



**2017 Edwards Aquifer Recharge Zone (EARZ) Cured In Place Pipe (CIPP) Construction Contract  
Solicitation Number: CO-00130  
Job No.: 17-4536**

**ADDENDUM 4  
June 7, 2017**

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**

**None**

**CHANGES TO THE SPECIFICATIONS**

1. Bid Proposal: Revised to add items associated with Loop 1604 revisions described under Changes to the Plans below. Remove and replace the Bid Proposal with the attached. This is the version Bidders should use when submitting a bid for this project.

**CHANGES TO THE PLANS**

1. Errol & Wurzbach, Sheet 1: Revision table added. Remove and replace sheet 1 in its entirety with the revised sheet attached.
2. Errol & Wurzbach, Sheet 2: Sheet Index and map labels modified. Remove and replace sheet 2 in its entirety with the revised sheet attached.
3. Errol & Wurzbach, Sheet 3: New issuance date. Remove and replace sheet 3 in its entirety with the revised sheet attached.
4. Errol & Wurzbach, Sheet 4: New issuance date. Remove and replace sheet 4 in its entirety with the revised sheet attached.
5. Errol & Wurzbach, Sheet 5: Quantity table revised to remove manhole and extra depth items. Remove and replace sheet 5 in its entirety with the revised sheet attached.
6. Errol & Wurzbach, Sheet 6: Quantity table revised to remove manhole and extra depth items. New note added. Pipe description revised in plan. Title block revised. Remove and replace sheet 6 in its entirety with the revised sheet attached.
7. Errol & Wurzbach, Sheet 7: Quantity table revised to change bypass description. Title block revised. Remove and replace sheet 7 in its entirety with the revised sheet attached.
8. Errol & Wurzbach, Sheet 8: Note added. Pipe description in plan changed. Title block revised. Remove and replace sheet 8 in its entirety with the revised sheet attached.
9. Errol & Wurzbach, Sheet 9: Title block revised. Remove and replace sheet 9 in its entirety with the revised sheet attached.
10. New Oak / Loop 1604, Sheet 1: Number of sheets updated. Remove and replace sheet 1 in its entirety with the revised sheet attached.
11. New Oak / Loop 1604, Sheet 2: Quantities have been revised to add one (1) additional manhole reconstruction (MH 74869), and pavement repair required for TxDOT roadway repair resulting from MH 74869 manhole reconstruction. Number of sheets updated. Remove and replace sheet 2 in its entirety with the revised sheet attached.

12. New Oak / Loop 1604, Sheet 3: Number of sheets updated. Remove and replace sheet 3 in its entirety with the revised sheet attached.
13. New Oak / Loop 1604, Sheet 4: Quantities and plan revised to add one (1) additional manhole reconstruction (MH 74869), and pavement repair required for TxDOT roadway repair resulting from MH 74869 manhole reconstruction. Number of sheets updated. Remove and replace sheet 4 in its entirety with the revised sheet attached.
14. New Oak / Loop 1604, Sheet 5: Number of sheets updated. Remove and replace sheet 5 in its entirety with the revised sheet attached.
15. New Oak / Loop 1604, Sheet 6: Number of sheets updated. Remove and replace sheet 6 in its entirety with the revised sheet attached.
16. New Oak / Loop 1604, Sheet 7: Number of sheets updated. Remove and replace sheet 7 in its entirety with the revised sheet attached.
17. New Oak / Loop 1604, Sheet 8: Additional sheet to address traffic control for surfacing operations. Add the revised sheet attached.

<b>CLARIFICATIONS</b>
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NONE

2017.06.07 17:12:43-05'00'



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S. Keller Drozdick, P.E.  
Merrick & Company

**END OF ADDENDUM**

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:

**TOTAL BID PRICE**

**\$ \_\_\_\_\_**

\_\_\_\_\_  
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 **150** calendar days after the start date as set forth in the Authorization to Proceed. **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.

Line No.	Item No.	Description	Unit	Qty.	Unit Price	Total Price
1	110.0	Remove & Replace Wooden Privacy Fence (CoSA Spec)	LS	1	\$	\$
2	202.1	Prime Coat (CoSA Spec)	GAL	4	\$	\$
3	203.1	Tack Coat (CoSA Spec)	GAL	2	\$	\$
4	205.3	Hot Mix Asphaltic Pavement, Type D (2" Compacted Depth) (CoSA Spec)	SY	17	\$	\$
5	206.1	10" Asphalt Treated Base (CoSA Spec)	SY	17	\$	\$
6	530.1	Barricades, Signs, and Traffic Handling (CoSA Spec), 1822 Deer Mountain	LS	1	\$	\$
7	530.1	Barricades, Signs, and Traffic Handling (CoSA Spec), 15800 Heimer Road & 15715 Heimer Road	LS	1	\$	\$
8	530.1	Barricades, Signs, and Traffic Handling (CoSA Spec), 1844 Thousand Oaks	LS	1	\$	\$
9	530.1	Barricades, Signs, and Traffic Handling (CoSA Spec), 130 Encino Grande & 15101 Encino Verde	LS	1	\$	\$
10	530.1	Barricades, Signs, and Traffic Handling (CoSA Spec), 14902 Heimer Road	LS	1	\$	\$
11	530.1	Barricades, Signs, and Traffic Handling (CoSA Spec), 12703 Englemann	LS	1	\$	\$
12	530.1	Barricades, Signs, and Traffic Handling (CoSA Spec), Loop 1604	LS	1	\$	\$
13	850.0	Sanitary Sewer Structures	EA	1	\$	\$
14	851.2	Adjust Existing Manhole (Watertight Ring And Cover)	EA	4	\$	\$
15	855.0	Reconstruction Of Existing Manhole	EA	16	\$	\$
16	855.0	Manhole Rehabilitation	VF	61	\$	\$
17	864-S1	Bypass Pumping (Small Diameter Sanitary Sewer), 2400 Newoak Park	LS	1	\$	\$
18	864-S1	Bypass Pumping (Small Diameter Sanitary Sewer), 12703 Englemann	LS	1	\$	\$
19	864-S1	Bypass Pumping (Small Diameter Sanitary Sewer), 14902 Heimer Road	LS	1	\$	\$
20	864-S2	Bypass Pumping (Large Diameter Sanitary Sewers), 2400 Newoak Park	LS	1	\$	\$
21	864-S2	Bypass Pumping (Large Diameter Sanitary Sewer), Errol St.	LS	1	\$	\$
22	864-S2	Bypass Pumping (Large Diameter Sanitary Sewer), Wurzbach Parkway	LS	1	\$	\$
23	864-S2	Bypass Pumping (Large Diameter Sanitary Sewer), 12703 Englemann	LS	1	\$	\$
24	864-S2	Bypass Pumping (Large Diameter Sanitary Sewers), Loop 1604	LS	1	\$	\$
25	866.0	Sewer Main Pre-Television Inspection (8"-15" Diameter)	LF	1761	\$	\$
26	866.0	Sewer Main Pre-Television Inspection (18"-24" Diameter)	LF	1251	\$	\$
27	866.0	Sewer Main Pre-Television Inspection (30" Diameter And Larger)	L.F.	113	\$	\$
28	901.0	CIPP 8" Sanitary Sewer Pipe, All Depths	LF	1761	\$	\$

29	901.0	CIPP 24" Sanitary Sewer Pipe, All Depths	LF	1251	\$	\$
30	901.0	CIPP 33" Sanitary Sewer Pipe, All Depths	LF	113	\$	\$
31	910	Manhole Rehabilitation	VF	10	\$	\$
32	910.2	Manhole Structure Rehabilitation	SF	296	\$	\$
33	1103.0	Point Repairs For 8" Diameter, (10'-15' Depth) Including Up To 20 LF Of Piping	EA	2	\$	\$
34	1103.0	Point Repairs For 24" Diameter, (10'-15' Depth) Including Up To 20 LF Of Piping	EA	2	\$	\$
35	1103.0	Point Repairs For 33" Diameter, (10'-15' Depth) Including Up To 20 LF Of Piping	EA	2	\$	\$
36	1103.2	Obstruction Removal by Remote Device, 24" Diameter, all depths	EA	4	\$	\$
37	1109.0	Service Reconnection, All Depths (w/ remote control cut device)	EA	20	\$	\$
38	0347.6001 (TxDOT)	TOM (Asphalt) PG76-22	TON	5	\$	\$
39	0347.6002 (TxDOT)	TOM-C (Aggregate) SAC-A	TON	66	\$	\$
40	0354.6048 (TxDOT)	Plane Asphalt Concrete Pavement (3")	SY	400	\$	\$
41	0666.6300 (TxDOT)	RE PM w/RET REQ TY I (W) 4" (BRK) (100MIL)	LF	40	\$	\$
42	0666.6303 (TxDOT)	RE PM w/RET REQ TY I (W) 4" (SLD) (100MIL)	LF	100	\$	\$
43	0666.6315 (TxDOT)	RE PM w/RET REQ TY I (Y) 4" (SLD) (100MIL)	LF	100	\$	\$
44	0672.6007 (TxDOT)	REFL PAV MRKR TY I-C	EA	5	\$	\$





