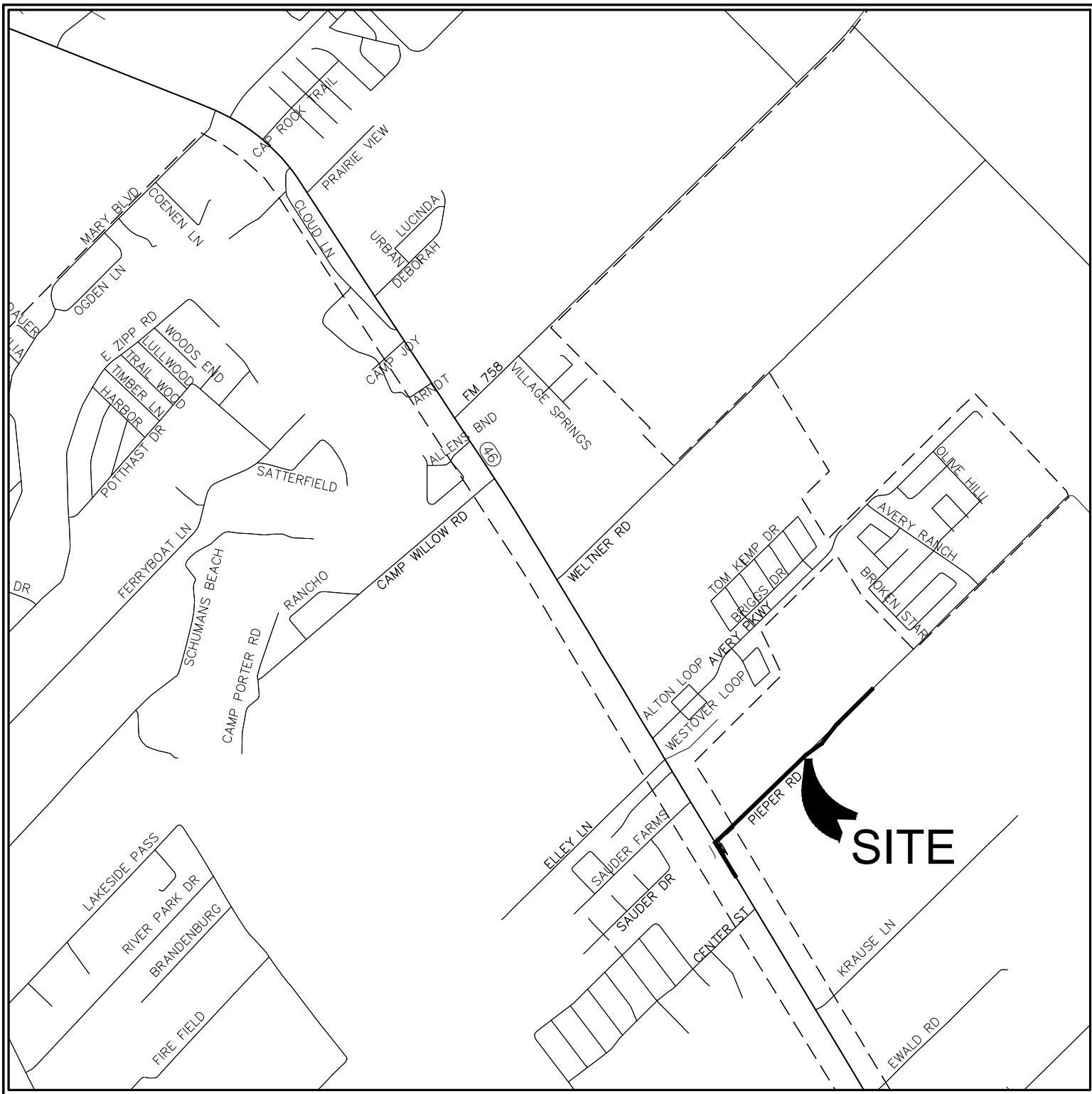


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PROJECT LOCATION MAP

SCALE: N.T.S.

PROJECT BENCHMARK

SITE TBM #1  
SET 1/2" IRON PIN  
N: 13789630.0227  
E: 2272043.7095  
ELEV: 610.40'

SITE TBM #2  
SET 1/2" IRON PIN  
N: 13793617.4578  
E: 2276073.9463  
ELEV: 636.20

LEGAL DESCRIPTION

BEING AT THE INTERSECTION OF HIGHWAY 46 AND PIEPER ROAD

GENERAL NOTES:

- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
- THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER IN RECORD.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS & TXDOT TO SET A PRE-CONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED FOR ALL INSPECTION AND MEETING REQUESTS.
  - ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,
  - FAXED IN AT 830-608-2117 OR,
  - E-MAILED AT INSPECTIONS@NBTEXAS.ORG.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
- THIS DEVELOPMENT IS A TYPE 3 DEVELOPMENT.
- NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE GUADALUPE COUNTY, TEXAS, FIRM PANEL NUMBER 48187C0120F EFFECTIVE DATE NOVEMBER, 02, 2007, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- THIS PROJECT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.

# PARKSIDE OFFSITE HWY 46 - PIEPER RD IMPROVEMENTS CITY OF NEW BRAUNFELS CIVIL SITE CONSTRUCTION PLANS

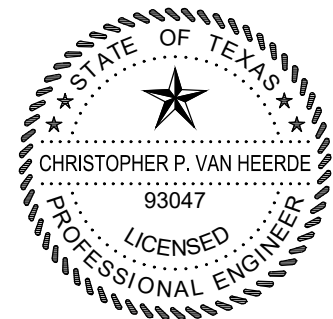
SYMMETRY VENTURES  
130 S. SEGUIN AVE., SUITE 100  
NEW BRAUNFELS, TEXAS 78130

REQUIRED PERMITS

NUMBER

- CITY OF NEW BRAUNFELS #PI 2019-0013
- TXDOT #

JUNE 2020



06/16/2020

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.

Christopher P. Van Heerde  
P.E. Registration No. 93047

PREPARED BY:



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TBPE FIRM F-10961  
TBPLS FIRM 1053600

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C2.02	EXISTING CONDITIONS DRAINAGE AREA MAP INSET
C2.03	PROPOSED CONDITIONS DRAINAGE AREA MAP
C2.04	PROPOSED CONDITIONS DRAINAGE AREA INSET
C2.05	ULTIMATE CONDITIONS DRAINAGE AREA MAP
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NOTE TO CONTRACTOR:

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

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

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CITY OF NEW BRAUNFELS GENERAL NOTES

ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL COMPLY WITH:

A. CURRENT CITY OF NEW BRAUNFELS CONSTRUCTION SPECIFICATIONS AND STANDARDS AS OF THE DATE OF THIS CONTRACT

B. THE MOST CURRENT EDITION OF TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES".

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES." ALONG WITH CURRENT CITY OF NEW BRAUNFELS AND GUADALUPE COUNTY SPECIFICATIONS. ANY DISCREPANCIES BETWEEN SPECIFICATIONS SHALL BE RESOLVED BY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES, AND TAXES AREA AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.

ANY EXISTING OFF-SITE IMPROVEMENTS THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE OWNER OF THE EXISTING IMPROVEMENT AT THE CONTRACTOR'S EXPENSE. (NO SEPARATE PAY ITEM)

WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR CONSENT OF THE OWNER OR ENGINEER WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100YR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.

CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.

WHEN MATCHING EXISTING PAVEMENTS, CURBS, DRIVES, AND WALKS, THEY SHALL BE SAW CUT FULL DEPTH AND REMOVED TO ALLOW FOR PROPOSED CONSTRUCTION. IF ANY EXISTING JOINT IS ENCOUNTERED, PRECAUTION SHALL BE TAKEN DURING REMOVAL OF CONCRETE SO AS NOT TO DAMAGE EXISTING DOWELS. ALL EXISTING DOWELS SHALL BE EXPOSED AND CLEANED.

ITEM OF WORK DESIGNATED "BY OTHERS" SHALL NOT BE CONSIDERED PART OF THIS CONTRACT.

ALL "COMPACTED SUBGRADE" SHALL CONSIST OF NATIVE MATERIAL SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES AND COMPACTED TO 95% DENSITY ACCORDING TO DENSITY TEST METHOD TEX-115E OR ACCORDING TO ASTM D-698 AND TESTED BY ASTM D-2922.

ALL "FLEXIBLE BASE" SHALL BE TYPE "A", GRADE 4, ACCORDING TO TXDOT ITEM 247, COMPACTED TO 95% MODIFIED DENSITY AT A MOISTURE CONTENT BETWEEN -2 AND +3 OF OPTIMUM PERCENT MOISTURE ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR) AND TESTED BY ASTM D-2922.

ASPHALT PAVEMENT SHALL BE THE TYPE SPECIFIED ON THE PLANS AND ACCORDING TO TXDOT ITEM 340 "HOT MIX ASPHALT CONCRETE PAVEMENT".

PRIME COAT USING MC-30 AT A RATE OF 0.2 GALLONS PER SQUARE YARD SHALL BE PLACED OVER PREPARED BASE AT LEAST ONE DAY PRIOR TO LAYING ASPHALTIC CONCRETE PAVEMENT. ANY NECESSARY TACK COAT SHALL BE MC-30 AT 0.05 GALLONS PER SQUARE YARD. IT IS REQUIRED THAT BOTH THE PRIME COAT AND THE TACK COAT BE APPLIED AT THE TEMPERATURE SPECIFIED UNDER TXDOT ITEM 300.3.

CONCRETE SHALL BE CLASS "A" ACCORDING TO TXDOT ITEM 421 UNLESS OTHERWISE ON PLANS.

REINFORCING STEEL SHALL BE FROM NEW BILLET AND SHALL CONFORM TO TXDOT ITEM 440. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS EXCEPT WHEN REFERRING TO CLEARANCE.

ALL SAWED JOINTS SHALL BE SAWED WITHIN 24 HOURS OF POURING.

ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED WITHOUT THE SPECIFIC APPROVAL OF THE ENGINEER.

ORDINARY COMPACTION CONTROL IS REQUIRED ON THIS PROJECT.

ALL ROLLING FOR COMPACTION OF ASPHALTIC CONCRETE PAVEMENT SHALL BE COMPLETED BEFORE THE MIXTURE TEMPERATURE DROPS BELOW 175 DEG. (F).

ALL FILL MATERIAL SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL.

CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO THE NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS, OFFICES, DIRECTORS, OR CONSULTANTS, HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.

ALL CMP (CORRUGATED METAL PIPE) USED ON THIS PROJECT SHALL HAVE A MANNING'S "N" VALUE OF 0.024, UNLESS OTHERWISE SHOWN ON PLANS.

CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTING PER CURRENT CITY OF NEW BRAUNFELS REQUIREMENTS. ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. ENGINEER AND OWNER RESERVE THE RIGHT TO HAVE THE CONTRACTOR REMOVE AND REPLACE ANY MATERIAL THAT WAS NOT TESTED OR FAILED TESTING. ALL COST ASSOCIATED WITH THE REMOVAL, REPLACEMENT AND TESTING SHALL BE PAID BY THE CONTRACTOR.

ALL PVC SLEEVES SHALL BE INSTALLED 3 FEET BELOW FINISHED GRADE AND ENDS SHALL BE MARKED SO THAT LOCATIONS OF SLEEVES CAN BE EASILY IDENTIFIED.

PRE-CONSTRUCTION CONFERENCE IS REQUIRED. ENGINEER WILL ARRANGE SUCH CONFERENCE IN COORDINATION WITH CITY OF NEW BRAUNFELS STREET INSPECTOR & NEW BRAUNFELS UTILITIES INSPECTOR. NO CONSTRUCTION MAY BEGIN PRIOR TO THE PRE-CONSTRUCTION CONFERENCE.

CONTRACTOR SHALL COORDINATE WITH DRY UTILITY INSTALLERS AND SHARED TRENCHING SHALL BE UTILIZED, CUTTING THE STREETS AFTER COMPLETION BY DRY UTILITIES SHALL NOT BE ACCEPTABLE.

AS PER PLATTING ORDINANCE SECTION 118-38M.: WHEN ALL IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD DRAWINGS" PLANS, AND A DIGITAL COPY OF ALL PLANS (AUTOCAD 2000 MINIMUM) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.

EROSION / SEDIMENTATION CONTROL

AT A MINIMUM, THESE CONTROLS SHALL CONSIST OF ROCK BERMS AND/OR SILT FENCES CONSTRUCTED PARALLEL TO AND DOWN GRADIENT FROM THE TRENCHES. THE ROCK BERM OR SILT FENCES SHALL BE INSTALLED IN A MANNER SUCH THAT ANY RAINFALL RUNOFF SHALL BE FILTERED. HAY BALES SHALL NOT BE USED FOR TEMPORARY EROSION AND SEDIMENTATION CONTROLS.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED DURING CONSTRUCTION BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CONTROLS WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED {31 TAC 313.5 (C)(12)}. ADDITIONAL PROTECTION MAY BE REQUIRED IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER/ENGINEER.

PLACEMENT OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS. ACTUAL LOCATIONS MAY VARY SLIGHTLY FROM THE PLANS, BUT WILL BE VERIFIED BY THE ENGINEER/INSPECTOR IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY SIGNIFICANT RAINFALL TO INSURE DISTURBANCE OF THE STRUCTURES HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER A RAINFALL SHALL BE REMOVED FROM THE SITE OR PLACED IN AN ENGINEER APPROVED DESIGNATED DISPOSAL AREA.

CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT NO EROSION CONTROL MEASURES BLOCK THE DRAINAGE SYSTEM FROM WORKING AS DESIGNED.

CITY OF NEW BRAUNFELS CONSTRUCTION NOTES

REVISED 01/2019

IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.

THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SCHEDULE A PRECONSTRUCTION MEETING.

FOR PUBLIC INFRASTRUCTURE PERMIT (SC) OR SITE PREP PERMIT (SD) PROJECTS:

- FOR INSPECTIONS, YOU MUST CALL BEFORE 12:00 P.M., 48 HOURS PRIOR TO YOUR INSPECTION REQUEST.
- EACH INSPECTION WILL BE ALLOTTED 1 HOUR UNLESS YOU REQUEST FOR MORE TIME.
- ONCE YOUR REQUEST HAS BEEN ACCEPTED, YOU WILL RECEIVE A CALL FROM THE CITY OF NEW BRAUNFELS INSPECTOR.

FOR COMMERCIAL PERMIT (CP) PROJECTS:

- ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,
- FAXED IN AT 830-608-2117 OR,
- E-MAILED AT [INSPECTIONS@NBTEXAS.ORG](mailto:INSPECTIONS@NBTEXAS.ORG).

IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF, IN THE OPINION OF THE ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

A TXDOT TYPE II B-B BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE ROADWAY ADJACENT TO ALL FIRE HYDRANTS, IN LOCATIONS WHERE HYDRANTS ARE SITUATED ON CORNERS, BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH FORM THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET TXDOT MATERIAL, EPOXY AND ADHESIVE SPECIFICATIONS. GROUNDWATER

IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS, BUILDERS, GEO-TECHNICAL ENGINEER, AND PROJECT ENGINEER TO IMMEDIATELY NOTIFY THE OFFICE OF THE CITY ENGINEER AND PROJECT ENGINEER IF THE PRESENCE OF GROUNDWATER WITHIN THE SITE IS EVIDENT. UPON NOTIFICATION THE PROJECT ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. THE CITY ENGINEER SHALL RESPOND WITHIN TWO (2) BUSINESS DAYS UPON RECEIPT OF THE MITIGATION PLAN. ALL CONSTRUCTION ACTIVITY, IMPACTED BY THE DISCOVERY OF GROUNDWATER, SHALL BE SUSPENDED UNTIL THE CITY ENGINEER GRANTS A WRITTEN APPROVAL OF THE GROUNDWATER MITIGATION PLAN.

RECORD DRAWINGS

AS PER PLATTING ORDINANCE SECTION 118-38M.: WHEN ALL OF THE IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD DRAWING" PLANS, AND A DIGITAL COPY OF ALL PLANS (PDF COPY) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.

CONSTRUCTION NOTE

ENGINEER OF RECORD IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL SUFFICIENT TO MITIGATE OFF SITE IMPACTS ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.

DRAINAGE NOTE

DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE THE IMPACT OF CONSTRUCTION SHALL BE INSTALLED PRIOR TO ADDING IMPERVIOUS COVER.

FINISHED FLOOR ELEVATIONS

THE ELEVATION OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE.

SOILS TESTING

PROCTORS SHALL BE SAMPLED FROM ON-SITE MATERIAL (ON-SITE IS DEFINED AS LIMITS OF CONSTRUCTION FOR THIS -PLAN SET) AND A COPY OF THE PROCTOR RESULTS SHALL BE DELIVERED TO THE CITY OF NEW BRAUNFELS STREET INSPECTOR PRIOR TO ANY DENSITY TESTS.

ROADWAY

ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FLEXIBLE BASE OR FILL/EMBANKMENT MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") LOOSE. THE REQUIRED DENSITY FOR THE FILL/EMBANKMENT MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 132. THE REQUIRED DENSITY FOR THE FLEXIBLE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 247. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT. UPON COMPLETION OF TESTING, THE GEOTECHNICAL ENGINEER WILL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE

BASE, AND FILL MATERIAL, AND SUBGRADE, HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

ITEM 340

ASPHALTIC CONCRETE PAVEMENT SHALL BE THE TYPE OF HOT MIX ASPHALT AS DEFINED IN TXDOT'S STANDARD SPECIFICATIONS FOR CURRENT TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET AND BRIDGES.

THE CITY OF NEW BRAUNFELS WILL NOT ACCEPT THE USE OF RECYCLED ASPHALT PAVEMENT (RAP) OR RECYCLED ASPHALT SHINGLES (RAS) IN ASPHALT MIXTURES FOR NEW ROADWAYS. ANY DEBRIS INCLUSIONS WITHIN NEW ASPHALT PAVEMENTS WILL RESULT IN ASPHALT REMOVAL AND REPLACEMENT FROM CURB TO CURB FOR LIMITS TO BE DETERMINED BY THE CITY OF NEW BRAUNFELS.

THE ASPHALTIC CONCRETE PAVEMENT SURFACE COURSE SHALL BE PLANT MIXED, HOT LAID TYPE "D" MEETING THE SPECIFICATION REQUIREMENTS OF TXDOT ITEM 340. THE ASPHALTIC CONCRETE PAVEMENT SUB-SURFACE COURSES SHALL BE PLANT MIXED, HOT LAID TYPE "B" MEETING THE SPECIFICATION REQUIREMENTS OF TXDOT ITEM 340. THE MIXTURE SHALL BE DESIGNED PER THE DESIGN REQUIREMENTS SPECIFIED IN TXDOT ITEM 340 AND SHALL BE COMPACTED TO BETWEEN 91 AND 95 PERCENT OF THE MAXIMUM THEORETICAL DENSITY AS DETERMINED BY TXDOT TEST METHOD TEX-227-F. PLACE THE MIXTURE WHEN THE ROADWAY SURFACE TEMPERATURE IS AT OR ABOVE 60°F. COMPLETE ALL COMPACTION OPERATIONS BEFORE THE PAVEMENT TEMPERATURE DROPS BELOW 160°F. THE ASPHALT CEMENT CONTENT BY PERCENT OF TOTAL MIXTURE WEIGHT SHALL FALL WITHIN A TOLERANCE OF ±0.5 PERCENT FROM A SPECIFIC MIX DESIGN.

UTILITY TRENCH COMPACTION (ADDED TO THE CONSTRUCTION PLANS ON ALL UTILITY PLAN SHEETS).

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

CITY OF NEW BRAUNFELS CONSTRUCTION NOTES  
01/2019

REVISED

CURB CUT DUE TO CONSTRUCTION OF NEW RIGHT-OF-WAY CONSTRUCTION

- (INDICATE THE 2 OPTIONS ON THE CONSTRUCTION PLANS).
- 1.SAWCUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION.
  - 2.SAWCUT EXISTING CURB TO TIE INTO EXISTING CONSTRUCTION.

CONSTRUCTION STABILIZED ENTRANCE

SAWCUT CURB FOR CONSTRUCTION ENTRANCE.

STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3"x6" ROCK TO BE PLACED A MINIMUM LENGTH OF 25-FT. AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE CITY RIGHT-OF-WAY. RIGHT- OF-WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.

(NOTES TO BE PLACED ON ALL VW PLAN & DETAIL SHEETS)

ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A.

SPECIFICATIONS. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.

SIGNING AND PAVEMENT MARKING PLAN NOTES

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREETS NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CITY WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

SEEDING AND ESTABLISHMENT OF VEGETATION WITHIN EARTHEN CHANNELS, STORMWATER BASINS AND DISTURBED AREAS

SEEDING FOR THE PURPOSE OF ESTABLISHING VEGETATION WITHIN CONSTRUCTED EARTHEN CHANNELS, BASINS AND DISTURBED AREAS SHALL BE CONDUCTED IN ACCORDANCE WITH ITEM 164 (SEEDING FOR EROSION CONTROL) OF TXDOT'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS AND BRIDGES MANUAL. ONLY SEED TYPES AND MIXES SPECIFIED FOR THE SAN ANTONIO DISTRICT (DISTRICT 15) IN TABLES 1 AND 2 UNDER ITEM 164 SHALL BE UTILIZED. DURING THE COOL SEASON (SEPT 1-NOV 30), CEREAL RYE AND SEED SPECIES SPECIFIED FOR THE SAN ANTONIO DISTRICT IN TABLE 3 MAY BE USED. FOR COOL SEASON SEEDING APPLICATIONS, COOL SEASON SEED MIXES SHALL BE USED IN CONJUNCTION WITH SEED MIXES FOR THE SAN ANTONIO DISTRICT AS SPECIFIED IN TABLE 1 AND 2 UNDER ITEM 164.

IT MAY BE DEEMED NECESSARY TO INCORPORATE TOPSOIL AND SOIL AMENDMENTS (I.E. COMPOST/ FERTILIZER) INTO EXISTING SOIL IN ORDER TO FACILITATE VEGETATION GROWTH. TOPSOIL, COMPOST AND FERTILIZER ADDITIONS SHALL BE CONDUCTED ACCORDING TO ITEMS 160, 161 AND 166 OF TXDOT'S STANDARD SPECIFICATIONS MANUAL, RESPECTIVELY.

WATERING MAY ALSO BE NECESSARY TO FACILITATE AND EXPEDITE THE SPROUTING AND GROWTH OF VEGETATION. ITEM 168 OF TXDOT'S STANDARD SPECIFICATIONS MANUAL SHALL BE ADHERED TO FOR VEGETATIVE WATERING.

IF EXTENDED DROUGHT CONDITIONS EXIST THAT HINDER OR PROHIBIT THE GROWTH AND ESTABLISHMENT OF VEGETATION, THE CONTRACT/ DEVELOPER SHALL PROVIDE A PLAN TO THE CITY OF NEW BRAUNFELS DESCRIBING THE MEASURES THAT WILL BE TAKEN TO STABILIZE EARTHEN DRAINAGE INFRASTRUCTURE UNTIL A TIME WHEN GROWING CONDITIONS BECOME MORE FAVORABLE.

UTILITIES

LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION, INCLUDING THOSE NOT SHOWN ON THE DRAWINGS.

ANY EXISTING UTILITIES, ON OR OFF THE SITE, THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE RESPECTIVE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.

CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION AT:

THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION

NEW BRAUNFELS UTILITIES (ELECTRIC)	(830) 608-8951
TIME WARNER CABLE	(830) 625-3408
CENTERPOINT ENERGY (GAS)	(830) 643-6434
AT&T	(830) 303-1333
TEXAS ONE CALL SYSTEM	(800) 245-4545
ENERGY TRANSFER (PETROLEUM PIPELINE)	(210) 262-2486

CONTRACTOR SHALL REFERENCE NEW BRAUNFELS UTILITIES PLANS FOR FINAL ELECTRICAL LINE DESIGNS AND LAYOUT.

SEQUENCE OF CONSTRUCTION

1. INSTALL EROSION CONTROLS PER APPROVED PLAN.
2. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
3. CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
4. CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
5. CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
6. CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
7. INSTALL STREETSCAPE AND/OR LANDSCAPING IMPROVEMENTS.
8. CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 70% VEGETATION PRIOR TO COMPLETION
9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
10. TPDES REQUIREMENTS - DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY WILL BEGIN AGAIN WITHIN 21 DAYS

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



06/16/2020

GENERAL  
CONSTRUCTION NOTES  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

REVISION	DATE	NO.	DESCRIPTION

DATE: JUNE 2020

DRAWN BY: MK

DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

HMT PROJECT NO.:  
031.061

SHEET

C0.02

TXDOT CONSTRUCTION GENERAL NOTES

1. "THE DESIGN AND CONSTRUCTION WILL PROVIDE FOR PRESERVING ALL EXISTING FEATURES IN OR NEAR THE STATE RIGHT OF WAY BEING AFFECTED BY THE WIDENING. THIS INCLUDES BUT IS NOT LIMITED TO: EXISTING DRIVEWAY GATE SET-BACKS; RELOCATION OF ELECTRONIC PRIVATE PROPERTY GATES, MAILBOX TURNOUTS, MAIL BOXES AND SUPPORTS, CATTLE GUARDS, ROADWAY SIGNING, EXISTING RIP-RAP OR OTHER PERMANENT EROSION CONTROL FEATURES, DIVERSIONARY BERMS, SWALES, DITCHES, AMOUNT AND CONFIGURATION OF DRIVEWAY FLARES AND DRIVEWAY CENTERLINE PROFILE, METAL BEAM GUARD FENCE AND END TREATMENTS, ETC. EXISTING DRIVEWAY CULVERTS AND SAFETY END TREATMENTS IF EFFECTED BY ROADWAY WIDENING WILL BE RECONSTRUCTED TO PRESERVE EXISTING FRONT SLOPE RATIOS. THE COORDINATION OF ITEMS THAT EFFECT EXISTING PRIVATE PROPERTY ACCESS, MAIL DELIVERY, ETC. IS THE RESPONSIBILITY OF THE DEVELOPER. THE WRITTEN CONCURRENCE OF ANY EFFECTED PROPERTY OWNERS FOR CONSTRUCTION EFFECTING THEIR DRIVEWAYS OR MAILBOX TURNOUTS MUST BE OBTAINED AND PROVIDED TXDOT PRIOR TO TXDOT DRIVEWAY PERMITS BEING ISSUED."
2. "FOR WORK IN STATE RIGHT OF WAY, THE DEVELOPER IS RESPONSIBLE FOR COORDINATION OF, OBTAINING PERMITS FOR, AND COMPLYING WITH ANY AND ALL STATE AND FEDERAL REGULATORY AGENCIES AND ALL APPLICABLE LAWS, RULES AND REGULATIONS PERTAINING TO THE REGULATION OF DRAINAGE, PRESERVATION OF CULTURAL RESOURCES, NATURAL RESOURCES AND THE ENVIRONMENT. THE DEVELOPER IS RESPONSIBLE FOR DETERMINING IF THE PROJECT IS IN AN ENVIRONMENTALLY SENSITIVE AREA SUCH AS WITHIN THE RECHARGE OR CONTRIBUTING ZONE OF PROTECTED AQUIFERS, AND ACT IN ACCORDANCE WITH ALL RESOURCE AGENCY REGULATIONS."
- IF TXDOT HAS A CZP OR WPAP ON FILE WITH TCEQ, THE DEVELOPER IS RESPONSIBLE FOR AMENDING TXDOT'S PERMIT, OBTAINING TCEQ APPROVAL AND PROVIDING TXDOT WITH THE APPROVED AMENDED PERMIT. THE AMENDED PERMIT WILL ADDRESS THE RELOCATION OF ANY TXDOT PERMANENT BMP'S INCLUDING VEGETATIVE FILTER STRIPS THAT MAY BE IMPACTED BY WORK DONE WITHIN TXDOT ROW.
- IF TXDOT DOES NOT HAVE A CZP OR WPAP ON FILE WITH TCEQ, ANY PERMANENT BMP'S INCLUDING VEGETATIVE FILTER STRIPS, THAT MAY BE REQUIRED IN ORDER TO TREAT ADDITIONAL IMPERVIOUS COVER PLACED IN TXDOT ROW WILL BE LOCATED IN PRIVATE PROPERTY AND THE DEVELOPER WILL PROVIDE TXDOT WITH EVIDENCE OF TCEQ APPROVAL OF THE ADDITIONAL IMPERVIOUS COVER.
- THE DEVELOPER MAY NOT OPERATE UNDER RESOURCE AGENCY ENVIRONMENTAL CLEARANCE OF A PREVIOUS OR ONGOING TXDOT PROJECT, BUT WILL BE REQUIRED TO OBTAIN SEPARATE RESOURCE/ENVIRONMENTAL AGENCY CLEARANCE."
3. "IF WASTE AREAS OR MATERIAL SOURCE AREAS RESULT FROM THIS PROJECT, THE CONTRACTOR IS REMINDED TO FOLLOW THE REQUIREMENTS OF THE TEXAS AGGREGATE QUARRY AND PIT SAFETY ACT. IN ADDITION, IT IS REQUESTED THAT THESE AREAS NOT BE VISIBLE FROM ANY HIGHWAY ON THE STATE SYSTEM."
- 3.5. "ANY MATERIALS REMOVED AND NOT REUSED AND DETERMINED TO BE SALVAGEABLE SHALL BE STORED WITHIN THE PROJECT LIMITS AT AN APPROVED LOCATION OR DELIVERED UNDAMAGED TO THE STORAGE YARD AS DIRECTED. PROPERLY DISPOSE UNSALVAGEABLE MATERIALS IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DEFACE TRAFFIC SIGNS SO THAT THEY WILL NOT REAPPEAR IN PUBLIC AS SIGNS."
4. "ANY TREES EXISTING WITHIN STATE RIGHT OF WAY ARE THE NATURAL RESOURCES OF THE STATE AND WILL BE PROTECTED. IN THE EVENT THAT TREES MUST BE REMOVED, TXDOT WRITTEN PERMISSION WILL BE RECEIVED IN ADVANCE AND WILL IDENTIFY THE SPECIFIC TREES BY SPECIES, DIAMETER AND LOCATION TO BE REMOVED. THE DEVELOPER WILL BE FINED FOR ANY UNPERMITTED REMOVAL OF TREES."
- 4.5. "IN THE EVENT THAT THERE ARE AREAS OF PUBLIC ROW DEDICATION RESULTING FROM THE PLATTING PROCESS, THE AREA WITHIN THE PUBLIC ROW DEDICATION DOES NOT PASS INTO TXDOT OWNERSHIP AS A RESULT OF PLATTING. HOWEVER, THE DEVELOPER WILL REMOVE ANY OLD FENCING, GATES AND UNSIGHTLY VEGETATION WITHIN THE AREA OF THE ROW DEDICATION, LEAVING IT IN AN AESTHETICALLY PLEASING CONDITION. THE AREA OF ROW DEDICATION WILL NOT BE MOWED OR OTHERWISE MAINTAINED BY TXDOT. PRIOR TO REMOVAL OF TREES IN THE AREA OF ROW DEDICATION, THE TREES WILL FIRST BE EVALUATED IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL TREE PROTECTION ORDINANCES AND THE WRITTEN CONCURRENCE OF THE LOCAL JURISDICTION WILL BE PROVIDED TO TXDOT."
5. "THE DEVELOPER WILL MAINTAIN AT THE PROJECT SITE, AND MAKE AVAILABLE UPON REQUEST, COPIES OF ALL APPROVED ENVIRONMENTAL PLANS AND PERMITS RELATING TO WORK IN STATE RIGHT OF WAY."
6. "PRIOR TO BEGINNING GRADING ACTIVITY THE CONTRACTOR WILL SET AND MAINTAIN ROADWAY STATIONING, CONTROL POINTS, MARKS, STAKES TO ESTABLISH LINES, SLOPES, GRADES AND CENTERLINES."
7. "ANY SLOPES IN STATE RIGHT OF WAY WHICH BECOME STEEPER THAN 3:1 AS A RESULT OF THE WORK WILL BE TREATED WITH 4" THICK REINFORCED CONCRETE RIPRAP AND BE TREATED WITH METAL BEAM GUARD FENCE. THIS MAY ENTAIL ADDITIONAL RIP-RAP BEYOND THAT SHOWN IN THE PLANS."
- 7.5. "UNLESS OTHERWISE SHOWN ON THE PLANS, WHERE EXISTING CONCRETE RIP-RAP IS REMOVED, MODIFIED OR EXTENDED, THE PORTION TO BE REMOVED WILL BE NEATLY SAW-CUT PRIOR TO REMOVAL AND THE NEW RIP-RAP WILL BE FORMED TO MATCH THE EXISTING LINES AND GRADES OF THE EXISTING RIP-RAP AND WILL BE DOWELED INTO THE EXISTING RIP-RAP WITH #3 BARS ON 12" CENTERS. THE DOWEL BARS WILL BE EPOXIED IN PLACE WITH EPOXY MEETING TXDOT REQUIREMENTS. THE MINIMUM EMBEDMENT LENGTH IS 9 INCHES. THIS APPLIES TO ANY TYPE OF CONCRETE RIP-RAP INCLUDING METAL BEAM GUARD FENCE OR CABLE BARRIER MOW STRIPS."
8. "DUANE HOFFERLICHTER (830) 609-0707 NEW BRAUNFELS, TRAVIS YOUNG (830) 303-0130 SEGUIN, CHAD LUX (830) 816-2430 BOERNE, MARK ANDREWS (830) 393-3144 FLORESVILLE, TXDOT MAINTENANCE OFFICE WILL BE CONTACTED BY THE CONTRACTOR 48 HOURS PRIOR TO WORK OCCURRING IN STATE RIGHT OF WAY."
9. "STATE RIGHT OF WAY WILL NOT BE USED AS AN AREA FOR CONTRACTOR PARKING OR FOR STAGING THE RECEIPT OF MATERIALS OR EQUIPMENT."
10. "TRAFFIC CONTROL AND CONSTRUCTION BARRICADES WILL MEET THE REQUIREMENTS OF THE TEXAS MUTCD."
11. "THE CONTRACTOR WILL PROVIDE ADVANCE NOTIFICATION TO THE ENGINEER OF IMPENDING/UPCOMING LANE CLOSURES FOR ALL TEMPORARY AND/OR PERMANENT LANE, RAMP, CONNECTOR, FRONTAGE, SHOULDER, MEDIAN CROSSOVER, ETC. CLOSURES OR DETOURS."
12. "ACCESS TO ADJOINING PROPERTY MUST BE MAINTAINED AT ALL TIMES."
13. "UNLESS OTHERWISE NOTED IN THE PLANS AND/OR AS DIRECTED BY THE AREA ENGINEER OR MAINTENANCE SUPERVISOR, DAILY LANE CLOSURES SHALL BE LIMITED ACCORDING TO THE FOLLOWING RESTRICTIONS:  
NIGHTTIME: MAINTENANCE SUPERVISOR AND/OR AREA ENGINEER APPROVAL REQUIRED. (WITH UNIFORMED OFF DUTY LAW ENFORCEMENT OFFICERS).  
WEEKEND CLOSURES: MAINTENANCE SUPERVISOR AND/OR AREA ENGINEER APPROVAL REQUIRED."
14. "NO LANE CLOSURES OR ROADWAY CLOSURES WILL BE PERMITTED FOR THE FOLLOWING KEY DATES AND/OR SPECIAL EVENTS:  
  
BETWEEN DECEMBER 15 AND JANUARY 1:  
WEDNESDAY BEFORE THANKSGIVING THRU THE SUNDAY AFTER THANKSGIVING.  
SATURDAY AND SUNDAY BEFORE MEMORIAL DAY AND LABOR DAY.  
SATURDAY OR SUNDAY WHEN JULY 4 FALLS ON A FRIDAY OR MONDAY."
15. "AT NO TIME WILL THE ROADWAY TRAVEL WAY BE BLOCKED"
16. "LANE CLOSURES WILL ONLY BE PERMITTED WITH 48 HOUR PRIOR APPROVAL OF THE TXDOT MAINTENANCE SUPERVISOR. LANE CLOSURES WILL BE PERMITTED ONLY BETWEEN 9:00 A.M. AND 4:00 P.M. MONDAY THROUGH FRIDAY."
- 16.5. "FOR LANE CLOSURES ON TWO-LANE TWO-WAY ROADWAYS, INCLUDING DURING PILOT CAR OPERATIONS, FLAGGERS WILL BE PLACED AT THE BEGINNING AND END OF THE WORK ZONE AS WELL AS AT EACH INDIVIDUAL DRIVEWAY AND SIDE ROAD INTERSECTION WITHIN THE LIMITS OF THE WORK ZONE AND EXTENDING FOR A MINIMUM OF THE BEGINNING OF ADVANCED WARNING SIGNS EITHER END OF THE WORK ZONE TO CONTROL, WARN AND DIRECT SIDE ROAD AND DRIVEWAY TRAFFIC OF THE CHANGE IN TRAFFIC OPERATIONS. WHENEVER ONE WAY TRAFFIC CONTROL IS ACCOMPLISHED BY TRAFFIC SIGNALS WORK ZONE FLAGGERS WILL BE SIMILARLY STATIONED AT EACH INDIVIDUAL DRIVEWAY AND SIDE ROAD INTERSECTION WITHIN THE LIMITS OF THE WORK ZONE AND EXTENDING FOR A MINIMUM OF THE BEGINNING OF THE ADVANCED WARNING SIGNS EITHER END OF THE WORK ZONE. ALL FLAGGERS WILL BE IN CONSTANT RADIO CONTACT."
17. "A MINIMUM 3:1 (H:V) TEMPORARY SAFETY SLOPE OF STABLE COMPACTED MATERIAL WILL BE REQUIRED ADJACENT TO THE STATE HIGHWAY EDGE OF PAVEMENT AT ALL TIMES DURING NON WORKING HOURS."
18. "ONLY ONE SIDE OF THE ROADWAY WILL BE OPEN TO CONSTRUCTION AT A TIME. WORK WILL BE COMPLETED AND PAVEMENT EDGES BACKFILLED ON ONE SIDE OF THE ROAD BEFORE WORK WILL BEGIN ON THE OPPOSITE SIDE OF THE ROADWAY."
19. "ALL MILLING, PAVING AND SEAL COAT OPERATIONS SHALL PROCEED IN THE DIRECTION OF TRAFFIC."
20. "ANY PAVEMENT EDGE DROP-OFFS BETWEEN 1 AND 2 INCHES IN HEIGHT WILL HAVE CW 8-11 WARNING SIGNS. ANY PAVEMENT EDGE DROP-OFF 2 INCHES OR GREATER WILL HAVE A 3:1 COMPACTED SAFETY SLOPE AND CW 8-9A OR CW 8-11 SIGNS PLUS CHANNELIZING DEVICES. PAVEMENT EDGES WILL BE SHOULDERED UP WITH COMPACTED EMBANKMENT MATERIAL AND 4 INCHES OF TOPSOIL AS SOON AS POSSIBLE AFTER PAVING IS COMPLETED ON THE SIDE OF THE ROAD BEING WIDENED."
21. "PROOF ROLLING OF SUBGRADE IS REQUIRED AND SHALL BE WITNESSED BY TXDOT PRIOR TO PLACEMENT OF PAVEMENT STRUCTURE UNLESS OTHERWISE APPROVED BY THE TXDOT MAINTENANCE SUPERVISOR. THE REQUIREMENT FOR PROOF-ROLLING OF SUBGRADE IS NOT SUPERSEDED BY ANY OTHER REQUIREMENTS INCLUDING THOSE OF ANY GEOTECHNICAL REPORT."
22. "ALL FLEXIBLE BASE WILL HAVE A MINIMUM PLASTICITY INDEX OF 4."
23. "ALL COURSES OF ASPHALTIC CONCRETE PAVEMENT (REGARDLESS OF TYPE) WILL BE PLACED WITH A ASPHALT PAVING EQUIPMENT MEETING THE REQUIREMENTS OF TXDOT ITEM 320, "EQUIPMENT FOR ASPHALT CONCRETE PAVEMENT", UNLESS OTHERWISE APPROVED BY THE MAINTENANCE SUPERVISOR."
- 23.5. "TACK COAT WILL BE APPLIED WITH AN ASPHALT DISTRIBUTOR AND SPREAD ACROSS THE SURFACE RECEIVING THE TACK COAT BY MULTIPLE PASSES OF A PNEUMATIC ROLLER. THE APPLICATION OF TACK COAT AND THE NUMBER OF PASSES OF THE PNEUMATIC ROLLER WILL BE SUFFICIENT TO MAKE THE SURFACE AND EXPOSED EDGES CONSISTENTLY BLACK WITH NO AREAS DEVOID OF TACK. ASPHALT FOR TACK COAT SHALL MEET TXDOT SPECS AND BE FROM A TXDOT APPROVED SOURCE."
24. "ALL SURFACE AGGREGATES WILL MEET THE REQUIREMENTS OF TXDOT FRICTION CLASSIFICATION "B" AND WILL MEET PG BINDER GRADE 70-22"
25. "ALL SURFACE ASPHALT CONCRETE PAVEMENT WILL BE UNDER-SEALED WITH A ONE COURSE SURFACE TREATMENT."
26. "ALL ASPHALTIC CONCRETE PAVEMENT USED IN BASE COURSES WILL BE TYPE "A" OR "B" AND WILL MEET PG BINDER GRADE 64-22."
27. "ALL PAVEMENT WIDENING INCLUDING SHOULDERS WILL MATCH THE EXISTING PAVEMENT CROSS SLOPE."
28. "ALL PAVEMENT MARKINGS WILL BE TYPE I THERMOPLASTIC (100 MIL) WITH UNDER-SEAL MEETING THE REQUIREMENTS OF TXDOT ITEM 666, REFLECTORIZED PAVEMENT MARKINGS. THE CONTRACTOR WILL PLACE GUIDE MARKS IN ACCORDANCE WITH ITEM 666 AND WILL MAKE ARRANGEMENTS FOR TXDOT INSPECTION OF THE PAVEMENT MARKING LAYOUT PRIOR TO PLACEMENT OF STRIPING. EQUIPMENT USED FOR THE PLACEMENT OF STRIPING WILL MEET THE PRODUCTION REQUIREMENTS OF ITEM 666 UNLESS OTHERWISE APPROVED IN ADVANCE BY THE TXDOT MAINTENANCE SUPERVISOR."
29. "EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS WILL BE LIGHTLY GROUND IN A MANNER THAT DOES NOT DAMAGE THE PAVEMENT SURFACE, TO REMOVE ANY PAVEMENT MARKING ACCUMULATION, AND WILL BE COVERED WITH A STRIP SEAL OF 18" MINIMUM WIDTH, CONSISTING OF PRECOATED GRADE 5, FRICTION CLASS B AGGREGATE."
30. "ALL MATERIALS AND CONSTRUCTION METHODS USED IN STATE RIGHT OF WAY WILL MEET TXDOT SPECIFICATIONS. THIS SUPERSEDES ALL OTHER SPECIFICATIONS IN THE PLANS."
31. "ALL TURN LANE CONCRETE PAVEMENT IN STATE ROW WILL MEET THE REQUIREMENTS OF TXDOT ITEM 360 CLASS P CONCRETE AND WILL BE BATCHED AT CONCRETE PLANTS HAVING A CURRENT APPROVED MIX DESIGN. CLASS P CONCRETE SHALL HAVE 7 AND 28 DAY COMPRESSIVE STRENGTH OF 3200 PSI AND 4400 PSI RESPECTIVELY."
32. "WHEN WIDENING EXISTING CONCRETE PAVEMENTS, JOINTS IN THE NEW PAVEMENT WILL MATCH JOINTS IN EXISTING PAVEMENT AND CURB."
33. "THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT TXDOT APPROVED MATERIALS, MIX DESIGNS, APPROVED SOURCES AND PRODUCTS ARE USED FOR ALL WORK IN STATE ROW. THE CONTRACTOR WILL ARRANGE FOR THE SERVICES OF A QUALIFIED TESTING LABORATORY FOR ALL ITEMS REQUIRING TESTING AND WILL NOTIFY TXDOT OF ANY DISCREPANCIES BETWEEN TEST RESULTS AND TXDOT SPECS IN A TIMELY MANNER. THE CONTRACTOR WILL PROVIDE TO TXDOT INVOICES AND TESTING RESULTS AS SOON THEY ARE AVAILABLE. FAILURE TO DO THIS WILL RESULT IN REJECTION OF THE WORK."
34. "SAWING OF CONTRACTION/CONSTRUCTION JOINTS IN CONCRETE PAVEMENT WILL BE ACCOMPLISHED AS SOON AS PERSONNEL CAN WALK ON THE CONCRETE WITHOUT DAMAGING THE SURFACE REGARDLESS OF TIME OF DAY OR WEATHER CONDITIONS. STAND-BY POWER DRIVEN CONCRETE SAWS WILL BE PROVIDED DURING THE SAWING OPERATION. CURING COMPOUND WILL BE RE-APPLIED TO THE SAWED JOINT IMMEDIATELY UPON SAWING THE JOINT."
35. "GUARDRAIL SGT'S WILL BE TYPE 3 UNLESS OTHERWISE APPROVED BY THE TXDOT MAINTENANCE SUPERVISOR. GUARDRAIL MOW STRIP PLACED ADJACENT TO OTHER CONCRETE RIP-RAP WILL BE SEPARATED BY A FORMED CONSTRUCTION JOINT."
36. "ANY CONCRETE CURB TO BE REMOVED WILL BE SAW-CUT AT THE LIMITS OF REMOVAL AND BE REMOVED ENTIRELY. SLICING THE TOP PORTION OF THE CURB OFF AND LEAVING REMAINING PORTION OF CURB IN PLACE IS UNACCEPTABLE."

37. "ANY DAMAGE TO TXDOT FACILITIES WILL BE REPAIRED AT NO EXPENSE TO THE STATE, TO TXDOTS SATISFACTION."

38. "SIDEWALKS PLACED IN THE HIGHWAY RIGHT-OF-WAY WILL BE A MINIMUM WIDTH OF FIVE FEET OR COMPLY WITH THE MORE STRINGENT WIDTH AS REQUIRED BY CITY ORDINANCE AND WILL MEET ALL OTHER REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT. PEDESTRIAN RAMPS WILL BE PROVIDED AT STREET AND DRIVEWAY INTERSECTIONS AS SHOWN ON THE CURRENT STATE STANDARD FOR PEDESTRIAN FACILITIES. COLOR CONTRAST AND TEXTURING OF PEDESTRIAN RAMPS WILL BE PLACED AT STREET INTERSECTION RAMPS ONLY AS SHOWN ON THE CURRENT STATE STANDARD FOR PEDESTRIAN FACILITIES. PEDESTRIAN RAMPS AT DRIVEWAY INTERSECTIONS WILL NOT RECEIVE ANY COLOR CONTRAST OR TEXTURING. METAL PLATING FOR SIDEWALK BRIDGES WILL MATCH THE TYPICAL WIDTH OF THE APPROACH SIDEWALK. HIS MAY RESULT IN A WIDTH THAT IS GREATER THAN SHOWN IN THE STANDARD DETAILS INCLUDED IN THE PLANS"

39. "THE CONTRACTOR WILL USE BEST MANAGEMENT PRACTICES (BMP'S) TO MINIMIZE EROSION AND SEDIMENTATION IN THE STATE RIGHT OF WAY RESULTING FROM THE PROPOSED CONSTRUCTION. RE-VEGETATION OF DISTURBED AREAS WILL BE COMPLETED IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS. PERMANENT VEGETATIVE COVER MUST ACHIEVE 70% COVERAGE PRIOR TO PROJECT ACCEPTANCE. SOIL RETENTION BLANKETS MAY BE REQUIRED TO PREVENT EROSION OF TOPSOIL PRIOR TO VEGETATION RE-ESTABLISHMENT"

40. "PRIOR TO SEEDING OR RE-VEGETATION THE FRONT SLOPES WILL BE SHOULDERED UP WITH TOPSOIL TO ELIMINATE ANY PAVEMENT EDGE DROP-OFF."

41. "MUD TRACKED ONTO THE ROADWAY FROM THE SITE WILL BE IMMEDIATELY REMOVED TO THE SATISFACTION OF TXDOT."

42. "IT WILL BE THE DEVELOPER/OWNER'S RESPONSIBILITY TO CLEAN OUT, TO THE STATE'S SATISFACTION, ANY DRAINAGE STRUCTURE OR STORM SEWER SYSTEM THAT BECOMES SILTED AS A RESULT OF THEIR OPERATIONS."

43. "THE ADJUSTMENT OF ANY UTILITIES IN STATE RIGHT OF WAY OR ADJACENT PRIVATE EASEMENT WILL BE THE RESPONSIBILITY OF THE DEVELOPER/OWNERS."

44. "THE CONTRACTOR IS RESPONSIBLE FOR PLACING AND MAINTAINING EXISTING SIGNS ON TXDOT APPROVED TEMPORARY MOUNTS UNTIL PERMANENT SIGNS ARE PLACED."

45. "THE FINAL PLACEMENT OF PERMANENT SIGNS WILL BE COORDINATED PRIOR TO PLACEMENT WITH THE LOCAL TXDOT MAINTENANCE SUPERVISOR."

46-"FOR WORK WITHIN THE STATE RIGHT OF WAY WHERE REMOVAL OF MATERIALS OR DEBRIS WITHIN THE CONSTRUCTION LIMITS AND NOT INCORPORATED IN THE FINISHED ROADWAY SECTION OF RIGHT OF WAY, WILL BE DISPOSED OF IN A MANNER ACCEPTABLE TO THE MAINTENANCE SUPERVISOR AT NO EXPENSE TO THE STATE. MATERIALS THAT ARE NOT DETERMINED TO BE SALVAGEABLE BY THE MAINTENANCE SUPERVISOR BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL AT THEIR EXPENSE. MATERIALS DETERMINED TO BE SALVAGEABLE WILL BE RETURNED TO THE STATE AND DELIVERED TO THE LOCATION AS DETERMINED BY THE MAINTENANCE SUPERVISOR."

47. "REGARDLESS OF ERRORS AND OMISSIONS IN INFORMATION PROVIDED IN THE PLANS OR CROSS-SECTIONS THE PERMITEE IS RESPONSIBLE FOR PROVIDING FOR POSITIVE DRAINAGE OUTFALLS WITHIN AND OFF THE LIMITS OF THE PROJECT."

47.5. "KEEP THE SIGNALS IN OPERATION AT ALL TIMES EXCEPT WHEN NECESSARY FOR SPECIFIC INSTALLATION OPERATIONS, INCLUDING ANY MODIFICATIONS TO EXISTING SIGNAL HEADS TO MAINTAIN CLEAR VISIBILITY AT ALL TIMES. WHEN IT IS NECESSARY FOR A SIGNAL TO BE TURNED OFF, HIRE OFF DUTY POLICE OFFICERS TO CONTROL THE TRAFFIC UNTIL THE SIGNALS ARE BACK IN SATISFACTORY CONDITION."

48. (FOR WORK IN CITY OF NEW BRAUNFELS) "ALL TRAFFIC SIGNALS ON THE STATE HIGHWAY SYSTEM WITHIN THE NEW BRAUNFELS CITY LIMITS, WITH THE EXCEPTION OF SIGNALS ON IH 35, ARE THE RESPONSIBILITY OF THE CITY OF NEW BRAUNFELS AND THE CITY OF NEW BRAUNFELS WILL PERFORM CONSTRUCTION INSPECTION. CONTACT GARRY FORD, P.E. AT (830) 221-4645, 48 HOURS PRIOR TO THE NEED FOR ANY INSPECTIONS. ALSO WHEN NON-TRAFFIC SIGNAL WORK IS BEING PERFORMED WITHIN 400 FEET OF AN EXISTING SIGNALIZED INTERSECTION, FLASHING BEACON OR SCHOOL ZONE FLASHER OR OTHER TYPE OF SIGNAL, IF WITHIN THE CITY OF NEW BRAUNFELS AREA OF RESPONSIBILITY CONTACT GARRY FORD, P.E. TO DETERMINE/VERIFY THE LOCATION OF LOOP DETECTORS, CONDUIT, GROUND-BOXES, ETC. FOR ALL OTHER LOCATIONS, CONTACT TXDOT REPRESENTATIVE, EDUARDO VILLALON, P.E., AT (210) 615-6308, E-MAIL IS EDUARDO.VILLALON@TXDOT.GOV. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY SIGNAL EQUIPMENT DAMAGED BY CONSTRUCTION OPERATIONS. THE METHOD OF REPAIR OR REPLACEMENT SHALL BE PRE-APPROVED AND INSPECTED. DEPENDING ON THE TYPE AND EXTENT OF THE DAMAGE, THE ENGINEER RESERVES THE RIGHT TO PERFORM THE REPAIR OR REPLACEMENT WORK AND THE CONTRACTOR WILL BE BILLED FOR THIS WORK. WHEN WORKING NEAR AERIAL ELECTRICAL LINES OR UTILITY POLES, COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS."

49. (FOR AREAS OTHER THAN CITY OF NEW BRAUNFELS) "WHEN NON-TRAFFIC SIGNAL WORK IS BEING PERFORMED WITHIN 400 FEET OF AN EXISTING SIGNALIZED INTERSECTION, FLASHING BEACON OR SCHOOL ZONE FLASHER OR OTHER TYPE OF SIGNAL, CONTACT TXDOT REPRESENTATIVE, EDUARDO VILLALON, P.E., AT (210) 615-6308, E-MAIL IS EDUARDO.VILLALON@TXDOT.GOV. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY SIGNAL EQUIPMENT DAMAGED BY CONSTRUCTION OPERATIONS. THE METHOD OF REPAIR OR REPLACEMENT SHALL BE PRE-APPROVED AND INSPECTED. DEPENDING ON THE TYPE AND EXTENT OF THE DAMAGE, TXDOT RESERVES THE RIGHT TO PERFORM THE REPAIR OR REPLACEMENT WORK AND THE CONTRACTOR WILL BE BILLED FOR THIS WORK. WHEN WORKING NEAR AERIAL ELECTRICAL LINES OR UTILITY POLES, COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS."

290 S. CASTELL AVE., STE. 100  
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TBPLS FIRM 1053600



06/16/2020

TXDOT NOTES  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION DESCRIPTION	REVISION DATE				

DATE: JUNE 2020

DRAWN BY: MK

DESIGNED BY: CAM

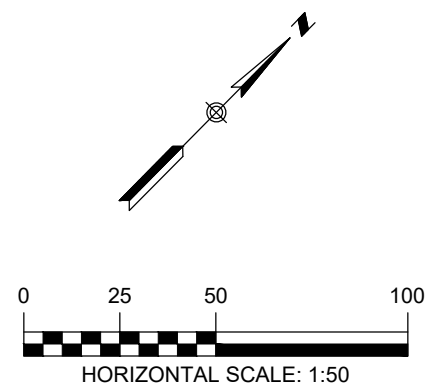
REVIEWED BY: CVH/SMH

HMT PROJECT NO.:  
031.061

SHEET

C0.03

ALL EXISTING STRUCTURES, SUCH AS HYDRANTS, WATER METER BOXES, DRIVEWAYS, DRIVEWAY CULVERTS, AND MAILBOXES, ARE TO BE PROTECTED DURING DEMOLITION.



