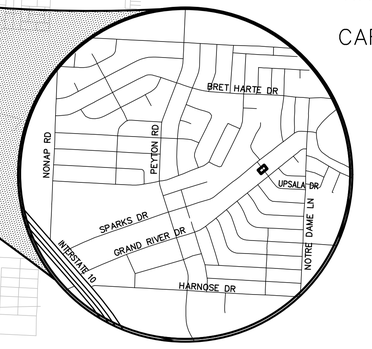
COUNTY OF EL PASO, TEXAS

UPSALA DRIVE
DRAINAGE
IMPROVEMENTS

LOCATION MAP
SCALE: 1"=5000'



PROJECT LOCATION
SCALE: 1"=1500'

SEPTEMBER 2020

EL PASO COMMISSIONER'S COURT

RICARDO A. SAMANIEGO	COUNTY JUDGE
CARLOS LEON	COMMISSIONER PRECINCT 1
DAVID STOUT	COMMISSIONER PRECINCT 2
VINCENT PEREZ	COMMISSIONER PRECINCT 3
CARL L. ROBINSON	COMMISSIONER PRECINCT 4

PLANNING•ENGINEERING•PROJECT MANAGEMENT
MCi Moreno Cardenas Inc.
EL PASO • SAN ANTONIO
2505 E. Missouri Ave. El Paso, TX 79903 (915) 532-2091
9601 McAllister Freeway #207, San Antonio TX 78216 (210) 314-3553
Texas Board of Professional Engineers Registration No. F-000554

9/21/2020

STATE OF TEXAS
FERNANDO SANCHEZ
132581
LICENSED
PROFESSIONAL ENGINEER

"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY FERNANDO SANCHEZ, P.E. No. 132581 **ON SEPTEMBER 21, 2020** ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT"

GENERAL NOTES

1. THE CONTRACTOR SHALL VISIT AND FAMILIARIZE HIMSELF/HERSELF WITH THE PROJECT SITE PRIOR TO SUBMITTING BIDS.

2. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AUTOMOBILE AND PEDESTRIAN ACCESS AT ALL TIMES, INCLUDING SATURDAY, SUNDAYS AND HOLIDAYS TO AREA RESIDENTS AND FACILITY USERS. THIS INCLUDES, BUT IS NOT LIMITED TO DRIVEWAYS, STREETS AND ALLEYS. THIS REQUIREMENT IS SUBSIDIARY TO THE VARIOUS BID ITEMS. CONTRACTOR SHALL MAINTAIN DUST CONTROL PREVENTIVE MEASURES THROUGHOUT CONSTRUCTION.

3. ALL EXISTING WATER AND SANITARY SEWER MAINS (INCLUDING SERVICE CONNECTIONS) CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION. RESIDENT WILL BE NOTIFIED 48 HRS PRIOR TO ANY SERVICE OUTAGE. SERVICE WILL BE RESTORED WITHIN 4 HOUR OR AS COORDINATED.

4. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING WATER AND SANITARY SEWER (INCLUDING SERVICE CONNECTIONS) FROM DAMAGE AS A RESULT OF CONSTRUCTION ACTIVITIES. EXISTING WATER AND SEWER MAINS (INCLUDING SERVICE CONNECTIONS) DISTURBED DURING CONSTRUCTION SHALL BE REPLACED TO ORIGINAL OR BETTER CONDITION AT NO COST TO THE OWNER.

5. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM WORK SO AS TO PROVIDE PROPER PASSAGE OF ANY STORM WATER DURING THE COURSE OF CONTRACTOR OPERATIONS. ALL LABOR, TOOLS, EQUIPMENT AND SUPERVISION REQUIRED TO ASSURE SUCH PROPER PASSAGE OF RUNOFF WATER AND ANY REMOVAL OR HANDLING OF WATER IN ORDER TO MAINTAIN DRY CONDITIONS SHALL BE CONSIDERED AS INCIDENTAL TO THE REMAINDER OF THE WORK AND SHALL BE AT THE EXPENSE OF THE CONTRACTOR. CONTRACTOR SHALL PUMP THE WATER OUT OF THE BASIN AFTER A STORM EVENT. THE PUMPING OPERATIONS AND DISCHARGE POINTS SHALL BE COORDINATED AND APPROVED BY THE COUNTY OF EL PASO. CONTRACTOR IS RESPONSIBLE FOR THE FULL PROJECT SITE ONCE THE NOTICE TO PROCEED IS ISSUED. CONTRACTOR IS RESPONSIBLE FOR THE PROPER PASSAGE RUNOFF FOR THE FULL PROJECT SITE.

6. THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION SCHEDULE WITH ALL UTILITIES AND ALL OTHER AFFECTED AGENCIES.

7. THE CONTRACTOR SHALL COMPLY WITH ALL THE STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, PERTAINING TO THE LOCATION OF THESE UTILITY FACILITIES. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY HIS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES IN THE PLANNING AND CONDUCTING OF EXCAVATION. THE COUNTY OF EL PASO MAKES NO REPRESENTATION PERTAINING THERE TO AND ASSUMES NO RESPONSIBILITY OF LIABILITY. THEREFORE, IF THE UTILITY FACILITIES ARE DAMAGED DURING CONSTRUCTION ALL PAVEMENT, ADJACENT UTILITIES, STRUCTURES, ETC. DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE COUNTY TO ORIGINAL OR BETTER CONDITION. UNDERGROUND/OVERHEAD UTILITY FACILITIES SHOWN ON THESE DRAWINGS ARE FOR PLANNING DESIGN PURPOSES ONLY. OTHER UTILITY FACILITIES MAY EXIST WHICH ARE NOT SHOWN ON THE DRAWINGS. THE LOCATION, DEPTH, AND SIZE OF THESE UTILITY FACILITIES SHOWN ARE FOR INFORMATION PURPOSES ONLY AND MUST BE VERIFIED BY THE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE FACILITY'S EXACT DEPTH AND LOCATION BY SAFE AND ACCEPTABLE MEANS WITHIN THE MARKED FACILITY AREA.

8. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND GRADES BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THEIR CORRECTNESS.

9. VERTICAL CONTROL FOR THIS PROJECT IS BASED UPON NAVD 88 DATUM. TOPOGRAPHIC SURVEY WAS PERFORMED BY BARRAGAN AND ASSOCIATES INC.

10. THE BOUNDARY RIGHT-OF-WAY AND EASEMENT LINES SHOWN AREA BASED ON ACTUAL BOUNDARY SURVEY PERFORMED BY THE SURVEYOR.

11. IF THE CONTRACTOR DISTURBS ANY EXISTING COUNTY MONUMENT, IT SHALL BE REPLACED BY A REGISTERED SURVEYOR IN THE STATE OF TEXAS AT NO COST TO THE OWNER. THE CONTRACTOR'S SURVEYOR SHALL FURNISH A CERTIFIED ELEVATION AND LOCATION FOR EACH REPLACED MONUMENT.

12. REJECTED/DEFECTIVE CURB MUST BE REPLACED IN 10-FOOT LONG SECTIONS, MINIMUM AND/OR TO THE NEAREST EXPANSION JOINT.

13. EXPANSION JOINTS FOR MACHINE LAID CURBS SHALL BE PROVIDED AT CHANGES OF DIRECTION, AT ALL CURB RETURNS, WHERE CURB ABUTS OTHER MASONRY STRUCTURES, AND WHERE MACHINE STARTS AND STOPS LAYING CURB.

14. SCORED CONSTRUCTION JOINTS SHALL BE AT LEAST 1/4 THE THICKNESS OF THE CONCRETE SLAB AND SHALL BE PROVIDED EVERY 10 FEET FOR CURB AND GUTTER AND EVERY 5 FEET FOR SIDEWALKS.

15. ALL CONCRETE SHALL COMPLY WITH THE STRENGTH SPECIFIED UNDER THE TECHNICAL SPECIFICATIONS.

16. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO BE TO THE CENTER OF BARS UNLESS OTHERWISE SHOWN ON THE PLANS.

17. COST OF FIELD CUTTING AND BENDING OF REINFORCING STEEL SHALL BE INCIDENTAL TO CONSTRUCTION AND NO ADDITIONAL PAYMENT WILL BE CONSIDERED.

18. VIBRATORY ROLLERS WILL NOT BE PERMITTED ON ANY PHASE OF THIS PROJECT.

19. THE CONTRACTOR SHALL CONTACT A NOTIFICATION CENTER OR THE PROPER UTILITY COMPANY 48 HRS. PRIOR TO PERFORMING ANY EXCAVATION.

20. CONTRACTOR IS EXPECTED TO MAINTAIN A MINIMUM CLEARANCE OF TWO FEET PLUS THE WIDTH OF THE LINE BETWEEN MARKED AND UNEXPOSED FACILITIES AND THE CUTTING EDGE OR POINT OF ANY POWER-OPERATED EXCAVATING OR EARTH-MOVING EQUIPMENT. EXCAVATION SHOULD BE PERFORMED VERY CAREFULLY WITH HAND TOOLS AND WITHOUT DAMAGE AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.

21. THE CONTRACTOR/EXCAVATOR IS CAUTIONED THAT EQUIPMENT MAY DISTURB/DAMAGE FACILITIES BY ITS WEIGHT AND/OR OTHER CHARACTERISTICS.

22. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING PERMITS FROM THE COUNTY OF EL PASO PRIOR TO DEMOLITION AND NEW CONSTRUCTION. THE COST OF THE PERMIT WILL BE AT THE CONTRACTOR'S EXPENSE.

23. ALL EXISTING ROADWAYS, SIDEWALKS, SIGNS, LANDSCAPING, DRAINAGE STRUCTURES AND DRIVEWAYS NOT TO BE DISTURBED AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER BY CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

24. THE FOLLOWING LOCAL AGENCY PERSONNEL SHALL BE CONTACTED BY CONTRACTOR PRIOR TO COMMENCING WORK.

LIST OF UTILITIES AND AGENCIES		
COMPANY NAME	CONTACT PERSON	PHONE NUMBER
EL PASO ELECTRIC COMPANY (DISTRIBUTION DEPT.)	MARGARET ONTIVEROS	(915) 543-2244
TEXAS GAS SERVICE	FRANCISCO CAMPA	(915) 680-7275
AT&T	DIANA McKOWN	(915) 595-5142
LOWER VALLEY WATER DISTRICT	DANIEL HERNANDEZ	(915) 791-4480
EMERGENCIES AND HAZMAT	-	911
DIG TESS	-	(800) 344-8377

25. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PUBLIC WORKS DEPT. IN WRITING, OF ANY PROPOSED DUMP SITE(S) FOR OVERBURDEN AND ANY CONSTRUCTION DEBRIS FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL OBTAIN APPROVAL OF IT'S TRUCK ROUTE TO THE DUMP SITE, AS WELL AS FOR THE MATERIALS IT SHALL BE HAULING BEFORE REMOVAL OF OVERBURDEN FROM PROJECT SITE.

26. CONTRACTOR SHALL ADJUST ALL MANHOLES, WATER VALVES ETC. TO NEW PAVEMENT ELEVATIONS.

27. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING IT'S WORK AREAS TO PREVENT ANY UNAUTHORIZED ACCESS.

28. CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED ACTIVITIES TO KEEP THE TOTAL PROJECT LIMITS IN A CLEAN AND SAFE CONDITION. SEQUENCING OF WORK DOES NOT RELIEVE THE CONTRACTOR OF HOUSE KEEPING THROUGHOUT THE COMPLETE PROJECT LIMITS. TO INCLUDE, BUT NOT LIMITED TO WATER EXTRACTION, STREET SWEEPING, DEBRIS, REMOVAL ETC.

29. CONTRACTOR SHALL COORDINATE WITH THE PUBLIC WORKS DEPT. THROUGH THE PROJECT MANAGER FOR REPLACEMENT AND/OR RELOCATION OF ANY EXISTING AND/OR PROPOSED SIGNS.

30. CONTRACTOR SHALL COORDINATE AND OBTAIN PERMIT APPROVALS FROM OWNER FOR THE REMOVAL/RELOCATION OF ALL ITEMS AS SHOWN ON DRAWINGS PRIOR TO COMMENCEMENT OF ANY DEMOLITION ACTIVITIES.

31. COORDINATE WITH THE PUBLIC WORKS COUNTY ENGINEER AT 915-546-2015 PRIOR TO REMOVAL/RELOCATION OF ANY EXISTING FIRE HYDRANTS, MONUMENTS, FENCES AND ROCKWALLS LOCATED WITHIN STREET ROW.

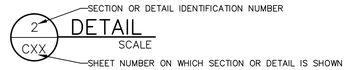
32. CONTRACTOR SHALL INSTALL TEMPORARY TRAFFIC CONTROL MEASURES AS DESCRIBED ON THE GENERAL NOTES FOR TRAFFIC CONTROL PLAN (TCP) FOR CONSTRUCTION AREAS.

33. CONTRACTOR IS RESPONSIBLE FOR ANY TEMPORARY RELOCATION OF ANY SURFACE STRUCTURES. CONTRACTOR SHALL ALSO COORDINATE WITH EL PASO COUNTY OR THE ADJACENT PROPERTY OWNER(S) FOR ANY RELOCATIONS.

SPECIFICATION REFERENCE

XX XX XX SERIES OF NUMBERS ON PLANS USED TO CROSS-REFERENCE THE APPLICABLE TECHNICAL SPECIFICATION SECTION.

SECTION AND DETAIL REFERENCE



GENERAL NOTES FOR TRAFFIC CONTROL PLAN FOR CONSTRUCTION AREAS

1. TRAFFIC CONTROL PLAN (TCP) FOR THE FULL PROJECT SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

2. SUBMIT A TRAFFIC CONTROL PLAN TO THE EL PASO COUNTY PUBLIC WORKS DEPT. FOR REVIEW AND APPROVAL 7 DAYS OR SOONER AFTER AWARD OF CONTRACT AND TO COMMENCEMENT OF WORK.

3. THE TRAFFIC CONTROL PLAN SHALL BE SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS. THE CONTRACTOR SHALL PREPARE BARRICADES AND A TRAFFIC CONTROL PLAN ACCEPTABLE TO AND APPROVED BY THE PUBLIC WORKS DEPARTMENT.

4. ERECT PORTABLE MESSAGE SIGNS FOR A PERIOD OF SIX (6) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. SIGNS SHALL DISPLAY MESSAGE NOTIFYING TRAVELING PUBLIC OF UPCOMING CONSTRUCTION. CONTACT THE PUBLIC WORKS DEPARTMENT FOR EXACT MESSAGE TO BE DISPLAYED AND EXACT LOCATION OF SIGNS.

5. BUSINESSES, RESIDENTS, EMERGENCY FACILITIES, SCHOOLS, E.M.S., AND CITY AGENCIES SHALL BE ADVISED AND/OR CONSULTED BY THE CONTRACTOR DURING REPARATION OF TOP OF TCP AND NOTIFIED PRIOR TO THE START OF CONSTRUCTION.

6. ACCESS TO PUBLIC AND PRIVATE PROPERTY - LOCAL ACCESS SHALL BE MAINTAINED TO ALL PROPERTIES AT ALL TIMES ON ALL STREETS DURING CONSTRUCTION AND MAINTENANCE ACTIVITIES.

7. THE TRAFFIC CONTROL PLAN SHALL SHOW THE HOURS OF THE DAY AND THE TENTATIVE TOTAL NUMBER OF DAYS IT WILL BE IN EFFECT.

8. TRAFFIC CONTROL & STREET NAME SIGNS - ALL TRAFFIC CONTROL OR STREET NAME SIGNS AND SIGN POSTS ADJACENT TO CONSTRUCTION OR MAINTENANCE WORK SITE SHALL BE PROTECTED FROM DAMAGE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING TRAFFIC CONTROL PLAN AND STREET NAME SIGNS AND SIGN POST. THE DAMAGE SHALL BE REPAIRED COMPLETELY AND TO THE SATISFACTION OF THE OWNER AND THE CITY ENGINEER WITHIN 24-HRS. AND A TEMPORARY SIGN SHALL BE PROVIDED.

SURVEY ABBREVIATIONS

- AC ASBESTOS CEMENT
- ASV ANTI-SIPHON VALVE
- CATV CABLE TV PEDESTAL
- CBC CONCRETE BOX CULVERT
- CL CENTERLINE
- CMP CORRUGATED METAL PIPE
- CONC CONCRETE
- DIP DUCTILE IRON PIPE
- DIA DIAMETER
- EBX ELECTRIC BOX
- FH FIRE HYDRANT
- FM FORCE MAIN
- FOMKR FIBER OPTIC MARKER
- FT FEET
- G GAS LINE
- GALV GALVANIZED
- GM GAS METER
- GV GAS VALVE
- GP GUARDPOST
- GR NATURAL GROUND
- GU GUTTER
- GV GAS VALVE
- HMAC HOT MIXED ASPHALTIC CONCRETE
- INV INVERT
- IV IRRIGATION VALVE
- LP LIGHT POLE
- LT LEFT
- MAX MAXIMUM
- MBX MAILBOX
- MIN MINIMUM
- MH MANHOLE
- NOM NOMINAL
- OC OF CENTER
- OCEW OF CENTER EACH WAY
- OD OUTSIDE DIAMETER
- OFF OFFSET
- PED PEDESTAL
- PGL PROFILE GRADE LINE
- PL PROPERTY LINE
- PP POWER POLE
- PVC POLYVINYL CHLORIDE
- RCP REINFORCED CONCRETE PIPE
- RT RIGHT
- ROW RIGHT OF WAY
- ROE RIGHT OF ENTRY
- SCO SEWER CLEANOUT
- S SANITARY SEWER
- SS STORM SEWER
- SSL STAINLESS STEEL
- SP 0.2'ø SIGNPOST
- STA STATION
- STD STANDARD
- STRM STORM SEWER
- TBM TEMPORARY BENCHMARK
- TBX TELEPHONE PEDESTAL
- TC TOP OF CURB
- TD TOP OF DRIVEWAY
- TG TOP OF GROUND
- TMH TELEPHONE MANHOLE
- TP TOP OF PAVEMENT
- TS TOP OF SIDEWALK
- TSBX TRAFFIC SIGNAL BOX
- TW TOP OF WALL
- TYP TYPICAL
- W WATER LINE
- WV WATER VALVE
- WM WATER METER

SURVEY LEGEND

- SET BIG NAIL
- ORIGINAL CORNER
- SET 1/2" REBAR W/CAP "B&A INC" (UNLESS NOTED OTHERWISE)
- CALCULATED POINT (UNABLE TO SET)
- BUILDING
- BRICK WALL
- CHAIN LINK FENCE
- CONCRETE
- CURB
- EDGE OF PAVEMENT
- ROCK WALL
- SIGN
- WOOD FENCE
- INLET
- ANCHOR
- IRRIGATION VALVE
- MANHOLE, SEWER
- MANHOLE
- POWER POLE
- TRAFFIC SIGNAL
- WATER VALVE
- CONCRETE
- PAVEMENT
- SCREENING PAVEMENT
- POST - BOLLARD
- P.R.E.C. PLAT RECORDS OF EL PASO COUNTY, TEXAS
- APPARENT STORM MANHOLE
- APPARENT WATER VALVE
- CENTER LINE
- GAS LINE
- OVERHEAD POWER LINE
- SANITARY SEWER
- STORM DRAIN
- WATER LINE

SHEET INDEX

CIVIL

NO.	DATE	REVISION REMARKS	BY

PLANNING•ENGINEERING•PROJECT MANAGEMENT
MCi Moreno Cardenas Inc.
EL PASO · SAN ANTONIO
2305 E. Missouri Ave. El Paso, TX 79903 (915) 532-2091
9607 McAllister Freeway #207, San Antonio TX 78216 (210) 314-5353
Texas Board of Professional Engineers Registration No. F-9660654

ENGINEER'S SEAL
12/2020
STATE OF TEXAS
FERNANDO SANCHEZ
132581
LICENSED PROFESSIONAL ENGINEER

ENGINEER'S NOTE
"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY FERNANDO SANCHEZ, P.E. #132581 ON SEPTEMBER 21, 2020"
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SCALE
Horiz. N/A
Vert. N/A
Date SEPT 2020
Design by F.S./E.G
Drawn by E.G.
Chkd. by F.S.
Appd. by M.M.
JOB No. 19-146

