



West Sewershed Package 1
Solicitation Number: CO-00196
Job No.: 17-4546

ADDENDUM 1
August 30, 2018

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.

CHANGES TO THE SPECIFICATIONS

1. Remove Contractor's Bid Packet Checklist in its entirety and replace with Contractor's Bid Packet Checklist provided in this addendum.
2. Remove Bid Proposal form in its entirety and replace with Bid Proposal form provided in this addendum. This version of the Bid Proposal should be utilized by Bidders when submitting a bid for this project.

CHANGES TO THE PLANS

1. Remove Sheets 6, 7, 8, 9, 10, 11, 12, 13, and 14 in their entirety and replace with Sheets 6, 7, 8, 9, 10, 11, 12, 13, and 14 provided in this addendum.

END OF ADDENDUM

This Addendum, including this one (1) page, is thirteen (13) pages with attachments in its entirety.

Attachments:

- Contractor's Bid Packet Checklist
- Bid Proposal
- Plans – Sheet 6 – 14: Sanitary Sewer Engineering Plan

A handwritten signature in blue ink that reads "Atlan David Weikel".

Atlan David Weikel
Trihydro Corporation



CONTRACTOR'S BID PACKET CHECKLIST:
West Sewershed Package 1 Project
SAWS Job No. 17-4546
SAWS Solicitation No. CO-00196

Items to be included for Submittal with Bid:

- Bid proposal and Acknowledgement of All Addendums (Addendum 1)
- Proposal Certification; page PC-1
- Bid Bond/Cashier's Check
- Statement on President's Executive Orders – Page IB 6 or 7
- Good Faith Effort Plan
- Conflict of Interest Questionnaire - Form CIQ (*Rev. 11/30/2015*)
- Proof of Insurability (Letter from Insurer or Sample Certificate of Insurance)
- Detailed Baseline Schedule
- An information packet on company showing organization and equipment
- A statement regarding ability to complete the project within the schedule taking into account existing commitments
- Statement of Bidder's Experience
- A completed and signed W-9

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:

(PLEASE SEE ATTACHED PDF LIST OF BID ITEMS)

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.

BID

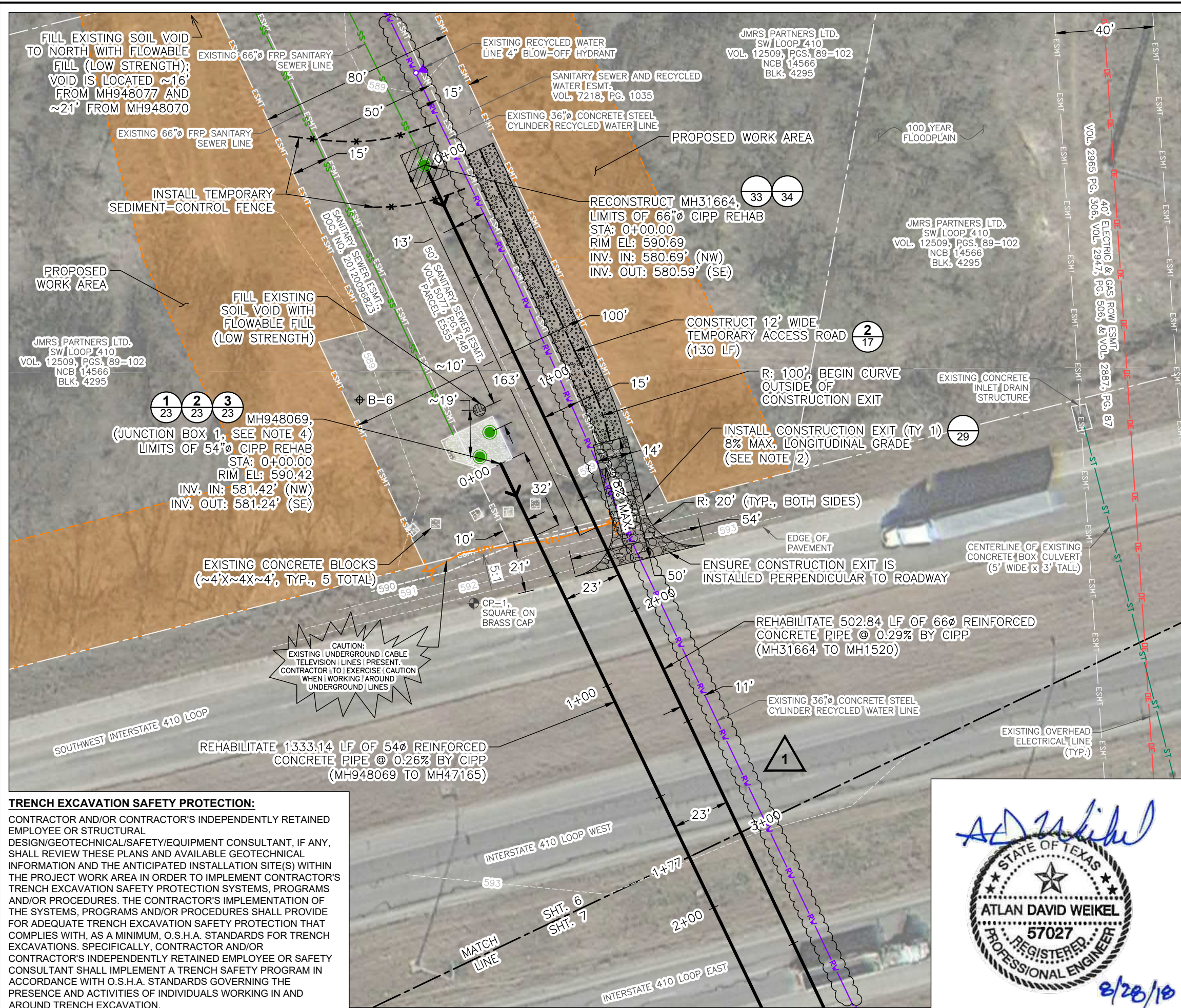
The bidder offers to construct the Project in accordance with the Contract Documents for the contract price, and to complete the Project within **300** calendar days after the start date, as set forth in the Authorization to Proceed. **The bidder understands and accepts the provisions of the contract 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.



SAWS
West Sewershed Package 1
SAWS Job No. 17-4546
Solicitation No. CO-00196

LINE NO.	ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	100	MOBILIZATION (Maximum of 10% of the total of Line Items 4-28)	LS	1		
2	100	INTERMEDIATE DEMOB/REMOB	LS	1		
3	101	PREPARING RIGHT-OF-WAY (Maximum of 5% of the total of Line Items 4-28)	LS	1		
4	169	SOIL RETENTION BLANKET (CLASS 1, TYPE A)	SY	276		
5	200	BASE COURSE (6-INCHES COMPACTED DEPTH)	SY	2,450		
6	220	BLADING	LF	1,837		
7	413	FLOWABLE FILL (LOW STRENGTH)	CY	75		
8	502	BARRICADES, SIGNS AND TRAFFIC HANDLING	LS	1		
9	506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	316		
10	506	CONSTRUCTION EXITS (REMOVE)	SY	316		
11	515	TOPSOIL	CY	25		
12	516	BERMUDA SODDING	SY	150		
13	520	HYDROMULCHING	SY	276		
14	540	TEMPORARY EROSION, SEDIMENTATION, AND WATER POLLUTION PREVENTION AND CONTROL	LS	1		
15	540	TEMPORARY SEDIMENT-CONTROL FENCE	LF	552		
16	550	TRENCH EXCAVATION SAFETY PROTECTION	LF	446		
17	552	WIRE FENCE (TY C)	LF	1,735		
18	552	18' GATE (TY 3)	EA	7		
19	855	RECONSTRUCTION OF EXISTING MANHOLES	EA	6		
20	855	RECONSTRUCTION OF EXISTING SIPHON INLET STRUCTURE (MH 4587)	EA	1		
21	864-S2	BYPASS PUMPING LARGE DIAMETER SANITARY SEWER	LS	1		
22	866	SEWER MAIN TELEVISION INSPECTION (30" AND LARGER)	LF	7,292		
23	901	CIPP 54" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	3,583		
24	901	CIPP 66" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	3,709		
25	1103	POINT REPAIRS FOR 54" DIAMETER, INCLUDING 9 LF OF PIPING, ALL DEPTHS	EA	3		
26	1103	POINT REPAIRS FOR 66" DIAMETER, INCLUDING 9 LF OF PIPING, ALL DEPTHS	EA	3		
27	1103	OBSTRUCTION REMOVAL BY REMOTE DEVICE, 54" DIAMETER, ALL DEPTHS	EA	5		
28	1103	OBSTRUCTION REMOVAL BY REMOTE DEVICE, 66" DIAMETER, ALL DEPTHS	EA	5		

