

# DEPARTMENT OF TRANSPORTATION

Fresno Area Express ♦ Fleet ♦ Handy Ride

# ADDENDUM NO. 5 FACILITY UPGRADE PROJECT Bid File 3839

## NOTICE TO ALL BIDDERS

Addenda to date: 5

This Addendum is attached to and made a part of the above entitled specifications for the City of Fresno with a scheduled bid opening of 3:00 P.M. February 1, 2022

All changes and or clarifications will appear in bold underlined type.

The attached documents have been made part of the specification:

# **RFI QUESTIONS AND ANSWERS.**

END OF ADDENDUM NO. 5

City of Fresno

BRIAN CETTI
Capital Development Specialist

The bidder shall sign below indicating he/she has thoroughly read and understands the contents of this Addendum.

Signed:

Company:

This addendum is being distributed ONLINE only and will not be sent by U.S. Mail. The bidder shall submit a signed copy of this addendum with their bid.



# DEPARTMENT OF TRANSPORTATION

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6. My question is regarding type of grating called out in Detail 4/S-420. The note in the detail says, "See Architectural and Mechanical Drawings". I could not find any information in the Arch's or Mech Drawings. I also could not find any information in the Specs.

# Answer: Provide 2" x 1/4" 19-W-4 galvanized bar grating.

7. Regarding the subject project, the plans and specs for site concrete (section 033001) have many conflicts. Spec 033001 (for Site Work Concrete) calls for an air content of 6% +/- 1.5%. This is not necessary in the Fresno area (this IS required in the mountains and higher foothill areas where they get numerous freeze/thaw cycles each winter). This requirement increases the cost of this project substantially without any benefit.

Furthermore, spec 033001 calls for a w/cm ratio of 0.45 maximum which is also unnecessary for site work. Why isn't the Fresno City Standard Specification being used for site work concrete? This requirement also increases the cost of this project substantially without any benefit. Normal 6-sack concrete has a w/cm ratio of 0.50 and meets the City spec. The 0.45 w/cm ratio pushes these mixes to at least 6.5 sack for no good reason.

Perhaps an addendum can be issued? Otherwise we'll quote it to cover these excesses.

#### Answer:

(Clarification) The City of Fresno Standard Specifications shall be used on all concrete improvements in the public street right-of-way (see off-site street plans) and for all onsite concrete curb, gutter and walkways/sidewalks. Specification section 03 33 01 shall be utilized for on-site concrete pavement.

(Revision) Specification section 03 33 01 is hereby revised to omit the air entrainment and the water to cement ratio under paragraph 2.1. (see attached).

8. Is the purpose of the bid proposal of each bid items (1-25) going to be use to remove or add scope via change order?

#### No

9. Please add a line item on the bid proposal form for general conditions, overhead and insurance costs

FAX does not use a line for these costs

10. Sheet E-002 (1-line diagram) shows 2 feeders that we are to run into an existing pull box to feed the existing administration building. The pull box is not indicated anywhere on the drawings so we do not know how to route the new feeders. Can we get a location for these pull boxes?

Answer: Refer to included drawing ED-100 and as-built drawing E-1 from 1981 for location of pull boxes.

11. Is there a bid bond form? Or can our surety use their own bid bond form?

FAX Answer: The City does not have bid bond forms, please use the bid bond forms provided by your surety agency.

12. Spec 085113 indicates aluminum windows are to be used. Architectural details show/indicate the windows are to be storefront. If storefront, please provide the correct specs. If aluminum windows, please provide correct details.

Answer: Aluminum windows are to be used – see revised details attached (A-611).

13. Window schedule indicates a FF finish on W2, W3, & W4. Spec 085113 does not specify a finish or color. Window W1 indicates a PT-2 finish which is indicated on finish legend and states per specification. Please verify/specify the needed finish.

Answer: Finish for W2, W3 and W4 are indicated as FF on the Window Schedule on Sheet A-610, which is listed under Abbreviations on the same sheet as Bronze Anodized Aluminum (both sides).