PROJECT NAME
UPSALA DRIVE DRAINAGE IMPROVEMENTS

EL PASO COUNTY TEXAS

SHEET TITLE
INDEX & GENERAL NOTES

SHEET G1.0

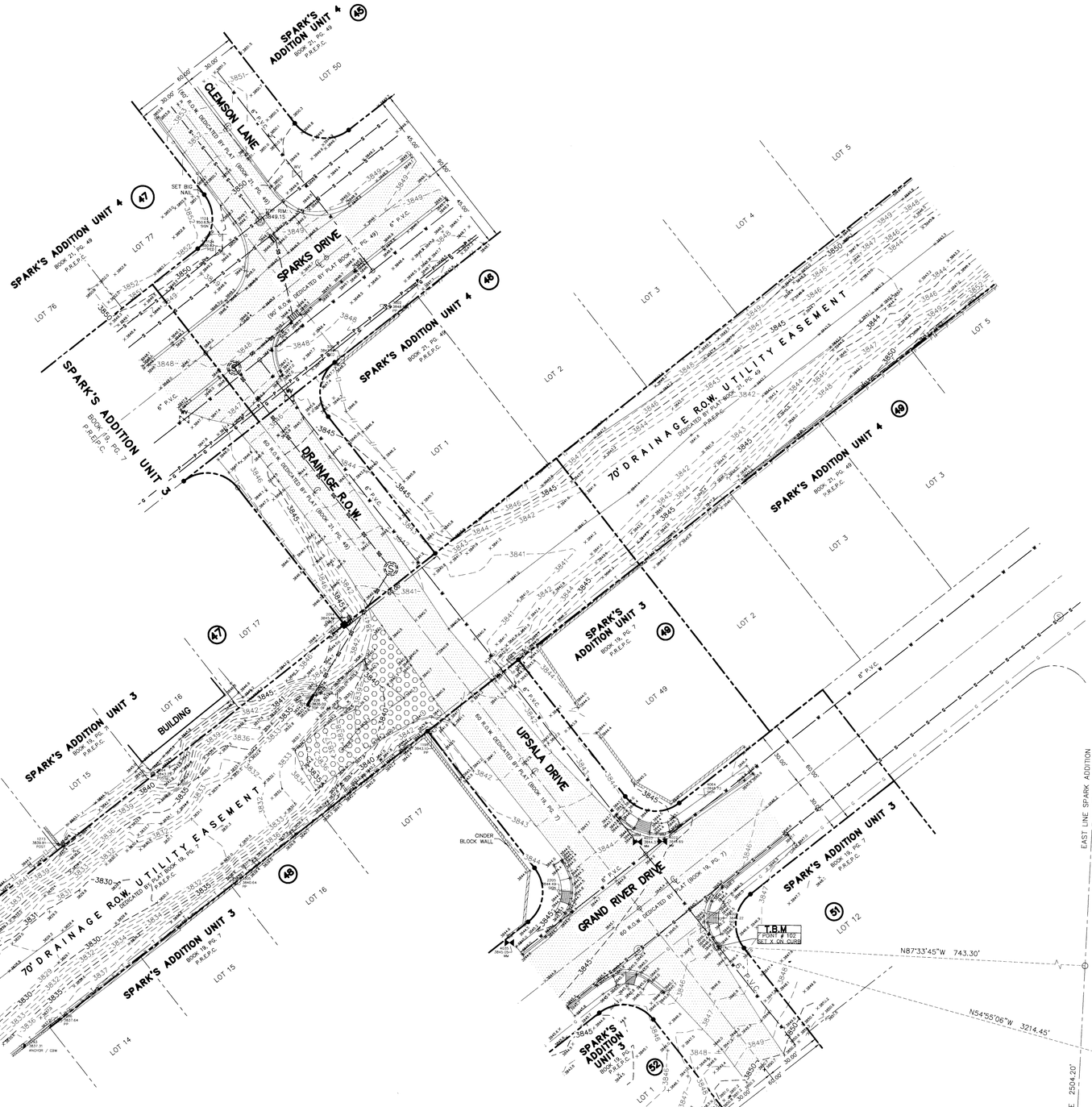
1 OF 1

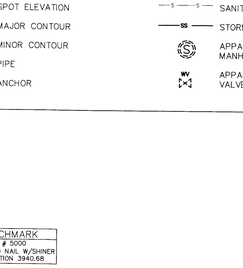
F:\19146\DWG\02_19146 - G1.0_DWG_GN_01.dwg, Time:Sep/21/2020--09:49am, Login:edgar

N:\G COMPUTER\SPARKS DRAINAGE\SPARKS DRAINAGE.dwg

TOPOGRAPHIC SURVEY

CLEMSON DRIVE AND UPSALA DRIVE, FROM SPARKS DRIVE TO GRAND RIVER DRIVE. EL PASO COUNTY, TEXAS,





GENERAL NOTES

1. LOCATION OF ALL UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT ALL UTILITY COMPANIES FOR THE EXACT LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES INCLUDING UTILITIES NOT SHOWN ON PLANS. THE CONTRACTOR SHALL PROTECT ALL EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND ANY UTILITIES NOT SHOWN THIS PLAN DURING CONSTRUCTION. THE CONTRACTOR WILL PERFORM ALL UTILITY INSTALLATION, REMOVAL AND RELOCATION'S AS PER LOCAL UTILITY CONSTRUCTION SPECIFICATIONS.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS, CONDITIONS, AND ELEVATIONS ON SITE AND SHALL CONTACT THE DESIGN ENGINEER AND REPORT ANY DISCREPANCIES, OMISSIONS AND/OR ERRORS ON PLANS PRIOR TO COMMENCING WORK.
3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE COUNTY OF EL PASO STANDARD SPECIFICATIONS AND DETAILS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITTING NECESSARY FOR EARTHWORK OPERATIONS.
5. CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING UTILITIES AND MANHOLE WITH RESPECTIVE UTILITY COMPANIES.
6. CONTRACTOR SHALL PERFORM ALL EARTHWORK REQUIREMENTS AS PER GEOTECHNICAL STUDY REPORT.
7. A CALL WAS PLACED TO TEXAS DIG SAFE NUMBER (811) TO ACQUIRE LINE-SPOTS. CONFIRMATION NUMBER IS 1984047848.

SURVEY NOTES

1. COORDINATES ARE DERIVED FROM THE APPLICATION OF RTK OBSERVATION, EL PASO RTK NETWORK, NAD83 TEXAS STATE PLANE COORDINATE SYSTEM OF 1983 (1993 ADJUSTMENT) CENTRAL ZONE, (4203) WITH VALUES IN U.S. SURVEY FOOT. DISTANCES ARE GROUND AND MAY BE CONVERTED TO GRID BY DIVIDING BY 1.000231.
2. THESE NAVD 88 ELEVATIONS WERE DERIVED FROM APPLICATION OF THE GEOID 2012A MODEL TO RTK CO-OP ELLIPSOID HEIGHTS (ACCURACY ± 0.16')
3. THIS PROPERTY MAY BE SUBJECT TO EASEMENTS WHETHER OF RECORD OR NOT. NO ADDITIONAL RESEARCH WAS PERFORMED BY B&A INC. FOR ANY RESERVATION, BUILDING LINE, AND OR EASEMENTS WHICH MAY OR MAY NOT AFFECT SUBJECT PARCEL.
4. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATION INDICATED. THEY ARE LOCATED AS ACCURATE AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

LEGEND

SET BIG NAIL	INLET
ORIGINAL CORNER	IRRIGATION VALVE
SET 1/2" REBAR W/CAP "B&A INC" (UNLESS NOTED OTHERWISE)	MANHOLE, SEWER
CALCULATED POINT(UNABLE TO SET)	MANHOLE
BUILDING	POWER POLE
BRICK WALL	TRAFFIC SIGNAL
CHAIN LINK FENCE	WATER VALVE
CONCRETE	CONCRETE
CURB	PAVEMENT
EDGE OF PAVEMENT	SCREENING PAVEMENT
ROCK WALL	CENTER LINE
SIGN	WATER LINE
WOOD FENCE	UTILITY LINE
GAS LINE	POST - BOLLARD
POWER LINE	CONCRETE WALL
SANITARY SEWER	ROCK WALL
TELEPHONE PEDESTAL	PLAT RECORDS OF EL PASO COUNTY, TEXAS.
SPOT ELEVATION	SANITARY SEWER
MAJOR CONTOUR	STORM SEWER LINE
MINOR CONTOUR	APPARENT STORM MANHOLE
PIPE	APPARENT WATER VALVE
ANCHOR	

BENCHMARK

H-15
FOUND NAIL WITH SHINER ON CENTER LINE OF CAMELDALE DRIVE, (See coordinates below)
ELEVATION: 3940.68 (NAVD 88 DATUM)
(TxDOT CONTROL) (POINT #5000)

DUST AND EROSION CONTROL NOTE

CONTRACTOR SHALL MAKE PROVISIONS FOR TEMPORARY DUST AND EROSION CONTROL WHERE EXTENSIVE DIRT OR DUST OPERATIONS ARE PERFORMED. USE WATER SPRINKLING AND OTHER METHODS TO LIMIT DUST AND DIRT MIGRATION. COMPLY WITH GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

BEFORE YOU DIG - CALL

EL PASO ELECTRIC COMPANY	1-800-592-1634
AT & T	1-877-213-1053
SOUTHERN UNION GAS COMPANY	(915) 544-6300
EMERGENCY HOT LINE	562-8411/562-2003
PUBLIC SERVICE BOARD (WATER&SEWER)	(915) 594-5500
SPECTRUM	1-833-267-6094
TEXAS GAS SERVICE	1-800-959-5325
TEXAS EXCAVATION SAFETY SYSTEM	811
HORIZON REGIONAL MUNICIPAL UTILITY DISTRICT	(915) 852-3917

POINT TABLE

POINT #	DESCRIPTION	GRID NORTHING	GRID EASTING	GROUND NORTHING	GROUND EASTING	ELEVATION (NAVD 88)
5000	(H-15)FOUND NAIL WITH SHINER (TXDOT CONTROL)	10619935.451	464137.680	10622388.6570	464244.8960	3940.68
102	SET "X" ON CURB	10621782.511	461507.796	10624236.1430	461614.4050	-
-	TEXAS VRS NETWORK BASE STATION ELMK_	10649688.92	437691.59	10652149.00	437792.69	3882.69

REVISIONS		
DATE	DESCRIPTION	BY
01/27/2020	GENERAL COMMENTS	NC
01/28/2020	GENERAL COMMENTS	NC

Date: 12/12/19 Drawn by: NC Job No. 191205-22

Barragan & Associates Inc.
LAND PLANNING & LAND SURVEYING
TBPELS FIRM # 10151200
10950 Pellicano Dr. Bldg. F - El Paso TX 79935
Phone (915) 591-5709 Fax (915) 591-5706

PROJECT NAME

SPARKS DRAINAGE

PREPARED BY AND UNDER THE SUPERVISION OF:

STATE OF TEXAS REGISTERED BENITO BARRAGAN 5615 PROFESSIONAL LAND SURVEYOR

BENITO BARRAGAN
TX. REG. NO. 5615

NOTES:

1. TRAFFIC CONTROL PLAN (TCP) FOR THE FULL PROJECT SITE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SEE GENERAL NOTES SHEET G1.0 FOR TRAFFIC CONTROL NOTES

LEGEND

- PROJECT LIMITS
- WORK AREA
- DETOUR ARROWS

PLAN VIEW

SCALE: 1"=100'

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Texas Board of Professional Engineers Registration No. F-9660

ENGINEER'S SEAL

STATE OF TEXAS · FERNANDO SANCHEZ · 132581 · PROFESSIONAL ENGINEER · 09/21/2020

ENGINEER'S NOTE

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Appd. by M.M.
JOB No. 19-146

PROJECT NAME

UPSALA DRIVE DRAINAGE IMPROVEMENTS

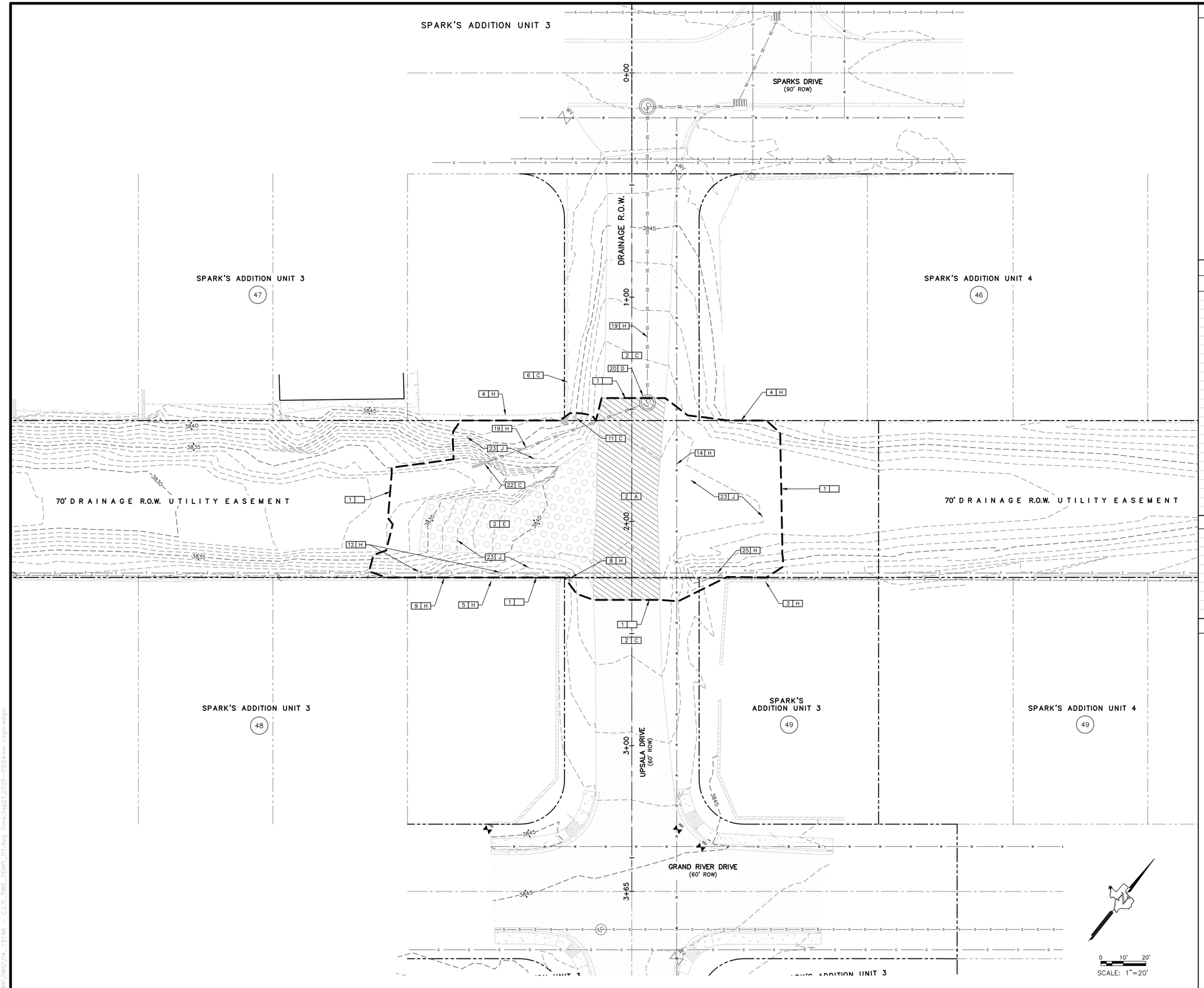
EL PASO COUNTY TEXAS

SHEET TITLE

TRAFFIC CONTROL PLAN

SHEET C1.0

1 OF 1



KEYED LEGEND

- LIMITS OF DEMOLITION
- 1+00 — STATIONING AND PROPOSED GRADE CENTERLINE
- EXISTING RIGHT-OF-WAY
- 3XXX — EXISTING MAJOR CONTOUR
- 3XXX — EXISTING MINOR CONTOUR
- EXISTING PAVEMENT TO BE REMOVED
- EXISTING PAVEMENT TO BE REMAIN UNDISTURBED
- P — EXISTING OVERHEAD ELECTRIC LINE
- W — EXISTING DOMESTIC WATER LINE
- S — EXISTING SANITARY SEWER LINE
- SS — EXISTING STORM SEWER LINE
- G — EXISTING GAS LINE
- 1 A — KEYNOTE

KEYED NOTES

00

1	LIMITS OF DEMOLITION, SAW-CUT EXISTING PAVEMENT/SIDEWALK
2	EXISTING CONCRETE / ASPHALT PAVEMENT STRUCTURE
3	EXISTING ROCKWALL
4	EXISTING CHAINLINK FENCE
5	EXISTING CINDER BLOCK WALL
6	EXISTING WOODEN FENCE
7	EXISTING SIGN
8	EXISTING POWER POLE
9	EXISTING OVERHEAD POWER LINE
10	EXISTING GUY WIRE
11	EXISTING WOOD POST
12	EXISTING CONCRETE
13	EXISTING BUILDING
14	EXISTING WATERLINE
15	EXISTING WATER METER
16	EXISTING WATER VALVE
17	EXISTING SANITARY SEWER LINE
18	EXISTING SANITARY SEWER MANHOLE
19	EXISTING STORM SEWER LINE
20	EXISTING STORM SEWER MANHOLE
21	EXISTING STORM SEWER INLET
22	EXISTING 24" DIA. CMP PIPE
23	CLEAR AND GRUB
24	EXISTING GAS LINE
25	EXISTING TELECOMMUNICATION LINE

A

A	REMOVE AND REPLACE
B	REMOVE AND RELOCATE
C	REMAIN UNDISTURBED
D	ADJUST TO NEW GRADE
E	REMOVE AND PROPERLY DISPOSE OF
F	REMOVE AND SALVAGE
G	PROTECT AND COORDINATE WITH EL PASO ELECTRIC COMPANY
H	PROTECT AND REMAIN UNDISTURBED
I	REMOVE BY OTHERS
J	CLEAR AND GRUB

NOTES

1. ALL DEMOLITION WORK SHALL BE KEPT WITHIN THE EXISTING RIGHT-OF-WAY UNLESS OTHERWISE SPECIFIED ON PLANS.

NO.	DATE	REVISION REMARKS	BY

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EL PASO · SAN ANTONIO
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Texas Board of Professional Engineers Registration No. F-9660/5/4

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STATE OF TEXAS
FERNANDO SANCHEZ
132581
LICENSED PROFESSIONAL ENGINEER
09/17/2020

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Drawn by E.G.
Chkd. by F.S.
Appd. by M.M.
JOB No. 19-146

PROJECT NAME
UPSALA DRIVE DRAINAGE IMPROVEMENTS

EL PASO COUNTY TEXAS

SHEET TITLE
DEMOLITION PLAN

SHEET C2.0
1 OF 1

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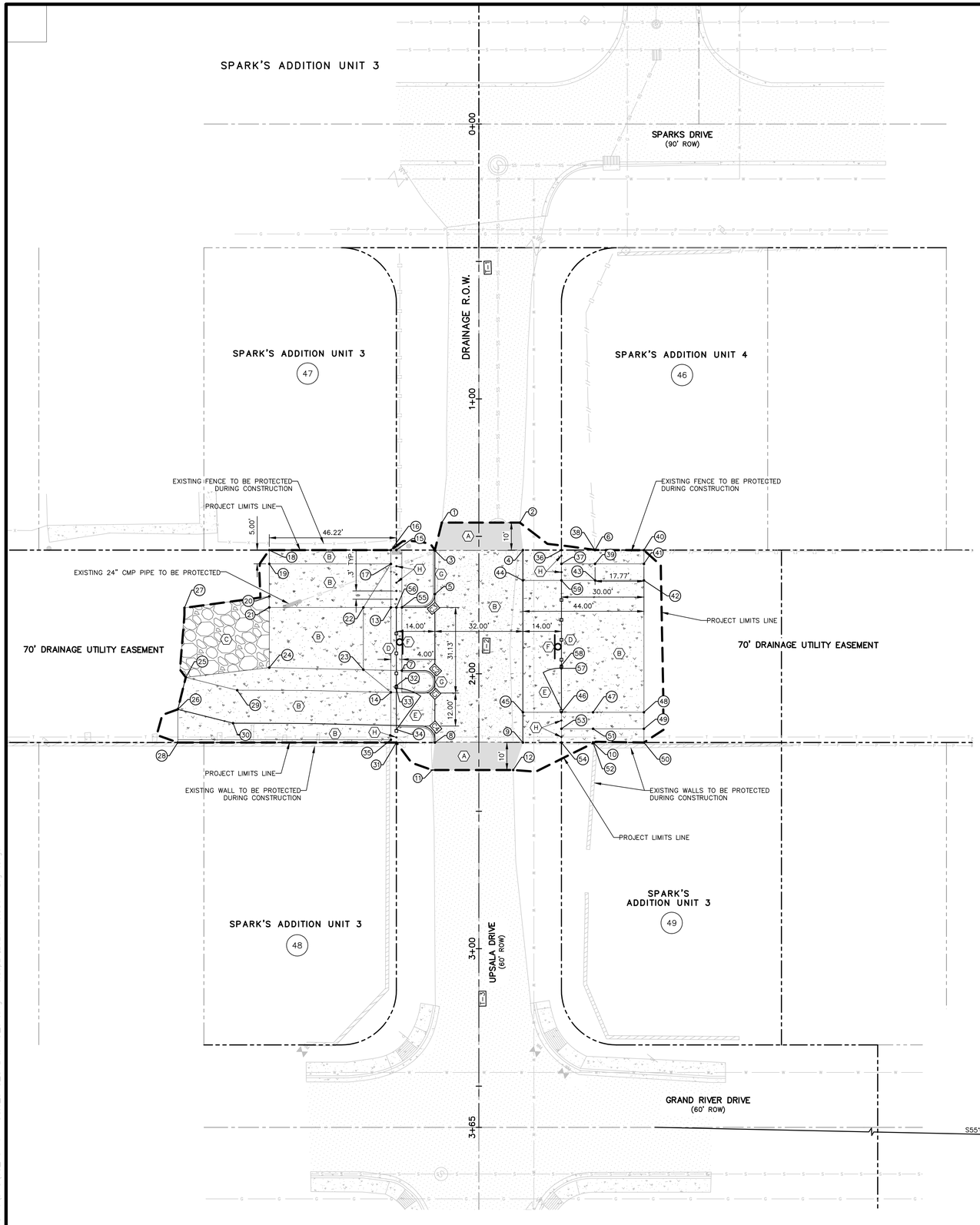

