

DEVELOPER-AWARDED-PROJECT CHANGE ORDER

PROJECT NAME:	M-584			CHANGE ORDER No: 4
CONTRACT:	SANITARY SEWER IMPROVEMENTS			
CFA #	22-0044		CITY PARTICIPATION: YES	
CITY PROJECT #	103521			
CITY SECRETARY CONTRACT #	57832			
FID #	30114-0200431-103521-E07685			
FILE #	X-27161			

INSPECTOR: ARIEL DUARTE Phone No: 817-223-2266
 PROJECT MANAGER: KIRAN KONDURU Phone No: 817-392-2237

	CONTRACT UNIT										CONTRACT DAYS	
	WATER		SEWER			DRAINAGE		PAVING		STREET LIGHTS		
	Developer Cost	City Cost	HPC Developer Cost	Northstar Developer Cost	City Cost	Developer Cost	City Cost	Developer Cost	City Cost	Developer Cost		City Cost
ORIGINAL CONTRACT	\$0.00		\$3,018,184.61	\$867,848.62	\$5,756,729.07	\$0.00		\$0.00		\$0.00		400
CHANGE ORDER NO 1			(\$30,552.24)	(\$8,784.99)	(\$58,273.77)							0
CHANGE ORDER NO 2			\$7,930.89	\$2,280.44	\$15,126.97							0
CHANGE ORDER NO 3			\$5,180.11	\$0.00	\$0.00							0
CONTRACT TO DATE	\$0.00	\$0.00	\$3,000,743.37	\$861,344.07	\$5,713,582.27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	400
AMOUNT OF PROP. CHANGE ORDER			(\$40,080.39)	(\$11,524.71)	(\$76,447.25)							
REVISED CONTRACT AMOUNT	\$0.00	\$0.00	\$2,960,662.98	\$849,819.36	\$5,637,135.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	400
TOTAL REVISED CONTRACT AMOUNT PER UNIT	\$0.00		\$9,447,617.36			\$0.00		\$0.00		\$0.00		
REVISED COST SHARE	HPC DEV. COST		\$2,960,662.98	Northstar Dev. Cost		\$849,819.36	City Cost:					\$5,637,135.02
TOTAL REVISED CONTRACT	\$9,447,617.36											

You are directed to make the following changes in the contract documents:

PAY ITEM #	CITY BID ITEM #	QUANTITY	UNIT	ITEM DESCRIPTION	UNIT PRICE	TOTAL	HPC	Northstar	City
							31.30%	9%	59.70%
Unit I: Sanitary Sewer Segment 1									
12	3305.1007	122	LF	42" Casing by Open Cut	\$570.00	\$69,540.00	\$21,766.02	\$6,258.60	\$41,515.38
13	3305.1202	-122	LF	42" Casing/Tunnel Liner Plate By Other Than Oper	\$1,000.00	-\$122,000.00	-\$38,186.00	-\$10,980.00	-\$72,834.00
19	3231.0211	-190	LF	Barbed Wire Fence, Metal Posts	\$10.00	-\$1,900.00	-\$594.70	-\$171.00	-\$1,134.30
21	3231.0306	-2	EA	16' Gate, Steel	\$2,800.00	-\$5,600.00	-\$1,752.80	-\$504.00	-\$3,343.20
26	3304.0002	-1	LS	Cathodic Protection	\$70,000.00	-\$70,000.00	-\$21,910.00	-\$6,300.00	-\$41,790.00
47	3305.3010	-122	LF	24" FRP SN72 Sewer Carrier Pipe By Other Than	\$404.50	-\$49,349.00	-\$15,446.24	-\$4,441.41	-\$29,461.35
48	3301.3010	122	LF	24" FRP SN72 Sewer Carrier Pipe By Open Cut	\$407.50	\$49,715.00	\$15,560.80	\$4,474.35	\$29,679.86
49*	9999.0014	6	EA	Cores	\$672.75	\$4,036.50	\$1,263.42	\$363.29	\$2,409.79
50*	9999.0015	6	EA	Epoxy Coating Touch-Up	\$339.25	\$2,035.50	\$637.11	\$183.20	\$1,215.19
51*	9999.0016	6	EA	Additional Forms + Rebar	\$132.25	\$793.50	\$248.37	\$71.42	\$473.72
52*	9999.0017	6	CY	Additional Concrete Material	\$205.56	\$1,233.38	\$386.05	\$111.00	\$736.33
53*	9999.0018	12	HRs	Additional Concrete Crew Labor	\$266.06	\$3,192.77	\$999.34	\$287.35	\$1,906.08
TOTAL						-\$118,302.35	-\$37,028.64	-\$10,647.21	-\$70,626.50
Unit II: Sanitary Sewer - Segment 2									
14	3231.0211	-135	LF	Barbed Wire Fence, Metal Posts	\$10.00	-\$1,350.00	-\$422.55	-\$121.50	-\$805.95
15	3231.0306	-3	EA	16' Gate, Steel	\$2,800.00	-\$8,400.00	-\$2,629.20	-\$756.00	-\$5,014.80
TOTAL						-\$9,750.00	-\$3,051.75	-\$877.50	-\$5,820.75
GRAND TOTAL						-\$128,052.35	-\$40,080.39	-\$11,524.71	-\$76,447.25

Asterisk (*) indicates New Pay Item

REASONS FOR CHANGE ORDER

All items Quantity reconciliation of contract and additional line items for revised Manhole with Wager 2050 unit installation

RECOMMENDED: _____

APPROVED: _____

APPROVED: _____

APPROVED: _____

By: _____

By: _____

By: _____

By: _____

Name: LJA ENGINEERING, INC

Name: HPC Wellington Nance
Development Corporation

Name: 170 Northstar Ranch
Developer, Inc

Name: EXCEL

Title: Project Engineer Title: _____ Title: _____

APPROVAL RECOMMENDED:

CFW - Sponsoring Department

By: _____

Name: _____

Title: _____

APPROVED:

CFW - Assistant City Manager

By: _____

Name: _____

Title: _____

APPROVED AS TO FORM AND LEGALITY:

CFW - Assistant City Attorney

By: _____

Name: _____

Title: _____

RECOMMENDED:

*CFW - *Contract Compliance Manager*

By: _____

Name: _____

Title: _____

*** Contract Compliance Manager (Project Manager):**

By signing I acknowledge that I am the person responsible for the monitoring and administration of this contract, include ensuring all performance and reporting requirements.

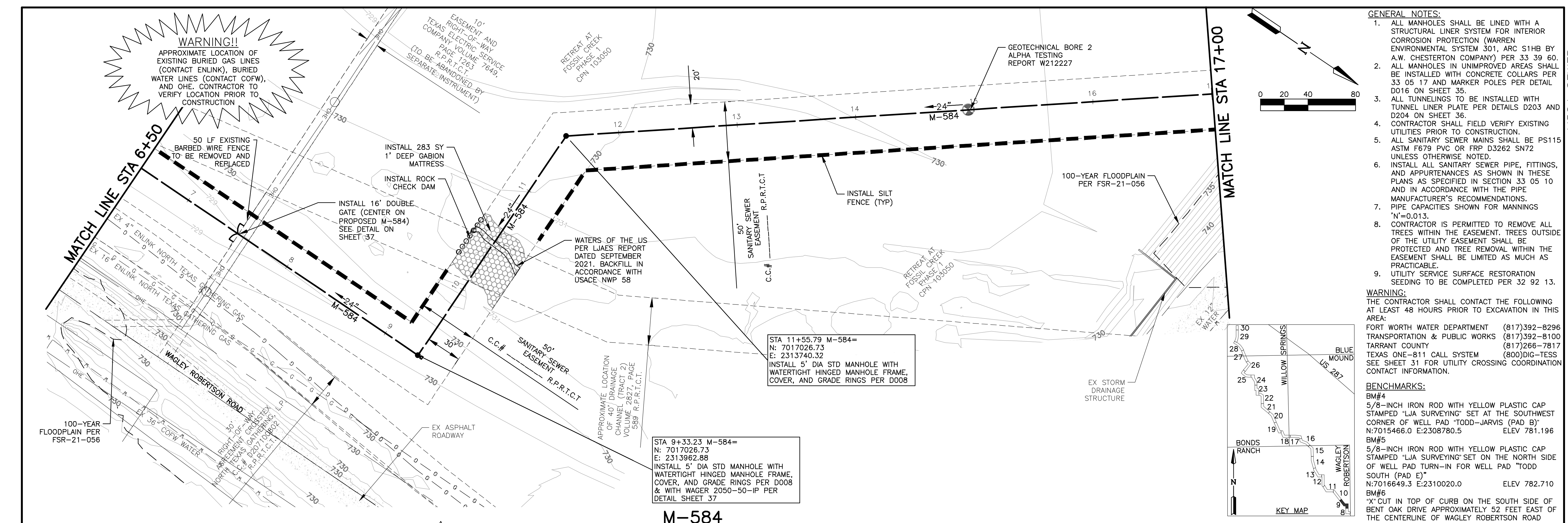
- There are **NO** City Funds associated with this Contract
- There are City Funds associated with this Contract

