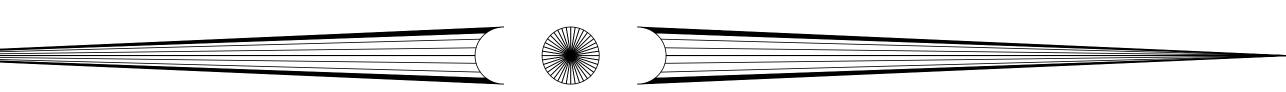
CONSTRUCTION PLANS FOR



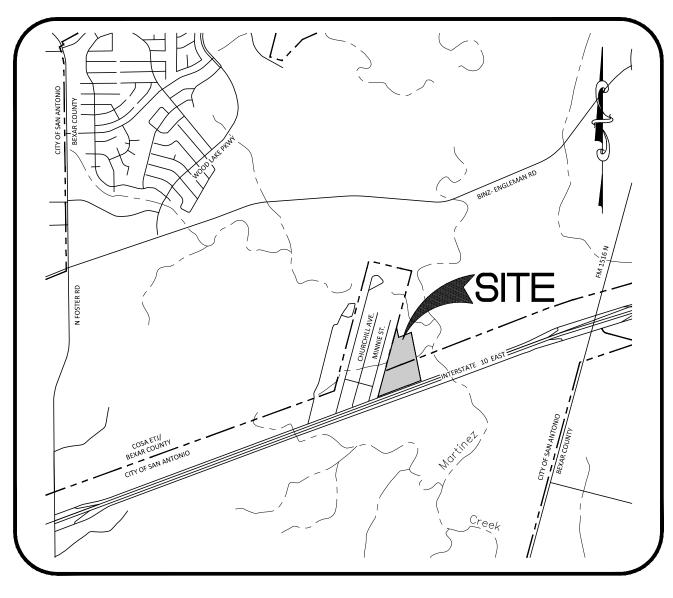
ENCLAVE AT HORIZON POINTE

SUBMITTED BY: MOY TARIN RAMIREZ ENGINEERS, LLC. 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249 TEL: (210) 698-5051

OWNER/DEVELOPER

FAX: (210) 698-5085

SAN ANTONIO LD, LLC 4058 NORTH COLLEGE AVE SUITE 300, BOX 9 FAYETTEVILLE,, AR 72703 (479) 455-9090





SUBMITTAL DATE:

LEGAL DESCRIPTION:

BEING A TOTAL OF 24.428 ACRES (1,063,822.32 SQUARE FEET) OF LAND, SITUATED IN COUNTY BLOCK NUMBER 5090, AND BEING PART OF THE GUADALUPE TORRES SURVEY NO. 38, ABSTRACT NO. 739, BEXAR COUNTY, TEXAS AND INCLUDING THE TRACT CALLED 10.058 ACRES OF LAND CONVEYED TO SAN ANTONIO LD, LLC BY GENERAL WARRANTY DEED AS RECORDED IN DOCUMENT NUMBER 20220203708 AND THE TRACT CALLED 14.384 ACRES OF LAND CONVEYED TO SAN ANTONIO LD, LLC BY GENERAL WARRANTY DEED AS RECORDED IN DOCUMENT NUMBER 20200143665, OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS



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C3.9

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C5.0 **GRADING PLAN** C5.1 **GRADING PLAN**

C6.2

SW3P PLANS C6.0 STORM WATER POLLUTION PREVENTION PLAN C6.1 STORM WATER POLLUTION PREVENTIONN PLAN

 Surveyors Planners Moy Tarin Ramirez Engineers, LLC FIRM TBPELS ENG F-5297 SVY F-10131500

SAN ANTONIO, TEXAS 78249

BEXAR COUNTY

12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051 FAX: (210) 698-5085

Engineers

STORMWATER POLLUTION PREVENTION PLAN DETAILS

PESCRIPTION

J. # DGN. BY: DWN. BY: CHKD. BY:

• Surveyors
• Planners

neers, LLC

NG: F-10131500
(210) 698-5051
(210) 698-5085

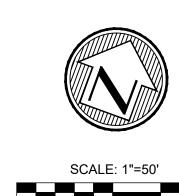


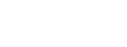


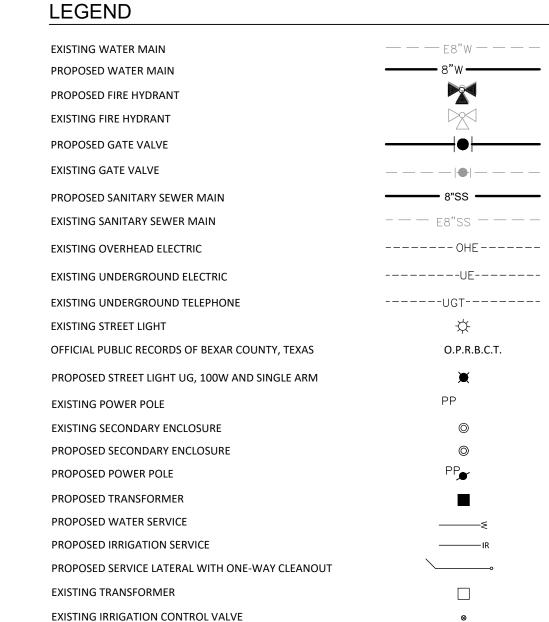
OVERALL UTILITY IMPROVEMENTS PLAN

SHEET

C1.1







UTILITY GENERAL NOTES

- LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF ALL UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON THE PLANS OR NOT. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES. 2. ALL EXCAVATION IS UNCLASSIFIED. THERE IS NO ADDITIONAL PAYMENT FOR ROCK
- ALL SPOIL AND UNUSABLE MATERIAL FROM THIS PROJECT SHALL BE REMOVED FROM
- THE SITE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS,
- APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THE PROJECT. 5. CONSTRUCTION STAKING TO BE PROVIDED BY CONSULTANT IS AS FOLLOWS:
- A. STREET CENTERLINE STAKING FOR CLEARING.
- B. STREET STAKING (ONE SIDE) FOR STREET EXCAVATION AND WATER MAIN INSTALLATION.
- SEWER STAKING AT 100-FT INTERVALS. STAKING FOR WATER SERVICES.
- STAKING FOR DRAINAGE CHANNELS.
- FINAL STREET STAKING.
- METER BOX STAKING.
- H. CPS STAKING.
- SETTING OF LOT CORNERS.

EXISTING WATER METER

CPS NOTES:

1. CPS TO SUPPLY ALL ELECTRIC CONDUITS FOR TRENCH AS FOLLOW:

PRIMARY - 2 1/2" HDPE SCHEDULE 40 SECONDARY - 3" PVC SCHEDULE 40 SERVICE STUBS - 2 1/2" PVC SCHEDULE 40

- 2. 6" P.V.C. SCHEDULE 80 WILL BE REQUIRED FOR C.P.S. UTILITIES CROSSINGS WHEN DRAIN OR STREET CONSTRUCTION PRECEDES UTILITY INSTALLATION.
- 3. 4" P.V.C. SCHEDULE 40 WILL BE REQUIRED FOR UNDERGROUND TELEPHONE AND CABLE T.V. IF ABOVE APPLIES.
- 4. P.V.C. CONDUIT WITH 90° SWEEPS TO 6" ABOVE GRADE WITH CAP.

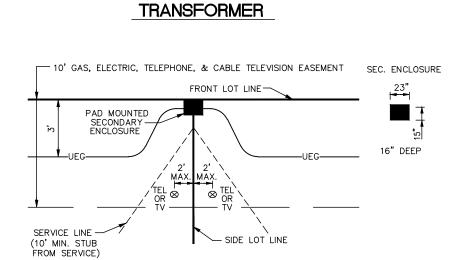
NOTE:

TELEPHONE AND CABLE LINES TO GO IN JOINT TRENCH WITH CITY PUBLIC SERVICE.

CAUTION: EXISTING UNDERGROUND UTILITIES, CONTRACTOR TO VERIFY PRIOR TO START OF ANY CONSTRUCTION.

MATCHLINE "C" SEE SHEET C1.3

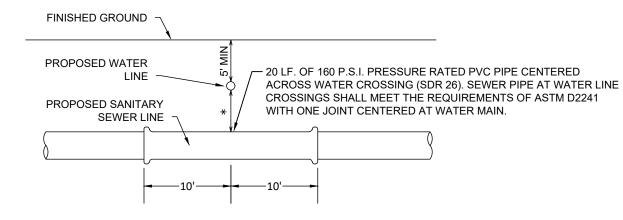
CITY OF SAN ANTONIO ETJ/ BEXAR COUNTY CITY OF SAN ANTONIO



10' GAS, ELECTRIC, TELEPHONE, & CABLE TELEVISION EASEMENT

SECONDARY ENCLOSURE FRONT LOADED

* SEPARATION DISTANCE TO COMPLY WITH TCEQ REGULATION 30 TAC 290.44 (E) APPENDIX E & 30 TAC 217.53 (D) APPENDIX D - SEPARATION DISTANCE



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

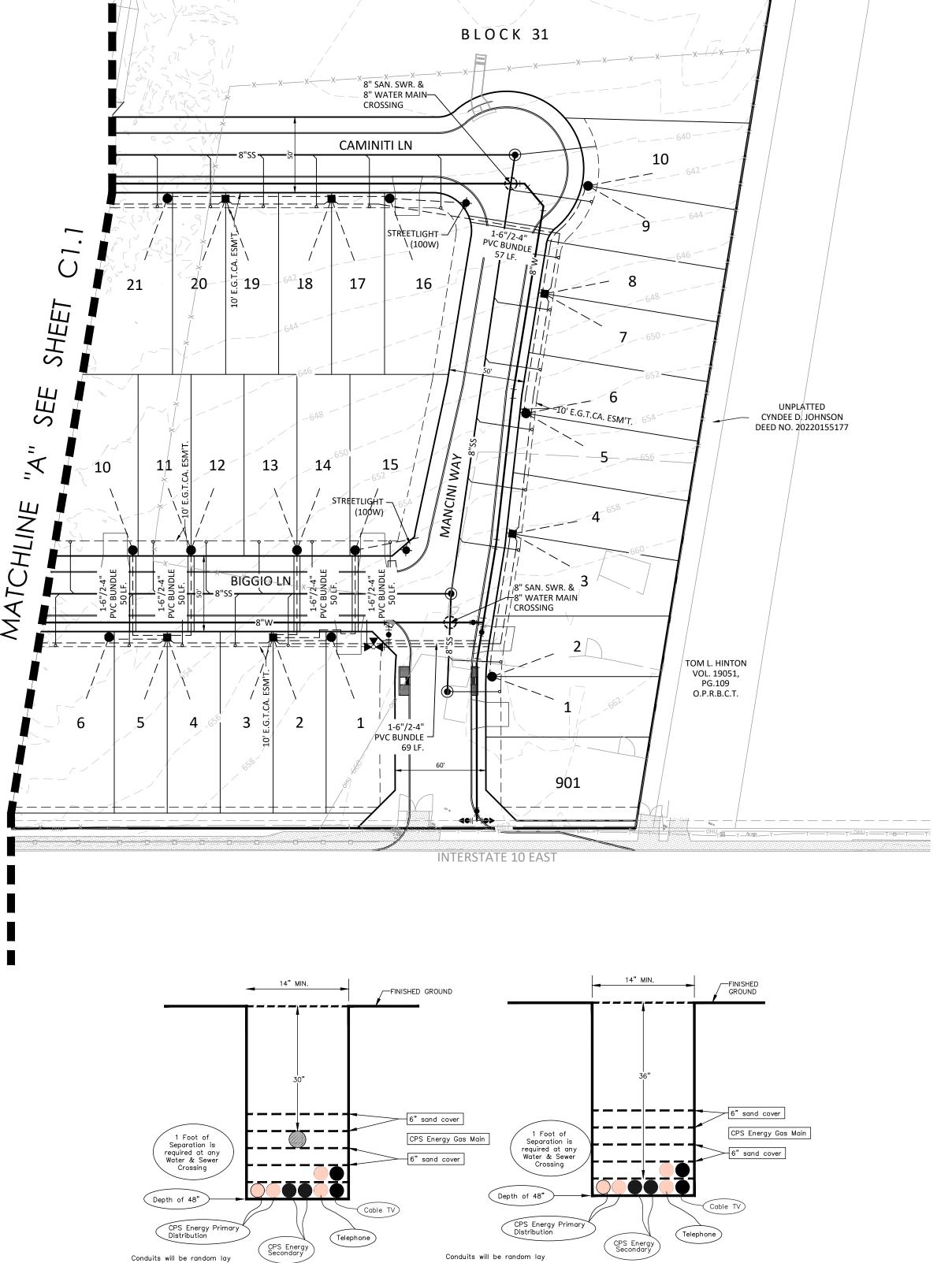
NOTE TO CONTRACTOR:

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY, FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

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 for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA 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 OSHA standards governing the presence and activities of individuals working in and around trench excavation.



Standards for Gas and Electric Trench or Electric Trench with Joint Utilities NOT TO SCALE Trench Diagram

Standards for Electric Trench or Electric Trench with Joint Utilities NOT TO SCALE Trench Diagram

TRENCH DETAILS

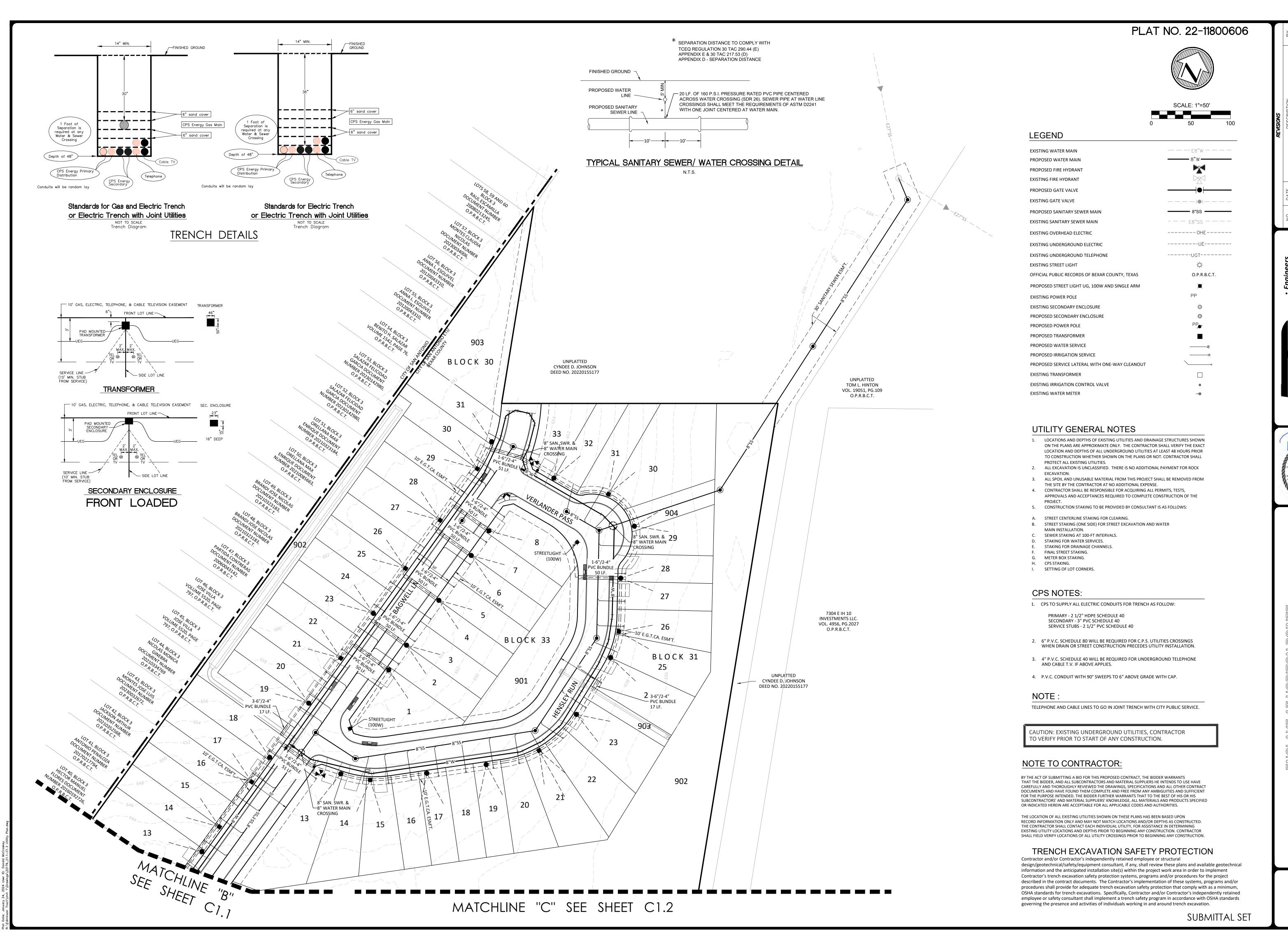
SUBMITTAL SET

SHEET

PAUL LANDA, JR.

100182

ROV



PROJ. # DGN. BY: DWN. BY: CHKD. BY:

• Planners

in Ramirez Engineers, LLC

EERING F-5297/SURVEYING: F-10131500

DN PATH, SUITE 100 TEL: (210) 698-5051

TEXAS 78249 FAX: (210) 698-5085

PAUL LANDA, JR.

100182 CENSE

ENGLAVE ALHORIZON POINTE ALL UTILITY IMPROVEMENTS PLAN

SHEET

C1.3

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 for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA 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 OSHA standards governing the presence and activities of individuals working in and around trench excavation.

SAWS CONSTRUCTION NOTES **COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT**

General Section

- 1. All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable: A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1
- B. Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
- C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction". D. Current City of San Antonio "Standard Specifications for Public Works Construction".
- E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
- 2. The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements. Work completed by the contractor without an approved Counter Permit and/or a GCP will be subject to removal and replacement
- at the expense of the contractors and/or the developer. 3. The Contractor shall obtain the SAWS Standard Details from the SAWS website,
- http://www.saws.org/business_center/specs. Unless otherwise noted within the design plans.
- 4. The Contractor is to make arrangements with the SAWS Construction Inspection Division at (210) 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48
- 5. Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate. Actual locations and depths must be field verified by the Contractor at least 1 week prior to construction. It shall be the Contractor's responsibility to locate utility service lines as required for construction and to protect them during construction
- 6. The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not. Please allow up to 7 business days for locates requesting pipe location
- markers on SAWS facilities. The following contact information are supplied for verification purposes: SAWS Utility Locates: http://www.saws.org/Service/Locates
- COSA Drainage (210) 207-0724 or (210) 207-6026
- COSA Traffic Signal Operations (210) 206-8480 COSA Traffic Signal Damages (210) 207-3951
- Texas State Wide One Call Locator 1-800-545-6005 or 811
- 7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
- 8. All work in Texas Department of Transportation (TxDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements. 9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating
- 10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood
- 11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays. Request should be
- Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work. Request should be sent to constworkreq@saws.org.
- Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper
- 12. Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party. Compaction tests will be done at one location point randomly selected, or as indicated by the SAWS Inspector and/or the test administrator, per each 12-inch loose lift per 400 linear feet at a minimum. This project will not be accepted and finalized by SAWS without this requirement being met and verified by providing all necessary documented test results.
- 13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

Water Section

1. Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week in advance of the shutdown. The Contractor must also provide a sequence of work as related to the tie-ins; this is at no additional cost to SAWS or the project and it is the responsibility of the Contractor to sequence the work accordingly.

NOTE TO CONTRACTOR:

TRAFFIC CONTROL NOTE:

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS

FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS

SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED.

THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY, FOR ASSISTANCE IN DETERMINING

EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION, CONTRACTOR

SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

NECESSARY TRAFFIC CONTROL. FLAGMEN, DETOUR ROUTING AROUND WORK ACTIVITIES AND MAINTENANCE

IN ALL AREAS WHERE WORK IS ADJACENT TO OR CROSSING ROADWAYS, THE CONTRACTOR SHALL MAINTAIN

AT LEAST ONE OPEN TRAFFIC LANE (12 FT.), CONTROLLED WITH FLAGMEN, DURING WORKING HOURS. DURING

OF DETOUR SIGNS ARE THE CONTRACTOR'S RESPONSIBILITY, UNLESS DIRECTED OTHERWISE BY THE PLANS.

ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), TO PROPERLY WARN, GUIDE AND CONTROL TRAFFIC

ALL NON-WORKING HOURS A MINIMUM OF TWO TRAFFIC LANES (24 FT.) SHALL BE OPEN TO TRAFFIC. CONTRACTOR WILL FURNISH AND MAINTAIN ALL REQUIRED TRAFFIC CONTROL DEVICES PER TEXAS MANUAL

MISCELLANEOUS GENERAL NOTES

MACHINE CHLORINATION BY THE SAN ANTONIO WATER SYSTEM FOR NEW

JUMPER CONNECTIONS TO EXISTING WATER SERVICE TO BE PROVIDED AS

4. FITTINGS WEIGHT IS BASED ON M.J. DUCTILE IRON FITTINGS (COMPACT).

*6. MINIMUM COVER OVER WATER MAIN BASED ON FINISHED GROUND.

5. CONTRACTOR TO OBTAIN STREET CUT PERMITS AS NECESSARY FOR WATER

MAINS WITH HTH FOR NEW WATER MAINS 750 FEET AND LESS

REQUIRED OR DIRECTED BY THE SAWS INSPECTOR.

3. ALL MAINS ARE ON-SITE.

WATER LINE DIA. MIN. DEPTH

WATER MAINS GREATER THAN 800 FEET. CONTRACTOR SHALL CHLORINATE NEW

MAIN INSTALLATION. REPLACEMENT OF CURB, SIDEWALKS, BASE AND PAVEMENT

WILL BE SUBSIDIARY TO THE ITEMS THAT THE STREET CUT WAS NEEDED FOR.

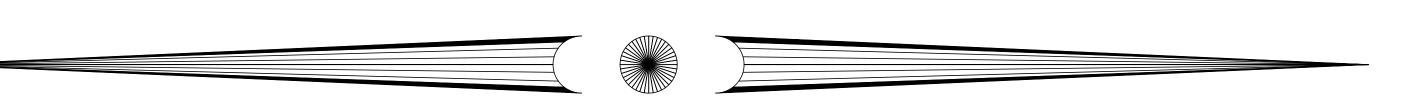
SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS

THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE

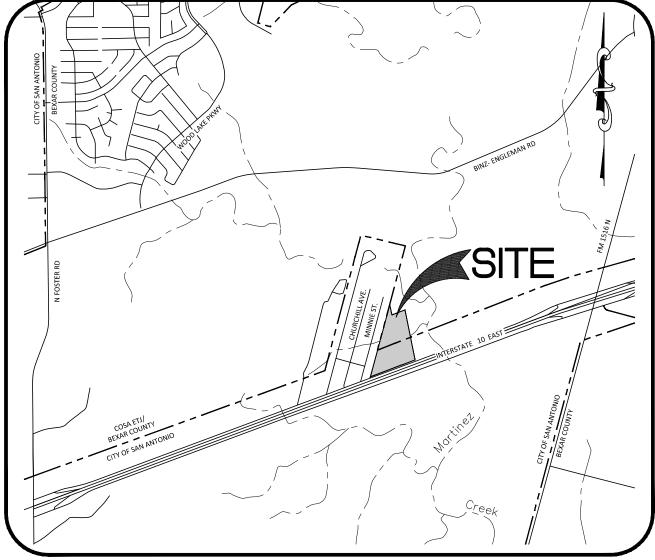
CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT

- For water mains 12" or higher: SAWS Emergency Operations Center (210) 233-2014
- 2. Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos- containing material (ACM). may be located within the project limits. Special waste management procedures and health and safety requirements will be applicable when removal and/or disturbance of this pipe occurs. Such work is to be made under Special Specification Item No. 3000, "Special Specification for Handling Asbestos Cement Pipe".
- 3. Valve removal: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a cap/plug. (NSPI)
- 4. Suitable anchorage/thrust blocking or joint restraint shall be provided at all of the following main locations: dead ends, plugs, caps, tees, crosses, valves, and bends, in accordance with the Standard Drawings DD-839 Series and Item No. 839, in the SAWS Standard Specifications for Construction.
- 5. All valves shall read "open right". 6. PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of 643 feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below 643 feet, the Developer or Builder shall install at each lot, on the customer's side of the meter, an approved type pressure regulator in conformance
- with the Plumbing Code of the City of San Antonio. No dual services allowed for any lot(s) if *PRV is/are required for such lot(s), only single service connections shall be allowed.
- *Note: A pressure regulator is also known as a pressure reducing valve (PRV). 7. Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. (Item No. 847.3): Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the Inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed for main repairs. The Contractor shall utilize all appropriate safety
- measure to protect his personnel during disinfection operations. 8. Backflow Prevention Devices:
- All irrigation services within residential areas are required to have backflow prevention devices.
- All commercial backflow prevention devices must be approved by SAWS prior to installation. 9. Final connection to the existing water main shall not be made until the water main has been pressure tested, chlorinated, and SAWS has released the main for tie-in and use
- 10. Division Valves: Division Valves shown on plans or not shown on plans but found in the field shall only be operated by SAWS Distribution and Collection staff and only with prior written approval of the SAWS Director of Production and Operations and proper coordination with all SAWS departments. Contractor shall provide written notification to the inspector a minimum of two weeks in advance to start the coordination process and will be informed by the Inspector when the division valve will be operated by the SAWS Distribution and Collection staff. The Division Valve can only be operated by SAWS Distribution and Collection staff member not the inspector or the contractor. Operation of a Division Valve without the express prior written approval of the SAWS Distribution and Collection staff will constitute a material breach of any written SAWS contract or permit in addition to subjecting the Contractor to liability for any and all fines, fees, or other damages, direct or consequential, that may arise from or be caused by the operation of the valve without prior written permission. Please be informed that the approval of the operation or opening or closing of a division valve can take several weeks for approval. Division Valves will also have a valve lid labeled Division Valve and a locking mechanism installed with a key. The lock and key mechanism will be paid for by the contractor but will be installed by SAWS Distribution and Collection staff.

CONSTRUCTION PLANS FOR



ENCLAVE AT HORIZON POINTE WATER IMPROVEMENTS



VICINITY MAP

SUBMITTAL DATE:

JUNE 2023

LEGAL DESCRIPTION:

BEING A TOTAL OF 24.428 ACRES (1,063,822.32 SQUARE FEET) OF LAND, SITUATED IN COUNTY BLOCK NUMBER 5090, AND BEING PART OF THE GUADALUPE TORRES SURVEY NO. 38, ABSTRACT NO. 739, BEXAR COUNTY, TEXAS AND INCLUDING THE TRACT CALLED 10.058 ACRES OF LAND CONVEYED TO SAN ANTONIO LD, LLC BY GENERAL WARRANTY DEED AS RECORDED IN DOCUMENT NUMBER 20220203708 AND THE TRACT CALLED 14.384 ACRES OF LAND CONVEYED TO SAN ANTONIO LD, LLC BY GENERAL WARRANTY DEED AS RECORDED IN DOCUMENT NUMBER 20200143665, OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS

C2.2 C2.3

C2.0

WATER PLANS

Sheet Number Sheet Title

C2.1 OVERALL WATER PLAN OVERALL WATER PLAN OVERALL WATER PLAN C2.4 WATER DETAILS C2.5 WATER DETAILS

WATER COVER

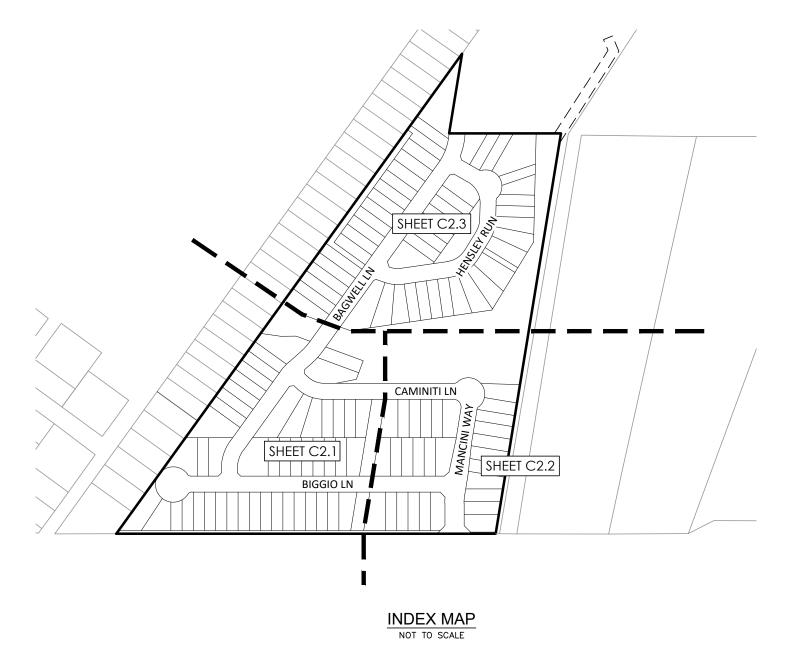


SUBMITTED BY:

MOY TARIN RAMIREZ ENGINEERS, LLC 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249 TEL: (210) 698-5051 FAX: (210) 698-5085

OWNER/DEVELOPER

SAN ANTONIO LD, LLC 4058 NORTH COLLEGE AVE SUITE 300, BOX 9 FAYETTEVILLE, AR 72703 (479) 455-9090



ESTIMATED WATER QUANTITIES

ITEM	DESCRIPTION	UNIT	EST/QTY
	Phase I		
1	8" Water Tie-In	EA.	2
2	Trench Excavation Protection	L.F.	4,354
3	8" Pipe, C900 DR 18 PVC Class 235 (Incl. Joint Restraints)	L.F.	4,354
4	8" D.I. Pipe	L.F.	133
5	24" Steel Casing	EA.	65
6	8" Gate Valve, M.J. w/6" Valve Box, Complete	EA.	15
7	Standard Fire Hydrant	EA.	5
8	2" Blow-Off (Temporary)	EA.	2
9	3/4" Single Service: Short (Shared Trench)	EA.	92
10	3/4" Single Service: Long (Shared Trench)	EA.	33
11	3/4" Irrigation Service: Short	EA.	2
12	3/4" Irrigation Service: Long	EA.	1
13	D.I. Fittings	TON	1.25
14	Hydrostatic Testing	EA.	1
	Phase II		
15	Meter Box	EA.	128

Moy Tarin Ramirez Engineers, LLC

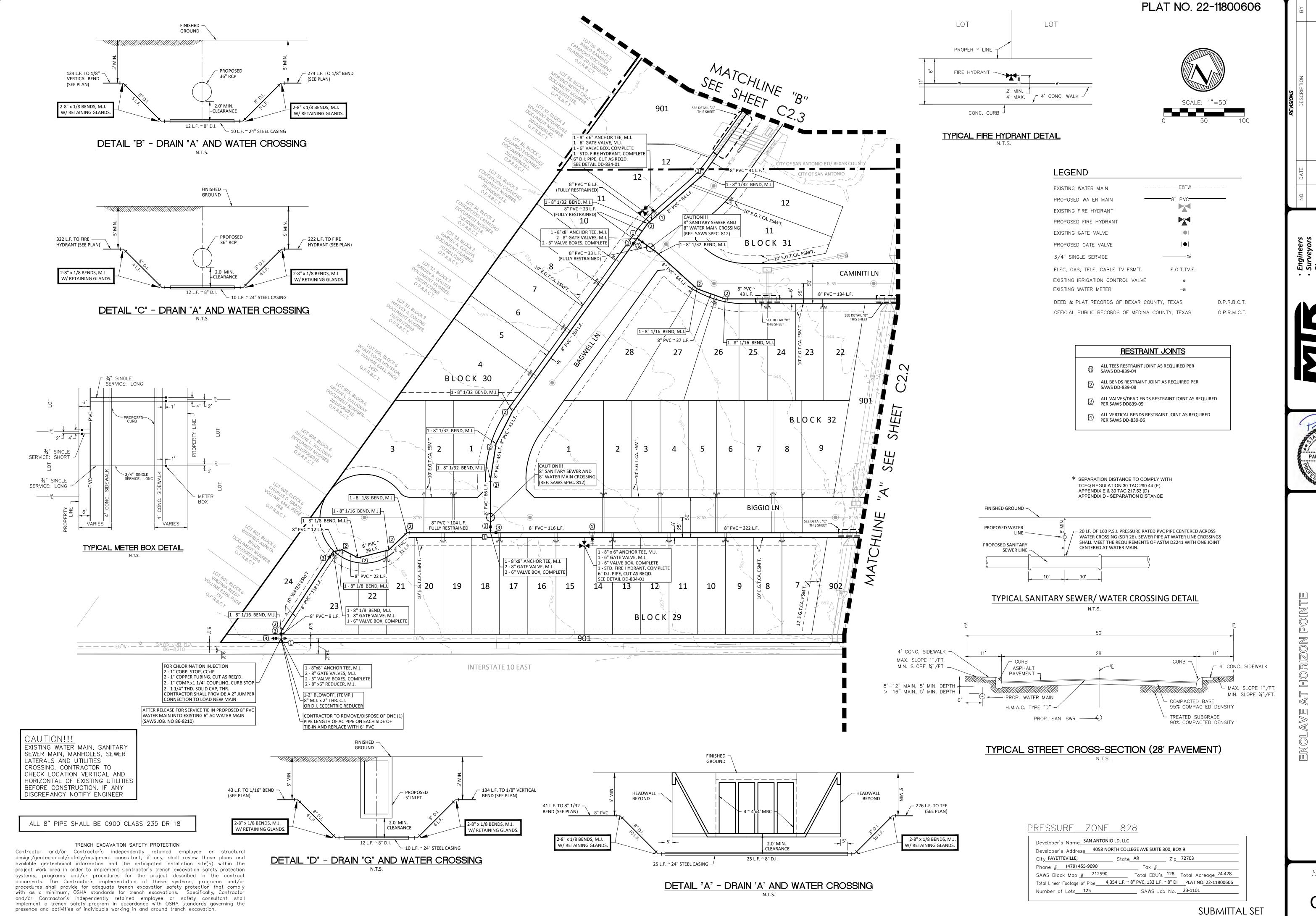
FIRM TBPELS ENG F-5297 SVY F-10131500 12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085

PRESSURE 70NE 828

Developer's Name	SAN ANTONIO	LD, LLC				
Developer's Address	4058 NOR	TH COLL	EGE AVE SUITE	300, BC	X 9	
City_FAYETTEVILLE,		State _	AR	Zip_	72703	
Phone #(479) 4	55-9090		Fax #			
SAWS Block Map # _	212590		Total EDU's	128	Total Acreage	24.428
Total Linear Footage	of Pipe <u>4,354</u>	L.F. ~ 8	" PVC, 133 L.F.	~ 8" DI	PLAT NO. 22-1	1800606
Number of Lots	125		SAWS Job	No.	23-1101	

SUBMITTAL SET TEXAS C2.0

BEXAR COUNTY



NO. DATE DESCRIPTION E

PROJ. # DGN. BY: CHKD. BY: DATE

PROJ. # DGN. BY: DWN. BY: DATE

PROJ. # DGN. BY: DWN. BY: DATE

PROJ. # DGN. BY: DWN. BY: DATE

• Planners

nirez Engineers, LLC

-5297/SURVEYING: F-10131500

SUITE 100 TEL: (210) 698-5051

Moy Tarin Ramirez E TBPELS: ENGINEERING F-5297/SU 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249



ENGLAVE AT HORIZON POINTE R OVERALL DISTRIBUTION PLAN

SHEET

C2.1

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 for the project described in the contract

documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA 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 OSHA standards governing the

presence and activities of individuals working in and around trench excavation.

TYPICAL STREET CROSS-SECTION (28' PAVEMENT)

PLAT NO. 22-11800606

O.P.R.M.C.T.

---- E8"W ----E.G.T.TV.E. D.P.R.B.C.T.





TRIBUTION

<u>DIS</u>

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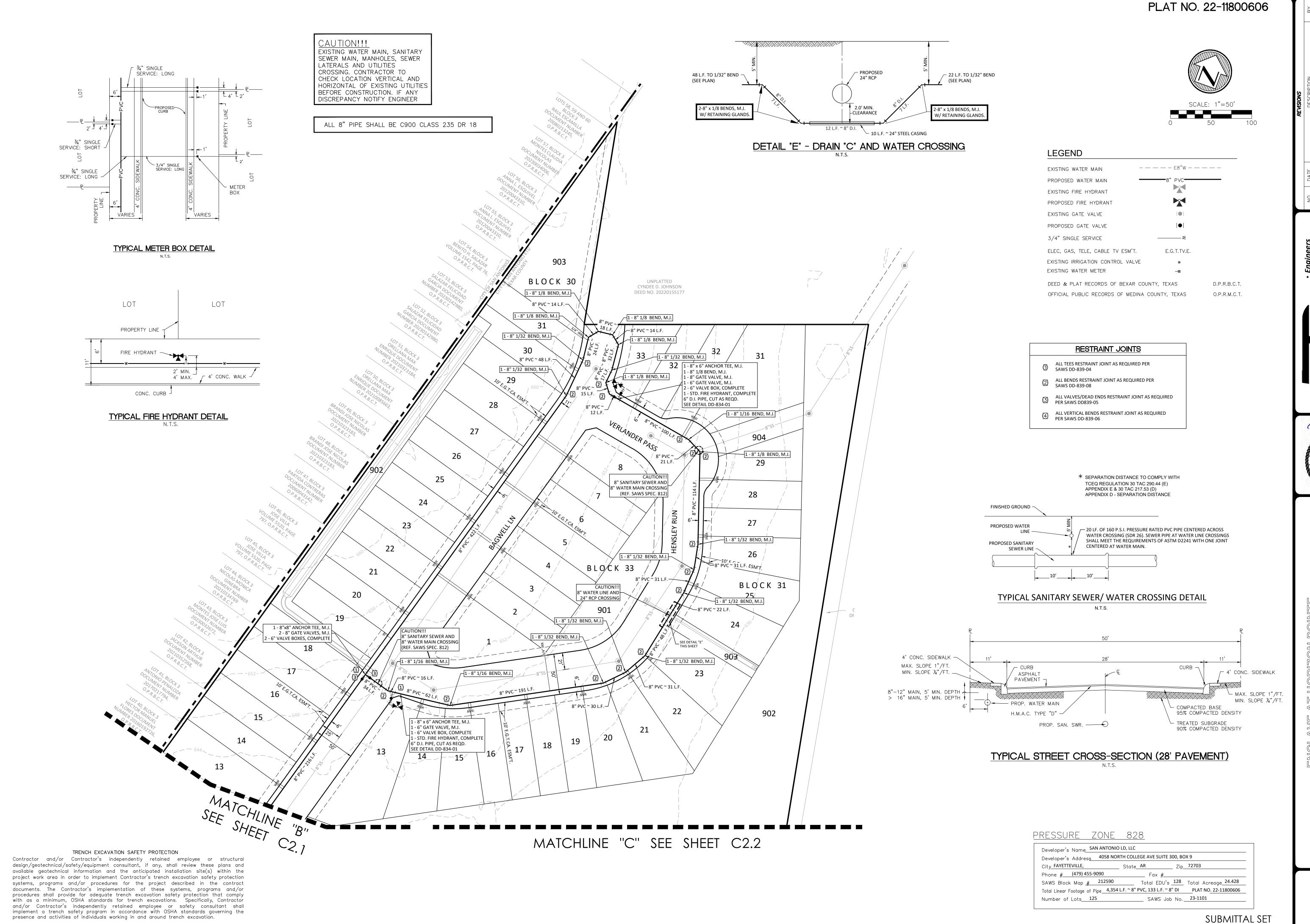
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ALL VALVES/DEAD ENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD839-05

4 ALL VERTICAL BENDS RESTRAINT JOINT AS REQUIRED PER SAWS DD-839-06

Developer's Name_SAN ANTONIO LD, LLC Developer's Address 4058 NORTH COLLEGE AVE SUITE 300, BOX 9 City FAYETTEVILLE, Phone # (479) 455-9090 SAWS Block Map <u>#</u> **212590** Total EDU's <u>128</u> Total Acreage <u>24.428</u> Total Linear Footage of Pipe 4,354 L.F. ~ 8" PVC, 133 L.F. ~ 8" DI PLAT NO. 22-11800606 SAWS Job No. 23-1101 Number of Lots<u>125</u>

SHEET



NO. DATE
DESCRIPTION

PROJ. # DGN. BY: DWN. BY: DA

• Planners

mirez Engineers, LLC

-5297/SURVEYING: F-10131500

SUITE 100 TEL: (210) 698-5051

5249 FAX: (210) 698-5085

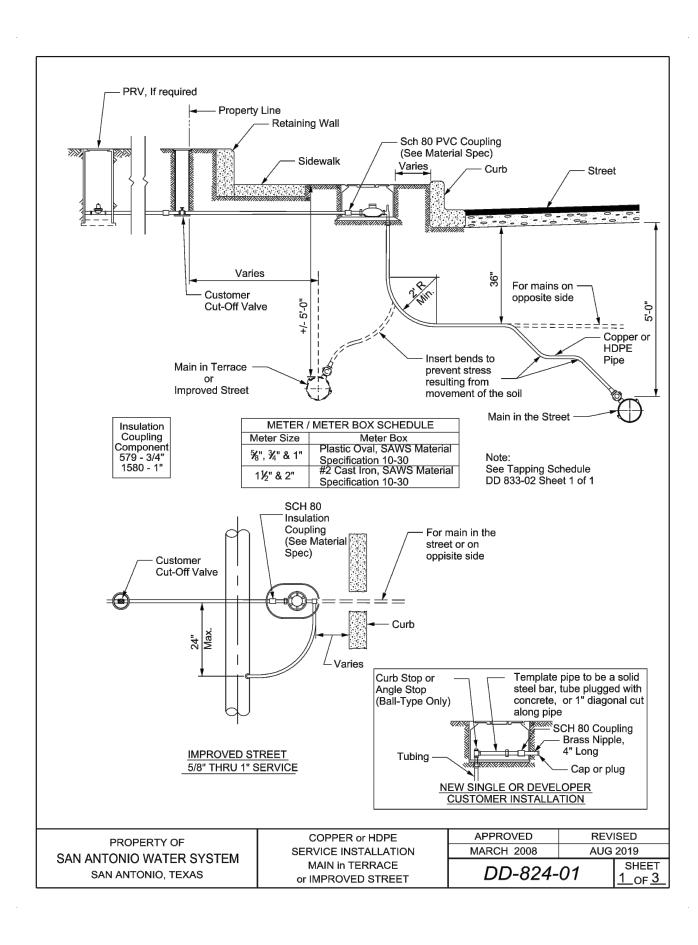
Moy Tarin Ramirez E.
TBPELS: ENGINEERING F-5297/SU
12770 CIMARRON PATH, SUITE 100
SAN ANTONIO, TEXAS 78249