SCALE: 1" = 2000'

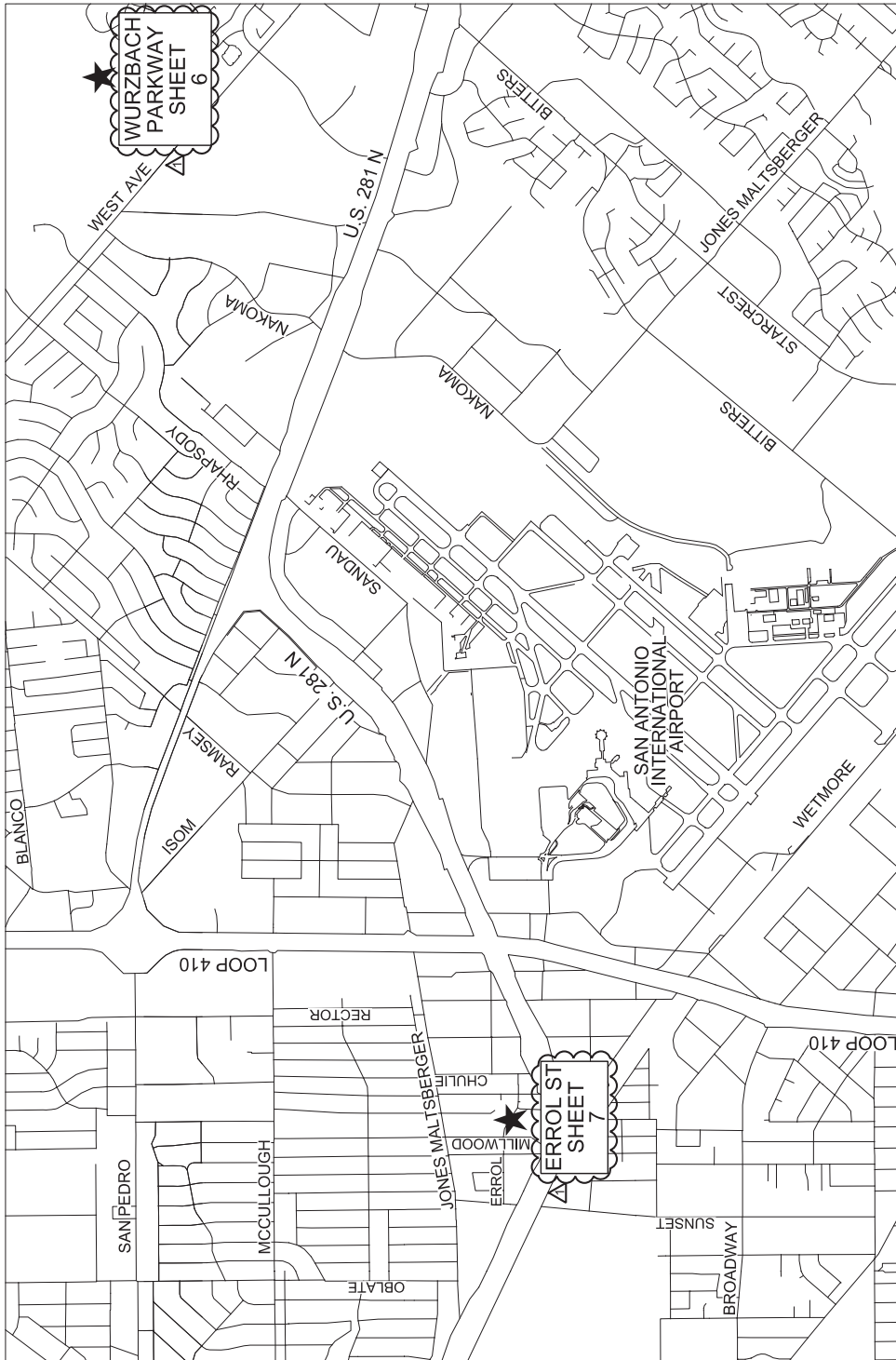
**SANITARY SEWER IMPROVEMENTS INDEX**

SHEET NO. DESCRIPTION

- 1 COVER SHEET
- 2 OVERALL LAYOUT & INDEX
- 3 - 4 GENERAL NOTES
- 5 QUANTITY SUMMARY
- 6 PLAN SHEET - SEWERLINE WURZBACH PARKWAY
- 7 PLAN SHEET - SEWERLINE ERROL ST BYPASS PUMPING PLAN WURZBACH PARKWAY
- 8 BYPASS PUMPING PLAN ERROL ST
- 9

WURZBACH PARKWAY SHEET 6

ERROL ST SHEET 7



100% SUBMITTAL

**MAESTAS**  
 11905414 10 WEST  
 SAN ANTONIO, TEXAS 78240  
 ENGINEER  
 REGISTRATION NO. 52938  
 02/28/2008

No.	Revision	Date	By	Appr'd	Disc
1	ADDITIONAL 3	VI	RBA	6-8-17	

2017 EARZ CPP CONSTRUCTION CONTRACT

OVERALL LAYOUT & INDEX

DEVELOPER: SUBMITTED APPROVED

MAP No. Company

SECT. No. JOB No. SHEET

DR. CAD CK. ENR/JS 17-4538 2 OF 9







**SAWS GENERAL CONSTRUCTION NOTES**

6. Contractor to protect existing signs (NSP). Provide temporary signs and salvage and replace signs that interfere with construction of sewer mains and laterals. (NSP).
7. Contractor to support and keep intact storm drains and inlet structures. Any damages incurred will be at the Contractor's expense.
8. Contractor shall provide access for the delivery of mail by the U.S. Postal Service.
9. The Contractor shall provide erosion control to prevent pollution of storm water's originating up gradient, and prevent downstream pollution by contaminated stormwater runoff from the site (NSP).
10. If damaged, the Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping, structure, etc. to its original or better condition (NSP).
11. Contractor must field verify all sanitary sewer depths, distances, pipe sizes, grades, and laterals before start of construction. (NSP)
12. Contractor shall coordinate with SAWS and property owners to access to sites located in easements and private properties.
13. Location of laterals are approximate only and contractor shall verify location of all laterals prior to construction.
14. Remove and Replaced fences shall be paid under preparation Right of Way.

**UTILITIES**

1. The existence and location of utilities indicated on these plans are taken from available records and are not guaranteed to be accurate.
2. For location of underground utilities, including electric and gas facilities, telephone cables and Time Warner Cable TV, call Texas State Wide One Call locator at 1-800-545-6005, 48 hours prior to beginning any excavation.
3. Contractor shall exercise extreme caution when working near, adjacent, or under existing utilities. Any damage to existing utility facilities resulting from Contractor's activities or construction methods will be repaired, replaced, restored or reimbursed at the Contractor's expense.
4. The location and depth of existing utilities and associated easements, if any, shown in these plans are approximate only. Prior to construction, Contractor shall verify the location and depth of all the existing public or private utilities including but not limited to water, sanitary sewer, service laterals, telephone, cable television, data transfer cables, communications, duct banks, utility vaults, gas, heating and cooling, underground electric, fiber-optic, drainage systems and irrigation lines. Contractors shall notify SAWS and the Engineer of any discrepancies or conflicts prior to construction. Any damage to the existing utilities shall be repaired at the Contractor's expense (NSP).
5. Contractor shall provide proper shoring or other suitable support for all utilities crossed or located adjacent to the construction areas. Contractor shall coordinate with the utility company representatives as required to provide support, marking and protective measures within the construction work zones.
6. Due to Federal Regulations Title 49, part 192.181, C.P.S. must maintain access to gas valves at all times. The Contractor must protect and work around any gas valves that are in the project area.
7. Contractor shall support, maintain and keep intact all drainage features or structures. Existing drainage paths shall not be blocked and shall remain in operation during construction. Any damage resulting from contractor's activities or construction methods will be restored by the contractor's at his own expense.