- -Jiah Hong, Stantec 1/20/2022
- -Michael Osborn, Provost & Pritchard 1/20/2022
- -Gerry Miramontes, Stantec 1/20/2022

#### **SECTION 03 30 01**

# **CAST-IN-PLACE CONCRETE (SITE WORK)**

# **PART 1 GENERAL**

#### 1.1 WORK INCLUDED

- A. Work required under this section consists of furnishing all materials, supplies, equipment, tools, transportation, and facilities, and performing all labor and services incidental to furnishing and installing concrete work as described in this section of the Specifications, shown on the accompanying Plans, or reasonably implied therefrom, except as hereinafter specifically excluded. The work shall include, but is not necessarily limited to:
  - 1. All form work including special forms as required for any special construction and/or to accommodate the work of others and removal of forms.
  - 2. All concrete reinforcement, placement, bending and forming thereof.
  - 3. All concrete and cement finishing, all surface treatment and curing including non-slip finishes.
  - 4. Installation of all reglets, bolts, anchors, cans, sleeves, column bolts, etc., whether furnished under this section or by others.
  - 5. The furnishing of all items required to be or shown on the Plans as embedded in concrete, which are not specifically required under other sections.
  - 6. Setting headers and screens finishing, curing, and protecting concrete.
- B. Where prior inspection and test of materials are required, documentary evidence, in the form of test reports, shall be furnished prior to the time the material is incorporated into the work. All rejected material shall be promptly removed from the premises.

# 1.2 RELATED WORK

- A. Division 3 Concrete
- B. Division 32 Exterior Improvements

#### 1.3 REFERENCES

- A. American Concrete Institute (ACI)
- B. American Society for Testing and Materials (ASTM)
- C. State Standard Specifications
- D. California Building Code (CBC)

E. City of Fresno Department of Public Works Standard Drawings and Specifications, published February 2016

# 1.4 DEFECTIVE WORK

- A. Work considered to be defective may be ordered, by the Engineer, to be replaced in which case the Contractor shall remove and replace the defective work at his expense. Work considered to be defective shall include, but not be limited to, the following:
  - 1. Concrete incorrectly formed, or not conforming to details and dimensions on the Plans or with the intent of these documents or concrete the surfaces of which are out of plumb or level.
  - 2. Concrete in which defective or inadequate reinforcing steel has been placed.
  - 3. Concrete containing wood, cloth, or other foreign matter, rock pockets, voids, honeycombs, cracks or cold joints not scheduled or indicated on the Plans.
  - Concrete below specified strength.

#### 1.5 SUBMITTALS

- A. Submittals shall be in accordance with Section 01 33 00 of these Specifications.
- B. Provide material certificates, shop fabrication and placement drawings, and schedule for all reinforcing steel, embedded items, form release and curing compounds.
- C. The Contractor shall provide a proposed concrete placement plan (to minimize the effects of cracking and differential settlement) to the Engineer, and gain approval of said plan, prior to ordering of reinforcing steel. As a minimum this plan shall contain the layout of horizontal and vertical construction joints, spaced as shown on the Drawings and no greater than 50 feet apart (unless specifically approved otherwise by the Engineer), and a pour schedule for the individual slab pours. All construction joints shall be sized in conformance with the City of Fresno Standard Drawing P-9.

#### **PART 2 PRODUCTS**

#### 2.1 CONCRETE

- Concrete shall conform to Section 90 of the State Standard Specifications. Unless otherwise shown or specified, all concrete shall contain not less than 564 pounds of Portland cement per cubic yard of concrete (6 sack) with a minimum 28-day compressive strength of 4000 psi. Portland cement shall be Type II.
- 2. Concrete shall contain 6% ±1% entrained air.
- 3. Water/cement ratio shall not exceed 0.45 (by weight).

- 4. Slump at placement shall be 4 inches.
- B. Concrete used for thrust blocks or for pipe encasement shall contain not less than 517 pounds of Type II Portland Cement per cubic yard of concrete (5 1/2 sack).
- C. Slurry cement backfill used in lieu of compacted soil shall contain not less than 188-pounds of Type II Portland Cement per cubic yard of concrete (2 sack) and shall comply with Section 19-3.02E of the State Standard Specifications.

