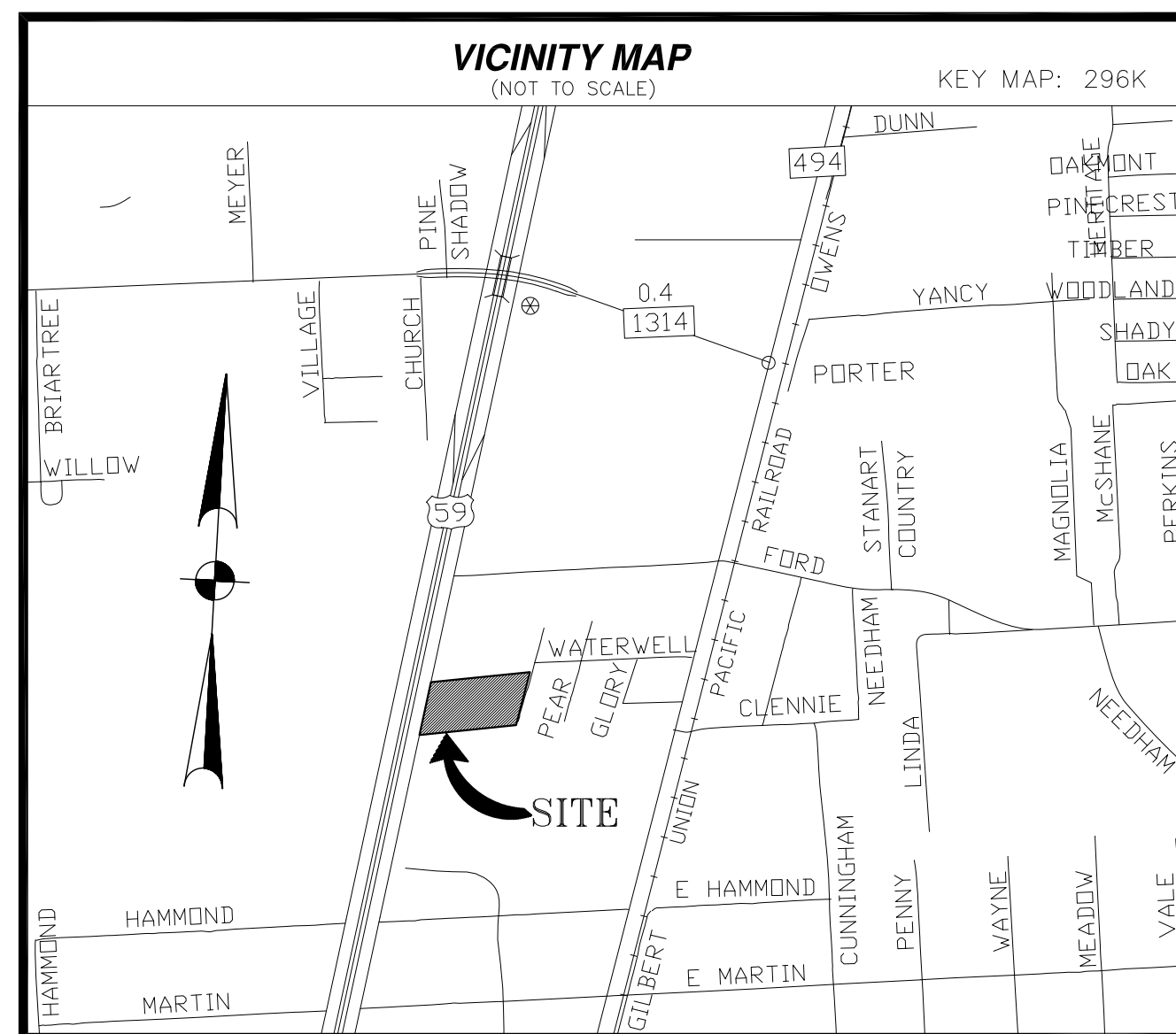


PROPOSED UTILITIES, DRAINAGE & PAVING
CONSTRUCTION PLANS

DESIGNED FOR

PROPOSED COMMERCIAL DEVELOPMENT

24255 US HWY 59
MONTGOMERY, TX 77365
DECEMBER 2023



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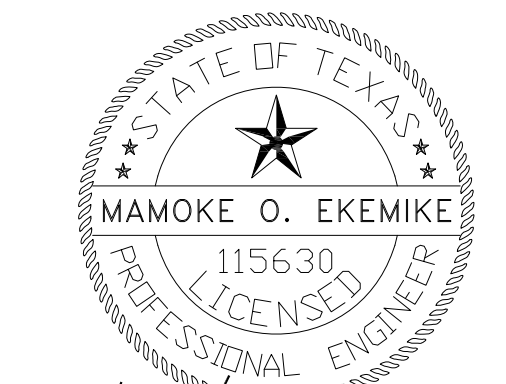
NOTE:
1. CONTRACTOR WILL MAKE THE CONNECTIONS TO THE DISTRICT'S WATERLINE UP TO THE METER. THE DISTRICT STAFF OR CONSULTANTS WILL OBSERVE INSTALLATION. NOTIFY BLEYL (MIKE KELLY 936-441-7833) AND THE DISTRICT (281-354-5922) WHEN THE WORK WILL BE PERFORMED AND PROVIDE SUBMITTALS FOR WATERLINE CONSTRUCTION.
2. METERS WILL BE PROVIDED AND INSTALLED BY THE DISTRICT. BACK FLOW DEVICES SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR.



Know what's below.
Call before you dig.

ONE-CALL NOTIFICATION
SYSTEM
CALL BEFORE YOU DIG!!!
(713)223-4567 (IN HOUSTON)
(NEW STATEWIDE NUMBER OUTSIDE HOUSTON)
1-800-344-8377

CAUTION!
EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.



01/23/2024

PROJECT :

PROPOSED COMMERCIAL
DEVELOPMENT LOCATED AT
24255 US HWY 59
MONTGOMERY, TEXAS 77365

CLIENT :

MOHAMED EL ATTAR

TITLE :

COVER SHEET

STRUCTURAL ENGINEERS:

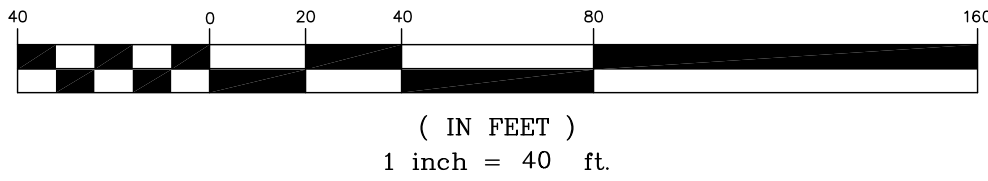
SAPO ENGINEERING
4201 Pine Mill Ct.
Pearland TX 77584, USA
P: +1 (832) 230-7294
F: +1 (832) 569-4964
info@sapoengr.com
www.sapoengr.com

CONSTRUCTORS:

DESIGNED	MIF	DWG. No.	
DRAWN	MIF	DATE	MAY, 22 2023
CHECKED	MOE	SHT.Nos.	
SCALE	N.T.S		C-1

MARY OWENS SURVEY, ABSTRACT NO. 405
MONTGOMERY COUNTY, TEXAS

GRAPHIC SCALE



SCHEDULE "B" ITEMS:

EASEMENT:
RECORDED: AUGUST 27, 1980 IN COUNTY CLERK'S FILE NO. 8029134, OF THE OFFICIAL PUBLIC RECORDS, MONTGOMERY COUNTY, TEXAS.
(DOES AFFECT SUBJECT TRACT; EASEMENT DESCRIPTION IS BLANKET IN NATURE AND CANNOT BE PLOTTED AS DESCRIBED.)

EASEMENT: RIGHT OF WAY
RECORDED: JANUARY 18, 2006 IN COUNTY CLERK'S FILE NO. 2006-055617, OF THE OFFICIAL PUBLIC RECORDS, MONTGOMERY COUNTY, TEXAS.
(DOES AFFECT SUBJECT TRACT; EASEMENT DESCRIPTION CANNOT BE PLOTTED BY DOCUMENT AS DESCRIBED)

LEGEND

- MANHOLE
- TELEPHONE MANHOLE
- POWER POLE
- SIGN
- WATER METER
- WATER VALVE
- MONITORING WELL
- LIGHT POLE
- SET 5/8" CAPPED IRON ROD
- FIRE HYDRANT
- OHU
- OVERHEAD UTILITY LINE
- CHAIN LINK FENCE LINE
- WOOD FENCE LINE
- BARBED-WIRE FENCE LINE
- WROUGHT IRON FENCE LINE

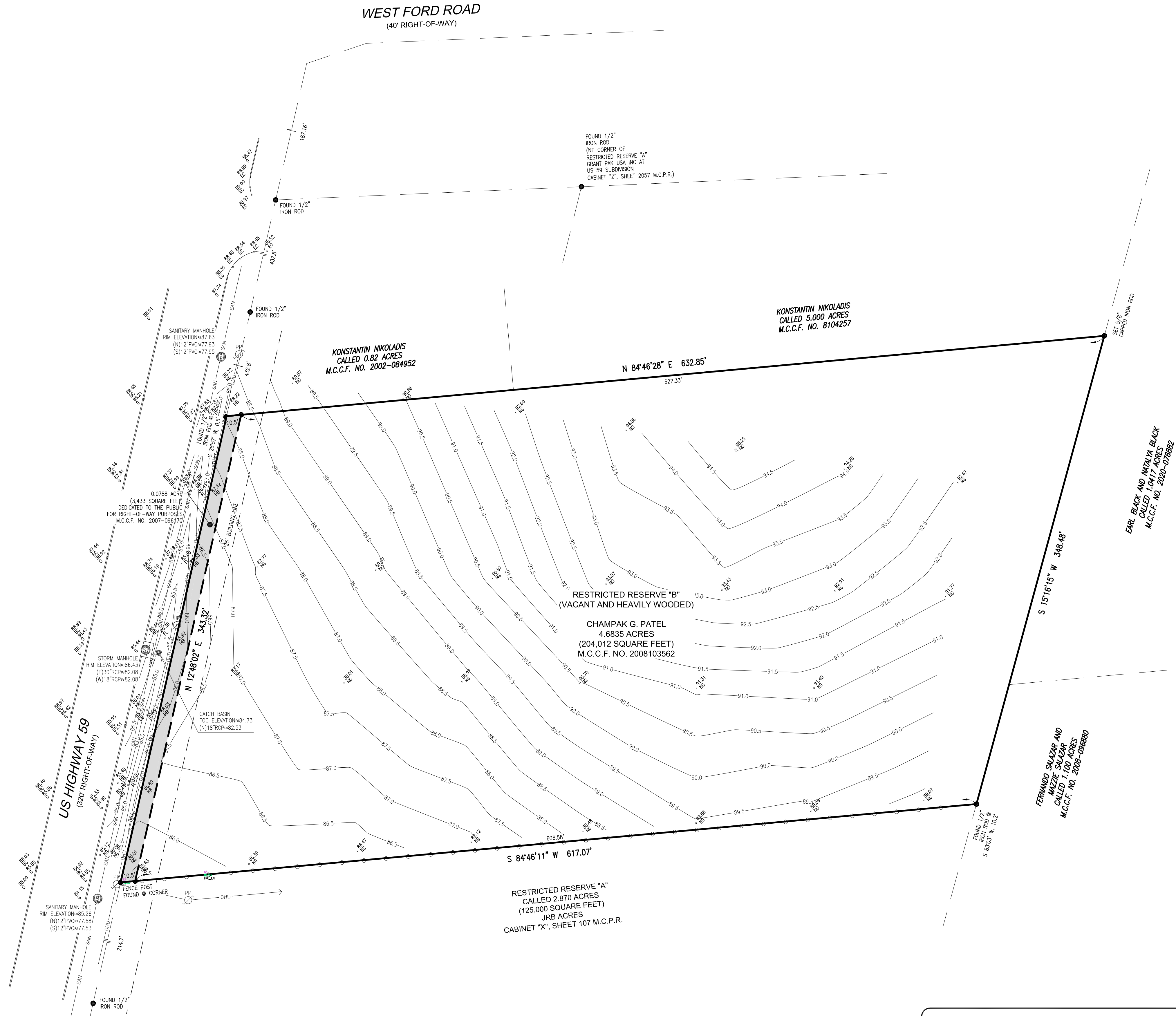
NOTES:

- SUBJECT TO APPLICABLE RESTRICTIVE COVENANTS LISTED IN ITEM NO. 1, SCHEDULE "B" OF THE TITLE COMMITMENT ISSUED BY FIRST AMERICAN TITLE GUARANTY COMPANY UNDER G.F. NO. 2708617-12232; EASEMENTS AND BUILDING LINES PER RECORDED PLAT, UNLESS SHOWN OTHERWISE.
- SURVEYOR HAS NOT ABSTRACTED SUBJECT PROPERTY, THERE MAY BE EASEMENTS, BUILDING LINES AND OTHER MATTERS OF RECORD NOT SHOWN HEREON.
- BUILDING LINE RESTRICTIONS PER THE RECORDED SUBDIVISION PLAT.
- FENCES DO NOT FOLLOW PROPERTY LINES AS SHOWN.
- BEARINGS AND DISTANCES SHOWN HEREON ARE BASED ON GPS TEXAS SOUTH CENTRAL ZONE NUMBER 4204.

FLOOD ZONE NOTE:

BY SCALING AND GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY APPEARS TO LIE WITHIN ZONE(S) "X" OF THE FLOOD INSURANCE RATE MAP FOR HARRIS COUNTY, TEXAS, COMMUNITY PANEL OR MAP NUMBER 46339C 07504, BEARING AN EFFECTIVE DATE OF 08/18/2014. A FIELD SURVEY WAS PERFORMED TO DETERMINE THIS ZONE AND AN ELEVATION CERTIFICATE MAY BE NEEDED TO VERIFY THIS DETERMINATION OR APPLY FOR A VARIANCE FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY. RELEVANT ZONES ARE DEFINED ON SAID MAP AS FOLLOWS:

ZONE "X" = AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.



BENCHMARK:

FLOODPLAIN REFERENCE MARK NUMBER 100005 IS A BRASS DISK STAMPED 100005; FROM THE INTERSECTION OF US 59 AND FM 1960, NORTH ALONG THE US 59 FEEDER 2.2 MILES TO SPORTERS/MCCLELLAN. WEST ALONGSPORTERS/MCCLELLAN APPROXIMATELY 300 FEET TO THE FIRST DRIVEWAY ON THE RIGHT AND THE BENCHMARK ON THE RIGHT. KEYMAP 335H IN THE SPRING CREEK BAYOU WATERSHED NEAR STREAM J100-00-00

ELEVATION=78.70 FEET NAVD 1988, 2001 ADJUSTED.

TOPOGRAPHIC SURVEY OF

RESTRICTED RESERVE "B", JRB ACRES, A SUBDIVISION IN MONTGOMERY COUNTY, TEXAS, ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN CABINET X, SHEET 107, OF THE MAP AND/OR PLAT RECORDS OF MONTGOMERY COUNTY, TEXAS. SAVE AND EXCEPT THAT CERTAIN 0.0788 ACRE TRACT WHICH WAS CONVEYED BY SUPREME PROPERTIES, LLC TO STATE OF TEXAS, BY DEED DATED APRIL 19, 2007 AND RECORDED ON AUGUST 15, 2007 UNDER COUNTY CLERK'S FILE NO. 2007-096170, OFFICIAL PUBLIC RECORDS OF MONTGOMERY COUNTY, TEXAS.

SURVEYED FOR: TEXMAR GROUP LLC AND MOHAMED EL ATTAR

ADDRESS: 0 US HIGHWAY 59, MONTGOMERY, TEXAS

FIRST AMERICAN TITLE INSURANCE COMPANY

JOB NUMBER: 030922

FIELD WORK: 07/17/2022

SCALE: 1" = 40'

PROPERTY SUBJECT TO SUBDIVISION COVENANTS, CONDITIONS AND RESTRICTIONS.

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND AND THAT THIS PLAT CORRECTLY REPRESENTS THE FACTS FOUND AT THE TIME OF SURVEY SHOWING ANY IMPROVEMENTS, FROM LEGAL DESCRIPTIONS SUPPLIED BY CLIENT. THERE ARE NO ENCROACHMENTS APPARENT ON THE GROUND, EXCEPT AS SHOWN. THIS SURVEY IS ONLY CERTIFIED FOR BOUNDARY AND THIS TRANSACTION ONLY. SURVEYOR DID NOT ABSTRACT PROPERTY EASEMENTS, BUILDING LINES, ETC. SHOWN ARE AS IDENTIFIED BY THE TITLE COMMITMENT.

