



**WATER MAIN ALONG ENTRANCE TO ENCINO PS / HWY 281 TO ENCINO TANK
& FACILITY 063, LOOP 1604, FUEL LINE REPLACEMENT**

Solicitation Number: CO-00137

SAWS Job No.: 16-7003

SAWS Job No.: 16-0122

ADDENDUM 1

September 29, 2017

To Respondent of Record:

This addendum, applicable to work referenced above, is an amendment to the proposal, plans, 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 RECEIVED

1. My question is will there be any need for Non destructive testing for example x-ray or Magnetic Particle inspection of welds.

Response: It is in the Contractor's best interest to hire their own welding inspector to ensure quality; however it is not required by the Contract Documents. SAWS will provide a third-party welding inspector to perform inspections in accordance with the Contract Documents.

2. I was inquiring about the Water Main Along Entrance to Encino PS/Highway 281 to Encino Tank and Facility 063 Loop 1604 - Fuel Line Replacement Project. I was wondering if there is an estimated value or budget set for the project yet and also if there is a start date set for the construction yet.

Response: SAWS' estimated value for this project is \$941,400. The anticipated start construction date depends on SAWS Board bid approval. SAWS anticipated board meeting date is November 7, 2017.

3. The two brands of fuel pipe of which are in the provided specifications are only UL Rated for underground installations. We would like to offer a replacement of double wall steel piping with welded connections. This will also eliminate the HDPE 4" containment piping.

Response: HDPE will not be required for above ground installation, the primary 316 stainless steel pipe with the EFEP secondary barrier and outer nylon jacket complies with the TCEQ requirements. Refer to revised notes on Sheet C-02 and C-04, which is included with this Addendum No. 1.

4. Will SAWS be handling all Edwards Aquifer Permits, applications, and fees? Or will this be the responsibility of contractors?

Response: The Water Pollution Abatement Plan (WPAP) and Above Ground Storage Tank (AST) Plan has been approved by the Texas Commission Environmental Quality. The Contractor shall obtain all necessary additional permits as may be required by Federal, State and Local Authorities.

MODIFICATIONS TO THE SPECIFICATION

1. **Invitation to Bidders** – Replace with the attached.
2. **Bid Proposal** – Replace with the attached.

MODIFICATIONS TO THE PLANS

1. **Sheet C-02** – General Notes 1 and 3 have been revised. Replace with the attached.
2. **Sheet C-04** – References to HDPE have been removed. Replace with the attached.



Arcadis U.S., Inc.
Texas Firm No. F-533

This Addendum, including these two (2) pages, is thirteen (13) pages with attachments in its entirety.

Attachments included:

- Invitation to Bidders
- Bid Proposal
- Sheet C-02 - Diesel Fuel Piping Removal Details and Notes
- Sheet C-04 – Civil Details

END ADDENDUM

INVITATION TO BIDDERS

Solicitation No. CO-00137

Sealed bids are requested by the San Antonio Water System (SAWS) for the construction of the **Water Main Along Entrance to Encino PS/HWY. 281 to Encino Tank & Facility 063, Loop 1604, Fuel Line Replacement**, SAWS Job No. **16-7003 and 16-0122**. The project's scope of work generally consists of the installation of approximately 430 linear feet of 24-inch diameter DI waterline from a proposed 24-inch diameter DI waterline, by others, in the right-of-way of US HWY 281, for the PZ 7 pressure zone at the Encino Facility main entrance. The work also includes, but is not limited to, modifications to the inlet of the existing Encino Pump Station Ground Storage Tank, with associated upgrades to the flow control system, chlorination system, and access drive; and other appurtenant work. In addition, work includes replacement of the diesel fuel supply and returning piping with approximately 45 feet of new ~~braided lines~~ **HDPE pipe 316 stainless steel primary piping, nylon 12 outer jacket, and EFEP secondary barrier** of the existing fuel storage tank and emergency diesel-powered pump for the SAWS Facility 063, located at 685 1604 North Loop West San Antonio, Texas, 78258. The work also includes, but is not limited to, relocation of the existing fuel storage tank, construction of a new concrete pad, draining, disposal and disconnection of the existing fuel lines and storage tank and installation of all fittings and appurtenances necessary for the connection of the new braided lines to the fuel storage tank and emergency diesel-powered pump. Removal and installation of the existing fuel supply and return piping shall meet all applicable Federal, State and Local requirements for fuel systems.

