



**REVIEW BY FORT BEND COUNTY
COMMISSIONERS COURT**

**Fort Bend County
Engineering Department**
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytx.gov

- Right of Way Permit**
- Commercial Driveway Permit**

Permit No: 2018-23045

Applicant: Gonzalez Construction Enterprises, Inc.

Job Location Site: 1855 1/2 Benton Road , Rosenberg , TX 77471

Bond No. **Date of Bond:** 7/30/2015 **Amount:** \$50,000.00

The above applicant came to make use of certain Fort Bend County property subject to, "The Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas, of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Chapter 181, Vernon's Texas Statutes and Codes Annotated.

Notes:

1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
 - a. 48 hours in advance of construction start up, and
 - b. When construction is completed and ready for final inspection, submit notification to Permit Administrator thru MyGovernmentOnline.org portal.
3. This permit expires one (1) year from date of permit if construction has not commenced.

On this 11th day of September, 2018, Upon Motion of Commissioner _____, seconded by Commissioner _____, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Signature

By: 
County Engineer

Presented to Commissioners Court and approved.

Date Recorded _____ Comm. Court No. _____

Clerk of Commissioners Court

By: N/A
Drainage District Engineer/Manager

By: _____
Deputy



**PERMIT APPLICATION REVIEW FORM FOR
CABLE, CONDUIT, AND POLE LINE ACTIVITY
IN FORT BEND COUNTY**

**Fort Bend County
Engineering Department**
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytx.gov

- Right of Way Permit**
 Commercial Driveway Permit

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The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

(1) COMPLETE APPLICATION FORM:

- a. Name of road, street, and/or drainage ditch affected.
 b. Vicinity map showing course of directions
 c. Plans and specifications

(2) BOND:

- County Attorney, approval when applicable.
- Perpetual bond currently posted. Bond No: Amount: \$50,000.00
- Performance bond submitted. Bond No: Amount:
- Cashier's Check Check No: Amount:

(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):

Drainage District Approval

Date

We have reviewed this project and agree it meets minimum requirements.



Permit Administrator

9/4/2018

Date

GENERAL CONSTRUCTION NOTES

- 1. THERE WILL BE NO SEPARATE PAYMENT FOR WORK SHOWN ON THESE PLANS...
2. ALIGNMENT, CENTERLINE CURVE DATA, AND STATIONING SHALL BE VERIFIED FROM APPROVED SUBDIVISION PLAT OR APPROVED PLOT.
3. ALL UTILITIES PRESENTED ON THESE DRAWINGS ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION...

FORT BEND COUNTY GENERAL CONSTRUCTION NOTES

- 1. FORT BEND COUNTY MUST BE INVITED TO THE PRE-CONSTRUCTION MEETING.
2. CONTRACTOR SHALL NOTIFY FORT BEND COUNTY ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCING CONSTRUCTION AT 48 HOURS NOTICE TO ANY CONSTRUCTION ACTIVITY WITHIN THE LIMITS OF THE PAVING AT CONSTRUCTION@FORTBENDCOUNTYTX.GOV.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FROM FORT BEND COUNTY PRIOR TO COMMENCING CONSTRUCTION OF ANY IMPROVEMENTS WITHIN COUNTY ROAD RIGHT OF WAYS.

NOTE: FORT BEND COUNTY NOTES SUPERSEDE ANY CONFLICTING NOTES

WATER LINE CONSTRUCTION NOTES

- 1. ALLOWABLE WATER LINE PIPE MATERIALS:
A.) POLYVINYL CHLORIDE PIPE (PVC) PRESSURE PIPE, FOUR-INCH (4") THROUGH SIX-INCH (6")...
B.) DUCTILE IRON PIPE (D.I.P.), FOUR-INCH (4") THROUGH FIFTY-FOUR (54"), SHALL CONFORM TO THE REQUIREMENTS OF "DUCTILE-IRON PIPE, CENTRIFUGALLY CAST IN METAL MOLDS FOR SAND-LINED MOLDS..."
C.) STEEL WATER PIPE, FOUR-INCH (4") AND LARGER SHALL CONFORM TO THE REQUIREMENTS OF "STANDARD FOR STEEL WATER PIPE SIX INCHES AND LARGER", AWWA C200, STEEL PIPE, MINIMUM WALL THICKNESS SHALL CONFORM TO THE THICKNESS SHOWN ON THE CITY OF ROSENBERG CONSTRUCTION DETAILS.

- 13. FLUSHING VALVES/FIRE HYDRANTS SHALL BE ANY OF THE FOLLOWING:
A.) MUELLER - MODEL:CENTURION OR MODERN CENTURION
14. CENTERLINE OF STEAMER NOZZLE TO BE A MINIMUM OF 18-INCHES FROM NATURAL GROUND.
15. ALL FLUSHING VALVES/FIRE HYDRANTS THAT ARE DELIVERED EXHIBITING RUST AND/OR THE COATING IS DAMAGED DURING INSTALLATION SHALL BE SURFACE PREPPED AND RECOATED (NO SEPARATE PAY). (CHAINS TO BE REPLACED IF RUSTED.) (VALVES OPEN COUNTER-CLOCKWISE, LEFT.
16. WATER SERVICE MARKED WITH CUT IN CURB PAINTED BLUE.
17. RECLAIMED WATER PIPING SHALL BE SEPARATED FROM POTABLE WATER PIPING BY A HORIZONTAL DISTANCE OF AT LEAST NINE FEET (IN ACCORDANCE WITH 30 TAC 210.25(C)), WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE RECLAIMED WATER PIPING MUST MEET THE LINE SEPARATION REQUIREMENTS OF 30 TAC 290.44(E)(4)(A).

SANITARY SEWER CONSTRUCTION NOTES

- 1. SANITARY SEWER MANHOLES SHALL BE STANDARD CITY OF ROSENBERG PRECAST CONCRETE MANHOLES, 4-FOOT DIAMETER, UNLESS OTHERWISE NOTED, CONSTRUCTED IN ACCORDANCE WITH CITY OF ROSENBERG STANDARD CONSTRUCTION DETAILS S-105, AS APPLICABLE, NO BRICK MATERIAL ALLOWED. CONTRACTOR SHALL UTILIZE CONCRETE RING COLLAR FOR MANHOLE ADJUSTMENT, NO GROUTING PERMITTED INSIDE MANHOLE.
2. ALLOWABLE GRAY SEWER LINE PIPE MATERIALS:
A.) POLYVINYL CHLORIDE PIPE, SDR 26 FOR 6-INCH THRU 12-INCH PIPE (ASTM D3034).
B.) POLYVINYL CHLORIDE PIPE, DR 25 FOR GREATER THAN 12-INCH PIPE, 165 PSI RATED WATER WORKING PRESSURE.
C.) CENTRIFUGALLY CAST FIBERGLASS PIPE, CLASS PN200/SN72.
D.) DUCTILE IRON PIPE, CLASS 50, FOUR-INCH (4") SCHEDULE 40 WITH DRAIN, WASTE AND VENT POLYVINYL CHLORIDE PIPE FITTINGS.
E.) SANITARY SEWERS CROSSING WATER LINES SHALL BE DUCTILE IRON PIPE, 150 PSI RATED WATER WORKING PRESSURE (AWWA 151), DOUBLE WRAPPED IN 8-MIL POLYETHYLENE OR GREEN POLYVINYL CHLORIDE PIPE DR 18 (AWWA C900 OR C905).
F.) SANITARY SEWER SERVICE LATERALS CROSSING WATER LINES SHALL BE GREENPOLYVINYL CHLORIDE PIPE, CLASS 160, DR 18 (AWWA C900) CENTERED OVER CROSSING POINT, AT LEAST 9- FEET EITHER SIDE OF CENTER, WITH GASKETED PUSH-ON JOINTS (ASTM 3139) AND ELASTOMERIC GASKETS (ASTM F477). SERVICE LATERALS NOT CROSSING WATER LINES MAY CONFORM TO ASTM D3034 OR ASTM 92241.
3. INTERIOR LINING FOR DUCTILE IRON SEWER PIPE SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS AND CONFORMING TO THE REQUIREMENTS OF EITHER ASTM D1248, ASTM D1653 OR ASTM D16 TYPE V, MINIMUM LINING THICKNESS TO BE 40-MILS REGARDLESS OF COATING RECOMMENDED BY THE MANUFACTURER. NO CEMENT MORTAR LINING OR BITUMINOUS LINING WILL BE ALLOWED.
4. CONTRACTOR SHALL TEST FOR SANITARY SEWER SYSTEMS IN ACCORDANCE WITH CITY OF HOUSTON STANDARD SPECIFICATION 02553-ACCEPTANCE TESTING FOR SANITARY SEWERS. CONTRACTOR SHALL AIR TEST ALL GRAVITY SANITARY SEWER LINES.
5. AT ALL LOTS WHERE TOP OF PIPE IS GREATER THAN 8- FEET BELOW FINISHED GRADE, PROVIDE A 6-INCH SANITARY SEWER STACK, LOCATION TO BE AT NEAREST PIPE JOINT TO CENTER OF EACH LOT, UNLESS OTHERWISE SHOWN. WHERE POSSIBLE, SEWER STACKS SHALL BE LOCATED TO SERVE TWO (2) LOTS. LATERALS AND STACKS SHALL BE MARKED FOR LOCATION AS INDICATED ON DETAIL SHEET 32 OF 44.
6. WHERE SEWER MANHOLES ARE LOCATED WITHIN THE STREET R-0-W, THE CONTRACTOR SHALL SET RIM ELEVATIONS TO 3" TO 6" ABOVE FINISHED GROUND ELEVATIONS. FINISHED GROUND ELEVATION IS A STRAIGHT LINE BETWEEN NATURAL GROUND AND/OR FINISHED GRADE AT PROPERTY LINE TO TOP OF CURB. MANHOLES WITHIN EASEMENTS, RIM ELEVATION SHALL BE SET 3-INCHES ABOVE NATURAL GROUND AND/OR FINISHED GRADE.
7. SANITARY MANHOLE (MH) RIMS SET LESS THAN 6" (0.5') ABOVE THE NEAREST 100 YEAR FLOOD WATER SURFACE (FINISHED OR UNFINISHED) DRAINAGE CHANNELS, OR DETENTION POND, WILL BE SET 2" TO 3" ABOVE THE FINISH GRADE WITH 1:3 (V:H) SLOPED FILL OR FLUSHED WITH ANY ABUTTING/CONTAINING PAVED SURFACE, THE (VULCAN, NENAH OR EQUAL) HEAVY DUTY BOLTED MH COVER WILL BE PROPERLY (AND SECURELY) ATTACHED AND SEALED TO ITS COMPATIBLE GASKETED FRAME USING BOTH: A. NEOPRENE GASKET; AND 4 (AT LEAST) COUNTER SUNK HEX-HEAD COARSE TREADED 1/2"-13 UNC STAINLESS STEEL BOLTS. THE HEAVY DUTY MH COVER WILL BE SOLID (NO AIR HOLES). SAID FRAME SHALL BE BOTH EMBEDDED INTO THE MH'S TOP AND ALSO SECURELY ANCHORED TO THE UNDERLYING MH STRUCTURE WITH; EITHER SECURELY ATTACHED EMBEDDED ANCHOR BOLTS; OR THE MH'S EXPOSED REBARS WELDED TO THE FRAME, OR OTHER EQUALLY SECURED METHODS TO PREVENT MH COVER/FRAME BLOW-OFFS/EJECTIONS.
8. ALLOWABLE SANITARY FORCE MAIN PIPE MATERIAL:
A.) P.V.C. 12-INCH - SDR 26, ASTM 3034
B.) P.V.C. > 12-INCH - DR 25, 165 PSI RATING
C.) CENTRIFUGALLY CAST FIBER GLASS PIPE, CLASS PN200/SN72
D.) DUCTILE IRON PIPE, CLASS 50, 4" SCH 40 DWV PCV PIPE
9. CONTRACTOR SHALL PROVIDE ADEQUATE CONCRETE THRUST BLOCKING AT ALL FORCE MAIN BENDS TO WITHSTAND PRESSURE TEST.
10. CONTRACTOR SHALL INSTALL OVER THE FORCE MAIN LINES "TERRA TAPE" OR SIMILAR PRODUCT APPROVED BY OWNER. TAPE TO BE CONTINUOUSLY LABELED "NONPOTABLE WATER". INCLUDE COST OF MATERIAL AND INSTALLATION IN UNIT PRICE BID FOR TAPE.
11. ALL SEMI-RIGID SEWER PIPE SHALL BE TESTED FOR DEFLECTION. TESTING SHALL BE PERFORMED 30 DAYS AFTER BACKFILL OPERATIONS ARE COMPLETED, AND PRIOR TO OTHER TESTING OF SEWER SYSTEM. TEST FOR DEFLECTION BY PULLING AHEAD LINE WITH AN ATTACHED MANDREL DEVICE THROUGH PIPE (NO MECHANICAL PULLING DEVICE ATTACHED). MANDREL TO HAVE AN OUTSIDE DIAMETER EQUAL TO 95 PERCENT OF THE NOMINAL DIAMETER OF PIPE BEING TESTED. MANDREL TO BE MANUFACTURED WITH A MINIMUM OF NINE (9) RUNNERS, WITH EACH RUNNER'S MINIMUM LENGTH TO BE AT LEAST EQUAL TO OR GREATER THAN THE TESTED PIPE'S INSIDE DIAMETER. CONTRACTOR TO PROVIDE AN APPROVED TRUNING RIG FOR MANDREL DEVICE. ANY PIPE NOT MEETING TEST REQUIREMENTS SHALL BE REMOVED AND REPLACED AT CONTRACTOR'S EXPENSE. PAYMENT FOR THIS WORK TO BE INCLUDED IN UNIT PRICE BID PER LINEAR FOOT OF SEWER PIPE IN APPROPRIATE SIZE.
12. SANITARY LEADS (CROSSING WATERLINES AT LESS THAN 75' ANGLE) WILL REQUIRE A 20-FOOT LONG SINGLE JOINT SEGMENT OR A MECHANICAL JOINT CONNECTION (JUNCTION) BETWEEN THE TWO HIGH-PRESSURE PIPE JOINTS CROSSING THE WATERLINE.
13. SANITARY SERVICE LEADS SHALL BE AT A MINIMUM SLOPE OF 1.00% AND BE INSTALLED AT A MANHOLE, WHEN POSSIBLE.
14. SANITARY SEWER CONSTRUCTION WHERE UNSATISFACTORY SOIL CONDITIONS EXIST SHALL HAVE BEDDING AS SHOWN ON DETAIL SHEET 32 OF 44.
15. THIS PROJECT IS INTENDED TO BE DONE PRIMARILY BY OPEN CUT INSTALLATION OF STANDARD SANITARY SEWER PIPE. HOWEVER, SHOULD ANY BORING TUNNELING AND/OR JACKING BE REQUIRED OR PREFERRED, IT WILL BE DONE BY USING SANITARY (THICK WALL) "PRESSURE PIPE". ALSO, ALL BORING, TUNNELING AND/OR JACKING PITS WILL BE OF SUFFICIENT LENGTH TO JACK A STANDARD 20'-22' LONG (OR AS LONG AS POSSIBLE OR NEEDED) MADE-UP JOINT (SEGMENT/PIECE) OF PIPE, WHETHER C900/C905 (DR 14) OR POLYETHYLENE ENCASED DUCTILE IRON PIPE, (THK CL 50-54(+)), AS NEEDED OR STIPULATED ELSEWHERE ON PLANS. USE OF HOPE PIPE, SDR 17 (OR SDR 19) MAY REQUIRE WRITTEN APPROVAL FOR SUCH USE.
16. USE THE SAME TYPE OF SEWER PIPE (OR PIPE JOINT ENDS) FROM MH TO MH WITH THE SAME PIPE TYPE (OR THEIR JOINT ENDS) CHANGE IN BETWEEN EACH SEPARATE PAIR OF MHS. IDENTICAL DIAP-SIZED SEWER PIPE BELL & SPIGOT ENDS ARE REQUIRED FOR ALL SEWER PIPE USED FROM MH TO MH WHEREVER GREEN C-900 (DR18) PVC PIPE OR POLYETHYLENE-ENCASED DI SECTIONS (42'-20' (+)) ARE USED FOR WL CROSSING(S) AND/OR SEWER AUGERING AND/OR JACKING AND/OR SHALLOW BURIAL.
17. SANITARY SEWER SERVICE MARKED WITH CURB CUT PAINTED GREEN.

STORM SEWER CONSTRUCTION NOTES

- 1. REINFORCED CONCRETE (C78, CLASS III) STORM SEWERS SHALL BE INSTALLED, BEDDED AND BACKFILLED IN ACCORDANCE WITH THE CITY OF ROSENBERG DETAIL D-100A, UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
2. ALL SEWER UNDER PROPOSED OR FUTURE PAVEMENT AND TO A POINT ONE-FOOT BACK OF ALL PROPOSED OR FUTURE CURBS SHALL BE BACKFILLED WITH 1-1/2 SACK CEMENT/ CY CEMENT-STABILIZED SAND TO WITHIN ONE-FOOT OF PAVEMENT SUBGRADE. THE REMAINING DEPTH OF TRENCH SHALL BE BACKFILLED WITH COMPACTED SUITABLE EARTH MATERIAL.
3. ALL TRENCH BACKFILLS SHALL BE IN 8-INCH LOOSE LIFTS, WITH TESTS TAKEN AT 100-FOOT INTERVALS ON EACH LIFT, AND MECHANICALLY COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR COMPACTION TEST (ASTM D-698/AASHTO T99).
4. ALL STORM SEWERS CONSTRUCTED IN SIDE LOT EASEMENTS SHALL BE RCP, MINIMUM 20-FOOT WIDE EASEMENTS SHALL BE PROVIDED.
5. CIRCULAR AND ELLIPTICAL REINFORCED CONCRETE PIPE SHALL BE INSTALLED USING RUBBER GASKET JOINTS CONFORMING TO ASTM C443 AND ASTM C877 RESPECTIVELY, UNLESS OTHERWISE NOTED ON PLANS.
6. ALL STORM SEWER PIPES AND INLET LEADS SHALL BE 24-INCH DIAMETER RCP (C78, CLASS III) MINIMUM, UNLESS OTHERWISE NOTED ON PLANS.
7. ALL PROPOSED PIPE STUB-OUTS FROM MANHOLES OR INLETS ARE TO BE PLUGGED WITH 8-INCH BRICK WALLS, UNLESS OTHERWISE NOTED.
8. CONTRACTOR SHALL PROVIDE 12" MINIMUM CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.
9. ADJUST MANHOLE COVERS TO GRADE CONFORMING TO REQUIREMENTS OF CITY OF ROSENBERG STANDARDS WHILE ADJUSTING MANHOLES, INLETS AND VALVE BOXES TO GRADE.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING, MAINTAINING, AND RESTORING ANY BACK SLOPE DRAINAGE SYSTEM DISTURBED AS A RESULT OF HIS WORK.
11. ALL DITCHES SHALL BE REGRADED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED. ALL DISTURBED AREA SHALL BE REGRADED, SEEDED, AND FERTILIZED.
12. CONTRACTOR SHALL PROVIDE 12" MINIMUM CLEARANCE AT STORM SEWER AND WATER LINE CROSSINGS.
13. STORM SEWER MANHOLES SHALL BE STANDARD CITY OF ROSENBERG TYPE "C", UNLESS OTHERWISE NOTED.
14. ALL STORM SEWER MANHOLE RIMS LOCATED OUTSIDE THE PROPOSED PAVING SHALL BE SET TO 3-INCHES ABOVE PROPOSED FINISHED GRADE ELEVATION.
15. ALL INLETS TO BE TYPE "1"-2", UNLESS OTHERWISE INDICATED ON PLANS. INLETS TO BE STAGED CONSTRUCTED. FOR STAGED CONSTRUCTION INFORMATION SEE DETAIL SHEET 28 OF 44.
16. ADEQUATE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE OWNING AUTHORITY. ALL DITCHES SHALL BE REGRADED TO PROPOSED ELEVATIONS TO INSURE PROPER DRAINAGE. ALL OUTFALLS SHALL BE PROPERLY BACKFILLED AND COMPACTED. ALL DISTURBED AREAS SHALL BE REGRADED, SEEDED, AND FERTILIZED.

PAVING CONSTRUCTION NOTES

- 1. PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF ROSENBERG'S DEPARTMENT OF ENGINEERING "DESIGN CRITERIA MANUAL" AND/OR AMENDMENTS TO INSURE PROPER DRAINAGE. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF ROSENBERG DETAILS.
2. ALL ROAD WIDTHS, CURB RADII AND CURVE ALIGNMENT SHOWN INDICATES BACK OF CURB TO INDICATES TOP OF CURB ELEVATION AND TP INDICATES TOP OF PAVEMENT ELEVATION.
3. CURB RADII AT STREET INTERSECTION TO BE 25- FEET WITH A MINIMUM 1-PERCENT GRADE, UNLESS OTHERWISE NOTED. FOR MACHINE-LAID CURB, OMIT MORTAR FINISH, BUT MAINTAIN SAME OUTSIDE DIMENSIONS.
4. CONTRACTOR SHALL USE CONTINUOUS LONGITUDINAL REINFORCING BAR FOR 6-INCH CURB, AND 4-INCH BY 12-INCH CURB.
5. ALL CONCRETE PAVEMENT SHALL BE 6.5-SACK MIX. REINFORCING STEEL TO CONFORM TO ASTM A615, GRADE 60. PROVIDE MINIMUM 30 BAR DIAMETER LAPS.
6. SUBGRADE STABILIZATION SHALL BE LIME MIXTURE AT A RATE AS ESTABLISHED BY LABORATORY TESTING OF SUBGRADE MATERIAL.
7. WHERE PROPOSED PAVEMENT IS TO MATCH EXISTING PAVEMENT, EXISTING REBARS OR DOWELS PROJECTING FROM EXISTING PAVEMENT TO BE CLEANED AND TIED INTO PROPOSED PAVEMENT. IF NO REINFORCING STEEL EXIST, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE #6 BARS, 24-INCHES LONG, DRILLED AND EMBEDDED 8-INCHES INTO THE CENTER OF THE EXISTING SLAB WITH "PO RCP" OR EQUAL AT 18-INCHES CENTER TO CENTER. REMOVE EXISTING BARRICADES.
8. WHERE PROPOSED PAVEMENT ENDS AT A CONSTRUCTION JOINT, EXTEND RE-BARS 15-INCHES, COAT WITH ASPHALT AND WRAP WITH BURLAP. AT EXPANSION JOINTS, EXTEND DOWELS 9-INCHES, COAT AND WRAP SAME AS CONSTRUCTION JOINTS.
9. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT ALL RADII RETURNS AND AT MAXIMUM 100-FOOT INTERVALS. LOAD TRANSMISSION UNITS TO BE SPACED AT 12-INCHES ON CENTER. DO NOT LOCATE TRANSVERSE EXPANSION JOINTS WITHIN DEPRESSIONS FOR INLETS.
10. LONGITUDINAL JOINTS SHALL BE INSTALLED AS SHOWN ON CITY OF ROSENBERG DETAIL P-106 SUBDIVISION PAVEMENT STANDARD DETAIL SHEET. MAXIMUM SPACING BETWEEN JOINTS NOT TO EXCEED 15- FEET. DEFORMED METAL STRIP SHALL BE INSTALLED 1/4-INCH BELOW FINISHED TOP OF PAVEMENT.
11. GUIDELINES SET FORTH IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" SHALL BE OBSERVED. SIGNS SHALL BE INSTALLED AS SHOWN ON PAVING LAYOUT.
12. STREET NAME SIGNS SHALL BE STANDARD CITY OF ROSENBERG SIGNS AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL VERIFY STREET NAMES WITH APPROVED PLAT. ALL SIGNS SHALL BE HIGH INTENSITY REFLECTIVE ALUMINUM AS SHOWN ON SHEET 41 OF 44.
13. ALL PAINT STRIPING SHALL BE THERMAL REFLECTORIZED STRIPING. PRIOR TO THE PLACEMENT OF THERMAL STRIPING THE ROADWAY SHALL BE (1) SURFACE PREPPED IN ACCORDANCE WITH TXDOT SPECIFICATION ITEM 678 AND (2) PRIMED AND SEALED IN ACCORDANCE WITH TXDOT SPECIFICATION ITEM 666.
14. ONE BLUE DOUBLE REFLECTORIZED MARKER SHALL BE INSTALLED AT EACH FLUSHING VALVE LOCATION, PLACE MARKER 6-INCHES OFF CENTERLINE OF PAVEMENT ON FLUSHING VALVE SIDE.
15. STANDARD TYPE III BARRICADES SHALL BE PERMANENTLY INSTALLED BY THE DEVELOPER AT THE END OF ALL DEAD-END STREETS 5- FEET FROM END OF PAVEMENT AND CENTERED ON CENTERLINE OF PAVEMENT, NOT TERMINATING IN A CUL-DE-SAC, AND ALL TURNOUTS. THESE BARRICADES SHALL MEET AT LEAST THE MINIMUM REQUIREMENTS OF THE TMOUC.
16. STRING LEVEL LINES ON FORMS NOT TO EXCEED 20 FEET.
17. ALL SAWCUTS MADE INTO THE EXISTING CONCRETE PAVEMENT SHALL BE COMPLETELY THROUGH TO THE SUBGRADE.
18. IN ALL CUL-DE-SACS THE CONTRACTOR IS TO PROVIDE CONTROL JOINTS TO PREVENT CRACKING.
19. A ONE YEAR WARRANTY INSPECTION WILL BE HELD SIX (6) WEEKS PRIOR TO THE DATE OF CITY ACCEPTANCE.
20. WHEREVER A SIDEWALK IS REQUIRED BY CITY ORDINANCE, PROVIDE WHEELCHAIR RAMP AND/OR SIDEWALKS PER PLAN AND IN ACCORDANCE WITH THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD WHEELCHAIR RAMP AND SIDEWALK DETAILS" AND CITY OF ROSENBERG DETAILS.

SPECIAL CONSTRUCTION NOTES

- 1. DURABLE METAL WIRE SHALL BE INSTALLED ABOVE WATER LINE OR OTHER MEANS PROVIDED FOR DETECTION PURPOSE IF POLYVINYL CHLORIDE PIPE (PVC) IS TO BE USED.
2. SUITABLE SURPLUS EXCAVATED MATERIAL FROM CONSTRUCTION OF WATER LINE, SEWERS, AND ROADWAY SHALL BE:
(X) SPREAD AND COMPACTED IN MAXIMUM 8-LOOSE LIFTS TO 95% STANDARD PROCTOR DENSITY IN ACCORDANCE WITH GRADING AND FILL LAYOUT FOR LOT FILL.
() HAULED OFFSITE AT CONTRACTOR'S EXPENSE.
() HAULED TO SPOIL SITE AS SHOWN ON PLANS.
3. PRIOR TO CONNECTING PROPOSED SANITARY SEWER SYSTEMS TO EXISTING SANITARY SEWER, CONTRACTOR SHALL REMOVE ALL WATER AND DEBRIS FROM PROPOSED SANITARY SEWER SYSTEMS. ENGINEER SHALL BE NOTIFIED 24 HOURS PRIOR TO CLEANING OF PROPOSED SANITARY SEWER SYSTEMS.
4. I.D. OF STEEL CASING TO BE A MINIMUM OF 2" GREATER THAN O.D. OF CARRIER PIPE BELL.
5. CONTRACTOR RESPONSIBLE FOR FILING CONTRACTOR'S NOI AND NOT. INSPECTIONS SHALL BE A MINIMUM OF EVERY 14 CALENDAR DAYS OR AFTER 0.5-INCHES OF RAINFALL WHICHEVER COMES FIRST. INSPECTOR REPORTS TO BE TURNED IN WITH MONTHLY PROGRESS PAYMENT REQUEST.
6. CONTRACTOR SHALL PLACE SUITABLE MATERIAL IN FILL AREAS IN MAXIMUM 8-INCH LOOSE LIFTS AND COMPACTED TO 95% STANDARD PROCTOR DENSITY IN ACCORDANCE WITH THESE CONSTRUCTION PLANS.
7. CONTRACTOR TO PROVIDE THE FOLLOWING PROTECTION REQUIREMENTS (IN ACCORDANCE WITH TAC 290.44(C)-(4)(B)(VI)(III)) AT ALL WATER LINE (WL) - SANITARY SEWER (SS) CROSSINGS:
WHEN WL IS UNDER SS:
• MINIMUM 2 FOOT VERTICAL CLEARANCE.
• THE WATERLINE SHALL BE ENCASED IN AN 18-FOOT (OR LONGER) SECTION OF PIPE OR CONSTRUCTED OF DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS AS APPROPRIATE.
• THE ENCASED PIPE SHALL BE AT LEAST TWO NOMINAL PIPE DIAMETERS LARGER THAN THE WASTEWATER MAIN OR LATERAL.
• THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT (OR LESS) INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND.
• EACH END OF THE CASING SHALL BE SEALED WITH A WATERTIGHT NON-SHRINK CEMENT GROUT OR A MANUFACTURED WATERTIGHT SEAL.
• THE ENCASED WL SECTION WILL BE CENTERED AT SS CROSSING.
• PROVIDE RESTRAINED JOINTS ON WL SPACED AT LEAST 9 FEET HORIZONTALLY FROM CENTERLINE OF SS.
• EMBED SS WITH CSS FOR THE TOTAL LENGTH OF 1 PIPE SEGMENT PLUS 1 FOOT BEYOND THE JOINTS ON EACH END AND MEET TAC §290.44(c)(4)(B)(vi).
• BOTH THE WATERLINE AND THE WASTEWATER MAIN OR LATERAL MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C600 STANDARDS.
WHEN WL IS OVER SS:
• MINIMUM 1 FOOT ABSOLUTE VERTICAL CLEARANCE.
• PROVIDE RESTRAINED JOINTS ON WL SPACED AT LEAST 9 FEET HORIZONTALLY FROM CENTERLINE OF SS.
• EMBED WL WITH CSS FOR THE TOTAL LENGTH OF 1 PIPE SEGMENT PLUS 1 FOOT BEYOND THE JOINTS ON EACH END AND MEET TAC §290.44(c)(4)(B)(vi).
• BOTH THE WATERLINE AND THE WASTEWATER MAIN OR LATERAL MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C600 STANDARDS.

CENTERPOINT ENERGY NOTES

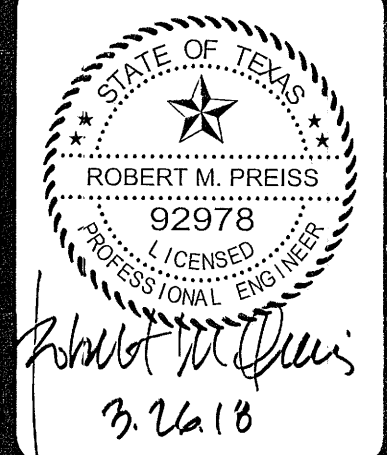
- CAUTION: UNDERGROUND GAS FACILITIES.
LOCATIONS OF CENTERPOINT ENERGY MAIN LINES (TO INCLUDE CENTERPOINT ENERGY, NATURAL GAS, AND WATER SERVICE LINES) ARE SHOWN IN AN APPROXIMATE LOCATION ONLY. SERVICE LINES ARE USUALLY NOT SHOWN. OUR SIGNATURE ON THESE PLANS ONLY INDICATES THAT OUR FACILITIES ARE SHOWN IN APPROXIMATE LOCATION. IT DOES NOT IMPLY THAT A CONFLICT ANALYSIS HAS BEEN MADE. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT (713) 223-4567 OR 1-800-669-8344 OR 811 A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE MAIN AND SERVICE LINES FIELD LOCATED.
• WHEN CENTERPOINT ENERGY PIPE LINE MARKINGS ARE NOT VISIBLE, CALL (713) 945-8036 OR (713) 945-8037 (7:00 A.M. TO 4:30 P.M.) FOR STATUS OF LINE LOCATION REQUEST BEFORE EXCAVATION BEGINS.
• WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF CENTERPOINT ENERGY FACILITIES, ALL EXCAVATION MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES.
• WHEN CENTERPOINT ENERGY FACILITIES ARE EXPOSED, SUFFICIENT SUPPORT MUST BE PROVIDED TO THE FACILITIES TO PREVENT EXCESSIVE STRESS ON THE PIPING.
• FOR EMERGENCIES REGARDING GAS LINES, CALL (713) 659-3552 OR (713) 207-4200.
THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY DAMAGES CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND FACILITIES.
WARNING: OVERHEAD ELECTRICAL LINES
OVERHEAD LINES MAY EXIST ON THE PROPERTY. THE LOCATION OF OVERHEAD LINES HAS NOT BEEN SHOWN ON THESE DRAWINGS AS THE LINES ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING ANY CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH & SAFETY CODE, FORBIDS ACTIVITIES THAT OCCUR IN CLOSE PROXIMITY TO HIGH VOLTAGE LINES, SPECIFICALLY:
• ANY ACTIVITY WHERE PERSON OR THINGS MAY COME WITHIN SIX(6) FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES; AND
• OPERATING A CRANE, DERRICK, POWER SHOVEL, DRILLING RIG, PILE DRIVER, HOISTING EQUIPMENT, OR SIMILAR APPARATUS WITHIN TEN FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES.
PARTIES RESPONSIBLE FOR THE WORK, INCLUDING CONTRACTORS, ARE LEGALLY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CRIMINAL AND CIVIL LIABILITY. TO ARRANGE FOR LINES TO BE TURNED OFF OR REMOVED CALL CENTERPOINT ENERGY AT (713) 207-2222.
ACTIVITIES ON OR ACROSS CENTERPOINT ENERGY FEE OR EASEMENT PROPERTY NO APPROVAL TO USE, CROSS OR OCCUPY CENTERPOINT FEE OR EASEMENT PROPERTY IS GIVEN. IF YOU NEED TO USE CENTERPOINT PROPERTY, PLEASE CONTACT OUR SURVEYING & RIGHT OF WAY DIVISION AT (713) 207-6248 OR (713) 207-5769.

NOTIFY CITY PUBLIC WORKS (832-595-3500) AND CITY ENGINEER (713-462-3242) 48 HOURS PRIOR TO STARTING CONSTRUCTION AND 24 HOURS PRIOR TO ANY TESTING.



APPROVED: FORT BEND COUNTY DEVELOPMENT COORDINATOR
DATE:

Table with columns: NO, REVISION, DATE. Contains revision history entries.



PAPE-DAWSON ENGINEERS
HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10850 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
TXPE FIRM REGISTRATION #070 11 TRIPLE FIRM REGISTRATION #0189874

SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS
CONSTRUCTION NOTES

PLAT NO. 40166-20
JOB NO. 40166-21
DATE MARCH 2018
DESIGNER LS
CHECKED DRAWN ALL
SHEET 2 OF 44

STATE OF TEXAS
COUNTY OF FORT BEND
CITY OF ROSENBERG

I, CHRIS LINDHORST, BEING AN OFFICER OF D.R. HORTON-TEXAS, LTD., A TEXAS LIMITED LIABILITY PARTNERSHIP, OWNERS OF THE 6.998 ACRE TRACT DESCRIBED IN THE ABOVE AND FOREGOING MAP OF SUNSET CROSSING BRYAN ROAD PHASE ONE, DO HEREBY MAKE AND ESTABLISH SAID SUBDIVISION AND DEVELOPMENT PLAT OF SAID PROPERTY ACCORDING TO ALL LINES, DEDICATIONS, RESTRICTIONS AND NOTATIONS ON SAID MAPS OR PLAT AND HEREBY DEDICATE TO THE USE OF PUBLIC FOREVER, ALL STREETS (EXCEPT THOSE STREETS DESIGNATED AS PRIVATE STREETS), ALLEYS, PARKS, WATER COURSES, DRAINS, EASEMENTS AND PUBLIC PLACES SHOWN THEREON FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED; AND DO HEREBY BIND OURSELVES, OUR HEIRS AND ASSIGNS TO WARRANT AND FOREVER DEFEND THE TITLE TO THE LAND SO DEDICATED.

FURTHER, WE DO HEREBY DEDICATE FOR PUBLIC UTILITY PURPOSES AN UNOBSTRUCTED AERIAL EASEMENT FIVE (5) FEET IN WIDTH FROM A PLANE TWENTY (20) FEET ABOVE THE GROUND LEVEL UPWARD, LOCATED ADJACENT TO ALL PUBLIC UTILITY EASEMENTS SHOWN HEREON.

FURTHER, WE DO HEREBY COVENANT AND AGREE THAT ALL OF THE PROPERTY WITHIN THE BOUNDARIES OF THIS PLAT SHALL BE RESTRICTED TO PREVENT THE DAMAGE OF ANY SEPTIC TANKS INTO ANY PUBLIC OR PRIVATE STREET, ROAD OR ALLEY OR ANY DRAINAGE DITCH, EITHER DIRECTLY, OR INDIRECTLY.

FURTHER, WE DO HEREBY CERTIFY THAT WE ARE THE OWNERS OF ALL PROPERTY IMMEDIATELY ADJACENT TO THE BOUNDARIES OF THE ABOVE AND FOREGOING SUBDIVISION OF SUNSET CROSSING BRYAN ROAD PHASE I WHERE BUILDING SETBACK LINES OR PUBLIC UTILITY EASEMENTS ARE TO BE ESTABLISHED OUTSIDE THE BOUNDARIES OF THE ABOVE AND FOREGOING SUBDIVISION AND TO HEREBY MAKE AND ESTABLISH ALL BUILDING SETBACK LINES AND DEDICATE TO THE USE OF PUBLIC, ALL PUBLIC UTILITY EASEMENTS SHOWN IN SAID ADJACENT ACREAGE.

FURTHER, WE DO HEREBY ACKNOWLEDGE THE RECEIPT OF THE "ORDERS FOR REGULATION OF OUTDOOR LIGHTING IN THE UNINCORPORATED AREAS OF FORT BEND COUNTY, TEXAS", AND DO HEREBY COVENANT AND AGREE AND SHALL COMPLY WITH THIS ORDER AS ADOPTED BY FORT BEND COUNTY COMMISSIONERS COURT ON MARCH 23, 2004, AND ANY SUBSEQUENT AMENDMENTS.

IN TESTIMONY WHEREOF, D.R. HORTON-TEXAS, LTD., A TEXAS LIMITED LIABILITY PARTNERSHIP, HAS CAUSED THESE PRESENTS TO BE SIGNED BY CHRIS LINDHORST, BEING AN OFFICER OF D.R. HORTON-TEXAS, LTD., A TEXAS LIMITED LIABILITY PARTNERSHIP, HERETO AUTHORIZED, ATTESTED BY ITS SECRETARY (OR AUTHORIZED TRUST OFFICER),

_____ AND ITS COMMON SEAL HEREUNTO AFFIXED THIS _____

DAY OF _____, 20____

D.R. HORTON-TEXAS, LTD., A TEXAS LIMITED LIABILITY PARTNERSHIP

By: D.R. HORTON, INC.,
A DELAWARE CORPORATION
AUTHORIZED AGENT

BY: _____ ATTEST: _____
CHRIS LINDHORST

NAME AND TITLE NAME AND TITLE

STATE OF TEXAS
COUNTY OF FORT BEND

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED _____

_____ AND _____ OF D.R. HORTON-TEXAS, LTD., A TEXAS LIMITED LIABILITY PARTNERSHIP, KNOWN TO ME TO BE THE PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED, AND IN THE CAPACITY THEREIN AND HEREIN STATED, AND AS THE ACT AND DEED OF SAID CORPORATION.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS _____ DAY OF _____, 20____

NOTARY PUBLIC IN AND FOR
FORT BEND COUNTY, TEXAS

THIS IS TO CERTIFY THAT THE PLANNING COMMISSION OF THE CITY OF ROSENBERG, TEXAS HAS APPROVED THIS PLAT AND THE SUBDIVISION OF SUNSET CROSSING BRYAN ROAD PHASE ONE IN CONFORMANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE ORDINANCES OF THE CITY OF

ROSENBERG AS SHOWN HEREON AND AUTHORIZES THE RECORDING OF THIS PLAT THIS _____

DAY OF _____, 201____

BY: _____ BY: _____
JAMES URBISH, CHAIRMAN WAYNE POLDRACK, SECRETARY

THIS IS TO CERTIFY THAT THE CITY COUNCIL OF THE CITY OF ROSENBERG, TEXAS HAS APPROVED THIS PLAT AND THE SUBDIVISION OF SUNSET CROSSING BRYAN ROAD PHASE ONE IN CONFORMANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE ORDINANCES OF THE CITY OF

ROSENBERG AS SHOWN HEREON AND AUTHORIZES THE RECORDING OF THIS PLAT THIS _____

DAY OF _____, 201____

BY: _____ BY: _____
WILLIAM BENTON, MAYOR DANVEL SWINT, CITY SECRETARY

CERTIFICATE FOR SURVEYOR

I, BRIAN NAWARA, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF SURVEYING AND HEREBY CERTIFY THAT THE ABOVE SUBDIVISION IS TRUE AND CORRECT, WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND AND THAT ALL BOUNDARY CORNERS, ANGLE POINTS OF CURVATURE AND OTHER POINTS OF REFERENCE HAVE BEEN MARKED WITH IRON (OR OTHER SUITABLE PERMANENT FERROUS METAL) PIPES AND A LENGTH OF NOT LESS THAN THREE (3) FEET.

BRIAN NAWARA
REGISTERED PROFESSIONAL LAND SURVEYOR
TEXAS REGISTRATION NO. 6060

CERTIFICATE FOR ENGINEER

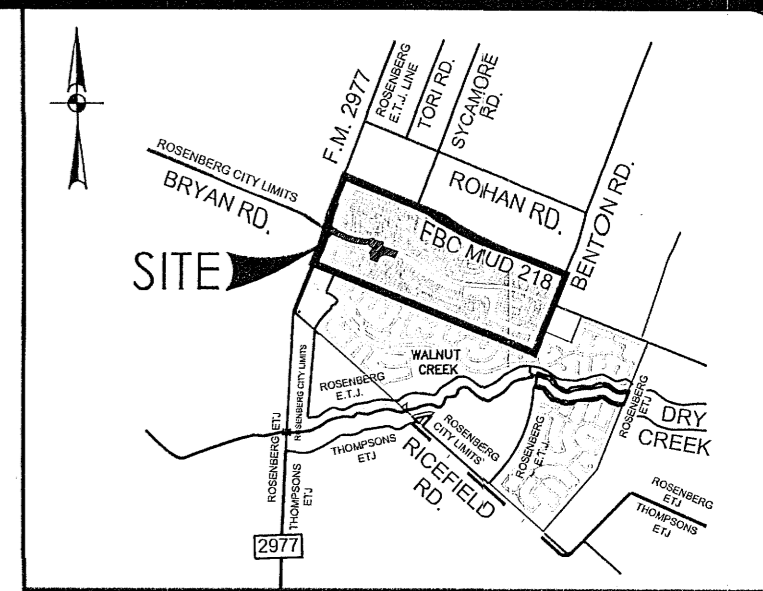
I, MICHAEL PREISS, A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS DO HEREBY CERTIFY THAT THIS PLAT MEETS ALL REQUIREMENTS OF FORT BEND COUNTY TO THE BEST OF MY KNOWLEDGE.

ROBERT M. PREISS
REGISTERED PROFESSIONAL ENGINEER
TEXAS REGISTRATION NO. 92978

CENTERPOINT NOTE:
"ABSENT WRITTEN AUTHORIZATION BY THE AFFECTED UTILITIES, ALL UTILITY AND AERIAL EASEMENTS MUST BE KEPT UNOBSTRUCTED FROM ANY NON-UTILITY IMPROVEMENTS OR OBSTRUCTIONS BY THE PROPERTY OWNER. ANY UNAUTHORIZED IMPROVEMENTS OR OBSTRUCTIONS MAY BE REMOVED BY ANY PUBLIC UTILITY AT THE PROPERTY OWNER'S EXPENSE. WHILE WOODEN POSTS AND PANELED WOODEN FENCES ALONG THE PERIMETER AND BACK TO BACK EASEMENTS AND ALONGSIDE REAR LOTS LINES ARE PERMITTED, THEY TOO MAY BE REMOVED BY PUBLIC UTILITIES AT THE PROPERTY OWNER'S EXPENSE SHOULD THEY BE AN OBSTRUCTION. PUBLIC UTILITIES MAY PUT SAID WOODEN POSTS AND PANELED WOODEN FENCES BACK UP, BUT GENERALLY WILL NOT REPLACE WITH NEW FENCING."

NOTES:

- 1. ONE-FOOT RESERVE DEDICATED FOR BUFFER PURPOSES TO THE PUBLIC IN FEE AS A BUFFER SEPARATION BETWEEN THE SIDE OR END OF STREET WHERE SUCH STREETS ADJACENT PROPERTY. THE CONDITION OF SUCH DEDICATION BEING THAT WHEN THE ADJACENT PROPERTY IS SUBDIVIDED OR RE-SUBDIVIDED IN A RECORDED PLAT, THE ONE-FOOT RESERVE SHALL THEREUPON BECOME VESTED IN THE PUBLIC FOR STREET RIGHT-OF-WAY PURPOSES AND THE FEE TITLE THERETO SHALL REVERT TO AND REVEST IN THE DEDICATOR, HIS HEIRS, ASSIGNS OR SUCCESSORS.
- 2. BENCHMARK: THE ELEVATIONS FOR THIS SURVEY ARE BASED ON THE PUBLISHED ELEVATIONS FOR THE FOLLOWING BENCHMARKS:
AW4789 ELEVATION: 91.68'
AW4792 ELEVATION: 94.48'
- 3. PROJECT BENCHMARK: CUT "X" IN CONCRETE HEADWALL:
N: 13754207.4200
E: 3001494.1400
ELEV: 88.17'
SET 3/4 IRON ROD WITH RED CAP MARKED (TRAVERSE)
N: 13752540.4400
E: 3002638.3230
ELEV: 84.47'
SET 3/4 IRON ROD WITH RED CAP MARKED (TRAVERSE)
N: 13751522.6400
E: 3005309.8010
ELEV: 81.74'
SET 3/4 IRON ROD WITH RED CAP MARKED (TRAVERSE)
N: 13752319.9700
E: 3006795.7820
ELEV: 84.97'
- 4. ELEVATIONS USED FOR DELINEATING CONTOUR LINES ARE BASED UPON NGS VERTICAL DATUM, NAVD-88 (1991 ADJUSTMENT).
- 5. THIS PLAT WAS PREPARED TO MEET CITY OF ROSENBERG AND FORT BEND COUNTY REQUIREMENTS.
- 6. THIS PLAT WAS PREPARED FROM INFORMATION FURNISHED BY DHI TITLE OF CENTRAL TEXAS, EFFECTIVE DATE FEBRUARY 26, 2018. THE SURVEYOR HAS NOT ABSTRACTED THE ABOVE PROPERTY.
- 7. THIS PLAT LIES WHOLLY WITHIN MUNICIPAL UTILITY DISTRICT NO. 218, FORT BEND SUBSIDIENCE DISTRICT, FORT BEND COUNTY DRAINAGE DISTRICT, LAMAR CONSOLIDATED I.S.D., AND THE CITY OF ROSENBERG EXTRATERRITORIAL JURISDICTION, AND FORT BEND COUNTY.
- 8. SUNSET CROSSING LIES WITHIN UNSHADED ZONE X AS PER FLOOD INSURANCE RATE MAP, MAP NUMBER 48157C0285L AND 48157C0245L, DATED APRIL 2, 2014.
- 9. APPROVAL OF THIS PLAT WILL EXPIRE ONE YEAR FROM CITY COUNCIL APPROVAL IF NOT RECORDED IN THE REAL PROPERTY RECORDS OF THE COUNTY OF FORT BEND.
- 10. FIVE-EIGHTHS INCH (5/8") IRON RODS THREE FEET (3') IN LENGTH ARE SET ON ALL PERIMETER BOUNDARY CORNERS, ALL ANGLE POINTS, ALL POINTS OF CURVATURE AND TANGENCY, AND ALL BLOCK CORNERS, UNLESS OTHERWISE NOTED. PROPERTY CORNERS ARE MONUMENTED WITH CAP OR DISK MARKED "PAPE-DAWSON", UNLESS NOTED OTHERWISE.
- 11. THE MINIMUM SLAB ELEVATION SHALL BE TWELVE INCHES (12") ABOVE THE 100-YEAR FLOOD PLAIN ELEVATION AND MAXIMUM PONDING ELEVATION, EIGHTEEN INCHES (18") ABOVE NATURAL GROUND, OR TWELVE INCHES (12") ABOVE THE TOP OF CURB AT THE FRONT OF THE LOT, WHICHEVER IS HIGHER.
- 12. THE DRAINAGE SYSTEM FOR THIS SUBDIVISION SHALL BE DESIGNED TO MEET THE REQUIREMENTS OF THE FORT BEND COUNTY DRAINAGE CRITERIA MANUAL WHICH ALLOWS STREET PONDING DURING INTENSE RAINFALL EVENTS.
- 13. THIS PLAT LIES WITHIN FORT BEND COUNTY LIGHTING ORDINANCE ZONE NO. LZ2.
- 14. ALL EASEMENTS ARE CENTERED ON LOT LINES UNLESS OTHERWISE INDICATED.
- 15. THE HORIZONTAL COORDINATES SHOWN ARE GRID AND ARE BASED ON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD-83 (NA2011); EPOCH 2010.00, AND WERE DERIVED USING GPS RTK METHODS REFERENCED TO THE NATIONAL GEODETIC SURVEY CORS NETWORK, STATION TXWN AND STATION TXHS. THE GRID COORDINATES MAY BE CONVERTED TO SURFACE BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 1.00013.
- 16. THE RADIUS ON ALL BLOCK CORNERS IS TWENTY FIVE (25) FEET UNLESS OTHERWISE NOTED.
- 17. UNLESS OTHERWISE INDICATED, THE BUILDING LINES (BL), WHETHER ONE OR MORE, SHOWN ON THIS SUBDIVISION PLAT ARE ESTABLISHED TO EVIDENCE COMPLIANCE WITH THE APPLICABLE PROVISIONS OF CHAPTER 4, UNIFIED DEVELOPMENT CODE, CITY OF ROSENBERG, TEXAS, IN EFFECT AT THE TIME THIS PLAT WAS APPROVED, WHICH MAY BE AMENDED FROM TIME TO TIME.
- 18. _____ INDICATES STREET NAME CHANGE SYMBOL.
- 19. DIMENSIONS SHOWN ARE SURFACE.
- 20. ALL DRAINAGE EASEMENTS MUST BE CLEAR OF FENCES, BUILDINGS, VEGETATION, AND OTHER OBSTRUCTIONS FOR THE PURPOSE OF THE OPERATION AND MAINTENANCE OF THE DRAINAGE FACILITY BY THE APPROPRIATE ENTITY.
- 21. SIDEWALKS SHALL BE BUILT OR CAUSED TO BE BUILT NOT LESS THAN 5 FEET IN WIDTH ON BOTH SIDES OF ALL DEDICATED RIGHTS-OF-WAY WITHIN SAID PLAT AND ON THE CONTIGUOUS RIGHT-OF-WAY OF ALL PERIMETER ROADS SURROUNDING SAID PLAT, IN ACCORDANCE WITH THE A.D.A.
- 22. ALL PROPERTY TO DRAIN INTO THE DRAINAGE EASEMENTS ONLY THROUGH AN APPROVED DRAINAGE STRUCTURE.
- 23. THERE ARE NO PIPELINES NOR PIPELINE EASEMENTS WITHIN THE LIMITS OF THE SUBDIVISION.



I, RICHARD W. STOLLEIS, FORT BEND COUNTY ENGINEER, DO HEREBY CERTIFY THAT THE PLAT OF THIS SUBDIVISION COMPLIES WITH ALL OF THE EXISTING RULES AND REGULATIONS OF THE OFFICE AS ADOPTED BY THE FORT BEND COUNTY COMMISSIONERS' COURT. HOWEVER, NO CERTIFICATION IS HEREBY GIVEN AS TO THE EFFECT OF DRAINAGE FROM THIS SUBDIVISION ON THE INTERCEPTING DRAINAGE ARTERY OR PARENT STREAM OR ON ANY OTHER AREA OR SUBDIVISION WITHIN THE WATERSHED.

RICHARD W. STOLLEIS, P.E.
FORT BEND COUNTY ENGINEER

APPROVED BY THE COMMISSIONERS' COURT OF FORT BEND COUNTY, TEXAS, THIS _____ DAY OF _____

VINCENT M. MORALES, JR.
PRECINCT 1, COUNTY COMMISSIONER

GRADY PRESTAGE
PRECINCT 2, COUNTY COMMISSIONER

ROBERT E. HEBERT
COUNTY JUDGE

W. A. (ANDY) MEYERS
PRECINCT 3, COUNTY COMMISSIONER

JAMES PATTERSON
PRECINCT 4, COUNTY COMMISSIONER

I, LAURA RICHARD, COUNTY CLERK IN AND FOR FORT BEND COUNTY, HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR RECORDATION IN

MY OFFICE ON _____, 201____, AT _____ O'CLOCK ____M. IN

PLAT NUMBER _____ OF THE PLAT RECORDS OF FORT BEND COUNTY.

WITNESS MY HAND AND SEAL OF OFFICE, AT RICHMOND, TEXAS, THE DAY AND DATE LAST ABOVE WRITTEN.