#### 2.2 AGGREGATE

- A. Aggregate for normal weight concrete shall conform to Section 90-1.02C, "Aggregates" of the State Standard Specifications. Aggregates shall be free of dirt, clay balls, roots, bark and other deleterious substances and shall be thoroughly washed before use.
- B. The combined aggregates for concrete shall conform to the grading limits for the one inch, maximum size specified in Section 90-1.02C(4)(d), "Aggregate Gradation" of the State Standard Specifications, Combined Aggregate Gradings.

#### 2.3 WATER

A. Water shall comply with Section 90-1.02D, "Water" of the State Standard Specifications, and shall be clean and free from injurious amounts of acids, alkalis, salts, oils, organic materials or other deleterious substances.

#### 2.4 FLYASH

- A. Fly Ash: Shall comply with SSS Section 90-1.02B(3), "Supplementary Cementitious Materials", and shall comply with AASHTO M 295, Class F or N.
  - 1. Type of fly ash shall be compatible with the type of cement and the intended use of the concrete.
- B. The combined weight of fly ash conforming to AASHTO M 295, Class F or N shall not exceed the amount provided for in Section 90-1.02B(3), "Supplementary Cementitious Materials" of the State Standard Specifications.

#### 2.5 ADMIXTURES

Admixtures shall comply with Section 90-1.02E, "Admixtures", of the State Standard Specifications and may be used with approval of Engineer

- A. Air Entraining: ASTM C260
- B. Water Reducing: ASTM C494, Type A, D or F
- C. Accelerating: ASTM C494, Type C or E
  - 1. No admixture containing any chloride ions is acceptable.
- D. Retarding: ASTM C494, Type B, D or G

#### 2.6 REINFORCING STEEL

- A. Rebar shall be ASTM designation A615, Grade 60.
- B. Welded wire fabric shall conform to ASTM A 1064.

#### 2.1 EXPANSION JOINT FILLERS

A. ASTM D994-71, preformed bituminous type, 1/2-inch thick.

# 2.2 CURING MATERIALS

- A. Polyethylene film
- B. Reinforced waterproof paper
  - 1. Sisal Kraft, Orange Label, or approved equal.
- C. Liquid-membrane curing compound
  - 1. Curing compound shall comply with ASTM C309, Type 2.
    - a. White pigmented material
    - b. Clear pigment may be used for concrete that will be exposed to public view.

# PART 3 EXECUTION

#### 3.1 REINFORCING STEEL

- A. Comply with CRSI, "Placing Reinforcing Bars" and as specified herein.
- B. Place reinforcing steel and embedded items in accordance with approved shop drawings.
- C. Splicing of bars shall be by lapping. Lapped splices shall be 45 bar diameters for bar size through #8 and 60 bar diameters for larger bars, unless otherwise shown on the Plans.
- D. Splicing of the wire fabric shall be by lapping. Lapped splices shall be two full mesh, minimum.
- E. Prior to placement of the concrete, reinforcing steel shall be cleaned and free of all concrete, dirt, oil, mill scale, rust or other coatings that would reduce or destroy the bond.
- F. All reinforcing steel and embedded items shall be reviewed and approved by the Engineer prior to concrete placement.

## 3.2 FORMS

- A. All forms shall be cleaned and an approved agent applied each time they are used and shall be so constructed and set as to resist, without springing or settlement, the pressure of the concrete and the placing operations.
- B. In designing forms and falsework, the concrete shall be treated as a liquid weighing at least 150 lbs. per cubic foot for vertical loads and not less than 85 lbs. per cubic foot for horizontal pressure. The design of the forms and falsework system shall include allowances for temporary construction loads. The rate of placement of concrete shall be so regulated that the pressures caused by the wet concrete will not exceed the designed form pressure. The unsupported length of wooden columns and compression members shall not exceed 30 times the width of the least side.
- C. All forms shall be set and maintained in true alignment, grade and section until the concrete has sufficiently set. The interior surfaces of forms shall be adequately treated with an acceptable material to insure non-adhesion of mortar. All forms shall be mortar-tight. When forms appear to be unsatisfactory in any way, concrete placement shall be stopped until the defects have been corrected.
- D. Metal tie rods or anchorages within the forms shall be fitted with suitable cones or comparable devices. Metal tie rods or anchorages shall be removed to a depth of 1" from the surface without injury to the concrete. All fittings for metal ties shall be of such design that upon their removal, the cavities which are left will be of the smallest possible size, but of sufficient diameter to allow the cavity to be "dry packed" with cement mortar. The cavities shall be filled with cement mortar and the surface left sound, smooth and even.
- E. Form release agent shall be applied to the form so that no agent comes in contact with reinforcing steel.