Working time on this project is Monday through Friday between 8:00 AM and 5:00 PM. In addition to no work being permitted on Sundays and holidays, no work shall occur on Saturdays without specific permission of the Owner forty-eight (48) hours in advance of intent to perform Work.

To view additional project information, as well as obtain the plans and specifications for this project, visit our website located at www.saws.org and click on the Business Center. Then select Bidder, Consultant, and Vendor Registration, which is located on the left-hand side of the screen. Select the Register Now button and proceed with registration.

For difficulties downloading plans and specifications, contact the Contracting Department at 210-233-3341.

For questions regarding this solicitation, technical questions or additional information, please contact Jonathan Miranda, Contract Administrator, in writing via email to: Jonathan.Miranda@saws.org or by fax to (210) 233-4253 until **4:00 PM (CT) on September 27, 2017**. Answers to the questions will be posted to the web site by **10:00 AM (CT) on September 29, 2017** as a separate document or included as part of an addendum. Please be advised that Bidders are prohibited from communicating with any other SAWS staff, the Consultant, the Developer, or City of San Antonio officials regarding this IFB up until the contract is awarded as outlined in the Instructions to Bidders.

A **non-mandatory** pre-bid meeting will be held at **10:00 AM (CT) on September 26, 2017** at the San Antonio Water System's Customer Service Building, First floor, Conference Room C-137, 2800 U.S. Hwy 281 North, San Antonio, Texas.

Sealed bids will be received by Counter Services in the Customer Service office across from the Guard Station, 2800 U.S. Hwy 281 North, Customer Center Building, San Antonio, Texas 78212, **until 10:00 AM (CT), October 6, 2017**. Bids will then be publicly opened and read aloud by Contract Administration in CR-C137, Customer Center Building, 2800 U.S. Hwy 281 North, San Antonio, Texas. Each bid must be accompanied by a cashier's check, certified check, or bid bond in an amount not less than five percent of the total bid price.

BID PROPOSAL

PROPOSAL OF _____, a corporation

a partnership consisting of

an individual doing business as

THE SAN ANTONIO WATER SYSTEM:

Pursuant to Instructions and Invitation to Bidders, the undersigned proposes to furnish all labor and materials as specified and perform the work required for the project as specified, in accordance with the Plans and Specifications for the following prices to wit:

Line No.	Item No.	Quote Category	Item Description	Unit	Quantity	Unit Bid Price	Total Price
1	COSA 104	General Water Bid Items	Street Excavation, the furnishing of all materials, equipment, tools, labor, and incidentals necessary to complete the work.	CY	34	\$	\$
2	TXDOT 164	General Water Bid Items	Broadcast Seeding (Perm) for Erosion, furnishing materials, including water for hydro-seeding and hydro-mulching operations, mowing, labor, equipment, tools, supplies, and incidentals.	Acre	0.5	\$	\$
3	TXDOT 166	General Water Bid Items	Fertilizer, including furnishing materials and performing operations.	Acre	0.5	\$	\$
4	TXDOT 168	General Water Bid Items	Vegetative Watering for the Seeded Area, including furnishing and operating watering equipment and measuring devices and for furnishing and applying water, including hauling, equipment, labor, and incidentals.	1,000 gallons	210	\$	\$
5	200	General Water Bid Items	Flexbase, Six Inches Thick, including the furnishing, hauling, and placing of all materials, for all water required, and for all equipment, tools, labor, and incidentals necessary to complete the work.	SY	160	\$	\$
6	COSA 234	General Water Bid Items	Geogrid, including furnishing all labor, materials, equipment and other items necessary and incidental to completion of work.	SY	160	\$	\$
7	COSA 306	General Water Bid Items	Structural Excavation, including compaction, pumping, bailing, sheathing, bracing, and for furnishing all materials, labor, equipment tools, and incidentals necessary to complete the work.	CY	7	\$	\$

