

# City of Gonzales

## ADDENDUM NO. 3 Industrial Wastewater Treatment Facility Project 02-13-2025

The following changes additions and clarifications are hereby made part of the contract documents for the above referenced project and shall be taken into account in the preparation of all proposals and the execution of all work. This Addendum shall be signed by the Bidder, be attached to submitted bid and acknowledged on the bid forms. All changes, omissions, additions and alterations in, on and to the Contract Documents and Specification will apply to proposals made for the execution of the various parts of the work affected thereby. In cases of conflict between the Plans, Specifications and this Addendum, this Addendum shall govern.

A. As discussed during the pre-bid meeting, an emergency infiltration basin has been constructed on the southwesterly portion of the Phase 2 City Property (G-8) and is in operation with the existing MWWTP. The Contractor shall not disturb this facility or inhibit City access throughout construction. Dimensions of the basin and fence are provided via attachment.

B. Changes to Bid Documents:

1. The Specifications for the Industrial Wastewater Treatment Facility Project have been modified. The links below access the modified sections. All bidders shall replace the original sections with these modified sections in preparing bids:  
(Deletions are indicated with strikethrough text, additions are indicated in red and bold.)

- a. **ADD:** Project shall be constructed in accordance with the approved **Conditional Use Permit 2021-01 (CUP 2021-01)**, see attached.
- b. **ADD: Section 01756, Commissioning and Process Start-Up.**
- c. **DELETE: Section 01061.3.01.G, Hydrology and Water Quality (MM-HYD-1a)** in its entirety.
- d. **DELETE: Section 01061.3.01.H, Hydrology and Water Quality (MM-HYD-1b)** in its entirety.
- e. **REPLACE: Appendix H – Geotechnical Report cover page** in its entirety with the attached. The link to the report has been updated.
- f. **REPLACE: The following Plan Sheets**, see attached:

GP-1	P-1	GH-1	H-1	E-1	I-5
	P-2		H-2	E-2	I-8
	P-3		H-3	E-3	
	P-4		H-4	E-4	
	P-5		H-5	E-5	
			H-6	E-9	
				E-10	
				E-11	
				E-13	
				E-17	
				E-18	
				E-21	

- g. **ADD: The following Plan Sheets: ECF-1, ECF-2, ECF-3, ECF-4, ECF-5, ECF-6**, see attached.

# City of Gonzales

## ADDENDUM NO. 3 Industrial Wastewater Treatment Facility Project 02-13-2025

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- h. **ADD: Drawing S-12, Wet Well Section A/S-11:** Add the following note:  
**"INFLUENT WET WELL SHALL BE LINED WITH A PLASTIC LINER. USE CORPROTECT BY PREDL, OR EQUAL."**
- i. **REVISE: Section 02446.2.05.A.6, Electric Swing Gate Operator,** page 02446-3:  
"As manufactured by Doorking, Model 6400 **6500**, or equal."
- j. **REVISE: Section 11310.2.02.C.1.b, Above Grade Valve Skid Assembly (8' x 8' Steel Skid),** page 11310-4:  
**Delete:** "(Endress & Hauser FXM21 Pressure transducer)"  
**Replace with:** "**(Dwyer Series 3200G)**"
- k. **REVISE: Section 11310.2.02.D.1, Vertical turbine Pump,** page 11310-4:  
**Delete:** "Gould"  
**Replace with:** "**Goulds**"
- l. **REVISE: Section 11310.2.02.D.6, Vertical turbine Pump,** page 11310-5:  
"Control panel – NEMA4X stainless steel enclosure with VFD made by ABB ACQ580 Series, **Vacon/Danfoss, KEB America**, or equal. Control devices shall be mounted on inner door of the enclosure."
- m. **REVISE: Section 11310.2.02.G.1, Pressure control system,** page 11310-5:  
**Delete:** "1. Endress & Hauser FXM21 Pressure transducer"  
**Replace with:** "**1. Dwyer Series 3200G**"
- n. **REVISE: Section 11320.2.04.A, Variable Speed Drives,** page 11320-7:  
"A. Description  
1. This specifications is to cover a complete Variable Frequency motor Drive (VFD) consisting of a pulse width modulated (PWM) inverter designed for use on a standard NEMA Design B induction motor manufactured by ABB ACQ580 Series, **Vacon/Danfoss**, or approved equal, and shall be in accordance with the Owner's approve equipment list. All VFDs throughout the project shall be provided from the same manufacturer, unless otherwise approved by the Owner.  
2. The drive manufacturer shall supply the drive and all necessary options as herein specified. VFD's that are manufactured by a third party and "brand labeled" shall not be acceptable. ~~All VFDs installed on this project shall be from the same manufacturer."~~
- o. **REVISE: Section 11610.1.02.B, Summary,** page 11610-1:  
"Blowers shall be complete pre-packaged units consisting of Permanent Magnet Synchronous Motors, integrated air filters, variable speed drive, harmonic filter, and ~~central processing unit (CPU)~~ **PLC** based Local Control Panel."
- p. **REVISE: Section 11610.2.05.C, Appurtenances,** page 11610-8, first sentence:  
"Each blower shall be supplied with one (1) 12" ~~manually~~ **motor** operated discharge isolation valves."

# City of Gonzales

## ADDENDUM NO. 3 Industrial Wastewater Treatment Facility Project 02-13-2025

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- q. **REVISE: Section 11610.2.07.A, Inverter/VFD**, page 11610-8 & 9:
- "A. Each blower shall be equipped with a high efficiency UL listed VFD (Variable Frequency Drive) with 97% efficiency at full rated motor speed and power. VFD Manufacturer shall be ABB ACQ580 Low Harmonic Series, **Vacon/Danfoss, KEB America**, or approved equal, and shall be in accordance with the Owner's approved equipment list. All VFDs throughout the project shall be provided from the same manufacturer, unless otherwise approved by the Owner. Proprietary or Non-UL listed VFDs shall not be accepted. If the blower Manufacturer does not use a VFD manufactured by a reputable frequency drive Manufacturer in the USA ~~or Canada~~, a design change must be made to accommodate it. No substitution or equal permitted."
- r. **REVISE: Section 11610.2.07.C, Inverter/VFD**, page 11610-9, first sentence:
- "Each VFD shall be supplied with a ~~passive~~**active** harmonic filter that reduces the THD (Total Harmonic Distortion) in compliance with IEEE 519 rating."
- s. **REVISE: Section 11610.2.08.A.7, Controls and Instrumentation**, page 11610-9, first sentence:
- "7. The system shall have an Allen-Bradley PanelView 800 series HMI 10" touchscreen, **or PanelView 700 Series HMI 7" touchscreen** ~~no substitutes.~~"
- t. **REVISE: Section 11610.2.08.G.1, System Function**, page 11610-11:
- "Each blower LCP shall consist of a PLC ~~or CPU~~-based control system with the following:"
- u. **ADD the following subsection to Section 11610.2.08.G.1.k, System Function**, page 11610-12:
- A. This blower system will be required to operate two blowers in this project and one centrifugal blower in the future. The blower system shall be supplied with a master control panel (MCU) that shall control the operation of all blowers and communicate directly with the plant SCADA system.
  - B. The master control panel shall communicate directly with the plant SCADA system via Ethernet TCP/IP protocol.
  - C. The master control panel shall be equipped with an Allen Bradley PLC (Programmable Logic Controller) with color graphical touch screen based control system that is installed as an integral part of the enclosure. Separately mounted touch screen PLCs shall not be permitted.
  - D. The Programmable Logic Controller shall provide control, monitoring and diagnostics capability.
  - E. The Master Control Panel shall have the ability to control the single or multiple blowers in four different modes: Speed setpoints, constant pressure, constant air flow or constant DO (dissolved oxygen) level.
  - F. The Master Control Panel shall automatically start and stop and control the speed of the blowers to provide the process demand. The high speed turbo blowers shall be designated the lead or lag blower under normal operating conditions. The Master controller shall have an operator input to select any one of the 2 current blowers as lead blower and the remaining blower as the lag blower. It is anticipated that in the future the third blower would be a standby blower.

# City of Gonzales

## ADDENDUM NO. 3 Industrial Wastewater Treatment Facility Project 02-13-2025

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- G. The Master Control Panel shall contain logic that prevents the high speed turbo blower from going into surge when a second blower is called to start and added in parallel to the running turbo blower.
- H. The Master Control Panel Controls shall be accessible through a touch screen control panel and remotely through SCADA Ethernet network communications.
- I. Ethernet communications shall include all blower and system information:
  - 1. Remote Command: process variable type and value
  - 2. System Airflow: Output
  - 3. Discharge pressure: Output
  - 4. DO Link: control of blower from feedback from DO analyzer
  - 5. Remote system enable: input
  - 6. Remote system disable: input
  - 7. Remote Emergency stop: input
  - 8. Blower run: outputs
  - 9. Blower stop: outputs
  - 10. Blower fault: outputs
- v. **REVISE: Section 11700.2.03.I, Transmitter Characteristics**, page 11700-2:  
"I. The flow meter shall be ~~Badger M2000-series~~ **McCrometer** or approved equal."
- w. **REVISE: Section 13000.2.6.1.A.6, Pressure switches and gauges, Manufacturers**, page 13000-13:  
**Revise:** "a. ~~Mercoid~~  
      ~~b. Dwyer~~"  
**Replace with: "a. ~~Mercoid series by Dwyer Instruments~~"**
- x. **REVISE: Section 13000.2.6.1.B.2.h, Pressure Transmitter, Performance**, page 13000-14:  
"h. ~~Integral~~ **Integral** LCD meter with the transmitter housing."
- y. **REVISE: Section 13000.2.6.1.B.4. Pressure Transmitter, Manufacturers**, page 13000-14:  
**Delete:** "a. ~~Rosemount 2051C~~  
      ~~b. Endress-Hauser~~"  
**Replace with: "a. ~~Dwyer Series 3200G~~"**
- z. **REVISE: Section 13000.2.6.2.A.3, Magnetic flow meters, Manufacturers**, page 13000-14:  
**Revise:** "a. ~~Badger M2000~~  
      ~~b. McCrometer, Endress-Hauser, Rosemount~~"  
**Replace with: "a. ~~McCrometer~~"**

# City of Gonzales

## ADDENDUM NO. 3 Industrial Wastewater Treatment Facility Project 02-13-2025

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- aa. **REVISE: Section 15064.2.01.B, High Density Polyethylene (HDPE) Pipe**, page 15064-4, first sentence:  
"Pipe Size: HDPE pressure pipe shall have a nominal diameter indicated on the plans with outside dimension (OD) correlating to standard stainless steel pipe size (ØIPS) as specified in AWWA C906."
- bb. **REVISE: Section 16900.2.2.1.A.1, Manufacturers, Switchboards**, page 16900-3:  
**Delete:** "~~±. Allen-Bradley~~"  
**Replace with:** "**1. Eaton**"
- cc. **REVISE: Section 16920.2.2.10.A.2.f, Control Wiring and Testing**, page 16920-7:  
"f. 6-pulse type **with active harmonic filter.**"
2. Answers to Contractor Questions. The following shall be considered as supplemental requirements in preparing bids:
- a. **Question:** There is a conflict between the plans and the specifications regarding conduit usage. Specification Section 16000 2.2 B requires "*All exposed conduit, indoor and outdoor, shall be threaded, PVC-coated galvanized, rigid steel conduit.*" General Note 13 requires "All exposed conduits shall be rigid galvanized steel conduits..." Please clarify which is correct.  
**Answer:** Please see revised Plan Sheet E-1 attached.
- b. **Question:** I am writing to request an amendment to Specification 16900-2.1A, which currently lists approved switchboard manufacturers as Allen-Bradley, Siemens, and Schneider Electric. It should be noted that Allen-Bradley is not a manufacturer of switchboards but rather motor control centers (MCCs).

To ensure the project remains cost-effective and compliant with BABA requirements, I propose the following changes:

1. Remove Allen-Bradley from the list of approved 600V switchboard manufacturers.
2. Include Eaton as an approved manufacturer for 600V switchboards.

Limiting the project to only Siemens and Schneider Electric could create significant challenges and may not be cost-effective. Including Eaton will provide more flexibility and help mitigate potential issues.

**Answer:** Please see 1 bb above.

- c. **Question:** Request for Information:  
Section 11610, 1.02B ("*Blowers shall be complete pre-packaged units consisting of Permanent Magnet Synchronous Motors, integrated air filters, variable speed drive, harmonic filter, and central processing unit (CPU) based Local Control Panel.*")

Section 11610, 2.8.G.1 ("*Each blower LCP shall consist of a PLC or CPU-based control system with the following:*")

Section 11610, 2.08.A.6 ("*The blower shall have an Allen Bradley PLC CompactLogix Series for operation, adjustment, and monitoring.*").

# City of Gonzales

## ADDENDUM NO. 3 Industrial Wastewater Treatment Facility Project 02-13-2025

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Paragraphs 1.02.B and 2.8.G.1 contradict section 2.08.A.6.

Please replace CPU by PLC to ensure that microprocessor based controllers are not allowed and each turbo blower shall be provided with an Allen Bradley PLC CompactLogix Series for Operation, Adjustment, and Monitoring.

**Answer:** See 1 o and t above.

- d. **Question:** Section 11610, Section 2.02.A

Maximum Air Flow at Duty Discharge Pressure Per Blower (SCFM)	4,500
Minimum Air Flow at Duty Discharge Pressure Per Blower (SCFM)	1,500
Maximum Design Blower Flow Rate (SCFM) at Design Operating Pressure (7 psi)	4,500
Minimum Design Blower Flow Rate (SCFM) at Design Operating Pressure (7 psi)	3,000

It seems the Maximum/Minimum Air Flow at Duty Discharge Pressure Per Blower (SCFM) (4,500/1,500) are duplicate requirement of the Maximum/Minimum Design Blower Flow Rate (SCFM) at Design Operating Pressure (7 psi) (4,500/3,000).

Please confirm the Maximum/Minimum Air Flow at Duty Discharge Pressure Per Blower (SCFM) (4,500/1,500) can be ignored.

**Answer:** The Max/Min airflow (at duty discharge pressure) per blower of (4,500/3,000 SCFM) represents the Max/Min airflow that each blower is capable of. The Max/Min design blower rate at design operating pressure (SCFM) (4,500/3,000) reflects the operating range that each blower is designed for.

- e. **Question:** Section 11610, 2.03.C "*Blowers shall be designed to operate with Manufacturer's supplied Master Control Panel in order to maximize overall system efficiency.*"

We confirm that the blowers are designed to operate with the manufacturer's supplied MCP, however, a Master Control Panel it appears that a MCP is not required in the scope of supply for this project as the blowers are controlled via SCADA. Please confirm.

**Answer:** See 1 u above.

- f. **Question:** Section 11610, 2.08.A.7 "*The system shall have an Allen-Bradley PanelView 800 series HMI 10" touchscreen, no substitutes.*"

We provide an Allen Bradley CompactLogix PLC with PanelView Plus 7 (7 inch) Graphic Terminals with our turbo blowers due to the compact design and minimal footprint of the blower enclosure. Please confirm if this standard HMI design is acceptable?

**Answer:** See 1 s above.

- g. **Question:** Section 11610, 2.08.G.1j. "*The blower MCU PLC shall allow for alternating operating schedules such that the service hours per blower is either 2:1, 3:1, 4:1, or 5:1 with respect to the standby unit...*"

The blower supplier scope does not include a Master Control Panel or Master Control Unit. Please clarify what the MCU PLC refers to.

**Answer:** See 1 u above.

# City of Gonzales

## ADDENDUM NO. 3 Industrial Wastewater Treatment Facility Project 02-13-2025

- h. **Question:** Drawing No. I-5, MOV-01 & MOV-02  
Both blower discharge isolation valves MOV-01 and MOV-02 are shown to have actuator service, however specifications section 11610-2.05.C has a discrepancy as it requires a manually operator isolation valve. Please advise if the discharge isolation valves shall be manual or actuated?

**Answer:** Discharge valves MOV-1 and 2 shall be electrically actuated.

- i. **Question:** Drawing No. E-15. The Type column is not clear. Does PVC/RGS mean PVC coated RGS, or does it mean part of the run is PVC (UG?) and part of the run is RGS (Overhead? Riser?)

**Answer:** The Conduit Type column for Cable and Conduit Schedule on Drawing Sheet E-15 where PVC/RGS is identified shall be PVC-coated rigid galvanized steel conduit, as indicated in the list of abbreviations shown on Sheet G-4.

- j. **Question:** Will the owner work with the awarded contractor regarding the long lead times due to lingering supply chain issues?

**Answer:** The project duration was determined based on long lead times for critical equipment; however, the City will review unanticipated supply chain issues on a case-by-case basis, assuming the Contractor has met the critical submittal requirements as detailed in the specifications and has maintained active progress on procurement and construction to the extent feasible.

- k. **Question:** Is there an allowance amount for Bid Item 11 Field Orders? Reading the bid documents it appears there was meant to be an amount included in this line item to keep bids equal however we don't see an amount included. Please advise if there is an amount you would like to include for item 11.

**Answer:** Contractor shall enter a value of \$400,000 for Bid Item 11 Field Orders.

- l. **Question:** On Sheet M-6 of the plans, the construction legend has the tees for 1, 2, and 3 listed as 18x18x10", 16x16x10" and 14x14x10. The pipes listed above for headers B, C, and D is listed as 12" exiting the tee. Should those tees be 18x18x12, 16x16x12, and 14x14x12?

**Answer:** Yes, that is correct, 18x18x12, 16x16x12, and 14x14x12.

- m. **Question:** In regard to the DR rating of the fittings. On page 15064-5, 2.03 A 2, it states that "Due to pressure de-rating of fabricated fittings per AWWA C 906-15 (75% of the pressure rating of the pipe the fitting is fabricated from), all fabricated fittings shall be fabricated from DR9 pipe." The tees listed above (question l) are called out as DR17 on the plans. They will be fabricated.

**Answer:** Fabricated tees shall be fabricated from DR 9 pipe.

CONSTRUCTION LEGEND	
①	18" x 18" x 10" DR17 HDPE TEE
②	16" x 16" x 10" DR17 HDPE TEE
③	14" x 14" x 10" DR17 HDPE TEE
④	12" x 12" x 10" DR17 HDPE TEE
⑤	10" x 10" x 10" DR17 HDPE TEE

# City of Gonzales

## ADDENDUM NO. 3 Industrial Wastewater Treatment Facility Project 02-13-2025

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- n. **Question:** Please clarify Section 11600.1.08.A Aeration System Design Factors, it appears there is potential for a pressure rise value of 11.7 psi. In sizing our (Sulzer) turbo-compressors for this application should we use that value for the basis or rather use the design criteria of 7.0 psi. Our machines are capable of either pressure differential but we want to ensure that we size the best possible solution for this application.

**Answer:** Use the design operating pressure of 7 psi for sizing the turbo-compressors.

- o. **Question:** Please clarify Section 15064 – HDPE Pipe, paragraphs 1.01.C and 2.01 B state “DIPS” piping is to be provided matching outside the diameter of stainless-steel piping. Stainless steel piping sizing is supplied as IPS, so should HDPE with IPS or DIPS sizing be provided?

**Answer:** See 1 aa above.

- p. **Question:** Please clarify the following items concerning site fencing
1. What size line, corner, and gate posts are required?
  2. Is top rail required or just top and bottom 7 ga. coil spring tension wire?
  3. Gate operator model 6400 doorking opener is rated for residential and only for 8’ wide gates less than 300lbs. Please confirm if this was mistaken for a 6500 model opener as that series as a pad mount commercial opener that does handle the other usage and rating.

**Answer:** See 1 i above and below:

1. Line posts shall be 2” Nominal Pipe Size (NPS). Corner and gate posts shall be 2.5” NPS.
2. Top rail is not required, just top and bottom tension wire.
3. Use the 6500 model Doorking opener.

- q. **Question:** Please clarify Sheet C-2, the Asphalt Paved area around the operations building on the Legend states “ ASPHALT CONCRETE PAVEMENT PER DTL 1 ON DWG GC-1” Detail 1 on sheet GC-1 appears to shows a structural section of 4” Asphalt over 10” Crushed Aggregate Base, over 12” of scarified and compacted subgrade. This detail also has a note that states “ASPHALT CONCRETE AS INDICATED ON PLANS” Can you please confirm that this structural section of 4/10/12 is correct for the access road paving, as well as the site asphalt paving?

**Answer:** The structural section of 4” Asphalt over 10” Crushed Aggregate Base, over 12” of scarified and compacted subgrade is applicable to the access road paving as well as the site asphalt paving.

- r. **Question:** What Topography data is shown is vague, has no elevation markers on many of the contours and does not quite cover the project site. Do you have CAD or a dedicated topo pdf sheet that can be used to produce an accurate estimate for this work?

**Answer:** Contours are visible on Sheets C-2 to C-5 as well as sections on Sheet C-7 and C-8 and C-9. The unlabeled contour on sheet C-3 surrounding the Headworks Pad is elevation 112.



# City of Gonzales

## ADDENDUM NO. 3 Industrial Wastewater Treatment Facility Project 02-13-2025

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- s. **Question:** Would you please direct me to a Plan Sheet or Specification Section that defines the Pipe Schedule (Pipe Type and Fitting) for each Service Description  
The Plan Sheets direct us to DWG G-5. PIPING SERVICE IDENTIFICATION only is shown.

**Answer:** Throughout the mechanical plans, there are pipe callouts that are written with three numbers (eg., 12" IW-7). The numbers correspond to:

1. PIPE DIAMETER SIZE
2. PIPING SERVICE IDENTIFICATION
3. GROUP NUMBER

The Piping Service identifications are as follows:

A	AERATION AIR
CW	COLD WATER
EFF	TREATED EFFLUENT
HW	HOT WATER
IW	INDUSTRIAL WASTEWATER
NPW	NON-POTABLE WATER
S	SEWER

The general layout of the above service types are shown on the summary on G-6.

The **group numbers** include the type of pipe and fitting for each group, which are summarized on the table on sheet G-5

3. Bid opening date remains the same: **February 26, 2024, at 2:00 pm** local time.

This Addendum has been sent to all "bidders of record". If there are questions regarding this addendum or bid, contact Megan Panofsky of MNS Engineers, Inc. via email at [mpanofsky@mnsengineers.com](mailto:mpanofsky@mnsengineers.com).



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Megan Panofsky, Program/Construction Manager

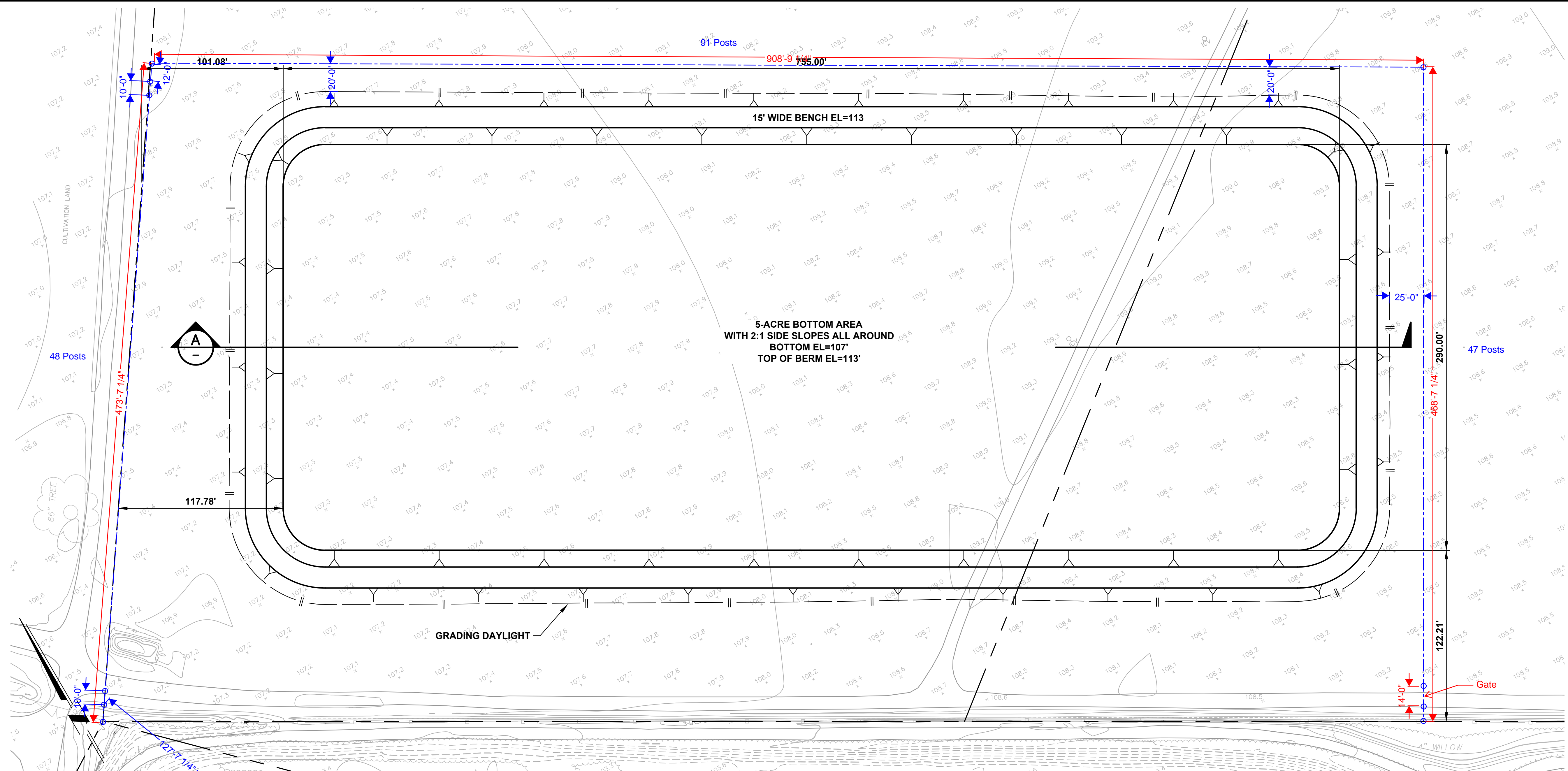
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Bidders shall acknowledge receipt of the Addendum by signing and dating below and returning the Addendum with your sealed bid

\_\_\_\_\_  
Bidder's Authorized Representative

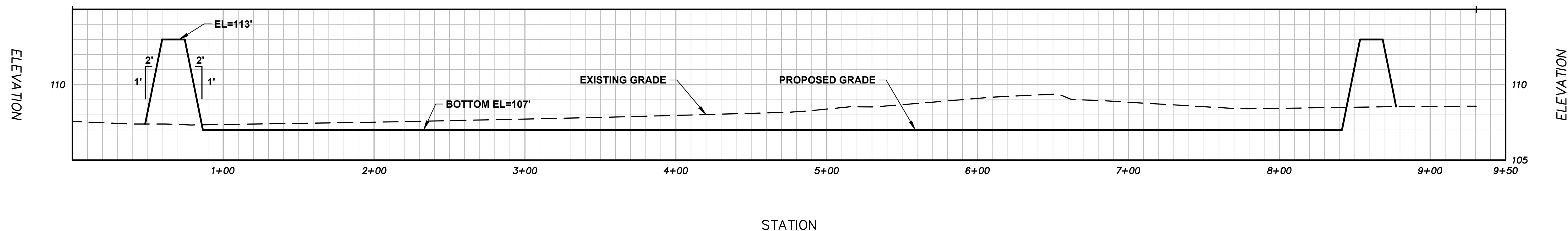
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Date

**End of Addendum 3**



Existing Municipal Wastewater Treatment Plant Property

**PLAN**  
SCALE: 1"=40'



**SECTION A**  
SCALE: 1"=40' HORIZ  
1"=4' VERT

# Emergency Infiltration Basin

# CONDITIONAL USE PERMIT 2021-01

## COMMUNITY DEVELOPMENT DEPARTMENT

**Property Address:** 500 Short Road  
Gonzales, CA 93926

**Assessor Parcel Numbers:** 223-061-017, 223-061-020, 223-061-019,  
223-061-002, and 223-061-014

**Property Owner:** City of Gonzales                      **Applicant/ Permittee:** Same as Owner

**Permit Issued To:** City of Gonzales

**Approval Date:** September 20, 2021 by the  
City Council

**PC Resolution:** PC-2021-01

**Permitted Use.** Construct a 1.0 MGD Industrial Wastewater Treatment Facility (IWTF) on city owned property abutting the existing 1.3 MGD (Municipal Wastewater Treatment Plant (MWTP) resulting in a 2.3 MGD City wastewater system. In addition, construct a 10,700 linear foot wastewater pipeline to connect the IWTF to select dischargers in the Gonzales Agricultural Industrial Business Park.

The proposed IWTF would be located adjacent to the existing MWTP on Short Road. The IWTF plant includes a 1-acre emergency over flow pond, six 2-acre facultative lagoons, two 5-acre polishing ponds, and three 6-acre rapid infiltration disposal basins.

The proposed IWTF would comprise a total of approximately 54 acres. Approximately 49 acres are within the City limits and 5 acres are within Monterey County but located in the City's sphere of influence (SOI). The 5 acres within Monterey County will be annexed to the City as part of the proposed project and as a result of a separate application to the LAFCO before construction.

### FINDINGS & CONSISTENCY

#### **Section 1. Environmental (CEQA) Finding.**

An Environmental Impact Report ('EIR') was prepared for the Gonzales Industrial Wastewater Treatment Facility and Industrial Wastewater Conveyance. (SCH#2020069049) The public review period for the EIR commenced on June 30, 2021 and ended on August 13, 2021. One comment letter was received from a State agency – Central Coast Regional Water Quality Control Board. No other comments/letters were received.

## Section 2. General Plan Consistency

A. The permitted use is consistent with the Gonzales General Plan to the following extent:

1. The proposed project is consistent with the City's General Plan. The project is located in the land use area designated Public/Quasi Public where an IWTF is allowed. As stated in the 2010 Gonzales General Plan, this land use designation includes the 50 acres of land proposed for expansion of the MWTP.

## Section 3. Zoning Ordinance Consistency

A. The proposed use is consistent with the Gonzales Zoning Ordinance to the following extent:

1. The proposed use is consistent with the Gonzales Zoning Ordinance. The intent of the Public Facility (PF) district is to provide areas parks, corporation yards, fire and police departments, city hall, and wastewater treatment plants needed by the city subject to regulation necessary to protect other nearby uses from hazards, noise and other disturbances..

B. The Conditional Use Permit has been processed per the City's Zoning Ordinance requirements per Chapter 12.28 as follows:

1. A Public Hearing Notice was published in the Salinas Valley Tribune on September 1, 2021.
3. Public Hearing Notices were mailed to all property owners within 300'-0" of the site. An affidavit of mailing is on file at the Planning Department.
4. A public hearing was conducted by the Planning Commission to consider the request on September 13, 2021, and members of the public were invited to comment and all comments were considered by the Planning Commission prior to its decision on the request.

## Section 4. Conditional Use Permit Findings

Pursuant to the Gonzales City Code Chapter 12.28, §12.28.030, the following findings are made in support of approval of the Conditional Use Permit 2021-01. The findings are labeled numerically with the "evidence" proposed by staff in *italics*.

1. The use is necessary or desirable in relation to the purposes and intent of the Gonzales General Plan, zoning ordinance, and the economic, social and environmental status of the City because:

*The proposed uses are fully consistent with the General Plan designation of the site as "Public/Quasi Public" as defined on page II-46 of the General Plan. This designation emphasizes public uses. The proposed project is consistent with General Plan policies that accommodate expansion of the wastewater treatment facilities.*

2. The use will be properly related to other uses, transportation facilities, and other public facilities in the area, and will not cause undue environmental impacts relating to noise, odor, pollution, etcetera, because:

*The proposed project consists of building a new 1.0 MGD industrial wastewater treatment plant and installation of 10,700 linear feet of new underground pipeline from the industrial park to the wastewater facilities. All environmental impacts are mitigated to a less than significant level except that the project would result in significant direct and cumulative impacts related to the conversion of Prime Farmland and Farmland of Statewide Importance and the project would result in a significant impact related to the potential for inundation due to the failure of uncertified levees and dams.*

*Because of the location of the project area is not near sensitive receptors or population centers, and surrounded by agricultural land and, or located in the ag business park, noise, odor, etc. are not deemed significant.*

3. The use will not adversely affect the health or safety of persons living or working in the vicinity, or be materially detrimental to the public welfare of the city and its residents because:

*The operation of a new wastewater treatment facility and ancillary pipelines will not have any effect on the health or safety of persons because of the significant distance (13,000 to 15,000 linear feet to waste treatment facility) to the nearest area of population (i.e., City of Gonzales residents). The project will be materially beneficial to the City because with project implementation there will be a separation of industrial and residential waste treatment and an overall increase in capacity for both residential and industrial uses which is an economic benefit to the community.*

## **CONDITIONS OF APPROVAL**

### **A. Standard Conditions.**

1. **Timely Completion of Conditions.** Unless otherwise provided for in a special condition to this Use Permit, all conditions shall be satisfied prior to operations.
2. **Conditions Run with Land.** The conditions of approval contained herein shall be perpetual and it is the intention of the City that the conditions of approval run with the land and bind the Owner/Applicant and its successors and assigns in interest of the subject property to all of the conditions of approval.
3. **Conditions to be Included on all Plan Sets.** All conditions of approval for this project shall be included as a component (sheet) of all plan sets submitted for review and approval. These conditions of approval shall be on (at all times), all grading and construction plans kept on the project site. It is the responsibility of the Owner/Applicant to ensure that the various contractors are aware of, and abide by, the conditions of approval.
4. **No Nuisance/Use of Property.** Use of the property shall be conducted in such a way that it does not constitute a nuisance to the surrounding neighborhood. If the Community Development Director/Planning Commission/City Council finds at any time that any use of the property constitutes such a nuisance or is otherwise detrimental to the neighborhood or to the community, such use shall be discontinued or modified as may be required. Failure to fully comply with all conditions of this approval may result in revocation of this permit.

5. **Code and Standards Compliance.** All construction and improvements and uses shall be in accordance with zoning, building, fire, and all other codes, ordinances, and public works standards and specifications of the City of Gonzales or agencies that have regulatory jurisdiction over the project. All such requirements shall be met prior to issuance of a temporary and/or Final Certificate of Occupancy for the entire Project, or a portion thereof, or final building inspection, except for items agreed to by the owner and the Building Official and/or Director of Public Works.

**B. Special Conditions/Environmental Impact Report Mitigation Measures**

The Conditions of Approval for this project incorporates herein by reference the IWTF EIR Mitigation Monitoring and Reporting Program (“MMRP”).

**General**

6. **California Code – Green Building Standards (‘CalGreen’).** The Owner/Applicant shall comply with all of the applicable non-residential mandatory measures contained in Chapter 5 of the 2016 California Code of Green Building Standards (‘CalGreen’); California Code of Regulations, Title 24, Part 11.

7. **Climate Action Plan Compliance.** At the time Improvement Plans are submitted, the Owner/Applicant shall demonstrate to the satisfaction of the Director of Community Development that the Project includes greenhouse gas emission reduction measures that when applied together will account for a reduction in greenhouse gas (GHG) emissions of 159.90 MT Co<sub>2e</sub>. Any documentation used to quantify the reduction in GHG emissions shall include a GHG emission reduction value for each measure and a calculation demonstrating how the reduction value was determined.

**Improvement Plans, Soils/Geotechnical Investigation/Grading**

8. **Improvement Plans.** The Owner/Applicant shall cause the preparation and submittal of improvement plans in a form acceptable to the City for review and approval. The improvement plans shall be accompanied by supporting studies and documentation which shall set forth the improvements necessary to construct, and thereafter serve the proposed Project including, but not limited to, final grading plans, geotechnical investigation and recommendations, temporary access, water supply and electrical power, permanent street and parking area improvements, water and sewer system improvements, storm drainage and retention facilities, gas, electric, telephone and cable facilities, and any other necessary appurtenances and/or services. Unless otherwise noted, all improvement plans and specifications shall be designed by a Civil Engineer licensed in the State of California. Prior to the issuance of a Final Certificate of Occupancy for the project, the Owner/Applicant shall cause the final improvement plans and map documents to be submitted to the City in digital format (AutoCADD).

9. **Structural Stability/Seismic Safety.** All structures shall be designed and constructed to resist a major earthquake as required by the latest edition of the California Building Code. All recommendations regarding seismic concerns identified in any geotechnical investigation prepared for the site shall be incorporated into the final building and improvement plans for the Project.

10. **Construction and Maintenance of On-site Utilities.** All on-site utilities (i.e., water, sanitary sewer and storm drainage) shall be designed and constructed to City standards and subject to the review

and approval of the Director of Public Works and the City Engineer and accepted by the City prior to uses. All on-site utilities shall be privately maintained.

11. **Warranty and Workmanship of Public Improvements.** All public improvements, as shown on the Improvement Plans, or required by these conditions of approval, shall be constructed per City Standards and Regulations and approved by the Director of Public Works and the City Engineer. The City may reject defective work and require its repair, replacement, or removal at no expense to City. All work shall meet the standards adopted or in current use by City, and otherwise shall conform to the approved plans and specifications.

All work is to be free of all defects of workmanship and materials for a period of one year after initial acceptance of the entire work by City. If defects in design, workmanship and materials actually appear during the guarantee period, and once corrected, the guarantee period with respect to such repairs shall automatically be extended for an additional year to ensure that such defects have actually been corrected.

12. **Soils Report/Geotechnical Investigation.** Improvement Plans submitted to the City for review and approval shall be accompanied by a soils report/geotechnical investigation. The project designer shall follow all recommendations included in soils report/geotechnical investigation when preparing the grading plan, site design and utility plans. The project soils engineer shall review the project plans and shall perform all required site inspections during construction.

13. **Grading & Excavation.** A qualified professional geotechnical engineer shall perform on-site monitoring of all grading, excavation and compaction activities on the Project site and in the public rights-of-ways. Evidence of an agreement between the Owner/Applicant and a geotechnical engineer shall be submitted for review and approval by the Building Department/City Building Official and the City Engineer prior to the issuance of a grading permit. Said geotechnical engineer will submit evidence that grading, excavation and compaction were performed consistent with the recommendations of the geotechnical investigation.

14. **Construction Equipment Emissions.** The Owner/Applicant shall be aware that the Air District suggests that cleaner construction equipment be used for the project, including equipment that conforms to ARB Tier 3 or Tier 4 emission standards. The District further recommends that, whenever feasible, construction equipment use alternative fuels such as compressed natural gas (CNG), propane, electricity or biodiesel.

### **Storm Water Pollution Prevention**

15. **Storm Water Pollution Prevention Plan.** Prior to the issuance of a grading permit, the Owner/Applicant shall prepare and submit a Notice of Intent to the State Water Resources Control Board (SWRCB) and prepare a Storm Water Pollution Prevention Plan (SWPPP) that has been designed specific to its site, conforming to the State Storm water NPDES Construction Permit or local ordinance, which-ever is stricter, as is required for projects one acre or more. The Plan should cover prevention of soil loss by storm water run-off and/or wind erosion, of sedimentation, and/or of dust/particulate matter air pollution. Evidence of such submittal shall be provided to the Director of Public Works and City Engineer prior to commencement of grading. The SWPPP shall remain onsite during the duration of project construction. Obtaining the appropriate operational permit is also required prior to the issuance of an occupancy permit.

16. **State Water Resources Control Board Industrial Permit.** The Owner/Applicant is responsible for determining if the project must comply with the State's General Permit for Storm Water Discharges Associated with Industrial Activities including on-site sampling requirements. If the project must comply with this Storm Water Permit, the Owner/Applicant shall take all appropriate actions and all design, permitting and construction costs shall be borne by the Owner/Applicant.

17. **State Water Resources Control Board Phase II Small MS4 NPDES Permit (MM-3).** Owner/Applicant shall be aware that a Storm Water Control Plan (SCP) will be required as a result of the City of Gonzales' enrollment on, July 1, 2013, into the "State Water Resources Control Board Water Quality National Pollution Discharge Elimination System (NPDES) General Permit for Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) - Order No. 2013-0001-DWQ, General Permit CAS000004."

Prior to the issuance of a temporary or permanent Certificate of Occupancy for the entire project, or any portion thereof, the Owner/Applicant shall cause the preparation of a Stormwater Control Plan (SCP) to document the Post-Construction Stormwater Control Measures (SCMs). The SCP shall be prepared by a registered civil engineer, in conformance with the Post Construction Standards outlined in Section XII of the "General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ". The SCP must include an Operation and Maintenance (O&M) Plan that addresses maintenance procedures and intervals for each SCM and identifies the responsible party to conduct maintenance. A maintenance Agreement will be required to ensure on-going maintenance for the life of the facility. The Agreement shall include the project owner's signed statement accepting responsibility for the O&M of the installed onsite and/or offsite structural treatment and flow control SCMs until such responsibility is legally transferred to another entity; and either:

- a. Written conditions in the sales or lease agreements or deed for the project that require the buyer or lessee to assume responsibility for the O&M of the onsite and/or offsite structural treatment and flow control SCM until such responsibility is legally transferred to another entity; or
- b. Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns responsibility for the O&M of the onsite and/or offsite structural treatment and flow control SCM to the project owner(s) or the City.

The Storm Water Control Plan, including the Operation and Maintenance Plan and the Storm Water Control Measures shall all be reviewed and approved by the City Engineer.

18. **On-site Storage and Treatment of Industrial Wastewater.** The Owner/Applicant shall obtain approval for on-site storage of industrial wastewater from the Central Coast Regional Water Quality Control Board, Monterey County Environmental Health Department and any other governmental agency with jurisdiction with regard to public health, groundwater or vector control matters. Any lagoons, ponds or other storage of industrial wastewater shall be lined to the satisfaction of the Director of Public Works and the City Engineer. Alternatively, storage of industrial wastewater in above-ground tanks shall be to the satisfaction of the Director of Public Works and the City Engineer. Storage of industrial wastewater shall not exceed two calendar days due to potential odor issues.



19. **Compliance with City of Gonzales Ordinance No. 2015-83.** The Owner/Applicant shall comply with the applicable provisions of Ordinance No. 2015-83, including those provisions contained in the Gonzales City Code at Chapter 10.24 Water Efficient Landscape Design Requirements and Chapter 10.28 Stormwater Quality Management and Discharge Control.

**Circulation (On- and Off-site) and Parking**

20. **Encroachment Permit.** The Owner/Applicant shall obtain encroachment permits from the City for any work to be performed in City public rights-of-way, from the County for any work to be performed within the Monterey County rights of way, and from the California Department of Transportation for any work to be performed in the State rights-of-way. Any work in these rights-of-ways shall be performed only by contractors licensed in the State of California.

**Diversion of Solid Waste and Construction/Demolition Debris (Recycling)**

21. **Diversion of Construction & Demolition Debris (Recycling).** Prior to the issuance of a Demolition Permit and/or Building Permit, the Owner/Applicant shall cause the preparation of a Construction and Demolition Debris Waste Management Plan for the project. The content and implementation measures of the Plan shall conform to guidelines promulgated by the City of Gonzales, as summarized in a handout entitled "*City of Gonzales Construction & Demolition Recycling Requirement Review for: Demolition, New Construction & Roofing*". The Plan shall include, but not be limited to, a Construction Waste Management Plan, Construction Waste Management Worksheet and Inventory of Waste Material Type and Diversion Method, and Waste Reduction & Recycling Plan. Preparation of the Plan shall be coordinated with the City's Recycling Coordinator and reviewed and approved by the Coordinator and the City Building Official.

**RESOLUTION NO. 2021-49**

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF GONZALES APPROVING (1) A STATEMENT OF OVERRIDING CONSIDERATIONS, (2) A MITIGATION MONITORING PROGRAM, AND (3) APPROVAL OF CONDITIONAL USE PERMIT (CUP 2021-01) THAT WILL ALLOW THE GONZALES INDUSTRIAL WASTE TREATMENT FACILITY AND CONVEYANCE PROJECTS TO PROCEED. ASSESSOR PARCEL NUMBERS: 223-061-017, 223-061-020, 223-061-019, 223-061-002, AND 223-061-014**

**WHEREAS**, the City has an existing Waste Treatment Facility permitted by the State of California Regional Water Quality Control Board to process up to 1.3 MGD of effluent; and

**WHEREAS**, the capacity of the existing Gonzales Industrial Waste Treatment Facility needs to expand to accommodate future industrial expansion and residential developments as discussed in the General Plan; and

**WHEREAS**, the City desires to embark on development of a new 1.0 million gallon per day (MGD) Gonzales Industrial Waste Treatment Facility and associated approximately 10,700-foot Industrial Waste Conveyance pipeline; and

**WHEREAS**, the City contracted the services of an environmental consultant (Dudek) to prepare an Environmental Impact Report (EIR) per the requirements of the California Environmental Quality Act (CEQA); and

**WHEREAS**, an EIR with Appendices was prepared and circulated for a 45-day public review period with an assigned California State Clearinghouse number (SCH#2020069049) with said review period commencing on June 29, 2021 and ending on August 13, 2021; and

**WHEREAS**, the City Council considered the aforesaid EIR, in its final form, at a noticed public hearing on September 20, 2021, and after considering all relevant matters, certified the Final EIR for the Gonzales Industrial Waste Treatment Project by adoption of Resolution No. 2021-43; and

**WHEREAS**, the following two environmental considerations were determined in the Final EIR to have Significant and Unavoidable impacts (i.e., no mitigation could reduce the impact to a Less-than-Significant level). Therefore, these impacts require findings and a *Statement of Overriding Considerations*, which is attached herein as Exhibit 'A':

- Ag and Forestry Resources
- Hydrology and Water Quality

**WHEREAS**, The Final EIR indicates that potentially significant environmental impacts identified and discussed in the Final EIR can be mitigated to a less-than-significant level as indicated in the EIR ; and

**WHEREAS**, a *Mitigation Monitoring and Reporting Program* (MMRP) has been prepared based on the prescribed mitigation measures set forth in the Final EIR and is attached hereto as Exhibit ‘B’; and

**WHEREAS**, approval of the Gonzales Industrial Waste Treatment Project requires consideration and approval of a *Conditional Use Permit* (CUP 2021-01) and a copy of findings and the required permit is attached hereto as Exhibit ‘C’; and

**WHEREAS**, the Planning Commission considered a resolution (Resolution PC No. 2021-03) on September 13, 2021, recommending to the City Council that it by resolution approve: (1) Statement of Overriding Considerations, (2) a Mitigation Monitoring Program, and (3) approval of Conditional Use Permit (CUP 2021-01) that will allow the treatment and conveyance projects to proceed; and

**WHEREAS**, the City Council conducted a noticed public hearing on the aforesaid 1) Statement of Overriding Considerations, (2) Mitigation Monitoring and Reporting Program, and (3) Conditional Use Permit (CUP 2021-01), and after taking public comment on said documents, now desires to move forward with consideration of approval of the same.