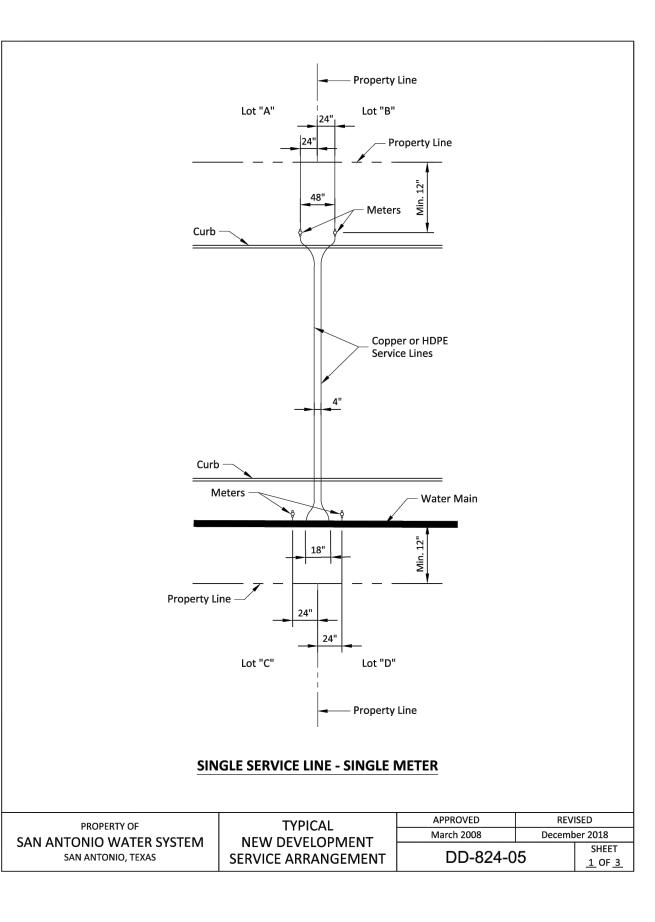


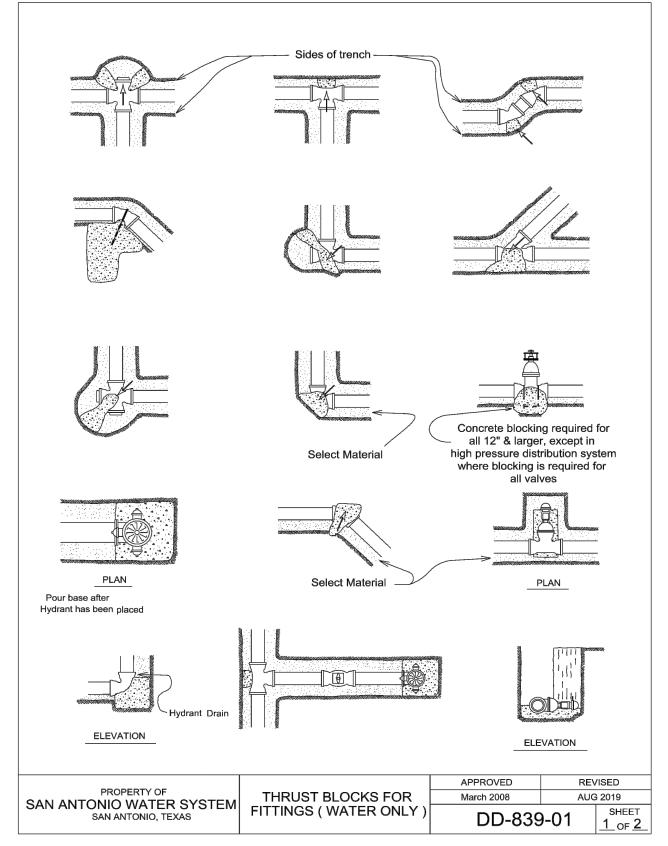
ENGLAVE AT HORIZON POINTE WATER OVERALL DISTRIBUTION PLAI

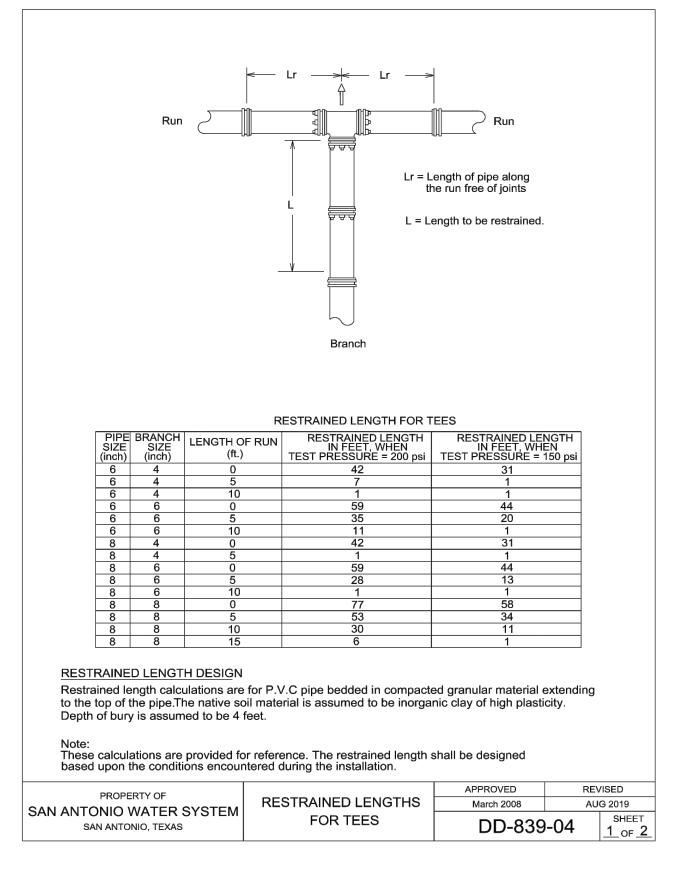
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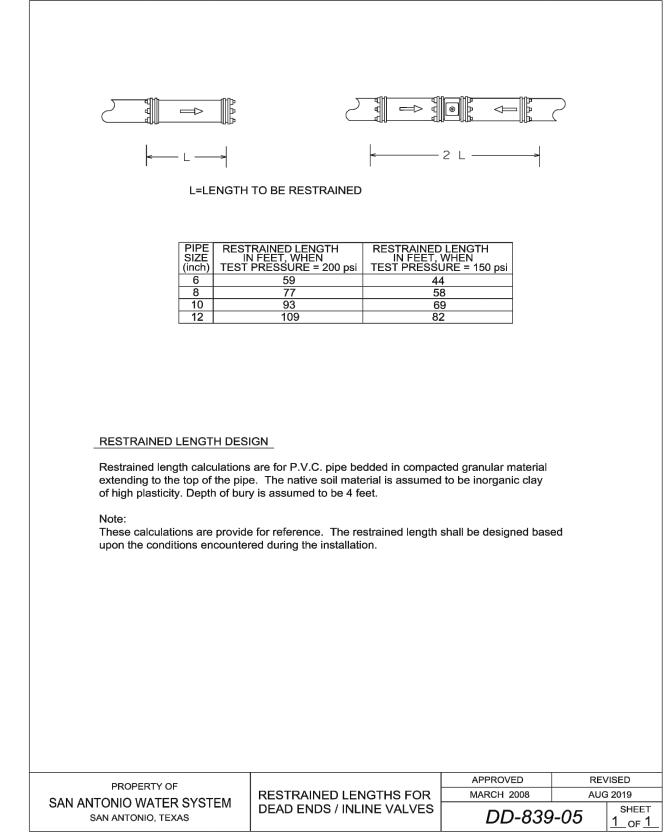
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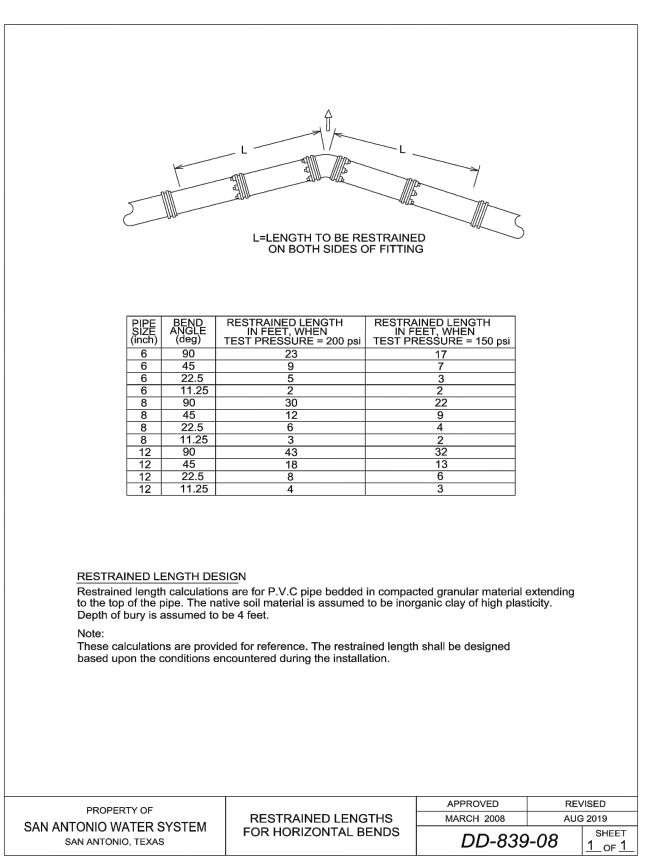


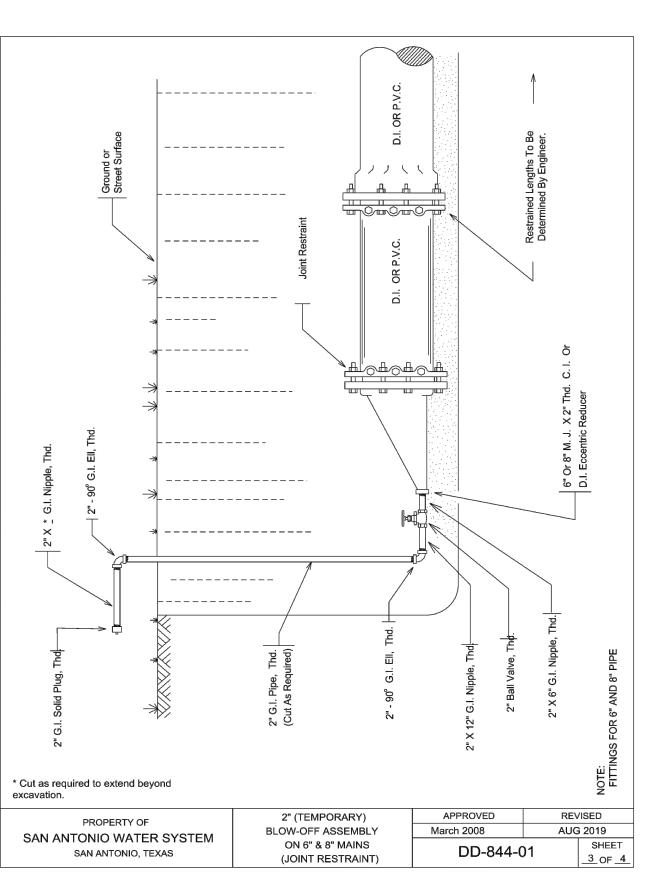


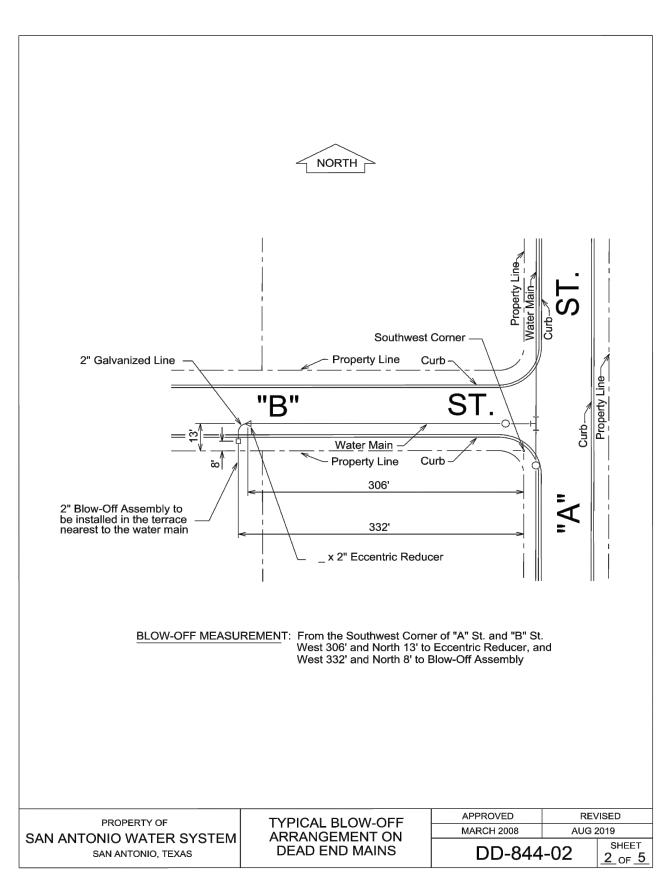












PRESSURE 70NF 828

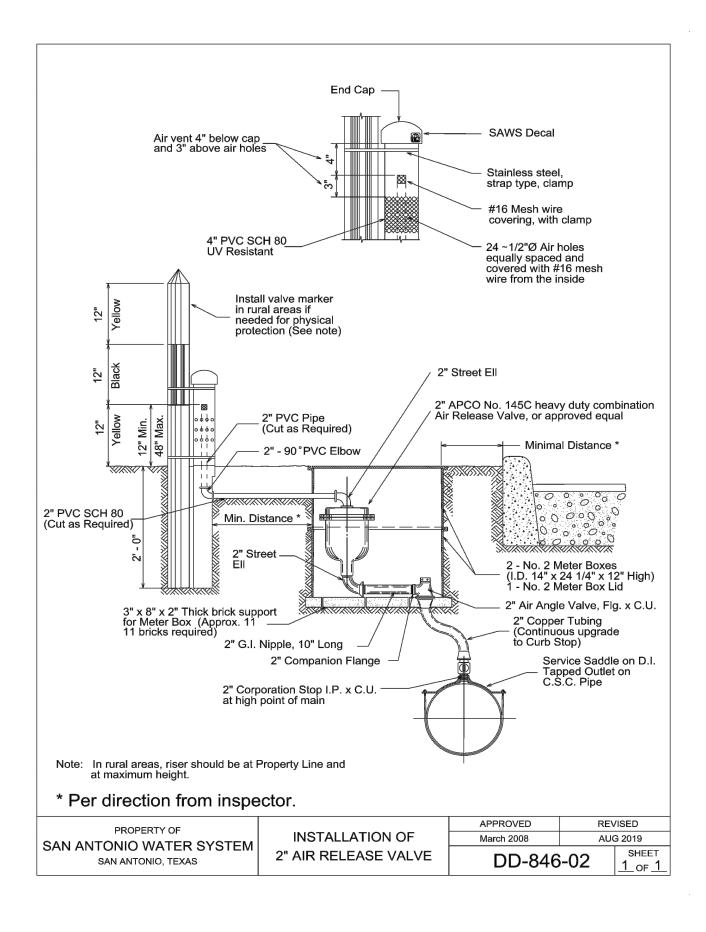
Developer's Name	SAN ANT	ONIO LD, LLC				
Developer's Address	4058	NORTH COLL	EGE AVE SUITE	300, BO)X 9	
City_FAYETTEVILLE,		State _	AR	Zip_	72703	
Phone #(479) 4	55-9090		Fax #			
SAWS Block Map #	2125	90	Total EDU's	128	Total Acreage	24.428
Total Linear Footage	of Pipe	4,354 L.F. ~ 8	8" PVC, 133 L.F.	~ 8" DI	PLAT NO. 22-:	11800606
Number of Lots	125		SAWS Job	No.	23-1101	

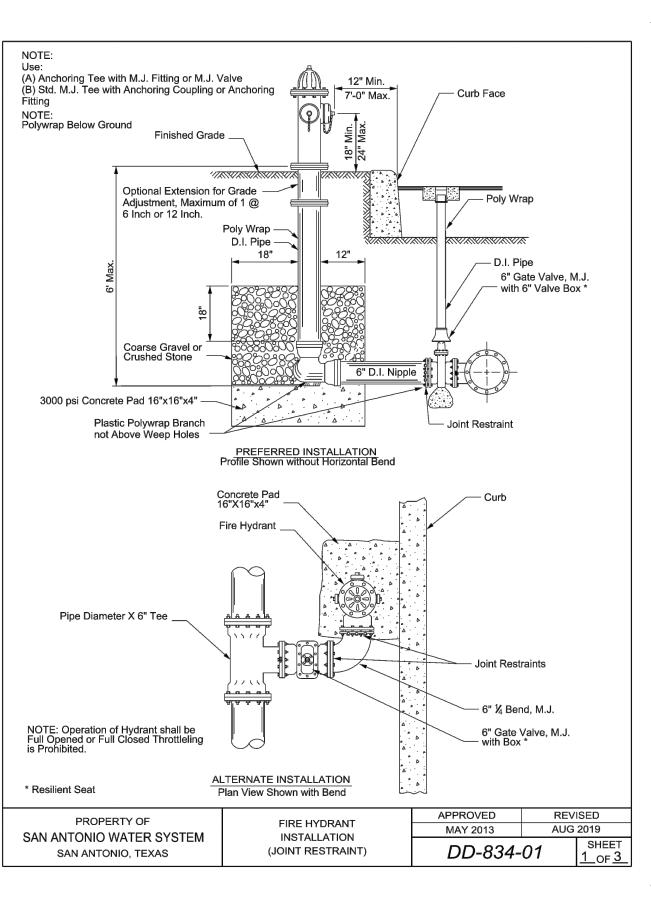
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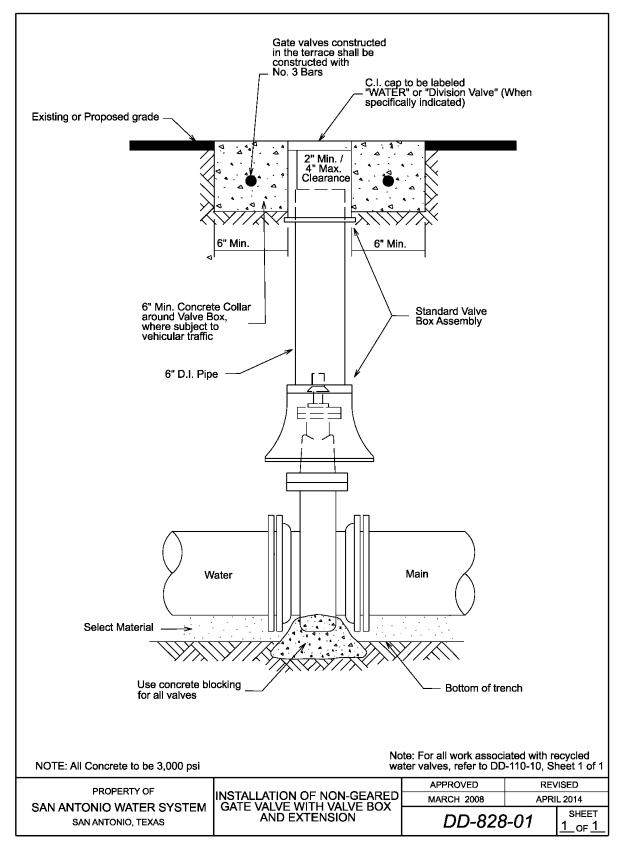
PAUL LANDA, JR 100182

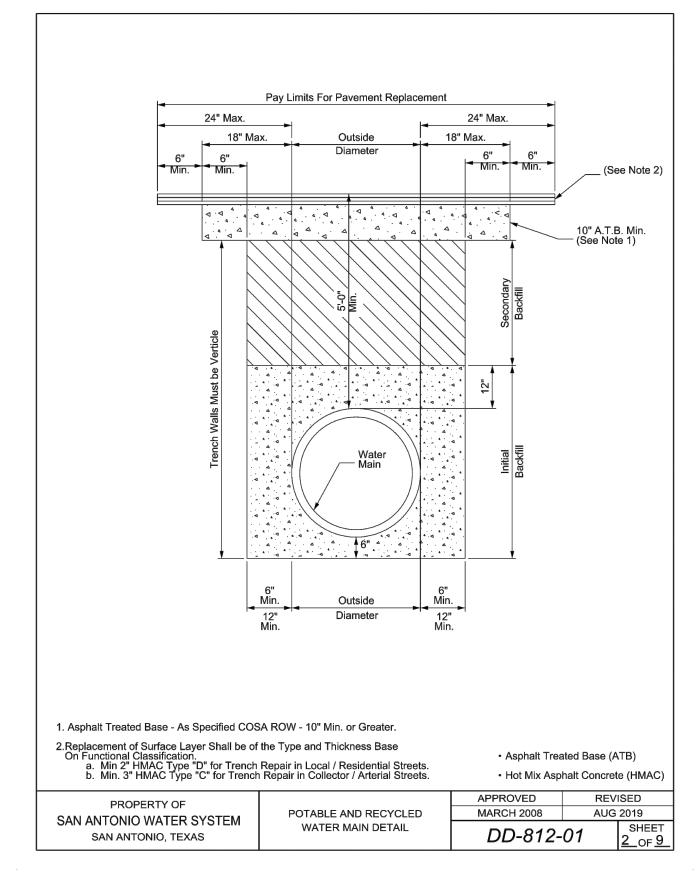
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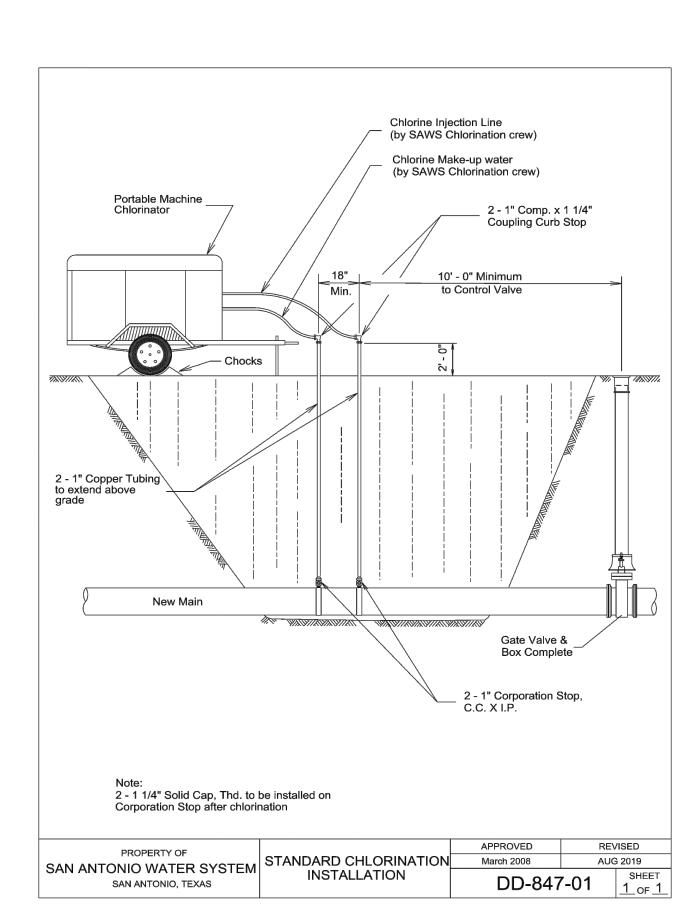
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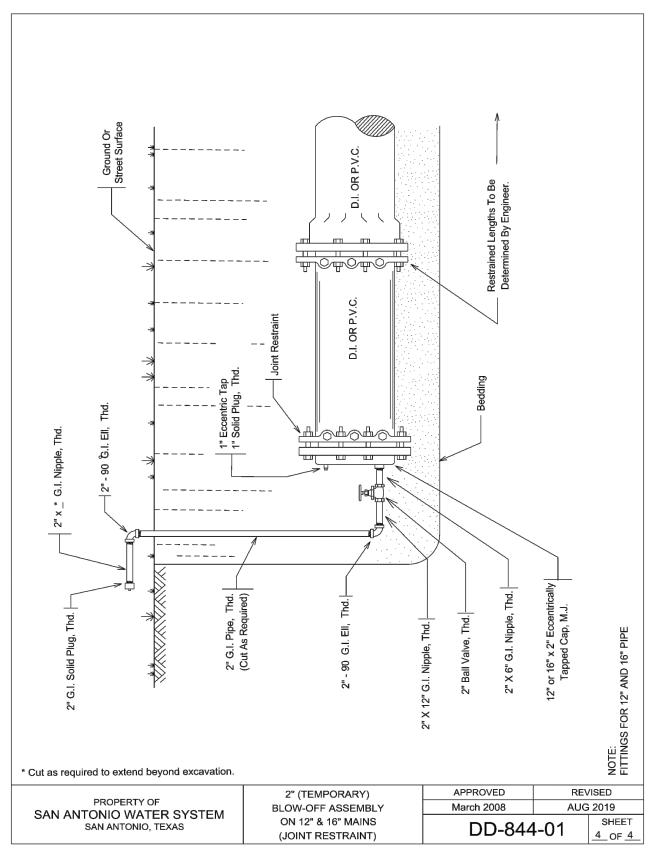


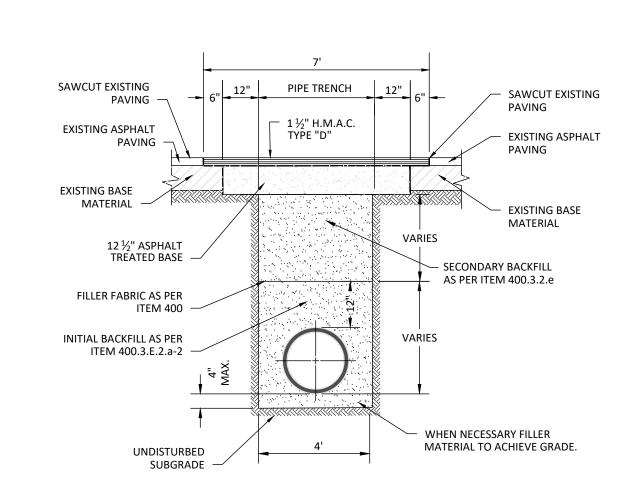












NOTE:

- FOR LOCAL TYPE "A" & "B" STREETS (RESIDENTIAL) USE 6" ASPHALT CONCRETE BASE TYPE "B" WITH 1-1/2" TYPE "D" HOT MIX ASPHALTIC CONCRETE PAVEMENT.
- 2. FOR ARTERIAL & SECONDARY STREETS (COMMERCIAL) USE 12.5" TYPE "B" HOT MIX ASPHALTIC CONCRETE PAVEMENT LEVELING -UP COURSE & 1-1/2" TYPE "D" HOT MIX ASPHALTIC CONCRETE PAVEMENT SURFACE COURSE.

TRENCH PAVEMENT REPLACEMENT ITEM 511

PRESSURE ZONE 828

Developer's Name	SAN ANTONIO	LD, LLC				
Developer's Address	4058 NOR	TH COLL	EGE AVE SUITE	300, BO	X 9	
City FAYETTEVILLE,		State	AR	Zip_	72703	
Phone #(479) 4	55-9090		Fax #			
SAWS Block Map #	212590		Total EDU's	128	Total Acreage	24.42
Total Linear Footage	of Pipe 4,3	54 L.F. ~	8" PVC, 133 L.F	. ~ 8" DI	PLAT NO. 22-1	180060
Number of Lots	125		SAWS Job	No.	23-1101	

Moy Tarin Ramirez Enginee
TBPELS: ENGINEERING F-5297/SURVEYING:
12770 CIMARRON PATH, SUITE 100 TEL: (210)
SAN ANTONIO, TEXAS 78249 FAX: (210)



MATER DETAILS

SHEET

C2.5

TEL: (210) 698-5051 FAX: (210) 698-5085

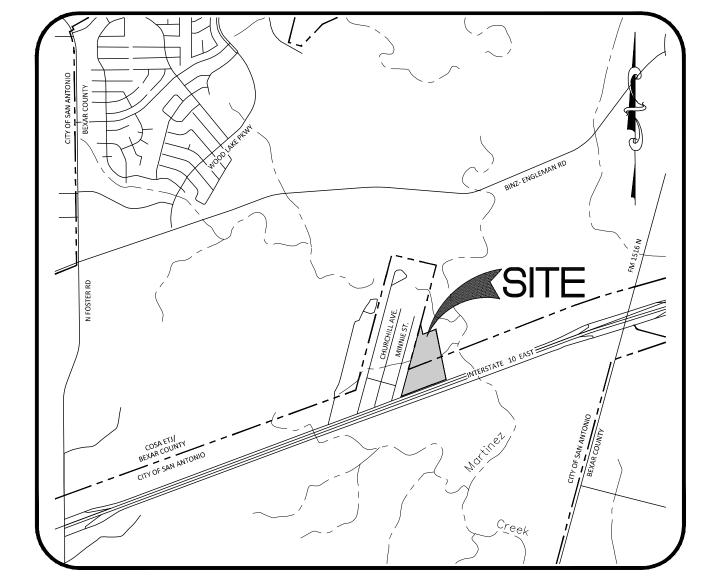
SUBMITTED BY:

PLAT NO. 22-11800606

SAN ANTONIO, TEXAS 78249

MOY TARIN RAMIREZ ENGINEERS, LLC 12770 CIMARRON PATH, SUITE 100

ENCLAVE AT HORIZON POINTE SANITARY SEWER IMPROVEMENTS



VICINITY MAP N.T.S.





REVISION DATE: DECEMBER 2023

LEGAL DESCRIPTION:

BEING A TOTAL OF 24.428 ACRES (1,063,822.32 SQUARE FEET) OF LAND, SITUATED IN COUNTY BLOCK NUMBER 5090, AND BEING PART OF THE GUADALUPE TORRES SURVEY NO. 38, ABSTRACT NO. 739, BEXAR COUNTY, TEXAS AND INCLUDING THE TRACT CALLED 10.058 ACRES OF LAND CONVEYED TO SAN ANTONIO LD, LLC BY GENERAL WARRANTY DEED AS RECORDED IN DOCUMENT NUMBER 20220203708 AND THE TRACT CALLED 14.384 ACRES OF LAND CONVEYED TO SAN ANTONIO LD. LLC BY GENERAL WARRANTY DEED AS RECORDED IN DOCUMENT NUMBER 20200143665, OF THE OFFICIAL PUBLIC RECORDS

SITE PLAN (BENCHMARKS)

BENCHMARKS

PLASTIC CAP STAMPED "MTR ENG CONTROL" N 13713432.0100 E 2180542.8820 ELEV = 663.37

CP-BM2: NAIL W/SHINER STAMPED "MTR ENGINEERING" N 13,713,369.0580

ELEV.=664.39 CP-BM3: NAIL W/SHINER STAMPED "MTR ENGINEERING" N 13,713,166.4710

E 2,180,833.8780

E 2,180,275.7110 ELEV.=673.00 CP-BM4: NAIL W/SHINER STAMPED "MTR ENGINEERING" N 13,713,580.7930

> E 2,181,402.1810 ELEV.=663.74

NOTE TO CONTRACTOR:

BY THE ACT OF SUBMITTING A BID FOR THIS PROPOSED CONTRACT, THE BIDDER WARRANTS THAT THE BIDDER, AND ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS HE INTENDS TO USE HAVE CAREFULLY AND THOROUGHLY REVIEWED THE DRAWINGS, SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS AND HAVE FOUND THEM COMPLETE AND FREE FROM ANY AMBIGUITIES AND SUFFICIENT FOR THE PURPOSE INTENDED. THE BIDDER FURTHER WARRANTS THAT TO THE BEST OF HIS OR HIS SUBCONTRACTORS' AND MATERIAL SUPPLIERS' KNOWLEDGE, ALL MATERIALS AND PRODUCTS SPECIFIED OR INDICATED HEREIN ARE ACCEPTABLE FOR ALL APPLICABLE CODES AND AUTHORITIES.

THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH INDIVIDUAL UTILITY, FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL UTILITY CROSSINGS PRIOR TO BEGINNING ANY CONSTRUCTION.

CONTRACTOR SHALL ADD 3-INCH PVC MARKERS TO THE ENDS OF ALL SANITARY SEWER LATERALS. MARKERS SHALL EXTEND 2 FEET ABOVE FINAL GRADE.

GENERAL SEWER NOTES

1. ALL SEWER CONSTRUCTION IS WITHIN THE JURISDICTION OF THE SAN ANTONIO RIVER AUTHORITY (SARA).

2. A PRECONSTRUCTION CONFERENCE WILL BE HELD WITH THE CONTRACTOR, CONSULTANT AND SARA STAFF

- PRIOR TO START OF CONSTRUCTION. 3. THE CONTRACTOR SHALL OBTAIN A COPY OF THE TECHNICAL SPECIFICATIONS FOR UTILITIES CONSTRUCTION,
- DATED APRIL, 2012, AS PUBLISHED BY THE SAN ANTONIO RIVER AUTHORITY. THESE SPECIFICATIONS AND THE GENERAL NOTES SHOWN ON THE PLANS WILL GOVERN ALL SEWER CONSTRUCTION IN THIS PROJECT.
- 4. DENSITY TESTING OF SECONDARY BACKFILL MATERIAL IN SEWER TRENCHES WILL BE REQUIRED. SEE SECTION 400.4 OF THE SPECIFICATIONS FOR MORE INFORMATION.
- SPECIFICATIONS FOR MORE INFORMATION. 6. COORDINATE ALL WORK WITH THE SARA INSPECTOR.

BEXAR COUNTY

5. SEEPAGE RETAINERS WILL BE REQUIRED AT CERTAIN LOCATIONS. SEE SECTION 400.4(C) OF THE

Engineers Surveyors Planners Moy Tarin Ramirez Engineers, LLC

FIRM TBPELS ENG F-5297 SVY F-10131500 12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051 FAX: (210) 698-5085 SAN ANTONIO, TEXAS 78249

SANITARY SEWER

Sheet Number	Sheet Title
C3.0	SANITARY SEWER COVER
C3.1	SANITARY SEWER GENERAL NOTES
C3.2	SANITARY SEWER DETAILS
C3.3	OVERALL SEWER
C3.4	OVERALL SEWER
C3.5	SANITARY SEWER PLAN & PROFILE LINE A
C3.6	SANITARY SEWER PLAN & PROFILE LINE F
C3.7	SANITARY SEWER PLAN & PROFILE LINE B
C3.8	SANITARY SEWER PLAN & PROFILE LINE C
C3.9	SANITARY SEWER PLAN & PROFILE LINE D & LINE E

ESTIMATED SEWER QUANTITIES

ITEM	DESCRIPTION	UNIT	EST/QTY
1	Tie into Existing Sanitary Sewer Main	EA.	1
2	Trench Excavation Protection	L.F.	4,144
3	8" Sanitary Sewer Pipe, SDR-26 (0'-6")	L.F.	685
4	8" Sanitary Sewer Pipe, SDR-26 (6'-10')	L.F.	1,519
5	8" Sanitary Sewer Pipe, SDR-26 (10'-14')	L.F.	1,494
6	8" Sanitary Sewer Pipe, SDR-26 (14'-18')	L.F.	446
7	Standard Sanitary Sewer Manhole	EA.	20
8	External Drop Manhole	EA.	3
9	Extra Depth Manhole	V.F.	95.9
10	Sanitary Sewer Laterals, SDR-26 Class 160 with PVC Markers	L.F.	4,573
11	Vertical Stacks	V.F.	278.4
12	Sewer Main Television Inspection	L.F.	4,144
13	30" Steel Casing	L.F.	40
14	20" Steel Casing	L.F.	40

CAUTION!
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE

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 for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA 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 OSHA standards governing the presence and activities of individuals working in and around trench excavation.

TEXAS C3.0

GENERAL NOTES:

- 1. SAN ANTONIO RIVER AUTHORITY (RIVER AUTHORITY) STANDARD SPECIFICATIONS AND STANDARD DETAILS ARE PROVIDED FOR DESIGN AND CONSTRUCTION OF SEWER COLLECTION SYSTEMS MANAGED AND CONTRACTED BY THE RIVER AUTHORITY.
- 2. AT ANY TIME, THESE STANDARD SPECIFICATIONS AND DETAILS MAY BE ALTERED OR SUPERSEDED BY THE GENERAL CONDITIONS, SUPPLEMENTAL CONDITIONS, PLANS OR PROJECT SPECIFICATIONS WITHIN THE CONTRACT DOCUMENT PER DIRECTION FROM THE RIVER AUTHORITY
- 3. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY RIVER AUTHORITY AND COMPLY WITH THE CONTRACT DOCUMENTS AND THE FOLLOWING AS APPLICABLE:
- 3.1. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30, PART 1, CHAPTER 217.
- 3.2. CURRENT TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT), "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".
- SANITARY SEWER CONSTRUCTION".
- 3.4. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION". CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL"
- 4. THE CONTRACTOR IS TO NOTIFY AND MAKE ARRANGEMENTS WITH THE RIVER AUTHORITY INSPECTIONS DIVISION AT (210) 302-4200 FORTY EIGHT (48) HOURS PRIOR TO ANY EXCAVATION. CONTRACTOR SHALL ALSO PROVIDE PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO ANY EXCAVATION OR CONSTRUCTION. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD BEFORE ANY EXCAVATION OR START OF PROJECT.
- 5. WORK SHALL NOT BE PERFORMED ON SATURDAYS, SUNDAYS FEDERAL HOLIDAYS RIVER ALITHORITY HOLIDAYS BEFORE 7:30 AM OR AFTER 4:30 PM. UNLESS PRIOR APPROVAL IS GRANTED BY THE RIVER ALITHORITY ENGINEER REQUEST TO PERFORM WORK DURING THESE TIMES MUST BE EMAILED 48 HOURS IN ADVANCE TO <u>UTILITIESDEVELOPMENT@SARIVERAUTHORITY.ORG</u>.
- 6. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR IN THE PLANS BUT NOT INCLUDED IN THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM WHICH IT RELATES TO.
- 7. WORK COMPLETED BY CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE CONSENT OF RIVER AUTHORITY WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTOR.
- 8. LOCATIONS AND DEPTHS OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 48 HOURS PRIOR TO CONSTRUCTION REGARDLESS OF ILLUSTRATION ON THE PLANS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND

- TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO RIVER AUTHORITY. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES TO EXISTING UTILITIES AND REPAIRS WILL BE AT CONTRACTOR'S EXPENSE.
- THE FOLLOWING CONTACT INFORMATION IS SUPPLIED FOR VERIFICATION PURPOSES: FAST CENTRAL SPECIAL UTILITY DISTRICT 210-649-2383 CITY OF SAN ANTONIO DRAINAGE CITY PUBLIC SERVICE (CPS)
- 210-207-5048 210-973-3500 CITY OF CONVERSE (PUBLIC WORKS) 210-659-9513 TIME WARNER 210-352-4872 VALERO ENERGY CO. 210-349-7555 RIVER AUTHORITY INSPECTIONS 210-302-4200 800-344-8377 TEXAS 811 SAN ANTONIO WATER SYSTEM (SAWS) 210-233-3500
- 9. CERTAIN PORTIONS OF THE PROJECT MAY PARALLEL AND/OR CROSS EXISTING UTILITIES, AND CONTRACTOR IS REQUIRED TO PROTECT THESE UTILITIES. ADDITIONAL SUPPORTIVE SHORING MAY BE REQUIRED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROTECT HIS WORKERS, EXISTING UTILITIES, AND FINISHED WORK THROUGHOUT THE PROJECT. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGES AND REPAIRS WILL BE AT CONTRACTORS EXPENSE.
- 3.3. CURRENT RIVER AUTHORITY "STANDARD SPECIFICATIONS FOR 10. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE LESS THAN 9 FEET (I.E. WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES OR WATER LINES NEXT TO MANHOLES), THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC 217
 - 11. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.161, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. T CONTRACTOR MUST PROTECT AND WORK AROUND VALVES THAT ARE IN THE PROJECT AREAS.
 - 12. AN APPROPRIATELY SAFE OVERHEAD CLEARANCE MUST BE MAINTAINED BETWEEN ALL OVERHEAD EQUIPMENT AND PERSONNEL. THE CONTRACTOR SHALL NOTIFY CPS AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION IN THE VICINITY OF CPS OVERHEAD LINES. CONTRACTOR SHALL MAINTAIN CPS RECOMMENDED CLEARANCE REQUIREMENTS.
 - 13. ALL WORK IN THE TEXAS DEPARTMENT OF TRANSPORTATION. (TXDOT) RIGHT-OF-WAY SHALL PROCEED DURING WORKING HOURS AGREED UPON BY RIVER AUTHORITY AND TXDOT
 - 14. BEFORE THE START OF ANY CONSTRUCTION, THE PROJECT SITE MUST BE VIDEO RECORDED BY THE CONTRACTOR WITH ONE COPY SUBMITTED TO RIVER AUTHORITY. THE PRE-CON SITE VIDEO WILL PROVIDE ACCURATE DOCUMENTATION OF EXISTING CONDITIONS.
 - 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ORIGINAL OR BETTER CONDITION AS A RESULT OF DAMAGE DONE DURING THE PROJECT CONSTRUCTION.
 - 16. ANY AND ALL FENCING, INCLUDING ELECTRIC FENCE, WHETHER OR NOT IDENTIFIED ON THE PLANS, MUST BE MAINTAINED AT ALL TIMES. ANY AND ALL DAMAGES DIRECTLY ATTRIBUTED TO THE CONTRACTOR MUST BE REPLACED TO EQUAL OR

- BETTER CONDITIONS AT THE CONTRACTOR'S EXPENSE AND AS APPROVED BY THE RIVER AUTHORITY INSPECTOR. GAPS IN THE FENCING MUST BE PROVIDED AT ALL LOCATIONS WHERE THE SEWER LINE EASEMENT CROSSES FENCING. FENCING REQUIRED TO MAINTAIN LIVESTOCK MUST BE MAINTAINED AT ALL TIMES.
- 17. CONTRACTOR MUST AVOID DAMAGE TO ADJACENT LAND OUTSIDE THE IDENTIFIED CONSTRUCTION LIMITS. ANY CLAIMS DIRECTLY ATTRIBUTED TO THE CONTRACTOR RESULTING FROM HIS STRAYING BEYOND THE CONSTRUCTION LIMITS MUST BE SETTLED BY THE CONTRACTOR TO THE SATISFACTION OF RIVER AUTHORITY AND THE APPROPRIATE LANDOWNER.
- 18. CONTRACTOR MUST MAINTAIN ACCESS FOR PRIVATE INDIVIDUALS AND BUSINESSES AT ALL TIMES. IF NORMAL ACCESS IS DAMAGED DURING CONSTRUCTION, THE CONTRACTOR MUST REPLACE THE ACCESS TO EQUAL OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE AND AS APPROVED BY RIVER
- 19. CONTRACTOR MUST COMPLY WITH TEXAS GOVERNMENT CODE SECTION 2166.303 UNIFORM TRENCH SAFETY CONDITIONS.
- 20. CONTRACTOR SHALL BACKFILL ALL OPEN TRENCHES AT THE FND OF THE DAY. CONTRACTOR SHALL NOT INSTALL MORE PIPE THAN CAN BE COVERED. NO OPEN TRENCHES WILL BE PERMITTED OVERNIGHT. ALL ENDS OF OPEN PIPE SHALL BE PLUGGED OVERNIGHT.
- 21. NO TREES SHALL BE REMOVED AS PART OF THIS PROJECT UNLESS OTHERWISE SPECIFIED IN THE PLANS.
- 22. FOR PORTIONS OF THE CONSTRUCTION THAT ARE WITHIN THE LIMITS OF THE 100-YEAR FLOODPLAIN, THE CONTRACTOR IS REQUIRED TO KEEP THE CHANNEL CLEAR OF POTENTIAL OBSTRUCTIONS TO FLOOD FLOWS. POTENTIAL OBSTRUCTIONS INCLUDE HEAVY CONSTRUCTION EQUIPMENT, TEMPORARY ROADS ACROSS CHANNEL, EXCAVATED MATERIAL, STOCKPILED DEBRIS, AND ALL OTHER ITEMS DEEMED UNACCEPTABLE BY RIVER AUTHORITY. UNDER THREATENING WEATHER CONDITIONS AND WHERE FLOODING IS LIKELY, OBSTRUCTIONS SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR AT NO ADDITIONAL COST TO RIVER AUTHORITY. THE CONTRACTOR ASSUMES ALL RISK FOR UNFINISHED WORK. NO EQUIPMENT OR MATERIALS SHALL BE STOCKPILED IN THE 100-YEAR FLOODPLAIN.
- 23. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING DRAINAGE LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS, NATURAL DRAINAGE, OR PLACED WITHIN THE LIMITS OF EXISTING FLOODPLAIN.
- 24. IF A THREATENED OR ENDANGERED PLANT OR ANIMAL SPECIES AND/OR CULTURAL/ARCHAEOLOGICAL RESOURCES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY AND NOTIFY THE APPROPRIATE

SEWER NOTES:

- 25. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THE WORK. ALL PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON THE PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:
- 25.1. IDENTIFY THE SOURCE OF THE SSO AND ATTEMPT TO ELIMINATE ANY ADDITIONAL SPILLAGE.
- 25.2. NOTIFY RIVER AUTHORITY CONSTRUCTION INSPECTIONS DIVISION AT 210-302-4216 OR 210-219-0130.
- 25.3. ATTEMPT TO FLIMINATE THE SOURCE OF THE SSO. 25.4. CONTAIN SEWAGE FROM THE SSO TO PREVENT CONTAMINATION OF WATERWAYS
- 25.5. CLEAN UP THE SPILL SITE AND REMOVE CONTAMINATED MATERIALS 25.6. DISINFECT THE AREA OF THE SPILL WITH A MIXTURE OF HTH
- CHLORINE AND WATER. 25.7. CLEAN THE AFFECTED SEWER LINE AND REMOVE ANY DEBRIS. 25.8. IDENTIFY AND TRAIN PERSONNEL RESPONSIBLE FOR SPILLAGE PREVENTION AND CONTROL.
- 25.9. NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND RIVER AUTHORITY. 26. TIE-INS OR SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE
- MUST BE COORDINATED WITH THE RIVER AUTHORITY INSPECTOR AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. CONTRACTOR SHALL PROVIDE A SEQUENCE OF WORK AS RELATED O TIE-INS AT NO ADDITIONAL COST TO RIVER AUTHORITY OR
- 27. ELEVATIONS OF THE TOP OF MANHOLES AND INVERTS ARE FOR REFERENCE ONLY, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR THE TOPS OF MANHOLES AND INVERTS TO MATCH THE FINISHED GRADE OF THE PROJECT IMPROVEMENTS (NSPI).
- 28. THE CONTRACTOR SHALL PROVIDE BYPASS PUMPING OF SEWAGE AROUND EACH SEGMENT OF PIPE TO BE REPLACED. CONTRACTOR SHALL HAVE STANDBY PUMPS AVAILABLE TO BYPASS FLOW IN CASE PRIMARY PUMP FAILS. THE CONTRACTOR SHALL PROVIDE A SEQUENCE OF BYPASS PUMPING FOR REVIEW AND APPROVAL BY RIVER AUTHORITY. THE CONTRACTOR SHALL ALSO PROVIDE A DETAILED SKETCH SHOWING THE LOCATION OF BYPASS PUMPING; SPECIFICATIONS FOR THE PUMPING EQUIPMENT; AND TYPE, SIZE, CAPACITY AND NUMBER OF PUMPS REQUIRED TO HANDLE THE PEAK WET WEATHER FLOW.
- 29. CONTRACTOR WILL MAINTAIN SERVICE TO ALL EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION. CONTRACTOR WILL CLEAN ALL DEBRIS. GRAVEL, DIRT. ETC. OUT OF MANHOLES AND FIX ANY STOPPAGES CAUSED BY DEBRIS DURING CONSTRUCTION AT CONTRACTOR'S EXPENSE. ANY DAMAGE TO EXISTING MANHOLES OR SEWER MAIN WILL BE CORRECTED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT DAMAGE TO EXISTING OF NEW RINGS, COVERS, OR CONES FROM EQUIPMENT AND MATERIALS USED OR TAKEN THROUGH THE WORK AREA. IF AN EXISTING OR NEW MANHOLE COVER. RING. OR CONE IS DAMAGED BY THE CONTRACTOR, IT SHALL BE REPLACED AS DIRECTED BY THE RIVER AUTHORITY INSPECTOR. MANHOLES WILL NEED TO BE RESEALED WITH RIVER AUTHORITY APPROVED SEALANT. IF SEAL COATING IS COMPROMISED, CONTRACTOR WILL HAVE MANHOLE RECOATED. CONTRACTOR SHALL RESEAL ALL LEAKS AT CONTRACTOR EXPENSE.
- 30. CONTRACTOR TO ENSURE ALL PLUGS USED TO PLUG SEWER LINES WHILE TESTING THE PROJECT (SUCH AS AIR PLUGS, SCREW TYPE PLUGS. ETC.) ARE LABELED, MARKED OR TAGGED. THE CONTRACTOR SHALL RECORD HOW MANY PLUGS ARE BEING USED, AS WELL AS THE LOCATION AND IDENTIFICATION OF EACH PLUG. CONTRACTOR WILL REPORT TO PROJECT INSPECTOR OF ANY LOST OR UNRESTRAINED PLUGS.

