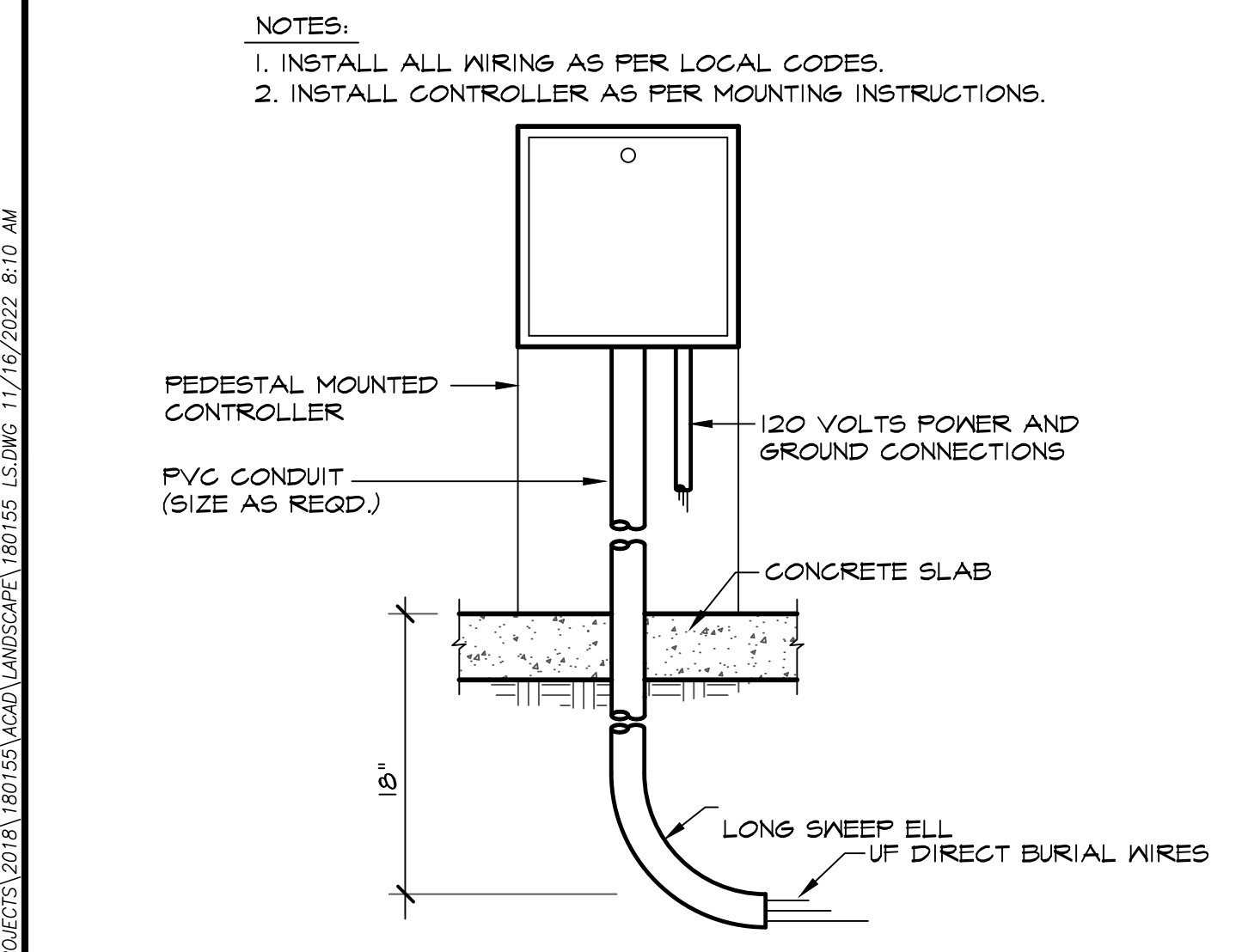
**A BACKFLOW PREVENTER CAGE**

**A BACKFLOW PREVENTER**

Appendix B - Water Efficient Landscape Worksheet

Reference Eto	51.1	Hydrozone/Plant Description	Plant Factor (PF)	Irrigation Method	Irrigation Efficiency (IE)	ETAF (PF/IE)	Landscape Area (S.F.)	ETAF x Area	Estimated Total Water Use (ETWU)	
<b>Regular Landscape Area</b>										
Low	0.2	Drip	0.81	0.25	10518	2597	82279			
							Totals	10518	2597	82279
<b>Special Landscape Area</b>										
							1	0	0	0
ETWU Total									82279	
<b>MAWA Total</b>										
Eto	0.62	ETAF	LA	1-ETAF	SLA					
51.1	0.62	0.45	10518	0.55	0		149954			
MAWA-ETWU=									67675	

**WATER USE CALCULATIONS**



**A CONTROLLER**

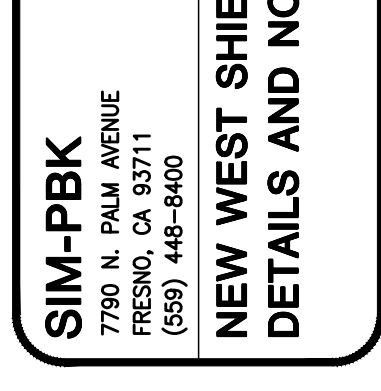
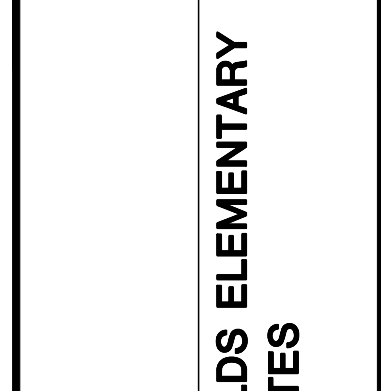
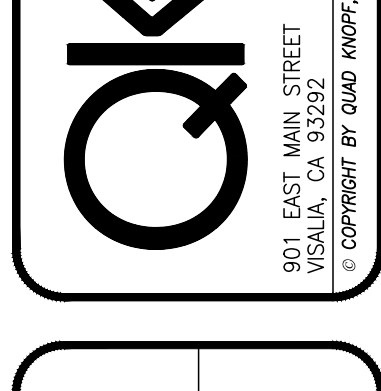
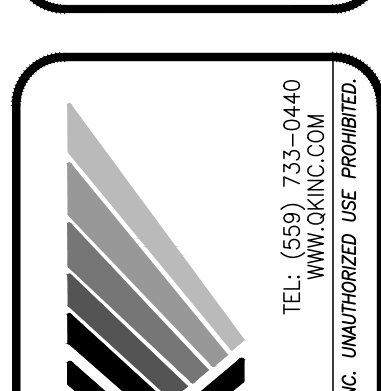
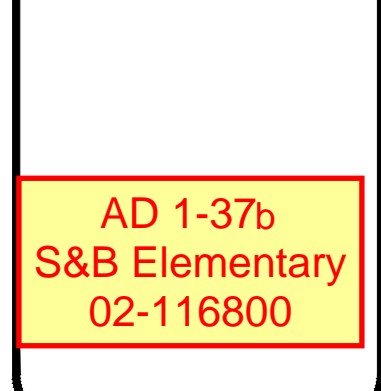
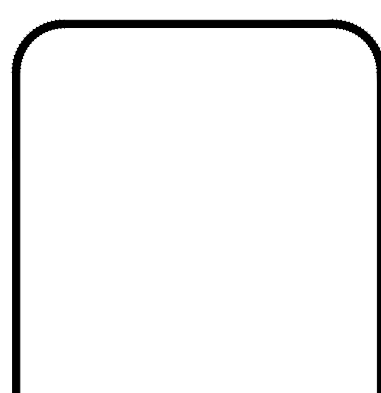
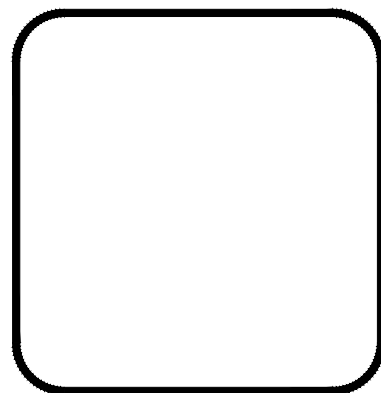
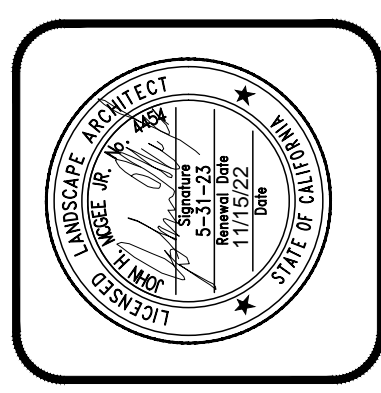
**A IRRIGATION VALVE AND BOX**

**A BACKFLOW PREVENTER CAGE**

**A BACKFLOW PREVENTER**

REVISIONS

NO.	DATE	DESCRIPTION



AD 1-37b  
S&B Elementary  
02-116800

901 EAST MAIN STREET  
VISALIA, CA 93292  
TEL: (559) 733-0440  
WWW.QIK.COM  
© COPYRIGHT BY QIK GROUP, INC. UNAUTHORIZED USE PROHIBITED.

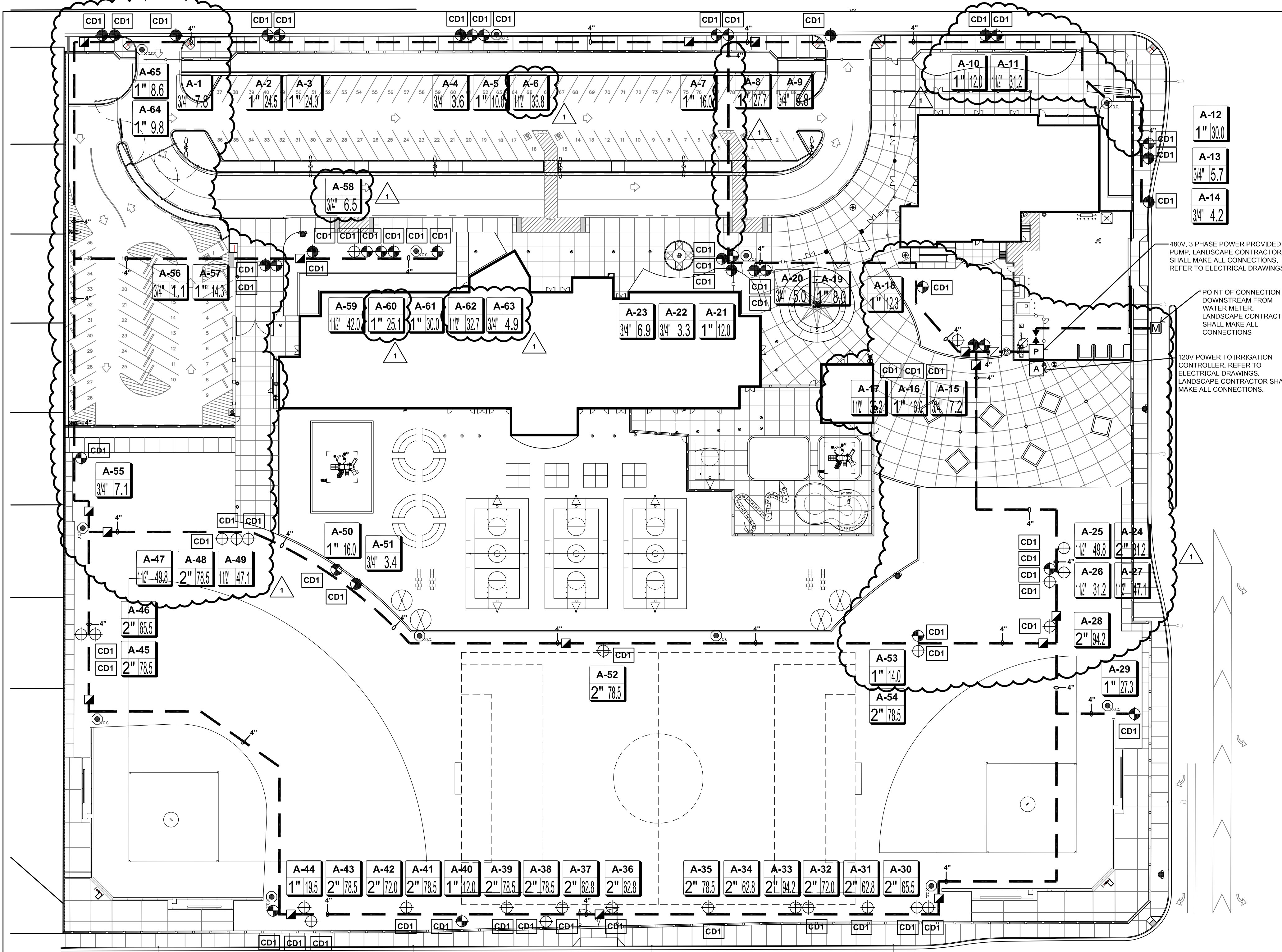
**QIK**

**SIM-PBK**  
7790 N. PALM AVENUE  
FRESNO, CA 93711  
(559) 448-8400

**NEW WEST SHIELDS ELEMENTARY  
DETAILS AND NOTES**

PROJECT NO.: 180155  
DRAWN BY:  
QA/QC BY:  
SB  
SCALE:  
CHOOSE SCALE  
SHEET NO.: **L-2**





SYM.	MANUFACTURER & DESCRIPTION	NOZZLE	GPM/PSI	DETAIL
●	HUNTER I-25-06-SS-R POP-UP ROTOR W/ STANDARD NOZZLE.	18	15.7 @ 60 PSI	G / L.S.5.0
○	HUNTER I-25-06-SS-R POP-UP ROTOR W/ STANDARD NOZZLE.	18	15.7 @ 60 PSI	G / L.S.5.0
○	HUNTER I-25-06-SS-R POP-UP ROTOR W/ STANDARD NOZZLE.	8	9.2 @ 60 PSI	G / L.S.5.0
○	HUNTER I-20-06-SS-R POP-UP ROTOR W/ GRAY LOW ANGLE NOZZLE.	4.5 LA	4.4 @ 50 PSI	G / L.S.5.0
○	HUNTER I-20-06-SS-R POP-UP ROTOR W/ GRAY LOW ANGLE NOZZLE.	4.5 LA	4.4 @ 50 PSI	G / L.S.5.0
○	HUNTER I-20-06-SS-R POP-UP ROTOR W/ GRAY LOW ANGLE NOZZLE.	2.5 LA	2.8 @ 50 PSI	G / L.S.5.0
○	HUNTER I-20-06-SS-R POP-UP ROTOR W/ BLUE STANDARD NOZZLE.	8.0	8.0 @ 45 PSI	G / L.S.5.0
○	HUNTER I-20-06-SS-R POP-UP ROTOR W/ BLUE STANDARD NOZZLE.	8.0	8.0 @ 45 PSI	G / L.S.5.0
○	HUNTER I-20-06-SS-R POP-UP ROTOR W/ BLUE STANDARD NOZZLE.	4.0	4.0 @ 45 PSI	G / L.S.5.0
▽	RAINBIRD 1806-SAM-PRS-1800-NPCAP 6" POP-UP SPRAY W/ 'U' SERIES NOZZLE.	12"-F.H.Q	2.80, 1.30, 0.65 @ 30 PSI	F / L.S.5.0
▽	RAINBIRD 1806-SAM-PRS-1800-NPCAP 6" POP-UP SPRAY W/ 'U' SERIES NOZZLE.	10"-F.H.Q	1.64, 0.82, 0.41 @ 30 PSI	F / L.S.5.0
▽	RAINBIRD 1806-SAM-PRS-1800-NPCAP 6" POP-UP SPRAY W/ 'U' SERIES NOZZLE.	8"-F.H.Q	1.05, 0.52, 0.26 @ 30 PSI	F / L.S.5.0
▽	RAINBIRD 1804-SAM-PRS-1800-NPCAP 4" POP-UP SPRAY W/ 'U' SERIES NOZZLE.	15"-F.H.Q	3.70, 1.85, 0.92 @ 30 PSI	F / L.S.5.0
▽	RAINBIRD 1804-SAM-PRS-1800-NPCAP 4" POP-UP SPRAY W/ 'U' SERIES NOZZLE.	12"-F.H.Q	2.80, 1.30, 0.65 @ 30 PSI	F / L.S.5.0
▽	RAINBIRD 1804-SAM-PRS-1800-NPCAP 4" POP-UP SPRAY W/ 'U' SERIES NOZZLE.	10"-F.H.Q	1.64, 0.82, 0.41 @ 30 PSI	F / L.S.5.0
□	RAINBIRD 1806-SAM-PRS-1800-NPCAP 6" POP-UP SPRAY W/ ADJUSTABLE FLOOD BUBBLER NOZZLE.	1300 A-F	1.70 @ 30 PSI	F / L.S.5.0
○	RAINBIRD RWS-B-1404-SOCK-GRATE-P ROOT WATERING SYSTEM.	1404	1.0 @ 30 PSI	E / L.S.5.0
○	FEBCO 4" 880LF REDUCED PRESSURE BACKFLOW PREVENTER. PROVIDE VALVE SETTER.			A / L.S.5.1
○	NIBCO F-619-RW-SON CAST IRON RESILIENT WEDGE GATE VALVE W/ 2" OPERATING NUT. SIZE EQUAL TO MAINLINE.			C / L.S.5.0
○	RAINBIRD 44NP QUICK COUPLING VALVE. INSTALL IN VALVE BOX.			D / L.S.5.0
○	TORO P-220S-26-9 SERIES ELECTRIC CONTROL VALVE W/ FLOW CONTROL, EFF-KIT-60HZ & TORO DCLP-LATCHING SOLENOID & TORO CDEC DECODER. SIZE AS NOTED ON PLAN. MAKE CONNECTIONS PER TORO SPECIFICATIONS.			A / L.S.5.0
○	TORO P-220S-27-9 SERIES ELECTRIC CONTROL VALVE W/ EZR-100 EZ-REG PRESSURE REGULATOR MODULE, FLOW CONTROL, EFF-KIT-60HZ & TORO DCLP-LATCHING SOLENOID & TORO CDEC DECODER. SIZE AS NOTED ON PLAN. MAKE CONNECTIONS PER TORO SPECIFICATIONS.			A / L.S.5.0
○	IRRITROL 700 SERIES CONTROL VALVE W/ OMR-100 OMNI REG PRESSURE REGULATOR & TORO DCLP-LATCHING SOLENOID, RW60-KIT & TORO CDEC DECODER. SIZE AS NOTED.			A / L.S.5.0
○	TORO TDC CDEC-PED-100 TWO WIRE IRRIGATION CONTROLLER. INSTALL IN STAINLESS STEEL PEDESTAL W/ DISCONNECT SWITCH. CONTROLLER SHALL BE REMOTE READY. PROVIDE & INSTALL TORO T-220S-26-9 SERIES WIRELESS RAINFREEZE SENSOR, MOUNT TRANSMITTER TO ROOF EAVE IN APPROVED LOCATION/MANNER. MOUNT RECEIVER TO CONTROLLER ENCLOSURE IN APPROVED MANNER. PROVIDE 3/4" CONDUIT W/ CAT5 ETHERNET CABLE TO CONTROLLER FROM NEAREST IDF BOARD.			L / L.S.5.0
P	WATERTRONICS WMBV-5000-2-15-460-3-300-80 SKID MOUNTED BOOSTER PUMP W/ VFD CONTROLS & PUMP START PANEL. MAKE ALL CONNECTIONS. PROVIDE RELAY, DECODER & WIRE TO PUMP START IN CONTROLLER 'A'.			J / L.S.5.1
○	NIBCO F-619-RW-SON RESILIENT WEDGE BLOW OFF VALVE W/ 2" OPERATING NUT. INSTALL IN VALVE BOX.			B / L.S.5.0
---	CLASS 200 'O' RING GASKETED 'PURPLE TINTED' NON POTABLE PVC MAIN LINE. SEE PLAN FOR SIZE.			H / L.S.5.0
---	CLASS 200 'PURPLE TINTED' NON POTABLE PVC LATERAL LINE. SEE PLAN FOR SIZE.			H / L.S.5.0
---	TORO DL2000 RGP-412 DRIFTLINE. INSTALL ON FINISH GRADE OF DIRT AT 12" O.C. STAPLE IN PLACE AT 12" O.C.			B / L.S.5.1
---	SCH. 40 PVC SLEEVE. SEE LEGEND FOR SIZE.			H / L.S.5.0
○	EZ-FLO FERTIGATION SYSTEM EZ086. INSTALL IN EZ-FLO HF-ENC ENCLOSURE W/ CBV-400 4" COUPLING BALL VALVE CONNECTION.			I / L.S.5.1
○	TORO T-YD-500-34 AIR RELIEF VALVE. INSTALL IN VALVE BOX.			O / L.S.5.0
○	TORO T-FCH-H-FIPT FLUSH VALVE. INSTALL IN VALVE BOX.			P / L.S.5.0
○	TORO T-ALFS 75150-S Y FILTER W/ 150 MESH STAINLESS STEEL SCREEN.			A / L.S.5.0 SIM.
○	TORO CDEC-ISP-1 SINGLE STATION DECODER WITH SURGE SUPPRESSION. INSTALL IN VALVE BOX. MAKE ALL WIRE CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE (1) DEC-SG-LINE LINE SURGE PROTECTOR AT 1,400 L.F. O.C. W/ GROUNDING ROD.			A / L.S.5.0
○	BERMAD 4" 410 MASTER VALVE W/ FLANGED ENDS. NORMALLY OPEN. PROVIDE 24V DC LATCHING SOLENOID & RELAY/DECODER. INSTALL IN VALVE BOX.			A / L.S.5.0 SIM.
○	FLOMEC QS 200-300 3" FLOW SENSOR. INSTALL IN VALVE BOX.			K / L.S.5.1

SYM.	DESCRIPTION
○	CONTROLLER STATION ID
○	GALLONS PER MINUTE
○	VALVE SIZE

KEY	DESCRIPTION
1	(1) 8" PVC MAINLINE SLEEVE
2	(1) 3" PVC LATERAL SLEEVE
3	(1) 4" PVC LATERAL SLEEVE

### OVERALL IRRIGATION PLAN

1" = 40'-0"

#### IRRIGATION NOTES

- LATERAL LINES SHALL BE CLASS 200 PVC.
- ADJUST ALL IRRIGATION HEADS TO ELIMINATE OVERSPRAY ON ADJACENT HARD SURFACE AREAS. PROVIDE ADJUSTABLE ARC NOZZLE FOR IRRIGATION HEADS WHERE OVERSPRAY IS EXCESSIVE. PROVIDE CHECK VALVES WHERE NEEDED TO PREVENT LOW HEAD DRAINAGE.
- PIPING, VALVES, ETC. SHOWN WITHIN PAVED AREAS ARE FOR DESIGN CLARIFICATION ONLY AND SHALL BE INSTALLED IN PLANTING AREAS WHERE POSSIBLE.
- IRRIGATION SYSTEM DESIGN: 300 G.P.M. @ 80 PSI AT POINT OF CONNECTION. 55 PSI PROVIDED AT STREET CONNECTION. 43 PSI BOOST PROVIDED BY PUMP.
- DO NOT WILLFULLY INSTALL THE IRRIGATION SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN THE AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY AT NO EXPENSE TO THE OWNER.
- SPlicing OF 24 VOLT WIRES WILL NOT BE PERMITTED EXCEPT IN VALVE BOXES. LEAVE A 24" COIL OF EXCESS WIRE AT EACH SPLICE. LABEL ALL WIRES W/ WATERPROOF MARKERS AT ALL SPLICES, VALVE MANIFOLDS AND CONTROLLER.
- INSTALL VALVE BOXES 12" FROM AND PERPENDICULAR TO WALKS, CURB, LAWN, BUILDINGS OR LANDSCAPE FEATURES. AT MULTIPLE VALVE BOX GROUPS, EACH BOX SHALL BE AN EQUAL DISTANCE FROM THE WALK, CURB, LAWN, ETC. AND EACH BOX SHALL BE 6" APART. SHORT SIDE OF THE VALVE BOX SHALL BE PARALLEL TO WALK, CURB, LAWN ETC. INSTALL ONE VALVE PER BOX ONLY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL MATERIAL APPEARING ON PLAN.
- CONCRETE THRUST BLOCKS SHALL BE PROVIDED ON ALL MAINLINE PIPING. THEY ARE TO BE LOCATED AT ALL ABRUPT CHANGES IN PIPELINE GRADE, CHANGES TO HORIZONTAL ALIGNMENT, REDUCTION IN PIPE SIZES, END OF LINE AND IN-LINE VALVES TO ABSORB ANY AXIAL THRUST OF THE PIPE. THE PIPE MANUFACTURER'S RECOMMENDATIONS FOR THRUST BLOCKS MUST BE FORMED AGAINST UNDISTURBED EARTH.

- ALL MAIN LINE PIPES SHALL BE PRESSURE TESTED PER STANDARD IRRIGATION SPECIFICATIONS WITH THE VALVES INSTALLED. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT NEEDED. IF ANY LEAKS DEVELOP, THE REPAIRS ARE TO BE MADE AND TEST REPEATED UNTIL THE SYSTEM IS PROVEN WATERTIGHT. THE CONTRACTOR IS TO CENTER LOAD THE PIPE AND LEAVE ALL JOINTS EXPOSED FOR INSPECTION. THE PRESSURE TEST SHALL BE OBSERVED AND APPROVED BY THE INSPECTOR. WHEN THE PIPE IS PROVEN WATERTIGHT AND ONLY THEN MAY THE LINE BE BACKFILLED.
- THE CONTRACTOR SHALL PROVIDE AND KEEP AN UP-TO-DATE "RECORD DRAWING" SHOWING ALL CHANGES TO THE ORIGINAL DRAWINGS AND EXACT LOCATIONS OF FACILITIES INSTALLED. BEFORE FINAL INSPECTION, THE CONTRACTOR SHALL FURNISH "RECORD DRAWINGS" TO THE PROJECT INSPECTOR.
- CONTRACTOR SHALL PROVIDE TO THE DISTRICT THE FOLLOWING EQUIPMENT AS PART OF HIS WORK:
  - ONE (1) TORO TMR-1-KIT REMOTE RADIO TRANSMITTER, RECEIVER, BATTERY AND ANTENNA
  - FOUR (4) COMPLETE ASSEMBLIES OF RAINBIRD 44NP QUICK COUPLER KEY WITH SWIVEL HOSE ELBOW.
- TWO (2) GATE VALVE KEY FOR 2" OPERATING NUT. IRRIGATION REPLACEMENT EQUIPMENT.
  - A. TWELVE (12) HUNTER I-25-06-NP ROTORS
  - B. TWELVE (12) HUNTER I-20-06-NP ROTORS
  - C. TWELVE (12) RAINBIRD 1806-SAM-PRS-1800-NPCAP POP-UP SPRAY BODIES
  - D. TWELVE (12) EACH RAINBIRD 'U' SERIES NOZZLE: 12"
  - E. TWELVE (12) EACH RAINBIRD 'U' SERIES NOZZLE: 15"
- FERTILIZER FOR FERTILIZER INJECTOR.
  - A. EIGHT (8) TWENTY-FIVE (25) POUND BAGS FERTA-MAXX-COOL
  - B. TWENTY-FOUR (24) TWENTY-FIVE (25) POUND BAGS FERTA-MAXX-LANDSCAPE
  - C. SIXTEEN (16) TWENTY-FIVE (25) POUND BAGS FERTA-MAXX-STARTER
  - D. EZ FLO EZ-FNLHC LARGE CAPACITY FILL FUNNEL
- TWO (2) SITE SERVICE CALLS WITHIN THE FIRST CALENDAR / WARRANTY YEAR FOR THE WATERTRONICS IRRIGATION BOOSTER PUMP

- ALL IRRIGATION CONTROL WIRE SHALL BE INSTALLED IN 1" SCHEDULE 40 PVC ELECTRICAL CONDUIT BELOW GRADE. PROVIDE LONG RADIUS ELBOW AT ALL TURNS AND SWEEPS INTO VALVE BOXES. PROVIDE AND INSTALL TORO TWO WIRE DECODER CABLE / CONTROL WIRE IN CONDUIT. INSTALLATION SHALL MEET MANUFACTURER'S RECOMMENDATIONS & REQUIREMENTS. PROVIDE AND INSTALL GROUNDING ROD / LINE SURGE PROTECTION AT 1,400 L.F. O.C. PER MANUFACTURER'S RECOMMENDATIONS & REQUIREMENTS. ENSURE GROUNDING & SURGE SUPPRESSION INSTALLATION MEETS MANUFACTURER'S REQUIREMENTS.
- THE CONTRACTOR SHALL PROVIDE ONE CONTROLLER CHART FOR EACH CONTROLLER INSTALLED. THE CHART SHALL SHOW THE AREA IRRIGATED BY THE CONTROLLER AND SHALL BE THE MAXIMUM SIZE THE CONTROLLER DOOR WILL ALLOW. THE CHART MAY BE REDUCED DRAWING OF THE RECORD DRAWINGS. THE CHART SHALL BE COLORED WITH A DIFFERENT COLOR FOR EACH STATION. THE CHART SHALL BE LAMINATED OR COVERED IN A WATERTIGHT ENVELOPE.
- THE CONTRACTOR SHALL PROVIDE TWO (2) INDIVIDUALLY BOUND SETS OF OPERATION AND MAINTENANCE MANUALS. REFER TO SPECIFICATION SECTION 32 84 00 FOR INFORMATION REQUIREMENTS.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PROVIDING A COMPLETE, FUNCTIONING IRRIGATION SYSTEM AS DIRECTED BY THE OWNER. CONTRACTOR SHALL FURNISH ALL APPURTENANT ITEMS, MATERIALS, LABOR, EQUIPMENT NECESSARY TO PROVIDE A COMPLETELY FUNCTIONAL IRRIGATION SYSTEM WHETHER SOLELY SHOWN OR CALLED FOR ON PLANS & SPECIFICATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INCLUDE SUCH ITEMS IN THEIR PRICE FOR THE WORK. NO ADDITIONAL COMPENSATION WILL BE AUTHORIZED FOR WORK DEEMED INCLUDED IN THE CONTRACT BY OWNER.
- CONTRACTOR IS RESPONSIBLE FOR BACKFLOW UNIT TO BE TESTED AND CERTIFIED BY AN APPROVED TESTER.
- THE CONTRACTOR SHALL PROVIDE & INSTALL TWO (2) AIR RELEASE VALVES PER DETAIL 'M.L.S.5.0' AT HIGH POINTS AND END RUNS OF MAINLINE. LOCATION SHALL BE DETERMINED IN THE FIELD BY THE LANDSCAPE ARCHITECT.

- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR: CONTROL WIRE TERMINATION AT CONTROLLER, SCHEDULING WATER TIMES & PROGRAMS FOR THE IRRIGATION CONTROLLERS ON SITE, PROVIDING THE CORRECT AMOUNT OF WATER AFFORDED TO THE PLANT MATERIAL ON THE PROJECT FOR OPTIMUM GROWTH; CONTRACTOR SHALL PROGRAM ALL CONTROLLERS TO UTILIZE THE TOTAL DESIGN FLOW OF THE IRRIGATION SYSTEM. PROGRAMMING SHALL ATTEMPT TO BALANCE THE FLOW AT 300 GPM BY USING ALL CONTROLLERS ON SITE. THIS REQUIREMENT SHALL RUN FROM START OF CONTRACT UNTIL FINAL ACCEPTANCE OF IRRIGATION SYSTEM. NO ADDITIONAL COMPENSATION SHALL BE AUTHORIZED FOR WORK NEEDED TO: PROGRAM, SCHEDULE OR TO SET UP WATERING CYCLES DEEMED INCLUDED IN THE CONTRACT BY THE OWNER.
- THE CONTRACTOR SHALL PROVIDE AN IRRIGATION SCHEDULE AS PART OF THE CONTRACT WORK. THE SCHEDULE SHALL COMPLY WITH THE STATE OF CALIFORNIA MODEL WATER EFFICIENT LANDSCAPE ORDINANCE.
- THE CONTRACTOR SHALL PROVIDE A LANDSCAPE & IRRIGATION MAINTENANCE SCHEDULE AND AN IRRIGATION AUDIT, SURVEY, & IRRIGATION WATER USE ANALYSIS AS PART OF THE CONTRACT WORK. THE MAINTENANCE SCHEDULE, IRRIGATION AUDIT, SURVEY, & IRRIGATION WATER USE ANALYSIS SHALL COMPLY WITH THE STATE OF CALIFORNIA MODEL WATER EFFICIENT LANDSCAPE ORDINANCE.
- CONTRACTOR SHALL ARRANGE AND ATTEND A PRE-CONSTRUCTION MEETING WITH THE TORO COMPANY FOR THE IRRIGATION CONTROLLER TWO WIRE SYSTEM PRIOR TO BEGINNING ANY IRRIGATION WORK ON THE PROJECT SITE. SUBMIT DOCUMENTATION AND VERIFICATION OF PRE-CONSTRUCTION MEETING FROM THE TORO COMPANY FOR REVIEW.
- ALL NON-GALVANIZED PIPE AND FITTINGS SHALL BE PRIMED AND PAINTED WITH ONE COAT PRIMER AND TWO COATS COLOR WITH APPROVED TYPE RUST INHIBITIVE PRIMER AND PAINT. COLOR SHALL BE DETERMINED BY THE LANDSCAPE ARCHITECT.
- THE CONTRACTOR SHALL PROVIDE & INSTALL THE FIRST FILL OF FERTILIZERS FOR THE EZ-FLO FERTIGATION SYSTEM TANK. PROVIDE 600 POUNDS OF FERTILIZER MATERIAL AND LABOR TO INSTALL FERTILIZER AS RECOMMENDED BY THE MANUFACTURER. FERTILIZER SHALL BE PER THE MANUFACTURER'S RECOMMENDATION AS APPROVED BY THE DISTRICT.

AD 1-38a  
S&B Elementary  
02-116800

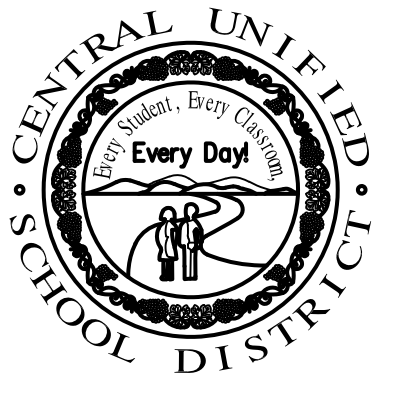
**ROBERT BORO**  
LANDSCAPE ARCHITECT  
REGISTERED LANDSCAPE ARCHITECT  
ROBERT L. BORO - CIVIL  
P.O. Box 4734  
Fresno, California 93744  
TEL. (559) 266-4367  
FAX (559) 266-3005

DATE: 1/20/23

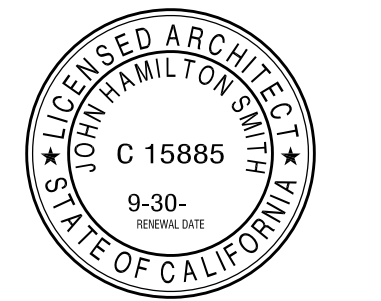


7780 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
759.448.8400 • 759.448.8467  
www.simpk.com

## PROJECT: SHIELDS & BRAWLEY ELEMENTARY SCHOOL



JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, BYRANAGA, MELHUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS

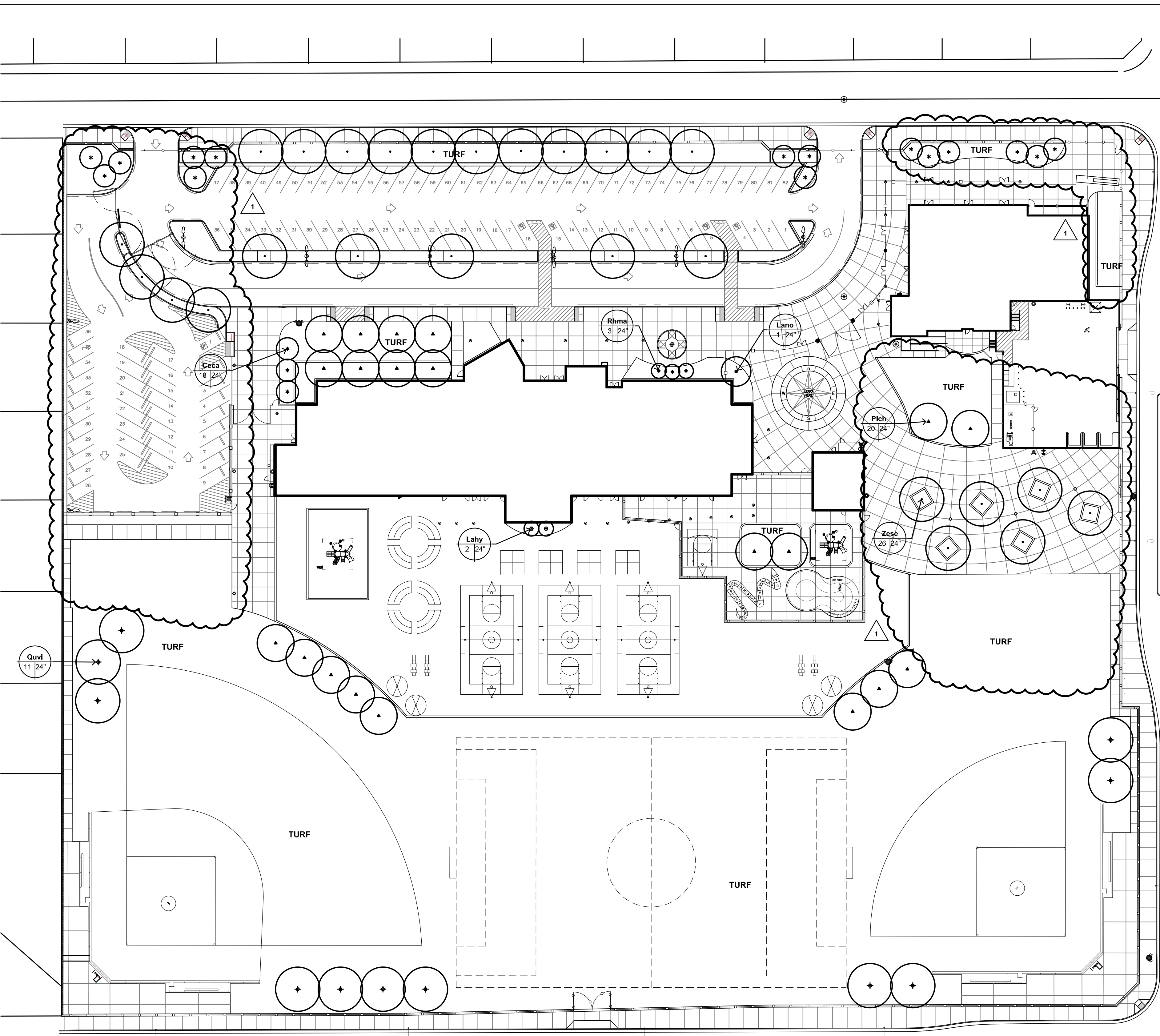
SHEET DESCRIPTION	
PROJECT COORDINATOR	SHEET No.
JOHN SMITH	
PROJECT NO.	17-67
DATE	1.27.23
SCALE	1" = 40'-0"

### OVERALL IRRIGATION PLAN

LS.1.0



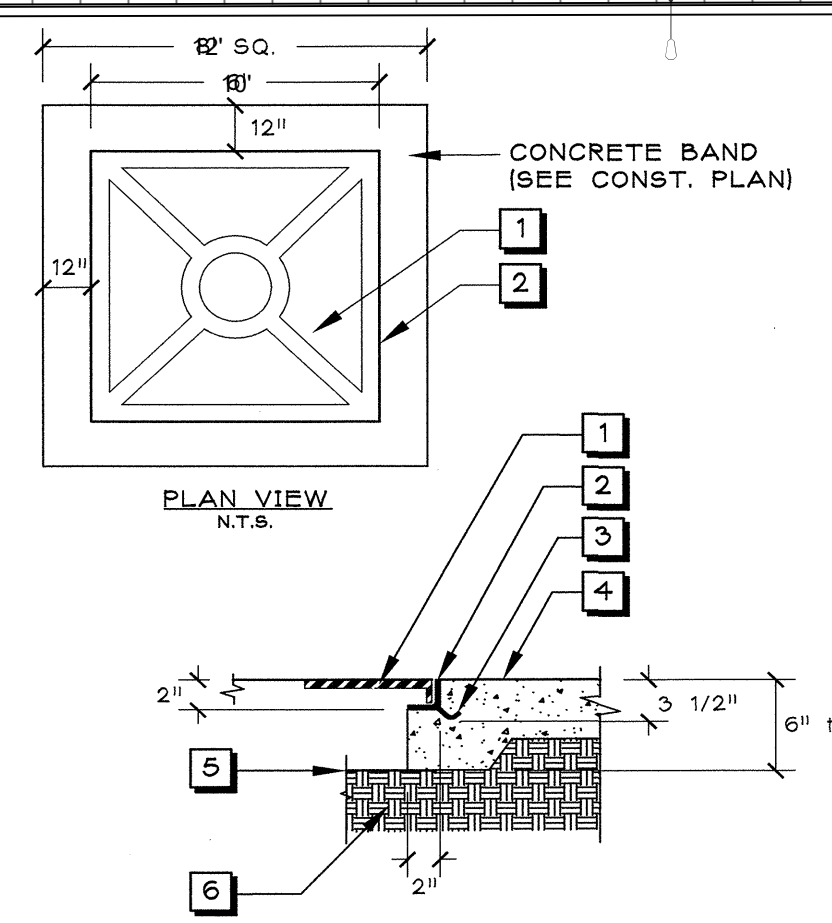
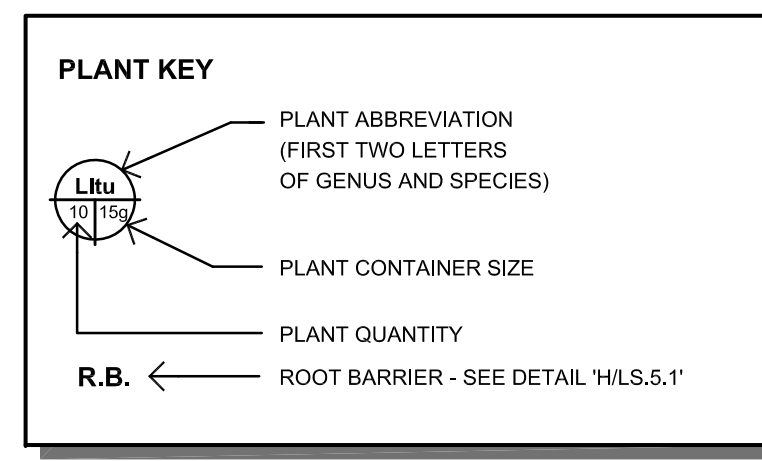
\\STEVE-PC\Boro Archives\18-2688\DSA BACKCHECK 2\_boro plan.dwg 2-09-23 03:57:08 PM Justin



PLANT LEGEND					
Symbol	Botanical Name	Common Name	Size	Quantity	Comments
Cavl	Callistemon viminalis 'Little John'	Dwarf Bottle Brush	5 Gal	40	
Ceca	Cercis canadensis texensis 'Oklahoma'	Oklahoma Redbud	24" Box	18	STANDARD, TRIPLE-STAKED.
Dibl	Diates bicolor	Fortnight Lily	1 Gal	38	
Hely	Hemerocallis hybrid 'Evergreen Orange'	Daylily	1 Gal	635	TRI-SPACED @ 18" O.C.
Lahy	Lagerstroemia hybrid 'Tuscara'	Crape Myrtle	24" Box	2	STANDARD, TRIPLE-STAKED.
Lano	Laurus nobilis	Bay Laurel	24" Box	1	STANDARD, TRIPLE-STAKED.
Nado	Nandina domestica 'Fire Power'	Dwarf Heavenly Bamboo	1 Gal	190	TRI-SPACED @ 14" O.C.
Patr	Parthenocissus tricuspidata	Boston Ivy	5 Gal	1	STAKED, TRAIN TO WALL.
Pich	Pistacia chinensis 'Pittosporum'	Chinese Pistache	24" Box	20	STANDARD, TRIPLE-STAKED.
Plto	Pittosporum tobira 'Wheeler's Dwarf'	Wheeler's Dwarf Pittosporum	5 Gal	15	
Rhna	Rhaphiolepis indica 'Magnificent'	Indian Hawthorn Tree	24" Box	11	STANDARD, TRIPLE-STAKED.
Rhin	Rhaphiolepis indica 'Spring Rapture'	Indian Hawthorn	5 Gal	126	
Rhna	Rhaphiolepis indica 'Magnificent'	Indian Hawthorn Tree	24" Box	1	STANDARD, TRIPLE-STAKED.
RooF	Rosmarinus officinalis 'Huntington Carpet'	Rosemary	1 Gal	113	TRI-SPACED @ 30" O.C.
Sagr	Salvia greggii 'Hot Lips'	Hot Lips Sage	5 Gal	33	
Tuvl	Tulbaghia violacea	Society Garlic	1 Gal	142	TRI-SPACED @ 14" O.C.
Vitl	Viburnum tinus 'Spring Bouquet'	Laurus Tinus	5 Gal	1	
Zese	Zelkova serrata 'Village Green'	Japanese Zelkova	24" Box	26	STANDARD, TRIPLE-STAKED.

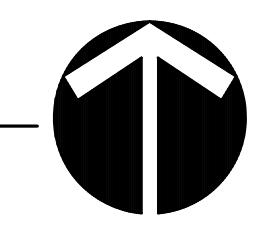
TURF LEGEND				
Symbol	Type	Quantity	Type	Comments
(Symbol)	TYPE ONE TURF	15,143 S.F.	90D	SEE SPECIFICATION SECTION 32 93 00.
(Symbol)	TYPE TWO TURF	154,418 S.F.	STOLONS	SEE SPECIFICATION SECTION 32 93 00.

- PLANTING NOTES**
- QUANTITIES ARE LANDSCAPE ARCHITECTS ESTIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL MATERIAL APPEARING ON PLAN.
  - DO NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITION SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COORDINATION WITH SUBCONTRACTORS AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.
  - SEE SPECIFICATIONS FOR PLANTING REQUIREMENTS, MATERIALS AND EXECUTION.
  - ALL PLANT MATERIAL SHALL BE APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION.
  - FINAL LOCATION OF ALL PLANT MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE.
  - CONTRACTOR SHALL NOTIFY OWNER'S AUTHORIZED REPRESENTATIVE 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT OBSERVATION SCHEDULES.
  - SEE DETAILS AND SPECIFICATIONS FOR STAKING METHOD, PLANT PIT DIMENSION AND BACKFILL REQUIREMENTS.
  - IF CONFLICTS ARISE BETWEEN SIZE OF AREAS AND PLANS, CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT FOR RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN TO THE LANDSCAPE ARCHITECT, WILL RESULT IN CONTRACTOR'S LIABILITY TO RELOCATE THE MATERIALS.
  - ALL GROUND COVER SHALL EXTEND BENEATH TALLER PLANT MATERIAL.
  - NO PLANTING SHALL BE DONE UNTIL INSTALLATION OF THE IRRIGATION SYSTEM IS COMPLETED. FINAL GRADES HAVE BEEN ESTABLISHED. PLANTING AREAS HAVE BEEN PROPERLY GRADED AND SOIL PREPARED, AND THE WORK APPROVED BY THE LANDSCAPE ARCHITECT.
  - PROVIDE ROOT BARRIER FOR TREES WHERE INDICATED ON PLAN.
  - PROVIDE ARBOR GUARD FOR ALL TREES IN TURF AREAS.
  - PROVIDE & PLACE 3" THICK LAYER OF WOOD TOP DRESS MULCH IN ALL PLANTING AREAS.
  - THE CONTRACTOR SHALL PROVIDE A SOILS FERTILITY ANALYSIS & SOIL MANAGEMENT REPORT AS PART OF THE CONTRACT WORK. ALL SOILS ANALYSIS & SOIL MANAGEMENT PLANS SHALL COMPLY WITH THE STATE OF CALIFORNIA MODEL WATER EFFICIENT LANDSCAPE ORDINANCE. SOIL AMENDMENTS SHALL BE ADJUSTED TO SATISFY THE RESULTS OF THE SOILS MANAGEMENT PLAN. SUBMIT DOCUMENTATION TO OWNER VERIFYING IMPLEMENTATION OF SOILS MANAGEMENT PLAN.



- LEGEND**
- TREE GRATE, TG172 (F), dark green WABASH VALLEY MANUF. INC. (800) 253-8619, www.wabashvalley.com
  - TREE GRATE FRAME (2 1/2" x 1 1/2") TG412N, WABASH VALLEY MANUF. INC. (800) 253-8619, www.wabashvalley.com
  - 1/2" DIA. IRON ANCHOR ROD (ATTACHED TO FRAME)
  - FINISHED SURFACE
  - FINISHED GRADE IN TREE WELL MIN. 6" BELOW TREE GRATE
  - SUBGRADE

**OVERALL PLANTING PLAN**  
1" = 40'-0"

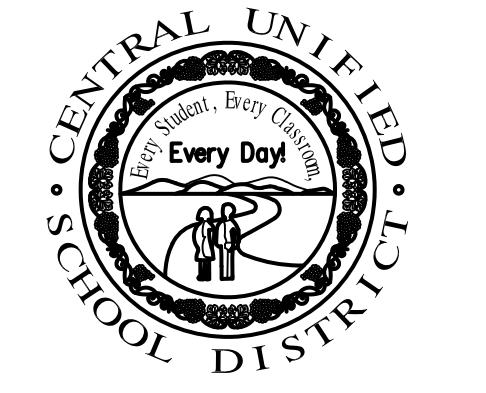


**AD 1-39a**  
**S&B Elementary**  
**02-116800**

**ROBERT BORO**  
LANDSCAPE ARCHITECT  
P.O. Box 4734  
Fresno, California 93744  
TEL: (559) 266-4367  
FAX: (559) 266-3005



**PROJECT:**  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



THE FIRM OF SMITH, EVANAGA, MELHUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

**PROJECT DEVELOPMENT**

DATE	ISSUED FOR

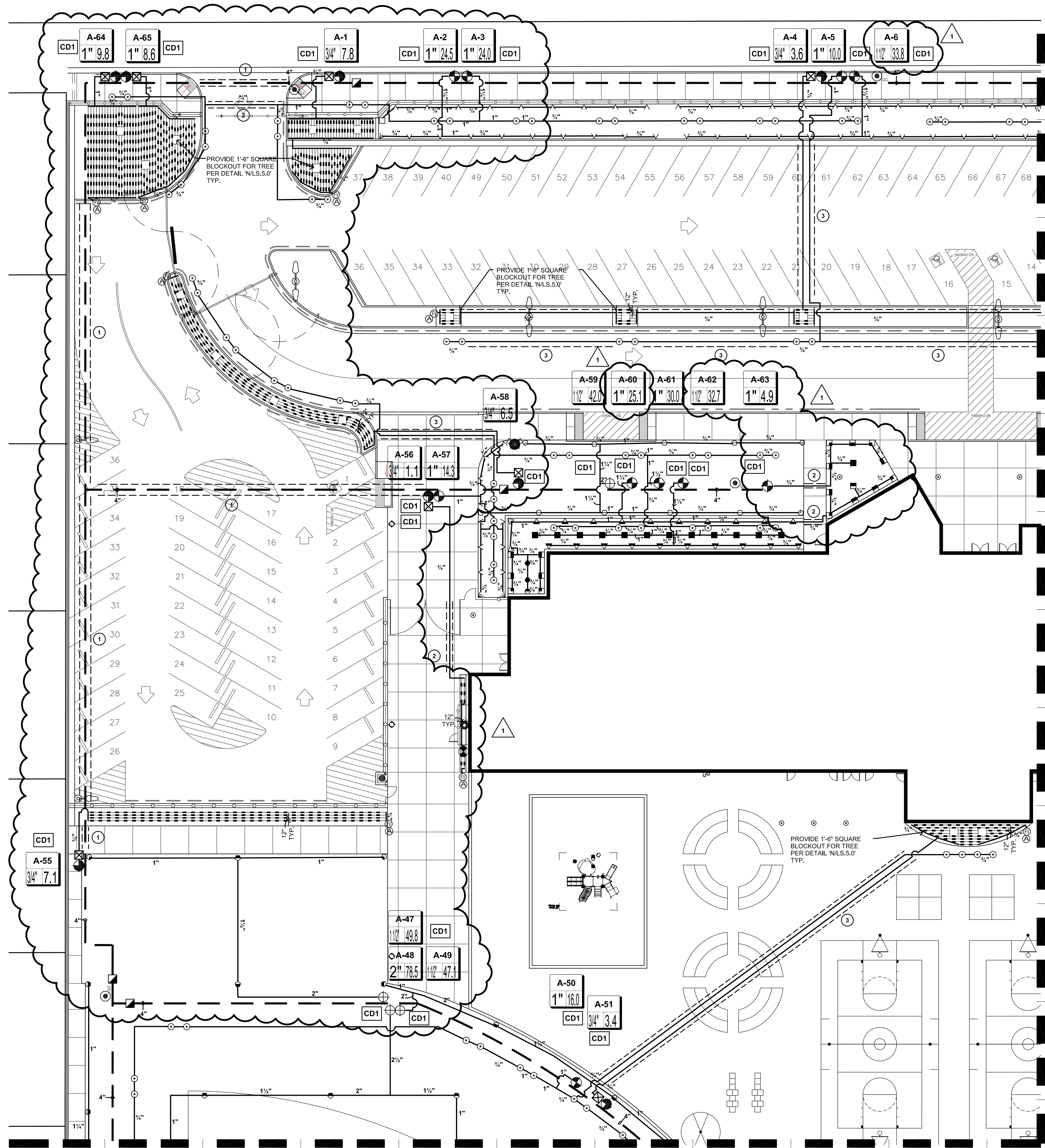
**REVISIONS**

No.	DATE	DESCRIPTION
1	2.14.23	DISTRICT MODIFICATIONS

**SHEET DESCRIPTION**

OVERALL PLANTING PLAN	
PROJECT COORDINATOR	JOHN SMITH
PROJECT NO.	17-67
DATE	1.27.23
SCALE	1" = 40'-0"
SHEET No.	<b>LS.2.0</b>



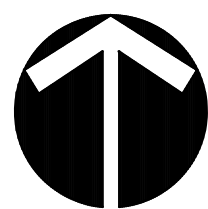


MATCHLINE - SEE SHEET LS.3.2

MATCHLINE - SEE SHEET LS.3.4

**PARTIAL IRRIGATION PLAN**

1" = 20'-0"



AD 1-40a  
S&B Elementary  
02-116800

**ROBERT BORO**  
LANDSCAPE ARCHITECT  
P.O. Box 4734  
Fresno, California 93744  
TEL: (559) 266-4367  
FAX: (559) 266-3005

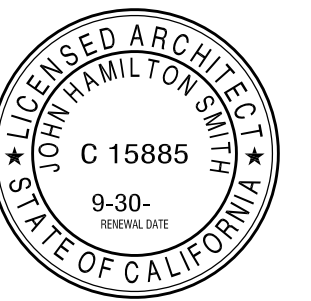


7780 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 F 559.448.8467  
www.slm-pbk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



JOHN H. SMITH, A.L.A. C15885



THE FIRM OF SMITH, BIVANAGA, MELHUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

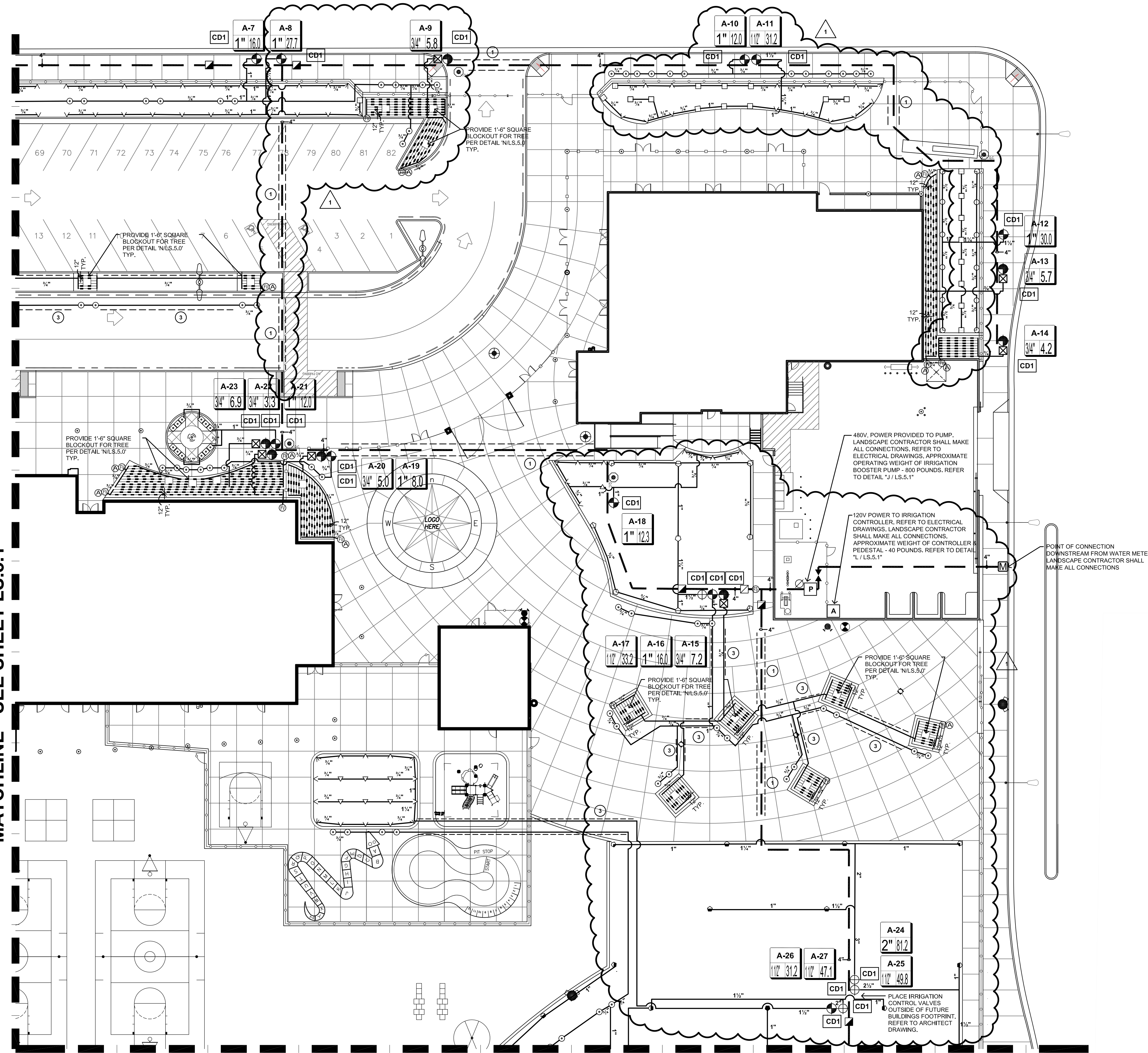
REVISIONS		
No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION  
**PARTIAL IRRIGATION PLAN**

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>LS.3.1</b>
DATE 1.27.23	
SCALE 1" = 20'-0"	



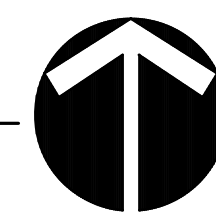
MATCHLINE - SEE SHEET LS.3.1



MATCHLINE - SEE SHEET LS.3.3

**PARTIAL IRRIGATION PLAN**

1" = 20'-0"



**AD 1-41a**  
**S&B Elementary**  
**02-116800**

**ROBERT BORO**  
 LANDSCAPE ARCHITECT  
 P.O. Box 4734  
 Fresno, California 93744  
 TEL: (559) 266-4367  
 FAX: (559) 266-3005



7780 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 T 559.448.8400 F 559.448.8467  
 www.slm-pbk.com

PROJECT:

**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, BYRANAGA, MELHUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

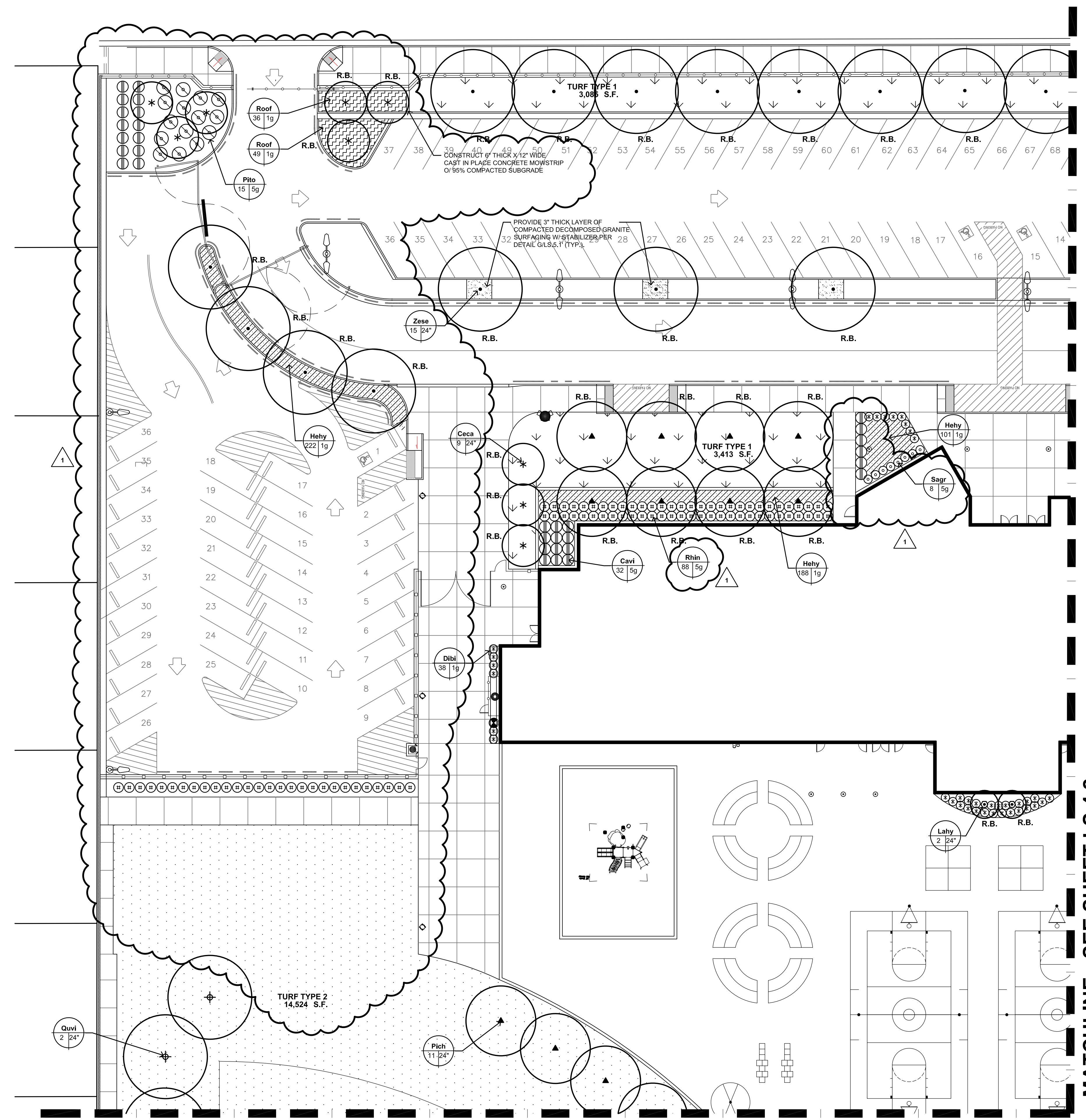
No.	DATE	DESCRIPTION
△ 1	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

PROJECT COORDINATOR	SHEET No.
JOHN SMITH	<b>LS.3.2</b>
PROJECT NO.	
DATE	
SCALE	



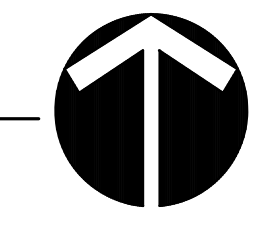
\\STEVE-PC\Boro Archives\18-2688\DSA BACKCHECK 2\boro plan.dwg 2-09-23 03:57:34 PM Justin



MATCHLINE - SEE SHEET LS.4.4

**PARTIAL PLANTING PLAN**

1" = 20'-0"



MATCHLINE - SEE SHEET LS.4.2

**AD 1-42a**  
**S&B Elementary**  
**02-116800**

**ROBERT BORO**  
 LANDSCAPE ARCHITECT  
 P.O. Box 4734  
 Fresno, California 93744  
 TEL: (559) 266-4367  
 FAX: (559) 266-3005

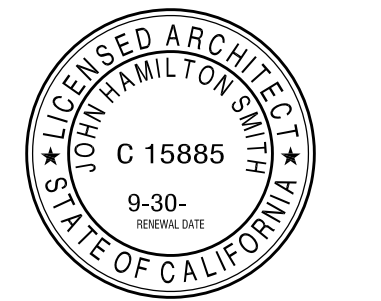


7780 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 T 559.448.8400 F 559.448.8467  
 www.simpk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, EVANAGA, MELHUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
△ 1	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

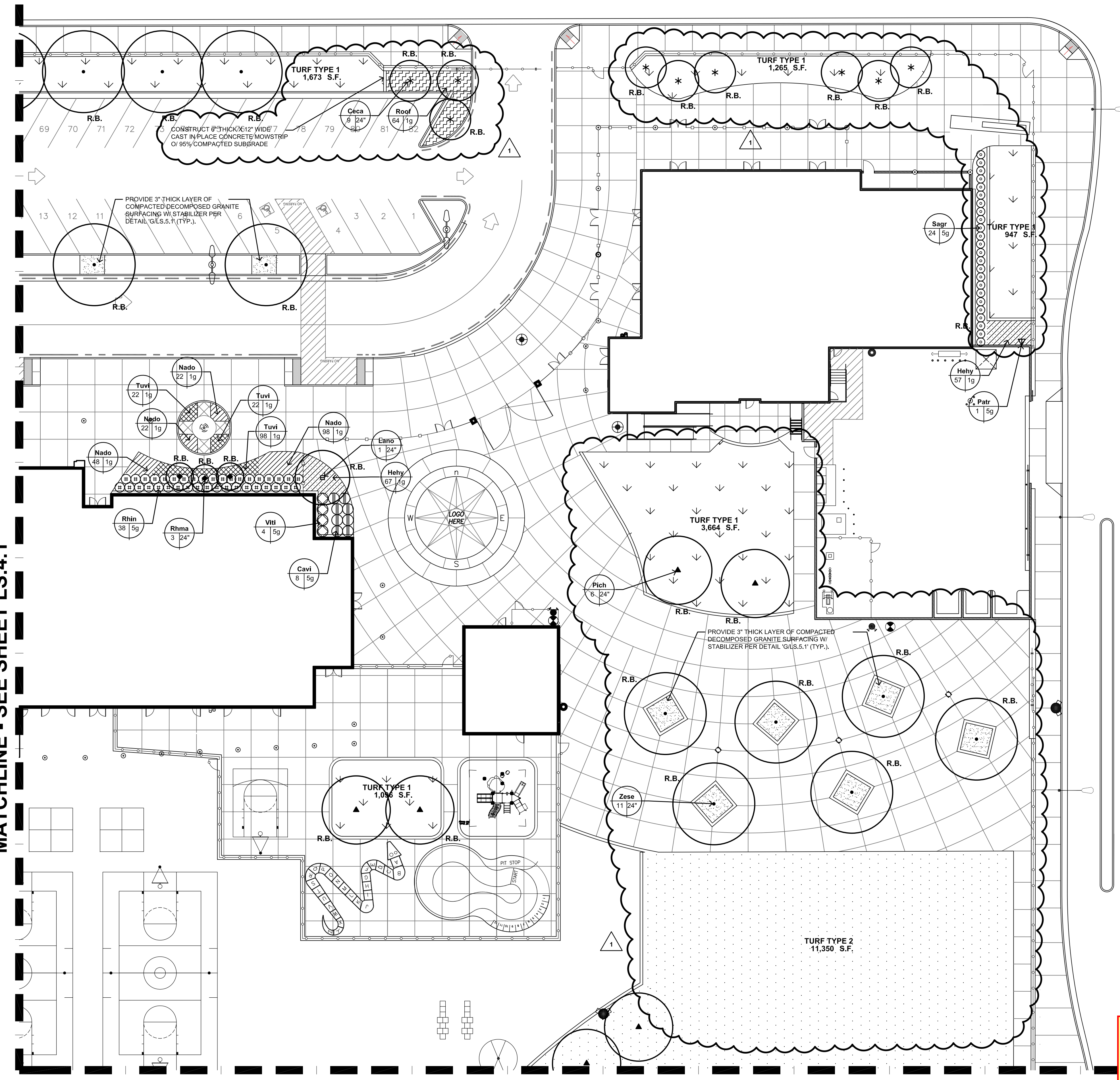
**PARTIAL PLANTING PLAN**

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>LS.4.1</b>
DATE 1.27.23	
SCALE 1" = 20'-0"	



\\STEVE-PC\Boro Archives\18-2688\DSA BACKCHECK 2\boro plan.dwg 2-09-23 03:57:52 PM Justin

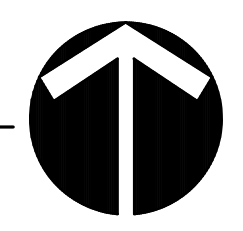
MATCHLINE - SEE SHEET LS.4.1



MATCHLINE - SEE SHEET LS.4.3

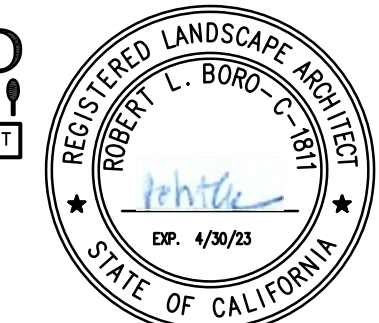
**PARTIAL PLANTING PLAN**

1" = 20'-0"



**AD 1-43a  
S&B Elementary  
02-116800**

**ROBERT BORO**  
LANDSCAPE ARCHITECT  
P.O. Box 4734  
Fresno, California 93744  
TEL: (559) 266-4367  
FAX: (559) 266-3005



7780 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 F 559.448.8467  
www.slm-pbk.com

PROJECT:  
**SHIELDS  
& BRAWLEY  
ELEMENTARY  
SCHOOL**



JOHN H. SMITH, A.I.A. C15885

THE FIRM OF SMITH, BYANAGA, MELHUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

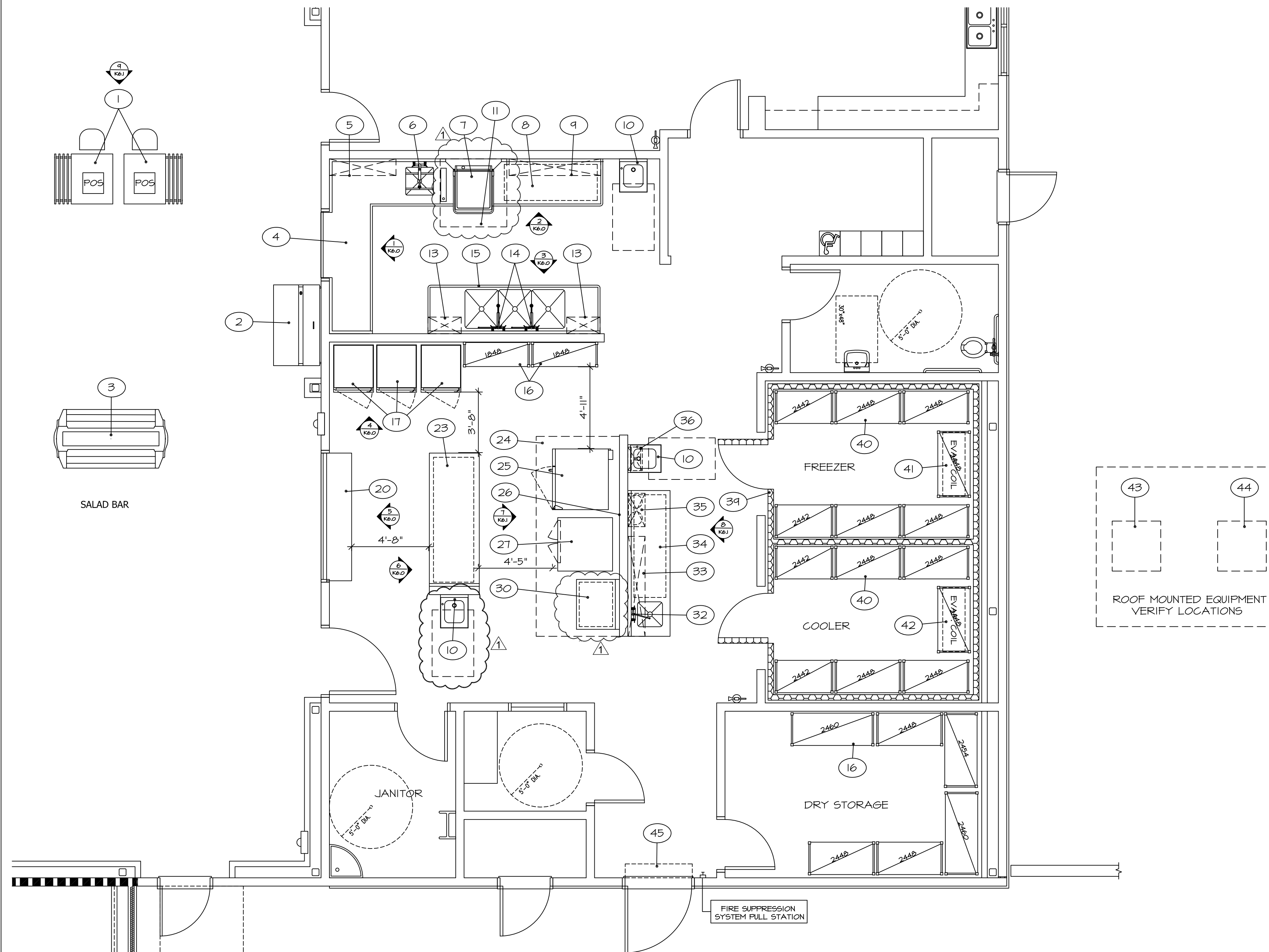
SHEET DESCRIPTION  
**PARTIAL  
PLANTING  
PLAN**

PROJECT COORDINATOR <b>JOHN SMITH</b>	SHEET No.
PROJECT NO. <b>17-67</b>	<b>LS.4.2</b>
DATE <b>1.27.23</b>	
SCALE <b>1" = 20'-0"</b>	









EQUIPMENT SCHEDULE				
ITEM	QTY	DESCRIPTION	MFG	MODEL
1	2	POS STANDS - BLACK	CAMBRO	ES28110
2	1	MILK COOLER	BEVERAGE AIR	SMB5HC-W
3	1	SALAD BAR - BLACK	CAMBRO	YBR6110
4	1	S/S SOILED DISHTABLE	CUSTOM	CUSTOM
5	1	S/S WALL SHELF	CUSTOM	CUSTOM
6	1	PRERINSE UNIT	T45 BRASS	B-0133-B
7	1	DISHWASHER	JACKSON	TEMPSTAR HHE
8	1	S/S CLEAN SIDE DISHTABLE	CUSTOM	CUSTOM
9	1	S/S WALL SHELF	CUSTOM	CUSTOM
10	3	HAND SINK - ACCESSIBLE	ADVANCE	T-PS-41
11	1	S/S EXHAUST HOOD - DISHWASHER	CAPTIVEAIRE	EH
12	--	SPARE	--	--
13	2	S/S WALL SHELF	CUSTOM	CUSTOM
14	2	PRERINSE UNIT W/FAUCET	T45 BRASS	B-0133ADFI4B
15	1	S/S 3-TUB POT SINK	CUSTOM	CUSTOM
16	1	(LOT) DRY STORAGE SHELVING	CAMBRO	CAMSHELVING
17	3	FOOD WARMING CABINETS	CRESCOR	H-135-9UA-II-R
18	--	SPARE	--	--
19	--	SPARE	--	--
20	1	S/S SERVING COUNTER	CUSTOM	CUSTOM
21	--	SPARE	--	--
22	--	SPARE	--	--
23	1	S/S ISLAND WORKTABLE	CUSTOM	CUSTOM
24	1	S/S TYPE I EXHAUST HOOD	CAPTIVEAIRE	ND-2
25	1	COMBI-OVEN 2-COMPARTMENT	ALTO-SHAAM	CTCT-206
26	1	S/S WALL LINER	CUSTOM	CUSTOM
27	1	DOUBLE CONVECTION OVEN	MONTAGUE	2-115A
28	--	SPARE	--	--
29	--	SPARE	--	--
30	1	S/S WORKTABLE	CUSTOM	CUSTOM
31	--	SPARE	--	--
32	1	FAUCET	T45 BRASS	B-0230
33	1	S/S WALL SHELF	CUSTOM	CUSTOM
34	1	S/S PREP TABLE W/SINK	CUSTOM	CUSTOM
35	1	FIRE SUPPRESSION SYSTEM	ANSUL	R-102
36	1	WATER FILTER FOR COMBI OVEN	EVERPURE	EV919122
37	--	SPARE	--	--
38	--	SPARE	--	--
39	1	WALK-IN COOLER/FREEZER	ARCTIC	CUSTOM
40	1	(LOT) WALK-IN SHELVING	CAMBRO	CAMSHELVING
41	1	EVAP COIL - FREEZER	RUSSELL	RF018045DA
42	1	EVAP COIL - COOLER	RUSSELL	RF018045DA
43	1	CONDENSING UNIT - FREEZER	RUSSELL	RF0180E45DA
44	1	CONDENSING UNIT - COOLER	RUSSELL	RF0180E45DA
45	1	AIR CURTAIN	BERNER	CHDIO-1048A

SEE SHEET K&O FOR EQUIPMENT WEIGHTS AND ANCHORAGE DETAILS

**NOTE: THIS KITCHEN WILL PERFORM FULL FOOD PREP, SO IT HAS BEEN DESIGNED WITH A FOOD PREPARATION SINK. THIS KITCHEN STAFF DOES NOT NEED A DOUGH MIXER, SHEETER, OR ANY ADDITIONAL EQUIPMENT THAT IS NOT ON THE PLAN. ALL KITCHEN EQUIPMENT WILL MEET ANSI STANDARDS.**

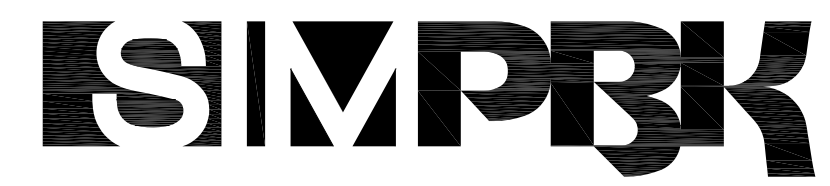
**NOTE:**  
 ALL FOOD SERVICE EQUIPMENT IS TO BE PROVIDED BY THE GENERAL CONTRACTOR AS PART OF HIS CONTRACT.  
 EXISTING EQUIPMENT IS TO BE OWNER FURNISHED AND CONTRACTOR INSTALLED.

**HAND SINK NOTES**  
 HAND SINKS TO BE FURNISHED WITH 6" HIGH S/S SPLASH GUARDS ON BOTH SIDES OF THE SINKS. THE SPLASH GUARDS MUST HAVE A ROUNDED FRONT EDGE.  
 HAND SINKS TO HAVE HOT AND COLD WATER AND WALL MOUNTED SOAP AND TOWEL DISPENSERS.

**FABRICATION NOTES**  
 ALL CUSTOM STAINLESS EQUIPMENT TO BE FABRICATED TO NSF & ANSI STANDARDS BY AN APPROVED CUSTOM STAINLESS FABRICATOR.  
 WALK-IN COOLER TO BE MANUFACTURED TO NSF STANDARDS BY DURACOLD, MONROVIA, CA.

LEGEND		ABBREVIATIONS	
[Symbol]	FULL HEIGHT WALLS AND PARTITIONS	BREI	= BALLINGER REST. EQUIP. INC.
[Symbol]	STUB WALLS AND CURBS (VERIFY HEIGHT)	PC	= PLUMBING CONTRACTOR
[Symbol]	ITEM NUMBER IDENTIFICATION SYMBOLS	EC	= ELECTRICAL CONTRACTOR
[Symbol]	ELEVATION SYMBOLS	GC	= GENERAL CONTRACTOR
[Symbol]	PLUMBING MARK SYMBOL (SEE PLUMBING PLAN)	O	= OWNER
[Symbol]	ELECTRICAL MARK SYMBOL (SEE ELECTRICAL PLAN)	HVAC	= HEATING/VENTILATION CONTRACTOR
[Symbol]	REVISION NUMBER	NTS	= NOT TO SCALE
		EXIST	= EXISTING

**AD 1-45a**  
**S&B Elementary**  
**02-116800**



PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, MANAGA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS
△	3.05.23	HEALTH REVISION

SHEET DESCRIPTION

FOODSERVICE EQUIPMENT FLOOR PLAN	
PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>K1.0</b>
DATE 1.27.23	
SCALE 1/4" = 1'-0"	





PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH BRAWLEY ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

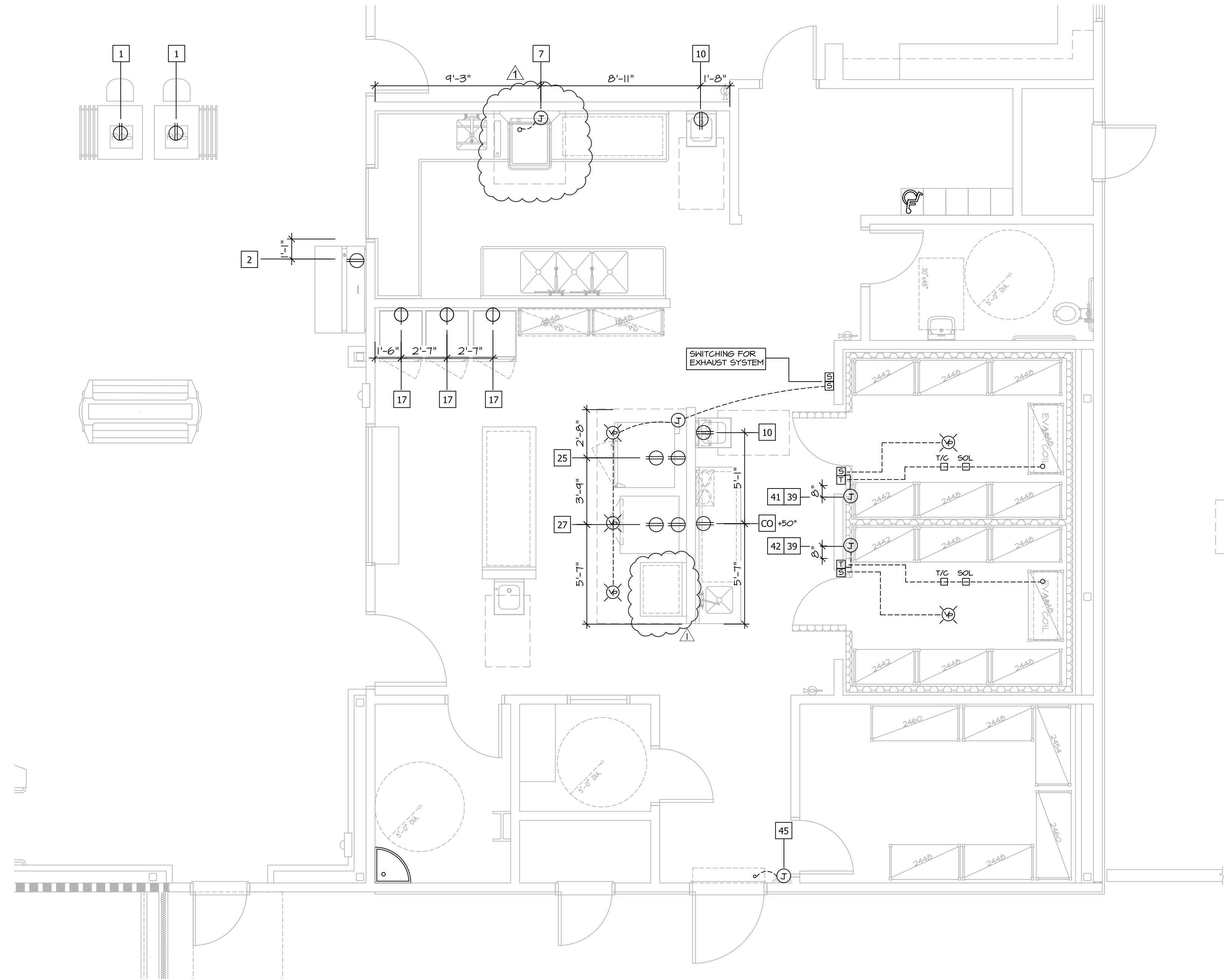
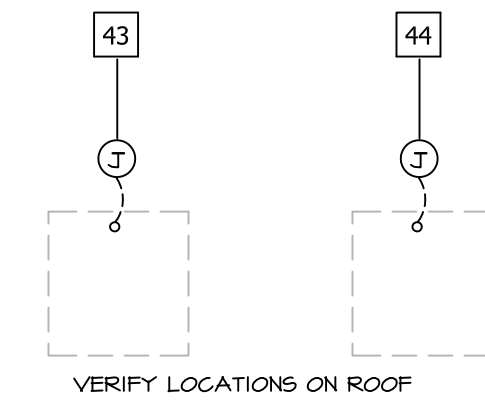
No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS
△	3.05.23	HEALTH REVISION

SHEET DESCRIPTION

**FOODSERVICE EQUIPMENT ELECTRICAL PLAN**

PROJECT COORDINATOR JOHN SMITH	SHEET NO. 17-67
PROJECT NO. 17-67	<b>K2.0</b>
DATE 1.27.23	
SCALE 1/4" = 1'-0"	

ELECTRICAL SCHEDULE		ELECTRICAL					
ITEM	QTY	DESCRIPTION	VOLTS	PHASE	AMPS	CONN	HT
1	2	POS STANDS - BLACK	VERIFY POS REQUIREMENTS				
2	1	MILK COOLER	120	1	2.2	PLUG	+15"
3	1	SALAD BAR - BLACK					
4	1	S/S SOILED DISHTABLE					
5	1	S/S WALL SHELF					
6	1	PRERINSE UNIT					
7	1	DISHWASHER	460	3	25.7	JBOX	+16"
8	1	S/S CLEAN SIDE DISHTABLE					
9	1	S/S WALL SHELF					
10	3	HAND SINK - ACCESSIBLE	120	1	1.0	PLUG	+18"
11	1	S/S EXHAUST HOOD - DISHWASHER					
12	--	SPARE					
13	2	S/S WALL SHELF					
14	2	PRERINSE UNIT W/FAUCET					
15	1	S/S 3-TUB POT SINK					
16	1	(LOT) DRY STORAGE SHELVING					
17	3	FOOD WARMING CABINETS	120	1	12.6	PLUG	+15"
18	--	SPARE					
19	--	SPARE					
20	1	S/S SERVING COUNTER					
21	--	SPARE					
22	--	SPARE					
23	1	S/S ISLAND WORKTABLE					
24	1	S/S TYPE I EXHAUST HOOD	120	1	3.0	JBOX	+10"
25	1	COMBI-OVEN 2-COMPARTMENT	(2) 120	1	7.0	JBOX	+24"
26	1	S/S WALL LINER					
27	1	DOUBLE CONVECTION OVEN	(2) 120	1	7.4	PLUG	+24"
28	--	SPARE					
29	--	SPARE					
30	1	S/S WORKTABLE					
31	--	SPARE					
32	1	FAUCET					
33	1	S/S WALL SHELF					
34	1	S/S PREP TABLE W/SINK					
35	1	FIRE SUPPRESSION SYSTEM					
36	1	WATER FILTER FOR COMBI OVEN					
37	--	SPARE					
38	--	SPARE					
39	1	WALK-IN COOLER/FREEZER	120	1	6.0	JBOX	+10"
40	1	(LOT) WALK-IN SHELVING					
41	1	EVAP COIL - FREEZER				SEE REF SCHEDULE	JBOX +10"
42	1	EVAP COIL - COOLER				SEE REF SCHEDULE	JBOX +10"
43	1	CONDENSING UNIT - FREEZER				SEE REF SCHEDULE	JBOX ROOF
44	1	CONDENSING UNIT - COOLER				SEE REF SCHEDULE	JBOX ROOF
45	1	AIR CURTAIN	120	1	6.5	JBOX	+46"

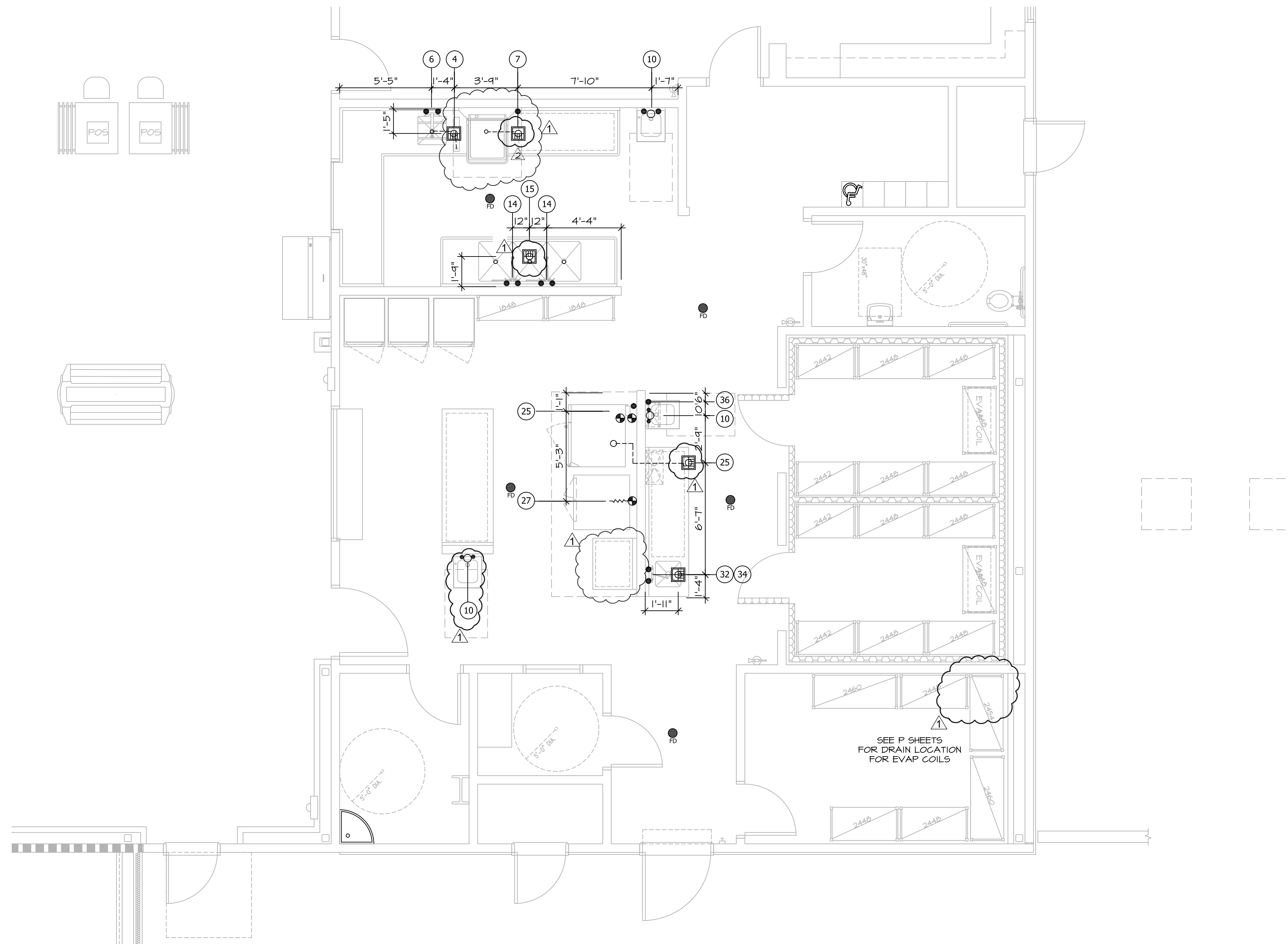


**NOTE:**  
 ALL FOOD SERVICE EQUIPMENT IS TO BE PROVIDED BY THE GENERAL CONTRACTOR AS PART OF HIS CONTRACT.  
 EXISTING EQUIPMENT IS TO BE OWNER FURNISHED AND CONTRACTOR INSTALLED.