HORIZONTAL CONTROL TABLE			
POINT NO.	DESCRIPTION	NORTHING	EASTING
1	TIE TO EXISTING PAVEMENT	10624419.15	461425.74
2	TIE TO EXISTING PAVEMENT	10624436.86	461447.90
3	NEW TOP OF MONOLITHIC CURB	10624409.65	461430.16
4	NEW TOP OF REINFORCED CONCRETE PAVEMENT	10624429.74	461455.01
5	NEW TOP OF MONOLITHIC CURB	10624397.25	461440.01
6	NEW WIRE BARRIER FENCE	10624446.11	461475.49
7	NEW TOP OF MONOLITHIC CURB	10624368.04	461448.00
8	NEW TOP OF MONOLITHIC CURB	10624355.09	461473.71
9	NEW TOP OF REINFORCED CONCRETE PAVEMENT	10624375.08	461498.71
10	NEW WIRE BARRIER FENCE	10624391.01	461518.63
11	TIE TO EXISTING PAVEMENT	10624346.66	461479.17
12	TIE TO EXISTING PAVEMENT	10624365.06	461502.19
13	NEW TOP OF REINFORCED CONCRETE TOE WALL	10624383.48	461430.53
14	NEW TOP OF REINFORCED CONCRETE TOE WALL	10624359.37	461449.81
15	NEW WIRE BARRIER FENCE	10624401.01	461419.08
16	NEW TOP OF REINFORCED CONCRETE	10624399.77	461417.52
17	NEW TOP OF REINFORCED CONCRETE	10624395.86	461420.64
18	NEW TOP OF REINFORCED CONCRETE	10624372.15	461382.97
19	NEW TOP OF REINFORCED CONCRETE	10624368.25	461386.10
20	NEW LOOSE ROCK RIP-RAP	10624359.01	461393.48
21	NEW BOTTOM OF REINFORCED CONCRETE	10624355.87	461395.99
22	NEW BOTTOM OF REINFORCED CONCRETE	10624377.24	461422.72
23	NEW BOTTOM OF REINFORCED CONCRETE	10624359.55	461436.87
24	NEW BOTTOM OF REINFORCED CONCRETE	10624338.77	461409.66
25	NEW BOTTOM OF REINFORCED CONCRETE RAMP	10624317.06	461388.16
26	NEW BOTTOM OF REINFORCED CONCRETE RAMP	10624306.15	461393.15
27	NEW LOOSE ROCK RIP-RAP	10624336.50	461372.00
28	TOP OF NEW REINFORCED CONCRETE	10624296.72	461400.69
29	NEW TOP OF REINFORCED CONCRETE RAMP	10624325.07	461405.67
30	NEW TOP OF REINFORCED CONCRETE RAMP	10624314.77	461411.99
31	NEW TOP OF REINFORCED CONCRETE	10624346.35	461462.77
32	NEW GUARD RAIL	10624362.53	461449.84
33	NEW METAL SWING GATE	10624361.73	461450.44
34	NEW METAL SWING GATE	10624350.05	461459.86
35	NEW TOP OF REINFORCED CONCRETE	10624345.88	461460.59
36	NEW BOTTOM OF REINFORCED CONCRETE	10624438.48	461465.94
37	NEW BOTTOM OF REINFORCED CONCRETE	10624434.57	461469.07
38	NEW TOP OF REINFORCED CONCRETE	10624446.11	461475.49
39	NEW TOP OF REINFORCED CONCRETE	10624442.21	461478.62
40	NEW TOP OF REINFORCED CONCRETE	10624457.21	461489.38
41	NEW TOP OF REINFORCED CONCRETE	10624453.31	461492.50
42	NEW BOTTOM OF REINFORCED CONCRETE	10624448.62	461496.24
43	NEW BOTTOM OF REINFORCED CONCRETE	10624437.53	461482.38
44	NEW TOP OF REINFORCED CONCRETE	10624421.14	461461.88
45	NEW TOP OF REINFORCED CONCRETE	10624383.67	461491.84
46	NEW BOTTOM OF REINFORCED CONCRETE	10624392.41	461502.77
47	NEW BOTTOM OF REINFORCED CONCRETE	10624399.60	461511.77
48	NEW BOTTOM OF REINFORCED CONCRETE	10624411.14	461526.20
49	NEW TOP OF REINFORCED CONCRETE	10624406.46	461529.95
50	NEW TOP OF REINFORCED CONCRETE	10624402.55	461533.07
51	NEW TOP OF REINFORCED CONCRETE	10624394.91	461515.51
52	NEW TOP OF REINFORCED CONCRETE	10624391.01	461518.63
53	NEW BOTTOM OF REINFORCED CONCRETE	10624387.72	461506.52
54	NEW BOTTOM OF REINFORCED CONCRETE	10624383.82	461509.64
55	NEW TOP OF MONOLOTHIC CURB	10624385.98	461433.66
56	NEW GUARD RAIL	10624384.73	461432.10
57	NEW METAL SWING GATE	10624404.90	461492.77
58	NEW GUARD RAIL	10624405.69	461492.17
59	NEW GUARD RAIL	10624429.88	461472.82

EXISTING CONTROL DATA TABLE			
POINT NO.	DESCRIPTION	NORTHING	EASTING
EB-1	EXISTING BENCHMARK	10622388.66	464244.90

LINE DATA TABLE		
LINE ID	LENGTH	BEARING
T-1	105.06	S40° 08' 51.15"E
T-2	170.02	S37° 21' 44.58"E
T-3	90.01	S39° 17' 27.56"E

CURVE DATA TABLE						
CURVE ID	LENGHT	RADIUS	TANGENT	DELTA	CHORD DIRECTION	CHORD LENGHT
C1	6.37	4.00	4.09	91.28	S6° 59' 57"W	5.72
C2	6.28	4.00	4.00	90.00	S83° 38' 21"E	5.66
C3	7.85	5.00	5.00	90.00	N6° 21' 39"E	7.07
C4	7.74	5.00	4.89	88.72	S83° 00' 03"E	6.99

KEYED LEGEND

- PROJECT LIMITS
- 1+00 — STATIONING AND PROPOSED GRADE CENTERLINE
- EXISTING RIGHT-OF-WAY
- (A) NEW HMAC PAVEMENT..... 1 C7.0
- (B) CONTINUOUSLY REINFORCED CONCRETE PAVEMENT & REINFORCED CONCRETE..... 2 C7.0, 1 C8.0, 1 C8.1
- (C) NEW 8-12 INCH LOOSE ROCK RIP-RAP..... 2 C8.2
- (D) NEW GUARD RAIL..... 1 C7.1
- (E) NEW METAL SWING GATE..... 5 C7.0
- (F) NEW NO TRESPASSING SIGN..... 3 C7.1
- (G) NEW 6" MONOLITHIC CURB..... 4 C7.0
- (H) NEW METAL GUARD POST..... 2 C7.1

BENCHMARK

1. FOUND NAIL WITH SHINER ON CENTERLINE OF CAMELDALE DRIVE.
   ELEVATION 3940.68' (NAVD 88)
   TxDOT CONTROL POINT #5000

NO.	DATE	REVISION REMARKS	BY

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10/21/2020
STATE OF TEXAS
FERNANDO SANCHEZ
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LICENSED PROFESSIONAL ENGINEER

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Chkd. by F.S.
Appd. by M.M.
JOB No. 19-146

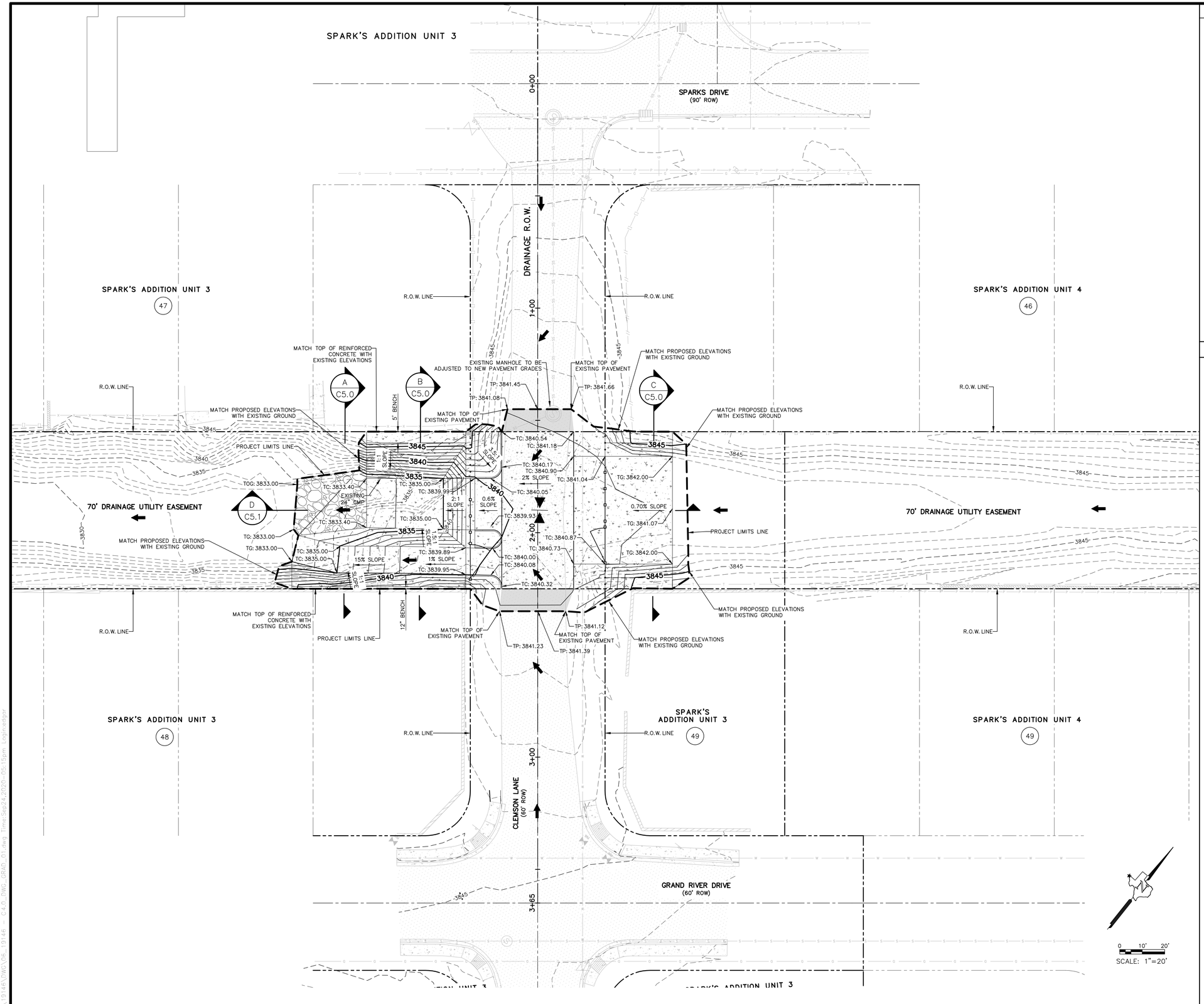
PROJECT NAME
UPSALA DRIVE DRAINAGE IMPROVEMENTS

EL PASO COUNTY TEXAS

SHEET TITLE
SITE PLAN AND HORIZONTAL CONTROL

SHEET
C3.0
1 OF 1

F:\19146\DWG\05_19146 - C3.0_DWG, SITE & HC_01.dwg, Time:Sep21,2020-09:55am, Login:edgar



KEYED LEGEND

- EXISTING RIGHT-OF-WAY
- EXISTING PROPERTY LINE
- PROJECT LIMITS
- STREET CENTERLINE
- PROPERTY LINE
- 3XXX — PROPOSED MAJOR CONTOUR
- 3XXX — PROPOSED MINOR CONTOUR
- 3XXX — EXISTING MAJOR CONTOUR
- 3XXX — EXISTING MINOR CONTOUR
- HIGH POINT
- LOW POINT
- FLOW DIRECTION
- XXXX.XX — SPOT ELEVATION
- TP — TOP OF PAVEMENT
- TG — TOP OF GROUND
- A / CX.X — CROSS SECTION

NOTES

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Texas Board of Professional Engineers Registration No. F-6606554

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Appd. by M.M.
JOB No. 19-146

PROJECT NAME

UPSALA DRIVE DRAINAGE IMPROVEMENTS

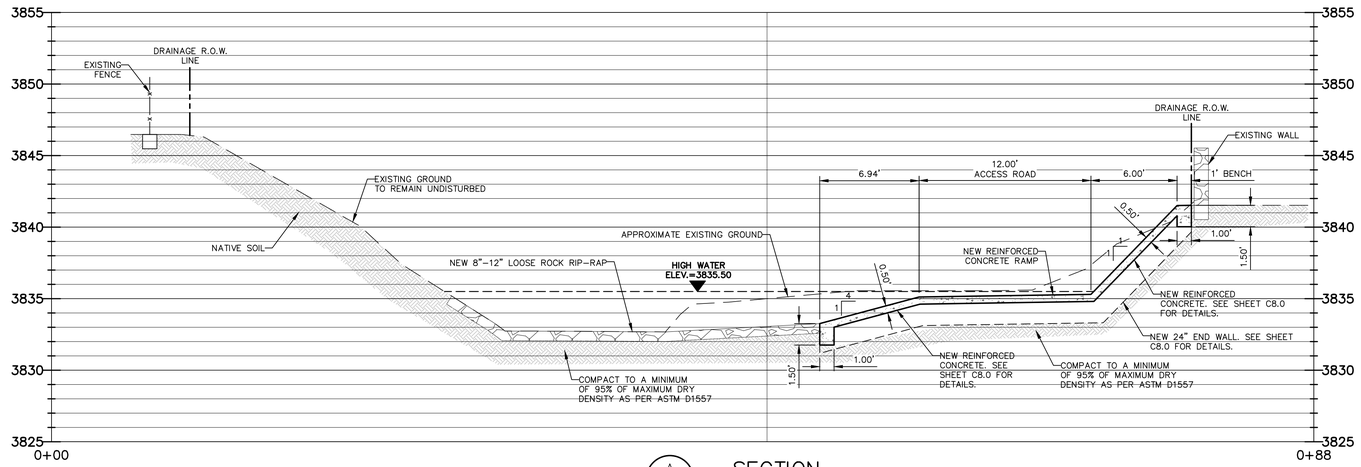
EL PASO COUNTY TEXAS

SHEET TITLE

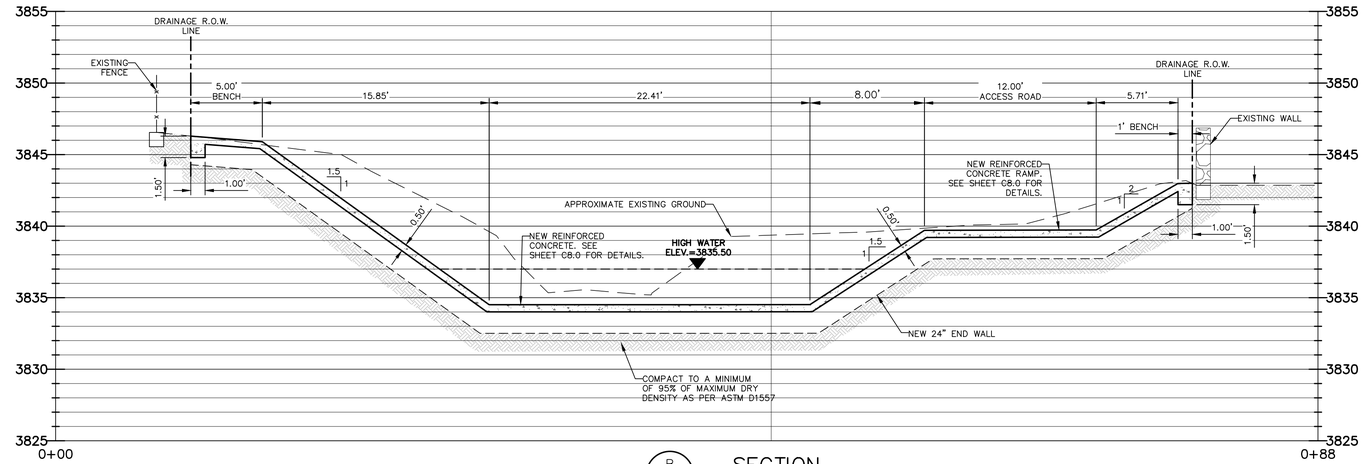
GRADING PLAN

SHEET C4.0

1 OF 1



A C5.0 **SECTION**
SCALE: HORIZONTAL 1"=5'
VERTICAL 1"=5'



B C5.0 **SECTION**
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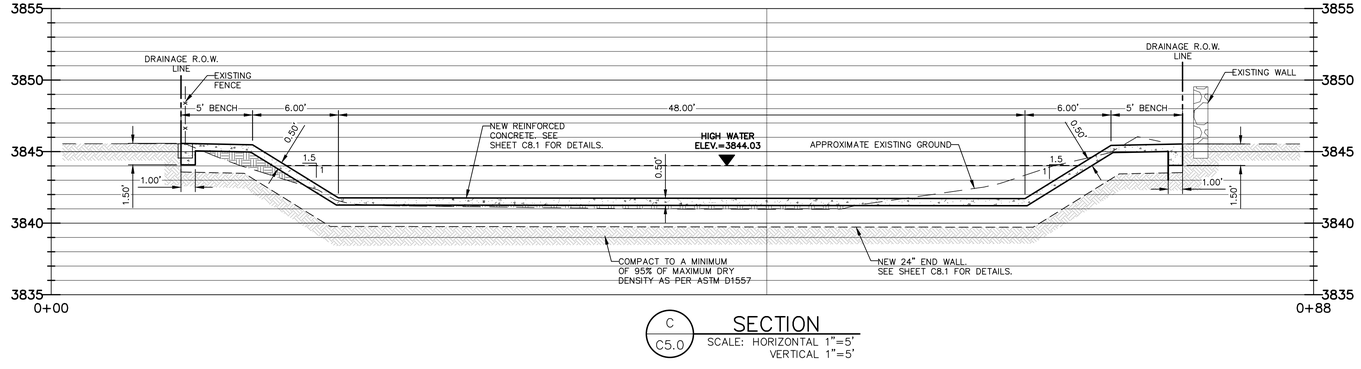
VERTICAL 1"=5'



C C5.0 **SECTION**
SCALE: HORIZONTAL 1"=5'
VERTICAL 1"=5'

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JOB No. 19-146

PROJECT NAME

UPSALA DRIVE DRAINAGE IMPROVEMENTS

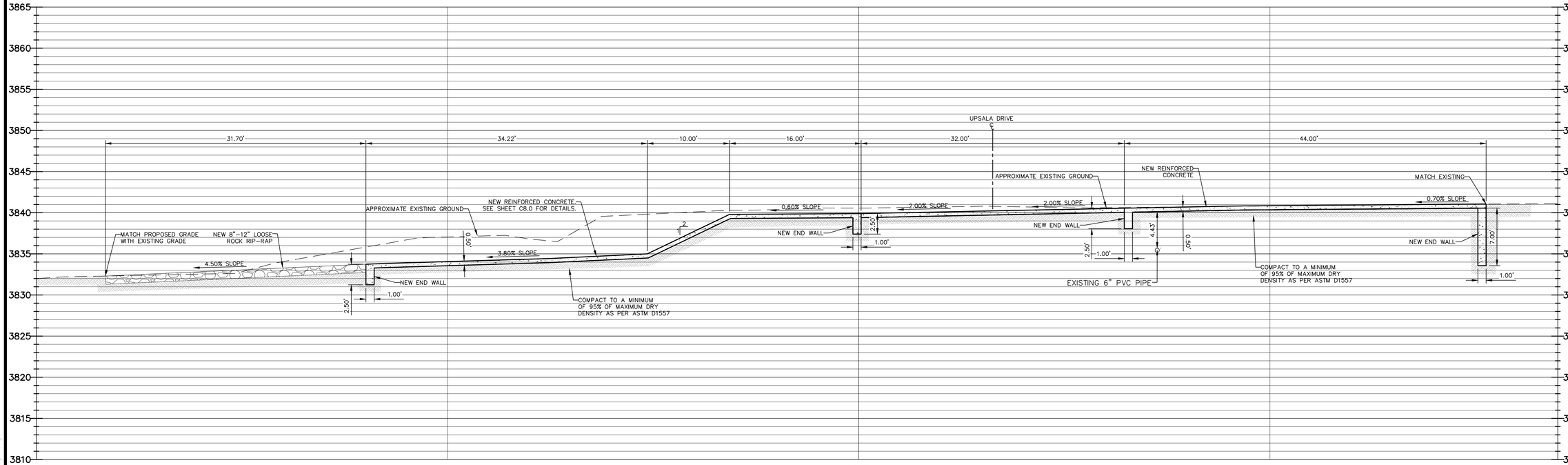
EL PASO COUNTY TEXAS

SHEET TITLE

GRADING SECTIONS

SHEET C5.0

1 OF 2



D
C5.1

SECTION

SCALE: HORIZONTAL 1"=6'
VERTICAL 1"=6'