**CPS ENERGY NOTES**

1. Consider overhead line clearances and locations where large equipment may be used.
2. Consider location of existing overhead lines for construction and design purposes. Sleeving of overhead primary lines will be a cost to the Contractor. The sleeving of lines is for reference, not for protection from electrical shock.

3. De-energizing of primary lines or transmission lines for construction purposes will be a cost to the Contractor. De-energizing may not be possible in all instances.
4. Consider possible need for temporary relocation of poles during construction. Associated costs will be the responsibility of the party making the request.
5. Consider locations of both existing guy wires and proposed new guy wires. These could cause unforeseen construction interference. Any temporary bracing needed will be a cost to the Contractor.
6. Width, depth, and location of trenching or excavation must be considered around utility poles. This could necessitate tracing/shoring during construction at a cost to the Contractor.
7. Contractors are responsible for requesting a gas leak survey. Allow 10 working days to survey and 10 working days to adjust gas valves. All requests need to be coordinated through the agency inspectors.
8. Gas subcontractors are responsible for adjusting gas valves that are within the project area. Agency inspectors must notify their Utility Coordinators to request adjustments needed for valves that are inside the project area but not part of the joint bid.
9. The Right-of-way width must be considered for placement of relocated utilities.
10. Include utility inspections and time needed where necessary in schedules.
11. Call for locates before excavating.

**GENERAL NOTES FOR CURED IN PLACE PIPE (CIPP) INSTALLATION:**

1. The Contractor shall install CIPP in sections of the sewer mains that are identified on the engineering plans for rehabilitation in accordance with the construction phasing and traffic control plans developed for the project.
2. Bypass Pumping shall be per item SS864-S2.
3. Contractor shall provide any additional local bypass pumping as required to complete CIPP work. No separate payment will be made for additional local bypass pumping.
4. The Contractor is advised to take appropriate cautionary steps during all cleaning, video inspection, CIPP installation and sewer line point repair.
5. After cleaning sections of sewer main according to specification No. 866 the Contractor shall televise and videotape all sections of sewer main designated for rehabilitation to identify location of service connections. Pipe condition and locations requiring point repairs, pipe lengths and manhole locations are approximate.
6. After CIPP installation is completed, the Contractor shall televise and videotape the rehabilitated sewer mains in accordance with specification No. 866 to document satisfactory completion of work to the engineer and owner.

**BYPASS PUMPING NOTES:**

In addition to SS864, Contractor shall provide at no additional cost, as per bid item 864-S2, all site restoration, pavement patching, fence repair, doghouse-style & standard manholes and all lateral pumping and associated clean-out installation.

**ABBREVIATIONS:**  
 CP - Concrete Pipe  
 CT - Clay Tile  
 PVC - Polyvinyl Chloride  
 VCP - Vitrified Clay Pipe  
 CSC - Concrete Steel Cylinder



100% SUBMITTAL  
 MAESTAS  
 1108344, 10 WEST  
 5000 W. SAMARITA, TEXAS  
 75152-3885  
 682/2017

No.	Revision	Date	By	Appr'd	Disc
1	ADDENDUM 3		VI	RBA	6-6-17

REVISIONS

2017 EARZ CPP CONSTRUCTION CONTRACT

GENERAL NOTES SHEET 2 OF 2

DEVELOPER:	
CONTRACT:	
DATE SUBMITTED:	
DATE APPROVED:	
MAP No.:	Company
SECT. No.:	JOB No.
DR. CAD CLK EWSJ	17-4538
SHEET	4
OF	9

QUANTITY SUMMARY

Item	Description	Units		Sheet No.		Totals
		EA	VF	6	7	
850	Sanitary Sewer Structures	EA	1	2	1	1
851.2	Adjust Existing Manhole (W/Height Ring and Cover)	EA	4	6	4	4
852.1	Sanitary Sewer Manhole - 2 ft. Diameter (U-G)	EA	4	6	4	4
852.3	Extra Depth Manholes - 4 ft. Diameter (46)	VF	6	6	6	6
864-S2	Bypass Pumping (Large Diameter Sanitary Sewer), Wurzbach Parkway	LS	1	1	1	1
864-S2	Bypass Pumping (Large Diameter Sanitary Sewer), Ermi St.	LS	1	1	1	1
864-S2	Bypass Pumping (Large Diameter Sanitary Sewer), Ermi St. (8'-24")	LF	296	296	296	296
901	CIPP 24" Sanitary Sewer Pipe, all depths	LF	125	346	471	471
910	Manhole Rehabilitation	VF	10	10	10	10
910.2	Manhole Structure Rehabilitation	SF	296	296	296	296
1103.2	Obstruction Removal by Remote Device, 24" Diameter, all depths	EA	4	4	4	4



100% SUBMITTAL

**MAESTAS**  
 11908 JH. STREET  
 SUITE 100  
 SAN ANTONIO, TEXAS 78203  
 TEL: 214.520.1000  
 FAX: 214.520.1888  
 TUBE REGISTRATION NO. 17-553

No.	Revision	By	Date	Approved	Date
1	ADDENDUM 3	VI	REB	6-6-17	

2017 EARZ CIPP CONSTRUCTION CONTRACT

QUANTITY SUMMARY

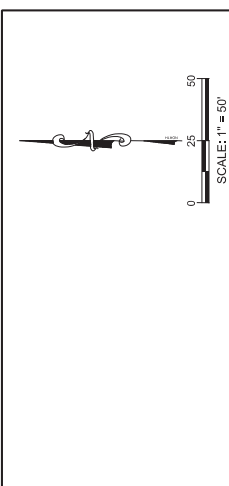
DEVELOPER: \_\_\_\_\_  
 CONT. SUBMITTED \_\_\_\_\_  
 APPROVED \_\_\_\_\_

MAP No. \_\_\_\_\_  
 SHEET 5  
 SECT. No. \_\_\_\_\_  
 JOB No. 17-4538  
 OF 9









ESTIMATED QUANTITIES			
ITEM	DESCRIPTION	UNIT	EST. FINAL
864-SZ	Storm Pumping (Large Diameter Sanitary Sewer)	LS	1
901	CPP 24" Sanitary Sewer Pipe, @ depths	LF	346
910	Manhole Rehabilitation	VF	10

