CITY OF SONORA CALIFORNIA	SHEET No.	TOTAL SHEETS
CITY PUBLIC WORKS MAINTENANCE YARD STRUCTURE	1	16

REGISTERED CIVIL ENGINEER

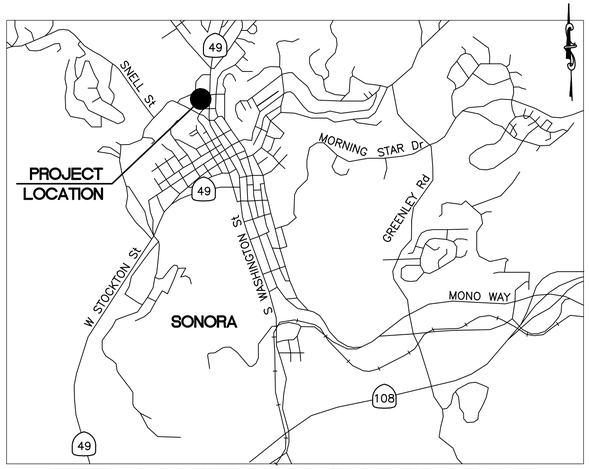
REGISTERED PROFESSIONAL ENGINEER
MICHAEL PUGH
No. S 3967
Exp. 3-31-25
STRUCTURAL
STATE OF CALIFORNIA

DEWBERRY ENGINEERS INC.
575 EAST LOCUST AVENUE
FRESNO, CA 93720

CITY OF SONORA
94 NORTH WASHINGTON STREET
SONORA, CA 95370

CITY OF SONORA CALIFORNIA

CITY OF SONORA PUBLIC WORKS
MAINTENANCE YARD STRUCTURE



SITE LOCATION MAP (NOT TO SCALE)

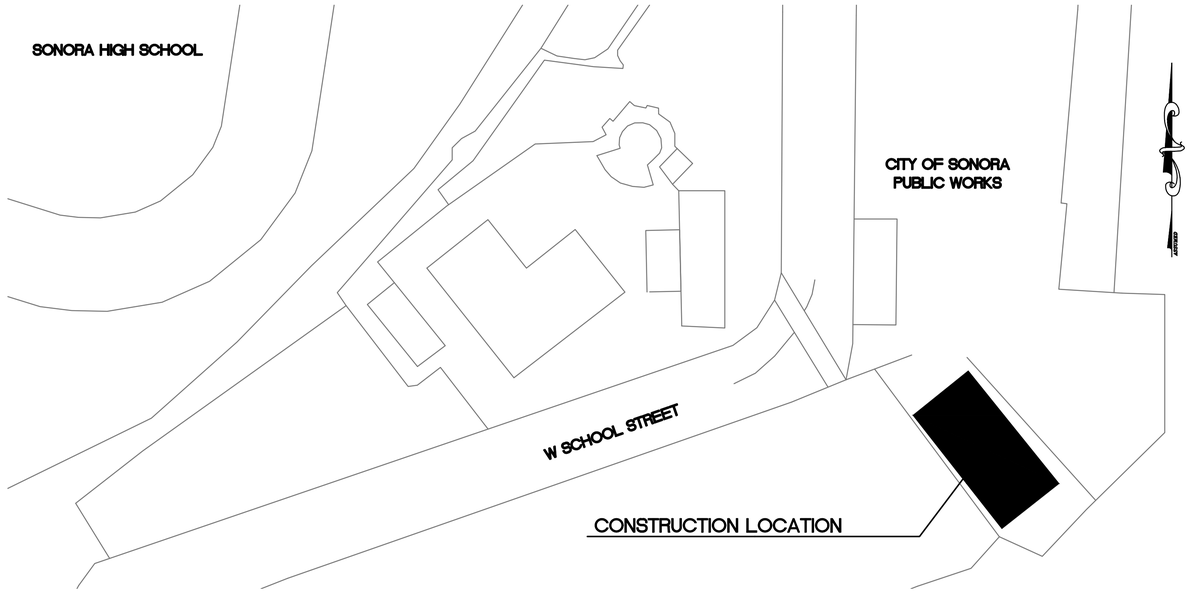
BASIS OF ELEVATIONS, BEARINGS AND COORDINATES:
ASSUMED COORDINATE SYSTEM USED.
ASSUMED ELEVATIONS USED. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO CONSTRUCTION.

INDEX OF PLANS

SHEET	DRAWING	TITLE
1	T-1	TITLE SHEET
2	C-1	SITE PLAN
3	D-1	DEMOLITION PLAN
4	ST-1	GENERAL STRUCTURAL NOTES
5	ST-2	BUILDING PLAN
6	ST-3	BUILDING SECTIONS
7	W-1	WATERLINE PLAN
8	W-2	WATERLINE PIPELINE DETAILS 1
9	W-3	WATERLINE PIPELINE DETAILS 2
10	E-1	SYMBOLS & ABBREVIATIONS
11	E-2	GENERAL NOTES
12	E-3	ELECTRICAL NOTES
13	E-4	OVERALL SITE PLAN
14	E-5	SITE PLAN LIGHTING
15	E-6	SCHEDULES & ONE-LINE DIAGRAM
16	E-7	ELECTRICAL DETAILS - 1
17	E-8	ELECTRICAL DETAILS - 2

LEGEND

- TREE
- CHAIN LINK FENCE
- OVERHEAD UTILITY
- WATER METER
- BOX "IRRIGATION CONTROL VALVE"
- BOX "ELECTRIC"
- BOX "SEWER"
- WATER SPIGOT
- UTILITY POLE
- LIGHT POLE
- 8" BLOCK WALL
- SIGN "NO PARKING"
- SURVEY CONTROL POINT
  - POINT NUMBER
  - ELEVATION
  - DESCRIPTION



VICINITY MAP
SCALE: 1"=40'

ABBREVIATIONS

Min	MINIMUM
MAX	MAXIMUM
SD	STORM DRAIN
SSMH	SANITARY SEWER MANHOLE
(E)	EXISTING
(P)	PROPOSED

APPROVED

CITY REP 1, TITLE 1 — DATE

CITY REP 2, TITLE 2 — DATE

MIKE PUGH, PRINCIPAL ENGINEER (DEWBERRY) — DATE

811 SAFETY IS IN YOUR HANDS. EVERY DIG. EVERY TIME.

TITLE SHEET

T-1

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY:
CHECKED BY:
CONSULTANT FUNCTIONAL SUPERVISOR: MIKE PUGH (DEWBERRY)

LAST REVISION: 01-31-25
DATE PLOTTED => 02-03-2025
TIME PLOTTED => 2:53 PM

BORDER LAST REVISED 7/2/2010
USERNAME => jloy
FILE NAME => MY_Title Sheet_T1.dwg
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0000
PROJECT NUMBER 50185787

REVISED BY	DATE REVISED

CALCULATED–DESIGNED BY

CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

MIKE PUGH (DEWBERRY)

LEGEND

- GRADE BREAK
- FLOW LINE
- CONCRETE
- HMA

ABBREVIATIONS

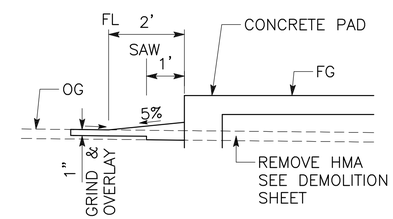
(E)	EXISTING
FG	FINISH GRADE
FL	FLOW LINE
HMA	HOT MIXED ASPHALT
OG	ORIGINAL GRADE
SAW	SAWCUT

CITY OF SONORA CALIFORNIA	SHEET No.	TOTAL SHEETS
CITY PUBLIC WORKS MAINTENANCE YARD STRUCTURE	8	16

REGISTERED CIVIL ENGINEER

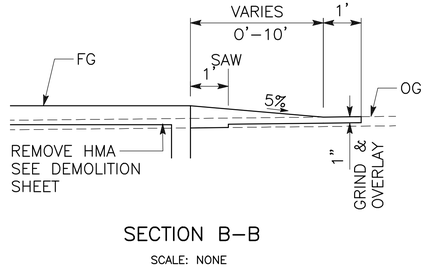
REGISTERED PROFESSIONAL ENGINEER
MICHAEL PUGH
No. S 3967
Exp. 3-31-25
STRUCTURAL
STATE OF CALIFORNIA

DEWBERRY ENGINEERS INC.	CITY OF SONORA
575 EAST LOCUST AVENUE	94 NORTH WASHINGTON STREET
FRESNO, CA 93720	SONORA, CA 95370



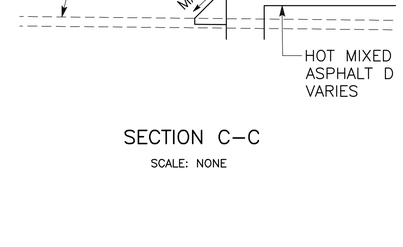
SECTION A–A

SCALE: NONE



SECTION B–B

SCALE: NONE



SECTION C–C

SCALE: NONE

SITE PLAN

C-1

SCALE: Horiz 1"=5'

LAST REVISION 01-31-25

DATE PLOTTED => 02-03-2025

TIME PLOTTED => 2:52 PM

CITY OF SONORA CALIFORNIA	SHEET No.	TOTAL SHEETS
CITY PUBLIC WORKS MAINTENANCE YARD STRUCTURE	9	16

REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
MICHAEL PUGH
No. S 3967
Exp. 3-31-25
STRUCTURAL
STATE OF CALIFORNIA

DEWBERRY ENGINEERS INC.
575 EAST LOCUST AVENUE
FRESNO, CA 93720

CITY OF SONORA
94 NORTH WASHINGTON STREET
SONORA, CA 95370

LEGEND

- 1'' HOT MIXED ASPHALT GRIND
- REMOVE HOT MIXED ASPHALT
- SAWCUT

DEMOLITION PLAN

D-1

SCALE: Horiz 1"=5'

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY

CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

MIKE PUGH (DEWBERRY)

LAST REVISION 01-31-25

DATE PLOTTED => 02-03-2025
TIME PLOTTED => 3:02 PM

BORDER LAST REVISED 7/2/2010

USERNAME => jloy
FILE NAME => Demo Plan.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER 50185787

GENERAL STRUCTURAL NOTES

GENERAL:
1. THE GENERAL STRUCTURAL NOTES ARE INTENDED TO AUGMENT THE DRAWINGS AND SPECIFICATIONS. SHOULD CONFLICTS EXIST BETWEEN THE DRAWINGS, SPECIFICATIONS, AND GENERAL STRUCTURAL NOTES, THE STRICTEST PROVISION SHALL GOVERN.
2. UNLESS NOTED OTHERWISE, CONSTRUCTION MEANS AND METHODS SHALL BE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES AND VERIFY ALL DIMENSIONS PRIOR TO START OF CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES.
3. FIELD SUBSTITUTION OF MATERIALS AND FASTENERS IS NOT PERMITTED.
4. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL OF THE FOLLOWING ITEMS. MATERIAL ORDERING OR FABRICATION SHALL NOT PROCEED PRIOR TO APPROVAL OF SUBMITTALS
   A. STRUCTURAL STEEL
   B. CONCRETE
   C. REINFORCING STEEL
   D. UTILITY SUPPORTS
5. THE STRUCTURE, OR STRUCTURES, DEFINED BY THESE DRAWINGS HAVE BEEN DESIGNED AS COMPLETE STRUCTURES TO RESIST THE LOADS LISTED IN THE DESIGN SECTION OF THESE GENERAL NOTES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION LOADS AND OTHER LOADS IMPOSED ON THE PARTIALLY COMPLETED STRUCTURE(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF SHORING, BRACING, FORMWORK, ERECTION AIDS, AND OTHER NON-PERMANENT SUPPORTING ELEMENTS UTILIZED FOR CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING IN ALL DIRECTIONS UNTIL ALL PERMANENT CONNECTIONS ARE MADE.

DESIGN:
1. THE CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE DRAWINGS.
2. STRUCTURAL DESIGN CONFORMS TO THE REQUIREMENTS OF THE 2019 CALIFORNIA BUILDING CODE.
3. BUILDING DESIGN LOADS AND DESIGN DATA FOR NEW CONSTRUCTION ARE AS FOLLOWS:
   A. FLOOR LIVE LOADS:
      DISTRIBUTED LOAD — 100 PSF
   B. RAIN LOAD: — 32 PSF
   C. WIND LOAD:
      BASIC WIND SPEED (3 SECOND GUST) — 94
      BUILDING CATEGORY — I
      WIND EXPOSURE CATEGORY — C
   D. SEISMIC DESIGN DATA:
      BUILDING OCCUPANCY CATEGORY — IV
      SEISMIC IMPORTANCE FACTOR — 1.00
      MAPPED SPECTRAL RESPONSE ACCELERATIONS, S_S — 0.36g
      MAPPED SPECTRAL RESPONSE ACCELERATIONS, S_1 — 0.183g
      SPECTRAL RESPONSE COEFF. S_{DS} — 0.363g
      SPECTRAL RESPONSE COEFF. S_{D1} — 0.272g
      SITE CLASS (ASSUMED) — D
      SEISMIC DESIGN CATEGORY — D
      SEISMIC-FORCE-RESISTING SYSTEM — SPECIAL REINFORCED CONCRETE MOMENT FRAME
      ANALYSIS PROCEDURE — LINEAR DYNAMIC ANALYSIS