**FABRICATION NOTES**  
 ALL CUSTOM STAINLESS EQUIPMENT TO BE FABRICATED TO NSF & ANSI STANDARDS BY AN APPROVED CUSTOM STAINLESS FABRICATOR.  
 WALK-IN COOLER TO BE MANUFACTURED TO NSF STANDARDS BY DURACOLD, MONROVIA, CA.

LEGEND	ABBREVIATIONS
FULL HEIGHT WALLS AND PARTITIONS	BR(E). = BALLINGER REST. EQUIP. INC.
STUB WALLS AND CURBS (VERIFY HEIGHT)	PC = PLUMBING CONTRACTOR
ITEM NUMBER IDENTIFICATION SYMBOLS	EC = ELECTRICAL CONTRACTOR
ELEVATION SYMBOLS	GC = GENERAL CONTRACTOR
PLUMBING MARK SYMBOL (SEE PLUMBING PLAN)	o = OWNER
ELECTRICAL MARK SYMBOL (SEE ELECTRICAL PLAN)	HVAC = HEATING/VENTILATION CONTRACTOR
REVISION NUMBER	NTS = NOT TO SCALE
	EXIST = EXISTING

**AD 1-46a**  
**S&B Elementary**  
**02-116800**



PLUMBING PLAN											
ITEM	QTY	DESCRIPTION	WATER			WASTE			GAS		
			HOT	COLD	HT	DIRECT	INDIRECT	HT	SIZE	BTU	HT
1	2	POS STANDS - BLACK									
2	1	MILK COOLER									
3	1	SALAD BAR - BLACK									
4	1	S/S SOILED DISHTABLE					2'	FS			
5	1	S/S WALL SHELF									
6	1	PRERINSE UNIT	1/2"	1/2"	+16"						
7	1	DISHWASHER	1/2"	1/2"	+16"		1-1/2'	FS			
8	1	S/S CLEAN SIDE DISHTABLE									
9	1	S/S WALL SHELF									
10	3	HAND SINK - ACCESSIBLE	1/2"	1/2"	+24"		1-1/2'	+22"			
11	1	S/S EXHAUST HOOD - DISHWASHER									
12	--	SPARE									
13	2	S/S WALL SHELF									
14	2	PRERINSE UNIT W/FAUCET	1/2"	1/2"	+16"						
15	1	S/S 3-TUB POT SINK					2'	FS			
16	1	(LOT) DRY STORAGE SHELVING									
17	3	FOOD WARMING CABINETS									
18	--	SPARE									
19	--	SPARE									
20	1	S/S SERVING COUNTER									
21	--	SPARE									
22	--	SPARE									
23	1	S/S ISLAND WORKTABLE									
24	1	S/S TYPE I EXHAUST HOOD									
25	1	COMBI-OVEN 2-COMPARTMENT	3/4"	+36"			1-1/2'	+22"	(2) 3/4"	85,000	+24"
26	1	S/S WALL LINER							1"	230,000	+24"
27	1	DOUBLE CONVECTION OVEN									
28	--	SPARE									
29	--	SPARE									
30	1	S/S WORKTABLE									
31	--	SPARE									
32	1	FAUCET	1/2"	1/2"	+16"						
33	1	S/S WALL SHELF									
34	1	S/S PREP TABLE W/SINK					2'	FS			
35	1	FIRE SUPPRESSION SYSTEM									
36	1	WATER FILTER FOR COMBI OVEN	3/4"	+86"							
37	--	SPARE									
38	--	SPARE									
39	1	WALK-IN COOLER/FREEZER									
40	1	(LOT) WALK-IN SHELVING									
41	1	EVAP COIL - FREEZER									
42	1	EVAP COIL - COOLER									
43	1	CONDENSING UNIT - FREEZER									
44	1	CONDENSING UNIT - COOLER									
45	1	AIR CURTAIN									

PLUMBING LEGEND	
	GAS CONNECTION
	GAS CONNECTION WITH QUICK DISCONNECT
	HOT & COLD WATER SUPPLY (H & CW)
	WASTE (DIRECT CONNECTED)
	DRAIN (INDIRECT CONN. TO FS BY OTHERS)
	FLOOR DRAIN (FD)
	FLOOR SINK (FS) WITH HALF GRATE

**AD 1-47a**  
**S&B Elementary**  
**02-116800**



PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, BANAGRA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

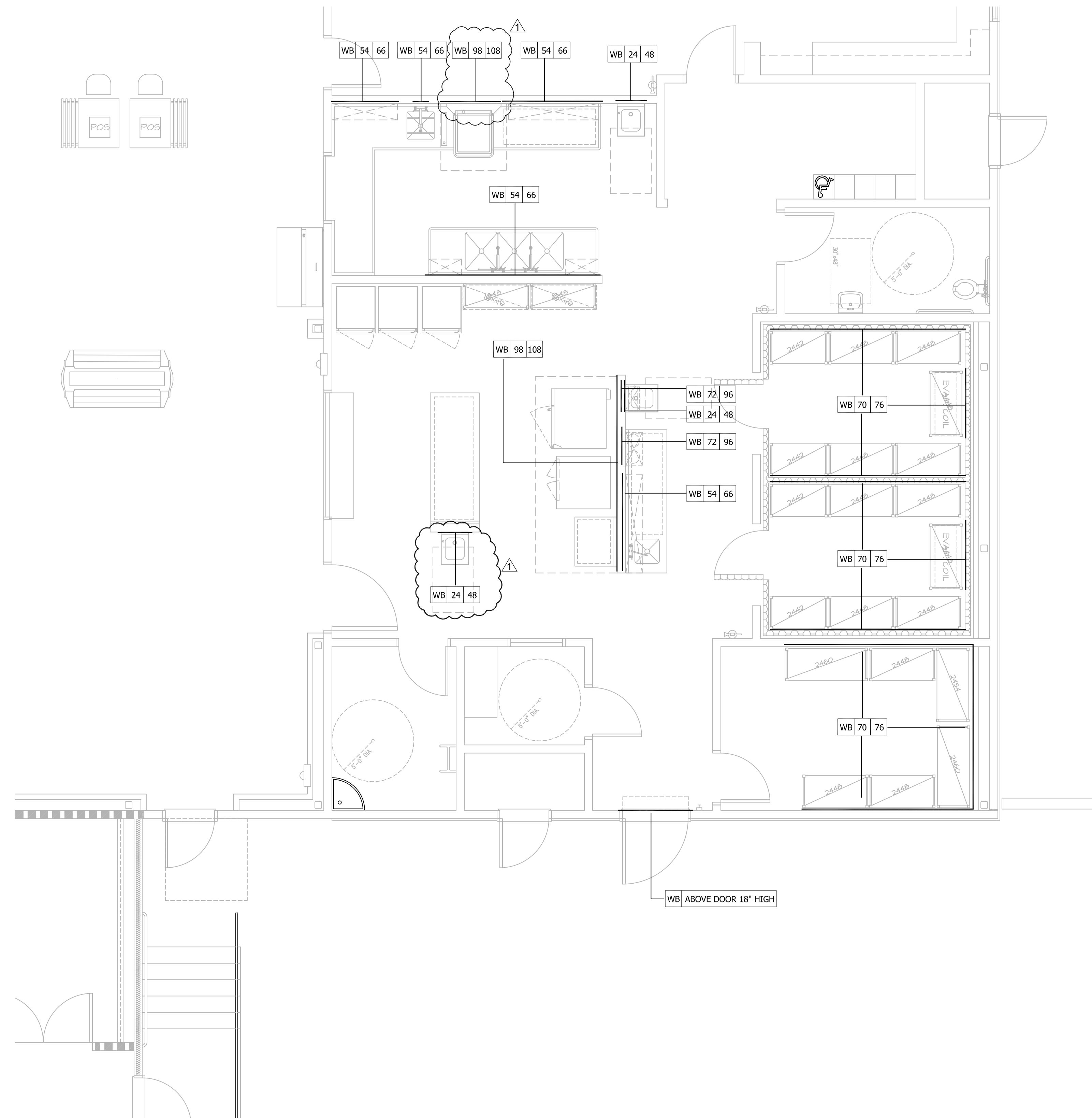
No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS
△	3.05.23	HEALTH REVISION

SHEET DESCRIPTION

**FOODSERVICE EQUIPMENT PLUMBING PLAN**

PROJECT COORDINATOR JOHN SMITH	SHEET No.  <b>K3.0</b>
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE 1/4" = 1'-0"	

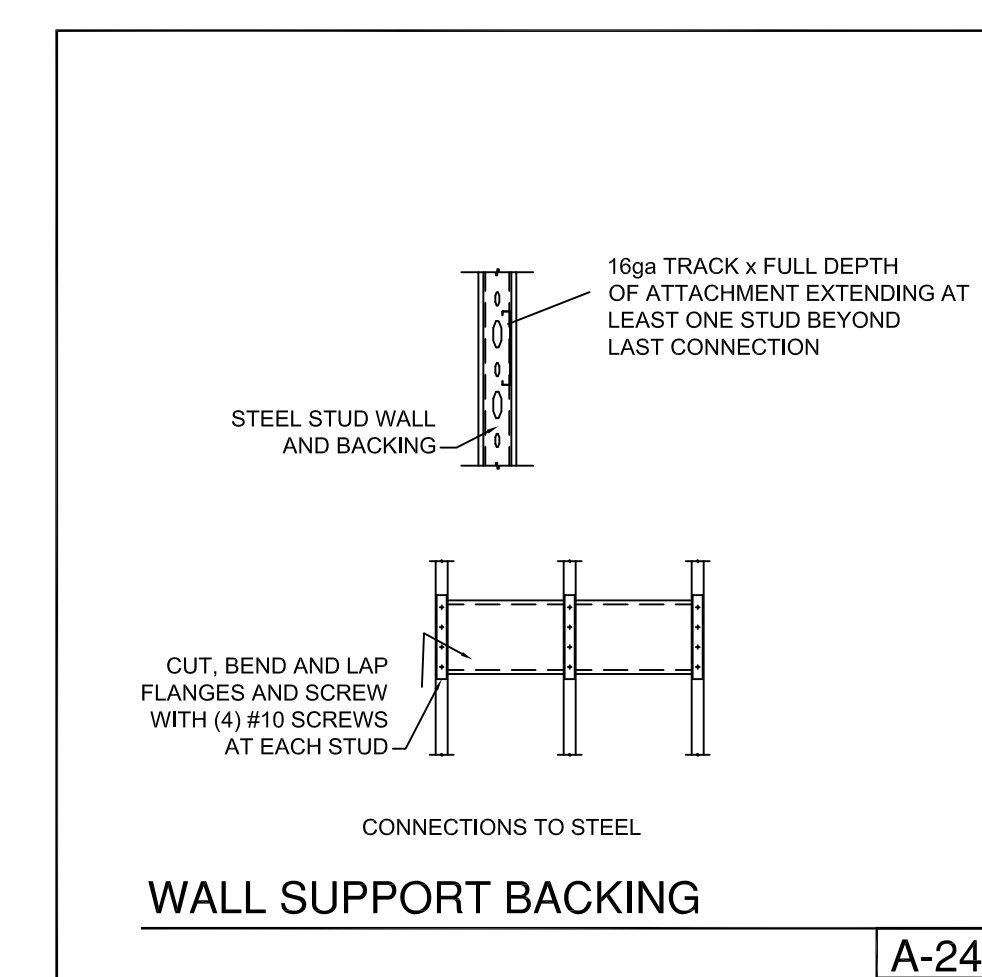
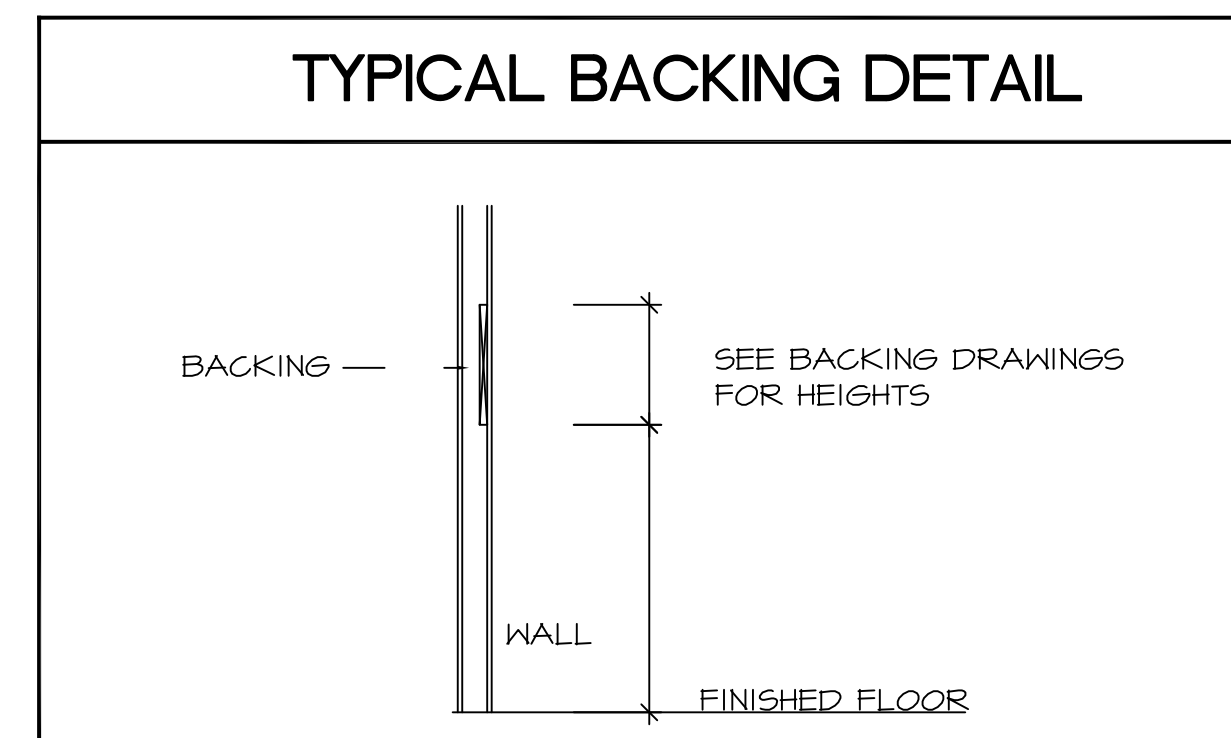




**WALL BACKING NOTES**

- GC TO PROVIDE WALL BACKING PER THIS DRAWING.
- IF FIELD CONDITIONS DO NOT ALLOW BACKING TO BE INSTALLED PER THIS PLAN GC TO ADVISE BALLINGER. BALLINGER WILL ADVISE HOW TO PROCEED.
- THIS WALL BACKING PLAN SHOWS WALL BACKING REQUIRED FOR FOODSERVICE EQUIPMENT ONLY. CONTACT ARCHITECT FOR ANY OTHER BACKING REQUIREMENTS.

BOTTOM = THE LOWEST EDGE OF THE WALL BACKING ABOVE THE FINISHED FLOOR.  
 TOP = THE HIGHEST EDGE OF THE WALL BACKING ABOVE THE FINISHED FLOOR.



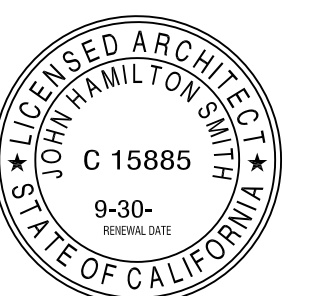
**AD 1-48a  
 S&B Elementary  
 02-116800**



PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, MANAGA, McHUGH, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

**PROJECT DEVELOPMENT**

DATE	ISSUED FOR

**REVISIONS**

No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS
Δ	3.05.23	HEALTH REVISION

**SHEET DESCRIPTION**

**FOODSERVICE EQUIPMENT BUILDING CONDITIONS**

PROJECT COORDINATOR JOHN SMITH	<b>K4.0</b>
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE 1/4" = 1'-0"	

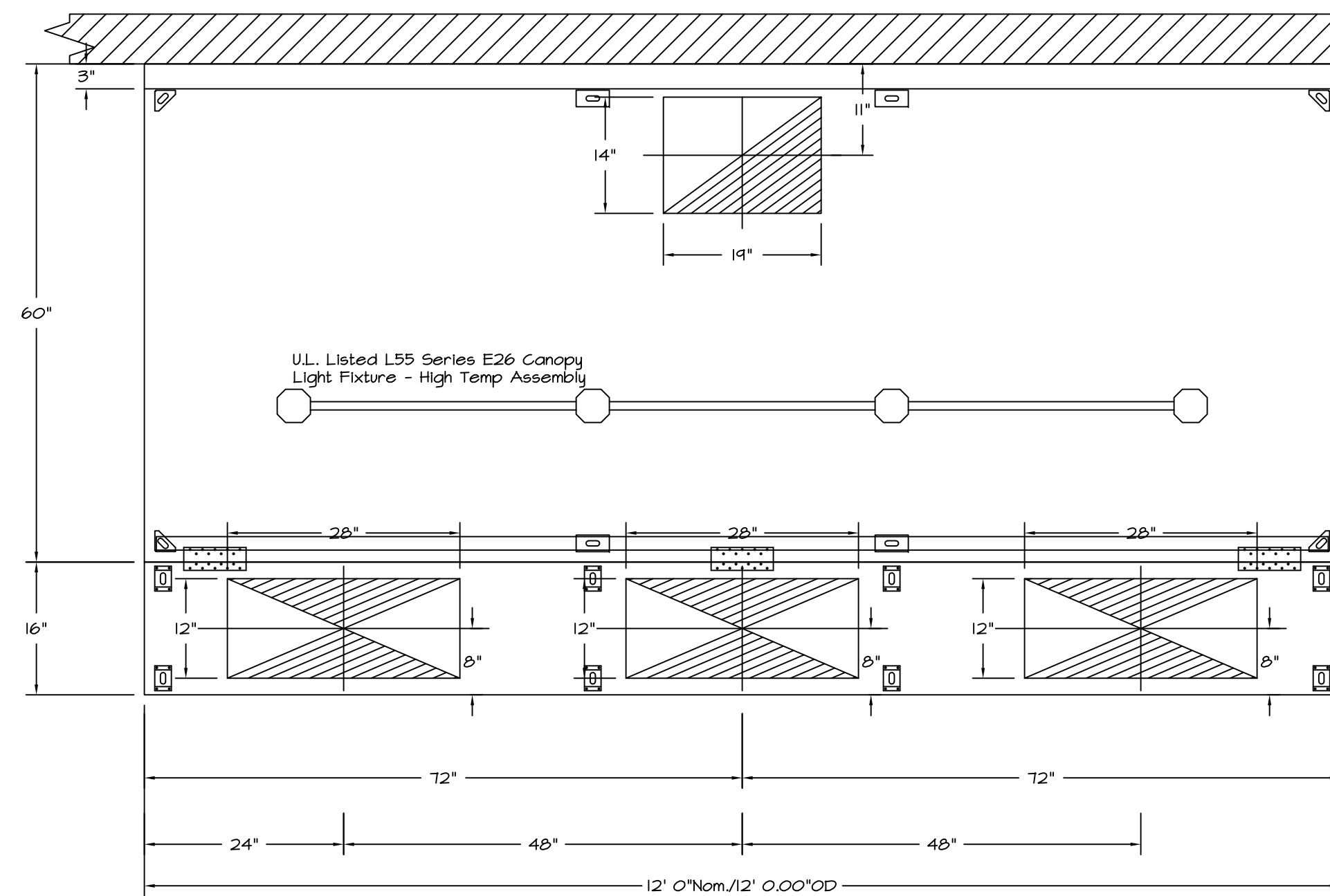




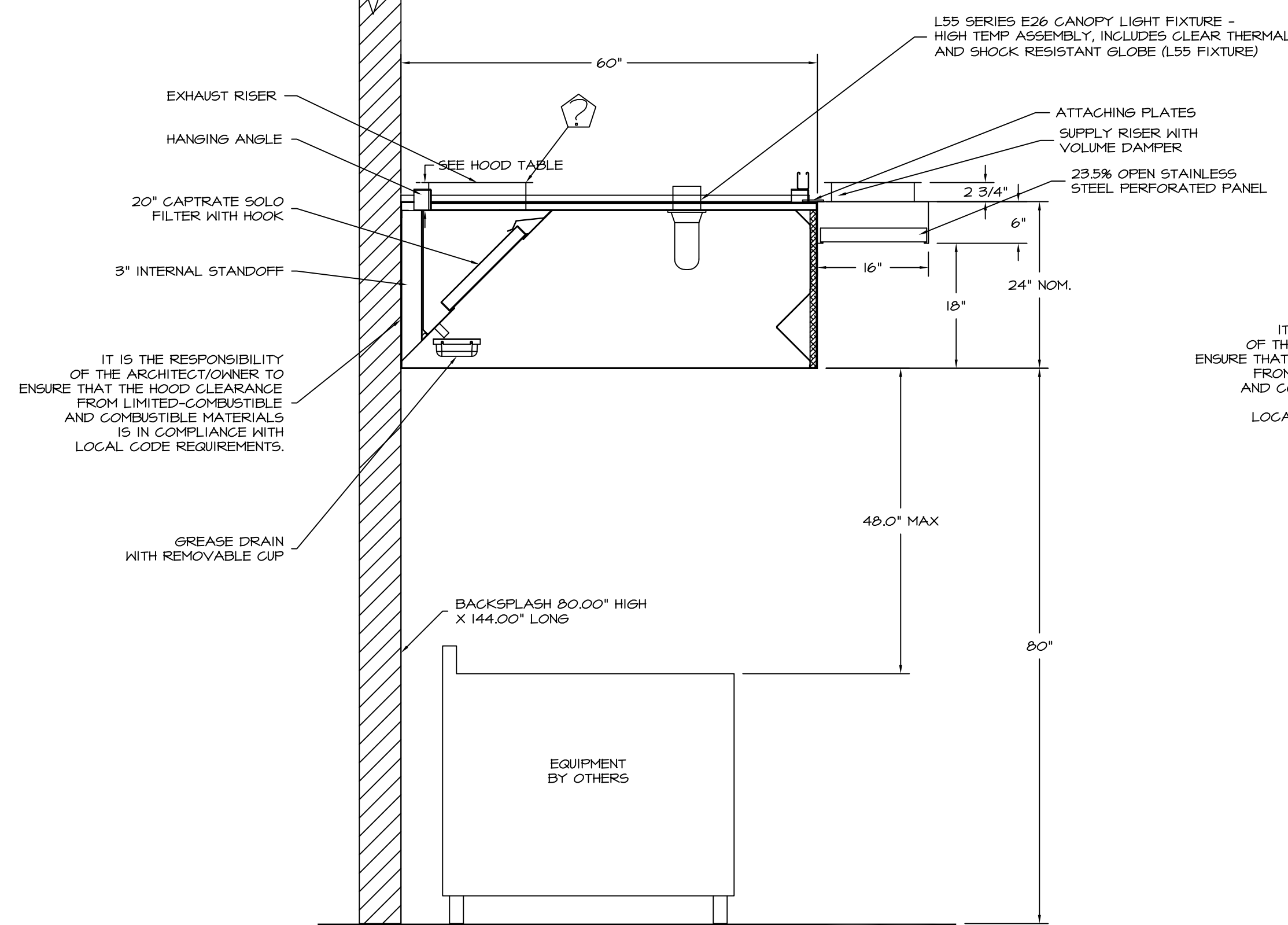
PROJECT:  
**SHIELDS & BRAWLEY  
 ELEMENTARY  
 SCHOOL**



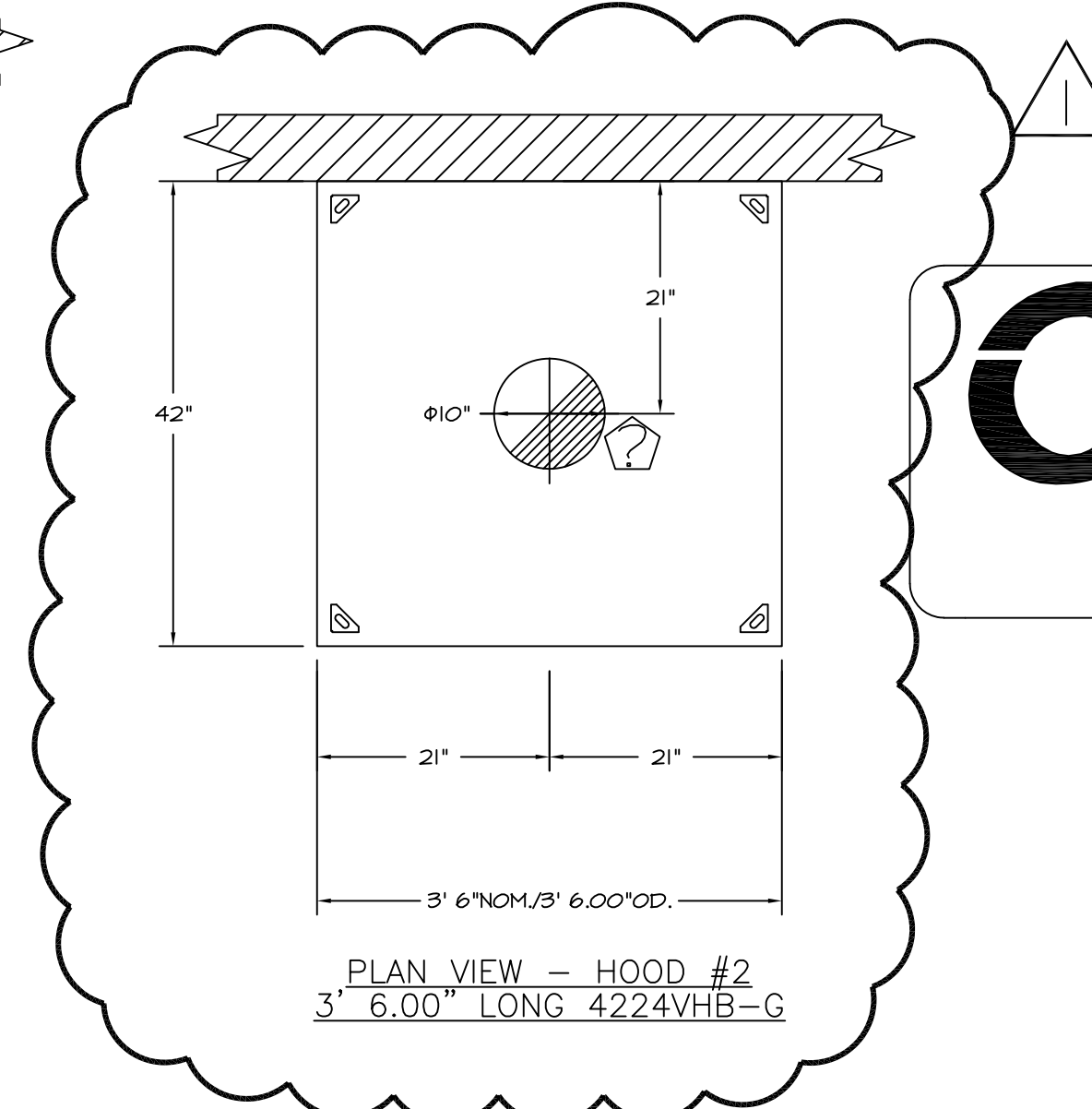
Northern California Office  
 1110 Burnett Ave, Suite G, Concord, CA 94520 (925) 962-1999 reg92@captiveaire.com



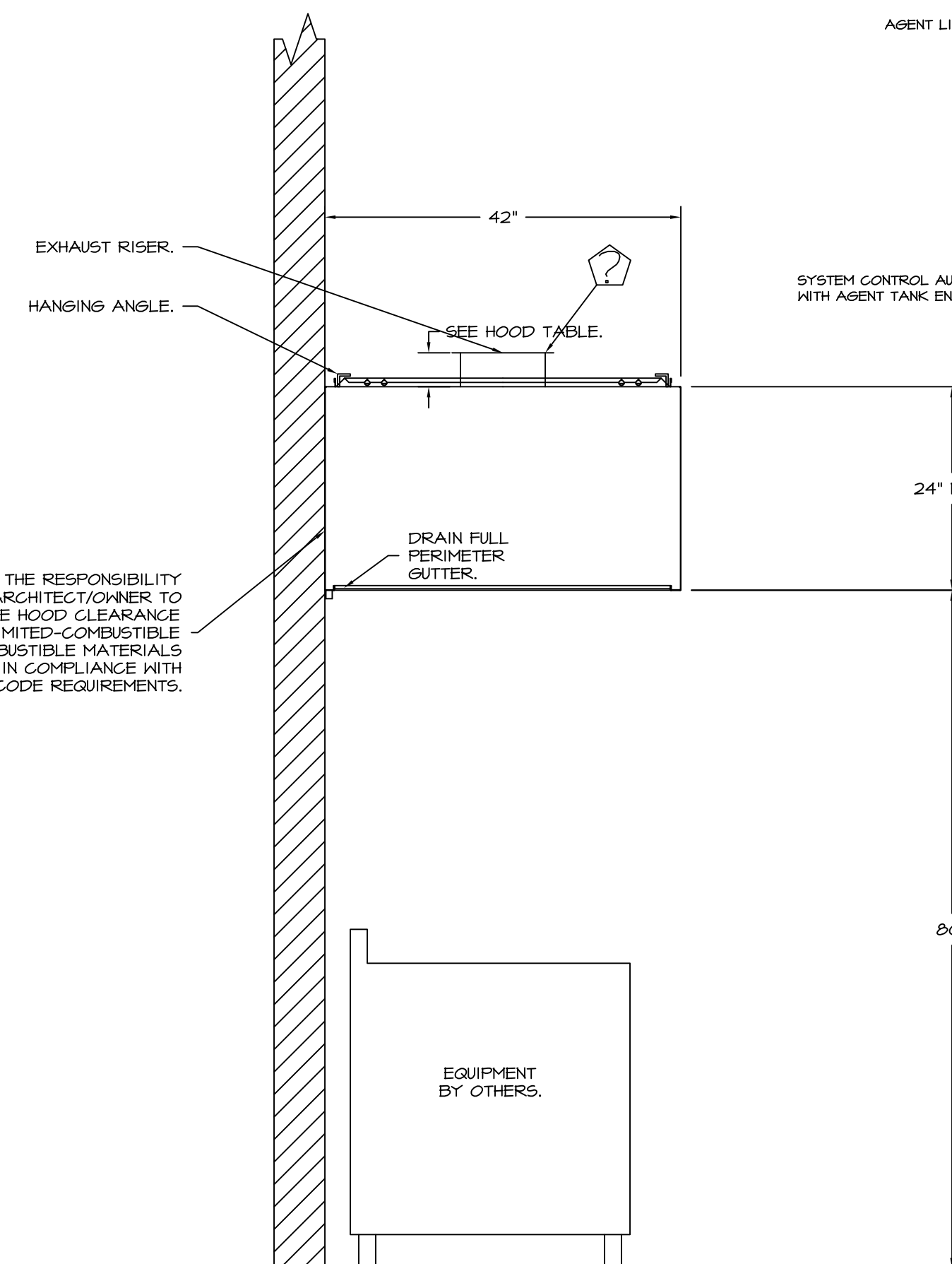
PLAN VIEW - Hood #1  
 12' 0.00" LONG 6024ND-2-PSP-F  
 NOTE: Additional hanging angles provided for hoods 12' and longer.



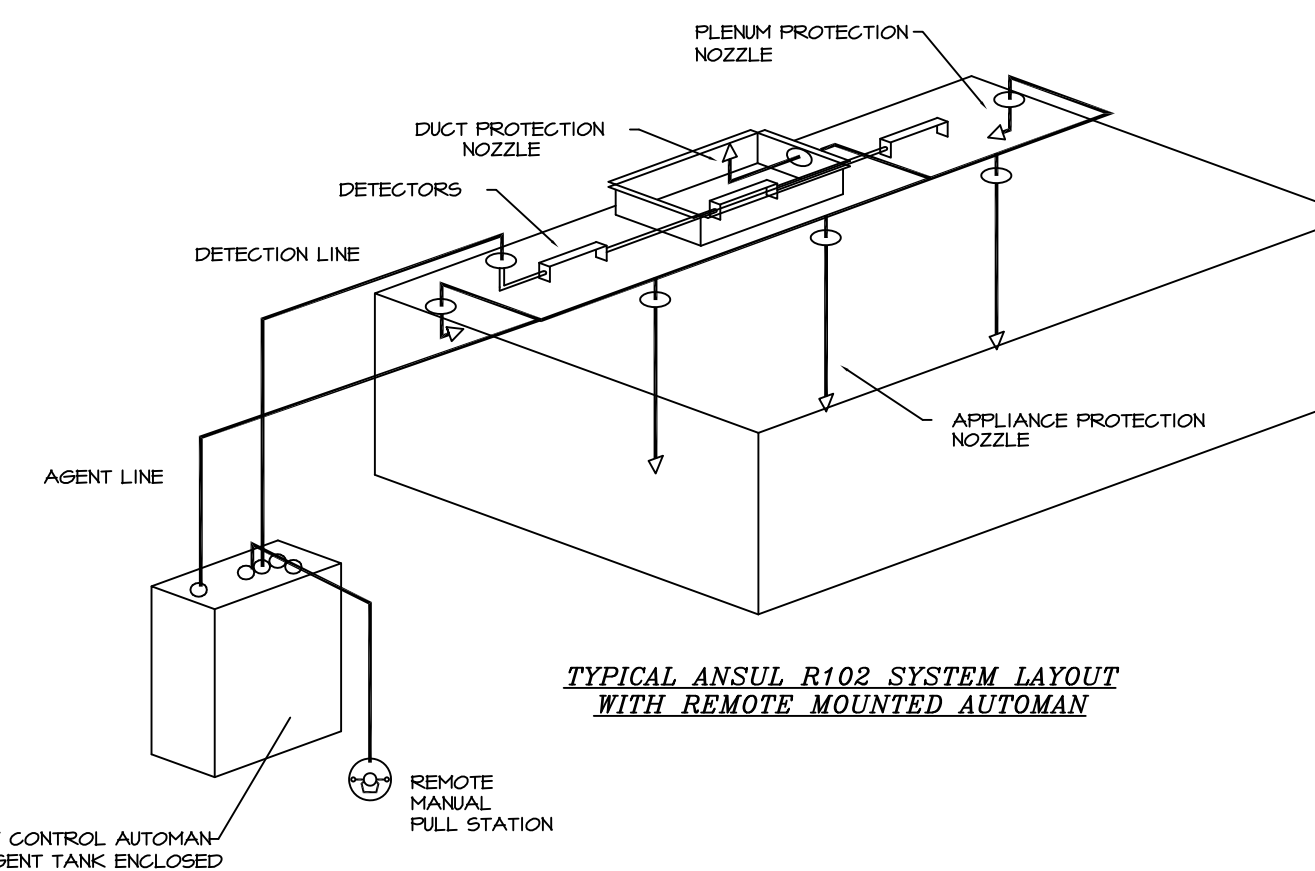
SECTION VIEW - MODEL 6024ND-2-PSP-F  
 HOOD - #1



PLAN VIEW - HOOD #2  
 3' 6.00" LONG 4224VHB-C



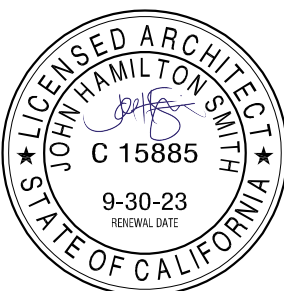
SECTION VIEW - MODEL 4224VHB-C  
 HOOD - #2



TYPICAL ANSUL R102 SYSTEM LAYOUT  
 WITH REMOTE MOUNTED AUTOMAN

IT IS THE RESPONSIBILITY OF THE ARCHITECT/OWNER TO ENSURE THAT THE HOOD CLEARANCE FROM LIMITED-COMBUSTIBLE AND COMBUSTIBLE MATERIALS IS IN COMPLIANCE WITH LOCAL CODE REQUIREMENTS.

JOHN H. SMITH, A.J.A. C15885



THE FIRM OF SMITH, MANANIGA, VILCHUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

FOODSERVICE EQUIPMENT  
 HOOD PLAN

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	K5.0
DATE 1.27.23	
SCALE 1/4" = 1'-0"	

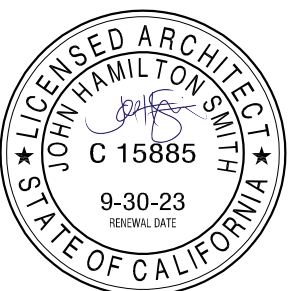
**AD 1-49a  
 S&B Elementary  
 02-116800**



PROJECT:  
**SHIELDS & BRAWLEY  
 ELEMENTARY  
 SCHOOL**



JOHN H. SMITH, A.J.A. C15885



THE FIRM OF SMITH, MANANGA, VILCHUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

**FOODSERVICE EQUIPMENT  
 HOOD PLAN**

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>K5.1</b>
DATE 1.27.23	
SCALE 1/4" = 1'-0"	

**AD 1-50a  
 S&B Elementary  
 02-116800**

**CAPTIVE AIRE**  
 Northern California Office  
 1110 Burnett Ave, Suite G, Concord, CA 94520 (925) 962-1999 reg92@captiveaire.com  
 www.captiveaire.com

**CAPTRATE SOLO FILTERS**

CAPTRATE FILTERS ARE BUILT IN COMPLIANCE WITH  
 NSF #16  
 NSF STANDARD #2  
 UL STANDARD #1046  
 INT. MECH. CODE (IMC)

**FILTER COLLECTION EFFICIENCY**

**RESISTANCE VS. AIRFLOW** - 2" Captrate Solo Filter

**SPECIFICATION: CAPTRATE GREASE-STOP SOLO FILTER**

THE CAPTRATE GREASE-STOP SOLO FILTER IS A SINGLE-STAGE FILTER FEATURING A UNIQUE S-BAFFLE DESIGN IN CONJUNCTION WITH A SLOTTED REAR BAFFLE DESIGN, TO DELIVER EXCEPTIONAL FILTRATION EFFICIENCY.

FILTER IS CONSTRUCTED OF 430 STAINLESS STEEL, AND SIZED TO FIT INTO STANDARD 2-INCH DEEP HOOD CHANNEL(S).

UNITS SHALL INCLUDE STAINLESS STEEL HANDLES AND A FASTENING DEVICE TO SECURE THE TWO COMPONENTS WHEN ASSEMBLED.

\*\*\*GREASE EXTRACTION EFFICIENCY PERFORMANCE SHALL REMOVE AT LEAST 75% OF GREASE PARTICLES FIVE MICRONS IN SIZE, AND 90% GREASE PARTICLES SEVEN MICRONS IN SIZE AND LARGER, WITH A CORRESPONDING PRESSURE DROP NOT TO EXCEED 1.0 INCHES OF WATER GAUGE.

**FILTER INFORMATION - CAPTRATE GREASE-STOP SOLO**

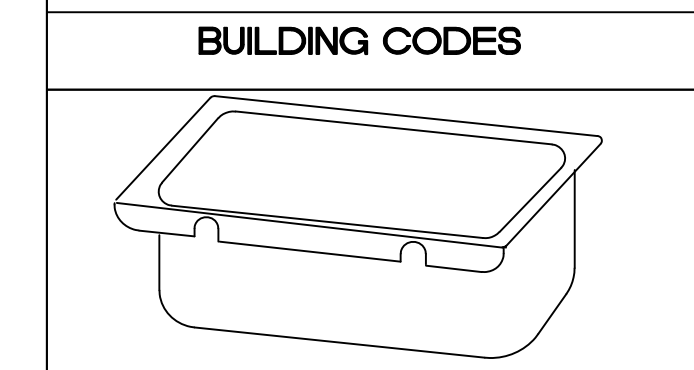
NOMINAL SIZE (H x W)	ACTUAL DIMENSIONS (H x W x D)	FREE AREA (SQ. FEET)	HEIGHT (POUNDS)	VELOCITY (FEET PER MINUTE)	STATIC PRESSURE (WATER GAUGE)
20 x 20	14-5/8" x 14-5/8" x 1-7/8"	2.28	11	100	0.25
20 x 16	14-5/8" x 15-5/8" x 1-7/8"	1.78	8.4	125	0.35
16 x 20	15-5/8" x 14-5/8" x 1-7/8"	1.78	11	150	0.45
16 x 16	15-5/8" x 15-5/8" x 1-7/8"	1.34	7.4	175	0.55
12 x 20	11-5/8" x 14-5/8" x 1-7/8"	1.23	6.0	200	0.80
12 x 16	11-5/8" x 15-5/8" x 1-7/8"	0.96	5.0	225	1.00
10 x 20	8-5/8" x 14-5/8" x 1-7/8"	1.00	5.0	250	1.30
10 x 16	8-5/8" x 15-5/8" x 1-7/8"	0.75	4.0	275	1.50

CAPTIVE-AIRE HOODS ARE BUILT IN COMPLIANCE WITH:  
 • NFPA #96  
 • NSF  
 • ETL Listed  
 • CALIFORNIA MECHANICAL CODE  
 • INTERNATIONAL MECHANICAL CODE

**BUILDING CODES**

Grease cup will be supported by 2 studs on the inside wall of the hood. The grease will drain through a concealed grease trough and into this removable cup.

**1/2 Pint Grease Cup Detail**



**ND-2 HANGING ANGLE DETAIL**

HANGING ANGLES WILL BE LOCATED IN THE FOLLOWING LOCATIONS FOR WALL CANOPIES

HOOD STYLE	DIM FROM REAR	DIM FROM FRONT (24" High Hood)	DIM FROM SIDES (24" High Hood)
ND-2 (-WI) Exhaust only	4.125"	2.25"	2.25"
VHB (-B)	2.25"	2.25"	2.25"

ALL OTHER HOOD MODELS CONTACT CAPTIVE AIRE FOR HANGING ANGLE LOCATIONS

**HANGING ANGLE LOCATIONS**

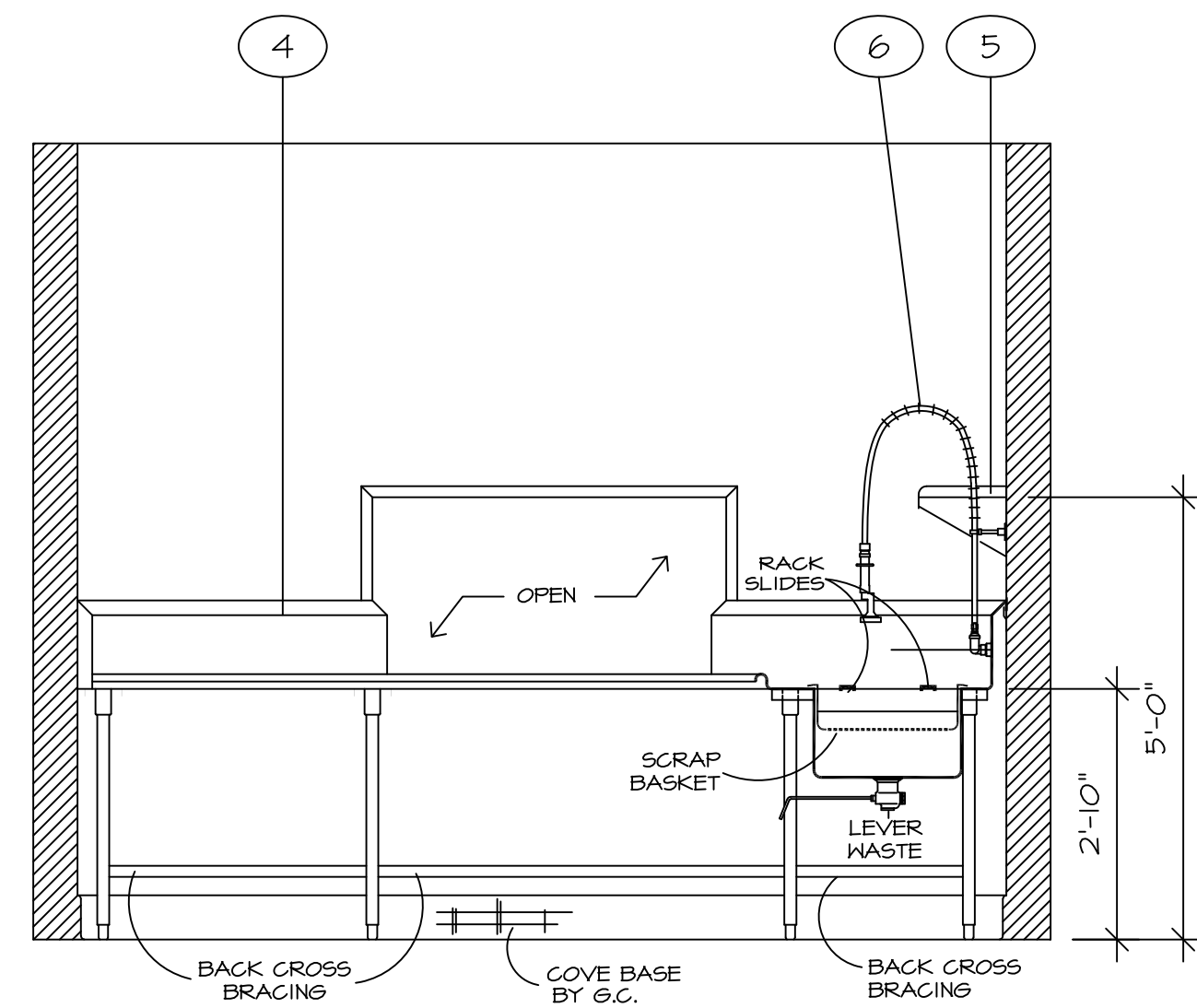
**HOOD INFORMATION - JOB#5714680**

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)				TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG		PERFORATED SUPPLY PLENUM(S)															
										WIDTH	LENG	HEIGHT	DIA			CFM	VEL	SP	END TO END	ROW	HOOD NO	TAG	POS	LENGTH	WIDTH	HEIGHT	TYPE	WIDTH	LENG	DIA	CFM	SP	
1	24	6024 ND-2-PSP-F	CAPTIVEAIRE	12' 0"	600 DEG	I	HEAVY	240	2080	14"	19"	4"	2080	1554	-0.834"	2160	304 SS 100%	ALONE	ALONE	1		Front	144"	16"	6"	MUA	12"	28"		T20	0.195"		
2	11	4424 VHB-G	CAPTIVEAIRE	3' 6"	100 DEG	II	N/A	150	525				4"	10"	525	463	-0.064"	0	304 SS 100%	ALONE	ALONE	1											

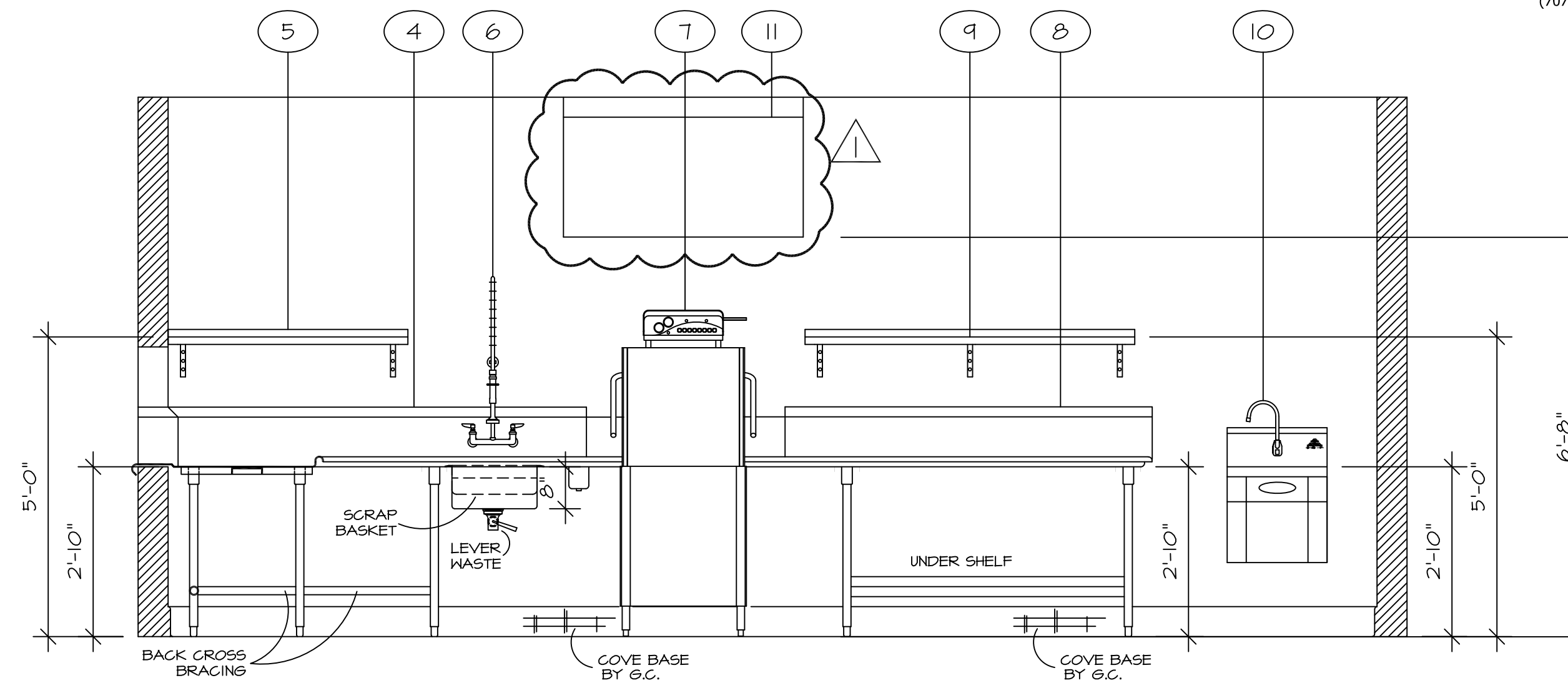
**HOOD INFORMATION**

HOOD NO	TAG	TYPE	FILTER(S)		EFFICIENCY @ 7 MICRONS	QTY	LIGHT(S)		UTILITY CABINET(S)		FIRE SYSTEM	HOOD HANGING WEIGHT
			QTY	HEIGHT			LENGTH	TYPE	SIZE	MODEL #		
1	24	CAPTRATE SOLO FILTER	1	20"	16"	4	85% SEE FILTER SPEC	4	L55 SERIES E26	NO		645 LBS
2						0						135 LBS

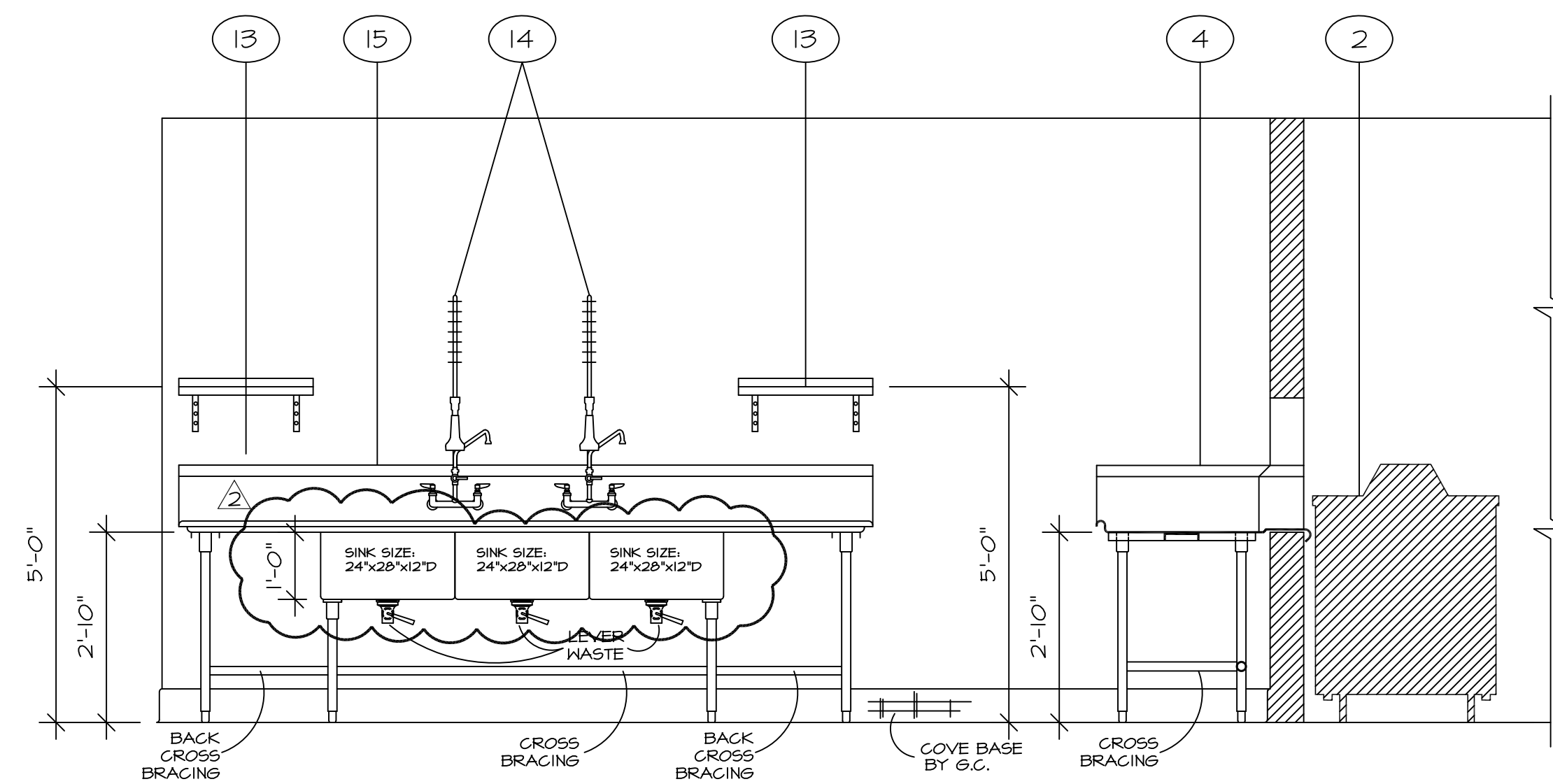




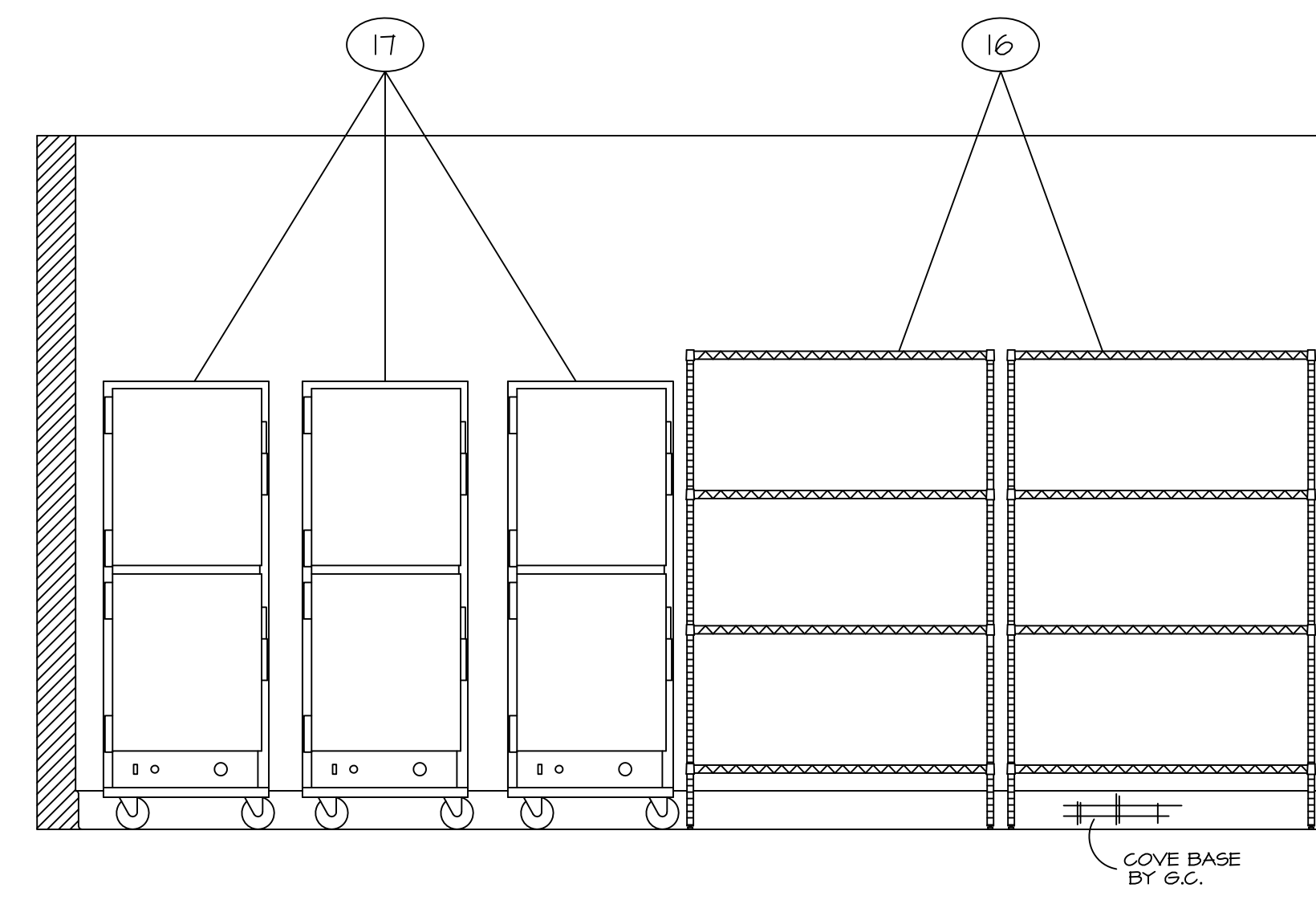
1 ELEVATION - TRAY DROP-OFF/WAREWASHING AREA  
 1/2" = 1' - 0"



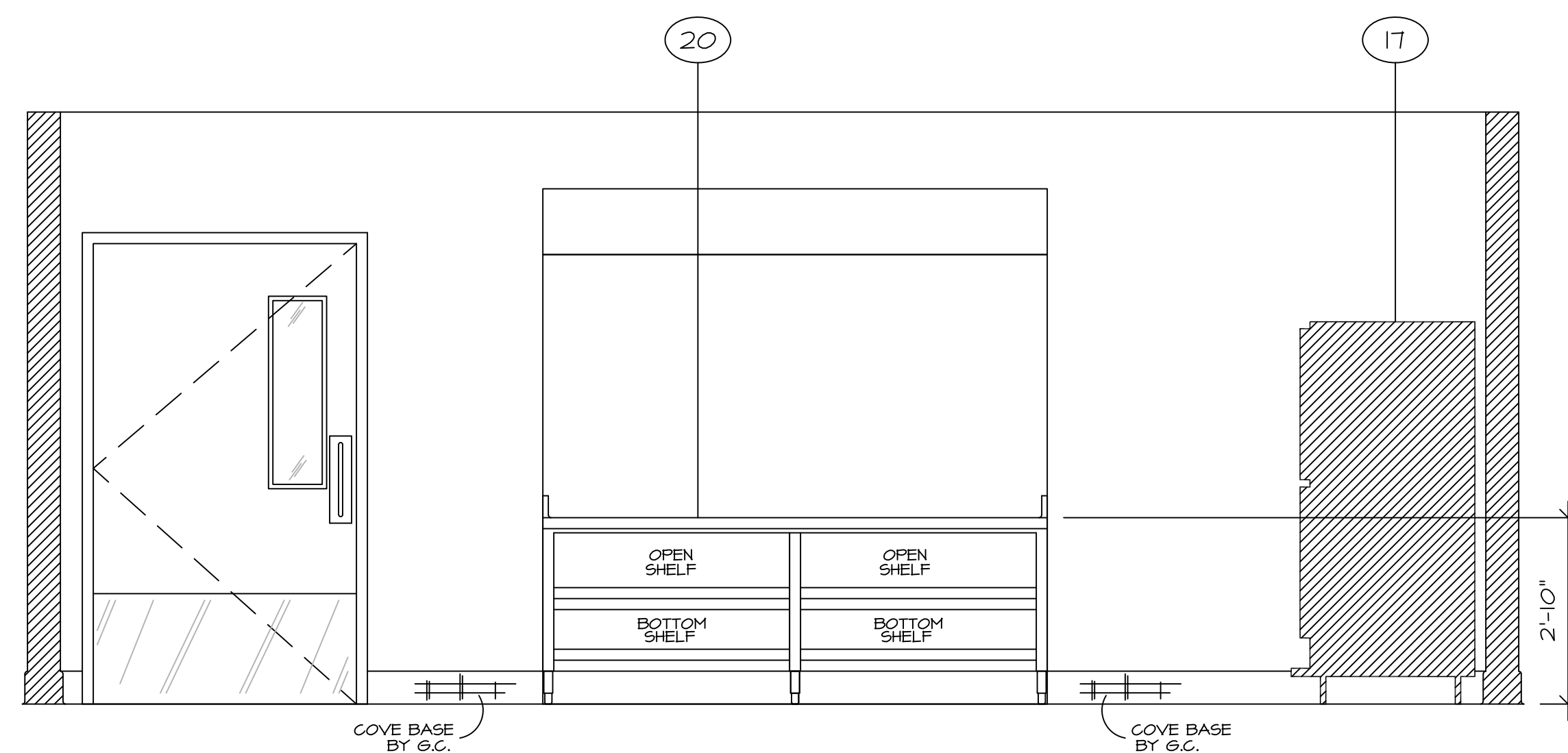
2 ELEVATION - WAREWASHING AREA  
 1/2" = 1' - 0"



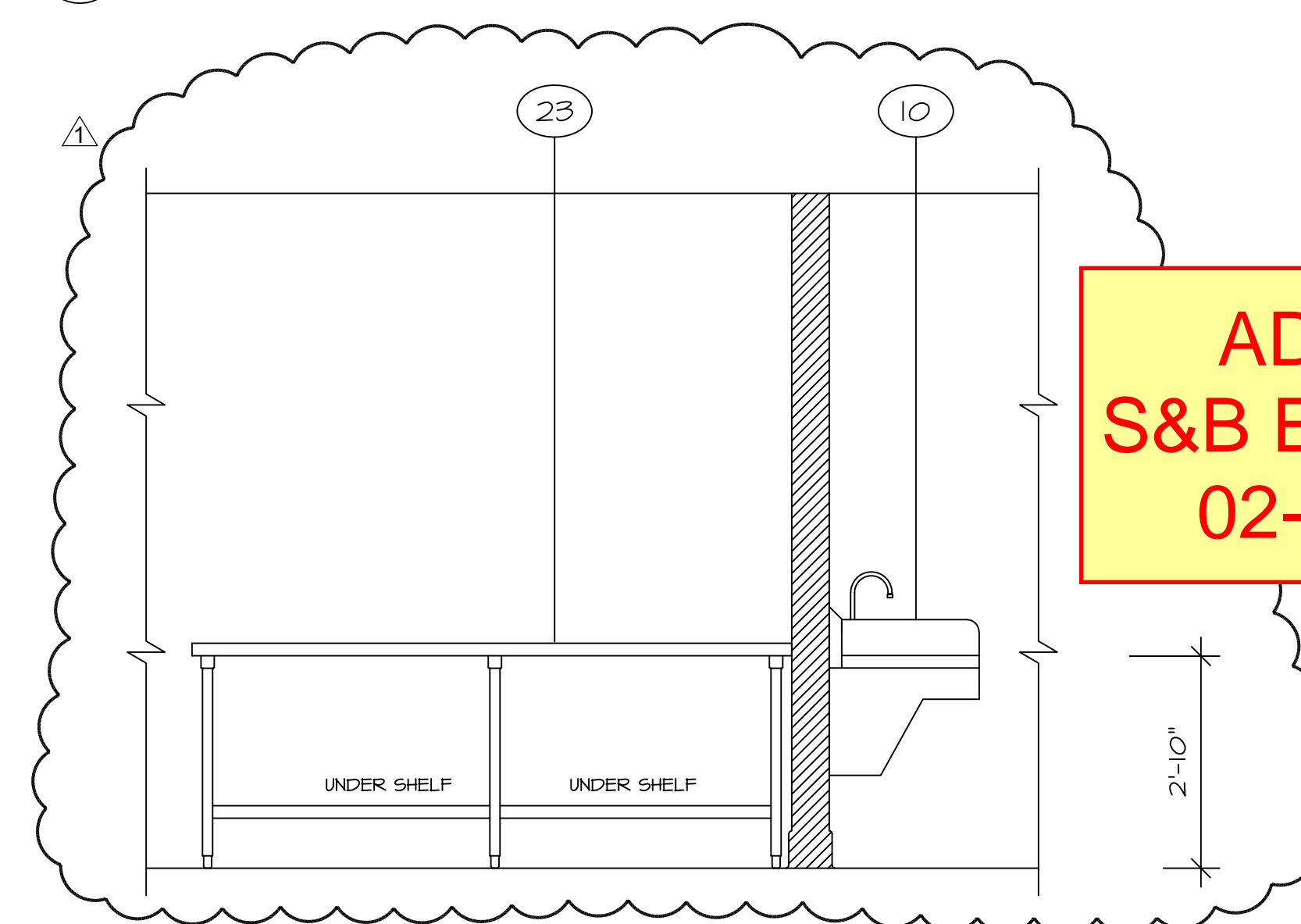
3 ELEVATION - POT WASH AREA  
 1/2" = 1' - 0"



4 ELEVATION - STORAGE/HOLDING AREA  
 1/2" = 1' - 0"



5 ELEVATION - SERVING/HOLDING AREA  
 1/2" = 1' - 0"



6 ELEVATION - ISLAND WORKTABLE  
 1/2" = 1' - 0"

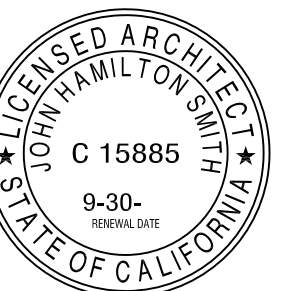
**AD 1-51a**  
**S&B Elementary**  
**02-116800**



PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, MORGAN, HILGUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPRIETARY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH OBTAINING AND ENFORCEING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS
Δ	3.05.23	HEALTH REVISION

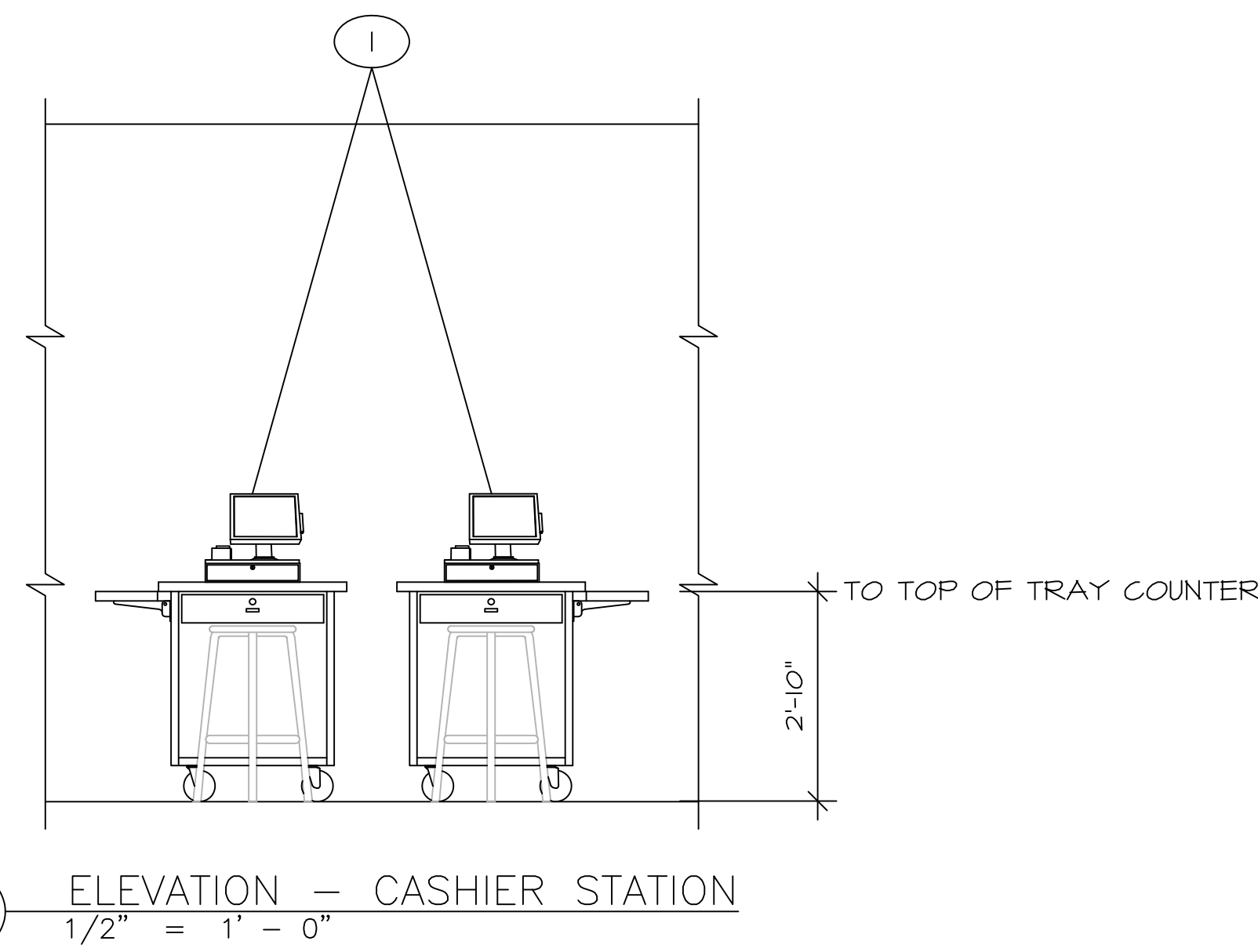
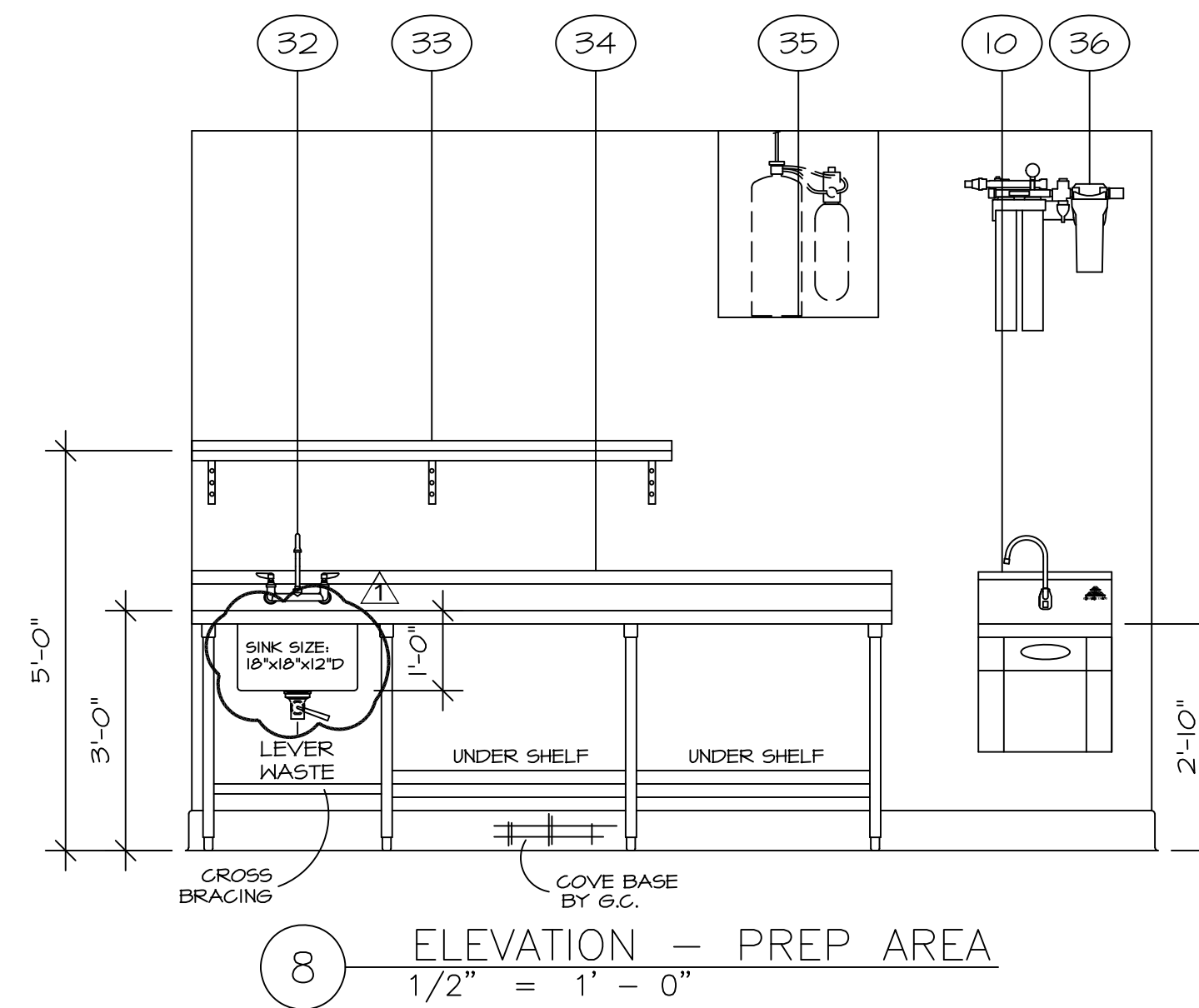
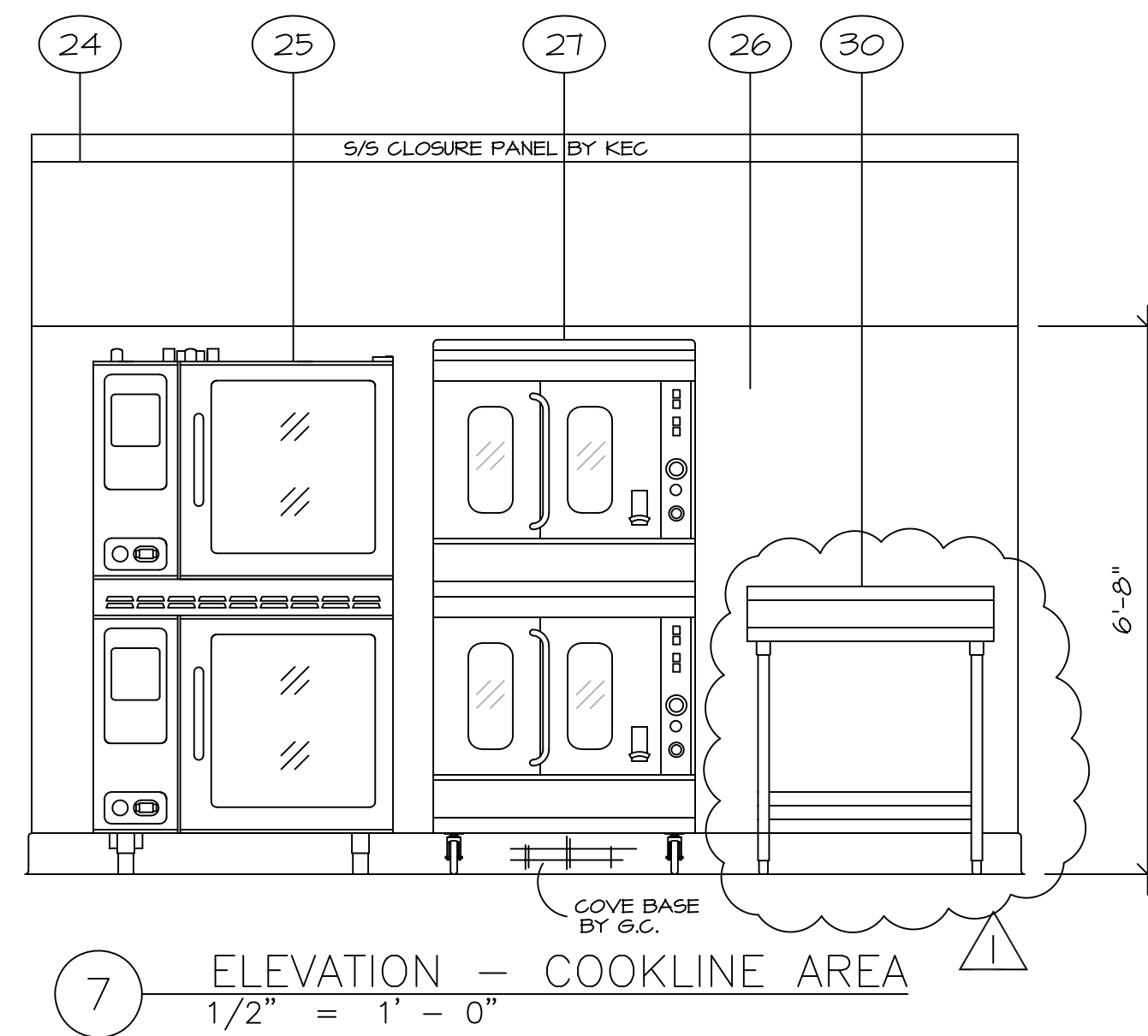
SHEET DESCRIPTION

**FOODSERVICE EQUIPMENT ELEVATIONS**

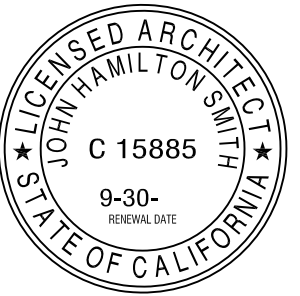
PROJECT COORDINATOR JOHN SMITH	SHEET NO. <b>K6.0</b>
PROJECT NO. 17-67	DATE 1.27.23
SCALE 1/4" = 1'-0"	



PROJECT:  
**SHIELDS  
 & BRAWLEY  
 ELEMENTARY  
 SCHOOL**



JOHN H. SMITH, A.J.A. C15885



THE FIRM OF SMITH, MANAGA, M.J.HOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
△ 2.14.23		DISTRICT MODIFICATIONS
△ 3.05.23		HEALTH REVISION

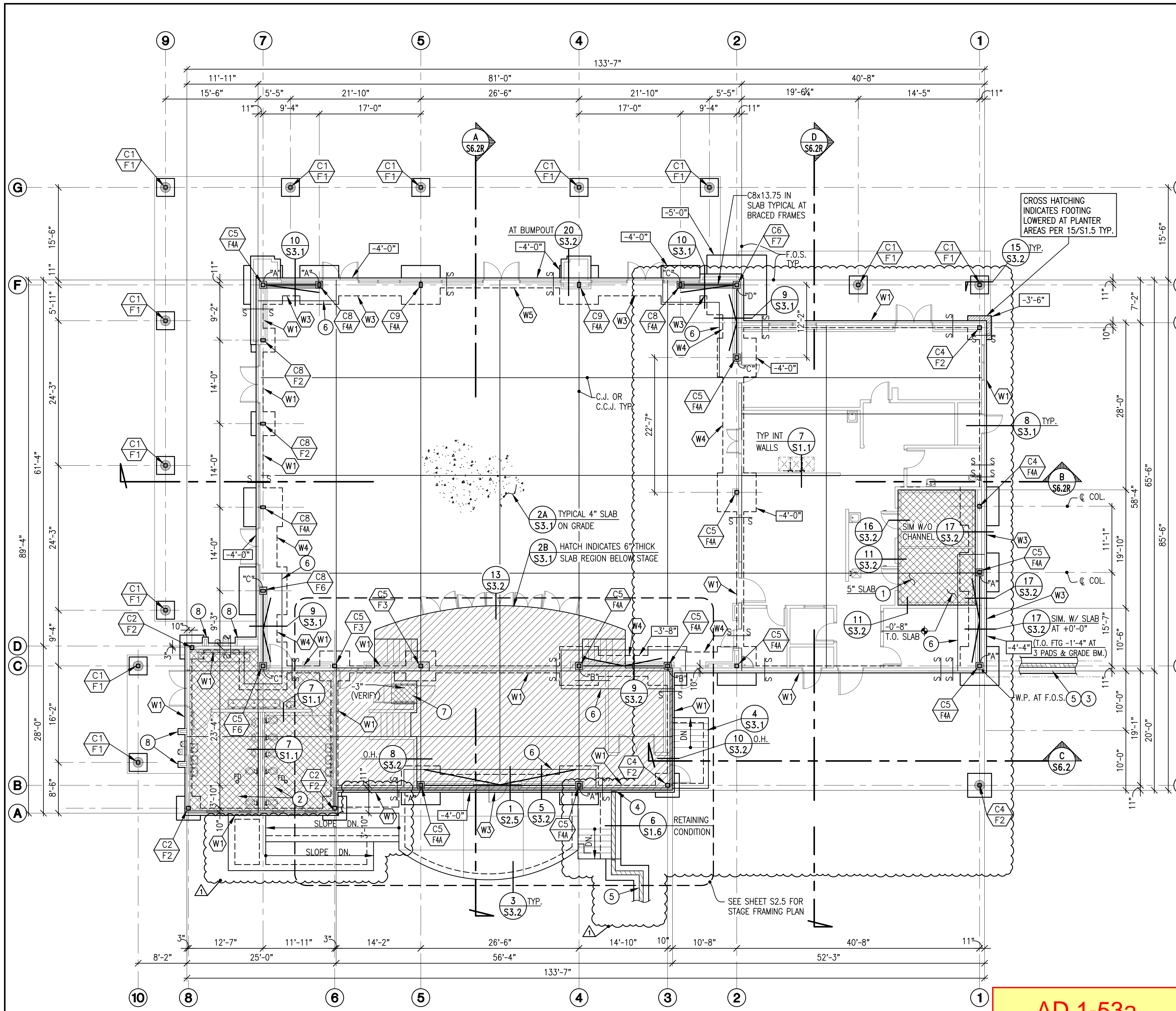
SHEET DESCRIPTION

FOODSERVICE EQUIPMENT  
 ELEVATIONS

PROJECT COORDINATOR JOHN SMITH	SHEET No.  <b>K6.1</b>
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE 1/4" = 1'-0"	

**AD 1-52a  
 S&B Elementary  
 02-116800**





- ### FOUNDATION NOTES
- SEE FOUNDATION NOTES ON SHEET S2.1
  - PROVIDE #4x4'-0" DOWELS TO MATCH CONT. FTG. BARS AT ALL LOCATIONS WHERE FENCE FOOTING RUNS INTO BLDG. FOOTINGS.
- INDICATES BRACED FRAME AT WALL. SEE S7 SHEETS FOR ELEVATIONS.
  - = BOTTOM OF FOOTING ELEV.
  - C.C.J. = CRACK CONTROL JOINT PER DET. 2/S3.2
  - C.J. = CONSTRUCTION JOINT PER DET. 1/S3.2
  - C1 F1 = COLUMN TYPE.
  - F1 = FOOTING TYPE.
  - = CONC. CURB
  - S S = STEPPED FOOTING PER DETAIL 7/S3.2. (USE 6/S3.2 WHERE BOTH TOP AND BOTTOM OF FOOTING ARE STEPPED)
  - \*A\* - INDICATES SPECIAL BASE REQUIREMENTS AT BRACED FRAMES PER DET. 13/S7.5
  - INDICATES DEPRESSED SLAB (-2") FOR TILE
- ### KEY NOTES
- DEPRESS SLAB FOR FREEZERS. SEE KITCHEN DRAWING K1. SLAB SHALL BE 5" THICK W/ #4 @ 18"o.c. EACH WAY.
  - DEPRESS SLAB 2" FOR TILE AT RESTROOMS.
  - 2" CLEAR BETWEEN CMU FENCE & BLDG. FINISHES.
  - 2" CLEAR BETWEEN CMU FENCE & BLDG. FINISHES ABOVE LANDING. PROVIDE DOWELS BELOW LANDING PER LINE "B" ON SHEET S7.3.
  - CMU FENCE: SEE ARCH. DET. 51/AB.3 & DETAIL 1/S1.6. SEE FDN. NOTE #2, THIS SHEET TYPICAL.
  - CLOSURE POUR AT BRACED FRAMES AS REQ'D PER 9/S3.1 TYPICAL IF SLAB IS POURED PRIOR TO STEEL ERECTION.
  - DEPRESS SLAB AS REQUIRED AT CHAIR LIFT FOR FLUSH INSTALLATION.
  - PROVIDE SLAB & FOOTING PER 19/S3.2 AT DRINKING FOUNTAIN WALLS TYPICAL.

### FOOTING SCHEDULE

TYPE	PLAN DIMENSION	DEPTH (MIN.)	REINFORCEMENT
W1	1'-0" WIDE	2'-0"	(1) #5 CONT. T. & B.
W3	3'-0" WIDE	3'-0"	(6) #8 CONT. T. & B. W/ #4 STIRRUPS @ 12"o.c.
W4	3'-6" WIDE	3'-0"	(6) #9 CONT. T. & B. W/ #4 STIRRUPS @ 12"o.c.
W5	1'-8" WIDE	2'-0"	(4) #5 CONT. T. & B. W/ #3 TIES @ 24"o.c.
W6	1'-8" WIDE	2'-0"	(4) #7 CONT. T. & B. W/ #3 TIES @ 24"o.c.
F1	3'-0" SQ.	2'-0"	(4) #6 EACH WAY, BOTTOM
F2	4'-0" SQ.	2'-0"	(5) #6 EACH WAY, BOTTOM
F3	5'-0" SQ.	2'-0"	(6) #6 EACH WAY, BOTTOM
F4	6'-0" SQ.	2'-0"	(8) #6 EACH WAY, BOTTOM
F4A	6'-6" SQ.	3'-0"	(8) #6 EACH WAY, T&B
F5	7'-0" SQ.	2'-0"	(9) #6 EACH WAY, BOTTOM
F6	8'-0" SQ.	3'-0"	(10) #6 EACH WAY, T&B
F7	10'-0" SQ.	4'-0"	(11) #7 EACH WAY, T&B

### COLUMN SCHEDULE

TYPE	SIZE	BASE PLATE * U.O.N.	REF. DET.* U.O.N.
C1	HSS 3½x3½x¾"	ℓ ½"x10" SQ.	5/S1.2
C2	HSS 4x4½"	ℓ ¾"x10" SQ.	5/S1.2
C3	HSS 4x4¾"	ℓ ¾"x10" SQ.	5/S1.2
C4	HSS 5x5½"	ℓ ¾"x11" SQ.	5/S1.2
C5	HSS 6x6½"	ℓ 7⁄8"x12" SQ.	5/S1.2
C6	HSS 6x6¾"	ℓ 1"x12" SQ.	5/S1.2
C7	HSS 6x6¾"	ℓ 1"x12" SQ.	5/S1.2
C8	HSS 8x6½"	ℓ ¾"x12"x1'-2"	5/S1.2
C9	HSS 8x6¾"	ℓ ¾"x12"x1'-2"	5/S1.2
C10	HSS 6x6½"	ℓ 1"x12" SQ.	5/S1.2
C11	HSS 6x6¾"	ℓ 1¼"x12" SQ.	5/S1.2

\* SEE S7.5 FOR BRACE FRAME DETAILS & SPECIAL BASE PLATE DETAILS AT BRACED FRAMES.