**NOW, THEREFORE, BE IT RESOLVED** by the City Council of the City of Gonzales, as follows:

**Section 1.** The foregoing recitals are true and correct and constitute the City Council’s findings in this matter.

**Section 2.** Based on the aforesaid findings, information contained in the Final EIR for the Gonzales Industrial Waste Treatment Project (as Certified by Resolution No. 2021-43), and all related evidence and comments thereon, facts and findings contained in the documents referenced herein, and in compliance with CEQA, including but not limited to Public Resources Section 21081, the City Council hereby approves and adopts the (1) Statement of Overriding Considerations and (2) Mitigation Monitoring and Reporting Program for the Gonzales Industrial Waste Treatment Project, attached hereto as Exhibits ‘A’ and ‘B’, and by this reference incorporated herein.

**Section 3.** Based on the aforesaid findings, and all facts and findings contained in the document referenced herein this section, the City Council approves Conditional Use Permit (CUP 2021-01), attached hereto as Exhibit ‘C’, and incorporated by this reference, that will allow the Gonzales Industrial Waste Treatment Facility and associated Industrial Waste Conveyance pipeline Project to proceed as conditioned.

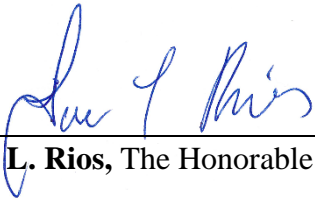
**PASSED AND ADOPTED** at the regular meeting of the Gonzales City Council duly held on the 20<sup>th</sup> day of September 2021, by the following vote:

**AYES:**           **COUNCIL MEMBERS:** Mayor Pro Tem Scott Funk, Liz Silva, Lorraine Worthy, Paul Miller, and Mayor Jose L. Rios


**NOES:**           **COUNCIL MEMBERS:** None

**ABSTAIN:**   **COUNCIL MEMBERS:** None

**ABSENT:**   **COUNCIL MEMBERS:** None

  
\_\_\_\_\_  
**Jose L. Rios**, The Honorable Mayor

**ATTEST:**

  
\_\_\_\_\_  
**Mary Villegas**, Deputy City Clerk

## SECTION 01756

### COMMISSIONING AND PROCESS START-UP

#### PART 1 GENERAL

##### 1.01 SUMMARY

- A. Section includes Requirements for the Planning, Commissioning and Process Start-Up phases for the Project.
- B. Related sections:
  - 1. Section 01010 - Summary of Work.
  - 2. Section 01510 – Temporary Utilities.
  - 3. Section 15050 – Basic Mechanical Materials and Methods.
  - 4. Section 15950 - Testing, Adjusting, and Balancing.
  - 5. Section 16940 - Electrical Testing.

##### 1.02 DEFINITIONS

- A. Clean Water Facility Testing – Testing of complete facility utilizing MWWTP treated effluent water for purposes of confirming extended equipment/system operation prior to process start-up.
- B. Commissioning – The process of testing the installation for compliance with contract requirements and demonstrating, through documented verification, that the project has successfully met the Contractual requirements and the Project is ready for Process Start-Up.
- C. Component – A basic building block of equipment, subsystems, and systems that requires installation or functional testing but does not have an electrical connection or internal electronics. (Examples: filter effluent piping and manual isolation valves).
- D. Device – A basic building block of equipment, subsystems, and systems that requires installation or functional testing and has an electrical connection or internal electronics. (Examples: filter level transmitter or water pump pressure transmitter).
- E. Equipment – An assembly of component(s) and devices(s) that requires installation or functional testing. (Examples: Pump, motor, VFD, Blowers, etc.).
- F. Facility – A grouping of process areas, systems, subsystems, equipment, components, and devices (Example: Treatment Plant, Pump Station, etc.).
- G. Preliminary Functional Testing – Testing performed on a completed subsystem to demonstrate that equipment/system meets manufacturers' calibration and adjustment requirements and other requirements as specified. Functional testing includes operating equipment/system manually in local, manually in remote (or remote manual), and automatically in remote (in remote auto).
- H. Installation Testing – Testing to demonstrate that subsystem component (piping, power, networks, devices, etc.) is ready and meet the project requirements in advance of functional testing. Installation testing also includes manufacturers' certification of installation and other requirements as specified to prepare equipment/system for Functional Testing. Also referred to as Functional Acceptance Test (FAT). Factory Test (FT) shall be performed as required per individual spec section(s).

- I. Instrumentation and Controls Performance Testing and Fine Tuning – Testing to prove the performance of the Instrumentation Process Control system by operating for an extended period.
- J. Manufacturer’s Certificate of Source Testing – When applicable, the form is used during Source Testing for the manufacturer to confirm that the applicable source tests have been performed and results conform to the Contract Documents. The form is provided at the end of this Section.
- K. Manufacturer’s Certificate of Installation and Functionality Compliance – The form is used during Installation Testing and Functional Testing. It is submitted at the end of Functional Testing to confirm that the equipment/system is installed in conformance with the Contract Documents and that it meets the Functional Testing requirements defined in the Contract Documents. The form is provided at the end of this Section.
- L. Phases – The work activities of testing, training, facility commissioning, and process start-up are grouped into the 2 distinct phases as defined in the table below.

<b>Commissioning Phase</b>	<b>Process Start-Up Phase</b>
Source Testing	Process Start-Up
City Training	Process Operational Period
Installation Testing	Instrumentation and Controls Performance Testing and Fine Tuning
Functional Testing	
Clean Water Facility Testing	
Closeout Documentation	

- M. Process Area – A grouping of systems, subsystems, equipment, components, and devices that divide a facility into functional areas. (Examples: Headworks Area or Blowers Area).
- N. Process Operational Period – A period after completion of the Process Start-Up set aside for final Operational Testing to verify facility performance meets the Contract Document requirements. This period may specifically limit other construction activities.
- O. Process Start-Up – Activities conducted after commissioning that are necessary to place systems or process areas into operational service.
- P. Product – A system, subsystem, or component.
- Q. Source Testing – Quality control testing conducted at the source or point of assembly to demonstrate components, devices, equipment/systems, and software meets specified performance requirements prior to shipment. Also referred to as factory testing or factory acceptance testing (FT).
- R. Subsystem – A building block of systems made up from a grouping of components, devices, and equipment that perform a definable function. (Examples: Potable Water System, Sewage System).
- S. System – A grouping of subsystems, equipment, components, and devices that perform a definable function. (Examples: Treatment Basin).

### **1.03 SERVICES OF MANUFACTURER'S REPRESENTATIVES**

- A. Qualification of manufacturer's representative as specified in the Contract Document's technical sections includes the following:
  - 1. Authorized representative of the manufacturer, factory trained, and experienced in the technical applications, installation, operation, and maintenance of respective equipment/system with full authority by the equipment/system manufacturer to issue the certifications required of the manufacturer.
  - 2. Competent, experienced technical representatives of equipment/system manufacturers for assembly, installation, testing guidance, and training.
  - 3. Additional qualifications may be specified in the individual Specification sections.
  - 4. Submit qualifications of the manufacturer's representative no later than 30 days in advance of required observations.
  - 5. Representative subject to approval by City and Construction Manager.
  - 6. No substitute representatives will be allowed until written approval by City and Construction Manager has been obtained.
  
- B. Completion of manufacturers' on-site services: Construction Manager approval required.
  
- C. Manufacturer is responsible for determining the time required to perform the specified services.
  - 1. Minimum times specified in the Contract Documents are estimates.
  - 2. No additional costs associated with performing the required services will be approved.
  - 3. Manufacturer required to schedule services in accordance with the Contractor's project schedule up to and including making multiple trips to project site when there are separate milestones associated with installation of each occurrence of manufacturer's equipment.
  
- D. Manufacturer's on-site services as specified in the Contract Documents include the following:
  - 1. Assistance during Commissioning and Process Start-Up.
  - 2. Provide daily copies of manufacturers' representatives field notes and data to the Construction Manager.
  - 3. Other requirements as specified in the Contract Documents.

### **1.04 PLANNING PHASE**

- A. Submit Commissioning and process start up schedule and plan not less than 180 calendar days prior to planned initial commissioning of each subsystem or system to the sole satisfaction of the City.
  
- B. Commissioning and Process Start-Up schedule:
  - 1. Commissioning overview:
    - a. Comply with Commissioning and Process Start-Up Roles and Responsibilities Matrix specified at the end of this Section.
  - 2. Submittal due date:
    - a. Submit Commissioning and Process Start-Up schedule not less than 180 calendar days prior to planned initial commissioning of each subsystem or system.
  - 3. Schedule requirements:
    - a. Include in the baseline schedule as outlined in Section 01310, Progress Schedules and Reports, the commissioning and process start-up schedule.
    - b. Schedule durations and float for commissioning and process start-up activities to ensure Work does not fall behind schedule due to complications or delays during Commissioning and Process Start-Up.

- c. Time-scaled network diagram detailing the work to take place in the period between 90 calendar days prior to planned initial commissioning and process start-up of equipment and systems, and prior to the date of Substantial Completion, together with supporting narrative.
- d. Provide detailed schedule of Commissioning and Process Start-Up activities including durations and sequencing requirements.
  - 1) Identify the following activities:
    - a) Commissioning Phase:
      - (1) Source Testing.
      - (2) City Training.
      - (3) Installation Testing.
      - (4) Functional Testing.
      - (5) Clean Water Facility Testing.
      - (6) Closeout Documentation.
    - b) Process Start-Up Phase:
      - (1) Process Start-Up.
      - (2) Process Operational Period.
      - (3) Instrumentation and Controls Performance Testing and Fine Tuning.
- e. Schedule manufacturer's services to avoid conflict with other on-site testing or other manufacturers' on-site services.
- f. Verify that conditions necessary to allow successful testing to have been met before scheduling services.

C. Clean Water Facility Testing Plan:

- 1. Submit a Clean Water Facility Testing Plan equivalent to the requirements of the subsystem test plans a minimum of 120 calendar days prior to Clean Water Facility Testing.

## 1.05 COMMISSIONING PHASE

A. Overview of Commissioning Phase:

- 1. General:
  - a. Include specified Source Testing, City Training, Installation Testing, Functional Testing, Clean Water Facility Testing, and Closeout Documentation required by this Section and the technical sections.
- 2. Contractor responsibilities:
  - a. Furnish labor, power, chemicals, tools, equipment, instruments, laboratory analyses, water quality testing, and services required for and incidental to completing commissioning activities in accordance with the approved Commissioning Plans.
  - b. Prior to testing, verify equipment protective devices and safety devices have been installed, calibrated, and tested.
  - c. Acceptable tests: Demonstrate the equipment/system performance meets the requirements stated in the Contract Documents.
    - 1) When the equipment/system fails to meet the specified requirements, perform additional, more detailed, testing to determine the cause, correct, repair, or replace the causative components and repeat the testing that revealed the deficiency.

B. Source Testing:

- 1. Also referred to as factory testing (FT).
- 2. Test components, devices, and equipment/system for proper performance at point of manufacture or assembly as specified in the technical specifications.
- 3. Notify the Construction Manager in writing when the equipment/system is ready for source inspection and testing.
- 4. Source Test Plan:
  - a. As specified in this Section and other technical sections.
  - b. Source Testing requirements as specified in technical sections.



- 1) Non-witnessed: Provide Manufacturer's Certificate of Source Testing.
- c. Prepared by Contractor as a result of discussions and planning emerging from regularly conducted commissioning and process start-up meetings for source tests as specified in the Contract Documents.
- d. Provide the following items for each Source Test:
  - 1) Purpose and goals of the test.
  - 2) Identification of each item of equipment/system, including system designation, location, tag number, control loop identifier, etc.
  - 3) Description of the pass/fail criteria that will be used.
  - 4) Listing of pertinent reference documents (Contract Documents and industry standards or specifications applicable to the testing).
  - 5) Complete description, including drawings or photographs, of test stands and/or test apparatus.
  - 6) Credentials of test personnel.
  - 7) Descriptions of test equipment to be used, product information, and all appropriate calibration records for the test equipment.
  - 8) Test set-up procedures.
  - 9) Detailed, step-by-step test procedures.
    - a) The level of detail shall be sufficient for any witness with a rudimentary technical aptitude to be able to follow the steps and develop confidence that the tests were being performed as planned.
    - b) All steps are significant, and all steps shall be included in the procedures.
  - 10) Sample data logs and data recording forms. Sample computations or analyses with the results in the same format as the final report to demonstrate how data collected will be used to generate final results.
    - a) Complete disclosure of the calculation methodologies.
    - b) Include a sample for each type of computation required for the test and analysis of the results.
  - 11) Detailed outline of the Source Test report.
  - 12) Sample test reports.
- e. Submit Source Test Plan and forms as specified in the technical specifications.
  - 1) Submit a copy of the Source Test Plan at least 21 days before any scheduled test date.
  - 2) Engineer approval of Source Test Plan required prior to beginning source testing.
  - 3) Schedule the testing after approval of the test procedures submittal.
- f. Indicate the desired dates for source inspection and testing.
  - 1) Notify the Engineer of the scheduled tests a minimum of 15 days before the date of the test.

5. Test results:

- a. Prepare and submit test results with collected data attached.

6. Contractor is responsible for providing fuel, chemicals, and other consumables needed for Source Testing.

C. City Training:

1. Conduct hands-on instruction according to the following descriptions:
  - a. Present hands-on demonstrations of at least the following tasks:
    - 1) Proper start-up, shutdown, and normal and alternative operating strategies.
    - 2) Common corrective maintenance repairs for each group.
    - 3) Describe recommended procedures to check/test equipment/system following a corrective maintenance repair.
  - b. Use tools and equipment provided by manufacturer to conduct the demonstrations.
    - 1) Submit requests for supplemental assistance and facilities with the Contractor's proposed lesson plans.

- c. Contractor remains responsible for equipment disassembly or assembly during hands-on training situations involving equipment disassembly or assembly by City's personnel.
  - 1) Provide written certification of proper equipment/system operation to Engineer after completion of hands-on training.
- 2. Number of students:
  - a. Estimated maximum class size: 8 persons.
    - 1) City will determine the actual number of students.
    - 2) Engineer will provide an estimated headcount 1 week prior to the class, so that the instructor can provide the correct number of training aids for participants.
- 3. Instructor qualifications:
  - a. Provide instructors completely knowledgeable in the equipment/system for which they are training.
  - b. Provide instructors experienced in conducting classes.
  - c. Provide instructor's technical preparation and instructional technology skills and experience.
  - d. Sales representatives are not qualified instructors unless they possess the detailed operating and maintenance knowledge required for proper class instruction.
  - e. If, in the opinion of the City, an appropriately knowledgeable person did not provide the scheduled training, such training shall be rescheduled and repeated with a suitable instructor at no additional cost to City.
  - f. Instructor qualifications are subject to the approval of the Engineer.
- 4. Classroom documentation:
  - a. Trainees will keep training materials and documentation after the session.
  - b. Operations and maintenance manuals, as specified in Section 01730, Operation and Maintenance Data, and the technical sections:
    - 1) Provide hard copies of the final approved operations and maintenance manuals as specified in Section 01730 for use during the classroom instruction.
    - 2) City reserves the right to delay training for a particular equipment item if the operations and maintenance manuals for that equipment are incomplete, inaccurate, or otherwise unsuitable for use by the City's staff.
    - 3) City also reserves the right to delay training for a particular equipment item if the contents of training need modifications or adjustment as per City's/Engineer's comments prior to the approval of training document to meet City's expectation of the training.
    - 4) No contract extensions or extra costs will be allowed for training delays due to operations and maintenance manual submittal delays or any of the reasons mentioned above.
  - c. Training manuals and materials:
    - 1) Furnish training manuals and other materials for training courses.
    - 2) Manuals are to be professionally written to present the course material in a format that is easy to comprehend.
    - 3) The manuals are to serve as teaching aids during presentation of the training classes.
    - 4) Manuals are to serve as reference material after the training has been completed:
      - a) All text shall be capable of electronic word searches:
    - 5) Electronic training data shall comply with the labeling, formats, file saving, and file naming conventions for Operation and Maintenance data as specified in Section 01730.
- 5. Class logistics:
  - a. Conduct all training at the project site unless another location is approved by the City.
  - b. Class agenda:
    - 1) Schedule refreshment breaks and meal breaks to meet the class needs and City work rules.
  - c. Schedule specific sessions:

- 1) Minimum of 30 days in advance to allow City staffing arrangements to take place.
  - 2) At the times requested by the City, within the period 7 a.m. to 7 p.m. Monday through Friday.
    - a) Times scheduled will be at City's discretion.
  - 3) City approval and confirmation required for session schedules.
    - a) A maximum of 1 session per day for each class is allowed.
  - d. Revise training sessions judged "Unsatisfactory" by a majority of attendees.
    - 1) Conduct training sessions again until a satisfactory rating is achieved at no additional cost to City.
6. Submittals:
- a. Prior to the training session:
    - 1) Instructor qualifications: Due 90 calendar days prior to initial training session.
    - 2) Training course materials: Due 60 calendar days prior to initial training session.
      - a) Training agenda, lesson plan, presentation, and handouts.
      - b) Other audio-visual aids utilized during each training course.
      - c) Format: 2 electronic copies and 3 hard copies organized in notebooks.
      - d) Provide an additional 2 hard copies for the PC and PDM.
7. Specific Requirements for Instrument and Control Systems:
- a. Provide operations and maintenance training for items of instrumentation equipment and controls system components. Utilize manufacturer's representatives to conduct training sessions.
  - b. Coordinate training sessions to prevent overlapping sessions. Arrange sessions so that individual operators and maintenance technicians do not attend more than 2 sessions per week.
  - c. Contractor shall provide elements of training for the software and components that they configured, created or constructed. Examples include, but are not limited to: application software, alarm configuration, PLC cabinets, instruments, analyzers, and architecture of the PanelView HMI.
  - d. Include instruction on the use of all maintenance equipment and special tools provided under the Contract.
  - e. Complete operator training classes before process start-up of the SCADA system, or any part of it.
  - f. Schedule follow-up training classes after HMI start-up for a duration of two (2) days.
  - g. System overview training:
    - 1) Furnish training courses that give the City's supervisory level personnel an overview of all elements of the I&CS system that focus on the overall functional aspect of elements of the control system and provide an understanding of the interaction of the various components.
  - h. Training course requirements:
    - 1) Operator training:
      - a) Furnish training courses that provide system operators with a working knowledge of the I&CS that include the general operation of the control system.
      - b) Operator's training shall include:
        - (1) Control system overview: Architecture, equipment functions, software components, etc.
        - (2) Display navigation, overview, and types of displays.
        - (3) Process and equipment monitoring and control: Basic principles and operation.
        - (4) Logging ON and OFF the system and description of the security and access system.
        - (5) Alarm subsystem.
        - (6) Trending: Provide a thorough session on how to use all trending functions.
        - (7) Reports: How to access, print, and review content.

- (8) Control strategies: Present an average 15-minute review of each control strategy, including a hands-on demonstration of screens and operator functions for each.
- (9) Instruction on the use of all operational functionality alarm logging, trending, displays, database, reports, and control software developed for the Project and incorporated in the installed I&CS system.
- c) Training includes prescribed Rockwell Automation training.
- 2) OIT/HMI hardware/software development training:
  - a) Provide training by a factory-authorized vendor.
  - b) Furnish training courses that will enable the City's staff to develop and maintain all aspects of the operator interface system applications.
  - c) Overview of hardware and firmware, including starting, stopping, and PLC interface.
  - d) Training includes prescribed Rockwell Automation SCADA hardware and software training including Factory Talk View SE.
  - e) Include topics:
    - (1) Operating systems and utilities such as virus protection software.
    - (2) Point (tag) database development and modification.
    - (3) Troubleshooting.
    - (4) I/O servers, drivers, licensing etc.
    - (5) PLC interface functions and software.
    - (6) Graphic screen creation and editing.
    - (7) Trending.
    - (8) Alarms and events.
    - (9) System security, access levels, and areas of responsibility.
    - (10) General system maintenance, including backups, history data archive, version control, file naming and cataloging conventions, and system file housekeeping.
- 3) Report training:
  - a) Furnish training courses that will enable the City's staff to develop and maintain all aspects of reports.
  - b) Training includes prescribed Rockwell Automation training.
  - c) Include topics:
    - (1) Generation of a developed report.
    - (2) Generation of a new report.
    - (3) Modification and editing of reports.
    - (4) Formatting reports.
    - (5) Manual entry and automatic entry of data from a database.
- 4) Instrumentation training:
  - a) Furnish training covering all instruments and control panels.
  - b) Furnish the specified quantity of training, allocated to cover new instruments and hardwired controls as specified in this Section and specifically determined in the accepted training plan.
  - c) Train maintenance staff in the use, cleaning, calibration, maintenance, and troubleshooting of all the instruments furnished within this Project.
  - d) Furnish training on the operation of new hardwired controls.
- 5) Analytical instrument training:
  - a) Furnish training covering all analytical instruments.
  - b) Furnish the specified quantity of training, allocated to cover new analytical instruments as specified in this Section and specifically determined in the accepted training plan.
  - c) Train maintenance staff in the use, cleaning, calibration, maintenance, and troubleshooting of all the analytical instruments furnished within this Project.

d) Provide training by manufacturer.

D. Installation Testing:

1. Perform subsystem testing according to approved Subsystem Testing Plans.
2. Initiate the Manufacturer's Certificate of Installation and Functionality Compliance for all equipment.
  - a. Manufacturer's Certificate of Installation and Functionality Compliance form is included in this Section.
  - b. Manufacturer's Certificate of Installation and Functionality Compliance certifies the equipment meets the following requirements:
    - 1) Has been properly installed, adjusted, aligned, and lubricated.
    - 2) Is free of any stresses imposed by connecting piping or anchor bolts.
    - 3) Is able to be operated as necessary for Functional Testing.
  - c. Form shall be submitted after completion of Functional Testing, as specified in this Section.
3. Coordinate Installation Testing with restrictions and requirements as specified in Section 01010, Summary of Work.
4. Perform Holiday testing.
5. Perform pressure and leakage testing as specified in individual component Sections and Section 15950.
6. Perform mechanical equipment Installation Testing: As specified below and in individual equipment Sections, such as Sections 15050 and 15950:
  - a. Remove rust preventatives and oils applied to protect equipment during construction.
  - b. Flush lubrication systems and dispose of flushing oils.
    - 1) Recharge lubrication system with lubricant recommended by manufacturer.
  - c. Flush fuel system and provide fuel for testing and start-up.
  - d. Install and adjust packing, mechanical seals, O-rings, and other seals. Replace defective seals.
  - e. Remove temporary supports, bracing, or other foreign objects installed to prevent damage during shipment, storage, and erection.
  - f. Check rotating machinery for correct direction of rotation and for freedom of moving parts before connecting driver.
  - g. Perform cold alignment and hot alignment to manufacturer's tolerances.
  - h. Adjust V-belt tension and variable pitch sheaves.
  - i. Inspect hand and motorized valves for proper adjustment.
    - 1) Tighten packing glands to ensure no leakage but permit valve stems to rotate without galling.
    - 2) Verify valve seats are positioned for proper flow direction.
  - j. Tighten leaking flanges or replace flange gasket.
    - 1) Inspect screwed joints for leakage.
  - k. Install gratings, safety chains, handrails, shaft guards, and sidewalks prior to operational testing.
7. Electrical devices and subsystems Installation Testing: As specified below, in Section 16940, and the technical sections.
  - a. Perform insulation resistance tests on all wiring except wiring and control wiring inside electrical panels.
  - b. Perform grounding resistance tests on grounding systems.
  - c. Test and set relays and circuit breaker trip units for proper operation.
    - 1) Settings as documented in approved electrical studies performed.
  - d. Perform direct current high potential tests on all cables that will operate at more than 2,000 volts.
  - e. Motors:
    - 1) Windings energized to 1,000 volts DC for 1 minute.
      - a) Motor resistance measured at the end of the test and recorded.
    - 2) Check motors for actual full load amperage draw and proper rotation.
8. Instrumentation devices and subsystems Installation Testing: As specified below and technical sections.
9. HVAC systems Installation Testing: As specified below, in Section 15950, and technical sections.

- a. Perform testing of heating, ventilating, and air conditioning equipment, balancing of distribution systems, and adjusting of ductwork accessories.
- b. Test hydronic systems, if required by technical specifications.

E. Functional Testing:

1. Perform subsystem testing according to approved Subsystem Testing Plan.
2. Notify the Construction Manager 5 days prior to when the Work is ready for Functional Testing.
  - a. Perform testing in the presence of the Engineer.
3. Determine Functional Testing durations with City's input.
  - a. Durations will vary depending on the availability of water for testing.
  - b. Target minimum Functional Test duration: 8 hours.
    - 1) Identify equipment/system that cannot be tested for a minimum of 8 hours as specified in technical sections.
4. Perform Functional Testing as specified in technical sections.
  - a. Perform Functional Testing in addition to the other tests specified in the technical sections.
  - b. Perform Functional Testing to demonstrate that the component equipment functions as an entire system in accordance with the design requirements.
  - c. Perform Functional Testing to demonstrate that the unit process has operated in a manner necessary to demonstrate equipment/system functions manually in local, manually in remote (or remote manual), and automatically in remote (in remote auto).
  - d. Perform testing with Contractor provided water.
  - e. Repair or replace parts that operate improperly and retest.
  - f. Submit testing results as specified in the technical section to the City and Engineer for approval of Functional Testing results.
5. Provide completed Manufacturer's Certificate of Installation and Functionality Compliance forms for all equipment.
  - a. Manufacturer's Certificate of Installation and Functionality Compliance form is included in this Section.
  - b. Manufacturer's Certificate of Installation and Functionality Compliance certifies the equipment/system meets the following requirements:
    - 1) Is suitable for satisfactory full-time operation under full load conditions.
    - 2) Operates within the allowable limits for vibration and noise.
    - 3) Electrical and instrumentation requirements:
      - a) Electrical equipment, instrumentation, and control panels are properly installed, calibrated, and functioning.
      - b) Electrical Installation Testing is complete and test results have been approved by the Engineer.
        - (1) Noted deficiencies have been corrected.
        - (2) Relays, circuit breakers, and other protective devices are set.
      - c) Control logic for start-up, shutdown, sequencing, interlocks, control, and emergency shutdown have been tested and are properly functioning.
      - d) Motor control is calibrated and tested.

F. Clean Water Facility Testing:

1. Utilize treated effluent from the existing MWWTP.
  - a. See Section 01510 for requirements.
2. Do not begin Clean Water Facility Testing until Engineer has approved submittals for Functional Testing requirements.
3. Test entire facility with re-circulating water supply at the design flow for the largest single process or system train to ensure proper complete facility (equipment/system) hydraulic performance. Recirculation equipment shall capture flow prior to discharge into the infiltration basins and return it to the headworks. Setup shall be modified by the Contractor as directed by the City as needed to facilitate Process Start-Up. Recirculation equipment shall remain in place through the Process Operational phase.

4. Perform testing in the presence of the Engineer unless such presence is expressly waived in writing.
5. The purpose of Clean Water Facility Testing is to confirm extended equipment/system operation prior to Process Start-Up.
  - a. Test entire facility continuously for a 7-calendar day period at a minimum. If a problem is encountered, the 7-day period shall restart per 1.07.C.7.g.
  - b. Perform control loop tuning during system testing with water to the extent possible.

G. Closeout documentation:

1. Submittals:
  - a. Provide records generated during commissioning and process start-up phase of Project.
    - 1) Required documents include but are not limited to:
      - a) Training documentation.
      - b) Manufacturer's Certificate of Source Testing.
      - c) Manufacturer's Certificate of Installation and Functionality Compliance.
      - d) Daily logs of equipment/system testing identifying tests conducted and outcome.
      - e) Test forms and documentation.
      - f) Functional Testing results.
      - g) Logs of time spent by manufacturer's representatives performing services on the job site.
      - h) Equipment lubrication records.
      - i) Electrical phase, voltage, and amperage measurements.
      - j) Insulation resistance measurements.
      - k) Bearing temperature measurements.
    - 2) Data sheets of control loop testing including but not limited to functional checks from field to the SCADA, testing and calibration of instrumentation devices and setpoints. Format: 1 electronic copy and 3 hard copies organized in notebooks.
    - 3) Due date: Within 30 calendar days following completion of activity.
  - b. Provide Instrumentation and Control Performance Testing and Fine-Tuning reports.
    - 1) Format: 2 electronic copies and 3 hard copies organized in notebooks.
    - 2) Due date: Within 30 calendar days of Instrumentation and Controls Performance Testing and Fine-Tuning completion.

## 1.06 PROCESS START-UP PHASE

A. Overview of Process Start-Up Phase:

1. The City will self-perform the Process Start-Up Phase (30 calendar days).
2. The Contractor shall be responsible for providing mechanical, electrical, and integrator support services during the Process Start-Up Phase.
3. The Contractor shall be responsible for repairing any systems, subsystems, or devices that are nonfunctional, nonoperational, or not working as intended during the entire Process Start-Up

B. Process Start-Up:

1. Pre-start-up activities (by the City, unless otherwise specified herein):
  - a. Commissioning Documentation and Data Review.
  - b. Start-Up Go/No-Go Decision Criteria.
  - c. Support the City's Process Start-Up Sequence Review.
    - 1) Coordinate with the City to prepare a process start-up sequence.
    - 2) Include the following:
      - a) Pre-start-up activities.
      - b) Process Start-Up.
      - c) Process Operational Period.
  - d. Final Process Start-Up Forms and Documentations.
  - e. Final Operational Testing Plan.

2. Control loop tuning (by the Contractor).
    - a. Perform control loop tuning during system testing with water during Clean Water Facility Testing to the extent possible.
    - b. Contractor shall compete control loop tuning with process water during the Process Start-Up phase if tuning could not be accomplished during the Clean Water Facility Testing phase.
- C. Process Operational Period (by the City, unless otherwise specified herein):
1. General:
    - a. Begin Process Operational Period when all Process Start-Up activities have been completed.
      - 1) All systems and sub-systems are operational and treating process flow.
      - 2) All equipment and system performance tests are complete.
    - b. During the Process Operational Period, the new facilities will be operated together, as part of normal day-to-day operation.
  2. Prior to beginning the Process Operational Period (by the Contractor):
    - a. Correct any outstanding punch list items that may affect the operation of the new facilities prior to the Process Operational Period.
  3. Prove facility operation is in conformance with Contract Document requirements.
  4. Contractor shall provide:
    - a. Specified start-up materials and operating supplies.
    - b. Necessary craft or labor assistance, in the event of an emergency equipment failure requiring immediate attention (emergency is defined as a failure of function which precludes the further operation of a critical segment of or the whole of the work) with a response time of not more than 4 hours from the time of notification.
    - c. Manufacturer's authorized representative to supervise placing equipment/systems in operation and provide guidance during Operational Testing per applicable section.
    - d. Necessary manufacturer's representatives and operating supplies for retesting systems that fail to pass the initial Operational Testing due to deficiencies in products of workmanship at no additional cost to the City.
  5. Contractor shall cover all operational costs through successful completion of the Operational Period, including electrical, chemical, water, etc.
  6. Prior to date of Final Completion, the City's CSC shall oversee Process Operational Period.
    - a. The City's operations personnel will operate the IWTF during the Process Operational Period, including all ancillary and support systems:
      - 1) Influent Pumping System.
      - 2) Headworks.
      - 3) Air Blowers and Blower Building.
      - 4) Treatment Basins.
      - 5) Non-potable water.
      - 6) Potable Water System.
      - 7) Standby Power System.
      - 8) Operation Building.
      - 9) Sewage Lift Station.
    - b. IWTF Turnover to City (by the Contractor):
      - 1) Upon successful completion of the Process Operational Period and Instrumentation and Controls Performance Testing and Fine Tuning, the Contractor shall perform the following:
        - a) Check and fill all operational fluids (i.e. generator fuel, oil lubricants, etc.)
        - b) Clean and/or replace, if needed, all filters (HVAC, Electrical, Blowers, etc.)  
Replacement of filters will be at the discretion of the Construction Manager.
    - c. Entire system shall continuously meet performance requirements and shall operate without fault, failure, or defect for a continuous period.



- d. Individual equipment/system failures that are corrected within 24 hours and do not prevent the entire project from continuously satisfying the established operational requirements shall not require the consecutive day test to be re-started unless the failure recurs.
- e. Repairs on individual equipment/system with fault, failure, or defects shall be permanent and be coordinated and approved by the associated equipment manufacturer (by the Contractor).
- f. Restart the consecutive test period for any of the following conditions:
  - 1) Any failure of the complete Project construction to meet operational requirements.
  - 2) When malfunctions or deficiencies cause shutdown of the facility or results in failure of the complete Project construction to meet operational requirements.
    - a) Malfunctions or deficiencies that cause a partial shutdown or operation of the facility will be reviewed on a case-by-case basis. For example, if the failed piece of equipment has a redundant stand-by and it is operational this may not require a restart if the system is still operating as designed.
  - 3) Any individual equipment/system failure that meets any of the following conditions:
    - a) Requires more than 24 hours to correct.
    - b) Recurs within the 24-hour correction period requiring further correction.
- g. Immediately correct defects in material, workmanship, or equipment/system which became evident during Operational Testing (by the Contractor).
- h. If water quality samples indicate inadequate treatment, the recirculation system setup during the "Clean Water Testing" shall be used to recirculate flow to the headworks, and City staff shall transition flow at the processing facilities from the IWTF to the municipal WWTP until the issue is resolved and startup can be resumed.

**PART 2        PRODUCTS**

Not Used.

**PART 3        EXECUTION**

Not Used.

**MANUFACTURER'S CERTIFICATE OF SOURCE TESTING**

CITY \_\_\_\_\_  
PROJECT NAME \_\_\_\_\_  
PROJECT NO. \_\_\_\_\_  
SPECIFICATION NO. \_\_\_\_\_  
SPECIFICATION TITLE \_\_\_\_\_

EQPT/SYSTEM \_\_\_\_\_  
EQPT TAG NO. \_\_\_\_\_  
EQPT SERIAL NO. \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I hereby certify Source Testing has been performed on the above-referenced equipment/system as defined in the Contract Documents and results conform to the Contract Document requirements. Testing data is attached.

Date of Execution: \_\_\_\_\_, 20\_\_\_\_

Manufacturer: \_\_\_\_\_

Manufacturer's Authorized Representative Name (*print*): \_\_\_\_\_

\_\_\_\_\_  
(Authorized Signature)

If applicable, Witness Name (*print*): \_\_\_\_\_

\_\_\_\_\_  
(Witness Signature)

**MANUFACTURER'S CERTIFICATE OF  
INSTALLATION AND FUNCTIONALITY COMPLIANCE**

CITY \_\_\_\_\_ EQPT/SYSTEM \_\_\_\_\_  
PROJECT NAME \_\_\_\_\_ EQPT TAG NO. \_\_\_\_\_  
PROJECT NO. \_\_\_\_\_ EQPT SERIAL NO. \_\_\_\_\_  
SPECIFICATION NO. \_\_\_\_\_  
SPECIFICATION TITLE \_\_\_\_\_

I hereby certify that the above-referenced equipment/system has been: (Check Applicable)

- Installed in accordance with manufacturer's recommendations.
- Inspected, checked, and adjusted.
- Serviced with proper initial lubricants.
- Electrical/Instrumentation and mechanical connections meet quality and safety standards.
- All applicable safety equipment has been properly installed.
- Functionally tested.
- System has been performance tested and meets or exceeds specified performance requirements.
- System is ready for Clean Water Testing.

NOTES:

Attach test results with collected data and test report.

Attach written certification report prepared by and signed by the electrical and/or instrumentation subcontractor.

Comments: \_\_\_\_\_  
\_\_\_\_\_

I, the undersigned manufacturer's representative, hereby certify that I am (i) a duly authorized representative of the manufacturer, (ii) empowered by the manufacturer to inspect, approve, and operate this equipment/system and (iii) authorized to make recommendations required to assure that the equipment/system furnished by the manufacturer is complete and operational, except as may be otherwise indicated herein. I further certify that all information contained herein is true and accurate.

Date: \_\_\_\_\_, 20 \_\_\_\_

Manufacturer: \_\_\_\_\_

Manufacturer's Authorized Representative Name (*print*): \_\_\_\_\_

By Manufacturer's Authorized Representative: \_\_\_\_\_  
(Authorized Signature)

**COMMISSIONING AND PROCESS START-UP**

**TRAINING EVALUATION FORM**

EQUIPMENT/SYSTEM ITEM: \_\_\_\_\_  
 VENDOR/MANUFACTURER: \_\_\_\_\_  
 DATE: \_\_\_\_\_ NAME OF REPRESENTATIVE: \_\_\_\_\_

- |  |            |              |    |     |
|--|------------|--------------|----|-----|
| 1. Was representative prepared?  | Acceptable | Unacceptable | or | N/A |
| 2. Was an overview description presented?  | Acceptable | Unacceptable | or | N/A |
| 3. Was specific detail presented for system components?                                | Acceptable | Unacceptable | or | N/A |
| 4. Were alarm and shutdown conditions clearly presented?                               | Acceptable | Unacceptable | or | N/A |
| 5. Were step-by-step procedures for starting, stopping, and troubleshooting presented? | Acceptable | Unacceptable | or | N/A |
| 6. Were routine/preventive maintenance items clearly identified?                       | Acceptable | Unacceptable | or | N/A |
| 7. Was the lubrication schedule (if any) discussed?                                    | Acceptable | Unacceptable | or | N/A |
| 8. Was the representative able to answer all questions?                                | Acceptable | Unacceptable | or | N/A |
| 9. Did the representative agree to research and answer unanswered questions?           | Acceptable | Unacceptable | or | N/A |
| 10. Comments: _____  |            |              |    |     |
| _____  |            |              |    |     |
| _____  |            |              |    |     |

11. Overall Rating: Satisfactory Unsatisfactory

Notes:

Sessions judged “Unsatisfactory” by a majority of attendees shall be revised and conducted again until a satisfactory rating is achieved.

**COMMISSIONING AND PROCESS START-UP ROLES AND RESPONSIBILITIES MATRIX**

<b>NO.</b>	<b>TASK</b>	<b>CITY</b>	<b>CONTRACTOR</b>	<b>CM</b>	<b>DESIGN CONSULTANT</b>
<b>Commissioning Phase</b>					
Source Testing					
1	Source Testing	Witness	Lead	Support	Witness/ Primary Review
City Training					
2	Manufacturer and Vendor Training	Witness	Lead	Secondary Review	Primary Review
3	Instrument and Control Systems (I&CS) Training	Witness	Lead	Secondary Review	Primary Review
Installation Testing					
4	Electrical Conductor Testing	No Action	Lead	Witness	Primary Review
5	Electrical Functional Acceptance Tests	No Action	Lead	Witness	Primary Review
6	Instrument Field Calibration	Support	Lead	Witness	Primary Review
7	Fiber Network Installation Testing	Support	Lead	Witness	Primary Review
8	Loop Testing	Support	Lead	Witness	Primary Review
9	Pressure Testing	No Action	Lead	Witness	Primary Review
10	Leak Testing	No Action	Lead	Witness	Primary Review
11	Holiday Testing	No Action	Lead	Witness	Primary Review
12	HVAC Testing	No Action	Lead	Witness	Primary Review
13	Motor Electrical Testing	No Action	Lead	Witness	Primary Review
Functional Testing					
14	Fiber Network Operational Testing	Secondary Review	Lead	Witness	Primary Review
15	Preliminary Run Testing Local /Manual Control	Secondary Review	Lead	Witness	Primary Review
16	I&CS Functional Demonstration Testing	Secondary Review	Lead	Witness	Primary Review

**COMMISSIONING AND PROCESS START-UP ROLES AND RESPONSIBILITIES MATRIX**

<b>NO.</b>	<b>TASK</b>	<b>CITY</b>	<b>CONTRACTOR</b>	<b>CM</b>	<b>DESIGN CONSULTANT</b>
	- Local/Auto Control Testing - Remote/Manual Contact Testing - Alarm Testing - Control Loop Testing				
17	Subsystem Start-Up and Testing	Secondary Review	Lead	Witness	Primary Review
18	Equipment/System Start-Up and Testing	Secondary Review	Lead	Witness	Primary Review
19	HVAC Start-Up and Testing	Secondary Review	Lead	Witness	Primary Review
20	Local Area Network Communications Testing	Secondary Review	Lead	Witness	Primary Review
21	Manufacturer’s Certificate of Installation and Functionality Compliance	Secondary Review	Lead	Witness	Primary Review
22	Control Systems Testing	Support	Lead	Witness	Support/ Primary Review
23	Standby Power System	Secondary Review	Lead	Witness	Primary Review
24	Ancillary System Start-Up and Testing	Secondary Review	Lead	Witness	Primary Review
<b>Instrumentation and Control Performance Testing and Fine Tuning</b>					
25	I&CS Performance Testing and Fine Tuning	Support	Lead	Witness	Primary Review
26	OP BLDG Fire and Security System Testing	Support	Lead	Witness	Primary Review
<b>Clean Water Facility Testing</b>					
27	Test Water Management Plan Finalization	Secondary Review	Lead	Witness	Primary Review
28	Clean Water Facility Testing	Secondary Review	Lead	Witness	Witness/ Primary Review
<b>Process Start-Up Phase</b>					
<b>Pre-Start-Up Activities</b>					
29	Commissioning Documentation and Data Review	Lead	No Action	Witness	Primary Review
30	Process Start-Up Plan Finalization	Lead	Support	Witness	Primary Review

**COMMISSIONING AND PROCESS START-UP ROLES AND RESPONSIBILITIES MATRIX**

<b>NO.</b>	<b>TASK</b>	<b>CITY</b>	<b>CONTRACTOR</b>	<b>CM</b>	<b>DESIGN CONSULTANT</b>
31	Start-Up Go/No-Go Decision Criteria	Lead	No Action	Witness	Secondary Review
Facility Wide Process Start-Up					
32	Process Start-Up	Lead	Support	Witness	Support/ Primary Review
33	Control Loop Tuning and Optimization	Support	Lead	Witness	Support/ Primary Review
34	Complete Remaining Equipment and System Tests	Secondary Review	Lead	Witness	Primary Review
Process Operational Period					
35	Operational Testing	Lead	Support	Witness	Support/ Primary Review
36	Final Testing Reports	Lead	Support	Witness	Primary Review
37	Water Quality Testing and Documentation	Lead	Support	Support	Primary Review

**Legend:**

- Lead:** Primarily responsible for organization, coordination, and execution of task work product or result.
- Support:** Assist the lead with coordination of task work product or result and integration of work product with existing facilities and treatment process. Observe task work product or result.
- Witness:** Observe and document completion of task work product or result.
- Primary Review:** As necessary to accept task work product result.
- Secondary Review:** As necessary to observe work product or result and provide input on acceptability of work product result to primary reviewer.
- No Action:** Limited or no involvement.