M&C Number: M&C 22-0361

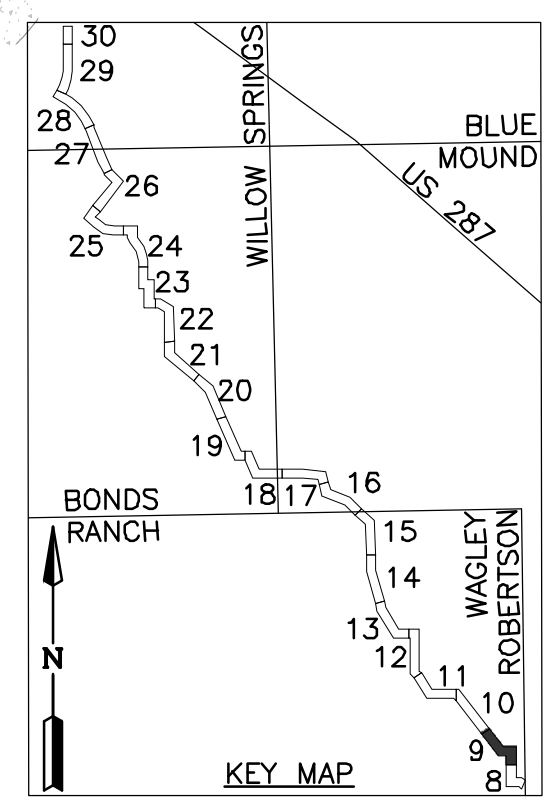
M&C Date Approved: 5/10/2022

Date: Wed, 16 Aug 2023 1:53pm User: Name: Emerigon
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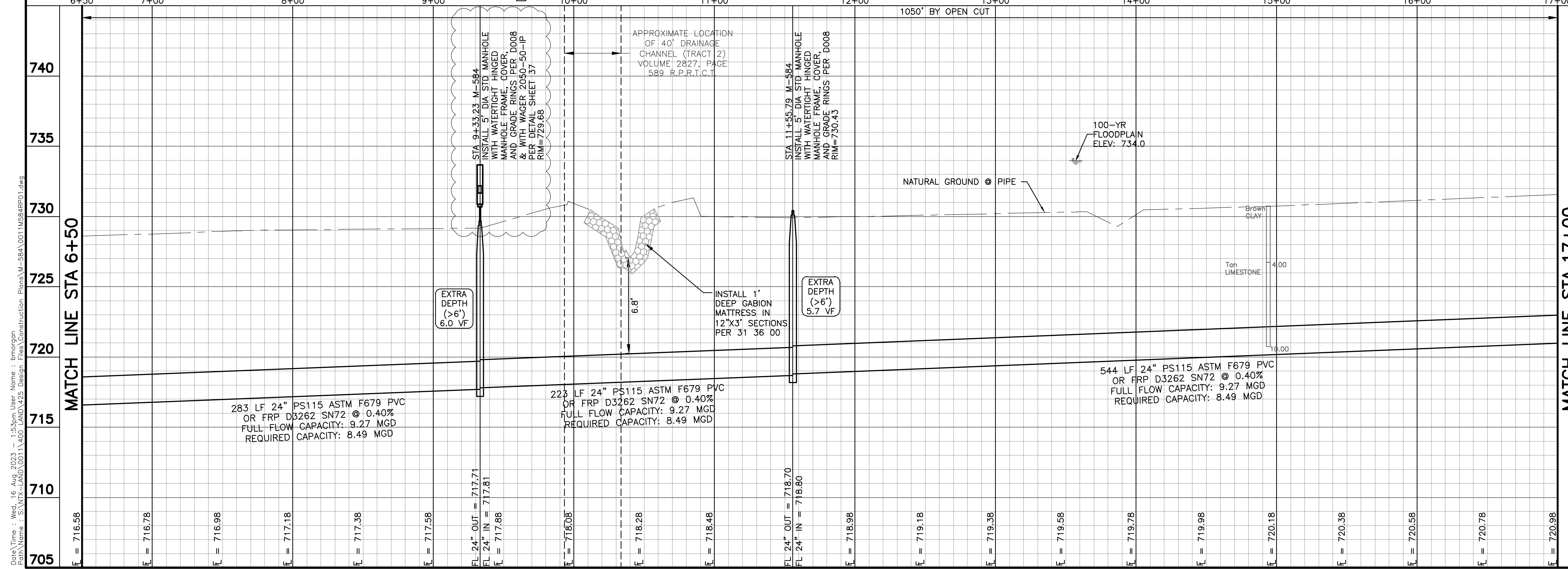
WARNING!!
 APPROXIMATE LOCATION OF EXISTING BURIED GAS LINES (CONTACT ENLINK), BURIED WATER LINES (CONTACT COFW), AND OHE. CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION



- GENERAL NOTES:**
- ALL MANHOLES SHALL BE LINED WITH A STRUCTURAL LINER SYSTEM FOR INTERIOR CORROSION PROTECTION (WARREN ENVIRONMENTAL SYSTEM 301, ARC S1HB BY A.W. CHESTERTON COMPANY) PER 33 39 60. ALL MANHOLES IN UNIMPROVED AREAS SHALL BE INSTALLED WITH CONCRETE COLLARS PER 33 05 17 AND MARKER POLES PER DETAIL D016 ON SHEET 35.
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 - CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - ALL SANITARY SEWER MAINS SHALL BE PS115 ASTM F679 PVC OR FRP D3262 SN72 UNLESS OTHERWISE NOTED.
 - INSTALL ALL SANITARY SEWER PIPE, FITTINGS, AND APPURTENANCES AS SHOWN IN THESE PLANS AS SPECIFIED IN SECTION 33 05 10 AND IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS.
 - PIPE CAPACITIES SHOWN FOR MANNINGS 'N'=0.013.
 - CONTRACTOR IS PERMITTED TO REMOVE ALL TREES WITHIN THE EASEMENT. TREES OUTSIDE OF THE UTILITY EASEMENT SHALL BE PROTECTED AND TREE REMOVAL WITHIN THE EASEMENT SHALL BE LIMITED AS MUCH AS PRACTICABLE.
 - UTILITY SERVICE SURFACE RESTORATION SEEDING TO BE COMPLETED PER 32 92 13.
- WARNING:**
 THE CONTRACTOR SHALL CONTACT THE FOLLOWING AT LEAST 48 HOURS PRIOR TO EXCAVATION IN THIS AREA:
 FORT WORTH WATER DEPARTMENT (817)392-8296
 TRANSPORTATION & PUBLIC WORKS (817)392-8100
 TARRANT COUNTY (817)266-7817
 TEXAS ONE-811 CALL SYSTEM (800)DIG-TESS
 SEE SHEET 31 FOR UTILITY CROSSING COORDINATION CONTACT INFORMATION.
- BENCHMARKS:**
 BM#4
 5/8"-INCH IRON ROD WITH YELLOW PLASTIC CAP STAMPED "LJA SURVEYING" SET AT THE SOUTHWEST CORNER OF WELL PAD "TODD-JARVIS (PAD B)" N:7015466.0 E:2308780.5 ELEV 781.196
 BM#5
 5/8"-INCH IRON ROD WITH YELLOW PLASTIC CAP STAMPED "LJA SURVEYING" SET ON THE NORTH SIDE OF WELL PAD TURN-IN FOR WELL PAD "TODD SOUTH (PAD E)" N:7016649.3 E:2310020.0 ELEV 782.710
 BM#6
 "X" CUT IN TOP OF CURB ON THE SOUTH SIDE OF BENT OAK DRIVE APPROXIMATELY 52 FEET EAST OF THE CENTERLINE OF WAGLEY ROBERTSON ROAD N:7016710.3 E:2314126.7 ELEV 731.202



M-584



740			
735			
730			
725			
720			
715			
710			
705			

8/10/23	REVISED MANHOLE RIM	BY
DATE	REVISION	BY

SANITARY SEWER PLAN AND PROFILE 6+50 TO 17+00

M-584 Sanitary Sewer Interceptor Improvements

CITY OF FORT WORTH
 TARRANT COUNTY, TEXAS

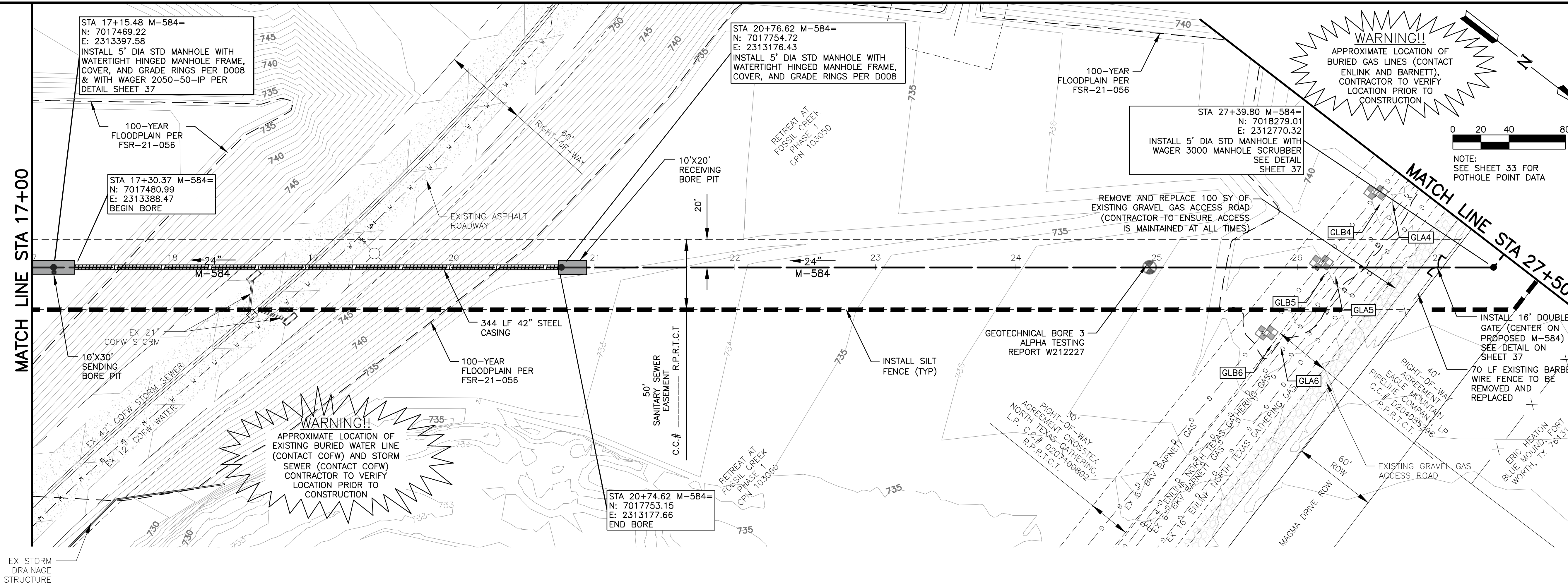
LJA Engineering, Inc.
 6060 North Central Expressway Phone 469.621.0710
 Suite 400
 Dallas, Texas 75206 FRN - F-1386

DESIGN: PRESTON LJA PROJECT ID NT360-0011M
 DRAWN: PRESTON
 DATE: FEBRUARY 2022
 SCALE
 HORZ: 1" = 40'
 VERT: 1" = 4'