FOUNDATIONS:
1. FOUNDATION DESIGN IS BASED ON A GEOTECHNICAL MEMORANDUM PREPARED BY CRAWFORD & ASSOCIATES, INC DATED NOVEMBER 27, 2019.
2. THE ENGINEER OF RECORD IS NOT RESPONSIBLE FOR SUBSURFACE CONDITIONS ENCOUNTERED IN THE FIELD CONTRARY TO THOSE ASSUMED FOR DESIGN.
3. FOUNDATION BEARING PRESSURE USED IN DESIGN (POUNDS PER SQUARE FOOT):
   SPREAD FOOTINGS — 3,000 PSF
4. ALL COMPACTED FILL, EXCAVATIONS, AND SUBGRADES SHALL BE OBSERVED AND TESTED BY A GEOTECHNICAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA (OR A QUALIFIED GEOTECHNICAL TECHNICIAN WORKING UNDER THE DIRECT SUPERVISION OF A REGISTERED ENGINEER) TO VERIFY SPECIFIED GEOTECHNICAL CONFORMANCE REQUIREMENTS.
5. COMPACTED FILL SHALL BE AS FOLLOWS:
   A. INSPECTED AND APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
   B. CONTAIN AT LEAST 25% PASSING THE NO. 4 SIEVE AND AT LEAST 15% FINES PASSING THE NO. 200 SIEVE.
   C. PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES IN THICKNESS.
   D. COMPACT FILL TO AT LEAST 90% RELATIVE COMPACTION. INCREASE THE MINIMUM RELATIVE COMPACTION TO 95% WITHIN 18 INCHES OF FINISHED GRADE.
   E. MOISTURE CONTENT AND PLASTICITY INDEX AS RECOMMENDED BY GEOTECHNICAL ENGINEER.
   F. EXPANSION INDEX LESS THAN 20, PER ASTM D4829
   G. FREE OF BOULDERS, ORGANICS, DEBRIS, TRASH, PARTICLES OF 2 INCHES OR MORE IN DIAMETER, AND OTHER DELETERIOUS MATERIALS.
6. DURING FILLING AND BACKFILLING, DENSITY TESTING SHALL BE MADE IN ACCORDANCE WITH ASTM D1557 (OR EQUIVALENT) TO TEST RELATIVE COMPACTION AND MOISTURE CONTENTS. FREQUENCY OF DENSITY TESTING SHALL BE AS DIRECTED BY GEOTECHNICAL ENGINEER TO VERIFY SPECIFIED COMPACTION AND MOISTURE CONTENT REQUIREMENTS.
7. CARE SHALL BE EXERCISED DURING EXCAVATION FOR FOUNDATIONS SO THAT AS LITTLE DISTURBANCE AS POSSIBLE OCCURS AT THE FOUNDATION LEVEL. LOOSE OR SOFT SOILS SHALL BE CAREFULLY CLEANED FROM THE BOTTOM OF THE EXCAVATIONS BEFORE PLACING CONCRETE. ACTUAL FOUNDATION SUBGRADES SHALL BE OBSERVED DURING CONSTRUCTION BY THE GEOTECHNICAL ENGINEER TO EVALUATE SUITABILITY OF SUBGRADE SOILS.
8. WHENEVER POSSIBLE, FOUNDATION CONCRETE SHALL BE PLACED IMMEDIATELY AFTER EXCAVATION SO THAT ACCUMULATION OF WATER IN THE EXCAVATION OR DRYING OF FOUNDATION SOILS CAN BE AVOIDED.
9. CONTRACTOR SHALL CONTROL SITE GROUNDWATER AND/OR SURFACE WATER BY ALL MEANS NECESSARY TO MAINTAIN A WATER LEVEL ONE FOOT BELOW SLAB SUBGRADE SO AS TO NOT DAMAGE FOUNDATION EXCAVATIONS.
10. ANY SUBGRADE SOILS WHICH HAVE BEEN WEAKENED DUE TO SATURATION OR DISTURBANCE SHALL BE RECOMPACTED OR REMOVED AND REPLACED WITH STRUCTURAL FILL AS DIRECTED BY THE GEOTECHNICAL ENGINEER. CONCRETE STRUCTURES SHALL BE CONSTRUCTED IN AN EXPEDIENT MANNER ONCE EXCAVATIONS ARE MADE TO AVOID WEATHER DAMAGE.
11. ALL EXCAVATIONS SHALL CONFORM TO APPLICABLE OSHA REGULATIONS.

REINFORCED CONCRETE:
1. UNLESS NOTED OTHERWISE, ALL CONCRETE WORK, DETAILING, FABRICATION, AND PLACING OF REINFORCING AND CONCRETE SHALL BE GOVERNED BY THE LATEST REVISIONS OF:
   A. ACI 301, ACI 315, AND ACI 318.
   B. CRSI RECOMMENDED PRACTICE OF PLACING REINFORCING BARS.
   C. ACI 306 AND ACI 305 FOR COLD AND HOT WEATHER CONCRETING, RESPECTIVELY.
2. ALL CONCRETE SHALL BE NORMAL WEIGHT WITH A MAXIMUM UNIT WEIGHT OF 150 POUNDS PER CUBIC FOOT AND SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH, AS SPECIFIED BELOW, FOR THE RESPECTIVE AREAS:
   A. FOOTINGS — 3,600 PSI
   B. SLABS 3,000 PSI — 4,000 PSI
3. PROVIDE A 3/4" CHAMFER AT ALL EXPOSED CONCRETE CORNERS.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, AND SHALL BE GRADE 60 U.N.O.
5. REINFORCING BAR LAP SPLICES AND HOOK DIMENSIONS SHALL BE AS REQUIRED PER THE SCHEDULE ON SHEET S0.01 UNLESS NOTED OTHERWISE.
6. STEEL SHALL NOT BE CUT UNLESS SHOWN OTHERWISE ON THE DRAWINGS, OR UNLESS AGREED TO BY THE ENGINEER ON A CASE BY CASE BASIS.

STRUCTURAL STEEL:
1. UNLESS NOTED OTHERWISE, DESIGN, DETAILING, FABRICATION, AND ERECTION OF STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH CURRENT ADDITIONS OF AISC 303 AND 360, AND AWS D1.1.
2. ALL STEEL WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A992 (Fy=50 KSI MIN.). ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A36, U.N.O.
3. ALL WELDING SHALL BE DONE BY WELDERS CURRENTLY CERTIFIED BY THE AMERICAN WELDING SOCIETY (AWS) AS HAVING PASSED AWS QUALIFICATION TESTS FOR THE TYPE OF WELDING THEY ARE TO PERFORM. ALL WELDERS SHALL USE E70XX ELECTRODES AND SHALL CONFORM TO AWS STANDARDS.
4. ALL COPES, BLOCKS, CUTS, CUT-OUTS, AND OTHER CUTTING OF STRUCTURAL MEMBERS SHALL HAVE ALL RE-ENTRANT CORNERS SHAPED, NOTCH-FREE, TO A RADIUS OF AT LEAST 1/2" INCH.
5. ALL STRUCTURAL STEEL CONNECTIONS SHALL BE BEARING TYPE "N" USING 3/4" DIAMETER ASTM A 325 HIGH STRENGTH BOLTS (MINIMUM OF 2 PER CONNECTION), U.N.O.
6. ALL EXPOSED STRUCTURAL STEEL SHALL BE HOT-DIPPED GALVANIZED U.N.O.

STEEL DECK:
1. UNLESS NOTED OTHERWISE, TYPICAL STEEL DECK SHALL BE 2" DEEP, WIDE RIB, 22 GAUGE, GALVANIZED STEEL DECK AND SHALL HAVE THE FOLLOWING MINIMUM SECTION PROPERTIES: Sp=0.247 IN 3/FT, Sn=0.252 IN 3/FT, AND I=0.353 IN 4/FT.
2. CHALKLINES OR OTHER METHODS SHALL BE USED TO ENSURE THAT DECK WELDS ARE ALIGNED WITH AND WILL OCCUR OVER THE TOP OF STEEL GIRDERS. EXCESSIVE WELD BLOWTHROUGH IN THE DECK DUE TO MISALIGNMENT OF WELDS OR EXCESSIVE WELD HEAT WILL NOT BE PERMITTED. IF, IN THE OPINION OF THE ENGINEER, EXCESSIVE BLOWTHROUGH HAS OCCURRED, THEN THE CONTRACTOR SHALL REPLACE THE DAMAGED DECK AT THEIR OWN EXPENSE.
3. STEEL DECK SHALL BE GALVANIZED.
4. ATTACH STEEL DECK TO SUPPORTING MEMBERS AS REQUIRED TO RESIST CONSTRUCTION LOADING PER MANUFACTURERS RECOMMENDATIONS.

UTILITY SUPPORTS
1. WATERLINE SUPPORTS SHALL BE GALVANIZED STEEL ROLLER SUPPORTS ("EATON B-LINE B3117SL STEEL ROLLER STAND" OR APPROVED EQUAL).
2. WATERLINES SHALL BE ANCHORED TO EACH UTILITY SUPPORT WITH GALVANIZED STEEL U-BOLTS ("EATON B-LINE B3188 STANDARD U-BOLTS" OR APPROVED EQUAL).

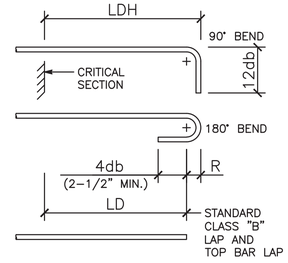
AREA DRAIN
1. AREA DRAINS SHALL BE APPROXIMATELY 5" IN DIAMETER AND INCLUDE A GALVANIZED CAST IRON BODY WITH A GALVANIZED CAST IRON VANDAL PROOF GRATE ("ZURN FD-2200 SMALL AREA FLOOR DRAIN" OR APPROVED EQUAL).
2. AREA DRAIN SHALL BE CONNECTED TO A 4" PVC HUB AND DRAIN PIPE THAT EXTENDS A MINIMUM OF 1" PAST THE BOTTOM OF THE STEEL DECKING.

COORDINATION:
1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH, AND COORDINATED WITH CIVIL, MECHANICAL, ELECTRICAL, AND OTHER CONTRACT DOCUMENTS.

2. THE DRAWINGS HAVE BEEN PREPARED USING SOME DIMENSIONS AND ELEMENTS FROM A PARTICULAR EQUIPMENT MANUFACTURER. AS ALLOWED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR MAY IN FACT PROVIDE A DIFFERENT PIECE OF EQUIPMENT WHICH HAS DIFFERENT DIMENSIONS AND ELEMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GAINING APPROVAL OF THE DIFFERENT DIMENSIONS AND ELEMENTS PRIOR TO ANY CONSTRUCTION AND ALL CHANGES SHALL BE MADE AT THE CONTRACTOR'S EXPENSE. THE SALIENT FEATURES SHALL NOT BE COMPROMISED. THE HYDRAULIC PERFORMANCE OF THE PUMPS SHALL NOT BE CHANGED.

REBAR SPLICE AND HOOK SCHEDULE

ASTM BAR SIZE	LD	CLASS B LAP	TOP BAR LAP	LDH
3	15"	19"	24"	9"
4	19"	25"	32"	11"
5	24"	31"	40"	14"
6	29"	37"	48"	17"
7	42"	54"	70"	19"
8	48"	62"	80"	22"
9	54"	70"	91"	25"
10	61"	79"	102"	28"



NOTES:

TOP BAR - DEFINED AS A BAR LOCATED SUCH THAT 12 IN. OR MORE OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE.

MINIMUM OUTSIDE RADIUS OF BEND, R, SHALL BE 4db.
LD - STANDARD DEVELOPMENT LENGTH OF BAR
LDH - STANDARD DEVELOPMENT LENGTH OF HOOK
db - BAR DIAMETER

STRUCTURE ABBREVIATIONS LIST

B.S.	BOTH SIDES	EQ.	EQUAL	#	NUMBER
BOT.	BOTTOM	EXP.	EXPANSION	O.C.	ON CENTER
CF	CUBIC FOOT	FTG.	FOOTING	PSI	POUNDS PER SQUARE INCH
CLR.	CLEAR	GALV.	GALVANIZED	PSF	POUNDS PER SQUARE FOOT
COL.	COLUMN	GA.	GAUGE	R	RADIUS
CONC.	CONCRETE	HORIZ.	HORIZONTAL	REINF.	REINFORCING
CONT.	CONTINUOUS	KSI	KIPS PER SQUARE INCH	STD.	STANDARD
DET.	DETAIL	MAX.	MAXIMUM	TYP.	TYPICAL
DIA.	DIAMETER	MIN.	MINIMUM	U.N.O.	UNLESS NOTED OTHERWISE
DIM.	DIMENSION	MPH	MILES PER HOUR	V.I.F.	VERIFY IN FIELD
EA.	EACH	N.T.S.	NOT TO SCALE	VERT.	VERTICAL
ELEV.	ELEVATION	NO.	NUMBER	W.P	WORKING POINT

CITY OF SONORA CALIFORNIA | SHEET No. 10 | TOTAL SHEETS 16
CITY PUBLIC WORKS MAINTENANCE YARD STRUCTURE

REGISTERED PROFESSIONAL ENGINEER — MICHAEL PUGH — No. S 3967 — Exp. 3-31-25 STRUCTURAL — STATE OF CALIFORNIA

REGISTERED CIVIL ENGINEER

DEWBERRY ENGINEERS INC.
575 EAST LOCUST AVENUE
FRESNO, CA 93720

CITY OF SONORA
94 NORTH WASHINGTON STREET
SONORA, CA 95370

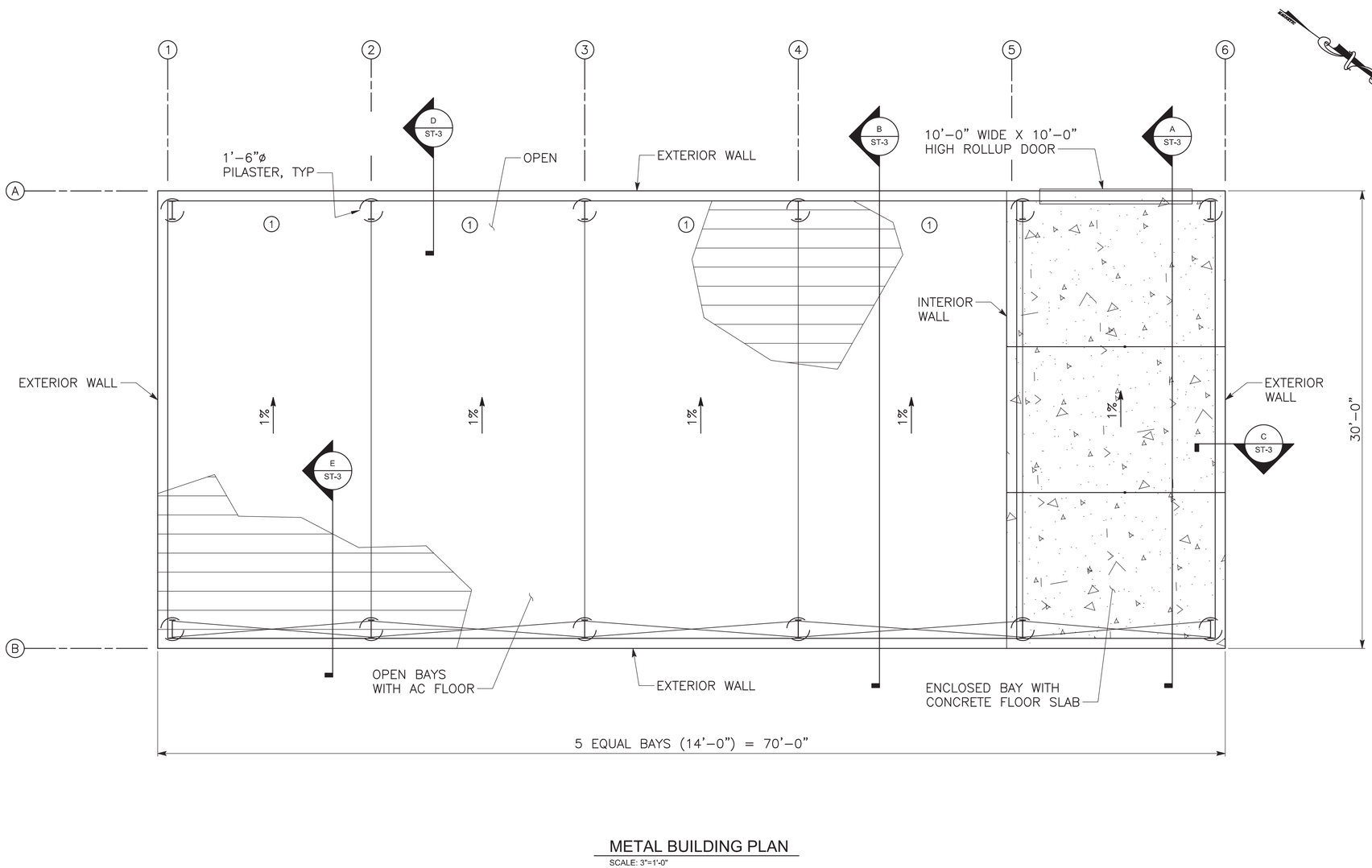
REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR: MIKE PUGH (DEWBERRY)