LAURA RICHARD, COUNTY CLERK
FORT BEND COUNTY, TEXAS

By: _____
DEPUTY

SUNSET CROSSING BRYAN ROAD PHASE ONE

A SUBDIVISION OF 6.998 ACRES OUT OF A 250.260 ACRES LOCATED IN THE W. LUSK SURVEY SURVEY, A-276, & E. WHEAT SURVEY, A-396, FORT BEND COUNTY, TEXAS (FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT NO. 218)

1 RESERVE ~ 1 BLOCK

DATE OF PREPARATION:
April 10, 2018

OWNER:
CHRIS LINDHORST
D.R. HORTON-TEXAS, LTD.,
A TEXAS LIMITED LIABILITY PARTNERSHIP
14100 SW FREEWAY, SUITE 500
SUGAR LAND, TEXAS 77478
(281) 566-2100



ENGINEER:
PAPE-DAWSON ENGINEERS
MICHAEL PREISS, P.E.
SR. VICE PRESIDENT-HOUSTON

SURVEYOR:
PAPE-DAWSON ENGINEERS
BRIAN NAWARA, R.P.L.S.
HOUSTON SURVEY DEPARTMENT MANAGER



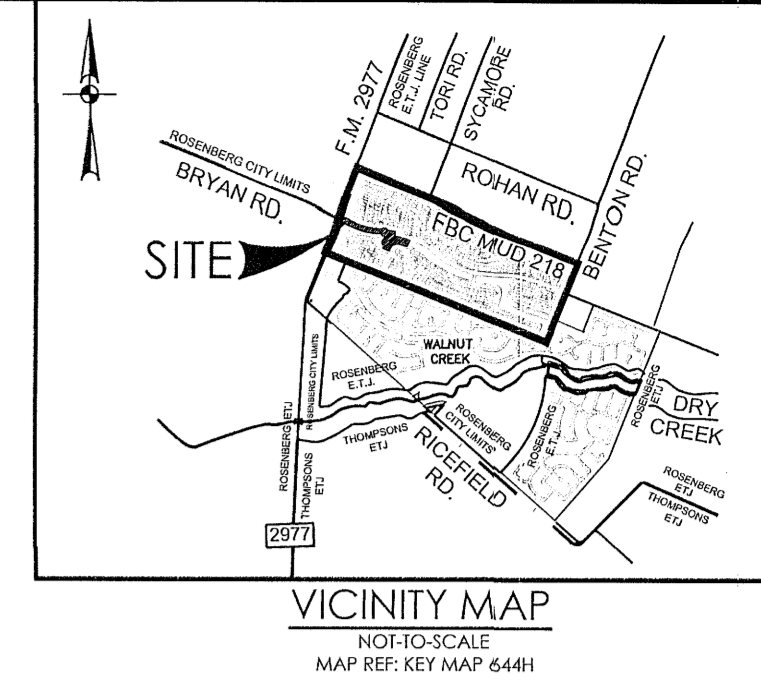
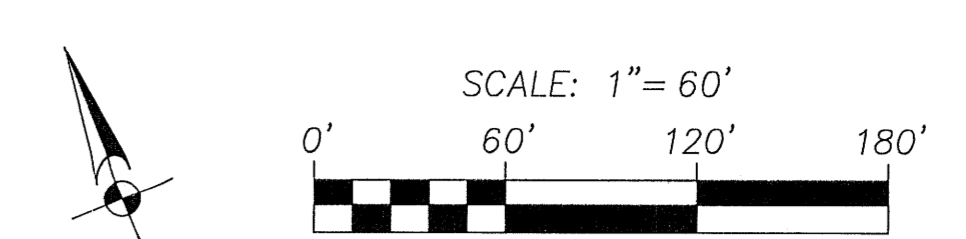
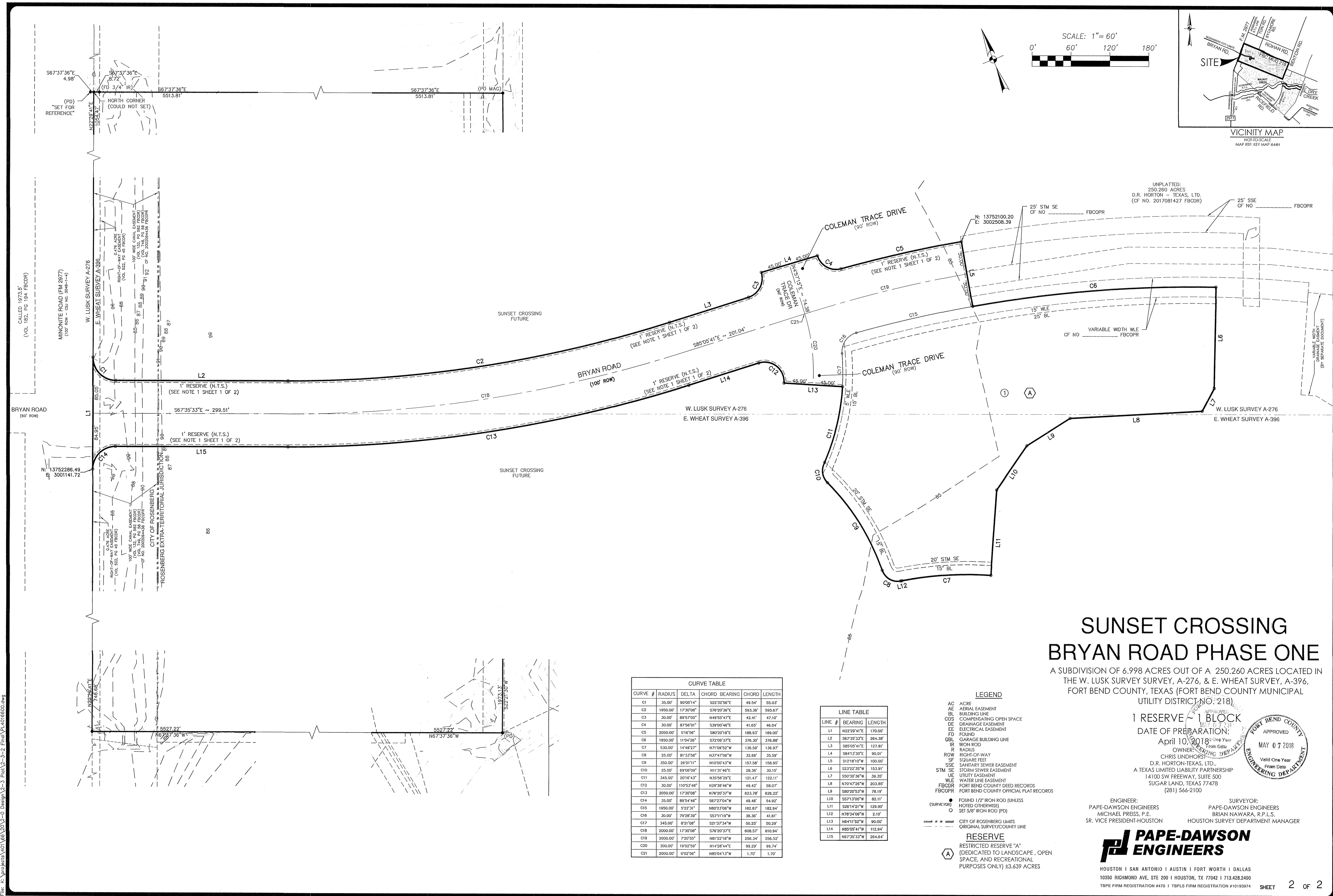
PAPE-DAWSON ENGINEERS

HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10193974

SHEET 1 OF 2

Date: Apr 10, 2018, 1:33pm User: ID: ANEWTON File: K:\projects\40166\2018\2018-01-31\Plat12-3-2_FirmA_P140166B00.dwg

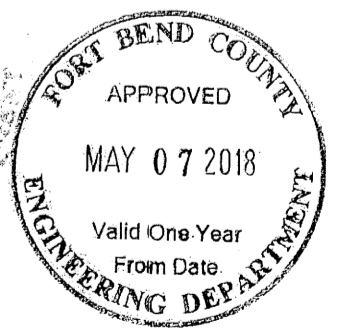
PD JOB NO. 40166-20 SUNSET CROSSING BRYAN ROAD PHASE ONE



SUNSET CROSSING BRYAN ROAD PHASE ONE

A SUBDIVISION OF 6.998 ACRES OUT OF A 250.260 ACRES LOCATED IN THE W. LUSK SURVEY SURVEY, A-276, & E. WHEAT SURVEY, A-396, FORT BEND COUNTY, TEXAS (FORT BEND COUNTY MUNICIPAL UTILITY DISTRICT NO. 218)

1 RESERVE - 1 BLOCK
 DATE OF PREPARATION: April 10, 2018
 OWNER: CHRIS LINDHORST
 D.R. HORTON-TEXAS, LTD.,
 A TEXAS LIMITED LIABILITY PARTNERSHIP
 14100 SW FREEWAY, SUITE 500
 SUGAR LAND, TEXAS 77478
 (281) 566-2100



CURVE TABLE				
CURVE #	RADIUS	DELTA	CHORD BEARING	CHORD LENGTH
C1	35.00'	90°05'14"	S22°32'56"E	49.54'
C2	1950.00'	17°30'08"	S76°20'36"E	593.36'
C3	30.00'	89°57'05"	N49°55'47"E	42.41'
C4	30.00'	87°56'01"	S39°00'46"E	41.65'
C5	2050.00'	5°16'56"	S80°01'8"E	188.93'
C6	1950.00'	11°04'28"	S72°09'37"E	376.30'
C7	530.00'	14°48'27"	N71°09'52"W	136.59'
C8	25.00'	81°33'58"	N37°47'06"W	32.66'
C9	350.00'	28°01'11"	N10°00'43"W	157.58'
C10	25.00'	89°06'09"	N11°31'46"E	28.36'
C11	345.00'	20°16'43"	N35°56'29"E	121.47'
C12	30.00'	110°53'48"	N28°38'46"W	49.42'
C13	2050.00'	17°30'08"	N76°20'37"W	623.78'
C14	35.00'	89°54'46"	S67°27'04"W	49.46'
C15	1950.00'	5°22'31"	N80°23'06"W	182.87'
C16	30.00'	79°28'39"	S51°11'09"W	38.36'
C17	345.00'	8°21'08"	S21°37'34"W	50.25'
C18	2000.00'	17°30'08"	S76°20'37"E	608.57'
C19	3000.00'	7°20'55"	N81°22'18"W	256.34'
C20	300.00'	19°02'59"	N14°28'44"E	99.29'
C21	2000.00'	0°02'56"	N85°04'13"W	1.70'

LINE TABLE		
LINE #	BEARING	LENGTH
L1	N22°29'41"E	170.00'
L2	S67°35'33"E	284.38'
L3	S85°05'41"E	127.81'
L4	S84°13'30"E	90.01'
L5	S12°18'10"W	100.00'
L6	S23°22'35"W	153.91'
L7	S50°30'36"W	38.35'
L8	N70°47'28"W	203.85'
L9	S80°26'53"W	78.19'
L10	S57°13'00"W	82.11'
L11	S28°14'21"W	129.90'
L12	N78°34'06"W	2.10'
L13	N64°11'52"W	90.00'
L14	N85°05'41"W	112.94'
L15	N67°35'33"W	284.64'

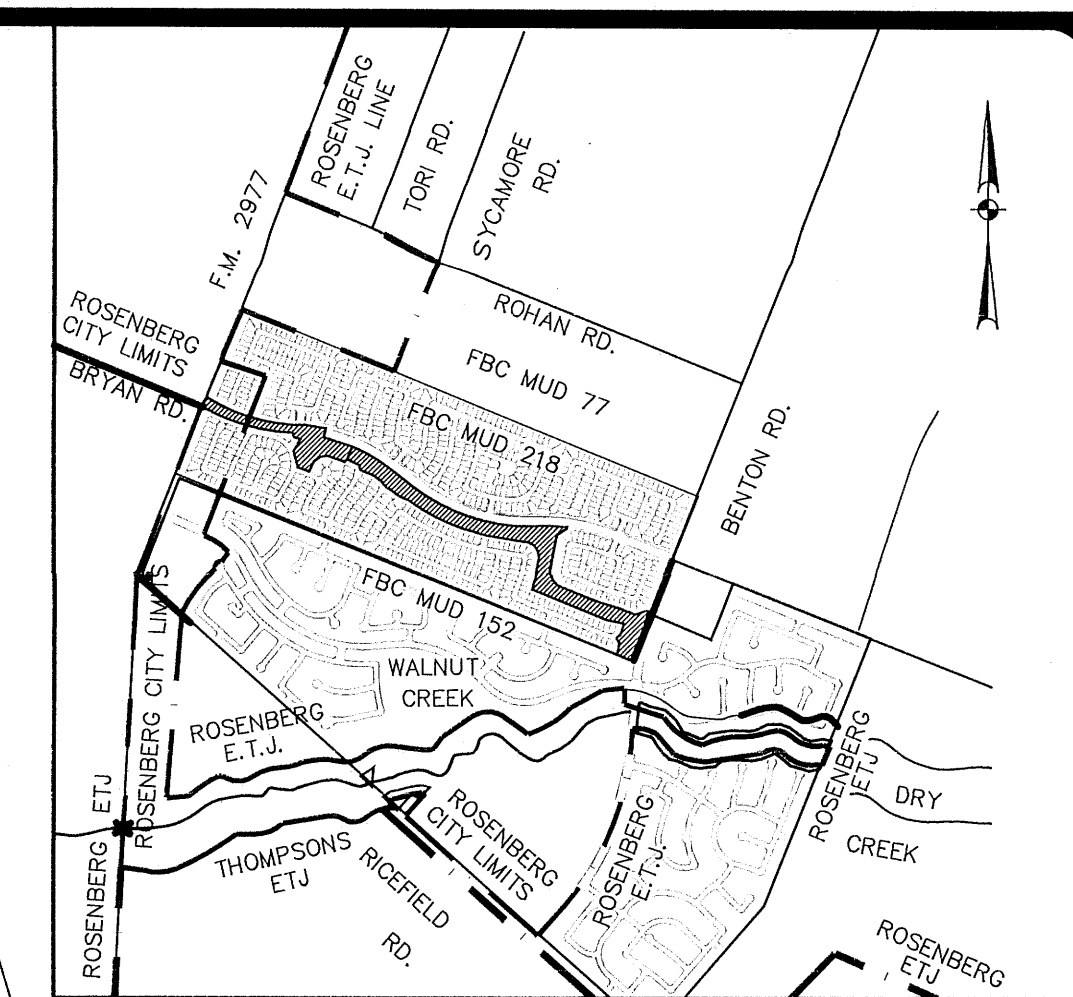
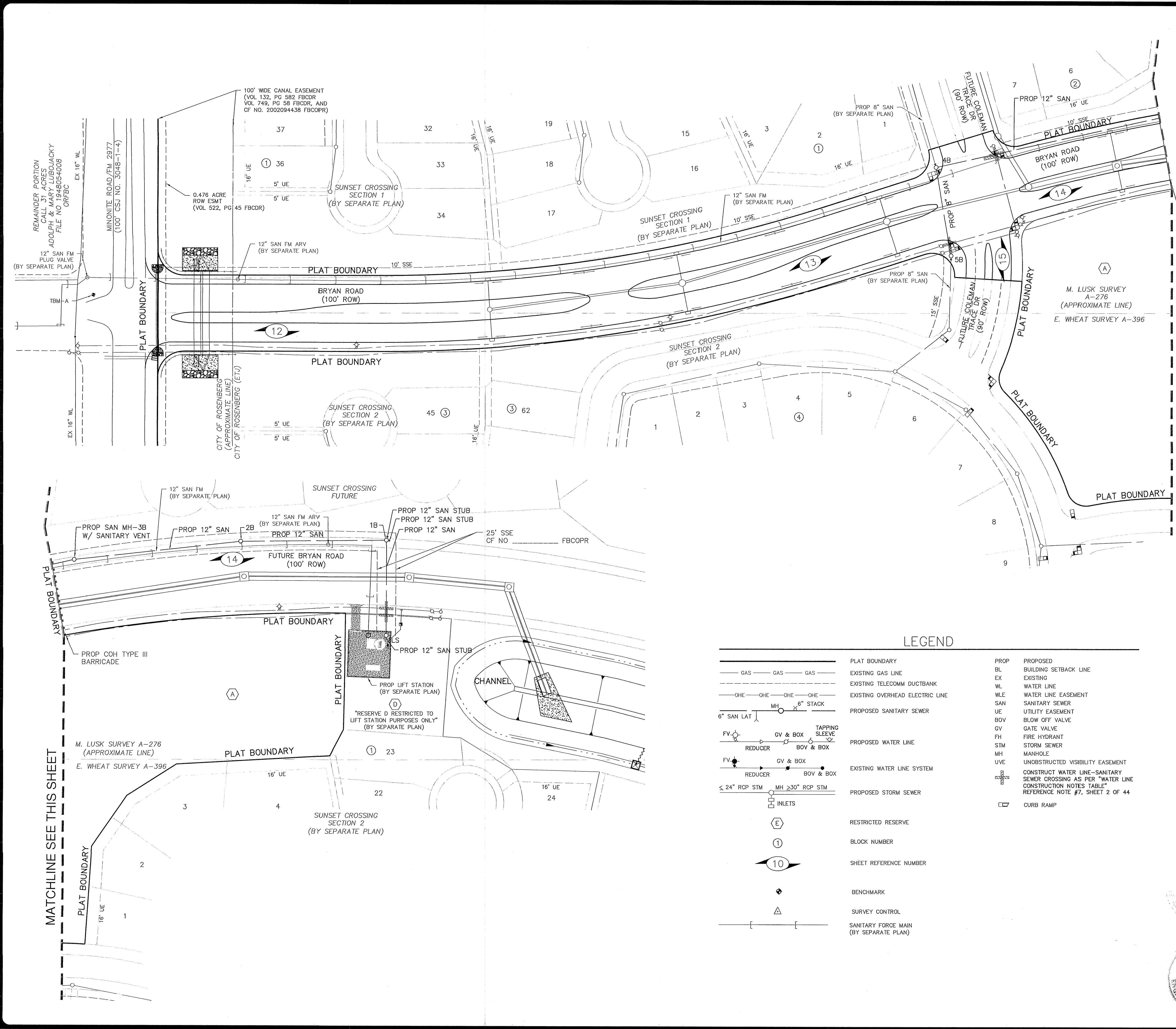
- LEGEND**
- AC ACRE
 - AE AERIAL EASEMENT
 - BL BUILDING LINE
 - CCS COMPENSATING OPEN SPACE
 - DE DRAINAGE EASEMENT
 - EE ELECTRICAL EASEMENT
 - FD FOUND
 - GBL GARAGE BUILDING LINE
 - IR IRON ROD
 - RADIUS
 - ROW RIGHT-OF-WAY
 - SF SQUARE FEET
 - SSE SANITARY SEWER EASEMENT
 - STM SE STORM SEWER EASEMENT
 - UE UTILITY EASEMENT
 - WLE WATER LINE EASEMENT
 - FBCDR FORT BEND COUNTY DEED RECORDS
 - FBCOPR FORT BEND COUNTY OFFICIAL PLAT RECORDS
 - FOUND 1/2" IRON ROD (UNLESS NOTED OTHERWISE)
 - SET 5/8" IRON ROD (PD)
 - CITY OF ROSENBERG LIMITS
 - - - ORIGINAL SURVEY/COUNTY LINE
- RESERVE**
 RESTRICTED RESERVE "A"
 (DEDICATED TO LANDSCAPE, OPEN SPACE, AND RECREATIONAL PURPOSES ONLY) ±3.639 ACRES

PAPE-DAWSON ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
 TBP FIRM REGISTRATION #470 | TBP L S FIRM REGISTRATION #10193974

Date: Apr 10, 2018, 1:25:57pm, User: ID: ANEWTON, File: C:\Users\anewton\OneDrive\Documents\180410\180410-01\180410-01.dwg

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Date: Apr 13, 2018, 1:24pm, User: jf, Job: 40166-20, File: C:\Projects\40166-20\Drawings\BRYAN ROAD\04-4016600-SS04-BRYN-PH1.dwg



STA 24+69.72
 END PROP 7" CONC
 PWMT W/ 6" CURB,
 STD PAVING HEADER,
 AND LOAD TRANSFER
 DEVICE, TC ± 83.57

LOCATION MAP
 SCALE: NTS
 MAP REF: KEY MAP 691H

SCALE: 1" = 60'
 0' 60' 120' 180'

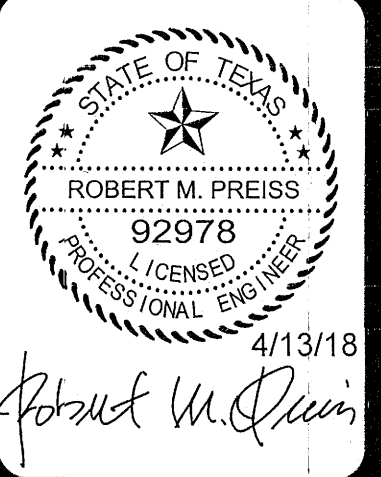
BENCHMARK:
 TBM-A
 OUT "X" IN CONCRETE HEADWALL
 N: 13754207.4200 E: 3001494.1400 ELEV: 88.17

FIRM FLOOD INSURANCE RATE MAP
 FORT BEND COUNTY COMMUNITY
 MAP 418570268L PANEL 265 OF 575,
 DATED APRIL 2, 2014.
 BASE FLOOD ELEVATION = 78.5

NOTE:
 1. WHEN MUD DISSOLVES, HOA IS RESPONSIBLE FOR MAINTENANCE OF DRAINAGE CHANNELS AND INFRASTRUCTURE.
 2. JUNCTION BOXES TO HAVE MANHOLE ACCESS

SPECIAL BACKFILL REQUIREMENTS FOR STORM SEWER AND SANITARY SEWER LATERALS:
 ALL SANITARY SEWER LEADS CROSSING STORM SEWER, WITH A CLEARANCE OF 1-FOOT OR LESS, MUST BE BACKFILLED WITH CEMENT STABILIZED SAND BETWEEN THE TWO UTILITIES.

DATE	
NO.	REVISION

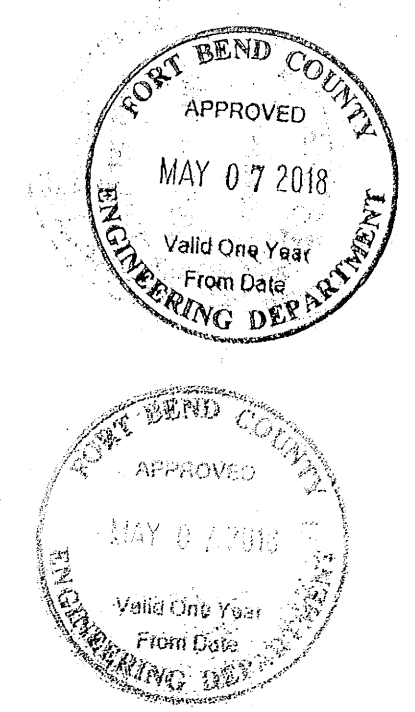


PAPE-DAWSON ENGINEERS

HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
 TPE FIRM REGISTRATION #270 | TPE FIRM REGISTRATION #10193974

LEGEND

	PLAT BOUNDARY		PROPOSED SANITARY SEWER
	EXISTING GAS LINE		PROPOSED WATER LINE
	EXISTING TELECOMM DUCTBANK		EXISTING WATER LINE SYSTEM
	EXISTING OVERHEAD ELECTRIC LINE		PROPOSED STORM SEWER
	PROPOSED SANITARY SEWER		INLETS
	PROPOSED WATER LINE		RESTRICTED RESERVE
	EXISTING WATER LINE SYSTEM		BLOCK NUMBER
	PROPOSED STORM SEWER		SHEET REFERENCE NUMBER
	INLETS		BENCHMARK
	RESTRICTED RESERVE		SURVEY CONTROL
	BLOCK NUMBER		SANITARY FORCE MAIN (BY SEPARATE PLAN)
	SHEET REFERENCE NUMBER		
	BENCHMARK		
	SURVEY CONTROL		
	SANITARY FORCE MAIN (BY SEPARATE PLAN)		



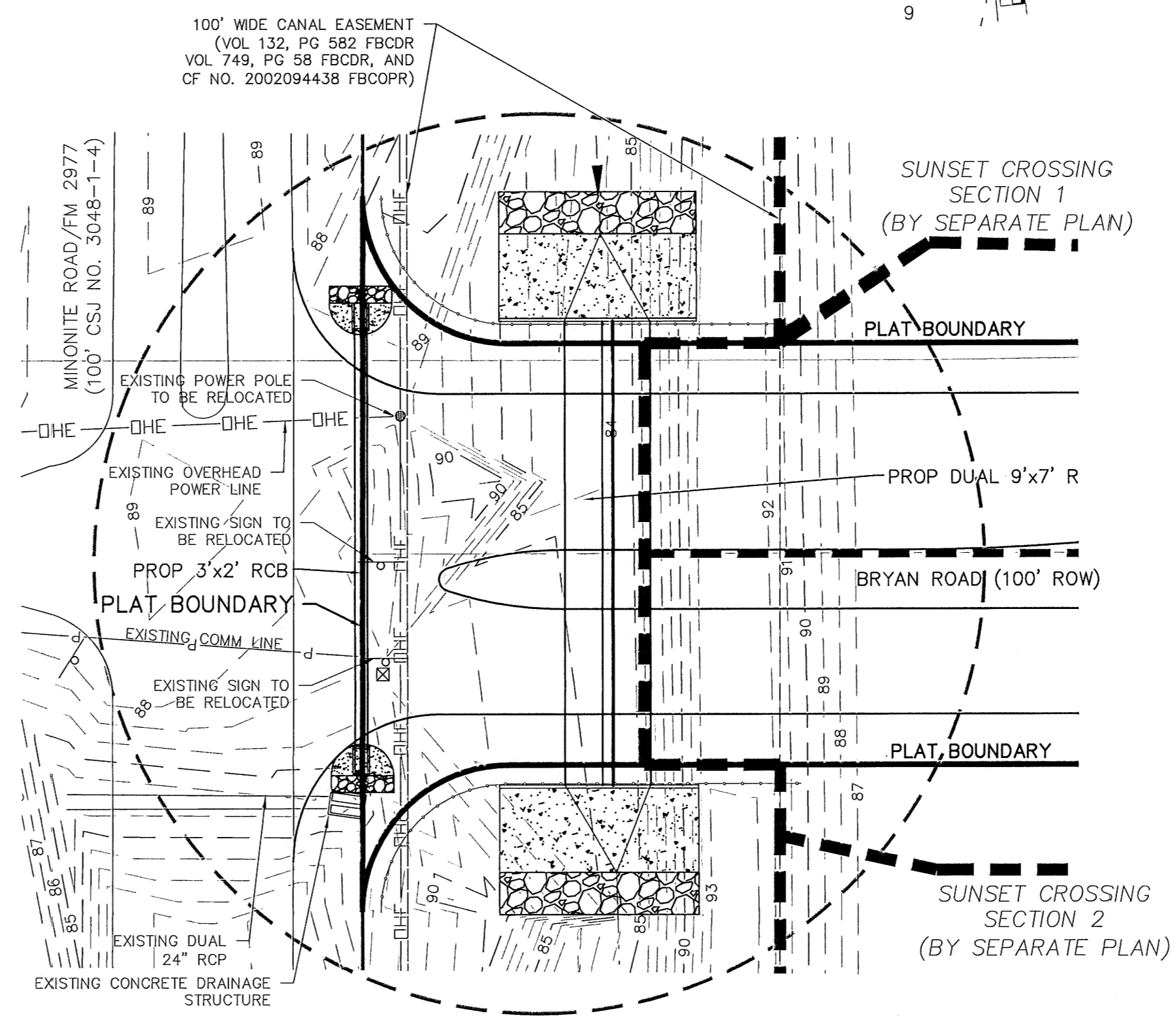
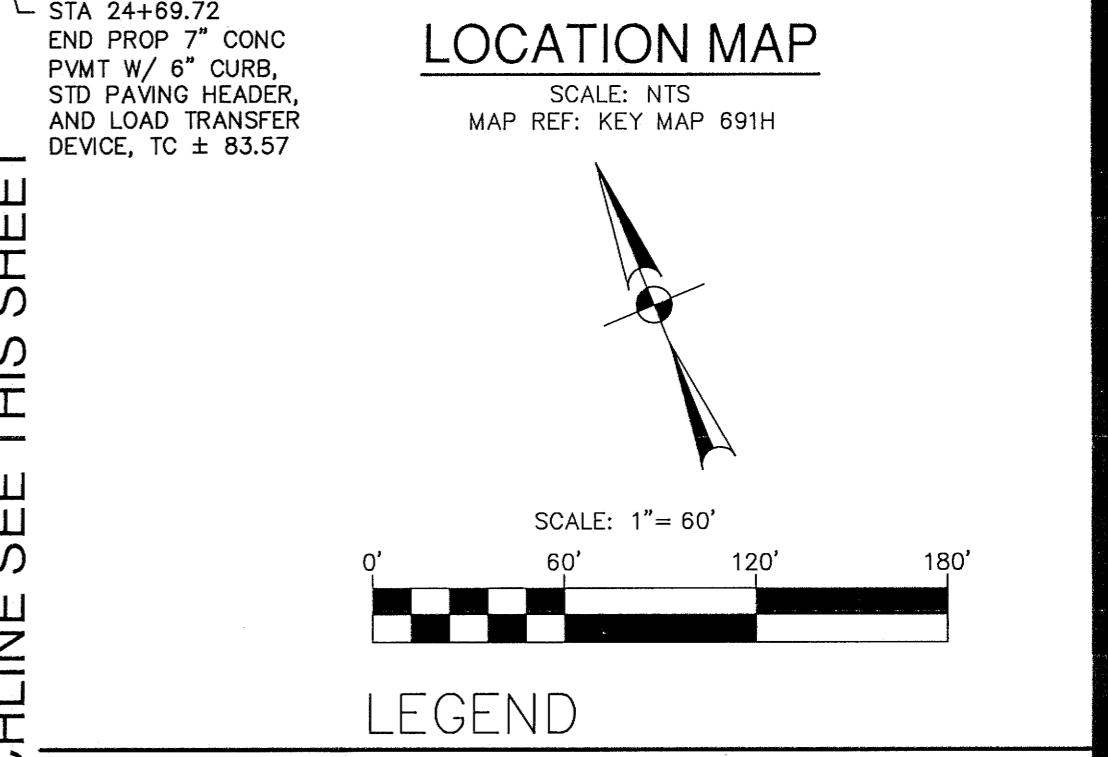
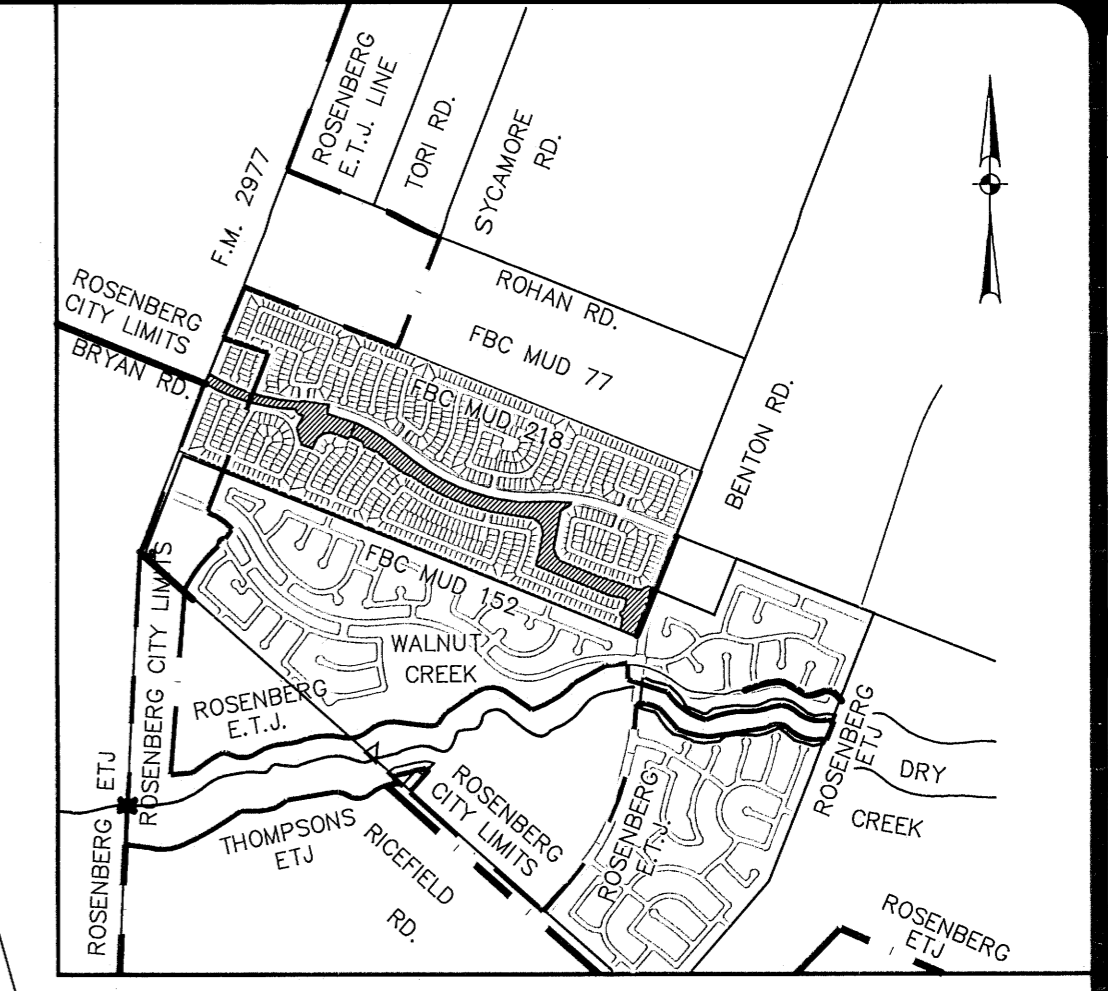
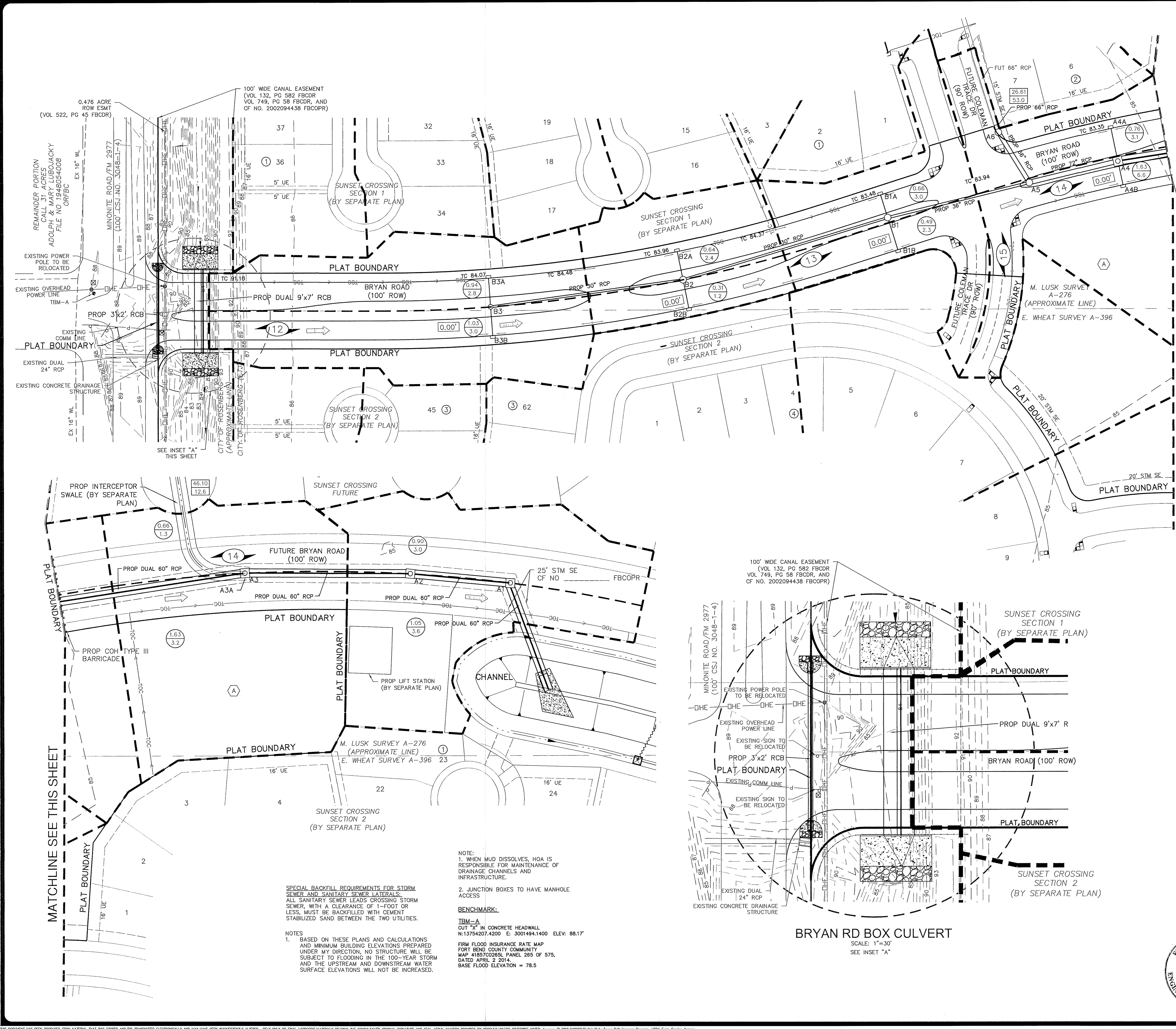
APPROVED: _____
 FORT BEND COUNTY
 DEVELOPMENT COORDINATOR

DATE: _____

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 SANITARY SEWER LAYOUT

PLAT NO.	40166-20
JOB NO.	40166-21
DATE	MARCH 2018
DESIGNER	LS
CHECKED	DRAWN ALL
SHEET	6 OF 44

Date: Apr. 20, 2018, 9:46am User ID: ANEWTON
 File: K:\Projects\W01\B05\00\02-00 Design\2-1 Civil\DWG_S-BRYAN ROAD\05-4016600-SD0A-BRYAN-PH1.dwg



NOTE:
 1. WHEN MUD DISSOLVES, HOA IS RESPONSIBLE FOR MAINTENANCE OF DRAINAGE CHANNELS AND INFRASTRUCTURE.
 2. JUNCTION BOXES TO HAVE MANHOLE ACCESS

BENCHMARK:
 TBM-A
 OUT "X" IN CONCRETE HEADWALL
 N: 13754207.4200 E: 3001494.1400 ELEV: 88.17'

FIRM FLOOD INSURANCE RATE MAP
 FORT BEND COUNTY COMMUNITY
 MAP 41857/00265L PANEL 285 OF 575,
 DATED APRIL 2 2014.
 BASE FLOOD ELEVATION = 78.5

SPECIAL BACKFILL REQUIREMENTS FOR STORM SEWER AND SANITARY SEWER LATERALS:
 ALL SANITARY SEWER LEADS CROSSING STORM SEWER, WITH A CLEARANCE OF 1-FOOT OR LESS, MUST BE BACKFILLED WITH CEMENT STABILIZED SAND BETWEEN THE TWO UTILITIES.

NOTES
 1. BASED ON THESE PLANS AND CALCULATIONS AND MINIMUM BUILDING ELEVATIONS PREPARED UNDER MY DIRECTION, NO STRUCTURE WILL BE SUBJECT TO FLOODING IN THE 100-YEAR STORM AND THE UPSTREAM AND DOWNSTREAM WATER SURFACE ELEVATIONS WILL NOT BE INCREASED.



APPROVED: _____
 FORT BEND COUNTY DEVELOPMENT COORDINATOR

DATE: _____

DATE: _____
 NO. REVISION: _____

STATE OF TEXAS
 LICENSE NO. 92978
 PROFESSIONAL ENGINEER
 ROBERT M. PREISS

4/20/18
 Robert M. Preiss

PAPE-DAWSON ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10850 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
 TOLL FREE REGISTRATION #470 | TOLLS FREE REGISTRATION #1018974

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 DRAINAGE LAYOUT

PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE: MARCH 2018
 DESIGNER: LS
 CHECKED: _____ DRAWN: ALL
 SHEET 7 OF 44



Project Name: SUNSET CROSSING - BRYAN ROAD PHASE ONE
 Project No: 40166-21
 Prepared By: KLB Date: 12/12/2017
 Checked By: MPL Date: 4/17/2018

Jurisdiction: FORT BEND COUNTY
 Design Frequency: 5 year
 Design Multiplier: 1.00
 Starting W.S. Elev.: 80.90 feet

Rainfall Coeff.
 b = 78.9
 d = 11.1
 e = 0.801

Storm Sewer Design Calculations

Manhole No. From	Manhole No. to	INLET Drainage Area (acres)	MH Total Area (acres)	Runoff Coefficient C	Sum Of C * A	Inlet Time of Conc. (min)	System Time of Conc. (min)	Rainfall Intensity I (in/hr)	Drainage Area Flow (cfs)	Sum Of Flows (cfs)	Reach Length (ft)	Diameter (in) or Rise (ft)	Span (ft)	Number of Barrels	Slope %	Manning's Roughness Coefficient "n"	Design Capacity (cfs)	Design Velocity (ft/sec)	Fall (ft)	Manhole Drop (ft)	Flowline Elevation Upstream (ft)	Flowline Elevation Downstream (ft)	Actual Velocity (ft/sec)	Hydraulic Gradient %	Change in Head (ft)	Elevation of Hyd. Grad. Upstream (ft)	Elevation of Hyd. Grad. Downstream (ft)	Top of Curb Elevation Upstream (ft)	Gutter Elevation Upstream (ft)
A1	OUT	0.00	83.41	0.55	23.39	0.0	43.6	3.20	0.0	74.9	149	60		2	0.060	0.013	127.6	3.2	0.09	N/A	73.64	73.55	1.91	0.021	0.03	80.93	80.90	83.39	82.89
A2	A1	1.95	83.41	0.42	23.39	6.1	42.4	3.26	6.6	76.2	134	60		2	0.060	0.013	127.6	3.2	0.08	0.00	73.72	73.64	1.94	0.021	0.03	80.96	80.93	83.15	82.65
A3	A2	2.29	81.46	0.40	22.57	20.7	40.5	3.35	4.5	75.7	220	60		2	0.060	0.013	127.6	3.2	0.13	0.00	73.85	73.72	1.93	0.021	0.05	81.01	80.96	83.25	82.75
A4	A3	2.39	33.07	0.52	17.92	6.8	37.2	3.54	9.7	63.4	318	60		2	0.060	0.013	127.6	3.2	0.19	0.00	74.04	73.85	1.61	0.015	0.05	81.05	81.01	83.35	82.85
A5	A4	0.00	30.68	0.55	16.68	0.0	36.3	3.59	0.0	59.9	113	72		1	0.050	0.013	94.7	3.3	0.06	0.00	74.10	74.04	2.12	0.020	0.02	81.08	81.05	83.73	83.23
A6	A5	0.00	26.61	0.55	14.64	0.0	35.7	3.62	0.0	53.0	78	66		1	0.050	0.013	75.1	3.2	0.04	0.00	74.14	74.10	2.23	0.025	0.02	81.10	81.08	84.23	83.73
B1	A5	1.15	4.07	0.61	2.04	7.8	17.1	5.44	5.3	11.1	194	36		1	0.110	0.013	22.1	3.1	0.21	1.60	75.91	75.70	1.57	0.028	0.05	81.13	81.08	83.48	82.98
B2	B1	0.95	2.92	0.50	1.34	7.8	14.2	5.94	3.6	8.0	285	30		1	0.130	0.013	14.8	3.0	0.37	0.04	76.32	75.95	1.62	0.038	0.11	81.24	81.13	83.96	83.46
B3	B2	1.97	1.97	0.44	0.87	10.5	10.5	6.73	5.8	5.8	259	30		1	0.130	0.013	14.8	3.0	0.34	0.00	76.66	76.32	1.19	0.020	0.05	81.29	81.24	84.11	83.61
Offsite	A3	46.10	46.10	0.08*	3.73	40.0	40.0	3.38	12.6	12.6																			

* Coefficient (C) adjusted to match Rational Method peak flow in this spreadsheet to the 2D model of the offsite area draining to E inlet at A3 at the time of concentration for the storm sewer system. (5yr: 12.6 cfs @ 40min, 100yr: 54.0 cfs @ 28min)



Project Name: SUNSET CROSSING - BRYAN ROAD PHASE ONE - EXTREME EVENT ANALYSIS
 Project No: 40166-21
 Prepared By: KLB Date: 12/12/2017
 Checked By: MPL Date: 4/17/2018

Jurisdiction: FORT BEND COUNTY
 Design Frequency: 100 year
 Design Multiplier: 1.25
 Starting W.S. Elev.: 80.90 feet

Rainfall Coeff.
 b = 146.2
 d = 15.1
 e = 0.785

Storm Sewer Design Calculations

Manhole No. From	Manhole No. to	INLET Drainage Area (acres)	MH Total Area (acres)	Runoff Coefficient C	Sum Of C * A	Inlet Time of Conc. (min)	System Time of Conc. (min)	Rainfall Intensity I (in/hr)	Drainage Area Flow (cfs)	Sum Of Flows (cfs)	Reach Length (ft)	Diameter (in) or Rise (ft)	Span (ft)	Number of Barrels	Slope %	Manning's Roughness Coefficient "n"	Design Capacity (cfs)	Design Velocity (ft/sec)	Fall (ft)	Manhole Drop (ft)	Flowline Elevation Upstream (ft)	Flowline Elevation Downstream (ft)	Actual Velocity (ft/sec)	Hydraulic Gradient %	Change in Head (ft)	Elevation of Hyd. Grad. Upstream (ft)	Elevation of Hyd. Grad. Downstream (ft)	Top of Curb Elevation Upstream (ft)	Gutter Elevation Upstream (ft)
A1	OUT	0.00	83.41	0.55	23.39	0.0	29.7	7.38	0.0	233.6	149	60		2	0.060	0.013	127.6	3.2	0.09	N/A	73.64	73.55	5.95	0.201	0.30	81.20	80.90	83.39	82.89
A2	A1	1.95	83.41	0.42	23.39	6.1	29.4	7.43	13.6	235.1	134	60		2	0.060	0.013	127.6	3.2	0.08	0.00	73.72	73.64	5.99	0.204	0.27	81.47	81.20	83.15	82.65
A3	A2	2.29	81.46	0.40	21.51	20.7	28.7	7.51	10.1	230.1	220	60		2	0.060	0.013	127.6	3.2	0.13	0.00	73.85	73.72	5.86	0.195	0.43	81.40	81.47	83.25	82.75
A4	A3	2.39	33.07	0.52	17.92	6.8	27.5	7.68	20.1	172.0	318	60		2	0.060	0.013	127.6	3.2	0.19	0.00	74.04	73.85	4.38	0.109	0.35	82.25	81.40	83.35	82.85
A5	A4	0.00	30.68	0.55	16.68	0.0	27.2	7.72	0.0	161.0	113	72		1	0.050	0.013	94.7	3.3	0.06	0.00	74.10	74.04	5.70	0.145	0.16	82.41	82.25	83.73	83.23
A6	A5	0.00	26.61	0.55	14.64	0.0	27.0	7.76	0.0	141.9	78	66		1	0.050	0.013	75.1	3.2	0.04	0.00	74.14	74.10	5.97	0.178	0.14	82.55	82.41	84.23	83.73
B1	A5	1.15	4.07	0.61	2.04	7.8	13.5	10.50	11.0	26.8	194	36		1	0.110	0.013	22.1	3.1	0.21	1.60	75.91	75.70	3.79	0.162	0.31	82.73	82.47	83.48	82.98
B2	B1	0.95	2.92	0.50	1.34	7.8	12.2	10.88	7.4	18.2	285	30		1	0.130	0.013	14.8	3.0	0.37	0.04	76.32	75.95	3.72	0.198	0.56	83.24	82.73	83.96	83.46
B3	B2	1.97	1.97	0.44	0.87	10.5	10.5	11.44	12.4	12.4	259	30		1	0.130	0.013	14.8	3.0	0.34	0.00	76.66	76.32	2.53	0.091	0.24	83.53	83.29	84.11	83.61
Offsite	A3	46.10	46.10	0.12*	5.67	28.0	28.0	7.61	54.0	54.0																			

* Coefficient (C) adjusted to match Rational Method peak flow in this spreadsheet to the 2D model of the offsite area draining to E inlet at A3 at the time of concentration for the storm sewer system. (5yr: 12.6 cfs @ 40min, 100yr: 54.0 cfs @ 28min)

Velocity Based Method		MINIMUM T _c TO USE:						
Sheet Flow		Shallow Concentrated Flow						
0.2		1.0						
INLET ID	Sheet Flow Length L (ft)	Sheet Flow Velocity V (FPS)	Sheet Flow Travel Time t (MIN)	Shallow Flow Length L (ft)	Shallow Flow Velocity V (FPS)	Shallow Flow Travel Time t (MIN)	CALCULATED TIME OF CONCENTRATION (MIN)	TIME OF CONCENTRATION USED (MIN)
A4	15.0	0.2	1.3	335.0	1.0	5.6	6.8	6.8
B1	66.0	0.2	5.5	139.0	1.0	2.3	7.8	7.8
B2	68.0	0.2	5.7	125.0	1.0	2.1	7.8	7.8
B3	36.0	0.2	3.0	300.0	1.0	5.0	8.0	8.0
A2	15.0	0.2	1.3	292.0	1.0	4.9	6.1	6.1
A3	218.0	0.2	18.2	152.0	1.0	2.5	20.7	20.7

BOX CULVERT CALCULATIONS FOR OUTLET CONTROL		Calc HW for known Flow & TW	
(FULL FLOW CONDITIONS - 9'X7' DUAL RCB IN NRG IRRIGATION CANAL)			
Headwater Elev.	(ft)		88.00
Tailwater Elev.	(ft)		87.97
HW	(ft)		7.03
TW	(ft)		7.00
Box Span	(ft)		9
Box Rise	(ft)		7
Downstream Flowline Elev.	(ft)		80.97
Upstream Flowline Elev.	(ft)		81.00
Manning's Roughness, n	-		0.015
Culvert Length, L	(ft)		110.0
Culvert Slope, S ₀	(%)		0.03%
Entrance Loss Coefficient, k _{ent}	-		0.5
Exit Loss Coefficient, k _{ex}	-		1.0
Flow Area (single box), A	(ft ²)		63.00
Wetted Perimeter (single box), P	(ft)		32.00
Box Hydraulic Radius (single pipe), R	(ft)		1.97
Head Loss through Barrel, h _L	(ft)		0.06
Number of Barrels, N	-		2
Total Culvert Capacity, Q _{capacity}	(cfs)		357.3
Total Flow Rate, Q	(cfs)		180.0
Flow Per Barrel, Q _{1 barrel}	(cfs)		90.0
Flow Velocity, V	(fps)		1.4

Runoff Coefficient Calculations

$$C = \frac{\sum \text{Runoff Coefficient} \times \text{Area}}{\text{Total Drainage Area}}$$

Manhole	Total Drainage Area (Acres)	Reserve [0.18]*	Bryan Rd [0.85]*	Offsite Drainage [0.3]*	Rec Center [0.4]**	Calculated Coefficient
B3	2.24	1.360	0.880			0.44
B2	0.95	0.490	0.460			0.50
B1	1.10	0.400	0.700			0.61
A4	2.34	0.353	0.816		1.166	0.52
A3	5.23	0.380	0.547	2.94	1.363	0.40
A2	1.95	1.263	0.687			0.42

*Coefficients are from Table 2-3 Rational Method Runoff Coefficients in the FBDCDM

**Rec center is anticipated to be a playground (C=0.28). Coefficient was increased to 0.4 as parking/pavement is anticipated and ultimate use of space is still to be determined. The offsite drainage is from an undeveloped, cultivated area (C=0.35)

Flow, Q	(cfs)	59.7
Swale Depth, y	(ft)	2.5
Swale Bottom Width, b	(ft)	5
Swale Side Slope, m	-	3
Manning's n value	-	0.04
Normal Depth, y _n	(ft)	2.35
E Inlet Opening Height	(ft)	1
E Inlet Opening Width (per side)	(ft)	4
Applied Head to centroid of opening, h	(ft)	1.85

$$Q_{inlet} = C * A * \sqrt{2 * g * h}$$

Inlet Coeff	-	0.8
Opening Area (per side)	(sf)	4.00
Flow (per side)	-	34.9
Number of Openings	-	4
Total Flow into E Inlet	(cfs)	139.8

DATE: _____

NO. REVISION: _____

Robert M. Preiss
4.16.18

PAPE-DAWSON ENGINEERS

HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.426.2400
 TUBE FIRM REGISTRATION #472-1 TPLS FIRM REGISTRATION #10189974

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS

STORM SEWER DESIGN CALCULATIONS

PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED AG DRAWN ALL

APPROVED: _____
 FORT BEND COUNTY DEVELOPMENT COORDINATOR

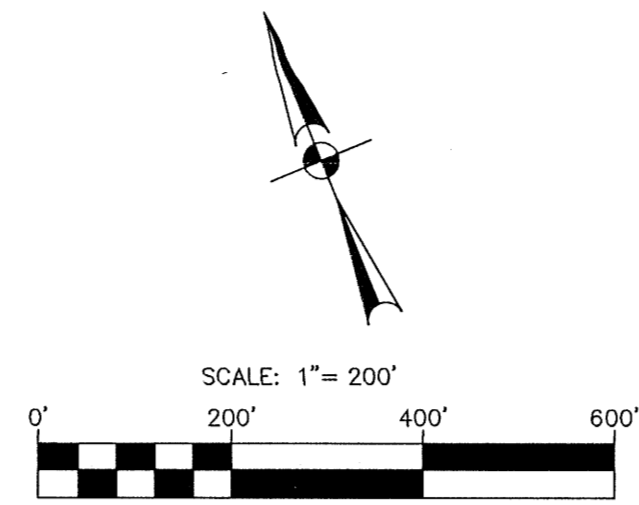
DATE: _____

APPROVED: _____
 FORT BEND COUNTY ENGINEERING DEPARTMENT
 MAY 07 2018
 Valid One Year From Date

SHEET 8 OF 44

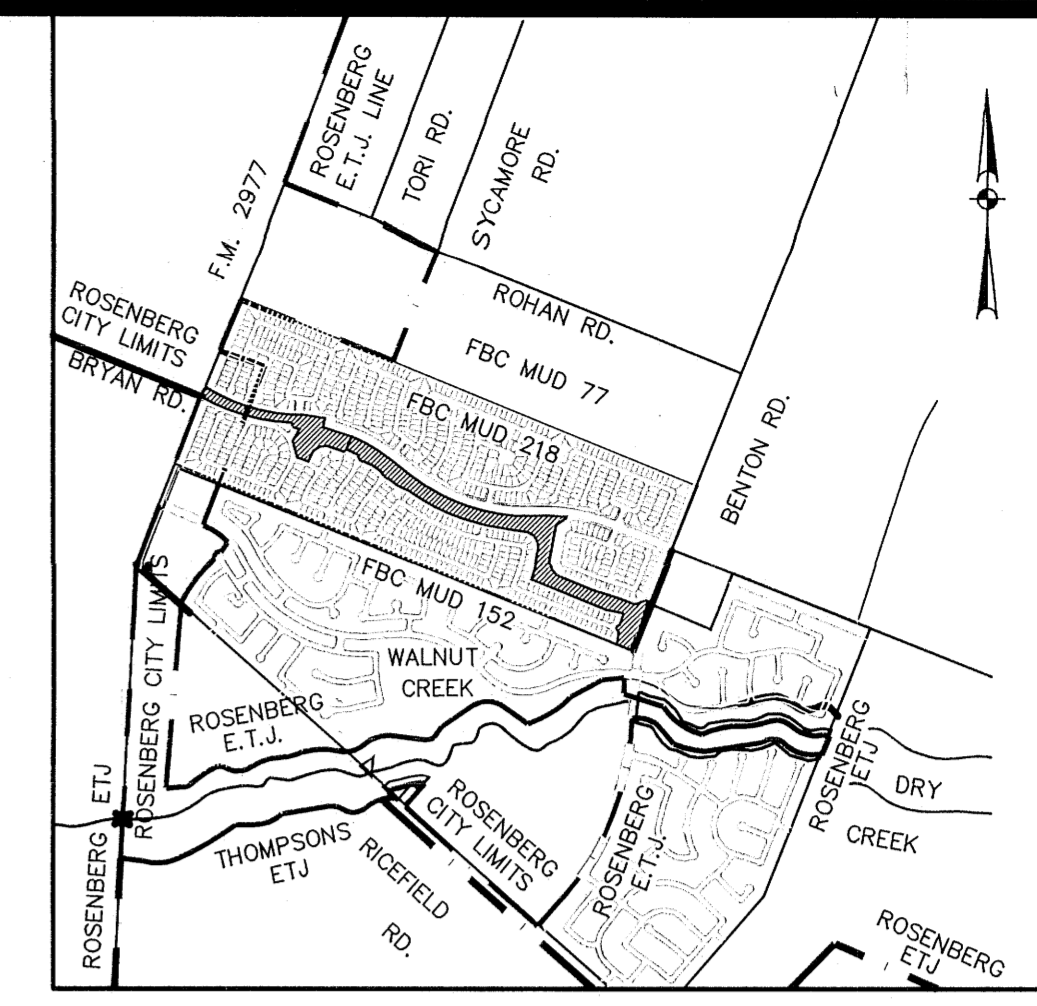
Date: Apr 25, 2018, 10:56am User ID: ANKBYON File: K:\Projects\40166-21\Drawings\40166-21-01-Storm\40166-21-01-Storm.dwg

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LEGEND

	PLAT BOUNDARY
	EXISTING CONTOUR
	EXISTING GAS LINE
	EXISTING TELECOMM DUCTBANK
	EXISTING OVERHEAD ELECTRIC LINE
	RESTRICTED RESERVE
	BENCHMARK
	SURVEY CONTROL
	PROPOSED SHEET FLOW ROUTE
	EXISTING DRAINAGE FLOW ROUTE
	DRAINAGE FLOW ROUTE
	DRAINAGE AREA
	DRAINAGE AREA FLOW PATH (SEE TIME OF CONCENTRATION CALCULATIONS FOR MORE INFORMATION)
	EXCAVATION & FILL AREA WITHIN SUNSET CROSSING BRYAN RD PH ONE
	FILL AREA WITHIN SUNSET CROSSING MASS GRADE

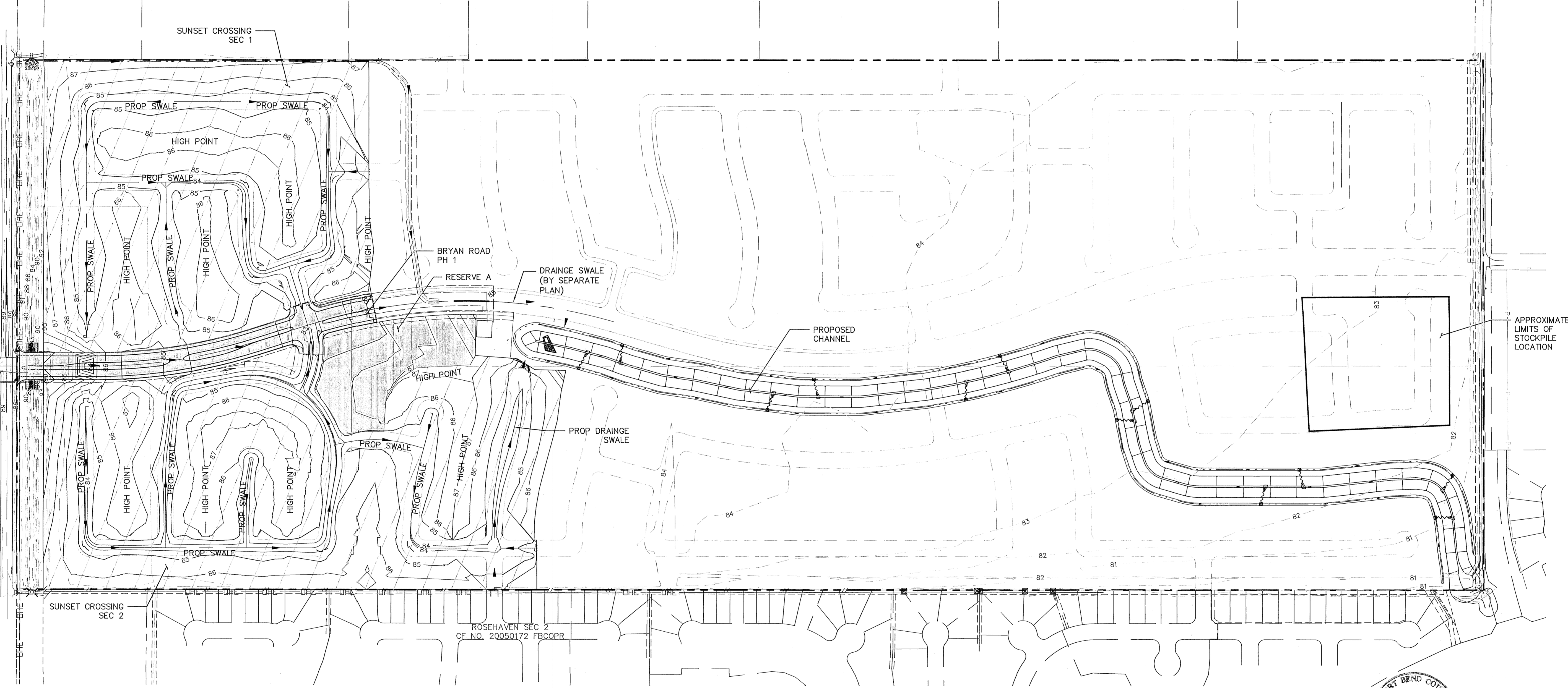


LOCATION MAP
SCALE: NTS
MAP REF: KEY MAP 691H

4.1687 ACRES
HV ASSET, LLC
CF NO. 2014072568 FBCOPR

27.550 ACRES
COMMUNITY FOCUS FOUNDATION
A TEXAS FOUNDATION
CF NO. 2013053643 FBCOPR

16.313 ACRES
COMMUNITY FOCUS FOUNDATION
A TEXAS NONPROFIT CORP.
CF NO. 2013053643 FBCOPR



NO.	REVISION	DATE



**PAPE-DAWSON
ENGINEERS**

HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.423.2400
TYPE FIRM REGISTRATION #479 | TEPUS FIRM REGISTRATION #0189874

SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS
OVERALL MASS GRADING



APPROVED: _____
FORT BEND COUNTY
DEVELOPMENT COORDINATOR

DATE: _____

PLAT NO.	40166-20
JOB NO.	40166-21
DATE	MARCH 2018
DESIGNER	LS
CHECKED	CV
DRAWN	ALL
SHEET	9 OF 44

Date: May 23, 2018, 3:52pm, User ID: ANEWTON
File: C:\Projects\40166\2-D Design\2-1 Civil\DWG_SUNSET_BRYAN_ROAD\CSA-4016600-MG-BRYN-PH1.dwg

100' WIDE CANAL EASEMENT
(VOL. 132, PG. 582 FBDDR
VOL. 749, PG. 58 FBDDR, AND
CF NO. 2002094438 FBDDR)

0.476 ACRE
ROW ESM
(VOL. 522, PG. 45 FBDDR)

REMAINDER PORTION
CALL 31 ACRES
ADOLPH & MARY LUBOJACKY
FILE NO. 1948054008
ORFBC

MINONITE ROAD / FM 2977
(100' CSJ NO. 3048-1-4)

LEFT TURN LANE
(BY SEPARATE PLAN)

TBM-A

PROPOSED ASPHALT DRIVEWAY

METAL GUARDRAIL
(SEE SHEET 44 OF 44 FOR DETAILS)

EX. 16" WL

EX. 16" WL

EX. 16" WL

EX. 16" WL

EX. 16" WL

EX. 16" WL

EX. 16" WL

EX. 16" WL

EX. 16" WL

EX. 16" WL

EX. 16" WL

EX. 16" WL

EX. 16" WL

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EX. 16" WL

EX. 16" WL

EX. 16" WL

EX. 16" WL

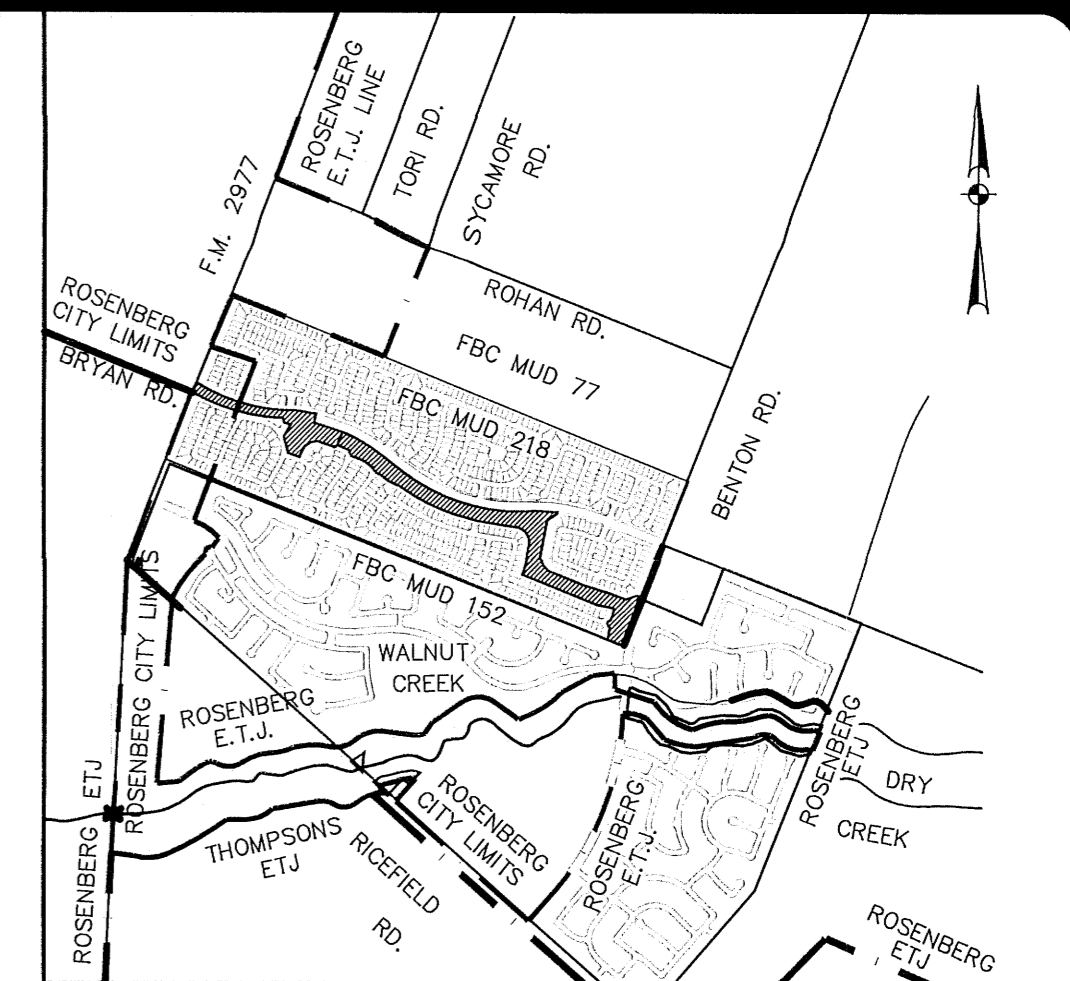
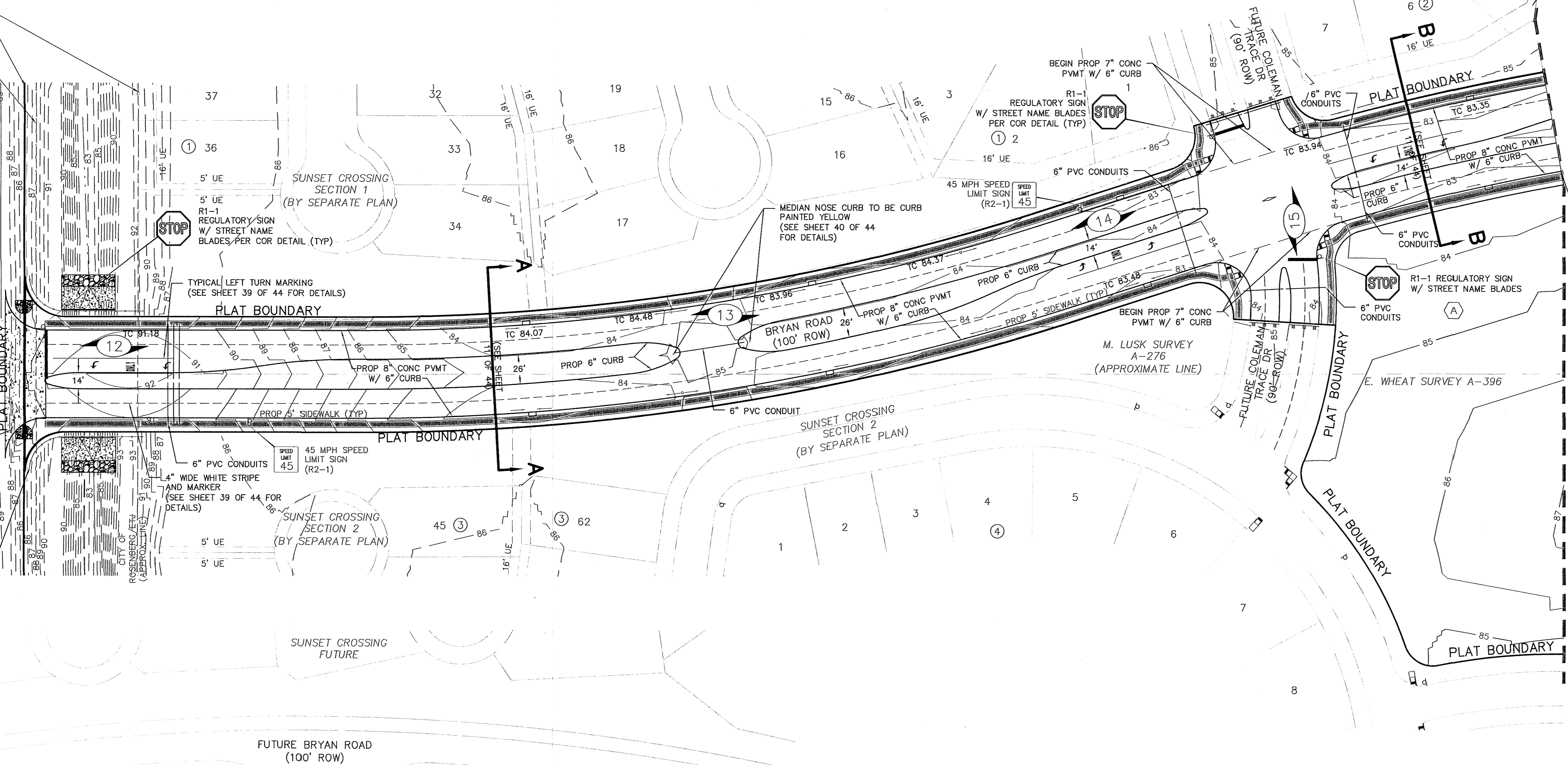
EX. 16" WL

EX. 16" WL

EX. 16" WL

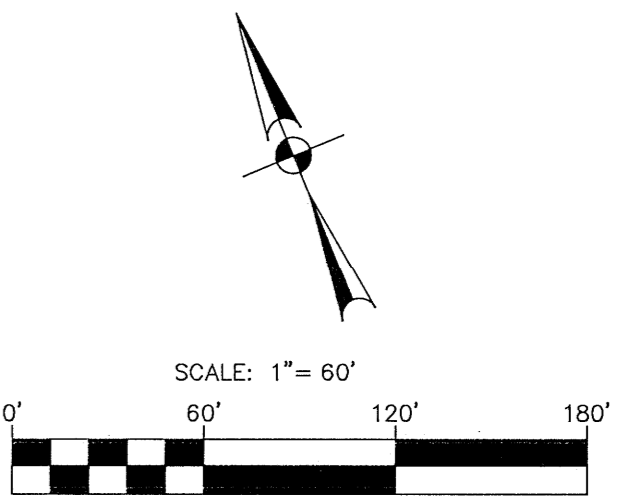
EX. 16" WL

EX. 16" WL



STA 24+69.72
END PROP 7" CONC
PWMT W/ 6" CURB,
STD PAVING HEADER,
AND LOAD TRANSFER
DEVICE, TC ± 83.57

SCALE: NTS
MAP REF: KEY MAP 691H



BENCHMARK:
TBM-A
CUT "X" IN CONCRETE HEADWALL
N: 13754207.4200 E: 3001494.1400 ELEV: 88.17

FIRM FLOOD INSURANCE RATE MAP
FORT BEND COUNTY COMMUNITY
MAP 4185700285L, PANEL 265 OF 575,
DATED APRIL 2, 2014.
BASE FLOOD ELEVATION = 78.5

NOTE:
WHEN MUD DISSOLVES, HOA IS
RESPONSIBLE FOR MAINTENANCE OF
DRAINAGE CHANNELS AND
INFRASTRUCTURE.

LEGEND			
	PLAT BOUNDARY		TRAFFIC SIGN (PER COR DETAIL)
	PROPOSED CONTOUR		CURB RAMP
	EXISTING CONTOUR		EXISTING CURB RAMP
	FLOW ARROW		COH TYPE III BARRICADE
	HIGH POINT		1-6" PVC CONDUIT (IRRIGATION SVC)
	PROPOSED BUILDING SETBACK LINE		DRY APPLICATION SEEDING IN ACCORDANCE WITH HCFCD SPECIFICATION 02921 (WITH STRAW MAT AND CURLEX EROSION CONTROL BLANKET)
	EXISTING UTILITY EASEMENT		GRADE BREAK
	SPOT GRADE		MINIMUM FINISHED FLOOR ELEVATION
	TOP OF CURB ELEVATION AT HIGH POINT AND AT INLET		STOP SIGN/STREET NAME SIGN (PER COR DETAIL)
	CURB INLET		ELEVATION BENCHMARK BRASS DISC IN CONCRETE
	RESTRICTED RESERVE		PROP 5" WIDE SIDEWALK, BUILT BY PAVING CONTRACTOR
	BLOCK NUMBER		PROP 5" WIDE SIDEWALK, BUILT BY HOME BUILDER
	SHEET REFERENCE NUMBER		BENCHMARK
	PROPOSED PAVEMENT W/ 6" CONCRETE CURB		SURVEY CONTROL

MATCHLINE SEE THIS SHEET

MATCHLINE SEE THIS SHEET

Date: Apr 13, 2018 1:22pm User: id_@bricks
File: C:\projects\1805\1805_001\1805_001.dwg Design: C:\1\CHANDWISS_BRYAN ROAD\07-C016600-GROU-GRD-PLAN-PH1.dwg

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NO.	REVISION	DATE

STATE OF TEXAS
ROBERT M. PREISS
92978
LICENSED PROFESSIONAL ENGINEER
4/13/18
Robert M. Preiss

PAPE-DAWSON ENGINEERS
HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10850 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.462.2400
TYPE FIRM REGISTRATION #479 | TYPE FIRM REGISTRATION #193874

SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS
GRADING & PAVING LAYOUT

APPROVED
MAY 07 2018
Valid One Year
From Date

CITY OF ROSENBERG
FOUNDED 1889

APPROVED: _____
FORT BEND COUNTY
DEVELOPMENT COORDINATOR

DATE: _____

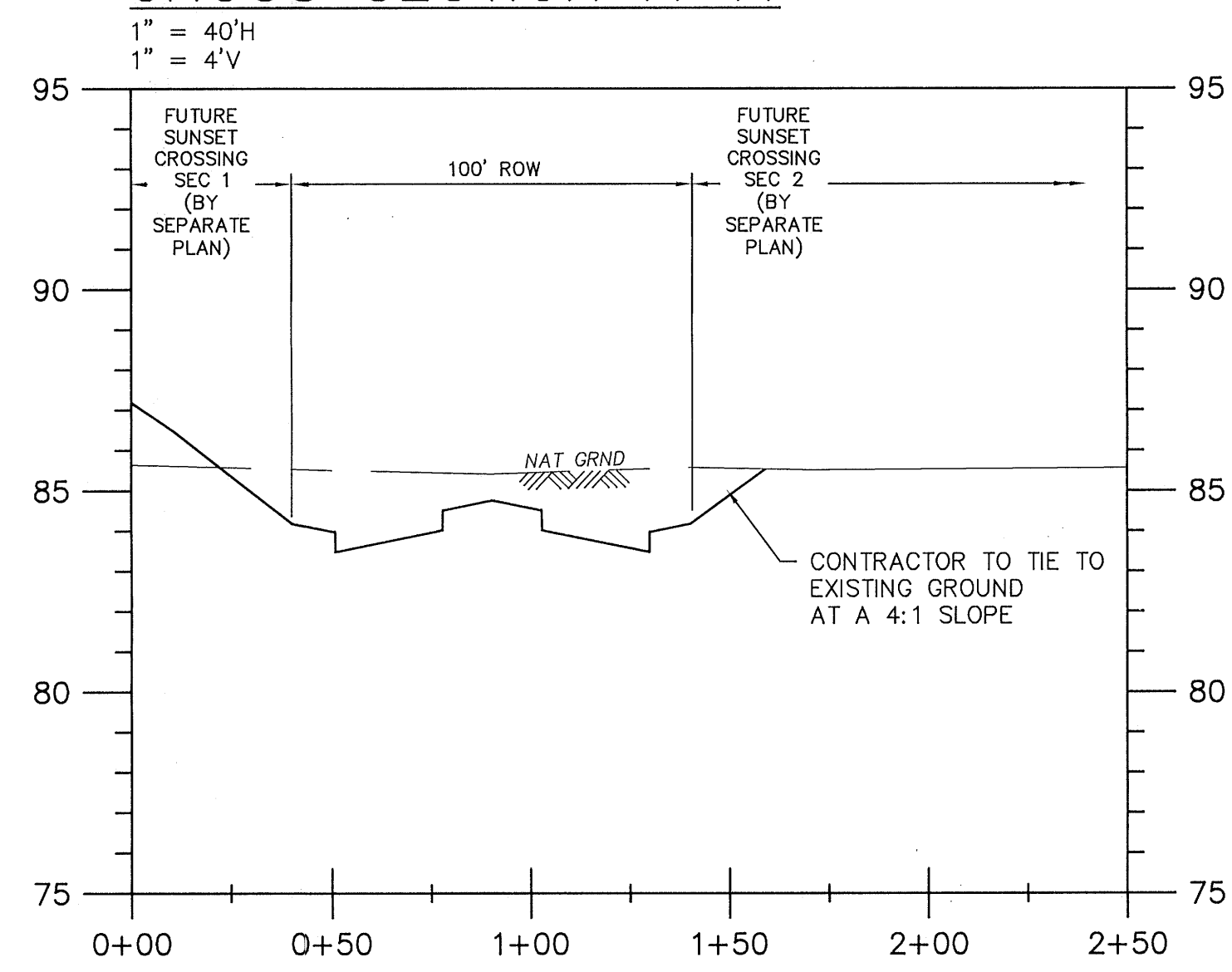
PLAT NO.	40166-20
JOB NO.	40166-21
DATE	MARCH 2018
DESIGNER	LS
CHECKED	DRAWN ALL
SHEET	10 OF 44

PERMIT SET

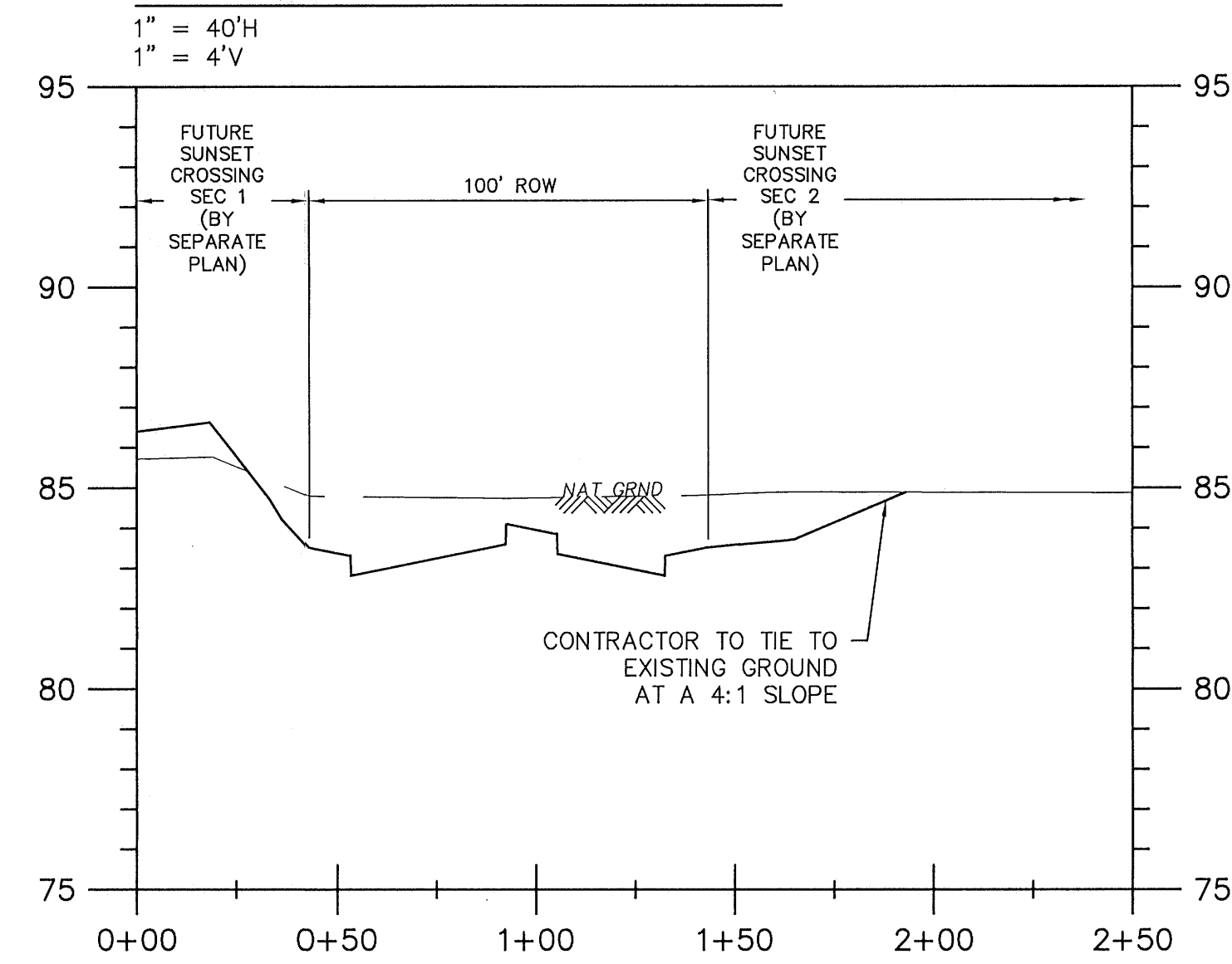
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CROSS SECTION A-A

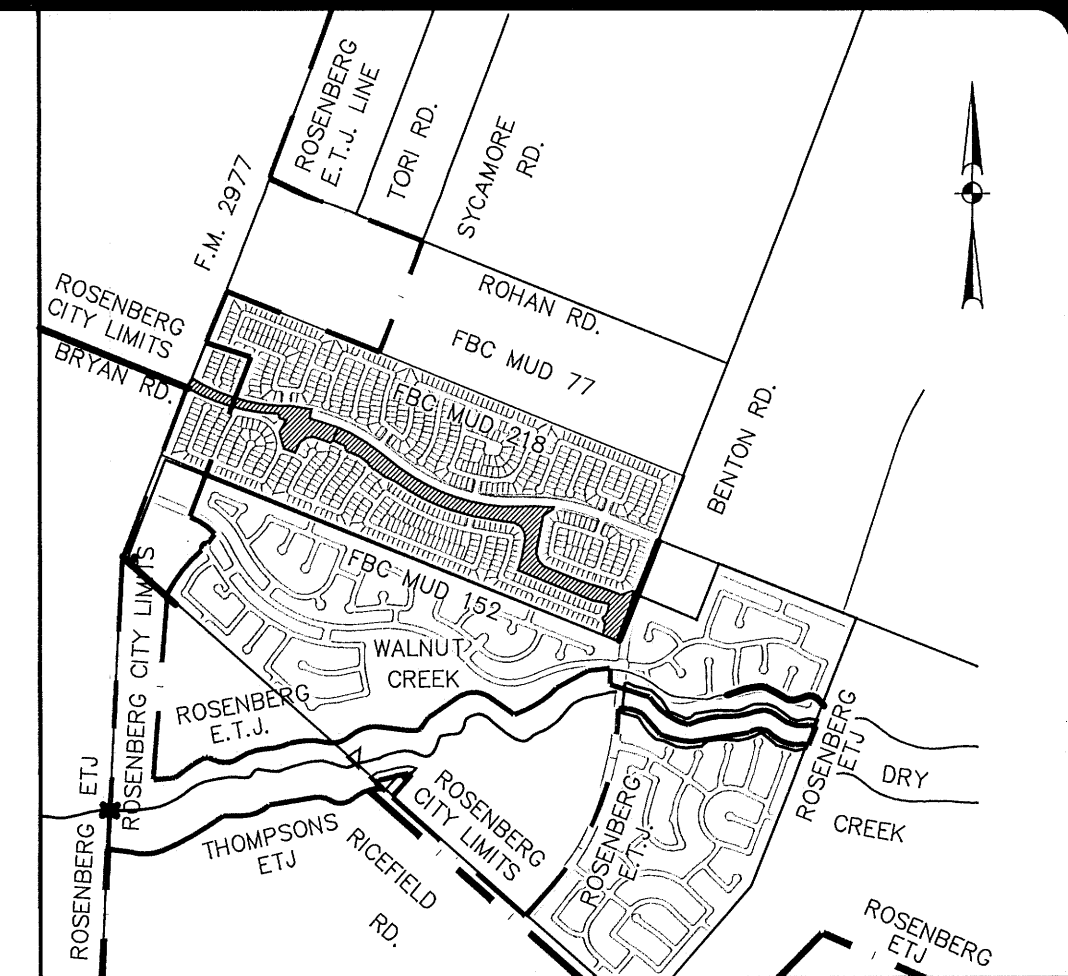


CROSS SECTION B-B

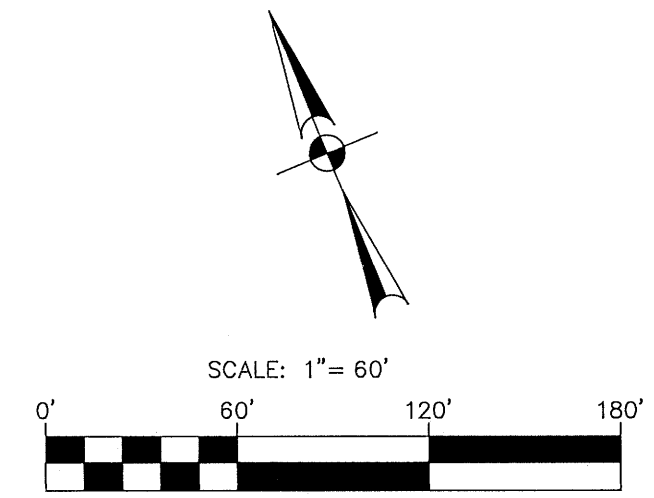


LEGEND

- PLAT BOUNDARY
- 48" PROPOSED CONTOUR
- PROP PROPOSED
- BL BUILDING SETBACK LINE
- EX EXISTING
- UE UTILITY EASEMENT
- PROPOSED PAVEMENT
- W/ 6" CONCRETE CURB



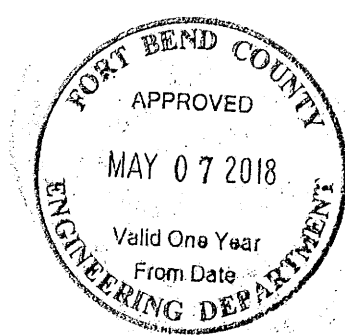
LOCATION MAP
 SCALE: NTS
 MAP REF: KEY MAP 691H



BENCHMARK:

TBM-A
 CUT "X" IN CONCRETE HEADWALL
 N:13754207.4200 E: 3001494.1400 ELEV: 88.17'
 FIRM FLOOD INSURANCE RATE MAP
 FORT BEND COUNTY COMMUNITY
 MAP 41857C0265L PANEL 265 OF 575,
 DATED APRIL 2, 2014.
 BASE FLOOD ELEVATION = 78.5

NOTE:
 WHEN MUD DISSOLVES, HOA IS
 RESPONSIBLE FOR MAINTENANCE OF
 DRAINAGE CHANNELS AND
 INFRASTRUCTURE.



APPROVED: _____
 FORT BEND COUNTY
 DEVELOPMENT COORDINATOR
 DATE: _____

NO.	REVISION	DATE

STATE OF TEXAS
 PROFESSIONAL ENGINEER
 LICENSE NO. 92978
 4/13/18
Robert M. Pfeiffer

PAPE-DAWSON ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10850 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713-228-2400
 TEXAS ENGINEERING REGISTRATION #161019874

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 GRADING CROSS SECTIONS

PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED DRAWN ALL
 SHEET 11 OF 44

10+00
1~16" X 12" TS&V
1~10" GV & BOX
1~2" BOV & BOX

POINT:	STATION:	OFFSET:	ELEV:
1	11+20.26	8.665 R	91.05
2	11+20.26	3.335 R	91.16
3	11+47.85	13.000 R	91.17
4	11+47.85	-1.000 L	91.41
5	12+31.62	-1.000 L	91.46
6	13+08.95	-7.018 L	89.81
7	13+88.95	-13.028 L	86.32
8	13+99.51	13.000 R	86.01
9	16+35.50	13.000 R	84.17
10	16+37.30	-13.000 L	84.18

POINT:	STATION:	OFFSET:	ELEV:
11	16+74.09	4.638 R	85.11
12	16+74.16	-4.806 L	85.10
13	17+31.88	-4.806 L	84.89
14	17+31.95	4.638 R	84.90
15	17+68.74	-13.000 L	83.92
16	17+70.54	13.000 R	83.92
17	18+61.42	13.000 R	83.97
18	19+60.28	5.532 R	84.72
19	20+00.00	2.000 R	84.06
20	20+10.45	-13.000 L	83.77

13+64
1~12" X 6" TEE
1~6" GV & BOX
1-FH

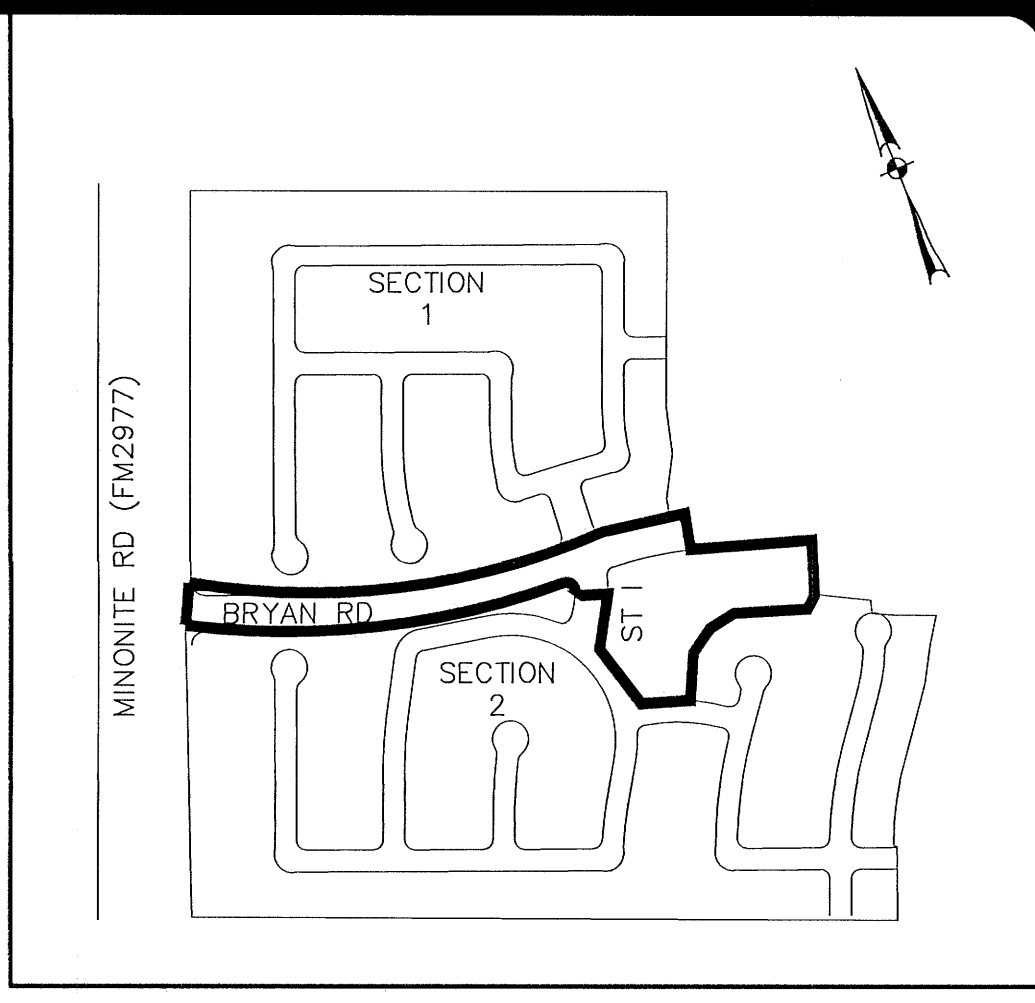
17+64
1~12" GV & BOX
1~10" GV & BOX

17+78
1~12" X 6" TEE
1~6" GV & BOX
1-FH

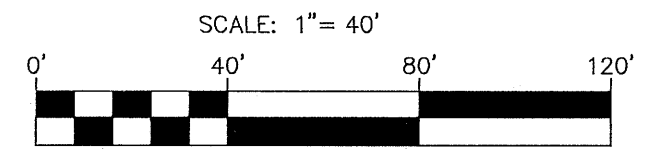
CL CURVE DATA 1
PC = 13+99.51
Δ = 17°50'08"
R = 2000.00'
L = 610.94'
PT = 20+10.45

BENCHMARK:
TBM-A
CUT "C" IN CONCRETE HEADWALL
N: 13754207.4200 E: 3001494.1400 ELEV: 88.17'
FIRM FLOOD INSURANCE RATE MAP
FORT BEND COUNTY COMMUNITY
MAP 41857C0285L PANEL 265 OF 575,
DATED APRIL 2 2014.
BASE FLOOD ELEVATION = 78.5

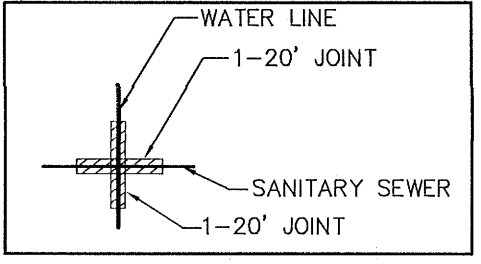
WHEN MUD DISSOLVES, HOA IS RESPONSIBLE FOR MAINTENANCE OF DRAINAGE CHANNELS AND INFRASTRUCTURE.



LOCATION MAP
SCALE: NTS
MAP REF: KEY MAP 691H



HORIZONTAL SCALE 1" = 40' H
VERTICAL SCALE 1" = 4' V



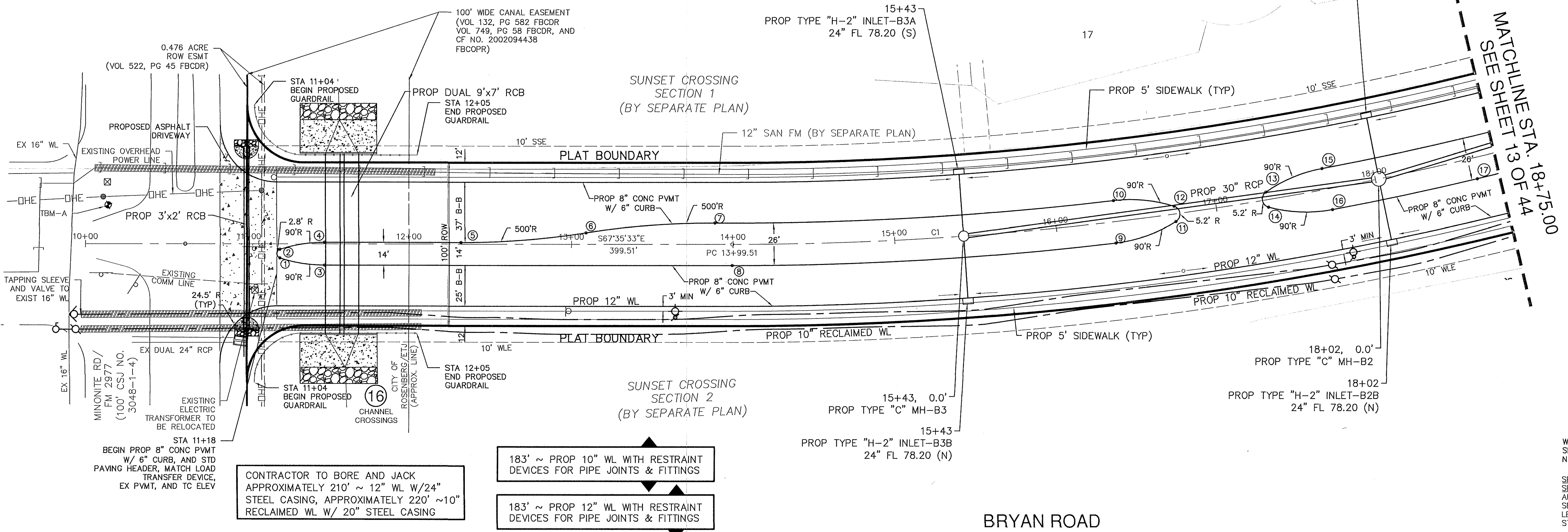
WATER LINE & SANITARY SEWER CROSSING
SEE NOTE #7 OF SPECIAL CONSTRUCTION NOTES SHEET 2 OF 44.

SPECIAL BACKFILL REQUIREMENTS FOR STORM SEWER AND SANITARY SEWER LATERALS:
ALL SANITARY SEWER LEADS CROSSING STORM SEWER, WITH A CLEARANCE OF 1-FOOT OR LESS, MUST BE BACKFILLED WITH CEMENT STABILIZED SAND BETWEEN THE TWO UTILITIES.

ALL WATERLINE FITTINGS (EXCEPT FITTINGS FOR STEEL PIPE) SHALL BE MECHANICAL JOINTS

WATER METER SHALL BE SET ONE (1) FOOT INSIDE ROW OR IN ADJACENT WATER LINE EASEMENT

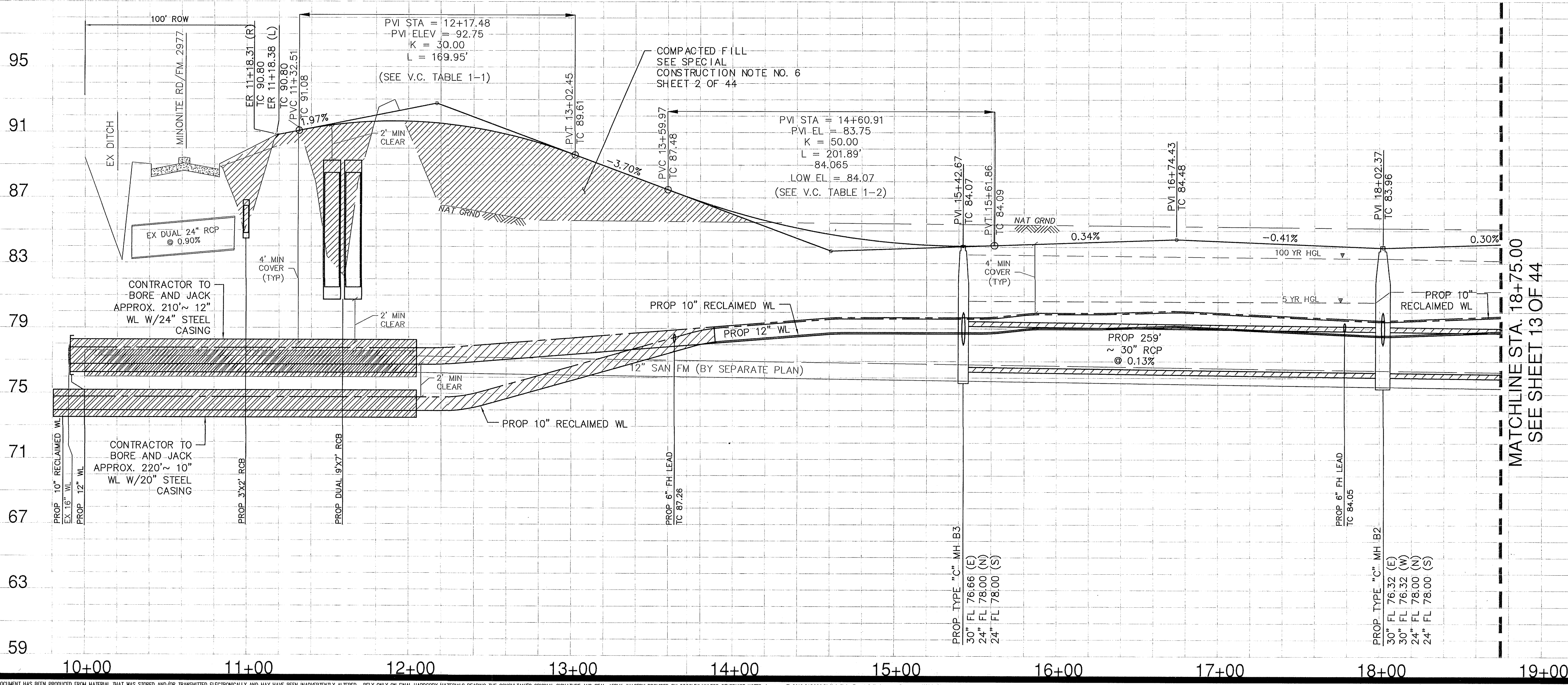
CONTRACTOR TO TRANSITION CURB HEIGHT AT EACH INLET FROM 4" TO 6" BEGINNING 10' EITHER SIDE OF INLET OPENING AS PER "TYPICAL CURB TRANSITION" DETAIL ON SHEET 38 OF 44.



CONTRACTOR TO BORE AND JACK APPROXIMATELY 210' ~ 12" WL W/24" STEEL CASING, APPROXIMATELY 220' ~ 10" RECLAIMED WL W/ 20" STEEL CASING

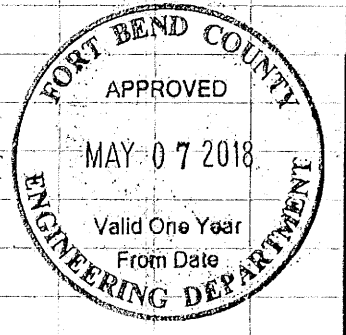
183' ~ PROP 10" WL WITH RESTRAINT DEVICES FOR PIPE JOINTS & FITTINGS

183' ~ PROP 12" WL WITH RESTRAINT DEVICES FOR PIPE JOINTS & FITTINGS



Station	Elevation
11+32.51	91.078'
11+42.51	91.258'
11+52.51	91.405'
11+62.51	91.518'
11+72.51	91.598'
11+82.51	91.645'
11+92.51	91.659'
12+02.51	91.639'
12+12.51	91.585'
12+17.48	91.547'
12+22.51	91.499'
12+32.51	91.379'
12+42.51	91.226'
12+52.51	91.039'
12+62.51	90.819'
12+72.51	90.566'
12+82.51	90.279'
12+92.51	89.960'
13+02.45	89.609'

Station	Elevation
13+59.97	87.482'
13+69.97	87.122'
13+79.97	86.783'
13+89.97	86.463'
13+99.97	86.163'
14+09.97	85.883'
14+19.97	85.624'
14+29.97	85.384'
14+39.97	85.164'
14+49.97	84.965'
14+59.97	84.785'
14+60.91	84.769'
14+69.97	84.625'
14+79.97	84.485'
14+89.97	84.366'
14+99.97	84.266'
15+09.97	84.186'
15+19.97	84.127'
15+29.97	84.087'
15+39.97	84.067'
15+49.97	84.068'
15+59.97	84.088'
15+61.86	84.094'
15+61.86	84.094'



APPROVED: FORT BEND COUNTY DEVELOPMENT COORDINATOR
DATE: _____

DATE: _____
NO. REVISION: _____

STATE OF TEXAS
ROBERT M. PREISS
92978
LICENSED PROFESSIONAL ENGINEER

4/30/18
Robert M. Preiss

PAPE-DAWSON ENGINEERS
HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.425.2400
TYPE FIRM REGISTRATION #476 | TPELS FIRM REGISTRATION #1016974

SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS
P&P - BRYAN RD (STA BEGIN TO 18+75)

PLAT NO. 40166-20
JOB NO. 40166-21
DATE MARCH 2018
DESIGNER LS
CHECKED DRAWN ALL

SHEET 12 OF 44

File: Apr 30, 2018, 10:45am, User: J. M. WATSON
Path: \\pape-dawson.com\design\2018\03\DWGSS_BRYAN_BROAD\11-40166-00-BRYAN-P&P.dwg

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CL CURVE DATA 2
 PC = 20+11.50
 Δ = 33°30'07"
 R = 2000.00'
 L = 1169.443'
 PT = 33+80.94

27+66
 1~12" X 6" TEE
 1~6" GV & BOX
 1~FH

29+90
 2~2" BOV & BOX
 1~12" GV & BOX
 1~10" GV & BOX

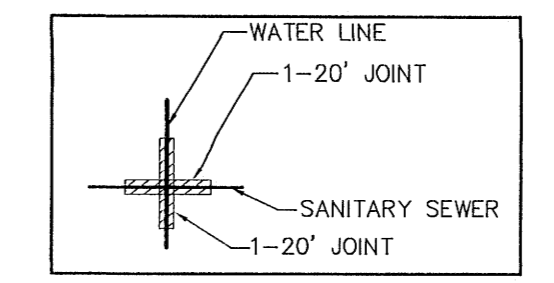
ALL WATERLINE FITTINGS (EXCEPT FITTINGS FOR STEEL PIPE) SHALL BE MECHANICAL JOINTS

WATER METER SHALL BE SET ONE (1) FOOT INSIDE ROW OR IN ADJACENT WATER LINE EASEMENT

CONTRACTOR TO TRANSITION CURB HEIGHT AT EACH INLET FROM 4" TO 6" BEGINNING 10' EITHER SIDE OF INLET OPENING AS PER "TYPICAL CURB TRANSITION" DETAIL ON SHEET 38 OF 44.

BENCHMARK:
 TBM-A
 CUT "X" IN CONCRETE HEADWALL
 N:13754207.4200 E: 3001494.1400 ELEV: 88.17'

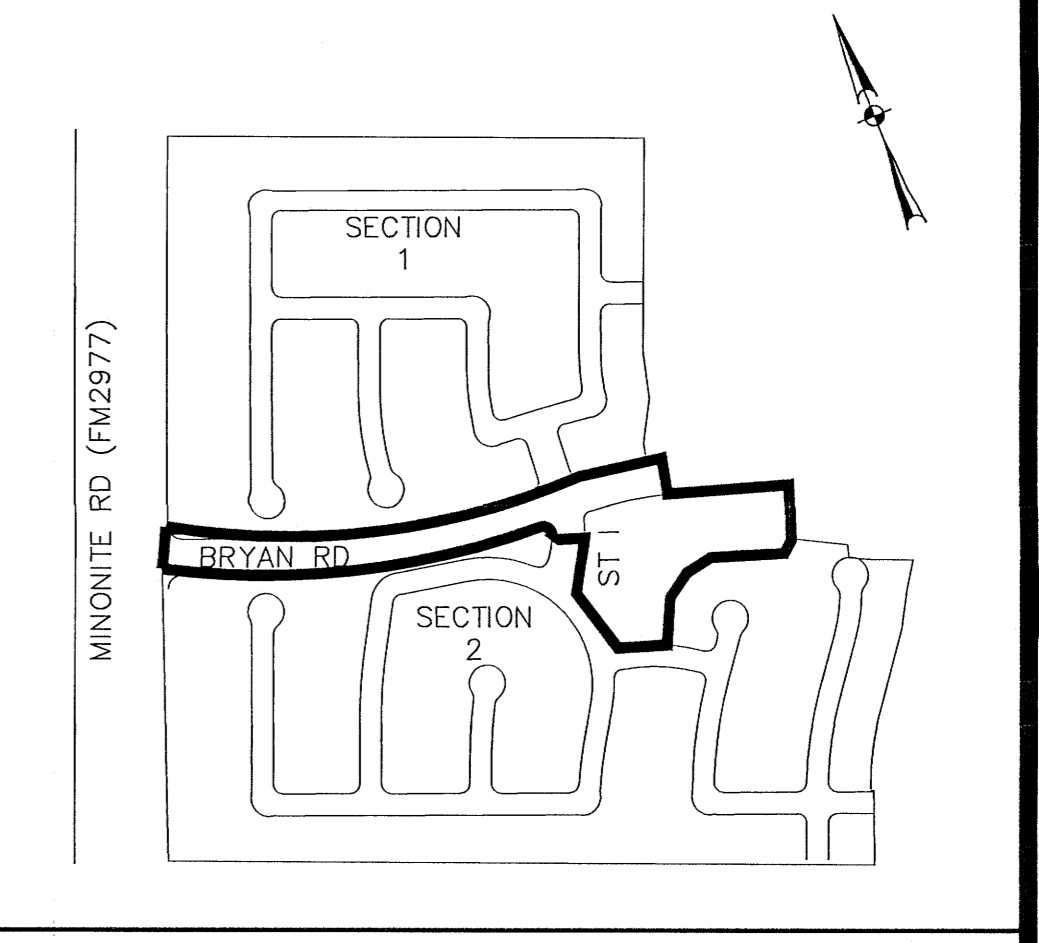
FIRM FLOOD INSURANCE RATE MAP
 FORT BEND COUNTY COMMUNITY
 MAP #8157C0245, PANEL 245 OF 575
 DATED APRIL 2, 2014
 BASE FLOOD ELEVATION = 78.5



WATER LINE & SANITARY SEWER CROSSING
 SEE NOTE #7 OF SPECIAL CONSTRUCTION NOTES SHEET 2 OF 44.

NOTE:
 1. WATER METERS SHALL END 1 FOOT WITHIN WLE OR ROW.
 2. JUNCTION BOX TO HAVE MANHOLE ACCESS.

SPECIAL BACKFILL REQUIREMENTS FOR STORM SEWER AND SANITARY SEWER LATERALS:
 ALL SANITARY SEWER LEADS CROSSING STORM SEWER, WITH A CLEARANCE OF 1-FOOT OR LESS, MUST BE BACKFILLED WITH CEMENT STABILIZED SAND BETWEEN THE TWO UTILITIES.