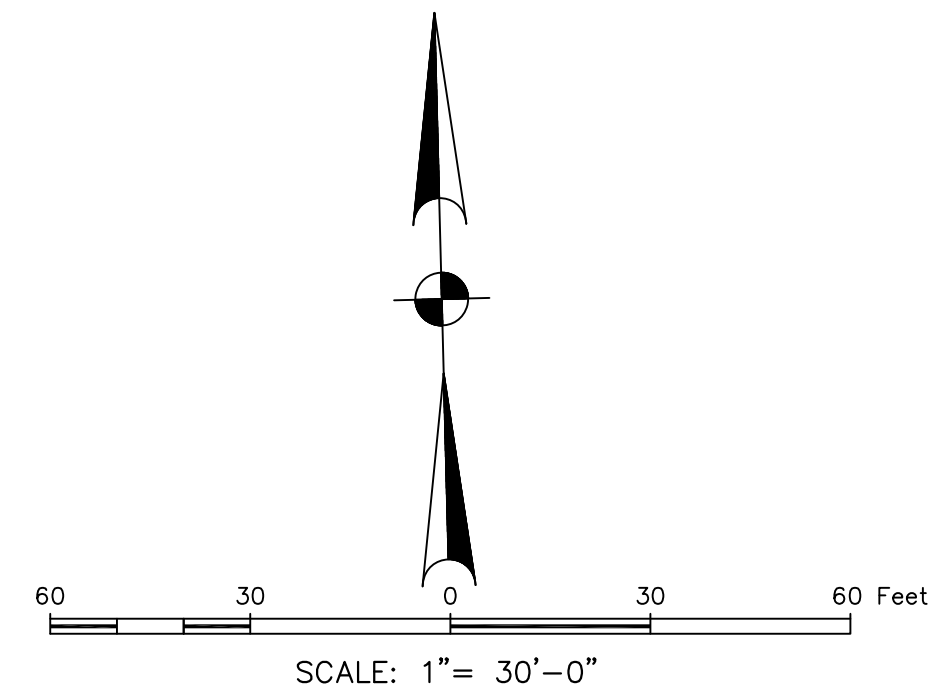
GF: 2708617-12232

EFF: 07/06/2022

of FIRST AMERICAN TITLE GUARANTY COMPANY

Xavier Chapa, REGISTERED PROFESSIONAL LAND SURVEYOR NO. 2568





NOTE:

REFER TO MONTGOMERY COUNTY GENERAL
CONSTRUCTION NOTES AND STANDARD DETAILS FOR
ADDITIONAL INFORMATION.

STORM SEWER (HDPE WITH SMOOTH BORE AND RUBBER GASKETS)
 PROPERTY LINE
 HIGH POINT (H.P.)
 DIRECTION OF FLOW
 STORM/SANITARY SEWER MANHOLE
 CATCH BASIN (C.B.)
 (RE. SCHEDULE FOR SIZE)
 EXISTING GRADE ELEVATIONS
 FLOW LINE ELEVATION
 PROPOSED ELEVATION OF TOP OF GRATE OF INLET
 MONTGOMERY COUNTY MAP RECORDS
 MONTGOMERY COUNTY CLERK'S FILE

[illegible]

01/23/2024

PROJECT :

PROPOSED COMMERCIAL
DEVELOPMENT LOCATED AT
24255 US HWY 59
MONTGOMERY, TEXAS 77365

CLIENT :

MOHAMED EL ATTAR

TITLE :

SITE DRAINAGE & DETENTION PLAN

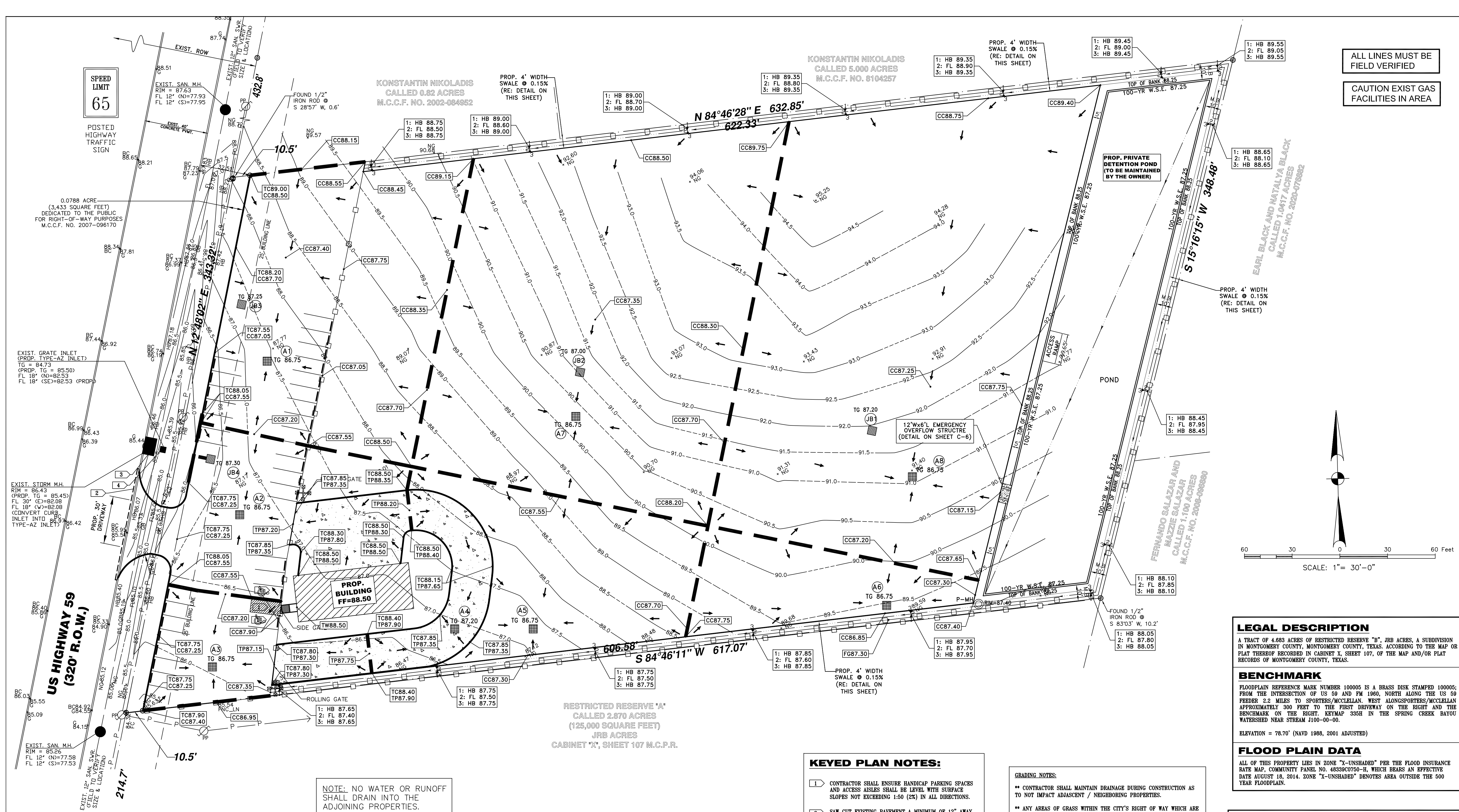
STRUCTURAL ENGINEERS:

SAPO ENGINEERING
4201 Pine Mill Ct.
Pearland TX 77584, USA
P: +1 (832) 230-7294
F: +1 (832) 569-4964
info@sapoengr.com
www.sapoengr.com

CONSTRUCTORS:

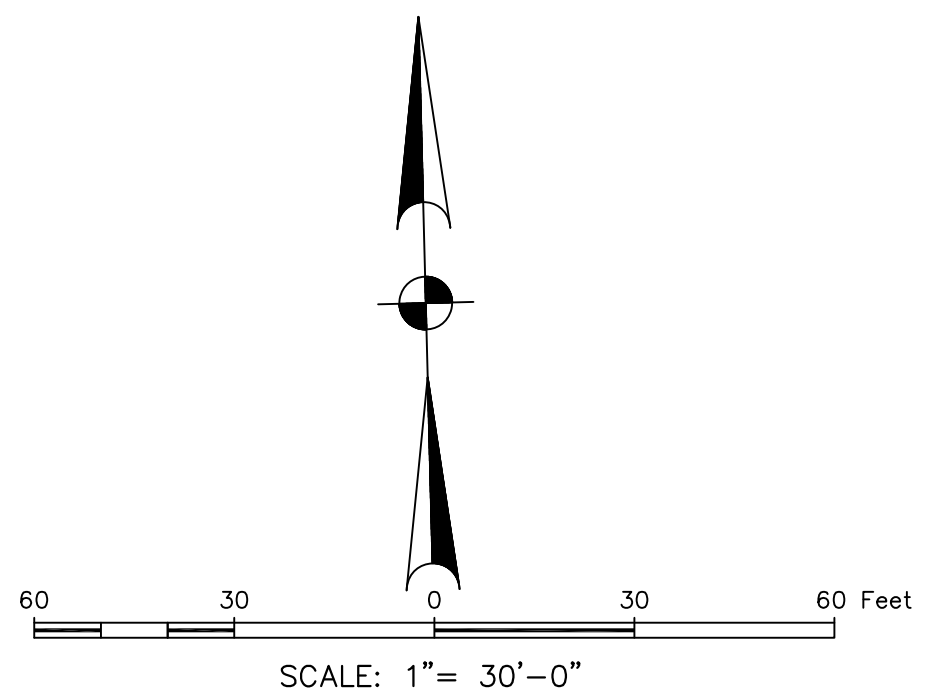
DESIGNED	MIF	DWG. No.	
DRAWN	MIF	DATE	MAY, 22 2023
CHECKED	MOE	SHT.Nos.	C-4
SCALE	1" = 30'-0"		

C-4



ALL LINES MUST BE
FIELD VERIFIED

CAUTION EXIST GAS
FACILITIES IN AREA



LEGAL DESCRIPTION

A TRACT OF 4.683 ACRES OF RESTRICTED RESERVE "B", JRB ACRES, A SUBDIVISION IN MONTGOMERY COUNTY, MONTGOMERY COUNTY, TEXAS. ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN CABINET X, SHEET 107, OF THE MAP AND/OR PLAT RECORDS OF MONTGOMERY COUNTY, TEXAS.

BENCHMARK

FLOODPLAIN REFERENCE MARK NUMBER 100005 IS A BRASS DISK STAMPED 100005; FROM THE INTERSECTION OF US 59 AND FM 1980, NORTH ALONG THE US 59 FREDER 2.2 MILES TO SPORTERS/MCCLELLAN, WEST ALONGSPORTERS/MCCLELLAN APPROXIMATELY 300 FEET TO THE FIRST DRIVEWAY ON THE RIGHT AND THE BENCHMARK ON THE RIGHT. KEYMAP 335H IN THE SPRING CREEK BATOU WATERSHED NEAR STREAM 1100-00-00.

FLOOD PLAIN DATA

ALL OF THIS PROPERTY LIES IN ZONE "X-UNSHADED" PER THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 4839C0750-H, WHICH BEARS AN EFFECTIVE DATE AUGUST 18, 2014. ZONE "X-UNSHADED" DENOTES AREA OUTSIDE THE 500 YEAR FLOODPLAIN.

LEGEND

	STORM SEWER (HDPE WITH SMOOTH BORE AND RUBBER GASKETS)
	PROPERTY LINE
	HIGH POINT (H.P.)
	DIRECTION OF FLOW
	STORM/SANITARY SEWER MANHOLE
	CATCH BASIN (C.B.) (RE: SCHEDULE FOR SIZE)
	EXISTING GRADE ELEVATIONS
	FLOW LINE ELEVATION
	PROPOSED ELEVATION OF TOP OF GRATE OF INLET
	MONTGOMERY COUNTY MAP RECORDS
	MONTGOMERY COUNTY CLERK'S FILE
	PROPOSED TOP OF CURB ELEVATION
	PROPOSED TOP OF PAVEMENT ELEVATION
	PROPOSED TOP OF SIDEWALK ELEVATION
	PROPOSED FINISHED GRADE ELEVATION
	PROPOSED TOP OF RETAINING WALL ELEVATION
	PROPOSED TOP OF CRUSHED CONCRETE ELEVATION

KEYED PLAN NOTES:

- CONTRACTOR SHALL ENSURE HANDICAP PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:50 (2%) IN ALL DIRECTIONS.
- SAW CUT EXISTING PAVEMENT A MINIMUM OF 12" AWAY FROM FACE OF CURB (GUTTER LINE) AND BREAK OUT TO EXPOSE EXISTING REINFORCEMENT STEEL.
- CONTRACTOR SHALL MODIFIED AND CONVERT EXISTING CURB INLET INTO PROPOSED GRATE INLET.
- CONTRACTOR SHALL MODIFIED AND CONVERT EXISTING TYPE-A INLET INTO PROPOSED TYPE-AZ INLET.
- CONTRACTOR SHALL REMOVE/RELOCATE ANY EXISTING OBSTRUCTIONS IN PROPOSED DRIVEWAY, BUILDING OR PARKING AREA AT NO ADDITIONAL COST TO THE OWNER.

GRADING NOTES:

- CONTRACTOR SHALL MAINTAIN DRAINAGE DURING CONSTRUCTION AS TO NOT IMPACT ADJACENT / NEIGHBORING PROPERTIES.
- ANY AREAS OF GRASS WITHIN THE CITY'S RIGHT OF WAY WHICH ARE DISTURBED OR DUG UP DURING CONSTRUCTION SHALL BE REPLACED WITH ST. AUGUSTINE OR GRASS WHICH MATCHED THE GRASS REMOVED.
- ANY DRAINAGE TO EXISTING ROADS, DRIVEWAYS, SIDEWALKS, OR OTHER APPURTENANCES WITHIN THE CITY'S RIGHT OF WAY SHALL BE SAW CUT, REMOVED AND REPLACED WITH MATERIALS EQUAL TO OR SUPERIOR MATERIAL, AND MUST BE INSTALLED TO CITY STANDARDS.
- ALL SURFACE ORGANIC, TOPSOIL AND UNSUITABLE MATERIAL SHALL BE STRIPPED FROM ALL PROPOSED BUILDING AND PAVING AREAS.
- ALL TREE-STUMPS THAT ARE TO BE REMOVED SHALL BE DONE THOROUGHLY BY REMOVING ALL THE ROOTS AND PLACING UP THE VOID WITH SELECT FILL AND COMPACTED PRIOR TO CONSTRUCTION.
- PROOF ROLL THE SUBGRADE TO DETECT ANY WET, SOFT OR PUMPING AREAS. TREAT THESE AREAS WITH DRYING/STABILIZING AGENTS AS NECESSARY OR REMOVE & REPLACE THEM WITH SELECT FILL.
- COMPACT THE SUBGRADE TO A MINIMUM OF 95% OF ITS DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D 698).
- ADDITIONAL FILL MATERIAL WITHIN THE BUILDING AREA SHOULD BE SILTY OR SANDY CLAY HAVING A PLASTICITY INDEX (PI) OF 10 - 20 & A LIQUID LIMIT OF 28 OR MORE. SILL MATERIALS SHOULD BE PLACED IN 6 TO 8 INCH LIFTS & COMPACTED AT OPTIMUM MOISTURE CONTENT TO 95% OF THEIR MAXIMUM DRY DENSITY AS DETERMINED BY STANDARD PROCTOR COMPACTION TEST (ASTM D 698).

NOTES:

- ANY PAVING INSTALLED OVER A UTILITY EASEMENT SHALL HAVE CONSTRUCTION JOINTS OR SAW CUTS ALONG THE ENTIRE EASEMENT LINE OF THE ENCROACHMENT AND TRAVERSE THE EASEMENT AT INTERVALS EQUAL TO OR LESS THAN 10 FOOT INTERVALS.
- ALL PROPOSED CURBS ARE 6" TYPICAL, U.N.O. ON PLANS. CONTRACTOR SHALL CONTACT ENGINEER/ARCHITECT IF CURB DEPTH EXCEEDS 6".
- OVERHEAD AND UNDERGROUND UTILITIES MAY EXIST IN THE VICINITY OF THIS PROJECT. LOCATIONS SHOWN FOR EXISTING UTILITIES ARE APPROXIMATE AND OTHER UTILITIES MAY EXIST IN THE VICINITY OF THE PROJECT WHICH ARE NOT SHOWN ON THE PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES IN THE VICINITY OF THE PROJECT, PRIOR TO BEGINNING CONSTRUCTION. IF ANY DISCREPANCIES EXIST, NOTIFY ENGINEER IMMEDIATELY.
- CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB SHALL BE AS GOOD AS OR BETTER THAN PRIOR TO STARTING WORK.
- EXISTING PRIVATE AND PUBLIC GREEN AREAS, UTILITIES, PAVEMENTS, CURBS, DRIVEWAYS AND SIDEWALKS DAMAGED OR REMOVED DURING CONSTRUCTION OR AS A RESULT OF CONSTRUCTION SHALL BE REPLACED TO MONTGOMERY COUNTY STANDARDS.