BRIGHTON W. YAU
 141836
 LICENSED PROFESSIONAL ENGINEER

SHEET
9-R4
 OF 37 SHEETS

03/20/2023

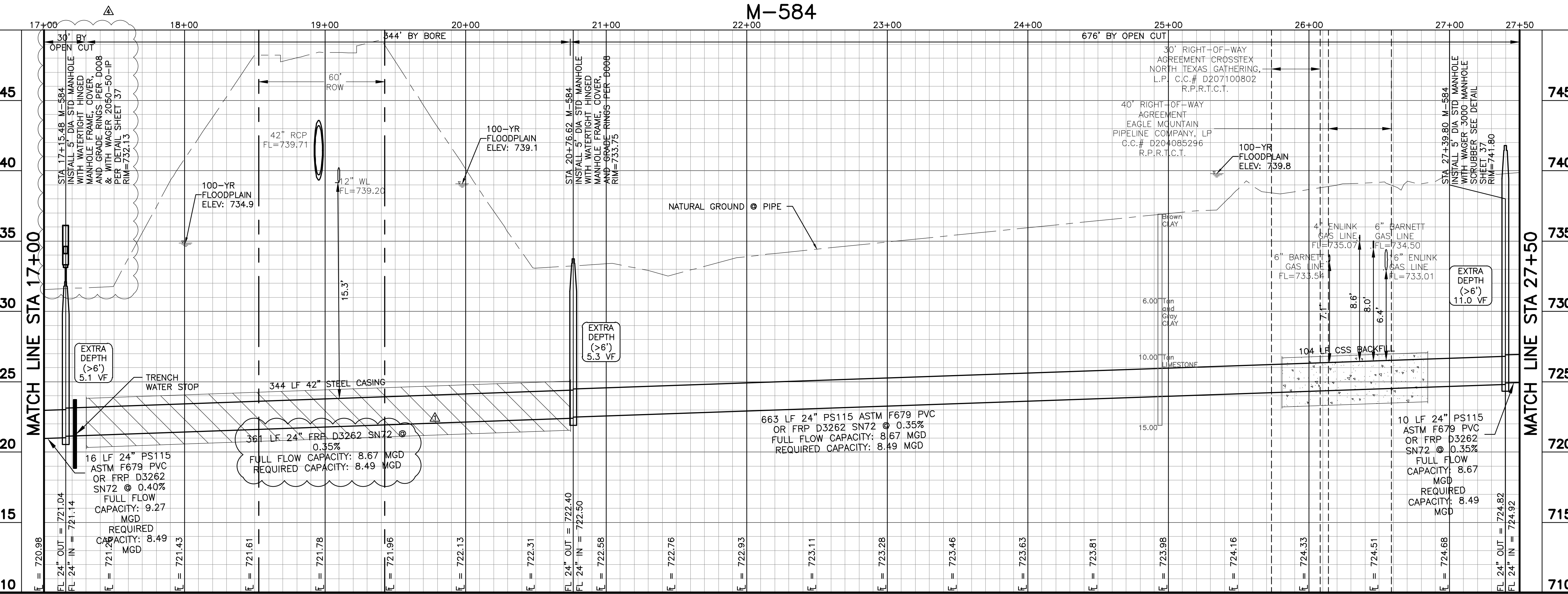


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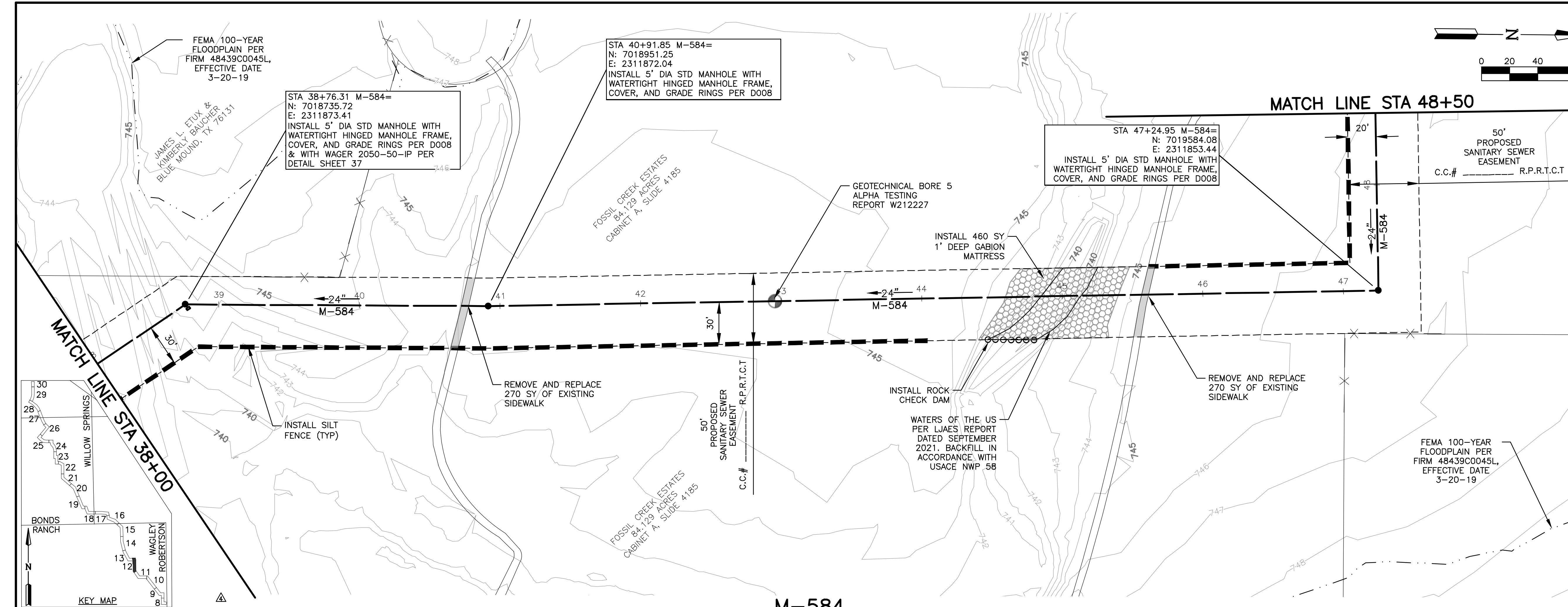
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TARRANT COUNTY (817)266-7817
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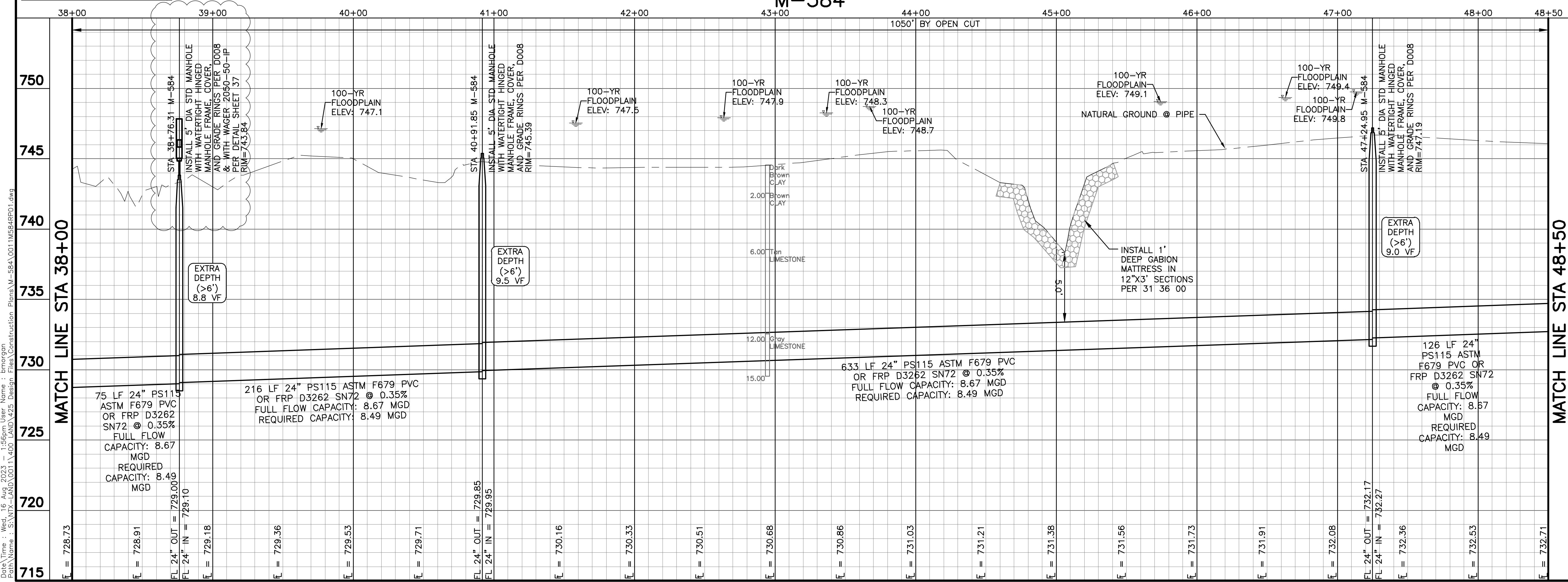


745			
740	8/10/23	REVISED MANHOLE RIM	BWY
735	8/23/22	REPLACED DIP WITH FRP	LMP
730		REVISION	BY
725	SANITARY SEWER PLAN AND PROFILE 17+00 TO 27+50		
720	M-584 Sanitary Sewer Interceptor Improvements		
715	CITY OF FORT WORTH TARRANT COUNTY, TEXAS		
710	<p>LJA Engineering, Inc.</p> <p>6060 North Central Expressway Phone 469.621.0710 Suite 400 Dallas, Texas 75206 FRN - F-1386</p>		
	DESIGN: PRESTON	LJA PROJECT ID NT360-0011M	
	DRAWN: PRESTON	DATE: FEBRUARY 2022	
	SCALE		
	HORIZ: 1" = 40'		
	VERT: 1" = 4'		
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	10-R1,R4		
	08/23/2022		
	OF 37 SHEETS		

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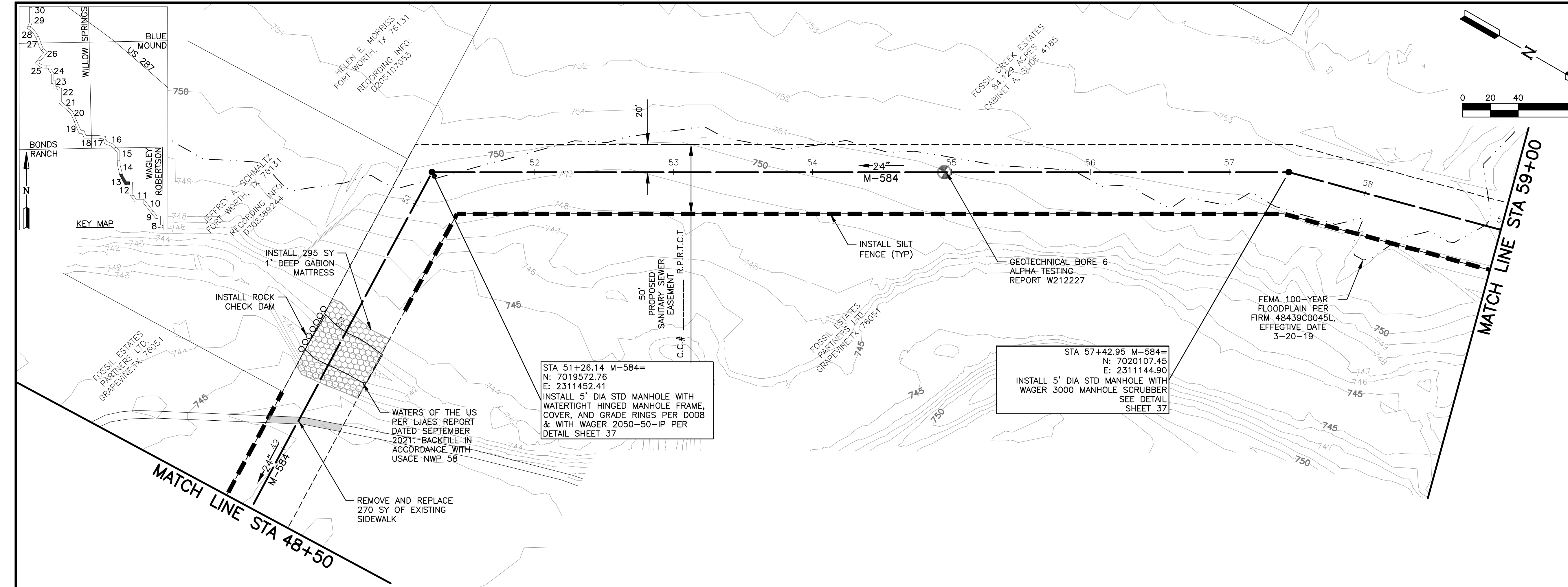
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BM#6
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N:7016710.3 E:2314126.7 ELEV 731.202



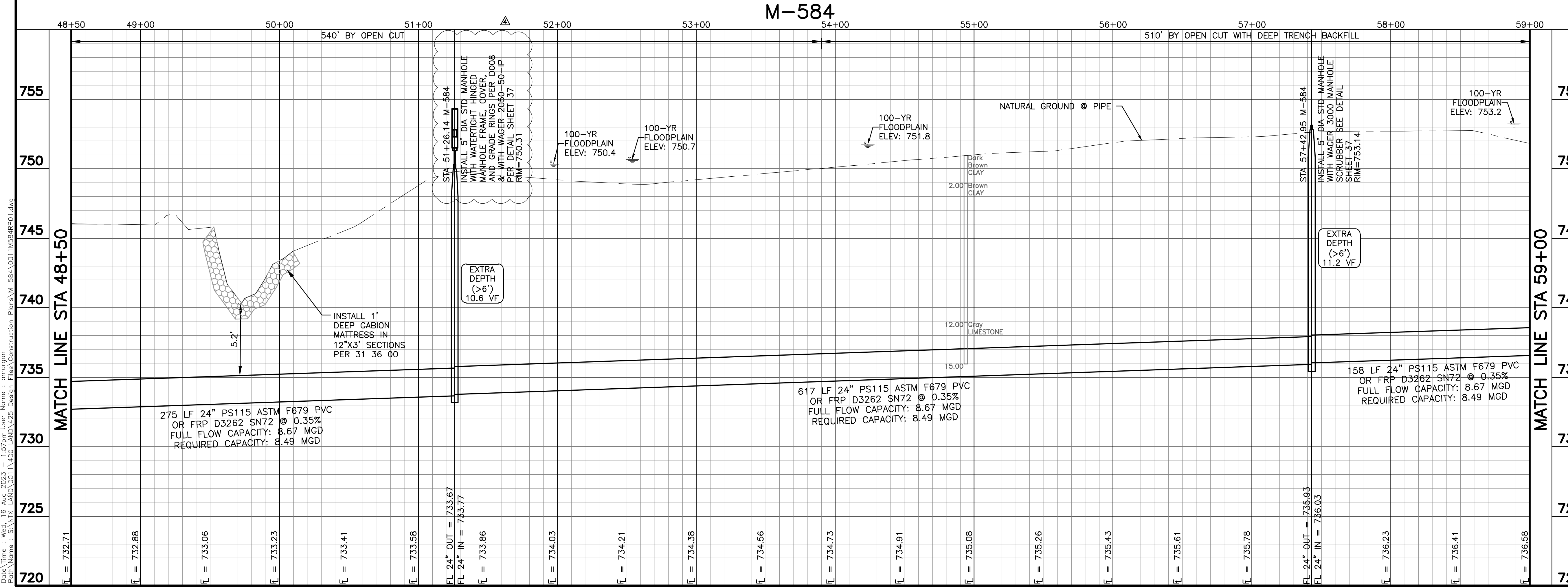
750			
745	8/10/23	REVISED MANHOLE RIM	BY
745	DATE	REVISION	BY
745	SANITARY SEWER PLAN AND PROFILE 38+00 TO 48+50		
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725	DRAWN: PRESTON	NT360-0011M	
720			
720	DATE: FEBRUARY 2022		
720	SCALE		
720	HORIZ: 1" = 40'		
720	VERT: 1" = 4'		
720	SHEET		
720	12-R4		
715	OF 37 SHEETS		
715	2/11/2022		

