



**CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
Seeling Channel Phase II Drainage #40-00427**



ADDENDUM NO.2

May 12, 2015

05/12/2015
AECOM TBPE# F-3580

TO BIDDER OF RECORD:

The following changes, additions, and/or deletions are hereby made a part of the Contract Documents for the Seeling Channel Phase II Drainage #40-00427 project for the City of San Antonio, Transportation & Capital Improvements, San Antonio, Texas, dated April 2015, as fully and completely as if the same were full set forth therein.

GENERAL

The pre-bid meeting held on Wednesday, May 6, 2015 at 10:00 a.m. was non-mandatory. The list of attendees is attached, and is also posted on the City of San Antonio Bidding & Contracting Opportunities website.

Appended hereto and part of Addendum No. 2 are:

1. Contractor Questions and Clarifications from Pre-Bid Meeting and via E-Mail.
2. Pre-Bid Meeting Sign-In Sheet.

BIDDING AND CONTRACT REQUIREMENTS

Appended hereto and part of Addendum No. 2 is:

1. City of San Antonio 020 Form – The estimated construction cost. This form shall replace the 020 Form that is included in the bid package.

TECHNICAL SPECIFICATIONS

Not applicable.

DRAWINGS:

Appended hereto and part of Addendum No. 2 is:

1. Plan Sheets, Sheet 528-545 – Channel Details, Layouts, and Plans

OTHER:

Not applicable.



**CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
Seeling Channel Phase II Drainage #40-00427**

CONTRACTOR QUESTIONS AND CLARIFICATIONS FROM PRE-BID MEETING AND VIA EMAIL

1. **Question:** Can the existing 18" line be temporarily tied into the proposed manhole at station 1+00.00 when it is set and remain in service until the proposed 30" line is tied in to the existing 18" line at the proposed manhole at station 25+19.05. This would mean that the manholes at the 8" tie-ins at stations 1+86.79 and 1+87.77 would be made after the 30" line was completed and tied into the 18" line on the upstream end. This would minimize the bypass pumping required on the existing 18" line

Response: Yes. Please note, however, that new manhole will be required to be successfully tested prior to putting into service.
2. **Question:** On item #854 sanitary sewer laterals, is this line to be tied into the proposed 30" line or the proposed 15" line and what are the requirements for the one where this tie-in takes place?

Response: Item 854 is intended solely to establish a unit price for laterals.
3. **Question:** On the existing 15" line that is to be removed in segments as the work progresses will the contractor be allowed to make temporary tie-ins to the proposed 30" line and if so what would be the requirements for these tie-ins to minimize the bypass pumping on the 15" line?

Response: Contractor will be permitted to make temporary tie-ins to the proposed 30" line to minimize by-pass pumping. Contractor requirement to properly test 30" sewer line will remain. By deferring testing, and opting for temporary tie-in, contractor agrees and understands that he will take whatever steps necessary to ensure proposed sewer passes testing requirements, at no additional cost to CoSA and SAWS.
4. **Question:** If temporary tie-ins are not allowed, when having to bypass pump from the existing 15" line on one side of the road to the proposed 30" line on the other side of the road will the contractor be able to close the road where his pumping crosses the road to keep the piping from being damaged? If not what will be required?

Response: N/A, temporary tie-in will be allowed.
5. **Question:** On the Huisache Avenue bridge the 8" steel water line is shown to be 0.64' off of the edge of the bridge. When it reaches the point where it is shown to turn down to go underground it will be in conflict with the flare shown on the bridge prior to the 8" line reaching this point where it projects to the center of the bridge abutment. Will this line bend on a 45 degree angle prior to this flare to a point outside of these conflicts to turn down, and if so what kind of support will be required for the portion between the 45 degree bend and the turndown?

Response: See detail "Line L & O Typical Transition Over Bridge Abutment" on page 1016 within the water plans.
6. **Question:** Detail2-WATER CROSSING UNDER SBC/MBC STORM DRAIN of 10'-8" needs to be increased for the width of the 2-6'x5' box culvert.

Response: Dimensions shown on Detail 2 are generically set to a typical 10' section of water line pipe. Actual lengths of pipe needed to cross storm drains shall be determined by contractor.
7. **Question:** While laying the 30" sanitary sewer and water lines in the street will the contractor be restricted to the 9:00AM to 4:00PM working hours?

Response: The project is designated with a six-day, sunup to sundown schedule and will not have restricted time for sewer work.



CITY OF SAN ANTONIO
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8. **Question:** In reading the notes on the sequence of work sheets it appears that the contractor will have to submit for approval and install temporary water bypass lines to keep the citizens in water while laying the proposed sanitary sewer and proposed water lines due to conflicts with the existing water lines. When these lines are no longer needed can they be abandoned in place or will they have to be removed?

Response: Any temporary water mains or connections related to construction phasing will need to be coordinated with SAWS inspection and will be at the contractor's expense. Temporary water connections will not be allowed to remain at the completion of the project and will need to be removed.

9. **Question:** Could it be allowed that the water and sanitary sewer contractor able to work in more that the next stage in construction ahead of the channel construction to complete this work and minimize the impact that will be caused by the bypass pumping. By allowing the water and sanitary sewer to continue uninterrupted to the end of their work it will save a lot of expense in bypass pumping.

Response: Please bid the project materials as advertised. Considerations for alternative materials can be made during construction.

10. **Question:** Item 400 2005 CEM STABIL BKFL, TxDOT allows the use of Flowable Fill for this item, will it be allowed on this project?

Response: Please bid the project materials as advertised. Considerations for alternative materials can be made during construction.

11. **Question:** If Flowable Fill will not be allowed, what specifically is the engineer going to require?

Response: Please bid the project materials as advertised. Considerations for alternative materials can be made during construction.

12. **Question:** TxDOT no longer uses item 428 2001 CONC SURF TREATMENT, please consider removing.

Response: Please bid the project materials as advertised. Considerations for alternative materials can be made during construction.

13. **Question:** Hoping for clarification of the Soldier Pile and Lagging Specifications ITEM SP.1. Paragraph 2.4 states: "The soldier pile and lagging system is shown in the drawings for schematic purposes only and displaying minimum expectations of design... Design the shoring system to comply with OSHA... Design structural systems to comply with AASHTO Standard Specifications for Highway Bridges or AASHTO LRFD Bridge Design Specifications." Does this mean the temporary shoring system needs to comply with AASHTO LRFD Design specifications? If so, it appears that that the system shown on the drawings would not work for that specification if you added in AASHTO LRFD recommended surcharge loadings. Does this temporary shoring system need to assume surcharge loading from traffic? If so how much?

Response: The soldier pile and lagging wall designed by LFE can be found in sheets 528-545 which have been attached to this addendum. The temporary shoring for bridges should have surcharge load but the design will be verified during construction by contractor's choice of engineer.

14. **Question:** Will the contractor be able to use the Item 304.5.2.C option shown for the backfill of the sanitary sewer manholes or will the flowable fill option be required?

Response: Please bid the project materials as advertised. Considerations for alternative materials can be made during construction.

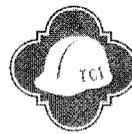


**CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
Seeling Channel Phase II Drainage #40-00427**

15. **Question:** Will you please make sure to add the plan sheets that are missing. There is no detail sheet for the Ty-2 TxDOT Junction Boxes.

Response: The plan sheets have been added that were missing but these sheets do not include this detail. The sheet is not required. The detail is being referenced on the details sheet (sheet 616) and is a typical detail that can be found from TxDOT.

Pre-Bid Meeting Sign-In Sheet



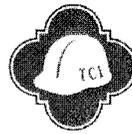
May 6, 2015

CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS

Seeling Channel Phase II Drainage (Re-Bid) #40-00427

NAME	ORGANIZATION	PHONE	EMAIL
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Luis Alday	AECOM	210-321-1119	luis.alday@aecom.com
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Aze Duran	TCI	207-2799	
Theresa Larsa	TCI	207-1446	theresa.larsa@sanantonio.gov
KELLY ANDERSON	THYSSEN LAUGHTON	734-296-5000	TYLER@LAUGHTON.COM

Pre-Bid Meeting Sign-In Sheet



May 6, 2015

CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS

Seeling Channel Phase II Drainage (Re-Bid) #40-00427

NAME	ORGANIZATION	PHONE	EMAIL
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JEFF FARNSWORTH	Kimley-Horn	321-3429	jeff.farnsworth@kimley-horn.com
Tysson Laughlin Jose Cardon	Tysson Laughlin	713 429 6500	
DAVID PUUDO	TCI	207.8128	DAVID.PUUDO@SANANTONIO.GOV
Thomas Gonzalez	TCI	207-1328	TCI.schedules@sanantonio.gov
DARYL SPILLMANN	SANS	233-3012	dspillmann@saws.org

CITY OF SAN ANTONIO

Project Name: Sealing Channel Improvements Phase II
ID NO.: 40-00427

Date Issued: April 29, 2015

The estimated construction budget for this contract is \$16,000,000.00

Page 1 of 2

020

BID FORM

I. BASE BID

Amount of Roadway/Drainage Construction Base Bid (Insert Amount in Words and Numbers):

_____ \$ _____

Amount of SAWS Sewer Base Bid (Insert Amount in Words and Numbers):

_____ \$ _____

Amount of SAWS Water Base Bid (Insert Amount in Words and Numbers):

_____ \$ _____

Amount of CPS Base Bid (Insert Amount in Words and Numbers):

_____ \$ _____

Total Amount of Base Bid (Insert Amount in Words and Numbers):

_____ \$ _____

II. ALTERNATES

Amount of each Alternates (if applicable) insert in Numbers: 1

Additive Alternate #1 - Improvements extended through Morning Glory

Amount of Roadway/Drainage Construction Additive Alternate Bid (Insert Amount in Words and Numbers):

_____ \$ _____

Amount of SAWS Sewer Additive Alternate Bid (Insert Amount in Words and Numbers):

_____ \$ _____

Amount of SAWS Water Additive Alternate Bid (Insert Amount in Words and Numbers):

_____ \$ _____

Total Amount of Bid for Additive Alternate #1 (Insert Amount in Words and Numbers):

_____ \$ _____

III. UNIT PRICES

Bidders shall submit unit pricing on the 025 Unit Pricing form, and it shall be attached immediately following this sheet.

IV. ALLOWANCES (if applicable)

CITY OF SAN ANTONIO

Project Name: Seeling Channel Improvements Phase II
ID NO.: 40-00427

Date Issued: April 29, 2015

The estimated construction budget for this contract is \$16,000,000.00

Page 2 of 2

Official Name of Company (legal)

Telephone No.

Address

Fax No.

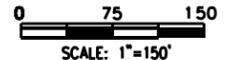
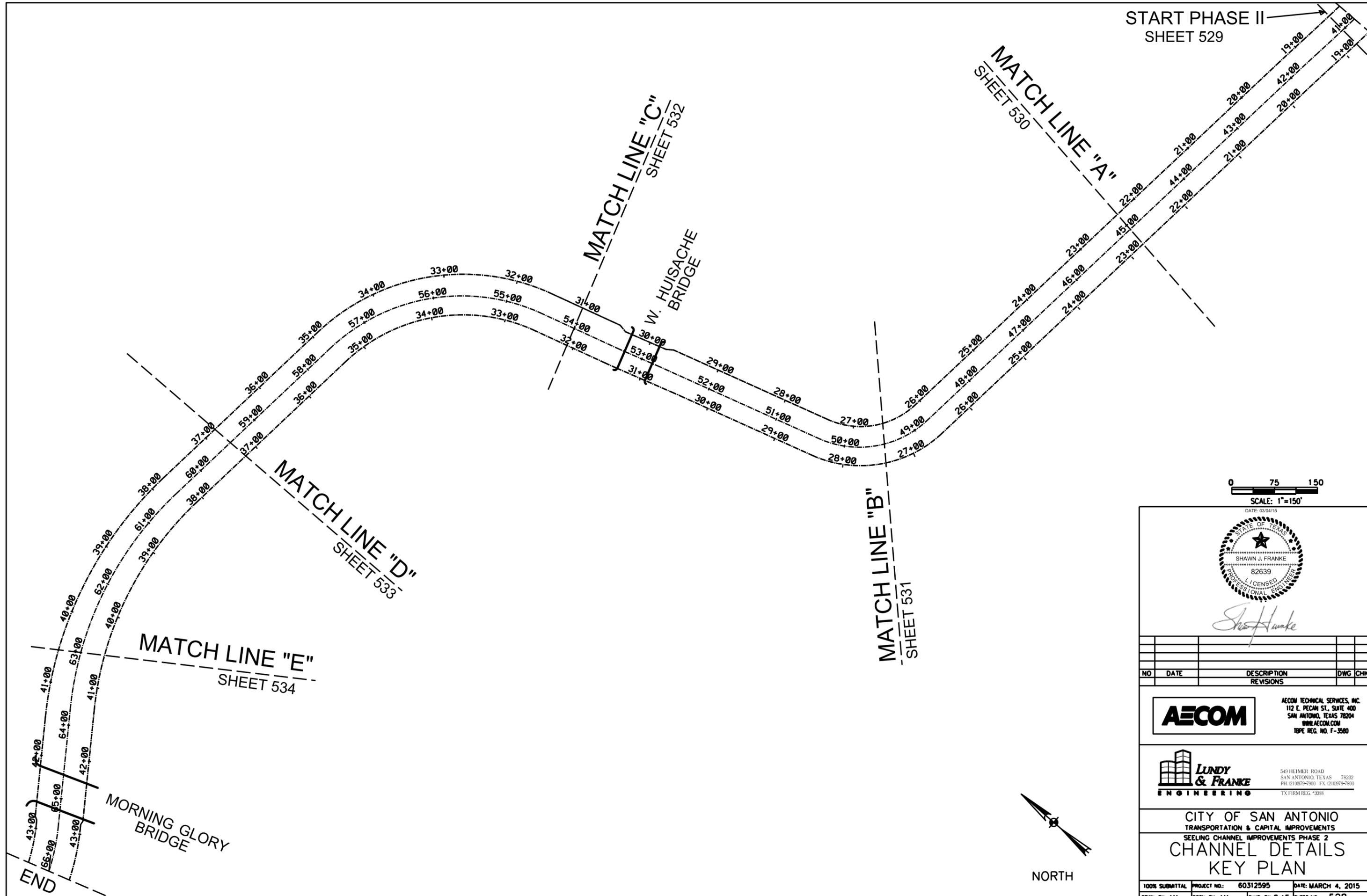
City, State and Zip Code

E-mail Address

Name of the proposed **Project Manager:** _____

Name of the proposed **Site Superintendent:** _____

START PHASE II
SHEET 529



SCALE: 1"=150'

DATE: 03/04/15



Shawn Franke

NO	DATE	DESCRIPTION	DWG	CHK

AECOM
 AECOM TECHNICAL SERVICES, INC.
 112 E. PECAN ST., SUITE 400
 SAN ANTONIO, TEXAS 78204
 WWW.AECOM.COM
 T&PE REG. NO. F-3580

LUNDY & FRANKE
 ENGINEERING
 540 HEIMER ROAD
 SAN ANTONIO, TEXAS 78222
 PH. (210) 879-7900 FX. (210) 879-7800
 TX FIRM REG. #3388

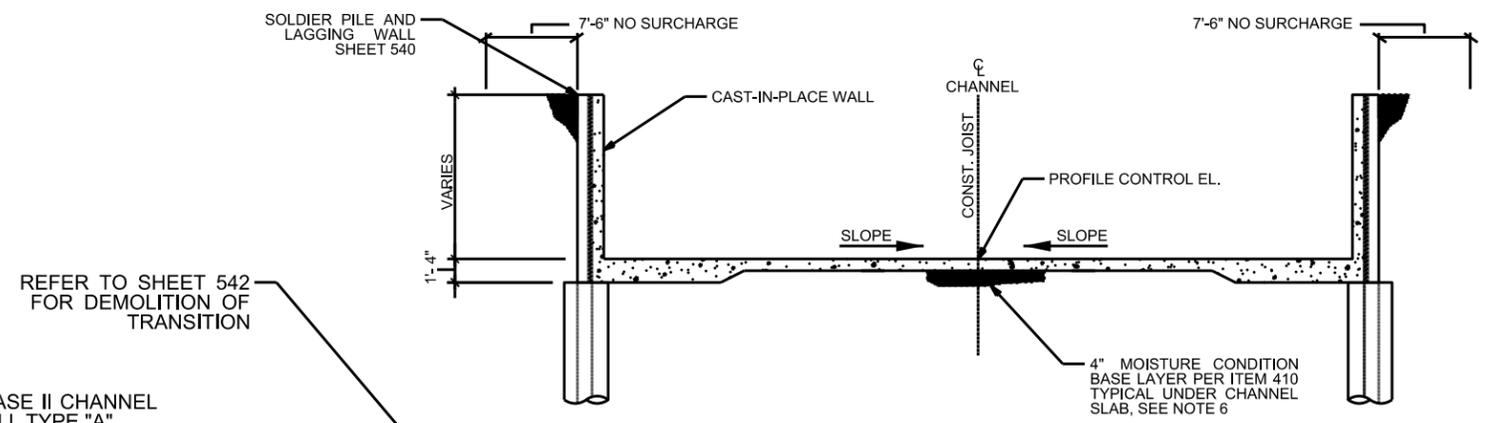
CITY OF SAN ANTONIO
 TRANSPORTATION & CAPITAL IMPROVEMENTS
 SEELING CHANNEL IMPROVEMENTS PHASE 2
CHANNEL DETAILS
KEY PLAN