NOTE:

EXCESS SOIL MATERIAL IS THE RESPONSIBILITY OF THE CONTRACTOR & IS TO BE DISPOSED OFFSITE RESPONSIBLY AT NO SEPARATE PAY.

HYDROMULCH NOTE:

CONTRACTOR SHALL HYDROMULCH ALL NEWLY GRADED AREAS AND EXPOSED SOILS UPON PAVING COMPLETION.

CONSTRUCTION NOTE:

CONTRACTOR SHALL CONFIRM NO CONFLICTS BETWEEN EXISTING AND PROPOSED DRY/WET UTILITIES IN PUBLIC R.O.W., BEFORE STARTING SITE WORK CONSTRUCTION.

WARNING

ALL CONTRACTORS MUST KNOW EXACT LOCATION OF, AND AVOID, ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. CALL UTILITY LOCATOR SERVICE AT LEAST 48 HOURS PRIOR TO COMMENCING WORK.

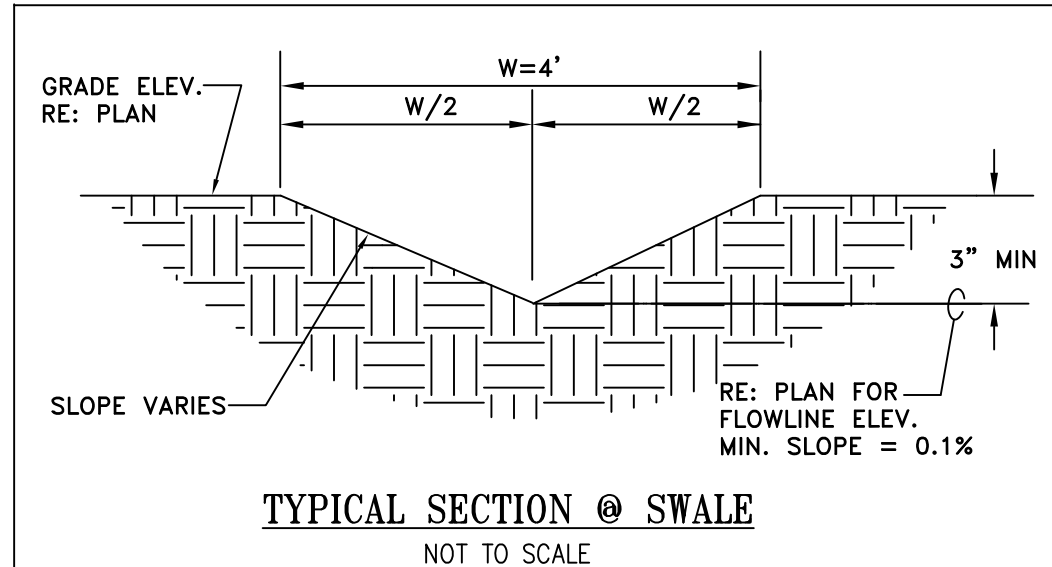
KNOW WHAT'S BELOW. CALL BEFORE YOU DIG. CALL 811

NOTE: NO WATER OR RUNOFF SHALL DRAIN INTO THE ADJOINING PROPERTIES.

NOTE:

REFER TO MONTGOMERY COUNTY GENERAL CONSTRUCTION NOTES AND STANDARD DETAILS FOR ADDITIONAL INFORMATION.

CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING DIMENSIONS & CONDITIONS & SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES THAT MAY AFFECT THE WORK DESCRIBED HEREIN.



TYPICAL SECTION @ SWALE
NOT TO SCALE



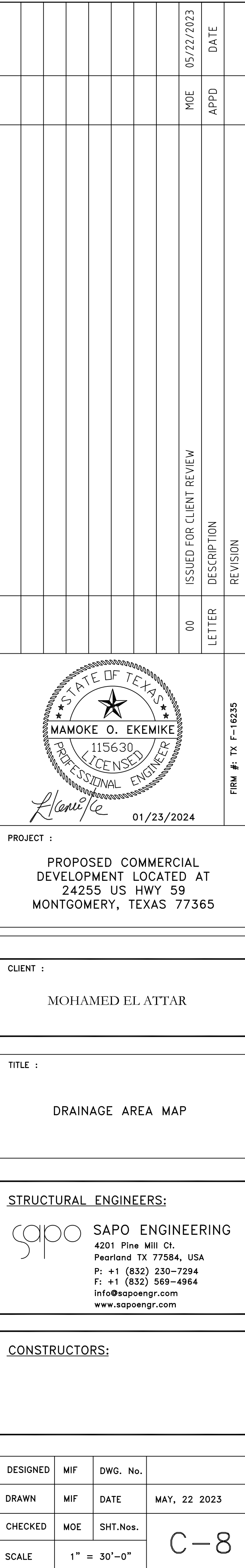
PROJECT:		HWY 59 N		MONTGOMERY COUNTY																																																	
JOB NO.:				DESIGN STORM = 100-YR																				$I = b/(dC)^{1/e}$ $T_o = 10 \times A^{(0.1761 + 15 C = 0.60 \text{ la} + 0.20}$ $Q = C \times I \times A$										FL=Flowline HG= Hydraulic Gradient UP=Upstream G=Gutter R=Top of Rim										Hazen Williams Formula: $h_L = 4.72 L Q^{1.85} / C^{1.85} D^{4.87}$									
DATE:		9/23/2023		b= 98.8549 d= 11.6170 e= 0.8841																																																	
BY:																																																					
CHECKED BY:																																																					
MH FROM	MH TO	AREA (ACRES)	TOTAL AREA (ACRES)	RUNOFF COEFF. C	SUM OF C * A	TC (MIN.)	INTENSITY I (IN/HR 100-YR)	SUM OF FLOWS (CFS) 100-YR	REACH LENGTH (FT)	DIAM. (IN)	Slope %	Manning's "n"	Design Capacity (CFS)	Design Velocity (ft/s)	Fail (FT)	FL. Bev. UP (FT)	FL. Bev. DS (FT)	Actual Velocity (ft/s)	HG in Change (FT)	h _L (FT)	Bev. of HG UP (FT)	Bev. of HG DS (FT)																															
A1	A2	0.60	0.60	0.90	0.54	10.00	12.07	6.53	93	18	0.20	0.011	5.57	3.15	0.19	79.66	79.47	3.70	0.28	0.26	0.21	81.27	81.06																														
A2	A3	0.31	0.91	0.90	0.82	10.00	12.07	9.88	92	24	0.13	0.011	9.67	3.08	0.12	79.47	79.35	3.15	0.14	0.11	81.06	80.85																															
A3	A4	0.20	1.11	0.90	1.00	10.00	12.07	12.08	149	24	0.13	0.011	9.67	3.08	0.19	79.35	79.16	3.85	0.20	0.30	0.28	80.95	80.69																														
A4	A5	0.18	1.30	0.90	1.17	10.00	12.07	14.08	44	24	0.17	0.011	11.05	3.52	0.07	79.16	79.08	4.48	0.28	0.12	80.10	80.69	80.59																														
A5	A6	0.33	1.62	0.90	1.46	10.00	12.07	17.63	218	30	0.10	0.011	15.37	3.13	0.22	79.08	78.87	3.59	0.13	0.29	0.26	80.59	80.34																														
A6	POND	0.20	1.82	0.90	1.64	10.00	12.07	19.77	66	30	0.10	0.011	15.37	3.13	0.07	78.87	78.80	4.03	0.17	0.11	80.10	80.34	80.24																														
A7	A8	1.02	1.02	0.90	0.92	10.00	12.07	11.12	210	24	0.13	0.011	9.67	3.08	0.27	79.21	78.94	3.54	0.17	0.36	0.31	80.73	80.42																														
A8	POND	1.22	2.25	0.90	2.02	10.00	12.07	24.42	60	30	0.15	0.011	16.82	3.83	0.09	78.94	78.85	4.98	0.25	0.15	0.13	80.42	80.29																														
POND	P-MH	0.62	4.68	0.90	4.22	10.00	12.07	50.90	7	42	0.10	0.011	37.70	3.92	0.01	77.77	77.76	5.29	0.18	0.01	0.01	79.78	79.77																														
P-MH	JB-4	4.68	4.68	0.90	4.22	10.00	12.07	50.90	659	4	F.M.	0.011				82.58	82.58																																				
JB-4	E-INLET	4.68	4.68	0.90	4.22	10.00	12.07	50.90	26	18	0.20	0.013	4.71	2.67	0.05	82.58	82.53	28.80	23.35	6.07	2.62	86.30	83.66																														

DRAINAGE SUMMARY TABLE (APPLICABLE TO PROJECTS WITH DRAINAGE TO TxDOT)

Please copy and paste the completed table onto the drainage sheet

TxDOT Trackingnumber (TR#)		
Highway	US HWY 59	
TxDOT frontage	343.32	FT
TxDOT Area (the strip of site within 150-ft frontage)	1.182	AC
Total tractarea based on submitted survey map	4.683	AC
Proposed disturbed area	4.276	AC
Project contributing drainage area to TxDOT	4.683	AC
Off-site contributing drainage area (if applicable)	NA	AC
Increased impervious area	4.276	AC
10-yrrequired detention volume	2.230	AC-FT
10-yrproposed detention volume	4.332	AC-FT
10-yrdesign W.S.E.	83.35	FT
10-yrPre-developed peak flow	12.29	CFS
10-yrPost-developed peak flow (Before de te nti on/restrictor)	34.14	CFS
10-yr Proposed discharge to TxDOT R.O.W. (With detention/restrictor)	0.65	CFS
100-yr required detention volume	4.330	AC-FT
100-yrproposed detention volume	4.332	AC-FT
100-yrdesign W.S.E.	87.25	FT
100-yrPre-developed peak flow	18.42	CFS
100-yr Post-developed peak flow (Before de te nti on/restrictor)	50.87	CFS
100-yr Proposed discharge to TxDOT R.O.W. (With detention/restrictor)	2.06	CFS
TxDOT as-built or calculated allowable discharge	2.313	CFS
Primary tie-in/outfall structure size	18	Inch
Primary restrictor size	10	Inch
Primaryrestrictormaximum discharge	2.313	CFS
Secondary outfall device size (If applicable)	NA	CFS
Secondary outfall discharge (If applicable)	NA	CFS
Maximum combined pumped discharge (If applicable)	208	GPM (CFS)
% Pumped discharge volume (If applicable)	3.189	AC-FT
Effective gravity discharge elevation (If applicable)	84.88	FT
B.F.E. per effective FIRM (If applicable)	N/A	FT
Proposed fill below B.F.E. (If applicable)	N/A	AC-FT
Proposed cut below B.F.E. (If applicable)	N/A	AC-FT

[illegible]





WARNING

ALL CONTRACTORS MUST KNOW EXACT LOCATION OF, AND AVOID, ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. CALL UTILITY LOCATOR SERVICE AT LEAST 48 HOURS PRIOR TO COMMENCING WORK.

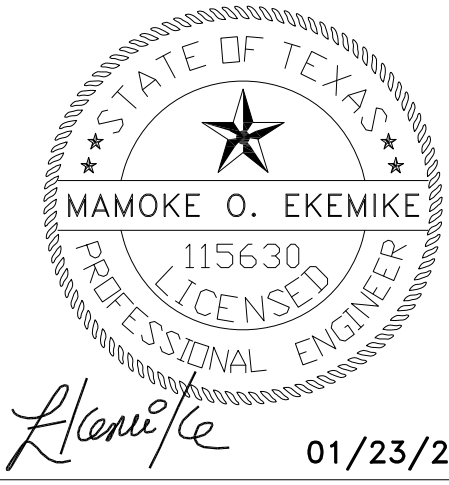
LEGEND

PROPERTY LINE

DRAINAGE AREA BOUNDARY

ACCUM DRAINED AREA (ACRES)

ACCUM FLOW RATE (CFS)

[illegible]

PROJECT :

PROPOSED COMMERCIAL
DEVELOPMENT LOCATED AT
24255 US HWY 59
MONTGOMERY, TEXAS 77365

CLIENT : MOHAMED EL ATTAR

TITLE :

EXIST. DRAINAGE AREA MAP

STRUCTURAL ENGINEERS:

 **SAPO ENGINEERING**

4201 Pine Mill Ct.
Pearland TX 77584, USA

P: +1 (832) 230-7294
F: +1 (832) 569-4964

info@sapoengr.com
www.sapoengr.com

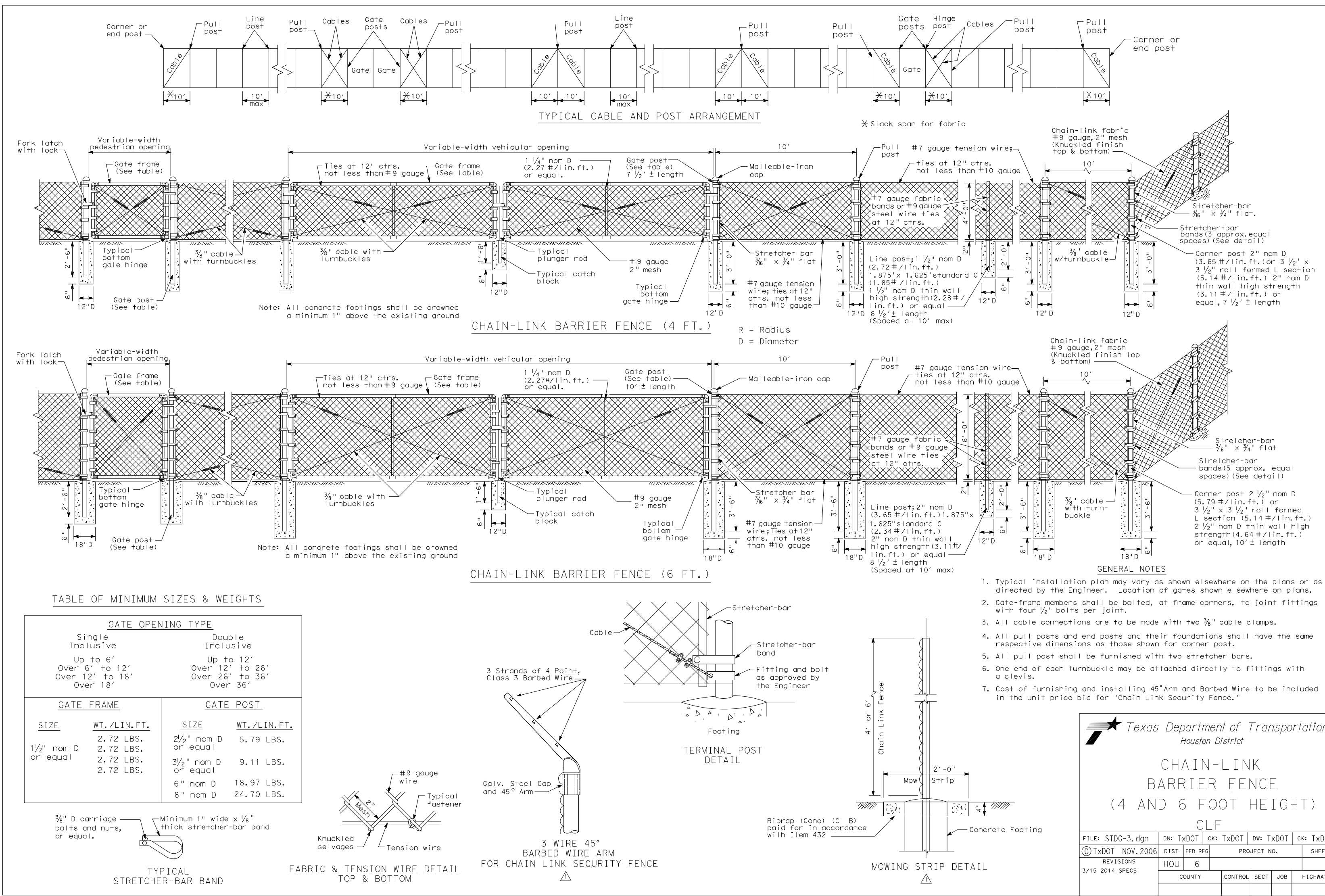
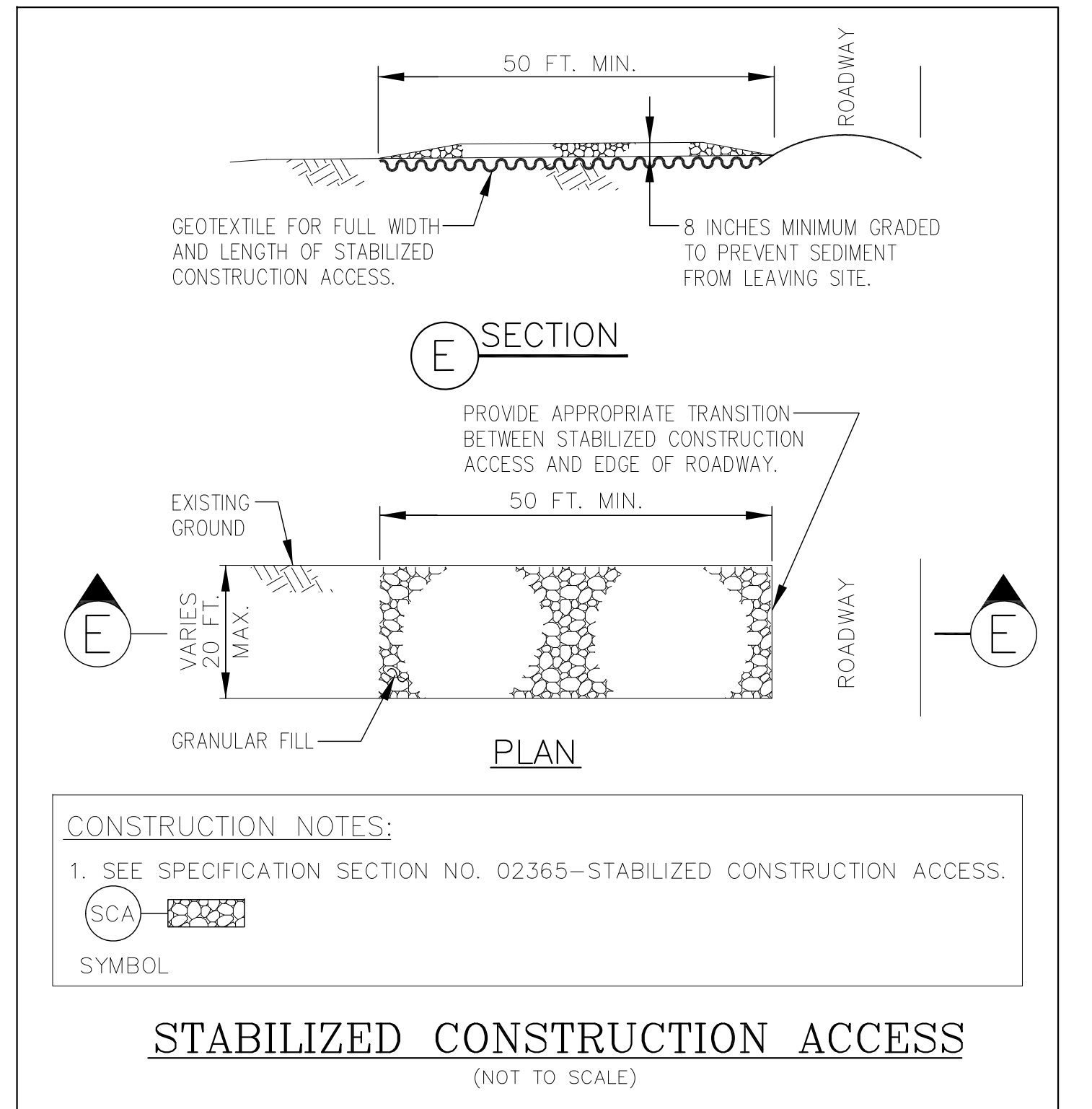
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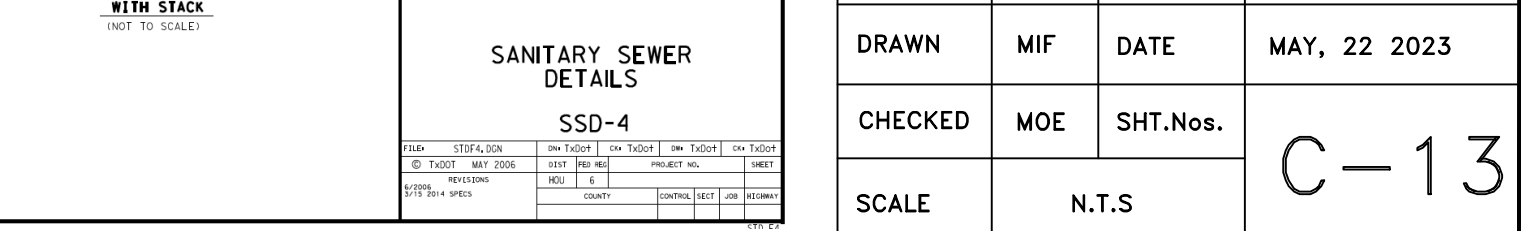
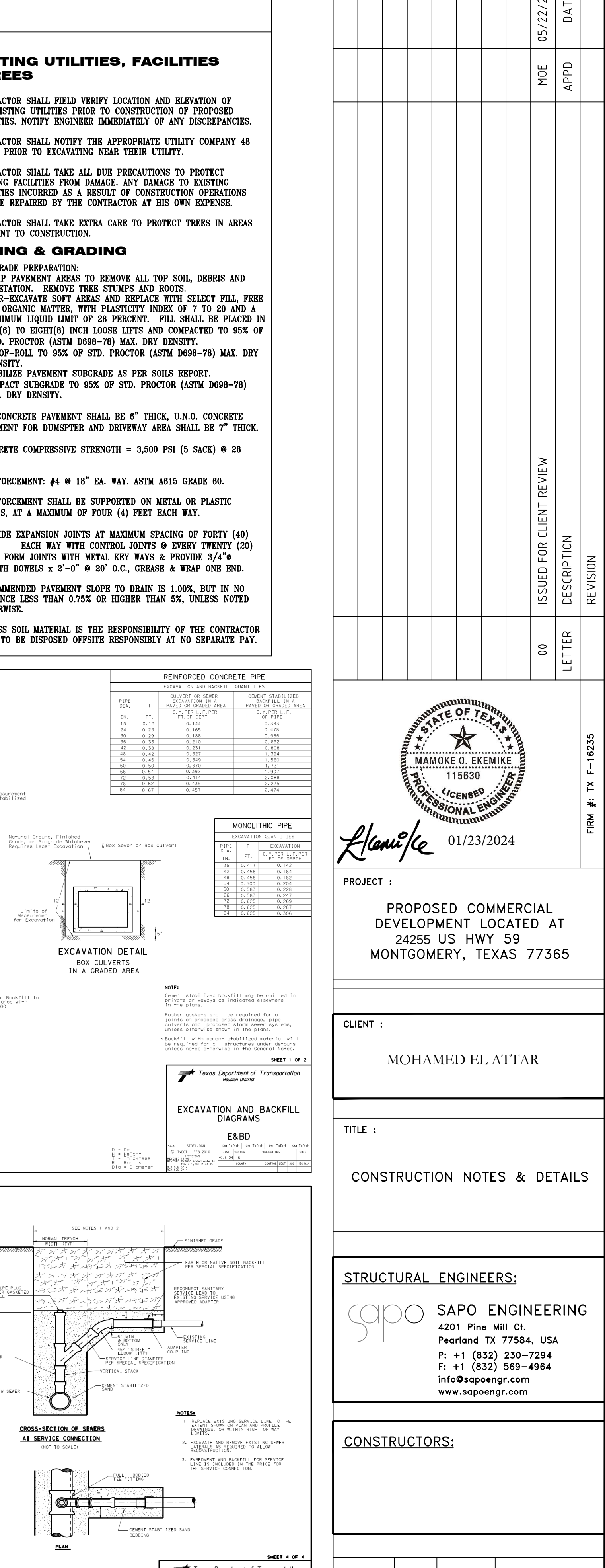
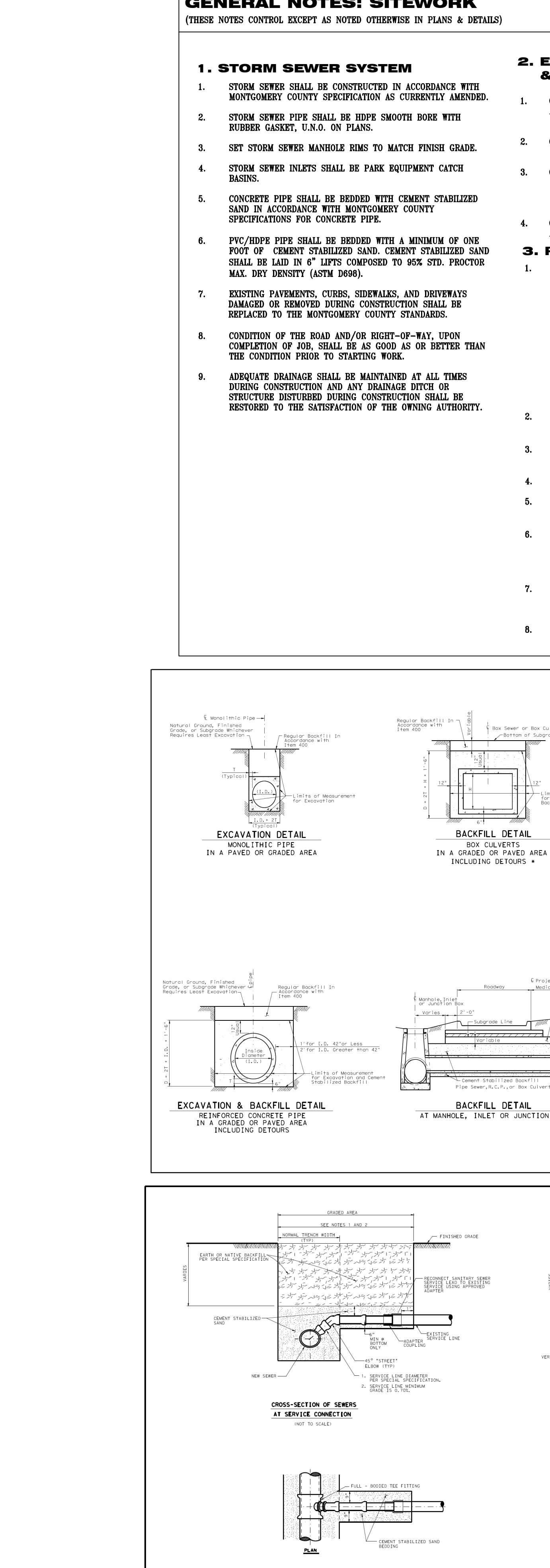
