

WATER RESOURCES INTEGRATION PROGRAM (WRIP) PHASE 2, PUMP STATION IMPROVEMENTS SAWS Job No. 16-8604 SAWS Solicitation No. CO-00339

ADDENDUM 1 6/30/2020

To Bidder of Record:

This addendum, applicable to work referenced above, is an amendment to the bid proposal, plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the bid proposal.

RESPONSES TO QUESTIONS

- 1. Please confirm proposals may be submitted via the drop box without Owners permission, per IV-1. 01300 2/8, 1.03. A. 3. states 'CONTRACTOR may deliver submittals to Owner using conventional mail only after securing Owner's written approval'.
 - <u>Response:</u> Proposals may be submitted via the drop box without Owner's permission.
- 2. Please clarify if Final Completion is 660 days per Price Proposal (PP-1) and Proposal Certification (PC-1) or 661 days per Contract (CA-1).
 - <u>Response:</u> Work shall be completed in full within 660 consecutive calendar days. The CA-1 will be updated, refer to CONTRACTS in the changes to the specifications of this addendum.
- 3. For the Price Proposal, Item No. 13 Startup / Commissioning Allowance, please clarify the intent of this allowance. Is this intended for each site location, all inclusive, or should the Contractor include additional startup / commissioning for Item No. 1 3. Please Clarify.
 - <u>Response:</u> Contractor should include startup/commissioning for Item No. 1-3 in price proposal one for the project. Price Proposal Item No. 13 is for unforeseen items during startup not identified in the contract documents.
- 4. Contract Drawing D-1402, indicates concrete support saddles, per Detail 1/S-1402. Detail 1 on S-1402 indicates that the Surge Tank Manufacturer shall provide the saddle support. This detail doesn't appear to be shown as a concrete support saddle. Please clarify if the support saddles shall be concrete, and if so, please provide a detail. If they are to be steel and provide by Surge Tank Manufacturer, please correct call out on D-1402.
 - <u>Response:</u> Surge tank supports shall be steel and provided by manufacturer, call out will be updated. Refer to Drawing D-1402 Surge Tank Sections and Details in the changes to the plan of this addendum.
- 5. SIR-11 indicates subs/suppliers must be registered with the SCTRCA to count towards SWMBE Goal and be certified as an SBE to count toward the MWBE Goal. Do non-SCTRCA HUB certified MWBE subs/suppliers count toward the GEEP?
 - <u>Response:</u> Yes. In addition to being HUB/MBE/WBE/SBE-certified, a contractor or subcontractor must also have a local business presence (office or tool yard) in order to count toward the aspirational SMWB goal.
- 6. May Control Panels USA, Inc. be listed in the project specifications among the other firms pre-approved to provide PCSI and ASP services for the Water Resources Integration Program (WRIP) Phase 2 Pump Station Improvements Project (Solicitation No. CO-00339-SM)?
 - <u>Response:</u> Specification 17300 Process Controls System General Provisions will be revised in a subsequent addendum.

- 7. <u>Background</u>: Page 14 of the December 21, 2017 geotechnical report and Section 1 ("Concrete Tank Slab Section") in Sheet S-1502, call for perimeter footing dimensions (depth and width) that are not consistent with standard industry practice for AWWA D110, Type III prestressed concrete tanks. For example, a. Page 14 of the geotechnical report recommends that the perimeter footing "extend at least 24 inches into the select fill material." This is also reflected in Section 1, "Concrete Tank Slab Section" in Sheet S-1502. Given that finish grade is 6 inches below the top of the footing, this recommendation would require a 2'-6" deep footing. However, this is contrary to standard practice according to which the perimeter footing is normally 12 to 15 inches deep. b. Section 1 of Sheet S-1502 also shows a 5'-0"-wide footing at the bottom, while page 14 of the geotechnical report recommends a 3'-0" width. The latter is more consistent with standard practice according to which the typical footing width (especially for competent subgrade as is the case at this tank site) is 3'-0" to 4'-0"._Question: Considering that the tank manufacturer is fully responsible for the tank foundation design, please confirm that the geometry and design of the perimeter footing is the responsibility of the tank manufacturer provided that said geometry and design fully meet the requirements of AWWA D110-13 and the provisions of the tank specifications.
 - <u>Response:</u> The tank manufacturer is fully responsible for the tank foundation design. The footing embedment shall be a minimum of 18" thick with 12" minimum into select fill material, and a minimum of 3' width. Refer to Drawing S-1502 in the changes to drawings of this addendum.
- 8. Please confirm that the allowable soil bearing pressure is 4,000 psf as recommended in the geotechnical report and specified in the tank specs; and that therefore, Foundations Note 1 in Sheet S-1001 ("The allowable soil bearing pressure for shallow spread footings is 2,000 pounds per square foot") does not apply to the tank footing design.

 Response: The allowable soil bearing pressure for the Ground Storage Tank is 4,000 psf, the allowable soil bearing pressure for all other foundations is 2,000 psf.
- 9. Would owner consider providing a "Required Document Matrix" for this project? (similar to the attached which was provided with the bidding documents for a previous project- We found this to be very helpful at that time).

 Response: Respondent's Proposal Checklist is available within the Solicitation.
- 10. Article V of the Supplemental Conditions indicates that Installation Floater Insurance is required for this project which, "insures SAWS and the City for damages to all Property Purchased for, or Assigned to, the Project commencing on the start date through completion. Policy limits shall be in an amount equal to the total contract cost contracted herewith. The policy form shall be an All Risk form and shall include coverage for both during transit and while stored at the work site". To avoid duplicate coverage, is the installation floater still required if our Builder's Risk policy provides far superior coverage than the floater? On an installation floater the coverage ends once the materials become part of the structure/project as opposed to a Builders Risk which covers everything associated with the project (except the existing structure) until the project/job is completed. Our insurance provider is concerned that if we have both policies in place on the same project, they could void each other out whereas just having a Builders risk to cover the whole thing is much cleaner in a claims scenario with just one set of deductibles.