100% SUBMITTAL	PROJECT NO.: 60312595	DATE: MARCH 4, 2015
DRWN. BY: J.H.	DESIGN. BY: J.H.	CHECK. BY: S.J.F. SHEET NO. 528

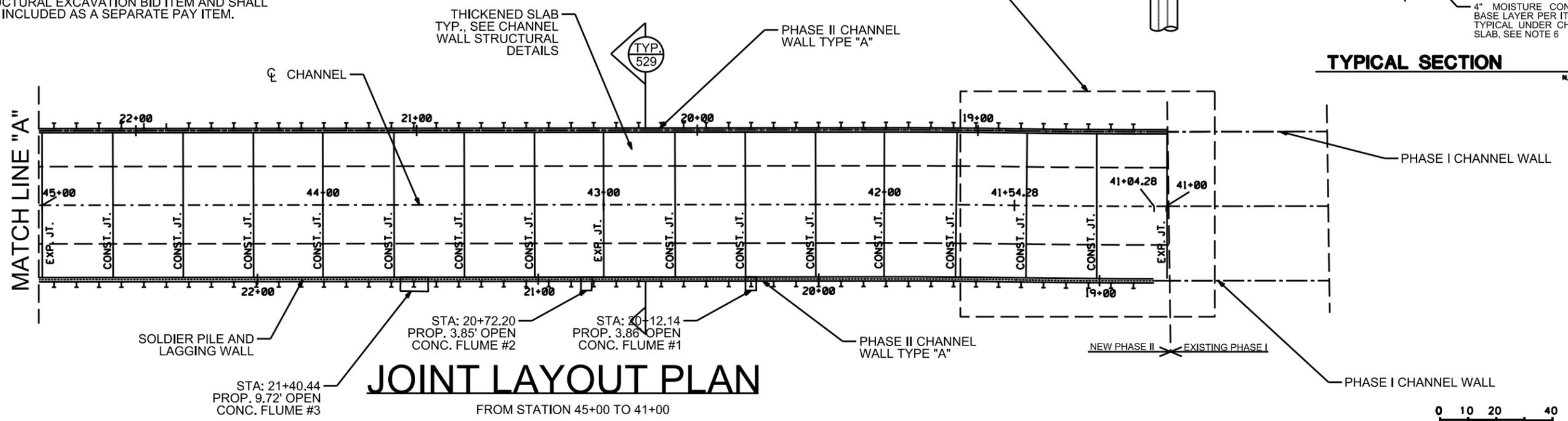


NORTH

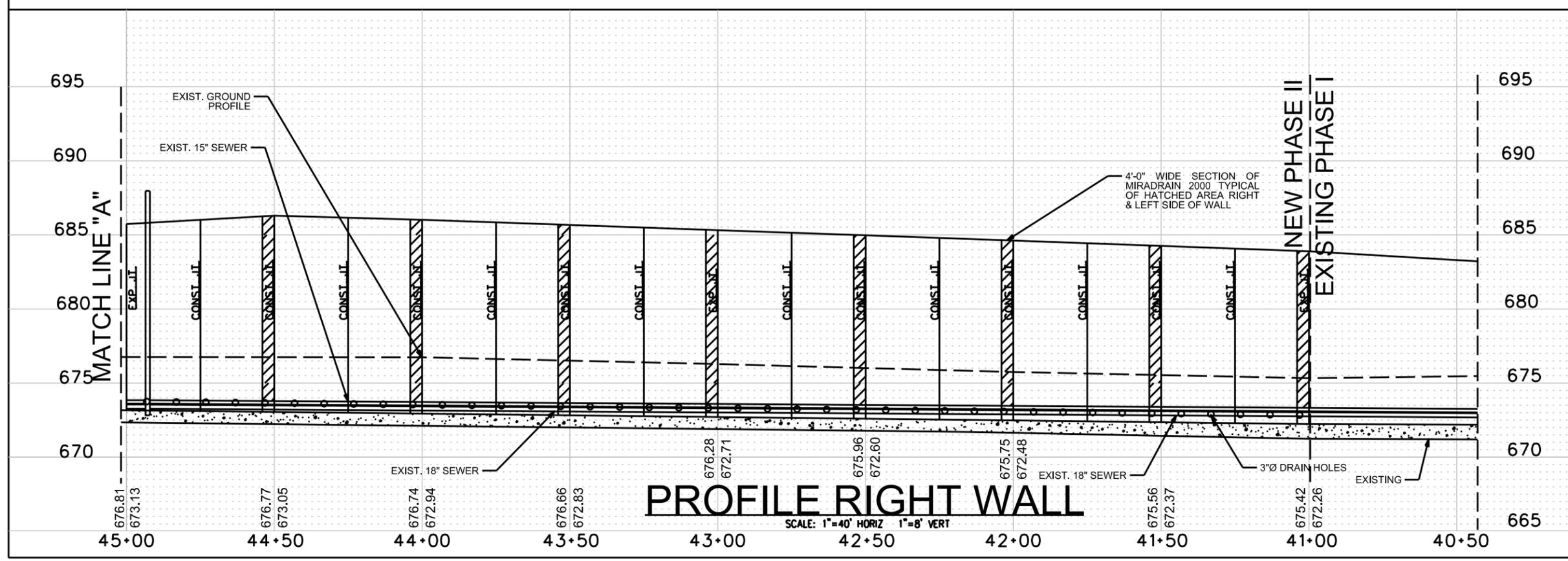
- NOTES:
 1. ALL JOINTS ARE TO BE LOCATED AT THE STATIONING SHOWN AND ARE PERPENDICULAR TO CHANNEL CENTERLINE UNLESS OTHERWISE SPECIFIED.
 2. JOINT PROFILE SHOWN IS RIGHT TOP (RT) OF CHANNEL. LEFT TOP (LT) OF CHANNEL JOINT PROFILE IS SIMILAR.
 3. REFER TO CHANNEL RETAINING WALLS PLAN AND PROFILES, SHEETS 510-518 FOR LT WALL ELEVATIONS AND CONFIRMATION OF THOSE SHOWN ON THIS SHEET.
 4. SEE SHEET 537 FOR CHANNEL SLAB REINF. AND JOINT DETAILS.
 5. SEE SHEET 539-540 FOR SOLDIER PILE AND LAGGING WALL AND CAST-IN-PLACE WALL DETAILS.
 6. GRAVEL SUBGRADE FILLER ITEM 410 IS INCLUDED IN STRUCTURAL EXCAVATION BID ITEM AND SHALL NOT BE INCLUDED AS A SEPARATE PAY ITEM.



TYPICAL SECTION
N.T.S.



JOINT LAYOUT PLAN
FROM STATION 45+00 TO 41+00



PROFILE RIGHT WALL
SCALE: 1"=40' HORIZ 1"=8' VERT

DATE: 03/04/15

SHAWN J. FRANKE
82639
LICENSED PROFESSIONAL ENGINEER

Shawn Franke

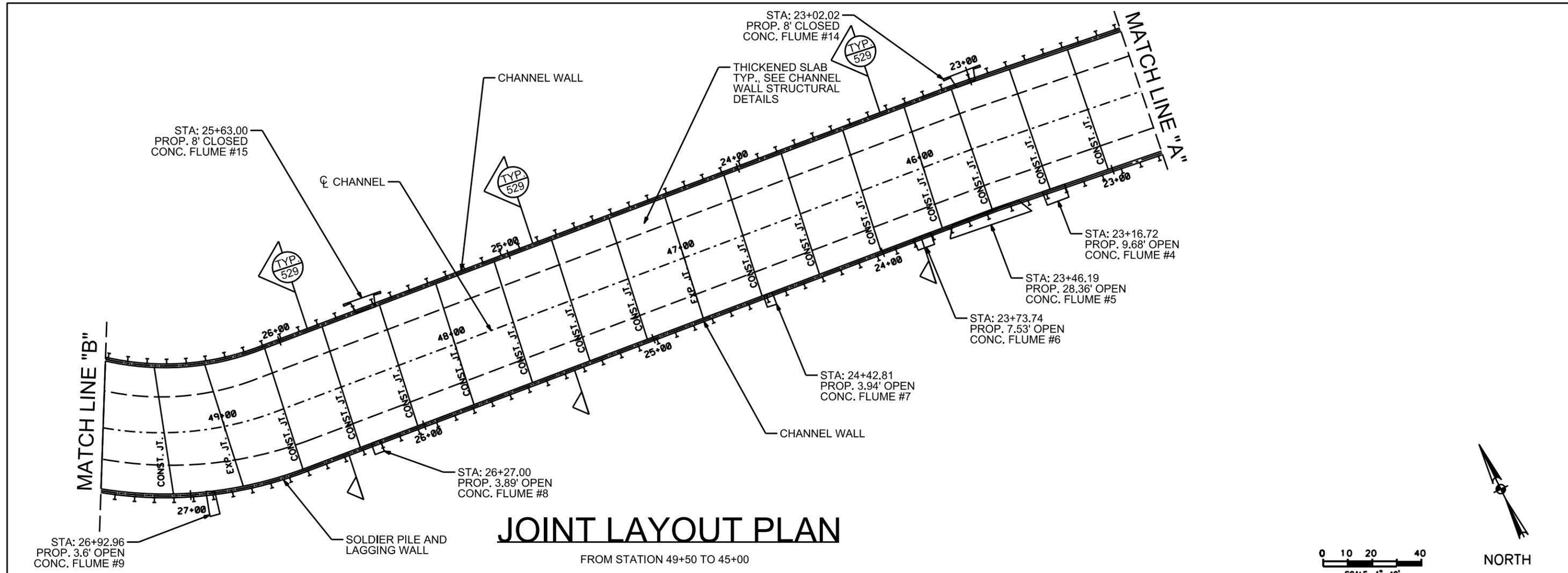
NO	DATE	DESCRIPTION	DWG	CHK

AECOM AECOM TECHNICAL SERVICES, INC.
112 E. PECAN ST., SUITE 400
SAN ANTONIO, TEXAS 78204
WWW.AECOM.COM
TBP REG. NO. F-3580

LUNDY & FRANKE ENGINEERING 540 HEIMER ROAD
SAN ANTONIO, TEXAS 78232
PH. (210) 879-7900 FX. (210) 879-7800
TX REG. NO. 73388

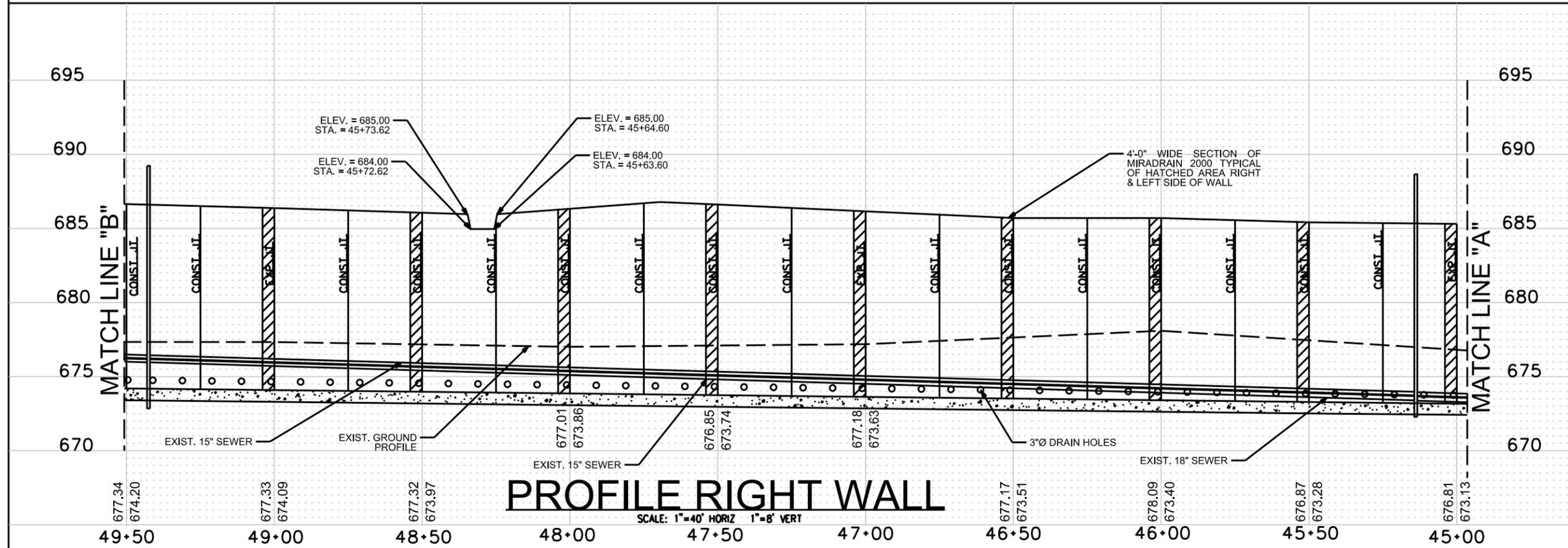
CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEELING CHANNEL IMPROVEMENTS PHASE 2
CHANNEL JOINT LAYOUT
AND PLAN PROFILE "A"

100% SUBMITTAL	PROJECT NO.: 60312595	DATE: MARCH 4, 2015
DRWN. BY: J.H.	OSDN. BY: J.H.	CHKD. BY: S.J.F. SHEET NO. 529



JOINT LAYOUT PLAN

FROM STATION 49+50 TO 45+00



PROFILE RIGHT WALL

SCALE: 1"=40' HORIZ 1"=8' VERT



Shawn Franke

NO	DATE	DESCRIPTION	DWG	CHK



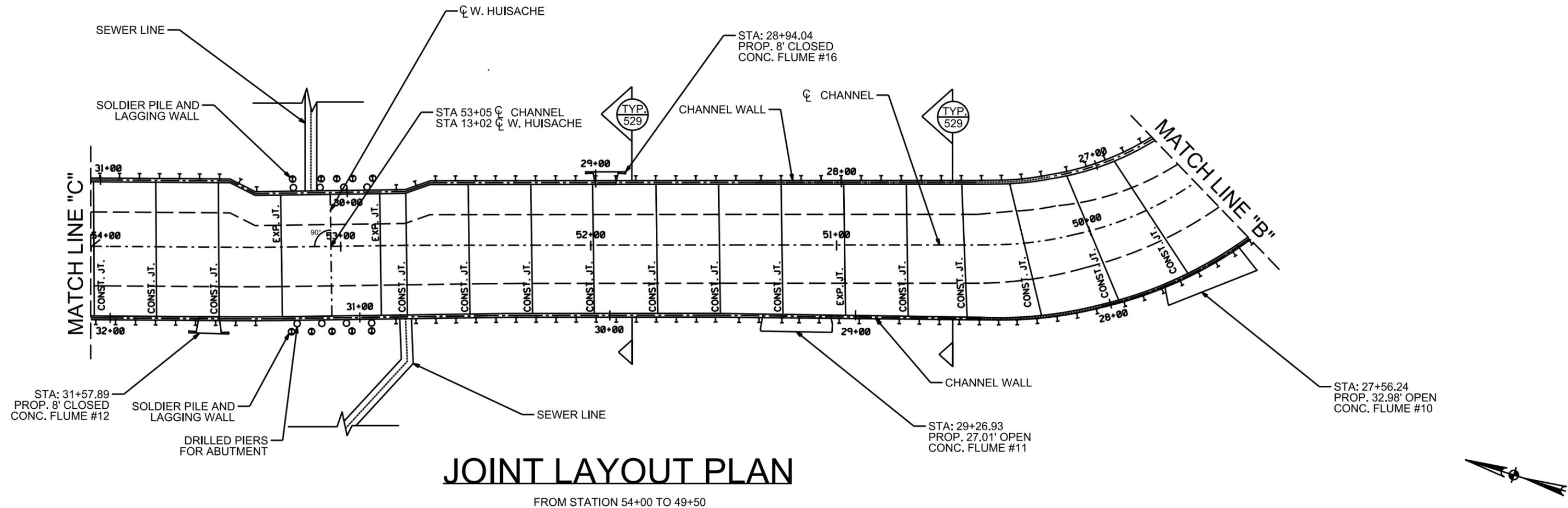
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TX FIRM REG. #3388