NO.	DATE	REVISION REMARKS	BY

PLANNING•ENGINEERING•PROJECT MANAGEMENT
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PROFESSIONAL ENGINEER
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PROJECT NAME

UPSALA DRIVE DRAINAGE IMPROVEMENTS

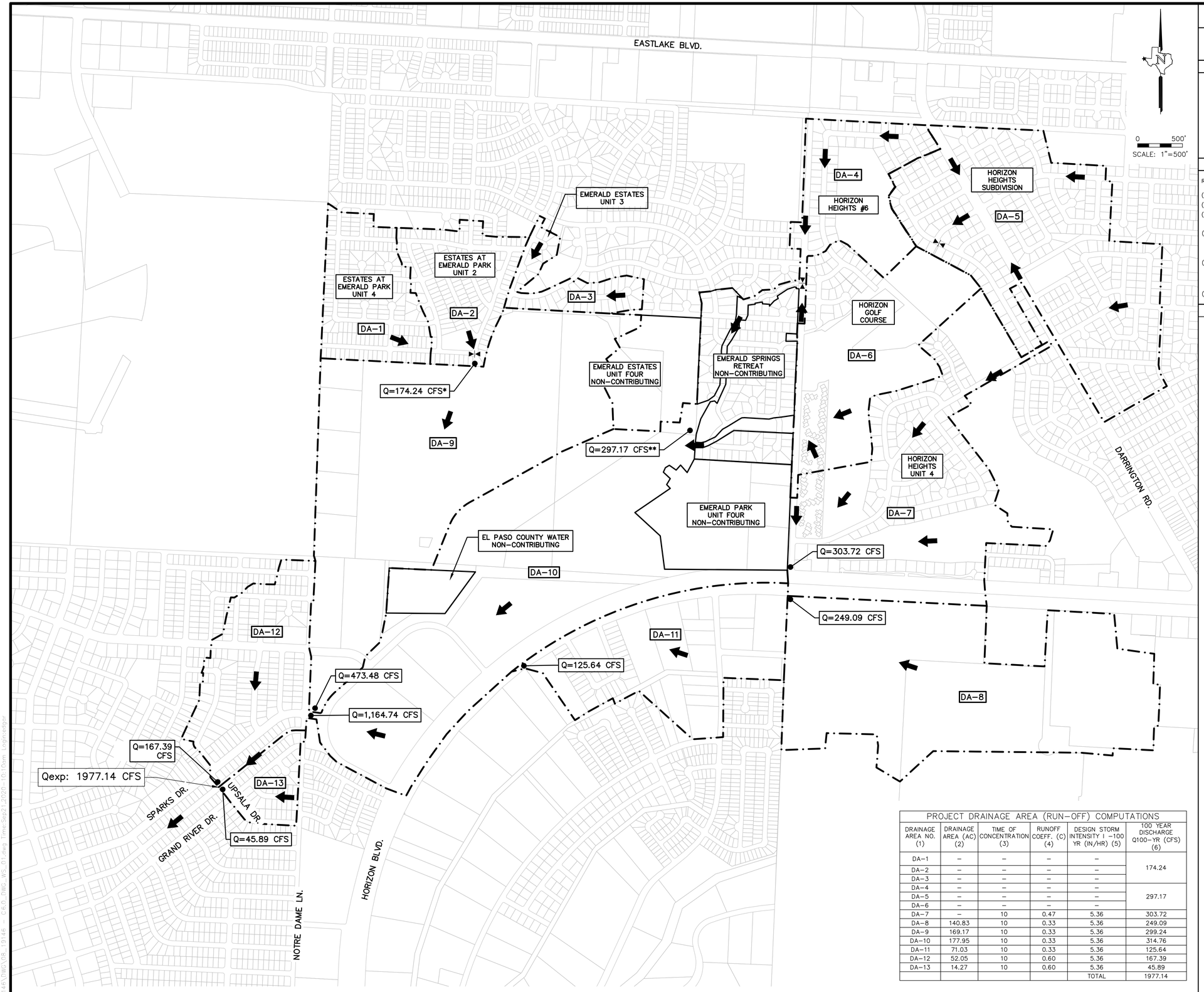
EL PASO COUNTY TEXAS

SHEET TITLE

GRADING SECTIONS

SHEET C5.1

2 OF 1



PROJECT DRAINAGE AREA (RUN-OFF) COMPUTATIONS					
DRAINAGE AREA NO. (1)	DRAINAGE AREA (AC) (2)	TIME OF CONCENTRATION (3)	RUNOFF COEFF. (C) (4)	DESIGN STORM INTENSITY I -100 YR (IN/HR) (5)	100 YEAR DISCHARGE Q100-YR (CFS) (6)
DA-1	–	–	–	–	174.24
DA-2	–	–	–	–	
DA-3	–	–	–	–	
DA-4	–	–	–	–	297.17
DA-5	–	–	–	–	
DA-6	–	–	–	–	
DA-7	–	10	0.47	5.36	303.72
DA-8	140.83	10	0.33	5.36	249.09
DA-9	169.17	10	0.33	5.36	299.24
DA-10	177.95	10	0.33	5.36	314.76
DA-11	71.03	10	0.33	5.36	125.64
DA-12	52.05	10	0.60	5.36	167.39
DA-13	14.27	10	0.60	5.36	45.89
				TOTAL	1977.14

FLOOD ZONE "X"
AREAS OF 100-YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS DETERMINED.

FIRM – FLOOD INSURANCE RATE MAP CITY OF EL PASO, EL PASO COUNTY, TX.

PANEL XX OF 52 COMMUNITY – PANEL NUMBER XXXXXX XXXX X
MAP REVISED: XXXXXXXX XX, 19XX

LEGEND

DA - X	DRAINAGE AREA IDENTIFICATION
◀▶	HIGH POINT
▶◀	LOW POINT
— · — · —	DRAINAGE AREA BOUNDARY
➡	FLOW DIRECTION

REFERENCE DATA

REFERENCE: CITY OF EL PASO DRAINAGE DESIGN MANUAL (JUNE 2008)

(1) WATERSHED AREA IDENTIFICATION
(2) AREA FROM DRAINAGE PLAN IN ACRES
(3) RUNOFF COEFFICIENT => TABLE 4-5
SINGLE FAMILY RESIDENTIAL: C=0.60 FOR 25 YEARS & C=0.60 FOR 100 YEARS
(4) TIME OF CONCENTRATION: TC = 10 MINUTES (MIN.)

$$T_c = 0.0078\left(\frac{L^{0.77}}{S^{0.385}}\right)$$

(5) 100-YR RAINFALL INTENSITY EASTSIDE REGION INTENSITY EQUATION 4-25

$$I_{100\text{-}YR} = \frac{144.20}{(T_c+25.944)^{0.9190}}$$

(6) $Q_{100YR} = C \times A \times I_{100YR}$

NOTES

1. FOR CONTRACTOR'S INFORMATION ONLY.
2. *STORMWATER RUNOFF GENERATED WAS OBTAINED FROM THE ESTATES AT EMERALD PARK UNIT 2 SUBDIVISION IMPROVEMENT PLANS AS-BUILTS.
3. **STORMWATER RUNOFF GENERATED WAS OBTAINED FROM EMERALD SPRINGS SUBDIVISION IMPROVEMENTS PLANS AS-BUILTS.
4. STORMWATER RUNOFF GENERATED FORM DA-4, DA-5, AND DA-6 WAS TAKEN INTO ACCOUNT FROM EMERALD SPRINGS RETREAT SUBDIVISION IMPROVEMENT PLANS AS-BUILTS.

NO. | DATE | REVISION REMARKS | BY

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9/21/2020
STATE OF TEXAS
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132581
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JOB No. 19-146

PROJECT NAME
UPSALA DRIVE DRAINAGE IMPROVEMENTS

EL PASO COUNTY TEXAS

SHEET TITLE
OVERALL WATERSHED

SHEET C6.0
1 OF 1

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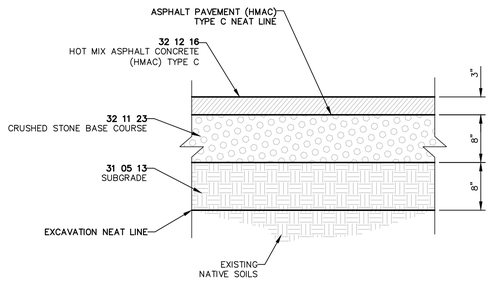
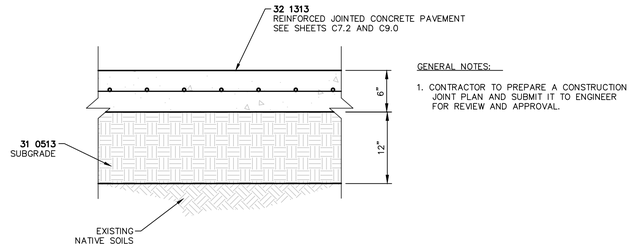


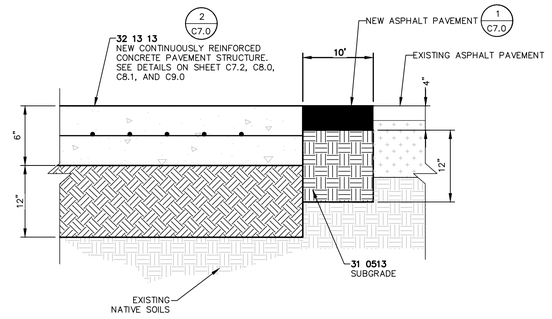
1 C7.0 ASPHALT HMAC PAVEMENT
SCALE: 1"= 1'-0"



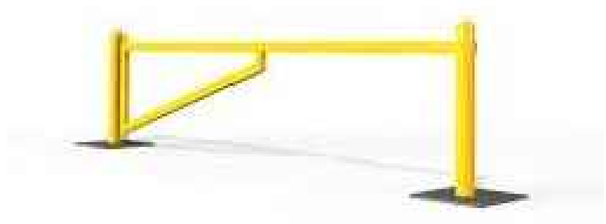
GENERAL NOTES:

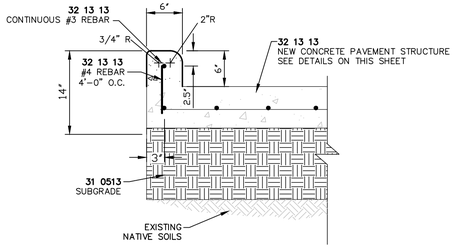
1. CONTRACTOR TO PREPARE A CONSTRUCTION JOINT PLAN AND SUBMIT IT TO ENGINEER FOR REVIEW AND APPROVAL.

2 C7.0 REINFORCED CONCRETE PAVEMENT
SCALE: 1"= 1'-0"



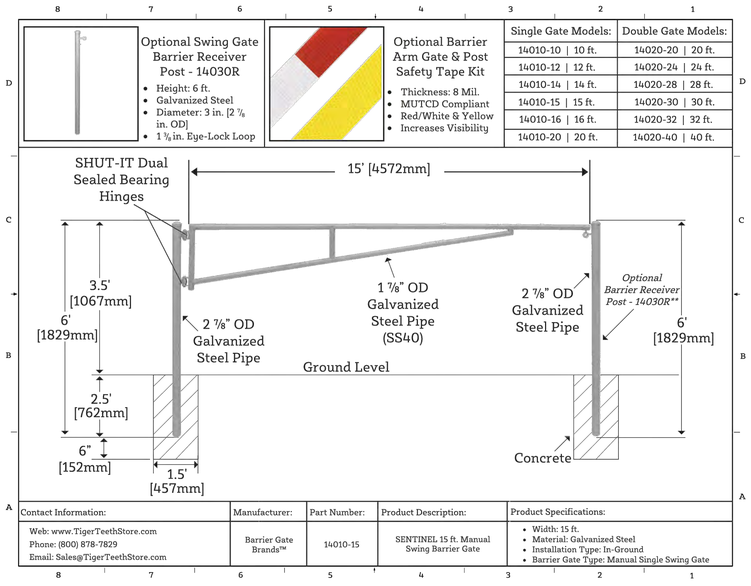
3 C7.0 TYPICAL CONCRETE PAVEMENT JOINT TO EXISTING ASPHALT PAVEMENT
SCALE: 1"=1'-0"





STANDARD 6" CURB
32 1313

4 C7.0 MONOLITHIC CONCRETE CURB DETAIL
SCALE: 1"=1'-0"



5 C7.0 METAL SWING GATE
SCALE: AS SHOWN

NO. | DATE | REVISION REMARKS | BY

PLANNING•ENGINEERING•PROJECT MANAGEMENT
MCi Moreno Cardenas Inc.
EL PASO · SAN ANTONIO
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9601 McAllister Freeway #207, San Antonio TX 78216 (210) 314-5353
Texas Board of Professional Engineers Registration No. F-9660-04

ENGINEER'S SEAL
09/21/2020
STATE OF TEXAS · FERNANDO SANCHEZ · 132581 · LICENSED PROFESSIONAL ENGINEER

ENGINEER'S NOTE
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SCALE
Horiz. N/A
Vert. N/A
Date SEPT 2020
Design by F.S./E.G.
Drawn by E.G.
Chkd. by F.S.
Appd. by M.M.
JOB No. 19-146

PROJECT NAME
UPSALA DRIVE DRAINAGE IMPROVEMENTS

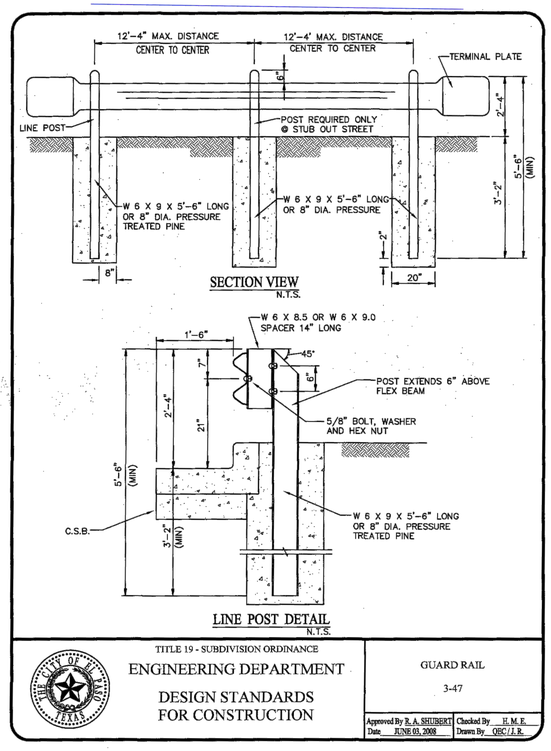
EL PASO COUNTY TEXAS

SHEET TITLE
TYPICLA DETAILS

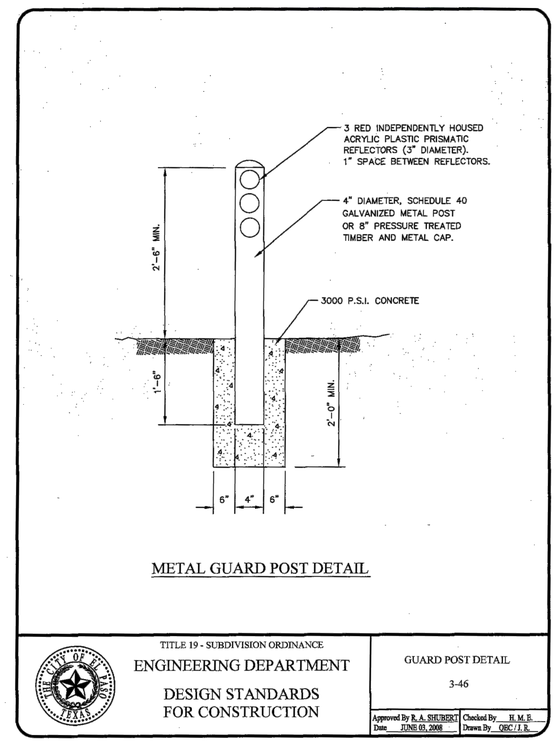
SHEET C7.0
1 OF 2

GENERAL NOTES:

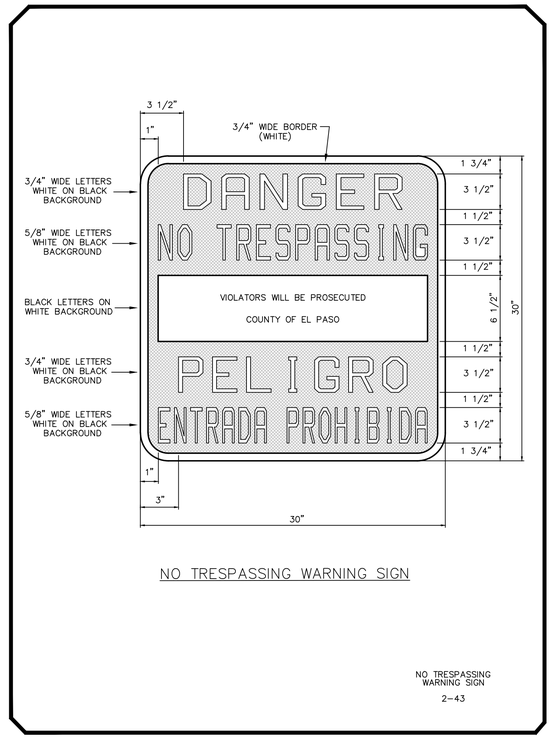
1. THE TYPE OF POST (STEEL POST) WILL BE AS SHOWN IN THE PLANS. THE EXACT POSITION OF MBGF SHALL BE SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. STEEL POSTS TO BE GALVANIZED IN ACCORDANCE WITH "GALVANIZING SPEC."
2. RAIL ELEMENT SHALL MEET THE REQUIREMENTS OF SPEC NO. 05 53 00," METAL BEAM GUARD FENCE" EXCEPT AS MODIFIED IN THE PLANS. THE CONTRACTOR MAY FURNISH RAIL ELEMENTS OF 25'– 0", OR 12'– 6" (NOM.) LENGTHS. RAIL ELEMENTS MAY HAVE SLOTTED HOLES AT 3'–11/2" C–C OR 6'–3" C–C. A SPECIAL LENGTH OF RAIL MAY BE MANUFACTURED TO ACCOMMODATE THE DOWNSTREAM ANCHOR TERMINAL (DAT) AND THE TRANSITION SECTIONS OF GUARDRAIL.
3. BUTTON HEAD "POST" BOLTS (ASTM A307) SHALL BE OF SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT (ASTM A563) AND TYPE A (1 3/4" O.D.) WASHER AND NOT MORE THAN 1" BEYOND IT. BUTTON HEAD "SPLICE" BOLTS (ASTM A307) ARE 5/8" x 1 1/4" (OR 2" LONG AT TRIPLE RAIL SPLICES) WITH A 5/8" DOUBLE RECESSED NUT (ASTM A563). THRIE BEAM "CONNECTION" 7/8" DIA. (ASTM A325) HEX BOLTS SHALL BE OF SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE RAIL, WASHERS, AND NUTS.
4. FITTINGS (BOLTS, NUTS, AND WASHERS) SHALL BE GALVANIZED IN ACCORDANCE WITH "GALVANIZING SPEC." FITTINGS SHALL BE SUBSIDIARY TO THE BID ITEM.
5. CROWN SHALL BE WIDENED TO ACCOMMODATE THE METAL BEAM GUARD FENCE.
6. THE LATERAL APPROACH TO THE GUARD FENCE, SHALL HAVE A MAXIMUM SLOPE OF 1V:10H.
7. IF SHOWN ELSEWHERE IN THE PLANS OR AS DIRECTED BY THE ENGINEER, THE GUARD FENCE MAY BE FLARED AT A RATE OF 25:1 OR FLATTER.
8. UNLESS OTHERWISE SHOWN IN THE PLANS, GUARD FENCE PLACED IN THE VICINITY OF CURBS SHALL BE POSITIONED SO THAT THE FACE OF CURB IS LOCATED DIRECTLY BELOW OR BEHIND THE FACE OF THE RAIL. RAIL PLACED OVER CURBS SHALL BE INSTALLED SO THAT THE POST BOLT IS LOCATED APPROXIMATELY 25 INCHES ABOVE THE GUTTER PAN OR EDGE OF SHOULDER.
9. IF SOLID ROCK IS ENCOUNTERED WITHIN 0 TO 18" OF THE FINISHED GRADE, DRILL A 22" DIA. HOLE, OR DRILL TWO 12" DIA. FRONT TO BACK OVERLAPPING HOLES, 24" INTO THE ROCK. IF SOLID ROCK IS ENCOUNTERED BELOW 18", DRILL A 12" DIA. HOLE, 12" INTO THE ROCK OR TO THE STANDARD EMBEDMENT DEPTH, WHICHEVER MAYBE LESS. ANY EXCESS POST LENGTH, AFTER MEETING THESE DEPTHS, MAY BE FIELD CUT TO ENSURE PROPER GUARDRAIL MOUNTING HEIGHT. BACKFILL WITH A COHESION LESS MATERIAL.
10. POSTS SHALL NOT BE SET IN CONCRETE, OF ANY DEPTH.
11. SPECIAL FABRICATION WILL BE REQUIRED AT INSTALLATIONS HAVING A CURVATURE OF LESS THAN 150 FT. RADIUS.
12. THE DETAIL SHOWN IS THE MINIMUM LENGTH OF NEED (LON) FOR A DAT CONNECTED TO A CONCRETE RAIL.
13. HALF ANGLE BRACKET. THE RAIL ELEMENT IS NOT ATTACHED TO THE END POST.
14. THE FOUNDATION TUBES SHALL NOT PROJECT MORE THAN 3 3/4" ABOVE THE FINISHED GRADE.
15. ALL HARDWARE FOR DAT SHALL BE ASTM A307 UNLESS OTHERWISE SHOWN.