 Response: No, an installation floater is not required if the Builder Risk Policy is in place for the property.
- 11. Please confirm surety can use their own bid bond form since one was not provided in the contract documents. Response: Surety company can use their own bid bond form.
- 12. Please confirm there is no maintenance bond required for this project. Response: Maintenance bond not required for this project.
- 13. Can you provide a pipe schedule for this project? What Pipe is required for the 2" CA, & 6" DR? (Ref Plan Page 13) Response: Piping for 2" CA is stainless steel and 6" DR is PVC pipe, schedule 40 type.
- 14. Ref Spec 15103 2.01 E. Flanges shall conform to ANSI/ASME B16.1, Class 125. The Valve schedule is calling out several areas with Pressure Class 300 Flanges. Does this specification need to be updated to include the 300 PSI rating?
 - <u>Response:</u> Flanges shall be rated for 300 psi, refer to specification 15102 AWWA Ball Valves in Changes to the Specifications of this addendum.
- Ref Plan Page 60. Can you provide a specification for the Duckbill check Valve?
 Response: The duckbill check valve detail requirement is listed in technical specification 13207, Section 2.06B.

- 16. Ref Plan Page 16. Can you provide a detail / specification for the Casing Spacers/End Seals that will go one the pipe in the existing casing?
 - <u>Response:</u> Requirements for the casing spacers/end seals that will go on the pipe in the existing casing have been provided, refer to Specification 02220 Excavating, Backfill and Compaction for Utilities in the changes to the specifications section of this addendum.
- 17. Ref Plan Page 15 and spec section 15065 2.01 A. Pipe B is called out as 300 PSIG in the specification. The Profile on page 15 is calling the line from Sta 13+40 to 14+80 as Class 150. Please verify which is correct.

 Response: Pipe B has a 300 psig working pressure, refer to drawing C-1110 Yard Piping Profiles 1 in the changes to the drawings section of this addendum.
- 18. Ref Detail 1/Page 14 & Detail B/Page 26. This ductile iron pipe is called out as needing to be rated for 300 PSI. Would Flg C110 150# drilling fittings with Tourseal Gaskets be acceptable to meet this requirement? Or will you require 250# Flange Drilling Fittings? 4"-24" Toruseal Gaskets are rated to 350 PSI.

 Response: Provide AWWA C110 flanges with special gaskets as specified in AWWA C111 to provide for a 350 psi rated flanged joint.
- 19. Ref Plan Page 63. Trench Drain. Do you have a specification for the trench drain? Response: Trench drain manufacturer information is located on Detail 1 Sheet D-1903.
- 20. Respondents Proposal Checklist, under sealed envelope 2 indicates that it must include, "One USB flash drive of Original Proposal Packet <u>Including Price Proposal</u>", however item F.9 (SIR-13) indicates that, "The CD or thumb drive shall contain the entire proposal package as submitted, <u>excluding the ... Price Proposal</u>". Please confirm priced proposal does not need to be included on USB.
 Response: Price Proposal does not need to be included on the USB.
- 21. Can the Good Faith Effort Plan be made available in Microsoft Word format for this project? (If Michele wants- we used a word version last time since we had almost 100 subs/suppliers listed on it at time of bid)

 Response: Yes, the Good Faith Effort Plan will be made available in Word Format.
- 22. On sheet D-1402 it shows the tank supports to be concrete, and to refer to S-1402. The support on S-1402 isn't a concrete pipe supports and states the tank manufacturer will provide the supports. Please advise.
 <u>Response:</u> Surge tank supports shall be steel and provided by manufacturer, call out will be updated. Refer to Drawing D-1402 Surge Tank Sections and Details in the changes to the plan of this addendum.
- 23. With regards to Evaluation Criteria Form, page EV-1, it states, "While there are page limits for this solicitation, there are no character limitations". Please clarify page limitations for each section and what is meant by character limitations (for instance is this in regard to font size)?
 Response: There are no page limits for the Evaluation Forms. Respondents are required to provide the requested information using the fillable forms available on the SAWS website. There is not character limit for each of the responses inside the forms.
- 24. In the Evaluation Criteria Form, page EV-18, Proposers are required to provide a list of all current and completed pump station improvement, rehabilitation and new construction projects performed in the last 5 years in Texas. However, only 5 project spaces are provided. In order to provide our complete experience on Pump Stations from the last 5 years as requested, can Bidder's submit a structured list of all these projects in Excel format as long as every required item of information is present, In lieu of the tables 1-5 provided?

 Response: For consistency purposes, Respondents must use tables provided as part of this solicitation. They can copied as necessary.
- 25. Please confirm Rigger Liability Insurance is required on this project and the liability limit required. Response: Yes, Rigger Liability Insurance is required.
- 26. Please confirm piping material for the 2" CA.

 Response: Piping material for 2" CA is stainless steel.

27. Please confirm piping material for the 6" DR.

Response: Piping material for 6" DR is PVC pipe, schedule 40 type.

CHANGES TO THE SPECIFICATIONS

CONTRACT

1. Page CA-1; REPLACE "661 calendar days" with "660 calendar days"

SPECIAL CONDITIONS

- 1. Page SC-1; Third paragraph, first bullet; DELETE "see Drawing D-101" and REPLACE with "see Drawing D-1101"
- 2. Page SC-1; Third paragraph, second bullet; DELETE "see Drawing C-108" and REPLACE with "see Drawing C-1108"
- 3. Page SC-1; Third paragraph, third bullet; DELETE "see Drawing C-108" and REPLACE with "see Drawing C-1108"

Specification 02220 - Excavating, Backfill and Compaction for Utilities

1. ADD the following:

"2.02 END SEAL/CASING SPACERS FOR PIPE INSTALLED IN CASING

- A. End Seals:
 - 1. Sized to securely attach to the exterior of casing and carrier pipe to prevent water, dirt and debris from entering the annular space between the installed pipe and the casing.
 - 2. The end seal shall be pull-on or wrap-around. No concrete, grout or bricks will be acceptable.
 - 3. Clamp end seal to carrier pipe and to casing pipe with ½-inch minimum width 304 stainless steel worm type screw clamps.
 - 4. Material: minimum 1/8-inch thick EPDM rubber.
 - 5. Seam: minimum 2-inch overlap with a self-curing adhesive to seal or mastic tape seal.
- B. Casing Spacers: Sized to securely fasten on to the carrier pipe barrel O.D. Furnish with a runner height to maintain a minimum clearance of one inch between the carrier pipe and casing pipe.
 - 1. Band: 8-inch minimum width, 14-gauge 304 stainless steel.
 - 2. Liner: PVC, minimum 0.090-inch thick.
 - 3. Risers: 10-gauge 304 stainless steel.
 - 4. Runners: 2-inch wide polyester or Ultra-High Molecular Weight Polyethylene (UHMW-PE).
 - 5. Hardware (nuts, washers, bolts, etc.): 304 stainless steel."