# 3.3 PLACING

- A. All concrete shall be placed before it has taken its initial set and shall be placed in horizontal layers and in such a manner as to avoid segregation. The concrete adjacent to the forms and joints shall be thoroughly internal consolidated with a vibrator operating at not less than 4,500 vibrations per minute.
  - 1. Pumping equipment shall be of suitable type, without Y-sections, and with adequate pumping capacity.
  - 2. Loss of slump in pumping shall not exceed  $1^{1}/_{2}$ ".
  - 3. Concrete shall not be placed through reinforcing that may cause separation of aggregates.
- B. The concrete shall be deposited as nearly as possible in its final position. Drop chutes and elephant trunks shall be used on drops greater than 5 feet. Concrete shall be placed at such a rate that all concrete in the same lift will be deposited on

plastic concrete. The concrete comprising each unit of work shall be placed in a continuous lift.

- C. The Contractor shall notify the Engineer 24 hours (1 working day) prior to concrete placement.
  - 1. The form work and reinforcing steel placement shall be approved by the Engineer prior to ordering concrete.

#### D. Form Removal.

1. Remove forms within 24 hours after concrete placement. Repair minor defects with mortar. Plastering will not be permitted on exposed faces.

# 3.4 CONCRETE JOINTS

#### A. General

- 1. Provide joints:
  - a. As shown on the Drawings and as noted below in these Specifications.
  - b. As required for constructability
  - c. After favorable review of layout, sequence and concrete placement program.
- 2. Provide minimum curing times before the second placement:
  - a. 2 days after the first concrete placement at the joint.
  - b. 10 days after each adjacent concrete placement, for infill pours or checkerboard placement pattern.

#### B. Control Joints:

- 1. Space typical control joints in slabs on grade or suspended slabs not exceeding 10 feet, or as shown on the Drawings.
- 2. If cast-in with the concrete, positively locate the preformed joint filler and hold rigidly in place during concreting.
- 3. If saw-cut, use a wheeled power saw as soon as the concrete surface is firm enough. Saw-cut control joints must be constructed within 12-hours after concrete placement. Fill the groove with sealant over a backer rod.

# C. Construction Joints:

1. Produce quality concrete, with full continuity of reinforcing and water tightness across the joints.

- 2. Space typical slab joints not exceeding 20 feet in the direction of the transverse or secondary reinforcing, typically the smaller reinforcing nearer to the center of the slab thickness.
- 3. Continue all reinforcing through the joint unless otherwise noted.
- 4. After the first concrete placement at the joint, do not walk on or disturb any reinforcing extending into the second placement area for at least 48 hours.
- 5. Before depositing new concrete on or against concrete that has hardened, clean and roughen the entire surface of the joint exposing clean coarse aggregate solidly embedded in mortar matrix. Provide typically 1/4-inch roughness or amplitude of the concrete surface measured from the top of the exposed aggregate to the bottom of pockets between stones.
- 6. Drench the prepared joint with clean water and remove prior to the concrete pour.
- 7. Use special care in vibrating adjacent to construction joints to ensure thorough consolidation of the concrete around the waterstops and against the hardened portion of the joint. Additional hand tamping may be required.
- 8. For joints that are shown on architectural drawings as having a continuous reveal or recess, leave the wood form or pour strip used to create the reveal or recess in place or re-insert before roughening. Prevent the next concrete placement from filling the reveal or recess.

# D. Expansion Joints

- 1. Stop all steel reinforcing clear of the joint at each side.
- 2. Prepare a smooth first concrete surface with all voids filled.
- 3. Provide preformed joint filler, securely fastened to the existing concrete as directed by the Manufacturer.
- 4. Install bond breaker and sealant after curing is completed and when directed.
- E. Bonding to Pre-existing Concrete: Mechanically roughen the old surface to a 1/4-inch amplitude, as defined in construction joint paragraph above. Apply epoxy bonding material prior to concreting, as recommended by the manufacturer.