**FOUNDATION PLAN**  
 1/8" = 1'-0"  
 B.O. FOOTING ELEVATION = -3'-0" U.O.N.



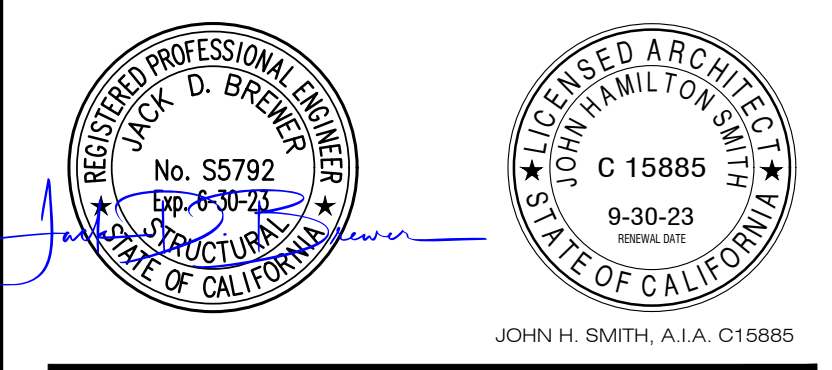
**AD 1-53a**  
**S&B Elementary**  
**02-116800**



# SHIELDS & BRAWLEY ELEMENTARY SCHOOL



**ASD**  
 advanced structural design, inc.  
**STRUCTURAL ENGINEERS**  
 2490 West Shaw, suite 210  
 Fresno, California 93711  
 (559) 432-4151 office      asdi@asdiengr.com



PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

## FOUNDATION PLAN

MULTI-PURPOSE BLDG

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>S2.4R</b>
DATE 1.27.23	
SCALE	

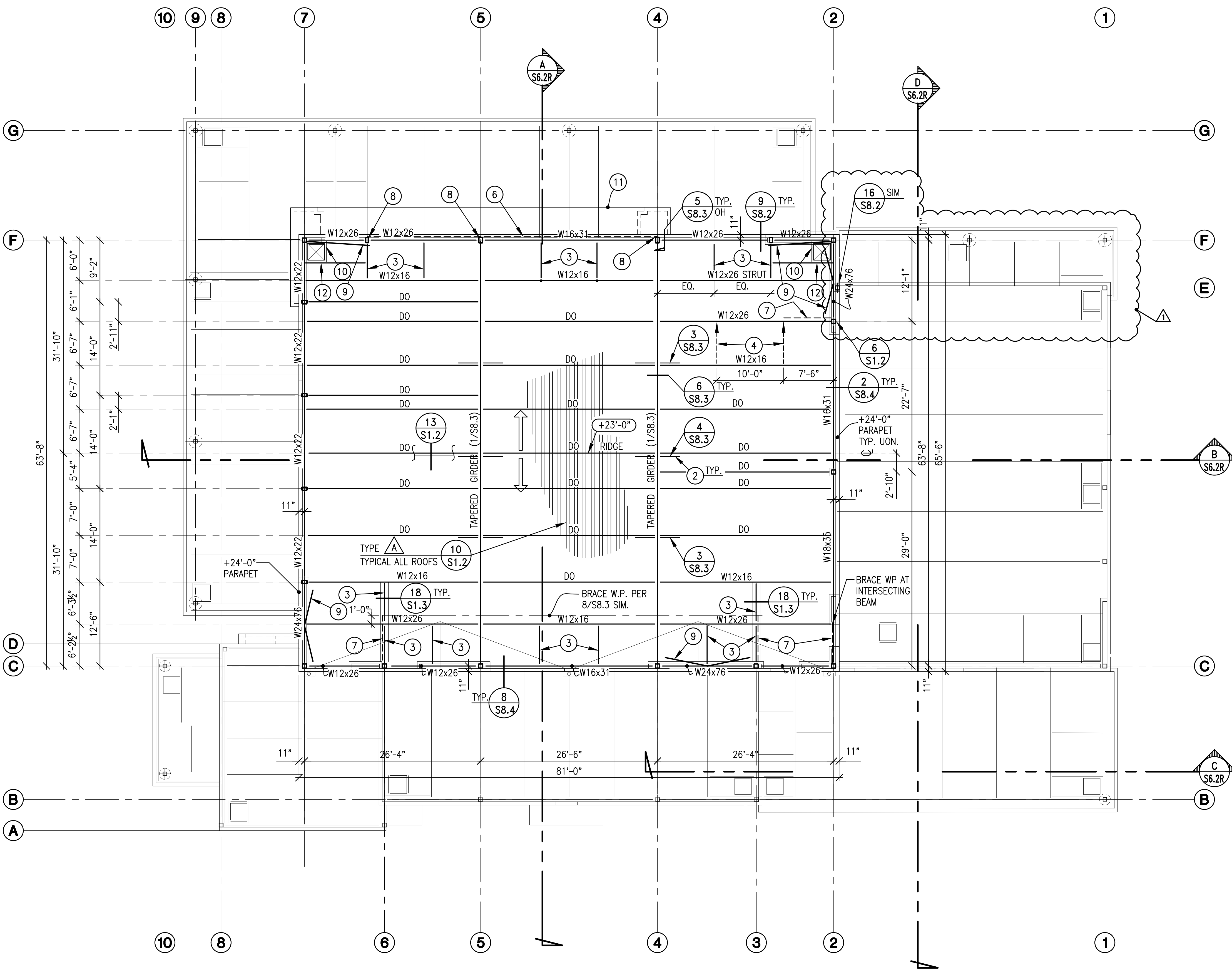












- ### STEEL FRAMING NOTES
- SEE STEEL FRAMING NOTES ON SHEET S5.1
- $+x'-x''$  - INDICATES TOP OF STEEL ELEVATION (BOTTOM OF METAL DECK)
  - BEAM SPLICE
  - H.S.S. COLUMN
  - ARCHITECTURAL COLUMN COVER
- ### KEY NOTES
- MECH. UNIT PER ARCH AND MECH. DWGS. SEE DET. 12/S1.3 FOR FRAMING.
  - FLANGE BRACES
  - W12x16
  - BOTTOM FLANGE BRACE PER 9/S1.2. ARROW INDICATES LOW END OF BRACE.
  - L3x3x $\frac{3}{4}$  HANGER PER 14/S8.5.
  - HSS 6x6x $\frac{3}{8}$  HORIZONTAL WIND GIRT PER 3/S7.6
  - BRACE FROM LOW ROOF PER PLAN ON S5.4.
  - WIND GIRT CONN AT COLUMN PER 9/S8.5
  - INDICATES BRACED FRAMES, SEE BRACED FRAME ELEVATIONS.
  - PROVIDE FRAME PER 16/S1.5 AT ALL ROOF DRAINS.
  - SEE SHEET S7.6 FOR WALL BUMPOUTS
  - W12x16 & L3x3x $\frac{3}{4}$  HANGER DOWN TO CARRY C10 SOFFIT BEAM BELOW: SEE 10/S8.5

**HIGH ROOF FRAMING PLAN**  
 $\frac{1}{8}'' \sim 1'-0''$

AD 1-56a  
 S&B Elementary  
 02-116800



100 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 (559) 432-4151

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**

**ASD**  
 advanced structural design, inc.  
 STRUCTURAL ENGINEERS  
 2490 West Shaw, suite 210  
 Fresno, California 93711  
 (559) 432-4151 office      asdi@asdiengr.com

REGISTERED PROFESSIONAL ENGINEER  
 JACK D. BREWER  
 No. S5792  
 9-30-23  
 STATE OF CALIFORNIA

LICENSED ARCHITECT  
 JOHN HAMILTON SMITH  
 C 15885  
 9-30-23  
 STATE OF CALIFORNIA

JOHN H. SMITH, A.I.A. C15885

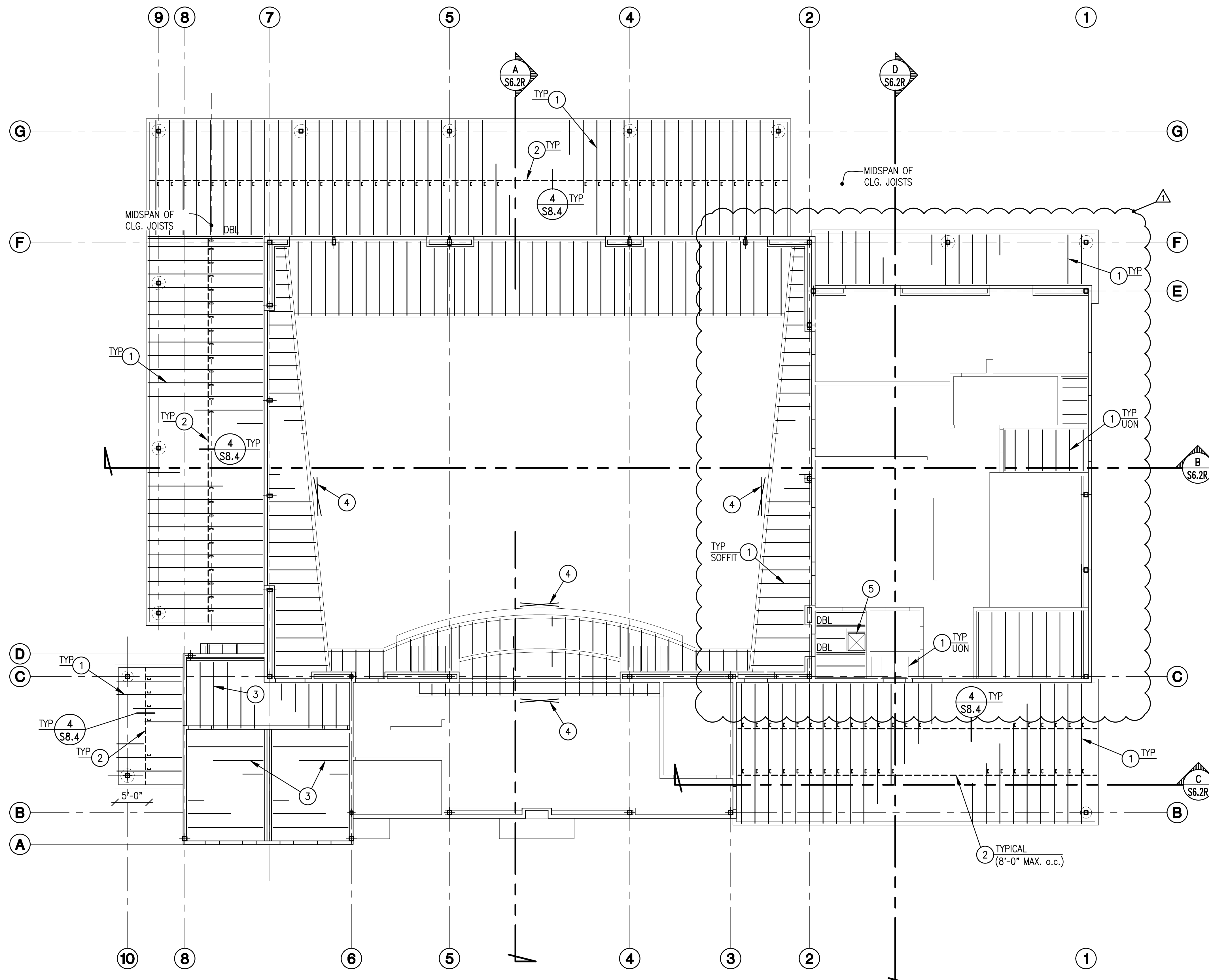
THE FIRM OF SMITH, WYMAN, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION	
HIGH ROOF FRAMING PLAN	
MULTI-PURPOSE BLDG	
PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	S5.5R
DATE 1.27.23	
SCALE	





**CEILING FRAMING NOTES**

1. PROVIDE CEILING FRAMING AT ALL HARD CEILINGS AND SOFFITS SHOWN ON ARCHITECTURAL DRAWINGS EVEN IF A FRAMING PLAN IS NOT SPECIFICALLY SHOWN ON STRUCTURAL DRAWINGS. THESE NOTES APPLY TO ALL BUILDINGS ON THIS JOB.
2. SEE DETAIL 15/S1.4 FOR JOIST SIZE AND SPACING U.O.N. ADD HANGERS PER 18/S1.4 & 19/S1.4 WHEN SPANS EXCEED THOSE ALLOWED ON DETAIL 15/S1.4.
3. FRAME OPENINGS PER 16/S1.4
4. PROVIDE DOUBLE JOISTS AT SIDES OF OPENINGS AND AT CHANGES IN FRAMING DIRECTION UNLESS MORE STRINGENT FRAMING IS SHOWN.
5. COORDINATE JOIST LAYOUT WITH LIGHTS, VENTS, ACCESS OPENINGS, AND OTHER CEILING PENETRATIONS AS REQUIRED.
6. PROVIDE DOUBLE JOISTS EACH SIDE OF JOISTS THAT ARE CUT. DO NOT CUT MORE THAN TWO ADJACENT JOISTS.
7. SEE SHEET S5.4 FOR DETAILS AT PERIMETER OF ROOFS TYPICAL.

**KEY NOTES**

- 1 TYPE 1 CLG. JOISTS @ 24"o.c.
- 2 STRONGBACK BETWEEN ROOF BEAMS AND HANGERS PER 4/S8.4
- 3 TYPE 2 CLG. JOISTS PER 15/S1.4.
- 4 PROVIDE SOFFIT X-BRACING @ 8'-0"o.c. SPACING, PER 13/S1.3, FULL LENGTH OF SOFFIT.
- 5 ACCESS HATCH. FRAME OPENING PER 16/S1.4.

**CEILING FRAMING PLAN**  
 1/8" = 1'-0"  
 NORTH

**AD 1-57a**  
**S&B Elementary**  
**02-116800**

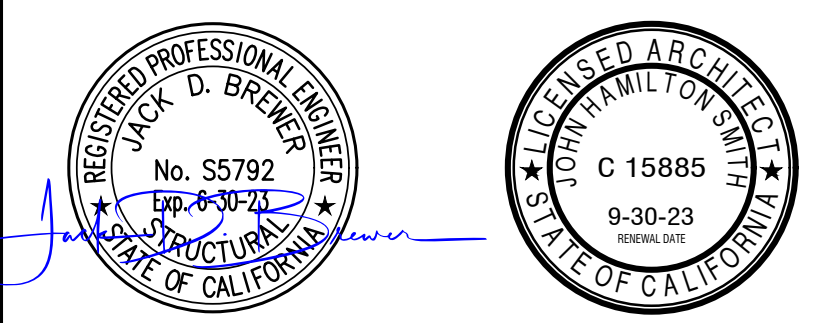


1800 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93721  
 (559) 432-4151  
 WWW.SIMPBK.COM

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**ASD**  
 advanced structural design, inc.  
 STRUCTURAL ENGINEERS  
 2490 West Shaw, suite 210  
 Fresno, California 93711  
 (559) 432-4151 office asdi@asdiengr.com



THE FIRM OF SMITH, WANAGATA, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER AVAILABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

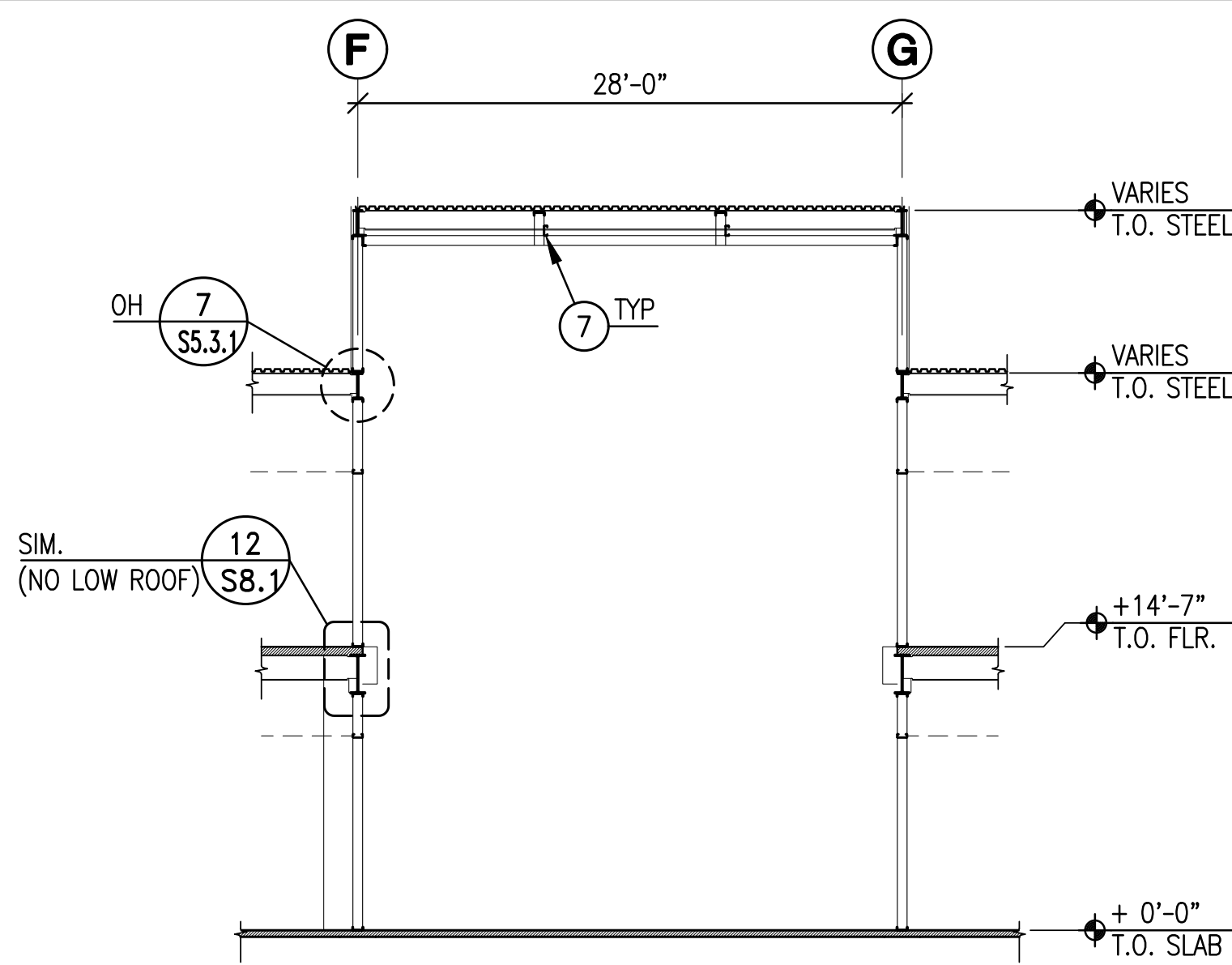
No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

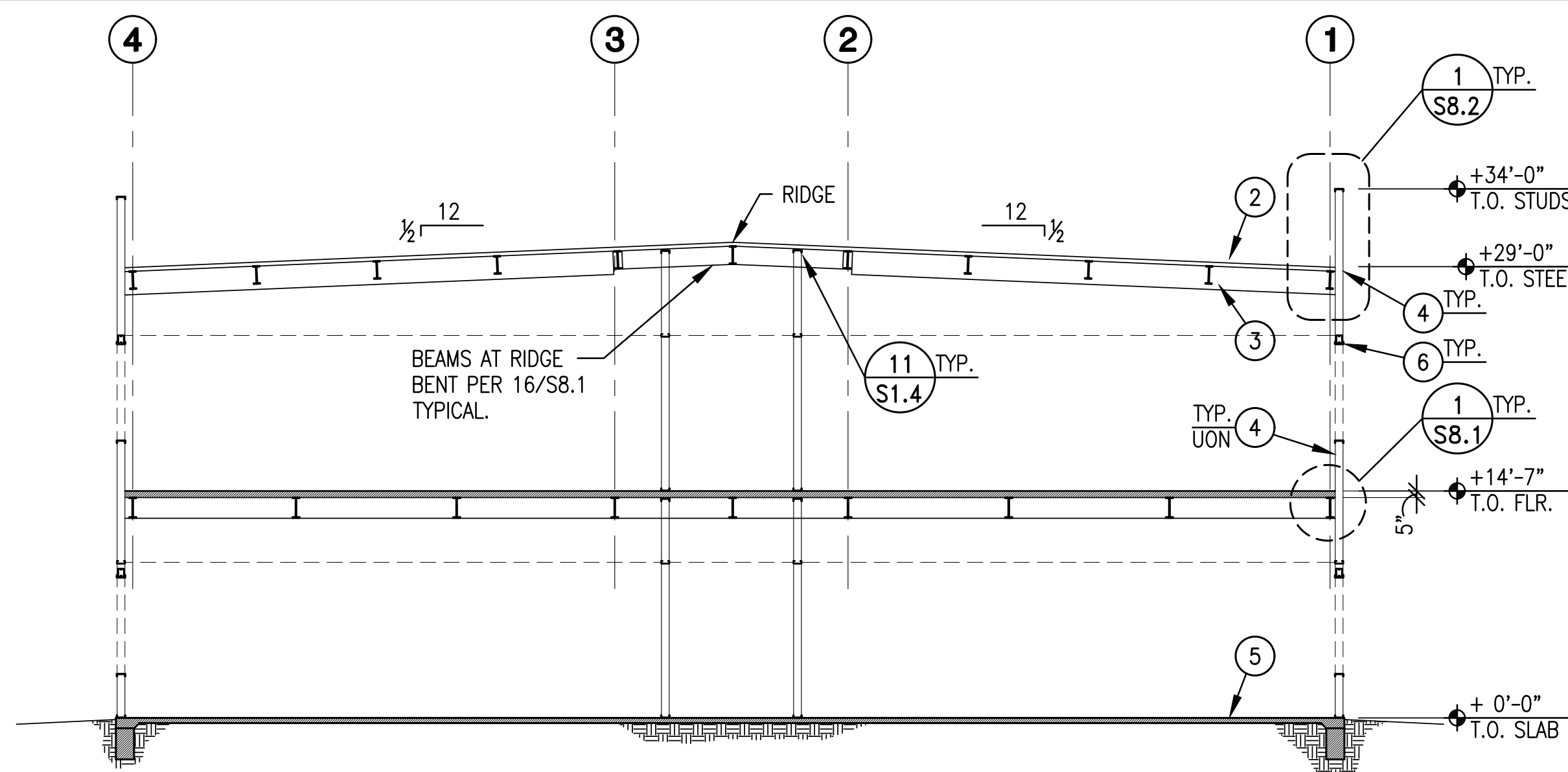
**CEILING FRAMING PLAN**  
 MULTI-PURPOSE BLDG

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>S5.6R</b>
DATE 1.27.23	
SCALE	



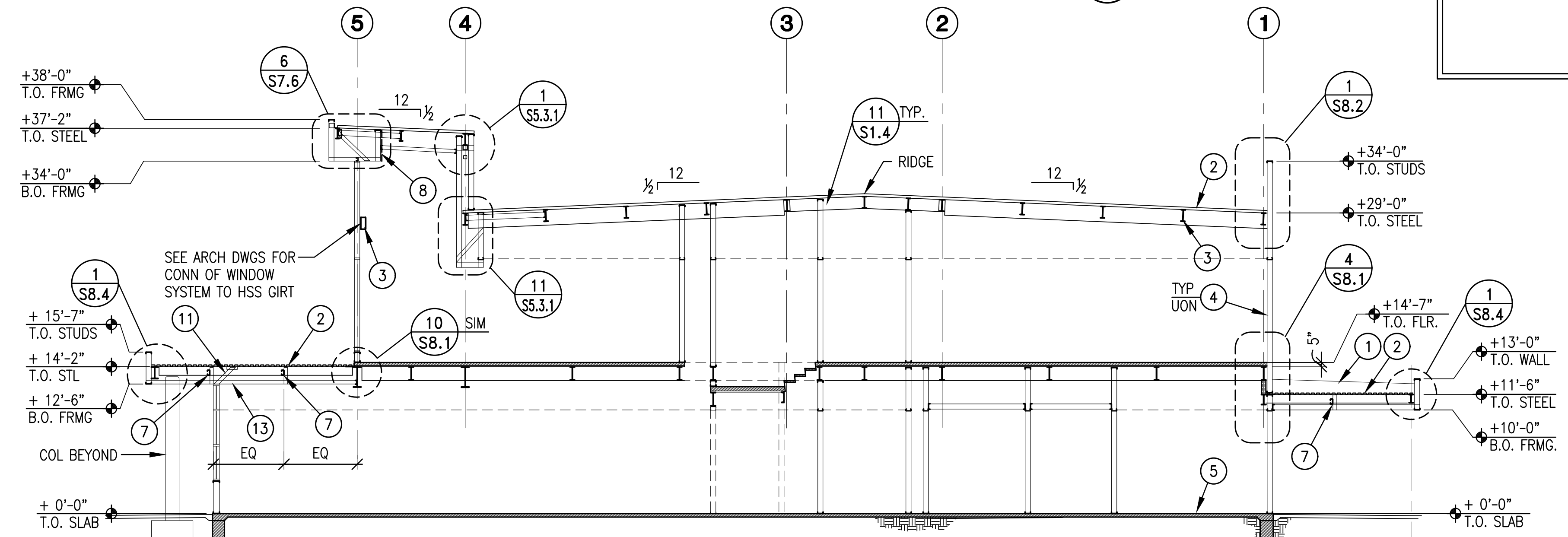


**PARTIAL SECTION**  
 1/8" ~ 1'-0"  
 D S6.1

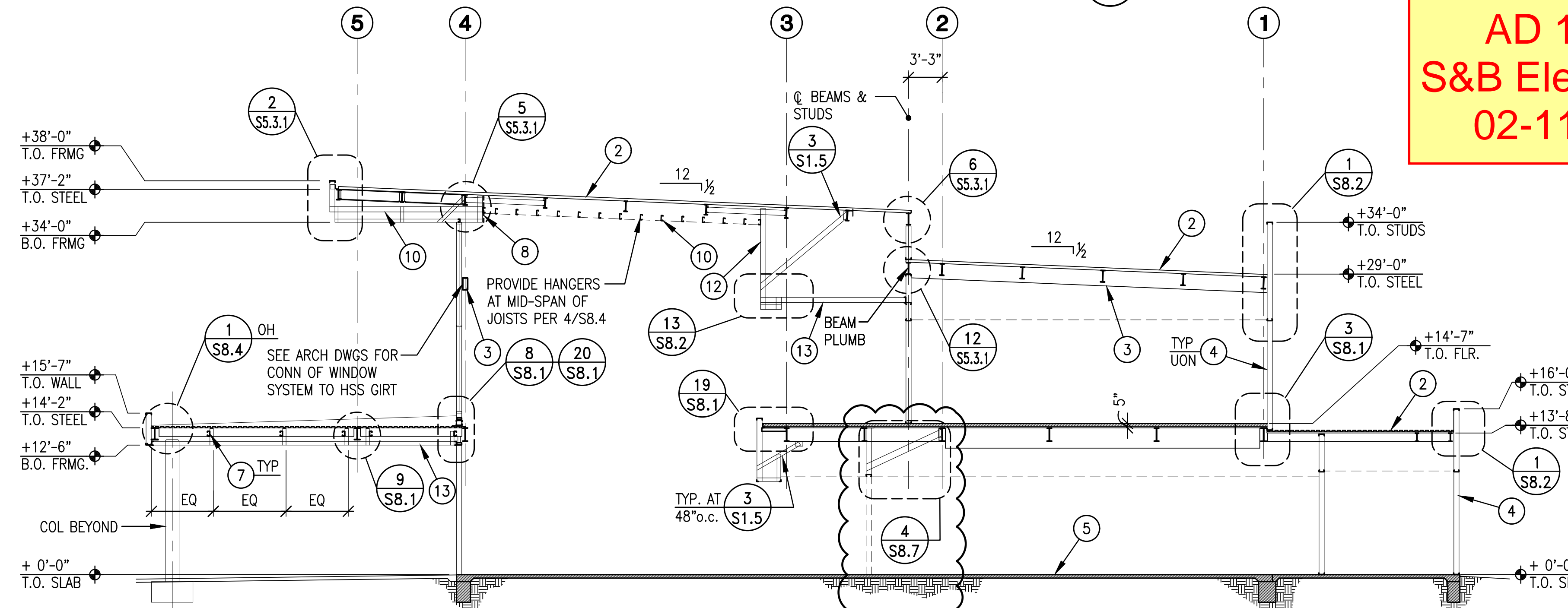


**BUILDING SECTION**  
 1/8" ~ 1'-0"  
 A S6.1

- KEY NOTES**
- 1 TAPER INSULATION FOR ROOF SLOPE 1/2" MIN. STEEL IS LEVEL.
  - 2 METAL ROOF DECK PER PLANS.
  - 3 BEAM PER PLANS.
  - 4 EXTERIOR METAL STUDS TYPE 4 @ 16"o.c.
  - 5 CONCRETE SLAB ON GRADE.
  - 6 BOX HEADER AT ALL WALL OPENINGS PER 3/S1.4 & 4/S1.4 TYP. SEE 5/S7.6 FOR SPECIAL HEADER AND JAMBS AT OPENINGS OVER 6'-0" WIDE.
  - 7 STRONG BACK BTW. BEAMS PER 4/S8.4 WITH HANGER EACH JOIST.
  - 8 SOFFIT X-BRACING PER 13/S1.3
  - 9 METAL JOISTS @ 24"o.c. PER PLANS
  - 10 6" CLG. JOISTS @ 24"o.c. TYPE 4 PER DETAIL 1/S1.4
  - 11 TYPE 4 BRACE @ 48"o.c. ABOVE WINDOW SYSTEM PER 3/S1.5 SIM
  - 12 TYPE 3 STUDS @ 24"o.c. PER 3/S8.4
  - 13 CEILING / SOFFIT JOISTS @ 24"o.c. PER DET 15/S1.4



**BUILDING SECTION**  
 1/8" ~ 1'-0"  
 B S6.1



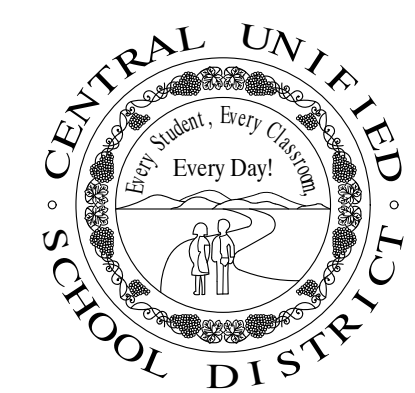
**BUILDING SECTION**  
 1/8" ~ 1'-0"  
 C S6.1

**AD 1-58a**  
**S&B Elementary**  
**02-116800**

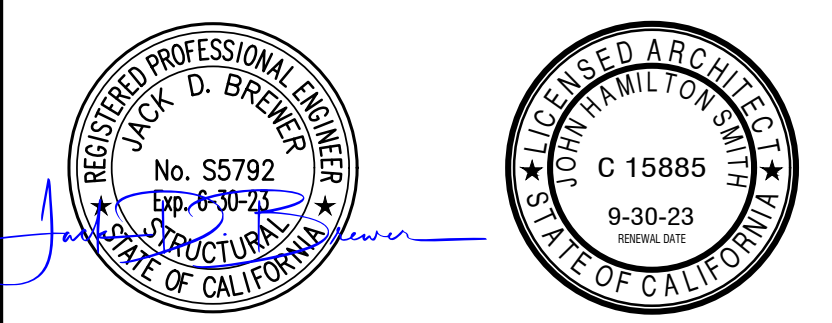


1780 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 TEL: 559-432-4151 FAX: 559-432-4152  
 WWW.SIMPBK.COM

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**ASD**  
 advanced structural design, inc.  
 STRUCTURAL ENGINEERS  
 2490 West Shaw, suite 210  
 Fresno, California 93711  
 (559) 432-4151 office asdi@asdiengr.com



THE FIRM OF SMITH, WANAMAKER, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PRIORITY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
Δ 1	2.14.23	DISTRICT MODIFICATIONS

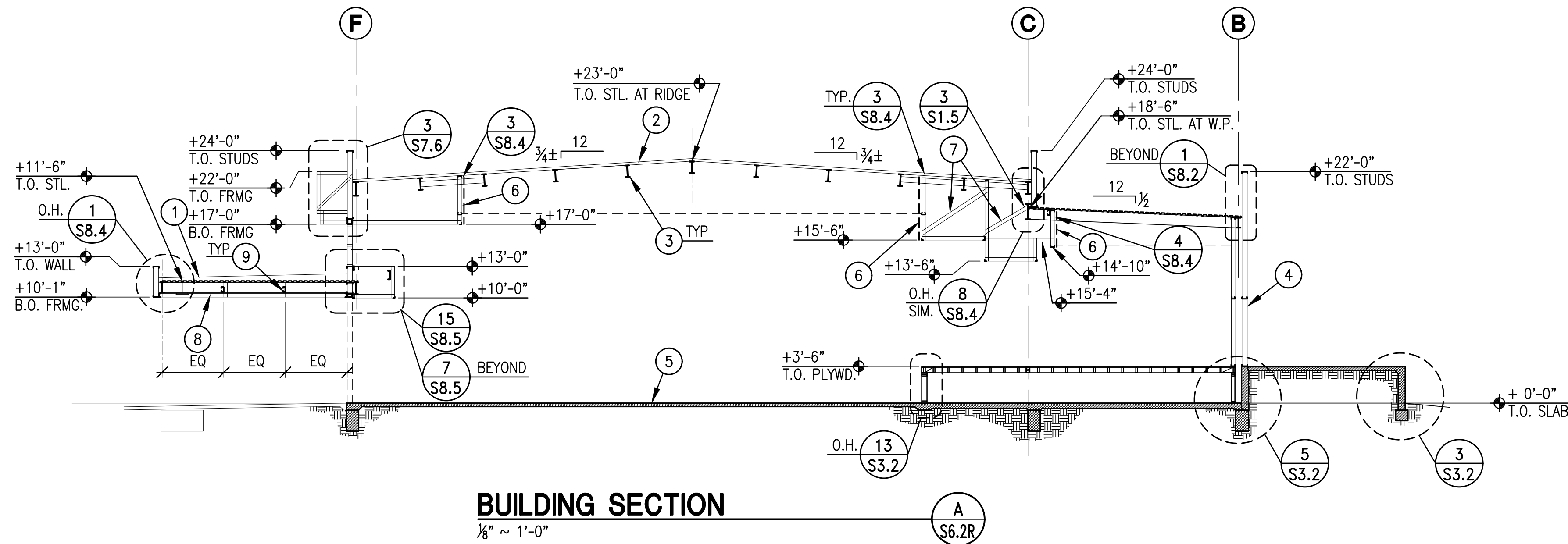
SHEET DESCRIPTION

**BUILDING SECTIONS**

MAIN BLDG

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>S6.1R</b>
DATE 1.27.23	
SCALE	

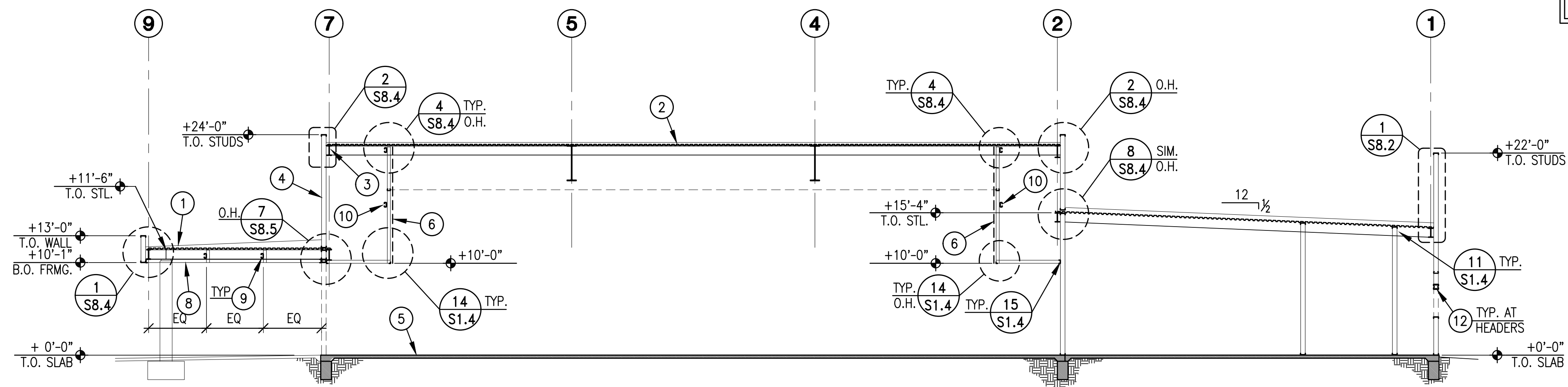




**BUILDING SECTION**

1/8" ~ 1'-0"

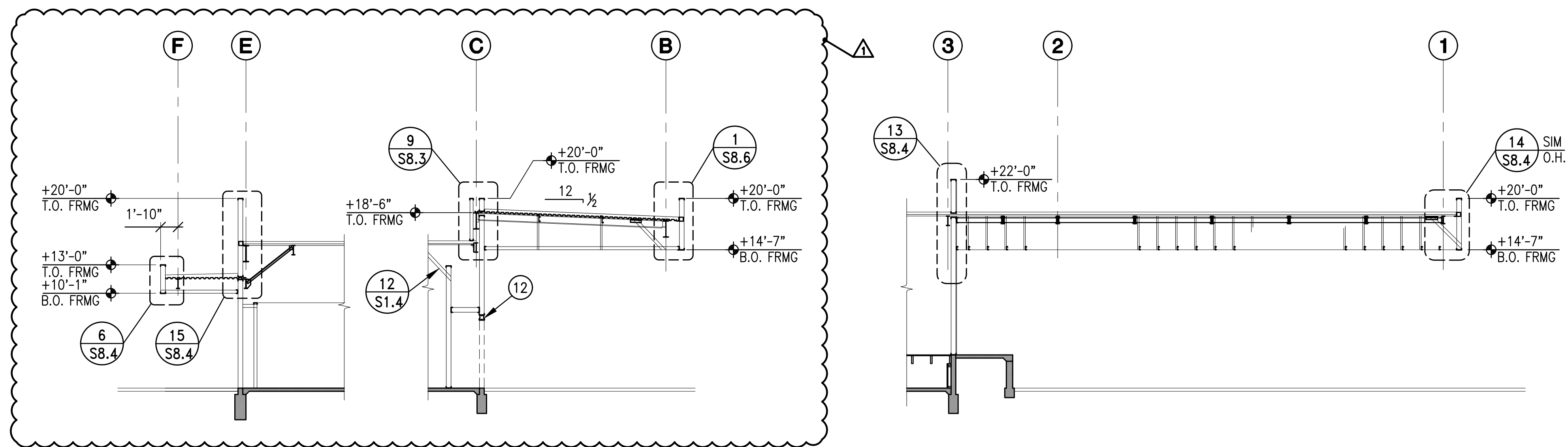
A  
S6.2R



**BUILDING SECTION**

1/8" ~ 1'-0"

B  
S6.2R



**BUILDING SECTION**

1/8" ~ 1'-0"

D  
S6.2R

**BUILDING SECTION**

1/8" ~ 1'-0"

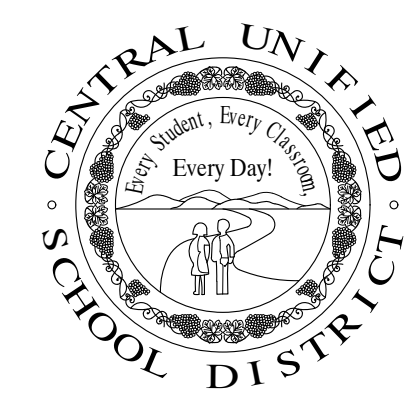
C  
S6.2R

- KEY NOTES**
- 1 TAPER INSULATION FOR ROOF SLOPE 1/2:12 MIN. STEEL IS LEVEL.
  - 2 METAL ROOF DECK PER PLANS.
  - 3 BEAM PER PLANS.
  - 4 METAL STUDS @ 16"o.c. SEE SHEET S7.6 FOR SIZES.
  - 5 CONCRETE SLAB ON GRADE.
  - 6 SOFFIT X-BRACING PER 13/S1.3.
  - 7 BRACE @ 48"o.c. PER 12/S1.4 SIM.
  - 8 JOIST @ 24"o.c.
  - 9 STRONG BACK BTW. BEAMS PER 4/S8.4 WITH HANGER EACH JOIST.
  - 10 CONT. AT MID-HT. OF SOFFIT HANGERS W/ (2) #8 SMS EACH HANGER, TYP.
  - 11 SEE SHEET S7.7 FOR WALL BUMPOUTS WHERE OCCUR. (NOT USED)
  - 12 BOX HEADER AT ALL WALL OPENINGS PER 3/S1.4 & 4/S1.4 TYP. SEE 5/S7.6 FOR SPECIAL HEADER AND JAMBS AT OPENINGS OVER 6'-0" WIDE.

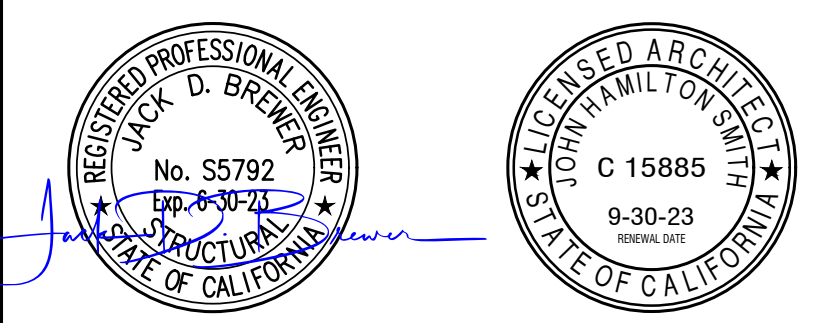


180 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
732.428.4400 FAX 732.428.4401  
WWW.SIMPBK.COM

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**ASD**  
advanced structural design, inc.  
STRUCTURAL ENGINEERS  
2490 West Shaw, suite 210  
Fresno, California 93711  
(559) 432-4151 office asdi@asdiengr.com



THE FIRM OF SMITH, MANANADA, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER AVAILABLE PRIORITY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS

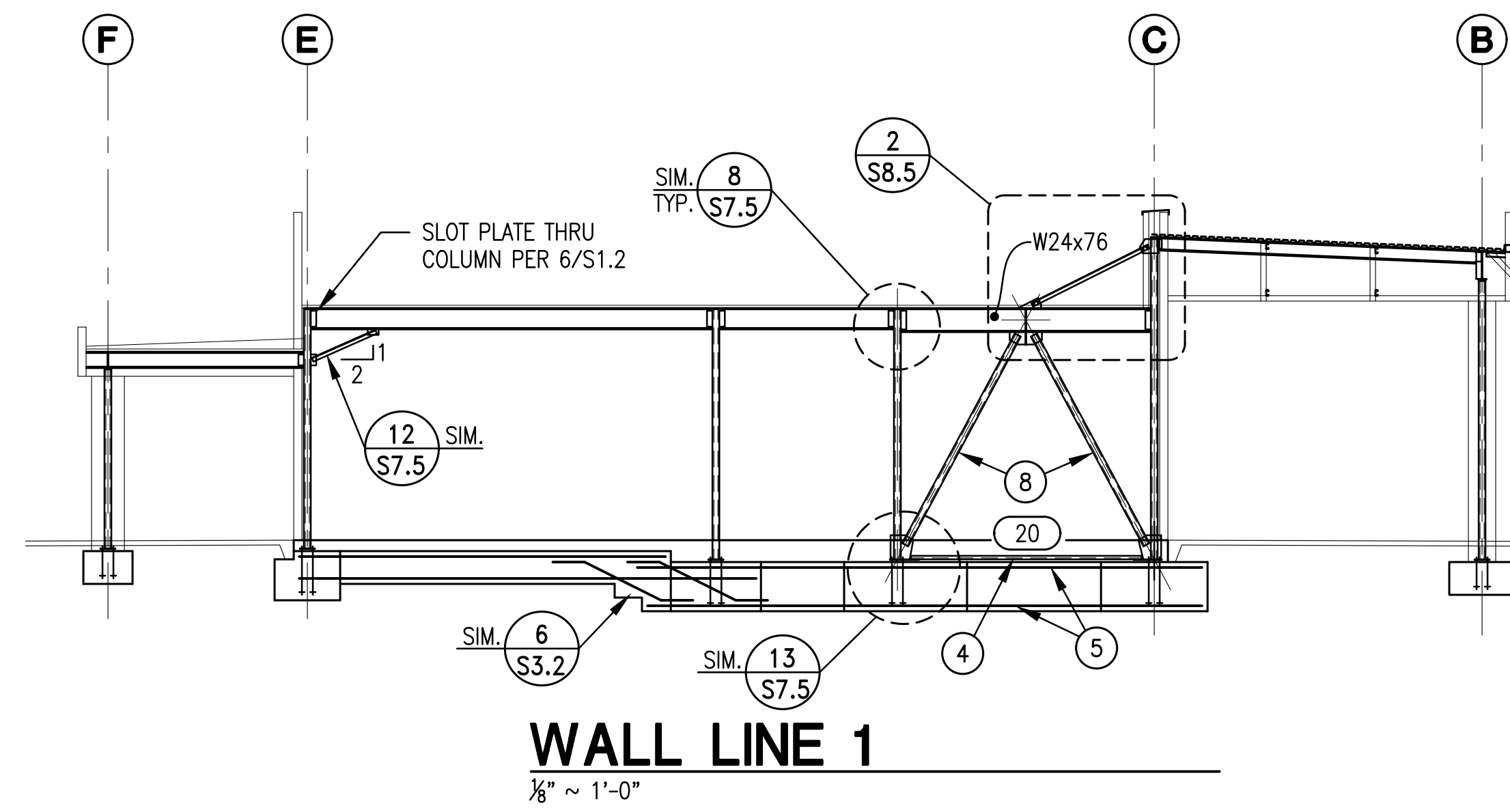
SHEET DESCRIPTION

**BUILDING SECTIONS**  
MULTI-PURPOSE BLDG

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>S6.2R</b>
DATE 1.27.23	
SCALE	

**AD 1-59a  
S&B Elementary  
02-116800**





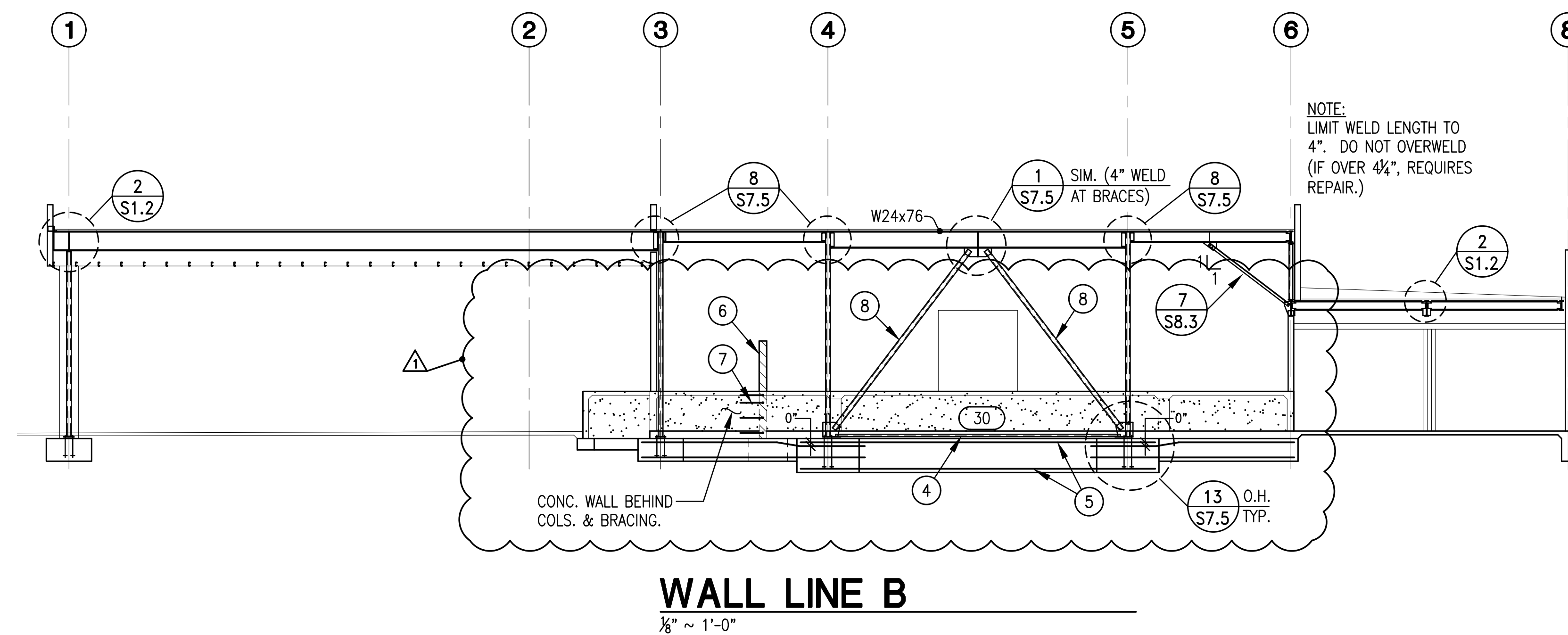
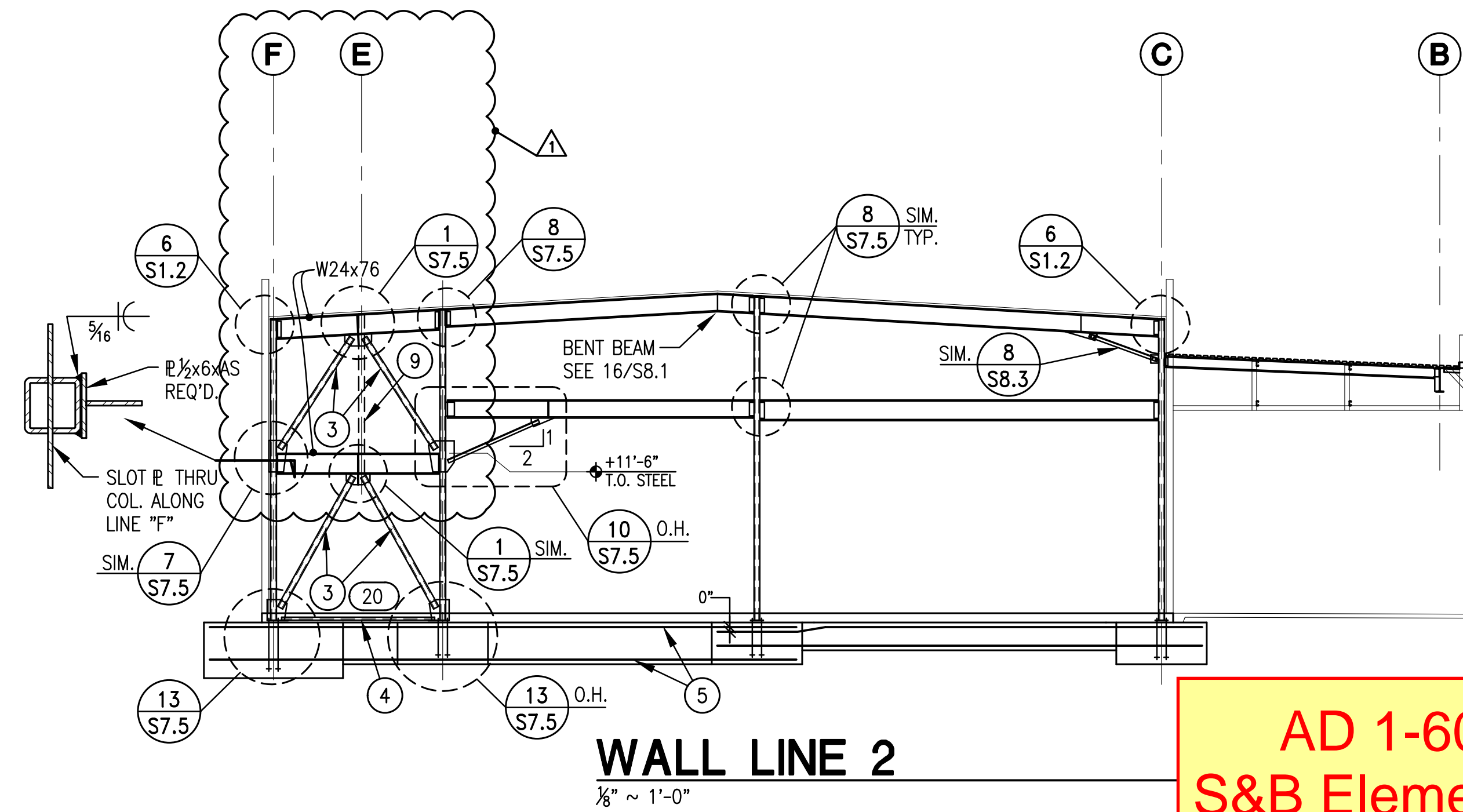
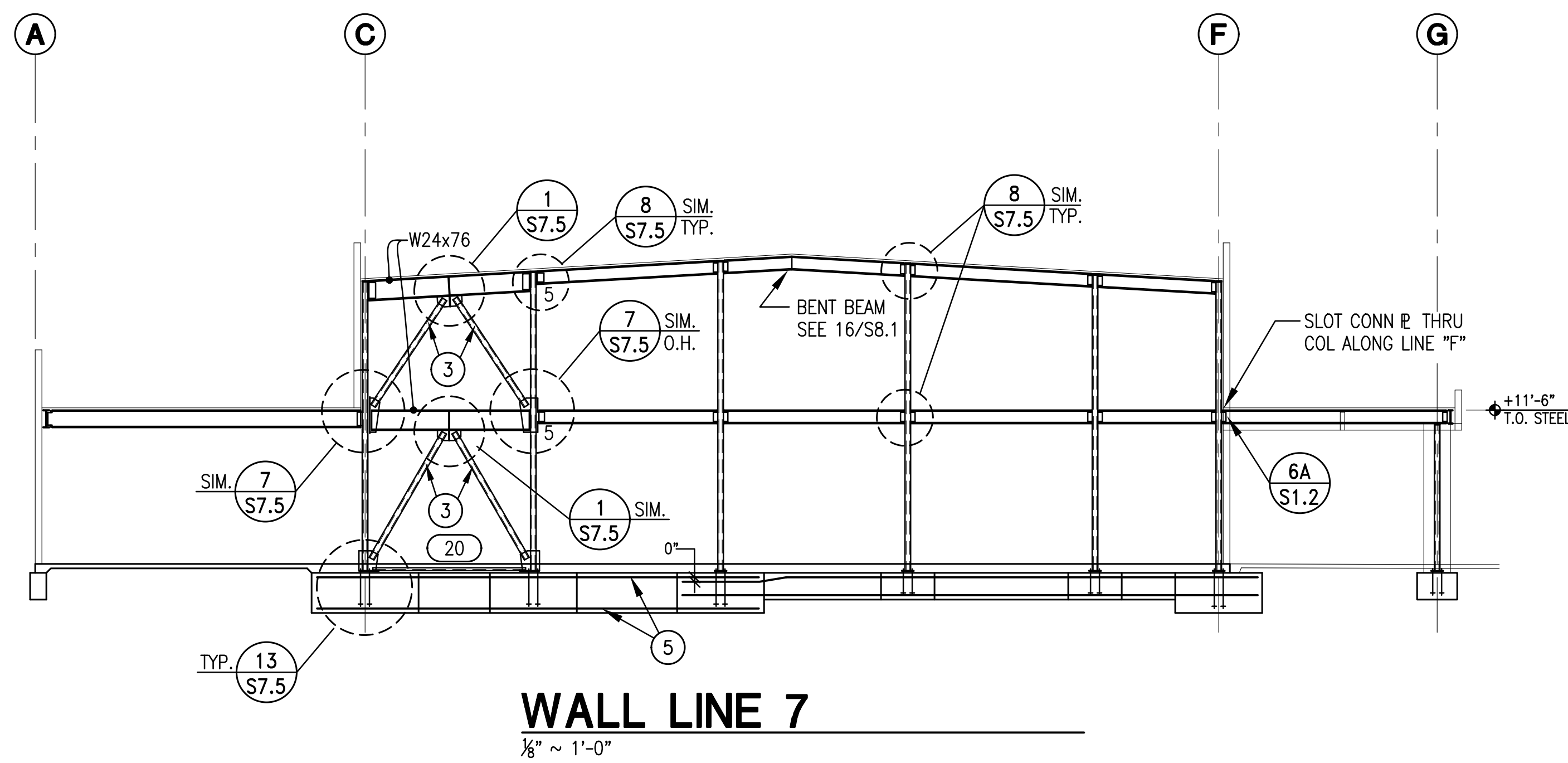
**GENERAL NOTES**

1. ALL BEAM CONNECTIONS ALONG BRACED FRAME LINES SHALL BE SLIP CRITICAL WITH CLASS A FAYING SURFACES.

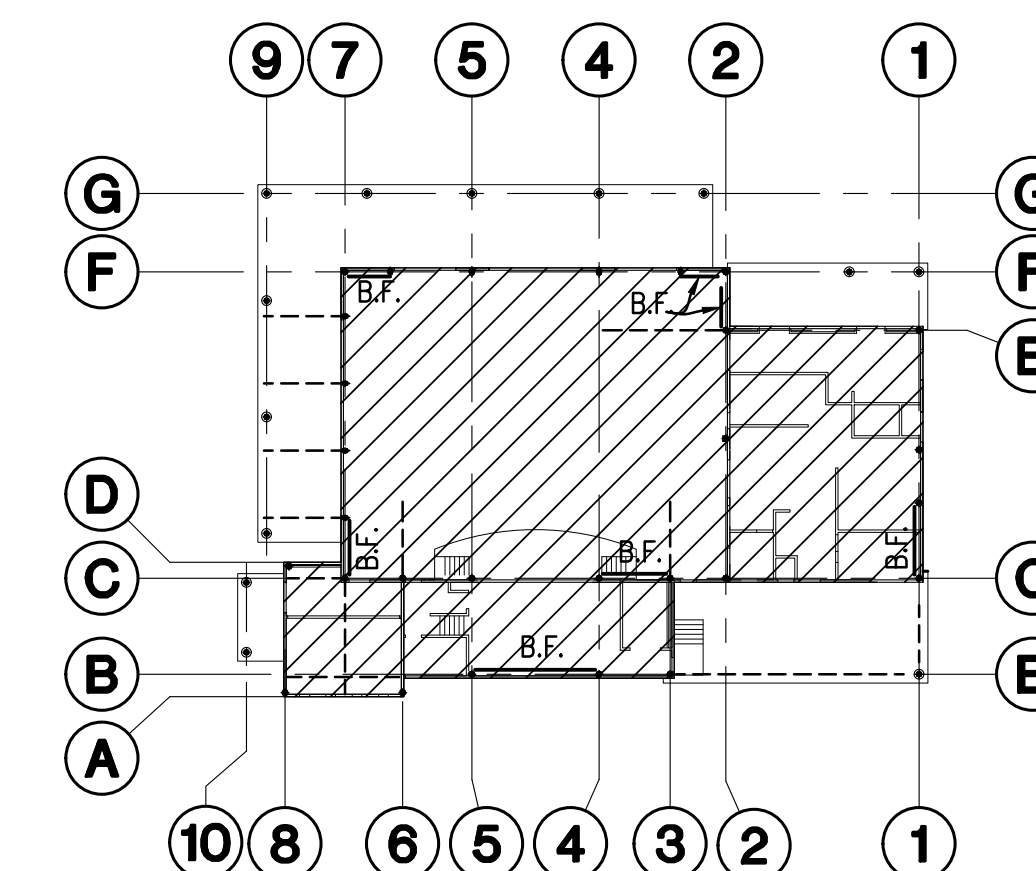
XX — INDICATES NUMBER OF  $\frac{3}{4}''$  NELSON STUDS AT CHANNEL. STAGGERED PER DETAIL 9/S3.1.

**KEY NOTES**

- 1 HSS 4x4x $\frac{1}{4}$
- 2 HSS 5x5x $\frac{1}{4}$
- 3 HSS 5x5x $\frac{3}{16}$
- 4 CHANNEL AT BRACED FRAMES PER 9/S3.1
- 5 GRADE BEAM TOP & BOTTOM BARS ONE-PIECE CONTINUOUS FOR EXTENT SHOWN
- 6 2" CLEAR BETWEEN CMU WALL & BLDG. FINISHES ABOVE LANDING
- 7 #4 DWLS @ 16"o.c. (4) MIN FROM STEM WALL TO CMU WALL PER DETAIL 5/S8.7
- 8 HSS 6x6x $\frac{3}{8}$
- 9 HSS COL IN PLANE OF STUD WALL, SEE FRAMING PLAN

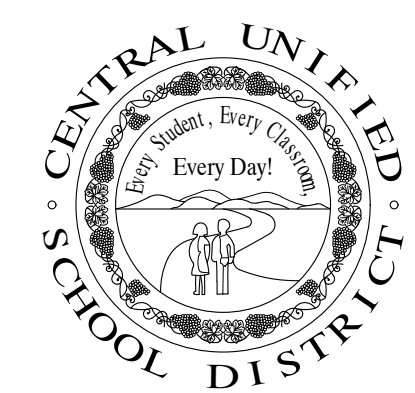


**AD 1-60a**  
**S&B Elementary**  
**02-116800**

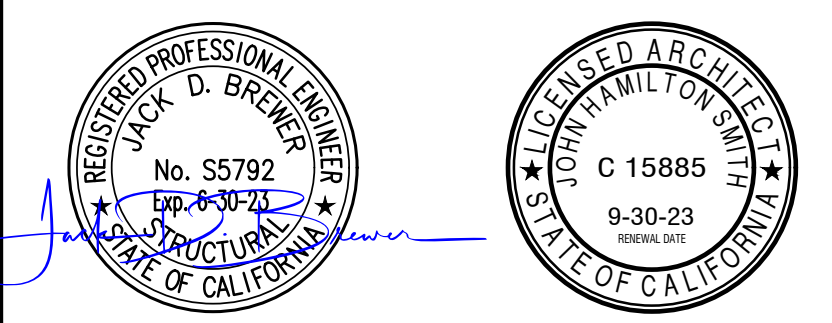


100 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 (559) 432-4151

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**ASD**  
 advanced structural design, inc.  
**STRUCTURAL ENGINEERS**  
 2490 West Shaw, suite 210  
 Fresno, California 93711  
 (559) 432-4151 office asdi@asdiengr.com



THE FIRM OF SMITH, WANAMAKER, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PRIORITY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED RELEASE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

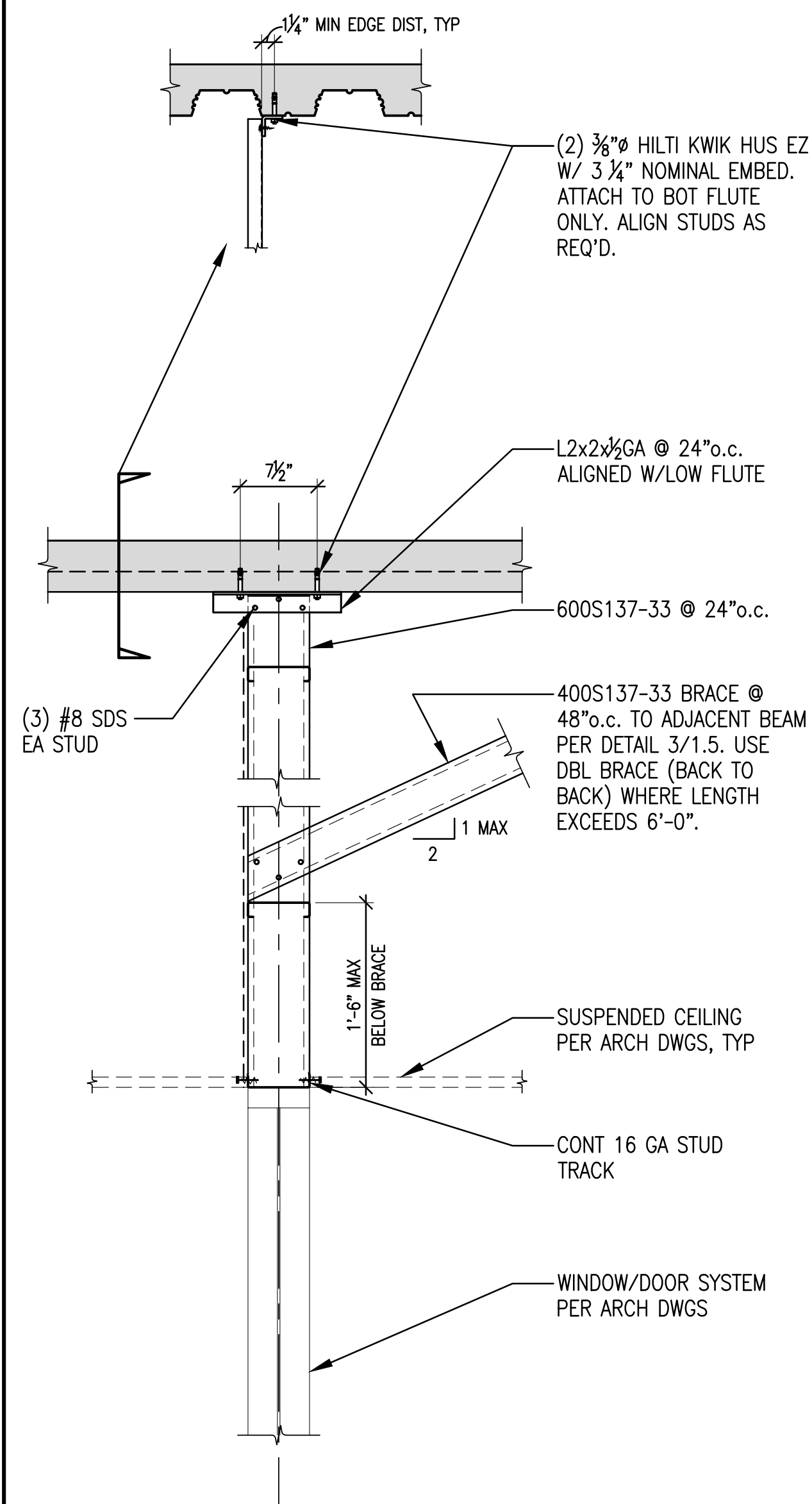
REVISIONS

No.	DATE	DESCRIPTION
△ 1	2.14.23	DISTRICT MODIFICATIONS

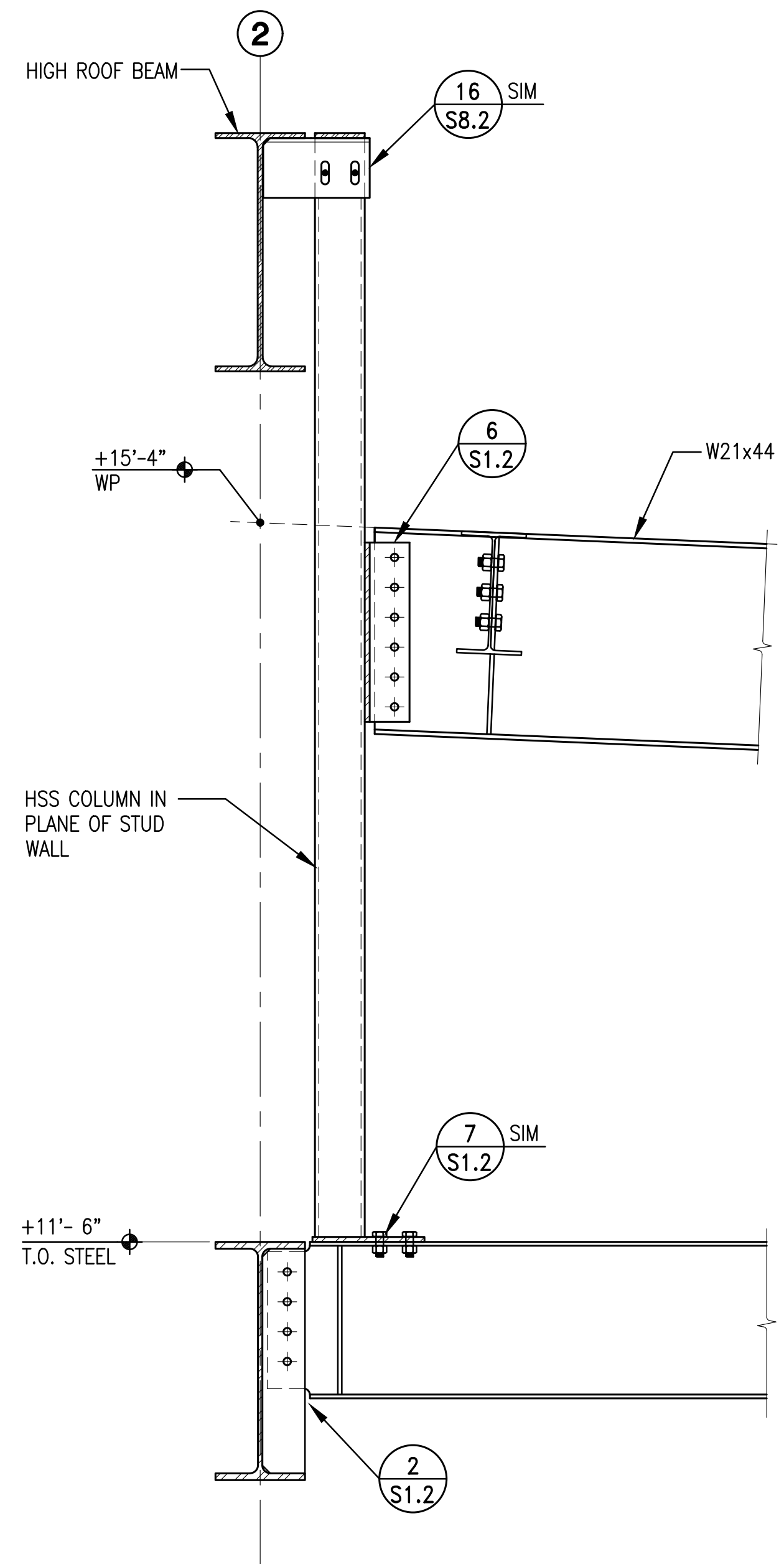
SHEET DESCRIPTION

**FRAME ELEVATIONS**  
 MULTI-PURPOSE BLDG

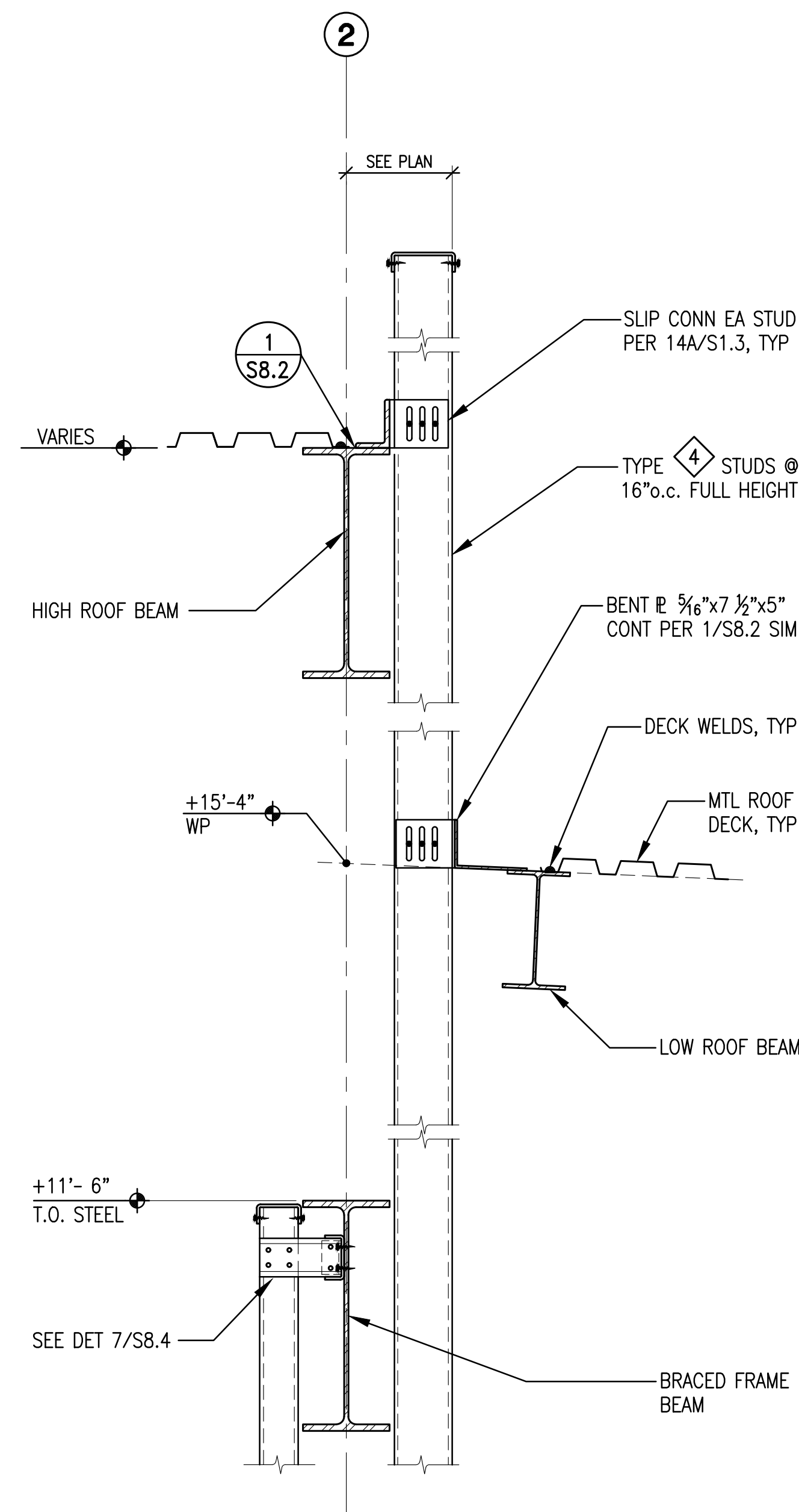
PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>S7.3R</b>
DATE 1.27.23	
SCALE	



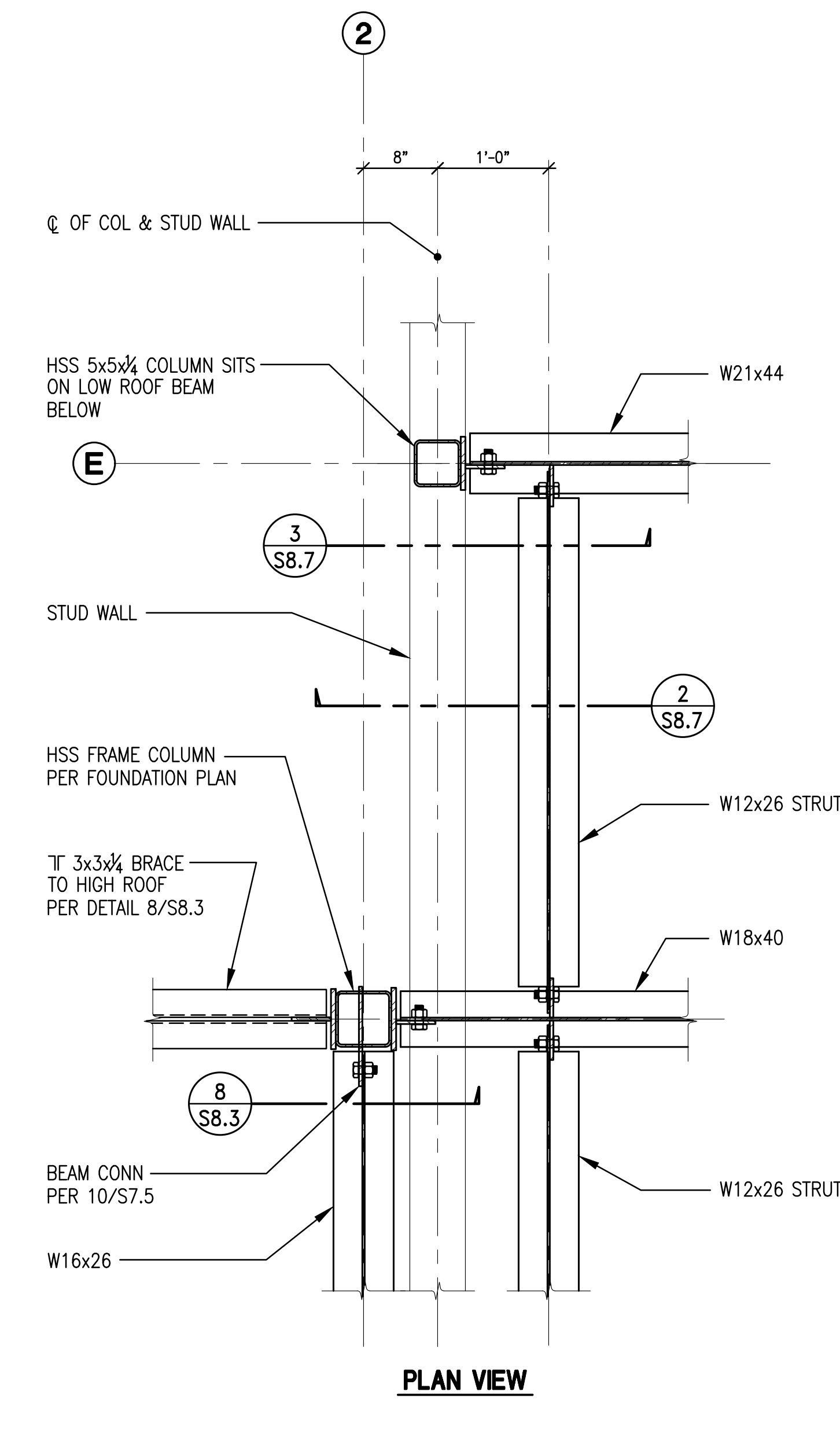
**DETAIL**  
1" ~ 1'-0" (4) S8.7



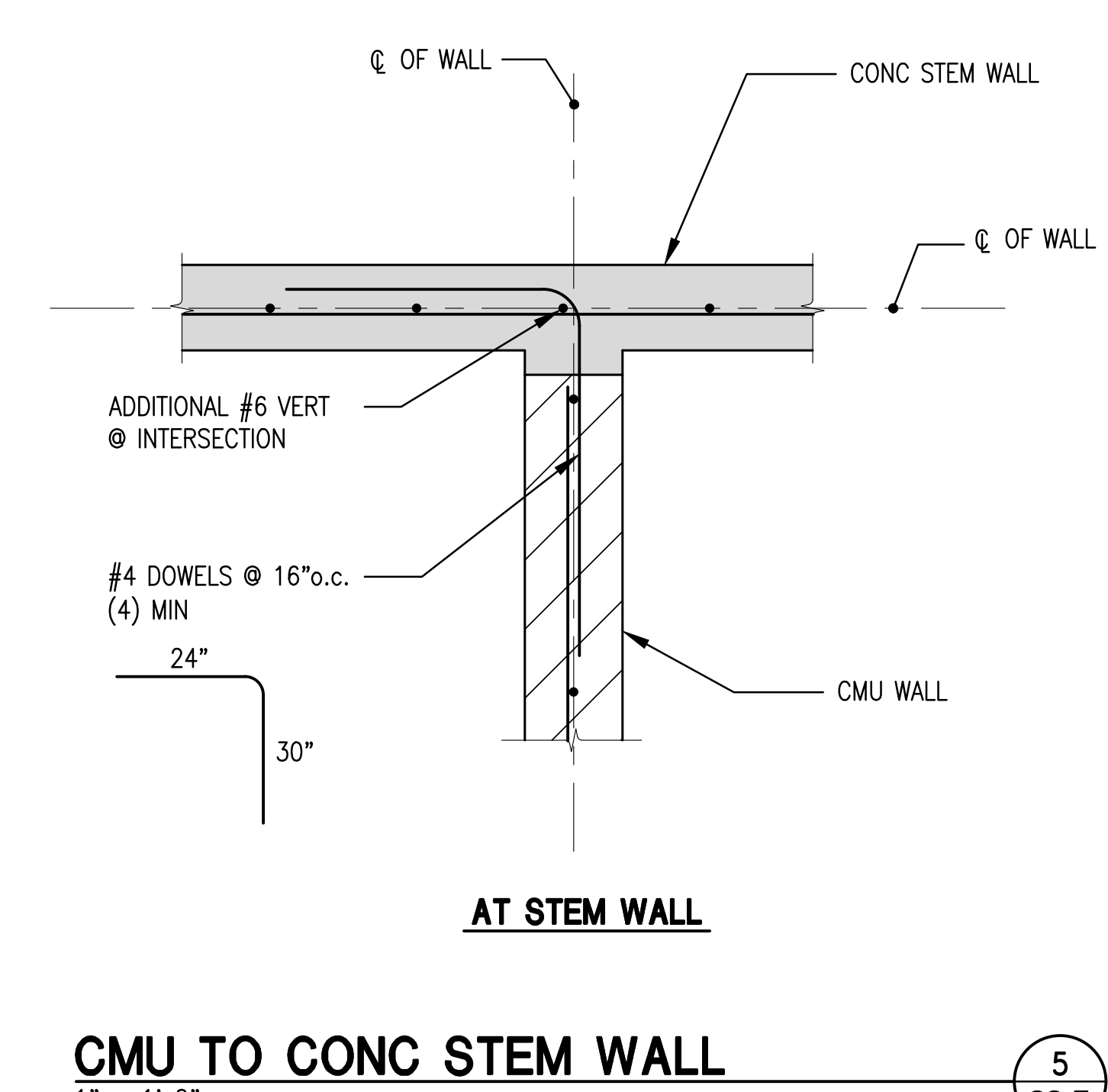
**DETAIL**  
1" ~ 1'-0" (3) S8.7



**DETAIL**  
1" ~ 1'-0" (2) S8.7



**LOW ROOF @ +15'-4\"/>**



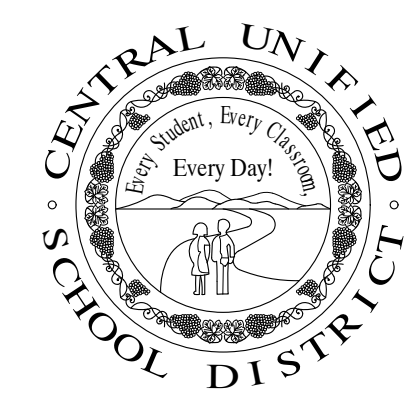
**CMU TO CONC STEM WALL**  
1" ~ 1'-0" (5) S8.7

AD 1-61a  
S&B Elementary  
02-116800

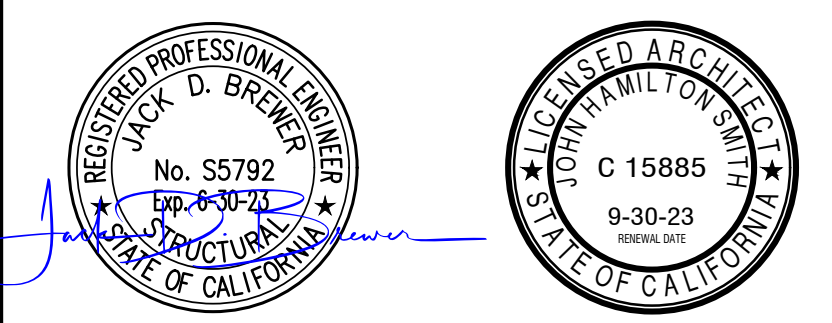


1780 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
759.448.8400 FAX 759.448.8467  
WWW.SIMPBK.COM

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**ASD**  
advanced structural design, inc.  
STRUCTURAL ENGINEERS  
2490 West Shaw, suite 210  
Fresno, California 93711  
(559) 432-4151 office asdi@asdiengr.com



THE FIRM OF SMITH, WANAMAKER, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE INTELLECTUAL PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

**FRAMING DETAILS**

PROJECT COORDINATOR JOHN SMITH	<b>S8.7</b>
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE	



**STRUCTURAL CALCULATIONS  
FOR:**

**Delta 1 Changes**

**Shields & Brawley Elementary School**

**CENTRAL UNIFIED SCHOOL DISTRICT**

**DESIGN PARAMETERS:**

Governing Code:	2016 California Building Code (CBC)
Roof Live Load:	20 psf (Reducible per 1607A.12.2.1)
Floor Live Load:*	<u>Uniform</u>
Classrooms/Offices	50 psf
Corridors/Stairs/Lobby	100 psf
Light Storage	125 psf
Partitions	15 psf
Stage	150 psf

(\*Reducible per 1607A.10.1 for loads less than 100 psf)

Seismic Load:  $S_{DS} = 0.566$ ,  $S_{D1} = 0.332$   
Seismic Design Category D  
Site Classification: D

Wind Load: Exposure C  
 $V = 115$  mph (Risk Category III)

Design Soil Press: 3,500 psf (Dead + Live)  
Based on Geotechnical Report No. 1-216-1084 prepared by  
Salem Engineering Group, Inc. and dated October 31, 2016

**AD 1-62a  
S&B Elementary  
02-116800**

**MATERIALS:**

WF Beams:	$F_y = 50$ ksi
HSS Sections:	$F_y = 46$ ksi (Rectangular) $F_y = 42$ ksi (Round)
Pipe Sections:	$F_y = 35$ ksi
Channels, Angles & Plates:	$F_y = 36$ ksi
Concrete - Typ:	$f'_c = 3000$ psi -Normal Wt.
Concrete - SOG:	$f'_c = 4,000$ psi -Normal Wt.
Concrete – Elev Slab:	$f'_c = 3,000$ psi -Light Wt
Reinforcing Steel:	Deformed bars, Grade 60





ADVANCED STRUCTURAL DESIGN, INC.