Specification 11110 - Horizontal Split-Case Centrifugal Pump

- Section 2.01.A; ADD "6. No Substitutions"
- 2. Section 2.02.F; DELETE "Pump shall be manufactured by Fairbanks-Nijhuis by Pentair, or Engineer-approved equal."

Specification 15103 – AWWA Ball Valves

1. Section 2.01.E; DELETE "Class 125" and REPLACE with "Class 300"

CHANGES TO THE PLANS

Drawing C-1110 - Yard Piping Profiles I

1. Pipe B Profile; REPLACE callout "Construct 48" WSP, Class 150" with "Construct 48" WSP, Class 300"

Drawing D-1402 - Surge Tank Sections and Details

 REPLACE callout "Concrete support saddles (TYP)" with "Steel surge tank supports to be provided by manufacturer"

Drawing S-1002 - Structural General Notes and Abbreviations

REMOVE and REPLACE in its entirety.

Drawing S-1401 – Surge Tank Foundation Plan

1. REMOVE and REPLACE in its entirety.

Drawing S-1502 - Ground Storage Tank Slab Sections and Details

REMOVE and REPLACE in its entirety.

Drawing E-1104 – Ductbank Sections

REMOVE and REPLACE in its entirety.

Drawing E-1105 – Overall Site Lighting Plan

1. REMOVE and REPLACE in its entirety.

Drawing I-1101 – Facility Network Diagram

1. REMOVE and REPLACE in its entirety.

CLARIFICATIONS

1. None

END OF ADDENDUM

This Addendum, including these five (5) pages, is eleven (11) pages with attachments in its entirety.

Attachments.

Don Burger, P.E. Tetra Tech

DONALD J. BURGER

DETAILING AND FABRICATION OF REINFORCING STEEL AND SUPPORTS SHALL CONFORM TO ACI DETAILING MANUAL ACI 315 (SP-66) AND ACI 318.

ALL HOOKS AND BENDS IN REINFORCING BARS SHALL CONFORM TO ACI DETAILING STANDARDS UNLESS SHOWN OTHERWISE.

PROVIDE REINFORCING BARS IN ACCORDANCE WITH THE BAR BENDING DIAGRAM IF BAR TYPES ARE SPECIFIED. IN UNSCHEDULED BEAMS, SLAB, COLUMNS AND WALLS DETAIL REINFORCING AS FOLLOWS:

A. LAP BEAM TOP REINFORCING BARS AT MID SPAN BETWEEN SUPPORTS WITH A CLASS A TENSION SPLICE.

LAP BEAM BOTTOM REINFORCING BARS AT THE SUPPORTS WITH A CLASS A TENSION SPLICE.

LAP VERTICAL BARS IN COLUMNS AND WALLS ONLY AT FLOOR LINES, UNLESS NOTED OTHERWISE.

LAP REINFORCING BARS WITH CLASS B TENSION SPLICE AT OTHER LOCATIONS, UNLESS NOTED OTHERWISE.

PROVIDE STANDARD HOOKS IN TOP BARS AT CANTILEVER AND DISCONTINUOUS ENDS OF BEAMS, WALLS AND SLABS.

PROVIDE CORNER BARS FOR ALL HORIZONTAL BARS AT THE INSIDE AND OUTSIDE FACES OF INTERSECTION BEAMS OR WALLS, CORNER BARS ARE NOT REQUIRED IF HORIZONTAL BARS ARE HOOKED. CORNER BARS SHALL BE SAME SIZE AS LAPPED BARS AND SHALL BE CLASS A TENSION SPLICE WITH 90 DEGREE BEND EACH SIDE, UNLESS NOTED OTHERWISE.

UNLESS NOTED OTHERWISE ON DRAWINGS LAP ALL WELDED WIRE FABRIC A MINIMUM DISTANCE OF ONE CROSS WIRE SPACING PLUS 2 INCHES.

MAT SLAB BOTTOM STEEL SHALL BE CHAIRED AT 5'-0" MAXIMUM CENTERS USING BEAM BOLSTERS PROVIDING 3" BOTTOM COVER TO REINFORCING STEEL. BEAM BOLSTERS USED SHALL BE INTENDED FOR SUPPORT IN SOIL.

ADDITIONAL WALL REINFORCEMENT SHALL BE REQUIRED AROUND ALL OPENINGS IN THE WALL. SEE TYPICAL DETAIL ON THE DRAWINGS.

SPLICES IN WALL REINFORCING STEEL.

UNLESS SHOWN OTHERWISE ON THE DRAWINGS, SPLICE NO MORE THAN 50% OF THE BARS IN ANY VERTICAL WIDTH OF WALL WITH A MINIMUM OFFSET BETWEEN SPLICE PLANES OF A TENSION DEVELOPMENT LENGTH OF THE BARS. SPLICED BARS SHALL BE STAGGERED WITH UNSPLICED BARS. SPLICES SHALL BE A CLASS B TENSION SPLICE.

THE WELDING OF REINFORCING STEEL WILL NOT BE PERMITTED

HEAT SHALL NOT BE USED IN THE FABRICATION OR INSTALLATION OF REINFORCEMENT.

REINFORCING STEEL MINIMUM CLEAR COVER SHALL BE AS FOLLOWS. COVER IN MEMBER NOT SHOWN BELOW SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 UNLESS NOTED OTHERWISE ON DRAWINGS.

1 1/2" TOP, 3" BOTTOM, 3" SIDE (PLACED AGAINST EARTH OR A. GRADE BEAMS:

FORMED).

6" BOTTOM, 3" SIDES DRILLED PIERS:

C. WALLS:

1 1/2" D. COLUMNS:

E. SLABS ABOVE GRADE:

F. BEAMS. JOISTS ABOVE GRADE: 1 1/2"

G. SLAB ON GRADE: 1 1/2" TOP, 3" AGAINST EARTH

CONTRACTOR SHALL MAKE ALLOWANCE TO PROVIDE AND INSTALL ONE (1) TON OF ADDITIONAL REINFORCING STEEL (SIZE TO RANGE FROM #4 TO #10) TO BE USED IN THE FIELD AS DIRECTED BY THE ENGINEER. ANY UNUSED PORTION OF THE QUANTITY SHALL BE CREDITED TO THE OWNER AT THE RATE OF \$2,000.00 PER TON. LABOR FOR PLACING REINFORCING SHALL BE INCLUDED IN UNIT COST. ALL ADDITIONAL REINFORCING STEEL LENGTHS, SIZES AND PLACEMENT LOCATIONS SHALL BE DOCUMENTED BY CONTRACTOR AND PROVIDE3D TO ENGINEER WITHIN SEVEN CALENDAR DAYS OF PLACEMENT.