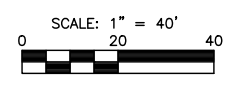


ESTIMATED QUANTITIES				
ITEM	DESCRIPTION	UNIT	EST.	FINAL
200	BASE COURSE (6-INCHES COMPACTED DEPTH)	SY	174	
220	BLADING	LF	130	
413	FLOWABLE FILL (LOW STRENGTH)	CY	16	
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	97	
506	CONSTRUCTION EXITS (REMOVE)	SY	97	
520	HYDROMULCHING	SY	45	
540	TEMPORARY SEDIMENT-CONTROL FENCE	LF	99	
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	80	
855	RECONSTRUCTION OF EXISTING MANHOLES	EA	1	
866	SEWER MAIN TELEVISION INSPECTION (30" AND LARGER)	LF	477	
901	CIPP 54" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	177	
901	CIPP 66" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	300	

NOTES:

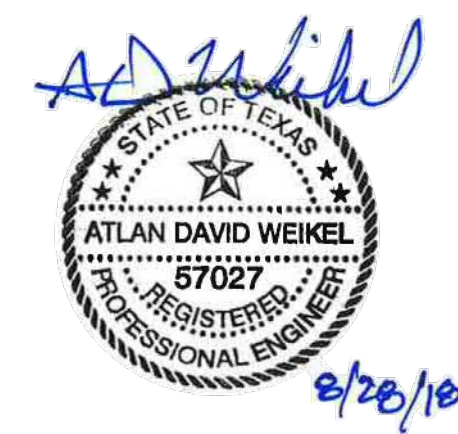
- QUANTITIES ARE ESTIMATED FROM MATCH LINE TO MATCH LINE.
- EMBANKMENT MATERIAL MAY BE REQUIRED TO CONSTRUCT CONSTRUCTION EXIT (TY 1) AT LOCATION AND GRADE SHOWN. EMBANKMENT PLACEMENT AND REMOVAL SHALL BE CONSIDERED SUBSIDIARY TO BID ITEMS 506 6020 AND 506 6024; CONSTRUCTION EXITS (INSTALL) (TY 1), CONSTRUCTION EXITS (REMOVE).
- CONTRACTOR SHALL FIELD LOCATE AND PROTECT EXISTING UTILITIES DURING CONSTRUCTION ACTIVITIES. DAMAGE COSTS INCURRED RESULTING FROM THEIR ACTIVITIES SHALL BE BORNE BY THE CONTRACTOR.
- IF NEEDED FOR ACCESS, CONTRACTOR SHALL REMOVE, PROTECT, AND REINSTALL JUNCTION BOX 1 LID AND MH31664 CONE (NSPI).
- IF USING RECYCLED WATER LINE FOR CONSTRUCTION ACTIVITIES CONTRACTOR SHALL COORDINATE WITH SAWS PRIOR TO USE AND SHALL USE EXISTING APPURTENANCES.

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ATLAN DAVID WEIKEL, REGISTERED P.E. NO. 57027, August 29, 2018. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.



Trihydro CORPORATION
 Texas Engineering Firm F-131
 Texas Survey Firm 10194320
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 www.trihydro.com
 TRIHYDRO PROJECT NO. 702-557-E00

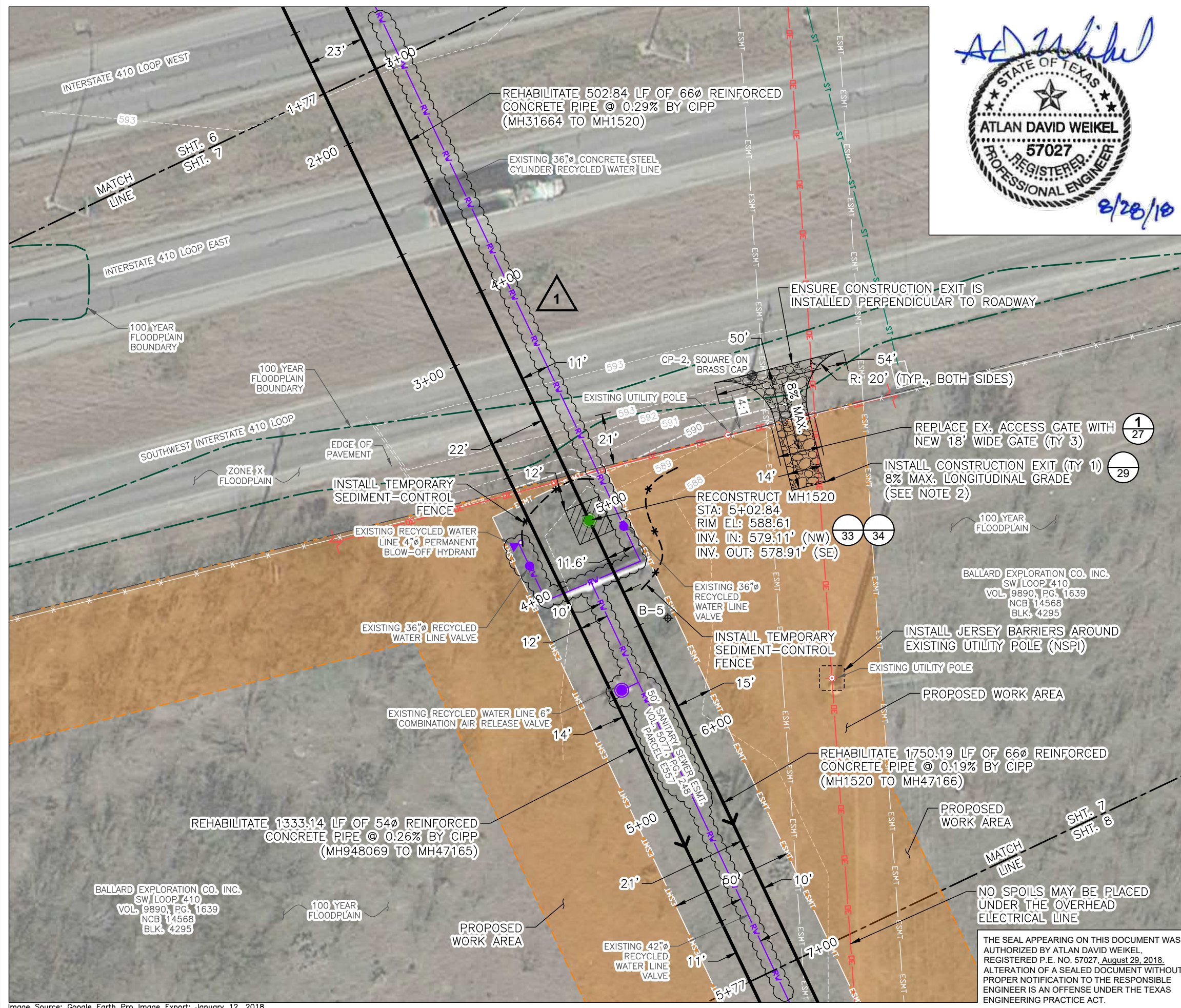
TRENCH EXCAVATION SAFETY PROTECTION:
 CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, O.S.H.A. STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH O.S.H.A. STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



