MANGINI

MANGINI ASSOCIATES INC.
4320 West Mineral King Avenue
Visalia, California 93291
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DATE:	October 23, 2026
MAI NO.:	24042
OPSC APPL. NO.:	
DSA APPL. NO.:	02-123774
DSA FILE NO.:	10-126

ADDENDUM FOR:

NEW TEMPERANCE ELEMENTARY SCHOOL

SANGER UNIFIED SCHOOL DISTRICT
SANGER, FRESNO COUNTY, CALIFORNIA

J. Ryan Morrelli **C-33128**
ARCHITECT
MANGINI ASSOCIATES INC.
4320 W. Mineral King Avenue, Visalia, CA 93291
PHONE: (559) 627-0530 FAX: (559) 627-1926

ADDENDUM NUMBER

4

NON-DSA

ADDENDUM NO. 4

TO PROSPECTIVE BIDDERS:

This Addendum forms a part of the Contract Documents and modifies the Contract Documents dated December 18, 2025, approved September 22, 2026 and Issued September 27, 2026.

Bidders shall acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.

This Addendum consists of 3 printed pages and the following Attachments:

- Exhibit B – Prequalification Certification
- Addendum 4 Letter by QK, dated October 23, 2026.
- Addendum 4 Civil Drawings by QK, revisions dated October 23, 2026.
- Addendum 4 Letter by Lawrence Engineering Group, dated October 22, 2026.
- Addendum 4 Drawings by Lawrence Engineering Group, revisions dated October 22, 2026.
- Pre-Bid RFI Responses, dated October 23, 2026.

CHANGES TO THE PROJECT MANUAL

ITEM NO. 4.1: Exhibit B Prequalification Certification:
Refer to Request for Lump Sum Price Proposals and Qualifications For Lease-Leaseback Construction Services.
Delete Exhibit B – Prequalification Certification form and replace with Updated Exhibit B – Prequalification Certification form included with this addendum. See attached for updated Exhibit B – Prequalification Certification form. The new form references Temperance Elementary School, not Walnut Modular Expansion.

ITEM NO. 4.2: Deferred Submittals:
Refer to spec section 08 1110 – Hollow Metal Doors and Frames.
See Section 1.2 Submittals. Add subparagraph B to Section 1.2
See below for subparagraph B:
B. DSA Deferred Approval: Submit shop drawings and structural calculations, sealed and signed by a California-licensed structural engineer, for the frame systems for DSA review and approval within 14 days of Notice to Proceed. No time extensions will be granted for the project related to completion of this work if the submittals are not submitted in a timely manner. Refer to DSA IR 24-2 and section 01 3300 for additional requirements.

ITEM NO. 4.3: Moisture Control Treatment:
Refer to Project Manual Specifications. Delete Spec Section 09 6110 Moisture Control Treatment for Flooring from Table of Contents and Project Manual. Moisture Control Treatment for Flooring shall not be required on this project.

CHANGES TO THE DRAWINGS

ITEM NO. 4.4: Anti-Graffiti Coating:
Anti-Graffiti Coating shall be applied to CMU walls per Spec Section 09 9100.
Apply Anti-Graffiti Coating to exterior CMU walls of Building 800, to both sides of CMU walls at service yard enclosure adjacent to Building 200, and along CMU wall at property line (side facing the school site only).

ADDENDUM NO. 4

ITEM NO. 4.5: Civil:
Refer to attached Addendum 4 letter and drawings by QK, dated 10/23/26, for changes and clarifications to Civil Drawings.

ITEM NO. 4.6: Mechanical:
Refer to attached Addendum 4 letter and drawings by Lawrence Engineering Group, dated 10/22/26, for changes and clarifications to Mechanical Drawings and Specifications.

REQUESTS FOR INFORMATION

ITEM NO. 4.7: RFIs:
A list of Pre-Bid Requests for Information and their associated responses has been provided, see attached. The attached Pre-Bid Requests for Information and their responses shall become a part of the contract documents.

END OF ADDENDUM NUMBER 4

EXHIBIT B - <u>Prequalification Certification</u>

I, _____, am authorized to represent _____ *[insert name of proposing LLB entity]* and sign this certification on its behalf to accompany the proposal that _____ *[insert name of proposing LLB entity]* is submitting for the TEMPERANCE ELEMENTARY SCHOOL CONSTRUCTION PROJECT lease-leaseback contract ("Contract"). I certify and declare that:

- _____ *[insert name of proposing LLB entity]* was previously prequalified by the Sanger Unified School District ("District") to submit bids and proposals on District public works contracts;
- The District issued such prequalification on _____, 2026;
- To the best of my knowledge, such prequalification has not expired; and
- The scope of such prequalification covers the Contract.

In addition, I certify and declare that: *(Choose one)*

☐ The answers and financial statements of _____ *[insert name of proposing LLB entity]* submitted in response to the previous prequalification questionnaire are still accurate and complete, and require no updated information.

☐ Some of the answers and/or financial statements of _____ *[insert name of proposing LLB entity]* submitted in response to the previous prequalification questionnaire are no longer accurate and complete, and updated information is required. Attached is a separate sheet setting forth all such updated information and answers. I understand that if this prequalification certification if submitted after the deadline for prequalification for this Contract, and if any of the updated information attached to this certification would result in my company not being prequalified for this Contract, the District reserves the right to discard and not consider my company's lease-leaseback proposal.

I understand that any statement which is proven to be false shall be grounds for disqualification of _____ *[insert name of proposing LLB entity]* from submitting a proposal for the Contract. I represent and warrant that I have authority to bind _____ *[insert name of proposing LLB entity]*.

I certify and declare that I have read all the foregoing answers in this certification and all of the documents mentioned in the certification above, and know their contents. The matters stated in this certification are true of my own knowledge and belief, except as to those matters stated on information and belief, and as to those matters I believe them to be true. I declare under penalty of perjury under the laws of the State of California, that the foregoing is correct.

Executed this _____ day of _____, 2026, at _____.

_____ _____

Signature Name of Proposing Contractor

_____

601 Pollasky Avenue, Suite 301 | Clovis, CA 93612 | (559) 449-2400

October 23, 2026

Manuel Acosta
Project Manager
Mangini Associates Inc.
4320 West Mineral King Avenue
Visalia, CA 93291

Subject: Temperance Elementary School Civil Improvements Addendum 4

Dear Mr Acosta:

The following changes to the enclosed Onsite Civil Improvement Plans were made as part of Addendum 4 for Bid purposes:

1. Sheet GP-9
    a. Revised storm drain pipe, inlets, and manholes in parking lot and drive aisle
    b. Eliminated plug connections to public system in Truman Avenue
2. Sheet GP-10
    a. Drywell added for drinking fountain (see detail on sheet DT-3)
    b. Add storm drain pipe from added inlet between building 200 and 800
3. Sheet GP-11
    a. Revised storm drain pipe, inlets, and manholes in parking lot, and drive aisle, and ball field
    b. Add inlet and storm drain pipe between building 200 and 800.
    c. Eliminated plug connections to public system in Truman Avenue
    d. Drywell added for drinking fountain (see detail on sheet DT-3)
4. Sheet GP-12
    a. Sheet added showing basin outfall and outlet structure details
    b. Add storm drain stubs for connection to public facilities.
5. Sheet UT-1
    a. Revised storm drain pipe, inlets, and manholes in parking lot, and drive aisle, ball field, and between buildings 200 and 800.
    b. Eliminated plug connections to public system in Truman Avenue
    c. Added drywell for drinking fountain to ball field area.
6. Sheet DT-3
    a. Added detail for drinking fountain drywell

If you should have any questions, please contact Alex Dwiggins, PE at alex.dwiggins@qkinc.com or Joel Thompson, PE at joel.thompson@qkinc.com.

Sincerely,

Joel Thompson, PE
Civil Engineer

Enclosures:

GP-9 thru GP-12 Drainage Sheet, Addendum 4
UT-1 Utility Plan Sheet, Addendum 4
DT-3 Details Sheet, Addendum 4

cc: Ryan Morelli, Mangini Associates inc

250125/ 01 /5.5

JT/ AD/ MG

LAWRENCE
ENGINEERING GROUP

October 22, 2026

Mr. Manuel Acosta
Mangini Associates Inc
4320 West Mineral King Avenue
Visalia, CA 93291

LEG #25026 (M.A. #24042)

Subject: Sanger Unified School District
Temperance Elementary School
Addendum #4

Dear: Mr. Acosta

Please include with your next published addendum:

SPECIFICATIONS

1. Specification Section 230001, Paragraph 2.1, A, 2:
   1.1. **REVISE** to read as follows:

> "*2. Underground chilled water piping: Shall be Ferro-Therm, as manufactured by Thermacor Process. All straight sections, fittings and other accessories shall be factory-fabricated to job dimensions. Each system layout shall be computer-analyzed by the piping system manufacturer to determine stress on the carrier pipe and anticipated thermal movement of the service pipe. The system design shall be in conformance with ANSI B31.1. Provide manufacturer's shop drawings with dimensioned piping layout and details of all expansion fittings, elbows, building entry points and all other pertinent information needed to verify that the type of materials being offered is in accordance with the specifications."*

MECHANICAL DRAWINGS

1. **REPLACE** sheet M7.00 with the sheet M7.00 attached.
   1.1. Changes to this sheet have been clouded with deltas and include the changes from Addendum #3.
2. **REPLACE** sheet M7.01 with the sheet M7.01 attached.
   2.1. Changes to this sheet have been clouded with deltas and include the changes from Addendum #3.
3. **REPLACE** sheet M7.02 with the sheet M7.02 attached.
   3.1. Changes to this sheet have been clouded with deltas and include the changes from Addendum #3.

4. **REPLACE** sheet M7.03 with the sheet M7.03 attached.
   4.1. Changes to this sheet have been clouded with deltas and include the changes from Addendum #3.
5. **REPLACE** sheet M7.04 with the sheet M7.04 attached.
   5.1. Changes to this sheet have been clouded with deltas and include the changes from Addendum #3.

Sincerely,
LAWRENCE ENGINEERING GROUP

Creighont Whaley

Creighont Whaley
Mechanical Designer

MANGINI

MANGINI ASSOCIATES INC.
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PRE-BID RFI RESPONSES FOR: **10/23/26**

NEW TEMPERANCE ELEMENTARY SCHOOL
SANGER UNIFIED SCHOOL DISTRICT
SANGER, FRESNO COUNTY, CALIFORNIA

The following are Pre-bid RFI questions submitted for the project. Responses have been provided. These responses shall become a part of the Contract Documents. Some of these items have already been addressed in previously issued addenda.

QUESTION 1:
Regarding RFP and Prequalification Application
The RFP and Prequalification application have various references as to which subcontractors need to be prequalified. Please clarify if subcontractors who hold one of the specialty licenses listed below, but will be performing a scope that does not require one of the specialty licenses listed below is required to be prequalified (i.e., does a contractor who holds both a C-36 Plumbing and a C-8 Concrete license who will be performing only C-8 concrete work and will not be performing C-36 plumbing work on this project need to be prequalified)?
RESPONSE 1:
Prequalification is required for the prime contractor (Class A or B license) and for any MEP contractor or subcontractor performing work that requires one of the following license classifications: C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, or C-46. Accordingly, the Fire Sprinkler Subcontractor (C-16) and Sheet Metal Subcontractor (C-43) are considered MEP subcontractors and must be prequalified.

Prequalification requirements are determined by the scope of work a subcontractor will perform on this Project, not solely by the licenses the subcontractor holds. An MEP subcontractor is any subcontractor performing work that requires a C-4, C-7, C-10, C-16, C-20, C-34, C-36, C-38, C-42, C-43, or C-46 license. For example, a subcontractor that holds a C-36 license but is performing only C-8 concrete work, and no work requiring one of the listed MEP license classifications, is not required to be prequalified. However, any subcontractor performing work that requires one of the listed MEP license classifications must be prequalified.

This information was addressed and clarified in Addendum 2.

QUESTION 2:
Reference: Section 01 5000, Temporary Facilities and Controls, 2.8 Security (01 5000 - 4); General Conditions 11.1.6.1, Builder's Risk (pages 93 and 94).
Section 2.8.A makes the Contractor "responsible for security and protection of his equipment and the site-stored and installed products whether paid for by the Owner or not, until the Owner accepts the Project," and Section 11.1.6.1 requires Builder's Risk against perils including "Vandalism, theft, malicious mischief" while placing the risk of damage to the Work on "the Contractor and the surety."
a. Please confirm the Contractor bears the Builder's Risk deductible on each theft or vandalism loss to

PRE-BID RFI RESPONSES

site-stored and installed products until the Owner accepts the Project.
b. Please confirm the maximum Builder's Risk deductible the District will accept.

RESPONSE 2:

a.- Yes, the contractor would be responsible for its insurance deductibles in the event of a covered loss. The deductible is a cost of insurance, and contractor is required to obtain and maintain the insurance. Further, the contractor is responsible for the site, and liable in any event until the District accepts the work.
b.- The answer here is moot due to Q.a above, since the District is not paying the deductible.

QUESTION 3:

Reference: Section 01 4130, Offsite Development, 1.11 Monitoring of Construction Site (01 4130 - 3); RFPQ, Project Schedule (page 5).
Section 1.11 states "Contractor shall monitor the construction site on a regular basis during non-working hours, including weekends and holidays" and "The Contractor shall secure the site of work at all times," and the RFPQ requires completion "within 517 calendar days" of a start "on or about January 1, 2027."
Please confirm the monitoring and site security required by Section 1.11 apply to the entire Temperance Elementary site, onsite and offsite, during all non-working hours for the full 517 calendar days.

RESPONSE 3:

Yes. The contractor is responsible for all onsite and offiste, including security and monitoring for the full 517 calendar days.

QUESTION 4:

Reference: RFPQ Section II.D, Scope of the Lump Sum Price Proposal (page 4).
Section II.D requires each lump sum to cover "General conditions, general requirements, and field overhead, including but not limited to temporary facilities, utilities (electricity, water, garbage, etc.), structures, fences, dust control, security, restrooms," and states "contingency allowance and special allowances will be included in the lump sum price proposal."
a. Please confirm each proposer must carry construction site security for the full Contract Time within the general conditions of its lump sum.
b. If not, please confirm whether the District would carry construction site security as a special allowance.

RESPONSE 4:

a – Yes. This is a contractor cost and must be included in lump sum price proposal.
b – Moot. District will not provide the site security, which contractor is responsible for per the contract documents.

QUESTION 5:

Regarding Specification Section 09 2400 – Cement Plaster:
Spec Section 09 2400 Part 2.4, C calls for “Polymer-Based Exterior Finish Coat: 100% acrylic polymer

PRE-BID RFI RESPONSES

finish coat with integral color as indicated on Finish Schedule, applied over stucco brown coat; Standard Finish by Dryvit Systems, Inc., Senerflex Finish by Senergy, or Sto Powerwall Finish by Sto Corp."
The Exterior Elevations and Specification Section 09 9100 – Painting calls for Cement plaster to be painted.
Please confirm exterior cement plaster requires a 100% acrylic polymer finish coat with integral color and painting.

RESPONSE 5:
Both integral acrylic polymer finish coat and painting of cement plaster finish are to be used on this project's exterior cement plaster. Painting shall be applied over the integral colored plaster.

QUESTION 6:
Regarding General Conditions Builder's Risk Insurance:
General Conditions 11.1.6.1 calls for the Contractor to provide Builder's Risk Insurance "unless provided by Owner".
a. Please confirm if Contractors shall include Builder's Risk Insurance in their proposal.
b. Please confirm if Contractors shall include earthquake and/or flood coverage in their proposal.

RESPONSE 6:
a.- Yes, the contractor shall include Builder's Risk Insurance in their proposal.
b.- No, earthquake and flood coverage are not required.

QUESTION 7:
The RFP calls for (1) original plus (4) copies of the proposal.
Considering the time constraints associated with finalizing subcontractor and DVBE documentation at bid time, for proposal submission, may the following documents be submitted as a single original hard copy in a sealed envelope, rather than Four duplicate sets? (please see listing below):
Proposal Form, Bonding Certificates, Designation of Subcontractors, DVBE Certification, Good Faith Efforts Worksheet.

RESPONSE 7:
Submission of Hard Copies. Proposers must submit one (1) sealed original bid proposal at or before the proposal deadline. In addition, proposers are required to submit four (4) complete hard copy duplicates ("Hard Copies") of their proposal, by no later than 10:00 AM on Monday, November 2, 2026. The Hard Copies shall be identical to the sealed original. Hard Copies are provided for administrative convenience only and shall not modify the original sealed proposal. If any discrepancy exists between the original proposal and the Hard Copies, the original sealed bid shall govern. **This revises RFPQ Section I.D and RFPQ Section V**.

QUESTION 8:
Request for Proposal – Designation of Subcontractors:
The Designation of Subcontractors instructions call for "the name and the location of the place of business of each subcontractor, the portion of the Work which will be performed by each subcontractor, the California contractor license number of each subcontractor and, for all projects over

PRE-BID RFI RESPONSES

Twenty-Five Thousand Dollars ($25,000), the public works contractor registration of each subcontractor..."
In additional to the required information listed above, the accompanying Subcontractor Listing Form includes columns for "Portion of Work (dollar amount)", and "Name of Subcontractor & Phone No". Due to time constraints at the time of proposal submission, please clarify if the dollar amount and phone number may be submitted within 24 business hours of the proposal.

RESPONSE 8:

At the time of bid submission, bidders shall provide one completed original Designation of Subcontractors form with the sealed bid. At a minimum, the form shall include: (1) subcontractor name, (2) business location, (3) portion of work, (4) contractor license number, and (5) DIR registration number. If any re-quired information is unavailable at the time of bid opening, bidders shall provide the missing information, corrections, subcontract amount, contact telephone number, and DIR registration information by email no later than 3:30 PM on the Saturday following the bid opening to Deborah Flores at deborah_flores@sangerusd.net. Supplemental information submitted after bid opening shall be limited to clarification, completion, or correction of information omitted from the original submission and shall not alter the bidder's intended subcontractor designation.

QUESTION 9:

Civil:
Sheet SP-1 calls for rolling gates per 21/SD13 near Arroyo Ave and Pitt Ave. Detail 21/SD13 shows a hinge swing gate. Please clarify and provide detail if necessary.

RESPONSE 9:

Delete reference detail 21/SD13 on sheet SP-1 indicating rolling gates and replace with reference detail 11/SD20.

QUESTION 10:

Civil:
Sheet SP-1 calls for ADA crossing per detail 7/SD6. There is no detail 7 on sheet SD6. It appears the etail for this work is shown on 21/SD6. Please confirm how to proceed.

RESPONSE 10:

Delete reference to accessible crossing per detail 7/SD6 on sheet SP-1 and replace with detail reference 21/SD6.

QUESTION 11:

Civil:
Sheet SP-1 calls for rolling gate per detail 23/SD13 from the parking lot into the service yard. Detail 23/SD13 is a detail for kickplate. This does not appear to be the correct detail. Please confirm.

RESPONSE 11:

Delete reference to rolling gate detail per detail 23/SD13 on sheet SP-1 and replace with detail reference 24/SD13.

PRE-BID RFI RESPONSES

QUESTION 12:
Civil:
Sheet SP-1 calls for Bus Loading striping to be horizontal but references per SD14 which shows a stacked layout. Please confirm Bus Loading striping.
RESPONSE 12:
The actual striping for Bus Loading should be horizontal as shown on the site plan sheets, however the size and spacing of the letters should still be per detail 11/SD14.