WHERE NO REINFORCING IS INDICATED IN SLABS ON GRADE. PROVIDE #4 AT 12" ON CENTER, EACH

SPECIAL INSPECTION:

(GROUND STORAGE TANK & SURGE TANK FOUNDATIONS ONLY)

SPECIAL INSPECTION WILL BE PROVIDED BY THE OWNER BASED ON THE REQUIREMENTS OF THE 2018 IBC AS SUMMARIZED IN THE TABLE BELOW. THE CONTRACTOR SHALL PROVIDE SUFFICIENT NOTICE AND ACCESS FOR THE SPECIAL INSPECTOR TO PERFORM THESE INSPECTIONS.

LIST OF SPECIAL INSPECTIONS (1)

ITEM	CONTINUOUS	PERIODIC (3)	COMMENTS
SOILS			
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.		Х	
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X	
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X	
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X		
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X	
CONCRETE			
INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT		X	
INSPECT ANCHORS CAST IN CONCRETE		X	
VERIFY USE OF REQUIRED DESIGN MIX		X	
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	Х		
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X		
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		X	
INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		Х	

FOOTNOTES:

- THE ITEMS CHECKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE PROJECT SPECIFICATIONS AND THE SPECIFIC GENERAL NOTES SECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, STRUCTURAL ENGINEER, CONTRACTOR AND OWNER. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER, SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
- SPECIAL INSPECTION MAY BE REQUIRED FOR WORK PERFORMED BY AN APPROVED FABRICATOR PER
- CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON THE SITE AT ALL TIMES OBSERVING THE WORK REQUIRING SPECIAL INSPECTION. PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON SITE AT TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE.

ABBREVIATIONS:

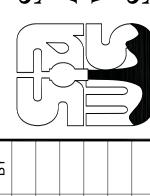
K (KIP)

1000 POUNDS

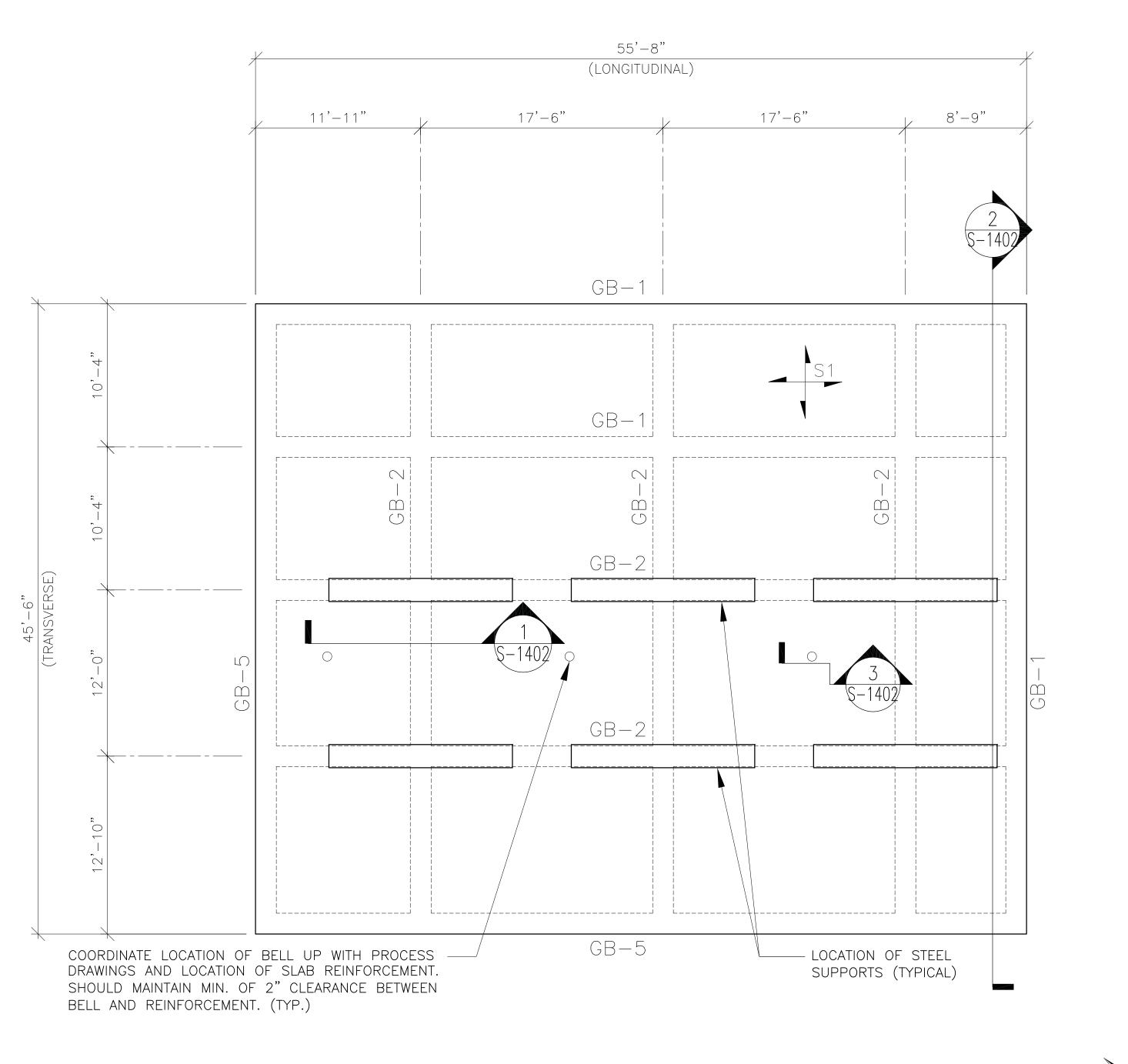
A.F.F.	ABOVE FINISHED FLOOR	LL	LIVE LOAD
ALT.	ALTERNATE	LBS (#)	POUNDS
A.B.	ANCHOR BOLT	LLH	LONG LEG HORIZONTAL
@	AT (MEASUREMENT)	LLV	LONG LEG VERTICAL
BM.		M.D.	
B.F.F.	BELOW FINISHED FLOOR	MFR('S)	MANUFACTURER('S)
B.O.B.	BOTTOM OF BEAM	MAS. C.J.	
B.O.D.	BOTTOM OF DECK	MECH'L	
BRG.	BEARING	N/A	
C.I.P.	CAST IN PLACE	N.T.S.	NOT TO SCALE
C.J.			
	CONTROL JOINT	O.F.W.	
CL.		OPP.	
CONC.		PL	PLATE
	CONCRETE CONTROL JOINT		
	CONCRETE SAW JOINT	PSI.	POUNDS PER SQUARE INCH
	CONCRETE MASONRY UNIT		
	CONNECTION	REINF.	
	CONTINUOUS	SIM.	SIMILAR
	DEAD LOAD	SQ.	SQUARE
DIA.		STD.	
DWG(S)	DRAWING(S)	TL.	TOTAL LOAD
E.F. Č		T.O.B.	TOP OF BEAM
	EDGE OF SLAB	T.O.C.	
ELEV.		T.O.D.	
	EQUAL	T.O.F.	
EQUIP.		T.O.L.	
	EXPANSION BOLT	T.O.M.	
	EXPANSION JOINT	T.O.P.	TOP OF PLATE
E.W.	EACH WAY	T.O.S.	TOP OF STEEL
F.F.	FINISHED FLOOR	T.O.W.	TOP OF WALL
F.F.E.	FINISHED FLOOR ELEVATION	TYP.	TYPICAL
GA.	GAGE	U.N.O.	UNLESS NOTED OTHERWISE
GALV.	GALVANIZED	VERT.	VERTICAL
G.S.N.	GENERAL STRUCTURAL NOTES	W.W.R.	WELDED WIRE REINFORCING
I.F.W.	INSIDE FACE OF WALL	W/	WITH
HORIZ	HORIZONTAL	W/O	WITHOUT
		-	