LEGEND

- 7000 EXISTING CONTOURS
- E E EXISTING ELECTRIC
- W W EXISTING WATER LINE
- LOT LINE
- CONCRETE TO BE REMOVED
- ONLY ASPHALT SURFACE TO BE REMOVED (BASE TO REMAIN)
- ASPHALT AND BASE TO BE REMOVED
- EXISTING DRIVEWAY

MATCHLINE 'A'  
SEE SHEET C1.02

7.503 ACRE TRACT  
VOL. 2432, PG. 786  
O.P.R.G.C.T.

EXISTING GUARDRAIL  
TO BE PROTECTED

REMOVE AND DISPOSE  
OF 4707 SY EXISTING  
ASPHALT LAYER

10.124 ACRE TRACT  
DOC. NO. 2017002973  
O.P.R.G.C.T.

CONTRACTOR TO  
TIE IN TO  
EXISTING DRIVEWAY

LOT 1  
RIC AND SONIA  
MARTINEZ SUBDIVISION  
VOL. 8, PG. 127-128  
M.P.R.G.C.T.

CONTRACTOR TO  
TIE IN TO  
EXISTING DRIVEWAY

CONTRACTOR TO  
TIE IN TO  
EXISTING DRIVEWAY

LOT 2  
RIC AND SONIA MARTINEZ SUBDIVISION  
VOL. 8, PG. 127-128  
M.P.R.G.C.T.

HMAC, TYPE D  
TO BE SCRAPPED OFF  
AND RE-LAID WITH NEW  
HMAC OVER THE  
ENTIRE ROADWAY. NO RAP  
SHALL BE USED.

GRADE FLEX BASE  
TO EXISTING DRIVEWAY

PROPOSED ROAD WIDTH VARIES; MIN WIDTH IS 24'

PROPOSED  
PRIME & TACK COAT

PROPOSED  
SUBGRADE

CONTRACTOR TO  
GRADE TO  
DRAINAGE DITCH  
3:1 MAX SLOPE

EXISTING DRIVEWAY  
CULVERT (NOT TO BE REMOVED  
OR DAMAGED)

12"x8" RIBBON CURB  
11" FLEX. BASE MATERIAL  
95% DENSITY  
FLEXIBLE BASE MATERIAL  
OR BLACK BASE EQUIV.  
100% DENSITY AS PER  
TxDOT TEX-113-E  
AS SHOWN IN TABLE

STREET IMPROVEMENT AT EXISTING DRIVEWAY SECTION  
N.T.S.

MATCHLINE 'B'  
SEE THIS SHEET

CHANNEL A1  
PROPOSED PARKSIDE  
PHASE 1

+/- 64 S.Y. EXISTING  
HWY 46 CONCRETE  
CHANNEL TO BE  
REMOVED.  
CONTRACTOR SHALL  
TIE PROPOSED  
CHANNEL A1 FROM  
PARKSIDE PHASE 1  
DEVELOPMENT INTO  
EXISTING HWY 46  
EXISTING CONCRETE  
CHANNEL

NOTE:  
CONTRACTOR SHALL NOT REMOVE OR DAMAGE EXISTING  
DRIVEWAY CULVERTS.

NOTE:  
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL  
DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES  
HAVE CEASED (TEMPORARILY OR PERMANENT) AND  
SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY  
RESUMES IN 21 DAYS, PER TPDES REQUIREMENTS.  
SEEDING DOES NOT CONSTITUTE STABILIZATION.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE  
SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR  
SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING  
UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL  
AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL  
DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO  
EXACTLY LOCATE AND PRESERVE ANY AND ALL  
UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES.  
CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES  
24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

290 S. CASTELL AVE., STE. 100  
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TBPE FIRM F-10961  
TBPLS FIRM 1053600



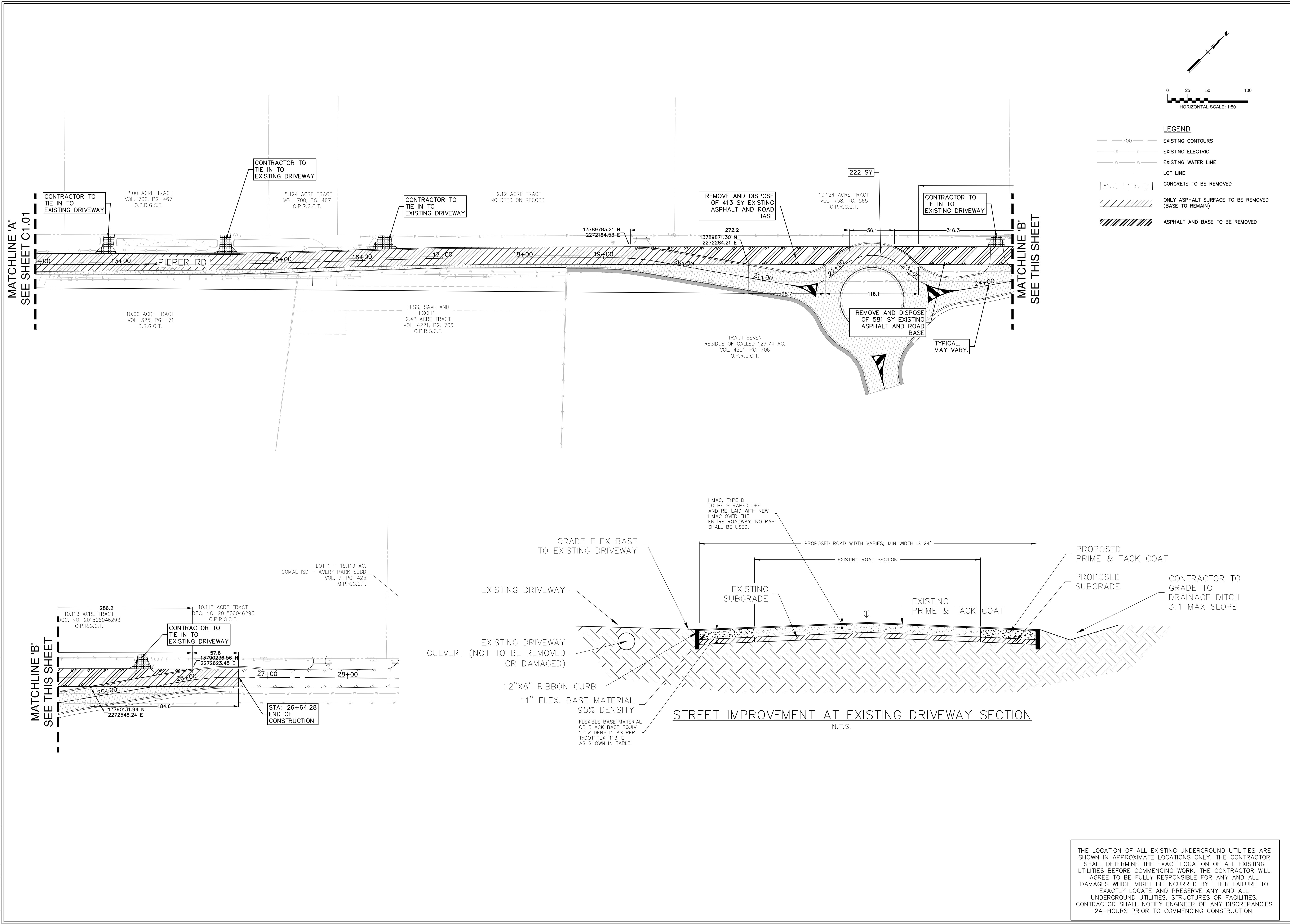
06/16/2020  
DEMOLITION PLAN  
(SHEET 1 OF 2)  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JUNE 2020  
DRAWN BY: MK  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.061

SHEET  
C1.01

Drawing Name: N:\\_Projects\031 - DR Horton\031.061 - 175 Ac Friesenhahn C&S\Office\031.061\_Demo.dwg User: callym-m Jun 16, 2020 - 8:10am



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

06/16/2020

**DEMOLITION PLAN**  
**(SHEET 2 OF 2)**  
**PARKSIDE OFFSITE**  
**HWY 46 - PIEPER RD IMPROVEMENTS**

NO.	REVISION	DESCRIPTION	DATE

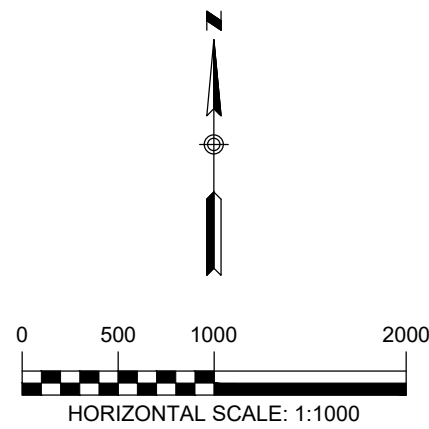
DATE: **JUNE 2020**  
DRAWN BY: **MK**  
DESIGNED BY: **CAM**  
REVIEWED BY: **CVH/SWH**

HMT PROJECT NO.:  
**031.061**

**SHEET**  
**C1.02**

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

Drawing Name: N:\\_Projects\031 - IR Horton\031.060 - 175 Ac Friesenhahn CDA\031.060\_DRNG EXIST.dwg User: callynn-m Jun 16, 2020 - 8:11am



**LEGEND**

— 700 — EXISTING CONTOURS  
— 700 — PROPOSED CONTOURS  
B.L. BUILDING SETBACK LINE  
U.E. UTILITY EASEMENT  
D.E. DRAINAGE EASEMENT  
— — DRAINAGE AREA  
— TC — TC TIME OF CONCENTRATION  
○ A ○ POINT OF CONCENTRATION  
← DRAINAGE FLOW DIRECTION  
DA ACRES DRAINAGE AREA LABEL

UNDEVELOPED/AGRICULTURAL GRASS (FAIR) ZONING  
COMMERCIAL ZONING  
INDUSTRIAL ZONING  
MIXED USE ZONING  
RESIDENTIAL  
ASPHALT

Table 1 - Existing Conditions Hydrology Calculations - City of New Braunfels											
Point of Concentration	Description	Drainage Area	Area	T <sub>c</sub>	Curve Number	Q <sub>2</sub> (cfs)	Q <sub>5</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>50</sub> (cfs)	Q <sub>100</sub> (cfs)
EX A1	Drainage sub-area A1 Comparison	EX A1	1906.93	122.26	85.27	1002.62	1713.53	2312.98	3291.98	4218.96	5355.58
EX A2	Drainage sub-area A2 Comparison	EX A2	21.96	31.98	98.00	38.71	56.38	70.91	94.50	116.89	144.44
EX A3	Drainage sub-area A3 Comparison	EX A3	117.84	59.61	78.46	72.66	137.54	194.37	289.37	380.59	492.94
EX A1-A3						1056.56	1812.75	2451.33	3495.48	4485.49	5698.02
EX A4	Drainage sub-area A4 Comparison	EX A4	4.45	10.00	94.00	11.19	16.88	21.53	29.03	36.11	44.80
EX A5	Basin A3 Discharge + Drainage Sub-Area A6 Comparison	EX A5	24.99	63.10	78.00	14.49	27.69	39.30	58.74	77.45	100.52
EX A6	Drainage sub-area A6 Comparison	EX A6	31.11	40.82	78.01	22.75	43.33	61.45	91.70	120.72	156.45
EX A						1076.03	1848.80	2502.49	3570.74	4582.87	5823.16

290 S. CASTELL AVE., STE. 100  
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TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
Chris Van Heerde, P.E.

06/16/2020

EXISTING CONDITIONS  
DRAINAGE AREA MAP

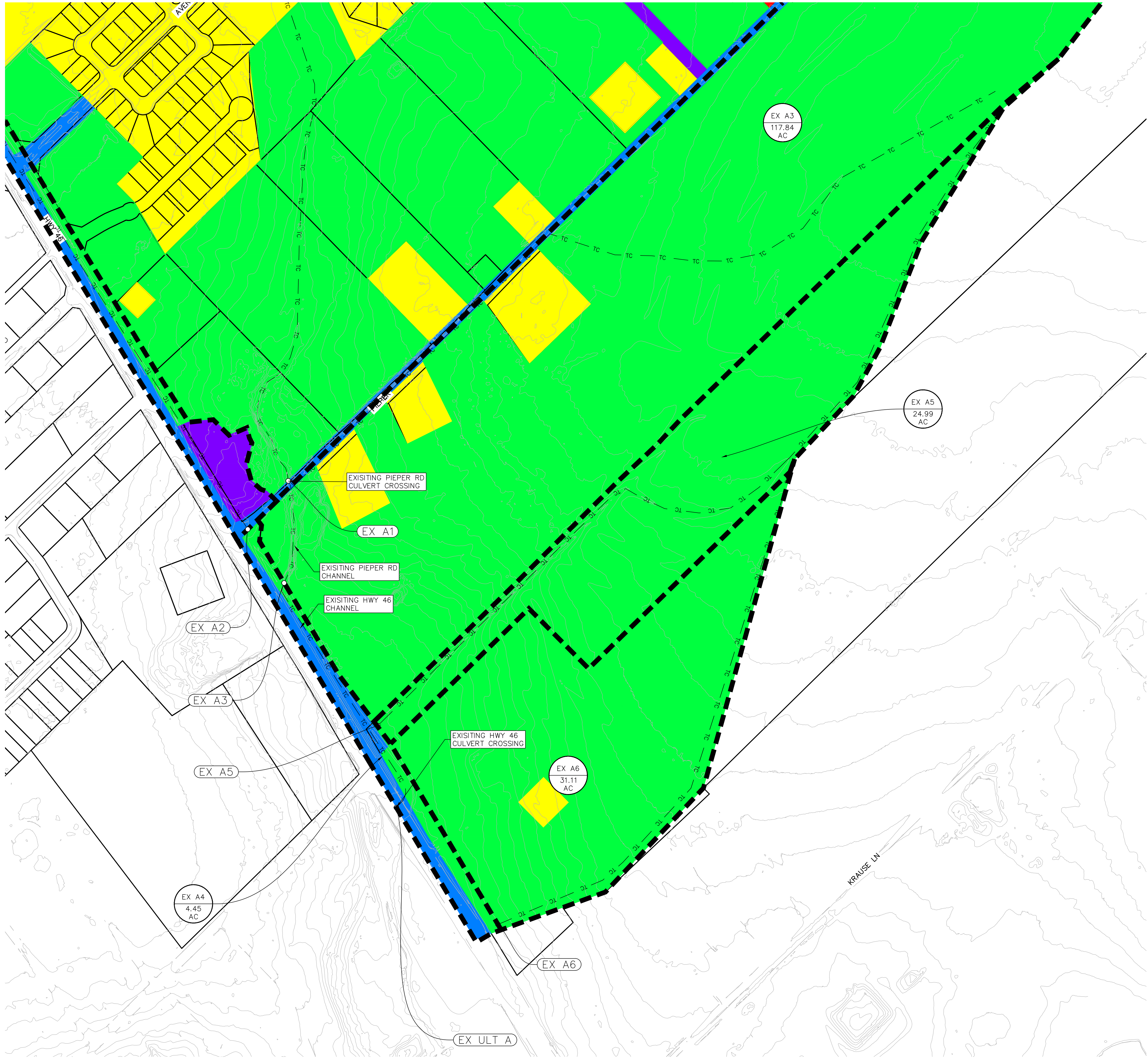
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JUNE 2020  
DRAWN BY: MK  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.061

SHEET  
C2.01

Drawing Name: N:\\_Projects\031 - IR Horton\031.060 - 175 Ac Friesenhahn CDA\Office\031.060\_DRNG EXIST.dwg User: callym-m Jun 16, 2020 - 8:11am



DRAINAGE AREA INSET

**LEGEND**

— 700 — EXISTING CONTOURS  
— 700 — PROPOSED CONTOURS  
B.L. BUILDING SETBACK LINE  
U.E. UTILITY EASEMENT  
D.E. DRAINAGE EASEMENT  
— — DRAINAGE AREA  
— TC — TC — TIME OF CONCENTRATION  
○ A ○ POINT OF CONCENTRATION  
← DRAINAGE FLOW DIRECTION  
○ DA ACRES DRAINAGE AREA LABEL

■ UNDEVELOPED/AGRICULTURAL GRASS (FAIR) ZONING  
■ COMMERCIAL ZONING  
■ INDUSTRIAL ZONING  
■ MIXED USE ZONING  
■ RESIDENTIAL  
■ ASPHALT

0 100 200 400  
HORIZONTAL SCALE: 1:200

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
CHRISTOPHER P. VAN HEERDEN  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerden, P.E.*

06/16/2020

**EXISTING CONDITIONS  
DRAINAGE AREA MAP INSET**

PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JUNE 2020

DRAWN BY: MK

DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

HMT PROJECT NO.: 031.061

**SHEET**

**C2.02**

Drawing Name: N:\\_Projects\031 - BR Horton\031.060 - 175 Ac Friesenhahn CDA\Office\031.60\_DRNG.dwg User: calbrym-m Jun 16, 2020 - 8:11am



Table 2 - Proposed Conditions Hydrology Calculations - City of New Braunfels*** Parkside development being fully developed and containing detention***											
Point of Concentration	Description	Drainage Area	Area (acres)	T <sub>c</sub>	Curve Number	Q <sub>2</sub> (cfs)	Q <sub>5</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>50</sub> (cfs)	Q <sub>100</sub> (cfs)
A1	Drainage sub-area EX A1 Comparison	A1	1906.93	122.26	85.27	1002.62	1713.53	2312.98	3291.98	4218.96	5355.58
A2	Drainage sub-area EX A2 Comparison	A2	21.96	31.98	98.00	38.71	56.38	70.91	94.50	116.89	144.44
A3	Drainage sub-area EX A3 Comparison	A3	33.05	25.60	79.66	33.81	62.43	87.35	128.59	167.93	216.22
A1-A3						1014.34	1732.33	2338.07	3326.44	4263.63	5411.44
A4	Drainage sub-area EX A4 Comparison	A4	4.45	10.00	94.00	8.96	13.54	17.29	23.32	29.02	36.02
A5	Longest Time of Concentration Analysis	A5	139.2	42.03	94.00	22.24	61.62	101.75	173.26	243.14	328.26
A6	Longest Time of Concentration Analysis	A6	2.20	10.00	84.00	3.48	5.77	7.67	10.74	13.64	17.17
Basin A3 Release + A6	Drainage sub-area EX A5 Comparison					22.43	62.06	102.40	174.27	244.47	330.09
A7	Drainage sub-area EX A6 Comparison	A7	31.11	40.82	78.01	17.72	33.92	48.19	72.05	95.02	123.39
A						1027.52	1791.00	2449.13	3532.38	4559.23	5814.79

Table 3 - Existing to Proposed Discharge Comparison						
Drainage Area	2YR	5YR	10YR	25YR	50YR	100YR
EX A	1076.03	1848.80	2502.49	3570.74	4582.87	5823.16
A	1027.52	1791.00	2449.13	3532.38	4559.23	5814.79
Proposed <= Existing	YES	YES	YES	YES	YES	YES
Drainage Area	2YR	10YR	10YR	25YR	50YR	100YR
EX A1	1002.62	1713.53	2312.98	3291.98	4218.96	5355.58
A1	1002.62	1713.53	2312.98	3291.98	4218.96	5355.58
Proposed <= Existing	YES	YES	YES	YES	YES	YES
Drainage Area	2YR	10YR	10YR	25YR	50YR	100YR
EX A2	38.71	56.38	70.91	94.50	116.89	144.44
ULT A2	38.71	56.38	70.91	94.50	116.89	144.44
Proposed <= Existing	YES	YES	YES	YES	YES	YES
Drainage Area	2YR	10YR	10YR	25YR	50YR	100YR
EX A3	72.66	137.54	194.37	289.37	380.59	492.94
A3	33.81	62.43	87.35	128.59	167.93	216.22
Proposed <= Existing	YES	YES	YES	YES	YES	YES
Drainage Area	2YR	10YR	10YR	25YR	50YR	100YR
EX A1-A3	1056.56	1812.75	2451.33	3495.48	4485.49	5698.02
A1-A3	1014.34	1732.33	2338.07	3326.44	4263.63	5411.44
Proposed <= Existing	YES	YES	YES	YES	YES	YES
Drainage Area	2YR	10YR	10YR	25YR	50YR	100YR
EX A4	11.19	16.88	21.53	29.03	36.11	44.80
A4	8.96	13.54	17.29	23.32	29.02	36.02
Proposed <= Existing	YES	YES	YES	YES	YES	YES
Drainage Area	2YR	10YR	10YR	25YR	50YR	100YR
EX A5	14.49	27.69	39.30	58.74	77.45	100.52
Basin A3 Release + A6	22.43	62.06	102.40	174.27	244.47	330.09
Proposed <= Existing	NO	NO	NO	NO	NO	NO
Drainage Area	2YR	10YR	10YR	25YR	50YR	100YR
EX A6	22.75	43.33	61.45	91.70	120.72	156.45
A7	17.72	33.92	48.19	72.05	95.02	123.39
Proposed <= Existing	YES	YES	YES	YES	YES	YES

700

EXISTING CONTOURS

700

PROPOSED CONTOURS

B.L.

BUILDING SETBACK LINE

U.E.

UTILITY EASEMENT

D.E.

DRAINAGE EASEMENT

DA

DRAINAGE AREA

TC

TC

TC

TIME OF CONCENTRATION

A

POINT OF CONCENTRATION

DA

DRAINAGE AREA LABEL

ACRES

ACRES

UNDEVELOPED/AGRICULTURAL GRASS (FAIR) ZONING

COMMERCIAL ZONING

INDUSTRIAL ZONING

MIXED USE ZONING

RESIDENTIAL

ASPHALT

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NEW BRAUNFELS, TX 78130  
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**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

06/16/2020

**PROPOSED CONDITIONS  
DRAINAGE AREA MAP**  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION DESCRIPTION	REVISION DATE
1	UPDATED DRAINAGE CALCULATIONS	06/10/20

DATE: JUNE 2020

DRAWN BY: MK

DESIGNED BY: CAM

REVIEWED BY: CWH/SMH

HMT PROJECT NO.: 031.061

**SHEET  
C2.03**



Drawing Name: N:\\_Projects\031 - BR Horton\031.060 - 175 Ac Friesenhahn CDA\031.060\031.060\_DRNG\_ULT.dwg User: callym-m Jun 16, 2020 - 8:11am

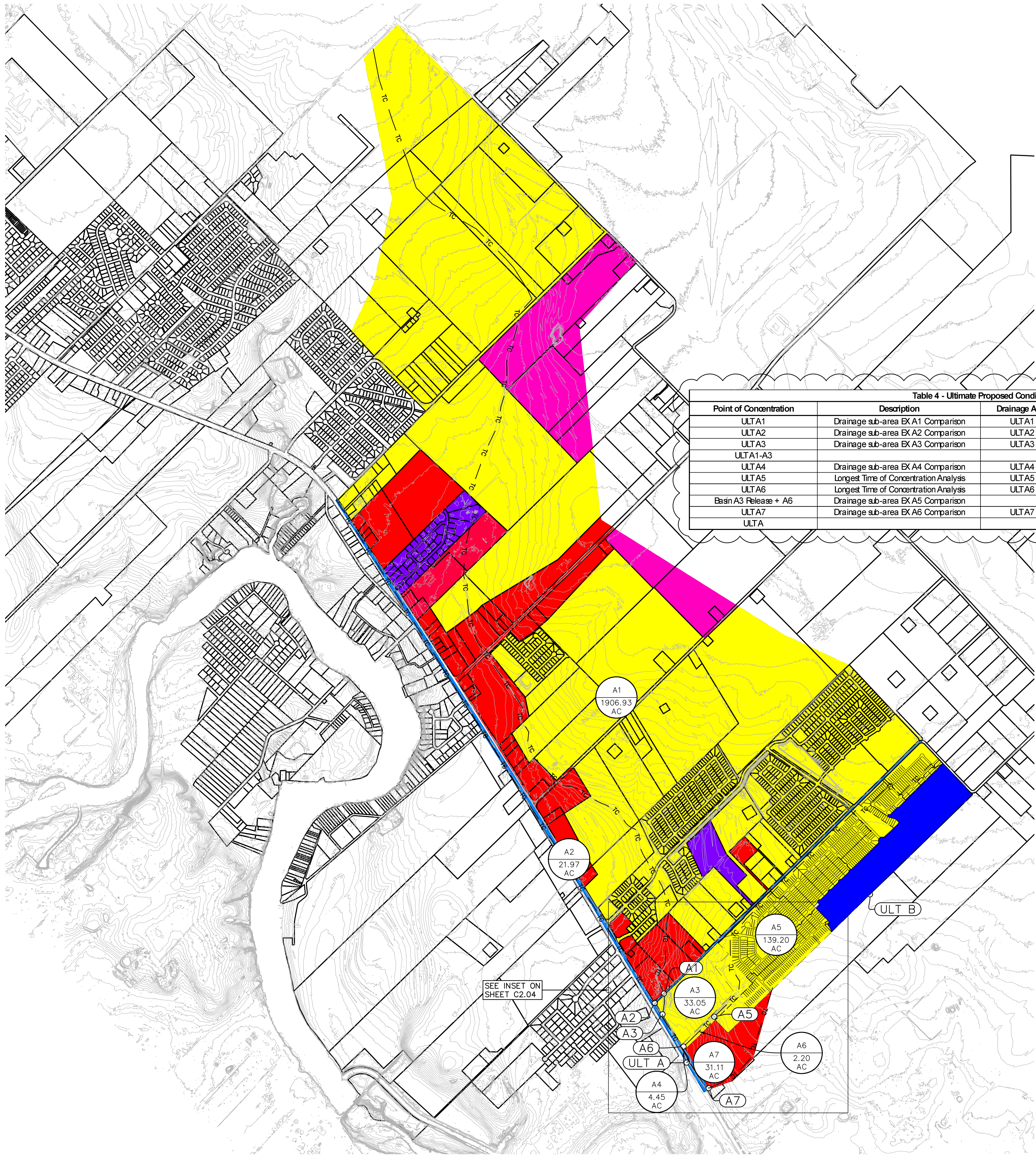


Table 4 - Ultimate Proposed Conditions Hydrology Calculations - City of New Braunfels \*\*Assuming no other development details\*\*

Point of Concentration	Description	Drainage Area	Area (acres)	T <sub>c</sub>	Curve Number	Q <sub>2</sub> (cfs)	Q <sub>5</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>50</sub> (cfs)	Q <sub>100</sub> (cfs)
ULT A1	Drainage sub-area EX A1 Comparison	ULT A1	1906.93	122.26	88.44	1141.60	1866.75	2468.89	3444.27	4365.42	5935.32
ULT A2	Drainage sub-area EX A2 Comparison	ULT A2	21.96	31.98	98.00	38.71	56.38	70.91	94.50	116.89	144.44
ULT A3	Drainage sub-area EX A3 Comparison	ULT A3	33.72	25.60	87.82	49.33	80.72	106.68	148.61	188.11	236.38
ULT A1-A3						1155.19	1887.79	2495.72	3481.58	4411.85	5549.89
ULT A4	Drainage sub-area EX A4 Comparison	ULT A4	4.45	10.00	94.00	11.19	16.88	21.53	29.03	36.11	44.80
ULT A5	Longest Time of Concentration Analysis	ULT A5	138.53	42.03	87.00	120.49	200.06	266.47	374.12		599.84
ULT A6	Longest Time of Concentration Analysis	ULT A6	2.2	10.00	84.00	3.64	6.29	6.52	12.15	15.58	19.77
Basin A3 Release + A6	Drainage sub-area EX A5 Comparison					43.47	98.43	149.58	241.81	322.39	418.81
ULT A7	Drainage sub-area EX A6 Comparison	ULT A7	31.11	40.82	95.00	45.07	67.45	85.74	115.29	177.52	
ULT A						1168.50	1928.79	2571.00	3636.02	4659.92	5910.76

- 700 —

EXISTING CONTOURS
- 700 —

PROPOSED CONTOURS
- —

B.L. BUILDING SETBACK LINE
- —

U.E. UTILITY EASEMENT
- —

D.E. DRAINAGE EASEMENT
- —

DRAINAGE AREA
- TC — TC —

TIME OF CONCENTRATION
- A

POINT OF CONCENTRATION
- ←

DRAINAGE FLOW DIRECTION
- DA  
ACRES

DRAINAGE AREA LABEL
- UNDEVELOPED/AGRICULTURAL GRASS (FAIR) ZONING
- COMMERCIAL ZONING
- INDUSTRIAL ZONING
- MIXED USE ZONING
- RESIDENTIAL
- ASPHALT

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

06/16/2020

**ULTIMATE CONDITIONS  
DRAINAGE AREA MAP**  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION DESCRIPTION	DATE
1	UPDATED DRAINAGE CALCULATIONS	06/10/20

DATE: JUNE 2020

DRAWN BY: MK

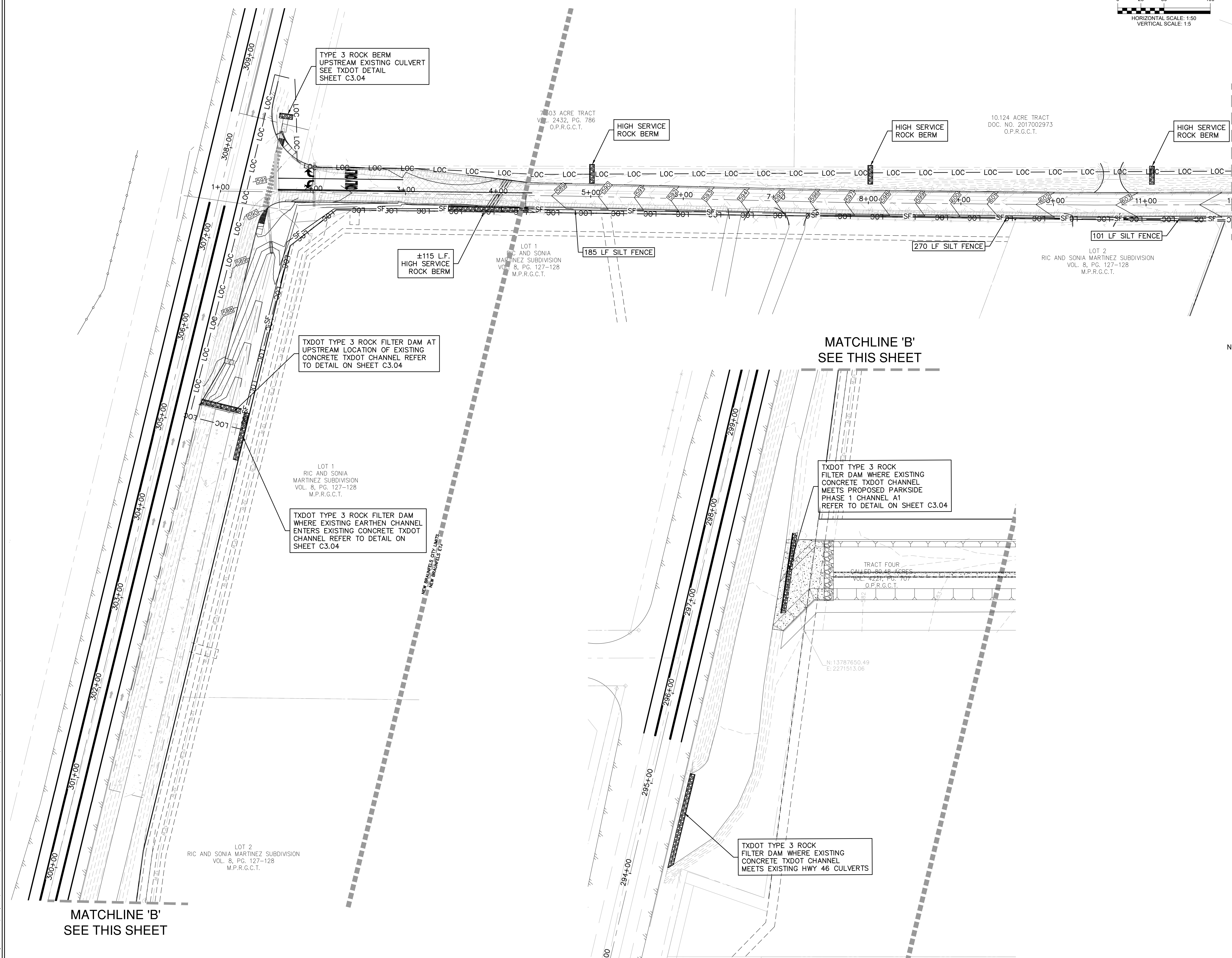
DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

HMT PROJECT NO.: 031.061

**SHEET**  
**C2.05**





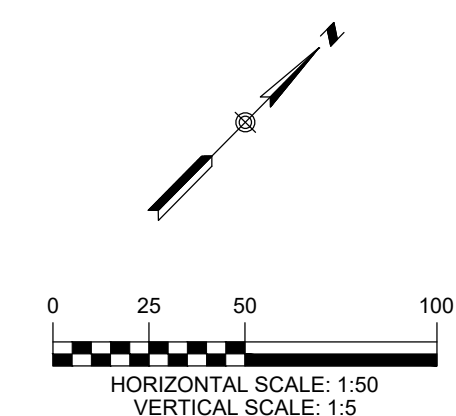
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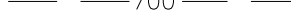


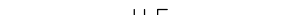




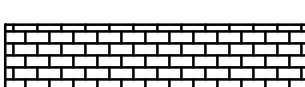


1. SILT FENCE SHALL BE PLACED WITHIN THE RIGHT OF WAY AND SHALL NOT BLOCK DRIVEWAYS.
2. ROCK BERMS SHALL BE PLACED 10 FEET FROM THE UPSTREAM SIDE OF THE EXISTING CULVERT TO PREVENT STORM WATER FROM DAMMING.
3. AREAS IN TxDOT RIGHT OF WAY WILL RECEIVE TOP SOIL, SODDING, SEEDING, FERTILIZER AND VEGETATIVE WATERING OF ALL DISTURBED AREAS TO COMPLY WITH TxDOT SPECIFICATIONS (2014) ITEMS 160, 162, 164, 166 AND 168. ALL EROSION CONTROL MEASURES WILL BE REMOVED FROM THE TxDOT RIGHT OF WAY AFTER 70% VEGETATIVE COVER HAS BEEN ESTABLISHED IN THE DISTURBED SOIL AREAS OF TxDOT RIGHT OF WAY AND ON SITE DEVELOPMENT AS APPROVED BY THE TxDOT SEQUIN MAINTENANCE SUPERVISOR."

NOTE:

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL  
DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES  
HAVE CEASED (TEMPORARILY OR PERMANENT) AND  
SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY  
RESUMES IN 21 DAYS, PER TPDES REQUIREMENTS.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.



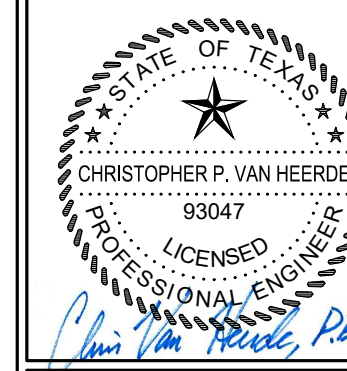
- |   |                                    |
|---|------------------------------------|
|  | EXISTING CONTOURS                  |
|  | PROPOSED CONTOURS                  |
|  | BUILDING SETBACK LINE              |
|  | UTILITY EASEMENT                   |
|  | DRAINAGE EASEMENT                  |
|  | DRAINAGE FLOW DIRECTION            |
|  | SALT FENCE                         |
|  | LIMIT OF CONSTRUCTION              |
|  | STABILIZED CONSTRUCTION ENTRANCE   |
|  | FILTER DIKE CURB INLET PROTECTION  |
|  | ROCK BERM / HIGH SERVICE ROCK BERM |

### SEQUENCE OF CONSTRUCTION

1. INSTALL EROSION CONTROLS PER APPROVED PLAN.
2. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
3. CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
4. CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
5. CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
6. CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
7. INSTALL STREETScape AND/OR LANDSCAPING IMPROVEMENTS.
8. CONTRACTOR TO VEGETATE ANY DISTURBED AREAS. GRADING IS COMPLETE, AND ESTABLISH A MIN. OF 70% VEGETATION PRIOR TO COMPLETION. PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE STABILIZATION.
9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

**HMT**  
ENGINEERING & SURVEYING

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06/16/2020

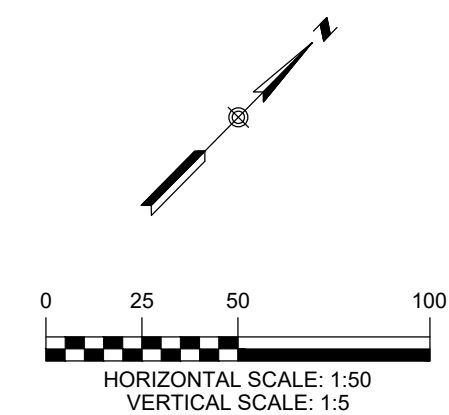
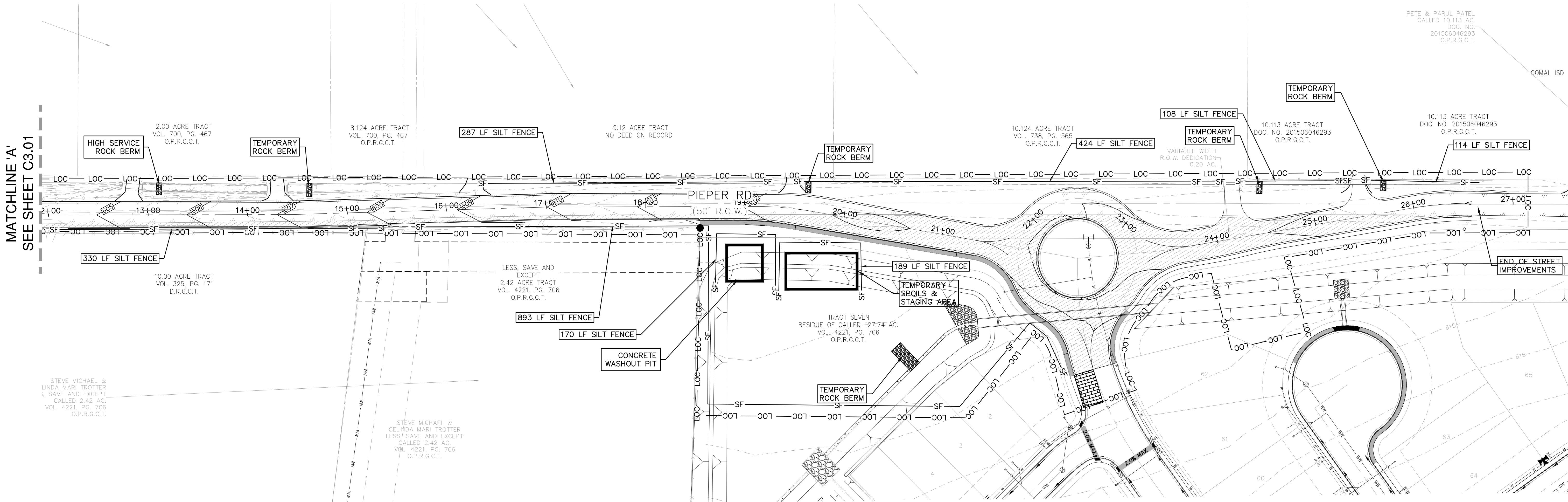
**EROSION CONTROL PLAN**  
**(SHEET 1 OF 2)**  
**PARKSIDE OFFSITE**  
**HWY 46 - PIEPER RD IMPROVEMENTS**

[illegible]

DATE: JUNE 2020
DRAWN BY: MK
DESIGNED BY: CAM
REVIEWED BY: CVH/SWH
HMT PROJECT NO.: 031.061

**SHEET**  
**C3.01**

Drawing Name: N:\\_Projects\031 - DR Heron\031.060 - 175 Ac Friesenhain Cbs\Office\031.060\_ESC.dwg User: cathy-m Jun 16, 2020 - 8:12am



- LEGEND**
- 700 — EXISTING CONTOURS
  - 700 — PROPOSED CONTOURS
  - B.L. — BUILDING SETBACK LINE
  - U.E. — UTILITY EASEMENT
  - D.E. — DRAINAGE EASEMENT
  - > — DRAINAGE FLOW DIRECTION
  - SF — SF — SILT FENCE
  - LOC — LOC — LIMIT OF CONSTRUCTION
  - [Brick Pattern] — STABILIZED CONSTRUCTION ENTRANCE
  - [Hatched] — FILTER DIKE CURB INLET PROTECTION
  - [Solid Black] — ROCK BERM

- NOTE:**
1. SILT FENCE SHALL BE PLACED WITHIN THE RIGHT OF WAY AND SHALL NOT BLOCK DRIVEWAYS.
  2. ROCK BERMS SHALL BE PLACED 10 FEET FROM THE UPSTREAM SIDE OF THE EXISTING CULVERT TO PREVENT STORM WATER FROM DAMNING.
  3. AREAS IN TXDOT RIGHT OF WAY WILL RECEIVE TOP SOIL, SODDING, SEEDING, FERTILIZER AND VEGETATIVE WATERING OF ALL DISTURBED AREAS TO COMPLY WITH TXDOT SPECIFICATIONS (2014) ITEMS 160, 162, 164, 166 AND 168. ALL EROSION CONTROL MEASURES WILL BE REMOVED FROM THE TXDOT RIGHT OF WAY AFTER 70% VEGETATIVE COVER HAS BEEN ESTABLISHED IN THE DISTURBED SOIL AREAS OF TXDOT RIGHT OF WAY AND ON SITE DEVELOPMENT AS APPROVED BY THE TXDOT SEGUIN MAINTENANCE SUPERVISOR.

- SEQUENCE OF CONSTRUCTION**
1. INSTALL EROSION CONTROLS PER APPROVED PLAN.
  2. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
  3. CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
  4. CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
  5. CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
  6. CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
  7. INSTALL STREETScape AND/OR LANDSCAPING IMPROVEMENTS.
  8. CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 70% VEGETATION PRIOR TO COMPLETION. PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE STABILIZATION.
  9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

- NOTE:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENT) AND SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES IN 21 DAYS, PER TPDES REQUIREMENTS.
- THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

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**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

06/16/2020

**EROSION CONTROL PLAN**  
**(SHEET 2 OF 2)**  
**PARKSIDE OFFSITE**  
**HWY 46 - PIEPER RD IMPROVEMENTS**

NO.	REVISION	DESCRIPTION	DATE

DATE: JUNE 2020

DRAWN BY: MK

DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

HMT PROJECT NO.: 031.061

**SHEET**  
**C3.02**

**MATERIALS:**

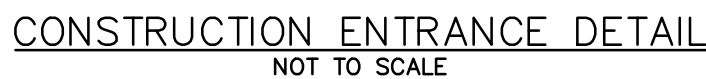
1. THE AGGREGATE SHOULD CONSIST OF 3 TO 5 INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
3. FILTER MEDIA SHALL BE 20/40 MESH SIZED SAND SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD<sup>2</sup>, A MULLEN BURST RATING OF 140 LB/IN<sup>2</sup>, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
4. IF A MINIMUM FLOW CAPACITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4 INCH DIAMETER WASHED STONE OR COMMERCIAL RACK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

INSTALLATION:

1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6 TO 8 INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE POOR CONDITIONS ARE ANTICIPATED.
6. PLACE STONE TO DIMENSION AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES:

1. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR LOWING OF SEDIMENT ONTO PUBLIC RIGHTS--OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS--OF WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO TURNING AND/OR REVERSE TRAVEL.
4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
5. SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.



THE PURPOSE OF CONCRETE WASHOUT AREAS IS TO PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORMWATER FROM CONCRETE WASTE BY CONDUCTING WASHOUT OFFSITE, PERFORMING ONSITE WASHOUT IN A DESIGNATED AREA, AND TRAINING EMPLOYEES AND SUBCONTRACTORS.

THE FOLLOWING STEPS WILL HELP REDUCE STORMWATER POLLUTION FROM CONCRETE WASTES:

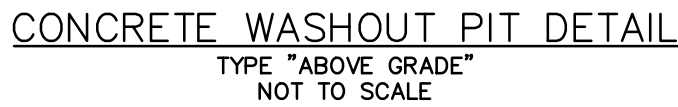
- INCORPORATE REQUIREMENTS FOR CONCRETE WASTE MANAGEMENT INTO MATERIAL SUPPLIER AND SUBCONTRACTOR AGREEMENTS.
- AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE.
- PERFORM WASHOUT OF CONCRETE TRUCKS IN DESIGNATED AREAS ONLY.
- DO NOT WASH OUT CONCRETE TRUCKS INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
- DO NOT ALLOW EXCESS CONCRETE TO BE DUMPED ONSITE, EXCEPT IN DESIGNATED AREAS.

FOR ONSITE WASHOUT:

- LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES, OR WATER BODIES. DO NOT ALLOW RUNOFF FROM THIS AREA BY CONSTRUCTING A TEMPORARY PIT OR BERMED AREA LARGE ENOUGH FOR LIQUID AND SOLID WASTE.
- WASH OUT WASTES INTO THE TEMPORARY PIT WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND THEN DISPOSED PROPERLY.

BELOW GRADE CONCRETE WASHOUT FACILITIES ARE TYPICAL. THESE CONSIST OF A LINED EXCAVATION SUFFICIENTLY LARGE TO HOLD EXPECTED VOLUME OF WASHOUT MATERIAL. ABOVE GRADE FACILITIES ARE USED IF EXCAVATION IS NOT PRACTICAL. TEMPORARY CONCRETE WASHOUT FACILITY (TYPE ABOVE GRADE) SHOULD BE CONSTRUCTED AS SHOWN ON THE DETAILS AT THE END OF THIS SECTION, WITH PROPERLY DESIGNED LINING TO CONTAIN ALL LIQUID AND SOLID WASTE GENERATED BY WASHOUT OPERATIONS. PLACING LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.



**MATERIALS:**

1. SILENT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MAXIMUM BURST STRENGTH EXCEEDING 190 LBS./YD, TENSILE STRENGTH EXCEEDING 700%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NO. 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEES OR YBAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM MINIMUM HEIGHT 18 LB/FT<sup>2</sup>, AND BRINDLE HARDOSS EXCEEDING 140.
3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION:

1. STEEL PILES, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1'-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.
2. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS NEARLY AS POSSIBLE. THE POSITION OF THE FENCE SHOULD BE SUCH THAT THE MAXIMUM DRAINAGE AREA IS  $\frac{1}{4}$  ACRE/100 FEET OF FENCE.
3. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE FENCING. THE TRENCH SHOULD BE 12" DEEP AND 12" WIDE (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SLEEPING UNDER FENCE.
4. THE FENCE MUST BE SECURELY FASTENED TO EACH SILT SUPPORT POST OR ANCHOR. THE FENCE FABRIC MUST BE REINFORCED AND STAPLED TO THE GROUND TO AVOID FLOW UNDER THE FENCE FABRIC AND BE REINFORCED IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
5. THE FENCE SHOULD BE SECURELY FASTENED TO EACH SILT SUPPORT POST OR ANCHOR. THE FENCE FABRIC MUST BE REINFORCED AND STAPLED TO THE GROUND TO AVOID FLOW UNDER THE FENCE FABRIC AND BE REINFORCED IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
6. THE FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES:

1. INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
3. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
4. REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL ACCESS TO BOTH SIDES OF THE ROAD. IF A SECTION OF FENCE IS OBSTRUCTING A DIKE MAKE IT PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.
5. WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE FENCE SHOULD BE REVEALED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.

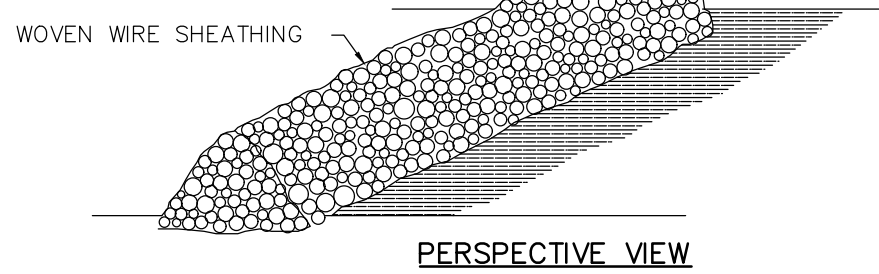


1. INSTALL EROSION CONTROLS PER APPROVED PLAN.
2. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
3. CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
4. CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
5. CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
6. CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
7. INSTALL STREETScape AND/OR LANDSCAPING IMPROVEMENTS.
8. CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 70% VEGETATION PRIOR TO COMPLETION
9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

NOTE:

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL  
DISTURBED AREAS ON WHICH CONSTRUCTION  
ACTIVITIES HAVE CEASED (TEMPORARILY OR  
PERMANENT) AND SHALL BE STABILIZED WITHIN 14  
DAYS UNLESS ACTIVITY RESUMES IN 21 DAYS, PER  
TPDES REQUIREMENTS.

1. USE ONLY OPEN GRADED ROCK 3-5" DIAMETER.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENINGS AND MINIMUM WIRE DIAMETER OF 20 GA.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC COVER-WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS REQUIRED, DUE TO DAMAGE TO ANY OF THE ROCKS, WASHOUT CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO 6", THE SILT WILL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER AND IN SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE SLOPE ROCK BERMS WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.



ROCK BERM DETAIL  
NOT TO SCALE

MATERIALS:

1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 150 LB/INCH, AND A MINIMUM TENSILE STRENGTH EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NO. 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH THE 6" X 6" Y-R BAR CROSS SECTION. SURFACE PAINTED OR GALVANIZED, MINIMUM MINIMUM WEIGHT 1.25 LB/FT<sup>2</sup>, AND BRINELL HARDNESS EXCEEDING 140. REBAR (TYPE #5 OR #6) MAY ALSO BE USED TO ANCHOR THE BERM.
3. WOVEN FABRIC BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X4" WELDED WIRE, 12 GAUGE MINIMUM.
4. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND MINIMUM TENSILE DIAMETER OF 1/8" GALVANIZED AND SHOULD BE SECURED WITH SHOOT RINGS.
5. CLEAN, OPEN GRADED 3 TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE ENCOUNTERED. WHERE 5 TO 8-INCH DIAMETER ROCKS MAY BE USED.

INSTALLATION:

1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1-INCH OPENINGS.
2. INSTALL SILT FENCE AT THE DOWNSTREAM END OF THE PROPOSED BERM PLACEMENT, AS WITH A NORMAL SILT FENCE DESCRIBED IN SECTION 2.4.3.
3. PLACE THE ROCK ALONG THE SHEATHING ON BOTH SIDES OF THE FLOW LINE TO FOLLOW THE DIAGRAM (FIGURE 10), TO A HEIGHT NOT LESS THAN 24 INCHES. CLEAN, OPEN, GRADED 3"-5" DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5" TO 8-INCH DIAMETER ROCK MAY BE USED.
4. WRAP WIRE SHEATHING AROUND THE ROCK AND SECURE WITH THE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP A LEAST 6 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
5. THE HIGH SERVICE ROCK BERM SHOULD BE REMOVED WHEN THE SITE IS REVEGETATED OR OTHERWISE STABILIZED OR IT MAY BE LEFT IN PLACE AS A PERMANENT BMP IF DRAINAGE IS ADEQUATE.

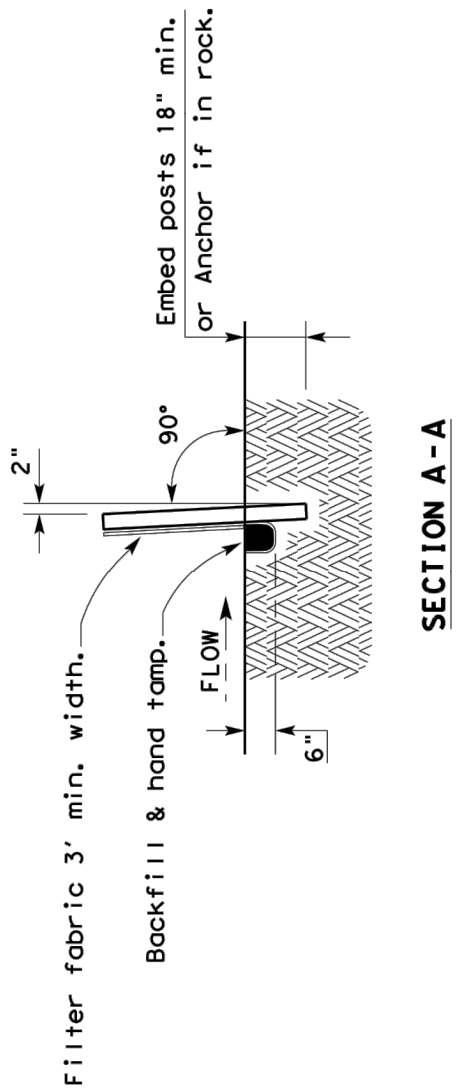
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

NO.	REVISION DESCRIPTION	REVISION DATE

Diagram illustrating the construction of a wire mesh structure, likely for a filter or screen, showing the following components and instructions:

- Top Strand:** Attach the wire mesh and fabric on end for securing the top strand. Attach the wire mesh and fabric on end for securing the top strand. Attach the wire mesh and fabric on end for securing the top strand.
- Vertical Pockets:** Attach the wire mesh and fabric on end for securing the top strand. Attach the wire mesh and fabric on end for securing the top strand. Attach the wire mesh and fabric on end for securing the top strand.
- Dimensions:**
  - 2" (width of the top strand)
  - 90° (angle of the top strand)
  - 4" (width of the fabric)
  - 6" (width of the fabric)
  - 2" (width of the fabric)
  - 6" (width of the fabric)
- Labels:**
  - Woven filter fabric
  - FLOW
  - FLOW
- Notes:**
  - Connect the ends of the successive reinforcement sheets or rolls a minimum of 6 times with hog rings.
  - Attach the wire mesh and fabric on end for securing the top strand. Attach the wire mesh and fabric on end for securing the top strand. Attach the wire mesh and fabric on end for securing the top strand.
  - Place 4" to 6" of fabric against the trench side and approximately 2" across the bottom in the upstream direction. Minimum trench size shall be 6" square. Backfill and hand tamped.