QUESTION 13:
Civil:
Sheet SP-2 calls for Basin Fence per detail on P-98/D-2. It does not appear there is a detail P-98 on D-2. Please confirm the correct sheet.
RESPONSE 13:
The basin fence note should reference sheet DT-2, not sheet D-2.

QUESTION 14:
Civil:
Note 10 for parallel curb ramp on sheet GP-1 calls for detail 10/GP7. Conditions shown in detail 10/GP7 do not match what is graphically shown on GP-1 where note 10 is called out. Please clarify and provide detail if necessary.
RESPONSE 14:
Please reference detail #1 on GP-6 for the #10 call out.

QUESTION 15:
Civil:
There are six trees shown to be demo'd on sheets D1 and D2 that currently do not exist onsite. Per the job walk it appears the six trees were removed. Please confirm if the roof systems were removed and to what extent.
RESPONSE 15:
I concur with the statement that the trees have been removed. Regarding the root system, the contractor will need to satisfy the requirements of the geotechnical report prepared by Salem Engineering Group related to root removal.

QUESTION 16:
Civil: On sheet GP-8 there are multiple tree wells shown without an associated keynote 5 for tree well connection. Please confirm intent.
RESPONSE 16:
The tree wells without a keynote 5 on sheet GP-8 are locations where the planter has a 6" curb, no drain needed. Drains are identified in locations where the planter area will be completely surrounded by 18" high concrete curb. ALSO, there is one planter that does indicate a storm drain stub that needs to be removed, the one noted 27 LF just east of the SDMH bottom left corner of sheet GP-8.

PRE-BID RFI RESPONSES

QUESTION 17:
Civil:
Block wall footing details do not match between keynote 8 on sheet SD4 and SD5 (Details 1/SD12, 13/SD12, 11/S1.2) and sheets BK1, BK2, and BK3. Please provide on how to proceed.
RESPONSE 17:
For onsite CMU footings around service yard enclosure and trash enclosures, use details 1/SD12, 13/SD12 and 11/S1.2. For CMU footing around property line, use details from Civil BK sheets.

QUESTION 18:
Site Development:
Please provide location for temporary project sign (16/SD14) on project site.
RESPONSE 18:
The temporary project sign shall be located in the vicinity of the south east corner of the project site, facing Temperance Avenue.

QUESTION 19:
Civil, Fire Protection:
Sheet F8.00 calls for fire water invert to be 4'-6" below grade. Sheet DT-2 calls for fire water invert to be a minimum 4'-0" below grade. Please confirm required depth.
RESPONSE 19:
The elevation of the in building riser assembly only shall be as shown on the detail at 4'-6". At the rest of the site pipe, install at a minimum of 36" below grade.

QUESTION 20:
Spec Section Division 0:
Please confirm that the Sublease duration is 22 months. Additionally, we would like to confirm that the amount that will be paid in 22 equal installments is the total contract amount and is not limited to only the General Conditions cost.
RESPONSE 20:
Yes, the Sublease Agreement term is 22 months (unless extended). There are 22 equal monthly payments, which will add up to the Total Sublease Amount, which is the contract price not including contingency/allowances. If contingency/allowance is used, the remaining payments will be recalculated as provided in Section 6 of the Sublease Agreement.

QUESTION 21:
MC Cable:
Will MC Cable be allowed in concealed walls and ceilings? Please confirm whether MC cable is permitted in concealed walls and ceilings.
RESPONSE 21:
MC cable is not permitted.

PRE-BID RFI RESPONSES

QUESTION 22:
Electrical Panel HSL:
Sheet ES1.3 / ES1.5 / Electrical Single-Line Diagram.
ES1.5 shows Panel HSL at this location. Panel HSL is not shown on the single-line diagram. Is this a labeling error or a separate panel? Please confirm the correct panel designation.
RESPONSE 22:
There is no Panel HSL. I is incorrectly labeled on sheet #ES1.5. That should be panel HBF.

QUESTION 23:
Boring:
Addendum 1, Sheet 2 of 2.
On South Arroyo Avenue there is a street light being fed from an existing 3-1/2 box. Note and arrow say to “sawcut and trench existing sidewalk”. Will this be allowed to be bored?
RESPONSE 23:
The City of Fresno permits boring under existing pavement per City Standard Specifications Section 23. No exception to boring street light conduits in accordance with City Standards.

QUESTION 24:
Streetlight Feed:
Addendum 1, Sheet 2 of 2.
Where are the new street lights being fed from? Addendum 1 Sheet 2 of 2 only shows up to PGE #2 box on the corner of Temperance Avenue and Truman Avenue.
RESPONSE 24:
The street lights on Truman and Temperance are being fed from new electrical service per separate PGE electrical plans. The PGE service will be located within 10ft of City of Fresno pedestal shown on the street light plan.
The PGE electrical plans are currently not completed at the time of issuing this addendum, thus there is a Cash Allowance of $750,000.00 identified in the contract documents indicated for Offsite Electrical Utility Work.

QUESTION 25:
PG&E Feed:
Where is the PG&E Utility Transformer on ES1.1 being fed from?
Sheet ES1.1 shows ending at Truman ave and turning East.
Please advise on final location.
RESPONSE 25:
There will be a set of PGE electrical plans included in this project, which will include final location of PG&E Utility Transformer.
The PGE electrical plans are currently not completed at the time of issuing this addendum, thus there is a Cash Allowance of $750,000.00 identified in the contract documents indicated for Offsite Electrical Utility Work.

PRE-BID RFI RESPONSES

QUESTION 26:
Electrical:
I want to check on the MSB note 5. Does the M/B need to be 100% and RK frame. I have noticed this note on jus about all your plans. “Main circuit breaker shall be 100% rated electronic type, equipped with long-time, short-time, instantaneous-off type and ground fault type configurations. Main circuit breaker shall also be equipped with a trip indicator and local current meter Square D #RK series or equal”. Also Busdcut or is the amp wrong on the board. You show 5.5” conduit. Is that 1600Amp.
RESPONSE 26:
This is now addressed in Addendum 3, issued 10.16.26.

QUESTION 27:
Electrical:
I want to check on the MSB note 5. Does the M/B need to be 100% and RK frame. Seems extreme for a Elem school. Also, at MSB you show 3000A per PG&E Greenbook would require Busduct or is the amp wrong on the board. You show 5.5” conduit. That is 1600Amp per PG&E Greenbook.
RESPONSE 27:
This is now addressed in Addendum 3, issued 10.16.26.

QUESTION 28:
Please advise who is responsible for retaining the commissioning agent?
RESPONSE 28:
The commissioning agent is already retained by the Owner and does not need to be covered by the GC.

QUESTION 29:
Spec 081110 does not note the Deferred Approval requirement noted on the front cover of the plans. Please confirm deferred approval requirement and if it is in fact required please update the specification to reflect the same. Including engineering requirements and expectations.
RESPONSE 29:
Yes, deferred submittals are required as indicated in the front cover of the plans.
Addendum #4 will add language to Spec 08 1110 regarding deferred submittal requirements.

QUESTION 30:
What is the intent with regard to the surveying? On Plan Sheet G2 there is a note right below the "Construction General Notes" called "Note to Owner & Contractor". This note essentially states that if QK doesn't perform the surveying, if there is an issue that "COULD" have been prevented had QK performed the survey, QK is not responsible for the ramifications of that mistake.
a. Has the district requested surveying services be performed by QK on this project? If so is there a value of the work that needs to be carried by the bidders for the contract?
b. Is it the district's intention to only except QK as the Surveyor on the project?
c. If it is the intention to use QK please provide a scope of work indicating what work is covered.
If the intent is open bidding for the survey work, this note needs to be removed.

PRE-BID RFI RESPONSES

RESPONSE 30:
a. No, the District has not requested surveying services to be preformed by QK. The contractor shall include all surveying as part of their bid.
b. No.
c. It is not the intention to use QK. The contractor shall include all surveying scope as part of their bid.

QUESTION 31:
Spec Section 072700 is for the exterior Air Barrier System however, it only lists a spray foam system in the products. There is a separate Spec for this item in 072120. Please confirm the intent is to put Tyvek or similar product in place for the Bldg. Air Barrier and use the Foam Application in the areas noted on the various "Air Barrier" sheets included in the plan set.
RESPONSE 31:
Delete Spec Section 07 2120 Foam-In-Place Insulation. On the plans, where Foam-In-Place Insulation is shown, particularly on the Air Barrier Sections, Replace the Foam-In-Place with Closed-Cell Spray Polyurethane Foam, which is noted in Spec Section 07 2700 – Air Barrier System.

QUESTION 32:
There is an UG Survey Specification included in bid documents and there are notes on the Civil Drawings that elude to a UG Survey Requirement. However, Exhibit U General Conditions - Section 2.2.4 states this will be covered by the owner. Please advise. Recommend this stays an owner requirement because it can be done ahead of the board approval in December and the map ready for the contractor on Day 1.
RESPONSE 32:
The survey that the owner can provide is the survey that was performed for design of the project, which located surface items and utilities. Identification of underground utilities shall be by the contractor. Refer to spec section 02 3100.

QUESTION 33:
Demo Note#4 on the Civil Demo Plans states that the contractor is to contact the adjacent property owners prior to removing fences. Has contact been made with these home owners previously by the District to make the home owners aware of the project or is this intended to be the first conversation about the project. There will need to be some form of access to the adjacent homes back yards to dig the block wall footing.
RESPONSE 33:
Initial contact with neighbors was done via public meeting, however community participation was low. It shall be the contractor’s responsibility to contact the adjacent property owners and coordinate the scope of work.

QUESTION 34:
Detail#23SD8 notes the SOF Playground Surfacing as OFCI, the Spec makes mention that we are to submit product data and samples, etc…as if this was a CFCI item please advise if this is OFCI or CFCI.

PRE-BID RFI RESPONSES

RESPONSE 34:
The SOFSURFACE Playground Surface Tile shall be Owner furnished Contractor Installed.

QUESTION 35:
Interior Elevation note#5 states the contractor is to plan to install any item noted as NIC on the documents. Please provide information on all NIC items including mounting details for all items. Also any specific hts the blocking in the note needs to be at.
RESPONSE 35:
Any items noted as NIC are already identified on the plans as NIC. Most are ground mount items such as copy machine, refrigerator, etc… Items that are NIC and do require blocking at certain heights are also already identified on the plans, such as mounting bracket for TVs. The mounting brackets are NIC, but the blocking and infrastructure for the TVs are required at the heights identified on the plans.

QUESTION 36:
Door Threshold detail 16/A89 notes the Epoxy Floor is over a setting bed. 20/A97 for Cove Epoxy Base makes no mention of this mortar bed. Please confirm mortar bed is not needed at Epoxy floor locations and the slope to the drains will be achieved with the concrete. Foundation plans show slabs sloped to drains.
RESPONSE 36:
Mortar bed is not needed at Epoxy floor location, this was an earlier note that should have been deleted when the design was intended for tile flooring. Delete references to the mortar bed on the epoxy details as this is not the case. The Foundation plans show the slopes to drains.

QUESTION 37:
Please advise how the district would like to handle the permanent cores. Hardware will initially have construction cores and these will need to swapped for the permanent cores at the end of the job will the district make that swap or will that be on the contractor?
RESPONSE 37:
Contractor shall install permanent cores.

QUESTION 38:
Spec 033540 notes Dyed Concrete, where does this occur, there is no Finish Floor notating any sort of pattern, please advise.
RESPONSE 38:
The dyed concrete is in reference to the plans “stained & polished” concrete. Please revise all references on the plans of “stained & polished” to “polished & dyed” concrete. This will now match with Spec Section 03 3540.
On the drawings finish schedule, all references to “stained & polished” shall be revised to “polished & dyed”. The finish will be tag ‘dd’ per the plans. There are no specific patterns or designs, the entire rooms, where noted with finish ‘dd’ will be dyed.

PRE-BID RFI RESPONSES

QUESTION 39:
Spec 042900 notes the Masonry walls are to get a light sand blasting please confirm this is not required.
RESPONSE 39:
A light sand blasting of Masonry walls shall not be required.

QUESTION 40:
RFPQ section III.B states the District will require an open book policy, with the District having access to subcontractor bids, value engineering back-up, contingency breakdown and tracking, general conditions breakdown and tracking, and documentation of Contractor's fees. However, section III.D states all proposals shall be in the form of a lump sum price which includes all the aforementioned items in section B. Please confirm the "open book policy" section is not applicable or required for the successful Contractor.
RESPONSE 40:
Open Book Requirements. No change. Proposers are not required to provide the referenced documentation with their proposal. Rather, the District will be entitled audit the referenced documentation of the successful Contractor, upon request, during the progress of the Work and for three years after the final sublease payment. The purpose of a potential inspection is not to adjust the lump sum price. See also General Conditions section 13.12, second paragraph.

QUESTION 41:
RFPQ section I.D states the contractor must provide an original plus four (4) copies of each Contractor's sealed proposal. Can there be a technical submission that complies with the original and copy count in the RFP and a separate sealed fee proposal? The fee proposal would contain one (1) original exhibit G "Proposal Form" and exhibit H "Designation of Subcontractors".
RESPONSE 41:
Submission of Hard Copies. Proposers must submit one (1) sealed original bid proposal at or before the proposal deadline. In addition, proposers are required to submit four (4) complete hard copy duplicates ("Hard Copies") of their proposal, by no later than 10:00 AM on Monday, November 2, 2026. The Hard Copies shall be identical to the sealed original. Hard Copies are provided for administrative convenience only and shall not modify the original sealed proposal. If any discrepancy exists between the original proposal and the Hard Copies, the original sealed bid shall govern. **This revises RFPQ Section I.D and RFPQ Section V**.

QUESTION 42:
Within exhibit H "Designation of Subcontractors" please confirm "Portion of Work (dollar amount)" is not applicable or required with the lump sum proposal submission.
RESPONSE 42:
Designation of Subcontractor form.
At the time of bid submission, bidders shall provide one completed original Designation of Subcontractors form with the sealed bid. At a minimum, the form shall include: (1) subcontractor name,

PRE-BID RFI RESPONSES

(2) business location, (3) portion of work, (4) contractor license number, and (5) DIR registration number. If any re-quired information is unavailable at the time of bid opening, bidders shall provide the missing information, corrections, subcontract amount, contact telephone number, and DIR registration information by email no later than 3:30 PM on the Saturday following the bid opening to Deborah Flores at deborah_flores@sangerusd.net. Supplemental information submitted after bid opening shall be limited to clarification, completion, or correction of information omitted from the original submission and shall not alter the bidder's intended subcontractor designation.

QUESTION 43:
RFPQ section V states no more than 75 single-sided pages. Please confirm this does not include the content of proposal forms, tabs, cover page, and cover letter.
RESPONSE 43:
Page Limit. Sealed proposals shall not exceed 75 single sided pages, not including signed forms required to be submitted with each proposal.

QUESTION 44:
RFPQ Exhibit B – Prequalification Certification notes the project as Walnut Modular Expansion and Site Work lease-leaseback contract. Please provide an updated Exhibit B.
RESPONSE 44:
Prequalification Certification. Bidders are instructed to use the revised form of RFPQ Exhibit B, Prequalification Certification, issued via Addendum 4.

QUESTION 45:
PGE Rule 16 and 20 Drawings:
Drawings E9.1 reference work associated with a new PG&E service including new utility transformer pad. Please provide approved / preliminary PG&E utility Rule 16/ 20 drawings associated with the new service. If not available, can an allowance be assigned to cover work not depicted on the project document?
RESPONSE 45:
There will be a set of PGE electrical plans included in this project, which will include final location of PG&E Utility Transformer.
The PGE electrical plans are currently not completed at the time of addressing this RFI thus there is a Cash Allowance of $750,000.00 identified in the contract documents indicated for Offsite Electrical Utility Work.

QUESTION 46:
In Spec 014520 talks about a special inspection for Lime Treatment of Soil per Spec Section 313215. Spec 313215 is not in the documents and the Soils report doesn't talk the need to Lime Treat the Soil. Please confirm this is not a requirement.
RESPONSE 46:
Delete reference to Lime Treatment of Soil. It is not required on this project.

PRE-BID RFI RESPONSES

QUESTION 47:
In Spec 064000 it notes Standing & Running Trim, Glass, Hardboard & Louvers. None of the drawings for the casework show these items, please confirm these items are not required as they pertain to casework.
RESPONSE 47:
These items are not required in the project as they pertain to casework.

QUESTION 48:
Please advise if earthquake and flood insurance coverage is required on this project.
RESPONSE 48:
Earthquake and Flood insurance are not required.

QUESTION 49:
On the Riser the TC1 cabinet for future modulars is showing direct to Bldg 600. On the actual Site Drawing TS1.1 the TC1 Cabinet is going to Pull Box S10. Please clarify Proper routing.
RESPONSE 49:
The riser is incorrect. TC1 cabinet is to be connected to Pull box S10 as in TS1.1.

QUESTION 50:
a. Is $2,000,000 of professional liability insurance acceptable?
b. Please confirm that subcontractors may provide their standard insurance limits and that they will not need to meet the higher limits shown in Lease Leaseback Agreement article 14. If article 14 limits are applicable to contractors, many subcontractors may not be able to meet these increased limits and it may preclude them from bidding.
RESPONSE 50:
a. Professional Liability: The professional liability requirement of $ 2,000,000 per occurrence in Lease - Leaseback Agreement It shall apply only to delegated design subcontractors responsible for deferred approval items.
b. Subcontractor Limits: Subcontractors shall carry commercial general liability insurance of $1,000,000 per occurrence and $2,000,000 aggregate, unless the District approves otherwise in writing. This revises the “like amounts” requirement of General Conditions Section 11.1.2 for subcontractors. The Contractor shall carry the full Article 14 limits, and the Contractor’s insurance shall cover the acts of its subcontractors.

QUESTION 51:
Moisture Control:
Section 09 6110 references a cash allowance for moisture control treatment. Please confirm the allowance amount or, if treatment is to be included in the base bid, provide the required area for pricing.
RESPONSE 51:
Delete Spec Section 09 6110 Moisture Control Treatment for Flooring from Table of Contents and

PRE-BID RFI RESPONSES

Project Manual. Moisture Control Treatment for Flooring shall not be required on this project, thus no allowance allocated for moisture control treatments.

QUESTION 52:
Bid Date:
Would the District consider moving the bid deadline from Friday at 3:30 PM to Tuesday or another weekday? This would allow subcontractors adequate time to finalize pricing and help ensure competitive bid coverage.
RESPONSE 52:
No, the bid date or time will not change.

QUESTION 53:
CAD Files:
Please confirm if the District can provide CAD files for the project to assist with quantity takeoffs and bid preparation.
RESPONSE 53:
As noted in Specification Section 01 3300 Submittal Procedures, Electronic CAD files of the Contract Drawings may be provided for Contractor's use in preparation of submittals, subject to certain requirements. Waiver of Liability Forms will need to be executed prior, not typically issued during bidding, more for construction once the Construction team is assembled.

QUESTION 54:
Exterior plan note pg A4 shows gutter paint. Detail pg A102 details 1-4 show prefinished. What is right?
RESPONSE 54:
Gutters and downspouts shall be prefinished.

QUESTION 55:
HSS Call Out:
Keynote 3 on Sheet S6.3 calls for HSS 5x5x1/4" with Simpson CCO connection to glulam beam below; however, no location is identified on the plans. Please clarify the location(s) and quantity of these HSS posts.
RESPONSE 55:
Key note 3 on sheet S6.3 is not used and shall be disregarded.