#### 3.5 CONCRETE CURING

A. Exposed concrete surfaces shall be protected from premature drying by covering as soon as possible with canvas, plastic sheets with sealed joints, burlap, sand or other satisfactory materials and kept continuously moist; or, if the surfaces are not covered, they shall be kept continuously moist by flushing or sprinkling.

1. Curing shall continue for a period of not less than 7 days after placing the concrete. If curing compound is used, two (2) applications will be made for even coverage. Curing methods must be approved by the Engineer.

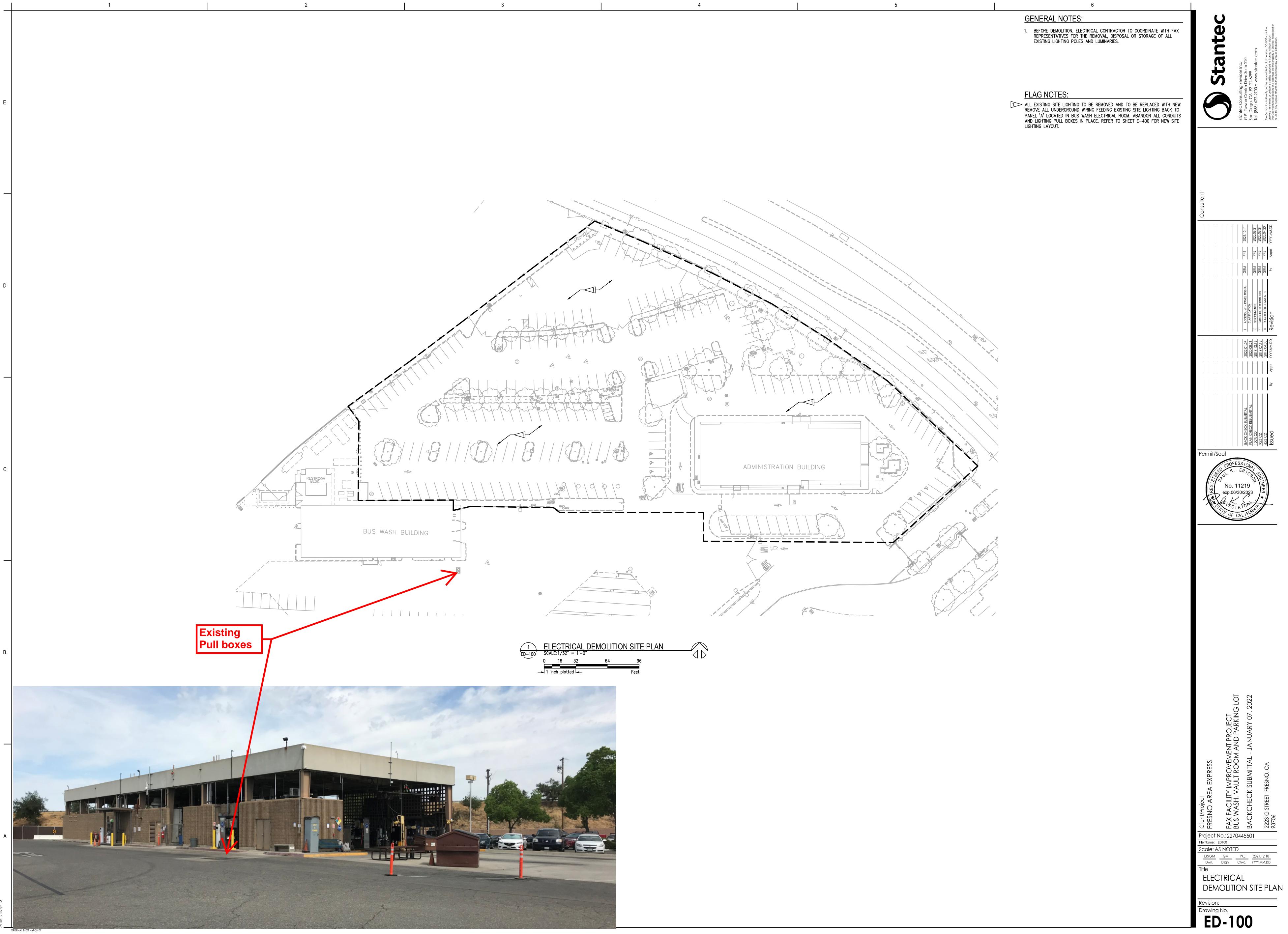
#### 3.6 FINISHING

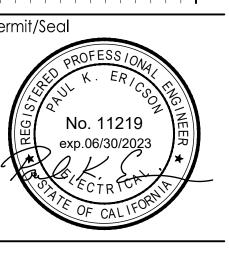
- A. Defective and honeycombed surfaces shall be chipped back to such a depth to expose solid concrete. The surface shall be dampened and coated with a bonding agent and packed with mortar.
- B. Concrete Finishes for Horizontal Slab Surfaces:
  - 1. General: Tamp concrete to force coarse aggregate down from surface. Screed with straightedge, eliminate high and low places, bring surface to required finish elevations; slope uniformly to drains. Dusting of surface with dry cement or sand during finishing processes not permitted.
  - 2. Slab Finish shall be as follows:
    - a. Vehicular areas: Heavy Broom finish.
    - b. Sidewalks and pedestrian ramps, guard shack slab and areas, not covered by other finish materials: Medium Broom finish.
  - 3. Deviation in finish surface shall not exceed \( \frac{1}{4} \)" in 10 ft.
  - 4. No tolerance will be allowed that will result in exceeding the maximum running, or cross, slope of the standards of the Americans with Disabilities Act.