END OF SECTION

APPENDIX H – Geotechnical Report

The Geotechnical Investigation – Gonzales Industrial Wastewater Recycling Facility by Pacific Crest Engineering Inc., dated March 2020 can be accessed via this link

<https://mnsengineers.box.com/s/b4cbrfpeixvthb61ga6g5nnvj0p6xkci>



CODE COMPLIANCE NOTES		LEGEND AND SYMBOLS		ABBREVIATIONS		GENERAL NOTES	
<p>1. BUILDING DRAIN AND VENT PIPING MATERIALS SHALL COMPLY WITH SECTIONS 701.0 AND 903.0 OF THE CALIFORNIA PLUMBING CODE.</p> <p>2. ALL SANITARY SYSTEM MATERIALS SHALL BE LISTED BY AN APPROVED LISTING AGENCY.</p> <p>3. EACH VENT SHALL RISE VERTICALLY TO A POINT NOT LESS THAN SIX (6) INCHES ABOVE THE FLOOD-LEVEL RIM OF THE FIXTURE SERVED BEFORE OFFSETTING HORIZONTALLY OR BEFORE BEING CONNECTED TO ANY OTHER VENT.</p> <p>4. INSTANT HOT WATER HEATERS, PER PLUMBING SCHEDULE IS A LISTED, NON-STORAGE, INSTANTANEOUS HEATER HAVING AN INSIDE DIAMETER OF NOT MORE THAN 3 INCHES.</p> <p>5. PIPE, TUBE, FITTINGS, SOLVENT CEMENT, THREAD SEALANTS, SOLDER, AND FLUX USED IN POTABLE WATER SYSTEMS INTENDED TO SUPPLY DRINKING WATER SHALL COMPLY WITH NSF 61. MATERIALS FOR BUILDING WATER PIPING AND BUILDING SUPPLY PIPING SHALL COMPLY WITH THE APPLICABLE STANDARDS IN CPC TABLE 604.1.</p>		<p>SYMBOL DESCRIPTION</p> <p>————— SANITARY OR WASTE ABOVE GRADE (W, SAN)</p> <p>----- SANITARY OR WASTE VENT (V)</p> <p>----- DOMESTIC COLD WATER (CW)</p> <p>----- DOMESTIC HOT WATER (HW)</p> <p>----- DOMESTIC HOT WATER RETURN (HWR)</p> <p>⊗ SHUT-OFF VALVE (SOV)</p> <p>⊕ PRESSURE REGULATING VALVE (PRV)</p> <p>⊗ STRAINER</p> <p>⊕ BFP BACKFLOW PREVENTER</p> <p>● POINT OF CONNECTION (POC)</p> <p>● POINT OF DISCONNECTION (POD)</p> <p>////// REMOVE EXISTING PIPING OR EQUIPMENT</p> <p>○ PIPE-UP UNLESS OTHERWISE NOTED</p> <p>○ PIPE DROP UNLESS OTHERWISE NOTED</p> <p>LOW HIGH</p> <p>○ DROP OR RISE</p> <p>○ TOP CONNECTION</p> <p>○ BOTTOM CONNECTION</p> <p>○ FLOOR CLEANOUT (FCO)</p> <p>⊔ VALVE AND CAPPED OUTLET</p> <p>⊔ UNION</p> <p>⊔ CLEANOUT WALL (WCO)</p> <p>⊔ P-TRAP</p> <p>⊔ PIPE RISER W/ SHUT-OFF VALVE</p> <p>⊔ STOP VALVE</p> <p>⊔ CHECK VALVE (CV)</p> <p>⊔ BALANCING VALVE (BV)</p> <p>⊔ TEMPERATURE &amp; PRESSURE RELIEF VALVE (TP)</p> <p>⊔ GAS COCK (GC)</p> <p>⊔ VENT THROUGH ROOF (VTR)</p> <p>⊔ UNION</p> <p>⊔ THERMOMETER</p> <p>⊔ WATER HAMMER ARRESTOR (WHA)</p> <p>⊔ PRESSURE GAUGE</p> <p>⊔ FLOOR DRAIN (FD)</p> <p>⊔ HOSE BIBB (HB)</p> <p>EQUIPMENT DESCRIPTION</p> <p>EQUIPMENT NUMBER</p>		<p>ABBREV. DESCRIPTION</p> <p>ABV ABOVE</p> <p>ADA AMERICAN DISABILITY ACT</p> <p>AFF ABOVE FINISHED FLOOR</p> <p>AFG ABOVE FINISHED GRADE</p> <p>AP ACCESS PANEL</p> <p>B/G BELOW GRADE</p> <p>B/S BELOW SLAB</p> <p>BEL BELOW</p> <p>BFF BELOW FINISHED FLOOR</p> <p>CA COMPRESSED AIR</p> <p>CD CONDENSATE DRAIN</p> <p>CONN CONNECT, CONNECTION</p> <p>CONT CONTINUE</p> <p>CR CONDENSATE RETURN</p> <p>CW COLD WATER (POTABLE)</p> <p>DI DEIONIZED WATER</p> <p>DN DOWN</p> <p>DR DRAIN</p> <p>DSP DRY STANDPIPE</p> <p>DWG DRAWING</p> <p>EL ELEVATION</p> <p>(E) EXISTING</p> <p>FCO FLOOR CLEANOUT</p> <p>FD FLOOR DRAIN</p> <p>FFE FINISHED FLOOR ELEVATION</p> <p>FM FACTORY MUTUAL</p> <p>FT FOOT, FEET</p> <p>FU FIXTURE UNIT</p> <p>GAL GALLON</p> <p>GPM GALLONS PER MINUTE</p> <p>GPF GALLONS PER FLUSH</p> <p>HB HOSE BIBB</p> <p>HDR HEADER</p> <p>HP HORSEPOWER</p> <p>HW HOT WATER</p> <p>HWR HOT WATER RETURN</p> <p>HZ HERTZ</p> <p>ICW INDUSTRIAL COLD WATER</p> <p>IHW INDUSTRIAL HOT WATER</p> <p>IE INVERT ELEVATION</p> <p>IN INCH</p> <p>INT INTEGRAL</p> <p>KW KILOWATT</p> <p>LAV LAVATORY</p> <p>MAX MAXIMUM</p> <p>MIN MINIMUM</p> <p>MPG MEDIUM PRESSURE GAS (5 PSI)</p> <p>N NEW</p> <p>NC NORMALLY CLOSED</p> <p>NG NATURAL GAS, LOW PRESSURE</p> <p>NO NORMALLY OPEN</p> <p>NPT NATIONAL PIPE THREAD</p> <p>NTS NOT TO SCALE</p> <p>POC POINT OF CONNECTION</p> <p>POD POINT OF DISCONNECT</p> <p>PSI POUNDS PER SQUARE INCH</p> <p>PW POTABLE WATER</p> <p>S SEWER</p> <p>SD STORM DRAIN</p> <p>SF SQUARE FEET</p> <p>SH SHOWER</p> <p>SOW SCOPE OF WORK</p> <p>SOV SHUT-OFF VALVE</p> <p>TEMP TEMPERATURE</p> <p>TP TRAP PRIMER</p> <p>TYP TYPICAL</p> <p>UTR UP THRU ROOF</p> <p>UW UNTREATED WATER</p> <p>V VENT</p> <p>VTR VENT THRU ROOF</p> <p>W WASTE</p> <p>WC WATER CLOSET</p> <p>WCO WALL CLEANOUT</p> <p>WHA WATER HAMMER ARRESTOR</p> <p>WTR WATER</p>		<p>1. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO RECONSTRUCT THE BUILDING IN ACCORDANCE WITH CALIFORNIA BUILDING STANDARDS CODE, TITLE 19 &amp; 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE APPROVED PLANS AND SPECIFICATIONS WHERE IN THE FINISHED WORK WILL COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE CITY BEFORE PROCEEDING WITH THE WORK.</p> <p>2. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH:</p> <p>2019 CALIFORNIA ADMINISTRATIVE CODE (CAC) PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)</p> <p>2019 CALIFORNIA BUILDING CODE (CBC) PART 2, TITLE 24, CCR BASED ON THE 2018 INTERNATIONAL BUILDING CODE (IBC)</p> <p>2019 CALIFORNIA ELECTRICAL CODE (CEC) PART 3, TITLE 24, CCR BASED ON THE 2017 NATIONAL ELECTRICAL CODE (NEC)</p> <p>2019 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24, CCR BASED ON THE 2018 UNIFORM MECHANICAL CODE (UMC)</p> <p>2019 CALIFORNIA PLUMBING CODE (CPC) PART 5, TITLE 24, CCR BASED ON THE 2018 UNIFORM PLUMBING CODE (UPC)</p> <p>2019 CALIFORNIA FIRE CODE (CFC) PART 9, TITLE 24, CCR BASED ON THE 2018 INTERNATIONAL FIRE CODE (IFC)</p> <p>ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THE REQUIREMENTS OF THESE CODES AND APPLICABLE LOCAL ORDINANCE WHERE CONTRACT DOCUMENTS EXCEED WITHOUT VIOLATING CODE AND REGULATION REQUIREMENTS, CONTRACT DOCUMENTS TAKE PRECEDENCE. WHERE CODE CONFLICT, THE MORE STRINGENT SHALL APPLY. IT SHALL BE THE CONTRACTOR'S AND HIS EMPLOYEE'S RESPONSIBILITY TO BE FAMILIAR WITH ALL CODES AND ORDINANCES, CITY OR STATE, AS REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT. WHERE ANY CONFLICTS OCCUR BETWEEN FEDERAL, STATE AND LOCAL LAWS, CODES, ORDINANCES, AND REGULATIONS, THE MOST STRINGENT SHALL GOVERN.</p> <p>3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO STRUCTURE, MECHANICAL, PLUMBING, ELECTRICAL, EQUIPMENT, AND ALL OTHER EXISTING SYSTEMS; AND MAKE NECESSARY PROVISIONS TO MAINTAIN THE INTEGRITY OF SAID SYSTEMS PRIOR TO THE COMMENCEMENT OF DEMOLITION, IF ANY. SEE STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND EQUIPMENT DRAWINGS FOR ANY SYSTEMS OR PORTIONS THEREOF TO BE REMOVED, RELOCATED, REVISED OR ABANDONED. ALL POSSIBLE CARE SHALL BE EXERCISED BY THE CONTRACTOR TO INSURE THAT ANY SAID UTILITY WILL NOT BE THE CAUSE OF ENDANGERMENT TO THE LIFE OR HEALTH OF ANY PERSON.</p> <p>4. ALL DRAWINGS AND SPECIFICATIONS ARE TO BE CONSIDERED PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO ANY CONSTRUCTION, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL. ANY APPARENT DISCREPANCY SHALL BE BROUGHT TO THE CONTRACTING OFFICER PRIOR TO START OF CONST. SO A CLARIFICATION MAY BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENT SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.</p> <p>5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK WITH THE CONTRACT DOCUMENTS BEFORE THE INSTALLATION OF ANY MECHANICAL, PLUMBING, ELECTRICAL OR SYSTEMS CONSTRUCTION. ANY DISCREPANCIES WITHIN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR CLARIFICATION BEFORE COMMENCING WITH THE WORK. ANY CONSTRUCTION INSTALLED IN CONFLICT WITH THE CONTRACT DOCUMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE, AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.</p> <p>6. VERIFICATIONS SHALL BE MADE FROM AVAILABLE SOURCES TO THE CONTRACTOR, SUCH AS BUT NOT LIMITED TO, UTILITY COMPANIES, PLANS OF EXISTING BUILDINGS, CONTRACT DOCUMENTS, THE OWNER, SITE INVESTIGATION REPORTS, ETC. IN NO WAY SHALL ANY DOCUMENTATION RECEIVED BY THE CONTRACTOR RELIEVE HIM OF THE RESPONSIBILITY OF PERFORMING HIS OWN FIELD INVESTIGATION.</p> <p>7. DRAWINGS HAVE BEEN DETAILED IN COMPLIANCE WITH U.L. LISTING REQUIREMENTS AND I.C.B.O. REPORTS FOR THE MATERIALS SPECIFIED. IF AN ALTERNATE OR SUBSTITUTED MATERIAL IS ACCEPTED AS AN EQUAL BY THE GENERAL CONTRACTOR, HE WILL ASSUME THE RESPONSIBILITY FOR WHATEVER CONSTRUCTION MODIFICATION AND/OR ADDITIONAL COSTS ARE REQUIRED BY REASON OF THIS ACCEPTANCE.</p> <p>8. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR A COMPLETE LIST OF GENERAL CONDITIONS, SPECIAL CONDITIONS, MATERIALS, INSTALLATION METHODOLOGY AND NOTES.</p> <p>9. PRIOR TO DELIVERY OF MATERIALS TO THE CONSTRUCTION ZONE AND REMOVAL OF WASTE FROM THE SITE, THE CONTRACTOR SHALL CHECK WITH THE CHIEF ENGINEER FOR AN ACCEPTABLE ACCESS ROUTE AND TIME. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR, SUBCONTRACTOR'S, OR ANY OF THEIR EMPLOYEES USE ANY AREA OUT-SIDE THE CONSTRUCTION ZONE WITHOUT PRIOR APPROVAL FROM THE CHIEF FACILITY ENGINEER. ALL STAGING AREAS SHALL BE PROTECTED WITH FIRE RESISTANT PLYWOOD ENCLOSURES. ALL TRASH SHALL BE REMOVED FROM THE BLDG. DAILY. CONSTRUCTION MATERIALS SHALL NOT BE STORED IN THE CORRIDORS AT ANY TIME.</p> <p>10. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, SERVICES, AND POINTS OF CONNECTION PRIOR TO START OF WORK.</p> <p>11. DUCTWORK, PIPING AND EQUIPMENT, AS SHOWN ON DRAWINGS, IS SCHEMATIC AND SHALL BE FABRICATED AND INSTALLED BASED ON ACTUAL FIELD MEASUREMENT. COORDINATE WITH OTHER TRADES AS REQUIRED.</p> <p>12. CONTRACTOR SHALL PROVIDE WRITTEN REQUESTS TO OWNER FOR SHUT-DOWNS AT LEAST 14 DAYS PRIOR TO EVENT. WORK REQUIRING SHUT-DOWNS MAY BE REQUIRED TO BE PERFORMED OUTSIDE NORMAL WORK HOURS.</p> <p>13. THE DESIGN ADEQUACY, SAFETY, AND ERECTION OF BRACING, SHORING, SCAFFOLDING, AND TEMPORARY SUPPORTS AND RESTRAINTS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.</p> <p>14. CONTRACTOR SHALL NOTIFY THE OWNER ON TIMES WHEN THE CONSTRUCTION NOISE WILL BE EXCESSIVE. CONTRACTOR SHALL RESCHEDULE SUCH WORK IF SO REQUIRED BY THE FACILITY.</p> <p>15. ALL ITEMS TO BE REMOVED AND RELOCATED OR REPLACED SHALL BE HANDLED WITH PROPER CARE AND STORED IN A SAFE PLACE TO PREVENT DAMAGE OR BE REPLACED AT THE CONTRACTOR'S EXPENSE.</p> <p>16. WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE-OR POSTTENSIONED) LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.</p> <p>17. ABBREVIATIONS THROUGHOUT THE DOCUMENTS ARE THOSE IN COMMON USE. THE ENGINEER WILL DEFINE THE INTENT OF ANY IN QUESTION.</p> <p>18. ALL DRAWINGS, THOUGH NOTED TO SCALE, ARE FOR ILLUSTRATION ONLY. THE CONTRACTOR AND HIS SUBCONTRACTORS SHALL NOT SCALE THE DRAWINGS. ITEMS WRONGLY LOCATED BY DRAWING SCALING SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.</p> <p>19. HANDLE, STORE AND INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS.</p> <p>20. SLOPE OF PIPING SYSTEMS:</p> <p>A. SANITARY SEWER WASTE PIPING 2% UNLESS NOTED OTHERWISE</p> <p>B. SANITARY SEWER VENT PIPING 2% UNLESS NOTED OTHERWISE</p> <p>21. ALL PENETRATIONS OF FIRE RATED WALL AND FLOOR ASSEMBLIES SHALL BE PROTECTED AS REQUIRED BY CBC, SEC. 714. SYSTEMS SHALL BE REVIEWED AND APPROVED BY THE INSPECTOR OF RECORD AND FIELD FLSO PRIOR TO INSTALLATION.</p>	
<p><b>GREEN BLDG. COMPLIANCE NOTES</b></p> <p>1. PLUMBING FIXTURES AND FITTINGS SHALL COMPLY WITH ALL THE REQUIREMENTS IN SECTION 5.303 IN THE 2019 CALIFORNIA GREEN BUILDING CODE.</p> <p>2. WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH.</p> <p>3. LAVATORY FAUCET SHALL NOT EXCEED WATER FLOW OF 0.5 GPM.</p> <p>4. KITCHEN FAUCET SHALL NOT EXCEED WATER FLOW OF 1.8 GPM.</p> <p>5. PROVIDE THE BUILDING OWNER OR REPRESENTATIVE WITH DETAILED OPERATING AND MAINTENANCE INSTRUCTIONS AND COPIES OF GUARANTIES/WARRANTIES FOR EACH SYSTEM. O&amp;M INSTRUCTIONS SHALL BE CONSISTENT WITH OSHA REQUIREMENTS IN CCR, TITLE 8, SECTION 5142, AND OTHER RELATED REGULATIONS.</p>							

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02-12-25		ADDENDUM 3	DTN

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DESIGNED: TN, SC  
DRAWN: S. CHHAT  
CHECKED: T. NGO

PROGRESS:	FINAL SIGNED
SUBMITTAL DATE:	NOVEMBER 2024
TONY NGO	M30641
DISCIPLINE ENGINEER	P.E. NO.



LINE IS 2 INCHES AT FULL SIZE  
IF NOT 2" - SCALE ACCORDINGLY

**DUDEK**

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**CITY OF GONZALES**  
**INDUSTRIAL WASTE WATER TREATMENT FACILITY**

**PLUMBING GENERAL**  
**NOTES, LEGEND & SYMBOLS**

JOB NO. PO# 6761  
DRAWING NO. **GP-1**  
SHEET NO. **83** of 133

DN:2020 PROJECTS 20-MB-100 Gonzales IWR Operation Bldg.MECH03\_GP-1.dwg 02/12/2025 08:05





**PLUMBING MATERIAL SCHEDULE**

- A. WATER PIPE – BELOW GRADE AND DOWNSTREAM OF BUILDING S.O.V. TYPE "K" COPPER WITH WROUGHT COPPER FITTINGS AND "NO-LEAD" SOLDER. ABOVE GRADE, TYPE "L" COPPER WITH WROUGHT COPPER FITTINGS AND "NO-LEAD" SOLDER.
- B. ALL HOT WATER AND HOT WATER RETURN PIPING SHALL BE INSULATED WITH INSULATION AS NOTED PER PLUMBING INSULATION SCHEDULE ON THIS SHEET.
- C. SEWER AND VENT PIPE – BELOW AND ABOVE BUILDING SLAB, SERVICE WEIGHT (HUB LESS) CAST IRON SOIL PIPE AND STAINLESS STEEL STRAP FITTINGS. BELOW GRADE 5 FEET OUTSIDE OF BUILDING SCHEDULE 40 PVC PIPE AND FITTINGS.
- D. CONDENSATE DRAIN – TYPE "DWV" COPPER WITH WROUGHT COPPER FITTINGS AND SOLDERED JOINTS.

**VALVE SCHEDULE**

SIZE (IN)	DESCRIPTION/REMARKS
1/2	NIBCO BRONZE BALL VALVE, MODEL S-585-70, LEAD FREE, TWO-PIECE BODY, FULL PORT, BLOWOUT-PROOF STEM, SOLDER ENDS, 600 PSI COLD WORKING PRESSURE.
3/4	
1	
1-1/4	

**PLUMBING INSULATION SCHEDULE**

OPERATING TEMPERATURE RANGE (F)	INSULATION CONDUCTIVITY (IN BTU·IN/H·FT <sup>2</sup> ·F)	SIZE (INCHES)	MINIMUM THICKNESS (INCHES)	MINIMUM R-VALUE
105-140	0.22-0.28	1/2	1	R-7.7
		3/4		
		1	1-1/2	R-12.5
		1-1/4		
		1-1/2		
2	2	R-11		

\* DOMESTIC HOT WATER PIPING INSULATION SHALL BE MINIMUM THICKNESS OR MINIMUM R-VALUE AS LISTED ABOVE TO MEET MINIMUM REQUIREMENT PER SECTION 609.11 CPC 2019 AND TABLE 120.3-A CEC 2019.

**PLUMBING FIXTURES SCHEDULE**

MARK	FIXTURE	ROUGH-IN-SIZE				MINIMUM BRANCH SIZE		DESCRIPTION/REMARKS
		S/W	V	CW	HW	CW	HW	
WC 1	WATER CLOSET (ADA)	4"	2"	1/2"	-	3/4"	-	KOHLER HIGHLINE WATER CLOSET, MODEL K-3519, TWO-PIECE TOILET BOWL AND TANK, VITREOUS CHINA, FLOOR MOUNTED, ELONGATED BOWL. 1.0 GPF AND ADA COMPLIANT. PROVIDE WITH PROFLO TOILET SEAT, MODEL PFTSCOF2000WH, OPEN FRONT LESS COVER, ELONGATED.
L 1	LAVATORY (ADA)	2"	1 1/2"	1/2"	1/2"	1/2"	1/2"	KOHLER GREENWICH SINK, MODEL K-2032, VITREOUS CHINA, WALL-MOUNTED AND ADA COMPLIANT. PROVIDE WITH KOHLER CENTERSET FAUCET, MODEL K-400T20-4ANL, MANUAL LEVER HANDLES, DECK MOUNT, 4" CENTER, 0.5 GPM AND ADA COMPLIANT. PROVIDE WITH ZURN CARRIER, MODEL Z1224. PROVIDE WITH STOP VALVES, SUPPLIES, DRAIN FITTING AND P-TRAP. PROVIDE PROTECTIVE COVERS FOR SUPPLIES AND P-TRAP FITTING.
SH 1	SHOWER SYSTEM (ADA)	-	-	1/2"	1/2"	3/4"	3/4"	SYMMONS SAFETYMIX SHOWER SYSTEM, MODEL 1-117-L5-1.5-X-CHKS. INCLUDES PRESSURE BALANCING MIXING VALVE, LEVER DIVERTER, AND SHOWER HEAD. POLISHED CHROME FINISH. INCLUDE WITH 1.5 GPM FLOW RESTRICTOR, INTEGRAL CHECK STOPS AND LESS HAND SHOWER SYSTEM OPTION. PROVIDE WITH HAND SHOWER SYSTEM, MODEL T736-1.5. INCLUDES ADA HAND SHOWER, 36" SLIDE/GRAB BAR AND 1.5 GPM FLOW RESTRICTOR. POLISHED CHROME FINISH.
S 1	SINK (ADA)	2"	1 1/2"	1/2"	1/2"	1/2"	1/2"	JUST MANUFACTURING SINK, MODEL UDADA1832A65-J, STAINLESS STEEL, DOUBLE BOWL, UNDERMOUNT, CENTER REAR DRAIN, 6 3/8" DEEP AND ADA COMPLIANT. PROVIDE WITH JUST MANUFACTURING MANUAL FAUCET, MODEL JV-110-W4, TWO 4" WRISTBLADE HANDLES, DECK MOUNT, 8" CENTER, 1.5 GPM. PROVIDE WITH STOP VALVES, SUPPLIES, DRAIN FITTING AND P-TRAP.
S 2	SINK (ADA)	2"	1 1/2"	1/2"	1/2"	1/2"	1/2"	JUST MANUFACTURING SINK, MODEL USADA1824A65-J, STAINLESS STEEL, SINGLE BOWL, UNDERMOUNT, CENTER REAR DRAIN, 6 3/8" DEEP AND ADA COMPLIANT. PROVIDE WITH CHICAGO FAUCETS MANUAL FAUCET, MODEL W8D-GN2AE35-317AB, GOOSENECK, TWO 4" WRISTBLADE HANDLES, DECK MOUNT, 8" CENTER, 1.5 GPM. PROVIDE WITH STOP VALVES, SUPPLIES, DRAIN FITTING AND P-TRAP.
S 3	SINK (ADA)	2"	1 1/2"	1/2"	1/2"	3/4"	3/4"	JUST MANUFACTURING SINK, MODEL USADA1830A65-J, STAINLESS STEEL, SINGLE BOWL, UNDERMOUNT, CENTER REAR DRAIN, 6 3/8" DEEP AND ADA COMPLIANT. PROVIDE WITH DELTA PRE-RINSE MANUAL FAUCET, MODEL 55C1213, TWO LEVER BLADE HANDLES, DECK MOUNT, 8" CENTER, WALL MOUNT BRACKET AND 1.05 GPM. PROVIDE WITH STOP VALVES, SUPPLIES, DRAIN FITTING AND P-TRAP. PROVIDE PROTECTIVE COVERS FOR SUPPLIES AND P-TRAP FITTING.
SS 1	SERVICE SINK	2"	1 1/2"	1/2"	1/2"	3/4"	3/4"	ADVANCE TABCO FABRICATED FLOOR MOP SINK, MODEL 9-OP-44, STAINLESS STEEL, 24"x24"x12" BOWL SIZE, FLOOR MOUNT WITH DRAIN, MODEL K-16. PROVIDE WITH CHICAGO FAUCETS SERVICE SINK FAUCET, MODEL 835-CP, EXPOSED WALL-MOUNT, TOP-MOUNT SUPPLIES, 6" CENTERS, RIGID SPOUT WITH VACUUM BREAKER.
IHW 1	INSTANT HOT WATER HEATER	-	-	3/4"	3/4"	1"	1"	EeMAX PROSERIES XTP ELECTRIC TANKLESS WATER HEATER MODEL #XTP054480. ELECTRICAL POWER: 480/3/60, 54KW AT 65 AMPS PER PHASE, 0.5 GPM TURN ON ACTIVATION, THERMOSTATIC, ADJUSTABLE SET POINT, NPT FITTINGS, 150 PSI MAX. 6.0 GPM AT 61°F RISE.
RP 1	RECIRCULATOR PUMP	-	-	-	1/2"	-	1/2"	GRUNDFOS UP COMFORT SERIES RECIRCULATOR PUMP, MODEL #UP10-16 A PM B5/LC. ELECTRICAL POWER: 115V, 6W AT 0.23 AMPS. SIZE AT 1 GPM AND 0.5 FT HEAD. PROVIDE WITH AUTO CONTROL MODE OPERATION.
WD 1	WASTE DISPOSER	1 1/2"	-	-	-	-	-	INSINKERATOR FOOD WASTE DISPOSER, MODEL BADGER 5, CONTINUOUS FEED WITH 1/2 HP MOTOR. ELECTRICAL POWER: 120V/1PH/60 AT 6.3 AMPS. PROVIDE WITH WALL SWITCH.
FD 1	FLOOR DRAIN	2"	1 1/2"	-	-	-	-	ZURN FLOOR DRAIN, MODEL Z415B, CAST IRON BODY WITH TYPE B FLAT STRAINER.
TP 1	TRAP PRIMER	-	-	1/2"	-	1/2"	-	PRECISION PLUMBING PRODUCTS (PPP) TRAP PRIMER, MODEL PR-500, PRIME-RITE SERIES, AUTOMATIC PRIMER.
OB 1	ICE MAKER OUTLET BOX	-	-	1/2"	-	1/2"	-	OATLEY METAL ICE MAKER OUTLET BOX, MODEL 39140, STEEL BOX, 1/4" TURN BALL VALVE, WATER HAMMER ARRESTOR, LOW LEAD.
WHA 1	WATER HAMMER ARRESTOR	-	-	-	-	-	-	ZURN WILKINS WATER HAMMER ARRESTOR, MODEL 1260XL.

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No.	DATE	REVISIONS	APPROVED
3	02-12-25	ADDENDUM 3	DTN



DESIGNED: TN, SC	PROGRESS: FINAL SIGNED
DRAWN: S. CHHAT	SUBMITTAL DATE: NOVEMBER 2024
CHECKED: T. NGO	TONY NGO M30641
	DISCIPLINE ENGINEER P.E. NO.



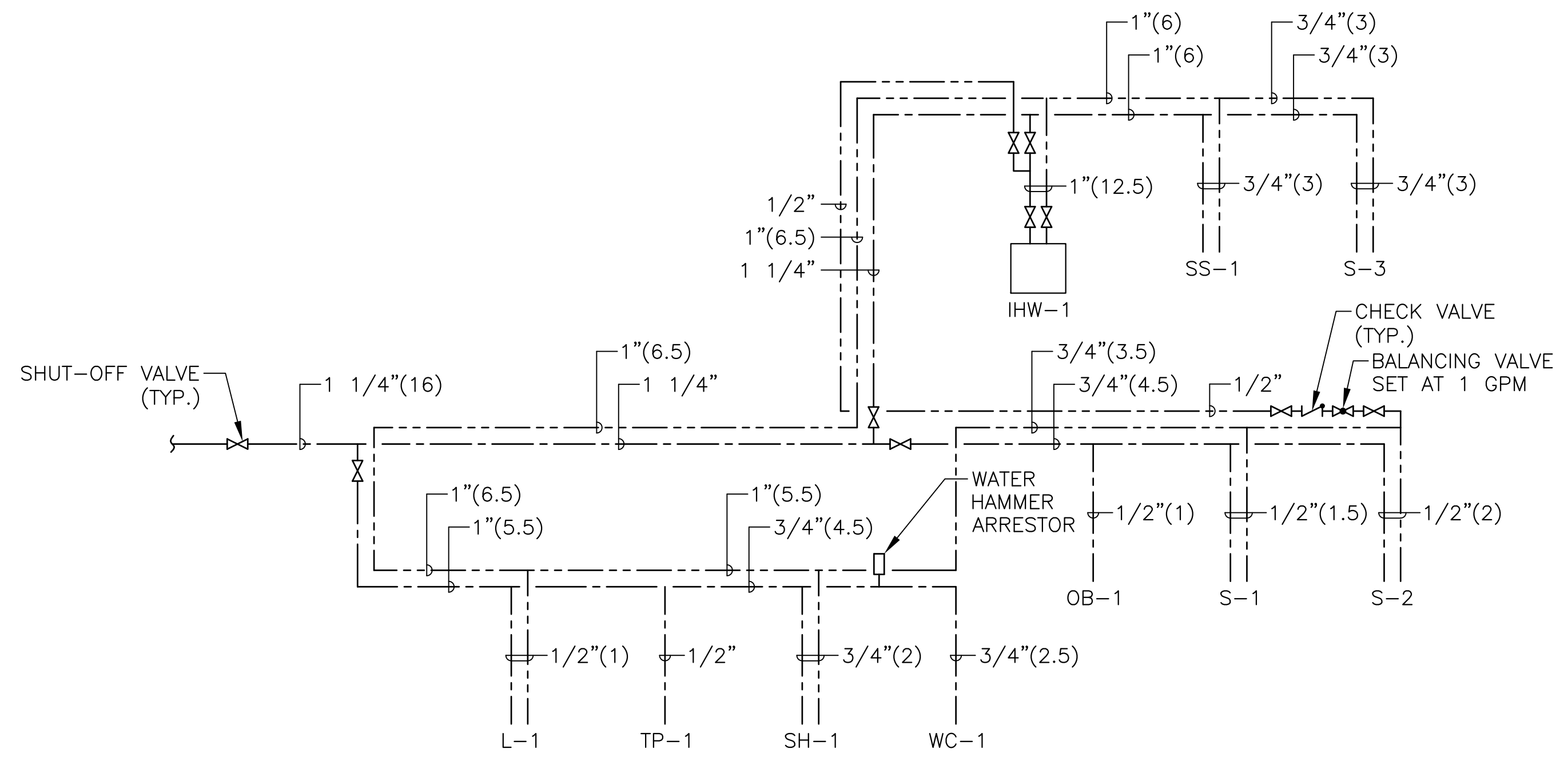
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CITY OF GONZALES  
**INDUSTRIAL WASTE WATER TREATMENT FACILITY**  
**PLUMBING SCHEDULES**

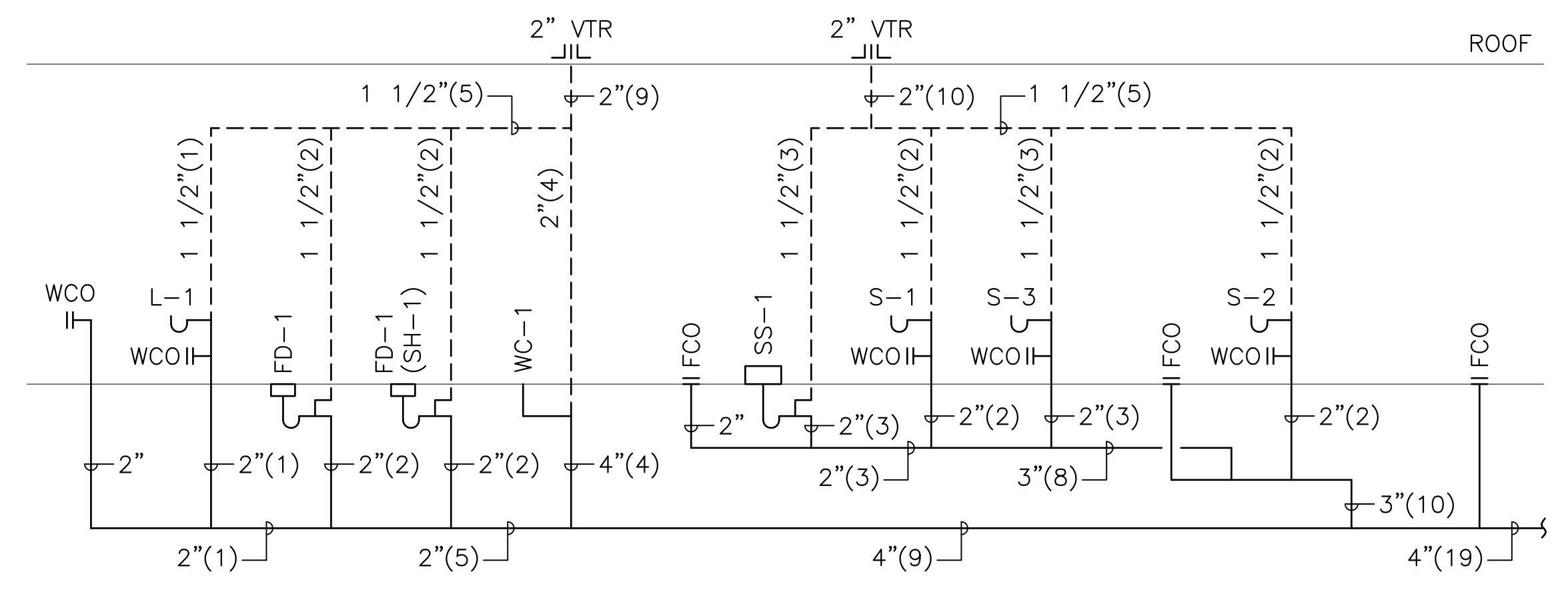
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DRAWING NO. **P-3**  
SHEET NO. **86** of 133





**DOMESTIC WATER RISER DIAGRAM**

SCALE: 3  
NTS



**WASTE AND VENT RISER DIAGRAM**

SCALE: 1  
NTS

**WATER DEMAND CALCULATION (UW)**

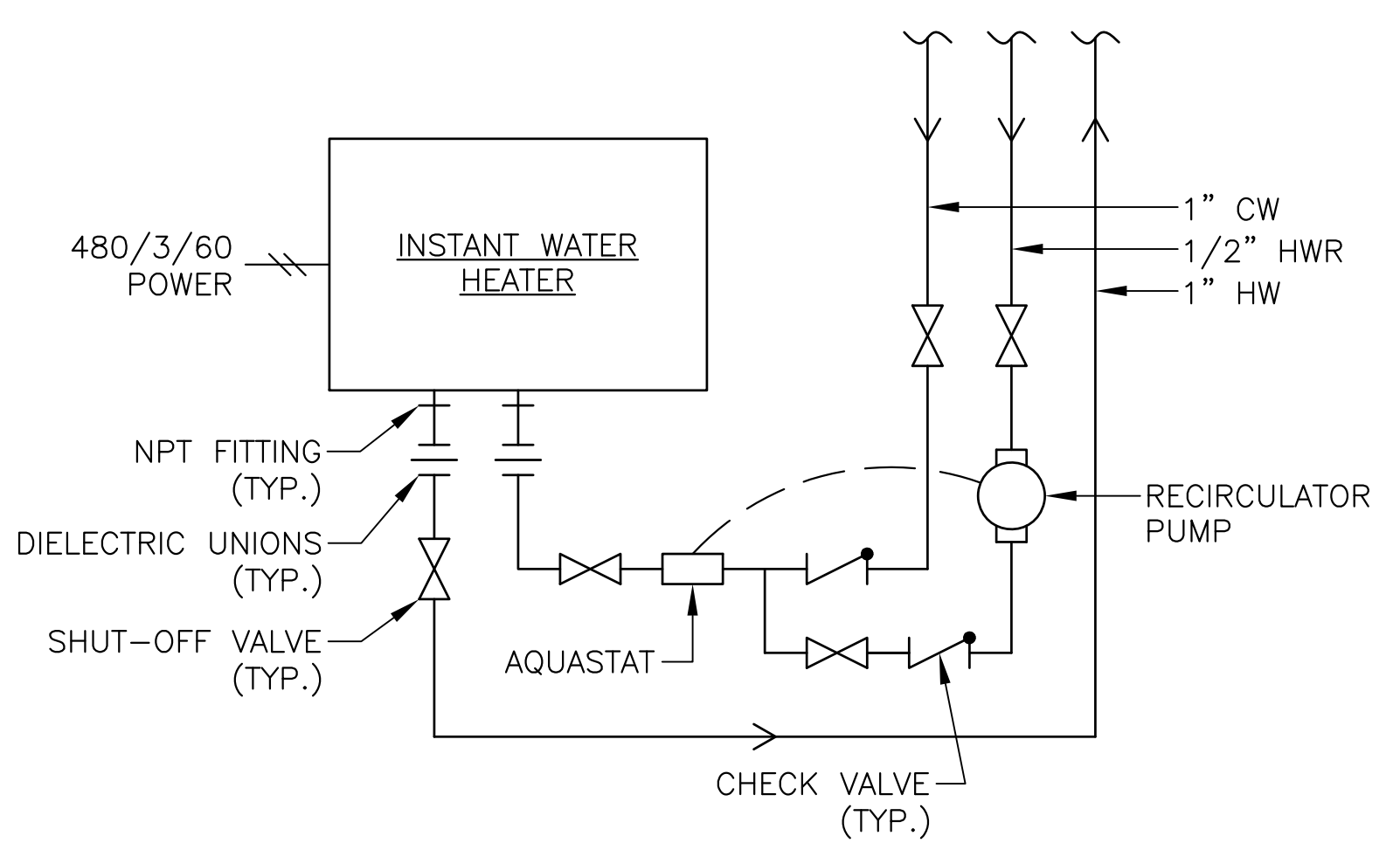
MARK	FIXTURE/EQUIPMENT	FIXTURE QUANTITY	FIXTURE UNITS (EACH)	FIXTURE UNITS (TOTAL)
HB 1	HOSE BIBB	3	2.5 (1)	3.5

**WATER DEMAND CALCULATION (POTABLE)**

MARK	FIXTURE/EQUIPMENT	FIXTURE QUANTITY	FIXTURE UNITS (EACH)	FIXTURE UNITS (TOTAL)	EQUIPMENT GPM
S 1	SINK	1	1.5	1.5	-
S 2	SINK	1	2	2	-
S 3	SINK	1	3	3	-
SS 1	SINK	1	3	3	-
WC 1	WATER CLOSET (TANK TYPE)	1	2.5	2.5	-
L 1	LAVATORY	1	1	1	-
SH 1	SHOWER SYSTEM	1	2	2	-
-	ICE MAKER	1	-	-	1 GPM

WATER SUPPLY GPM (POTABLE WATER)	
TOTAL WATER SUPPLY FIXTURE UNITS	15 FU
TOTAL WATER SUPPLY FIXTURE GPM	12 GPM
TOTAL EQUIPMENT GPM	1 GPM
TOTAL OVERALL WATER SUPPLY GPM	13 GPM

WATER SUPPLY GPM (UNTREATED WATER)	
TOTAL WATER SUPPLY FIXTURE UNITS	3.5 FU
TOTAL WATER SUPPLY FIXTURE GPM	3.5 GPM
TOTAL EQUIPMENT GPM	0 GPM
TOTAL OVERALL WATER SUPPLY GPM	3.5 GPM



**NOTE:**  
1. INSTALL PER MANUFACTURER INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.

**WATER DEMAND CALCULATION**

SCALE: 4  
NTS

**INSTANTANEOUS WATER HEATER DETAIL**

SCALE: 2  
NTS

DN:2020 PROJECTS 20-MBN-100 Gonzales IWRP Operation Bldg.MECH.A98\_P-5.dwg 02/12/2025 09:17

No.	DATE	REVISIONS	APPROVED
02-12-25	ADDENDUM 3		DTN

**UNDERGROUND SERVICE ALERT**  
CALL: TOLL FREE 1-800-227-2600  
TWO WORKING DAYS BEFORE YOU DIG

DESIGNED: TN, SC	PROGRESS: FINAL SIGNED
DRAWN: S. CHHAT	SUBMITTAL DATE: NOVEMBER 2024
CHECKED: T. NGO	TONY NGO M30641
	DISCIPLINE ENGINEER P.E. NO.



LINE IS 2 INCHES AT FULL SIZE IF NOT 2" - SCALE ACCORDINGLY

**DUDEK**  
605 Third Street Encinitas, CA 92024  
760.942.5147 Fax 760.942.4508

**CITY OF GONZALES**  
**INDUSTRIAL WASTE WATER TREATMENT FACILITY**  
**PLUMBING DETAILS - 2**

JOB NO. PO# 6761
DRAWING NO. P-5
SHEET NO. 88 of 133

**LEGEND AND SYMBOLS**

**GENERAL NOTES**

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	ABBREV.	DESCRIPTION
	SINGLE LINE DUCTWORK, NEW		EQUIPMENT TAG, DESCRIPTION EF, MARK NUMBER 23	AFF	ABOVE FINIHSED FLOOR
	SINGLE LINE DUCTWORK, EXISTING		CEILING DIFFUSER/REGISTER TYPE "A", 150 CFM AND 8" x 8" NECK SIZE	AHU	AIR HANDLING UNIT
	DUCTWORK TO BE REMOVED		CENTER LINE	AMB	AMBIENT
	DUCTWORK WITH ACOUSTIC LINING		DIAMETER	ARCH	ARCHITECTURAL
	DUCT UNDER POSITIVE PRESSURE (SUPPLY AIR UP AND DOWN)		SQUARE FEET	BHP	BRAKE HORSEPOWER
	DUCT UNDER NEGATIVE PRESSURE (RETURN AIR UP AND DOWN)		LOUVER IN DOOR, MINIMUM 1.0 SQUARE FOOT FREE AREA	BTU	BRITISH THERMAL UNIT
	DUCT UNDER NEGATIVE PRESSURE (EXHAUST AIR UP AND DOWN)		POINT OF DISCONNECT	BTUH	BTU PER HOUR
	FLEXIBLE DUCT		POINT OF CONNECTION	CFM	CUBIC FEET PER MINUTE
	DUCT FLEXIBLE CONNECTION		NEW PIPE WITH DIRECTION OF FLOW	CLG	CEILING
	RECTANGULAR VERTICAL DUCT DROP		EXISTING PIPING	COND	CONDENSATE
	RECTANGULAR VERTICAL DUCT RISE		REMOVE EXISTING PIPING	CONN	CONNECTION
	ROUND VERTICAL DUCT DROP		EXPANSION LOOP	CONT	CONTINUATION
	ROUND VERTICAL DUCT RISE		PIPE ANCHOR	CU	CONDENSING UNIT
	VOLUME DAMPER IN DUCT		SHUT-OFF VALVE	DB	DRY BULB
	BACKDRAFT DAMPER IN DUCT		ANGLE GATE VALVE	DIAM	DIAMETER
	AUTOMATIC DAMPER IN DUCT		COCK VALVE	DN	DOWN
	FIRE DAMPER IN DUCT AND ACCESS DOOR		GLOBE VALVE	DWG	DRAWING
	COMBINATION FIRE AND SMOKE DAMPER IN DUCT		DRAIN VALVE	EA/EXA	EXHAUST AIR
	CEILING DIFFUSER THROW PATTERN 4-WAY		CHECK VALVE, SWING OR LIFT	EAT	ENTERING AIR TEMPERATURE
	RETURN REGISTER		BUTTERFLY VALVE	EDB	ENTERING DRY BULB TEMPERATURE
	EXHAUST REGISTER		BALL VALVE	EF	EXHAUST FAN
	WALL LOUVER		BALANCING VALVE	ELEC	ELECTRICAL
	THERMOSTAT		PLUG VALVE (TYPE AS NOTED)	ENT	ENTERING
	SWITCH		PRESSURE REDUCING VALVE	ERV	EXHAUST RELIEF VENTILATOR
	CEILING DIFFUSER NECK SIZE (IN.) AIR QUANTITY (CFM)		TWO-WAY AUTOMATIC CONTROL VALVE	ESP	EXTERNAL STATIC PRESSURE
			THREE-WAY AUTOMATIC CONTROL VALVE	EWB	ENTERING WET BULB TEMPERATURE
			SOLENOID VALVE	EWT	ENTERING WATER TEMPERATURE
			ELECTRIC MOTORIZED VALVE OPERATOR	(E)	EXISTING
			PNEUMATIC VALVE OPERATOR	*F	DEGREES FAHRENHEIT
			"Y" TYPE STRAINER	FC	FAN COIL
			RELIEF VALVE	FD	FIRE DAMPER
			SAFETY VALVE	FLA	FULL LOAD AMPERES
			MANUAL AIR VENT	FPM	FEET PER MINUTE
			TEST PLUG	FT	FEET
			THERMOMETER AND WELL	GA	GAUGE
			PRESSURE GAUGE WITH VALVE	GAL	GALLON
			DETAIL DESIGNATION	GPM	GALLONS PER MINUTE
			COMMUNICATION CABLE	HC	HEATING COIL
			THERMOSTAT CONTROL CABLE	HD	HEAD
				HP	HORSEPOWER
				HR	HOUR
				HZ	HERTZ
				INCH	INCH OR INCHES
				KW	KILOWATT
				LAT	LEAVING AIR TEMPERATURE
				LDB	LEAVING DRY BULB TEMPERATURE
				LVG	LEAVING
				LWB	LEAVING WET BULB TEMPERATURE
				LWT	LEAVING WATER TEMPERATURE
				MAX	MAXIMUM
				MBH	THOUSAND BTU PER HOUR
				NC	NOISE CRITERIA
				N.C.	NORMALLY CLOSED
				NG	NATURAL GAS
				NO.	NUMBER
				NTS	NOT TO SCALE
				OA	OUTSIDE AIR
				PD	PRESSURE DROP
				POC	POINT OF CONNECTION
				POD	POINT OF DISCONNECT
				PSI	POUNDS PER SQUARE INCH
				RA	RETURN AIR
				REFRIG	REFRIGERANT
				RF	RETURN FAN
				RM	ROOM
				RPM	REVOLUTIONS PER MINUTE
				SA	SUPPLY AIR
				SF	SUPPLY FAN
				SOV	SHUT-OFF VALVE
				SP	STATIC PRESSURE
				SQ. FT.	SQUARE FOOT
				TEMP	TEMPERATURE
				TYP	TYPICAL
				V	VOLTS
				VD	VOLUME DAMPER

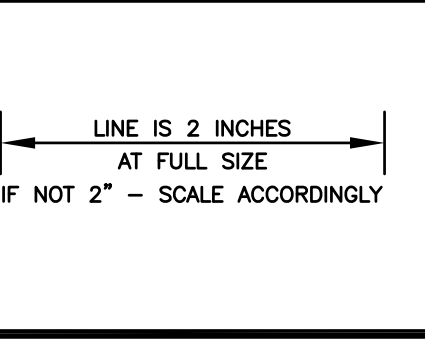
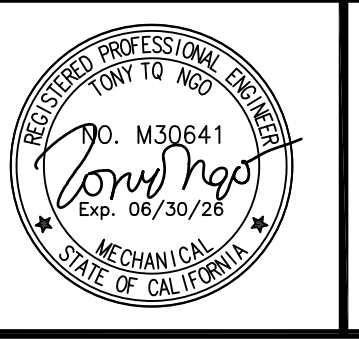
- THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO RECONSTRUCT THE BUILDING IN ACCORDANCE WITH CALIFORNIA BUILDING STANDARDS CODE, TITLE 19 & 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE APPROVED PLANS AND SPECIFICATIONS WHERE IN THE FINISHED WORK WILL COMPLY WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS. A CHANGE ORDER DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE CITY BEFORE PROCEEDING WITH THE WORK.
- ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH:
  - 2019 CALIFORNIA ADMINISTRATIVE CODE (CAC) PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
  - 2019 CALIFORNIA BUILDING CODE (CBC) PART 2, TITLE 24, CCR BASED ON THE 2018 INTERNATIONAL BUILDING CODE (IBC)
  - 2019 CALIFORNIA ELECTRICAL CODE (CEC) PART 3, TITLE 24, CCR BASED ON THE 2017 NATIONAL ELECTRICAL CODE (NEC)
  - 2019 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24, CCR BASED ON THE 2018 UNIFORM MECHANICAL CODE (UMC)
  - 2019 CALIFORNIA PLUMBING CODE (CPC) PART 5, TITLE 24, CCR BASED ON THE 2018 UNIFORM PLUMBING CODE (UPC)
  - 2019 CALIFORNIA FIRE CODE (CFC) PART 9, TITLE 24, CCR BASED ON THE 2018 INTERNATIONAL FIRE CODE (IFC)
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING BUT NOT LIMITED TO STRUCTURE, MECHANICAL, PLUMBING, ELECTRICAL, EQUIPMENT, AND ALL OTHER EXISTING SYSTEMS AND MAKE NECESSARY PROVISIONS TO MAINTAIN THE INTEGRITY OF SAID SYSTEMS PRIOR TO THE COMMENCEMENT OF DEMOLITION, IF ANY. SEE STRUCTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND EQUIPMENT DRAWINGS FOR ANY SYSTEMS OR PORTIONS THEREOF TO BE REMOVED, RELOCATED, REVISED OR ABANDONED. ALL POSSIBLE CARE SHALL BE EXERCISED BY THE CONTRACTOR TO INSURE THAT ANY SAID UTILITY WILL NOT BE THE CAUSE OF ENDANGERMENT TO THE LIFE OR HEALTH OF ANY PERSON.
- ALL DRAWINGS AND SPECIFICATIONS ARE TO BE CONSIDERED PART OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO ANY CONSTRUCTION, INCLUDING ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL. ANY APPARENT DISCREPANCY SHALL BE BROUGHT TO THE CONTRACTING OFFICER PRIOR TO START OF CONSTRUCTION. SO A CLARIFICATION MAY BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENT SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK WITH THE CONTRACT DOCUMENTS BEFORE THE INSTALLATION OF ANY MECHANICAL, PLUMBING, ELECTRICAL OR SYSTEMS CONSTRUCTION. ANY DISCREPANCIES WITHIN THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR CLARIFICATION BEFORE COMMENCING WITH THE WORK. ANY CONSTRUCTION INSTALLED IN CONFLICT WITH THE CONTRACT DOCUMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE, AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.
- VERIFICATIONS SHALL BE MADE FROM AVAILABLE SOURCES TO THE CONTRACTOR, SUCH AS BUT NOT LIMITED TO, UTILITY COMPANIES, PLANS OF EXISTING BUILDINGS, CONTRACT DOCUMENTS, THE OWNER, SITE INVESTIGATION REPORTS, ETC. IN NO WAY SHALL ANY DOCUMENTATION RECEIVED BY THE CONTRACTOR RELIEVE HIM OF THE RESPONSIBILITY OF PERFORMING HIS OWN FIELD INVESTIGATION.