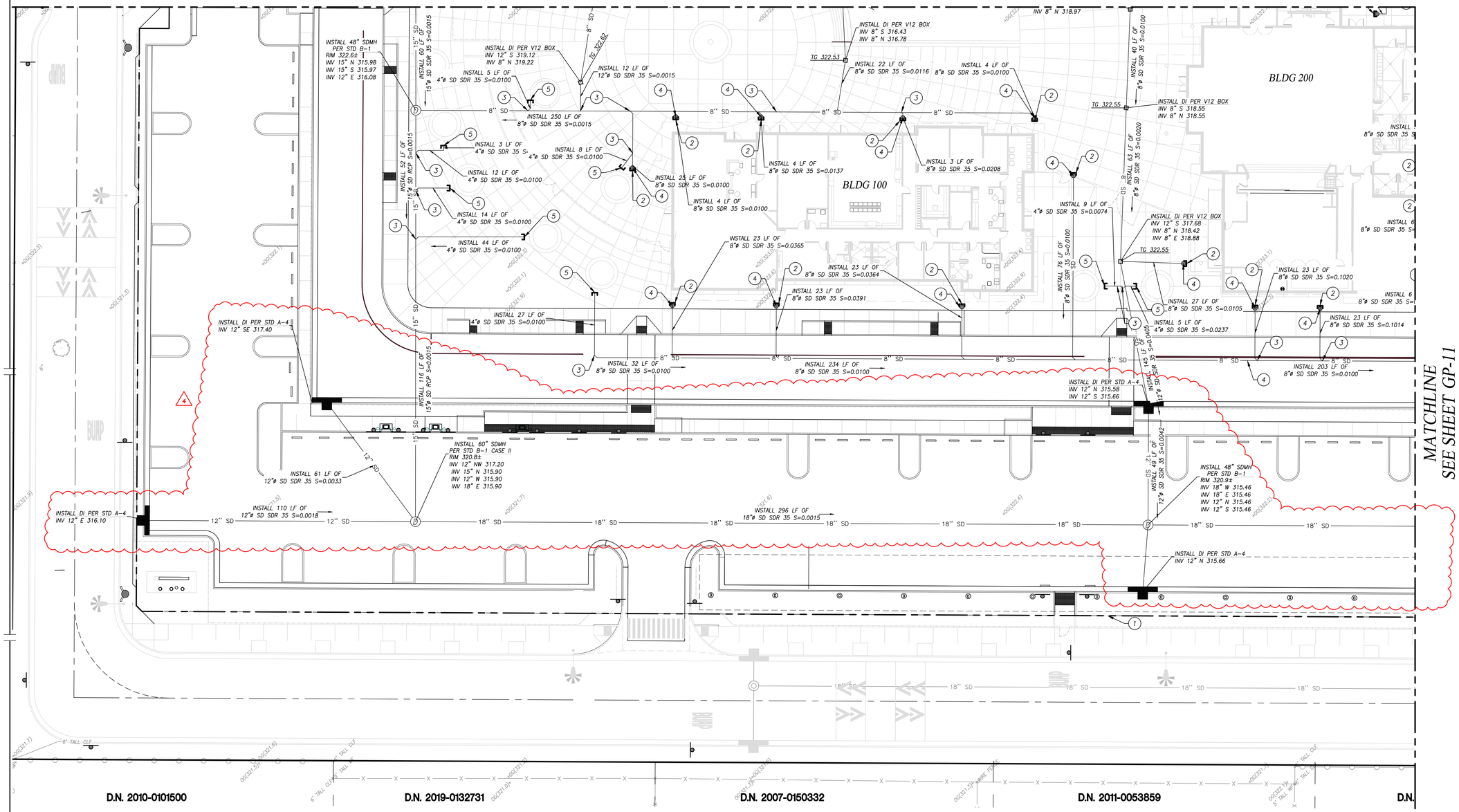
END OF PRE-BID RFI RESPONSES

APPROVALS

FILE # 10-126 | APPLICATION # 02-123774

DATE: SEPTEMBER 16.2026

SEE SHEET GP-8
MATCHLINE



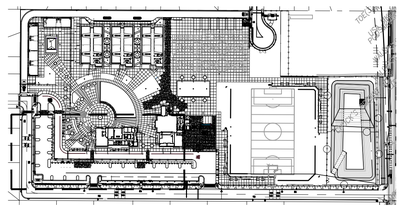
MATCHLINE
SEE SHEET GP-11

STORM DRAIN LEGEND

- SD — PROPOSED STORM DRAIN (PRIVATE FACILITY), AS NOTED
- SD — STORM DRAIN MAIN PER SEPARATE OFFSITE PLAN
- CLEANOUT PER CITY OF FRESNO STD S-6
- PROPOSED PIPE END
- (D) STORM DRAIN MANHOLE, PER FMFCD STD B-1
- FMFCD TYPE D STORM DRAIN INLET (PRIVATE FACILITY)
- V12 DRAIN BOX 12"X12" (PRIVATE FACILITY)
- U SERIES CATCH BASIN 24" X 24" (PRIVATE FACILITY)
- FMFCD TYPE D STORM DRAIN INLET PER SEPARATE OFF-SITE PLANS

STORM DRAIN KEYNOTES:

1. CONNECT TO EXISTING STUB
2. BUILDING CONNECTION CAP AS REQUIRED
3. WYE CONNECTION
4. CLEANOUT
5. TREE WELL CONNECTION



KEY PLAN

N

20" 0' 20'

SCALE: 1"= 20'

REGISTERED PROFESSIONAL ENGINEER
ALEX T. DWINGUBS
NO. 61523
CIVIL
STATE OF CALIFORNIA

BY:

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TITLE
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GP-9

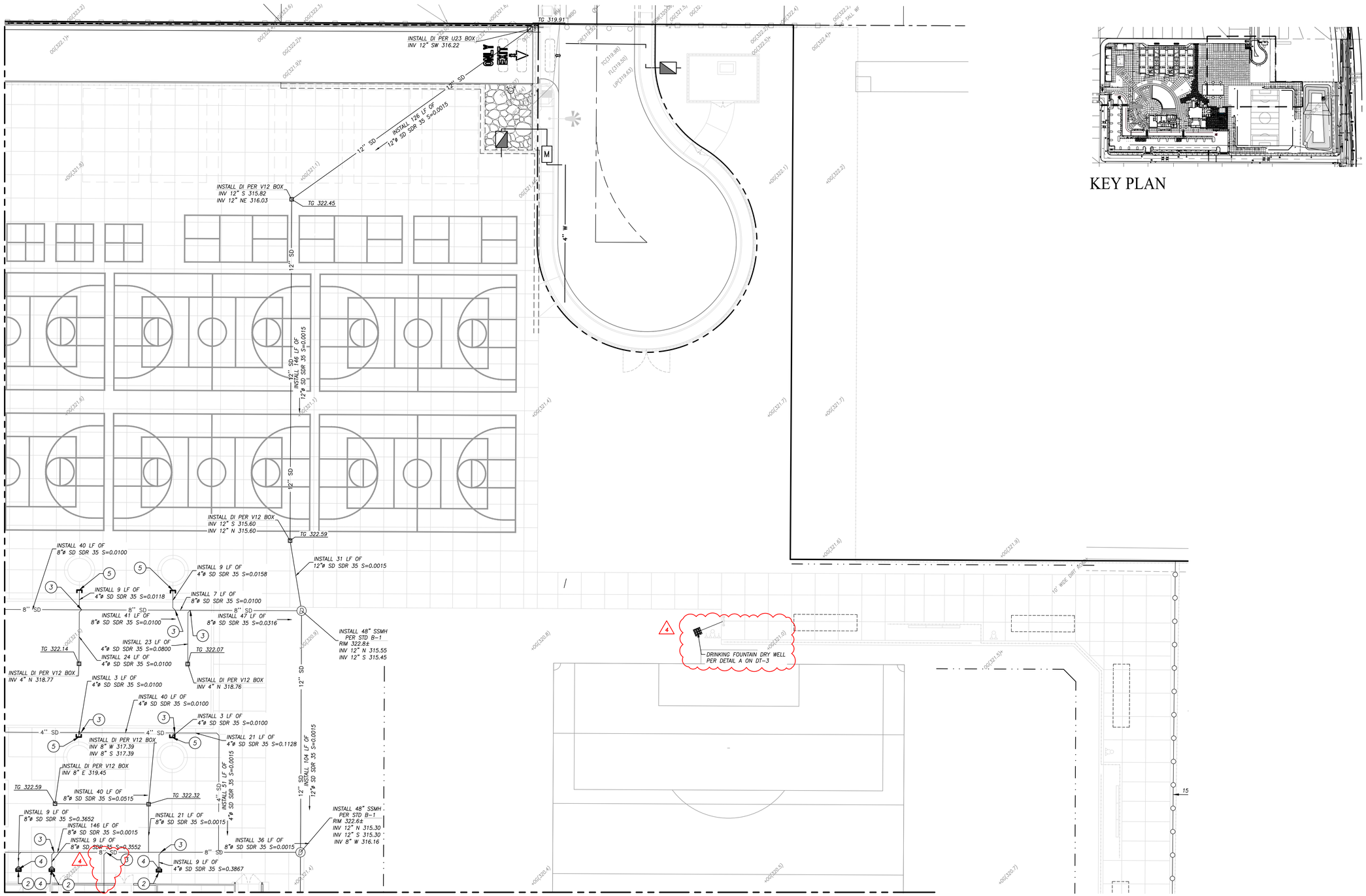
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APPROVALS

FILE # 10-126 | APPLICATION # 02-123774

DATE: SEPTEMBER 16.2026



KEY PLAN

LEGEND

- PROPOSED ON-SITE LIGHT DUTY CONCRETE
- PROPOSED ON-SITE HEAVY DUTY CONCRETE
- PROPOSED ON-SITE LIGHT DUTY AC PAVEMENT
- PROPOSED ON-SITE HEAVY DUTY AC PAVEMENT
- PROPOSED DETECTABLE WARNING SURFACE
- PROPOSED LANDSCAPE
- GRADE BREAK LINE

STORM DRAIN LEGEND

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5. TREE WELL CONNECTION

N

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SCALE: 1"= 20'

REGISTERED PROFESSIONAL ENGINEER ALEX T. DWIGGINS NO. 61523 CIVIL STATE OF CALIFORNIA

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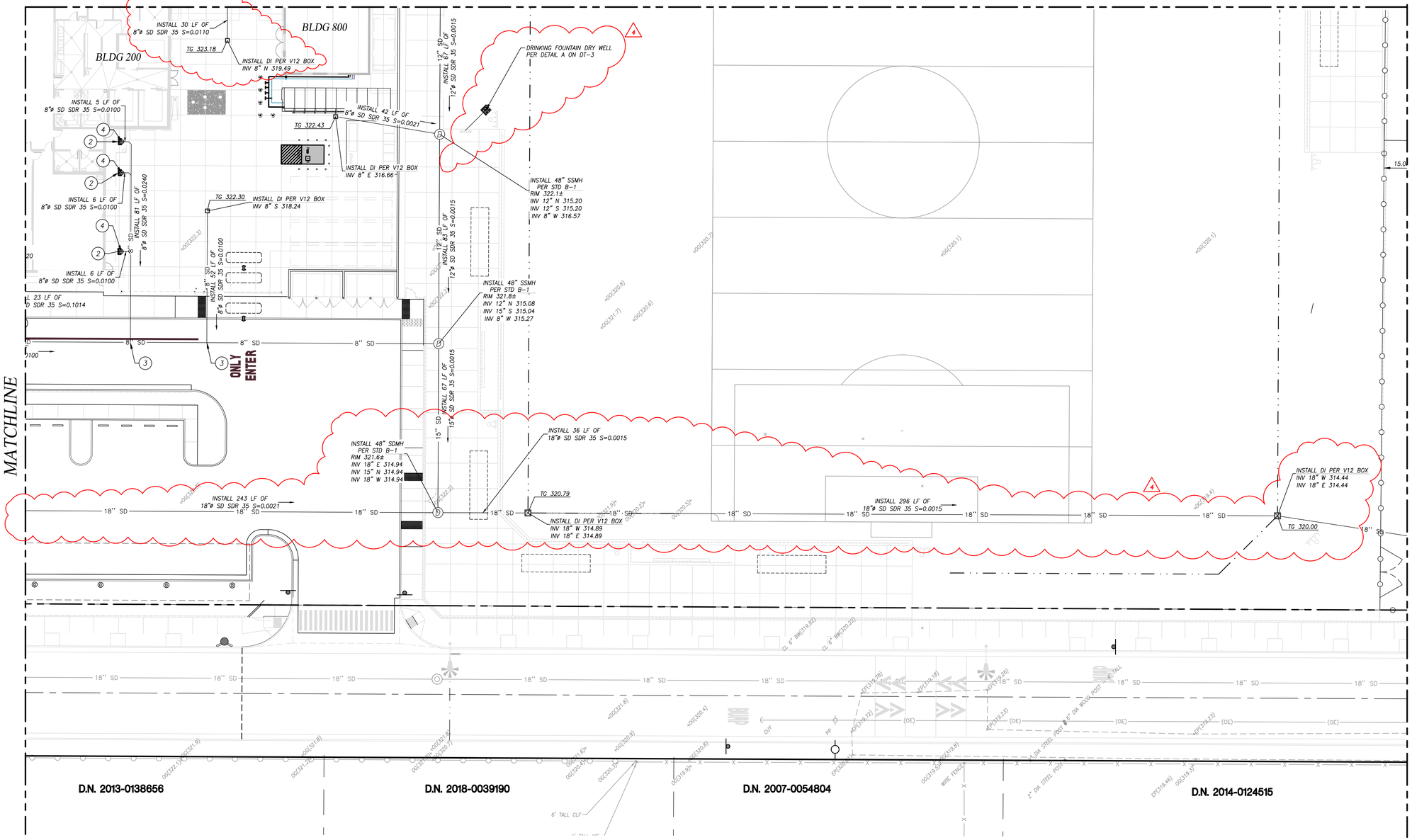
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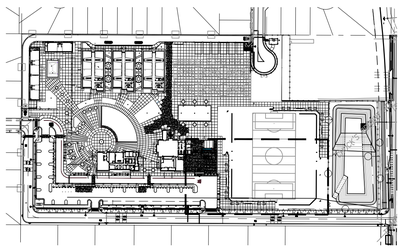
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SEE SHEET GP-10
MATCHLINE

SEE SHEET GP-9
MATCHLINE

MATCHLINE
SEE SHEET GP-12





KEY PLAN

STORM DRAIN LEGEND

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5. TREE WELL CONNECTION

N

20" 0' 20'

SCALE: 1"= 20'

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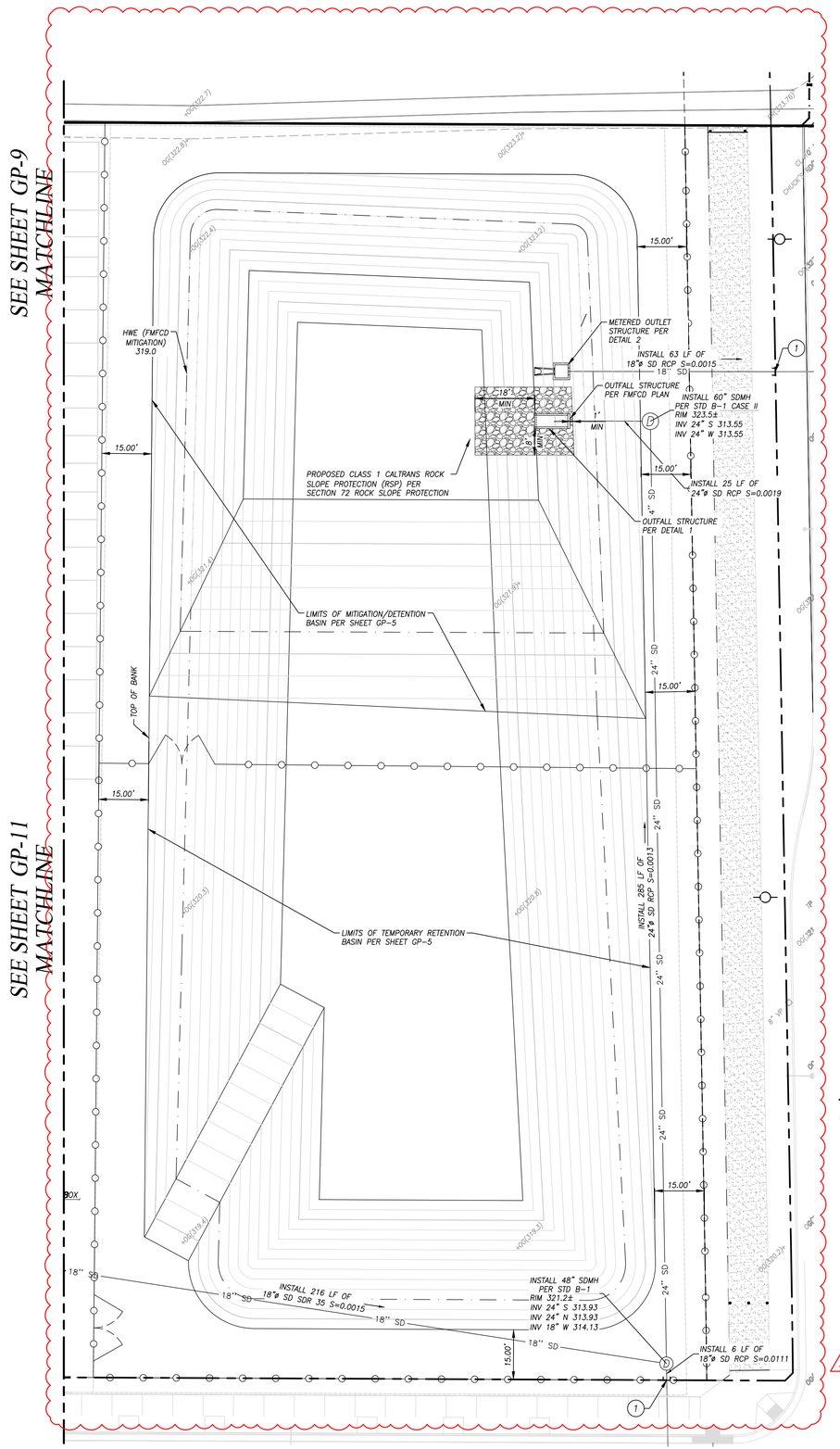
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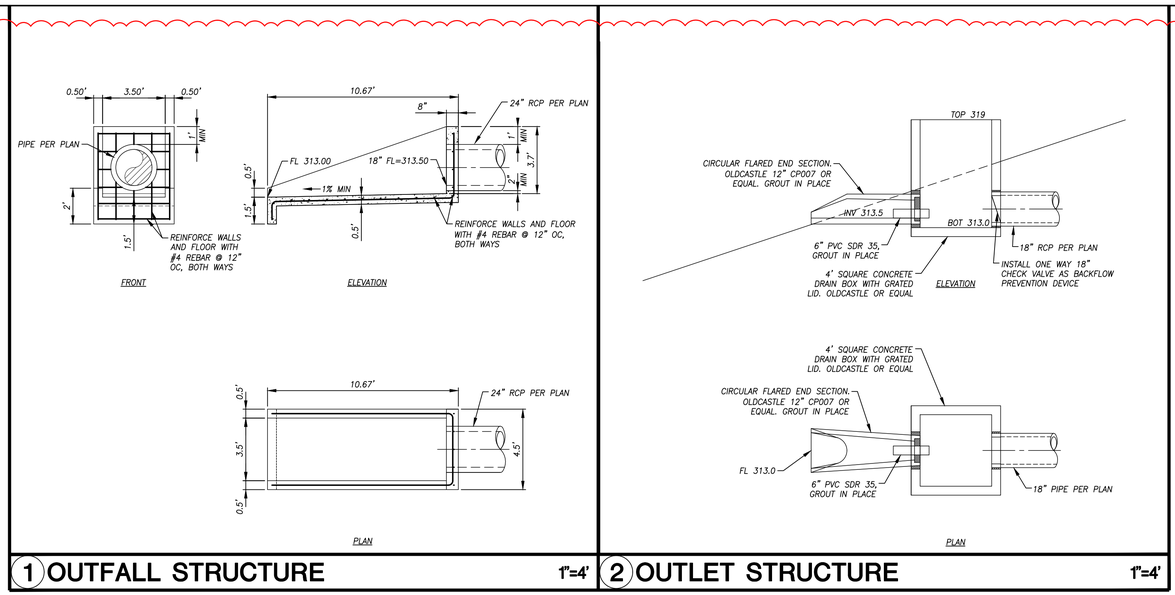
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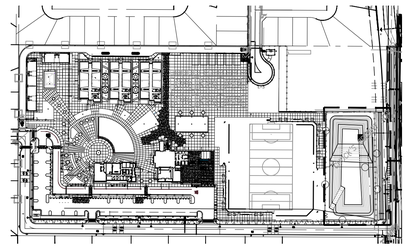