8	307	General Water Bid Items	Structural Concrete, the furnishing of concrete, formwork, reinforcement steel, curing and miscellaneous items, equipment, tools, labor, and incidentals necessary to complete the work.	CY	7	\$	\$
9	TXDOT 506	General Water Bid Items	Erosion Control Log, including furnishing materials, equipment, tools, labor, and incidentals for the installation, maintenance, removal and disposal.	LF	650	\$	\$
10	COSA 511	General Water Bid Items	Pavement Repair, including sawcutting existing pavement, asphalt treated base, pavement material, compaction, disposal of materials, and testing, complete and in place.	SY	112	\$	\$
11	COSA 515	General Water Bid Items	6" Top Soil, including all hauling, placing material, sprinkling the material with water, and for all labor, equipment, tools and incidentals necessary to complete the work.	CY	76	\$	\$
12	COSA 530	General Water Bid Items	Temporary Traffic Control, including preparation of signed and sealed temporary traffic control plan for review and approval by the Engineer, and implementation of temporary traffic control plan, complete in place.	LS	1	\$	\$
13	COSA 540	General Water Bid Items	Sedimentation and Erosion Control, Stormwater Pollution Prevention Plan, and Tree Protection including preparation of permitting documents, preparation of temporary erosion/sedimentation control plan, tree trimming, tree planking, temporary tree fencing, and implementation of the plan, complete in place.	LS	1	\$	\$
14	550	General Water Bid Items	Trench Excavation Safety Protection required for the construction of all trench excavation protection systems to be utilized in the project and including but not limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, dewatering or temporary diversion and proper recapture and transportation of water to provide adequate drainage, complete in place.	LF	476	\$	\$
15	TXDOT 552	General Water Bid Items	Remove Wire Fence, including cleaning, grading, and backfilling; removing and disposing of surplus material; and equipment, labor, tools, and incidentals, complete in place.	LF	60	\$	\$
16	TXDOT 552	General Water Bid Items	Install Temporary Lockable Gate, including providing materials, center anchorages, equipment, labor, tools, and incidentals, complete in place.	EA	1	\$	\$

17	TXDOT 552	General Water Bid Items	Install Wire Mesh Fence, including furnishing and installing fencing, except gates; cleaning, grading, and backfilling; removing and disposing of surplus material; and equipment, labor, tools, and incidentals, complete in place.	LF	60		
18	814	General Water Bid Items	12" Ductile Iron Pipe by Open Cut, including restrained joints, excavation, selected embedment material, backfill, compaction, polyethylene sleeve, hauling and disposition of surplus excavation material, including all existing pipe, fittings, appurtenances to be abandoned or removed, complete in place.	LF	12	\$	\$
19	814	General Water Bid Items	24" Ductile Iron Pipe by Open Cut, including restrained joints, excavation, selected embedment material, backfill, compaction, polyethylene sleeve, hauling and disposition of surplus excavation material, including all existing pipe, fittings, appurtenances to be abandoned or removed, complete in place.	LF	434	\$	\$
20	816	General Water Bid Items	12" Steel Water line, including supports, couplings, restraints, painting, hauling, and disposition of surplus material, concrete reaction blocking, protective coating material for bolts, nuts, and ferrous surfaces, complete in place.	LF	25	\$	\$
21	816	General Water Bid Items	16" Steel Water Line, including supports, couplings, restraints, painting, hauling, and disposition of surplus material, concrete reaction blocking, protective coating material for bolts, nuts, and ferrous surfaces, complete in place.	LF	15	\$	\$
22	816	General Water Bid Items	24" Steel Water line, including supports, couplings, restraints, painting, hauling, and disposition of surplus material, concrete reaction blocking, protective coating material for bolts, nuts, and ferrous surfaces, complete in place.	LF	15	\$	\$
23	828	General Water Bid Items	12" Gate Valves with Hand Wheel, including supports, couplings, restraints, painting, hauling, and disposition of surplus material, concrete reaction blocking, protective coating material for bolts, nuts, and ferrous surfaces, complete in place.	EA	2	\$	\$

24	830	General Water Bid Items	16" Butterfly Valves with Hand Wheel, including supports, couplings, restraints, painting, hauling, and disposition of surplus material, concrete reaction blocking, protective coating material for bolts, nuts, and ferrous surfaces, complete in place.	EA	1	\$	\$
25	830	General Water Bid Items	24" Butterfly Valves With Hand Wheel, including supports, couplings, restraints, painting, hauling, and disposition of surplus material, concrete reaction blocking, protective coating material for bolts, nuts, and ferrous surfaces, complete in place.	EA	1	\$	\$
26	830	General Water Bid Items	24" Butterfly Valves, including excavation, selected embedment material, anti-corrosion embedment, hauling, and disposition of excavated surplus material, backfill, concrete collar at the valve box, ductile iron riser pipe, cast iron boot, packing, tar paper, concrete grout, concrete reaction blocking, protective coating material for bolts, nuts, and ferrous surfaces, and polyethylene sleeve, complete in place.	EA	2	\$	\$
27	836	General Water Bid Items	Ductile Iron Fittings, including excavation, installation, anti-corrosion protection, select anticorrosion embedment material and installation, hauling and disposition of surplus excavated materials, all glands, bolts, nuts, rubbers, and flange gaskets of whatever type required, and concrete thrust/reaction blocking, complete in place.	Ton	3.8	\$	\$
28	840	General Water Bid Items	Water Tie-in to 12-inch Ductile Iron Line, including shut-down and isolation of the existing main to which the new main is to be connected, cutting pipe for the connection, dewatering the excavation, and customer notification of service interruption were required.	EA	1	\$	\$
29	840	General Water Bid Items	Water Tie-in to 24-inch Steel Line, including shut-down and isolation of the existing main to which the new main is to be connected, cutting pipe for the connection, dewatering the excavation, and customer notification of service interruption were required.	EA	1	\$	\$
30	841	General Water Bid Items	Hydrostatic Testing Operations, including all pipe, valves, fittings, pumping equipment, pressure gauge, and other required apparatus incidental to the conduct of the test, complete in place.	EA	1	\$	\$