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M584 SEWER



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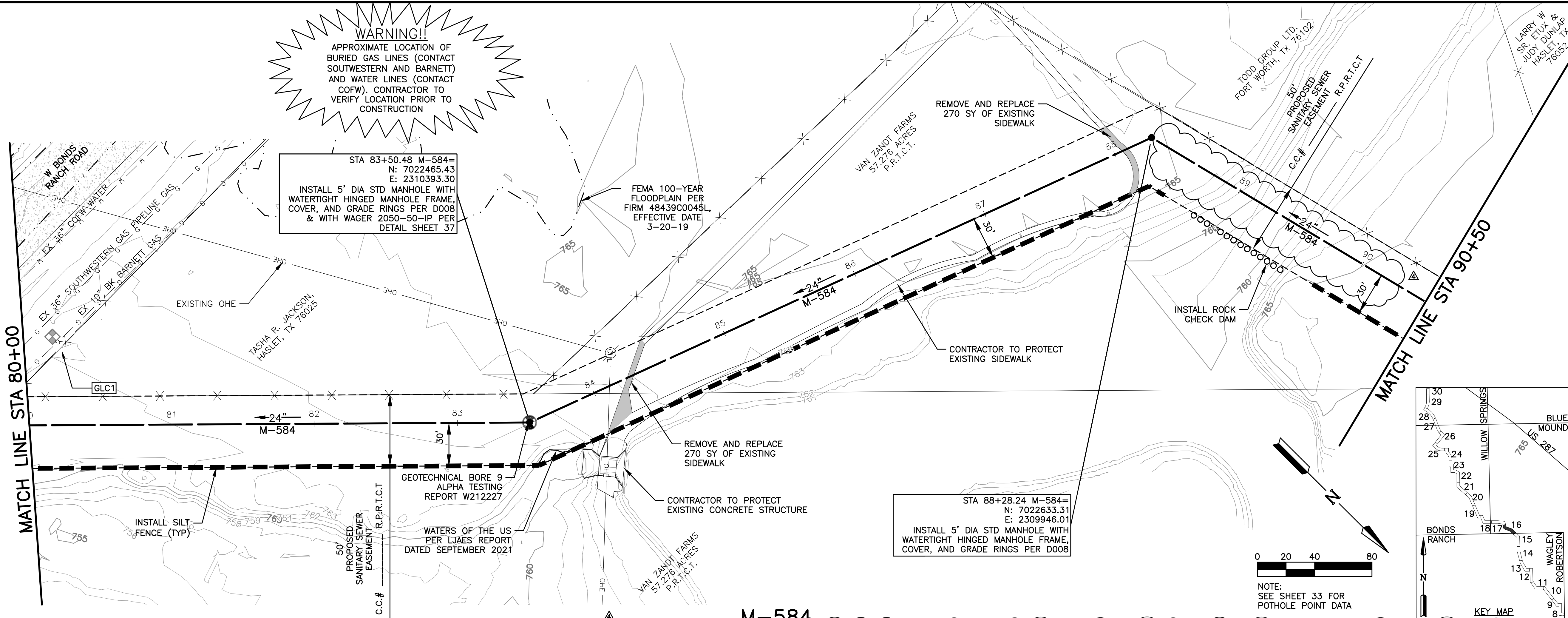
8/10/23	REVISED MANHOLE RIM	BY
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SANITARY SEWER PLAN AND PROFILE 48+50 TO 59+00		
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SHEET		
13-R4		
OF 37 SHEETS		

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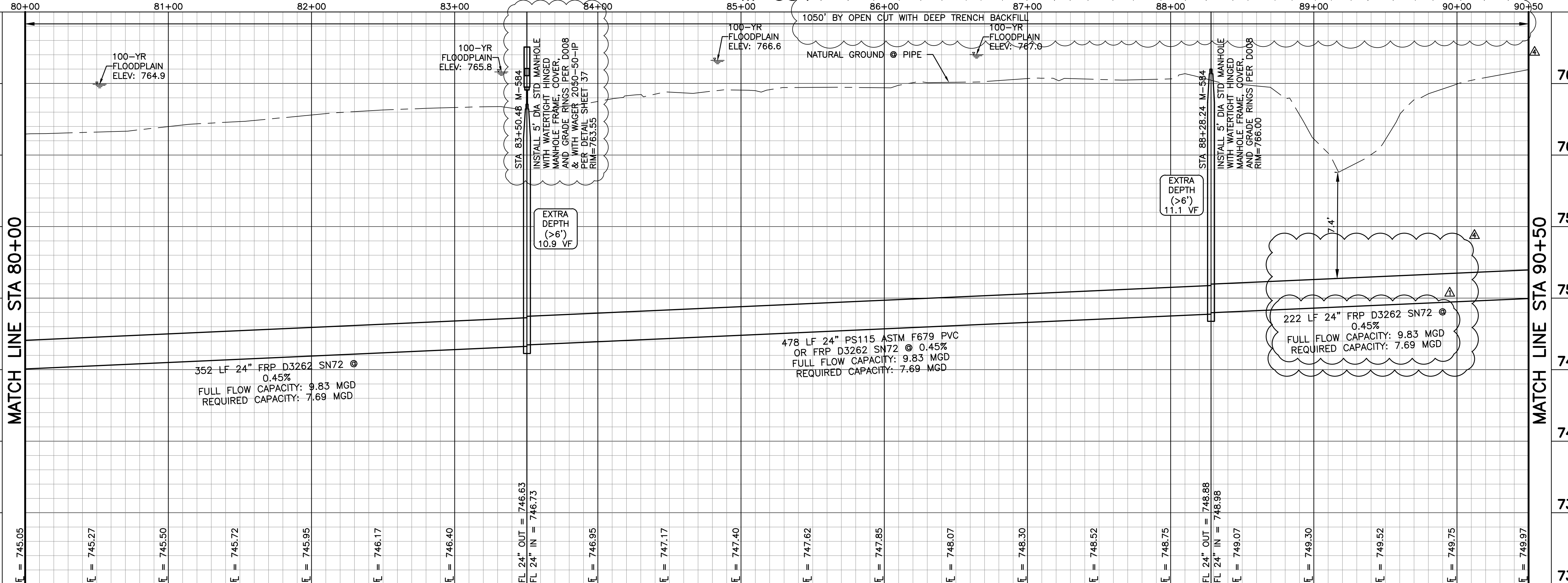
M584 SEWER

2/11/2022

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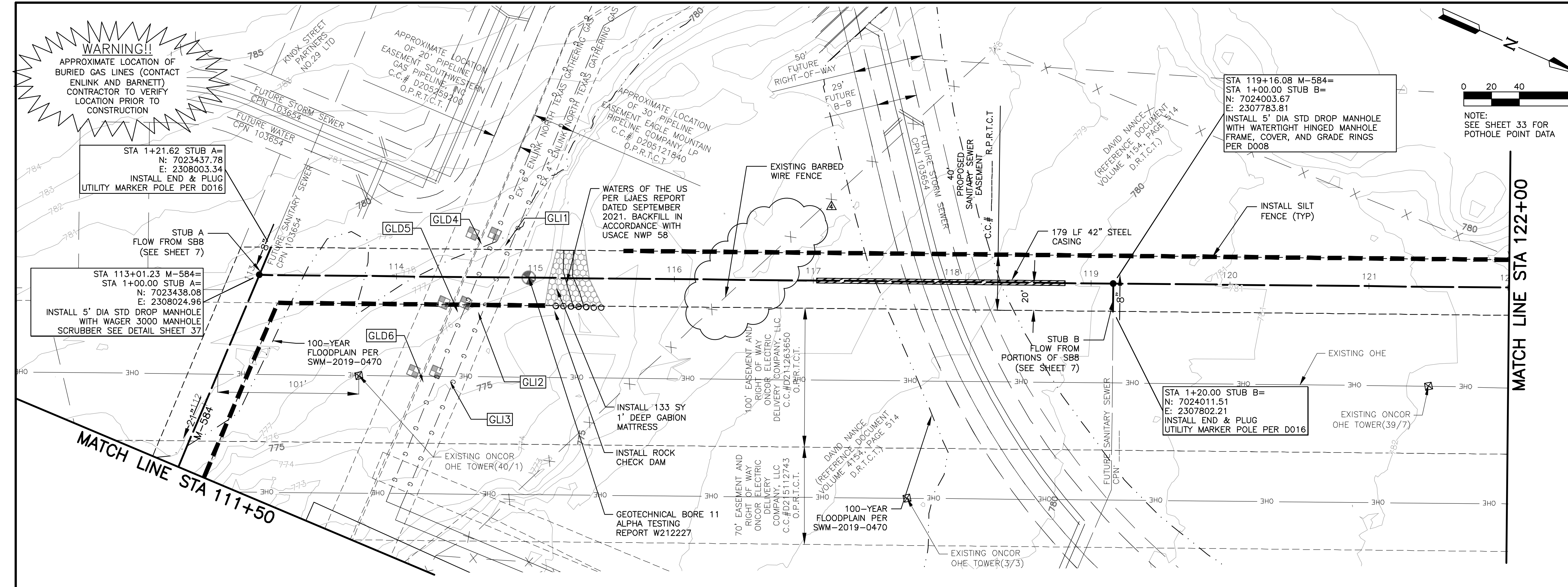


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 FORT WORTH WATER DEPARTMENT (817)392-8296
 TRANSPORTATION & PUBLIC WORKS (817)392-8100
 TARRANT COUNTY (817)266-7817
 TEXAS ONE-811 CALL SYSTEM (800)DIG-TESS
 SEE SHEET 31 FOR UTILITY CROSSING COORDINATION CONTACT INFORMATION.
- BENCHMARKS:**
 BM#4
 5/8-INCH IRON ROD WITH YELLOW PLASTIC CAP STAMPED "LJA SURVEYING" SET AT THE SOUTHWEST CORNER OF WELL PAD "TODD-JARVIS (PAD B)" N:7015466.0 E:2308780.5 ELEV 781.196
 BM#5
 5/8-INCH IRON ROD WITH YELLOW PLASTIC CAP STAMPED "LJA SURVEYING" SET ON THE NORTH SIDE OF WELL PAD TURN-IN FOR WELL PAD "TODD SOUTH (PAD E)" N:7016649.3 E:2310020.0 ELEV 782.710
 BM#6
 "X" CUT IN TOP OF CURB ON THE SOUTH SIDE OF BENT OAK DRIVE APPROXIMATELY 52 FEET EAST OF THE CENTERLINE OF WAGLEY ROBERTSON ROAD N:7016710.3 E:2314126.7 ELEV 731.202