STORM DRAIN LEGEND

- SD — PROPOSED STORM DRAIN (PRIVATE FACILITY), AS NOTED
- SD — STORM DRAIN MAIN PER SEPARATE OFFSITE PLAN
- CLEANOUT PER CITY OF FRESNO STD S-6
- PROPOSED PIPE END
- (D) STORM DRAIN MANHOLE, PER FMFCD STD B-1
- FMFCD TYPE D STORM DRAIN INLET (PRIVATE FACILITY)
- V12 DRAIN BOX 12"X12" (PRIVATE FACILITY)
- U SERIES CATCH BASIN 24" X 24" (PRIVATE FACILITY)
- FMFCD TYPE D STORM DRAIN INLET PER SEPARATE OFF-SITE PLANS

STORM DRAIN KEYNOTES:

1. INSTALL BRICK AND MORTAR PLUG FOR CONNECTION TO OFFSITE STORM DRAIN
2. BUILDING CONNECTION CAP AS REQUIRED
3. WYE CONNECTION
4. CLEANOUT
5. TREE WELL CONNECTION



KEY PLAN

N

20" 0' 20'

SCALE: 1"= 20'

APPROVALS

FILE # 10-126 APPLICATION # 02-123774

DATE: SEPTEMBER 16.2026

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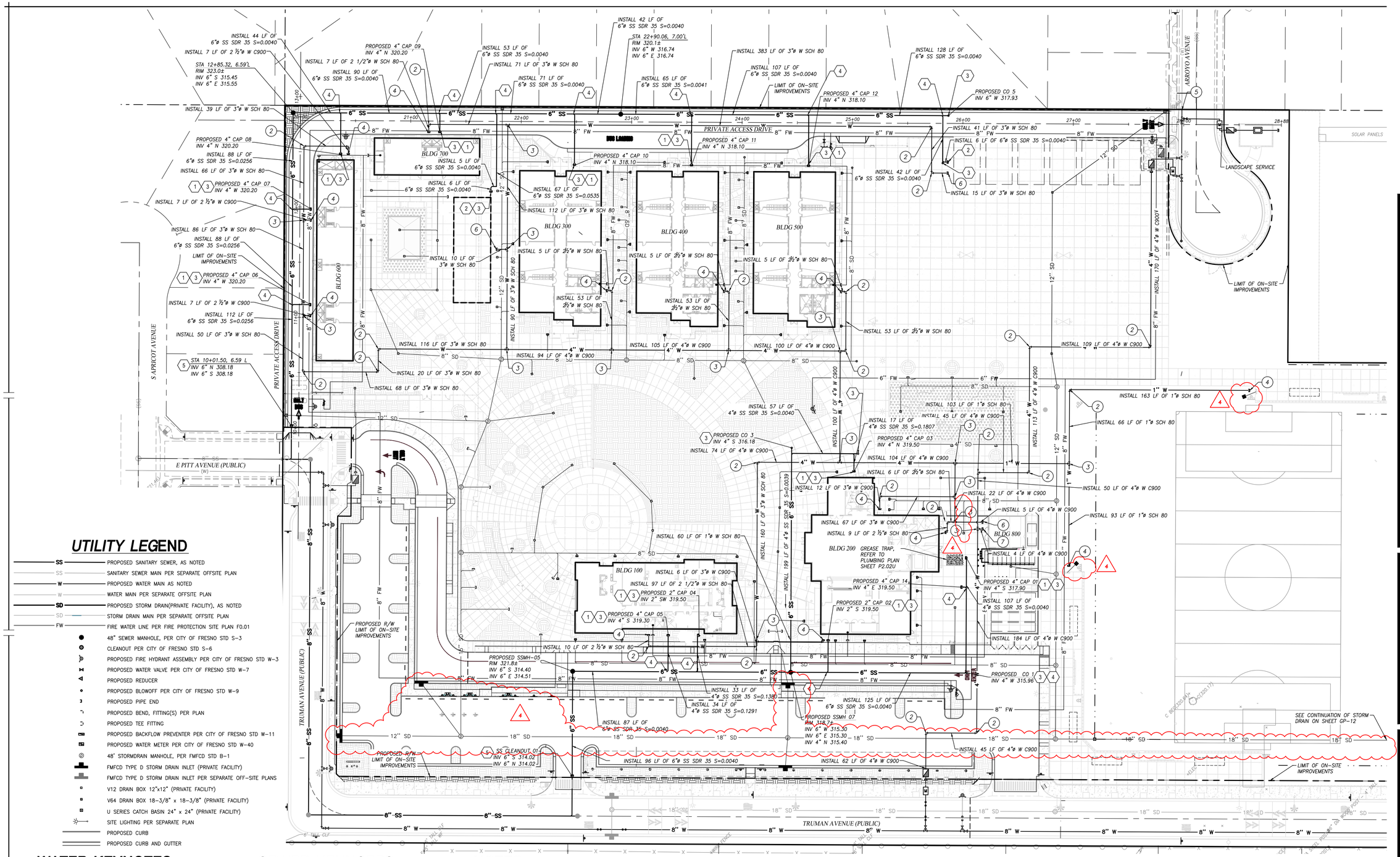
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UTILITY LEGEND

- SS — PROPOSED SANITARY SEWER, AS NOTED
- SS — SANITARY SEWER MAIN PER SEPARATE OFFSITE PLAN
- W — PROPOSED WATER MAIN AS NOTED
- W — WATER MAIN PER SEPARATE OFFSITE PLAN
- SD — PROPOSED STORM DRAIN(PRIVATE FACILITY), AS NOTED
- SD — STORM DRAIN MAIN PER SEPARATE OFFSITE PLAN
- FW — FIRE WATER LINE PER FIRE PROTECTION SITE PLAN F0.01
- 48" SEWER MANHOLE, PER CITY OF FRESNO STD S-3
- CLEANOUT PER CITY OF FRESNO STD S-6
- PROPOSED FIRE HYDRANT ASSEMBLY PER CITY OF FRESNO STD W-3
- PROPOSED WATER VALVE PER CITY OF FRESNO STD W-7
- PROPOSED REDUCER
- PROPOSED BLOWOFF PER CITY OF FRESNO STD W-9
- PROPOSED PIPE END
- PROPOSED BEND, FITTING(S) PER PLAN
- PROPOSED TEE FITTING
- PROPOSED BACKFLOW PREVENTER PER CITY OF FRESNO STD W-11
- PROPOSED WATER METER PER CITY OF FRESNO STD W-40
- 48" STORMDRAIN MANHOLE, PER FMFCD STD B-1
- FMFCD TYPE D STORM DRAIN INLET (PRIVATE FACILITY)
- FMFCD TYPE D STORM DRAIN INLET PER SEPARATE OFF-SITE PLANS
- V12 DRAIN BOX 12"x12" (PRIVATE FACILITY)
- V64 DRAIN BOX 18-3/8" x 18-3/8" (PRIVATE FACILITY)
- U SERIES CATCH BASIN 24" x 24" (PRIVATE FACILITY)
- SITE LIGHTING PER SEPARATE PLAN
- PROPOSED CURB
- PROPOSED CURB AND GUTTER

WATER KEYNOTES

1. 45° BEND FITTING(S), WITH VALVE(S) AS SHOWN
2. 90° BEND FITTING(S), WITH VALVE(S) AS SHOWN
3. TEE FITTING(S), WITH VALVE(S) AS SHOWN
4. BUILDING CONNECTION
5. SERVICE CONNECTION, SIZE AS NOTED
6. STUB AND CAP FOR FUTURE BUILDING CONNECTION
7. CONNECTION TO ON-SITE DISTRIBUTION SYSTEM
8. CONNECTION FROM CITY MAIN TO BOOSTER PUMP

SEWER KEYNOTES

1. BUILDING CONNECTION, CAP AS REQUIRED
2. STUB AND CAP FOR FUTURE BUILDING CONNECTION
3. CLEANOUT
4. WYE CONNECTION, 4" PIPE UNLESS OTHERWISE NOTED
5. CONNECT TO EXISTING STUB

NOTES

1. REFER TO SPECIFICATIONS FOR ALL TRENCHING AND BACKFILL REQUIREMENTS.
2. ALL STUBBED UTILITY LOCATIONS SHALL BE MARKED WITH WOOD POST THAT STATES THE TYPE OF UTILITY STUB (SD, SS, W, FW, IRR) AND SIZE.
3. ALL PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE OR FITTING TO FITTING
4. V12 DRAIN BOX WITH V12-71W GRATE BY "OLD CASTLE PRECAST" OR APPROVED EQUAL. PLACE BOX ON BED OF 6" MIN DEEP 3/4" SIZE DRAIN DRAIN ROCK. PROVIDE 1"ø DRAIN HOLE AT BOTTOM. INVERT SHALL BE 0.2' HIGHER THAN INLET BOTTOM FOR DEBRIS TRAP.
5. U23 CATCH BASIN WITH U23CB FRAME AND C21-HT WELDED GALVANIZED GRATE.
6. V64 DRAIN BOX WITH V64-71C CAST IRON GRATE.
7. AT ONSITE UTILITY CROSSINGS "LOWER" MAIN UNDER CROSSING MAIN W/ 45-DEGREE BENDS UTILIZE VERTICAL RESTRAINED JOINTS AND FITTINGS. MAINTAIN 12" MIN SEPARATION BETWEEN MAINS.
8. WATER MAIN TABLE FOR PIPES SIZED 4" AND LARGER:
   POTABLE WATER-C900
9. WATER TABLE FOR PIPES SIZED LESS THAN 4":
   PIPE-PVC, SCHEDULE 80
   FITTINGS-PVC, SCHEDULE 80
10. CONTRACTOR SHALL FIELD ADJUST VALVE LOCATIONS TO AVOID CONFLICT WITH CURB AND GUTTER. ALL VALVES SHALL BE 1' CLEAR OF CURB AND GUTTER.
11. SEE ELECTRICAL PLANS FOR DRY UTILITY JOINT TRENCH, FINAL SITE LIGHTING LOCATIONS, AND EV CHARGER LOCATIONS
12. SEE PLUMBING PLANS FOR BOOSTER PUMP DETAILS AND CALCULATIONS.
13. SEE FIRE PLAN FOR FINAL FIRE LINE LOCATIONS, CONNECTIONS AND ALL SPECIFICATIONS FOR EQUIPMENT.

N

40" 0' 40'

SCALE: 1"= 40'

REGISTERED PROFESSIONAL ENGINEER ALEX T. DWIGGINS NO. 61523 CIVIL STATE OF CALIFORNIA

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APPROVALS

FILE # 10-126	APPLICATION # 02-123774

DATE: SEPTEMBER 16.2026

NEW TEMPERANCE ELEMENTARY SCHOOL

SANGER UNIFIED SCHOOL DISTRICT

SANGER, FRESNO COUNTY, CA

REVISIONS

4	10/23/26	ADDENDUM 4

MANGINI ARCHITECTURE INC.
MANGINI ASSOCIATES INC.
4320 West Mineral King Avenue
Visalia, California 93291
www.mangini.us
(559) 627.7638 Office
(559) 627.1926 Fax

TITLE
UTILITY PLAN SHEET

UT-1

PROJECT 24042

L:\Projects\2025\250125\ACAD\Improvements\250125 On-Site Improvement Plans\250125-UTPP.dwg Oct 23 2026 9:55am

APPROVALS

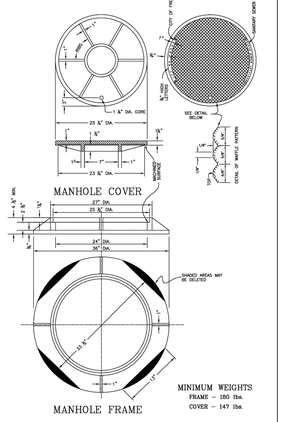
FILE # 10-126 | APPLICATION # 02-123774

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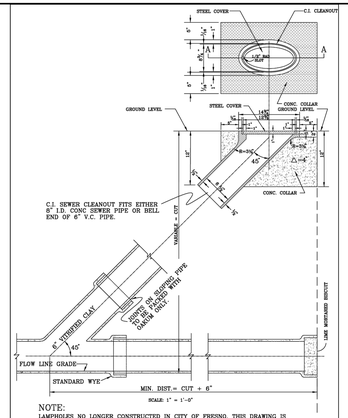
NEW TEMPERANCE ELEMENTARY SCHOOL

SANGER UNIFIED SCHOOL DISTRICT

SANGER, FRESNO COUNTY, CA

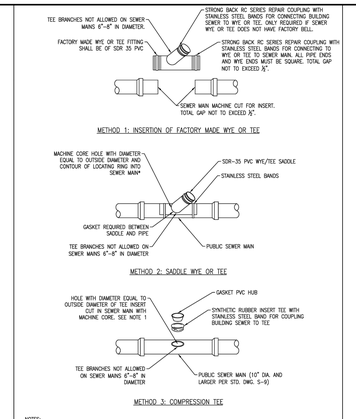


CAST IRON MANHOLE FRAME AND COVER | REF. & REV. JUNE 2014 | CITY OF FRESNO S-5A



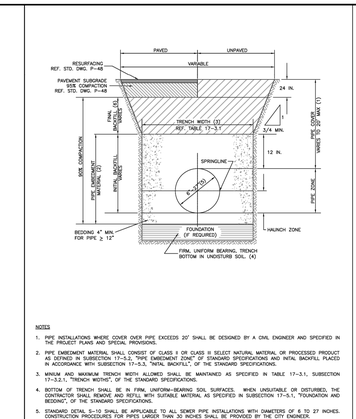
NOTE:
LAMPHOLES NO LONGER CONSTRUCTED IN CITY OF FRESNO. THIS DRAWING IS RETAINED FOR INFORMATIONAL PURPOSES TO SHOW CONSTRUCTION OF EXISTING LAMPHOLES.

SLOPING LAMPHOLE WITH C.I. CLEANOUT & COVER | REF. & REV. AUG. 2002 | CITY OF FRESNO S-6



NOTES:
1. 6" MACHINE CORE IS NOT CLEAN CUT (WITHOUT DAMAGE TO THE HOST PIPE) MUST USE METHOD 1 TO INSTALL HOUSE BRANCH

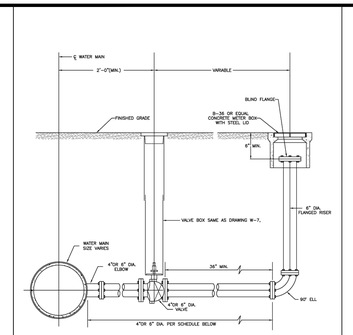
HOUSE BRANCH CONNECTIONS | REF. & REV. AUG-0919 MAR. 2021 (A.7) | CITY OF FRESNO S-8



NOTES

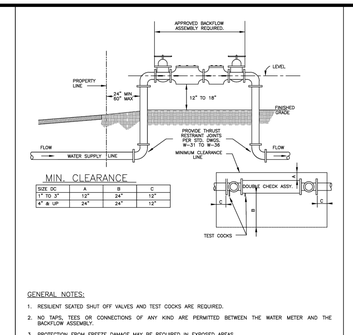
1. PIPE INSTALLATIONS WHERE COVER OVER PIPE EXCEEDS 20' SHALL BE DESIGNED BY A CIVIL ENGINEER AND SPECIFIED IN THE PROJECT PLANS AND SPECIAL PROVISIONS.
2. PIPE EMBEDMENT MATERIAL SHALL CONSIST OF CLASS I OR CLASS III SELECT NATURAL MATERIAL OR PROCESSED PRODUCT AS DEFINED IN SUBSECTION 17-5.2, "PIPE EMBEDMENT ZONE" OF STANDARD SPECIFICATIONS AND INITIAL BACKFILL PLACED IN ACCORDANCE WITH SUBSECTION 17-5.3, "INITIAL BACKFILL", OF THE STANDARD SPECIFICATIONS.
3. MINIUM AND MAXIMUM TRENCH WIDTH ALLOWED SHALL BE MAINTAINED AS SPECIFIED IN TABLE 17-3.1, SUBSECTION 17-3.2.1, "TRENCH WIDTHS", OF THE STANDARD SPECIFICATIONS.
4. BOTTOM OF TRENCH SHALL BE IN FIRM, UNIFORM-BEARING SOIL SURFACES. WHEN UNSUITABLE OR DISTURBED, THE TRENCH BOTTOM SHALL BE OVER-EXCAVATED WITH SUITABLE MATERIAL AS SPECIFIED IN SUBSECTION 17-5.1, "FOUNDATION AND BEDDING", OF THE STANDARD SPECIFICATIONS.
5. STANDARD DETAIL S-10 SHALL BE APPLICABLE TO ALL SEWER PIPE INSTALLATIONS WITH DIAMETERS OF 6 TO 27 INCHES. CONSTRUCTION PROCEDURES FOR PIPES LARGER THAN 30 INCHES SHALL BE PROVIDED BY THE CITY ENGINEER.
6. IN UNPAVED AREAS FINAL BACKFILL SHALL EXTEND TO THE SURFACE ELEVATION WITH 95% COMPACTION IN THE UPPER 24" OF TRENCH.

SEWER MAIN TRENCH, BEDDING, AND BACKFILL DETAIL | REF. & REV. NOV-0007 MAR. 2021 (A.7) | CITY OF FRESNO S-10



NOTES:
1. ALL INSIDE DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWER SHALL USE THE DROP BOWL AS PRODUCED BY: RELINER-DURAN, INC. 53 MT. ARCHER RD. LYME, CT 06371 (860)434-0277 FAX: (860)434-3195 OR APPROVAL EQUAL
2. DROP BOWL MODEL "A-6" SHALL BE USED FOR ALL LINES UP THROUGH FULL 6" INLETS. DROP BOWLS MODEL "B-8" SHALL BE USED FOR ALL 8" INLETS. DROP BOWLS MODEL "B-10" SHALL BE USED FOR ALL 10" INLETS. 6" ONLY ALLOWABLE FOR REPLACING EXISTING 6" DROP. LINES LARGER THAN 10" SHALL BE AS DIRECTED BY THE ENGINEER.
3. SECURE DROP PIPE TO MANHOLE WALL WITH RELINER-DURAN, INC STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS OR APPROVED EQUAL (SEE DETAIL S-11B).
4. ATTACH THE DROP BOWL & EACH CLAMPING BRACKET TO THE MANHOLE WALL WITH 2" X 3 ½" RAWSET/RED HEAD BOLTS. PRE-ROTO DRILL AND SET BOLTS IN PLACE WITH EPOXY PASTE. EPOXY SHALL MEET THE FOLLOWING REQUIREMENTS:
   A. EPOXY PASTE SHALL BE A TWO COMPONENT, 100% SOLID SYSTEM. EPOXY SHALL BE SIKADUR 31 HI-MOD GEL BY SIKA CORPORATION (PHONE 592/941-0231) OR EQUAL.
   B. THE EPOXY PASTE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI IN 28 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM D695 AT 73 DEGREES.
   C. THE EPOXY PASTE SHALL DEVELOP A MINIMUM TENSILE STRENGTH OF 3,000 PSI IN 14 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM D638.
   D. THE EPOXY PASTE SHALL DEVELOP A MINIMUM BOND STRENGTH OF 2,000 PSI IN 2 DAYS WHEN TESTED IN ACCORDANCE WITH ASTM C882 (HARDENED CONCRETE TO HARDENED CONCRETE).