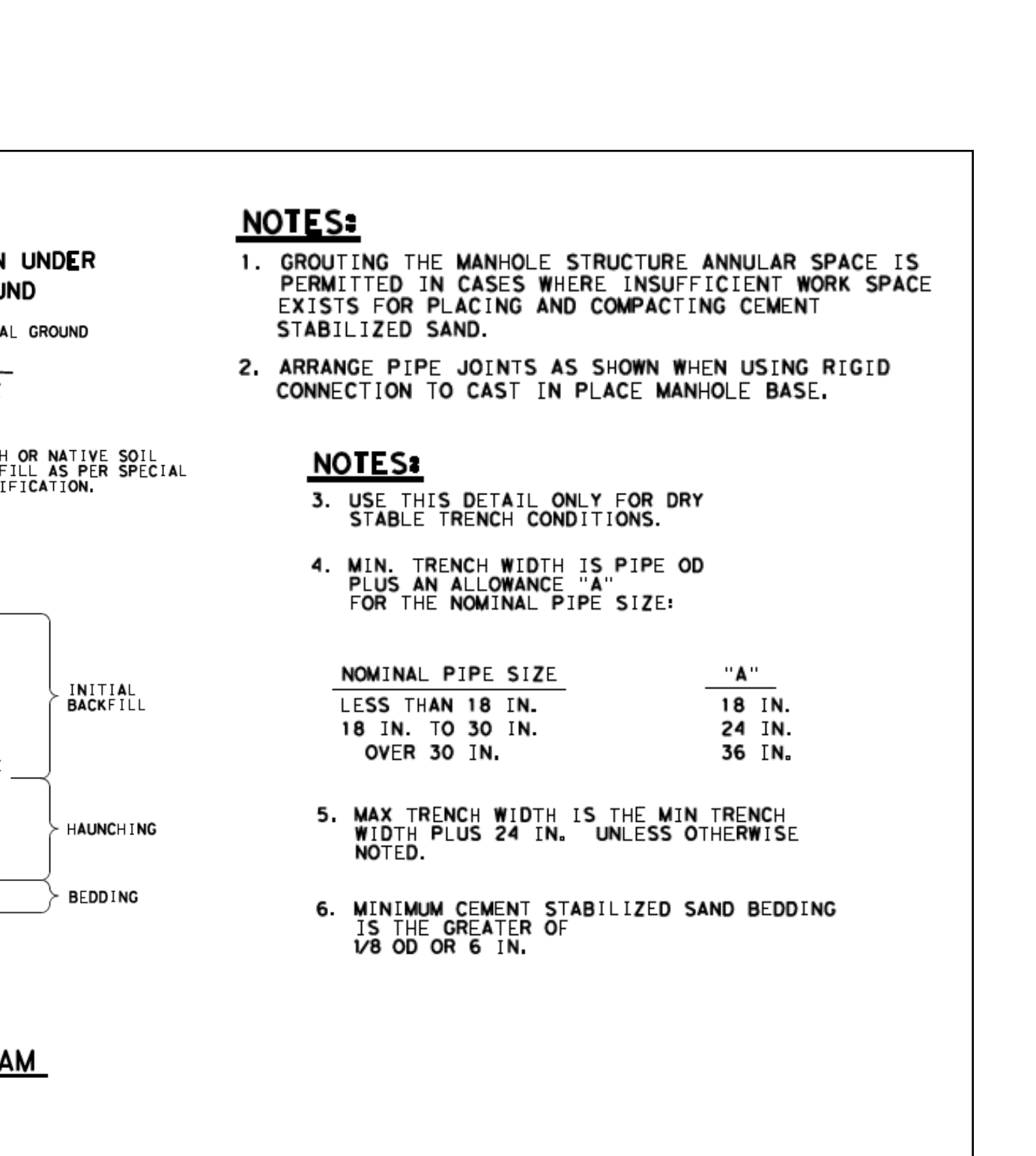
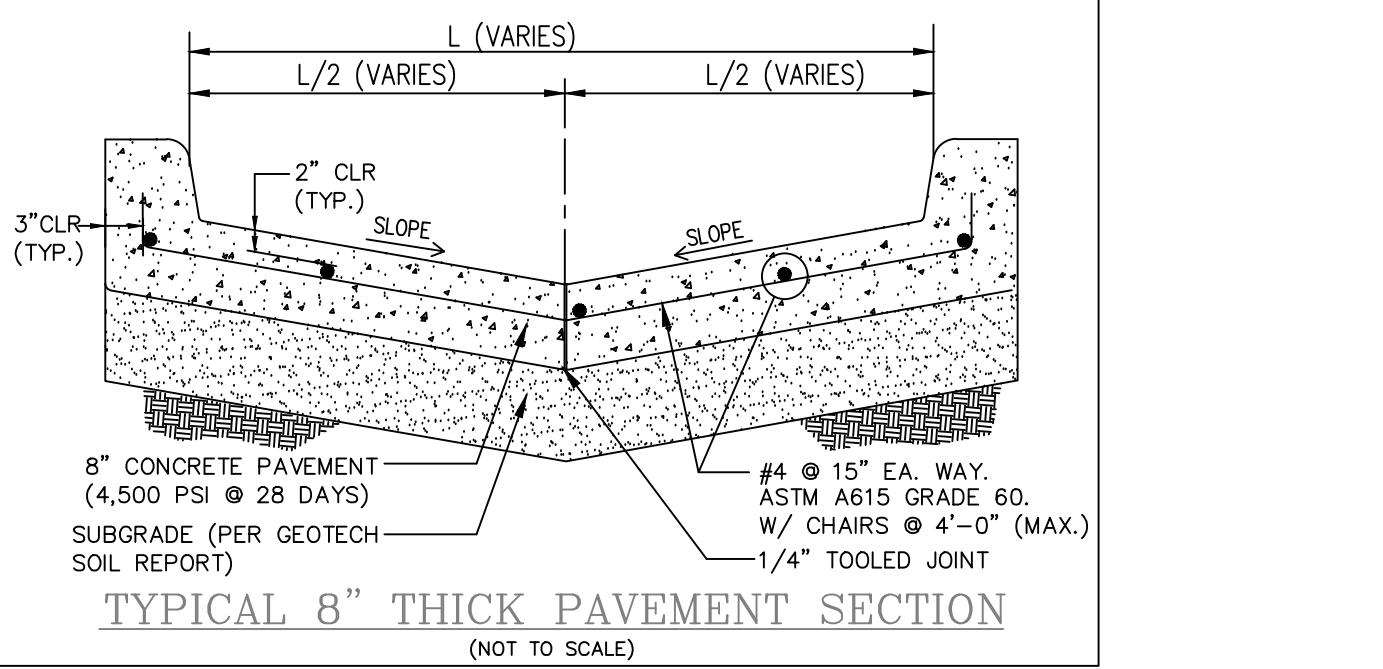
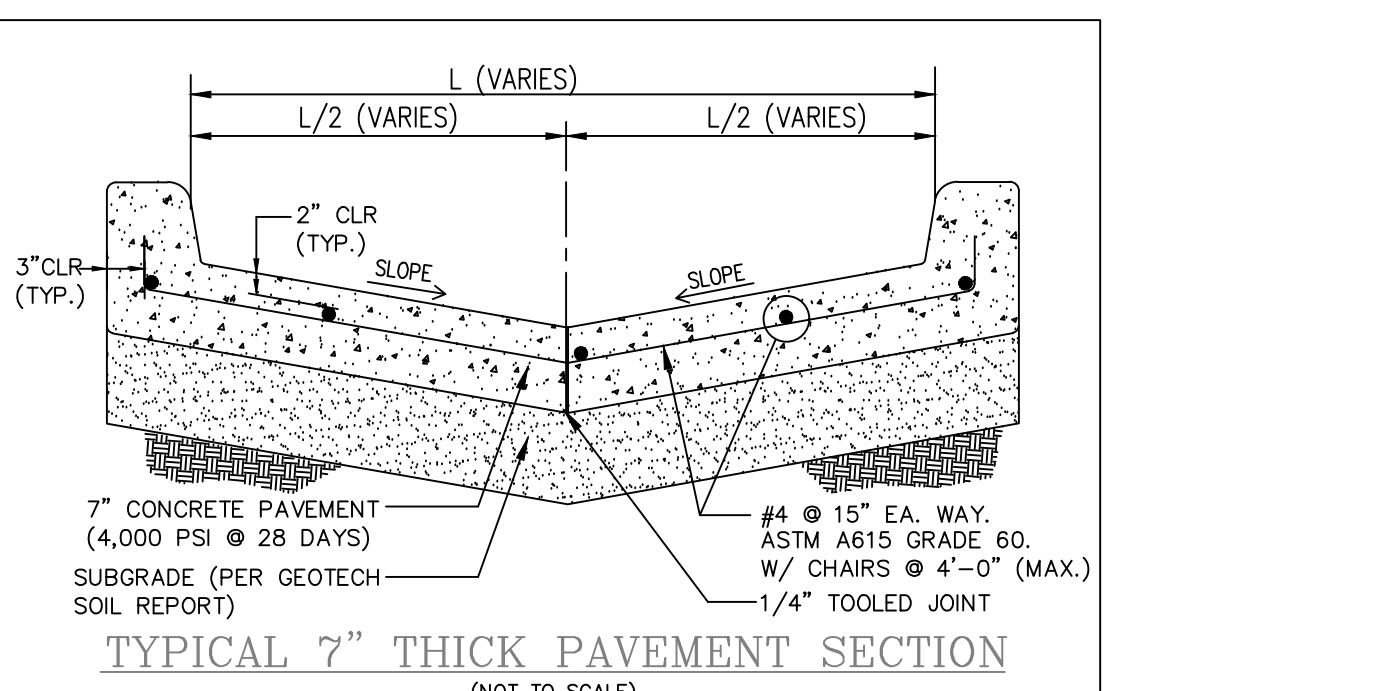
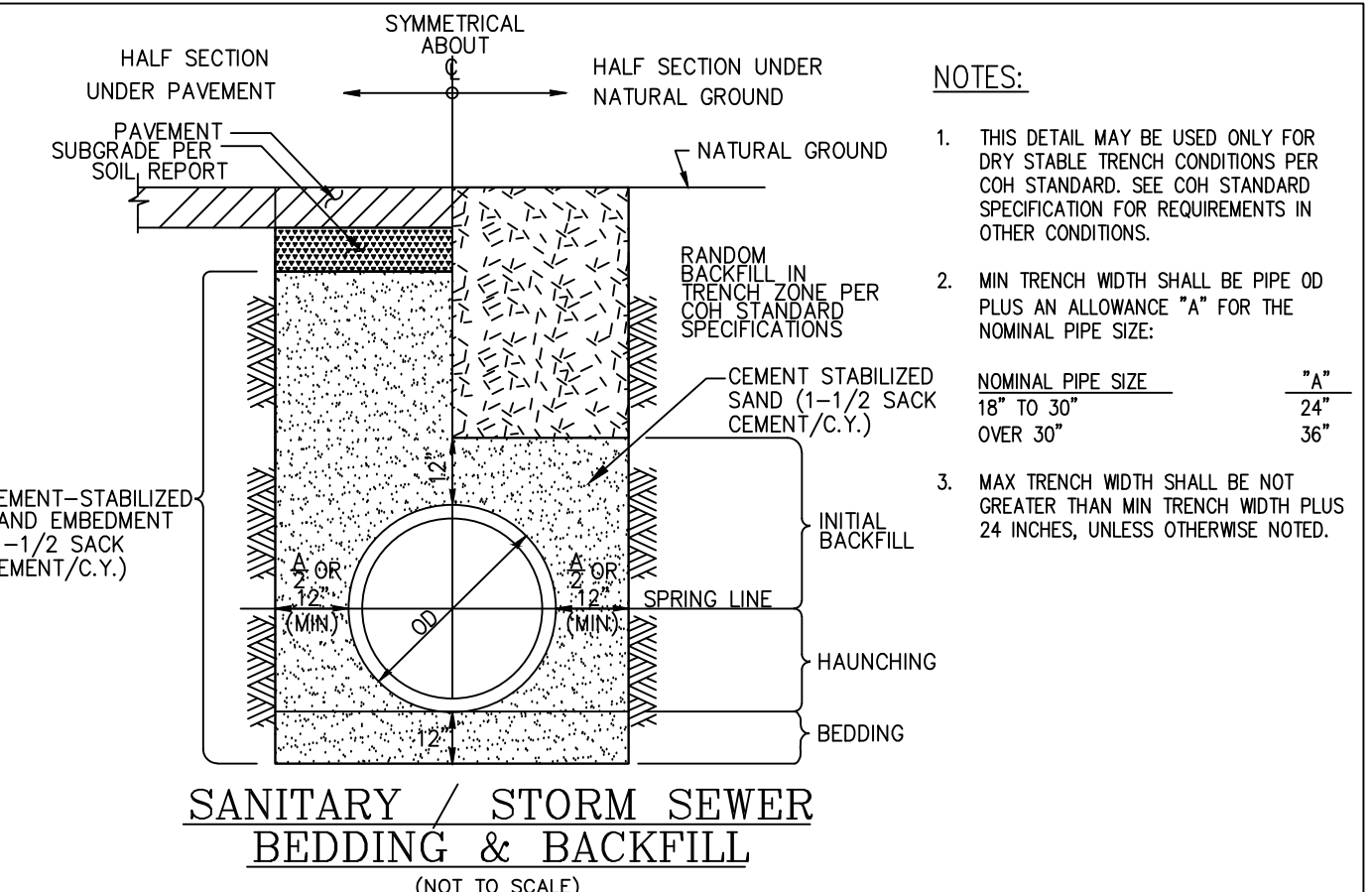
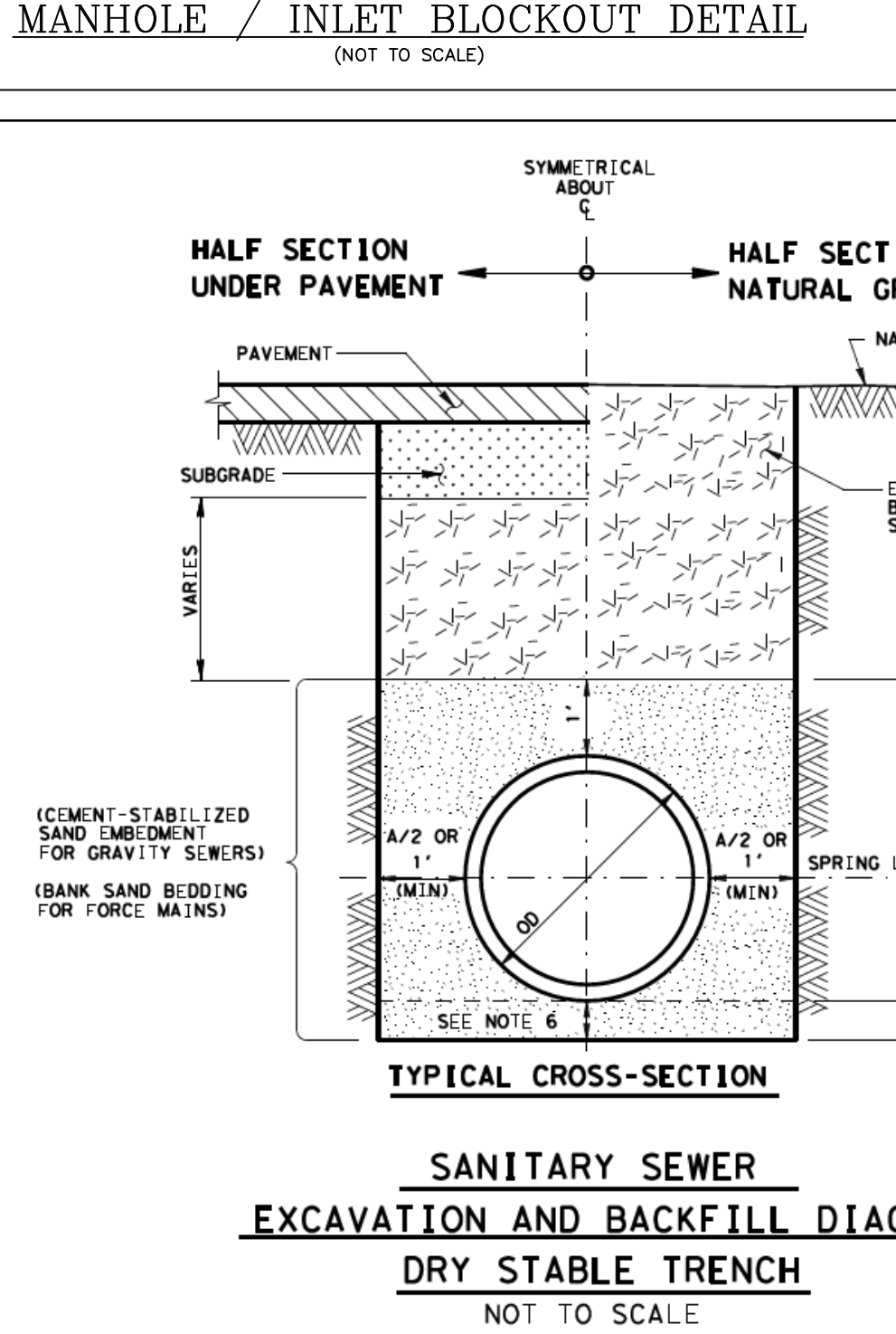
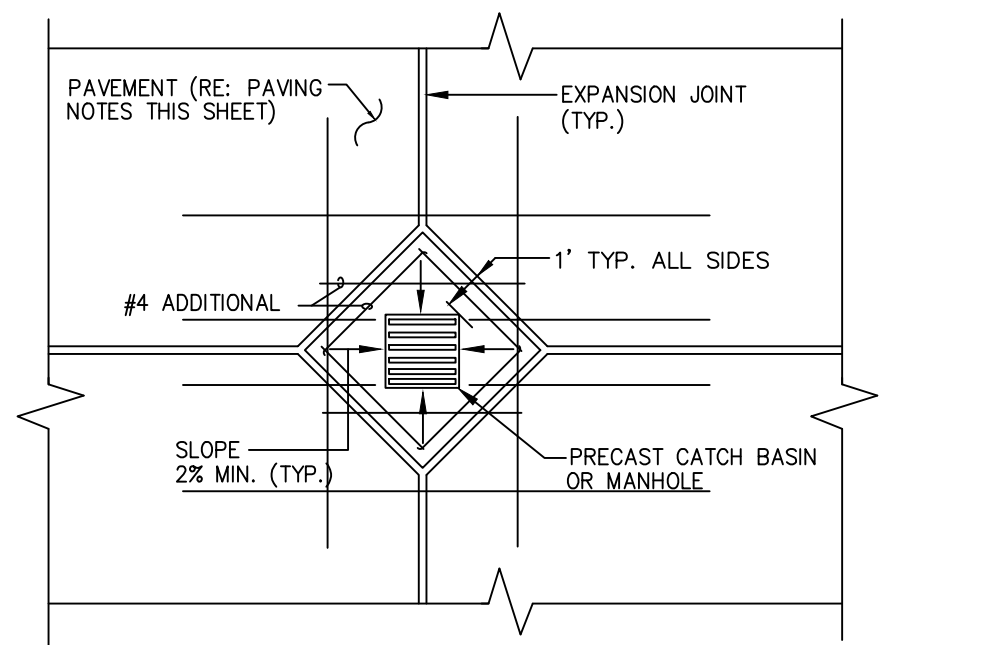
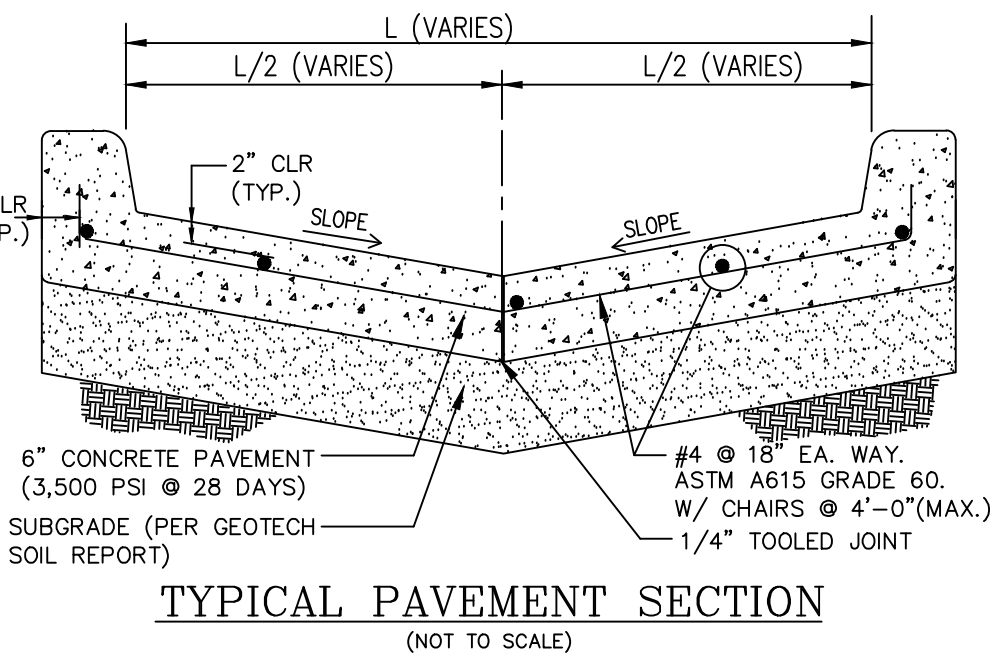
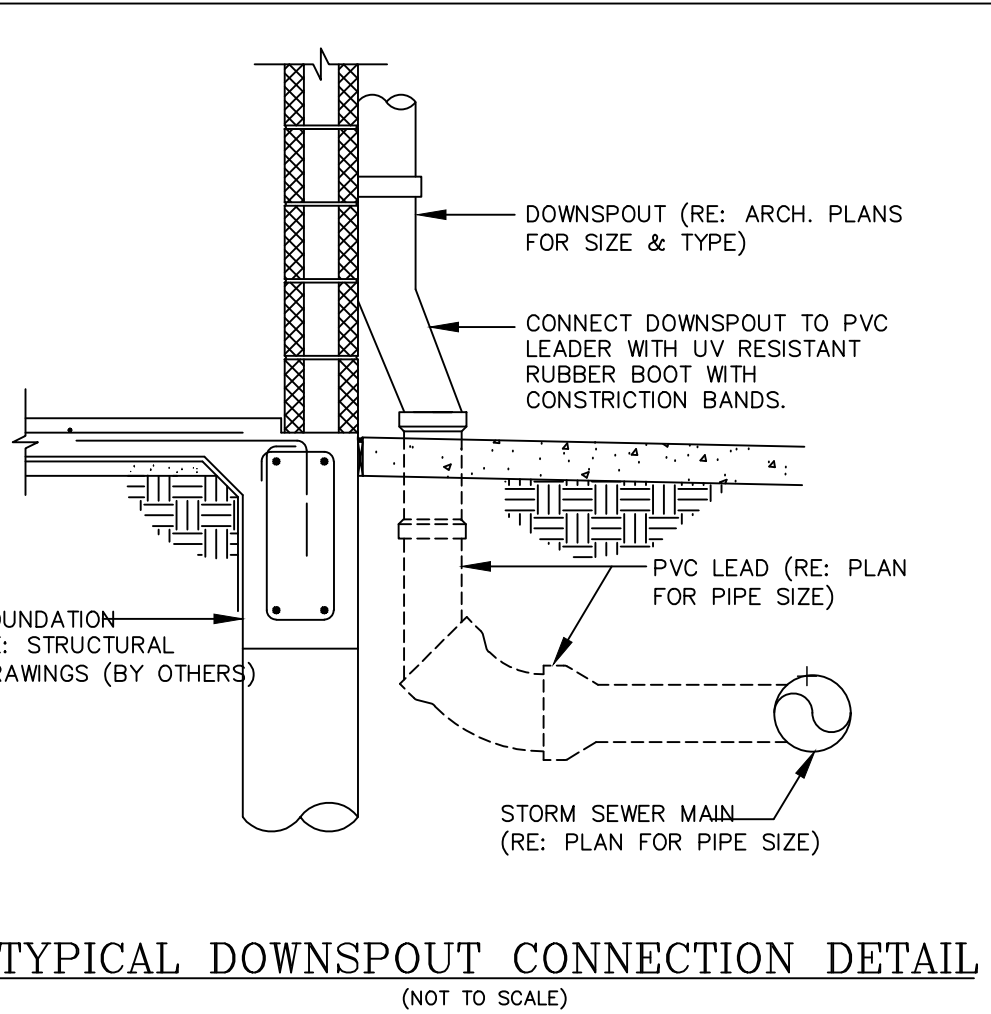
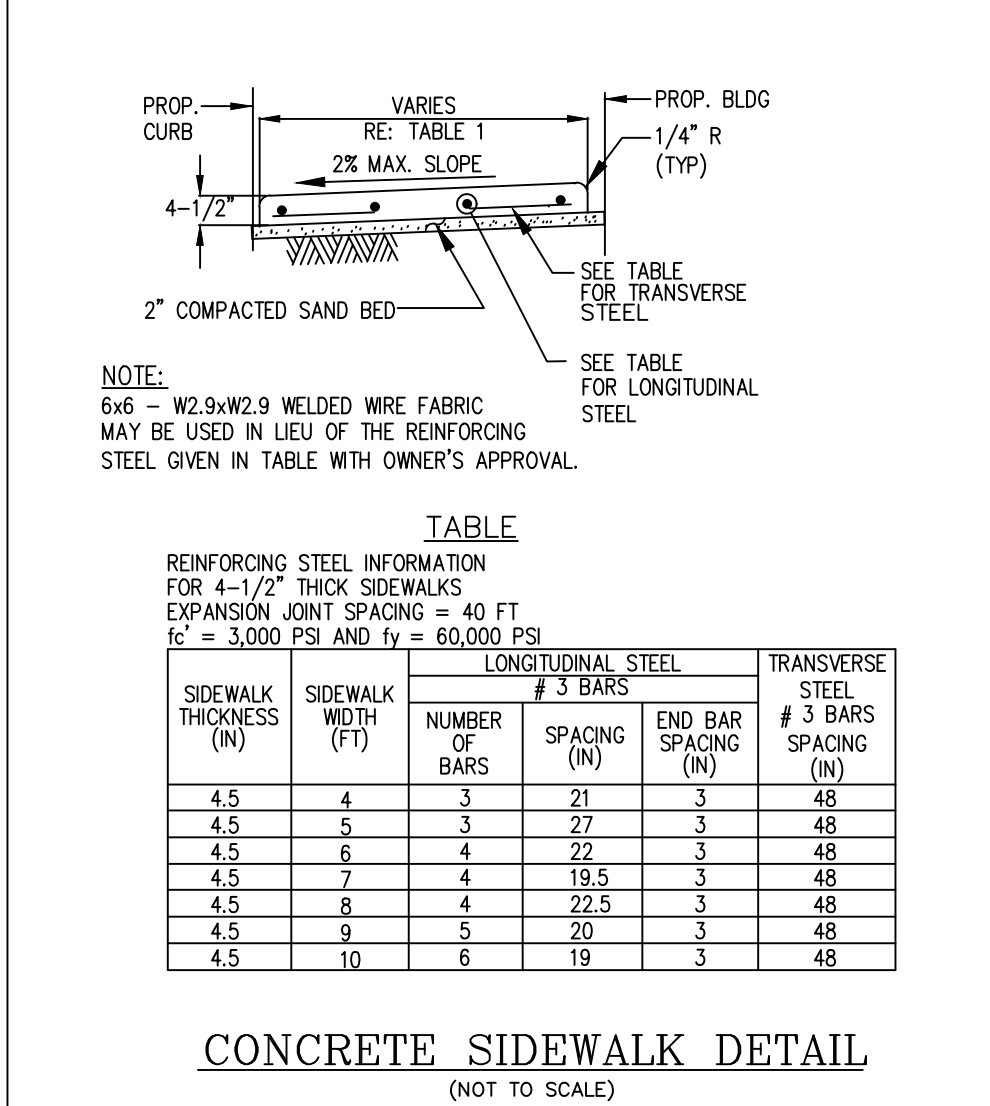
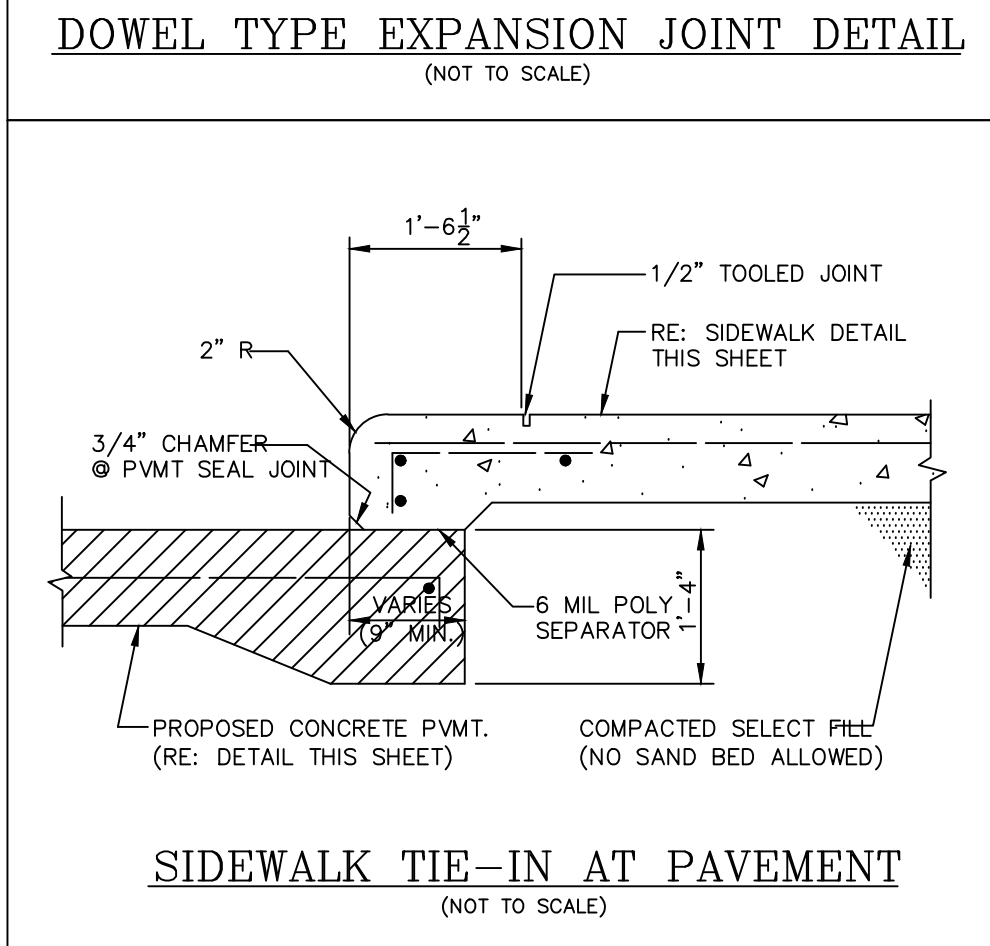