- DRAWINGS HAVE BEEN DETAILED IN COMPLIANCE WITH U.L. LISTING REQUIREMENTS AND I.C.B.O. REPORTS FOR THE MATERIALS SPECIFIED. IF AN ALTERNATE OR SUBSTITUTED MATERIAL IS ACCEPTED AS AN EQUAL BY THE GENERAL CONTRACTOR, HE WILL ASSUME THE RESPONSIBILITY FOR WHATEVER CONSTRUCTION MODIFICATION AND/OR ADDITIONAL COSTS ARE REQUIRED BY REASON OF THIS ACCEPTANCE.
- THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR A COMPLETE LIST OF GENERAL CONDITIONS, SPECIAL CONDITIONS, MATERIALS, INSTALLATION METHODOLOGY & NOTES.
- PRIOR TO DELIVERY OF MATERIALS TO THE CONSTRUCTION ZONE AND REMOVAL OF WASTE FROM THE SITE, THE CONTRACTOR SHALL CHECK WITH THE CHIEF FACILITY ENGINEER FOR AN ACCEPTABLE ACCESS ROUTE AND TIME. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR, SUBCONTRACTOR'S, OR ANY OF THEIR EMPLOYEES USE ANY AREA OUT-SIDE THE CONSTRUCTION ZONE WITHOUT PRIOR APPROVAL FROM THE CHIEF FACILITY ENGINEER. ALL TRASH SHALL BE REMOVED FROM THE BUILDING DAILY. CONSTRUCTION MATERIALS SHALL NOT BE STORED IN THE CORRIDORS AT ANY TIME.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS, SERVICES, AND POINTS OF CONNECTION PRIOR TO START OF WORK.
- DUCTWORK, PIPING AND EQUIPMENT, AS SHOWN ON DRAWINGS, IS DIAGRAMMATICALLY AND SHALL BE FABRICATED AND INSTALLED BASED ON ACTUAL FIELD MEASUREMENT. COORDINATE WITH OTHER TRADES AS REQUIRED.
- CONTRACTOR SHALL PROVIDE WRITTEN REQUESTS TO CHIEF FACILITY ENGINEER FOR SHUT-DOWNS AT LEAST 14 DAYS PRIOR TO EVENT. WORK REQUIRING SHUT-DOWNS MAY BE REQUIRED TO BE PERFORMED OUTSIDE NORMAL WORK HOURS.
- THE DESIGN ADEQUACY, SAFETY, AND ERECTION OF BRACING, SHORING, SCAFFOLDING, AND TEMPORARY SUPPORTS AND RESTRAINTS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL NOTIFY THE OWNER ON TIMES WHEN THE CONSTRUCTION NOISE WILL BE EXCESSIVE. CONTRACTOR SHALL RESCHEDULE SUCH WORK IF SO REQUIRED BY THE FACILITY.
- ALL ITEMS TO BE REMOVED AND RELOCATED OR REPLACED SHALL BE HANDLED WITH PROPER CARE AND STORED IN A SAFE PLACE TO PREVENT DAMAGE OR BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRESTRESSED CONCRETE (PRE-OR POSTTENSIONED) LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN.
- ABBREVIATIONS THROUGHOUT THE DOCUMENTS ARE THOSE IN COMMON USE. THE ENGINEER WILL DEFINE THE INTENT OF ANY IN QUESTION.
- ALL DRAWINGS, THOUGH NOTED TO SCALE, ARE FOR ILLUSTRATION ONLY. THE CONTRACTOR AND HIS SUBCONTRACTORS SHALL NOT SCALE THE DRAWINGS. ITEMS WRONGLY LOCATED BY DRAWING SCALING SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- HANDLE, STORE AND INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS.
- GENERAL CONTRACTOR TO REPLACE DAMAGED CEILING TILES AS NEEDED.
- COVERING OF DUCT OPENINGS AND PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION: AT THE TIME OF ROUGH INSTALLATION AND DURING STORAGE ON THE CONSTRUCTION SITE UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF DUST, WATER AND DEBRIS WHICH MAY ENTER THE SYSTEM.
- MATERIALS EXPOSED WITHIN DUCTS OR PLENUMS MUST HAVE A FLAME-SPREAD INDEX OF NOT MORE THAN 25 AND SMOKE-DEVELOPED RATING NOT EXCEEDING 50.

No.	DATE	REVISIONS	APPROVED
02-12-25		ADDENDUM 3	DTN

**UNDERGROUND SERVICE ALERT**  
 CALL: TOLL FREE 1-800-227-2600  
 TWO WORKING DAYS BEFORE YOU DIG

DESIGNED: TN, SC	PROGRESS: FINAL SIGNED
DRAWN: S. CHHAT	SUBMITTAL DATE: NOVEMBER 2024
CHECKED: T. NGO	TONY NGO M30641
	DISCIPLINE ENGINEER P.E. NO.



**DUDEK**  
 605 Third Street Encinitas, CA 92024  
 760.942.5147 Fax 760.942.4508

**CITY OF GONZALES**  
**INDUSTRIAL WASTE WATER TREATMENT FACILITY**  
**HVAC GENERAL NOTES, LEGEND & SYMBOLS**

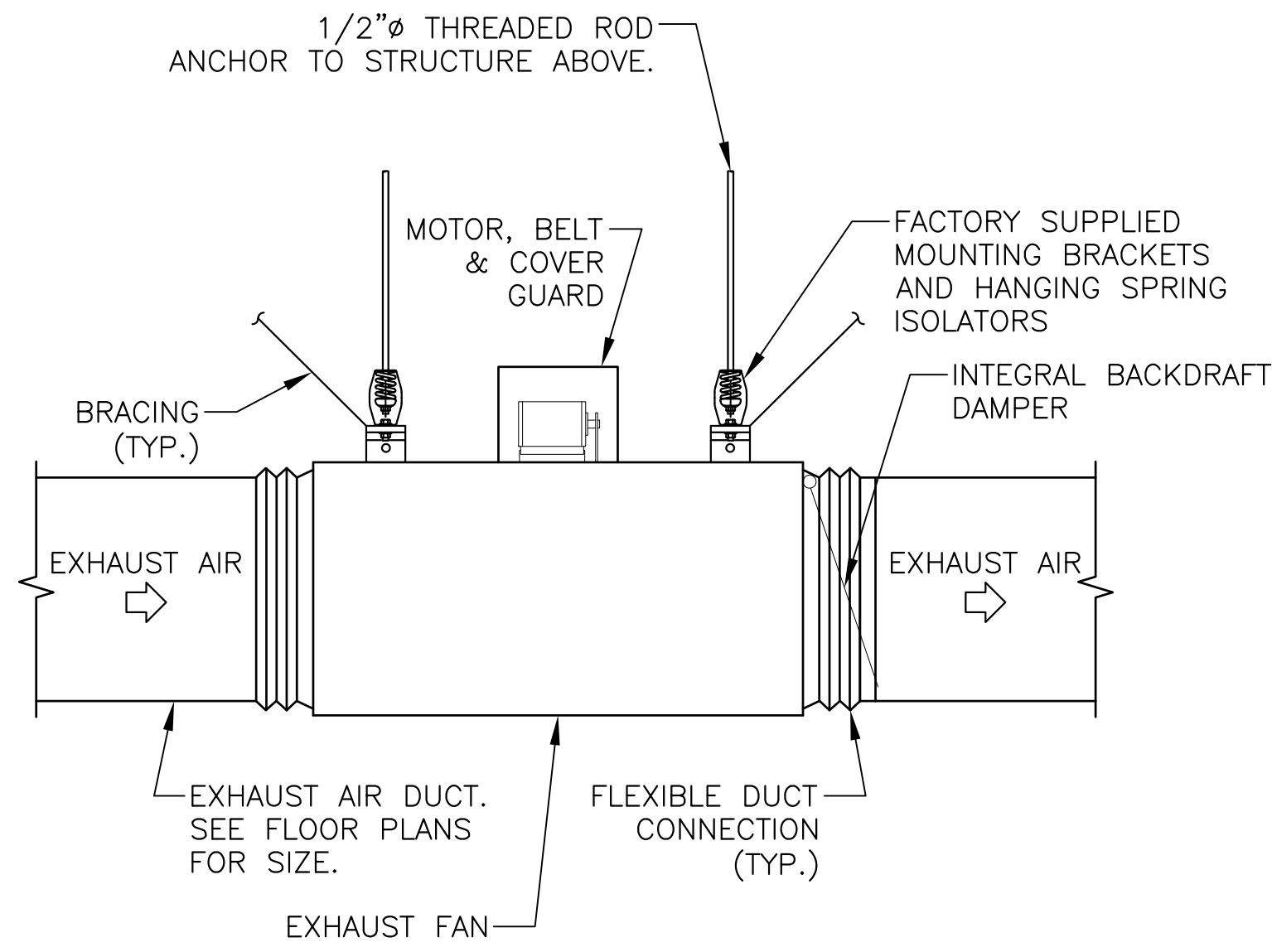
JOB NO. PO# 6761
DRAWING NO. <b>GH-1</b>
SHEET NO. 89 of 133

DN-2020 PROJECTS 20-MBN-100 Gonzales WRF Operation Bldg.MECH.89\_GH-1.dwg 02/12/2025 08:20









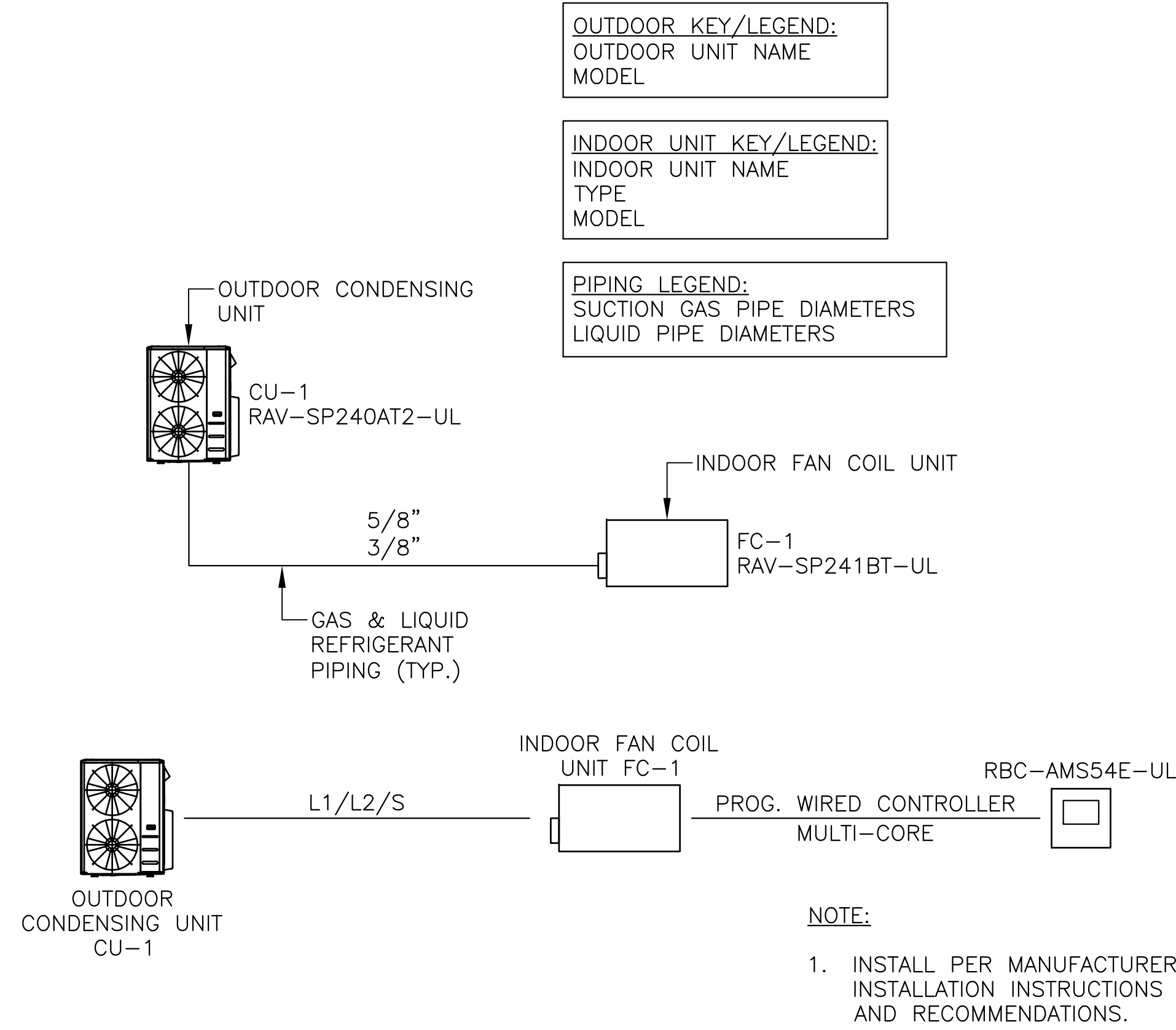
**NOTE:**

1. ANCHOR THREADED ROD AND BRACING CABLE TO STRUCTURE ABOVE PER DETAIL 2/GS-12 STRUCTURAL DRAWING

**INLINE EXHAUST FAN MOUNTING DETAIL**

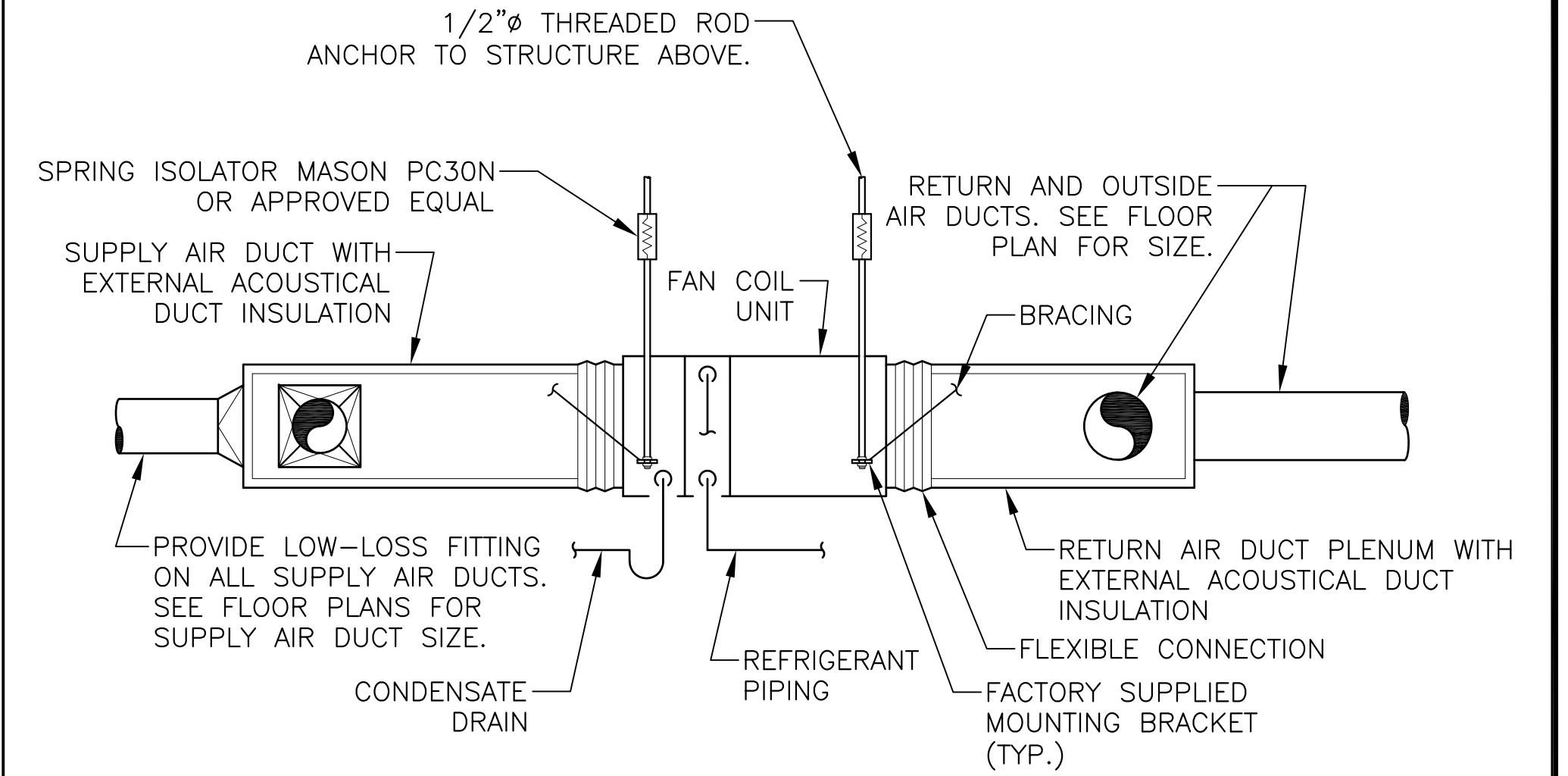
SCALE: 5  
NTS

**REFRIGERANT PIPING & CONTROL WIRING DIAGRAM**



**NOTE:**

1. INSTALL PER MANUFACTURER INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.

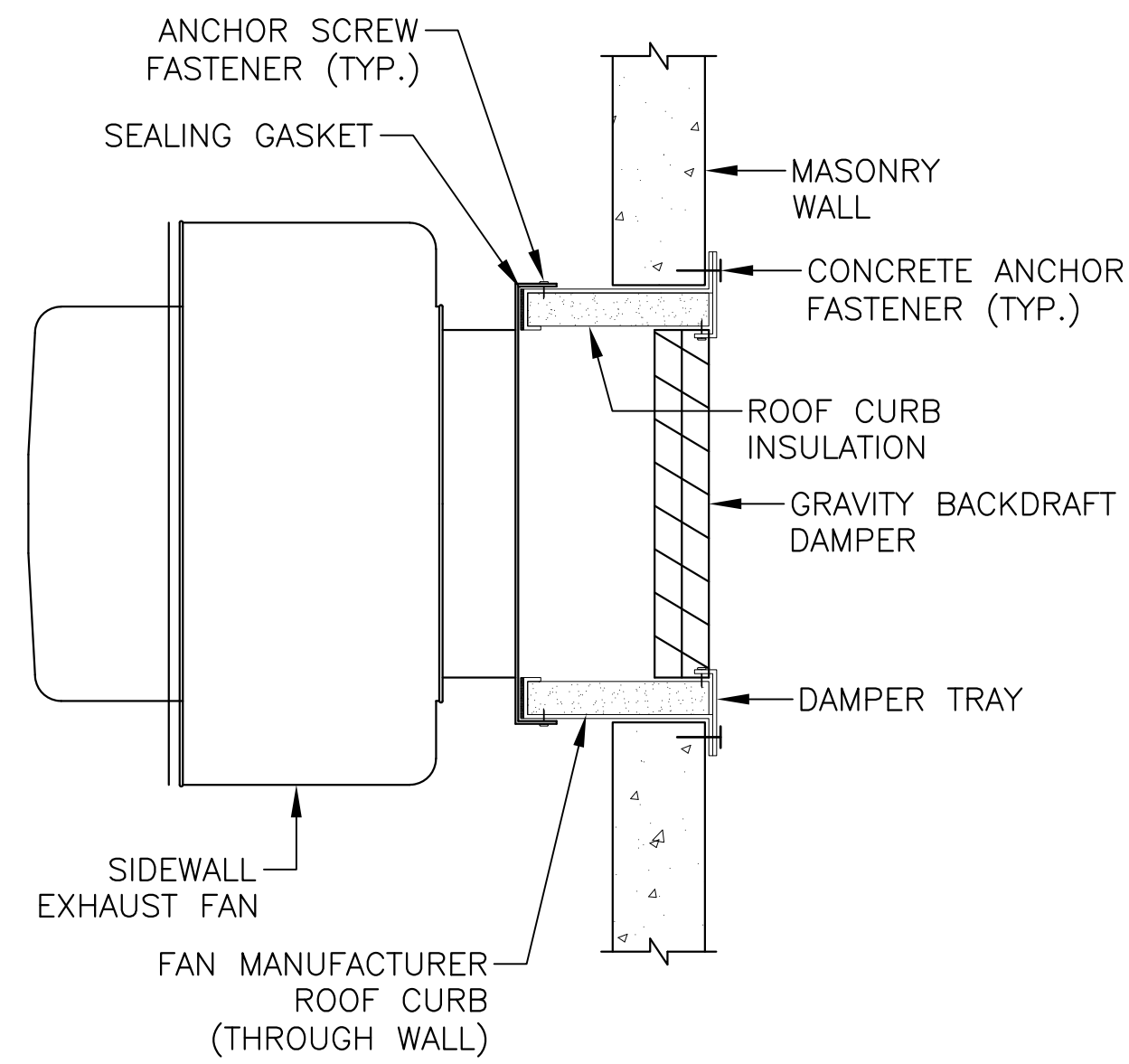


**NOTE:**

1. ANCHOR THREADED ROD AND BRACING CABLE TO STRUCTURE ABOVE PER DETAIL 2/GS-12 STRUCTURAL DRAWING.

**INDOOR FAN COIL MOUNTING DETAIL**

SCALE: 1  
NTS

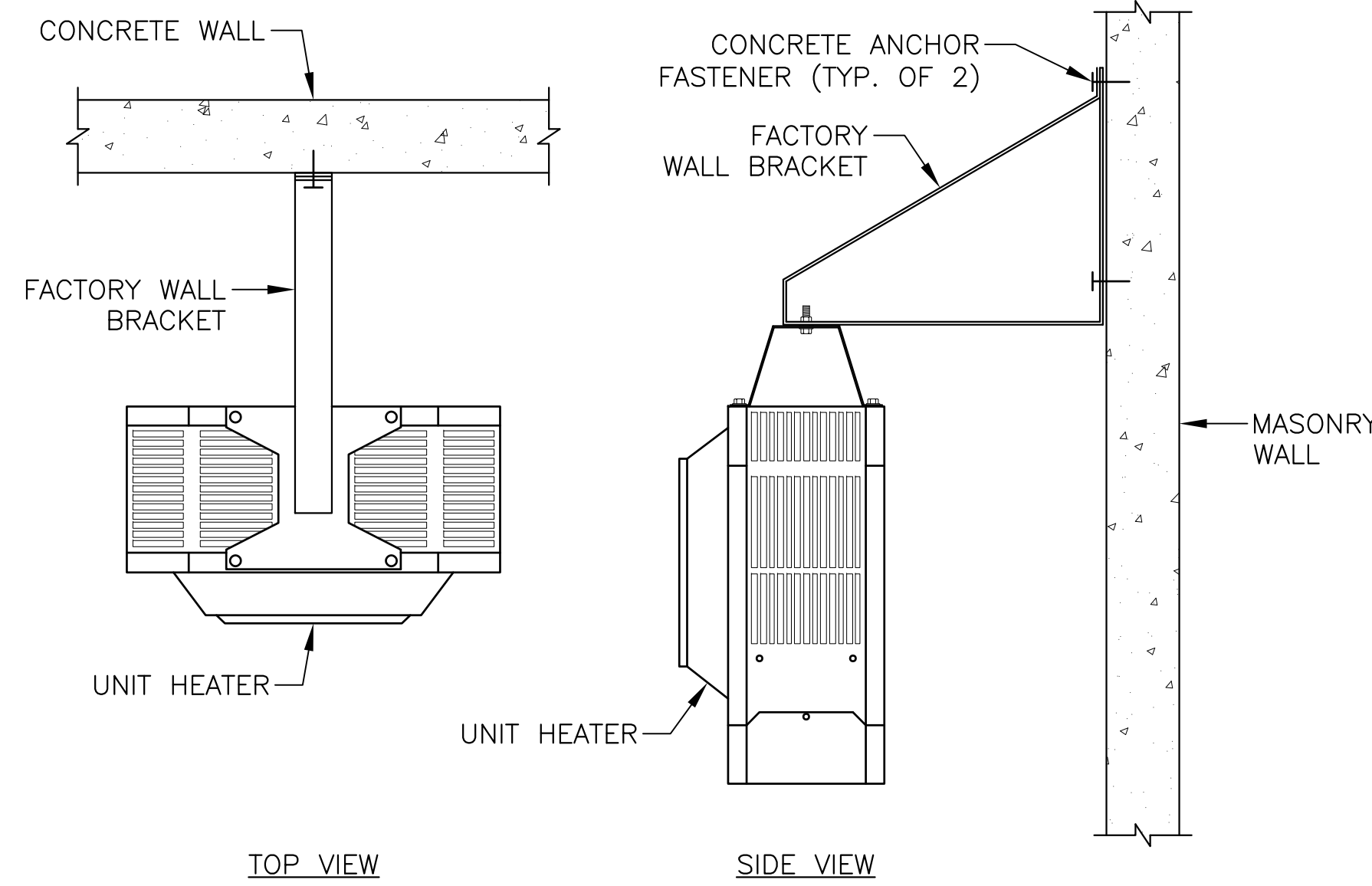


**NOTES:**

1. INSTALL PER MANUFACTURER INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.
2. WALL OPENING SHALL CONFORM TO CURB SIZE.
3. CONCRETE ANCHOR FASTENER TO MASONRY WALL SHALL BE 3/8" DIAMETER HILTI KH-EZ x 3-1/4" EMBED, OR EQUAL.

**SIDEWALL MOUNTING EXHAUST FAN DETAIL**

SCALE: 6  
NTS

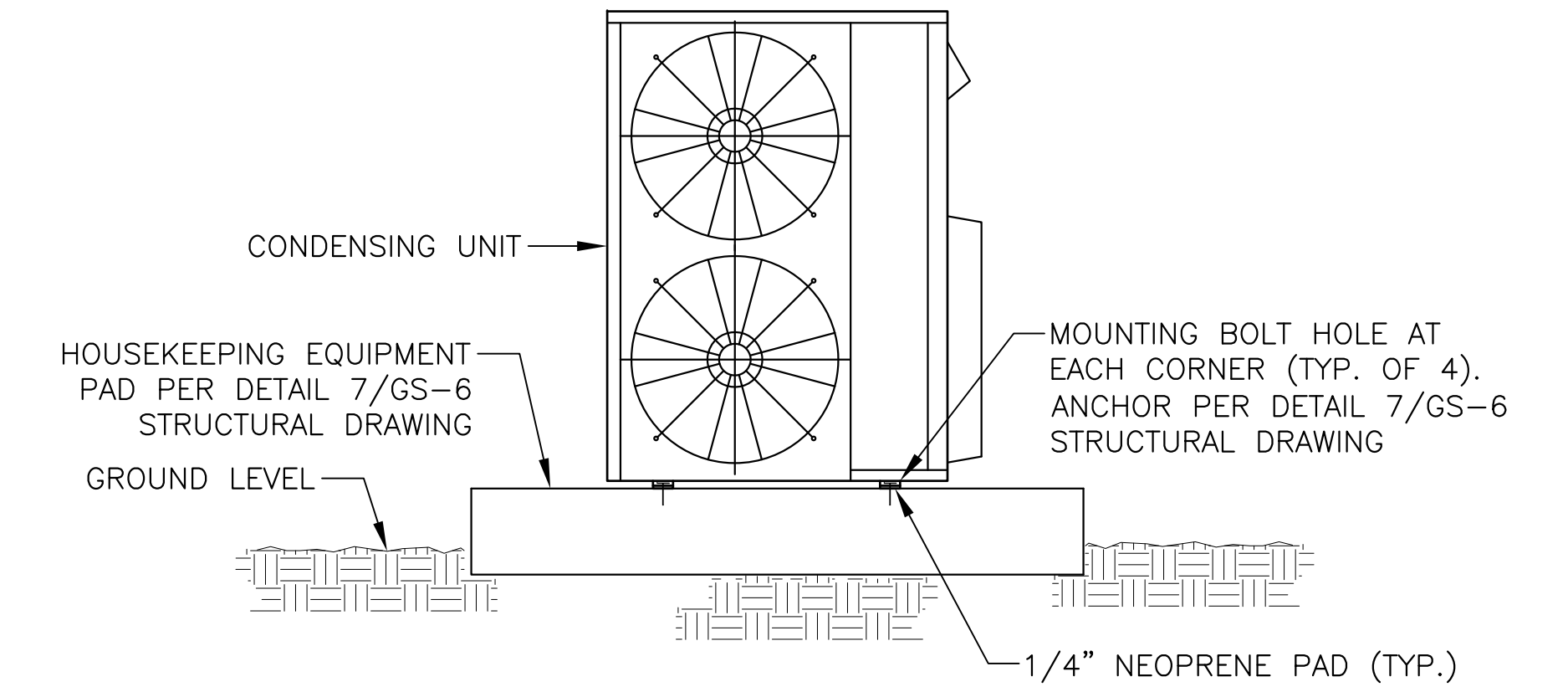


**NOTES:**

1. INSTALL PER MANUFACTURER INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.
2. CONCRETE ANCHOR FASTENER TO MASONRY WALL SHALL BE 3/8" DIAMETER HILTI KH-EZ x 3-1/4" EMBED, OR EQUAL.

**UNIT HEATER INSTALLATION DETAIL**

SCALE: 4  
NTS



**OUTDOOR CONDENSING UNIT MOUNTING DETAIL**

SCALE: 2  
NTS

No.	DATE	REVISIONS	APPROVED
02-12-25		ADDENDUM 3	DTN

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DESIGNED: TN, SC  
DRAWN: S. CHHAT  
CHECKED: T. NGO

PROGRESS: FINAL SIGNED  
SUBMITTAL DATE: NOVEMBER 2024  
TONY NGO M30641  
DISCIPLINE ENGINEER P.E. NO.



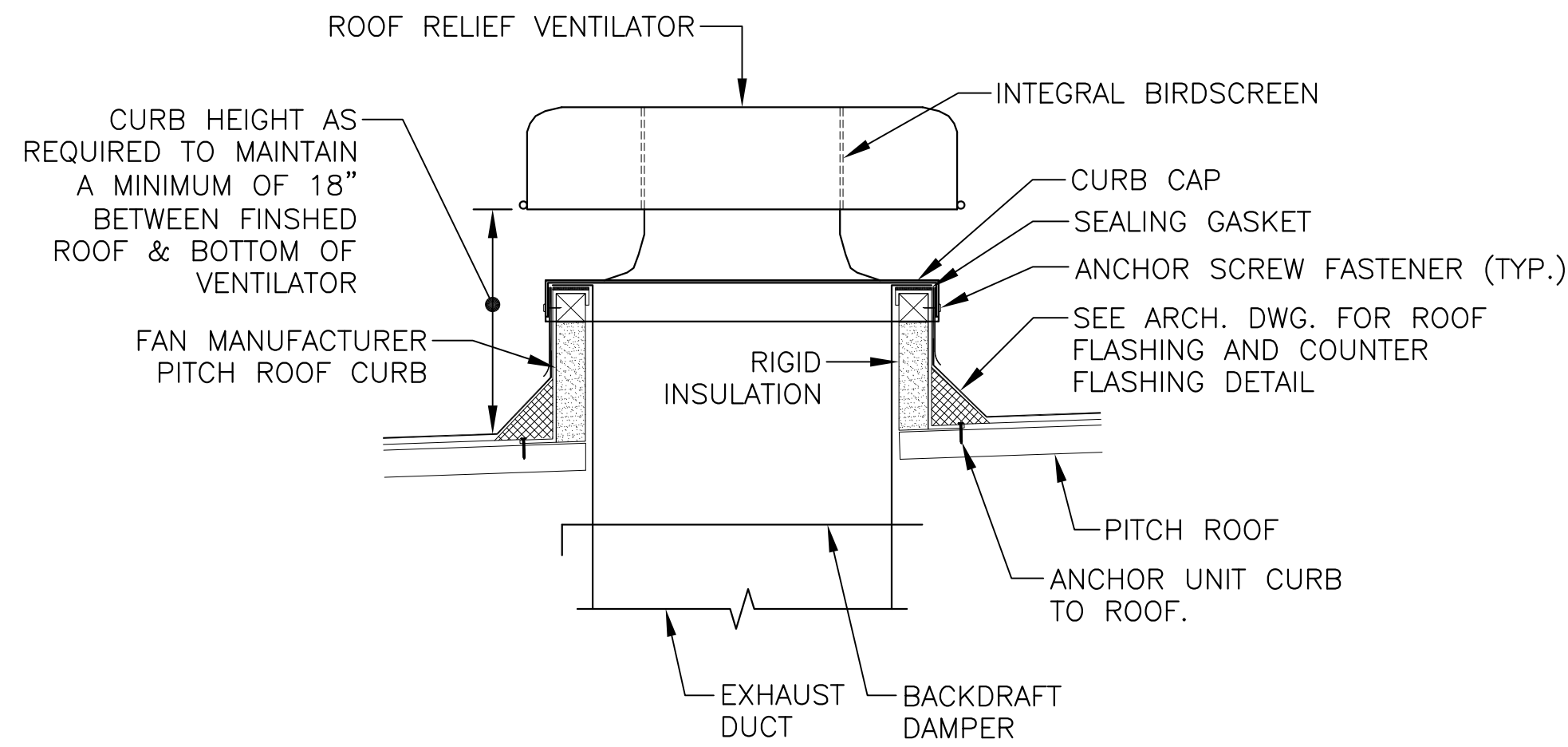
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IF NOT 2" - SCALE ACCORDINGLY

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605 Third Street Encinitas, CA 92024  
760.942.5147 Fax 760.942.4508

**CITY OF GONZALES**  
**INDUSTRIAL WASTE WATER TREATMENT FACILITY**

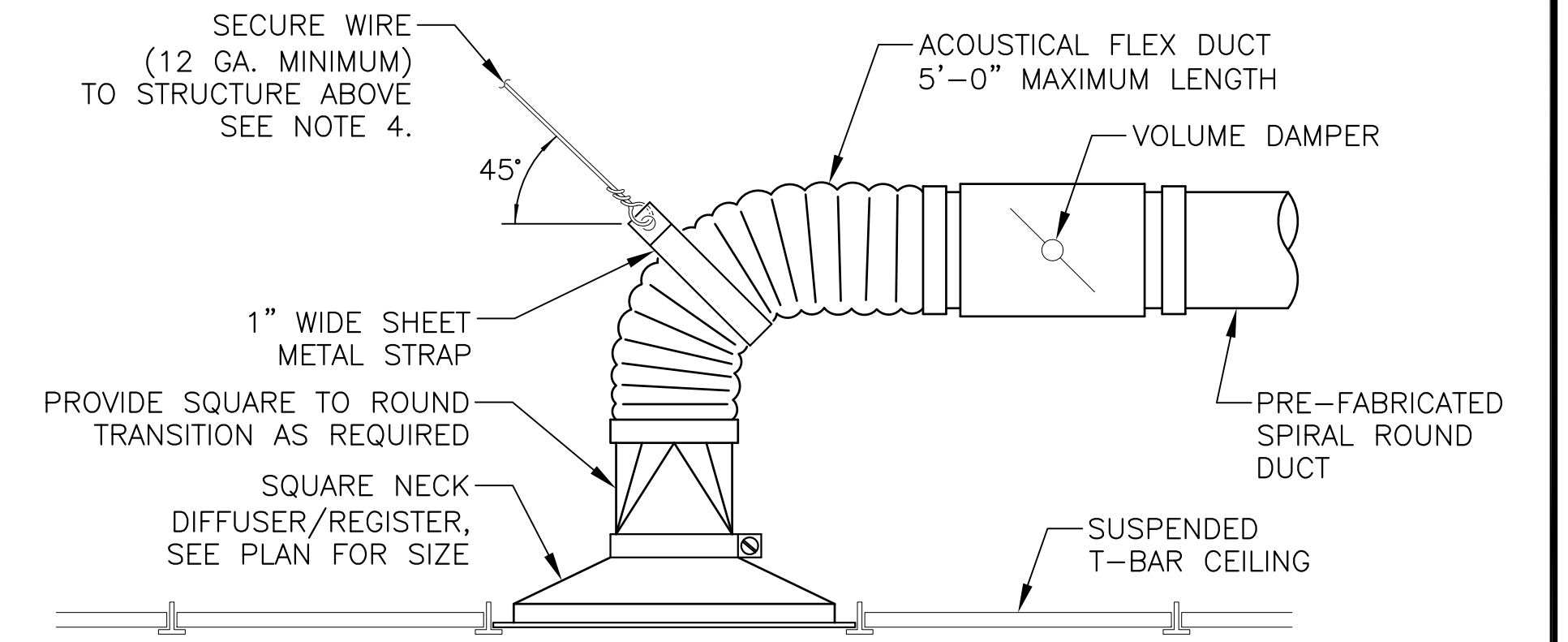
**HVAC DETAILS - 1**

JOB NO. PO# 6761  
DRAWING NO. **H-3**  
SHEET NO. 92 of 133



**NOTE:**

1. DUCT SHALL BE 1" SMALLER THAN ROOF OPENING. ROOF OPENING SHALL CONFORM TO CURB SIZE.
2. ANCHOR UNIT CURB TO ROOF WITH 0.157" DIA. HILTI X-U SHOTPINS @ 8" OC INSTALLED PER ICC-ESR-2269.



**NOTES:**

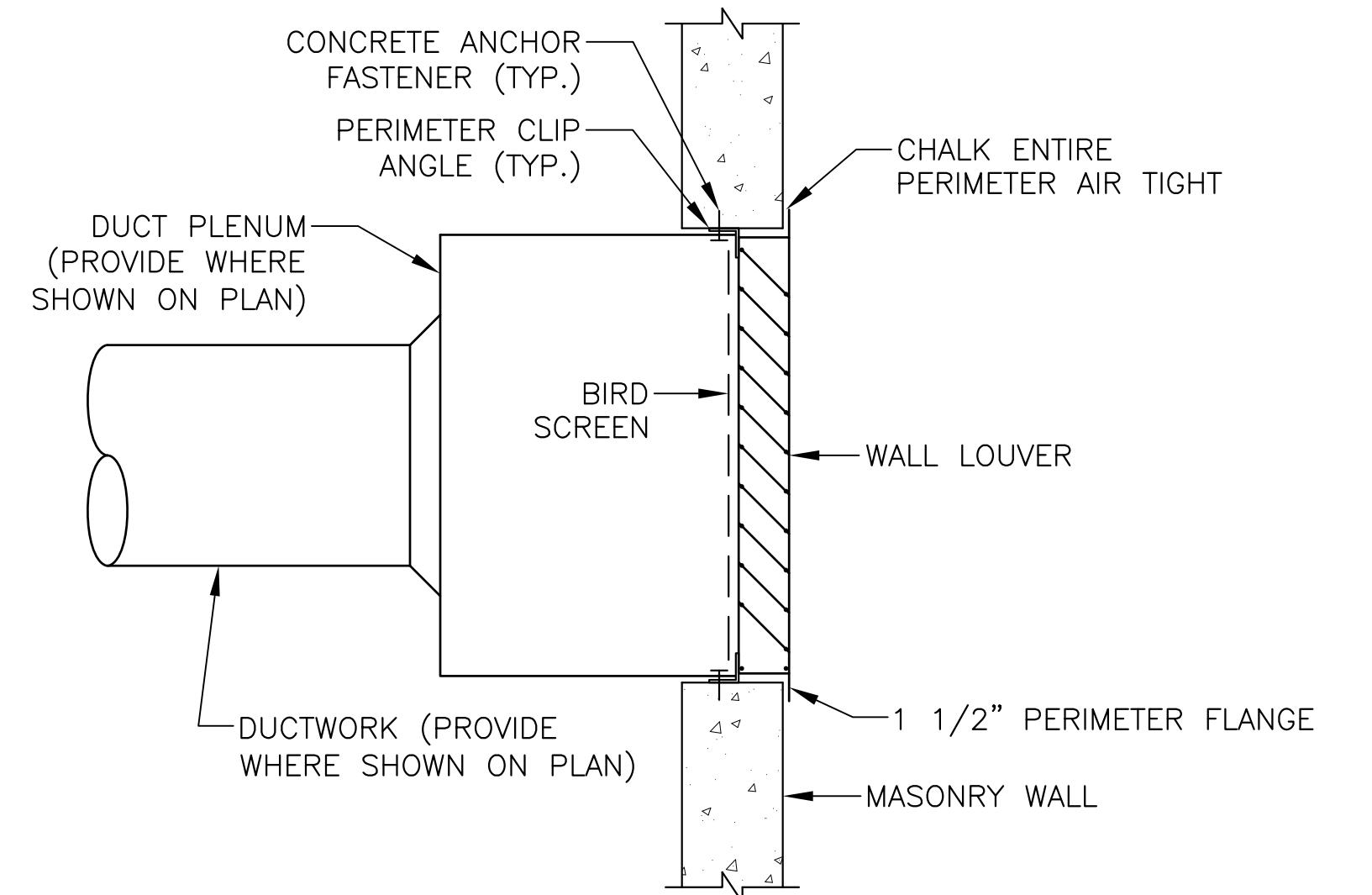
1. ALL FLEX CONNECTIONS SHALL BE INTERNALLY LINED.
2. RETURN AND EXHAUST AIR REGISTER INSTALLATION IS SIMILAR.
3. FOR CEILING DIFFUSERS IN EXPOSED AREAS USE HARD DUCT CONNECTION WITH R/D = 1.5 ELBOW.
4. SECURE WIRE ABOVE SIMILAR TO ANCHORAGE SHOWN PER DETAIL 2/GS-12 STRUCTURAL DRAWING.

**AIR RELIEF VENTILATOR DETAIL**

SCALE 3  
NTS

**CEILING DIFFUSER CONNECTION DETAIL**

SCALE 1  
NTS



**NOTE:**

1. CONCRETE ANCHOR FASTENER TO MASONRY WALL SHALL BE 3/8" DIAMETER HILTI KH-EZ x 3-1/4" EMBED, OR EQUAL.

**WALL LOUVER DETAIL**

SCALE 2  
NTS

DN:2020 PROJECTS:20-MBN-100 Gonzales, IVRF Operation Bldg.MECH493\_H-4.dwg 02/12/2025 09:27

No.	DATE	REVISIONS	APPROVED
02-12-25	ADDENDUM 3		DTN



DESIGNED: TN, SC  
DRAWN: S. CHHAT  
CHECKED: T. NGO

PROGRESS: FINAL SIGNED  
SUBMITTAL DATE: NOVEMBER 2024  
TONY NGO M30641  
DISCIPLINE ENGINEER P.E. NO.



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760.942.5147 Fax 760.942.4508

CITY OF GONZALES  
INDUSTRIAL WASTE WATER TREATMENT FACILITY

HVAC DETAILS - 2

JOB NO. PO# 6761  
DRAWING NO. H-4  
SHEET NO. 93 OF 133

STATE OF CALIFORNIA  
MECHANICAL SYSTEMS  
CERTIFICATE OF COMPLIANCE  
Mechanical Ventilation and Reheat  
Industrial Water Reclamation Facility  
Date Prepared: 2/16/2021  
Page 1 of 4

**A. Mechanical Ventilation and Reheat**

ROOM	MECHANICAL VENTILATION	REHEAT	COMPLIANCE
01	485	0.15	73
02			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			

Company: Tony Ngo  
Address: 5755 Oberlin Dr. Suite 112  
City/State/Zip: San Diego, CA 92121  
Phone: (858) 658-0304

Responsible Designer Signature: Tony Ngo  
Date Signed: 2/16/2021  
License: M30641  
Phone: 858-658-0304

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
January 2016

STATE OF CALIFORNIA  
MECHANICAL SYSTEMS  
CERTIFICATE OF COMPLIANCE  
Industrial Water Reclamation Facility  
Date Prepared: 2/16/2021  
Page 1 of 4

**B. Mechanical Systems**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Tony Ngo & Santa Chhat  
Signature Date: 2/16/2021  
Company: Advanced Technologies Consultants, Inc.  
Address: 5755 Oberlin Dr. Suite 112  
City/State/Zip: San Diego, CA 92121  
Phone: (858) 658-0304

Responsible Person's Declaration Statement  
I certify the following under penalty of perjury, under the laws of the State of California:  
1. The information provided on this Certificate of Compliance is true and correct.  
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible for the design of the building or system design identified on this Certificate of Compliance).  
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
4. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building department.