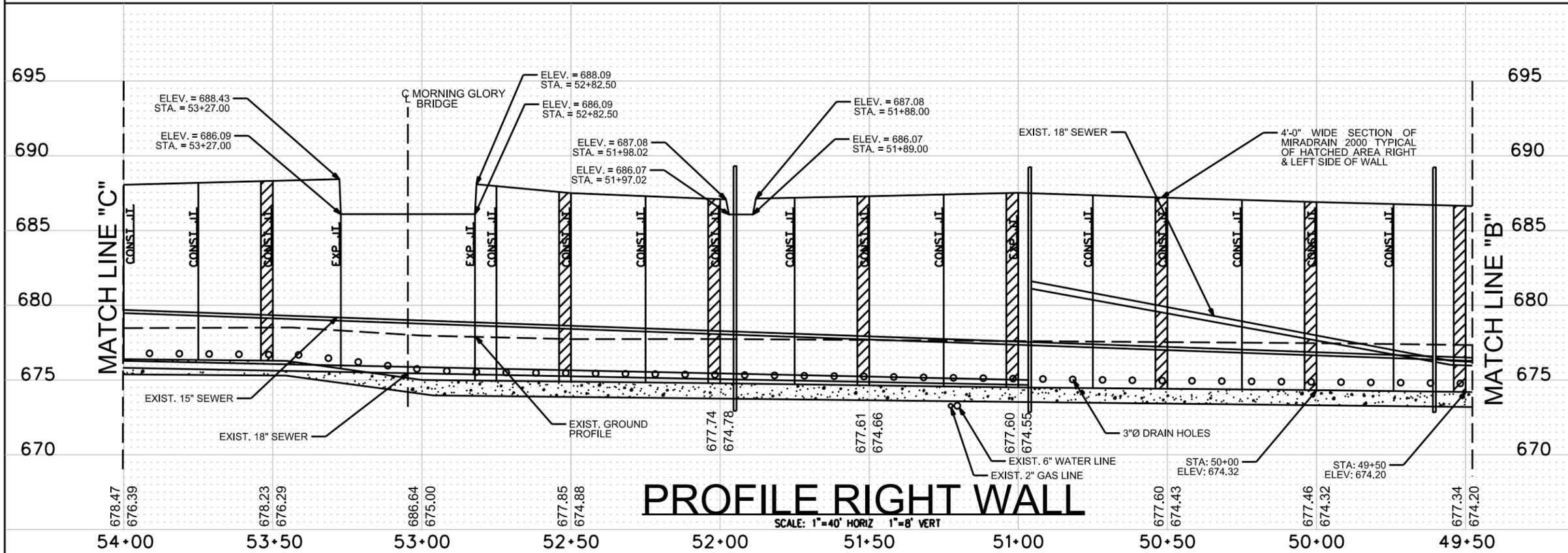
CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEELING CHANNEL IMPROVEMENTS PHASE 2
CHANNEL JOINT LAYOUT
AND PLAN PROFILE "B"

100% SUBMITTAL	PROJECT NO.: 60312595	DATE: MARCH 4, 2015
DRWN. BY: J.H.	OSDN. BY: J.H.	CHKD. BY: S.J.F. SHEET NO. 530



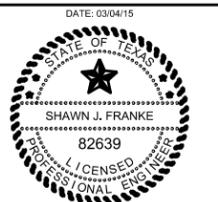
JOINT LAYOUT PLAN

FROM STATION 54+00 TO 49+50



PROFILE RIGHT WALL

SCALE: 1"=40' HORIZ 1"=8' VERT



Shawn Franke

NO	DATE	DESCRIPTION	DWG	CHK
REVISIONS				



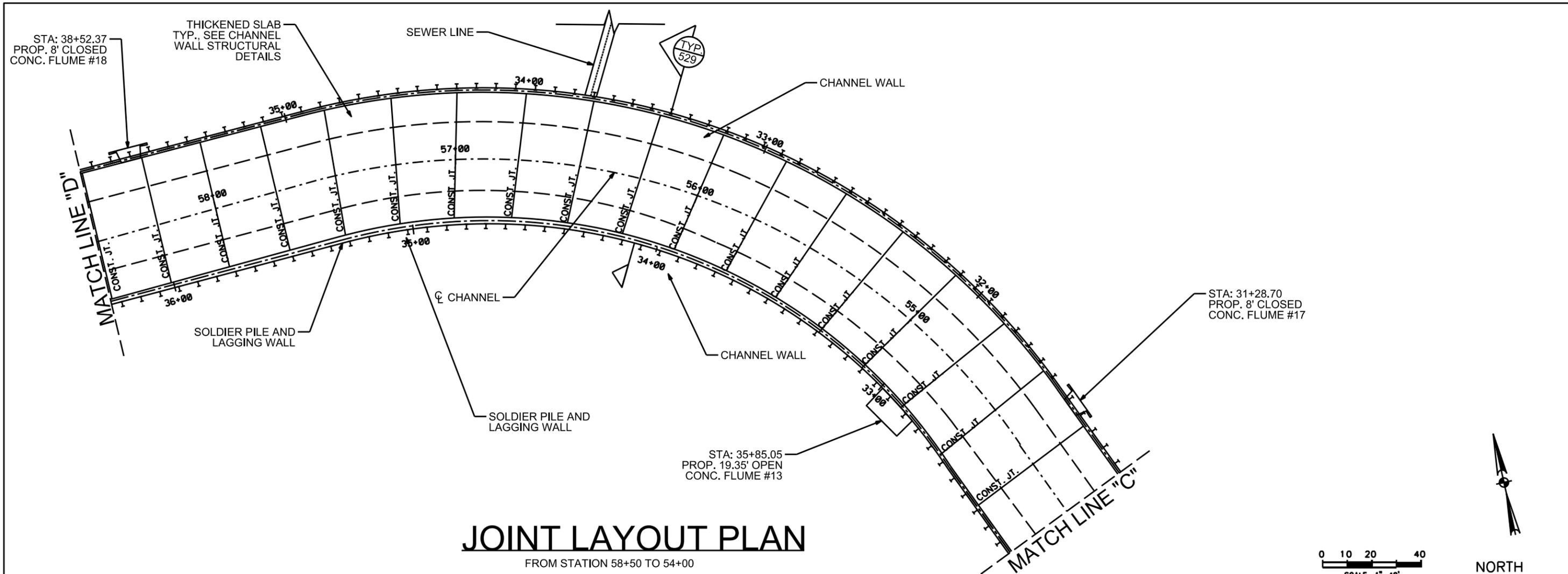
AECOM TECHNICAL SERVICES, INC.
112 E. PECAN ST., SUITE 400
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T&E REG. NO. F-3580



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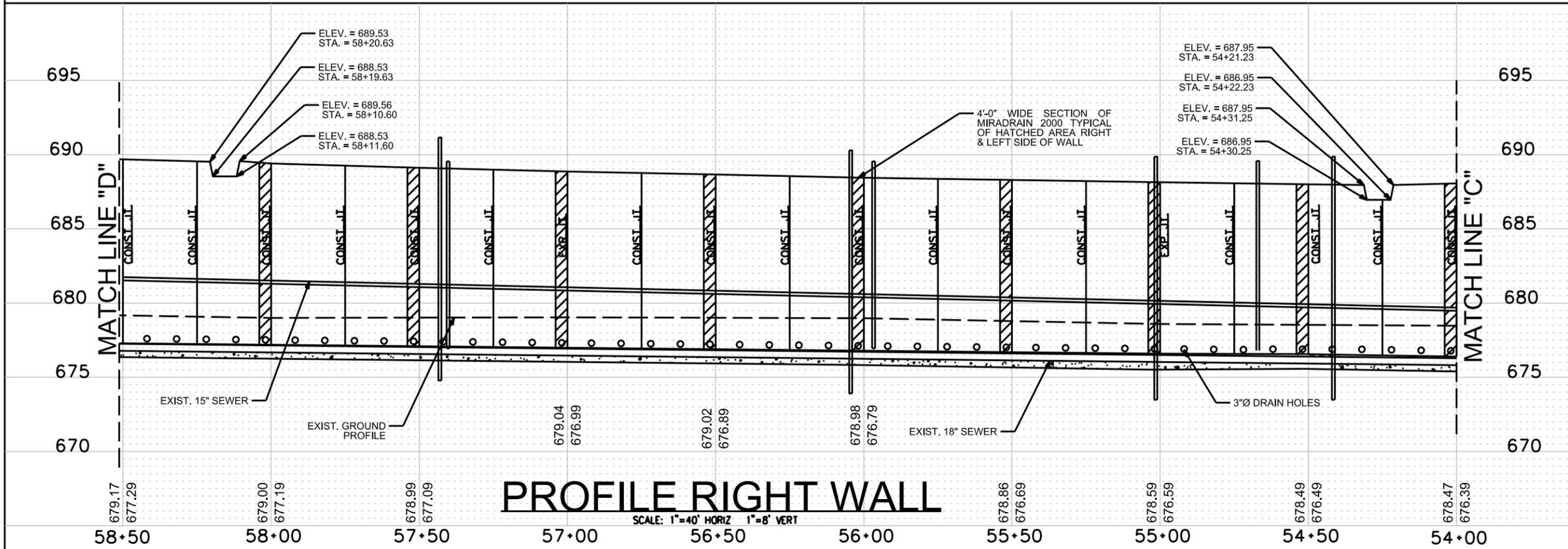
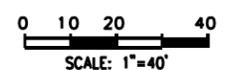
CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEEILING CHANNEL IMPROVEMENTS PHASE 2
CHANNEL JOINT LAYOUT
AND PLAN PROFILE "C"

100% SUBMITTAL	PROJECT NO.: 60312595	DATE: MARCH 4, 2015
DRWN. BY: J.H.	OSDN. BY: J.H.	CHKD. BY: S.J.F. SHEET NO. 531



JOINT LAYOUT PLAN

FROM STATION 58+50 TO 54+00



PROFILE RIGHT WALL

SCALE: 1"=40' HORIZ 1"=8' VERT



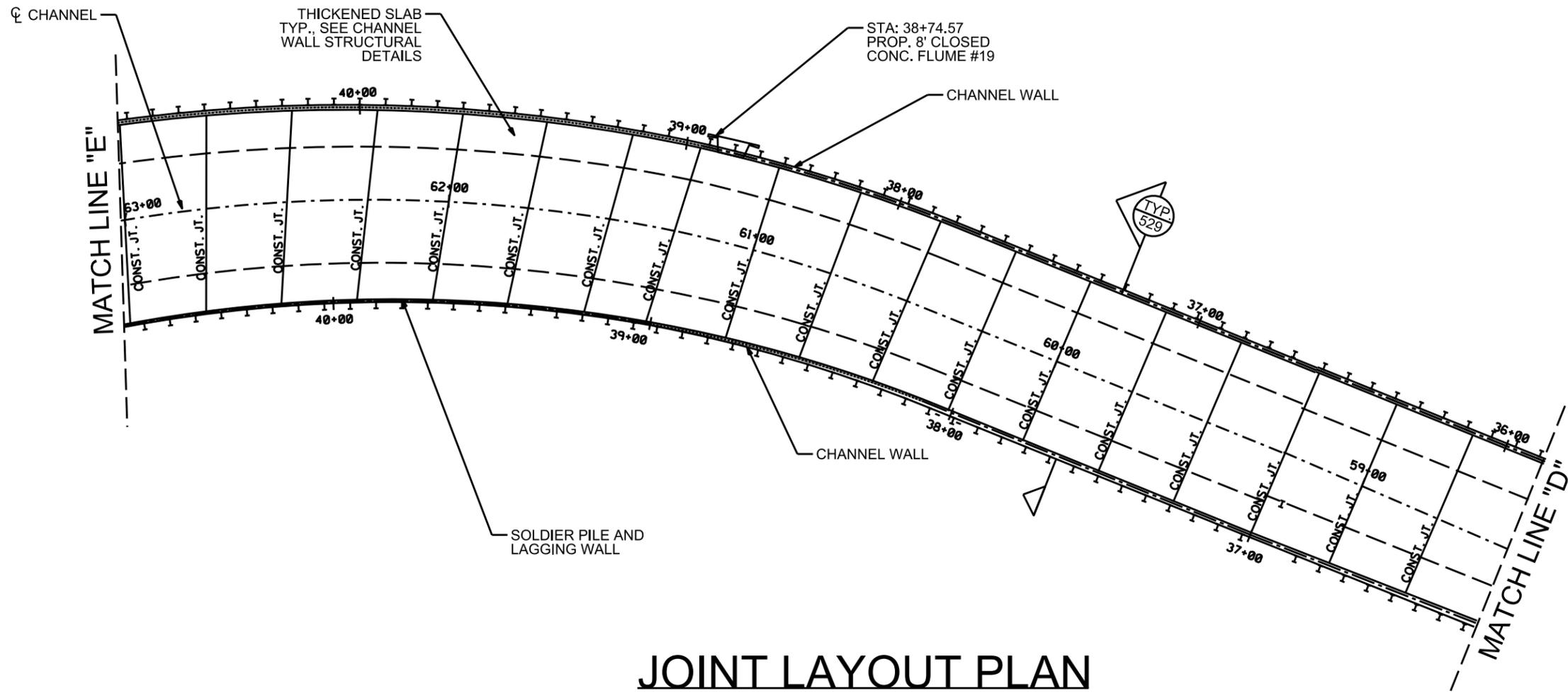
NO	DATE	DESCRIPTION	DWG	CHK
REVISIONS				

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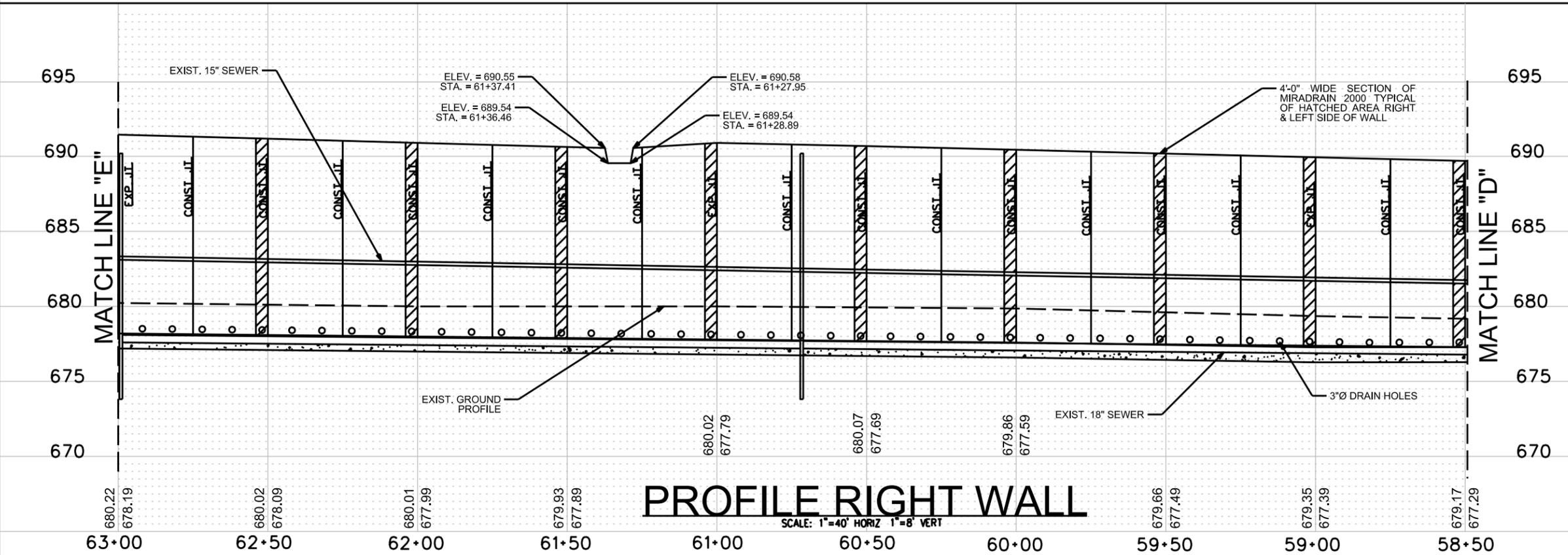
CITY OF SAN ANTONIO
 TRANSPORTATION & CAPITAL IMPROVEMENTS
 SEELENG CHANNEL IMPROVEMENTS PHASE 2
 CHANNEL JOINT LAYOUT
 AND PLAN PROFILE "D"