1 C7.1 GUARD RAIL DETAIL
SCALE: AS SHOWN



2 C7.1 METAL GUARD POST DETAIL
SCALE: AS SHOWN



NO TRESPASSING WARNING SIGN

3 C7.1 NO TRESPASSING SIGN DETAIL
SCALE: AS SHOWN

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MCi Moreno Cardenas Inc.
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Texas Board of Professional Engineers Registration No. F-9660/654

ENGINEER'S SEAL
DATE: 09/17/2020
STATE OF TEXAS · FERNANDO SANCHEZ · 132581 · LICENSED PROFESSIONAL ENGINEER

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SCALE
Horiz. N/A
Vert. N/A
Date SEPT 2020
Design by F.S./E.G
Drawn by E.G.
Chkd. by F.S.
Appd. by M.M.
JOB No. 19-146

PROJECT NAME
UPSALA DRIVE DRAINAGE IMPROVEMENTS

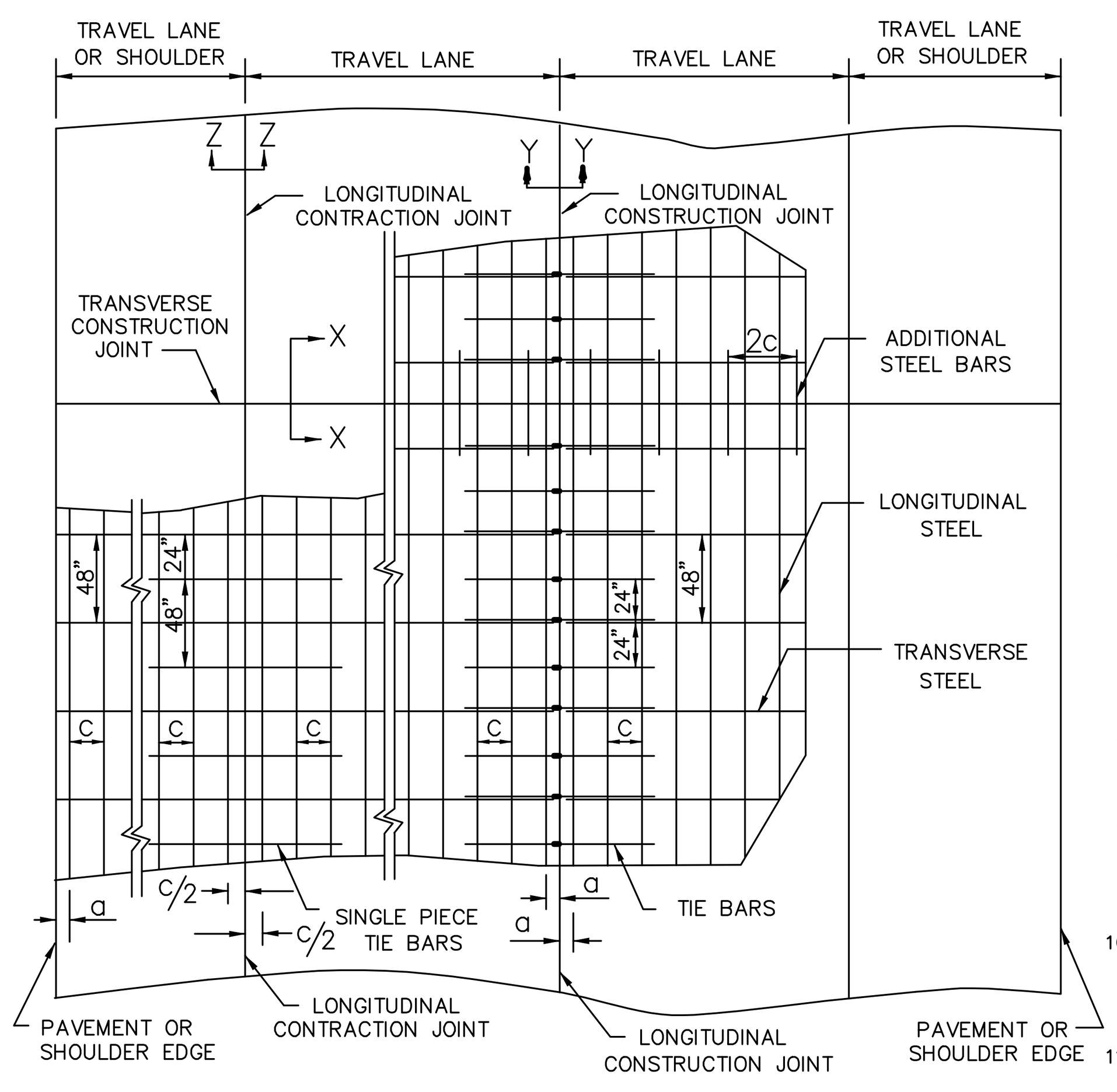
EL PASO COUNTY TEXAS

SHEET TITLE
TYPICAL DETAILS

SHEET C7.1
2 OF 2

TABLE NO.1 LONGITUDINAL STEEL					
SLAB THICKNESS AND BAR SIZE		REGULAR STEEL BARS	FIRST SPACING AT EDGE OR JOINT	ADDITIONAL STEEL BARS AT TRANSVERSE CONSTRUCTION JOINT (SECTION X–X)	
T (IN.)	BAR SIZE	SPACING c (IN.)	SPACING a (IN.)	SPACING 2 x c (IN.)	LENGTH L (IN.)
7.0	#5	6.5	3 TO 4	13	50

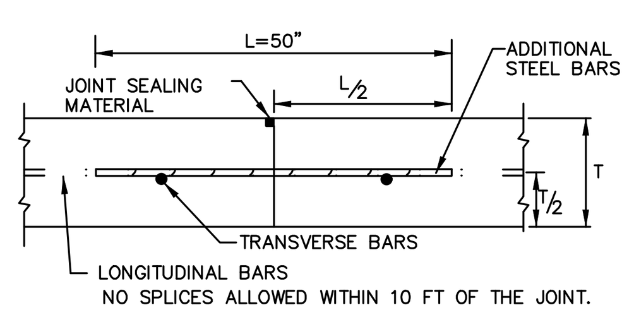
TABLE NO.2 TRANSVERSE STEEL AND TIE BARS						
SLAB THICKNESS (IN.)	TRANSVERSE STEEL		TIE BARS AT LONGITUDINAL CONTRACTION JOINT (SECTION Z–Z)		TIE BARS AT LONGITUDINAL CONSTRUCTION JOINT (SECTION Y–Y)	
	BAR SIZE	SPACING (IN.)	BAR SIZE	SPACING (IN.)	BAR SIZE	SPACING (IN.)
7.0 – 7.5	#5	48		48		24



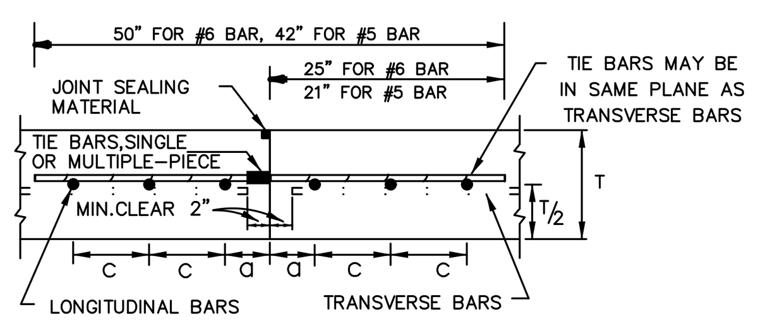
TYPICAL PAVEMENT LAYOUT
PLAN VIEW (NOT TO SCALE)

GENERAL NOTES

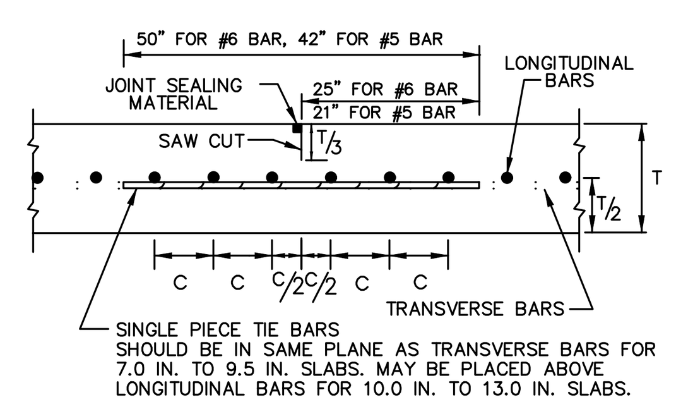
1. DETAILS FOR PAVEMENT WIDTH, PAVEMENT THICKNESS AND THE CROWN CROSS-SLOPE SHALL BE SHOWN ELSEWHERE IN THE PLANS. PAVEMENTS WIDER THAN 100 FT. WITHOUT A FREE LONGITUDINAL JOINT ARE NOT COVERED BY THIS STANDARD.
2. USE COARSE AGGREGATES WITH A RATED COEFFICIENT OF THERMAL EXPANSION (CoTE) OF NOT MORE THAN 5.5×10^{-6} IN/IN/ °F AS LISTED IN THE CONCRETE RATED SOURCE QUALITY CATALOG (CRSQC).
3. ALL THE REINFORCING STEEL AND TIE BARS SHALL BE DEFORMED STEEL BARS CONFORMING TO ASTM A 615 (GRADE 60) OR ASTM A 996 (GRADE 60) OR ABOVE. STEEL BAR SIZES AND SPACING SHALL CONFORM TO TABLE NO.1 AND TABLE NO.2.
4. WHEN COARSE AGGREGATE WITH A RATED CoTE OF NOT MORE THAN 4.3×10^{-6} IN/IN/ °F IS USED, TABLE NO.1A MAY BE USED FOR LONGITUDINAL STEEL AS APPROVED BY THE ENGINEER.
5. STEEL BAR PLACEMENT TOLERANCE SHALL BE +/– 1 IN. HORIZONTALLY AND +/– 0.5 IN. VERTICALLY. CALCULATED AVERAGE BAR SPACING (CONCRETE PLACEMENT WIDTH / NUMBER OF LONGITUDINAL BARS) SHALL CONFORM TO TABLE NO.1 OR TABLE NO.1A.
6. PAVEMENT WIDTHS OF MORE THAN 15 FT. SHALL HAVE A LONGITUDINAL JOINT (SECTION Z–Z OR SECTION Y–Y). THESE JOINTS SHALL BE LOCATED WITHIN 6 IN. OF THE LANE LINE UNLESS THE JOINT LOCATION IS SHOWN ELSEWHERE ON THE PLANS.
7. THE SAW CUT DEPTH FOR THE LONGITUDINAL CONTRACTION JOINT (SECTION Z–Z) SHALL BE ONE THIRD OF THE SLAB THICKNESS (T/3).
8. WHEN TYING CONCRETE GUTTER AT A LONGITUDINAL JOINT, THE TIE BAR LENGTH OR POSITION MAY BE ADJUSTED. PROVIDE 3 IN. OF CONCRETE COVER FROM THE BACK OF GUTTER TO THE END OF TIE BAR.
9. REPLACE MISSING OR DAMAGED TIE BARS WITHOUT ADDITIONAL COMPENSATION BY DRILLING MIN.10 IN. DEEP AND GROUTING TIE BARS WITH TYPE III, CLASS C EPOXY. MEET THE PULL-OUT TEST REQUIREMENTS IN ITEM 361.
10. OMIT TIE BARS LOCATED WITHIN 18-IN. OF THE TRANSVERSE CONSTRUCTION JOINTS (SECTION X–X). USE HAND-OPERATED IMMERSION VIBRATORS TO CONSOLIDATE THE CONCRETE ADJACENT TO ALL FORMED JOINTS.
11. LONGITUDINAL REINFORCING STEEL SPLICES SHALL BE A MINIMUM OF 25 IN. STAGGER THE LAP LOCATIONS SO THAT NO MORE THAN 1/3 OF THE LONGITUDINAL STEEL IS SPLICED IN ANY GIVEN 12-FT. WIDTH AND 2-FT. LENGTH OF THE PAVEMENT.
12. THE DETAIL FOR THE JOINT SEALANT AND RESERVOIR IS SHOWN ON STANDARD SHEET "CONCRETE PAVING DETAILS, JOINT SEALS."



TRANSVERSE CONSTRUCTION JOINT
SECTION X – X



LONGITUDINAL CONSTRUCTION JOINT
SECTION Y – Y



LONGITUDINAL CONTRACTION JOINT
SECTION Z – Z

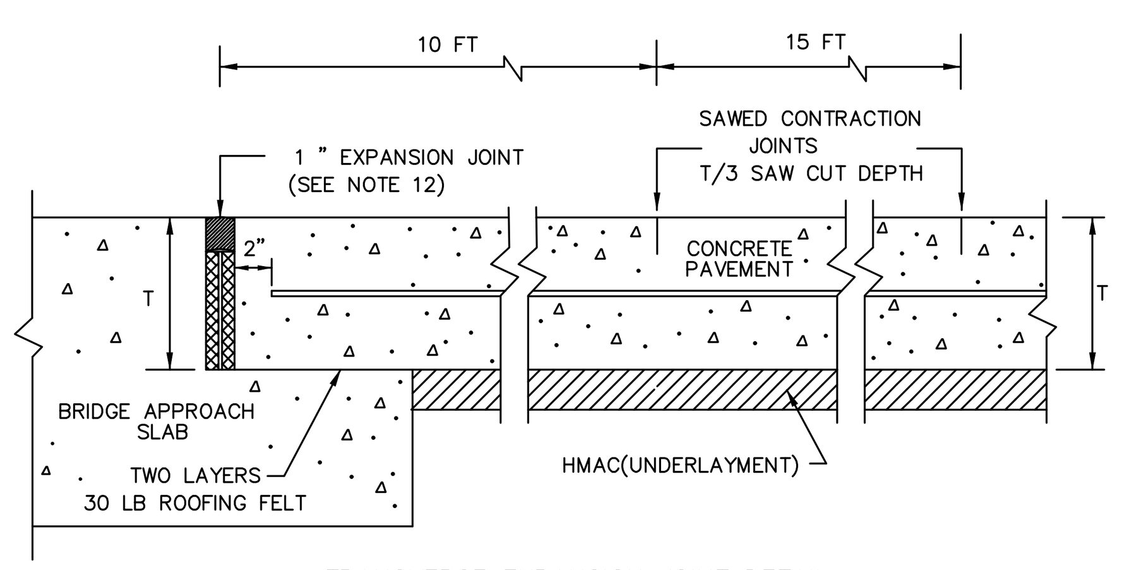
SHEET 1 OF 2

Texas Department of Transportation | Design Division Standard

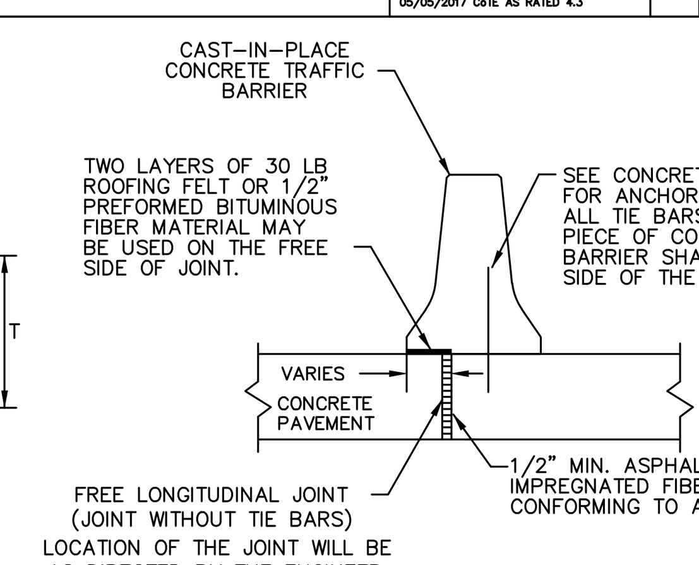
CONTINUOUSLY_ REINFORCED CONCRETE_ PAVEMENT
ONE LAYER STEEL BAR PLACEMENT
T – 7 to 13 INCHES
CRCP(1)–17

FILE: crcp117.dgn	DN: TxDOT	CK: AN	DW: HC	CK: VP/KM
©TxDOT: May 2017	CONT	SECT	JOB	HIGHWAY
REVISIONS 10/10/2011 ADD GN #12 04/09/2013 REMOVE 6" AND 6.5" ADD CTE REQUIREMENTS 05/05/2017 CoTE AS RATED 4.3	DIST	COUNTY		SHEET NO.