LEGEND		REVISIONS				
PROP. CIPP REHAB		1	ISSUE FOR ADDENDUM 1	FZ	ADW	8/28/2018
PROP. S-C FENCE		0	ISSUE FOR 100% PLANS	RJ	ADW	8/23/2018
PROP. CONST. EXIT		No.	Revision	Drawn	Approved	Date
PROP. ACCESS ROAD		REVISIONS				
PROP. WORK AREA		WEST SEWERSHED PACKAGE 1				
SANITARY SEWER		SANITARY SEWER ENGINEERING PLAN 1 OF 9				
OH ELECTRICAL LINE		DEVELOPER: SAN ANTONIO WATER SYSTEM				
RECYC. WATER LINE		CONT. BUDGET PROJ.				
CONC. BOX CULVERT		SUBMITTED _____				
UG TELEVISION LINE		APPROVED _____				
FLOODPLAIN		MAP No. _____				
FENCE		SECT. No. _____				
PARCEL LINE		DR. RJ CK. ADW				
EASEMENT LINE		JOB No. 17-4546				
SURFACE CONTOURS		SHEET 6				
		OF 37				

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Image Source: Google Earth Pro Image Export; January 12, 2018



AD Weikel

STATE OF TEXAS
★ ★ ★
ATLAN DAVID WEIKEL
57027
REGISTERED
PROFESSIONAL ENGINEER

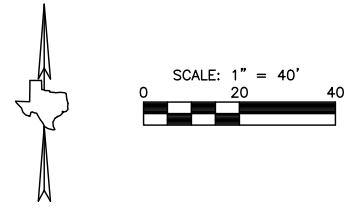
8/28/18

TRENCH EXCAVATION SAFETY PROTECTION:

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ESTIMATED QUANTITIES				
ITEM	DESCRIPTION	UNIT	EST.	FINAL
506	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	97	
506	CONSTRUCTION EXITS (REMOVE)	SY	97	
520	HYDROMULCHING	SY	45	
540	TEMPORARY SEDIMENT-CONTROL FENCE	LF	105	
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	80	
552	18' GATE (TY 3)	EA	1	
855	RECONSTRUCTION OF EXISTING MANHOLES	EA	1	
866	SEWER MAIN TELEVISION INSPECTION (30" AND LARGER)	LF	800	
901	CIPP 54" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	400	
901	CIPP 66" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	400	

- NOTES:**
- QUANTITIES ARE ESTIMATED FROM MATCH LINE TO MATCH LINE.
 - EMBANKMENT MATERIAL MAY BE REQUIRED TO CONSTRUCT CONSTRUCTION EXIT (TY 1) AT LOCATION AND GRADE SHOWN. EMBANKMENT PLACEMENT AND REMOVAL SHALL BE CONSIDERED SUBSIDIARY TO BID ITEMS 506 6020 AND 506 6024; CONSTRUCTION EXITS (INSTALL) (TY 1), CONSTRUCTION EXITS (REMOVE).
 - CONTRACTOR SHALL FIELD LOCATE AND PROTECT EXISTING UTILITIES DURING CONSTRUCTION ACTIVITIES. DAMAGE COSTS INCURRED RESULTING FROM THEIR ACTIVITIES SHALL BE BORNE BY THE CONTRACTOR.
 - IF USING RECYCLED WATER LINE FOR CONSTRUCTION ACTIVITIES CONTRACTOR SHALL COORDINATE WITH SAWS PRIOR TO USE AND SHALL USE EXISTING APPURTENANCES.



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TRIHYDRO PROJECT NO. 702-557-E00

LEGEND

PROP. CIPP REHAB	→
PROP. S-C FENCE	* - - *
PROP. CONST. EXIT	⊠
SITE RESTORATION	▨
PROP. WORK AREA	▨
OH ELECTRICAL LINE	— DE —
RECYC. WATER LINE	— RW —
CONC. BOX CULVERT	— ST —
FLOODPLAIN	- - -
FENCE	x - - x
PARCEL LINE	- - -
EASEMENT LINE	- - - ESMT
SURFACE CONTOURS	590 591

No.	Revision	Drawn	Approved	Date
1	ISSUE FOR ADDENDUM 1	FZ	ADW	8/28/2018
0	ISSUE FOR 100% PLANS	RJ	ADW	8/23/2018

REVISIONS

WEST SEWERSHED PACKAGE 1

SANITARY SEWER ENGINEERING PLAN 2 OF 9

DEVELOPER: SAN ANTONIO WATER SYSTEM

CONT. BUDGET PROJ.

SUBMITTED _____

APPROVED _____

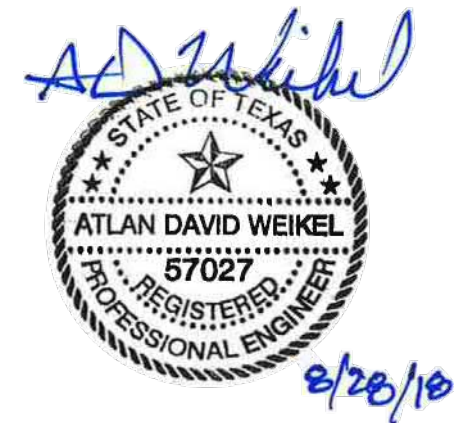
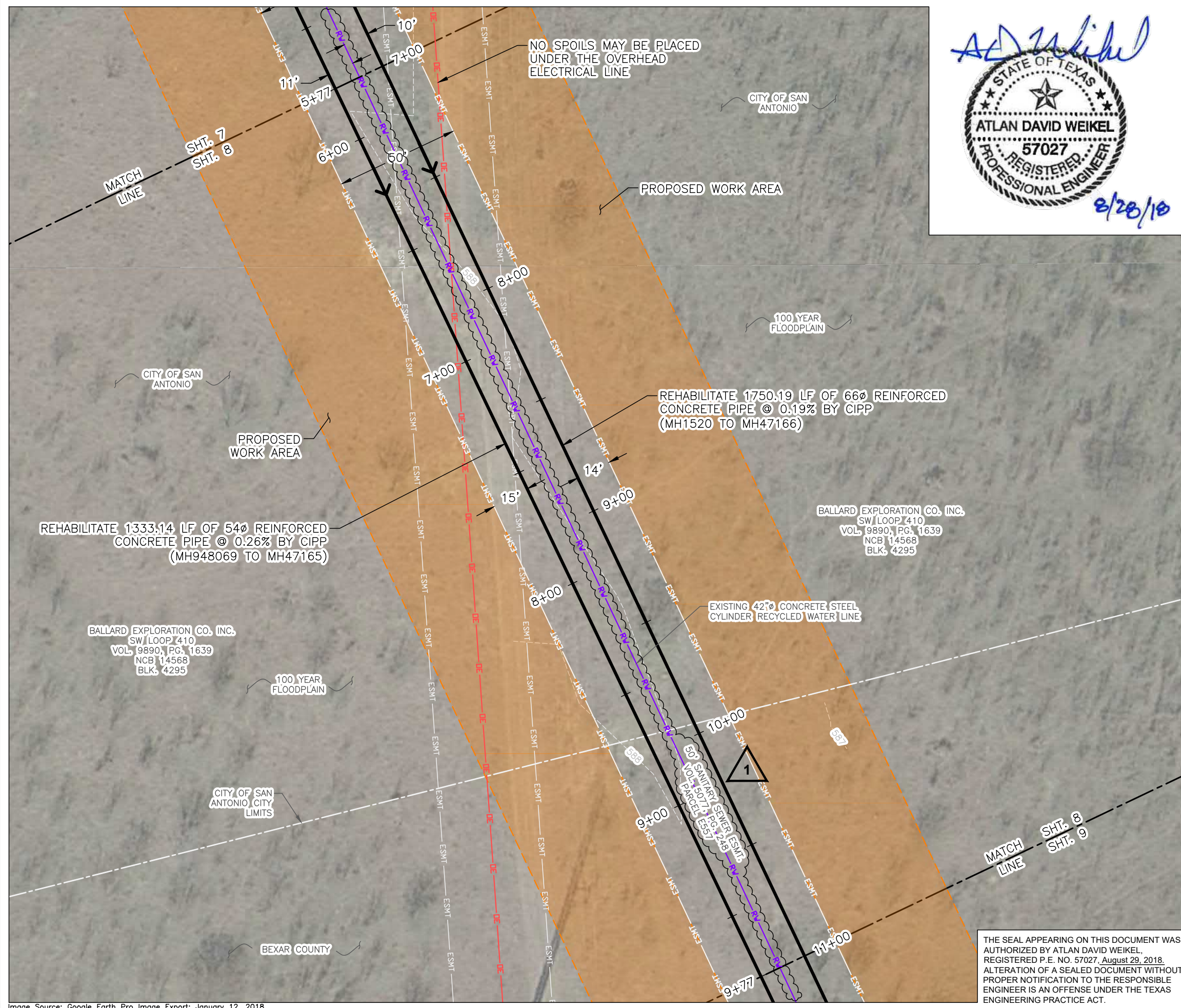
MAP No. _____