100% SUBMITTAL	PROJECT NO.: 60312595	DATE: MARCH 4, 2015
DRWN. BY: J.H.	OSDN. BY: J.H.	CHKD. BY: S.J.F. SHEET NO. 532



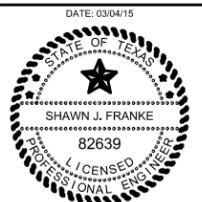
JOINT LAYOUT PLAN

FROM STATION 63+00 TO 58+50 BASE BID FINISH POINT



PROFILE RIGHT WALL

SCALE: 1"=40' HORIZ 1"=8' VERT



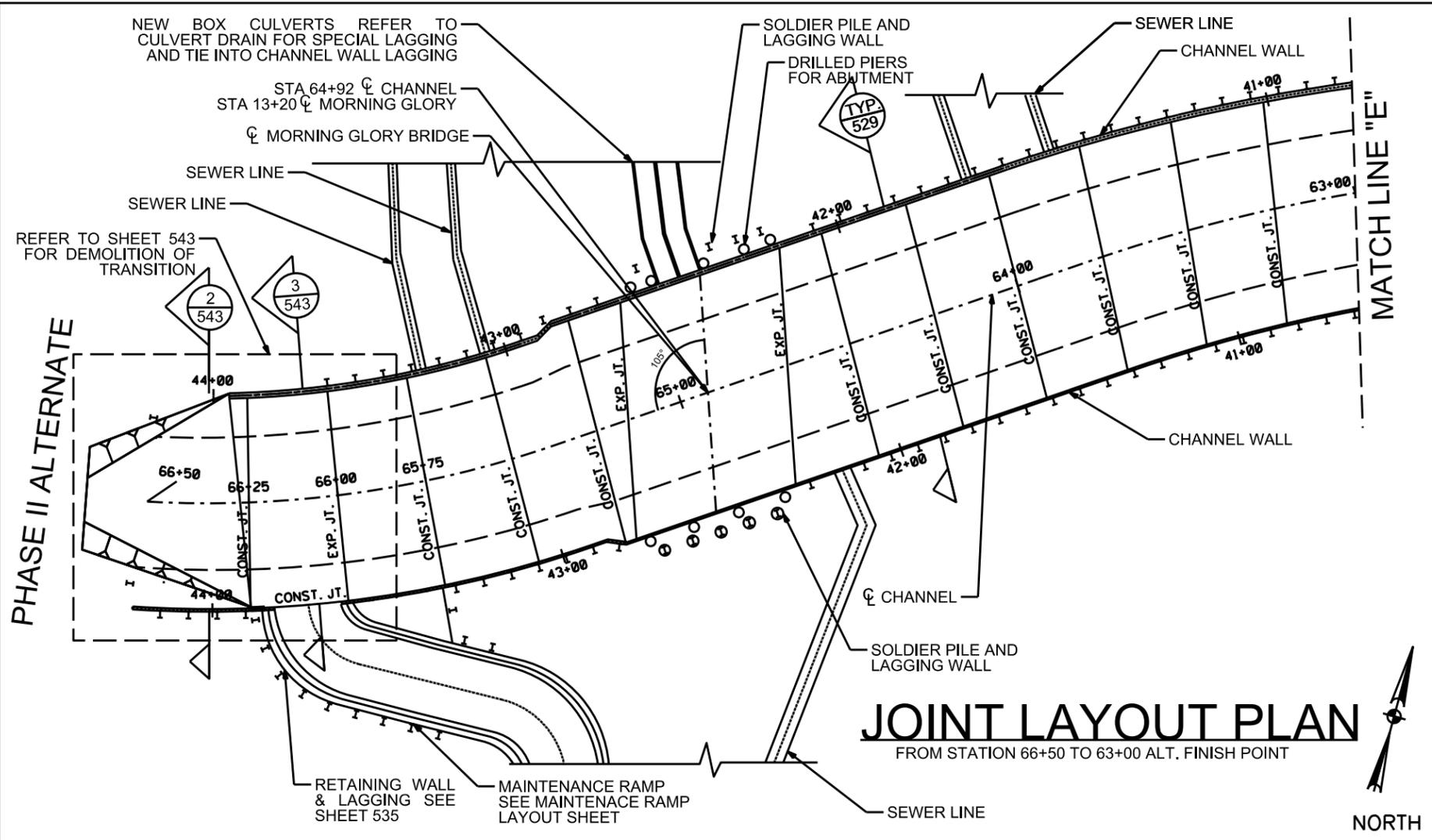
Shawn Franke

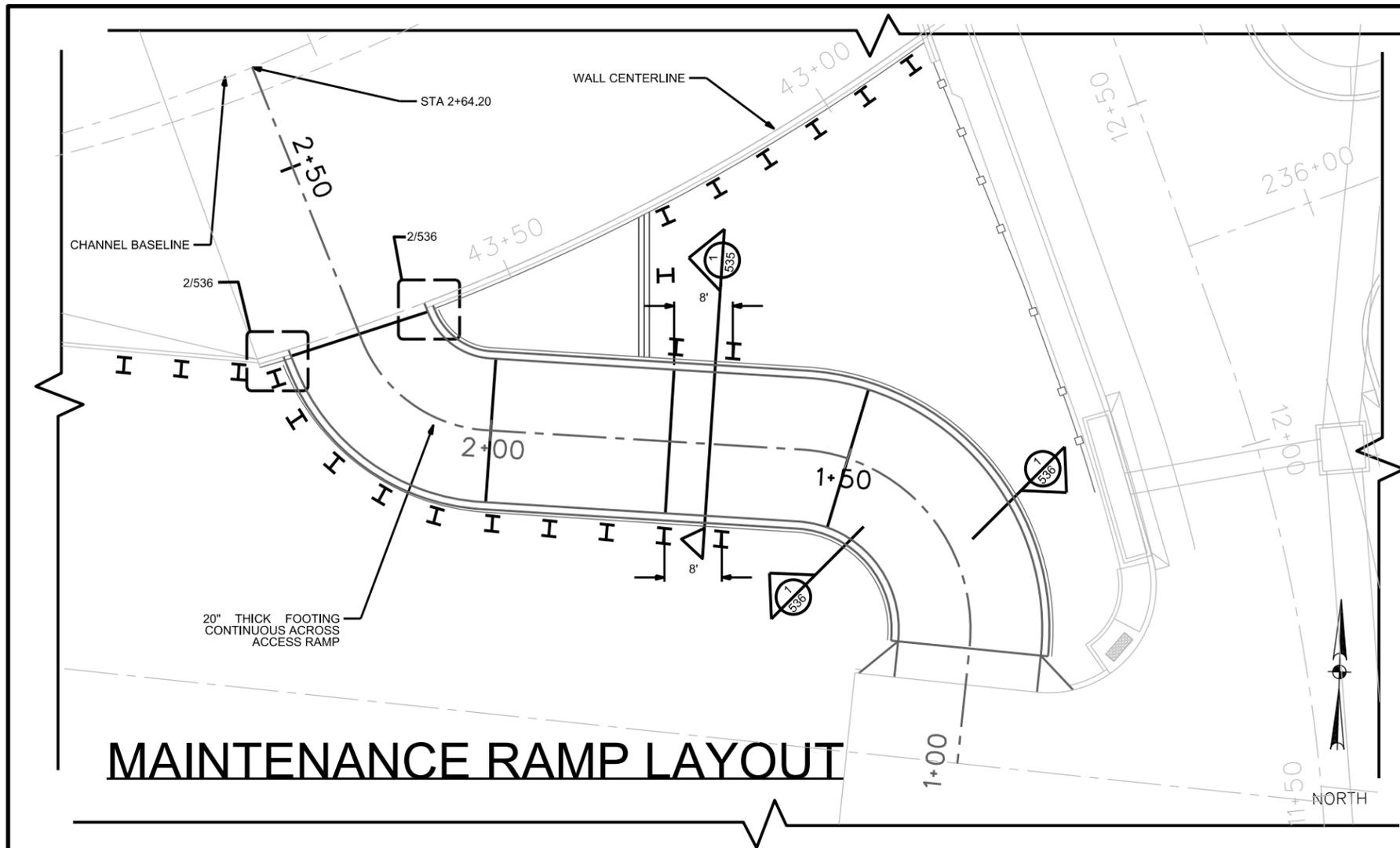
NO	DATE	DESCRIPTION	DWG	CHK
REVISIONS				

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 AECOM TECHNICAL SERVICES, INC.
 112 E. PECAN ST., SUITE 400
 SAN ANTONIO, TEXAS 78204
 WWW.AECOM.COM
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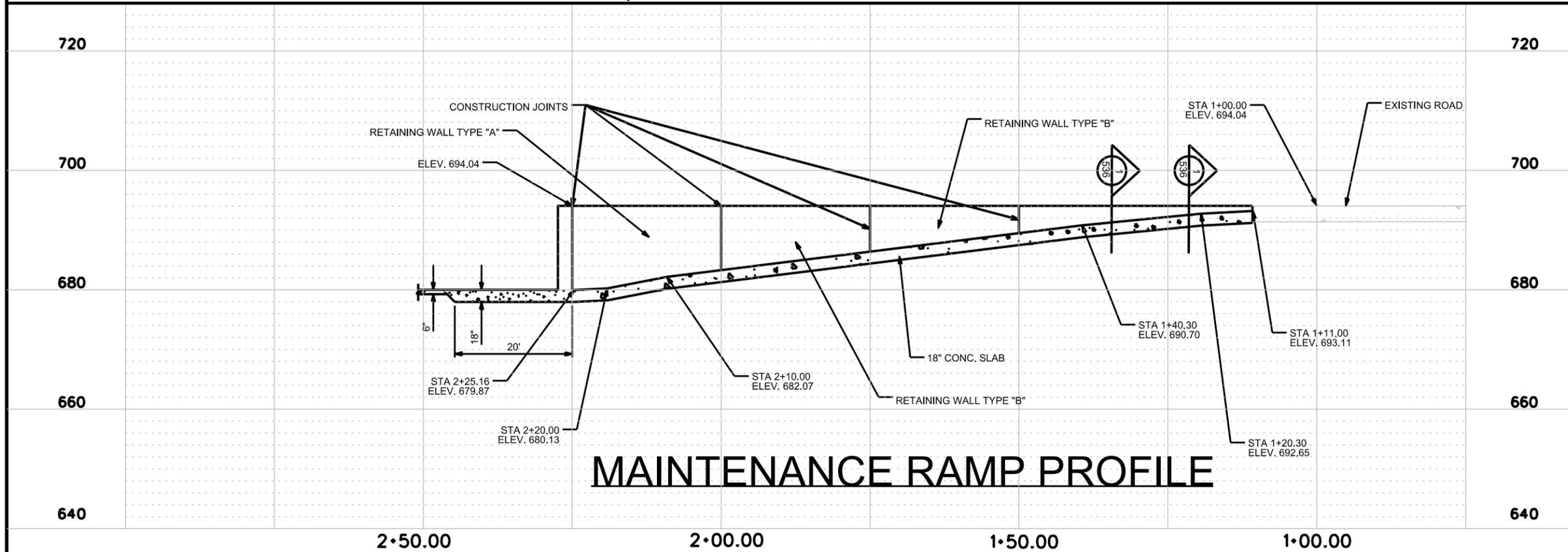
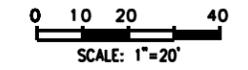
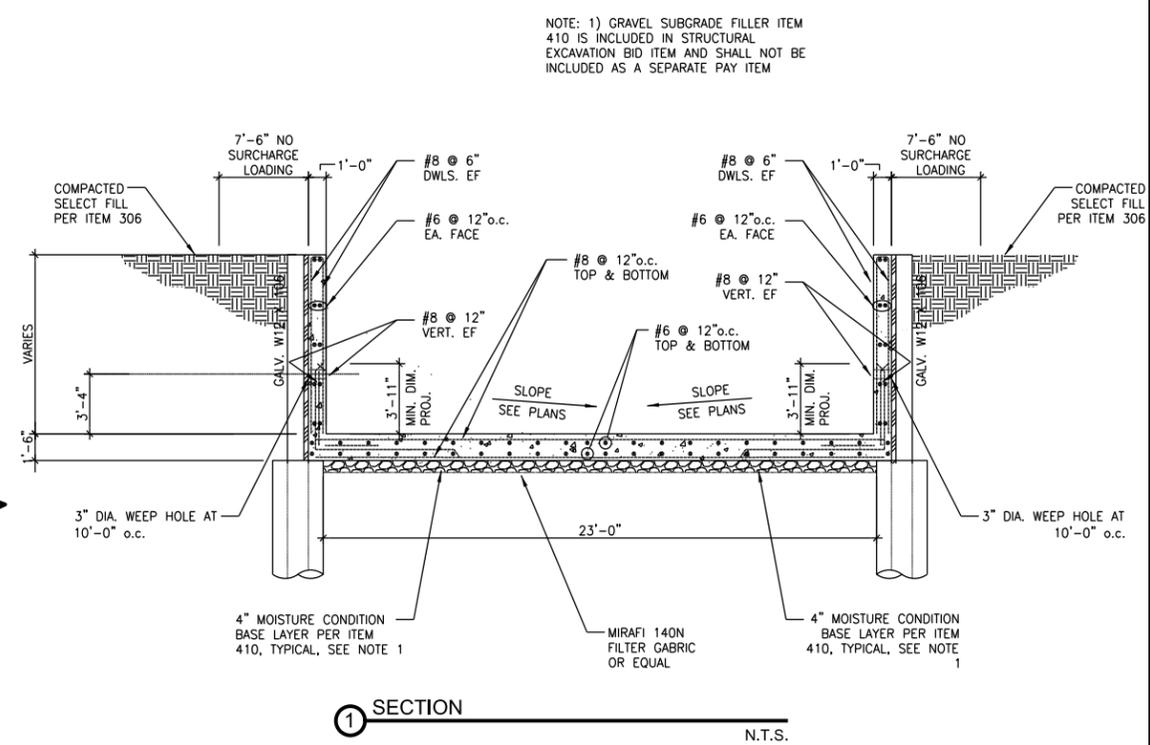
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CITY OF SAN ANTONIO
 TRANSPORTATION & CAPITAL IMPROVEMENTS
 SEELING CHANNEL IMPROVEMENTS PHASE 2
 CHANNEL JOINT LAYOUT
 AND PLAN PROFILE "E"
 100% SUBMITTAL PROJECT NO.: 60312595 DATE: MARCH 4, 2015
 DRWN. BY: J.H. OSUN. BY: J.H. CHD. BY: S.J.F. SHEET NO. 533





MAINTENANCE RAMP LAYOUT



MAINTENANCE RAMP PROFILE

DATE: 03/04/15

SHAWN J. FRANKE
82639
LICENSED PROFESSIONAL ENGINEER

Shawn Franke

NO	DATE	DESCRIPTION	DWG	CHK

AECOM

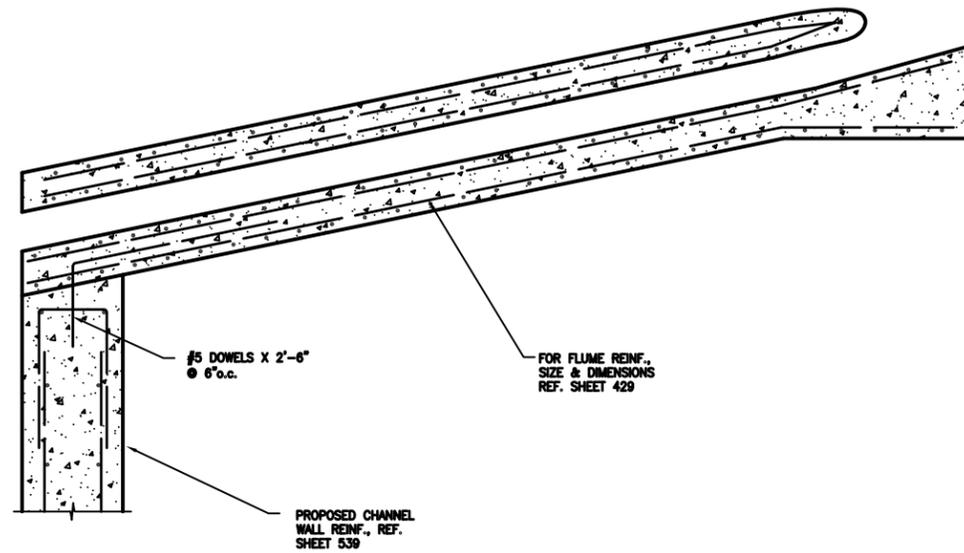
AECOM TECHNICAL SERVICES, INC.
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SAN ANTONIO, TEXAS 78204
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TBPE REG. NO. F-3580

LUNDY & FRANKE ENGINEERING

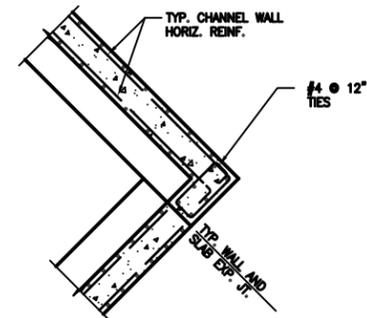
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TX FIRM REG. #3388

CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEELING CHANNEL IMPROVEMENTS PHASE 2
MAINTENANCE RAMP JOINT LAYOUT PLAN AND PROFILE

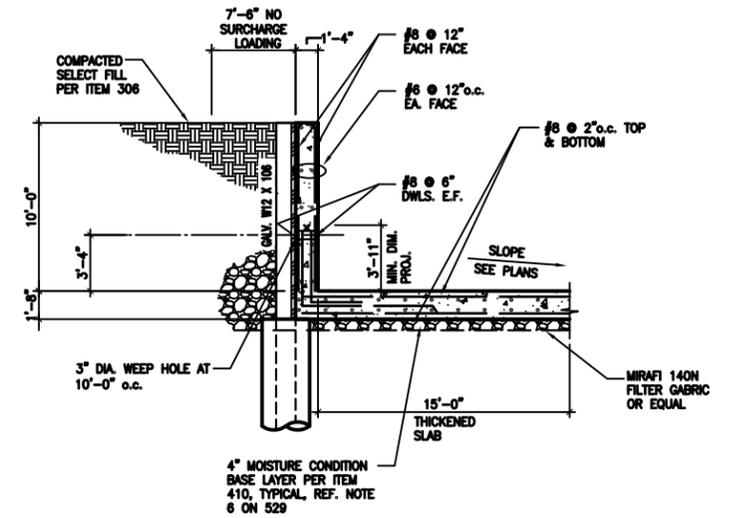
100% SUBMITTAL PROJECT NO.: 60312595 DATE: MARCH 4, 2015
DRWN. BY: J.H. DSN. BY: J.H. CHKD. BY: S.J.F. SHEET NO. 535



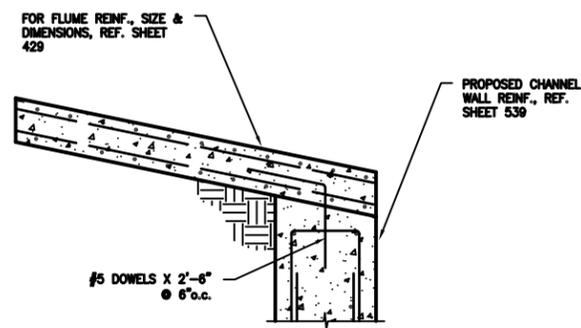
5 DETAIL AT CLOSED FLUME TO CHANNEL WALL CONNECTION TYPICAL N.T.S.