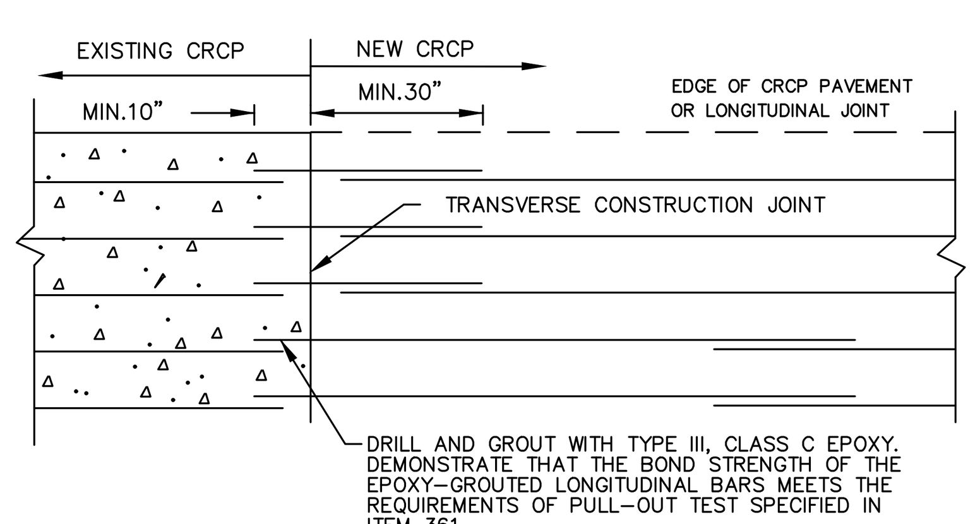
TABLE NO.1A LONGITUDINAL STEEL FOR LOW CoTE CONCRETE AS APPROVED BY THE ENGINEER					
SLAB THICKNESS AND BAR SIZE		REGULAR STEEL BARS	FIRST SPACING AT EDGE OR JOINT	ADDITIONAL STEEL BARS AT TRANSVERSE CONSTRUCTION JOINT (SECTION X–X)	
T (IN.)	BAR SIZE	SPACING c (IN.)	SPACING a (IN.)	SPACING 2 x c (IN.)	LENGTH L (IN.)
7.0	#5	7.5	3 TO 4	15	50



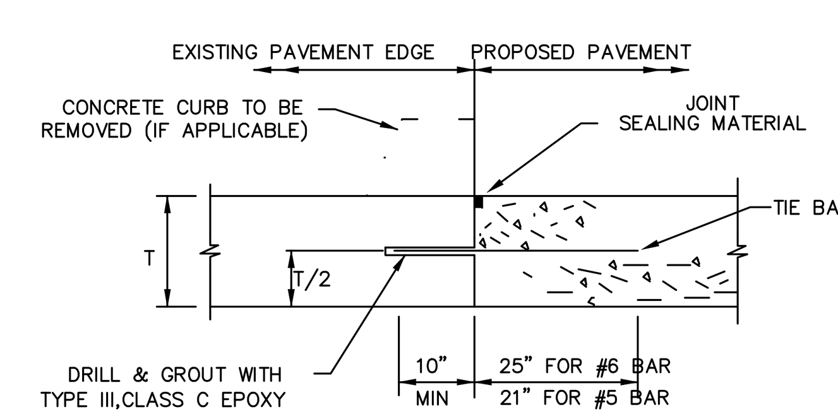
TRANSVERSE EXPANSION JOINT DETAIL
AT BRIDGE APPROACH



FREE LONGITUDINAL JOINT DETAIL

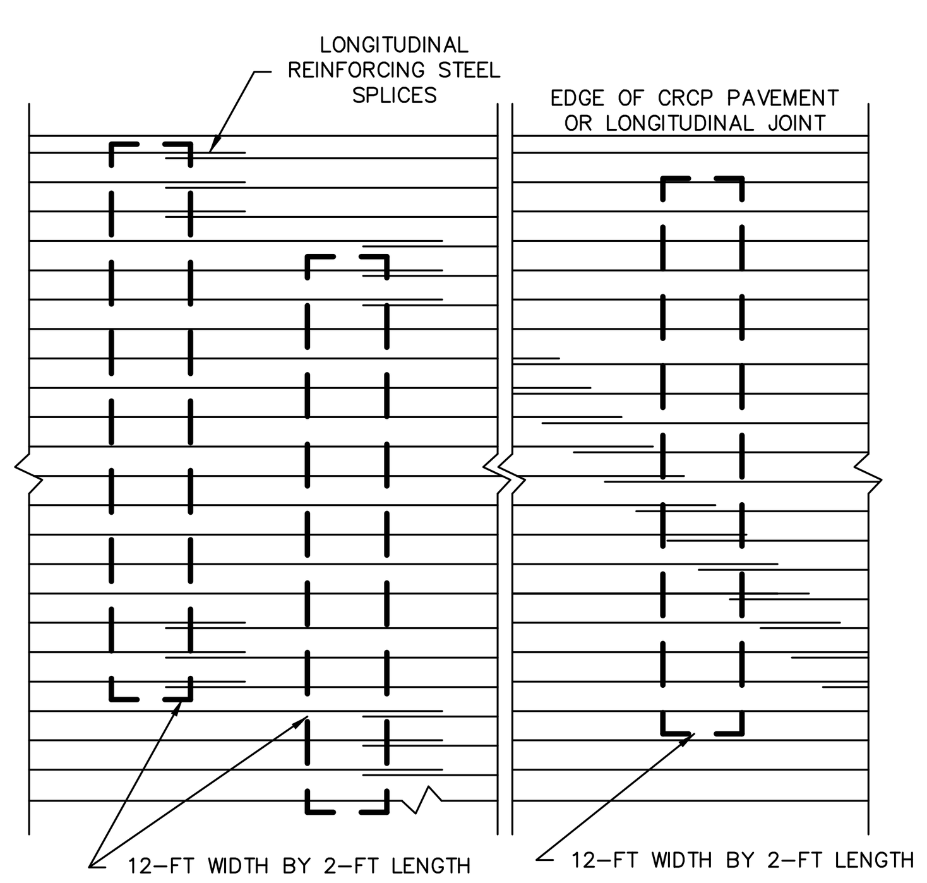


OPTION A: DRILL AND EPOXY
PLAN VIEW (NOT TO SCALE)



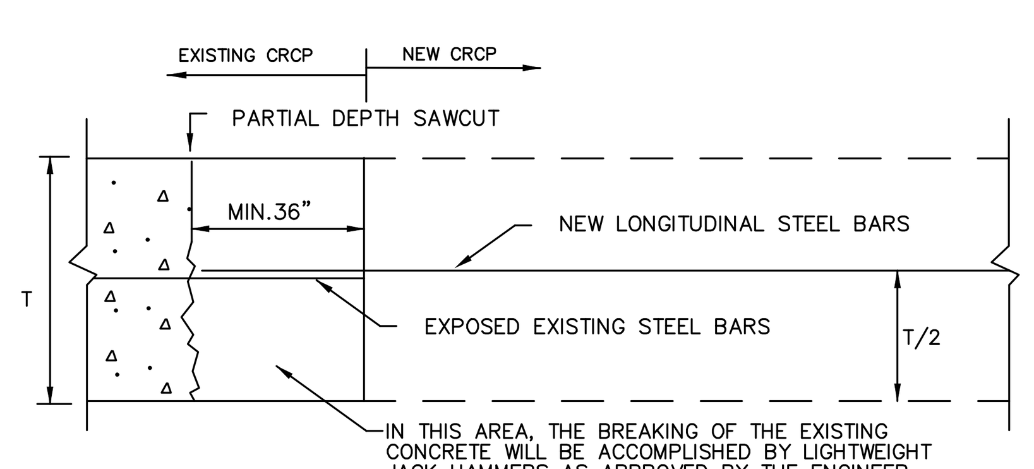
1.BEFORE WIDENING WORK, DEMONSTRATE THAT THE BOND STRENGTH OF THE EPOXY-GROUTED TIE BARS MEETS THE REQUIREMENTS OF PULL-OUT TEST SPECIFIED IN ITEM 361.
2.SPACE TIE BARS AT 24" SPACING. USE #6 TIE BARS FOR 8" AND THICKER SLABS, USE #5 TIE BARS FOR LESS THAN 8" THICK SLABS.

LONGITUDINAL WIDENING JOINT DETAIL



STAGGER THE LAP LOCATIONS SO THAT NO MORE THAN 1/3 OF THE LONGITUDINAL STEEL IS SPLICED IN ANY GIVEN 12-FT. WIDTH AND 2-FT. LENGTH OF THE PAVEMENT. ANY OTHER LAP CONFIGURATION MEETING THIS REQUIREMENT WILL BE ALLOWED.

EXAMPLES OF LAP CONFIGURATION
PLAN VIEW (NOT TO SCALE)



OPTION B: BREAKBACK AND LAP

TRANSVERSE TIE JOINT DETAIL
EXISTING CRCP TO NEW CRCP

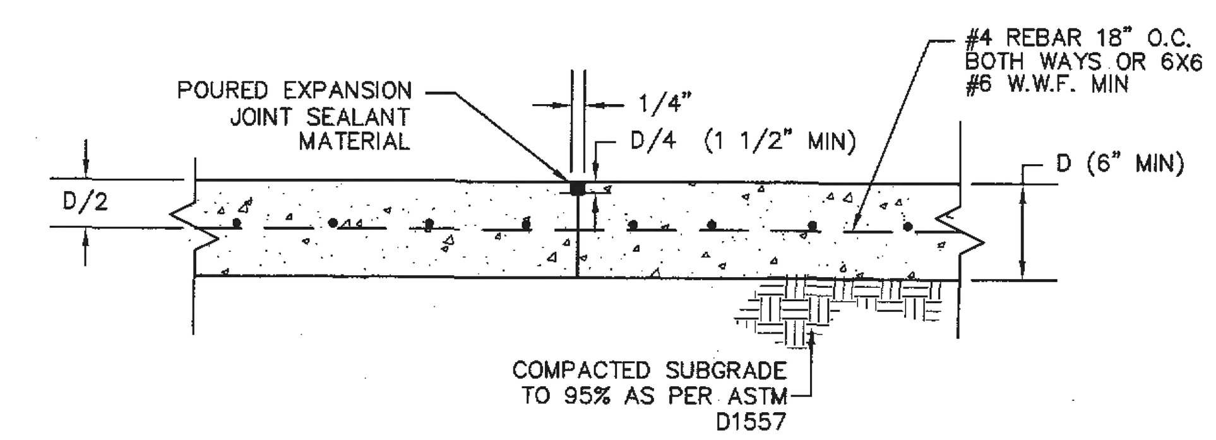
SHEET 2 OF 2

Texas Department of Transportation | Design Division Standard

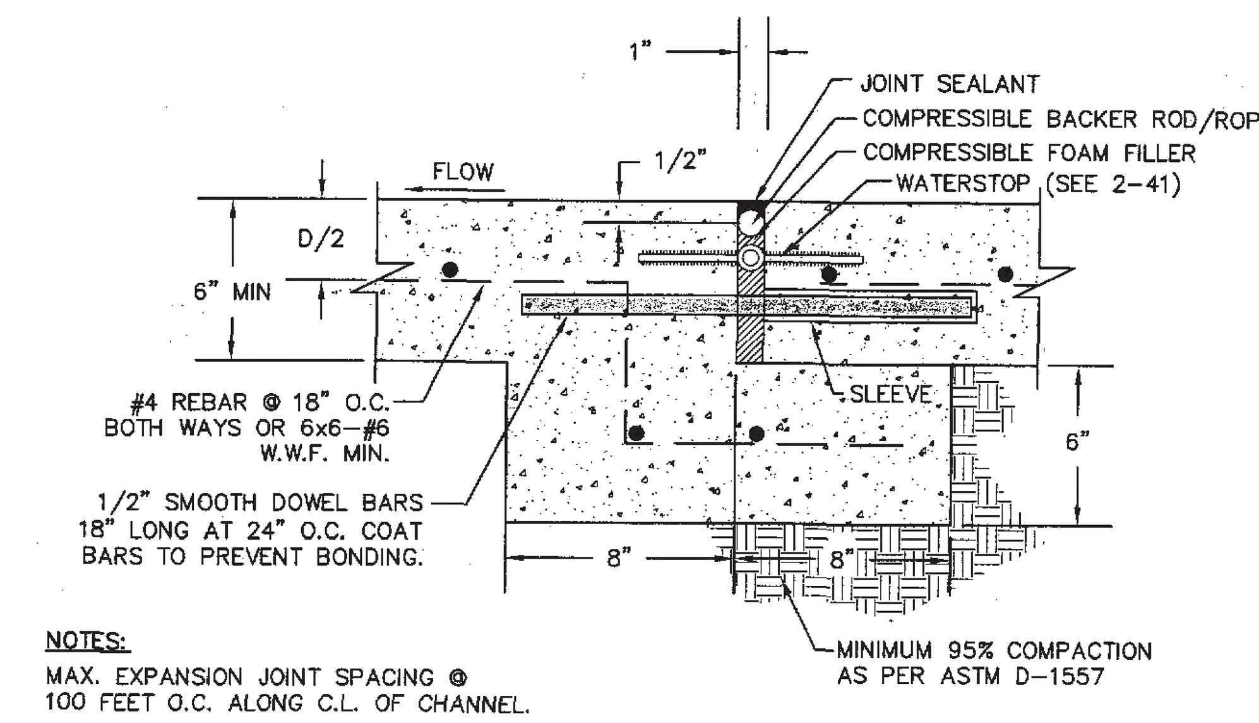
CONTINUOUSLY_ REINFORCED CONCRETE_ PAVEMENT
ONE LAYER STEEL BAR PLACEMENT
T – 7 to 13 INCHES
CRCP(1)–17

FILE: crcp117.dgn	DN: TxDOT	CK: AN	DW: HC	CK: VP/KM
©TxDOT: May 2017	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY		SHEET NO.

1 / C7.2 CONTINUOUSLY REINFORCED CONCRETE PAVEMENT DETAIL
SCALE: AS SHOWN



CONTRACTION JOINT AT 25' O.C.



NOTES:
MAX. EXPANSION JOINT SPACING @ 100 FEET O.C. ALONG C.L. OF CHANNEL.

EXPANSION JOINT

THE CITY OF EL PASO TEXAS
TITLE 19 - SUBDIVISION ORDINANCE
ENGINEERING DEPARTMENT
DESIGN STANDARDS FOR CONSTRUCTION

CONCRETE JOINTS
2-40

Approved By R. A. SHUBERT | Checked By H. M. E.
Date JUNE 03, 2008 | Drawn By QEC / J. R.

2 / C7.2 CONCRETE JOINTS DETAIL
SCALE: AS SHOWN

NO.	DATE	REVISION REMARKS	BY

PLANNING·ENGINEERING·PROJECT MANAGEMENT
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Texas Board of Professional Engineers Registration No. F-000554

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STATE OF TEXAS
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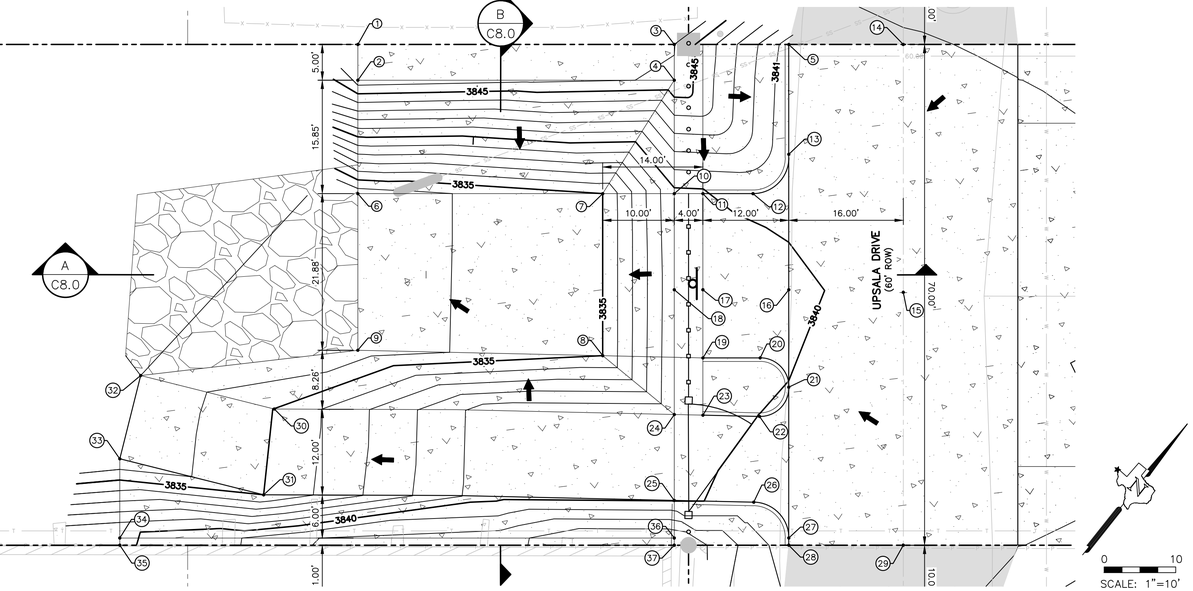
SCALE
Horiz. N/A
Vert. N/A
Date SEPT 2020
Design by F.S./E.G.
Drawn by E.G.
Chkd. by F.S.
Appd. by M.M.
JOB No. 19-146

PROJECT NAME
UPSALA DRIVE DRAINAGE IMPROVEMENTS

EL PASO COUNTY TEXAS

SHEET TITLE
TYPICAL DETAILS

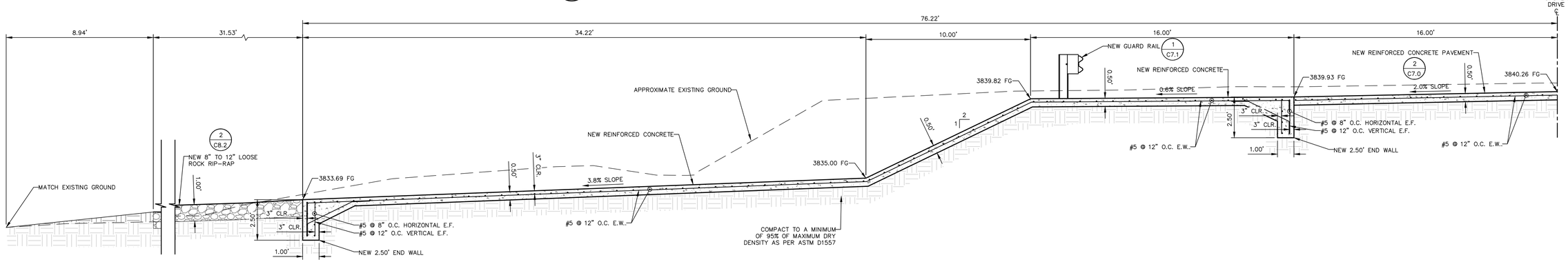
SHEET C7.2
2 OF 2



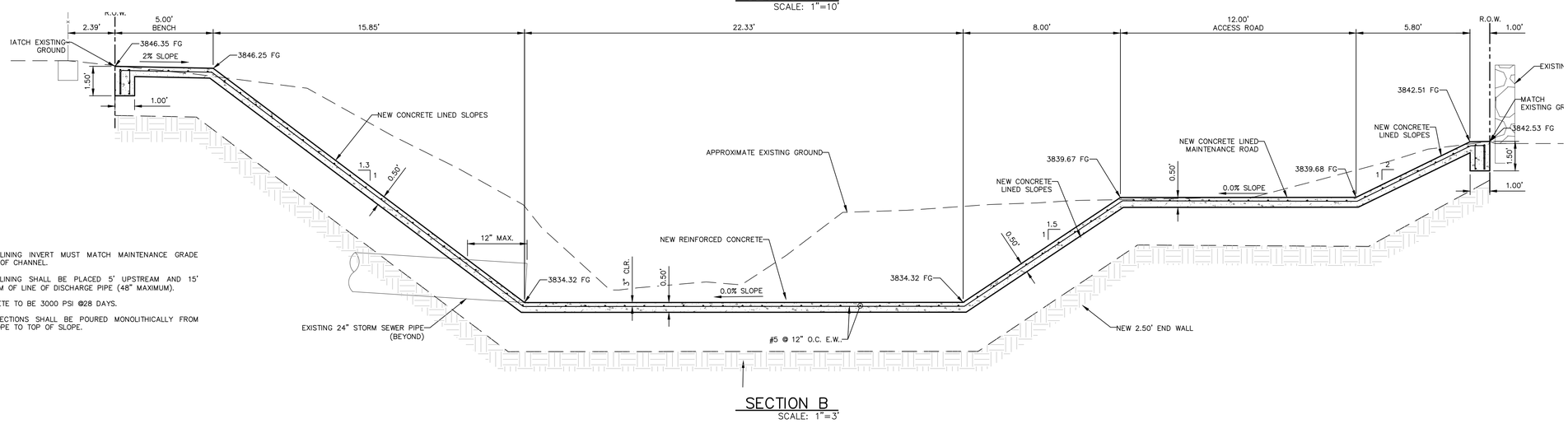
1 C8.0 PLAN VIEW
SCALE: 1"=10'

HORIZONTAL CONTROL TABLE			
POINT NO.	DESCRIPTION	NORTHING	EASTING
1	TOP OF CONCRETE	10624372.15	461382.97
2	TOP OF CONCRETE	10624368.25	461386.10
3	TOP OF CONCRETE	10624399.77	461417.52
4	TOP OF CONCRETE	10624395.86	461420.64
5	TOP OF CONCRETE PAVEMENT	10624409.76	461430.01
6	TOP OF CONCRETE	10624355.87	461395.99
7	TOP OF CONCRETE	10624377.24	461422.72
8	TOP OF CONCRETE	10624359.55	461436.87
9	TOP OF CONCRETE	10624338.77	461409.66
10	TOP OF CONCRETE	10624383.48	461430.53
11	TOP OF CONCRETE	10624385.98	461433.66
12	TOP OF CONCRETE	10624390.35	461439.13
13	TOP OF CONCRETE PAVEMENT	10624397.76	461439.60
14	TOP OF CONCRETE PAVEMENT	10624419.75	461442.51
15	TOP OF CONCRETE PAVEMENT	10624392.69	461464.14
16	TOP OF CONCRETE PAVEMENT	10624382.98	461451.42
17	TOP OF CONCRETE	10624375.49	461442.04
18	TOP OF CONCRETE	10624372.99	461438.92
19	TOP OF CONCRETE	10624368.04	461448.00
20	TOP OF CONCRETE	10624373.04	461454.24

HORIZONTAL CONTROL TABLE			
POINT NO.	DESCRIPTION	NORTHING	EASTING
21	TOP OF CONCRETE	10624372.34	461459.92
22	TOP OF CONCRETE	10624366.60	461459.28
23	TOP OF CONCRETE	10624361.79	461452.99
24	TOP OF CONCRETE	10624359.37	461449.81
25	TOP OF CONCRETE	10624349.99	461457.31
26	TOP OF CONCRETE	10624356.73	461466.14
27	TOP OF CONCRETE PAVEMENT	10624355.88	461473.08
28	TOP OF CONCRETE PAVEMENT	10624355.09	461473.71
29	TOP OF CONCRETE PAVEMENT	10624365.09	461486.21
30	TOP OF CONCRETE	10624325.07	461405.67
31	TOP OF CONCRETE	10624314.77	461411.99
32	TOP OF CONCRETE	10624317.06	461388.16
33	TOP OF CONCRETE	10624306.15	461393.15
34	TOP OF CONCRETE	10624297.50	461400.06
35	TOP OF CONCRETE	10624296.72	461400.69
36	TOP OF CONCRETE	10624345.88	461460.59
37	TOP OF CONCRETE	10624345.10	461461.21



SECTION A
SCALE: 1"=10'



SECTION B
SCALE: 1"=3'

NOTES:

1. CONCRETE LINING INVERT MUST MATCH MAINTENANCE GRADE AND WIDTH OF CHANNEL.
2. CONCRETE LINING SHALL BE PLACED 5' UPSTREAM AND 15' DOWNSTREAM OF LINE OF DISCHARGE PIPE (48" MAXIMUM).
3. ALL CONCRETE TO BE 3000 PSI @28 DAYS.
4. CHANNEL SECTIONS SHALL BE POURED MONOLITHICALLY FROM TOP OF SLOPE TO TOP OF SLOPE.