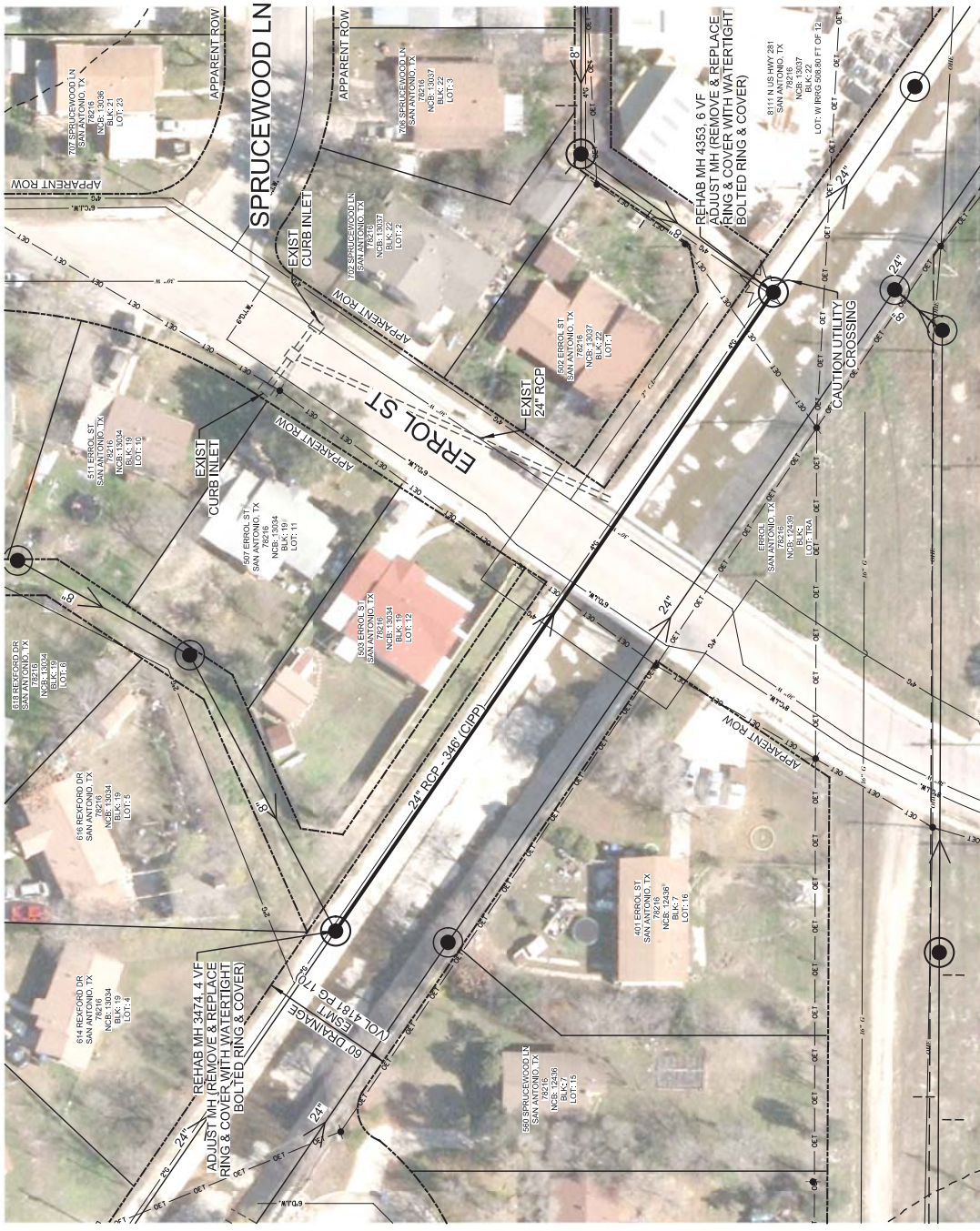
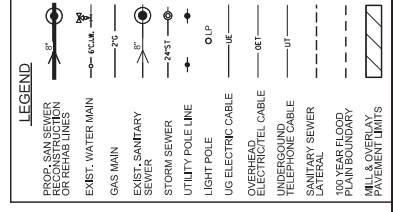


100% SUBMITTAL  
**MAESTAS**  
 1100 S. W. 10th Street  
 San Antonio, TX 78205  
 (210) 350-1888  
 LICENSE REGISTRATION NO. 15-533

No.	Revision	Date	Approved	Drawn
1	ADDITIONAL 3	05-27	RBA	05-27

2017 EARZ CPP CONSTRUCTION  
 CONTRACTOR  
**SEWER LINE 012**  
**ERROL ST.**  
**SHEET 1 OF 1**

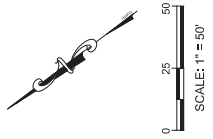
DEVELOPER:  
 SUBMITTED  
 APPROVED  
 MAP No. 957411  
 SHEET 7  
 COMPANY  
 JOB No. 17-458  
 PR. CAD CK EJMJS



NOTE:  
 1. THIS PROJECT IS LOCATED WITHIN THE DESIGNATED 100-YEAR FLOOD PLAIN.  
 2. THIS PROJECT IS LOCATED WITHIN THE DESIGNATED 100-YEAR FLOOD PLAIN.  
 3. ALL SANITARY SEWER LINES DEPICTED WERE DRAWN PER SEWER BLOCK MAP 104610 & 106610.

TRENCH EXCAVATION SAFETY PROTECTION  
 CONTRACTOR SHALL RETAIN ERM (OR AN ERM) AS STRUCTURAL DESIGN/GEOTECHNICAL SAFETY EQUIPMENT CONSULTANT. IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE CONTRACTOR SHALL PROVIDE TRENCH EXCAVATION SAFETY PROTECTION AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL PROVIDE FOR ADEQUATE TRENCH SAFETY SYSTEMS THAT COMPLY WITH AS MINIMUM OSHA STANDARDS FOR TRENCH EXCAVATIONS. CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION CALL C.P.S. LOCATOR AT 727-2606. 48 HOURS BEFORE BEGINNING ANY EXCAVATION.





6/6/2017  
**100% SUBMITTAL**  
**MAESTAS**  
 PROFESSIONAL ENGINEER  
 1100 N. W. STREET  
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 (214) 350-8888

No.	Revision	By	Checked	Approved	Date
1	ADDITIONAL 3	VI	RBA		6-6-17

DEVELOPER:  
 2017 EARCP CONSTRUCTION  
 CONTRACT  
 BY-PASS PUMPING PLAN  
 WÜRZBACH PARKWAY  
 SHEET 1 OF 9

**LEGEND**

	6\"/>	RECONSTRUCTION OR REHAB LINES
	EXIST. WATER MAIN	
	GAS MAIN	
	EXIST. SANITARY SEWER	
	STORM SEWER	
	UTILITY POLE LINE	
	LIGHT POLE	
	UG ELECTRIC CABLE	
	OVERHEAD ELECTRIC CABLE	
	UNDERGROUND TELEPHONE CABLE	
	SANITARY SEWER LATERAL	
	100 YEAR FLOOD PLAIN BOUNDARY	
	MILL & OVERLAY PARALLEL UNITS	

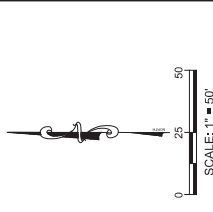


**NOTE:**  
 1. INSTALL NEW MANHOLE STRUCTURE OVER EXISTING 30" CONCRETE STEEL CYLINDER (CSC) SANITARY SEWER AS NEEDED FOR BY-PASS PUMPING.  
 2. CONTRACTOR MUST COORDINATE WITH CSC MANUFACTURER PRIOR TO CUTTING PIPE.

NOTE: ALL SANITARY SEWER LINES DEPICTED WERE DRAWN PER SEWER BLOCK MAP 158623.

NOTE: CONTRACTOR SHALL SUBMIT TO GAMS METHOD FOR TESTING MANHOLE AND REHABILITATED SANITARY SEWER. NOTE: NEW MANHOLE INSTALLATION IS SUBORDINARY TO ITEM 864-S3 WÜRZBACH PARKWAY.





**LEGEND**

	PROP. SAN SEWER RECONSTRUCTION OR REHAB LINES
	EXIST. WATER MAIN
	GAS MAIN
	EXIST. SANITARY SEWER
	STORM SEWER
	UTILITY POLE LINE
	LIGHT POLE
	UG ELECTRIC CABLE
	UG OVERHEAD ELECTRIC CABLE
	UG UNDERGROUND TELEPHONE CABLE
	SANITARY SEWER LATERAL
	100 YEAR FLOOD PLAIN BOUNDARY
	POWER POLE LIMITS



100% SUBMITTAL

**MAESTAS**  
1190514, WYREST  
SAN ANTONIO, TX 78240  
P.E. REGISTRATION NO. 15-533

No.	Description	Revision	By	Appr'd	Date
1	ADDENDUM 3	VI	RBA		05-27

2017 EAR CIPP CONSTRUCTION CONTRACT  
BYPASS PUMPING PLAN  
ERROL ST  
SHEET 1 OF 9

DEVELOPER: [Logo]

CONTRACT NO. [Blank]

PROJECT NO. [Blank]

DATE: [Blank]

APPROVED: [Signature]

MAP No. [Blank]

COMPLEXITY [Blank]

SECT. No. [Blank]