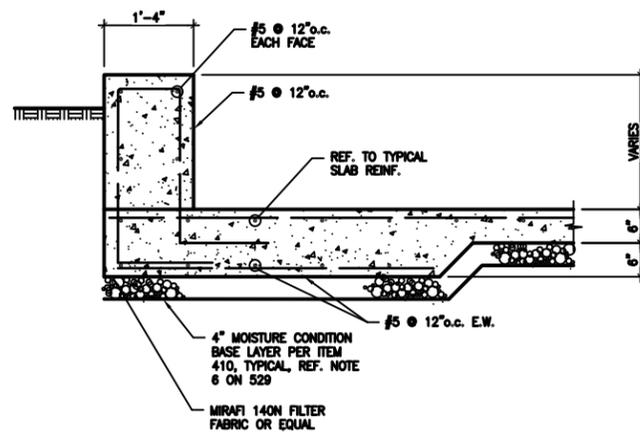
2 ACCESS RAMP CORNER BAR DETAIL SCALE: N.T.S.



1 TYPICAL ACCESS RAMP CAST-IN-PLACE WALL SCALE: 3/16" = 1'-0"



4 DETAIL AT OPEN FLUME TO CHANNEL WALL CONNECTION TYPICAL N.T.S.



3 SECTION SCALE: 3/4" = 1'-0"

DATE: 03/04/15

STATE OF TEXAS
SHAWN J. FRANK
82639
LICENSED PROFESSIONAL ENGINEER

Shawn Franke

NO.	DATE	DESCRIPTION	DWG.	CHK.
REVISIONS				

AECOM AECOM TECHNICAL SERVICES, INC.
112 E. PECAN ST., SUITE 400
SAN ANTONIO, TEXAS 78204
WWW.AECOM.COM
TYPE REG. NO. F-3080

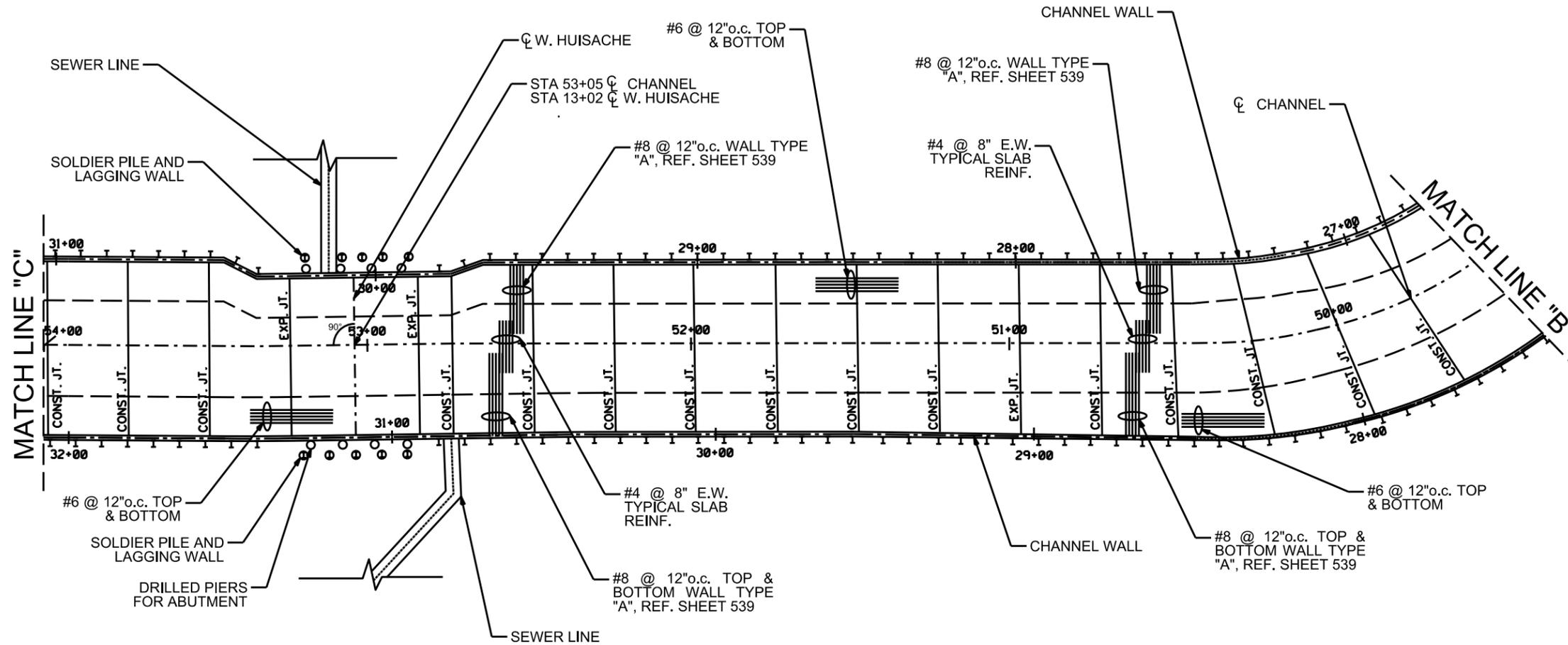
LUNDY & FRANK ENGINEERING
549 HEIMER ROAD
SAN ANTONIO, TEXAS 78232
PH. (210) 979-7900 FX. (210) 979-7800
TX FIRM REG. #3388

CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEILING CHANNEL IMPROVEMENTS PHASE 2
MAINTENANCE RAMP
DETAILS

100% SUBMITTAL PROJECT NO.: 60312585 DATE: MARCH 4, 2015
DRAWN BY: J.H. CHECKED BY: J.H. DESIGNED BY: S.J.F. SHEET NO.: 536

NOTES:

1. CHANNEL REINFORCEMENT LAYOUT SHOWN ABOVE IS TYPICAL TO OTHER CHANNEL SECTIONS UNLESS SPECIFIED OTHERWISE.
2. ALL JOINTS ARE TO BE LOCATED AT THE STATIONING SHOWN ON SHEETS 528-534 AND ARE PERPENDICULAR TO CHANNEL CENTERLINE UNLESS OTHERWISE SPECIFIED.
3. SEE SHEET 540 FOR THICKENED FOOTING WIDTH & REINFORCEMENT
- 4 FOR TYPICAL SLAB SECTIONS & DETAILS SEE SHEET 538



DATE: 03/04/15

SHAWN J. FRANKE
82639
LICENSED PROFESSIONAL ENGINEER

Shawn Franke

NO	DATE	DESCRIPTION	DWG	CHK

TYPICAL CHANNEL SLAB
SLAB REINFORCEMENT PLAN
 SCALE 1"=40'

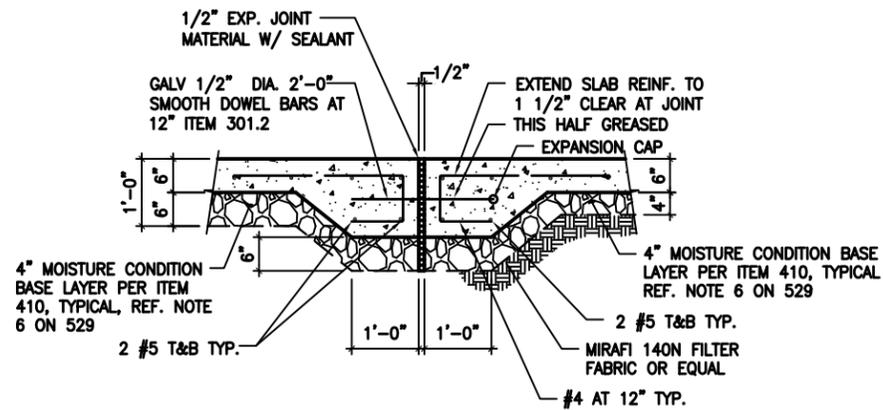
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 112 E. PECAN ST., SUITE 400
 SAN ANTONIO, TEXAS 78204
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LUNDY & FRANKE
 ENGINEERING

540 HEIMER ROAD
 SAN ANTONIO, TEXAS 78232
 PH. (210) 879-7900 FX. (210) 879-7800
 TX FIRM REG. #3388

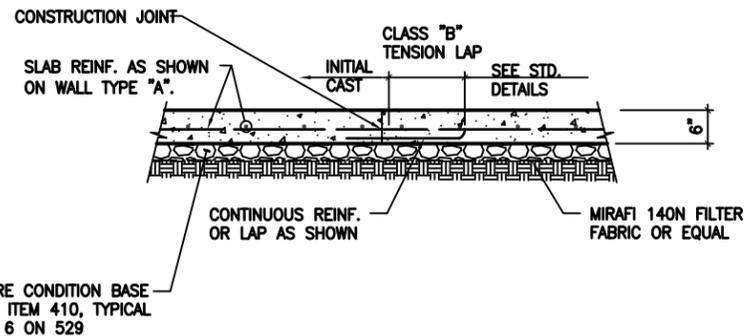
CITY OF SAN ANTONIO
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 SEELING CHANNEL IMPROVEMENTS PHASE 2
TYPICAL SLAB REINFORCEMENT PLAN

100% SUBMITTAL	PROJECT NO.: 60312595	DATE: MARCH 4, 2015
DRWN. BY: J.H.	DESIGN BY: J.H.	CHECKED BY: S.J.F. SHEET NO. 537



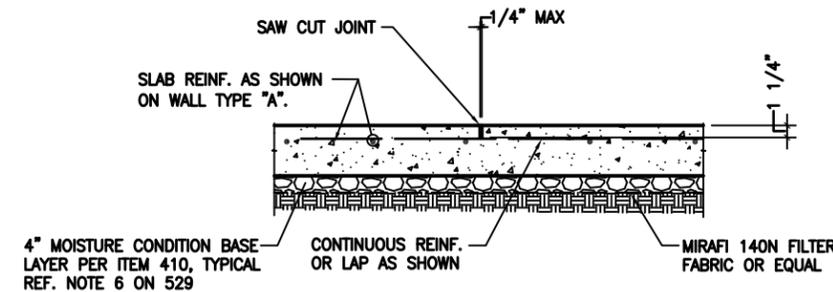
6" SLAB EXP. JOINT

SCALE: 3/4" = 1'-0"



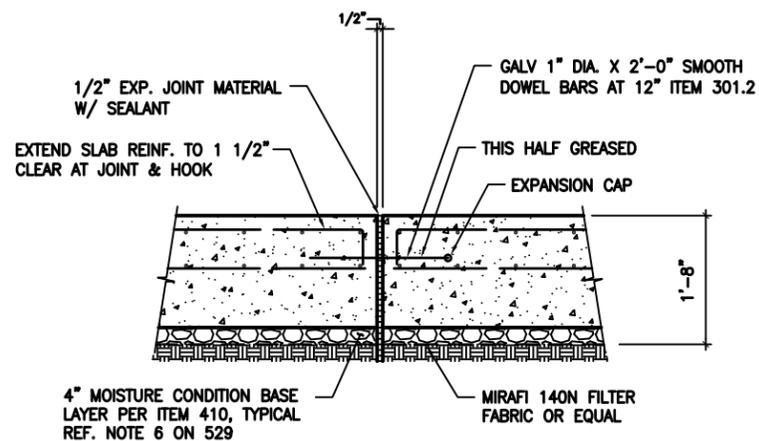
6" SLAB CONST. JOINT

SCALE: 3/4" = 1'-0"



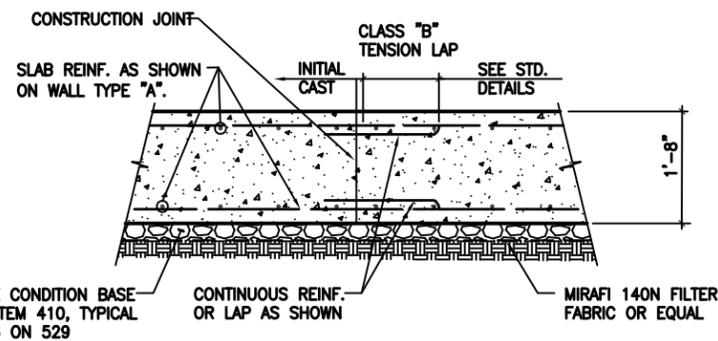
TYPICAL SAW CUT JOINT

SCALE: 3/4" = 1'-0"



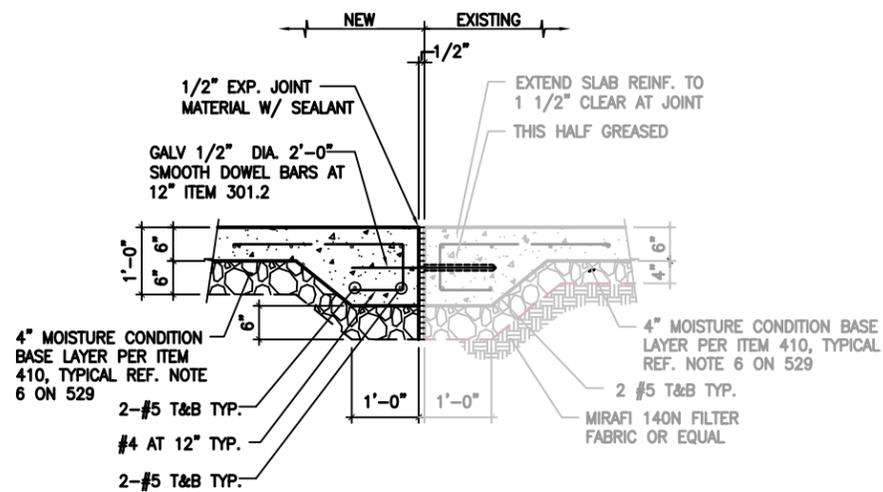
20" SLAB EXP. JOINT

SCALE: 3/4" = 1'-0"



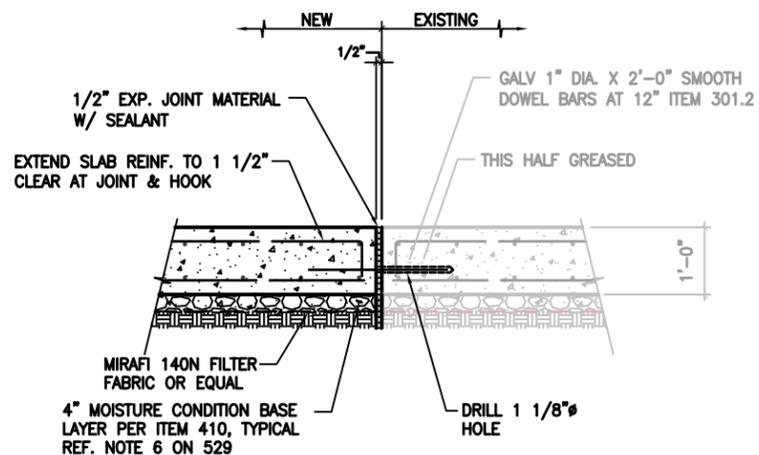
18" SLAB CONST. JOINT

SCALE: 3/4" = 1'-0"



6" SLAB EXP. JOINT

NEW TO EXIST.
SCALE: 3/4" = 1'-0"



18" SLAB EXP. JOINT

NEW TO EXIST.
SCALE: 3/4" = 1'-0"

DATE: 03/04/15

SHAWN J. FRANKE
82639
LICENSED PROFESSIONAL ENGINEER

Shawn Franke

NO.	DATE	DESCRIPTION REVISIONS	DWG.	CHK.

AECOM

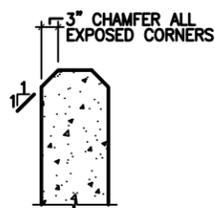
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SAN ANTONIO, TEXAS 78204
WWW.AECOM.COM
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LUNDY & FRANK
ENGINEERING

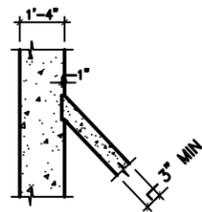
549 HEIMER ROAD
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PH. (210)979-7900 FX. (210)979-7800
TX FIRM REG. 73388

CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEELING CHANNEL IMPROVEMENTS PHASE 2
CHANNEL STRUCTURAL DETAILS

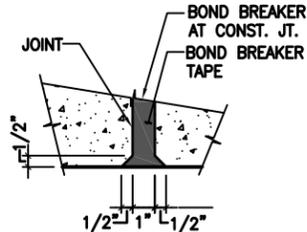
100% SUBMITTAL PROJECT NO.: 60312565 DATE: MARCH 4, 2015
DRAWN BY: J.H. CHECKED BY: J.H. DESIGNED BY: S.J.F. SHEET NO.: 538



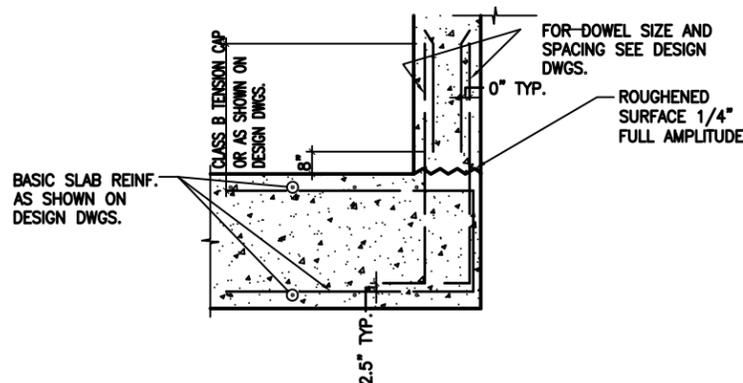
10 CHAMFER N.T.S.