SECT. No. 590

DR. RJ CK. ADW

JOB No. 17-4546	SHEET 7 OF 37
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TRENCH EXCAVATION SAFETY PROTECTION:

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ESTIMATED QUANTITIES				
ITEM	DESCRIPTION	UNIT	EST.	FINAL
866	SEWER MAIN TELEVISION INSPECTION (30" AND LARGER)	LF	800	
901	CIPP 54" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	400	
901	CIPP 66" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	400	

- NOTES:**
1. QUANTITIES ARE ESTIMATED FROM MATCH LINE TO MATCH LINE.
 2. CONTRACTOR SHALL FIELD LOCATE AND PROTECT EXISTING UTILITIES DURING CONSTRUCTION ACTIVITIES. DAMAGE COSTS INCURRED RESULTING FROM THEIR ACTIVITIES SHALL BE BORNE BY THE CONTRACTOR.

SCALE: 1" = 40'

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www.trihydro.com

TRIHYDRO PROJECT NO. 702-557-E00

No.	Revision	Drawn	Approved	Date
1	ISSUE FOR ADDENDUM 1	FZ	ADW	8/28/2018
0	ISSUE FOR 100% PLANS	RJ	ADW	8/23/2018

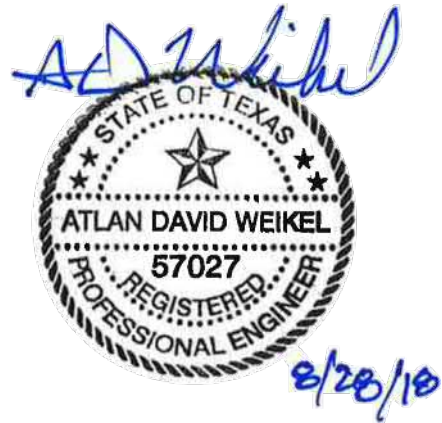
REVISIONS	
	WEST SEWERSHED PACKAGE 1 SANITARY SEWER ENGINEERING PLAN 3 OF 9
DEVELOPER:	SAN ANTONIO WATER SYSTEM
CONT.	BUDGET PROJ.
SUBMITTED	
APPROVED	
MAP No.	
SECT. No.	
DR. RJ	CK. ADW

JOB No. 17-4546	SHEET 8
	OF 37

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY ATLAN DAVID WEIKEL, REGISTERED P.E. NO. 57027, August 29, 2018. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

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BALLARD EXPLORATION CO. INC.
SW LOOP 410
VOL. 9890, PG. 1639
NCB 14568
BLK. 4295



BALLARD EXPLORATION CO. INC.
4662 SW LOOP 410
VOL. 9751, PG. 1181
NCB 14568
BLK. 4295

BALLARD EXPLORATION CO. INC.
4662 SW LOOP 410
VOL. 9751, PG. 1181
NCB 14568
BLK. 4295

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ESTIMATED QUANTITIES

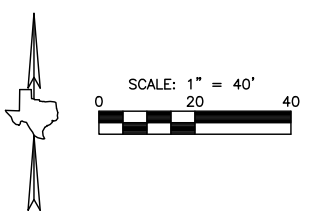
ITEM	DESCRIPTION	UNIT	EST.	FINAL
866	SEWER MAIN TELEVISION INSPECTION (30" AND LARGER)	LF	1000	
901	CIPP 54" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	500	
901	CIPP 66" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	500	

NOTES:

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TRIHYDRO PROJECT NO. 702-557-E00