---

**SHEET INDEX:**

Cover Sheet	i
Sheet Index	ii
Floor Map – Beam Designs	1
Floor Map – Beam Numbers	2
Beam #163	3
Beam #69	4
Column Design	5
Org Calcs p.32	9
RAM Mass Check	10

# Floor Map

RAM Steel 17.04.01.07

DataBase: S11804 MP Working Model

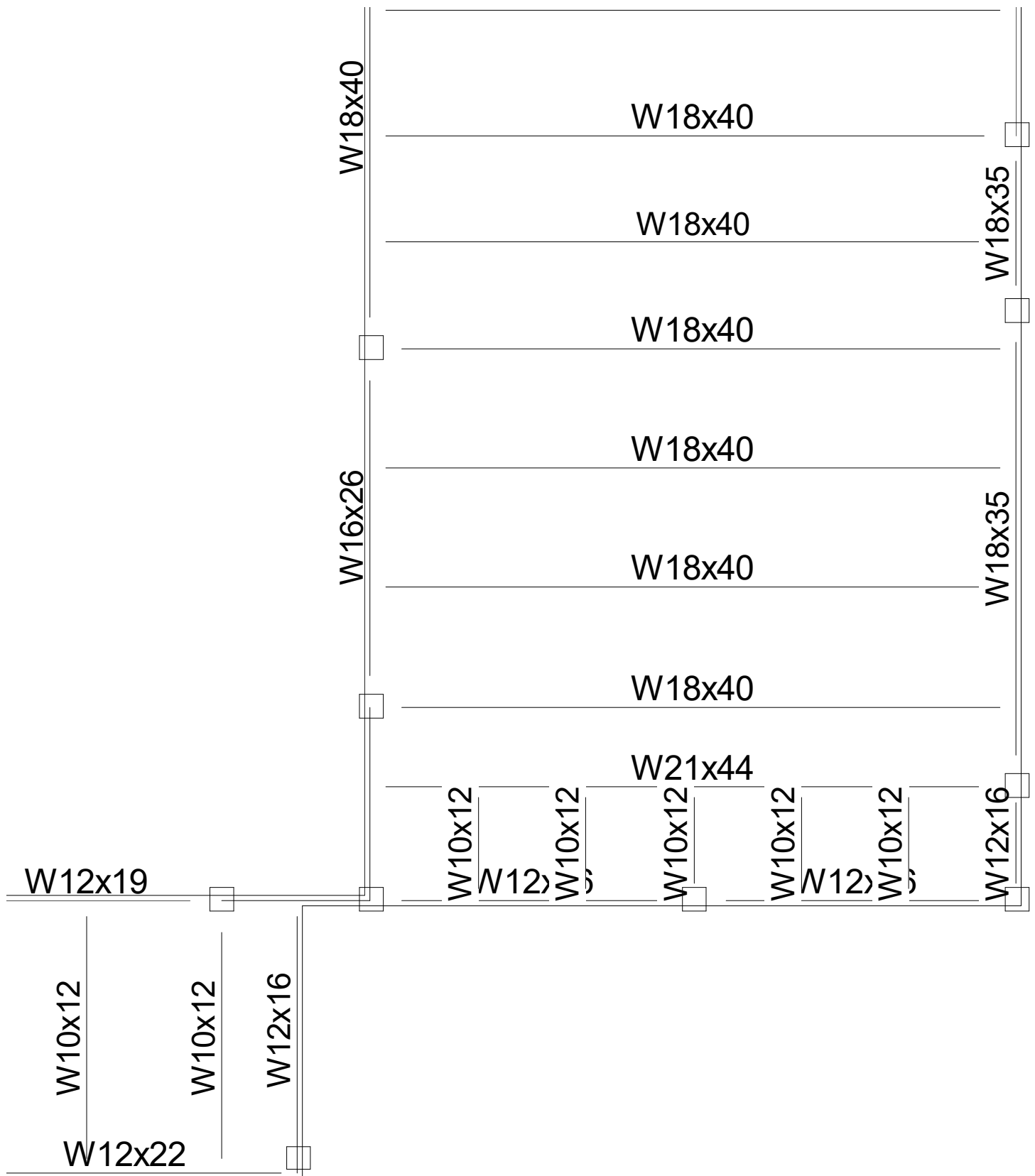
Building Code: IBC

10/29/22 09:45:38

Steel Code: AISC 360-10 LRFD

Floor Type: Low Roof

Beam Designs





# Floor Map

RAM Steel 17.04.01.07

DataBase: S11804 MP Working Model

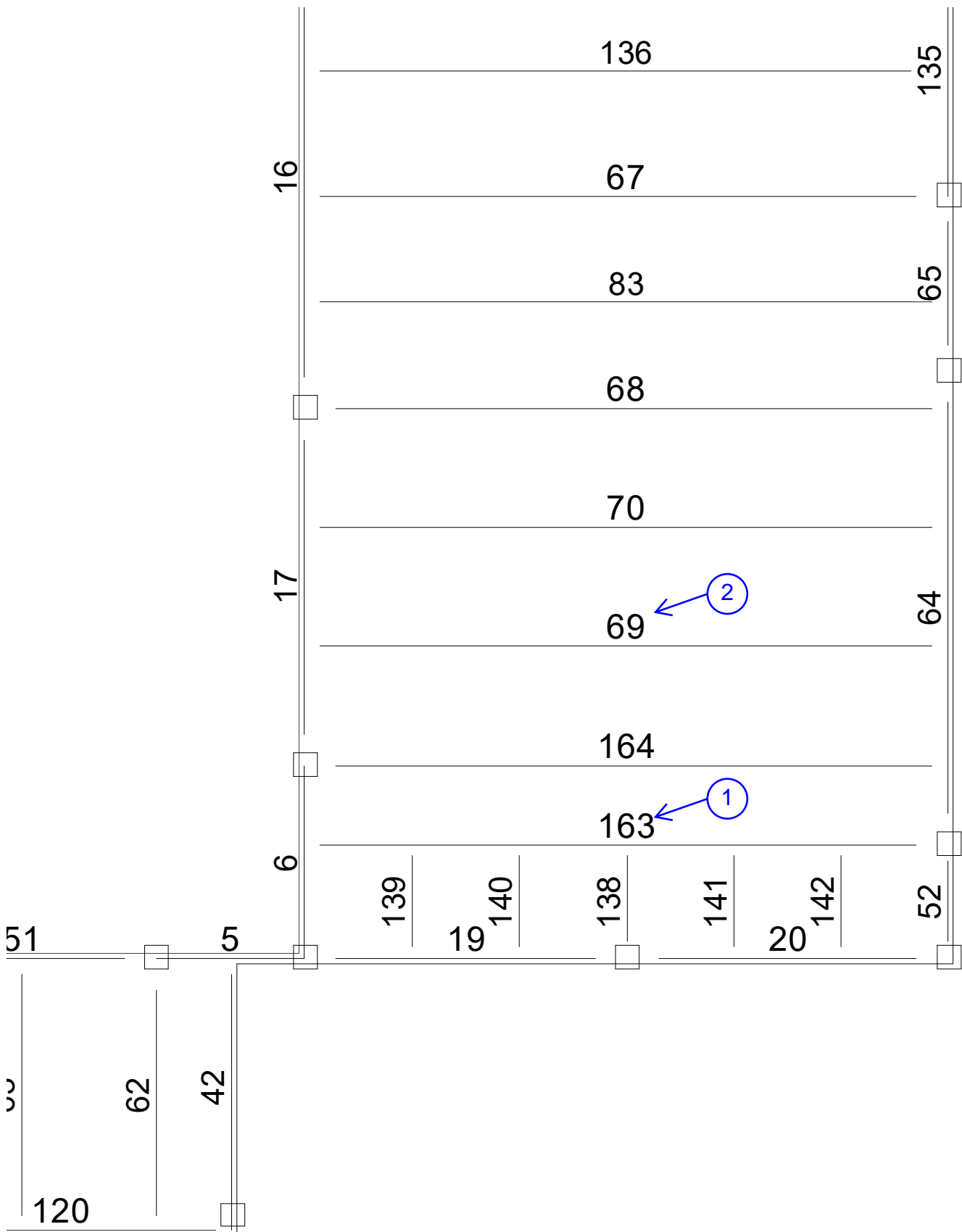
Building Code: IBC

10/29/22 09:45:38

Steel Code: AISC 360-10 LRFD

Floor Type: Low Roof

Beam Numbers



# Gravity Beam Design

RAM Steel 17.04.01.07

DataBase: S11804 MP Working Model

Building Code: IBC

10/29/22 09:45:38

Steel Code: AISC 360-10 LRFD

**Floor Type: Low Roof**

**Beam Number = 163** 1

**SPAN INFORMATION (ft): I-End (104.08,23.50) J-End (144.75,23.50)**

Beam Size (User Selected) = W21X44 Fy = 50.0 ksi  
 Total Beam Length (ft) = 40.67  
 Mp (kip-ft) = 397.50

**POINT LOADS (kips):**

Dist	DL	RedLL	Red%	NonRLL	StorLL	Red%	RoofLL	Red%	PartL
6.779	0.67	0.00	0.0	0.00	0.00	0.0	0.49	2.3	0.00
13.558	0.67	0.00	0.0	0.00	0.00	0.0	0.49	2.3	0.00
20.337	0.67	0.00	0.0	0.00	0.00	0.0	0.49	2.3	0.00
27.114	0.67	0.00	0.0	0.00	0.00	0.0	0.49	2.3	0.00
33.890	0.67	0.00	0.0	0.00	0.00	0.0	0.49	2.3	0.00

**LINE LOADS (k/ft):**

Load	Dist	DL	LL	Red%	Type	PartL
1	0.000	0.170	0.000	0.0%	Red	0.000
	40.667	0.170	0.000			0.000
2	0.000	0.007	0.000	---	NonR	0.000
	40.667	0.007	0.000			0.000
3	0.000	0.040	0.050	2.3%	Roof	0.000
	40.667	0.040	0.050			0.000
4	0.000	0.044	0.000	---	NonR	0.000
	40.667	0.044	0.000			0.000

**SHEAR (Ultimate): Max Vu (1.2DL+1.6LL) = 11.90 kips 1.00Vn = 217.35 kips**

**MOMENTS (Ultimate):**

Span	Cond	LoadCombo	Mu kip-ft	@ ft	Lb ft	Cb	Phi	Phi*Mn kip-ft
Center	Max +	1.2DL+1.6LL	128.9	20.3	0.0	1.00	0.90	357.75
Controlling		1.2DL+1.6LL	128.9	20.3	0.0	1.00	0.90	357.75

**REACTIONS (kips):**

	Left	Right
DL reaction	7.01	7.01
Max +LL reaction	2.18	2.18
Max +total reaction (factored)	11.90	11.90

**DEFLECTIONS:**

			Ratio
Dead load (in)	at 20.33 ft =	-0.904	L/D = 540
Live load (in)	at 20.33 ft =	-0.295	L/D = 1653 > 360
Net Total load (in)	at 20.33 ft =	-1.199	L/D = 407 > 240

# Gravity Beam Design

RAM Steel 17.04.01.07

DataBase: S11804 MP Working Model

Building Code: IBC

10/29/22 09:45:38

Steel Code: AISC 360-10 LRFD

**Floor Type: Low Roof**

**Beam Number = 69** 2

**SPAN INFORMATION (ft): I-End (104.08,36.03) J-End (144.75,36.03)**

Beam Size (User Selected) = W18X40 Fy = 50.0 ksi  
 Total Beam Length (ft) = 40.67  
 Mp (kip-ft) = 326.67

**POINT LOADS (kips):**

Dist	DL	RedLL	Red%	NonRLL	StorLL	Red%	RoofLL	Red%	PartL
10.609	2.50								

**LINE LOADS (k/ft):**

Load	Dist	DL	LL	Red%	Type	PartL
1	0.000	0.023	0.000	---	NonR	0.000
	40.667	0.023	0.000			0.000
2	0.000	0.120	0.151	10.6%	Roof	0.000
	40.667	0.120	0.151			0.000
3	0.000	0.040	0.000	---	NonR	0.000
	40.667	0.040	0.000			0.000

**SHEAR (Ultimate): Max Vu (1.2DL+1.6LL) = 11.07 kips 1.00Vn = 169.15 kips**

**MOMENTS (Ultimate):**

Span	Cond	LoadCombo	Mu kip-ft	@ ft	Lb ft	Cb	Phi	Phi*Mn kip-ft
Center	Max +	1.2DL+1.6LL	106.6	18.5	0.0	1.00	0.90	294.00
Controlling		1.2DL+1.6LL	106.6	18.5	0.0	1.00	0.90	294.00

**REACTIONS (kips):**

	Left	Right
DL reaction	5.57	4.38
Max +LL reaction	2.74	2.74
Max +total reaction (factored)	11.07	9.63

**DEFLECTIONS:**

			Ratio
Dead load (in)	at 19.72 ft =	-0.879	L/D = 555
Live load (in)	at 19.93 ft =	-0.466	L/D = 1046 > 360
Net Total load (in)	at 19.93 ft =	-1.345	L/D = 363 > 240



ADVANCED STRUCTURAL DESIGN, INC

SHT:

PROJECT: SHIELDS & BRAWLEY ES

PROJ #: S11804

BY: EM

SUBJECT: LATERAL LOADS

DATE: 9/7/2022

CHECK COLUMN @ GRID 2 & GRID E.4

HSS 5x5x1/4 COL

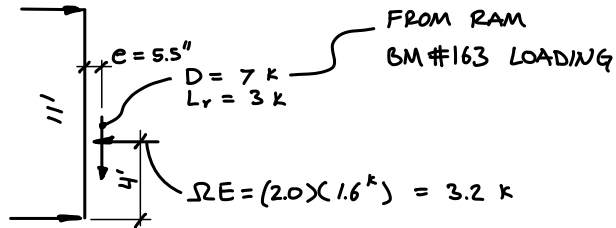


SEISMIC LOAD

REF ORIGINAL CALCS p. 32

$$\leftarrow SL = \left( \frac{52^k}{8467 \text{ sf}} \right) \times 41' = 252 \text{ plf}$$

$$E = 252 \text{ plf} \times \left( 5\frac{1}{2} + 7\frac{1}{2} \right) = \underline{1.6 \text{ kips}}$$

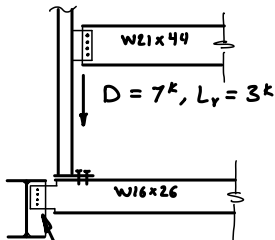


DEFLECTION LIMIT

$$\frac{L}{240} = \frac{11 \times 12}{240} = 0.55 \text{ in}$$

$$\Delta = 0.31 \text{ in} < 0.55 \text{ in} \quad \text{OK}$$

CHECK LOW BEAM CONN



$$\text{CONN CAP} = 52.2^k \gg 1.2D + 1.6L_r = 13.2^k \quad \text{OK}$$

(PER DET 3/S1.2)

## Steel Column

Project File: S11804 Shields-Brawley.ec6

LIC#: KW-06017515, Build:20.22.8.17

ADVANCED STRUCTURAL DESIGN INC.

(c) ENERCALC INC 1983-2022

DESCRIPTION: 1\_Column

1

### Code References

Calculations per AISC 360-10, IBC 2015, CBC 2016, ASCE 7-10  
 Load Combinations Used : ASCE 7-16

### General Information

Steel Section Name : **HSS5x5x1/4** Overall Column Height 11.0 ft  
 Analysis Method : Load Resistance Factor Top & Bottom Fixity Top & Bottom Pinned  
 Steel Stress Grade , A500, Grade B, Fy = 46 ksi, Carbon Steel Brace condition for deflection (buckling) along columns :  
 Fy : Steel Yield 46.0 ksi X-X (width) axis :  
 E : Elastic Bending Modulus 29,000.0 ksi Unbraced Length for buckling ABOUT Y-Y Axis = 11.0 ft, K = 1.0  
 Y-Y (depth) axis :  
 Unbraced Length for buckling ABOUT X-X Axis = 11.0 ft, K = 1.0

### Applied Loads

Service loads entered. Load Factors will be applied for calculations.

Column self weight included : 171.820 lbs \* Dead Load Factor

AXIAL LOADS . . .

Beam Reaction: Axial Load at 11.0 ft, Yecc = 5.50 in, D = 7.0, LR = 3.0 k

BENDING LOADS . . .

Seismic Load: Lat. Point Load at 4.0 ft creating Mx-x, E = 3.20 k

### DESIGN SUMMARY

#### Bending & Shear Check Results

<b>PASS</b> Max. Axial+Bending Stress Ratio =	<b>0.2942</b> : 1	<b>Maximum Load Reactions . .</b>	
Load Combination	+0.90D+E	Top along X-X	0.0 k
Location of max.above base	3.987 ft	Bottom along X-X	0.0 k
At maximum location values are . . .		Top along Y-Y	1.164 k
Pu	6.455 k	Bottom along Y-Y	2.036 k
0.9 * Pn	129.961 k	<b>Maximum Load Deflections . . .</b>	
Mu-x	7.072 k-ft	Along Y-Y	0.3025 in at 5.094 ft above base
0.9 * Mn-x :	26.255 k-ft	for load combination : E Only	
Mu-y	0.0 k-ft	Along X-X	0.0 in at 0.0 ft above base
0.9 * Mn-y :	26.255 k-ft	for load combination :	
<b>PASS</b> Maximum Shear Stress Ratio	<b>0.0</b> : 1		
Load Combination	0.0		
Location of max.above base	0.0 ft		
At maximum location values are . . .			
Vu : Applied	0.0 k		
Vn * Phi : Allowable	0.0 k		

### Load Combination Results

Load Combination	Maximum Axial + Bending Stress Ratios				Maximum Shear Ratios					
	Stress Ratio	Status	Location	Cbx	Cby	KxLx/Ry	KyLy/Rx	Stress Ratio	Status	Location
+1.40D	0.210	PASS	11.00 ft	1.35	1.00	68.39	68.39	0.000	PASS	0.00 ft
+1.20D+0.50Lr	0.212	PASS	11.00 ft	1.35	1.00	68.39	68.39	0.000	PASS	0.00 ft
+1.20D	0.180	PASS	11.00 ft	1.35	1.00	68.39	68.39	0.000	PASS	0.00 ft
+1.20D+1.60Lr	0.282	PASS	11.00 ft	1.35	1.00	68.39	68.39	0.000	PASS	0.00 ft
+0.90D	0.135	PASS	11.00 ft	1.35	1.00	68.39	68.39	0.000	PASS	0.00 ft
+1.20D+E	0.289	PASS	3.99 ft	1.35	1.00	68.39	68.39	0.000	PASS	0.00 ft
+0.90D+E	0.294	PASS	3.99 ft	1.35	1.00	68.39	68.39	0.000	PASS	0.00 ft

### Maximum Reactions

Note: Only non-zero reactions are listed.

Load Combination	Axial Reaction	X-X Axis Reaction		k	Y-Y Axis Reaction		Mx - End Moments		My - End Moments	
	@ Base	@ Base	@ Top		@ Base	@ Top	@ Base	@ Top	@ Base	@ Top
D Only	7.172				-0.292	0.292				
+D+Lr	10.172				-0.417	0.417				
+D+0.750Lr	9.422				-0.385	0.385				
+0.60D	4.303				-0.175	0.175				
+D+0.70E	7.172				1.134	1.106				
+D+0.5250E	7.172				0.777	0.903				

## Steel Column

Project File: S11804 Shields-Brawley.ec6

LIC# : KW-06017515, Build:20.22.8.17

ADVANCED STRUCTURAL DESIGN INC.

(c) ENERCALC INC 1983-2022

DESCRIPTION: 1\_Column

### Maximum Reactions

Note: Only non-zero reactions are listed.

Load Combination	Axial Reaction @ Base	X-X Axis Reaction		k	Y-Y Axis Reaction		Mx - End Moments		My - End Moments	
		@ Base	@ Top		@ Base	@ Top	@ Base	@ Top	@ Base	@ Top
+0.60D+0.70E	4.303				1.250	0.990				
Lr Only	3.000				-0.125	0.125				
E Only					2.036	1.164				

### Extreme Reactions

Item	Extreme Value	Axial Reaction @ Base	X-X Axis Reaction		k	Y-Y Axis Reaction		Mx - End Moments		My - End Moments	
			@ Base	@ Top		@ Base	@ Top	@ Base	@ Top	@ Base	@ Top
Axial @ Base	Maximum	10.172				-0.417	0.417		-4.583		
"	Minimum					2.036	1.164				
Reaction, X-X Axis Base	Maximum	7.172				-0.292	0.292		-3.208		
"	Minimum	7.172				-0.292	0.292		-3.208		
Reaction, Y-Y Axis Base	Maximum					2.036	1.164				
"	Minimum	10.172				-0.417	0.417		-4.583		
Reaction, X-X Axis Top	Maximum	7.172				-0.292	0.292		-3.208		
"	Minimum	7.172				-0.292	0.292		-3.208		
Reaction, Y-Y Axis Top	Maximum	7.172				-0.292	0.292		-3.208		
"	Minimum					2.036	1.164				
Moment, X-X Axis Base	Maximum	7.172				-0.292	0.292		-3.208		
"	Minimum	7.172				-0.292	0.292		-3.208		
Moment, Y-Y Axis Base	Maximum	7.172				-0.292	0.292				-3.208
"	Minimum	7.172				-0.292	0.292				-3.208
Moment, X-X Axis Top	Maximum					2.036	1.164				
"	Minimum	10.172				-0.417	0.417		-4.583		
Moment, Y-Y Axis Top	Maximum	7.172				-0.292	0.292		-3.208		
"	Minimum	7.172				-0.292	0.292		-3.208		

### Maximum Deflections for Load Combinations

Load Combination	Max. X-X Deflection	Distance	Max. Y-Y Deflection	Distance
D Only	0.0000 in	0.000 ft	-0.094 in	6.423 ft
+D+Lr	0.0000 in	0.000 ft	-0.134 in	6.423 ft
+D+0.750Lr	0.0000 in	0.000 ft	-0.124 in	6.423 ft
+0.60D	0.0000 in	0.000 ft	-0.056 in	6.423 ft
+D+0.70E	0.0000 in	0.000 ft	0.126 in	4.577 ft
+D+0.5250E	0.0000 in	0.000 ft	0.074 in	4.282 ft
+0.60D+0.70E	0.0000 in	0.000 ft	0.159 in	4.799 ft
Lr Only	0.0000 in	0.000 ft	-0.040 in	6.423 ft
E Only	0.0000 in	0.000 ft	0.302 in	5.094 ft

### Steel Section Properties : HSS5x5x1/4

Depth	=	5.000 in	I xx	=	16.00 in^4	J	=	25.800 in^4
Design Thick	=	0.233 in	S xx	=	6.41 in^3			
Width	=	5.000 in	R xx	=	1.930 in			
Wall Thick	=	0.250 in	Zx	=	7.610 in^3			
Area	=	4.300 in^2	I yy	=	16.000 in^4	C	=	10.500 in^3
Weight	=	15.620 plf	S yy	=	6.410 in^3			
			R yy	=	1.930 in			

Ycg = 0.000 in

**Steel Column**

Project File: S11804 Shields-Brawley.ec6

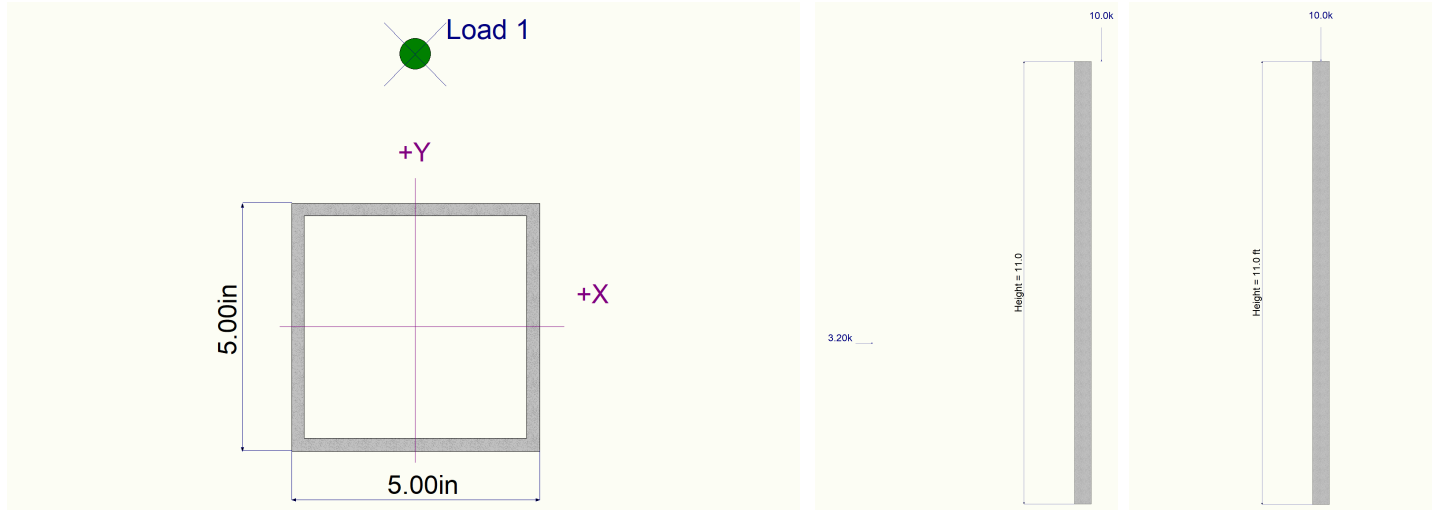
LIC# : KW-06017515, Build:20.22.8.17

ADVANCED STRUCTURAL DESIGN INC.

(c) ENERCALC INC 1983-2022

**DESCRIPTION:** 1\_Column

**Sketches**



10/29/2022

SEISMIC LOAD - ROOF DIAPH.

HIGH ROOF WT = 240k  
 LOW ROOF WT =  $\frac{323k}{563k}$  324k

Small increase in mass. OK by inspection

$S_{DS} = 0.566$   
 $I = 1.25$   
 $F_x = F_y = 1.30$

$V_{TOTAL} = 0.218(563) = 123k$   
 $V_{HR} = 71k \rightarrow C_v = 71/123 = 0.577$   
 $V_{LR} = 52k \rightarrow C_v = 52/123 = 0.423$

FROM RAM "LOADS & APPLIED FORCES"

HIGH ROOF AREA = 5306 SF  
 LOW ROOF AREA = 8467 SF

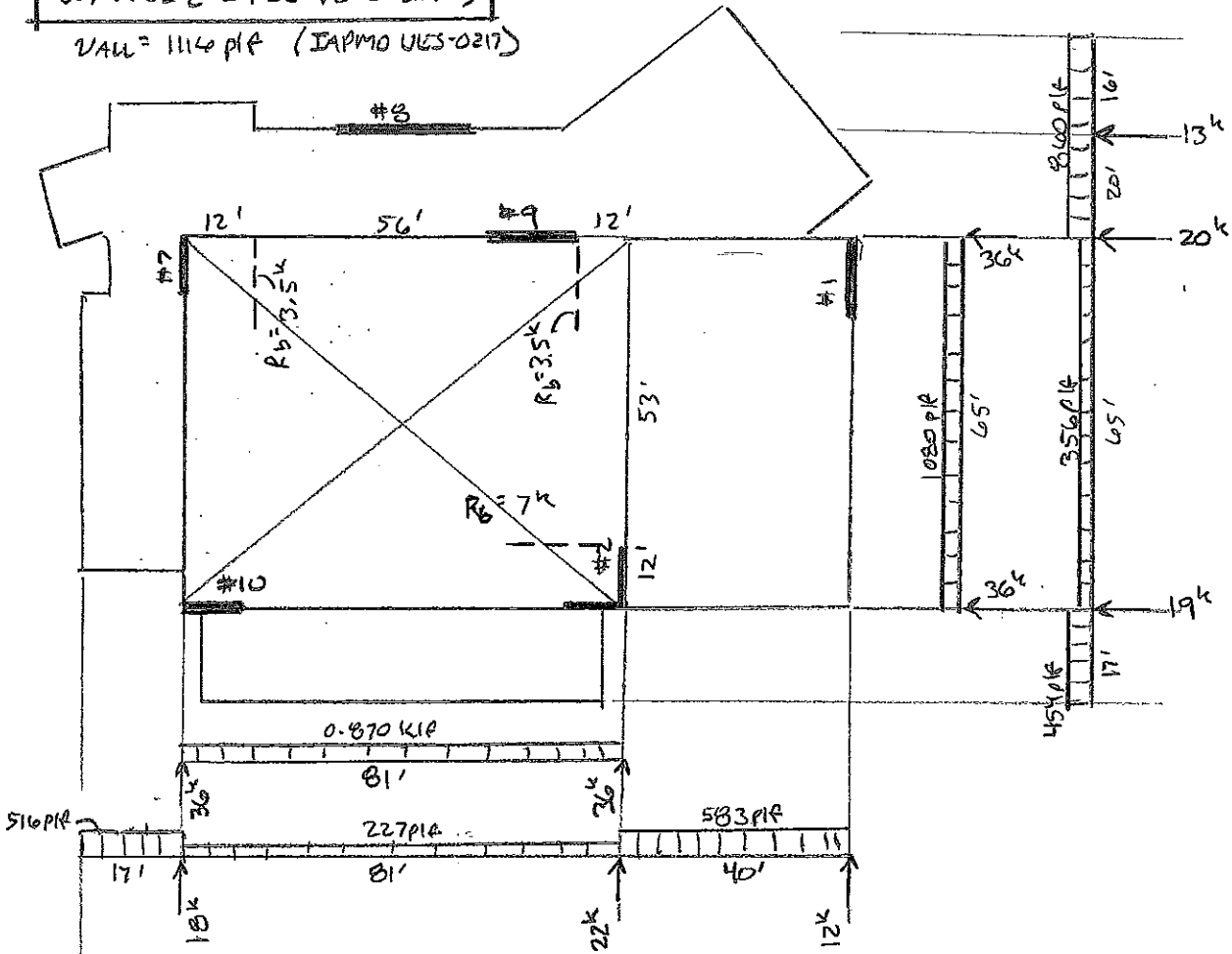
$\downarrow SL_{HR} = (71/5306) \times 65' = 870 \text{ plf}$   
 $\rightarrow SL_{HR} = (71/5306) \times 81' = 1.08 \text{ klf}$

DIAPH SHEAR =  $V = 36k/65' = 554 \text{ plf (LRFD)}$   
 $V_{ASD} = 0.7 \times 554 = 388 \text{ plf}$   
 $C_{DR} = \frac{870(81)^2}{8 \times 65'} = 11k$

$\downarrow SL_{LR} = (52/8467) \times 84' = 0.516 \text{ klf}$   
 $= \quad \quad \quad \times 37' = 0.227 \text{ klf}$   
 $= \quad \quad \quad \times 95' = 0.583 \text{ klf}$   
 $\rightarrow SL_{LR} = (52/8467) \times 74' = 0.454 \text{ klf}$   
 $= \quad \quad \quad \times 58' = 0.356 \text{ klf}$   
 $= \quad \quad \quad \times 140' = 0.800 \text{ klf}$

USE 18GA PLB-36 DECK 36/7/4  
 W/VSC2 @ 24" OC (8'-0" SPAN)

$V_{ALL} = 1114 \text{ plf (IAPMO UES-0217)}$





## Criteria, Mass and Exposure Data

RAM Frame 17.04.01.07

DataBase: S11804 MP Working Model

10/29/22 09:45:38

### CRITERIA:

Rigid End Zones: Ignore Effects  
 Member Force Output: At Face of Joint  
 P-Delta: Yes Scale Factor: 1.00  
 Ground Level: Base  
 Mesh Criteria :  
     Max. Distance Between Nodes on Mesh Line (ft) : 8.00  
     Merge Node Tolerance (in) : 0.0100  
     Geometry Tolerance (in) : 0.0050  
 Walls Out-of-plane Stiffness Not Included in Analysis.  
 Sign not considered for Dynamic Load Case Results.  
 Rigid Links Not Included at Fixed Beam-to-Wall Locations  
 Eigenvalue Analysis : Eigen Vectors (Subspace Iteration)

### DIAPHRAGM DATA:

Story	Diaph #	Diaph Type
High roof	1	Pseudo - Flexible
Low Roof	1	Pseudo - Flexible

Disconnect Internal Nodes of Beams: Yes  
 Disconnect Nodes outside Slab Boundary: Yes

### STORY MASS DATA:

#### Includes Self Mass of:

Beams  
 Columns (Half mass of columns above and below)  
 Walls (Half mass of walls above and below)  
 Slabs/Deck

#### Calculated Values:

Story	Diaph #	Weight kips	Mass k-s2/ft	MMI ft-k-s2	Xm ft	Ym ft	EccX ft	EccY ft
High roof	1	232.14	7.21	8318	64.48	48.21	4.02	3.24
Low Roof	1	323.76	10.05	32390	79.51	55.24	7.27	5.28

Story	Diaph #	Combine
High roof	1	None
Low Roof	1	None

### WIND EXPOSURE DATA:

#### Calculated Values:

Story	Diaph #	Building Extents (ft)				Expose	Parapet ft
		Min X	Max X	Min Y	Max Y		
High roof	1	24.25	104.58	15.83	80.67	Full	3.00
Low Roof	1	-0.33	145.08	-1.33	104.33	Full	3.00

### STORY GRAVITY LOADS DATA:

#### Includes Weight of:

Beams

# Criteria, Mass and Exposure Data

RAM Frame 17.04.01.07  
DataBase: S11804 MP Working Model

Page 2/2  
10/29/22 09:45:38

Columns  
Walls  
Slabs/Deck

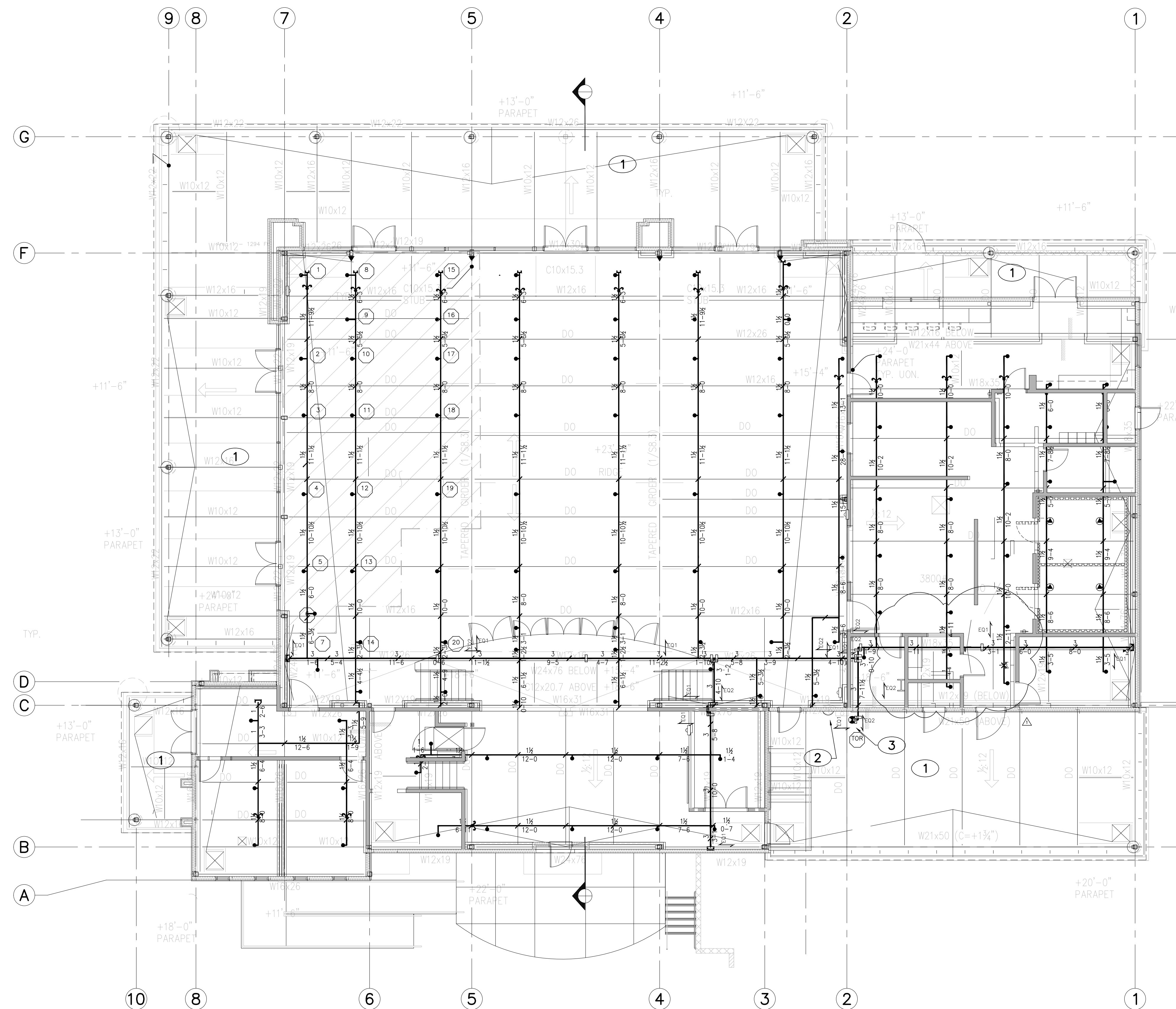
## Live Load Reduction (Calculated)

Reducible : 0.00 %  
Storage : 0.00 %  
Roof : 40.00 %

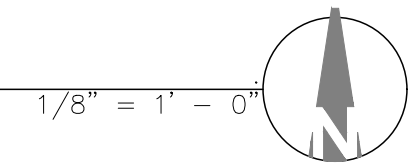
## Calculated Values:

Story	Diaph #	Dead kips	Xc ft	Yc ft	Live kips	Xc ft	Yc ft
High roof	1	208.23	64.43	48.16	0.00	0.00	0.00
Low Roof	1	305.64	78.61	54.39	0.00	0.00	0.00

Story	Diaph #	Roof kips	Xc ft	Yc ft	Combine
High roof	1	62.50	64.42	48.25	None
Low Roof	1	96.69	78.06	54.84	None



FIRE SPRINKLER MULTI PURPOSE PIPING PLAN



SYMBOLS AND DESCRIPTIONS										
SYM	QUANT	TYPE	FINISH	TEMP (F)	K FACTOR	THR	SIN #	MFG	MODEL	ESCUTCHEON
●	106	SSP	CHROME	155	5.6	1/2"	VK302	VIKING	MICROFAST	SEMI REC
⊙	04	DRY SSP	CHROME	200	5.6	1/2"	VK150	VIKING	MICROFAST	TWO PIECE
△	110	TOTAL SPRINKLERS THIS SHEET								

FIRE SPRINKLER INFORMATION IS FOR DSA REVIEW ONLY. INSTALLING CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACCURATE SPRINKLER LAYOUT AND QUANTITIES. NO PRICING ADJUSTMENT WILL BE ALLOWED FOR ADDITIONAL SPRINKLER HEADS ADDED BY CONTRACTOR.

ANY CHANGES TO APPROVED PLANS SHALL BE SUBMITTED TO DSA AS CCD FOR APPROVAL PRIOR TO INSTALLATION.

KEYNOTES

- ① NON-COMBUSTIBLE EXTERIOR CANOPY NO A.S.
- ② 10" ELECTRIC BELL
- ③ FIRE SPRINKLER RISER 02/FP14

PIPING NOTES

1. MAIN HANGERS SHALL BE (C-CLAMP W/RETAINER STRAP), (04/FP13)
2. BRANCH LINE HANGERS SHALL BE (C-CLAMP W/RETAINER STRAP) OR CEILING FLANGE. (4/FP13)
3. MAIN PIPING SHALL BE SCHEDULE 10 BLACK STEEL AND SHALL BE ROLL GROOVED PER NFPA 13.
4. BRANCHLINE PIPING SHALL BE SCHEDULE 40, BLACK STEEL, THREADED WITH THREADED FITTINGS OR ROLL GROOVED PER NFPA 13.
5. MECHANICAL TEES ARE NOT PERMITTED.
6. HANGERS TO BE < 6" FROM TOP OF PIPE TO POINT OF CONNECTION TO STRUCTURE. NO LATERAL EARTHQUAKE BRACING OR BRANCH LINE RESTRAINT IS REQUIRED.
7. HANGER DETAILS WITH SYMBOLS ARE SHOWN ON FP13
8. BUILDING IS DESIGNED AND HYDRAULICALLY CALCULATED FOR LIGHT HAZARD OCCUPANCY. STORAGE ROOMS ARE TO HAVE SPRINKLERS SPACED FOR ORDINARY HAZARD.

GENERAL NOTES

1. ITEMS SHOWN ON THIS PLAN DESCRIBE GENERAL LAYOUT REQUIREMENTS, AND ARE NOT INTENDED TO SHOW A COMPLETE LAYOUT OF REQUIRED FIRE PROTECTION SYSTEM PIPING AND COMPONENTS. REFER TO ARCHITECTURAL, MECHANICAL AND PLUMBING SHEETS, FIRE PROTECTION SPECIFICATIONS, AS WELL AS OTHER PORTIONS OF THE CONTRACT DOCUMENTS FOR ADDITIONAL COORDINATION REQUIREMENTS.
2. THE LAYOUT REQUIREMENTS DESCRIBED IN THESE PLANS SHALL BE ADHERED TO AS CLOSELY AS POSSIBLE BUT SHALL NOT SUPERSEDE CODE CONSTRAINTS AND/OR REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION (AHJ'S), WHERE CODE OR AHJ REQUIREMENTS SUPERSEDE ITEMS SHOWN ON THIS PLAN, CONTRACTOR SHALL INCLUDE ALL ASSOCIATED PROVISIONS IN THE BID, AND SHALL MAKE THEM AT NO ADDITIONAL COST TO OWNER. PROPOSED DEVIATIONS FROM THIS PLAN SHALL BE SUBJECT TO ARCHITECT'S AND ENGINEER'S REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
3. ALL AREAS OF THE BUILDING SHALL BE FULLY SPRINKLERED IN ACCORDANCE WITH SPECIFICATIONS AND CODE REQUIREMENTS.
4. WHERE PLAN INDICATES EXPOSED FIRE SPRINKLER PIPING DIRECTION OF LAYOUT, ASSOCIATED CONNECTED FIRE SPRINKLER PIPING RUNNING IN PERPENDICULAR DIRECTIONS SHALL BE INSTALLED ONLY IN CONCEALED LOCATIONS UNLESS INDICATED OTHERWISE.
5. SEE STRUCTURAL PLANS FOR EXACT LOCATIONS AND CHARACTERISTICS OF ALL STRUCTURAL MEMBERS.
6. EXPOSED FIRE SPRINKLER SYSTEM PIPING SHALL BE RUN STRAIGHT AND TIGHT TO UNDERSIDE OF STRUCTURAL MEMBERS.
7. PIPING IS NOT TO PENETRATE THROUGH STEEL BEAM WEB.
8. CONTRACTOR IS TO PREPARE SHOP DRAWINGS AND FABRICATION DRAWINGS, ALL PLANS, INCLUDING HYDRAULIC CALCULATIONS AND SEISMIC BRACE CALCULATIONS ARE TO BE SUBMITTED TO LP CONSULTING ENGINEERS, INC. FOR REVIEW PRIOR TO FABRICATION OR INSTALLATION OF FIRE SPRINKLER SYSTEM.

WALL LEGEND

— 1 HR. RATED WALL

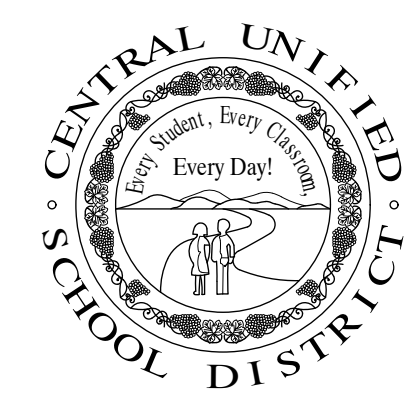


**LP Engineers, Inc.**  
 895 W. Ashlan Ave, Suite 101 Clovis, CA 93612  
 p 559-348-2130 f 559-348-2131  
 www.lpengr.com  
 job #: 18-1024



7790 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 T559.448.8400 F559.448.8467  
 www.sim-pbk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-63a**  
**S&B Elementary**  
**02-116800**



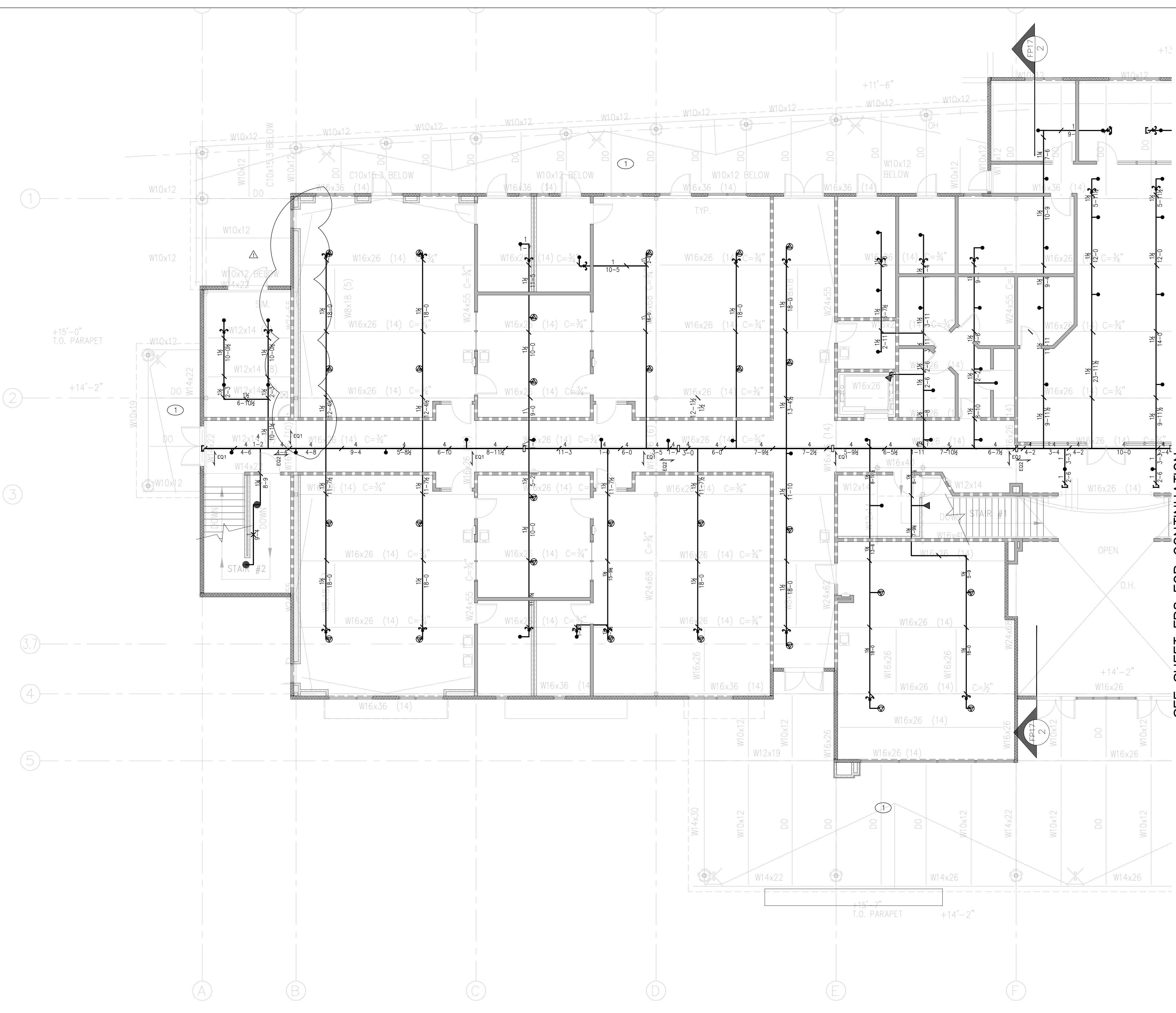
THE FIRM OF SMITH, WANAMAKER, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION	
FIRE SPRINKLER PIPING PLAN - MULTI PURPOSE BLDG	
PROJECT COORDINATOR JOHN SMITH	SHEET No. FP4
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE	





### KEYNOTES

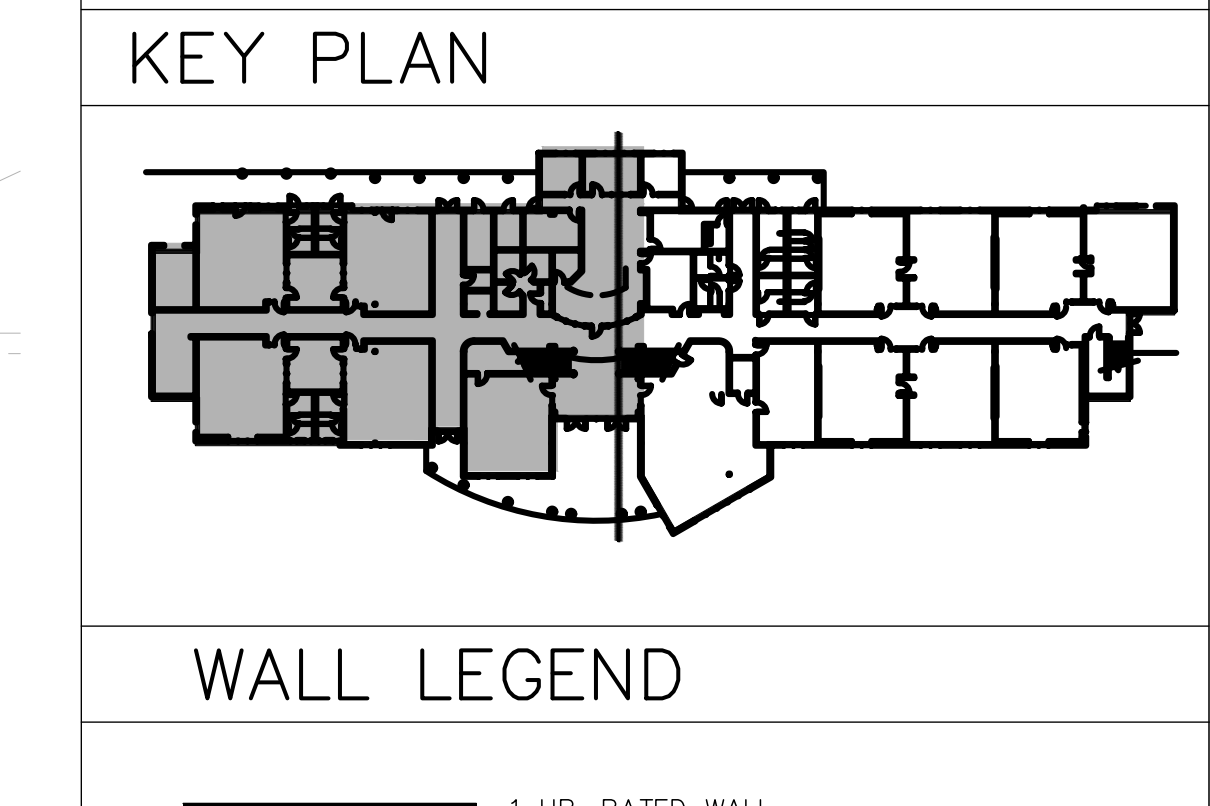
① NON-COMBUSTIBLE EXTERIOR CANOPY NO A.S.

### PIPING NOTES

1. MAIN HANGERS SHALL BE (C-CLAMP W/RETAINER STRAP), (04/FP13)
2. BRANCH LINE HANGERS SHALL BE (C-CLAMP W/RETAINER STRAP) OR CEILING FLANGE. (4/FP13)
3. MAIN PIPING SHALL BE SCHEDULE 10 BLACK STEEL AND SHALL BE ROLL GROOVED PER NFPA 13.
4. BRANCHLINE PIPING SHALL BE SCHEDULE 40, BLACK STEEL, THREADED WITH THREADED FITTINGS OR ROLL GROOVED PER NFPA 13.
5. MECHANICAL TEES ARE NOT PERMITTED.
6. HANGERS TO BE < 6" FROM TOP OF PIPE TO POINT OF CONNECTION TO STRUCTURE. NO LATERAL EARTHQUAKE BRACING OR BRANCH LINE RESTRAINT IS REQUIRED.
7. HANGER DETAILS WITH SYMBOLS ARE SHOWN ON FP13
8. BUILDING IS DESIGNED AND HYDRAULICALLY CALCULATED FOR LIGHT HAZARD OCCUPANCY. STORAGE ROOMS ARE TO HAVE SPRINKLERS SPACED FOR ORDINARY HAZARD.

### GENERAL NOTES

1. ITEMS SHOWN ON THIS PLAN DESCRIBE GENERAL LAYOUT REQUIREMENTS, AND ARE NOT INTENDED TO SHOW A COMPLETE LAYOUT OF REQUIRED FIRE PROTECTION SYSTEM PIPING AND COMPONENTS. REFER TO ARCHITECTURAL, MECHANICAL AND PLUMBING SHEETS, FIRE PROTECTION SPECIFICATIONS, AS WELL AS OTHER PORTIONS OF THE CONTRACT DOCUMENTS FOR ADDITIONAL COORDINATION REQUIREMENTS.
2. THE LAYOUT REQUIREMENTS DESCRIBED IN THESE PLANS SHALL BE ADHERED TO AS CLOSELY AS POSSIBLE BUT SHALL NOT SUPERSEDE CODE CONSTRAINTS AND/OR REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION (AHJ'S), WHERE CODE OR AHJ REQUIREMENTS SUPERSEDE ITEMS SHOWN ON THIS PLAN, CONTRACTOR SHALL INCLUDE ALL ASSOCIATED COSTS IN THE BID, AND SHALL MAKE THEM AT NO ADDITIONAL COST TO OWNER. PROPOSED DEVIATIONS FROM THIS PLAN SHALL BE SUBJECT TO ARCHITECT'S AND ENGINEER'S REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
3. ALL AREAS OF THE BUILDING SHALL BE FULLY SPRINKLERED IN ACCORDANCE WITH SPECIFICATIONS AND CODE REQUIREMENTS.
4. WHERE PLAN INDICATES EXPOSED FIRE SPRINKLER PIPING DIRECTION OF LAYOUT, ASSOCIATED CONNECTED FIRE SPRINKLER PIPING RUNNING IN PERPENDICULAR DIRECTIONS SHALL BE INSTALLED ONLY IN CONCEALED LOCATIONS UNLESS INDICATED OTHERWISE.
5. SEE STRUCTURAL PLANS FOR EXACT LOCATIONS AND CHARACTERISTICS OF ALL STRUCTURAL MEMBERS.
6. EXPOSED FIRE SPRINKLER SYSTEM PIPING SHALL BE RUN STRAIGHT AND TIGHT TO UNDERSIDE OF STRUCTURAL MEMBERS.
7. PIPING IS NOT TO PENETRATE THROUGH STEEL BEAM WEB.
8. CONTRACTOR IS TO PREPARE SHOP DRAWINGS AND FABRICATION DRAWINGS, ALL PLANS, INCLUDING HYDRAULIC CALCULATIONS AND SEISMIC BRACE CALCULATIONS ARE TO BE SUBMITTED TO LP CONSULTING ENGINEERS, INC. FOR REVIEW PRIOR TO FABRICATION OR INSTALLATION OF FIRE SPRINKLER SYSTEM.



### SYMBOLS AND DESCRIPTIONS

SYM	QUANT	TYPE	FINISH	TEMP (F)	K FACTOR	THRD	SIN #	MFG	MODEL	ESCUTCHEON	
•	30	SSP	CHROME	155	5.6	1/2"	VK302	VIKING	MICROFAST	SEMI REC	
▲	2	HSW	BRASS	155	5.6	1/2"	VK350	VIKING	MICROFAST	SEMI REC	
⊙	27	EC SSP	CHROME	155	11.2	17/32"	VK608	VIKING	ELO	SEMI REC	
⊙	59	TOTAL SPRINKLERS ON THIS SHEET									

FIRE SPRINKLER INFORMATION IS FOR DSA REVIEW ONLY. INSTALLING CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACCURATE SPRINKLER LAYOUT AND QUANTITIES. NO PRICING ADJUSTMENT WILL BE ALLOWED FOR ADDITIONAL SPRINKLER HEADS ADDED BY CONTRACTOR.

ANY CHANGES TO APPROVED PLANS SHALL BE SUBMITTED TO DSA AS CCD FOR APPROVAL PRIOR TO INSTALLATION.

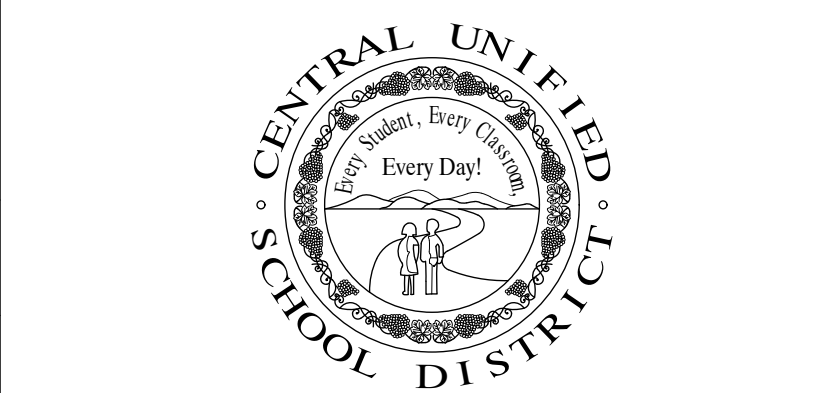
REGISTERED PROFESSIONAL ENGINEER  
GAVIN W. LENCIONI  
No. 33380  
MECHANICAL  
STATE OF CALIFORNIA

**LP Engineers, Inc.**  
895 W. Ashlan Ave, Suite 101 Clovis, CA 93612  
p 559-348-2130 f 559-348-2131  
www.lpengr.com  
job #: 18-1024

1ST FLOOR FIRE SPRINKLER PIPING PLAN WEST SIDE-MAIN BLDG. 1/8" = 1' - 0"



# SHIELDS & BRAWLEY ELEMENTARY SCHOOL



AD 1-64a  
S&B Elementary  
02-116800



THE FIRM OF SMITH, WANAMAKER, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

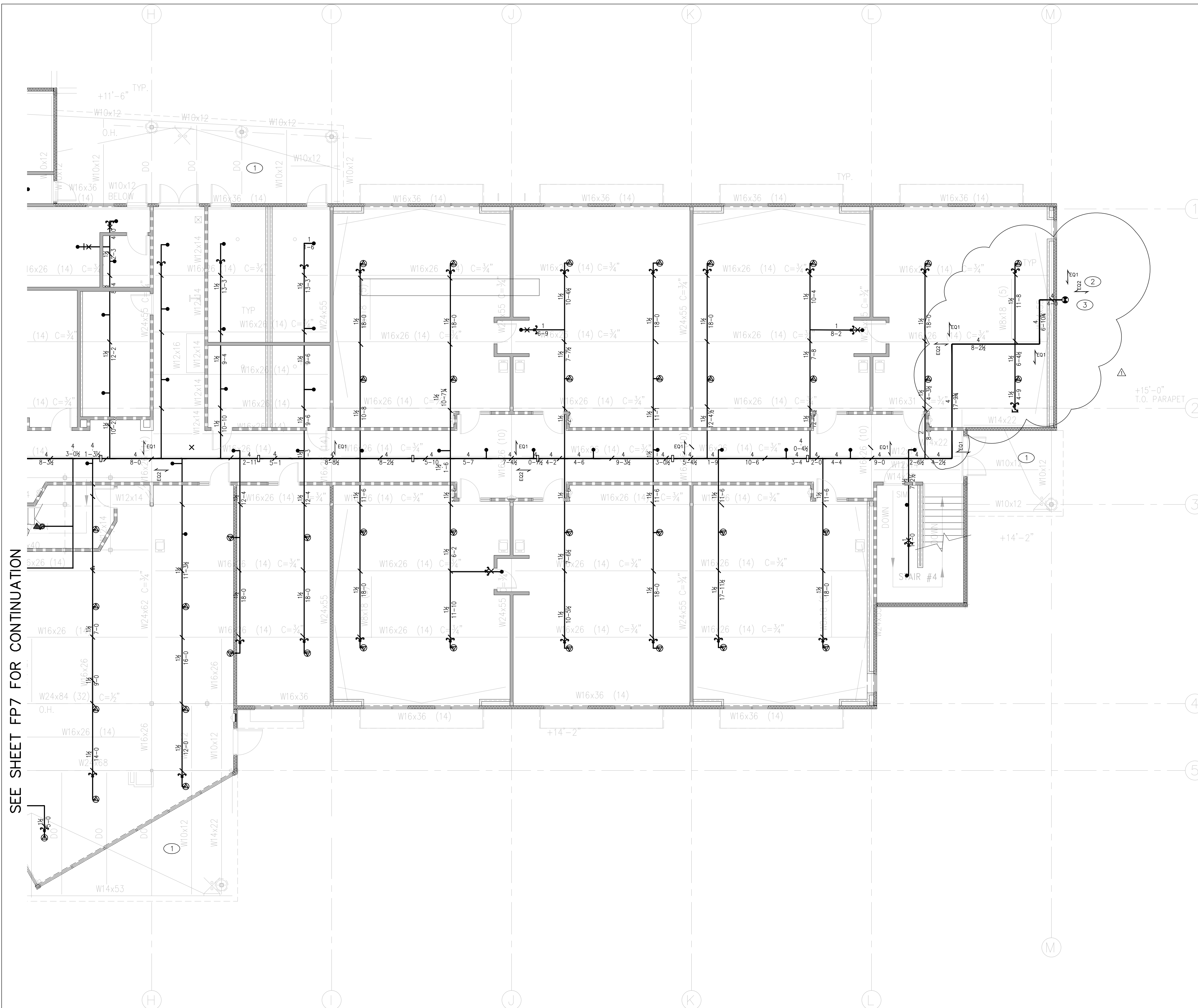
REVISIONS		
No.	DATE	DESCRIPTION
▲	2.14.23	DISTRICT MODIFICATIONS

**FIRE SPRINKLER PIPING PLAN  
1ST FLOOR EAST SIDE-MAIN BLDG.**

PROJECT DEVELOPER	JOHN SMITH
PROJECT NO.	17-67
DATE	1.27.23
SCALE	

FP7

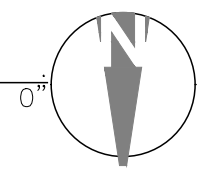




SEE SHEET FP7 FOR CONTINUATION

1ST FLOOR FIRE SPRINKLER PIPING PLAN EAST SIDE-MAIN BLDG.

1/8" = 1' - 0"



KEYNOTES

- ① NON-COMBUSTIBLE EXTERIOR CANOPY NO A.S.
- ② 10" ELECTRIC BELL
- ③ FIRE SPRINKLER RISER 1/FP14

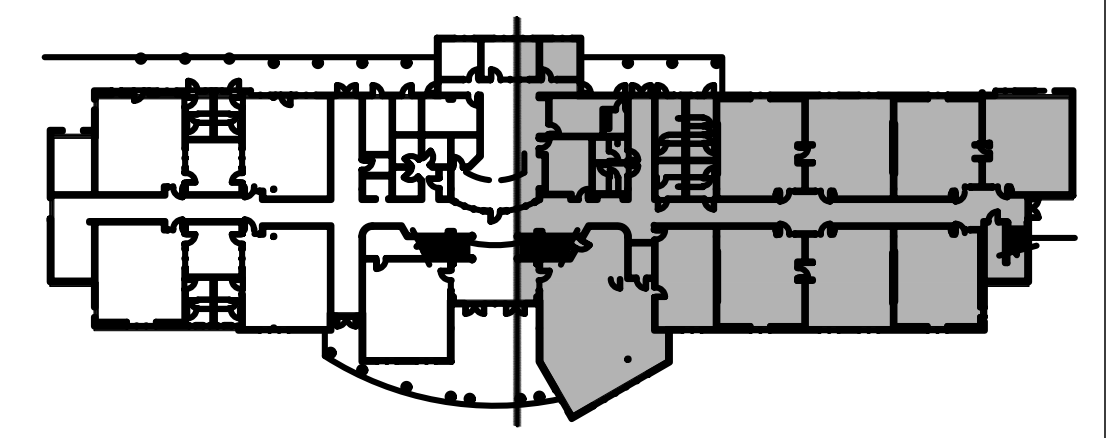
PIPING NOTES

1. MAIN HANGERS SHALL BE (C-CLAMP W/RETAINER STRAP). (04/FP13)
2. BRANCH LINE HANGERS SHALL BE (C-CLAMP W/RETAINER STRAP) OR CEILING FLANGE. (4/FP13)
3. MAIN PIPING SHALL BE SCHEDULE 10 BLACK STEEL AND SHALL BE ROLL GROOVED PER NFPA 13.
4. BRANCHLINE PIPING SHALL BE SCHEDULE 40, BLACK STEEL, THREADED WITH THREADED FITTINGS OR ROLL GROOVED PER NFPA 13.
5. MECHANICAL TEES ARE NOT PERMITTED.
6. HANGERS TO BE < 6" FROM TOP OF PIPE TO POINT OF CONNECTION TO STRUCTURE. NO LATERAL EARTHQUAKE BRACING OR BRANCH LINE RESTRAINT IS REQUIRED.
7. HANGER DETAILS WITH SYMBOLS ARE SHOWN ON FP13
8. BUILDING IS DESIGNED AND HYDRAULICALLY CALCULATED FOR LIGHT HAZARD OCCUPANCY. STORAGE ROOMS ARE TO HAVE SPRINKLERS SPACED FOR ORDINARY HAZARD.

GENERAL NOTES

1. ITEMS SHOWN ON THIS PLAN DESCRIBE GENERAL LAYOUT REQUIREMENTS, AND ARE NOT INTENDED TO SHOW A COMPLETE LAYOUT OF REQUIRED FIRE PROTECTION SYSTEM PIPING AND COMPONENTS. REFER TO ARCHITECTURAL, MECHANICAL AND PLUMBING SHEETS, FIRE PROTECTION SPECIFICATIONS, AS WELL AS OTHER PORTIONS OF THE CONTRACT DOCUMENTS FOR ADDITIONAL COORDINATION REQUIREMENTS.
2. THE LAYOUT REQUIREMENTS DESCRIBED IN THESE PLANS SHALL BE ADHERED TO AS CLOSELY AS POSSIBLE BUT SHALL NOT SUPERSEDE CODE CONSTRAINTS AND/OR REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION (A/H'S). WHERE CODE OR A/H REQUIREMENTS SUPERSEDE ITEMS SHOWN ON THIS PLAN, CONTRACTOR SHALL INCLUDE ALL ASSOCIATED PROVISIONS IN THE BID, AND SHALL MAKE THEM AT NO ADDITIONAL COST TO OWNER. PROPOSED DEVIATIONS FROM THIS PLAN SHALL BE SUBJECT TO ARCHITECT'S AND ENGINEER'S REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
3. ALL AREAS OF THE BUILDING SHALL BE FULLY SPRINKLERED IN ACCORDANCE WITH SPECIFICATIONS AND CODE REQUIREMENTS.
4. WHERE PLAN INDICATES EXPOSED FIRE SPRINKLER PIPING DIRECTION OF LAYOUT, ASSOCIATED CONNECTED FIRE SPRINKLER PIPING RUNNING IN PERPENDICULAR DIRECTIONS SHALL BE INSTALLED ONLY IN CONCEALED LOCATIONS UNLESS INDICATED OTHERWISE.
5. SEE STRUCTURAL PLANS FOR EXACT LOCATIONS AND CHARACTERISTICS OF ALL STRUCTURAL MEMBERS.
6. EXPOSED FIRE SPRINKLER SYSTEM PIPING SHALL BE RUN STRAIGHT AND TIGHT TO UNDERSIDE OF STRUCTURAL MEMBERS.
7. PIPING IS NOT TO PENETRATE THROUGH STEEL BEAM WEB.
8. CONTRACTOR IS TO PREPARE SHOP DRAWINGS AND FABRICATION DRAWINGS. ALL PLANS, INCLUDING HYDRAULIC CALCULATIONS AND SEISMIC BRACE CALCULATIONS ARE TO BE SUBMITTED TO LP CONSULTING ENGINEERS, INC. FOR REVIEW PRIOR TO FABRICATION OR INSTALLATION OF FIRE SPRINKLER SYSTEM.

KEY PLAN



WALL LEGEND

1 HR. RATED WALL

SYMBOLS AND DESCRIPTIONS

SYM	QUANT	TYPE	FINISH	TEMP (F)	K FACTOR	THRD	SIN #	MFG	MODEL	ESCUTCHEON	
•	30	SSP	CHROME	155	5.6	1/2"	VK302	VIKING	MICROFAST	SEMI REC	
▲	2	HSW	BASS	155	5.6	1/2"	VK350	VIKING	MICROFAST	SEMI REC	
▲	27	EC SSP	CHROME	155	11.2	17/32"	VK608	VIKING	ELO	SEMI REC	
	59	TOTAL SPRINKLERS ON THIS SHEET									

FIRE SPRINKLER INFORMATION IS FOR DSA REVIEW ONLY. INSTALLING CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACCURATE SPRINKLER LAYOUT AND QUANTITIES. NO PRICING ADJUSTMENT WILL BE ALLOWED FOR ADDITIONAL SPRINKLER HEADS ADDED BY CONTRACTOR.

ANY CHANGES TO APPROVED PLANS SHALL BE SUBMITTED TO DSA AS CCD FOR APPROVAL PRIOR TO INSTALLATION.



7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T559.448.8400 · F559.448.8467  
www.sim-pbk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD1-65a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF BATH, WANAMAKER, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PRIORITY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
▲	2.14.23	DISTRICT MODIFICATIONS

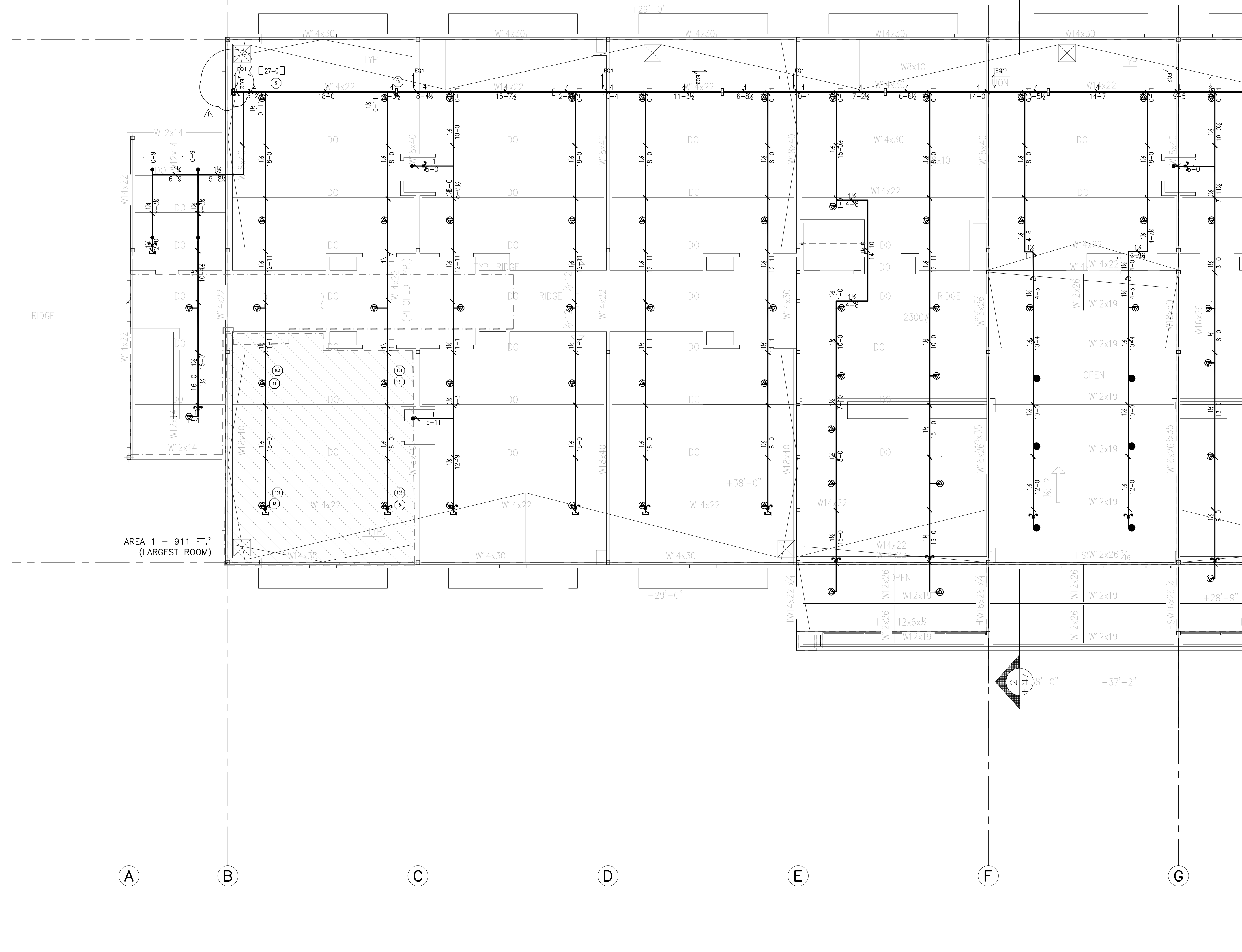
SHEET DESCRIPTION  
**FIRE SPRINKLER PIPING PLAN 1ST FLOOR WESTSIDE-MAIN BLDG.**

PROJECT COORDINATOR JOHN SMITH	SHEET NO. <b>FP8</b>
PROJECT NO. 17-67	DATE 1.27.23
SCALE	

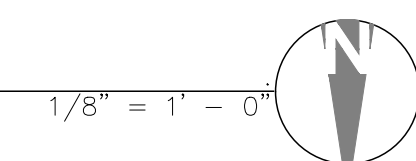


**LP Engineers, Inc.**  
895 W. Ashlan Ave, Suite 101 Clovis, CA 93612  
p 559-348-2130 - f 559-348-2131  
www.lpengr.com  
job #: 18-1024





2ND FLOOR FIRE SPRINKLER PIPING PLAN WEST SIDE-MAIN BLDG.



KEYNOTES

PIPING NOTES

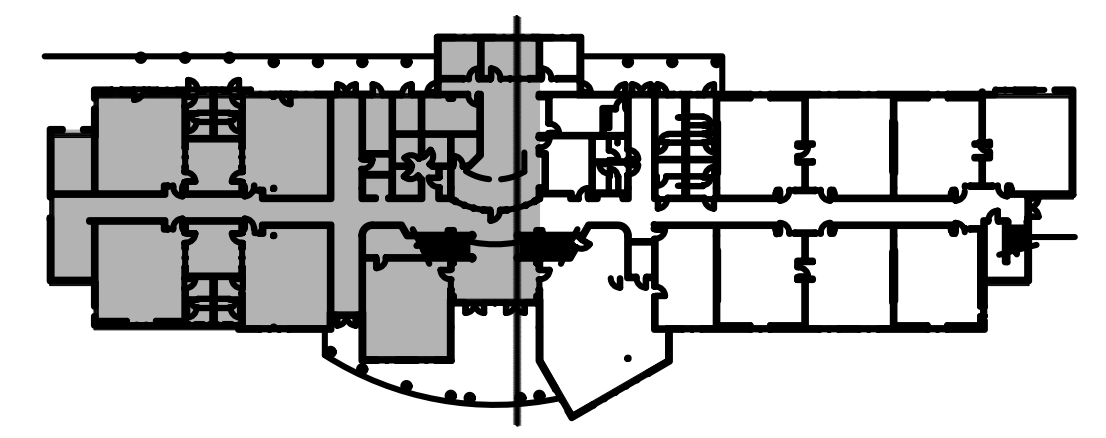
1. MAIN HANGERS SHALL BE (C-CLAMP W/RETAINER STRAP). (3/FX1.1)
2. BRANCH LINE HANGERS SHALL BE (C-CLAMP W/RETAINER STRAP) OR CEILING FLANGE. (3/FSX1.1)
3. MAIN PIPING SHALL BE SCHEDULE 10 BLACK STEEL AND SHALL BE ROLL GROOVED PER NFPA 13.
4. BRANCHLINE PIPING SHALL BE SCHEDULE 40, BLACK STEEL, THREADED WITH THREADED FITTINGS OR ROLL GROOVED PER NFPA 13.
5. MECHANICAL TEES ARE NOT PERMITTED.
6. HANGERS TO BE < 6" FROM TOP OF PIPE TO POINT OF CONNECTION TO STRUCTURE. NO LATERAL EARTHQUAKE BRACING OR BRANCH LINE RESTRAINT IS REQUIRED.
7. HANGER DETAILS WITH SYMBOLS ARE SHOWN ON FSX1.1
8. BUILDING IS DESIGNED AND HYDRAULICALLY CALCULATED FOR LIGHT HAZARD OCCUPANCY. STORAGE ROOMS ARE TO HAVE SPRINKLERS SPACED FOR ORDINARY HAZARD.

GENERAL NOTES

1. ITEMS SHOWN ON THIS PLAN DESCRIBE GENERAL LAYOUT REQUIREMENTS, AND ARE NOT INTENDED TO SHOW A COMPLETE LAYOUT OF REQUIRED FIRE PROTECTION SYSTEM PIPING AND COMPONENTS. REFER TO ARCHITECTURAL, MECHANICAL AND PLUMBING SHEETS, FIRE PROTECTION SPECIFICATIONS, AS WELL AS OTHER PORTIONS OF THE CONTRACT DOCUMENTS FOR ADDITIONAL COORDINATION REQUIREMENTS.
2. THE LAYOUT REQUIREMENTS DESCRIBED IN THESE PLANS SHALL BE ADHERED TO AS CLOSELY AS POSSIBLE BUT SHALL NOT SUPERSEDE CODE CONSTRAINTS AND/OR REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION (AHJ'S), WHERE CODE OR AHJ REQUIREMENTS SUPERSEDE ITEMS SHOWN ON THIS PLAN, CONTRACTOR SHALL INCLUDE ALL ASSOCIATED PROVISIONS IN THE BID, AND SHALL MAKE THEM AT NO ADDITIONAL COST TO OWNER. PROPOSED DEVIATIONS FROM THIS PLAN SHALL BE SUBJECT TO ARCHITECT'S AND ENGINEER'S REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
3. ALL AREAS OF THE BUILDING SHALL BE FULLY SPRINKLERED IN ACCORDANCE WITH SPECIFICATIONS AND CODE REQUIREMENTS.
4. WHERE PLAN INDICATES EXPOSED FIRE SPRINKLER PIPING DIRECTION OF LAYOUT, ASSOCIATED CONNECTED FIRE SPRINKLER PIPING RUNNING IN PERPENDICULAR DIRECTIONS SHALL BE INSTALLED ONLY IN CONCEALED LOCATIONS UNLESS INDICATED OTHERWISE.
5. SEE STRUCTURAL PLANS FOR EXACT LOCATIONS AND CHARACTERISTICS OF ALL STRUCTURAL MEMBERS.
6. EXPOSED FIRE SPRINKLER SYSTEM PIPING SHALL BE RUN STRAIGHT AND TIGHT TO UNDERSIDE OF STRUCTURAL MEMBERS.
7. PIPING IS NOT TO PENETRATE THROUGH STEEL BEAM WEB.
8. CONTRACTOR IS TO PREPARE SHOP DRAWINGS AND FABRICATION DRAWINGS, ALL PLANS, INCLUDING HYDRAULIC CALCULATIONS AND SEISMIC BRACE CALCULATIONS ARE TO BE SUBMITTED TO LP CONSULTING ENGINEERS, INC. FOR REVIEW PRIOR TO FABRICATION OR INSTALLATION OF FIRE SPRINKLER SYSTEM.

SEE SHEET FP12 FOR CONTINUATION

KEY PLAN



WALL LEGEND



SYMBOLS AND DESCRIPTIONS

SYM	QUANT	TYPE	FINISH	TEMP (F)	K FACTOR	THRD	SIN #	MFG	MODEL	ESCUTCHEON	
•	13	SSP	CHROME	155	5.6	1/2"	VK302	VIKING	MICROFAST	SEMI REC	
▲	-	HSW	BRASS	155	5.6	1/2"	VK350	VIKING	MICROFAST	SEMI REC	
▽	57	EC SSP	CHROME	155	11.2	17/32"	VK608	VIKING	ELO	SEMI REC	
	60	TOTAL SPRINKLERS ON THIS SHEET									

FIRE SPRINKLER INFORMATION IS FOR DSA REVIEW ONLY. INSTALLING CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACCURATE SPRINKLER LAYOUT AND QUANTITIES. NO PRICING ADJUSTMENT WILL BE ALLOWED FOR ADDITIONAL SPRINKLER HEADS ADDED BY CONTRACTOR.

ANY CHANGES TO APPROVED PLANS SHALL BE SUBMITTED TO DSA AS CCD FOR APPROVAL PRIOR TO INSTALLATION.



7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T559.448.8400 · F559.448.8467  
www.sim-prk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-66a  
S&B Elementary  
02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF BSMH, WANAGA, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COPYRIGHT, LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
▲	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION  
**FIRE SPRINKLER PIPING PLAN  
2ND FLOOR EAST MAIN BUILDING**

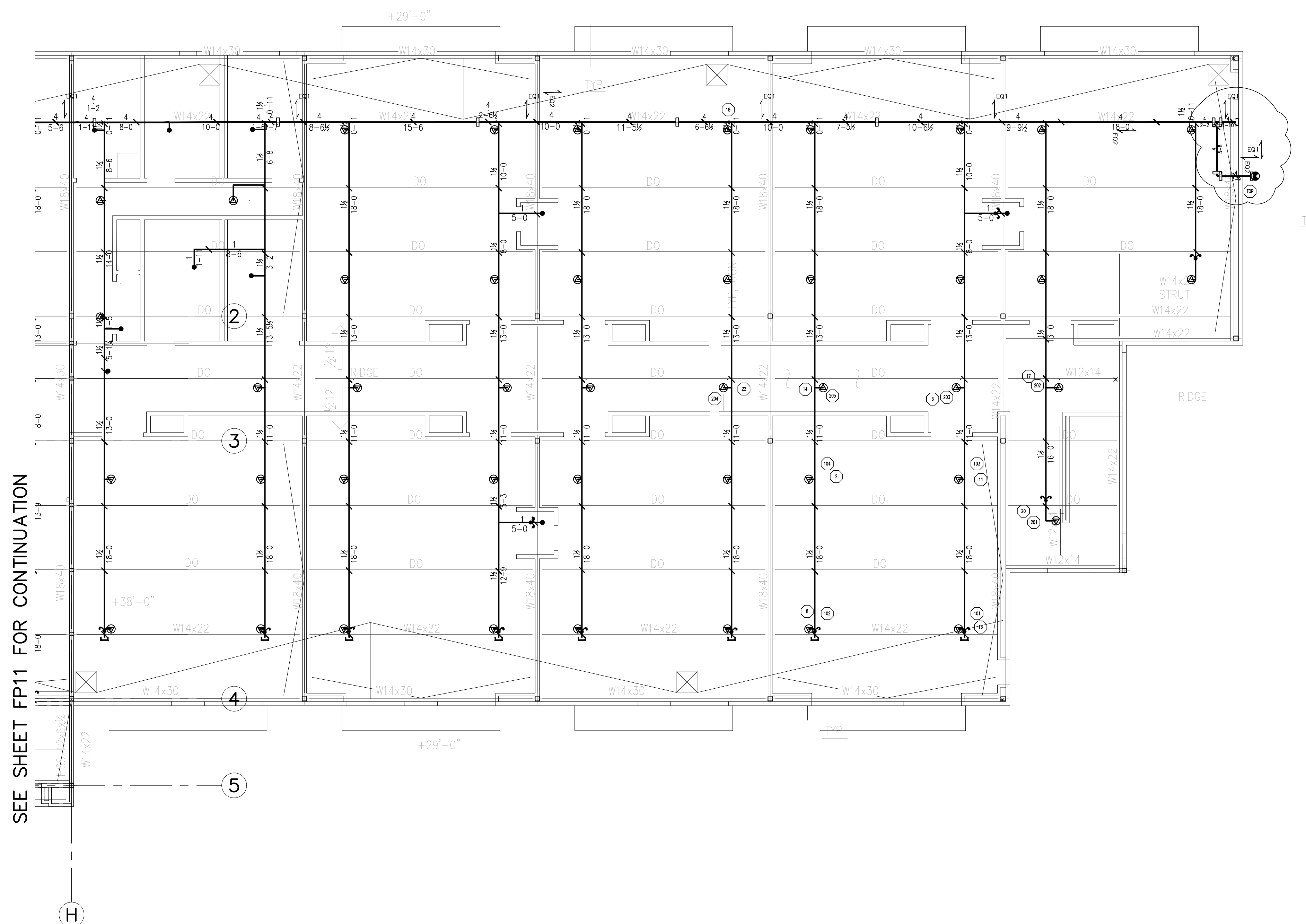
PROJECT COORDINATOR	JOHN SMITH
PROJECT NO.	17-67
DATE	1.27.23
SCALE	



**LP Engineers, Inc.**  
895 W. Ashlan Ave, Suite 101 Clovis, CA 93612  
p 559-348-2130 · f 559-348-2131  
www.lpengr.com  
job #: 18-1024

**FP11**





SEE SHEET FP11 FOR CONTINUATION

2ND FLOOR FIRE SPRINKLER PIPING PLAN EAST SIDE-MAIN BLDG. 1/8" = 1' - 0"

KEYNOTES

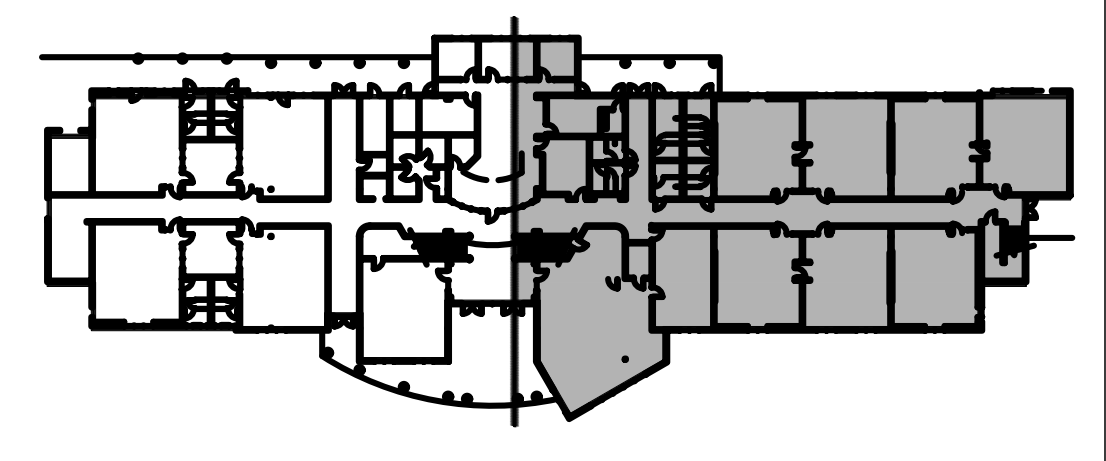
PIPING NOTES

1. MAIN HANGERS SHALL BE (C-CLAMP W/RETAINER STRAP). (04/FP13)
2. BRANCH LINE HANGERS SHALL BE (C-CLAMP W/RETAINER STRAP) OR CEILING FLANGE. (4/FP13)
3. MAIN PIPING SHALL BE SCHEDULE 10 BLACK STEEL AND SHALL BE ROLL GROOVED PER NFPA 13.
4. BRANCHLINE PIPING SHALL BE SCHEDULE 40, BLACK STEEL, THREADED WITH THREADED FITTINGS OR ROLL GROOVED PER NFPA 13.
5. MECHANICAL TEES ARE NOT PERMITTED.
6. HANGERS TO BE < 6" FROM TOP OF PIPE TO POINT OF CONNECTION TO STRUCTURE. NO LATERAL EARTHQUAKE BRACING OR BRANCH LINE RESTRAINT IS REQUIRED.
7. HANGER DETAILS WITH SYMBOLS ARE SHOWN ON FP13
8. BUILDING IS DESIGNED AND HYDRAULICALLY CALCULATED FOR LIGHT HAZARD OCCUPANCY. STORAGE ROOMS ARE TO HAVE SPRINKLERS SPACED FOR ORDINARY HAZARD.

GENERAL NOTES

1. ITEMS SHOWN ON THIS PLAN DESCRIBE GENERAL LAYOUT REQUIREMENTS, AND ARE NOT INTENDED TO SHOW A COMPLETE LAYOUT OF REQUIRED FIRE PROTECTION SYSTEM PIPING AND COMPONENTS. REFER TO ARCHITECTURAL, MECHANICAL AND PLUMBING SHEETS, FIRE PROTECTION SPECIFICATIONS, AS WELL AS OTHER PORTIONS OF THE CONTRACT DOCUMENTS FOR ADDITIONAL COORDINATION REQUIREMENTS.
2. THE LAYOUT REQUIREMENTS DESCRIBED IN THESE PLANS SHALL BE ADHERED TO AS CLOSELY AS POSSIBLE BUT SHALL NOT SUPERSEDE CODE CONSTRAINTS AND/OR REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION (AHJ'S). WHERE CODE OR AHJ REQUIREMENTS SUPERSEDE ITEMS SHOWN ON THIS PLAN, CONTRACTOR SHALL INCLUDE ALL ASSOCIATED PROVISIONS IN THE BID, AND SHALL MAKE THEM AT NO ADDITIONAL COST TO OWNER. PROPOSED DEVIATIONS FROM THIS PLAN SHALL BE SUBJECT TO ARCHITECT'S AND ENGINEER'S REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
3. ALL AREAS OF THE BUILDING SHALL BE FULLY SPRINKLERED IN ACCORDANCE WITH SPECIFICATIONS AND CODE REQUIREMENTS.
4. WHERE PLAN INDICATES EXPOSED FIRE SPRINKLER PIPING DIRECTION OF LAYOUT, ASSOCIATED CONNECTED FIRE SPRINKLER PIPING RUNNING IN PERPENDICULAR DIRECTIONS SHALL BE INSTALLED ONLY IN CONCEALED LOCATIONS UNLESS INDICATED OTHERWISE.
5. SEE STRUCTURAL PLANS FOR EXACT LOCATIONS AND CHARACTERISTICS OF ALL STRUCTURAL MEMBERS.
6. EXPOSED FIRE SPRINKLER SYSTEM PIPING SHALL BE RUN STRAIGHT AND TIGHT TO UNDERSIDE OF STRUCTURAL MEMBERS.
7. PIPING IS NOT TO PENETRATE THROUGH STEEL BEAM WEB.
8. CONTRACTOR IS TO PREPARE SHOP DRAWINGS AND FABRICATION DRAWINGS. ALL PLANS, INCLUDING HYDRAULIC CALCULATIONS AND SEISMIC BRACE CALCULATIONS ARE TO BE SUBMITTED TO LP CONSULTING ENGINEERS, INC. FOR REVIEW PRIOR TO FABRICATION OR INSTALLATION OF FIRE SPRINKLER SYSTEM.

KEY PLAN



WALL LEGEND



SYMBOLS AND DESCRIPTIONS

SYM	QUANT	TYPE	FINISH	TEMP (F)	K FACTOR	THRD	SIN #	MFG	MODEL	ESCUTCHEON	
•	10	SSP	CHROME	155	5.6	1/2"	VK302	VIKING	MICROFAST	SEMI REC	
▲	-	HSW	BRASS	155	5.6	1/2"	VK350	VIKING	MICROFAST	SEMI REC	
⊙	50	EC SSP	CHROME	155	11.2	17/32"	VK608	VIKING	ELO	SEMI REC	
	60	TOTAL SPRINKLERS ON THIS SHEET									

FIRE SPRINKLER INFORMATION IS FOR DSA REVIEW ONLY. INSTALLING CONTRACTOR IS RESPONSIBLE FOR VERIFYING ACCURATE SPRINKLER LAYOUT AND QUANTITIES. NO PRICING ADJUSTMENT WILL BE ALLOWED FOR ADDITIONAL SPRINKLER HEADS ADDED BY CONTRACTOR.

ANY CHANGES TO APPROVED PLANS SHALL BE SUBMITTED TO DSA AS CCD FOR APPROVAL PRIOR TO INSTALLATION.

REGISTERED PROFESSIONAL ENGINEER  
GAVIN M. LENCIONI  
NO. 33380  
MECHANICAL  
STATE OF CALIFORNIA

LP Engineers, Inc.  
895 W. Ashlan Ave, Suite 101, Clovis, CA 93612  
p 559-348-2130 - f 559-348-2131  
www.lpengr.com  
job #: 18-1024



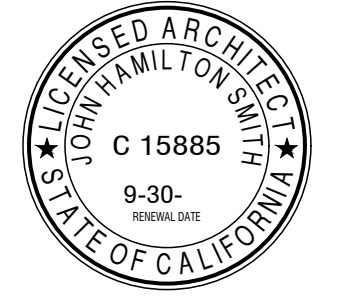
7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T559.448.8400 · F559.448.8467  
www.sim-pbk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-67a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF BATH, WANAGA, MILHOUSE, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED RELEASE OF THESE PLANS BY A THIRD PARTY, THE ARCHITECT SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
▲	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION  
**FIRE SPRINKLER PIPING PLAN 2ND FLOOR WESTSIDE-MAIN BLDG.**

PROJECT COORDINATOR JOHN SMITH	SHEET NO. <b>FP12</b>
PROJECT NO. 17-67	DATE 1.27.23
SCALE	



INSPECTOR NOTES

ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR A CHANGE DOCUMENT APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24 CCR.

CODE TABULATION

ALL NEW WORK AND MATERIAL SHALL BE PERFORMED & INSTALLED TO COMPLY WITH THE LATEST APPLICABLE CODES.
PARTIAL LIST OF APPLICABLE CODES EFFECTIVE JANUARY 1, 2017
TITLE 19 CCR PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
TITLE 24 CCR PART 1 - 2016 BUILDING STANDARDS ADMINISTRATIVE CODE

REFERENCE CODE SECTION FOR NFPA STANDARDS - 2016 CBC (SFM) CHAPTER 35. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS. ALL WORK SHALL BE IN COMPLIANCE WITH SEISMIC DESIGN CATEGORY 'D'.

DEDUCTIVE ALTERNATE 1

PARKING LOT B TO BE DEDUCTED FROM SCOPE OF WORK. SEE SPEC SECTION 01 23 00 TO SEE MORE DETAILS.

BUILDING DATA/SCOPE OF WORK

COMPLETE PROJECT DESCRIPTION: CONSTRUCTION OF A NEW ELEMENTARY SCHOOL CAMPUS FOR THE CENTRAL UNIFIED SCHOOL DISTRICT.

PROJECT ADDRESS: 4108 W. SHIELDS AVE, FRESNO, CALIFORNIA 93722

PROPOSED BUILDING DATA

Table with columns: MAIN BUILDING, CONST. TYPE, E OCCUPANCY, TOTAL S.F., MULTI-PURPOSE, CONST. TYPE, A-2 & B OCCUPANCY, TOTAL S.F., (1) 36X40 PRE-SCHOOL RELOCATABLES, OCCUPANCY, TOTAL S.F., CONST. TYPE, TOTAL S.F.

ORGANIZATION

THE ORGANIZATION OF THESE DRAWINGS IS NOT INTENDED TO CONTROL THE DIVISION OF WORK AMONG SUBCONTRACTORS. IT SHALL BE THE CONSTRUCTION MANAGER'S RESPONSIBILITY TO DIVIDE THE WORK.

COPIES OF THESE DRAWINGS ARE SUPPLIED TO THE OWNER, AND THE CONTRACTOR FOR USE IN THE CONSTRUCTION OF THIS PROJECT ONLY. THE DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER.

IT IS THE INTENTION OF THE PLANS AND SPECIFICATIONS TO COVER ALL THINGS REQUIRED TO MAKE COMPLETE AND OPERATIVE SYSTEMS. CONTRACTOR IS TO FURNISH ALL LABOR, MATERIALS, TRANSPORTATION, EQUIPMENT, MISCELLANEOUS SERVICES, ETC., REQUIRED TO ACCOMPLISH THIS RESULT.

SHIELDS & BRAWLEY ELEMENTARY SCHOOL

CENTRAL UNIFIED SCHOOL DISTRICT
PROPOSED ELEMENTARY SCHOOL
FRESNO, CALIFORNIA

PROJECT DIRECTORY

OWNER / REPRESENTATIVE: CENTRAL UNIFIED SCHOOL DISTRICT, 4605 N. POLK AVE., FRESNO, CALIFORNIA 93722
ARCHITECT: SIM-PBK, 7790 N. PALM AVE., FRESNO, CALIFORNIA 93711
CIVIL ENGINEER: QUAD KNOPF INC., 301 E. POLLASKY AVE., CLOVIS, CALIFORNIA 93612
STRUCTURAL ENGINEER: A.S.D.I., INC., 2490 W. SHAW, SUITE 210, FRESNO, CALIFORNIA 93711
MECHANICAL PLUMBING FIRE SPRINKLER ENGINEER: LP ENGINEERS, INC., 895 W. ASHLAN, SUITE 101, CLOVIS, CALIFORNIA 93612
ELECTRICAL ENGINEER: HARDIN-DAVIDSON ENGINEERING, 356 POLLASKY AVE., SUITE 200, CLOVIS, CALIFORNIA 93612
LANDSCAPE ARCHITECT: ROBERT BORO, P.O. BOX 4734, FRESNO, CALIFORNIA 93744
KITCHEN: BALLINGER RESTAURANT EQUIPMENT, INC., 1000 APOLLO WAY, SUITE 170, SANTA ROSA, CALIFORNIA 95407

STATEMENT OF GENERAL CONFORMANCE

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO, SHOP DRAWINGS PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS
I FIND THAT: [X] ALL DRAWINGS OR SHEETS LISTED ON THE COVER OR INDEX SHEETS
[ ] THIS DRAWING OR PAGE

ARCHITECTURAL

T1 COVER SHEET
T2 ARCHITECTURAL NOTES
T3 CODE ANALYSIS
T4 EXIT ANALYSIS & SIGNAGE
T5 EXIT ANALYSIS & SIGNAGE
T6 EXIT ANALYSIS & SIGNAGE
A0.1 OVERALL SITE PLAN
A0.2 ENLARGED SITE PLAN
A0.3 ENLARGED SITE PLAN

ARCHITECTURAL

T1 COVER SHEET
T2 ARCHITECTURAL NOTES
T3 CODE ANALYSIS
T4 EXIT ANALYSIS & SIGNAGE
T5 EXIT ANALYSIS & SIGNAGE
T6 EXIT ANALYSIS & SIGNAGE
A0.1 OVERALL SITE PLAN
A0.2 ENLARGED SITE PLAN
A0.3 ENLARGED SITE PLAN

ARCHITECTURAL

T1 COVER SHEET
T2 ARCHITECTURAL NOTES
T3 CODE ANALYSIS
T4 EXIT ANALYSIS & SIGNAGE
T5 EXIT ANALYSIS & SIGNAGE
T6 EXIT ANALYSIS & SIGNAGE
A0.1 OVERALL SITE PLAN
A0.2 ENLARGED SITE PLAN
A0.3 ENLARGED SITE PLAN

ARCHITECTURAL

T1 COVER SHEET
T2 ARCHITECTURAL NOTES
T3 CODE ANALYSIS
T4 EXIT ANALYSIS & SIGNAGE
T5 EXIT ANALYSIS & SIGNAGE
T6 EXIT ANALYSIS & SIGNAGE
A0.1 OVERALL SITE PLAN
A0.2 ENLARGED SITE PLAN
A0.3 ENLARGED SITE PLAN

SHEET INDEX (cont.)