- 31. CONTRACTOR WILL BE HELD LIABLE FOR ANY DAMAGE TO SEWER COLLECTION SYSTEM, STOPPAGES, OVER-FLOWS, OR BACKUPS INTO HOMES CAUSED BY LOST OR RUNAWAY SEWER PLUGS.
- 32. CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO WASTEWATER TREATMENT EQUIPMENT CAUSED BY LOST OR RUNAWAY SEWER PLUGS. CONTRACTOR WILL BE HELD LIABLE
- 33. RIVER AUTHORITY IS NOT RESPONSIBLE FOR ANY ABNORMALITIES ON STUB OUT, INVERT, GRADE OR SLOPE FOR ANY EXISTING MANHOLE TIE-IN OR SERVICE LATERAL
- MANHOLE NOTES:
- 34. THERE SHALL BE 400 FEET MAXIMUM SPACE BETWEEN MANHOLES TO PROVIDE ACCESS FOR CLEANING, A 16-FOOT WIDE GATE WITH A LOCK SHALL ALSO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR FOR ACCESSING THE SANITARY SEWER LINE IN FASEMENTS.
- 35. ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS AT LEAST FOUR (4) INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND IN UNPAVED AREAS. IN

PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH THE

- 36. EVERY THIRD MANHOLE COVER WILL HAVE A 1"HOLE FOR A VENT. VENTING SHALL COMPLY WITH TAC 217.55.
- 37. EACH MANHOLE SHALL HAVE TWO LOCKS INSTALLED TO PREVENT REMOVAL.
- 38. ALL MANHOLES SHALL HAVE A 30"OPENING, WATERTIGHT RINGS AND COVERS, WITH THE RIVER AUTHORITY LOGO AND I/I
- 39. NEW MANHOLE PROTECTIVE COATING LINER MUST BE APPLIED TO ALL MANHOLES. APPLICATION PROCEDURES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION AND PER THE FOLLOWING SPECIFICATIONS:
- 39.1. CONTRACTOR WILL BE RESPONSIBLE FOR MANHOLE SAFETY AND CONFINED SPACE ENTRY SET BY OCCUPATIONAL SAFETY AND HEALTH STANDARDS, 29 CFR 1910.146 APP. E. 39.2. THE CONTRACTOR SHALL NOTIFY THE RIVER AUTHORITY
- UTILITIES INSPECTIONS DEPARTMENT A MINIMUM OF 48 HOURS IN ADVANCE OF THE START OF ANY FIELD SURFACE PREPARATION WORK FOR MANHOLES. 39.3. ALL NEW MANHOLES AND THE EXISTING MANHOLE THAT THE PROPOSED SEWER LINE WILL TIE-IN TO SHALL HAVE THE

INTERIOR WALL PREPPED AS PER MANUFACTURER'S

- RECOMMENDATIONS AND COATED WITH A RIVER AUTHORITY APPROVED PRODUCT 39.4. FOR ALL MANHOLES, APPLY THE CEMENTITIOUS COATING FIRST, FOLLOWED BY THE EPOXY COATING, LAFARGE SEWPERCOAT 200 HR PRODUCT IS THE ONLY APPROVED PRODUCT WHICH COMBINES THE CEMENTITIOUS AND FROXY
- PRODUCT LIST 39.5. CEMENTITIOUS COATING WITH REQUIRED ONE-INCH-THICK APPLICATION: SEE RIVER AUTHORITY APPROVED PRODUCT

COATINGS, UNLESS OTHERWISE LISTED IN THE APPROVED

- 39.6. EPOXY COATING: WITH SPECIFIED THICKNESS APPLICATION: SEE RIVER AUTHORITY APPROVED PRODUCT SHEET.
- 39.7. SPRAY WALL POLYURETHANE SYSTEM REQUIRED THICKNESS 39.8. CONTRACTOR SHALL SUBMIT WARRANTY LETTER ON MANHOLE PROTECTIVE COATING FOR 10 YEARS AFTER FINAL

GROUTING AT INTERIOR AND EXTERIOR PENETRATIONS.

ACCEPTANCE OF PROTECTIVE COATINGS. 40. ANY CONNECTIONS TO EXISTING MANHOLES WILL REQUIRE A CRADLE TO SUPPORT THE INCOMING PIPE. A RUBBER GASKET WILL ALSO BE REQUIRED (CENTERED AT MANHOLE WALL) WITH

- 41. PENETRATION INTO THE MANHOLE WILL BE CORE DRILLED. ANY DAMAGE TO EXISTING MANHOLE WILL BE REPAIRED AT CONTRACTOR'S EXPENSE. IF EXISTING SEWER MANHOLE SEAL COATING IS COMPROMISED, ALL OF THE MANHOLE WILL BE
- 42. IF ANY EXISTING MANHOLES CONNECTED WITH THIS PROJECT ARE FOUND TO HAVE INFILTRATION, THE MANHOLES SHALL BE SEALED AND TESTED AT CONTRACTORS EXPENSE.

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- 43. MANHOLES WITH STUB-OUTS 8-INCH OR LARGER MUST BE LOCATED AT THE END OF ALL SEWER LINES THAT MAY BE EXTENDED IN THE FUTURE. STUB-OUTS SHALL BE PLUGGED.
- 44. MANHOLE COVER INSERTS ARE SHOWN IN RIVER AUTHORITY APPROVED PRODUCT SHEET. INSERTS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE NECESSARY FIELD MEASUREMENTS FOR THE MANUFACTURER PRIOR TO PRODUCTION.
- 45. BEFORE BACK FILLING/COMPACTION/CONCRETE ENCASEMENT, ALL MANHOLF JOINT SECTION RISERS. CONF SECTIONS AND GRADE RING SHALL BE WRAPPED WITH INFL-SHIFLD GATOR WRAP SEALING SYSTEMS. BUTYL ADHESIVE SEALANT WITH A MINIMUM THICKNESS OF 30 MILS. JOINT SEALANT MUST MEET ASTM C923 MASTIC MUST MEETS ASTM C 990 OR BE APPROVED BY THE RIVER AUTHORITY ENGINEER.
- 46. IF CONCRETE THROAT RINGS ARE TO BE INSTALLED THEY MUST BE USED IN CONJUNCTION WITH A UV STABILIZED POLYETHYLENE LINER AND I/I BARRIER. I/I BARRIER MUST MEET THE FOLLOWING ASTM STANDARDS: ASTM D-790/1505 DENSITY OF POLYETHYLENE MATERIALS, ASTM D-1238 MELT FLOW INDEX, ASTM 638 TENSILE STRENGTH@ YIELD (50 mm/mm), ASTM 790 FLEXURAL MODULUS. ASTM 648 HEAT DEFLECTION TEMPERATURE @IGEPAL, ASTM 1693 EsCR,100% IGEPAL /10% IGEPAL.
- 47. A MINIMUM OF TWO AND A MAXIMUM OF FOUR THROAT RINGS WILL BE USED AT EACH MANHOLE FOR ADJUSTMENT.
- 48. DROP MANHOLES SHALL BE REQUIRED WHEN THE INFLOW ELEVATION IS MORE THAN 24 INCHES ABOVE THE OUTFLOW ELEVATION. DROP SHALL BE LOCATED OUTSIDE THE MANHOLE WITH THE FLOWLINE ELEVATION LOCATED BETWEEN THE CENTER LINE AND TOP OF SEWER LINE.
- 49. THERE SHALL BE CONCRETE ENCASEMENT 18 INCHES AROUND MANHOLE RING, AND 28 INCHES AROUND THE GATOR WRAP SEALING SYSTEM. CONCRETE ENCASEMENT SHALL BE CIRCULAR. FORMED LEVEL. AND HAVE A SMOOTH OR BROOM FINISH, SEE SPECIFICATIONS.
- 50. SEWER PIPE CONNECTIONS TO PRECAST MANHOLES SHALL BE APPROVED BY RIVER AUTHORITY, REFER TO APPROVED PRODUCT LIST. SEWER PIPE CONNECTIONS TO MONOLITHIC MANHOLES WILL BE AS SHOWN ON THE STANDARD DETAIL SHEET. ANY CHANGES IN THESE METHODS MUST BE APPROVED BY RIVER AUTHORITY
- 51. ALL PIPE TRENCHING, BEDDING AND BACKFILL SHALL BE DONE IN ACCORDANCE WITH APPROPRIATE ASTM/ANSI SPECIFICATIONS [REFERENCE 30 TAC 217.54: ASTM C-12 (ANSI A106.2) OR ASTM D-2321 (ANSI K65.171)]. ALL COMPACTION SHALL BE TO 98% DENSITY. THERE SHALL BE ONE RANDOM DENSITY TEST PER LIFT FOR EVERY 400 FEET. ALL TESTING SHALL BE IN COMPLIANCE WITH CURRENT TXDOT SPECIFICATIONS.
- 52. A SAND MIGRATION PREVENTION COLLAR SHALL BE INSTALLED WHEN TRANSITIONING FROM SELECT INITIAL BACKFILL T OPTIONAL SELECT INITIAL BACKFILL. A 2-FOOT LONG CLASS B CONCRETE ENCASEMENT BETWEEN THE TWO SHALL BE PROVIDED FOR THE ENTIRE HEIGHT OF THE INITIAL BACKFILL EVERY 180 FEET ALONG PIPE AND 20 FEET FROM WALL OF MANHOLE IN EACH DIRECTION.

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53. UPON REQUEST FROM THE SAN ANTONIO RIVER AUTHORITY, CONTRACTOR SHALL PROVIDE SAMPLE VERIFYING PROPER INSTALLATION OF FLOWABLE BACKFILL, INCLUDING, BUT NOT LIMITED TO CORE SAMPLES.

SANITARY SEWER PIPING:

- 54. THE TYPE AND DESCRIPTION OF THE PIPE CONDUIT IS SHOWN ON THE PLANS. REFER TO RIVER AUTHORITY SPECIFICATIONS FOR MATERIALS, STIFFNESS, AND TYPE.
- 55. THE USE OF ASBESTOS CEMENT PIPE WILL BE PROHIBITED UNDER THIS CONTRACT.
- 56. ALL DUCTILE IRON PIPE USED IN THIS SYSTEM SHALL BE CORROSION PROTECTED ON BOTH THE INTERIOR AND EXTERIOR SURFACES. ALL CORROSION PROTECTION SHALL BE APPLIED AND INSTALLED IN SUCH A MANNER AS TO MAINTAIN A CONTINUOUSLY PROTECTED SURFACE AFTER FINAL PIPE INSTALLATION.
- 57. SEE SPECIFICATIONS FOR PVC SEWER PIPE WITH OVER 14 FEET
- 58. ALL SEWER PIPES SHALL HAVE COMPRESSION OR MECHANICAL JOINTS.
- 59. SAND MIGRATION PREVENTION COLLAR WHEN CHANGING THE INITIAL BACKFILL FROM SELECT INITIAL BACKFILL TO OPTIONAL SELECT INITIAL BACKFILL. A TWO (2) FOOT LONG CLASS B CONCRETE ENCASEMENT OR FIRMLY COMPACTED. CONSOLIDATED CLAY ENCASEMENT BETWEEN THE TWO SHALL BE PROVIDED FOR THE ENTIRE HEIGHT OF THE INITIAL BACKFILL, EVERY 180 FEET ALONG PIPE AND 20 FEET FROM WALL OF MANHOLE IN EACH DIRECTION.

SEWER LINE LOCATION:

- 60. SEWER LINES SHALL BE SIZED AND EXTENDED THROUGH THE LIMITS OF A DEVELOPMENT TO SERVE ADJACENT PROPERTY, WITH MANHOLE AND STUB-OUT AT END OF SEWER LINE.
- 61. IN PHASED CONSTRUCTION OF THOROUGHFARES, THE SEWER LINE SHALL BE EXTENDED THE ENTIRE LENGTH OF PROPOSED
- 62. ALL SANITARY SEWER LINES SHALL BE LOCATED A MINIMUM OF FIVE (5) FEET FROM ANY TREE.
- 63. SIZES AND GRADES FOR SANITARY SEWER SHALL BE AS REQUIRED BY THE RIVER AUTHORITY ENGINEER AND CONSIDERATION SHALL BE GIVEN AS TO POSSIBLE EXTENSIONS FOR FUTURE DEVELOPMENT. NO SANITARY SEWERS, OTHER THAN LATERALS AND FORCE MAINS, SHALL BE LESS THAN EIGHT (8) INCH IN DIAMETER.

SEWER SERVICE LATERALS

- 64. WHEN SEWER LATERALS ARE TO BE CONNECTED TO EXISTING SEWER MAINS AND NO STUB-OUT HAS BEEN EARLIER PROVIDED. THE CONNECTION MUST BE CONDUCTED PER THE RIVER AUTHORITY STANDARD DETAILS AND APPROVED PRODUCT
- 65. REFER TO THE RIVER AUTHORITY APPROVED PRODUCTS LIST FOR ACCEPTABLE FITTINGS AND CONNECTIONS.
- 66. ALL RESIDENTIAL SERVICE LATERALS SHALL BE SDR 26 PVC WITH RATING OF 115 PSI OR 160 PSI, DETERMINED BY RIVER AUTHORITY SPECIFICATION. LINE SHALL BE EXTENDED TO THE PROPFRTY LINE AT (6 x 6) CAPPED AND SEALED. ATTACH SEWER BURIAL TAPE TO THE END OF ALL SEWER LATERALS AND BRING UP TO THE GROUND LEVEL FOR MARKER (GREEN). (SEE HOUSE LATERALS DETAILS).

- 67. THE SIZES AND LOCATIONS OF LATERALS SHALL BE DESIGNATED AS FOLLOWS UNLESS OTHERWISE DIRECTED BY THE RIVER AUTHORITY ENGINEER:
- 68. IN GENERAL, FOR SINGLE FAMILY DWELLING, THE LATERAL SIZE SHALL BE A SIX (6) INCH MINIMUM. HOUSE LATERALS SHALL BE INSTALLED SO THAT CLEANOUTS SHALL HAVE A TWO (2) FOOT SEPARATION FROM DRIVEWAYS, AND SHALL HAVE A NINE (9) FOOT SEPARATION FROM THE WATER SERVICE. THE SERVICE SHALL THEN BE EXTENDED AT A FORTY-FIVE (45) DEGREE ANGLE TO FOUR (4) FEET ABOVE THE FINISHED GRADE AND CAPPED. USE SEWER BURIAL TAPE TO MARK ALL SEWER SERVICE LATERALS.
- 69. MULTIPLE UNITS. APARTMENTS, LOCAL RETAIL AND COMMERCIAL SIX (6) INCH MINIMUM, MANUFACTURING AND INDUSTRIAL -EIGHT (8) INCH MINIMUM, OR LARGER AS REQUIRED.

TRAPS AND INTERCEPTORS (FOG - TECQ)

70. UNIFORM PLUMBING CODE, CITY OF SAN ANTONIO BUILDING INSPECTIONS DEPARTMENT. ALL COMMERCIAL BUILINGS WILL HAVE TRAPS (FOG -TECQ).

OIL SEPARATORS

71. WHICH INCLUDE OIL SEPARATOR- GASOLINE SERVICE STATIONS. CAR WASHES, GARAGES, DRY CLEANERS, CHEMICAL PLANTS, GAS PLANTS, HIDE PROCESSORS, TESTING LABORATORIES, OR ANY PLACE WHERE OIL OR SOLVENTS MAY BE INTRODUCED. INTO THE SANITARY SEWER SYSTEM. THE SIZING CRITERIA FOR OIL SEPARATORS SHALL BE BASED ON THE G.P.M. RATE OF ALL FIXTURES, APPLIANCE OR APPURTENANCE, DRAINING INTO SEWER SYSTEM.

SAND INTERCEPTORS

72. SAND INTERCEPTORS SHALL BE INSTALLED IN THE SEWER SYSTEM OF THE FOLLOWING ESTABLISHMENTS, GARAGES, CAR WASHES, SERVICE STATIONS, OR ANY PLACE OF BUSINESS WHERE HEAVY SOLIDS MAY BE INTRODUCED INTO THE SANITARY SEWER SYSTEM. THE SIZING CRITERIA FOR A SAND INTERCEPTOR SHALL BE BASED ON THE REQUIRED G.P.M. x 12 MINUTE RETENTION TIMES TO OBTAIN THE TANK SIZE IN GALLONS CAPACITY.

AUTOMATIC CAR WASHES

73. WITH HIGH PRESSURE SPRAYS AND /OR BRUSHES INSTALL A 50 G.P.M. INTERCEPTOR.MINIMUM. FOR A 4-BAY VEHICLE WASH. THE SIZE OF THE INTERCEPTOR SHALL INCREASE 10 G.P.M. FOR FACH ADDITIONAL WASH BAY OVER 4. SINGLE BAY OR PORTABLE WASHER TYPE VEHICLE WASHES SHALL INSTALL A 20 GPM INTERCEPTOR MINIMUM.

NEUTRALIZING DEVICES

74. IN NO CASE SHALL CORROSIVE LIQUIDS, SPENT ACIDS, OR OTHER HARMFUL CHEMICALS WHICH MIGHT DESTROY OR INJURE A DRAIN, SEWER, SOIL, OR WASTE PIPE, OR WHICH MIGHT CREATE NOXIOUS OR TOXIC FUMES, DISCHARGE INTO THE SANITARY SEWER SYSTEM WITHOUT BEING THOROUGHLY NEUTRALIZED BY PASSING THROUGH A PROPERLY CONSTRUCTED AND ACCEPTABLE NEUTRALIZING DEVICE. SUCH DEVICE SHALL BE PROVIDED WITH A SUFFICIENT INTAKE OF NEUTRALIZING MEDIUM, CONSISTING OF LIMESTONE OR MARBLE CHIPS, SO AS TO MAKE ITS CONTENTS NON-INJURIOUS BEFORE BEING DISCHARGED INTO THE SANITARY SEWER SYSTEM.

- 75. PUBLIC AND PRIVATE LAUNDROMATS AND COMMERCIAL LAUNDRIES SHALL INSTALL A LINT TRAP FOLIPPED WITH A CONVENIENTLY LOCATED AND EASILY REMOVABLE WIRE BASKET OR OTHER SIMILAR DEVICE THAT WILL PREVENT THE STRINGS. RAGS, BUTTONS, OR OTHER PROHIBITED MATERIAL FROM ENTERING THE SANITARY SEWER SYSTEM. THE BASKET OR OTHER SIMILAR DEVICE SHALL PREVENT PASSAGE TO THE SANITARY SEWER SYSTEM OF SOLIDS GREATER THAN 1/2"INCH IN DIAMETER. THE LINT TRAP SIZE SHALL BE BASED ON THE TOTAL G.P.M. OF ALL FIXTURES, APPLIANCES AND APPURTENANCES DRAINING TO IT IN LIEU OF A LINT TRAP, A LINT INTERCEPTOR MAY BE INSTALLED. THE INTERCEPTOR SHALL BE SIZED AND DESIGNED BY A TEXAS REGISTERED ENGINEER WITH HIS SEAL AND SIGNATURE ON THE DRAWINGS.
- SILVER RECOVERY UNITS
- 76. SILVER RECOVERY UNITS SHALL BE INSTALLED IN WASTE LINE(S) LEADING FROM X- RAY PROCESSING, PHOTOGRAPHIC PROCESSING, AND /OR ANY PROCEDURES IN ESTABLISHMENT SUCH AS MEDICAL LABS, DENTAL LABS, PHOTO FINISHERS, PRINTERS, GRAPHIC ARTS PRODUCTION FACILITIES, HOSPITA FACILITIES, VETERINARY HOSPITALS, OR OTHER ESTABLISHMENTS WHERE SILVER MAY BE INTRODUCED INTO THE SANITARY SEWER

SOLIDS INTERCEPTORS

WASTEWATER.

77. SOLIDS INTERCEPTORS SHALL BE INSTALLED WHEN PRE-TREATMENT OF WASTE STREAMS IS NECESSARY TO PREVENT SOLIDS GREATER THAN 1/2" IN DIAMETER, WHICH MAY CAUSE LINE STOPPAGE FROM ENTERING THE SANITARY SEWER SYSTEM.

INTERCEPTORS

- 78. INTERCEPTORS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN APPROVED BY THE SAN ANTONIO RIVER AUTHORITY CONSISTING OF A MINIMUM OF TWO COMPARTMENTS WITH FITTINGS DESIGNED FOR GREASE RETENTION AND PROVIDE
- 79. THERE SHALL BE AN ADEQUATE NUMBER OF MANHOLES TO PROVIDE ACCESS FOR CLEANING ALL AREAS OF AN INTERCEPTOR, ONE MANHOLE PER TRAP COMPARTMENT. MANHOLE COVERS SHALL BE GAS TIGHT IN CONSTRUCTION HAVING A MINIMUM OPENING DIMENSION OF 20 INCH INCHES

FOR A MINIMUM OF TWELVE (12) MINUTES RETENTION.

- 80. IN AREAS WHERE TRAFFIC MAY EXIST THE INTERCEPTOR SHALL BE DESIGNED TO HAVE ADEQUATE REINFORCEMENT AND COVER.
- 81. ALL INTERCEPTORS SHALL HAVE THE SIZE OF THE INTERCEPTOR (IN GALLON PER MINUTE OR GALLON CAPACITY) PERMANENTLY AFFIXED TO THE DEVICE.

INTERCEPTOR SHALL HAVE A MINIMUM STRENGTH OF 3000 PSI.

COLLECTION SYSTEM. THE WELL SHALL BE PERPENDICULAR TO

THE EFFLUENT LATERAL TO ALLOW VISUAL OBSERVATION OF

THE FLOW STREAM AND PROVIDE FOR SAMPLING OF

83. AN EFFLUENT SAMPLING WELL ON ALL INTERCEPTORS SHALL BE REQUIRED. THE SAMPLE WELL SHALL HAVE A RISER A MINIMUM OF 6" INCHES IN DIAMETER AND SHALL BE INSTALLED AFTER THE CONFLUENCE OF ALL WASTE STREAMS FROM THE FACILITY AND PRIOR TO DISCHARGING INTO SANITARY SEWER

82. ALL CONCRETE UTILIZED IN THE CONSTRUCTION OF

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WATERTIGHT TESTING (24 HOURS):

- 84. ALL INTERCEPTORS SHALL BE WATER TESTED OUT AT JOB SITE AFTER BEING INSTALLED (PLUG BOTH ENDS AND FILL TO TOP OF INTERCEPTOR), INTERCEPTOR SHALL SHOW NO LEAKAGE FROM SECTION SEAMS. PINHOLES. OR OTHER IMPERFECTIONS ANY LEAKAGE IS CAUSE FOR REJECTION. WHEN LEAKAGE OCCURS, ADDITIONAL WATER TESTING SHALL BE MADE. AFTER CORRECTING MEASURE TEST, REPORTS SHALL SHOW TOTAL NUMBER OF INTERCEPTERS TESTED. WHEN LEAKAGE OCCURS, CORRECTIVE MEASURES TAKEN SHALL BE REPORTED BY THE RIVER AUTHORITY INSPECTORS. RIVER AUTHORITY INSPECTORS SHALL RECORD IN DAILY LOG WITH PROJECT NAME, DATE IT WAS TESTED AND COMPLETED.
- 84.1. MANHOLES WILL BE REQUIRED ON SIX (6) INCH AND LARGER LATERALS WHERE THEY CONNECT TO THE MAIN. 84.2 LATERALS WILL NOT BE ATTACHED TO SEWER MAINS THAT
- ARE DEEPER THAN TWELVE (12) FEET. 84.3. FITTINGS ARE NOT PERMITTED ON LATERALS BETWEEN THE WYE AND THE PROPERTY LINE. 84.4. DEEP CUT OR DROP CONNECTIONS SHALL NOT BE
- 84.5. A MINIMUM OF ONE (1) LATERAL PER BUILDING SHALL BE REQUIRED. ALSO, A MINIMUM OF ONE (1) LATERAL PER RESIDENTIAL LOT SHALL BE REQUIRED. DUPLEXES SHALL HAVE TWO (2) LATERALS THAT SHALL BE INDEPENDENTLY ATTACHED TO THE MAIN.
- REQUIREMENTS OF TAC CHAPTER 217.53, LATEST REVISION, SDR 26 150 PSI, OR DUCT IRON PIPE, CONCRETE FNCASMENT. 85. WHERE REQUIRED CONCRETE ENCASEMENT SHALL BE PLACED

FOR FULL WIDTH OF THE TRENCH TO A PLAIN SIX (6) INCHES ABOVE THE TOP OF THE PIPE WITH PAY UNITS AS SHOWN ON

84.6. ALL SEWER LATERAL CROSSING WATER MAINS OR WATER

SERVICE LINES SHALL CONFORM TO THE SAME

- THE STANDARD DETAIL SHEET. 86. A MINIMUM OF FOUR (4) FEET OF COVER IS TO BE MAINTAINED OVER THE SANITARY SEWER MAIN AND LATERALS AT GRADE.
- 87. WHERE POROUS MATERIAL INCLUDING "SUBGRADE FILLER" IS USED FOR BACKFLL IN THE BEDDING AND INITIAL BACKFILL ZONES, REFER TO SPECIFICATIONS SEC. 33-05-05 FOR SPACING OF SEEPAGE RETAINERS. RETAINERS SHALL CONSIST OF CLASS "D" CONCRETE ENCASEMENT OR FIRMLY COMPACTED. CONSOLIDATED CLAY ENCASEMENT, THE RETAINERS SHALL EXTEND FROM THE BOTTOM OF THE TRENCH TO THE TOP OF THE GRANULAR MATERIAL FOR THE ENTIRE TRENCH WIDTH. ENCASEMENT SHALL BE 24 INCHES LONG. NO EXTRA PAY

OTHERWISE CONCRETE ENCASEMENT IS REQUIRED.

BLASTING

- 88. BLASTING SHALL NOT BE ACCEPTABLE.
- **TESTING** 89. TESTING SHALL NOT BE CONDUCTED UNTIL ALL OTHER UTILITIES WITHIN THE VICINITY OF THE SANTIARY SEWER ARE FULLY INSTALLED.

- THE FOLLOWING SEQUENCE WILL BE STRICTLY ADHERED TO:
- A. PULL MANDREL AFTER 30 DAYS OF INSTALLATION B. PERFORM AIR TEST C. PULL WIPER (AFTER STREET HAS BEEN ASPHALTED), AS APPLICABLE D. VACUUM TEST ALL MANHOLES WITHIN THE PROJECT

E. CCTV- ALL OF THE NEW LINES AND PAN/TILT ALL SERVICE

- LATERALS TO 6"X6" CLEAN OUT. CONTRACTOR SHALL FLOOD ALL LINES BEFORE CCTV. AT FND OF PROJECT, CONTRACTOR SHALL SUBMIT FIELD COPY PLAN AND PROFILES SHOWING AS-BUILT WORK, CCTV DVD, AND COMPACTION DENSITY REPORTS FOR MAIN SEWER LINES AND
- WARRANTY LETTERS FOR MATERIAL AND WORKMANSHIP FOR 12 MONTHS AFTER FINAL ACCEPTANCE. 90. ALL SEWER LINES MUST BE TESTED IN ACCORDANCE WITH THE

ALL SERVICE LATERALS, CONTRACTOR SHALL ALSO ISSUE

CONDUCTED AFTER FINAL BACKFILL HAS BEEN IN PLACED AT B. 217.57, OR RIVER AUTHORITY SPECIFICATIONS INFILTRATION AND OR EXFILTRATION AND OR LOW-PRESSURE AIR TEST.

C. 217.58 OR RIVER AUTHORITY SPECIFICATIONS: ALL MANHOLES

A. 217.57; DEFLECTION TEST FOR FLEXIBLE AND SEMI-RIGID PIPE

AND WET WELLS MUST BE TESTED SEPARATELY AND INDEPENDENTLY OF THE COLLECTION LINES. D. IN THE EVENT THAT TESTING REQUIREMENTS CONFLICT, THE

LATEST TCEQ DESIGN CRITERIA SHALL BE USED.

- 91. SEWER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE. 92. SANITARY SEWER CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WHICH REQUIRE PENETRATION INTO THE MANHOLE WILL BE CORE DRILLED. ANY DAMAGE TO EXISTING MANHOLE WILL BE REPLACED AT CONTRACTOR'S EXPENSE AND WILL REQUIRE SUCCESSFUL TESTING OF THE EXISTING MANHOLE IN ACCORDANCE WITH THE RIVER AUTHORITY SPECIFICATIONS. THEY MUST HAVE A PROTECTIVE COATING SPECIFIED IN THE RIVER AUTHORITY APPROVED PRODUCTS LIST, COATING WILL BE MINIMUM OF 200 MILS THICKNESS DEPENDING ON EXISTING CONDITIONS, TO PREVENT INFRASTRUCTURE INFILTRATION,
- 93. AFTER CONSTRUCTION, TESTING WILL BE DONE BY PAN/TILT TV CAMERA BY THE CONTRACTOR AND OBSERVED BY THE INSPECTOR, WASTEWATER ENGINEERING PERSONNEL AND CONTRACTOR AS CAMERA IS RUN THROUGH THE LINES. PAN/TILT ALL 6" SERVICE LATERALS TO 6"X6" STUB-OUT VIDEOS MUST INCLUDE SUBDIVISION NAME, MANHOLE NUMBER SERVICE LATERAL STATION NUMBER, FLOW DIRECTION, LOCATION ANY ABNORMALITIES, SUCH AS BROKEN PIPE OR MISALIGNED, JOINT, GRAVEL, DIRT, MUST BE CLEANED OUT, REPLACE AT CONTRACTOR'S EXPENSE. NEW SEWER SYSTEM WILL BE FLOODED WITH H20 BEFORE BEING TV. ALL SEWER LINES MUST BE PRESSURE CLEANED TO INCLUDE SERVICE LATERALS 6"INCH TO STUB-OUT. ALL VIDEOS SHALL BE SUBMITTED IN

DVD FORMAT WITH WRITTEN REPORTS.

FOLLOW MANUFACTURER'S RECOMMENDATION ON PROTECTIVE

- 94. A COPY OF ALL TESTING REPORTS INCLUDING BACKFILL COMPACTION TESTS SHALL BE FORWARDED TO THE RIVER AUTHORITY.
- 95. DENSITY TEST WILL BE REQUIRED ON ALL SANITARY SEWER TRENCHES INCLUDING SERVICE LATERALS. SERVICE LATERALS TO BE CHOSEN RANDOMLY BY FIFLD INSPECTOR DENSITIES ON SERVICE LATERAL SHALL NOT EXCEED 25% OF TOTAL NUMBER OF SERVICE.

EXCAVATION

- 96. 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 CONTRACTORS 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 OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIALLY, CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND
- AROUND TRENCH EXCAVATION. 97. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT STOCKPILE ANY WASTE MATERIAL IN THE 100 YEAR

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SANANTONIO RIVER AUTHORITY

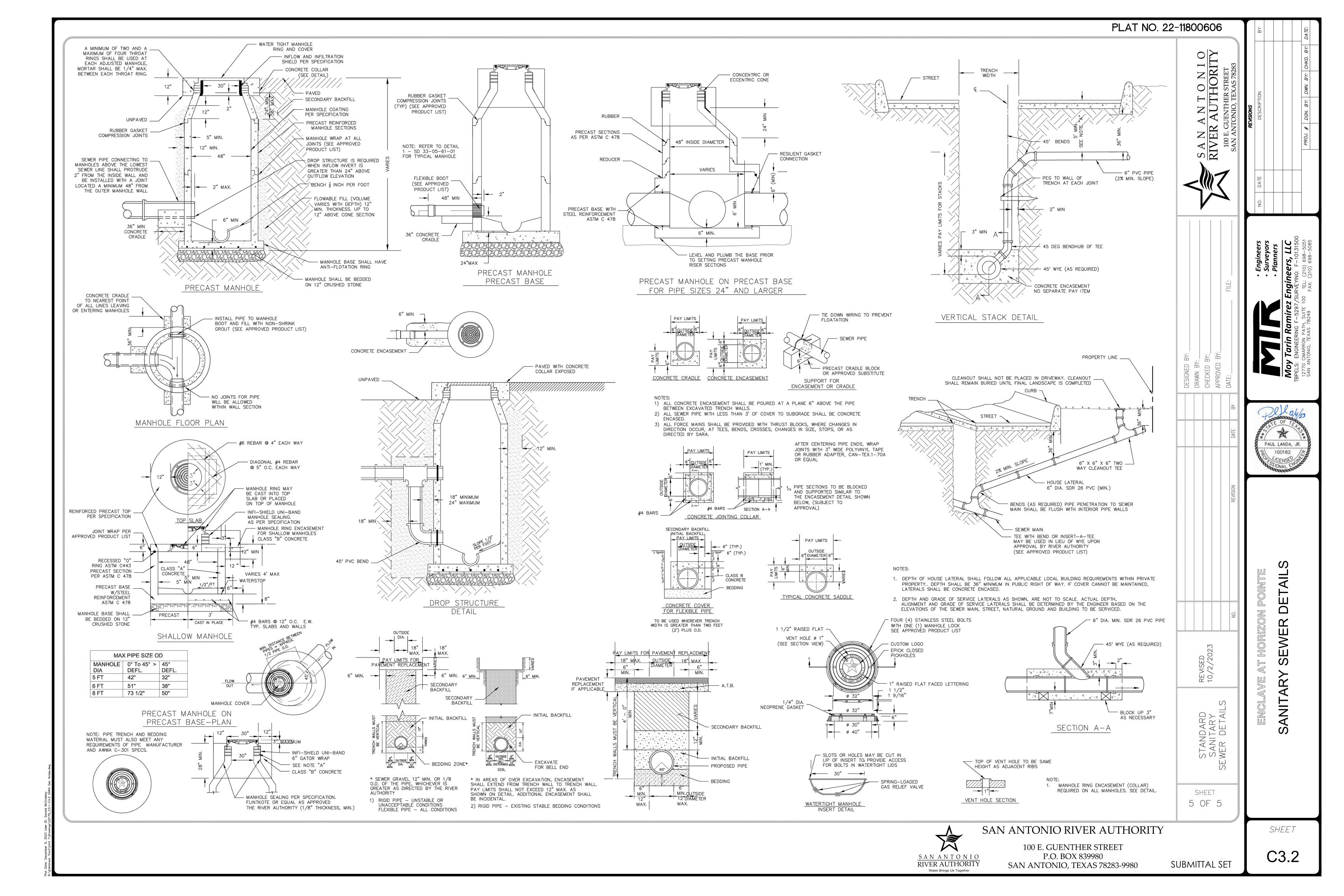
SAN ANTONIO RIVER AUTHORITY

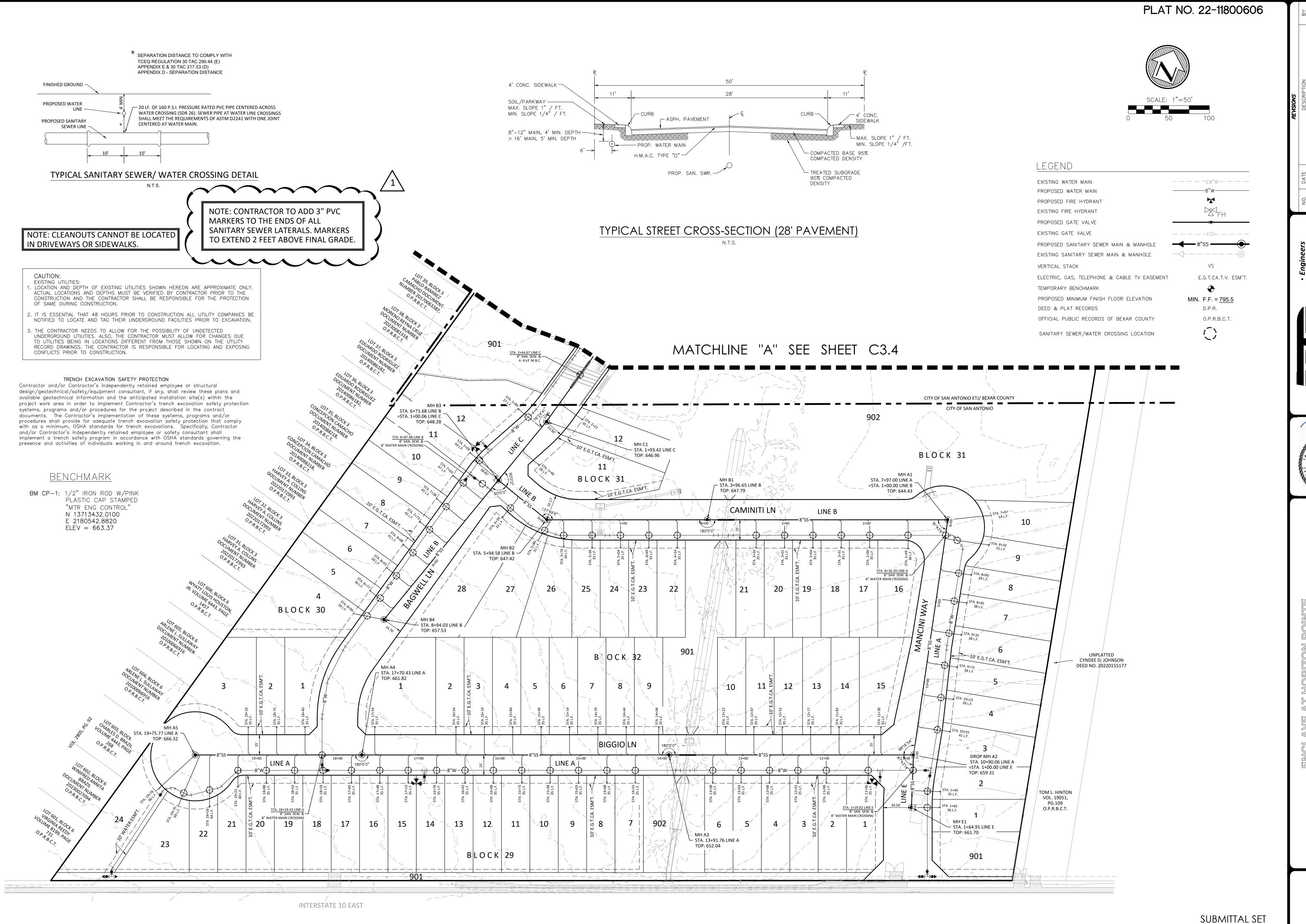
100 E. GUENTHER STREET P.O. BOX 839980 SAN ANTONIO, TEXAS 78283-9980

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DATE

DESCRIPTION

02/01/24 ADDED NOTE (PER SARA) FOR LATERAL PVC MARKERS

DM

PROJ. # DGN. BY: DWN. BY: CHKD. BY: DATE

• Surveyors
• Planners
• Planners

irez Engineers, LLC
5297/SURVEYING: F-10131500
5297/SURVEYING: F-10131500
5297/SURVEYING: F-10131500
5297/SURVEYING: F-10131500

Moy Tarin Ramirez
TBPELS: ENGINEERING F-5297,
12770 CIMARRON PATH, SUITE 11
SAN ANTONIO, TEXAS 78249

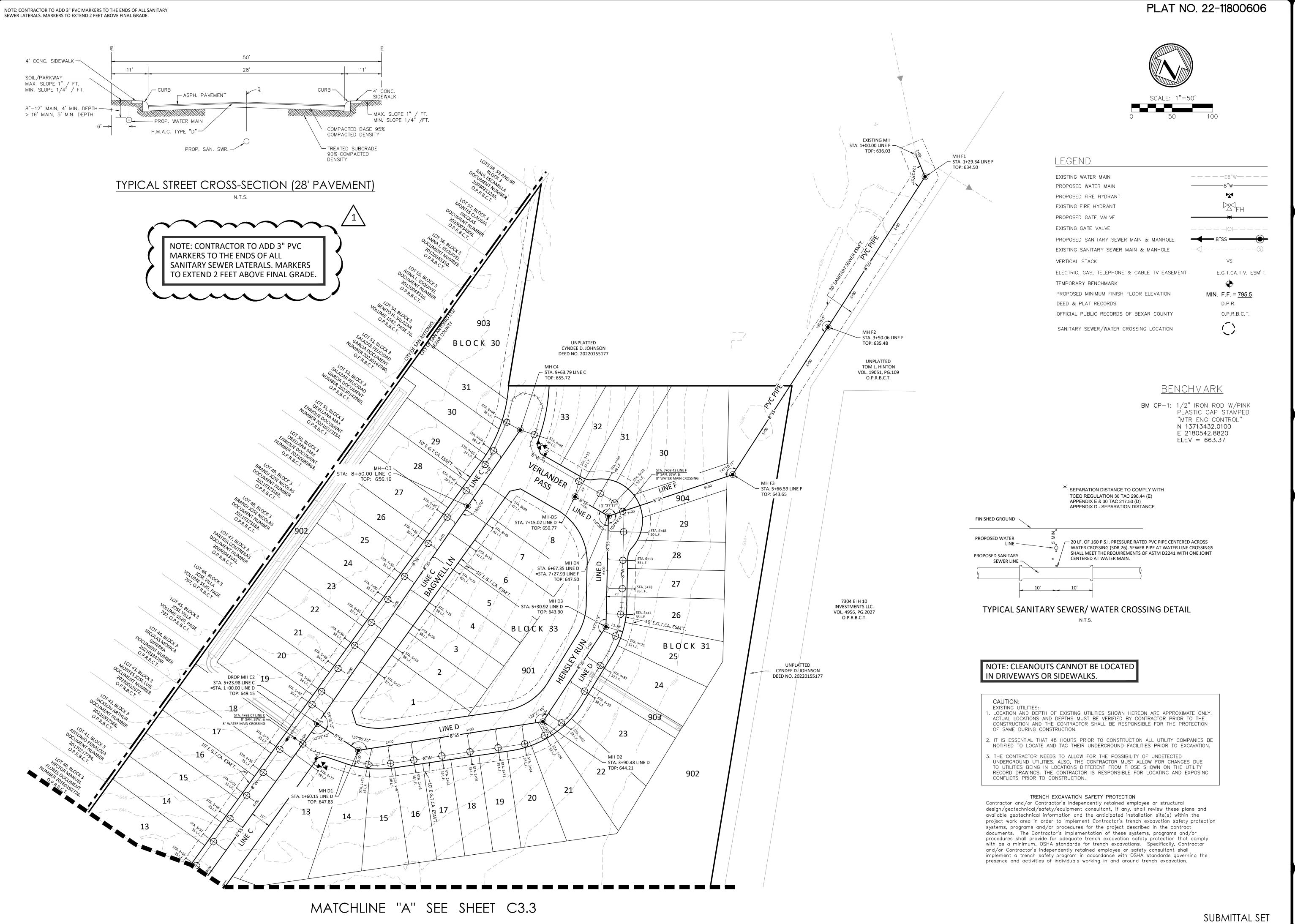
PAUL LANDA, JR.