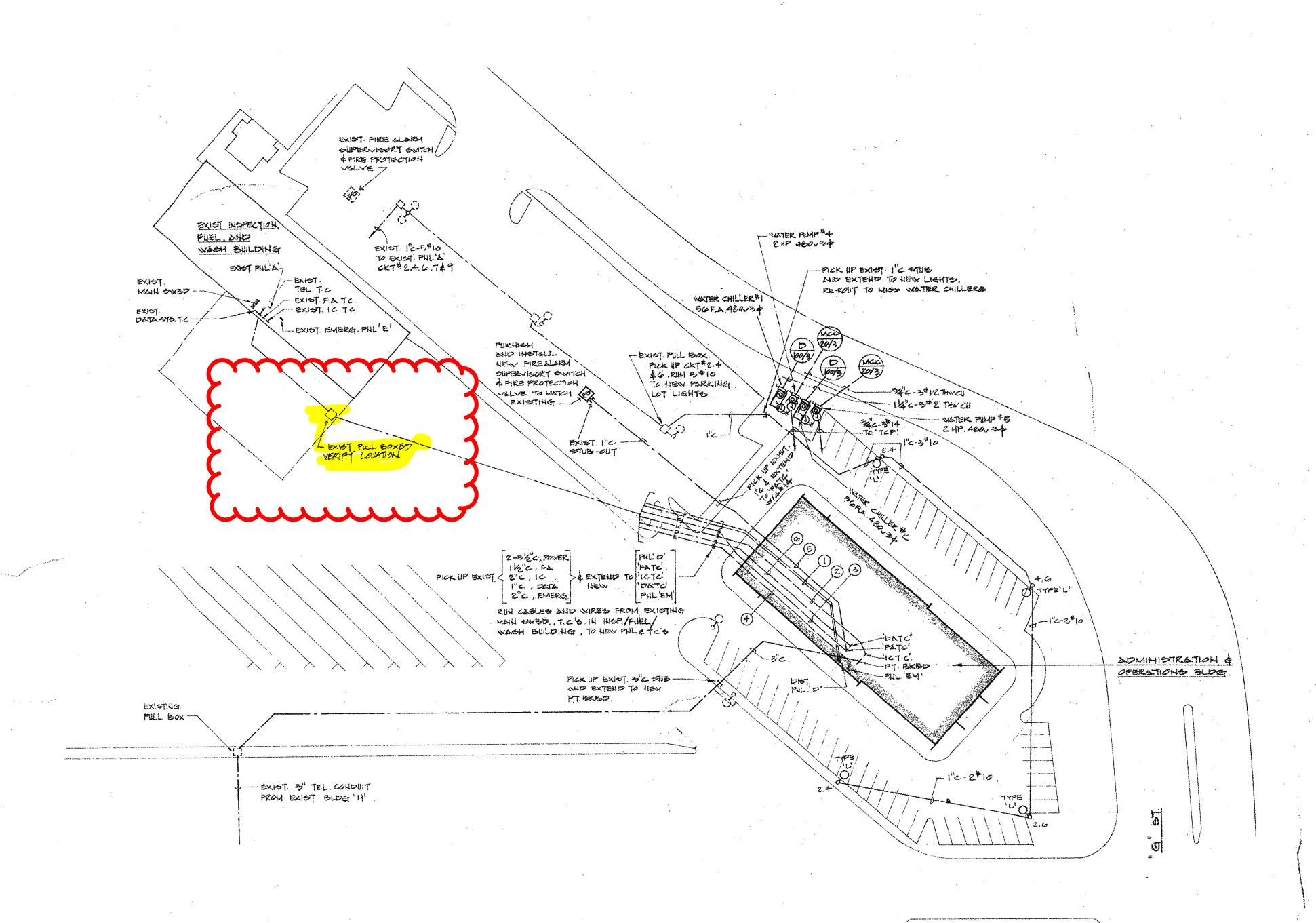
#### 3.7 TESTING

- A. Testing of concrete shall be as required by the Engineer and in accordance with ACI 301, Chapter 16.
  - 1. All costs of initial testing will be paid by the Owner unless otherwise noted.
  - 2. All costs involved, including those required