CIVIL
C1.1 PARTIAL TOPOGRAPHIC SURVEY & DEMO PLAN
C2.1 SITE PLAN
C2.2 SITE STRIPING AND SIGNAGE PLAN
C3.1 OMIT
C3.2 OMIT
C4.1 GRADING & DRAINAGE PLAN
C5.1 SITE PLUMBING PLAN
C5.2 STORM DRAIN PLAN
C6.1 DETAILS
C6.2 DETAILS
C6.3 DETAILS
C6.4 DETAILS
C6.5 DETAILS
C6.6 DETAILS
C6.7 STORM DRAIN DETAILS
C6.8 DETAILS
C6.9 CITY OF FRESNO DETAILS
C6.10 CITY OF FRESNO DETAILS
C6.11 CITY OF FRESNO DETAILS
FD1 FIRE DEPARTMENT PLAN
FD2 FIRE DEPARTMENT PLAN

LANDSCAPE

LS.1.0 OVERALL IRRIGATION PLAN
LS.2.0 OVERALL PLANTING PLAN
LS.3.1 PARTIAL IRRIGATION PLAN
LS.3.2 PARTIAL IRRIGATION PLAN
LS.3.3 PARTIAL IRRIGATION PLAN
LS.3.4 PARTIAL IRRIGATION PLAN
LS.4.1 PARTIAL PLANTING PLAN
LS.4.2 PARTIAL PLANTING PLAN
LS.4.3 PARTIAL PLANTING PLAN
LS.4.4 PARTIAL PLANTING PLAN
LS.5.0 IRRIGATION DETAILS
LS.5.1 PLANTING DETAILS

ARCHITECTURAL

FLOOR PLANS
A1.1 MAIN - 1ST FLOOR - FLOOR PLAN
A1.2 MAIN - 1ST FLOOR - FLOOR PLAN
A1.3 MAIN - 1ST FLOOR - FLOOR PLAN
A1.4 MAIN - 1ST FLOOR - ENLARGED RESTROOM PLANS
A1.5 MAIN - 1ST FLOOR - ENLARGED RESTROOM PLANS
A1.6 MAIN - 2ND FLOOR - FLOOR PLAN
A1.7 MAIN - 2ND FLOOR - FLOOR PLAN
A1.8 MAIN - 2ND FLOOR - FLOOR PLAN
A1.9 MAIN - 2ND FLOOR - ENLARGED RESTROOM PLANS
A1.10 MAIN - ENLARGED - STAIR PLAN
A1.11 MAIN - ENLARGED STAIR PLAN
A1.12 MULTI-PURPOSE - FLOOR PLAN
A1.13 MULTI-PURPOSE - ENLARGED RAMPS & PLATFORM PLANS
A1.14 MULTI-PURPOSE - ENLARGED RESTROOM PLANS
A1.15 ENLARGED METAL PANEL PLANS

ARCHITECTURAL

SCHEDULES
A2.1 MAIN - 1ST FLOOR - FINISH SCHEDULE
A2.2 MAIN - 1ST FLOOR - DOOR SCHEDULE
A2.3 MAIN - 1ST FLOOR - WINDOW SCHEDULE
A2.4 MAIN - 2ND FLOOR - FINISH SCHEDULE
A2.5 MAIN - 2ND FLOOR - DOOR SCHEDULE
A2.6 MAIN - 2ND FLOOR - WINDOW SCHEDULE
A2.7 MULTI-PURPOSE - FINISH, DOOR, AND WINDOW SCHEDULE
A2.8 COLOR SCHEDULE
A2.9 MAIN - 1ST FLOOR - ENLARGED FINISH FLOOR PLAN
A2.10 MAIN - 2ND FLOOR - ENLARGED FINISH FLOOR PLAN

ARCHITECTURAL

CEILING PLANS
A3.1 MAIN - 1ST FLOOR - REFLECTED CEILING PLAN
A3.2 MAIN - 1ST FLOOR - REFLECTED CEILING PLAN
A3.3 MAIN - 1ST FLOOR - REFLECTED CEILING PLAN
A3.4 MAIN - 2ND FLOOR - REFLECTED CEILING PLAN
A3.5 MAIN - 2ND FLOOR - REFLECTED CEILING PLAN
A3.6 MAIN - 2ND FLOOR - REFLECTED CEILING PLAN
A3.7 MULTI-PURPOSE - REFLECTED CEILING PLAN

ARCHITECTURAL

ROOF PLANS
A4.1 MAIN - 1ST FLOOR - ROOF PLAN
A4.2 MAIN - 1ST FLOOR - ROOF PLAN
A4.3 MAIN - 1ST FLOOR - ROOF PLAN
A4.4 MAIN - 2ND FLOOR - ROOF PLAN
A4.5 MAIN - 2ND FLOOR - ROOF PLAN
A4.6 MAIN - 2ND FLOOR - ROOF PLAN
A4.7 MULTI-PURPOSE - ROOF PLAN

ARCHITECTURAL

INTERIOR ELEVATIONS
A5.1 MAIN - 1ST FLOOR - INTERIOR ELEVATIONS
A5.2 MAIN - 1ST FLOOR - INTERIOR ELEVATIONS
A5.3 MAIN - 1ST FLOOR - INTERIOR ELEVATIONS
A5.4 MAIN - 1ST FLOOR - INTERIOR ELEVATIONS
A5.5 MAIN - 1ST FLOOR - INTERIOR ELEVATIONS
A5.6 MAIN - 1ST FLOOR - INTERIOR ELEVATIONS
A5.7 MAIN - 1ST FLOOR - INTERIOR ELEVATIONS
A5.8 MAIN - 1ST FLOOR - INTERIOR ELEVATIONS
A5.9 MAIN - 1ST FLOOR - INTERIOR ELEVATIONS
A5.10 MAIN - 1ST FLOOR - INTERIOR ELEVATIONS
A5.11 MAIN - 1ST FLOOR - INTERIOR ELEVATIONS
A5.12 MAIN - 2ND FLOOR - INTERIOR ELEVATIONS
A5.13 MAIN - 2ND FLOOR - INTERIOR ELEVATIONS
A5.14 MAIN - 2ND FLOOR - INTERIOR ELEVATIONS
A5.15 MAIN - 2ND FLOOR - INTERIOR ELEVATIONS
A5.16 MAIN - 2ND FLOOR - INTERIOR ELEVATIONS
A5.17 MULTI-PURPOSE - INTERIOR ELEVATIONS
A5.18 MULTI-PURPOSE - INTERIOR ELEVATIONS
A5.19 MULTI-PURPOSE - INTERIOR ELEVATIONS
A5.20 MULTI-PURPOSE - INTERIOR ELEVATIONS

ARCHITECTURAL

EXTERIOR ELEVATIONS
A6.1 MAIN - EXTERIOR - ELEVATIONS
A6.2 MAIN - EXTERIOR - ELEVATIONS
A6.3 MAIN - EXTERIOR - ELEVATIONS
A6.4 MULTI-PURPOSE - EXTERIOR ELEVATIONS

ARCHITECTURAL

SECTIONS
A7.1 MAIN - SECTIONS
A7.2 MAIN - SECTIONS
A7.3 MULTI-PURPOSE - BUILDING SECTIONS

SHEET INDEX (cont.)

DETAILS
A8.1 DETAILS
A8.2 DETAILS
A8.3 DETAILS
A8.4 DETAILS
A8.5 DETAILS
A8.6 DETAILS
A8.7 DETAILS
A8.8 DETAILS
A8.9 DETAILS
A8.10 DETAILS
A8.11 DETAILS
A8.12 SERVICE YARD PLAN
A8.13 DETAILS
A8.14 DETAILS
A8.15 DETAILS
A8.16 DETAILS
A8.17 DETAILS
A8.18 DETAILS

DETAILS

KITCHEN PLANS
K1.0 FOOD SERVICE EQUIPMENT FLOOR PLAN
K2.0 FOOD SERVICE EQUIPMENT ELECTRICAL PLAN
K3.0 FOOD SERVICE EQUIPMENT PLUMBING PLAN
K4.0 FOOD SERVICE EQUIPMENT BUILDING CONDITIONS
K5.0 FOOD SERVICE EQUIPMENT HOOD PLAN
K5.1 FOOD SERVICE EQUIPMENT HOOD DETAILS
K5.2 FIRE SUPPRESSION PLAN
K5.3 FIRE SUPPRESSION PLAN
K5.4 FIRE SUPPRESSION PLAN
K6.0 FOODSERVICE EQUIPMENT ELEVATIONS
K6.1 FOODSERVICE EQUIPMENT ELEVATIONS
K7.0 FOODSERVICE EQUIPMENT WALK-IN COOLER/FREEZER
K7.1 FOODSERVICE EQUIPMENT WALK-IN COOLER/FREEZER
K7.2 FOODSERVICE EQUIPMENT WALK-IN COOLER/FREEZER DETAILS
K8.0 FOODSERVICE EQUIPMENT ANCHORAGE DETAILS

STRUCTURAL

S1.1 TYPICAL NOTES & DETAILS
S1.2 TYPICAL NOTES & DETAILS
S1.3 TYPICAL NOTES & DETAILS
S1.4 TYPICAL NOTES & DETAILS
S1.5 TYPICAL NOTES & DETAILS
S1.6 TYPICAL NOTES & DETAILS
S2.1 MAIN BLDG. - PARTIAL FOUNDATION PLAN
S2.2 MAIN BLDG. - PARTIAL FOUNDATION PLAN
S2.3 MAIN BLDG. - PARTIAL FOUNDATION PLAN
S2.4 MULTI-PURPOSE BLDG. - FOUNDATION PLAN
S2.5 MULTI-PURPOSE BLDG. - STAGE FRAMING
S3.1 FOOTING DETAILS
S3.2 FOOTING DETAILS
S4.1 MAIN BLDG. - PARTIAL 2ND FLOOR FRAMING PLAN
S4.2 MAIN BLDG. - PARTIAL 2ND FLOOR FRAMING PLAN
S4.3 MAIN BLDG. - PARTIAL 2ND FLOOR FRAMING PLAN
S5.1 MAIN BLDG. - PARTIAL ROOF FRAMING PLAN
S5.2 MAIN BLDG. - PARTIAL ROOF FRAMING PLAN
S5.3 MAIN BLDG. - PARTIAL ROOF FRAMING PLAN
S5.4 MULTI-PURPOSE BLDG. - LOW ROOF FRAMING PLAN
S5.5 MULTI-PURPOSE BLDG. - HIGH ROOF FRAMING PLAN
S5.6 MULTI-PURPOSE BLDG. - CEILING FRAMING PLAN
S6.1 MAIN BLDG. - BUILDING SECTIONS
S6.2 MAIN BLDG. - BUILDING SECTIONS
S7.1 MAIN BLDG. - FRAME ELEVATIONS
S7.2 MAIN BLDG. - FRAME ELEVATIONS
S7.3 MULTI-PURPOSE BLDG. - FRAME ELEVATIONS
S7.4 MULTI-PURPOSE BLDG. - FRAME ELEVATIONS
S7.5 BRACED FRAME DETAILS
S7.6 MAIN BLDG. & MP - WALL SECTIONS AND DETAILS
S8.1 FRAMING DETAILS
S8.2 FRAMING DETAILS
S8.3 FRAMING DETAILS
S8.4 FRAMING DETAILS
S8.5 FRAMING DETAILS
S8.6 FRAMING DETAILS
S9.1 STAIR PLANS & DETAILS
S9.2 STAIR DETAILS

MECHANICAL

M0 MECHANICAL LEGEND, INDEX, AND NOTES
M1 MECHANICAL FLOOR PLAN - MULTI-PURPOSE
M2 MECHANICAL ROOF PLAN - MULTI-PURPOSE
M3 1ST FLOOR MECHANICAL PLAN WEST SIDE - MAIN BUILDING
M4 2ND FLOOR MECHANICAL PLAN EAST SIDE - MAIN BUILDING
M5 1ST FLOOR MECHANICAL PLAN WEST SIDE - MAIN BUILDING
M6 2ND FLOOR MECHANICAL PLAN EAST SIDE - MAIN BUILDING
M7 MECHANICAL ROOF PLAN WEST SIDE - MAIN BUILDING
M8 MECHANICAL ROOF PLAN EAST SIDE - MAIN BUILDING
M9 MECHANICAL SCHEDULES
M10 MECHANICAL DETAILS
M11 MECHANICAL DETAILS
M12 MECHANICAL DETAILS
M13 MECHANICAL DETAILS
M14 MECHANICAL DETAILS
M15 MECHANICAL DETAILS
M16 MECHANICAL DETAILS

MECHANICAL

ENERGY COMPLIANCE
EC0 TITLE-24 NOTES
EC1 ENERGY COMPLIANCE TITLE-24 MULTI PURPOSE
EC2 ENERGY COMPLIANCE TITLE-24 MULTI PURPOSE
EC3 ENERGY COMPLIANCE TITLE-24 MULTI PURPOSE
EC4 ENERGY COMPLIANCE TITLE-24 MULTI PURPOSE
EC5 ENERGY COMPLIANCE TITLE-24 MAIN BUILDING
EC6 ENERGY COMPLIANCE TITLE-24 MAIN BUILDING
EC7 ENERGY COMPLIANCE TITLE-24 MAIN BUILDING
EC8 ENERGY COMPLIANCE TITLE-24 MAIN BUILDING
EC9 ENERGY COMPLIANCE TITLE-24 MAIN BUILDING
EC10 ENERGY COMPLIANCE TITLE-24 MAIN BUILDING
EC11 ENERGY COMPLIANCE TITLE-24 MAIN BUILDING

MECHANICAL

PLUMBING
P0A PLUMBING LEGEND, INDEX AND NOTES
P0B PLUMBING SITE PLAN
P1 WATER BOOSTER PUMP PLAN
P2 PLUMBING FLOOR PLAN - MULTI-PURPOSE
P3 1ST FLOOR PLUMBING PLAN WEST SIDE - MAIN BUILDING
P4 1ST FLOOR PLUMBING PLAN EAST SIDE - MAIN BUILDING
P5 2ND FLOOR PLUMBING PLAN WEST SIDE - MAIN BUILDING

PLUMBING

PLUMBING (cont.)
P6 2ND FLOOR PLUMBING PLAN EAST SIDE - MAIN BUILDING
P7 ENLARGED PLUMBING FLOOR PLANS - MAIN BUILDING
P8 ENLARGED PLUMBING FLOOR PLANS - MAIN BUILDING
P9 ENLARGED PLUMBING FLOOR PLANS - MULTI PURPOSE BUILDING
P10 ENLARGED PLUMBING FLOOR PLANS - MULTI PURPOSE BUILDING
P11 PLUMBING DETAILS
P11A PLUMBING DETAILS
P12 PLUMBING SCHEDULES

PLUMBING

FIRE
FP0.1 FIRE SPRINKLER COVER SHEET INFORMATION
FP1 FIRE SPRINKLER REFERENCE SITE PLAN
FP2 FIRE SPRINKLER NOTES
FP3 FIRE SPRINKLER REFLECTED CEILING PLAN - MULTI-PURPOSE BUILDING
FP4 FIRE SPRINKLER PIPING PLAN - MULTI-PURPOSE BUILDING
FP5 1ST FLR FIRE SPRINKLER REFLECTED CEILING PLAN WEST SIDE-MAIN BLDG
FP6 1ST FLOOR FIRE SPRINKLER REFLECTED CEILING PLAN EAST SIDE-MAIN BLDG
FP7 1ST FLOOR FIRE SPRINKLER PIPING PLAN WEST SIDE - MAIN BLDG
FP8 1ST FLOOR FIRE SPRINKLER PIPING PLAN WEST SIDE - MAIN BLDG
FP9 2ND FLOOR FIRE SPRINKLER REFLECTED CEILING PLAN WEST SIDE - MAIN BLDG
FP10 2ND FLOOR FIRE SPRINKLER REFLECTED CEILING PLAN EAST SIDE - MAIN BLDG
FP11 2ND FLOOR FIRE SPRINKLER PIPING PLAN WEST SIDE - MAIN BUILDING
FP12 2ND FLOOR FIRE SPRINKLER PIPING PLAN EAST SIDE - MAIN BUILDING
FP13 FIRE SPRINKLER NOTES
FP14 FIRE SPRINKLER NOTES
FP15 FIRE SPRINKLER BUILDING SECTIONS

PLUMBING

ELECTRICAL
E0.1 ELECTRICAL SYMBOLS AND NOTES
E0.2 ELECTRICAL DETAILS AND SCHEDULE
E0.3 ELECTRICAL DETAILS
E0.4 ELECTRICAL DETAILS
E0.5 ELECTRICAL DETAILS & LINE DIAGRAM
E0.6 ELECTRICAL DETAILS
E0.7 PANEL SCHEDULES
E0.8 PANEL SCHEDULES
E0.9 ENERGY COMPLIANCE DOCUMENTS
E0.10 ENERGY COMPLIANCE DOCUMENTS
E1.1 FIRE ALARM SYMBOLS AND NOTES
E1.2 FIRE ALARM SINGLE LINE DIAGRAM
E1.3 FIRE ALARM CALCULATIONS
E1.4 FIRE ALARM PLANS & CALCULATIONS
E2.1 LIGHTING SITE DIAGRAM
E2.2 POWER & LOW VOLTAGE SYSTEMS SITE PLAN
E3.1 MAIN BUILDING - 1ST FLOOR - LIGHTING PLAN
E3.2 MAIN BUILDING - 1ST FLOOR - LIGHTING PLAN
E3.3 MAIN BUILDING - 1ST FLOOR - LIGHTING PLAN
E3.4 MAIN BUILDING - 2ND FLOOR - LIGHTING PLAN
E3.5 MAIN BUILDING - 2ND FLOOR - LIGHTING PLAN
E3.6 MAIN BUILDING - 2ND FLOOR - LIGHTING PLAN
E3.7 MULTI-PURPOSE - LIGHTING PLAN
E4.1 MAIN BUILDING - 1ST FLOOR - POWER & LOW VOLTAGE PLAN
E4.2 MAIN BUILDING - 1ST FLOOR - POWER & LOW VOLTAGE PLAN
E4.3 MAIN BUILDING - 1ST FLOOR - POWER & LOW VOLTAGE PLAN
E4.4 MAIN BUILDING - 2ND FLOOR - POWER & LOW VOLTAGE PLAN
E4.5 MAIN BUILDING - 2ND FLOOR - POWER & LOW VOLTAGE PLAN
E4.6 MAIN BUILDING - 2ND FLOOR - POWER & LOW VOLTAGE PLAN
E4.7 MULTI-PURPOSE - POWER & LOW VOLTAGE PLAN
E4.8 MAIN BUILDING - ELECTRICAL ROOF PLAN
E4.9 MAIN BUILDING - ELECTRICAL ROOF PLAN
E4.10 MAIN BUILDING - ELECTRICAL ROOF PLAN
E5.1 MAIN BUILDING - FIRE ALARM PLAN
E5.2 MAIN BUILDING - 1ST FLOOR - FIRE ALARM PLAN
E5.3 MAIN BUILDING - 1ST FLOOR - FIRE ALARM PLAN
E5.4 MAIN BUILDING - 2ND FLOOR - FIRE ALARM PLAN
E5.5 MAIN BUILDING - 2ND FLOOR - FIRE ALARM PLAN
E5.6 MAIN BUILDING - 2ND FLOOR - FIRE ALARM PLAN
E5.7 MULTI-PURPOSE - FIRE ALARM PLAN

SHEET INDEX (cont.)

RELOCATABLES (PRE-SCHOOL)
TS TITLE SHEET
N1.0 GENERAL NOTES
N2.0 GENERAL NOTES
N3.0 TYPICAL SCHEDULES:DOORS, WINDOWS, & FINISHES
N4.0 ACCESSIBILITY STANDARDS AND DETAILS
N5.0 MULTIPURPOSE FLOOR PLAN CONFIGURATIONS
EN.1 ENERGY CALCULATIONS
EN.3 ENERGY CALCULATIONS
EN.4 ENERGY CALCULATIONS
EN.5 ENERGY CALCULATIONS
EN.6 ENERGY CALCULATIONS
A1.2 RESTROOM OPTION FLOOR PLANS
A2.0 ROOF PLANS
A2.1 ROOF DETAILS
A4.0 INTERIOR ELEVATIONS-TYPICAL CLASSROOM
A4.1 INTERIOR ELEVATIONS-RESTROOM OPTION
A5.0 TYPICAL EXTERIOR ELVATIONS - DURA TEMP 303 SIDING OPTION
A5.1 TYPICAL ARCHITECTURAL DETAIL- DURA TEMP 303 SIDING OPTION
A7.2 MISCELLANEOUS ARCHITECTURAL DETAILS
S0.0 STEEL MEMBER PROPERTIES
S1.1 CONCRETE FOUNDATION PLAN-50+15 PSF LIVE LOAD
S1.4 CONCRETE FOUNDATION DETAILS
S1.5 CONCRETE FOUNDATION DETAILS
S1.6 CONCRETE FOUNDATION DETAILS
S1.7 CONCRETE FOUNDATION OPTIONAL UTILITY OPENINGS IN FOOTINGS
S3.0 FLOOR FRAMING PLAN-PLYWOOD OR STUCCO-CRETE
S4.1 ROOF FRAMING PLAN & DETAILS- ENCLOSED SOFFIT OPTION
S4.2 ROOF FRAMING DETAILS
S5.0 MOMENT FRAME ELEVATIONS AND DETAILS
S5.1 MOMENT FRAME CONNECTION DETAILS
S6.0 TYPICAL LONGITUDINAL & TRANSVERSE FRAME ELVATIONS
S8.0 WOOD STUD WALL FRAMING ELEVATIONS AND SCHEDULES
S8.1 WOOD STUD WALL FRAMING DETAILS
M1.0 TYPICAL REFLECTED CEILING PLAN
M1.1 TYPICAL MECHANICAL PLAN OPTIONS
M1.4 MECHANICAL BUILDING SECTION& CEILING DETAILS
M1.5 CEILING & MECHANICAL DETAILS
M1.6 MECHANICAL ROOF DETAILS
M1.7 CEILING NOTES & MECHANICAL NOTES, SCHEDULES
E1.0 TYPICAL ELECTRICAL PLAN
E1.2 ELECTRICAL NOTES, PANEL LAYOUT & DETAILS
P1.0 RESTROOM OPTION PLUMBING PLANS AND FIXTURE SCHEDULE
P2.0 PLUMBING DETAILS & ACCESSIBLE DETAILS
P3.0 PLUMBING ISOMETRIC DRAWINGS
FS1 FIRE SPRINKLER COVER SHEET
FS2 FIRE SPRINKLER LAYOUT/PIPING PLAN
TOTAL SHEETS : 302

RELOCATABLES (PRE-SCHOOL)

RELOCATABLES (PRE-SCHOOL)
TS TITLE SHEET
N1.0 GENERAL NOTES
N2.0 GENERAL NOTES
N3.0 TYPICAL SCHEDULES:DOORS, WINDOWS, & FINISHES
N4.0 ACCESSIBILITY STANDARDS AND DETAILS
N5.0 MULTIPURPOSE FLOOR PLAN CONFIGURATIONS
EN.1 ENERGY CALCULATIONS
EN.3 ENERGY CALCULATIONS
EN.4 ENERGY CALCULATIONS
EN.5 ENERGY CALCULATIONS
EN.6 ENERGY CALCULATIONS
A1.2 RESTROOM OPTION FLOOR PLANS
A2.0 ROOF PLANS
A2.1 ROOF DETAILS
A4.0 INTERIOR ELEVATIONS-TYPICAL CLASSROOM
A4.1 INTERIOR ELEVATIONS-RESTROOM OPTION
A5.0 TYPICAL EXTERIOR ELVATIONS - DURA TEMP 303 SIDING OPTION
A5.1 TYPICAL ARCHITECTURAL DETAIL- DURA TEMP 303 SIDING OPTION
A7.2 MISCELLANEOUS ARCHITECTURAL DETAILS
S0.0 STEEL MEMBER PROPERTIES
S1.1 CONCRETE FOUNDATION PLAN-50+15 PSF LIVE LOAD
S1.4 CONCRETE FOUNDATION DETAILS
S1.5 CONCRETE FOUNDATION DETAILS
S1.6 CONCRETE FOUNDATION DETAILS
S1.7 CONCRETE FOUNDATION OPTIONAL UTILITY OPENINGS IN FOOTINGS
S3.0 FLOOR FRAMING PLAN-PLYWOOD OR STUCCO-CRETE
S4.1 ROOF FRAMING PLAN & DETAILS- ENCLOSED SOFFIT OPTION
S4.2 ROOF FRAMING DETAILS
S5.0 MOMENT FRAME ELEVATIONS AND DETAILS
S5.1 MOMENT FRAME CONNECTION DETAILS
S6.0 TYPICAL LONGITUDINAL & TRANSVERSE FRAME ELVATIONS
S8.0 WOOD STUD WALL FRAMING ELEVATIONS AND SCHEDULES
S8.1 WOOD STUD WALL FRAMING DETAILS
M1.0 TYPICAL REFLECTED CEILING PLAN
M1.1 TYPICAL MECHANICAL PLAN OPTIONS
M1.4 MECHANICAL BUILDING SECTION& CEILING DETAILS
M1.5 CEILING & MECHANICAL DETAILS
M1.6 MECHANICAL ROOF DETAILS
M1.7 CEILING NOTES & MECHANICAL NOTES, SCHEDULES
E1.0 TYPICAL ELECTRICAL PLAN
E1.2 ELECTRICAL NOTES, PANEL LAYOUT & DETAILS
P1.0 RESTROOM OPTION PLUMBING PLANS AND FIXTURE SCHEDULE
P2.0 PLUMBING DETAILS & ACCESSIBLE DETAILS
P3.0 PLUMBING ISOMETRIC DRAWINGS
FS1 FIRE SPRINKLER COVER SHEET
FS2 FIRE SPRINKLER LAYOUT/PIPING PLAN
TOTAL SHEETS : 302

RELOCATABLES (PRE-SCHOOL)

RELOCATABLES (PRE-SCHOOL)
TS TITLE SHEET
N1.0 GENERAL NOTES
N2.0 GENERAL NOTES
N3.0 TYPICAL SCHEDULES:DOORS, WINDOWS, & FINISHES
N4.0 ACCESSIBILITY STANDARDS AND DETAILS
N5.0 MULTIPURPOSE FLOOR PLAN CONFIGURATIONS
EN.1 ENERGY CALCULATIONS
EN.3 ENERGY CALCULATIONS
EN.4 ENERGY CALCULATIONS
EN.5 ENERGY CALCULATIONS
EN.6 ENERGY CALCULATIONS
A1.2 RESTROOM OPTION FLOOR PLANS
A2.0 ROOF PLANS
A2.1 ROOF DETAILS
A4.0 INTERIOR ELEVATIONS-TYPICAL CLASSROOM
A4.1 INTERIOR ELEVATIONS-RESTROOM OPTION
A5.0 TYPICAL EXTERIOR ELVATIONS - DURA TEMP 303 SIDING OPTION
A5.1 TYPICAL ARCHITECTURAL DETAIL- DURA TEMP 303 SIDING OPTION
A7.2 MISCELLANEOUS ARCHITECTURAL DETAILS
S0.0 STEEL MEMBER PROPERTIES
S1.1 CONCRETE FOUNDATION PLAN-50+15 PSF LIVE LOAD
S1.4 CONCRETE FOUNDATION DETAILS
S1.5 CONCRETE FOUNDATION DETAILS
S1.6 CONCRETE FOUNDATION DETAILS
S1.7 CONCRETE FOUNDATION OPTIONAL UTILITY OPENINGS IN FOOTINGS
S3.0 FLOOR FRAMING PLAN-PLYWOOD OR STUCCO-CRETE
S4.1 ROOF FRAMING PLAN & DETAILS- ENCLOSED SOFFIT OPTION
S4.2 ROOF FRAMING DETAILS
S5.0 MOMENT FRAME ELEVATIONS AND DETAILS
S5.1 MOMENT FRAME CONNECTION DETAILS
S6.0 TYPICAL LONGITUDINAL & TRANSVERSE FRAME ELVATIONS
S8.0 WOOD STUD WALL FRAMING ELEVATIONS AND SCHEDULES
S8.1 WOOD STUD WALL FRAMING DETAILS
M1.0 TYPICAL REFLECTED CEILING PLAN
M1.1 TYPICAL MECHANICAL PLAN OPTIONS
M1.4 MECHANICAL BUILDING SECTION& CEILING DETAILS
M1.5 CEILING & MECHANICAL DETAILS
M1.6 MECHANICAL ROOF DETAILS
M1.7 CEILING NOTES & MECHANICAL NOTES, SCHEDULES
E1.0 TYPICAL ELECTRICAL PLAN
E1.2 ELECTRICAL NOTES, PANEL LAYOUT & DETAILS
P1.0 RESTROOM OPTION PLUMBING PLANS AND FIXTURE SCHEDULE
P2.0 PLUMBING DETAILS & ACCESSIBLE DETAILS
P3.0 PLUMBING ISOMETRIC DRAWINGS
FS1 FIRE SPRINKLER COVER SHEET
FS2 FIRE SPRINKLER LAYOUT/PIPING PLAN
TOTAL SHEETS : 302

RELOCATABLES (PRE-SCHOOL)

RELOCATABLES (PRE-SCHOOL)
TS TITLE SHEET
N1.0 GENERAL NOTES
N2.0 GENERAL NOTES
N3.0 TYPICAL SCHEDULES:DOORS, WINDOWS, & FINISHES
N4.0 ACCESSIBILITY STANDARDS AND DETAILS
N5.0 MULTIPURPOSE FLOOR PLAN CONFIGURATIONS
EN.1 ENERGY CALCULATIONS
EN.3 ENERGY CALCULATIONS
EN.4 ENERGY CALCULATIONS
EN.5 ENERGY CALCULATIONS
EN.6 ENERGY CALCULATIONS
A1.2 RESTROOM OPTION FLOOR PLANS
A2.0 ROOF PLANS
A2.1 ROOF DETAILS
A4.0 INTERIOR ELEVATIONS-TYPICAL CLASSROOM
A4.1 INTERIOR ELEVATIONS-RESTROOM OPTION
A5.0 TYPICAL EXTERIOR ELVATIONS - DURA TEMP 303 SIDING OPTION
A5.1 TYPICAL ARCHITECTURAL DETAIL- DURA TEMP 303 SIDING OPTION
A7.2 MISCELLANEOUS ARCHITECTURAL DETAILS
S0.0 STEEL MEMBER PROPERTIES
S1.1 CONCRETE FOUNDATION PLAN-50+15 PSF LIVE LOAD
S1.4 CONCRETE FOUNDATION DETAILS
S1.5 CONCRETE FOUNDATION DETAILS
S1.6 CONCRETE FOUNDATION DETAILS
S1.7 CONCRETE FOUNDATION OPTIONAL UTILITY OPENINGS IN FOOTINGS
S3.0 FLOOR FRAMING PLAN-PLYWOOD OR STUCCO-CRETE
S4.1 ROOF FRAMING PLAN & DETAILS- ENCLOSED SOFFIT OPTION
S4.2 ROOF FRAMING DETAILS
S5.0 MOMENT FRAME ELEVATIONS AND DETAILS
S5.1 MOMENT FRAME CONNECTION DETAILS
S6.0 TYPICAL LONGITUDINAL & TRANSVERSE FRAME ELVATIONS
S8.0 WOOD STUD WALL FRAMING ELEVATIONS AND SCHEDULES
S8.1 WOOD STUD WALL FRAMING DETAILS
M1.0 TYPICAL REFLECTED CEILING PLAN
M1.1 TYPICAL MECHANICAL PLAN OPTIONS
M1.4 MECHANICAL BUILDING SECTION& CEILING DETAILS
M1.5 CEILING & MECHANICAL DETAILS
M1.6 MECHANICAL ROOF DETAILS
M1.7 CEILING NOTES & MECHANICAL NOTES, SCHEDULES
E1.0 TYPICAL ELECTRICAL PLAN
E1.2 ELECTRICAL NOTES, PANEL LAYOUT & DETAILS
P1.0 RESTROOM OPTION PLUMBING PLANS AND FIXTURE SCHEDULE
P2.0 PLUMBING DETAILS & ACCESSIBLE DETAILS
P3.0 PLUMBING ISOMETRIC DRAWINGS
FS1 FIRE SPRINKLER COVER SHEET
FS2 FIRE SPRINKLER LAYOUT/PIPING PLAN
TOTAL SHEETS : 302

RELOCATABLES (PRE-SCHOOL)

RELOCATABLES (PRE-SCHOOL)
TS TITLE SHEET
N1.0 GENERAL NOTES
N2.0 GENERAL NOTES
N3.0 TYPICAL SCHEDULES:DOORS, WINDOWS, & FINISHES
N4.0 ACCESSIBILITY STANDARDS AND DETAILS
N5.0 MULTIPURPOSE FLOOR PLAN CONFIGURATIONS
EN.1 ENERGY CALCULATIONS
EN.3 ENERGY CALCULATIONS
EN.4 ENERGY CALCULATIONS
EN.5 ENERGY CALCULATIONS
EN.6 ENERGY CALCULATIONS
A1.2 RESTROOM OPTION FLOOR PLANS
A2.0 ROOF PLANS
A2.1 ROOF DETAILS
A4.0 INTERIOR ELEVATIONS-TYPICAL CLASSROOM
A4.1 INTERIOR ELEVATIONS-RESTROOM OPTION
A5.0 TYPICAL EXTERIOR ELVATIONS - DURA TEMP 303 SIDING OPTION
A5.1 TYPICAL ARCHITECTURAL DETAIL- DURA TEMP 303 SIDING OPTION
A7.2 MISCELLANEOUS ARCHITECTURAL DETAILS
S0.0 STEEL MEMBER PROPERTIES
S1.1 CONCRETE FOUNDATION PLAN-50+15 PSF LIVE LOAD
S1.4 CONCRETE FOUNDATION DETAILS
S1.5 CONCRETE FOUNDATION DETAILS
S1.6 CONCRETE FOUNDATION DETAILS
S1.7 CONCRETE FOUNDATION OPTIONAL UTILITY OPENINGS IN FOOTINGS
S3.0 FLOOR FRAMING PLAN-PLYWOOD OR STUCCO-CRETE
S4.1 ROOF FRAMING PLAN & DETAILS- ENCLOSED SOFFIT OPTION
S4.2 ROOF FRAMING DETAILS
S5.0 MOMENT FRAME ELEVATIONS AND DETAILS
S5.1 MOMENT FRAME CONNECTION DETAILS
S6.0 TYPICAL LONGITUDINAL & TRANSVERSE FRAME ELVATIONS
S8.0 WOOD STUD WALL FRAMING ELEVATIONS AND SCHEDULES
S8.1 WOOD STUD WALL FRAMING DETAILS
M1.0 TYPICAL REFLECTED CEILING PLAN
M1.1 TYPICAL MECHANICAL PLAN OPTIONS
M1.4 MECHANICAL BUILDING SECTION& CEILING DETAILS
M1.5 CEILING & MECHANICAL DETAILS
M1.6 MECHANICAL ROOF DETAILS
M1.7 CEILING NOTES & MECHANICAL NOTES, SCHEDULES
E1.0 TYPICAL ELECTRICAL PLAN
E1.2 ELECTRICAL NOTES, PANEL LAYOUT & DETAILS
P1.0 RESTROOM OPTION PLUMBING PLANS AND FIXTURE SCHEDULE
P2.0 PLUMBING DETAILS & ACCESSIBLE DETAILS
P3.0 PLUMBING ISOMETRIC DRAWINGS
FS1 FIRE SPRINKLER COVER SHEET
FS2 FIRE SPRINKLER LAYOUT/PIPING PLAN
TOTAL SHEETS : 302

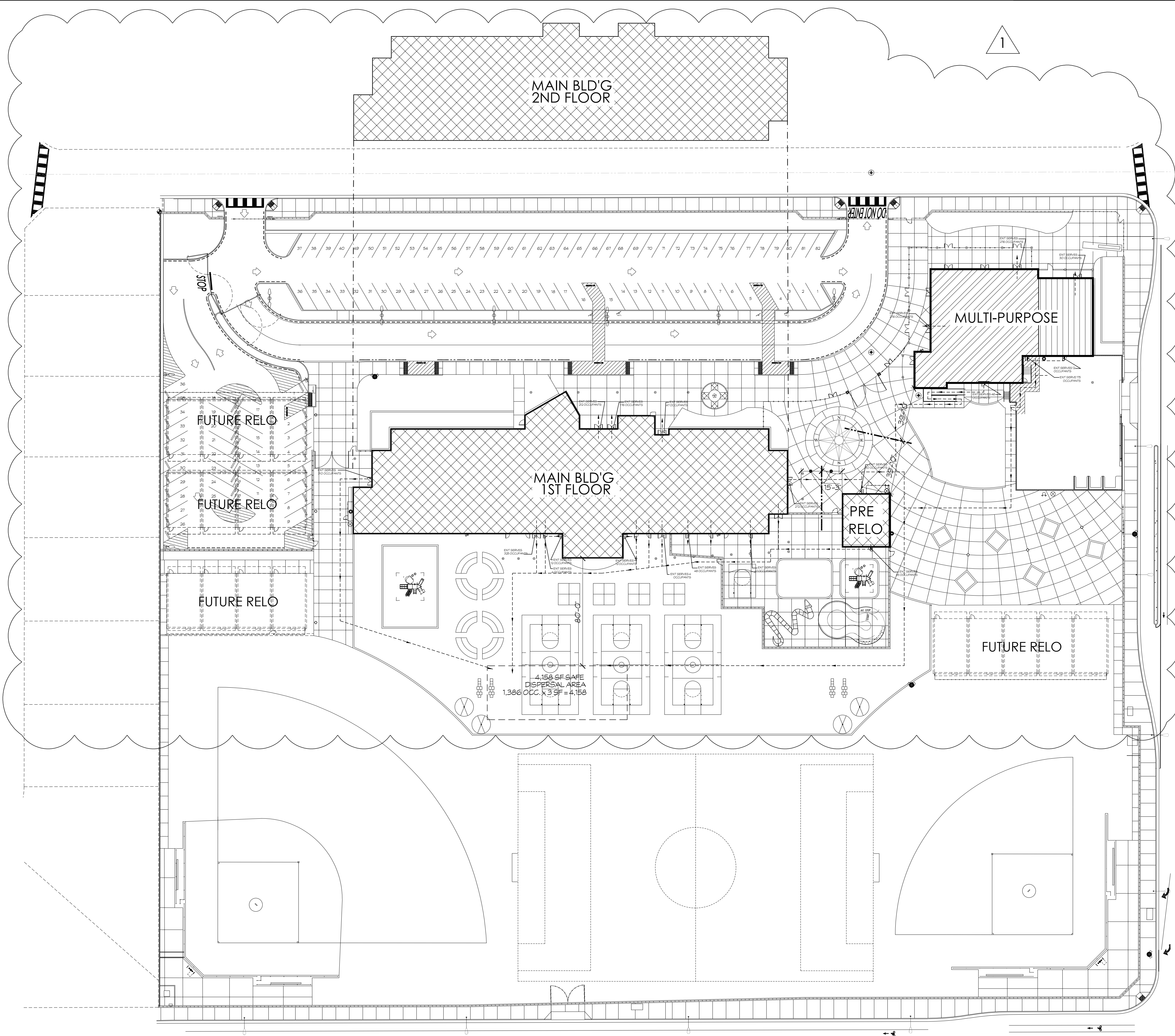
RELOCATABLES (PRE-SCHOOL)

RELOCATABLES (PRE-SCHOOL)
TS TITLE SHEET
N1.0 GENERAL NOTES
N2.0 GENERAL NOTES
N3.0 TYPICAL SCHEDULES:DOORS, WINDOWS, & FINISHES
N4.0 ACCESSIBILITY STANDARDS AND DETAILS
N5.0 MULTIPURPOSE FLOOR PLAN CONFIGURATIONS
EN.1 ENERGY CALCULATIONS
EN.3 ENERGY CALCULATIONS
EN.4 ENERGY CALCULATIONS
EN.5 ENERGY CALCULATIONS
EN.6 ENERGY CALCULATIONS
A1.2 RESTROOM OPTION FLOOR PLANS
A2.0 ROOF PLANS
A2.1 ROOF DETAILS
A4.0 INTERIOR ELEVATIONS-TYPICAL CLASSROOM
A4.1 INTERIOR ELEVATIONS-RESTROOM OPTION
A5.0 TYPICAL EXTERIOR ELVATIONS - DURA TEMP 303 SIDING OPTION
A5.1 TYPICAL ARCHITECTURAL DETAIL- DURA TEMP 303 SIDING OPTION
A7.2 MISCELLANEOUS ARCHITECTURAL DETAILS
S0.0 STEEL MEMBER PROPERTIES
S1.1 CONCRETE FOUNDATION PLAN-50+15 PSF LIVE LOAD
S1.4 CONCRETE FOUNDATION DETAILS
S1.5 CONCRETE FOUNDATION DETAILS
S1.6 CONCRETE FOUNDATION DETAILS
S1.7 CONCRETE FOUNDATION OPTIONAL UTILITY OPENINGS IN FOOTINGS
S3.0 FLOOR FRAMING PLAN-PLYWOOD OR STUCCO-CRETE
S4.1 ROOF FRAMING PLAN & DETAILS- ENCLOSED SOFFIT OPTION
S4.2 ROOF FRAMING DETAILS
S5.0 MOMENT FRAME ELEVATIONS AND DETAILS
S5.1 MOMENT FRAME CONNECTION DETAILS
S6.0 TYPICAL LONGITUDINAL & TRANSVERSE FRAME ELVATIONS
S8.0 WOOD STUD WALL FRAMING ELEVATIONS AND SCHEDULES
S8.1 WOOD STUD WALL FRAMING DETAILS
M1.0 TYPICAL REFLECTED CEILING PLAN
M1.1 TYPICAL MECHANICAL PLAN OPTIONS
M1.4 MECHANICAL BUILDING SECTION& CEILING DETAILS
M1.5 CEILING & MECHANICAL DETAILS
M1.6 MECHANICAL ROOF DETAILS
M1.7 CEILING NOTES & MECHANICAL NOTES, SCHEDULES
E1.0 TYPICAL ELECTRICAL PLAN
E1.2 ELECTRICAL NOTES, PANEL LAYOUT & DETAILS
P1.0 RESTROOM OPTION PLUMBING PLANS AND FIXTURE SCHEDULE
P2.0 PLUMBING DETAILS & ACCESSIBLE DETAILS
P3.0 PLUMBING ISOMETRIC DRAWINGS
FS1 FIRE SPRINKLER COVER SHEET
FS2 FIRE SPRINKLER LAYOUT/PIPING PLAN
TOTAL SHEETS : 302

RELOCATABLES (PRE-SCHOOL)

RELOCATABLES (PRE-SCHOOL)
TS TITLE SHEET
N1.0 GENERAL NOTES
N2.0 GENERAL NOTES
N3.0 TYPICAL SCHEDULES:DOORS, WINDOWS, & FINISHES
N4.0 ACCESSIBILITY STANDARDS AND DETAILS
N5.0 MULTIPURPOSE FLOOR PLAN CONFIGURATIONS
EN.1 ENERGY CALCULATIONS
EN.3 ENERGY CALCULATIONS
EN.4 ENERGY CALCULATIONS
EN.5 ENERGY CALCULATIONS
EN.6 ENERGY CALCULATIONS
A1.2 RESTROOM OPTION FLOOR PLANS
A2.0 ROOF PLANS
A2.1 ROOF DETAILS
A4.0 INTERIOR ELEVATIONS-TYPICAL CLASSROOM
A4.1 INTERIOR ELEVATIONS-RESTROOM OPTION
A5.0 TYPICAL EXTERIOR ELVATIONS - DURA TEMP 303 SIDING OPTION
A5.1 TYPICAL ARCHITECTURAL DETAIL- DURA TEMP 303 SIDING OPTION
A7.2 MISCELLANEOUS ARCHITECTURAL DETAILS
S0.0 STEEL MEMBER PROPERTIES
S1.1 CONCRETE FOUNDATION PLAN-50+15 PSF LIVE LOAD
S1.4 CONCRETE FOUNDATION DETAILS
S1.5 CONCRETE FOUNDATION DETAILS
S1.6 CONCRETE FOUNDATION DETAILS
S1.7 CONCRETE FOUNDATION OPTIONAL UTILITY OPENINGS IN FOOTINGS
S3.0 FLOOR FRAMING PLAN-PLYWOOD OR STUCCO-CRETE





**CODE ANALYSIS**

MAIN BUILDING	
CONSTRUCTION TYPE:	II-B
OCCUPANCY CLASSIFICATION:	E
FIRE SPRINKLERS:	YES
ALLOWABLE STORES, HEIGHT:	2 STORIES, +55'-0" (w/ area increase)
ACTUAL STORES, HEIGHT:	2 STORY, +38'-0"
BUILDING AREA:	1ST FLOOR: 26,061 S.F. 2ND FLOOR: 24,782 S.F.
w/ COVERED AREA:	31,810 S.F. / 26,216 S.F.
TOTAL BUILDING AREA:	50,843 S.F.
w/ COVERED AREA:	58,026 S.F.
ALLOWABLE AREA DETERMINATION:	
TABULAR AREA FACTOR:	S1 (w/o height increase) = 43,500 S.F.
FRONTAGE INCREASE (EQ 5-5):	$[888'-4" / 904'-1" - 25] 30/30 = .73$
ALLOWABLE AREA (EQ 5-2):	$[43,500 + (14,500 \times .73)] \times 2 = 108,170$
TOTAL ALLOWABLE AREA:	108,170 S.F. (54,085 S.F. per floor)
DETERMINATION:	58,026 S.F. < 108,170 S.F. = (OK)

MULTI-PURPOSE	
CONSTRUCTION TYPE:	V-B
OCCUPANCY CLASSIFICATION:	A-2 & B
FIRE SPRINKLERS:	YES
OCCUPANCY TYPE:	A-2 B
ALLOWABLE STORES, HEIGHT:	1 STORY, +40'-0" / 2 STORIES, +40'-0"
ACTUAL STORES, HEIGHT:	1 STORY, +24'-0" / 1 STORY, +18'-0"
BUILDING AREA:	7,148 S.F. / 2,169 S.F.
w/ COVERED AREA:	11,537 S.F. / 2,78 S.F.
ALLOWABLE AREA DETERMINATION:	
TABULAR AREA FACTOR:	S1 = 24,000 S.F. / S1 = 36,000 S.F.
TOTAL ALLOWABLE AREA:	24,000 S.F. / 36,000 S.F.
DETERMINATION:	A-2 E
	$\frac{11,537 \text{ S.F.}}{24,000 \text{ S.F.}} + \frac{2,78 \text{ S.F.}}{36,000 \text{ S.F.}} = .557 \text{ (OK)}$

PRE-SCHOOL	
CONSTRUCTION TYPE:	V-B
OCCUPANCY CLASSIFICATION:	E
FIRE SPRINKLERS:	YES
ALLOWABLE STORES, HEIGHT:	1 STORY, +40'-0" (w/ area increase)
ACTUAL STORES, HEIGHT:	1 STORY, +11'-8"
BUILDING AREA:	1,440 S.F.
w/ COVERED AREA:	1,800 S.F.
ALLOWABLE AREA DETERMINATION:	
TABULAR AREA FACTOR:	S1 = 38,000 S.F.
DETERMINATION:	1,800 S.F. < 38,000 S.F. = (OK)

TOTAL COMBINED AREA:	61,600 S.F.
w/ COVERED AREA:	74,081 S.F.

**CODES UTILIZED**

- PER C.B.C. 303.3 - NO SEPARATION BETWEEN KITCHEN AND DINING AREA

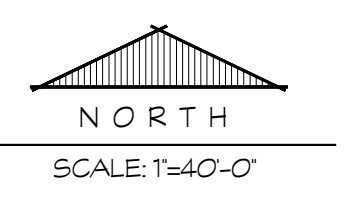
**NOTES**

- REFER TO T.4 & T.5 FOR EXIT ANALYSIS OF EACH BUILDING
- REFER TO FLOOR PLAN SHEETS FOR ALL WALL TYPES AND ASSEMBLIES

**PATH OF TRAVEL NOTES**

- ALL BUILDINGS CAN BE ACCESSED FROM PARKING SPACES
- ARCHITECT HAS SURVEYED/INSPECTED THE PATH OF TRAVEL (POT) AS INDICATED ON THE PLANS AND HAS FOUND IT TO BE, OR HAS INDICATED ON THE PLANS REMEDIAL WORK WHICH WOULD CAUSE IT TO BE, A BARRIER-FREE ACCESSIBLE ROUTE.
  - AT LEAST 48" IN WIDTH, OR AS APPROVED BY CODE
  - WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 12" MAXIMUM SLOPE, OR VERTICAL LEVEL CHANGES EXCEEDING 1/4"
  - WITH A FIRM, STABLE, AND SLIP RESISTANT WALKING SURFACE
  - WITH A RUNNING SLOPE OF 1:20 OR LESS, UNLESS OTHERWISE INDICATED, AND A CROSS SLOPE OF 1:50 OR LESS
  - IS FREE FROM OVERHEAD OBSTRUCTIONS WITHIN 80" ABOVE WALKING SURFACE
  - IS FREE OF OBJECTS WHICH PROTRUDE MORE THAN 4" BETWEEN THE HEIGHTS OF 27" AND 80" ABOVE THE WALKING SURFACE.
- ALL DOORS, DOORWAYS & GATES IN PATH OF TRAVEL MUST COMPLY WITH EXIT DOOR REQUIREMENTS SECTION 108-404: PROVIDE LEVER HARDWARE, KICK PLATES, 5 lbs PRESSURE TO OPERATE, 24" MIN. STRIKE SIDE CLEARANCE, 48" MAX. WIDTH, AND PANIC HARDWARE IF REQUIRED BY FIRE LIFE SAFETY.
- THERE IS NO DROP-OFF OVER 4" AT THE EDGE OF WALK OR LANDING. IN NEW CONSTRUCTION, ALL WALKS AND ROUTES ARE CONSIDERED PATH OF TRAVEL (P.O.T.) ARCHITECT AND CONTRACTOR SHALL VERIFY THAT THE ENTIRE PATH OF TRAVEL HAS BEEN CONSTRUCTED FREE OF BARRIERS.
- ALL ACCESSIBLE PARKING SPACES ARE LOCATED SO THAT A PERSON WITH DISABILITY IS NOT COMPELLED TO WHEEL OR WALK BEHIND ANY OTHER CAR.
- WALKS IN PATH OF TRAVEL SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. WHEN INSTALLED, OPENINGS SHALL BE 1/2" MAXIMUM IN DIRECTION OF TRAFFIC FLOW.

**CODE ANALYSIS**



LEGEND	
	<b>A-2</b> ASSEMBLY USES INTENDED FOR FOOD AND/OR DRINK CONSUMPTION
	<b>B</b> THE USE OF A BUILDING OR STRUCTURE OR PORTION THEREOF FOR OFFICE, PROFESSIONAL, OR SERVICE TYPE TRANSACTIONS
	<b>E</b> THE USE OF A BUILDING OR STRUCTURE OR PORTION THEREOF FOR EDUCATIONAL PURPOSES THROUGH THE 12TH GRADE
	ASSUMED PROPERTY LINE, DEFINES GO BOUNDARY OF UNLIMITED AREA
	PATH OF TRAVEL
	FIRE HYDRANT, SEE CIVIL PLANS

**PATH OF TRAVEL NOTES**

DSA PR-15-01

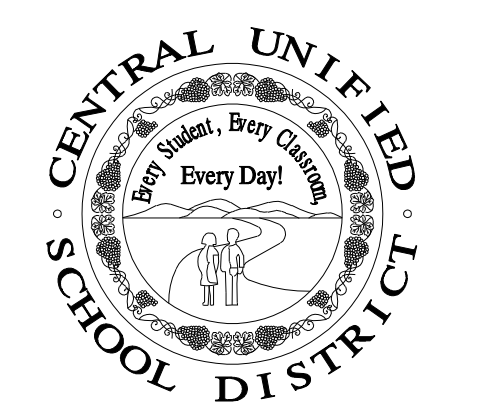
DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:

THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS AND STRUCTURAL REPAIRS, AS PART OF THE DESIGN OF THIS PROJECT. THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTION OF THE POT THAT WERE DETERMINED TO BE NON-COMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS, AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NON-COMPLIANT ELEMENTS, COMPONENTS OR PORTION OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF POT ITEMS WITHIN SCOPE OF THE PROJECT REPRESENTED AS CODE COMPLIANT ARE FOUND TO BE NON-COMPLYING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT (FORM DSA 140)



**PROJECT:**  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-69a**  
**S&B Elementary**  
**02-116800**



THE FIRM OF SMITH, WANAGSA, MUKHUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

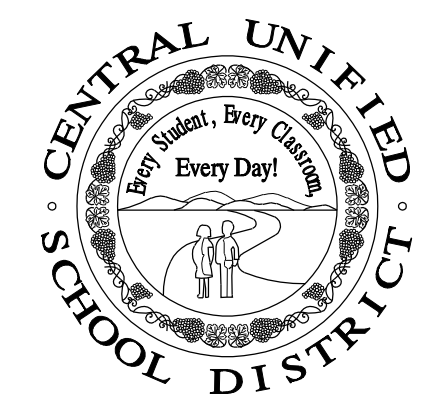
REVISIONS		
No.	DATE	DESCRIPTION
1	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION	
PROJECT COORDINATOR	SHEET NO.
JOHN SMITH	T3
PROJECT NO.	17-67
DATE	1.27.23
SCALE	1/40'-0"



PROJECT:

## SHIELDS & BRAWLEY ELEMENTARY SCHOOL



**AD 1-70a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, IWANAGA, MELHUIS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

### PROJECT DEVELOPMENT

DATE	ISSUED FOR

### REVISIONS

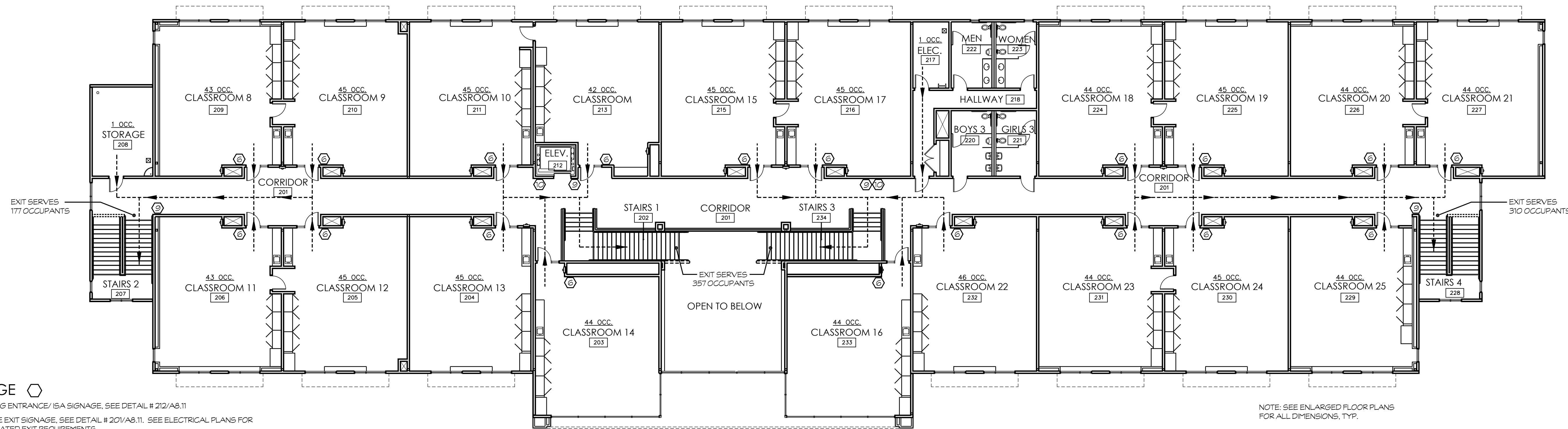
No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS

### SHEET DESCRIPTION

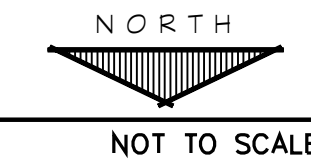
## EXIT ANALYSIS & SIGNAGE

MAIN BLDG.

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	T4
DATE 1.27.23	
SCALE NOT TO SCALE	



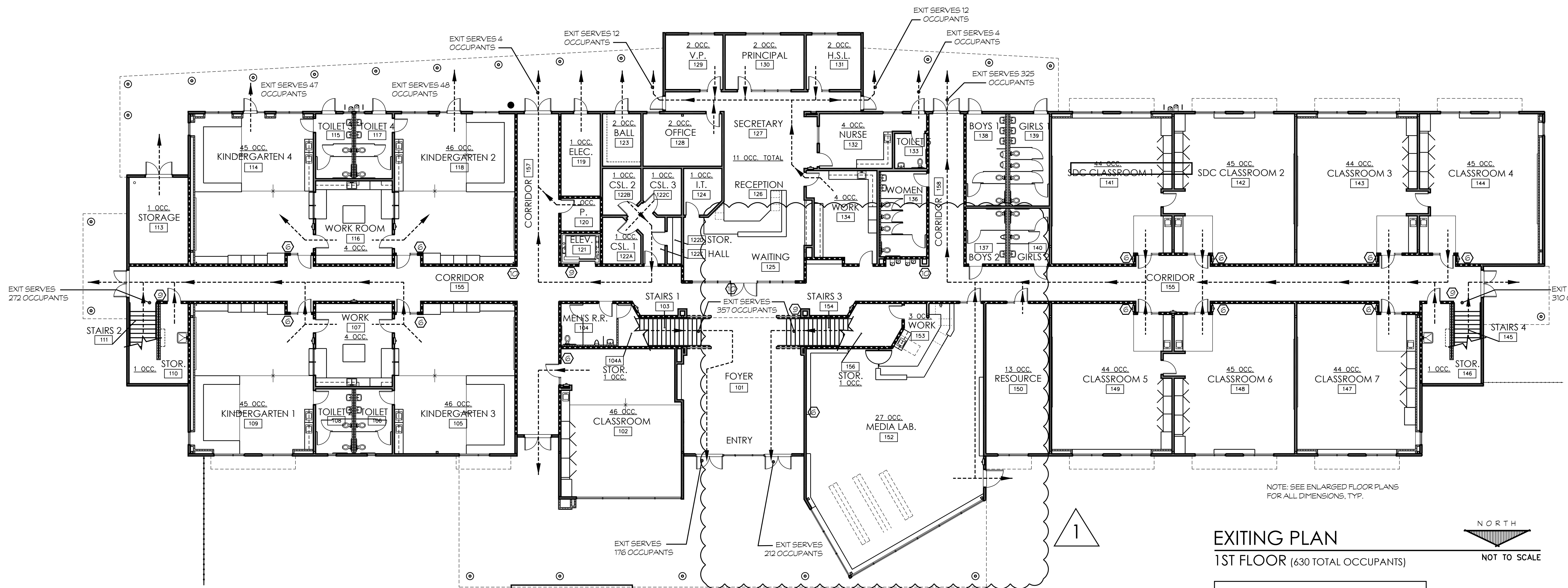
**EXITING PLAN**  
 2ND FLOOR (844 TOTAL OCCUPANTS)



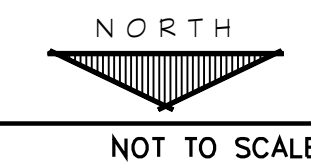
--- INDICATES SUGGESTED ACCESSIBLE EMERGENCY EXIT ROUTE

### SIGNAGE

- BUILDING ENTRANCE/ISA SIGNAGE, SEE DETAIL # 212/A8.11
- TACTILE EXIT SIGNAGE, SEE DETAIL # 201/A8.11. SEE ELECTRICAL PLANS FOR ILLUMINATED EXIT REQUIREMENTS.
- ROOM IDENTIFICATION SIGNAGE, SEE DETAIL # 303/A8.17 (VERIFY ROOM NAME & NUMBER W/ OWNER). WHERE TWO ROOMS ADJOIN ONE ANOTHER, PROVIDE SIGNAGE ON EACH SIDE OF THE WALL, TYP. ALL ROOMS
- RESTROOM SIGNAGE, SEE DETAIL # 217/A8.11
- ROOM CAPACITY SIGNAGE, SEE DETAILS # 305 / A8.17
- ASSISTIVE LISTENING SIGNAGE, SEE DETAIL # 205/A8.11
- ACCESSIBLE LIFT TO STAGE SIGNAGE, SEE DETAIL # 197/ A8.10
- ACCESSIBLE LIFT SIGNAGE, SEE DETAIL # 242/A8.13
- FLOOR IDENTIFICATION SIGNAGE, SEE DETAIL # 302/A8.17
- ROOM DIRECTIONAL SIGNAGE, SEE DETAIL # 304/A8.17



**EXITING PLAN**  
 1ST FLOOR (630 TOTAL OCCUPANTS)

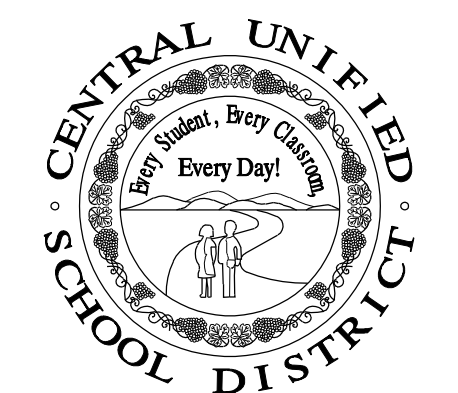


--- INDICATES SUGGESTED ACCESSIBLE EMERGENCY EXIT ROUTE



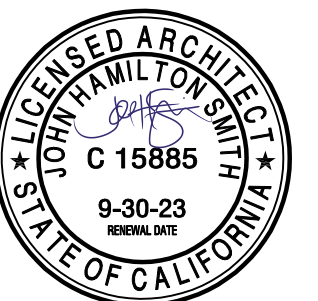
PROJECT:

## SHIELDS & BRAWLEY ELEMENTARY SCHOOL



AD 1-71a  
S&B Elementary  
02-116800

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, KWANAGA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

### PROJECT DEVELOPMENT

DATE	ISSUED FOR

### REVISIONS

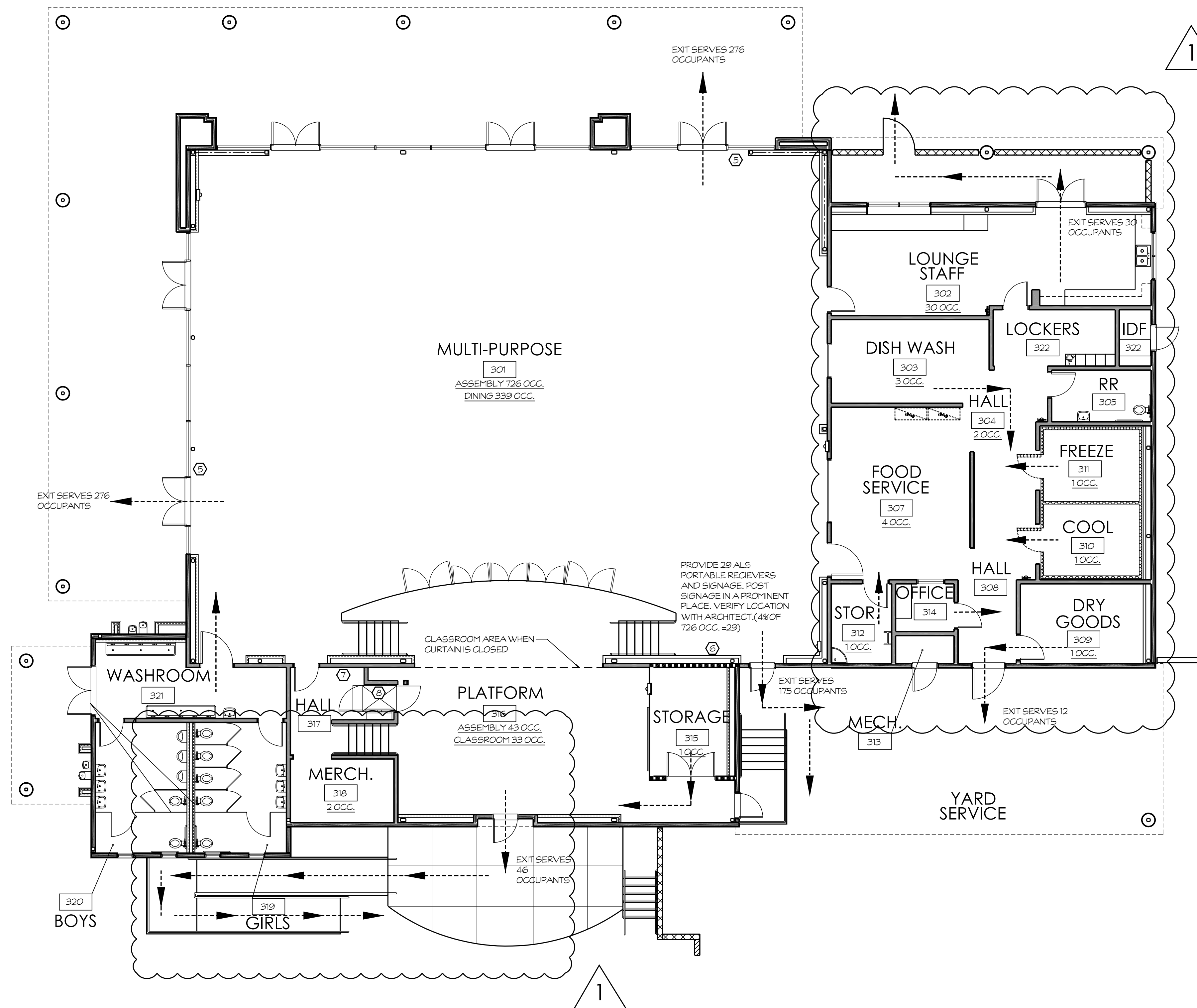
No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

### SHEET DESCRIPTION

## EXIT ANALYSIS & SIGNAGE

MULTI-PURPOSE BUILDING

PROJECT COORDINATOR JOHN SMITH	SHEET No. <b>T5</b>
PROJECT NO. 17-67	DATE 1.27.23
SCALE NOT TO SCALE	



### SIGNAGE

- BUILDING ENTRANCE/ISA SIGNAGE, SEE DETAIL # 212/A8.11
- TACTILE EXIT SIGNAGE, SEE DETAIL # 201/A8.11. SEE ELECTRICAL PLANS FOR ILLUMINATED EXIT REQUIREMENTS.
- ROOM IDENTIFICATION SIGNAGE, SEE DETAIL # 303/A8.17 (VERIFY ROOM NAME & NUMBER w/ OWNER). WHERE TWO ROOMS ADJOIN ONE ANOTHER, PROVIDE SIGNAGE ON EACH SIDE OF THE WALL. **TYP. ALL ROOMS**
- RESTROOM SIGNAGE, SEE DETAIL # 217/A8.11
- ROOM CAPACITY SIGNAGE, SEE DETAILS # 305 / A8.17
- ASSISTIVE LISTENING SIGNAGE, SEE DETAIL # 205/A8.11
- ACCESSIBLE LIFT TO STAGE SIGNAGE, SEE DETAIL # 197/A8.10
- ACCESSIBLE LIFT SIGNAGE, SEE DETAIL # 242/A8.13
- FLOOR IDENTIFICATION SIGNAGE, SEE DETAIL # 302/A8.17
- ROOM DIRECTIONAL SIGNAGE, SEE DETAIL # 304/A8.17

### ASSISTIVE LISTENING SYSTEM

PROVIDE A COMPLETE & OPERATING ASSISTIVE LISTENING SYSTEM FOR THE MULTI-PURPOSE ROOM WITH CAPACITY OF 726 IN THE ASSEMBLY AREA. THE SYSTEM SHALL REQUIRE THE FOLLOWING EQUIPMENT, OR APPROVAL EQUAL:

- (1) LISTENING TECHNOLOGIES #LT-800 STATIONARY FM TRANSMITTER. INTEGRATE WITH THE AUDIO-VIDEO SYSTEM.
- (30) LISTENING TECHNOLOGIES #LR-4200 FM RECEIVER
- (30) LISTENING TECHNOLOGIES #LA-381 BATTERIES
- (27) LISTENING TECHNOLOGIES #LA-403 BEHIND-THE-HEAD HEADPHONES
- (8) LISTENING TECHNOLOGIES #LA-166 NECK LOOP TELECOL COMPATIBLE RECEIVERS
- (4) LISTENING TECHNOLOGIES 'ASSISTIVE LISTENING SYSTEM AVAILABLE' APPROVED DESIGN

NOTE: SEE ENLARGED FLOOR PLANS FOR ALL DIMENSIONS, TYP.

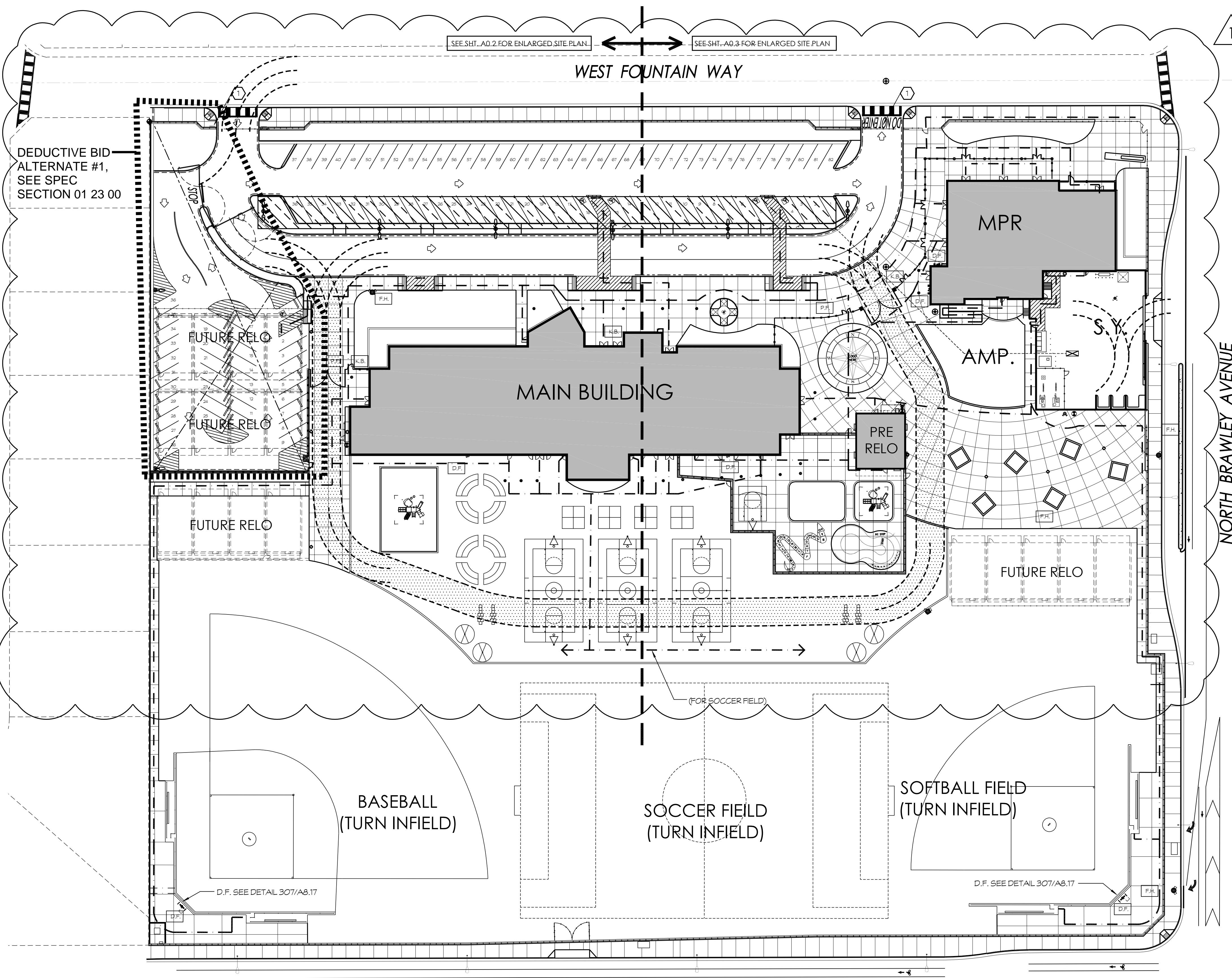
### EXITING PLAN

MULTI PURPOSE (815 TOTAL OCCUPANTS)

--- INDICATES SUGGESTED ACCESSIBLE EMERGENCY EXIT ROUTE







DEDUCTIVE BID ALTERNATE #1, SEE SPEC SECTION 01 23 00

SEE SHT. A0.2 FOR ENLARGED SITE PLAN SEE SHT. A0.3 FOR ENLARGED SITE PLAN

**SITE LEGEND**

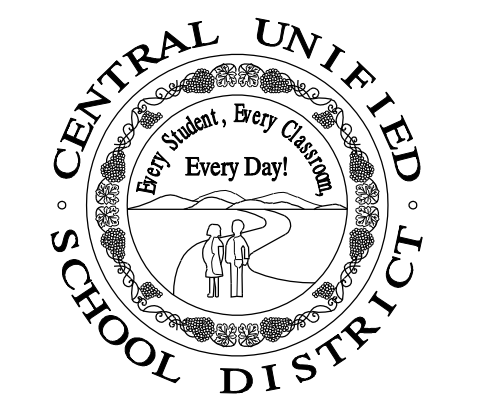
- PROPERTY LINE
- PAINT CURBS YELLOW WITH 4" HIGH WHITE LETTERS STATING 'LOADING & UNLOAD PASSENGERS AT 50'-0" O.C.
- PAINT CURBS RED WITH 4" HIGH WHITE LETTERS STATING 'NO PARKING - FIRE LANE AT 50'-0" O.C.
- FIRE HYDRANT
- ⊙ POST INDICATOR VALVE
- ⊙ FIRE DEPARTMENT CONNECTION
- INDICATES PATH OF TRAVEL
- [K.B.] KNOX BOX @ CENTER 5'-0" ABV. GRADE.
- [P.F.] POLICE / FIRE BYPASS LOCK
- [D.F.] ACCESSIBLE HI/LOW DRINKING FOUNTAIN
- BUILDING IN SCOPE
- ▨ FIRE ACCESS ROAD

NOTE: FOR DSA 8-10 FORM, REFER TO SHEET FD2



7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
TS 59.448.8409 - F 559.448.8467  
www.sim-prk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-72a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, MANAGA, MULLINS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER AVAILABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

**KEYNOTES**

- CITY OF FRESNO FIRE DEPARTMENT TO PROVIDE NEW BYPASS PADLOCK BEST/ X-1 MODEL 216700

REVISIONS

No.	DATE	DESCRIPTION
1	2.14.23	DISTRICT MODIFICATIONS

**PATH OF TRAVEL NOTES**

- ALL BUILDINGS CAN BE ACCESSED FROM PARKING SPACES
- ARCHITECT HAS SURVEYED/INSPECTED THE PATH OF TRAVEL (POT) AS INDICATED ON THE PLANS AND HAS FOUND IT TO BE, OR HAS INDICATED ON THE PLANS REMEDIAL WORK WHICH WOULD CAUSE IT TO BE, A BARRIER-FREE ACCESSIBLE ROUTE:
  - AT LEAST 48" IN WIDTH, OR AS APPROVED BY CODE
  - WITHOUT ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAXIMUM SLOPE, OR VERTICAL LEVEL CHANGES EXCEEDING 1/4"
  - WITH A FIRM, STABLE, AND SLIP RESISTANT WALKING SURFACE
  - WITH A RUNNING SLOPE OF 1:20 OR LESS, UNLESS OTHERWISE INDICATED, AND A CROSS SLOPE OF 1:50 OR LESS
  - IS FREE FROM OVERHEAD OBSTRUCTIONS WITHIN 8'0" ABOVE WALKING SURFACE
  - AND IS FREE OF OBSTRUCTIONS WHICH PROTRUDE MORE THAN 4" BETWEEN THE HEIGHTS OF 27" AND 80" ABOVE THE WALKING SURFACE
- ALL DOORS, DOORWAYS & GATES IN PATH OF TRAVEL MUST COMPLY WITH EXIT DOOR REQUIREMENTS SECTION 11B-404. PROVIDE LEVER HARDWARE, KICK PLATES, 5 lb PRESURE TO OPERATE, 24" MIN. STRIKE SIDE CLEARANCE, 48" MAX. WIDTH, AND PANIC HARDWARE IF REQUIRED BY FIRE LIFE SAFETY.
- THERE IS NO DROP-OFF OVER 4" AT THE EDGE OF WALK OR LANDING. IN NEW CONSTRUCTION, ALL WALKS AND ROUTES ARE CONSIDERED PATH OF TRAVEL (P.O.T.) ARCHITECT AND CONTRACTOR SHALL VERIFY THAT THE ENTIRE PATH OF TRAVEL HAS BEEN CONSTRUCTED FREE OF BARRIERS.
- ALL ACCESSIBLE PARKING SPACES ARE LOCATED SO THAT A PERSON WITH DISABILITY IS NOT COMPELLED TO WHEEL OR WALK BEHIND ANY OTHER CAR.
- WALKS IN PATH OF TRAVEL SHALL BE FREE OF GRATINGS WHENEVER POSSIBLE. WHEN INSTALLED, OPENINGS SHALL BE 1/2" MAXIMUM IN DIRECTION OF TRAFFIC FLOW.

**WEST SHIELDS AVENUE**

SOLAR READY BUILDING ANALYSIS CEC 110.10 (b) 1B		
NOTE: SOLAR ITEMS BELOW ARE PROVIDED FOR REFERENCE ONLY TO DEMONSTRATE 'SOLAR-READY' COMPLIANCE PER C.E.C. 110.10 (b) 1B. CARPORTS AND SOLAR PANELS ARE TO BE COMPLETED IN THE FUTURE AND ARE NOT PART OF THE SCOPE OF WORK OF THIS SET AND MUST BE SEPARATELY SUBMITTED FOR DSA APPROVAL.		
<b>BUILDING SUMMARY</b>	<b>ROOF AREA</b>	<b>SKYLIGHT AREA</b>
MAIN BUILDING	24,782 S.F.	0 S.F.
MULTI-PURPOSE BUILDING	9,317 S.F.	0 S.F.
PRESCHOOL BUILDING	1,440 S.F.	0 S.F.
<b>TOTAL ROOF AREA</b>	<b>35,539 S.F.</b>	<b>0 S.F.</b>
<b>AREA REQUIRED FOR SOLAR:</b>	35,539 X 0.15 = 5,330.9 S.F.	
<b>AREA PROVIDED FOR SOLAR, ZONE A</b>	9,544 S.F.	
	AREA OF SOLAR ZONE (COVERED PARKING)	
	AREA FOR SOLAR INVERTERS & PATHWAY FOR CONDUITS	

SITE DATA	
<b>BUILDINGS:</b>	
MAIN	50,843 SQ. FT.
MULTI-PURPOSE	9,317 SQ. FT.
PRE-SCHOOL	1,440 SQ. FT.
<b>TOTAL</b>	<b>61,600 SQ. FT.</b>
<b>SITE:</b>	
FUTURE RELOS	20. STUBS ONLY IN BID SET.
<b>PARKING RATIO:</b>	
LOT:	PARKING STALLS 92
	ACCESSIBLE REQD 4

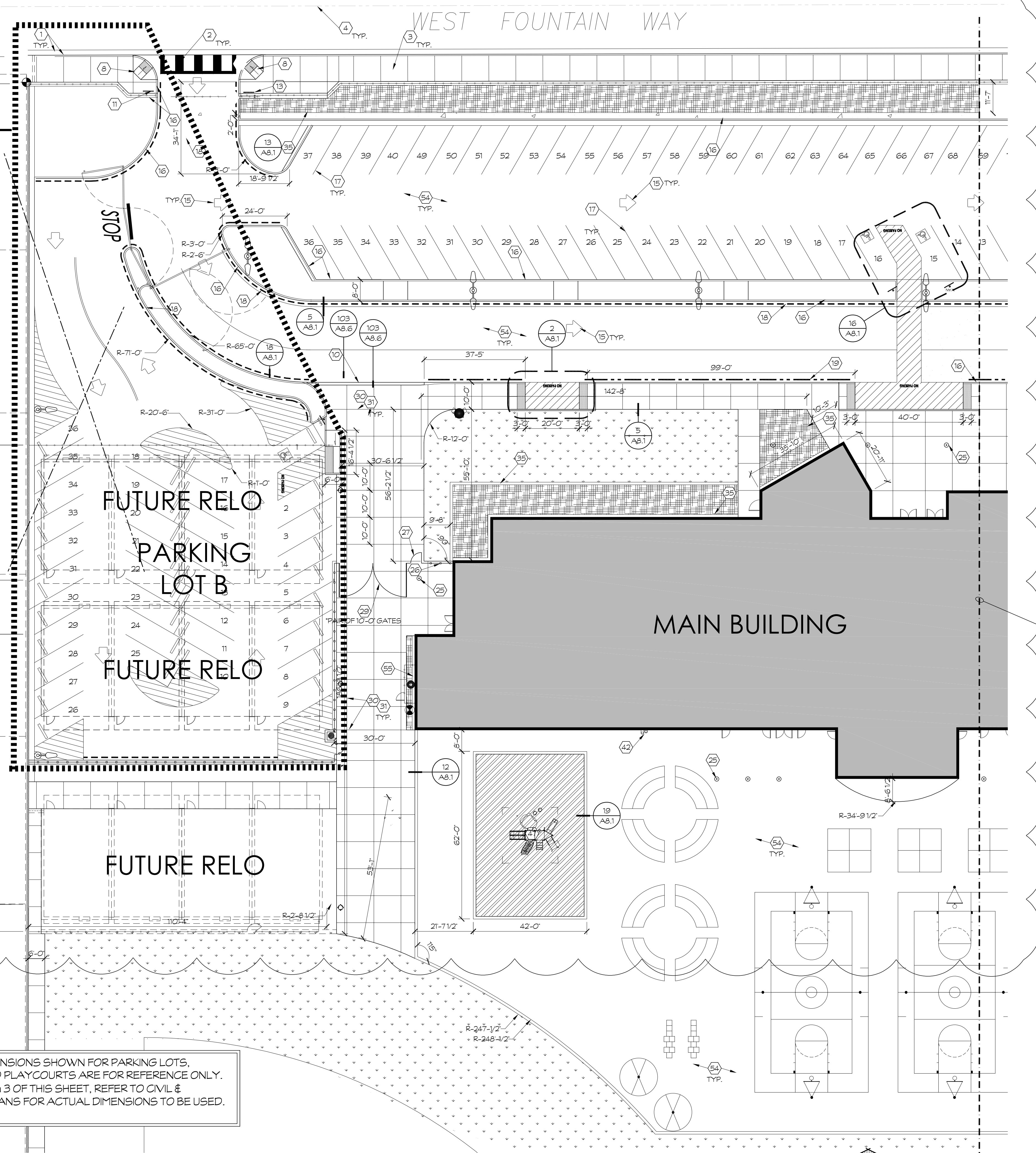
OVERALL SITE PLAN  
NORTH  
SCALE: 1"=40'-0"

**OVERALL SITE PLAN**

PROJECT COORDINATOR JOHN SMITH	SHEET NO. <b>A0.1</b>
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE 1"=30'-0"	



DEDUCTIVE BID  
ALTERNATE #1,  
SEE SPEC SECTION  
01 23 00



NOTE: ALL DIMENSIONS SHOWN FOR PARKING LOTS, FLATWORK AND PLAYCOURTS ARE FOR REFERENCE ONLY. PER NOTES 1 THRU 3 OF THIS SHEET, REFER TO CIVIL & LANDSCAPE PLANS FOR ACTUAL DIMENSIONS TO BE USED.

KEYNOTES

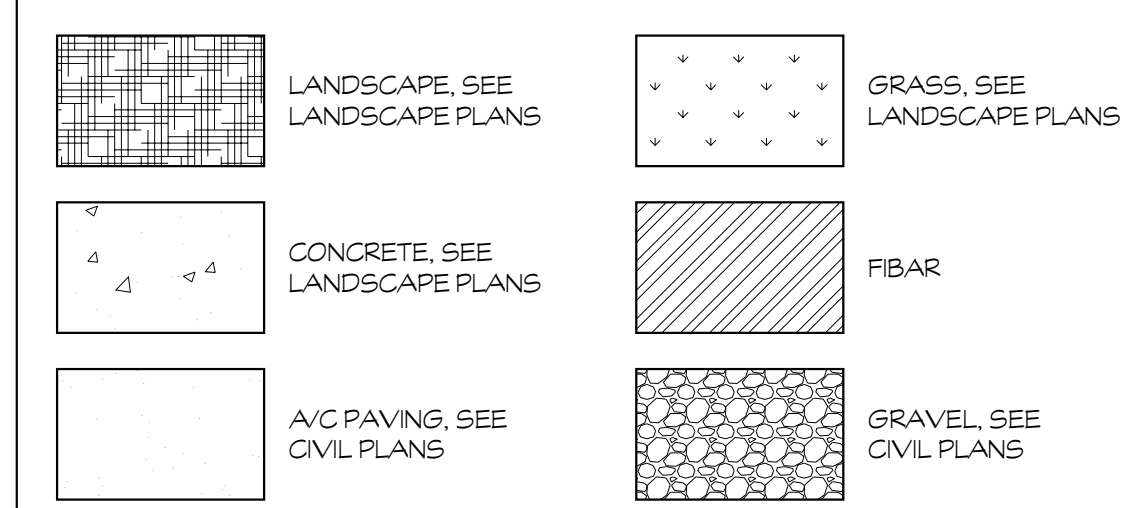
- OFF-SITE CONCRETE CURB AND/OR GUTTER, SEE CIVIL PLANS
- OFF-SITE DRIVE APPROACH, SEE CIVIL PLANS
- OFF-SITE SIDEWALK, SEE CIVIL PLANS
- DOUBLE DASHED LINE INDICATES PROPERTY LINE, SEE CIVIL PLAN
- 6'-0" HIGH CHAIN LINK FENCE, SEE CIVIL SHEETS C2.1 & C6.3 TYP.
- ROLLING CHAIN LINK GATE, SEE CIVIL SHEETS C2.1 & C6.3 TYP.
- 4'-0" WIDE CHAIN LINK GATE, SEE CIVIL SHEETS C2.1 & C6.3 TYP.
- ACCESSIBLE RAMP, SEE CIVIL PLAN
- PAIR OF 12'-6" WIDE CHAIN LINK SWING GATES, SEE CIVIL SHEETS C2.1 & C6.3 TYP.
- DRIVE OVER CURB, SEE CIVIL
- PARKING LOT ENTRY SIGN, SEE DTL. 21/A8.2
- N/A
- STOP SIGN, SEE CIVIL PLAN
- 3'-0" HIGH PAINTED LETTERING, SEE CIVIL PLAN
- PAINTED DIRECTIONAL ARROW, SEE CIVIL PLAN
- 6" HIGH CURB AND/OR GUTTER, SEE CIVIL PLAN
- 4" WIDE WHITE STRIPING, SEE CIVIL PLAN
- DASHED LINE INDICATES RED PAINTED CURB WITH 'NO PARKING' PAINTED IN 4" HIGH WHITE LETTERS, SEE CIVIL PLAN
- YELLOW PAINTED CURB WITH 'LOADING ZONE' PAINTED IN 4" HIGH BLACK LETTERS, SEE CIVIL PLAN
- 12" WIDE WHITE STRIPING, SEE CIVIL PLANS
- N/A
- MARQUIS SIGN, COORDINATE EXACT LOCATION W/ DISTRICT
- PAIR OF 3'-0" WIDE WROUGHT IRON GATES, SEE DTL. 52/A8.3
- TREE GRATES, SEE LANDSCAPE PLAN DTL. C1/L52.0
- COLUMN, SEE FLOOR PLAN
- 6'-0" HIGH WROUGHT IRON FENCE, SEE DTL. 55/A8.3
- 4'-0" WIDE WROUGHT IRON GATE, SEE DTL. 31/A8.2
- MASONRY PLASTER, SEE DTL. 48/A8.3
- STEEL SWING GATES, SEE DTL. 46/A8.3
- CRACK CONTROL JOINT, SEE LANDSCAPE PLAN
- EXPANSION JOINT, SEE LANDSCAPE PLAN
- FLAG POLE, SEE DTL. 28/A8.2
- RAISED PLANTER, SEE LANDSCAPE PLAN
- N/A
- PLANTER MOWSTRIP, SEE LANDSCAPE PLAN
- FIRE SPRINKLER RISER LOCATION, SEE CIVIL PLANS
- FDC LOCATION, SEE CIVIL PLAN
- PIV LOCATION, SEE CIVIL PLAN
- 3'-0" WIDE CHAIN LINK GATE, SEE CIVIL PLANS
- STEEL BOLLARD, SEE DTL. 44/A8.3
- FIRE HYDRANT LOCATION
- H/L/D DRINKING FOUNTAIN, SEE DTL. 202/A8.11 & 206/A8.11
- 4'-0" HIGH CHAIN LINK FENCE, SEE CIVIL PLANS
- COMPASS PATTERN, SEE LANDSCAPE PLAN
- BIKE RACK, SEE DTL. 20/A8.1
- 6'-0" WIDE CHAIN LINK SWING GATE, SEE CIVIL SHEETS C2.1 & C6.3 TYP.
- FIBAR PLAY AREA, SEE DTL. 19/A8.1
- RAISED CONCRETE PLATFORM, SEE DTL. 29/A8.2
- CONCRETE RAMP W/ ALUMINUM HANDRAILS, SEE DTL. 47/A8.3
- RELOCATABLE PRESCHOOL BUILDING, SEE RELOCATABLE DRAWINGS
- VINYL PRIVACY SLATES, SEE CIVIL PLANS
- REMOVABLE BOLLARD, SEE DTL. 56/A8.3
- N/A
- AC PAVING, SEE CIVIL PLANS
- BUILDING MOWSTRIP, SEE DTL. 17/A8.1
- POLICE/ FIRE BY-PASS LOCK
- KNOX BOX 3200 SERIES W/ HINGED DOOR (OR EQUAL) VERIFY EXACT LOCATION W/ DISTRICT PRIOR TO INSTALL
- PROVIDE PANIC HARDWARE PER DETAIL 50/A8.3
- BICYCLE 'ART' RACK (MAN ON BIKE)
- N/A
- ADA ACCEPTABLE GROUND VENTS, MENCHOLS BAR GRATING OR EQUAL
- 8'-0" CMU WALL
- 6'-0" CMU WALL

SEE SHT. A0.3 FOR CONTINUATION

NOTES

- SEE CIVIL PLANS FOR PARKING LOT DIMENSIONS, DETAILS & INFO
- SEE LANDSCAPE PLANS FOR FLATWORK DIMENSIONS, DETAILS & INFO.
- SEE CIVIL SITE PLANS FOR PLAY COURT STRIPING, BASKETBALL POLE LOCATIONS, VOLLEYBALL POLE LOCATIONS, VOLLEYBALL POLE STORAGE SLEEVE LOCATIONS, AND TETHER BALL POLE LOCATIONS.