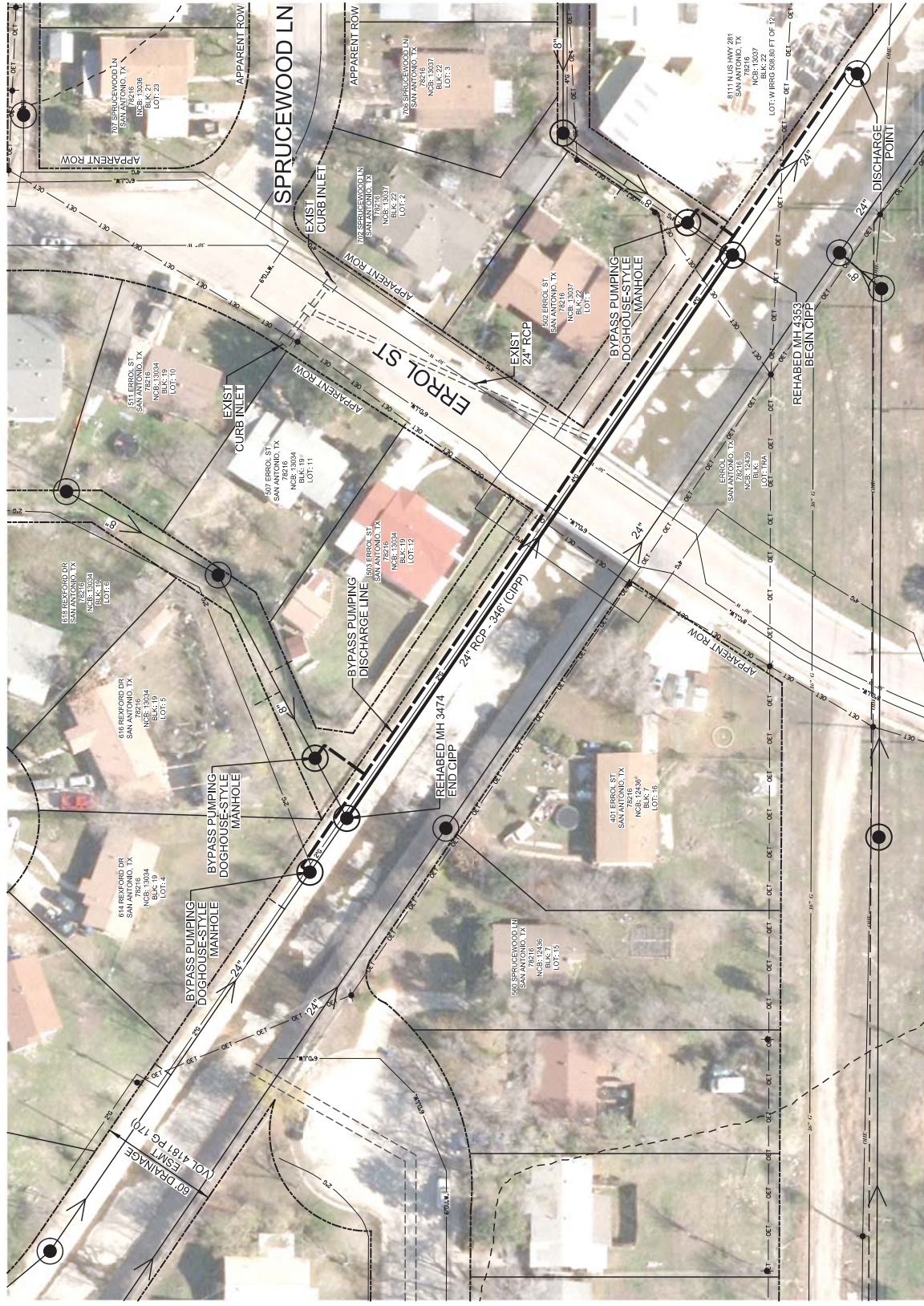
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DATE: [Blank]

PR. CAD CK. ENR. [Blank]

17-458

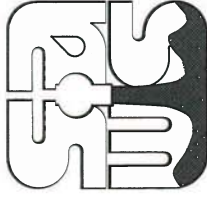
SHEET 9 OF 9



- NOTE: DISCHARGE PIPES SHALL BE INSTALLED AT THE TOP OF THE DRAINAGE CHANNEL BANK.
- NO PIPING ALLOWED WITHIN DRAINAGE CHANNEL OR PER SEWER BLOCK MAP 164610 & 166610.
  - THIS PROJECT IS LOCATED WITHIN THE DESIGNATED 100 YEAR FLOOD PLAIN.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.
  - ALL SANITARY SEWER LINES DEPICTED WERE DRAWN PER SEWER BLOCK MAP 164610 & 166610.
  - THIS PROJECT IS LOCATED WITHIN THE DESIGNATED 100 YEAR FLOOD PLAIN.



# SAN ANTONIO WATER SYSTEM



SAWS JOB NO 17-4536

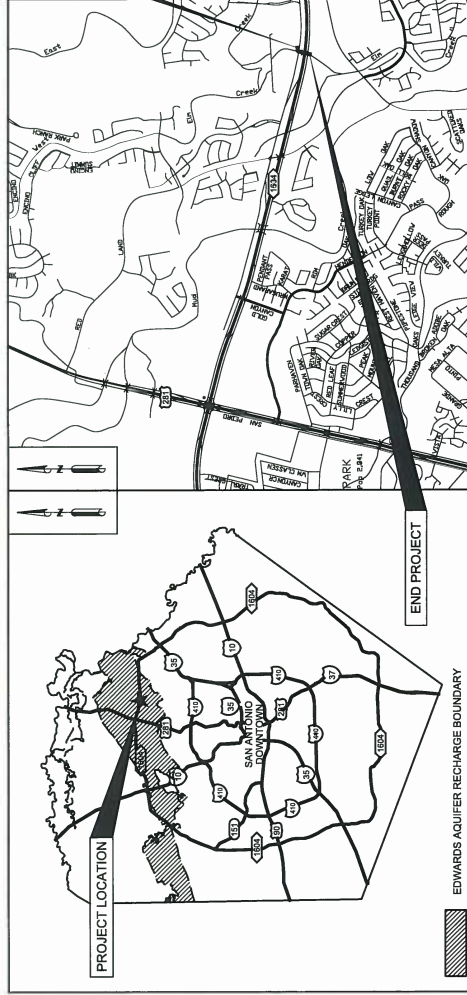
## 2017 EARZ CIPP CONSTRUCTION CONTRACT

DR 242 LOOP 1604 LARGE DIAMETER  
SEWER REHAB PROJECT

FINAL DESIGN

**TABLE OF CONTENTS**

SHT. NO.	DESCRIPTION
1	TITLE SHEET
2	GENERAL NOTES & QUANTITIES
3	T&E NOTES
4-5	SANITARY SEWER PLAN
6	TREE PROTECTION DETAILS
7-8	TRAFFIC CONTROL PLAN DETAILS



The seal appearing on this document is authorized by P.E. 56996 ON 5/19/2017

**BAIN MEDINA BAIN, INC.**  
ENGINEERS & SURVEYORS  
7075 S. Federal Freeway, Suite 100, San Antonio, TX 78216  
Phone: 214-494-7222 Fax: 214-494-6030 WWW.BMBI.COM



**TITLE SHEET**

DEVELOPER:	BUDGET PROJ.
SUBMITTED:	
APPROVED:	
MAP No.	
SECT. No.	1
DR. No.	17-4536
CK.	CC/CR
JOB No.	17-4536
FINAL SUBMITTAL	1
SHEET	OF 8

MAY 2017  
BMB PROJECT NO C-1432.09

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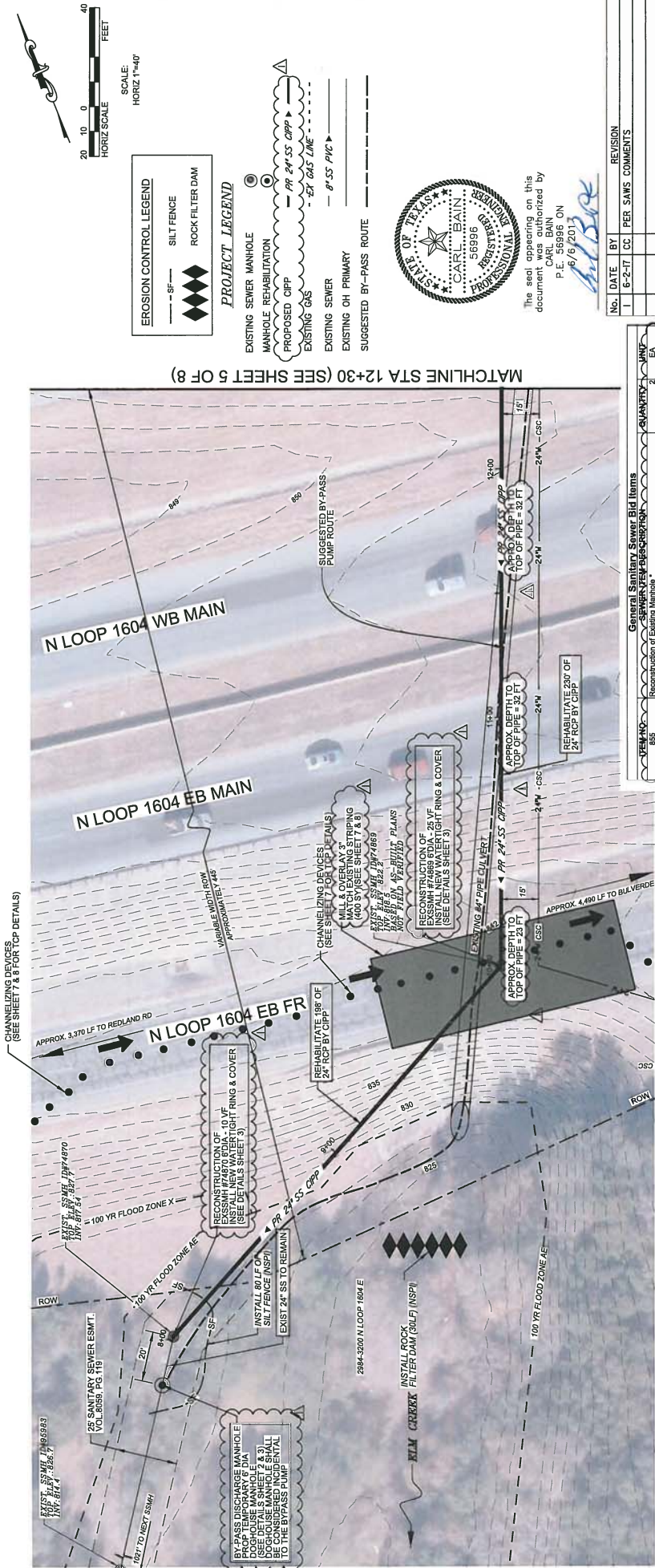