Responsible Designer Name: Tony Ngo  
Signature Date: 2/16/2021  
Company: Advanced Technologies Consultants, Inc.  
Address: 5755 Oberlin Dr. Suite 112  
City/State/Zip: San Diego, CA 92121  
License: M30641  
Phone: 858-658-0304

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
January 2016

STATE OF CALIFORNIA  
HVAC SYSTEM REQUIREMENTS  
CERTIFICATE OF COMPLIANCE  
HVAC Wet System Requirements  
Industrial Water Reclamation Facility  
Date Prepared: 2/16/2021  
Page 3 of 3

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Tony Ngo & Santa Chhat  
Company: Advanced Technologies Consultants, Inc.  
Address: 5755 Oberlin Dr. Suite 112  
City/State/Zip: San Diego, CA 92121  
Phone: (858) 658-0304

Responsible Person's Declaration Statement  
I certify the following under penalty of perjury, under the laws of the State of California:  
1. The information provided on this Certificate of Compliance is true and correct.  
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
4. The building design features or system design features identified on this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Tony Ngo  
Signature Date: 2/16/2021  
Company: Advanced Technologies Consultants, Inc.  
Address: 5755 Oberlin Dr. Suite 112  
City/State/Zip: San Diego, CA 92121  
License: M30641  
Phone: 858-658-0304

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
January 2016

STATE OF CALIFORNIA  
MECHANICAL SYSTEMS  
CERTIFICATE OF COMPLIANCE  
Industrial Water Reclamation Facility  
Date Prepared: 2/16/2021  
Page 3 of 4

**C. MECHANICAL HVAC ACCEPTANCE FORMS** (check box for required compliance documents)

Test Performed By: \_\_\_\_\_

The contractor who installed the equipment is responsible to either conduct the acceptance test themselves or have a qualified entity run the test for them. If more than one person has responsibility for the acceptance testing, each person shall sign and submit the Certificate of Acceptance applicable to the portion of the construction or installation for which they are responsible. This compliance document is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for HVAC systems. The designer is required to check the applicable boxes for all acceptance tests that apply and list all equipment that requires an acceptance test. All equipment of the same type that requires a test, list the equipment description and the number of units.

Equipment Test Description

Equipment Test Description	MCH-12-A	MCH-13-A	MCH-14-A	MCH-15-A	MCH-16-A	MCH-17-A	MCH-18-A
Fault Detection & Diagnostics for DX Units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
# of Units	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toshiba Carrier 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
January 2016

STATE OF CALIFORNIA  
HVAC DRY & WET SYSTEM REQUIREMENTS  
CERTIFICATE OF COMPLIANCE  
HVAC Dry & Wet System Requirements  
Industrial Water Reclamation Facility  
Date Prepared: 2/16/2021  
Page 2 of 3

**B. Equipment Tags and System Description - Wet Systems**

MANDATORY MEASURES	T-24 Sections	Reference to the Requirements in the Contract Documents
Heating Hot Water Equipment Efficiency	110.1	
Cooling Chilled and Condenser Water Equipment Efficiency	110.1, 140.4(i)	
Open and Closed Circuit Cooling Towers conductivity or flow-based controls	110.2(e) 1	
Open and Closed Circuit Cooling Towers Maximum Achievable Cycles of Concentration (L/S)	110.2(e) 2	
Flow Meter with analog output	110.2(e) 3	
Open and Closed Circuit Cooling Towers Overflow Alarm	110.2(e) 4	
Open and Closed Circuit Cooling Towers Efficient Drift Eliminators	110.2(e) 5	
Pipe Insulation	120.3	
PRESCRIPTIVE MEASURES		
Cooling Tower Fan Controls	140.4(h)2, 140.4(h)5	Y/N
Cooling Tower Flow Controls	140.4(h)3	Y/N
Centrifugal Fan Cooling Towers	140.4(h)4	Y/N
Air-Cooled Chiller Limitation	140.4(i)	Y/N
Variable Flow System Design	140.4(k)	Y/N
Chiller and Boiler Isolation	140.4(k)	Y/N
CHW and HHW Reset Controls	140.4(k)	Y/N
WHP Isolation Valves	140.4(k)	Y/N
VSD on CHW, CW & WHP Pumps & SHP	140.4(k)	Y/N
DP Sensor Location	140.4(k)	Y/N

Notes:  
1. Provide equipment tags (e.g. CH 1 to 3) or system description (e.g. CHW loop) as appropriate. Multiple units with common requirements can be grouped together.  
2. Provide references to plans (i.e. Drawing Sheet Numbers) and/or specifications (including Section name/number and relevant paragraphs) where each requirement is specified. Enter "N/A" if the requirement is not applicable to this system.  
3. The referenced plans and specifications must include all of the following information: equipment tag, equipment nominal capacity, Title 24 minimum efficiency requirements, and actual rated equipment efficiencies. Where multiple efficiency requirements are applicable (e.g. full- and part-load) include all. Where appliance standards apply (110.1), identify where equipment is required to be listed per Title 20 1601 et seq.  
4. Identify where the ventilation requirements are documented for each central HVAC system. Include references to both central unit schedules and sequences of operation. If one or more spaces is naturally ventilated identify where this is documented in the plans and specifications. Multiple zone central air systems must also provide a MCH-03-E compliance document.  
5. If one or more spaces has demand controlled ventilation identify where it is specified including the sensor specifications and the sequence of operation.  
6. If the system is DDC identify the sequences for the system start/stop, optimal start, setback (if required) and setup (if required).  
7. For all systems identify the specification for the thermostats and time clocks (if applicable).  
8. Identify where the heating, cooling and demand airflows are scheduled for this system. Include a reference to the specification of the zone controls. Provide a MCH-03-E compliance document.  
9. Enter N/A if there is no electric heating. If the system has electric heating indicate which exception to 140.4(g) applies.  
10. If duct leakage sealing and testing is required, a MCH-04-A compliance document must be submitted.

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance  
January 2016

STATE OF CALIFORNIA  
MECHANICAL SYSTEMS  
CERTIFICATE OF COMPLIANCE  
Industrial Water Reclamation Facility  
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Page 2 of 4

**B. MECHANICAL HVAC ACCEPTANCE FORMS** (check box for required compliance documents)

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Equipment Test Description

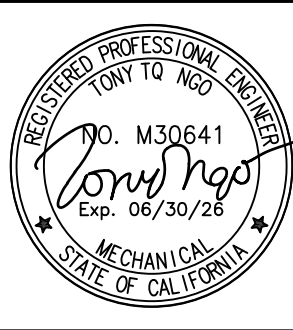
Equipment Test Description	MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-08-A	MCH-09-A	MCH-10-A	MCH-11-A
Outdoor Air	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Single Zone Unitary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Fan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Fan VAV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Fan VAV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Fan VAV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Fan VAV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Supply Fan VAV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Fan VAV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Supply Fan VAV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Supply Fan VAV	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply Fan VAV	<input type="checkbox"/>	<input type="checkbox"/>								

No.	DATE	REVISIONS	APPROVED
02-12-25	ADDENDUM 3		DTN



DESIGNED:  
TN, SC  
DRAWN:  
S. CHHAT  
CHECKED:  
T. NGO

PROGRESS: FINAL SIGNED  
SUBMITTAL DATE: NOVEMBER 2024  
TONY NGO M30641  
DISCIPLINE ENGINEER P.E. NO.



LINE IS 2 INCHES AT FULL SIZE  
IF NOT 2" - SCALE ACCORDINGLY

**DUDEK**  
605 Third Street Encinitas, CA 92024  
760.942.5147 Fax 760.942.4508

CITY OF GONZALES  
INDUSTRIAL WASTE WATER TREATMENT FACILITY  
HVAC T-24 FORMS - 2

JOB NO. PO# 6761  
DRAWING NO. **H-6**  
SHEET NO. 95 of 133

STATE OF CALIFORNIA  
CALIFORNIA ENERGY COMMISSION  
NRCC-MCH-04-E  
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS  
CERTIFICATE OF COMPLIANCE  
Project Name: Industrial Water Reclamation Facility Date Issued: 2/16/2021 (Page 1 of 3)

REQUIRED ACCEPTANCE TESTS  
1. I certify that this Certificate of Compliance documentation is accurate and complete.

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT  
Documentation Author Name: Tony Ngo & Santa Chhat Signature Date: 2/16/2021  
Company: Advanced Technologies Consultants, Inc. City/State/Zip: San Diego, CA 92121  
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Company: Advanced Technologies Consultants, Inc. City/State/Zip: San Diego, CA 92121  
Address: 5755 Oberlin Dr, Suite 112 License: M30641  
Phone: 659-658-0304

CA Building Energy Efficiency Standards - 2016 Nonresidential Compliance January 2016

STATE OF CALIFORNIA  
CALIFORNIA ENERGY COMMISSION  
NRCC-MCH-04-E  
REQUIREMENTS FOR PACKAGED SINGLE ZONE UNITS  
CERTIFICATE OF COMPLIANCE  
Project Name: Industrial Water Reclamation Facility Date Issued: 2/16/2021 (Page 2 of 3)

REQUIRED ACCEPTANCE TESTS  
1. I certify that this Certificate of Compliance documentation is accurate and complete.

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Equipment Requiring Testing or Verification	MS-C20-A	MS-C20-B	MS-C20-C	MS-C20-D	MS-C20-E	MS-C20-F	MS-C20-G	MS-C20-H	MS-C20-I	MS-C20-J	MS-C20-K	MS-C20-L	MS-C20-M	MS-C20-N	MS-C20-O	MS-C20-P	MS-C20-Q	MS-C20-R	MS-C20-S	MS-C20-T	MS-C20-U	MS-C20-V	MS-C20-W	MS-C20-X	MS-C20-Y	MS-C20-Z	TEST PERFORMED BY:
TURBIDA CH 1	✓																										

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MANDATORY MEASURES  
F-R Sections Requirement: 18 X SEER (8) Requirement: As SCHEDULED  
Cooling Equipment Efficiency Requirement: 13.0 SEER Requirement: As SCHEDULED  
Thermostats Requirement: 110.0(B), 110.0(C) Requirement: SERIALIZED  
Furnace Standby Loss Control Requirement: 110.0(D) Requirement: NR  
Ventilators Requirement: 120.10(A) Requirement: NR  
Demand Control Ventilation Requirement: 120.10(B) Requirement: NR  
Occupant Sensor Ventilation Control Requirement: 120.10(C), 120.2(6)(3) Requirement: PROGRAMMABLE  
Outdoor Air and Exhaust Damper Control Requirement: 120.20(A) Requirement: NR  
Automatic Demand Fresh Air Control Requirement: 120.20(B) Requirement: NR  
Exhaust Fan Control Requirement: 120.20(C) Requirement: NR-8.0  
PREScriptive MEASURES  
Equipment is sized in accordance with 140.4(a & b) Requirement: 15 MGD BUHTR  
Electric Resistance Heating Requirement: 140.4(a) Requirement: NR  
Electric Resistance Heating and Testing Requirement: 140.4(b) Requirement: NR  
Direct Leakage Testing Requirement: 140.4(c) Requirement: NR

1. Provide equipment tags (e.g. AGI or ACT) to 10. Multiple units of the same make and model with the same application and accessories can be grouped together.  
2. Enter the following information as appropriate: Unit Manufacturer, Unit Model Number (including all accessories), Description of the unit (e.g. gas pack or heat pump, rated heating capacity in BTU/hr), and the minimum requirement from the Standard (e.g. Programmatic Requirements from the Standard or the minimum requirement from the Standard).  
3. For each requirement, enter the minimum requirement from the Standard in the left column (under "Standard Requirement"). In the right column (under "As SCHEDULED") enter the value for the units as specified.  
4. In the left column indicate the required time controls from the standard. In the right column indicate the device that provides this functionality (e.g. EMS or programmable thermostat).  
5. In the left column indicate the required time controls from the standard. In the right column indicate the device that provides this functionality (e.g. EMS or programmable thermostat).  
6. If the unit has a furnace with a rated capacity of 200,000 Btu/h or greater, indicate the rated standby loss and ignition source (e.g. ID). If there is no furnace or the unit is rated for <200,000 Btu/h, indicate the standby loss and ignition source (e.g. ID).  
7. In the left column, enter both the required ventilation value from Table 120.2.1A and for the number of occupants times 15 cfm/person. In the right column enter the actual minimum ventilation as scheduled. If the space is naturally ventilated enter "N/A". In the left column and "the space is naturally ventilated" in the right column.  
8. In the left column indicate the required fresh air flow rate. In the right column indicate "N/A". In the left column, if either DCV or Occupant Sensor Ventilation Control is provided indicate "provided". In the right column indicate "N/A". In the right column.  
9. In the left column indicate the required time controls from the standard. In the right column indicate the device that provides this functionality (e.g. EMS or programmable thermostat).  
10. In the left column indicate the required time controls from the standard. In the right column indicate the device that provides this functionality (e.g. EMS or programmable thermostat).  
11. If applicable, indicate the required time controls from the standard. In the right column indicate the device that provides this functionality (e.g. EMS or programmable thermostat).

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A. MECHANICAL COMPLIANCE FORMS & WORKSHEETS  
For detailed instructions on the use of this and all Energy Standards compliance documents, refer to the 2016 Nonresidential Manual. Note: The Enforcement Agency may require all compliance documents to be incorporated onto the building plans. The NRCC-MCH-04-E and NRCC-MCH-05-E are alternative compliance documents to NRCC-MCH-04-E, NRCC-MCH-04-E and NRCC-MCH-05-E for projects using only single zone packaged HVAC systems.

YES	NO	Form	Title
✓		NRCC-MCH-04-E (1 of 2)	Certificate of Compliance. Required on plans when used.
✓		NRCC-MCH-04-E (2 of 2)	Mechanical Acceptance Tests. Required on plans when used.
✓		NRCC-MCH-05-E (1 of 2)	HVAC Prescriptive Requirements. Required on plans when used.
✓		NRCC-MCH-05-E (2 of 2)	Mechanical SWH Equipment Summary is required for all submittals with service water heating, pool or spa. It is required on plans where applicable.

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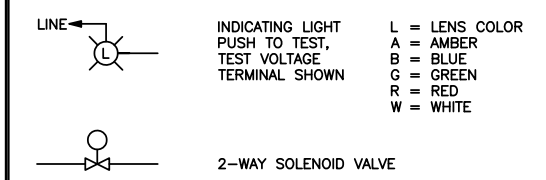
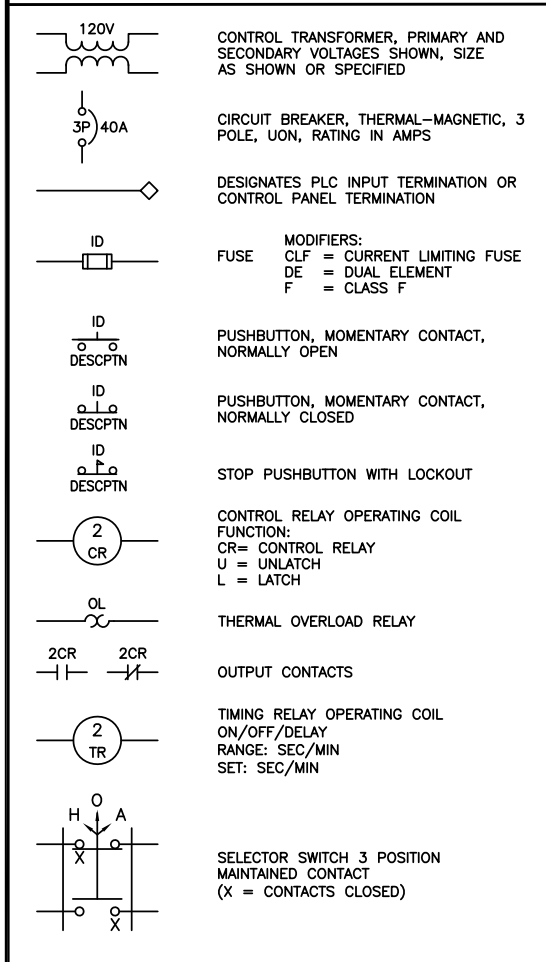
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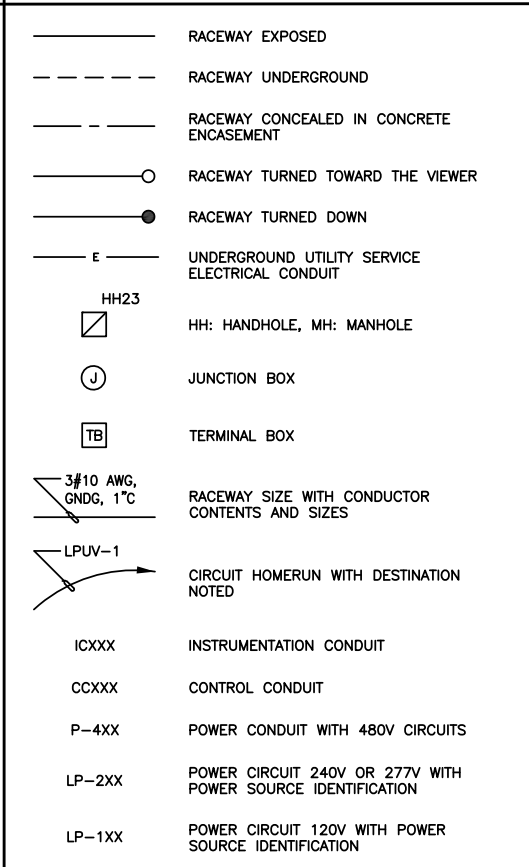
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**CONTROL DIAGRAM SYMBOLS**

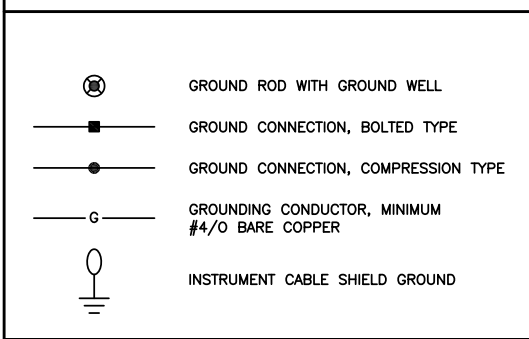


NORMALLY OPEN	NORMALLY CLOSE	DEFINITION
		DELAY ON COIL ENERGIZATION (ON DELAY)
		POSITION (LIMIT) SWITCH
		TEMPERATURE SWITCH
		PRESSURE SWITCH
		LEVEL SWITCH
		FLOW SWITCH

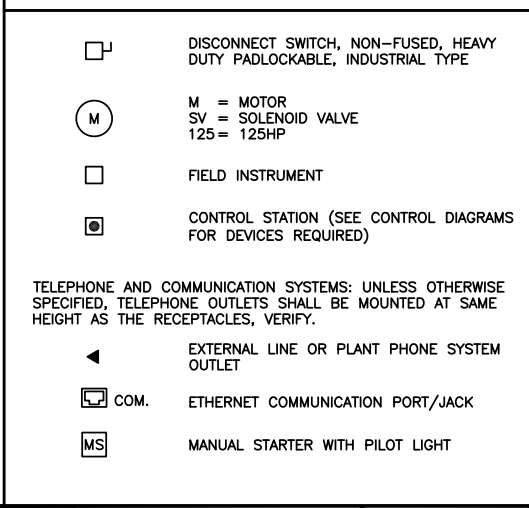
**CIRCUITS AND RACEWAYS**



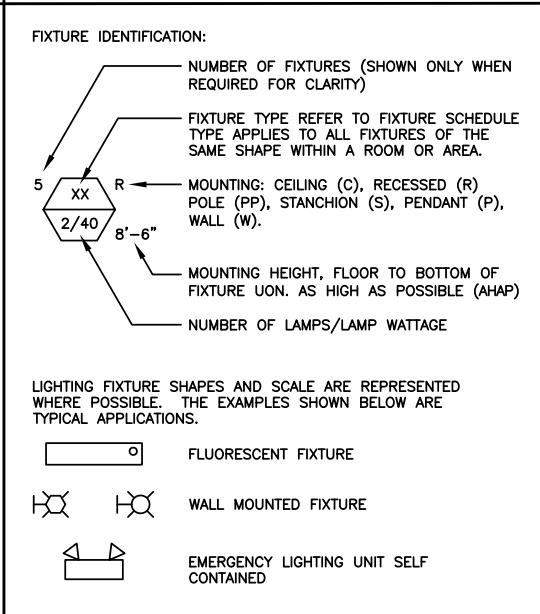
**GROUNDING**



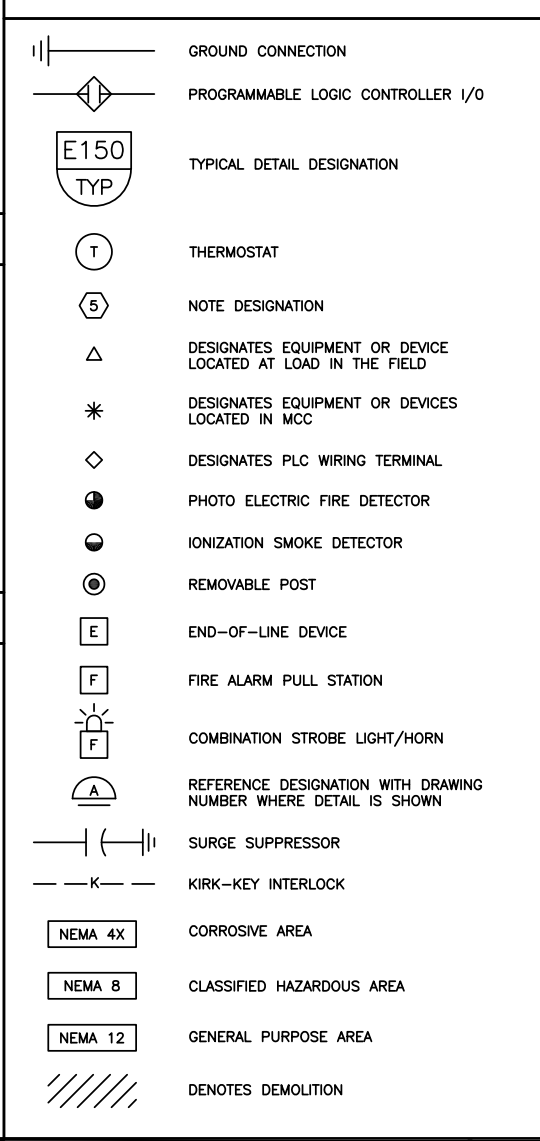
**MOTORS AND EQUIPMENT**



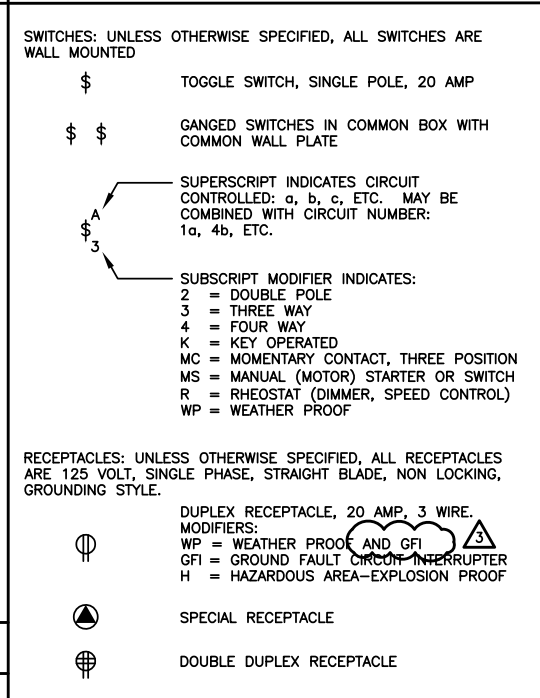
**LIGHTING**



**MISCELLANEOUS**



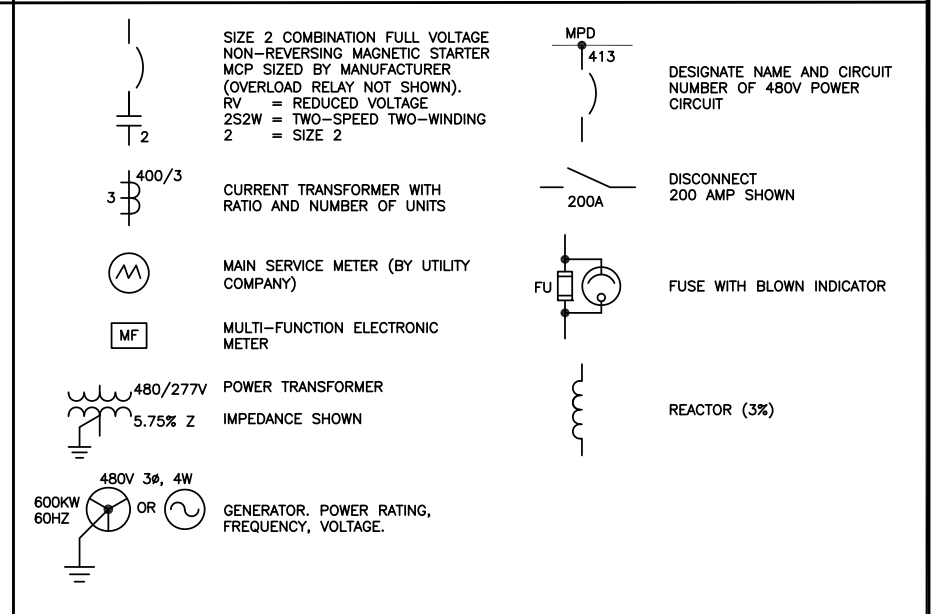
**WIRING DEVICES**



**STANDARD ABBREVIATIONS**

A	AMPERE
AFF	ABOVE FINISHED FLOOR
ATS	AUTOMATIC TRANSFER SWITCH
BCW	BARE COPPER WIRE
C	CONDUIT
C.O.	CONDUIT ONLY (EMPTY CONDUIT)
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CT	CONTACTOR (HEAVY DUTY)
CU	COPPER
DPDT	DOUBLE POLE DOUBLE THROW
(E) OR EXIST.	EXISTING
FA	FIRE ALARM
FLA	FULL LOAD AMPERE
FM	FIBER OPTIC MODEM
FS	FLOAT SWITCH
G OR GND	GROUND
HP	HORSE POWER
HZ	HERTZ
KVAR	REACTIVE POWER
KW	KILOWATT
KWHR	KILOWATT HOUR
I/O	INPUT/OUTPUT
IPB	INSTRUMENTATION PULL BOX
ISR	INTRINSICALLY SAFE RELAY
LC	LOAD CENTER
LCP	LOCAL CONTROL PANEL
LOS	LOCKOUT STOP
LP	LIGHTING PANEL
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MF	MULTI-FUNCTION METER
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OIT	OPERATOR INTERFACE TERMINAL OPERATIONS
OPS	PAIRS OR PR
PB	PULL BOX
PG&E	PACIFIC GAS & ELECTRIC COMPANY
PLC	PROGRAMMABLE LOGIC CONTROLLER
PP	POWER POLE
PPB	POWER PULL BOX
RTD	RESISTANCE THERMAL DETECTOR
RTU	REMOTE TERMINAL UNIT
SCADA	SUPERVISORY CONTROL & DATA ACQUISITION
SPD	SURGE PROTECTION DEVICE
SSRS OR RVSS	SOLID STATE REDUCED VOLTAGE STARTER
SPTD	SINGLE POLE DOUBLE THROW
SPS	SURGE PROTECTION SYSTEM
TDR	TIME DELAY RELAY
TS	TEMPERATURE SWITCH
TYP	TYPICAL
UON	UNINTERRUPTIBLE POWER SUPPLY
UPS	VOLTMETER
V	VARIABLE FREQUENCY DRIVE
VFD	WEATHER PROOF (NEMA 4X) TRANSFORMER
WP	
XFMR	

**ONE-LINE DIAGRAM SYMBOLS**



**GENERAL NOTES**

- THIS DRAWING IS GENERAL IN NATURE. SOME SYMBOLS SHOWN HERE ON MAY NOT BE USED ON THE CONTRACT DRAWINGS.
- IDENTIFICATIONS (ID), SIZES, RATINGS, LOCATIONS AND SIMILAR INFORMATION SHOWN ASSOCIATED WITH SYMBOLS ARE OPTIONAL; EXAMPLES OF SUCH INFORMATION ARE SHOWN WITH SOME SYMBOLS FOR CLARITY.
- THE ELECTRICAL DRAWINGS USE THE ONE-LINE DIAGRAMS AND PANEL SCHEDULES IN CONJUNCTION WITH SHOWING THE LOCATION OF THE ELECTRICAL/INSTRUMENTATION SOURCES AND LOADS/DEVICES SHOWN ON THE PLAN DRAWINGS TO DEPICT THE WORK. THE CONTRACTOR SHALL USE THESE DOCUMENTS TO DETERMINE AND PROVIDE THE NECESSARY RACEWAY AND WIRING SYSTEM FOR EACH CIRCUIT. ALL INDOOR RACEWAY SHALL BE RUN EXPOSED, AND ROUTED BY THE CONTRACTOR, UNLESS OTHERWISE NOTED. THE TYPE OF RACEWAY AND WIRE USED SHALL BE AS SPECIFIED IN THE SPECIFICATIONS UNLESS OTHERWISE NOTED.
- THE LOCATION OF THE CONTROL STATIONS SHOWN ON THE PLAN DRAWINGS ARE DIAGRAMMATIC AND THE ACTUAL LOCATION SHALL BE COORDINATED IN THE FIELD WITH THE CONSTRUCTION MANAGER.
- THE EXACT LOCATION OF THE MOTORS AND ACCESSORIES ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE THE STRUCTURAL AND MECHANICAL DRAWINGS FOR CONDUIT STUB-OUT AND TERMINATION LOCATIONS.
- ALL EQUIPMENT SHALL BE LABELED WITH NAMEPLATES. DESCRIPTION OF EQUIPMENT SHALL BE IN ACCORDANCE WITH THE ONE-LINE DIAGRAM DESCRIPTION. A LIST OF THE NAMEPLATES SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER PRIOR TO ENGRAVING.
- UNLESS OTHERWISE NOTED, ALL CONVENIENCE OUTLETS SHALL BE MOUNTED AT 15-INCHES MINIMUM AND 48-INCHES MAXIMUM ABOVE FINISHED FLOOR. ALL LIGHT SWITCHES SHALL BE MOUNTED AT 48-INCHES ABOVE FINISHED FLOOR. THE LOWER REACH IS MEASURED TO THE BOTTOM OF THE BOX AND THE UPPER REACH TO THE TOP OF THE BOX.
- EACH CONVENIENCE OUTLET AND LIGHTING CIRCUIT SHALL BE PROVIDED WITH A #12AWG GREEN GROUNDING CONDUCTOR.
- THE CONTRACTOR SHALL INCLUDE IN HIS BID THE COST TO DISCONNECT AND REMOVE EXISTING ELECTRICAL EQUIPMENT AS SHOWN ON THE DRAWINGS. CORE DRILL EXISTING WALLS AS REQUIRED FOR CONDUIT ENTRIES.
- ALL TYPICAL DETAILS SHALL APPLY REGARDLESS THEY ARE REFERENCED ON ANY DRAWING OR NOT.
- FOR PACKAGED EQUIPMENT, CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S RECOMMENDED INSTALLATION AND SHALL INSTALL THEM PER APPROVED SHOP DRAWINGS.
- FOR CLARITY, CONTROL SCHEMATIC DIAGRAMS DO NOT SHOW REQUIRED EQUIPMENT GROUNDING CONDUCTOR WHICH SHALL BE PROVIDED FOR EACH POWER CIRCUIT.
- ALL EXPOSED CONDUITS SHALL BE THREADED PVC-COATED RIGID GALVANIZED STEEL CONDUITS, ALL ASSOCIATED CONDUIT ACCESSORIES SUCH AS FITTINGS, BOXES, CONDUITS SUPPORTS ETC. SHALL BE 316 STAINLESS STEEL.
- ALL EQUIPMENT AND ASSOCIATED INSTALLATION IN CLASSIFIED AREAS WHERE SHOWN SHALL BE SUITABLE FOR SUCH CLASSIFIED HAZARDOUS LOCATIONS PER NEC ARTICLE 500.
- ALL EQUIPMENT AND ASSOCIATED INSTALLATION IN NEMA 4X AREAS WHERE SHOWN SHALL BE CORROSIVE RESISTANT WITH 316 STAINLESS STEEL MATERIALS AND ENCLOSURES. UNLESS OTHERWISE NOTED, ALL OUTDOOR AREAS ARE NEMA 4X AREAS.
- IN ADDITION TO SPECIFIC ARC FLASH LABELS GENERATED FROM THE ARC FLASH / SHORT CIRCUIT STUDY, GENERIC ARC FLASH WARNING LABELS SHALL BE PROVIDED FOR EACH OF THE ELECTRICAL EQUIPMENT, PANEL, ENCLOSURE.
- IN THIS PROJECT, CONTINUOUS OPERATIONS OF THE EXISTING FACILITIES IS VERY IMPORTANT, AND THUS COORDINATION WITH THE OWNER IS NECESSARY AND REQUIRED. SEE SPECS FOR PRIORITY AND PROJECT CONSTRAINTS.
- SEISMIC CALCULATIONS SHALL BE PREPARED AND SUBMITTED BY THE CONTRACTOR PER CALIFORNIA BUILDING CODES. SEE SPECS FOR DETAILS.
- A MINIMUM OF 12" SEPARATION IS REQUIRED BETWEEN POWER AND INSTRUMENTATION CONDUITS. SAME REQUIREMENT SHALL ALSO APPLY TO CONDUITS IN DUCT BANKS.
- MOTOR DISCONNECTS FOR 120V AND 208V MOTORS SHALL BE MANUAL STARTER STYLE, SINGLE-POLE OR TWO-POLE, 20A, NEMA 4X 316 STAINLESS STEEL, PAD LOCKABLE, MADE BY SQUARE D, EATON OR EQUAL.

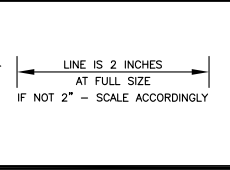
No.	DATE	REVISIONS	APPROVED
02-12-25		ADDENDUM 3	DTN

**UNDERGROUND SERVICE ALERT**

CALL: TOLL FREE 1-800-227-2600

TWO WORKING DAYS BEFORE YOU DIG

DESIGNED: NAME	PROGRESS: REVISED PER REVIEW COMMENTS
DRAWN: NAME	SUBMITTAL DATE: NOVEMBER 2024
CHECKED: NAME	DIEP NGUYEN E-10687
	DISCIPLINE ENGINEER P.E. NO.



**DUDEK**

605 Third Street Encinitas, CA 92024  
760.942.5147 Fax 760.942.4508

**CITY OF GONZALES**

**INDUSTRIAL WASTE WATER TREATMENT FACILITY**

**ELECTRICAL**

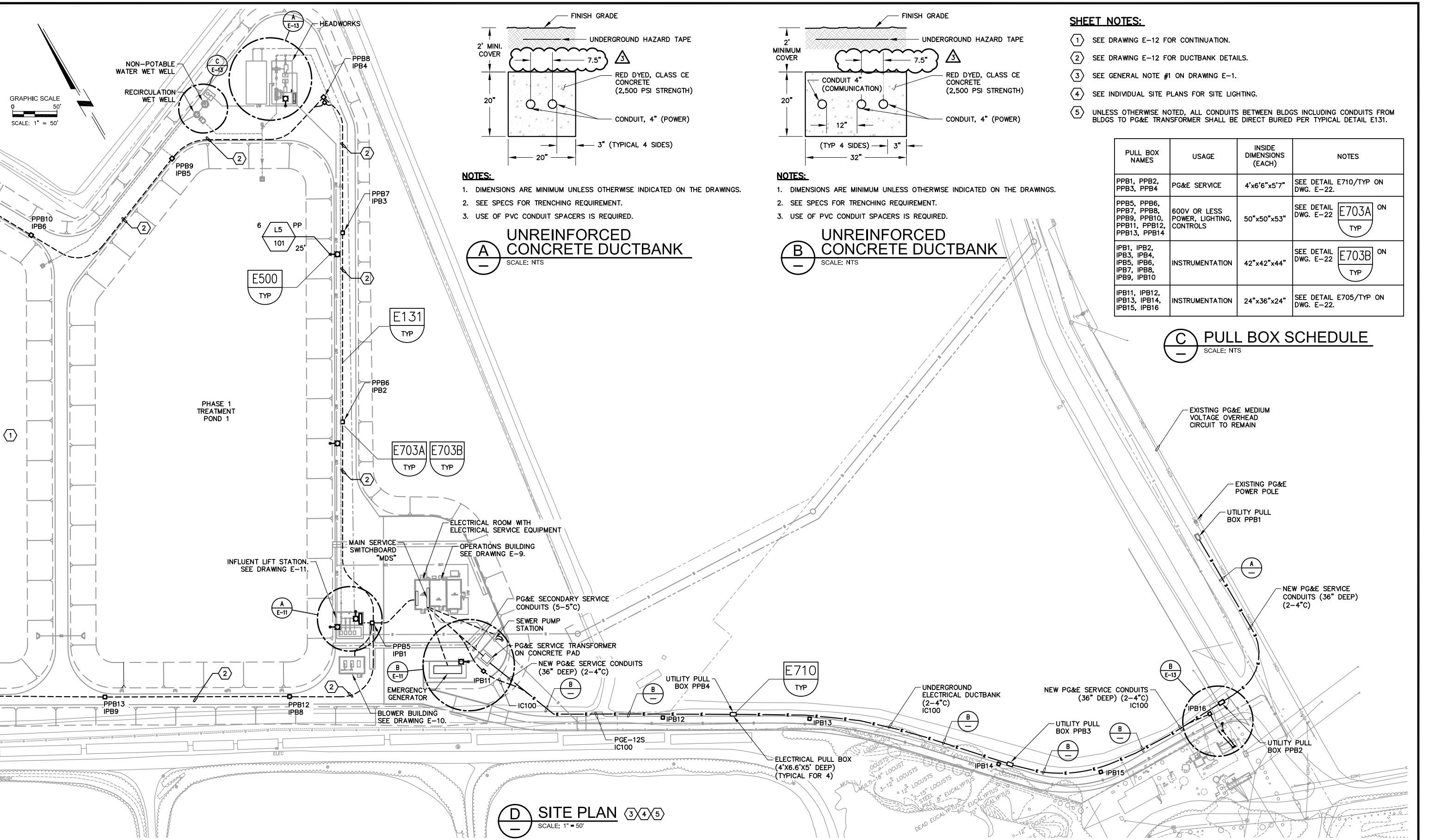
**ELECTRICAL SYMBOLS, LEGEND AND NOTES**

JOB NO. PO# 6761

DRAWING NO. **E-1**

SHEET NO. 96 OF 133

P:\432\_Gonzales Separators Industrial Treatment Plant\_Dudek\DRAWINGS\31008-2\_SHO096 E-01\_Admn 3.dwg 02/11/2025 15:34



**SHEET NOTES:**

- ① SEE DRAWING E-12 FOR CONTINUATION.
- ② SEE DRAWING E-12 FOR DUCTBANK DETAILS.
- ③ SEE GENERAL NOTE #1 ON DRAWING E-1.
- ④ SEE INDIVIDUAL SITE PLANS FOR SITE LIGHTING.
- ⑤ UNLESS OTHERWISE NOTED, ALL CONDUITS BETWEEN BLDGS INCLUDING CONDUITS FROM BLDGS TO PG&E TRANSFORMER SHALL BE DIRECT BURIED PER TYPICAL DETAIL E131.

**NOTES:**

- 1. DIMENSIONS ARE MINIMUM UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- 2. SEE SPECS FOR TRENCHING REQUIREMENT.
- 3. USE OF PVC CONDUIT SPACERS IS REQUIRED.



**NOTES:**

- 1. DIMENSIONS ARE MINIMUM UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- 2. SEE SPECS FOR TRENCHING REQUIREMENT.
- 3. USE OF PVC CONDUIT SPACERS IS REQUIRED.



PULL BOX NAMES	USAGE	INSIDE DIMENSIONS (EACH)	NOTES
PPB1, PPB2, PPB3, PPB4	PG&E SERVICE	4'x6'6"x5'7"	SEE DETAIL E710/TYP ON DWG. E-22.
PPB5, PPB6, PPB7, PPB8, PPB9, PPB10, PPB11, PPB12, PPB13, PPB14	600V OR LESS POWER, LIGHTING, CONTROLS	50"x50"x53"	SEE DETAIL E703A ON TYP
IPB1, IPB2, IPB3, IPB4, IPB5, IPB6, IPB7, IPB8, IPB9, IPB10	INSTRUMENTATION	42"x42"x44"	SEE DETAIL E703B ON TYP
IPB11, IPB12, IPB13, IPB14, IPB15, IPB16	INSTRUMENTATION	24"x36"x24"	SEE DETAIL E705/TYP ON DWG. E-22.

**C PULL BOX SCHEDULE**  
SCALE: NTS

**D SITE PLAN** ③④⑤  
SCALE: 1" = 50'

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No.	DATE	REVISIONS	APPROVED
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CHECKED: NAME	DIEP NGUYEN E-10687
	DISCIPLINE ENGINEER P.E. NO.

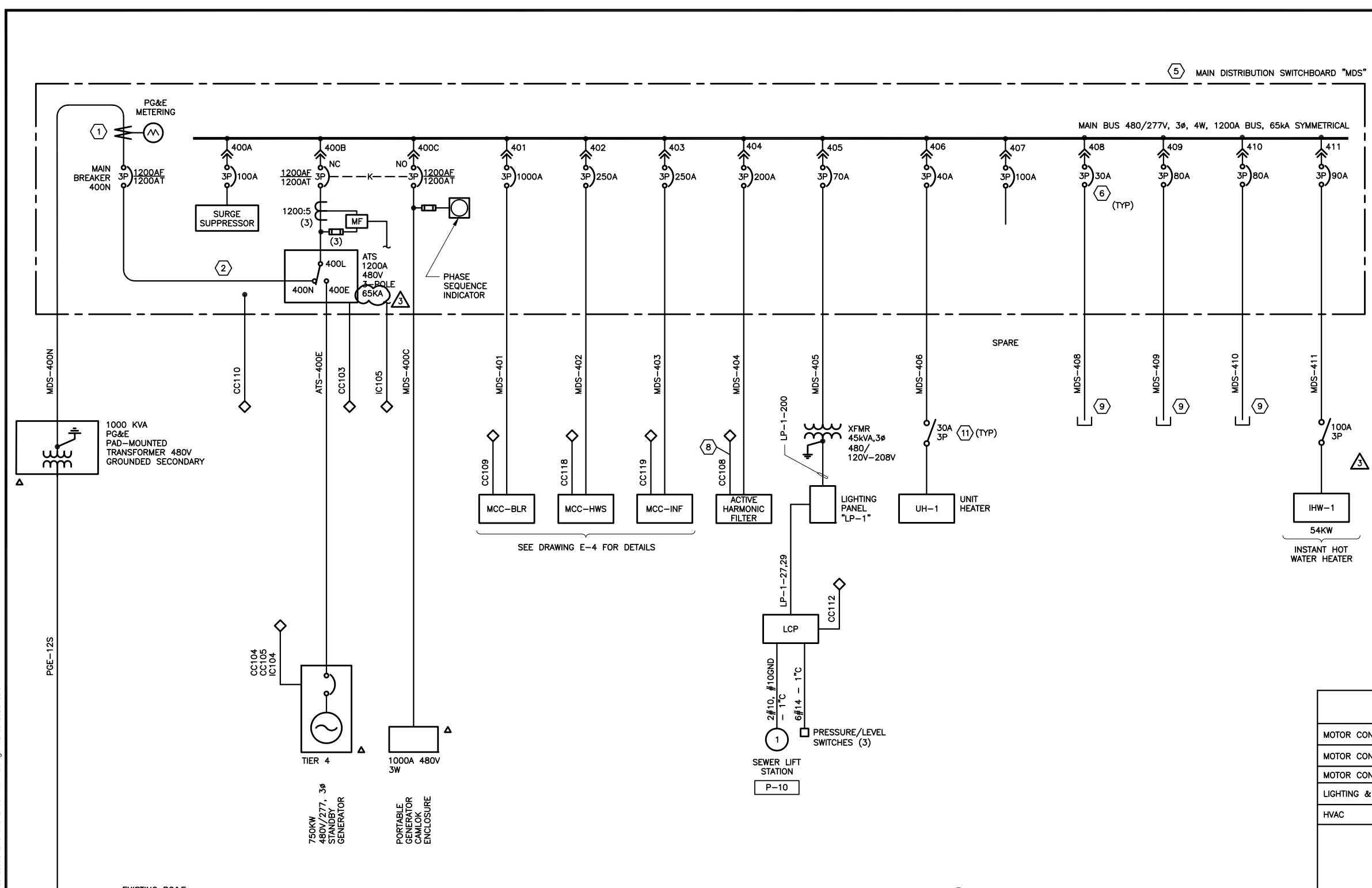


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**CITY OF GONZALES**  
**INDUSTRIAL WASTE WATER TREATMENT FACILITY**  
**ELECTRICAL SITE PLAN**

JOB NO. PO# 6761
DRAWING NO. <b>E-2</b>
SHEET NO. 97 OF 133



- SHEET NOTES:**
- 1 PULL SECTION AND METERING SECTION OF THE MAIN DISTRIBUTION SWITCHBOARD SHALL BE IN FULL COMPLIANCE WITH PG&E REQUIREMENTS IN THE GREEN BOOK AND APPLICABLE EUSERC STANDARDS.
  - 2 FURNISH AND INSTALL NEUTRAL GROUNDING DISCONNECT BONDED TO THE MAIN DISTRIBUTION SWITCHBOARD COPPER GROUND BUS WHICH IS EXTENDED THRU ALL VERTICAL SECTIONS OF THE SWITCHBOARD.
  - 3 ALL WORK INVOLVING SERVICE SHALL BE FULLY COORDINATED WITH PG&E AND WITH THE ENGINEER IN ADVANCE.
  - 4 CIRCUIT BREAKERS RATED  $\geq 225A$  SHALL BE PROVIDED WITH A TRIP UNIT HAVING THE FOLLOWING CHARACTERISTICS:
    - LONG TIME AND DELAYS
    - SHORT TIME AND DELAYS
    - GROUND FAULT AND DELAYS
    - INSTANTANEOUS
  - 5 PROVIDE A SIGN TO INDICATE "THIS ELECTRICAL GEAR IS SUPPORTED BY AN ONSITE GENERATOR LOCATED AT THE SOUTH SIDE OPERATIONS BUILDING".
  - 6 ALL BREAKERS SHOWN ARE 3-POLE.
  - 7 SEE DRAWINGS E-15 AND E-16 FOR CABLE AND CONDUIT SCHEDULE.
  - 8 HARMONIC FILTER'S DRY CONTACTS FOR RUN AND FAIL FUNCTIONS SHALL BE CONNECTED TO PLC FOR REMOTE MONITORING (#14).
  - 9 CAP CONDUIT ON WALL 36" ABOVE SWITCHBOARD FOR FUTURE USE.
  - 10 BREAKERS 400A AND LARGER FRAME SHALL BE 100% RATED.
  - 11 ALL POWER DISCONNECT SWITCH SHALL BE 600V RATED, NON-FUSED, HEAVY DUTY, INDUSTRIAL TYPE, PAD-LOCKABLE, NEMA 4X (316 SS) FOR OUTDOOR LOCATIONS AND NEMA 12 FOR INDOOR LOCATIONS.
  - 12 A PERMANENT PLAQUE OR DIRECTORY SHALL BE INSTALLED AT THE SERVICE EQUIPMENT LOCATION, OR AT AN APPROVED READILY VISIBLE LOCATION. THE PLAQUE OR DIRECTORY SHALL DENOTE THE LOCATION OF EACH POWER SOURCE DISCONNECTING MEANS FOR THE BUILDING OR STRUCTURE AND BE GROUPED WITH OTHER PLAQUES OR DIRECTORIES FOR OTHER ONSITE SOURCES. THE PLAQUE OR DIRECTORY SHALL BE MARKED WITH THE WORDING "CAUTION: MULTIPLE SOURCES OF POWER". ANY POSTED DIAGRAMS SHALL BE CORRECTLY ORIENTED WITH RESPECT TO THE DIAGRAM'S LOCATION. THE MARKING SHALL COMPLY WITH CEC 110.21(B).
  - 13 A TORQUE SCHEDULE SHALL BE PROVIDED FOR ALL EQUIPMENT CONNECTIONS INCLUDING HARDWARE, DISCONNECTS, BREAKERS, MODULE CLIPS, LUGS, PANEL HARDWARE, GROUND CONNECTIONS, RACKING SYSTEM BOLTS, CLAMPS, ETC. THE SCHEDULE SHALL BE AS INDICATED ON EQUIPMENT OR IN INSTALLATION INSTRUCTIONS PROVIDED BY THE EQUIPMENT MANUFACTURER. AN APPROVED MEANS SHALL BE USED TO ACHIEVE THE INDICATED TORQUE VALUE.