LOCATION MAP
 SCALE: NTS
 MAP REF: KEY MAP 691H

DATE: _____

NO. REVISION: _____

4/30/18

ROBERT M. PREISS
 LICENSED PROFESSIONAL ENGINEER
 92978

PAPE-DAWSON ENGINEERS

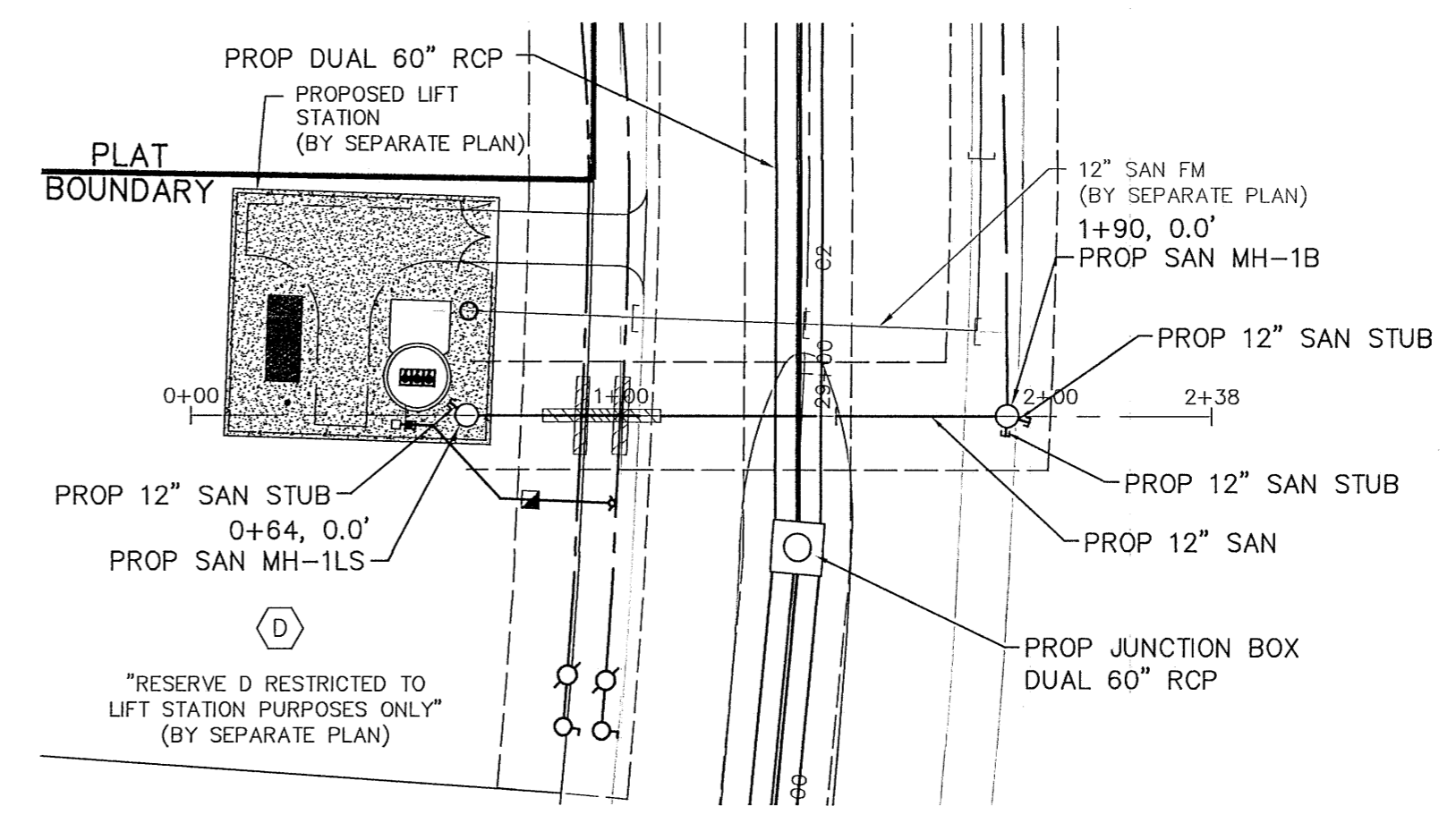
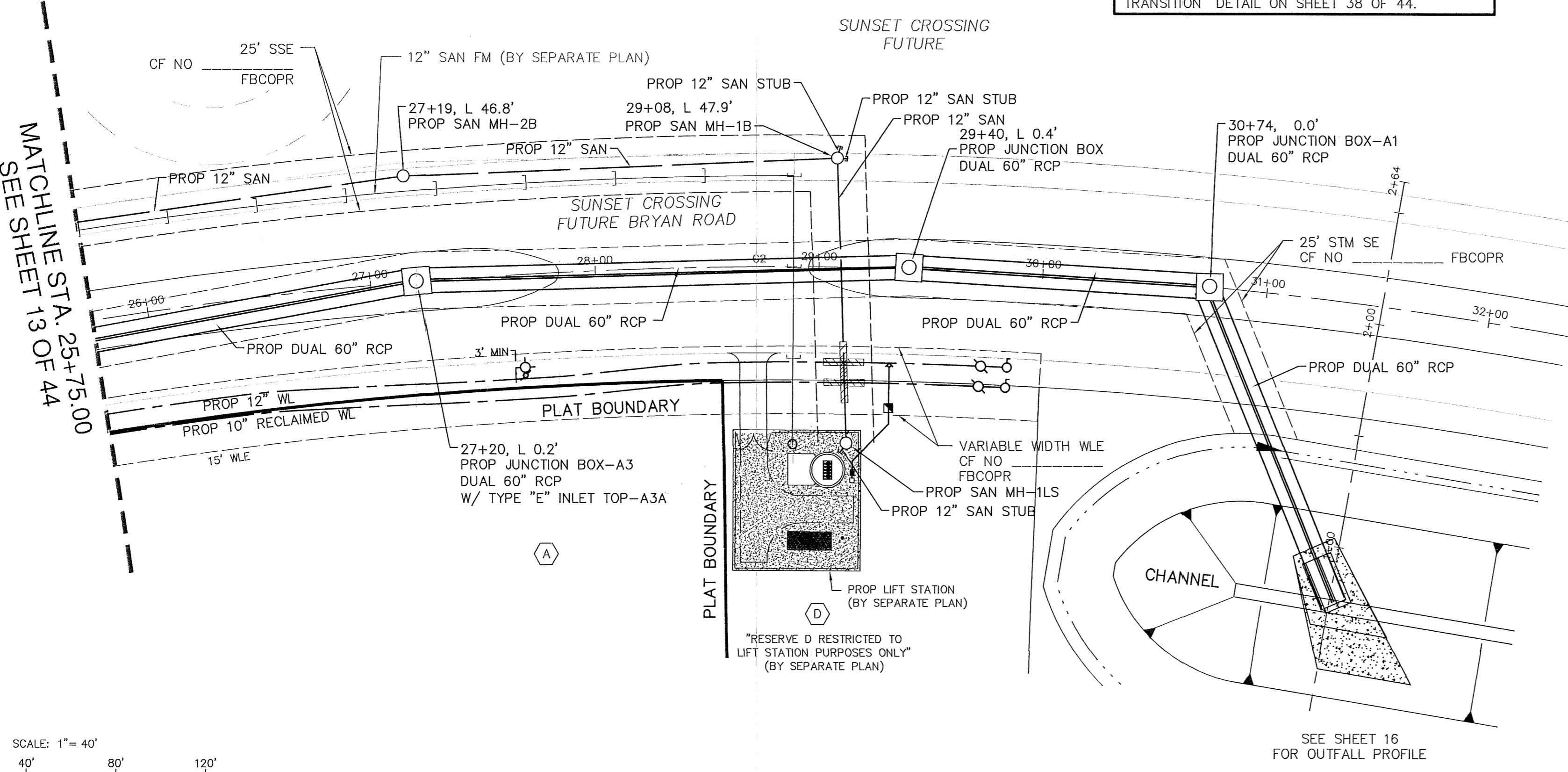
HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10850 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
 TPEL FIRM REGISTRATION #475 | TPELS FIRM REGISTRATION #1098974

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS

P&P - BRYAN RD (STA 25+75 TO END)

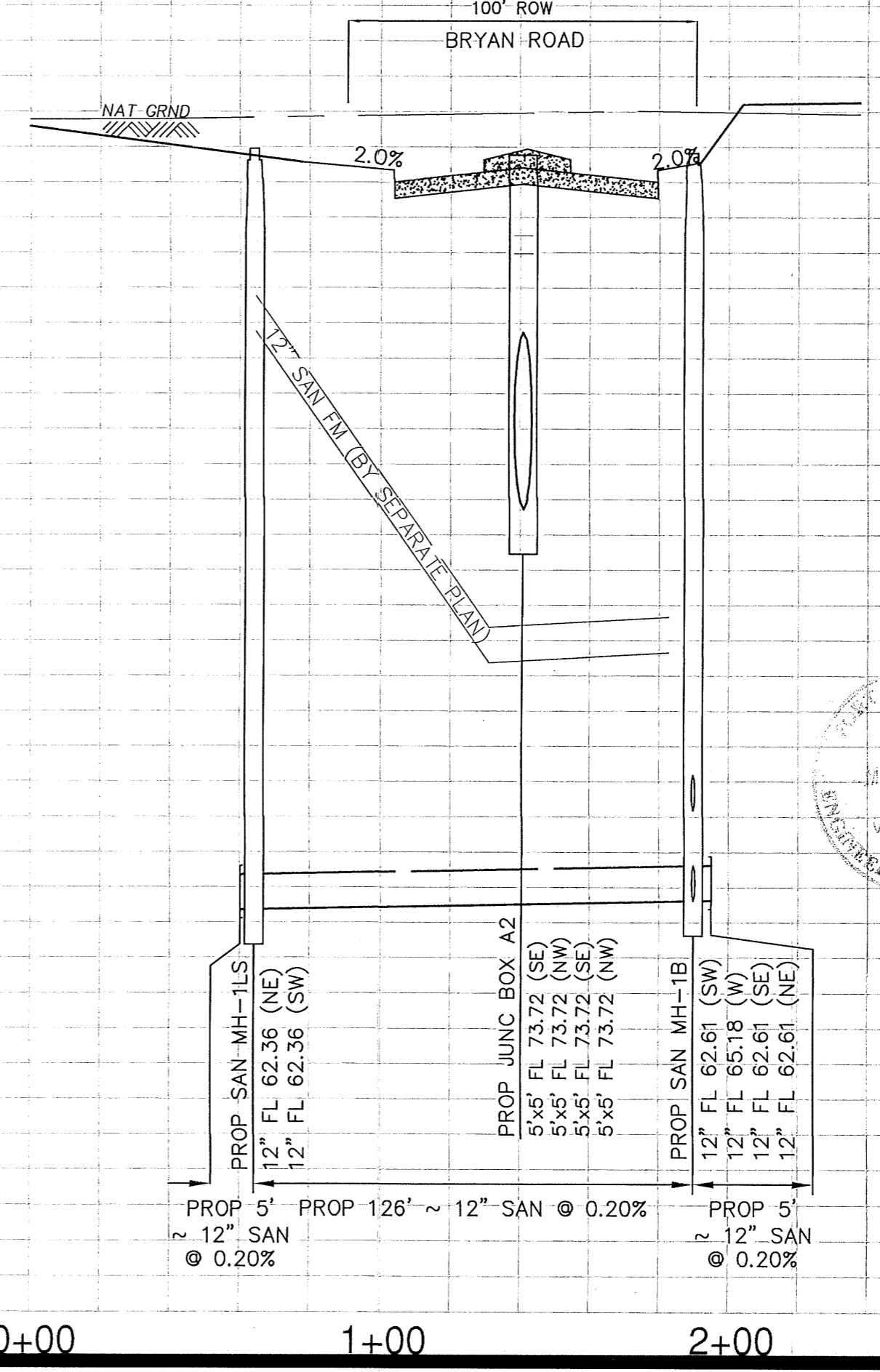
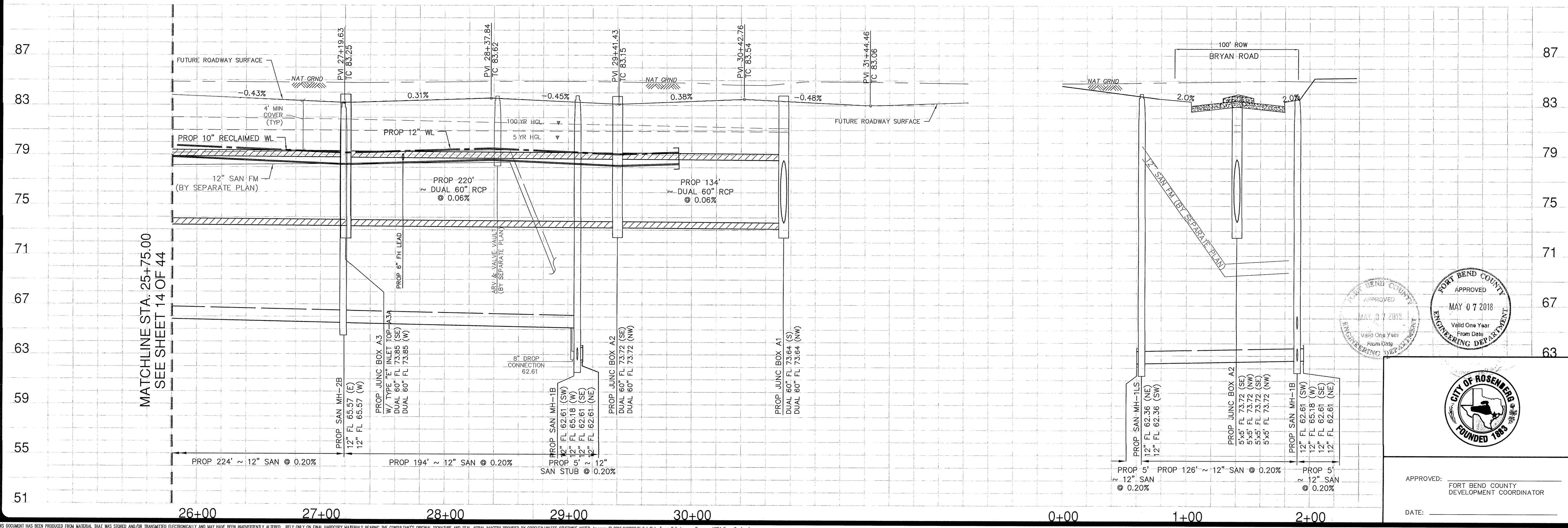
PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED DRAWN ALL

SHEET 14 OF 44



BRYAN ROAD LIFT STATION

HORIZONTAL SCALE 1" = 40' H
 VERTICAL SCALE: 1" = 4' V



APPROVED
 MAY 07 2018
 Valid One Year
 From Date

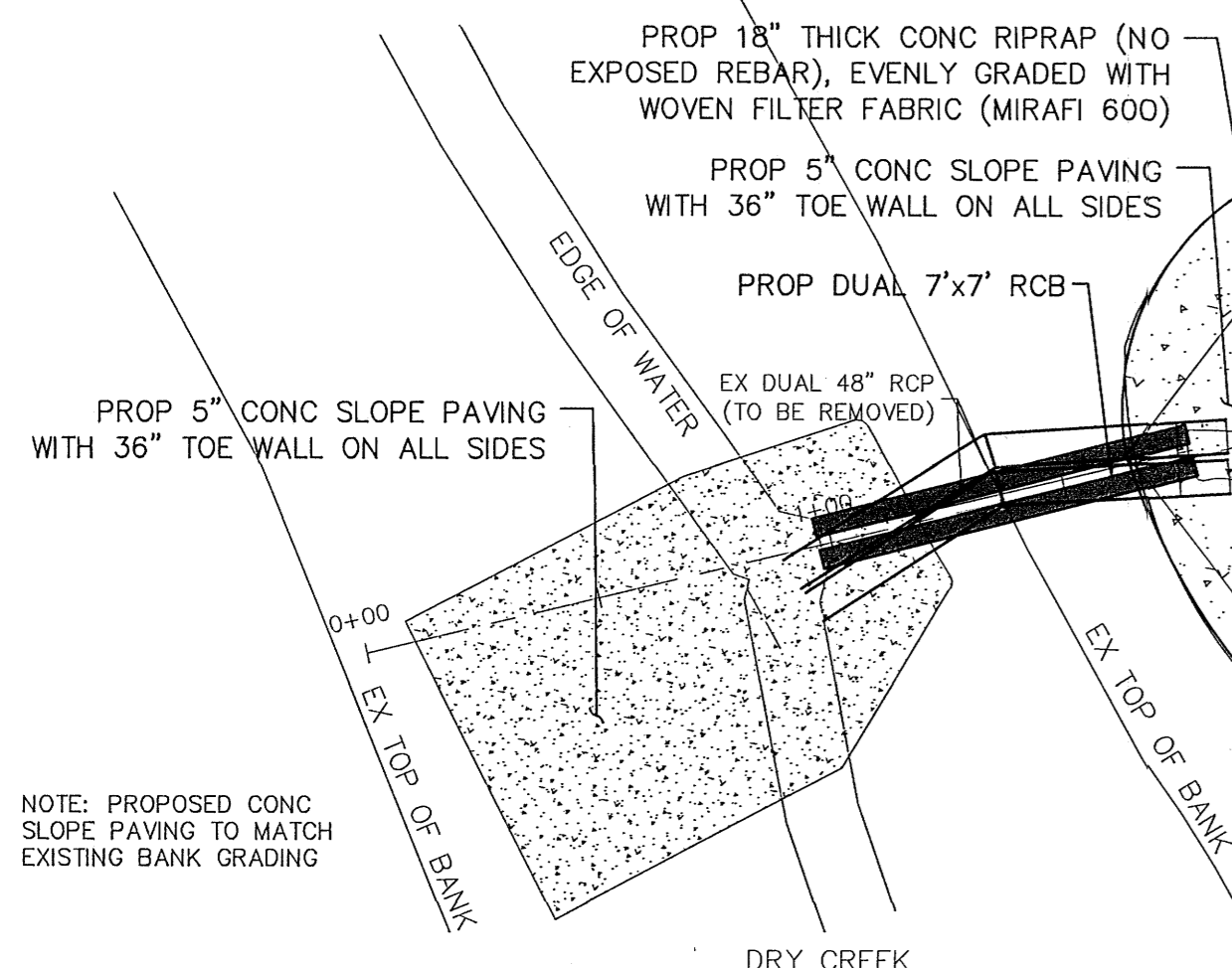
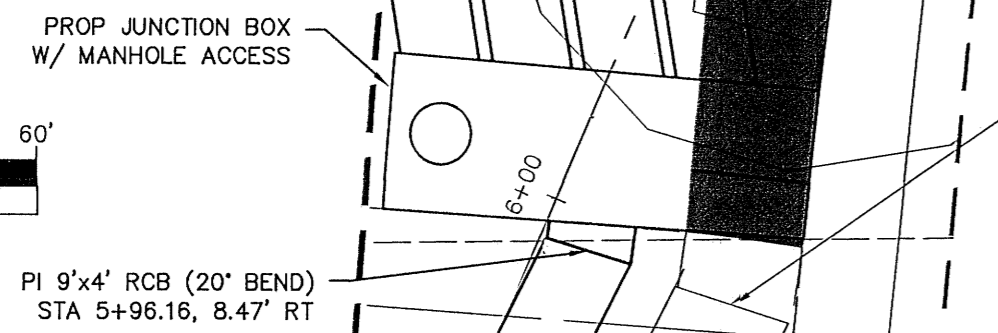
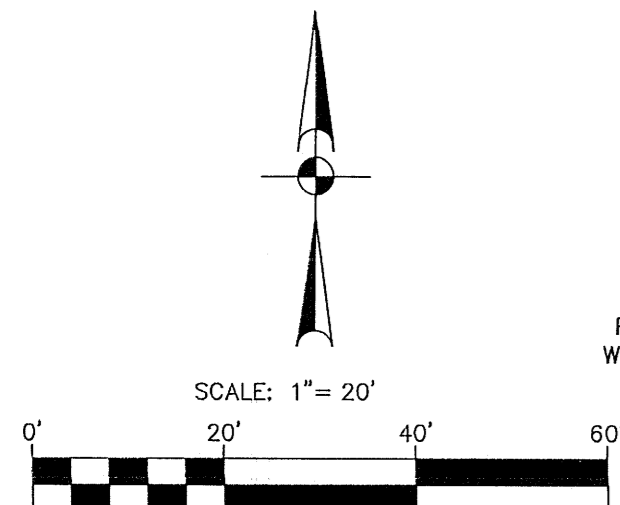


APPROVED: _____
 FORT BEND COUNTY
 DEVELOPMENT COORDINATOR

DATE: _____

Date: Apr 30, 2018 10:46am User: G. ANEBYON
 File: K:\Projects\40166\002-0 Design\2-1 Civil\DWGS\BRYAN ROAD\11-4016600-BRYAN-P&P.dwg

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NOTE: PROPOSED CONC SLOPE PAVING TO MATCH EXISTING BANK GRADING

PI EX 12'x4' RCB (20' BEND) STA 5+98.39, 20.56' RT

PROP 18" THICK CONC RIPRAP (NO EXPOSED REBAR), EVENLY GRADED WITH WOVEN FILTER FABRIC (MIRAFI 600)

PROP 5" CONC SLOPE PAVING WITH 36" TOE WALL ON ALL SIDES

PROP 5" CONC SLOPE PAVING WITH 36" TOE WALL ON ALL SIDES

PROP DUAL 7'x7' RCB

EX DUAL 48" RCP (TO BE REMOVED)

EX TOP OF BANK

EX TOE OF SLOPE

PROP TOP OF BANK (3:1)

EX TOP OF BANK

EX TOE OF SLOPE

EX TOP OF BANK

EX TOE OF SLOPE

EX TOP OF BANK

EX TOE OF SLOPE

EX TOP OF BANK

EX TOE OF SLOPE

EX TOP OF BANK

EX TOE OF SLOPE

EX TOP OF BANK

EX TOE OF SLOPE

EX TOP OF BANK

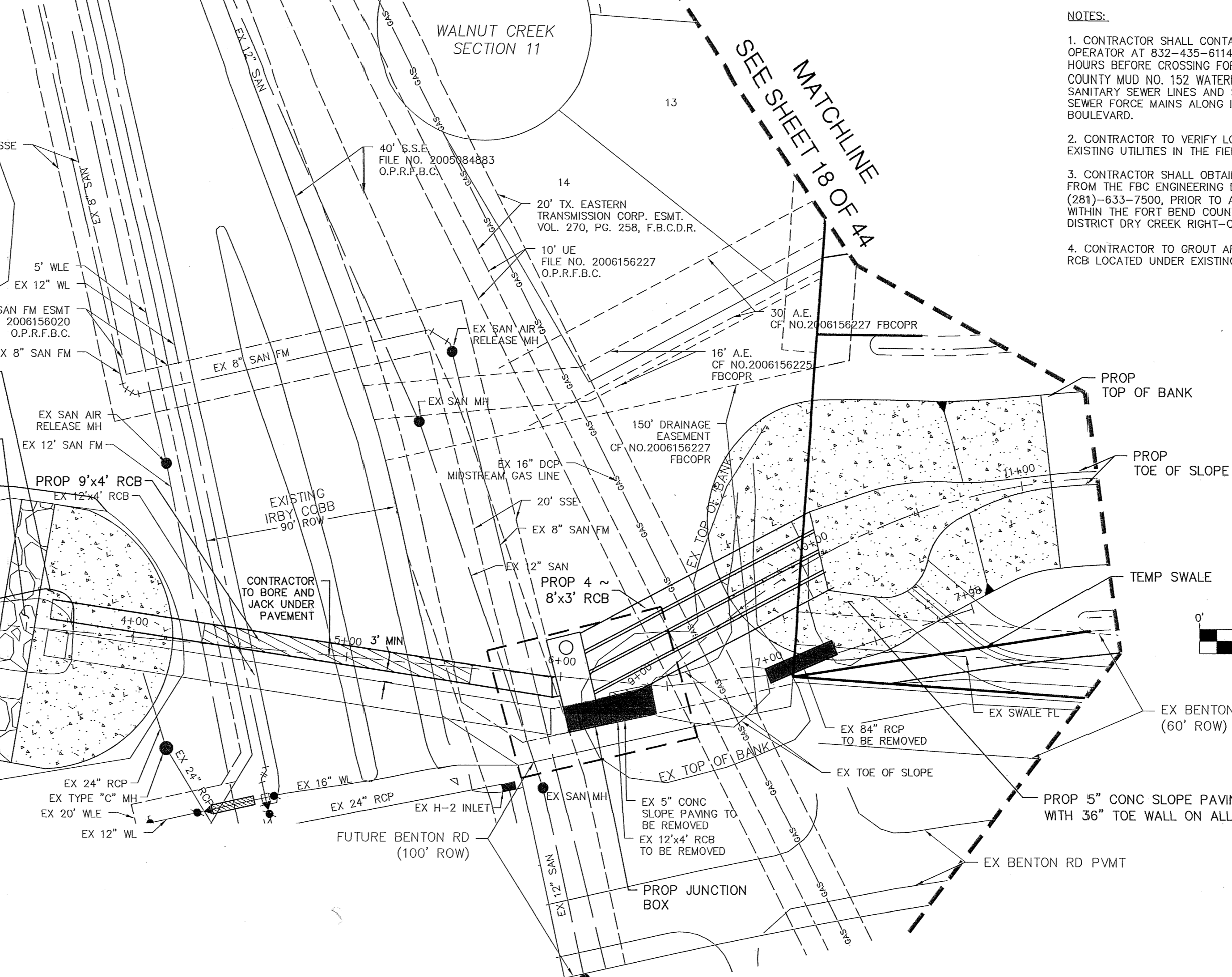
EX TOE OF SLOPE

EX TOP OF BANK

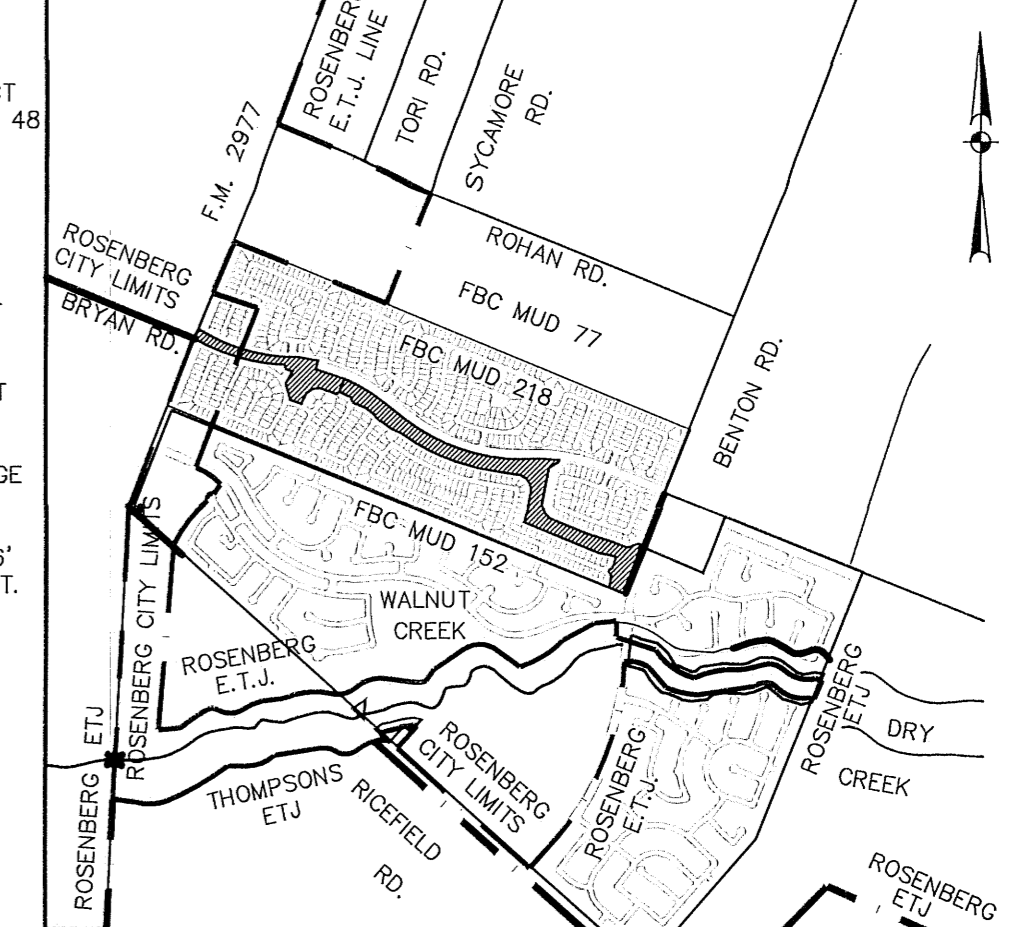
EX TOE OF SLOPE

EX TOP OF BANK

EX TOE OF SLOPE



IRBY COBB CULVERT CROSSING

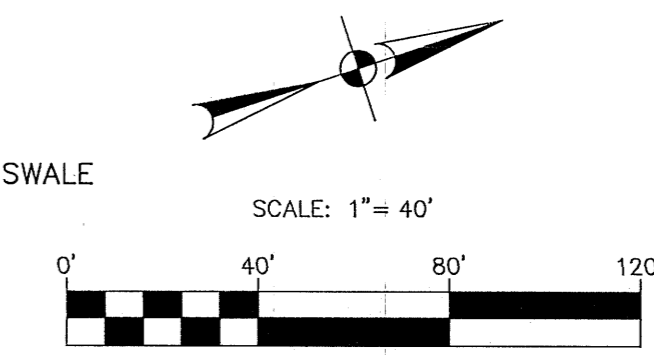


LOCATION MAP

SCALE: NTS
MAP REF: KEY MAP 691H

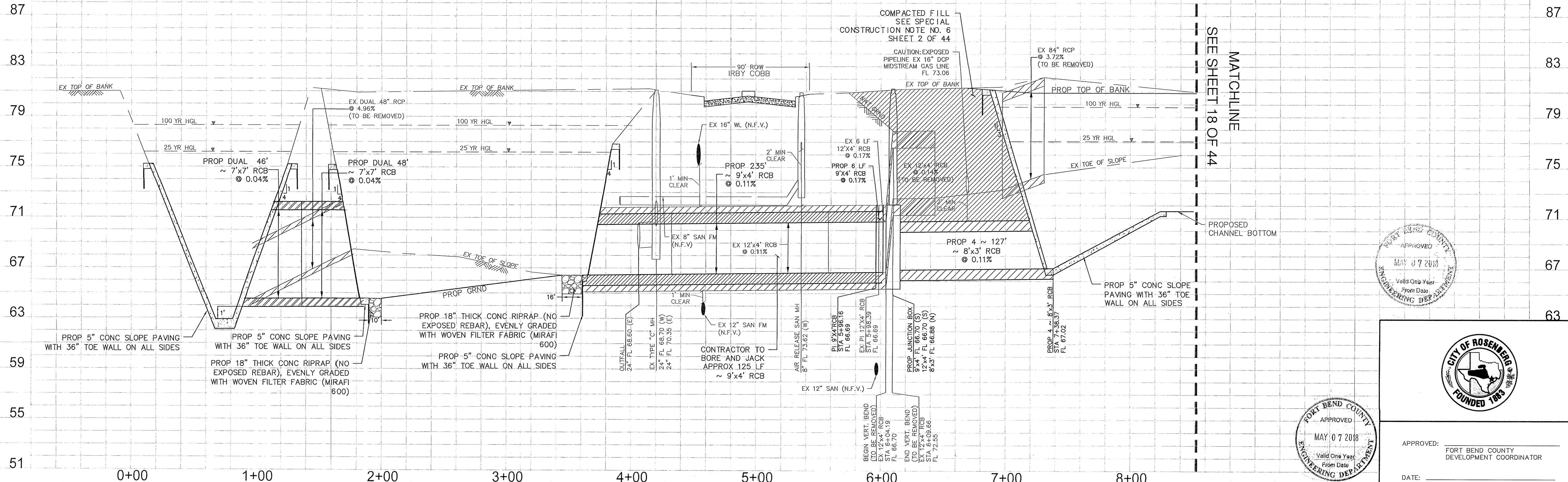
BENCHMARK:

IBM-A
CUT "X" IN CONCRETE HEADWALL
N:13754207.4200 E: 3001494.1400 ELEV: 88.17'
FIRM FLOOD INSURANCE RATE MAP
MAP 41857C0285L, PANEL 285 OF 575,
DATED APRIL 2 2014.
BASE FLOOD ELEVATION = 78.5
WHEN MUD DISSOLVES, HOA IS RESPONSIBLE FOR MAINTENANCE OF DRAINAGE CHANNELS AND INFRASTRUCTURE.



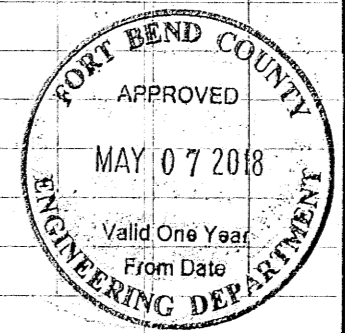
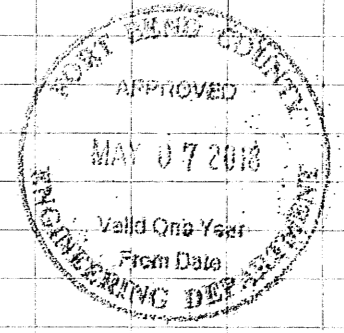
- NOTES:
- CONTRACTOR SHALL CONTACT DISTRICT OPERATOR AT 832-435-6114 AT LEAST 48 HOURS BEFORE CROSSING FORT BEND COUNTY MUD NO. 152 WATERLINES, SANITARY SEWER LINES AND SANITARY SEWER FORCE MAINS ALONG IRBY COBB BOULEVARD.
 - CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES IN THE FIELD
 - CONTRACTOR SHALL OBTAIN A PERMIT FROM THE FBC ENGINEERING DEPT., (281)-633-7500, PRIOR TO ANY WORK WITHIN THE FORT BEND COUNTY DRAINAGE DISTRICT DRY CREEK RIGHT-OF-WAY.
 - CONTRACTOR TO GROUT AROUND 6'x6' RCB LOCATED UNDER EXISTING PAVEMENT.

HORIZONTAL SCALE 1" = 40' H
VERTICAL SCALE: 1" = 4' V



SEE SHEET 18 OF 44

SEE SHEET 18 OF 44



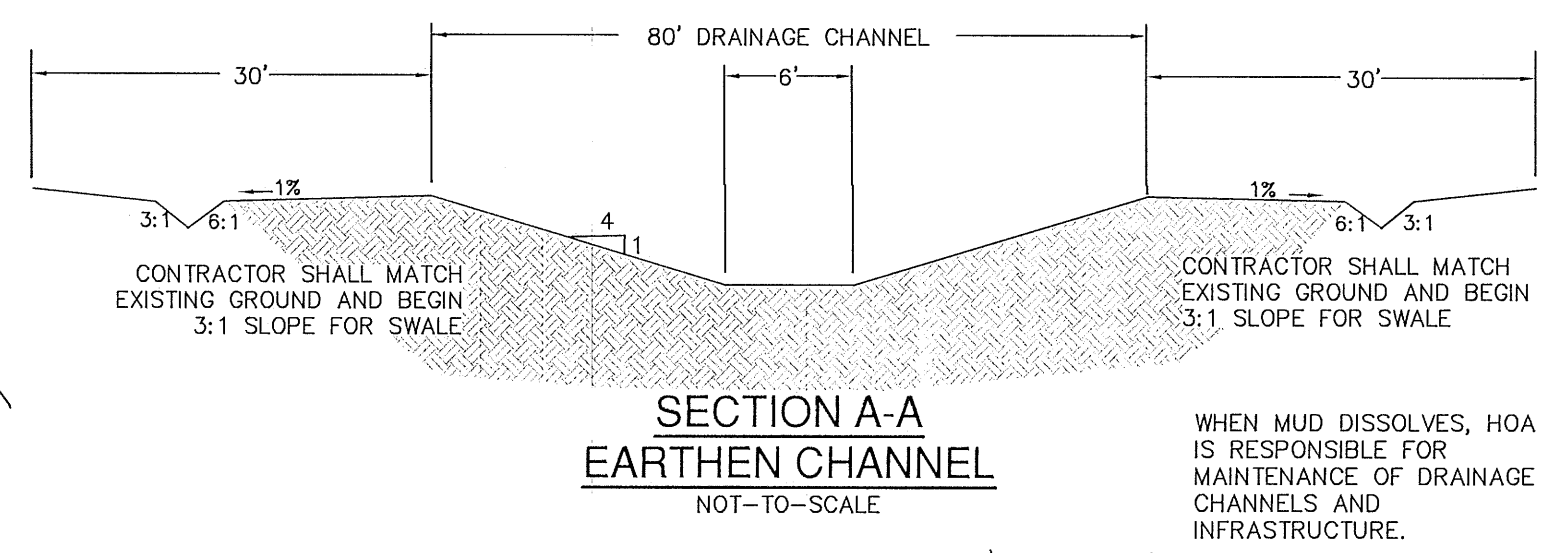
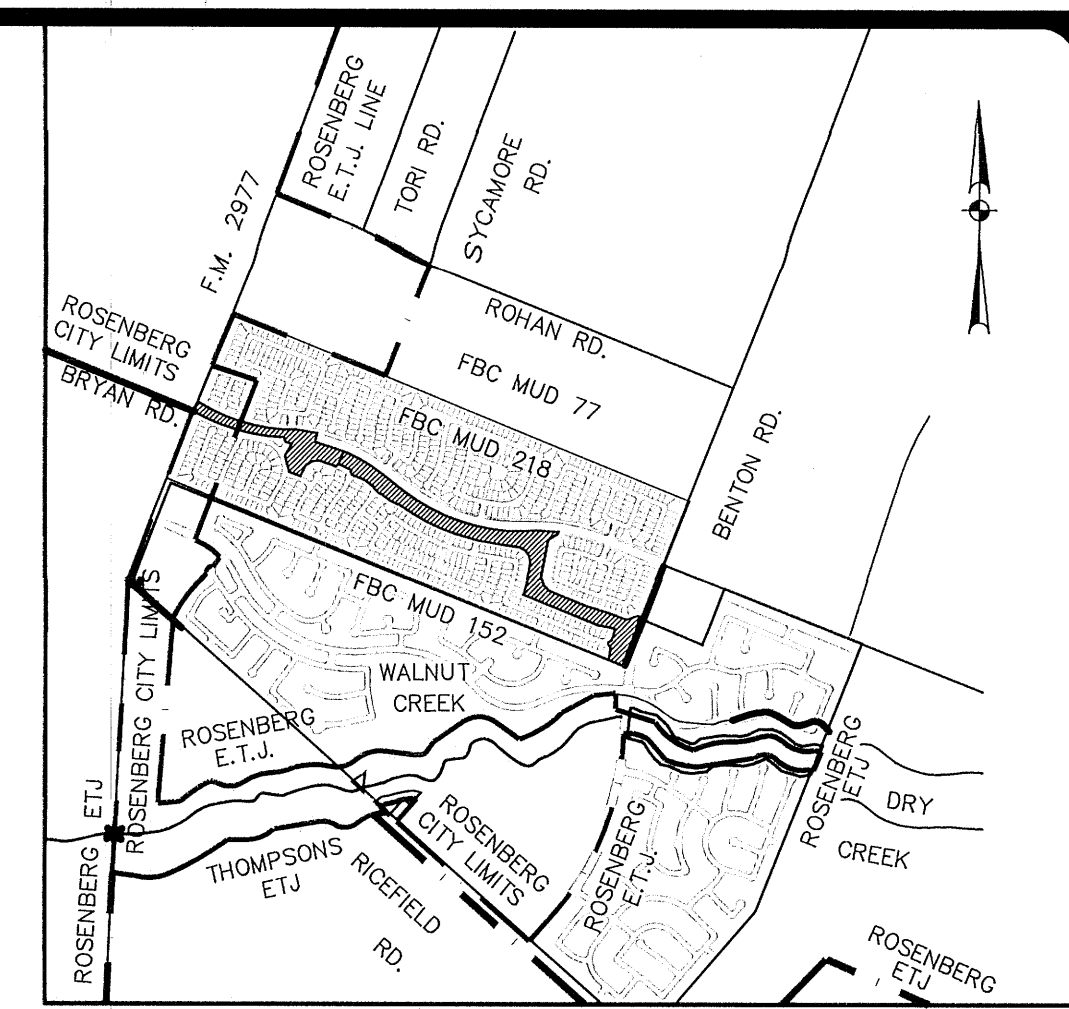
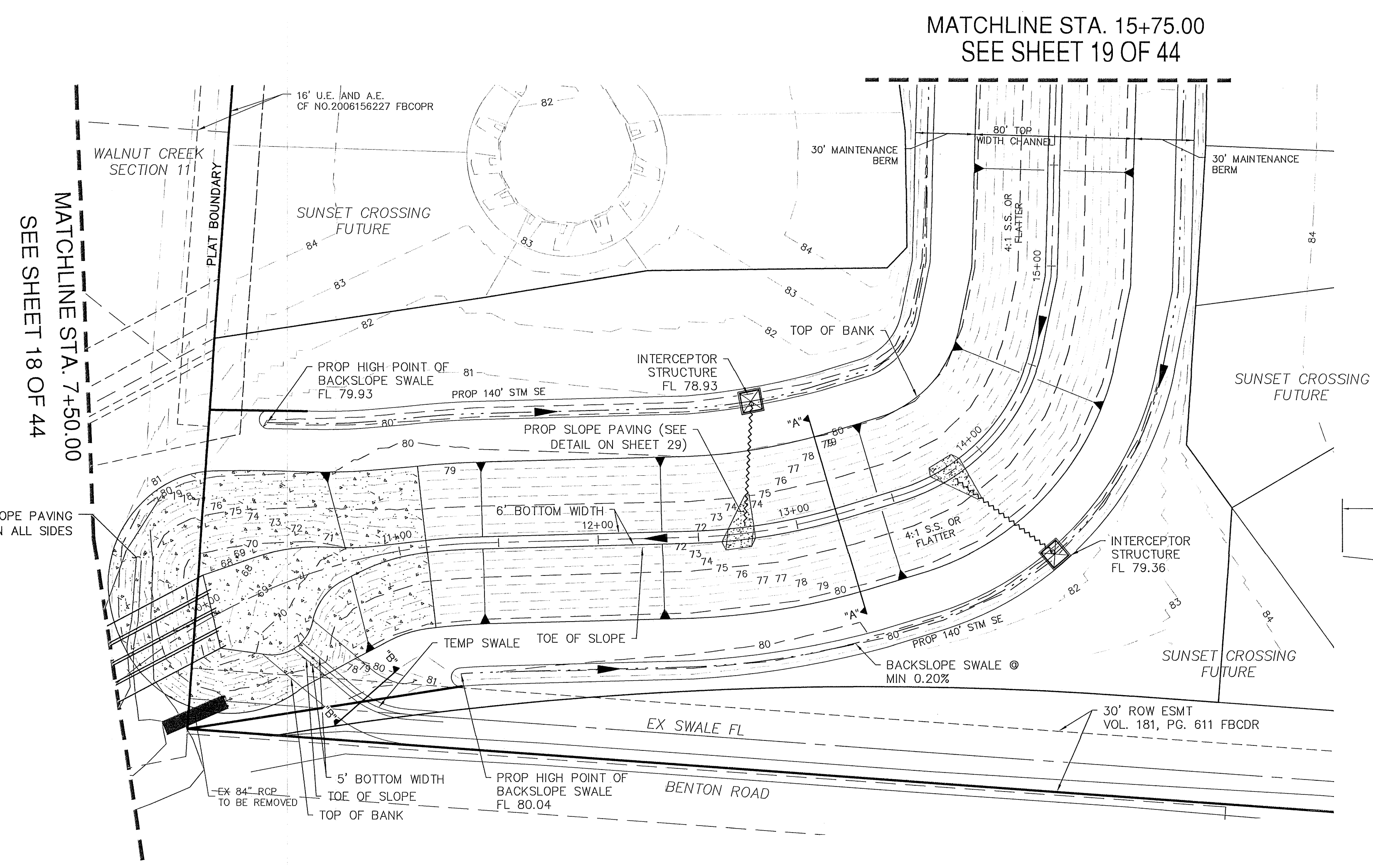
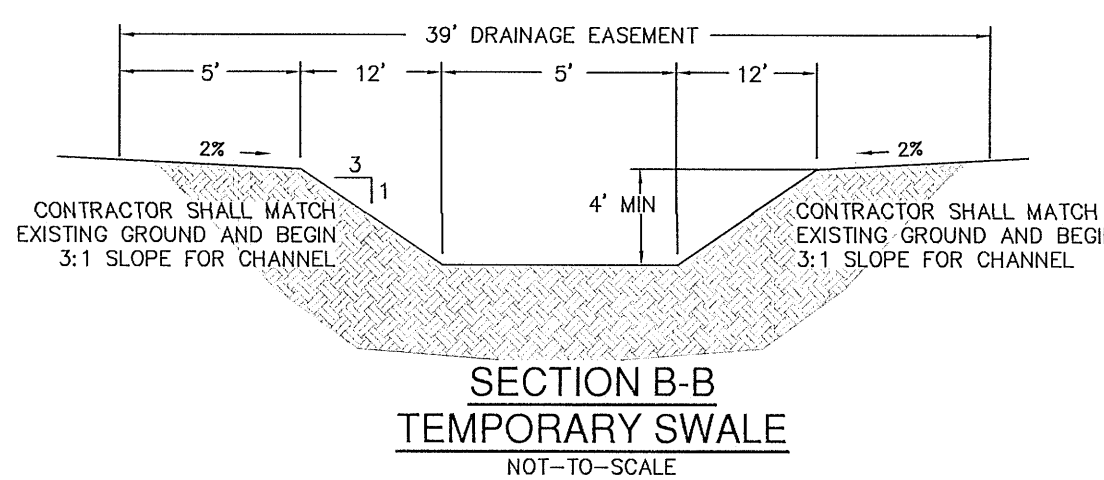
APPROVED: FORT BEND COUNTY DEVELOPMENT COORDINATOR
DATE:

SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS
IRBY COBB CULVERT CROSSING

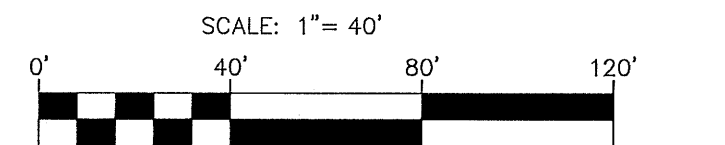
PLAT NO. 40166-20
JOB NO. 40166-21
DATE MARCH 2018
DESIGNER LS
CHECKED DRAWN ALL
SHEET 17 OF 44

Date: Apr 13, 2018, 1:17:01 PM User ID: jf_rocks File: C:\Projects\2018\03\20180320\Design\2-1_CulvertCrossing.dwg

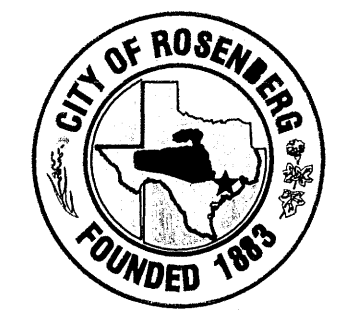
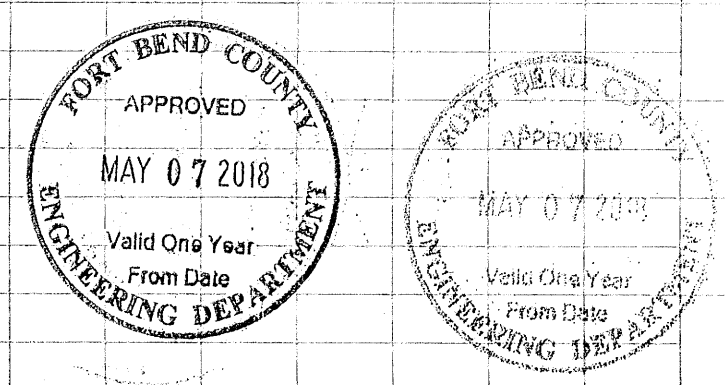
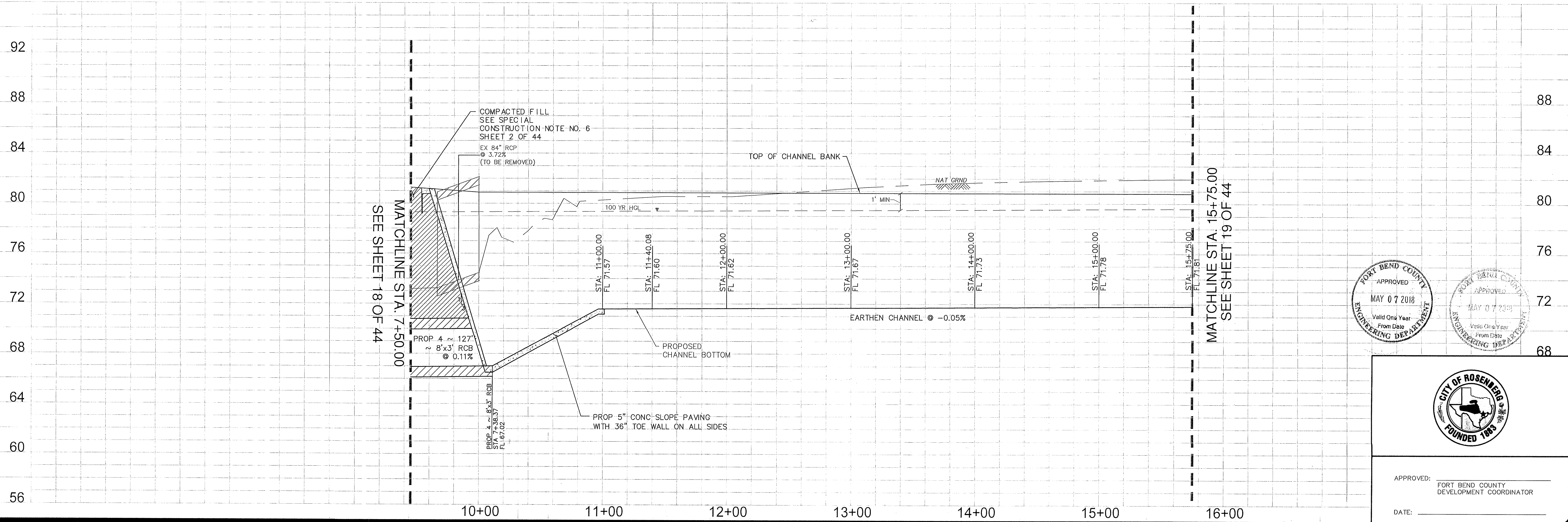
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FIRM FLOOD INSURANCE RATE MAP
 FORT BEND COUNTY FIRM COMMUNITY
 MAP 41857C0265L PANEL 265 OF 575,
 DATED APRIL 2 2014.
 BASE FLOOD ELEVATION = 78.5



HORIZONTAL SCALE 1" = 40' H
 VERTICAL SCALE 1" = 4' V



APPROVED: _____
 FORT BEND COUNTY
 DEVELOPMENT COORDINATOR

NO.	REVISION	DATE

STATE OF TEXAS
 ROBERT M. PREISS
 LICENSED PROFESSIONAL ENGINEER
 92978
 4/13/18
Robert M. Preiss

PAPE-DAWSON ENGINEERS
 FIRM
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 1050 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
 *TBE FIRM REGISTRATION #470 | TBE'S FIRM REGISTRATION #018974

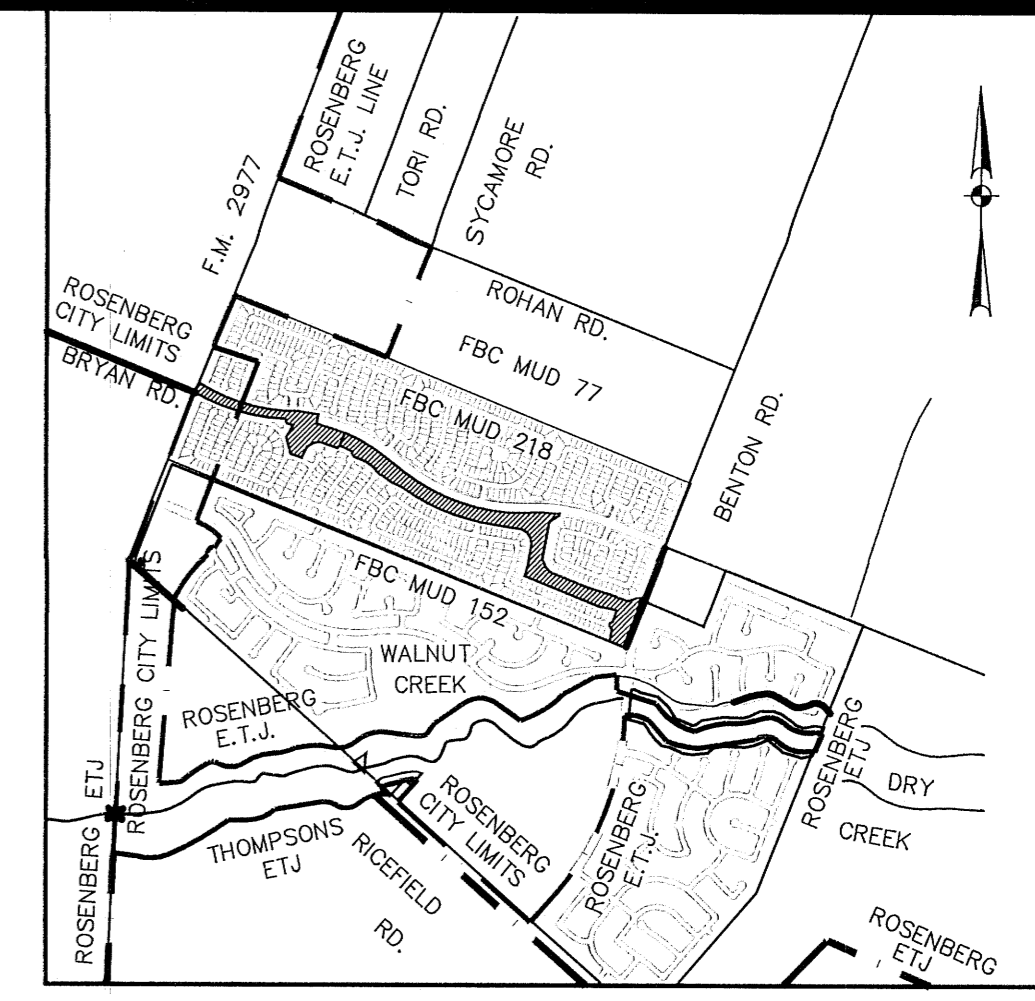
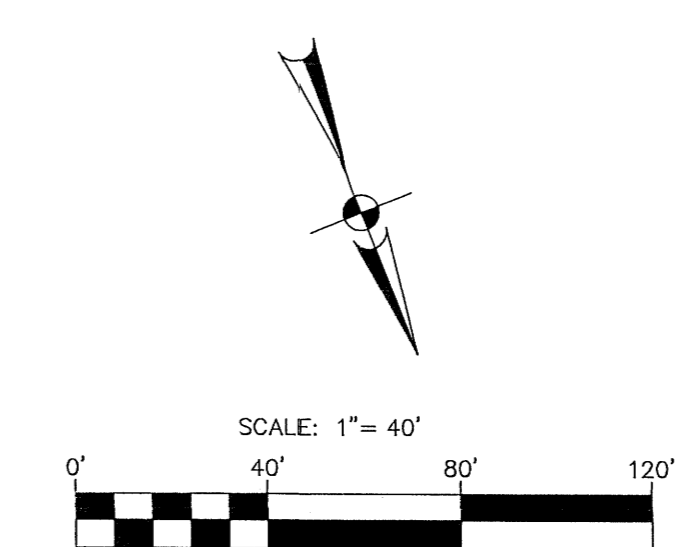
SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 BRYAN ROAD CHANNEL (SHEET 1 OF 6)

PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED DRAWN ALL
 SHEET 18 OF 44

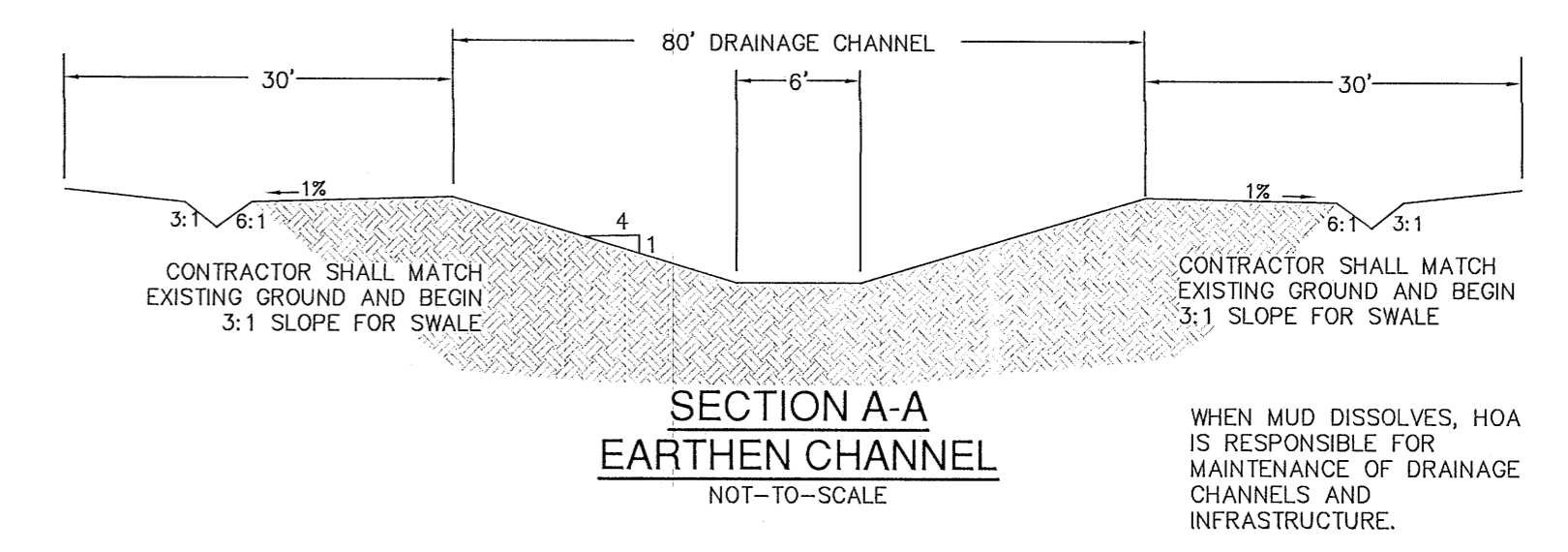
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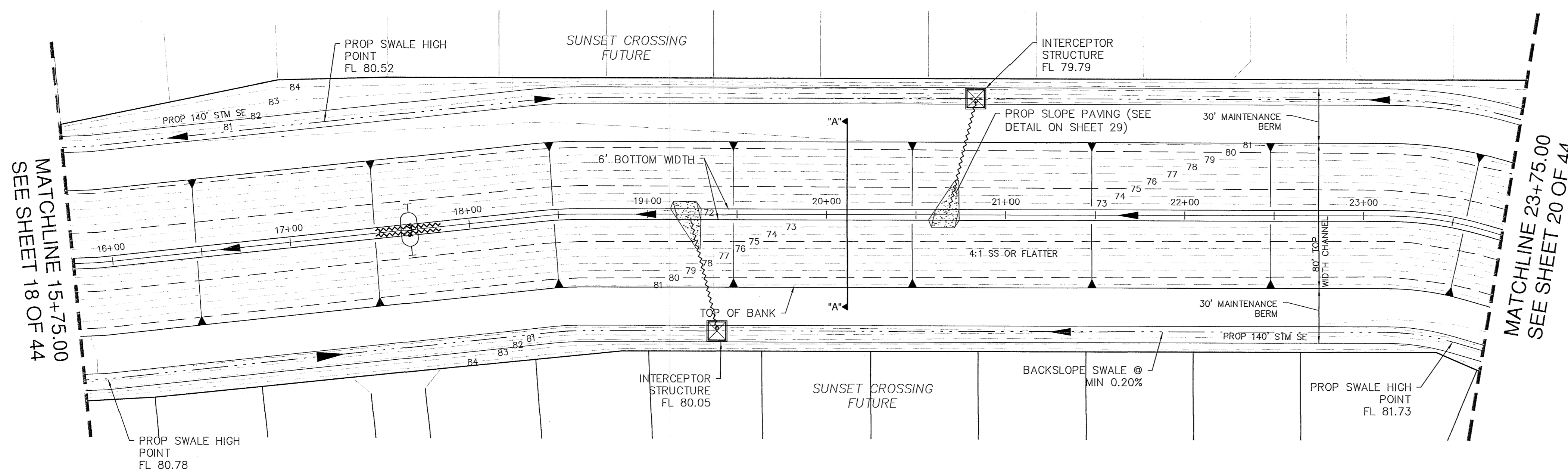
ROCK FILTER DAM 3
 TOP ELEV: 80.85'
 WEIR ELEV: 78.0'
 56' WEIR LENGTH
 36" CMP
 2:1 SLOPES FROM TOP TO WEIR
 (SEE SHEET 43 OF 44 FOR DETAILS)



LOCATION MAP
 SCALE: NTS
 MAP REF: KEY MAP 691H



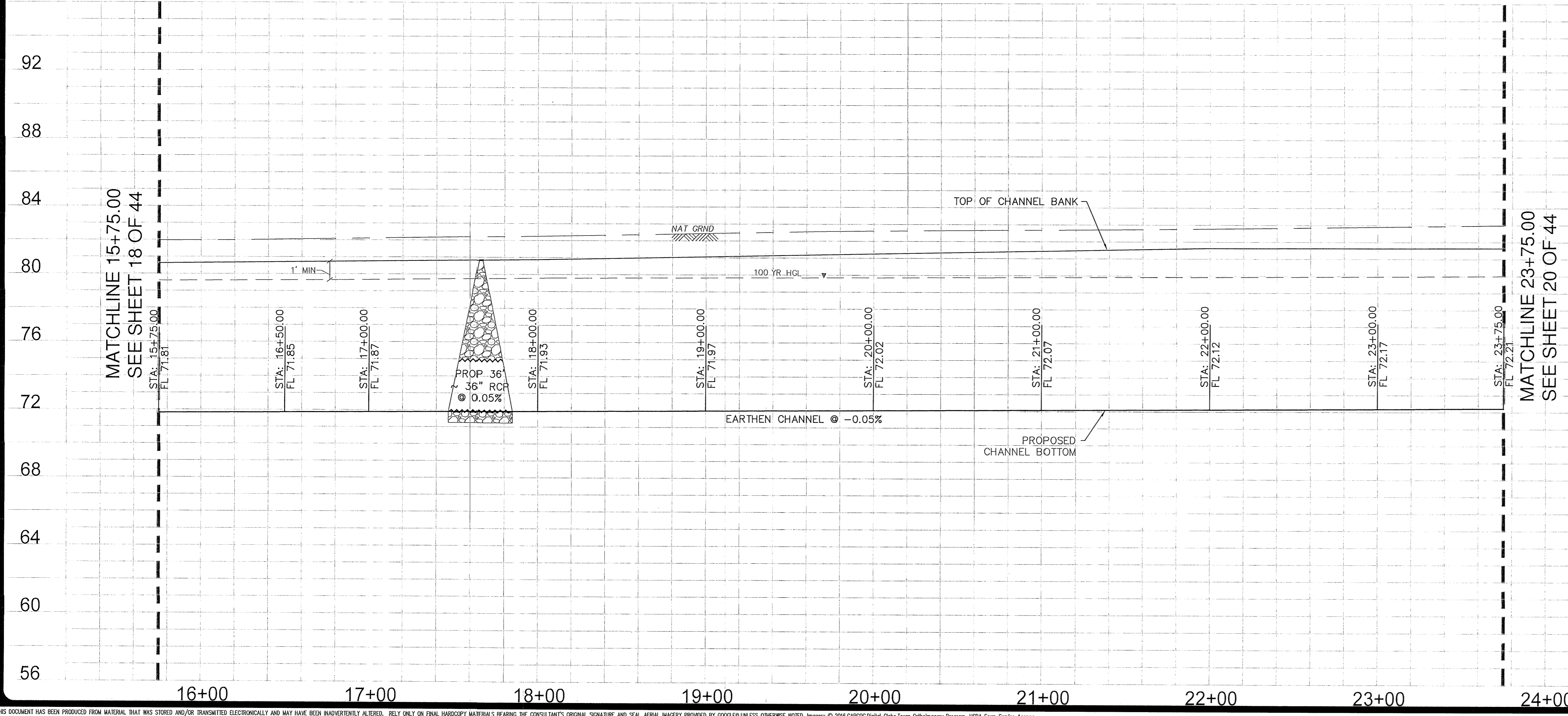
SECTION A-A
 EARTHEN CHANNEL
 NOT-TO-SCALE



BRYAN ROAD CHANNEL

FIRM FLOOD INSURANCE RATE MAP
 FORT BEND COUNTY FIRM COMMUNITY
 MAP 41857C0285L PANEL 265 OF 575,
 DATED APRIL 2 2014
 BASE FLOOD ELEVATION = 78.5