LEGEND



ENLARGED SITE PLAN



7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 F 559.448.8467  
www.simprk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-73a**  
**S&B Elementary**  
**02-116800**



THE FIRM OF SMITH, WANAAGA, MELHUIS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

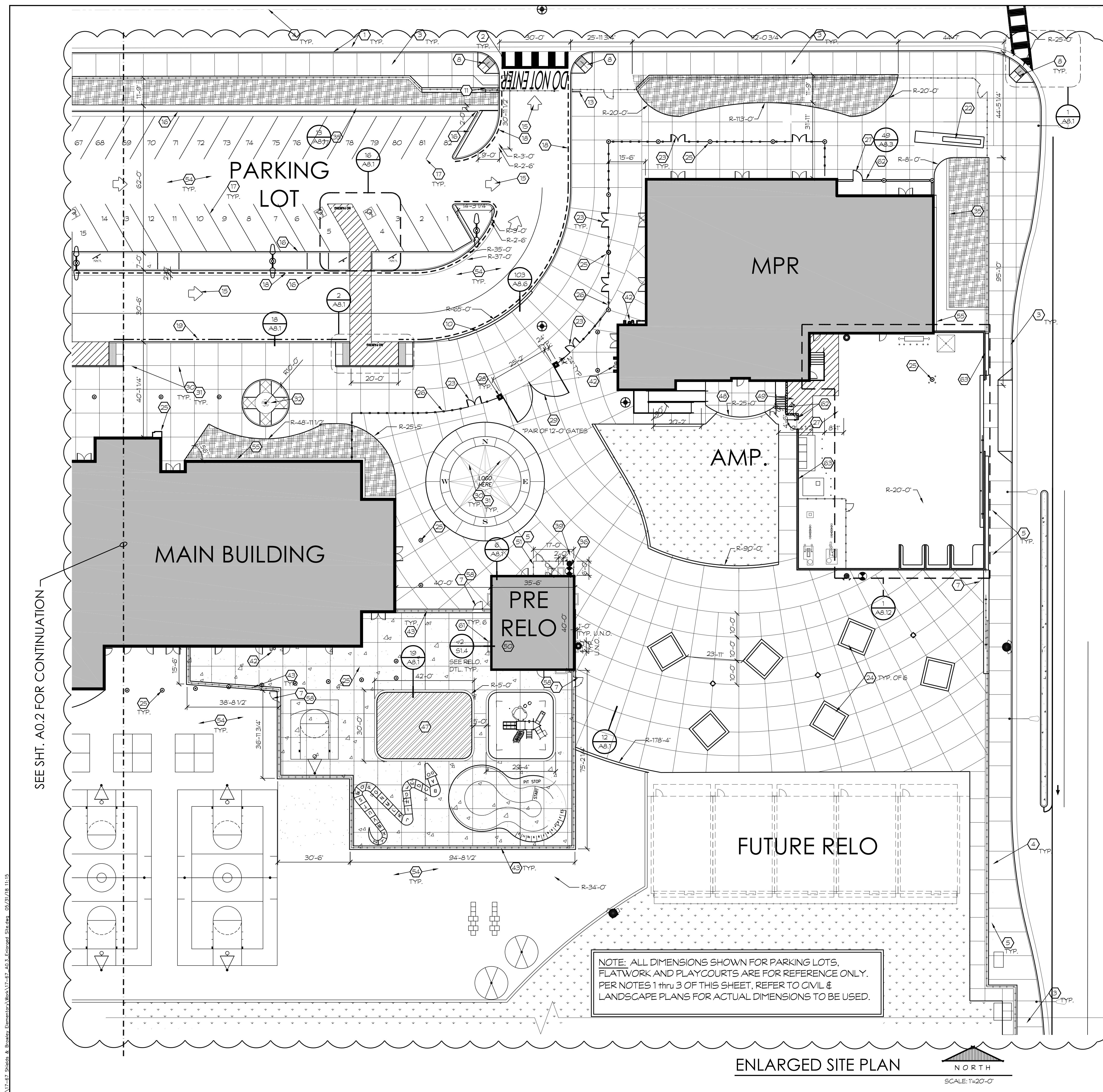
PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
1	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION	
PROJECT COORDINATOR	SHEET NO.
JOHN SMITH	A0.2
PROJECT NO.	17-67
DATE	1.27.23
SCALE	1"=20'-0"

S:\17-67\_Shields & Brawley\_Elementary\Work\17-67\_A0.2\_Enlarged\_Site.dwg 09/21/18 11:16





SEE SHT. A0.2 FOR CONTINUATION

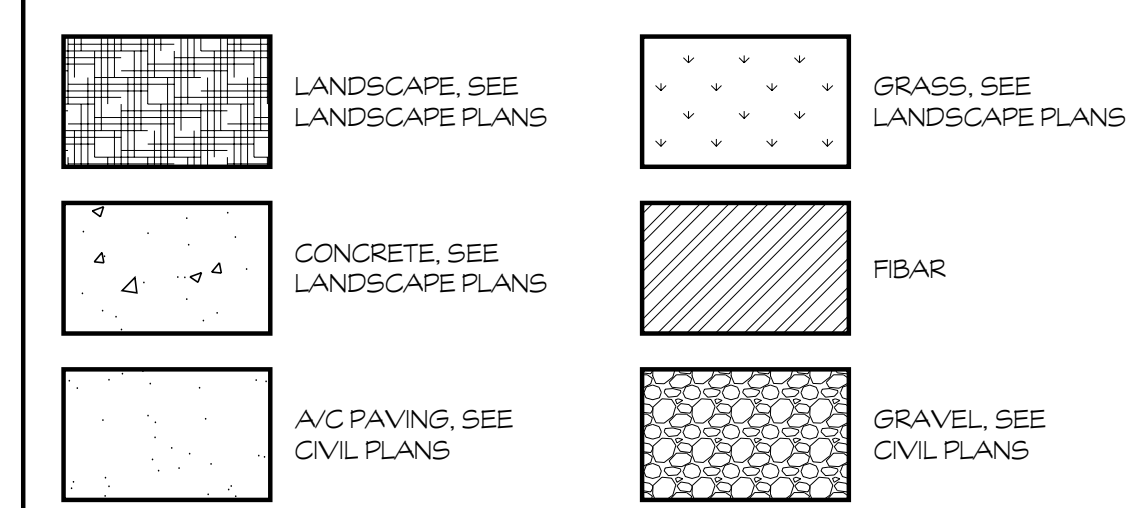
KEYNOTES

- OFF-SITE CONCRETE CURB AND/OR GUTTER, SEE CIVIL PLANS
- OFF-SITE DRIVE APPROACH, SEE CIVIL PLANS
- OFF-SITE SIDEWALK, SEE CIVIL PLANS
- DOUBLE DASHED LINE INDICATES PROPERTY LINE, SEE CIVIL PLAN
- 6'-0" HIGH CHAIN LINK FENCE, SEE CIVIL SHEETS C2.1 & C6.3 TYP.
- ROLLING CHAIN LINK GATE, SEE CIVIL SHEETS C2.1 & C6.3 TYP.
- 4'-0" WIDE CHAIN LINK GATE, SEE CIVIL SHEETS C2.1 & C6.3 TYP.
- ACCESSIBLE RAMP, SEE CIVIL PLAN
- PAIR OF 12'-6" WIDE CHAIN LINK SWING GATES, SEE CIVIL SHEETS C2.1 & C6.3 TYP.
- DRIVE OVER CURB, SEE CIVIL
- PARKING LOT ENTRY SIGN, SEE DTL. 21/A8.2
- N/A
- STOP SIGN, SEE CIVIL PLAN
- 3'-0" HIGH PAINTED LETTERING, SEE CIVIL PLAN
- PAINTED DIRECTIONAL ARROW, SEE CIVIL PLAN
- 6" HIGH CURB AND/OR GUTTER, SEE CIVIL PLAN
- 4" WIDE WHITE STRIPING, SEE CIVIL PLAN
- DASHED LINE INDICATES RED PAINTED CURB WITH NO PARKING PAINTED IN 4" HIGH WHITE LETTERS, SEE CIVIL PLAN
- YELLOW PAINTED CURB WITH LOADING ZONE PAINTED IN 4" HIGH BLACK LETTERS, SEE CIVIL PLAN
- 12" WIDE WHITE STRIPING, SEE CIVIL PLANS
- N/A
- MARQUEE SIGN, COORDINATE EXACT LOCATION W/ DISTRICT
- PAIR OF 3'-0" WIDE WROUGHT IRON GATES, SEE DTL. 52/A8.3
- TREE GRATES, SEE LANDSCAPE PLAN DTL. C12.2
- COLUMN, SEE FLOOR PLAN
- 6'-0" HIGH WROUGHT IRON FENCE, SEE DTL. 55/A8.3
- 4'-0" WIDE WROUGHT IRON GATE, SEE DTL. 31/A8.2
- MASONRY PLASTER, SEE DTL. 48/A8.3
- STEEL SWING GATES, SEE DTL. 46/A8.3
- CRACK CONTROL JOINT, SEE LANDSCAPE PLAN
- EXPANSION JOINT, SEE LANDSCAPE PLAN
- FLAG POLE, SEE DTL. 28/A8.2
- RAISED PLANTER, SEE LANDSCAPE PLAN
- N/A
- PLANTER MOWSTRIP, SEE LANDSCAPE PLAN
- FIRE SPRINKLER RISER LOCATION, SEE CIVIL PLANS
- FDC LOCATION, SEE CIVIL PLAN
- PIV LOCATION, SEE CIVIL PLAN
- 3'-0" WIDE CHAIN LINK GATE, SEE CIVIL PLANS
- STEEL BOLLARD, SEE DTL. 44/A8.3
- FIRE HYDRANT LOCATION
- H/L/O DRINKING FOUNTAIN, SEE DTL. 202/A8.11 & 206/A8.11
- 4'-0" HIGH CHAIN LINK FENCE, SEE CIVIL PLANS
- COMPASS PATTERN, SEE LANDSCAPE PLAN
- BIKE RACK, SEE DTL. 20/A8.1
- 6'-0" WIDE CHAIN LINK SWING GATE, SEE CIVIL SHEETS C2.1 & C6.3 TYP.
- FIBAR PLAY AREA, SEE DTL. 19/A8.1
- RAISED CONCRETE PLATFORM, SEE DTL. 29/A8.2
- CONCRETE RAMP W/ ALUMINUM HANDRAILS, SEE DTL. 47/A8.3
- RELOCATABLE PRESCHOOL BUILDING, SEE RELOCATABLE DRAWINGS
- VINYL PRIVACY SLATES, SEE CIVIL PLANS
- REMOVABLE BOLLARD, SEE DTL. 56/A8.3
- N/A
- AC PAVING, SEE CIVIL PLANS
- BUILDING MOWSTRIP, SEE DTL. 17/A8.1
- POLICE/ FIRE BY-PASS LOCK
- KNOX BOX 3200 SERIES W/ HINGED DOOR (OR EQUAL) VERIFY EXACT LOCATION W/ DISTRICT PRIOR TO INSTALL.
- PROVIDE PANIC HARDWARE PER DETAIL 50/A8.3
- BICYCLE ART RACK (MAN ON BIKE)
- N/A
- ADA ACCEPTABLE GROUND VENTS, McNICOLS BAR GRATING OR EQUAL
- 8'-0" CMU WALL
- 6'-0" CMU WALL

NOTES

- SEE CIVIL PLANS FOR PARKING LOT DIMENSIONS, DETAILS & INFO
- SEE LANDSCAPE PLANS FOR FLATWORK DIMENSIONS, DETAILS & INFO.
- SEE CIVIL SITE PLANS FOR PLAY COURT STRIPING, BASKETBALL POLE LOCATIONS, VOLLEYBALL POLE LOCATIONS, VOLLEYBALL POLE STORAGE SLEEVE LOCATIONS, AND TETHER BALL POLE LOCATIONS.

LEGEND



ENLARGED SITE PLAN



7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 F 559.448.8467  
www.sim-prbk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-74a**  
**S&B Elementary**  
**02-116800**



THE FIRM OF SMITH, KWANAGA, MALHOTRA, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
1	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION	
PROJECT COORDINATOR	SHEET NO.
JOHN SMITH	A0.3
PROJECT NO.	17-67
DATE	1.27.23
SCALE	1"=20'-0"

E:\17-67\_Shields & Brawley\_Elementary\Work\17-67\_A0.3\_Enlarged\_Site.dwg 05/21/18 11:15



KEYNOTES

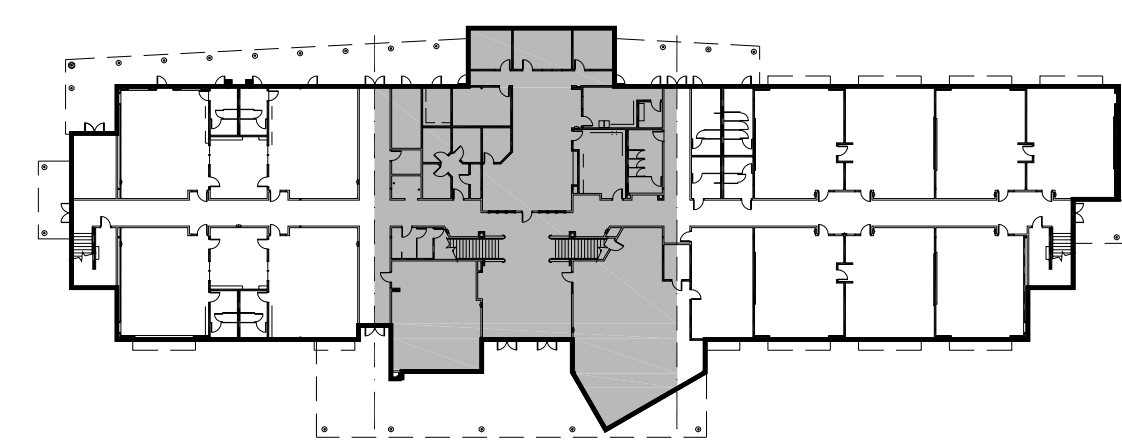
1. CASEWORK - SEE INTERIOR ELEVATIONS
2. DRINKING FOUNTAINS - SEE PLUMBING
3. DASHED LINE INDICATES ROOF OVERHANG
4. DASHED LINE INDICATES FURNISHINGS (N.I.C.)
5. FIXED SHELVING PER DTL. 72/A8.4
6. SINK - SEE PLUMBING PLANS
7. INDICATES HVAC DROPS FROM ROOF THRU SECOND FLOOR TO ATTIC OF FIRST FLOOR
8. 20" DIA. COLUMN, SEE DTL. 20/A8.3
9. WALL SAFE - INSTALL AT 40" ABV FF. SIM TO 108/A8.6
10. 2A: 10BC MIN. TYPE FIRE EXTINGUISHER w/ SEMI RECESSED CABINET, PER DTL. 108/A8.6
11. open
12. MOP/BROOM HOLDER
13. (2) TACK STRIPS, 12" LONG, SEE INTERIOR ELEVATIONS
14. 4'-0" h. CORNERGUARD TOP @ 45'-0", SEE INT. ELEVATIONS
15. 6" T.S. COLUMN, SEE STRUCTURAL PLANS
16. MAGNETIC MARKERBOARD @ VTB.
17. 3/4" EXPANSION JOINT, REFER TO STRUCTURAL DRAWINGS FOR ALL LOCATIONS, SEE DTL. 310/A8.10 FOR TYPICAL FINISH CONDITIONS.

NOTE: ALL GRID LINES ARE TO CENTER OF COLUMNS, U.N.O.

SYMBOLS LEGEND

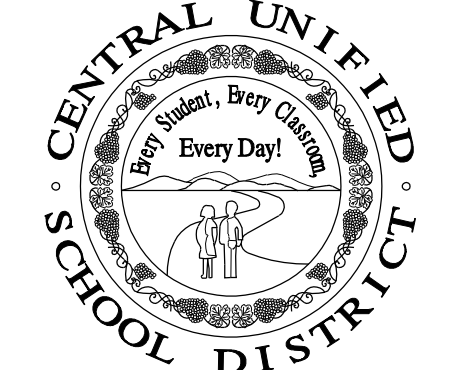
- DOOR PER SCHEDULE. SEE DOOR SCHEDULE SHEET A2.5
- WINDOW PER SCHEDULE. SEE WINDOW SCHEDULE SHEET A2.6
- INTERIOR ELEVATION SYMBOL. ALL INTERIOR ELEVATIONS NOT KEYPED FOR CLARITY. SYMBOLS SHOWN INDICATE TYPICAL ELEVATIONS WITH MULTIPLE LOCATIONS.
- EXTERIOR ELEVATION SYMBOL

KEY PLAN



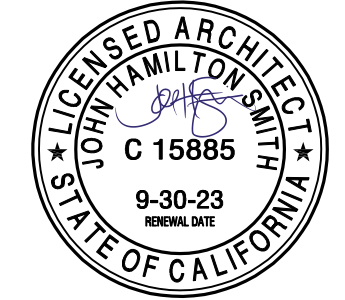
7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 F 559.448.8467  
www.simprk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-75a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885

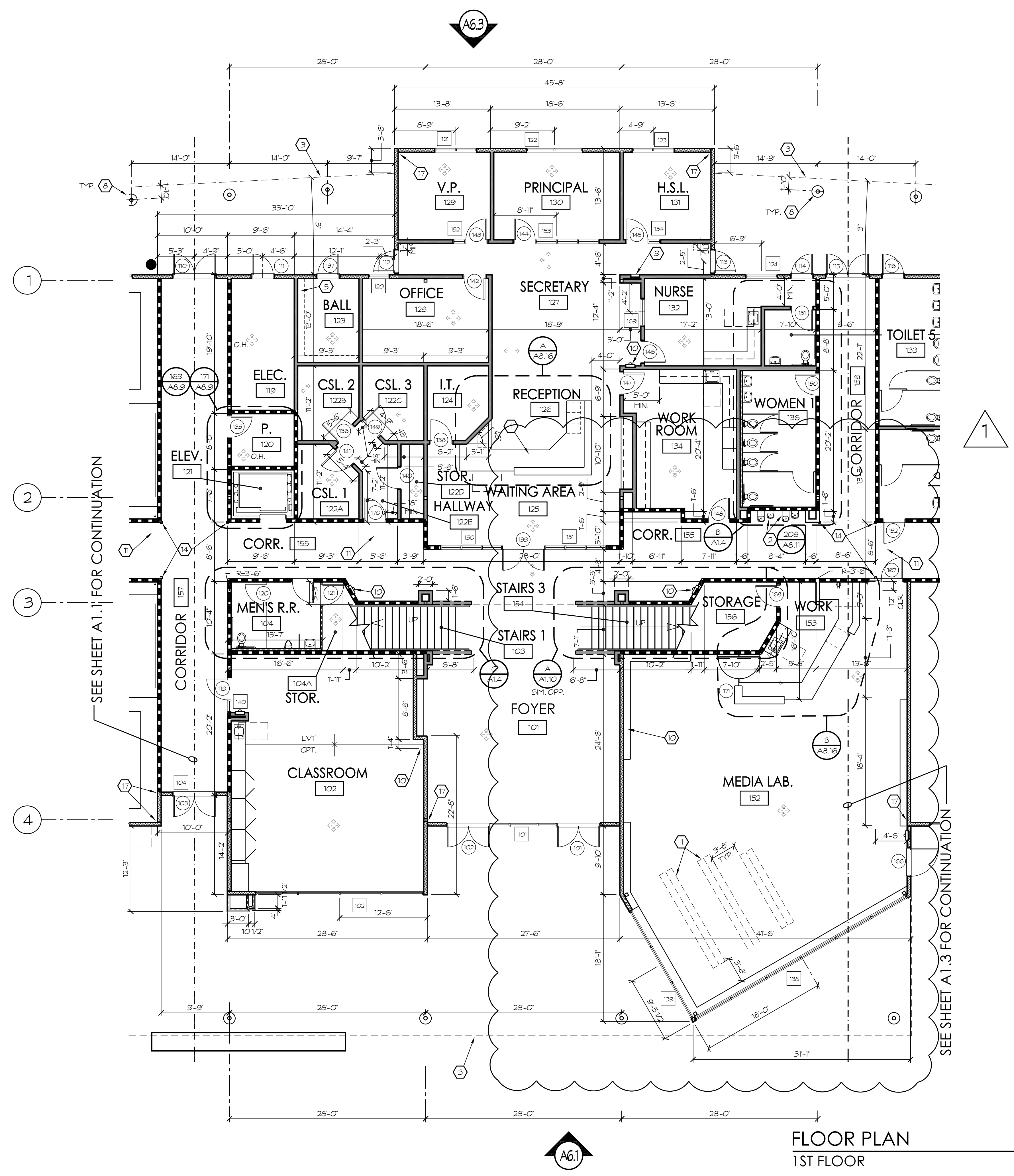


THE FIRM OF SMITH, WATANAGA, MELHUIS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER RIGHTS AND PRIORITIES IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

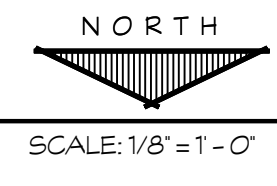
PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
△ 1	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION	
FLOOR PLAN	
MAIN - 1ST FLOOR	
PROJECT COORDINATOR JOHN SMITH	SHEET NO. <b>A1.2</b>
PROJECT NO. 17-67	DATE 1.27.23
SCALE 1/8"=1'-0"	



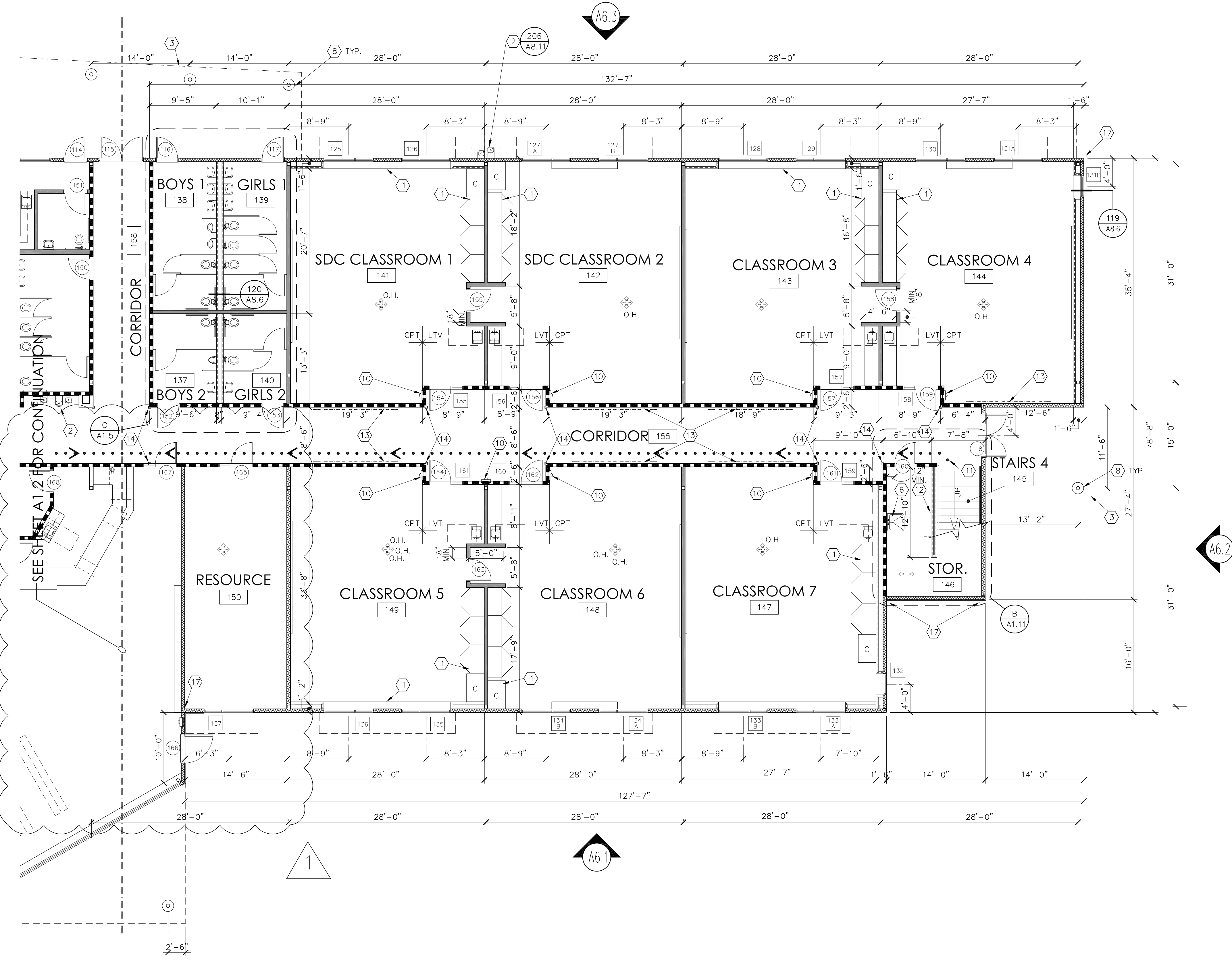
FLOOR PLAN  
1ST FLOOR



SEE SHEET A1.1 FOR CONTINUATION

SEE SHEET A1.3 FOR CONTINUATION





FLOOR PLAN  
1ST FLOOR

NORTH  
SCALE: 1/8" = 1' - 0"

KEYNOTES

1. CASEWORK - SEE INTERIOR ELEVATIONS
2. DRINKING FOUNTAINS - SEE PLUMBING
3. DASHED LINE INDICATES ROOF OVERHANG
4. DASHED LINE INDICATES FURNISHINGS (N.I.C.)
5. FIXED SHELVING PER DTL. 72/A8.4
6. SINK - SEE PLUMBING PLANS
7. INDICATES HVAC DROPS FROM ROOF THRU SECOND FLOOR TO ATTIC OF FIRST FLOOR
8. 20" DIA. COLUMN, SEE DTL. 20/A8.3
9. WALL SAFE - INSTALL AT 40" ABV FF. SIM TO 108/A8.6
10. 2A: 10BC MIN. TYPE FIRE EXTINGUISHER w/ SEMI RECESSED CABINET, PER DTL. 108/A8.6
11. open
12. MOP/BROOM HOLDER
13. (5)24"x48" TACKBOARD PANELS SEE COLOR SCHEDULE REMARK 13/A2.8
14. 4'-0" h. CORNERGUARD TOP @ +5'-0", SEE INT. ELEVATIONS
15. 6" T.S. COLUMN, SEE STRUCTURAL PLANS
16. MAGNETIC MARKERBOARD o/VTB.
17. 3/4" EXPANSION JOINT, REFER TO STRUCTURAL DRAWINGS FOR ALL LOCATIONS, SEE DTL. 310/A8.10 FOR TYPICAL FINISH CONDITIONS.

NOTE: ALL GRID LINES ARE TO CENTER OF COLUMNS, U.N.O.

SYMBOLS LEGEND

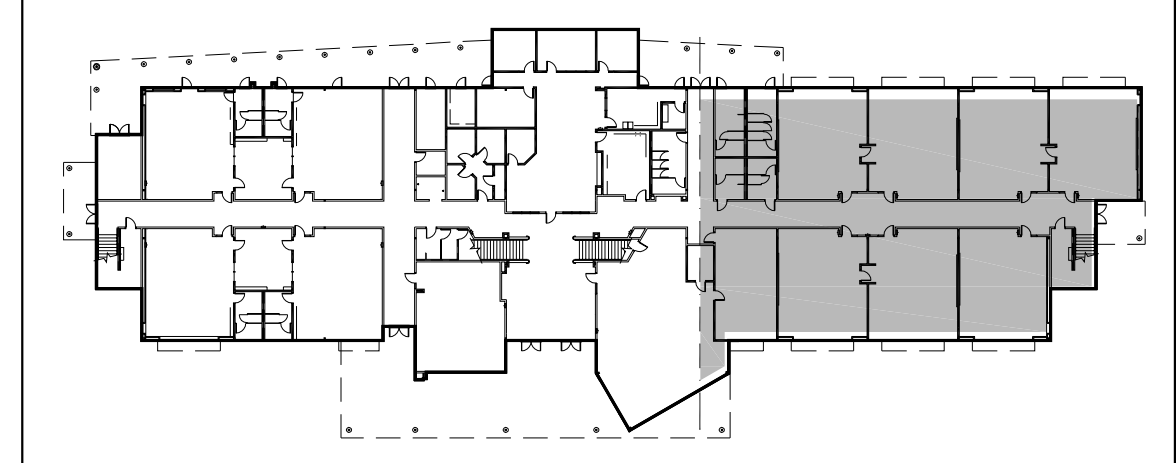
- # DOOR PER SCHEDULE. SEE DOOR SCHEDULE SHEET A2.5
- # WINDOW PER SCHEDULE. SEE WINDOW SCHEDULE SHEET A2.6
- ^ INTERIOR ELEVATION SYMBOL. ALL INTERIOR ELEVATIONS NOT KEYPED FOR CLARITY. SYMBOLS SHOWN INDICATE TYPICAL ELEVATIONS WITH MULTIPLE LOCATIONS.
- ◡ EXTERIOR ELEVATION SYMBOL

WALL LEGEND

- 6" METAL STUDS AT 16" O.C. w/ R-19 INSULATION  
EXT. SIDE: CEMENT PLASTER o/ PAPER BACKED WIRE LATH o/ 1/2" DENS. GLAS GOLD  
INTERIOR SIDE: SEE FINISH SCHEDULE
- 6" METAL STUDS AT 16" O.C. w/ SOUND BATT INSULATION - SEE FINISH SCHEDULE
- 6" METAL STUDS AT 16" O.C. 42" HIGH w/ PAINTED WOOD CAP - SEE FINISH SCHEDULE
- 4" METAL STUDS AT 16" O.C. - SEE FINISH SCHEDULE
- 1-HR WALL: 6" METAL STUDS AT 16" O.C. w/ SOUND BATT INSULATION - PROVIDE 5/8" TYPE 'X' GYP. BD. EACH SIDE (UL #419) SEE DETAIL 102/A8.6
- DOUBLE 4" 18 GA METAL STUDS AT 16" O.C. SEE FINISH SCHEDULE
- 8" x 8" x 16" CMU WALL - SEE DETAIL 51/A8.3
- 20" DIA. CONCRETE COLUMN, SEE DETAIL 60/A8.3

NOTE: SEE STRUCT. FOR METAL STUD SIZES AND CONNECTIONS

KEY PLAN



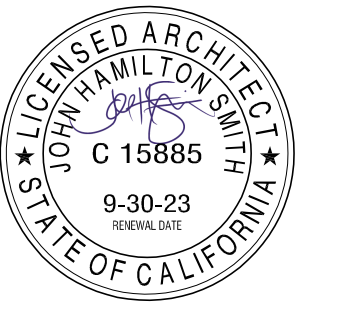
7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 F 559.448.8467  
www.sim-prk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



AD 1-76a  
S&B Elementary  
02-116800

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, BAWAGNA, MILHOLM, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

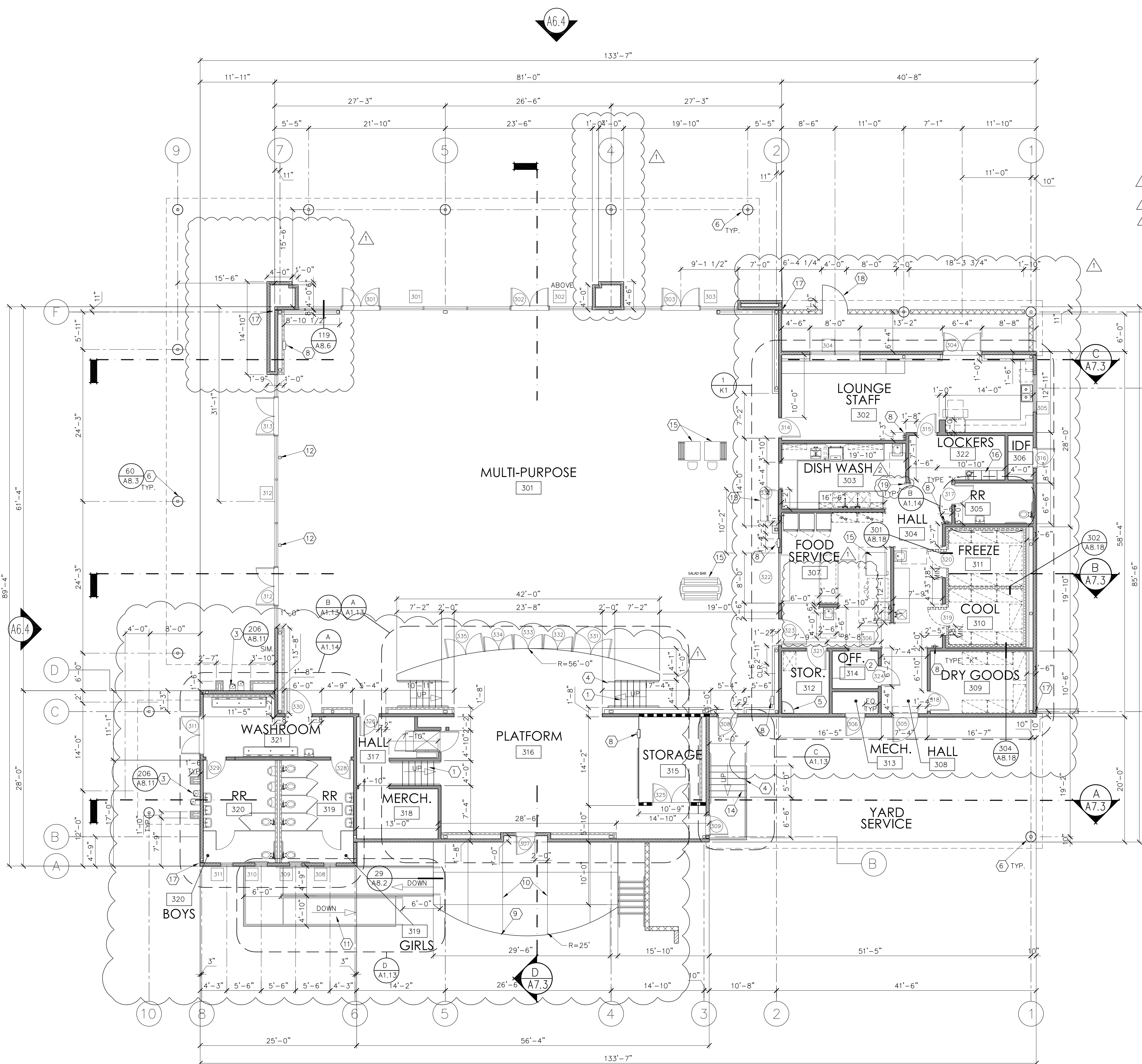
PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
1	2.14.23	DISTRICT MODIFICATIONS
2	2.27.23	DISTRICT MODIFICATIONS

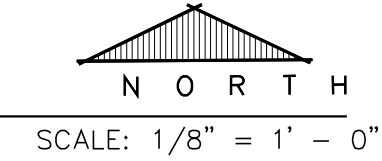
SHEET DESCRIPTION	
FLOOR PLAN	
MAIN - 1ST FLOOR	
PROJECT COORDINATOR JOHN SMITH	SHEET NO. <b>A1.3</b>
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE 1/8"=1'-0"	

E:\17-67 Shields & Brawley Elementary\Work\17-67\_A1.3\_11-15-23\Floor2.dwg 05/30/23 2:14





FLOOR PLAN  
MULTI-PURPOSE



- KEYNOTES
- STAIRS w/ 2" WARNING SAFETY STRIP OF CONTRASTING COLOR AT TOP & BOTTOM TREADS
  - CASEWORK, SEE INT. ELEVATIONS
  - DRINKING FOUNTAIN
  - HANDRAIL/GUARDRAIL
  - FLOOR CORNER SINK, SEE PLUMBING DWGS.
  - 20" DIA. CONC. COLUMN
  - ROOF ACCESS LADDER
  - 2A:10BC MIN. TYPE FIRE EXTINGUISHER w/ BRACKET 108/A8.6 & TYPE "K" IN KITCHEN.
  - OUTDOOR PLATFORM
  - CRACK CONTROL JOINT
  - SLOPED WALKWAY
  - STEEL COLUMN, PAINTED, SEE STRUCTURAL DWGS.
  - PROVIDE SIGNAGE, MAXIMUM OCCUPANT LOAD: ASSEMBLY= 726/ DINING= 339
  - STAIRS w/ 2" WARNING SAFETY STRIP OF CONTRASTING COLOR AT EVERY TREAD
  - KITCHEN EQUIPMENT. REFER TO "K" SHEETS FOR ALL KITCHEN EQUIPMENT.
  - LOCKERS
  - 3/4" EXPANSION JOINT. REFER TO STRUCTURAL DRAWINGS FOR ALL LOCATIONS. SEE DTL 310/A8.18 FOR TYPICAL FINISH CONDITIONS.
  - 4'-0" W X 6'-0" GATE
  - 4'-0" CORNER GUARD TOP @ 45-0". SEE INT. ELEVATIONS
- GENERAL NOTES
- FOR FREEZER/ REFRIGERATOR COMBO IN LOUNGE THE FREEZER IS TO HAVE 50% OF SPACE A MAXIMUM OF 54" A.F.F.

- SYMBOLS LEGEND
- DOOR PER SCHEDULE. SEE DOOR SCHEDULE SHEET A2.7
  - WINDOW PER SCHEDULE. SEE WINDOW SCHEDULE SHEET A2.7
  - EXTERIOR ELEVATION SYMBOL

- WALL LEGEND
- 6" METAL STUDS AT 16" O.C. w/ R-19 INSULATION  
EXT. SIDE: CEMENT PLASTER o/ PAPER BACKED WIRE LATH o/ 1/2" DENS. GLAS GOLD  
INTERIOR SIDE: SEE FINISH SCHEDULE
  - 6" METAL STUDS AT 16" O.C. w/ SOUND BATT INSULATION - SEE FINISH SCHEDULE
  - 6" METAL STUDS AT 16" O.C. 42" HIGH w/ PAINTED WOOD CAP - SEE FINISH SCHEDULE
  - 4" METAL STUDS AT 16" O.C. - SEE FINISH SCHEDULE
  - 1-HR WALL: 6" METAL STUDS AT 16" O.C. w/ SOUND BATT INSULATION - PROVIDE 5/8" TYPE 'X' GYP. BD. EACH SIDE (UL #419) SEE DETAIL 102/A8.6
  - DOUBLE 4" 18 GA METAL STUDS AT 16" O.C. SEE FINISH SCHEDULE
  - 8" x 8" x 16" CMU WALL - SEE DETAIL 51/A8.3
  - 20" DIA. CONCRETE COLUMN, SEE DETAIL 60/A8.3
- NOTE: SEE STRUCT. FOR METAL STUD SIZES AND



PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-77a**  
**S&B Elementary**  
**02-116800**



THE FIRM OF SMITH, BAWAGNA, MALHOTRA, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY, WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

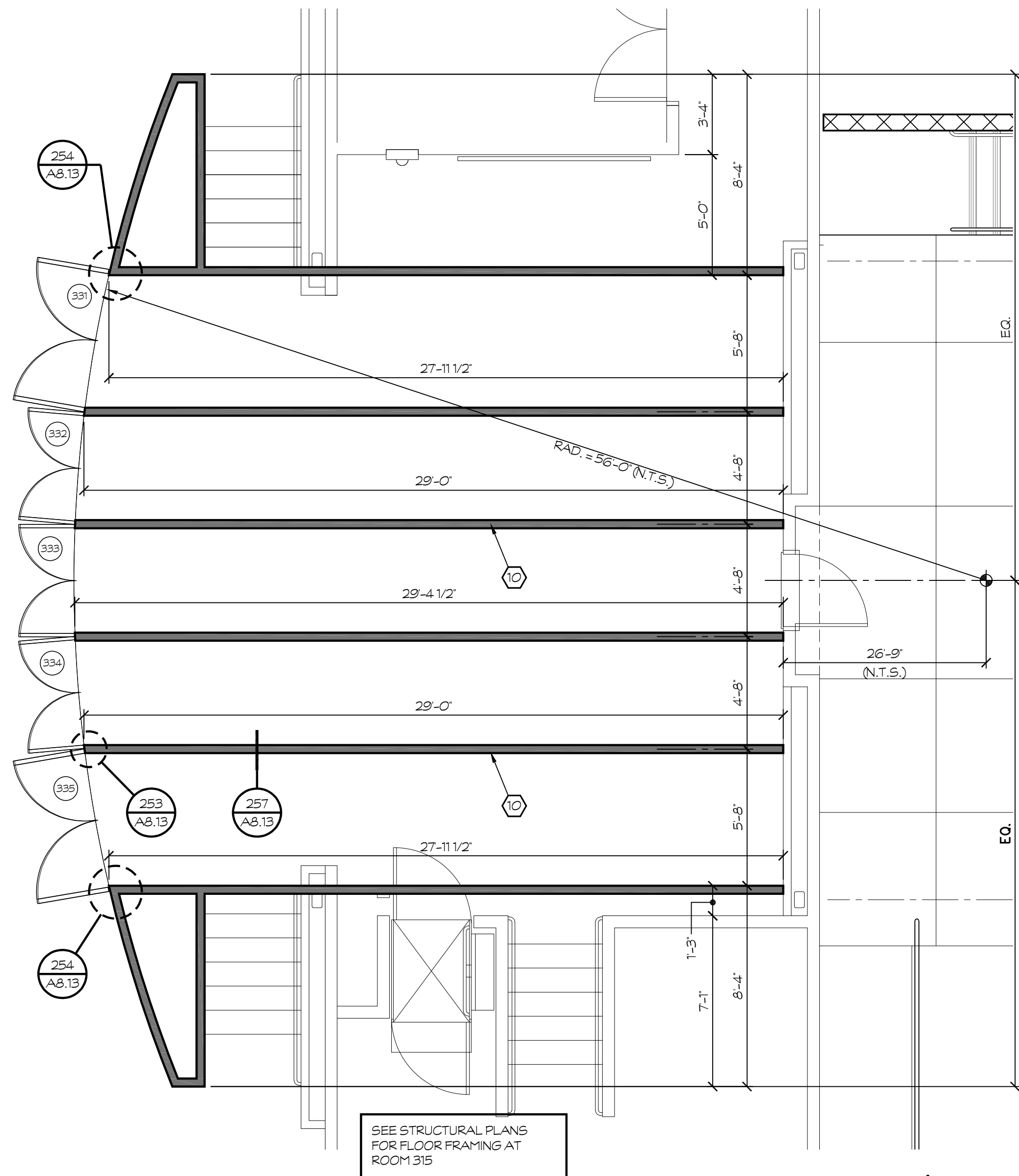
REVISIONS

No.	DATE	DESCRIPTION
1	2.14.23	DISTRICT MODIFICATIONS
2	2.27.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

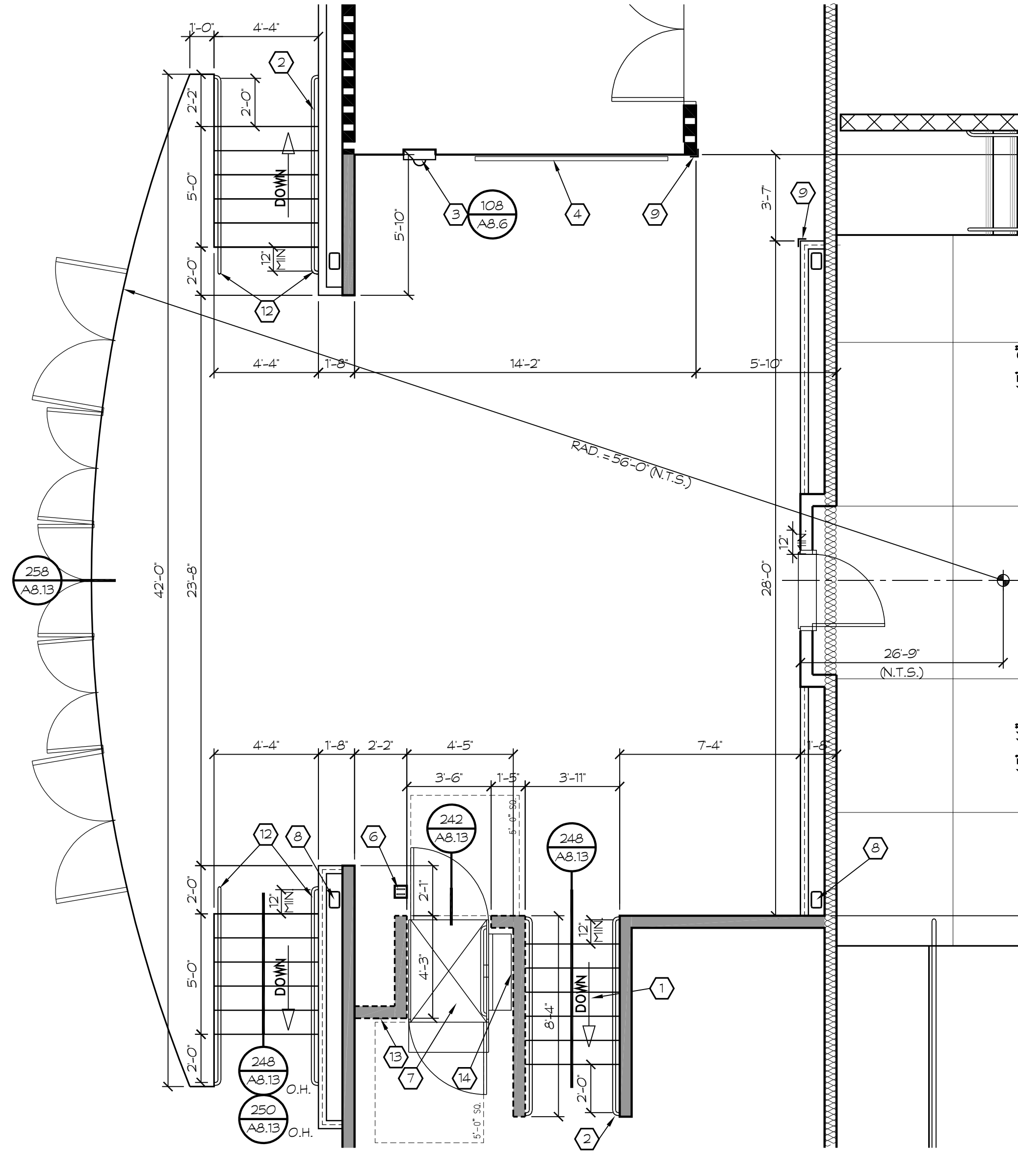
FLOOR PLAN	
MULTI-PURPOSE	
PROJECT COORDINATOR JOHN SMITH	SHEET NO. A1.12
PROJECT NO. 17-67	DATE 1.27.23
DATE 1.27.23	SCALE 1/8"=1'-0"





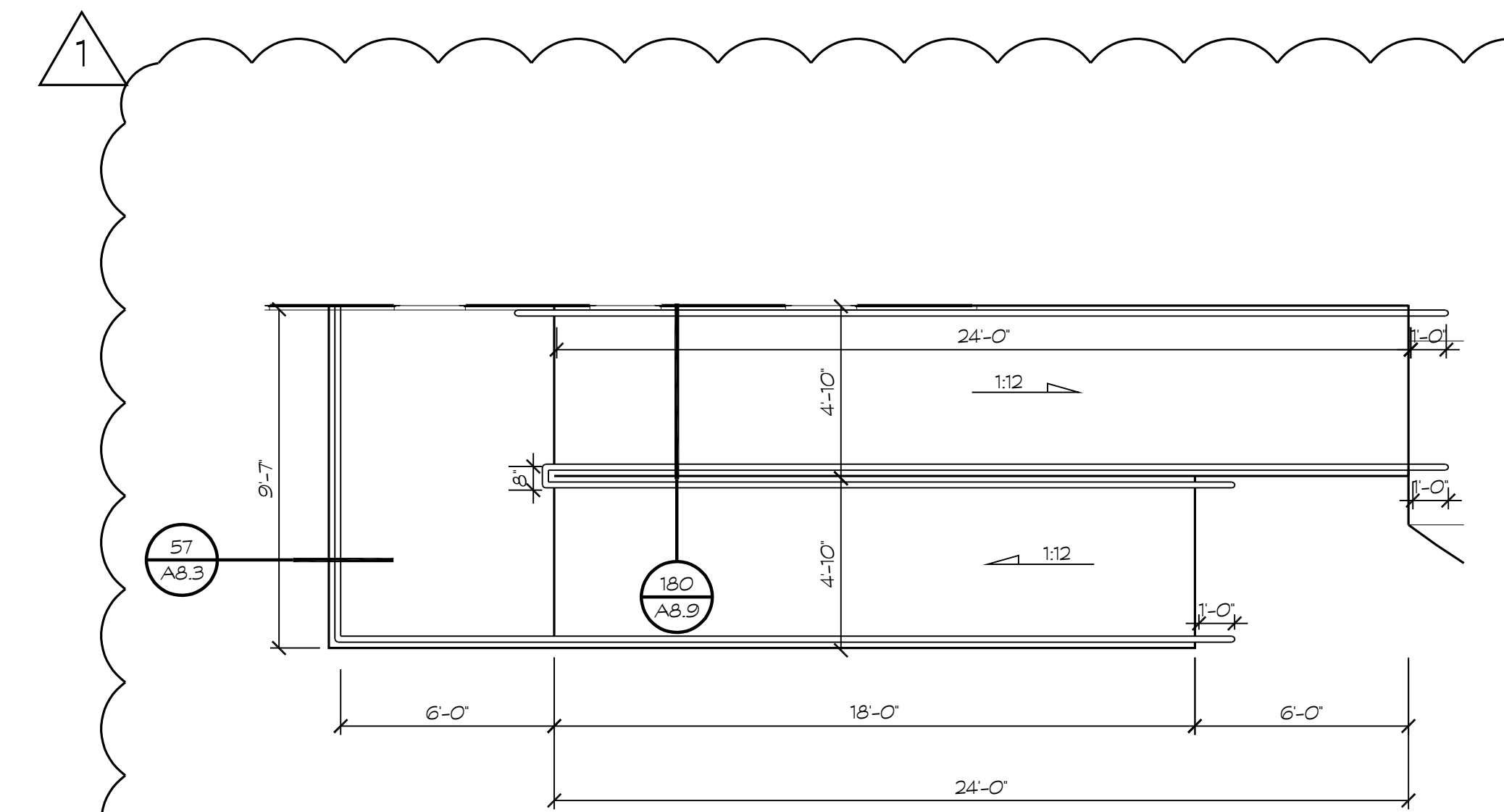
**B** SUB PLATFORM PLAN

SCALE: 1/4" = 1'-0"



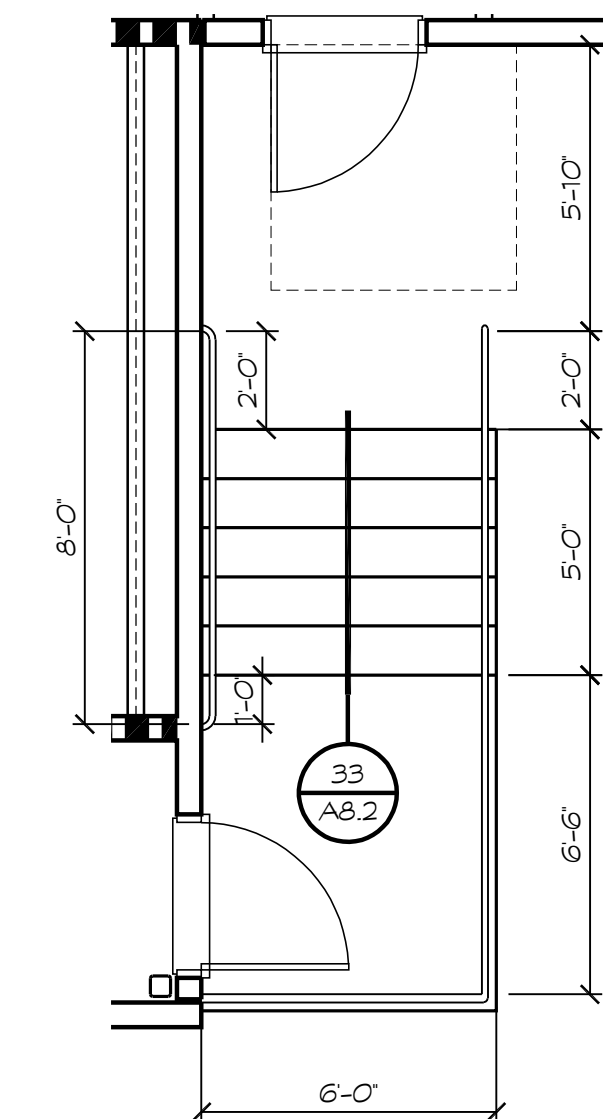
**A** PLATFORM PLAN

SCALE: 1/4" = 1'-0"



**D** EXTERIOR ACCESSIBLE RAMP AT AMPHITHEATER

SCALE: 1/4" = 1'-0"





DOOR SCHEDULE

DOOR No.	DOOR TYPE	DOOR SIZE W. x H.	DOOR		FRAME		GLASS		FIRE RATING	SIGNAGE	DETAILS			HARDWARE	REMARKS	
			THICKNESS	CONST.	FINISH	CONST.	FINISH	TYPE			FINISH	LOUVER	HEAD			JAMB
101	A	PAIR 3'-0" x 7'-0"	13/4	ALUM	FF	ALUM	ANOD	T	TNT	--	1,2,3	86 A8.5	87 A8.5	88 A8.5	101	1
102	A	PAIR 3'-0" x 7'-0"	13/4	ALUM	FF	ALUM	ANOD	T	TNT	--	1,2,3	86 A8.5	87 A8.5	88 A8.5	102	1
103	B	PAIR 3'-0" x 7'-0"	13/4	ALUM	FF	ALUM	ANOD	T	TNT	--	1,2,3	86 A8.5	87 A8.5	88 A8.5	103	1
104	B	PAIR 3'-0" x 7'-0"	13/4	ALUM	FF	ALUM	ANOD	T	TNT	--	1,2,3	86 A8.5	87 A8.5	88 A8.5	104	1
105	C	PAIR 3'-0" x 7'-0"	13/4	HM	SGP	HM	SGP	--	--	--	3	82 A8.5	83 A8.5	84 A8.5	105	3
106	I	3'-0" x 7'-0"	13/4	HM	SGP	ALUM	ANOD	T	TNT	--	2,3	86 A8.5	87 A8.5	88 A8.5	106	3
107	E	3'-0" x 7'-0"	13/4	HM	SGP	HM	SGP	--	--	--	4	82 A8.5	83 A8.5	84 A8.5	107	2
108	E	3'-0" x 7'-0"	13/4	HM	SGP	HM	SGP	--	--	--	4	82 A8.5	83 A8.5	84 A8.5	108	2
109	I	3'-0" x 7'-0"	13/4	HM	SGP	ALUM	ANOD	T	TNT	--	2,3	86 A8.5	87 A8.5	88 A8.5	109	3
110	B	PAIR 3'-0" x 7'-0"	13/4	ALUM	ANOD	ALUM	ANOD	T	TNT	--	1,2,3	86 A8.5	87 A8.5	88 A8.5	110	1
111	E	4'-6" x 4'-2"	13/4	HM	SGP	HM	SGP	--	--	--	3	82 A8.5	83 A8.5	84 A8.5	111	3
112	H	3'-0" x 7'-0"	13/4	HM	SGP	HM	SGP	T	TNT	--	1,2	82 A8.5	83 A8.5	84 A8.5	112	1
113	H	3'-0" x 7'-0"	13/4	HM	SGP	HM	SGP	T	TNT	--	1,2	82 A8.5	83 A8.5	84 A8.5	113	1
114	E	3'-0" x 7'-0"	13/4	HM	SGP	HM	SGP	--	--	--	1,2,3	82 A8.5	83 A8.5	84 A8.5	114	3
115	B	PAIR 3'-0" x 7'-0"	13/4	ALUM	ANOD	ALUM	ANOD	T	TNT	--	1,2,3	86 A8.5	87 A8.5	88 A8.5	115	1
116	E	3'-0" x 7'-0"	13/4	HM	SGP	HM	SGP	--	--	--	4	82 A8.5	83 A8.5	84 A8.5	116	2
117	E	3'-0" x 7'-0"	13/4	HM	SGP	HM	SGP	--	--	--	4	82 A8.5	83 A8.5	84 A8.5	117	2
118	B	PAIR 3'-0" x 7'-0"	13/4	ALUM	ANOD	ALUM	ANOD	T	TNT	--	1,2,3	86 A8.5	87 A8.5	88 A8.5	118	1
119	G	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	119	3
120	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	45, 4	105 A8.6	105 A8.6	--	120	2
121	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 3	105 A8.6	105 A8.6	--	121	3
122	D	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	122	3
123	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	123	3
124	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	--	4	105 A8.6	105 A8.6	--	124	2
125	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	--	4	105 A8.6	105 A8.6	--	125	2
126	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	126	3
127	D	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	127	3
128	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	45, 3	3	105 A8.6	105 A8.6	--	128	3
129	D	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	129	3
130	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	130	3
131	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	--	4	105 A8.6	105 A8.6	--	131	2
132	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	--	4	105 A8.6	105 A8.6	--	132	2
133	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	133	3
134	D	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	134	3
135	E	3'-0" x 6'-0"	13/4	SC	LP	HM	SGP	--	--	45, 3	3	105 A8.6	105 A8.6	--	135	3
136	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	136	3
137	F	3'-0" x 7'-0"	13/4	HM	LP	HM	SGP	--	--	--	3	105 A8.6	105 A8.6	--	137	3
138	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	138	3
139	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	45, 2,3	3	105 A8.6	105 A8.6	--	139	3
140	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	--	3	105 A8.6	105 A8.6	--	140	3
141	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	141	3
142	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	--	3	105 A8.6	105 A8.6	--	142	4

DOOR SCHEDULE

DOOR No.	DOOR TYPE	DOOR SIZE W. x H.	DOOR		FRAME		GLASS		FIRE RATING	SIGNAGE	DETAILS			HARDWARE	REMARKS	
			THICKNESS	CONST.	FINISH	CONST.	FINISH	TYPE			FINISH	LOUVER	HEAD			JAMB
143	G	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	143	3
144	J	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	144	3
145	G	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	145	3
146	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	146	3
147	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	147	3
148	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	45, 2,3	3	105 A8.6	105 A8.6	--	148	3
149	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	149	3
150	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	45, 4	4	105 A8.6	105 A8.6	--	150	2
151	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	--	4	105 A8.6	105 A8.6	--	151	2
152	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	20, 4	4	105 A8.6	105 A8.6	--	152	2
153	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	20, 4	4	105 A8.6	105 A8.6	--	153	2
154	D	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	154	3
155	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	155	3
156	D	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	156	3
157	D	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	157	3
158	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	158	3
159	D	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	159	3
160	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	45, 3	3	105 A8.6	105 A8.6	--	160	3
161	D	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	161	3
162	D	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	45, 2,3	105 A8.6	105 A8.6	--	162	3
163	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	163	3
164	D	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	164	3
165	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	20, 2,3	105 A8.6	105 A8.6	--	165	3
166	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	3	105 A8.6	105 A8.6	--	166	3
167	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	45, 3	3	105 A8.6	105 A8.6	--	167	3
168	E	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	--	--	20, 3	3	105 A8.6	105 A8.6	--	168	3
170	H	3'-0" x 7'-0"	13/4	SC	LP	HM	SGP	T	CLR	--	45, 2,3	105 A8.6	105 A8.6	--	170	3
171	K	3'-0" x 3'-8"													171	3
173															173	
174															174	
175															175	
176															176	

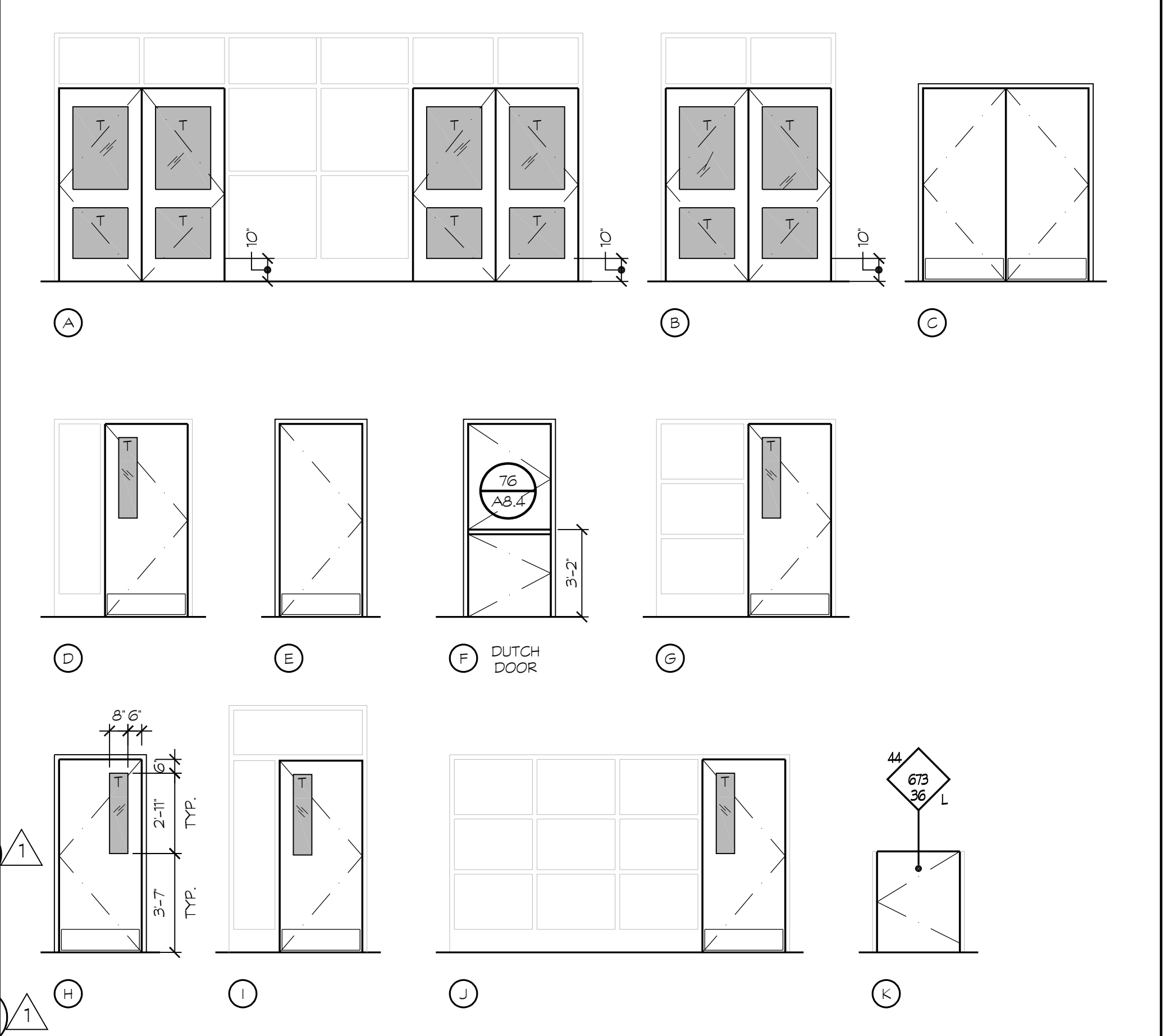
DOOR SIGNAGE

- BUILDING ENTRANCE/ISA SIGNAGE, SEE DETAIL 212/A8.11
- TACTILE EXIT SIGNAGE, SEE DETAIL 201/A8.11, AND/OR SEE ELECTRICAL PLANS FOR ILLUMINATED EXIT REQUIREMENTS.
- ROOM IDENTIFICATION SIGNAGE, SEE DETAIL 212/A8.11 (VERIFY ROOM NAME & NUMBER w/ OWNER), WHERE TWO ROOMS ADJOIN ONE ANOTHER, PROVIDE SIGNAGE ON EACH SIDE OF THE WALL, TYP. ALL ROOMS.
- RESTROOM SIGNAGE, SEE DETAIL 217/A8.11.

ABBREVIATIONS

ALUM	ALUMINUM	MT	MARLITE PANEL
ANOD	ANODIZED	P	PAINT
CLN	CLEAN	PL	PLATE
CLR	CLEAR	PW	PICTURE WINDOW
CPT	CARPET (N.I.C.)	S	SINGLE GLAZED
CV	INTEGRAL COVE	SC	SOLID CORE
DL	DUAL GLAZED	SGP	SEM GLOSS PAINT
EP	EPOXY PAINT	SH	SINGLE-HUNG
ESP	EGG SHELL PAINT	SIGN	PROVIDE SIGNAGE
EXP	EXPOSED STRUCTURE	SL	SEAL
FG	FIBERGLASS	STN	STAIN
FF	FACTORY FINISH	STL	STEEL
FP	FACTORY PAINT	T	TEMPERED
FR	FIRE RATED	TF	TIMELY FRAME
FT	FACTORY	TNT	TINTED
GBLK	GLASS BLOCK	TT	TAPE & TEXTURED
HM	HOLLOW METAL	VAR	VARIABLES
LP	LAMINATE PLASTIC	W	WIRE GLASS
		WD	WOOD

DOOR TYPES



REMARKS

- PROVIDE ACCESSIBLE EXIT SIGNAGE. SEE DETAIL 201/A8.11
- PROVIDE ACCESSIBLE RESTROOM SIGNAGE. SEE DETAIL 217/A8.11
- PROVIDE ROOM IDENTIFICATION SIGNAGE. SEE DETAIL 212/A8.11

GENERAL NOTES

- SEE SPECIFICATIONS FOR SUSPENDED ACOUSTICAL CEILING TILE TYPE.
- ARCHITECT TO SELECT PAINT COLORS AND LOCATIONS.
- WINDOW JAMBS AT LOCATIONS WITH VINYL TACKBOARD FINISH TO RECEIVE V.T.B. WRAP.
- ALL GLAZING WITHIN 24" OF A DOOR OR OPERABLE WINDOW SHALL BE TEMPERED GLASS
- SEE SPECIFICATION SECTION 10400 FOR DOOR & ROOM SIGNAGE
- ALL FINISH MATERIALS SHALL COMPLY WITH CBC TABLE 803.5'
- FOR CONDITIONS AT METAL PANELS NOT SPECIFICALLY REFERENCED, SEE SHEETS A8.14 & A8.15. DOORS TO BE SIMILAR TO WINDOWS, COORDINATE w/ METAL PANEL MANUFACTURER.
- SEE DETAIL #179/A8.9 FOR HM FRAME ANCHORAGE, TYP.
- SEE GENERAL NOTES ON COLOR SCHEDULE, SHEET A2.8, FOR TYPICAL DOOR & WINDOW FINISHES.
- HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL BE 34 INCHES MINIMUM AND 44 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
- FOR ADDITIONAL SIGNAGE NOT SHOWN IN SCHEDULE, SEE T4



WINDOW SCHEDULE

WINDOW No.	WINDOW TYPE	WINDOW DIMENSIONS	WINDOW					FRAME			DETAILS			REMARKS
			TYPE	FINISH	MATERIAL	FINISH	FREIGHTING	HEAD	JAMB	SILL	HEAD	JAMB	SILL	
101	A	26'-0" x 12'-6"	DL	TNT	ALUM	ANOD	90	91	106	A8.5	A8.5	A8.6		
102	D	24'-0" x 9'-4"	DL	TNT	ALUM	ANOD	261	265	267	A8.14	A8.14	A8.14	1	
103														
104	L	6'-4" x 9'-0"	DL	TNT	ALUM	ANOD	90	91	86	A8.5	A8.5	A8.5		
105	B	7'-0" x 5'-10"	DL	TNT	FG	FT	94	95	267	A8.5	A8.5	A8.14		
106	E	2'-0" x 2'-0"	DL	OBSC	FG	FT	94	95	96	A8.5	A8.5	A8.5	2	
107	E	2'-0" x 2'-0"	DL	OBSC	FG	FT	94	95	96	A8.5	A8.5	A8.5	2	
108	C	7'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	2	
109		NOT USED												
110	B	7'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1	
111	H	3'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1.2	
112	H	3'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1.2	
113	I	6'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1.2	
114	T	5'-0" x 9'-0"	DL	TNT	ALUM	ANOD	90	91	106	A8.5	A8.5	A8.6	1	
115	J	6'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1	
116	E	2'-0" x 2'-0"	DL	OBSC	FG	FT	94	95	96	A8.5	A8.5	A8.5	2	
117	E	2'-0" x 2'-0"	DL	OBSC	FG	FT	94	95	96	A8.5	A8.5	A8.5	2	
118	I	6'-0" x 5'-10"	DL	TNT	FG	FT	94	95	267	A8.5	A8.5	A8.14	1	
119	J	6'-0" x 5'-10"	DL	TNT	FG	FT	94	95	267	A8.5	A8.5	A8.14	1	
120	S	3'-0" x 4'-0"	DL	TNT	FG	FT	94	95	96	A8.5	A8.5	A8.5	1	
121	J	6'-0" x 5'-10"	DL	TNT	FG	FT	261	265	267	A8.14	A8.14	A8.14	1	
122	R	8'-0" x 5'-10"	DL	TNT	FG	FT	261	265	267	A8.14	A8.14	A8.14	1	
123	I	6'-0" x 5'-10"	DL	TNT	FG	FT	261	265	267	A8.14	A8.14	A8.14	1	
124	S	4'-6" x 4'-0"	DL	TNT	FG	FT	94	95	96	A8.5	A8.5	A8.5	1	
125	C	7'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1	
126	B	7'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1	
127A	C	7'-0" x 5'-10"	DL	TNT	FG	FT	94	95	267	A8.5	A8.5	A8.14	1	
127B	B	7'-0" x 5'-10"	DL	TNT	FG	FT	94	95	267	A8.5	A8.5	A8.14	1	
128	C	7'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1	
129	B	7'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1	
130	C	7'-0" x 5'-10"	DL	TNT	FG	FT	94	95	267	A8.5	A8.5	A8.14	1	
131A	B	7'-0" x 5'-10"	DL	TNT	FG	FT	94	95	267	A8.5	A8.5	A8.14	1	
131B	H	3'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1.2	
132	H	3'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1.2	
133A	C	7'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1	
133B	B	7'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1	
134A	C	7'-0" x 5'-10"	DL	TNT	FG	FT	94	95	267	A8.5	A8.5	A8.14	1	
134B	B	7'-0" x 5'-10"	DL	TNT	FG	FT	94	95	267	A8.5	A8.5	A8.14	1	
135	C	7'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1	
136	B	7'-0" x 5'-10"	DL	TNT	FG	FT	98	99	100	A8.5	A8.5	A8.5	1	
137	C	7'-0" x 5'-10"	DL	TNT	FG	FT	94	95	267	A8.5	A8.5	A8.14	1	
138	Q	34'-10" x 9'-4"	DL	TNT	ALUM	ANOD	261	265	267	A8.14	A8.14	A8.14	1	

WINDOW SCHEDULE

WINDOW No.	WINDOW TYPE	WINDOW DIMENSIONS	WINDOW					FRAME			DETAILS			REMARKS
			TYPE	FINISH	MATERIAL	FINISH	FREIGHTING	HEAD	JAMB	SILL	HEAD	JAMB	SILL	
139	P	17'-8" x 9'-4"	DL	TNT	ALUM	ANOD	261	265	267	A8.14	A8.14	A8.14	1	
140	G	6'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
141	G	5'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
142	M	6'-0" x 3'-0"	S	CLR	HM	P		107	107	107	A8.6	A8.6	A8.6	
143	M	6'-0" x 3'-0"	S	CLR	HM	P		107	107	107	A8.6	A8.6	A8.6	
144	G	5'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
145	G	5'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
146	M	6'-0" x 3'-0"	S	CLR	HM	P		107	107	107	A8.6	A8.6	A8.6	
147	M	6'-0" x 3'-0"	S	CLR	HM	P		107	107	107	A8.6	A8.6	A8.6	
148	G	5'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
149		NOT USED												
150	N	9'-0" x 9'-6"	S	CLR	HM	P		107	107	107	A8.6	A8.6	A8.6	
151	N	9'-0" x 9'-6"	S	CLR	HM	P		107	107	107	A8.6	A8.6	A8.6	
152	K	5'-0" x 7'-2"	S	CLR	HM	P		107	107	107	A8.6	A8.6	A8.6	
153	O	12'-4" x 7'-2"	S	CLR	HM	P		107	107	107	A8.6	A8.6	A8.6	1
154	K	5'-0" x 7'-2"	S	CLR	HM	P		107	107	107	A8.6	A8.6	A8.6	
155	G	5'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
156	G	5'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
157	G	5'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
158	G	5'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
159	G	5'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
160	G	5'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
161	G	5'-0" x 7'-2"	S	CLR	HM	P	45	107	107	107	A8.6	A8.6	A8.6	
163		NOT USED												
164	T	5'-0" x 9'-0"	DL	TNT	ALUM	ANOD	90	91	106	A8.6	A8.6	A8.6		
165		NOT USED												
166		NOT USED												
167		NOT USED												
168		NOT USED												
169	E	4'-0" x 4'-0"	S	CLR	HM	P		107	107	107	A8.8	A8.8	A8.8	1
170		NOT USED												
171		NOT USED												

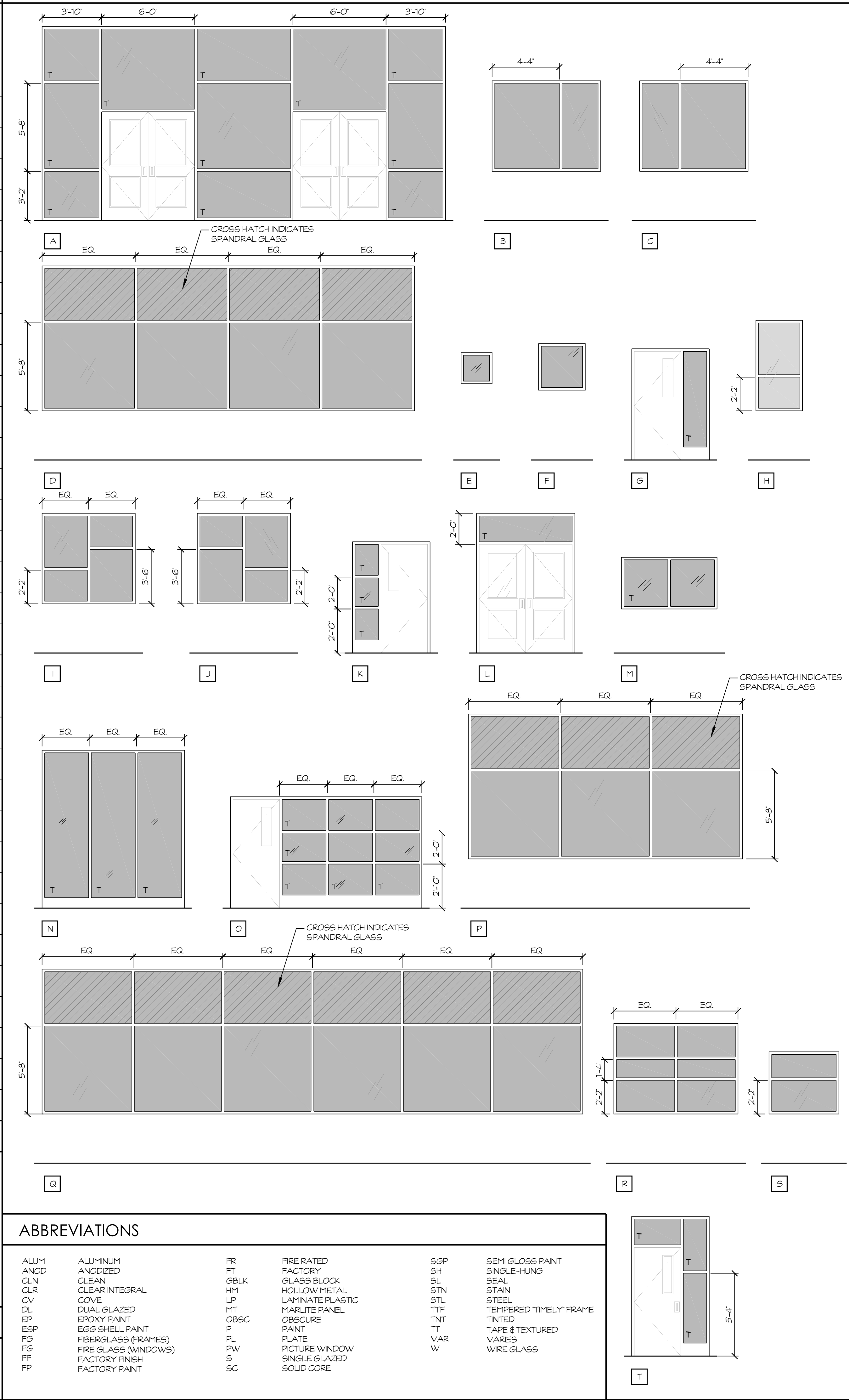
**GENERAL NOTES**

- ALL WINDOWS WITHIN 24" OF DOOR OR 18" FROM GROUND SHALL BE TEMPERED GLASS.
- WINDOW JAMBS AT LOCATIONS WITH VINYL BACKBOARD FINISH TO RECEIVE V.T.B. WRAP.
- ALL GLAZING WITHIN 24" OF DOOR OR OPERABLE WINDOW ARE TO BE TEMPERED.
- SEE 97/A8.5 FOR FLASHING SEQUENCE
- FOR CONDITIONS AT METAL PANELS NOT SPECIFICALLY REFERENCED, SEE SHEETS A8.14 & A8.15

**REMARKS**


- PROVIDE VERTICAL LOUVERS (SPEC. SECTION 12510)
- WINDOWS ARE FIXED, DETAIL SHOWS OPENABLE

WINDOW TYPES



**ABBREVIATIONS**


ALUM	ALUMINUM	FR	FIRE RATED	SGP	SEMI GLOSS PAINT
ANOD	ANODIZED	FT	FACTORY	SH	SINGLE-HUNG
CLN	CLEAN	GBLK	GLASS BLOCK	SL	SEAL
CLR	CLEAR INTEGRAL	HM	HOLLOW METAL	STN	STAIN
CV	COVE	LP	LAMINATE PLASTIC	STL	STEEL
DL	DUAL GLAZED	MT	MARLITE PANEL	TTF	TEMPERED TIMELY FRAME
EP	EPOXY PAINT	OBSC	OBSCURE	TNT	TINTED
ESP	EGG SHELL PAINT	P	PAINT	TT	TAPE & TEXTURED
FG	FIBERGLASS FRAMES	PL	PLATE	VARS	VARIABLES
FG	FIRE GLASS (WINDOWS)	PW	PICTURE WINDOW	W	WIRE GLASS
FF	FACTORY FINISH	S	SINGLE GLAZED		
FP	FACTORY PAINT	SC	SOLID CORE		



7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 • F 559.448.8467  
www.sim-pbk.com

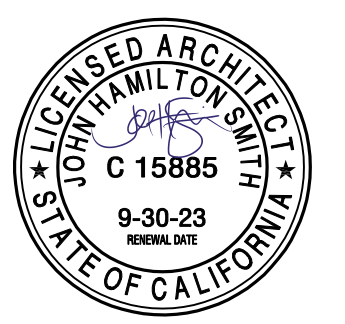
PROJECT:

# SHIELDS & BRAWLEY ELEMENTARY SCHOOL



AD 1-80a  
S&B Elementary  
02-116800

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, WANAGA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PRIORITY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

**PROJECT DEVELOPMENT**

DATE	ISSUED FOR

**REVISIONS**

No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS

**SHEET DESCRIPTION**

## WINDOW SCHEDULE

MAIN - 1ST FLOOR

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	A2.3
DATE 1.27.23	
SCALE 1/4" = 1'-0"	

E:\17-67 Shields & Brawley Elementary\Work\17-67-02-116800-01.dwg, 02/15/23, 2:18 PM



FINISH SCHEDULE

ROOM No.	ROOM DESCRIPTION	FLOOR		BASE			WAINSCOT			WALLS								CEILING	
		MATERIAL	FINISH	MATERIAL	FINISH	HEIGHT	MATERIAL	FINISH	HEIGHT	WEST		NORTH		EAST		SOUTH			
										MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH		
301	MULTI-PURPOSE	CONC	SL	RTB	FF	4"	AC	FT	48"	GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	ESP
302	STAFF LOUNGE	LVT	FF	RTB	FF	4"				GB	SGP	GB	SGP	GB	SGP	GB	SGP	GB	SGP
303	DISH WASH	EPF	FF	EPF	CV	6"				FRP	FF	FRP	FF	FRP	FF	FRP	FF	FRP	FF
304	HALL	EPF	FF	EPF	CV	6"				FRP	FF	FRP	FF	FRP	FF	FRP	FF	FRP	FF
305	STAFF RR	EPF	FF	EPF	CV	6"	FRP	FF	7'-2"	CT	CLN	CT	CLN	CT	CLN	CT	CLN	CT	CLN
306	IDF	CONC	SL	TL	CV	6"				GB	SGP	GB	SGP	GB	SGP	GB	SGP	GB	SGP
307	FOOD SERVICE	EPF	FF	EPF	CV	6"				FRP	FF	FRP	FF	FRP	FF	FRP	FF	FRP	FF
308	HALL	EPF	FF	EPF	CV	6"				FRP	FF	FRP	FF	FRP	FF	FRP	FF	FRP	FF
309	DRY GOODS	EPF	FF	EPF	CV	6"				GB	SGP	GB	SGP	GB	SGP	GB	SGP	GB	SGP
310	COOL	EPF	FF	EPF	CV	6"				IP	FF	IP	FF	IP	FF	IP	FF	IP	FF
311	FREEZE	EPF	FF	EPF	CV	6"				IP	FF	IP	FF	IP	FF	IP	FF	IP	FF
312	STORAGE	CONC	SL	TL	CV	6"				FRP	FF	FRP	FF	FRP	FF	FRP	FF	FRP	FF
313	MECHANICAL	CONC	SL	RTB	FF	4"				GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	ESP
314	OFFICE	EPF	FF	EPF	CV	6"				GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	ESP
315	STORAGE	WD	WAX	RTB	FF	4"				GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	ESP
316	PLATFORM	WD	WAX	WD	FF	4"				GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	ESP
317	HALL	CONC	CD	RTB	FF	4"				GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	ESP
318	MERCHANDISE	CONC	CD	RTB	FF	4"				GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	ESP
319	GIRL'S RR	TL	CLN	CV	CLN	6"	TL	CLN	7'-11"	TL	CLN	TL	CLN	TL	CLN	TL	CLN	TL	CLN
320	BOY'S RR	TL	CLN	CV	CLN	6"	TL	CLN	7'-11"	TL	CLN	TL	CLN	TL	CLN	TL	CLN	TL	CLN
321	WASHROOM	TL	CLN	CV	CLN	6"	TL	CLN	7'-11"	TL	CLN	TL	CLN	TL	CLN	TL	CLN	TL	CLN
322	LOCKERS	EPF	FF	EPF	CV	6"				GB	ESP	GB	ESP	GB	ESP	GB	ESP	GB	ESP
323																			
324																			
325																			

SEE REFLECTED CEILING PLANS FOR ALL CEILING INFORMATION

DOOR SCHEDULE

DOOR No.	DOOR TYPE	DOOR SIZE W. x H.	THICKNESS	CONSTRUCTION	FINISH	CONSTRUCTION	FINISH	GLASS	TYPE	FINISH	LOWER	FIRE RATING	SIGNAGE	DETAILS			REMARKS		
														HEAD	JAMB	THRESHOLD			
														86	87	88			
301	A	PAIR 3'-0" x 7'-0"	1 3/4"	ALUM ANOD	ALUM ANOD	T	TNT						1,2,3	A8.5	A8.5	A8.5	04		
302	A	PAIR 3'-0" x 7'-0"	1 3/4"	ALUM ANOD	ALUM ANOD	T	TNT						1,2,3	A8.5	A8.5	A8.5	01		
303	B	PAIR 3'-0" x 7'-0"	1 3/4"	ALUM ANOD	ALUM ANOD	T	TNT						1,2,3	A8.5	A8.5	A8.5	04		
304	H	PAIR 3'-0" x 7'-0"	1 3/4"	HM	SGP	HM	SGP						2,3	A8.5	A8.5	A8.5	05		
305	D	4'-0" x 7'-0"	1 3/4"	HM	SGP	HM	SGP						2,3	A8.5	A8.5	A8.5	08		
306	J	3'-0" x 7'-0"	1 3/4"	HM	SGP	HM	SGP						3	A8.5	A8.5	A8.5	14		
307	E	3'-0" x 7'-0"	1 3/4"	HM	SGP	HM	SGP						1,2,3	A8.5	A8.5	A8.5	07		
308	E	3'-0" x 7'-0"	1 3/4"	HM	SGP	HM	SGP						1,2,3	A8.5	A8.5	A8.5	07		
309	E	3'-0" x 7'-0"	1 3/4"	HM	SGP	HM	SGP						1,2,3	A8.5	A8.5	A8.5	14		
310																			
311	H	PAIR 3'-0" x 7'-0"	1 3/4"	HM	SGP	HM	SGP						1,2,3	A8.5	A8.5	A8.5	03		
312	F	PAIR 3'-0" x 7'-0"	1 3/4"	ALUM ANOD	ALUM ANOD	T	TNT						1,2,3	A8.5	A8.5	A8.5	01		
313	F	PAIR 3'-0" x 7'-0"	1 3/4"	ALUM ANOD	ALUM ANOD	T	TNT						1,2,3	A8.5	A8.5	A8.5	04		
314	E	3'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						3	105	105		17		
315	E	3'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						3	105	105		17		
316	E	3'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						3	82	83		14		
317	E	3'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						4	105	105		22		
318	E	3'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						3	105	105		27		
319																			
320																			
321	E	3'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						3	105	105		28		
322	G	7'-8" x 4'-0"	2"	SS	FF	SS	FF							312	118	80		33	
323	D	4'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						3	105	105		18		
324	E	3'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						3	105	105		23		
325	H	PAIR 3'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						45	105	105		30		
326	E	3'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						2,3	105	105		17		
327	M	4'-10" x 7'-0"				HM	SGP						2	105	105				
328	E	3'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						4	105	105		21		
329	E	3'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						4	105	105		21		
330	E	4'-0" x 7'-0"	1 3/4"	SC	LP	HM	SGP						3,4	105	105		17		
331	K	PAIR 3'-0" x 3'-0"	1 3/8"	SC	LAM	WD	LAM							258	254		32		
332	K	PAIR 2'-4" x 3'-0"	1 3/8"	SC	LAM	WD	LAM							258	253		32		
333	K	PAIR 2'-4" x 3'-0"	1 3/8"	SC	LAM	WD	LAM							258	253		32		
334	K	PAIR 2'-4" x 3'-0"	1 3/8"	SC	LAM	WD	LAM							258	253		32		
335	K	PAIR 3'-0" x 3'-0"	1 3/8"	SC	LAM	WD	LAM							258	254		32		
336	G	4'-0" x 4'-0"	2"	SS	FF	SS	FF							312	118	80		33	

ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE	SC	SOLID CORE
ALUM	ALUMINUM	SGP	SEMI GLOSS PAINT
ANOD	ANODIZED	SIGN	PROVIDE SIGNAGE
ASF	ALTRO SAFETY FLOORING	SL	SEAL
CBU	CEMENTIOUS BACKER UNIT	STN	STAIN
CLN	CLEAN	STL	STEEL
CLR	CLEAR	T	TEMPERED
CONC	CONCRETE	TF	"TIMELY" FRAME
CPT	CARPET	TL	TILE
CT	CERAMIC TILE	TNT	TINTED
CV	INTEGRAL COVE	TP	TECTUM PANELS
DL	DUAL GLAZED	SV	SHEET VINYL
EP	EPOXY PAINT	VCT	VINYL COMPOSITION TILE
ESP	EGG SHELL PAINT	VTB	VINYL TACKBOARD
EXP	EXPOSED STRUCTURE	VAR	VARIES
FRP	FIBER REINFORCED PANEL	WD	MAPLE WOOD w/ CLEAR FINISH
FG	FIBER GLASS	WR	WATER RESISTANT GYP. BD.
FP	FACTORY PAINT	CD	DYE / POLISHED CONCRETE SYSTEM
FF	FACTORY FINISH	RF	RESILIENT RUBBER FLOORING
GB	GYPSUM BOARD w/ LIGHT SPRAY TEXTURE	SS	STEEL
GBK	GLASS BLOCK	AC	ACROVYN
HM	HOLLOW METAL		
IP	INSULATED PANEL		
LP	LAMINATE PLASTIC		
MT	MARLITE PANEL		
OBSC	OBSCURE		
PL	PLATE		
PLY	PLYWOOD		
EPF	EPOXY RESIN FLOORING		
RTB	RUBBER TOPSET BASE		
S	SINGLE GLAZED		

DOOR SIGNAGE

- BUILDING ENTRANCE/ ISA SIGNAGE, SEE DETAIL 212 / A8.11
- TACTILE EXIT SIGNAGE, SEE DETAIL 201/A8.11. AND/OR SEE ELECTRICAL PLANS FOR ILLUMINATED EXIT REQUIREMENTS.
- ROOM IDENTIFICATION SIGNAGE, SEE DETAIL 212/A8.11 (VERIFY ROOM NAME & NUMBER w/ OWNER). WHERE TWO ROOMS ADJOIN ONE ANOTHER, PROVIDE SIGNAGE ON EACH SIDE OF THE WALL, TYP. ALL ROOMS.
- RESTROOM SIGNAGE, SEE DETAIL 217/A8.11.