EQUIPMENT	PRELIM HP/KVA	BUS RATING	NOTES
MOTOR CONTROL CENTER "BLR"	601	1000	
MOTOR CONTROL CENTER "HWS"	58	600	
MOTOR CONTROL CENTER "INF"	96	600	
LIGHTING & MISCELLANEOUS	45	N/A	
HVAC	150	N/A	
SUBTOTAL = 950 HP $\approx$ 1143A			
1143 A @ 480V, 3 $\phi$ CONNECTED			
USE 1200A STANDARD RATING			

**A MAIN SINGLE-LINE DIAGRAM** 4 7 10 13  
SCALE: NTS

P:\432\_Gonzales\_Separate\_Industrial\_Treatment\_Plant\_Dudek\DRAWINGS\3008-2\_SH098\_E-03\_Admn\_3.dwg 02/11/2025 15:34

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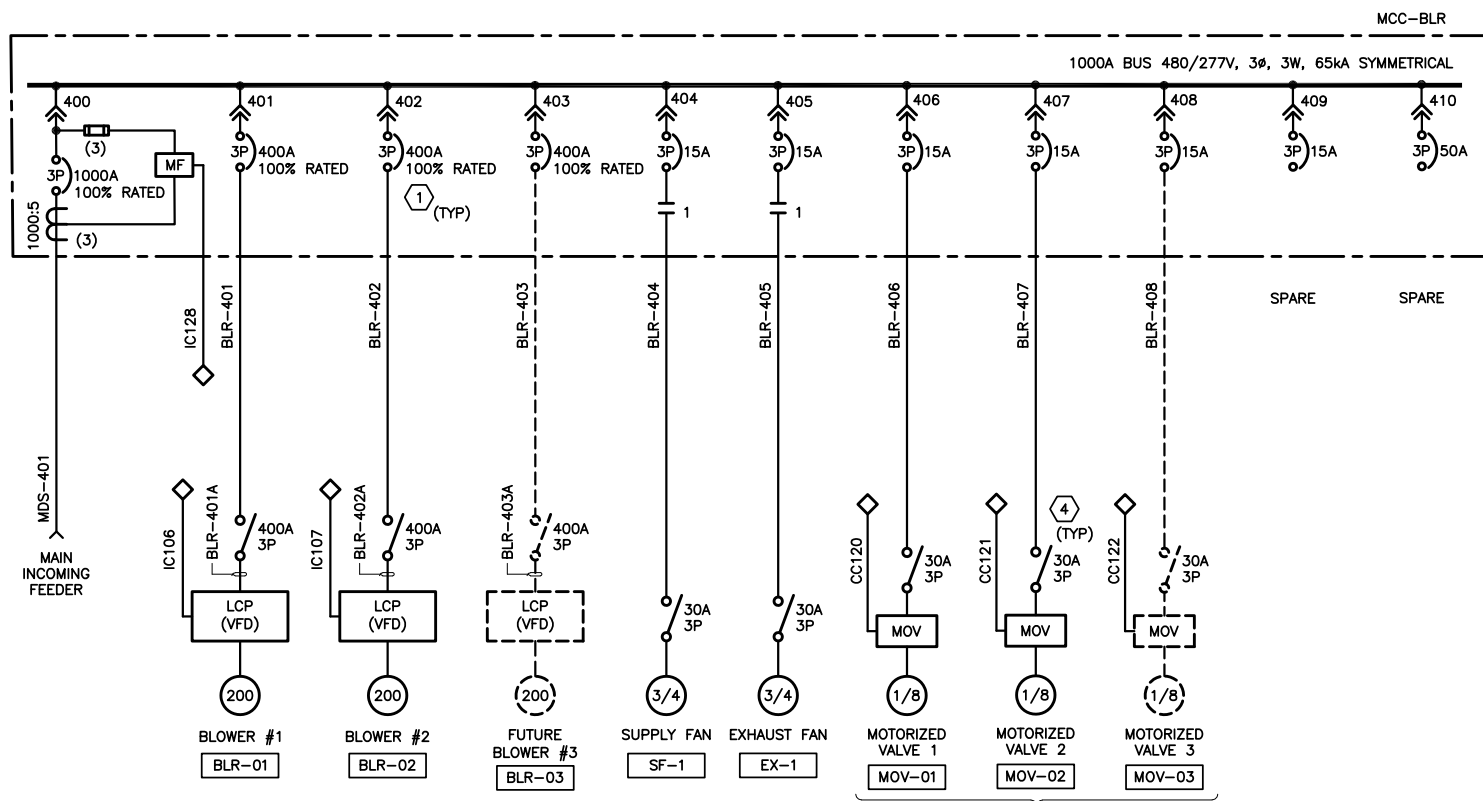
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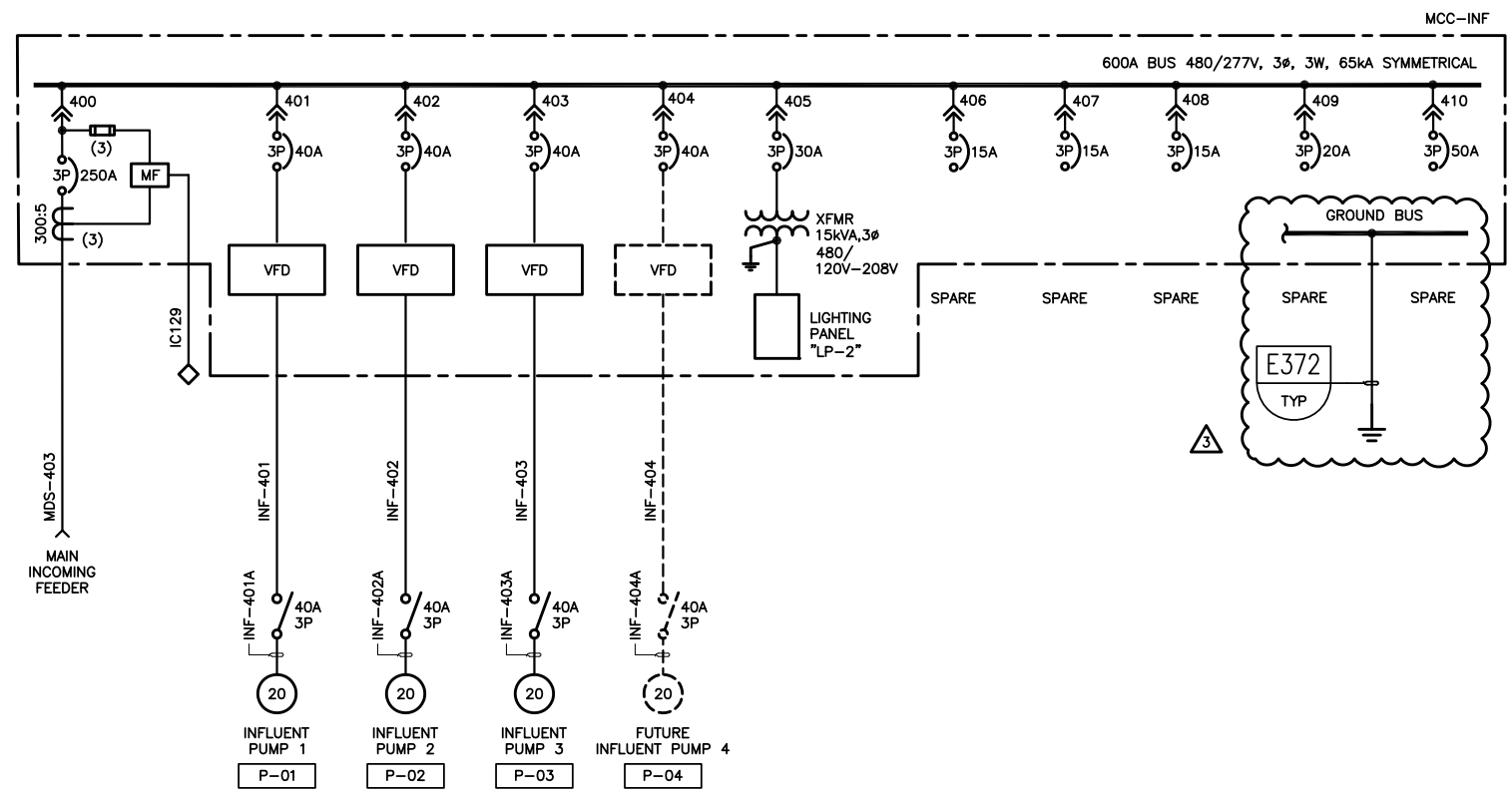
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**ELECTRICAL**  
**MAIN SINGLE - LINE DIAGRAM**  
**AND LOAD CALCULATIONS**

JOB NO. PO# 6761
DRAWING NO. E-3
SHEET NO. 98 of 133

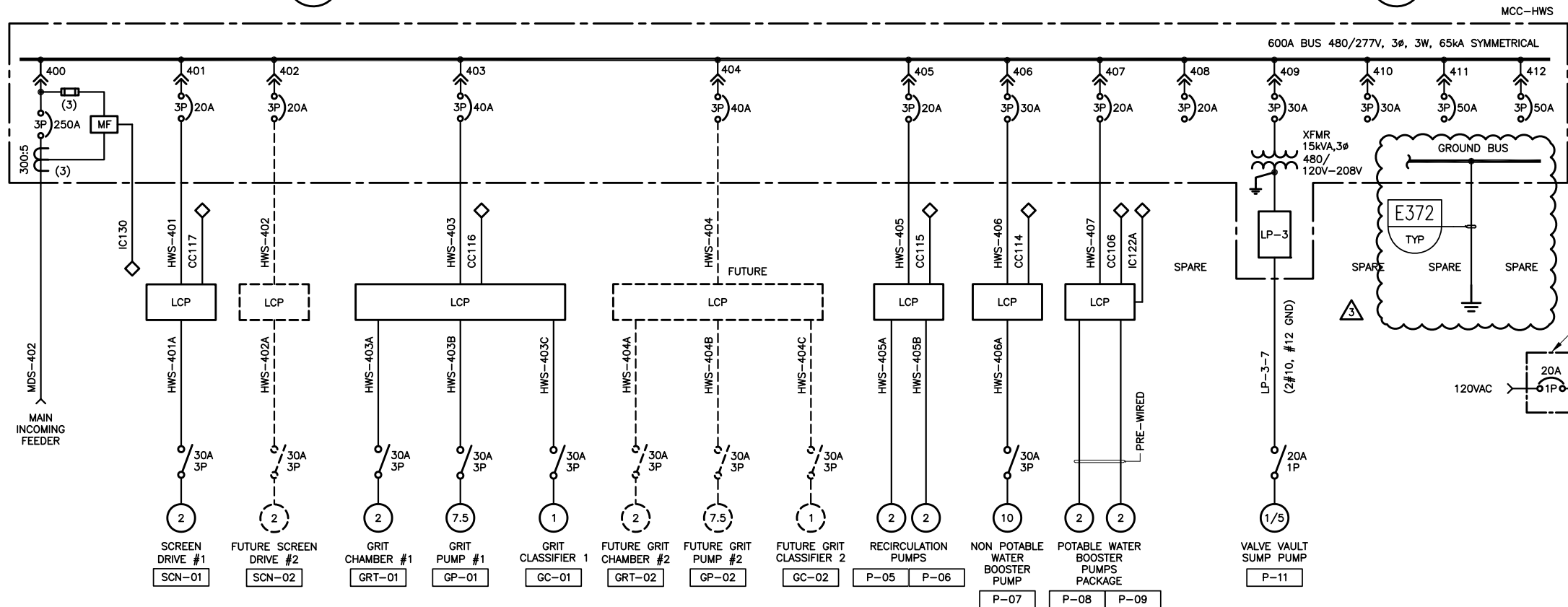




**A SINGLE-LINE DIAGRAM - BLOWER BUILDING**  
SCALE: NTS



**B SINGLE-LINE DIAGRAM - INFLUENT BUILDING**  
SCALE: NTS

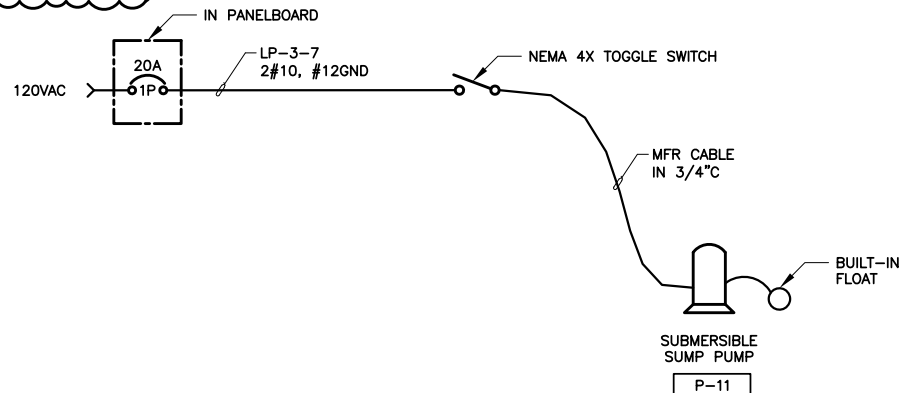


**C SINGLE-LINE DIAGRAM - HEADWORKS**  
SCALE: NTS

**D VALVE VAULT SUMP PUMP**  
SCALE: NTS  
AT RECIRCULATION PS

**SHEET NOTES:**

- ① ALL BREAKERS SHOWN ARE 3-POLE.
- ② CIRCUIT BREAKERS RATED  $\geq 225A$  SHALL BE PROVIDED WITH A TRIP UNIT HAVING THE FOLLOWING CHARACTERISTICS:
  - LONG TIME AND DELAYS
  - SHORT TIME AND DELAYS
  - GROUND FAULT AND DELAYS
  - INSTANTANEOUS
- ③ SEE DRAWINGS E-15 AND E-16 FOR CABLE AND CONDUIT SCHEDULE.
- ④ SEE NOTE 11 ON DRAWING E-3.



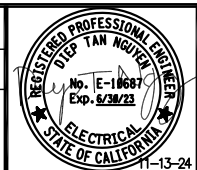
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DISCIPLINE ENGINEER P.E. NO.



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CITY OF GONZALES  
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ELECTRICAL  
SINGLE - LINE DIAGRAMS, MCC

JOB NO. PO# 6761  
DRAWING NO. **E-4**  
SHEET NO. 99 OF 133

PANEL LP-1		VOLTAGE/PHASE 120/208V - 3φ		POLES X		MTG. SURFACE						
LOCATION MAIN DISTRIBUTION "MDS"		MAIN BREAKER : 225A		BUS 225A 22KA		PANEL BREAKER BOLT-ON						
LOAD DESCRIPTION	WATTAGE			WIRE CONDUIT	TRIP	CKT.	S/N	WIRE CONDUIT	WATTAGE			LOAD DESCRIPTION
	φA	φB	φC						φA	φB	φC	
ELECTRICAL RM - OUTLETS	360			①	20	1	A B C	①	153			ELECTRICAL RM - LIGHTING
OPS RM - OPERATOR PLUGMOLD		1080		①	20	3		①		341		OPS RM - LIGHTING
OPS RM - BREAK AREA PLUGMOLD			1080	①	20	5		①			153	STORAGE RM - LIGHTING
OPS RM - REFRIGERATOR	800			①	20	7		①	102			OPS BLDG. EXT. LIGHTING
OPS RM - BREAK AREA OUTLETS		720		①	20	9		①		1000		LCP-1 (PLC SYSTEM)
OPS RM - OUTLETS			540	①	20	11		①			50	LIGHTING CONTROL PANEL
OPS RM - TOILET OUTLETS	360			①	20	13		①				
STORAGE RM - OUTLETS		720		①	20	15		③		560		SITE LIGHTING
EXHAUST FAN EF-1			528	①	20	17		①			2496	FAN COIL FC-1 AND CU-1
EXHAUST FAN EF-2	696			①	20	19		①		2496		
RECIRCULATION PUMP		28		①	20	21		①	200			FIRE ALARM CONTROL PANEL
EXIT LIGHTS			50	①	20	23		①			696	EXHAUST FAN EF-3
REFRIGERATOR	800			①	20	25		①	200			SECURITY CONTROL PANEL
SEWER PUMP CONTROLLER		1380		②	20	27		⑤		4500		EMERGENCY GEN HEATER
			1380		2	29		⑤		4500		
POTABLE SYSTEM UV CONTROL	500			①	20	31		⑥	1440			BATTERY CHARGER
POTABLE SYSTEM CONTROL PANEL		1500		①	20	33		①		500		WASTE DISPOSER
OPS ROOM - OUTLETS			1080	①	20	35		①				SPARE
SPARE					20	37						SPARE
SPARE					20	39						SPARE
SPARE					20	41						SPARE
SUBTOTAL	3516	5428	4658						4951	7101	7895	
TOTAL VA = 33549		AMPERES = 93.12		● 208 V 3φ								

**SHEET NOTES:**

- ① 2#12, #12 GND - 3/4"C
- ② 2#10, #12 GND - 2"C
- ③ 2#8, #8 GND - 2"C
- ④ 2#8, #10 GND - 3/4"C
- ⑤ 2#4, #8 GND - 2"C
- ⑥ 2#10, #12 GND - IN SAME CONDUIT WITH CIRCUIT 28, 30.
- ⑦ USE TWO-POLE BREAKER IF AC UNIT IS RATED FOR 208V SINGLE-PHASE.
- ⑧ THIS CIRCUIT BREAKER SHALL BE RED AND PROVIDED WITH MECHANISM SUCH THAT IT CAN BE PADLOCKED IN CLOSED POSITION.

**A** PANELBOARD LP-1  
SCALE: NTS

PANEL LP-2		VOLTAGE/PHASE 120/208V - 3φ		POLES X		MTG. IN MCC						
LOCATION IN MCC "INF"		MAIN BREAKER : 50A		BUS 100A 22KA		PANEL BREAKER BOLT-ON						
LOAD DESCRIPTION	WATTAGE			WIRE CONDUIT	TRIP	CKT.	S/N	WIRE CONDUIT	WATTAGE			LOAD DESCRIPTION
	φA	φB	φC						φA	φB	φC	
BLOWER BLDG - LIGHTING	306			②	20	1	A B C	②	50			FLOW TRANSMITTER FE/FIT-109
BLOWER BLDG - OUTLETS		720		②	20	3		②		300		DO TRANSMITTERS AIT-117 & 119
LCP-2 (PLC SYSTEM)			1000	①	20	5		②		50		FLOW TRANSMITTER FE/FIT-126
MCC ENCLOSURE - LIGHTS	100			①	20	7		②	50			pH TRANSMITTER AIT-109
MCC ENCLOSURE - FANS		250		①	20	9		②		50		LEVEL TRANSMITTER LIT-105
INFLUENT PS - OUTLETS			540	②	20	11						SPARE
AIR CONDITIONER ⑦	900			①	20	13						SPARE
SPARE					20	15						SPARE
SPARE					20	17						SPARE
SPARE					20	19						SPARE
SUBTOTAL	1306	970	1540						100	300	100	
TOTAL VA = 4316		AMPERES = 11.98		● 208 V 3φ								

**B** PANELBOARD LP-2  
SCALE: NTS

PANEL LP-3		VOLTAGE/PHASE 120/208V - 3φ		POLES X		MTG. IN MCC						
LOCATION IN MCC "HWS"		MAIN BREAKER : 50A		BUS 100A 22KA		PANEL BREAKER BOLT-ON						
LOAD DESCRIPTION	WATTAGE			WIRE CONDUIT	TRIP	CKT.	S/N	WIRE CONDUIT	WATTAGE			LOAD DESCRIPTION
	φA	φB	φC						φA	φB	φC	
MCC ENCLOSURE - LIGHTS	200			①	20	1	A B C	①				SPARE
MCC ENCLOSURE - FANS		300		①	20	3		②		720		CONVENIENCE OUTLETS
RECIRCULATION PS - OUTLETS			180	②	20	5		①			1000	LCP-3 (PLC SYSTEM)
RECIRCULATION PS - SUMP PUMP	250			②	20	7		②				SPARE (FUTURE METER)
SPARE					20	9				200		DO TRANSMITTERS AIT-116 & 118
SPARE					20	11		②				SPARE
SPARE					20	13		①	900			AIR CONDITIONER ⑦
SPARE					20	15						SPARE
SPARE					20	17						SPARE
SPARE					20	19						SPARE
SPARE					20	21						SPARE
SPARE					20	23						SPARE
SPARE					20	25						SPARE
SPARE					20	27						SPACE
SPARE					20	29						SPACE
SPARE					20	31						SPACE
SUBTOTAL	450	300	180						900	920	1000	
TOTAL VA = 3750		AMPERES = 10.41		● 208 V 3φ								

**C** PANELBOARD LP-3  
SCALE: NTS

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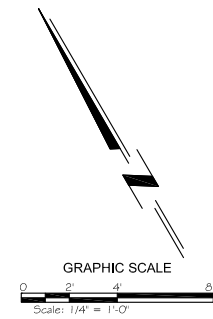


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ELECTRICAL  
PANELBOARD SCHEDULES

JOB NO. PO# 6761
DRAWING NO. E-5
SHEET NO. 100 OF 133

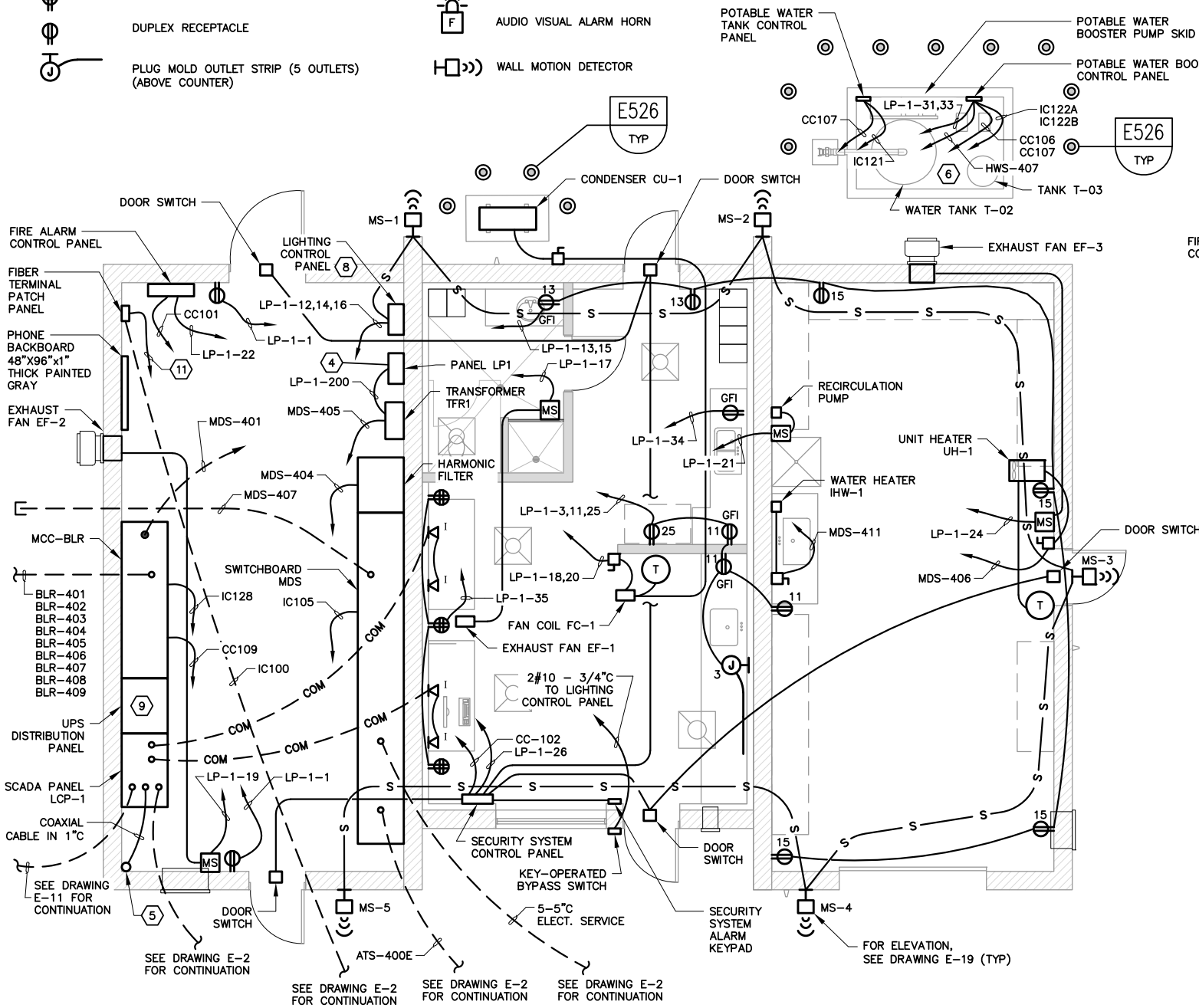
**LEGEND** ②

- LED STRIP LIGHT, PENDANT
- LED STRIP LIGHT, RECESSED CEILING MOUNTED
- LED ABOVE DOOR, WALL MOUNTED
- LED DUAL HEAD BATTERY PACK
- DOUBLE DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE
- PLUG MOLD OUTLET STRIP (5 OUTLETS) (ABOVE COUNTER)
- SINGLE POLE LIGHT SWITCH
- THREE WAY SWITCH, SUBSCRIPT CONTROLLED FIXTURE
- ETHERNET OUTLET
- MANUAL PULL STATION
- IONIZATION DETECTOR
- AUDIO VISUAL ALARM HORN
- WALL MOTION DETECTOR

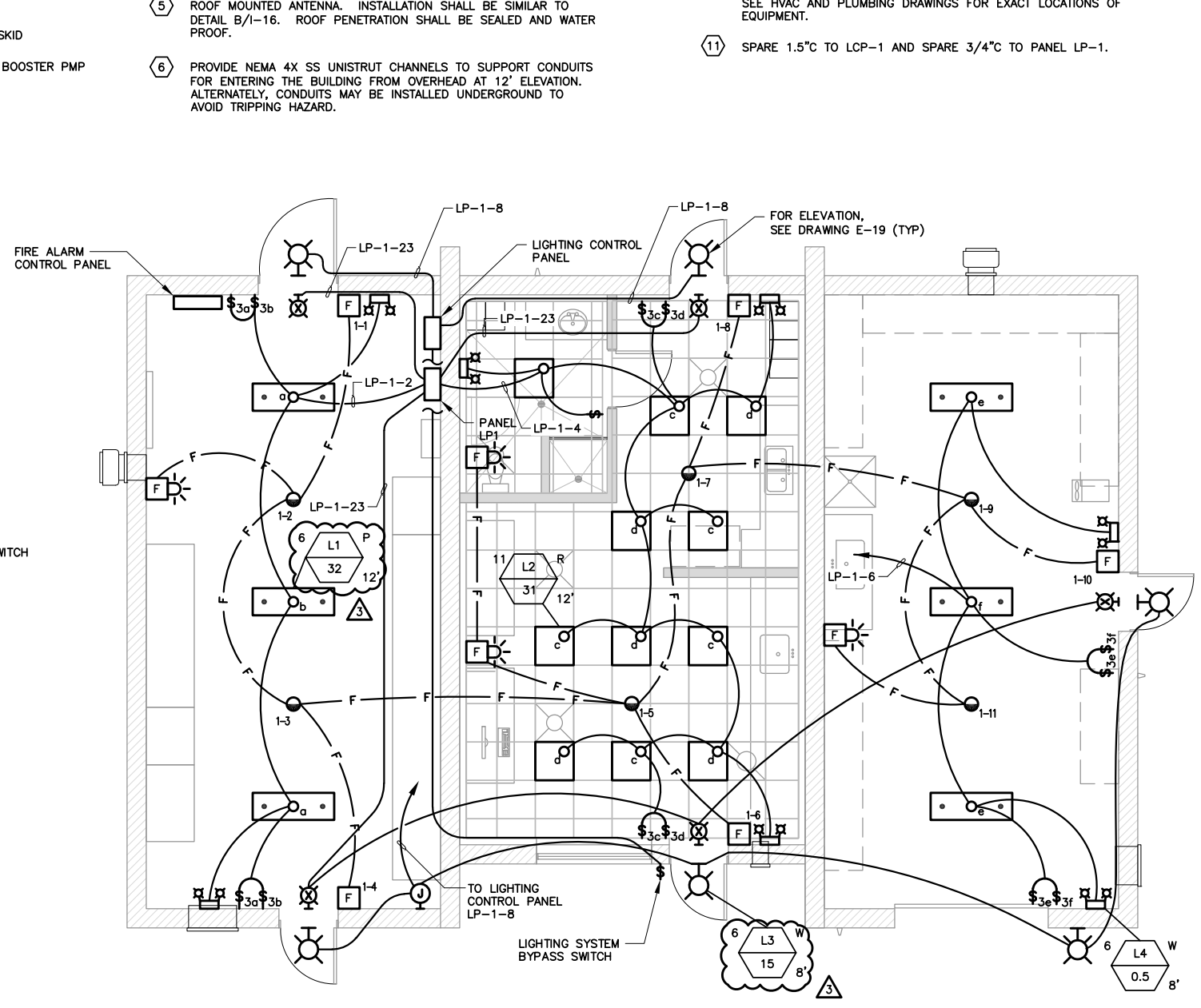


**SHEET NOTES:**

- ① SEE DRAWING E-18 FOR LIGHTING REQUIREMENTS AND CONTROL CIRCUITRIES.
- ② FOR OTHER LEGENDS AND SYMBOLS, SEE DRAWING E-1.
- ③ SEE MECHANICAL DRAWINGS FOR EXACT LOCATIONS OF MECHANICAL EQUIPMENT AND DEVICES REQUIRING POWER, CONTROL, AND INSTRUMENTATION CONNECTIONS.
- ④ FURNISH AND INSTALL NEMA 12 WIRE TROUGH BELOW LIGHTING PANEL LP1 TO ACCOMMODATE INCOMING CONDUITS FROM FIELD (UNDERGROUND) TROUGH SHALL BE 24" WIDE BY 6" HIGH BY 6" DEEP MINIMUM.
- ⑤ ROOF MOUNTED ANTENNA. INSTALLATION SHALL BE SIMILAR TO DETAIL B/I-16. ROOF PENETRATION SHALL BE SEALED AND WATER PROOF.
- ⑥ PROVIDE NEMA 4X SS UNISTRUT CHANNELS TO SUPPORT CONDUITS FOR ENTERING THE BUILDING FROM OVERHEAD AT 12' ELEVATION. ALTERNATELY, CONDUITS MAY BE INSTALLED UNDERGROUND TO AVOID TRIPPING HAZARD.
- ⑦ SEE DETAIL B/E-11 FOR ADDITIONAL INCOMING CONDUITS FROM THE FIELD.
- ⑧ LIGHTING CONTROL PANEL SHALL BE MINIMUM 20" WIDE X 36" HIGH X 8" DEEP. NEMA 12 WITH DOOR HANDLE, LOCKABLE LATCH AND WITH NAMEPLATE. ANSI GRAY 60 FINISH COPY
- ⑨ UPS DISTRIBUTION PANEL SHALL BE SIMILAR TO SCADA LCP-1 PANEL EXCEPT IT IS 24" WIDE X 90" HIGH X 20" DEEP WITH A BACKBOARD FOR FUTURE USE.
- ⑩ FOR FANS EF-1, EF-2 AND EF-3, MOUNT FAN CONTROLLER BELOW MOTOR STARTER AND DISCONNECT SWITCH. SEE HVAC AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT.
- ⑪ SPARE 1.5°C TO LCP-1 AND SPARE 3/4°C TO PANEL LP-1.



**A OPERATIONS BLDG - POWER & SIGNAL PLAN** ⑦⑩  
SCALE: 1/4" = 1'-0"



**B OPERATIONS BLDG - LIGHTING & FIRE ALARM PLAN** ①  
SCALE: 1/4" = 1'-0"

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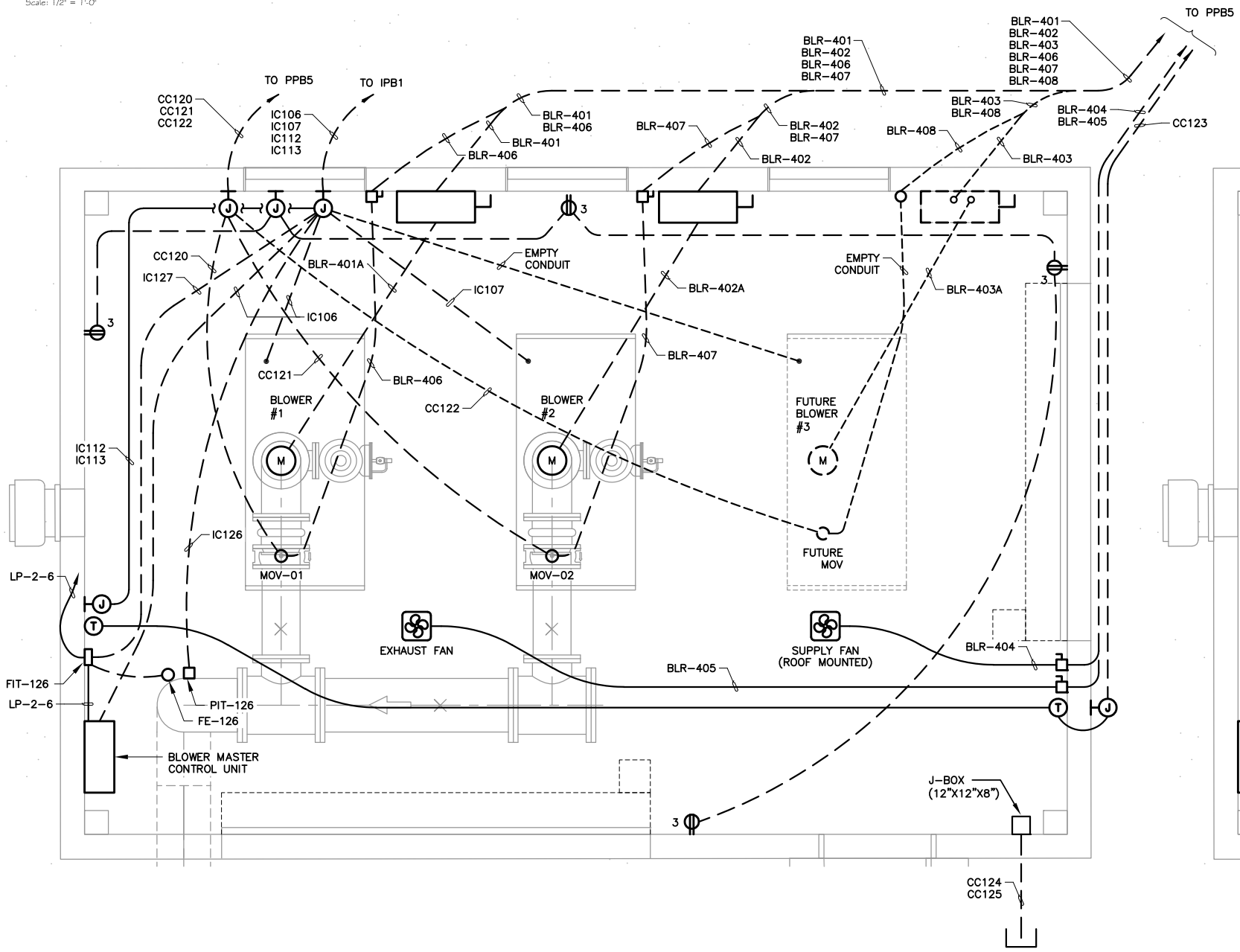
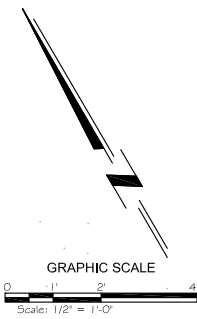
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**ELECTRICAL**  
**OPERATIONS BUILDING - POWER/SIGNAL AND LIGHTING PLAN**

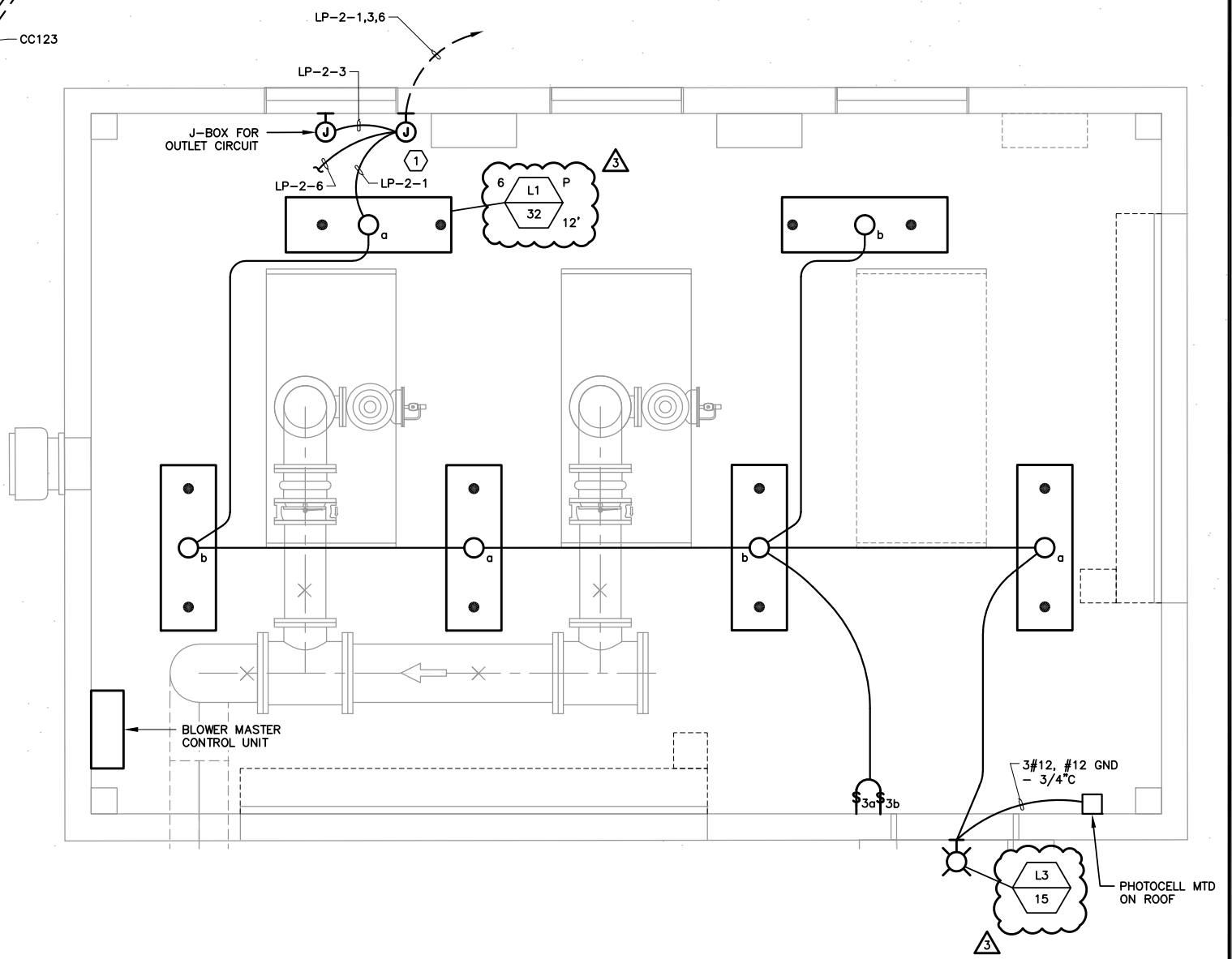
JOB NO. PO# 6761
DRAWING NO. <b>E-9</b>
SHEET NO. 104 of 133

**SHEET NOTES:**

- ① USE THIS COMMON J-BOX FOR BOTH LIGHTING AND RECEPTACLE AND FLOWMETER CIRCUITS.
- ② SEE TYPICAL LIGHTING DETAILS SHOWN ON DRAWING E-18 FOR APPLICABLE DETAILS.



**A BLOWER BLDG - POWER & SIGNAL PLAN**  
SCALE: 1/2" = 1'-0"



**B BLOWER BLDG - LIGHTING PLAN**  
SCALE: 1/2" = 1'-0"

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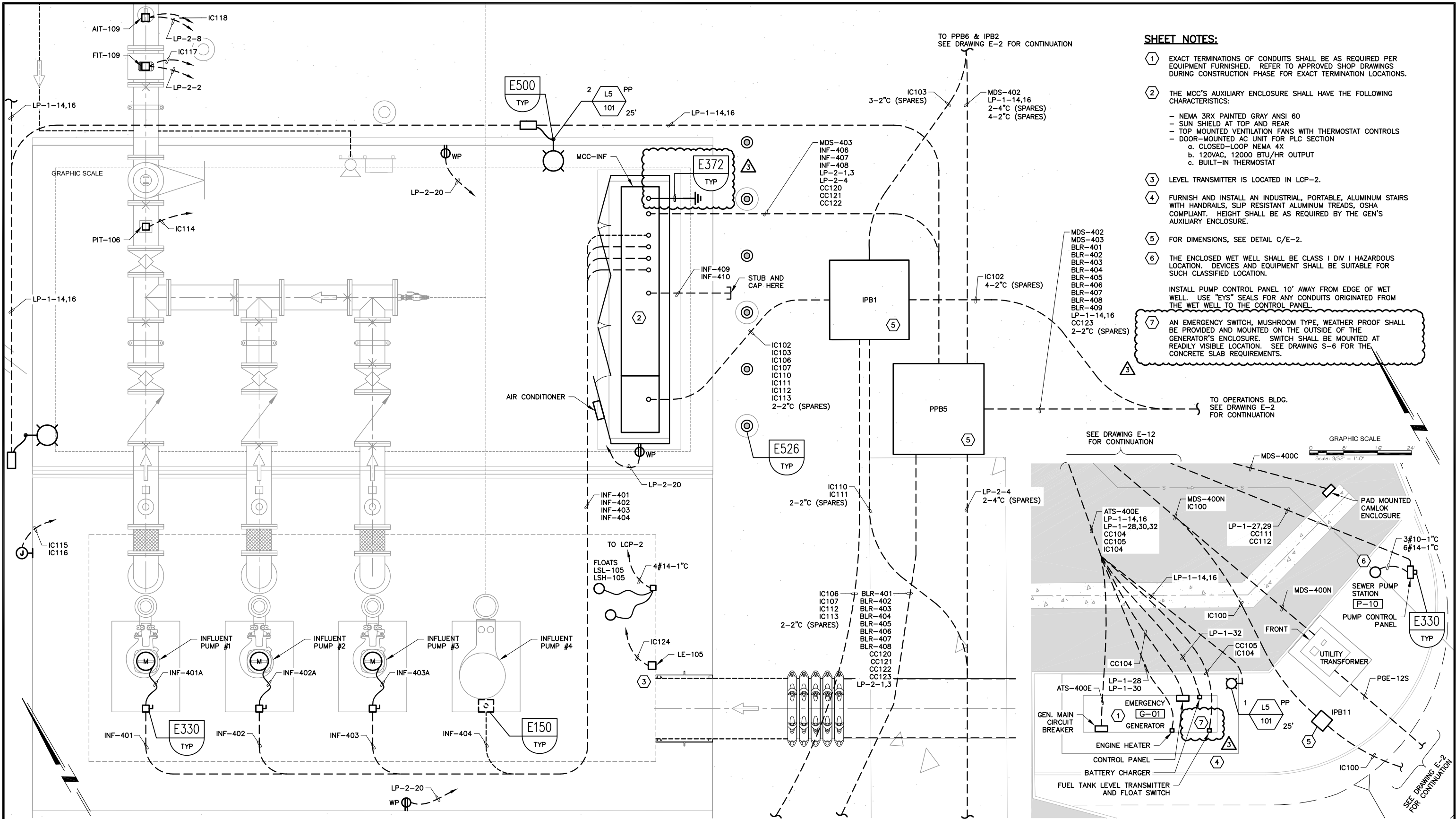


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ELECTRICAL  
BLOWER BUILDING - POWER/SIGNAL  
AND LIGHTING PLAN

JOB NO. PO# 6761
DRAWING NO. <b>E-10</b>
SHEET NO. 105 of 133



- SHEET NOTES:**
- EXACT TERMINATIONS OF CONDUITS SHALL BE AS REQUIRED PER EQUIPMENT FURNISHED. REFER TO APPROVED SHOP DRAWINGS DURING CONSTRUCTION PHASE FOR EXACT TERMINATION LOCATIONS.
  - THE MCC'S AUXILIARY ENCLOSURE SHALL HAVE THE FOLLOWING CHARACTERISTICS:
    - NEMA 3RX PAINTED GRAY ANSI 60
    - SUN SHIELD AT TOP AND REAR
    - TOP MOUNTED VENTILATION FANS WITH THERMOSTAT CONTROLS
    - DOOR-MOUNTED AC UNIT FOR PLC SECTION
      - CLOSED-LOOP NEMA 4X
      - 120VAC, 12000 BTU/HR OUTPUT
      - BUILT-IN THERMOSTAT
  - LEVEL TRANSMITTER IS LOCATED IN LCP-2.
  - FURNISH AND INSTALL AN INDUSTRIAL, PORTABLE, ALUMINUM STAIRS WITH HANDRAILS, SLIP RESISTANT ALUMINUM TREADS, OSHA COMPLIANT. HEIGHT SHALL BE AS REQUIRED BY THE GEN'S AUXILIARY ENCLOSURE.
  - FOR DIMENSIONS, SEE DETAIL C/E-2.
  - THE ENCLOSED WET WELL SHALL BE CLASS I DIV I HAZARDOUS LOCATION. DEVICES AND EQUIPMENT SHALL BE SUITABLE FOR SUCH CLASSIFIED LOCATION.
 