100182

CENSE
ONAL ENGINE

OVERALL SANITARY SEWER

SHEET



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DESCRIPTION
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DIVIDIGUE
DESCRIPTION
DES

• Surveyors
• Planners
Engineers, LLC
SURVEYING: F-10131500

Moy Tarin Ramirez Eng RPELS: ENGINEERING F-5297/SURVE 12770 CIMARRON PATH, SUITE 100 TE SAN ANTONIO, TEXAS 78249 FA

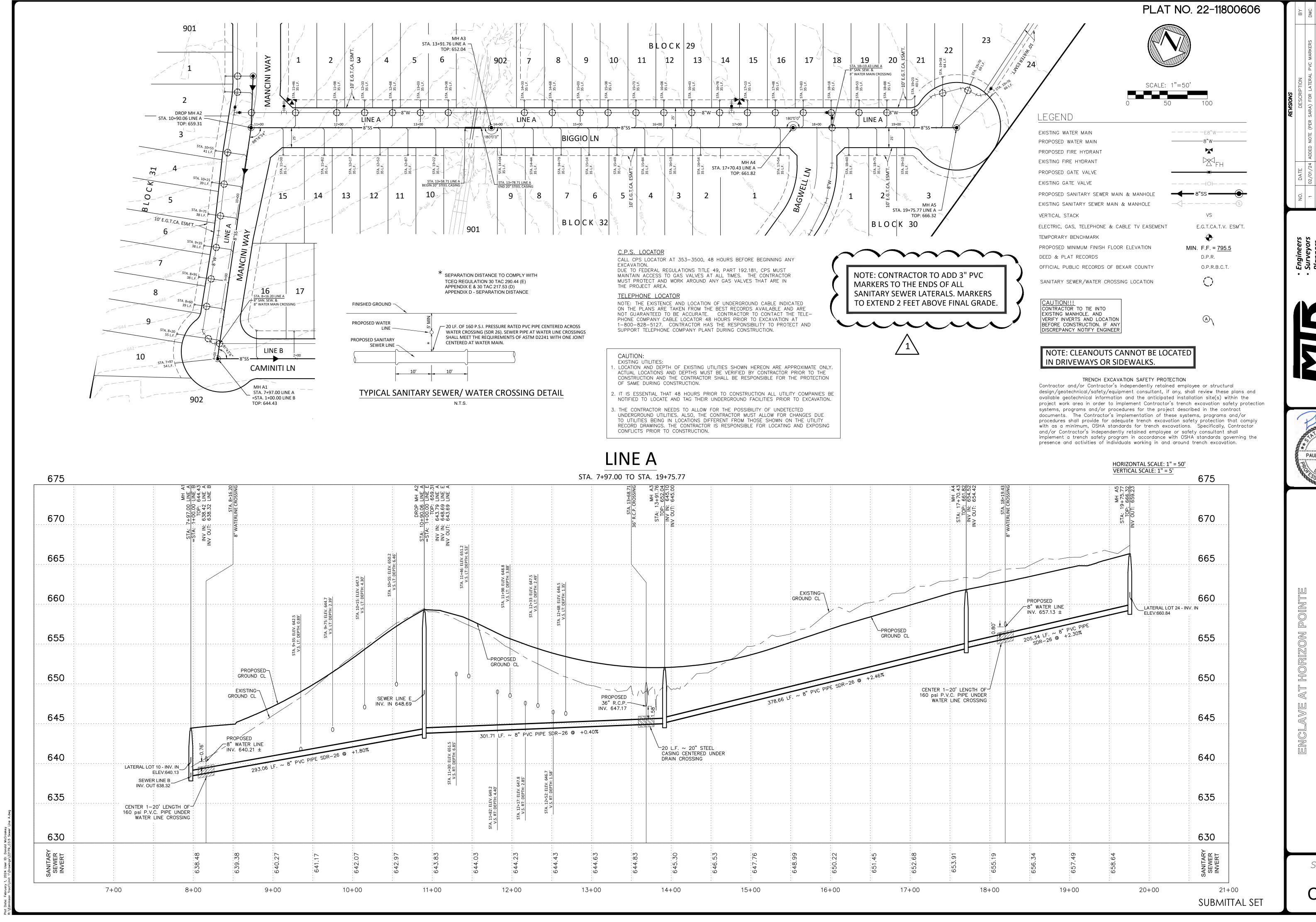
PAUL LANDA, JR.

100182

CENSE
SONAL ENGINEERS

OVERALL SANITARY SEWER

SHEET



NO. DATE

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DM

PROJ. # DGN. BY: DWN. BY: CHKD. BY: DATE

• Surveyors
• Planners
nirez Engineers, LLC
-5297/SURVEYING: F-10131500

Moy Tarin Ramirez Eng TBPELS: ENGINEERING F-5297/SURVI

PAUL LANDA, JR.

100182

CENSE
ONAL ENGINEERS

ANITARY SEWER PLAN & PROFIL

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* SEPARATION DISTANCE TO COMPLY WITH TCEQ REGULATION 30 TAC 290.44 (E) APPENDIX E & 30 TAC 217.53 (D) APPENDIX D - SEPARATION DISTANCE

FINISHED GROUND -PROPOSED WATER 20 LF. OF 160 P.S.I. PRESSURE RATED PVC PIPE CENTERED ACROSS WATER CROSSING (SDR 26). SEWER PIPE AT WATER LINE CROSSINGS SHALL MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE JOINT PROPOSED SANITARY CENTERED AT WATER MAIN. SEWER LINE

TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

HORIZONTAL SCALE: 1" = 50'

645

640

635

615

SANITAR) SEWER INVERT

9+00

VERTICAL SCALE: 1" = 5'

SEWER LINE D

_INV. IN 636.17

_SEWER LINE D INV. IN 631.27

8+00

STA: 7+27. =STA: 6+67. INV IN 636. INV IN 631. NV OUT: 631.

PROPOSED-

PROPOSED

8" WATER LINE

INV. 641.89 ±

161.34 LF. ~ 8" PVC PIPE SDR-26 @ +0.40%

CENTER 1-20' LENGTH OF

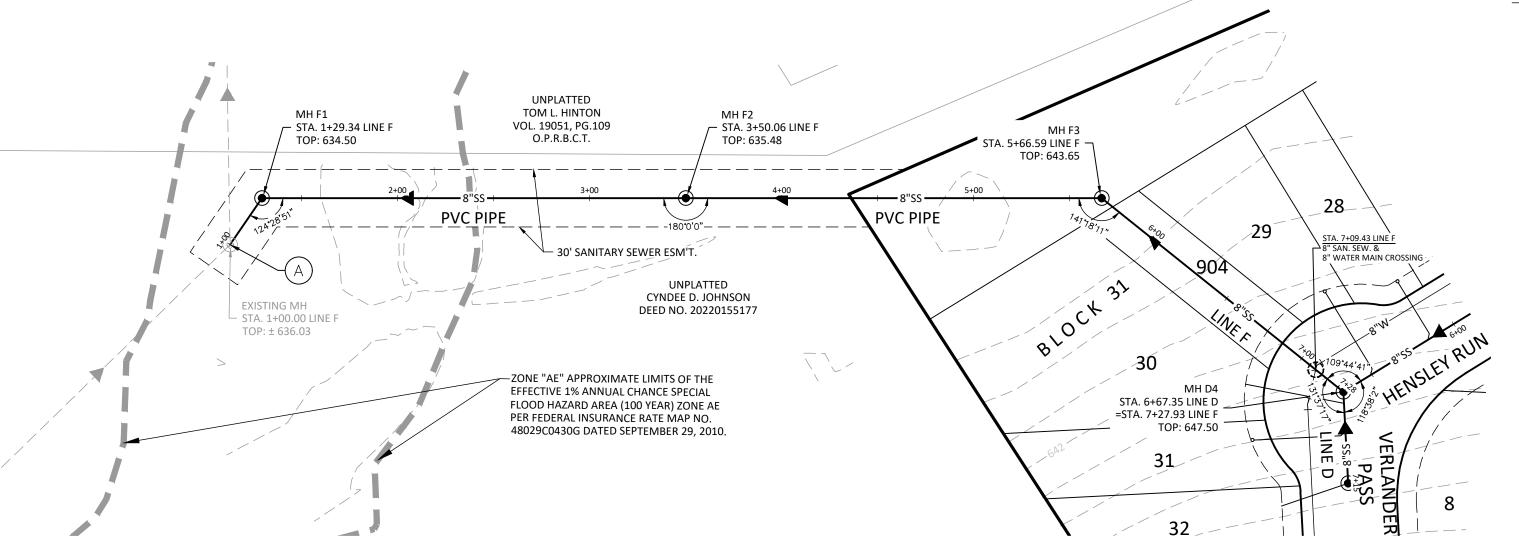
160 psi P.V.C. PIPE UNDER

6+00

WATER LINE CROSSING

7+00

GROUND CL



MH F2 3+50.06 635.48 629.56 629.56

220.71 LF. ~ 8" PVC PIPE SDR-26 @ +0.40%

3+00

- 29.34 LF. ~ 8" PVC PIPE SDR-26 @ +0.40%

-EXISTING 27" V.C.P. SANITARY SEWER MAIN

(SEWER ELEVATIONS OBTAINED FROM SARA

2+00

RECORD DRAWINGS DATED 08/21/1987)

CONTRACTOR SHALL VERIFY EXISTING INVERTS PRIOR TO CONSTRUCTION

AND NOTIFY ENGINEER OF ANY

DISCREPANCIES FOUND

INV IN: 625.20 INV OUT: 624.08 LINE F

STA. 1+12.31 TO STA. 7+27.93

216.53 LF. ~ 8" PVC PIPE SDR-26 @ +0.40%

5+00

EXISTING-

GROUND CL

4+00

MH F3 5+66.59 643.65 630.53 630.43

LEGEND

----F8"W----EXISTING WATER MAIN PROPOSED WATER MAIN PROPOSED FIRE HYDRANT EXISTING FIRE HYDRANT PROPOSED GATE VALVE EXISTING GATE VALVE PROPOSED SANITARY SEWER MAIN & MANHOLE EXISTING SANITARY SEWER MAIN & MANHOLE VERTICAL STACK VS ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT E.G.T.CA.T.V. ESM'T. TEMPORARY BENCHMARK PROPOSED MINIMUM FINISH FLOOR ELEVATION MIN. F.F. = <u>795.5</u> DEED & PLAT RECORDS D.P.R. OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY O.P.R.B.C.T. SANITARY SEWER/WATER CROSSING LOCATION

CAUTION!!!
CONTRACTOR TO TIE INTO EXISTING MANHOLE. AND VERIFY INVERTS AND LOCATION BEFORE CONSTRUCTION. IF ANY DISCREPANCY NOTIFY ENGINEER

C.P.S. LOCATOR

CALL CPS LOCATOR AT 353-3500, 48 HOURS BEFORE BEGINNING ANY DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

NOTE: THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELE— PHONE COMPANY CABLE LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1-800-828-5127. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

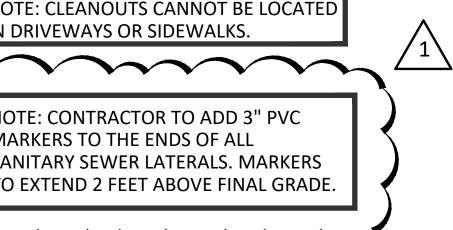
Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA 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 OSHA standards governing the presence and activities of individuals working in and around trench excavation.

CAUTION: EXISTING UTILITIES:

- . LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY CONTRACTOR PRIOR TO THE CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF SAME DURING CONSTRUCTION.
- 2. IT IS ESSENTIAL THAT 48 HOURS PRIOR TO CONSTRUCTION ALL UTILITY COMPANIES BE NOTIFIED TO LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION.
- 3. THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED UNDERGROUND UTILITIES. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING CONFLICTS PRIOR TO CONSTRUCTION.

NOTE: CLEANOUTS CANNOT BE LOCATED IN DRIVEWAYS OR SIDEWALKS.

NOTE: CONTRACTOR TO ADD 3" PVC MARKERS TO THE ENDS OF ALL SANITARY SEWER LATERALS. MARKERS TO EXTEND 2 FEET ABOVE FINAL GRADE



SHEET

PAUL LANDA, JR

100182

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ANITARY

S

WER F

C3.6

660

650

645

640

635

630

625

620

615

SEWER LINE F

INV. IN 628.35

1+00

SUBMITTAL SET



LEGEND

STA. 8+94.03 LINE B 4 TOP: 657.53

1 1 8" WATER MAIN CROSSING

NOTE: CONTRACTOR TO ADD 3" PVC

SANITARY SEWER LATERALS. MARKERS

TO EXTEND 2 FEET ABOVE FINAL GRADE.

LATERAL LOT 4 - INV. IN

ELEV:653.06

9+00

10+00

MARKERS TO THE ENDS OF ALL

HORIZONTAL SCALE: 1" = 50' VERTICAL SCALE: 1" = 5'

STA. 6+71.68 LINE B 12 =STA. 1+00.06 LINE C

TOP: 648.28

DROP 71.68 00.00 TOP: 35.84 38.99 35.74

IN NI IN NI IN OCT

PROPOSED ⊢8" WATER LINE

INV. 642.95 ±

-CENTER 1-20' LENGTH OF

160 psi P.V.C. PIPE UNDER WATER LINE CROSSING

8+00

SEWER LINE C

INV. OUT 635.74

7+00

— STA. 5+94.58 LINE B

EXISTING WATER MAIN ----E8"W--------8"W-----PROPOSED WATER MAIN PROPOSED FIRE HYDRANT EXISTING FIRE HYDRANT PROPOSED GATE VALVE EXISTING GATE VALVE PROPOSED SANITARY SEWER MAIN & MANHOLE EXISTING SANITARY SEWER MAIN & MANHOLE

VS VERTICAL STACK ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT E.G.T.CA.T.V. ESM'T. TEMPORARY BENCHMARK

MIN. F.F. = <u>795.5</u> PROPOSED MINIMUM FINISH FLOOR ELEVATION DEED & PLAT RECORDS OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY

SANITARY SEWER/WATER CROSSING LOCATION

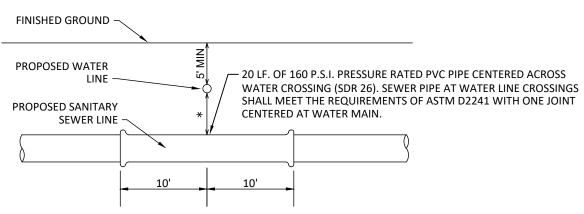
CAUTION!!! CONTRACTOR TO TIE INTO EXISTING MANHOLE. AND VERIFY INVERTS AND LOCATION BEFORE CONSTRUCTION. IF ANY DISCREPANCY NOTIFY ENGINEER

D.P.R.

0.P.R.B.C.T.

NOTE: CLEANOUTS CANNOT BE LOCATED IN DRIVEWAYS OR SIDEWALKS.

> * SEPARATION DISTANCE TO COMPLY WITH TCEQ REGULATION 30 TAC 290.44 (E) APPENDIX E & 30 TAC 217.53 (D) APPENDIX D - SEPARATION DISTANCE



TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL N.T.S.

C.P.S. LOCATOR

CALL CPS LOCATOR AT 353-3500, 48 HOURS BEFORE BEGINNING ANY DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

NOTE: THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELE— PHONE COMPANY CABLE LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1-800-828-5127. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

- **EXISTING UTILITIES:**
- LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY.

 ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY CONTRACTOR PRIOR TO THE

 CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF SAME DURING CONSTRUCTION.
- 2. IT IS ESSENTIAL THAT 48 HOURS PRIOR TO CONSTRUCTION ALL UTILITY COMPANIES BE NOTIFIED TO LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION. 3. THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED
- UNDERGROUND UTILITIES. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING CONFLICTS PRIOR TO CONSTRUCTION.

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 for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA 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 OSHA standards governing the presence and activities of individuals working in and around trench excavation.

SUBMITTAL SET



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SHEET

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C3.7

9

670

665

660

645

635

630

625

LATERAL LOT 10 - INV. IN

ELEV:640.13

SEWER LINE A
INV. IN 638.42

1+00

1+00.00 7+97.00 TOP: 638.32

-19 -

STA. 7+97.00 LINE A

=STA. 1+00.00 LINE B

TOP: 644.43

-20_

LINE B

PROPOSED 36" R.C.P.-

INV. 643.14

20 L.F. ~ 20" STEEL CASING CENTERED UNDER

3+00

DRAIN CROSSING

296.65 LF. ~ 8" PVC PIPE SDR-26 @ +0.40%

2+00

21

CAMINITÍ LN

STA. 3+96.65 LINE B

TOP: 647.79

22

23 🗟

BLOCK 31

LINE B

STA. 1+00.00 TO STA. 8+94.03

EXISTING+

GROUND CL

197.93 LF. ~ 8" PVC PIPE SDR-26 @ +0.40%

5+00

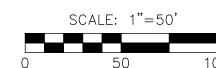
77.09 LF. ~ 8" PVC PIPE _

SDR-26 @ +0.40%

6+00

GROUND CL

4+00



DROP MH C2 BLOCK 30 MH-C3 STA. 5+23.98 LINE C STA. 8+50.00 LINE C -10 STA. 9+63.79 LINE C =STA. 1+00.00 LINE D TOP: 656.16 TOP: 655.72 16 TOP: 649.15 MH B3 20 29 22 STA. 6+71.68 LINE B =STA. 1+00.06 LINE C TOP: 648.28 LINE C LINE C LINE C **BAGWELL LN** 33 8" WATER MAIN CROSSING 10' E.G.T.CA. ESM'T. \ MH C1 ∖10' E.G.T.CA. ESM'T. 🗗 STA. 1+93.42 LINE C - TOP: 646.96 BLOCK 33 BLOCK 31 BLOCK_31 _12

NOTE: CONTRACTOR TO ADD 3" PVC
MARKERS TO THE ENDS OF ALL
SANITARY SEWER LATERALS. MARKERS
TO EXTEND 2 FEET ABOVE FINAL GRADE.

LEGEND EXISTING WATER MAIN ----E8"W--------8"W-----PROPOSED WATER MAIN PROPOSED FIRE HYDRANT EXISTING FIRE HYDRANT PROPOSED GATE VALVE EXISTING GATE VALVE PROPOSED SANITARY SEWER MAIN & MANHOLE EXISTING SANITARY SEWER MAIN & MANHOLE VS VERTICAL STACK ELECTRIC, GAS, TELEPHONE & CABLE TV EASEMENT E.G.T.CA.T.V. ESM'T. TEMPORARY BENCHMARK MIN. F.F. = <u>795.5</u> PROPOSED MINIMUM FINISH FLOOR ELEVATION DEED & PLAT RECORDS D.P.R. OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY 0.P.R.B.C.T. SANITARY SEWER/WATER CROSSING LOCATION CAUTION!!! CONTRACTOR TO TIE INTO EXISTING MANHOLE. AND VERIFY INVERTS AND LOCATION BEFORE CONSTRUCTION. IF ANY DISCREPANCY NOTIFY ENGINEER

NOTE: CLEANOUTS CANNOT BE LOCATED IN DRIVEWAYS OR SIDEWALKS.

PROPOSED WATER
LINE

PROPOSED SANITARY
SEWER LINE

APPENDIX E & 30 TAC 217.53 (D)
APPENDIX D - SEPARATION DISTANCE

20 LF. OF 160 P.S.I. PRESSURE RATED PVC PIPE CENTERED ACROSS WATER CROSSING (SDR 26). SEWER PIPE AT WATER LINE CROSSINGS SHALL MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE JOINT CENTERED AT WATER MAIN.

* SEPARATION DISTANCE TO COMPLY WITH TCEQ REGULATION 30 TAC 290.44 (E)

TYPICAL SANITARY SEWER/ WATER CROSSING DETAIL

N.T.S.

C.P.S. LOCATOR

CALL CPS LOCATOR AT 353—3500, 48 HOURS BEFORE BEGINNING ANY EXCAVATION.

DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

NOTE: THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELE—PHONE COMPANY CABLE LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1—800—828—5127. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY PLANT DURING CONSTRUCTION.

- EXISTING UTILITIES:

 1. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY.
 ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY CONTRACTOR PRIOR TO THE
 CONSTRUCTION AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION
 OF SAME DURING CONSTRUCTION.
- IT IS ESSENTIAL THAT 48 HOURS PRIOR TO CONSTRUCTION ALL UTILITY COMPANIES BE NOTIFIED TO LOCATE AND TAG THEIR UNDERGROUND FACILITIES PRIOR TO EXCAVATION.
 THE CONTRACTOR NEEDS TO ALLOW FOR THE POSSIBILITY OF UNDETECTED UNDERGROUND UTILITIES. ALSO, THE CONTRACTOR MUST ALLOW FOR CHANGES DUE TO UTILITIES BEING IN LOCATIONS DIFFERENT FROM THOSE SHOWN ON THE UTILITY
- RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND EXPOSING CONFLICTS PRIOR TO CONSTRUCTION.

 TRENCH EXCAVATION SAFETY PROTECTION

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 for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA 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 OSHA standards governing the presence and activities of individuals working in and around trench excavation.

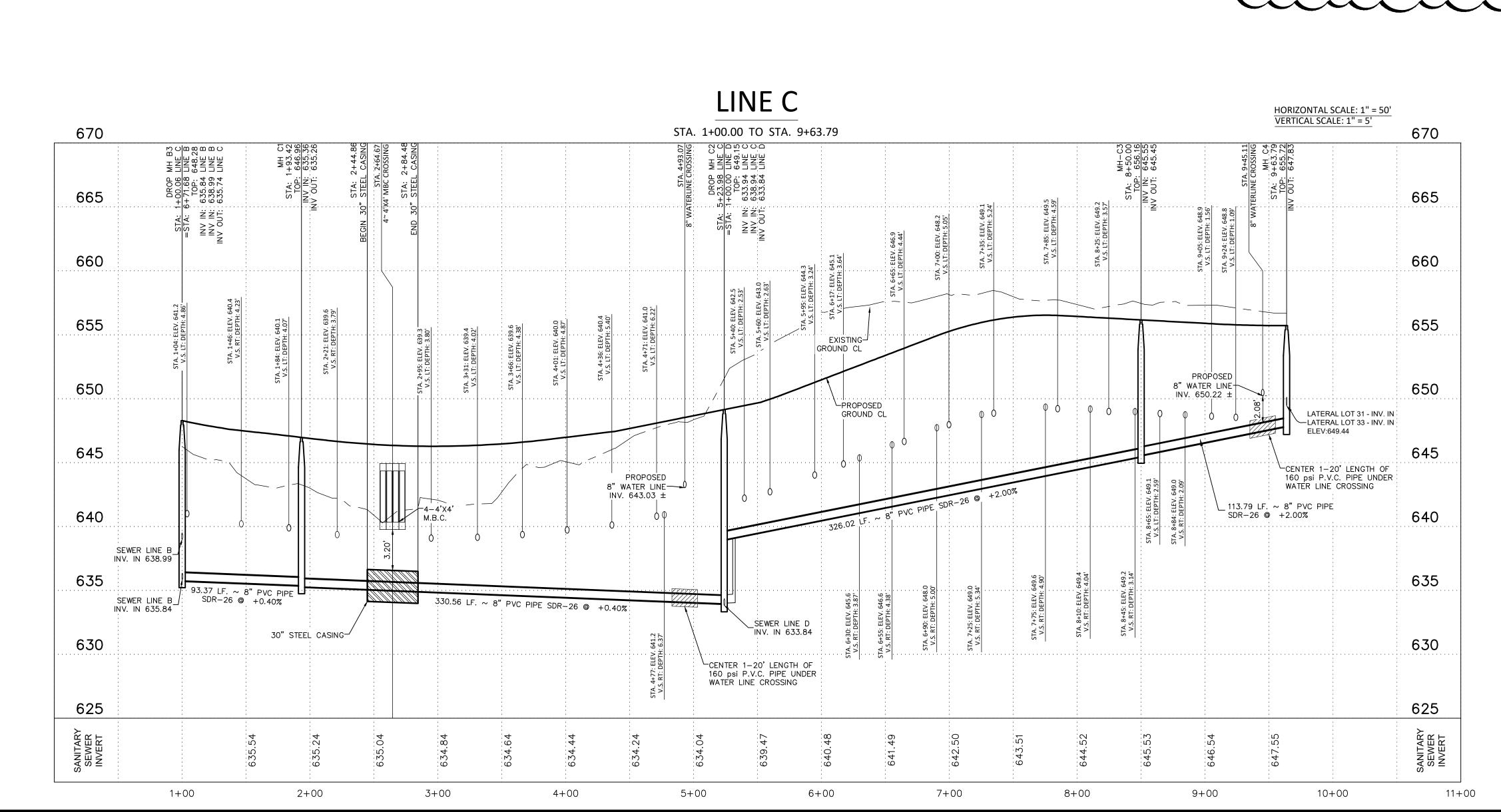
SUBMITTAL SET

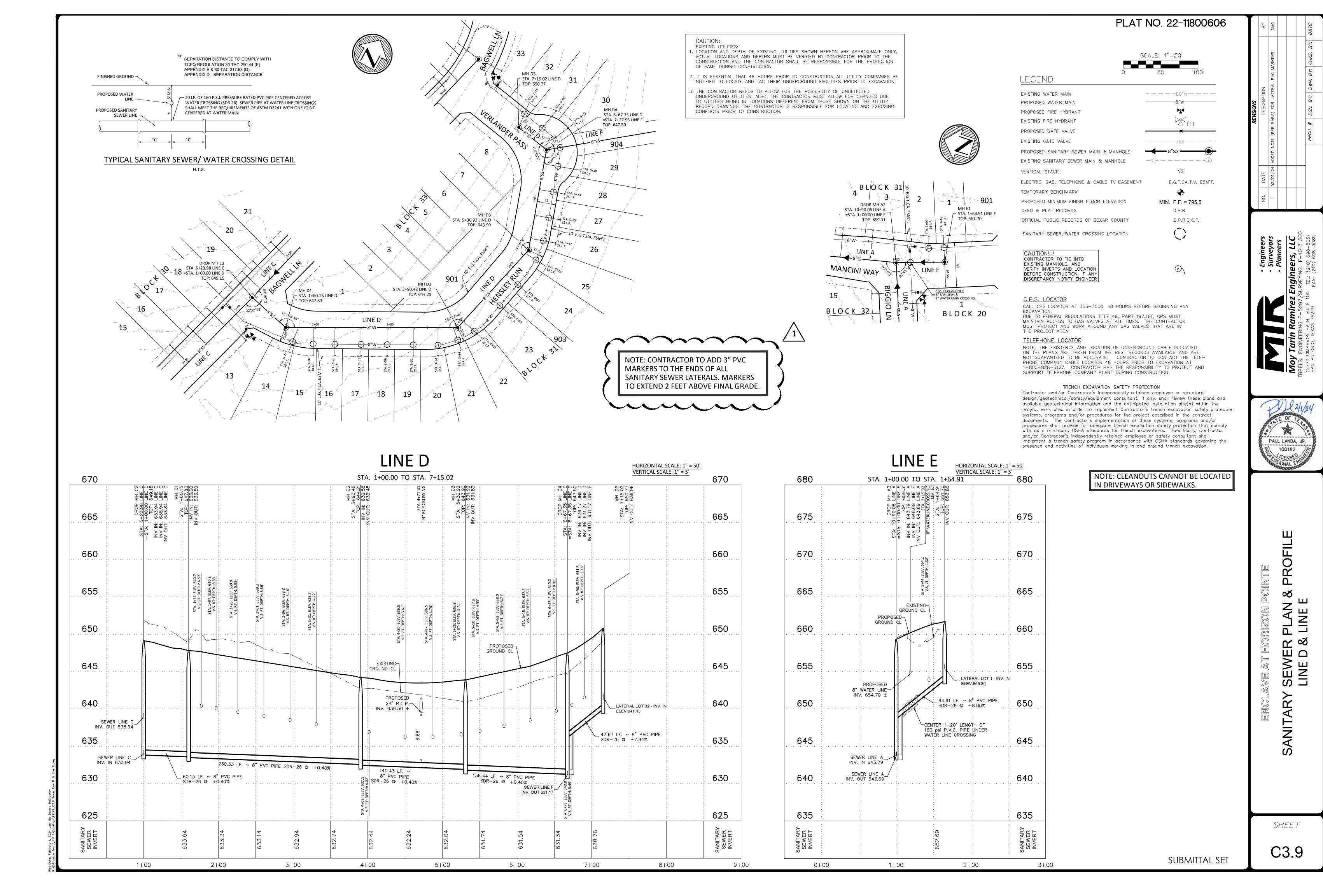
IITARY SEWER PLAN & PROFIL

PAUL LANDA, JR.

100182

SHEET





1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE TO THE CITY OF SAN ANTONIO SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

- 2. ALL CONSTRUCTION IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY OF SAN ANTONIO.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING UTILITIES DURING CONSTRUCTION. THE LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION:

SAN ANTONIO WATER SYSTEM
TEXAS STATE WIDE ONE CALL LOCATOR
CITY PUBLIC SERVICE
AT&T
TIME WARNER CABLE
TELE. NO.: 210-704-7109
TELE. NO.: 800-545-6005

- 4. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CPS MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
- 5. THE CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT THE TELEPHONE COMPANY DURING CONSTRUCTION.
- 6. THE CONTRACTOR HAS THE RESPONSIBILITY OF RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGE DONE TO THE EXISTING PAVEMENT, STRUCTURES OR FENCES (NO SEPARATE PAY ITEM).
- 7. MATERIAL SPECIFICATIONS:

CONCRETE/CONCRETE RIPRAP: CLASS A 3000 PSI IN 28 DAYS UNLESS
OTHERWISE NOTED ON PLANS
REINFORCING STEEL: CONFORM TO A.S.T.M. A-615, GRADE 60
(2" COVER UNLESS OTHERWISE NOTED ON PLANS)
PIPE RAILING: CONFORM TO A.S.T.M. A-53, GRADE B, OR A-501
STRUCTURAL STEEL: CONFORM TO A.S.T.M. A-36

- 8. CONTRACTOR TO COORDINATE CONCRETE CURB DEPRESSIONS WITH THE DEVELOPER (NO SEPARATE PAY ITEM).
- 9. TRANSITION TO/FROM WASHOUT CROWNS IN TWENTY-FIVE FEET (25').
- 10. IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE CHANNEL SUBGRADE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT THE CANNEL FOR MAINTENANCE. REFER TO 16.2.1 OF THE CITY OF SAN ANTONIO STORM WATER DESIGN CRITERIA MANUAL. NO EXTRA PAY ITEM.

LEGEND

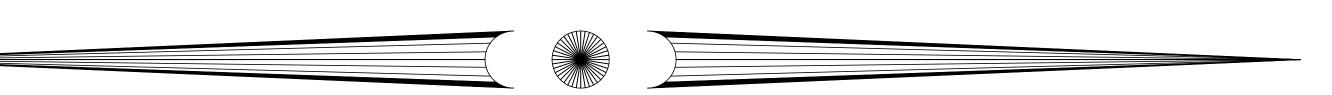
LEGEND	
SIDEWALK WHEELCHAIR RAMP — TYPE I DEVELOPER INSTALLED	A
SIDEWALK WHEELCHAIR RAMP — TYPE 10 DIRECTIONAL RAMPS (SINGLE) DEVELOPER INSTALLED	lacksquare
SIDEWALK WHEELCHAIR RAMP — TYPE II DEVELOPER INSTALLED	©
SIDEWALK WHEELCHAIR PASSING SPACE DEVELOPER INSTALLED	(D)
SIDEWALK WHEELCHAIR RAMP — TYPE 10 DIRECTIONAL RAMPS (DUAL) DEVELOPER INSTALLED	E
SIDEWALK WHEELCHAIR RAMP — TYPE 11 DEVELOPER INSTALLED	F
TYPICAL SIDEWALK WHEELCHAIR RAMP — MODIFY DIRECTIONAL RAMP DEVELOPER INSTALLED	©
EXISTING GUTTER ELEVATION	621.81G
EXISTING TOP OF CURB ELEVATION	621.81TC
PROPOSED TOP OF CURB ELEVATION	621.81
PROPERTY LINE	
EXISTING CONTOUR	_ — — — 621 — — —
PROPOSED CONTOUR	621
PROPOSED CONCRETE CURB	
FLOW ARROW	─
DEED & PLAT RECORDS	D.P.R.
OFFICIAL PUBLIC RECORDS	O.P.R.
	Frei Description and Committee Committee
EXISTING SIDEWALK	
EXISTING SIDEWALK HOME BUILDER INSTALLED SIDEWALK	
HOME BUILDER INSTALLED SIDEWALK	
HOME BUILDER INSTALLED SIDEWALK DEVELOPER INSTALLED SIDEWALK	
HOME BUILDER INSTALLED SIDEWALK DEVELOPER INSTALLED SIDEWALK WASH-OUT CROWN	
HOME BUILDER INSTALLED SIDEWALK DEVELOPER INSTALLED SIDEWALK WASH-OUT CROWN FILL HATCH	

BEXAR COUNTY R.O.W. NOTE:

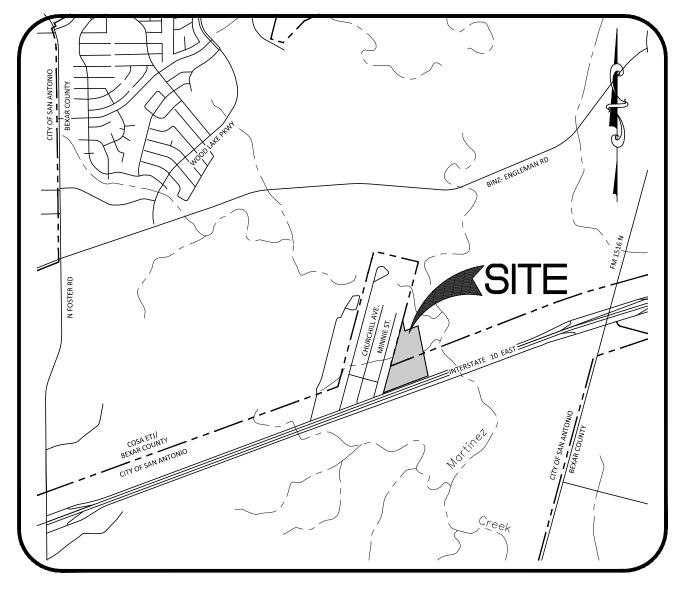
VEHICULAR NON-ACCESS EASEMENT

BEXAR COUNTY PERMIT REQUIRED FOR STREET TIE-IN, CURB/SIDEWALK & INTERSECTION PAVEMENT REPLACEMENT AND/OR ANY WORK BEING DONE IN BEXAR COUNTY R.O.W.

CONSTRUCTION PLANS FOR



ENCLAVE AT HORIZON POINTE STREET AND DRAINAGE IMPROVEMENTS

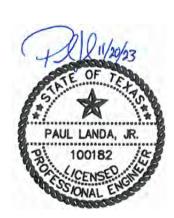






LEGAL DESCRIPTION:

BEING A TOTAL OF 24.428 ACRES (1,063,822.32 SQUARE FEET) OF LAND, SITUATED IN COUNTY BLOCK NUMBER 5090, AND BEING PART OF THE GUADALUPE TORRES SURVEY NO. 38, ABSTRACT NO. 739, BEXAR COUNTY, TEXAS AND INCLUDING THE TRACT CALLED 10.058 ACRES OF LAND CONVEYED TO SAN ANTONIO LD, LLC BY GENERAL WARRANTY DEED AS RECORDED IN DOCUMENT NUMBER 20220203708 AND THE TRACT CALLED 14.384 ACRES OF LAND CONVEYED TO SAN ANTONIO LD, LLC BY GENERAL WARRANTY DEED AS RECORDED IN DOCUMENT NUMBER 20200143665, OF THE OFFICIAL PUBLIC RECORDS OF BEXAR COUNTY, TEXAS



Sheet List Table

JIICCT LIS	LIGDIC
Sheet Number	Sheet Title
C4.0	STREET COVER
C4.1	TRAFFIC PLAN
C4.2	TRAFFIC PLAN
C4.3	BEXAR TRAFFIC DETAILS
C4.4	BEXAR TRAFFIC DETAILS
C4.5	COSA TRAFFIC DETAILS
C4.6	STEET PLAN & PROFILE BAGWELL LN
C4.7	STREET PLAN & PROFILE BAGWELL LN
C4.8	STREET PLAN & PROFILE BIGGIO LN
C4.9	STREET PLAN & PROFILE CAMINITI LN
C4.10	STREET PLAN & PROFILE MANCINI WAY
C4.11	STREET PLAN & PROFILE HENSLEY RUN
C4.11A	STREET PLAN & PROFILE VERLANDER PAS
C4.12	STANDARD STREET DETAILS
C4.13	STANDARD STREET DETAILS
C4.14	WHEELCHAIR RAMP DETAILS
C4.15	DRAINAGE PLAN & PROFILE DRAIN A
C4.16	DRAINAGE PLAN & PROFILE DRAIN A
C4.17	DRAINAGE PLAN & PROFILE DRAIN B
C4.18	DRAINAGE PLAN & PROFILE DRAIN C
C4.19	DRAINAGE PLAN & PROFILE DRAIN D
C4.20	DRAINAGE PLAN & PROFILE DRAIN E
C4.21	DRAIN E DETAILS
C4.22	DRAINAGE PLAN & PROFILE DRAIN F
C4.23	DRAINAGE PLAN & PROFILE DRAIN F
C4.24	DRAINAGE PLAN & PROFILE DRAIN G
C4.25	DRAINAGE PLAN & PROFILE DRAIN H
C4.26	STANDARD DRAINAGE DETAILS
C4.27	STANDARD DRAINAGE DETAILS
C4.28	STANDARD DRAINAGE DETAILS
C4.29	STANDARD DRAINAGE DETAILS
C4.29A	STANDARD DRAINAGE DETAILS
C4.30	RIGHT TURN LANE



FIRM TBPELS ENG F-5297 SVY F-10131500 12770 CIMARRON PATH, SUITE 100 TEL: (210) 698-5051 SAN ANTONIO, TEXAS 78249 FAX: (210) 698-5085 PLAT NO. 22-11800606

MOY TARIN RAMIREZ ENGINEERS, LLC.

OWNER/DEVELOPER

4058 NORTH COLLEGE AVE SUITE 300, BOX 9

12770 CIMARRON PATH, SUITE 100

SUBMITTED BY:

SAN ANTONIO, TEXAS 78249

TEL: (210) 698-5051

FAX: (210) 698-5085

SAN ANTONIO LD, LLC

(479) 455-9090

FAYETTEVILLE,, AR 72703

NO. DATE

PROJ. # DGN. BY: CHKD. BY: DATE:

• Surveyors
• Planners

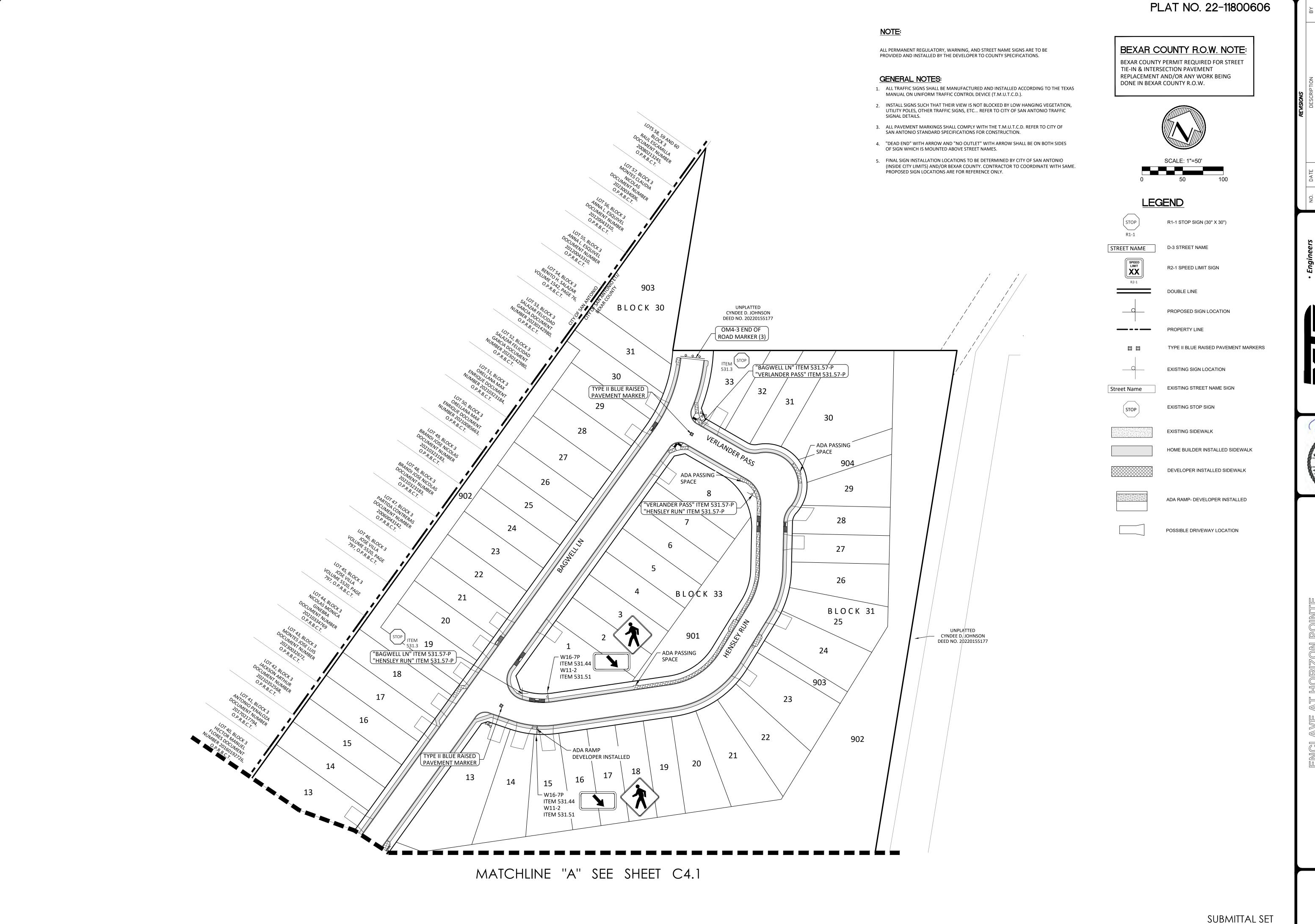
nirez Engineers, LLC
-5297/SURVEYING: F-10131500
SUITE 100 TEL: (210) 698-5051

Moy Tarin Ramire:
TBPELS: ENGINEERING F-5297
12770 CIMARRON PATH, SUITE
SAN ANTONIO, TEXAS 78249



OVERALL TRAFFIC PLAN

SHEET



DATE DESCRIPTION

PROJ. # DGN. BY: DWN. BY: CHKD. BY: L

Surveyors
Surveyors
Planners
Z Engineers, LLC
7/SURVEYING: F-10131500

Moy Tarin Ramirez E TBPELS: ENGINEERING F-5297/St 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249



OVERALL TRAFFIC PLAN

SHEET

SMD (GEN) -08

Approximate Bolt Length

Specific Clamp Universal Clamp

4 1/2"

2" nominal 3" 3 or 3 1/2" 2 1/2" nominal 3 or 3 1/2" 3 1/2 or 4"

3" nominal 3 1/2 or 4"

should be placed as far from the travel

*** Post may be shorter if protected by

guardrail or if Engineer determines the post could not be hit due to extreme

ane as practical.

7.0 ft min *

Pipe Diameter

head per ASTM A307 with nut and helical-spring lock

ight. The bolt length may need to be adjusted

Sign clamps may be either the specific size clamp or the universal clamp.

depending upon field conditions.

washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at

SUBMITTAL SET

SMD(SLIP-2)-08

The depth shall be sufficient to give positive

protection against entrance of rainwater. They

and show no evidence of metal fracture.

shall be free of sharp creases or indentations

Caps shall have an electrodeposited coating of

zinc in accordance with the requirements of ASTM

Depth

Pipe O.D.

+.025"±.010"

Rolled Crimp to

engage pipe O.D.