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MCi Moreno Cardenas Inc.
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Texas Board of Professional Engineers Registration No. F-9606

ENGINEER'S SEAL
STATE OF TEXAS
FERNANDO SANCHEZ
132581
LICENSED PROFESSIONAL ENGINEER
9/21/2020

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Chkd. by F.S.
Appd. by M.M.
JOB No. 19-146

PROJECT NAME
UPSALA DRIVE DRAINAGE IMPROVEMENTS

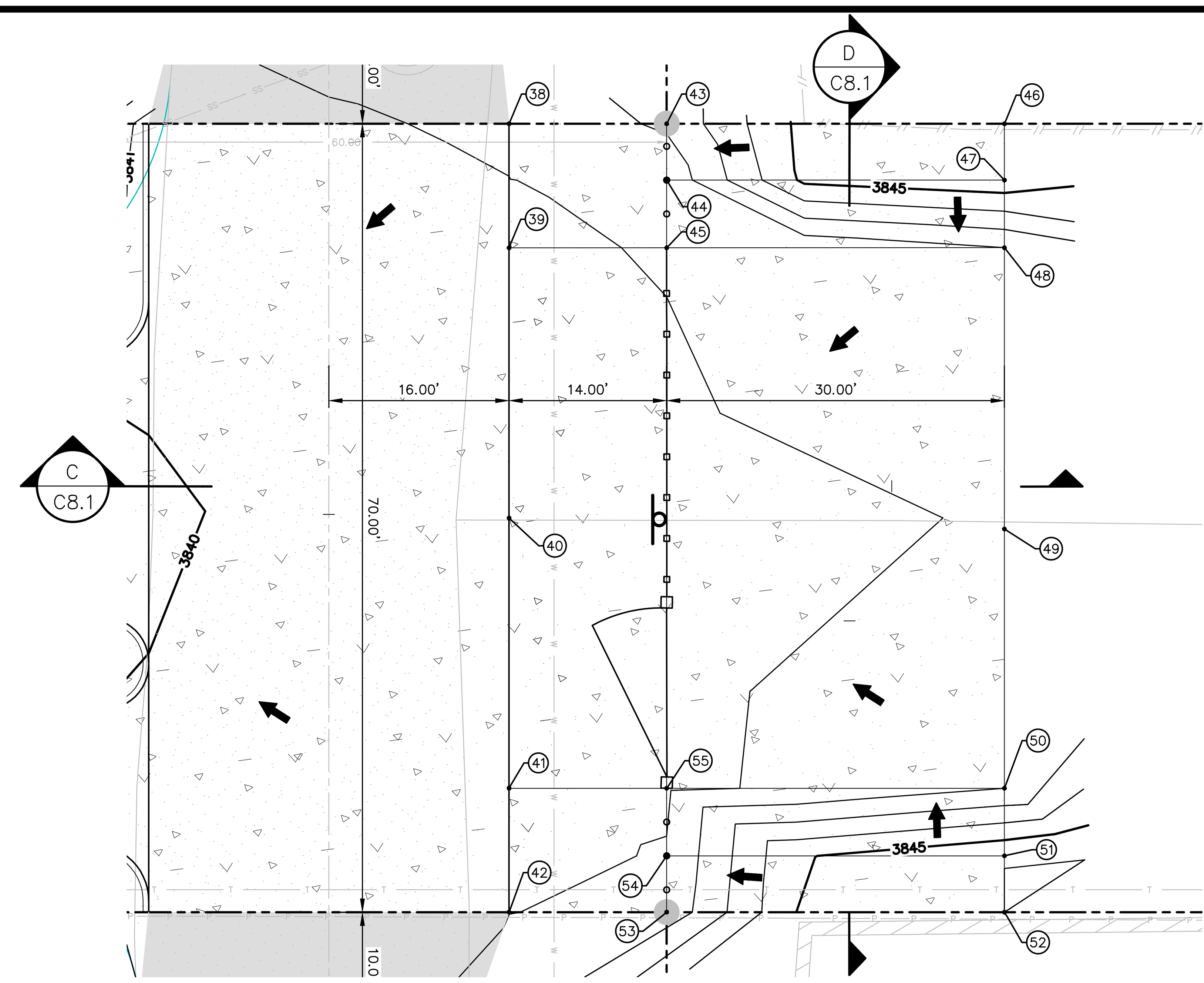
EL PASO COUNTY TEXAS

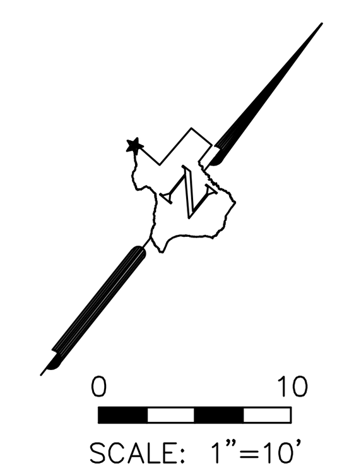
SHEET TITLE
DRAINAGE DETAILS

SHEET C8.0
1 OF 3

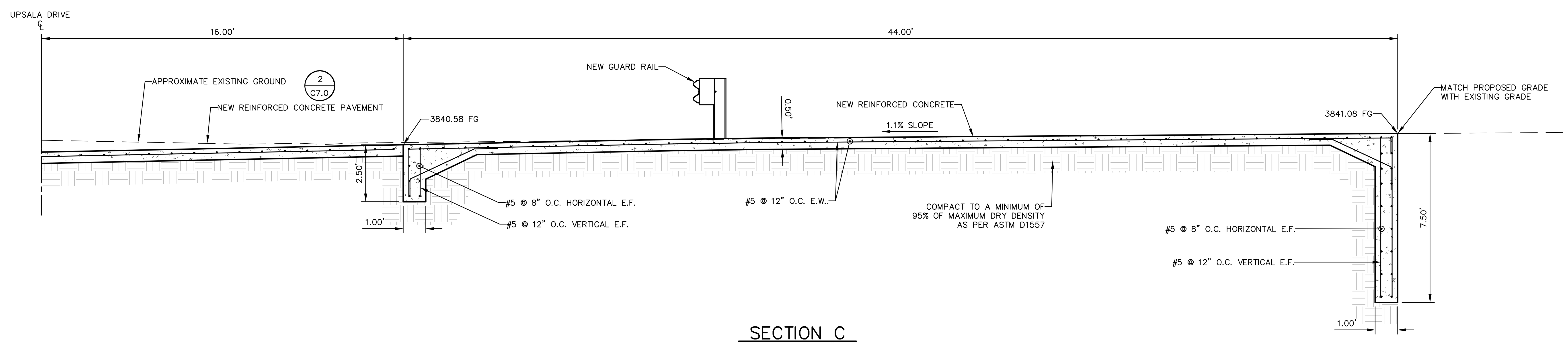
HORIZONTAL CONTROL TABLE

POINT NO.	DESCRIPTION	NORTHING	EASTING
38	TOP OF CONCRETE PAVEMENT	10624429.74	461455.01
39	TOP OF CONCRETE PAVEMENT	10624421.14	461461.88
40	TOP OF CONCRETE PAVEMENT	10624402.40	461476.86
41	TOP OF CONCRETE PAVEMENT	10624383.67	461491.84
42	TOP OF CONCRETE PAVEMENT	10624375.08	461498.71
43	TOP OF CONCRETE	10624438.48	461465.94
44	TOP OF CONCRETE	10624434.57	461469.07
45	TOP OF CONCRETE	10624429.88	461472.82
46	TOP OF CONCRETE	10624457.21	461489.38
47	TOP OF CONCRETE	10624453.31	461492.50
48	TOP OF CONCRETE	10624448.62	461496.24
49	TOP OF CONCRETE	10624429.11	461511.84
50	TOP OF CONCRETE	10624411.14	461526.20
51	TOP OF CONCRETE	10624406.46	461529.95
52	TOP OF CONCRETE	10624402.55	461533.07
53	TOP OF CONCRETE	10624383.82	461509.64
54	TOP OF CONCRETE	10624387.72	461506.52
55	TOP OF CONCRETE	10624392.41	461502.77

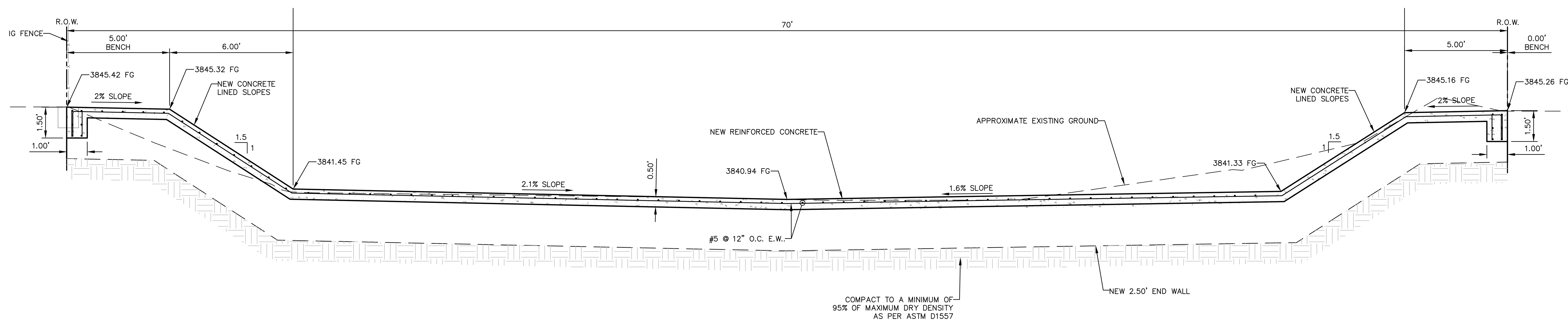




1 C8.1 PLAN VIEW
SCALE: 1"=10'



SECTION C
SCALE: 1"=10'



SECTION D
SCALE: 1"=3'

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PROJECT NAME
UPSALA DRIVE DRAINAGE IMPROVEMENTS

EL PASO COUNTY TEXAS

SHEET TITLE
DRAINAGE DETAILS

SHEET C8.0
2 OF 3

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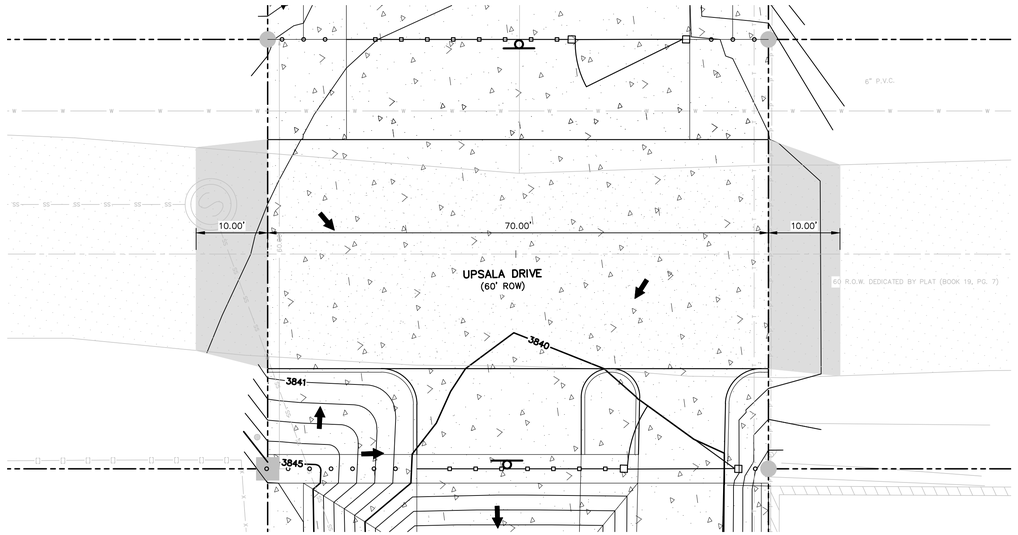
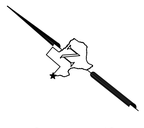
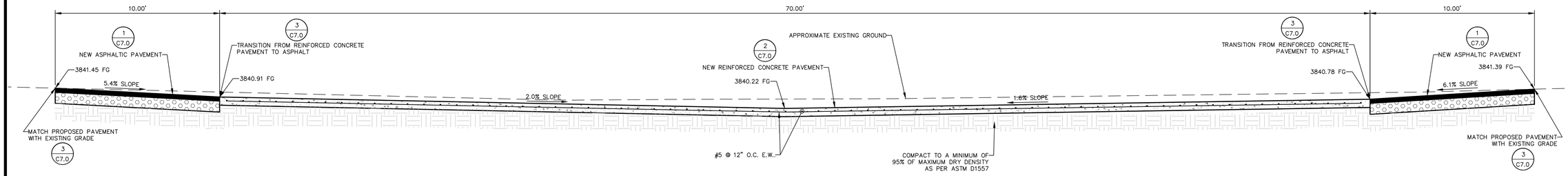


1 C8.2 PLAN VIEW
SCALE: 1"=10'

NOTES:

1. SEE SHEET C8.0 AND C8.1 FOR POINTS, DESCRIPTION AND SPOT ELEVATIONS.

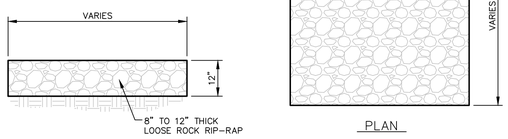




SECTION E
SCALE: 1"=3'

GENERAL NOTE:

1. STONE FOR RIP-RAP SHALL BE 6" TO 8" AS NEARLY UNIFORM IN SECTION AS PRACTICABLE. STONE SHALL BE QUARRIED; FRACTURED RIVERROCK SHALL NOT BE PERMITTED.
2. REFER TO SITE PLAN FOR DIMENSIONS.



2 C8.2 LOOSE ROCK RIP-RAP DETAIL
SCALE: 1/2"=1'-0"

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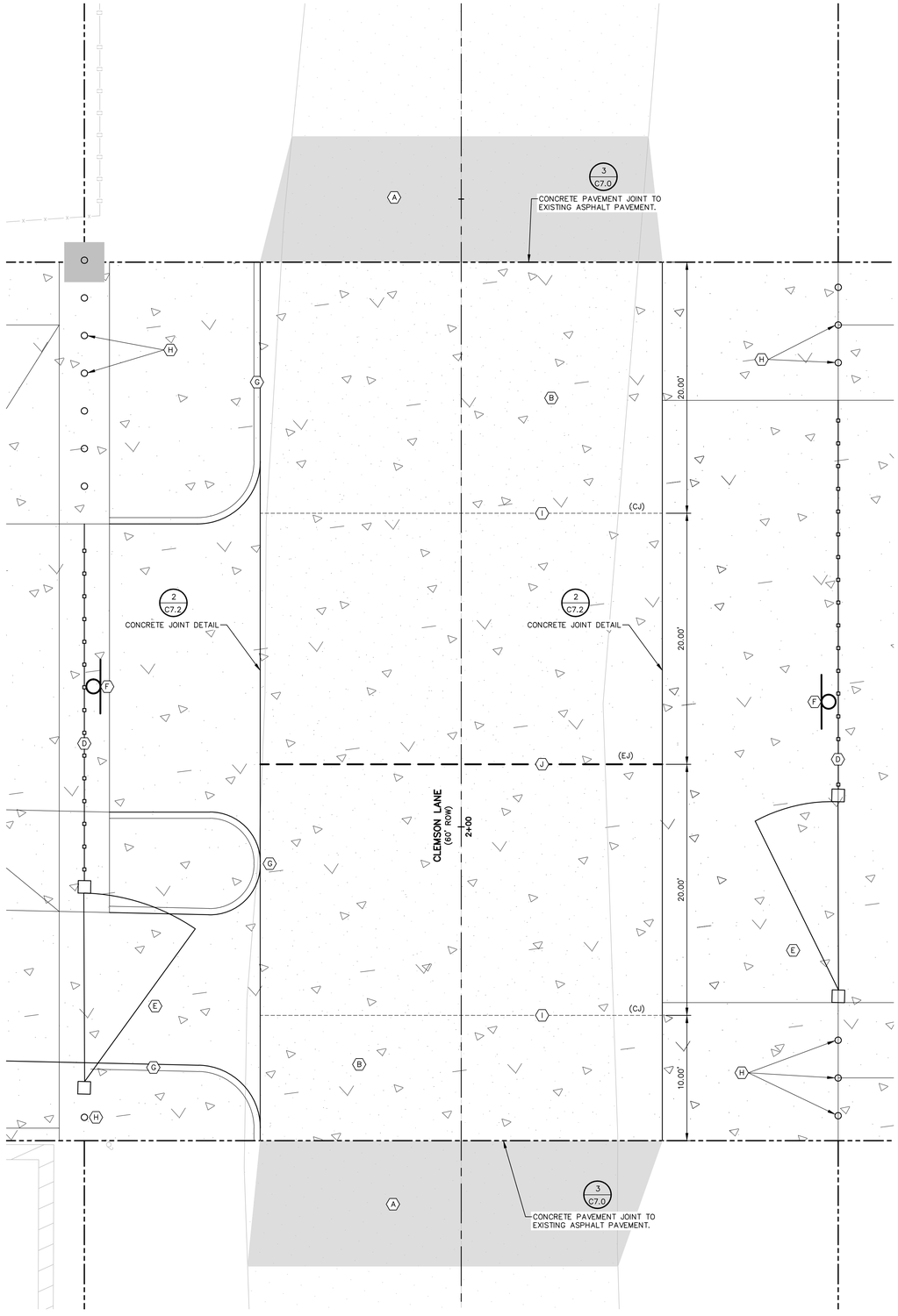
PROJECT NAME
UPSALA DRIVE DRAINAGE IMPROVEMENTS

EL PASO COUNTY TEXAS

SHEET TITLE
DRAINAGE DETAILS

SHEET C8.2
3 OF 3



KEYED LEGEND

	PROJECT LIMITS	
1+00	STATIONING AND PROPOSED GRADE CENTERLINE	
	EXISTING RIGHT-OF-WAY	
A	NEW HMAC PAVEMENT	1 / C7.0
B	CONTINUOUSLY REINFORCED CONCRETE PAVEMENT & REINFORCED CONCRETE	2 / C7.0, 1 / C8.0, 1 / C8.1
C	NEW 8-12 INCH LOOSE ROCK RIP-RAP	2 / C8.2
D	NEW GUARD RAIL	1 / C7.1
E	NEW METAL SWING GATE	5 / C7.0
F	NEW NO TRESPASSING SIGN	3 / C7.1
G	NEW 6" MONOLITHIC CURB	4 / C7.0
H	NEW METAL GUARD POST	2 / C7.1
I	NEW CONSTRUCTION JOINT	1 / C7.2
J	NEW EXPANSION JOINT	1 / C7.2

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STATE OF TEXAS
FERNANDO SANCHEZ
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09/21/2020

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PROJECT NAME

UPSALA DRIVE DRAINAGE IMPROVEMENTS

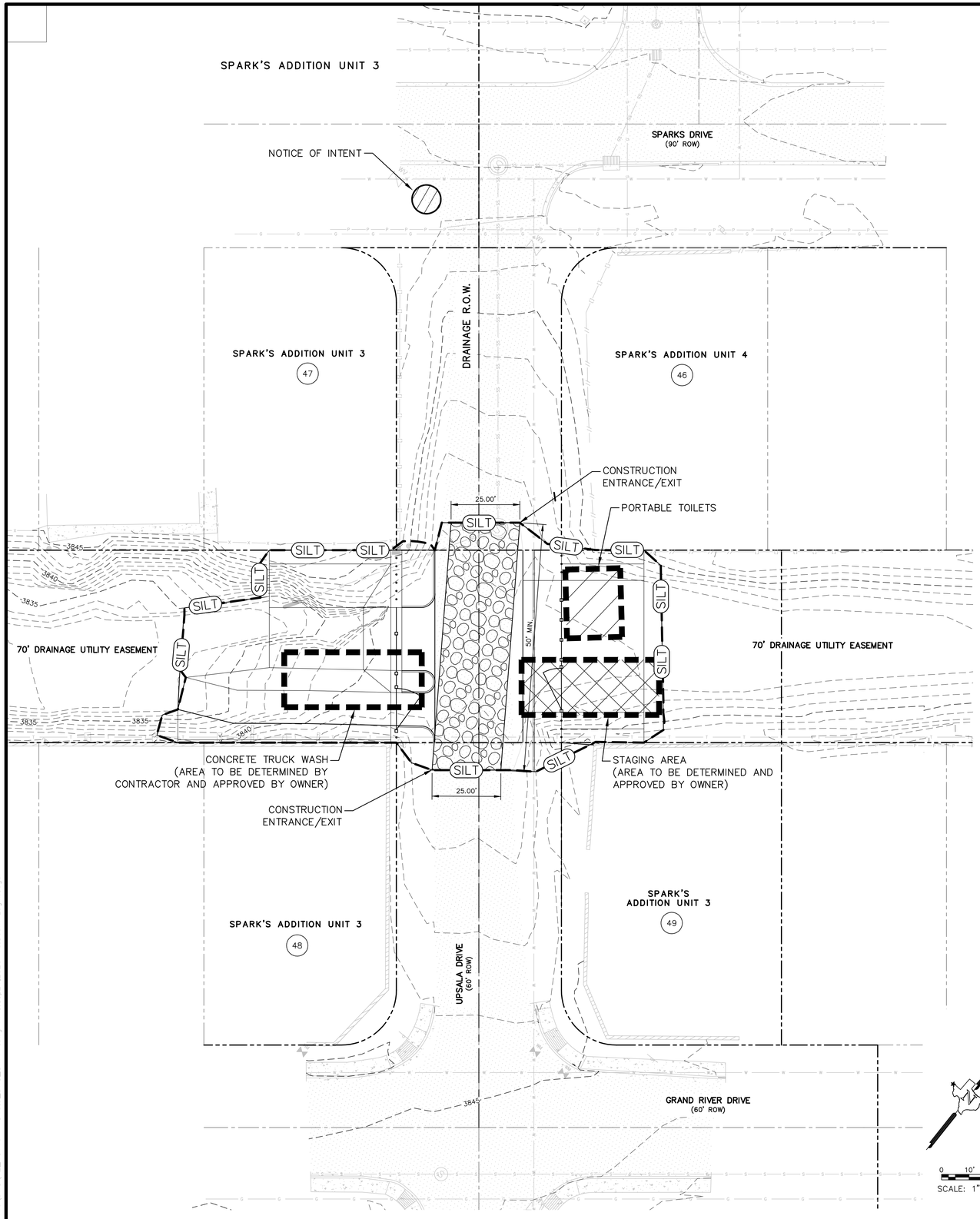
EL PASO COUNTY TEXAS

SHEET TITLE

REINFORCED CONCRETE PAVEMENT LAYOUT

SHEET C9.0

1 OF 1



FLOOD ZONE "AE"

BASE FLOOD ELEVATIONS DETERMINED.