DATE PLOTTED => 01-30-2025
TIME PLOTTED => 1:46 PM
LAST REVISION 01-31-25

GENERAL STRUCTURAL NOTES

ST-1

BORDER LAST REVISED 7/2/2010 | USERNAME => tpretzer | FILE NAME => General Structural Notes.dwg | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0000 | PROJECT NUMBER 50185787



METAL BUILDING PLAN

SCALE: 3"=1'-0"

CITY OF SONORA CALIFORNIA	SHEET No.	TOTAL SHEETS
CITY PUBLIC WORKS MAINTENANCE YARD STRUCTURE	11	16

REGISTERED PROFESSIONAL ENGINEER
MICHAEL PUGH
No. S 3967
Exp. 3-31-25
STRUCTURAL
STATE OF CALIFORNIA

REGISTERED CIVIL ENGINEER

DEWBERRY ENGINEERS INC.
575 EAST LOCUST AVENUE
FRESNO, CA 93720

CITY OF SONORA
94 NORTH WASHINGTON STREET
SONORA, CA 95370

GENERAL NOTES:

1. FOR STRUCTURAL GENERAL NOTES SEE DRAWING ST–1.

2. FOR LOCATION OF EQUIPMENT, PIPE SUPPORTS, ELECTRICAL, ETC. SEE MECHANICAL AND ELECTRICAL DRAWINGS.

3. STRUCTURAL DESIGN CRITERIA:
   1. DESIGN LIVE LOAD:
      A. SLABS: 100PSF.
      B. POINT LOAD: 18,000 LBS.
   2. DESIGN DEAD LOAD:
      A. EQUIPMENT: SELF WEIGHT
      B. CONCRETE: SELF WEIGHT (150 PCF)
   3. SEISMIC DESIGN CRITERIA:
      A. ANALYSIS PROCEDURES: ASCE 7–16 § 15.7.6 AND ACI3520.3–06
      B. RISK CATEGORY: III
      C. BASIC SEISMIC FORCE RESISTANCE SYSTEMS:
      STEEL MOMENT FRAME R – 4
      STEEL BRACED FRAME R – 3.25
   4. WIND DESIGN CRITERIA:
      A. EXPOSURE FACTOR: C
      B. IMPORTANCE FACTOR: IW 1.0

KEY NOTES:

① DENOTES BRACED FRAME

BUILDING PLAN

ST-2

REVISED BY | DATE REVISED

CALCULATED–DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR
MIKE PUGH (DEWBERRY)

LAST REVISION 01–31–25
DATE PLOTTED => 01–30–2025
TIME PLOTTED => 1:47 PM

BORDER LAST REVISED 7/2/2010

USERNAME => tpretzer
FILE NAME => Sonora Border.dwg
Sonora Building.dwg

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER 50185787

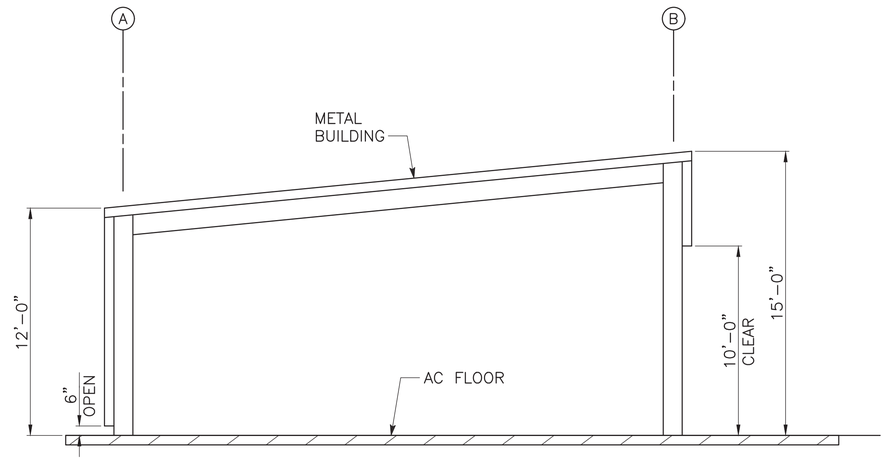
CITY OF SONORA CALIFORNIA	SHEET No.	TOTAL SHEETS
CITY PUBLIC WORKS MAINTENANCE YARD STRUCTURE	12	16

REGISTERED CIVIL ENGINEER

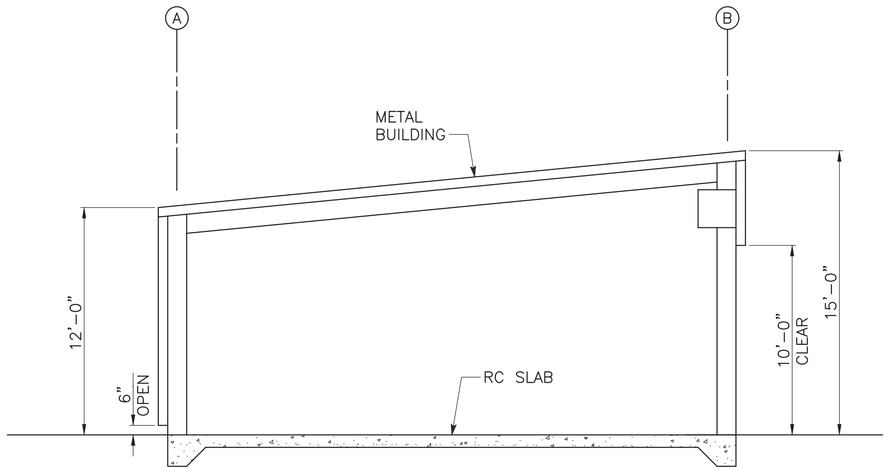
REGISTERED PROFESSIONAL ENGINEER
MICHAEL PUGH
No. S 3967
Exp. 3-31-25
STRUCTURAL
STATE OF CALIFORNIA

DEWBERRY ENGINEERS INC.
575 EAST LOCUST AVENUE
FRESNO, CA 93720

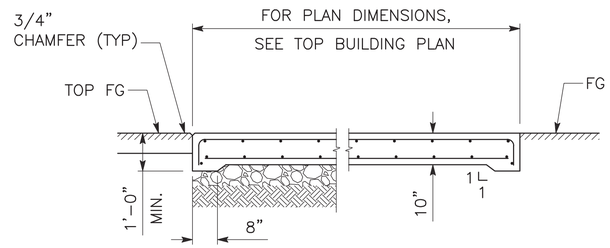
CITY OF SONORA
94 NORTH WASHINGTON STREET
SONORA, CA 95370



SECTION B-B
SCALE: 3"=1'-0"



SECTION A-A
SCALE: 3"=1'-0"



SECTION C-C
SCALE: 3"=1'-0"

BUILDING SECTIONS

ST-3

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY

CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR
MIKE PUGH (DEWBERRY)

LAST REVISION 01-31-25
DATE PLOTTED => 01-30-2025
TIME PLOTTED => 1:48 PM

BORDER LAST REVISED 7/2/2010
USERNAME => tpretzer
FILE NAME => Sections.dwg
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0000
PROJECT NUMBER 50185787

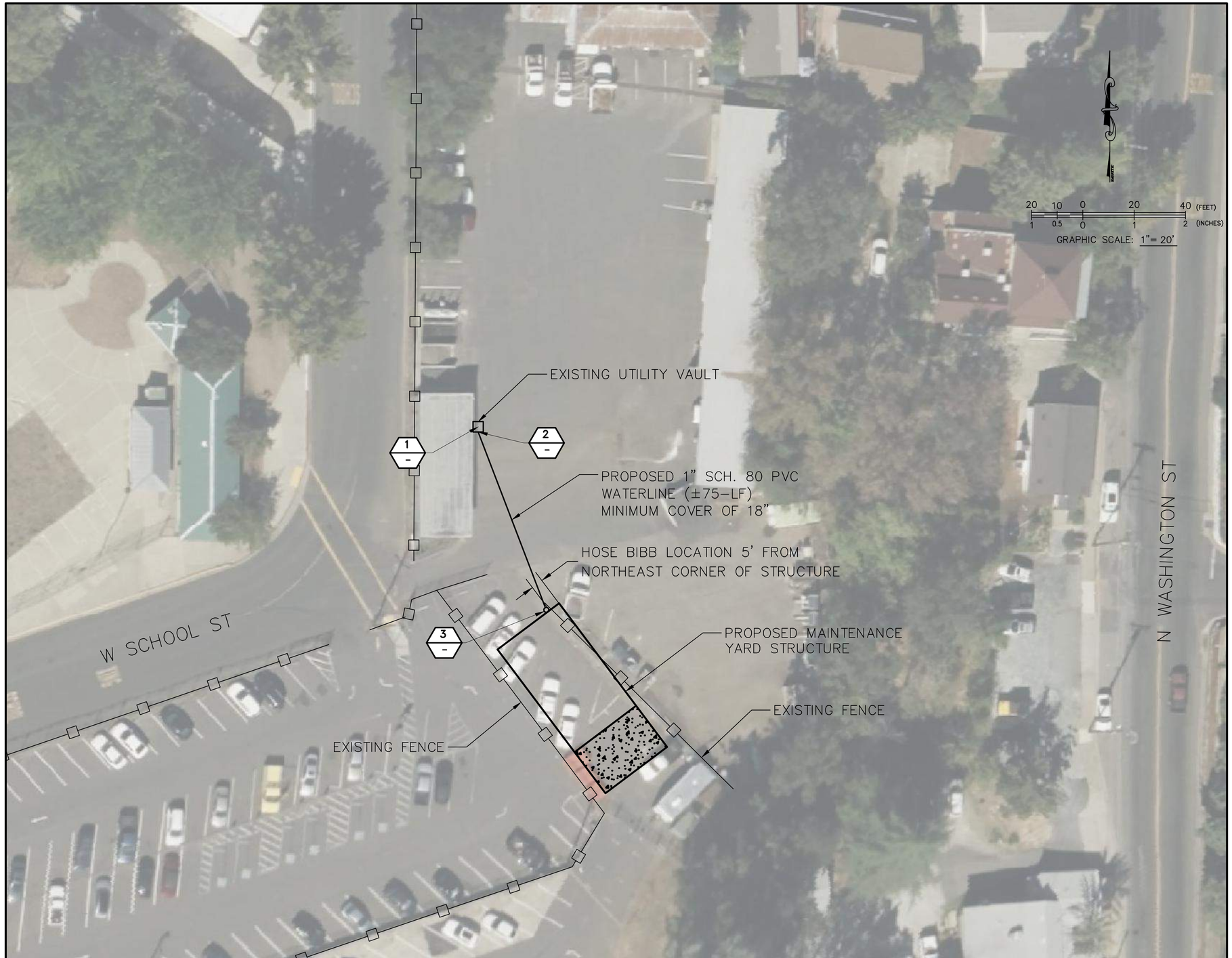
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
SON	TUO	CITY PARK		1	3

REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
DAVID RICHARD
No. 33479
EXP. 6/30/26
CIVIL
STATE OF CALIFORNIA

DEWBERRY ENGINEERS INC.
575 EAST LOCUST AVENUE
FRESNO, CA 93720

CITY OF SONORA
94 SOUTH WASHINGTON STREET
SONORA, CA 95370



WATERLINE PLAN
W-1

SCALE: Horiz 1"=20'

CALCULATED–DESIGNED BY	C.AGUIAR	REVISED BY	
CHECKED BY	D.RICHARD	DATE REVISED	1.31.2025

CONSULTANT FUNCTIONAL SUPERVISOR

CITY OF SONORA

MAINTENANCE YARD STRUCTURE – WATERLINE EXTENSION

LAST REVISION 01–31–25
DATE PLOTTED => 01–23–2025
TIME PLOTTED => 9:49 AM

BORDER LAST REVISED 7/2/2010

USERNAME => caguiar
FILE NAME =>

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER 50185787

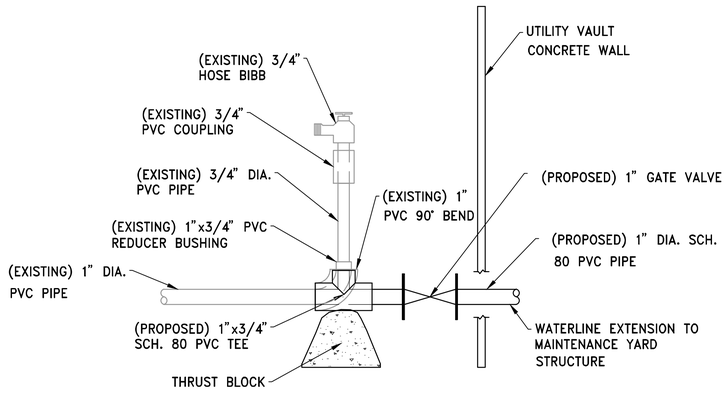
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
SON	TUO	CITY PARK		2	3

REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
DAVID RICHARD
No. 33479
EXP. 6/30/26
CIVIL
STATE OF CALIFORNIA

DEWBERRY ENGINEERS INC.
575 EAST LOCUST AVENUE
FRESNO, CA 93720

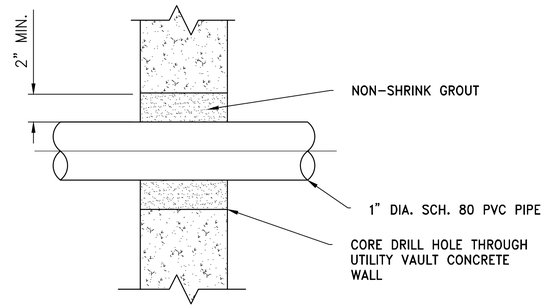
CITY OF SONORA
94 SOUTH WASHINGTON STREET
SONORA, CA 95370



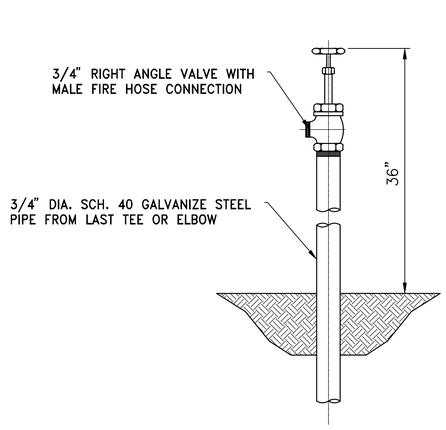
NOTES:

1. CITY TO ISOLATE EXISTING LINE PRIOR TO BEGINNING WORK.
2. CONTRACTOR TO CUT AND DRAIN EXISTING LINE.
3. DEPTH OF EXISTING PIPE IS APPROXIMATELY 20".
4. REMOVE AND REPLACE EXISTING 1" PVC 90° BEND WITH 1"x3/4" SCH. 80 PVC TEE.
5. CONNECT PROPOSED 1" DIA. SCH. 80 PVC PIPE TO 1"x3/4" SCH. 80 PVC TEE, UTILITY VAULT CONCRETE WALL WILL BE PENETRATED TO EXTEND WATERLINE FROM VAULT TO MAINTENANCE YARD STRUCTURE SEE DETAIL 2, THIS SHEET.