HORIZONTAL SCALE 1" = 40' H
 VERTICAL SCALE: 1" = 4' V



APPROVED: _____
 FORT BEND COUNTY
 DEVELOPMENT COORDINATOR

DATE: _____

NO.	REVISION	DATE

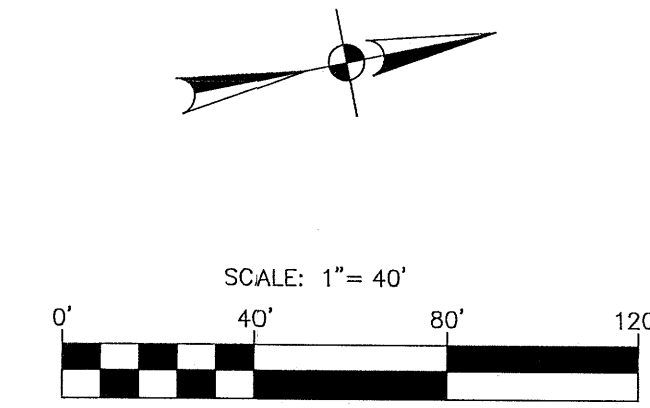
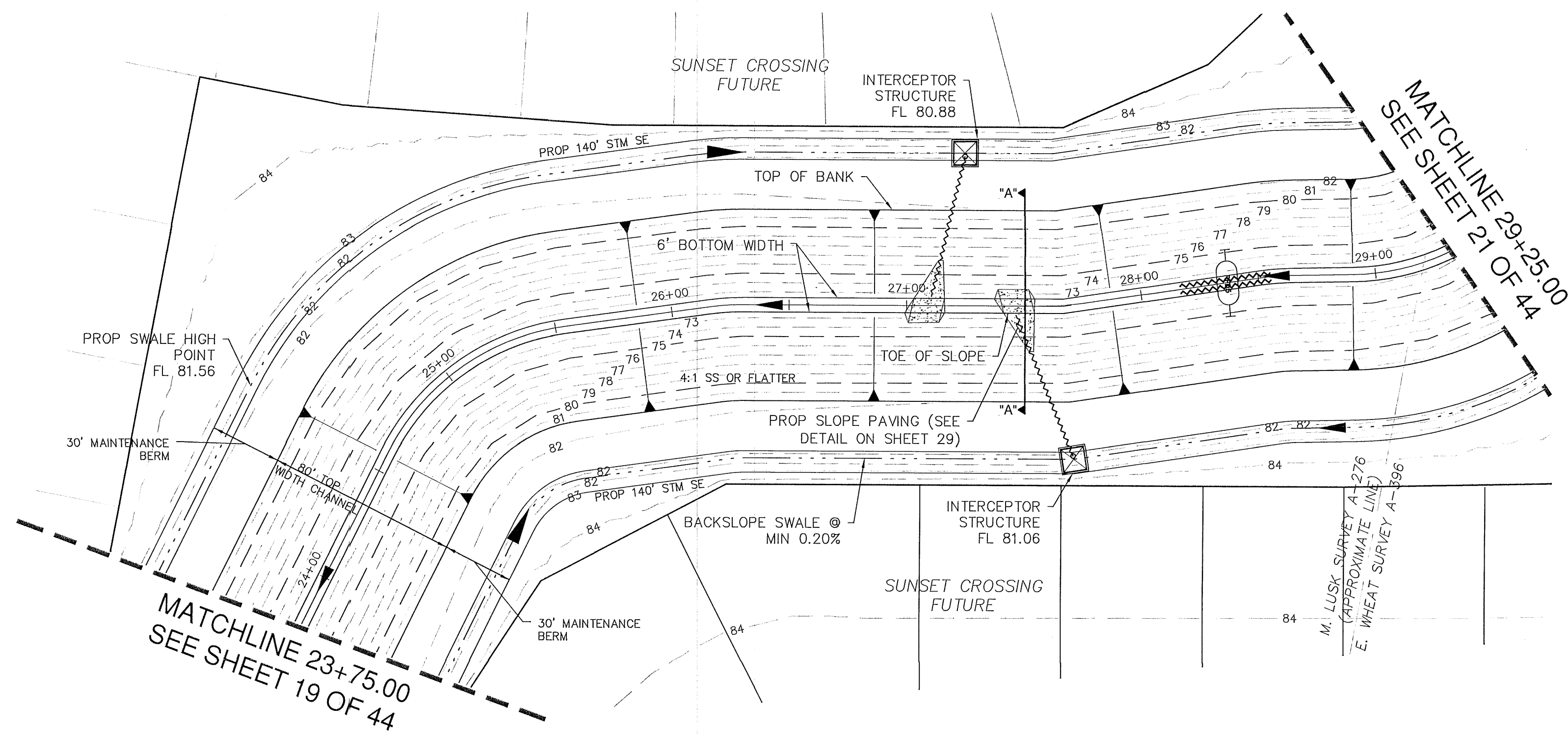
STATE OF TEXAS
 ROBERT M. PREISS
 92978
 LICENSED PROFESSIONAL ENGINEER
 4/13/18
Robert M. Preiss

PAPE-DAWSON ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10550 RICHMOND AVE. STE 200 | HOUSTON, TX 77042 | 713.228.2400
 TPE FIRM REGISTRATION #470 | TPE FIRM REGISTRATION #1019874

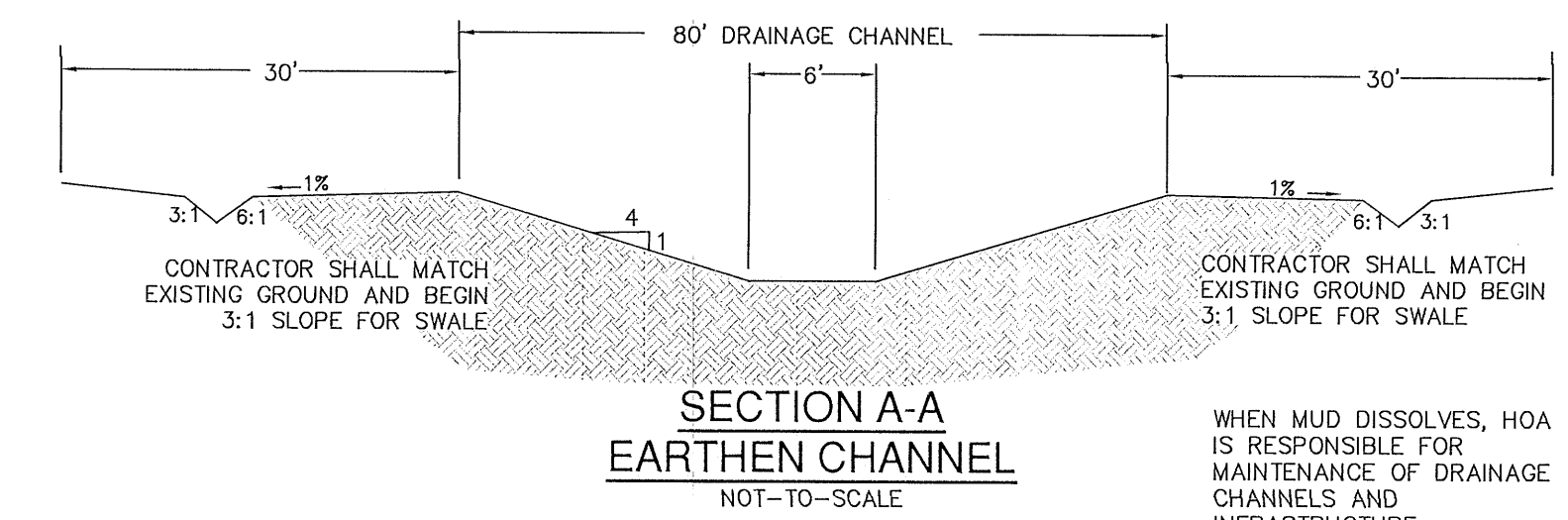
SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 BRYAN ROAD CHANNEL (SHEET 2 OF 6)

PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED DRAWN ALL
 SHEET 19 OF 44

Date: Apr 13, 2018, 1:16pm User: jdb Date: File: K:\Projects\1461\461\DWG\BRYAN_ROAD\1-40166-20-CHANNEL_PP.dwg



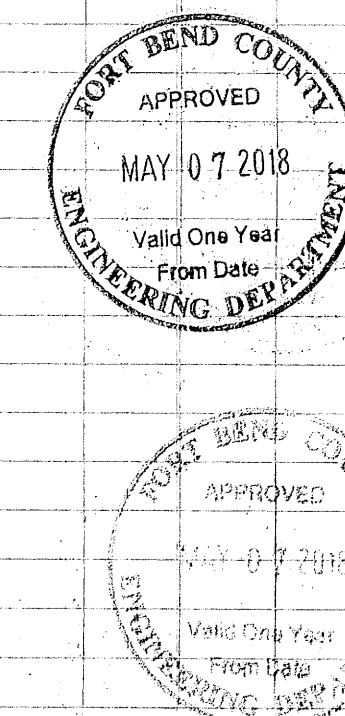
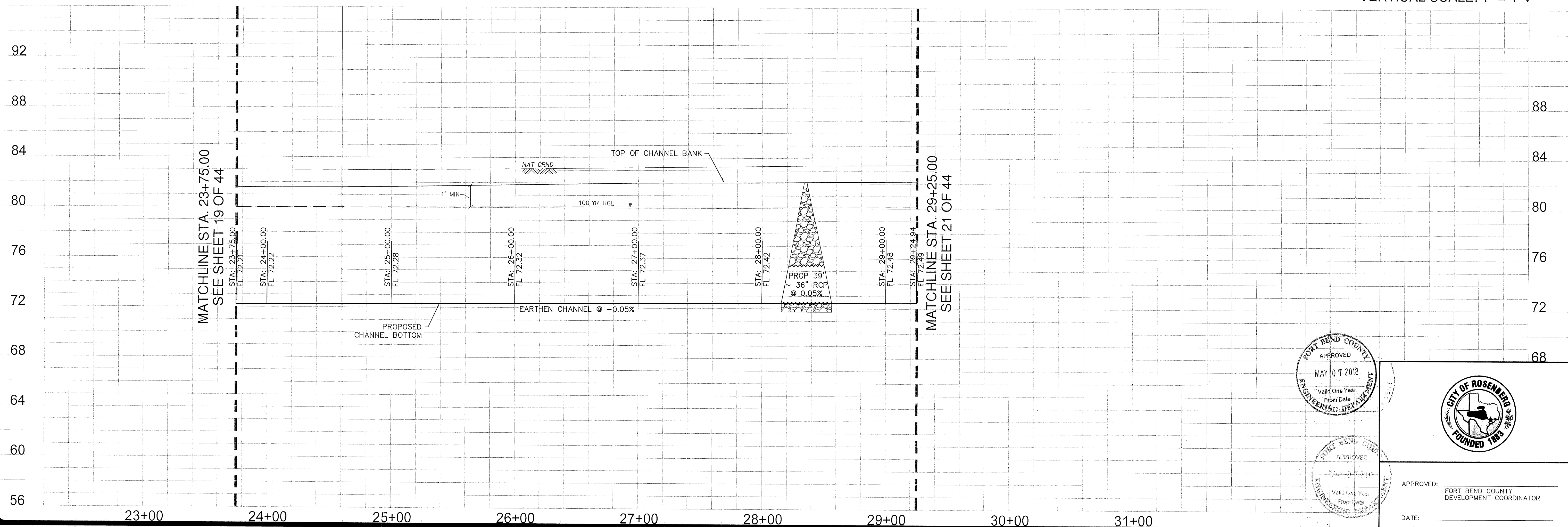
ROCK FILTER DAM 2
 TOP ELEV: 82.10'
 WEIR ELEV: 79.0'
 56' WEIR LENGTH
 36" CMP
 2:1 SLOPES FROM TOP TO WEIR
 (SEE SHEET 43 OF 44 FOR DETAILS)



FIRM
 FLOOD INSURANCE RATE MAP
 FORT BEND COUNTY FIRM COMMUNITY
 MAP #1857C0265L PANEL 265 OF 575,
 DATED APRIL 2 2014
 BASE FLOOD ELEVATION = 78.5

HORIZONTAL SCALE 1" = 40' H
 VERTICAL SCALE: 1" = 4' V

BRYAN ROAD CHANNEL



APPROVED: _____
 FORT BEND COUNTY
 DEVELOPMENT COORDINATOR
 DATE: _____

NO.	REVISION	DATE

STATE OF TEXAS
 ROBERT M. PREISS
 LICENSED PROFESSIONAL ENGINEER
 92978
 4/13/18
Robert M. Preiss

PAPE-DAWSON ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10860 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.463.2400
 TEXAS FIRM REGISTRATION #470 | TEXAS FIRM REGISTRATION #1018994

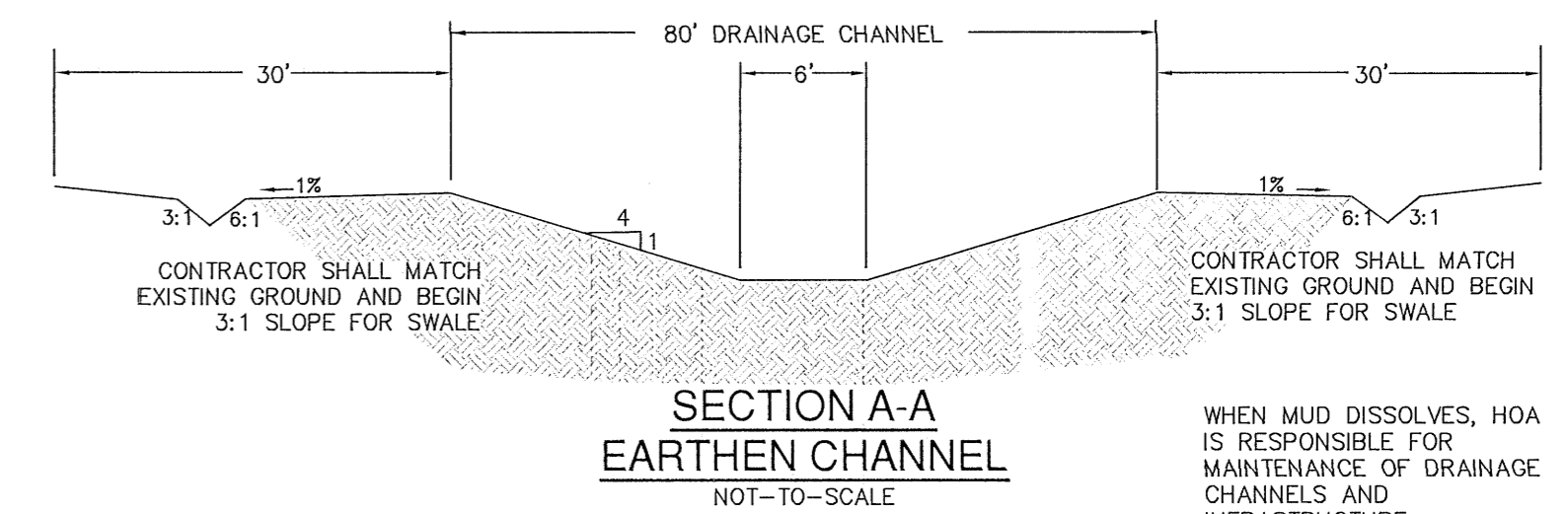
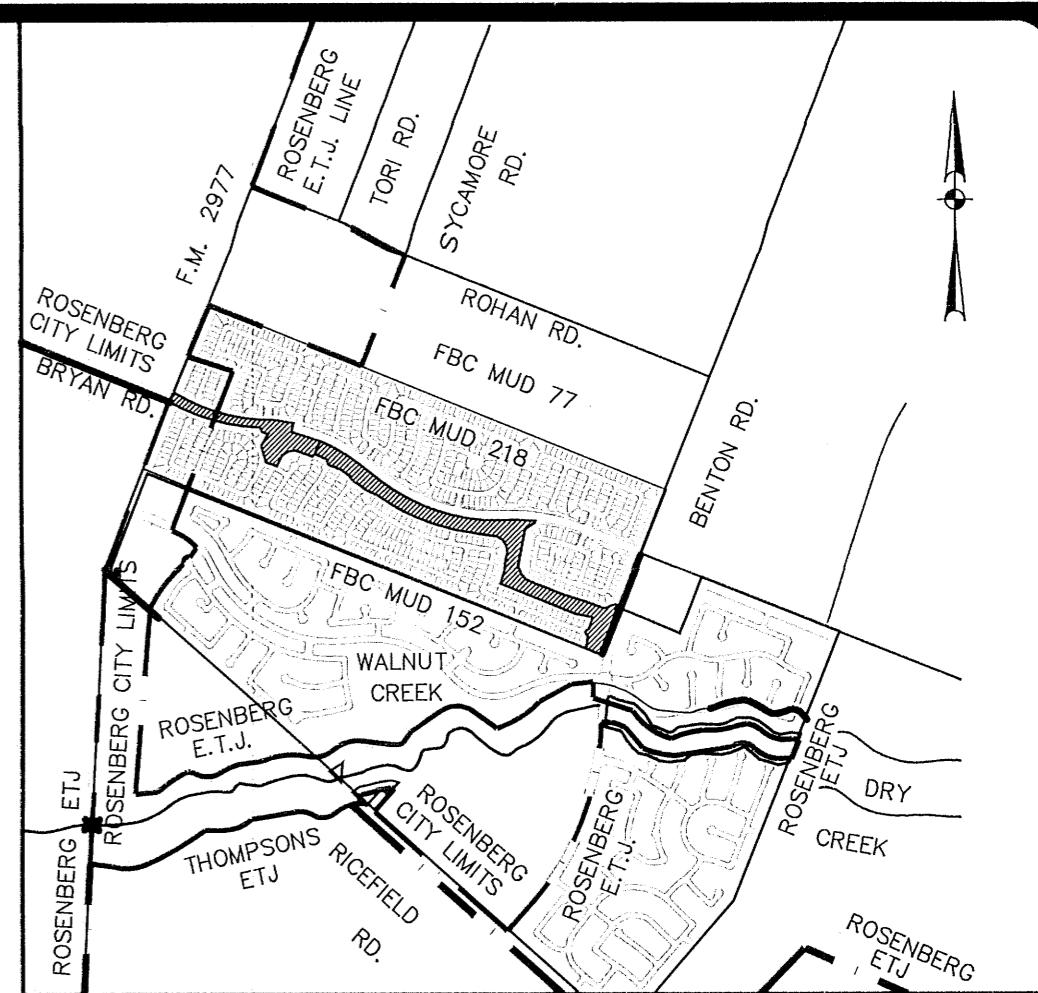
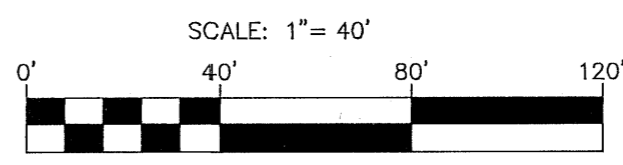
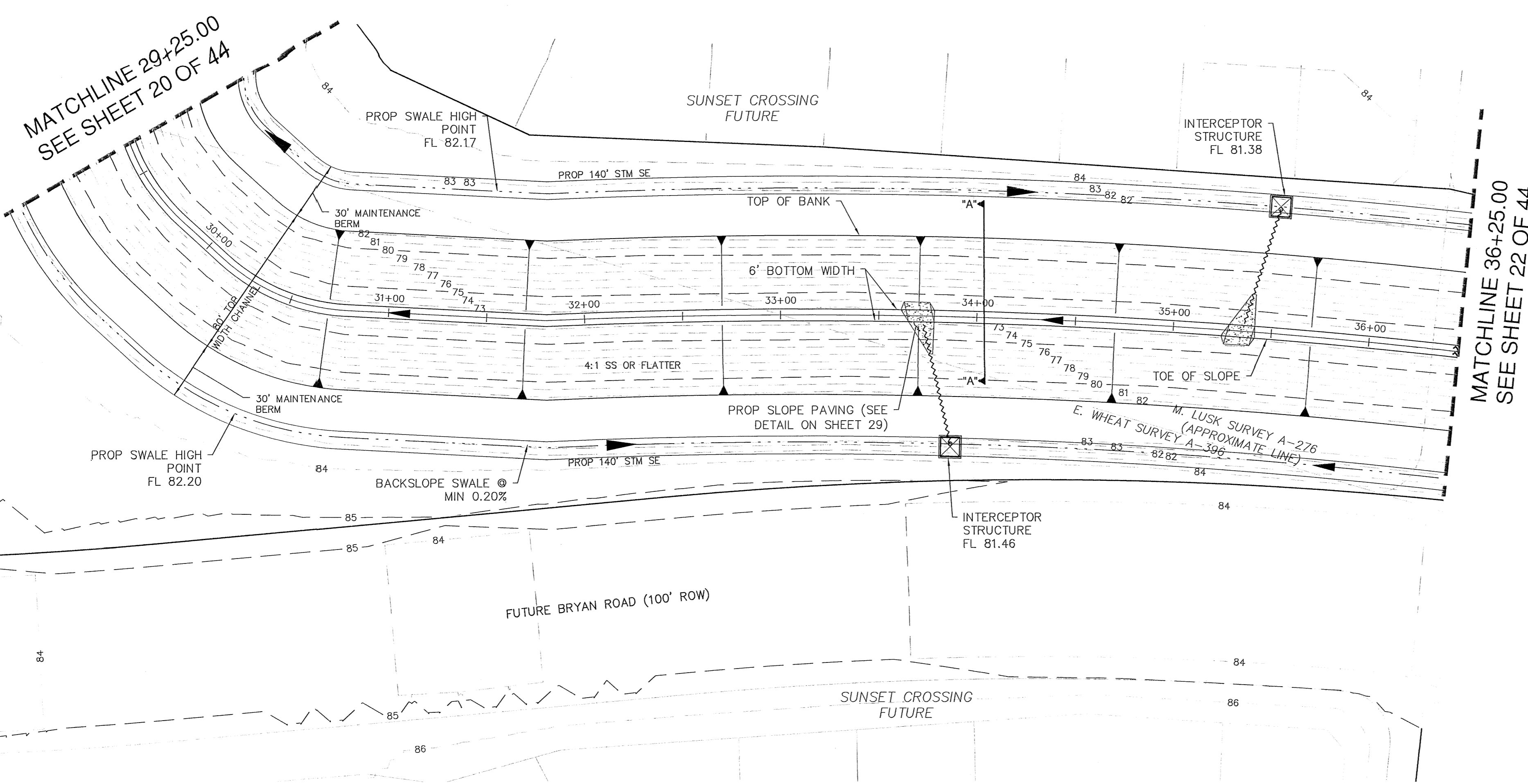
SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 BRYAN ROAD CHANNEL (SHEET 3 OF 6)

PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED DRAWN ALL
 SHEET 20 OF 44

Date: Apr 13, 2018, 1:16pm User: jrb@pape-dawson.com File: K:\Projects\40166\002-0 Design\2-1 Civil\DWGS\BRYAN ROAD\11-4016600-CHANNEL_PP.dwg

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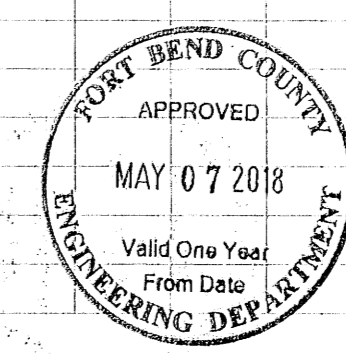
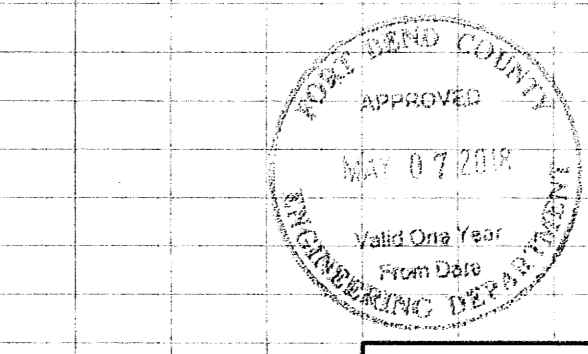
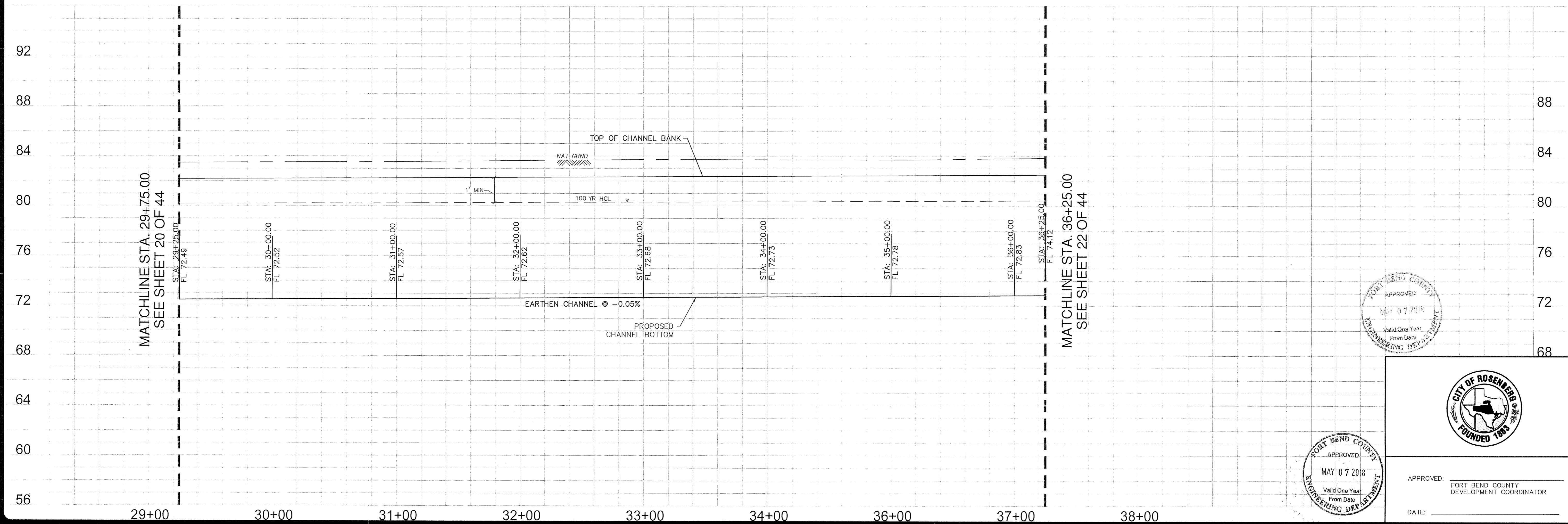
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BRYAN ROAD CHANNEL

FIRM
FLOOD INSURANCE RATE MAP
FORT BEND COUNTY FIRM COMMUNITY
MAP 4185700265L PANEL 265 OF 575,
DATED APRIL 2 2014.
BASE FLOOD ELEVATION = 78.5

HORIZONTAL SCALE 1" = 40' H
VERTICAL SCALE: 1" = 4' V



APPROVED:
FORT BEND COUNTY
DEVELOPMENT COORDINATOR
DATE: _____

NO.	REVISION	DATE

Robert M. Preiss
4/13/18
PROFESSIONAL ENGINEER

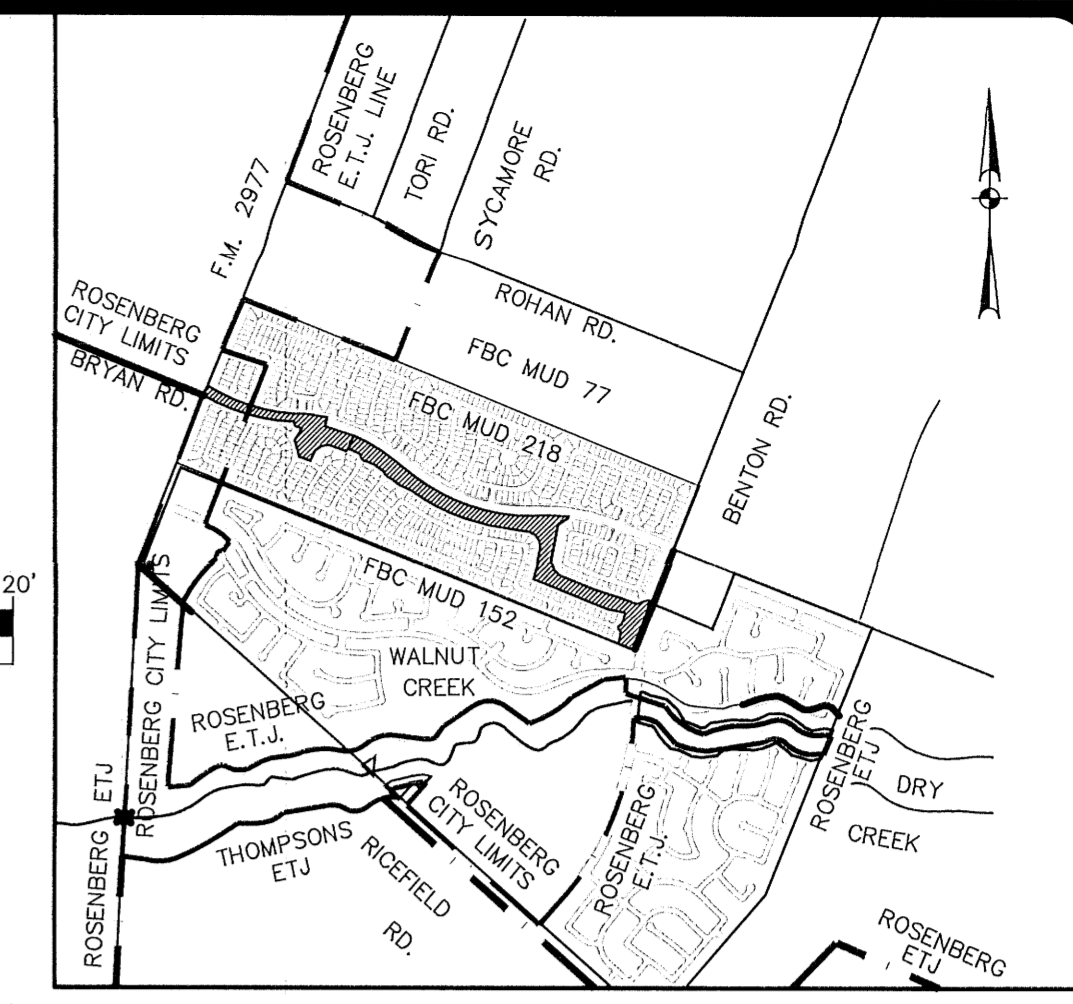
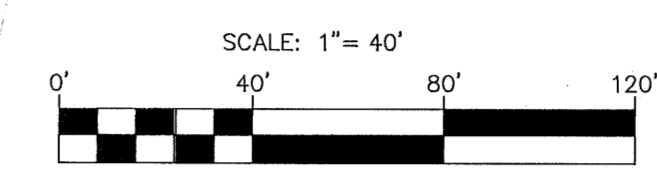
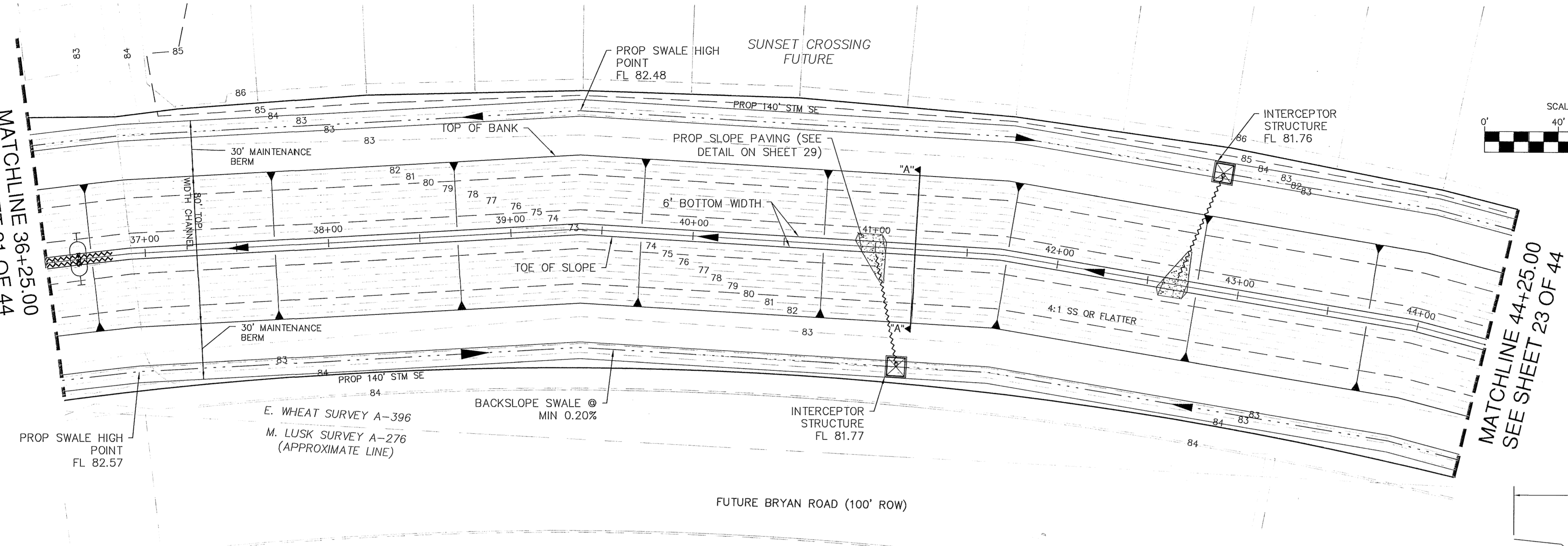
PAPE-DAWSON ENGINEERS
HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10850 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
TXPE FIRM REGISTRATION #470 | TEBLS FIRM REGISTRATION #10188974

SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS
BRYAN ROAD CHANNEL (SHEET 4 OF 6)

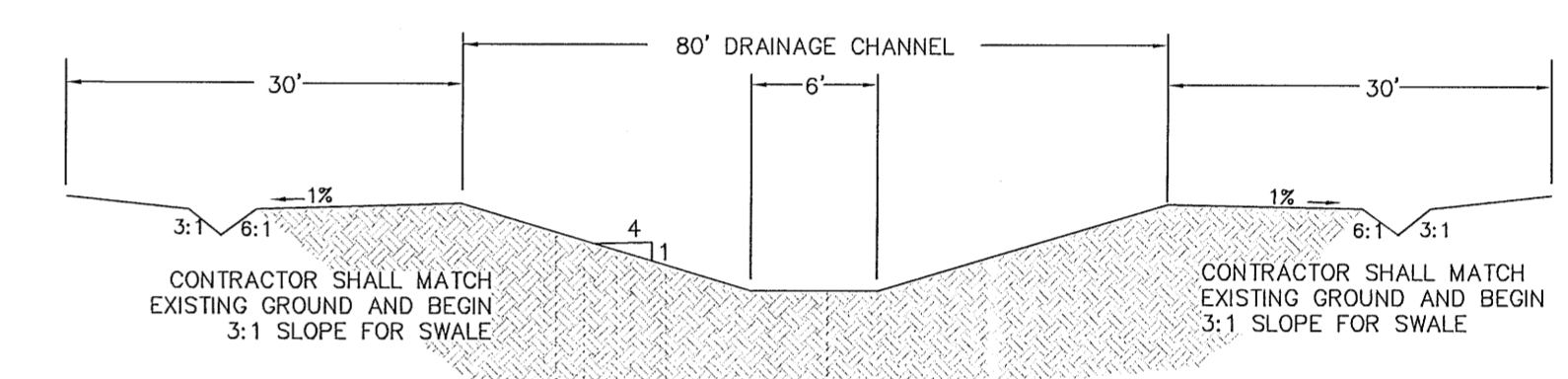
PLAT NO. 40166-20
JOB NO. 40166-21
DATE MARCH 2018
DESIGNER LS
CHECKED DRAWN ALL
SHEET 21 OF 44

ROCK FILTER DAM 1
 TOP ELEV: 82.56'
 WEIR ELEV: 80.0'
 60' WEIR LENGTH
 36" CMP
 2:1 SLOPES FROM TOP TO WEIR
 (SEE SHEET 43 OF 44 FOR DETAILS)

MATCHLINE STA. 36+25.00
 SEE SHEET 21 OF 44



LOCATION MAP
 SCALE: NTS
 MAP REF: KEY MAP 691H

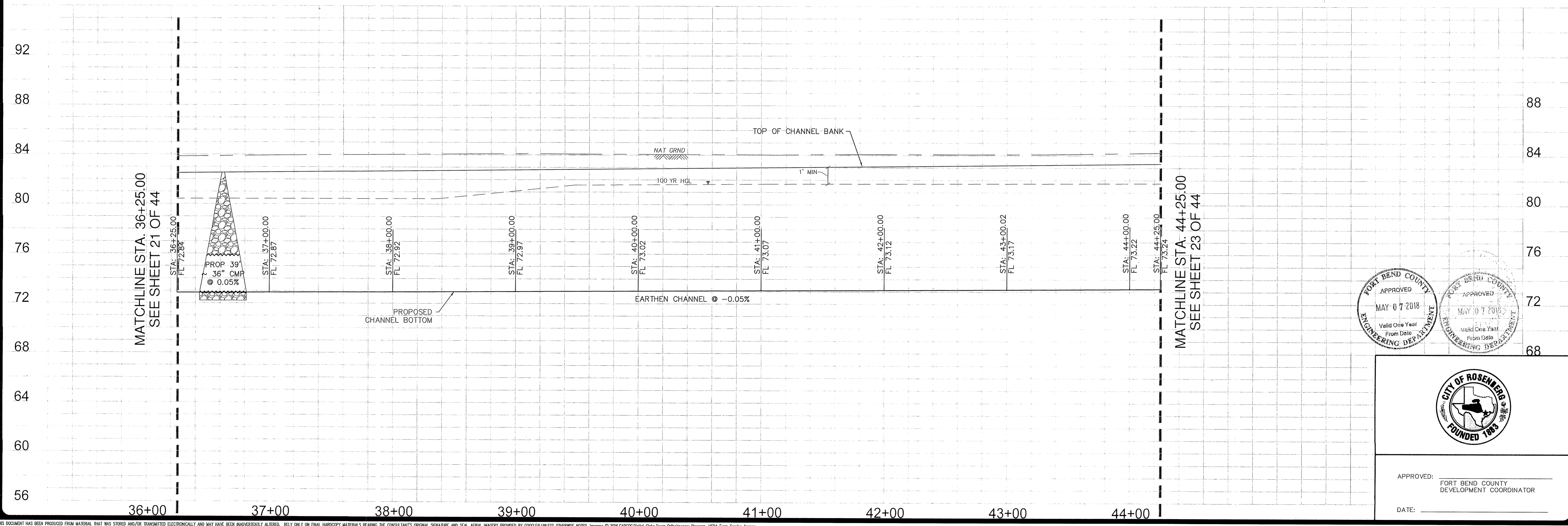


WHEN MUD DISSOLVES, HOA IS RESPONSIBLE FOR MAINTENANCE OF DRAINAGE CHANNELS AND INFRASTRUCTURE.

BRYAN ROAD CHANNEL

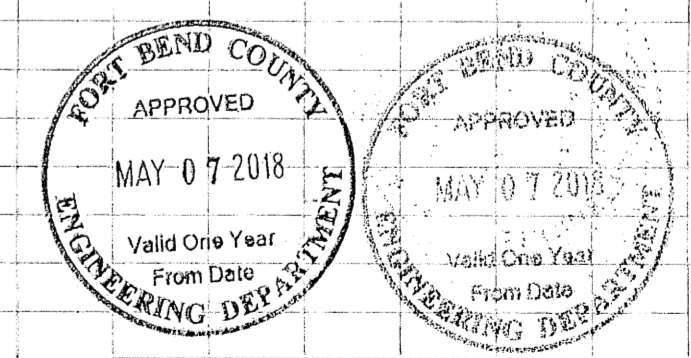
FIRM FLOOD INSURANCE RATE MAP
 FORT BEND COUNTY FIRM COMMUNITY
 MAP 4185700265L PANEL 265 OF 575,
 DATED APRIL 2, 2014.
 BASE FLOOD ELEVATION = 78.5

HORIZONTAL SCALE 1" = 40' H
 VERTICAL SCALE: 1" = 4' V



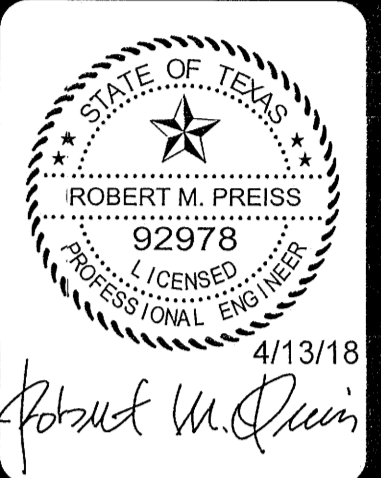
MATCHLINE STA. 36+25.00
 SEE SHEET 21 OF 44

MATCHLINE STA. 44+25.00
 SEE SHEET 23 OF 44



APPROVED: _____
 FORT BEND COUNTY
 DEVELOPMENT COORDINATOR
 DATE: _____

NO.	REVISION	DATE



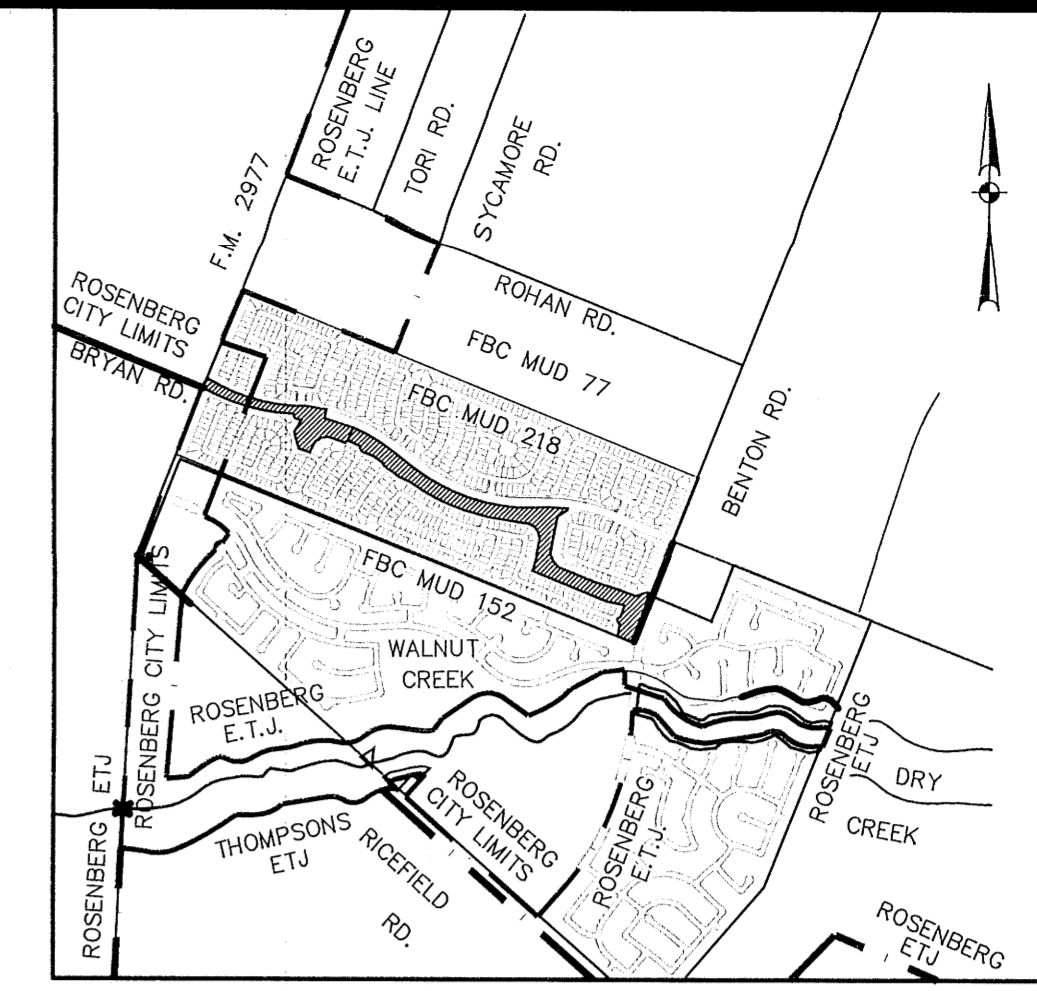
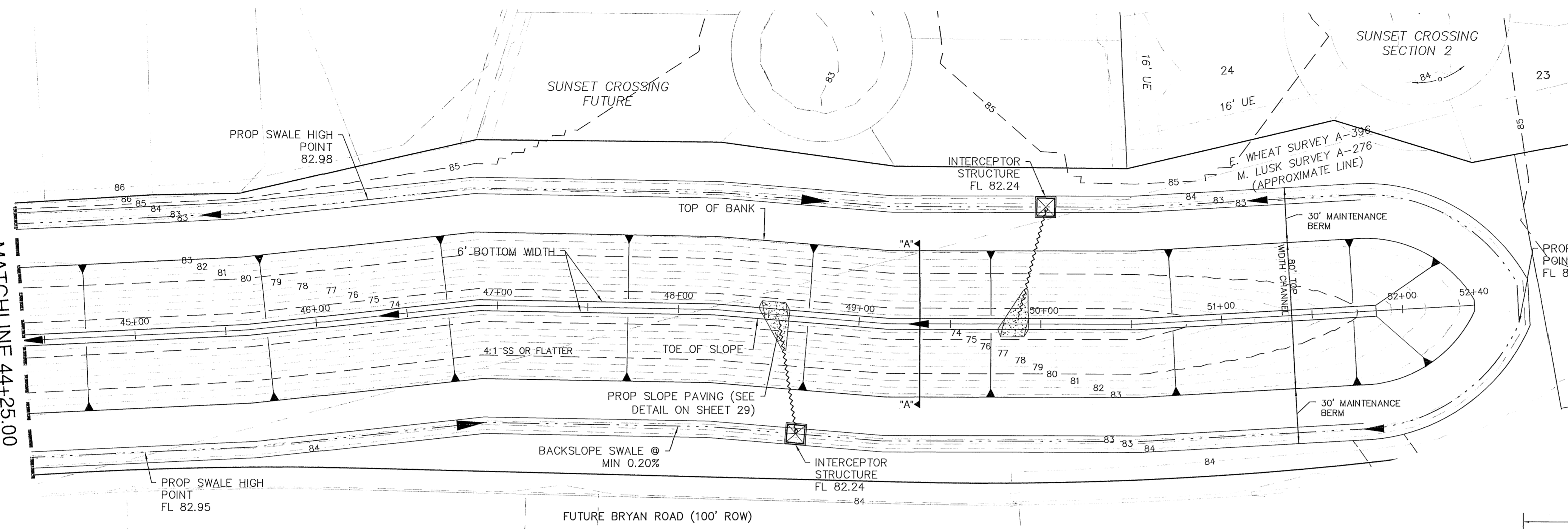
PAPE-DAWSON ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10850 RICHMOND AVE. STE 200 | HOUSTON, TX 77042 | 713.423.2400
 TPE FIRM REGISTRATION #479 | TPELS FIRM REGISTRATION #10189874

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 BRYAN ROAD CHANNEL (SHEET 5 OF 6)

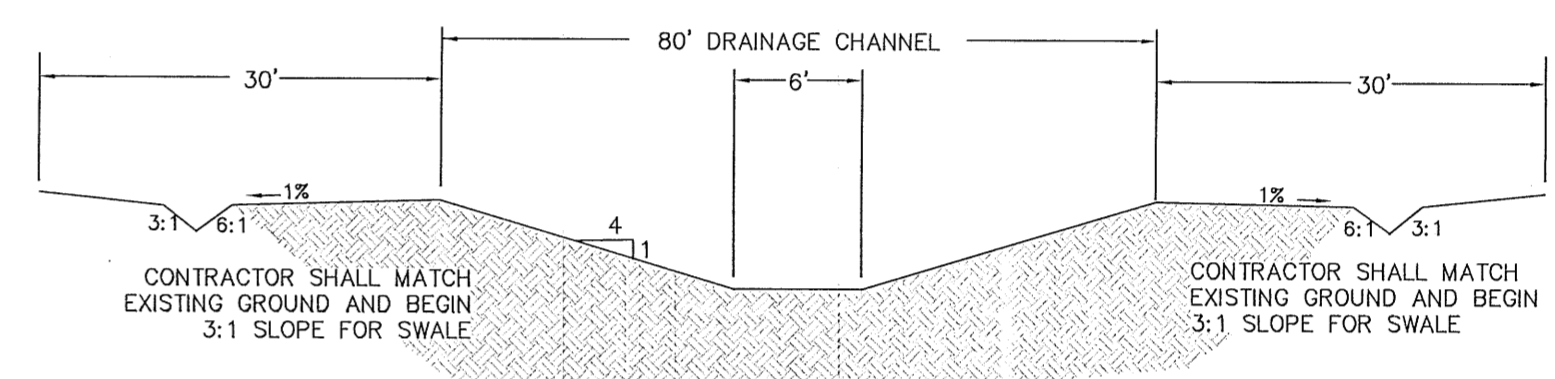
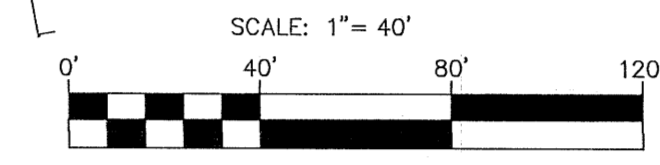
PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED DRAWN ALL
 SHEET 22 OF 44

Date: Apr 13, 2018, 1:26pm, User: ds...
 File: K:\Projects\40166\DWG\BRYAN ROAD\11-4016600-CHANNEL_PP.dwg

MATCHLINE 44+25.00
SEE SHEET 22 OF 44



LOCATION MAP
SCALE: NTS
MAP REF: KEY MAP 691H



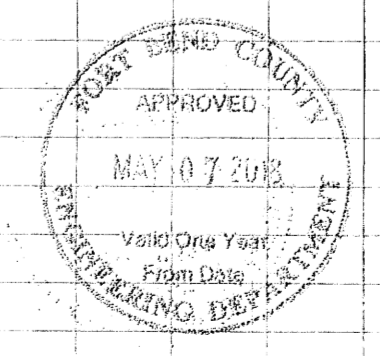
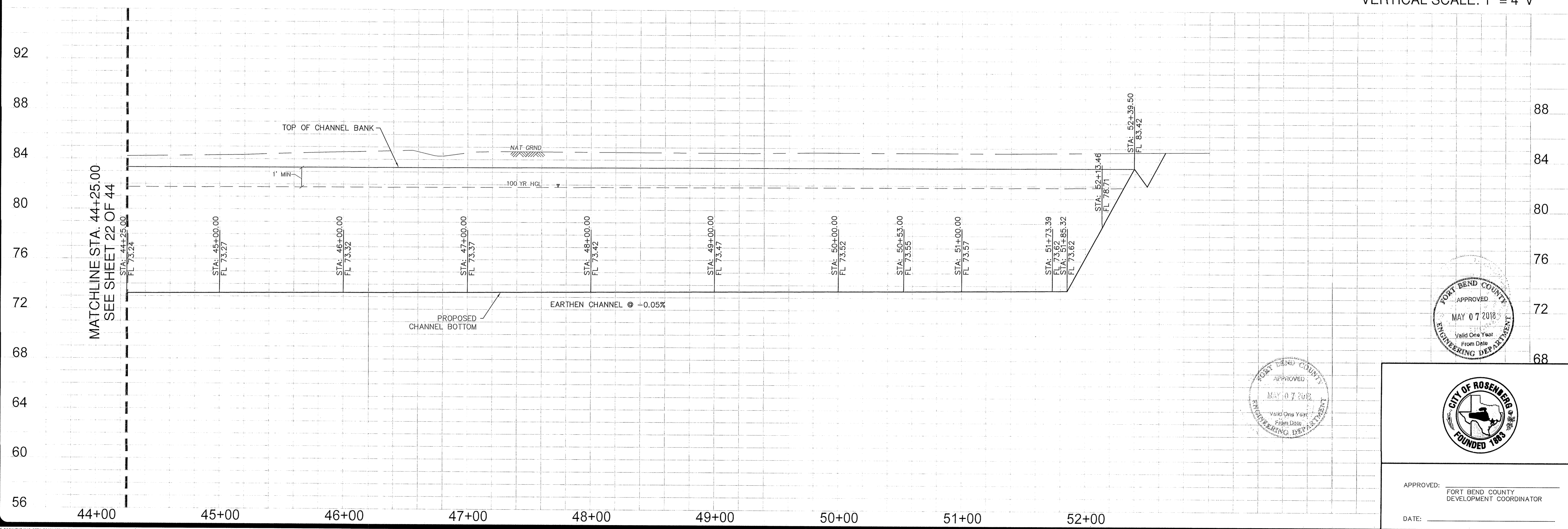
SECTION A-A
EARTHEN CHANNEL
NOT-TO-SCALE

WHEN MUD DISSOLVES, HOA IS RESPONSIBLE FOR MAINTENANCE OF DRAINAGE CHANNELS AND INFRASTRUCTURE.