FIRM – FLOOD INSURANCE RATE MAP CITY OF EL PASO, EL PASO COUNTY, TX.

THIS PROJECT IS LOCATED WITHIN ZONE "AE" AS DESIGNATED IN PANEL NO. 480212-0237 B, DATED SEPTEMBER 4, 1991 OF THE FLOOD INSURANCE RATE MAPS IN THE AREAS OF CITY OF EL PASO, EL PASO COUNTY, TEXAS.

LEGEND

- SILT — TEMPORARY SEDIMENT CONTROL FENCE
- FLOW DIRECTION
- STABILIZED CONSTRUCTION ENTRANCE/ EXIT
- CONCRETE TRUCK WASH OUT
- NOTICE OF INTENT
- PORTABLE TOILETS
- STAGING AREA

STAGING AREA

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN AREA TO BE USED FOR STAGING.

NOTES

1. STABILIZED CONSTRUCTION EXITS TO BE PLACED AT ACCESS POINTS COORDINATED WITH AND APPROVED BY THE STREET DEPARTMENT.
2. SW3P SIGN SHALL BE LOCATED WITHIN ON-SITE OFFICE.
3. CONTRACTOR TO POST T.C.E.Q. CONSTRUCTION SITE NOTICE ON THE JOB SITE.
4. SEDIMENT CONTROL FENCE AND ROCK FILTER DAMS TO BE LOCATED DOWNSTREAM ROW LINE OR AT PROPOSED GRADING LIMITS OR AS PER DIRECTION OF THE ENGINEER.
5. LOCATION OF CONSTRUCTION EXITS ARE PRELIMINARY AND ARE TO BE LOCATED AS PER DIRECTION OF THE ENGINEER.
6. EXISTING INLETS TO BE PROTECTED WITH SILT FENCE DURING CONSTRUCTION UNTIL REMOVAL.

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JOB No. 19-146

PROJECT NAME

UPSALA DRIVE DRAINAGE IMPROVEMENTS

EL PASO COUNTY TEXAS

SHEET TITLE

STORMWATER POLLUTION PREVENTION PLAN

SHEET C10.0

1 OF 1

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SITE DESCRIPTION

PROJECT NAME AND LIMITS: UPSALA DRIVE DRAINAGE IMPROVEMENTS
LOCATED IN EAST EL PASO COUNTY, TEXAS, THE PROJECT LIES NEAR THE RESIDENTIAL AREA KNOWN AS SPARKS, APPROXIMATELY 4,500 FEET NORTH OF THE I-10.

PROJECT DESCRIPTION: THE PROPOSED PROJECT CONSISTS OF THE REPAIR AND IMPROVEMENT OF THE EXISTING DRAINAGE CROSSING ACROSS UPSALA DRIVE.

EXISTING CONDITIONS: THE CROSSING CONSISTS OF NATURAL ARROYO. THE UPSTREAM OPENING LIES DIRECTLY ON THE GROUND AND CONVEYS THE WATER ACROSS UPSALA DRIVE. AT THE DOWNSTREAM END, THE OPENING THE ROADWAY IS EARTHEN EMBANKMENT WITHOUT ANY PROTECTION AND/OR RIP RAP THUS RESULTING IN EROSION OF THE EMBANKMENT. UPSALA DRIVE DOES NOT HAVE ANY CURB OR GUTTER AND CONTRIBUTES TO THE EROSION OF THE EMBANKMENT AND LOSS OF SUBSOILS AT RUNOFF CONCENTRATION POINTS.

MAJOR SOIL DISTURBING ACTIVITIES: MAJOR SOIL DISTURBING ACTIVITIES WILL CONSIST OF GRADING ALONG THE EMBANKNENTS ON BOTH SIDES OF UPSALA DRIVE.

TOTAL PROJECT AREA: 0.40 ACRES ±

TOTAL AREA TO BE DISTURBED: 0.40 ACRES ±

WEIGHTED RUNOFF COEFFICIENT
(AFTER CONSTRUCTION): 0.33

EXISTING CONDITION OF SOIL AND VEGETATIVE
COVER AND % OF EXISTING VEGETATIVE COVER: WUECO-WINK ASSOCIATION PER NRCS (EL PASO COUNTY). NEARLY LEVEL AND GENTLY SLOPING SOILS THAT HAVE A FINE SANDY LOAM SUBSOIL AND ARE MODERATELY DEEP OVER CALICHE.

NAME OF RECEIVING WATERS:
XCXXXXXXXXXXXXXXX

EROSION AND SEDIMENT CONTROL

SOIL STABILIZATION PRACTICES

_____ TEMPORARY SEEDING
_____ PERMANENT PLANTING, SODDING, OR SEEDING
_____ MULCHING
_____ SOIL RETENTION BLANKET
_____ BUFFER ZONES
_____ PRESERVATION OF NATURAL RESOURCES

OTHER: _____

STRUCTURAL PRACTICES:

X SILT FENCES
_____ HAY BALES
_____ ROCK BERMS
_____ DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
_____ DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
_____ DIVERSION DIKE AND SWALE COMBINATION
_____ PIPE SLOPE DRAINS
_____ CONCRETE FLUMES
X ROCK BEDDING AT CONSTRUCTION EXIT (TEMPORARY)
_____ TIMBER MATTING AT CONSTRUCTION EXIT
_____ CHANNEL LINERS
_____ SEDIMENT TRAPS
_____ SEDIMENT BASINS
X STORM INLET SEDIMENT TRAP
_____ STONE OUTLET STRUCTURES
X CURBS AND GUTTERS
X STORM DRAINS
_____ VELOCITY CONTROL DEVICES
_____ VEGETATED SWALES & NATURAL DEPRESSIONS

OTHER: _____

NARRATIVE – SEQUENCE OF CONSTRUCTION (STORM WATER MANAGEMENT) ACTIVITIES:

1. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROLS (e.g. SILT FENCE AND/OR STABILIZED CONSTRUCTION ENTRANCE).
2. CLEARING, DEMOLITION AND EXCAVATION OF PROJECT AREA,
3. SUBGRADE PREPARATION,
4. NEW CURB AND GUTTER, HEADWALLS WITH WING WALLS, GABION BASKETS,
5. WHEN ALL CONSTRUCTION ACTIVITY RELATED IN DEVELOPMENT OF THE SITE IS COMPLETE, REMOVE TEMPORARY CONTROLS IN 1. ABOVE

BEGIN DATE: 10-2020 (APPROXIMATE)
END DATE: 03-2021 (APPROXIMMATE)

BEST MANAGEMENT PRACTICES CONTROLS

I. WASTE MATERIALS:
ALL WASTE MATERIALS, INCLUDING CONSTRUCTION DEBRIS, SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. NO CONSTRUCTION WASTE MATERIAL SHALL BE BURIED ON SITE. THE TRANSIT DUMPSTER SHALL COMPLY WITH ORDINANCE 18.52.010 (ENCLOSURE AND REMOVAL OF WASTE MATERIALS DURING CONSTRUCTION). THE DUMPSTER SHALL BE EMPTIED AS NECESSARY OR AS REQUIRED BY ORDINANCE 9.04 (SOLID WASTE MANAGEMENT) AND THE TRASH SHALL BE HAULED TO A LICENSED LANDFILL.

II. HAZARDOUS WASTE:
AT A MINIMUM, ANY PRODUCTS IN THE FOLLOWING CATEGORIES SHALL BE CONSIDERED HAZARDOUS: PAINT, ACIDS FOR CLEANING MASONRY SURFACES, CLEANING SOLVENTS, ASPHALT PRODUCTS, CHEMICAL ADDITIVES FOR SPILL STABILIZATION, CURING COMPOUNDS AND ADDITIVES. IN THE EVENT OF A SPILL WHICH MAY BE HAZARDOUS, THE CONTRACTOR SHALL TAKE IMMEDIATE ACTION AND CONTACT THE FIRE DEPT. AND TNRCC.

III. SANITARY WASTE:
ALL SANITARY WASTE SHALL BE COLLECTED FROM THE CONSTRUCTION PORTABLE UNITS AS NECESSARY OR AS REQUIRED, CHAPTER 18.08 (BUILDING CODE), BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR. ALL WASTE MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

IV. SPILL PREVENTION:
THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURES OF MATERIALS TO STORM WATER RUNOFF.

V. GOOD HOUSEKEEPING:
A. STORE ONLY ENOUGH PRODUCTS REQUIRED TO DO THE JOB
B. NEATLY STORE MATERIALS ON-SITE IN AN ORDERLY MANNER
C. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER
D. DO NOT MIX SUBSTANCES WITH ONE ANOTHER, UNLESS OTHERWISE RECOMMENDED BY THE MANUFACTURER
E. USE ENTIRE CONTENTS OF A PRODUCT BEFORE DISPOSING THE CONTAINER
F. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL

VI. HAZARDOUS PRODUCTS:
PRACTICES USED TO REDUCE RISKS:
A. KEEP PRODUCTS IN THEIR ORIGINAL CONTAINER IF AT ALL POSSIBLE
B. RETAIN ORIGINAL LABELS, PRODUCT INFORMATION AND MATERIAL SAFETY DATA SHEETS (MSDS)
C. DISPOSE SURPLUS PRODUCT IN ACCORDANCE WITH MANUFACTURER'S OR LOCAL & STATE RECOMMENDED METHODS

VII. PETROLEUM PRODUCTS:
ALL ON-SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATION.

VIII. SPILL CONTROL PRACTICES:
A. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES:
B. MATERIALS AND EQUIPMENT NECESSARY FOR CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON-SITE:
C. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY
D. SPILL AREA SHALL BE WELL VENTILATED AND APPROPRIATE CLOTHING WILL BE WORN:
E. ANY SPILL SHALL BE REPORTED TO THE APPROPRIATE GOVERNMENTAL AGENCY
F. MEASURES SHALL BE TAKEN TO PREVENT A SPILL FROM REOCCURRING

IX. MAINTENANCE AND INSPECTION PROCEDURES:
ALL POLLUTION PREVENTION MEASURES SHALL BE INSPECTED AT LEAST ONCE A MONTH OR WITHIN 24-HOURS PRIOR TO ANTICIPATED STORM EVENT AND FOLLOWING A STORM EVENT OF 0.5 INCHES OR MORE. INSPECTION IN FINAL STABILIZED AREAS OR DURING ARID PERIODS WILL BE CONDUCTED MONTHLY, BEST MANAGEMENT PRACTICES AND POLLUTION CONTROL PROCEDURES SHALL BE INSPECTED FOR ADEQUACY.

X. REMARKS:
DISPOSAL AREAS, STOCKPILES, AND HAUL ROADS SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE AND CONTROL THE AMOUNT OF SEDIMENT THAT MAY ENTER RECEIVING WATERS. DISPOSAL AREAS SHALL NOT BE LOCATED IN ANY WETLAND, WATERBODY OR STREAMBED. CONSTRUCTION STAGING AREAS AND VEHICLE MAINTENANCE AREAS SHALL BE CONSTRUCTED BY THE CONTRACTOR IN A MANNER TO MINIMIZE THE RUNOFF OF POLLUTANTS. ALL WATERWAYS SHALL BE CLEANED AS SOON AS PRACTICABLE OF TEMPORARY EMBANKMENT, TEMPORARY BRIDGES, MATTING, FALSEWORK, PILING DEBRIS OR OTHER OBSTRUCTIONS PLACED DURING CONSTRUCTION OPERATIONS THAT ARE NOT A PART OF THE FINISHED WORK.

XI. OFFSITE VEHICLE TRACKING:
IN ADDITION TO THE STABILIZED CONSTRUCTION ENTRANCES, THE FOLLOWING MEASURES SHALL BE OBSERVED DURING CONSTRUCTION:
- HAUL ROADS SHALL BE DAMPENED FOR DUST CONTROL
- LOADED HAUL TRUCKS SHALL BE COVERED WITH TARPAULIN
- EXCESS DIRT ON ROAD SHALL BE REMOVED IMMEDIATELY
- STABILIZED CONSTRUCTION ENTRANCE
- OTHER: _____

NO. | DATE | REVISION REMARKS | BY

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STATE OF TEXAS · FERNANDO SANCHEZ · 132581 · LICENSED PROFESSIONAL ENGINEER · 9/2020

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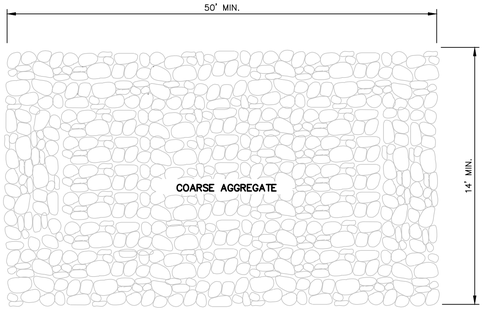
PROJECT NAME
UPSALA DRIVE DRAINAGE IMPROVEMENTS

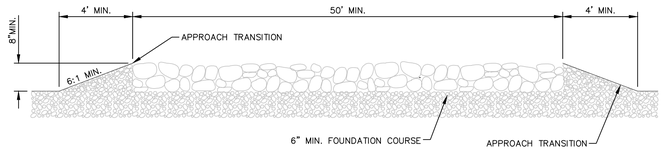
EL PASO COUNTY TEXAS

SHEET TITLE
SWPPP NOTES

SHEET C11.0
1 OF 1



PLAN



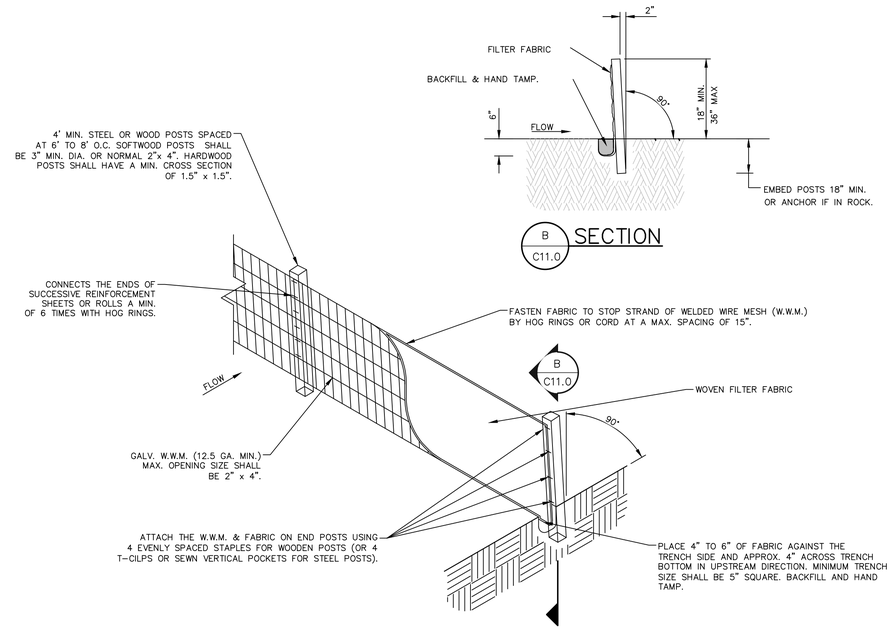
PROFILE

1 C11.0 CONSTRUCTION EXIT (TYPE 1)

SCALE NOT NEEDED

GENERAL NOTES:

1. THE LENGTH OF THE TYPE 1 CONSTRUCTION EXIT SHALL BE AS INDICATED ON THE PLANS, BUT NOT LESS THAN 50'.
2. THE COARSE AGGREGATE SHOULD BE OPEN GRADED WITH A SIZE OF 4" TO 8".
3. THE APPROACH TRANSITIONS SHOULD BE NO STEEPER THAN 6:1 AND CONSTRUCTED AS DIRECTED BY THE ENGINEER.
4. THE CONSTRUCTION EXIT FOUNDATION COURSE SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER.
5. THE CONSTRUCTION EXIT SHALL BE GRADED TO ALLOW DRAINAGE TO A SEDIMENT TRAPPING DEVICE. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

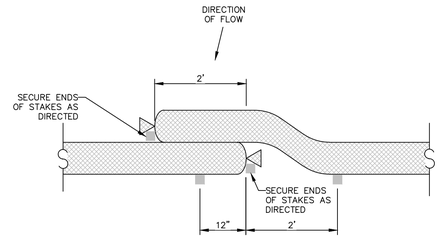


B C11.0 SECTION

2 C11.0 TEMPORARY SEDIMENT CONTROL FENCE

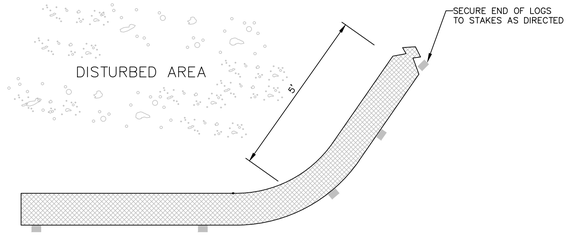
ISOMETRIC VIEW

LOGS SHALL BE SECURED IN PLACE USING SANDBAGS IN LIEU OF DOWELING STAKES INTO THE EXISTING PAVEMENT.



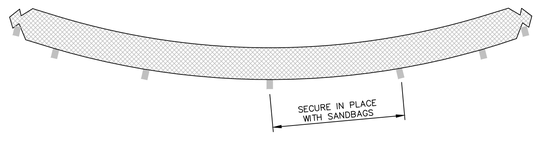
LAP DETAIL

NOT TO SCALE



END SECTION RAP DETAIL

NOT TO SCALE



STAKE DETAIL

NOT TO SCALE

GENERAL NOTES:

1. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.
2. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
3. STUFF LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE DENSITY THAT WILL HOLD SHAPE WITHOUT EXCESSIVE DEFORMATION.
4. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED.
5. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.

3 C11.0 EROSION CONTROL LOGS

NOT TO SCALE

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NO. | DATE | REVISION REMARKS | BY

PLANNING•ENGINEERING•PROJECT MANAGEMENT

MCi Moreno Cardenas Inc.

EL PASO · SAN ANTONIO

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ENGINEER'S SEAL

STATE OF TEXAS · FERNANDO SANCHEZ · 132581 · PROFESSIONAL ENGINEER · 09/21/2020

ENGINEER'S NOTE

"THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY FERNANDO SANCHEZ, P.E. #132581 ON SEPTEMBER 21, 2020"

ALTERATION OF A SEAL DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT

SCALE

Horiz. N/A
Vert. N/A
Date SEPT 2020
Design by F.S./E.G.
Drawn by E.G.
Chkd. by F.S.
Appd. by M.M.
JOB No. 19-146

PROJECT NAME

UPSALA DRIVE DRAINAGE IMPROVEMENTS

EL PASO COUNTY TEXAS

SHEET TITLE

SWPPP DETAILS

SHEET C12.0

1 OF 1