WATERLINE EXTENSION CONNECTION DETAIL 1
SCALE: NTS



CORE DRILLING DETAIL 2
SCALE: NTS



HOSE BIBB CONNECTION DETAIL 3
SCALE: NTS

WATER PIPELINE DETAILS 1
W-2

SCALE: NTS

CITY OF SONORA
MAINTENANCE YARD STRUCTURE - CONNECTION DETAILS

REVISED BY	DATE REVISED
	1.31.2025

CALCULATED-DESIGNED BY: C.AGUIAR
CHECKED BY: D.RICHARD
CONSULTANT FUNCTIONAL SUPERVISOR

LAST REVISION 01-31-25
DATE PLOTTED => 01-23-2025
TIME PLOTTED => 9:49 AM

BORDER LAST REVISED 7/2/2010
USERNAME => caguiar
FILE NAME =>
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0000
PROJECT NUMBER 50185787

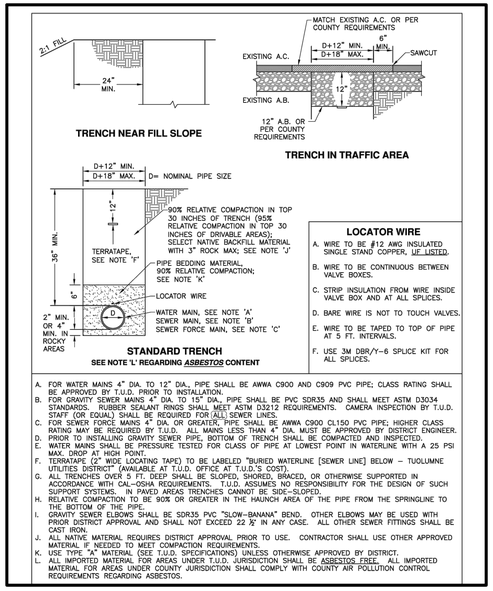
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
SON	TUO	CITY PARK		3	3

REGISTERED CIVIL ENGINEER

REGISTERED PROFESSIONAL ENGINEER
DAVID RICHARD
No. 33479
EXP. 6/30/26
CIVIL
STATE OF CALIFORNIA

DEWBERRY ENGINEERS INC.
575 EAST LOCUST AVENUE
FRESNO, CA 93720

CITY OF SONORA
94 SOUTH WASHINGTON STREET
SONORA, CA 95370



TRENCH FOR WATERLINE DETAIL

SCALE: NTS

4
TYP

WATER PIPELINE DETAILS 2

W-3

SCALE: NTS

LAST REVISION	DATE PLOTTED => 01-23-2025
01-31-25	TIME PLOTTED => 9:49 AM

REVISED BY	DATE REVISED
	1.31.2025

CALCULATED-DESIGNED BY: C.AGUIAR
CHECKED BY: D.RICHARD
CONSULTANT FUNCTIONAL SUPERVISOR

CITY OF SONORA
MAINTENANCE YARD STRUCTURE – T.U.D. STANDARD DETAILS

BORDER LAST REVISED 7/2/2010

USERNAME => caguiar
FILE NAME =>

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER 50185787

ABBREVIATIONS

3W	3-WIRE
4W	4-WIRE
A	AMPERE
AC	ALTERNATING CURRENT
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
CPT	CONTROL POWER TRANSFORMER (IN INDIVIDUAL STARTER CUBICLE)
CT	CURRENT TRANSFORMER
Cu	COPPER
DC	DIRECT CURRENT
DIA	DIAMETER
DPDT	DOUBLE PULL DOUBLE THROW
DS	DISCONNECT SWITCH
EGEN	EMERGENCY GENERATOR
FS	FLOW SWITCH
G, EG	EQUIPMENT GROUND
GFCT	GROUND FAULT CURRENT TRANSFORMER
GFI	GROUND FAULT INTERRUPTING
GRD	GROUND
HP	HORSEPOWER
HZ	HERTZ
INST	INSTANTANEOUS
JB	JUNCTION BOX
kV	KILO (1000) VOLT
kVA	KILO (1000) VOLT AMPERES
kW	KILO (1000) WATT
LOR	LOCK OUT RELAY
LS	LIMIT SWITCH
M	METER
MAX	MAXIMUM
MIN	MINIMUM
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MTS	MANUAL TRANSFER SWITCH
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NO	NUMBER, NORMALLY OPEN
OC	ON CENTER
OCB	OIL CIRCUIT BREAKER
OL	OVERLOAD RELAY
P	POLE
PB	PULL BOX
pf	POWER FACTOR
PH, ø	PHASE
PL	PILOT LIGHT
PM	POWER METER
PRESS	PRESSURE
PRI	PRIMARY
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RECT	RECTIFIER
RES	RESISTOR
RCPT	RECEPTACLE
RTD	RESISTANCE TEMPERATURE DETECTOR
RTU	REMOTE TELEMETRY UNIT
RU	RACK UNIT
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
RVSS	REDUCED VOLTAGE SOFT STARTER
SEC	SECONDARY
SP	SPARE
SQ	SQUARE
SS	SELECTOR SWITCH, STAINLESS STEEL
SW	SWITCH
SWBD	SWITCHBOARD
Th-MAG	THERMAL-MAGNETIC
TS	TEST SWITCH
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
T-STAT	THERMOSTAT
TVSS	TRANSIENT VOLTAGE SURGE SUPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UPT	UNSHIELDED TWISTED PAIR
V	VOLTAGE, VOLTS
VFD	VARIABLE FREQUENCY DRIVE
VS	VIBRATION SWITCH
WP	WEATHERPROOF
W	WATTS
XFMR	TRANSFORMER
XMTR	TRANSMITTER
(E)	EXISTING
(N)	NEW

SYMBOLS LEGEND

CONDUIT RUN UNDERGROUND OR IN CONCRETE

DP-1 CONDUIT HOME RUN TO PANEL DP1, CIRCUIT NO. 1
SHORT MARKS INDICATE NO. OF POWER CONDUCTORS, LONG DASH DENOTES NEUTRAL, SHORT DASH DENOTES LINE, CURVED LINE DENOTES GROUND

EXPOSED CONDUIT

CONDUIT BENDS TOWARD OBSERVER

CONDUIT BENDS AWAY FROM OBSERVER

GROUND GRID WIRE

RAILING

FLEXIBLE LIQUID – TIGHT CONDUIT CONNECTION

P1 INDICATES CONDUIT NUMBER
SEE CABLE AND CONDUIT SCHEDULE

X POLE MOUNTED LIGHT FIXTURE
X – LIGHTING SCHEDULE DESIGNATION

120V DUPLEX RECEPTACLE, NEMA CONFIGURATION 5-20.

100AT 100AF MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED: 100A – TRIP RATING IN AMPERES
AT – AMPERES TRIP
AF – AMPERES FRAME
MCP – MOTOR CIRCUIT PROTECTOR

MEDIUM VOLTAGE STARTER

N.O. CONTACT

N.C. CONTACT

NORMALLY OPEN – TIME DELAY

NORMALLY CLOSED – TIME DELAY

OL OVERLOAD RELAY CONTACTS

FUSE

COPPER SLUG

L INDICATING LIGHT:
G-GREEN
R-RED

FIELD TERMINATION (DEVICES)

52 MEDIUM OR HIGH VOLTAGE DRAWOUT BREAKER

* FULL VOLTAGE NON-REVERSING STARTER, NEMA SIZE AS INDICATED BY *

X FLUORESCENT LIGHT FIXTURE
X – LIGHTING SCHEDULE DESIGNATION

LUG

J JUNCTION BOX

ETM ELAPSED TIME METER

CT CURRENT TRANSFORMER, RATIO AND NUMBER OF CT'S AS NOTED

FUSED DISCONNECT SWITCH
3 POLE UNLESS OTHERWISE NOTED

HEATER

CR CONTROL RELAY

M MOTOR STARTER CONTACTOR

50/51 INSTANTANEOUS AND TIME OVERCURRENT RELAY

51 TIME OVERCURRENT RELAY

86 LOCKOUT RELAY (HAND RESET)

59/N GROUND FAULT OVERVOLTAGE RELAY

EMERGENCY LIGHTING PACK

GROUND ROD

PUSHBUTTON STATION

DISCONNECT SWITCH

THERMOSTAT OR MOTOR TEMP. SWITCH

5 INDUCTION MOTOR, (NUMBER INDICATES HORSEPOWER)

OVERLOAD RELAY

ALARM HORN

MOTION DETECTOR

P1 INDICATES CONDUIT NUMBER – SEE CABLE AND CONDUIT SCHEDULE

INDICATES CONDUIT NUMBER – SEE CABLE AND CONDUIT SCHEDULE

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR | MIKE PUGH

CITY OF SONORA CALIFORNIA
CITY PUBLIC WORKS MAINTENANCE YARD STRUCTURE

SHEET No. XX | TOTAL SHEETS XX

REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER – STATE OF CALIFORNIA – Electrical Engineer – Exp. 2025 – NOT FOR CONSTRUCTION

EETS, INC.
6060 SUNRISE VISTA DRIVE
SUITE 1450
CITRUS HEIGHTS, CA 95610

CITY OF SONORA
94 SOUTH WASHINGTON STREET
SONORA, CA 95370

GENERAL NOTE

1. THIS IS A GENERAL LEGEND SHEET. SOME SYMBOLS AND ABBREVIATIONS MAY NOT BE UTILIZED ON THIS SPECIFIC PROJECT.

CALL BEFORE YOU DIG

UNDERGROUND SERVICE ALERT
UTILITY NOTIFICATION CENTER OF CALIFORNIA
811 OR 1-800-422-4133

5 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

811 Know what's below. Call before you dig. usanorth811.org

SYMBOLS & ABBREVIATIONS

E-1

DATE PLOTTED => 02-04-2025
TIME PLOTTED => 2:05 PM
LAST REVISION 04-05-24

REVISED BY	DATE REVISED

CALCULATED–DESIGNED BY	CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR	
MIKE PUGH	

CODES & REGULATIONS

1. ALL ELECTRICAL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND SHALL COMPLY WITH ALL NATIONAL AND LOCAL AUTHORITIES, ORDINANCES, AND CODES AT TIME OF INSTALLATION. THIS INCLUDES THE CALIFORNIA BUILDING CODE (IBC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA), AND AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).
2. ALL CONSTRUCTION AND OPERATIONS BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS. PRIOR TO BEGINNING WORK, CONTACT OSHA FOR PERMIT REQUIREMENTS.
3. ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH CURRENT CONSTRUCTION INDUSTRY STANDARDS AND WORKMANSHIP.
4. IN THE EVENT OF CODE CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL.

GENERAL NOTES

1. ALL EQUIPMENT SHALL BE NEW, UNUSED, AND U.L. LISTED (WHERE A U.L. LISTING IS AVAILABLE FOR THAT CLASS OF EQUIPMENT).
2. ALL EQUIPMENT FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE, UNLESS A LONGER PERIOD IS SPECIFIED BY THE MANUFACTURER.
3. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS OCCURRING THROUGH THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT.
4. VERIFY FINAL OPENING DIMENSIONS IN WALLS, SLABS, AND DECKS WITH OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION OF THESE ELEMENTS.
5. VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS GUARANTOR OF CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, OR SAFETY AT THE JOB SITE.
6. PRIOR TO COMMENCING WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD LOCATE ALL AFFECTED UNDERGROUND UTILITIES MAIN AND SERVICE LINES AND POTHOLE ALL CONFLICTING UTILITIES PRIOR TO EXCAVATION. THE CONTRACTOR SHALL NOTIFY THE MEMBERS OF THE UNDERGROUND SERVICE ALERT (U.S.A.) 48 HOURS IN ADVANCE OF PERFORMING EXCAVATION WORK, BY CALLING THE TOLL–FREE NUMBER 811 FROM DIGALERT.ORG/CONTACT. THE KNOWN EXISTING BURIED UTILITIES AND PIPELINES ARE SHOWN ON THE DRAWINGS IN THEIR APPROXIMATE LOCATIONS. THERE IS NO GUARANTEE THAT ALL EXISTING PIPELINES AND OBSTRUCTIONS ARE SHOWN OR THAT LOCATIONS INDICATED ARE ACCURATE.
7. CONSTRUCTION MATERIALS TESTING, AND INSPECTION SHALL COMPLY WITH THESE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS. FAILURE TO MEET ANY OF THE ABOVE REQUIREMENTS SHALL BE CAUSE FOR REJECTION.
8. CONTRACTOR SHALL KEEP ONE ACCURATE, LEGIBLE SET OF AS–BUILT DRAWINGS AT THE SITE AND AVAILABLE FOR REVIEW BY THE ENGINEER IN CONTRACTOR'S FIELD OFFICE THROUGHOUT THE PROJECT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THE AS–BUILT DRAWINGS SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO FINAL ACCEPTANCE OF THE WORK.
9. ALL MANUFACTURED EQUIPMENT, ACCESSORIES, AND MATERIALS SHALL BE USED AS INTENDED BY THE CONTRACTOR, IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTALLATION, OPERATION, AND MAINTENANCE INSTRUCTIONS.
10. COORDINATE ELECTRICAL WORK WITH THAT OF OTHER TRADES. REFER TO CIVIL AND STRUCTURAL DRAWINGS AND SPECIFICATIONS. COORDINATION SHALL OCCUR PRIOR TO FABRICATION, PURCHASE, AND INSTALLATION OF WORK.
11. THOROUGHLY TEST ALL LINES, FEEDERS, EQUIPMENT, AND DEVICES WITH MAXIMUM LOADS TO ASSURE PROPER OPERATION.
12. COMPLETION OF WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE PROJECT SCHEDULE. SCHEDULE INSTALLATION WITH OTHER TRADES TO ENSURE PROJECT MILESTONES ARE MET.
13. DRAWINGS ARE DIAGRAMMATIC AND DO NOT SHOW ALL COMPONENTS REQUIRED FOR A COMPLETE INSTALLATION. PROVIDE COMPONENTS REQUIRED FOR COMPLETE AND OPERATIONAL SYSTEMS INCLUDING RACEWAYS, CONDUCTORS, BOXES, SUPPORTS, AND SIMILAR ITEMS.
14. DEVICE LOCATIONS ARE APPROXIMATE. COORDINATE DEVICE LOCATIONS AND ELEVATIONS WITH APPROPRIATE DOCUMENTS INCLUDING CASEWORK SHOP DRAWINGS AND INTERIOR ELEVATIONS PRIOR TO ROUGH–IN.
15. DRAWINGS ARE NOT INTENDED TO SHOW THE EXACT LOCATION OF CONDUIT RUNS AND STUB–UPS. THESE ARE TO BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICTS AND MAINTAIN REQUIRED CLEARANCES. THE CONTRACTOR SHALL COORDINATE CONDUIT STUB–UP LOCATIONS BASED UPON APPROVED EQUIPMENT SHOP DRAWINGS.
16. NOT ALL COMPONENTS AND FEATURES ARE SHOWN ON PLANS. CONTRACTOR SHALL REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS TO PROVIDE A COMPLETE FUNCTIONAL SYSTEM.
17. THE CONTRACTOR SHALL NOTIFY THE CITY REGARDING ANY DISCREPANCIES OR AMBIGUITIES, WHICH MAY EXIST IN THE PLANS OR SPECIFICATIONS PRIOR TO ROUGH IN.
18. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.