FIRM FLOOD INSURANCE RATE MAP FORT BEND COUNTY FIRM COMMUNITY MAP 4185700265L PANEL 285 OF 575, DATED APRIL 2 2014. BASE FLOOD ELEVATION = 78.5

HORIZONTAL SCALE 1" = 40' H
VERTICAL SCALE: 1" = 4' V

BRYAN ROAD CHANNEL



APPROVED: FORT BEND COUNTY DEVELOPMENT COORDINATOR
DATE:

NO.	REVISION	DATE

STATE OF TEXAS
ROBERT M. PREISS
LICENSED PROFESSIONAL ENGINEER
92978
4/13/18
Robert M. Preiss

PAPE-DAWSON ENGINEERS
HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10850 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713-428-2400
TXPE FIRM REGISTRATION #470 | TEPIS FIRM REGISTRATION #0189874

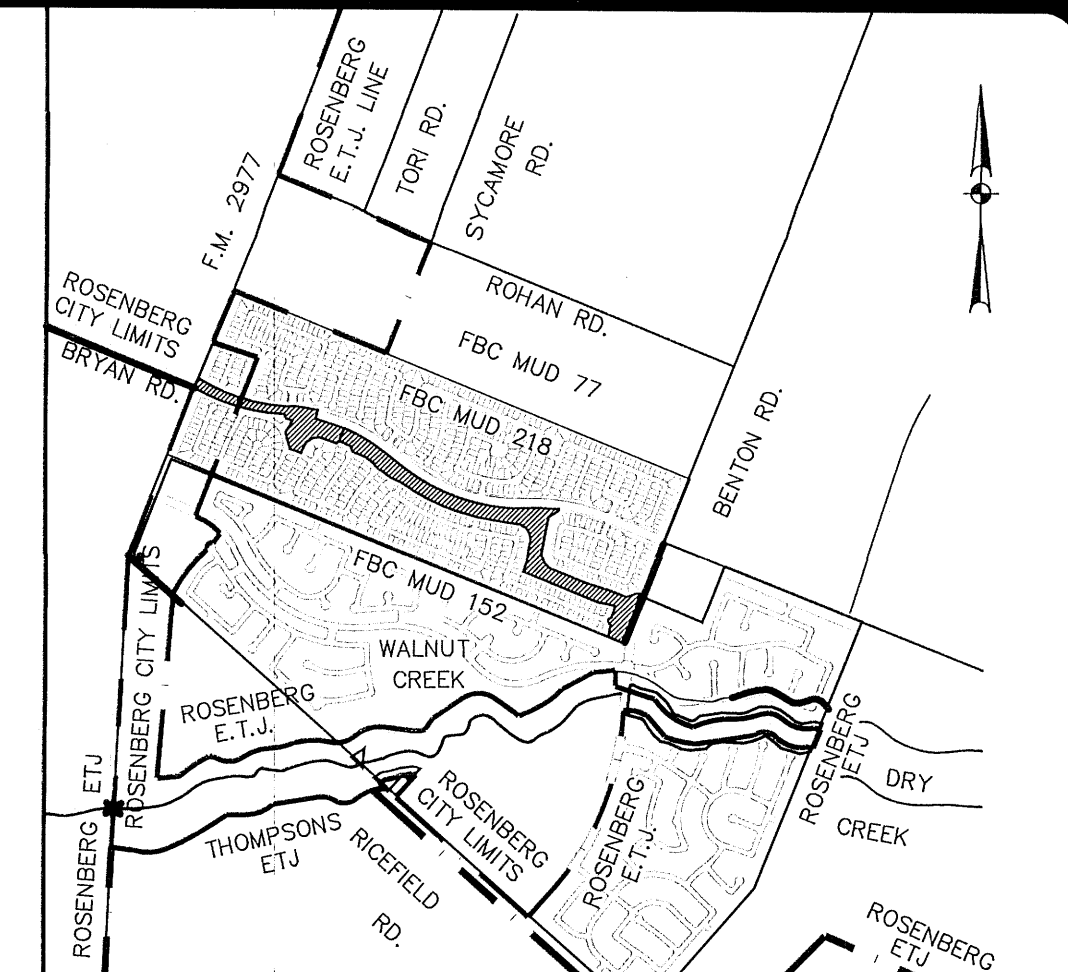
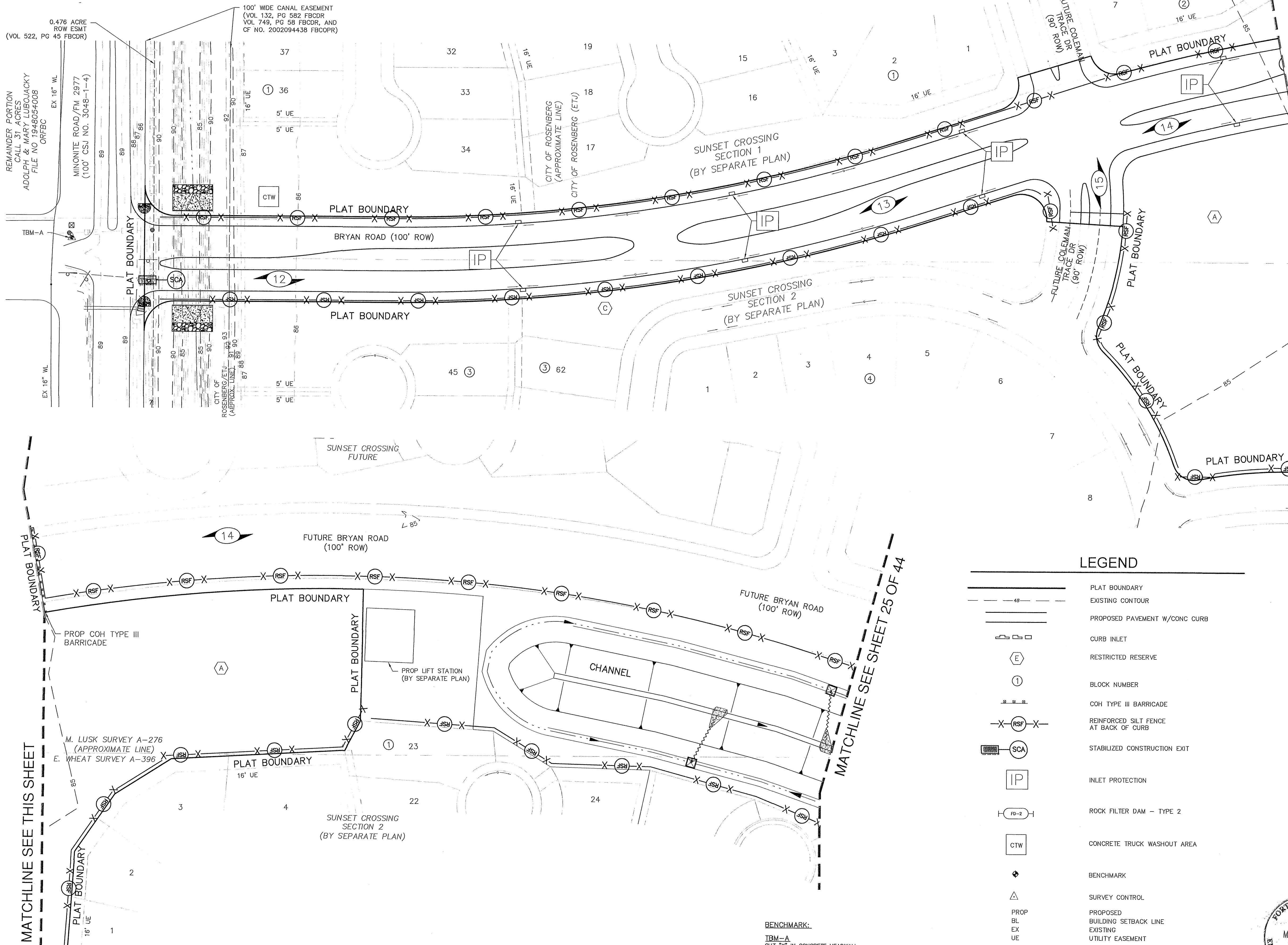
SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS
BRYAN ROAD CHANNEL (SHEET 6 OF 6)

PLAT NO.	40166-20
JOB NO.	40166-21
DATE	MARCH 2018
CHECKED	DRAWN ALL
SHEET	23 OF 44

Date: Apr 13, 2018, 1:15pm User: J. Brooks
File: K:\projects\40166\00_2-0_Design\2-1_Chil\DWGS_BRYAN ROAD\1-4016600-CHANNEL_PP.dwg

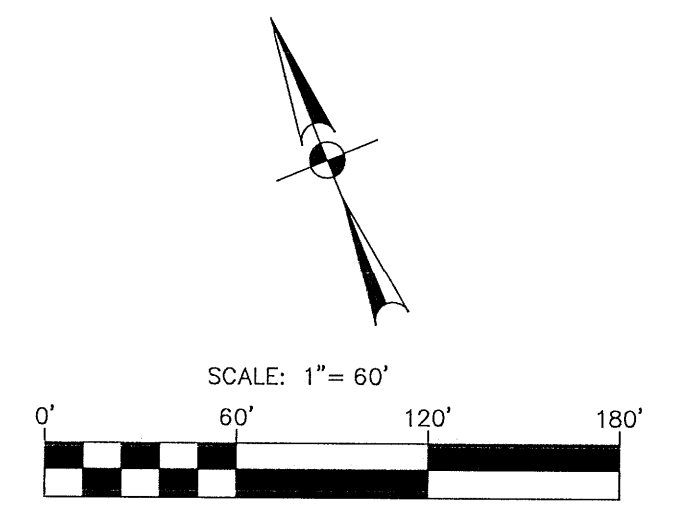
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Date: Apr 13, 2018, 11:14pm User ID: jBrooks
 File: K:\Projects\401\66\00\2-0 Design\2-1 Civil\DWGS_BRYAN ROAD\13-4016600-SWPP0A-BRYN-PHI.dwg



STA 24+69.72
 END PROP 7" CONC
 PMT W/ 6" CURB,
 STD PAVING HEADER,
 AND LOAD TRANSFER
 DEVICE, TC ± 83.57

LOCATION MAP
 SCALE: NTS
 MAP REF: KEY MAP 691H



MATCHLINE SEE THIS SHEET

MATCHLINE SEE SHEET 25 OF 44

MATCHLINE SEE THIS SHEET

- POLLUTION PREVENTION NOTES**
1. PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL INSTALL POLLUTION PREVENTION SYSTEMS AT LOCATION SHOWN ON PLANS.
 2. IF POLLUTION PREVENTION SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER AND/OR OWNER'S REPRESENTATIVE WITH THE CONTRACTOR SHALL EXAMINE THE EXISTING POLLUTION PREVENTION SYSTEMS FOR DAMAGE PRIOR TO CONTRACTOR STARTING CONSTRUCTION OF THE CONTRACT. ANY DAMAGE NOTED AT THIS TIME SHALL BE REPAIRED AT OWNER'S EXPENSE.
 3. CONTRACTOR SHALL INSPECT ALL POLLUTION PREVENTION SYSTEMS SPECIFIED HEREIN, AS REQUIRED IN THE PERMIT.
 4. CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE DAMAGED EROSION AND SEDIMENTATION CONTROL SYSTEMS THROUGHOUT THE DURATION OF THE CONTRACT.
 5. CONTRACTOR SHALL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS AND OTHER POTENTIALLY TOXIC MATERIALS.
 6. CONTRACTOR SHALL LOCATE FUEL/MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONVEYANCE SYSTEMS. CONTRACTOR SHALL USE A LINER UNDER ABOVE GROUND STORAGE TANKS. CONTRACTOR SHALL USE FILTER FABRIC FENCING, HAY BALES, OR BERMS AROUND FUEL STORAGE AREAS.
 7. CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY, AND IN WRITING, OF ANY FUEL OR TOXIC MATERIAL SPILLS ONTO THE PROJECT/CONSTRUCTION AREA AND THE ACTIONS TAKEN TO REMEDY THE PROBLEM.
 8. CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF HIS FUELS, MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER.
 9. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE ENVIRONMENTAL LAWS.
 10. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATELY MAINTAINED SANITARY FACILITIES.
 11. CONTRACTOR SHALL BE RESPONSIBLE FOR STREET CLEANING, ON A DAILY BASIS, ALL MUD AND DIRT DEPOSITED ON THE EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY.
 12. CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT.
 13. SEDIMENT WILL BE REMOVED FROM BEHIND THE FILTER FABRIC FENCE WHEN IT BECOMES ABOUT ONE-THIRD OF THE HEIGHT OF THE FENCE.
 14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE HAS BEEN ESTABLISHED, STRUCTURAL CONTROLS WILL BE REMOVED AND DISTURBED AREAS WILL BE RESTABILIZED.
 15. AT COMPLETION OF THE CONTRACT, OWNER AND/OR OWNER'S REPRESENTATIVE AND THE CONTRACTOR SHALL EXAMINE THE POLLUTION PREVENTION SYSTEM BEFORE RELIEVING CONTRACTOR OF HIS MAINTENANCE RESPONSIBILITIES.
 16. CONTRACTOR TO BE RESPONSIBLE FOR THE SUBMISSION OF HIS STORM WATER POLLUTION PREVENTION PLAN ITEMS INSPECTION REPORT WITH HIS PAYMENT REQUEST. FAILURE TO COMPLY MAY RESULT IN A DELAY IN PAYMENT.
 17. 3" TO 5" ROCK IS TO BE USED WITHIN THE STABILIZED CONSTRUCTION EXIT AREA.
 18. REFERENCE SHEET 27 OF 44 FOR ADDITIONAL SWPPP DETAILS
 19. CONTRACTOR TO ESTABLISH VEGETATION WITHIN BACK OF LOT AND DRAINAGE RESERVE.

LEGEND

	PLAT BOUNDARY
	EXISTING CONTOUR
	PROPOSED PAVEMENT W/CONC CURB
	CURB INLET
	RESTRICTED RESERVE
	BLOCK NUMBER
	COH TYPE III BARRICADE
	REINFORCED SILT FENCE AT BACK OF CURB
	STABILIZED CONSTRUCTION EXIT
	INLET PROTECTION
	ROCK FILTER DAM - TYPE 2
	CONCRETE TRUCK WASHOUT AREA
	BENCHMARK
	SURVEY CONTROL
	PROPOSED BUILDING SETBACK LINE
	EXISTING UTILITY EASEMENT

BENCHMARK:
 TBM-A
 CUT "X" IN CONCRETE HEADWALL
 N: 13754207.4200 E: 3001494.1400 ELEV: 88.17

FIRM FLOOD INSURANCE RATE MAP
 FORT BEND COUNTY COMMUNITY
 MAP 4187C0008L PANEL 265 OF 575,
 DATED APRIL 2 2014.
 BASE FLOOD ELEVATION = 78.5

WHEN MUD DISSOLVES, HOA IS RESPONSIBLE FOR MAINTENANCE OF DRAINAGE CHANNELS AND INFRASTRUCTURE.

FORT BEND COUNTY
 APPROVED
 MAY 07 2018
 Valid One Year
 From Date

FORT BEND COUNTY
 APPROVED
 4.7.2018
 Valid One Year
 From Date



APPROVED: _____
 FORT BEND COUNTY
 DEVELOPMENT COORDINATOR

DATE: _____

NO.	REVISION	DATE

STATE OF TEXAS
 ROBERT M. PREISS
 92978
 LICENSE
 APR 13 2018
 Robert M. Preiss

PAPE-DAWSON
ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10889 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.628.2400
 TPEP FIRM REGISTRATION #470 | TPEP FIRM REGISTRATION #1018974

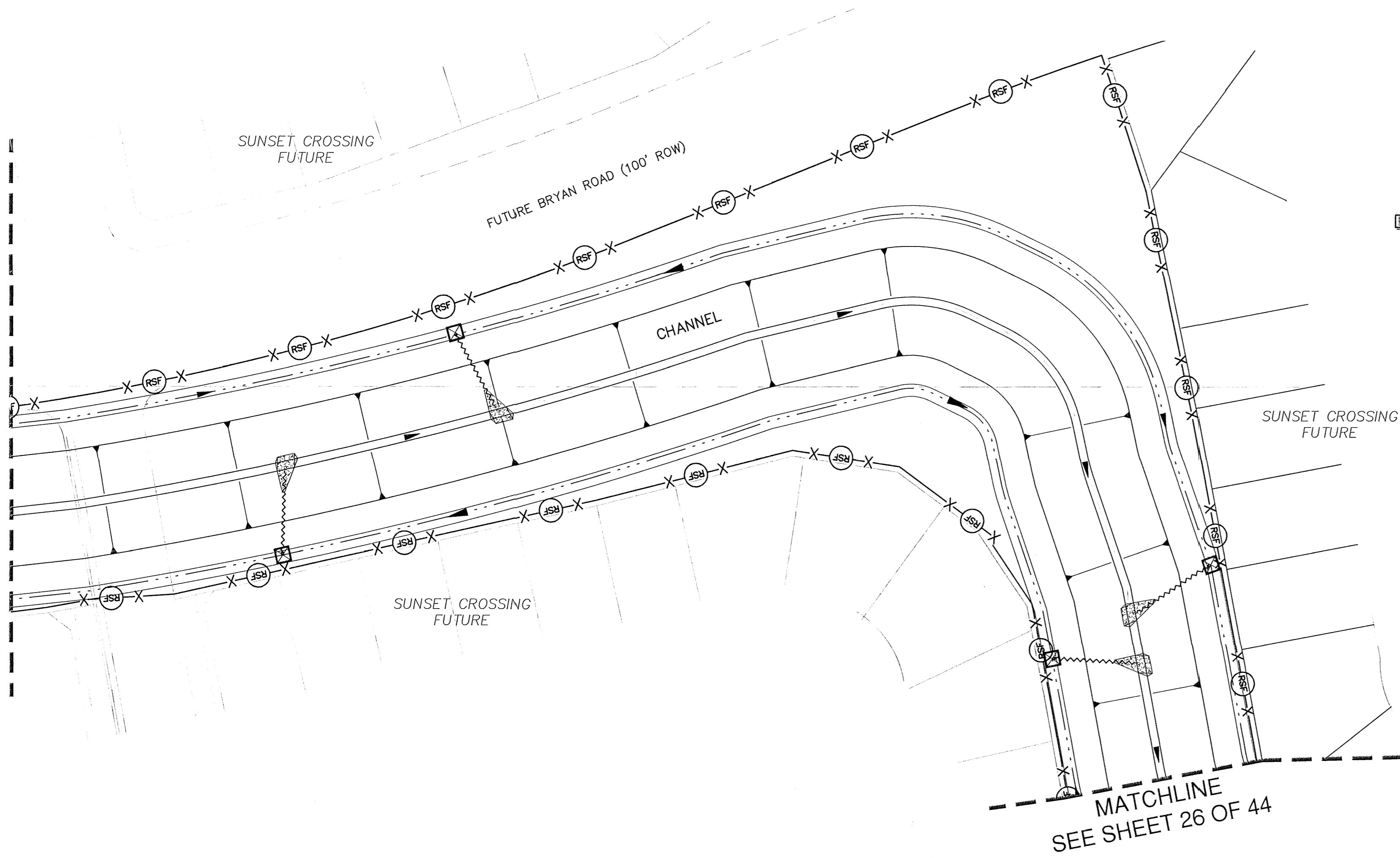
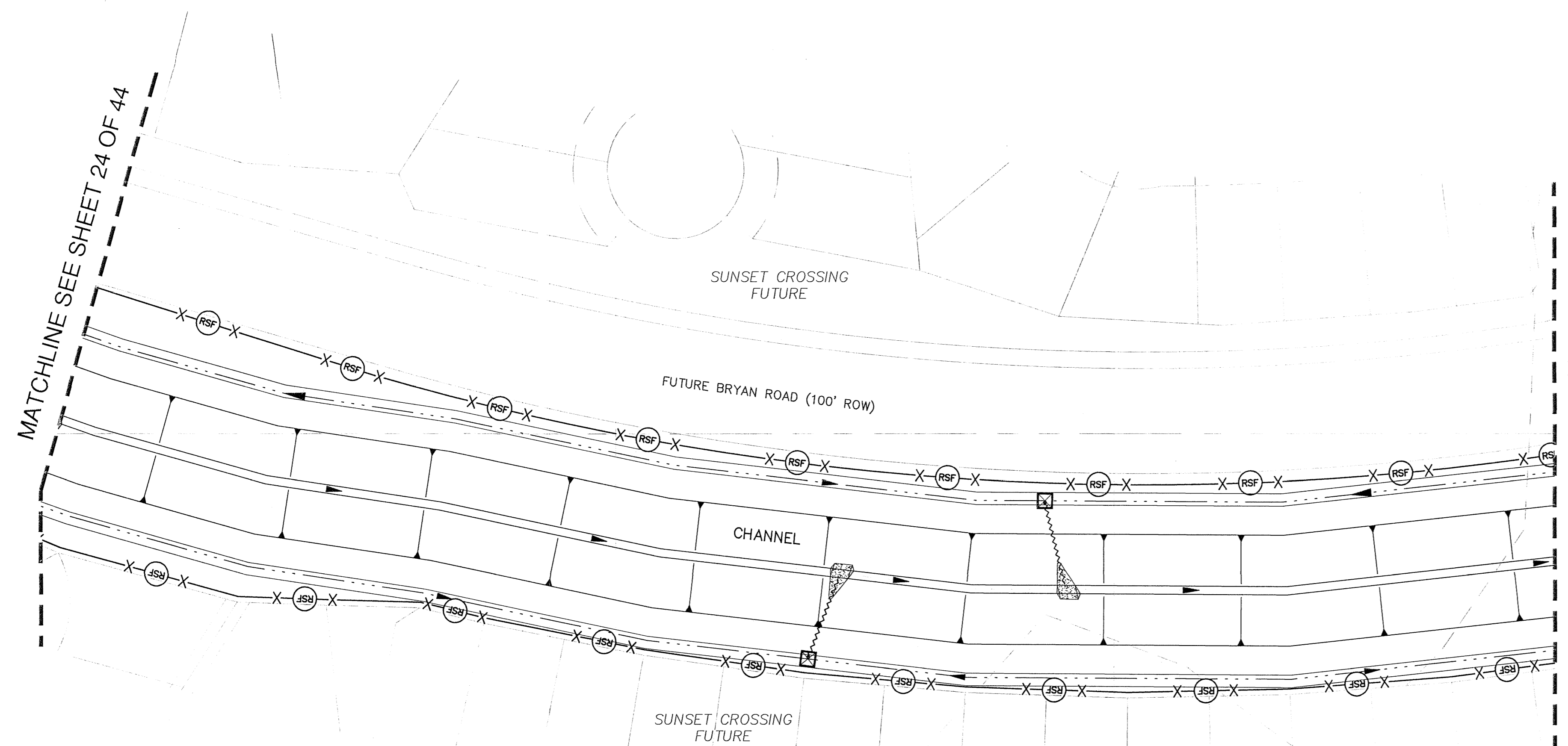
SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 STORMWATER POLLUTION PREVENTION (SHEET 1 OF 3)

PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED DRAWN ALL
 SHEET 24 OF 44

PERMIT SET

Date: Apr 13, 2018 1:15:01 PM User ID: jrbanks
 Plot File: W:\projects\1801\1801_02-D Drainage\2-D Drainage\1801-02-DRAINAGE-SWPPD-BRYAN-PH1.dwg

THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HANDCOPIED MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE UNLESS OTHERWISE NOTED. InRoads © 2016, CAPCO Digital Data, Texas Orthomography Program, USDA Farm Service Agency.



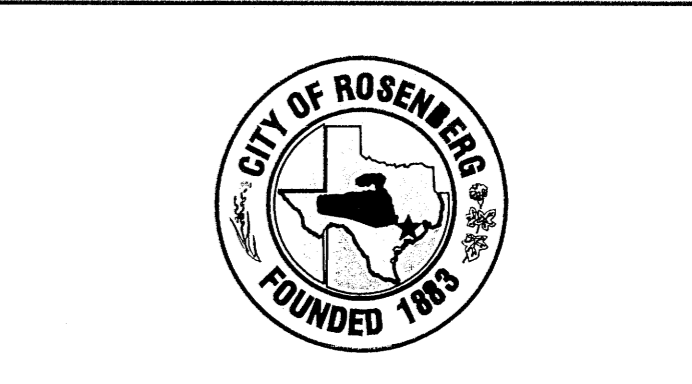
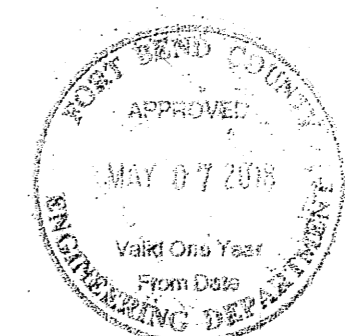
LEGEND

- PLAT BOUNDARY
- EXISTING CONTOUR
- PROPOSED PAVEMENT W/CONC CURB
- DROP INLET
- ⬢ RESTRICTED RESERVE
- ① BLOCK NUMBER
- COH TYPE III BARRICADE
- ⊗-RSF REINFORCED SILT FENCE AT BACK OF CURB
- ⊗-SCA STABILIZED CONSTRUCTION EXIT
- ⊗-IP INLET PROTECTION
- ⊗-FD-2 ROCK FILTER DAM - TYPE 2
- ⊗-CTW CONCRETE TRUCK WASHOUT AREA
- ⊕ BENCHMARK
- △ SURVEY CONTROL

BENCHMARK:
TBM-A
 CUT "X" IN CONCRETE HEADWALL
 N: 13754207.4200 E: 3001484.1400 ELEV: 88.17

FIRM FLOOD INSURANCE RATE MAP
 FORT BEND COUNTY COMMUNITY
 MAP #185700268L PANEL 285 OF 575,
 DATED APRIL 2 2014,
 BASE FLOOD ELEVATION = 78.5

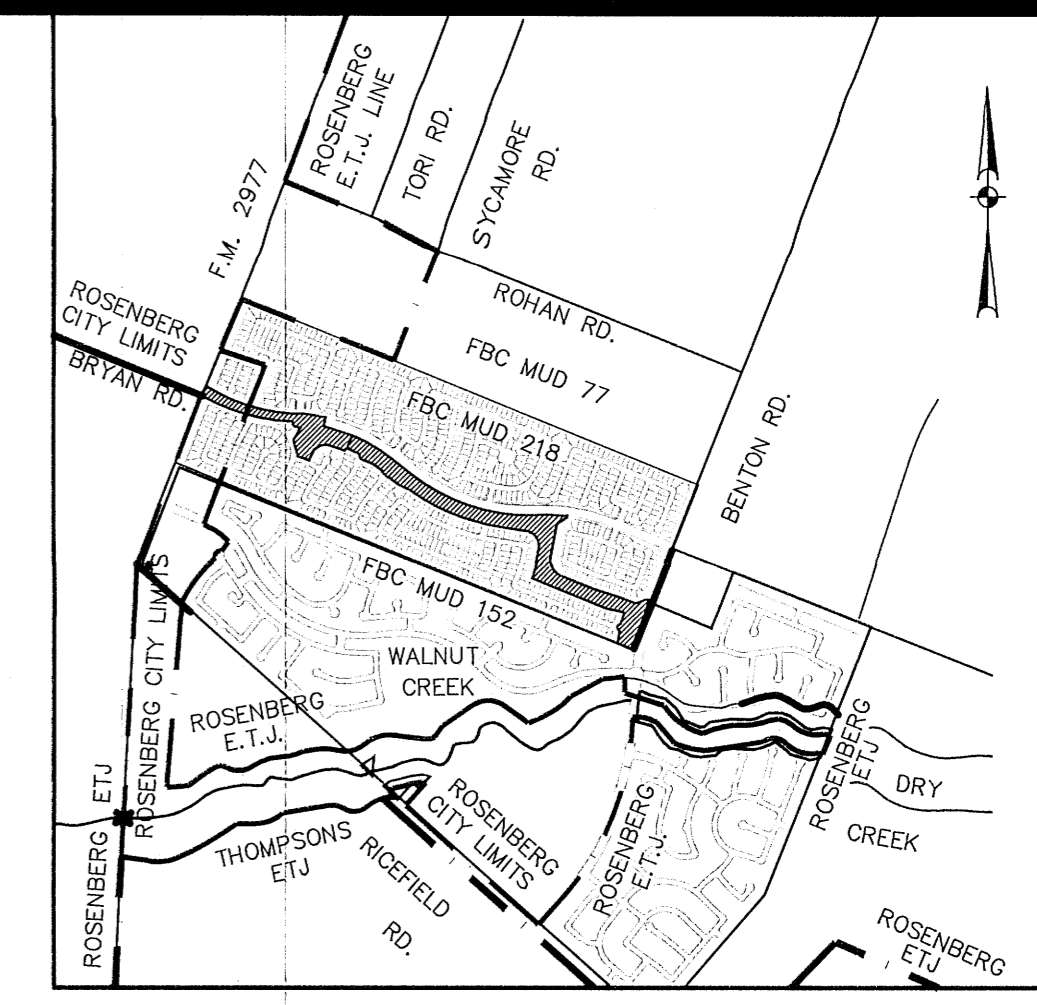
WHEN MUD DISSOLVES, HOA IS RESPONSIBLE FOR MAINTENANCE OF DRAINAGE CHANNELS AND INFRASTRUCTURE.



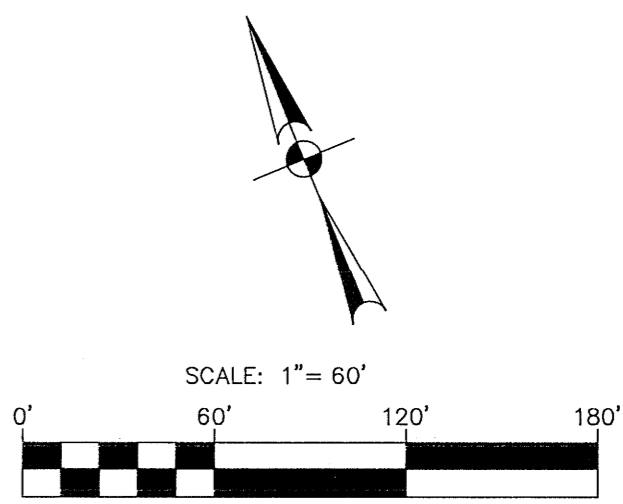
APPROVED: _____
 FORT BEND COUNTY DEVELOPMENT COORDINATOR

DATE: _____

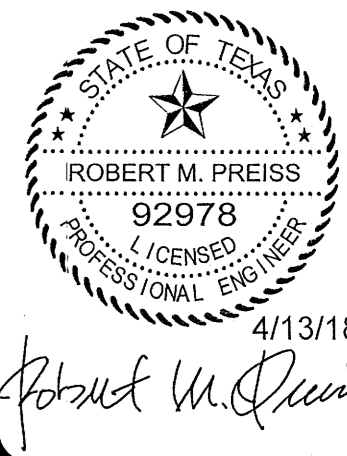
- POLLUTION PREVENTION NOTES**
- PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL INSTALL POLLUTION PREVENTION SYSTEMS AT LOCATION SHOWN ON PLANS.
 - IF POLLUTION PREVENTION SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER AND/OR OWNER'S REPRESENTATIVE WITH THE CONTRACTOR SHALL EXAMINE THE EXISTING POLLUTION PREVENTION SYSTEMS FOR DAMAGE PRIOR TO CONTRACTOR STARTING CONSTRUCTION OF THE CONTRACT. ANY DAMAGE NOTED AT THIS TIME SHALL BE REPAIRED AT OWNER'S EXPENSE.
 - CONTRACTOR SHALL INSPECT ALL POLLUTION PREVENTION SYSTEMS SPECIFIED HEREIN, AS REQUIRED IN THE PERMIT.
 - CONTRACTOR SHALL MAINTAIN, REPAIR AND/OR REPLACE DAMAGED EROSION AND SEDIMENTATION CONTROL SYSTEMS THROUGHOUT THE DURATION OF THE CONTRACT.
 - CONTRACTOR SHALL PROVIDE PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS AND OTHER POTENTIALLY TOXIC MATERIALS.
 - CONTRACTOR SHALL LOCATE FUEL/MATERIAL STORAGE AREAS AWAY FROM STORM WATER CONVEYANCE SYSTEMS. CONTRACTOR SHALL USE A LINER UNDER ABOVE GROUND STORAGE TANKS. CONTRACTOR SHALL USE FILTER FABRIC FENCING, HAY BALES, OR BERMS AROUND FUEL STORAGE AREAS.
 - CONTRACTOR SHALL ADVISE OWNER IMMEDIATELY, VERBALLY, AND IN WRITING, OF ANY FUEL OR TOXIC MATERIAL SPILLS ONTO THE PROJECT/CONSTRUCTION AREA AND THE ACTIONS TAKEN TO REMEDY THE PROBLEM.
 - CONTRACTOR IS RESPONSIBLE FOR DISPOSING OF HIS FUELS, MATERIALS, AND CONTAMINATED EXCAVATIONS IN A LEGALLY APPROVED MANNER.
 - CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE ENVIRONMENTAL LAWS.
 - CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATELY MAINTAINED SANITARY FACILITIES.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR STREET CLEANING, ON A DAILY BASIS, ALL MUD AND DIRT DEPOSITED ON THE EXISTING PAVEMENT DUE TO HIS CONSTRUCTION ACTIVITY.
 - CONTRACTOR SHALL PROVIDE A STABILIZED CONSTRUCTION EXIT.
 - SEDIMENT WILL BE REMOVED FROM BEHIND THE FILTER FABRIC FENCE WHEN IT BECOMES ABOUT ONE-THIRD OF THE HEIGHT OF THE FENCE.
 - WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE HAS BEEN ESTABLISHED, STRUCTURAL CONTROLS WILL BE REMOVED AND DISTURBED AREAS WILL BE RESTABILIZED.
 - AT COMPLETION OF THE CONTRACT, OWNER AND/OR OWNER'S REPRESENTATIVE AND THE CONTRACTOR SHALL EXAMINE THE POLLUTION PREVENTION SYSTEM BEFORE RELIEVING CONTRACTOR OF HIS MAINTENANCE RESPONSIBILITIES.
 - CONTRACTOR TO BE RESPONSIBLE FOR THE SUBMISSION OF HIS STORM WATER POLLUTION PREVENTION PLAN ITEMS INSPECTION REPORT WITH HIS PAYMENT REQUEST. FAILURE TO COMPLY MAY RESULT IN A DELAY IN PAYMENT.
 - 3" TO 5" ROCK IS TO BE USED WITHIN THE STABILIZED CONSTRUCTION EXIT AREA.
 - REFERENCE SHEET 27 OF 44 FOR ADDITIONAL SWPPP DETAILS
 - CONTRACTOR TO ESTABLISH VEGETATION WITHIN BACK OF LOT AND DRAINAGE RESERVE



LOCATION MAP
 SCALE: NTS
 MAP REF: KEY MAP 691H



NO.	REVISION	DATE



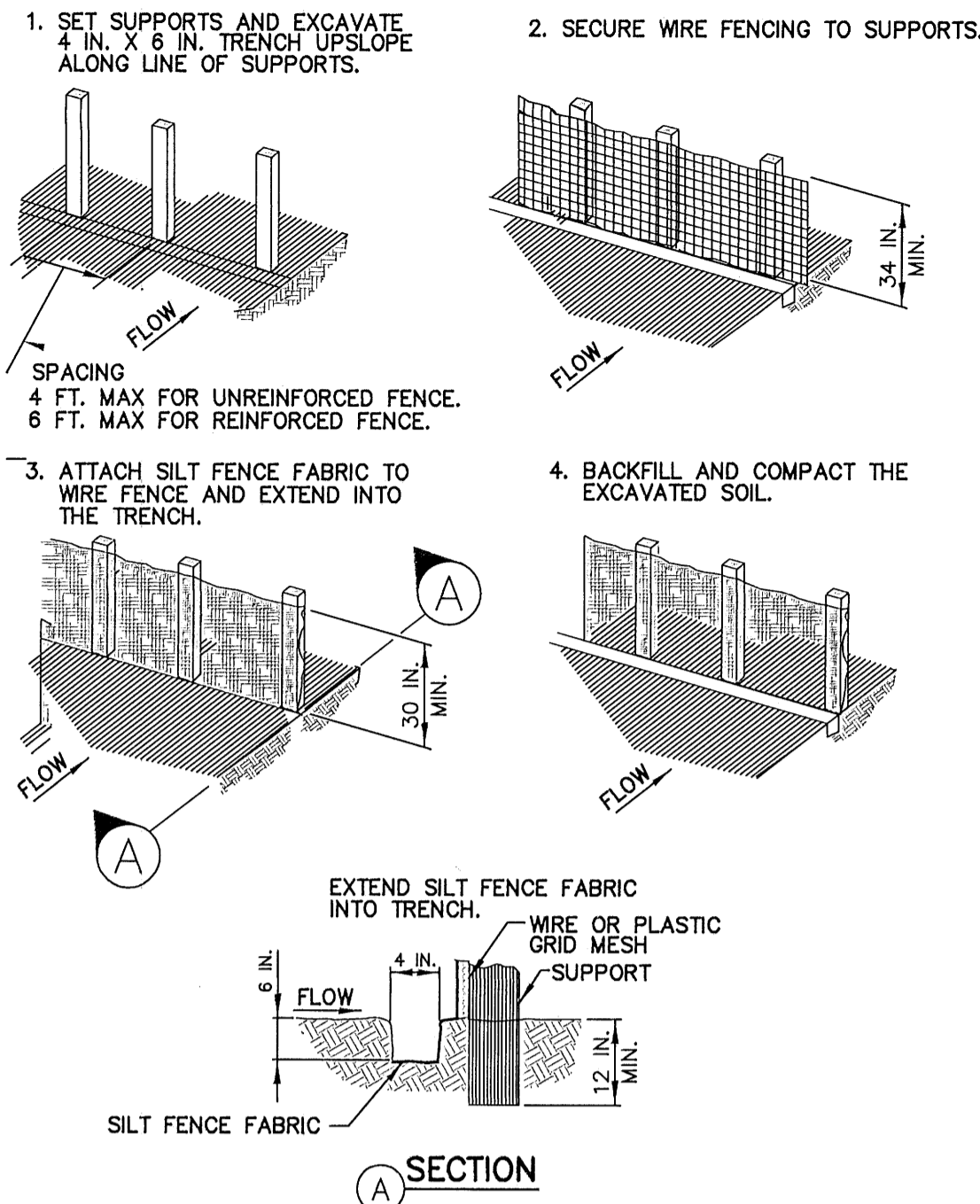
PAPE-DAWSON ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10850 RICHMOND AVE. STE 200 | HOUSTON, TX 77042 | 713.423.2400
 TUBE FIRM REGISTRATION #479 | TBPALS FIRM REGISTRATION #0789874

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS

STORMWATER POLLUTION PREVENTION (SHEET 2 OF 3)

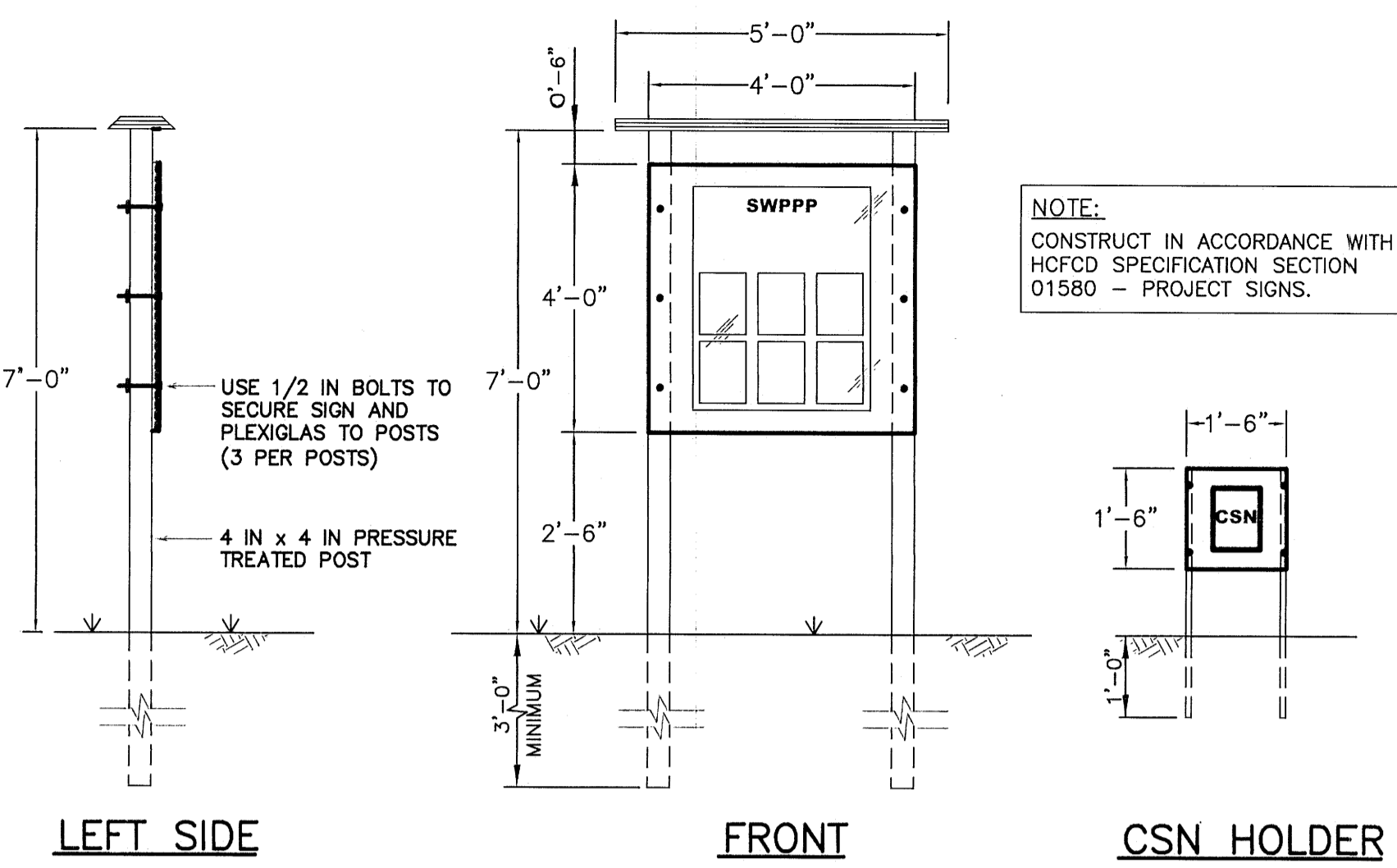
PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE: MARCH 2018
 DESIGNER: LS
 CHECKED: _____ DRAWN: ALL
 SHEET 25 OF 44

PERMIT SET

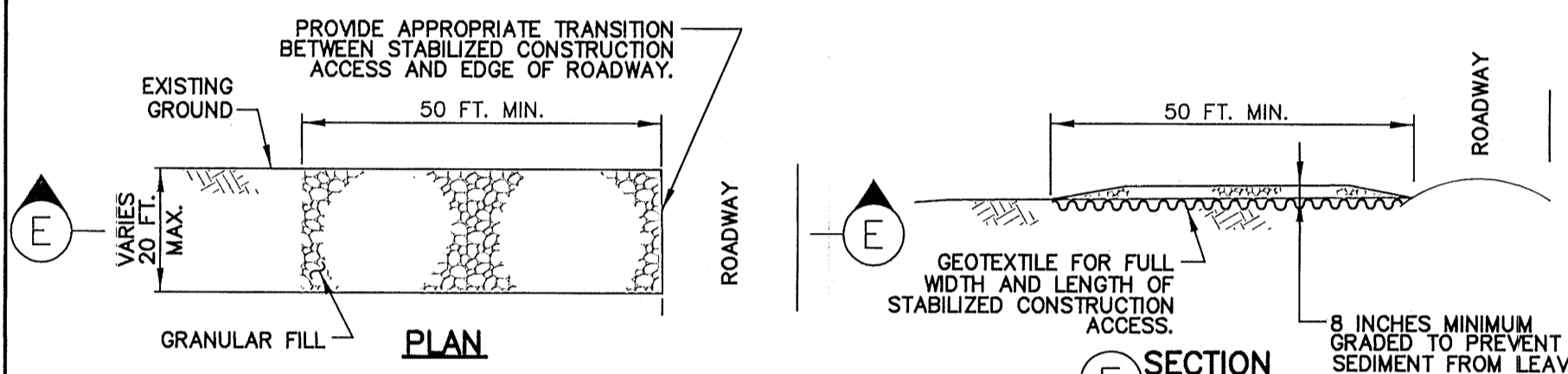


CONSTRUCTION NOTES:
 1. SEE SPECIFICATION SECTION NO. 02361-SILT FENCES.
 X-RSF-X REINFORCED SILT FENCE SYMBOL
 X-SF-X SILT FENCE SYMBOL

SILT FENCE

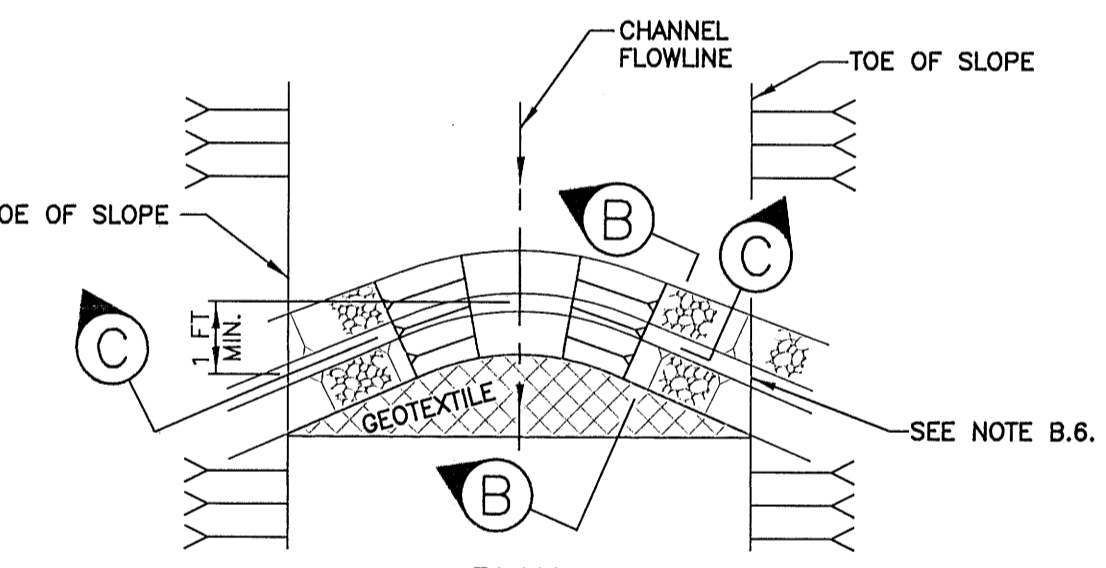


SWPPP / BMP SIGN AND CONSTRUCTION SITE NOTICE HOLDER DETAILS



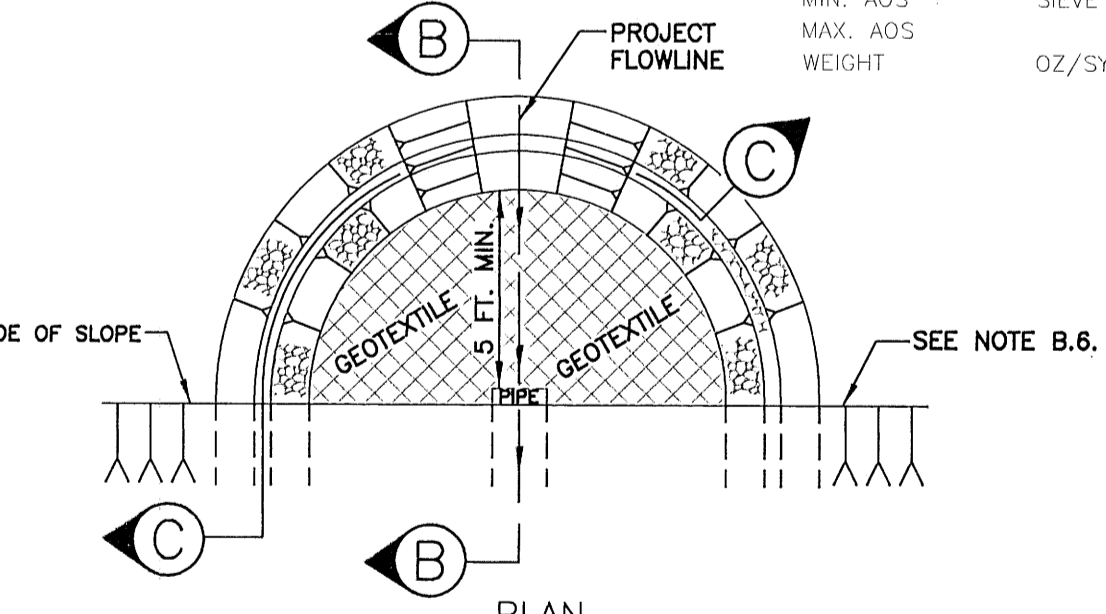
CONSTRUCTION NOTES:
 1. SEE SPECIFICATION SECTION NO. 02365-STABILIZED CONSTRUCTION ACCESS.

STABILIZED CONSTRUCTION ACCESS



IN-CHANNEL FILTER DAM

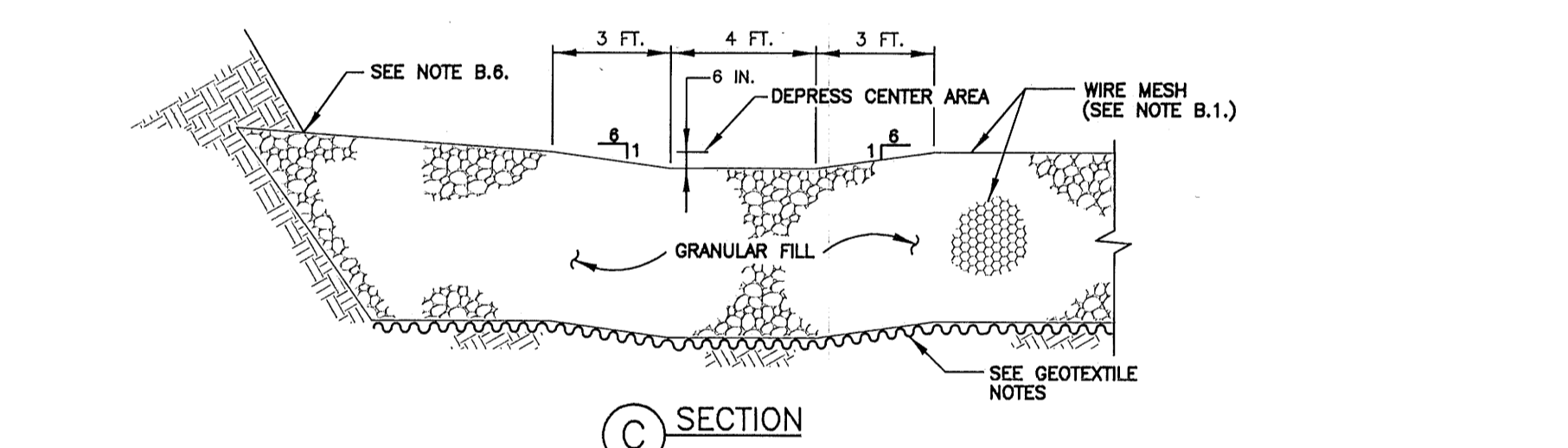
GEOTEXTILE NOTES:
 MIN. AOS 120 MIN
 MAX. AOS 50 MAX
 WEIGHT 4 OZ./SY



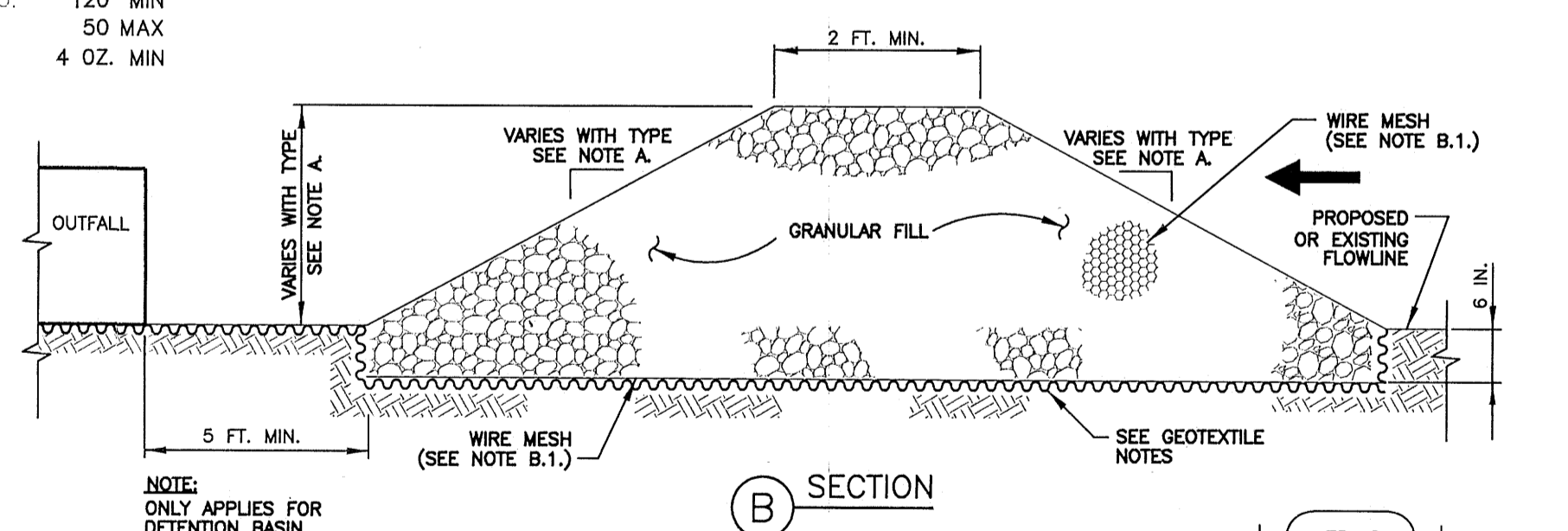
FILTER DAM AT DETENTION BASIN OUTFALL PIPE

FILTER DAM NOTES:

- A. TYPES OF FILTER DAMS
 1. TYPE 1 (NON-REINFORCED)
 - a. HEIGHT - 18-24 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - b. TOP WIDTH - 2 FEET (MINIMUM)
 - c. SLOPES - 2:1 (MAXIMUM).
 2. TYPE 2 (REINFORCED)
 - a. HEIGHT - 18-36 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - b. TOP WIDTH - 2 FEET (MINIMUM).
 - c. SLOPES - 2:1 (MAXIMUM).
 3. TYPE 3 (REINFORCED)
 - a. HEIGHT - 36-48 INCHES. MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - b. TOP WIDTH - 2 FEET (MINIMUM).
 - c. SLOPES - 3:1 (MAXIMUM).
 4. TYPE 4 (GABION)
 - a. HEIGHT - 30 INCHES (MINIMUM). MEASURE VERTICALLY FROM EXISTING GROUND TO TOP OF FILTER DAM.
 - b. TOP WIDTH - 2 FEET (MINIMUM).
 5. TYPE 5. AS SHOWN ON THE PLANS.



SECTION C

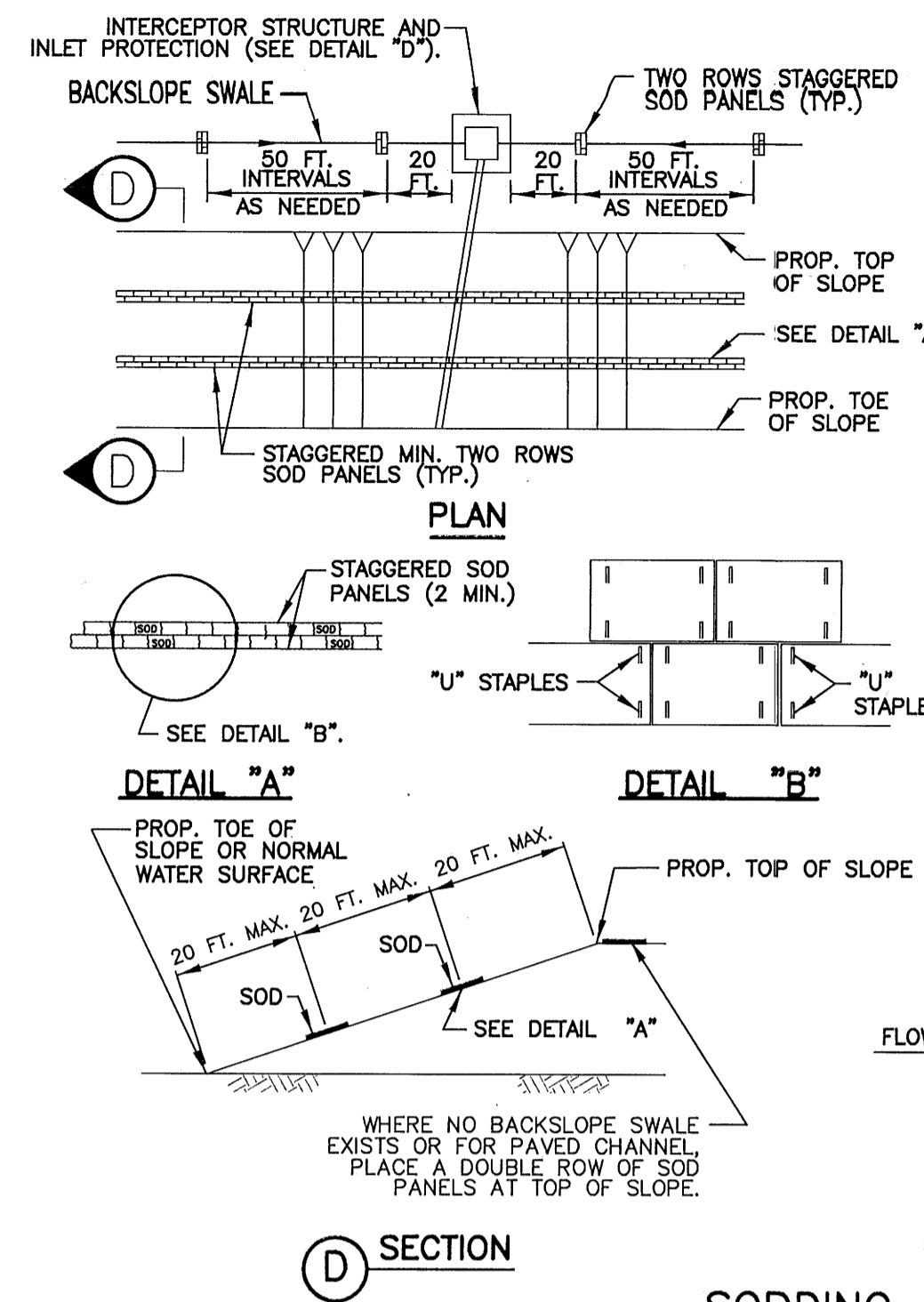


SECTION B

FILTER DAM - TYPE 2

B. CONSTRUCT FILTER DAMS ACCORDING TO THE FOLLOWING CRITERIA UNLESS SHOWN OTHERWISE ON THE PLANS.

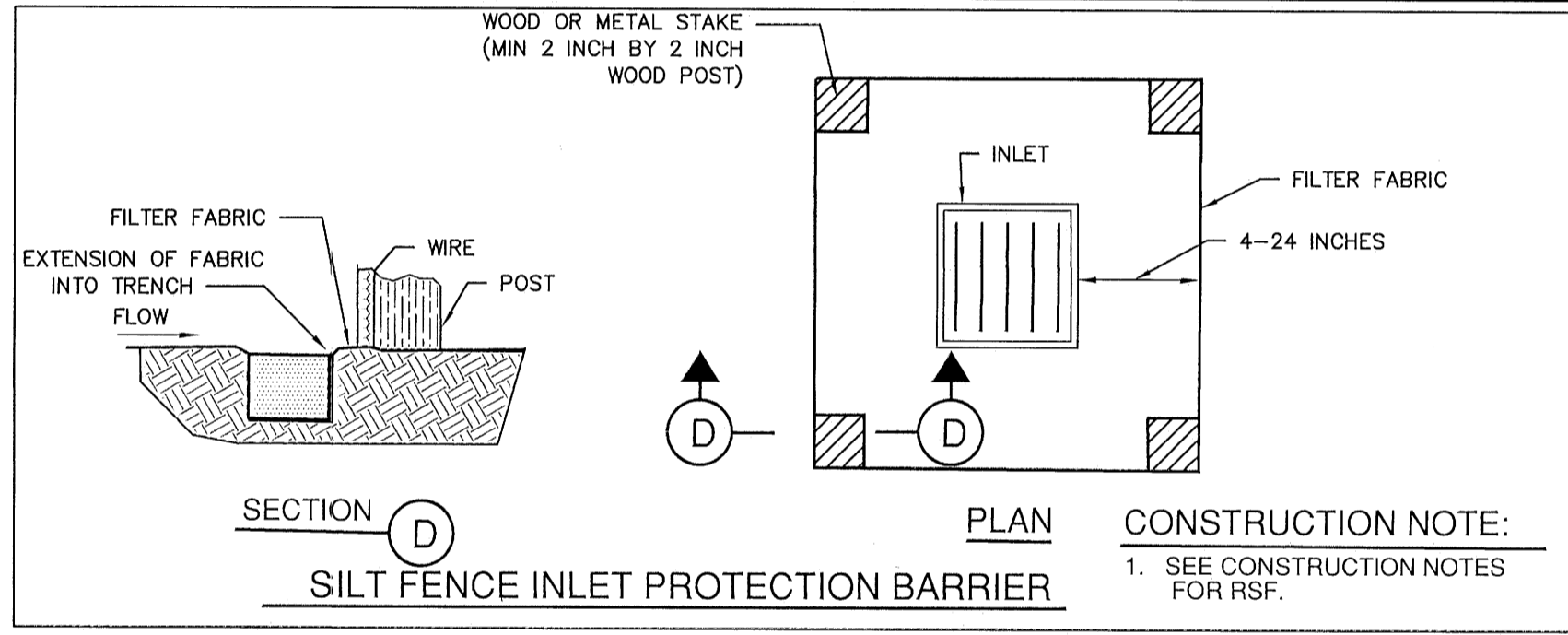
1. TYPE 2 AND 3 FILTER DAMS: SECURE WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH WITH 1 INCH DIAMETER HEXAGONAL OPENINGS.
2. GRANULAR FILL:
 - a. PLACE ON MESH TO HEIGHT AND SLOPES SHOWN ON PLANS OR AS SPECIFIED BY THE ENGINEER.
 - b. 3-5 INCHES FOR ROCK FILTER DAM TYPES 1, 2, AND 4 AND 4-8 INCHES FOR ROCK FILTER DAM TYPE REFER TO GRANULAR FILL IN SPECIFICATION SECTION NO. 02378-RIPRAP AND GRANULAR FILL.
3. WIRE MESH: FOLD AT UPSTREAM SIDE OVER GRANULAR FILL AND TIGHTLY SECURE TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS.
4. IN STREAMS: SECURE OR STAKE MESH TO STREAM BED PRIOR TO AGGREGATE PLACEMENT.
5. SEE SPECIFICATION SECTION NO. 02384-FILTER DAMS.
6. EMBED ONE FOOT MINIMUM INTO SLOPE AND AT SLOPE RAISE ONE FOOT HIGHER THAN CENTER OF DEPRESSED AREA.