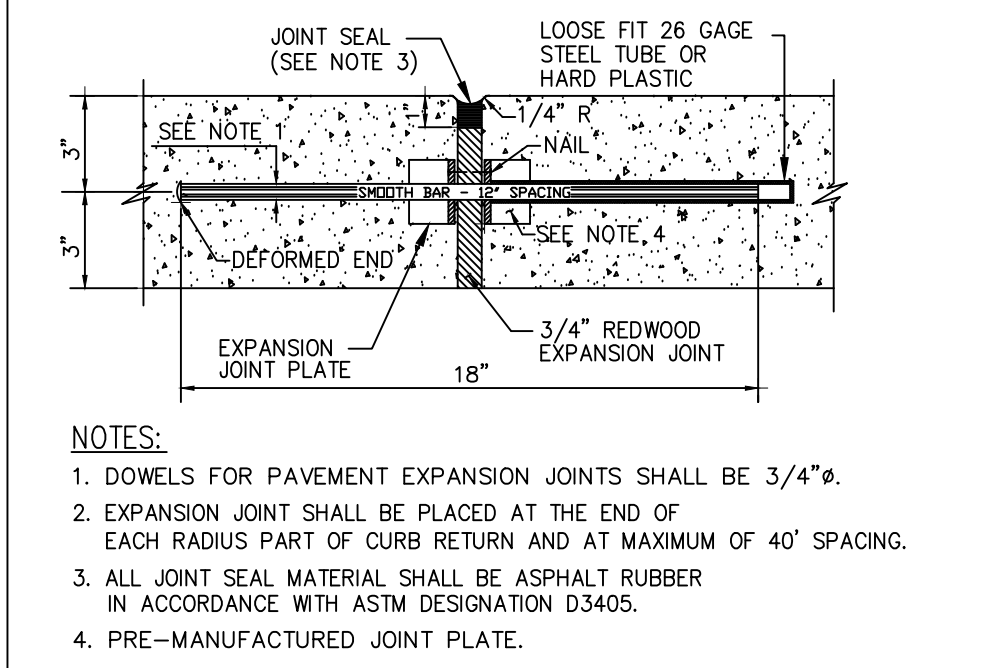
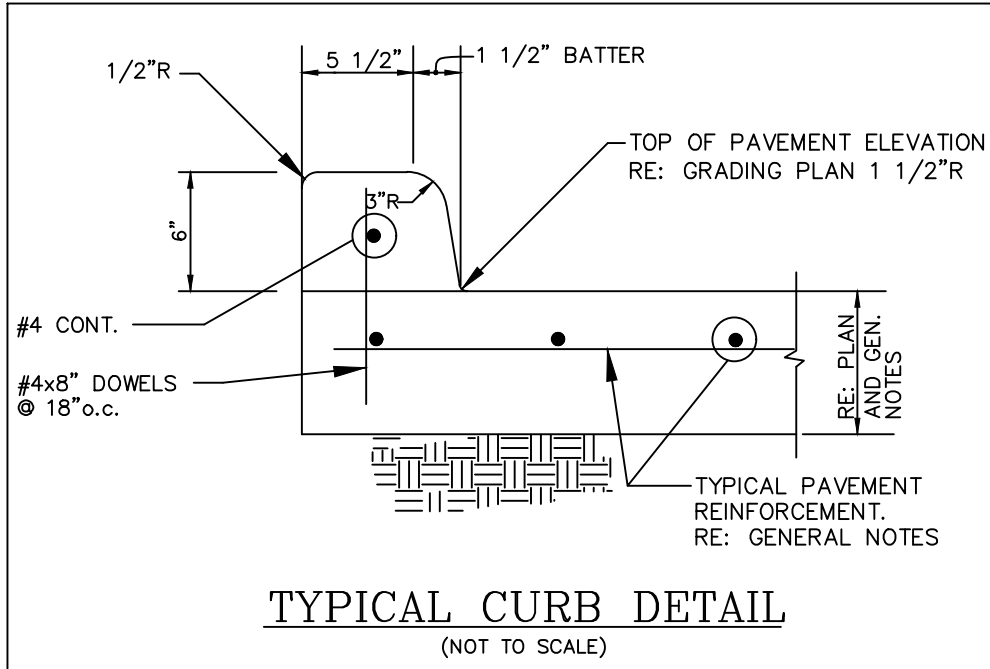
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DRAWN	MIF	DATE	
CHECKED	MOE	SHT.Nos.	
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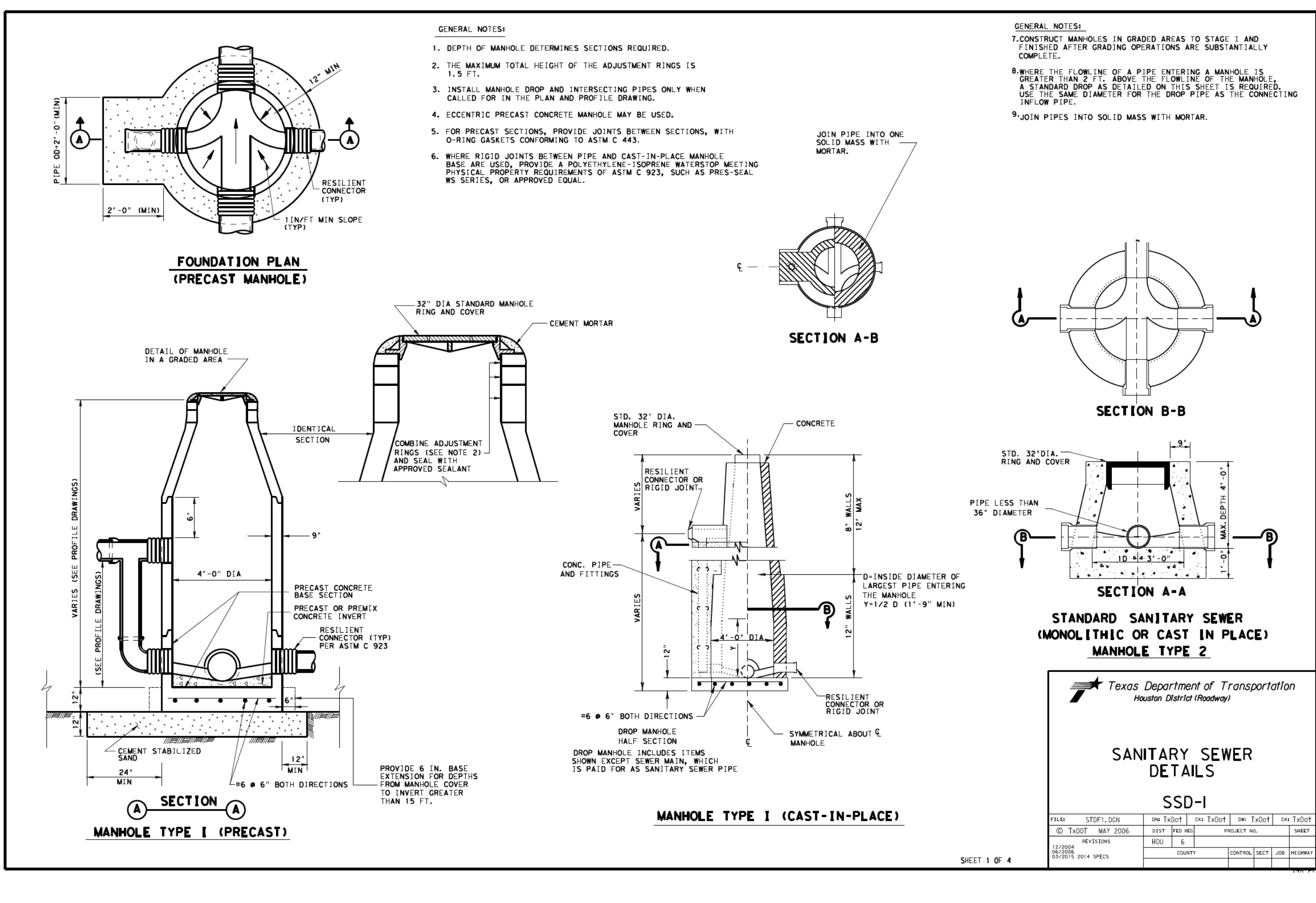
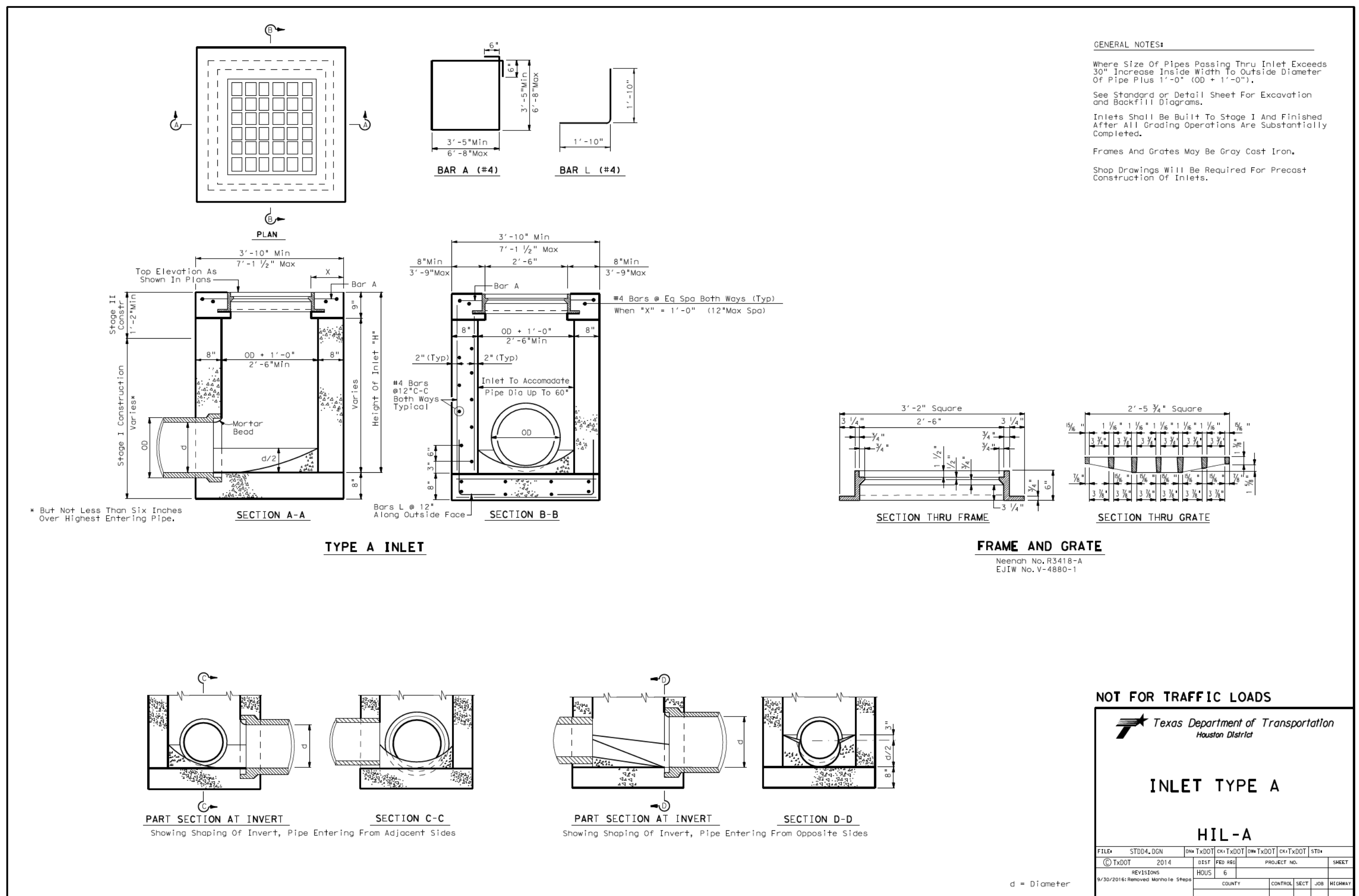
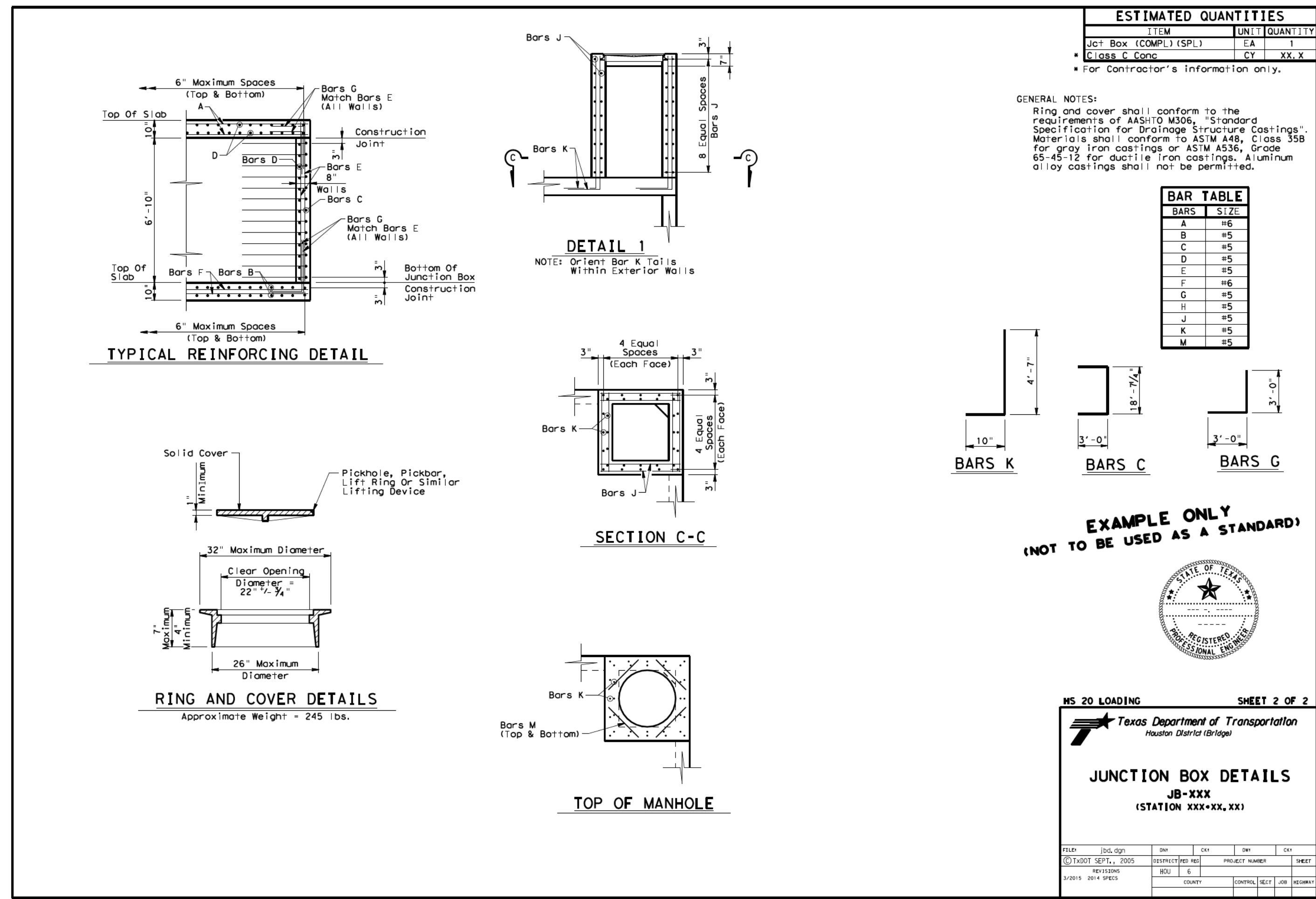
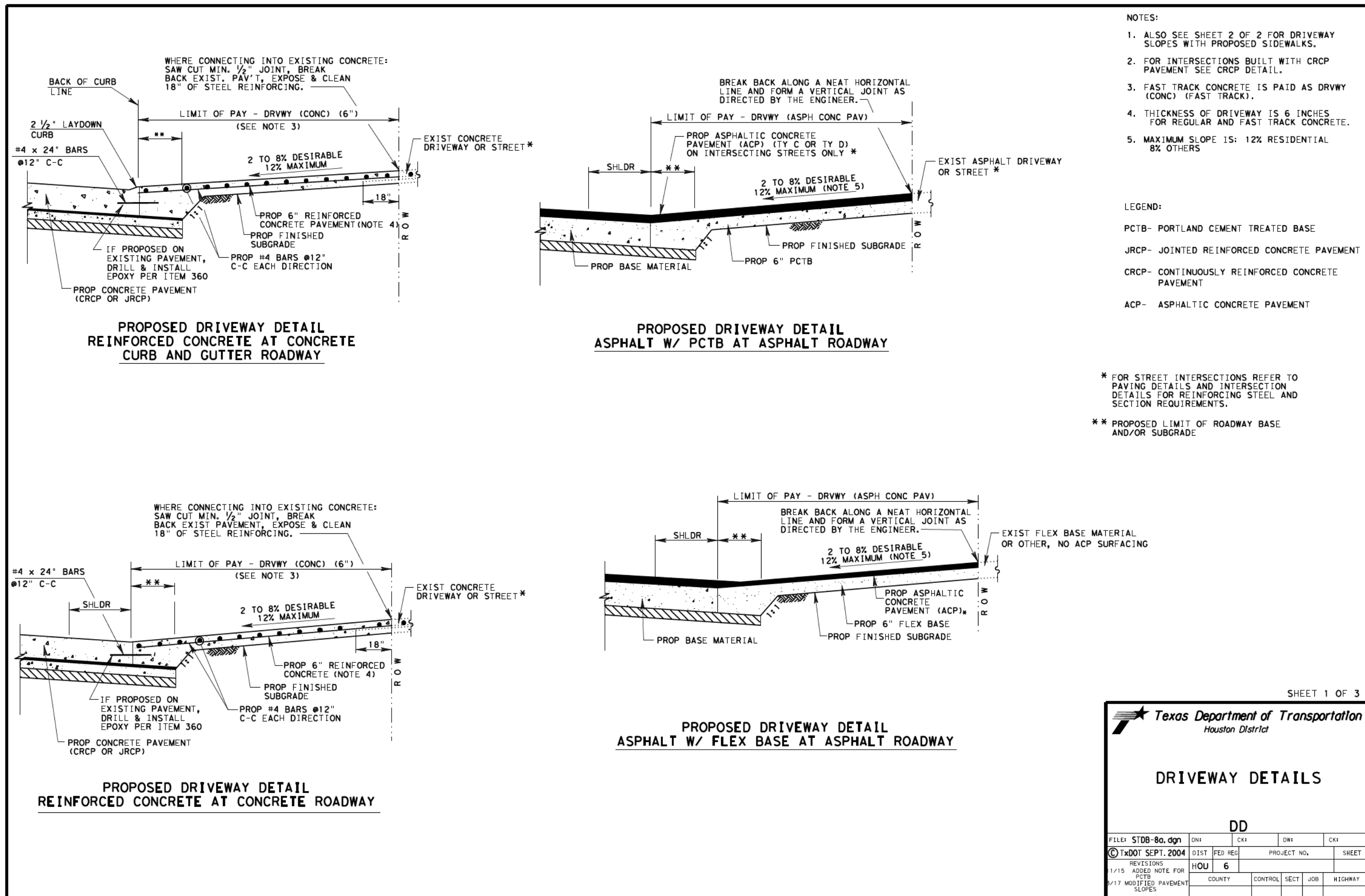