LEGEND

PROP. CIPP REHAB	
PROP. WORK AREA	
RECYC. WATER LINE	
FLOODPLAIN	
FENCE	
PARCEL LINE	
EASEMENT LINE	
SURFACE CONTOURS	

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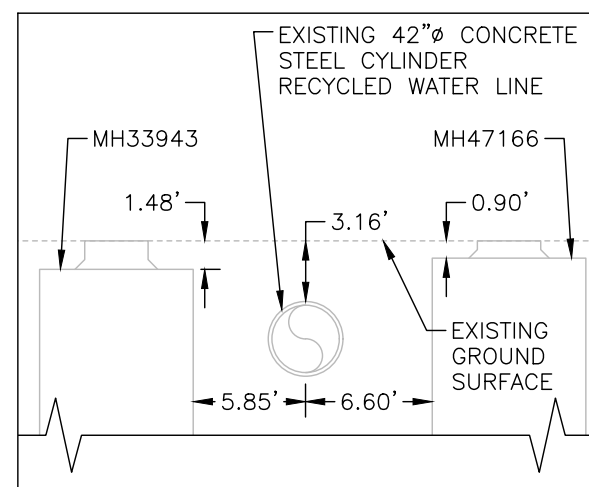
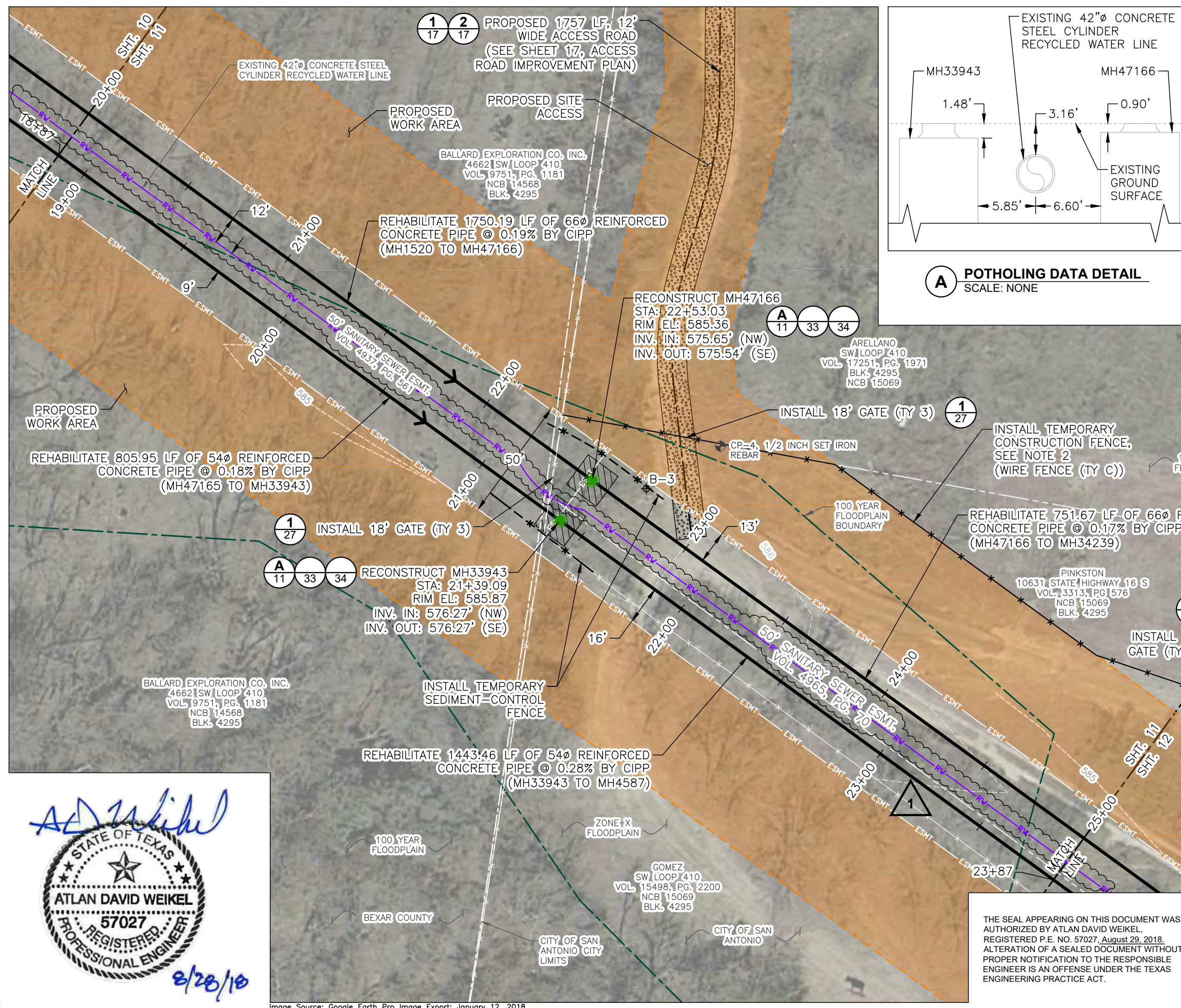
REVISIONS

	WEST SEWERSHED PACKAGE 1
	SANITARY SEWER ENGINEERING PLAN 5 OF 9
DEVELOPER:	SAN ANTONIO WATER SYSTEM
CONT.	BUDGET PROJ.
SUBMITTED	
APPROVED	
MAP No.	
SECT. No.	
DR. RJ	CK. ADW

JOB No. 17-4546

SHEET 10 OF 37

M:\STDA\SANS\CADD\17-4546_WESTSEWERSHED\PLANS\SET5\702-WSP1_PLANSHEETS

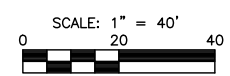


A POTHOLING DATA DETAIL
SCALE: NONE

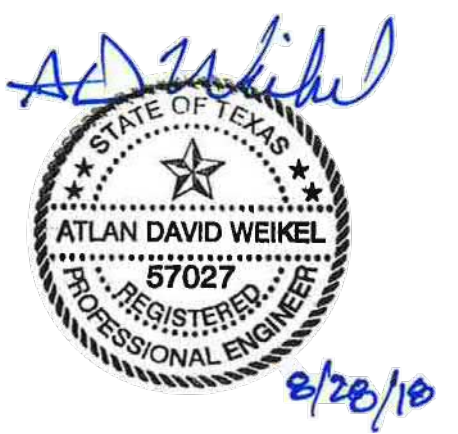
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ESTIMATED QUANTITIES				
ITEM	DESCRIPTION	UNIT	EST.	FINAL
520	HYDROMULCHING	SY	96	
540	TEMPORARY SEDIMENT-CONTROL FENCE	LF	109	
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	126	
552	WIRE FENCE (TY C)	LF	286	
552	18' GATE (TY 3)	EA	3	
855	RECONSTRUCTION OF EXISTING MANHOLES	EA	2	
866	SEWER MAIN TELEVISION INSPECTION (30" AND LARGER)	LF	1000	
901	CIPP 54" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	500	
901	CIPP 66" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	500	

- NOTES:**
- ALL QUANTITIES EXCEPT FOR THE GATES ARE ESTIMATED FROM MATCH LINE TO MATCH LINE. GATE QUANTITIES MATCH WHAT IS SHOWN ON THIS SHEET.
 - CONTRACTOR SHALL REMOVE TEMPORARY CONSTRUCTION FENCE AT PROJECT COMPLETION, AS DIRECTED BY THE ENGINEER. FENCE REMOVAL AND DISPOSAL SHALL BE CONSIDERED SUBSIDIARY TO BID ITEM 552 6003, WIRE FENCE (TY C).
 - CONTRACTOR SHALL FIELD LOCATE AND PROTECT EXISTING UTILITIES DURING CONSTRUCTION ACTIVITIES. DAMAGE COSTS INCURRED RESULTING FROM THEIR ACTIVITIES SHALL BE BORNE BY THE CONTRACTOR.
 - POTHOLING DATA SHOWN ON VIEW A OF THIS SHEET WAS FIELD COLLECTED ON MAY 22, 2018.
 - CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNER PRIOR TO, AND DURING, GATE INSTALLATION.



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TRIHYDRO PROJECT NO. 702-557-E00



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LEGEND

PROP. CIPP REHAB	→
PROP. S-C FENCE	—*—
PROP. TEMP. FENCE	—x—
PROP. ACCESS ROAD	—
SITE RESTORATION	▨
PROP. WORK AREA	▨
RECYC. WATER LINE	—RW—
FLOODPLAIN	—
FENCE	—x—
PARCEL LINE	—
EASEMENT LINE	—ESMT—
COSA CITY LIMITS	—
SURFACE CONTOURS	—590— —591—