DROP CONNECTIONS | REF. & REV. AUG. 2015 | CITY OF FRESNO S-11A 1 OF 2

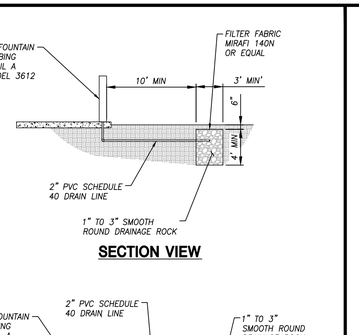


STAINLESS STEEL ADJUSTABLE CLAMPING BRACKED AS MANUFACTURED BY:

RELINER-DURAN, INC.
53 MT. ARCHER RD.
LYME, CT 06371
(860)434-0277 FAX: (860)434-3195
OR APPROVAL EQUAL

SPECIFICATIONS:
1) CLAMP AND BRACKETS IS TYPE 304 STAINLESS STEEL, 11 GAUGE (.1196").
2) 3/8" ø PINCH BOLT AND NUTS IS TYPE 18-8 STAINLESS STEEL.

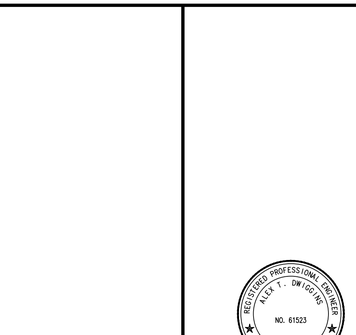
STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS | REF. & REV. JUNE 2014 | CITY OF FRESNO S-11B 2 OF 2



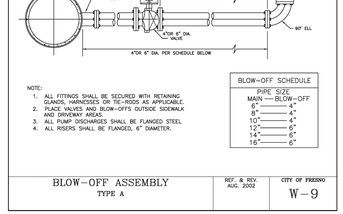
① ALL STRAIGHT PIPE TO BE LAID THROUGH MANHOLES WITH TOP HALF REMOVED TO PROVIDE AT LEAST A 44" OR 5/8" LONG OPENING, ROUGH BROKEN EDGES SHALL BE MORTARED SMOOTH. THIS INCLUDES UPPER ENDS OF LINE MANHOLE.
② ALL TURNS MUST BE MADE SUCH THAT THE CENTER LINE OF THE FLOW CHANNEL BEND RADIUS IS MINIMUM 24" IN A 45° MANHOLE AND MINIMUM 30" IN A 60° MANHOLE. TURNS TO BE CONSTRUCTED TO FORM A SMOOTH FLOW LINE OF SAME SHAPE AND PATTERN AS BOTTOM WALL PIPE.

NOTE:
WHEN PIPE IS CUT, ALL EXPOSED REINFORCING STEEL TO BE COATED WITH 2" OF CONCRETE.

MANHOLE BASE DESIGN FLOW CONFIGURATION SUPPLEMENT TO S-3 & S-4 | REF. & REV. AUG. 2015 | CITY OF FRESNO S-12



VALVE LID & PAVING RING WITH GALVANIZED CASING | REF. & REV. AUG-0902 MAR. 2021 (A.7) | CITY OF FRESNO W-7

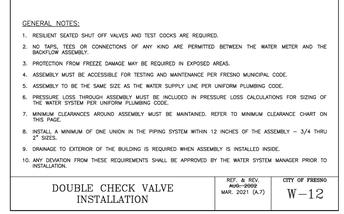


NOTE:
1. ALL FITTINGS SHALL BE SECURED WITH RETAINING GLANDS, HARNESSES OR TIE-RODS AS APPLICABLE.
2. PLACE VALVES AND BLOW-OFFS OUTSIDE SIDEWALK AND DRIVEWAY AREAS.
3. ALL PUMP DISCHARGES SHALL BE FLANGED STEEL
4. ALL RISERS SHALL BE FLANGED, 6" DIAMETER.

BLOW-OFF SCHEDULE

PIPE SIZE MAIN	BLOW-OFF
6"	4"
8"	4"
10"	4"
12"	6"
14"	6"
16"	6"

BLOW-OFF ASSEMBLY TYPE A | REF. & REV. AUG. 2002 | CITY OF FRESNO W-9



MIN. CLEARANCE

SIZE OF	A	B	C
1" TO 3"	12"	24"	12"
4" & UP	24"	24"	12"

GENERAL NOTES:
1. RESILIENT SEATED SHUT OFF VALVES AND TEST COCKS ARE REQUIRED.
2. NO TAPS, TEES OR CONNECTIONS OF ANY KIND ARE PERMITTED BETWEEN THE WATER METER AND THE BACKFLOW ASSEMBLY.
3. PROTECTION FROM FREEZE DAMAGE MAY BE REQUIRED IN EXPOSED AREAS.
4. ASSEMBLY MUST BE ACCESSIBLE FOR TESTING AND MAINTENANCE PER FRESNO MUNICIPAL CODE.
5. ASSEMBLY TO BE THE SAME SIZE AS THE WATER SUPPLY LINE PER UNIFORM PLUMBING CODE.
6. PRESSURE LOSS THROUGH ASSEMBLY MUST BE INCLUDED IN PRESSURE LOSS CALCULATIONS FOR SIZING OF THE WATER SYSTEM PER UNIFORM PLUMBING CODE.
7. MINIMUM CLEARANCES AROUND ASSEMBLY MUST BE MAINTAINED. REFER TO MINIMUM CLEARANCE CHART ON THIS PAGE.
8. INSTALL A MINIMUM OF ONE UNION IN THE PIPING SYSTEM WITHIN 12 INCHES OF THE ASSEMBLY – 3/4 THRU 2" SIZES.
9. DRAINAGE TO EXTERIOR OF THE BUILDING IS REQUIRED WHEN ASSEMBLY IS INSTALLED INSIDE.
10. ANY DEVIATION FROM THESE REQUIREMENTS SHALL BE APPROVED BY THE WATER SYSTEM MANAGER PRIOR TO INSTALLATION.

DOUBLE CHECK VALVE INSTALLATION | REF. & REV. AUG-0902 MAR. 2021 (A.7) | CITY OF FRESNO W-12

A DRINKING FOUNTAIN DRY WELL N.T.S

REVISIONS

4	10/23/26	ADDENDUM 4

MANGINI ARCHITECTURE INC.
MANGINI+ASSOCIATES INC.
4320 West Mineral King Avenue
Visalia, California 93291
www.mangini.us
(559) 627.0530 Office
(559) 627.1926 Fax

REGISTERED PROFESSIONAL ENGINEER ALEX T. DWIGGINS NO. 61523 CIVIL STATE OF CALIFORNIA

BY:

QK
WWW.QKINC.COM
559-582-1056
BAKERSFIELD, CLOVIS, HANFORD, MERCED, PORTERVILLE, VISALIA

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TITLE
DETAILS SHEET

DT-3

PROJECT 24042

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INDOOR UNIT SCHEDULE

DESIGNATION		IDU 1-1	IDU 1-2	IDU 2-1	IDU 2-2	IDU 3-1	IDU 3-2	IDU 4-1	IDU 4-2	IDU 5-1	IDU 5-2	IDU 6-1	IDU 7-1
BLOWER	SUPPLY AIR (CFM)	635	635	370	635	635	635	635	635	635	635	635	635
	EXT. S P (IN. WC)	-	-	-	-	-	-	-	-	-	-	-	-
	MIN. O.S.A. (CFM)	-	-	30	-	-	-	-	-	-	-	-	-
	MOCP	SEE ODU 3-1	SEE ODU 3-1	SEE ODU 2-1	SEE ODU 2-2	SEE ODU 3-1	SEE ODU 3-2	SEE ODU 4-1	SEE ODU 4-2	SEE ODU 5-1	SEE ODU 5-2	SEE ODU 6-1	SEE ODU 7-1
	MCA / FLA (AMPS)	SEE ODU 3-1	SEE ODU 3-1	SEE ODU 2-1	SEE ODU 2-2	SEE ODU 3-1	SEE ODU 3-2	SEE ODU 4-1	SEE ODU 4-2	SEE ODU 5-1	SEE ODU 5-2	SEE ODU 6-1	SEE ODU 7-1
	VOLTS / PHASE	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1
	SEER2 / EER2	21.1 / 12.0	21.1 / 12.0	24.8 / 17.1	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0
COOLING	SENSIBLE (MBH)	24.0	24.0	12.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
	TOTAL (MBH)	24.5	24.5	12.4	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
	EADB/EAWB (°F)	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67
	REFRIGERANT	R454B	R454B	R454B	R454B	R454B	R454B	R454B	R454B	R454B	R454B	R454B	R454B
HEATING	CAPACITY (MBH) @47°F	28.0	28.0	20.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
	KW	2.414	2.414	1.542	2.414	2.414	2.414	2.414	2.414	2.414	2.414	2.414	2.414
	STAGES	-	-	-	-	-	-	-	-	-	-	-	-
MANUFACTURER		MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI
TYPE		HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP
MODEL NUMBER		PKA-AK24NL	PKA-AK24NL	PLA-AE12NL	PKA-AK24NL	PKA-AK24NL	PKA-AK24NL	PKA-AK24NL	PKA-AK24NL	PKA-AK24NL	PKA-AK24NL	PKA-AK24NL	PKA-AK24NL
CONDENSING UNIT		ODU 1-1	ODU 1-1	ODU 2-1	ODU 2-2	ODU 3-1	ODU 3-2	ODU 4-1	ODU 4-2	ODU 5-1	ODU 5-2	ODU 6-1	ODU 7-1
SERVICE		DATA ROOM	DATA ROOM	CONTROL ROOM	ELECTRICAL ROOM	DATA ROOM	ELECTRICAL ROOM	DATA ROOM	ELECTRICAL ROOM	DATA ROOM	ELECTRICAL ROOM	ELECTRICAL ROOM	DATA ROOM
LOCATION		BLDG 100	BLDG 100	BLDG 200	BLDG 200	BLDG 300	BLDG 300	BLDG 400	BLDG 400	BLDG 500	BLDG 500	BLDG 600	BLDG 700
OPER. WT (LBS)		100	100	100	100	100	100	100	100	100	100	100	100
ACCESSORIES		1	1	1	1	1	1	1	1	1	1	1	1

1 . FACTORY HIGH LIFT CONDENSATE PUMP AND 24V THERMOSTAT INTERFACE WITH TRANSFORMERS.

OUTDOOR UNIT SCHEDULE

DESIGNATION	ODU 1-1	ODU 1-2	ODU 2-1	ODU 2-2	ODU 3-1	ODU 3-2	ODU 4-1	ODU 4-2	ODU 5-1	ODU 5-2	ODU 6-1	ODU 7-1
COOLING CAPACITY (MBH)	24.0	24.0	12.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
HEATING CAPACITY (MBH)	28.0	28.0	20.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
NOMINAL TONS	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
VOLTS / PHASE	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1	208-230 / 1
FLA	-	-	-	-	-	-	-	-	-	-	-	-
MCA / MOCP	22 / 37	22 / 37	16 / 27	22 / 37	22 / 37	22 / 37	22 / 37	22 / 37	22 / 37	22 / 37	22 / 37	22 / 37
SEER2 / EER2 (AT ARI)	21.1 / 12.0	21.1 / 12.0	24.8 / 17.1	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0	21.1 / 12.0	21.1 / 12	21.1 / 12
AMBIENT (°F)	105	105	105	105	105	105	105	105	105	105	105	105
REFRIG. LINE SIZE												
LIQUID (IN.OD)	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8
SUCTION (IN. OD)	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/8
REFRIG. TYPE	R454B	R454B	R454B	R454B	R454B	R454B	R454B	R454B	R454B	R454B	R454B	R454B
MANUFACTURER	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI	MITSUBISHI
TYPE	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP
MODEL NUMBER	PUZ-AH24NL	PUZ-AH24NL	PUZ-AK12NL	PUZ-AH24NL	PUZ-AH24NL	PUZ-AH24NL	PUZ-AH24NL	PUZ-AH24NL	PUZ-AH24NL	PUZ-AH24NL	PUZ-AH24NL	PUZ-AH24NL
SERVICE	IDU 1-1	IDU 1-1	IDU 2-1	IDU 2-2	IDU 3-1	IDU 3-2	IDU 4-1	IDU 4-2	IDU 5-1	IDU 5-2	IDU 6-1	IDU 7-1
LOCATION	BLDG 100 - ROOF	BLDG 100 - ROOF	BLDG 200 - ROOF	BLDG 200 - ROOF	BLDG 300 - ROOF	BLDG 300 - ROOF	BLDG 400 - ROOF	BLDG 400 - ROOF	BLDG 500 - ROOF	BLDG 500 - ROOF	BLDG 600 - ROOF	BLDG 700 - ROOF
OPER. WT (LBS)	300	300	200	300	300	300	300	300	300	300	300	300
ACCESSORIES	1	1	1	1	1	1	1	1	1	1	1	1

1 . DRAIN SOCKET AND MOUNTING PAD.

RELIEF FAN SCHEDULE

DESIGNATION	RF 3-1 - RF 3-2	RF 3-4 - RF 3-9	RF 4-1 - RF 4-2	RF 4-4 - RF 4-9	RF 5-1 - RF 5-2	RF 5-4 - RF 5-9	RF 6-1	RF 6-3 - RF 6-4	RF 6-6	RF 7-1	RF 7-3
MIN / MAX CFM	1150 / 1600	1150 / 1600	1150 / 1600	1150 / 1600	1150 / 1600	1150 / 1600	1150 / 1600	1150 / 1600	1150 / 1600	1150 / 1600	1150 / 1600
EXT. S.P. (IN. WC)	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355	0.355
HP / BHP / WATTS	0.75 / 0.22 / -	0.75 / 0.22 / -	0.75 / 0.22 / -	0.75 / 0.22 / -	0.75 / 0.22 / -	0.75 / 0.22 / -	0.75 / 0.22 / -	0.75 / 0.22 / -	0.75 / 0.22 / -	0.75 / 0.22 / -	0.75 / 0.22 / -
VOLTS / PHASE	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1
MCA / MOP (AMPS)	11 / 20	11 / 20	11 / 20	11 / 20	11 / 20	11 / 20	11 / 20	11 / 20	11 / 20	11 / 20	11 / 20
FLA (AMPS)	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
RPM	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
TIP SPEED/ SONES	3964 / 8.4	3964 / 8.4	3964 / 8.4	3964 / 8.4	3964 / 8.4	3964 / 8.4	3964 / 8.4	3964 / 8.4	3964 / 8.4	3964 / 8.4	3964 / 8.4
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
MOUNTING	INLINE	INLINE	INLINE	INLINE	INLINE	INLINE	INLINE	INLINE	INLINE	INLINE	INLINE
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK
TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
MODEL NUMBER	SQ-140-VG	SQ-140-VG	SQ-140-VG	SQ-140-VG	SQ-140-VG	SQ-140-VG	SQ-140-VG	SQ-140-VG	SQ-140-VG	SQ-140-VG	SQ-140-VG
CONTROL	EMS	EMS	EMS	EMS	EMS	EMS	EMS	EMS	EMS	EMS	EMS
SERVICE	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS	CLASSROOMS
LOCATION	BLDG 300 - ABOVE CEILING	BLDG 300 - ABOVE CEILING	BLDG 400 - ABOVE CEILING	BLDG 400 - ABOVE CEILING	BLDG 500 - ABOVE CEILING	BLDG 500 - ABOVE CEILING	BLDG 500 - ABOVE CEILING	BLDG 500 - ABOVE CEILING	BLDG 500 - ABOVE CEILING	BLDG 500 - ABOVE CEILING	BLDG 500 - ABOVE CEILING
OPER. WT. (LBS)	150	150	150	150	150	150	150	150	150	150	150
ACCESSORIES	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8	1, 2, 3, 4, 5, 6, 7, 8

1 . VARI-GREEN EC MOTOR. MUST ACCEPT 1-10V SIGNAL.
2 . PROVIDE WITH FACTORY HANGING SPRING ISOLATORS, SQUARE DUCT INLET ADAPTER, DAMPER, JUNCTION BOX MOUNTED AND WIRED, NEMA-1 SWITCH, MOTOR COVER, AND GALVANIZED HOUSING.
3 . HUSHCORE HUSH-FLEX ACOUSTIC CABINET WRAP.
4 . INTERLOCK OPERATION WITH AIR HANDLER SERVING SAME ROOM.
6 . INTEGRATE WITH EMS.
7 . CONTROL VIA STATIC PRESSURE SENSOR MOUNTED IN THE SPACE TO MAINTAIN A SLIGHTLY POSITIVE ROOM PRESSURE. PRESSURE SENSOR PROVIDED BY CONTROLS CONTRACTOR.
8 . FACTORY 0-10 VDC WIRING HARNESS FOR CONTROL, INSTALLED BY CONTROLS CONTRACTOR.