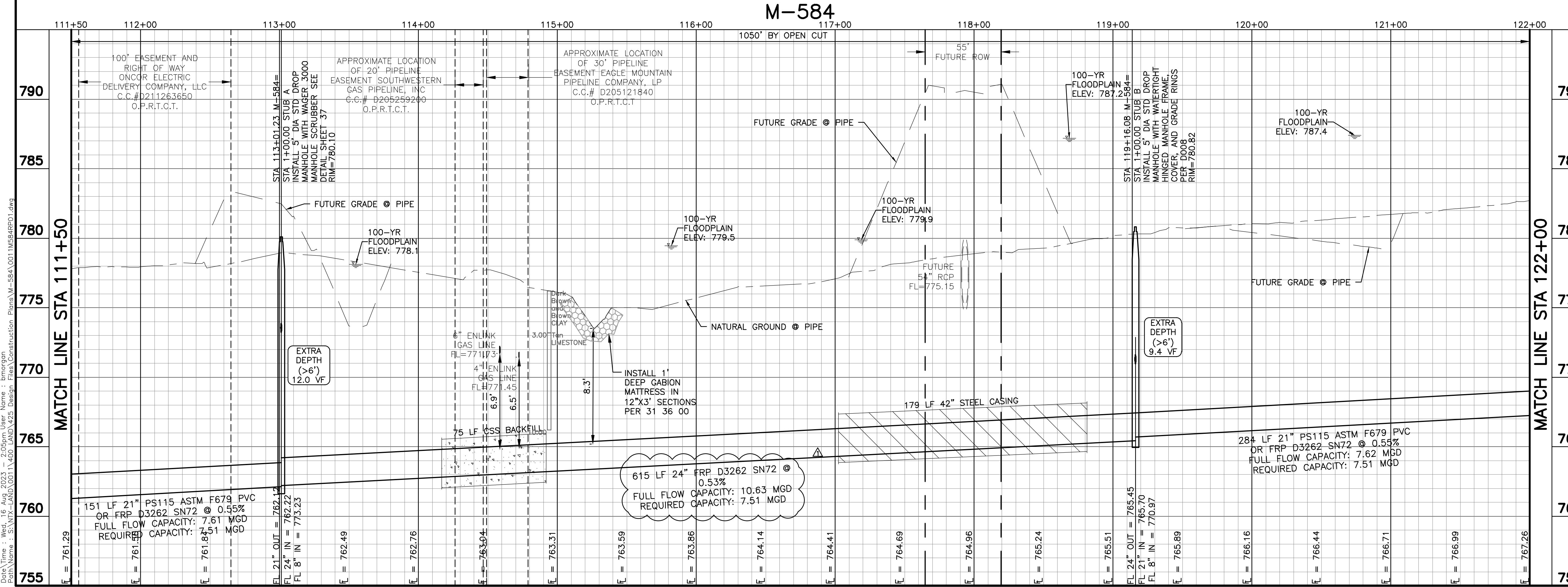


765			
8/10/23	REMOVED BORE & STEEL CASING		CJC
8/23/22	REVISED MANHOLE RIM		LMP
DATE	REVISION		BY
760	SANITARY SEWER PLAN AND PROFILE 80+00 TO 90+50		
755	M-584 Sanitary Sewer Interceptor Improvements		
750	CITY OF FORT WORTH TARRANT COUNTY, TEXAS		
745	LJA Engineering, Inc. 6060 North Central Expressway Suite 400 Dallas, Texas 75206 Phone 469.621.0710 FRN - F-1386		
740	DESIGN: PRESTON	LJA PROJECT ID NT360-0011M	
	DRAWN: PRESTON	DATE: FEBRUARY 2022	
735			SCALE
			HORIZ: 1" = 40'
			VERT: 1" = 4'
			SHEET
			16-R1,R4
730	03/01/2023		OF 37 SHEETS

M584 SEWER



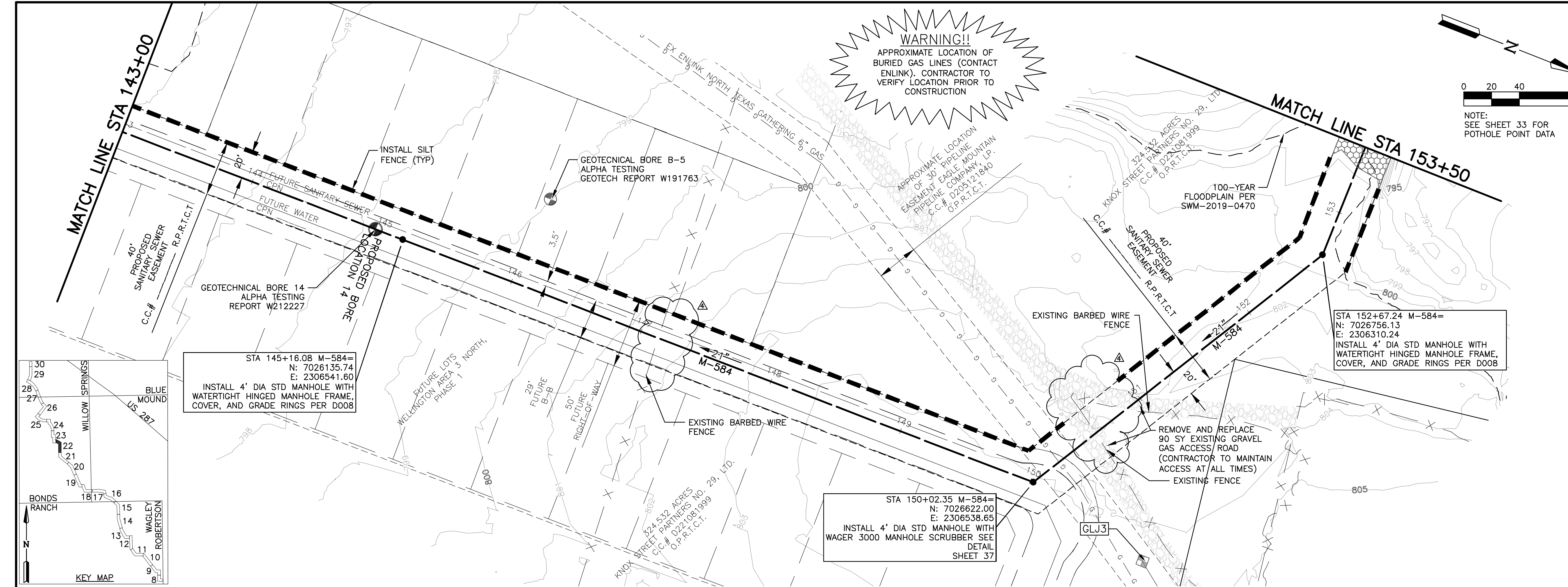
- GENERAL NOTES:**
- ALL MANHOLES SHALL BE LINED WITH A STRUCTURAL LINER SYSTEM FOR INTERIOR CORROSION PROTECTION (WARREN ENVIRONMENTAL SYSTEM 301, ARC S1HB BY A.W. CHESTERTON COMPANY) PER 33 39 60. ALL MANHOLES IN UNIMPROVED AREAS SHALL BE INSTALLED WITH CONCRETE COLLARS PER 33 05 17 AND MARKER POLES PER DETAIL D016 ON SHEET 35.
 - ALL TUNNELINGS TO BE INSTALLED WITH TUNNEL LINER PLATE PER DETAILS D203 AND D204 ON SHEET 36.
 - CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - ALL SANITARY SEWER MAINS SHALL BE PS115 ASTM F679 PVC OR FRP D3262 SN72 UNLESS OTHERWISE NOTED.
 - INSTALL ALL SANITARY SEWER PIPE, FITTINGS, AND APPURTENANCES AS SHOWN IN THESE PLANS AS SPECIFIED IN SECTION 33 05 10 AND IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS.
 - PIPE CAPACITIES SHOWN FOR MANNINGS 'N'=0.013.
 - CONTRACTOR IS PERMITTED TO REMOVE ALL TREES WITHIN THE EASEMENT. TREES OUTSIDE OF THE UTILITY EASEMENT SHALL BE PROTECTED AND TREE REMOVAL WITHIN THE EASEMENT SHALL BE LIMITED AS MUCH AS PRACTICABLE.
 - UTILITY SERVICE SURFACE RESTORATION SEEDING TO BE COMPLETED PER 32 92 13.
- WARNING:**
THE CONTRACTOR SHALL CONTACT THE FOLLOWING AT LEAST 48 HOURS PRIOR TO EXCAVATION IN THIS AREA:
FORT WORTH WATER DEPARTMENT (817)392-8296
TRANSPORTATION & PUBLIC WORKS (817)392-8100
TARRANT COUNTY (817)266-7817
TEXAS ONE-811 CALL SYSTEM (800)DIG-TESS
SEE SHEET 31 FOR UTILITY CROSSING COORDINATION CONTACT INFORMATION.
- BENCHMARKS:**
BM#4
5/8-INCH IRON ROD WITH YELLOW PLASTIC CAP STAMPED "LJA SURVEYING" SET AT THE SOUTHWEST CORNER OF WELL PAD "TODD-JARVIS (PAD B)"
N:7015466.0 E:2308780.5 ELEV 781.196
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N:7016649.3 E:2310020.0 ELEV 782.710
BM#6
"X" CUT IN TOP OF CURB ON THE SOUTH SIDE OF BENT OAK DRIVE APPROXIMATELY 52 FEET EAST OF THE CENTERLINE OF WAGLEY ROBERTSON ROAD
N:7016710.3 E:2314126.7 ELEV 731.202



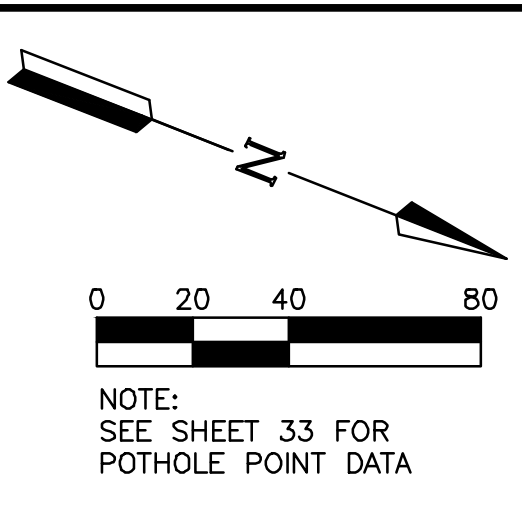
08/10/2023	REMOVED FENCE AND GATE CALLOUT	CJC
08/23/2022	REPLACED DIP WITH FRP	LMP
DATE	REVISION	BY
SANITARY SEWER PLAN AND PROFILE 111+50 TO 122+00		
M-584 Sanitary Sewer Interceptor Improvements		
CITY OF FORT WORTH TARRANT COUNTY, TEXAS		
LJA Engineering, Inc. 6060 North Central Expressway Phone 469.621.0710 Suite 400 Dallas, Texas 75206 FRN - F-1386		
DESIGN: PRESTON	LJA PROJECT ID NT360-0011M	
DRAWN: PRESTON	DATE: FEBRUARY 2022	
		SCALE
		HORIZ: 1" = 40'
		VERT: 1" = 4'
		SHEET 19-R1,R4
08/23/2022		OF 37 SHEETS