SM RD SGN ASSM TY XXXXX(1)XX(T)

(* - See Note 12)

0.6W - 0.2W -

- 0.2W →

C4.3

SHEET

ngi RVFY

PAUL LANDA, JR 100182

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Z

4

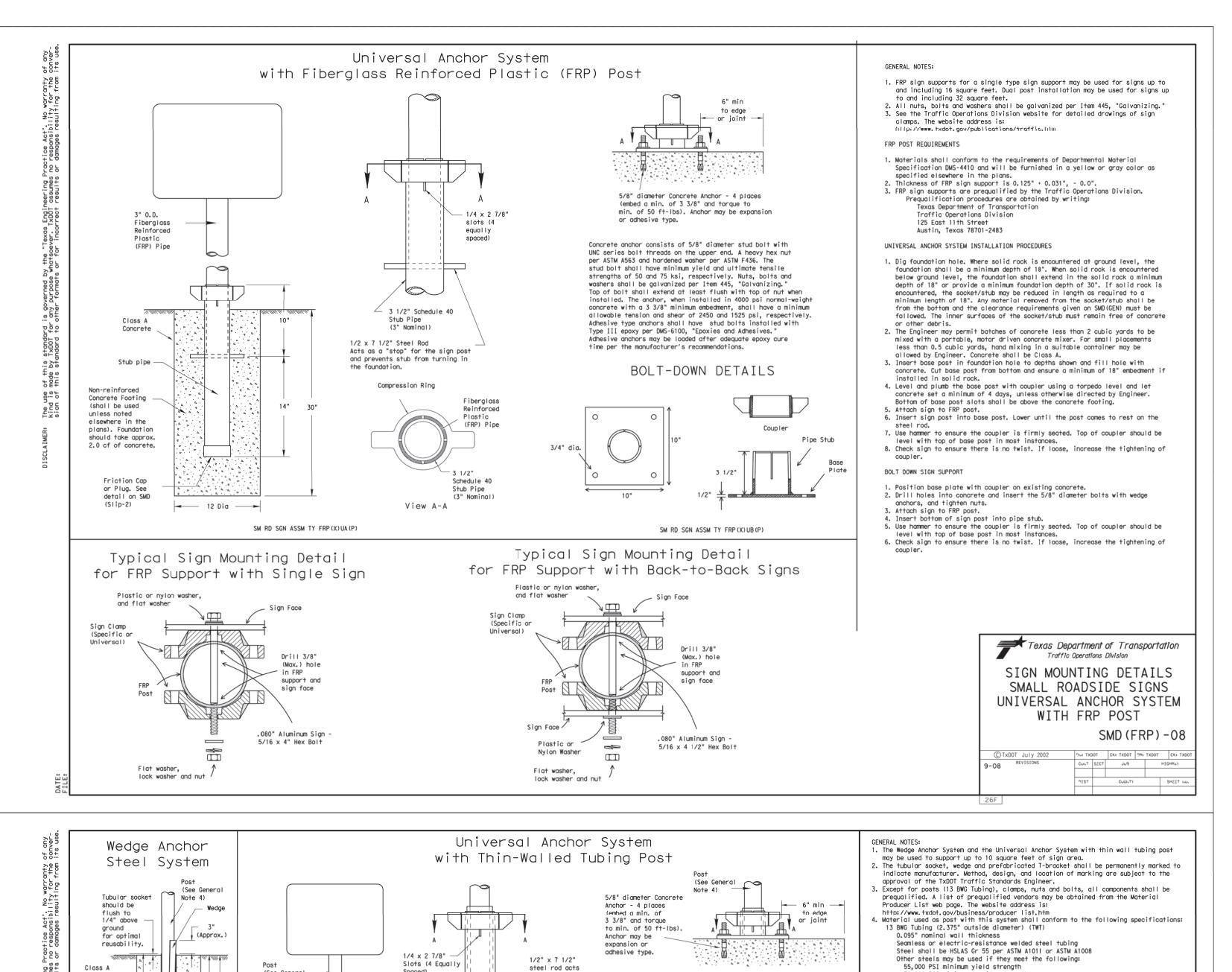
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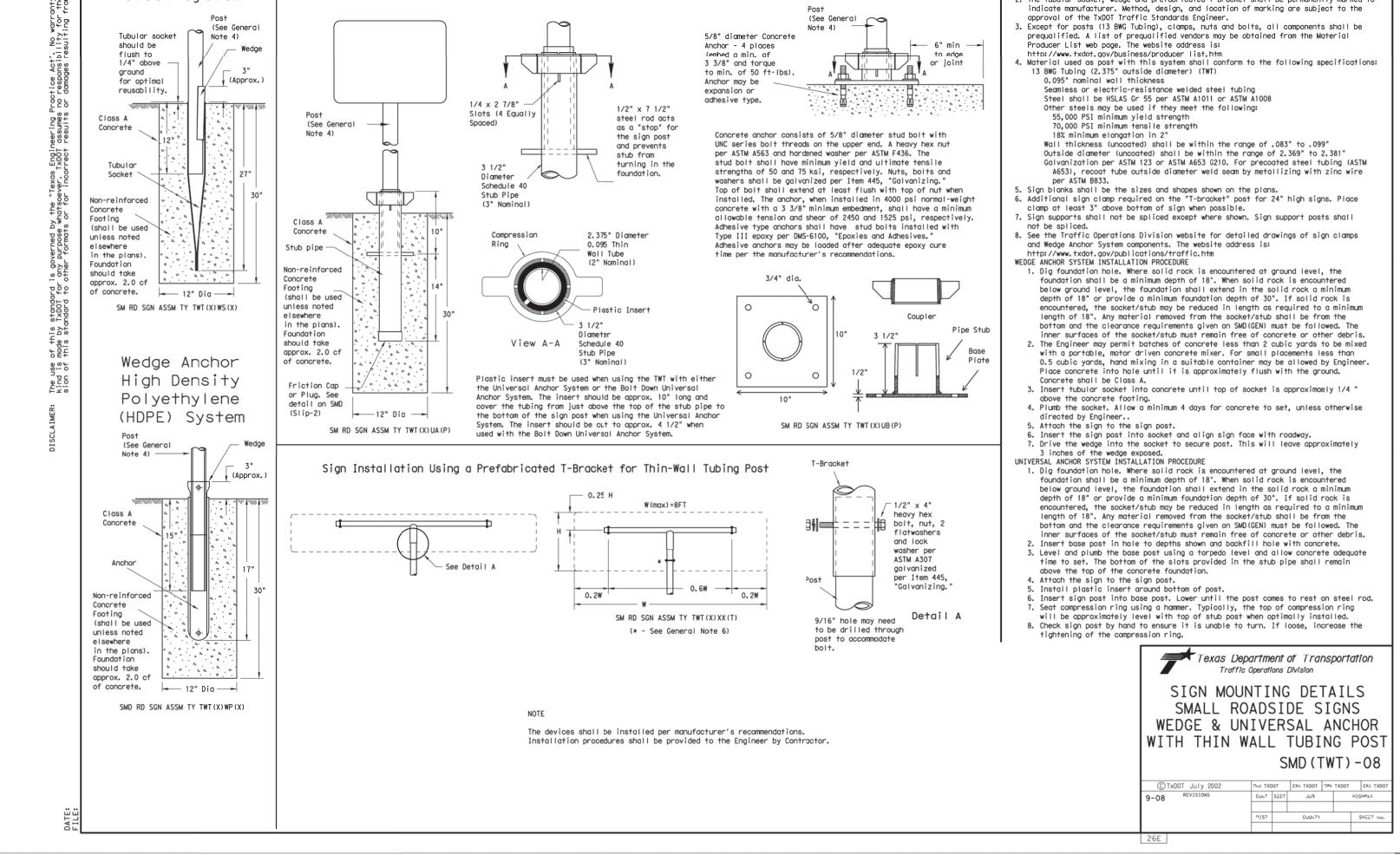
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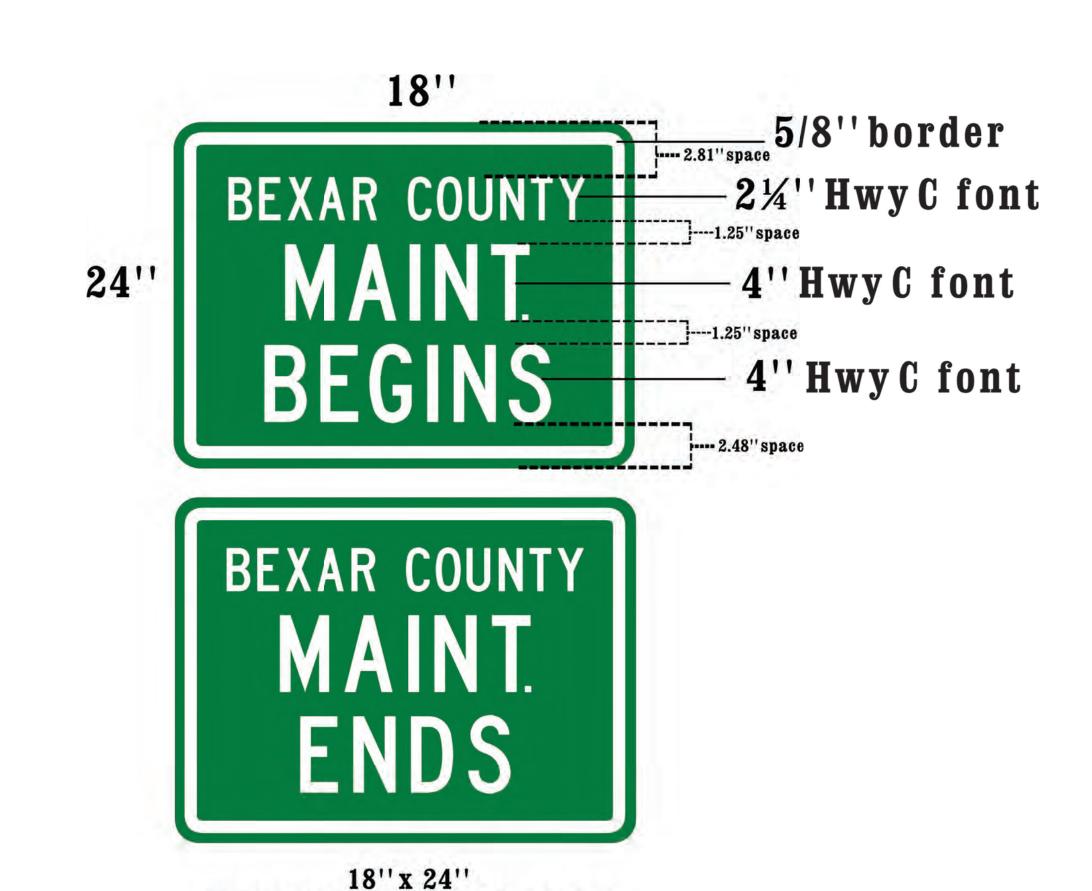
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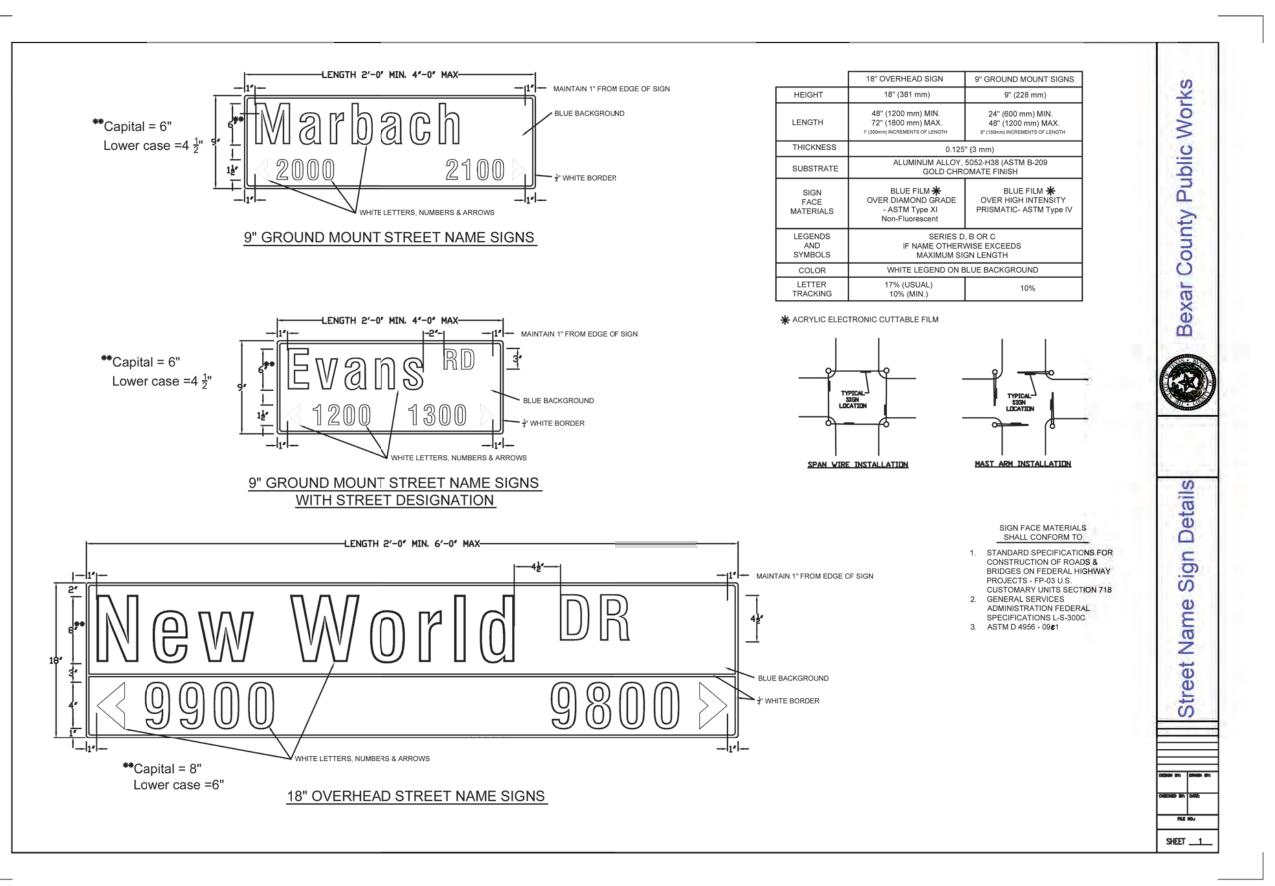


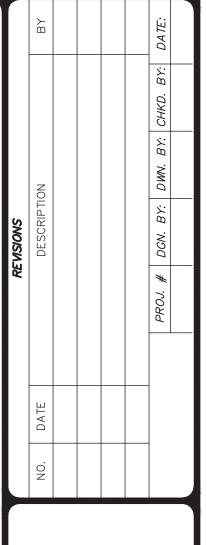


White Prismatic Background

Green Overlay Film

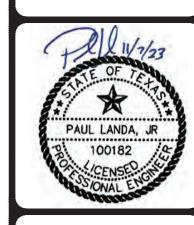
Hwy C lettering





• Engineers
• Surveyors
• Planners
irez Engineers, LLC
5297/SURVEYING: F-10131500





CLAVE AT HORIZON POINTE R TRAFFIC PLAN DETAIL

SHEET

_ C4.4

SUBMITTAL SET

DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGN STANDARDS

GENERAL NOTES AND

GROUND SIGN MOUNTING

DRWN. BY: A.F.G. DSGN. BY: E.N.M. CHKD. BY: J.D.F./E.N.M. SHEET NO.: OF

% SUBMITTAL PROJECT NO .:

SHEET 1 OF 4

12 36 3 30 11/2 11/2 9 0.080

18 24 1 1 / 2 21 1 1 / 2 1 1 1 / 2 1 5 0.080

24 30 3 24 11/2 3 18 0.080

24 48 6 36 1 7 /8 3 18 0.080

30 | 36 | 3 | 30 | 1 7 /8 | 3 | 24 | 0.080

6" X 3 /8" DIA.

STEEL PIN OR

DISFIGURE END

OF ANCHOR

THE ORIGINAL OF THIS DRAWING WAS SIGNED

AND SEALED BY EDWARD N. MERY, P.E., #58698

ON 02.06.06 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC

WORKS DEPARTMENT, CITY OF SAN ANTONIO.

14.) REINSTALLATION OF PREVIOUSLY EXISTING SIGNS, WHERE

THE CONTRACTOR'S EXPENSE.

REQUIRED BY THE CITY TRAFFIC ENGINEER, SHALL BE AT

HORIZONTAL RECTANGLE

A B C D E T

6 12 1 4 1/4 0.080 6 18 1 4 1/4 0.080

20 36 11/2 17 11/2 0.080

VERTICAL RECTANGLE

A B C D E F G T

5 7 3 /4 1/2 6 3 /4 1/2 4 1/4 0.100

48 60 6 48 9 30 3 0.100

48 36 3 30 3 42 2 1/4 0.100

60 24 2 20 2 56 11/2 0.100 60 36 3 30 3 54 2 1/4 0.100

48 30 3 24 3 42 17/8 0.100

60 30 3 24 3 54 1 7 /8 0.100

NO. DATE DESCRIPTION

PROJ. # DGN. BY: DWN. BY: CHKD.

• Planners

• Planners

• Planners

• 297/SURVEYING: F-10131500

IE 100 TEL: (210) 698-5051





AN ANTONIO TRAFFIC PLAN DETAILS

SHEET

S

C4.5

DEPARTMENT OF PUBLIC WORKS

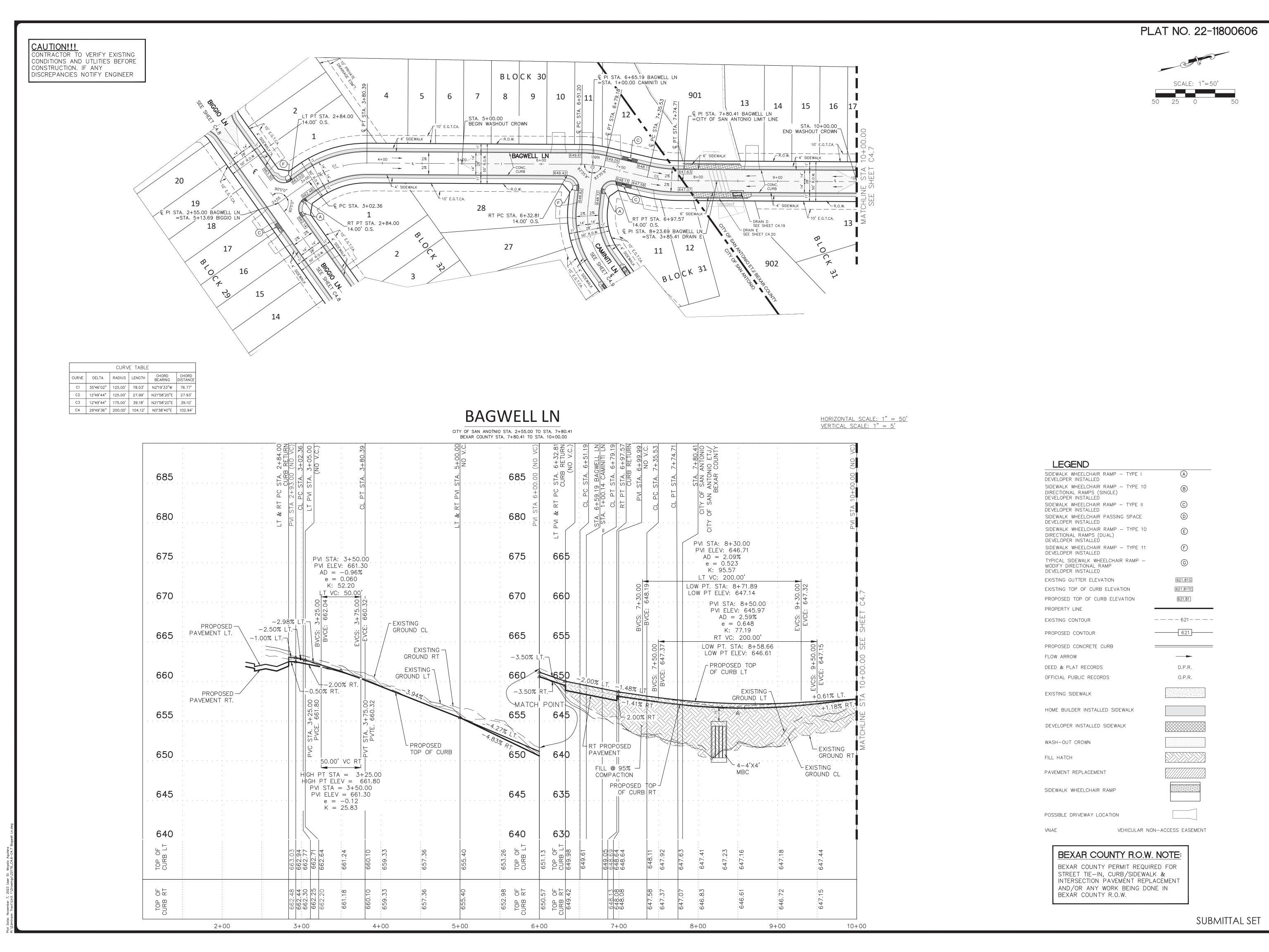
GROUND MOUNTED

SIGN SIZES

SHEET 3 OF 4

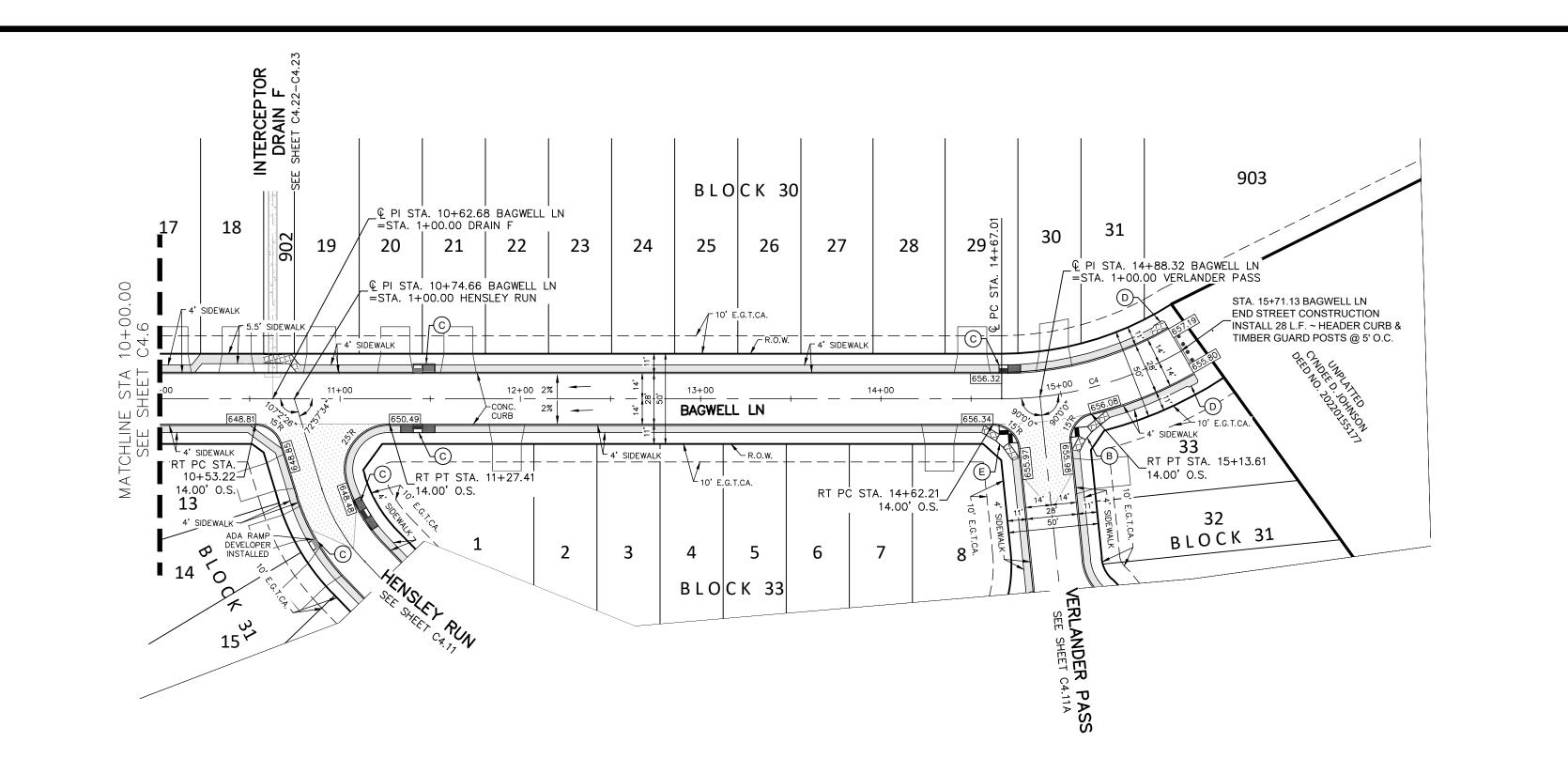
DRWN. BY: A.F.G. DSGN. BY: E.N.M. CHKD. BY: J.D.F./E.N.M. SHEET NO.: OF

% SUBMITTAL PROJECT NO.:



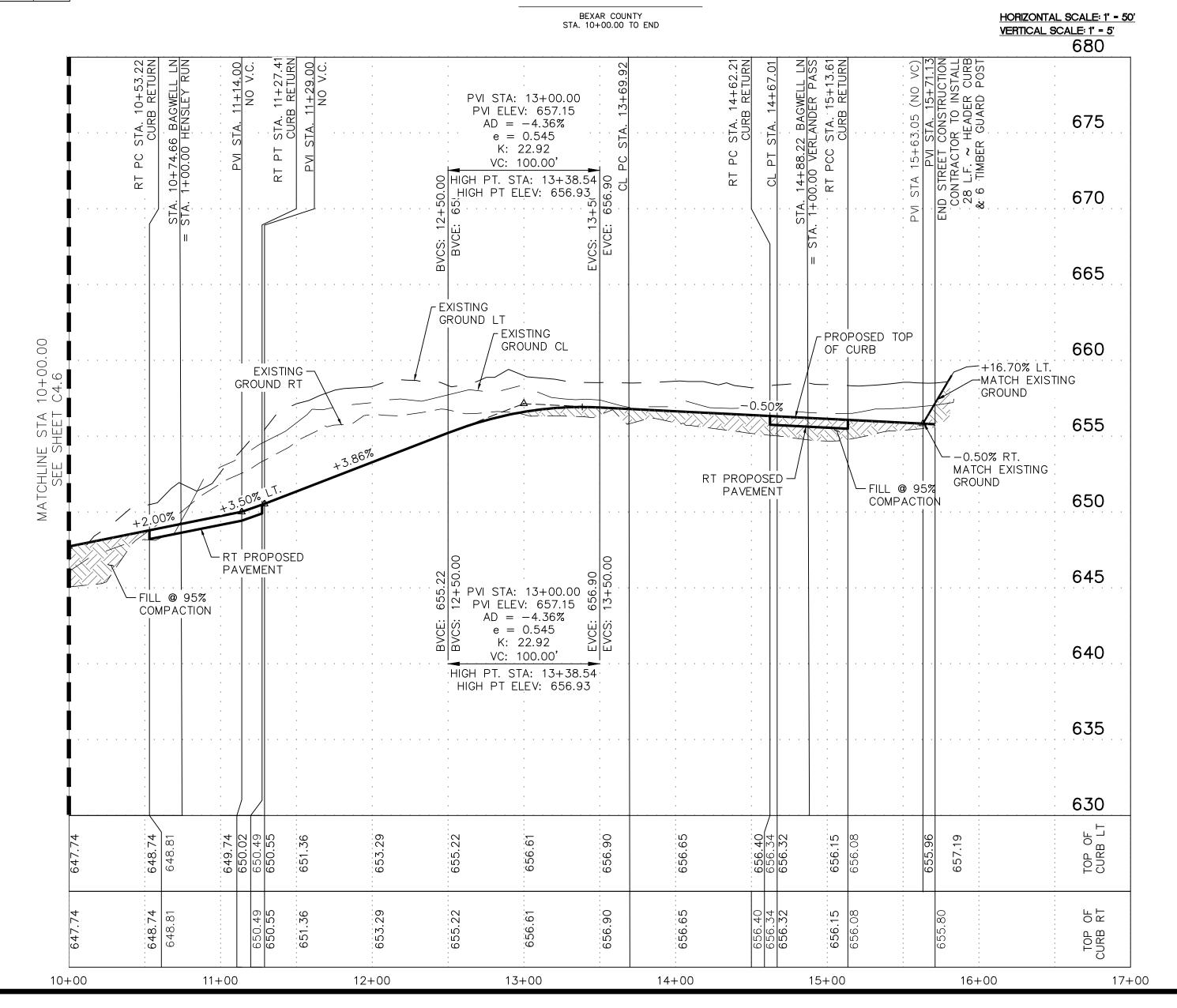


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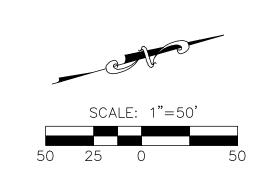


		CURV	e table	Ī	
CURVE	DELTA	RADIUS	LENGTH	CHORD BEARING	CHORD DISTANCE
C1	35*46'02"	125.00'	78.03'	N2°19'33"W	76.77
C2	12*49'44"	125.00'	27.99'	N21°58'20"E	27.93'
C3	12*49'44"	175.00'	39.18'	N21°58'20"E	39.10'
C4	29*49'36"	200.00'	104.12	N0°38'40"E	102.94

BAGWELL LN



PLAT NO. 22-11800606



PAUL LANDA, JR. 100182 SONAL ENG

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PR(NE

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621.81G 621.81TC

621.81

_ — — — 621 — — —

621

_

D.P.R.

0.P.R.

FILL HATCH PAVEMENT REPLACEMENT

CAUTION!!!

SIDEWALK WHEELCHAIR RAMP — TYPE I DEVELOPER INSTALLED

SIDEWALK WHEELCHAIR RAMP - TYPE II

SIDEWALK WHEELCHAIR PASSING SPACE

SIDEWALK WHEELCHAIR RAMP - TYPE 10

SIDEWALK WHEELCHAIR RAMP - TYPE 11

TYPICAL SIDEWALK WHEELCHAIR RAMP -

EXISTING TOP OF CURB ELEVATION

PROPOSED TOP OF CURB ELEVATION

DIRECTIONAL RAMPS (SINGLE)

SIDEWALK WHEELCHAIR RAMP - TYPE 10

LEGEND

DEVELOPER INSTALLED

DEVELOPER INSTALLED

DEVELOPER INSTALLED

DEVELOPER INSTALLED

DEVELOPER INSTALLED

PROPERTY LINE

EXISTING CONTOUR

PROPOSED CONTOUR

FLOW ARROW

PROPOSED CONCRETE CURB

DEED & PLAT RECORDS

EXISTING SIDEWALK

WASH-OUT CROWN

OFFICIAL PUBLIC RECORDS

HOME BUILDER INSTALLED SIDEWALK

DEVELOPER INSTALLED SIDEWALK

DIRECTIONAL RAMPS (DUAL)

MODIFY DIRECTIONAL RAMP DEVELOPER INSTALLED EXISTING GUTTER ELEVATION

CONTRACTOR TO VERIFY EXISTING CONDITIONS AND UTLITIES BEFORE CONSTRUCTION. IF ANY DISCREPANCIES NOTIFY ENGINEER

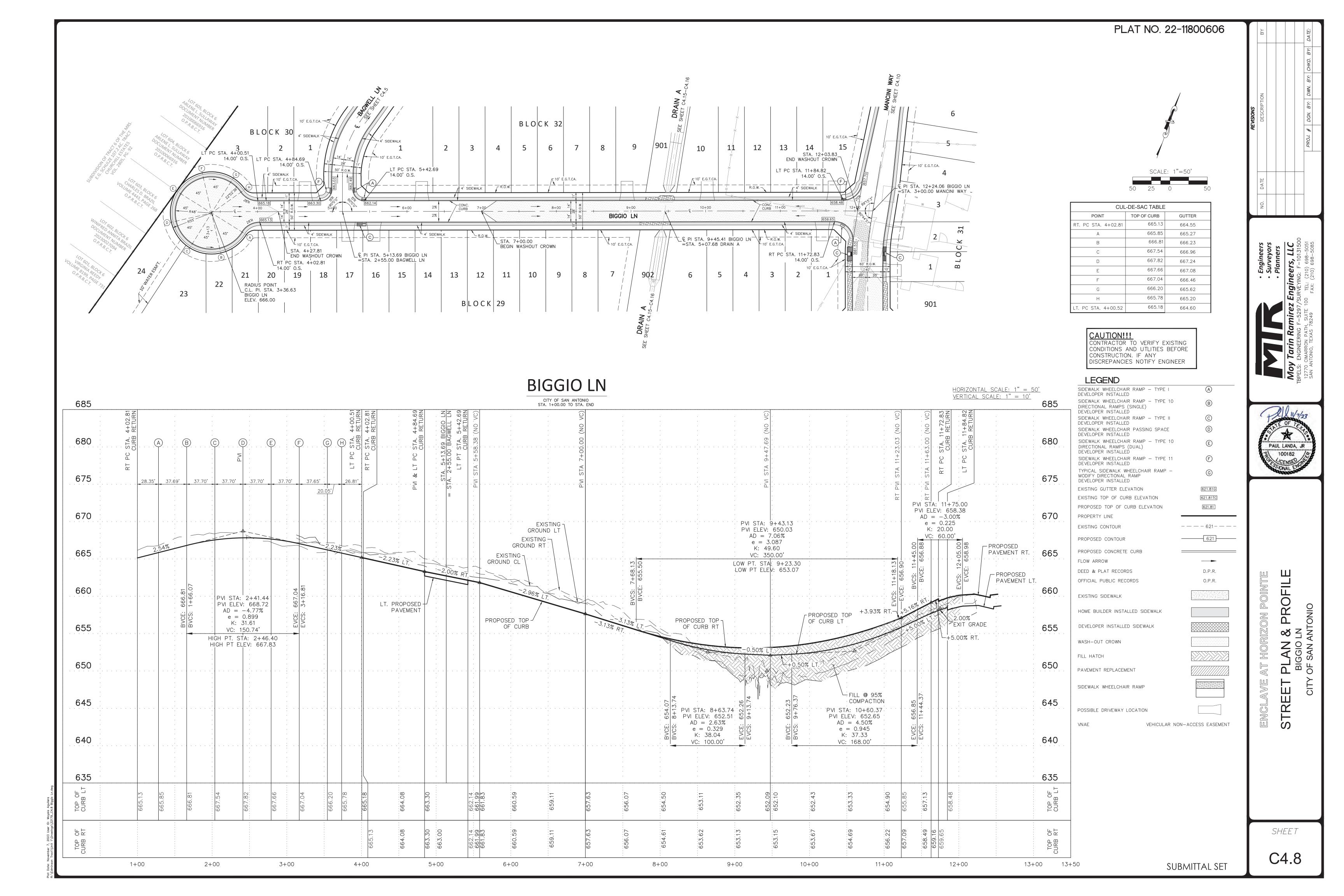
SIDEWALK WHEELCHAIR RAMP POSSIBLE DRIVEWAY LOCATION

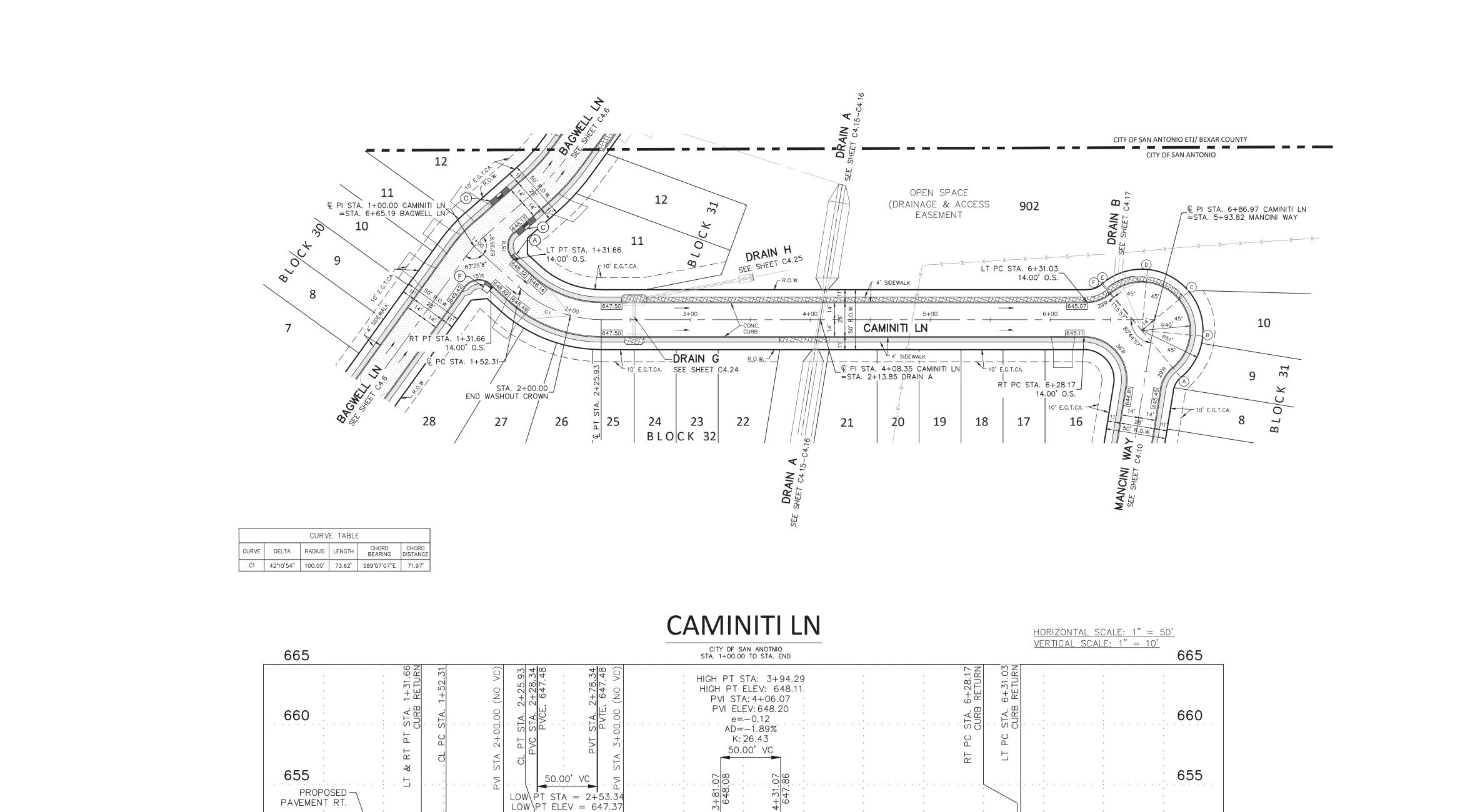
VEHICULAR NON-ACCESS EASEMENT

BEXAR COUNTY R.O.W. NOTE:

BEXAR COUNTY PERMIT REQUIRED FOR STREET TIE-IN, CURB/SIDEWALK & INTERSECTION PAVEMENT REPLACEMENT AND/OR ANY WORK BEING DONE IN BEXÁR COUNTY R.O.W.

SHEET





- PROPOSED TOP

└- FILL @ 95%

5+00

6+00

COMPACTION

OF CURB

PVI STA = 2+53.34PV ELEV = 647.26

AD = 1.78%

e = -0.11

K = 28.09

~0.89%

LEXISTING GROUND LT

└ EXISTING

GROUND RT

3+00

4+00

-0.89%

EXISTING

648.16 648.14

648.53

2+00

1+00

GROUND CL

645

640

620

P. I.

PROPOSED -

PAVEMENT LT.



645

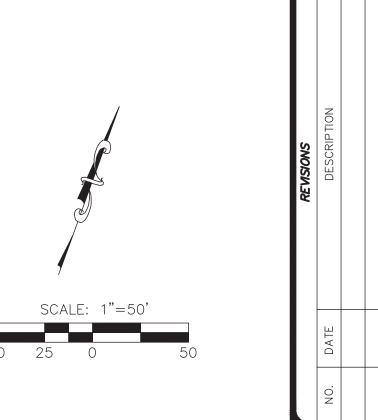
640

620

OF RT

8+00

7+00



PLAT NO. 22-11800606

CAUTION!!!

CONTRACTOR TO VERIFY EXISTING CONDITIONS AND UTLITIES BEFORE CONSTRUCTION. IF ANY DISCREPANCIES NOTIFY ENGINEER

LEGEND

SIDEWALK WHEELCHAIR RAMP - TYPE I DEVELOPER INSTALLED SIDEWALK WHEELCHAIR RAMP - TYPE 10 DIRECTIONAL RAMPS (SINGLE) DEVELOPER INSTALLED SIDEWALK WHEELCHAIR RAMP - TYPE II DEVELOPER INSTALLED SIDEWALK WHEELCHAIR PASSING SPACE DEVELOPER INSTALLED SIDEWALK WHEELCHAIR RAMP - TYPE 10 DIRECTIONAL RAMPS (DUAL) DEVELOPER INSTALLED SIDEWALK WHEELCHAIR RAMP - TYPE 11 DEVELOPER INSTALLED TYPICAL SIDEWALK WHEELCHAIR RAMP MODIFY DIRECTIONAL RAMP DEVELOPER INSTALLED EXISTING GUTTER ELEVATION 621.81G EXISTING TOP OF CURB ELEVATION 621.81TC 621.81 PROPOSED TOP OF CURB ELEVATION PROPERTY LINE _ _ _ _ _ 621 _ _ _ _ _ EXISTING CONTOUR PROPOSED CONTOUR PROPOSED CONCRETE CURB FLOW ARROW DEED & PLAT RECORDS D.P.R. OFFICIAL PUBLIC RECORDS 0.P.R. EXISTING SIDEWALK HOME BUILDER INSTALLED SIDEWALK

DEVELOPER INSTALLED SIDEWALK

WASH-OUT CROWN

PAVEMENT REPLACEMENT

SIDEWALK WHEELCHAIR RAMP

POSSIBLE DRIVEWAY LOCATION

FILL HATCH

ENCLAVE AT HORIZON POINT
STREET PLAN & PROFIL
CAMINITION

PAUL LANDA, JR

100182

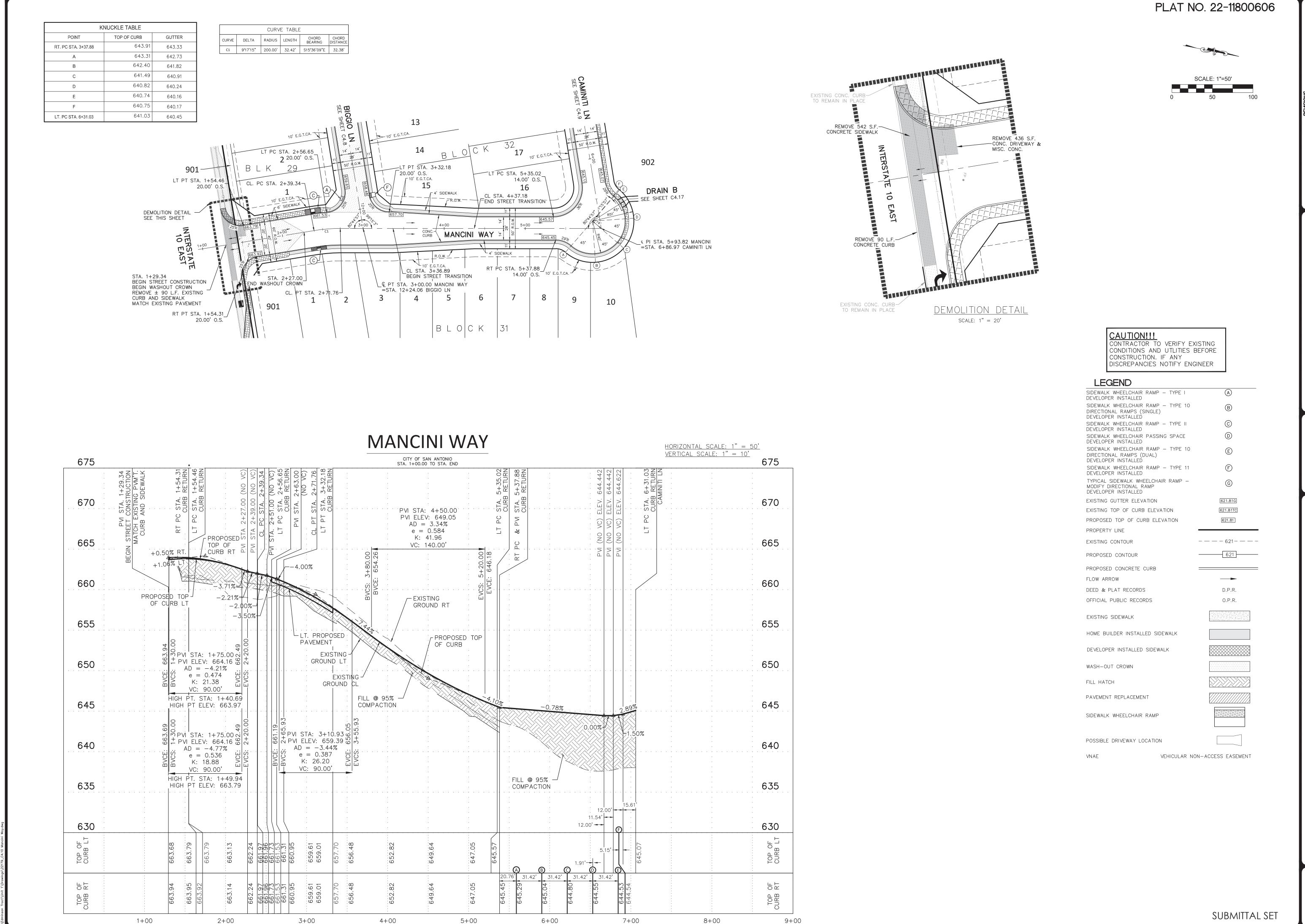
SHEET

C4.9

e: November 7, 2023 User ID: Mayola Aguile nson Tract\Unit 1\Drawings\22179_C4.9 Can

SUBMITTAL SET

VEHICULAR NON-ACCESS EASEMENT



NO. DATE DESCRIPTION EYER CHKD. BY: DATE

Surveyors
Surveyors
Planners

nirez Engineers, LLC
-5297/SURVEYING: F-10131500

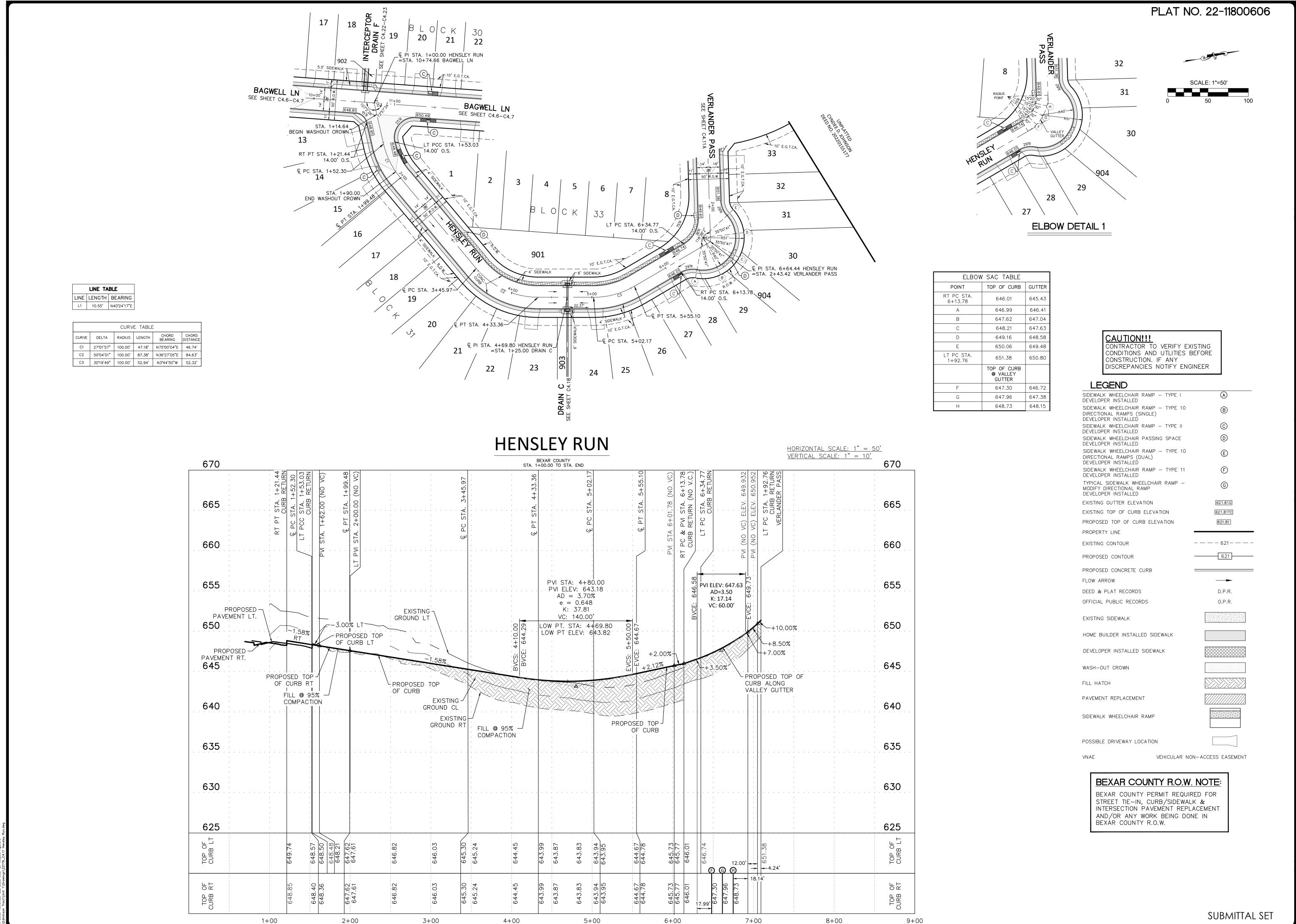
Moy Tarin Ramirez Er TBPELS: ENGINEERING F-5297/SUR 12770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249