31	844	General Water Bid Items	4" Blow off Assembly, including excavation, selected embedment material, anticorrosion embedment when specified, and the hauling and disposition of surplus excavated materials.	EA	1	\$	\$
32	846	General Water Bid Items	2" Combination Air Release Assemblies, including excavation, selected embedment material, anti-corrosion embedment when specified, hauling nad disposition of surplus excavated materials, blocking, and various types and sizes of meter boxes.	EA	2	\$	\$
33	846	General Water Bid Items	2" Combination Air Release Above Ground Assemblies, including, including supports, couplings, piping and valves, painting, hauling, and disposition of surplus material, protective coating material for bolts, nuts, and ferrous surfaces, complete in place.	EA	1	\$	\$
34	856	General Water Bid Items	42" Steel Casing Pipe by Open Cut, assembly, excavation, selected embedment material, backfill, compaction, polyethylene sleeve, hauling and disposition of surplus excavation material, including all existing pipe, fittings, complete in place.	LF	45	\$	\$
35	01 45 53	General Water Bid Items	Cleaning, Testing, and Disinfecting of Hydraulic Structure, including labor, material, tools, equipment, and incidentals as specified, and required to clean, flush, disinfect, and test structures (Groundwater Storage Tank), complete in place.	LS	1	\$	\$
36	02 41 00	General Water Bid Items	Demolition, removal and disposal of concrete pad, piping and supports, chlorine equipment, including costs associates with transporting and disposing materials and equipment resulting from demolition, complete in place.	LS	1	\$	\$
37	02 41 00	General Water Bid Items	Demolition, removal and disposal of chain link fence including costs associates with transporting and disposing materials resulting from demolition, complete in place.	LF	85	\$	\$
38	09 80 50	General Water Bid Items	Painting of Pipes, Valves, and Ground Storage Tank Modifications, including furnish labor, materials, equipment and incidentals necessary to apply protective coatings to material and equipment as specified herein, including the preparation of surfaces prior to application of coatings, complete in place.	1	LS	\$	\$

39	15 00 80	General Water Bid Items	Removeable Insulation for Pressure Sustaining Valve and Auxiliary piping, all exposed valves of all diameters and all piping 4-inch in diameter and smaller including furnish labor, materials, equipment and incidentals necessary to install removable insulation, complete in place.	LS	1	\$	\$
40	26 00 05	General Water Bid Items	Electrical work necessary for the Integration of Controls and Chlorination Equipment, including all labor, materials and incidentals as specified, complete in place.	LS	1	\$	\$
41	32 01 91	General Water Bid Items	Tree Protection & Trimming, including all labor, materials, tools, equipment and incidentals as specified and required to furnish and perform tree protection and trimming.	LS	1	\$	\$
42	32 31 00	General Water Bid Items	Chain Link Fencing installed and complete in place.	LF	105	\$	\$
43	32 31 00	General Water Bid Items	24-Foot Wide Double Swing Gate, installed and complete in place.	EA	1		
44	40 60 05/ 40 05 53/ 46 31 11	General Water Bid Items	All necessary equipment necessary for the operation of the 16-inch pressure sustaining valve, 12-inch magnetic flow meter and chlorine dosing equipment including PLC Panel with OIT and programming, complete in place.	LS	1	\$	\$
45	43 41 13	General Water Bid Items	Modifications to existing Steel Ground Storage Tank, including all labor, materials, equipment and incidentals required to modify the existing welded steel groundwater storage tank, complete in place.	LS	1	\$	\$
46	100	General Water Bid Items	Mobilization, including but not limited to the movement of equipment, personnel, material, supplies, etc. to the project site and the establishment of office and other facilities necessary prior to beginning the work. (Maximum of 10% of the Total Line Items 1-45 above).	LS	1	\$	\$
47	101	General Water Bid Items	Preparing Right-of-Way required for new construction including but not limited to all materials, equipment, tools, labor, and incidentals necessary to complete the work. 10% of the payment will be withheld until final construction payment.	LS	1	\$	\$
48	F63-01	General Water Bid Items	Permitting and Submittals	LS	1	\$	\$