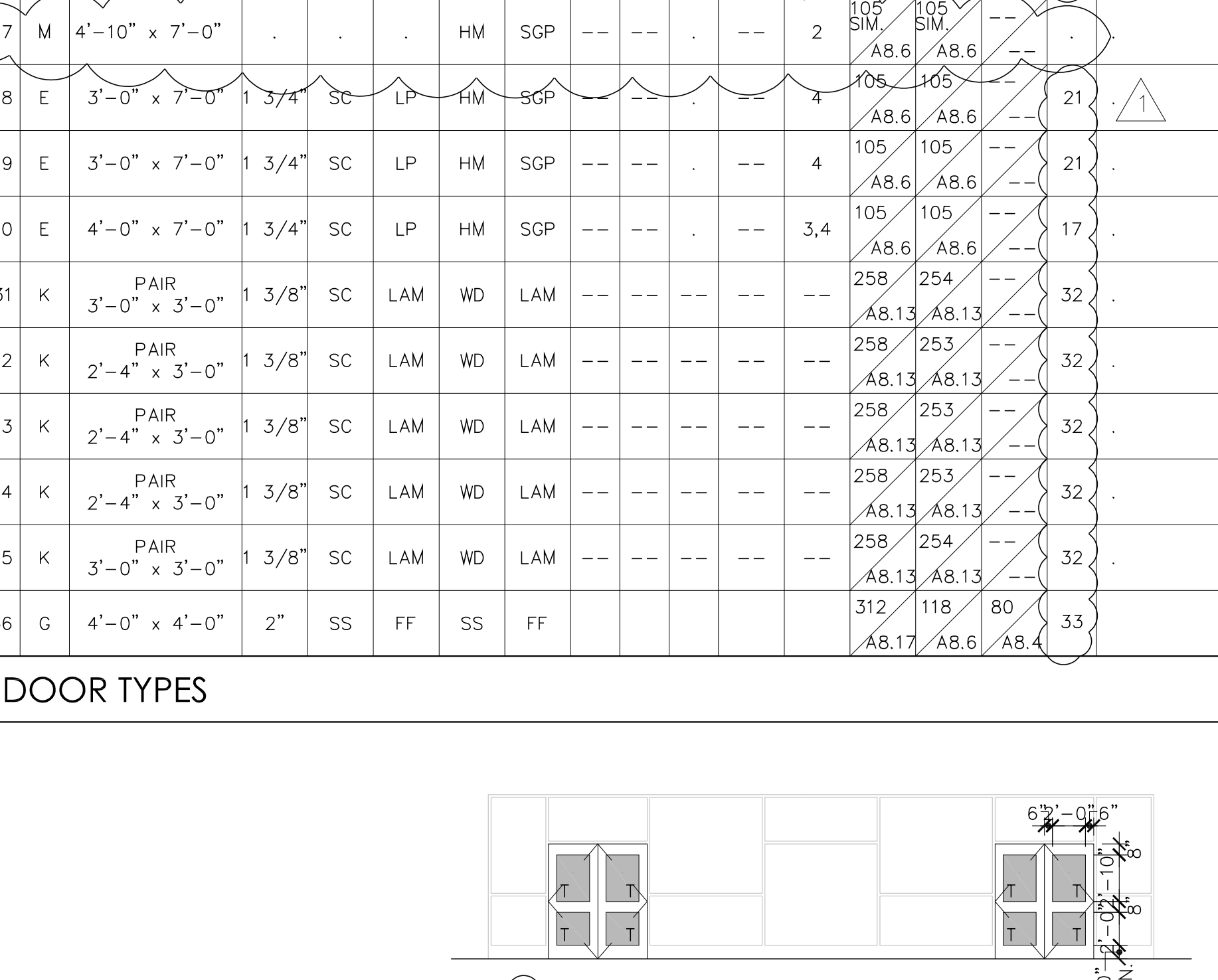
REMARKS

- SEE ENLARGED FINISH FLOOR PLAN FOR FLOOR COLORS & PATTERN.
- ALL FINISH MATERIALS SHALL COMPLY WITH CBC TABLE 803.5.
- EQUIPMENT AND APPLIANCES IN STAFF KITCHEN SHALL NOT BE USED FOR THE CLEANING, PREPARATION AND/OR STORAGE OF FOOD WHICH WILL BE SERVED TO STUDENTS
- ROOMS 309 AND 312 WILL BE USED FOR THE STORAGE OF DRY GOODS FOOD PRODUCTS

GENERAL NOTES

- SEE SPECIFICATIONS FOR SUSPENDED ACOUSTICAL CEILING TILE TYPE
- ARCHITECT TO SELECT PAINT COLORS AND LOCATIONS
- WINDOW JAMBS AT LOCATIONS WITH VINYL TACKBOARD FINISH TO RECEIVE VTB WRAP
- ALL GLAZING WITHIN 24" OF A DOOR OR OPERABLE WINDOW SHALL BE TEMPERED GLASS
- ALL EXTERIOR DOORS AND RESTROOMS DOORS TO BE SELF-CLOSING
- SEE SPECIFICATION SECTION 10400 FOR DOOR & ROOM SIGNAGE
- FOR CONDITIONS AT METAL PANELS NOT SPECIFICALLY REFERENCED, SEE SHEETS A8.14 & A8.15. DOORS TO BE SIMILAR TO WINDOWS, COORDINATE w/ METAL PANEL MANUFACTURER.
- ALL FINISH MATERIALS SHALL COMPLY WITH CBC TABLE 803.5
- SEE DETAIL #179/A8.9 FOR HM FRAME ANCHORAGE, TYP.
- SEE GENERAL NOTES ON COLOR SCHEDULE, SHEET A2.8, FOR TYPICAL DOOR & WINDOW FINISHES.
- HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL BE 34 INCHES MINIMUM AND 44 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.
- FOR ADDITIONAL SIGNAGE NOT SHOWN IN SCHEDULE, SEE T5

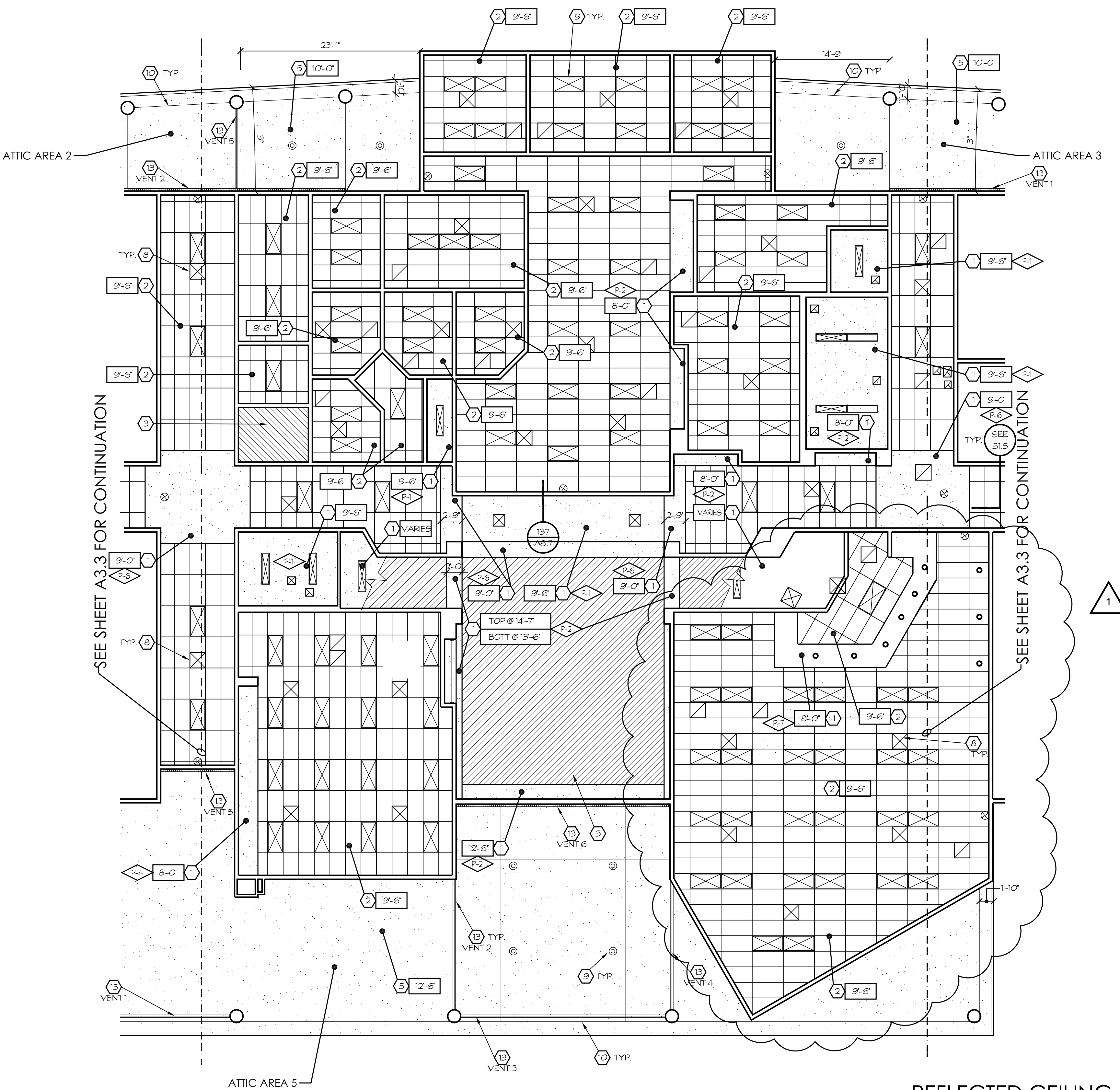
DOOR TYPES



WINDOW SCHEDULE

WINDOW No.	WINDOW TYPE	WINDOW OPENING DIMENSIONS	TYPE	FINISH	MATERIAL	FINISH	DETAILS			HEADER HEIGHT (NOMINAL)	REMARKS
							HEAD	JAMB	SILL		
							90	91	106		
301	A	47'-0" x									





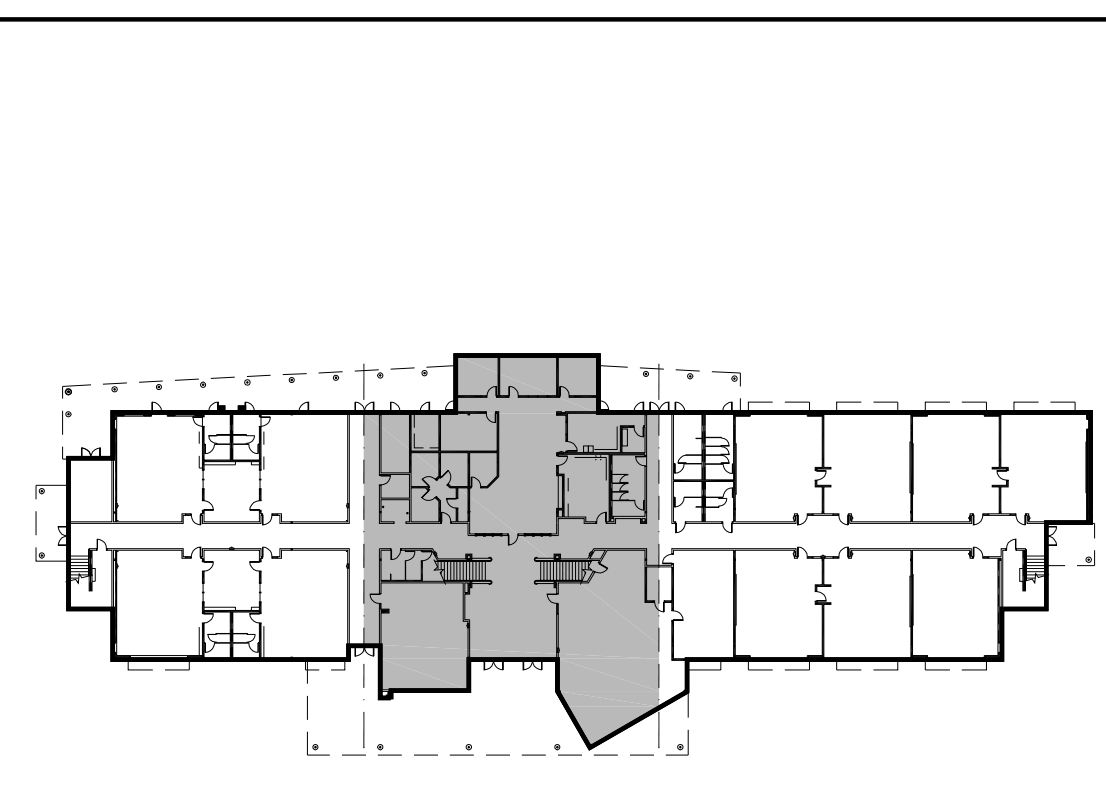
KEYNOTES

1. GYPSUM BOARD CEILING. SEE DETAIL 15/91.4
2. SUSPENDED ACOUSTICAL CEILING TILE. SEE DETAIL 140/A8.7
3. OPEN TO ABOVE
4. ROOF ACCESS LADDER. SEE DETAIL 142/A8.8
5. CEMENT PLASTER & RIGID METAL LATH. SEE SPECIFICATION 09 24 00
6. G.S.M. GUTTER
7. SKYLIGHT. SEE ROOF PLANS
8. MECHANICAL GRILL. SEE MECHANICAL DWGS.
9. LIGHTING. SEE ELECTRICAL DWGS.
10. EXPANSION JOINT
11. PROJECTOR SCREEN. SEE DETAIL 183/A8.10
12. PROJECTOR LIFT
13. 4" CONTINUOUS SOFFIT VENT
14. ROOF ACCESS HATCH
15. DASHED LINE INDICATES EXTENTS OF WALL FRAMING FOR CLERESTORY WINDOW ABOVE
16. STEEL TRUSS. SEE STRUCTURAL DWGS.
17. DECORATIVE METAL AWNING. SEE DETAIL 158/A8.8
18. DASHED LINE INDICATES SOFFIT BELOW. SEE INTERIORS AND SECTIONS FOR CLARIFICATION
19. METAL CANOPY
20. ATTIC ACCESS HATCH, 22X30 MIN.
21. SMOOTH METAL PANEL SOFFIT. SEE SHEET A3.5
22. DASHED LINE INDICATES SMOOTH METAL PANELS AT SOFFIT ABOVE CANOPY
23. IDU
24. SOFFIT
25. DOWNLIGHTS
26. FLYFAN
27. HOOD

CEILING LEGEND

- LIGHT FIXTURE. SEE ELECTRICAL
- MECHANICAL DIFFUSERS. SEE MECHANICAL
- PROJECTOR LIFT LOCATION
- PROJECTOR SCREEN LOCATION. SEE DETAIL 183/A8.10
- 20' x 30' ATTIC ACCESS

KEY PLAN



REFLECTED CEILING PLAN  
1ST FLOOR  
SCALE: 1/8" = 1'-0"

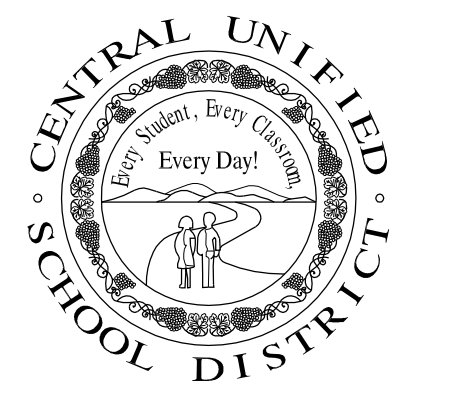
ATTIC VENTILATION CALC

ENCLOSED CANOPY ATTIC AREA - 1 = 240 S.F.	ENCLOSED CANOPY ATTIC AREA - 2 = 1,622 S.F.	ENCLOSED CANOPY ATTIC AREA - 3 = 595 S.F.	ENCLOSED CANOPY ATTIC AREA - 4 = 200 S.F.	ENCLOSED CANOPY ATTIC AREA - 5 = 2,562 S.F.
VENTILATION AREA REQUIRED: 240 x (144 / 300) 116 SQ. IN.	VENTILATION AREA REQUIRED: 1,622 x (144 / 300) 779 SQ. IN.	VENTILATION AREA REQUIRED: 595 x (144 / 300) 286 SQ. IN.	VENTILATION AREA REQUIRED: 200 x (144 / 300) 96 SQ. IN.	VENTILATION AREA REQUIRED: 2,562 x (144 / 300) 1,230 SQ. IN.
VENTILATION AREA PROVIDED: VENT 1: 4' x 21'-0" = 1,008 SQ. IN.	VENTILATION AREA PROVIDED: VENT 1: 4' x 6'-0" = 288 SQ. IN. VENT 2: 4' x 98'-0" = 4,704 SQ. IN. VENT 3: 4' x 7'-7" = 364 SQ. IN. VENT 4: 4' x 9'-0" = 432 SQ. IN. VENT 5: 4' x 10'-7" = 508 SQ. IN.	VENTILATION AREA PROVIDED: VENT 1: 4' x 14'-0" = 672 SQ. IN. VENT 2: 4' x 10'-0" = 480 SQ. IN.	VENTILATION AREA PROVIDED: VENT 1: 4' x 12'-8" = 608 SQ. IN.	VENTILATION AREA PROVIDED: VENT 1: 4' x 18'-10" = 904 SQ. IN. VENT 2: 4' x 16'-9" = 804 SQ. IN. VENT 3: 4' x 26'-4" = 1,264 SQ. IN. VENT 4: 4' x 16'-4" = 784 SQ. IN. VENT 5: 4' x 9'-6" = 456 SQ. IN. VENT 6: 4' x 27'-6" = 1,320 SQ. IN.
VENTILATION NEEDED: 116 SQ. IN. VENTILATION PROVIDED: 1,008 SQ. IN.	VENTILATION NEEDED: 779 SQ. IN. VENTILATION PROVIDED: 6,296 SQ. IN.	VENTILATION NEEDED: 286 SQ. IN. VENTILATION PROVIDED: 1,152 SQ. IN.	VENTILATION NEEDED: 96 SQ. IN. VENTILATION PROVIDED: 608 SQ. IN.	VENTILATION NEEDED: 1,230 SQ. IN. VENTILATION PROVIDED: 5,523 SQ. IN.



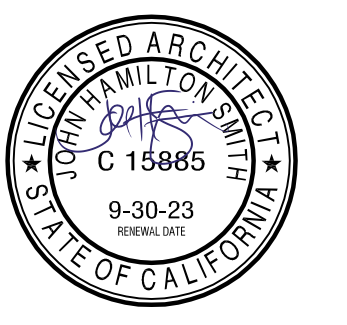
7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 F 559.448.8467  
www.simprbk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-82a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885



NOTE: ALL GRID LINES ARE TO CENTER OF COLUMNS, U.N.O.

THE FIRM OF SMITH, IMANAGA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPRIETARY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

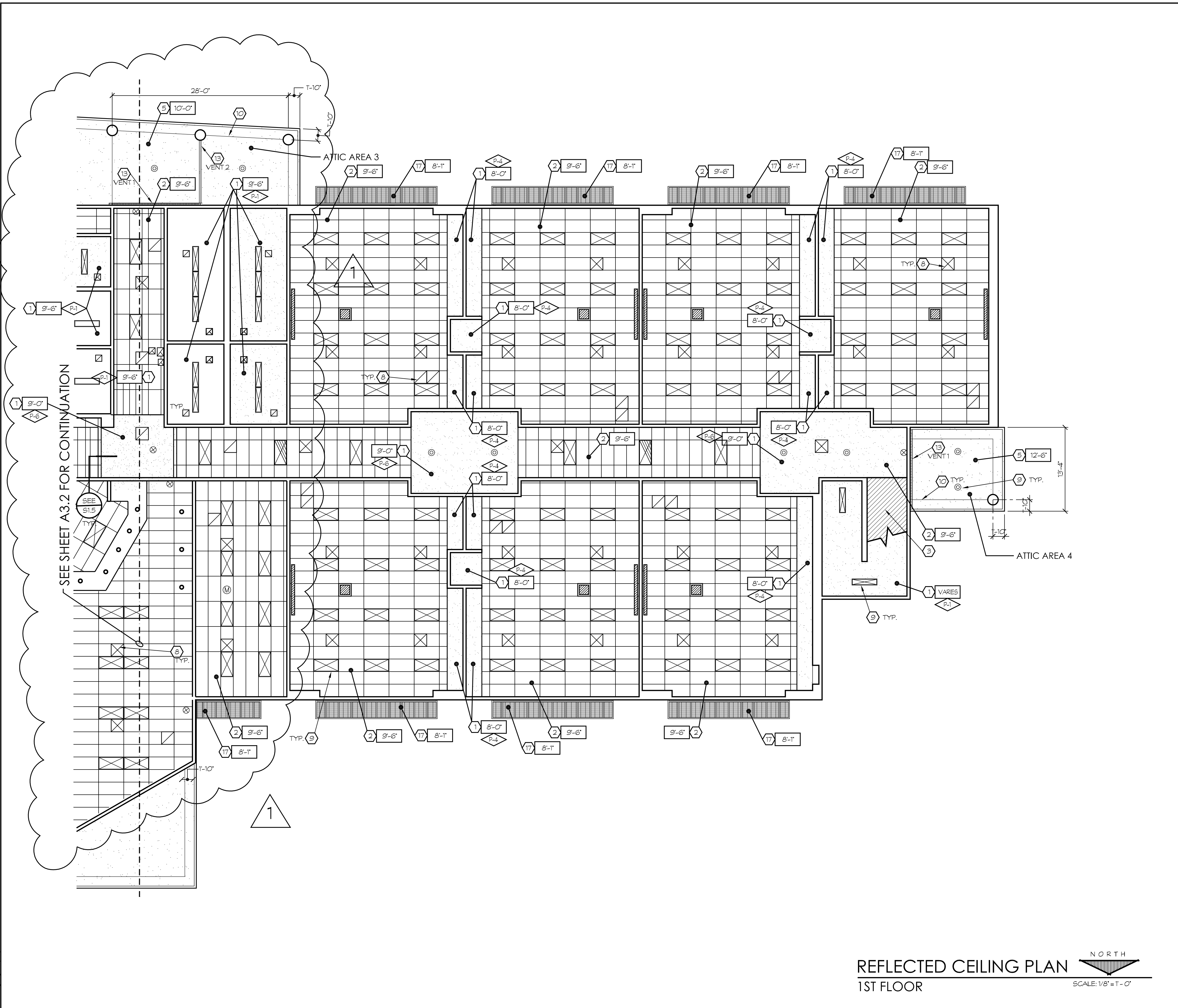
No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

<b>REFLECTED CEILING PLAN</b>	
MAIN - 1ST FLOOR	
PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>A3.2</b>
DATE 1.27.23	
SCALE 1/8" = 1'-0"	

S:\17-67 Shields & Brawley Elementary\Work\17-67\_A3.2\_1st-Ceiling.dwg 05/20/18 22:28





KEYNOTES

1. GYPSUM BOARD CEILING, SEE DETAIL 15/S1.4
2. SUSPENDED ACOUSTICAL CEILING TILE, SEE DETAIL 140/A8.7
3. OPEN TO ABOVE
4. ROOF ACCESS LADDER, SEE DETAIL 142/A8.8
5. CEMENT PLASTER w/ RIGID METAL LATH, SEE SPECIFICATION 09 24 00
6. G.S.M. GUTTER
7. SKYLIGHT, SEE ROOF PLANS
8. MECHANICAL GRILL, SEE MECHANICAL DWGS.
9. LIGHTING, SEE ELECTRICAL DWGS.
10. EXPANSION JOINT
11. PROJECTOR SCREEN, SEE DETAIL 183/A8.10
12. PROJECTOR LIFT
13. 4" CONTINUOUS SOFFIT VENT
14. ROOF ACCESS HATCH
15. DASHED LINE INDICATES EXTENTS OF WALL FRAMING FOR CLERESTORY WINDOW ABOVE
16. STEEL TRUSS, SEE STRUCTURAL DWGS.
17. DECORATIVE METAL AWNING, SEE DETAIL 158/A8.8
18. DASHED LINE INDICATES SOFFIT BELOW, SEE INTERIORS AND SECTIONS FOR CLARIFICATION
19. METAL CANOPY
20. ATTIC ACCESS HATCH, 22X30 MIN.
21. SMOOTH METAL PANEL SOFFIT, SEE SHEET A3.5
22. SMOOTH LINE INDICATES SMOOTH METAL PANELS AT SOFFIT ABOVE CANOPY

NOTE: ALL GRID LINES ARE TO CENTER OF COLUMNS, U.N.O.

CEILING LEGEND

- LIGHT FIXTURE, SEE ELECTRICAL
- MECHANICAL DIFFUSERS, SEE MECHANICAL
- PROJECTOR LIFT LOCATION
- PROJECTOR SCREEN LOCATION, SEE DETAIL 183/A8.10
- 20' x 30' ATTIC ACCESS

KEY PLAN



REFLECTED CEILING PLAN  
1ST FLOOR  
SCALE: 1/8" = 1'-0"  
NORTH

ATTIC VENTILATION CALC

ENCLOSED CANOPY ATTIC AREA - 1 = 240 S.F.	ENCLOSED CANOPY ATTIC AREA - 2 = 1,622 S.F.	ENCLOSED CANOPY ATTIC AREA - 3 = 595 S.F.	ENCLOSED CANOPY ATTIC AREA - 4 = 200 S.F.	ENCLOSED CANOPY ATTIC AREA - 5 = 2,562 S.F.
VENTILATION AREA REQUIRED: 240 x (144 / 300) 116 SQ. IN.	VENTILATION AREA REQUIRED: 1,622 x (144 / 300) 779 SQ. IN.	VENTILATION AREA REQUIRED: 595 x (144 / 300) 286 SQ. IN.	VENTILATION AREA REQUIRED: 200 x (144 / 300) 96 SQ. IN.	VENTILATION AREA REQUIRED: 2,562 x (144 / 300) 1,230 SQ. IN.
VENTILATION AREA PROVIDED: VENT 1: 4' x 21'-0" = 1,008 SQ. IN.	VENTILATION AREA PROVIDED: VENT 1: 4' x 6'-0" = 288 SQ. IN. VENT 2: 4' x 25'-0" = 1,344 SQ. IN. VENT 3: 4' x 7'-0" = 364 SQ. IN. VENT 4: 4' x 9'-0" = 432 SQ. IN. VENT 5: 4' x 41'-10" = 2,008 SQ. IN. VENT 6: 4' x 10'-7" = 508 SQ. IN.	VENTILATION AREA PROVIDED: VENT 1: 4' x 14'-0" = 672 SQ. IN. VENT 2: 4' x 10'-0" = 480 SQ. IN.	VENTILATION AREA PROVIDED: VENT 1: 4' x 12'-8" = 608 SQ. IN.	VENTILATION AREA PROVIDED: VENT 1: 4' x 18'-10" = 904 SQ. IN. VENT 2: 4' x 16'-9" = 804 SQ. IN. VENT 3: 4' x 26'-4" = 1,264 SQ. IN. VENT 4: 4' x 16'-4" = 784 SQ. IN.
VENTILATION NEEDED: 116 SQ. IN. VENTILATION PROVIDED: 1,008 SQ. IN.	VENTILATION NEEDED: 779 SQ. IN. VENTILATION PROVIDED: 4,944 SQ. IN.	VENTILATION NEEDED: 286 SQ. IN. VENTILATION PROVIDED: 1,152 SQ. IN.	VENTILATION NEEDED: 96 SQ. IN. VENTILATION PROVIDED: 608 SQ. IN.	VENTILATION NEEDED: 1,230 SQ. IN. VENTILATION PROVIDED: 3,756 SQ. IN.



7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 F 559.448.8467  
www.simprk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-83a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885

THE FIRM OF SMITH, IWANAGA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER AVAILABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER UNLESS THEY ARE TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
Δ 1	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

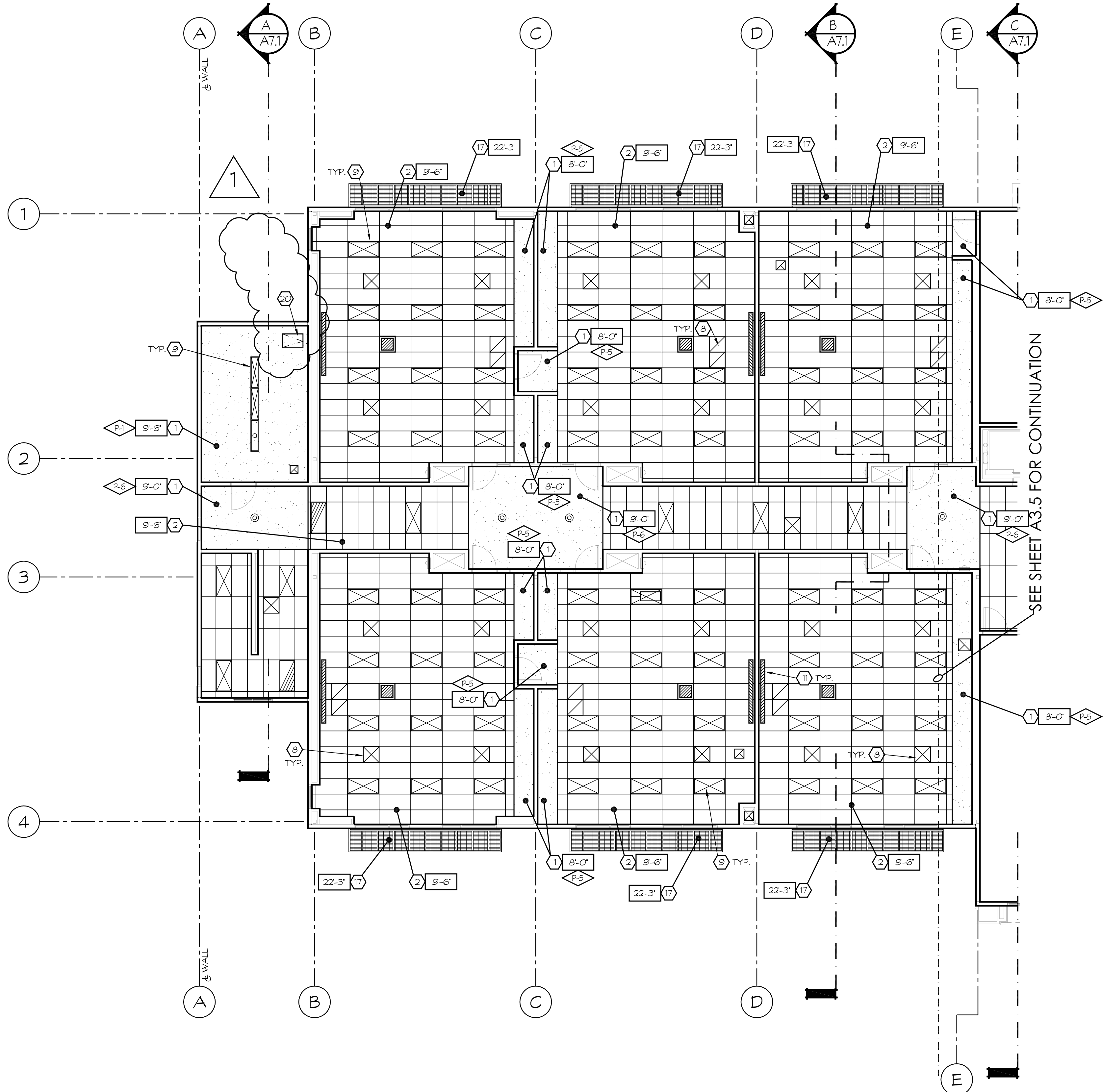
**REFLECTED CEILING PLAN**

MAIN - 1ST FLOOR

PROJECT COORDINATOR JOHN SMITH	SHEET NO.
PROJECT NO. 17-67	<b>A3.3</b>
DATE 1.27.23	
SCALE 1/8" = 1'-0"	

E:\17-67 Shields & Brawley Elementary\Work\17-67\_A3.3\_11-Ceiling.dwg 05/20/18 22:26





REFLECTED CEILING PLAN  
2ND FLOOR  
SCALE: 1/8"=1'-0"

KEYNOTES

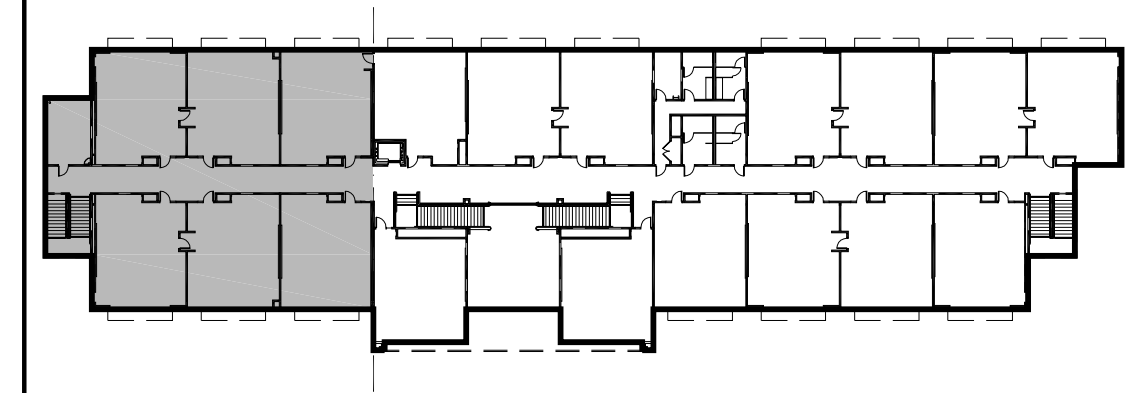
1. GYPSUM BOARD CEILING, SEE DETAIL 15/91.4
2. SUSPENDED ACOUSTICAL CEILING TILE, SEE DETAIL 140/A8.7
3. OPEN TO ABOVE
4. ROOF ACCESS LADDER, SEE DETAIL 142/A8.8
5. CEMENT PLASTER w/ RIGID METAL LATH, SEE SPECIFICATION 09 24 00
6. G.S.M. GUTTER
7. SKYLIGHT, SEE ROOF PLANS
8. MECHANICAL GRILL, SEE MECHANICAL DWGS.
9. LIGHTING, SEE ELECTRICAL DWGS.
10. EXPANSION JOINT
11. PROJECTOR SCREEN, SEE DETAIL 183/A8.10
12. PROJECTOR LIFT
13. 4' CONTINUOUS SOFFIT VENT
14. ROOF ACCESS HATCH
15. DASHED LINE INDICATES EXTENTS OF WALL FRAMING FOR CLERESTORY WINDOW ABOVE
16. STEEL TRUSS, SEE STRUCTURAL DWGS.
17. DECORATIVE METAL AWNING, SEE DETAIL 158/A8.8
18. DASHED LINE INDICATES SOFFIT BELOW, SEE INTERIORS AND SECTIONS FOR CLARIFICATION
19. METAL CANOPY
20. ATTIC ACCESS HATCH, 22X30 MIN.
21. SMOOTH METAL PANEL SOFFIT, SEE SHEET A3.5
22. DASHED LINE INDICATES SMOOTH METAL PANELS AT SOFFIT ABOVE CANOPY

NOTE: ALL GRID LINES ARE TO CENTER OF COLUMNS, U.N.O.

CEILING LEGEND

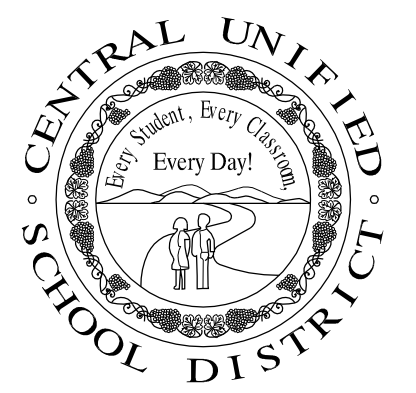
- LIGHT FIXTURE, SEE ELECTRICAL
- MECHANICAL DIFFUSERS, SEE MECHANICAL
- PROJECTOR LIFT LOCATION
- PROJECTOR SCREEN LOCATION, SEE DETAIL 183/A8.10
- 20' x 30' ATTIC ACCESS

KEY PLAN



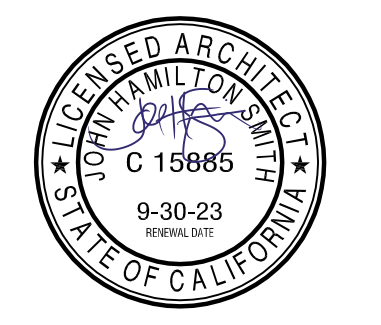
7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 • F 559.448.8407  
www.simprbk.com

PROJECT:  
**SHIELDS  
& BRAWLEY  
ELEMENTARY  
SCHOOL**



**AD 1-84a  
S&B Elementary  
02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, IWANAGA, MILKOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS

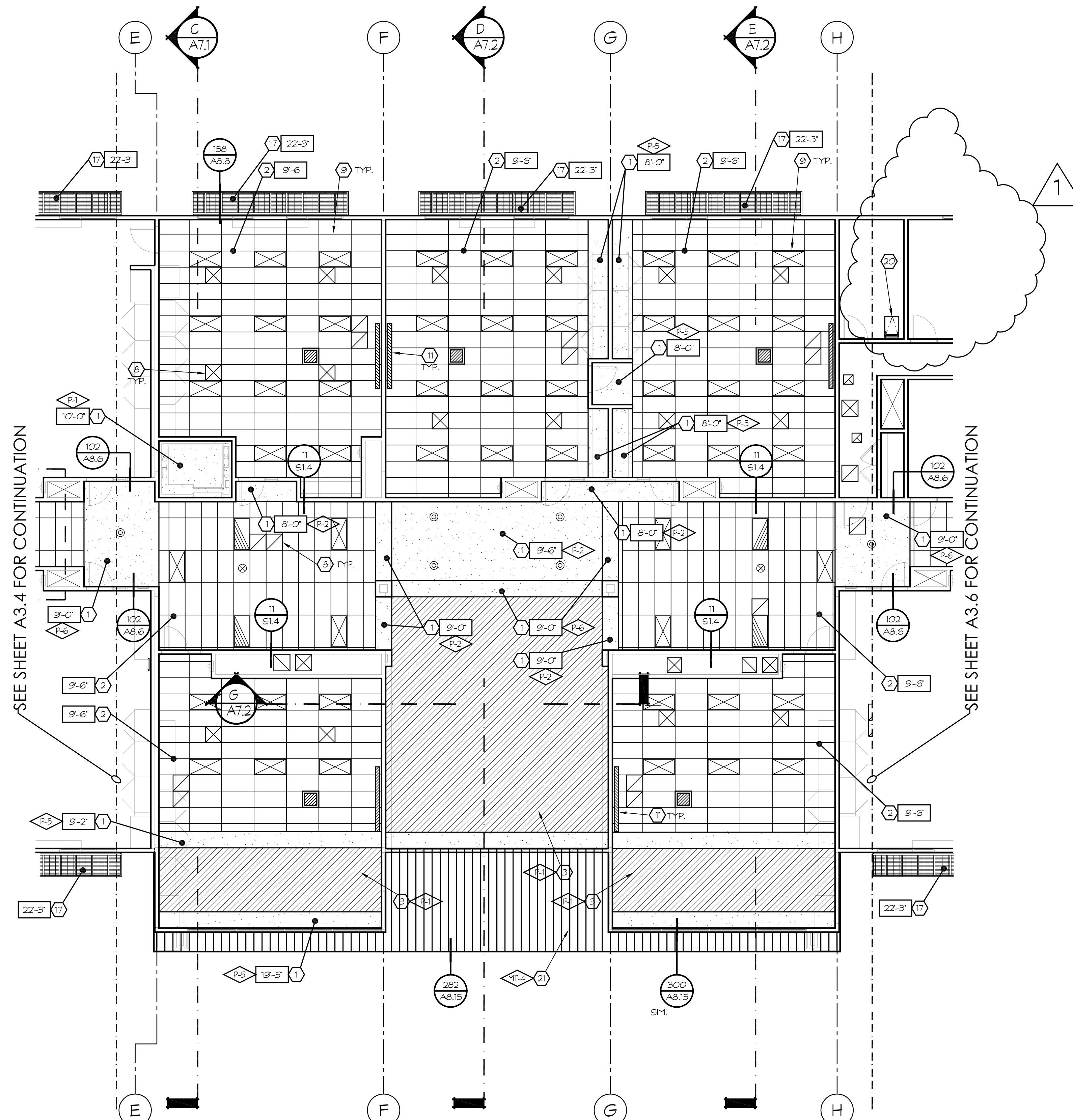
SHEET DESCRIPTION

**REFLECTED  
CEILING PLAN**

MAIN - 2ND FLOOR

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>A3.4</b>
DATE 1.27.23	
SCALE 1/8"=1'-0"	





REFLECTED CEILING PLAN  
2ND FLOOR  
SCALE: 1/8"=1'-0"

KEYNOTES

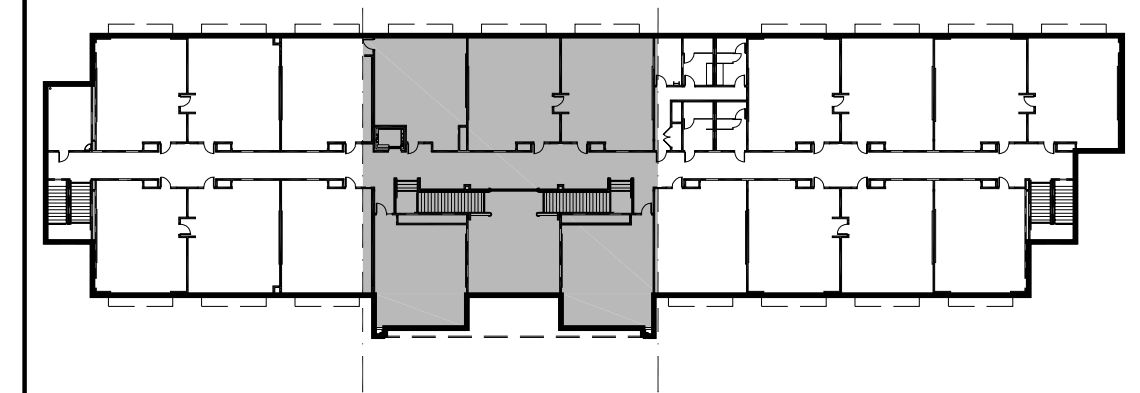
1. GYPSUM BOARD CEILING, SEE DETAIL 15/S1.4
2. SUSPENDED ACOUSTICAL CEILING TILE, SEE DETAIL 140/A8.7
3. OPEN TO ABOVE
4. ROOF ACCESS LADDER, SEE DETAIL 142/A8.8
5. CEMENT PLASTER w/ RIGID METAL LATH, SEE SPECIFICATION 09 24 00
6. G.S.M. GUTTER
7. SKYLIGHT, SEE ROOF PLANS
8. MECHANICAL GRILL, SEE MECHANICAL DWGS.
9. LIGHTING, SEE ELECTRICAL DWGS.
10. EXPANSION JOINT
11. PROJECTION SCREEN, SEE DETAIL 183/A8.10
12. PROJECTOR LIFT
13. 4' CONTINUOUS SOFFIT VENT
14. ROOF ACCESS HATCH
15. DASHED LINE INDICATES EXTENTS OF WALL FRAMING FOR CLERESTORY WINDOW ABOVE
16. STEEL TRUSS, SEE STRUCTURAL DWGS.
17. DECORATIVE METAL AWNING, SEE DETAIL 158/A8.8
18. DASHED LINE INDICATES SOFFIT BELOW, SEE INTERIORS AND SECTIONS FOR CLARIFICATION
19. METAL CANOPY
20. ATTIC ACCESS HATCH, 22X30 MIN.
21. SMOOTH METAL PANEL SOFFIT, SEE SHEET A3.5
22. DASHED LINE INDICATES SMOOTH METAL PANELS AT SOFFIT ABOVE CANOPY
23. IDU
24. SOFFIT
25. DOWNLIGHTS

NOTE: ALL GRID LINES ARE TO CENTER OF COLUMNS, U.N.O.

CEILING LEGEND

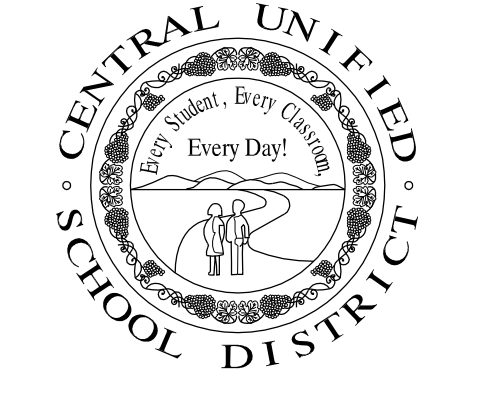
- LIGHT FIXTURE, SEE ELECTRICAL
- MECHANICAL DIFFUSERS, SEE MECHANICAL
- PROJECTOR LIFT LOCATION
- PROJECTOR SCREEN LOCATION, SEE DETAIL 183/A8.10
- 20' x 30' ATTIC ACCESS

KEY PLAN



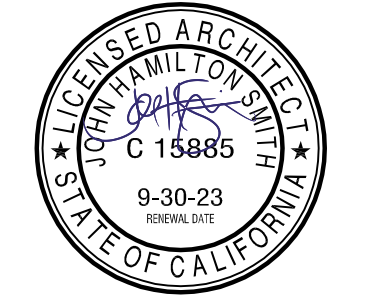
7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T: 559.448.8400 F: 559.448.8467  
www.simprk.com

PROJECT:  
**SHIELDS & BRAWLEY  
ELEMENTARY  
SCHOOL**



**AD 1-85a  
S&B Elementary  
02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, IWANAGA, MILHOUS ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

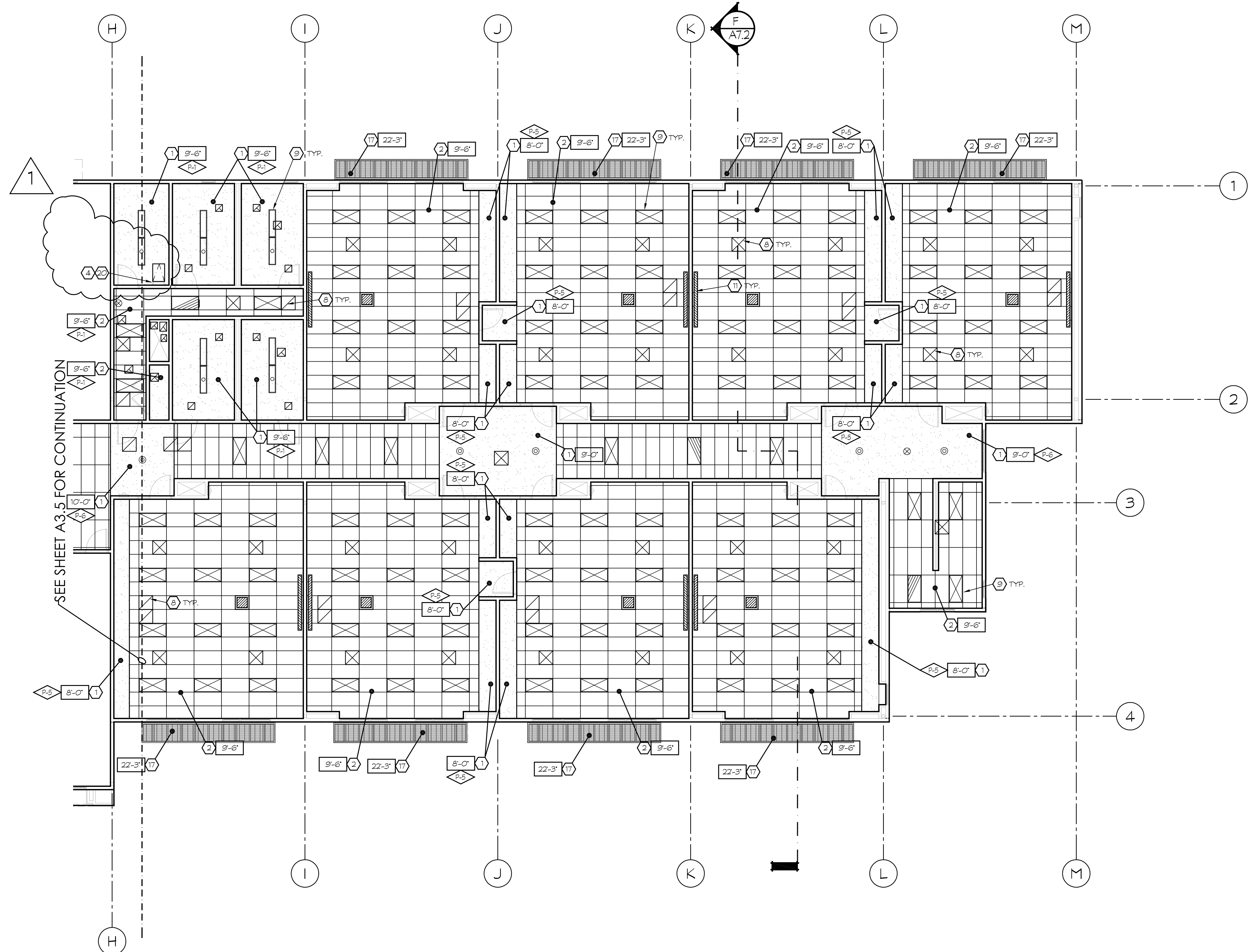
REVISIONS

No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION  
**REFLECTED  
CEILING PLAN**  
MAIN - 2ND FLOOR

PROJECT COORDINATOR JOHN SMITH	SHEET No. <b>A3.5</b>
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE 1/8"=1'-0"	

A:17-67\_Shields & Brawley\_Elementary\Work\17-67\_A3.5\_2nd-Ceiling.dwg 09/29/18 2:16



SEE SHEET A3.5 FOR CONTINUATION

REFLECTED CEILING PLAN  
2ND FLOOR  
SCALE: 1/8" = 1'-0"

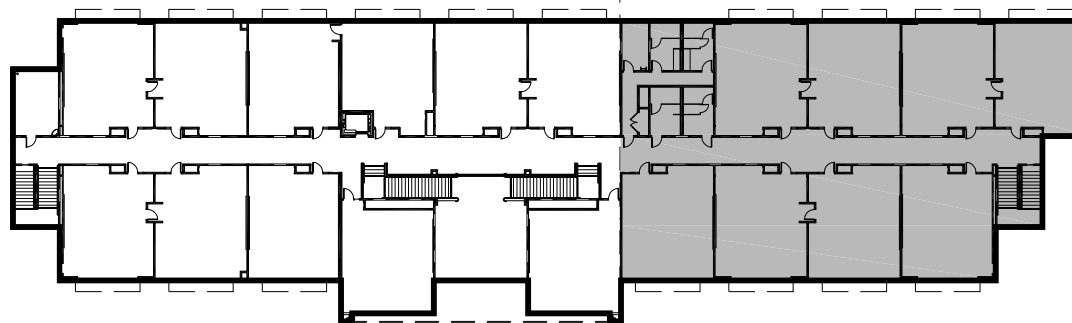
KEYNOTES

1. GYPSUM BOARD CEILING. SEE DETAIL 15/S1.4
2. SUSPENDED ACOUSTICAL CEILING TILE. SEE DETAIL 140/A8.7
3. OPEN TO ABOVE
4. ROOF ACCESS LADDER. SEE DETAIL 142/A8.8
5. CEMENT PLASTER w/ RIGID METAL LATH. SEE SPECIFICATION 09 24 00
6. G.S.M. GUTTER
7. SKYLIGHT. SEE ROOF PLANS
8. MECHANICAL GRILL. SEE MECHANICAL DWGS.
9. LIGHTING. SEE ELECTRICAL DWGS.
10. EXPANSION JOINT
11. PROJECTOR SCREEN. SEE DETAIL 183/A8.10
12. PROJECTOR LIFT
13. 4' CONTINUOUS SOFFIT VENT
14. ROOF ACCESS HATCH
15. DASHED LINE INDICATES EXTENTS OF WALL FRAMING FOR CLERESTORY WINDOW ABOVE
16. STEEL TRUSS. SEE STRUCTURAL DWGS.
17. DECORATIVE METAL AWNING. SEE DETAIL 158/A8.8
18. DASHED LINE INDICATES SOFFIT BELOW. SEE INTERIORS AND SECTIONS FOR CLARIFICATION
19. METAL CANOPY
20. ATTIC ACCESS HATCH, 22X30 MIN.
21. SMOOTH METAL PANEL SOFFIT. SEE SHEET A3.5
22. DASHED LINE INDICATES SMOOTH METAL PANELS AT SOFFIT ABOVE CANOPY

CEILING LEGEND

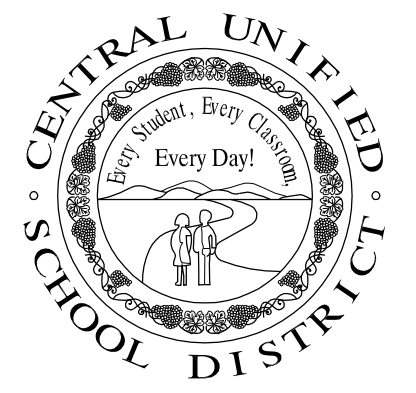
- LIGHT FIXTURE. SEE ELECTRICAL
- MECHANICAL DIFFUSERS. SEE MECHANICAL
- PROJECTOR LIFT LOCATION
- PROJECTOR SCREEN LOCATION. SEE DETAIL 183/A8.10
- 20' x 30' ATTIC ACCESS

KEY PLAN



7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 • F 559.448.8467  
www.sim-prbk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-86a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885



NOTE: ALL GRID LINES ARE TO CENTER OF COLUMNS, U.N.O.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

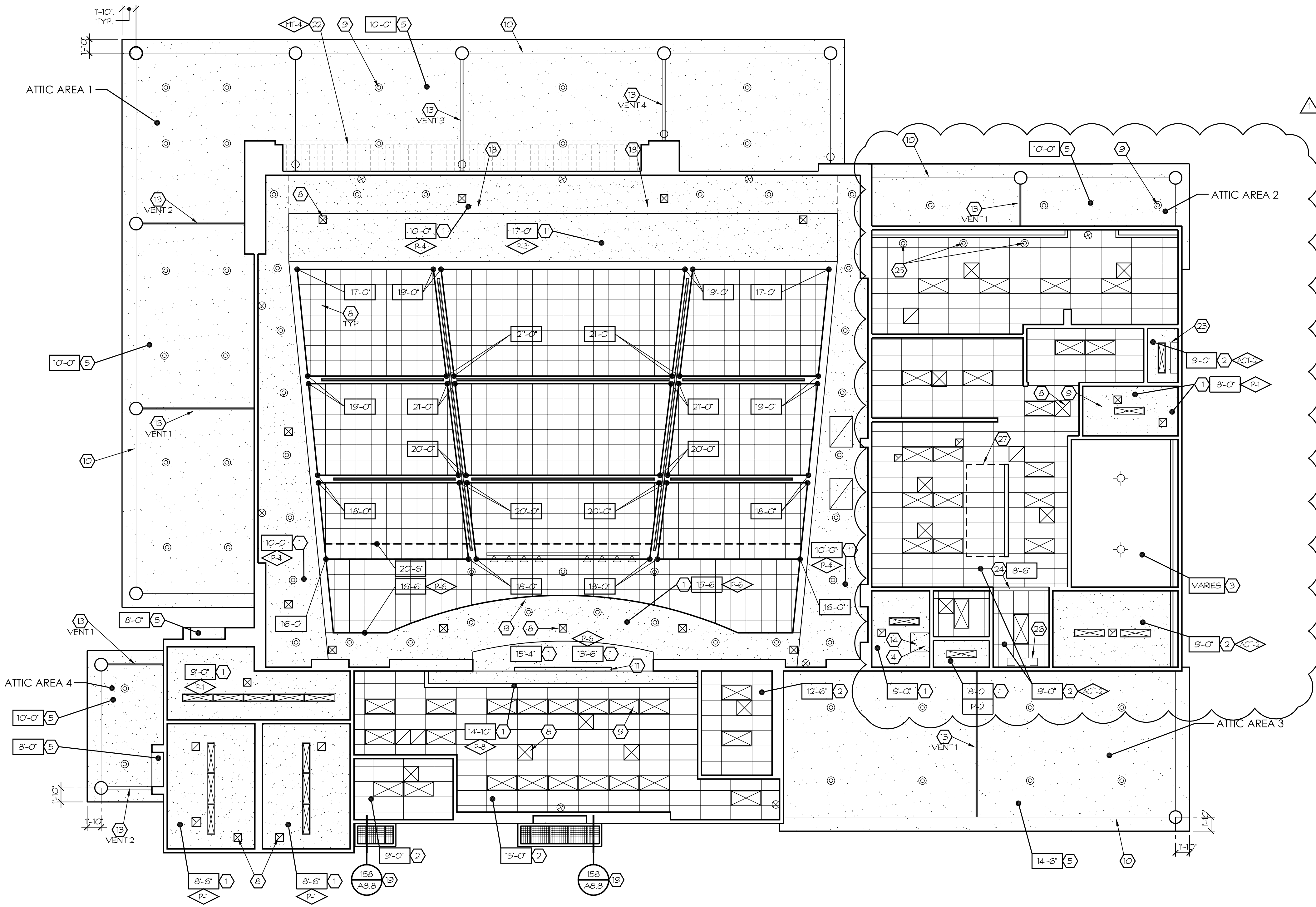
No.	DATE	DESCRIPTION
1	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

**REFLECTED CEILING PLAN**  
MAIN - 2ND FLOOR

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>A3.6</b>
DATE 1.27.23	
SCALE 1/8" = 1'-0"	





REFLECTED CEILING PLAN  
MULTI-PURPOSE  
SCALE: 1/8"=1'-0"  
NORTH

KEYNOTES

1. GYPSUM BOARD CEILING, SEE DETAIL 15/51.4
2. SUSPENDED ACOUSTICAL CEILING TILE, SEE DETAIL 140/A8.7
3. OPEN TO ABOVE
4. ROOF ACCESS LADDER, SEE DETAIL 142/A8.8
5. CEMENT PLASTER w/ RIGID METAL LATH, SEE SPECIFICATION 09 24 00
6. G.S.M. GUTTER
7. SKYLIGHT, SEE ROOF PLANS
8. MECHANICAL GRILL, SEE MECHANICAL DWGS.
9. LIGHTING, SEE ELECTRICAL DWGS.
10. EXPANSION JOINT
11. PROJECTION SCREEN, SEE DETAIL 183/A8.10
12. PROJECTOR LIFT
13. 4' CONTINUOUS SOFFIT VENT
14. ROOF ACCESS HATCH
15. DASHED LINE INDICATES EXTENTS OF WALL FRAMING FOR CLERESTORY WINDOW ABOVE
16. STEEL TRUSS, SEE STRUCTURAL DWGS.
17. DECORATIVE METAL AWNING, SEE DETAIL 158/A8.8
18. DASHED LINE INDICATES SOFFIT BELOW, SEE INTERIORS AND SECTIONS FOR CLARIFICATION
19. METAL CANOPY
20. ATTIC ACCESS HATCH, 22X30 MIN.
21. SMOOTH METAL PANEL SOFFIT, SEE SHEET A3.5
22. DASHED LINE INDICATES SMOOTH METAL PANELS AT SOFFIT ABOVE CANOPY
23. IDU
24. SOFFIT
25. DOWNLIGHTS
26. FLYFAN
27. HOOD

GENERAL NOTES

PROVIDE SHATTERPROOF BULBS OR SHIELDS FOR ALL LIGHT FIXTURES ABOVE FOOD PREPARATION, STORAGE, AND UTENSIL WASHING AREAS.

ATTIC VENTILATION CALC

ENCLOSED CANOPY ATTIC AREA - 1	=	2577 S.F.
VENTILATION AREA REQUIRED:	2577 x (144 / 300) 1,237 SQ. IN.	
VENTILATION AREA PROVIDED:		
VENT 1: 4' x 14'-8"	=	704 SQ. IN.
VENT 2: 4' x 13'-4"	=	640 SQ. IN.
VENT 3: 4' x 14'-8"	=	704 SQ. IN.
VENT 4: 4' x 10'-8"	=	512 SQ. IN.
VENTILATION NEEDED:	1,237 SQ. IN.	
VENTILATION PROVIDED:	2,560 SQ. IN.	
ENCLOSED CANOPY ATTIC AREA - 2	=	549 S.F.
VENTILATION AREA REQUIRED:	549 x (144 / 300) 264 SQ. IN.	
VENTILATION AREA PROVIDED:		
VENT 1: 4' x 10'-6"	=	504 SQ. IN.
VENTILATION NEEDED:	264 SQ. IN.	
VENTILATION PROVIDED:	504 SQ. IN.	
ENCLOSED CANOPY ATTIC AREA - 3	=	1,119 S.F.
VENTILATION AREA REQUIRED:	1,119 x (144 / 300) 538 SQ. IN.	
VENTILATION AREA PROVIDED:		
VENT 1: 4' x 19'-2"	=	920 SQ. IN.
VENTILATION NEEDED:	538 SQ. IN.	
VENTILATION PROVIDED:	920 SQ. IN.	
ENCLOSED CANOPY ATTIC AREA - 4	=	195 S.F.
VENTILATION AREA REQUIRED:	195 x (144 / 300) 94 SQ. IN.	
VENTILATION AREA PROVIDED:		
VENT 1: 4' x 7'-4"	=	352 SQ. IN.
VENT 2: 4' x 5'-10"	=	280 SQ. IN.
VENTILATION NEEDED:	94 SQ. IN.	
VENTILATION PROVIDED:	632 SQ. IN.	

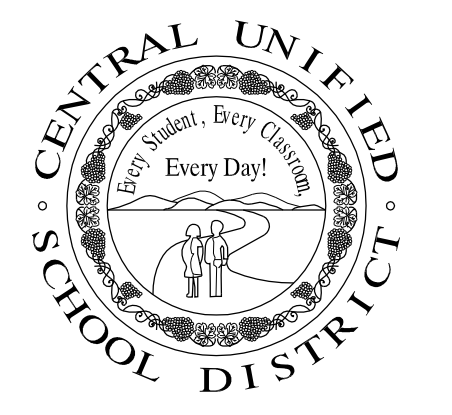
CEILING LEGEND

- LIGHT FIXTURE, SEE ELECTRICAL
- MECHANICAL DIFFUSERS, SEE MECHANICAL
- PROJECTOR LIFT LOCATION
- PROJECTOR SCREEN LOCATION, SEE DETAIL 183/A8.10
- 20' x 30' ATTIC ACCESS



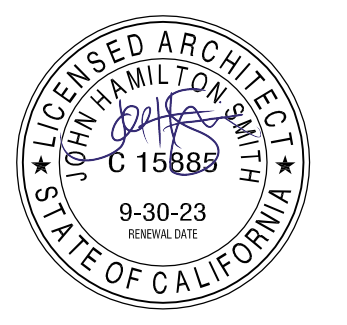
7798 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 F 559.448.8467  
www.slm-pbk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-87a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, IWANAGA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

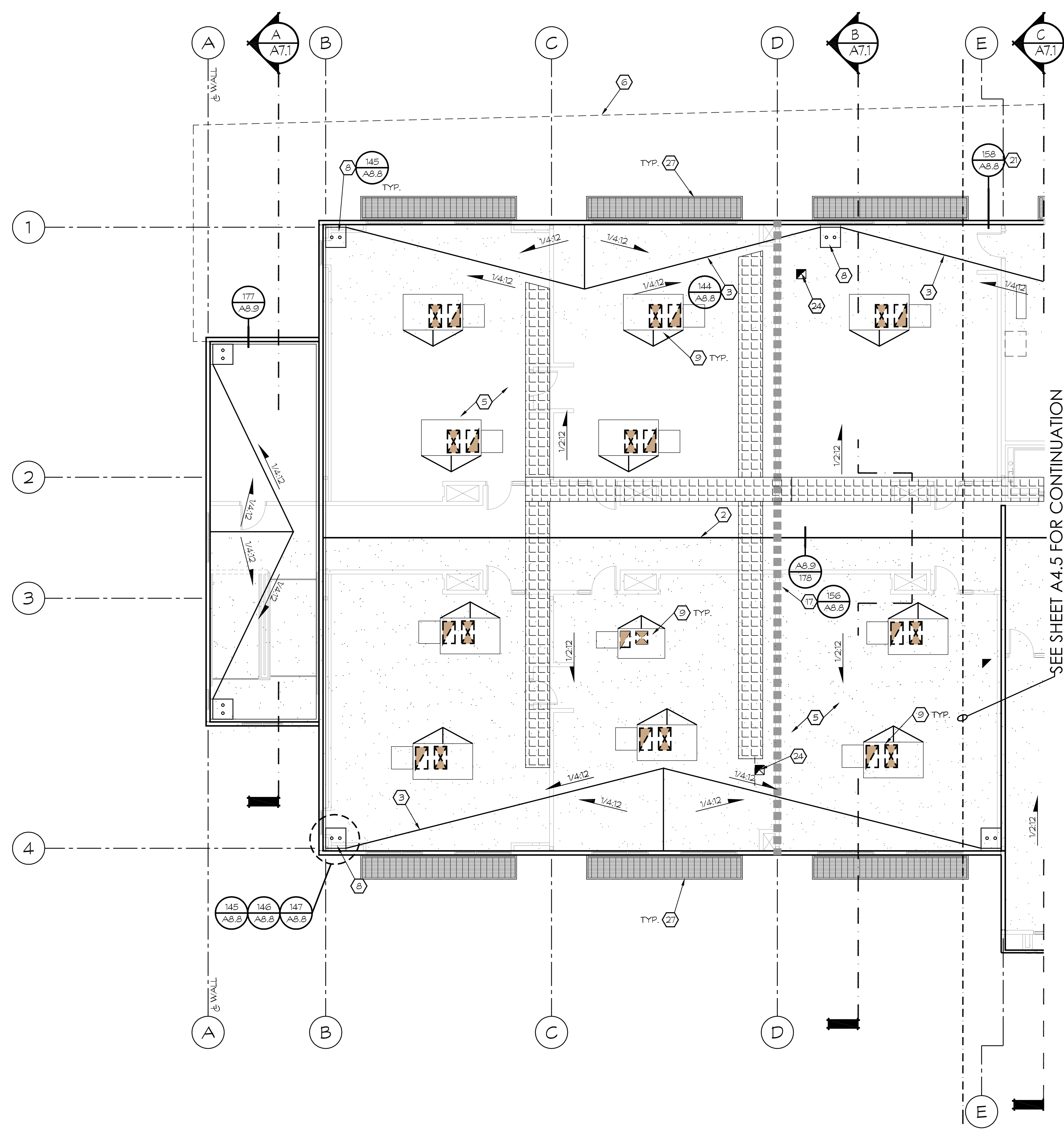
REVISIONS

No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

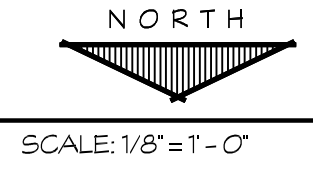
SHEET DESCRIPTION

<b>REFLECTED CEILING PLAN</b>	
MULTI-PURPOSE	
PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>A3.7</b>
DATE 1.27.23	
SCALE 1/8"=1'-0"	





ROOF PLAN  
2ND FLOOR

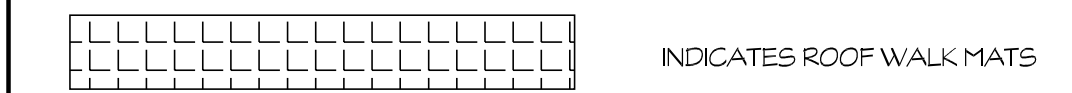


KEYNOTES

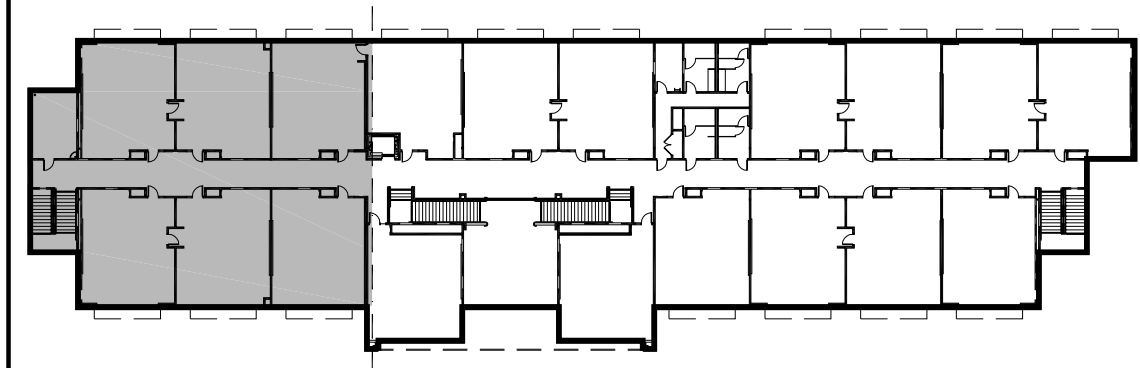
1. ROOF ACCESS HATCH - SEE DTL. 142/A8.8
2. RIDGE
3. SHAPED FOAM CRICKET
4. FIBROUS CANT STRIP
5. BUILT-UP ROOFING, CLASS 'A' MIN.
6. DASHED LINE INDICATES ROOF BELOW, SEE SHTS. A4.1-A4.3
7. 16 GA G5M GUTTER & DOWNSPOUT TO RUN DOWN WALL AND DAYLIGHT 6' ABOVE GRADE
8. ROOF DRAIN: RAIN LEADER LINE DOWN THRU WALL, CONNECT TO STORM DRAIN LINE, OVERFLOW LINE DOWN THRU WALL, DAYLIGHT 6' ABOVE FIN. GRADE. SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
9. MECHANICAL UNITS, SEE MECHANICAL PLANS
10. STANDING SEAM METAL ROOF
11. PARAPET CAP - SEE DTL. 154/A8.8
12. PREFINISHED METAL CAP, FINISH TO MATCH ADJACENT METAL PANELS
13. SKYLIGHT, CLASS 'A' RATED PER SPECS
14. GUTTER DOWNSPOUT: RAIN LEADER DOWN THRU WALL, CONNECT TO STORM DRAIN
15. GUTTER DOWNSPOUT: RAIN LEADER THRU SOFFIT, DOWN THRU WALL, CONNECT TO STORM DRAIN
16. ROOF LADDER
17. DASHED LINE INDICATES ATTIC DRAFT STOP
18. G5M SCUPPER AT WALL, PROVIDE CATCH BASIN WITH RAIN LEADER DOWN EXTERIOR FACE OF WALL, DAYLIGHT AT 4' ABOVE LOWER ROOF DECK ONTO CONCRETE SPLASH BLOCK. SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
19. ROOF DRAIN: RAIN LEADER LINE DOWN INTERIOR OF COLUMN, CONNECT TO STORM DRAIN LINE, OVERFLOW LINE DOWN INTERIOR OF COLUMN, DAYLIGHT 6' ABOVE FIN. GRADE. SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
20. ROOF MOUNTED COOLER/FREEZER CONDENSING UNITS, UNITS TO BE SUPPLIED AND INSTALLED BY WALK-IN BOX SUPPLIER, INSTALL AS PER MANUFACTURER REQUIREMENTS
21. METAL CANOPY
22. TRANSLUCENT WALL SYSTEM
23. PROVIDE CRICKET AS NECESSARY TO ACHIEVE REQUIRED CROSS-SLOPE
24. EXHAUST FAN, SEE MECHANICAL
25. OUTDOOR UNIT, SEE MECHANICAL
26. ROOF GUTTER
27. DECORATIVE METAL AWNING, SEE DETAIL 158/A8.8
28. G5M CAP, SEE DTL. 277/A8.14 (S1M).

NOTE: ALL GRID LINES ARE TO CENTER OF COLUMNS, U.N.O.

LEGEND

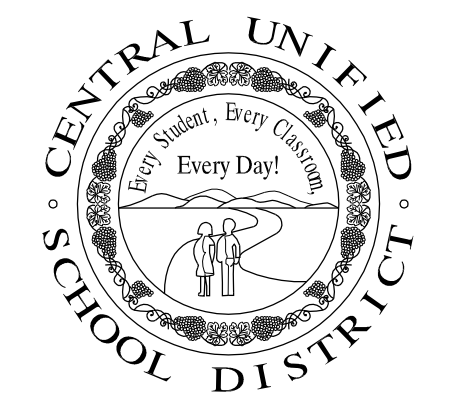


KEY PLAN



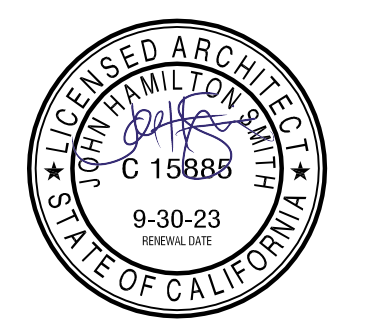
7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 F 559.448.8467  
www.simpk.com

PROJECT:  
**SHIELDS  
& BRAWLEY  
ELEMENTARY  
SCHOOL**



**AD 1-88a  
S&B Elementary  
02-116800**

JOHN H. SMITH, A.I.A. C15888



THE FIRM OF SMITH, MANAGA, MILHOLM, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COPYRIGHT, LAW, COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

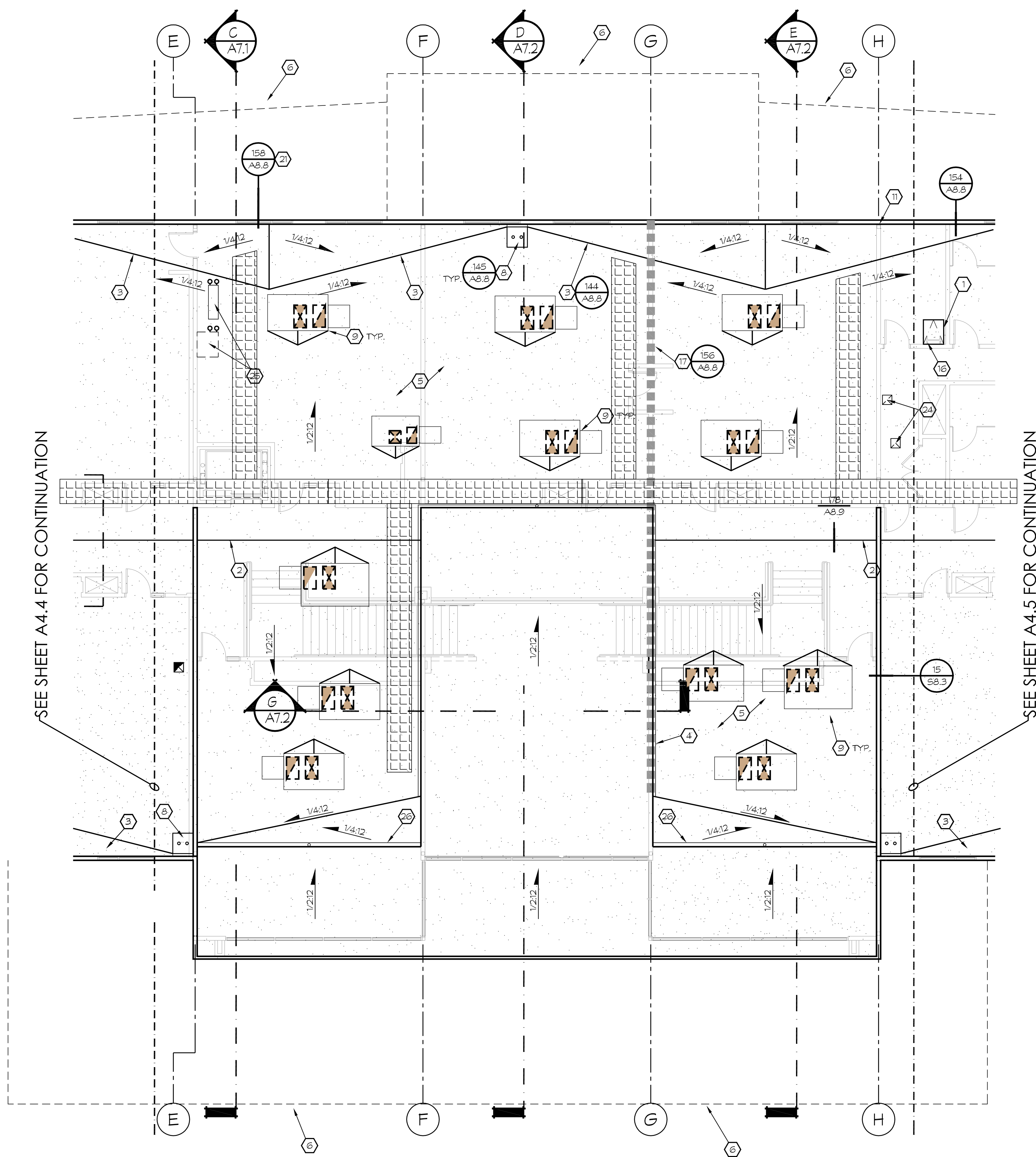
**ROOF PLAN**

MAIN - 2ND FLOOR

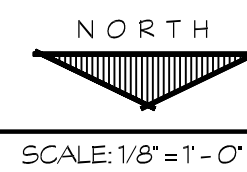
PROJECT COORDINATOR JOHN SMITH	SHEET NO. <b>A4.4</b>
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE 1/8"=1'-0"	

E:\17-67 Shields & Brawley Elementary\Work\17-67\_A4.4\_Roof-Plan.dwg 03/14/18 14:16





ROOF PLAN  
2ND FLOOR

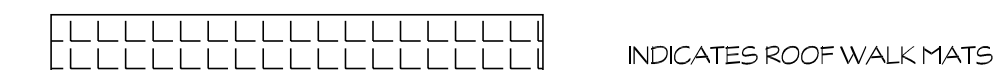


KEYNOTES

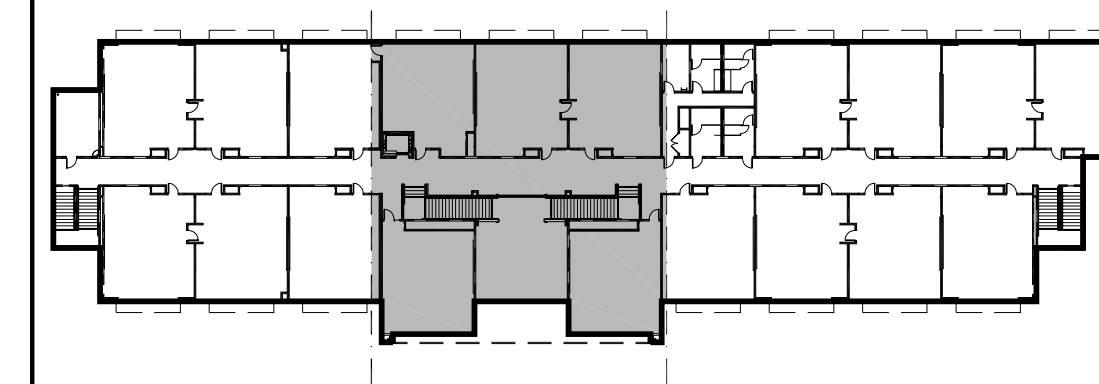
1. ROOF ACCESS HATCH - SEE DTL. 142/A8.8
2. RIDGE
3. SHAPED FOAM CRICKET
4. FIBROUS CANT STRIP
5. BUILT-UP ROOFING, CLASS 'A' MIN.
6. DASHED LINE INDICATES ROOF BELOW. SEE SHTS. A4.1-A4.3
7. 16 GA GSM GUTTER & DOWNSPOUT TO RUN DOWN WALL AND DAYLIGHT 6' ABOVE GRADE
8. ROOF DRAIN; RAIN LEADER LINE DOWN THRU WALL, CONNECT TO STORM DRAIN LINE. OVERFLOW LINE DOWN THRU WALL, DAYLIGHT 6' ABOVE FIN. GRADE. SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
9. MECHANICAL UNITS, SEE MECHANICAL PLANS
10. STANDING SEAM METAL ROOF
11. PARAPET CAP - SEE DTL. 154/A8.8
12. PREFINISHED METAL CAP, FINISH TO MATCH ADJACENT METAL PANELS
13. SKYLIGHT, CLASS 'A' RATED PER SPECS
14. GUTTER DOWNSPOUT; RAIN LEADER DOWN THRU WALL, CONNECT TO STORM DRAIN
15. GUTTER DOWNSPOUT; RAIN LEADER THRU SOFFIT, DOWN THRU WALL, CONNECT TO STORM DRAIN
16. ROOF LADDER
17. DASHED LINE INDICATES ATTIC DRAFT STOP
18. GSM SCUPPER AT WALL, PROVIDE CATCH BASIN WITH RAIN LEADER DOWN EXTERIOR FACE OF WALL, DAYLIGHT AT 4' ABOVE LOWER ROOF DECK ONTO CONCRETE SPLASH BLOCK. SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
19. ROOF DRAIN; RAIN LEADER LINE DOWN INTERIOR OF COLUMN, CONNECT TO STORM DRAIN LINE. OVERFLOW LINE DOWN INTERIOR OF COLUMN, DAYLIGHT 6' ABOVE FIN. GRADE. SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
20. ROOF MOUNTED COOLER/FREEZER CONDENSING UNITS. UNITS TO BE SUPPLIED AND INSTALLED BY WALK-IN BOX SUPPLIER. INSTALL AS PER MANUFACTURER REQUIREMENTS
21. METAL CANOPY
22. TRANSLUCENT WALL SYSTEM
23. PROVIDE CRICKET AS NECESSARY TO ACHIEVE REQUIRED CROSS-SLOPE
24. EXHAUST FAN, SEE MECHANICAL
25. OUTDOOR UNIT, SEE MECHANICAL
26. ROOF GUTTER
27. DECORATIVE METAL AWNING, SEE DETAIL 158/A8.8
28. GSM CAP, SEE DTL. 277/A8.14 (SP1)

NOTE: ALL GRID LINES ARE TO CENTER OF COLUMNS, U.N.O.

LEGEND



KEY PLAN



7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
F559.448.8400 • F559.448.8467  
www.sim-prk.com

PROJECT:

**SHIELDS  
& BRAWLEY  
ELEMENTARY  
SCHOOL**



**AD 1-89a  
S&B Elementary  
02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH MANAOGA MILHOLM ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

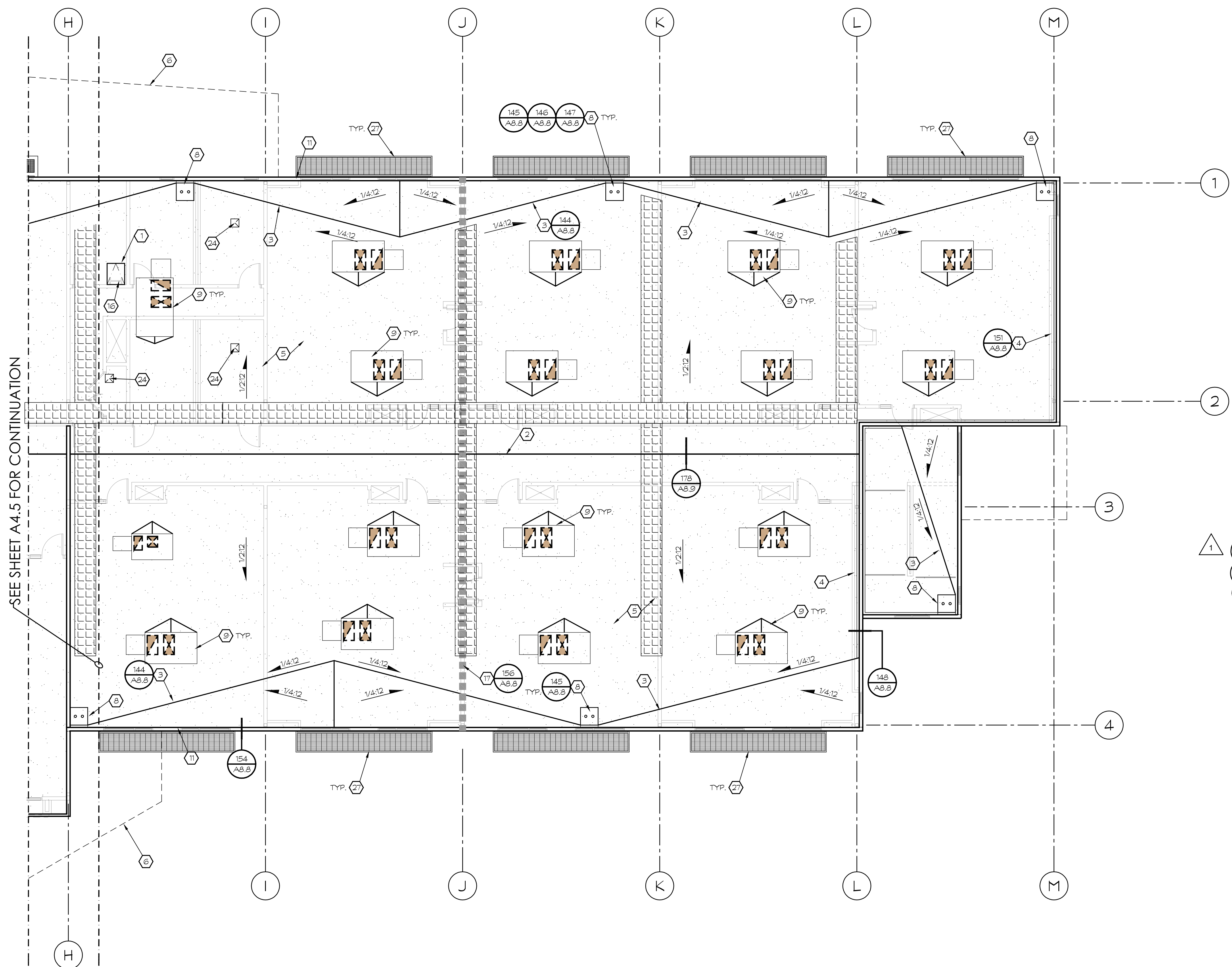
SHEET DESCRIPTION

**ROOF PLAN**

MAIN - 2ND FLOOR

PROJECT COORDINATOR JOHN SMITH	SHEET No. <b>A4.5</b>
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE 1/8"=1'-0"	





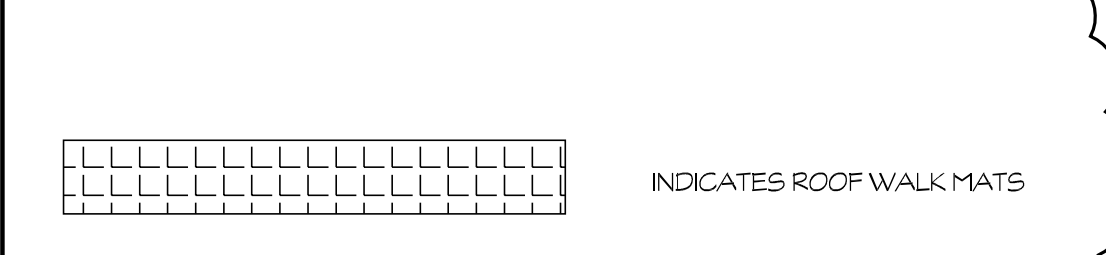
ROOF PLAN  
2ND FLOOR  
SCALE: 1/8"=1'-0"

KEYNOTES

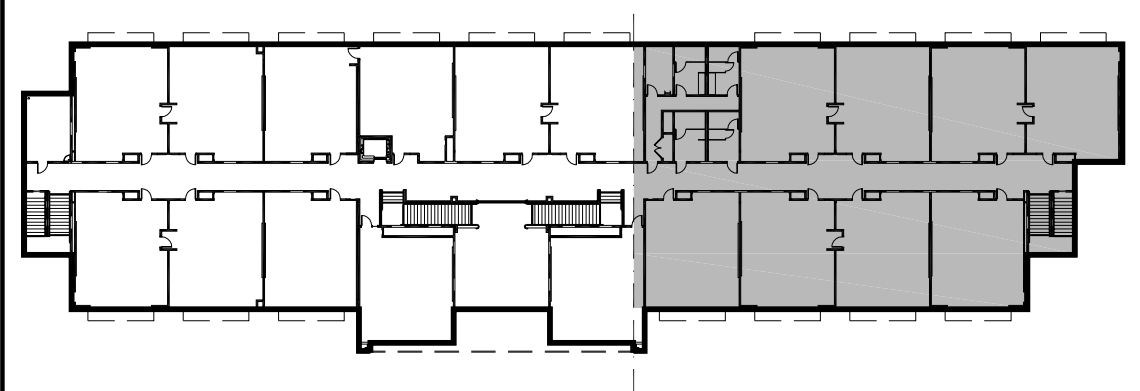
1. ROOF ACCESS HATCH - SEE DTL. 142/A8.8
2. RIDGE
3. SHAPED FOAM CRICKET
4. FIBROUS CANT STRIP
5. BUILT-UP ROOFING, CLASS 'A' MIN.
6. DASHED LINE INDICATES ROOF BELOW, SEE SHTS. A4.1-A4.3
7. 16 GA GSM GUTTER & DOWNSPOUT TO RUN DOWN WALL AND DAYLIGHT 6' ABOVE GRADE
8. ROOF DRAIN: RAIN LEADER LINE DOWN THRU WALL, CONNECT TO STORM DRAIN LINE, OVERFLOW LINE DOWN THRU WALL, DAYLIGHT 6' ABOVE FIN. GRADE, SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
9. MECHANICAL UNITS, SEE MECHANICAL PLANS
10. STANDING SEAM METAL ROOF
11. PARAPET CAP - SEE DTL. 154/A8.8
12. PREFINISHED METAL CAP, FINISH TO MATCH ADJACENT METAL PANELS
13. SKYLIGHT, CLASS 'A' RATED PER SPECS
14. GUTTER DOWNSPOUT, RAIN LEADER DOWN THRU WALL, CONNECT TO STORM DRAIN
15. GUTTER DOWNSPOUT, RAIN LEADER THRU SOFFIT, DOWN THRU WALL, CONNECT TO STORM DRAIN
16. ROOF LADDER
17. DASHED LINE INDICATES ATTIC DRAFT STOP
18. GSM SCUPPER AT WALL, PROVIDE CATCH BASIN WITH RAIN LEADER DOWN EXTERIOR FACE OF WALL, DAYLIGHT AT 4' ABOVE LOWER ROOF DECK ONTO CONCRETE SPLASH BLOCK. SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
19. ROOF DRAIN: RAIN LEADER LINE DOWN INTERIOR OF COLUMN, CONNECT TO STORM DRAIN LINE, OVERFLOW LINE DOWN INTERIOR OF COLUMN, DAYLIGHT 6' ABOVE FIN. GRADE, SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
20. ROOF MOUNTED COOLER/FREEZER CONDENSING UNITS, UNITS TO BE SUPPLIED AND INSTALLED BY WALK-IN BOX SUPPLIER, INSTALL AS PER MANUFACTURER REQUIREMENTS
21. METAL CANOPY
22. TRANSLUCENT WALL SYSTEM
23. PROVIDE CRICKET AS NECESSARY TO ACHIEVE REQUIRED CROSS-SLOPE
24. EXHAUST FAN, SEE MECHANICAL
25. OUTDOOR UNIT, SEE MECHANICAL
26. ROOF GUTTER
27. DECORATIVE METAL AWNING, SEE DETAIL 158/A8.8
28. GSM CAP, SEE DTL. 277/A8.14 (SIM)

NOTE: ALL GRID LINES ARE TO CENTER OF COLUMNS, U.N.O.