WILLIAM M. GLEESON

Checked By:



Drawn By:



LEGEND:

8" CONCRETE SLAB REINFORCING WITH #6 MID DEPTH BARS AT 10" O.C. TRANSVERSE AND LONGITUDINAL.

INDICATES CONCRETE GRADE BEAM. SEE 10N SHEET S-1902 FOR REINFORCING.

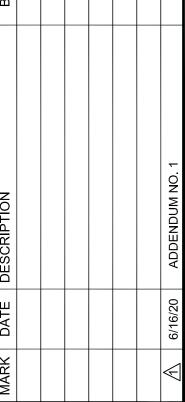
NOTES:

- 1. REFER TO THE CIVIL DRAWINGS FOR SLAB LOCATION, ELEVATIONS SLOPES, AND FOUNDATION SOIL PREPARATION.
- 2. REFER TO THE PROCESS, CIVIL, ELECTRICAL AND OTHER DRAWINGS FOR PENETRATIONS EMBEDDED ITEMS, ETC..
- 3. SPECIAL INSPECTIONS ARE REQUIRED FOR THE TANK FOUNDATION CONSTRUCTION, SEE SHEET S-1002 FOR A LIST OF SPECIAL INSPECTIONS.

TECH ation No. F-3924

SAN ANTONIO WATER SYSTEM

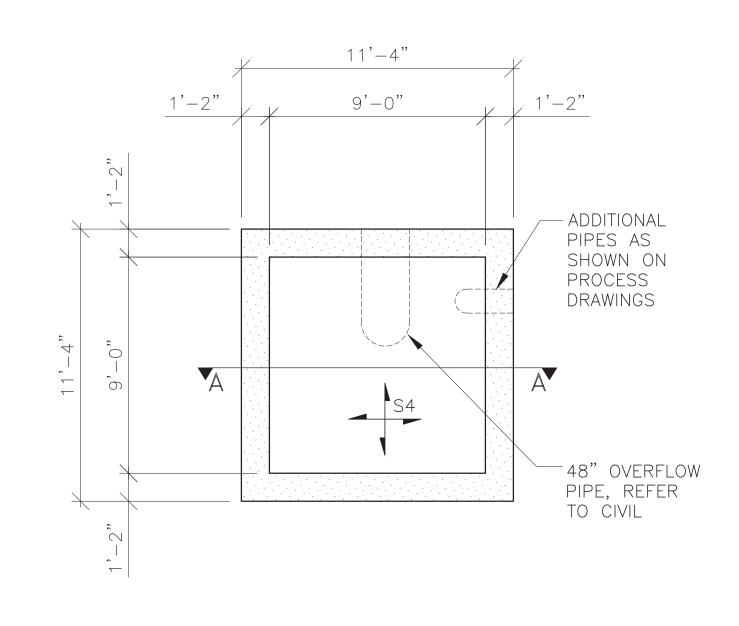




Drawn By:

SURGE TANK SLAB

SCALE: 3/16" = 1'-0"



11'-4" 9'-0" 1'-2" 1'-2" BAR GRATING, REFER TO D-DRAWINGS FINISH GRADE FINISH — GRADE -14" CONCRETE WALL 2~#4 BARS-WITH #6 VERTICAL 4'-0" LONG AND HORIZONTAL EACH FACE BARS AT 12" O.C. (TYPICAL) CLR. (TYP.) EACH FACE 6'x4' SBC

-SLAB REINFORCEMENT,

REFER TO PLAN

SECTION A-A

NOTES:

- 1. SEE SHEET S-1501 FOR GROUND STORAGE TANK NOTES.
- 2. REFER TO THE CIVIL, PROCESS, AND OTHER DRAWINGS FOR OVERFLOW BOX LOCATION, ORIENTATION ELEVATION, APPURTENANCES, CONNECTIONS, ETC., AND FOUNDATION SOIL PREPARATION.

14" CONCRETE SLAB REINFORCING WITH #6 BARS AT 12" O.C. TOP AND BOTTOM ËACH WAY.