SCF

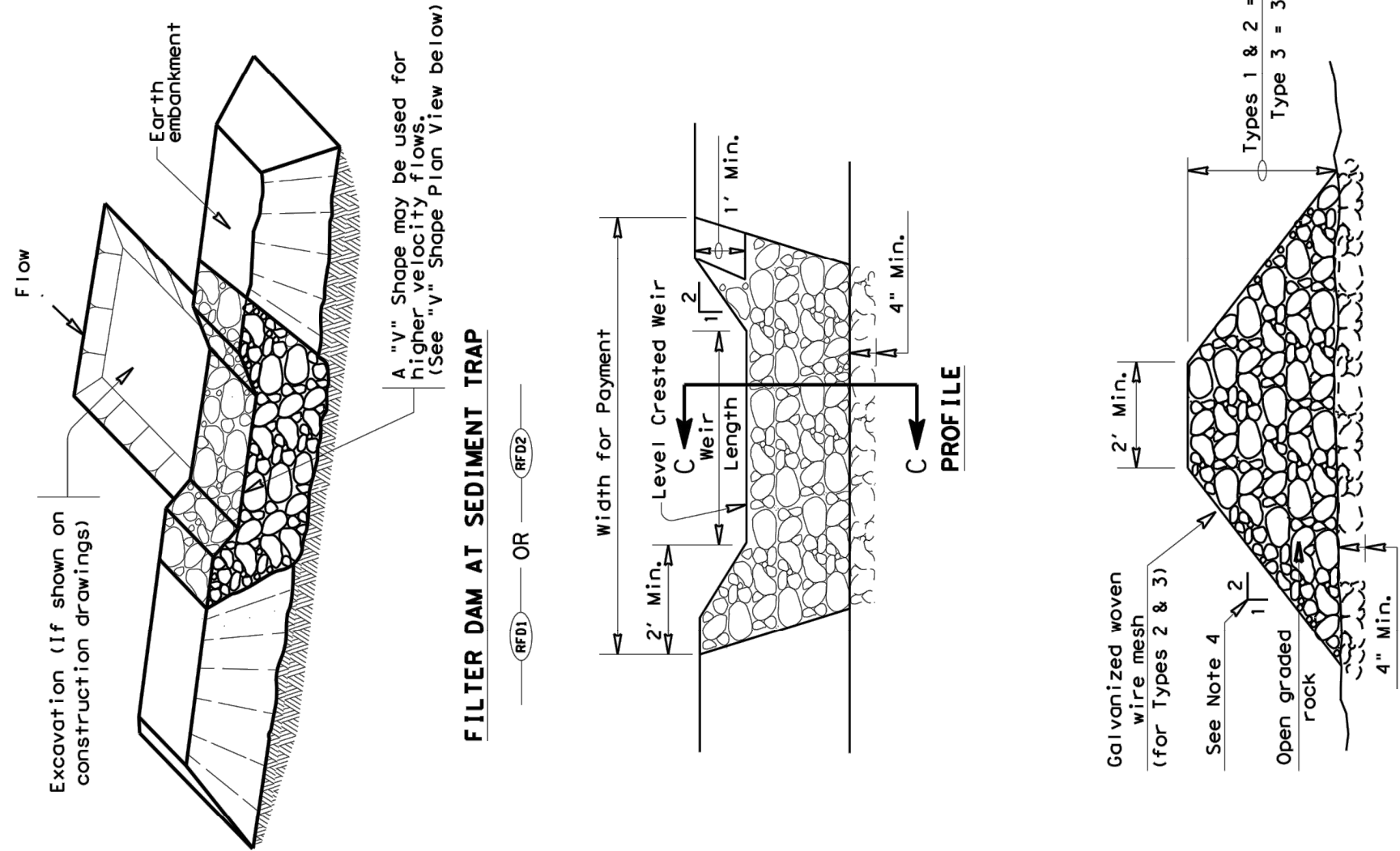


Galvanized hinge joint knot woven mesh (12.5 GA. SWG Min.) requires a minimum of five horizontal wires spaced at a maximum of 12 inches apart and all vertical wires spaced at a maximum of 12 inches apart.

A sediment control fence may be constructed near the downstream periphery of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

Sediment control fence should be sized to filter a maximum flow through rate of 100 GPM/FT<sup>2</sup>. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

## Sediment Control Fence



Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from over-land runoff and/or concentrated flow. The Dams should be sized to filter a maximum flow through rate of 60 GPM/FT<sup>2</sup> of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

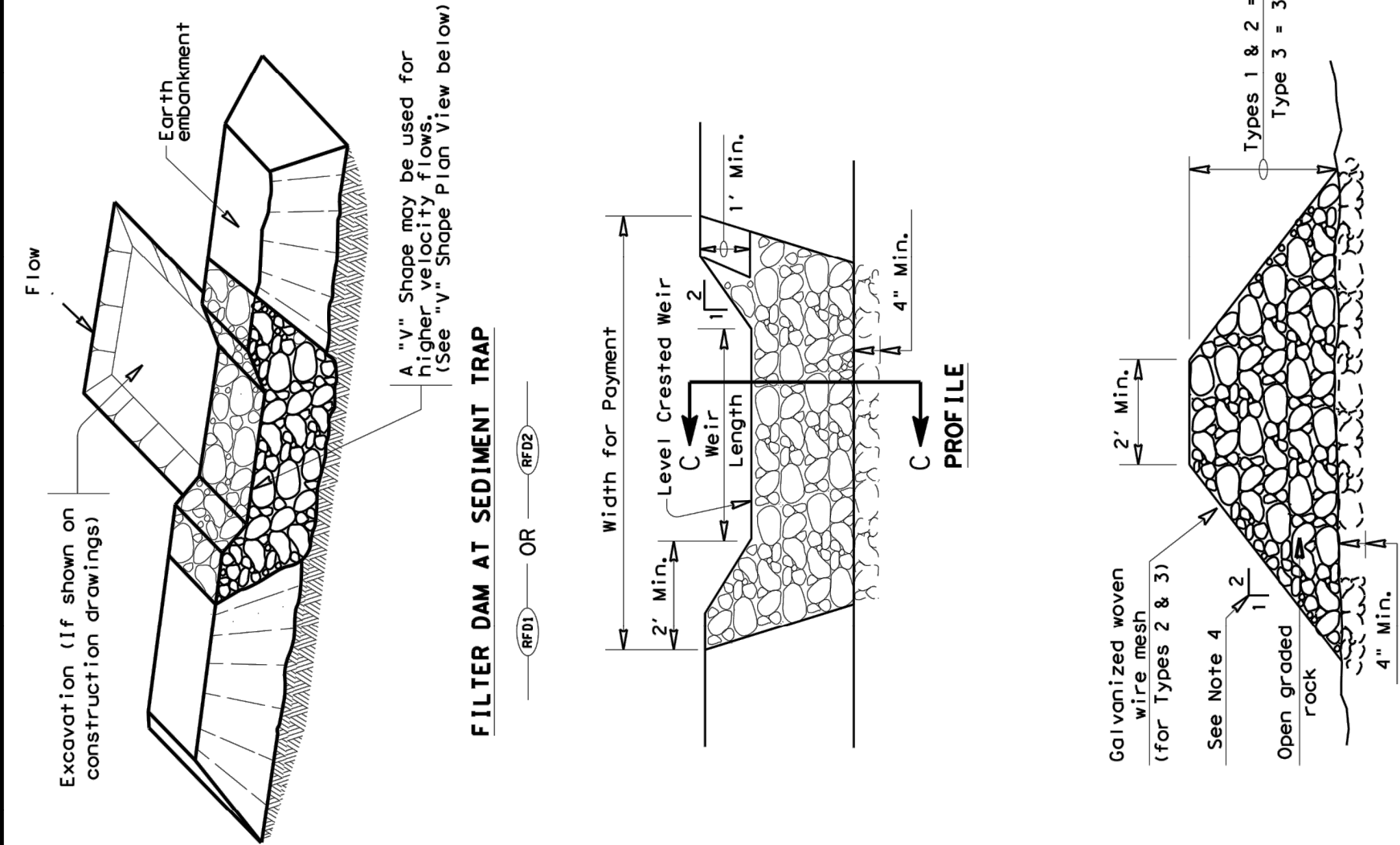
Type I (18" high with no wire mesh) ("3" to 6" aggregate); Type II may be made by using one of the two options, coarse inert materials and fines, or fine aggregates and fines; Type III may be made by using coarse inert materials and fines, or fine aggregates and fines, or both. The drainage area of 5 acres or less. Type IV may not be used in concentrated low velocity flows (approximately 8 ft/sec or more), in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

Type 2 (18" high with wire mesh) (3" to 6" aggregate): Type 2 may be used in ditches and at dike or swale outlets.

Type 3 (36" high with wire mesh) (4" to 8" aggregate): Type 3 may be used in stream flow and should be secured to the stream bed.

Type 4 (Sack gabions) (3" to 6" aggregate): Type 4 May be used in ditches and smaller channels to form an erosion control dam.

## RF D4



pe 1 Rock Filter Dam

**EC(2) - 16**

FILE: ec216	DWT XDOT		CKT KM	DWT VP	DWT CKT LS
© TXDOT: JULY 2016	CONT	SECT	JOB	H-WAY	
REVISIONS					
	DIST	COUNTY			SHEET NO.

**TYPE 4 (TSACK GABIONS)**

**SECTION A-A**

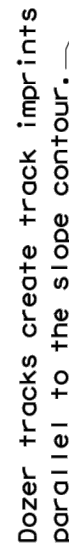
Type S1: Provide rock filter dams as shown on plans.

DATE: \_\_\_\_\_ FILED: \_\_\_\_\_

RF D-4

REVISIONS	DIST	COUNTY	SHEET NO.

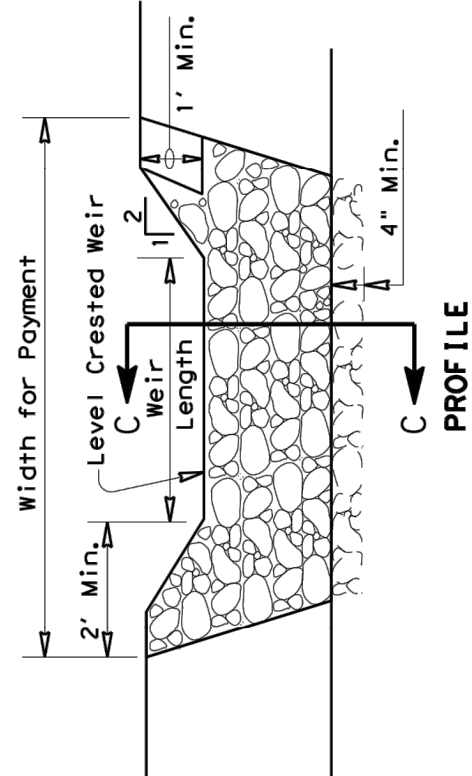
1. Vertical tracking is required on projects where soil distributing activities have occurred unless otherwise approved.
2. Perform vertical tracking on slopes to temporarily stabilize soil.
3. Provide equipment with a track undercarriage capable of producing linear soil impressions measuring a minimum of 12" in length by 2" in depth by 1/2" to 2" in depth.
4. Do not exceed 12" between track impressions.
5. Install continuous linear track impressions where the minimum 12" length impressions are perpendicular to the slope or direction of water flow.



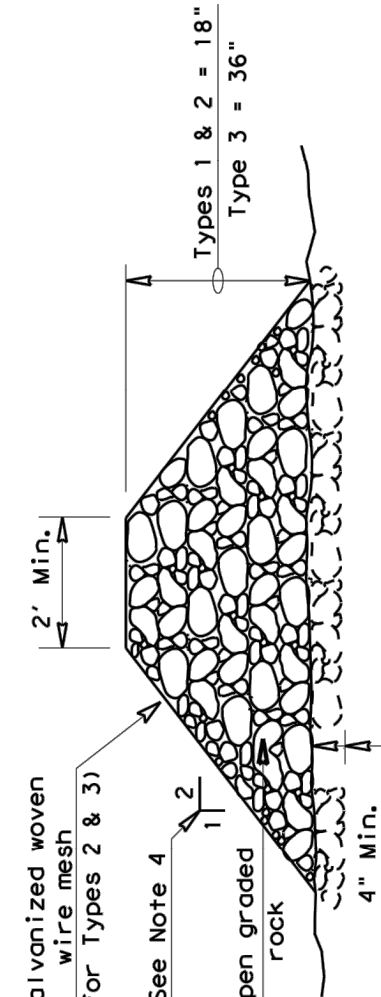
	Design Division Standard	
	Texas Department of Transportation	
<p style="text-align: center;"> <b>TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES FENCE &amp; VERTICAL TRACKING</b> </p>		
<p style="text-align: center;"><b>EC (1) - 16</b></p>		
FILE#	ec16	
 (X) ADOT JULY 2016 REVISED	DATE ADOT CONT. SECT. JOB COUNTY DIST.	DRAW. BY SCALE

## RF01 — OR — RF02

"V" Shape may be used for higher velocity flows.  
See "V" Shape plan view below)



## SECTION C-C



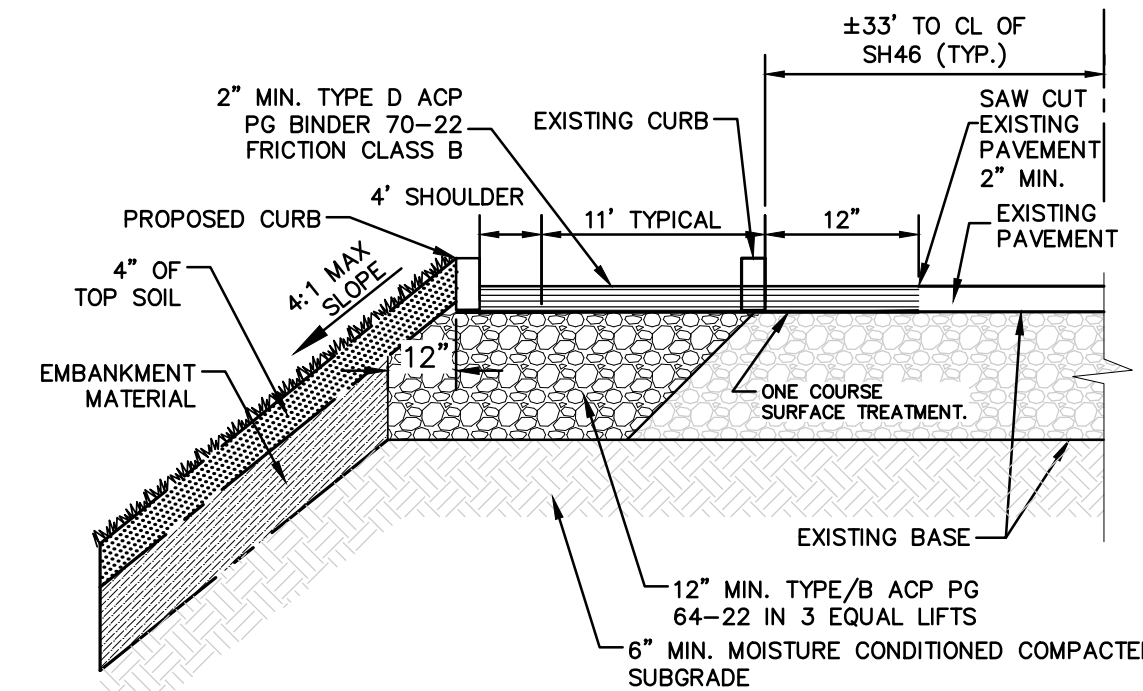
## PARKSIDE OFFSITE HWY 46 - PIEPER RD IMPROVEMENTS



**HMT**  
ENGINEERING & SURVEYING



06/16/2020



SH 46 WIDENING DETAIL  
SECTION A:A

**LEGEND**

EXISTING CONTOURS

PROPOSED CONTOURS

BUILDING SETBACK LINE

UTILITY EASEMENT

DRAINAGE EASEMENT

WATER LINE EASEMENT

NON-VEHICULAR ACCESS EASEMENT

A.D.A. RAMP

FLOW ARROW

WASHOUT CROWN AREAS

EXISTING GROUND LEFT (EG LT)

EXISTING GROUND RIGHT (EG RT)

EXISTING GROUND CENTER (EG CTR)

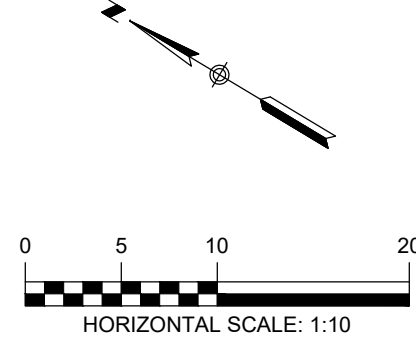
PROPOSED GROUND CENTER (PR TO

ACCESSIBLE CROSSING AREA  
CROSS SLOPE TO ENSURE MAX 2%  
CROSS SLOPE IN THESE AREAS

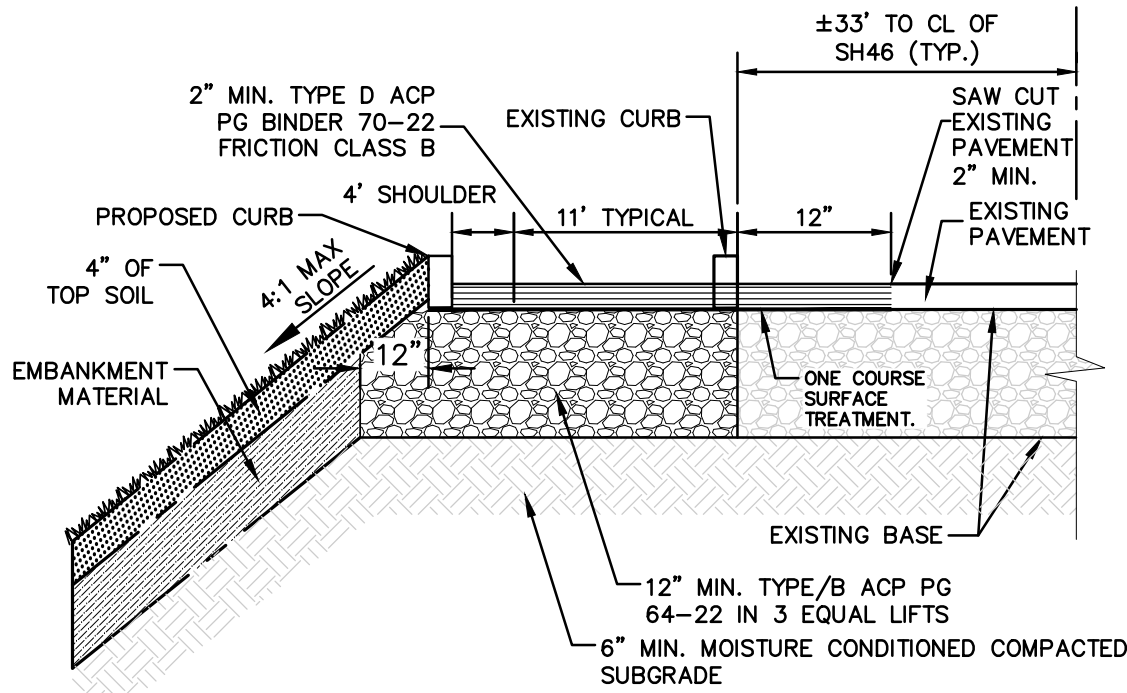
## NOTES

1. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
2. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET SUB OUT ENDS SO THAT NO "POUNDING" OR "BUMPING" OCCURS.











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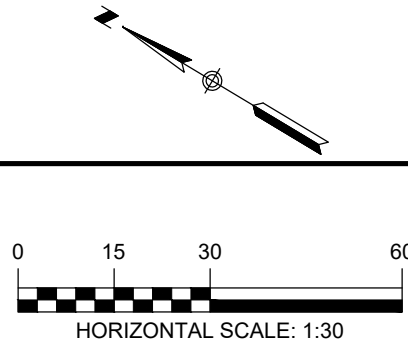


NOT TO SCALE  
SH 46 WIDENING DETAIL  
SECTION A:A

- |   |   |
|---|---|
|  | EXISTING CONTOURS   |
|  | PROPOSED CONTOURS   |
| B.L.  | BUILDING SETBACK LINE   |
| U.E.  | UTILITY EASEMENT  |
| D.E.  | DRAINAGE EASEMENT   |
| W.L.E.  | WATER LINE EASEMENT   |
| N.V.A.E.  | NON-VEHICULAR ACCESS EASEMENT   |
|  | A.D.A. RAMP   |
|  | FLOW ARROW  |
|  | WASHOUT CROWN AREAS   |
|  | EXISTING GROUND LEFT (EG LT)  |
|  | EXISTING GROUND RIGHT (EG RT)   |
|  | EXISTING GROUND CENTER (EG CTR)   |
|  | PROPOSED GROUND CENTER (PR CT)  |
|  | ACCESSIBLE CROSSING AREA<br>CONTRACTOR TO ENSURE MAX 2%<br>CROSS SLOPE IN THESE AREAS |

## NOTES

1. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
2. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



06/16/2020

**STATE HIGHWAY 46 DECEL  
LANE (SHEET 2 OF 2)**

[illegible]

DATE: JUNE 2020

DRAWN BY: MK

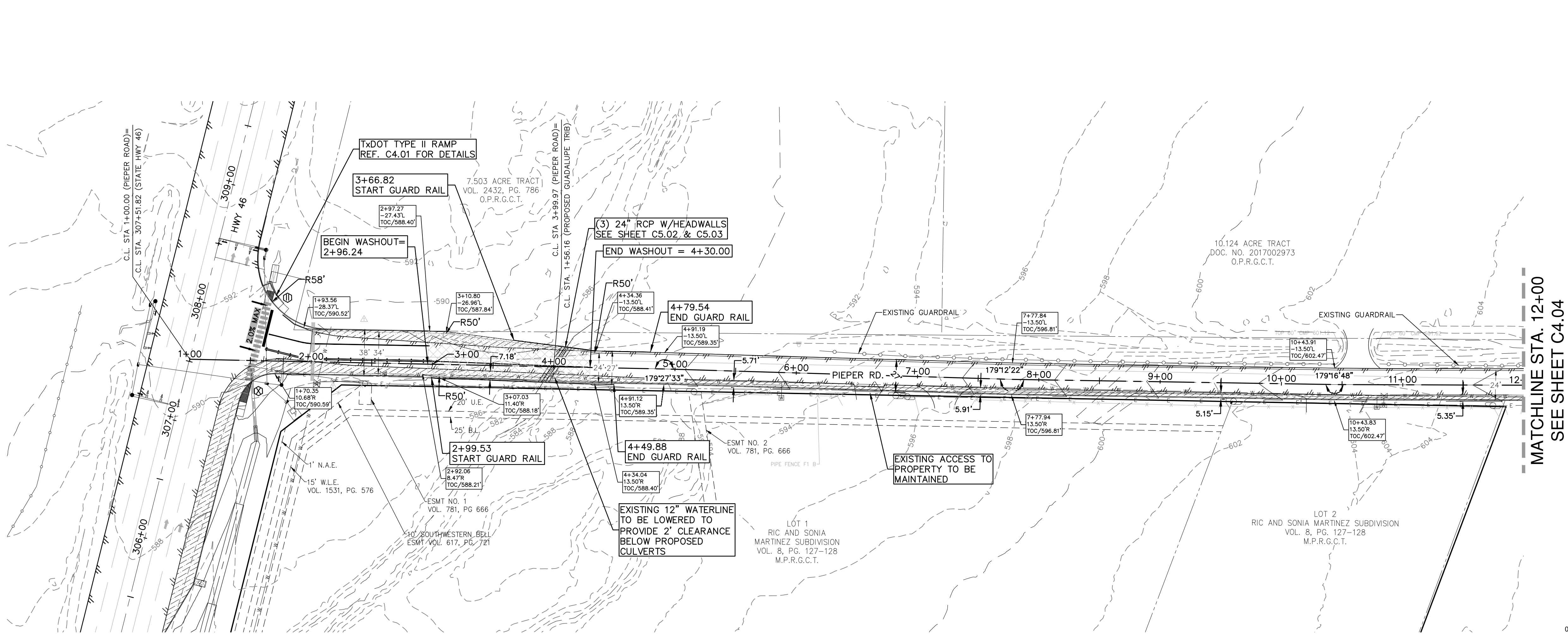
DESIGNED BY: CA

REVIEWED BY: CV

HMT PROJECT NO.  
031.061

**SHEET**  
**C4.02**

Drawing Name: N:\\_Projects\031 - DR Horton\031.060 - 175 Ac Friesenhain Old Office\031.060\_STREET PLANS.dwg User: calliyan-m Jun 16, 2020 - 8:12am



**LEGEND**

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- EXISTING PAVEMENT EDGE
- FLOW ARROW
- ADDITIONAL SUB-BASE AREAS
- EXISTING GROUND LEFT (EG LT)
- EXISTING GROUND RIGHT (EG RT)
- EXISTING GROUND CENTER (EG CTR)
- PROPOSED GROUND CENTER (PR TC)
- ACCESSIBLE CROSSING AREA  
CONTRACTOR TO ENSURE MAX 2%  
CROSS SLOPE IN THESE AREAS
- SIDEWALK RAMP TYPE  
(SEE DETAIL SHEET C4.08)
- SIDEWALK TO BE CONSTRUCTED  
BY SITE DEVELOPMENT CONTRACTOR

**NOTES**

- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET SUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 30 MPH.
- ALL A.D.A. RAMPS ARE TO BE CONSTRUCTED BY THE SITE DEVELOPMENT CONTRACTOR AT THE TIME OF STREET CONSTRUCTION.

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBP FIRM F-10961  
TBP FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
CHRISTOPHER P. VAN HEERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

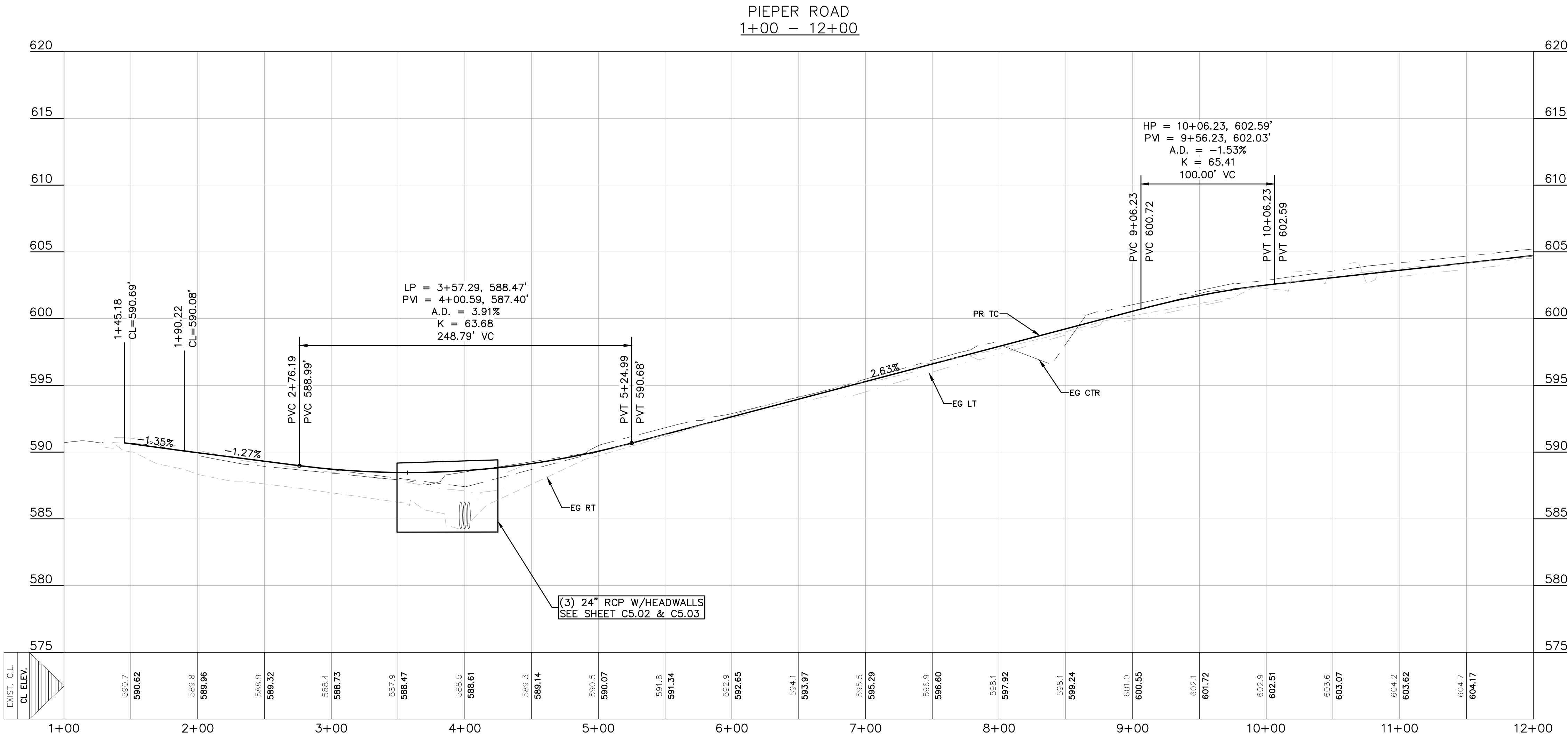
06/16/2020

**PIEPER ROAD PLAN & PROFILE**  
**STA 1+00 TO 12+00**  
**PARKSIDE OFFSITE**  
**HWY 46 - PIEPER RD IMPROVEMENTS**

NO.	REVISION	DESCRIPTION	REVISION DATE

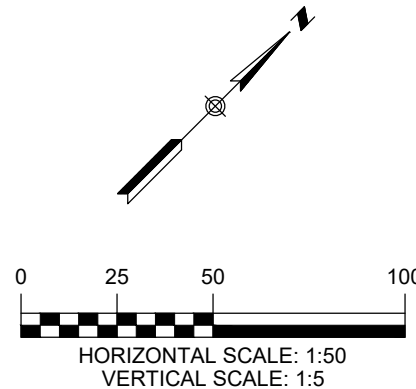
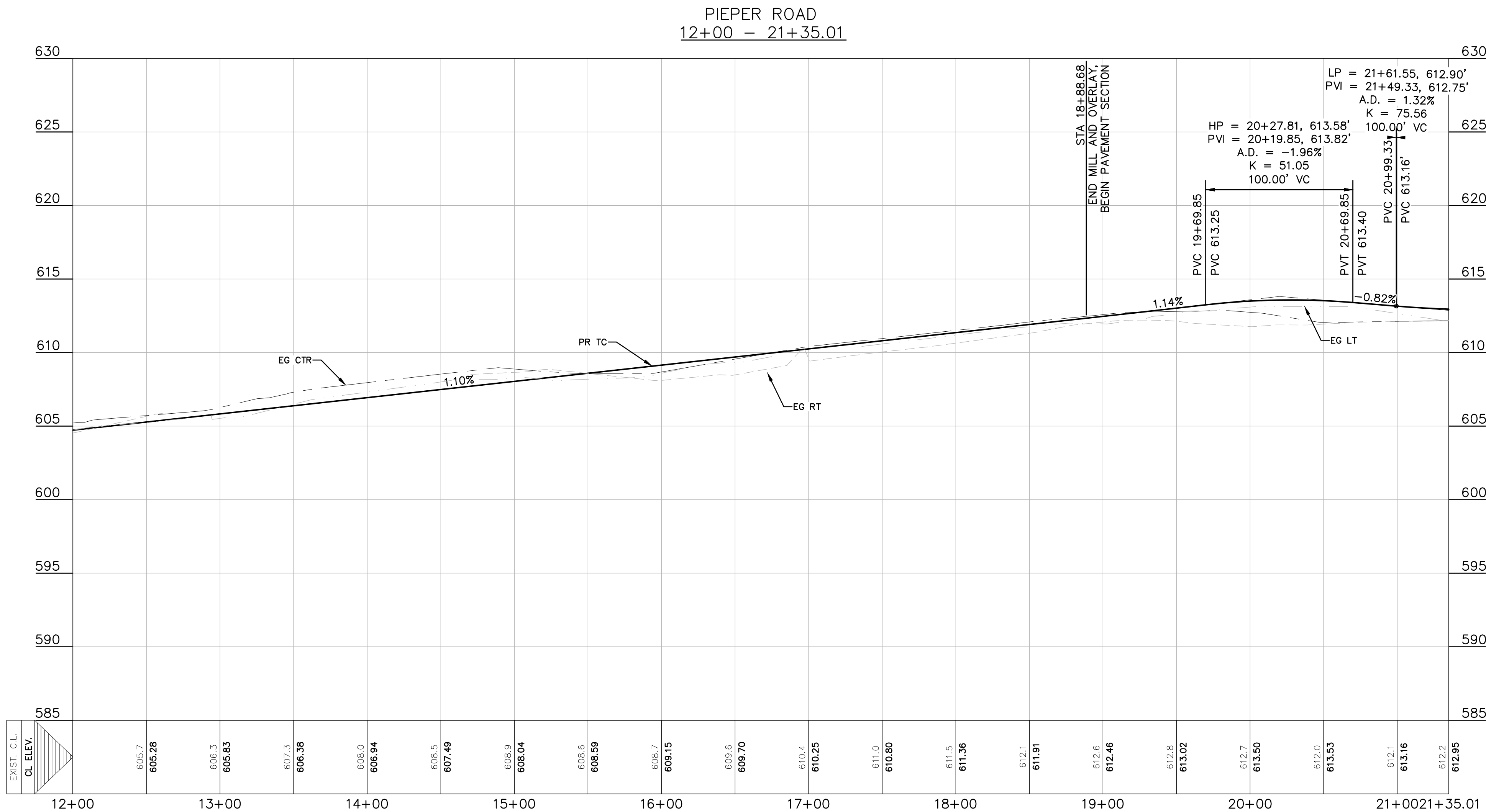
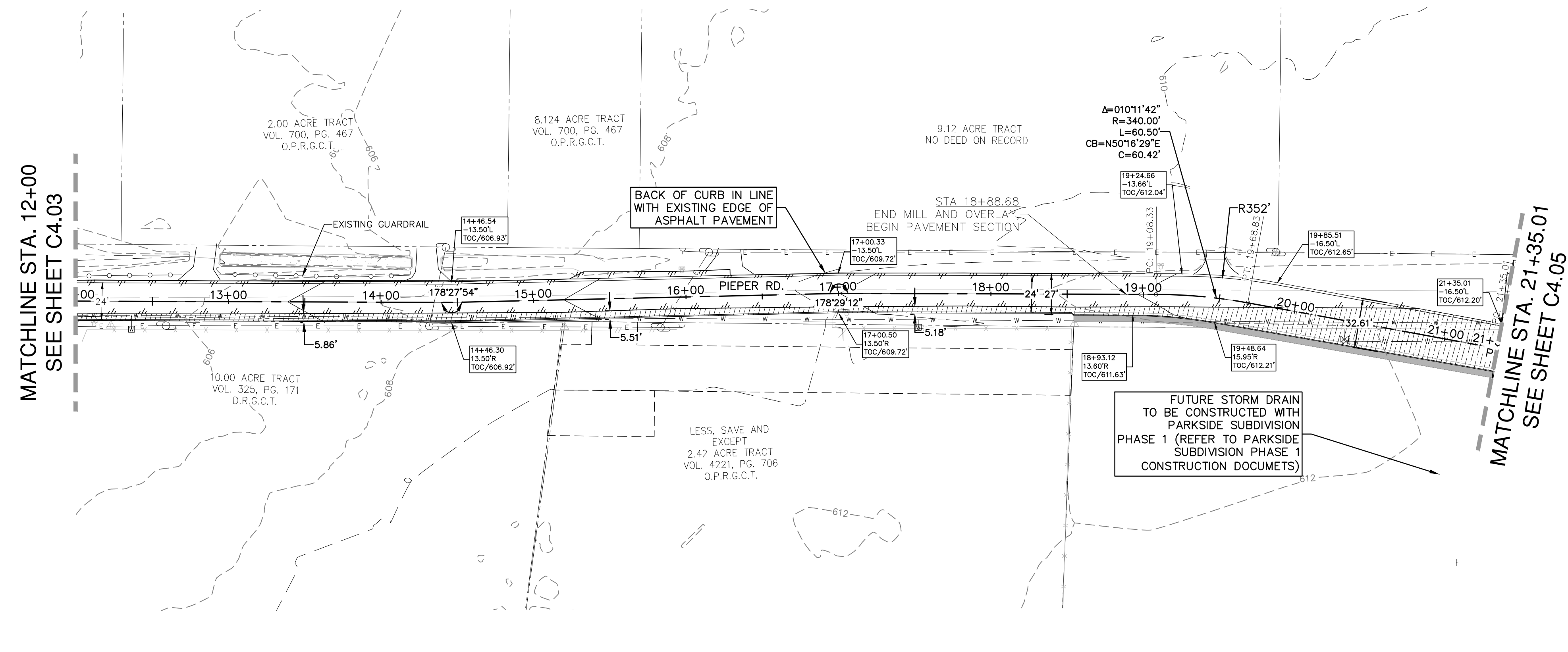
DATE: JUNE 2020  
DRAWN BY: MK  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.061

**SHEET**  
**C4.03**



THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

Drawing Name: N:\\_Projects\031 - DR Horton\031.060 - 175 Ac Friesenhahn Cds\Office\031.060\_STREET PLANS.dwg User: calliyan-m Jun 16, 2020 - 8:12am



- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - EXISTING PAVEMENT EDGE
  - FLOW ARROW
  - ADDITIONAL SUB-BASE AREAS
  - EXISTING GROUND LEFT (EG LT)
  - EXISTING GROUND RIGHT (EG RT)
  - EXISTING GROUND CENTER (EG CTR)
  - PROPOSED GROUND CENTER (PR TC)
  - ACCESSIBLE CROSSING AREA  
CONTRACTOR TO ENSURE MAX 2%  
CROSS SLOPE IN THESE AREAS
  - 2.0% MAX
  - SIDEWALK RAMP TYPE  
(SEE DETAIL SHEET C4.08)
  - SIDEWALK TO BE CONSTRUCTED  
BY SITE DEVELOPMENT CONTRACTOR

- NOTES**
- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
  - CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
  - CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
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  - ALL A.D.A. RAMPS ARE TO BE CONSTRUCTED BY THE SITE DEVELOPMENT CONTRACTOR AT THE TIME OF STREET CONSTRUCTION.

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

06/16/2020

**PIEPER ROAD PLAN & PROFILE**  
**STA 12+00 TO 21+35.01**  
**PARKSIDE OFFSITE**  
**HWY 46 - PIEPER RD IMPROVEMENTS**

NO.	REVISION	DESCRIPTION	DATE

DATE: **JUNE 2020**

DRAWN BY: **MK**

DESIGNED BY: **CAM**

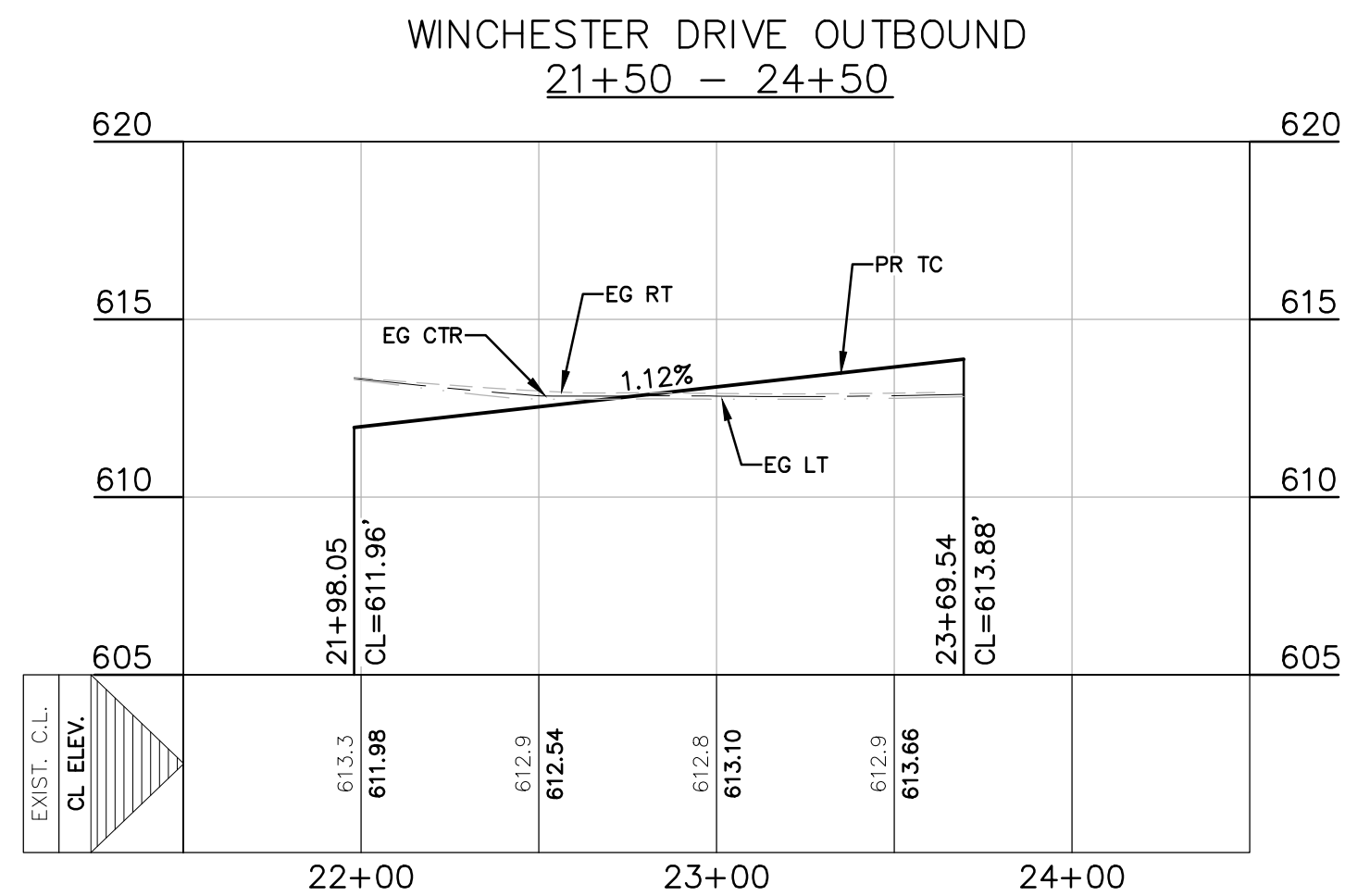
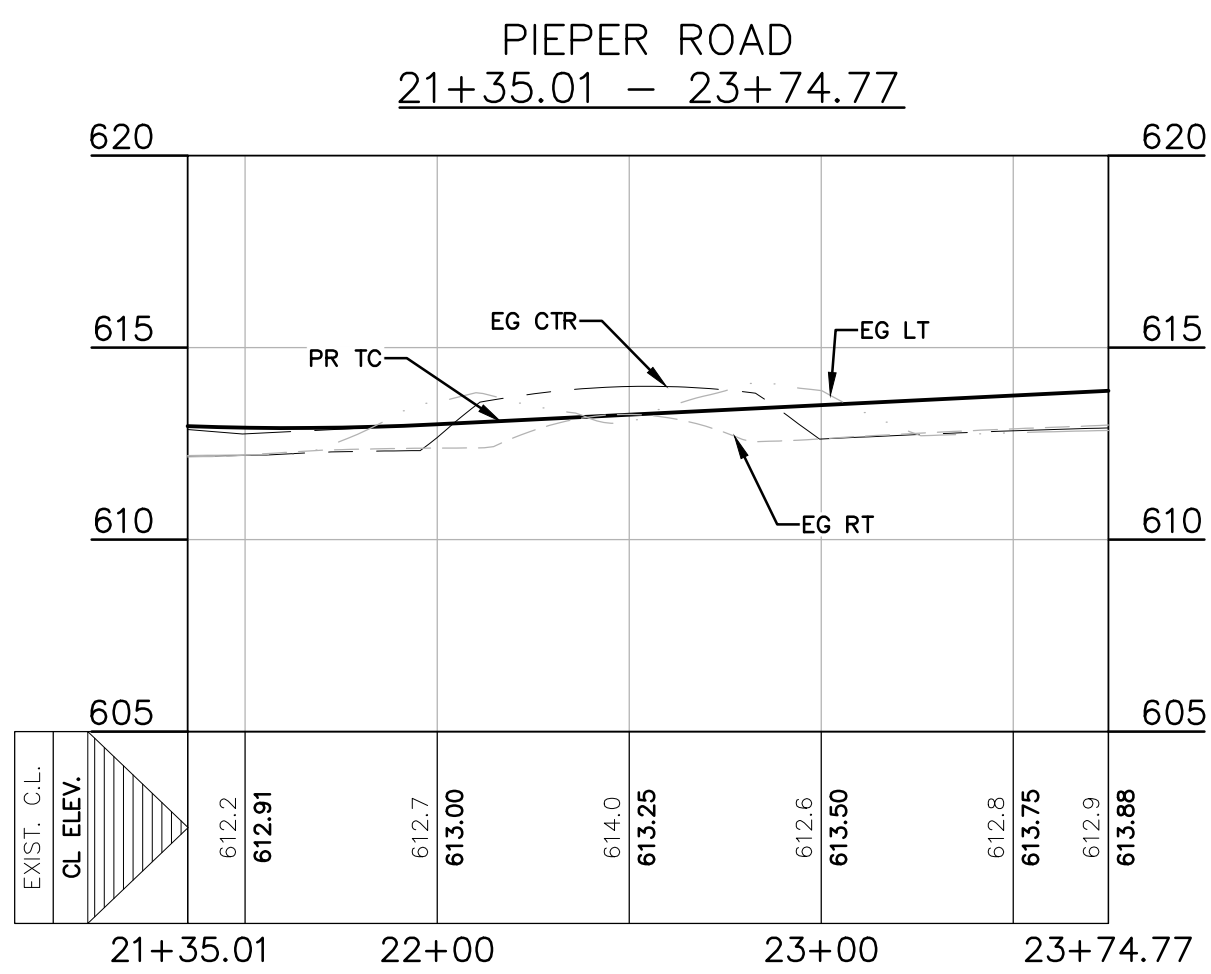
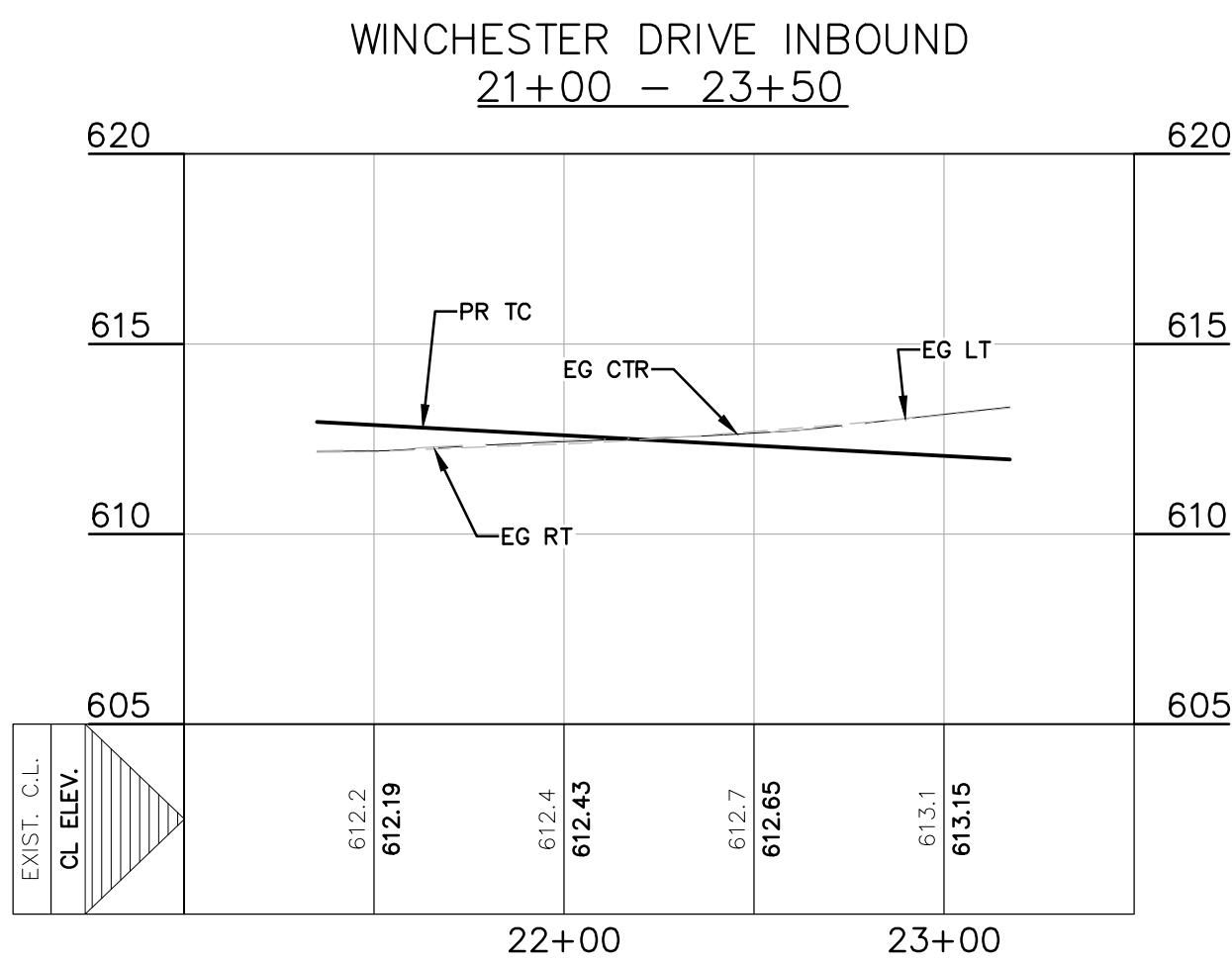
REVIEWED BY: **CVH/SWH**

HMT PROJECT NO.:  
**031.061**

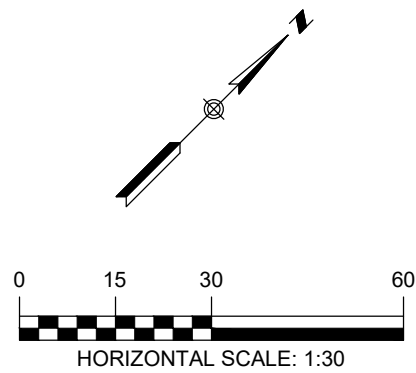
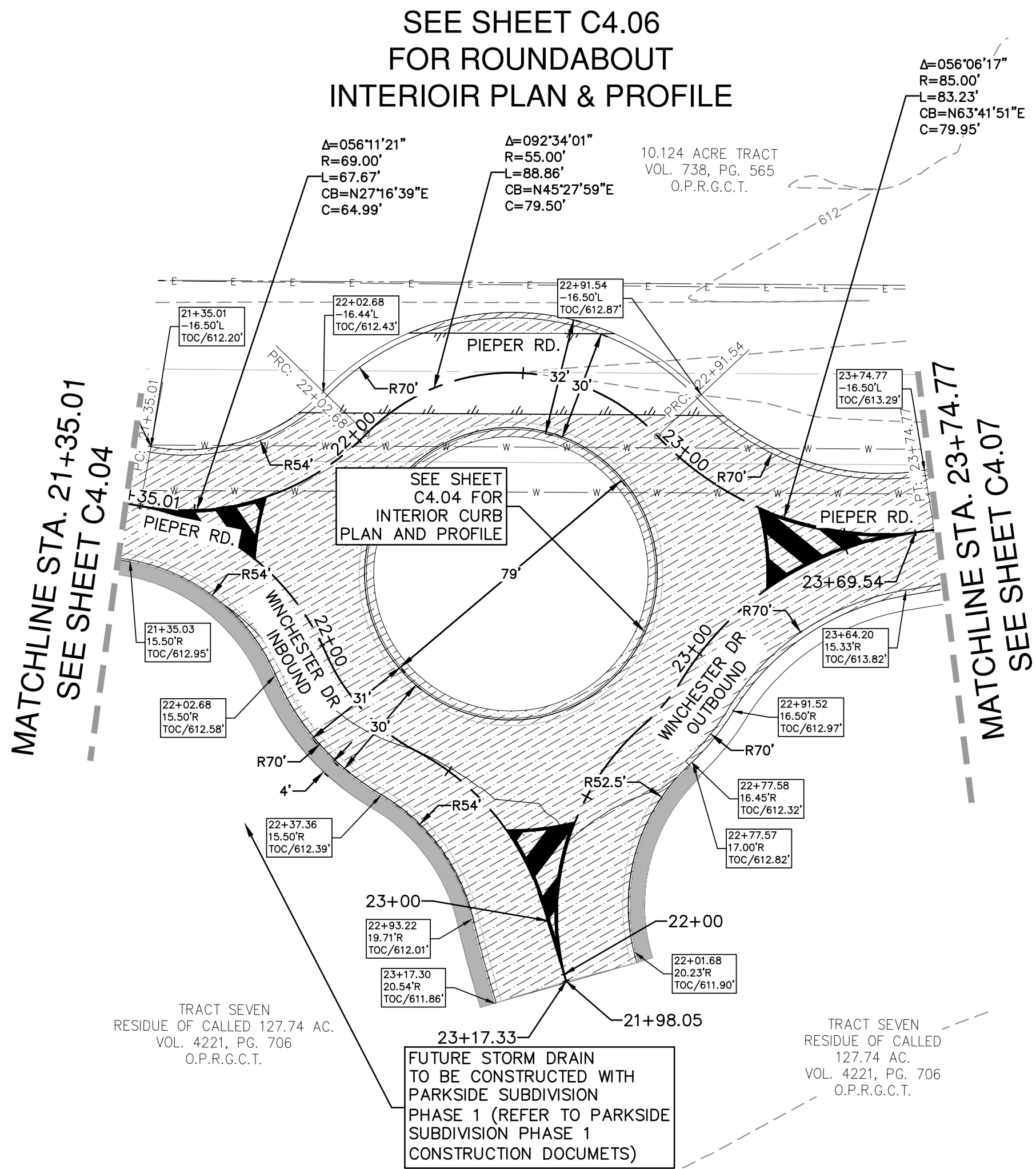
**SHEET**  
**C4.04**

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Drawing Name: N:\\_Projects\031 - DR Horton\031.060 - 175 Ac Friesenhahn Cds\Office\031.060\_STREET PLANS.dwg User: calliyan-m Jun 16, 2020 - 8:12am



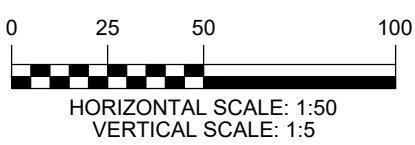
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.



- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - EXISTING PAVEMENT EDGE
  - FLOW ARROW
  - ADDITIONAL SUB-BASE AREAS
  - EXISTING GROUND LEFT (EG LT)
  - EXISTING GROUND RIGHT (EG RT)
  - EXISTING GROUND CENTER (EG CTR)
  - PROPOSED GROUND CENTER (PR TC)
  - ACCESSIBLE CROSSING AREA  
CONTRACTOR TO ENSURE MAX 2%  
CROSS SLOPE IN THESE AREAS
  - 2.0% MAX
  - SIDEWALK RAMP TYPE  
(SEE DETAIL SHEET C4.08)
  - SIDEWALK TO BE CONSTRUCTED  
BY SITE DEVELOPMENT CONTRACTOR

**NOTES**

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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



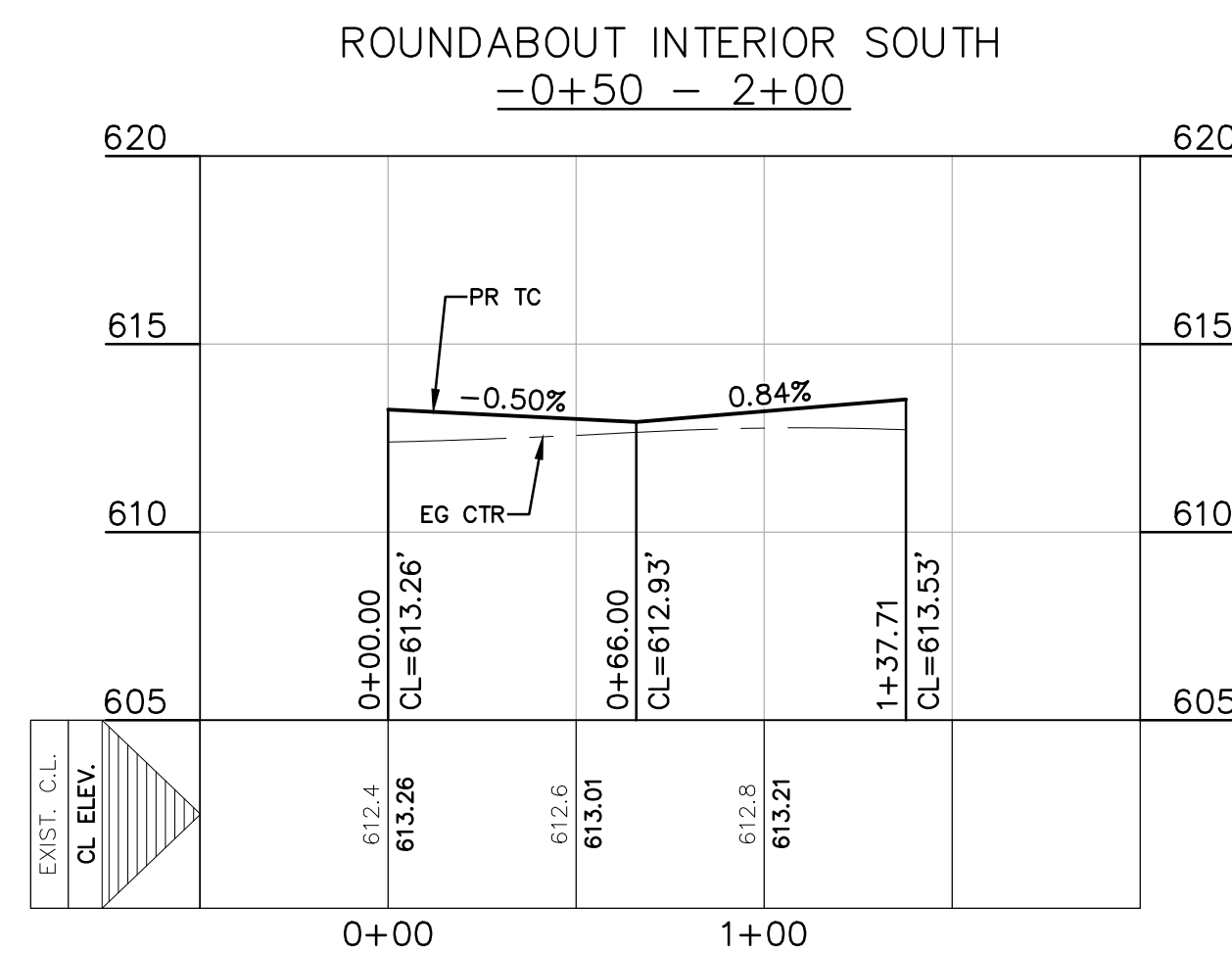
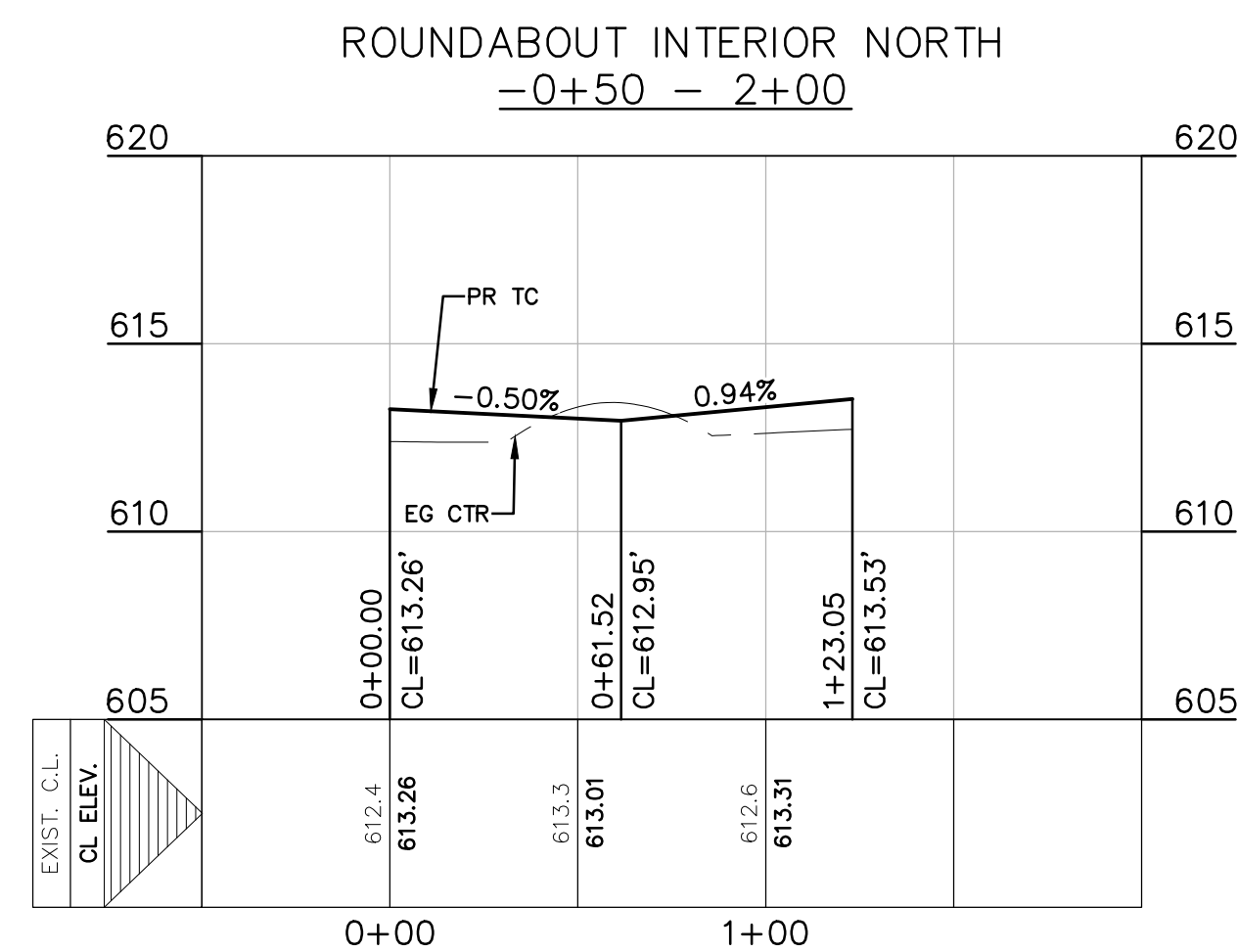
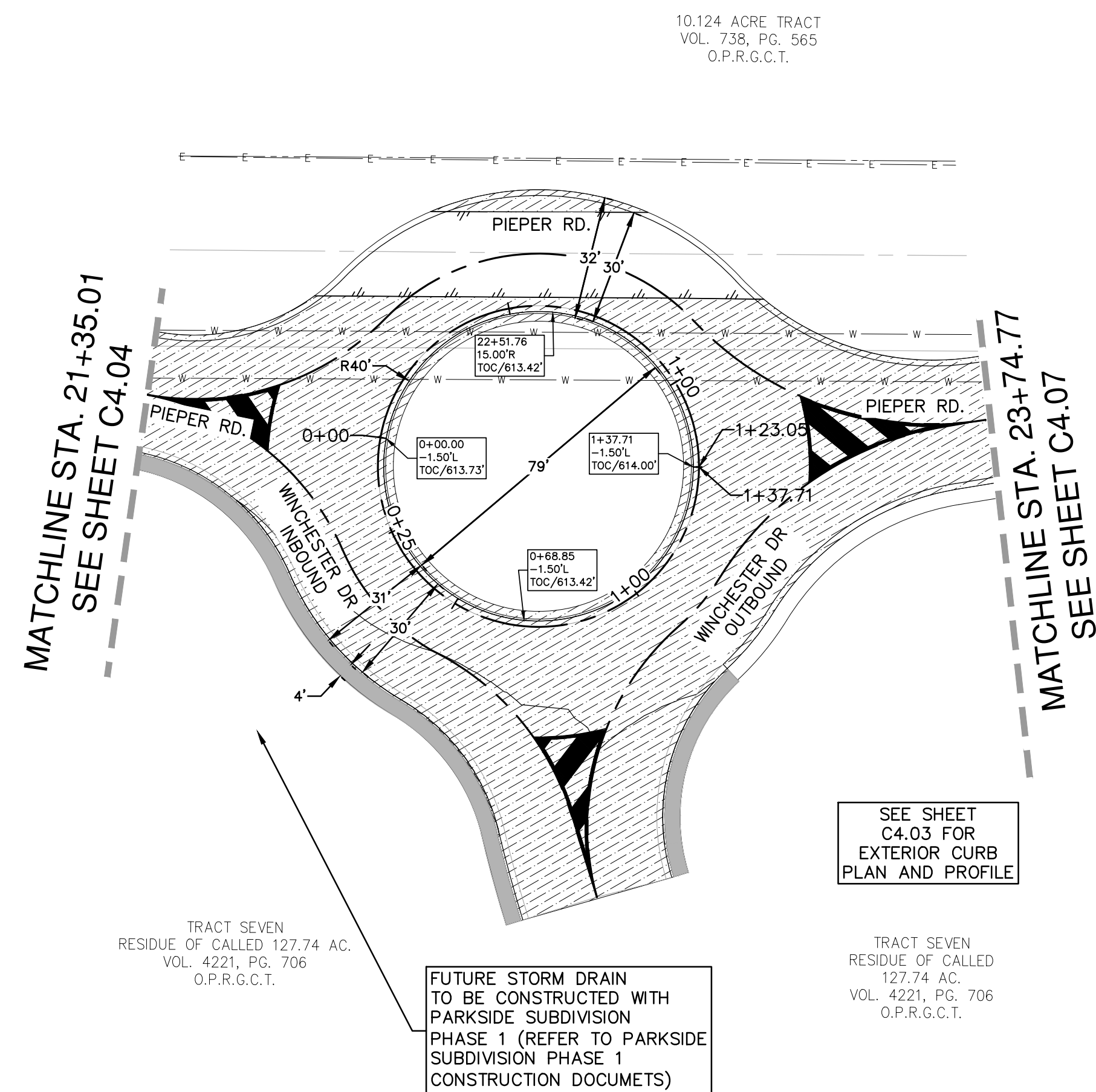
06/16/2020  
**PIEPER ROAD PLAN & PROFILE**  
**STA 21+35.01 TO 23+74.77**  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JUNE 2020  
DRAWN BY: MK  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH

HMT PROJECT NO.:  
031.061

**SHEET**  
**C4.05**



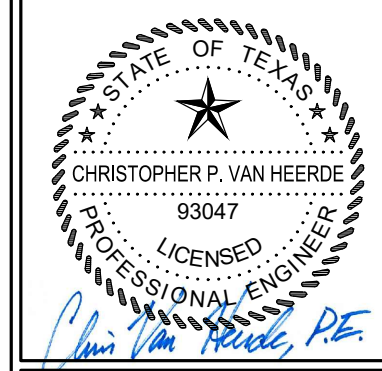
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[illegible]

DATE: JUNE 2020
DRAWN BY: MK
DESIGNED BY: CAM
REVIEWED BY: CVH/SWH

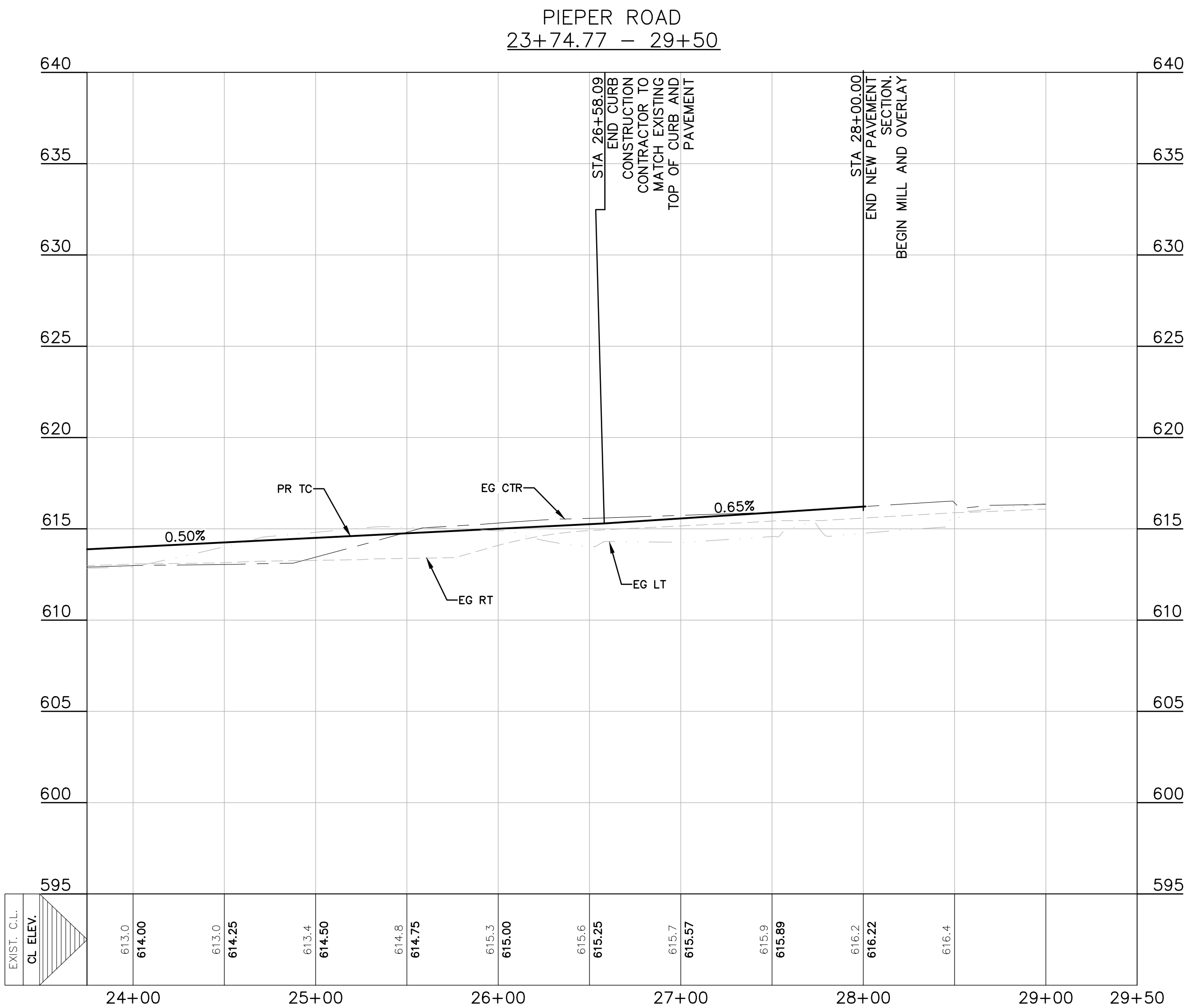
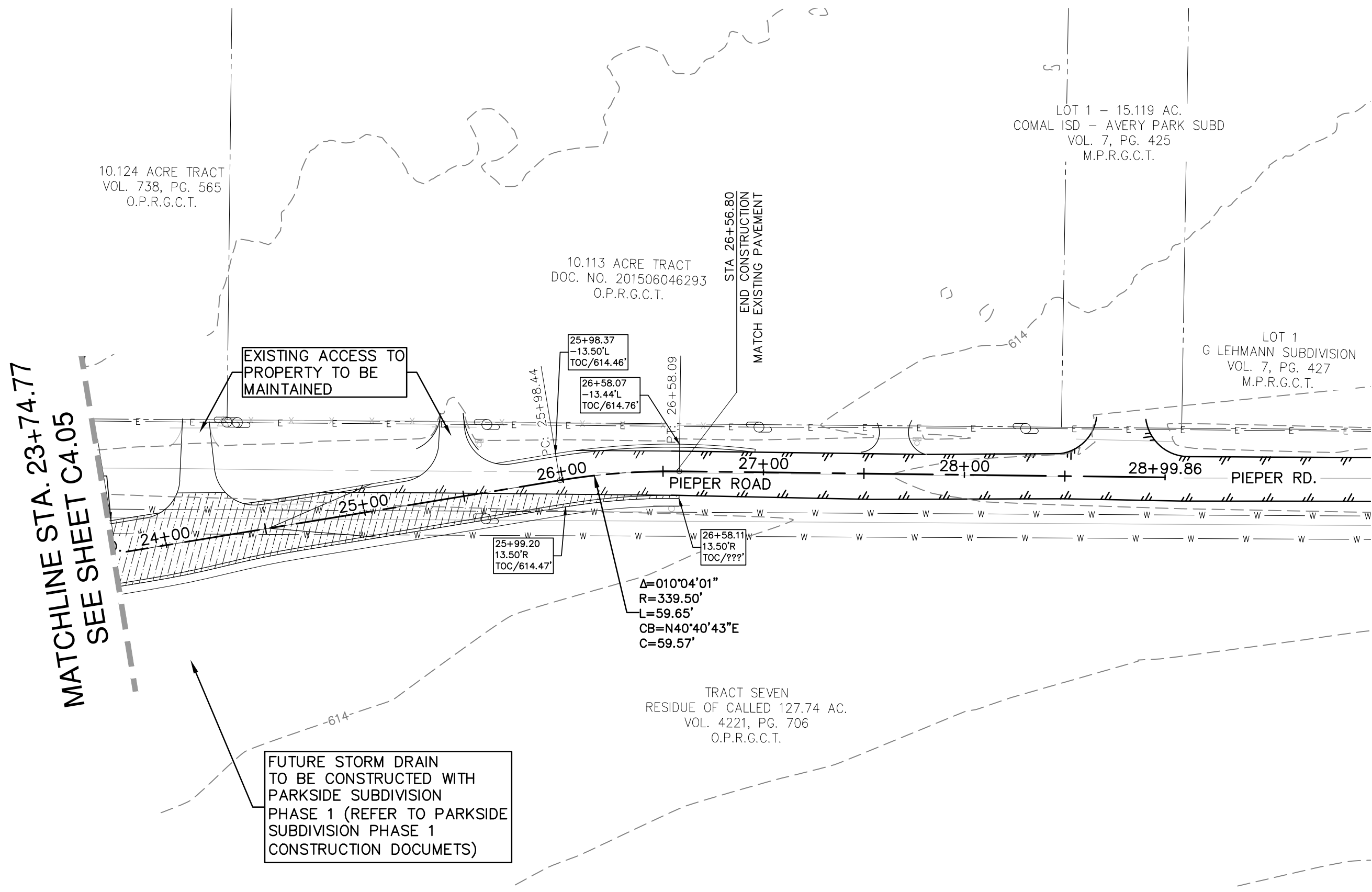
**SHEET**  
**C4.06**

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



06/16/2020  
**PIEPER ROAD PLAN & PROFILE**  
**ROUNDABOUT INTERIOR**  
 PARKSIDE OFFSITE  
 HWY 46 - PIEPER RD IMPROVEMENTS

Drawing Name: N:\\_Projects\031 - DR Horton\031.060 - 175 Ac Friesenhain Cds\Office\031.060\_STREET PLANS.dwg User: calliyn-m Jun 16, 2020 - 8:12am

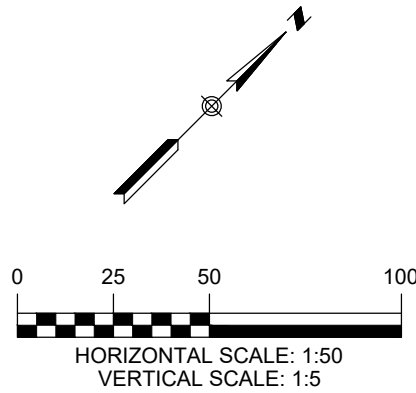


**LEGEND**

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- EXISTING PAVEMENT EDGE
- FLOW ARROW
- ADDITIONAL SUB-BASE AREAS
- EXISTING GROUND LEFT (EG LT)
- EXISTING GROUND RIGHT (EG RT)
- EXISTING GROUND CENTER (EG CTR)
- PROPOSED GROUND CENTER (PR TC)
- ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
- 2.0% MAX
- SIDEWALK RAMP TYPE (SEE DETAIL SHEET C4.08)
- SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR

**NOTES**

- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 30 MPH.
- ALL A.D.A. RAMPS ARE TO BE CONSTRUCTED BY THE SITE DEVELOPMENT CONTRACTOR AT THE TIME OF STREET CONSTRUCTION.



THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
CHRISTOPHER P. VAN HEERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

06/16/2020

**PIEPER ROAD PLAN & PROFILE**  
**STA 23+74.77 TO 34+00**  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JUNE 2020

DRAWN BY: MK

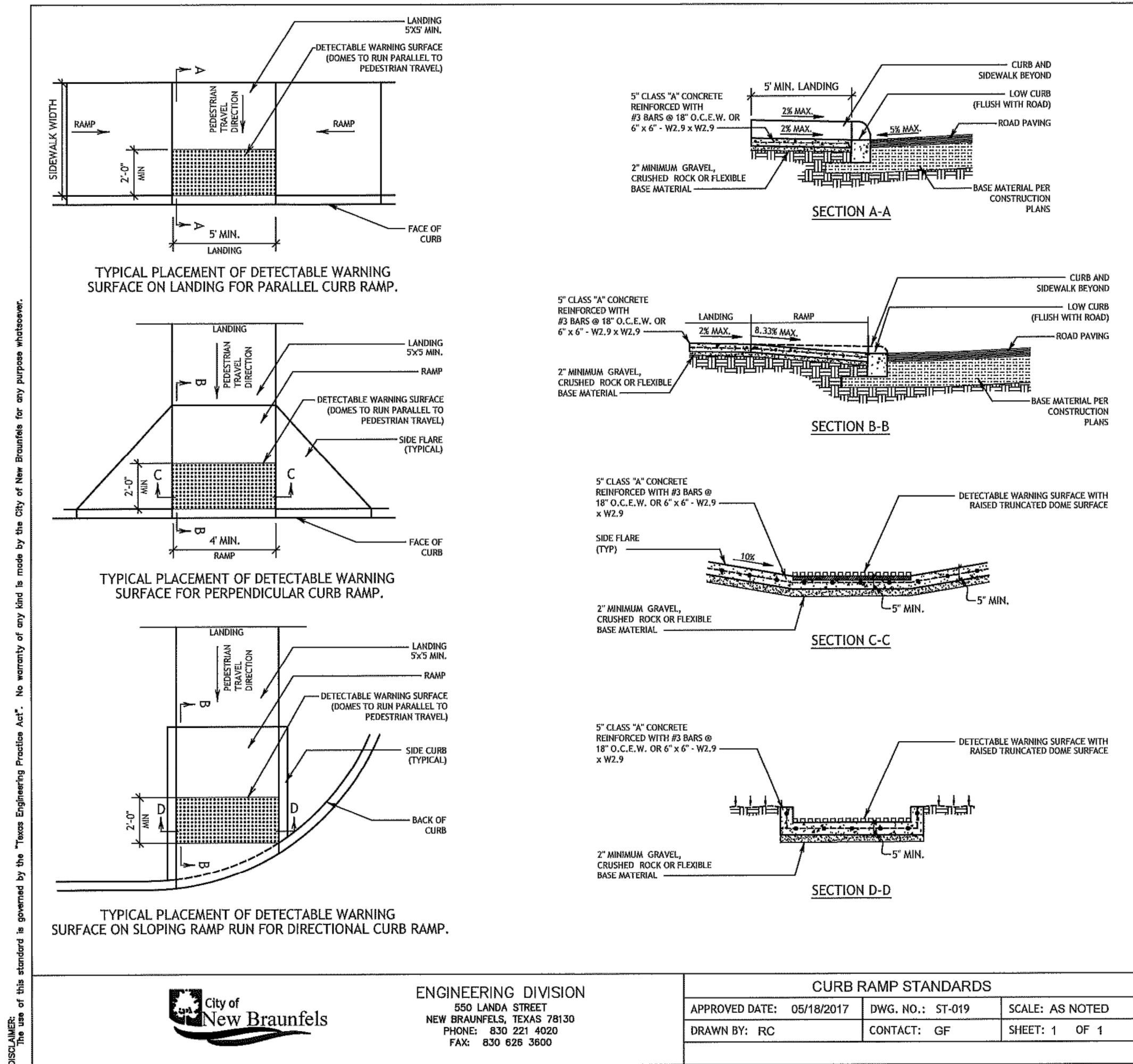
DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

HMT PROJECT NO.: 031.061

**SHEET**

**C4.07**



CURB RAMP NOTES			
1.	ALL SLOPES ARE MAXIMUM ALLOWABLE, THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS AS DIRECTED.		
2.	THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF CURB RAMPS ARE TO BE SHOWN ON THE CONSTRUCTION PLANS. ALL ACCESSIBLE WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT (ADA) AND TEXAS ACCESSIBILITY STANDARDS (TAS). CITY ENGINEER OR BUILDING OFFICIAL MAY ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.		
3.	THE MINIMUM STANDARD SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 118-49 OF THE NEW BRAUNFELS CODE OF ORDINANCES.		
4.	ALL LANDINGS WHERE REQUIRED SHALL BE 5'x 5' (60"x60") MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.		
5.	RAMP LENGTHS SHALL BE SUFFICIENT TO MAINTAIN A MAXIMUM SLOPE OF 8.33% (1V:12H), MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2% (1V:50H).		
6.	SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY. ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE GRADE OF THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS, AND LANDINGS IN ACCORDANCE WITH CURRENT ADA AND TAS REQUIREMENTS.		
7.	PROVIDE FLARED RAMP SIDES WITH A MAXIMUM SLOPE OF 10% (1V:10H) MEASURED ALONG THE CURB LINE. CURB RETURNS MAY BE USED IN-STEAD OF SIDE FLARES IN AREAS NOT NORMALLY WALKED ACROSS BY PEDESTRIANS, BECAUSE THE ADJACENT SURFACE IS VEGETATION OR OTHER NON-WALKING SURFACE OR WHERE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.		
8.	MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4' x 4' (48"x48") WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.		
9.	CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.		
10.	EXISTING FEATURES THAT COMPLY WITH CURRENT TAS REQUIREMENTS MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.		
11.	HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. PROVIDE CURB RAMPS WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.		
12.	SEPARATE CURB RAMP AND LANDINGS FROM ADJACENT SIDEWALK AND ANY OTHER ELEMENTS WITH PRE-MOLD OR BOARD JOINT OF 1/2" UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.		
13.	PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.		
14.	THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.07% (I.E. 8.33-(2.67+11)). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.		
15.	IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.		
16.	ADA RAMP SHALL BE CONSTRUCTED WITH 5' CLASS "A" CONCRETE WITH 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL. REINFORCING STEEL SHALL BE #3 BARS @ 18" O.C.E.W. OR 6" x 6" - W2.9 x W2.9 WIRE MESH.		
17.	THE EXTENTS OF ADA COMPLIANCE IN ALTERATIONS SHALL BE WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT AND AS DETERMINED BY THE CITY BUILDING OFFICIAL.		
DETECTABLE WARNING NOTES			
1.	CURB RAMPS OR LANDINGS ADJUTING THE CROSSWALK MUST HAVE A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOWNS COMPLYING WITH SECTION 705 OF THE TEXAS ACCESSIBILITY STANDARDS (TAS). THE SURFACE MUST CONTRAST VISUALLY WITH ADJACENT SURFACES, INCLUDING SIDE FLARES, TURNING DARK BROWN OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNLOCKED CONCRETE, UNLESS SPECIFIED ELSEWHERE IN THE PLANS.		
2.	DETECTABLE WARNING SURFACES MUST BE SLIP RESISTANT AND MUST NOT ALLOW WATER TO ACCUMULATE.		
3.	ALIGN TRUNCATED DOWNS IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.		
4.	DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.		
5.	DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS AT THE BACK OF CURB. ALIGN THE ROWS OF DOWNS TO BE PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADII.		
6.	DETECTABLE WARNING MATERIALS MUST MEET 73007 DEPARTMENTAL MATERIALS SPECIFICATION DWS 4250 AND BE LISTED ON THE MATERIAL PRODUCER LIST. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.		
7.	DETECTABLE WARNING PAVERS SHALL NOT BE PERMITTED WITHOUT THE APPROVAL BY THE PUBLIC WORKS DEPARTMENT.		
CURB RAMP STANDARDS			
APPROVED DATE:	05/18/2017	DWG. NO.:	ST-019
SCALE:	AS NOTED		
DRAWN BY:	RC	CONTACT:	GF
SHEET:	1	OF	1

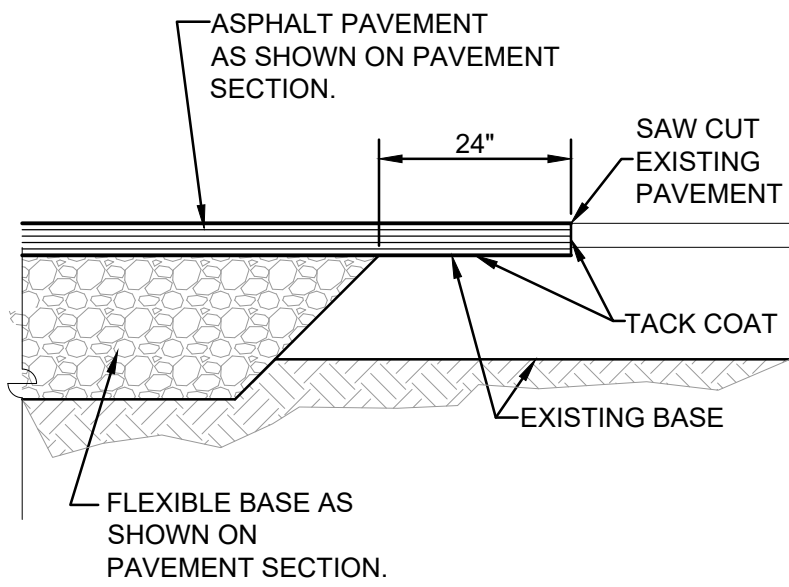
FLEXIBLE PAVEMENTS	
PAVEMENT MATERIAL	
TYPE "D" HMAC	2"
CRUSHED LIMESTONE FLEXIBLE BASE, IN.	11"
COMPACTED SUBGRADE	-
LIME SUBGRADE	6"

NOTE:

- ALL PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE TO THE "SUBSURFACE EXPLORATION AND PAVEMENT ANALYSIS, PROPOSED NEW STREETS, PARKSIDE SUBDIVISION UNIT 1", BY INTEC OF SAN ANTONIO, LP, DATED AUGUST 6, 2018.
- ALL PAVEMENT SECTIONS SHOWN ON THE ABOVE TABLE SHALL SUPERCEDE ANY STANDARD DETAILS WITH RESPECT TO DEPTH OF MATERIALS ASSOCIATED WITH THIS PROJECT.
- THE SUBGRADE SHOULD BE STABILIZED USING LIME IN ACCORDANCE WITH THE GEOTECHNICAL REPORT IN ORDER TO ACHIEVE THE FOLLOWING:
  - PLASTICITY INDEX OF 20 OR LESS
  - PH OF 12.4 OR GREATER
- THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF THE LIME OR CEMENT.

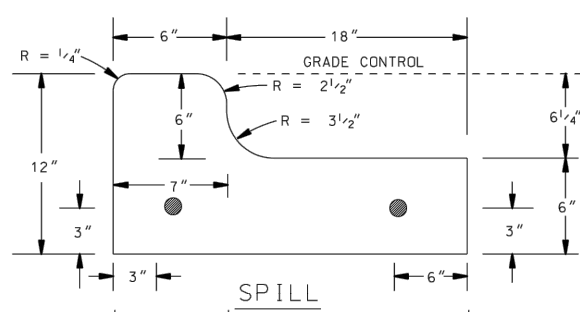
### TYPICAL PAVEMENT SECTION

\*\*\*FOR PIEPER ROAD ONLY\*\*\*



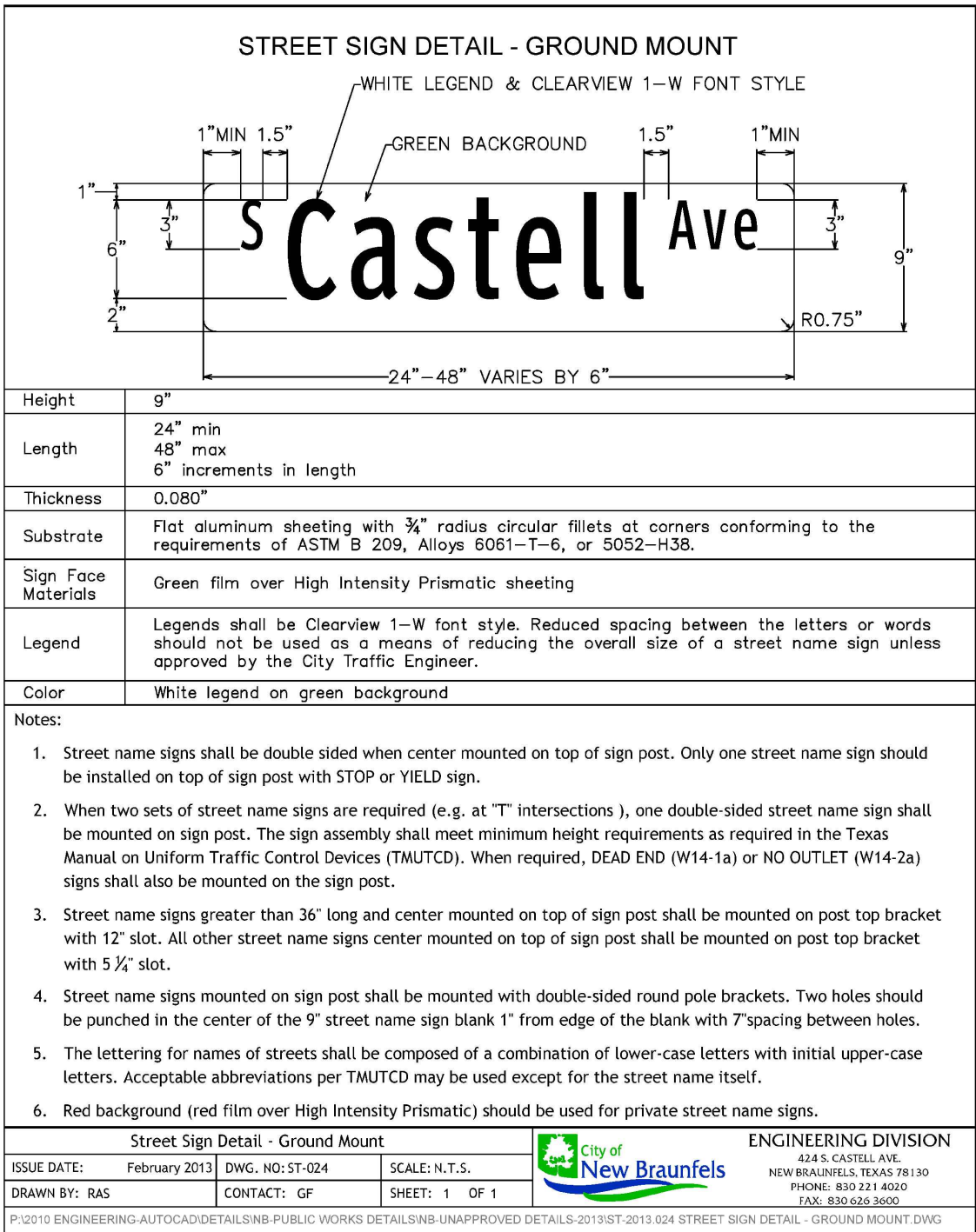
### NEW PAVEMENT TO EXISTING

NOT TO SCALE

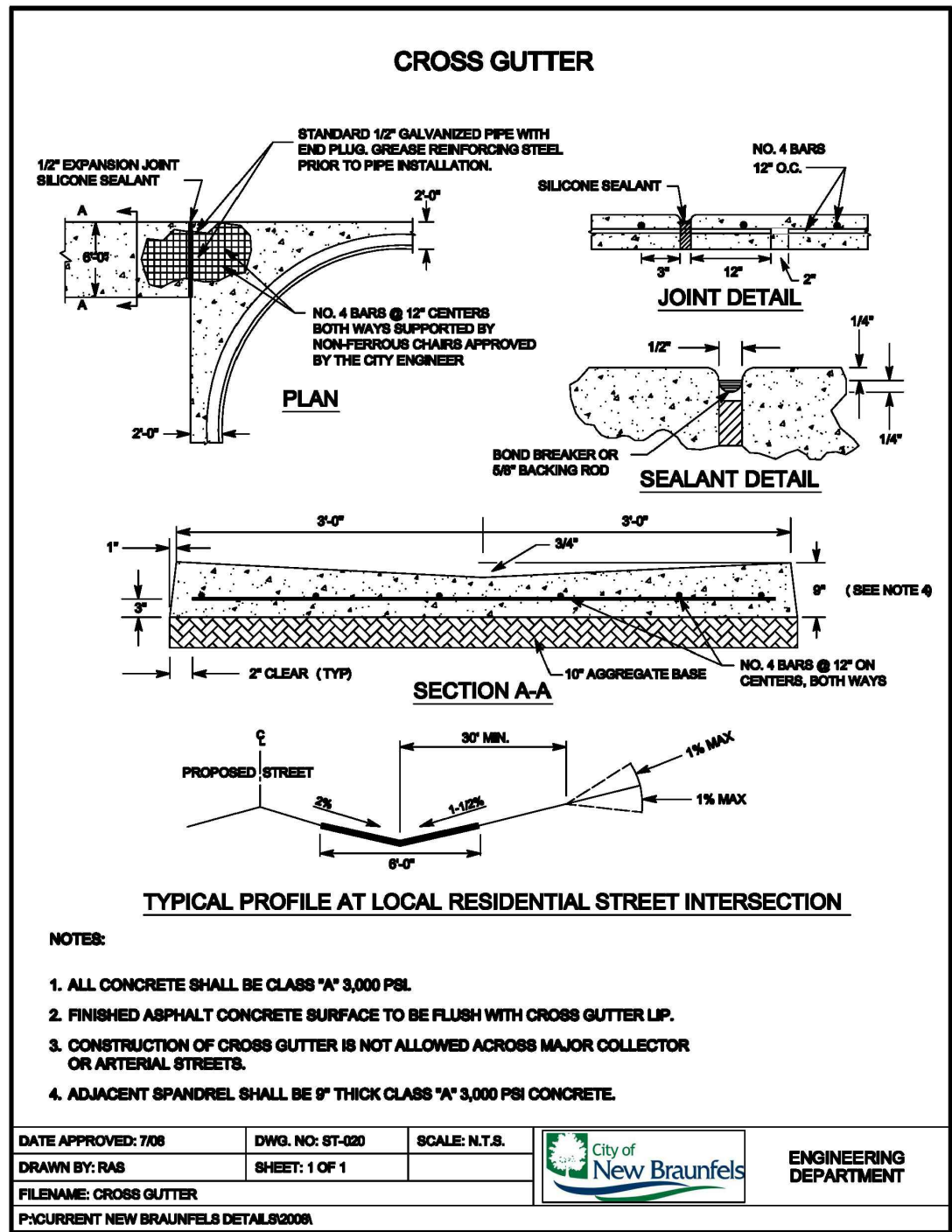


### SPILL CURB DETAIL

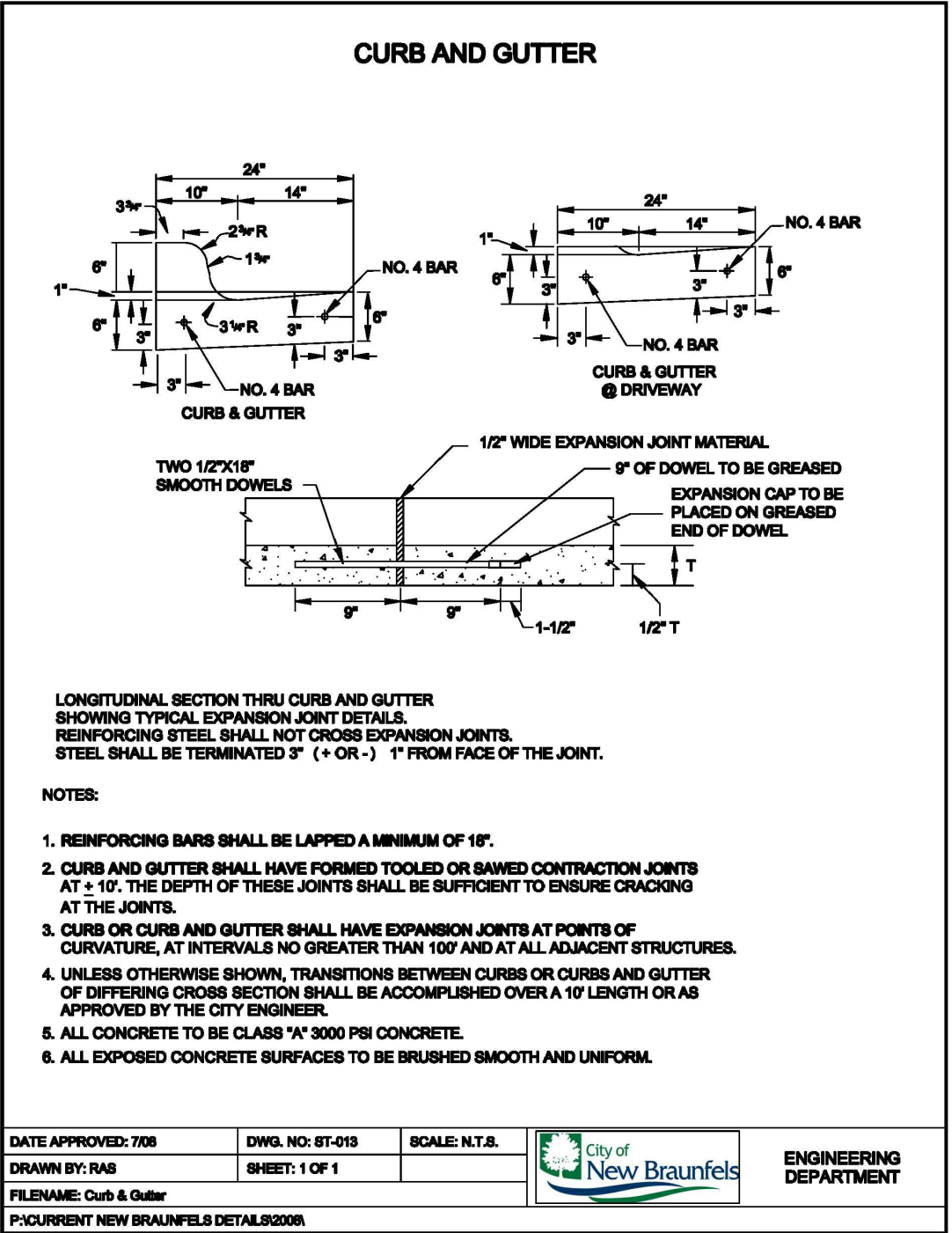
NOT TO SCALE



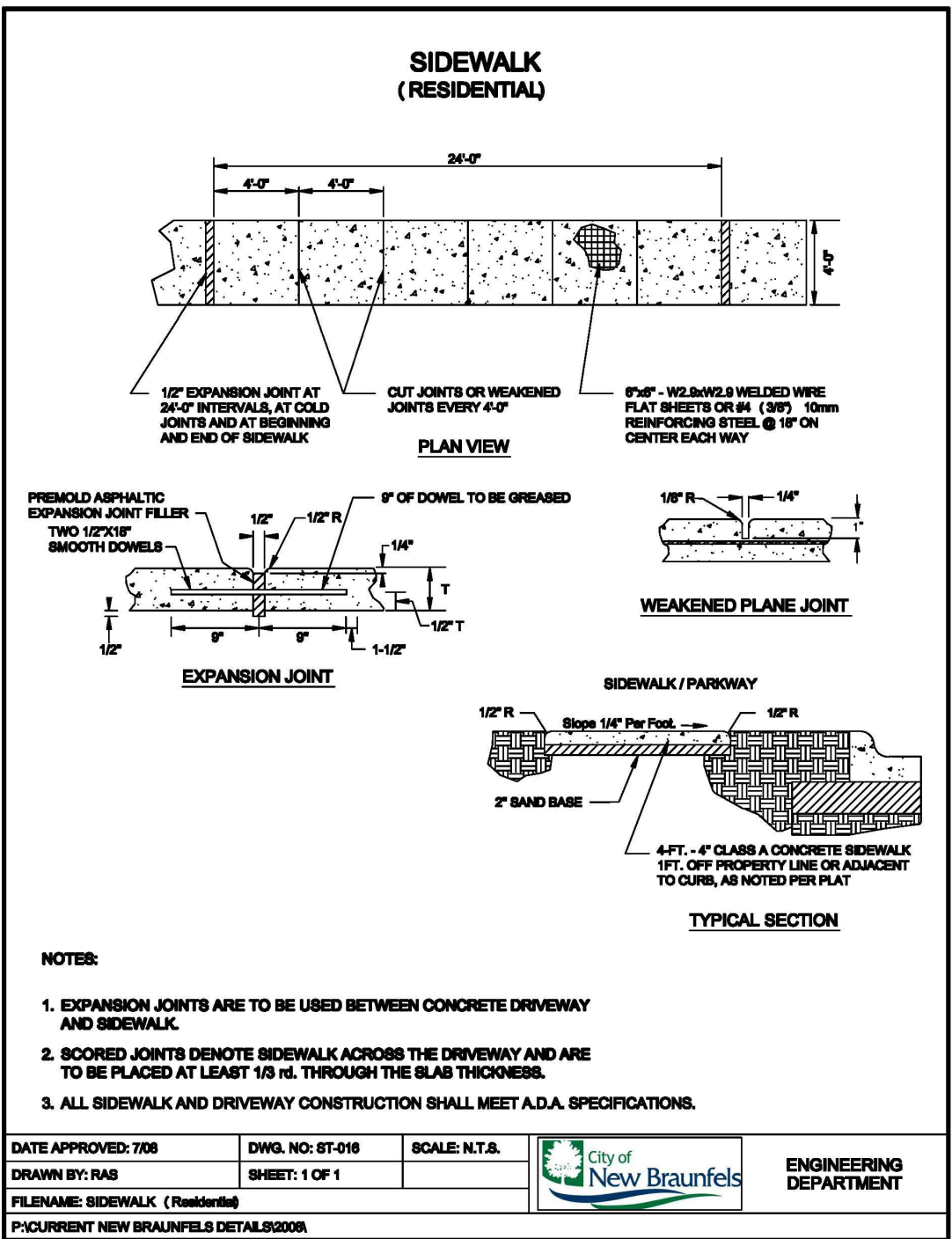
Height	9"
Length	24" min 48" max 6" increments in length
Thickness	0.080"
Substrate	Flat aluminum sheeting with 3/4" radius circular filets at corners conforming to the requirements of ASTM B 209, Alloys 6061-T-6, or 5052-H36.
Sign Face Materials	Green film over High Intensity Prismatic sheeting
Legend	Legends shall be Clearview 1-W font style. Reduced spacing between the letters or words should not be used as a means of reducing the overall size of a street name sign unless approved by the City Traffic Engineer.
Color	White legend on green background
Notes:	
1. Street name signs shall be double sided when center mounted on top of sign post. Only one street name sign should be installed on top of sign post with STOP or YIELD sign.	
2. When two sets of street name signs are required (e.g. at "T" intersections), one double-sided street name sign shall be mounted on sign post. The sign assembly shall meet minimum height requirements as required in the Texas Manual on Uniform Traffic Control Devices (TMUTCD). When required, DEAD END (W14-1a) or NO OUTLET (W14-2a) signs shall also be mounted on the sign post.	
3. Street name signs greater than 36" long and center mounted on top of sign post shall be mounted on post top bracket with 12" slot. All other street name signs center mounted on top of sign post shall be mounted on post top bracket with 5 1/2" slot.	
4. Street name signs mounted on sign post shall be mounted with double-sided round pole brackets. Two holes should be punched in the center of the 9" street name sign blank 1" from edge of the blank with 7" spacing between holes.	
5. The lettering for names of streets shall be composed of a combination of lower-case letters with initial upper-case letters. Acceptable abbreviations per TMUTCD may be used except for the street name itself.	
6. Red background (red film over High Intensity Prismatic) should be used for private street name signs.	
Street Sign Detail - Ground Mount	
DATE: February 2017	DWG. NO: ST-024
SCALE: N.T.S.	424 S. CASTELL AVE. NEW BRAUNFELS, TEXAS 78130 PHONE: 830 221 4020 FAX: 830 226 5005
DRAWN BY: BAS	CONTACT: GF
SHEET: 1	OF 1
P: 2010 ENGINEERING AUTO-CAD DETAILING PUBLIC WORKS DETAILS-UNAPPROVED DETAILS-2017-2018 024 STREET SIGN DETAIL - GROUND MOUNT DWG	



DATE APPROVED: 7/08	DWG. NO: ST-020	SCALE: N.T.S.	City of New Braunfels	ENGINEERING DEPARTMENT
DRAWN BY: BAS	SHEET: 1 OF 1			
FILENAME: CROSS GUTTER				
PICTURE: NEW BRAUNFELS DETAILS 020A				



DATE APPROVED: 7/08	DWG. NO: ST-023	SCALE: N.T.S.	City of New Braunfels	ENGINEERING DEPARTMENT
DRAWN BY: BAS	SHEET: 1 OF 1			
FILENAME: CURB & GUTTER				
PICTURE: NEW BRAUNFELS DETAILS 020B				



DATE APPROVED: 7/08	DWG. NO: ST-016	SCALE: N.T.S.	City of New Braunfels	ENGINEERING DEPARTMENT
DRAWN BY: BAS	SHEET: 1 OF 1			
FILENAME: SIDEWALK (RESIDENTIAL)				
PICTURE: NEW BRAUNFELS DETAILS 020C				

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HERDE  
93047  
PROFESSIONAL ENGINEER