INSTALL PUMP CONTROL PANEL 10' AWAY FROM EDGE OF WET WELL. USE "EYS" SEALS FOR ANY CONDUITS ORIGINATED FROM THE WET WELL TO THE CONTROL PANEL.
  - AN EMERGENCY SWITCH, MUSHROOM TYPE, WEATHER PROOF SHALL BE PROVIDED AND MOUNTED ON THE OUTSIDE OF THE GENERATOR'S ENCLOSURE. SWITCH SHALL BE MOUNTED AT READILY VISIBLE LOCATION. SEE DRAWING S-6 FOR THE CONCRETE SLAB REQUIREMENTS.

**(A) INFLUENT LIFT STATION - POWER & SIGNAL PLAN**  
SCALE: 1/2" = 1'-0"

**(B) GEN AREA - POWER & SIGNAL PLAN**  
SCALE: 3/32" = 1'-0"

P:\432\_Gonzales\_Separate\_Industrial\_Treatment\_Plant\_Dudek\DRAWINGS\3008-2\_SHI06 E-11 Adm 3.dwg 02/11/2025 15:36

No.	DATE	REVISIONS	APPROVED
02-12-25		ADDENDUM 3	DTN

**UNDERGROUND SERVICE ALERT**  
CALL: TOLL FREE 1-800-227-2600  
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DESIGNED: NAME	PROGRESS: REVISED PER REVIEW COMMENTS
DRAWN: NAME	SUBMITTAL DATE: NOVEMBER 2024
CHECKED: NAME	DIEP NGUYEN E-10687
	DISCIPLINE ENGINEER P.E. NO.

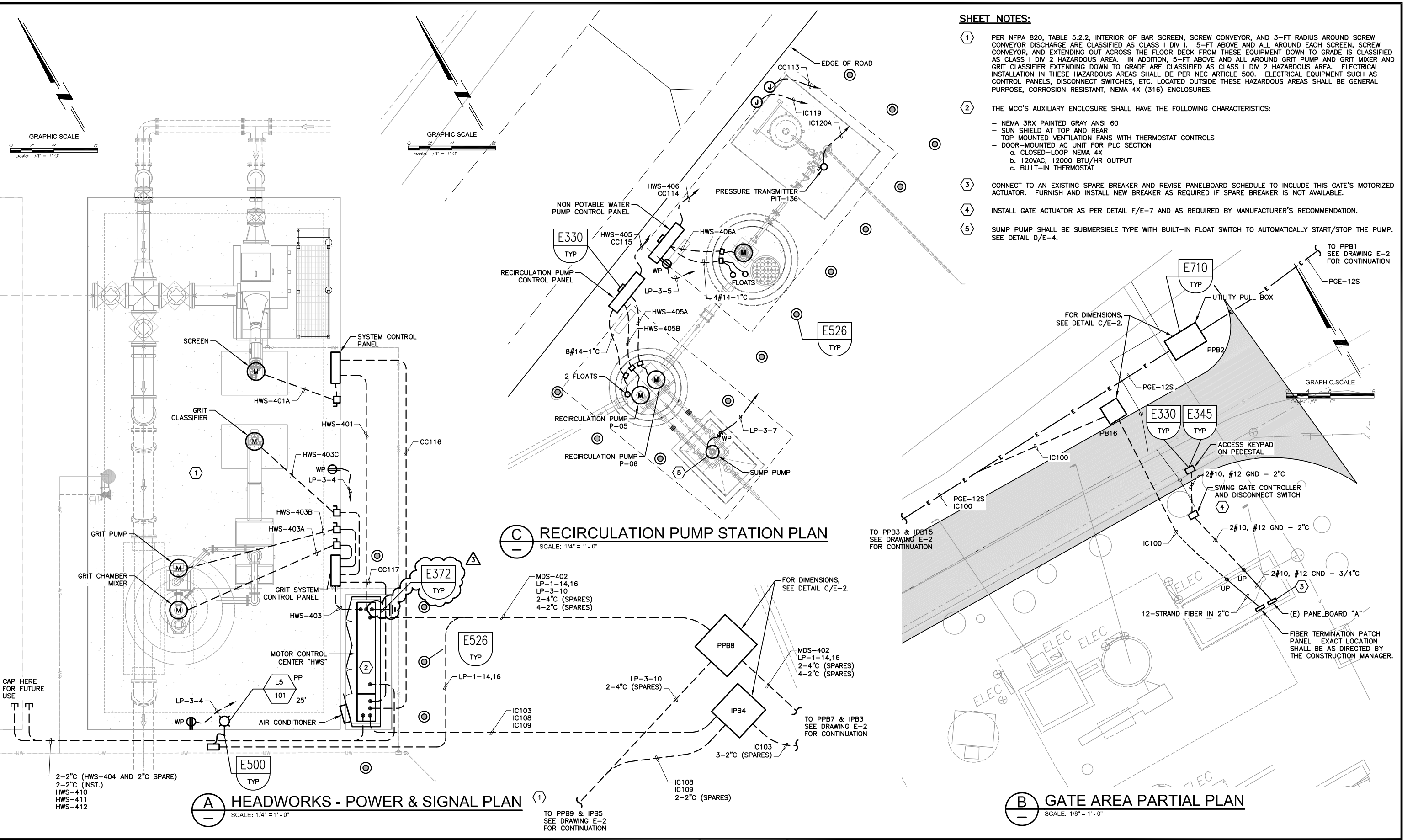


LINE IS 2 INCHES AT FULL SIZE  
IF NOT 2" - SCALE ACCORDINGLY

**DUDEK**  
605 Third Street Encinitas, CA 92024  
760.942.5147 Fax 760.942.4508

CITY OF GONZALES  
INDUSTRIAL WASTE WATER TREATMENT FACILITY  
ELECTRICAL  
INFLUENT LIFT STATION - POWER/SIGNAL PLAN

JOB NO. PO# 6761
DRAWING NO. E-11
SHEET NO. 106 OF 133



**SHEET NOTES:**

- 1 PER NFPA 820, TABLE 5.2.2, INTERIOR OF BAR SCREEN, SCREW CONVEYOR, AND 3-FT RADIUS AROUND SCREW CONVEYOR DISCHARGE ARE CLASSIFIED AS CLASS I DIV 1. 5-FT ABOVE AND ALL AROUND EACH SCREEN, SCREW CONVEYOR, AND EXTENDING OUT ACROSS THE FLOOR DECK FROM THESE EQUIPMENT DOWN TO GRADE IS CLASSIFIED AS CLASS I DIV 2 HAZARDOUS AREA. IN ADDITION, 5-FT ABOVE AND ALL AROUND GRIT PUMP AND GRIT MIXER AND GRIT CLASSIFIER EXTENDING DOWN TO GRADE ARE CLASSIFIED AS CLASS I DIV 2 HAZARDOUS AREA. ELECTRICAL INSTALLATION IN THESE HAZARDOUS AREAS SHALL BE PER NEC ARTICLE 500. ELECTRICAL EQUIPMENT SUCH AS CONTROL PANELS, DISCONNECT SWITCHES, ETC. LOCATED OUTSIDE THESE HAZARDOUS AREAS SHALL BE GENERAL PURPOSE, CORROSION RESISTANT, NEMA 4X (316) ENCLOSURES.
- 2 THE MCC'S AUXILIARY ENCLOSURE SHALL HAVE THE FOLLOWING CHARACTERISTICS:
  - NEMA 3RX PAINTED GRAY ANSI 60
  - SUN SHIELD AT TOP AND REAR
  - TOP MOUNTED VENTILATION FANS WITH THERMOSTAT CONTROLS
  - DOOR-MOUNTED AC UNIT FOR PLC SECTION
    - a. CLOSED-LOOP NEMA 4X
    - b. 120VAC, 12000 BTU/HR OUTPUT
    - c. BUILT-IN THERMOSTAT
- 3 CONNECT TO AN EXISTING SPARE BREAKER AND REVISE PANELBOARD SCHEDULE TO INCLUDE THIS GATE'S MOTORIZED ACTUATOR. FURNISH AND INSTALL NEW BREAKER AS REQUIRED IF SPARE BREAKER IS NOT AVAILABLE.
- 4 INSTALL GATE ACTUATOR AS PER DETAIL F/E-7 AND AS REQUIRED BY MANUFACTURER'S RECOMMENDATION.
- 5 SUMP PUMP SHALL BE SUBMERSIBLE TYPE WITH BUILT-IN FLOAT SWITCH TO AUTOMATICALLY START/STOP THE PUMP. SEE DETAIL D/E-4.

P:\432-Gonzales Separators Industrial Treatment Plant\_Dudek\DRAWINGS\31008-2\_SH08 E-13 Addm 3.dwg 02/11/2025 15:36

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DESIGNED: NAME	PROGRESS: REVISED PER REVIEW COMMENTS
DRAWN: NAME	SUBMITTAL DATE: NOVEMBER 2024
CHECKED: NAME	DIEP NGUYEN E-10687 DISCIPLINE ENGINEER P.E. NO.

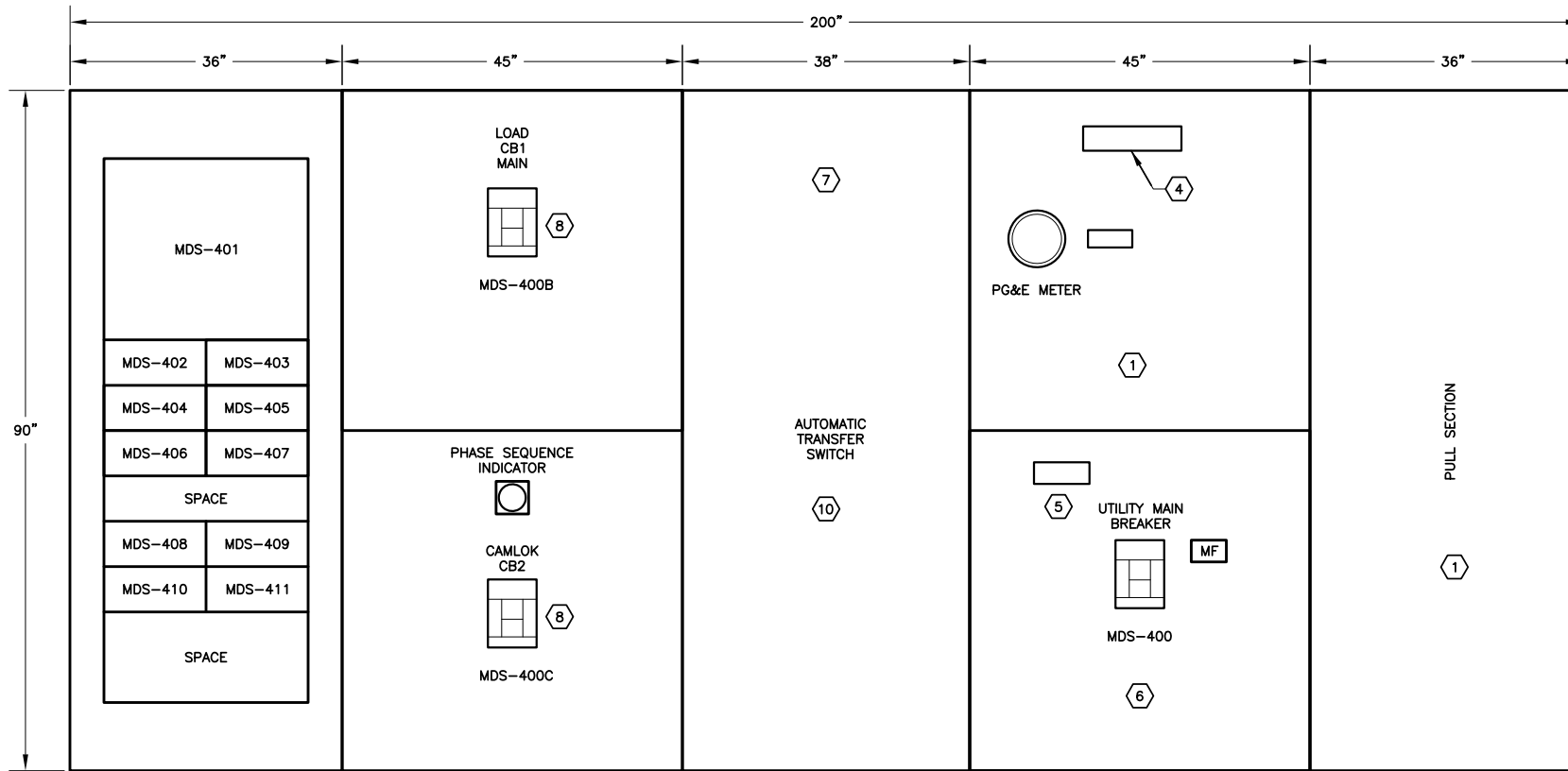


LINE IS 2 INCHES AT FULL SIZE  
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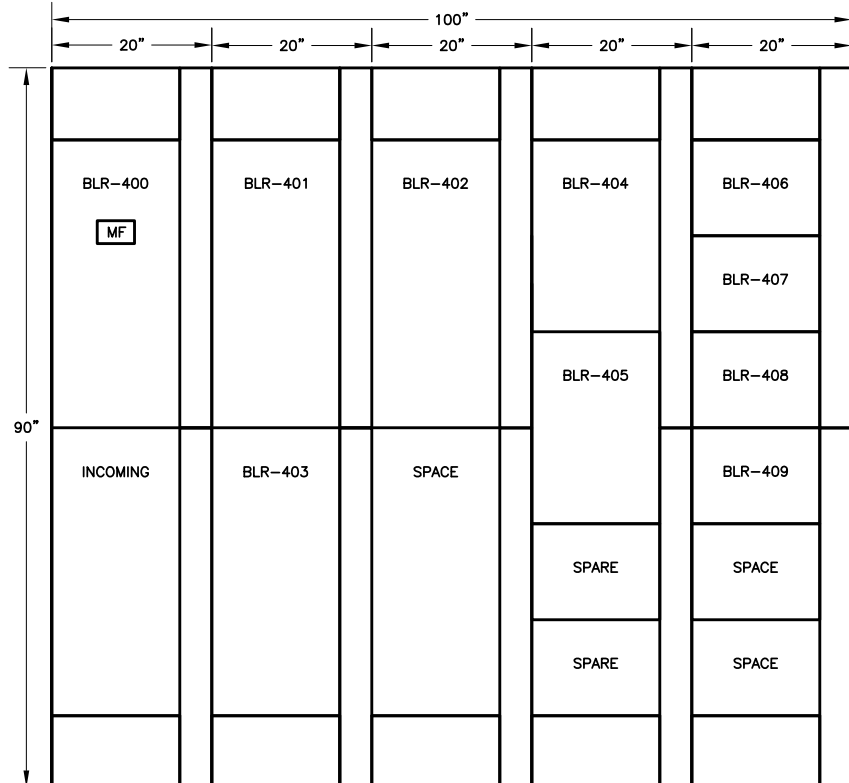
**CITY OF GONZALES**  
**INDUSTRIAL WASTE WATER TREATMENT FACILITY**  
**ELECTRICAL**  
**HEADWORKS - POWER/SIGNAL AND LIGHTING PLAN**

JOB NO. PO# 6761
DRAWING NO. <b>E-13</b>
SHEET NO. 108 OF 133

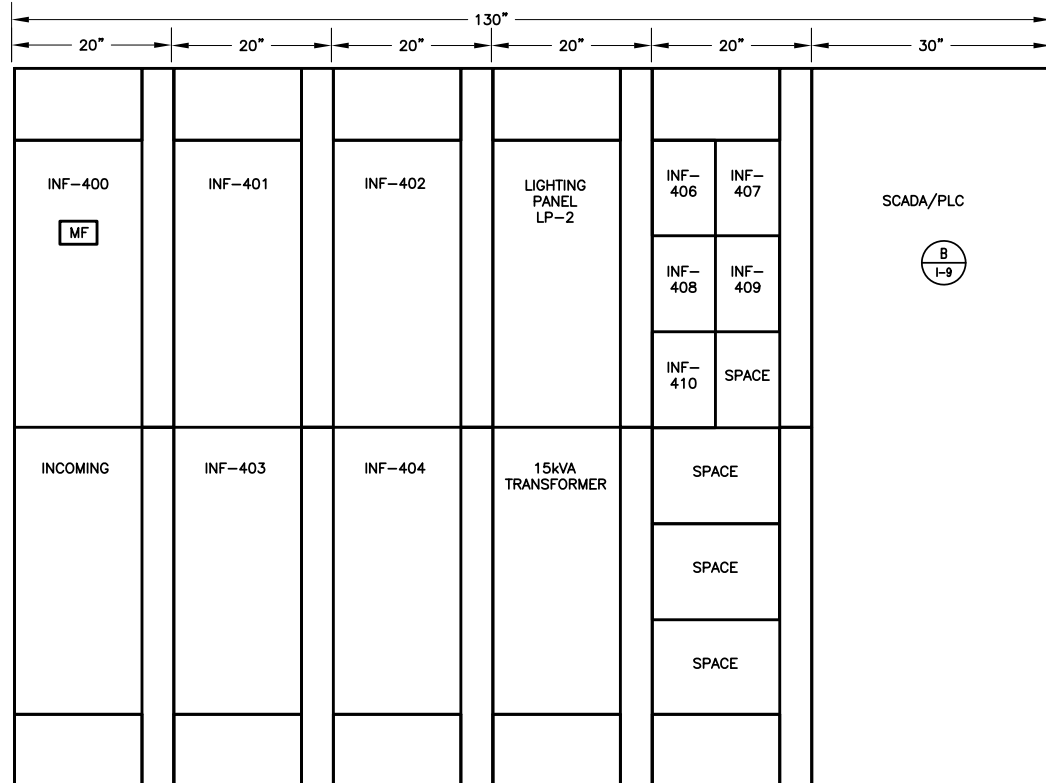


**A** MAIN DISTRIBUTION SWITCHBOARD "MDS" (2)(3)  
SCALE: NTS

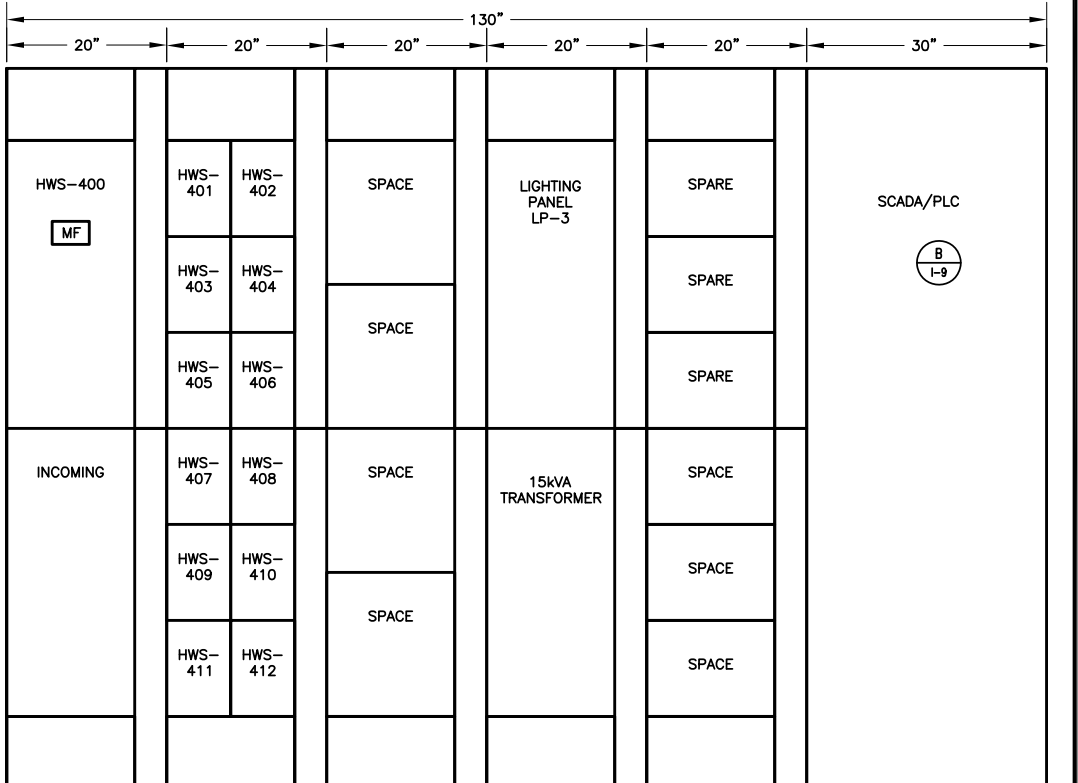
- SHEET NOTES:**
- THIS PULL SECTION AND METERING SECTION SHALL COMPLY WITH PG&E GREEN BOOK AND APPLICABLE EUSERC STANDARDS.
  - THIS GENERAL LAYOUT DEPICTS LOCATION OF DEVICES SPECIFIED IN DIV 16 OF THE SPECIFICATIONS.
  - FOR COMPLETE REQUIREMENTS, REFER TO SPECIFICATION SECTION 16900.  
FINAL PHYSICAL CONFIGURATION SHALL BE AS PER THE APPROVED SHOP DRAWINGS.
  - PROVIDE CERTIFICATION FROM THE MANUFACTURER AND/OR SEISMIC CALCULATIONS FOR THE MCC SUITABLE FOR INSTALLATION AT THE PROJECT LOCATION.
  - MASTER NAMEPLATE "MAIN DISTRIBUTION SWITCHBOARD "MDS".
  - PROVIDE A NAMEPLATE "THIS SERVICE ENTRANCE GEAR IS SUPPORTED BY AN ONSITE GENERATOR LOCATED AT THE SOUTH SIDE OPERATIONS BUILDING." IN ACCORDANCE WITH NEC ARTICLE 700.
  - NEUTRAL GROUNDING DISCONNECT SHALL BE PROVIDED IN THIS SECTION OF THE LINEUP.
  - SHORT CIRCUIT RATING (65KA) OF THE ATS SHALL BE CLEARLY SHOWN ON THE EXTERIOR OF THE ATS IN ACCORDANCE WITH NEC ARTICLE 700.
  - THESE TWO BREAKERS SHALL BE KEY INTERLOCKED SUCH THAT ONLY ONE BREAKER MAY BE CLOSED AT ANY ONE TIME.
  - THIS MCC SHALL BE PROVIDED WITH AN OUTDOOR AUXILIARY NEMA 3RX ENCLOSURE. SEE RESPECTIVE SITE PLAN AND SPECS FOR SPECIFIC REQUIREMENTS FOR AUXILIARY ENCLOSURE.  
THE AUXILIARY ENCLOSURE SHALL BE PROVIDED WITH DOOR-MOUNTED AIR CONDITIONER. SEE NOTE 2 ON DRAWINGS E-13 FOR ADDITIONAL REQUIREMENTS.
  - PROVIDE IF NEEDED BUS TRANSITION SECTION FOR NO ADDITIONAL COST TO THE OWNER.



**B** BLOWER - MCC-BLR  
SCALE: NTS



**C** INFLUENT - MCC-INF (9)  
SCALE: NTS



**D** HEADWORKS - MCC-HWS (9)  
SCALE: NTS

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02-12-25		ADDENDUM 3	DTN

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DRAWN: NAME	SUBMITTAL DATE: NOVEMBER 2024
CHECKED: NAME	DIEP NGUYEN E-10687 DISCIPLINE ENGINEER P.E. NO.



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CITY OF GONZALES  
**INDUSTRIAL WASTE WATER TREATMENT FACILITY**  
ELECTRICAL  
SWITCHBOARD ELEVATION DETAILS

JOB NO. PO# 6761
DRAWING NO. <b>E-17</b>
SHEET NO. 112 OF 133

LIGHT FIXTURE SCHEDULE

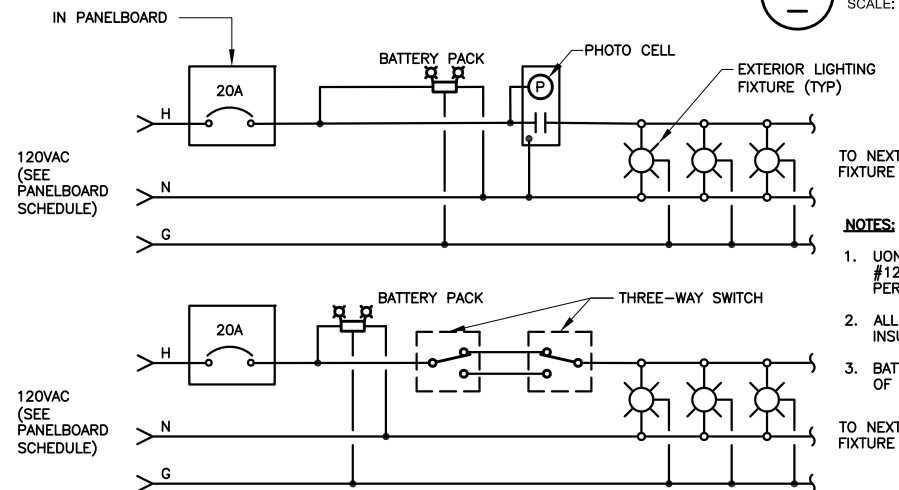
FIXTURE DESIGNATION	TYPE	QTY	VOLT	DESCRIPTION	MANUFACTURER	CAT. No.	LAMPS	PENDANT
L1 32	LED 32W	AS SHOWN	120V	PENDANT MOUNTED, WRAP-AROUND LED, 24"x48"	METALUX VAPORTITE OR EQUAL	4VT3-LD5-4-G-UNV-L840-CD1-U	LED	CEILING MOUNTED
L2 31	LED 31W	AS SHOWN	120V	RECESSED CEILING 2'X2' LED ON CEILING GRID SYSTEM	METALUX VAPORTITE OR EQUAL	22FPX-32-L840-HCD	LED	WALL MOUNTED
L3 15	LED 15W	AS SHOWN	120V	OUTDOOR WALL MOUNTED LED, ABOVE DOOR	HALO OR EQUAL	FSS152TIB	LED	WALL MOUNTED
L4 0.5	LED 0.5W	AS SHOWN	120V	BATTERY PACK WITH NICAD BATTERY, CHARGER, TWO 2W SEALED BEAM HEADS ADJUSTABLE 12VDC WITH INDICATOR AND TEST PUSH BUTTON.	SURE-LITES OR EQUAL	SELW-25	LED	WALL MOUNTED
L5 101	LED 101W	AS SHOWN	208V	ROADWAY LED COBRA HEAD WITH TAPERED ALUMINUM 25 FT POLE	STREETWORKS OR EQUAL	ARCH-M-PA2-100-740-U-T3-AP-PR7	LED	POLE MOUNTED

SHEET NOTES:

- ① THESE DEVICES ARE LOCATED IN COMMON WALL MOUNTED LIGHTING CONTROL PANEL.
- ② FIRE ALARM SYSTEM SHALL HAVE DEDICATED RACEWAY SYSTEM PER NEC. SEE SPECS.
- ③ THIS SWITCH IS KEY-OPERATED.

A LIGHTING SCHEDULE

SCALE: NTS

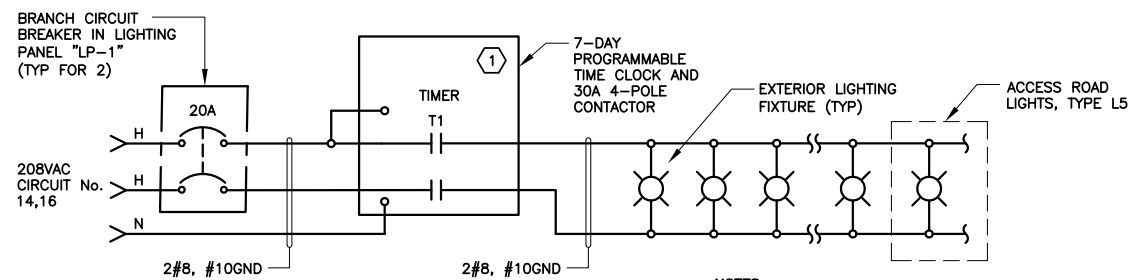


NOTES:

- 1. UON, ALL LIGHTING CONDUCTORS SHALL BE #12 AWG IN 3/4" C OR 1" C RGS IF EXCEEDED PERCENT FILL.
- 2. ALL FIXTURES SHALL BE BONDED TO GREEN, INSULATED GROUNDING CONDUCTOR.
- 3. BATTERY PACKS SHALL BE CONNECTED AHEAD OF THE SWITCHED CIRCUIT AS SHOWN.

B TYPICAL INTERIOR LIGHTING CONTROL DIAGRAMS

SCALE: NTS

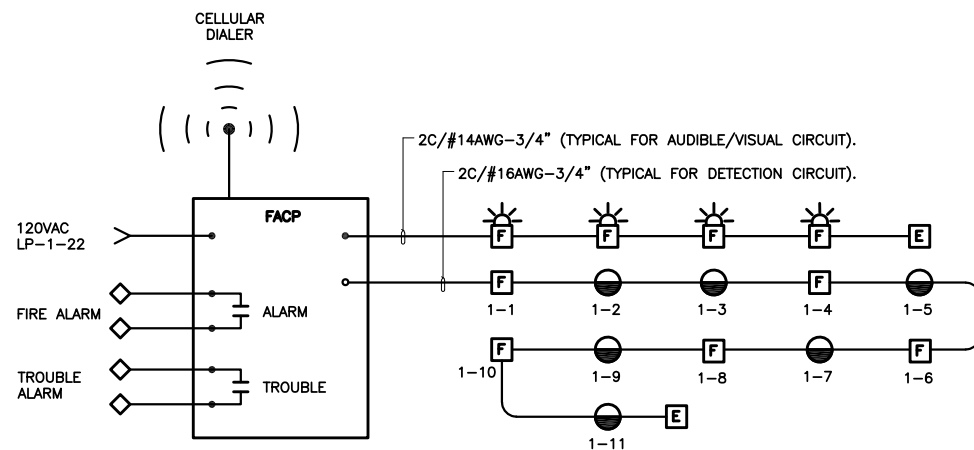


NOTES:

- 1. TIMERS ARE LOCATED IN LIGHTING CONTROL PANEL.
- 2. TIMER'S CONTACTOR SHALL BE 30A 240V RATED FOR SWITCHING LIGHTING LOADS.

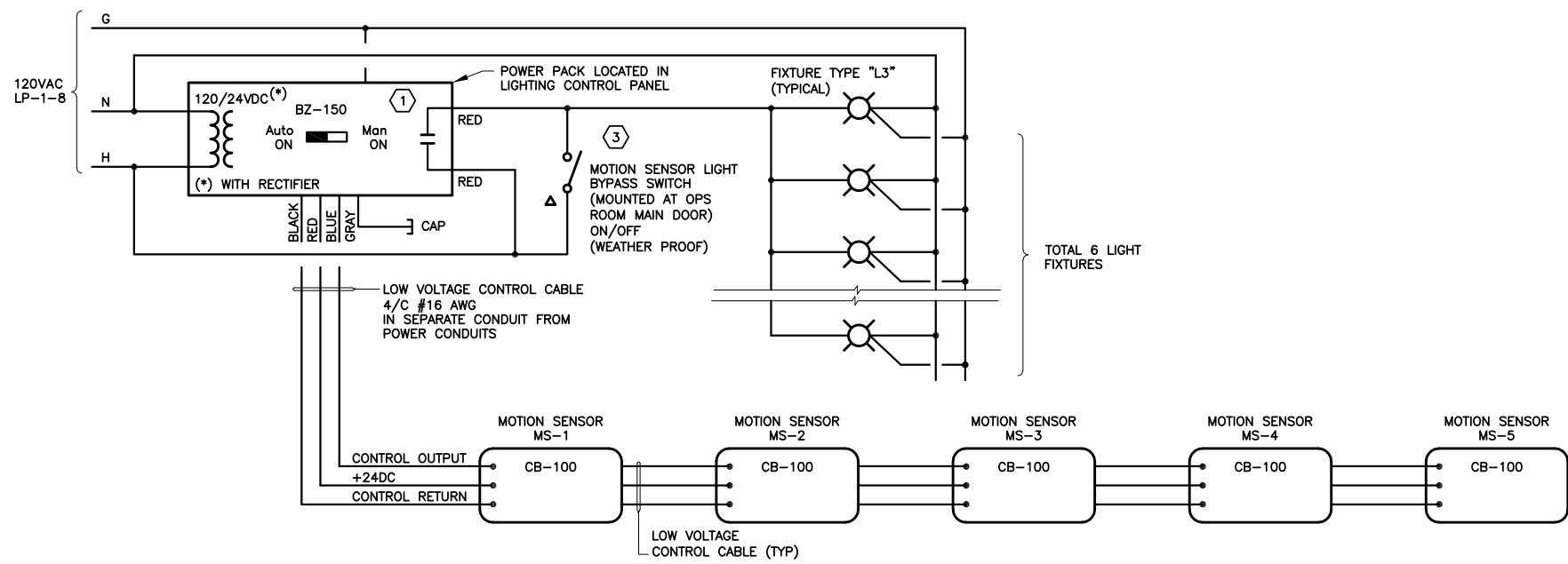
C SITE LIGHTING CONTROL

SCALE: NTS



E OPS BUILDING FIRE ALARM RISER DIAGRAM

SCALE: NTS



D OPERATIONS BLDG EXTERIOR LIGHTING CONTROL

SCALE: NTS

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3	02-12-25	ADDENDUM 3	DTN

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DRAWN: NAME	SUBMITTAL DATE: NOVEMBER 2024
CHECKED: NAME	DIEP NGUYEN E-10687
	DISCIPLINE ENGINEER P.E. NO.



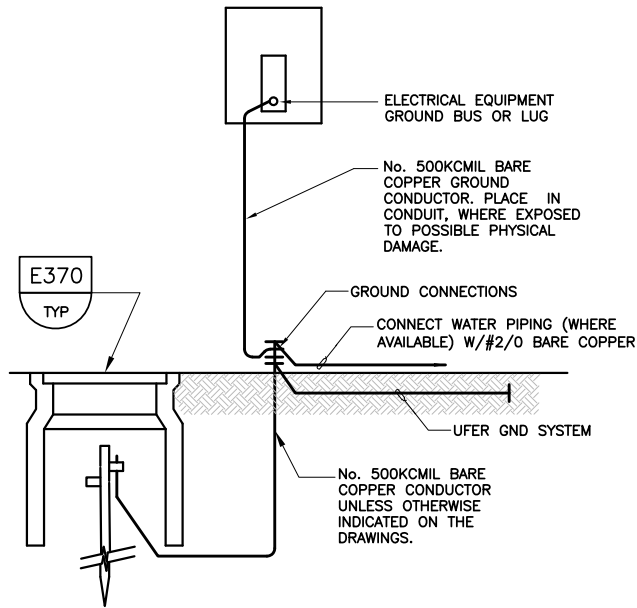
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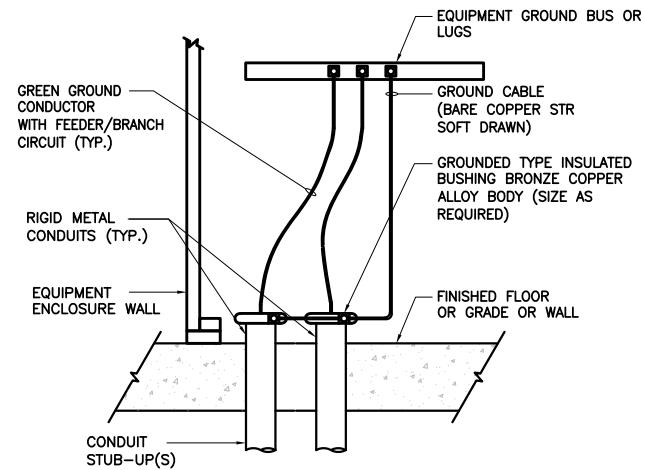
CITY OF GONZALES  
INDUSTRIAL WASTE WATER TREATMENT FACILITY  
ELECTRICAL LIGHTING FIXTURE SCHEDULE

JOB NO. PO# 6761
DRAWING NO. E-18
SHEET NO. 113 OF 133

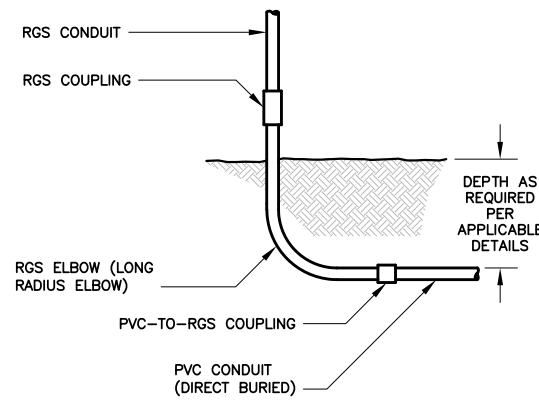




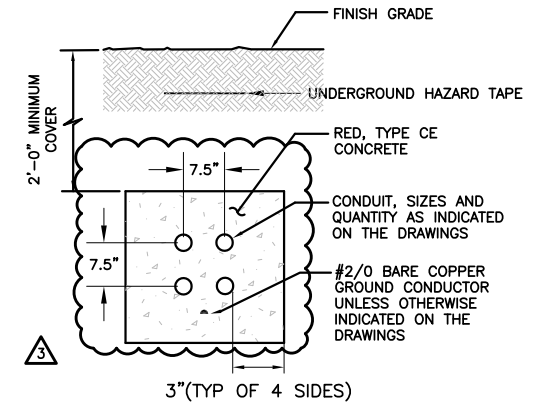
**E372** SERVICE GROUNDING DETAIL  
TYP SCALE: NTS



**E374** CONDUIT GROUNDING  
TYP SCALE: NTS

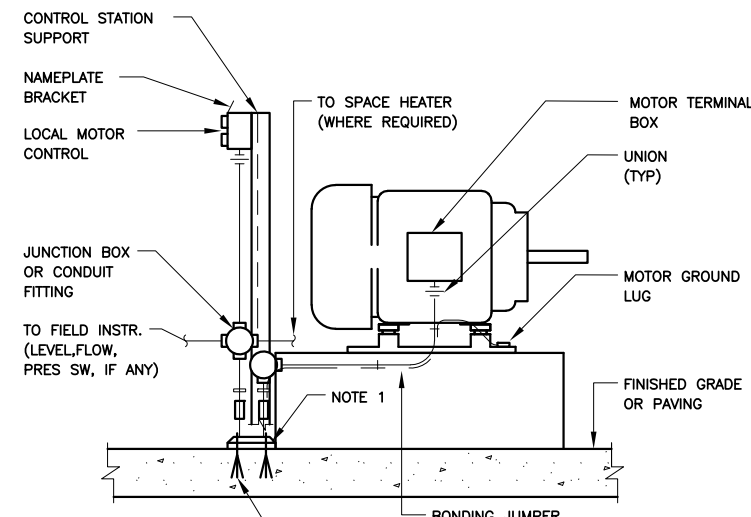


**E375** CONDUIT TRANSITION DETAIL  
TYP SCALE: NTS



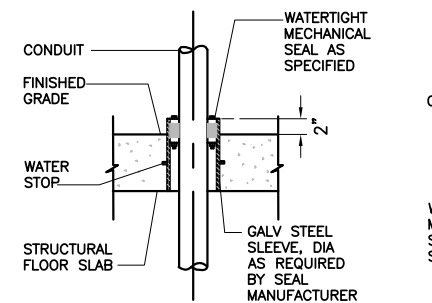
- NOTES:**
1. DIMENSIONS ARE MINIMUM UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
  2. THIS TYPICAL DETAIL IS FOR NON-TRAFFIC AREAS ONLY. OR WHERE SPECIFICALLY INDICATED ON THE DRAWINGS.

**E404** UNREINFORCED CONCRETE DUCTBANK  
TYP SCALE: NTS

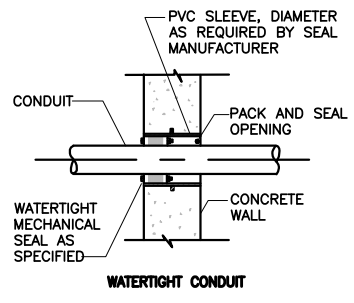


- NOTES:**
1. ALL CONDUITS, SLEEVES, AND SUPPORTS BROUGHT UP THROUGH CONCRETE SHALL HAVE A 1"x3" RADIUS CONCRETE CONE BUILT UP AROUND BASE.
  2. BONDING JUMPER IS REQUIRED ON ALL INSTALLATIONS WITH FLEXIBLE CONDUITS SPIRAL WIRE BONDING JUMPER AROUND FLEXIBLE CONDUIT.
  3. FOR STATIONS LOCATED ON EXISTING CONCRETE SLAB OR DECK, BOLT THE SUPPORT BASE PLATE WITH FOUR 3/8" DIA, 5" LONG STAINLESS STEEL ANCHOR BOLTS.

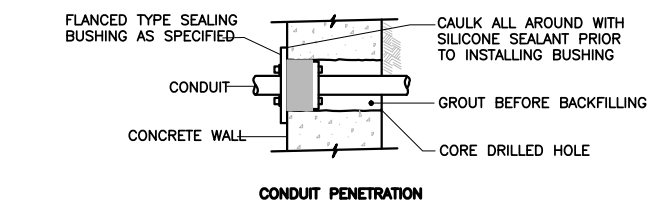
**E410A** MOTORS WITH COMBINED POWER & CONTROL - RGS CONDUIT  
TYP SCALE: NTS  
(INSTALLATION SIMILAR FOR BOTH HORIZONTAL AND VERTICAL MOTORS 50 HP MOTORS OR LESS WITH MAXIMUM CONDUCTOR SIZE OF #2 AWG)



**A** CONDUIT PENETRATION  
SCALE: NTS

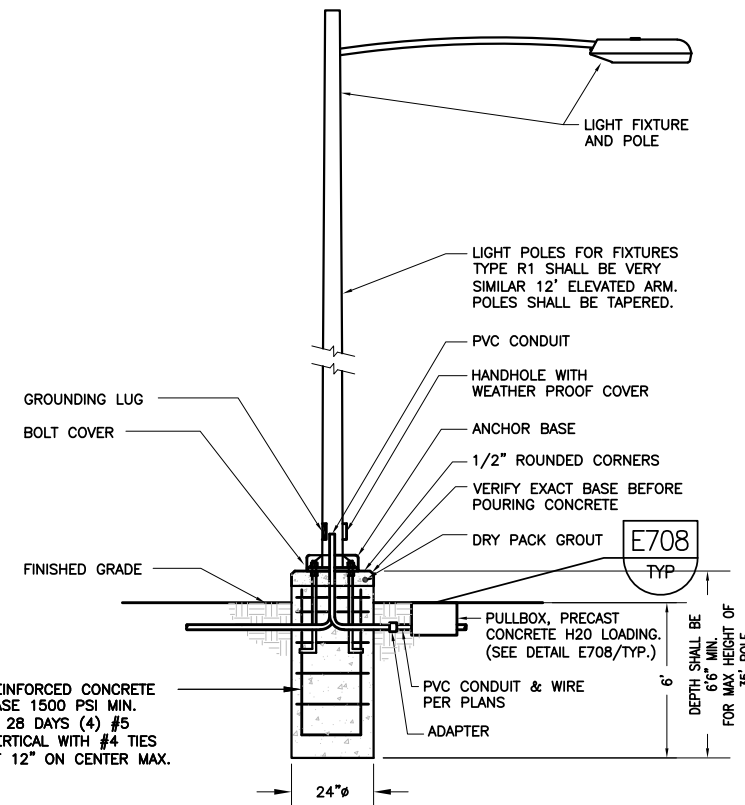


**B** PENETRATION  
SCALE: NTS

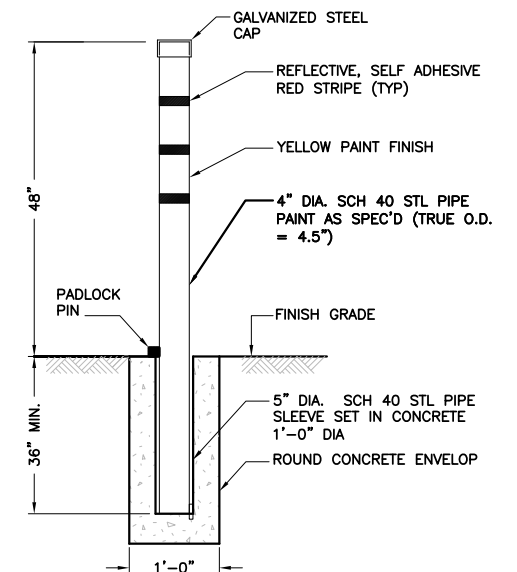


**C** THROUGH EXISTING CONCRETE WALL  
SCALE: NTS

**E418** DETAILED CONDUIT PENETRATION  
TYP SCALE: NTS



**E500** POLE MTD LIGHT FIXTURE  
TYP SCALE: NTS



**E526** REMOVABLE GUARD POST  
TYP SCALE: NTS

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No.	DATE	REVISIONS	APPROVED
02-12-25		ADDENDUM 3	DTN



DESIGNED: NAME	PROGRESS: REVISED PER REVIEW COMMENTS
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CITY OF GONZALES  
INDUSTRIAL WASTE WATER TREATMENT FACILITY  
ELECTRICAL  
TYPICAL CONSTRUCTION DETAILS - 2

JOB NO. PO# 6761  
DRAWING NO. **E-21**  
SHEET NO. 116 OF 133

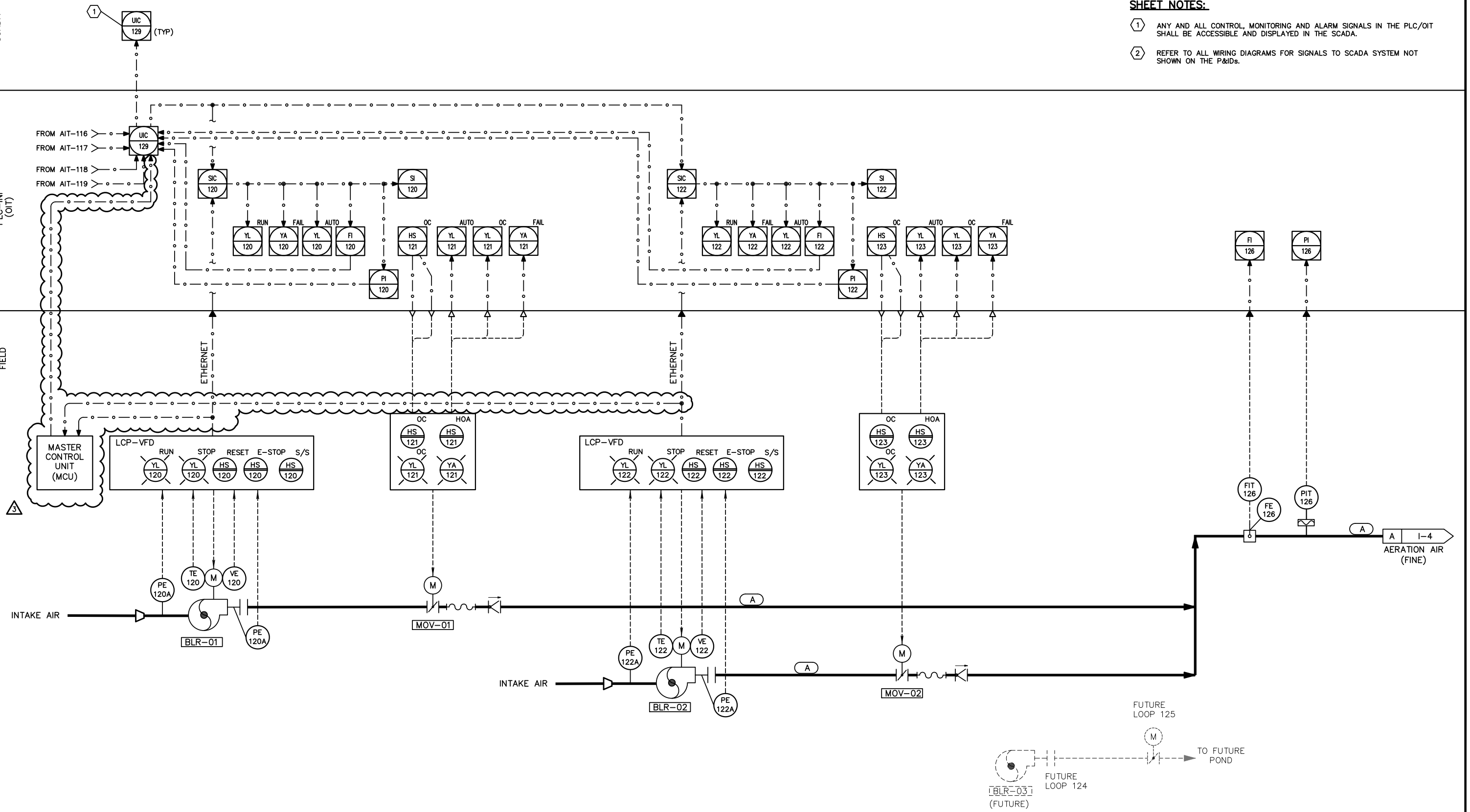
**SHEET NOTES:**

- ① ANY AND ALL CONTROL, MONITORING AND ALARM SIGNALS IN THE PLC/OIT SHALL BE ACCESSIBLE AND DISPLAYED IN THE SCADA.
- ② REFER TO ALL WIRING DIAGRAMS FOR SIGNALS TO SCADA SYSTEM NOT SHOWN ON THE P&IDs.