LEGEND:

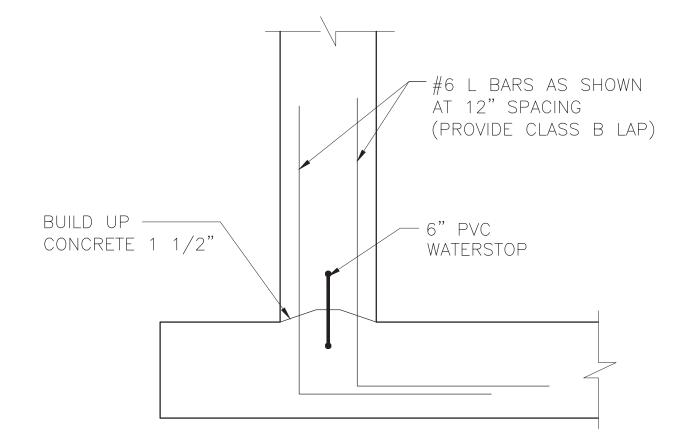
CONCRETE TANK SLAB - SECTION SCALE: 1/2" = 1'-0"

-#6 L BARS AS SHOWN AT 12" SPACING

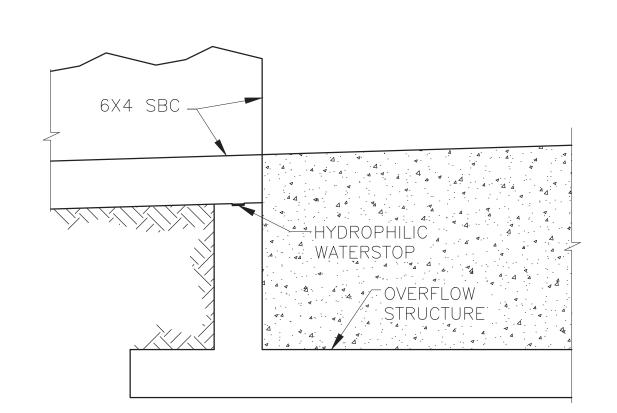
(PROVIDE CLASS B LAP)







SLAB TO WALL BARS



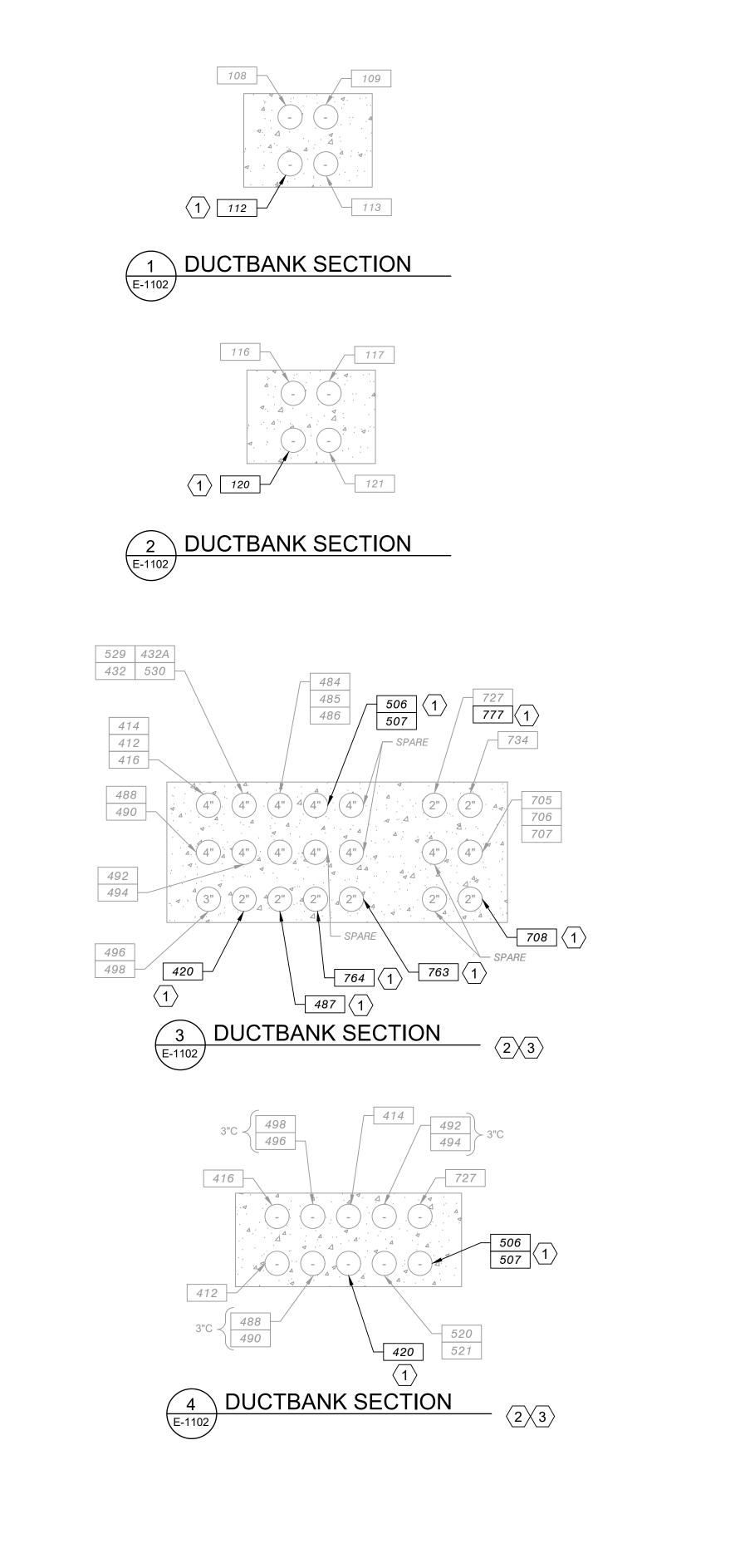
CULVERT TO OVERFLOW STRUCTURE CONNECTION SCALE: 3/4" = 1'-0"

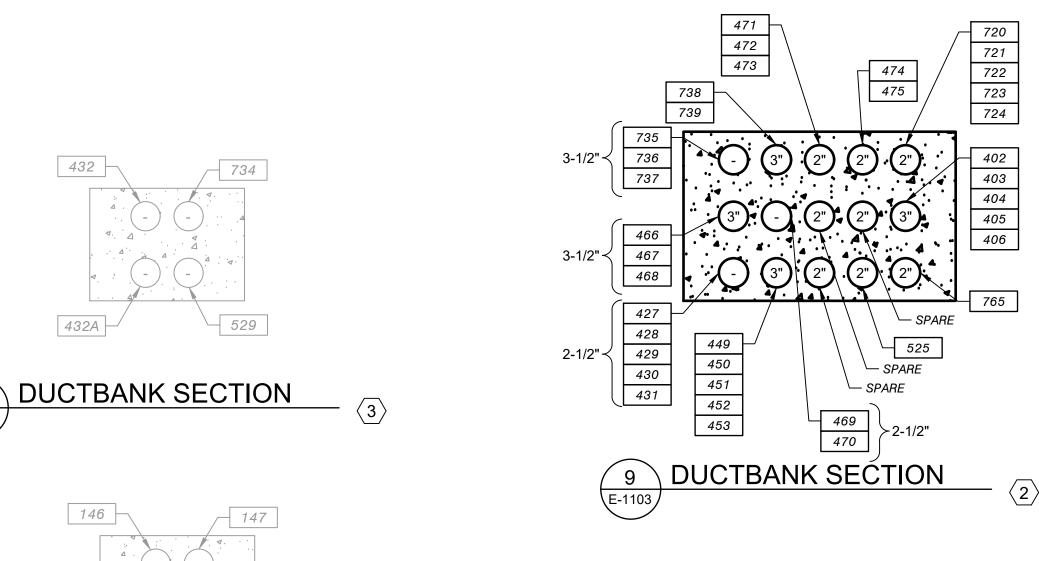
SCALE: 1" = 1'-0" SCALE: 1" = 1'-0"