EET PLAN & PROFILE
MANCINI WAY
CITY OF SAN ANTONIO

STR

SHEET



NO. DATE DESCRIPTION B BY: CHKD. BY: DATE

Surveyors
Surveyors
Planners
Z Engineers, LLC
7/SURVEYING: F-10131500

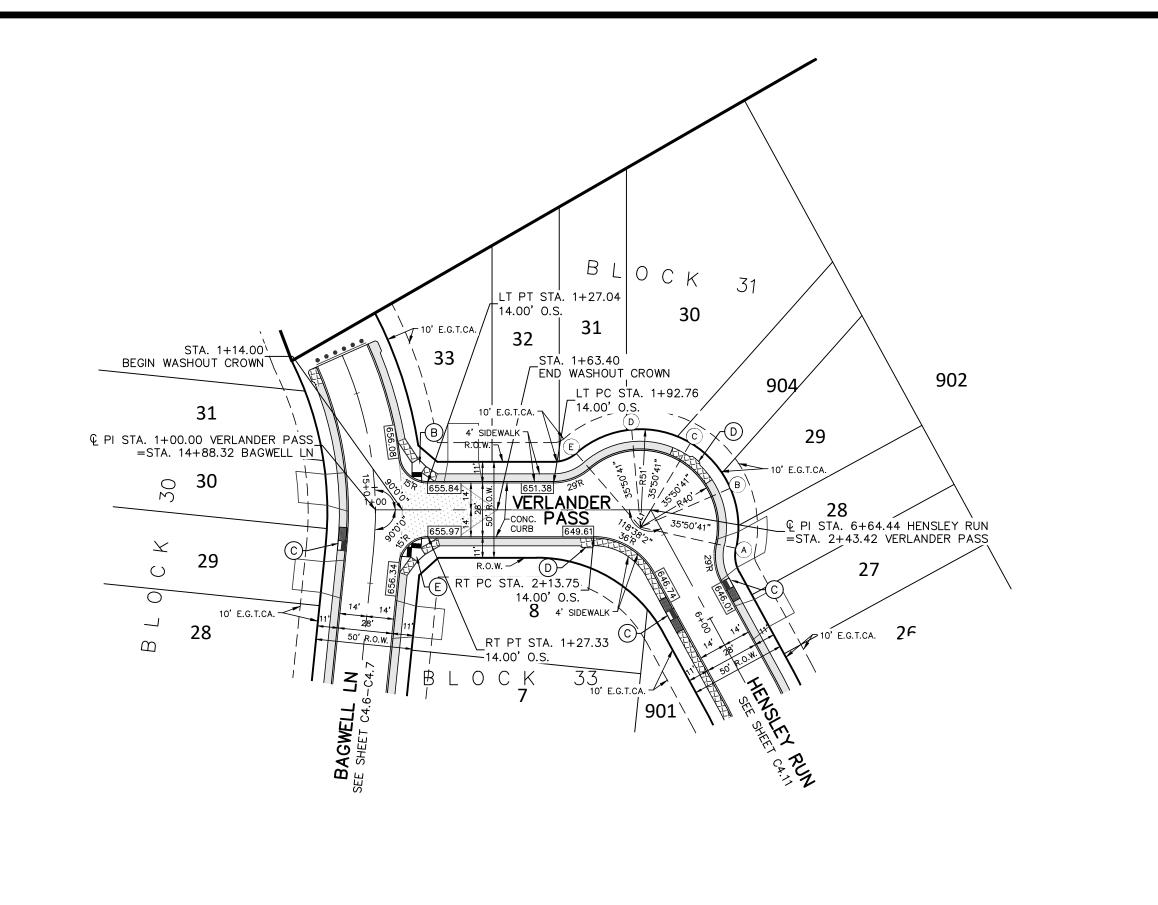
Moy Tarin Ramirez En PELS: ENGINEERING F-5297/SUR 2770 CIMARRON PATH, SUITE 100 SAN ANTONIO, TEXAS 78249

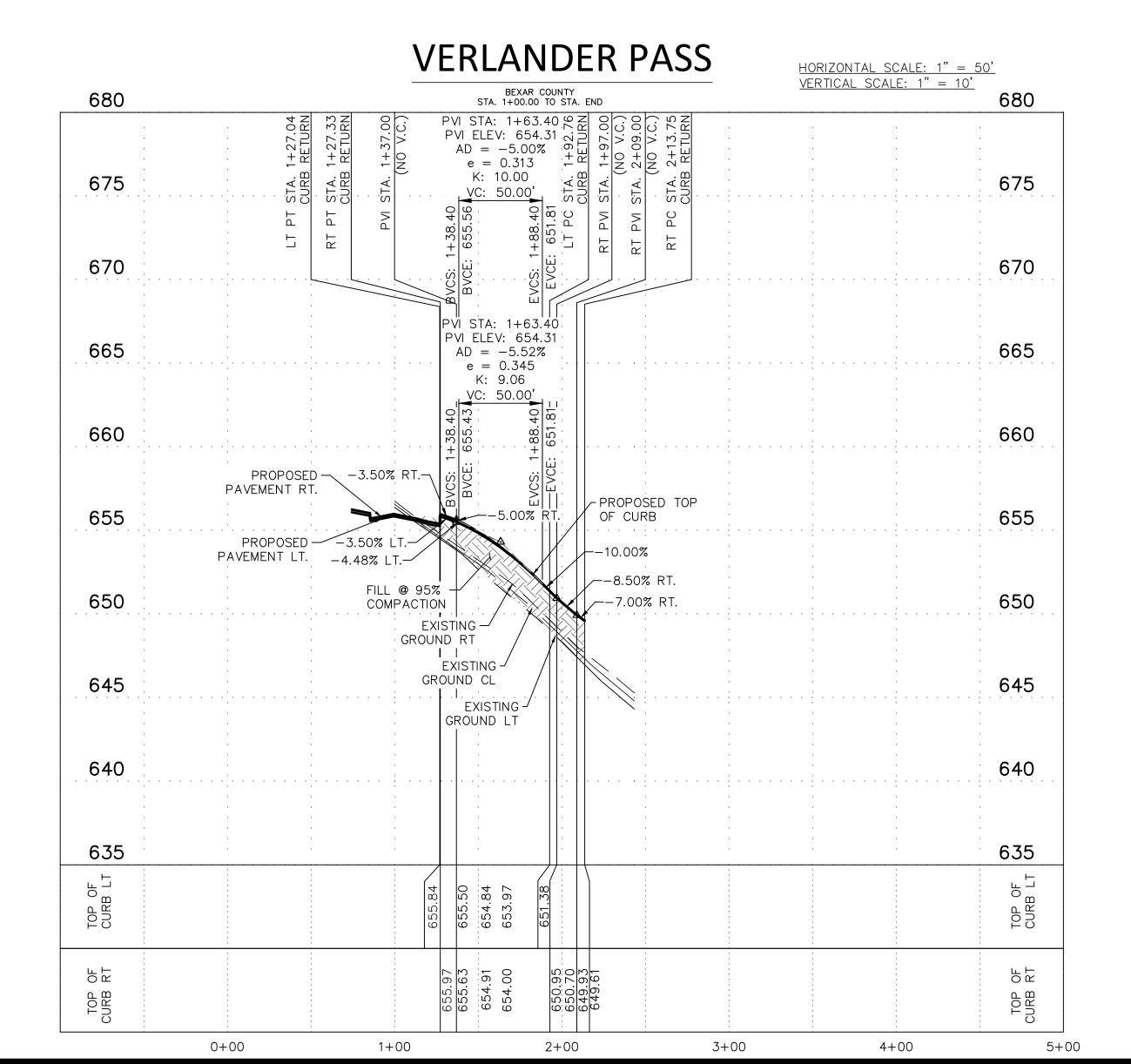


T PLAN & PROFILE
HENSLEY RUN
BEXAR COUNTY

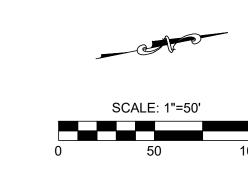
STREET PLAN

SHEET





PLAT NO. 22-11800606



LINE TABLE LINE LENGTH BEARING L1 10.55' N40°24'17"E

CAUTION!!! CONTRACTOR TO VERIFY EXISTING CONDITIONS AND UTLITIES BEFORE CONSTRUCTION. IF ANY DISCREPANCIES NOTIFY ENGINEER

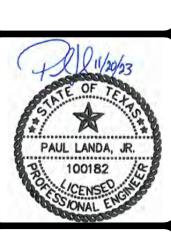
LECEND

LEGEND	
SIDEWALK WHEELCHAIR RAMP — TYPE I DEVELOPER INSTALLED	A
SIDEWALK WHEELCHAIR RAMP — TYPE 10 DIRECTIONAL RAMPS (SINGLE) DEVELOPER INSTALLED	B
SIDEWALK WHEELCHAIR RAMP — TYPE II DEVELOPER INSTALLED	©
SIDEWALK WHEELCHAIR PASSING SPACE DEVELOPER INSTALLED	D
SIDEWALK WHEELCHAIR RAMP — TYPE 10 DIRECTIONAL RAMPS (DUAL) DEVELOPER INSTALLED	Ē
SIDEWALK WHEELCHAIR RAMP — TYPE 11 DEVELOPER INSTALLED	F
TYPICAL SIDEWALK WHEELCHAIR RAMP — MODIFY DIRECTIONAL RAMP DEVELOPER INSTALLED	©
EXISTING GUTTER ELEVATION	621.81G
EXISTING TOP OF CURB ELEVATION	621.81TC
PROPOSED TOP OF CURB ELEVATION	621.81
PROPERTY LINE	
EXISTING CONTOUR	
PROPOSED CONTOUR	621
PROPOSED CONCRETE CURB	
FLOW ARROW	
FLOW ARROW DEED & PLAT RECORDS	D.P.R.
	D.P.R. O.P.R.
DEED & PLAT RECORDS	
DEED & PLAT RECORDS OFFICIAL PUBLIC RECORDS	
DEED & PLAT RECORDS OFFICIAL PUBLIC RECORDS EXISTING SIDEWALK	
DEED & PLAT RECORDS OFFICIAL PUBLIC RECORDS EXISTING SIDEWALK HOME BUILDER INSTALLED SIDEWALK	
DEED & PLAT RECORDS OFFICIAL PUBLIC RECORDS EXISTING SIDEWALK HOME BUILDER INSTALLED SIDEWALK DEVELOPER INSTALLED SIDEWALK	
DEED & PLAT RECORDS OFFICIAL PUBLIC RECORDS EXISTING SIDEWALK HOME BUILDER INSTALLED SIDEWALK DEVELOPER INSTALLED SIDEWALK WASH-OUT CROWN	
DEED & PLAT RECORDS OFFICIAL PUBLIC RECORDS EXISTING SIDEWALK HOME BUILDER INSTALLED SIDEWALK DEVELOPER INSTALLED SIDEWALK WASH-OUT CROWN FILL HATCH	
DEED & PLAT RECORDS OFFICIAL PUBLIC RECORDS EXISTING SIDEWALK HOME BUILDER INSTALLED SIDEWALK DEVELOPER INSTALLED SIDEWALK WASH—OUT CROWN FILL HATCH PAVEMENT REPLACEMENT	O.P.R.

BEXAR COUNTY R.O.W. NOTE:

BEXAR COUNTY PERMIT REQUIRED FOR STREET TIE-IN, CURB/SIDEWALK & INTERSECTION PAVEMENT REPLACEMENT AND/OR ANY WORK BEING DONE IN BEXAR COUNTY R.O.W.

SUBMITTAL SET



I & PROFILE
R PASS STREET PLAN & VERLANDER F

SHEET

C4.11A

TYPICAL STREET CROSS-SECTION (40' PAVEMENT)

MANCINI WAY (CITY OF SAN ANTONIO) ~ STA. 1+29.34 THRU 3+36.89 MANCINI WAY (CITY OF SAN ANTONIO) ~ STA. 3+36.89 THRU 4+37.18 (TRANSITION)

* 4' SIDEWALK WITH HOUSES FRONTING / 6' SIDEWALK WITH NO HOUSES FRONTING

#4 BARS @ 14" O.C.E.W. 6" CONC. SLAB EXISTING GROUND - SUBGRADE COMPACTED TO 90% DENSITY.

NOTES:

- THE CONTRACTOR WILL CONSTRUCT CONCRETE SLABS FOR "TEMPORARY MAIL BOX COLLECTION PAD" FOR THE UNITED STATES POSTAL SERVICE AT THE LOCATIONS AND SIZES SPECIFIED BY THE CITY ENGINEER DURING CONSTRUCTION.
- THE CONSTRUCTION OF SLABS SHALL CONFORM TO ITEM NO. 502 "CONCRETE SIDEWALKS AND DRIVEWAYS"
- PAYMENT WILL BE MADE UNDER ITEM NO. 502-2 DRIVEWAYS -
- UNIT PRICE WILL INCLUDE REMOVAL OF "TEMPORARY MAIL BOX COLLECTION PAD" SLABS AT THE END OF THE PROJECT. NO SEPARATE PAY ITEM.

TEMPORARY MAIL BOX COLLECTION PAD

SELECT FILL MATERIAL SHALL HAVE A PLASTICITY INDEX OF LESS THAN 20 AND A CALIFORNIA BEARING RATIO (CBR) OF AT LEAST 2.0

THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF LIME OR CEMENT

GEOTECHNICAL REPORT: INTEGRATED TESTING AND ENGINEERING COMPANY OF SAN ANTONIO, L.P. PROPOSED NEW STREETS 14.384 ACRE KLOPPE TRACT

THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF LIME OR CEMENT

INTEC PROJECT NO. S201092-P (APRIL 22, 2020)

PAVEMENT INDEX MAP

4' CONC. WALK

4' CONC. WALK

`56 L.F. _

4' CONC. WALK

6' CONC. WALK

5.5' CONC. WALK

4' CONC. WALK

6' CONC. WALK

4' CONC. WALK

4' CONC. WALK

187 L.F.

145 L.F. 4' CONC. WALK

5' CONC. WALK

4' CONC. WALK

4' CONC. WALK

6' CONC. WALK

25 L.F. ⁴ CONC. WALK

4' CONC. WALK

√ 41 L.F.

6' CONC. WALK

4' CONC. WALK

6' CONC. WALK

6' CONC. WALK 4' CONC. WALK

4' CONC. WALK

4' CONC. WALK

* PAVEMENT SECTIONS CLAY SUBGRADE PAVEMENT MATERIAL CBR= 2.0 CLAY SUBGRADE LOCAL "A" LOCAL "B" TYPE D ASPHALTIC CONCRETE 2.0 IN. 3.0 IN. FLEXIBLE BASE (TXDOT ITEM 247, 21.5 IN. TYPE A, GRADE 1 OR 2) 11.0 IN.

6.0 IN.

(31 LBS/SY)

LIME STABILIZED SUBGRADE

(7% BY WEIGHT)

E.G.T.TV.E

-3:1 | SLOPE 12:

SOIL/PARKWAY —

MIN. SLOPE 1/4"/FT.

4' CONC SIDEWALK -

0.2 GAL./S.Y. ITEM 202

0.1 GAL./S.Y. ITEM 203

PRIME COAT -

TACK COAT

MAX. SLOPE 1"/FT.

ASPH. PAVEMENT

STABILIZED SUBGRADE-

TYPICAL STREET CROSS-SECTION (28'

--- DEVELOPER INSTALLED

SIDEWALK

LOCAL "A"

LOCAL "B"

8.0 IN.

(41 LBS/SY)

95% COMPACTED DENSITY

N.T.S.

BAGWELL LN (BEXAR COUNTY) ~ STA. 7+80.41 THRU END

HENSLEY RUN (BEXAR COUNTY) ~ STA 1+00.00 THRU END

VERLANDER PASS (BEXAR COUNTY) ~ STA 1+00.00 THRU END

BAGWELL LN (CITY OF SAN ANTONIO) ~ STA. 2+55.00 THRU 7+80.41

BIGGIO LN (CITY OF SAN ANTONIO) ~ STA 3+36.63 THRU 12+03.83

CAMINITI LN (CITY OF SAN ANTONIO) ~ STA 1+00.00 THRU END

MANCINI WAY (CITY OF SAN ANTONIO) ~ STA 4+37.18 THRU END

2" H.M.A.C. TYPE "D"

* (SEE PAVEMENT SECTIONS)

-LIMITS OF PAVEMENT RECONSTRUCTION SAW-CUT JOINT-LIMITS OF NEW BASE -FOR SURFACE COURSE & BASE CONSTRUCTION TACK COAT (ITEM 203) SEE PAVEMENT STRUCTURE DETAILS EXISTING ASPHALT-PAVEMENT NEW SUBGRADE-EXISTING BASE—)
MATERIAL TACK COAT (ITEM 203) PAVEMENT JUNCTION DETAILS N.T.S.

E.G.T.TV.E | 3:1

SOIL/PARKWAY

* PAVEMENT SECTION TO BE DETERMINED BY ENGINEER

DURING CONSTRUCTION.

4' CONC. WALK

MIN. SLOPE 1/4"/FT.

- 4' CONC SIDEWALK

AFTER INSPECTION OF SUBGRADE

MAX. SLOPE 1"/FT.

CURB

COMPACTED FLEXIBLE BASE

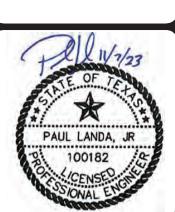
95% COMPACTED DENSITY

(SEE PAVEMENT SECTIONS) ★

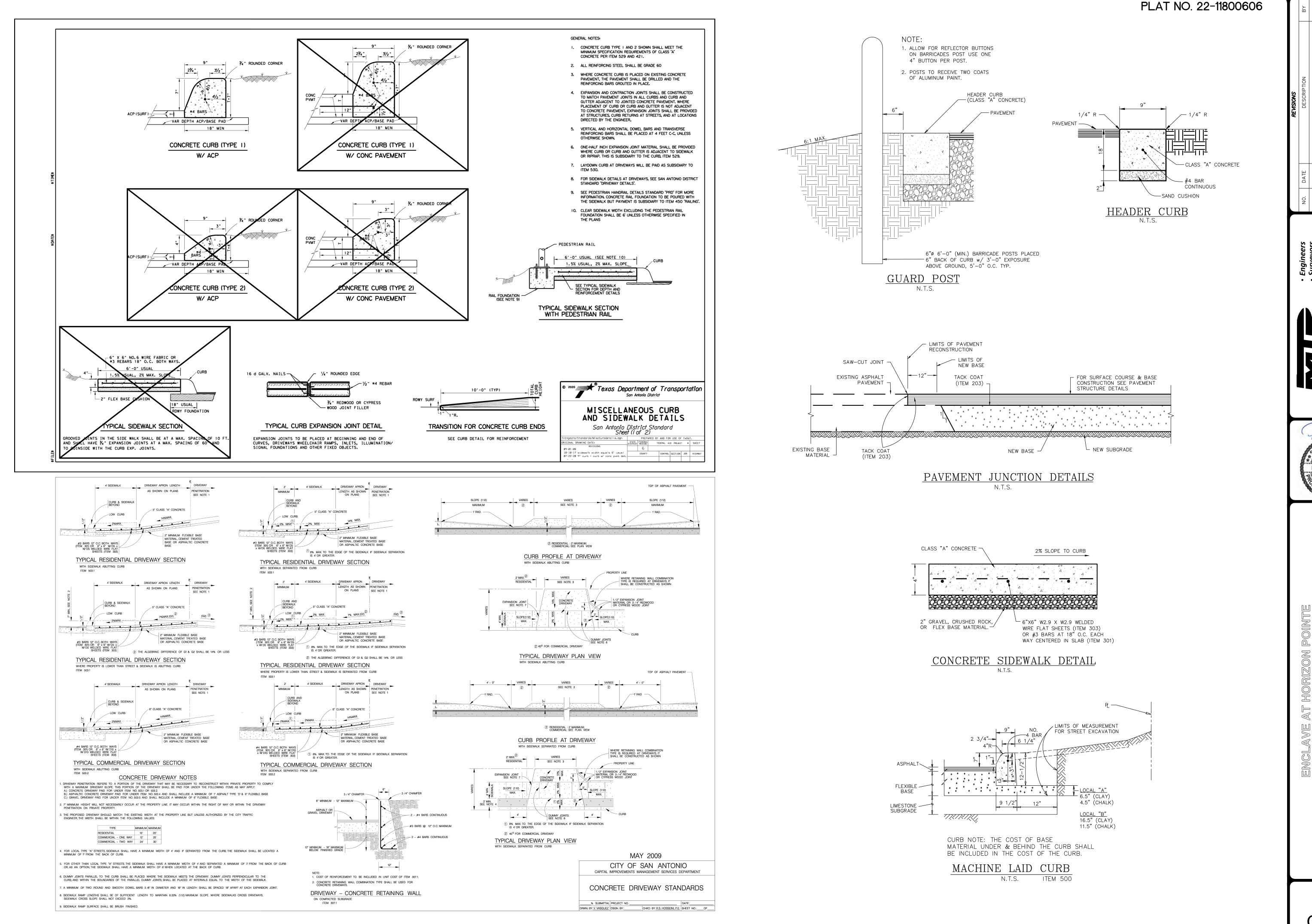
- NEW BASE

FOR CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED IN THE FIELD:

- AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2-3) DAYS. MAINTAIN MOISTURE DURING MELLOWING;
- AFTER MELLOWING AND FINAL MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE)
- NON-SLAKING AGGREGATES RETAINED ON THE 3/4 INCH SIEVE FROM THE SAMPLE):
- •• MINIMUM PASSING 13/4 SIEVE
- •• MINIMUM PASSING 3/4 SIEVE
- •• MINIMUM PASSING NO. 4 SIEVE
- SAMPLE SOIL-LIME MIXTURE FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD). IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERIFY UCS TO BE AT LEAST 160 PSI IN ACCORDANCE WITH PROCEDURE OUTLINED ABOVE FOR MIXTURE DESIGN.
- COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED);
- CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD TOTAL AT LEAST 5 DAYS).
- VERIFY DEPTH OF LIME STABILIZED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN ±1.0 INCH.



SHEET



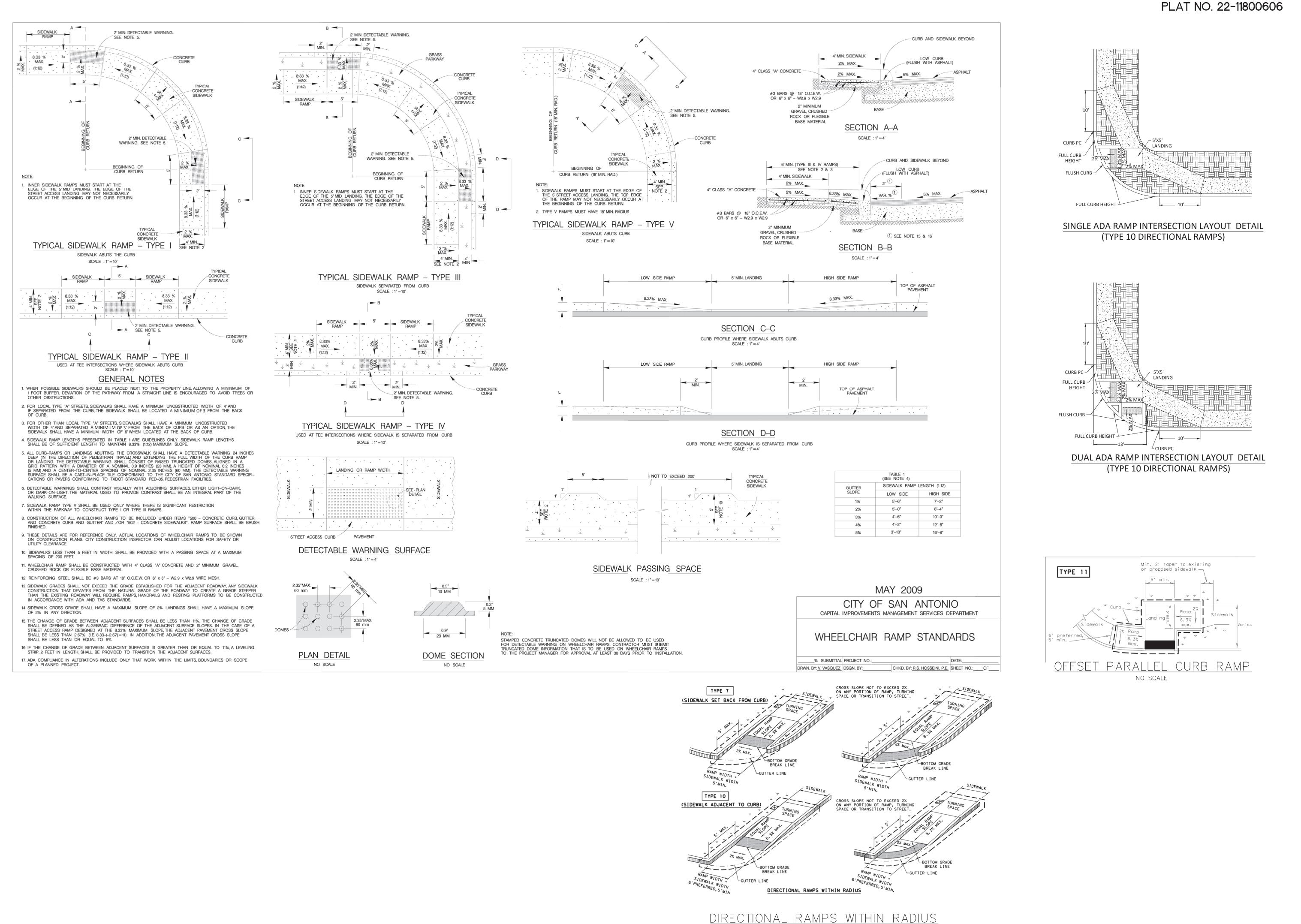
SUBMITTAL SET

C4.13

SHEET

PAUL LANDA, JR.

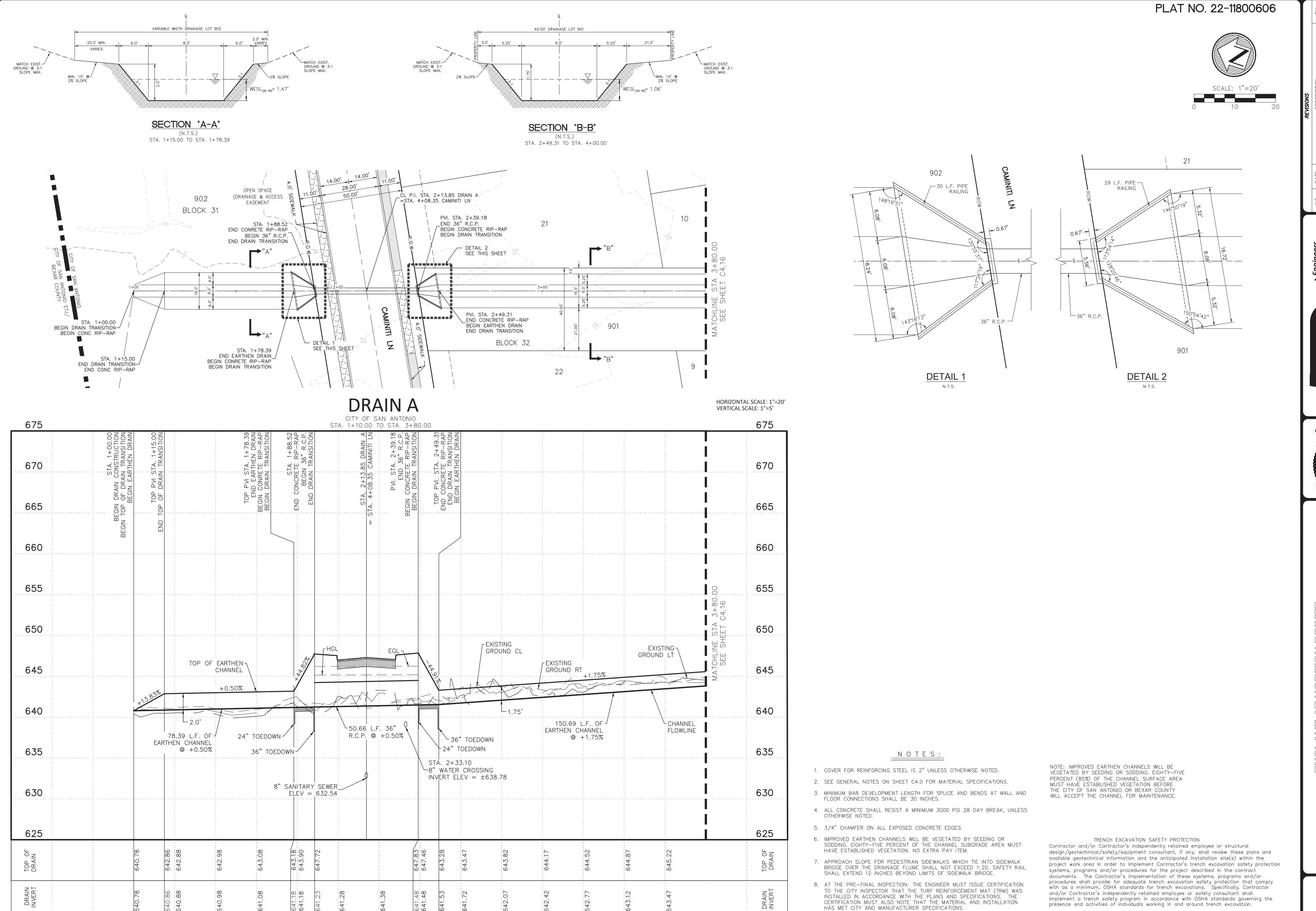
100182



NO SCALE



SHEET



1 + 00

2+00

3+00

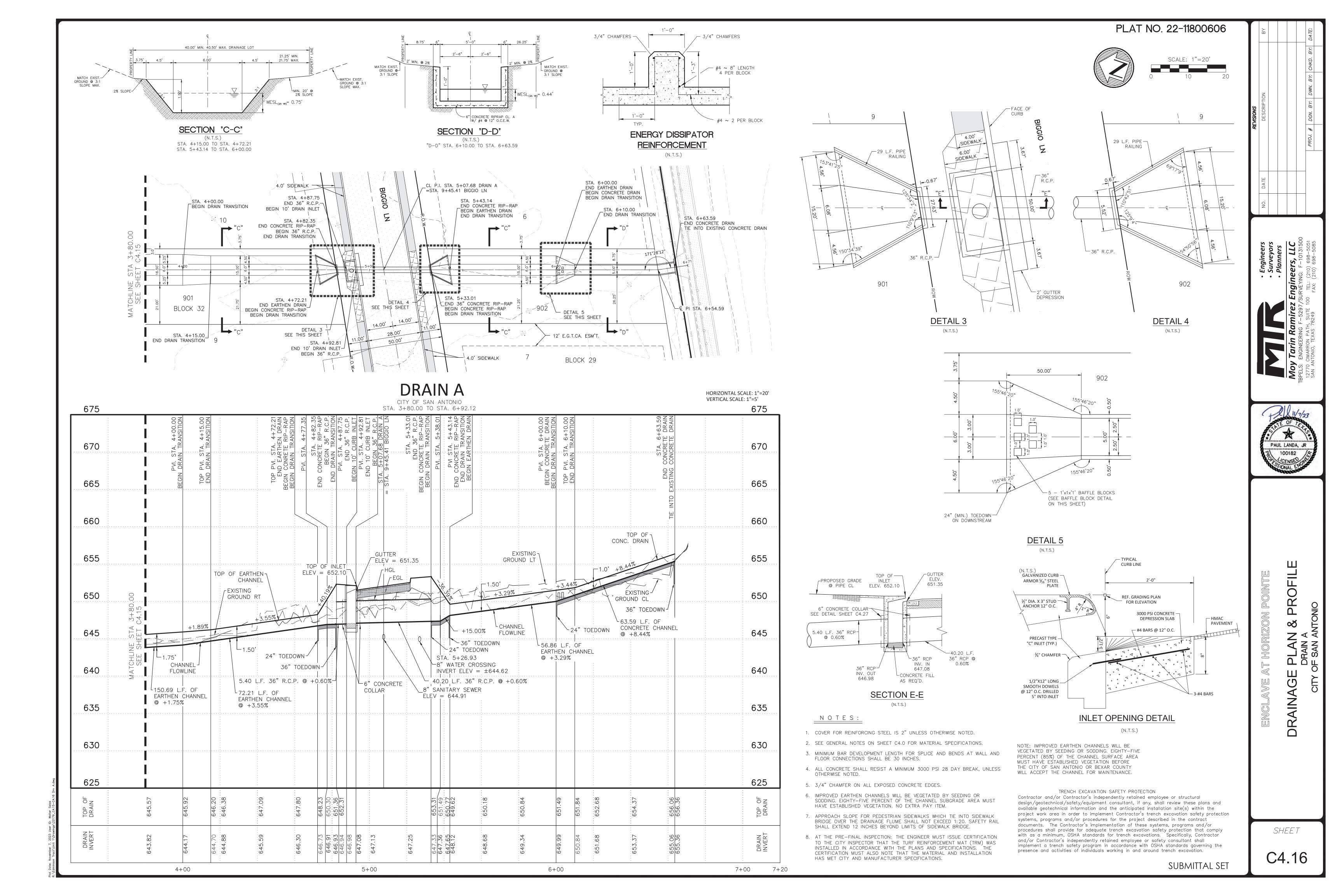
SUBMITTAL SET

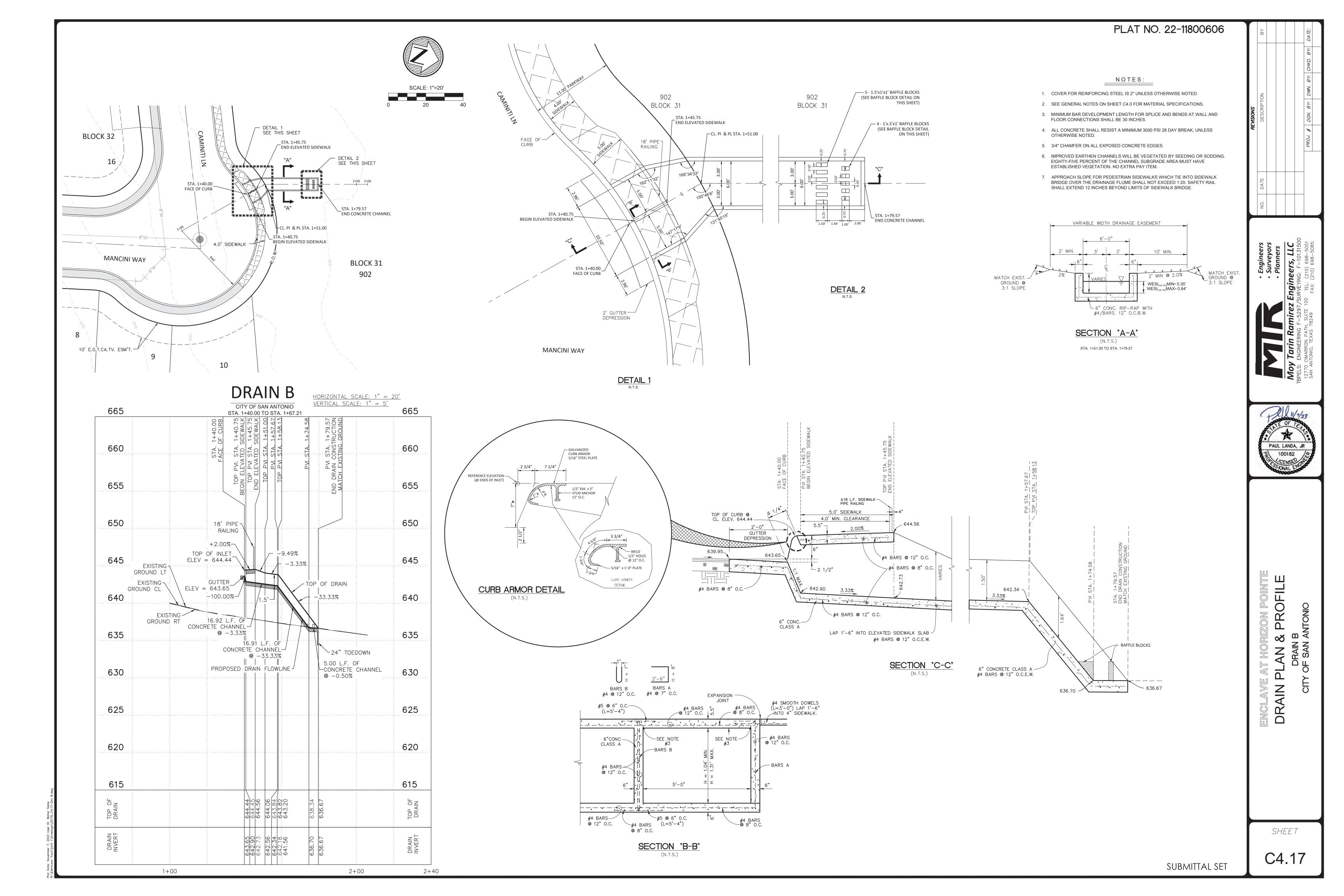
C4.15

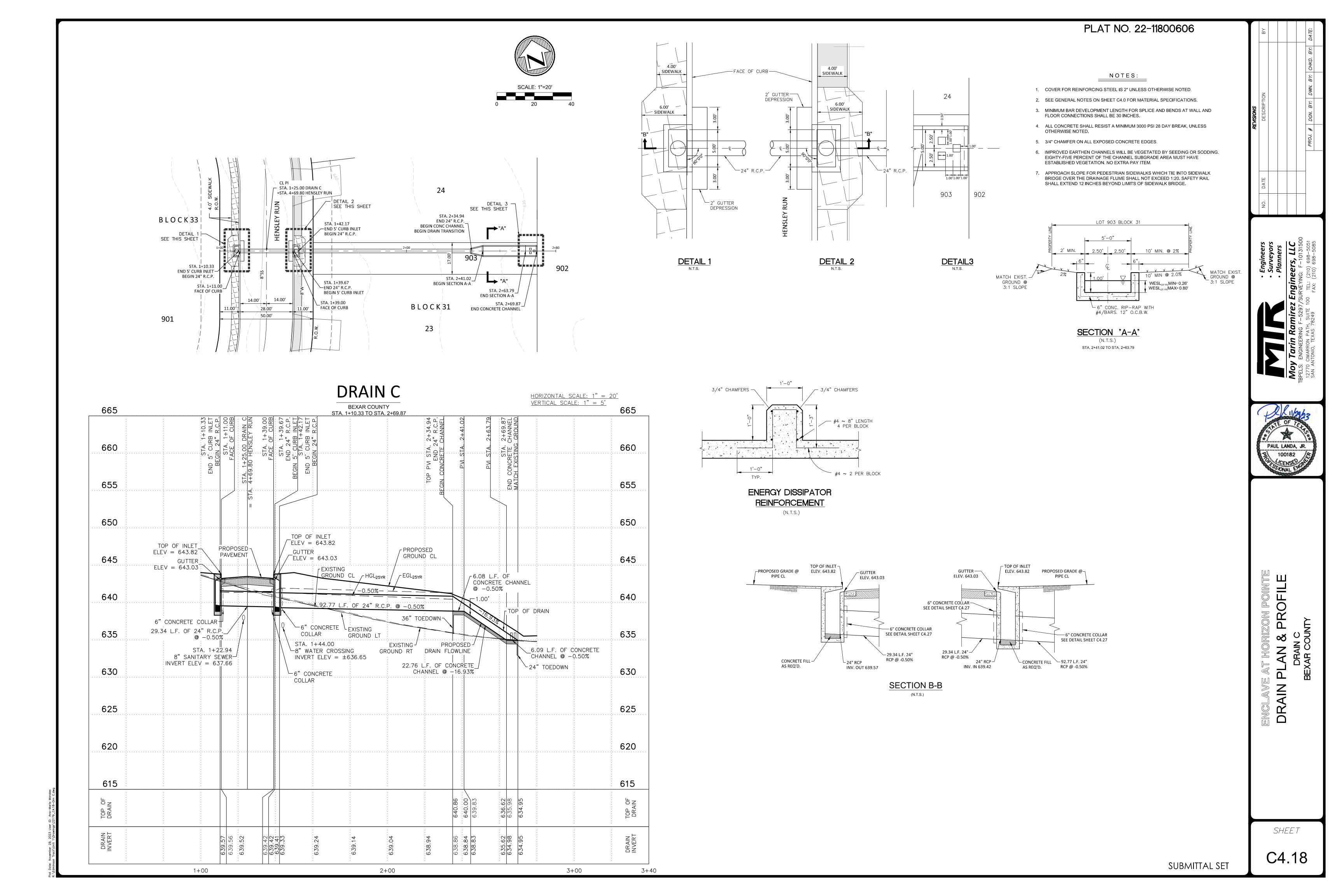
SHEET

PAUL LANDA, JR

0







645

635

620

2+00 2+20

PROVIDE CONCRETE -

HEAD WALL — SEE DETAIL

SHEET C4.21

EXISTING --GROUND CL

24" TOEDOWN -

1+00

CONC. RIP-RAP-

COLLAR AROUND PIPE

650 SEE DETAIL SHEET C4.27

630

625

620

_10' CURB INLET

-ELEV = 640.74

- GROUT TO DRAIN

3.94 L.F. OF 30"

R.C.P.@ 0.50%

TOP ELEV = 646.62

PAVEMENT

PLAT NO. 22-11800606



SCALE: 1"=20'

NO. DATE DESCRIPTION

PROJ. # DGN. BY: DWN

EngineersSurveyorsPlanners

Aloy Tarin Ramirez Eng PELS: ENGINEERING F-5297/SURVE



DRAINAGE PLAN & PROFILE

NOTES:

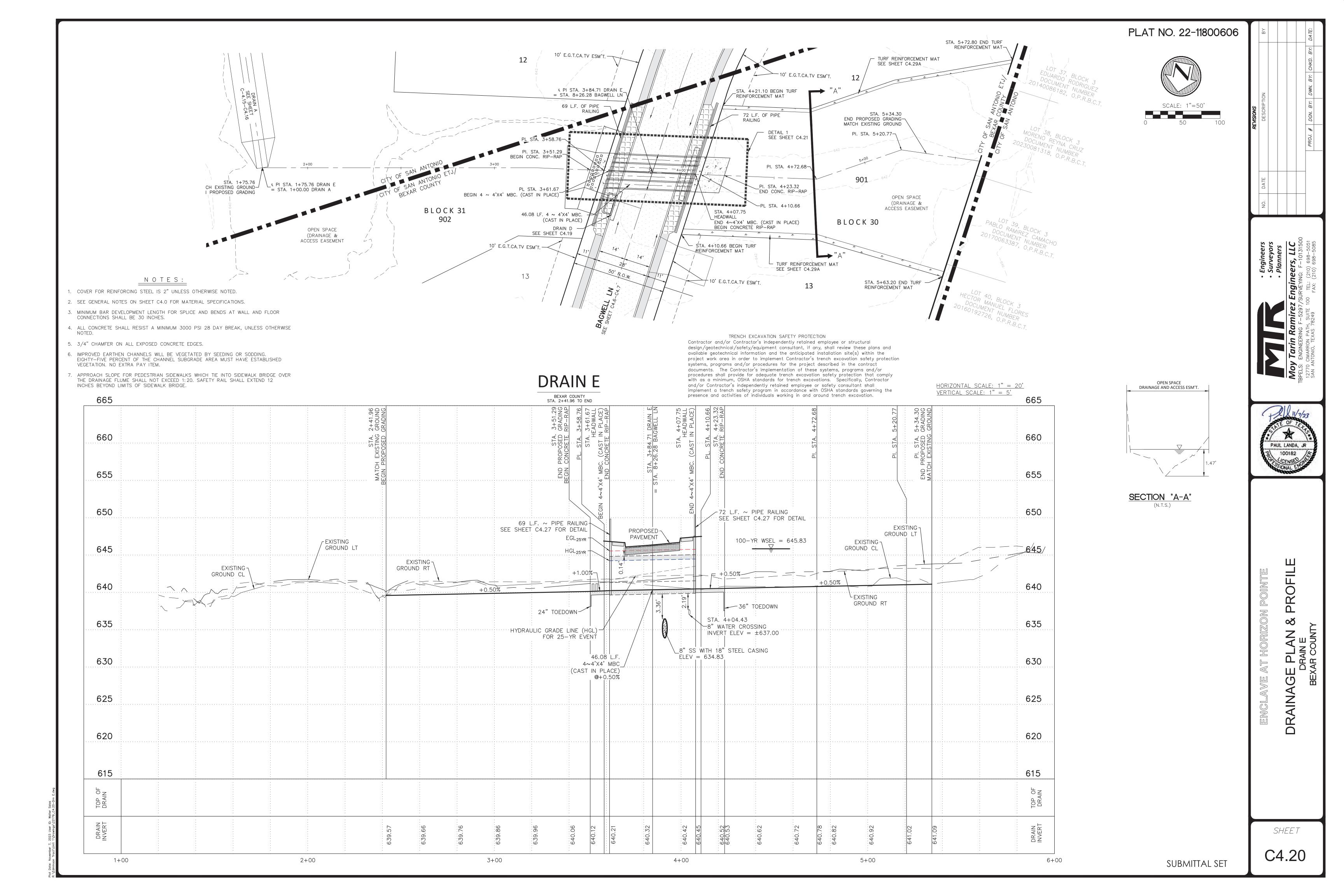
- 1. COVER FOR REINFORCING STEEL IS 2" UNLESS OTHERWISE NOTED.
- 2. SEE GENERAL NOTES ON SHEET C4.0 FOR MATERIAL SPECIFICATIONS.
- MINIMUM BAR DEVELOPMENT LENGTH FOR SPLICE AND BENDS AT WALL AND FLOOR CONNECTIONS SHALL BE 30 INCHES.
- 4. ALL CONCRETE SHALL RESIST A MINIMUM 3000 PSI 28 DAY BREAK, UNLESS OTHERWISE NOTED.
- 5. 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES.
- 6. IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY—FIVE PERCENT OF THE CHANNEL SUBGRADE AREA MUST HAVE ESTABLISHED VEGETATION. NO EXTRA PAY ITEM.
- 7. APPROACH SLOPE FOR PEDESTRIAN SIDEWALKS WHICH TIE INTO SIDEWALK BRIDGE OVER THE DRAINAGE FLUME SHALL NOT EXCEED 1: 20. SAFETY RAIL SHALL EXTEND 12 INCHES BEYOND LIMITS OF SIDEWALK BRIDGE.