HEAT PUMP MULTI-PIPE WATER CHILLER

DESIGNATION		WC 1
GENERAL	MODULES (MOD.)	10
	TOTAL CAPACITY (TONS)	276
	VOLTS / PHASE	460 / 3
	FLA	691.5
	MCA / MOCP (AMPS)	699 / 800
	EER / NPLV.IP	8.44 / 0.95
	COP (HEATNG)	2.25
COMPRESSOR	QTY PER MOD. / TYPE	2 / SCROLL
	REFRIG. TYPE / CLASS	R-454B / A2L
	REFRIG. LBS (PER MOD.)	87.0
	OPERATION	CONSTANT
COOLING	CAPACITY (TONS - TOTAL)	275.5
	MIN. UNLOADING (TONS - TOTAL)	13.76
	FLUID	WATER
	EWT / LWT (°F)	54.0 / 44.0
	AMBIENT DB / WB (°F)	105 / 72
	GPM (TOTAL)	657.7
	PD (FT. H2O - TOTAL)	9.09
	COMP. POWER (kW - TOTAL)	339.6
	FAN POWER (kW - TOTAL)	52.0
	SYSTEM POWER (kW - TOTAL)	391.6
HEATING	CAPACITY (TONS - TOTAL)	264.8
	FLUID	WATER
	EWT / LWT (°F)	120.0 / 140.0
	AMBIENT TEMP. / RH% (°F / %)	28 / 75%
	GPM (PER)	323.5
	PD (FT. H2O - PER)	2.3
	COMP. POWER (kW - TOTAL)	364.3
	FAN POWER (kW - TOTAL)	49.0
	SYSTEM POWER (kW - TOTAL)	413.3
HEAT RECOVERY	COOLING (TONS - TOTAL)	257.4
	HEATING (TONS - TOTAL)	352.5
	SYSTEM POWER (kW - TOTAL)	393.5
	COOLING GPM (TOTAL)	614.4
	COLLING PD (FT. H2O - TOTAL)	8.25
	HEATING GPM (TOTAL)	430.6
	HEATING PD (FT. H2O - TOTAL)	4.17
	EER / COP (HEAT RECOVERY)	7.848 / 3.15
MANUFACTURER		TRANE
TYPE		HEAT PUMP
MODEL NUMBER		MASA030
LOCATION		CHILLER YARD
OPER. WT (LBS - TOTAL)		35,500
ACCESSORIES		1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

1 . BACNET BY CONTROLS CONTRACTOR.
2 . CHILLER MUST BE CAPABLE OF OPERATION IN THE EVENT OF A PRIMARY CONTROLLER FAILURE.
3 . A STRAINER SHALL BE FACTORY INSTALLED BETWEEN THE HEADER SYSTEM AND EACH EVAPORATOR AND CONDENSER INLET.
4 . FACTORY-INSTALLED DRAIN PANS.
5 . AN ELECTRONIC DISCHARGE & MANUAL RETURN BUTTERFLY VALVE TO BE INSTALLED ON EA. EVAPORATOR AND CONDENSER FOR VPF CHILLER PLANT CONTROL.
6 . CHILLER TO INCLUDE 7 IN. TOUCHSCREEN DISPLAY.
7 . CHILLER MUST COME WITH SEPARATE LOW VOLTAGE AND HIGH VOLTAGE ENCLOSURES.
8 . SINGLE POINT POWER.
9 . FACTORY START UP.
10 . FACTORY PROVIDED NEOPRENE ISOLATOR MOUNTING PADS
11 . PROVIDE FACTORY HEAT TRACE FOR ALL WETTED COMPONENTS. REQUIRES (2) 120V POWER CIRCUITS. FIRST 120V CIRCUIT: 37.0A FLA, 46.25A MCA, 50.0A MOCP. SECOND 120V CIRCUIT: 37.0A FLA, 46.25A MCA, 50.0A MOCP. MECHANICAL CONTRACTOR TO COORDINATE TERMINATION POINT WITH ELECTRICAL CONTACTOR AND MANUFACTURER.

2

APPROVALS
FILE # 10-126 APPLICATION # 02-123774

LICENSED ARCHITECT JAMES R. MORRELL No. C-33128 REN. 05-31-27 STATE OF CALIFORNIA

DATE: DECEMBER 18, 2025

NEW TEMPERANCE ELEMENTARY SCHOOL
SANGER UNIFIED SCHOOL DISTRICT
SANGER, FRESNO COUNTY, CA

REVISIONS
1 10/22/26 Addendum #4

MANGINI ARCHITECTURE INGENUITY
MANGINI ASSOCIATES INC.
4320 West Mineral King Avenue
Visalia, California 93291
www.mangini.us
(559) 627-0530 Office
(559) 627-1926 Fax

TITLE
MECHANICAL SCHEDULES

M7.00

PROJECT 24042

REGISTERED PROFESSIONAL ENGINEER JEAN W. CARLSON No. M34846 Exp. 6-30-28 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101
(559) 431-0101
25026
Fresno, CA 93727
FAX (559) 431-1362

21 October 2026 9:52 AM P:\2025\25026 Sanger USD Temperance ES\4-Drawings\4 M\M7.00 - M7.06 - Mechanical Schedules.dwg ryonf
P:\2025\25026 Sanger USD Temperance ES\4-Drawings\4 M\M7.00 - M7.06 - Mechanical Schedules.dwg Oct 21 2026 9:52am

MAKE-UP AIR UNIT SCHEDULE		
DESIGNATION		MUA 2-1
VOLTS / PHASE		460 / 3
M.C.A.		6.22
F.L.A.		5.02
SEER / IEER / EER @ ARI		-
SEER2 / EER2 @ ARI		-
BLOWER	SUPPLY AIR (CFM)	3,150
	EXT. SP (IN. WC)	2.92
	O.S.A. (CFM)	3,150
	HP/BHP	3.0 / 2.2
	RPM	2489
	DRIVE	DIRECT
COOLING	SENSIBLE (MBH)	121.36
	TOTAL (MBH)	121.36
	SOURCE	WATER
	ROWS / FINS PER INCH	4 / 9
	EADB / EAWB (°F)	105 / 72
	AMBIENT AIR (°F)	105.0
	UNIT DISCHARGE TEMP (°F)	70.0
	GPM / PD (FT.)	22.79 / 0.69
	EWT / LWT (°F)	44.0 / 54.62
	BRANCH SIZE (IN.)	3/8
	VALVE TYPE	2-WAY
HEATING	CAPACITY @ 47 DEG. (MBH)	177.64
	SOURCE	WATER
	ROWS / FINS PER INCH	2 / 9
	EAT / LAT (°F)	28.0 / 80.0
	GPM / PD (FT.)	16.17 / 0.81
	EWT / LWT (°F)	140.0 / 117.98
	BRANCH SIZE (IN.)	3/8
	VALVE TYPE	2-WAY
FILTERS	QUANTITY / SIZE	4 / 16 x 20 x 2
	TYPE	MERV 13
	P D (IN WC)	1.437
MANUFACTURER		TRANE
TYPE		CW / HW
MODEL NUMBER		UCCAK08C1J0EDH32
SERVICE		KITCHEN
LOCATION		BLDG 200 - ROOF
OPER. WT (LBS)		2,300
ACCESSORIES		1, 2, 3, 4, 5, 6, 7, 8

1 . STAINLESS STEEL DRAIN PAN, DOUBLE WALL CONSTRUCTION, HINGED ACCESS PANELS, TUBE AND FIN STYLE COIL, AND WEATHER HOODS.
2 . DIRECT DRIVE FAN MOTOR, INTERNAL ISOLATION, AND VARIABLE FREQUENCY DRIVE (VFD) WITH DISCONNECT, FACTORY MOUNTED IN LOCKABLE ENCLOSURE.
3 . SEISMIC SLOPED CURB. HEIGHT AND SLOPE OF CURB TO BE DETERMINED BY THE MECHANICAL CONTRACTOR.
4 . KMC AIRFLOW MONITORING STATION PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED PER MANUFACTURER GUIDELINES.
5 . INTERLOCK OPERATION WITH CAPTIVEAIRE CONTROL PANEL.
6 . UNIT SHALL BE SUPPLIED WITH A TERMINAL STRIP ONLY, CONTROLS CONTRACTOR TO PROVIDE CONTROLLER.
7 . AUTOMATIC SHUT DOWN FROM FIRE ALARM AREA DETECTION SYSTEM, WIRING FROM FIRE ALARM RELAY TO UNIT BY HVAC CONTRACTOR.
8 . 5 YEAR PARTS AND LABOR FACTORY WARRANTY.

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EXHAUST FAN SCHEDULE - PART 1									
DESIGNATION	EF 1-1	EF 1-2	EF 2-1	EF 2-2	EF 2-3	EF 2-4	EF 3-1	EF 4-1	EF 5-1
CFM	750	750	1210	350	160	160	1400	1400	1400
EXT. S.P. (IN. WC)	0.75	0.4	0.75	0.5	0.3	0.3	0.75	0.75	0.75
HP / BHP / WATTS	0.25 / 0.2 / -	- / - / 133	0.5 / 0.33 / -	0.166 / 0.09 / -	- / - / 21	- / - / 21	0.5 / 0.42 / -	0.5 / 0.42 / -	0.5 / 0.42 / -
VOLTS / PHASE	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1
MCA / MOP (AMPS)	4.0 / 15	- / -	8 / 15	3 / 15	- / -	- / -	8 / 15	8 / 15	8 / 15
FLA (AMPS)	2.85	4.75	6.4	2.2	1.5	1.5	6.4	6.4	6.4
RPM	1550	1121	1512	1503	991	991	1725	1725	1725
TIP SPEED/ SONES	4515 / 7.5	- / 5.0	5172 / 12.4	4279 / 10.0	- / 2.5	- / 2.5	5600 / 13.6	5600 / 13.6	5600 / 13.6
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
MOUNTING	ROOF	CEILING	ROOF	ROOF	CEILING	CEILING	ROOF	ROOF	ROOF
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK
TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
MODEL NUMBER	G-100-VG	SP-A1050-VG	G-120-VG	G-095-VG	SP-A390-VG	SP-A390-VG	G-120-VG	G-120-VG	G-120-VG
CONTROL	EMS	SEE NOTE 7	EMS	EMS	EMS	EMS	EMS	EMS	EMS
SERVICE	RESTROOMS	ELECTRICAL ROOM	RESTROOMS	JANITOR'S ROOM	TOILET ROOM	TOILET ROOM	RESTROOMS	RESTROOMS	RESTROOMS
LOCATION	BLDG 100	BLDG 100	BLDG 200	BLDG 200	BLDG 200	BLDG 200	BLDG 300	BLDG 400	BLDG 500
OPER. WT. (LBS)	200	100	200	100	50	50	150	150	150
ACCESSORIES	1, 2, 3, 4, 10	2, 5, 7	1, 2, 3, 4, 10	1, 2, 3, 4, 10	2, 5, 6, 10	2, 5, 6, 10	1, 2, 3, 4, 10	1, 2, 3, 4, 10	1, 2, 3, 4, 10

1 . FACTORY SLOPED CURB. HEIGHT AND SLOPE OF CURB TO BE DETERMINED BY THE MECHANICAL CONTRACTOR.
2 . VARI-GREEN EC MOTOR WITH DIAL ON MOTOR. MUST ACCEPT 1-10V SIGNAL.
3 . BACKDRAFT DAMPER. SHIPPED LOOSE AND INSTALLED BY MECHANICAL CONTRACTOR.
4 . STAINLESS BIRDSCREEN, CONDUIT CHASE, FOAM CURB SEAL, UL/CUL 705 LISTED, NEMA-1 SWITCH, AND FACTORY JUNCTION BOX MOUNTED AND WIRED IN WEATHER-PROTECTED MOTOR COMPARTMENT.
5 . UL/CUL 507 LISTED ELECTRIC FAN, ISOLATION KIT SHIPPED LOOSE, FACTORY INSTALLATION MOUNTING BRACKET, AND STANDARD GRILLE.
6 . FACTORY ROUND DUCT CONNECTION.
7 . FACTORY WALL MOUNTED THERMOSTAT FOR SPEED CONTROL. ENABLE FAN AT 8°F (ADJ.) ABOVE SETPOINT.
8 . FACTORY GREASE TRAP WITH ABSORBENT MATERIAL AND HINGED ROOF CURB. HEIGHT AND SLOPE TO BE DETERMINED BY MECHANICAL CONTRACTOR. DIRECT DRIVE MOTOR ISOLATED ON SHOCK MOUNTS. FACTORY HIGH TEMP CURB SEAL RATED AT CONTINUOUS DUTY AT 1500°F. UL/CUL 705 LISTED. NEMA-1 SWITCH, FACTORY JUNCTION BOX IN WEATHER-PROTECTED COMPARTMENT, AND NON-STICK COATED ALUMINUM WHEEL.
9 . CONTROL BY CAPTIVEAIRE CONTROL PANEL, EMS TO MONITOR ONLY.
10 . INTERLOCK OPERATION WITH nLIGHT OCCUPANCY SENSOR FOR ON/OFF OPERATIONS.

EXHAUST FAN SCHEDULE - PART 2										
DESIGNATION	EF 6-1 – EF 6-4	EF 6-5	EF 6-6	EF 6-7	EF 7-1	EF 7-2	KEF 2-1	KEF 2-2	CPF 1	CPF 2
CFM	100	110	110	200	100	100	2200	1300	3500	3500
EXT. S.P. (IN. WC)	0.3	0.3	0.3	0.3	0.3	0.3	1.4	1.0	0.25	0.25
HP / BHP / WATTS	- / - / 16	- / - / 16	- / - / 16	- / - / 27	- / - / 16	- / - / 16	2.0 / 0.83 / -	0.5 / 0.258 / -	2.0 / 0.35 / -	2.0 / 0.35 / -
VOLTS / PHASE	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	115 / 1	460 / 3	115 / 1	460 / 3	460 / 3
MCA / MOP (AMPS)	- / -	- / -	- / -	- / -	- / -	- / -	4.0 / 15	8.0 / 15	4 / 15	4 / 15
FLA (AMPS)	1.5	1.5	1.5	1.5	1.5	1.5	3.2	6.4	3.3	3.3
RPM	971	971	971	1030	971	971	1590	1725	870	870
TIP SPEED/ SONES	- / 2.5	- / 2.5	- / 2.5	- / 5.5	- / 2.5	- / 2.5	6049 / 13.8	5369 / 15.3	3261 / 6.7	3261 / 6.7
DRIVE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
MOUNTING	CEILING	CEILING	CEILING	CEILING	CEILING	CEILING	ROOF	ROOF	ROOF	ROOF
MANUFACTURER	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK	GREENHECK
TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
MODEL NUMBER	SP-A390-VG	SP-A390-VG	SP-A390-VG	SP-A390-VG	SP-A390-VG	SP-A390-VG	CUE-180HP-VG	CUE-120-VG	G-240-VG	G-240-VG
CONTROL	EMS	EMS	EMS	EMS	EMS	EMS	HOOD 2-1	HOOD 2-2	T-STAT	T-STAT
SERVICE	TOILET ROOMS	TOILET ROOM	TOILET ROOM	JANITOR'S ROOM	TOILET ROOMS	TOILET ROOMS	KITCHEN HOOD	DISHWASHER HOOD	CENTRAL PLANT	CENTRAL PLANT
LOCATION	BLDG 600	BLDG 600	BLDG 600	BLDG 600	BLDG 600	BLDG 600	BLDG 200	BLDG 200	CENTRAL PLANT	CENTRAL PLANT
OPER. WT. (LBS)	50	50	50	50	50	50	360	100	500	500
ACCESSORIES	2, 5, 6, 10	2, 5, 6, 10	2, 5, 6, 10	2, 5, 6, 10	2, 5, 6, 10	2, 5, 6, 10	2, 8, 9	2, 8, 9	1, 2, 3, 4, 7	1, 2, 3, 4, 7

1 . FACTORY SLOPED CURB. HEIGHT AND SLOPE OF CURB TO BE DETERMINED BY THE MECHANICAL CONTRACTOR.
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6 . FACTORY ROUND DUCT CONNECTION.
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9 . CONTROL BY CAPTIVEAIRE CONTROL PANEL, EMS TO MONITOR ONLY.
10 . INTERLOCK OPERATION WITH NLIGHT OCCUPANCY SENSOR FOR ON/OFF OPERATIONS.

APPROVALS

FILE # 10-126 APPLICATION # 02-123774

LICENSED ARCHITECT JAMES R. MORRELL No. C-33128 REN. 05-31-27 STATE OF CALIFORNIA

DATE: DECEMBER 18, 2025

NEW TEMPERANCE ELEMENTARY SCHOOL
SANGER UNIFIED SCHOOL DISTRICT
SANGER, FRESNO COUNTY, CA

REVISIONS
4 10/22/26 Addendum #4

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(559) 627.0530 Office
(559) 627.1926 Fax

TITLE
MECHANICAL SCHEDULES

M7.01

PROJECT 24042

RECOMMENDED PROFESSIONAL ENGINEER BRIAN W. CARLSON No. M34846 Exp. 6-30-28 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101 (559) 431-0101
25026
Fresno, CA 93727 FAX (559) 431-1362

21 October 2026 9:52 AM P:\2025\25026 Sanger USD Temperance ES\4-Drawings\4 M\M7.00 - M7.06 - Mechanical Schedules.dwg ryonf

AIR HANDLER SCHEDULE - PART 1

	DESIGNATION	AH 2-3	AH 2-4	AH 3-1 – AH 3-2	AH 3-3	AH 3-4 – AH 3-5	AH 3-6	AH 3-7	AH 3-8	AH 3-9	AH 4-1 – AH 4-2	AH 4-3	AH 4-4 – AH 4-5	AH 4-6	AH 4-7	AH 4-8	AH 4-9
	VOLTS / PHASE	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3
	M.C.A.(AMPS)	10.3	4.47	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13
	M.O.C.P. (AMPS)	-	-	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
	F.L.A. (AMPS)	8.22	3.62	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
SUPPLY FAN (PER FAN)	QUANITY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	SUPPLY AIR FLOW (CFM)	3,000	1,900	1,600	1,300	1,600	1,600	1,600	1,600	1,100	1,600	1,300	1,600	1,600	1,600	1,600	1,100
	TOTAL SP (IN. WC)	4.64	4.17	1.75	1.68	1.75	1.75	1.75	1.75	1.93	1.75	1.68	1.75	1.75	1.75	1.75	1.93
	MIN. O.S.A. (CFM)	425	450	450	1,300	450	450	450	450	300	450	1,300	450	450	450	450	300
	HP / BRAKE HP	8.05 / -	3 / 2.465	1.0 / 0.803	1.0 / 0.634	1.0 / 0.803	1.0 / 0.803	1.0 / 0.803	1.0 / 0.803	1.0 / 0.767	1.0 / 0.803	1.0 / 0.634	1.0 / 0.803	1.0 / 0.803	1.0 / 0.803	1.0 / 0.803	1.0 / 0.767
	FAN TYPE/CLASS	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -
	ISOLATOR DFLEC (IN.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
COOLING COIL	SENSIBLE (MBH)	82.67	52.36	42.43	79.17	42.43	42.43	42.43	42.43	28.49	42.43	79.17	42.43	42.43	42.43	42.43	28.49
	TOTAL (MBH)	116.53	73.75	58.54	91.26	58.54	58.54	58.54	58.54	41.76	58.54	91.26	58.54	58.54	58.54	58.54	41.76
	ROWS / FINS PER INCH	6 / 8.75	6 / 8.33	4 / 12	- / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12	- / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12
	AIR PD (IN. WC)	0.701	0.518	0.579	0.568	0.579	0.579	0.579	0.579	0.438	0.579	0.568	0.579	0.579	0.579	0.579	0.438
	EADB / EAWB (°F)	80 / 67	80 / 67	80 / 67	105 / 72	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	105 / 72	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67
	GPM / PD (FT.)	23.22 / 4.34	14.70 / 2.78	11.67 / 6.16	18.19 / 19.32	11.67 / 6.16	11.67 / 6.16	11.67 / 6.16	11.67 / 6.16	8.80 / 11.75	11.67 / 6.16	18.19 / 19.32	11.67 / 6.16	11.67 / 6.16	11.67 / 6.16	11.67 / 6.16	8.80 / 11.75
	EWT (°F)	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
	BRANCH SIZE (IN.)	1-1/2	1-1/2	1-1/4	1-1/2	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/2	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4
	VALVE TYPE	2-WAY	2-WAY	2-WAY	2-WAY	2-WAY	3-WAY	2-WAY	3-WAY	2-WAY	2-WAY	2-WAY	2-WAY	3-WAY	2-WAY	3-WAY	2-WAY
HEATING COIL	CAPACITY (MBH)	146.41	92.72	38.64	93.71	38.64	38.64	38.64	38.64	31.50	38.64	93.71	38.64	38.64	38.64	38.64	31.50
	ROWS / FINS PER IN.	2 / 9.25	2 / 9.83	1 / 12	- / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12	- / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12
	AIR PD (IN. WC)	0.196	0.154	0.112	0.123	0.112	0.112	0.112	0.112	0.086	0.112	0.123	0.112	0.112	0.112	0.112	0.086
	EWT / EAT (°F)	140 / 45	140 / 45	140 / 65	140 / 28	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65	140 / 28	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65
	GPM / PD (FT.)	14.67 / 1.94	9.29 / 0.46	3.87 / 1.66	9.39 / 3.33	3.87 / 1.66	3.87 / 1.66	3.87 / 1.66	3.87 / 1.66	2.92 / 2.75	3.87 / 1.66	9.39 / 3.33	3.87 / 1.66	3.87 / 1.66	3.87 / 1.66	3.87 / 1.66	2.92 / 2.75
	BRANCH SIZE	1-1/4	1	1	1-1/4	1	1	1	1	1	1	1-1/4	1	1	1	1	1
	VALVE TYPE	2-WAY	2-WAY	2-WAY	2-WAY	2-WAY	3-WAY	2-WAY	3-WAY	2-WAY	2-WAY	2-WAY	2-WAY	3-WAY	2-WAY	3-WAY	2-WAY
PRE-FILTER	QUANTITY / SIZE	4 / 16 x 20 x 2	4 / 16 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 12 x 12 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 12 x 12 x 2
	QUANTITY / SIZE	-	-	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 24 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 24 x 2
	TYPE	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13
	FINAL PD (IN WC)	1.00	1.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MANUFACTURER	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
	TYPE	VERTICAL	VERTICAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	VERTICAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	VERTICAL
	MODEL NUMBER	CSAA006	CSAA004	BCVE048	BCVR048	BCVE048	BCVE048	BCVE048	BCVE048	BCHE036	BCVE048	BCVR048	BCVE048	BCVE048	BCVE048	BCVE048	BCHE036
	SERVICE	KITCHEN	FLEX ROOM	CLASSROOM	RR & CONF.	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	HALLWAY	CLASSROOM	RR & CONF.	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	HALLWAY
	LOCATION	BLDG 200 - ROOF	BLDG 200 - MEZZANINE	BLDG 300 - MECH. CLOSET	BLDG 300 - MECH. CLOSET	BLDG 300 - MECH. CLOSET	BLDG 300 - MECH. CLOSET	BLDG 300 - MECH. CLOSET	BLDG 300 - MECH. CLOSET	BLDG 300 - MEZZANINE	BLDG 400 - MECH. CLOSET	BLDG 400 - MECH. CLOSET	BLDG 400 - MECH. CLOSET	BLDG 300 - MECH. CLOSET	BLDG 300 - MECH. CLOSET	BLDG 300 - MECH. CLOSET	BLDG 400 - MEZZANINE
	OPER. WT (LBS)	2,000	2,000	500	500	500	500	500	500	500	500	500	500	500	500	500	500
	ACCESSORIES	1, 2, 3, 4, 6, 8, 9, 10, 13	1, 2, 3, 5, 6, 7, 8, 9, 10, 12, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 3, 6, 9, 10, 12, 13	1, 2, 6, 7, 8, 9, 10, 11, 13	1, 2, 6, 7, 8, 9, 10, 11, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 3, 6, 9, 10, 12, 13