6-22-20

TECH

WALL CORNER BARS





— 151 (1)

530

486

712 711 759 718 418

714 713 715

716 CAM-2

150

705

485

500 757

1 717

DUCTBANK SECTION

1 524

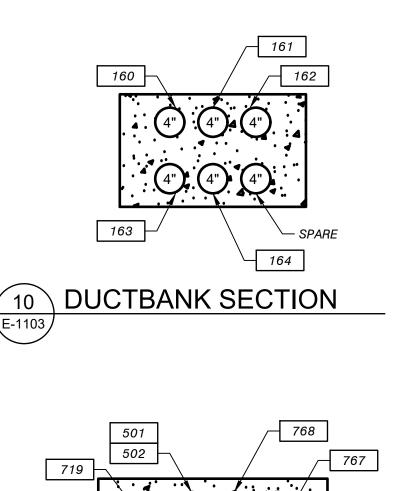
1 750

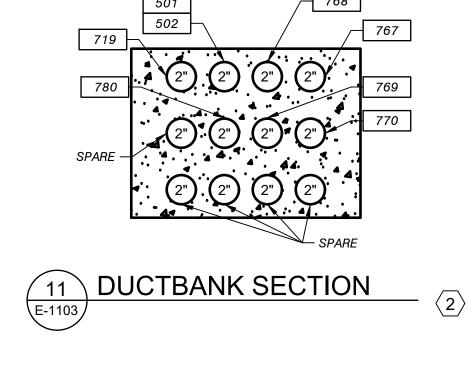
DUCTBANK SECTION

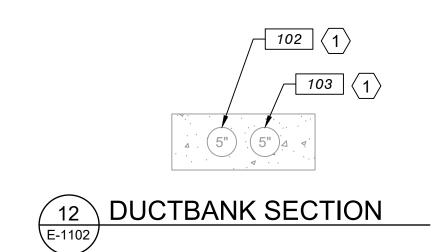
707

1 708

DUCTBANK SECTION





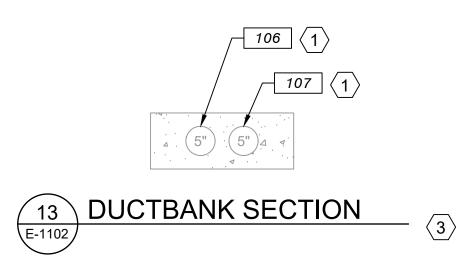


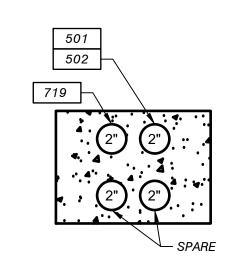


- 1. INSTALL NEW CABLE IN EXISTING DUCTBANK
- CONDUIT RUNS ROUTED WITH (2) OR MORE SETS OF MULTICONDUCTOR TRAY RATED CABLES ARE TO BE SIZED PER MINIMUM NFPA-70 REQUIREMENTS.

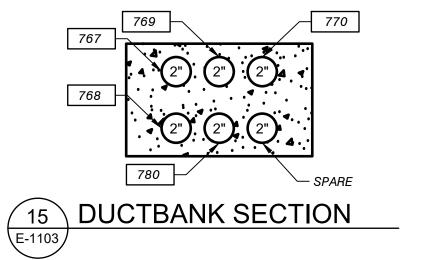
TECH ation No. F-3924

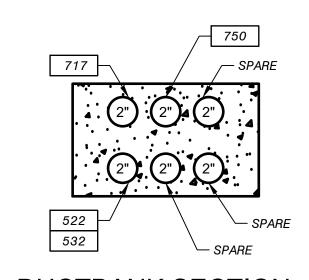
3. THE PLACEMENT AND ORIENTATION OF EXISTING SPARE CONDUITS SHALL BE FIELD VERIFIED.