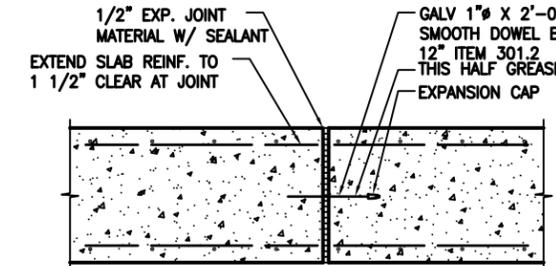
9 CONCRETE FILLET N.T.S.



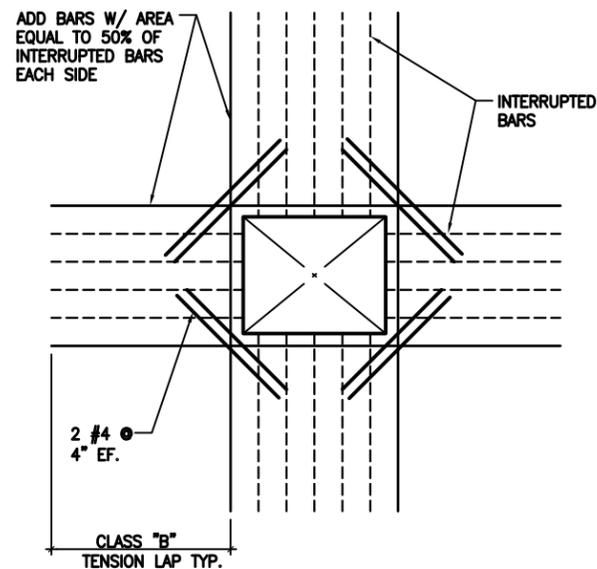
6 CHAMFER JOINT SEALANT



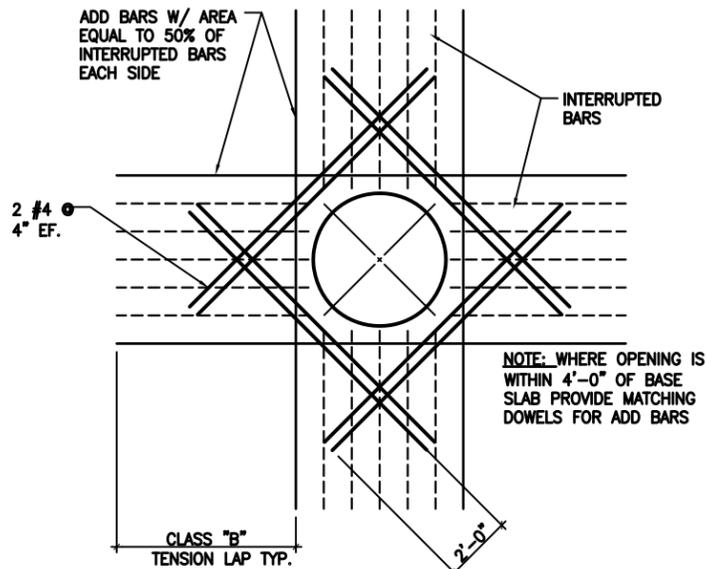
3 WALL BASE CONST. JOINT N.T.S.



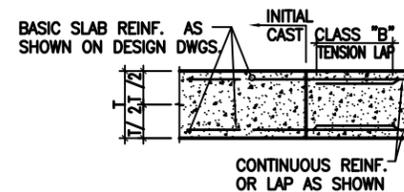
1 WALL EXPANSION JOINT N.T.S.



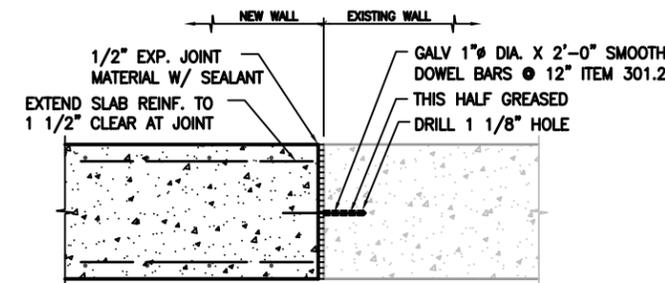
11 REINF. AT RECTANGULAR OPENINGS GREATER THAN 12" N.T.S.



7 REINF. AT CIRCULAR OPENINGS GREATER THAN 12" N.T.S.



4 WALL CONSTRUCTION JOINT N.T.S.

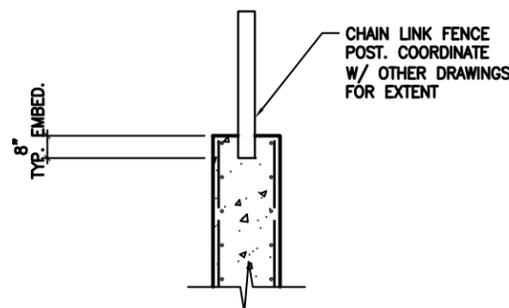


2 WALL EXPANSION JOINT N.T.S.

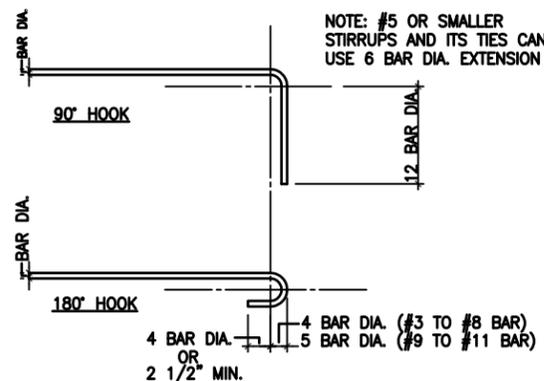
NOTES (1 & 2):

1 - IT IS THE INTENTION OF THIS JOINT THAT IT ALLOW FREE THERMAL EXPANSION OF THE WALL WHILE RESTRAINING OUT OF PLANE LATERAL MOVEMENT. THE DOWELS ARE TO BE PLACED TO ALLOW UNHINDERED MOVEMENT PARALLEL TO THE CENTERLINE OF THE WALL.

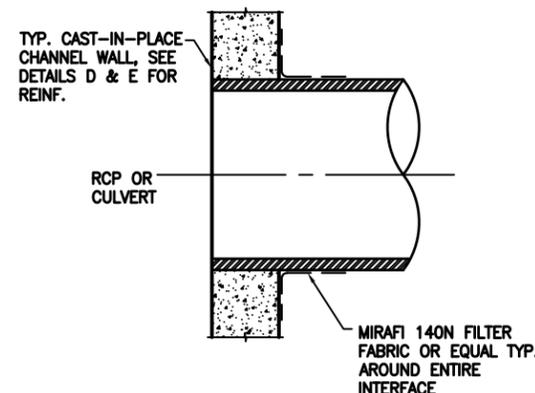
2 - THE DOWELS SHALL BE PLACED PARALLEL TO THE CENTERLINE OF THE WALL, BOTH VERTICALLY AND HORIZONTALLY. DEVIATION FROM LINE BY MORE THAN 1/4" OVER THE LENGTH OF THE DOWEL WILL NOT BE PERMITTED. TIE DOWELS TO SHORT PIECE OF REBAR AND VERTICAL REINFORCEMENT TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. PLACE CONCRETE 2 TO 3 FEET AWAY FROM BULKHEAD AND WORK INTO JOINT DURING PLACEMENT TO AVOID DISLODGING THE DOWELS.



12 TYPICAL FENCE POST POST EMBEDMENT AT WALL N. T. S.



8 TYPICAL REINFORCEMENT DETAILS N. T. S.



5 TYPICAL PENETRATION THROUGH CH. WALL N.T.S.

DATE: 03/04/15

SHAWN J. FRANKÉ
82639
LICENSED PROFESSIONAL ENGINEER

Shawn Franke

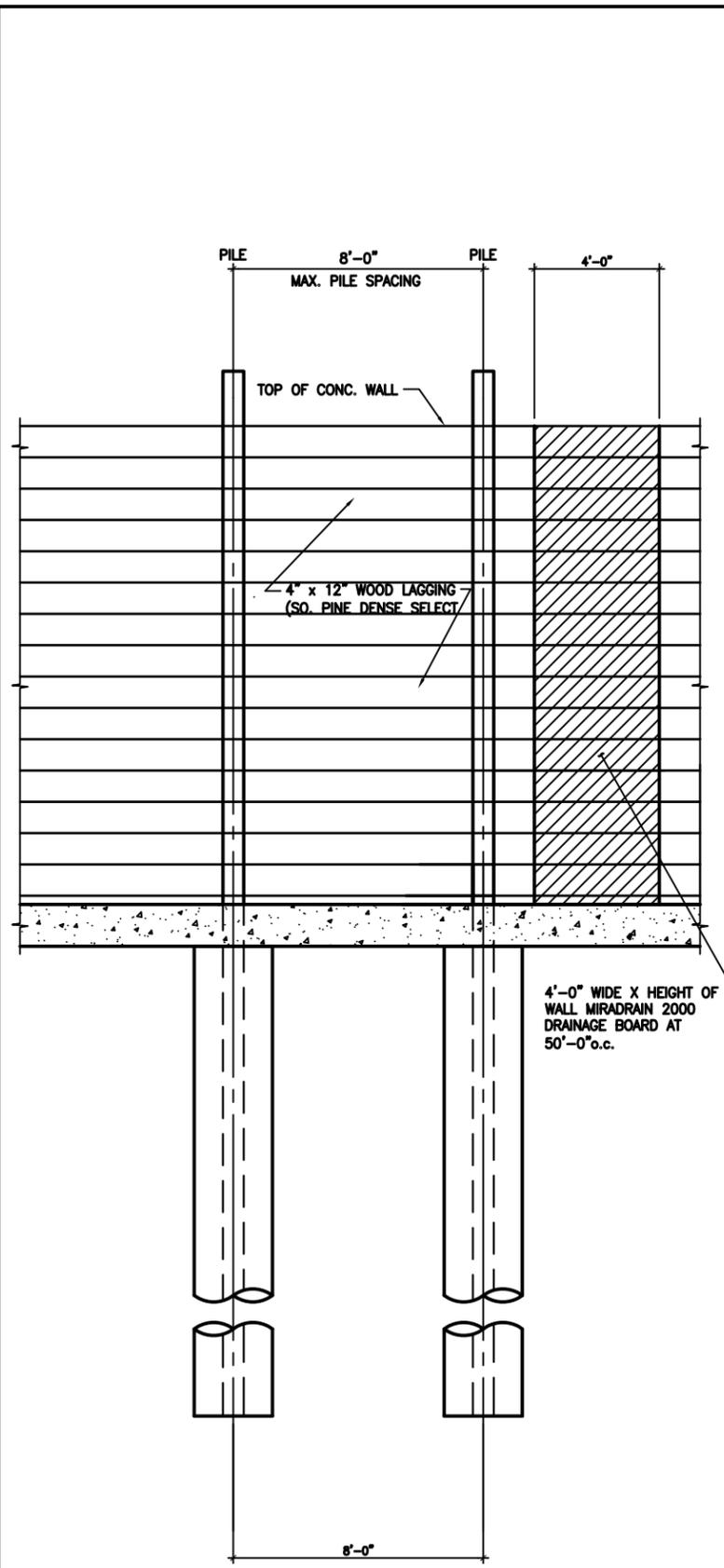
NO.	DATE	DESCRIPTION REVISIONS	DWG.	CHK.

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112 E. PECAN ST., SUITE 400
SAN ANTONIO, TEXAS 78204
WWW.AECOM.COM
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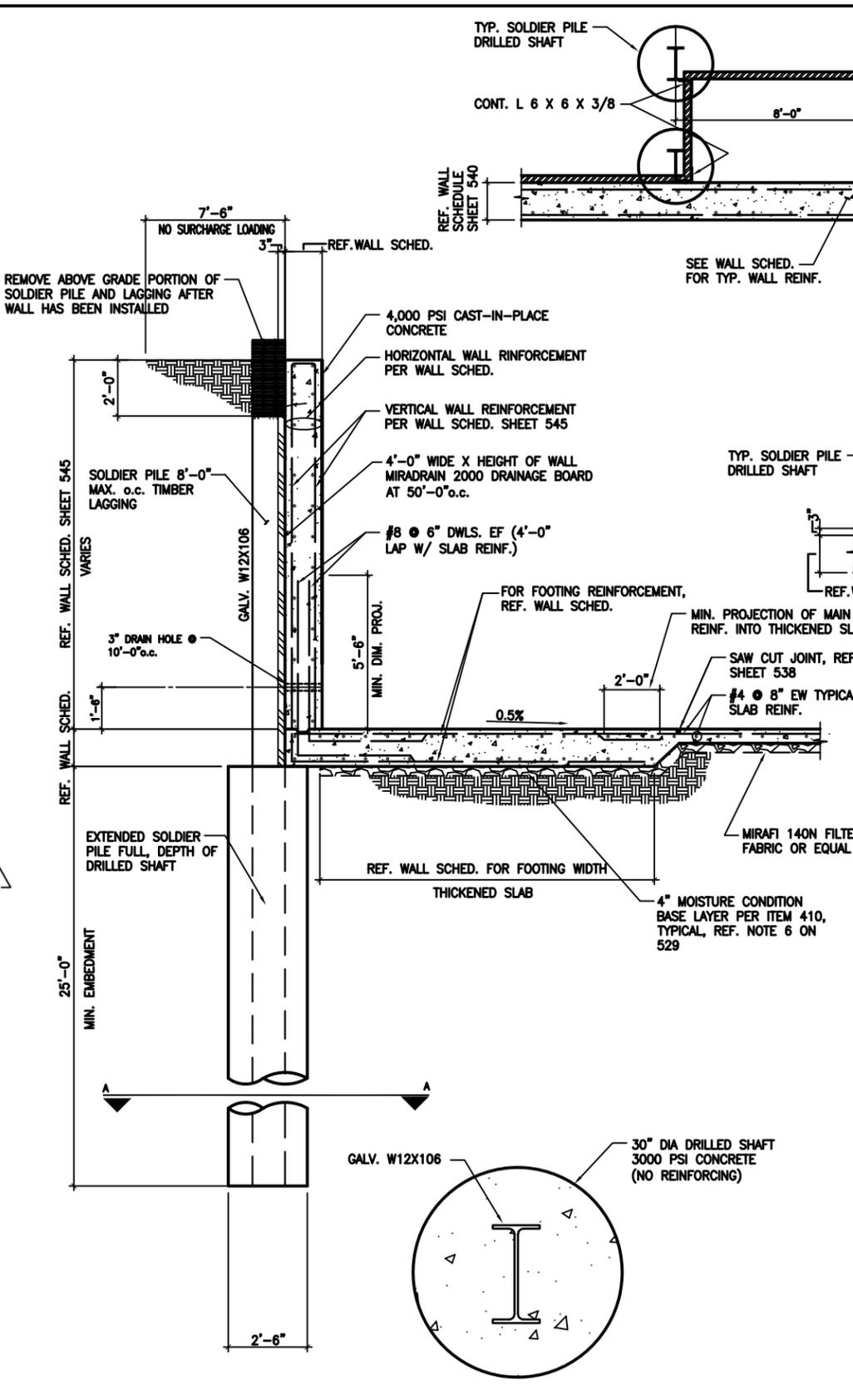
LUNDY & FRANKÉ ENGINEERING 549 HEIMER ROAD
SAN ANTONIO, TEXAS 78232
PH. (210) 979-7900 FX. (210) 979-7800
TX FIRM REG. 73388

CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEALING CHANNEL IMPROVEMENTS PHASE 2
CHANNEL WALL
STRUCTURAL DETAILS