SCADA

LCP-2 PANEL  
PLC-INF  
(OIT)

FIELD



P:\432\_Gonzales\_Separate\_Industrial\_Treatment\_Plant\_Duok\DRM\NGS\1308B-2\_Sht22\_1-05\_Admn\_3.dwg 02/11/2025 15:37

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3	02-12-25	ADDENDUM 3	DTN

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DESIGNED: NAME	PROGRESS: REVISED PER REVIEW COMMENTS
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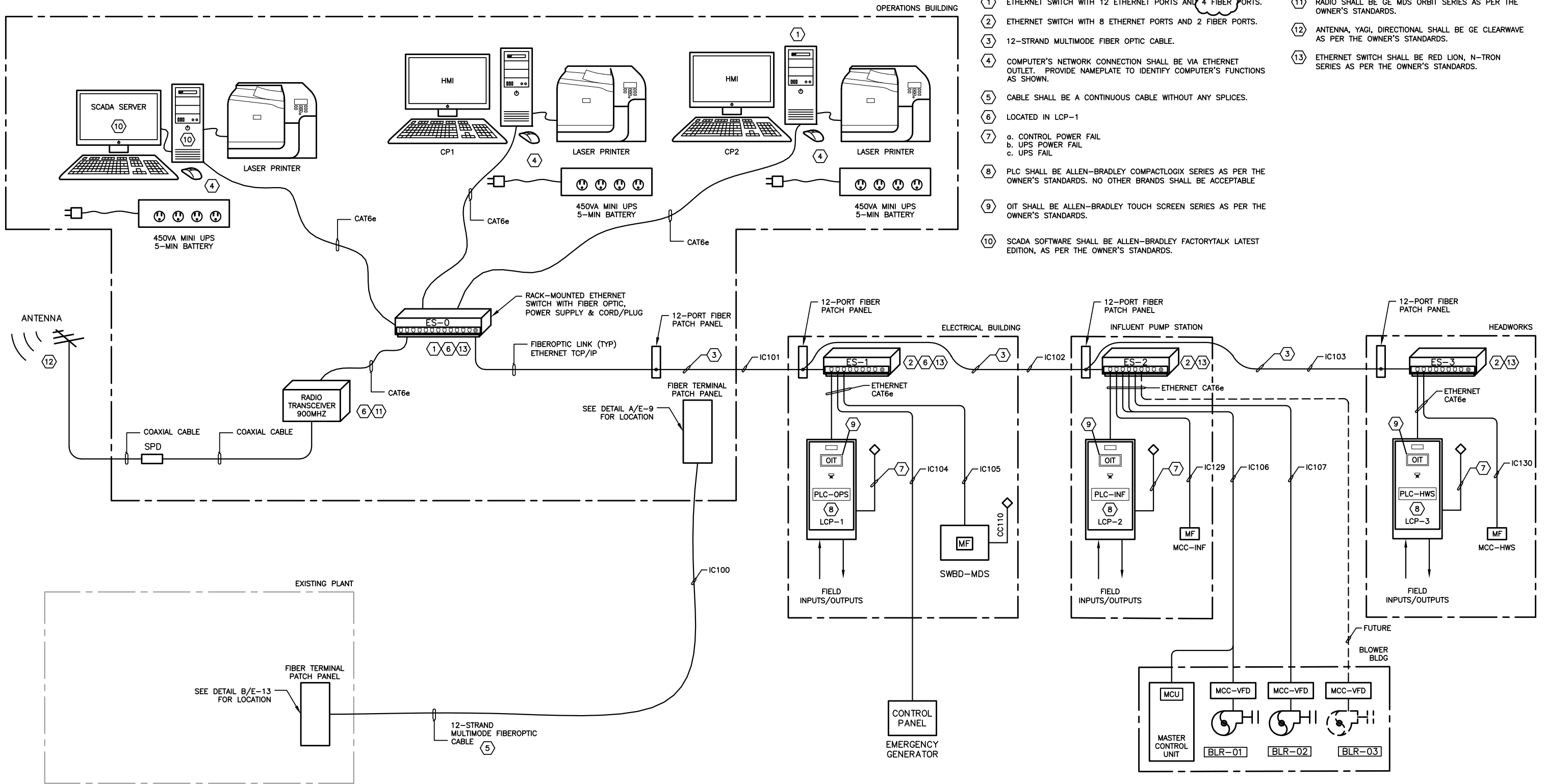
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**CITY OF GONZALES**  
**INDUSTRIAL WASTE WATER TREATMENT FACILITY**  
**AIR BLOWER SYSTEM**

JOB NO. PO# 6761
DRAWING NO. <b>1-5</b>
SHEET NO. 122 OF 133

**SHEET NOTES:**

- ① ETHERNET SWITCH WITH 12 ETHERNET PORTS AND 4 FIBER PORTS.
- ② ETHERNET SWITCH WITH 8 ETHERNET PORTS AND 2 FIBER PORTS.
- ③ 12-STRAND MULTIMODE FIBER OPTIC CABLE.
- ④ COMPUTER'S NETWORK CONNECTION SHALL BE VIA ETHERNET OUTLET. PROVIDE NAMEPLATE TO IDENTIFY COMPUTER'S FUNCTIONS AS SHOWN.
- ⑤ CABLE SHALL BE A CONTINUOUS CABLE WITHOUT ANY SPLICES.
- ⑥ LOCATED IN LCP-1
- ⑦ a. CONTROL POWER FAIL  
b. UPS POWER FAIL  
c. UPS FAIL
- ⑧ PLC SHALL BE ALLEN-BRADLEY COMPACTLOGIX SERIES AS PER THE OWNER'S STANDARDS. NO OTHER BRANDS SHALL BE ACCEPTABLE
- ⑨ OIT SHALL BE ALLEN-BRADLEY TOUCH SCREEN SERIES AS PER THE OWNER'S STANDARDS.
- ⑩ SCADA SOFTWARE SHALL BE ALLEN-BRADLEY FACTORYTALK LATEST EDITION, AS PER THE OWNER'S STANDARDS.
- ⑪ RADIO SHALL BE GE MDS ORBIT SERIES AS PER THE OWNER'S STANDARDS.
- ⑫ ANTENNA, YAGI, DIRECTIONAL SHALL BE GE CLEARWAVE AS PER THE OWNER'S STANDARDS.
- ⑬ ETHERNET SWITCH SHALL BE RED LION, N-TRON SERIES AS PER THE OWNER'S STANDARDS.



**A SCADA PLC SYSTEM BLOCK DIAGRAM**  
SCALE: NTS

P:\432\_Gonzales\_Separate\_Industrial\_Treatment\_Plant\_Duok\DRAWINGS\1308B-2\_Sht25\_1-08 Adm 3.dwg 02/11/2025 15:37

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DRAWN: NAME	SUBMITTAL DATE: NOVEMBER 2024
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CITY OF GONZALES INDUSTRIAL WASTE WATER TREATMENT FACILITY		JOB NO. PO# 6761
SCADA PLC SYSTEM BLOCK DIAGRAM		DRAWING NO. <b>1-8</b>
		SHEET NO. 125 OF 133

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Indoor Lighting**  
 CERTIFICATE OF COMPLIANCE NRCC-LTI-E  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 1 of 7)  
 Project Address: 500 Short Road Date Prepared: 2/10/2025

**A. GENERAL INFORMATION**

01 Project Location (city)	Gonzales	04 Total Conditioned Floor Area (ft <sup>2</sup> )	1,560
02 Climate Zone	12	05 Total Unconditioned Floor Area (ft <sup>2</sup> )	0
03 Occupancy Types Within Project (select all that apply):		06 # of Stories (Habitable Above Grade)	1
• Office			

**B. PROJECT SCOPE**  
 This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces	Unconditioned Spaces		
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft <sup>2</sup> )	Calculation Method	Area (ft <sup>2</sup> )
<input checked="" type="checkbox"/> New Lighting System	Area Category Method	1560	Area Category Method	0
<input type="checkbox"/> New Lighting System - Parking Garage				
<b>Total Area of Work (ft<sup>2</sup>)</b>		1560		0

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 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2136  
 Schema Version: rev 20220101 Report Generated: 2025-02-10 09:37:57

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Indoor Lighting**  
 CERTIFICATE OF COMPLIANCE NRCC-LTI-E  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 2 of 7)  
 Date Prepared: 2/10/2025

**C. COMPLIANCE RESULTS**  
 If any cell on this table says "DOES NOT COMPLY" or "COMPLIES WITH EXCEPTIONAL CONDITIONS" refer to Table D for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)					Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)			Compliance Results
	01	02	03	04	05	06	07	08	
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)3 / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)	Total Allowed (Watts)	Total Designed (Watts)	PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)	Total Adjusted (Watts) *Includes Adjustments	
Conditioned		936	0		= 936	= 512	0	= 512	COMPLIES
Unconditioned					=			=	COMPLIES
Controls Compliance (See Table H for Details)									COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)									

**D. EXCEPTIONAL CONDITIONS**  
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

**E. ADDITIONAL REMARKS**  
 This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

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 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2136  
 Schema Version: rev 20220101 Report Generated: 2025-02-10 09:37:57

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Indoor Lighting**  
 CERTIFICATE OF COMPLIANCE NRCC-LTI-E  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 3 of 7)  
 Date Prepared: 2/10/2025

**F. INDOOR LIGHTING FIXTURE SCHEDULE**  
 This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Conditioned Spaces									
01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change <sup>1</sup>	Watts per luminaire <sup>2</sup>	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector
A	LED Strip Pendant Light	No	NA	32	Mfr. Spec	6	No	192	<input type="checkbox"/>
R	LED Strip Recessed Light	No	NA	32	Mfr. Spec	10	No	320	<input type="checkbox"/>
<b>Total Designed Watts: CONDITIONED SPACES</b>									512

<sup>1</sup>FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75%/80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.  
<sup>2</sup>Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.

**G. MODULAR LIGHTING SYSTEMS**  
 This section does not apply to this project.

**H. INDOOR LIGHTING CONTROLS (Not including PAFs)**  
 This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls			01	02	03
Mandatory Demand Response 110.12(c)		Shut-off controls 130.1(c) / 160.5(b)4C			Field Inspector
Required >= 4,000W subject to multilevel		See Area/Space Level Controls			Pass
					Fall

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 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2136  
 Schema Version: rev 20220101 Report Generated: 2025-02-10 09:37:57

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Indoor Lighting**  
 CERTIFICATE OF COMPLIANCE NRCC-LTI-E  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 4 of 7)  
 Date Prepared: 2/10/2025

**H. INDOOR LIGHTING CONTROLS (Not including PAFs)**

**Area Level Controls**

04	05	06	07	08	09	10	11	12
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1 / 170.2(e)2A	Field Inspector
Admin	Office (>250 square feet)	Readily Accessible	NA: General Utg <= 0.5W/SF	See Building Level	NA: Rm < 24sf Glazing	NA: Rm < 24sf Glazing	No	<input type="checkbox"/>
13 Plan Sheet Showing Daylit Zones:								

**I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS**  
 Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(b) are being used.

Conditioned Spaces					
01	02	03	04	05	06
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft <sup>2</sup> )	Area (ft <sup>2</sup> )	Allowed Wattage (Watts)	Additional Allowance / Adjustment Area Category PAF
Office	Office (>250 square feet)	0.6	1,560	936	No
<b>TOTALS:</b>				1,560	936
See Tables J, or P for detail					

**J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM**  
 This section does not apply to this project.

Generated Date/Time: Documentation Software: EnergyPro  
 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2136  
 Schema Version: rev 20220101 Report Generated: 2025-02-10 09:37:57

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Indoor Lighting**  
 CERTIFICATE OF COMPLIANCE NRCC-LTI-E  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 5 of 7)  
 Date Prepared: 2/10/2025

**K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE**  
 This section does not apply to this project.

**L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY**  
 This section does not apply to this project.

**M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING**  
 This section does not apply to this project.

**N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS**  
 This section does not apply to this project.

**O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE**  
 This section does not apply to this project.

**P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))**  
 This section does not apply to this project.

**Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS**  
 This section does not apply to this project.

**R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS**  
 This section does not apply to this project.

Generated Date/Time: Documentation Software: EnergyPro  
 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2136  
 Schema Version: rev 20220101 Report Generated: 2025-02-10 09:37:57

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Indoor Lighting**  
 CERTIFICATE OF COMPLIANCE NRCC-LTI-E  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 6 of 7)  
 Date Prepared: 2/10/2025

**S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)**  
 This section does not apply to this project.

**T. DWELLING UNIT LIGHTING**  
 This section does not apply to this project.

**U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION**  
 Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online.

Form/Title

NRCC-LTI-E - Must be submitted for all buildings.

**V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**  
 Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <http://www.energy.ca.gov/title24/attccp/providers.html>

Form/Title

Systems/Spaces To Be Field Verified

NRCC-LTI-04-A - Must be submitted for demand responsive lighting controls.

Whole Building Demand Response

Generated Date/Time: Documentation Software: EnergyPro  
 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2136  
 Schema Version: rev 20220101 Report Generated: 2025-02-10 09:37:57

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No.	DATE	REVISIONS	APPROVED
3	02-12-25	ADDENDUM 3	DTN



DESIGNED: NAME	FINAL SIGNED
DRAWN: NAME	NOVEMBER 2024
CHECKED: NAME	E-10687
DISCIPLINE ENGINEER	P.E. NO.



LINE IS 2 INCHES AT FULL SIZE  
 IF NOT 2" - SCALE ACCORDINGLY



**CITY OF GONZALES**  
**INDUSTRIAL WASTE WATER TREATMENT FACILITY**  
**ADMIN BUILDING**  
**ENERGY CALCULATION FORMS**

JOB NO. PO# 6761
DRAWING NO. ECF-1
SHEET NO. 134 of 139



STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Indoor Lighting** NRCC-LT-E  
 CERTIFICATE OF COMPLIANCE (Page 7 of 7)  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 7 of 7)  
 Project Address: 500 Short Road Date Prepared: 2/10/2025

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: Benjamin Montalano Signature: [Signature]  
 Company: NRG Compliance, LP Signature Date: 2025-02-10  
 Address: 4480 Main St Suite B CEA/HERS Certification Identification (if applicable):  
 City/State/Zip: Riverside CA 92501 Phone: 202-870-7813

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Diep Nguyen Signature: [Signature]  
 Company: DTN Engineering Inc Date Signed: 2025-02-10  
 Address: 1313 North Milpitas Blvd Suite 100 License: E-10687  
 City/State/Zip: Milpitas CA 95035 Phone: 408-262-0441

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 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2136  
 Schema Version: rev 20220101 Report Generated: 2025-02-10 09:37:57

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Outdoor Lighting** NRCC-LTO-E  
 CERTIFICATE OF COMPLIANCE (Page 1 of 7)  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 1 of 7)  
 Project Address: 500 Short Road Date Prepared: 2/10/2025

**A. GENERAL INFORMATION**  
 01 Project Location (city): Gonzales 04 Total Illuminated Hardscape Area (ft²): 0  
 02 Climate Zone: 12  
 03 Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):  
 LZ-0: Very Low - Undeveloped Parkland  LZ-2: Moderate - Urban Clusters  LZ-4: High - Must be reviewed by CA Energy Commission for Approval  
 LZ-1: Low - Rural Areas  LZ-3: Moderately High - Urban Areas  
 05 Occupancy Types within Project:  
 Office

**B. PROJECT SCOPE**  
 This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.  
 My Project Consists of:  
 01 New Lighting System Must Comply with Allowances from 140.7 / 170.2(e)6  
 02 Altered Lighting System Is your alteration increasing the connected lighting load (Watts)?  Yes  No  
 03 % of Existing Luminaires Being Altered¹ Sum Total of Luminaires Being Added or Altered 05 Calculation Method  
 < 10%  >= 10% and < 50%  >= 50%

¹ FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

Generated Date/Time: Documentation Software: EnergyPro  
 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2135  
 Schema Version: rev 20220101 Report Generated: 2025-02-10 09:37:57

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Outdoor Lighting** NRCC-LTO-E  
 CERTIFICATE OF COMPLIANCE (Page 2 of 7)  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 2 of 7)  
 Project Address: 500 Short Road Date Prepared: 2/10/2025

**C. COMPLIANCE RESULTS**  
 Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv						Compliance Results		
01	02	03	04	05	06	07	08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	Sales Frontage 140.7(d)2 (See Table K)	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	Total Allowed (Watts)	Total Actual (Watts)	07 must be >= 08
0	75	---	---	---	---	75	75	COMPLIES
<b>Shielding Compliance (See Table G for Details)</b>						N/A		
<b>Controls Compliance (See Table H for Details)</b>						COMPLIES		

**D. EXCEPTIONAL CONDITIONS**  
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

**E. ADDITIONAL REMARKS**  
 This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Generated Date/Time: Documentation Software: EnergyPro  
 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2135  
 Schema Version: rev 20220101 Report Generated: 2025-02-10 09:37:57

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Outdoor Lighting** NRCC-LTO-E  
 CERTIFICATE OF COMPLIANCE (Page 3 of 7)  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 3 of 7)  
 Project Address: 500 Short Road Date Prepared: 2/7/2025

**F. OUTDOOR LIGHTING FIXTURE SCHEDULE**  
 For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H, and are not included here. All other multifamily outdoor lighting is included here.

01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Watts per luminaire <sup>1,2</sup>	How is Wattage determined	Total Number Luminaires <sup>3</sup>	Luminaire Status <sup>4</sup>	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 Initial lumen output 130.2(b) / 160.5(c) <sup>1,4</sup>	Field Inspector Pass Fail
B	LED Wall Pack <input type="checkbox"/> Linear	15	Mfr. Spec	5	New	<input type="checkbox"/>	75	NA: < 6200 lumens	<input type="checkbox"/> <input type="checkbox"/>
<b>Total Design Watts:</b>							75		

¹ NOTES: Selections with a ¹ require a note in the space below explaining how compliance is achieved.  
 ² Luminaire is lighting a statue; EXCEPTION 2 to 130.2(a)  
 ³ FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)  
 ⁴ For linear luminaires, wattage should be indicated as W/l instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.  
 ⁵ Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.  
 ⁶ Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b) / 160.5(c)

**G. SHIELDING REQUIREMENTS (BUG)**  
 This section does not apply to this project.

Generated Date/Time: Documentation Software: EnergyPro  
 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2131  
 Schema Version: rev 20220101 Report Generated: 2025-02-07 15:30:52

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Outdoor Lighting** NRCC-LTO-E  
 CERTIFICATE OF COMPLIANCE (Page 4 of 7)  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 4 of 7)  
 Project Address: 500 Short Road Date Prepared: 2/7/2025

**H. OUTDOOR LIGHTING CONTROLS**  
 This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.  
 Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit.  
 Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector
Wall Light	Photocontrol	Provided	Provided	Pass Fail
				<input type="checkbox"/> <input type="checkbox"/>

¹ FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.  
 ² Authority having jurisdiction may ask for cut sheets or other documentation to confirm compliance of light source.  
 ³ Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are exempted from ii and iii.

**I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))**  
 This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A / Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B / Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.  
 Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H, and are not included here. All other multifamily outdoor lighting is included here.

		01 "Use it or lose it" Allowance (select all that apply) (select all that apply)			
<input type="checkbox"/> General Hardscape Allowance Table I (below)	<input checked="" type="checkbox"/> Per Application Table J	<input type="checkbox"/> Sales Frontage Table K	<input type="checkbox"/> Ornamental Table L	<input type="checkbox"/> Per Specific Area Table M	

Generated Date/Time: Documentation Software: EnergyPro  
 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2131  
 Schema Version: rev 20220101 Report Generated: 2025-02-07 15:30:52

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION  
**Outdoor Lighting** NRCC-LTO-E  
 CERTIFICATE OF COMPLIANCE (Page 5 of 7)  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 5 of 7)  
 Project Address: 500 Short Road Date Prepared: 2/7/2025

**J. LIGHTING ALLOWANCE: PER APPLICATION**  
 This table includes areas using the wattage allowance per application from Table 140.7-B / Table 170.2-S.

01	02	03	04	05	06	07	08	09	10
Area Description	Application per Table 140.7-B¹	CALCULATED ALLOWANCE (Watts)			DESIGN WATTS			Additional Allowance (Watts)	
		# of Locations	Allowance per Location²	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires		Design Watts
Outdoor Lighting (Main Entrance)	Building Entrance/Exit	5	15	75	B	15	5	75	75
<b>Total Design Watts for this Area:</b>								75	
<b>Total Allowance (Watts) All Areas:</b>								75	

¹ FOOTNOTES: Primary entrance applications are only available for senior care facilities, healthcare facilities, police stations, hospitals, fire stations, and emergency vehicle facilities.  
 ² The allowance per Location for ATMs is 100W for the first ATM and 35W for each additional per Table 140.7-B / Table 170.2-S.  
 ³ For luminaires indicated in Table as linear, wattage in column 07 is W/l instead of Watts/luminaire. Total linear feet should be indicated in column 08 instead of number of luminaires.

**K. LIGHTING ALLOWANCE: SALES FRONTAGE**  
 This section does not apply to this project.

**L. LIGHTING ALLOWANCE: ORNAMENTAL**  
 This section does not apply to this project.

**M. LIGHTING ALLOWANCE: PER SPECIFIC AREA**  
 This section does not apply to this project.

**N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)**  
 This section does not apply to this project.

Generated Date/Time: Documentation Software: EnergyPro  
 Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2131  
 Schema Version: rev 20220101 Report Generated: 2025-02-07 15:30:52

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No.	DATE	REVISIONS	APPROVED
3	02-12-25	ADDENDUM 3	DTN



DESIGNED: NAME  
 DRAWN: NAME  
 CHECKED: NAME  
 NAME

PROGRESS: FINAL SIGNED  
 SUBMITTAL DATE: NOVEMBER 2024  
 DIEP NGUYEN E-10687  
 DISCIPLINE ENGINEER P.E. NO.



LINE IS 2 INCHES AT FULL SIZE  
 IF NOT 2" - SCALE ACCORDINGLY



CITY OF GONZALES  
 INDUSTRIAL WASTE WATER TREATMENT FACILITY  
 ADMIN BUILDING  
 ENERGY CALCULATION FORMS

JOB NO. PO# 6761  
 DRAWING NO. ECF-2  
 SHEET NO. 135 OF 139

STATE OF CALIFORNIA  
**Outdoor Lighting** CALIFORNIA ENERGY COMMISSION  
**CERTIFICATE OF COMPLIANCE** NRCC-LTO-E  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 6 of 7)  
 Date Prepared: 2/7/2025

**O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION**  
 Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E.  
 Additional Remarks. These documents must be provided to the building inspector during construction and can be found online.  
 Form/Title  
 NRCC-LTO-E - Must be submitted for all buildings.

**P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**  
 Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E.  
 Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <http://www.energy.ca.gov/title24/attcp/providers.html>  
 Form/Title Systems/Spaces To Be Field Verified  
 NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires. Wall Light;

Generated Date/Time: Documentation Software: EnergyPro  
 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2131  
 Schema Version: rev 20220101 Report Generated: 2025-02-07 15:30:32

STATE OF CALIFORNIA  
**Outdoor Lighting** CALIFORNIA ENERGY COMMISSION  
**CERTIFICATE OF COMPLIANCE** NRCC-LTO-E  
 Project Name: Gonzales Industrial WWTP Admin Bldg Report Page: (Page 7 of 7)  
 Project Address: 500 Short Road Date Prepared: 2/7/2025

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: Benjamin Montalano Documentation Author Signature: *Ben M*  
 Company: NRG Compliance, LP Signature Date:  
 Address: 4480 Main St Suite B CEA/ HERS Certification Identification (if applicable):  
 City/State/Zip: Riverside CA 92501 Phone: 202-870-7813

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 3 and Part 6 of the California Code of Regulations.  
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Zachariah Garman CE Responsible Designer Signature: *Zachariah Garman*  
 Company: Land & Structure Date Signed: 2025-02-07  
 Address: 105 South Stewart Street License: E-1 0687  
 City/State/Zip: Sonora CA 95370 Phone: 209-532-5173

Generated Date/Time: Documentation Software: EnergyPro  
 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2131  
 Schema Version: rev 20220101 Report Generated: 2025-02-07 15:30:32

3

P:\432\_Gonzales Separate Industrial Treatment Plant\_Dudek\DRAWINGS\3008-2\_SHI36\_ECF-3\_Addm\_3.dwg 02/11/2025 15:39

No.	DATE	REVISIONS	APPROVED
3	02-12-25	ADDENDUM 3	DTN



DESIGNED: NAME	FINAL SIGNED
DRAWN: NAME	NOVEMBER 2024
CHECKED: NAME	DIEP NGUYEN E-10687
	DISCIPLINE ENGINEER P.E. NO.



LINE IS 2 INCHES AT FULL SIZE IF NOT 2" - SCALE ACCORDINGLY



CITY OF GONZALES INDUSTRIAL WASTE WATER TREATMENT FACILITY	JOB NO. PO# 6761
ADMIN BUILDING ENERGY CALCULATION FORMS	DRAWING NO. <b>ECF-3</b>
	SHEET NO. 136 OF 139

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION
Indoor Lighting
CERTIFICATE OF COMPLIANCE
Project Name: Gonzales Industrial WWTP Blowers Bldg
Report Page: (Page 1 of 7)
Date Prepared: 2/7/2025

Table with 4 columns: Item, Location, Description, Value. Includes Project Location (Gonzales), Climate Zone (12), and Occupancy Types (All Other Occupancies).

Table with 5 columns: Scope of Work, Conditioned Spaces, Unconditioned Spaces, Calculation Method, Area (ft²). Includes lighting system and parking garage scope.

Generated Date/Time: Report Version: 2022.0.000
Documentation Software: EnergyPro
Compliance ID: EnergyPro-5581-0225-2129
Report Generated: 2025-02-07 15:29:34

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION
Indoor Lighting
CERTIFICATE OF COMPLIANCE
Project Name: Gonzales Industrial WWTP Blowers Bldg
Report Page: (Page 2 of 7)
Date Prepared: 2/7/2025

Table with columns: Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts), Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts), Compliance Results. Includes Total Allowed (200) and Total Adjusted (192) values.

D. EXCEPTIONAL CONDITIONS
This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS
This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Generated Date/Time: Report Version: 2022.0.000
Documentation Software: EnergyPro
Compliance ID: EnergyPro-5581-0225-2129
Report Generated: 2025-02-07 15:29:34

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION
Indoor Lighting
CERTIFICATE OF COMPLIANCE
Project Name: Gonzales Industrial WWTP Blowers Bldg
Report Page: (Page 3 of 7)
Date Prepared: 2/7/2025

Table with 10 columns: Name or Item Tag, Complete Luminaire Description, Modular (Track) Fixture, Small Aperture & Color Change, Watts per Luminaire, How is Wattage determined, Total Number of Luminaires, Excluded per 140.6(a)3 / 170.2(e)2C, Design Watts, Field Inspector. Includes LED Strip Light Pendant.

FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75%/80% of their rated wattage.

G. MODULAR LIGHTING SYSTEMS
This section does not apply to this project.

Table with 3 columns: Building Level Controls, 01, 02, 03. Includes Mandatory Demand Response 110.12(c) and Shut-off controls 130.1(c) / 160.5(b)4C.

Generated Date/Time: Report Version: 2022.0.000
Documentation Software: EnergyPro
Compliance ID: EnergyPro-5581-0225-2129
Report Generated: 2025-02-07 15:29:34

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION
Indoor Lighting
CERTIFICATE OF COMPLIANCE
Project Name: Gonzales Industrial WWTP Blowers Bldg
Report Page: (Page 4 of 7)
Date Prepared: 2/7/2025

Table with 12 columns: Area Level Controls, 04-12. Includes Area Description, Complete Building or Area Category Primary Function Area, Manual Area Controls, Multi-Level Controls, Shut-Off Controls, Primary/Sky lit Daylighting, Secondary Daylighting, Interlocked Systems, Field Inspector.

Table with 6 columns: Conditioned Spaces, 01-06. Includes Area Description, Complete Building or Area Category Primary Function Area, Allowed Density (W/ft²), Area (ft²), Allowed Wattage (Watts), Additional Allowance / Adjustment Area Category PAF.

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM
This section does not apply to this project.

Generated Date/Time: Report Version: 2022.0.000
Documentation Software: EnergyPro
Compliance ID: EnergyPro-5581-0225-2129
Report Generated: 2025-02-07 15:29:34

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION
Indoor Lighting
CERTIFICATE OF COMPLIANCE
Project Name: Gonzales Industrial WWTP Blowers Bldg
Report Page: (Page 5 of 7)
Date Prepared: 2/7/2025

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE
This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY
This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING
This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE / SPECIAL EFFECTS
This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE
This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))
This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS
This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS
This section does not apply to this project.

Generated Date/Time: Report Version: 2022.0.000
Documentation Software: EnergyPro
Compliance ID: EnergyPro-5581-0225-2129
Report Generated: 2025-02-07 15:29:34

STATE OF CALIFORNIA CALIFORNIA ENERGY COMMISSION
Indoor Lighting
CERTIFICATE OF COMPLIANCE
Project Name: Gonzales Industrial WWTP Blowers Bldg
Report Page: (Page 6 of 7)
Date Prepared: 2/7/2025

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)
This section does not apply to this project.

T. DWELLING UNIT LIGHTING
This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION
Additional Remarks: These documents must be provided to the building inspector during construction and can be found online.

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE
Additional Remarks: These documents must be provided to the building inspector during construction and any with "A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP).

Generated Date/Time: Report Version: 2022.0.000
Documentation Software: EnergyPro
Compliance ID: EnergyPro-5581-0225-2129
Report Generated: 2025-02-07 15:29:34

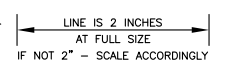
P:\432\_Gonzales\_Separate\_Industrial\_Treatment\_Plant\_Dudek\DRAWINGS\3008-2\_S137 ECF-4\_Admn\_3.dwg 02/11/2025 13:39

Table with 4 columns: No., DATE, REVISIONS, APPROVED. Includes revision 02-12-25 ADDENDUM 3 by DTN.

UNDERGROUND SERVICE ALERT
CALL: TOLL FREE 1-800-227-2600
TWO WORKING DAYS BEFORE YOU DIG

Table with 2 columns: DESIGNED, DRAWN, CHECKED, NAME and PROGRESS, SUBMITTAL DATE, DISCIPLINE ENGINEER. Includes names Diep Nguyen and P.E. No.

REGISTERED PROFESSIONAL ENGINEER
DIEP TAN NGUYEN
No. E-10687
Exp. 8/31/23
ELECTRICAL
STATE OF CALIFORNIA
11-13-24



DUDEK
605 Third Street Encinitas, CA 92024
760.942.5147 Fax 760.942.4508

CITY OF GONZALES
INDUSTRIAL WASTE WATER TREATMENT FACILITY
BLOWER BUILDING
ENERGY CALCULATION FORMS

JOB NO. PO# 6761
DRAWING NO. ECF-4
SHEET NO. 137 OF 139

STATE OF CALIFORNIA  
**Indoor Lighting**  
 CERTIFICATE OF COMPLIANCE  
 Project Name: Gonzales Industrial WWTP Blowers Bldg  
 Report Page: (Page 7 of 7)  
 Project Address: 500 Short Road  
 Date Prepared: 2/7/2025

CALIFORNIA ENERGY COMMISSION  
 NRCC-LTO-E  
 2/7/2025

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Benjamin Montalano  
 Signature:

Company: NRG Compliance, LP  
 Signature Date: 2025-02-07  
 Address: 4480 Main St Suite B  
 City/State/Zip: Riverside CA 92501  
 Phone: 951-781-7813

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Diep Nguyen  
 Signature:

Company: DTN Engineering Inc  
 Date Signed: 2025-02-07  
 License: E-10687  
 Address: 1313 North Milpitas Blvd Suite 100  
 City/State/Zip: Milpitas CA 95035  
 Phone: 408-262-0441

Generated Date/Time: 2025-02-07 15:29:34  
 Documentation Software: EnergyPro  
 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  
 Report Version: 2022.0.000  
 Schema Version: rev 20220101  
 Compliance ID: EnergyPro-5581-0225-2129  
 Report Generated: 2025-02-07 15:29:34

STATE OF CALIFORNIA  
**Outdoor Lighting**  
 CERTIFICATE OF COMPLIANCE  
 Project Name: Gonzales Industrial WWTP Blowers Bldg  
 Report Page: (Page 1 of 7)  
 Project Address: 500 Short Road  
 Date Prepared: 2/7/2025

CALIFORNIA ENERGY COMMISSION  
 NRCC-LTO-E  
 2/7/2025

**A. GENERAL INFORMATION**

01 Project Location (city)	Gonzales	04 Total Illuminated Hardscape Area (ft <sup>2</sup> )	0
02 Climate Zone	12		
03 Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):			
<input type="checkbox"/> LZ-0: Very Low - Undeveloped Parkland <input checked="" type="checkbox"/> LZ-2: Moderate - Urban Clusters <input type="checkbox"/> LZ-4: High - Must be reviewed by CA Energy Commission for Approval <input type="checkbox"/> LZ-1: Low - Rural Areas <input type="checkbox"/> LZ-3: Moderately High - Urban Areas			
05 Occupancy Types within Project			
<input checked="" type="checkbox"/> All Other Occupancies			

**B. PROJECT SCOPE**  
 This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.  
 My Project Consists of:

<input checked="" type="checkbox"/> New Lighting System	01	02	Must Comply with Allowances from 140.7 / 170.2(e)6
<input type="checkbox"/> Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?		
		Yes	No
03 % of Existing Luminaires Being Altered <sup>1</sup>			
Sum Total of Luminaires Being Added or Altered		04	
Calculation Method			
<input type="checkbox"/> < 10% <input type="checkbox"/> >= 10% and < 50% <input type="checkbox"/> >= 50%			

**Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.**  
<sup>1</sup> FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

Generated Date/Time: 2025-02-07 15:29:34  
 Documentation Software: EnergyPro  
 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  
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STATE OF CALIFORNIA  
**Outdoor Lighting**  
 CERTIFICATE OF COMPLIANCE  
 Project Name: Gonzales Industrial WWTP Blowers Bldg  
 Report Page: (Page 2 of 7)  
 Project Address: 500 Short Road  
 Date Prepared: 2/7/2025

CALIFORNIA ENERGY COMMISSION  
 NRCC-LTO-E  
 2/7/2025

**C. COMPLIANCE RESULTS**  
 Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv						Compliance Results	
01	02	03	04	05	06	07	08
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	Sales Frontage 140.7(d)2 (See Table K)	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	Total Allowed (Watts)	Total Actual (Watts)
0	30	---	---	---	---	30	30
Shielding Compliance (See Table G for Details)							N/A
Controls Compliance (See Table H for Details)							COMPLIES

**D. EXCEPTIONAL CONDITIONS**  
 This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

**E. ADDITIONAL REMARKS**  
 This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

Generated Date/Time: 2025-02-07 15:29:34  
 Documentation Software: EnergyPro  
 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  
 Report Version: 2022.0.000  
 Schema Version: rev 20220101  
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STATE OF CALIFORNIA  
**Outdoor Lighting**  
 CERTIFICATE OF COMPLIANCE  
 Project Name: Gonzales Industrial WWTP Blowers Bldg  
 Report Page: (Page 3 of 7)  
 Project Address: 500 Short Road  
 Date Prepared: 2/7/2025

CALIFORNIA ENERGY COMMISSION  
 NRCC-LTO-E  
 2/7/2025

**F. OUTDOOR LIGHTING FIXTURE SCHEDULE**  
 For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H, and are not included here. All other multifamily outdoor lighting is included here.

01	02	03	04	05	06	07	08	09	10
Name or Item Tag	Complete Luminaire Description	Watts per luminaire <sup>1,2</sup>	How is Wattage determined	Total Number Luminaires <sup>1</sup>	Luminaire Status <sup>1</sup>	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req. > 6,200 Initial lumen output 130.2(b) / 160.5(c) <sup>1,4</sup>	Field Inspector
B	LED Wall Pack	15	Mfr. Spec	2	New	<input type="checkbox"/>	30	NA: < 6200 lumens	Pass
<b>Total Design Watts:</b>								30	

**G. SHIELDING REQUIREMENTS (BUG)**  
 This section does not apply to this project.

Generated Date/Time: 2025-02-07 15:29:34  
 Documentation Software: EnergyPro  
 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  
 Report Version: 2022.0.000  
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STATE OF CALIFORNIA  
**Outdoor Lighting**  
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 Report Page: (Page 4 of 7)  
 Project Address: 500 Short Road  
 Date Prepared: 2/7/2025

CALIFORNIA ENERGY COMMISSION  
 NRCC-LTO-E  
 2/7/2025

**H. OUTDOOR LIGHTING CONTROLS**  
 This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.  
 Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit.  
 Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector
Wall Light	Photocontrol	Provided	Provided	Pass
				Fail

**I. LIGHTING POWER ALLOWANCE (per 140.7 / 170.2(e))**  
 This table includes areas using allowance calculations per 140.7 / 170.2(e). General Hardscape Allowance is per Table 140.7-A/170.2-R while "Use it or lose it" Allowances are per Table 140.7-B/170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.  
 Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H, and are not included here. All other multifamily outdoor lighting is included here.

01	
"Use it or lose it" Allowance (select all that apply) (select all that apply)	
<input type="checkbox"/> General Hardscape Allowance Table I (below)	<input checked="" type="checkbox"/> Per Application Table J
<input type="checkbox"/> Sales Frontage Table K	<input type="checkbox"/> Ornamental Table L
<input type="checkbox"/> Per Specific Area Table M	

Generated Date/Time: 2025-02-07 15:29:34  
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 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance  
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STATE OF CALIFORNIA  
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 CERTIFICATE OF COMPLIANCE  
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 Report Page: (Page 5 of 7)  
 Project Address: 500 Short Road  
 Date Prepared: 2/7/2025

CALIFORNIA ENERGY COMMISSION  
 NRCC-LTO-E  
 2/7/2025

**J. LIGHTING ALLOWANCE: PER APPLICATION**  
 This table includes areas using the wattage allowance per application from Table 140.7-B / Table 170.2-S.

01	02	03	04	05	06	07	08	09	10
Area Description	Application per Table 140.7-B <sup>1</sup>	CALCULATED ALLOWANCE (Watts)			DESIGN WATTS			Additional Allowance (Watts)	
		# of Locations	Allowance per Location <sup>2</sup>	Extra Allowance (Watts)	Luminaire Name or Item Tag	Watts per Luminaire	# of Luminaires		Design Watts
Outdoor Lighting	Building Entrance/Exit	2	15	30	B	15	2	30	30
<b>Total Design Watts for this Area:</b>							30		
<b>Total Allowance (Watts) All Areas:</b>							30		

**K. LIGHTING ALLOWANCE: SALES FRONTAGE**  
 This section does not apply to this project.

**L. LIGHTING ALLOWANCE: ORNAMENTAL**  
 This section does not apply to this project.

**M. LIGHTING ALLOWANCE: PER SPECIFIC AREA**  
 This section does not apply to this project.

**N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)**  
 This section does not apply to this project.

Generated Date/Time: 2025-02-07 15:29:34  
 Documentation Software: EnergyPro  
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 Report Version: 2022.0.000  
 Schema Version: rev 20220101  
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 Report Generated: 2025-02-07 15:29:34

P:\432\_Gonzales\_Separate\_Industrial\_Treatment\_Plant\_Dudek\_DRAWINGS\3008-2\_SH13B ECF-5 Addm 3.dwg 02/11/2025 15:40

No.	DATE	REVISIONS	APPROVED
3	02-12-25	ADDENDUM 3	DTN

**UNDERGROUND SERVICE ALERT**  
 CALL: TOLL FREE  
 1-800-227-2600  
 TWO WORKING DAYS BEFORE YOU DIG

DESIGNED: NAME	FINAL SIGNED
DRAWN: NAME	NOVEMBER 2024
CHECKED: NAME	E-10687
DISCIPLINE ENGINEER	P.E. NO.



LINE IS 2 INCHES AT FULL SIZE  
 IF NOT 2" - SCALE ACCORDINGLY

**DUDEK**  
 605 Third Street Encinitas, CA 92024  
 760.942.5147 Fax 760.942.4508

**CITY OF GONZALES**  
**INDUSTRIAL WASTE WATER TREATMENT FACILITY**  
**BLOWER BUILDING**  
**ENERGY CALCULATION FORMS**

JOB NO. PO# 6761  
 DRAWING NO. **ECF-5**  
 SHEET NO. 138 OF 139



STATE OF CALIFORNIA  
**Outdoor Lighting** CALIFORNIA ENERGY COMMISSION  
**CERTIFICATE OF COMPLIANCE** NRCC-LTO-E  
 Project Name: Gonzales Industrial WWTP Blowers Bldg Report Page: (Page 6 of 7)  
 Date Prepared: 2/7/2025

**O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION**  
 Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E.  
 Additional Remarks. These documents must be provided to the building inspector during construction and can be found online.  
 Form/Title  
 NRCC-LTO-E - Must be submitted for all buildings

**P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**  
 Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E.  
 Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: <http://www.energy.ca.gov/title24/attcp/providers.html>  
 Form/Title Systems/Spaces To Be Field Verified  
 NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires. Wall Mounted;

Generated Date/Time: Documentation Software: EnergyPro  
 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2129  
 Schema Version: rev 20220101 Report Generated: 2025-02-07 15:29:34

STATE OF CALIFORNIA  
**Outdoor Lighting** CALIFORNIA ENERGY COMMISSION  
**CERTIFICATE OF COMPLIANCE** NRCC-LTO-E  
 Project Name: Gonzales Industrial WWTP Blowers Bldg Report Page: (Page 7 of 7)  
 Project Address: 500 Short Road Date Prepared: 2/7/2025

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**  
 I certify that this Certificate of Compliance documentation is accurate and complete.  
 Documentation Author Name: Benjamin Montalano Documentation Author Signature: *Ben M*  
 Company: NRG Compliance, LP Signature Date:  
 Address: 4480 Main St Suite B CEA/ HERS Certification Identification (if applicable):  
 City/State/Zip: Riverside CA 92501 Phone: 202-870-7813

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**  
 I certify the following under penalty of perjury, under the laws of the State of California:  
 1. The information provided on this Certificate of Compliance is true and correct.  
 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).  
 3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 3 and Part 6 of the California Code of Regulations.  
 4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.  
 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Diep Nguyen Responsible Designer Signature: *Diep Nguyen*  
 Company: DTN Engineering Inc Date Signed: 2025-02-07  
 Address: 1313 North Milpitas Blvd Suite 100 License: E-10687  
 City/State/Zip: Milpitas CA 95035 Phone: 408-262-0441

Generated Date/Time: Documentation Software: EnergyPro  
 CA Building Energy Efficiency Standards - 2022 Nonresidential Compliance Report Version: 2022.0.000 Compliance ID: EnergyPro-5581-0225-2129  
 Schema Version: rev 20220101 Report Generated: 2025-02-07 15:29:34

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No.	DATE	REVISIONS	APPROVED
3	02-12-25	ADDENDUM 3	DTN



DESIGNED: NAME  
 DRAWN: NAME  
 CHECKED: NAME

PROGRESS: FINAL SIGNED  
 SUBMITTAL DATE: NOVEMBER 2024  
 DIEP NGUYEN E-10687  
 DISCIPLINE ENGINEER P.E. NO.



LINE IS 2 INCHES AT FULL SIZE  
 IF NOT 2" - SCALE ACCORDINGLY



CITY OF GONZALES  
 INDUSTRIAL WASTE WATER TREATMENT FACILITY  
 BLOWER BUILDING  
 ENERGY CALCULATION FORMS

JOB NO. PO# 6761  
 DRAWING NO. ECF-6  
 SHEET NO. 139 OF 139