UTILITIES MUST BE LOCATED AND NOTIFIED BY THE CONTRACTOR TO PROTECT THE AREA UTILITIES BEFORE STARTING CONSTRUCTION (NSP).

**GENERAL NOTES FOR CIPPED IN PLACE PIPE (CIPP) INSTALLATION:**

- THE CONTRACTOR SHALL INSTALL CIPPS FOR ALL EXISTING MANHOLES WITHIN THE CONSTRUCTION PHASING AND TRAFFIC CONTROL PLANS DEVELOPED FOR THE PROJECT.
- TO COMPLETE CIPP WORK, NO SEPARATE PAYMENT WILL BE MADE FOR LOCAL BYPASS PUMPING.
- THE CONTRACTOR IS ADVISED TO TAKE APPROPRIATE CAUTIONARY STEPS DURING ALL CLEANING, VIDEO INSPECTION, CIPP INSTALLATION, AND SEWER LINE POINT REPAIR WORK.
- THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO PROTECT ALL EXISTING UTILITIES AND SERVICE CONNECTIONS.
- BEFORE CIPP INSTALLATION TO IDENTIFY LOCATION OF SERVICE CONNECTIONS.
- AFTER CIPP INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL TELEPHONE AND VISUALLY VERIFY THE LOCATION OF ALL SERVICE CONNECTIONS TO THE ENGINEER, OWNER, AND OWNER (NSP).



**PROJ 24" CIPP  
STA 7+80 TO STA 12+30**

**GENERAL NOTES:**

- CONTRACTOR SHALL VERIFY ALL DEPTHS, DISTANCES, PIPE SIZES, AND GRADES BEFORE START OF CONSTRUCTION (NSP, I.D).
- CONTRACTOR MUST NOTIFY SAMS INSPECTION AT 233-3500 48 HOURS BEFORE ANY OF THE FOLLOWING ACTIVITIES TAKE PLACE:
  - NOTIFICATION OF PRE-TELEVISION INSPECTION.
  - NOTIFICATION OF BYPASS PUMPING SETUP OPERATIONS.
  - NOTIFICATION OF THE PIPE INSTALLATION.

NO.	DATE	BY	REVISION
1	6-2-17	CC	PER SAMS COMMENTS

**General Sanitary Sewer Bid Items**

ITEM NO.	DESCRIPTION	QUANTITY	UNIT
855	Reconstruction of Existing Manholes	2	EA
856	Reconstruction of Existing Manholes	2	EA
857	Reconstruction of Existing Manholes	2	EA
858	Reconstruction of Existing Manholes	2	EA
859	Reconstruction of Existing Manholes	2	EA
860	Reconstruction of Existing Manholes	2	EA
861	Reconstruction of Existing Manholes	2	EA
862	Reconstruction of Existing Manholes	2	EA
863	Reconstruction of Existing Manholes	2	EA
864	Reconstruction of Existing Manholes	2	EA
865	Reconstruction of Existing Manholes	2	EA
866	Reconstruction of Existing Manholes	2	EA
867	Reconstruction of Existing Manholes	2	EA
868	Reconstruction of Existing Manholes	2	EA
869	Reconstruction of Existing Manholes	2	EA
870	Reconstruction of Existing Manholes	2	EA
871	Reconstruction of Existing Manholes	2	EA
872	Reconstruction of Existing Manholes	2	EA
873	Reconstruction of Existing Manholes	2	EA
874	Reconstruction of Existing Manholes	2	EA
875	Reconstruction of Existing Manholes	2	EA
876	Reconstruction of Existing Manholes	2	EA
877	Reconstruction of Existing Manholes	2	EA
878	Reconstruction of Existing Manholes	2	EA
879	Reconstruction of Existing Manholes	2	EA
880	Reconstruction of Existing Manholes	2	EA

**CONTRACTOR MUST NOTIFY SAMS INSPECTION AT 233-3500 48 HOURS BEFORE ANY OF THE FOLLOWING ACTIVITIES TAKE PLACE:**

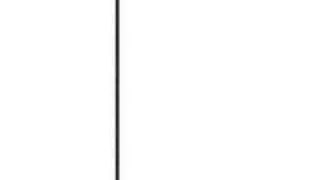
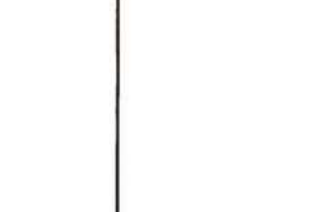
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- NOTIFICATION OF THE PIPE INSTALLATION.

**AT A NOTE:**

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLES INDICATED ON THE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITIES AND PRESERVE EXISTING CONDITIONS.

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**PROJ 24" CIPP  
STA 7+80 TO STA 12+30**