NOTES:
 1. FOR SOD ROLLS, 24 INCHES WIDE, PLACE STAPLES ON 24 INCH CENTERS NEAR THE EDGES. STAGGER STAPLES ON OPPOSING SIDES. PLACE ADDITIONAL STAPLES IN CORNERS AT ENDS OF ROLL AND ONE IN MIDDLE AT BOTH ENDS OF ROLL.
 2. PROVIDE STAPLES PER SPECIFICATION SECTION NO. 02922-SOD.
 3. SOD ROLL AS SHOWN IN DETAIL "C" EQUIVALENT TO TWO ROWS OF SOD PANELS.

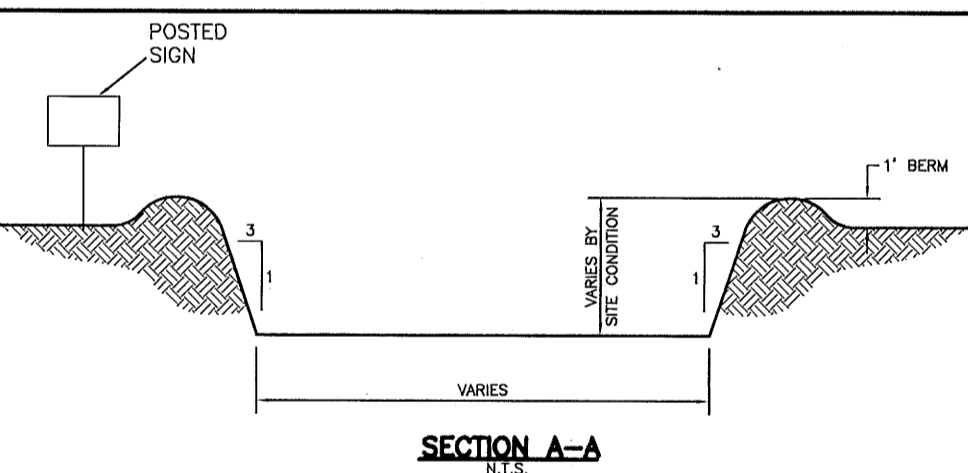
SODDING

SOD SYMBOL
 IP SYMBOL



SILT FENCE INLET PROTECTION BARRIER

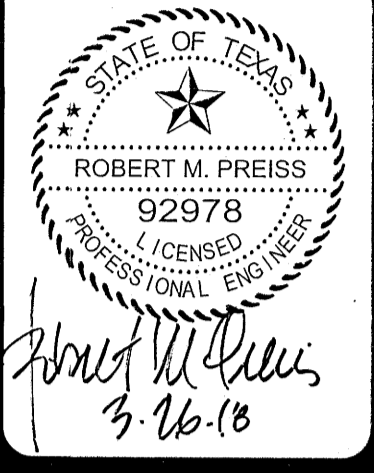
CONSTRUCTION NOTE:
 1. SEE CONSTRUCTION NOTES FOR RSF.



CONCRETE TRUCK WASHOUT AREA

- GENERAL NOTES:**
1. POST A SIGN READING "CONCRETE WASH OUT PIT" NEXT TO THE PIT.
 2. VERBALLY INSTRUCT THE CONCRETE TRUCK DRIVERS WHERE THE PIT IS AND TO WASH OUT THEIR TRUCKS IN THE PIT AND NO WHERE ELSE.
 3. UPON THE CONCRETE SETTING UP (CURING DRYING OUT), THE CONCRETE WASTE SHALL BE REMOVED FROM THE PROJECT SITE AND DISPOSED OF PROPERLY BY THE CONTRACTOR. AFTER REMOVAL OF THE CONCRETE WASTE, THE WASH OUT PIT SHALL BE FILLED WITH CLEAN FILL MATERIAL AND COMPACTED TO IN-SITU CONDITIONS, OR AS DIRECTED BY THE PROJECT SPECIFICATIONS.
 4. CONCRETE WASH OUT PITS SHALL NOT BE LOCATED DIRECTLY ADJACENT TO, NOR AT ANY TIME DRAIN INTO THE STORM SEWER SYSTEM OR ANY OTHER SWALE, DITCH, OR WATERWAY.
 5. CONSTRUCT ENTRY ROAD AND BOTTOM OF WASHOUT AREA TO SUPPORT EXPECTED LOADINGS FROM TRUCKS EQUIPMENT.

DATE	
NO.	
REVISION	



PAPE-DAWSON ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10250 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
 TDP# FIRM REGISTRATION #4270 | TEP#LS FIRM REGISTRATION #01019974

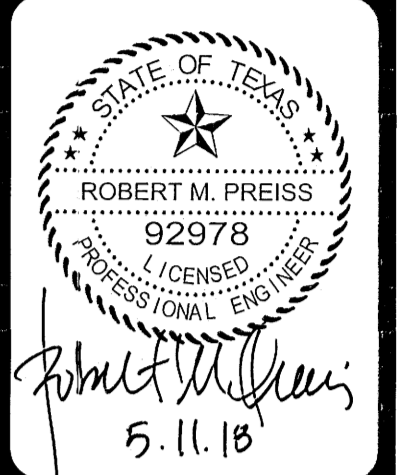
SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 STORM WATER POLLUTION PREVENTION DETAILS



APPROVED: FORT BEND COUNTY DEVELOPMENT COORDINATOR
 DATE:

PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED BY X, DRAWN ALL
 SHEET 27 OF 44

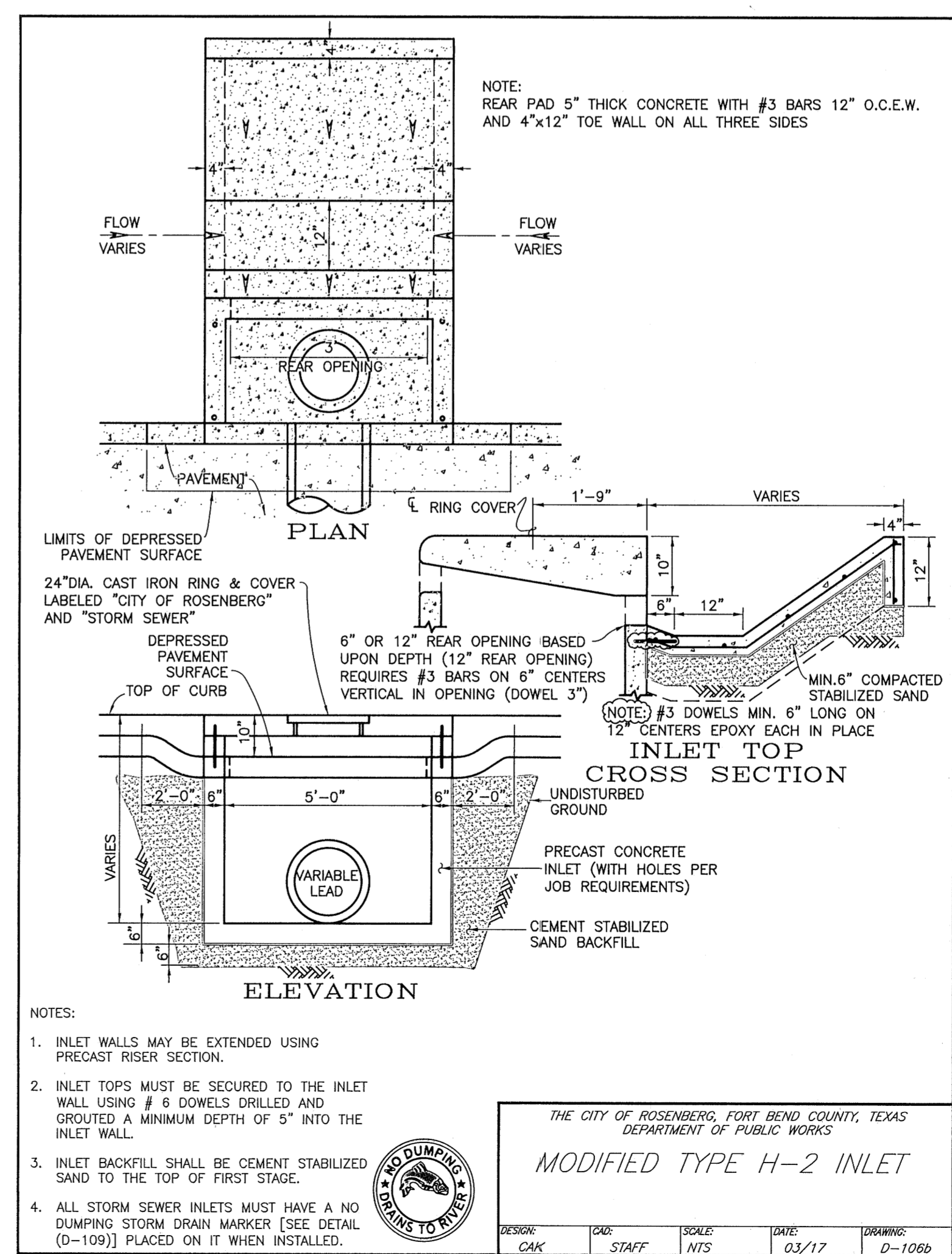
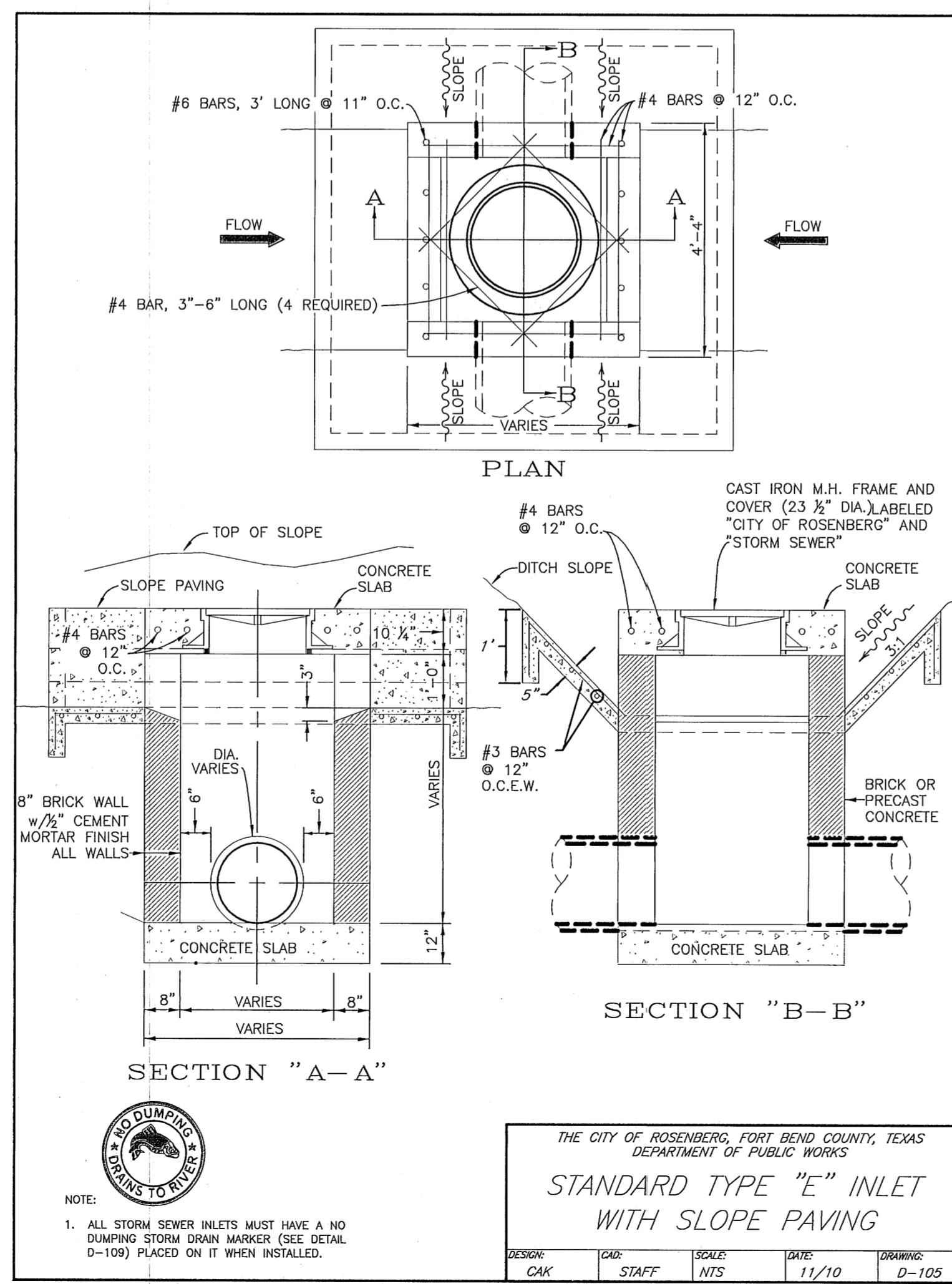
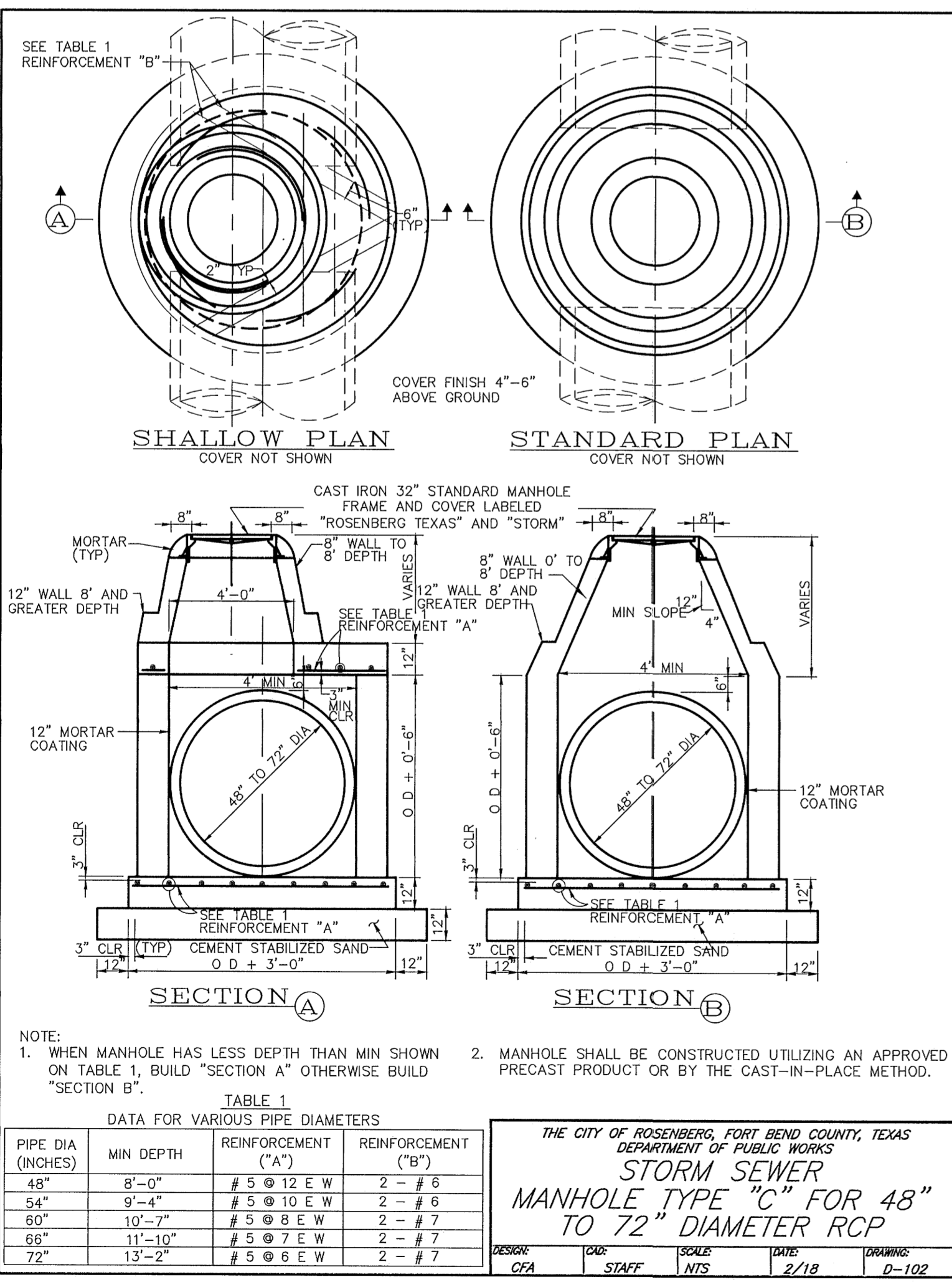
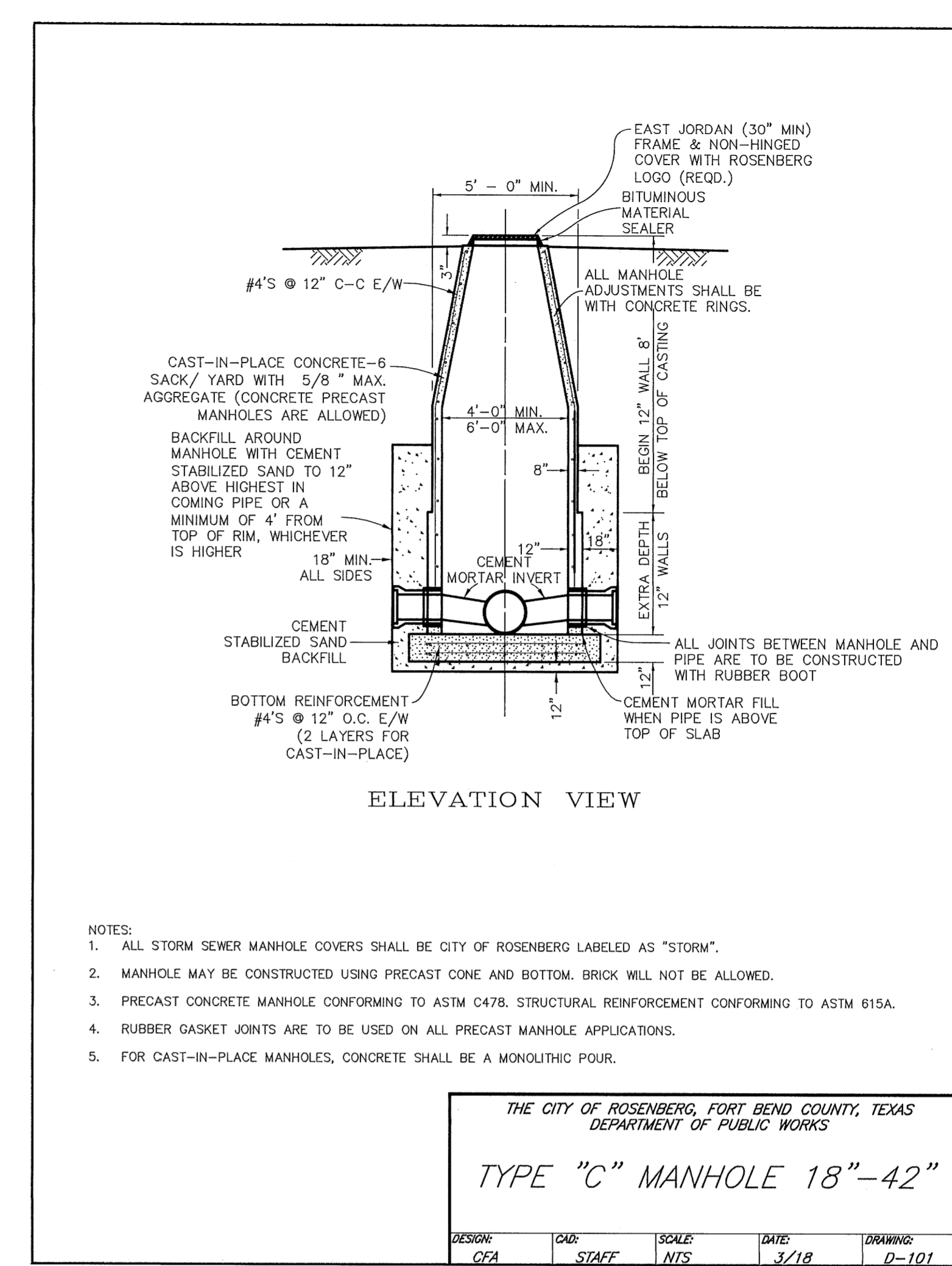
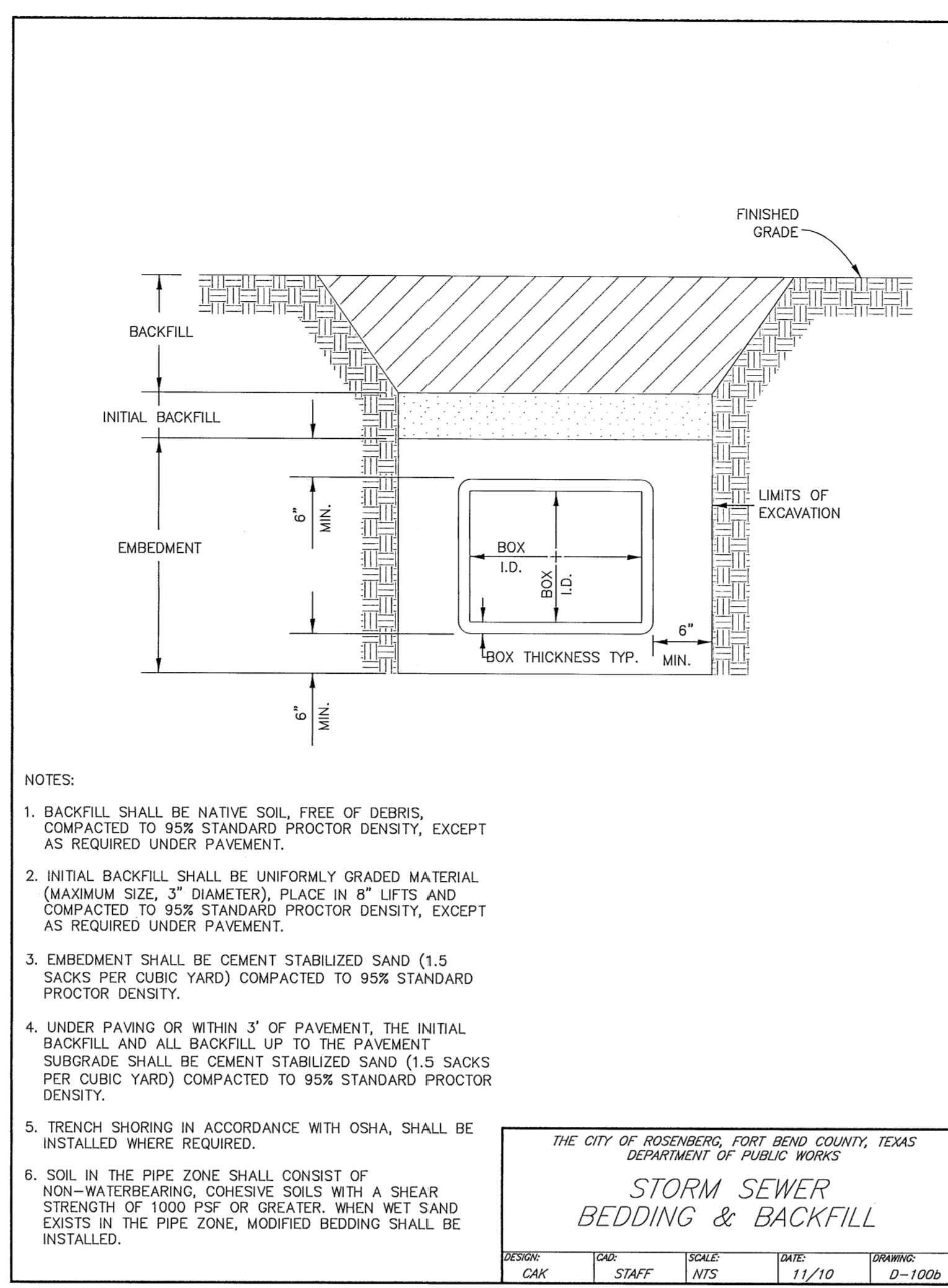
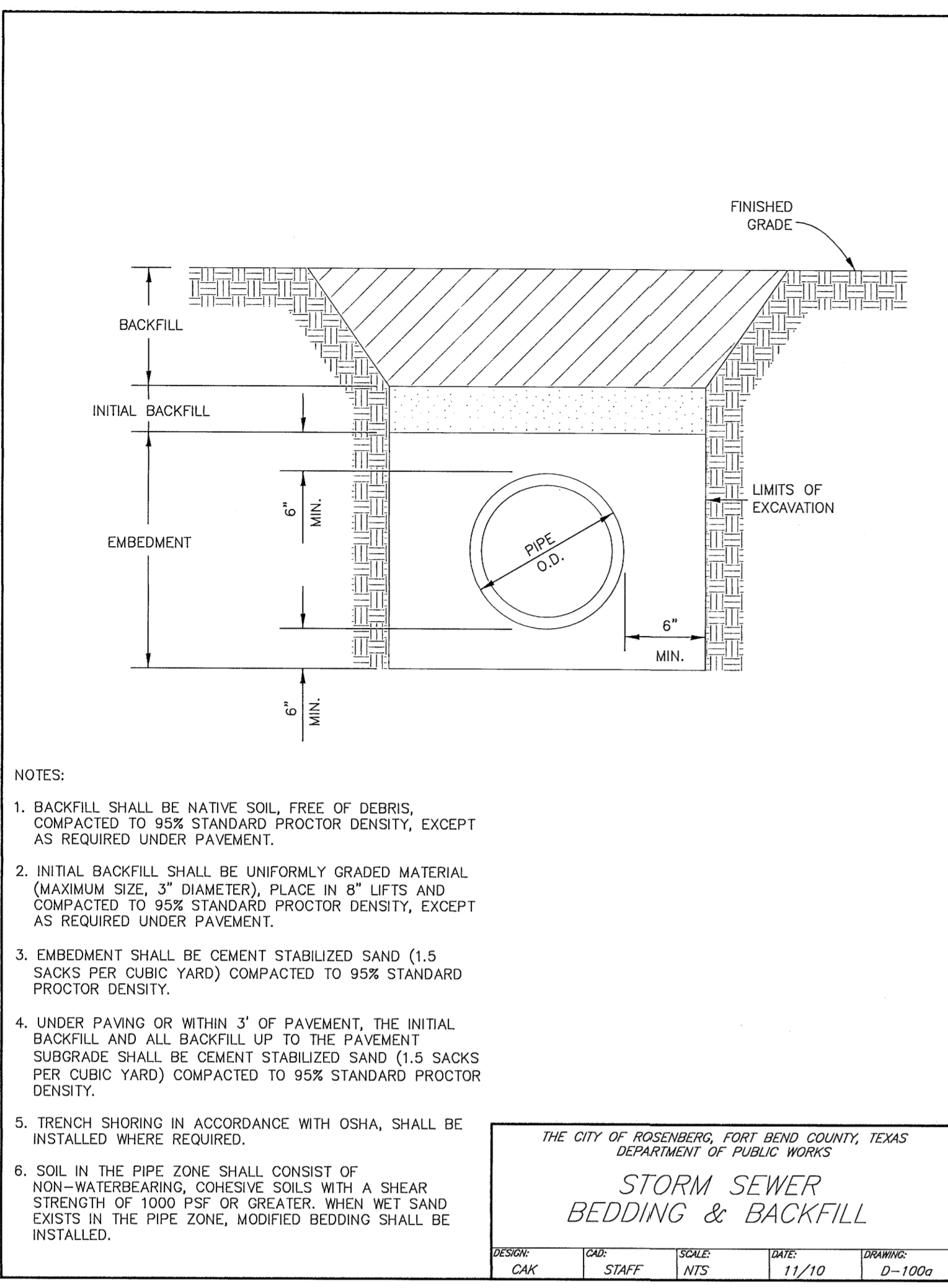
NO.	REVISION	DATE



PAPE-DAWSON ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
 TBPES FIRM REGISTRATION #10199374

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 STORM SEWER DETAILS (SHEET 1 OF 4)

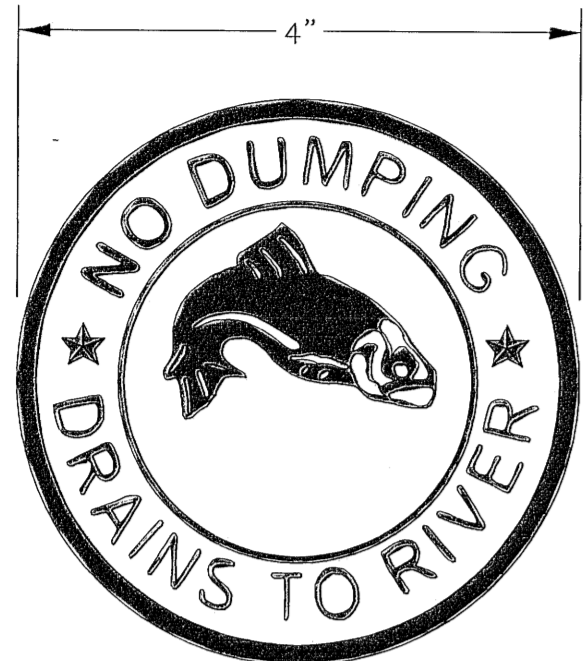
PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED DRAWN ALL
 SHEET 28 OF 44



APPROVED: FORT BEND COUNTY DEVELOPMENT COORDINATOR
 DATE: _____

PERMIT SET

Date: May 11, 2018, 8:16am User: J. ANSUTON File: K:\projects\40166\2-0 Design\2-1 Civil\DWGS_BRYAN ROAD\16-4016600-DT-BRYN-PH1.dwg



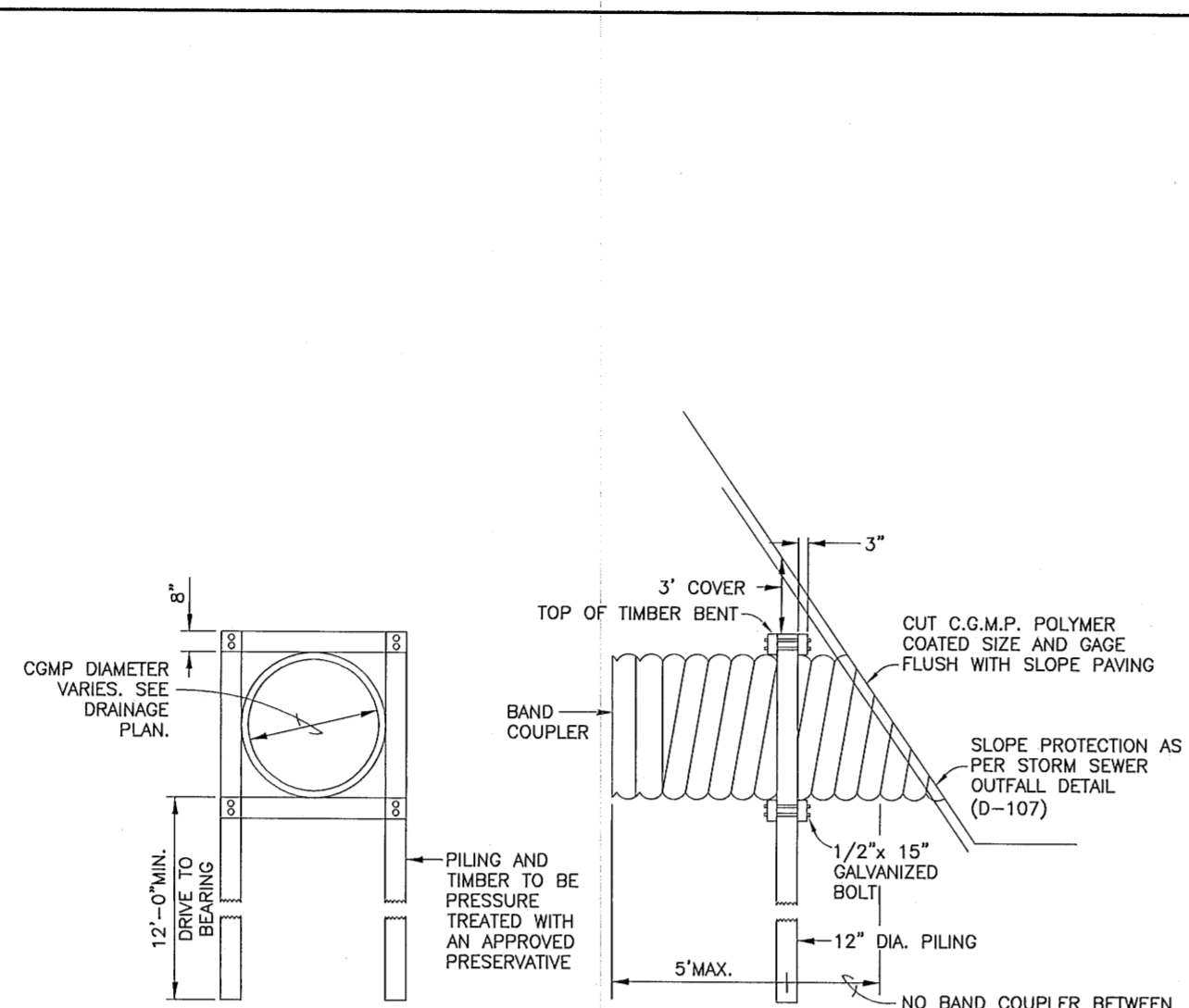
STORM DRAIN MARKER

ITEM NO. SD-4
 1 COLOR: BLUE, 4" DISC
 MATERIAL: STAINLESS STEEL
 SYMBOL: FISH
 MANUFACTURED BY:
 ALMETEX INDUSTRIES, INC.
 2 JOY DRIVE
 HACKETTSTOWN, NJ 07840
 1 (800) 248-2080
 www.almetex.com

- NOTES:**
- Surface installation requires the surface be brushed with a wire brush and all dust blown off that surface.
 - Install marker with [303-ADH] Stikbond Adhesive using a dripless caulking tube gun. Place the adhesive on the back side of the marker in a circular motion from the outside edge of the marker into the middle of the marker. Place marker in place and apply pressure to the face of the marker.
 - Markers may be applied to concrete, asphalt or steel. The City of Rosenberg requires the marker to be placed on the middle of every catch basin on all storm drains.

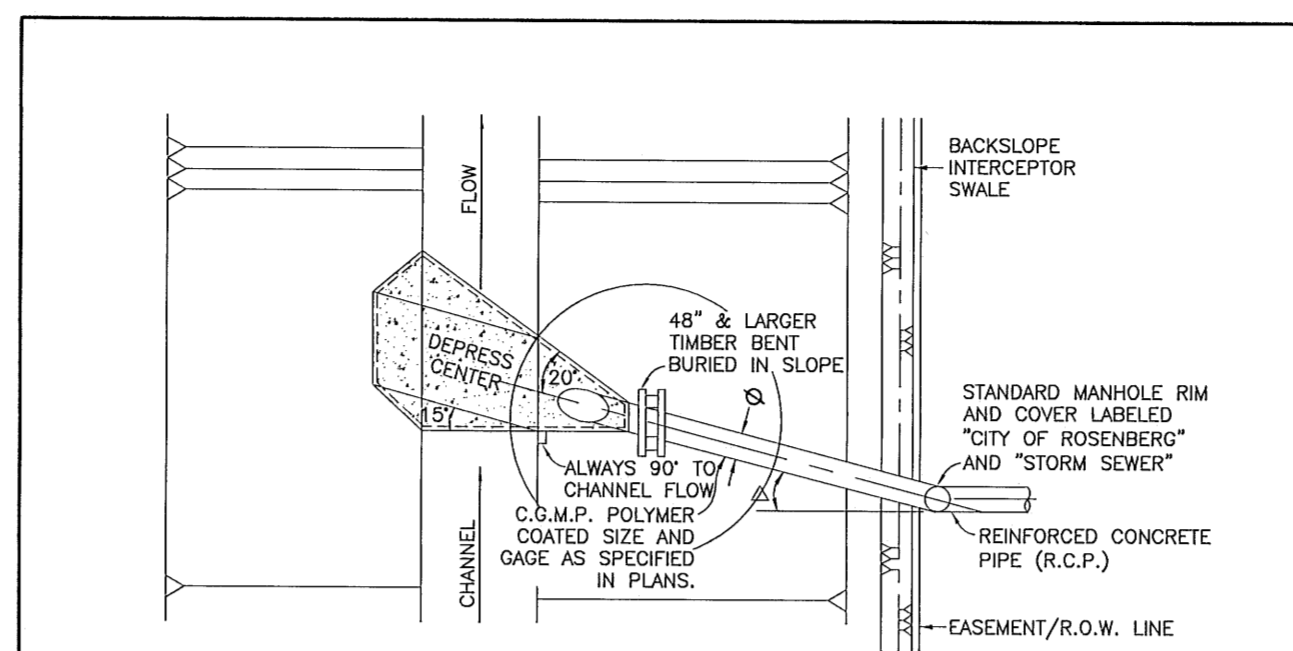
THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS
**NO DUMPING
 METAL STORM DRAIN MARKER**

DESIGNER	DATE	SCALE	DATE	DRAWING
CAK	STAFF	NTS	11/10	D-109

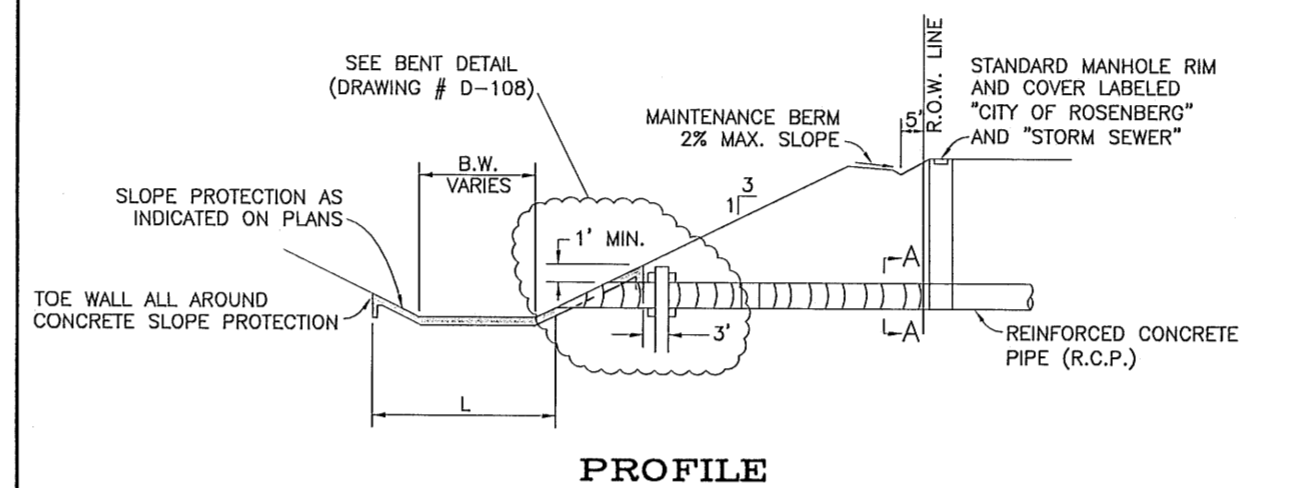


THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS
**TIMBER BENT FOR
 C.G.M.P. OUTFALL**

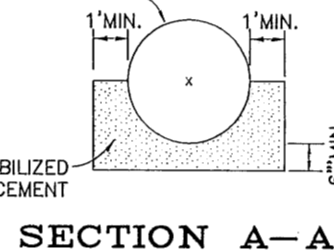
DESIGNER	DATE	SCALE	DATE	DRAWING
CAK	STAFF	NTS	11/10	D-108



PLAN VIEW



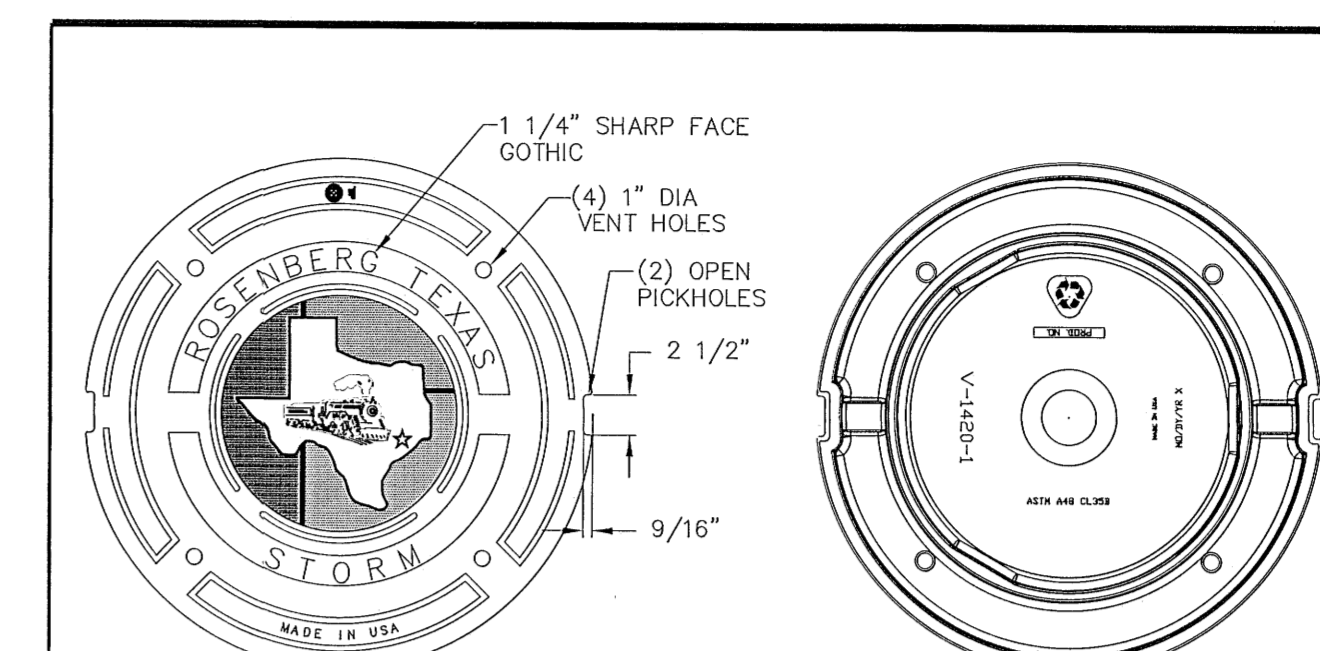
PROFILE



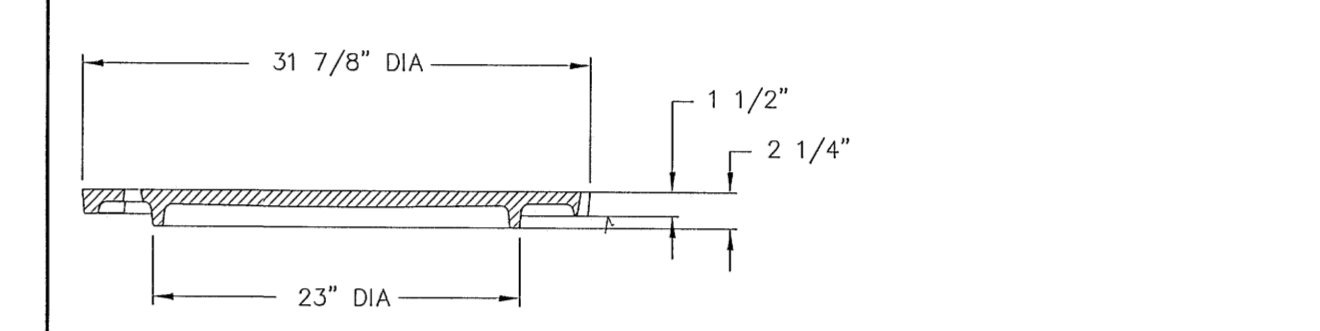
SECTION A-A

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS
STORM SEWER OUTFALL

DESIGNER	DATE	SCALE	DATE	DRAWING
CAK	STAFF	NTS	11/10	D-107



BOTTOM VIEW



COVER SECTION

- NOTES:**
- ALL STORM SEWER MANHOLE COVERS SHALL BE LABELED "ROSENBERG TEXAS" AND "STORM" AND INCLUDE THE SPECIFIED LOGO.
 - 32" MANHOLE COVERS SHALL BE USED ON ALL STORM SEWER MANHOLES.
 - COVER AND 32" FRAME MANUFACTURED BY EAST JORDAN IRON WORKS OR APPROVED EQUAL.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS
STORM SEWER 32" MANHOLE COVER

DESIGNER	DATE	SCALE	DATE	DRAWING
CFA	STAFF	NTS	2/18	D-111

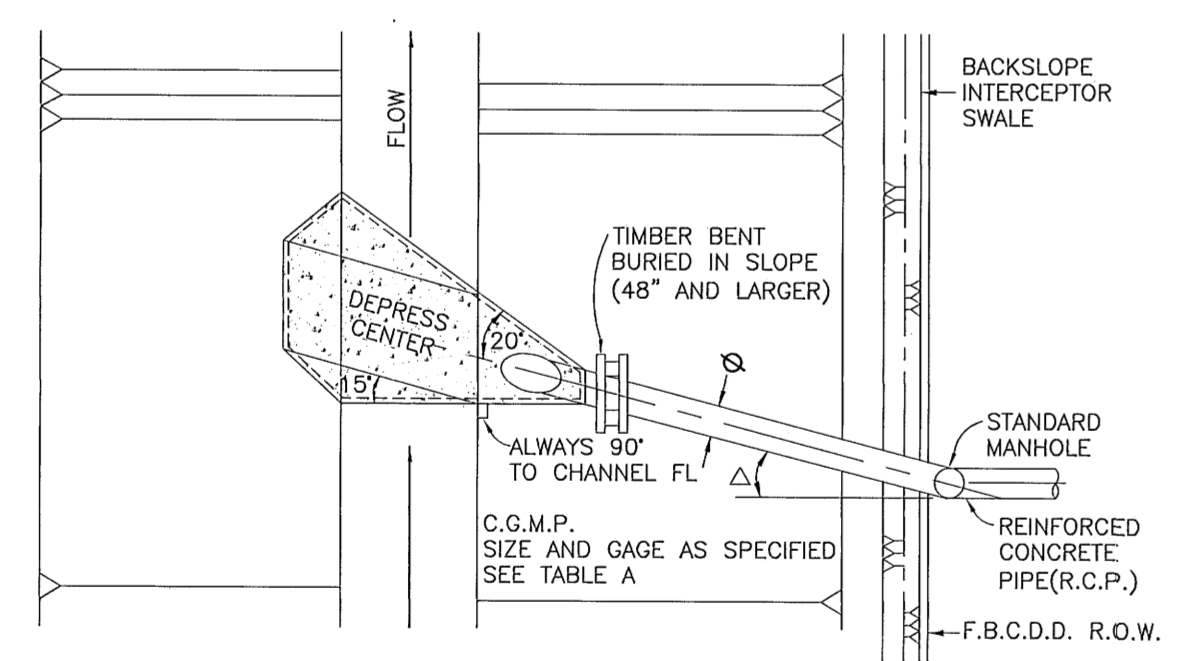


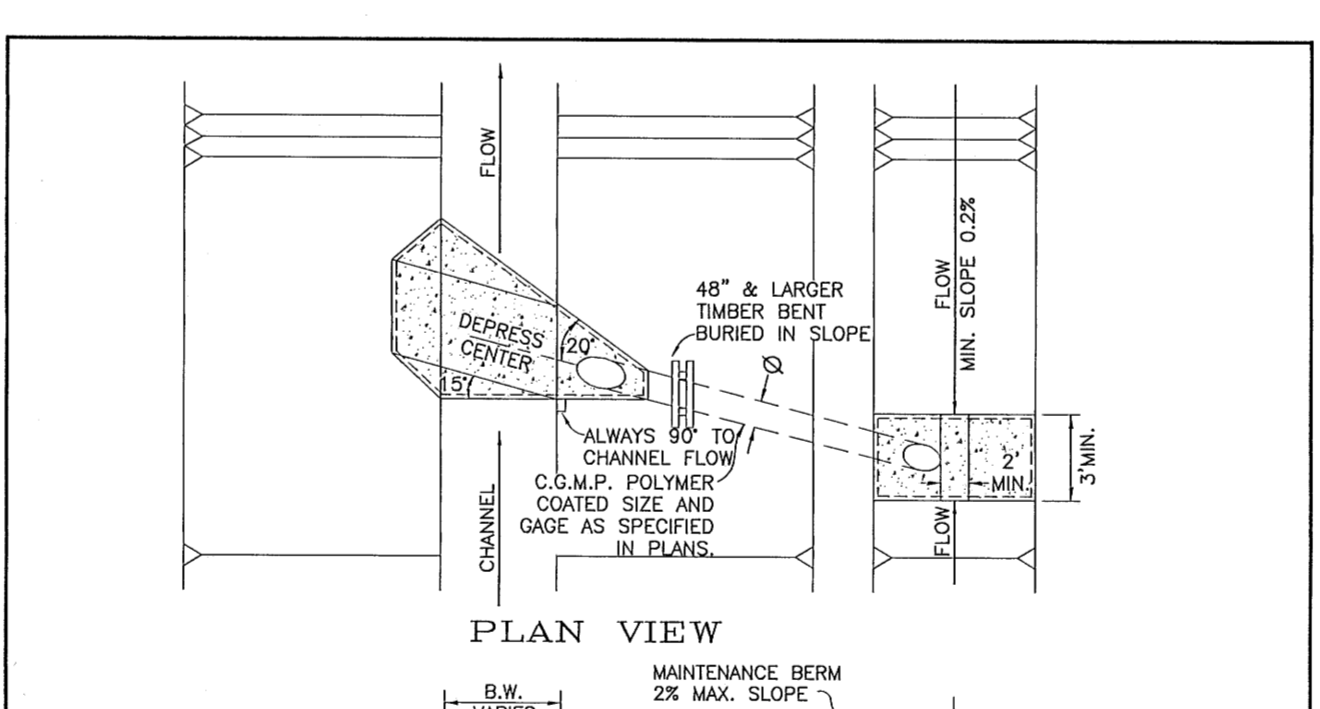
TABLE A

SIZE 2 2 1/2" X 1/2" CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE	SIZE 3"X1" OR 3"X1" CORRUGATION	PIPE GAUGE	BAND COUPLER GAUGE
24"	16	16			
30"	16	16			
36"	16	16			
42"	14	16			
48"	14	16	48"	16	18
54"	12	14	54"	16	18
60"	12	14	60"	16	18
66"	10	12	66"	16	18
72"	10	12	72"	16	18
78"	8	10	78"	14	16
84"	8	10	84"	14	16

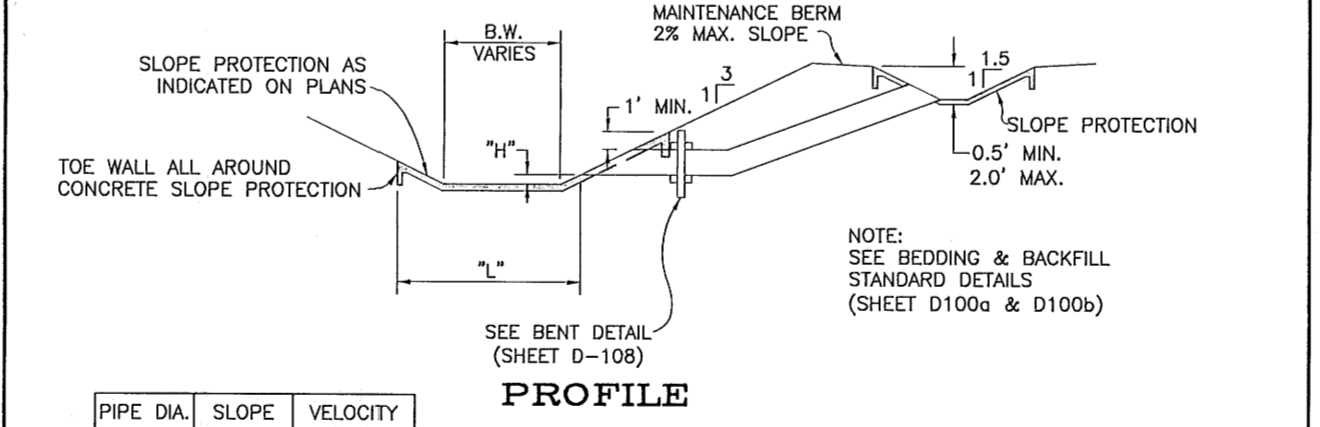
- H: FOR PIPE SIZES 24" TO 42"
 H=3' MAX AND 1' MIN
- H: FOR PIPE SIZES 48" AND LARGER
 H=1' MAX AND MIN
- L: B.W. ≤ 7'-6" → L WILL EXTEND ONE
 PIPE Ø
 INTO B.W. WHICH EVER IS GREATER
- L: B.W. > 7'-6" → L = 6' Ø OR MIN 1'-6"
 PIPE Ø
- Δ: PROP 24" TO 42" Δ = 15"
 PROP 48" AND LARGER Δ = 30"