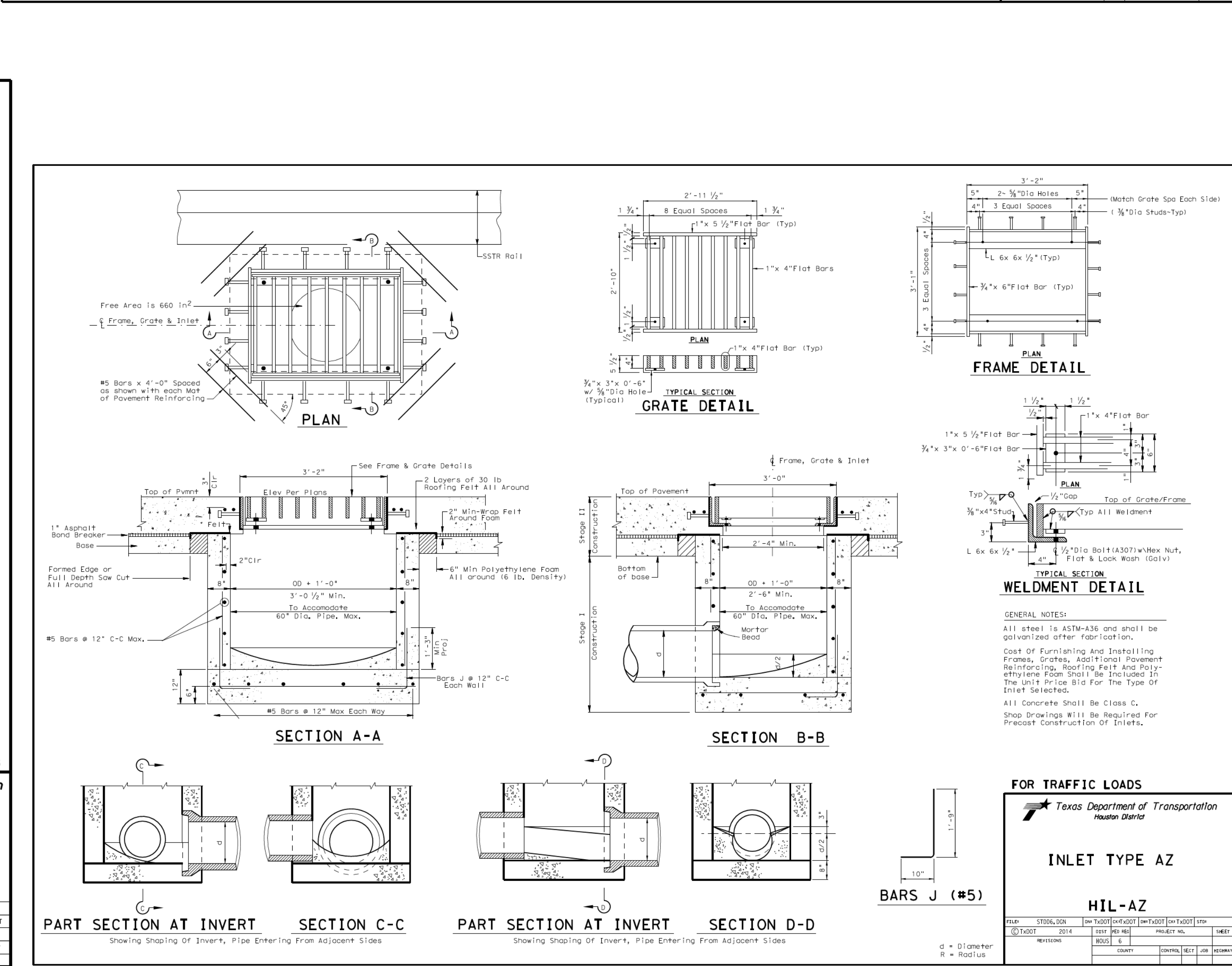
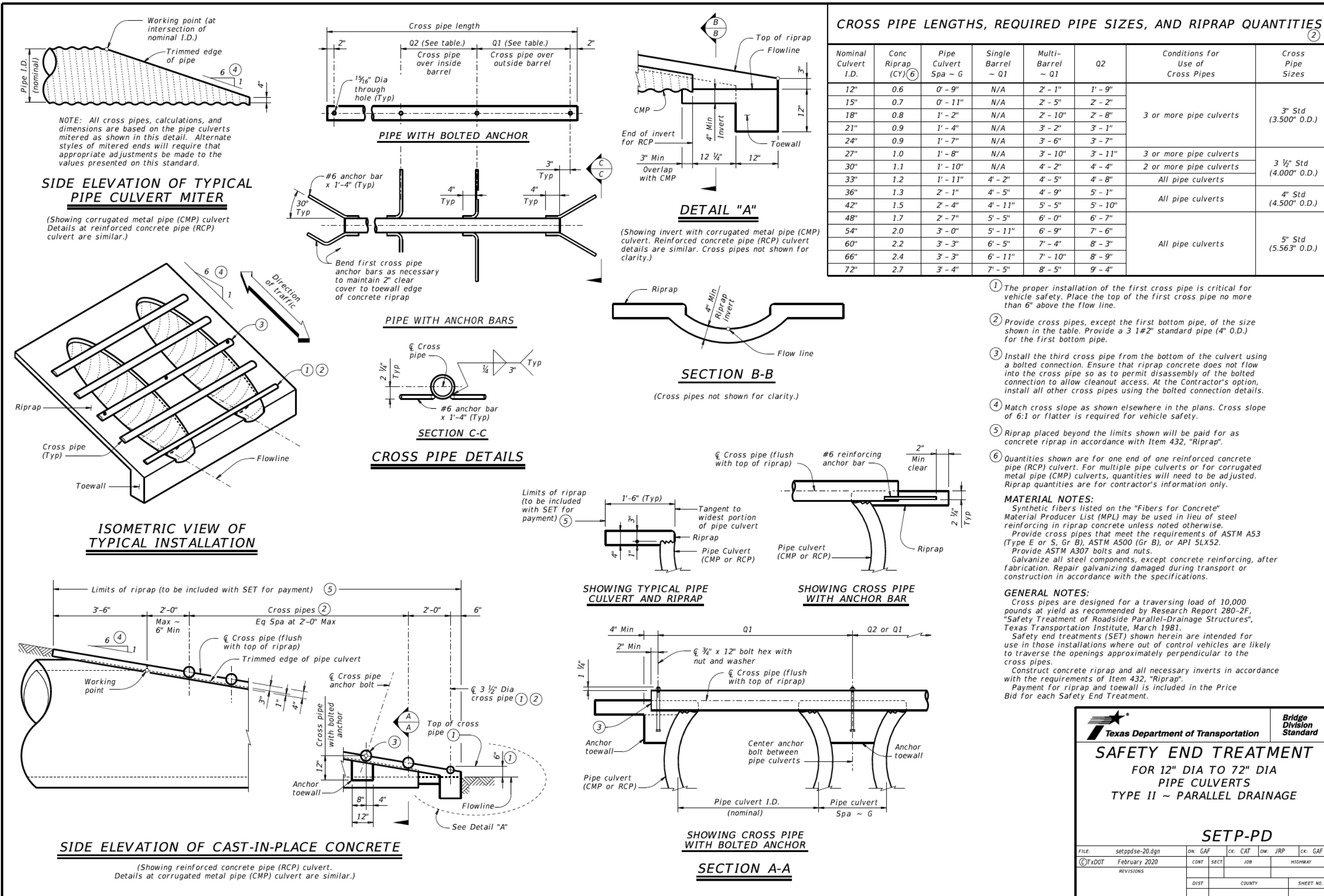
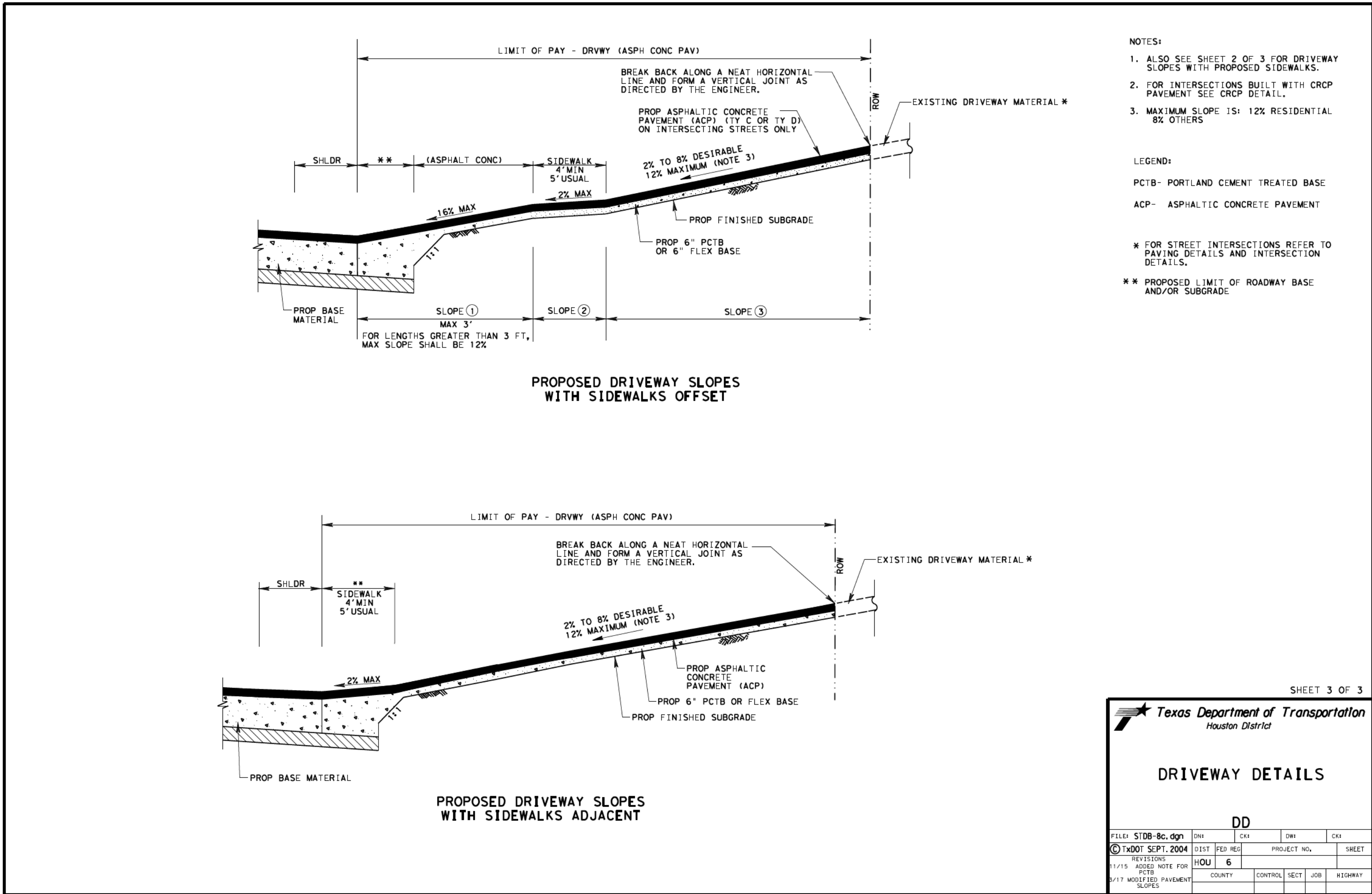
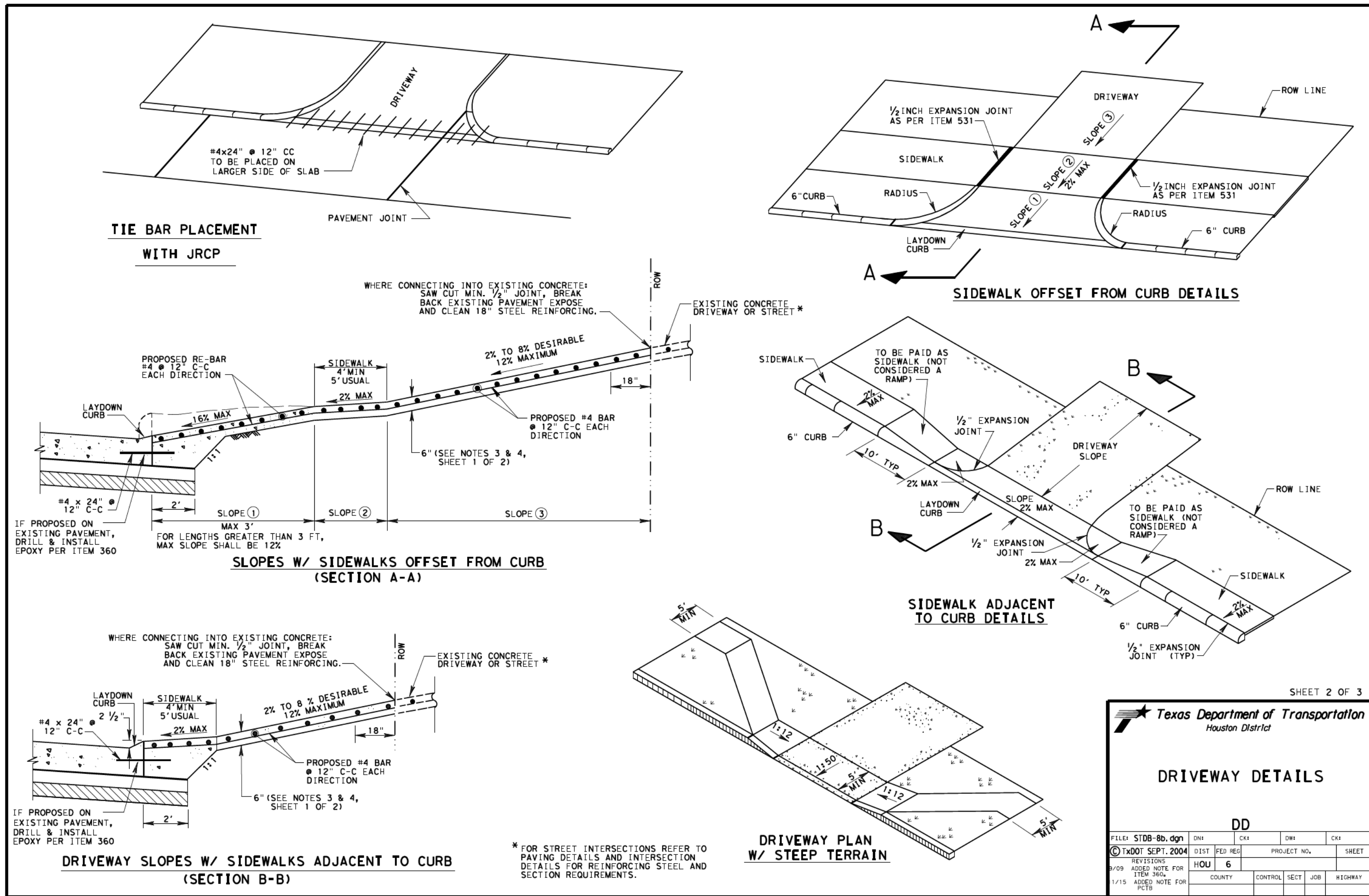
4. IF THE INTERIM PERIOD BETWEEN CONSTRUCTION OF UTILITIES AND STREET CONSTRUCTION WILL BE MORE THAN 21 DAYS, THE STREET RIGHT-OF-WAY WILL BE MULCHED OR OTHERWISE STABILIZED WITHIN THE 14 DAYS.
5. AFTER PAVING COMPLETION, NEWLY GRADED AREAS AND ALL EXPOSED SOILS WILL BE COMPLETELY STABILIZED.
6. CONTROL MEASURES WILL BE INSTALLED ALONG BACK OF CURB TO ADEQUATELY PREVENT SEDIMENT RUNOFF INTO STREETS ONCE PAVING COMPLETE.
7. CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE, UNLESS THEY ARE USING A PROPERLY DESIGNED AND DESIGNATED CONCRETE WASHOUT AREA.
8. EROSION AND SEDIMENT CONTROL MEASURES THAT HAVE BEEN IMPROPERLY INSTALLED OR MUST BE DISABLED, RUN-OVER, REMOVED, OR OTHERWISE RENDERED INEFFECTIVE MUST BE REPLACED OR CORRECTED IMMEDIATELY.
9. MAINTENANCE AND REPAIRS WILL BE CONDUCTED WITHIN 24 HOURS OF INSPECTION REPORT.
10. SEDIMENT WILL BE REMOVED FROM BEHIND THE FILTER FABRIC FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE.
11. SEDIMENT WILL BE REMOVED AROUND THE INLET BARRIERS AND DIKES WHEN THE STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED.
12. INSPECTIONS OF ALL BMP'S WILL BE CONDUCTED EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER; OR EVERY 7 CALENDAR DAYS.
13. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLANS WILL BE INSPECTED TO INSURE EFFECTIVE OPERATION.
14. THE SWPPP WILL BE AMENDED TO REPLACE INEFFECTIVE BMP'S IDENTIFIED THROUGH INSPECTIONS WITHIN 7 DAYS OF IDENTIFYING THE DEFICIENCY.
15. REPORTS WILL INCLUDE WHAT MAINTENANCE WAS DONE AS A RESULT OF THE INSPECTION.
16. ALL LITTER, TRASH AND FLOATABLE DEBRIS WILL BE CONTAINED WITHIN THE SITE.