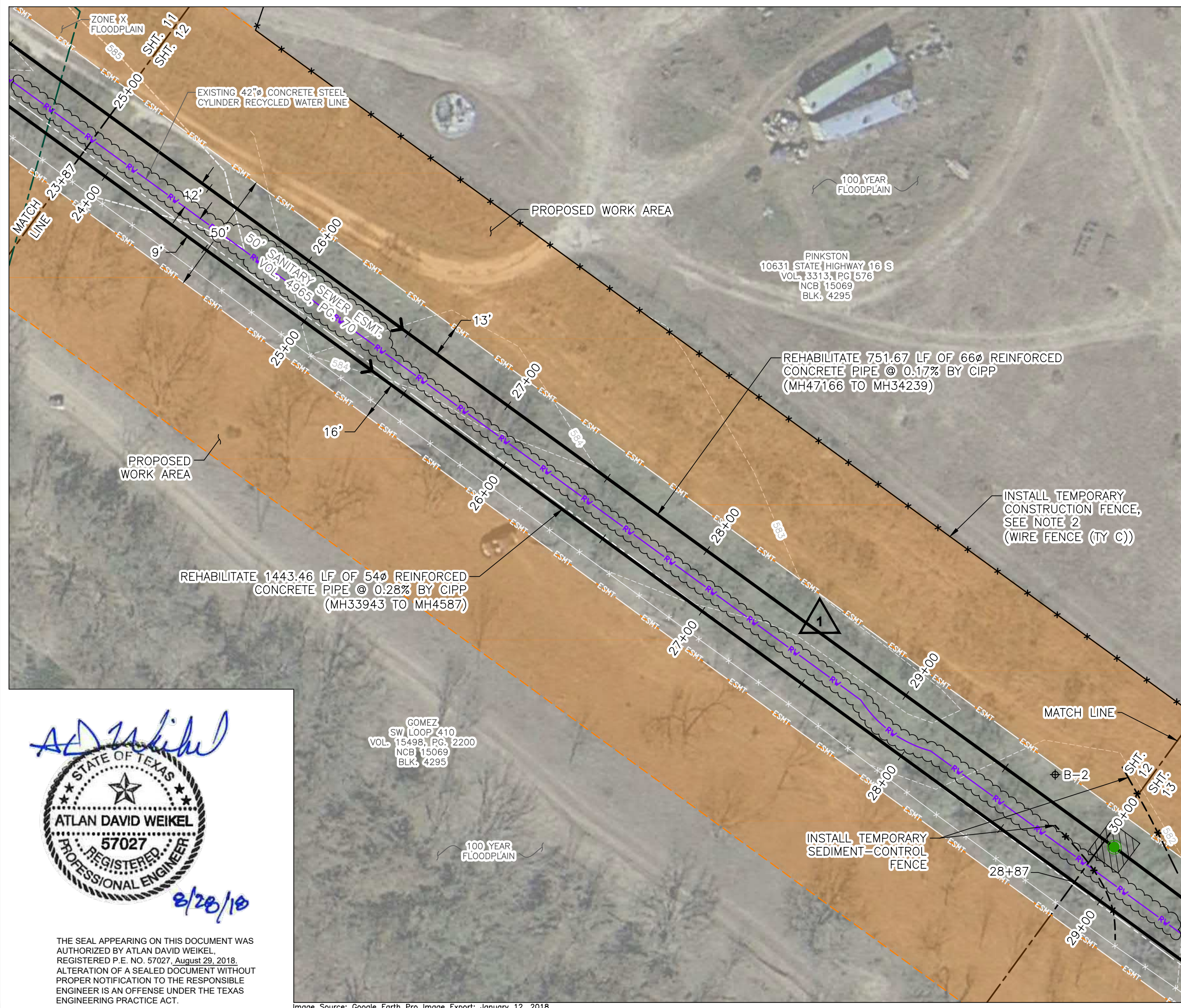
No.	Revision	Drawn	Approved	Date
1	ISSUE FOR ADDENDUM 1	FZ	ADW	8/28/2018
0	ISSUE FOR 100% PLANS	RJ	ADW	8/23/2018

REVISIONS

WEST SEWERSHED PACKAGE 1	
SANITARY SEWER ENGINEERING PLAN 6 OF 9	
DEVELOPER:	SAN ANTONIO WATER SYSTEM
CONT.	BUDGET PROJ.
SUBMITTED	
APPROVED	
MAP No.	
SECT. No.	
DR. RJ	CK. ADW

JOB No. 17-4546

SHEET 11 OF 37



TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, O.S.H.A. STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH O.S.H.A. STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

ESTIMATED QUANTITIES				
ITEM	DESCRIPTION	UNIT	EST.	FINAL
552	WIRE FENCE (TY C)	LF	512	
866	SEWER MAIN TELEVISION INSPECTION (30" AND LARGER)	LF	1000	
901	CIPP 54" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	500	
901	CIPP 66" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	500	

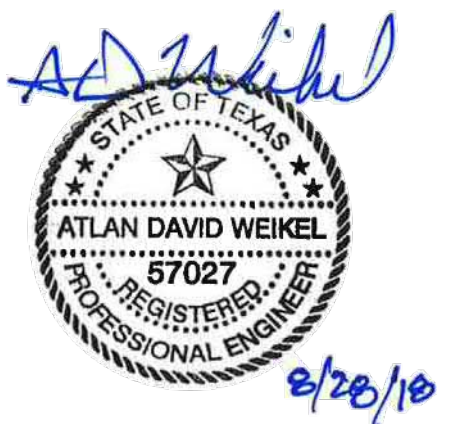
- NOTES:**
- QUANTITIES ARE ESTIMATED FROM MATCH LINE TO MATCH LINE.
 - CONTRACTOR SHALL REMOVE TEMPORARY CONSTRUCTION FENCE AT PROJECT COMPLETION, AS DIRECTED BY THE ENGINEER. FENCE REMOVAL AND DISPOSAL SHALL BE CONSIDERED SUBSIDIARY TO BID ITEM 552 6003, WIRE FENCE (TY C).
 - CONTRACTOR SHALL FIELD LOCATE AND PROTECT EXISTING UTILITIES DURING CONSTRUCTION ACTIVITIES. DAMAGE COSTS INCURRED RESULTING FROM THEIR ACTIVITIES SHALL BE BORNE BY THE CONTRACTOR.

SCALE: 1" = 40'

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Image Source: Google Earth Pro Image Export; January 12, 2018

REVISIONS			
No.	Revision	Drawn	Approved
1	ISSUE FOR ADDENDUM 1	FZ	ADW
0	ISSUE FOR 100% PLANS	RJ	ADW

LEGEND

- PROP. CIPP REHAB
- PROP. TEMP. FENCE
- PROP. WORK AREA
- RECYC. WATER LINE
- FLOODPLAIN
- FENCE
- PARCEL LINE
- EASEMENT LINE
- SURFACE CONTOURS

WEST SEWERSHED PACKAGE 1

SANITARY SEWER ENGINEERING PLAN 7 OF 9

DEVELOPER: SAN ANTONIO WATER SYSTEM

CONT. BUDGET PROJ.