Date: Wed, 16 Aug 2023 2:05pm User: Name: Emerigon
 Path: Name: S:\M\584\0011\111+50-122+00\111+50-122+00.dwg Design: Lisa Vonderheide
 Plot: M-584 (0011MS84R01).dwg

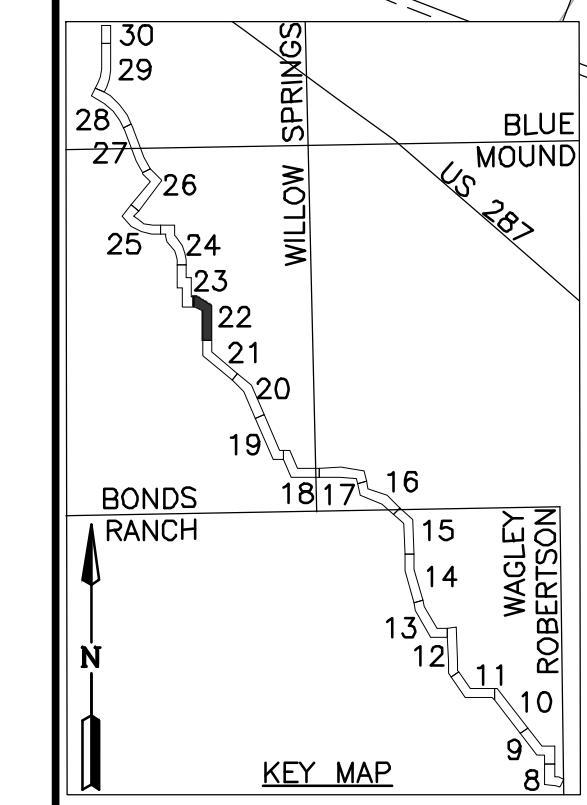
M584 SEWER



WARNING!!
 APPROXIMATE LOCATION OF BURIED GAS LINES (CONTACT ENLINK). CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION



- GENERAL NOTES:**
- ALL MANHOLES SHALL BE LINED WITH A STRUCTURAL LINER SYSTEM FOR INTERIOR CORROSION PROTECTION (WARREN ENVIRONMENTAL SYSTEM 301, ARC S1HB BY A.W. CHESTERTON COMPANY) PER 33 39 60. ALL MANHOLES IN UNIMPROVED AREAS SHALL BE INSTALLED WITH CONCRETE COLLARS PER 33 05 17 AND MARKER POLES PER DETAIL D016 ON SHEET 35.
 - ALL TUNNELINGS TO BE INSTALLED WITH TUNNEL LINER PLATE PER DETAILS D203 AND D204 ON SHEET 36.
 - CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITIES PRIOR TO CONSTRUCTION.
 - ALL SANITARY SEWER MAINS SHALL BE PS115 ASTM F679 PVC OR FRP D3262 SN72 UNLESS OTHERWISE NOTED.
 - INSTALL ALL SANITARY SEWER PIPE, FITTINGS, AND APPURTENANCES AS SHOWN IN THESE PLANS AS SPECIFIED IN SECTION 33 05 10 AND IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS.
 - PIPE CAPACITIES SHOWN FOR MANNINGS 'N'=0.013.
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 - UTILITY SERVICE SURFACE RESTORATION SEEDING TO BE COMPLETED PER 32 92 13.
- WARNING:**
 THE CONTRACTOR SHALL CONTACT THE FOLLOWING AT LEAST 48 HOURS PRIOR TO EXCAVATION IN THIS AREA:
 FORT WORTH WATER DEPARTMENT (817)392-8296
 TRANSPORTATION & PUBLIC WORKS (817)392-8100
 TARRANT COUNTY (817)266-7817
 TEXAS ONE-811 CALL SYSTEM (800)DIG-TESS
 SEE SHEET 31 FOR UTILITY CROSSING COORDINATION CONTACT INFORMATION.
- BENCHMARKS:**
 BM#4
 5/8-INCH IRON ROD WITH YELLOW PLASTIC CAP STAMPED "LJA SURVEYING" SET AT THE SOUTHWEST CORNER OF WELL PAD "TODD-JARVIS (PAD B)"
 N:7015466.0 E:2308780.5 ELEV 781.196
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 N:7016649.3 E:2310020.0 ELEV 782.710
 BM#6
 "X" CUT IN TOP OF CURB ON THE SOUTH SIDE OF BENT OAK DRIVE APPROXIMATELY 52 FEET EAST OF THE CENTERLINE OF WAGLEY ROBERTSON ROAD
 N:7016710.3 E:2314126.7 ELEV 731.202

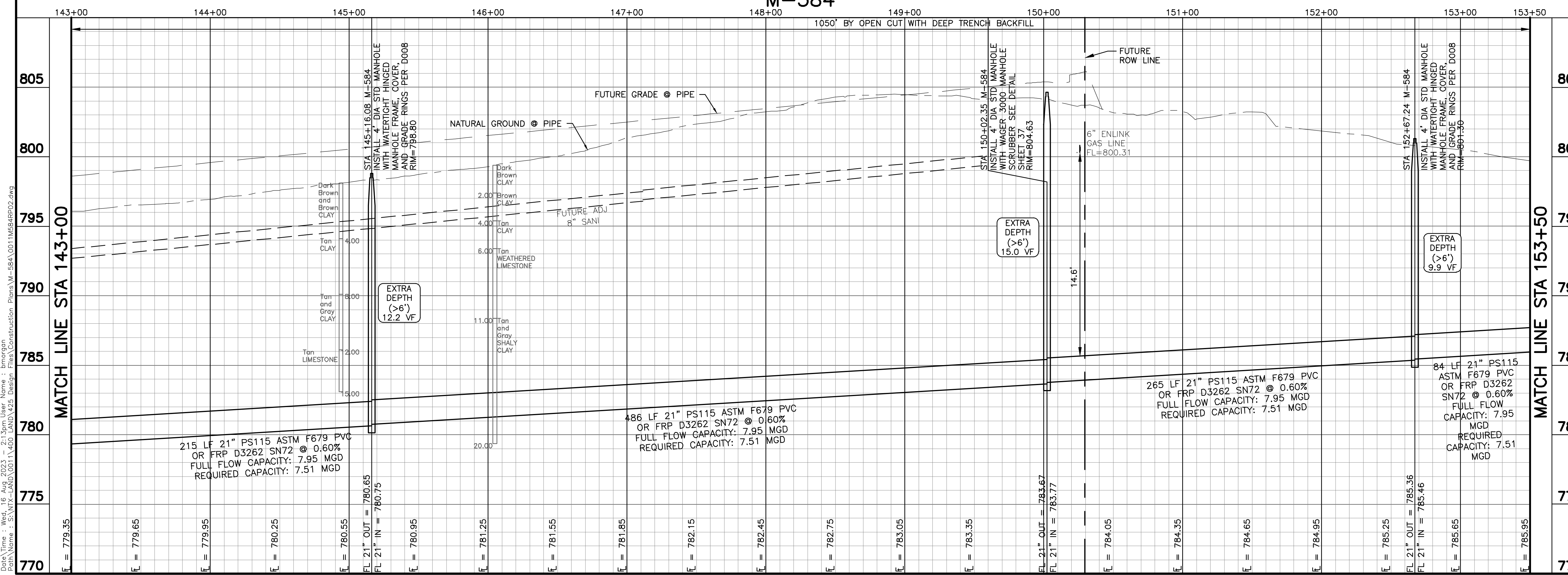


STA 145+16.08 M-584=
 N: 7026135.74
 E: 2306541.60
 INSTALL 4' DIA STD MANHOLE WITH WATERTIGHT HINGED MANHOLE FRAME, COVER, AND GRADE RINGS PER D008

STA 150+02.35 M-584=
 N: 7026622.00
 E: 2306538.65
 INSTALL 4' DIA STD MANHOLE WITH WAGER 3000 MANHOLE SCRUBBER SEE DETAIL SHEET 37

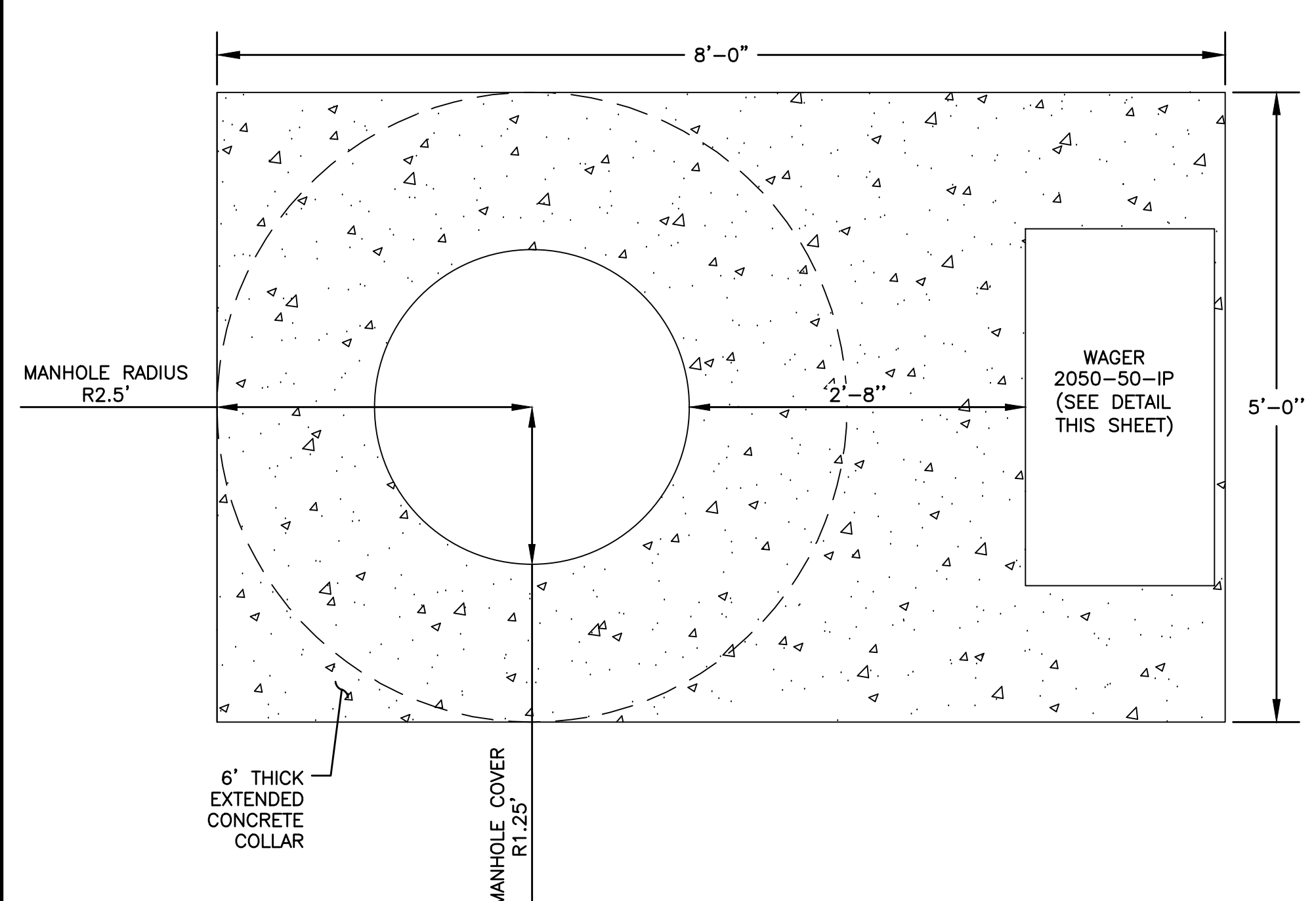
STA 152+67.24 M-584=
 N: 7026756.13
 E: 2306310.24
 INSTALL 4' DIA STD MANHOLE WITH WATERTIGHT HINGED MANHOLE FRAME, COVER, AND GRADE RINGS PER D008