LEGEND

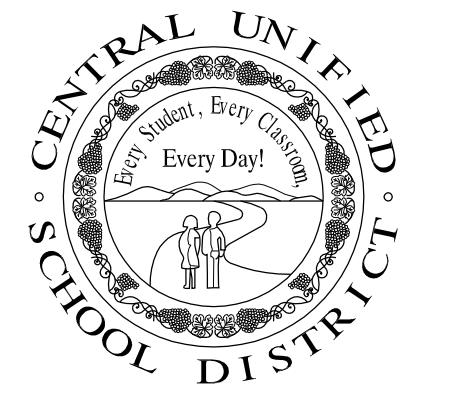


KEY PLAN



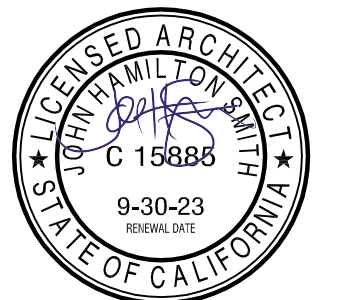
7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T559.448.8400 • F559.448.8467  
www.simpbk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-90a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, MANANGA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER AVAILABLE INTELLECTUAL PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
△	2.14.23	DISTRICT MODIFICATIONS

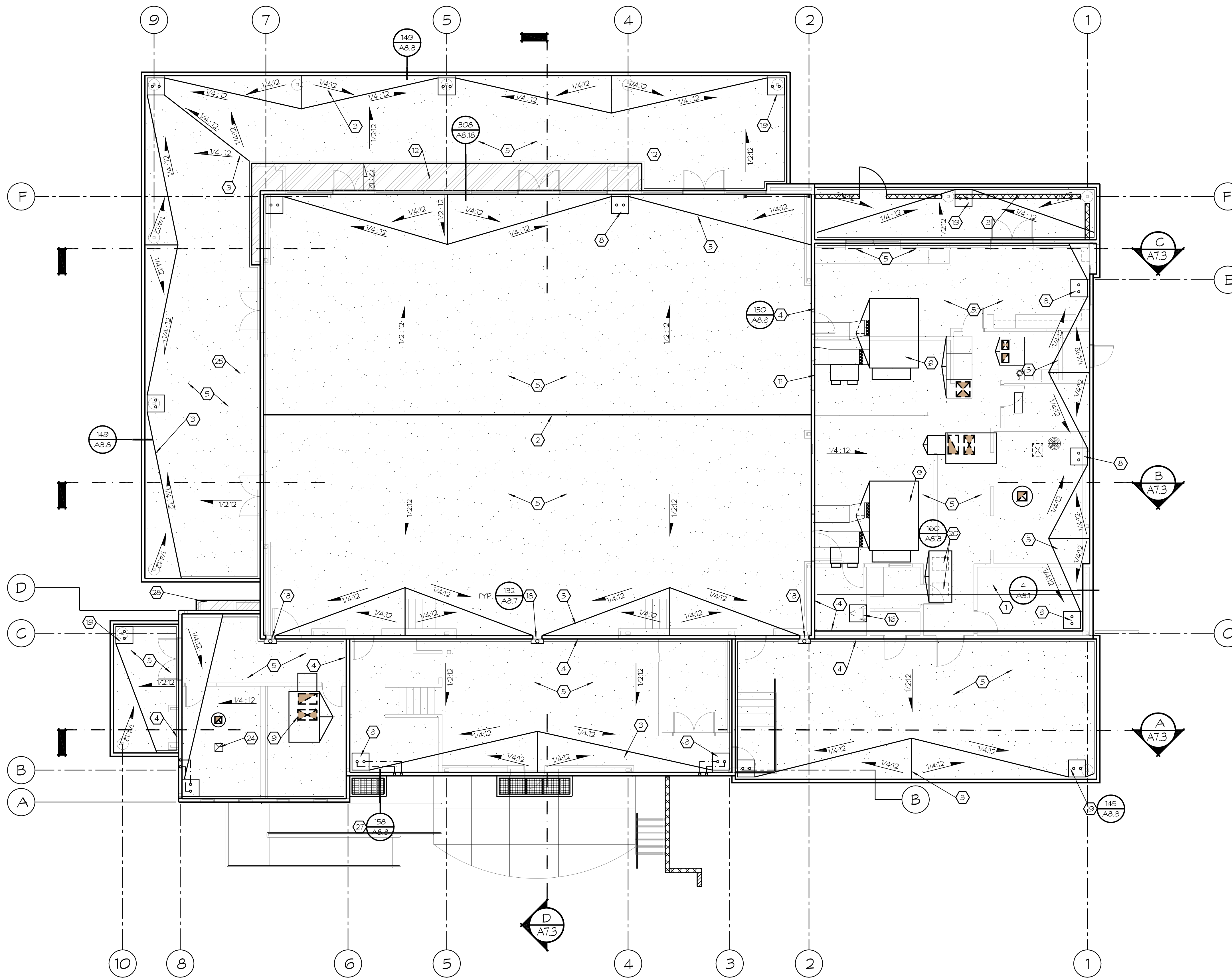
SHEET DESCRIPTION

**ROOF PLAN**

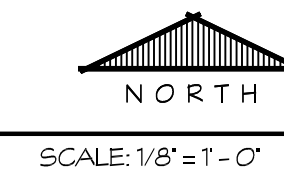
MAIN - 2ND FLOOR

PROJECT COORDINATOR JOHN SMITH	SHEET No. <b>A4.6</b>
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE 1/8"=1'-0"	





ROOF PLAN  
MULTI-PURPOSE



KEYNOTES

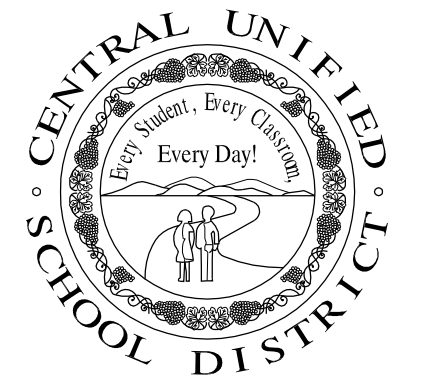
1. ROOF ACCESS HATCH - SEE DTL. 142/A8.8
2. RIDGE
3. SHAPED FOAM CRICKET
4. FIBROUS CANT STRIP
5. BUILT-UP ROOFING, CLASS 'A' MIN.
6. DASHED LINE INDICATES ROOF BELOW, SEE SHTS. A4.1-A4.3
7. 16 GA GSM GUTTER & DOWNSPOUT TO RUN DOWN WALL AND DAYLIGHT 6' ABOVE GRADE
8. ROOF DRAIN: RAIN LEADER LINE DOWN THRU WALL, CONNECT TO STORM DRAIN LINE. OVERFLOW LINE DOWN THRU WALL, DAYLIGHT 6' ABOVE FIN. GRADE. SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
9. MECHANICAL UNITS, SEE MECHANICAL PLANS
10. STANDING SEAM METAL ROOF
11. PARAPET CAP - SEE DTL. 154/A8.8
12. PREFINISHED METAL CAP, FINISH TO MATCH ADJACENT METAL PANELS
13. SKYLIGHT, CLASS 'A' RATED PER SPECS
14. GUTTER DOWNSPOUT: RAIN LEADER DOWN THRU WALL, CONNECT TO STORM DRAIN
15. GUTTER DOWNSPOUT: RAIN LEADER THRU SOFFIT, DOWN THRU WALL, CONNECT TO STORM DRAIN
16. ROOF LADDER
17. DASHED LINE INDICATES ATTIC DRAFT STOP
18. GSM SCUPPER AT WALL, PROVIDE CATCH BASIN WITH RAIN LEADER DOWN EXTERIOR FACE OF WALL, DAYLIGHT AT 4' ABOVE LOWER ROOF DECK ONTO CONCRETE SPLASH BLOCK. SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
19. ROOF DRAIN: RAIN LEADER LINE DOWN INTERIOR OF COLUMN, CONNECT TO STORM DRAIN LINE. OVERFLOW LINE DOWN INTERIOR OF COLUMN, DAYLIGHT 6' ABOVE FIN. GRADE. SEE PLUMBING PLANS FOR PIPE SIZING, TYPE AND POC.
20. ROOF MOUNTED COOLER/FREEZER CONDENSING UNITS. UNITS TO BE SUPPLIED AND INSTALLED BY WALK-IN BOX SUPPLIER. INSTALL AS PER MANUFACTURER REQUIREMENTS
21. METAL CANOPY
22. TRANSLUCENT WALL SYSTEM
23. PROVIDE CRICKET AS NECESSARY TO ACHIEVE REQUIRED CROSS-SLOPE
24. EXHAUST FAN, SEE MECHANICAL
25. OUTDOOR UNIT, SEE MECHANICAL
26. ROOF GUTTER
27. DECORATIVE METAL AWNINGS, SEE DETAIL 158/A8.8
28. GSM CAP, SEE DTL. 277/A8.14 (S11.)



7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 · F 559.448.8467  
www.sim-prk.com

PROJECT:

# SHIELDS & BRAWLEY ELEMENTARY SCHOOL



AD 1-91a  
S&B Elementary  
02-116800

JOHN H. SMITH, A.L.A. C15885



THE FIRM OF SMITH, MANAGA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

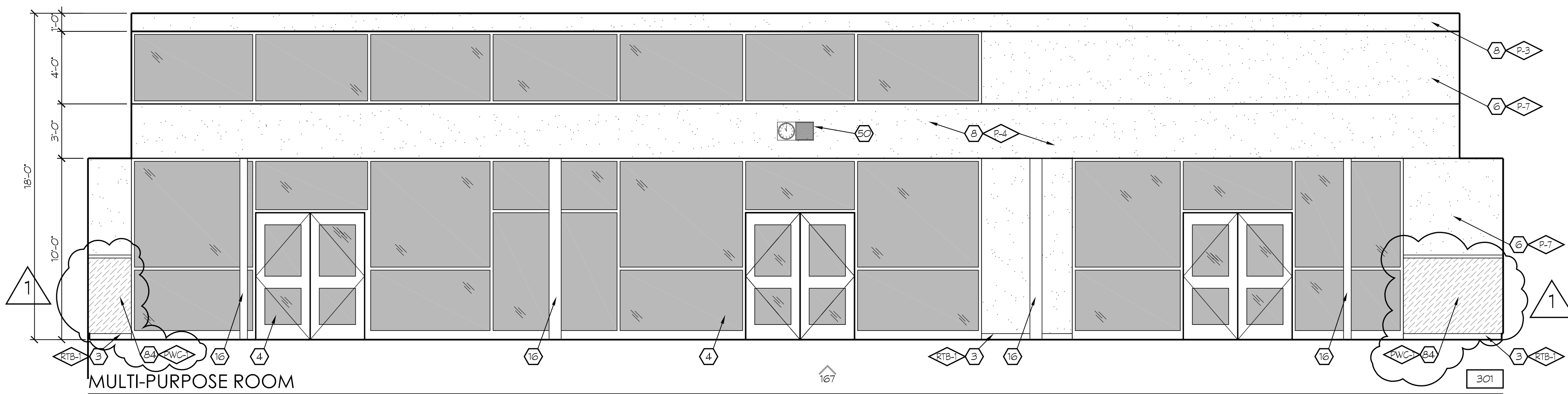
## ROOF PLAN

MULTI-PURPOSE

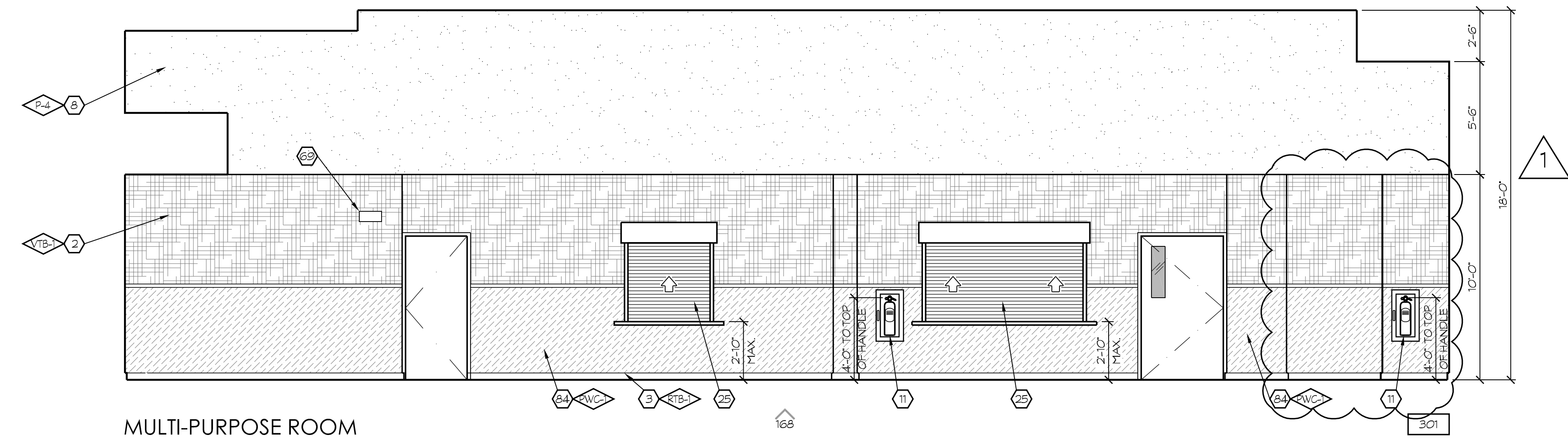
PROJECT COORDINATOR JOHN SMITH	SHEET No.  <b>A4.7</b>
PROJECT NO. 17-67	
DATE 1.27.23	
SCALE 1/8"=1'-0"	

S:\17-67 Shields & Brawley Elementary\Work\17-67\_A4.7\_Roof-Plan.dwg 05/30/23 22:47

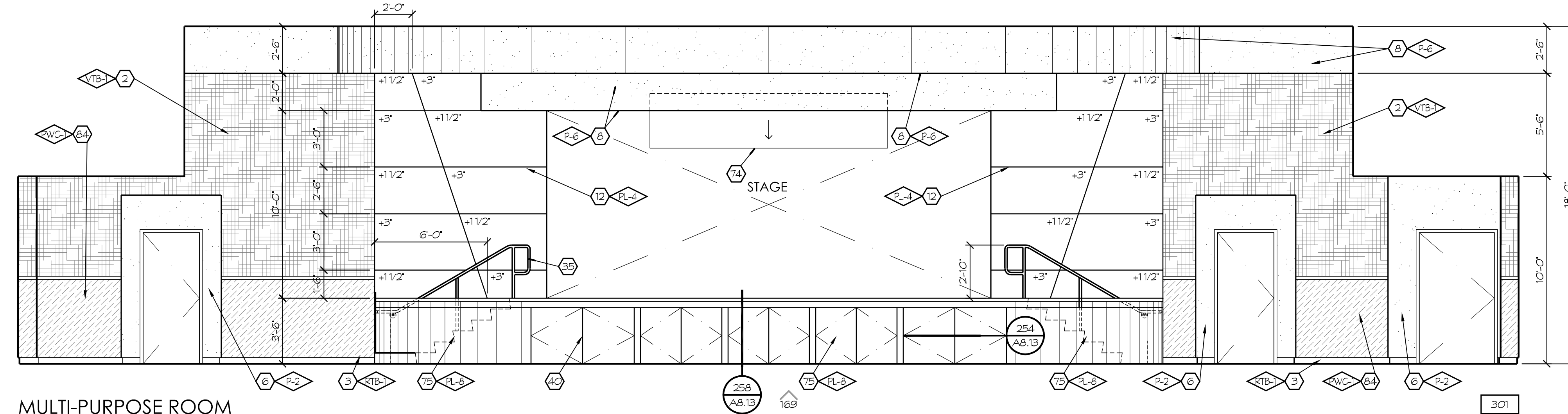




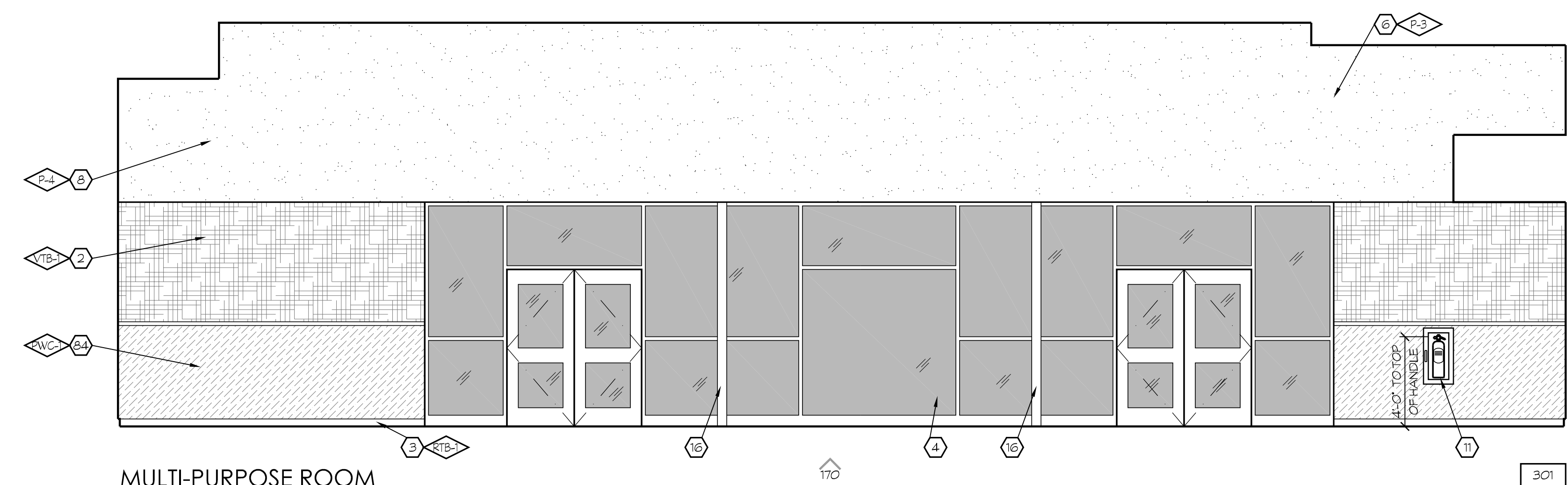
MULTI-PURPOSE ROOM



MULTI-PURPOSE ROOM



MULTI-PURPOSE ROOM

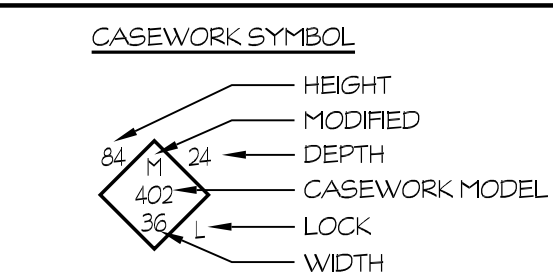


MULTI-PURPOSE ROOM

KEYNOTES

1. KNEE SPACE
  2. VINYL TACKBOARD @ GYP. BD.
  3. RUBBER TOPSET BASE
  4. STOREFRONT
  5. PAPER TOWEL DISPENSER
  6. GYPSUM BOARD, TAPE, TEXTURE & PAINT (PROVIDE 5/8" TYPE X GYP. BD. AT STAIRWAYS AND UNDERSTAIR WALL/CEILING FINISHES, TYP.)
  7. ROOF ACCESS LADDER
  8. SOFFIT
  9. FLOOR SINK - SEE PLUMBING
  10. UNDER-COUNTER REFRIGERATOR
  11. FIRE EXTINGUISHER w/ SEMI RECESSED CAB. TYPE 2A10BC
  12. PLASTIC LAMINATE CASEWORK
  13. W.I.C. 400 STORAGE SHELVING
  14. FIBER REINFORCED PANEL
  15. PLASTIC LAMINATE BACKSPLASH & COUNTERTOP
  16. METAL POST, PER STRUCTURAL
  17. SINK - SEE PLUMBING SCHEDULE
  18. MAGNETIC MARKER BOARD @ VTB
  19. APPLIANCES - SEE SPEC SECTION 11400
  20. BUTCHER PAPER HOLDER
  21. DEHWASHER
  22. HOOD
  23. REFRIGERATOR - FULL HEIGHT
  24. COOKTOP
  25. ROLL-UP DOOR
  26. STAINLESS STEEL COUNTERTOP
  27. FURNITURE (N.I.C.)
  28. DRINKING FOUNTAIN
  29. CLOCK/SPEAKER
  30. CLEAR GLASS DISPLAY CASE w/ LOCK (SEE SPEC. SECT. 10410)
  31. FEMINE NAPKIN DISPOSAL
  32. MIRROR
  33. TRACK AND CURTICLE CURTAIN.
  34. STAIRCASE
  35. HANDRAIL
  36. N/A
  37. TRANSLUCENT WALL SYSTEM
  38. WOOD BASE
  39. WHEEL CHAIR LIFT
  40. BELOW STAGE STORAGE
  41. SHEET VINYL COVERED BASE
  42. ELEVATOR LANTERN
  43. RAILING, SPACING SHALL BE SUCH THAT A 4" DIA. SPHERE CANNOT PASS THROUGH ANY OPENING, PER CBC 1013
  44. CALL BUTTON
  45. ELEVATOR DOORS
  46. LAVATORY
  47. TOILET PAPER DISPENSER
  48. TOILET SEAT COVER DISPENSER
  49. DATA RACEWAY. SEE ELECTRICAL DRAWINGS.
  50. CLOCK
  51. 4" HIGH CORNER GUARD, TYP.
  52. SOAP DISPENSER
  53. PLASTIC TOILET PARTITION
  54. SIGNAGE
  55. MANUFACTURED 3/4"X8" MTL. SHELVING, SEE S-1/K&O
  56. SPEAKER ENCLOSURE AND GRILLE
  57. MOP/BROOM HOLDER
  58. PLASTIC LAM. DOOR, 1 1/2" THICK
  59. PROVIDE 3/4" LAM. PLASTIC SUPPORTS AT STOREFRONT, AT 4'-0" O.C.
  60. RAYTHEM'S (N.I.C.)
  61. URINAL
  62. MICROWAVE (N.I.C.)
  63. PLASTIC LAMINATE CAP
  64. CERAMIC TILE
  65. GRAB BAR
  66. WATER CLOSET
  67. METAL LETTERS (SEE SPECS)
  68. PONY WALL BEHIND
  69. ROOM CAPACITY SIGN
  70. TECTUM PANELS
  71. 2x3 SHAPED WOOD NAILER
  72. UTILITY BOX
  73. MOVABLE ROD TO BE PLACED AT 44" FOR ADA COMPLIANCE, OPTIONAL.
  74. MOTORIZED SCREEN, SEE 143/A8.8
  75. PLASTIC LAMINATE PANELING AND DOORS
  76. WINDOW WALL, SEE T2 FOR DEFERRED ITEMS
  77. CLEAR GLASS POSTER CASE w/ LOCK (SEE SPEC. SECT. 10410)
  78. 1/2" REVEAL SCREEDS.
  79. WALL CLOCK, SEE SPEC SECTION 10050
  80. MICROWAVE OVEN
  81. PLASTIC LAMINATE COUNTERTOP
  82. SOLID SURFACE COUNTERTOP
  83. PERFORATED DECORATIVE METAL PANEL
  84. WALL PROTECTION PANEL
  85. ICE MACHINE
  86. CARPET BASE
  87. (2) 2" TACK STRIPS, 12" LONG BY WALLTALKERS OR EQUAL CORNER GUARD
  88. STRUCTURAL MEMBER TO BE PAINTED, SEE STRUCTURAL
  90. COVERED BASE
  91. CASEWORK
  92. TAC-WALL
- NOTES: 1. SEE DTL. 219/A8.11 FOR ACCESSIBILITY STANDARDS  
 2. ALL SHELVING WITH SPANS GREATER THAN 30" TO BE 1" THICK  
 3. REFER TO COLOR SCHEDULE (SHEET A2.8) FOR ALL COLOR REFERENCES, TYP.  
 4. ALL CARPET USES A CARPET BASE #86  
 ALL MONDO RUBBER FLOORS USE A RUBBER TOPSET BASE #3  
 ALL AHRO FLOORS USE SELF-COVER BASE #41  
 ALL STAINED & DYED CONCRETE FLOORS USE TOPSET #3

SYMBOL LEGEND



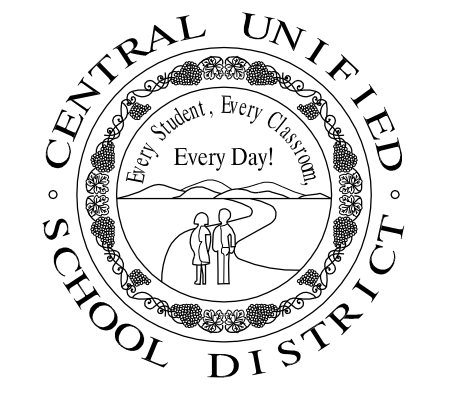
GENERAL NOTES

1. RECESSED CLOCKS AND/OR SPEAKERS ARE PROHIBITED IN FIRE RATED WALLS WHERE OPENING PROTECTION IS REQUIRED.



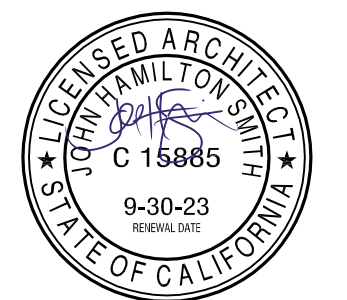
7790 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 T 559.448.8400 F 559.448.8467  
 www.sim-prk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-92a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, AIA, C15885



THE FIRM OF SMITH, WAMAGA, MILLER, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COPYRIGHT AND OTHER AVAILABLE PROPER RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

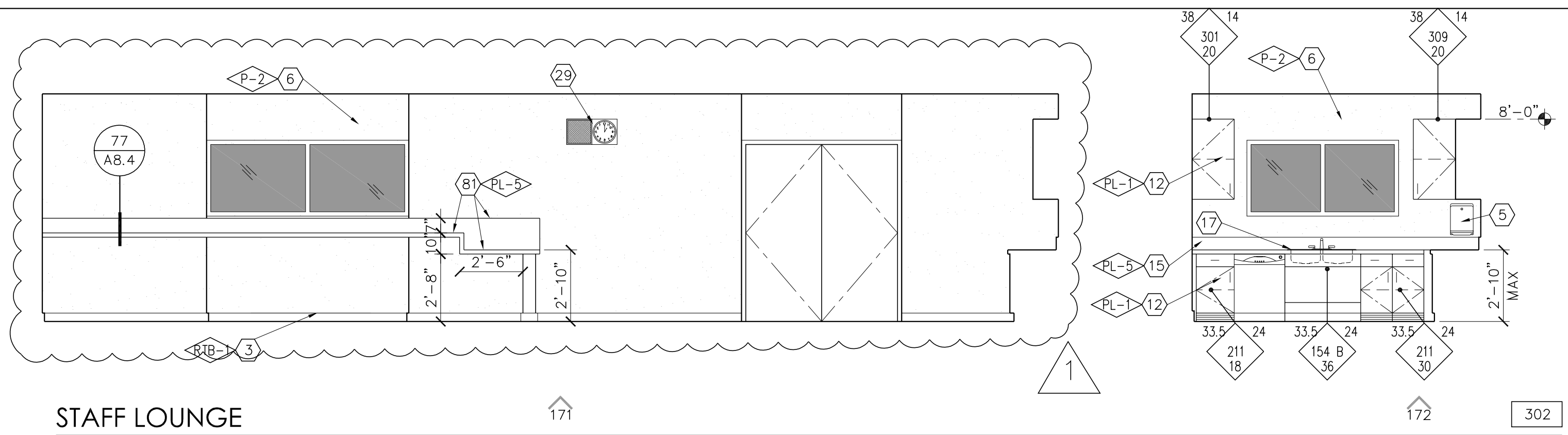
PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
1	2.14.23	DISTRICT MODIFICATIONS
2	2.27.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

<b>INTERIOR ELEVATIONS</b>		MULTI-PURPOSE
PROJECT COORDINATOR JOHN SMITH	SHEET No.	
PROJECT NO. 17-67	<b>A5.17</b>	
DATE 1.27.23		
SCALE 1/4"=1'-0"		



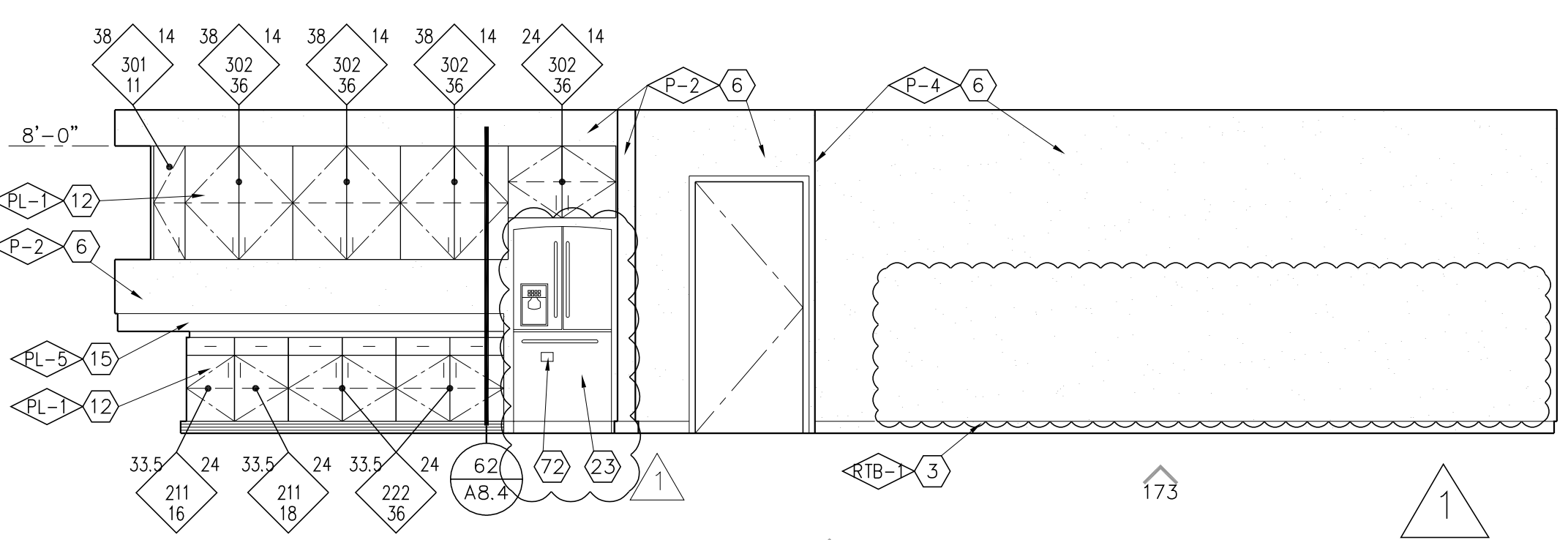


STAFF LOUNGE

171

172

302



STAFF LOUNGE

173

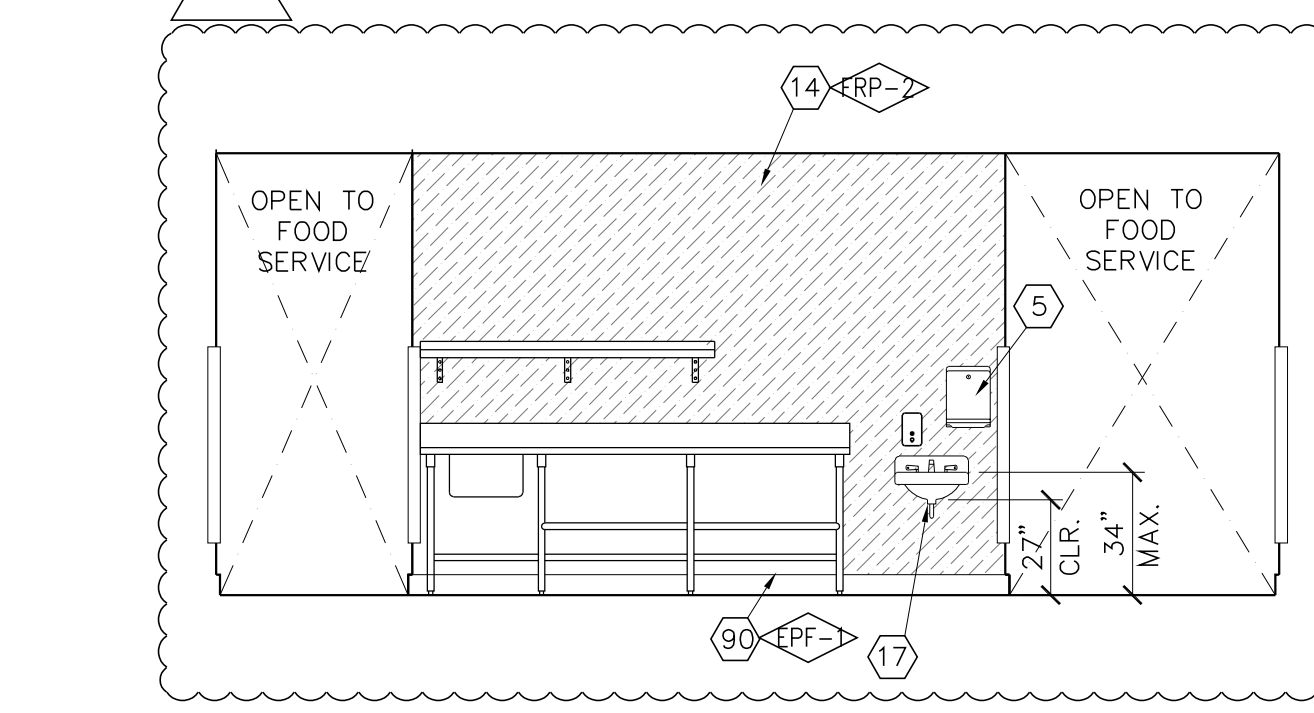
174

302

HALL

175

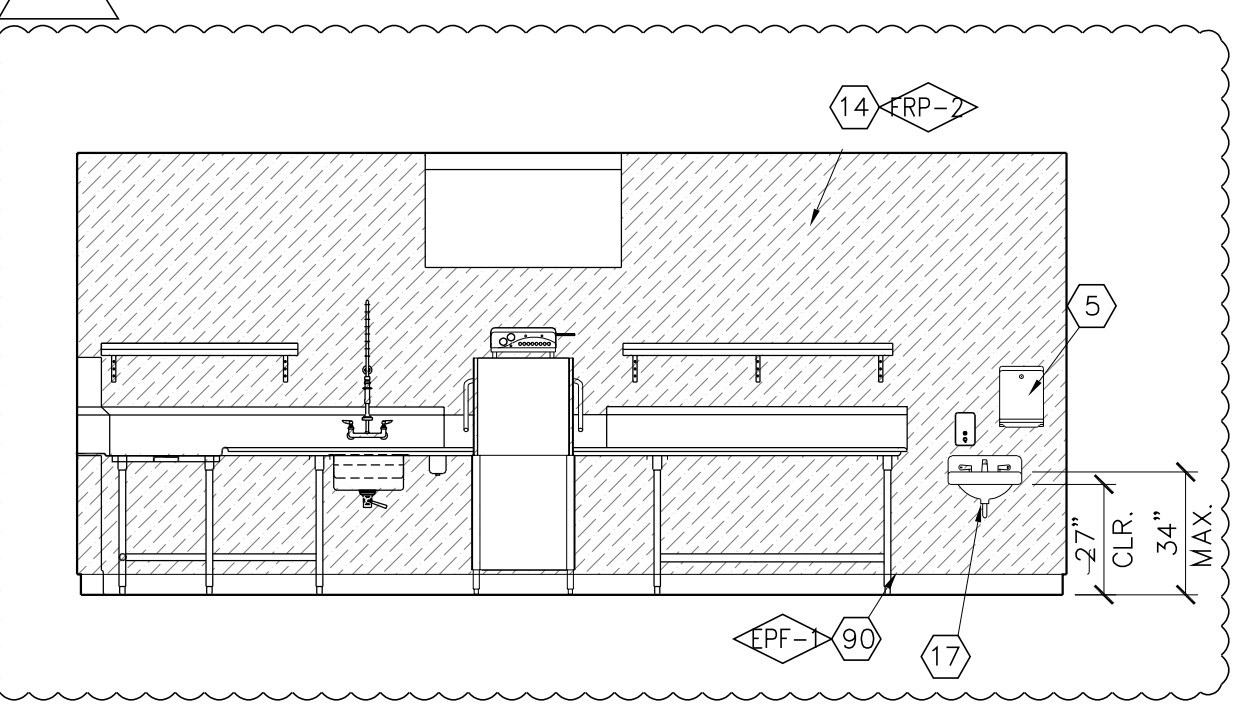
304



HALL

176

304



DISH WASHING

177

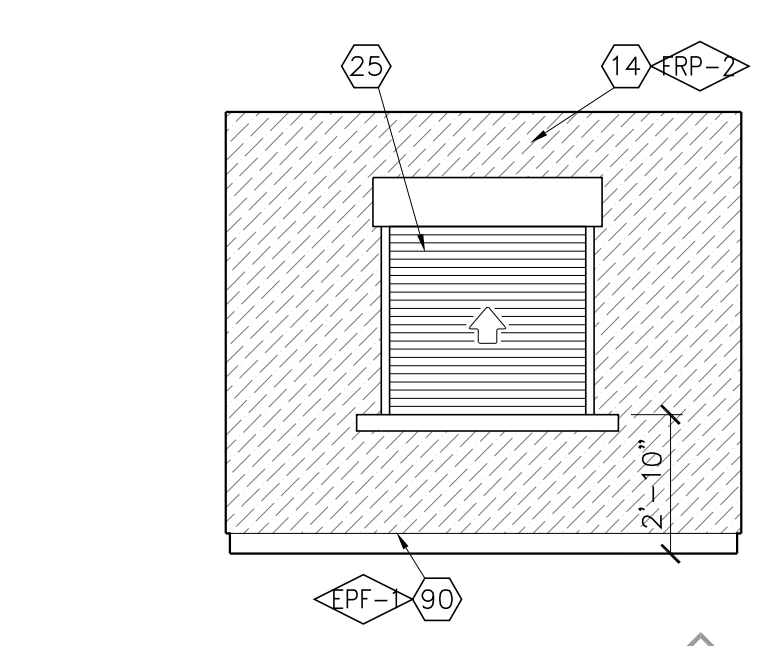
178

303

HALL

179

303



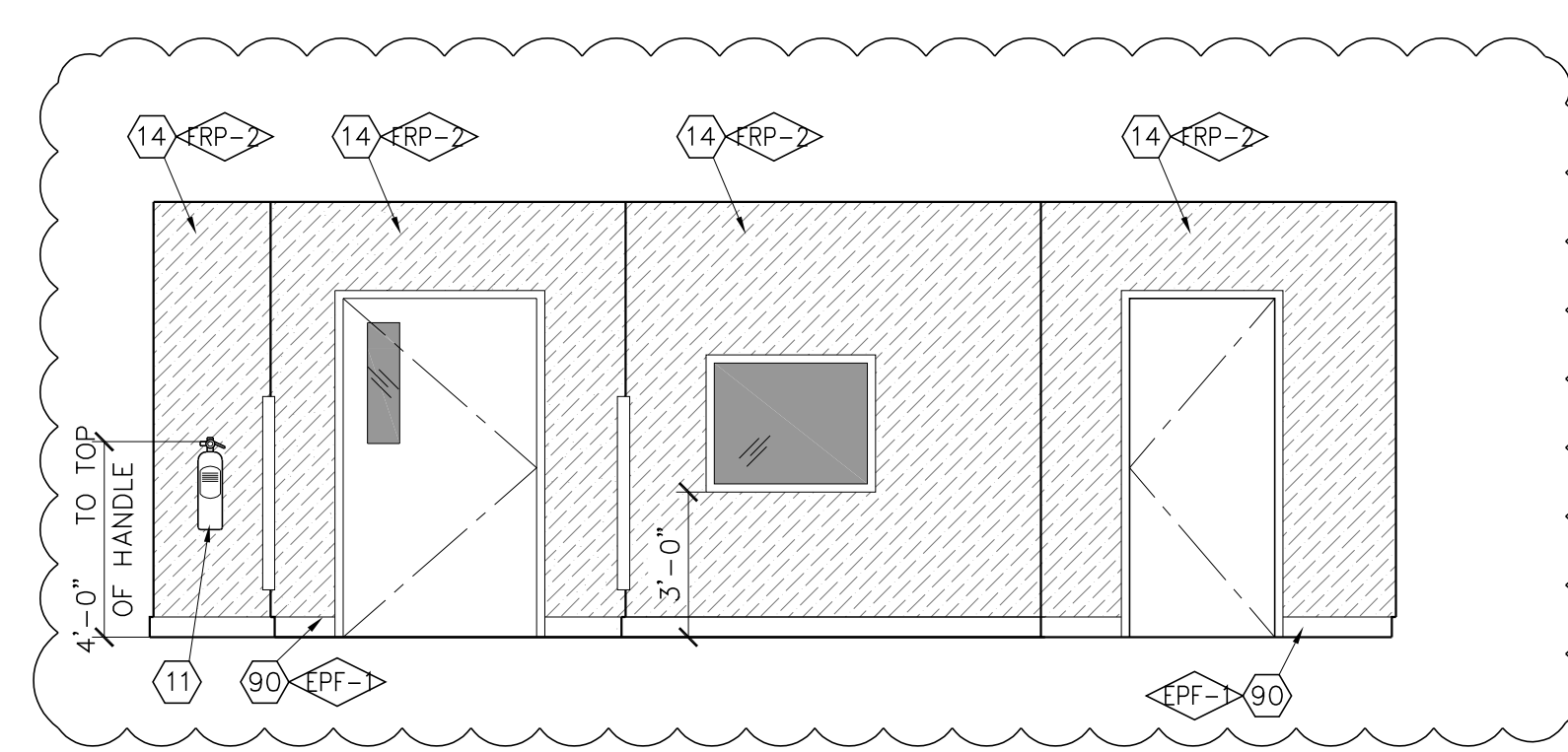
DISH WASHING

180

303

FOOD SERVICE

181

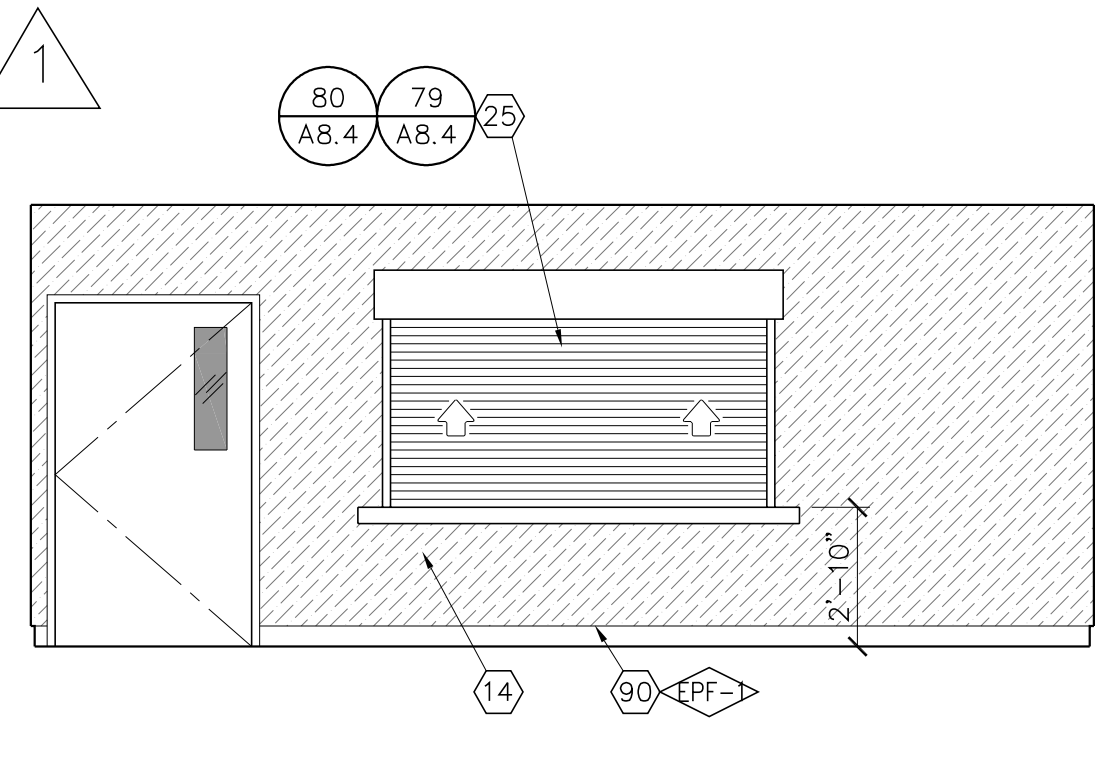


FOOD SERVICE

183

184

307



HALL

185

308

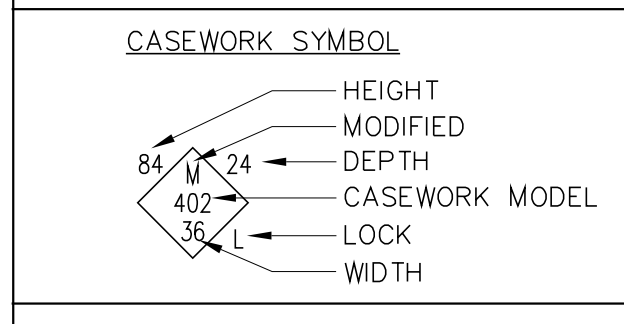
HALL

KEYNOTES

1. KNEE SPACE
2. VINYL TACKBOARD o/ GYP. BD.
3. RUBBER TOPSET BASE
4. STOREFRONT
5. PAPER TOWEL DISPENSER
6. GYPSUM BOARD TAPE, TEXTURE & PAINT (PROVIDE 5/8" TYPE 'X' GYP. AT STAIRWAYS AND UNDERSTAIR WALL/CEILING FINISHES, TYP.)
7. ROOF ACCESS LADDER
8. SOFFIT
9. FLOOR SINK - SEE PLUMBING
10. UNDER-COUNTER REFRIGERATOR
11. FIRE EXTINGUISHER w/ SEMI RECESSED CAB. TYPE 2A:10BC
12. PLASTIC LAMINATE CASEWORK
13. W.I.C. 400 STORAGE SHELVING
14. FIBER REINFORCED PANEL
15. PLASTIC LAMINATE BACKSPASH & COUNTERTOP
16. METAL POST, PER STRUCTURAL
17. SINK - SEE PLUMBING SCHEDULE
18. MAGNETIC MARKER BOARD o/VTB
19. APPLIANCES - SEE SPEC SECTION 11400
20. BUTCHER PAPER HOLDER
21. DISHWASHER
22. HOOD
23. REFRIGERATOR - FULL HEIGHT
24. COOKTOP
25. ROLL-UP DOOR
26. STAINLESS STEEL COUNTERTOP
27. FURNITURE (N.I.C.)
28. DRINKING FOUNTAIN
29. CLOCK/SPEAKER
30. CLEAR GLASS DISPLAY CASE w/ LOCK (SEE SPEC. SECT. 10410)
31. FEMININE NAPKIN DISPOSAL
32. MIRROR
33. TRACK AND CUBICLE CURTAIN.
34. STAIRCASE
35. HANDRAIL
36. N/A
37. TRANSLUCENT WALL SYSTEM
38. WOOD BASE
39. WHEEL CHAIR LIFT
40. BELOW STAGE STORAGE
41. ELEVATOR
42. ELEVATOR LANTERN
43. RAILING, SPACING SHALL BE SUCH THAT A 4" DIA. SPHERE CANNOT PASS THROUGH ANY OPENING, PER CBC 1013
44. CALL BUTTON
45. ELEVATOR DOORS
46. LAVATORY
47. TOILET PAPER DISPENSER
48. TOILET SEAT COVER DISPENSER
49. DATA RACEWAY. SEE ELECTRICAL DRAWINGS.
50. CLOCK
51. 4" HIGH CORNER GUARD, TYP.
52. SOAP DISPENSER
53. PLASTIC TOILET PARTITION
54. SIGNAGE
55. MANUFACTURED 3'x6'H MTL. SHELVING, SEE S-1/K8.0
56. SPEAKER ENCLOSURE AND GRILLE
57. MOP/BROOM HOLDER
58. PLASTIC LAM. DOOR, 1 1/2" THICK
59. PROVIDE 3/4" LAM. PLASTIC SUPPORTS AT STOREFRONT, AT 4'-0" O.C.
60. RAYTHERMS (N.I.C.)
61. URINAL
62. MICROWAVE (N.I.C.)
63. PLASTIC LAMINATE CAP
64. CERAMIC TILE
65. GRAB BAR
66. WATER CLOSET
67. METAL LETTERS (SEE SPECS)
68. PONY WALL BEHIND
69. ROOM CAPACITY SIGN
70. TECTUM PANELS
71. 2x3 SHAPED WOOD NAILER
72. UTILITY BOX
73. MOVABLE ROD TO BE PLACED AT 44" FOR ADA COMPLIANCE. OPTIONAL.
74. MOTORIZED SCREEN, SEE 143/A8.8
75. PLASTIC LAMINATE PANELING AND DOORS
76. WINDOW WALL, SEE 12 FOR DEFERRED ITEMS
77. CLEAR GLASS POSTER CASE w/LOCK (SEE SPEC. SECT. 10410)
78. 1/2" REVEAL SCREEDS
79. WALL CLOCK, SEE SPEC SECTION 10050
80. MICROWAVE OVEN
81. PLASTIC LAMINATE COUNTERTOP
82. SOLID SURFACE COUNTERTOP
83. PERFORATED DECORATIVE METAL PANEL
84. WALL PROTECTION PANEL
85. ICE MACHINE
86. CARPET BASE
87. N/A
88. CORNER GUARD
89. STRUCTURAL MEMBER TO BE PAINTED, SEE STRUCTURAL
90. CARPET
91. CASEWORK
92. TAC-WALL PANELS
93. 75" MONITOR WITH
94. MONITOR CONTROL DEVICE & HDMI DEVICES

- NOTES:
1. SEE DTL. 219/A8.11 FOR ACCESSIBILITY STANDARDS
  2. ALL SHELVING WITH SPANS GREATER THAN 30" TO BE 1" THICK
  3. REFER TO COLOR SCHEDULE (SHEET A2.8) FOR ALL COLOR REFERENCES, TYP.
  4. ALL CARPET USES A CARPET BASE #86
  5. ALL MONDO RUBBER FLOORS USE A RUBBER TOPSET BASE #3
  6. ALL AHRO FLOORS USE SELF-COVER BASE #41
  7. ALL STAINED & DYED CONCRETE FLOORS USE TOPSET #3

SYMBOL LEGEND



GENERAL NOTES

1. RECESSED CLOCKS AND/OR SPEAKERS ARE PROHIBITED IN FIRE RATED WALLS WHERE OPENING PROTECTION IS REQUIRED.
2. SCHOOL WILL NOT HAVE ANY SNACK BARS OR FOOD SERVING KIOSKS.



7790 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 T:559.448.8400 F:559.448.8467  
 www.simprbk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-93a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, KWANAGA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES FOR COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT IN THE EVENT OF UNAUTHORIZED RELEASE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT

DATE	ISSUED FOR

REVISIONS

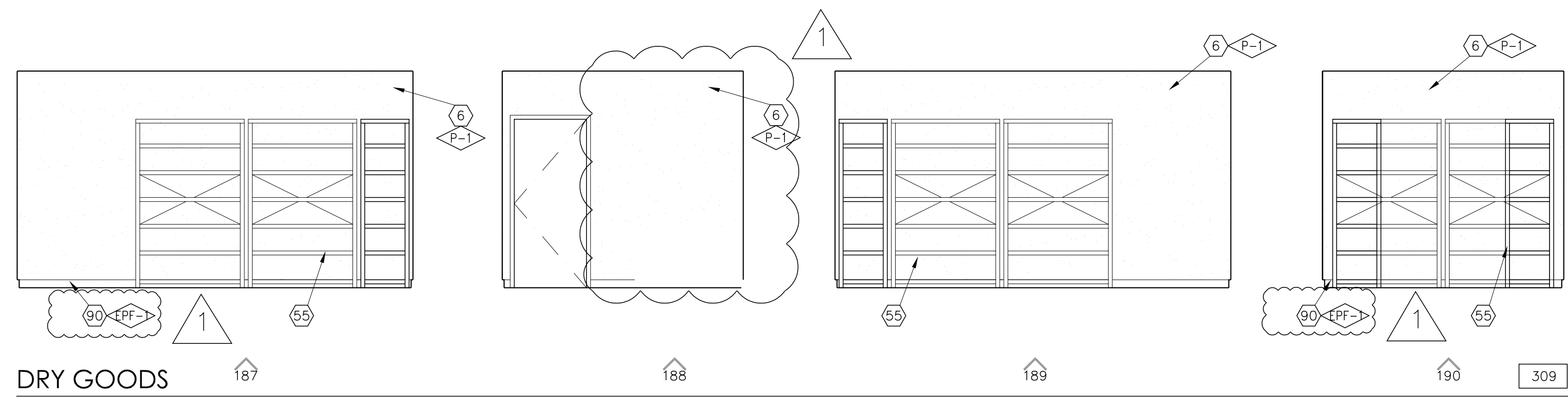
No.	DATE	DESCRIPTION
Δ	2.14.23	DISTRICT MODIFICATIONS
Δ	2.27.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION

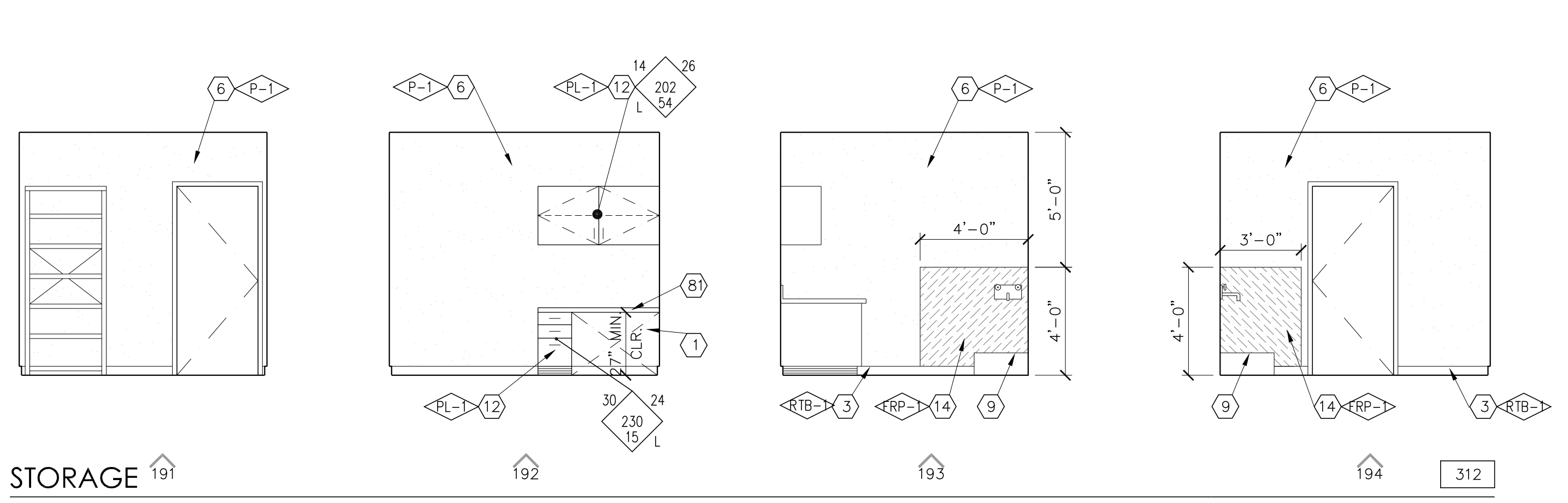
**INTERIOR ELEVATIONS**  
 MULTI-PURPOSE

PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	A5.18
DATE 1.27.23	
SCALE	

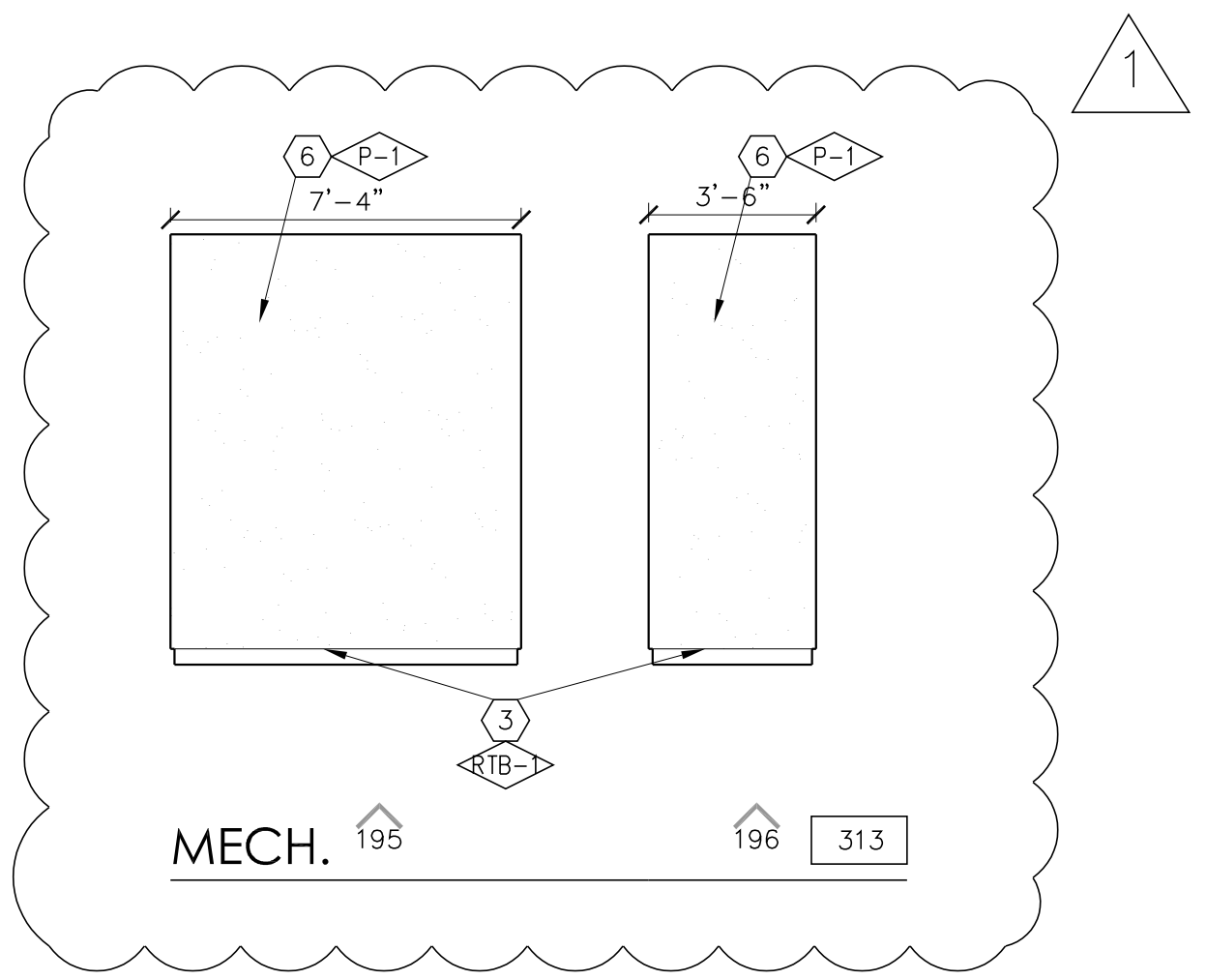




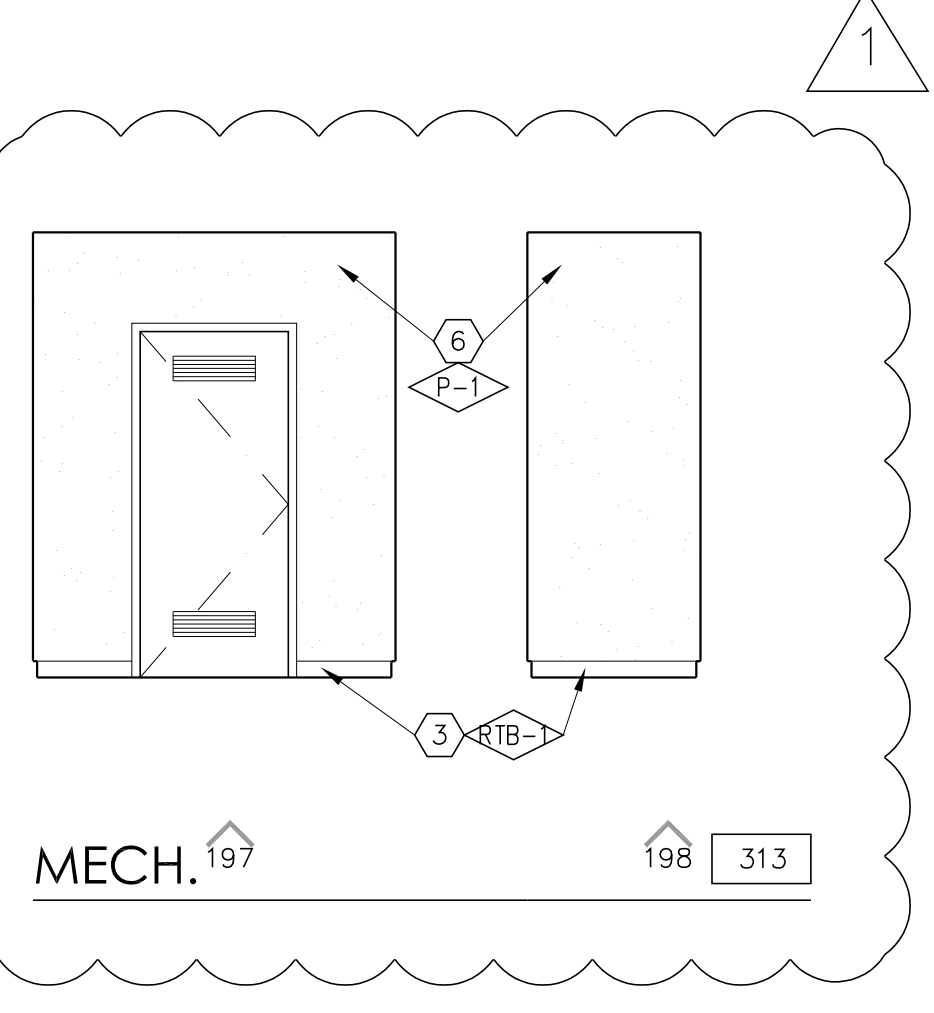
DRY GOODS 187 188 189 190 309



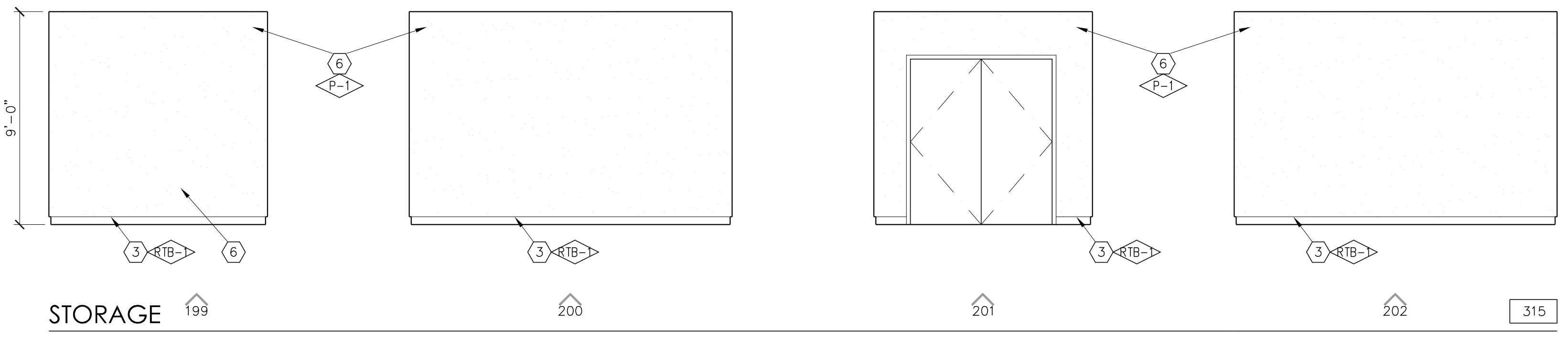
STORAGE 191 192 193 194 312



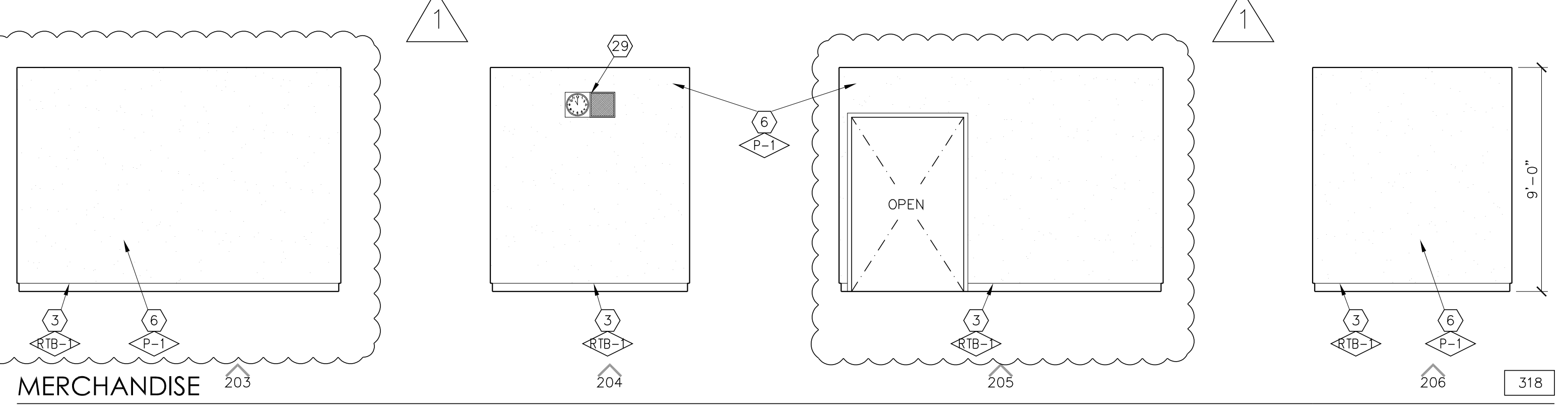
MECH. 195 196 313



MECH. 197 198 313



STORAGE 199 200 201 202 315



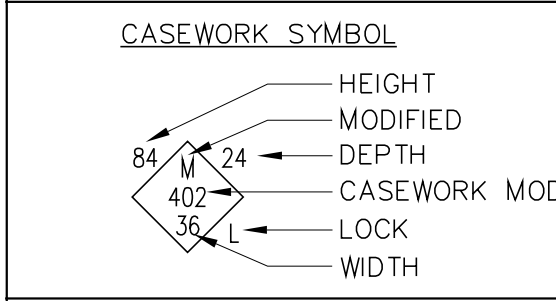
MERCHANDISE 203 204 205 206 318

KEYNOTES

1. KNEE SPACE
2. VINYL TACKBOARD o/ GYP. BD.
3. RUBBER TOPSET BASE
4. STOREFRONT
5. PAPER TOWEL DISPENSER
6. GYPSUM BOARD, TAPE, TEXTURE & PAINT (PROVIDE 5/8" TYPE 'X' GYP. BD. AT STAIRWAYS AND UNDERSTAIR WALL/CEILING FINISHES, TYP.)
7. ROOF ACCESS LADDER
8. SOFFIT
9. FLOOR SINK - SEE PLUMBING
10. UNDER-COUNTER REFRIGERATOR
11. FIRE EXTINGUISHER w/ SEMI RECESSED CAB. TYPE 2A:10BC
12. PLASTIC LAMINATE CASEWORK
13. W.I.C. 400 STORAGE SHELVING
14. FIBER REINFORCED PANEL
15. PLASTIC LAMINATE BACKSPASH & COUNTERTOP
16. METAL POST, PER STRUCTURAL
17. SINK - SEE PLUMBING SCHEDULE
18. MAGNETIC MARKER BOARD o/VTB
19. APPLIANCES - SEE SPEC SECTION 11400
20. BUTCHER PAPER HOLDER
21. DISHWASHER
22. HOOD
23. REFRIGERATOR - FULL HEIGHT
24. COOKTOP
25. ROLL-UP DOOR
26. STAINLESS STEEL COUNTERTOP
27. FURNITURE (N.I.C.)
28. DRINKING FOUNTAIN
29. CLOCK/SPEAKER
30. CLEAR GLASS DISPLAY CASE w/ LOCK (SEE SPEC. SECT. 10410)
31. FEMININE NAPKIN DISPOSAL
32. MIRROR
33. TRACK AND CUBICLE CURTAIN.
34. STAIRCASE
35. HANDRAIL
36. N/A
37. TRANSLUCENT WALL SYSTEM
38. WOOD BASE
39. WHEEL CHAIR LIFT
40. BELOW STAGE STORAGE
41. ELEVATOR LANTERN
42. ELEVATOR LANTERN
43. RAILING, SPACING SHALL BE SUCH THAT A 4" DIA. SPHERE CANNOT PASS THROUGH ANY OPENING, PER CBC 1013
44. CALL BUTTON
45. ELEVATOR DOORS
46. LAVATORY
47. TOILET PAPER DISPENSER
48. TOILET SEAT COVER DISPENSER
49. DATA RACEWAY. SEE ELECTRICAL DRAWINGS.
50. CLOCK
51. 4' HIGH CORNER GUARD, TYP.
52. SOAP DISPENSER
53. PLASTIC TOILET PARTITION
54. SIGNAGE
55. MANUFACTURED 3'x6" MTL. SHELVING, SEE S-1/K8.0
56. SPEAKER ENCLOSURE AND GRILLE
57. MOP/BROOM HOLDER
58. PLASTIC LAM. DOOR, 1 1/2" THICK
59. PROVIDE 3/4" LAM. PLASTIC SUPPORTS AT STOREFRONT. AT 4'-0" O.C.
60. RAYTHERMS (N.I.C.)
61. URINAL
62. MICROWAVE (N.I.C.)
63. PLASTIC LAMINATE CAP
64. CERAMIC TILE
65. GRAB BAR
66. WATER CLOSET
67. METAL LETTERS (SEE SPECS)
68. PONY WALL BEHIND
69. ROOM CAPACITY SIGN
70. TECTUM PANELS
71. 2x3 SHAPED WOOD NAILER
72. UTILITY BOX
73. MOVABLE ROD TO BE PLACED AT 44" FOR ADA COMPLIANCE. OPTIONAL.
74. MOTORIZED SCREEN SEE 14.3/A8.8
75. PLASTIC LAMINATE PANELING AND DOORS
76. WINDOW WALL, SEE T2 FOR DEFERRED ITEMS
77. CLEAR GLASS POSTER CASE w/LOCK (SEE SPEC. SECT. 10410)
78. 1/2" REVEAL SCREEDS
79. WALL CLOCK, SEE SPEC SECTION 10050
80. MICROWAVE OVEN
81. PLASTIC LAMINATE COUNTERTOP
82. SOLID SURFACE COUNTERTOP
83. PERFORATED DECORATIVE METAL PANEL
84. WALL PROTECTION PANEL
85. ICE MACHINE
86. CARPET BASE
87. N/A
88. CORNER GUARD
89. STRUCTURAL MEMBER TO BE PAINTED, SEE STRUCTURAL
90. EPOXY EPE-1
91. CASEWORK
92. TAC-WALL PANELS
93. 75" MONITOR WITH
94. MONITOR CONTROL DEVICE & HDMI DEVICES

- NOTES:
1. SEE DTL. 219/A8.11 FOR ACCESSIBILITY STANDARDS
  2. ALL SHELVING WITH SPANS GREATER THAN 30" TO BE 1" THICK
  3. REFER TO COLOR SCHEDULE (SHEET A2.8) FOR ALL COLOR REFERENCES, TYP.
  4. ALL CARPET USES A CARPET BASE #86
  5. ALL MONDO RUBBER FLOORS USE A RUBBER TOPSET BASE #3
  6. ALL AHRO FLOORS USE SELF-COVER BASE #41
  7. ALL STAINED & DYED CONCRETE FLOORS USE TOPSET #3

SYMBOL LEGEND



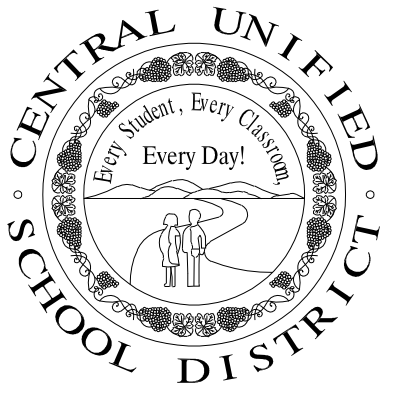
GENERAL NOTES

1. RECESSED CLOCKS AND/OR SPEAKERS ARE PROHIBITED IN FIRE RATED WALLS WHERE OPENING PROTECTION IS REQUIRED.



7790 NORTH PALM AVENUE  
 FRESNO, CALIFORNIA 93711  
 T 559.448.8400 F 559.448.8467  
 www.simprbk.com

PROJECT:  
**SHIELDS & BRAWLEY ELEMENTARY SCHOOL**



**AD 1-94a**  
**S&B Elementary**  
**02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, KWANAGA, MILHOUS, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION

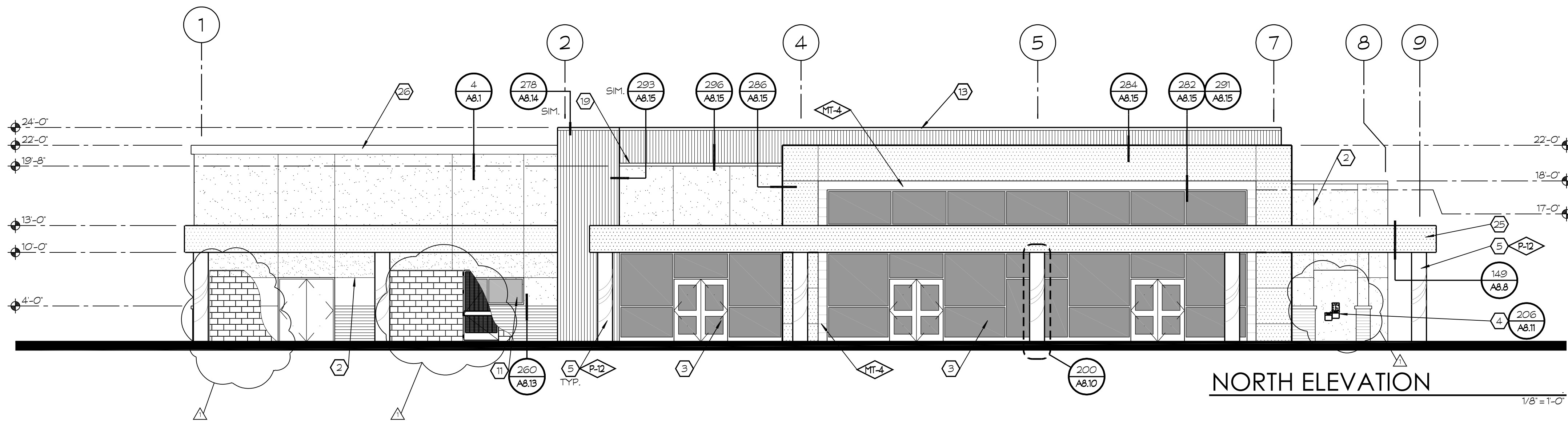
SHEET DESCRIPTION

**INTERIOR ELEVATIONS**  
 MULTI-PURPOSE

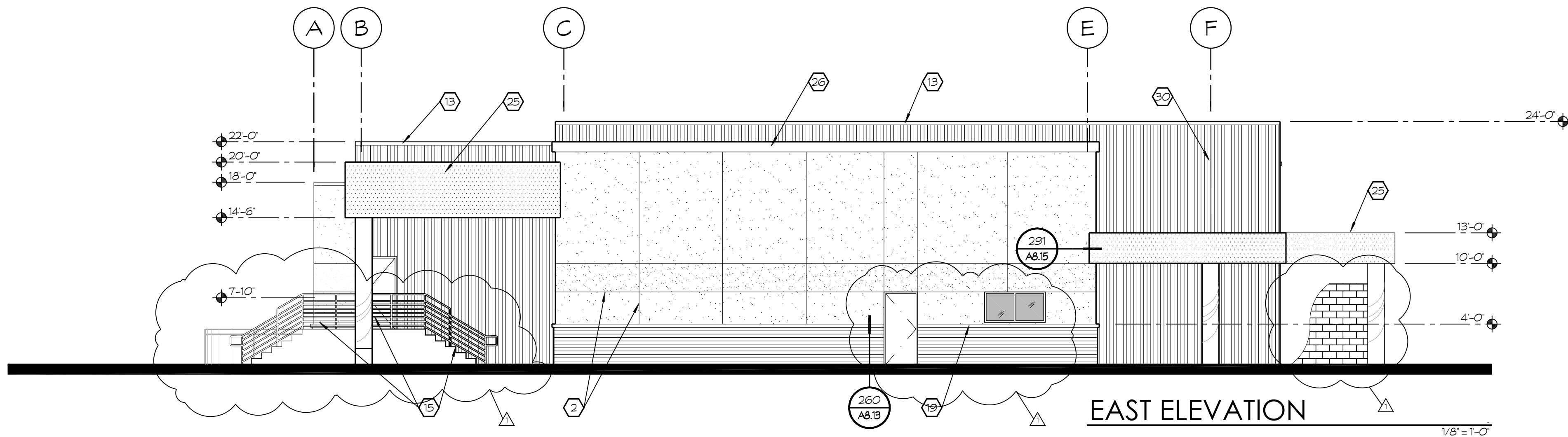
PROJECT COORDINATOR JOHN SMITH	SHEET No.
PROJECT NO. 17-67	<b>A5.19</b>
DATE 1.27.23	
SCALE 1/4"=1'-0"	

C:\17-67\_Shields & Brawley\_Elementary\Work\17-67\_A5.19\_Interiors.dwg 05/23/23 08:06:56

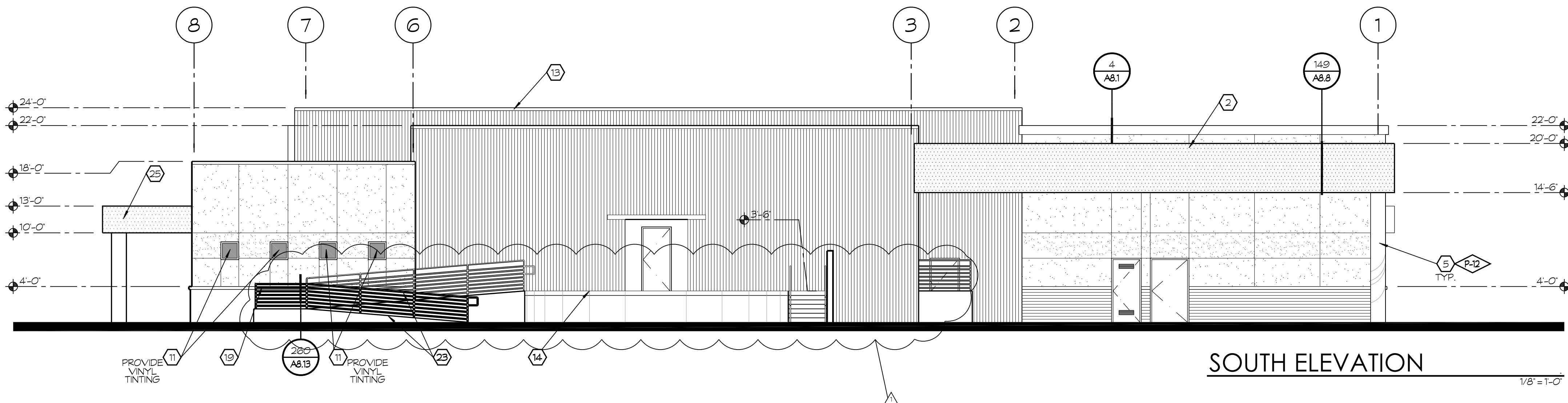




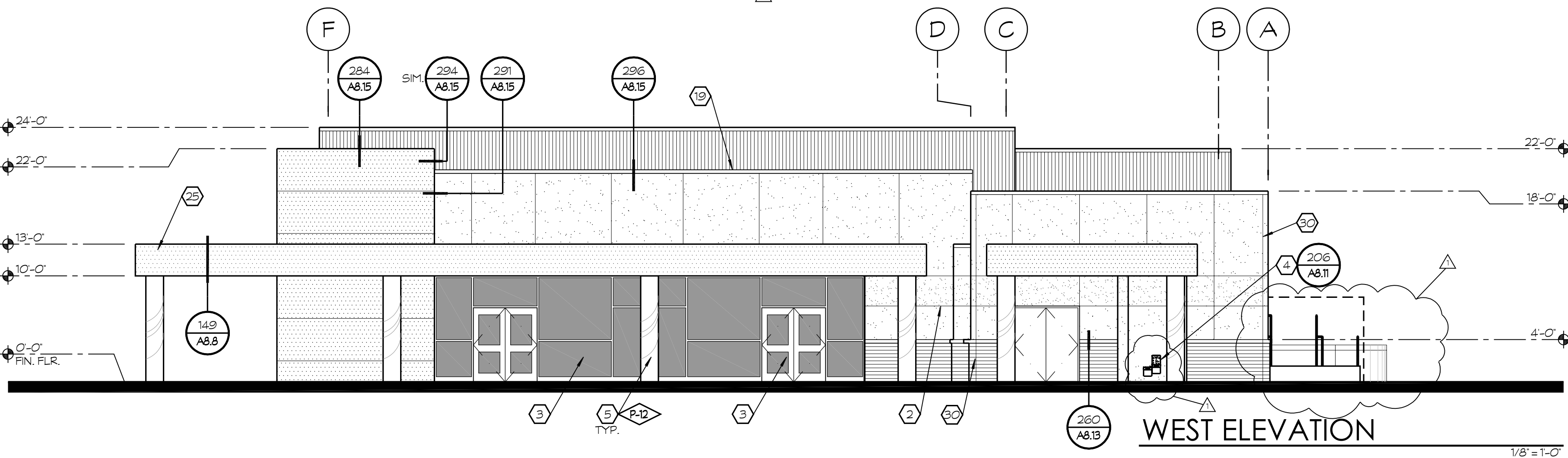
NORTH ELEVATION  
1/8" = 1'-0"



EAST ELEVATION  
1/8" = 1'-0"



SOUTH ELEVATION  
1/8" = 1'-0"



WEST ELEVATION  
1/8" = 1'-0"

KEYNOTES

1. N/A
2. 1/4" EXPANSION JOINT(S)
3. ALUMINUM STOREFRONT SYSTEM, SEE SCHEDULE
4. DRINKING FOUNTAIN SEE PLUMBING PLANS FOR INFO, SEE DTL. 4/P11A FOR ANCHORAGE
5. 20" DIA. CONC. COLUMN, TYP.
6. CMU WALL
7. DECORATIVE METAL AWNING
8. METAL CANOPY
9. STEEL TRUSS, SEE STRUCTURAL DWGS.
10. N/A
11. WINDOW, SEE SCHEDULES
12. N/A
13. COPING (BY METAL PANEL MANUFACTURER) SEE DTL. 154/A8.8
14. RAISED CONC. PLATFORM
15. STAIR & HANDRAIL/GUARDRAIL
16. SECURITY CAMERA
17. ACCESSIBLE ENTRANCE SIGNAGE, SEE DTL. 209/A8.11
18. METAL LETTERS
19. 4" FOAM PLANT-GN
20. 2" EXPANSION REVEAL, TYP.
21. N/A
22. HSS COLUMN, SEE STRUCTURAL DWGS.
23. ACCESSIBLE RAMP AND HANDRAILS
24. COMPOSITE WOOD DECKING
25. ARCHITECTURAL METAL FASCIA
26. CEMENT PLASTER SHAPED FOAM CORNICE
27. N/A
28. 6" T.S. COLUMN, SEE STRUCT. DWGS.
29. N/A
30. 2" EXPANSION JOINT, REFER TO STRUCTURAL DRAWINGS FOR ALL LOCATIONS, SEE DTL. 310/A8.18 FOR TYPICAL FINISH CONDITIONS.

NOTE: REFER TO COLOR SCHEDULE (SHEET A2.8) FOR ALL COLOR REFERENCES, TYP.

METAL PANEL NOTES:

1. CONTRACTOR TO PROVIDE ALL ACCESSORIES REQD TO PROVIDE WEATHER TIGHT CONSTRUCTION, COORDINATE W/ MANUFACTURER.
2. CORRUGATED PANELS:  
PROVIDE ENDWALL CLOSURES PER DETAIL 279/A8.14 AT ALL APPLICABLE LOCATIONS TO PROVIDE WEATHER TIGHT CONSTRUCTION, COORDINATE W/ METAL PANEL MANUFACTURER.  
SMOOTH PANELS:  
REFER TO DETAIL 288/A8.15 FOR END CONDITIONS, COORDINATE W/ METAL PANEL MANUFACTURER FOR ANY CONDITIONS NOT SHOWN.
3. REFER TO DETAIL 263/A8.14 FOR ISOMETRIC VIEW AT WINDOWS, TYP.
4. CORRUGATED PANELS:  
REFER TO DETAIL 275/A8.14 FOR EXPANSION REVEALS.  
SMOOTH PANELS:  
REFER TO DETAIL 285/A8.15 FOR EXPANSION REVEALS.

LEGEND:

- SMOOTH PANEL SYSTEM SEE SPEC SECTION 07 42 13.23 SUBSTITUTION SHALL BE REVIEWED & APPROVED BY DSA  
COLOR:
- VERTICAL-CORRUGATED METAL PANEL LATITUDE SERIES BY IMETCO SUBSTITUTIONS SHALL BE REVIEWED & APPROVED BY DSA  
COLOR:
- HORIZONTAL-CORRUGATED METAL PANEL LATITUDE SERIES (PROFILE 1) BY IMETCO SUBSTITUTIONS SHALL BE REVIEWED & APPROVED BY DSA  
COLOR:
- SMOOTH PANEL SYSTEM SEE SPEC SECTION 07 42 13.23 SUBSTITUTION SHALL BE REVIEWED & APPROVED BY DSA  
COLOR:
- CEMENT PLASTER w/ METAL LATH w/ PAPER  
COLOR:
- CEMENT PLASTER w/ METAL LATH w/ PAPER  
COLOR:
- CMU WALL



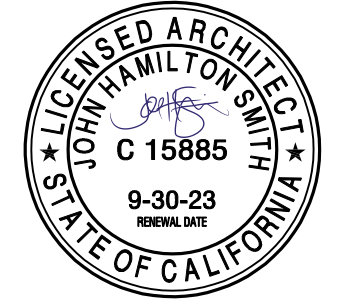
7790 NORTH PALM AVENUE  
FRESNO, CALIFORNIA 93711  
T 559.448.8400 F 559.448.8467  
www.simprk.com

PROJECT:  
**SHIELDS  
& BRAWLEY  
ELEMENTARY  
SCHOOL**



**AD 1-95a  
S&B Elementary  
02-116800**

JOHN H. SMITH, A.I.A. C15885



THE FIRM OF SMITH, MANAGA, MILHORN, ARCHITECTS, INC. EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER APPLICABLE PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WITHOUT THE WRITTEN PERMISSION AND CONSENT OF THE ARCHITECT. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD THE ARCHITECT HARMLESS, AND SHALL BEAR THE COST OF THE ARCHITECT'S LEGAL FEES, ASSOCIATED WITH DEFENDING AND ENFORCING THESE RIGHTS.

PROJECT DEVELOPMENT	
DATE	ISSUED FOR

REVISIONS		
No.	DATE	DESCRIPTION
1	2.14.23	DISTRICT MODIFICATIONS

SHEET DESCRIPTION  
**EXTERIOR  
ELEVATIONS**  
MULTI-PURPOSE

PROJECT COORDINATOR JOHN SMITH	SHEET No. <b>A6.4</b>
PROJECT NO. 17-67	DATE 1.27.23
DATE 1.27.23	SCALE

## TRUCKING PLAN, CONSTRUCTION SITE DELIVERIES:

1. **LOCATION:** CORNER OF W. SHIELDS & N. BRAWLEY AVENUES, FRESNO
2. **ARRIVING TRUCKS:** HIGHWAY 99, ONTO W. ASHLAN AVE. GO SOUTH ON N. PARKWAY DRIVE WHICH MERGES INTO N BRAWLEY AVENUE.
3. **ARRIVING TRUCKS:** MUST BE TRAVELING SOUTHBOUND ON N. BRAWLEY AVENUE
4. **NOTE:** N. BRAWLEY AVE. IS DIVIDED, TRUCKS NORTHBOUND WILL NOT BE ABLE TO ENTER.
5. **DEPARTING TRUCKS:** EXIT ONTO N. BRAWLEY AVE., TRAVEL SOUTHBOUND TO CLINTON AVENUE...

AD 1-96a  
S&B Elementary  
02-116800



# TRUCKING PLAN: Construction Deliveries

## Legend

- Central East High School
- Feature 1
- Food Junction (Indian Street Food)

AD 1-96B  
S&B Elementary  
02-116800

Exit Ashlan Ave

Muscate

Central East High School

W Dakota Ave

W Dakota Ave

Jobsite  
Construction  
Entrance

W Shields Ave

W Shields Ave

W Shields Ave

To Highway 99

W Clinton Ave

Save Mart

W Clinton Ave

Food Junction (Ind

Park Bazaar

Google Earth

Image Landsat / Copernicus

4000 ft