SUBMITTED: _____

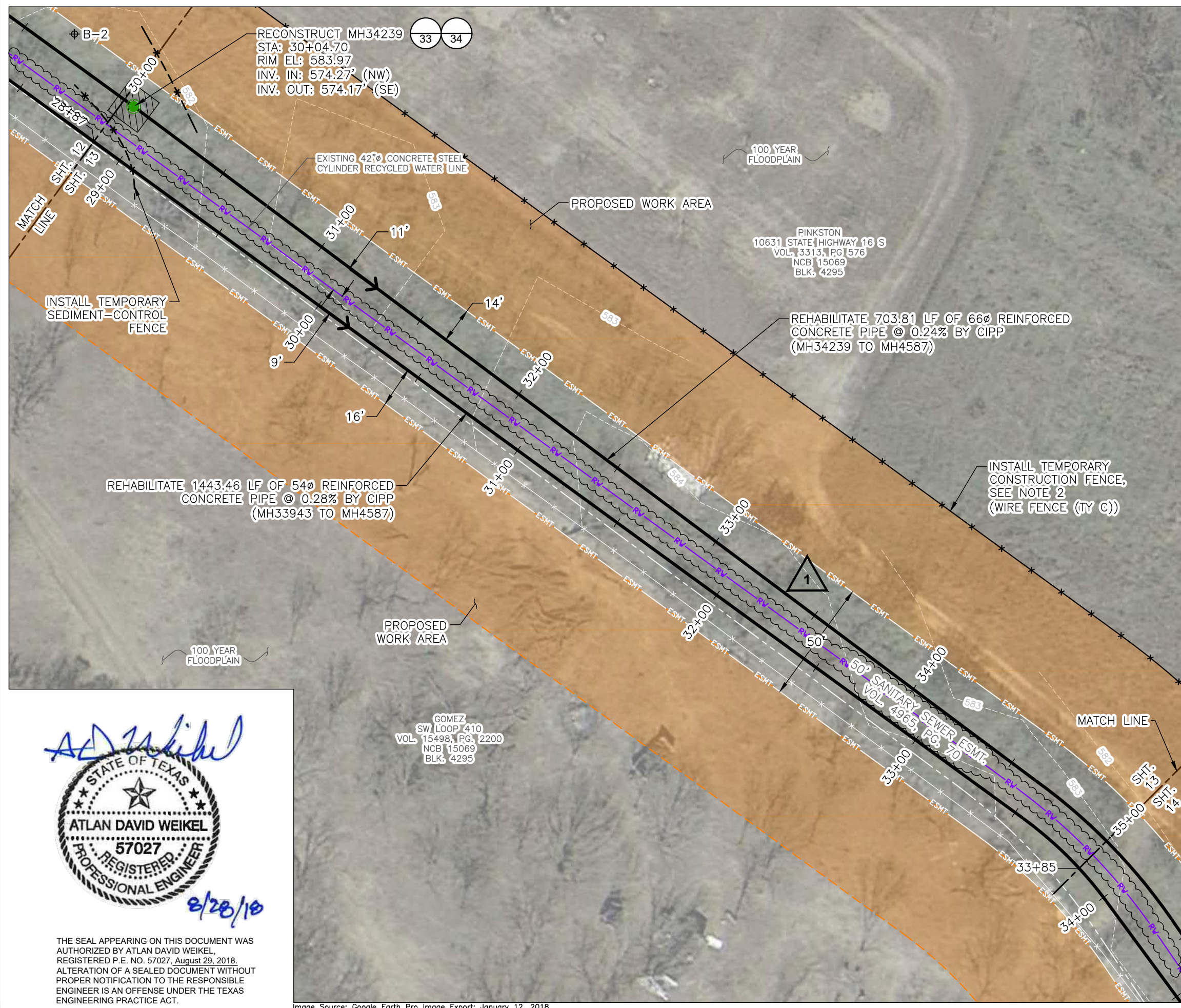
APPROVED: _____

MAP No. _____

SECT. No. _____

DR. RJ CK. ADW

JOB No. 17-4546	SHEET 12 OF 37
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TRENCH EXCAVATION SAFETY PROTECTION:

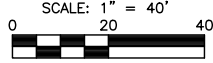
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, O.S.H.A. STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH O.S.H.A. STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.


ESTIMATED QUANTITIES				
ITEM	DESCRIPTION	UNIT	EST.	FINAL
520	HYDROMULCHING	SY	45	
540	TEMPORARY SEDIMENT-CONTROL FENCE	LF	103	
550	TRENCH EXCAVATION SAFETY PROTECTION	LF	80	
552	WIRE FENCE (TY C)	LF	511	
855	RECONSTRUCTION OF EXISTING MANHOLES	EA	1	
866	SEWER MAIN TELEVISION INSPECTION (30" AND LARGER)	LF	998	
901	CIPP 54" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	498	
901	CIPP 66" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	500	

- NOTES:**
- QUANTITIES ARE ESTIMATED FROM MATCH LINE TO MATCH LINE.
 - CONTRACTOR SHALL REMOVE TEMPORARY CONSTRUCTION FENCE AT PROJECT COMPLETION, AS DIRECTED BY THE ENGINEER. FENCE REMOVAL AND DISPOSAL SHALL BE CONSIDERED SUBSIDIARY TO BID ITEM 552 6003, WIRE FENCE (TY C).
 - CONTRACTOR SHALL FIELD LOCATE AND PROTECT EXISTING UTILITIES DURING CONSTRUCTION ACTIVITIES. DAMAGE COSTS INCURRED RESULTING FROM THEIR ACTIVITIES SHALL BE BORNE BY THE CONTRACTOR.



SCALE: 1" = 40'






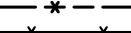
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TRIHIDRO PROJECT NO. 702-557-E00


No.	Revision	Drawn	Approved	Date
1	ISSUE FOR ADDENDUM 1	FZ	ADW	8/28/2018
0	ISSUE FOR 100% PLANS	RJ	ADW	8/23/2018


LEGEND


PROP. CIPP REHAB 


PROP. S-C FENCE 


PROP. TEMP. FENCE 


SITE RESTORATION 

PROP. WORK AREA 

RECYC. WATER LINE 

FENCE 

PARCEL LINE 

EASEMENT LINE 

SURFACE CONTOURS

WEST SEWERSHED PACKAGE 1

SANITARY SEWER ENGINEERING PLAN 8 OF 9

DEVELOPER: SAN ANTONIO WATER SYSTEM

CONT. BUDGET PROJ.