M-584

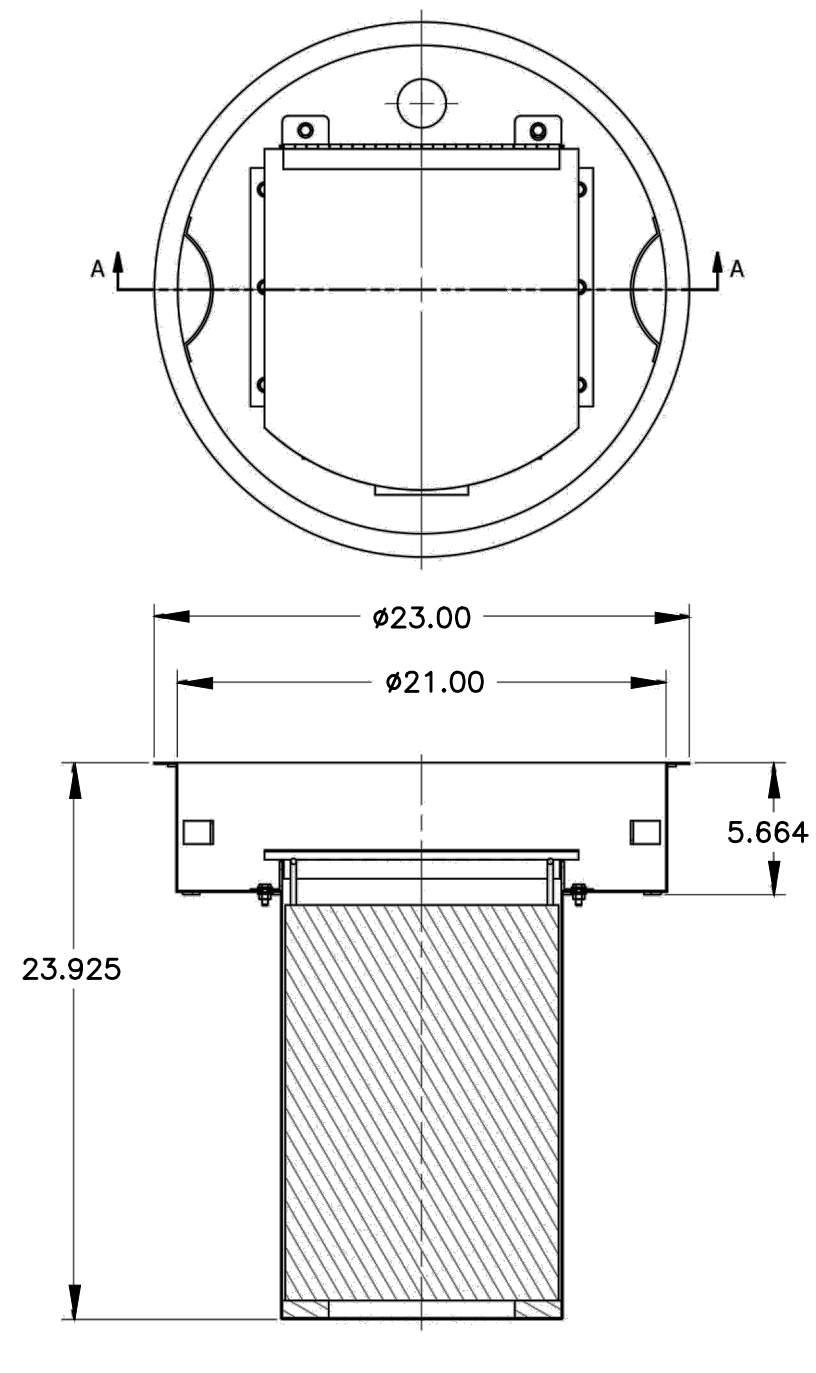


8/10/23	REMOVED FENCE AND GATE CALLOUT	CJC
DATE	REVISION	BY
SANITARY SEWER PLAN AND PROFILE 143+00 TO 153+50		
M-584 Sanitary Sewer Interceptor Improvements		
CITY OF FORT WORTH TARRANT COUNTY, TEXAS		
LJA Engineering, Inc.		
6060 North Central Expressway Suite 400 Dallas, Texas 75206		Phone 469.621.0710 FRN - F-1386
DESIGN: PRESTON	LJA PROJECT ID NT360-0011M	
DRAWN: PRESTON	DATE: FEBRUARY 2022	
SCALE		
HORIZ: 1" = 40'		
VERT: 1" = 4'		
SHEET		
22-R4		
OF 37 SHEETS		

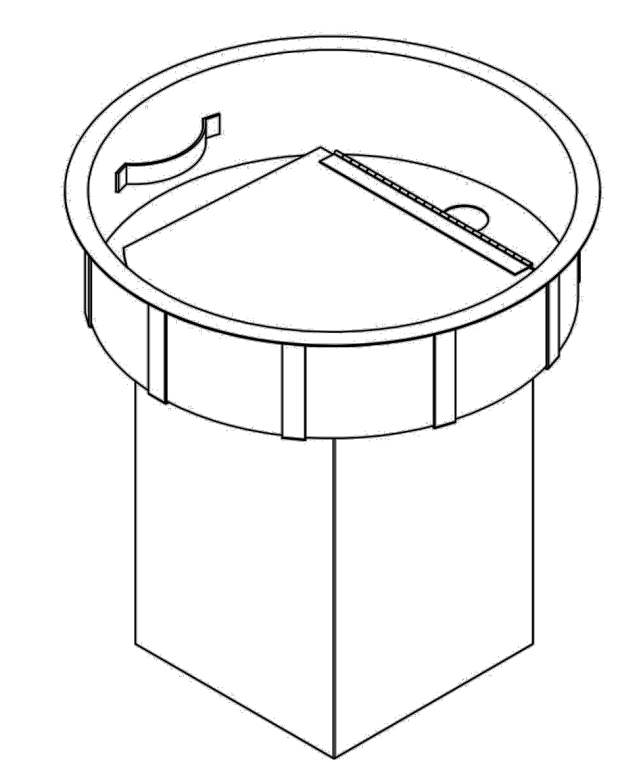
Date: Wed, 16 Aug 2023 21:39:00
 User: emorgon
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 Plot Name: S:\M-584\0111460-LAND\1425-Design-Files\Construction-Plans\M-584\0111460-RR02.dwg



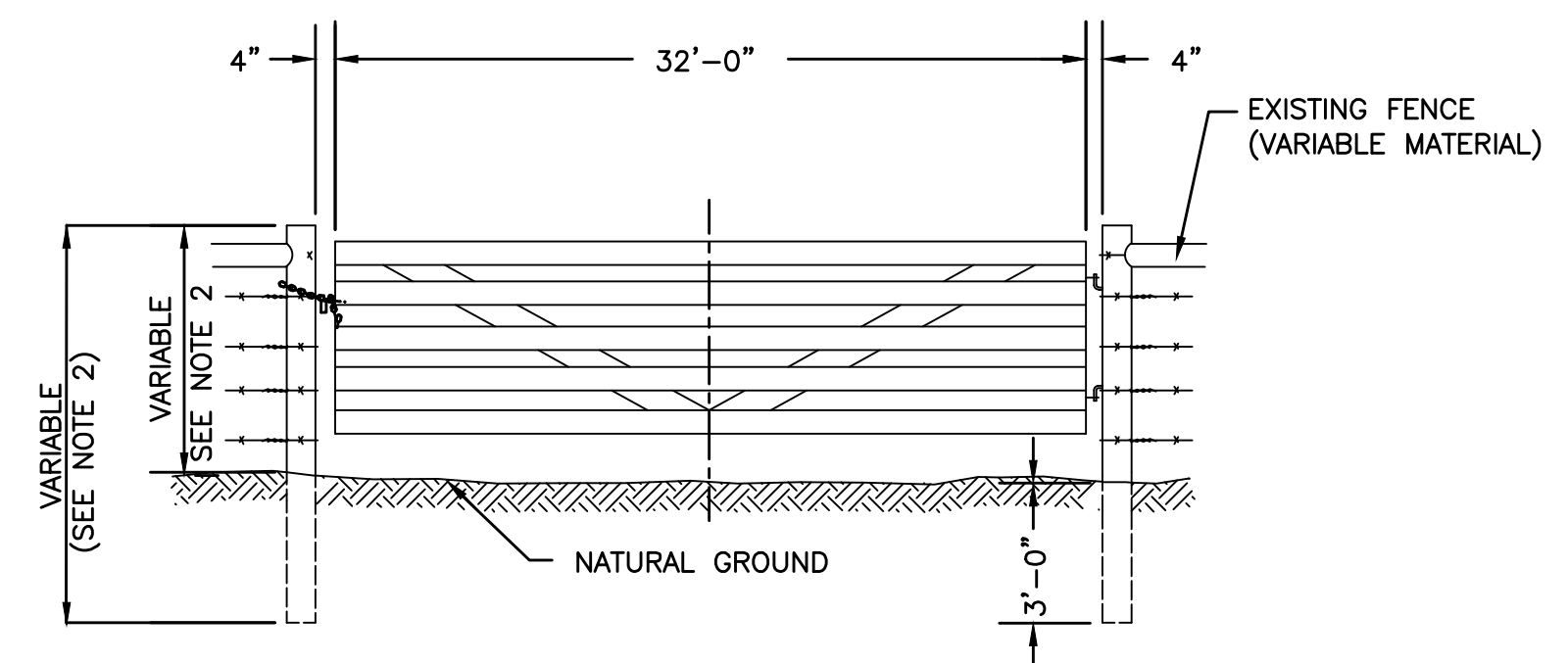
ODOR CONTROL DETAIL (PLAN VIEW)
1" = 1'