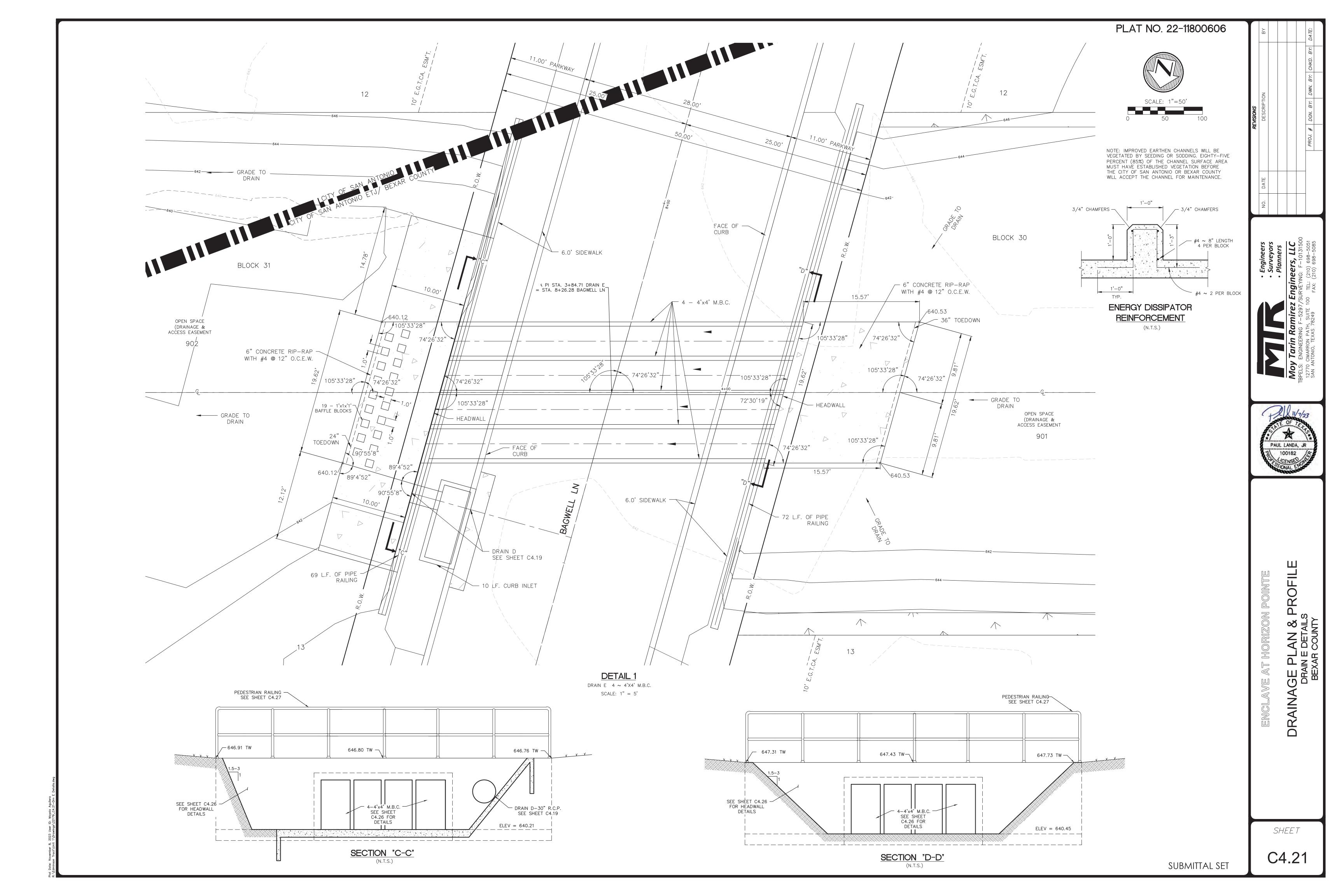
TRENCH EXCAVATION SAFETY PROTECTION

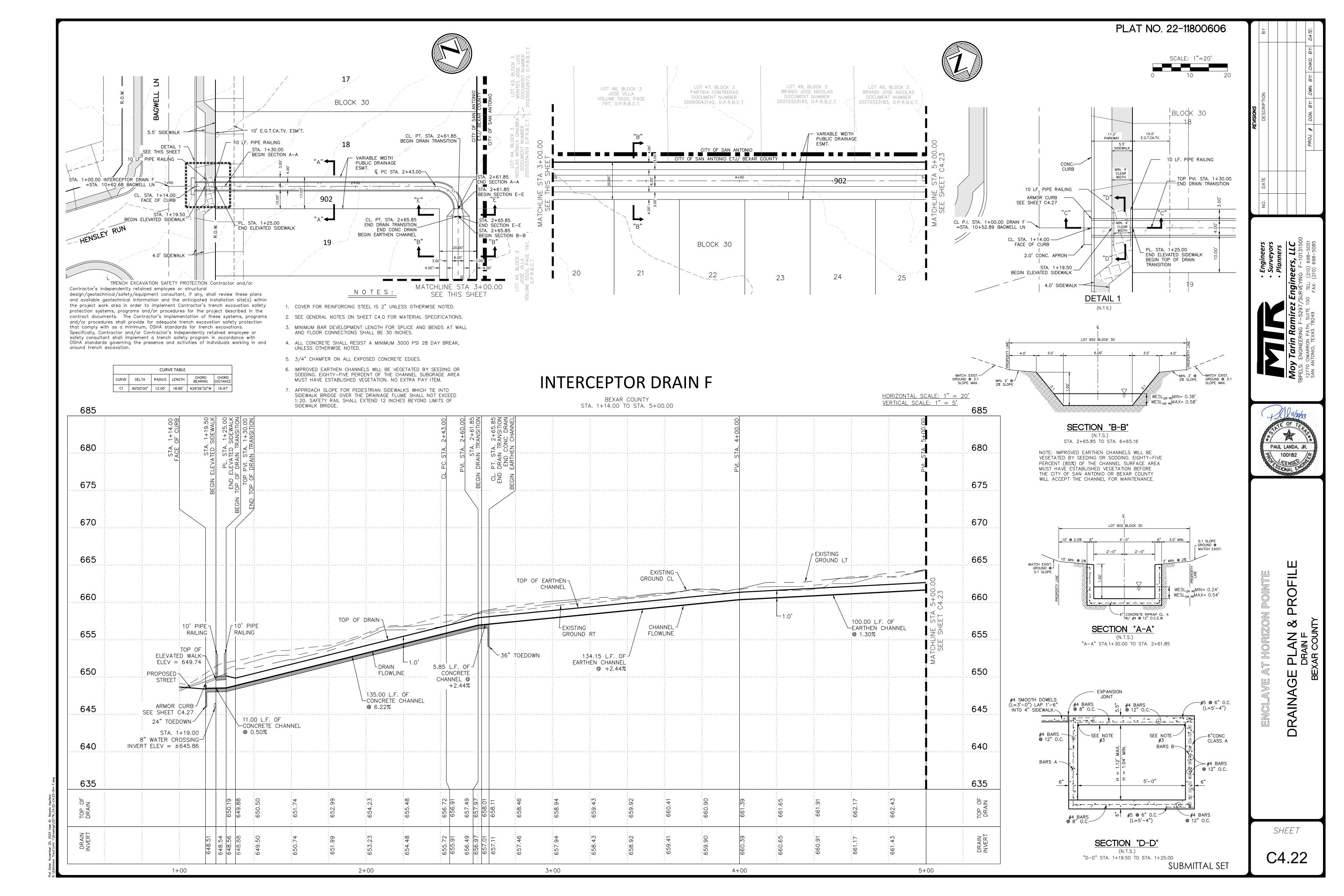
Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA 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 OSHA standards governing the presence and activities of individuals working in and around trench excavation.

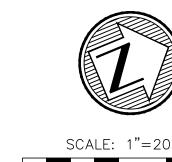
SUBMITTAL SET

SHEET











SECTION "B-B"

NOTE: IMPROVED EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT (85%) OF THE CHANNEL SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE
THE CITY OF SAN ANTONIO OR BEXAR COUNTY
WILL ACCEPT THE CHANNEL FOR MAINTENANCE.

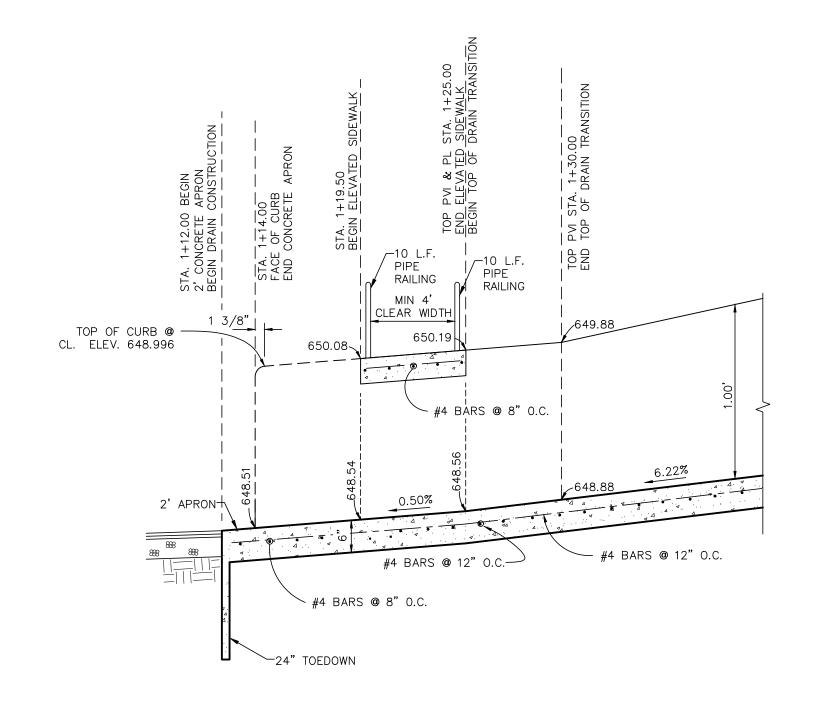
STA. 2+65.85 TO STA. 6+65.16

LOT 902 BLOCK 30

WESL_(25 YR) MAX= 0.58'

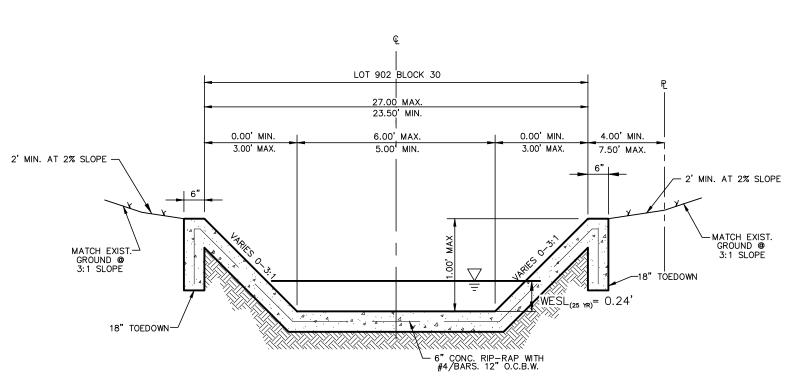
NOTES:

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SECTION "C-C"

(N.T.S.)



SECTION "E-E"

(N.T.S.) STA. 2+61.85 TO STA. 2+65.85

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 for the project described in the contract documents. The Contractor's implementation of these systems, programs and/or procedures shall provide for adequate trench excavation safety protection that comply with as a minimum, OSHA 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 OSHA standards governing the presence and activities of individuals working in and around trench excavation.

PAUL LANDA, JR. 100182

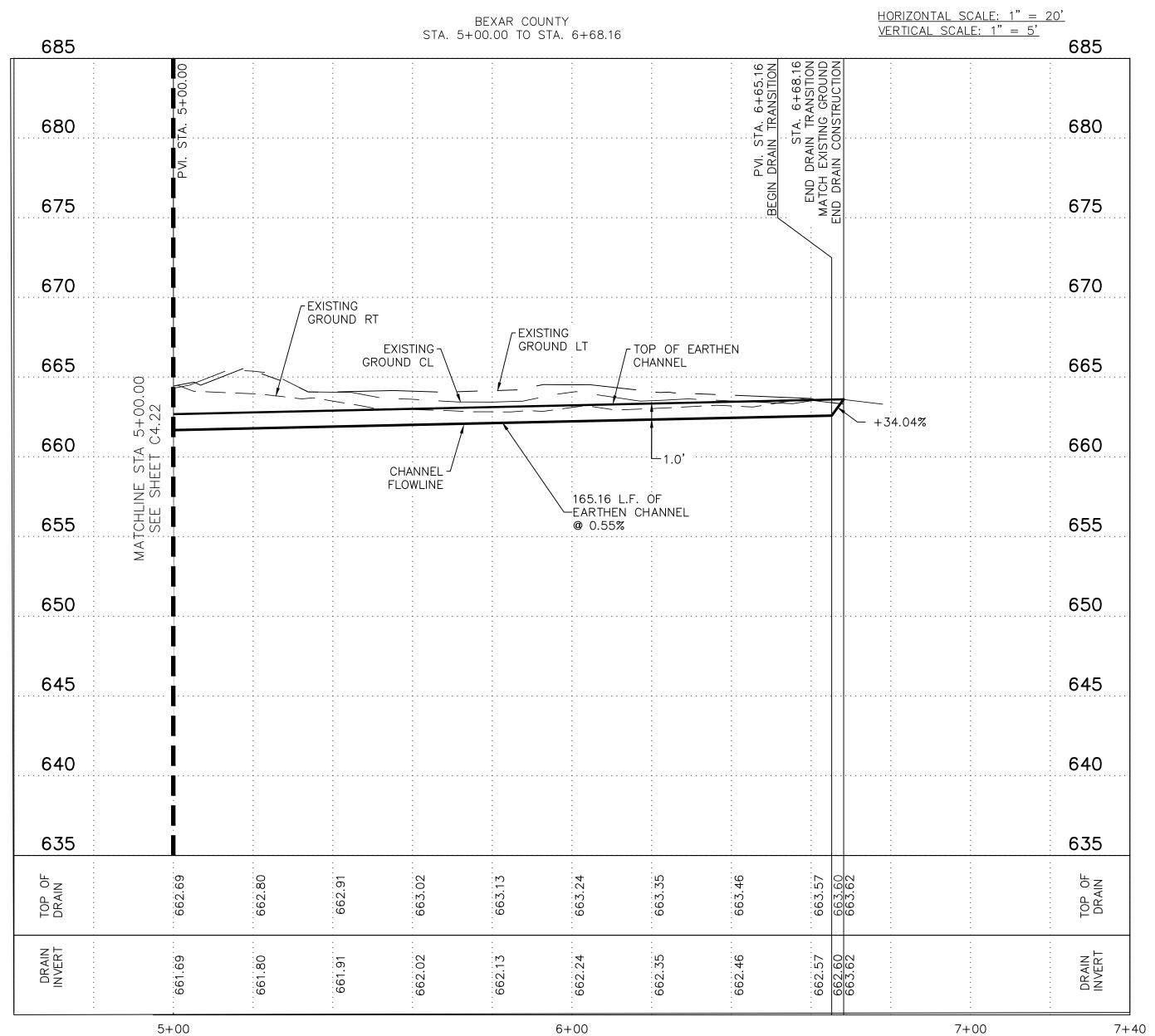
PROFIL

SHEET

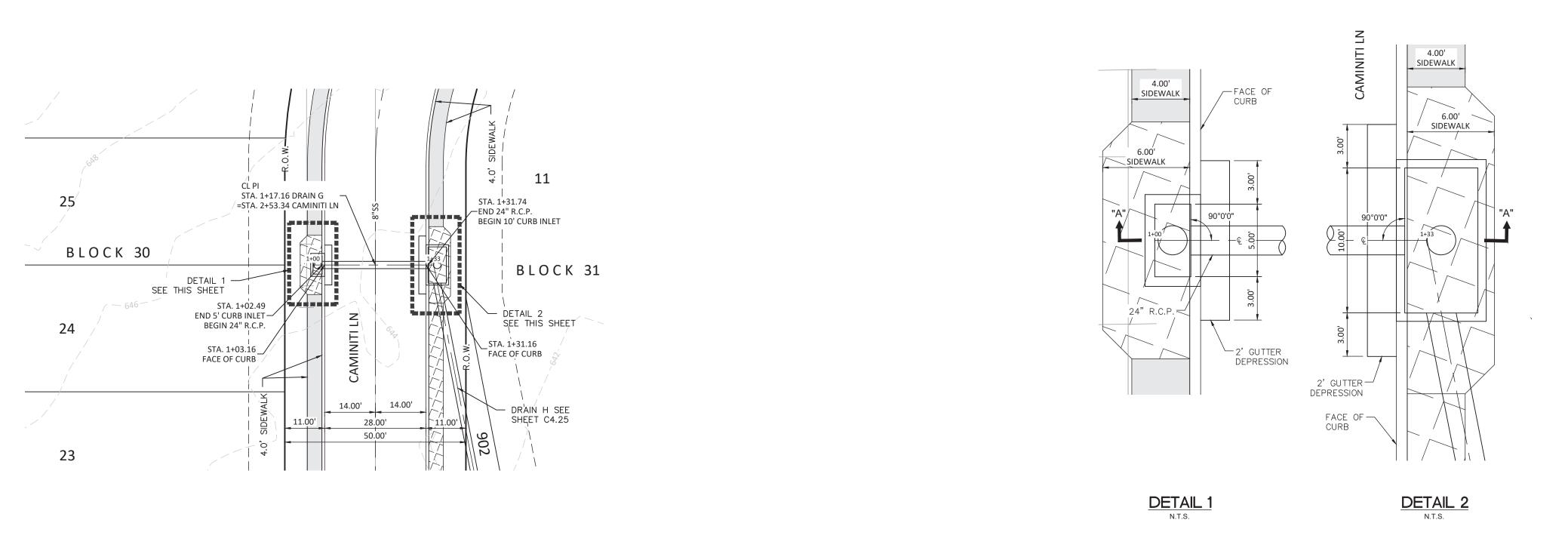
C4.23

LOT 49, BLOCK 3 LOT 50, BLOCK 3 LOT 51, BLOCK 3 BRANDI JOSE NICOLAS LOT 53, BLOCK 3 LOT 52, BLOCK 3 ORELLANA MAX ORELLANA MAX ENRIQUE DOCUMENT NUMBER LOT 54, BLOCK 3 SALAZAR FELICIDAD SALAZAR FELICIDAD GARCIA ENRIQUE DOCUMENT DOCUMENT NUMBER BENITO H. SALAZAR 20210323183, O.P.R.B.C.T GARCIA DOCUMENT NUMBER 20210085663, DOCUMENT NUMBER 20210323184, 0.P.R.B.C.T. NUMBER 20230142980, 0.P.R.B.C.T. VOLUME 1542, PAGE 76, O.P.R.B.C.T. 20230142980, O.P.R.B.C.T. O.P.R.B.C.T. STA. 6+68.16 _END DRAIN TRANSITION MATCH EXISTING GROUND END DRAIN CONSTRUCTION STA. 6+65.16 BEGIN DRAIN TRANSITION-END SECTION B-B BLOCK 30 27 30

INTERCEPTOR DRAIN F



SUBMITTAL SET





PLAT NO. 22-11800606

NOTES:

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- 5. 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

REF. GRADING PLAN

FOR ELEVATION

INLET OPENING DETAIL

(N.T.S.)

3000 PSI CONCRETE — DEPRESSION SLAB

─ #4 BARS @ 12" O.C.

HMAC PAVEMENT

(N.T.S.) GALVANIZED CURB —

ARMOR 5/16" STEEL PLATE

½" DIA. X 3" STUD ANCHOR 12" O.C.

PRECAST TYPE -

1/2"X12" LONG _

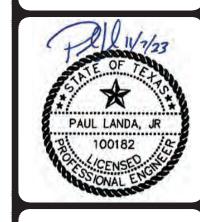
SMOOTH DOWELS

@ 12" O.C. DRILLED 5" INTO INLET

¾" CHAMFER −

"C" INLET (TYP.)

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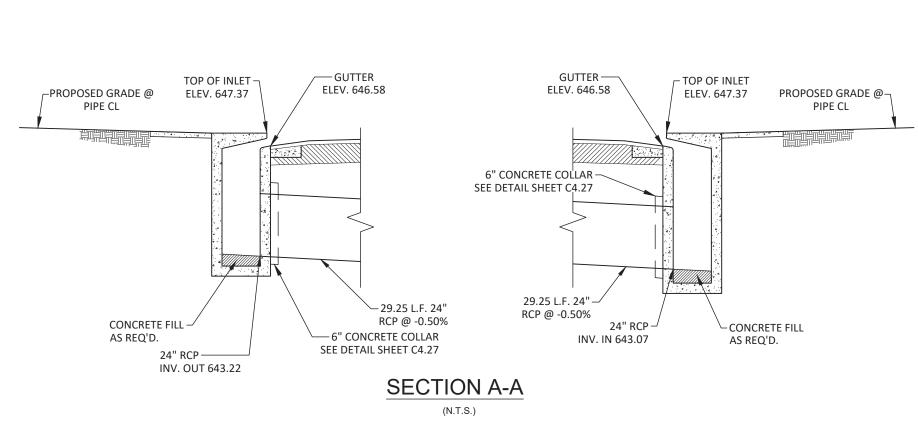


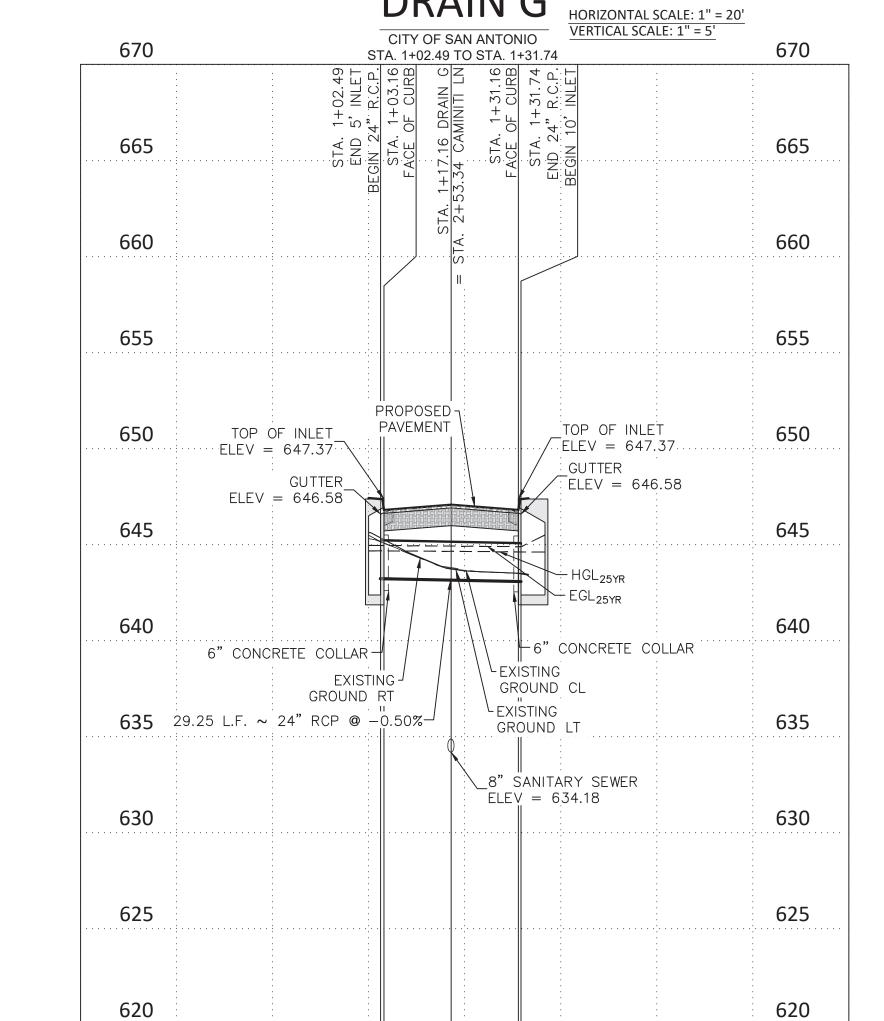


DRAIN PL

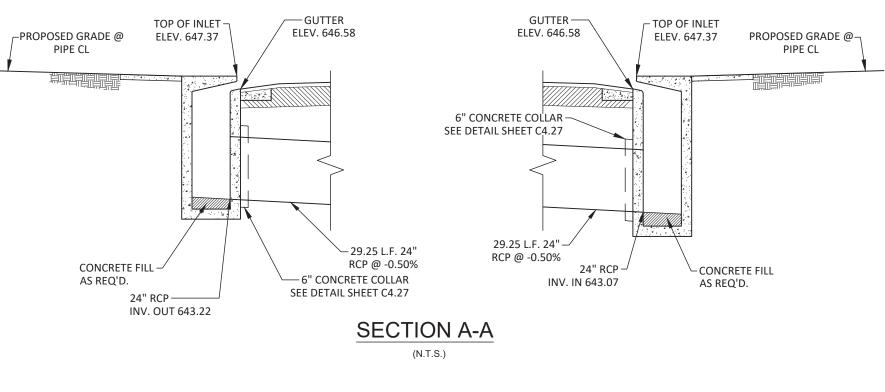
SHEET

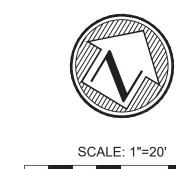
C4.24





1+00

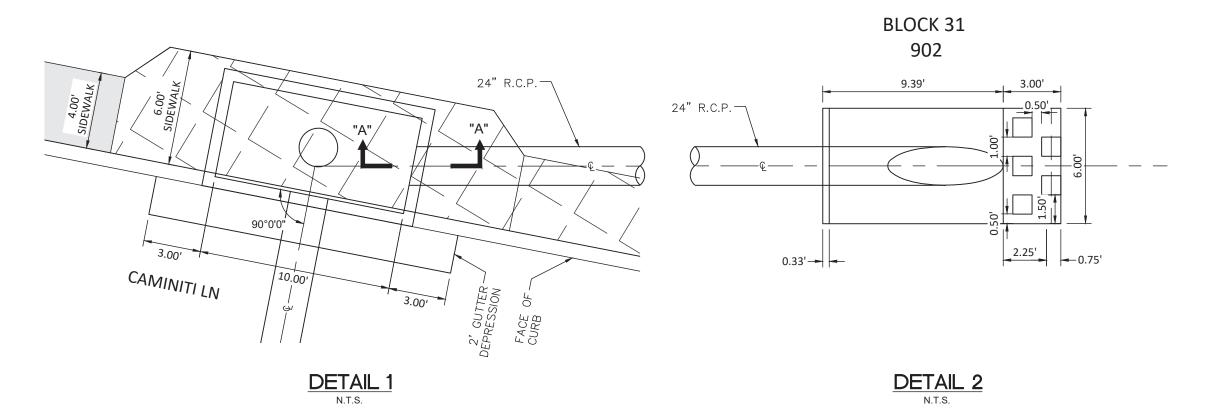








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12

STA. 1+98.39_ END 24" R.C.P.

STA. 1+89.00 BEGIN CONC. RIP-RAP

DRAIN H

CITY OF SAN ANTONIO

STA. 1+05.09 TO STA. 2+01.39

_ EGL_{25YR}

EXISTING GROUND LT

642.11

2+00

/-- HGL_{25YR} '

902

END CONC. RIP-RAP

DETAIL 2
SEE THIS SHEET

HORIZONTAL SCALE: 1" = 20' VERTICAL SCALE: 1" = 5'

670

665

660

655

650

645

640

635

630

625

620

DRAIN INVERT

2+60

×-----

BLOCK 31

STA. 1+05.09

_END 10' CURB INLET

DETAIL 1
SEE THIS SHEET

BEGIN 24" R.C.P.

4.0' SIDEWALK _/

_TOP OF INLET ELEV = 647.62

-6" CONCRETE COLLAR

93.33 L.F. ~ 24" RCP @-1.14%

EXISTING GROUND RT

24

BLOCK 32

.09 ET .

EXISTING J GROUND CL

1+00

25

670

665

660

655

650

645

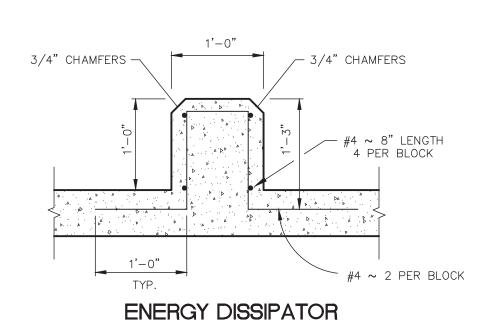
640

635

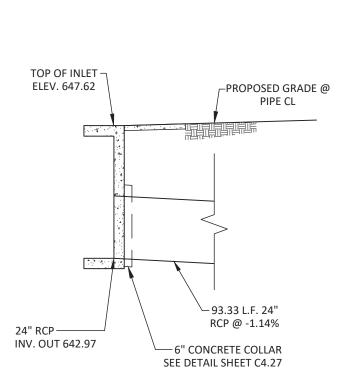
630

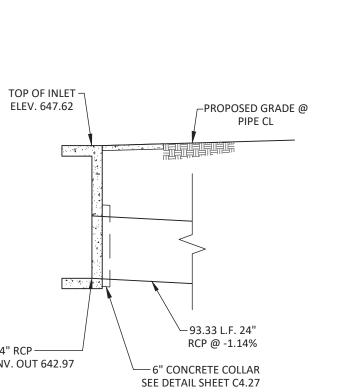
625

620



REINFORCEMENT (N.T.S.)



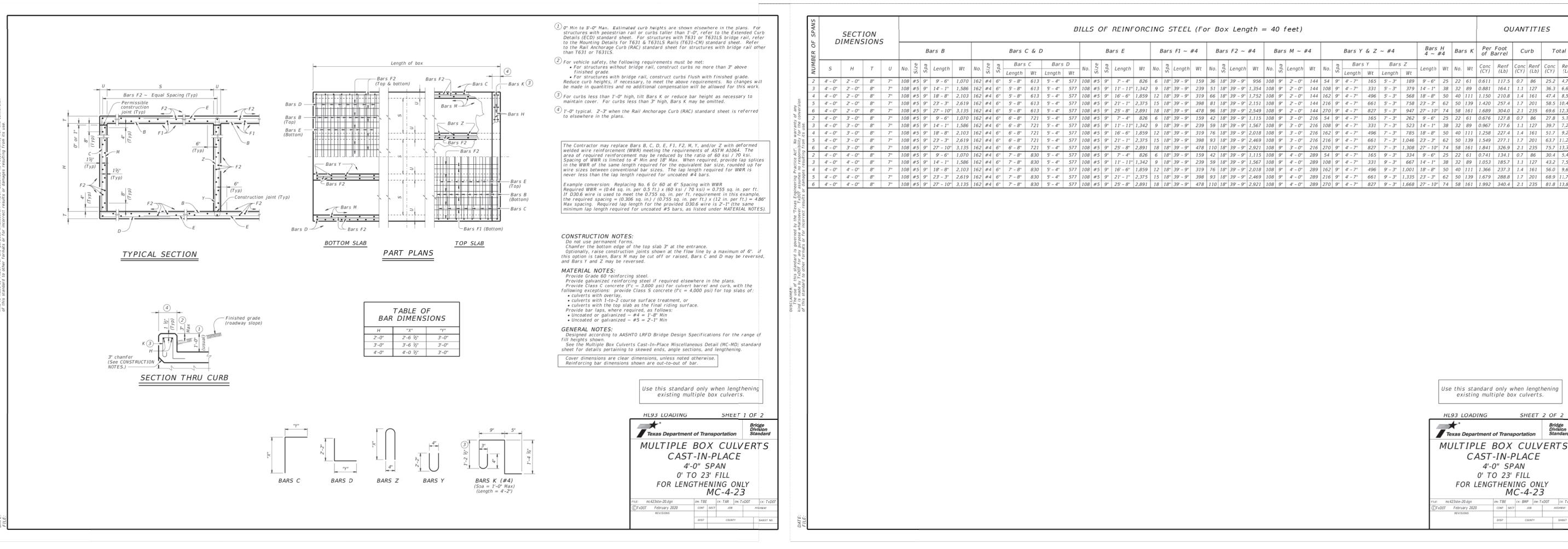


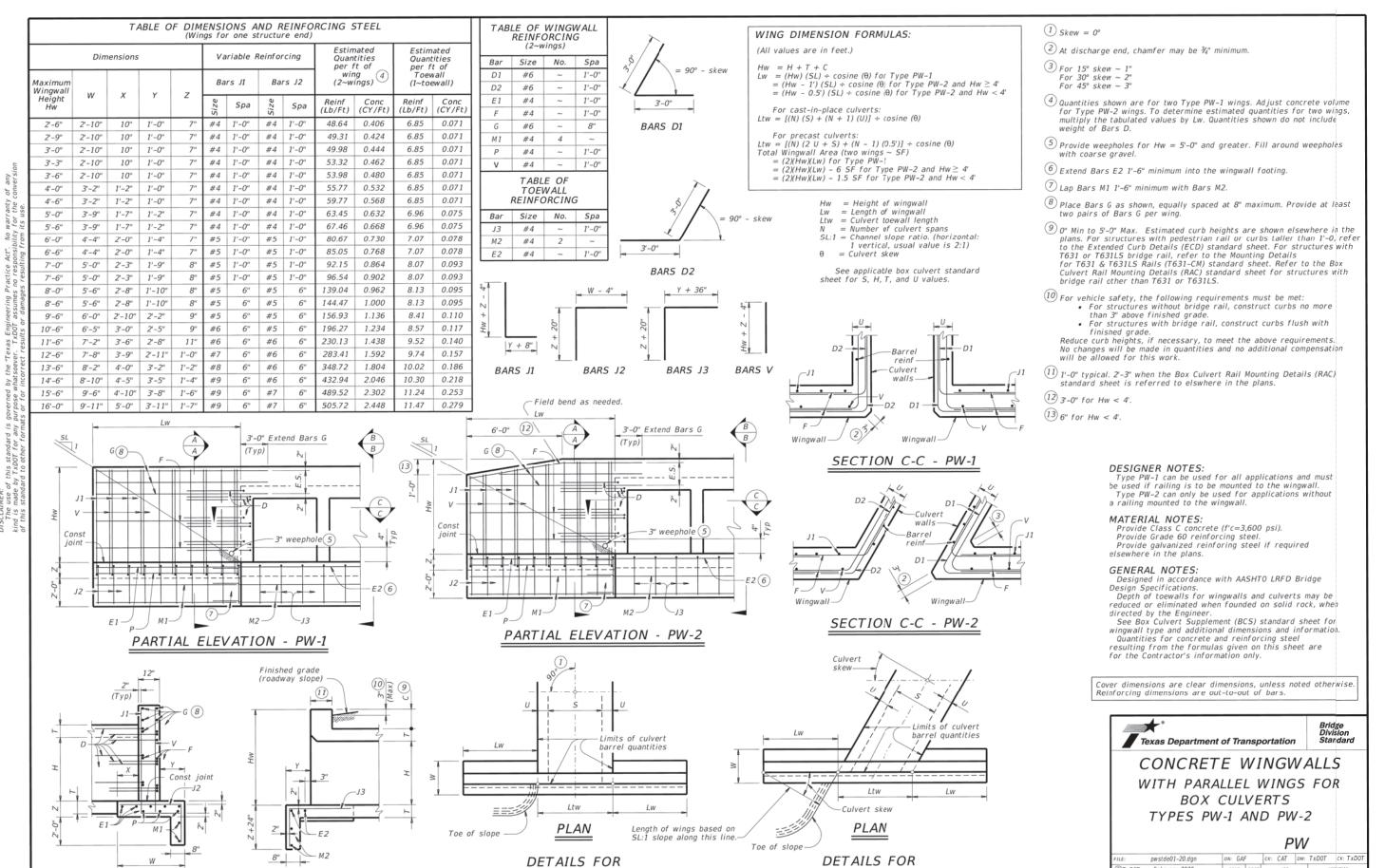
SECTION A-A



PROFILE DRAIN PL

SHEET





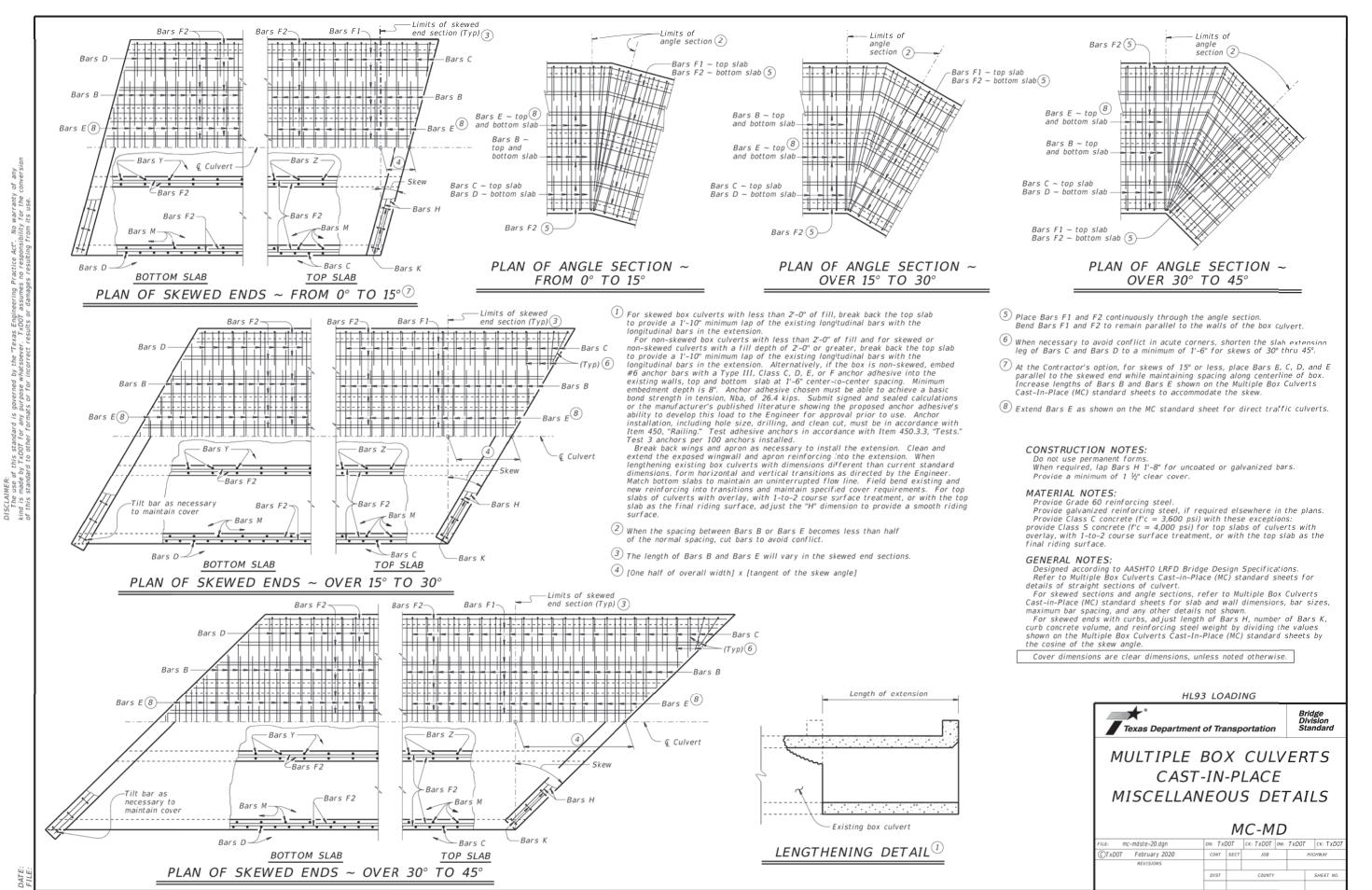
NON-SKEWED BOX CULVERTS

SECTION B-B

Showing wing reinforcement.