SUBMITTED _____

APPROVED _____

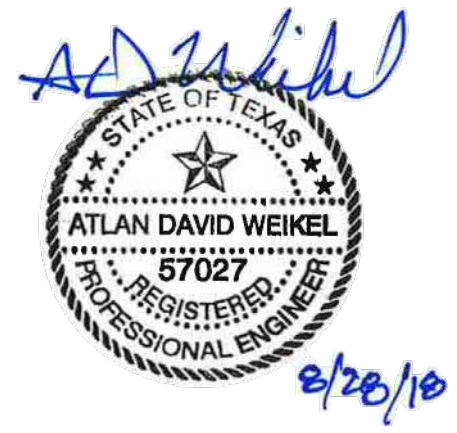
MAP No. _____

SECT. No. _____

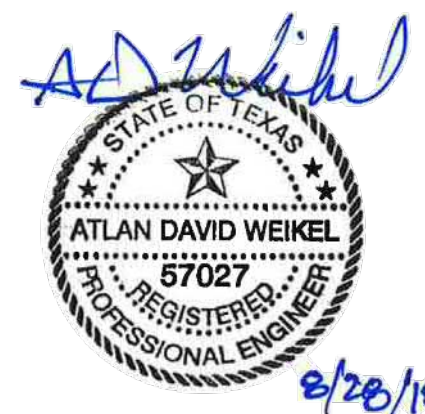
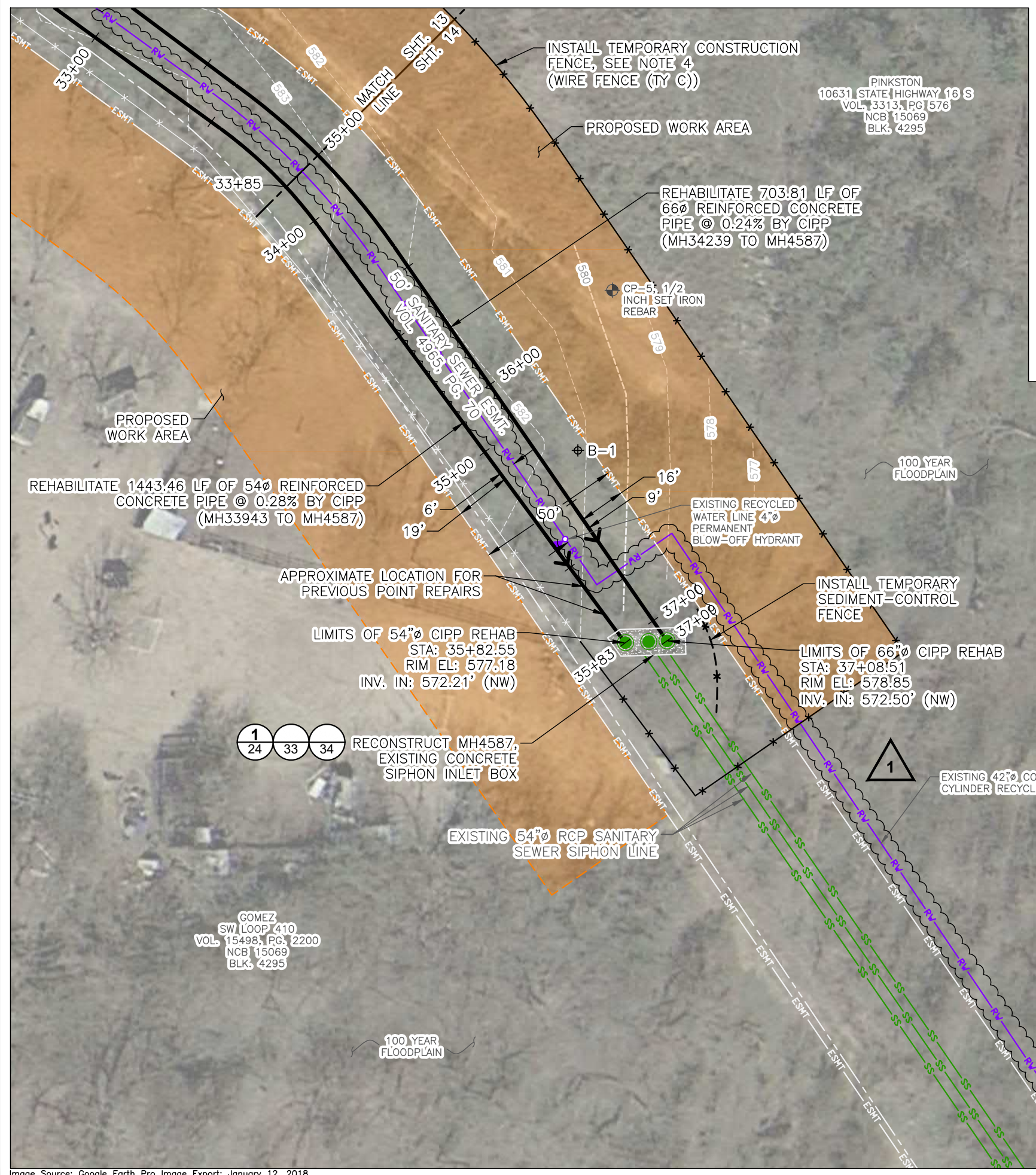
DR. RJ CK. ADW

JOB No. 17-4546

SHEET 13 OF 37



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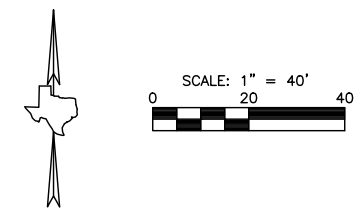
TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH, AS A MINIMUM, O.S.H.A. STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH O.S.H.A. STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

ESTIMATED QUANTITIES				
ITEM	DESCRIPTION	UNIT	EST.	FINAL
540	TEMPORARY SEDIMENT-CONTROL FENCE	LF	38	
552	WIRE FENCE (TY C)	LF	426	
855	RECONSTRUCTION OF EXISTING SIPHON INLET STRUCTURE (MH 4587)	EA	1	
866	SEWER MAIN TELEVISION INSPECTION (30" AND LARGER)	LF	407	
901	CIPP 54" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	198	
901	CIPP 66" SANITARY SEWER PIPE (HOT WATER CURED), ALL DEPTHS	LF	209	

NOTES:

- QUANTITIES ARE ESTIMATED FROM MATCH LINE TO MATCH LINE.
- DATA SHOWN ON CURVE TABLE IS TAKEN FROM AS-BUILT DRAWINGS, CIRCA 1982. THE DATA IS SHOWN FOR REFERENCE DURING CURVE REHABILITATION AND MAY NOT MATCH EXACTLY WITH LENGTHS SHOWN ON SHEETS, WHICH WERE DERIVED FROM A COMBINATION OF FIELD SURVEY DATA AND AS-BUILT DRAWINGS.
- THE BASE FLOOD ELEVATION FOR THE 100 YEAR FLOODPLAIN NEAR MH4587 IS ~586.5'. SHOULD A FLOOD EVENT OCCUR DURING THE TIME OF CONSTRUCTION/REHABILITATION, WHEN THE INLET BOX TOP SLAB HAS BEEN REMOVED, THE CONTRACTOR SHALL PROVIDE TEMPORARY FLOOD PROTECTION TO PREVENT FLOOD WATER FROM ENTERING THE SIPHON INLET BOX.
- CONTRACTOR SHALL REMOVE TEMPORARY CONSTRUCTION FENCE AT PROJECT COMPLETION, AS DIRECTED BY THE ENGINEER. FENCE REMOVAL AND DISPOSAL SHALL BE CONSIDERED SUBSIDIARY TO BID ITEM 552 6003, WIRE FENCE (TY C).
- CONTRACTOR SHALL FIELD LOCATE AND PROTECT EXISTING UTILITIES DURING CONSTRUCTION ACTIVITIES. DAMAGE COSTS INCURRED RESULTING FROM THEIR ACTIVITIES SHALL BE BORNE BY THE CONTRACTOR.
- IF USING RECYCLED WATER LINE FOR CONSTRUCTION ACTIVITIES CONTRACTOR SHALL COORDINATE WITH SAWS PRIOR TO USE AND SHALL USE EXISTING APPURTENANCES.
- INTERIOR RECONSTRUCTION OF THE EXISTING SIPHON INLET BOX (MH 4587) SHALL ONLY BE ALLOWED DURING DRY WEATHER FLOW CONDITIONS.



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No.	Revision	Drawn	Approved	Date
1	ISSUE FOR ADDENDUM 1	FZ	ADW	8/28/2018
0	ISSUE FOR 100% PLANS	RJ	ADW	8/23/2018

CURVE TABLE		
	54"Ø LINE	66"Ø LINE
DELTA ANGLE	19°30'	13°55'48"
RADIUS	232.27'	326.99'
TANGENT LENGTH	39.91'	39.95'
CURVE LENGTH	79.08'	79.50'

LEGEND	
PROP. CIPP REHAB	→
PROP. S-C FENCE	—*—
PROP. TEMP. FENCE	—x—
PROP. WORK AREA	—o—
SANITARY SEWER	—SS—
RECYC. WATER LINE	—RW—
FENCE	—x—
PARCEL LINE	— - -
EASEMENT LINE	—ESMT—
SURFACE CONTOURS	590 591

WEST SEWERSHED PACKAGE 1
 SANITARY SEWER ENGINEERING PLAN 9 OF 9
 DEVELOPER: SAN ANTONIO WATER SYSTEM
 CONT. BUDGET PROJ.
 SUBMITTED: _____
 APPROVED: _____
 MAP No. _____
 SECT. No. _____
 DR. RJ CK. ADW
 JOB No. 17-4546
 SHEET 14 OF 37

M:\STDA\SAWS\CADD\17-4546_WESTSEWERSHED\PLANS\702-WSP1_PLANSHEETS