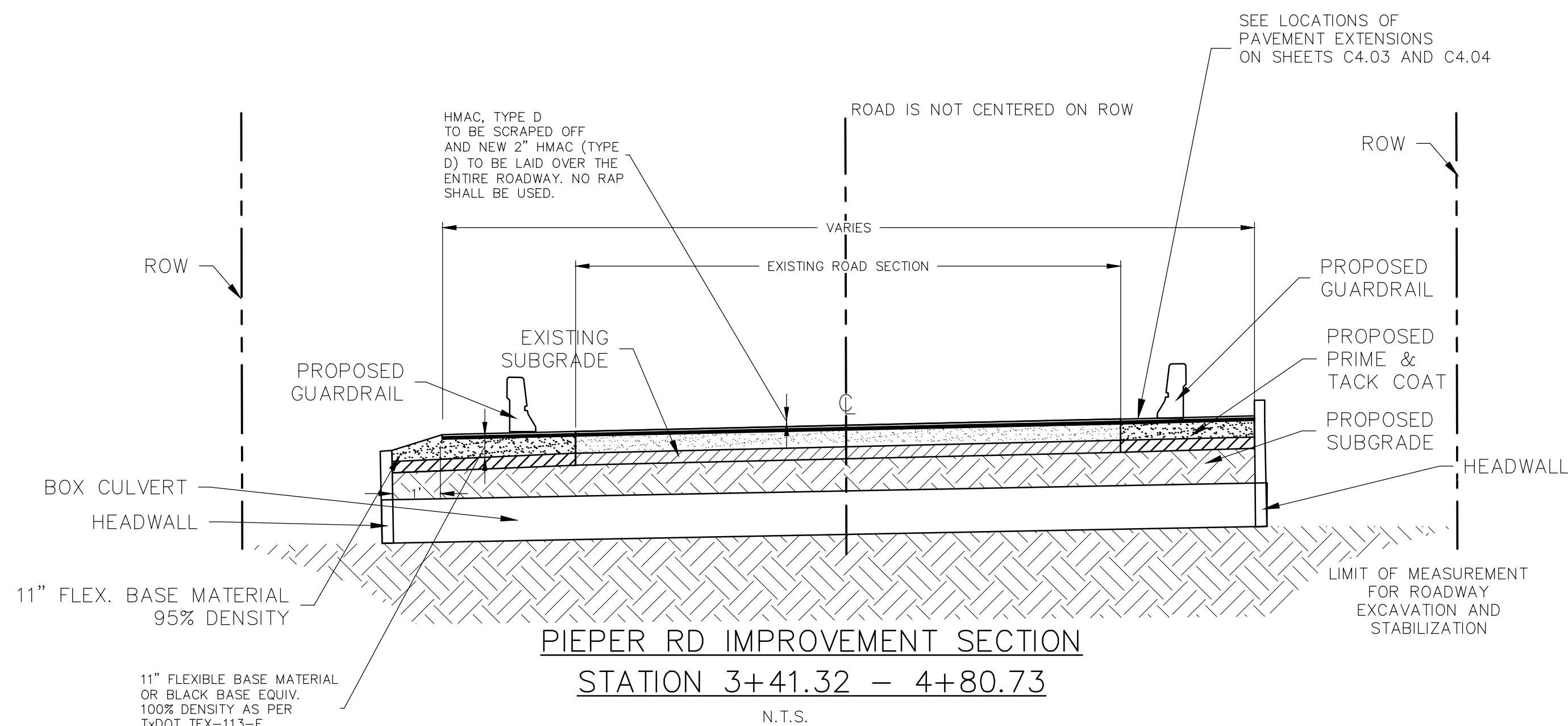
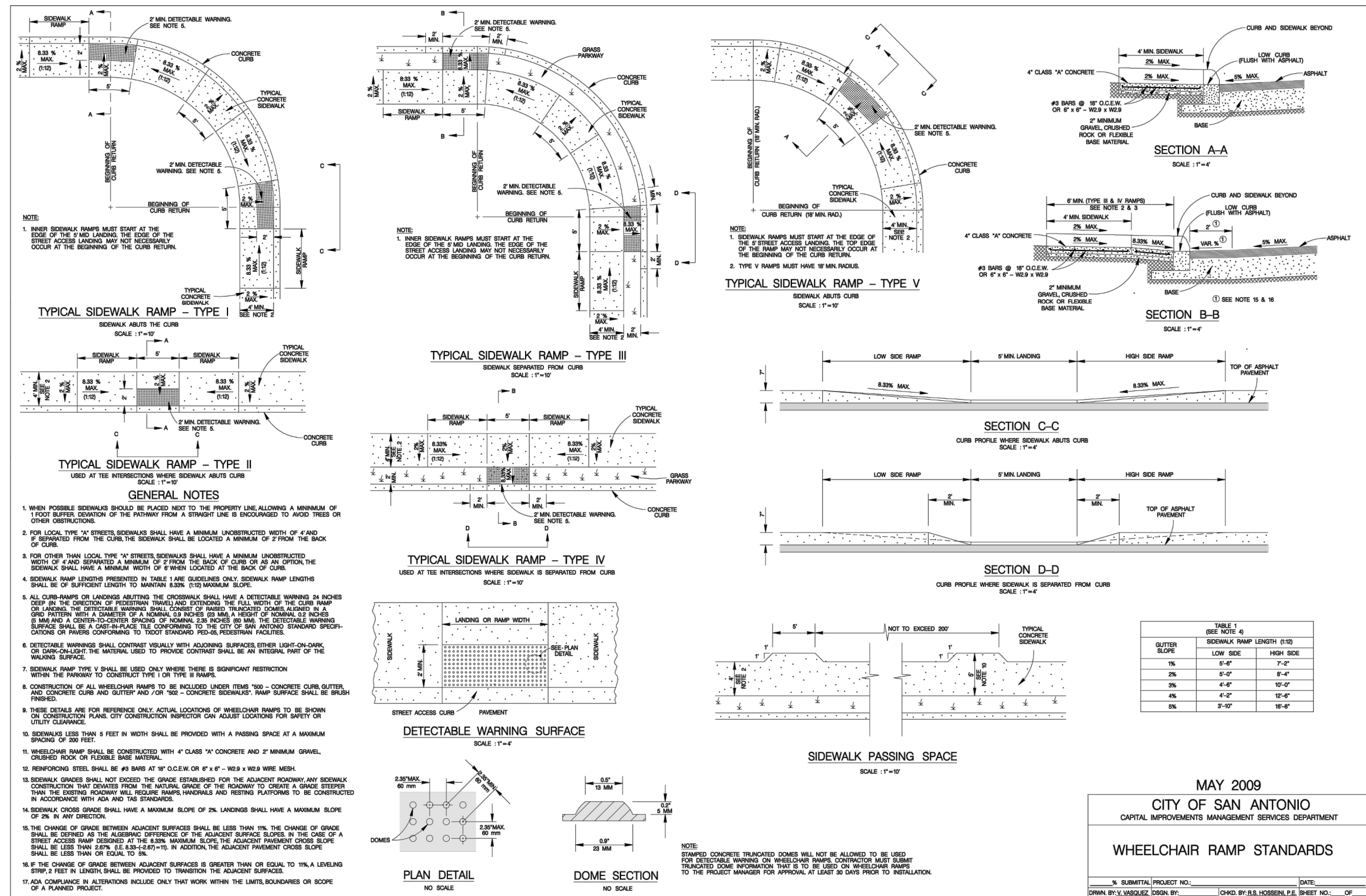
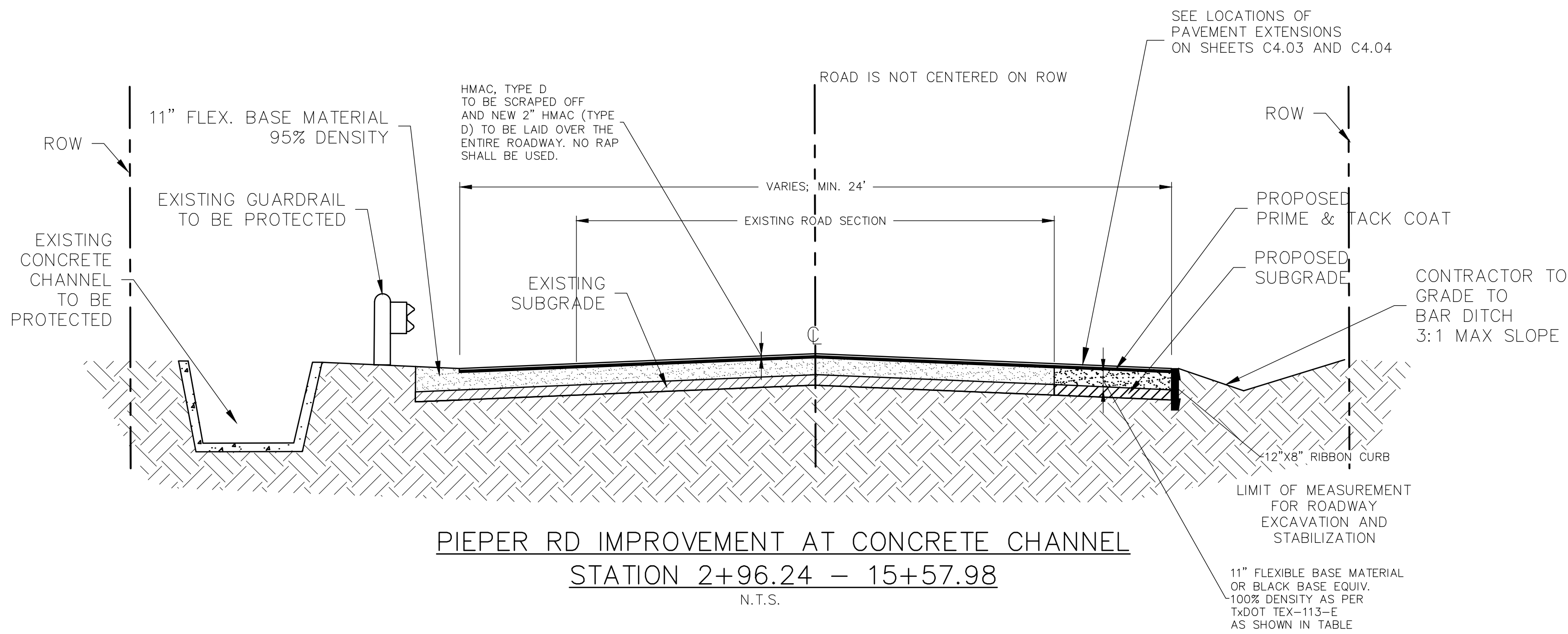
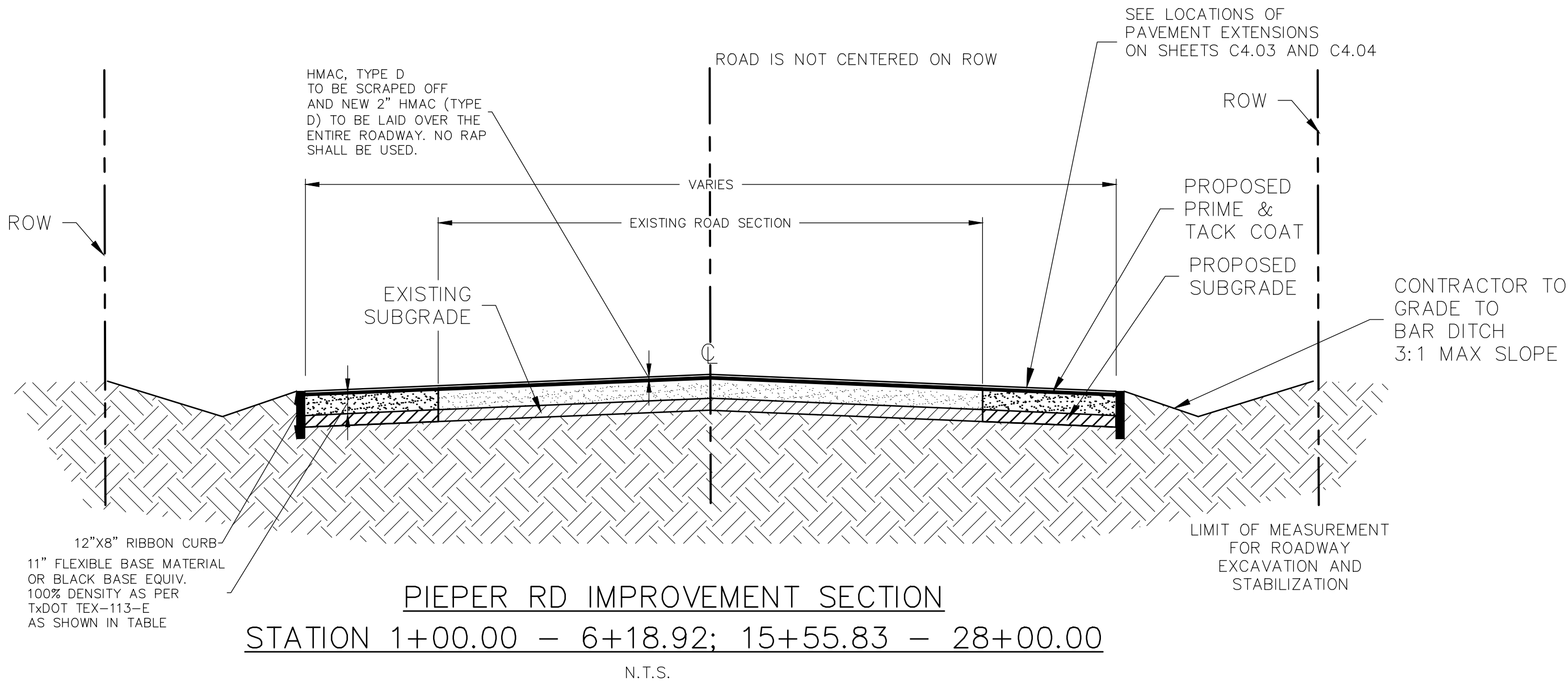
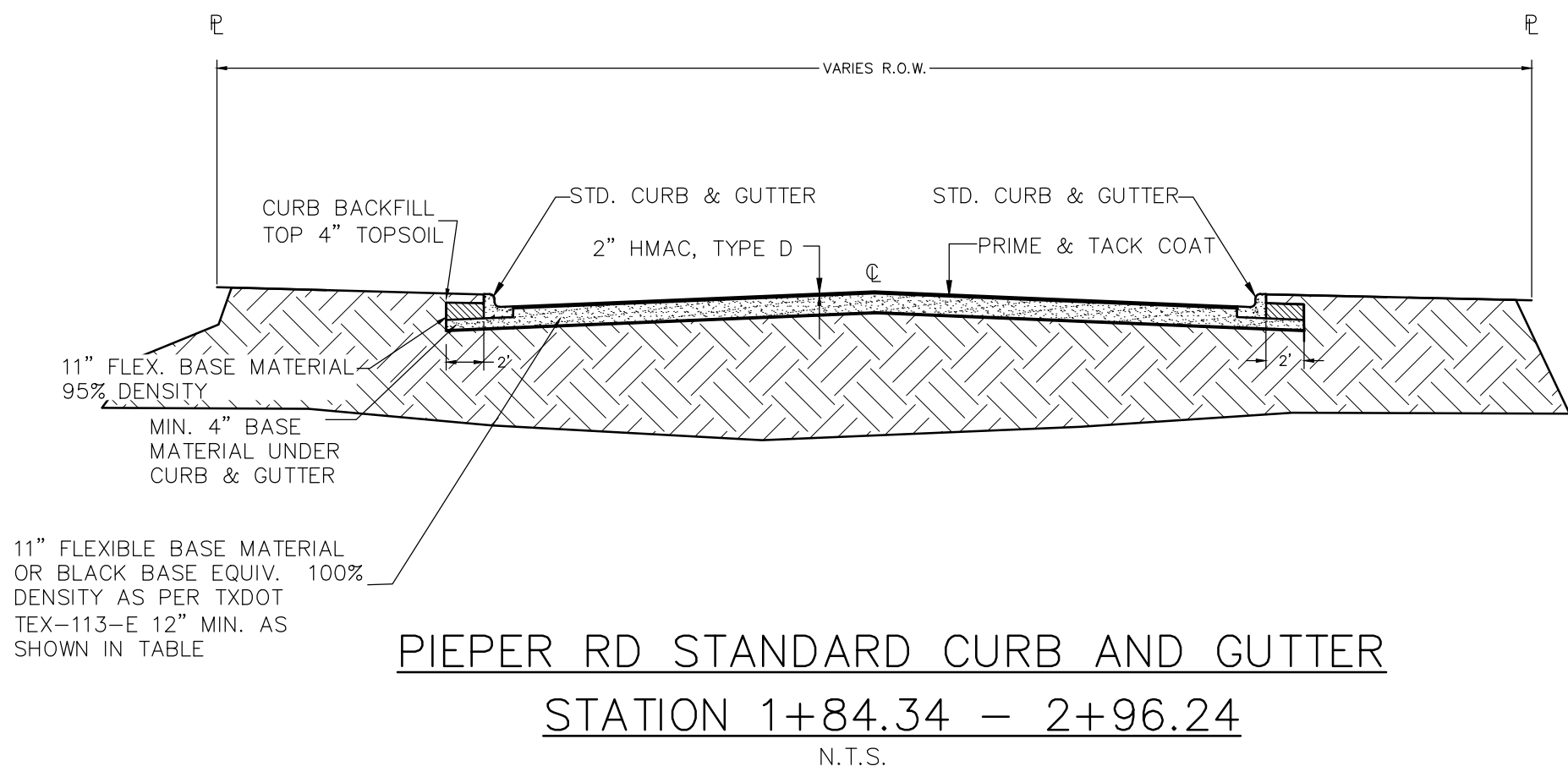
06/16/2020

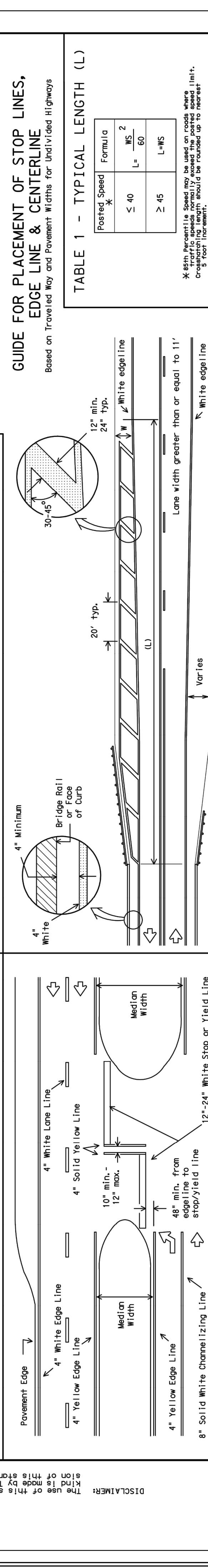
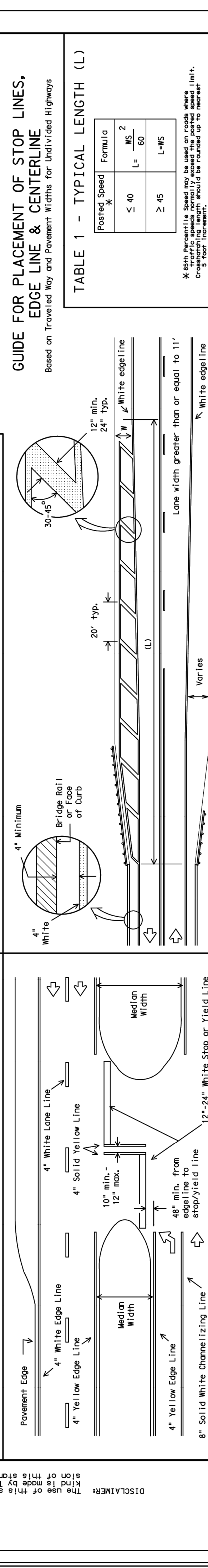
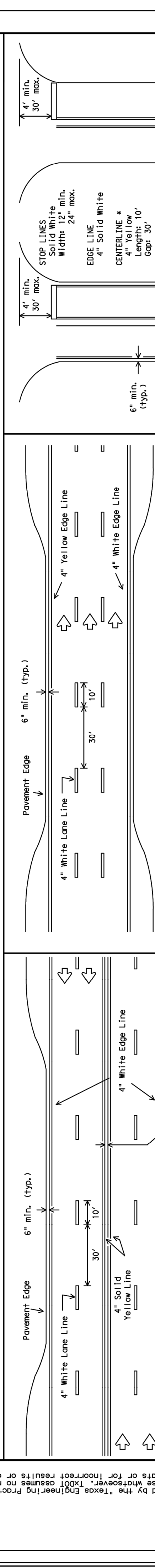
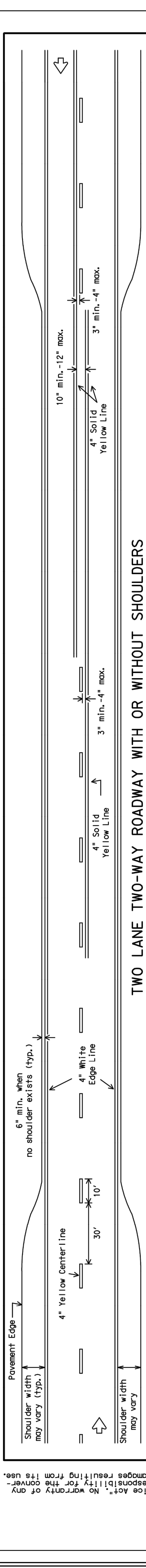
STREET DETAILS  
(SHEET 1 OF 9)  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

REVISION	DATE	DESCRIPTION
NO.		

DATE: JUNE 2020  
DRAWN BY: MK  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.061

**SHEET**  
**C4.08**





DISCLAIMER: The information herein is for informational purposes only and is not intended to constitute an offer of insurance or any other financial product. Please consult your agent for more information.

**TABLE 1 – TYPICAL LENGTH (L)**

Posted Speed *	Formula
≤ 40 L = 60	MS 2
≥ 45	L = MS

*\*MS = Maximum Speed*

12' min. to 24' typ.

20' typ.

4' min. to 12' max.

4' Yellow Edge Line

4' Solid Yellow Line

Median width

(L)

Diagram illustrating road layout and lane markings:

- Lane Width: 12'0"
- White Stop or Yield Line: 12'-24' White Stop or Yield Line
- 8" Solid White Channelizing Line
- Variable
- White edge line

NOTES:

- X-10th Percentile Speed may be used on roads where traffic is predominantly slower than posted speed limit. Traffic should be rounded up to nearest 5 foot increment.
- L=Length of Coalescing (ft.) W=Width of Offset (ft.)

EXAMPLES:

An 8 foot shoulder in advance of a bridge reduces to 4 feet on the roadway. The length of the cross-hatching should be 80 ft.  
 $L = 8 \times 70 = 560 \text{ ft.}$

A 4 foot shoulder in advance of a bridge reduces to 2 feet on the roadway. The length of the cross-hatching should be 40 ft.  
 $L = 4(40) \times 70 = 106.67 \text{ ft. rounded to 110 ft.}$

ROADWAYS WITH REDUCED SHOULDER

1. No-passing zone on bridge approach is optional but if used, it shall be a minimum 500 feet long.

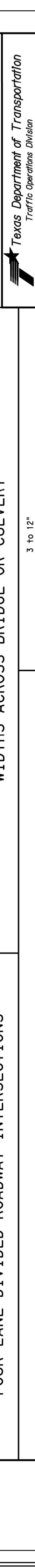
2. For crosshatching length (L) see Table 1.

3. The crosshatching on either (W) and the required crosshatching width is the full shoulder width in advance of the bridge.

4. The crosshatching is not required if delineators or barrier reflectors are used along the structure.

5. For guard fence details, refer elsewhere in the plans.

All medians shall be field measured to determine the location of necessary stripings. Strip/field bars and center lines shall be placed when the median width is greater than 30 ft. The median width is defined as the area between two roadways of a divided highway measured from edge of traveled way to edge of traveled way. The median excludes turn lanes. The median width might be measured from the edge of the traveled way to the edge of the traveled way on the other direction. The narrow median width will be the controlling width to determine if markings are required.



	DMS-4200
PAVEMENT MARKERS (REFLECTORIZED)	
EPOXY AND ADHESIVES	
DMS-6100	
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	
DMS-6130	

FOR POSTED SPEED ON ROAD BEING MARKED EQUAL TO OR GREATER THAN 45 MPH

TRAFFIC PAINI	UNS-5200	3 to 12"	PM(1) - 12
HOT APPLIED THERMOPLASTIC	DMS-8220	12"	

10 9 8 7 6 5 4 3 2 1 V V V V V V V V V V									
FOR POSTED SPEED ON ROAD BEING MARKED EQUAL TO OR LESS THAN 40 MPH									
YIELD LINES									
<div>PERMANENT PRECIPITATED PAYMENT MARKINGS UNIS-82-FV</div> <div>All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.</div>									
<div>① TxDOT November 1978</div> <div>UN TRFOD EN TRFOD EX TRFOD</div> <div>DIVISIONS JOB</div> <div>REVISED 8-95 2-12</div> <div>CONT SECT</div> <div>DIST COUNTY SHEET NO.</div> <div>8-00 3-03</div>									
DATE: FILE#:									

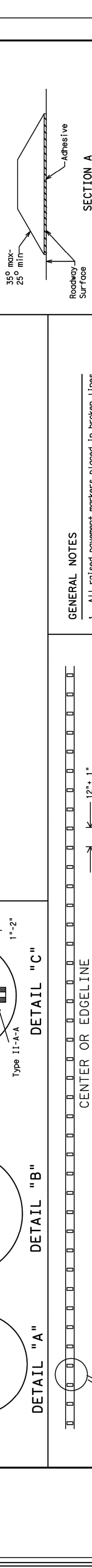
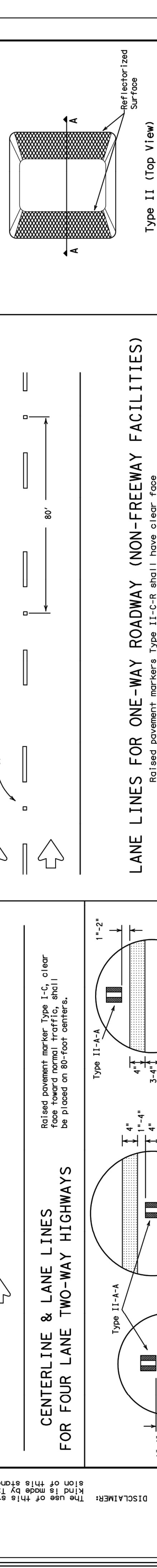
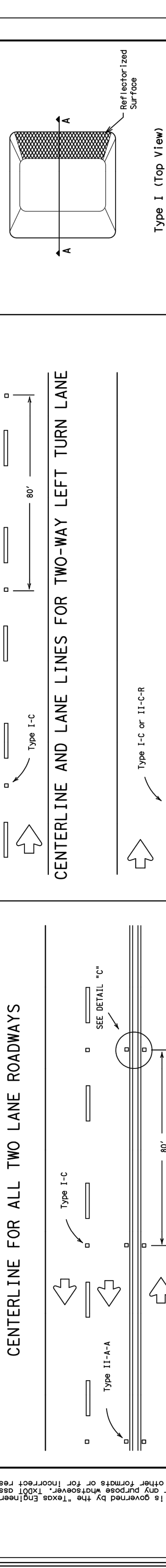
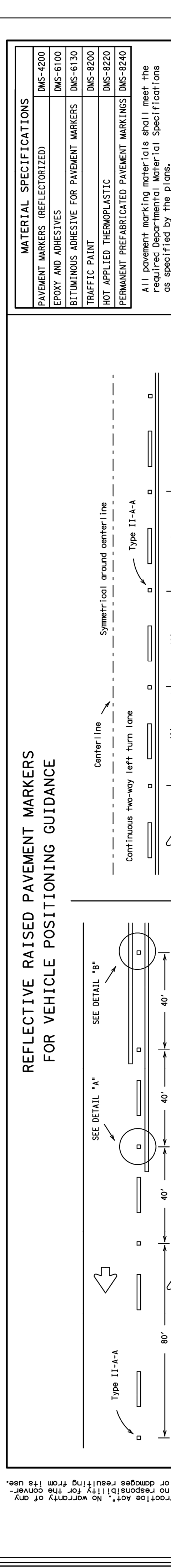
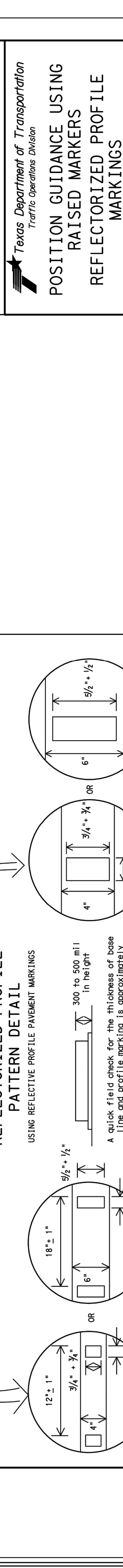
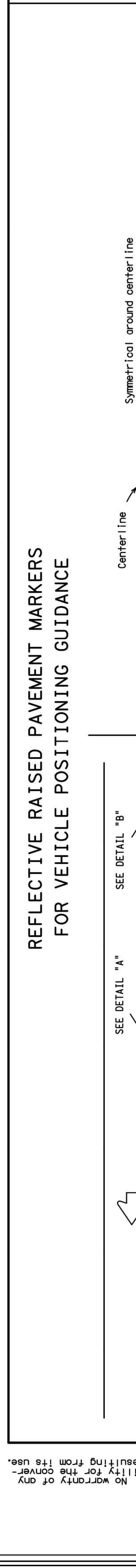
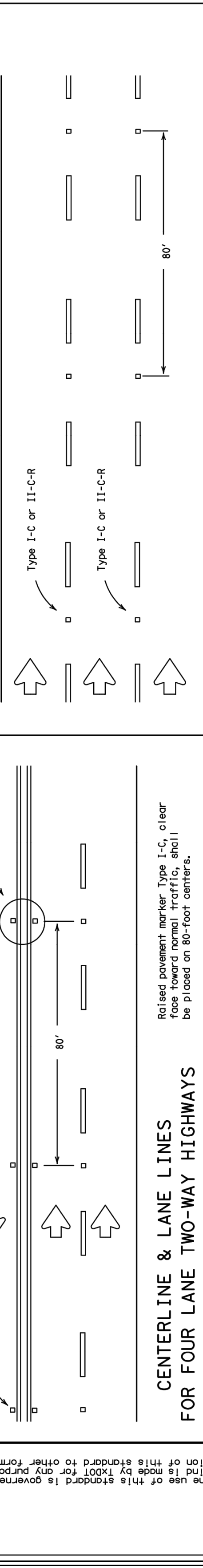


Diagram illustrating a raised pavement marker on a concrete pavement. The marker is a circular dome. Dimensions shown: 10' from the left edge to the center of the marker, 30' from the center of the marker to the right edge of the lane, and a total width of 40' for the lane. The text "BROKEN LANE LINE" is written above the marker.

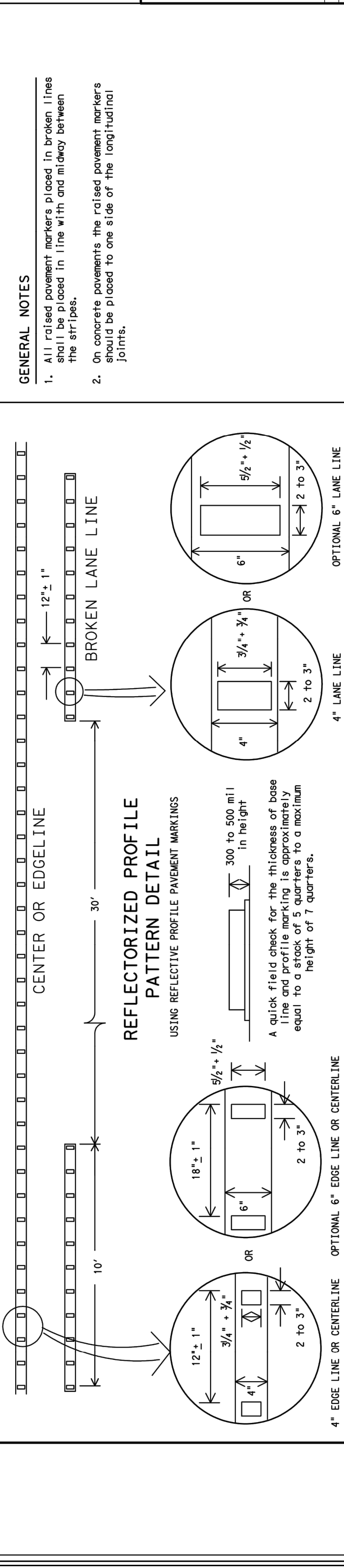
[illegible]

CENTERLINE FOR ALL TWO LANE ROADWAYS

Centerline for all two-lane roadways. Type I-C

[illegible]

- 
- CENTER OR EDGE LINE
- 30'
- 10'
- 12' to 14'
- BROKEN LANE LINE
1. All raised pavement markers placed in broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.



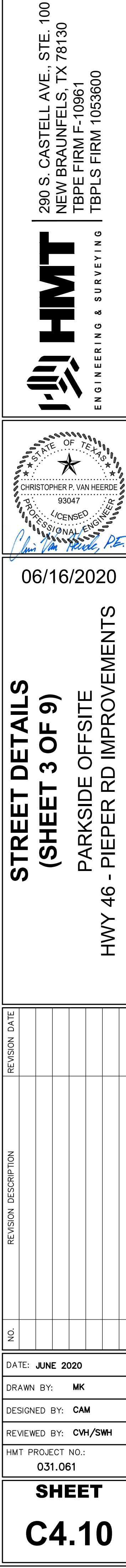
DATE: \_\_\_\_\_ FILE: \_\_\_\_\_

1. ROAD STATE OF CALIFORNIA  
COUNTY OF LOS ANGELES  
SECTION 9000 - ROAD STATE OF CALIFORNIA  
SECTION 9000 - ROAD STATE OF CALIFORNIA

2. CANCEL LINE  
3. CANCEL LINE  
OF TOTAL V CANCEL LINE

**NOTE:**

Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

[illegible]

290 S. CASTELL AVE., STE. 100  
 NEW BRAUNFELS, TX 78130  
 TBPE FIRM F-10961  
 TBPLS FIRM 1053600

**HMT**  
 ENGINEERING & SURVEYING



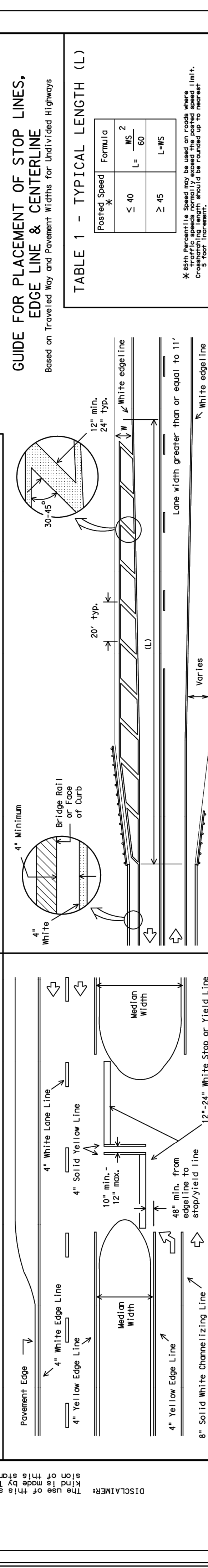
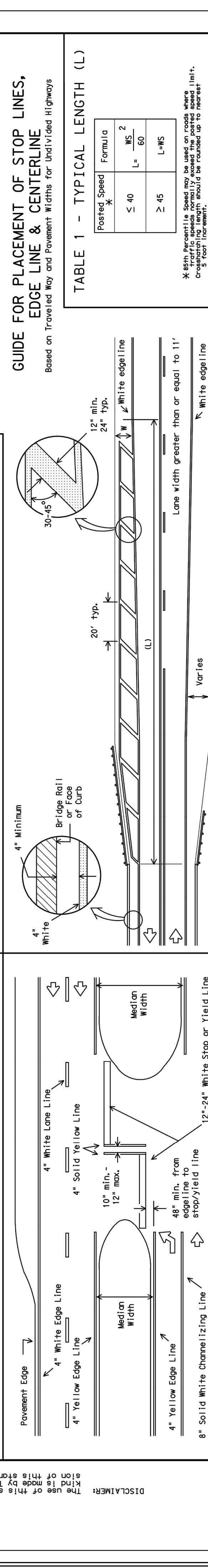
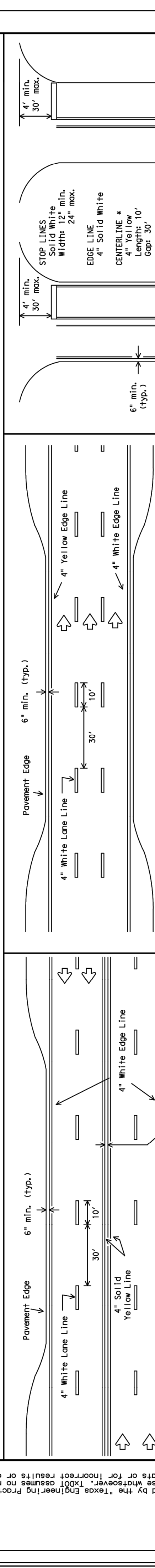
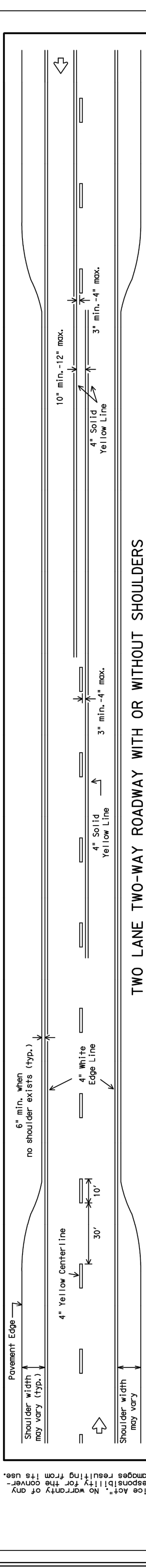
06/16/2020

**STREET DETAILS**  
**(SHEET 3 OF 9)**

**PARKSIDE OFFSITE**  
**HWY 46 - PIEPER RD IMPROVEMENTS**

DATE: JUNE 2020  
 DRAWN BY: MK  
 DESIGNED BY: CAM  
 CHECKED BY: CVH/SWH  
 PROJECT NO.: 031.061

**SHEET**  
**C4.10**



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**TABLE 1 – TYPICAL LENGTH (L)**

Posted Speed *	Formula
≤ 40 L = 60	MS 2
≥ 45	L = MS

*\* Minimum posted speed limit in miles per hour.*

12" min.  
24" typ.

20' typ.

White edge line

(L)

Median width

4" Yellow Edge Line

4" Solid Yellow Line

Median width

4" Yellow Edge Line

4" Solid Yellow Line

Diagram illustrating lane markings and dimensions:

- 8' Solid White Channelizing Line**
- Yield Line**
- Stop/Yield Line**
- White Edge Line**
- Dimensions:**
  - 8' Solid White Channelizing Line
  - 12'-24' Yield Line
  - 16' Stop/Yield Line

EXAMPLES:

An 8 foot shoulder in advance of a bridge reduces to 4 feet on the roadway. The length of the cross-hatching should be 80 ft.  
 $L = 8 \times 70 = 560 \text{ ft.}$

A 4 foot shoulder in advance of a bridge reduces to 2 feet on the roadway. The length of the cross-hatching should be 40 ft.  
 $L = 4(40) \times 70 = 106.67 \text{ ft. rounded to 110 ft.}$

1. No-passing zone on bridge approach is optional but if used, it shall be a minimum 500 feet long.

2. For crosshatching length (L) see Table 1.

3. The crosshatching length (M) and the required crosshatching width is the full shoulder width in advance of the bridge.

4. The crosshatching is not required if delineators or barrier reflectors are used along the structure.

5. For guard fence details, refer elsewhere in the plans.

ROADWAYS WITH REDUCED SHOULDER

All medians shall be field measured to determine the location of necessary stripings. Stop/field bore and center lines shall be placed when the median width is greater than 30 ft. The median width is defined as the area between two roadways of a divided highway measured from edge of traveled way to edge of traveled way. The median width might be traveled way to edge of traveled way. The median excludes turn lanes. The median width is defined as the area between two roadways of a divided highway measured from edge of traveled way to edge of traveled way. The median excludes turn lanes. The narrow median width will be the controlling width to determine if markings are required.



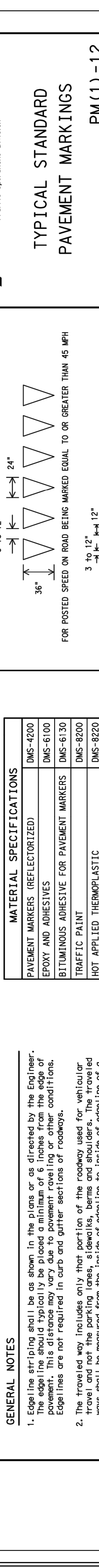
	DMS-4200 PAVEMENT MARKERS (REFLECTORIZED)	DMS-6100 EPOXY AND ADHESIVES	DMS-6130 BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS
1. Edge line striping should be as shown in the plans or as directed by the Engineer. The edge line should typically be placed a minimum of 6 inches from the edge of pavement. This of course may vary due to pavement rolling or other conditions. Edge lines are not required in cars and gutter sections of roadway.			

TYPICAL STANDARD  
PAVEMENT MARKINGS

FOR POSTED SPEED ON ROAD BEING MARKED EQUAL TO OR GREATER THAN 45 MPH

		PW(1) - 12
		3° to 12°
		12°
	TRAFFIC PAVEMENT	
	DMS-8200	
	HOT APPLIED THERMOPLASTIC	

PERMANENT PRECIPITATED PAYMENT MARKINGS UNIS-027U					
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.					
<b>YIELD LINES</b>					
10	↓	V	V	V	V
FOR POSTED SPEED ON ROAD BEING MARKED EQUAL TO OR LESS THAN 40 MPH					
①	TxDOT	November 1978	EN 75057	EN 75057	EN 75057
			REVISED	JOB	HIGHWAY
			CONT. SECT.		
			DIST.	COUNTY	SHEET NO.
					3-03



YIELD LINES		SHEET NO.	
required Departmental Material Specifications as specified by the plans.		COUNTY	
		DIST.	
8-95	2-12		
8-95	2-13		
8-95	2-14		
8-95	2-15		
8-95	2-16		
8-95	2-17		
8-95	2-18		
8-95	2-19		
8-95	2-20		
8-95	2-21		
8-95	2-22		
8-95	2-23		
8-95	2-24		
8-95	2-25		
8-95	2-26		
8-95	2-27		
8-95	2-28		
8-95	2-29		
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8-95	2-89		
8-95	2-90		
8-95	2-91		
8-95	2-92		
8-95	2-93		
8-95	2-94		
8-95	2-95		
8-95	2-96		
8-95	2-97		
8-95	2-98		
8-95	2-99		
8-95	2-100		

[illegible]

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-42000
EPoxy AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

FOR POSTED SPEED ON ROAD BEING MARKED EQUAL TO OR LESS THAN 40 MPH									
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.									
① 1-001 November 1978		ENR TROST		ENR TROST		ENR TROST			
REVISOR(S)		JOB		SHEET NO.		PROJECT NO.			
8-95 2-12		CONT		SECT		PRIORITY		SHEET NO.	
5-00									

The narrow median width will be the controlling width to determine if markings are required.

**FOUR LANE DIVIDED ROADWAY INTERSECTIONS**

**ROADWAYS WITH REDUCED SHOULDER WIDTHS ACROSS BRIDGE OR CULVERT**

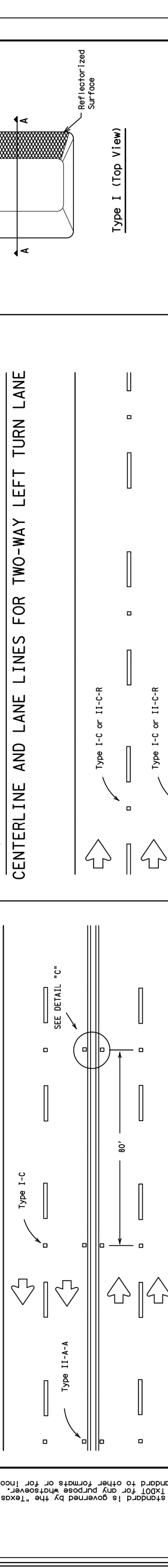
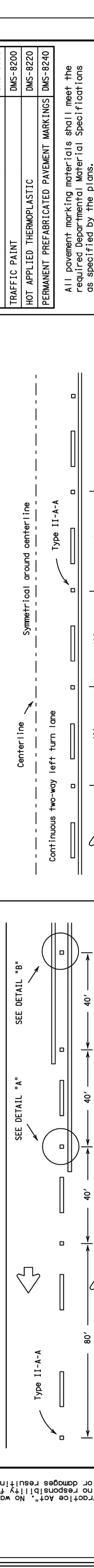
$L = 4(100) \div 60 = 106.67$  ft, rounded to 110 ft.

[illegible]

- The diagram illustrates typical standard pavement markings. It includes a series of chevron markings with a 36° angle, a series of V-shaped markings with a 12° angle, and a series of V-shaped markings with a 18° angle. The markings are shown in a perspective view, with dimensions 3' to 12' and 18' indicated. Below the markings, a table lists the product codes for each type of marking.

PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE	
MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
CONVEX AND CONCAVE	ONE 21000



**CENTERLINE & LANE LINES  
FOR FOUR LANE TWO-WAY HIGHWAYS**

Raised pavement marker Type I-C, clear face toward normal traffic, shall be placed on 80-foot centers.

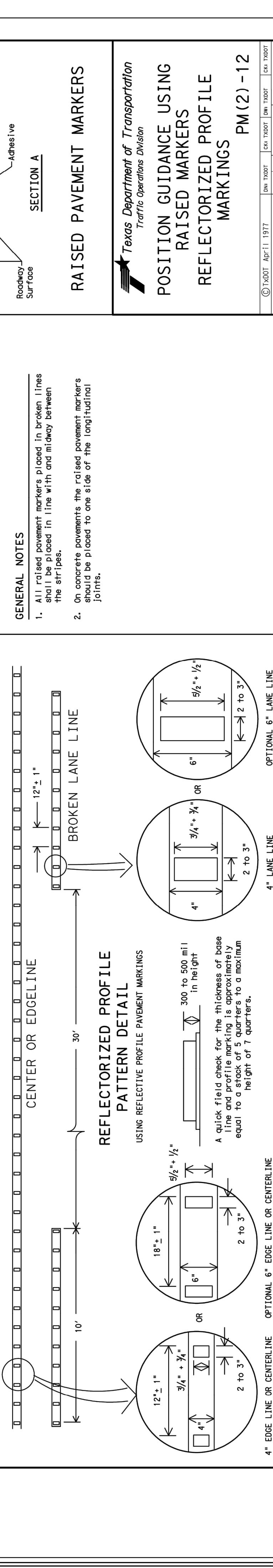
80'



Diagram illustrating the lane lines for one-way roadways (non-freeway facilities). The diagram shows a cross-section of a roadway with a centerline and lane lines. Dimensions are indicated: 4" for the centerline width, 4" for the lane width, and 1'-4" for the shoulder width. A legend indicates that the solid line represents the reflectorized surface.

**Type II (Top View)**

Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.



DATE:	FILE:	4" CODE LINE ON CENTERLINE	OPTIONAL 6" CODE LINE ON CENTERLINE	4" LINE LINE	OPTIONAL 6" LINE LINE																		
<p><b>NOTE:</b></p> <p>Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.</p>																							
<table border="1"> <tr> <td colspan="2">SECTION</td> <td>JOB</td> <td>ROUTE</td> <td>DATE</td> <td>SHEET NO.</td> </tr> <tr> <td>4-92</td> <td>2-10</td> <td></td> <td></td> <td>5-00</td> <td>2-12</td> </tr> <tr> <td>5-00</td> <td>2-12</td> <td></td> <td></td> <td>8-00</td> <td></td> </tr> </table>						SECTION		JOB	ROUTE	DATE	SHEET NO.	4-92	2-10			5-00	2-12	5-00	2-12			8-00	
SECTION		JOB	ROUTE	DATE	SHEET NO.																		
4-92	2-10			5-00	2-12																		
5-00	2-12			8-00																			

[illegible]

- SECTION A**
- Surface
- RAISED PAVEMENT MARKERS**
- RAISED PAVEMENT MARKERS**
1. All raised pavement markers placed in broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.
- CENTER OR EDGE LINE
- 12" ± 1"
- BROKEN LANE LINE
- 30'
- 10'
- 
- The diagram shows two views of raised pavement markers. The top view shows a series of rectangular markers with a circular marker in the center, labeled 'BROKEN LANE LINE'. A dimension line indicates a spacing of '12" ± 1"'. The bottom view shows a series of rectangular markers with a circular marker at the end, labeled 'CENTER OR EDGE LINE'. Dimension lines indicate a spacing of '30'' and a width of '10''.

BROKEN LANE LINE

10' 30' 40'



POSITION GUIDANCE USING  
RAISED MARKERS  
REFLECTORIZED PROFILE  
MARKINGS

Technical diagrams illustrating profile marking configurations and dimensions:

- Top diagram: A circular profile with a central rectangular marking. Dimensions:  $6''$  (total width),  $5\frac{1}{2}'' \pm \frac{1}{2}''$  (marking width).
- Middle diagram: A circular profile with a central rectangular marking. Dimensions:  $4''$  (total width),  $3\frac{3}{4}'' \pm \frac{3}{8}''$  (marking width).
- Bottom diagram: A circular profile with a central rectangular marking. Dimensions:  $18'' \pm 1''$  (total width),  $9\frac{1}{2}'' \pm \frac{1}{2}''$  (marking width).

A quick field check for the thickness of base line and profile marking is approximately:

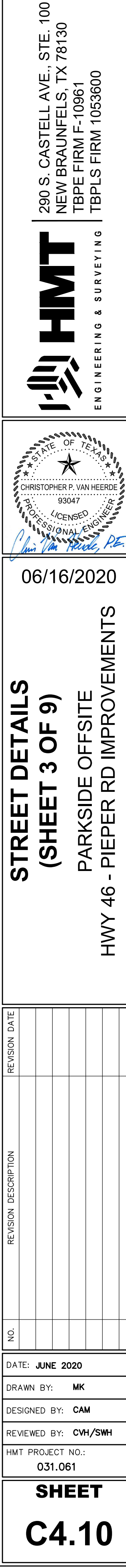
- Top diagram:  $300$  to  $500$  mil in height
- Middle diagram:  $4''$  (total width),  $3\frac{3}{4}'' \pm \frac{3}{8}''$  (marking width)
- Bottom diagram:  $12'' \pm 1''$  (total width),  $9\frac{1}{2}'' \pm \frac{1}{2}''$  (marking width)

line and profile marking is approximately equal to a stroke of 3 quarters to a maximum of 2 to 3".

4" EDGE LINE OR CENTERLINE	OPTIONAL 6" EDGE LINE OR CENTERLINE	4" LANE LINE	OPTIONAL 6" LANE LINE
<p>NOTE:</p> <p>Profile markings shall not be placed on roadways with a posted speed limit of 45 mph or less.</p>			
<p>DATE: _____ FILE: _____</p>			
		<p>① ADT: Apr 11 1977</p> <p>151506</p> <p>4-92 2-10</p> <p>5-00 2-12</p> <p>8-00</p> <p>2-08</p>	
		<p>DN TYPOT</p> <p>CON</p> <p>DIT</p>	<p>DN TYPOT</p> <p>SECT</p> <p>COUNTY</p>
		<p>DN TYPOT</p> <p>JOB</p>	<p>DN TYPOT</p> <p>SHEET NO.</p>

				290 S. CASTELL AVE., STE. 100 NEW BARNETT S. NY 11740	
06/16		STREET DETAILS (SHEET 3 OF 9)			
DATE: <b>JUNE 16, 2016</b>		REVISION DATE			
DRAWN BY:		REVISION DESCRIPTION			
DESIGNED BY:					
REVIEWED BY:					
HMT PROJECT NO. <b>031.0</b>					
<b>SH</b> <b>C4</b>					


 TBPE FIRM F-10961  
 TBPLS FIRM 1053600  
 ENGINEERING & SURVEYING  
 PARKSIDE OFFSITE  
 HWY 46 - PIEPER RD IMPROVEMENTS  
 02/2020  
 MK  
 CAM  
 CVH/SWH  
 NO.:  
 51  
 SHEET  
 .10



290 S. CASTELL AVE., STE. 100  
 NEW BRAUNFELS, TX 78130  
 TBPE FIRM F-10961  
 TBPLS FIRM 1053600  
**HMT**  
 ENGINEERING & SURVEYING

---

CHRISTOPHER R. VAN HECKE  
 PROFESSIONAL ENGINEER  
 LICENSE NO. 93047  
 STATE OF TEXAS

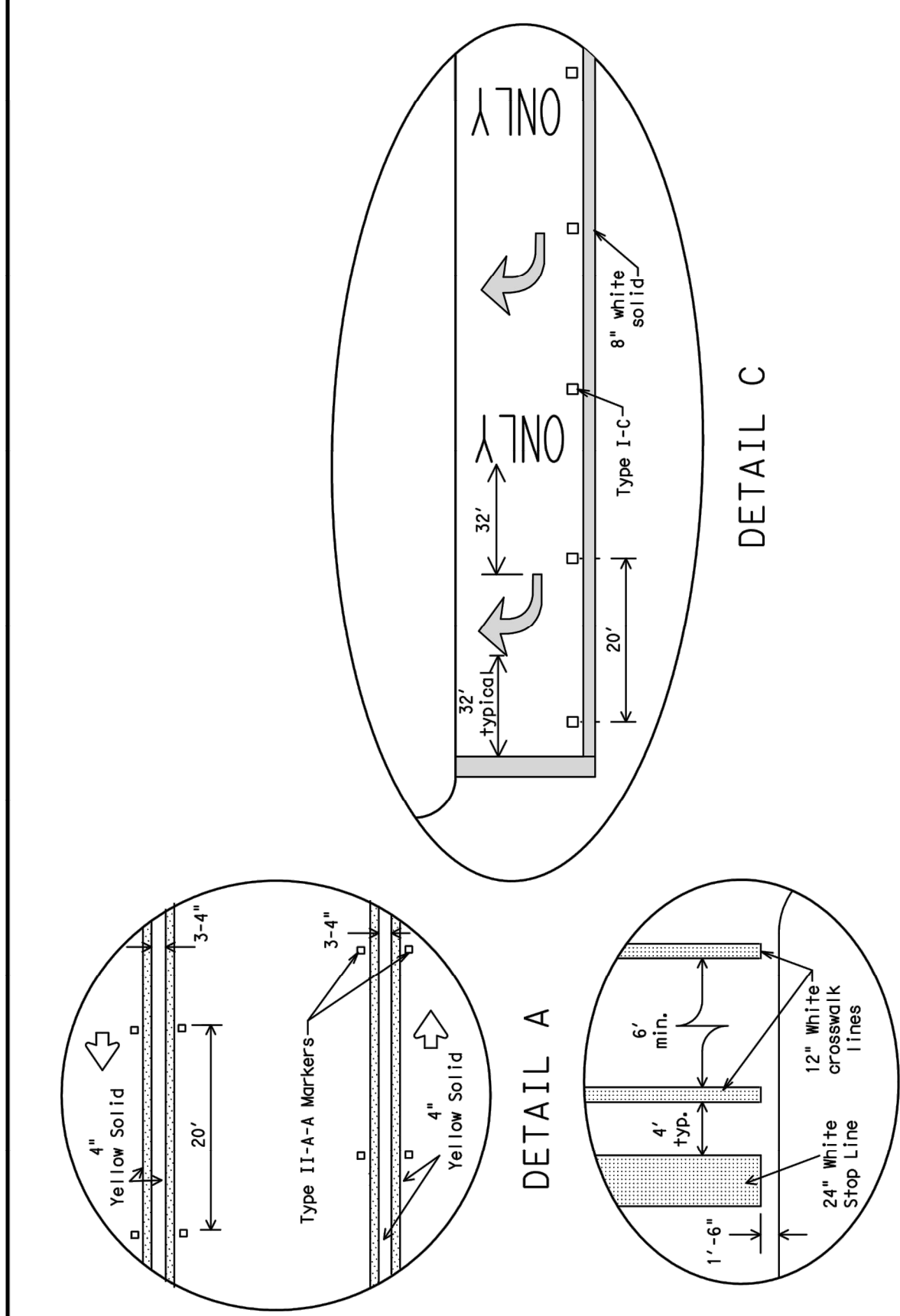
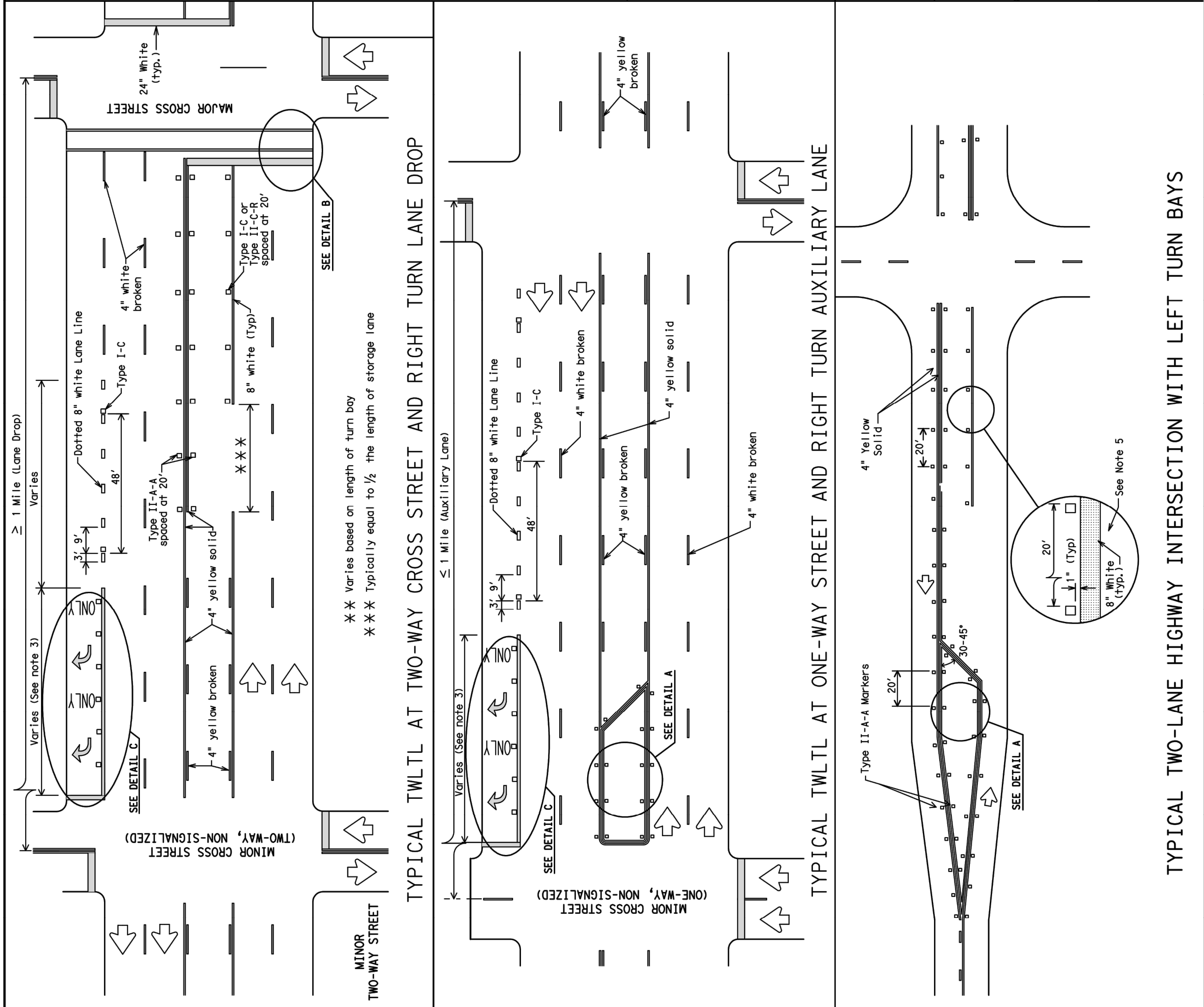
06/16/2020

STREET DETAILS	(SHEET 3 OF 9)	PARKSIDE OFFSITE	ORDERED BY: HANCOCK ELEMENTS
			JULY 13, 2020

DATE: JUNE 2020  
 DRAWN BY: MK  
 DESIGNED BY: CAM  
 REVIEWED BY: CVH/SV  
 PROJECT NO.: 031.061

**SHEET**  
**C4.10**

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the consequences of any use of this standard or for incorrect results or damages resulting from its use.