<u>STRUCTURAL ENGINEERS:</u>			
		SAPO ENGINEERING 4201 Pine Mill Ct. Pearland TX 77584, USA P: +1 (832) 230-7294 F: +1 (832) 569-4984 Info@sapoengr.com www.sapoengr.com	
<u>CONSTRUCTORS:</u>			
DESIGNED	MIF	DWG. No.	
DRAWN	MIF	DATE	MAY, 22 2023
CHECKED	MOE	SHT.Nos.	C-10
SCALE	1" = 30'-0"		

[illegible]







DESIGNED	MIF	DWG. No.	
DRAWN	MIF	DATE	MAY, 22 2023
CHECKED	MOE	SHT.Nos.	
SCALE	N.T.S		

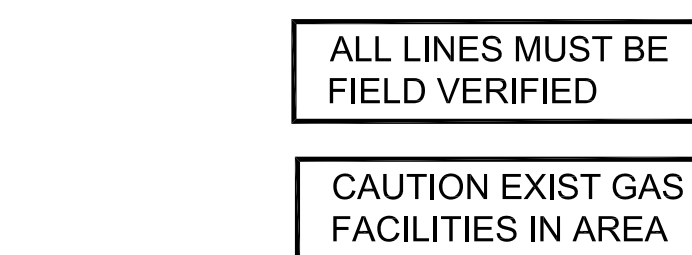
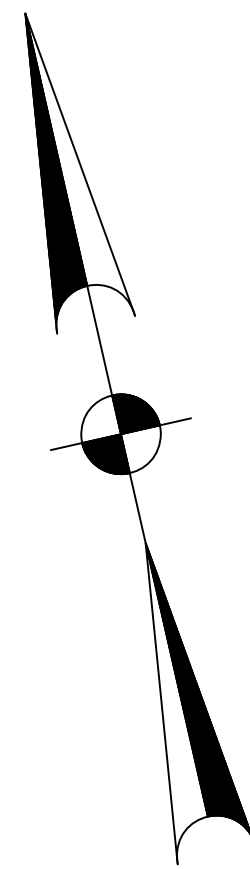
PROJECT :	PROPOSED COMMERCIAL DEVELOPMENT LOCATED AT 24255 US HWY 59 MONTGOMERY, TEXAS 77365
CLIENT :	MOHAMED EL ATTAR
TITLE :	CONSTRUCTION DETAILS
STRUCTURAL ENGINEERS:	SAPO ENGINEERING 4201 Pine Mill Ct. Pearland TX 77584, USA P: +1 (832) 230-7294 F: +1 (832) 569-4964 Info@sapoengr.com www.sapoengr.com
CONSTRUCTORS:	

ISSUED FOR CLIENT REVIEW	00	LETTER	REVISION
MOE	05/22/2023	APPO	DATE

115630
MAMOKO O. EKEMIKE
PROFESSIONAL ENGINEER
STATE OF TEXAS

01/23/2024

FIRM #: TX F-16235



A TRACT OF 4.683 ACRES OF RESTRICTED RESERVE "B", JRB ACRES, A SUBDIVISION IN MONTGOMERY COUNTY, MONTGOMERY COUNTY, TEXAS. ACCORDING TO THE MAP OR PLAT THEREOF RECORDED IN CABINET X, SHEET 107, OF THE MAP AND/OR PLAT RECORDS OF MONTGOMERY COUNTY, TEXAS.

FLOODPLAIN REFERENCE MARK NUMBER 100005 IS A BRASS DISK STAMPED 100005; FROM THE INTERSECTION OF US 59 AND FM 1960, NORTH ALONG THE US 59 FEEDER 2.2 MILES TO SPORTERS/MCCLELLAN. WEST ALONG SPORTERS/MCCLELLAN APPROXIMATELY 300 FEET TO THE FIRST DRIVEWAY ON THE RIGHT AND THE BENCHMARK ON THE RIGHT. KEYMAP 335H IN THE SPRING CREEK BAYOU WATERSHED NEAR STREAM J100-00-00.

FLOOD PLAIN DATA

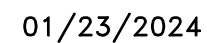
ALL OF THIS PROPERTY LIES IN ZONE "X-UNSHADED" PER THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 48339C0750-H, WHICH BEARS AN EFFECTIVE DATE AUGUST 18, 2014. ZONE "X-UNSHADED" DENOTES AREA OUTSIDE THE 500 YEAR FLOODPLAIN.

ALL CONTRACTORS MUST KNOW EXACT LOCATION OF, AND AVOID, ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. CALL UTILITY LOCATOR SERVICE AT LEAST 48 HOURS PRIOR TO COMMENCING WORK.

WARNING

OVERHEAD AND UNDERGROUND UTILITIES MAY EXIST IN THE VICINITY OF THIS PROJECT. LOCATIONS SHOWN FOR EXISTING UTILITIES ARE APPROXIMATE AND OTHER UTILITIES MAY EXIST IN THE VICINITY OF THE PROJECT WHICH ARE NOT SHOWN ON THE PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE EXACT ALL EXISTING UTILITIES IN THE VICINITY OF THE PROJECT, PRIOR TO BEGINNING CONSTRUCTION. IF ANY DISCREPANCY EXISTS, NOTIFY ENGINEER.

ONE CALL NOTIFICATION
SYSTEM
CALL BEFORE YOU DIG!!
CALL AT LEAST 2 WORKING DAYS (48 HOURS) BEFORE YOU DIG:
713-223-4567 (IN HOUSTON)
OR
(NEW STATEWIDE NUMBER OUTSIDE HOUSTON 1-800-344-8377)



PROJECT :

PROPOSED COMMERCIAL
DEVELOPMENT LOCATED AT
24255 US HWY 59
MONTGOMERY, TEXAS 77365

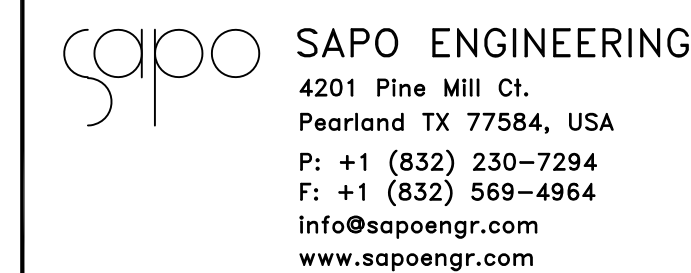
CLIENT :

MOHAMED EL ATTAR

TITLE :

PLAN & PROFILE

STRUCTURAL ENGINEERS:



CONSTRUCTORS:

C-16