49	F63-02	General Water Bid Items	Erosion and Sediment Control	LF	200	\$	\$
50	F63-03	General Water Bid Items	Excavation, Backfill and Compaction for piping removal	CY	9	\$	\$
51	F63-04	General Water Bid Items	Furnishing and installation of 4" HDPE pipe, to include labor and material	LF	45	\$	\$
52	F63-05	General Water Bid Items	Furnishing and installation of Braided 316 Stainless Steel Fuel line and fittings, to include labor and material	LF	45	\$	\$
53	F63-06	General Water Bid Items	New Concrete Pad	CY	4	\$	\$
54	F63-07	General Water Bid Items	Furnishing and installation of fuel tank threaded rods	EA	4	\$	\$
55	F63-08	General Water Bid Items	Furnishing and Installation of 4" HDPE 316 Stainless Steel pipe fittings, to include labor and material	EA	12	\$	\$
56	F63-09	General Water Bid Items	Installation of Pipe Supports	EA	6	\$	\$
57	F63-10	General Water Bid Items	Installation of Removable Bollards	EA	3	\$	\$
58	F63-11	General Water Bid Items	Draining, disconnection, removal and disposal of the existing fuel lines, including spill control measures.	LS	1	\$	\$

59	F63-12	General Water Bid Items	Draining and disposal of fuel, disconnection and relocation of the existing fuel aboveground storage tank, including spill control measures.	LS	1	\$	\$
60	F63-13	General Water Bid Items	Mobilization and Demobilization, to a maximum of 5% of Items No. 51-59.	LS	1	\$	\$

TOTAL BID PRICE

\$ _____

Mobilization and Prep of ROW shall be limited to the maximum percentage shown. **If the percentage exceeds the allowable maximum stated for mobilization and or preparation of ROW, SAWS reserves the right to cap the amount at the percentages shown and adjust the extensions of the bid items accordingly.**

BIDDER'S SIGNATURE & TITLE

FIRM'S NAME (TYPE OR PRINT)

FIRM'S ADDRESS

FIRM'S PHONE NO. /FAX NO.

FIRM'S EMAIL ADDRESS

The Contractor herein acknowledges receipt of the following:
Addendum Nos. _____

OWNER RESERVES THE RIGHT TO ACCEPT THE OVERALL MOST RESPONSIBLE BID.

The bidder offers to construct the Project in accordance with the Contract Documents for the contract price, and to complete the Project within **180** calendar days after the start date, ~~or until funds are exhausted.~~ **The bidder understands and accepts the provisions of the contract Documents relating to liquidated damages of the project if not completed on time.**

Complete the additional requirements of the Bid Proposal which are included on the following pages.



1 EMERGENCY DIESEL-POWERED PUMP
C-02



2 DIESEL FUEL STORAGE TANK
C-02



3 DIESEL FUEL SUPPLY & RETURN LINES
C-02

GENERAL NOTES:

1. REPLACE APPROXIMATELY 20' OF DIESEL FUEL SUPPLY AND RETURN PIPING WITH NEW 316 STAINLESS STEEL PRIMARY PIPING, NYLON 12 OUTER JACKET, AND EFEP SECONDARY BARRIER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FITTINGS AND APPURTENANCES NECESSARY FOR CONNECTING NEW LINES TO GENERATOR AND STORAGE TANK. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FITTINGS AND APPURTENANCES NECESSARY FOR ROUTING PIPE TO MINIMIZE IMPACT TO EXISTING FACILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR DRAINING AND DISPOSING OF ALL FUEL FROM THE TANK AND LINES PRIOR TO REMOVAL. CONTRACTOR SHALL COORDINATE WITH SAWS, PROVIDING AT LEAST 3 DAYS NOTICE PRIOR TO SCHEDULING WORK TO OCCUR.
2. NEW SUPPLY AND RETURN LINES SHALL BE MANUFACTURED BY OMEGA FLEX DOUBLETRAC OR APT. LINES SHALL CONTAIN ASTM A240 316 STAINLESS STEEL PRIMARY PIPING, NYLON 12 OUTER JACKET, AND EFEP SECONDARY BARRIER. FITTINGS SHALL BE IN 316 STAINLESS STEEL.
3. SUPPLY AND RETURN LINES SHALL BE SLEEVED INSIDE 4" SINGLE WALL CORRUGATED HEAVY DUTY HDPE PIPE. FITTINGS SHALL CONFORM TO ASTM F405 OR ASTM F607. PIPING AND FITTINGS SHALL CONFORM WITH THE REQUIREMENTS OF ASTM D 3350 OR ASTM D 1248 TYPE III, CLASS C, CATEGORY 1, GRADE P33.
4. SECONDARY CONTAINMENT HDPE PIPING SHALL ENCOMPASS SUPPLY AND RETURN LINES ALL THE WAY FROM FUEL TANK TO PUMP.
5. SECONDARY CONTAINMENT HDPE SHALL BE MANUFACTURED BY ADS OR APPROVED EQUAL.
6. AFTER REMOVAL OF THE FUEL SUPPLY AND RETURN LINES, BACKFILL USING EXCAVATED MATERIALS IN MAXIMUM 12 INCH LIFTS. EACH LIFT SHALL BE COMPACTED TO 95%. COMPACT EACH LIFT USING VIBRATING TAMPOR WITH MINIMUM THREE PASSES EACH LIFT.
7. INSTALLATION SHALL MEET OR EXCEED ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS FOR FUEL SYSTEMS.
8. CONTACT UNITED DNH FUELING SOLUTIONS AT 210-792-1235 FOR A QUALIFIED INSTALLER.

9. INSTALL NEW SUPPLY AND RETURN LINES ON TOP OF THE EXISTING CONCRETE PAD OF THE EMERGENCY DIESEL-POWERED PUMP. INSTALL PIPE STRAP SUPPORT ON THE HORIZONTAL ABOVE GROUND FUEL LINES IN ACCORDANCE WITH DETAIL 4 ON SHEET C-04 AND MANUFACTURER RECOMMENDED SPACING. FOLLOW ALIGNMENT SHOWN ON SHEET C-01.
10. NO TRENCHES SHALL BE LEFT OPEN DURING PERIODS OF NON-CONSTRUCTION OR OVERNIGHT WITHOUT PRIOR APPROVAL OF SAWS. IF TRENCHES ARE LEFT OPEN, SUCH TRENCHES SHALL BE SECURED WITH CONCRETE TRAFFIC BARRIERS OR OTHER ALTERNATIVE PROTECTIVE MEASURES ACCEPTABLE TO SAWS.
11. CONTRACTOR SHALL MINIMIZE TIME OF PUMP DISCONNECTION FROM FUEL TANK. CONTRACTOR SHALL SUBMIT SEQUENCING PLAN FOR REVIEW SHOWING COMPLETION OF LINE WORK INSTALLATION PRIOR TO DISCONNECTING TANK AND PUMP.

LEGEND:

TO BE DEMOLISHED OR REMOVED

NO.	DATE	REVISION	BY
1	9/29/17	ADDENDUM NO. 1	ET

COPYRIGHT: ARCADIS U.S., INC.
DATE: SEPTEMBER 2017
PROJECT NO.: 02196042.0000
DESIGNED BY: G. KEHOE
DRAWN BY: N. CANDELAS
CHECKED BY: S. SUE