by the Engineer, in retesting of concrete required because of a failure to meet these Specifications shall be at the expense of the Contractor.

#### **END OF SECTION**







SCALE: | = 40'-0"

TRANSFORMER 'TX'

- 4" concrete poo

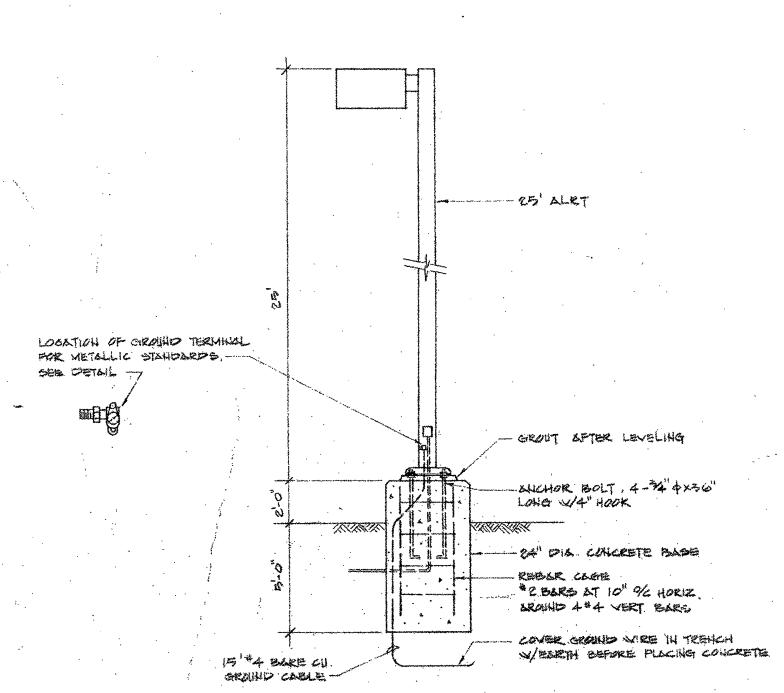
- 16" + EXT W/MIN OF 4"