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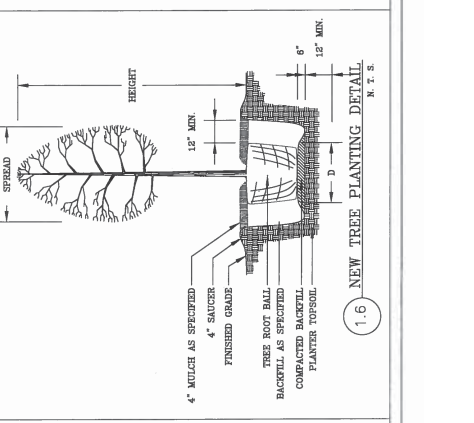
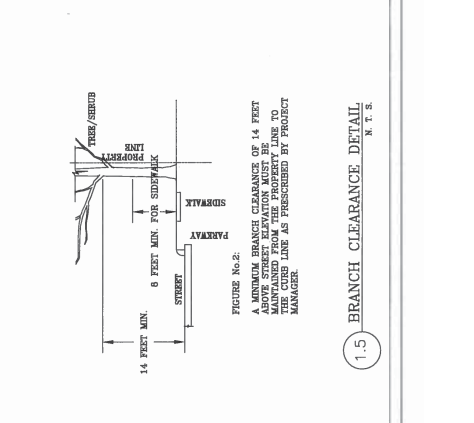
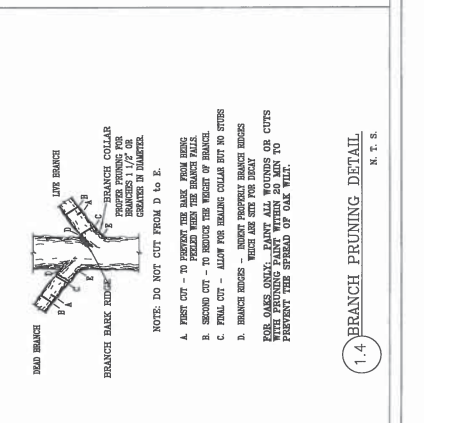
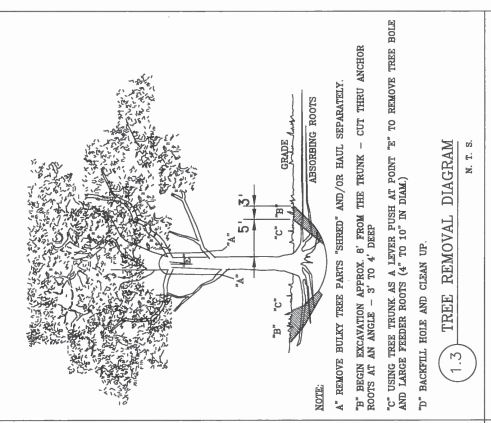
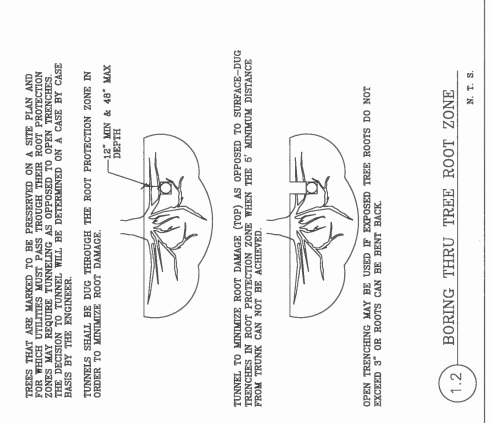
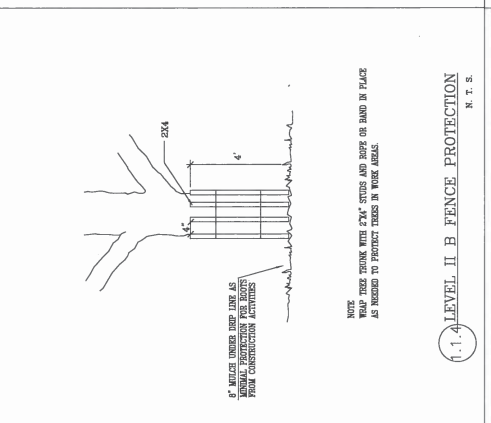
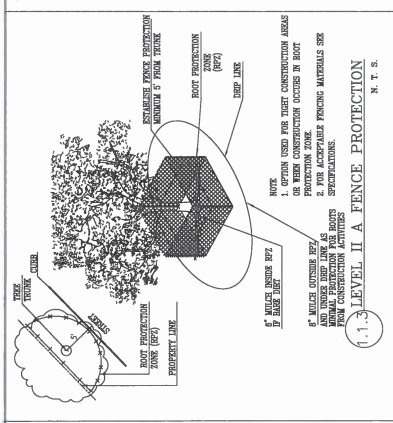
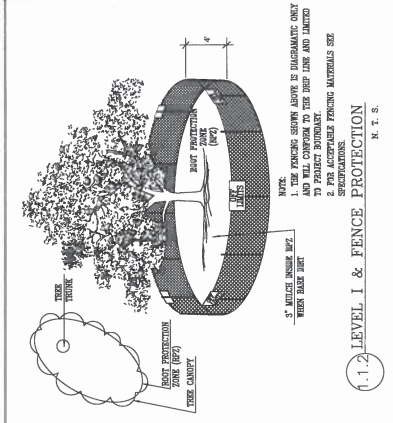
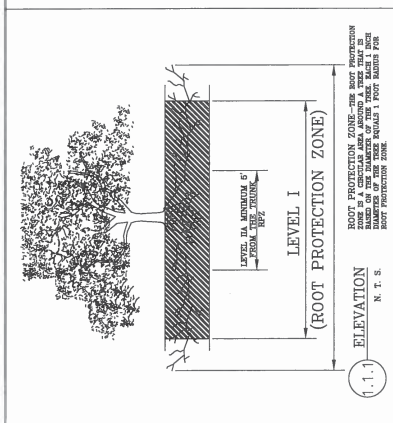
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**PROJ 24" CIPP  
STA 7+80 TO STA 12+30**







**GENERAL NOTES**

- ALL THE TREES WITH A DIAMETER GREATER THAN 3 INCHES AFFECTED BY CONSTRUCTION SHALL HAVE THE LIMBS AND ROOTS PROTECTED BY TREE PROTECTION FENCING. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. IN THESE NOTES BY DIAMETER WHEN PRUNING WAS PERFORMED BY THE CONTRACTOR, VEHICLES OR MATERIALS MAY OPERATE OR BE STORED. THE REQUIRED RADIUS LENGTH IS 1 FOOT PER INCH OF TREE TRUNK DIAMETER. THE ROOTS OR BRANCHES THAT ARE IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. LIVE OAK YOUNGS SHALL BE PAINTED OVER, WITHIN 20 MINUTES TO PREVENT OAK WILT. ACCESS TO FENCED AREAS WILL BE PERMITTED ONLY WITH THE APPROVAL OF THE ENGINEER OR CITY INSPECTOR.
- EXPOSED ROOTS SHALL BE COVERED AT THE END OF EACH DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH OR OTHER MATERIALS. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST PRIOR TO ITS REMOVAL.

**1.3 GENERAL NOTES**

# TREES TO BE PROTECTED AS PER SAWS INSPECTOR IF NECESSARY

**1.3 TREE PROTECTION TABLE**

TREE INVENTORY SUMMARY (6" DIAMETER AND LARGER)	TOTAL DIAMETER INCHES, R.O.W & RIGHTS	TOTAL DIAMETER INCHES REMOVED	TOTAL DIAMETER INCHES PRESERVED	TOTAL PERCENTAGE INCHES PRESERVED	TOTAL INCHES TO BE MITIGATED
TREES TO BE PROTECTED	0	0	0	0	0
TREES TO BE REMOVED	0	0	0	0	0
TOTAL	0	0	0	0	0

**1.3 TREE INVENTORY SUMMARY**

FEEDBACK	DATE	BY	FOR

**1.3 TREE INVENTORY SUMMARY**

NO.	DATE	BY	FOR

CITY OF SAN ANTONIO

DEPARTMENT OF PUBLIC WORKS

CITY OF SAN ANTONIO  
TREE PROTECTION DETAILS  
TREE PRESERVATION

REVISED: \_\_\_\_\_ DATE: \_\_\_\_\_ DRAWN: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO.: \_\_\_\_\_ OF \_\_\_\_\_



LEGEND	
██████████	Type 3 Barricade
▬▬▬▬▬▬▬▬	Channelizing Devices
▬▬▬▬▬▬▬▬	Truck Mounted Attenuator (TMA)
▬▬▬▬▬▬▬▬	Heavy Work Vehicle
▬▬▬▬▬▬▬▬	Trailer Mounted Flashing Arrow Board
▬▬▬▬▬▬▬▬	Sign
▬▬▬▬▬▬▬▬	Flag
▬▬▬▬▬▬▬▬	Portable Changeable Message Sign (PCMS)
▬▬▬▬▬▬▬▬	Traffic Flow
▬▬▬▬▬▬▬▬	Flagger

Posted Speed * MPH	Formula	Minimum Desirable Taper Lengths * '	Suggested Maximum Spacing of Channelizing Devices * '	Minimum Spacing of Channelizing Devices * '	Suggested Length of Buffer Space * '
30	$L = WS^2/60$	150', 165', 180', 60', 120', 90'	30', 30', 30', 30', 30', 30'	60', 70', 160', 120'	90'
35	$L = WS^2/60$	205', 225', 245', 35', 70', 160', 120'	35', 35', 35', 35', 35', 35'	70', 80', 200', 155', 195'	120'
40	$L = WS^2/60$	265', 285', 320', 40', 80', 200', 155', 195'	40', 40', 40', 40', 40', 40'	80', 90', 320', 240', 240'	150'
45	$L = WS^2/60$	450', 495', 540', 50', 100', 500', 295', 295'	45', 45', 45', 45', 45', 45'	100', 400', 400', 400', 400'	240'
50	$L = WS^2/60$	550', 605', 660', 60', 120', 600', 350', 350'	55', 55', 55', 55', 55', 55'	110', 500', 500', 500', 500'	295'
55	$L = WS^2/60$	650', 715', 780', 65', 130', 700', 400', 400'	65', 65', 65', 65', 65', 65'	130', 700', 700', 700', 700'	350'
60	$L = WS^2/60$	750', 825', 900', 75', 150', 900', 450', 450'	75', 75', 75', 75', 75', 75'	150', 900', 900', 900', 900'	415'
75	$L = WS^2/60$				540'