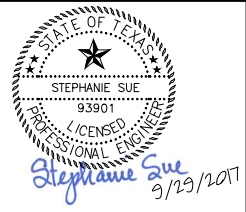
SHEET TITLE

CIVIL

DIESEL FUEL PIPING
REMOVAL DETAILS
AND NOTES

SCALE: AS SHOWN

SHEET **C-02**
4 OF 7



SAN ANTONIO WATER SYSTEM



FACILITY 063, LOOP 1604, FUEL LINE REPLACEMENT PROJECT

NO.	DATE	REVISION	BY
1	9/29/17	ADDENDUM NO. 1	ET

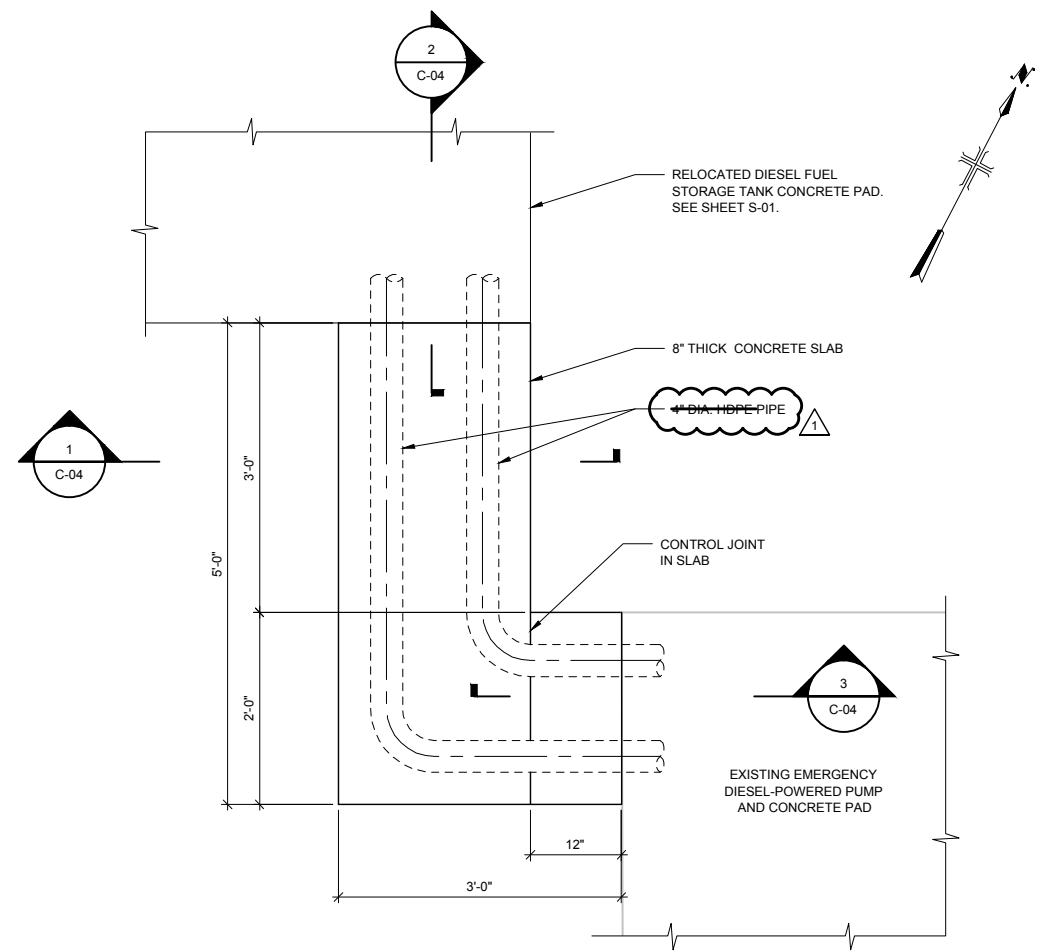
COPYRIGHT: ARCADIS U.S., INC.
DATE: SEPTEMBER 2017
PROJECT NO.: 02196042.0000
DESIGNED BY: E. TORRES
DRAWN BY: N. CANDELAS
CHECKED BY:

SHEET TITLE

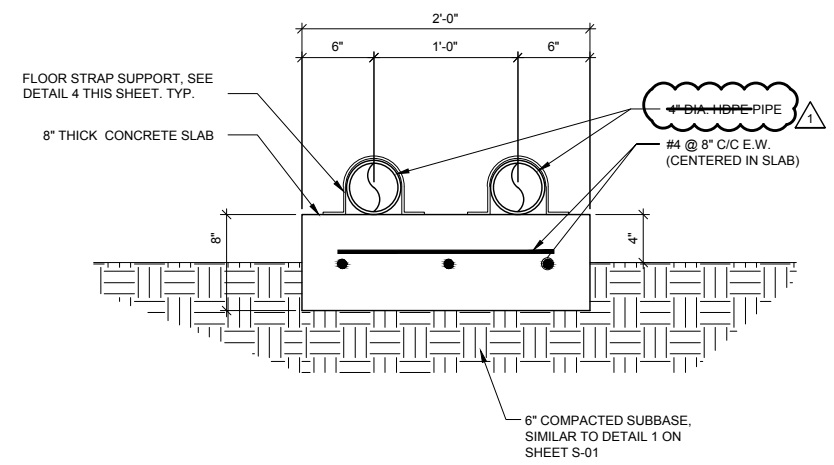
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CIVIL DETAILS