TYP. OF FAIR

EMPEDIUENT IN CONCRETE,

FLOOR HOUNTED TRANSFORMER DETAIL

iype	DESCRIPTION	LAMP.	VOLTAGE	MOUNTHE	
Д	COLUMBIA *4714-52-741-277V	TIE RO	277	eure	
පි	COLUMBIA *45436-43-243-2774	3540 TIZ RS	, and a second	RECES	
C	COLUMBIA *45426-43-242-277~	2540 Tiz Re			
D	COLUMBIA *4542 G-43-22111-277~	TIE RS	<b>\</b>		
E	PRESCOLITE"	11-40W	120		
F	PRESCOLITE *1015 HF-7	1-150 W			
<b>G</b>	*90 H4 M-71-277V	1-100 W	277	ACCESSION OF THE PROPERTY OF T	
Н	PRESCOLITE *9400	1-75 V	160	SIRFAC	
J	FORUM #940-105-457 X OH -277	F40 R5. *'S6 REQ'D.	277	A THE PROPERTY OF THE PROPERTY	
K	COLUMBIA * ×19 & -142 -877~	2540 TIC KS			
	GEN ELECTRIC - DECOMMOD #C0746514 HOLOPHANE POLE - ALRT 25 - JOERNEO	HPS	480	POLE	
×	PLOC BILG FBL (WARROW SO REDD)	HCL.	120	WALL	
Χľ.,	SAME SO TYPE'X'  COURLE HAVE (TWO EXTERNAL MITE BACK	IUCL.		545 470,	
М	PREGCOLITE *VB-ZB	1-1504. IF		-YALL	



DETAIL

FEEDER SCHEDULE

1 TWO(2) - 3/2"C, 4#350 MCM THW CU. H PSESLLEL

2-24.15

3-1/2"c-12\*14

(4) - 2"c -4" 10 TW CII.

5-1"c-4\*1+

ELECTRICAL SYMBOLD

A HOME RUN MINIMUM 3/4"CONDUIT

DISTRIBUTION PANEL TERMINAL CABINET XOG HOITSHUL ----CEILING OUTLET

O+- WALL BRACKET OUTLET COS -- PLIORESCENT FIXTURE

PECESSED UNIT Duplex CONVENIENCE OUTLET OMP. WEATHERPROOF OUTLET

● -- FLOOR OUTLET

MOTOR OUTLET AND DISCONNECT SWITCH CLOCK OUTLET

PUBLIC TELEPHONE OUTLET DO--- PUBLIC TELEPHONE PLOOR ONTLET

P.A. SPEAKER OUTLET MICROPHONE OUTLET

---- INTERCOM OUTLET THERMOSTAT ---- SWITCH

SPECIAL OUTLET

F- 3 WAY SWITCH KEY OPERATED SWITCH

SWITCH WITH PILOT LIGHT

DENOTES CIRCUIT NUMBER DEHOTES FIXTURE TYPE DENOTES WATTAGE --- CONDUIT RUN IN FLOOR

F FIRE ALARA STATION - HEINELLER RISER WATER FLOW SWITCH

EXISTING POLE LIGHT HEW POLE LIGHT

---- EXISTILES CONDUIT A TO PTEXED

PIXTURE ON EMERGENCY CIRCUIT

+ FOURPLEX GUTLET "

CODE RULES AND REGULATIONS

ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE STATE FIRE MARSHAL; THE NATIONAL ELECTRICAL CODE; THE SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY AND OTHER APPLICABLE STATE LAWS OR REGULATIONS. NOTHING IN THESE PLANS OR SPECIFICATIONS IS TO BE CONSTRUED TO FERMIT WORK NOT CONFORMING TO THESE CODES.

general hotes

I VERIFY EXACT LOCATION OF ALL EQUIPMENT ELECTRICAL OUTLETS WITH RESPECTIVE EXILIPHENT CONTRACTOR BEFORE STARTILLS WORK

e. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MECHANICAL EQUIPMENT CONTROL WINNES AND CONDUIT AS PER MECHANICAL DRAWINGO. AND HOOK UP.

3. CONTRACTOR SHALL APPRISE HIMSELP OF ALL EXISTING CONDITIONS ST SITE PRIOR TO BID.

4. SUBHIT FOR APPROVAL WORKING DRAWINGS OF THE FIRE ALARM SYSTEM PRIOR TO INSTALLATION TO THE CITY OF FRESHO FIRE PREVENTION BUREAU.

SHEET NUMBER

 $\mathbb{E} \circ \mathbb{I}$ 