GENERAL NOTES (CONTINUED)

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND LICENSES AND PAYING ALL ASSOCIATED FEES REQUIRED FOR THE CONSTRUCTION AND COMPLETION OF THE PROJECT.
20. THE PROJECT CONTRACTOR SHALL EXERCISE DUE CAUTION AND SHALL CAREFULLY PRESERVE BENCHMARKS AND SURVEY REFERENCE POINTS, AND SHALL BEAR ALL EXPENSES FOR REPLACEMENT BY A CALIFORNIA REGISTERED PROFESSIONAL LAND SURVEYOR.
21. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, BARRICADES, SIGNS, FLAGMEN, OR OTHER DEVICES NECESSARY FOR PUBLIC SAFETY.
22. THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO PROTECT ALL EXISTING UTILITIES SO THAT NO DAMAGE RESULTS DURING THE PERFORMANCE OF THIS CONTRACT WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PRESERVATION OF ALL SUCH FACILITIES IN THE AREA OF CONSTRUCTION AND SHALL NOTIFY UTILITY COMPANIES A MINIMUM OF FORTY–EIGHT HOURS IN ADVANCE OF ANY CONSTRUCTION.
23. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. THE COST OF REPLACING EXISTING IMPROVEMENTS WITH SAME LEVEL OF QUALITY SHALL BE INCLUDED IN THE CONTRACT BID PROCESS.
24. CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS WITHIN THE PROJECT SITE, STAGING AREAS, AND ACCESS ROAD TO THE SITE, DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS INCLUDES THE SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
25. REQUIRE ALL NECESSARY PERMITS AND COMPLY WITH ALL LOCAL CODES AND ORDINANCES FOR EXCAVATIONS OR TRENCHES FIVE (5) FEET OR MORE IN DEPTH.
26. WHENEVER PAVEMENT IS BROKEN OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE SPECIFICATIONS, THE CONTRACTOR SHALL REPLACE THE PAVEMENT, AFTER PROPER BACKFILLING, WITH PAVEMENT MATERIALS EQUAL TO OR BETTER THAN THE MATERIALS USED IN THE ORIGINAL PAVING. THE FINISHED PAVEMENT SHALL BE SUBJECT TO THE APPROVAL OF THE CITY.
27. EXACT LIMITS OF PAVEMENT REMOVAL AND RECONSTRUCTION SHALL BE DETERMINED IN THE FIELD BY THE CITY.
28. DUST SHALL BE CONTROLLED IN COMPLIANCE WITH LOCAL AUTHORITY AND PROJECT TECHNICAL SPECIFICATIONS.
29. ALL DRAINAGE PATTERNS SHALL BE MAINTAINED AT ALL TIMES DURING AND AFTER CONSTRUCTION.
30. PERFORM ALL VERIFICATION, OBSERVATIONS, TESTING, AND EXAMINATION OF WORK PRIOR TO THE ORDERING OF ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE CITY LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT, AND DISCREPANCIES.
31. UNAUTHORIZED CHANGES & USES: THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
32. ALL OPEN TRENCHES SHALL BE APPROPRIATELY PLATED OVER, WHEN THE CONTRACTOR IS NOT ACTIVELY WORKING IN SAID TRENCH.
33. PRIOR TO OPENING AN EXCAVATION, THE CONTRACTOR SHALL DETERMINE WHETHER UNDERGROUND INSTALLATIONS; I.E., SEWER, WATER, FUEL, ELECTRIC LINES, ETC., WILL BE ENCOUNTERED AND IF SO, WHERE SUCH UNDERGROUND INSTALLATION ARE LOCATED, WHEN THE EXCAVATION APPROACHES THE LOCATION OF SUCH UNDERGROUND INSTALLATION, THE EXACT LOCATION SHALL BE DETERMINED BY CAREFUL PROBING OR HAND DIGGING; AND, WHEN IT IS UNCOVERED, ADEQUATE PROTECTION SHALL BE PROVIDED FOR THE EXISTING INSTALLATION BY THE CONTRACTOR.
34. THE CITY SHALL BE NOTIFIED AT LEAST 48 HOURS IN ADVANCE OF ANY WORK TO BE PERFORMED.
35. A TEN (10) DAY NOTICE SHALL BE GIVEN FOR ANY PLANNED DISRUPTION, AND THE CITY OR ASSOCIATED UTILITY COMPANY TO BE AFFECTED SHALL BE NOTIFIED IMMEDIATELY UPON ANY UTILITY SERVICE DISRUPTION OTHER THAN SPECIFIED PREVIOUSLY.
36. EXISTING OVERHEAD ELECTRIC AND TELEPHONE TRANSMISSION LINES MAY BE LOCATED AT OR NEAR THE SITE. THESE OVERHEAD UTILITIES ARE NOT SHOWN ON THE DRAWINGS. EXTREME CAUTION SHALL BE USED WHEN WORKING IN THE VICINITY OF OVERHEAD UTILITIES SO AS TO PREVENT INJURY TO WORKMEN OR DAMAGE TO THE UTILITIES.

GENERAL NOTES (CONTINUED)

37. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR PROTECTING EXISTING TREES NOT IDENTIFIED FOR REMOVAL. ANY TREE DAMAGED SHALL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE CITY.
38. CONTRACTOR SHALL COORDINATE AND NOTIFY THE CITY 24 HOURS PRIORS TO WHEN WORK IS READY FOR INSPECTIONS. NO UNDERGROUND WORK SHALL BE BURIED PRIOR TO INSPECTION BY THE CITY. THE PRESENCE OR ABSENCE OF THE CITY WILL NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR THE PROPER PERFORMANCE OF WORK.
39. CONTRACTOR SHALL REMOVE AND LEGALLY DISPOSE OF ALL MATERIALS THAT ARE TO BE REMOVED FROM THE SITE, INCLUDING SURPLUS EXCAVATION MATERIALS AND DEBRIS. THE CONTRACTOR SHALL MAINTAIN THE SITE IN A SAFE, NEAT, AND ORDERLY CONDITION. THE CONTRACTOR SHALL DELIVER MATERIALS OR EQUIPMENT TO BE SALVAGED AND RETURNED TO THE CITY AT THE LOCATION TO BE DETERMINED BY THE CITY. MATERIALS MAY INCLUDE MECHANICAL/ELECTRICAL SYSTEMS THAT MAY BE DEMOLISHED AS PART OF THE WORK. REMOVED MATERIALS SHALL BE DISPOSED OF USING A LICENSED CARTING SERVICE.
40. ALL TRAFFIC CONTROL SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL AND CITY STANDARDS AND SPECIFICATIONS.
41. CONTRACTOR SHALL COMPLY WITH ALL STATE AND COUNTY LAWS AND ORDINANCES RELATING TO SAFETY AND CHARACTER OF WORK, EQUIPMENT, AND LABOR PERSONNEL. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO COVID–19 REGULATIONS AS MAY BE IN EFFECT AT THE TIME, SHORING OF TRENCHES, VENTILATION OF CONFINED SPACES, CONFORMANCE TO TRAFFIC CONTROL REQUIREMENTS, INCLUDING PROVISIONS AND MAINTENANCE OF BARRICADES, TRENCH COVERS, AND PREPARATION AND IMPLEMENTATION OF TRAFFIC CONTROL PLANS AS REQUIRED.
42. MANHOLE ENTRY AND/OR ENTRY TO ANY EXCAVATION OR STRUCTURE GREATER THAN FOUR (4) FEET DEEP SHALL BE IN FULL COMPLIANCE WITH THE CONFINED SPACE ENTRY REQUIREMENTS OF CALIFORNIA AND FEDERAL OSHA.
43. CONTRACTOR SHALL PREPARE A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE PROJECT. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING, ADHERING TO, AND MAINTAINING THE SWPPP FOR THE DURATION OF THE PROJECT. THE SWPPP SHALL BE SUBMITTED TO THE CITY FOR APPROVAL PRIOR TO THE START OF ANY WORK. THE CITY MAY AT ANY TIME INSPECT AND OBSERVE COMPLIANCE WITH THE SWPPP.
44. CONTRACTOR SHALL PROVIDE TEMPORARY SECURITY FENCING FOR THE STAGING AREA. THE CITY SHALL NOT BE RESPONSIBLE FOR SITE SECURITY.
45. CONTRACTOR SHALL POTHOLE TO EXPOSE ALL EXISTING PIPING AT UTILITY CROSSINGS AND PROPOSED CONNECTIONS TO DEVELOP INFORMATION TO FACILITATE PIPE FABRICATIONS AND CONNECTIONS. EXPOSURE AND MEASUREMENT SHALL OCCUR PRIOR TO PIPING SHOP DRAWING SUBMITTALS.
46. IN THE CASE OF AN INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM, THE BETTER QUALITY OR GREATER QUANTITY OF WORK SHALL CONTROL.
47. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
48. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE CONTRACT DRAWINGS.
49. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS, AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
50. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING, AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE CITY.
51. THE CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
52. THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
53. THE AREAS OF THE CITY'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.

CITY OF SONORA CALIFORNIA
CITY PUBLIC WORKS
MAINTENANCE YARD STRUCTURE

SHEET No.	TOTAL SHEETS
XX	XX

REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — JESSICA TOOF — Ex. 12-31-2025 — Electrical Engineer — STATE OF CALIFORNIA

NOT FOR CONSTRUCTION

EETS, INC.
6060 SUNRISE VISTA DRIVE
SUITE 1450
CITRUS HEIGHTS, CA 95610

CITY OF SONORA
94 SOUTH WASHINGTON STREET
SONORA, CA 95370

ALL GENERAL NOTES APPLY TO ALL SHEETS OF THESE CONTRACT DOCUMENTS, AS IF THEY WERE WRITTEN IN THE ENTIRETY ON EACH SHEET.

GENERAL NOTES

E-2

LAST REVISION	DATE PLOTTED => 02–04–2025
04–05–24	TIME PLOTTED => 2:15 PM

ELECTRICAL GENERAL NOTES

1. PROVIDE FIRESTOPPING SYSTEMS FOR CONDUIT AND RACEWAY SYSTEMS AT PENETRATIONS, SLEEVES, AND SLOTS OF FIRE RATED CONSTRUCTION FOR HORIZONTAL AND INTRABUILDING PATHWAYS AND SPACES.
2. ALL HOLES THROUGH MASONRY SHALL BE MADE WITH CORE DRILLS IF NOT SLEEVED THROUGH THE WALLS. IF CONDUITS REQUIRE CORE DRILLING, OTHER METHODS SUCH AS CHISELING OR HAMMERED OUT OPENINGS ARE NOT ACCEPTABLE. THE HOLES SHALL BE MADE NO LARGER THAN ¼ LARGER DIAMETER THAN THE CONDUIT. ALL OPENINGS SHALL BE GROUTED USING CONSTRUCTION-GRADE NON-SHRINK GROUT WHERE INSTALLED THROUGH CONCRETE AND CAULKED USING CONSTRUCTION-GRADE NATURAL CURE SILICONE CAULK WHERE INSTALLED THROUGH SIDING MATERIALS IF SHOWN, DRYWALL OR OTHER FINISHES ABOVE FINISH GRADE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING ALL CONDUITS NOT SHOWN ON THE PLANS. THIS SHALL INCLUDE ALL CONDUITS SHOWN ON THE ONE-LINES AND HOME-RUNS SHOWN ON THE PLAN DRAWINGS. CONDUITS SHALL BE ROUTED AS DEFINED IN THE SPECIFICATIONS.
4. ALL CONDUITS LEAVING OR ENTERING PANELS, ENCLOSURES, AND MOTOR CONTROL CENTERS FROM EXTERIOR OR COLD AREAS SHALL BE DUCT SEALED AT BOTH ENDS.
5. ALL INDOOR BUILDING CONDUIT PENETRATIONS INTO TOP, SIDE, OR BOTTOM OF ELECTRICAL ENCLOSURES ARE REQUIRED TO BE MADE USING MYERS HUBS FOR TERMINATION OF ELECTRICAL CIRCUITS.
6. ALL OUTDOOR BUILDING CONDUIT PENETRATIONS INTO SIDE OR BOTTOM OF ELECTRICAL ENCLOSURES ARE REQUIRED TO BE MADE USING WATERTIGHT MYERS HUBS FOR TERMINATION OF ELECTRICAL CIRCUITS. TOP CONDUIT PENETRATIONS INTO OUTDOOR INSTALLED ENCLOSURES IS PROHIBITED.
7. WHEN CONNECTIONS ARE COMPLETE IN THE CONNECTION BOX, COAT THE TERMINAL BLOCKS AND WIRE ENDS WITH PROTECTIVE COMPOUND, NO-OXIDE OR EQUAL, TO PREVENT CORROSION.
8. ALL PULLBOXES SHALL BE SIZED AS REQUIRED (WITH MINIMUM SIZE OF 12"x10"x8"), UNLESS NOTED OTHERWISE.
9. USE STAINLESS STEEL FASTENERS FOR MOUNTING OF JUNCTION BOXES OR OTHER DEVICES.
10. PROVIDE EQUIPMENT SUPPORTS, PIPE, AND DUCT HANGERS, AS REQUIRED TO SAFELY AND PERMANENTLY CARRY THE WEIGHT OF EQUIPMENT.
11. FACTORY SWEEPS SHALL BE USED AT ALL CONDUIT BENDS. FIELD BENDS ARE NOT ACCEPTABLE. WHEN FACTORY SWEEPS ARE UNAVAILABLE, SWEEPS SHALL BE SIZED TO MEET MINIMUM CABLE BENDING RADIUS OF 12 TIMES CABLE OUTER DIAMETER AND MAXIMUM SIDEWALL PRESSURE REQUIREMENTS.
12. PULL CABLES USING SUFFICIENT LUBRICATION PER CABLE MANUFACTURER'S RECOMMENDATIONS.
13. ALL BREAKERS SHALL HAVE TERMINALS RATED A MINIMUM OF 75°C.
14. ALL POWER CONDUCTORS FOR 480V AND BELOW SYSTEMS SHALL BE 600 VOLT RATED, STRANDED COPPER WITH TYPE THHN/THWN INSULATION PER THE SPECIFICATIONS.
15. UNLESS SHOWN OTHERWISE, ALL LIGHTING & RECEPTACLE HOMERUNS SHALL BE 3/4" CONDUIT CONTAINING (AS A MINIMUM) (2) #12 AND (1) #12 GROUND.
16. SPARE WIRES SHALL BE TAPED AND COILED.
17. ALL WIRING (INTERNAL AND EXTERNAL) SHALL BE TAGGED AT BOTH ENDS WITH PREPRINTED WIRE MARKERS. THE CONTRACTOR SHALL SUBMIT THE WIRE MARKING CODE FOR ACCEPTANCE PRIOR TO THE MANUFACTURE OF THE EQUIPMENT.
18. LOCKOUT AND TAGOUT PROCEDURE SHALL BE COORDINATED WITH THE CITY. LIVE/ENERGIZED WORK IS NOT ALLOWED WITHOUT PRIOR APPROVAL OF THE CITY.
19. CONNECTORS FOR 480V AND BELOW RATED POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
20. ALL WIRING INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
21. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGE THEREIN.