1. STAINLESS STEEL DRAIN PAN, DOUBLE WALL CONSTRUCTION, HINGED ACCESS PANELS, AND TUBE AND FIN STYLE COIL.
2. DIRECT DRIVE FAN MOTOR MUST ACCEPT 0-10V SIGNAL, INTERNALLY ISOLATED.
3. MIXING SECTION WITH MODULATING OUTDOOR AIR AND RETURN/EXHAUST AIR DAMPERS, AND MERV-13 FILTER RACK.
4. SEISMIC SLOPED CURB. HEIGHT AND SLOPE OF CURB TO BE DETERMINED BY THE MECHANICAL CONTRACTOR.
5. VARIABLE FREQUENCY DRIVE (VFD) WITH DISCONNECT, FACTORY MOUNTED IN LOCKABLE ENCLOSURE.
6. KMC AIRFLOW MONITORING STATION PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED PER MANUFACTURER GUIDELINES.
7. UV-C LIGHTS
8. CO2 SENSOR PROVIDED BY CONTROLS CONTRACTOR FOR DEMAND CONTROL VENTILATION AND INTEGRATE INTO EXISTING EMS.
9. UNITS SHALL BE SUPPLIED WITH A TERMINAL STRIP ONLY, CONTROLS CONTRACTOR TO PROVIDE CONTROLLER.
10. AUTOMATIC SHUT DOWN FROM FIRE ALARM AREA DEECTION SYSTEM, WIRING FROM FIRE ALARM RELAY TO UNIT BY HVAC CONTRACTOR.
11. FACTORY SINGLE POINT POWER.
12. UNIT MUST FIT THRU A 48 IN. X 48 IN. OPENING.
13. 5 YEAR PARTS AND LABOR FACTORY WARRANTY.

△4

APPROVALS

FILE # 10-126 | APPLICATION # 02-123774

LICENSED ARCHITECT JAMES R. MORRELL No. C-33128 REN. 05-31-27 STATE OF CALIFORNIA

DATE: DECEMBER 18, 2025

NEW TEMPERANCE ELEMENTARY SCHOOL
SANGER UNIFIED SCHOOL DISTRICT
SANGER, FRESNO COUNTY, CA

REVISIONS
△4 10/23/26 Addendum #4

MANGINI ARCHITECTURE | INGENUITY.
MANGINI ASSOCIATES INC.
4320 West Mineral King Avenue
Visalia, California 93291
www.mangini.us
(559) 627.0530 Office
(559) 627.1926 Fax

TITLE: MECHANICAL SCHEDULES

M7.02

PROJECT 24042

REGISTERED PROFESSIONAL ENGINEER RYAN W. CARLSEN No. M34846 Exp. 6-30-28 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101
(559) 431-0101
25026
Fresno, CA 93727
FAX (559) 431-1362

21 October 2026 9:53 AM P:\2025\25026 Sanger USD Temperance ES\4-Drawings\4 M\M7.00 - M7.06 - Mechanical Schedules.dwg ryanf

P:\2025\25026 Sanger USD Temperance ES\4-Drawings\4 M\M7.00 - M7.06 - Mechanical Schedules.dwg Oct 21 2026 9:53am

AIR HANDLER SCHEDULE - PART 2

DESIGNATION	AH 5-1 – AH 5-2	AH 5-3	AH 5-4 – AH 5-5	AH 5-6	AH 5-7	AH 5-8	AH 5-9	AH 6-1	AH 6-2	AH 6-3 – AH 6-4	AH 6-5	AH 6-6	AH 7-1	AH 7-2	AH 7-3
VOLTS / PHASE	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3	460 / 3
M.C.A.(AMPS)	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13	3.13
M.O.C.P. (AMPS)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
F.L.A. (AMPS)	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
SUPPLY FAN (PER FAN)															
QUANITY	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
SUPPLY AIR FLOW (CFM)	1,600	1,300	1,600	1,600	1,600	1,600	1,100	1,600	725	1,600	725	1,600	1,600	725	1,600
TOTAL SP (IN. WC)	1.75	1.68	1.75	1.75	1.75	1.75	1.93	1.75	1.87	1.75	1.87	1.75	1.75	1.87	1.75
MIN. O.S.A. (CFM)	450	1,300	450	450	450	450	300	450	205	450	205	450	450	205	450
HP / BRAKE HP	1.0 / 0.803	1.0 / 0.634	1.0 / 0.803	1.0 / 0.803	1.0 / 0.803	1.0 / 0.803	1.0 / 0.767	1.0 / 0.803	1.0 / 0.574	1.0 / 0.803	1.0 / 0.574	1.0 / 0.803	1.0 / 0.803	1.0 / 0.574	1.0 / 0.803
FAN TYPE/CLASS	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -	DIRECT / -
ISOLATOR DFLEC (IN.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
COOLING COIL															
SENSIBLE (MBH)	42.43	79.17	42.43	42.43	42.43	42.43	28.49	39.94	16.87	39.94	16.87	39.94	39.94	16.87	39.94
TOTAL (MBH)	58.54	91.26	58.54	58.54	58.54	58.54	41.76	56.05	23.20	56.05	23.20	56.05	56.05	23.20	56.05
ROWS / FINS PER INCH	4 / 12	- / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12	4 / 12
AIR PD (IN. WC)	0.579	0.568	0.579	0.579	0.579	0.579	0.438	0.579	0.457	0.579	0.457	0.579	0.579	0.457	0.579
EADB / EAWB (°F)	80 / 67	105 / 72	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67
GPM / PD (FT.)	11.67 / 6.16	18.19 / 19.32	11.67 / 6.16	11.67 / 6.16	11.67 / 6.16	11.67 / 6.16	8.80 / 11.75	11.67 / 6.16	4.98 / 3.32	11.67 / 6.16	4.98 / 3.32	11.67 / 6.16	11.67 / 6.16	4.98 / 3.32	11.67 / 6.16
EWT (°F)	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
BRANCH SIZE (IN.)	1-1/4	1-1/2	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1-1/4	1	1-1/4	1	1-1/4	1-1/4	1	1-1/4
VALVE TYPE	2-WAY	2-WAY	2-WAY	3-WAY	2-WAY	3-WAY	2-WAY	3-WAY	2-WAY	2-WAY	2-WAY	2-WAY	2-WAY	2-WAY	3-WAY
HEATING COIL															
CAPACITY (MBH)	38.64	93.71	38.64	38.64	38.64	38.64	31.50	41.13	19.10	41.13	19.10	41.13	41.13	19.10	41.13
ROWS / FINS PER IN.	1 / 12	- / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12	1 / 12
AIR PD (IN. WC)	0.112	0.123	0.112	0.112	0.112	0.112	0.086	0.112	0.094	0.112	0.094	0.112	0.112	0.094	0.112
EWT / EAT (°F)	140 / 65	140 / 28	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65	140 / 65
GPM / PD (FT.)	3.87 / 1.66	9.39 / 3.33	3.87 / 1.66	3.87 / 1.66	3.87 / 1.66	3.87 / 1.66	2.92 / 2.75	3.87 / 1.66	1.74 / 0.86	3.87 / 1.66	1.74 / 0.86	3.87 / 1.66	3.87 / 1.66	1.74 / 0.86	3.87 / 1.66
BRANCH SIZE	1	1-1/4	1	1	1	1	1	1	1/2	1	1/2	1	1	1/2	1
VALVE TYPE	2-WAY	2-WAY	2-WAY	3-WAY	2-WAY	3-WAY	2-WAY	3-WAY	2-WAY	2-WAY	2-WAY	2-WAY	2-WAY	2-WAY	3-WAY
PRE-FILTER															
QUANTITY / SIZE	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 18 x 20 x 2	1 / 12 x 12 x 2	1 / 18 x 20 x 2	FACTORY	1 / 18 x 20 x 2	FACTORY	1 / 18 x 20 x 2	1 / 18 x 20 x 2	FACTORY	1 / 18 x 20 x 2
QUANTITY / SIZE	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 20 x 2	1 / 12 x 24 x 2	1 / 12 x 20 x 2	-	1 / 12 x 20 x 2	-	1 / 12 x 20 x 2	1 / 12 x 20 x 2	-	1 / 12 x 20 x 2
TYPE	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13
FINAL PD (IN WC)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MANUFACTURER	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
TYPE	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	VERTICAL	HORIZONTAL	HORIZONTAL	VERTICAL	HORIZONTAL
MODEL NUMBER	BCVE048	BCVR048	BCVE048	BCVE048	BCVE048	BCVE048	BCHE036	BCVE048	BCHE024	BCVE048	BCHE024	BCVE048	BCVE048	BCHE024	BCVE048
SERVICE	CLASSROOM	RR & CONF.	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	HALLWAY	CLASSROOM	T.W.R.	CLASSROOM	T.W.R.	CLASSROOM	CLASSROOM	T.W.R.	CLASSROOM
LOCATION	BLDG 500 - MECH. CLOSET	BLDG 500 - MECH. CLOSET	BLDG 500 - MECH. CLOSET	BLDG 300 - MECH. CLOSET	BLDG 300 - MECH. CLOSET	BLDG 300 - MECH. CLOSET	BLDG 500 - MEZZANINE	BLDG 600 - MECH. CLOSET	BLDG 600 - MEZZANINE	BLDG 600 - MECH. CLOSET	BLDG 600 - MEZZANINE	BLDG 600 - MECH. CLOSET	BLDG 700 - MECH. CLOSET	BLDG 700 - MEZZANINE	BLDG 700 - MECH. CLOSET
OPER. WT (LBS)	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
ACCESSORIES	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 3, 6, 9, 10, 12, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 3, 6, 9, 10, 12, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 3, 6, 9, 10, 12, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 6, 7, 8, 9, 10, 13	1, 2, 3, 6, 9, 10, 12, 13	1, 2, 6, 7, 8, 9, 10, 13

1. STAINLESS STEEL DRAIN PAN, DOUBLE WALL CONSTRUCTION, HINGED ACCESS PANELS, AND TUBE AND FIN STYLE COIL.
2. DIRECT DRIVE FAN MOTOR MUST ACCEPT 0-10V SIGNAL, INTERNALLY ISOLATED.
3. MIXING SECTION WITH MODULATING OUTDOOR AIR AND RETURN/EXHAUST AIR DAMPERS, AND MERV-13 FILTER RACK.
4. SEISMIC SLOPED CURB. HEIGHT AND SLOPE OF CURB TO BE DETERMINED BY THE MECHANICAL CONTRACTOR.
5. VARIABLE FREQUENCY DRIVE (VFD) WITH DISCONNECT, FACTORY MOUNTED IN LOCKABLE ENCLOSURE.
6. KMC AIRFLOW MONITORING STATION PROVIDED BY MECHANICAL CONTRACTOR, INSTALLED PER MANUFACTURER GUIDELINES, AND INTEGRATED WITH THE EMS.
7. UV-C LIGHTS
8. CO2 SENSOR PROVIDED BY CONTROLS CONTRACTOR FOR DEMAND CONTROL VENTILATION AND INTEGRATE INTO EXISTING EMS.
9. UNITS SHALL BE SUPPLIED WITH A TERMINAL STRIP ONLY, CONTROLS CONTRACTOR TO PROVIDE CONTROLLER.
10. AUTOMATIC SHUT DOWN FROM FIRE ALARM AREA DEECTION SYSTEM, WIRING FROM FIRE ALARM RELAY TO UNIT BY HVAC CONTRACTOR.
11. FACTORY SINGLE POINT POWER.
12. UNIT MUST FIT THRU A 48 IN. X 48 IN. OPENING.
13. 5 YEAR PARTS AND LABOR FACTORY WARRANTY.

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PUMP SCHEDULE

DESIGNATION	CWP 1	CWP 2 – CWP 3	HWP 1	HWP 2 – HWP 3
HP/BHP	15 / 13	15 / 11	7.5 / 6.24	10 / 7.35
VOLTS/PHASE	460 / 3	460 / 3	460 / 3	460 / 3
RPM	1748	1714	1689	1728
GPM/TDH (FT.)	660 / 65	376 / 90	325 / 55	195 / 110
EFFICIENCY (%)	83.2	76.9	71.3	72.4
NPSH (FT)	10.4	6.12	9.77	6.96
MANUFACTURER	BELL AND GOSSETT	BELL AND GOSSETT	BELL AND GOSSETT	BELL AND GOSSETT
MOUNTING	BASE MOUNTED	BASE MOUNTED	BASE MOUNTED	BASE MOUNTED
TYPE	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL	CENTRIFUGAL
MODEL NUMBER	BG-E1510-3BD-SS-254T-S	BG-E1510-3EB-SS-254T-S	BG-E1510-2P5BB-SS-213T-S	BG-E1510-2EB-SS-215T-S
SERVICE	PRIMARY	SECONDARY	PRIMARY	SECONDARY
LOCATION	CENTRAL PLANT BLDG	CENTRAL PLANT BLDG	CENTRAL PLANT BLDG	CENTRAL PLANT BLDG
OPER. WT. (LBS)	375	375	325	350
ACCESSORIES	1, 2, 3	1, 2, 3	1, 2, 3	1, 2, 3

1. STAINLESS STEEL VOLUTE WEAR RING, GALVANIZED STEEL DRIP PAN, STAINLESS STEEL SHAFT, REXNORD OMEGA SPACE COUPLING, FLAK T31 SPACER COUPLING, EXTERNAL FLUSH LINE, STUFFING BOX CONFIGURATION, EPOXY COATED INTERNAL CAST IRON COMPONENTS.
2. SUCTION DIFFUSER.
3. ABB VFD #ACS580 PROVIDED BY CONTROLS CONTRACTOR.

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EVAPORATOR SCHEDULE

DESIGNATION	E 2-1	E 2-2
AIRFLOW (CFM)	-	-
MCA / MOPD	- / -	- / -
VOLTS/PHASE	208-230 / 1	208-230 / 1
TOTAL CAP. (MBH)	15,300	12,400
REFRIGERANT	R448A	R448A
REFRIG. SAFETY CLASS.	-	-
EVAP. TEMP. (°F)	25	-10
BOX TEMP. (°F)	35	0
LIQ. / SUCTION (IN.)	- / -	- / -
MANUFACTURER	RUSSELL	RUSSELL
DEFROST TYPE	ELECTRIC	ELECTRIC
MODEL NUMBER	RL6A130ADARE	RL6E105DDARE
SERVICE	REFRIGERATOR	FREEZER
LOCATION	BLDG 200 - INTERIOR WALL	BLDG 200 - INTERIOR WALL
OPER. WT (LBS)	-	-
ACCESSORIES	1, 2, 3, 4	1, 2, 3, 4

1. INCLUDES DEFROST HEATER.
2. FACTORY ECONET CONTROLS, FACTORY MOUNTED.
3. INTEGRATE INTO EMS. EMS TO MONITOR ONLY.
4. EMS TEMPERATURE SENSOR WITH ALARM, PROVIDED BY CONTROLS CONTRACTOR.

CONDENSING UNIT SCHEDULE

DESIGNATION	CU 2-1	CU 2-2
NAME PLATE AMPS	-	-
VOLTS / PHASE	208-230 / 1	208-230 / 1
MCA / MOPD / RLA (AMPS)	0 / 30 / 14.1	46 / 60 / 24.7
COMPRESSOR HP	2	5
COMPRESSOR TYPE	SCROLL	SCROLL
LIQ. / SUCTION (IN.)	- / -	- / -
COOLING CAP (MBH)	14,790	14,170
AMBIENT (°F)	110	110
MANUFACTURER	RUSSELL	RUSSELL
MODEL NUMBER	RFO200E4SDANT	RFO500L4SDBNT
SERVICE	REFRIGERATOR	FREEZER
LOCATION	BLDG 200 - ROOF	BLDG 200 - ROOF
OPER. WT (LBS)	100	100
ACCESSORIES	1	1

1. REPLACEABLE CORE SUCTION FILTER, REPLACEABLE CORE LIQUID LINE FILTER, FAN CYCLING CONTROL, SUCTION ACCUMULATOR, MANUAL RESET HIGH PRESSURE SWITCH, AND SIGHT GLASS.