Final placement of Stop Bar and Crosswalk shall be approved by the Engineer in the field.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPoxy AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

- GENERAL NOTES**
- Refer elsewhere in plans for additional RPM placement and details.
  - Lane use word and arrow markings shall be used in all cases. Lane use word and arrow markings shall be used in auxiliary lanes and in mandatory turn lanes. Lane use word and arrow markings shall be used in all cases. Lane use word and arrow markings shall be used in all cases. Lane use word and arrow markings shall be used in all cases.
  - When Lane use word and arrow markings are used, two sets of arrows should be used if the length of the lane is less than 100 feet. Lane use word and arrow markings shall be used in all cases. Lane use word and arrow markings shall be used in all cases.
  - Other crosswalk markings as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used.
  - Raised pavement marker Type T-C with undivided highways, flush medians and two-way left-turn lanes should be used in all cases. Lane use word and arrow markings shall be used in all cases.
  - A two-way left-turn (TWL) lane-use arrow pavement marking should be used at or just downstream from the intersection of a two-way left-turn lane with a corridor. Repeating the marking after each intersection or dedicated turn bay is not required unless stated elsewhere in the plans.

**Texas Department of Transportation**  
Traffic Operations Division

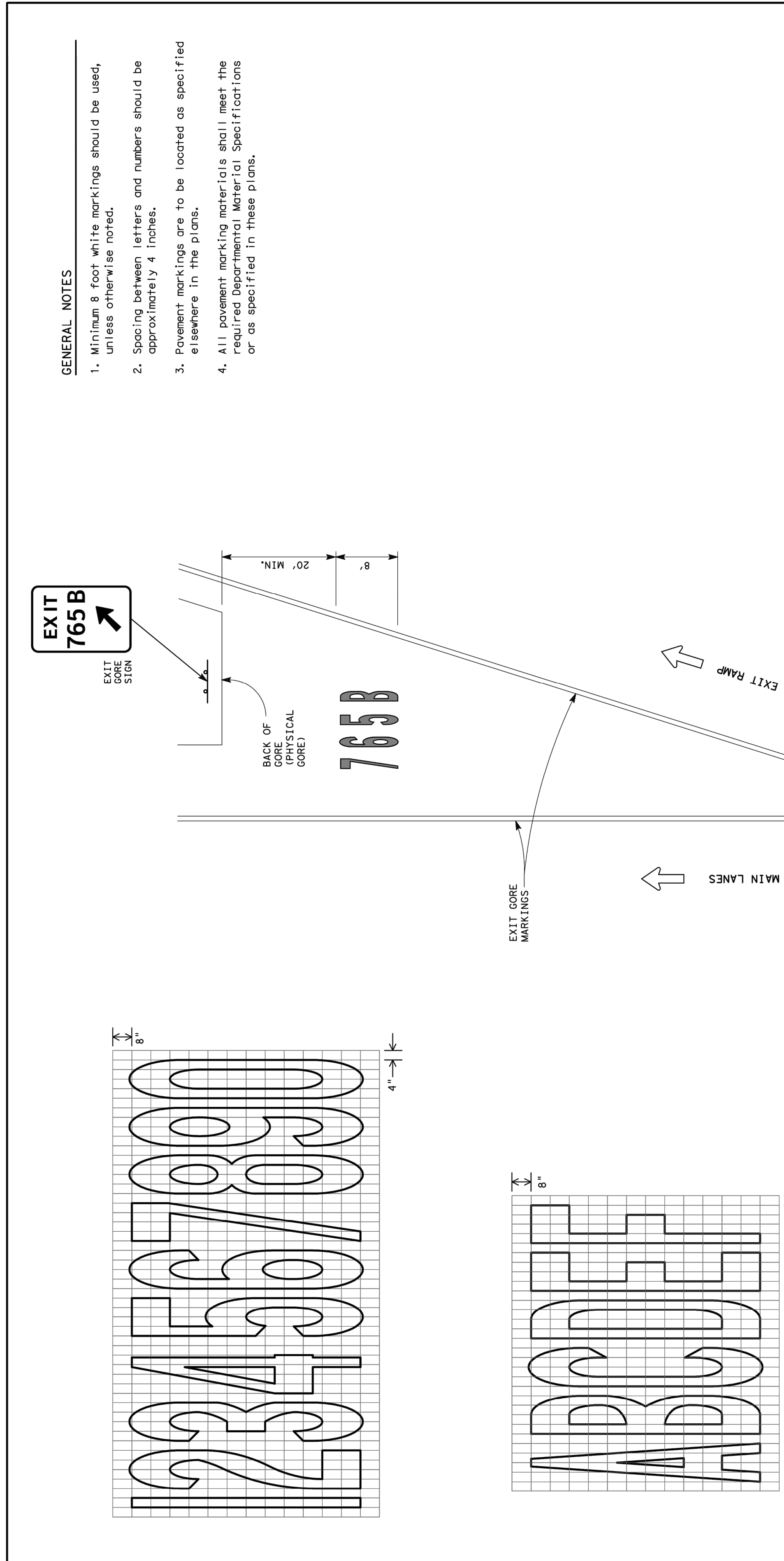
**PAVEMENT MARKINGS FOR TWO-WAY LEFT TURN LANES DIVIDED HIGHWAYS AND RURAL LEFT TURN BAYS**

PM (3) -12

① TxDOT, April 1, 1998	REVISED	DATE	BY	DATE	BY
5-00	2-12	5-00	2-12	5-00	2-12
2-10	2-10	2-10	2-10	2-10	2-10

SHEET NO.

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the consequences of any use of this standard or for incorrect results or damages resulting from its use.



**Texas Department of Transportation**  
Traffic Operations Division

**EXIT NUMBER CORE MARKINGS FOR AERIAL VIEW DETAIL**

PM (4) -12

① TxDOT, April 1, 2006	REVISED	DATE	BY	DATE	BY
5-00	2-12	5-00	2-12	5-00	2-12
2-10	2-10	2-10	2-10	2-10	2-10

SHEET NO.

**SHEET C4.11**

DATE: JUNE 2020

DRAWN BY: MK

DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

HMT PROJECT NO.: 031.061

NO.	REVISION DESCRIPTION	REVISION DATE

**STREET DETAILS (SHEET 4 OF 9)**

PARKSIDE OFFSITE

HWY 46 - PIEPER RD IMPROVEMENTS

06/16/2020

**HMT**  
ENGINEERING & SURVEYING

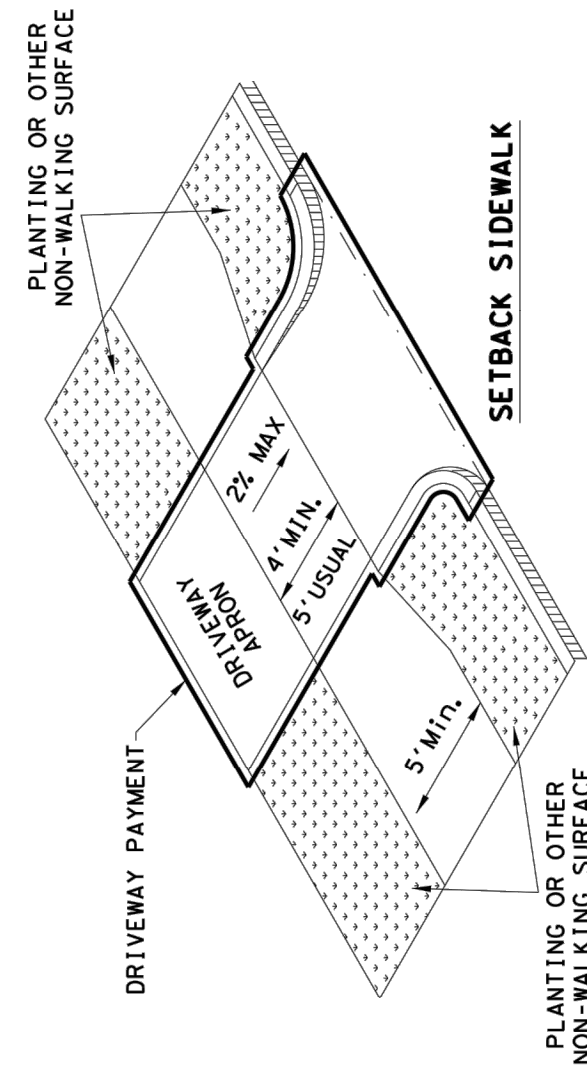
290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



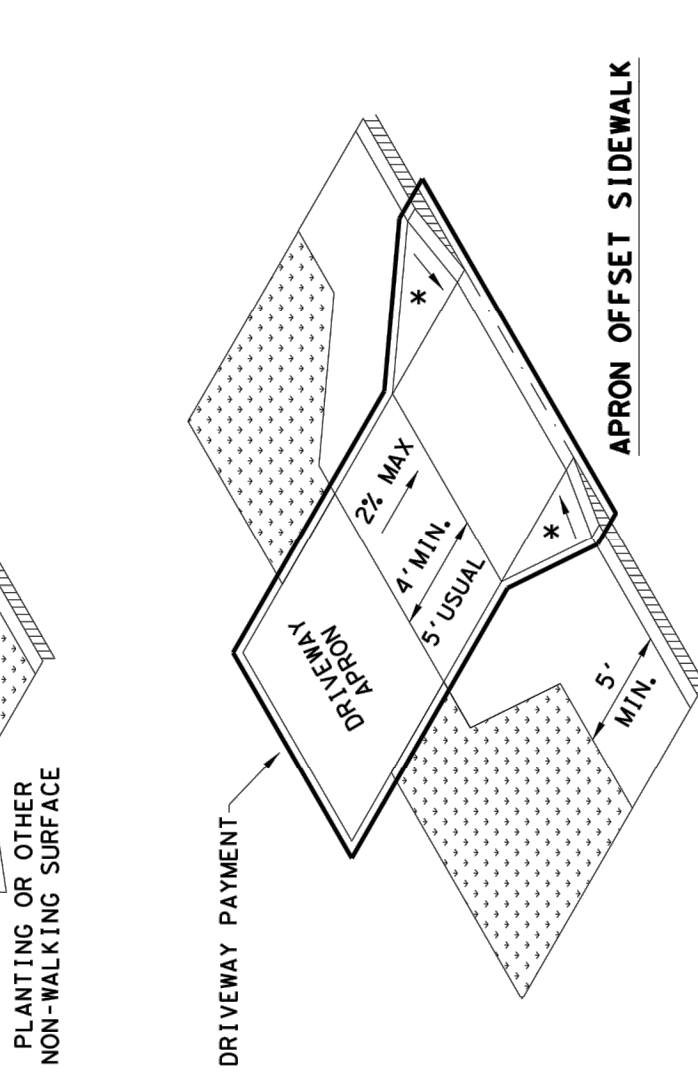




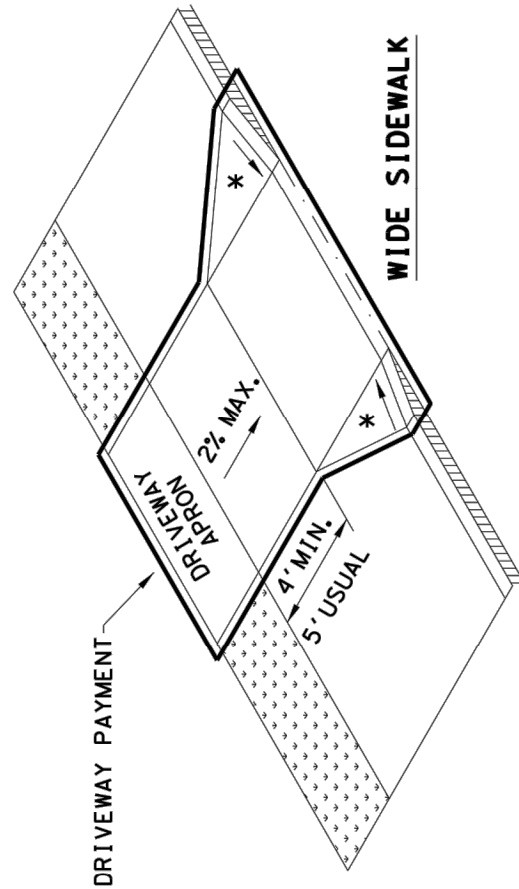
## SIDEWALK TREATMENT AT DRIVEWAYS



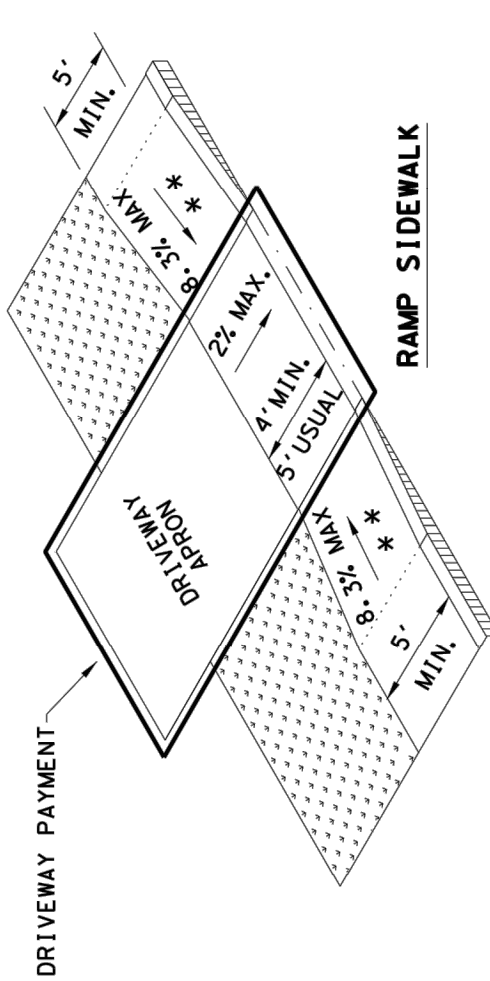
**SETBACK SIDEWALK**



## APRON OFFSET SIDEWALK



**WIDE SIDEWALK**

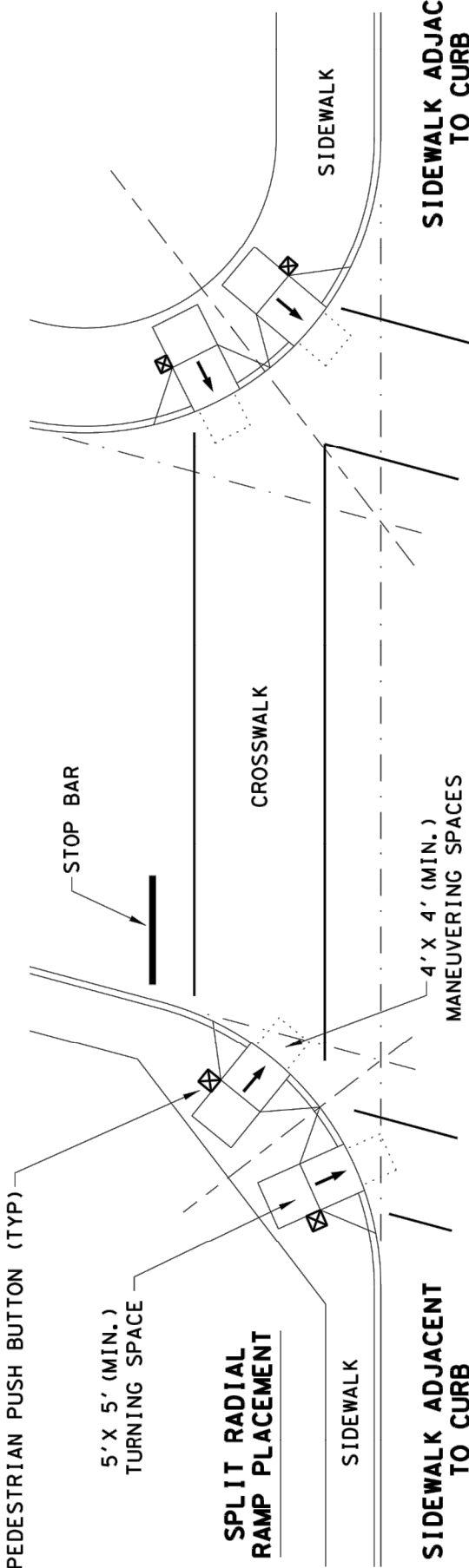


**NOTES:**

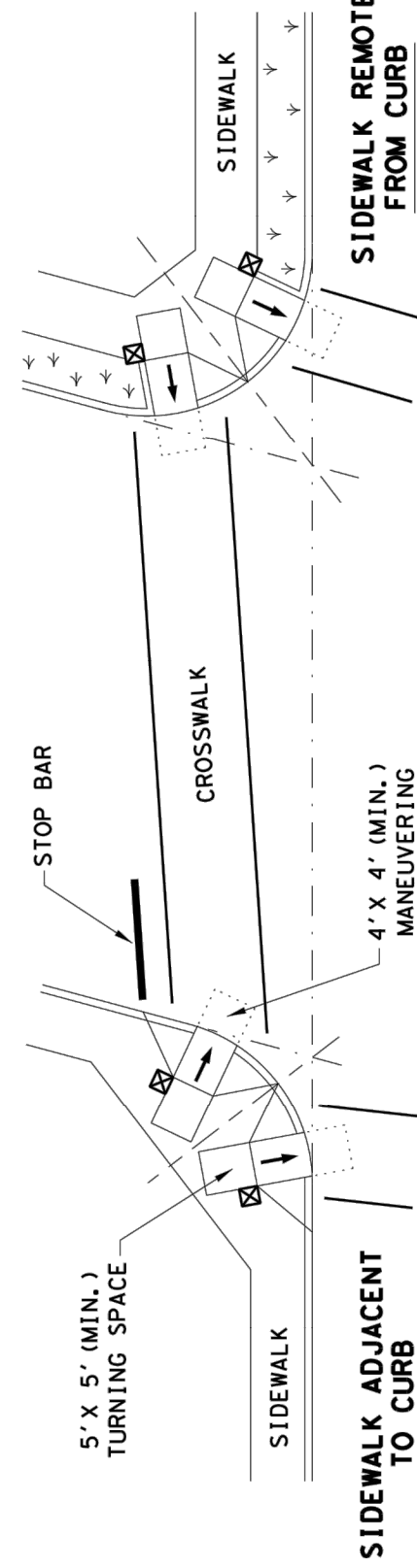
- \* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.
- \*\* IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.

DATE:  
FILE:

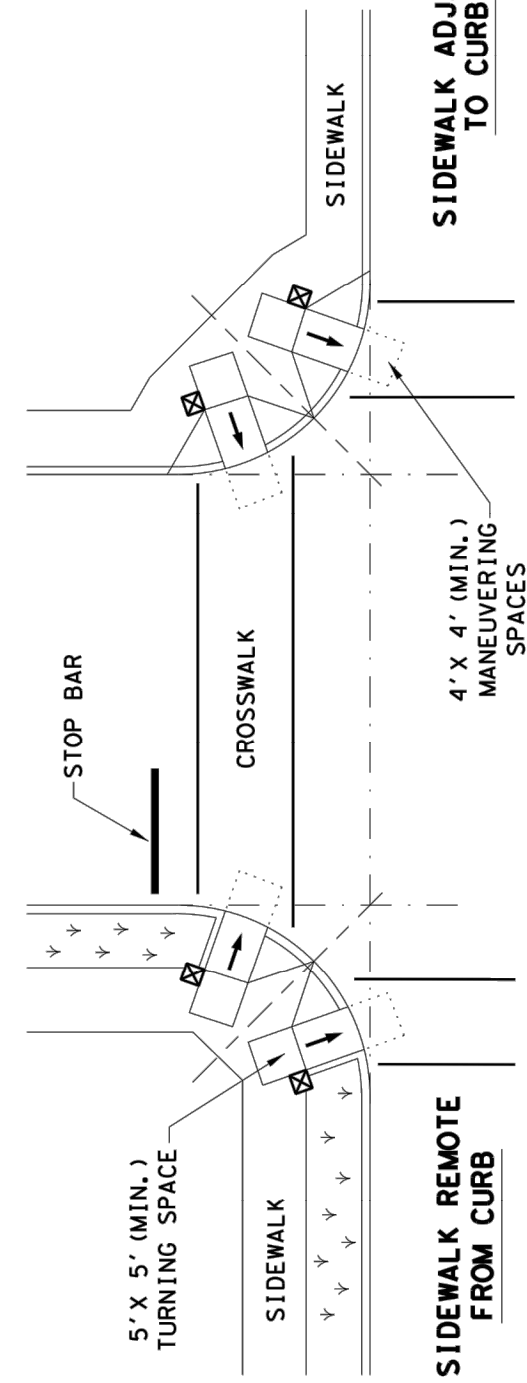
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



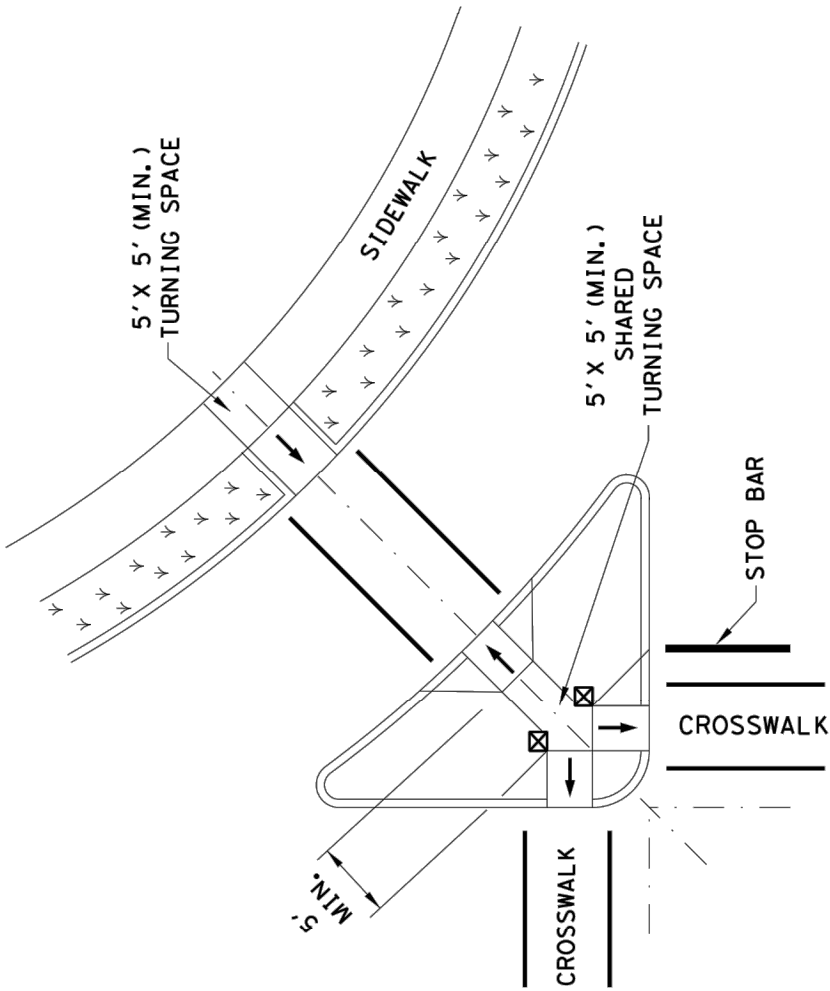
### SKewed Intersection with "Large" Radius



### SKewed Intersection with "Small" Radius



### NORMAL INTERSECTION WITH "SMALL" RADIUS



**AT INTERSECTION  
W/FREE RIGHT TURN & ISLAND**



SIDEWALK ADJACENT  
TO CURB

SIDEWALK REMOTE  
FROM CURB



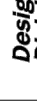
**LEGEND:**

DENOTES PREFERRED LOCATION OF PEDESTRIAN  
PUSH BUTTON (IF APPLICABLE).

DENOTES PLANTING OR NON-WALKING SURFACE  
NOT PART OF PEDESTRIAN CIRCULATION PATH.

DATE:  
FILE:

SHEET 4 OF 4



Texas Department of Transportation

# PEDESTRIAN FACILITIES

## CURB RAMPS

### PED-18

Design Standard

FILE #	PROJECT	DATE	DRAWN BY	CHECKED BY	DATE	DESIGNED BY	DATE
FILE: PED-18	TXDOT-MARCH, 2002	3/1/02	JAB				
REVISION							
REVISED BY	DATE	DESCRIPTION					
REVISED BY	DATE	DESCRIPTION					

Sheet No.

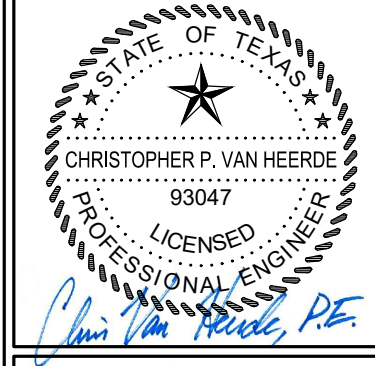
**PED-18**

[illegible]

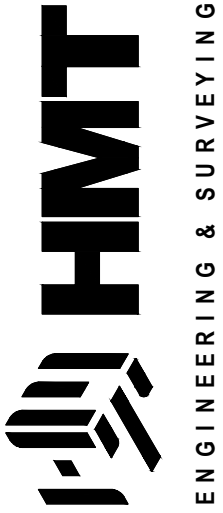
DATE: <b>JUNE 2020</b>
DRAWN BY: <b>MK</b>
DESIGNED BY: <b>CAM</b>
REVIEWED BY: <b>CVH/SWH</b>
HMT PROJECT NO.: <b>031.061</b>

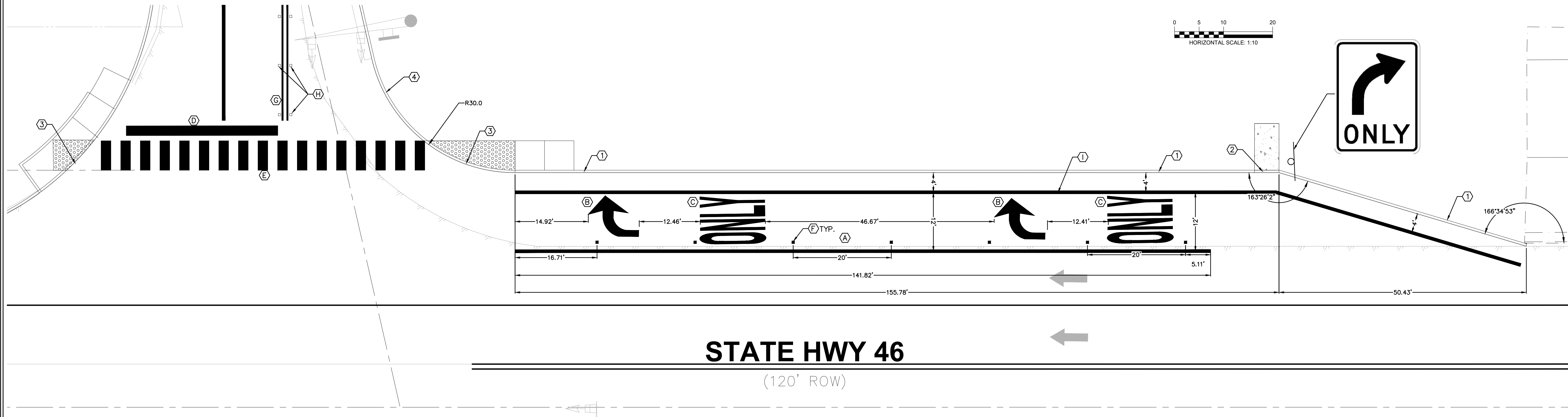
**SHEET**  
**C4.16**

**STREET DETAILS**  
**(SHEET 9 OF 9)**  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600





ITEM	CONSTRUCTION KEYNOTES
	NOTE
①	TxDOT TYPE 2 CURB (MONOLITHIC) 5 3/4" HEIGHT (SEE SHEET C4.10)
②	CONCRETE RIP-RAP CURB OPENING 5'x 9.5'
③	6" CURB OPENING FUTURE SIDEWALK CONSTRUCTION
④	TxDOT TYPE 2D CURB 5 3/4" HEIGHT SEE SHEET (SEE SHEET C4.10)

PAVEMENT MARKING KEY NOTES	
ITEM	NOTE
(A)	REFL PAV MRK TY I & II (WHITE)(SOLID)(8")
(B)	REFL PAV MRK TY I & II (WHITE)(ARROW)
(C)	REFL PAV MRK TY I & II (WHITE)(WORD)
(D)	STOP BAR REFL PAV MRK TY I & II (WHITE)(SLD)(24")
(E)	REFL PAV MRK TY I & II (WHITE)(SLD)(2'X6')
(F)	REFL PAV MRK TY I C (WHITE)
(G)	REFL PAV MRK TY I & II (YELLOW)(SOLID)(8")
(H)	REFL PAV MRK TY I C (YELLOW)
(I)	REFL PAV MRK TY I & II (WHITE)(SOLID)(4")

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

## SIGNAGE NOTES

## INSTALLATION

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY, WARNING AND STREET NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

## MOUNTING

THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (TWT) - 08.

THE TRIANGULAR SLIP BASE SYSTEM AND 10 BWG TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (SLIP-1-3)- 08.

OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D & OM (1 - 5) - 10.

## PAVEMENT MARKING REQUIREMENTS

PAVEMENT MARKING REQUIREMENTS PAVEMENT MARKINGS SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND WHERE JUSTIFIED BY ENGINEERING JUDGMENT OR STUDY.

ALL PAVEMENT MARKINGS SHALL BE SHOWN IN THE ENGINEERING PLANS FOR REVIEW AND APPROVAL AS PART OF THE PLAN & PROFILE SHEET. THE MARKING SHALL BE SHOWN IN THE PLAN & PROFILE SHEET OR THE LAYOUT SHEET. THE MARKING SHALL BE SHOWN IN THE LAYOUT SHEET. THE DESIGN, MATERIALS AND INSTALLATION SHOULD FOLLOW TxDOT TRAFFIC STANDARDS PM (1-4) 12. CITY OF SAN ANTONIO TRAFFIC ENGINEERING STANDARDS FOR PAVEMENT MARKINGS DESIGNATING TRAFFIC LANES, LANE USAGE, LANE REGULATIONS AND PAVEMENT/GEOMETRIC ACCOMMODATIONS. FOR ADDITIONAL STANDARD DESIGN DETAILS, MARKING STANDARDS SHALL BE INCLUDED IN THE ENGINEERING PLANS.

ALL PAVEMENT MARKINGS SHALL BE TYPE I HOT APPLIED THERMOPLASTIC AND MEET TXDOT DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-8220. TYPE II TRAFFIC PAINT MARKINGS SHALL ONLY BE USED AS SEALER AND MEET TXDOT DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-8200.

THE CONTRACTOR SHALL NOTIFY THE CITY OF NEW BRAUNFELS AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CONTRACTOR MAY BE RESPONSIBLE FOR PLACING SPOT TABS BEFORE MARKING APPLICATION. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.



06/16/2020

# HWY 46 & PIEPER STRIPING & SIGNAGE PLAN

[illegible]

DATE: JUNE 2020

DRAWN BY: MK

DESIGNED BY: CAM

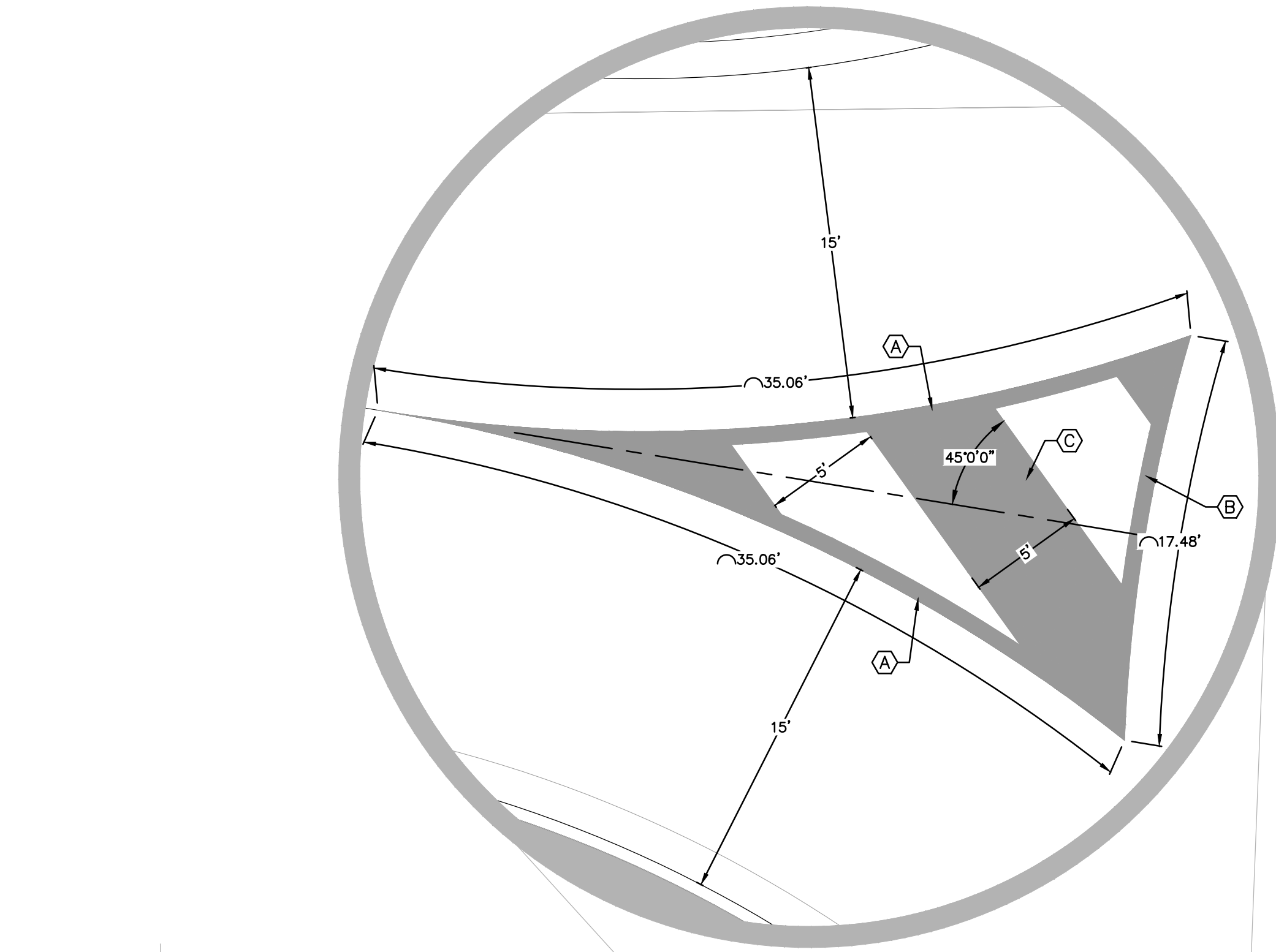
REVIEWED BY: CVH/

HMT PROJECT NO.:  
031.061

**SHEET**

## C4.17

Drawing Name: N:\\_Projects\031 - DR Horton\031.061 - 175 Ac Friesenhain Cda\Office\031.061\_STRIPING.dwg User: callym-m Jun 16, 2020 - 8:13am



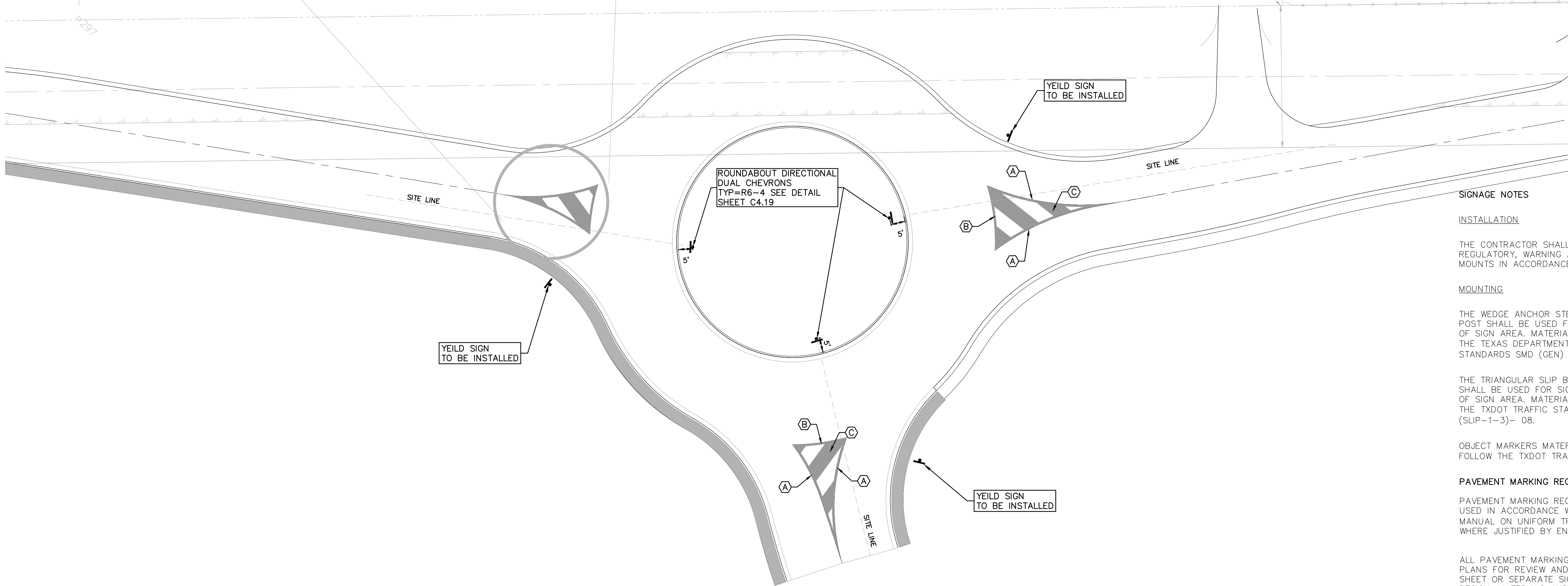
PAVEMENT MARKING TYPICAL DETAIL

NOTES

1. DIMENSIONS MAY VARY FOR STRIPE LENGTH
2. LANE WIDTH SHOULD BE 15' MINIMUM FROM FACE OF CURB TO STRIPING

PAVEMENT MARKING KEY NOTES

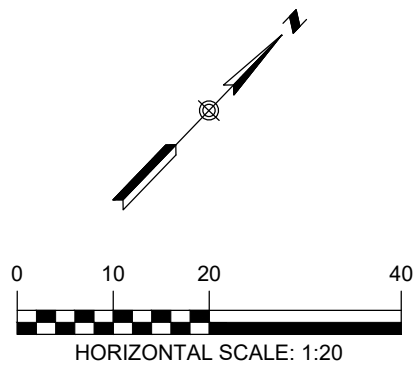
ITEM	NOTE
(A)	REFL PAV MRK TY I & II (WHITE)(SOLID)(8")
(B)	REFL PAV MRK TY I & II (YELLOW)(SOLID)(8")
(C)	REFL PAV MRK TY I & II (WHITE)(SLD)(5')



LEGEND	
	EXISTING CONTOURS
	PROPOSED CONTOURS
	B.L. BUILDING SETBACK LINE
	U.E. UTILITY EASEMENT
	D.E. DRAINAGE EASEMENT
	FLOW ARROW
	EXISTING GROUND LEFT (EG LT)
	EXISTING GROUND RIGHT (EG RT)
	EXISTING GROUND CENTER (EG CTR)
	PROPOSED TOP OF CURB (PR TC)

NOTES:

1. STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 30 MPH.
2. ALL A.D.A. RAMPS ARE TO BE CONSTRUCTED BY THE SITE DEVELOPMENT CONTRACTOR AT THE TIME OF STREET CONSTRUCTION.



SIGNAGE NOTES

INSTALLATION

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY, WARNING AND STREET NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

MOUNTING

THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (TWT) - 08.

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THE CONTRACTOR SHALL NOTIFY THE CITY OF NEW BRAUNFELS AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CONTRACTOR MAY BE RESPONSIBLE FOR PLACING SPOT TABS BEFORE MARKING APPLICATION. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



06/16/2020

WINCHESTER ROUNDABOUT  
STRIPING & SIGNAGE PLAN  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JUNE 2020

DRAWN BY: MK

DESIGNED BY: CAM

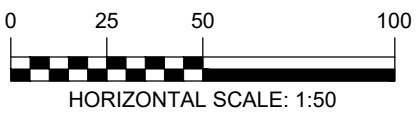
REVIEWED BY: CVH/SMH

HMT PROJECT NO.:  
031.061

SHEET  
C4.18





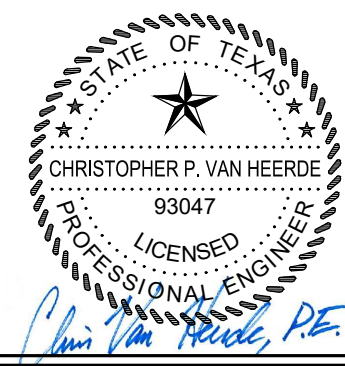


CONTRACTOR SHALL BE RESPONSIBLE FOR ALL  
DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES  
HAVE CEASED (TEMPORARILY OR PERMANENT) AND  
SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY  
RESUMES IN 21 DAYS, PER TPDES REQUIREMENTS.  
SEEDING DOES NOT CONSTITUTE STABILIZATION.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

MATCHLINE 'A'  
SEE SHEET C1.02

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



# PIEPER RIBBON CURB PLAN

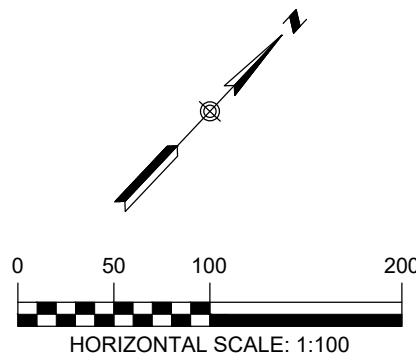
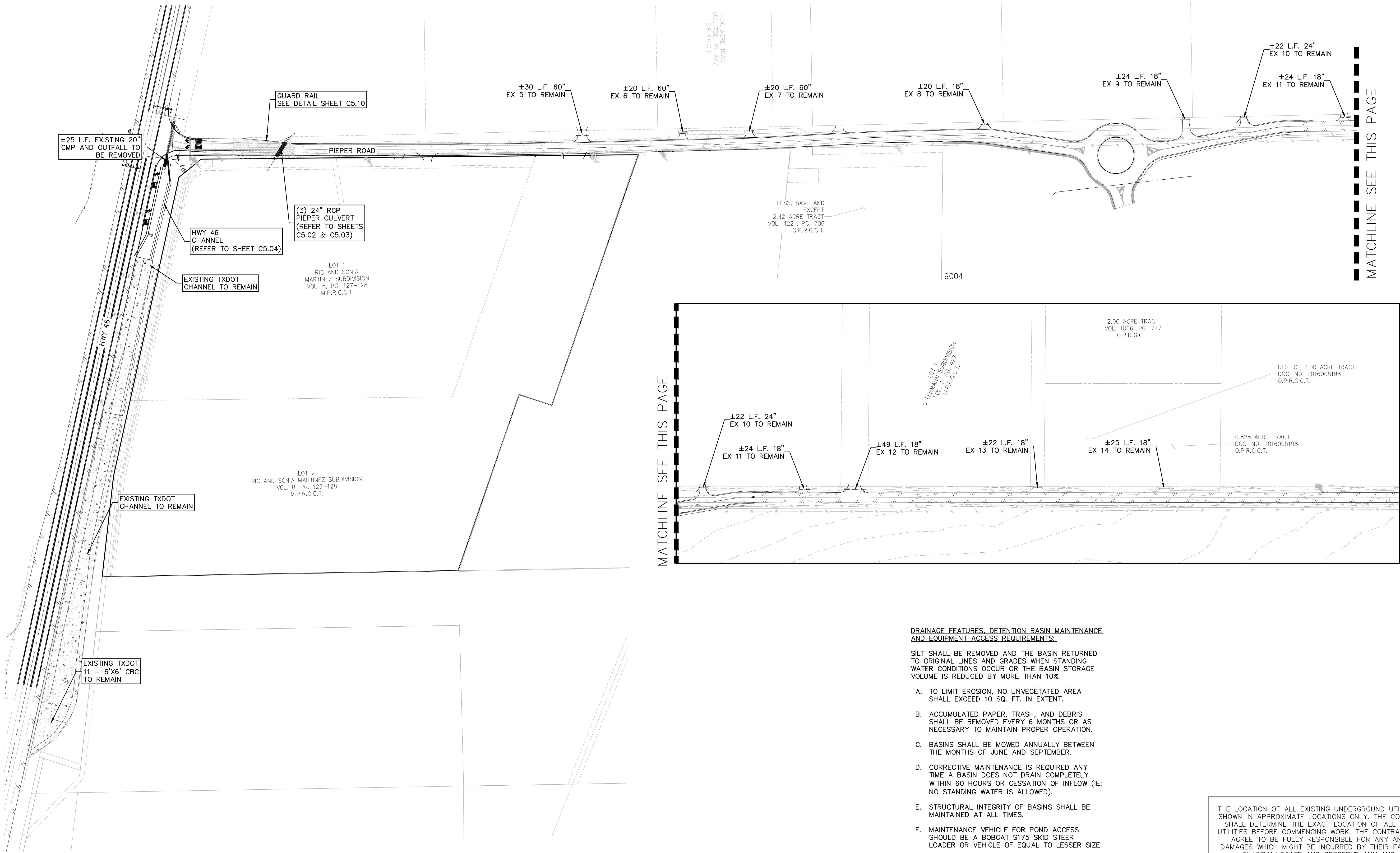
NO.	REVISION DESCRIPTION	REVISION DATE

HMT PROJECT NO.  
031.061

**SHEET**

## C4.21

Drawing Name: N:\\_Projects\031 - DR Horton\031.060 - 175 Ac Friesenhain Cbs\Office\031.060\_OFFSITE\_STORM.dwg User: callym-m Jun 16, 2020 - 8:14am



LEGEND	
	EXISTING CONTOURS
	PROPOSED CONTOURS
	B.L. BUILDING SETBACK LINE
	U.E. UTILITY EASEMENT
	D.E. DRAINAGE EASEMENT
	S.B.C. SINGLE BOX CULVERT
	PROPOSED STORM DRAIN LINE
	UTILITY CROSSING

- DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:**
- SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.
- A. TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
  - B. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
  - C. BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
  - D. CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
  - E. STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.
  - F. MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBP# FIRM F-10961  
TBP# FIRM 1053600



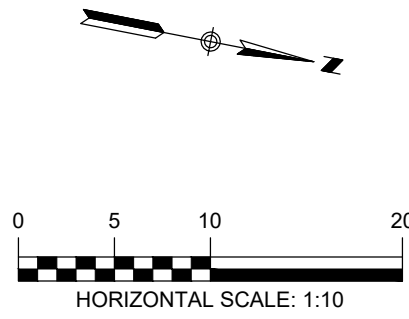
06/16/2020  
**OVERALL STORM PLAN**  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION DESCRIPTION	REVISION DATE

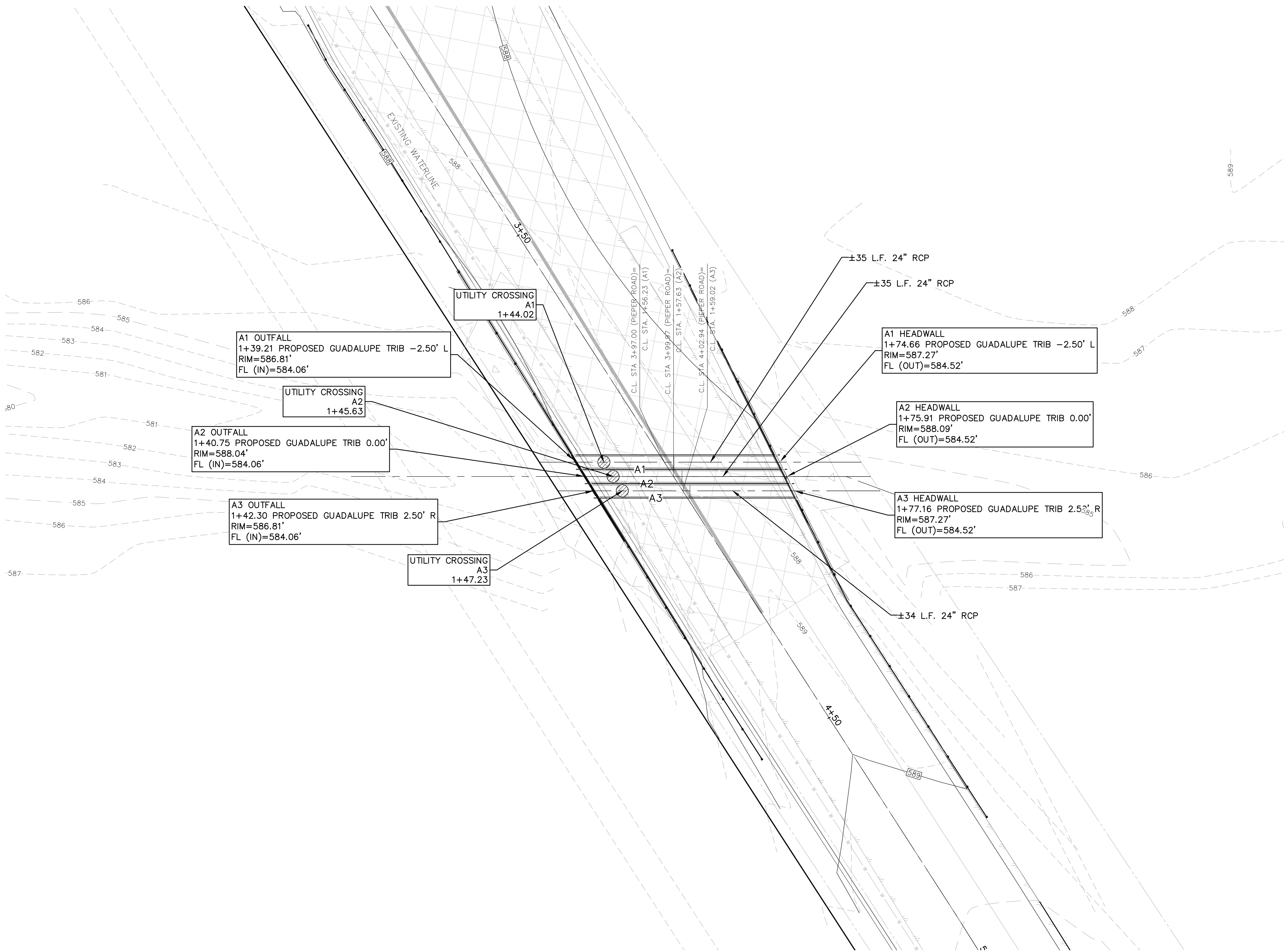
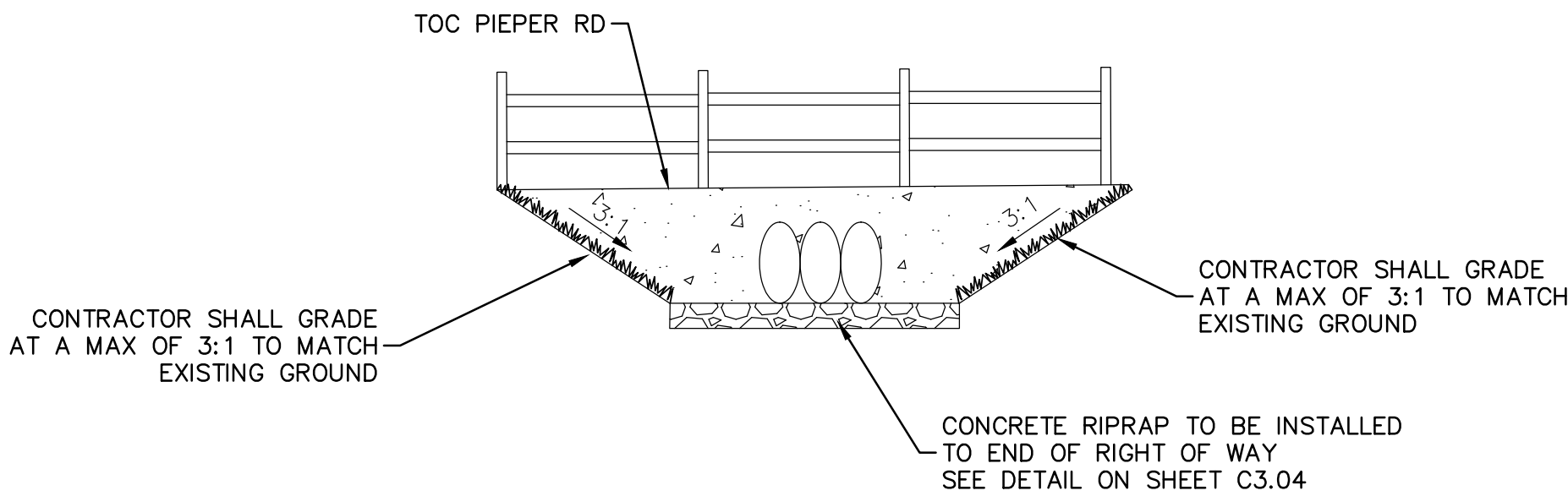
DATE: JUNE 2020  
DRAWN BY: MK  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SMH  
HMT PROJECT NO.: 031.061

**SHEET**  
**C5.01**

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.



- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - UTILITY EASEMENT
  - DRAINAGE EASEMENT
  - S.B.C. SINGLE BOX CULVERT
  - PROPOSED STORM DRAIN LINE
  - UTILITY CROSSING



**DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:**

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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBP# F-10961  
TBP# F-1053600



06/16/2020

**PIEPER CULVERTS PLAN**

PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JUNE 2020

DRAWN BY: MK

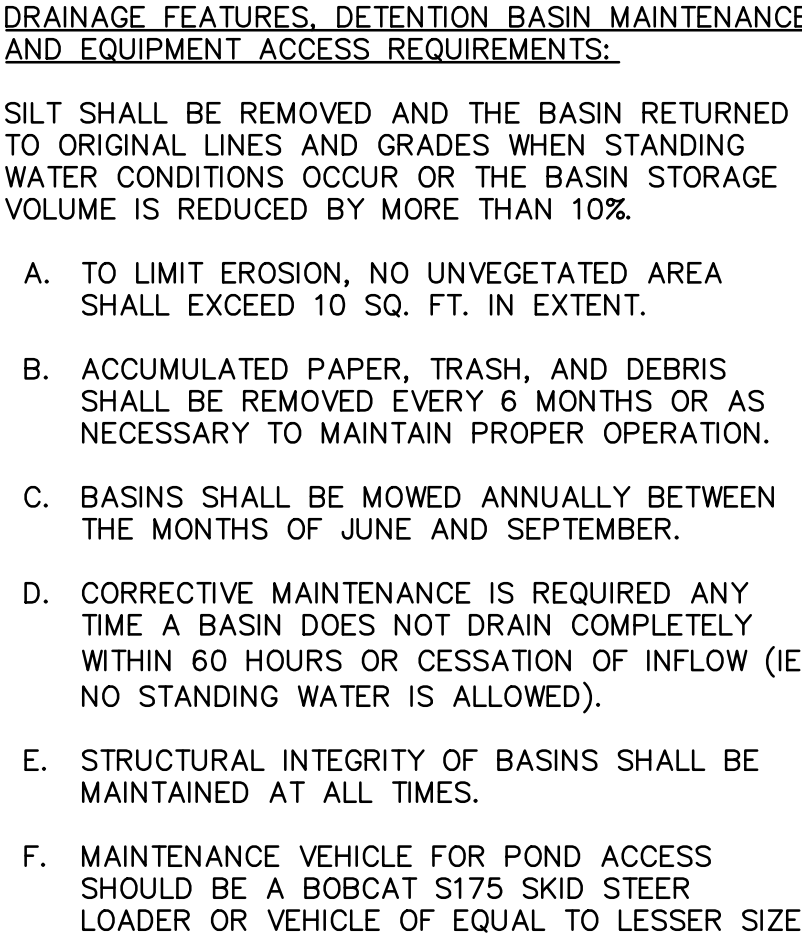
DESIGNED BY: CAM



REVIEWED BY: CVH/SMH

HMT PROJECT NO.: 031.061

**SHEET**

**C5.02**



290 S. CASTELL AVE., STE. 100 NEW BRAUNFELS, TX 78130 TBPE FIRM F- 10961 TBPLS FIRM 1053600		
 <b>HMT</b> ENGINEERING & SURVEYING		
		
06/16/2020		
<b>GUADALUPE TRIBUTARY PLAN &amp; PROFILE</b>		
<b>PARKSIDE OFFSITE</b>		
<b>HWY 46 - PIEPER RD IMPROVEMENTS</b>		
NO.	REVISION DESCRIPTION	REVISION DATE
DATE: JUNE 2020		
DRAWN BY: MK		
DESIGNED BY: CAM		
REVIEWED BY: CVH/SWH		
HMT PROJECT NO.: 031.061		
<b>SHEET</b>		
<b>C5.03</b>		

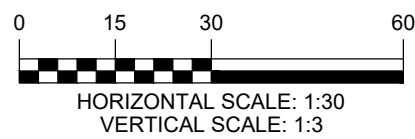
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

**DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:**

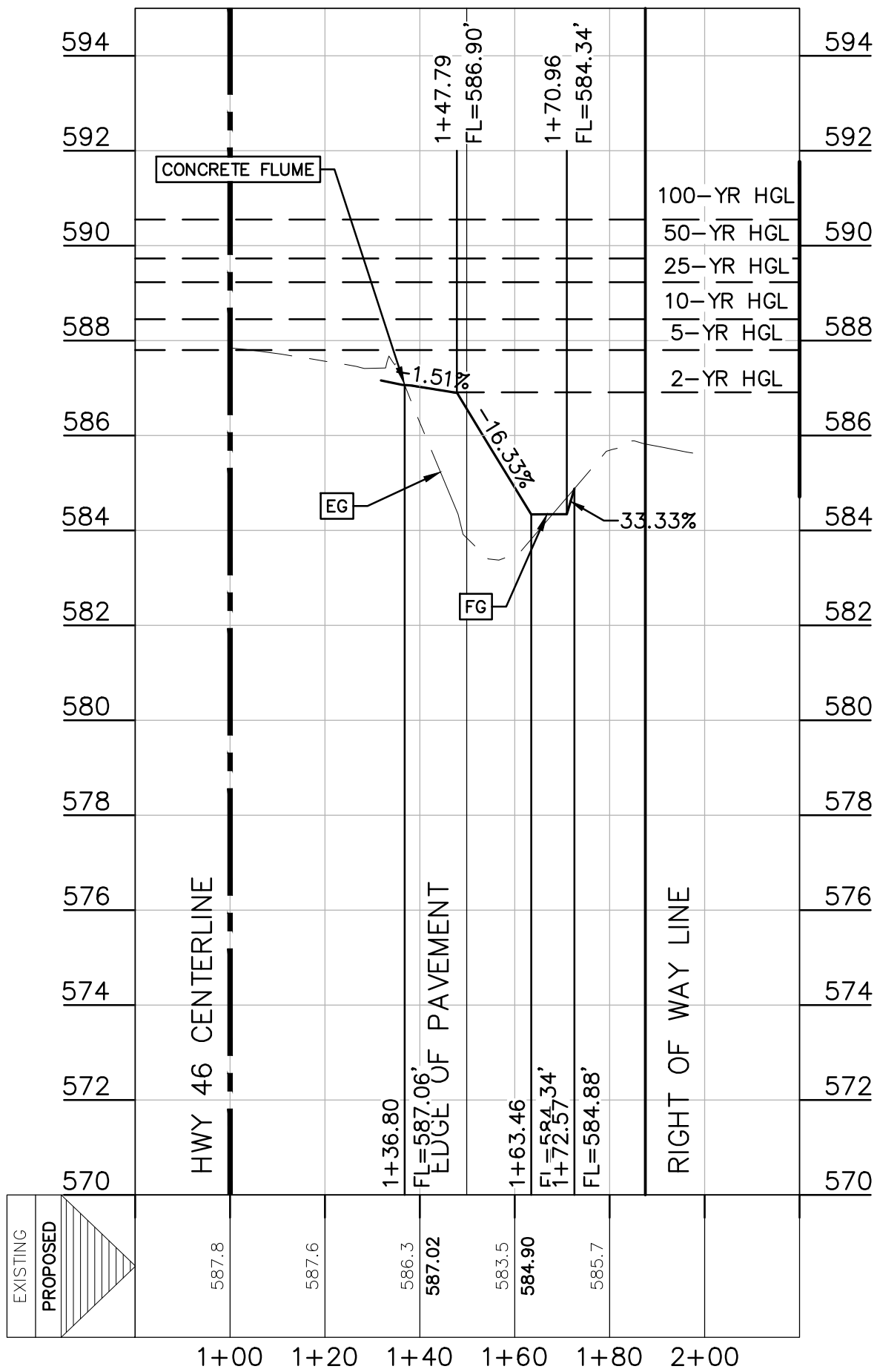
- SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.
- A. TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
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**LEGEND**

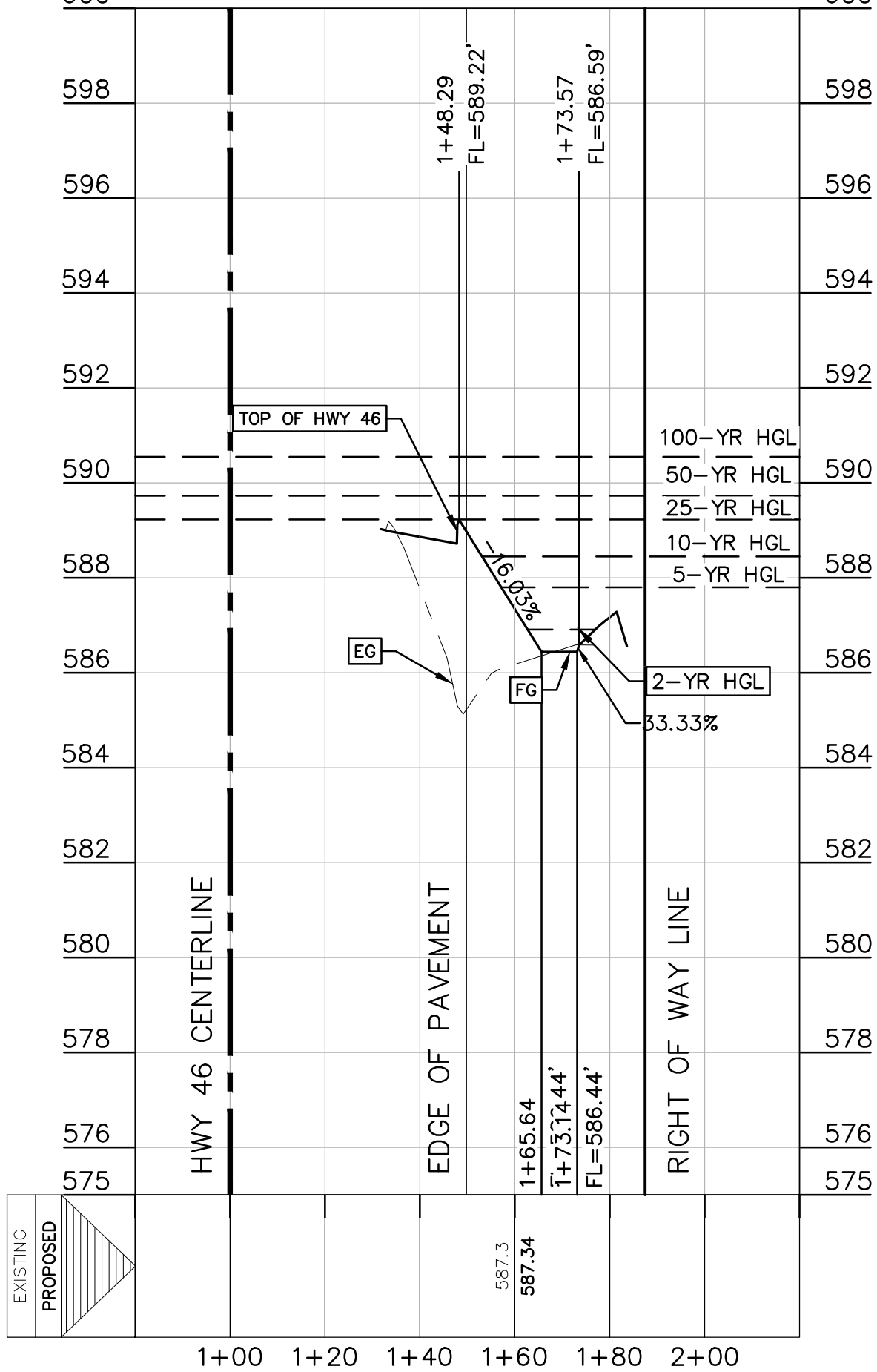
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[ 700 ] PROPOSED CONTOURS  
B.L. BUILDING SETBACK LINE  
U.E. UTILITY EASEMENT  
D.E. DRAINAGE EASEMENT  
S.B.C. SINGLE BOX CULVERT  
— — — PROPOSED STORM DRAIN LINE  
○ UTILITY CROSSING



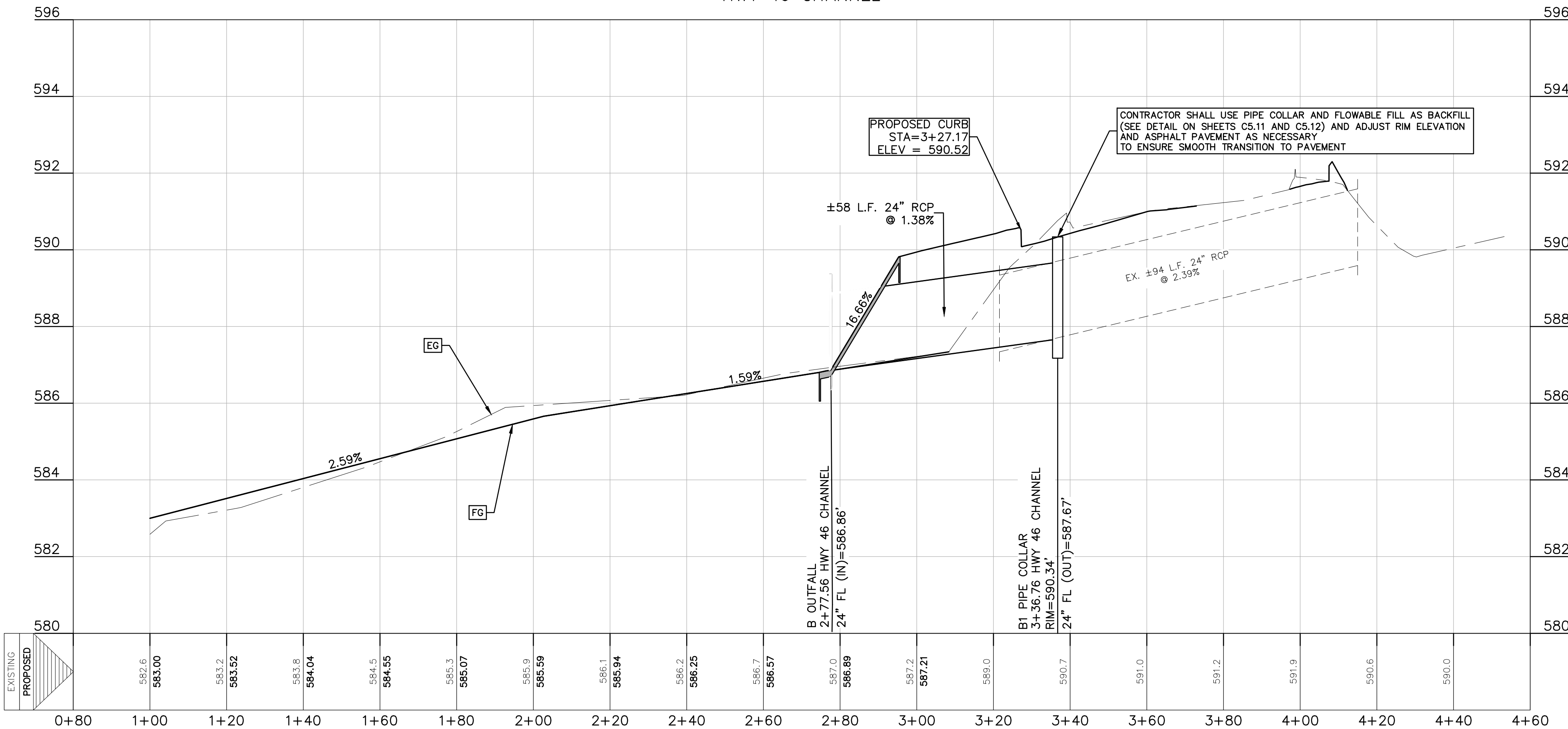
**SECTION 6+00**



**SECTION 7+00**



**HWY 46 CHANNEL**



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



06/16/2020

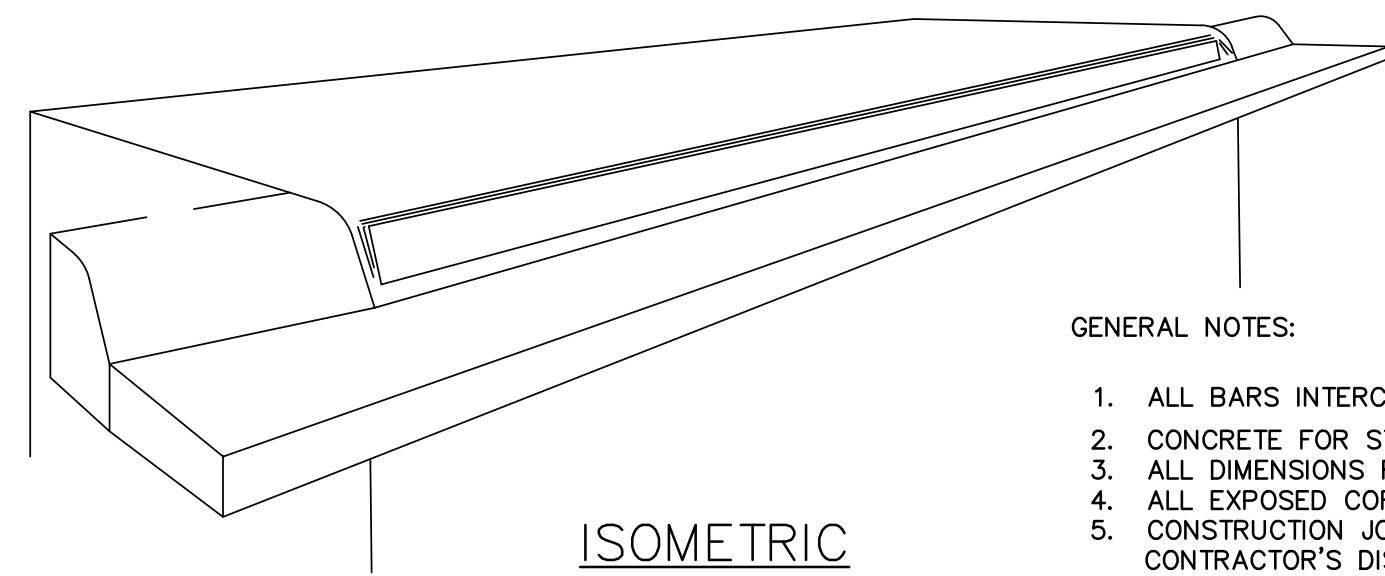
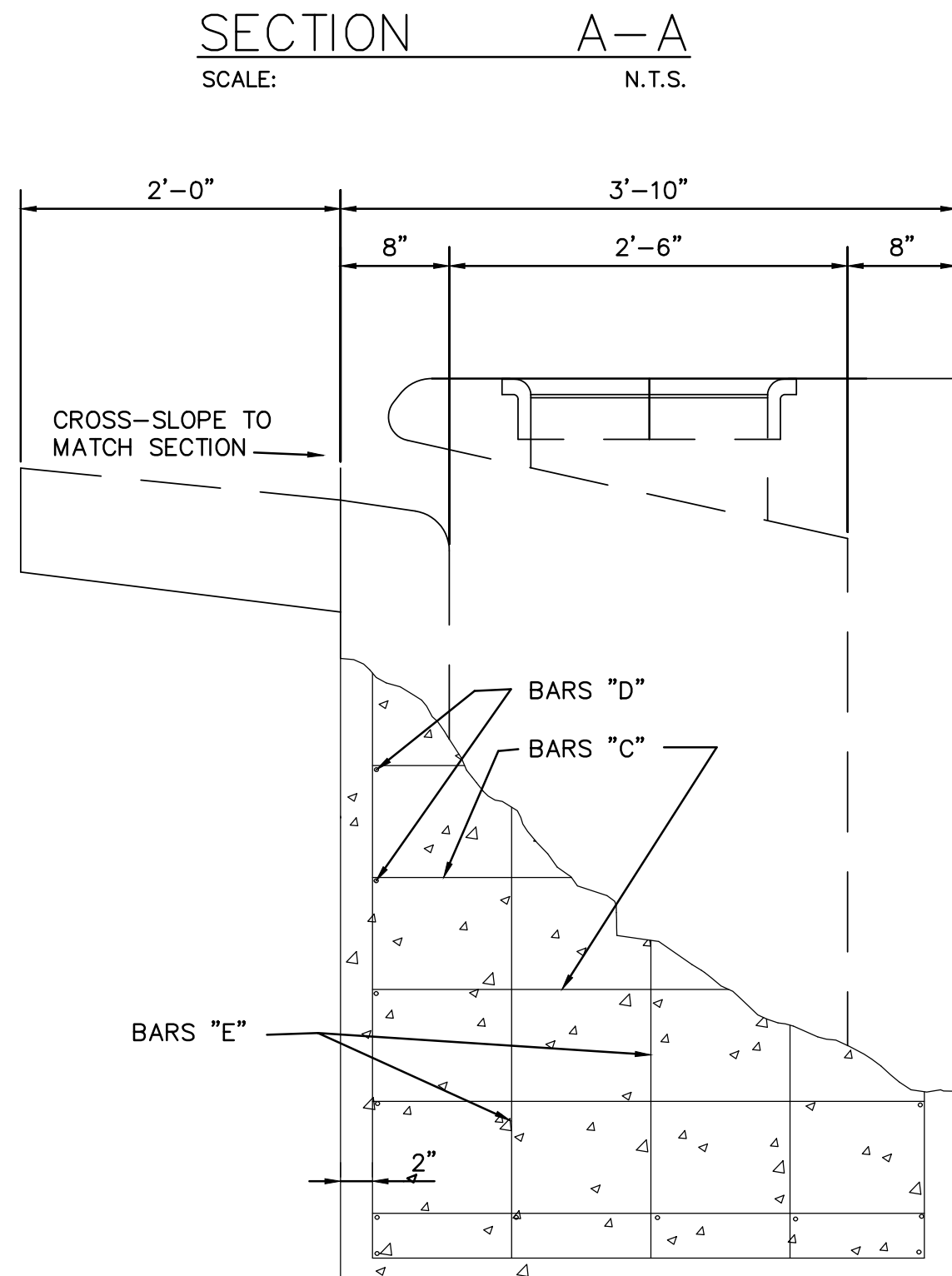
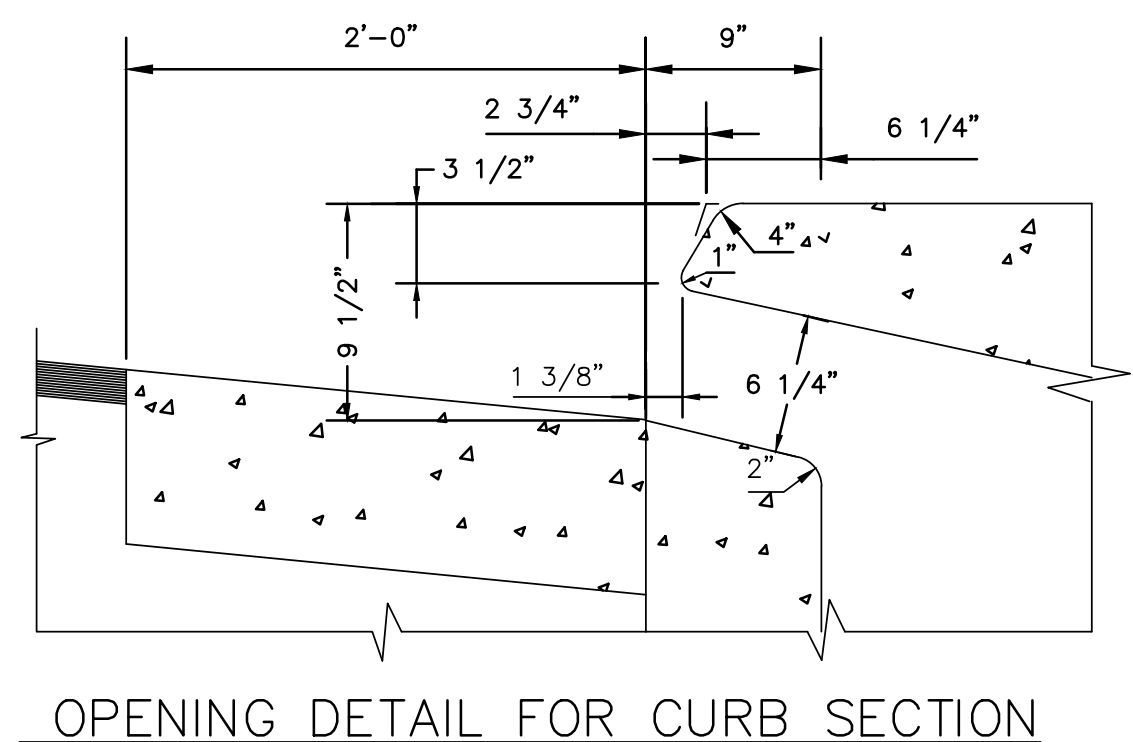
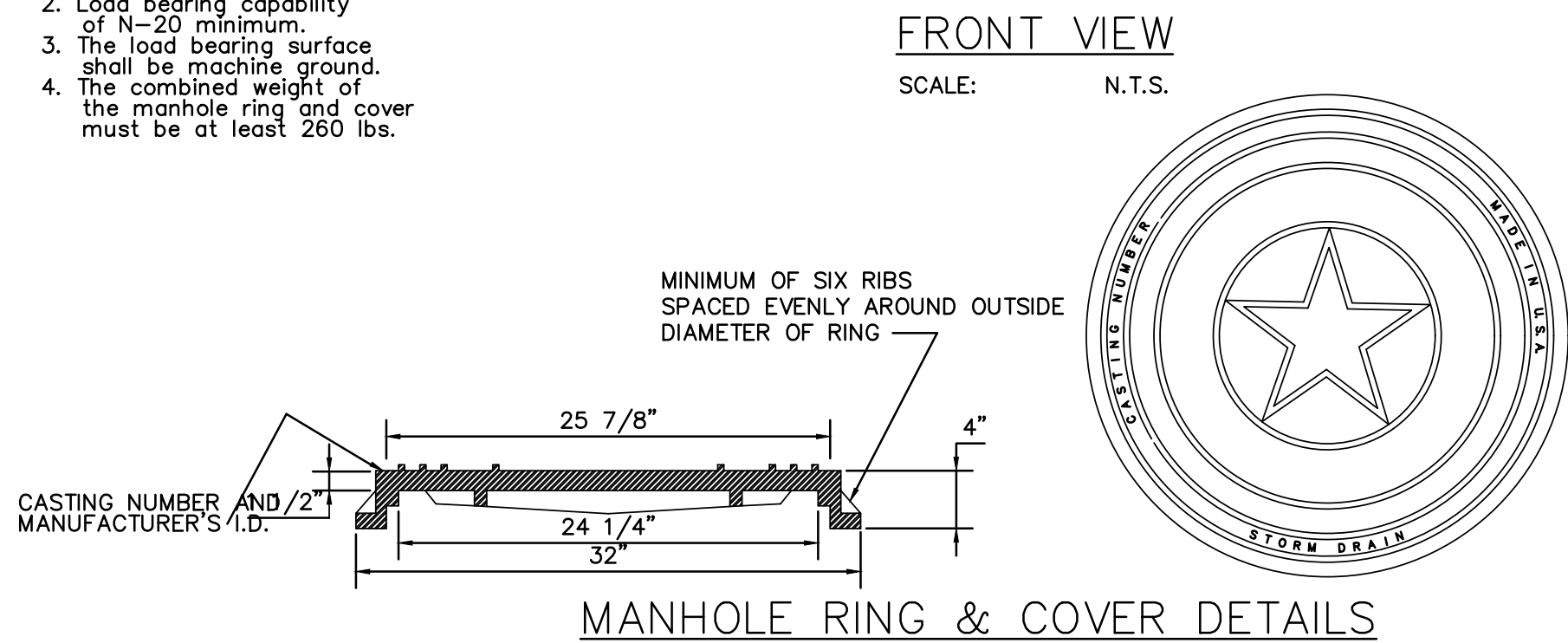
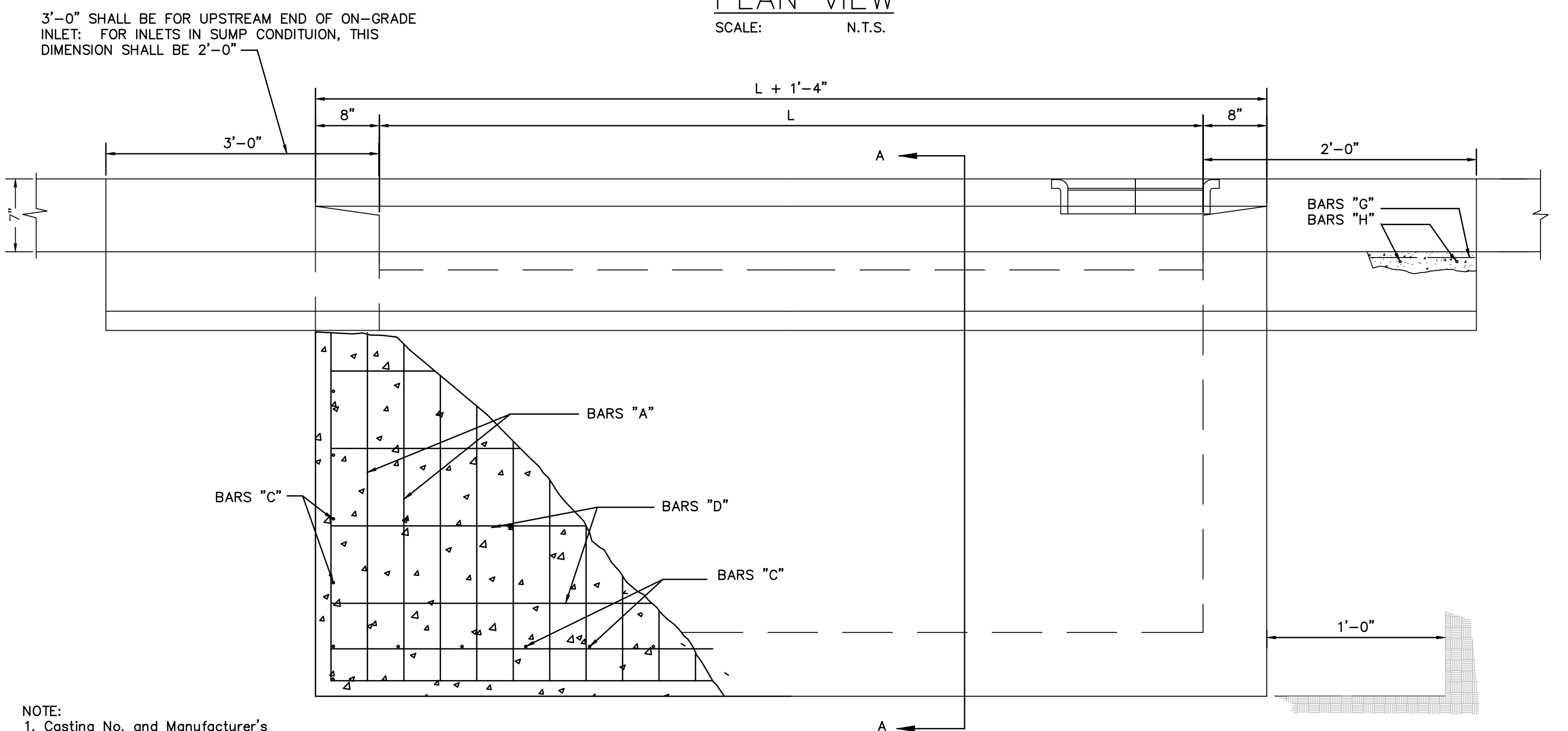
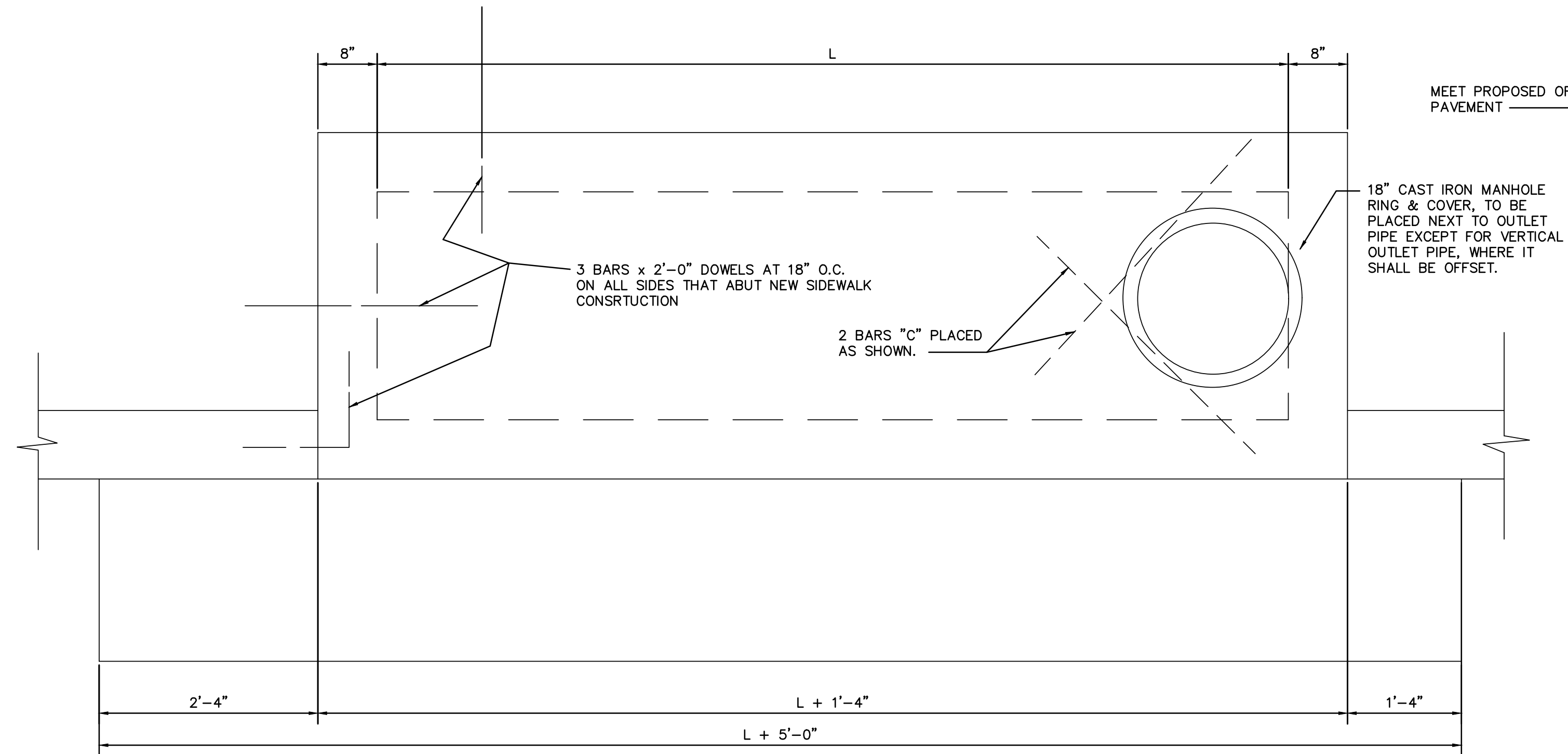
**HWY 46 CHANNEL  
PLAN & PROFILE**  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JUNE 2020  
DRAWN BY: MK  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.061

**SHEET  
C5.04**

Drawing Name: N:\\_Projects\031 - DR Horton\031.060 - 175 Ac Friesenhain Cbs\Office\031.060\_DETAILS.dwg User: cathy-m Jun 16, 2020 - 8:10am



GENERAL NOTES:

1. ALL BARS INTERCEPTING MANHOLE RING & REINFORCING CONCRETE PIPE SHALL BE FIELD CUT.
2. CONCRETE FOR STRUCTURES SHALL BE CLASS "A", 3000 P.S.I. IN 28 DAYS.
3. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED TO 3/4"
5. CONSTRUCTION JOINT SHOWN AT FLOWLINE MAY BE RAISED A MAXIMUM OF 6" AT THE CONTRACTOR'S DISCREION. ADJUST LENGTH OF VERTICAL STEEL AS REQUIRED.
6. ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A-615, GRADE 60.

Reinforcing Steel Schedule					
BAR	NO.	SIZE	SPA.	LENGTH	WEIGHT
L=5'-00"					
A	15	4	5"OC	13'-9 1/2"	138
B	15	4	5"	5'-1"	52
C	23	4	9"	3'-6"	54
D	22	4	10"	6'-1"	89
E	10	4	10 1/2"	6'-10"	46
F	6	5	12"	2'-3"	14
G	3	4	12"	9'-8"	20
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=353 CY. MANHOLE CASTING=100 LBS. STEEL TOTAL=422 LBS.					
10'					
A	27	4	5"OC	13'-9 1/2"	249
B	27	4	5"	5'-1"	93
C	30	4	9"	3'-6"	70
D	22	4	10"	11'-1"	163
E	10	4	10 1/2"	6'-10"	46
F	12	5	12"	2'-3"	27
G	3	4	12"	14'-8"	30
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=5.75CY. MANHOLE CASTING=100LBS. STEEL TOTAL=687LBS					
15'					
A	39	4	5"OC	13'-9 1/2"	359
B	39	4	5"	5'-1"	134
C	36	4	9"	3'-6"	84
D	22	4	10"	16'-1"	236
E	10	4	10 1/2"	6'-10"	46
F	17	5	12"	2'-3"	38
G	3	4	12"	19'-8"	40
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=7.97CY. MANHOLE CASTING=100LBS. STEEL TOTAL=946LBS					
20'					
A	51	4	5"OC	13'-9 1/2"	470
B	51	4	5"	5'-1"	175
C	43	4	9"	3'-6"	101
D	22	4	10"	6'-1"	310
E	10	4	10 1/2"	6'-10"	46
F	22	5	12"	2'-3"	50
G	3	4	12"	9'-8"	50
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=10.19CY. MANHOLE CASTING=100LBS. STEEL TOTAL=1211LBS					
25'					
A	63	4	5"OC	13'-9 1/2"	580
B	63	4	5"	5'-1"	217
C	50	4	9"	3'-6"	117
D	22	4	10"	6'-1"	383
E	10	4	10 1/2"	6'-10"	46
F	27	5	12"	2'-3"	61
G	3	4	12"	9'-8"	60
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=12.41CY. MANHOLE CASTING=100LBS. STEEL TOTAL=1473LB					
30'					
A	75	4	5"OC	13'-9 1/2"	691
B	75	4	5"	5'-1"	258
C	56	4	9"	3'-6"	131
D	22	4	10"	6'-1"	457
E	10	4	10 1/2"	6'-10"	46
F	32	5	12"	2'-3"	72
G	3	4	12"	9'-8"	70
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=14.63CY. MANHOLE CASTING=100LBS. STEEL TOTAL=1734LB					

\*These figures do not include concrete and steel intercepted by Manhole and Reinforced Concrete Pipe.  
\*Includes concrete gutter for on-grade inlet. Reduce by .05 cy for inlets in sump.



06/16/2020

STORM DETAILS  
(SHEET 1 OF 5)  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

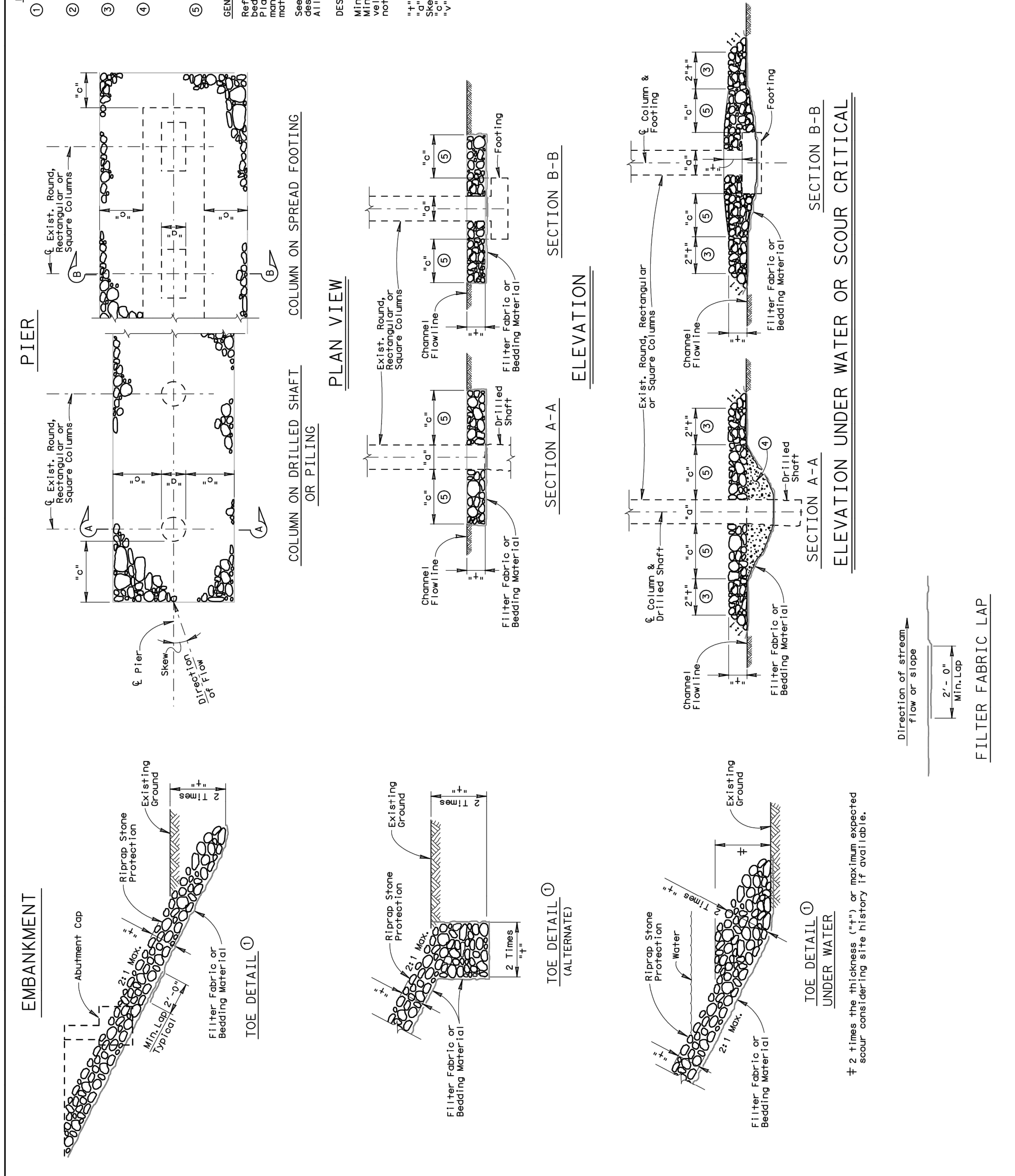
NO.	REVISION	DESCRIPTION	DATE

DATE: JUNE 2020  
DRAWN BY: MK  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.061

SHEET  
C5.05

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBP FIRM F-10961  
TBP L FIRM 1053600



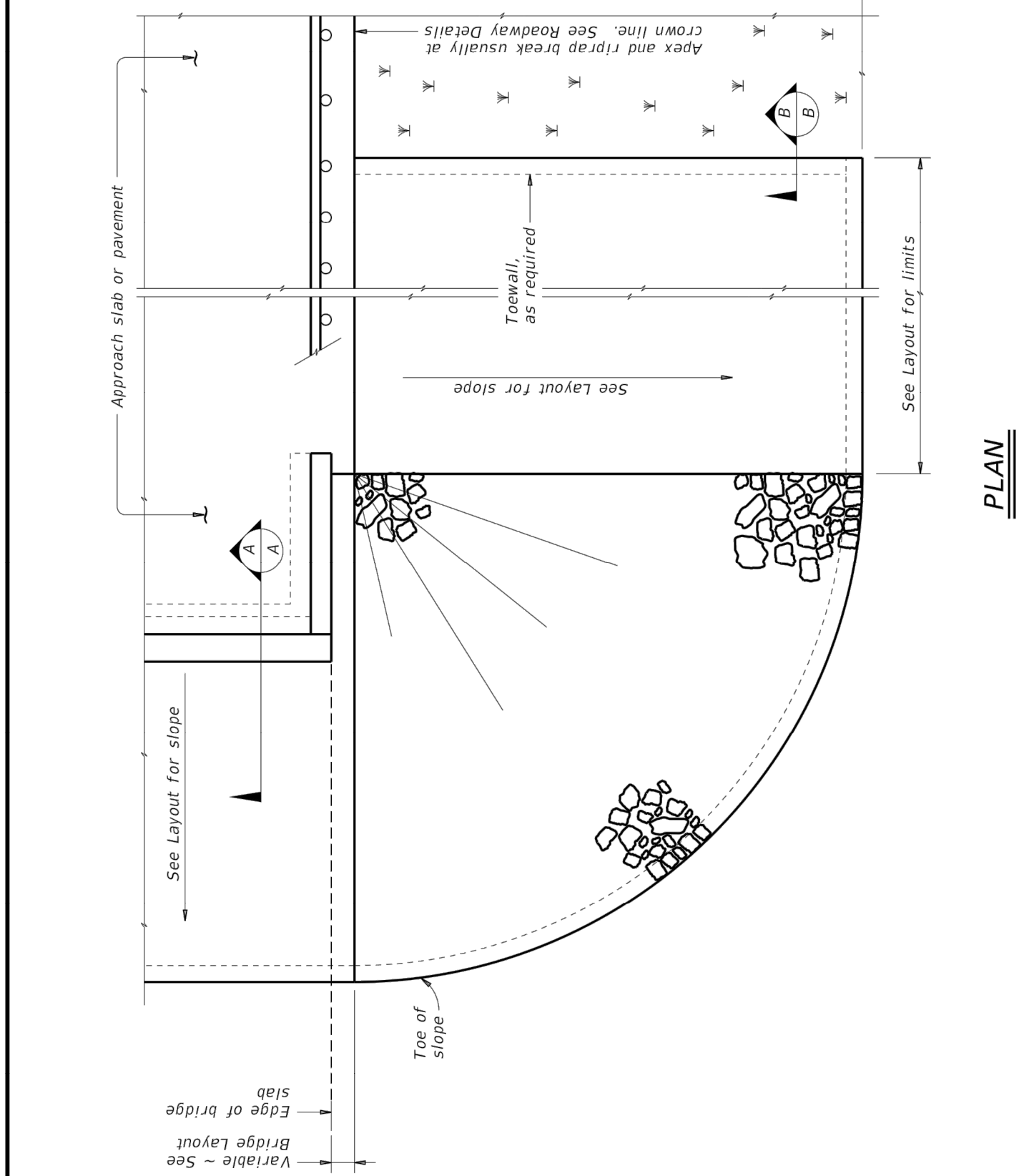




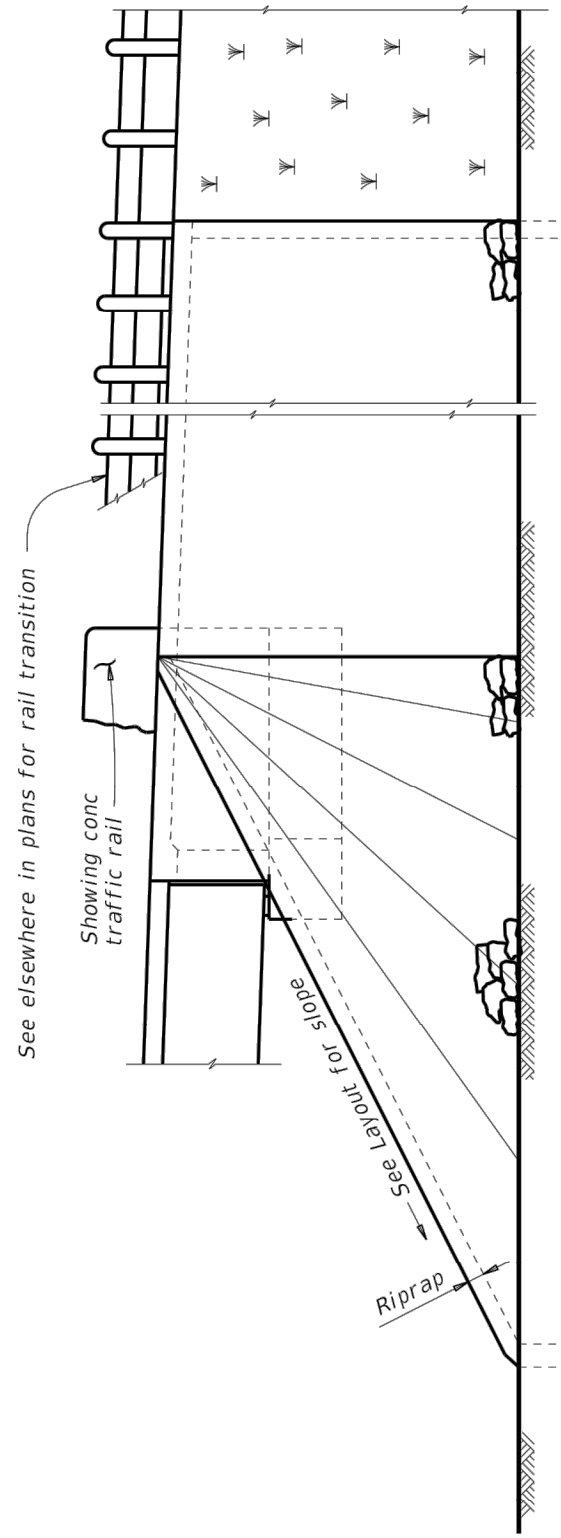
DISCLAIMER:  
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:

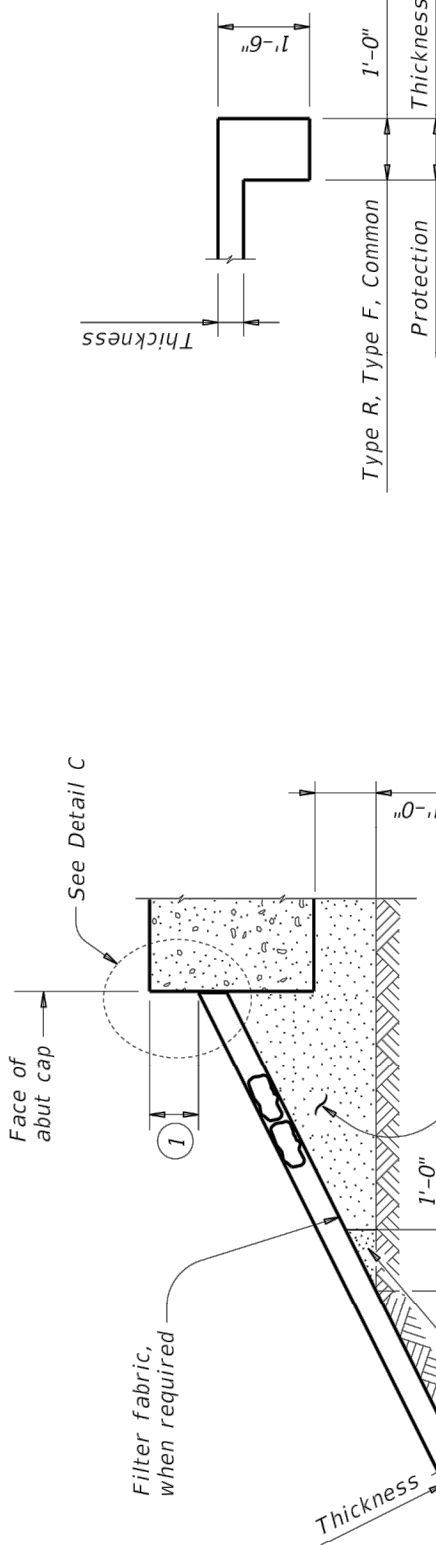
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PLAN



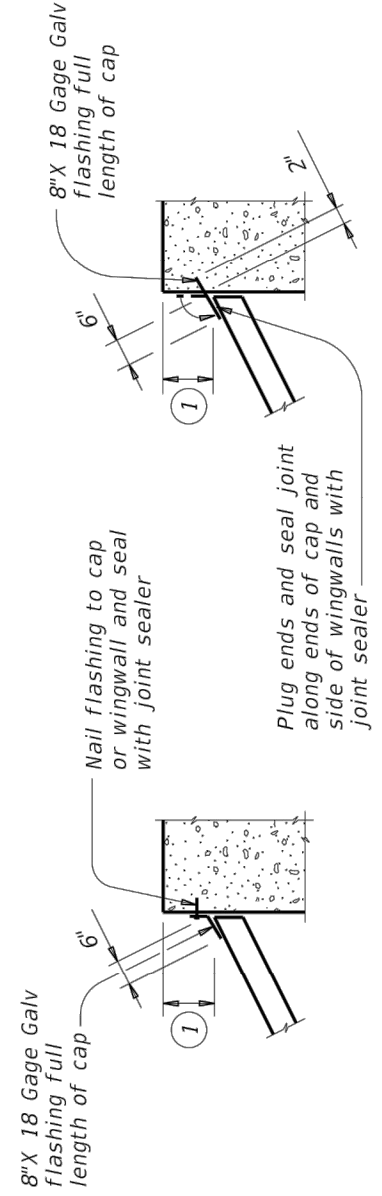
ELEVATION



SECTION A-A AT CAP

SECTION B-B

Provide toe wall when shoulder drain is located adjacent to limits of stone riprap. See layout for details of protection riprap is greater than 18".



CAP OPTION B

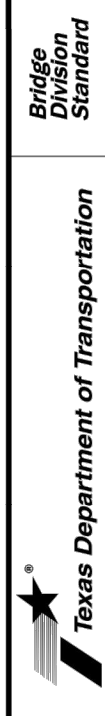
CAP OPTION A

DETAIL C

GENERAL NOTES:  
Refer to Item 432, "Riprap" for stone size and gradation, and construction details. See layout for limits and locations of riprap. See elsewhere in plans for locations and details of shoulder drains.

1 Top of cap to top of riprap dimension varies as directed by the Engineer. Provide 9" Min dimension for span, box beam, or slab beam bridges.