\* Conventional Roads Only  
 \*\* Taper lengths have been rounded off.  
 L=Length of Taper (FT) Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE		
MOBILE	SHORT DURATION	LONG TERM STATIONARY
	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY
		LONG TERM STATIONARY

**GENERAL NOTES**  
 1. Signs attached to signs where shown, are REQUIRED.  
 2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.  
 3. Channelizing devices used to close lanes may be supplemented with channelizing devices, chevrons may be attached to plastic drums as per BC Standards.  
 4. Channelizing devices used along the work space or along tangent sections may be supplemented with vertical panels (VP) placed on every other channelizing device, if night time conditions make it difficult to see at least two VPs, the VPs may be placed on each channelizing device.  
 5. The placement of pavement markings may be deferred on intermediate-term work, but must be placed on long-term work.  
 6. Shadow Vehicle with TMA and high intensity rotating, flashing, oscillating or strobe lights. Shadow Vehicle with TMA and high intensity rotating, flashing, oscillating or strobe lights. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or safety of the work. If workers are no longer present, the Shadow Vehicle should be removed from the work area.  
 7. Additional Shadow Vehicles with TMAs may be substituted for the closed lane, on the shoulder or off the paved surface, next to those shown in order to protect a wider work space.

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

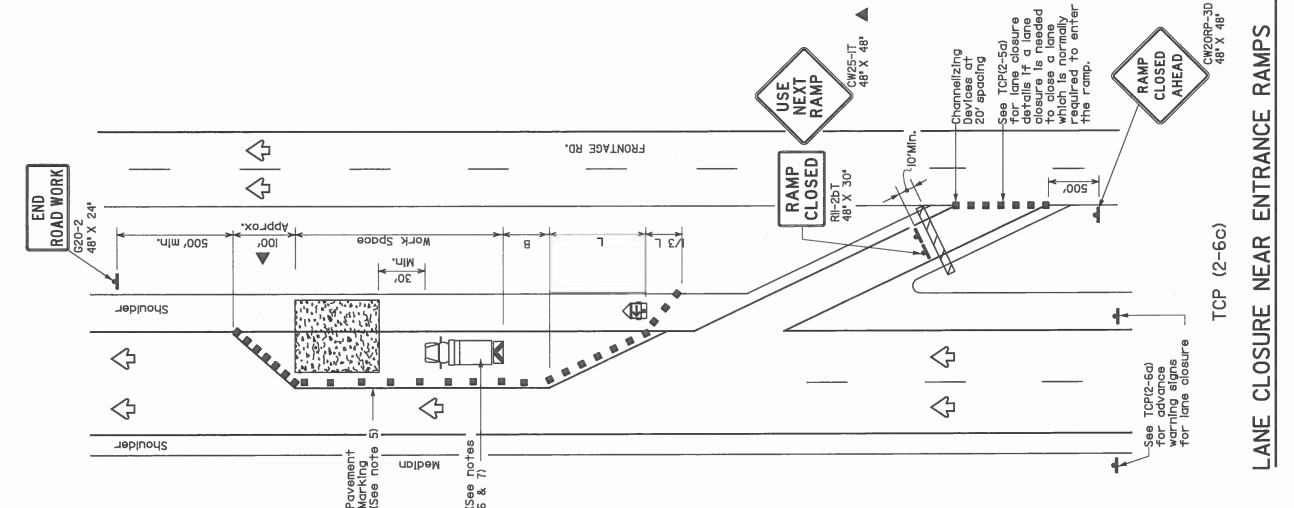
**Texas Department of Transportation**  
*Traffic Operations Division*

**TRAFFIC CONTROL PLAN**  
**LANE CLOSURES ON**  
**DIVIDED HIGHWAYS**

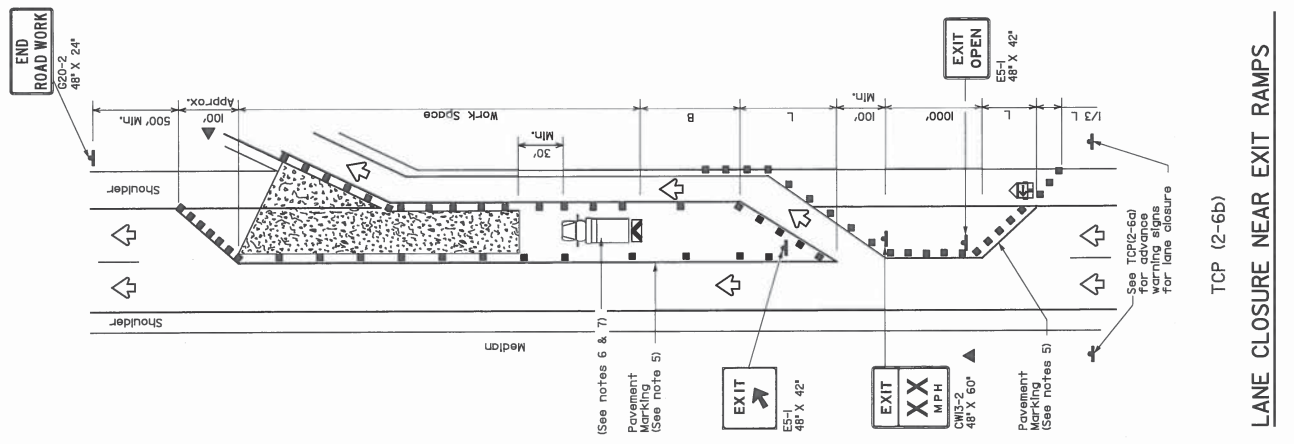
TCP(2-6)-12

DATE: 2-94	REVISED: 2-94	DATE: 12-00	REVISED: 12-00
BY: 1-97	BY: 1-97	DATE: 12-00	REVISED: 12-00
PROJECT: 1-97	PROJECT: 1-97	DATE: 12-00	REVISED: 12-00
COUNTY: 1-97	COUNTY: 1-97	DATE: 12-00	REVISED: 12-00
CITY: 1-97	CITY: 1-97	DATE: 12-00	REVISED: 12-00
STATE: 1-97	STATE: 1-97	DATE: 12-00	REVISED: 12-00

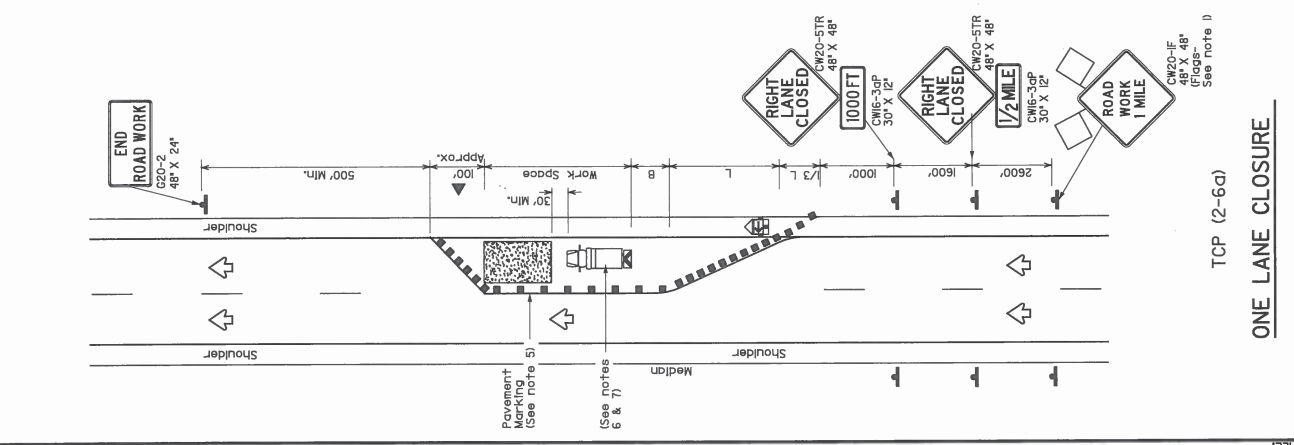
1165



**LANE CLOSURE NEAR ENTRANCE RAMP**  
 TCP (2-6c)



**LANE CLOSURE NEAR EXIT RAMP**  
 TCP (2-6b)



**ONE LANE CLOSURE**  
 TCP (2-6a)