GROUNDING NOTES

1. MULTIPLE ROD GROUNDING SYSTEMS SHALL BE CONNECTED TOGETHER WITH 4/0 BARE STRANDED COPPER CABLE. ALL BELOW GROUND CONNECTIONS SHALL BE EXOTHERMIC WELDED (CADWELD) OR COMPRESSION TYPE AS INDICATED ON DRAWING GROUNDING DETAILS.
2. PROVIDE 1" PVC CONDUIT SLEEVES FOR GROUNDING CABLE PENETRATIONS THROUGH CONCRETE FLOORS AND/OR WALLS.
3. CONNECTING SURFACES OF STEEL AND CABLES SHALL BE THOROUGHLY CLEANED TO BRIGHTNESS AND PREPARED PRIOR TO COMPLETING THE CONNECTION.
4. COMPLETELY AND EFFECTIVELY GROUND ELECTRICAL EQUIPMENT AS REQUIRED BY THE NEC.
5. A GROUND CONDUCTOR SIZED PER NEC ARTICLE 250 IS REQUIRED IN ALL CONDUITS.
6. ALL CONDUITS SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR.
7. LABEL ALL CONNECTIONS AT GROUND BUSBARS, EQUIPMENT, AND TEST WELLS. APPLY METAL TAGS TO CABLES; LABELS SHALL INDICATE CABLE PURPOSE AND POINT OF TERMINATION FOR THE OPPOSITE END OF CABLE.
8. ALL REQUIRED BONDS MAY NOT BE SHOWN; PROVIDE ADDITIONAL BONDS TO ALL DEVICES, INSTRUMENTS, CABINETS, CONTROL VALVES, ETC. AS REQUIRED TO COMPLY WITH UL AND NEC.
9. PROVIDE ELECTRICAL GROUNDING AND BONDING SYSTEM INDICATED WITH ASSEMBLY OF MATERIALS INCLUDING GROUNDING ELECTRODES, BONDING JUMPERS, AND ADDITIONAL ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.
10. ALL GROUNDING CONDUCTORS SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUND WITH GRADUAL BEND AS REQUIRED. GROUNDING CONDUCTORS SHALL NOT BE LOOPED OR SHARPLY BENT. ROUTE GROUNDING CONNECTIONS AND CONDUCTORS TO GROUND IN THE SHORTEST AND STRAIGHTEST PATH POSSIBLE TO MINIMIZE TRANSIENT VOLTAGE RISES.
11. TIGHTEN GROUNDING AND BONDING CONNECTORS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR CONNECTORS AND BOLTS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT AVAILABLE, TIGHTEN CONNECTION TO COMPLY WITH TIGHTENING TORQUE VALUES SPECIFIED IN UL TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
12. ALL GROUNDING CONNECTIONS SHALL BE INSPECTED FOR TIGHTNESS, AND EXOTHERMIC WELDED CONNECTIONS SHALL BE APPROVED BY THE INSPECTOR HAVING JURISDICTION, BEFORE BEING PERMANENTLY CONCEALED.
13. ALL EXISTING GROUND BARS, WIRES, AND CONNECTIONS SHALL BE FIELD VERIFIED. ANY DEFICIENT ITEMS SHALL BE REPLACED AS REQUIRED TO ACHIEVE ADEQUATE GROUNDING REQUIRED.
14. CONTRACTOR SHALL REPAIR, AND/OR REPLACE, EXISTING GROUNDING SYSTEM COMPONENTS DAMAGED DURING CONSTRUCTION AT THE CONTRACTOR'S EXPENSE.
15. TIGHTEN GROUNDING AND BONDING CONNECTORS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR CONNECTORS AND BOLTS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT AVAILABLE, TIGHTEN CONNECTION TO COMPLY WITH TIGHTENING TORQUE VALUES SPECIFIED IN UL TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
16. ALL STEEL STRUCTURES AND ALL MISCELLANEOUS STEEL, INCLUDING LIGHT FRAMEWORK, STEEL SUPPORT STRUCTURES, AND METAL BUILDINGS, SHALL BE SOLIDLY CONNECTED TO THE MAIN GROUND GRID WITH 4/0 BARE COPPER GROUND CABLE.

CITY OF SONORA CALIFORNIA	SHEET No.	TOTAL SHEETS
CITY PUBLIC WORKS MAINTENANCE YARD STRUCTURE	XX	XX

REGISTERED ELECTRICAL ENGINEER

NOT FOR CONSTRUCTION

EETS, INC.
6060 SUNRISE VISTA DRIVE
SUITE 1450
CITRUS HEIGHTS, CA 95610

CITY OF SONORA
94 SOUTH WASHINGTON STREET
SONORA, CA 95370

ALL GENERAL NOTES APPLY TO ALL SHEETS OF THESE CONTRACT DOCUMENTS, AS IF THEY WERE WRITTEN IN THE ENTIRETY ON EACH SHEET.

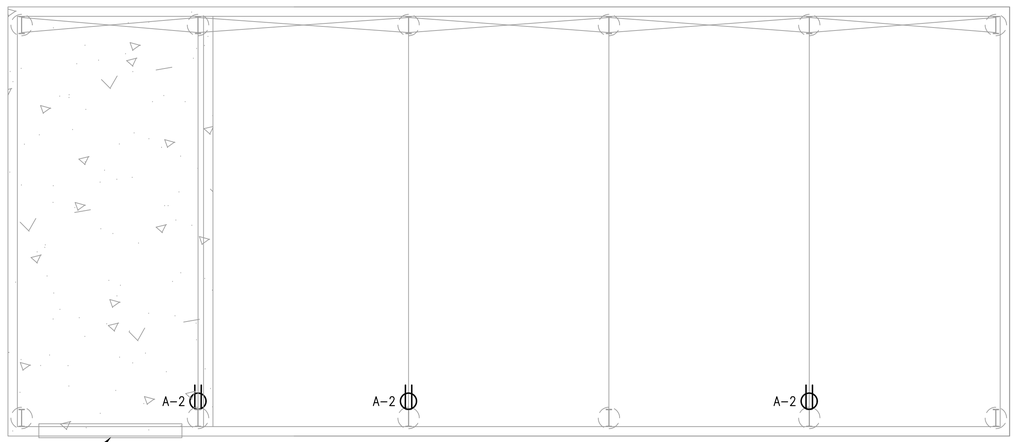
REVISED BY | DATE REVISED | CALCULATED-DESIGNED BY | CHECKED BY | CONSULTANT FUNCTIONAL SUPERVISOR | MIKE PUGH

DATE PLOTTED => 02-04-2025
TIME PLOTTED => 2:16 PM
LAST REVISION 04-05-24

ELECTRICAL NOTES

E-3

OVERALL SITE PLAN
NOT TO SCALE



BUILDING RECEPTACLE PLAN
NOT TO SCALE

CITY OF SONORA CALIFORNIA	SHEET No.	TOTAL SHEETS
CITY PUBLIC WORKS MAINTENANCE YARD STRUCTURE	XX	XX

REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — KEVIN A. TOOF — Ex. 12/31/2025 — Electrical Engineer — STATE OF CALIFORNIA — NOT FOR CONSTRUCTION

EETS, INC.
6060 SUNRISE VISTA DRIVE
SUITE 1450
CITRUS HEIGHTS, CA 95610

CITY OF SONORA
94 SOUTH WASHINGTON STREET
SONORA, CA 95370

GENERAL NOTES

1. EXISTING UTILITIES ARE NOT SHOWN ON THE ELECTRICAL DRAWINGS. CONTRACTOR SHALL FIELD VERIFY EXACT UTILITY LOCATIONS PRIOR TO ROUGH IN. HAND DIG ALL UTILITIES IN CLOSE PROXIMITY TO THE INSTALLATION OF THE ELECTRICAL EQUIPMENT TO AVOID DAMAGING ANY UTILITY LINE.
2. CONDUIT ROUTING IS DIAGRAMMATICALLY SHOWN ON PLANS AND ARE ONLY APPROXIMATIONS. THE EXACT LOCATION AND ROUTING PATHS SHALL BE FIELD VERIFIED AND INSTALLED PER JURISDICTIONAL REQUIREMENTS.
3. ALL ABOVE GROUND BUILDING INTERIOR RACEWAYS SHALL BE EMT, UNLESS THE RACEWAYS ARE NEAR VEHICLE TRAFFIC OR HEAVY EQUIPMENT TRAVELED AREAS, WHERE THE RACEWAYS ARE SUBJECT TO DAMAGE. AS A SUBSTITUTE TO EMT IN VEHICLE TRAFFIC OR HEAVY EQUIPMENT TRAVELED AREAS IN BUILDING INTERIOR, THE CONTRACTOR SHALL USE GALVANIZED RIGID STEEL CONDUIT FOR ABOVE GROUND RACEWAYS. ALL BUILDING EXTERIOR ABOVE GROUND RACEWAYS SHALL BE GALVANIZED RIGID STEEL. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 RIGID PVC. INSTALLATION OF CONDUIT SHALL BE IN ACCORDANCE WITH THE NEC AND CITY OF SONORA STANDARDS. SEE SHEET E7 DETAIL D5 FOR CONDUIT RISER DETAIL.

KEY NOTE

1. MOUNT NEW LOAD CENTER ON EXTERIOR OF BUILDING IN LINE OF SIGHT WITH EXISTING 100A PANEL.

OVERALL SITE PLAN

E-4

REVISED BY	DATE REVISED

CALCULATED–DESIGNED BY

CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR: MIKE PUGH

LAST REVISION: 04–05–24

DATE PLOTTED => 02–04–2025
TIME PLOTTED => 2:20 PM

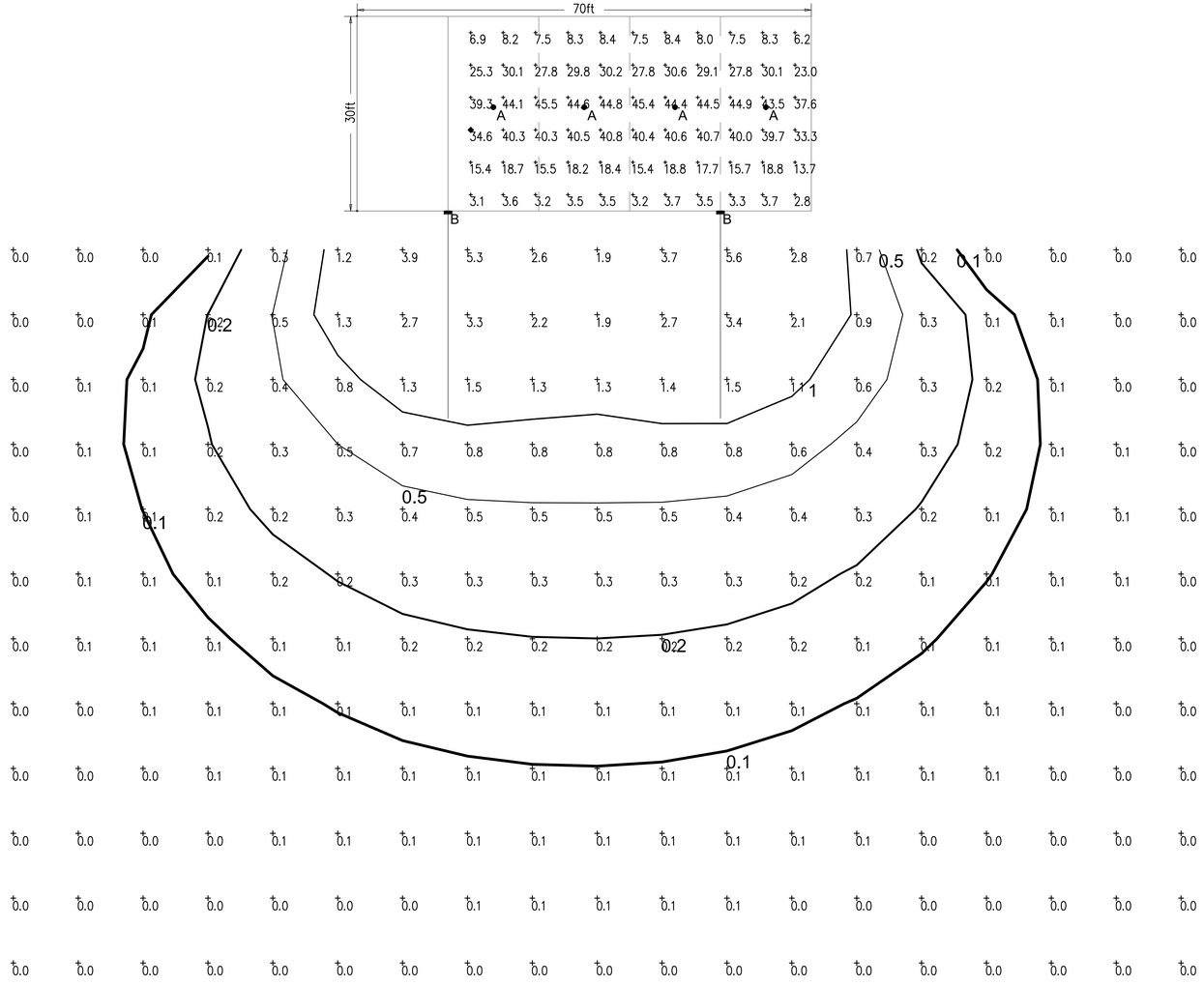
BORDER LAST REVISED 7/2/2010

USERNAME => ktoof
FILE NAME => E4 – Overall Site

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000 Plan.dwg

PROJECT NUMBER & PHASE 50185787



LIGHTING SITE PLAN

NOT TO SCALE

LUMINAIRE SCHEDULE

SYMBOL	QUANTITY	TAG	LABEL	ARRANGEMENT	DESCRIPTION	LLF	LUM LUMENS	LUM WATTS	TOTAL WATTS
	4	A	H17SB @60W_4K + RAL	SINGLE	HIGHBAY W/ ALUM REFLECTOR	1.000	9841	59.9562	239.825
	2	B	X17XFU105T @50W_4K	SINGLE	TRUNNION MOUNT FLOODLIGHT	1.000	6311	47.72	95.44