SHEET 1 OF 2



STONE RIPRAP

SRR

DATE	SYNOPSIS	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
07/20/20	07/20/20	07/20/20	07/20/20	07/20/20	07/20/20	07/20/20	07/20/20	07/20/20	07/20/20

DISCLAIMER:  
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:

FILE:

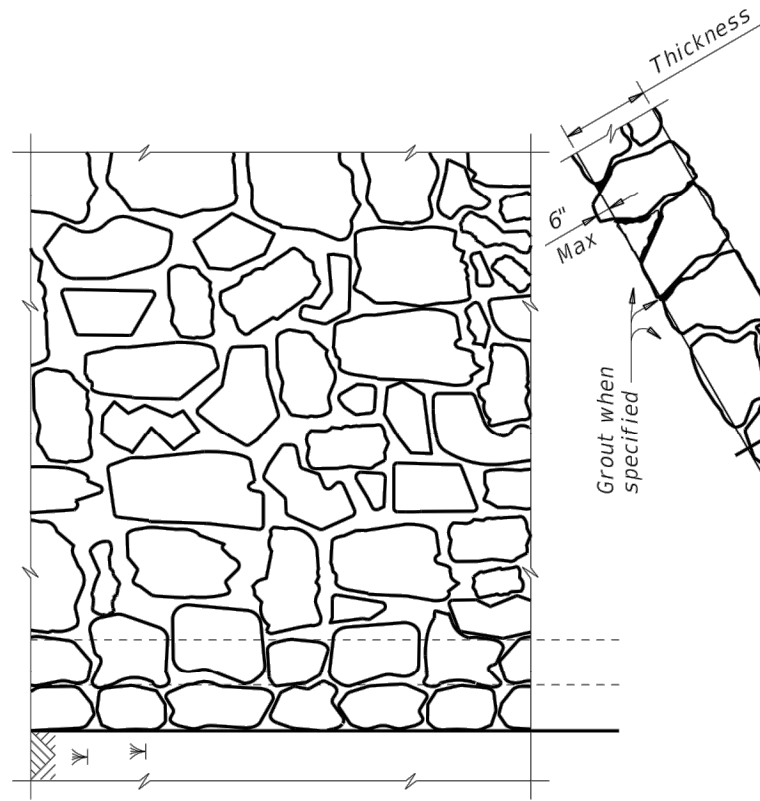


FIGURE 1 ~ TYPE R STONE RIPRAP

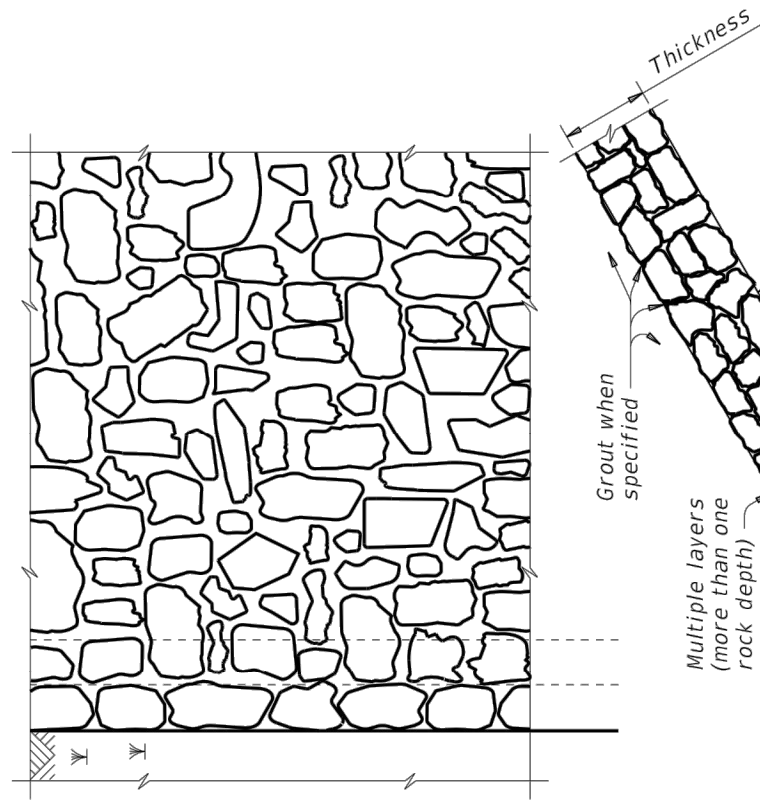


FIGURE 4 ~ COMMON STONE RIPRAP

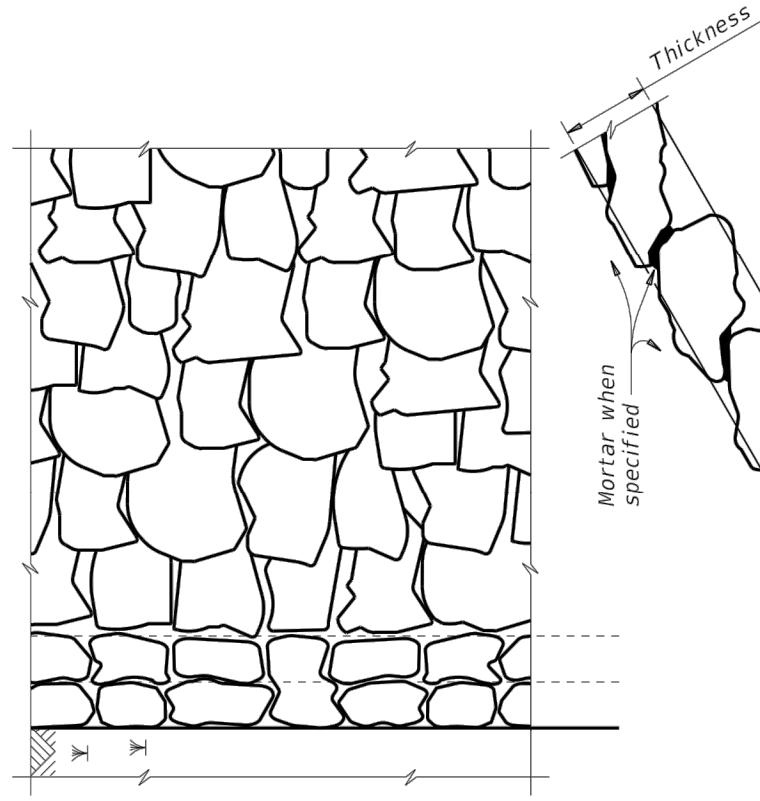


FIGURE 2 ~ TYPE F STONE RIPRAP

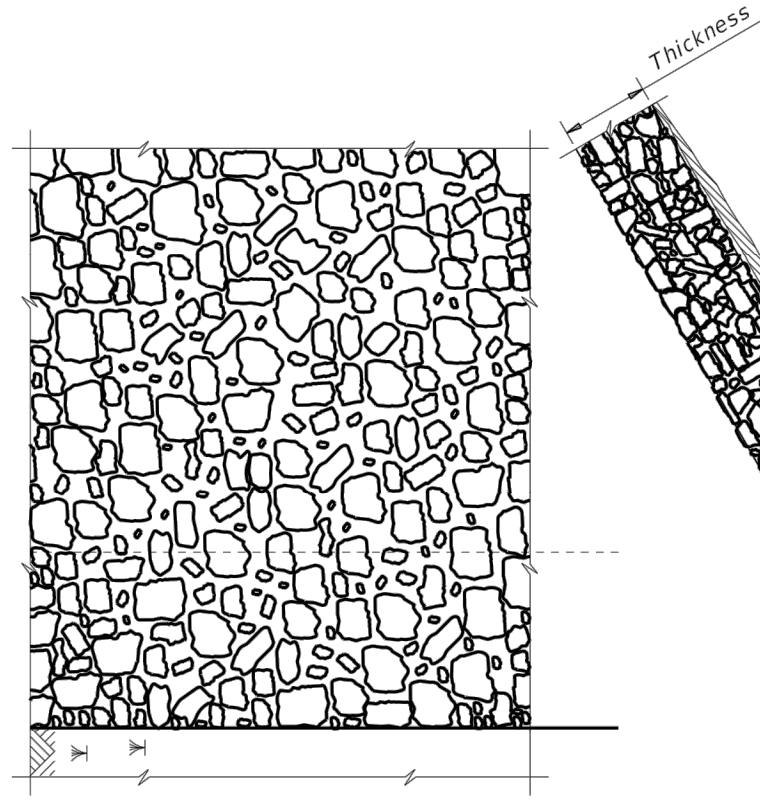


FIGURE 5 ~ PROTECTION STONE RIPRAP

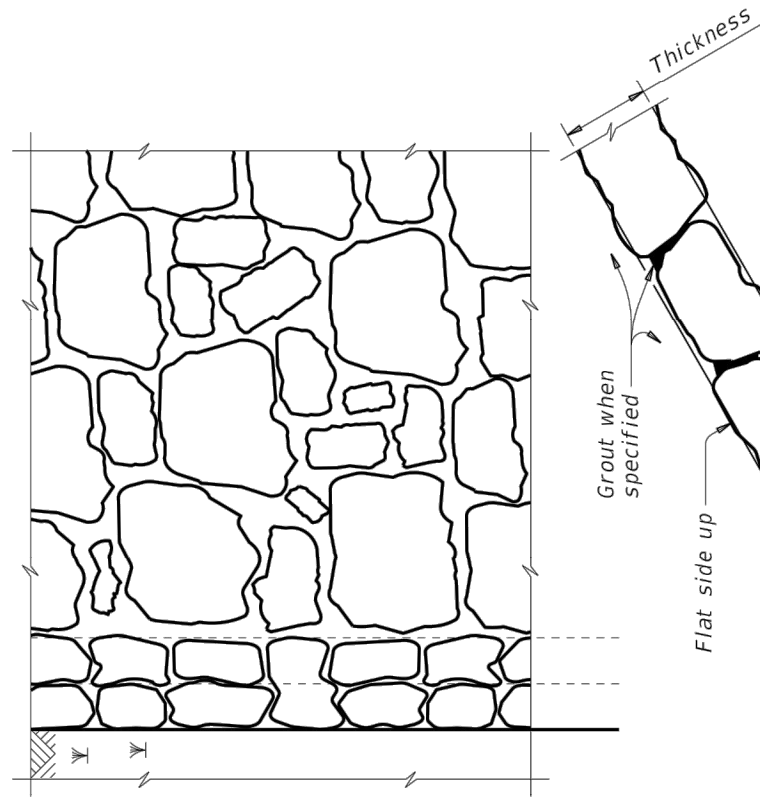


FIGURE 3 ~ TYPE F STONE RIPRAP

- 2 Provide bedding material instead of filter fabric if shown elsewhere in plans. See layout for thickness of bedding material.
- 3 Minimum toe depth is the larger of the maximum scour depth or 2 times the riprap thickness.



STONE RIPRAP

SRR

DATE	SYNOPSIS	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
07/20/20	07/20/20	07/20/20	07/20/20	07/20/20	07/20/20	07/20/20	07/20/20	07/20/20	07/20/20

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JUNE 2020
DRAWN BY: MK
DESIGNED BY: CAM
REVIEWED BY: CVH/SWH

HMT PROJECT NO.: 031.061

SHEET C5.08

STORM DETAILS  
(SHEET 4 OF 5)  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

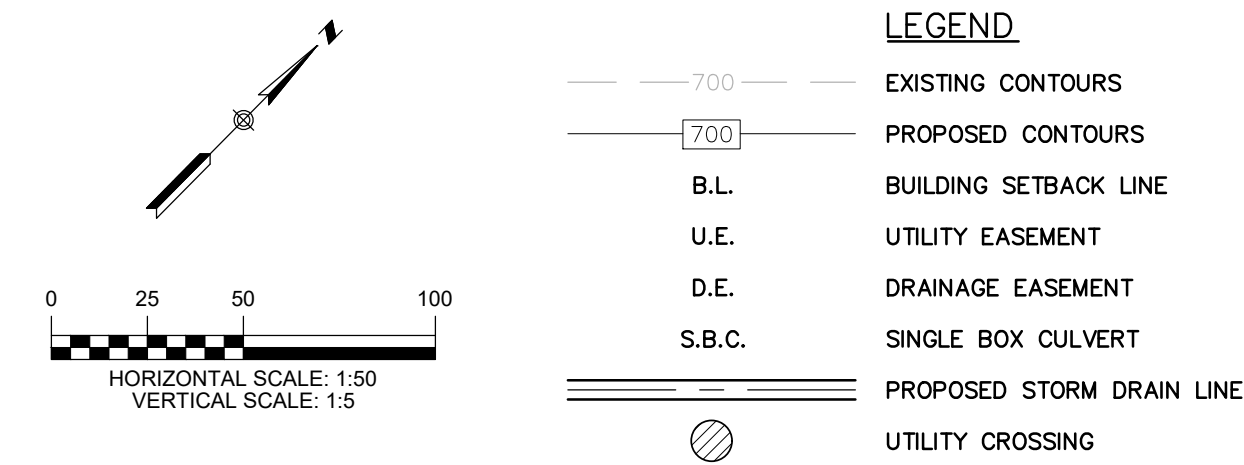
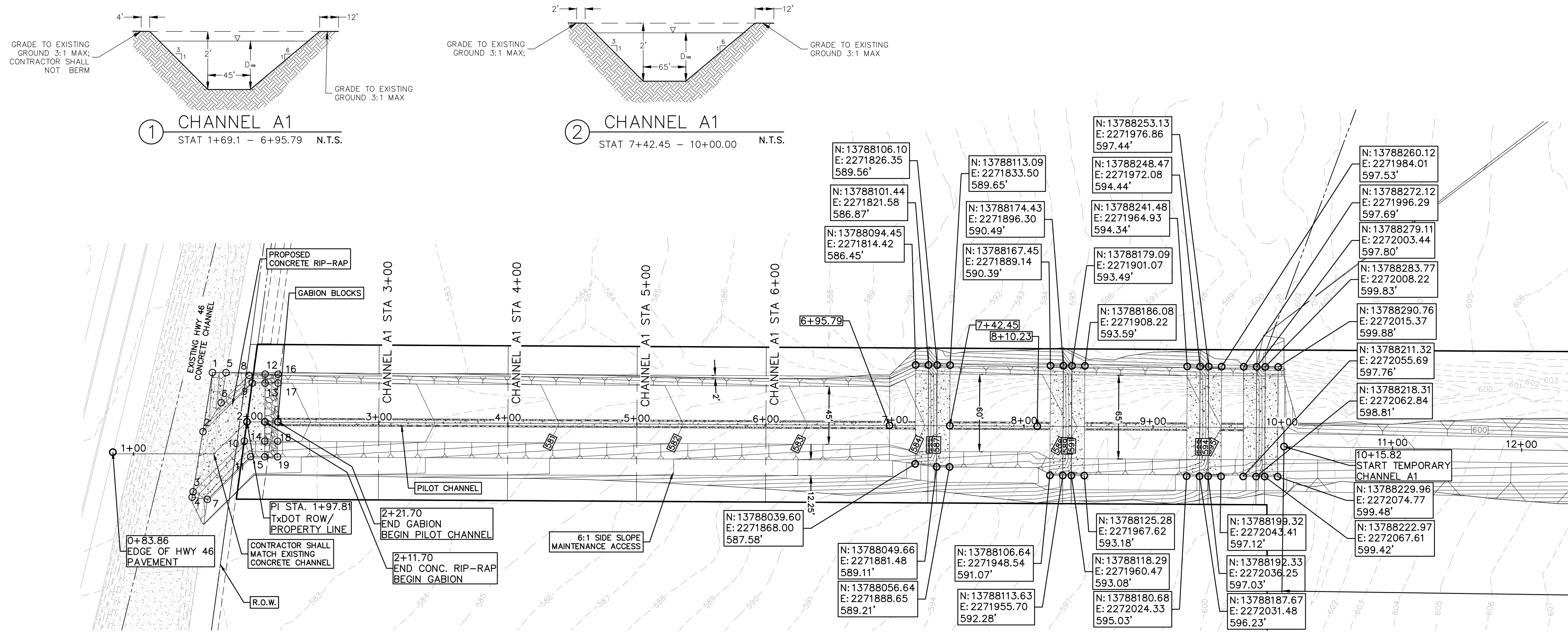
06/16/2020



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBP FIRM F-10961  
TBP FIRM 1053600



Drawing Name: N:\Projects\031 - DR Horton\031.060 - 175 Ac. Friesheim Cda\Phase 1\031.60\_STRM\_P1.dwg User: callym-m Jun 16, 2020 - 8:15am



Point Table				
Point #	Raw Description	Northing	Easting	Elevation
1	TOE OF CONC. RIP-RAP	13787707.20	2271430.91	579.03
2	TOE OF CONC. RIP-RAP	13787669.49	2271457.91	578.10
3	TOE OF CONC. RIP-RAP	13787630.99	2271485.15	578.00
4	TOE OF CONC. RIP-RAP	13787627.40	2271487.61	0.00
5	TOP OF CONC. RIP-RAP	13787714.57	2271438.45	580.80
6	TOP OF CONC. RIP-RAP	13787695.32	2271452.21	580.65
7	TOP OF CONC. RIP-RAP	13787634.50	2271497.19	580.58
8	TOP OF CONC. RIP-RAP	13787725.56	2271452.57	581.10
9	TOE OF CONC. RIP-RAP	13787723.09	2271458.54	578.85
10	TOE OF CONC. RIP-RAP	13787686.82	2271485.80	578.67

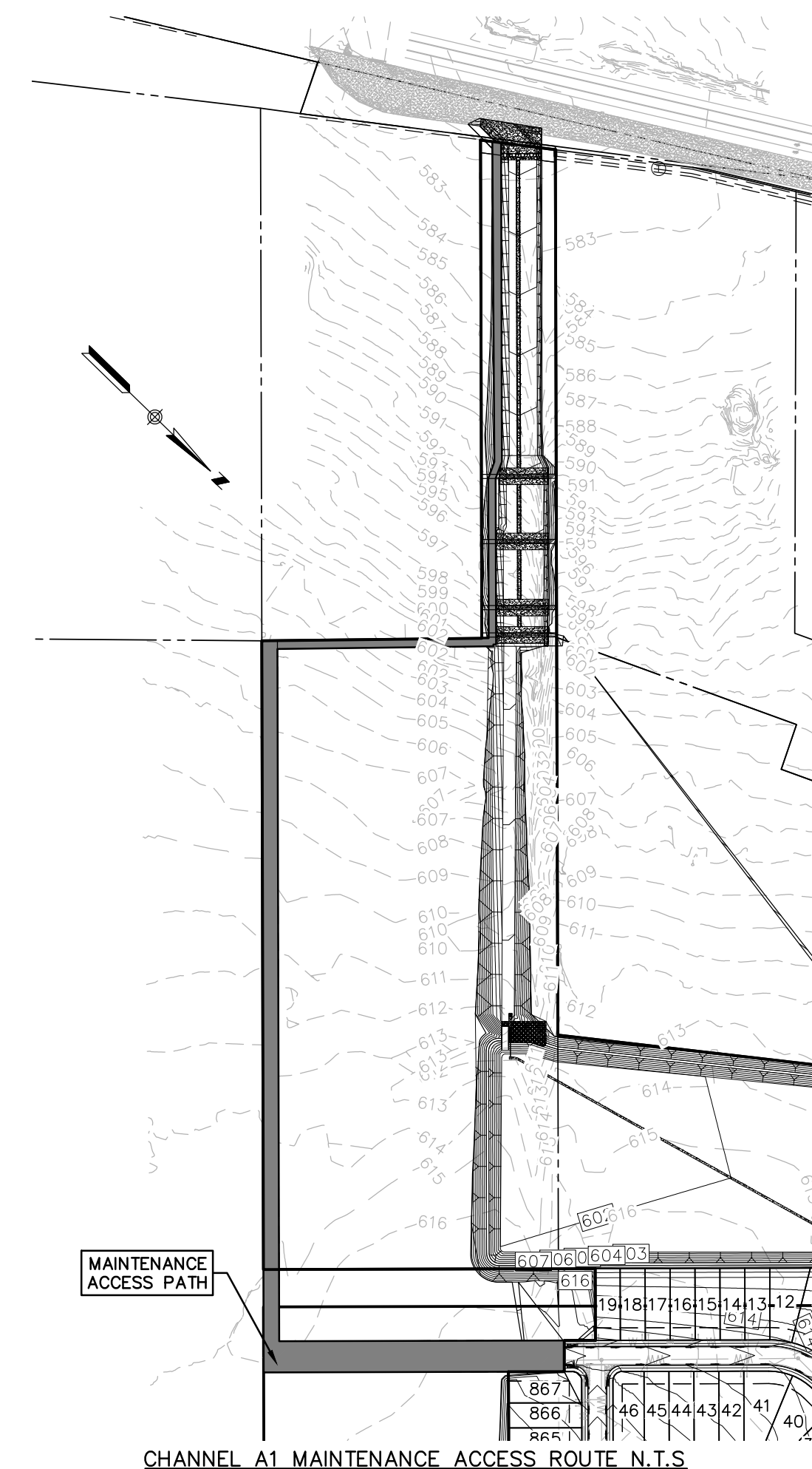
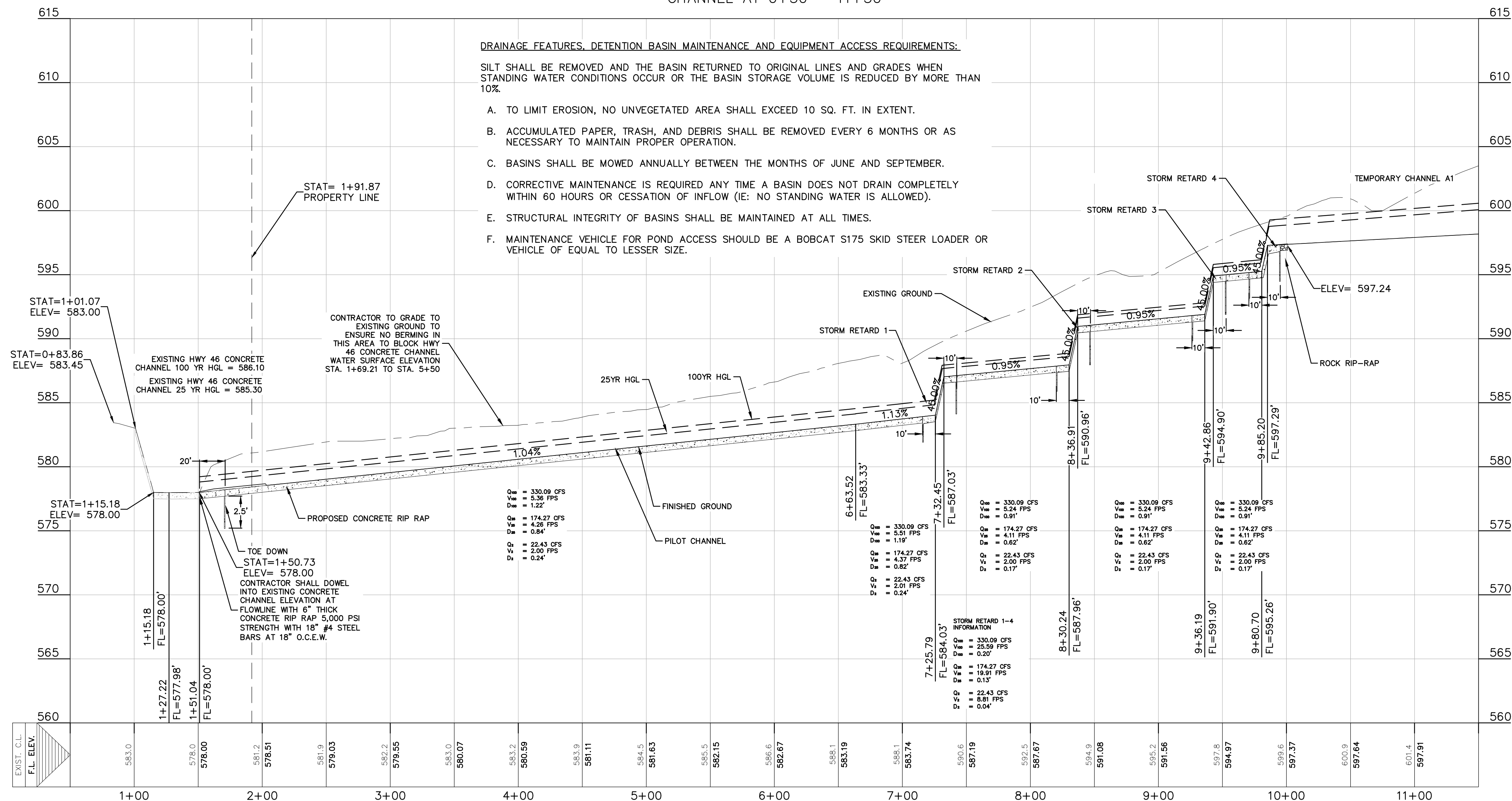
Point Table				
Point #	Raw Description	Northing	Easting	Elevation
11	TOP OF CONC. RIP-RAP	13787681.62	2271497.74	580.75
12	EDGE OF CONC. RIP-RAP	13787735.04	2271460.84	581.11
13	TOE OF CONC. RIP-RAP	13787730.08	2271465.69	578.80
14	TOE OF CONC. RIP-RAP	13787697.88	2271497.14	578.71
15	TOP OF CONC. RIP-RAP	13787689.26	2271505.56	580.71
16	TOP OF GABIION	13787742.03	2271467.99	581.22
17	TOE OF GABIION	13787737.06	2271472.85	578.90
18	TOE OF GABIION	13787704.87	2271504.29	578.81
19	TOP OF GABIION	13787696.25	2271512.71	580.81

CHANNEL A1 0+50 - 11+50

**DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:**

SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.

- TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
- CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
- STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.
- MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.



CHANNEL A1 MAINTENANCE ACCESS ROUTE N.T.S.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, STRUCTURES OR FACILITIES. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES 24-HOURS PRIOR TO COMMENCING CONSTRUCTION.

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HERDE  
93047  
LICENSED PROFESSIONAL ENGINEER

06/16/2020

**SD LN A1 PLAN  
& PROFILE**  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION	DESCRIPTION	DATE

DATE: JUNE 2020  
DRAWN BY: MK  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.061

**SHEET**  
**C5.10**



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User: caitlynn-m

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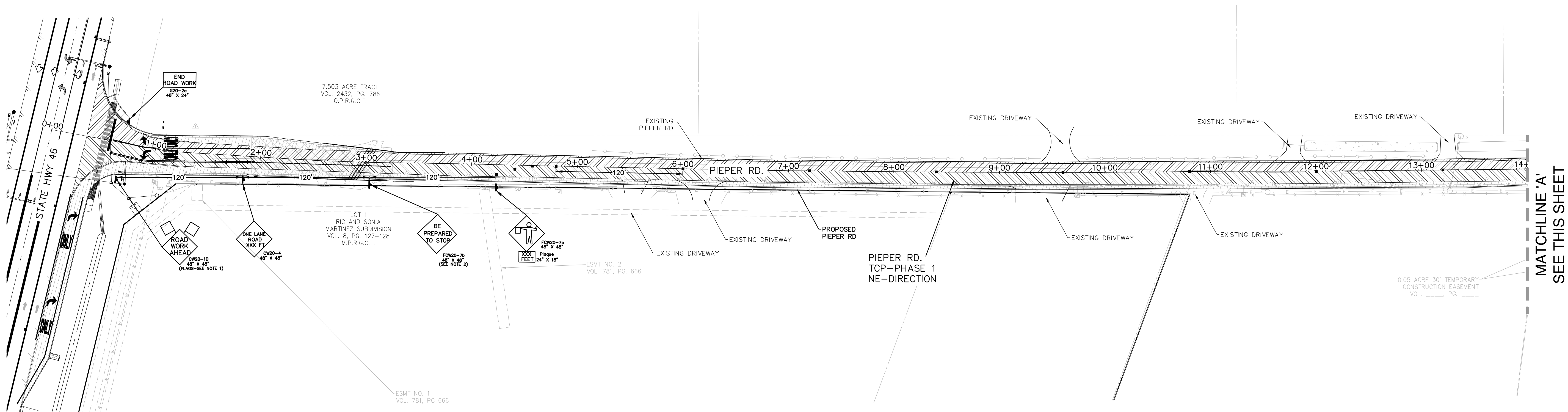
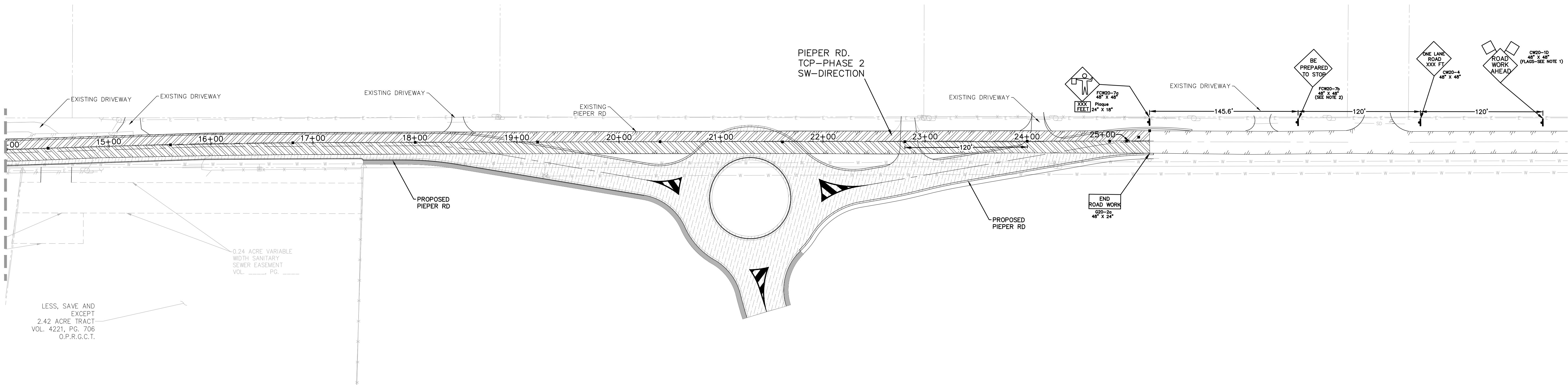
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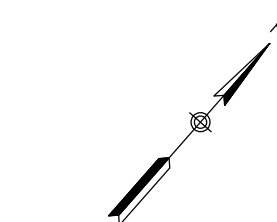
Draw











MATCHLINE 'A'  
SEE THIS SHEET



PROPOSED CURB

## LIMITS OF WORK SPACE



LEGEND		
	TYPE 3 BARRICADE	 CHANNELIZING DEVICES
	HEAVY WORK VEHICLE	 TRUCK MOUNTED ATTENUATOR (TMA)
	TRAILER MOUNTED FLASHING ARROW BOARD	 PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
	SIGN	 TRAFFIC FLOW
	FLAG	 FLAGGER

POSTED SIGN *	FORMULA	MINIMUM DESIRABLE TARGET LENGTHS **			SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES			MINIMUM SIGN SPACING	SUGGESTED LONGITUDINAL BUFFER SPACE "B"
		10' OFFSET	11' OFFSET	12' OFFSET	ON A TARGET	ON A TARGET	ON A TARGET		
30	L = WS 60	15'	16'	18'	30'	60'	120'	90'	
35		20'	22'	24'	35'	70'	160'	120'	
40		25'	29'	32'	40'	80'	240'	155'	
45		50'	49'	54'	45'	90'	320'	195'	
50	L = WS	50'	50'	60'	50'	100'	400'	240'	
55		55'	60'	66'	55'	110'	500'	295'	
60		60'	66'	72'	60'	120'	600'	350'	
65		65'	71'	78'	65'	130'	700'	410'	
70		70'	77'	84'	70'	140'	800'	475'	
75		75'	82'	90'	75'	150'	900'	540'	

\* CONVENTIONAL ROADS ONLY  
\*\* TAPER LENGTHS HAVE BEEN ROUNDED OFF.  
L=LENGTH OF TAPER(FT) W=WIDTH OF OFFSET(FT) S=POSTED SPEED(MPH)

2. FLAGS ATTACHED TO SIGNS WHERE SHOWN, ARE REQUIRED.
3. ALL TRAFFIC CONTROL DEVICES ILLUSTRATED ARE REQUIRED, EXCEPT THOSE DENOTED WITH THE TRIANGLE SYMBOL, MAY BE OMITTED WHEN STATED ELSEWHERE IN THE PLANS, OR FOR ROUTINE MAINTENANCE WORK, WHEN APPROVED BY THE ENGINEER.
4. THE DOWNSTREAM TAPER IS OPTIONAL. WHEN USED, IT SHOULD BE 100 FEET MINIMUM LENGTH PER LANE.
5. FOR SHORT TERM APPLICATIONS, WHEN STOP MOUNTED SIGNS ARE NOT USED, THE DISTANCE LEGEND MAY BE SHOWN ON THE SIGN FACE RATHER THAN ON A CW16-3P SUPPLEMENTAL PLaque.
6. A SHADOW VEHICLE WITH A TMS SHOULD BE USED ANYTIME IT CAN BE POSITIONED 30 TO 100 FEET IN ADVANCE OF THE AREA OF CREW EXPOSURE WITHOUT ADVERSELY AFFECTING THE PERFORMANCE OR QUALITY OF THE WORK. IF WORKERS ARE NO LONGER PRESENT BUT ROAD OR WORK CONDITIONS REQUIRE THE TRAFFIC CONTROL TO REMAIN IN PLACE, TYPE 3 BARRICADES OR OTHER CHANNELIZING DEVICES MAY BE SUBSTITUTED FOR THE SHADOW VEHICLE AND TMS.
7. ADDITIONAL SHADOW VEHICLES WITH TMS MAY BE POSITIONED IN EACH CLOSED LANE, ON THE SHOULDER OR OFF THE PAVED SURFACE, NEXT TO THOSE SHOWN IN ORDER TO PROTECT A WIDER WORK SPACE.
8. ADVANCED WARNING SIGNS WILL REMAIN IN PLACE DURING THE DURATION OF THE DEVELOPMENT OF CONSTRUCTION FOR ADDITIONAL CONSTRUCTION VEHICLE TRAFFIC ENTERING AND EXITING THE DEVELOPMENT SITE.

TCP (2-4-a)

8. IF THIS SIGN IS USED FOR A LEFT LANE CLOSURE, CW20-5TL "LEFT LANE CLOSED" SIGNS SHALL BE USED AND CHANNELIZING DEVICES SHALL BE PLACED ON THE CENTERLINE TO PROTECT THE WORK SPACE FROM OPPOSING TRAFFIC WITH THE ARROW BOARD PLACED IN THE CLOSED LANE NEAR THE END OF THE MERGING TAPER.

TCP (2-4a)

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



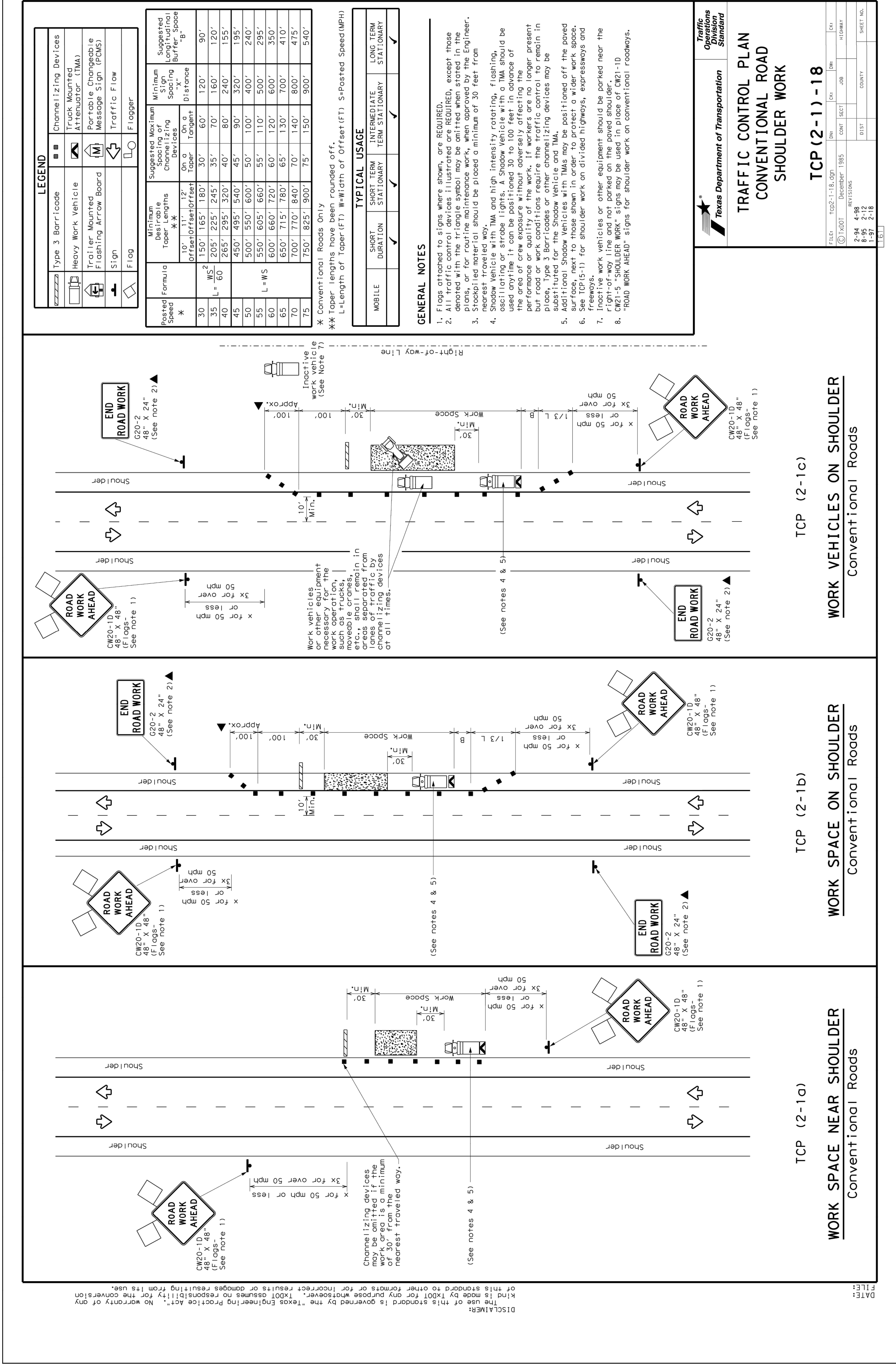
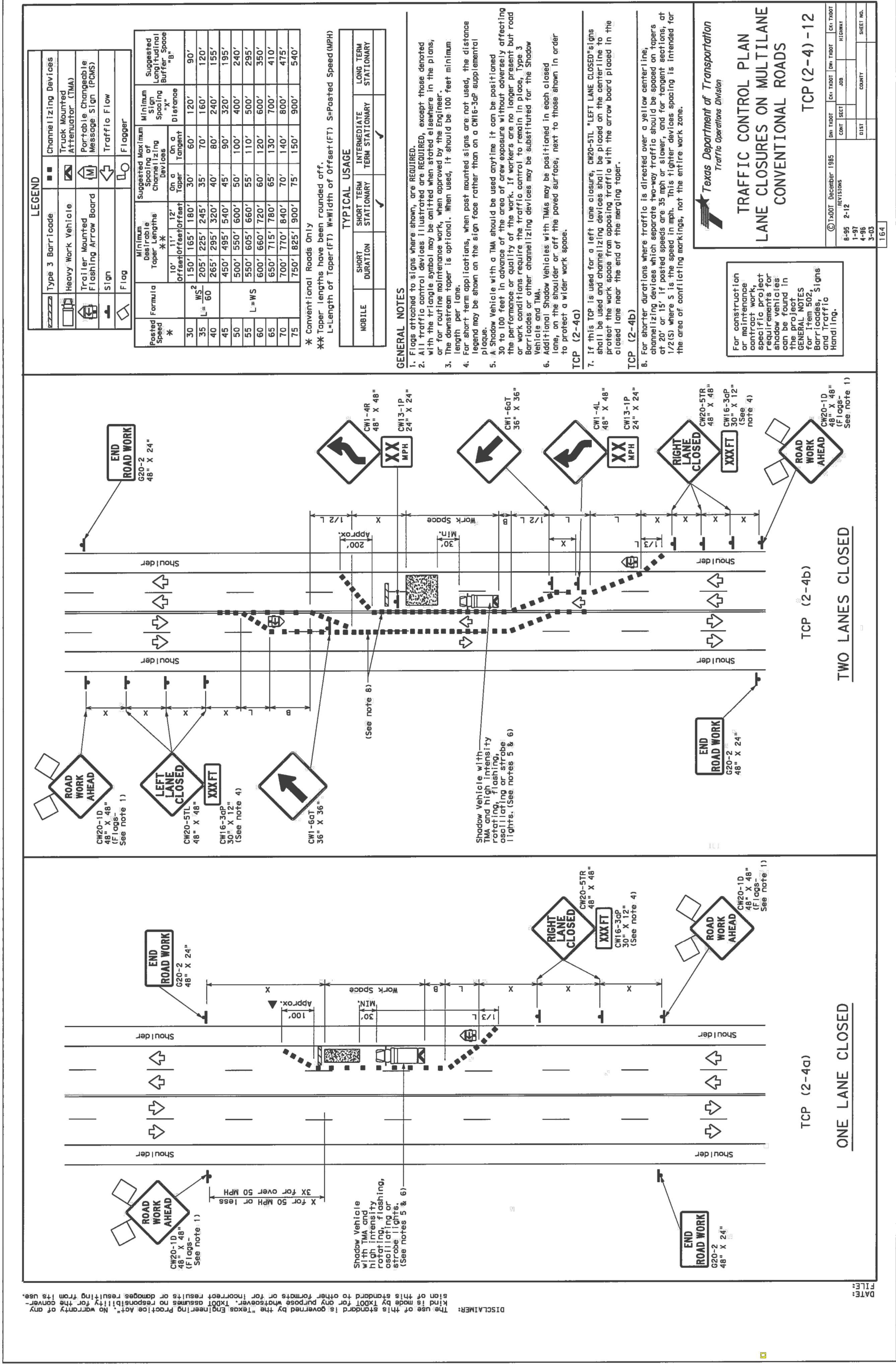
06/16/2020

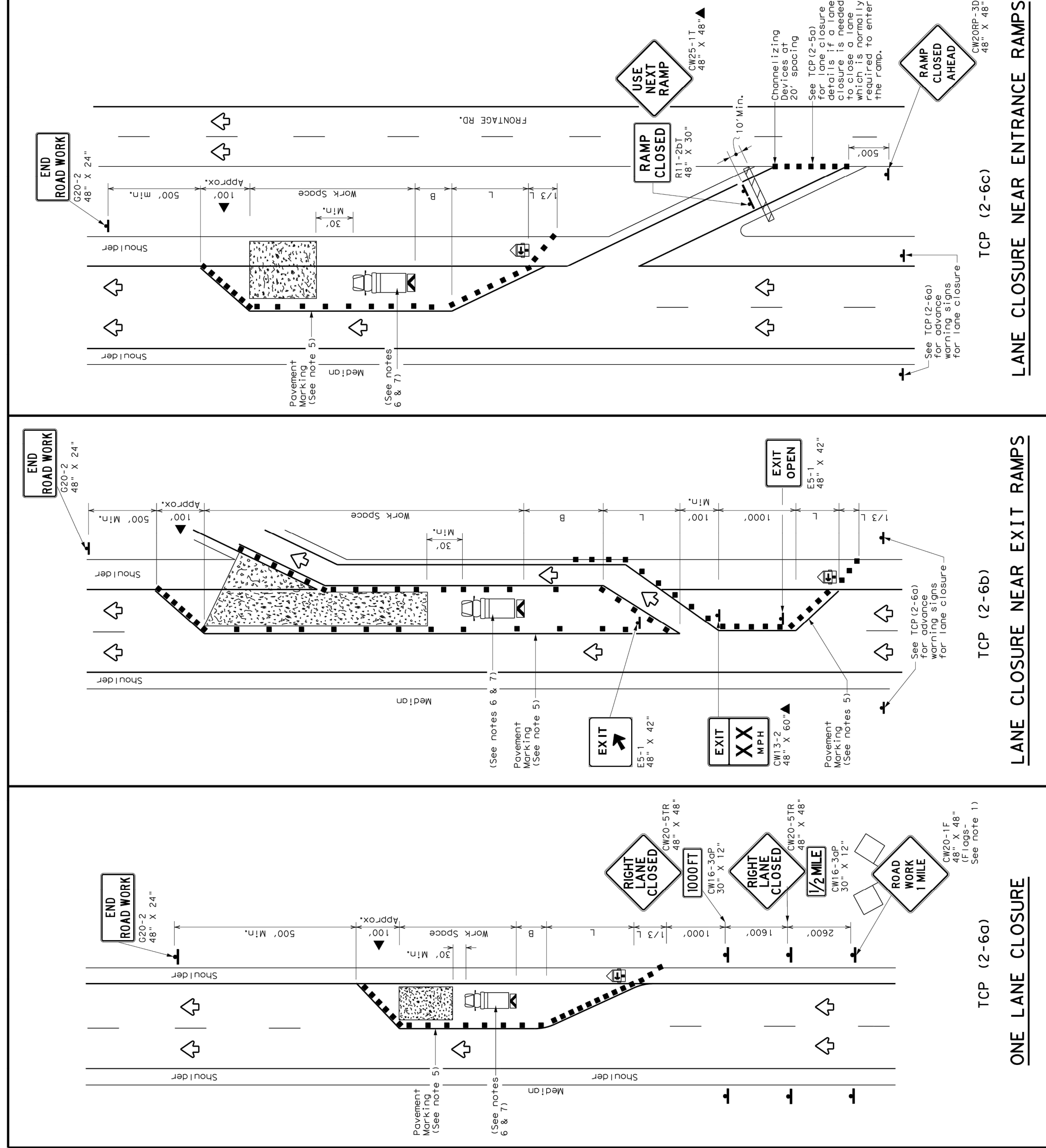
**TRAFFIC CONTROL PLAN  
PIEPER RD.**











NO.	REVISION DESCRIPTION	REVISION DATE

DATE: <b>JUNE 2020</b>
DRAWN BY: <b>MK</b>
DESIGNED BY: <b>CAM</b>
REVIEWED BY: <b>CVH/SWH</b>
HMT PROJECT NO.: <b>031.061</b>

**SHEET**  
**C6.02**



[illegible]

LEGEND		
	Type 3 Barricade	 Channelizing Devices
	Heavy Work Vehicle	 Truck Mounted Attenuator (TMA)
	Trailer Mounted Floating Arrow Board	 Portable Changeable Message Sign (PCMS)
	Sign	 Traffic Flow
	Flog	 Flogger

Posted Speed *	Formula	Minimum Spacing of Traffic Signs X X	Suggested Maximum Spacing of Traffic Signs on A	Minimum Sign Spacing on A	Suggested Minimum Sign Spacing on B	Minimum Sign Spacing on B
30	$L = 60$	10' or 12' or 15'	30'	60'	120'	90'
35	$L = 60$	150'	180'	60'	120'	90'
40	$L = 60$	200'	245'	35'	70'	120'
45	$L = 60$	265'	320'	40'	80'	135'
45	$L = 60$	450'	540'	45'	90'	135'
50	$L = 60$	500'	550'	60'	100'	140'
50	$L = 60$	500'	550'	60'	110'	150'
55	$L = 60$	600'	660'	60'	120'	160'
60	$L = 60$	650'	715'	65'	130'	170'
65	$L = 60$	700'	770'	70'	140'	180'
70	$L = 60$	750'	825'	75'	150'	190'
75	$L = 60$	800'	880'	80'	160'	200'

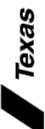
\* Conventional Roads Only  
 \*\* L-length of Trailer (FT) W=Width of Offsets (FT) S=Posted Speed (MPH)  
 L=Length of Trailer (FT) W=Width of Offsets (FT) S=Posted Speed (MPH)

TYPICAL USAGE		
MOBILE	SHORT DURATION	LONG TERM STATIONARY
	✓	✓

## GENERAL NOTES

1. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when deemed in the plans, or for routine maintenance work, when approved by the Engineer.
2. Channelizing devices shall be placed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and the Chevron Alignment Sign placed on every other channelizing device. Chevrons may be attached to plastic drums as per BC Standards.
3. Channelizing devices used along the work zone or along temporary sections of a channelizing device, if night time conditions make it difficult to see at least two VPS, the VPS may be placed on each channelizing device.
4. Temporary work zones with the approval of the Engineer, temporary-term Shadow Vehicle with TMA and high intensity rotating, flashing, oscillating or strobe lights. Shadow Vehicle with TMA and High Intensity rotating, flashing, oscillating or strobe lights should be positioned 30 to 100 feet in advance of the area of work exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work area is still exposed, the Shadow Vehicle with TMA and High Intensity rotating, flashing, oscillating or strobe lights may be substituted for the Shadow Vehicle and TMA.
5. Shadow Vehicle with TMA may be positioned in each direction of travel, on the shoulder or off road surface, shown in the plans, to protect a wider work space.

 Texas Department of Transportation	Traffic Operations Standard									
	Traffic Operations Standard									
TRAFFIC CONTROL PLAN LANE CLOSURES ON DIVIDED HIGHWAYS										
TCP (2-6) - 18										
FILE#	1202-4-18, GPN	DATE	CON	CON	CON	CON	CON	CON	CON	CON
② 14001	December 1985	CONF	SECT	JOB	CON	CON	CON	CON	CON	CON
2-94 4-98	REVISED	CONF	SECT	JOB	CON	CON	CON	CON	CON	CON
8-95 2-12	REVISED	CONF	SECT	JOB	CON	CON	CON	CON	CON	CON
1-97 2-18	REVISED	CONF	SECT	JOB	CON	CON	CON	CON	CON	CON

LEGEND					
	Type 3 Barriocode			Channeling Devices	
	Heavy Work Vehicle			Track Mounted Attenuator (TMA)	
	Trailer Mounted Flashing Arrow Board			Portable Changeable Message Sign (PCMS)	
	Sign			Traffic Flow	
	Flag			Flagger	


Vehicle Type	Desirable Lane Lengths		Suggested Max Number of Channeling Devices	Minimum Spacing Between Buffers	Suggested Longitudinal Spacing - "x"	Recommended Spacing Distance
	10' Offset	12' Offset				
Passenger Car (P)	150'	165'	180'	30'	60'	120'
	205'	225'	245'	35'	70'	160'
	265'	295'	320'	40'	80'	240'
	450'	495'	540'	45'	90'	320'
	500'	550'	600'	50'	100'	400'
	550'	605'	660'	55'	110'	500'
	600'	660'	720'	60'	120'	600'
Medium Truck (M)	650'	715'	780'	65'	130'	700'
	700'	770'	840'	70'	140'	800'
	750'	825'	900'	75'	150'	900'
Large Truck (L)	800'	880'	960'	80'	160'	1000'
	850'	935'	1020'	85'	170'	1100'
	900'	990'	1080'	90'	180'	1200'

on Road Only  
 off Road Only  
 S-Postered Speed (MPH)

Typical Usage			
Short Term Duration	Short Term Stationary	Intermediate Stationary	Long Term Stationary

[illegible]



**Texas Department of Transportation**  
Traffic Operations Division

# TRAFFIC CONTROL PLAN

## ONE-LANE TWO-WAY

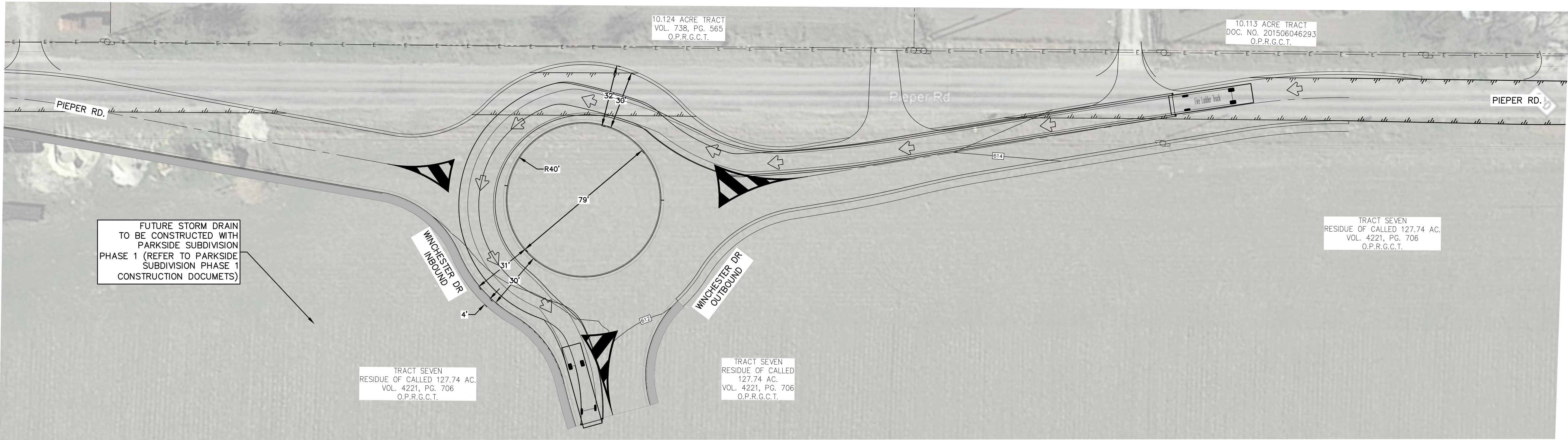
### TRAFFIC CONTROL

# TCP (1-2)-12

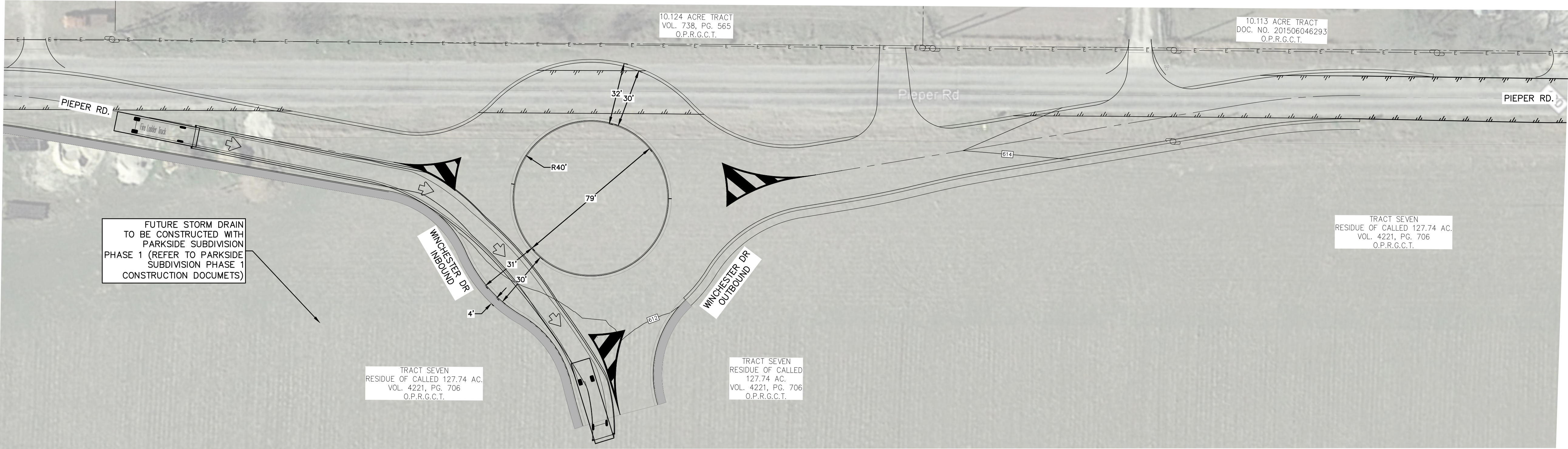
① XDOT	December 1985	DATE	XDOT	XDOT	XDOT	HIGHWAY
	REVISIONS					
4-90	2-12					
2-94						
1-97						
1-98						
1-99						
1-02						
1-03						

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Drawing Name: N:\\_Projects\031 - DR Horton\031.061 - 175 Ac Friesenham Cda\Office\031.061\_041818.dwg User: callyn-m Jun 16, 2020 - 8:16am



EAST TO WEST  
SCALE 1"=30'



WEST TO EAST  
SCALE 1"=30'



04/21/2020  
**ROUNDABOUT FIRE LANE  
EXHIBIT**  
PARKSIDE OFFSITE  
HWY 46 - PIEPER RD IMPROVEMENTS

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JUNE 2020  
DRAWN BY: MK  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.061

**SHEET**  
**EX-1**

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