SECTION A-A
WAGER 3000 MANHOLE SCRUBBER
NOT TO SCALE



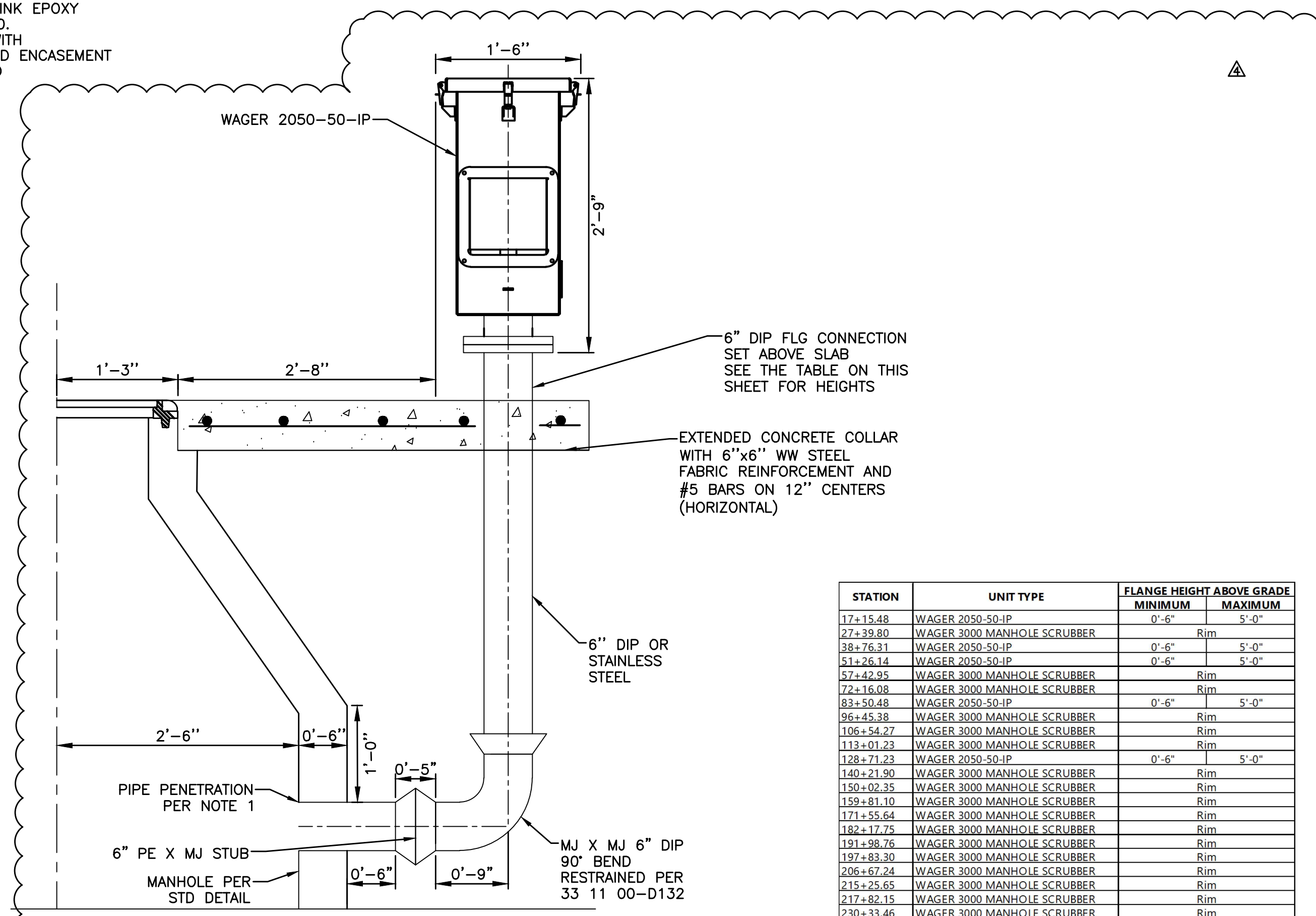
- NOTES:
- UNIT TO BE INSTALLED PER MANUFACTURERS' SPECIFICATIONS & RECOMMENDATIONS.
 - ODOR CONTROL SHALL BE INSTALLED ON MANHOLES INDICATED PER PLANS.



16'-0" DOUBLE GATE
NOT TO SCALE

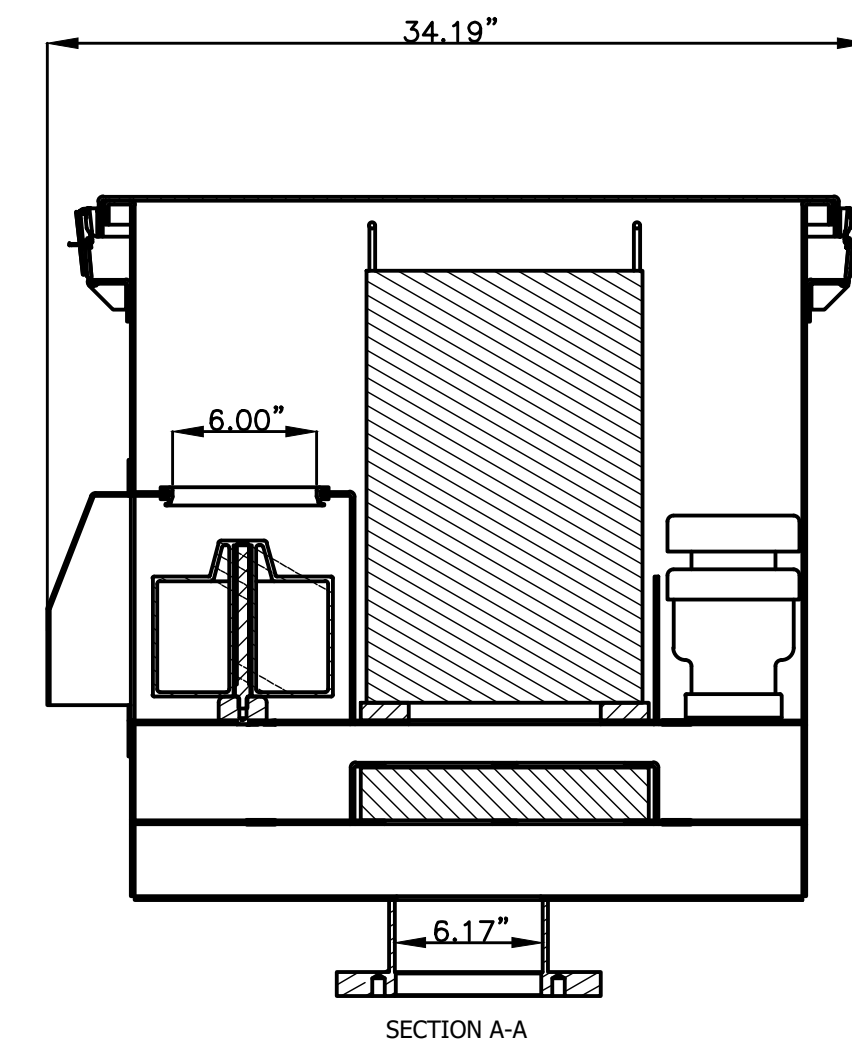
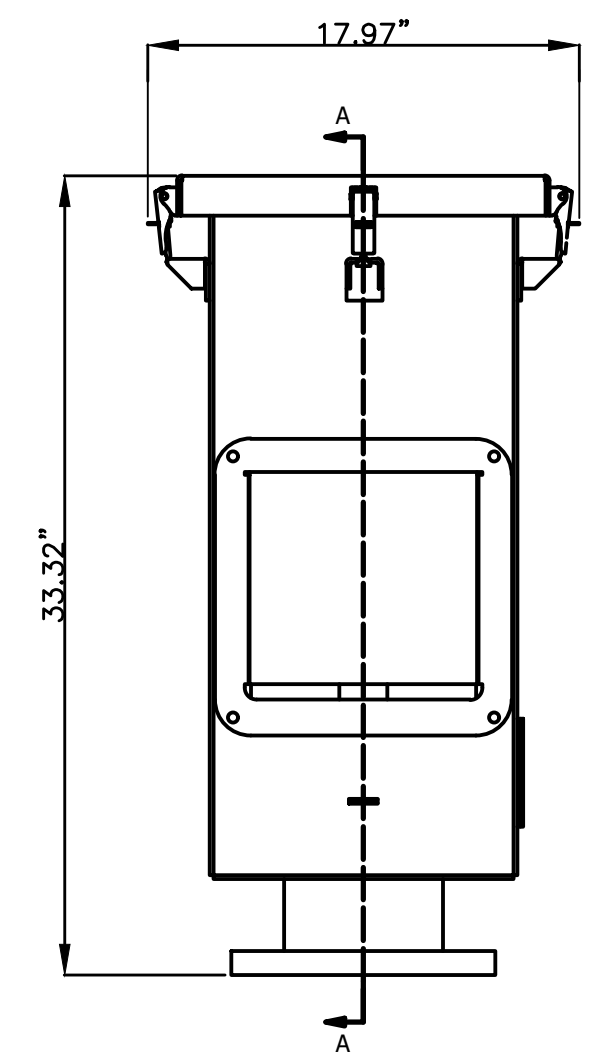
- NOTES:
- AT JUNCTURES, MEMBERS SHALL BE FASTENED TOGETHER WITH 1/4" MACHINE BOLTS, INCLUDING NUTS AND WASHERS.
 - POST HEIGHT DIMENSION SHALL BE THE SAME AS REQUIRED FOR THE ADJACENT FENCE.
 - NOMINAL 2"x4" BOARDS MAY BE SUBSTITUTED FOR THE POLES.

- NOTES:
- PIPE PENETRATION SHALL CONSIST OF BOOT-TYPE CONNECTOR INSTALLED IN A CIRCULAR BLOCK OUT OPENING IN ACCORDANCE WITH ASTM C923 AND SHALL BE SEALED WITH A NON-SHRINK EPOXY GROUT PER SPECIFICATION 33 39 20.
 - ALL VENT PIPING SHALL BE LINED WITH PROTECTOR 401 LINING, COATING AND ENCASUREMENT OF VENT PIPING SHALL CONFORM TO SPECIFICATION 33 11 10.



ODOR CONTROL DETAIL (SECTION VIEW)
1" = 1'

STATION	UNIT TYPE	FLANGE HEIGHT ABOVE GRADE	
		MINIMUM	MAXIMUM
17+15.48	WAGER 2050-50-IP	0'-6"	5'-0"
27+39.80	WAGER 3000 MANHOLE SCRUBBER	Rim	
38+76.31	WAGER 2050-50-IP	0'-6"	5'-0"
51+26.14	WAGER 2050-50-IP	0'-6"	5'-0"
57+42.95	WAGER 3000 MANHOLE SCRUBBER	Rim	
72+16.08	WAGER 3000 MANHOLE SCRUBBER	Rim	
83+50.48	WAGER 2050-50-IP	0'-6"	5'-0"
96+45.38	WAGER 3000 MANHOLE SCRUBBER	Rim	
106+54.27	WAGER 3000 MANHOLE SCRUBBER	Rim	
113+01.23	WAGER 3000 MANHOLE SCRUBBER	Rim	
128+71.23	WAGER 2050-50-IP	0'-6"	5'-0"
140+21.90	WAGER 3000 MANHOLE SCRUBBER	Rim	
150+02.35	WAGER 3000 MANHOLE SCRUBBER	Rim	
159+81.10	WAGER 3000 MANHOLE SCRUBBER	Rim	
171+55.64	WAGER 3000 MANHOLE SCRUBBER	Rim	
182+17.75	WAGER 3000 MANHOLE SCRUBBER	Rim	
191+98.76	WAGER 3000 MANHOLE SCRUBBER	Rim	
197+83.30	WAGER 3000 MANHOLE SCRUBBER	Rim	
206+67.24	WAGER 3000 MANHOLE SCRUBBER	Rim	
215+25.65	WAGER 3000 MANHOLE SCRUBBER	Rim	
217+82.15	WAGER 3000 MANHOLE SCRUBBER	Rim	
230+33.46	WAGER 3000 MANHOLE SCRUBBER	Rim	



WAGER 2050-50-IP
NOT TO SCALE

- NOTES:
- UNIT TO BE INSTALLED PER MANUFACTURERS' SPECIFICATIONS & RECOMMENDATIONS.
 - ODOR CONTROL SHALL BE INSTALLED ON MANHOLES INDICATED PER PLANS AND THE TABLE ON THIS SHEET.

DATE	REVISION	BY
6/10/23	REVISED ODOR CONTROL DETAIL	BWY

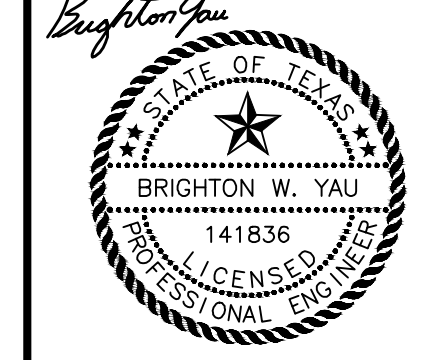
DETAILS

M-584 Sanitary Sewer Interceptor Improvements

CITY OF FORT WORTH
TARRANT COUNTY, TEXAS

LJA Engineering, Inc.
6060 North Central Expressway
Suite 400
Dallas, Texas 75206
Phone 469.621.0710
FRN - F-1386

DESIGN: N/A	LJA PROJECT ID NT360-0011M
DRAWN: N/A	DATE: FEBRUARY 2022
	SCALE
	HORIZ: N/A
	VERT: N/A
	SHEET 37-R4
	OF 37 SHEETS



3/20/23