CALCULATION SUMMARY

LABEL	CALCULATION TYPE	UNITS	AVERAGE	MAXIMUM	MINIMUM	AVG/MIN	MAX/MIN	PtSpcLr	PtSpcTb	METER TYPE
EXTERIOR LIGHTING	ILLUMINANCE	Fc	0.37	5.6	0.0	N.A.	N.A.	10	10	HORIZONTAL
METAL BUILDING_FLOOR	ILLUMINANCE	Fc	23.18	45.5	2.8	8.28	16.25	5	5	NORMAL

ROOM SUMMARY

LABEL	TYPE	WALL HEIGHT	DESCRIPTION
METAL BUILDING	Rect-VertExtr	12	REFLECTANCES: 50/50/20

GENERAL NOTES

1. LOCATION OF THE LIGHTING FIXTURES ARE SHOWN DIAGRAMMATICALLY. VERIFY EXACT LOCATIONS AND SPACING WITH PLANS AT THE SITE DURING INSTALLATION. NOTIFY THE ENGINEER ABOUT VARYING FIELD CONDITIONS WITH CONTRACT DOCUMENTS, BEFORE COMMENCING INSTALLATION.
2. ALL LIGHTING FIXTURES SHALL BE PROVIDED COMPLETELY WITH ALL LAMPS, WIRES, AND CONTROLLERS SECURELY ATTACHED TO SUPPORTS.
3. CONTRACTOR SHALL VERIFY MOUNTING REQUIREMENTS OF ALL LIGHT FIXTURES AND COORDINATE WITH THE LIGHT FIXTURE SUPPLIER TO FURNISH ALL REQUIRED MOUNTING HARDWARE AND ACCESSORIES THAT ARE SUITABLE FOR THE SPECIFIC MOUNTING SURFACE AND ENVIRONMENT, REGARDLESS OF WHAT IS SPECIFIED IN THE LUMINAIRE SCHEDULE.
4. SEE SHEET E5 FOR PANEL 'A' SCHEDULE.

CITY OF SONORA CALIFORNIA
CITY PUBLIC WORKS
MAINTENANCE YARD STRUCTURE

SHEET No. XX | TOTAL SHEETS XX

REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — KEITH A. TOOF — Ex. 12-31-2025 — Electrical Engineer — STATE OF CALIFORNIA

NOT FOR CONSTRUCTION

EETS, INC.
6060 SUNRISE VISTA DRIVE
SUITE 1450
CITRUS HEIGHTS, CA 95610

CITY OF SONORA
94 SOUTH WASHINGTON STREET
SONORA, CA 95370

SITE PLAN - LIGHTING

E-5

REVISED BY | DATE REVISED
CALCULATED-DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR: MIKE PUGH

LAST REVISION 04-05-24
DATE PLOTTED => 02-04-2025
TIME PLOTTED => 2:17 PM

BORDER LAST REVISED 7/2/2010
USERNAME => ktoof
FILE NAME => E5 - Site Plan
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 0000 Electrical
PROJECT NUMBER & PHASE 50185787

EXISTING PANEL SCHEDULE

PANEL: – TYPE: AS SPECIFIED FRAME: – MAIN: NONE

SERVICE: 120/240V, 1ø–3 WIRE AIC RATING: – MOUNT: SURFACE

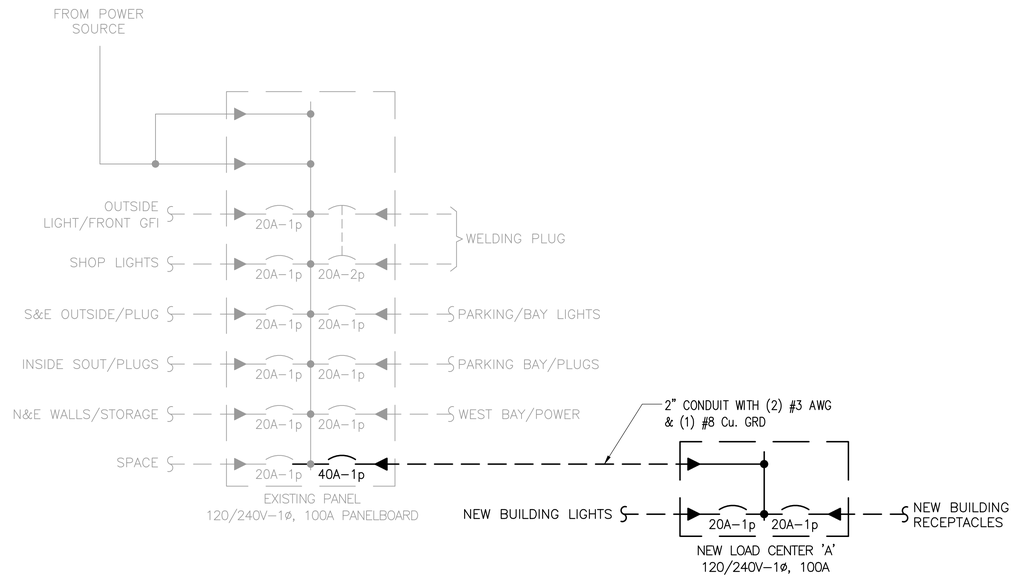
LOAD	KW	CB	#	S/N	#	CB	KW	LOAD
OUTSIDE LIGHT/FRONT GFI	–	20/1	1	X	2	20/2	–	WELDING PLUG
SHOP LIGHTS	–	20/1	3	X	4			
S&E OUTSIDE/PLUG	–	20/1	5	X	6	20/1	–	PARKNG/BAY LIGHTS
INSIDE SOUTH/PLUGS	–	20/1	7	X	8	20/1	–	PARKING BAY/PLUGS
N&E WALLS/STORAGE	–	20/1	9	X	10	20/1	–	WEST BAY/POWER
SPACE	–	20/1	11	X	12	40/1	–	NEW PANEL

NEW LOAD CENTER SCHEDULE

LOAD CENTER: 'A' TYPE: AS SPECIFIED FRAME: 100A MAIN: NONE

SERVICE: 120/240V, 1ø–3 WIRE AIC RATING: 10 kAIC MOUNT: SURFACE

LOAD	KW	CB	#	S/N	#	CB	KW	LOAD
INTERIOR CEILING LIGHTS	–	20/1	1	X	2	20/1	–	RECEPTACLES



CITY OF SONORA CALIFORNIA | SHEET No. XX | TOTAL SHEETS XX

CITY PUBLIC WORKS
MAINTENANCE YARD STRUCTURE

REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — KEVIN A. TOOF — Ex. 12-31-2025 — Electrical Engineer — STATE OF CALIFORNIA — NOT FOR CONSTRUCTION

EETS, INC.
6060 SUNRISE VISTA DRIVE
SUITE 1450
CITRUS HEIGHTS, CA 95610

CITY OF SONORA
94 SOUTH WASHINGTON STREET
SONORA, CA 95370

KEY NOTES

1. LOAD CENTER SHALL BE SQUARE D MODEL QO816L100RB, 100A, 120/240V AC, 8 SPACES, 10kA, NEMA 3R OUTDOOR RATED.
2. CONTRACTOR SHALL VERIFY EXISTING EQUIPMENT RATINGS PRIOR TO ROUGH–IN. IF DISCREPANCIES EXIST, CONTRACTOR SHALL CONTACT ENGINEER OF RECORD.
3. THE CONTRACTOR SHALL METER THE EXISTING PANEL FOR A MINIMUM OF 30 DAYS PER NEC 220.87 TO DETERMINE WHETHER IT HAS SUFFICIENT CAPACITY FOR THE ADDITION OF NEW LOADS, WHICH TOGETHER ARE RATED AT 3.65 AMPS AT 240V SINGLE–PHASE. IF THE PANEL LACKS CAPACITY, THE CONTRACTOR SHALL COORDINATE WITH THE CITY FOR THE ADDITION OF A NEW ELECTRICAL SERVICE WITH PG&E. IF THE PANEL HAS SUFFICIENT CAPACITY, THE CONTRACTOR SHALL PROCEED WITH THE CONSTRUCTION AS OUTLINED IN THE CONTRACT DRAWINGS.

   FOR A NEW SERVICE, THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION EFFORTS, INCLUDING ISSUING THE REQUIRED DRAWINGS TO PG&E THROUGH A CALIFORNIA–LICENSED ENGINEER AND MANAGING THE PROCESSING AND INSTALLATION OF THE NEW SERVICE WITH PG&E TO ENSURE A FULLY FUNCTIONAL SYSTEM. THE CONTRACT DRAWINGS SHALL BE MODIFIED AS NECESSARY TO INCORPORATE NEW OR MODIFIED EQUIPMENT TO PROVIDE POWER TO THE NEW LIGHTS AND RECEPTACLES WHILE ENSURING COMPLIANCE WITH THE NEC AND LOCAL CITY CODES.

   ALL NEW SERVICE ELECTRICAL DRAWINGS SUBMITTED TO PG&E SHALL FIRST BE REVIEWED AND APPROVED BY THE CITY BEFORE SUBMISSION.

LOAD CALCULATIONS

LIGHTING LOADS (PER ISO–FOOTCANDLE ANALYSIS)

BUILDING LIGHTING: 335.27 VA

RECEPTACLE LOADS (PER NEC 220.14(I))

(3) GENERAL PURPOSE RECEPTACLES
@ 180VA/RECEPTACLE = 540 VA

TOTAL LOAD

= 335.27 + 540
= 875.27 VA
= 3.65 AMPS @ 240V, 1ø

SIZE LOAD CENTER FOR 240V, 1ø, 60 AMP SERVICE

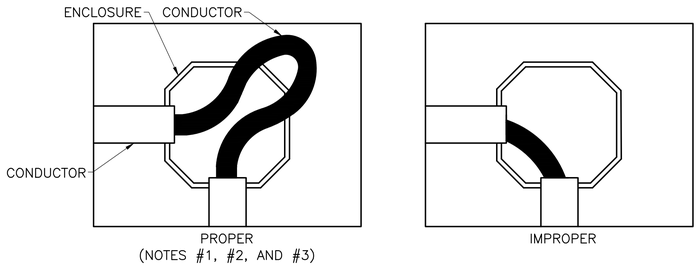
SCHEDULES & ONE-LINE DIAGRAM

E-6

REVISED BY | DATE REVISED
CALCULATED–DESIGNED BY | CHECKED BY
CONSULTANT FUNCTIONAL SUPERVISOR: MIKE PUGH

LAST REVISION 04–05–24 | DATE PLOTTED => 02–04–2025 | TIME PLOTTED => 2:17 PM

D01
TYP

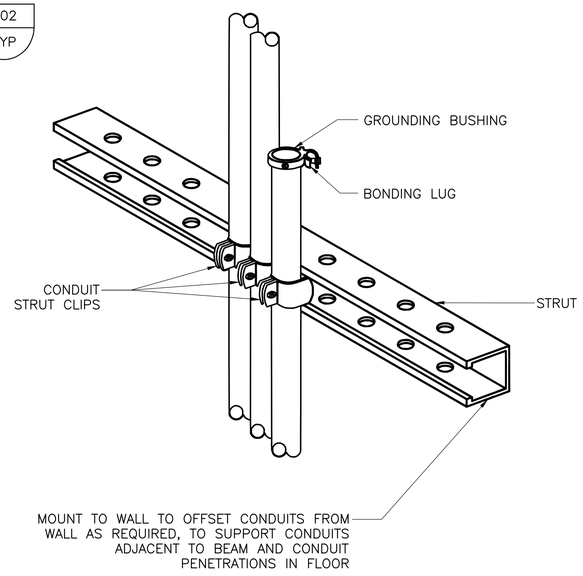


PULL THROUGH ENCLOSURE
NOT TO SCALE

DETAIL NOTES:

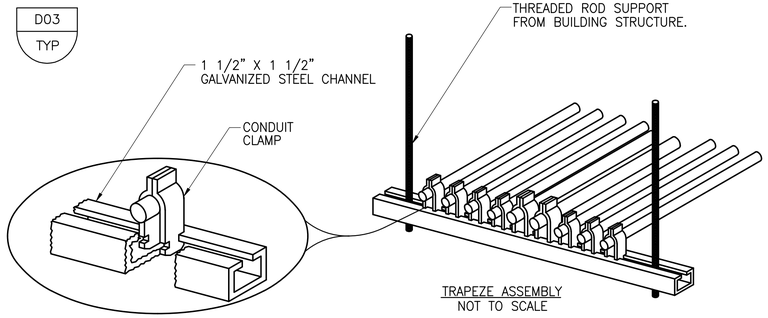
1. DO NOT PULL CABLES AND CONDUCTORS DIRECTLY ACROSS SHORT AND SHARP ANGLES. AFTER PULLING A CABLE OR CONDUCTOR COMPLETELY OUT OF ONE SIDE OF AN ENCLOSURE, FEED THE CABLE OR CONDUCTOR INTO THE OTHER SIDE OF THE ENCLOSURE AND PULL THAT SEGMENT.
2. MINIMUM BENDING RADII OF CABLES AND WIRES MUST BE MAINTAINED.
3. WHEN CABLES AND CONDUCTORS TRANSITION OUT OF CONDUITS IN ENCLOSURES, USE INSULATING BUSHINGS MADE OF PLASTIC AS REQUIRED TO MAINTAIN THE SAFETY OF CABLE AND CONDUCTOR RUNS.