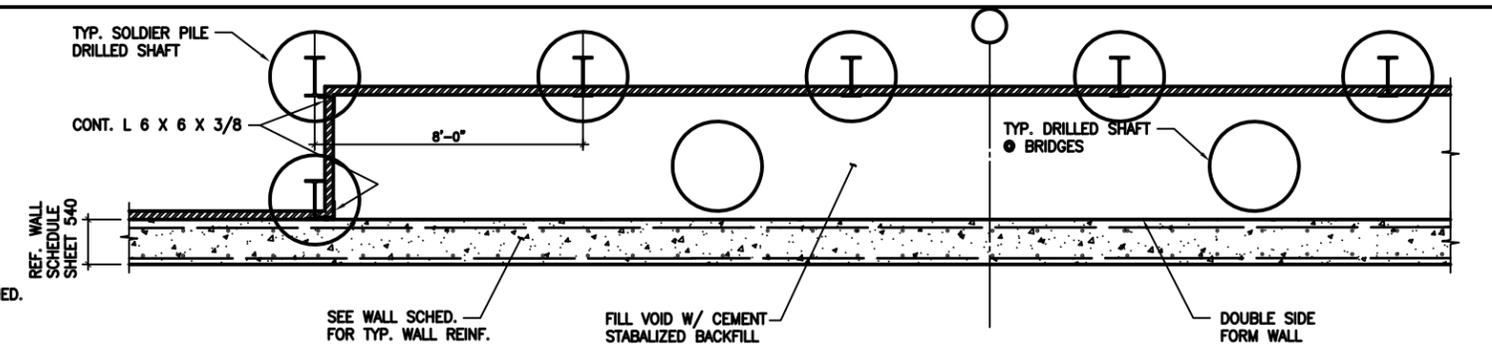
100% SUBMITTAL PROJECT NO.: 60312585 DATE: MARCH 4, 2015
DRAWN BY: J.H. CHECKED BY: J.H. DESIGNED BY: S.L.F. SHEET NO. 539



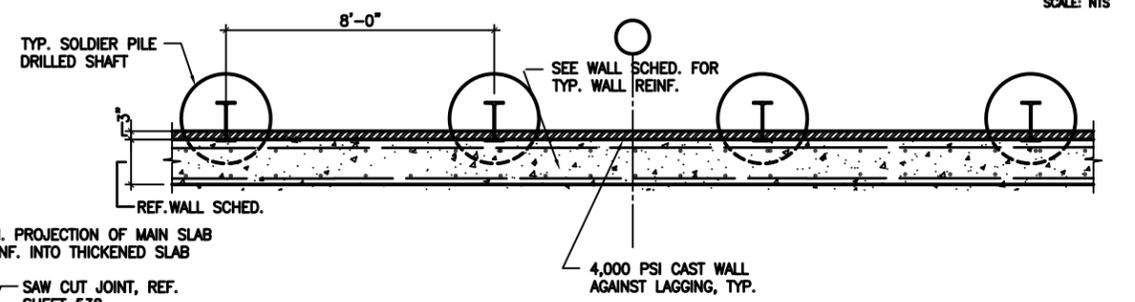
TYPICAL CHANNEL WALL & TYPICAL SOLDIER PILE AND LAGGING WALL
SCALE: NTS



SECTION A



TYPICAL CHANNEL WALL & TYPICAL SOLDIER PILE AND LAGGING WALL AT BRIDGES
SCALE: NTS



TYPICAL CHANNEL WALL & TYPICAL SOLDIER PILE AND LAGGING WALL
SCALE: NTS

CONSTRUCTION SEQUENCE NOTES:

- SF-1 BEFORE ANY CONSTRUCTION IS BEGUN, PERFORM ROUGH GRADING AND CUT SWALES SO THAT GROUNDS WILL DRAIN AWAY FROM THE EXCAVATION. MAINTAIN DRAINAGE DURING ALL PHASES OF CONSTRUCTION SO THAT STORM WATER WILL BE CONDUCTED AWAY FROM THE EXCAVATION. KEEP EXCAVATIONS FREE FLOWING FOR STORM WATER AT ALL TIMES.
- SF-2 PRECAUTIONS SHALL BE TAKEN TO PROTECT OPEN EXCAVATIONS FROM EXCESSIVE LOSS OR GAIN IN NATURAL MOISTURE LEVEL PRIOR TO PLACEMENT OF BASE MATERIAL. KEEP MOIST DURING DRY WEATHER AND KEEP STORM WATER FREE FLOWING, INCLUDING NIGHTS AND WEEKENDS, DURING RAINS.
- SF-3 VERIFY AND IDENTIFY ALL EXISTING UTILITIES IN EXCAVATION AREA.
- SF-4 DRILL SOLDIER PILES AS NOTED
- SF-5 INSTALL WOOD LAGGING AS EXCAVATION PROGRESSES. NEVER LEAVE MORE THAN 1'-6" EXPOSED.
- SF-6 PERFORM EXISTING CONCRETE CHANNEL DEMOLITION & REMOVAL EXCAVATE TO SUBGRADE
- SF-7 PROVIDE 4" MOISTURE CONDITIONS LAYER PER ITEM 410. REFER NOTE 1.
- SF-8 INSTALL MIRAFI FILTER FABRIC.
- SF-9 INSTALL CONCRETE SLAB & FOOTING PER JOINTING PLAN
- SF-10 INSTALL MIRADRAIN AGAINST WOOD LAGGING
- SF-11 FORM & PLACE CONCRETE WALL PER JOINTING PLAN
- SF-12 REMOVE 2'-0" OF SOLDIER PILES PER DETAIL
- SF-13 PROVIDE FINAL GRADING AT TOP OF WALL PER FINISH GRADE PLANS.

DATE: 03/04/15

STATE OF TEXAS
SHAWN J. FRANKIE
82639
LICENSED PROFESSIONAL ENGINEER

Shawn Franke

NO.	DATE	DESCRIPTION	REVISIONS	DWG	CHK

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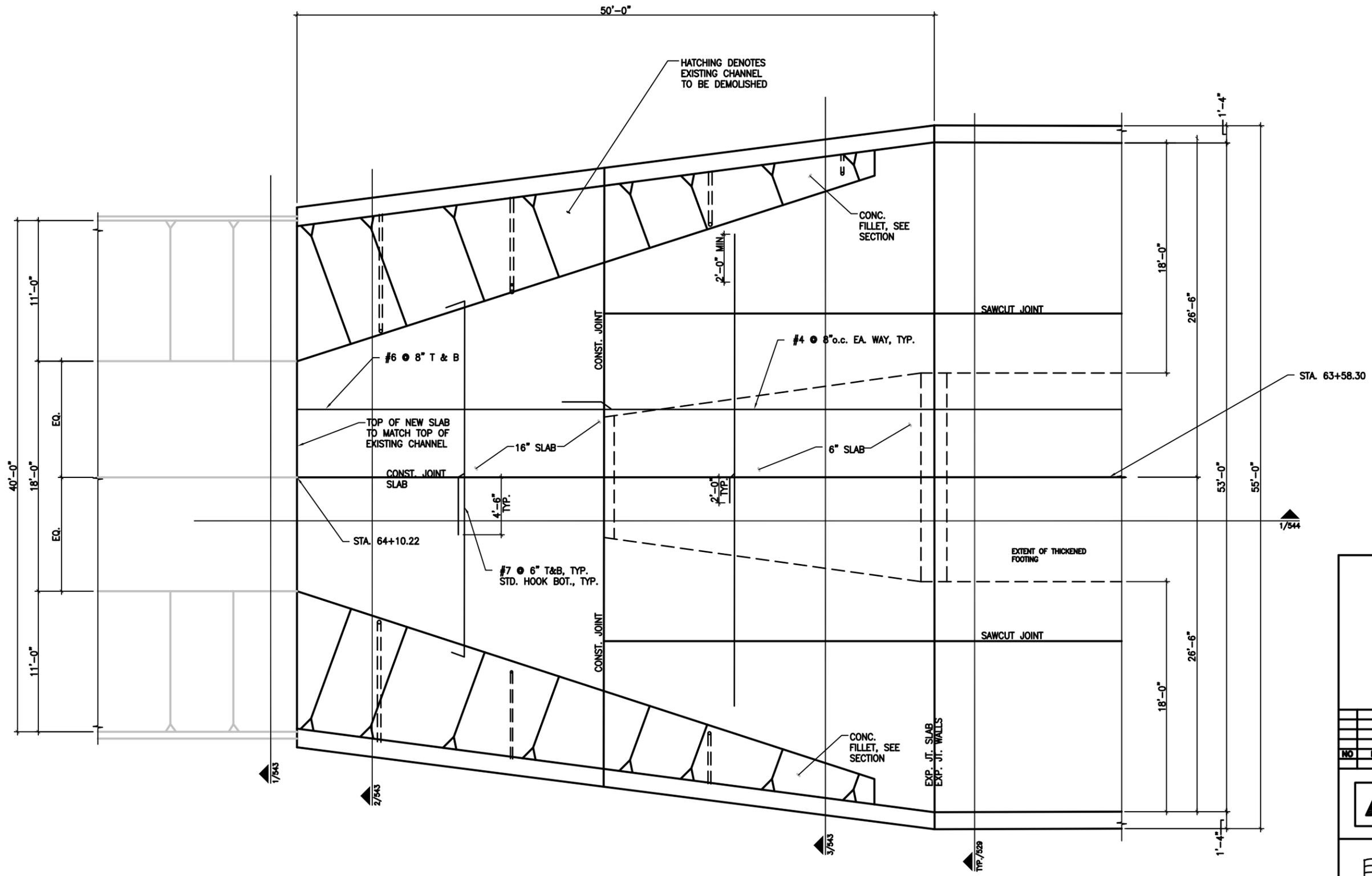
AECOM TECHNICAL SERVICES, INC.
112 E. PECAN ST., SUITE 400
SAN ANTONIO, TEXAS 78204
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LUNDY & FRANKIE ENGINEERING

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CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEELING CHANNEL IMPROVEMENTS PHASE 2
CHANNEL WALL
STRUCTURAL DETAILS

100% SUBMITTAL PROJECT NO.: 60312565 DATE: MARCH 4, 2015
DRAWN BY: J.H. CHECKED BY: J.H. DESIGNED BY: S.J.F. SHEET NO.: 540



DATE: 03/04/15

SHAWN J. FRANKE
82639
LICENSED PROFESSIONAL ENGINEER

Shawn Franke

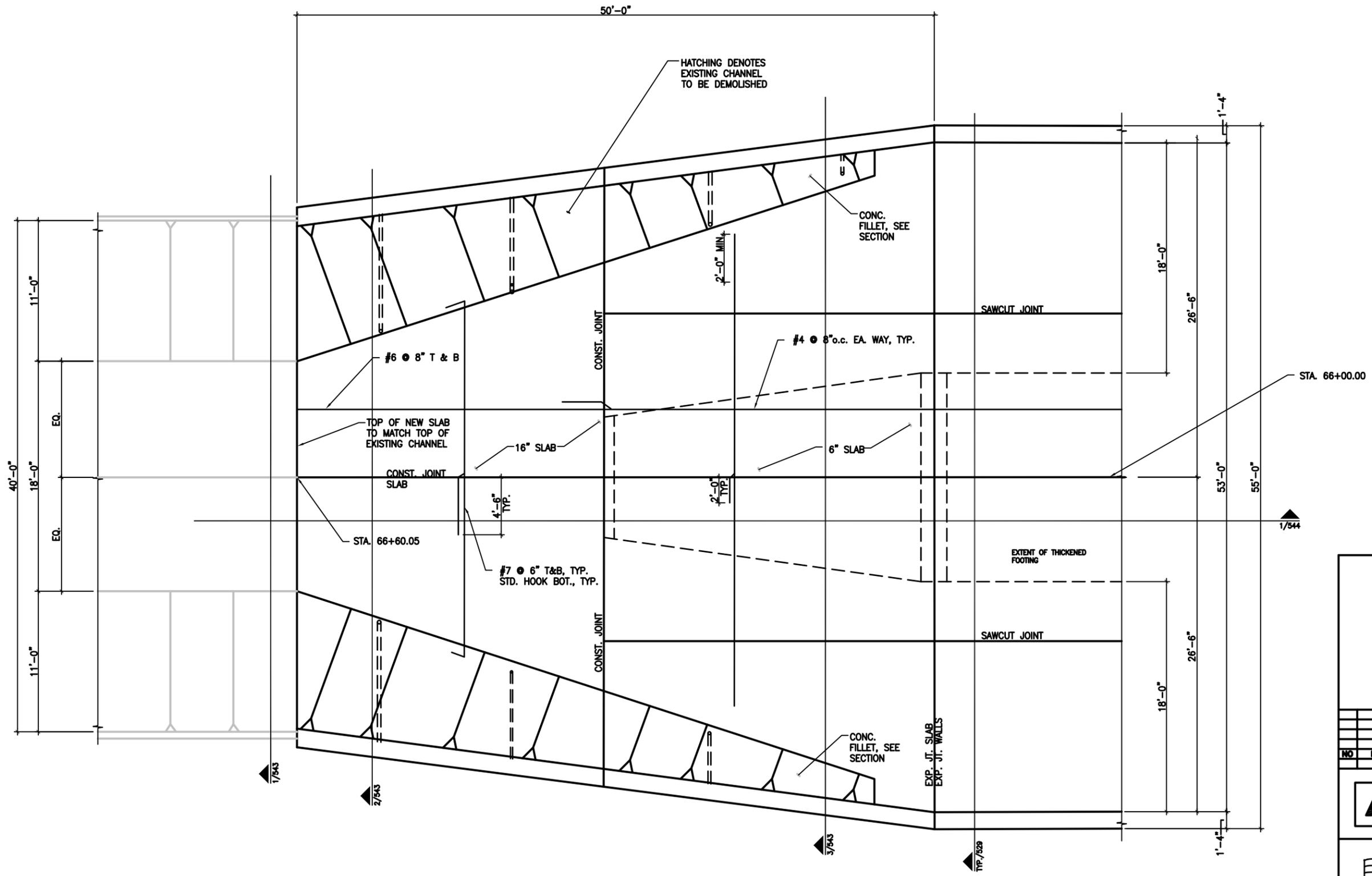
NO.	DATE	DESCRIPTION	DWG.	CHK.

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112 E. PECAN ST., SUITE 400
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CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEALING CHANNEL IMPROVEMENTS PHASE 2
UPSTREAM TRANSITION
BASE BID

100% SUBMITTAL PROJECT NO.: 60312565 DATE: MARCH 4, 2015
DRAWN BY: J.H. CHECKED BY: J.H. DESIGNED BY: S.L.F. SHEET NO.: 541



DATE: 03/04/15

SHAWN J. FRANKE
82639
LICENSED
PROFESSIONAL ENGINEER

Shawn Franke

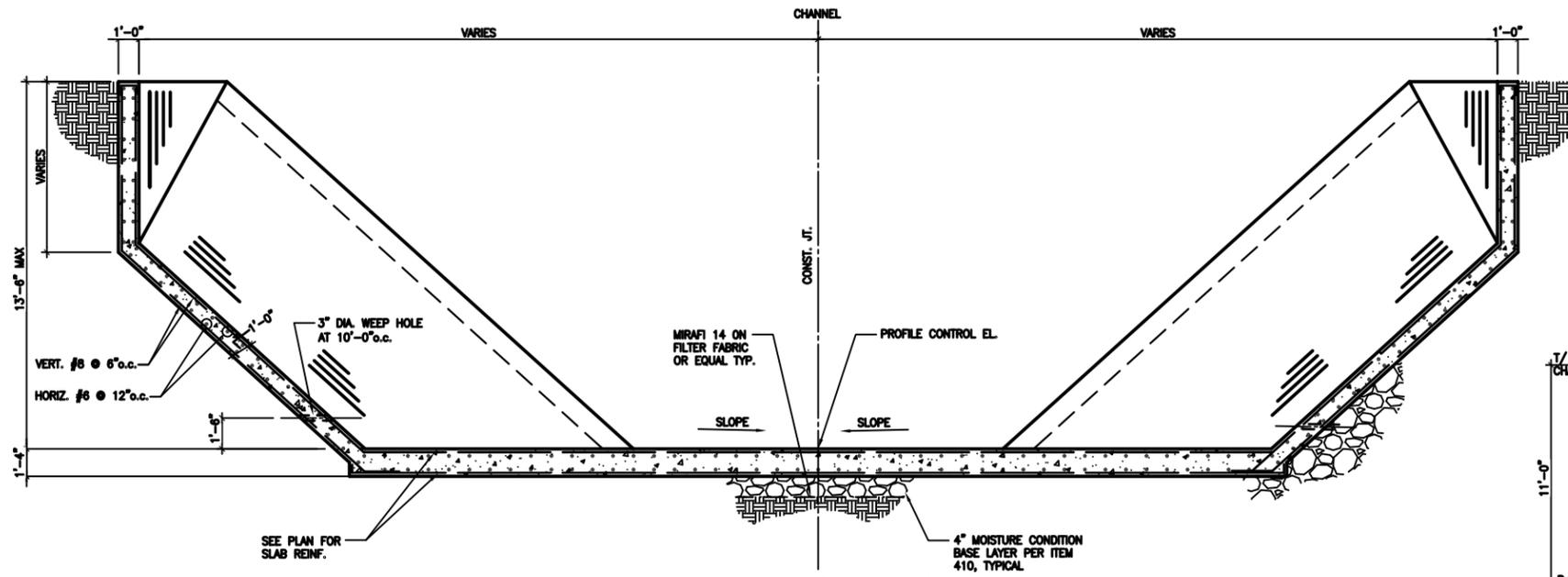
NO.	DATE	DESCRIPTION REVISIONS	DWG	CHK

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112 E. PECAN ST., SUITE 400
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WWW.AECOM.COM
TYPE REG. NO. F-3080