SECTION A-A

SKEWED BOX CULVERTS



NO. DATE

DESCRIPTION

BY

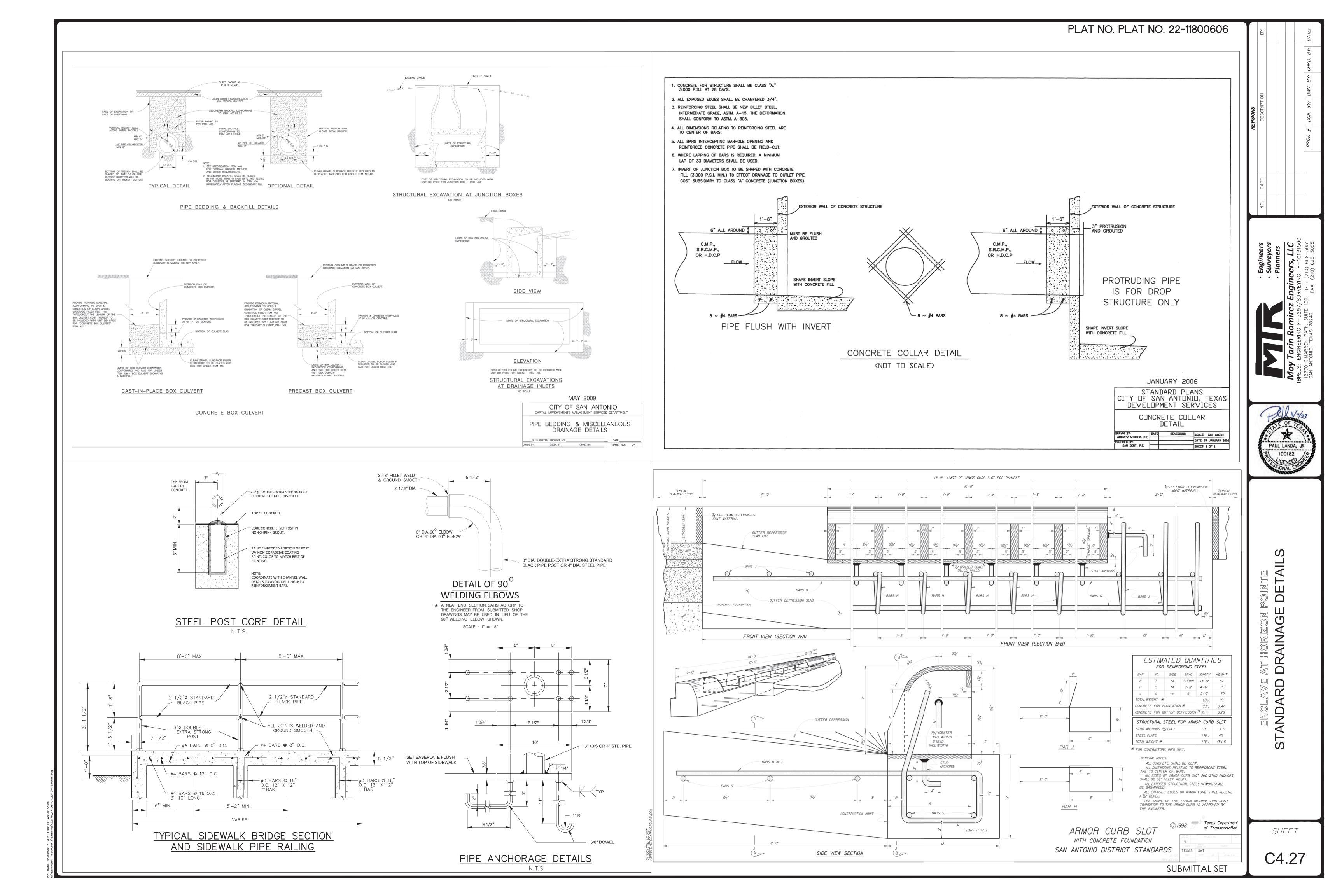
PROJ. # DGN. BY: DWN. BY: DATE

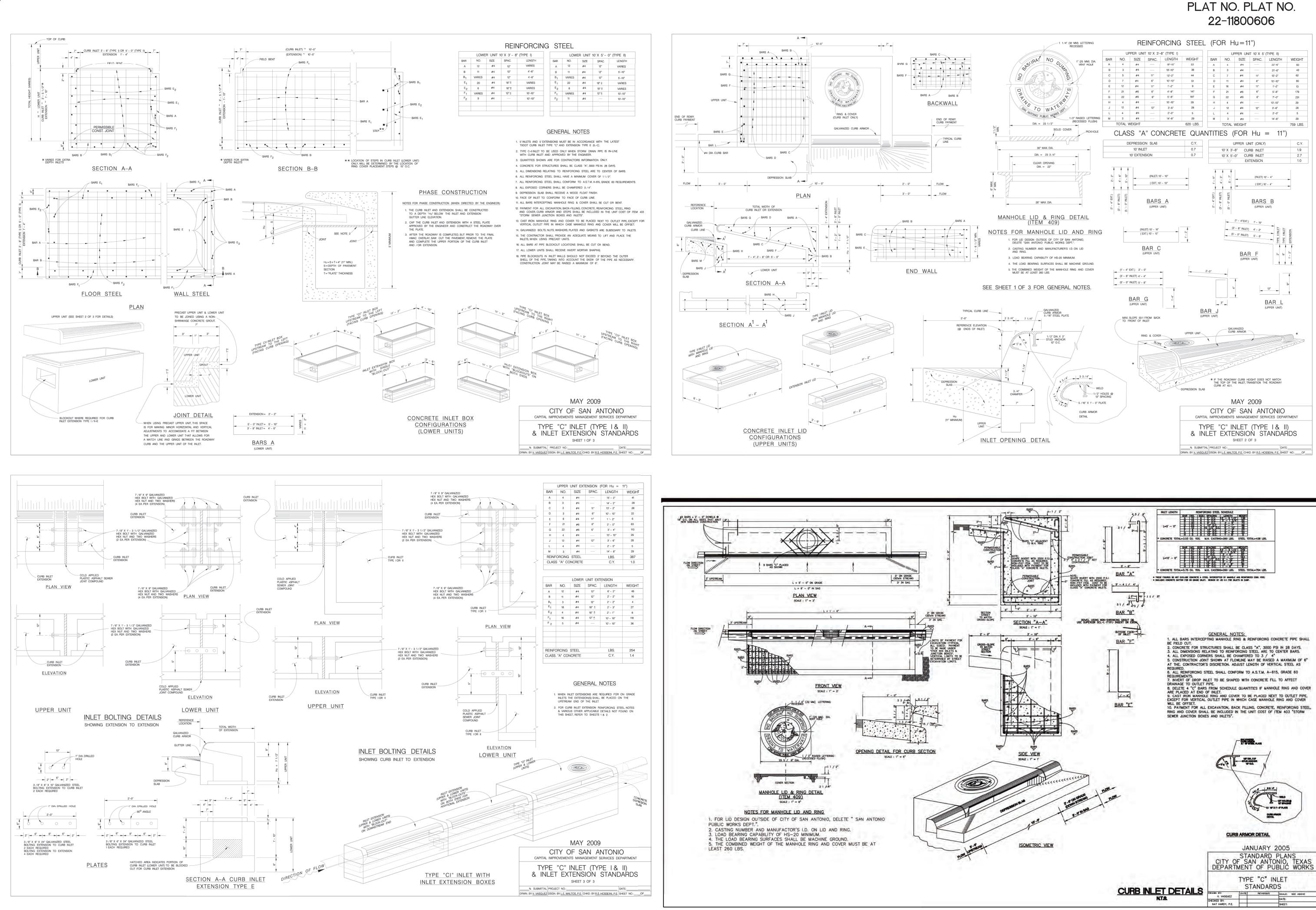


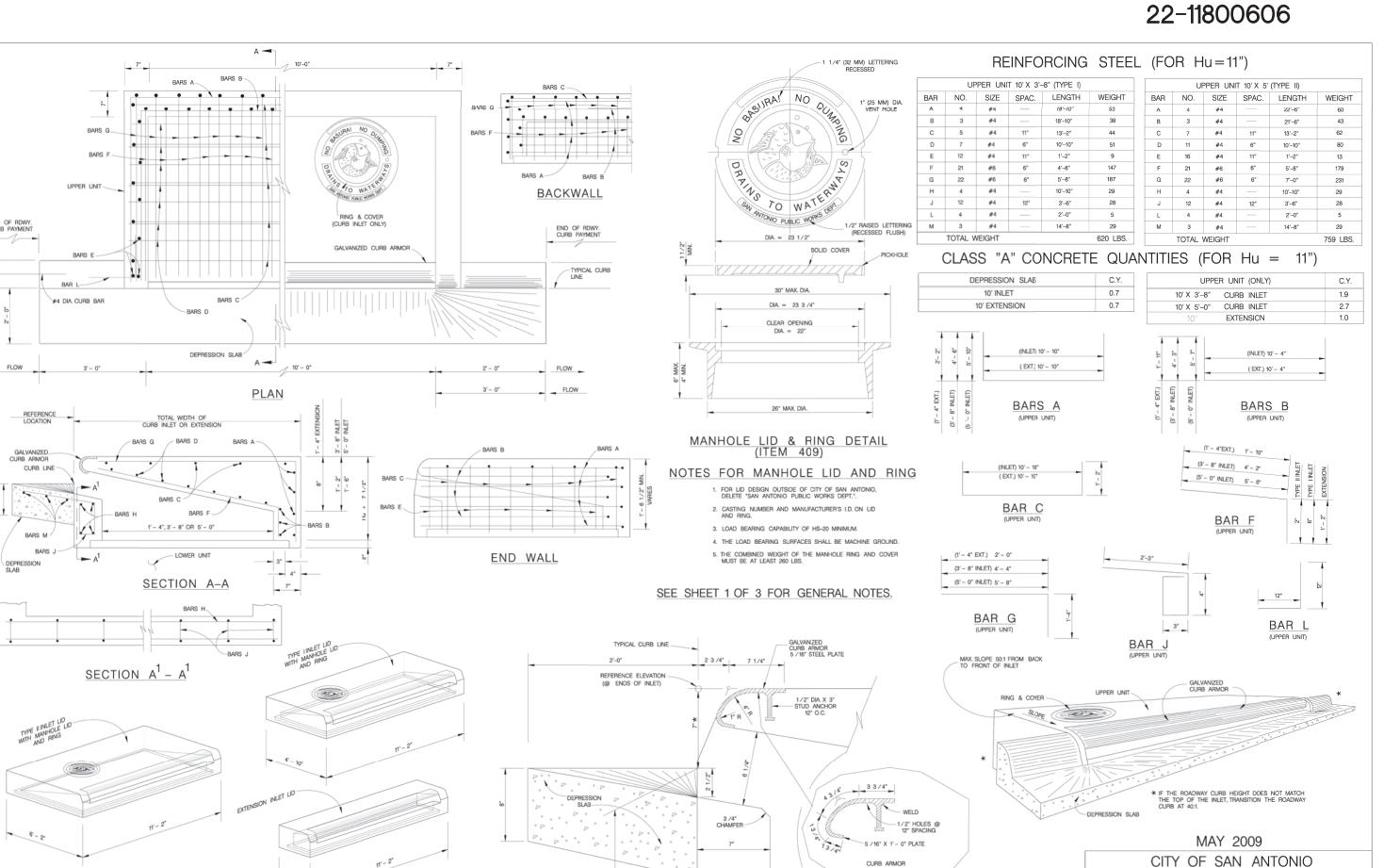


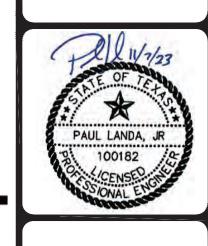
STANDARD DRAINAGE DETAILS

SHEET









SHEET 2 OF 3

Will street with the street will be street with the street with the street with the street wit

JANUARY 2005

TYPE "C" INLET

STANDARDS

NA RY)

V. VASQUEZ

DATE

RE14576NR

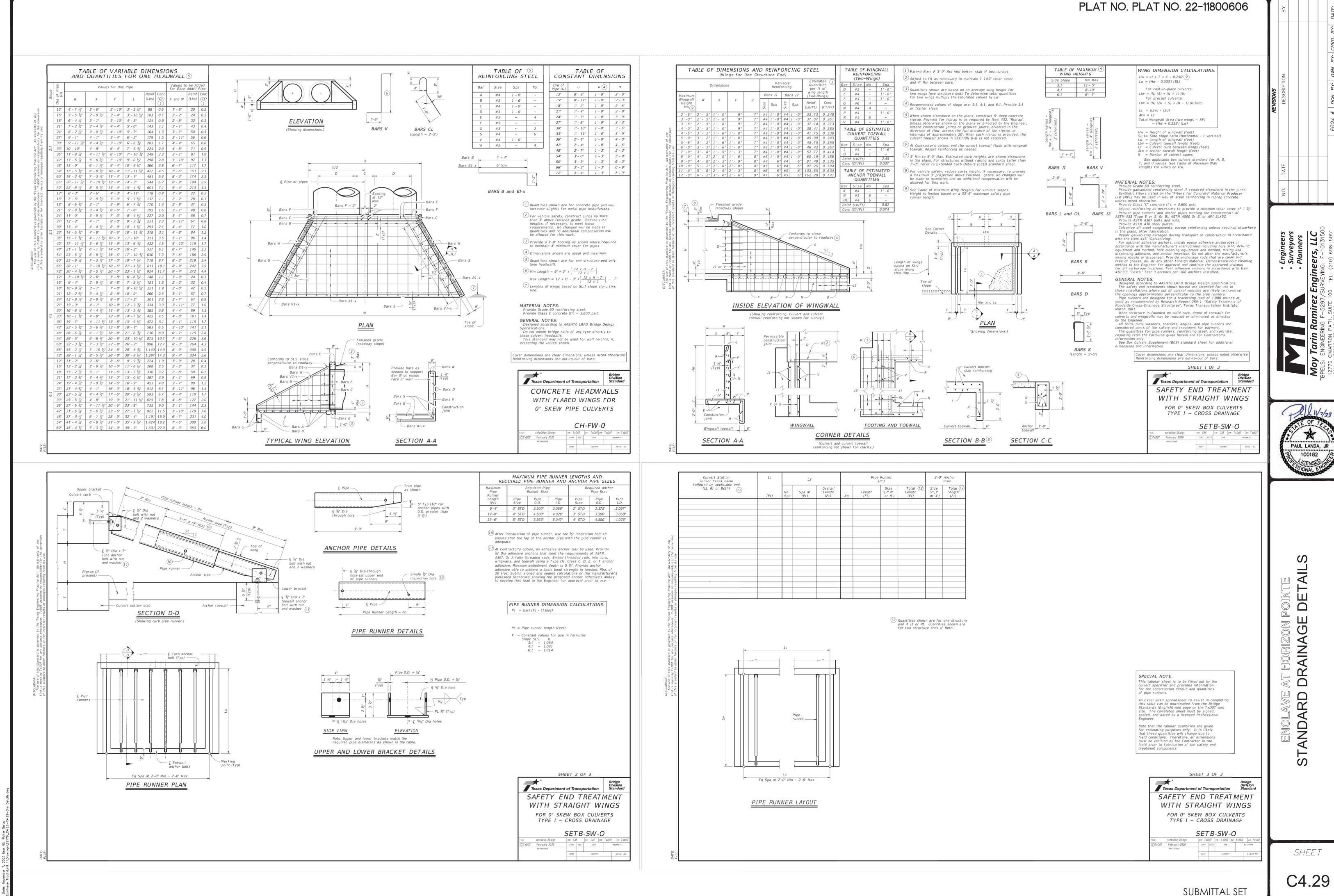
SOALE: SEE ABOVE

SUBMITTAL SET

CURB ARMOR DETAIL

 \triangleleft

SHEET





WATER FLOW

INTERMITTENT CHECK

SLOT DETAIL

NOT TO SCALE

CONCRETE/PYRAMAT

CONNECTION DETAIL

NOT TO SCALE

→ CONCRETE CHANNEL/-

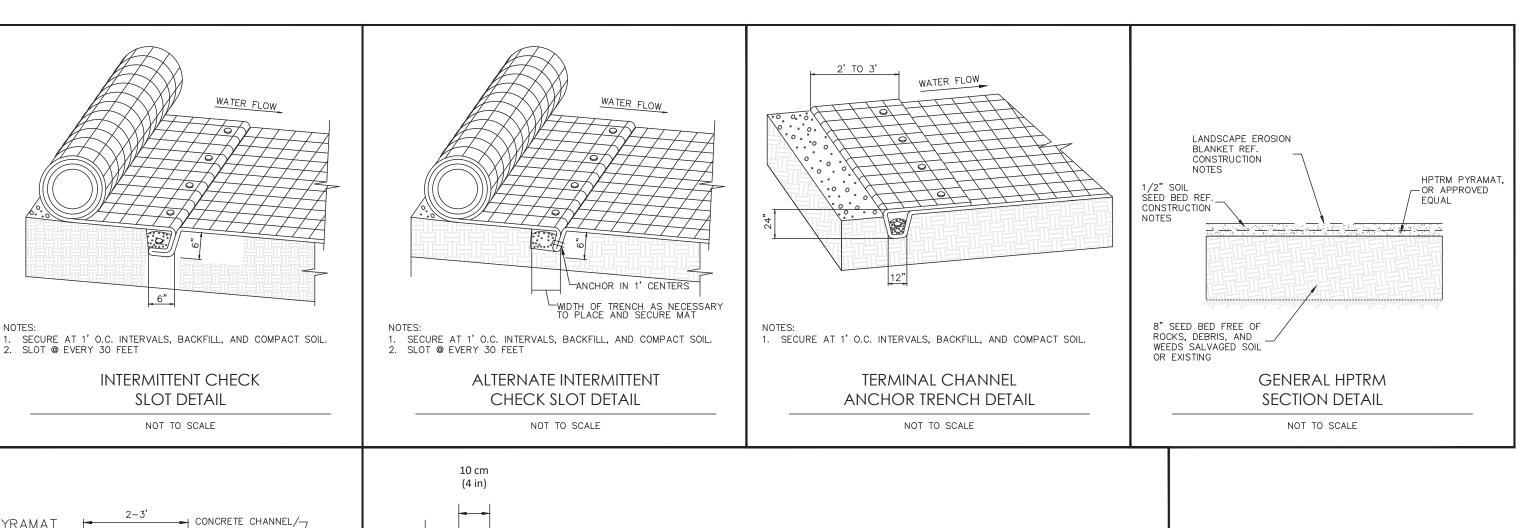
-3/8" X5", 3' O.C., BOLTS

EMBEDDED 3" INTO CONCRETE ATTACH PYRAMAT USING

3/8" DIA. NUT AND WASHER.

(3 in)

END TREATMENT



HIGH PERFORMANCE TURF REINFORCEMENT MAT

1. PLACE 3 ANCHOR / m² (2 ½ ANCHORS / Yd²) FOR CHANNELS 2. EXTEND LANDLOK® or PYRAMAT® TURF REINFORCEMENT MAT (OR EQUAL) TO ACCOMODATE MAXIMUM DESIGNED FLOW

GENERAL CHANNEL SECTION DETAIL

NOT TO SCALE

CONSTRUCTION NOTES GENERAL NOTES:

. HIGH PERFORMANCE TURF REINFORCEMENT MAT SHALL BE PYRAMAT BY PROPEX, OR APPROVED EQUAL. . AREA UNDER MAT TO BE FREE OF ROCKS AND OTHER DEBRIS. MAT MUST MAINTAIN INTIMATE CONTACT WITH

SOIL.

TURF REINFORCEMENT MAT TO BE ROLLED PARALLEL TO CHANNEL.

LOCAL SALES CONTACT: GEO—SOLUTIONS 210—651—3816.

EXECUTION NOTES: SITE PREPARATION - HIGH PERFORMANCE TURF REINFORCEMENT MAT (HPTRM)

A. GRADE AND COMPACT AREAS TO BE TREATED WITH HPTRM AND COMPACT. THE TOP 8" OF SUBGRADE MUST BE FREE OF ROCK, DEBRIS AND CONSIST OF A COHESIVE LIVE SOIL. IF THE EXISTING SUBGRADE DOES NOT MEET THESE STANDARDS THE CONTRACTOR IS RESPONSIBLE FOR THE IMPORT OF ACCEPTABLE MATERIAL.

B. REMOVE LARGE ROCKS, SOIL CLODS, VEGETATION, AND OTHER SHARP OBJECTS (LARGER THAN 2" IN

DIAMETER) THAT COULD KEEP THE HPTRM FROM INTIMATE CONTACT WITH SUBGRADE.

C. PREPARE THE 8" COMPACTED SEEDBED BY LOOSENING THE TOP ½" OF SOIL ABOVE FINAL SUBGRADE.

D. CONSTRUCT, AS A MINIMUM, 24 IN X 12 IN ANCHOR TRENCHES AT UPSTREAM AND DOWNSTREAM ENDS OF THE INSTALLATION TO INHIBIT UNDERMINING FROM STRAY SURFACE WATER. (ANCHOR ED TRENCHES SHOULD BE EXCAVATED TO A DEPTH THAT MATCHES DESIGN SCOUR DEPTH.) EXCAVATE 6
IN X 6 IN CHECK SLOTS AT 25 TO 30 FEET INTERVALS ALONG LENGTH OF CHANNEL. CUT
LONGITUDINAL ANCHOR SLOTS 6 IN X 6 IN AT TOP OF EACH SIDE SLOPE. THE AFOREMENTIONED
DIMENSIONS ARE MINIMUMS AND THE DIMENSIONS DETAILED ON THE DRAWINGS WILL CONTROL.

A MANDATORY PRE-CONSTRUCTION CONFERENCE WITH AN ENGINEER REPRESENTING THE HPTRM MANUFACTURER, CONTRACTOR, AND INSPECTOR MUST BE COMPLETED. THE CONFERENCE IS TO BE SCHEDULED BY THE CONTRACTOR WITH AT LEAST ONE WEEK'S NOTICE TO ALL PARTIES INVOLVED. REPRESENTATIVES MAY BE REQUIRED TO BE ON SITE FOR INSTALLATION ASSISTANCE. THE CONTRACTOR IS TO SCHEDULE THE ENGINEER REPRESENTING THE HPTRM TO INSPECT THE SITE PREPARATION PRIOR TO INSTALLATION AND THE COMPLETED INSTALLATION AND PROVIDE A CERTIFIED

LETTER STATING THE SITE MEETS THE MANUFACTURE'S RECOMMENDATIONS. A. INSTALL THE HPTRM AT ELEVATION AND ALIGNMENT INDICATED.

A. INSTALL THE HPTRM AT ELEVATION AND ALIGNMENT INDICATED.

B. THE HPTRM, IS TO BE SOILED FILLED WITH 1/2" OF TOP SOIL, AND VEGETATED BY APPLYING THE RIGHT MIXTURE OF SEED AND SOIL AMENDMENTS WITH FLEXTERRA, A FLEXIBLE GROWTH MEDIUM, PROTECTED BY A LIGHT WEIGHT EROSION CONTROL BLANKET, OR BY APPLYING THE RIGHT MIXTURE OF SEED AND SOIL AMENDMENTS WITH A WOOD FIBER MULCH, PROTECTED BY A LIGHT WEIGHT EROSION CONTROL BLANKET, OR BY PLACING SOD DIRECTLY ON TOP AND SECURE SOD WITH 8" STAPLES.

C. BEGINNING AT DOWNSTREAM END IN CENTER OF CHANNEL, PLACE INITIAL END OF FIRST ROLL OF HPTRM IN ANCHOR TRENCH AND SECURE WITH GROUND ANCHOR DEVICES AT 12 IN INTERVALS.

D. POSITION ADJACENT ROLLS IN ANCHOR TRENCH IN SAME MANNER, OVERLAPPING PROCEEDING ROLL MINIMILM 3 IN

D. POSITION ADJACENT RULLS IN ANCHOR TRENGT IN SOME MANUAL,
MINIMUM 3 IN.
E. SECURE THE HPTRM AT 12 IN INTERVALS ALONG THE TRENCH, BACKFILL AND COMPACT WITH
SPECIFIED SOIL OR AS DIRECTED BY THE ENGINEER.
F. UNROLL CENTER STRIP OF HPTRM UPSTREAM OVER COMPACTED TRENCH. STOP AT NEXT CHECK
SLOT OR TERMINAL ANCHOR TRENCH. UNROLL ADJACENT ROLLS OF HPTRM UPSTREAM IN SIMILAR
FASCION MAINTAINING 3 IN OVERLAP.

FASHION, MAINTAINING 3 IN OVERLAP.

G. FOLD AND SECURE THE HPTRM SNUGLY INTO TRANSVERSE CHECK SLOTS. LAY MATERIAL IN BOTTOM OF SLOT, AND THEN FOLD IT BACK AGAINST ITSELF AS INDICATED. ANCHOR THROUGH BOTH LAYERS OF HPTRM AT 12 IN INTERVALS. BACKFILL WITH SOIL AND COMPACT. CONTINUE UNROLLING THE HPTRM WIDTHS UPSTREAM OVER COMPACTED SLOT TO NEXT CHECK SLOT OR TERMINAL ANCHOR H. SECURE HPTRM TO CHANNEL BOTTOM WITH GROUND ANCHORING DEVICES AT A FREQUENCY OF 2 1/2

ANCHORS PER SQUARE YARD. ANCHORS SHOULD BE A MINIMUM OF 8 GAUGE AND 8" IN LENGTH OR SO THAT THEY HAVE SUFFICIENT GROUND PENETRATION TO RESIST PULLOUT IN A SATURATED CONDITION. INCREASED ANCHORING FREQUENCY MAY BE REQUIRED IF SITE CONDITIONS ARE SUCH

THAT THE ENGINEER DETERMINES IT NECESSARY.

I. AT THE ENGINEERS DISCRETION A MANUFACTURER'S DESIGNATED REPRESENTATIVE SHALL BE ON SITE FOR INSTALLATION ASSISTANCE.

J. ANY INSTALLATION OF ANGULAR PLACEMENT, OVERLAPPING AROUND CURVES, OR MODIFIED PLACEMENT METHODS MUST BE DETAILED ON THE CONSTRUCTION DRAWINGS.

K. THE ENGINEER MUST APPROVE ALTERNATE INSTALLATION METHODS PRIOR TO EXECUTION.

IRRIGATION, MOWING AND PROJECT ACCEPTANCE

A. PRIOR TO PROJECT ACCEPTANCE BY THE OWNER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A MINIMUM OF 85% OF THE AREA SEEDED SHALL BE COVERED WITH THE SPECIFIED VEGETATION WITH NO BARE OR DEAD SPOTS GREATER THAN 10 SQUARE FEET. THE CONTRACTOR SHALL BE RESPONSIBLE TO SET UP AND MAINTAIN TEMPORARY IRRIGATION, AS REQUIRED, TO ASSIST IN ESTABLISHMENT OF VEGETATION.

B. ALL AREAS THAT ERODE PRIOR TO PROJECT ACCEPTANCE SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR INCLUDING NECESSARY RESEEDING, WATERING, AND REPAIR OF THE HPTRM.

C. VEGETATED AREAS SHALL NOT BE MOWED PRIOR TO ESTABLISHMENT OF 70% VEGETATIVE DENSITY AND A MINIMUM GRASS GROWTH OF 3 INCHES. MOWER HEIGHT SHALL NOT BE SET LOWER THAN 3 INCHES. THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MOWING TO FACILITATE GROWTH AND SHALL NOT LET THE VEGETATION IN THE SEEDED AREAS EXCEED 18". IN ADDITION, THE CONTRACTOR SHALL WATER ALL GRASSED AREAS AS OFTEN AS NECESSARY TO ESTABLISH SATISFACTORY GROWTH AND TO MAINTAIN ITS GROWTH THROUGHOUT THE DURATION OF THE PROJECT.

SCALE: NONE

AREA UNDER MAT TO BE FREE OF ROCKS AND OTHER DEBRIS. MAT MUST MAINTAIN

1. SECURE AT 1' O.C. INTERVALS, BACKFILL, AND COMPACT SOIL.

INITIAL ANCHOR

TRENCH DETAIL

NOT TO SCALE

ANCHOR PATTERN 2 ANCHORS / Yd².
 U - SHAPED WIRE STAPLES, METAL GEOTEXTILE PINS, TRIANGULAR

ANCHOR PATTERN DETAIL

NOT TO SCALE

WOODEN OR PLASTIC STAKES CAN BE USED TO ANCHOR TRMs TO THE GROUND SURFACE

NOTE: 1) ALTERNATE CONNECTIONS MAY BE CONSIDERED BY THE ENGINEER

INTIMATE CONTACT WITH SOIL.

HIGH PERFORMANCE TURF REINFORCEMENT MAT (HPTRM) DETAILS

PYRAMAT

TOEDOWN -

ANCHOR PER STANDARD

INSTALLATION GUIDELINES

SHEET

PAUL LANDA, JR 100182

 \triangleleft

NO. DATE

1 02/01/24 UPDATED CALLOUTS

PROJ. # DGN. BY: CHKD. BY:

• Surveyors
• Planners

nirez Engineers, LLC
-5297/SURVEYING: F-10131500
SUITE 100 TEL: (210) 608-5051

Moy Tarin Ramirez E.
TBPELS: ENGINEERING F-5297/SU
12770 CIMARRON PATH, SUITE 100



GRADING AND PAVEMENT WIDENING

CONCEPTUAL TURN LANE IMPROVEMENTS

SHEET

- 1. ALL UTILITY EASEMENTS ARE TO BE CLEARED OF ALL UNDERBRUSH AND TREES LESS THEN 4" DIAMETER. CONTACT OWNER FOR TREES GREATER THAN 4" DIAMETER.
- 2. UTILITY EASEMENTS HAVE A MAXIMUM CROSS SLOPE OF 10%. A LETTER CERTIFYING THAT ALL UTILITY EASEMENTS ARE CLEARED AND TO FINAL GRADE WILL BE REQUIRED FROM THE CONTRACTOR PRIOR TO STAKING FOR UTILITY SERVICES AND/OR FINAL LOT PINS.
- 3. CONTRACTOR TO INSURE THAT ALL LOTS WILL HAVE POSITIVE DRAINAGE TO PREVENT ANY PONDING OF WATER. CONTRACTOR WILL PROVIDE A MINIMUM FINAL GRADE OF 2.0 % WITHIN ALL LOTS.
- 4. PRIOR TO ANY LOT GRADING, CONTRACTOR WILL CONTACT OWNER TO DETERMINE IF ANY TREES IN AREAS OF FILL/EXCAVATION CAN BE
- 5. EMBANKMENT MATERIAL TO HAVE A PLASTICITY INDEX (P.I.) OF 20 OR
- 6. THE PROPOSED FINISHED GRADE WITHIN THE ROOT PROTECTION ZONE OF ANY TREE TO BE PRESERVED SHALL NOT BE RAISED OR LOWERED MORE THAN THREE (3) INCHES. THE CONTRACTOR IS TO PROVIDE A TREE DAM IF THE PROPOSED GRADE WILL BE RAISED OR LOWERED MORE THAN THREE (3) INCHES IN THE ROOT PROTECTION ZONE.

1. GENERAL DESCRIPTION

THIS ITEM SHALL CONSIST OF ALL CLEARING AND GRUBBING, DEMOLITION, PREPARATION OF LAND TO BE FILLED, FILLING OF THE LAND, SPREADING, COMPACTION TESTING AND INSPECTION OF THE FILL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADES AND SLOPES AS SHOWN ON THE APPROVED PLANS.

ALL LOT GRADING MUST MEET REQUIREMENTS OF FHA/HUD HANDBOOK 4140.3, SPECIFICATIONS FOR LAND DEVELOPMENTS ON CONTROLLED EARTHWORK, DATASHEET 79g. HUD 79g REQUIREMENTS FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUD 79g COMPACTION TESTING. IN ADDITION, ENGINEERS MUST PROVIDED VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79g.

2. CLEARING THE AREA TO BE FILLED

ALL TIMBER, LOGS, TREES, BRUSH AND RUBBISH SHALL BE REMOVED FROM THE SITE.

3. SCARIFYING THE AREA TO BE FILLED

ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED, AND THE SURFACE SHALL THEN BE DISKED OR SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES (6"), ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE LEVELED PRIOR TO FIELD DENSITY TESTING. WHERE FILLS ARE MADE ON HILLSIDES OR SLOPES, THE SLOPE OF THE ORIGINAL GROUND UPON WHICH THE FILL IS TO BE PLACED SHALL BE DISKED OR SCARIFIED. WHERE THE SLOPE RATIO OF THE ORIGINAL GROUND IS STEEPER THAN 5 HORIZONTAL TO 1 VERTICAL, THE BANK SHALL BE STEPPED OR BENCHED. GROUND SLOPES WHICH ARE FLATTER

THAN 5 TO 1 SHALL BE BENCHED WHEN CONSIDERED NECESSARY BY THE GEOTECHNICAL

INTERSTATE 10

4. COMPACTING THE AREA TO BE FILLED

FOLLOWING THE CLEARING AND DISKING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS. THE AREA SHALL BE BROUGHT TO THE ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT (90%) OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT THD--TEX--113-E COMPACTION PROCEDURE.

5. FILL MATERIALS

THE MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, SUCH AS TREES, BRUSH AND RUBBISH, AND SHALL NOT CONTAIN ROCKS OR LUMPS HAVING A DIAMETER OF MORE THAN SIX INCHES (6").

6. DEPTH AND MIXING OF FILL LAYERS

THE SELECTED FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS WHICH, WHEN COMPACTED, SHALL HAVE A DENSITY CONFORMING TO THAT STIPULATED ABOVE. EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. COMPACTED LAYER THICKNESS MAY VARY DEPENDING ON THE COMPACTION EQUIPMENT OF DEMONSTRATED CAPABILITY. THE MAXIMUM LOOSE DEPTH FOR ANY MATERIAL SHALL NOT EXCEED TWELVE INCHES (12"). FOR TESTING REQUIREMENTS OF FILL MATERIAL, SEE DENSITY TESTING.

7. ROCK

WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO NEST AND ALL VOIDS MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED. NO LARGE ROCKS WILL BE PERMITTED WITHIN EIGHTEEN INCHES (18") OF THE FINISHED GRADE.

8. COMPACTION OF FILL LAYER

COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE FILL TO THE SPECIFIED DENSITY. COMPACTION SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER THE ENTIRE STRUCTURAL AREA (BENEATH PROPOSED STRUCTURES).

9. COMPACTION OF SLOPES

THE FACES OF FILL SLOPES SHALL BE COMPACTED. COMPACTING OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TOO DENSE FOR PLANTING ON THE SLOPES. COMPACTION OF THE SLOPE FACES MAY BE DONE PROGRESSIVELY IN INCREMENTS OF THREE TO FIVE FEET (3' TO 5') IN FILL HEIGHT AS THIS FILL PROGRESSES OR AFTER THE FILL HAS BEEN BROUGHT TO ITS TOTAL HEIGHT.

10. MOISTURE CONTENT

THE FILL MATERIAL SHALL BE COMPACTED AT THE APPROPRIATE MOISTURE CONTENT SPECIFIED FOR THE SOILS BEING USED. APPROPRIATE MOISTURE CONTENT IS DEFINED, TYPICALLY, AS OPTIMUM MOISTURE CONTENT; HOWEVER, FOR EXPANSIVE SOILS IT MAY BE GREATER THAN OPTIMUM MOISTURE CONTENT, AND OTHER MOISTURE CONTENTS MAY BE NECESSARY TO PRODUCE THE DESIRED RESULTS WITH CERTAIN SOILS.

11. DENSITY TESTS

FIELD DENSITY TESTS SHALL BE PERFORMED ON LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE TWELVE INCHES (12") AND AS SPECIFIED BY GEOTECHNICAL ENGINEER. ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. NOTIFICATION BY THE CONTRACTOR FOR GEOTECHNICAL ENGINEER TO CONDUCT TESTS SHALL BE AT LEAST THE DAY BEFORE. THIS NOTIFICATION SHALL INCLUDE THE FILL AREA LOCATION (LOT AND BLOCK), THE LIFT OR HEIGHT OF FILL AND APPROXIMATE DESIRED TIME OF TESTING. WHEN THESE TESTS INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED AND RETESTED AT THE EXPENSE OF THE CONTRACTOR UNLESS THE CONTRACTOR CAN SHOW EVIDENCE THAT CIRCUMSTANCES BEYOND HIS CONTROL REQUIRED THE RETESTING. GENERALLY, THE SPECIFIC TESTING WILL BE AS FOLLOWS AND CONDUCTED BY GEOTECHNICAL ENGINEER.

1. THE LAND TO BE FILLED (PREPARED SUBGRADE) SHALL BE PREPARED AND TESTED AT A FREQUENCY AS DETERMINED BY THE GEOTECHNICAL ENGINEER. 2. THE FIRST LIFT OF COMPACTED FILL (GENERALLY 8 TO 12-IN.) SHALL BE TESTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER. ANY AREAS SUPPORTING THE PROPOSED STRUCTURES REQUIRING FILL SHALL BE TESTED FOR SPECIFIED BY GEOTECHNICAL ENGINEER, OF FILL.

3. FILLS SHALL BE TESTED A MAXIMUM OF EACH TWELVE INCHES (12") AND AS 4. TEST RESULTS WILL BE PROVIDED BY THE FIELD TECHNICIAN TO THE CONTRACTOR WHEN POSSIBLE; HOWEVER, ALL TEST RESULTS ARE TO BE REVIEWED BY THE GEOTECHNICAL ENGINEER FOR COMPLIANCE. THE ENGINEER WILL NOTIFY THE CONTRACTOR OF ALL TEST RESULTS.

PLAT NO. 22-11800606

12. CUT/FILL LOTS

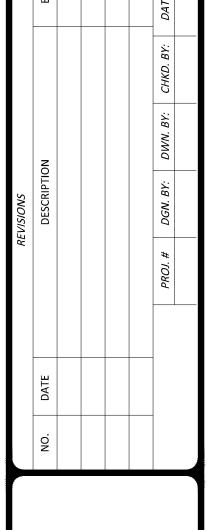
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MINIMUM SLAB EXPOSURE IS 1.0'.

ALL ELEVATIONS AT FRONT PROPERTY LINE ARE 0.18' ABOVE CURB ELEVATION.

CONTRACTOR TO VERIFY 1.5% MINIMUM SLOPE ON LOTS AND REGRADE TO MEET MINIMUM PROPOSED ELEVATIONS IF NECESSARY

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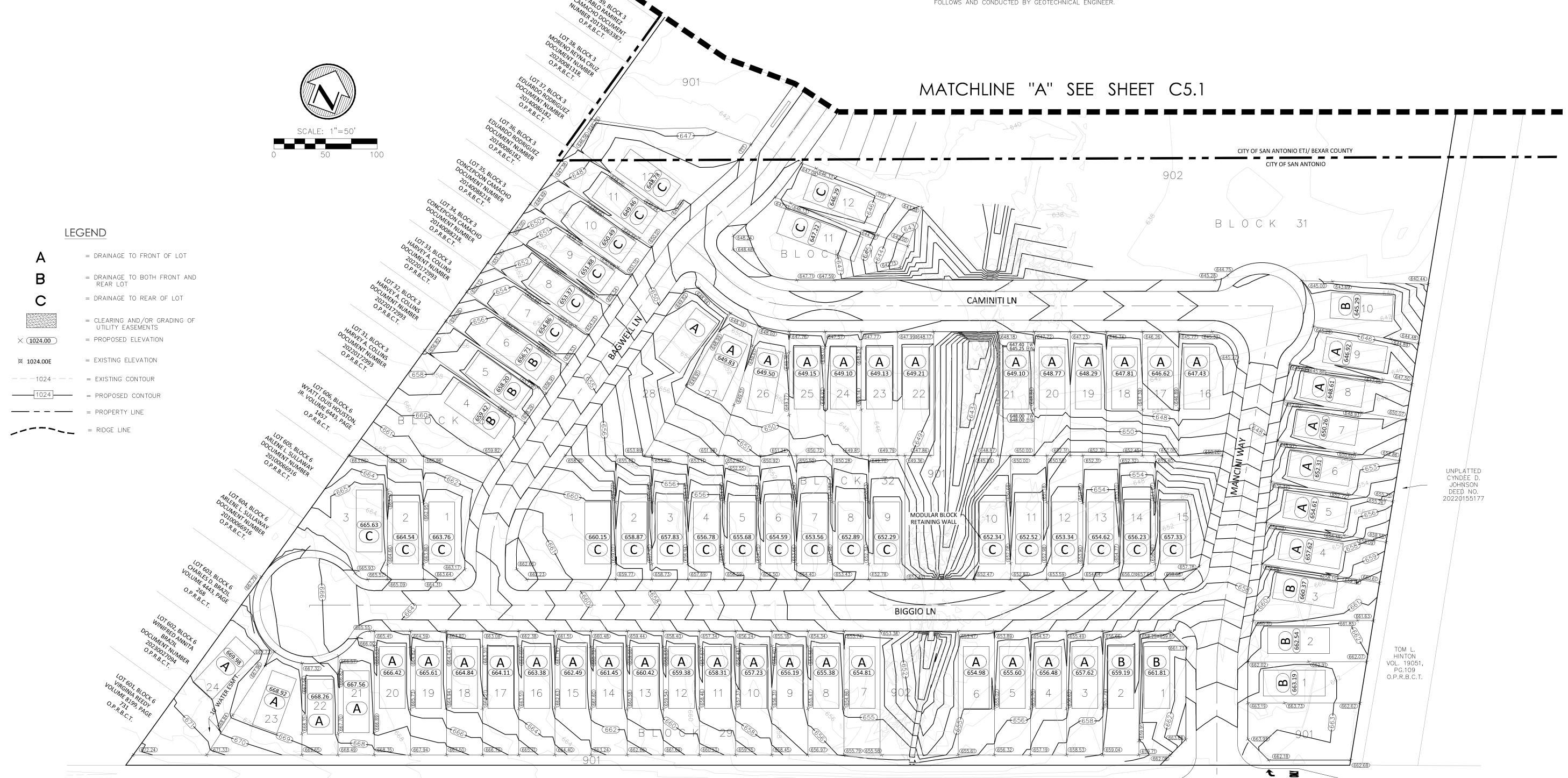


ADING 2

SHEET

C5.0

SUBMITTAL SET



PLAT NO. 22-11800606

GENERAL SPECIFICATIONS FOR SITE PREPARATION

1. GENERAL DESCRIPTION

THIS ITEM SHALL CONSIST OF ALL CLEARING AND GRUBBING, DEMOLITION, PREPARATION OF LAND TO BE FILLED, FILLING OF THE LAND, SPREADING, COMPACTION TESTING AND INSPECTION OF THE FILL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADES AND SLOPES AS SHOWN ON THE APPROVED PLANS. ALL LOT GRADING MUST MEET REQUIREMENTS OF FHA/HUD HANDBOOK 4140.3, SPECIFICATIONS FOR LAND DEVELOPMENTS ON CONTROLLED EARTHWORK, DATASHEET 79g. HUD 79g REQUIREMENTS FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUD 79g COMPACTION TESTING. IN ADDITION, ENGINEERS MUST PROVIDED VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79g.

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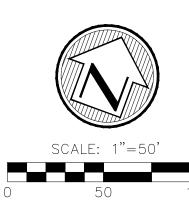
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SHEET

SUBMITTAL SET

SUBMITTAL SET

DESCRIPTION

PROJ. # DGN. BY: DWN. BY: CHKD. BY:

• Surveyors
• Planners

• Planners

• Engineers, LLC

/SURVEYING: F-10131500

100 TEL: (210) 698-5051

FAX: (210) 698-5085

Moy Tarin Ramirez El TBPELS: ENGINEERING F-5297/SU



ERALL STORM WATER POLLUTION
PREVENTION PLAN

SHEET

C6.0

MATCHLINE "A" SEE SHEET C6.1

SHEET

PAUL LANDA, JR.

100182

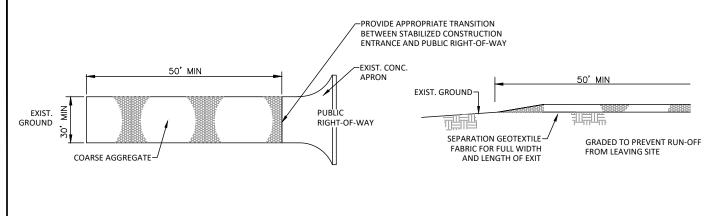
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L STORM WATER F PREVENTION PLA

_T C6.1

SILT FENCE NOTES

- 1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN 2 , ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NO. 30.
- 2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FT 2 , AND BRINDELL HARDNESS EXCEEDING 140. 3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12.5 GAUGE MINIMUM.
- 4. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1 FOOT DEEP AND SPACED NOT MORE THAN 5 FEET ON CENTER. 5. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS 1/4 ACRE/100 FEET OF FENCE.
- 6. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
- 7. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND
- 8. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3—FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
- 9. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE. 10. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES, OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE OLD FENCE. 11. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
- 12. REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.

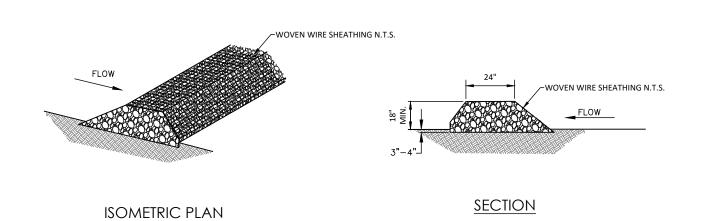


TEMPORARY CONSTRUCTION ENTRANCE/EXIT NOTES

- 1. THE AGGREGATE SHOULD CONSIST OF 4 TO 8 INCH WASHED STONE OVER A STABLE FOUNDATION.
- 2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.

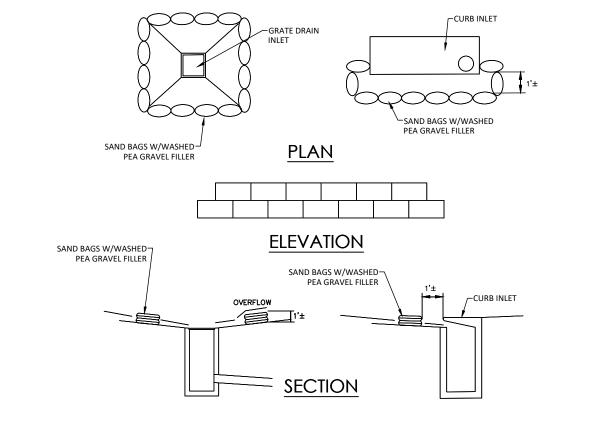
PLAN VIEW

- 3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD 2 , A MULLEN BURST RATING OF 140 LB/IN 2 , AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
- AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
- 5. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER. 6. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
- 7. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
- 8. PLACE STONE TO DIMENSIONS AND GRADE SHOWN. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
- 9. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- 10. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ON TO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
- 11. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. 12. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED
- 13. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE.



ROCK BERM NOTES

- THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
- 2. CLEAN, OPEN GRADED 3-TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-TO 8-INCH DIAMETER ROCKS MAY BE USED.
- 3. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE.
- 4. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
- 5. PLACE THE ROCK ALONG THE SHEATHING TO A HEIGHT NOT LESS THAN 18". 6. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES,
- AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
- 7. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
- 8. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO
- 9. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
- 10. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT OF IN AN APPROVED MANNER 11. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS,
- 12. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.



- . THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/YD 2 , MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
- 2. THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6
- 3. THE GRAVEL BAGS SHOULD BE FILLED WITH 34" GRAVEL .

MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.

- 4. WHEN A GRAVEL BAG IS FILLED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STAPLED OR
- 5. THE GRAVEL BAGS SHOULD BE PLACED AS SHOWN ON THE DETAIL. THE GRAVEL BAGS SHALL BE STACKED TO FORM A CONTINUOUS BARRIER AROUND THE INLETS. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
- 6. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE
- 7. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
- 8. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
- 9. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SCALE: NONE

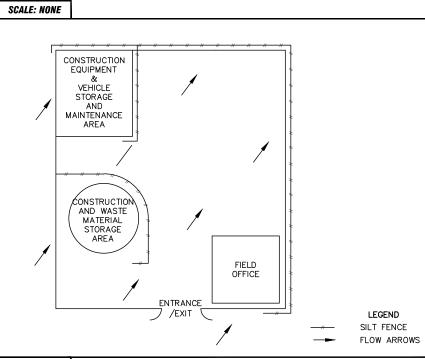
BAGGED GRAVEL INLET FILTER

SCALE: NONE

STABILIZED CONSTRUCTION ENTRANCE / EXIT



ROCK BERM



SILT FENCE DETAIL

CONSTRUCTION STAGING AREA SCALE: NONE

PROFILE

_10 MIL PLASTIC LINING — BERM ______ 10 MIL PLASTIC LINING DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF. CONCRETE TRUCK WASHOUT PIT SCALE: NONE

PAUL LANDA, JR. 100182

> **EVENTION** 2 $\overline{\Box}$ OLLUTION

WATER

SHEET

STORM

C6.2