D02
TYP



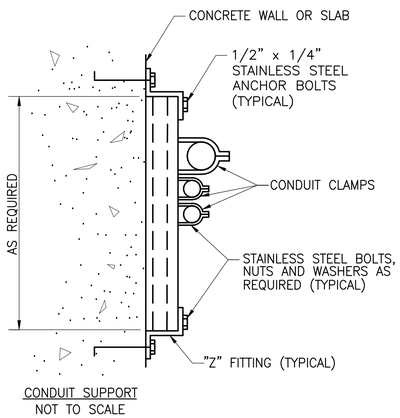
CONDUIT ROUGH–IN SUPPORT
NOT TO SCALE

D03
TYP



DETAIL NOTES:

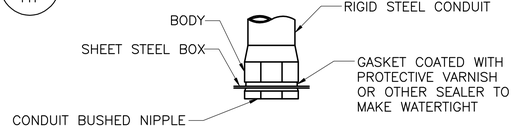
1. THIS DETAIL IS TYPICAL FOR BOTH VERTICAL AND HORIZONTAL MOUNTING.
2. CHANNEL AND ALL SUPPORT DEVICES TO BE HOT DIP GALVANIZED STEEL. FIELD COAT ALL CUTS, ETC. TO MATCH.
3. CHANNELS TO BE SPACED 5' MAXIMUM.



CONDUIT SUPPORT
NOT TO SCALE

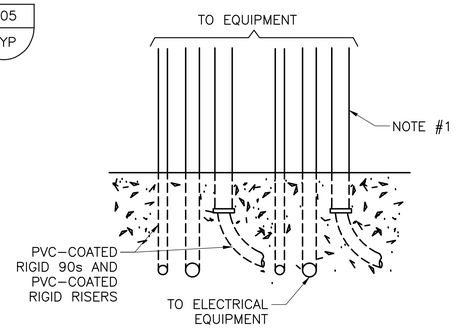
TYPICAL CONDUIT PIPE SUPPORTS (TYPICAL)
NOT TO SCALE

D04
TYP



CONDUIT ENTRANCE DETAIL
NOT TO SCALE

D05
TYP

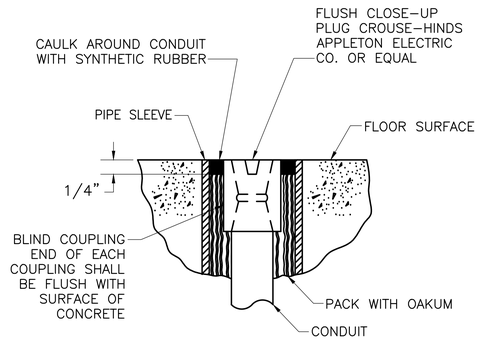


CONDUIT RISER
NOT TO SCALE

DETAIL NOTE:

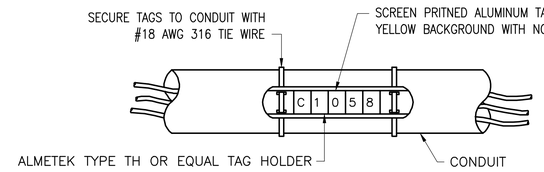
1. ALL CONDUITS FROM UNDERGROUND TO ABOVEGROUND 90s AND RISER PIPES SHALL BOTH BE PVC–COATED RIGID.

D06
TYP



CONDUIT PLUG FLOOR STUB UP
NOT TO SCALE

D07
TYP



TYPICAL CONDUIT MARKING SYSTEM
NOT TO SCALE

DETAILS ON THIS SHEET ARE TYPICAL ONLY AND ALL INSTALLATION AND REQUIREMENTS SHOULD BE COORDINATED WITH THE CONTRACTED VENDOR.

CITY OF SONORA CALIFORNIA
CITY PUBLIC WORKS
MAINTENANCE YARD STRUCTURE

SHEET No.	TOTAL SHEETS
XX	XX

REGISTERED ELECTRICAL ENGINEER

REGISTERED PROFESSIONAL ENGINEER — KTOOF — Exp. 12-31-2025 — Electrical Engineer — STATE OF CALIFORNIA — NOT FOR CONSTRUCTION

EETS, INC.
6060 SUNRISE VISTA DRIVE
SUITE 1450
CITRUS HEIGHTS, CA 95610

CITY OF SONORA
94 SOUTH WASHINGTON STREET
SONORA, CA 95370

ELECTRICAL DETAILS - 1

E-7

REVISED BY	DATE REVISED

CALCULATED–DESIGNED BY

CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR

MIKE PUGH

LAST REVISION 04–05–24

DATE PLOTTED => 02–04–2025
TIME PLOTTED => 2:18 PM

BORDER LAST REVISED 7/2/2010

USERNAME => ktoof
FILE NAME => E7 – Electrical

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000
Details – 1.dwg

PROJECT NUMBER & PHASE 50185787

CITY OF SONORA CALIFORNIA	SHEET No.	TOTAL SHEETS
CITY PUBLIC WORKS MAINTENANCE YARD STRUCTURE	XX	XX

REGISTERED ELECTRICAL ENGINEER

NOT FOR CONSTRUCTION

EETS, INC.
6060 SUNRISE VISTA DRIVE
SUITE 1450
CITRUS HEIGHTS, CA 95610

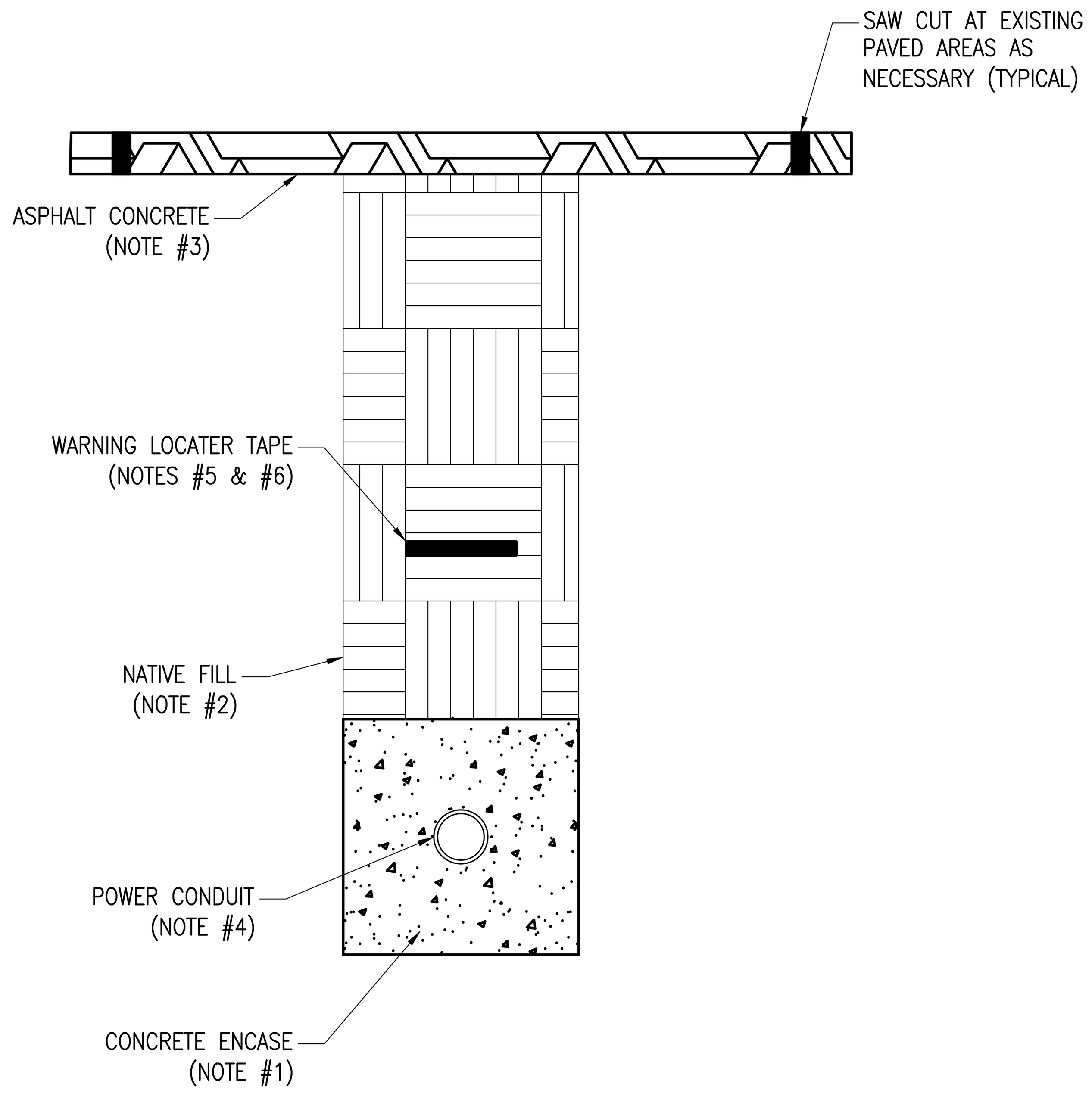
CITY OF SONORA
94 SOUTH WASHINGTON STREET
SONORA, CA 95370

REVISED BY | DATE REVISED

CALCULATED–DESIGNED BY | CHECKED BY

CONSULTANT FUNCTIONAL SUPERVISOR | MIKE PUGH

D08 TYP



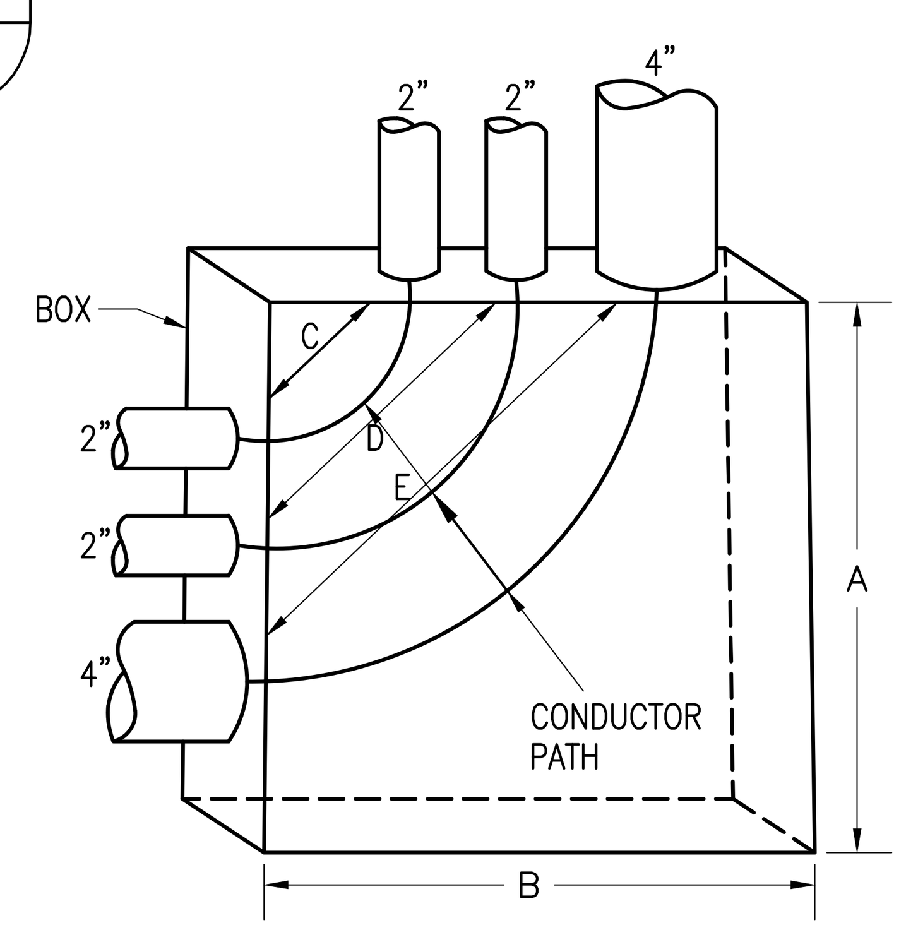
TYPICAL 600V BELOW 1 x 1 DUCT BANK DETAIL

NOT TO SCALE

DETAIL NOTES:

1. SLURRY SHALL HAVE A MAXIMUM STRENGTH OF 100 PSI AND SHALL BE PIGMENTED RED.
2. NATIVE BACKFILL SHALL BE COMPACTED TO 95% RELATIVE DENSITY.
3. REPLACE IN KIND ASPHALT CONCRETE AND STRUCTURAL BASE AS REQUIRED. CONTRACTOR SHALL PATCH, RESURFACE, AND REPLACE ANY PARTS OF THE PROJECT ASPHALT CONCRETE AFFECTED BY THE NEW TRENCH, WITH THICKNESS AND QUALITY TO MATCH EXISTING.
4. PLACE CONDUIT RUNS IN PLASTIC SPACERS (RATED FOR DIRECT BURIAL) EVERY 5' ALONG LENGTH OF RUN, AND TIE CONDUITS TO PREVENT FLOATATION DURING CONCRETE PLACEMENT. SPACERS NOT SHOWN IN DETAIL.
5. DURING BACKFILLING OF TRENCH, INSTALL CONTINUOUS UNDERGROUND LINE WARNING TAPE DIRECTLY ABOVE RACEWAY AT 12-INCHES BELOW FINISHED GRADE. USE MULTIPLE TAPES WHERE WIDTH OF MULTIPLE LINES INSTALLED EXCEEDS 16-INCHES OVERALL.
6. HEAVY-GAUGE, SOLID ALUMINUM CORE, LAMINATED, RED COLOR WITH BLACK LETTERING; MINIMUM 6" WIDTH FOR USE IN TRENCHES CONTAINING ELECTRIC CIRCUITS; MATERIAL RESISTANT TO CORROSIVE SOIL AND CONTAINING A METALLIC TRACER WIRE FOR USE WITH CABLE LOCATORS; PRINTED "CAUTION-BURIED (TYPE) CONDUIT" ON THE TAPE, TO BE ROUTED ABOVE AND ALONG ENTIRE LENGTH OF DUCT BANK.

D09 TYP



A = (6 x 4 INCH) + 2 INCH + 2 INCH
= 28 INCH MINIMUM

B = (6 x 4 INCH) + 2 INCH + 2 INCH
= 28 INCH MINIMUM

C = 6 x 2 INCH
= 12 INCH MINIMUM REQUIRED BETWEEN RACEWAYS ENCLOSING THE SAME CONDUCTOR

D = 6 x 2 INCH
= 12 INCH MINIMUM REQUIRED BETWEEN RACEWAYS ENCLOSING THE SAME CONDUCTOR

E = 6 x 4 INCH
= 24 INCH MINIMUM REQUIRED BETWEEN RACEWAYS ENCLOSING THE SAME CONDUCTOR

RACEWAY ENCLOSING SAME 600V & BELOW CONDUCTORS IN BOX

NOT TO SCALE

(SEE NEC SECTION 314.28 FOR BOX SIZING AND NEC SECTION 314.70 FOR MEDIUM VOLTAGE BOX SIZING)

DETAILS ON THIS SHEET ARE TYPICAL ONLY AND ALL INSTALLATION AND REQUIREMENTS SHOULD BE COORDINATED WITH THE CONTRACTED VENDOR.

ELECTRICAL DETAILS - 2

E-8

DATE PLOTTED => 02-04-2025
TIME PLOTTED => 2:18 PM
LAST REVISION 04-05-24