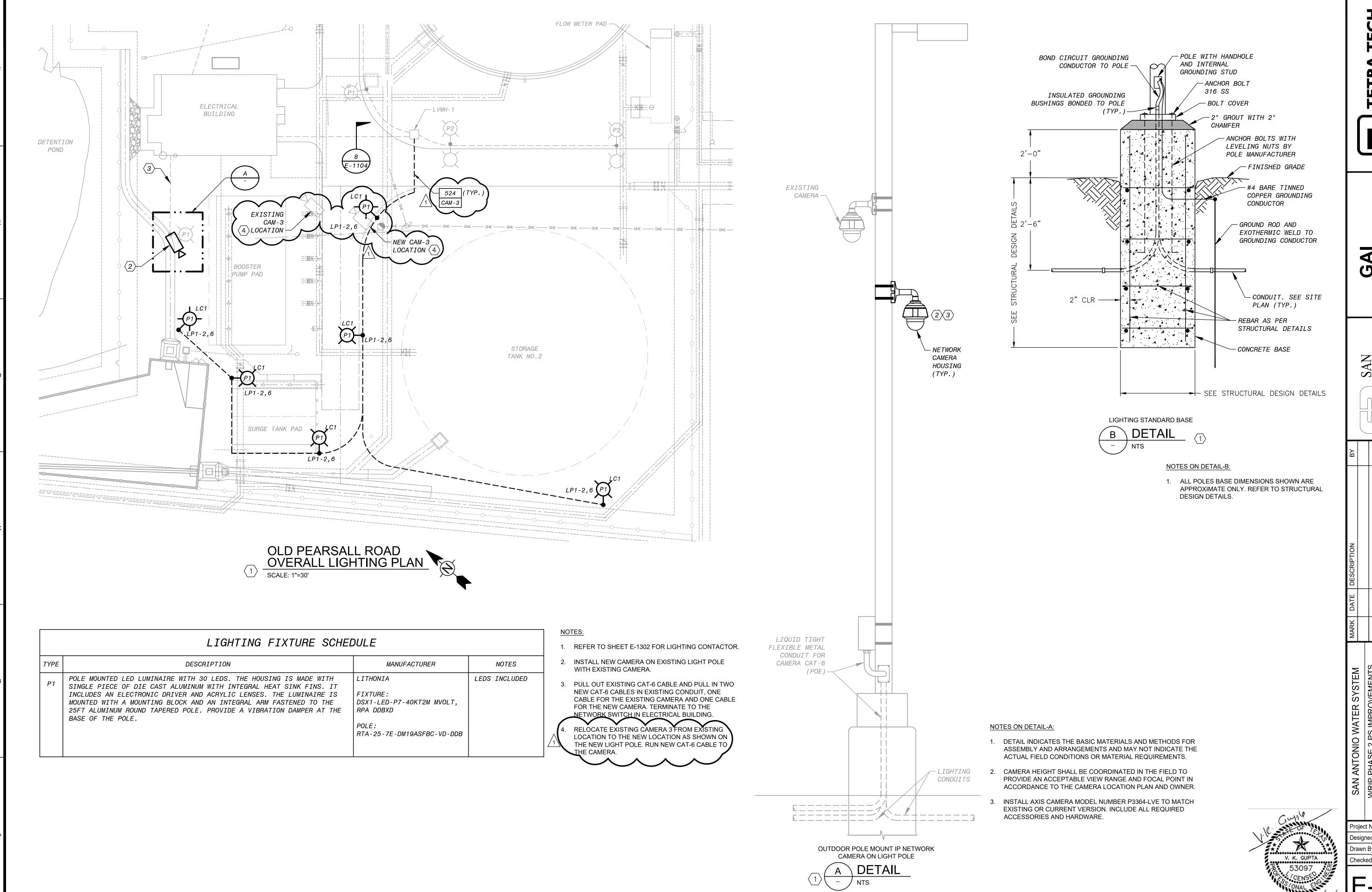






DUCTBANK

SECTIONS



Bar Measures 1 incl

Associates, Inc.
IG ENGINEERING
No. F-2593
n Road
75244
-7661

SAN ANTONIO WATER CVCTEM

MARK DATE DESCRIPTION

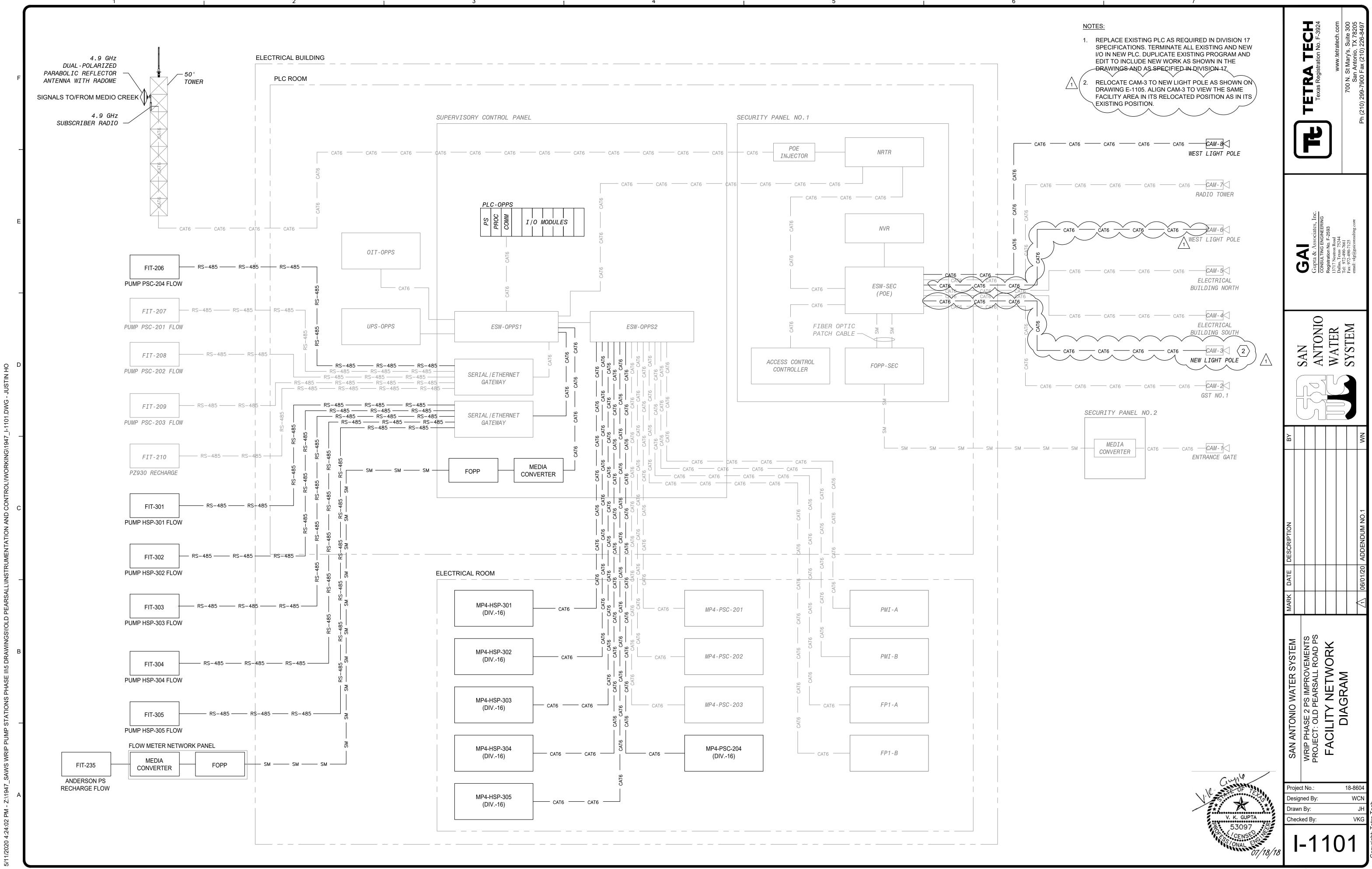
CT: OLD PEARSALL ROAD PS

OVERALL SITE

Project No.: 18-860
Designed By: D
Drawn By: J
Checked By: VK

Drawn By: JH
Checked By: VKG

.-1100



Bar Measures 1 incl