KITCHEN HOOD SCHEDULE

DESIGNATION	KH 2-1	KH 2-2
SIZE (L X W) (FT.)	12' 7" x 5' 0"	6' 6" x 5' 6"
CFM	2200	1300
DUCT CONN. NO. / SIZE	1 / 14"	1 / 12"
STATIC DROP (IN. WC)	-	-
MATERIAL	430 SS	430 SS
FILTER-QTY/SIZE (IN.)	9 / 20 x 16	-
MANUFACTURER	CAPTIVEAIRE	CAPTIVEAIRE
TYPE	TYPE 1	TYPE 2
MODEL NUMBER	6030 ND-2	6624 VHB-G-ND
SERVICE	KITCHEN	DISHWASHER
LOCATION	KITCHEN	CLEAN UP ROOM
OPER. WT. (LBS)	1200	500
ACCESSORIES	1, 3	2

1. FIELD WRAPPER, BACKSPLASH, LEFT AND RIGHT SIDESPLASHES, LEFT AND RIGHT END STANDOFFS, STRUCTURAL FRONT PANEL, AND INSULATION FOR TOP OF HOOD.
2. FIELD WRAPPER, BACKSPLASH, LEFT SIDESPLASH, AND BACKSPLASH INSIDE CORNER.
3. FIRE SUPPRESSION ANSUL SYSTEM. SEE KITCHEN HOOD SHOP DRAWINGS ON SHEET M7.07.

APPROVALS

FILE # 10-126 APPLICATION # 02-123774

LICENSED ARCHITECT JAMES R. MORRELL No. C-33128 REN. 05-31-27 STATE OF CALIFORNIA

DATE: DECEMBER 18, 2025

NEW TEMPERANCE ELEMENTARY SCHOOL
SANGER UNIFIED SCHOOL DISTRICT
SANGER, FRESNO COUNTY, CA

REVISIONS
4 10/23/26 Addendum #4

MANGINI ARCHITECTURE INGENUITY.
MANGINI ASSOCIATES INC.
4320 West Mineral King Avenue
Visalia, California 93291
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REGISTERED PROFESSIONAL ENGINEER JEAN W. CARLSEN No. M34846 Exp. 6-30-28 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
4910 E. Clinton Way, Suite 101
(559) 431-0101
25026
Fresno, CA 93727
FAX (559) 431-1362

TITLE
MECHANICAL SCHEDULES

M7.03

PROJECT 24042

AIR HANDLER WITH RETURN FAN SCHEDULE

	DESIGNATION	AH 2-1	AH 2-2
SUPPLY FAN (PER FAN)	QUANITY	1	1
	SUPPLY AIR FLOW (CFM)	9,000	4,000
	TOTAL SP (IN. WC)	4.13	4.01
	MIN. O.S.A. (CFM)	2,900	735
	HP / BRAKE HP	10 / 9.106	5 / 3.98
	VOLTS / PHASE	460 / 3	460 / 3
	M.C.A. (AMPS)	17.5	10.25
	F.L.A. (AMPS)	14.0	8.20
	FAN TYPE/CLASS	DIRECT / -	DIRECT / -
	ISOLATOR DFLEC (IN.)	2.0	2.0
RETURN FAN (PER FAN)	QUANTITY	1	1
	RETURN AIR FLOW (CFM)	9,000	4,000
	EXT. SP (IN. WC)	1.09	0.71
	HP / BRAKE HP	5 / 3.378	1.5 / 1.04
	M.C.A. (AMPS)	10.25	4.25
	F.L.A. (AMPS)	8.20	3.40
	VOLTS / PHASE	460 / 3	460 / 3
	FAN TYPE/CLASS	DIRECT / -	DIRECT / -
	ISOLATOR DFLEC (IN.)	2.0	2.0
COOLING COIL	SENSIBLE (MBH)	297.8	110.23
	TOTAL (MBH)	402.4	155.46
	COIL SIZE (FT.²)	20.8	9.7
	ROWS / FINS PER INCH	6 / 10	6 / 8.16
	AIR PD (IN. WC)	0.589	0.483
	EADB / EAWB (°F)	85 / 69	80 / 67
	GPM / PD (FT.)	80.2 / 2.85	20.66 / 3.81
	EWT (°F)	44	44
	BRANCH SIZE (IN.)	3	1-1/2
	VALVE TYPE	2-WAY	3-WAY
HEATING COIL	CAPACITY (MBH)	305.5	195.2
	COIL SIZE (FT.²)	20.5	9.72
	ROWS / FINS PER IN.	2 / 8.92	2 / 9.08
	AIR PD (IN. WC)	0.13	0.141
	EWT / EAT (°F)	140 / 58.7	140 / 45
	GPM / PD (FT.)	30.61 / 1.43	19.56 / 1.27
	BRANCH SIZE	2	1-1/2
	VALVE TYPE	2-WAY	3-WAY
PRE-FILTER	QUANTITY / SIZE	12 / 16 x 25 x 2	4 / 20 x 25 x 2
	QUANTITY / SIZE	-	-
	TYPE	MERV 13	MERV 13
	FINAL PD (IN WC)	1.0	1.00
MANUFACTURER		TRANE	TRANE
TYPE		VERTICAL	VERTICAL
MODEL NUMBER		CSAA021	CSAA010
SERVICE		MULTI-USE	STAGE
LOCATION		BLDG 200 - MEZZANINE	BLDG 200 - MEZZANINE
OPER. WT (LBS)		5,000	3,000
ACCESSORIES		1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13	1, 2, 3, 5, 6, 8, 9, 10, 11, 12, 13

1. STAINLESS STEEL DRAIN PAN, DOUBLE WALL CONSTRUCTION, HINGED ACCESS PANELS, AND TUBE AND FIN STYLE COIL.
2. DIRECT DRIVE FAN MOTOR MUST ACCEPT 0-10V SIGNAL, INTERNALLY ISOLATED.
3. MIXING SECTION WITH MODULATING OUTDOOR AIR AND RETURN/EXHAUST AIR DAMPERS, AND MERV-13 FILTER RACK.
4. SEISMIC SLOPED CURB. HEIGHT AND SLOPE OF CURB TO BE DETERMINED BY THE MECHANICAL CONTRACTOR.
5. VARIABLE FREQUENCY DRIVE (VFD) WITH DISCONNECT, FACTORY MOUNTED IN LOCKABLE ENCLOSURE.
6. KMC AIRFLOW MONITORING STATION PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED PER MANUFACTURER GUIDELINES.
7. UV-C LIGHTS
8. CO2 SENSOR PROVIDED BY CONTROLS CONTRACTOR FOR DEMAND CONTROL VENTILATION AND INTEGRATE INTO EXISTING EMS.
9. UNITS SHALL BE SUPPLIED WITH A TERMINAL STRIP ONLY, CONTROLS CONTRACTOR TO PROVIDE CONTROLLER.
10. AUTOMATIC SHUT DOWN FROM FIRE ALARM AREA DEECTION SYSTEM, WIRING FROM FIRE ALARM RELAY TO UNIT BY HVAC CONTRACTOR.
11. FACTORY SINGLE POINT POWER.
12. UNIT MUST FIT THRU A 60 IN. X 60 IN. OPENING.
13. 5 YEAR PARTS AND LABOR FACTORY WARRANTY.

SOUND TRAP SCHEDULE

DESIGNATION	ST 3-1 – ST 3-2	ST 3-4 – ST 3-9	ST 4-1 – ST 4-2	ST 4-4 – ST 4-9	ST 5-1 – ST 5-2	ST 5-4 – ST 5-9	ST 6-1	ST 6-3 – ST 6-4	ST 6-6	ST 7-1	ST 7-3
AIR FLOW (CFM)	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600	1,600
FACE VELOCITY (FPM)	576	576	576	576	576	576	576	576	576	576	576
PRESS. DROP (IN. W.C.)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
SIZE (W" x H" x L")	20 x 20 x 54	20 x 20 x 54	20 x 20 x 54	20 x 20 x 54	20 x 20 x 54	20 x 20 x 54	20 x 20 x 54	20 x 20 x 54	20 x 20 x 54	20 x 20 x 54	20 x 20 x 54
DYNAMIC INSERTION LOSS (DB)											
63 hz	6	6	6	6	6	6	6	6	6	6	6
125 hz	10	10	10	10	10	10	10	10	10	10	10
250 hz	19	19	19	19	19	19	19	19	19	19	19
500 hz	31	31	31	31	31	31	31	31	31	31	31
1000 hz	29	29	29	29	29	29	29	29	29	29	29
2000 hz	22	22	22	22	22	22	22	22	22	22	22
4000 hz	16	16	16	16	16	16	16	16	16	16	16
8000 hz	12	12	12	12	12	12	12	12	12	12	12
GENERATED NOISE (DB)											
63 hz	28	28	28	28	28	28	28	28	28	28	28
125 hz	21	21	21	21	21	21	21	21	21	21	21
250 hz	26	26	26	26	26	26	26	26	26	26	26
500 hz	32	32	32	32	32	32	32	32	32	32	32
1000 hz	29	29	29	29	29	29	29	29	29	29	29
2000 hz	26	26	26	26	26	26	26	26	26	26	26
4000 hz	14	14	14	14	14	14	14	14	14	14	14
8000 hz	10	10	10	10	10	10	10	10	10	10	10
AIR DIRECTION	REVERSE	REVERSE	REVERSE	REVERSE	REVERSE	REVERSE	REVERSE	REVERSE	REVERSE	REVERSE	REVERSE
MANUFACTURER	BRD	BRD	BRD	BRD	BRD	BRD	BRD	BRD	BRD	BRD	BRD
SHAPE	RECTANGULAR	RECTANGULAR	RECTANGULAR	RECTANGULAR	RECTANGULAR	RECTANGULAR	RECTANGULAR	RECTANGULAR	RECTANGULAR	RECTANGULAR	RECTANGULAR
MODEL NUMBER	C4-54LR	C4-54LR	C4-54LR	C4-54LR	C4-54LR	C4-54LR	C4-54LR	C4-54LR	C4-54LR	C4-54LR	C4-54LR
SERVICE	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM	CLASSROOM
LOCATION	BLDG 300 - ABOVE CEILING	BLDG 300 - ABOVE CEILING	BLDG 400 - ABOVE CEILING	BLDG 400 - ABOVE CEILING	BLDG 500 - ABOVE CEILING	BLDG 500 - ABOVE CEILING	BLDG 600 - ABOVE CEILING	BLDG 600 - ABOVE CEILING	BLDG 600 - ABOVE CEILING	BLDG 700 - ABOVE CEILING	BLDG 700 - ABOVE CEILING
OPER. WT. (LBS)	150	150	150	150	150	150	150	150	150	150	150
ACCESSORIES	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2

1 . PROVIDE WITH 22 GAUGE GAL. STEEL CASING, 26 GAUGE GAL. PERFORATED STEEL PARTITIONS, INORGANIC GLASS FIBER FILLER MATERIAL PACKED 5% COMPRESSION, ASTM E84 FLAME/SMOKE RATING OF 20/20.
2 . ASTM E477 RATED.

PACKAGE AIR CONDITIONING SCHEDULE

	DESIGNATION	HP 1-1	HP 1-2	HP 1-3	HP 1-4	HP 1-5	HP 1-6	HP 1-7
	VOLTS / PHASE	460 / 3	460 / 3	460 / 3	460 / 3	208-230 / 1	460 / 3	460 / 3
	F.L.A. (AMPS)	-	-	-	-	-	-	-
	MCA / MOCP (AMPS)	22 / 25	22 / 25	25 / 30	33 / 35	44 / 45	33 / 35	25 / 30
	SEER / EER / IEER @ ARI	16.8 / 13.5 / -	16.8 / 13.5 / -	16.8 / 13.5 / -	16.3 / 12.8 / -	-	16.3 / 12.8 / -	16.8 / 13.5 / -
	SEER2 / EER2 @ ARI	12.8 / 16.2 / -	-	-	-	15.2 / 11.5	-	-
BLOWER	SUPPLY AIR (CFM)	1200	1200	1600	2400	810	2400	1600
	EXT. SP (IN. WC)	1.02	1.02	1.03	1.08	-	1.08	1.03
	MIN. O.S.A. (CFM)	225	195	450	670	135	750	450
	HP / BHP	3.0 / 0.472	3.0 / 0.472	3.0 / 0.579	3.0 / 0.906	0.5 / -	3.0 / 0.91	3.0 / 0.579
	RPM	911	911	961	1127	810	1127	961
	DRIVE TYPE	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
COOLING	SENSIBLE (MBH)	26.59	26.59	35.59	54.59	19.2	68.67	35.59
	TOTAL (MBH)	33.08	33.08	45.05	70.64	23.4	70.38	45.05
	EADB / EAWB (°F)	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67	80 / 67
	AMBIENT AIR (°F)	105	105	105	105	105	105	105
	UNIT DISCH. TEMP (°F)	59.84	59.84	59.30	59.23	-	58.18	59.30
	REFRIGERANT TYPE	R-454B	R-454B	R-454B	R-454B	R-454B	R-454B	R-454B
	REFRIG. CLASSIFICATION	A2L	A2L	A2L	A2L	A2L	A2L	A2L
	TONS OF REFRIGERATION	3.0	3.0	4.0	6.0	2.0	6.0	4.0
HEATING	OUTPUT CAPACITY (MBH)	32.74	32.74	43.32	69.63	22.2	72.25	43.32
	UNIT DISCH. TEMP (°F)	99.43	99.43	99.17	101.26	-	89.42	99.17
	FUEL	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC	ELECTRIC
	AUXILIARY ELEC. (KW)	6.0	6.0	6.0	9.0	3.76	9.0	6.0
	COP (AT 47°F)	3.8	3.8	3.8	3.72	3.57	3.72	3.8
FILTERS	QUANTITY / SIZE	2) 18" x 24" x 2" 3) 24" x 16" x 2"	2) 18" x 24" x 2" 3) 24" x 16" x 2"	2) 18" x 24" x 2" 3) 24" x 16" x 2"	2) 18" x 24" x 2" 3) 24" x 16" x 2"	FACTORY	2) 18" x 24" x 2" 3) 24" x 16" x 2"	2) 18" x 24" x 2" 3) 24" x 16" x 2"
	TYPE	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13	MERV 13
	P D (IN WC)	0.3	0.3	0.3	0.3	-	0.3	0.3
MANUFACTURER		TRANE	TRANE	TRANE	TRANE	TRANE	TRANE	TRANE
TYPE		HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP	HEAT PUMP
MODEL NUMBER		WHK036A4S0B	WHK036A4S0B	WHK048A4S0B	WHK072A4S0C	5WCZ5024A1	WHK072A4S0C	WHK048A4S0B
SERVICE		LOBBY	OFFICES	STAFF LOUNGE	LIBRARY	CONFERENCE	NURSE & OFFICES	ELOP ROOM
LOCATION		BLDG 100 - ROOF	BLDG 100 - ROOF	BLDG 100 - ROOF	BLDG 100 - ROOF	BLDG 100 - ROOF	BLDG 100 - ROOF	BLDG 100 - ROOF
OPER. WT - UNIT ONLY (LBS)		1300	1300	1300	1500	415	1500	1300
ACCESSORIES		1, 2, 3, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 5, 7, 8, 9, 10, 11	1, 2, 3, 5, 7, 8, 9, 10, 11	1, 2, 4, 5, 7, 8, 9, 10, 11	1, 2, 3, 5, 6, 7, 8, 9, 10, 11	1, 2, 4, 5, 7, 8, 9, 10, 11	1, 2, 3, 5, 6, 7, 8, 9, 10, 11

1 . FACTORY REMOVABLE MAINTENANCE ACCESS PANELS, DUAL-SLOPED REMOVABLE CONDENSATE DRAIN PAIN, COIL GUARDS, DIRECT DRIVE SCROLL COMPRESSORS, MERV-13 FILTERS, AND FROSTAT.
2 . SEISMIC SLOPED CURB. HEIGHT AND SLOPE OF CURB TO BE DETERMINED BY THE MECHANICAL CONTRACTOR. (WEIGHT NOT INCLUDED IN WEIGHT LISTED ABOVE).
3 . MODULATING TITLE 24 COMPLIANT POWER EXHAUST AND ECONOMIZER WITH ACTUATOR ONLY. REQUIRES SEPARATE POWER AND DISCONNECT. POWER REQUIREMENTS: 460V / 3PH, 1.5 FLA, 1.9 MCA, 3.4 MOCP. (WEIGHT **NOT** INCLUDED IN WEIGHT LISTED ABOVE).
4 . MODULATING TITLE 24 COMPLIANT POWER EXHAUST AND ECONOMIZER WITH ACTUATOR ONLY. REQUIRES SEPARATE POWER AND DISCONNECT. POWER REQUIREMENTS: 460V / 3PH, 2.8 FLA, 3.5 MCA, 6.3 MOCP. (WEIGHT **NOT** INCLUDED IN WEIGHT LISTED ABOVE).
5 . KMC AIRFLOW MONITORY STATION PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED PER MANUFACTURER GUIDELINES.
6 . CO2 SENSOR PROVIDED BY CONTROLS CONTRACTOR FOR DEMAND CONTROL VENTILATION.
7 . AUTOMATIC SHUT DOWN FROM FIRE ALARM AREA DETECTION SYSTEM, WIRING FROM FIRE ALARM RELAY TO UNIT BY HVAC CONTRACTOR.
8 . UNIT TO BE LABELED PER ASHRAE 15. SEE SPECIFICATIONS FOR MORE DETAILS.
9 . INTEGRATE WITH EMS.
10 . BACNET BY CONTROLS CONTRACTOR.
11 . 5 YEAR PARTS AND LABOR FACTORY WARRANTY.

RADIANT HEATER SCHEDULE

	DESIGNATION	RH 1	RH 2
	VOLTS/PHASE	480 / 1	480 / 1
	AMPS	12.5	12.5
	LENGTH (FT)	66"	66"
HEATING	OUTPUT (MBH)	20.48	20.48
	FUEL	ELECTRICAL	ELECTRICAL
MANUFACTURER		FOSTORIA	FOSTORIA
TYPE		HORIZONTAL	HORIZONTAL
MODEL NUMBER		OCH2-66-480V-SS	OCH2-66-480V-SS
LOCATION		BLDG 800	BLDG 800
OPER. WT (LBS)		30	30
ACCESSORIES		1, 2	1, 2

1 . PROVIDE WITH WIRE GUARDS.
2 . PROVIDE WITH MOUNTING BRACKETS.

FLY FAN SCHEDULE

DESIGNATION	FF 2-1
CFM	1800
FPM AT NOZZLE	1800.00
(QUANTITY) HP	1/6
VOLTS / PHASE	115 / 1
MANUFACTURER	MARS
TYPE	UNHEATED
MODEL NUMBER	LPV272-1UA-OB
CONTROL	MICRO SWITCH
LOCATION	KITCHEN
OPER. WT. (LBS)	100
ACCESSORIES	1, 2

1 . PROVIDE WITH FACTORY DOOR LIMIT SWITCH MODEL #99-014, COMBINATION PLUNGER/ROLLER SWITCH 250V, 1 HP MAX.
2 . PROVIDE WITH FACTORY TRANSOM MOUNTING BRACKET SET FOR LPV2, MODEL #B0042.

APPROVALS

FILE # 10-126 APPLICATION # 02-123774

LICENSED ARCHITECT JAMES R. MORRELL No. C-33128 REN. 05-31-27 STATE OF CALIFORNIA

DATE: DECEMBER 18, 2025

NEW TEMPERANCE ELEMENTARY SCHOOL
SANGER UNIFIED SCHOOL DISTRICT
SANGER, FRESNO COUNTY, CA

REVISIONS
4 10/22/26 Addendum #4

MANGINI ARCHITECTURE | INGENUITY
MANGINI ASSOCIATES INC.
4120 West Mineral King Avenue
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www.mangini.us
(559) 627.8630 Office
(559) 627.1926 Fax

TITLE
MECHANICAL SCHEDULES

M7.04

PROJECT 24042

REGISTERED PROFESSIONAL ENGINEER RYAN W. CARLSON No. M34846 Exp. 6-30-28 MECHANICAL STATE OF CALIFORNIA

LAWRENCE ENGINEERING GROUP
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