SCALE: AS SHOWN

SHEET **C-04**
6 OF 7

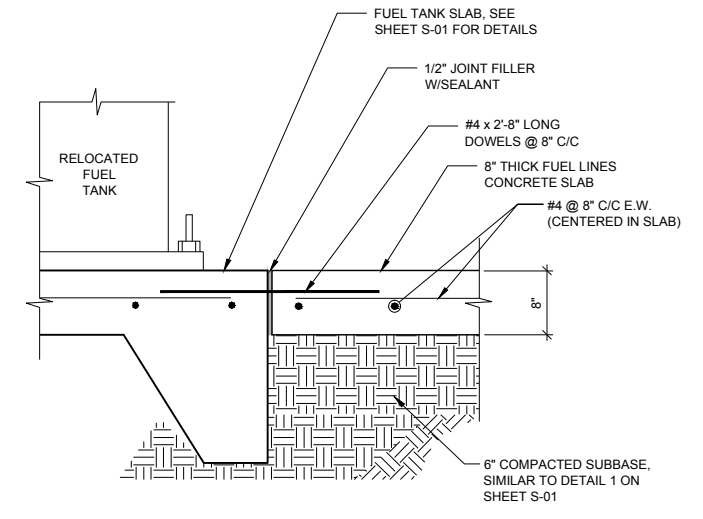


FUEL LINES CONCRETE SLAB



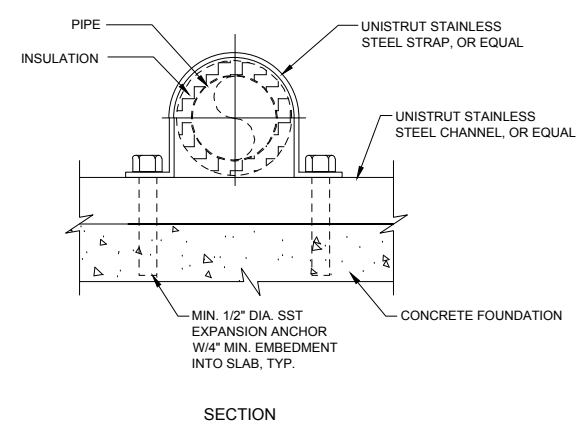
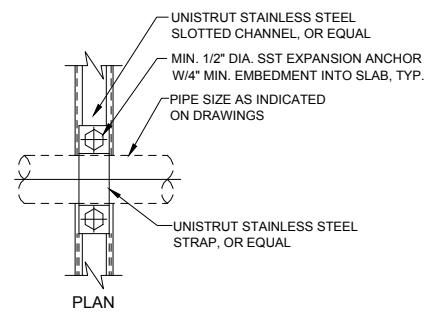
FUEL LINES CONCRETE SLAB

1 SECTION



FUEL LINE SLAB CONNECTION TO FUEL TANK SLAB

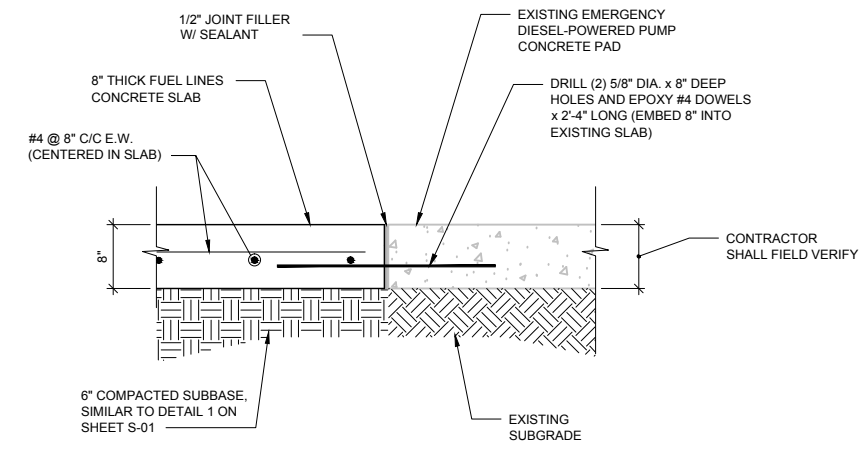
2 SECTION



NOTE: FOR MULTIPLE PIPES, EXTEND LENGTH OF STAINLESS STEEL CHANNEL AND PROVIDE 6" MIN. BETWEEN EACH PIPE.

FLOOR STRAP SUPPORT (HORIZONTAL) DETAIL

4 SECTION



FUEL LINES SLAB CONNECTION TO EXISTING EMERGENCY DIESEL-POWERED PUMP PAD

3 SECTION