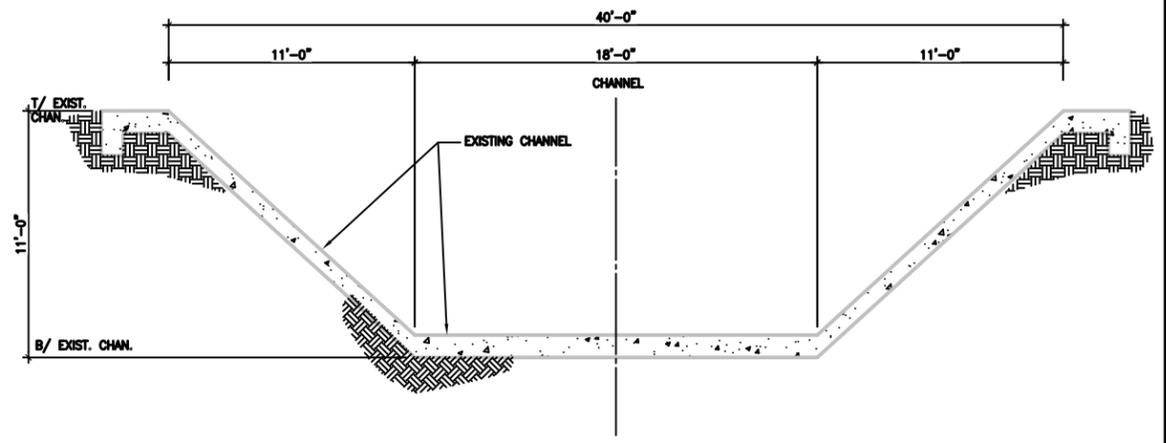
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CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEELING CHANNEL IMPROVEMENTS PHASE 2
UPSTREAM TRANSITION
ALT. BID

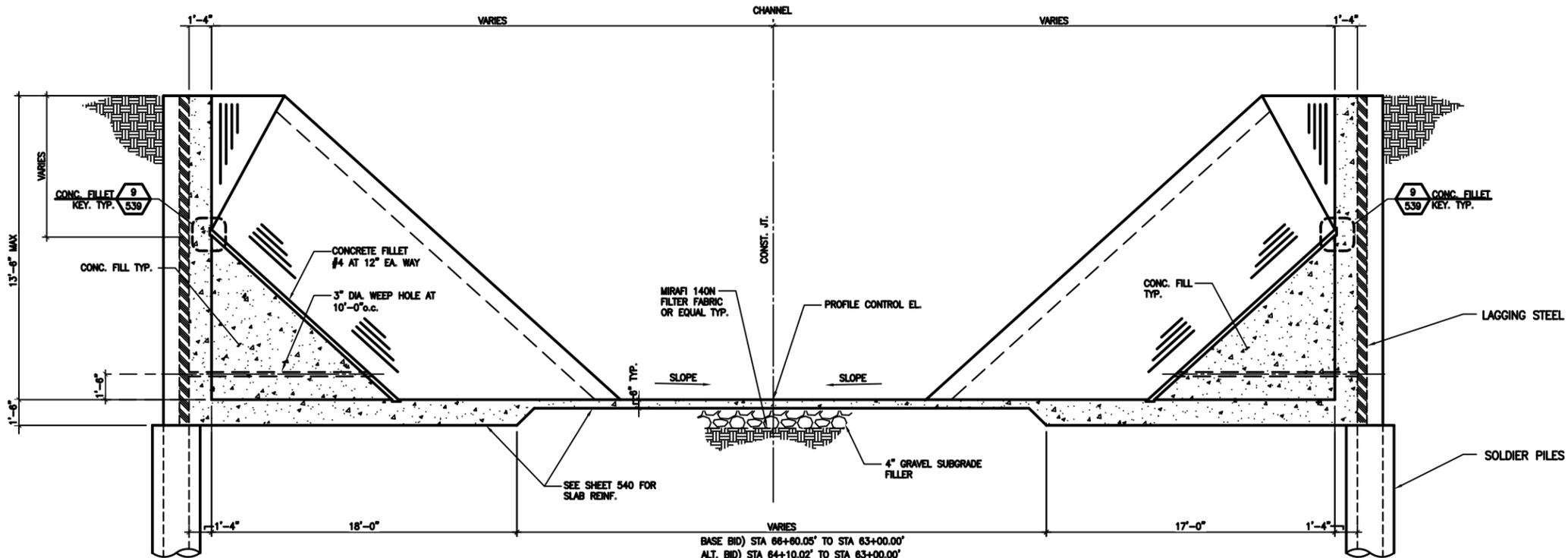
100% SUBMITTAL	PROJECT NO.: 60312585	DATE: MARCH 4, 2015	
DRWN. BY: J.H.	CHKD. BY: J.H.	APP. BY: S.L.F.	SHEET NO. 542



② **TRANSITION SECTION FOR NEW CONSTRUCTION**
 SCALE: 1/4" = 1'-0"



① **EXISTING CHANNEL SECTION FOR NEW CONSTRUCTION**
 SCALE: 1/4" = 1'-0"



③ **TRANSITION SECTION FOR NEW CONSTRUCTION**
 SCALE: 1/4" = 1'-0"

DATE: 03/04/15

STATE OF TEXAS
 SHAWN J. FRANK
 82639
 LICENSED PROFESSIONAL ENGINEER

Shawn Franke

NO.	DATE	DESCRIPTION	DWG.	CHK.
		REVISIONS		

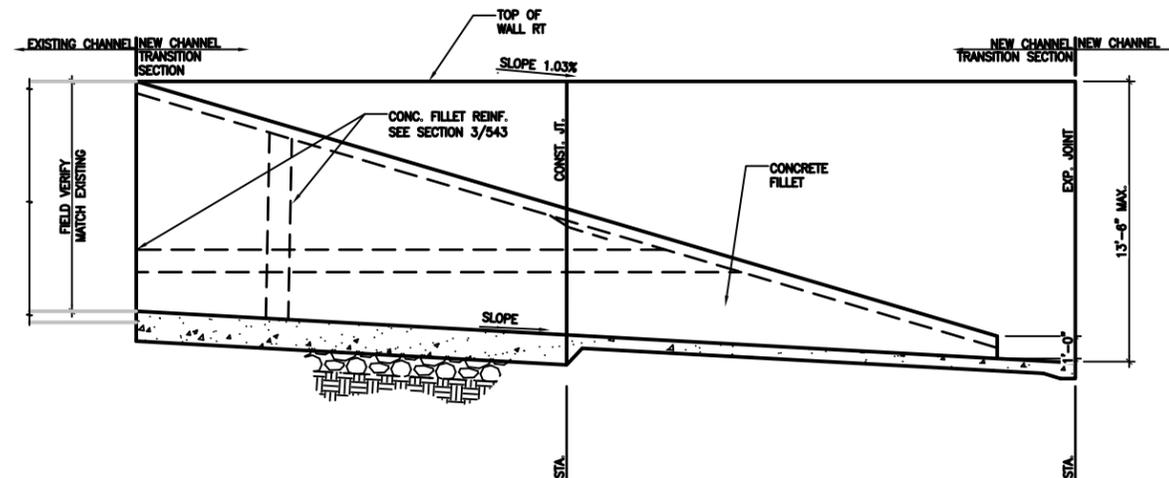
AECOM AECOM TECHNICAL SERVICES, INC.
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CITY OF SAN ANTONIO
 TRANSPORTATION & CAPITAL IMPROVEMENTS
 SEALING CHANNEL IMPROVEMENTS PHASE 2

TRANSITION DETAILS FOR NEW CONSTRUCTION

100% SUBMITTAL PROJECT NO.: 60312565 DATE: MARCH 4, 2015
 DESIGNED BY: J.H. DRAWN BY: J.H. CHECKED BY: S.L.F. SHEET NO. 543



1 TRANSITION SECTION FOR NEW CONSTRUCTION

SCALE: NTS

CHANNEL STRUCTURAL NOTES

DESIGN CRITERIA
CODES:

- 2012 INTERNATIONAL BUILDING CODE W/ CURRENT STATE OF TEXAS AMENDMENTS AND REVISIONS.
- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION
- REINFORCED CONCRETE:

WATER RETAINING STRUCTURES: ACI 350-01 "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES"

ALL OTHER STRUCTURES: ACI 318 " BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"

- STRUCTURAL STEEL: AISC MANUAL OF STEEL CONSTRUCTION 13TH EDITION

GEOTECHNICAL REPORT

GEOTECHNICAL REPORT WAS PERFORMED BY RABA KISTNER CONSULTANTS INC. (REPORT #ASA 14-003-00) AND SHALL BE USED AS CONTRACTOR'S REFERENCE ONLY. RETAINING WALL DESIGN BASED ON THE FOLLOWING PARAMETERS PROVIDED BY RABA KISTNER CONSULTANTS INC.

Back Fill Type	Estimated Total Unit Weight (pcf)	Active Condition		At Rest Condition	
		Earth Pressure Coefficient, k_a	Equivalent Fluid Density (pcf)	Earth Pressure Coefficient, k_r	Equivalent Fluid Density (pcf)
Washed Gravel	135	0.29	40	0.45	60
Crushed Limestone	145	0.24	35	0.38	55
Clean Sand	120	0.33	40	0.5	60
Pit Run Clayey Gravels or Sands	135	0.32	45	0.48	65
Clays	120	0.59	70	0.74	90

REINFORCING STEEL

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

- CONCRETE CAST AGAINST EARTH 3"
- FORMED SURFACES IN CONTACT WITH SOIL, WATER, OR EXPOSED TO WEATHER 2"

THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

CONCRETE

ALL CONCRETE SHALL CLASS S WITH 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS UNLESS PER COSA ITEM 300 OR NOTED OTHERWISE.

ALL EXPOSED CORNERS SHALL HAVE A MINIMUM CHAMFER OF $\frac{3}{8}$ " UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATION OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWINGS.

CHANNEL WALLS TO BE SPECIAL SURFACE FINISHED PER COSA CONSTRUCTION SPECIFICATION 311.4-B.2.b.

STRUCTURAL STEEL

DESIGN, FABRICATION, ERECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS AND THE DESIGN DRAWINGS.

W-SHAPED SECTIONS: ASTM A992, GR. 50.

DATE: 03/04/15

SHAWN J. FRANKE
82639
LICENSED PROFESSIONAL ENGINEER

Shawn Franke

NO	DATE	DESCRIPTION REVISIONS	DWG	CHK

AECOM TECHNICAL SERVICES, INC.
112 E. PECAN ST., SUITE 400
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TYPE REG. NO. F-3080

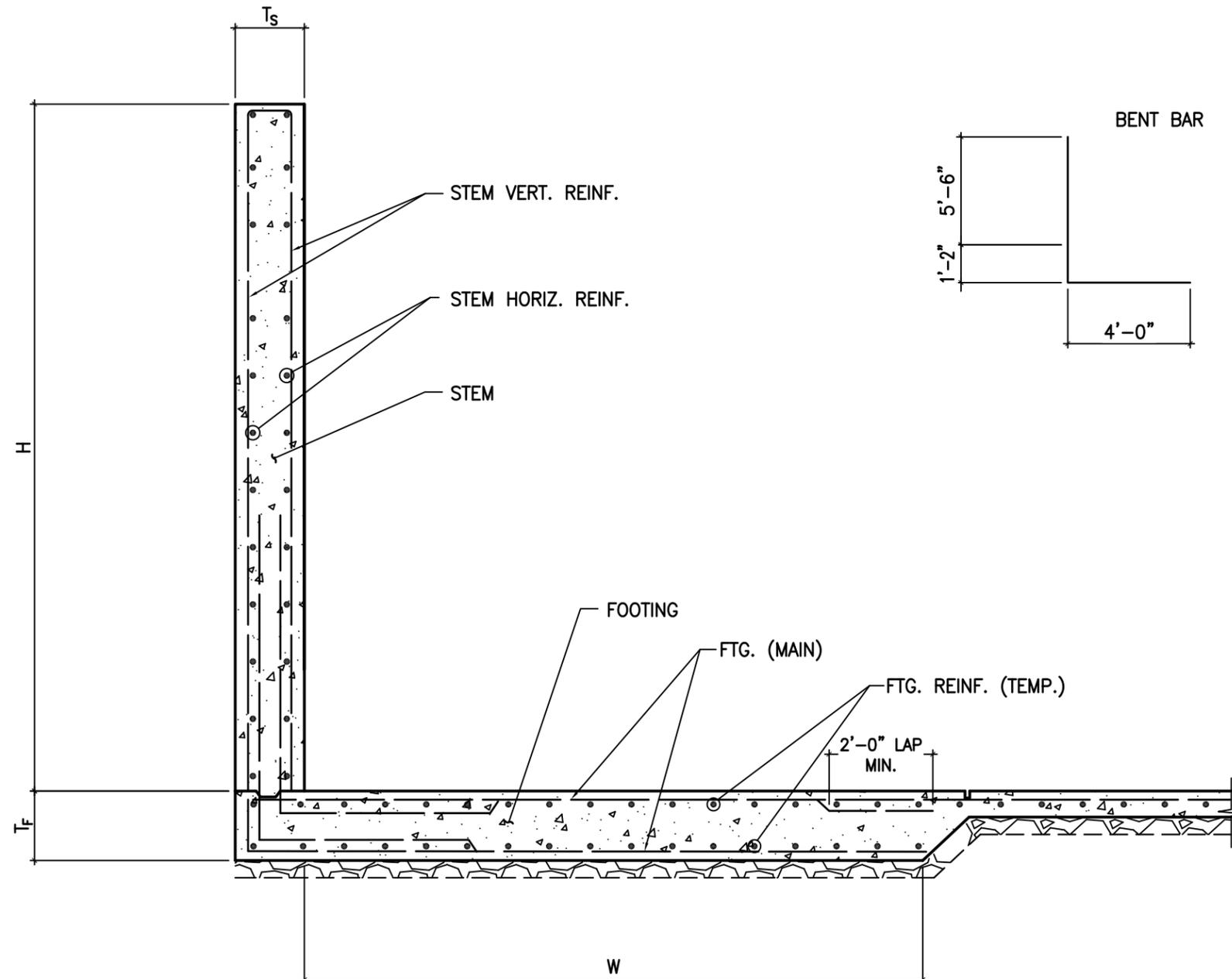
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CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEALING CHANNEL IMPROVEMENTS PHASE 2
STRUCTURAL NOTES

100% SUBMITTAL	PROJECT NO.: 60312565	DATE: MARCH 4, 2015
DRAWN BY: J.H.	DESIGN BY: J.H.	CHECK BY: S.L.F. SHEET NO. 544

RETAINING WALL SCHEDULE

WALL TYPE	HEIGHT (H)	STEM (T _S) THICKNESS	FOOTING (T _F) THICKNESS	FOOTING WIDTH (W)	VERT. STEM REINFORCING	HORIZ. STEM REINFORCING	FTG. REINF. MAIN	FTG. REINF. (TEMPERATURE)	RT WALL STATIONS	LT WALL STATIONS	LINEAR FT. OF WALL
A	12'-0" MAX	1'-2"	1'-6"	16'-0"	#8 @ 8"o.c. E.F.	#6 @ 12"o.c. E.F.	#8 @ 12"o.c. T & B	#6 @ 12"o.c. T & B	30+00 TO 34+00	29+00 TO 33+00 40+00 TO 44+00	1200 L. F.
B	13'-0" MAX	1'-4"	1'-6"	16'-0"	#8 @ 8"o.c. E.F.	#6 @ 12"o.c. E.F.	#8 @ 12"o.c. T & B	#6 @ 12"o.c. T & B	18+00 TO 20+00 27+00 TO 30+00 34+00 TO 42+00	19+00 TO 29+00 33+00 TO 38+00	3000 L.F.
C	14'-0" MAX	1'-4"	1'-6"	18'-0"	#8 @ 6"o.c. E.F.	#6 @ 12"o.c. E.F.	#8 @ 12"o.c. T & B	#6 @ 12"o.c. T & B	22+00 TO 27+00 42+00 TO 44+00	38+00 TO 40+00	900 L.F.



DATE: 03/04/15

Shawn Franke

NO.	DATE	DESCRIPTION REVISIONS	DWG	CHK

AECOM

AECOM TECHNICAL SERVICES, INC.
112 E. PECAN ST., SUITE 400
SAN ANTONIO, TEXAS 78204
WWW.AECOM.COM
TYPE REG. NO. F-3090

LUNDY & FRANK
ENGINEERING

549 HELMER ROAD
SAN ANTONIO, TEXAS 78232
PH: (210) 979-7900 FX: (210) 979-7800
TX FIRM REG. 73388

CITY OF SAN ANTONIO
TRANSPORTATION & CAPITAL IMPROVEMENTS
SEELING CHANNEL IMPROVEMENTS PHASE 2
TYPICAL CHANNEL WALL
STRUCTURAL DETAILS

100% SUBMITTAL	PROMOT NO.: 60312595	DATE: MARCH 4, 2015
DRAWN BY: J.H.	CHECKED BY: J.H.	DESIGNED BY: S.J.F.



City of San Antonio
TRANSPORTATION AND CAPITAL IMPROVEMENTS

RECEIPT OF ADDENDUM NUMBER(S) 2 IS HEREBY ACKNOWLEDGED FOR PLANS AND SPECIFICATIONS FOR CONSTRUCTION OF THE Seeling Channel Phase II Drainage #40-00427 FOR WHICH BIDS WILL BE OPENED ON May 19th, 2015 at 2:00pm THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID PACKAGE.

Company Name: _____

Address: _____

City/State/Zip Code: _____

Date: _____

Signature

Print Name/Title