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS
**TYPICAL STORM SEWER OUTFALL
 FORT BEND COUNTY, TEXAS**

DESIGNER	DATE	SCALE	DATE	DRAWING
CAK	STAFF	NTS	11/10	D-110



PLAN VIEW

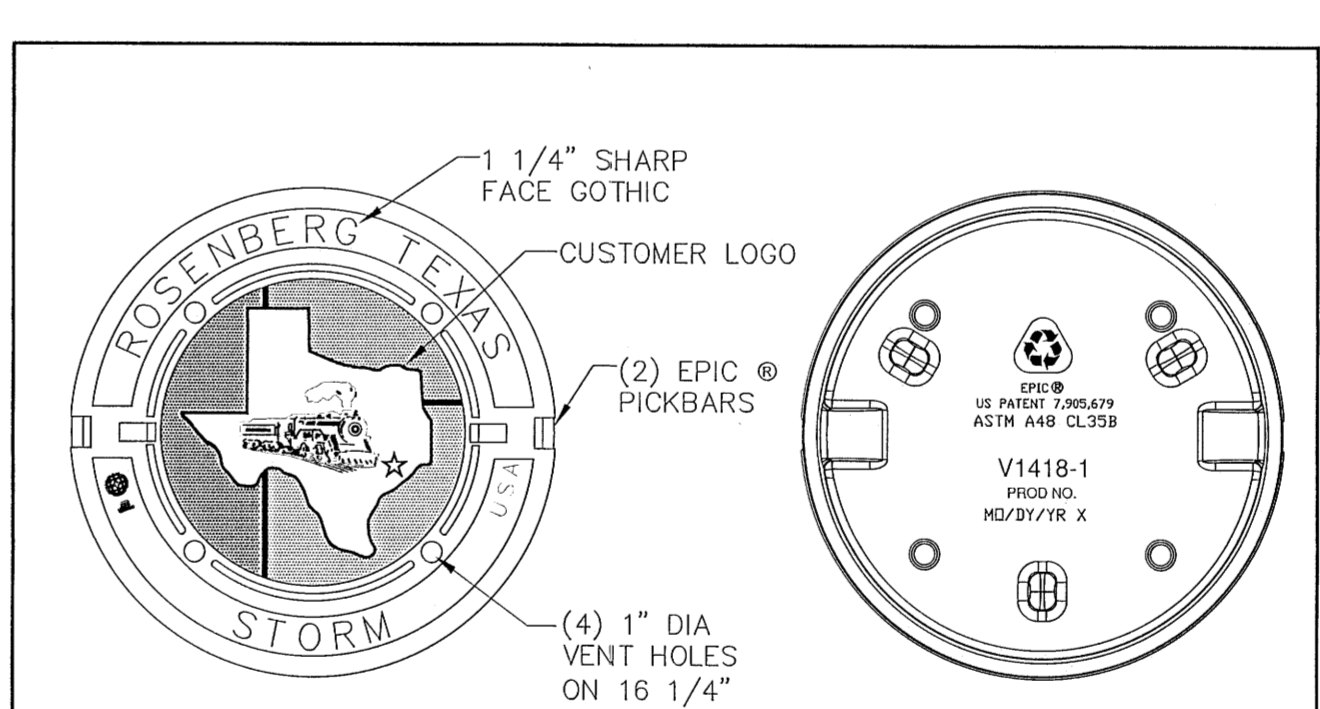


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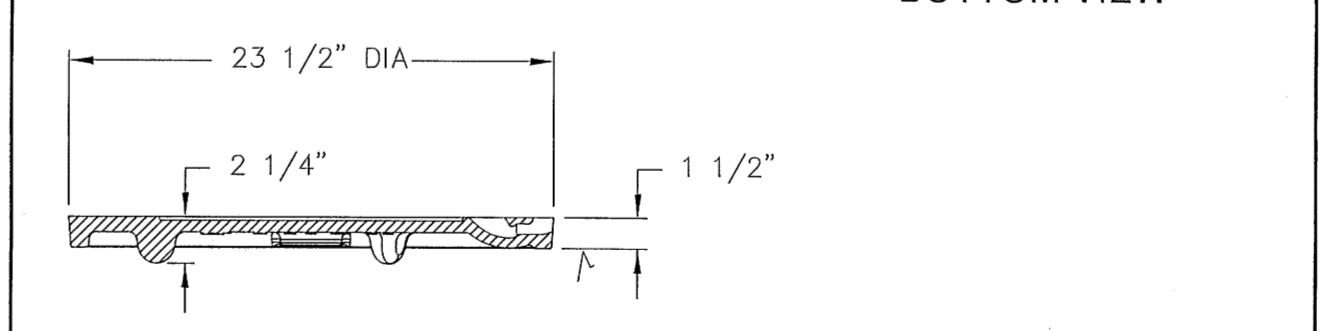
PIPE DIA.	SLOPE	VELOCITY
24"	0.6%	3.25 f.p.s.
36"	0.3%	3.00 f.p.s.
42"	0.2%	2.75 f.p.s.
48"	0.2%	3.00 f.p.s.
54"	0.2%	3.25 f.p.s.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS
TYPICAL BACKSLOPE DRAIN

DESIGNER	DATE	SCALE	DATE	DRAWING
CAK	STAFF	NTS	11/10	D-110



BOTTOM VIEW



SECTION

- NOTES:**
- ALL STORM SEWER MANHOLE COVERS SHALL BE LABELED "ROSENBERG TEXAS" AND "STORM" AND INCLUDE THE SPECIFIED LOGO.
 - 24" MANHOLE COVERS SHALL BE USED ON INLETS ONLY.
 - COVER AND 24" FRAME MANUFACTURED BY EAST JORDAN IRON WORKS OR APPROVED EQUAL.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS
STORM SEWER 24" MANHOLE COVER

DESIGNER	DATE	SCALE	DATE	DRAWING
CFA	STAFF	NTS	2/18	D-112

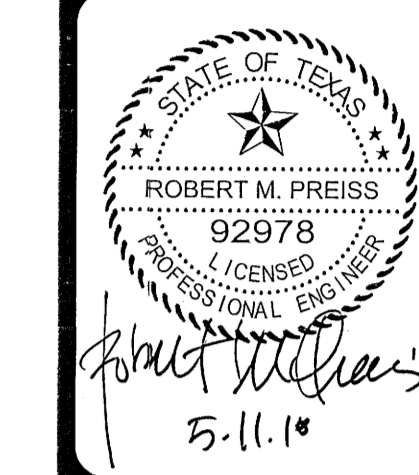


APPROVED: _____
 FORT BEND COUNTY
 DEVELOPMENT COORDINATOR

DATE: _____

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 STORM SEWER DETAILS (SHEET 2 OF 4)

PLAT NO.	40166-20
JOB NO.	40166-21
DATE	MARCH 2018
DESIGNER	LS
CHECKED	DRAWN ALL
SHEET	29 OF 44



**PAPE-DAWSON
 ENGINEERS**
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
 TBP# FIRM REGISTRATION #470 | TBP# FIRM REGISTRATION #1018374

NO.	REVISION	DATE

TABLE OF DIMENSIONS & REINFORCING STEEL (Wings for One Structure End)

Dimensions	Variable Reinforcing		Estimated Quantities per ft of Wing Length (2-Wings)
	Bars J	Bars K	
Maximum Wingwall Height Hw	W	X	Y
2'-0"	2'-5 1/2"	1'-0"	9"
3'-0"	2'-5 1/2"	1'-0"	9"
4'-0"	2'-5 1/2"	1'-0"	9"
5'-0"	3'-2 1/4"	1'-0"	9"
6'-0"	3'-2 1/4"	1'-0"	9"
7'-0"	3'-8 1/4"	1'-0"	9"
8'-0"	4'-2 1/4"	1'-0"	9"
9'-0"	4'-8 1/4"	1'-0"	9"
10'-0"	5'-2 1/4"	1'-0"	9"
11'-0"	5'-8 1/4"	1'-0"	9"
12'-0"	6'-2 1/4"	1'-0"	9"
13'-0"	6'-8 1/4"	1'-0"	9"
14'-0"	7'-2 1/4"	1'-0"	9"
15'-0"	7'-8 1/4"	1'-0"	9"
16'-0"	8'-2 1/4"	1'-0"	9"

TABLE OF ESTIMATED CURVEWALL TOEWALL QUANTITIES

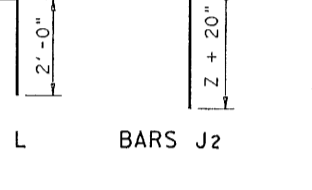
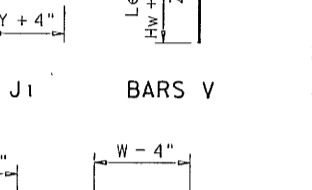
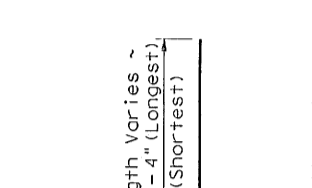
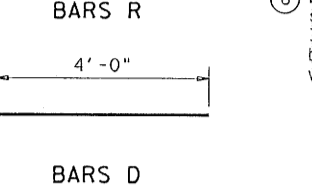
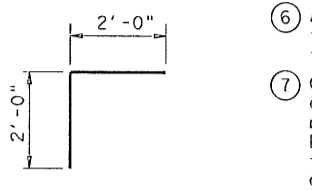
Bar Size	No.	Spa	Reinft (LB/FT)	Conc (CY/FT)
C	#4	1'-0"	33.73	0.248
D	#4	1'-0"	37.00	0.261
E	#4	1'-0"	37.74	0.273
F	#4	1'-0"	38.41	0.285
G	#4	1'-0"	41.25	0.330
H	#4	1'-0"	45.09	0.343
I	#4	1'-0"	45.75	0.355
J	#4	1'-0"	46.42	0.367
K	#4	1'-0"	50.71	0.414
L	#4	1'-0"	50.19	0.406
M	#4	1'-0"	81.49	0.535
N	#4	1'-0"	93.29	0.584
O	#4	1'-0"	133.65	0.634
P	#4	1'-0"	162.29	0.721
Q	#4	1'-0"	178.89	0.856
R	#4	1'-0"	216.78	0.959
S	#4	1'-0"	283.06	1.068
T	#4	1'-0"	291.02	1.234

WING DIMENSION CALCULATIONS:

Formulas: (All values are in Feet)
 $Hw = H + C + 0.250'$
 $Lw = (Hw - 0.333') (SL)$
 For Cast-in-place culverts:
 $Lw = (Hw - 0.333') (W + 1) (U)$
 For Precast culverts:
 $Lw = (Hw - 0.333') (W + 1) (U) + 10.5'$
 Total Wingwall Area (Two Wings) = $S.F. + (Hw - 0.333') (Lw)$

Reinft (LB/FT) = 2.45
 Conc (CY/FT) = 0.037

See applicable box culvert standard for H, S, T, and U values.



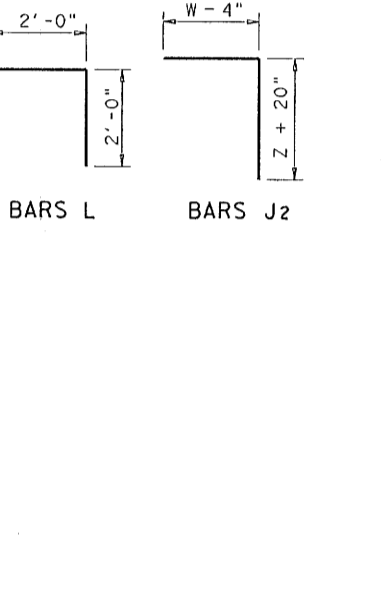
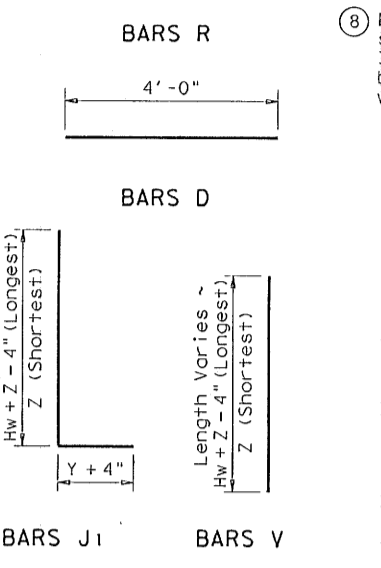
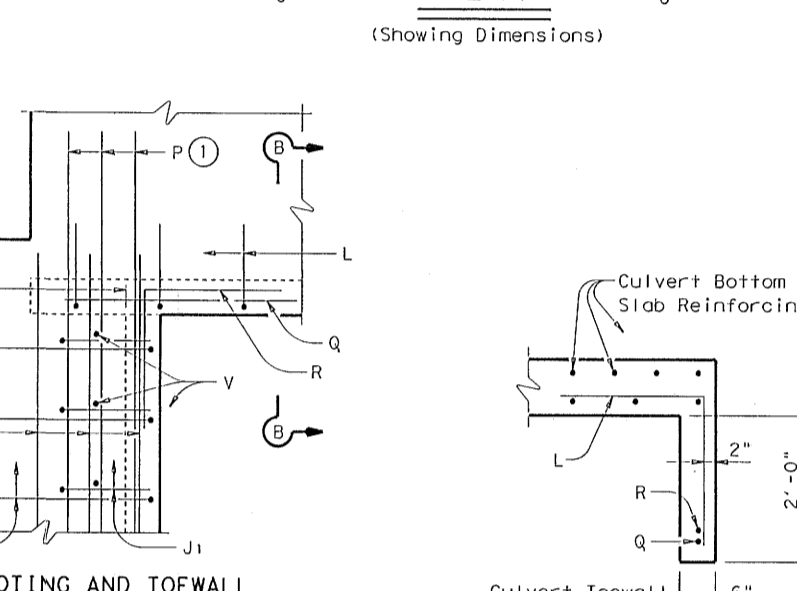
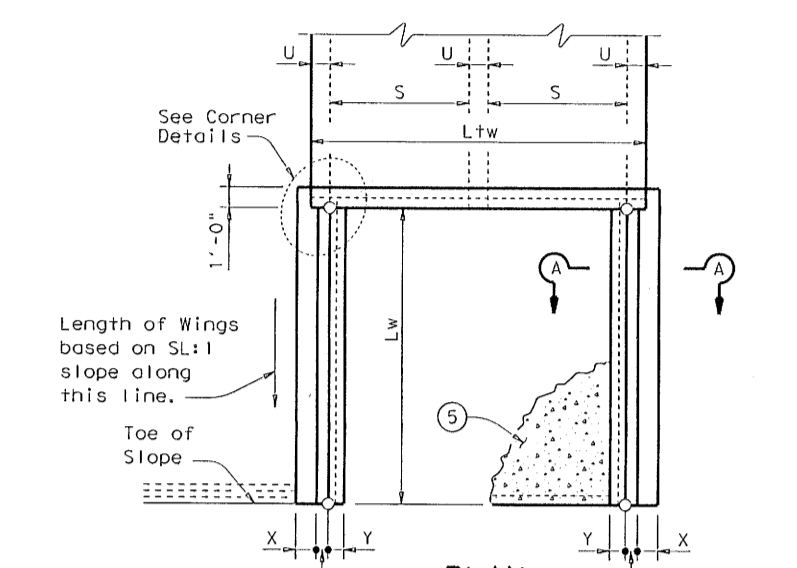
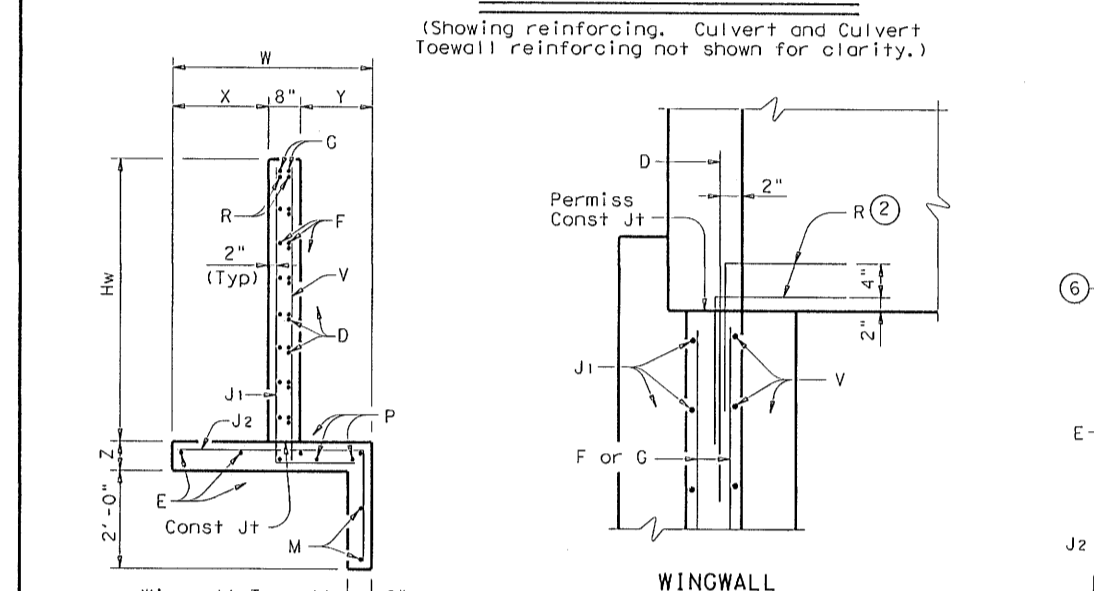
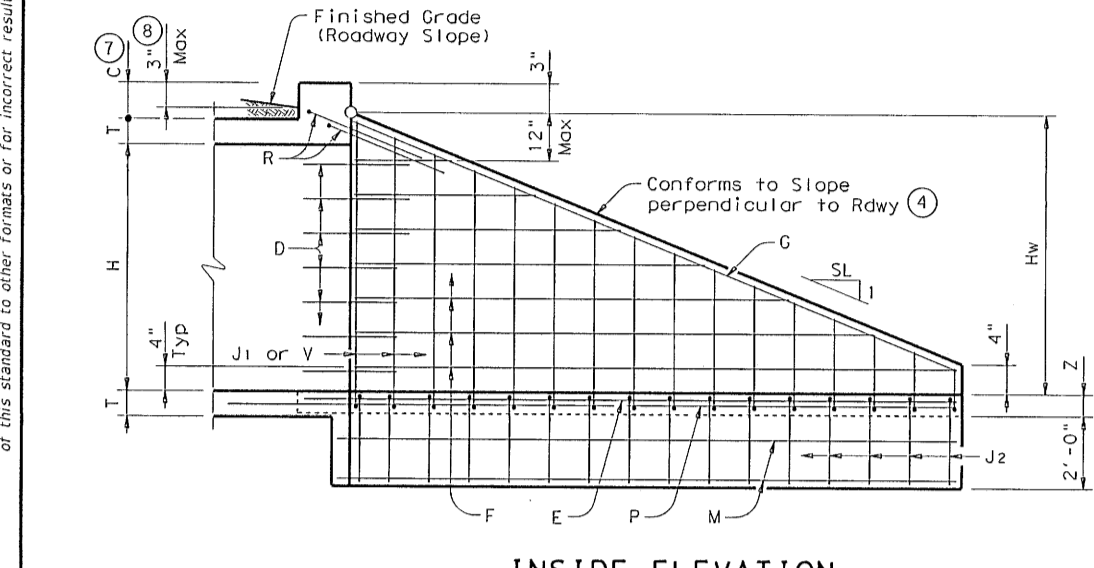
- Extend Bars P 3'-0" minimum into bottom slab of Box Culvert.
- Adjust to fit as necessary to maintain 1/4" clear cover and 4' minimum between wings.
- Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings multiply the tabulated values by Lw.
- Recommended values of Slope are: 3:1, 4:1, & 6:1.
- When shown elsewhere on the plans, a 5" deep concrete riprap shall be constructed. Payment for riprap shall be as required by Item 432, "Riprap". Unless otherwise shown on the plans or directed by the Engineer, the riprap shall have a 6" wide by 1/4" deep reinforced concrete toewall along all edges adjacent to natural joints or grooved joints, or located in the direction of flow, shall extend the full distance of the riprap, at intervals of approximately 20'. When such joints are provided, the culvert toewall shown in SECTION B-B will not be required.
- At Contractor's option, Culvert Toewall may be ended flush with Wingwall Toewall. Adjust reinforcing from that shown as necessary.
- 0' min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures without railing and curbs taller than 1'-0", refer to ECD standard. For structures with traffic rail, refer to 16-CM standard. For structures with traffic rail, other than 16, refer to ECD standard.
- For vehicle safety, curb heights and wall heights shall be reduced, if necessary, to provide a maximum 3" projection above finished grade. No changes will be made in quantities and no additional compensation will be allowed for this work.

GENERAL NOTES:
 Designed according to AASHTO LRFD Specifications. All reinforcing steel shall be Grade 60. Synthetic Fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.
 All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.
 All reinforcing bars shall be adjusted to provide a minimum of 1" clear cover.
 When structure is founded on solid rock, depth of toewalls for culverts and Wingwall may be reduced or eliminated as directed by the Engineer. See BCS sheet for additional dimensions and information.
 The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.

CONCRETE WINGWALLS WITH STRAIGHT WINGS FOR 0° SKEW BOX CULVERTS

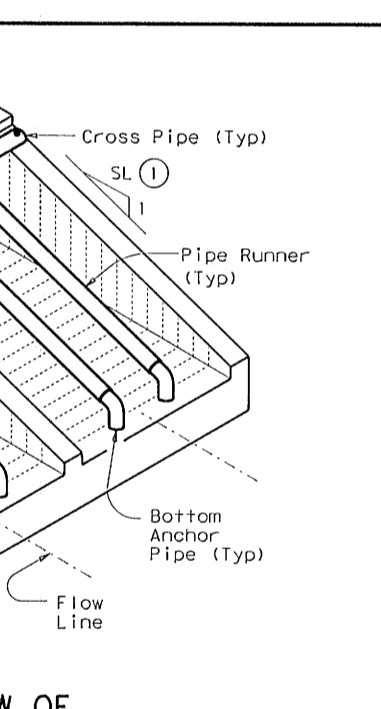
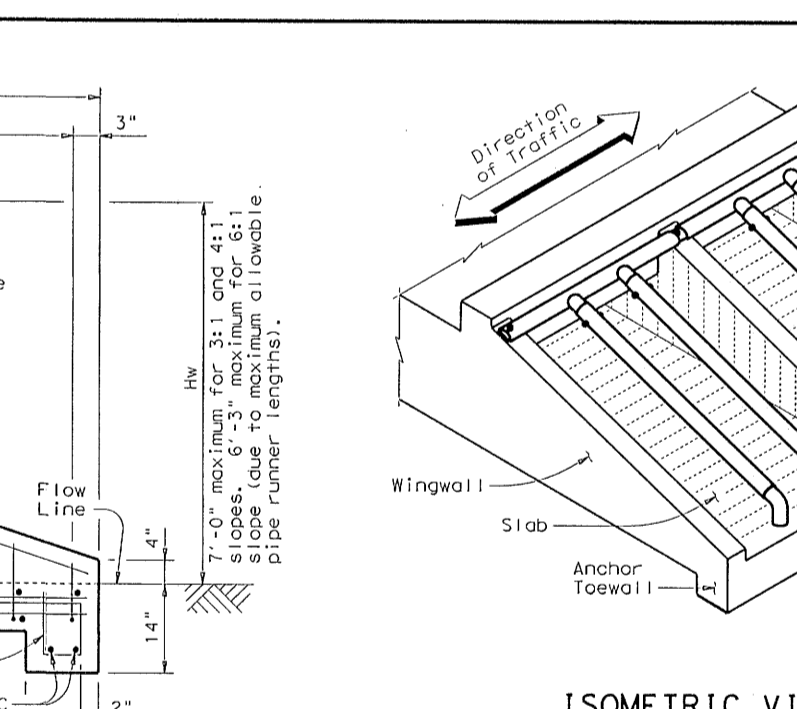
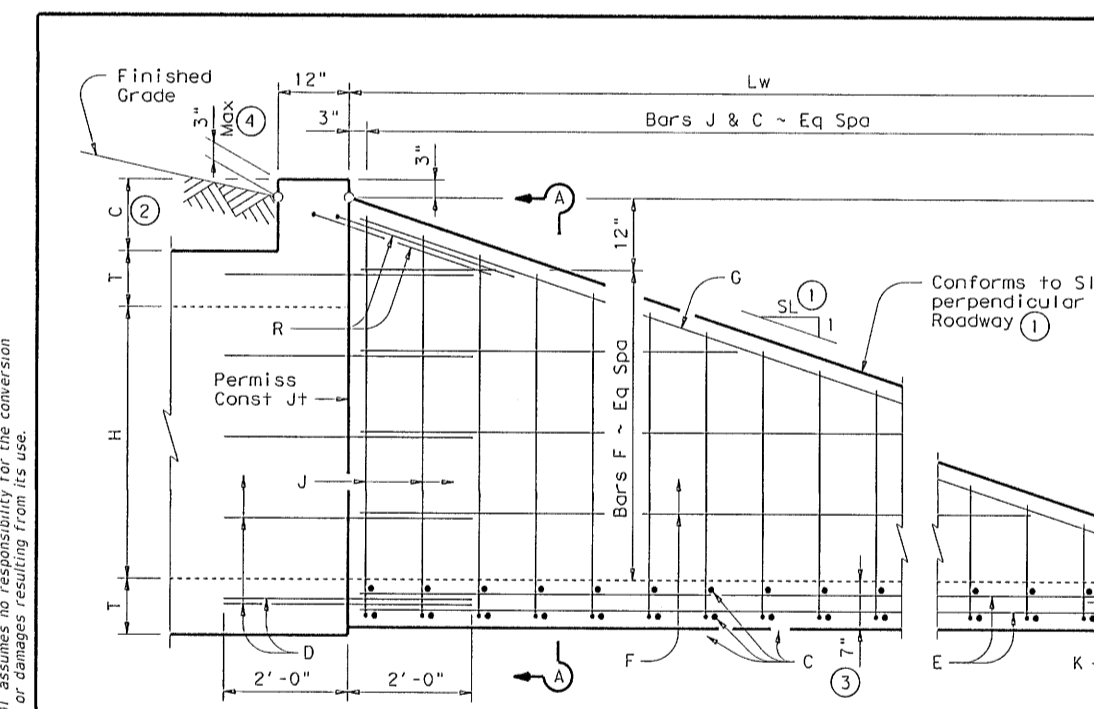
SW-0

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100	Revised	PHI	PHI	02/20/2018



SECTION A-A

SECTION B-B



Formulas: (All values are in Feet)
 $Hw = H + C + 0.250'$
 $Lw = (Hw - 0.333') (SL)$
 For Cast-in-place culverts:
 $Atw = (Hw - 0.333') (W + 1) (U)$
 For Precast culverts:
 $Atw = (Hw - 0.333') (W + 1) (U) + 10.5'$
 Total Wingwall Area (S.F.) = $(0.333') (Hw + 0.333') (Lw) (N + 1)$
 Total Concrete Volume (C.Y.) = $(Lw) (Atw) (0.583') + (Lw) (Atw) (1.167') (1.167' - 0.583') + (Lw) (Atw) (1.917')$
 Total Reinforcing (Lbs) = $(1.55) (Lw) (Atw) + (4.43) (Lw) (Atw) + (K2) (Lw) (N + 1) (W) (Lw)$

C = Height of Curb above top of Top Slab
 Hw = Height of Wingwall
 K = Constant Value for use in formulas
 Slope SL = K1 / K2
 K1 = 1.004
 K2 = 1.031 - 0.49
 6:1 = 1.014 - 0.30
 Atw = Anchor Toewall Length
 Lw = Length of Wingwall
 U = Number of Culvert Barrels
 SL = Side Slope Ratio (Horizontal : 1 Vertical)
 See applicable box culvert standard for H, S, T, and U values.

GENERAL NOTES:
 Designed according to AASHTO LRFD Specifications. The Safety End Treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the Pipe Runners.
 Pipe Runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.
 All reinforcing steel shall be Grade 60. All reinforcing shall be adjusted as necessary to provide a minimum clear cover of 1 1/2".
 All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.
 The quantities for Pipe Runners, reinforcing steel, and concrete, resulting from the formulas given herein are for Contractor's information only.
 Pipe Runners, Cross Pipes, and Anchor Pipes shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.
 Bolts and nuts shall conform to ASTM A307.
 All steel components, except the concrete reinforcing, shall be galvanized or protected in accordance with the specifications.
 See BCS sheet for additional dimensions and information.
 All items designed bearing the seal of a professional engineer will be acceptable for precast construction of the Safety End Treatments.

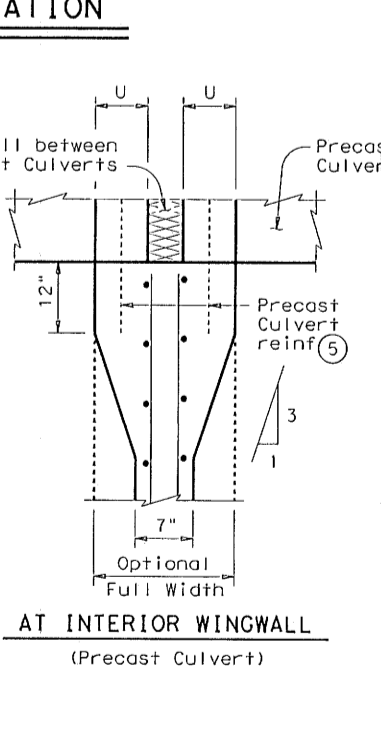
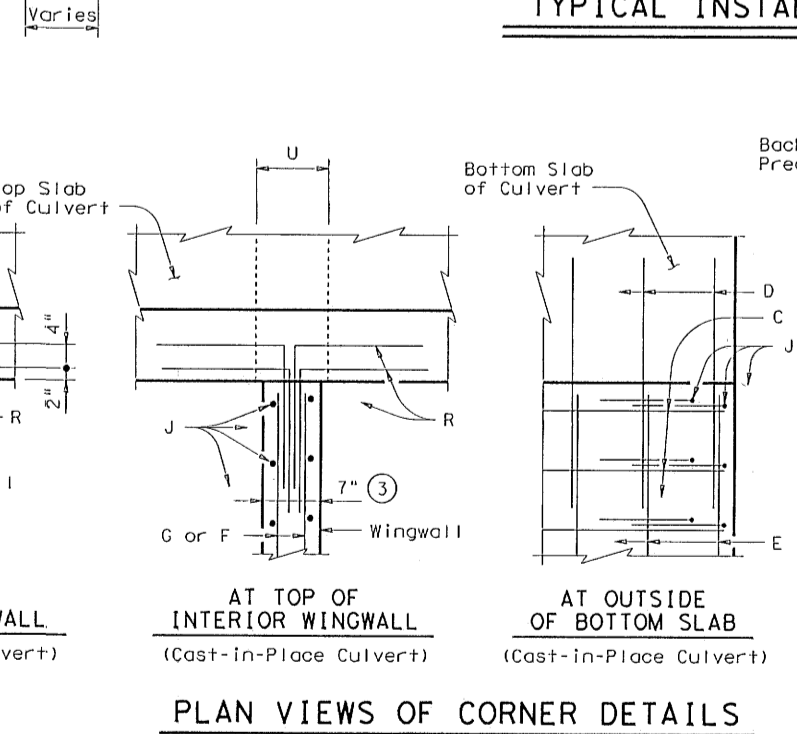
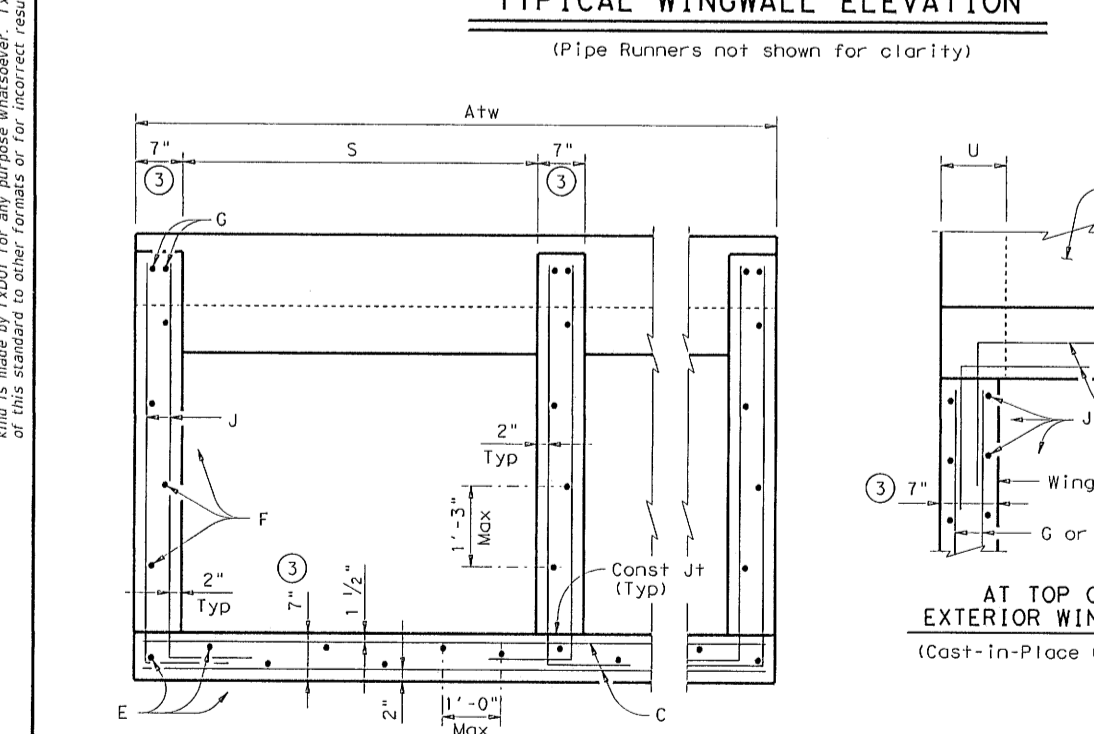
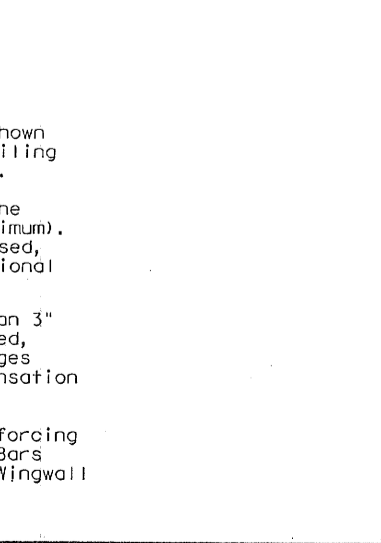
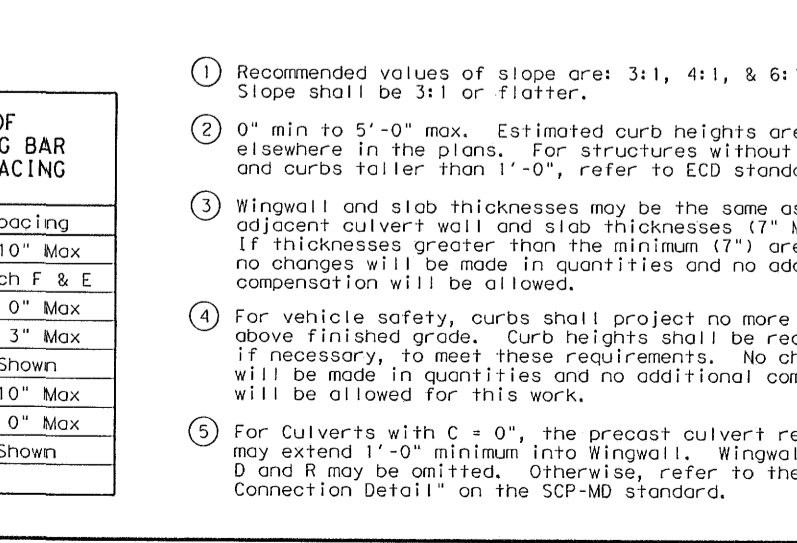
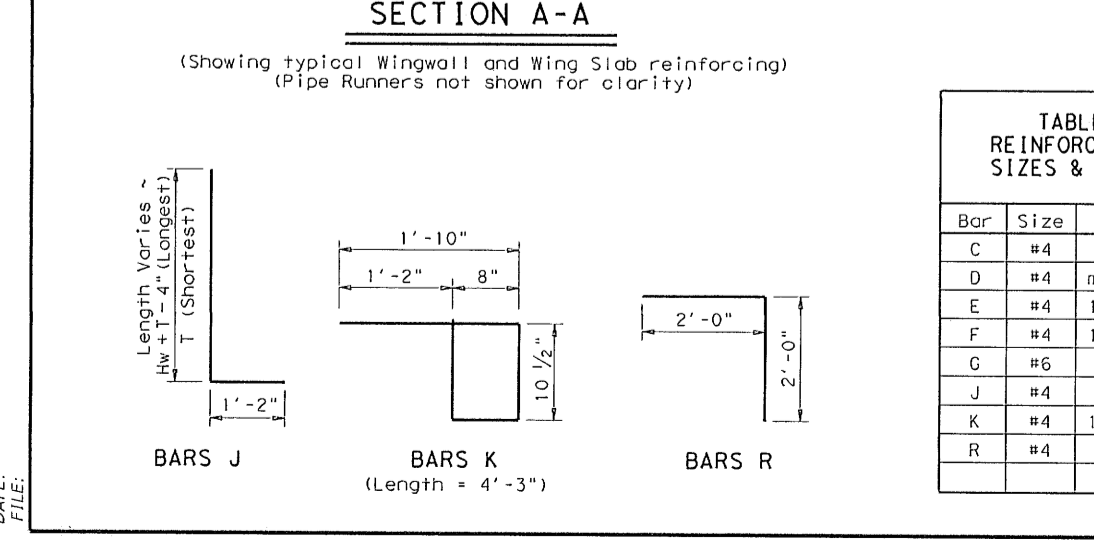


TABLE OF REINFORCING BAR SIZES & SPACING

Bar	Size	Spacing
C	#4	10" Max
D	#4	Match P & E
E	#4	1'-0" Max
F	#4	1'-3" Max
G	#6	Shown
H	#4	10" Max
J	#4	1'-0" Max
K	#4	1'-0" Max
R	#4	Shown



SHEET 1 OF 2

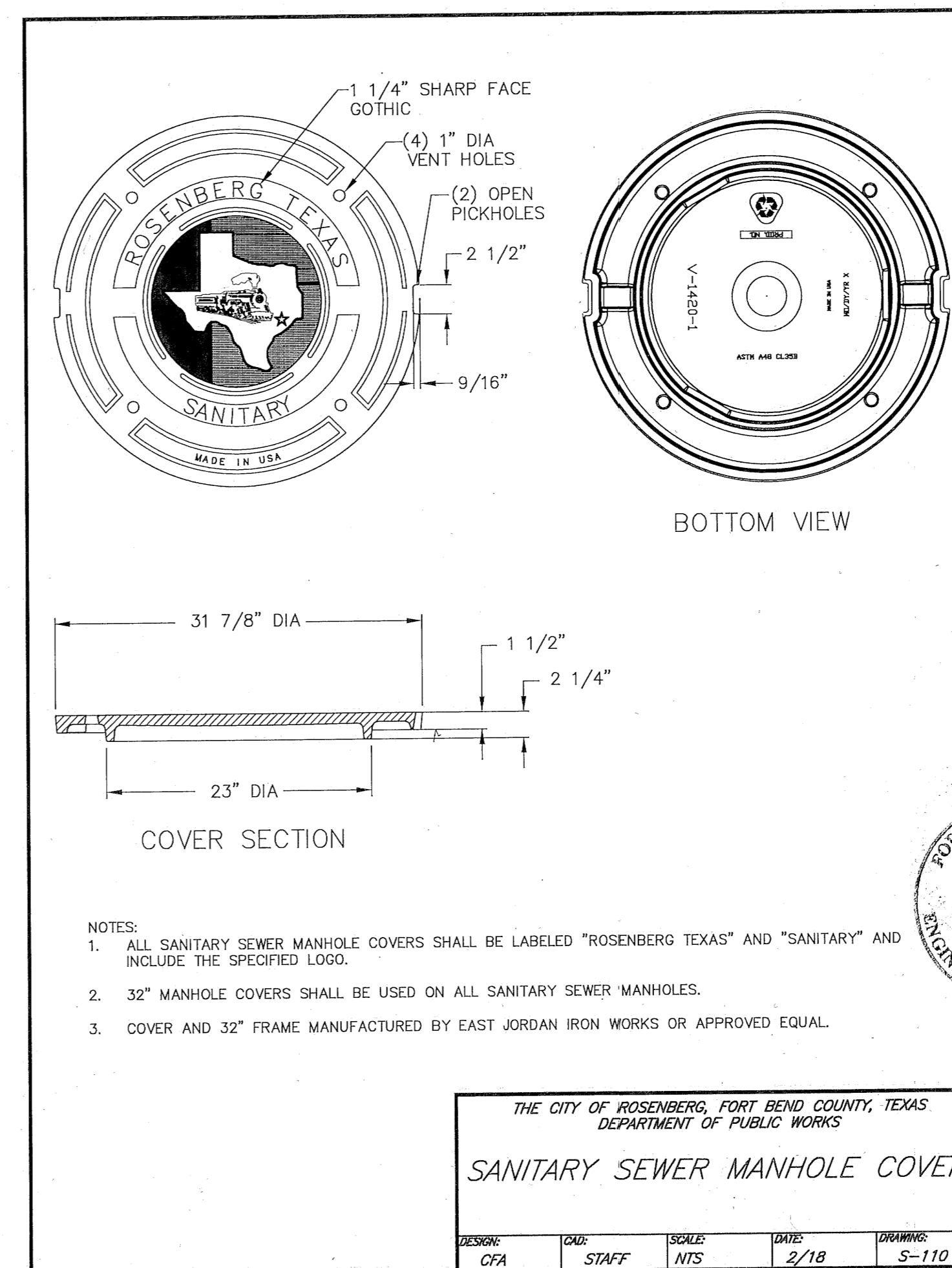
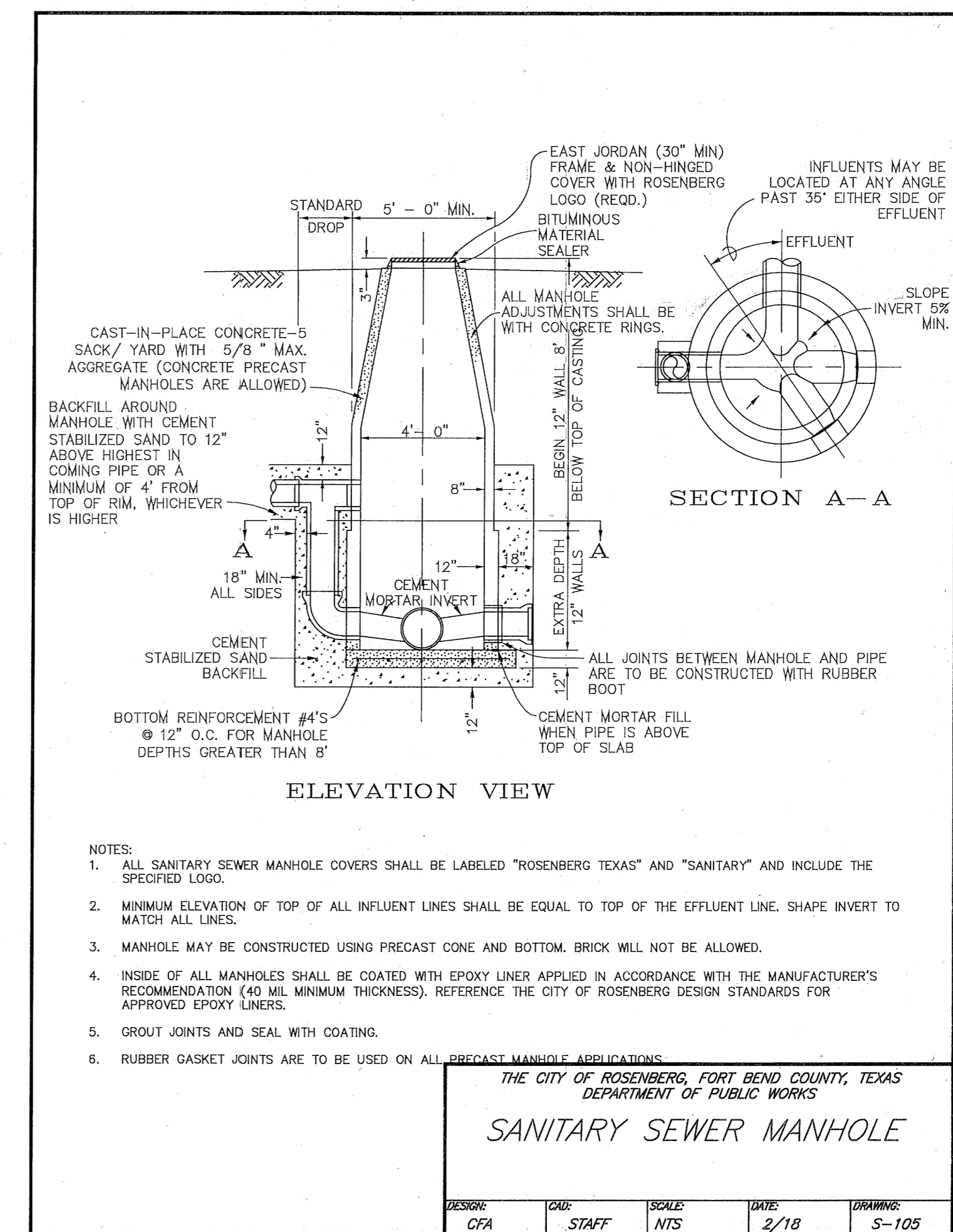
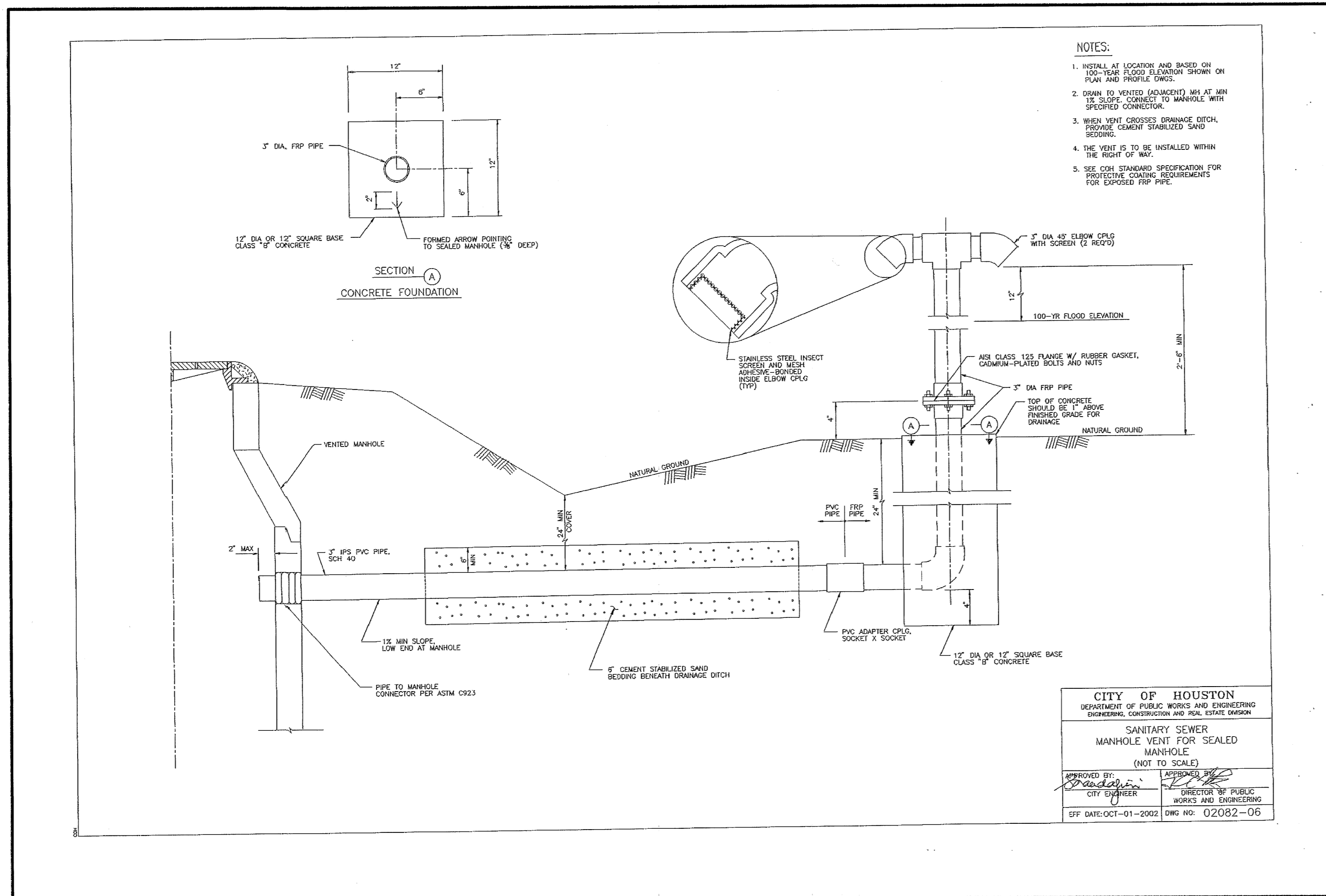
Texas Department of Transportation

SAFETY END TREATMENT FOR 0° SKEW BOX CULVERTS (MAXIMUM HW = 7'-0") TYPE I - CROSS DRAINAGE

SETB-CD

Rev	By	Chk	Date
01	PHI	PHI	02/19/2018
02	PHI	PHI	02/20/2018
03	PHI	PHI	02/20/2018
04	PHI	PHI	02/20/2018
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APPROVED: [Signature] FORT BEND COUNTY DEVELOPMENT COORDINATOR
 DATE: _____

APPROVED: [Signature] FORT BEND COUNTY ENGINEERING DEPARTMENT
 MAY 07 2018
 Valid One Year From Date

APPROVED: [Signature] FORT BEND COUNTY ENGINEERING DEPARTMENT
 MAY 07 2018
 Valid One Year From Date

CITY OF ROSENBERG
 FOUNDED 1883

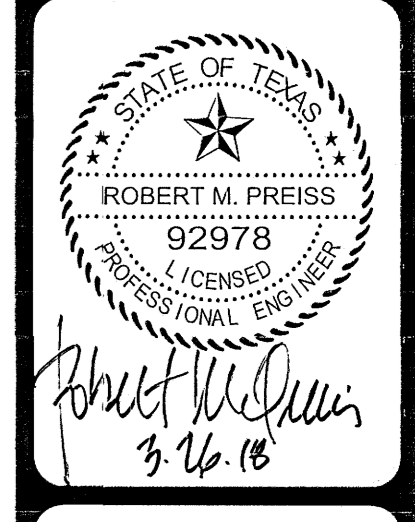
DATE: _____
 NO. REVISION: _____

STATE OF TEXAS
 ROBERT M. PREISS
 92978
 LICENSED PROFESSIONAL ENGINEER
 Robert M. Preiss
 3.16.18

PAPE-DAWSON ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
 TYPE FIRM REGISTRATION #470 | TPEIS FIRM REGISTRATION #0183974

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 SANITARY SEWER DETAILS (SHEET 2 OF 2)

PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED [Signature] DRAWN ALL
 SHEET 33 OF 44



PAPE-DAWSON ENGINEERS
 HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10550 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
 TEPIS FIRM REGISTRATION #479 | TEPIS FIRM REGISTRATION #10193874

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 WATER LINE DETAILS (SHEET 1 OF 2)

PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED JCV DRAWN ALL
 SHEET 34 OF 44

THRUST BLOCKING DETAILS

SIZE	90° BEND		45° BEND		22 1/2° BEND		TEES		PLUGS	
	A	B	A	B	A	B	A	B	C	D
2 1/2"	12"	7"	6"	7"	6"	6"	7"	8"	8"	14"
4"	14"	8"	7"	9"	6"	6"	8"	11"	8"	18"
6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"

NOTE: THRUST BLOCKS AT TRENCH FACE MUST HAVE A MINIMUM BEARING SURFACE OF 1.0 SQ. FOOT AND THE LEAST DIMENSION SHALL BE NO SMALLER THAN 1.5 TIMES PIPE DIAMETER, BUT NOT LESS THAN 1.0 FT.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS

DESIGN: CAK DATE: 02/11 DRAWING: W-100

GATE VALVE & BOX

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS

DESIGN: CAK DATE: 11/11 DRAWING: W-101

MAINGUARD NO. 77 BLOW-OFF HYDRANT

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS

DESIGN: CAK DATE: 02/11 DRAWING: W-102

WATER LINE ENCASEMENT

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS

DESIGN: CAK DATE: 03/17 DRAWING: W-103

TYPICAL SECTION SERVICE LINE

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS

DESIGN: CAK DATE: 02/11 DRAWING: W-104

WATER PIPE OFFSET ASSEMBLY

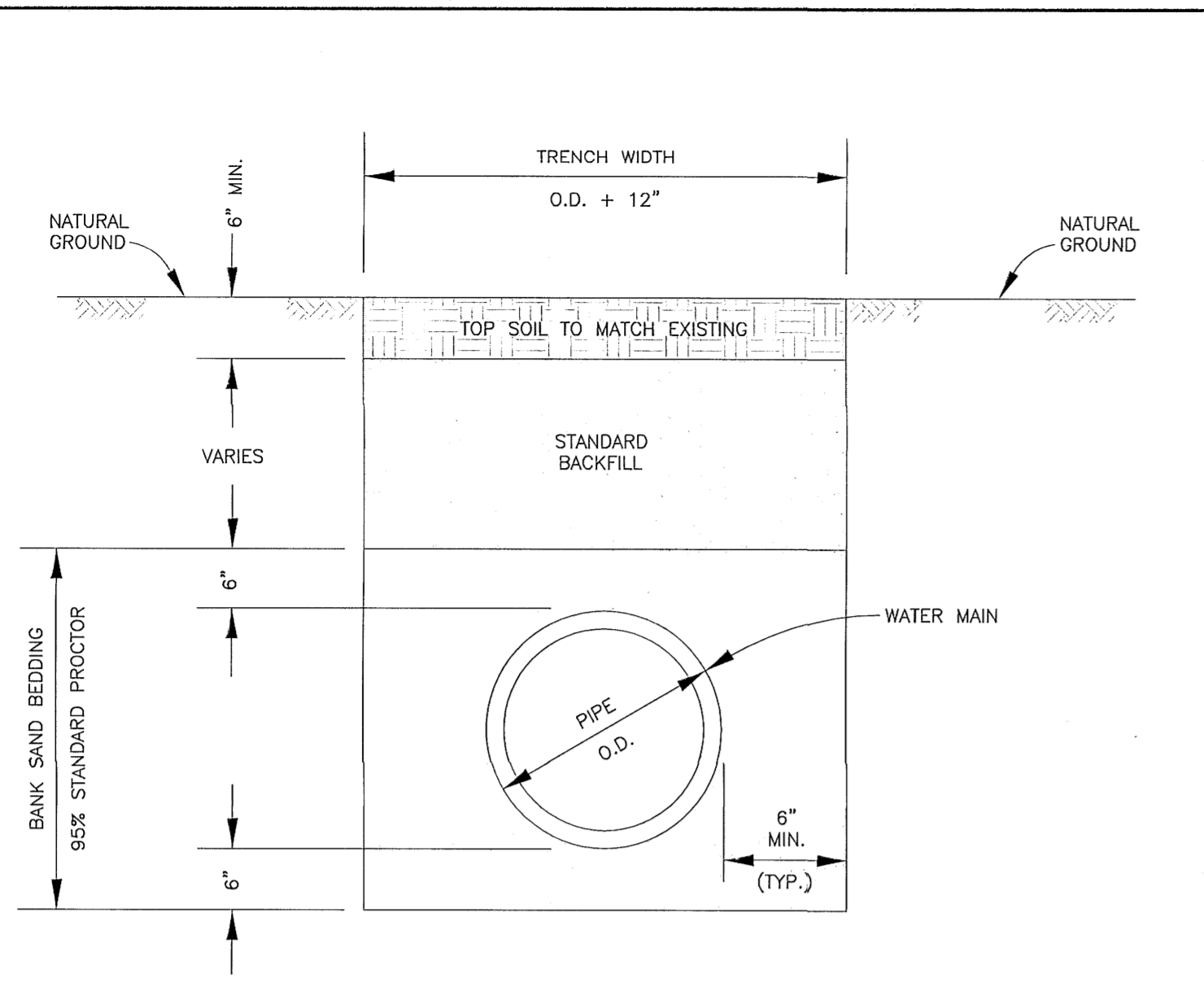
THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS

DESIGN: CAK DATE: 11/11 DRAWING: W-105

APPROVED: _____
 FORT BEND COUNTY DEVELOPMENT COORDINATOR

DATE: _____

Date: Mar 21, 2018, 10:05am User: ID: ANEWTON File: K:\Projects\4401\4401\W-103.dwg

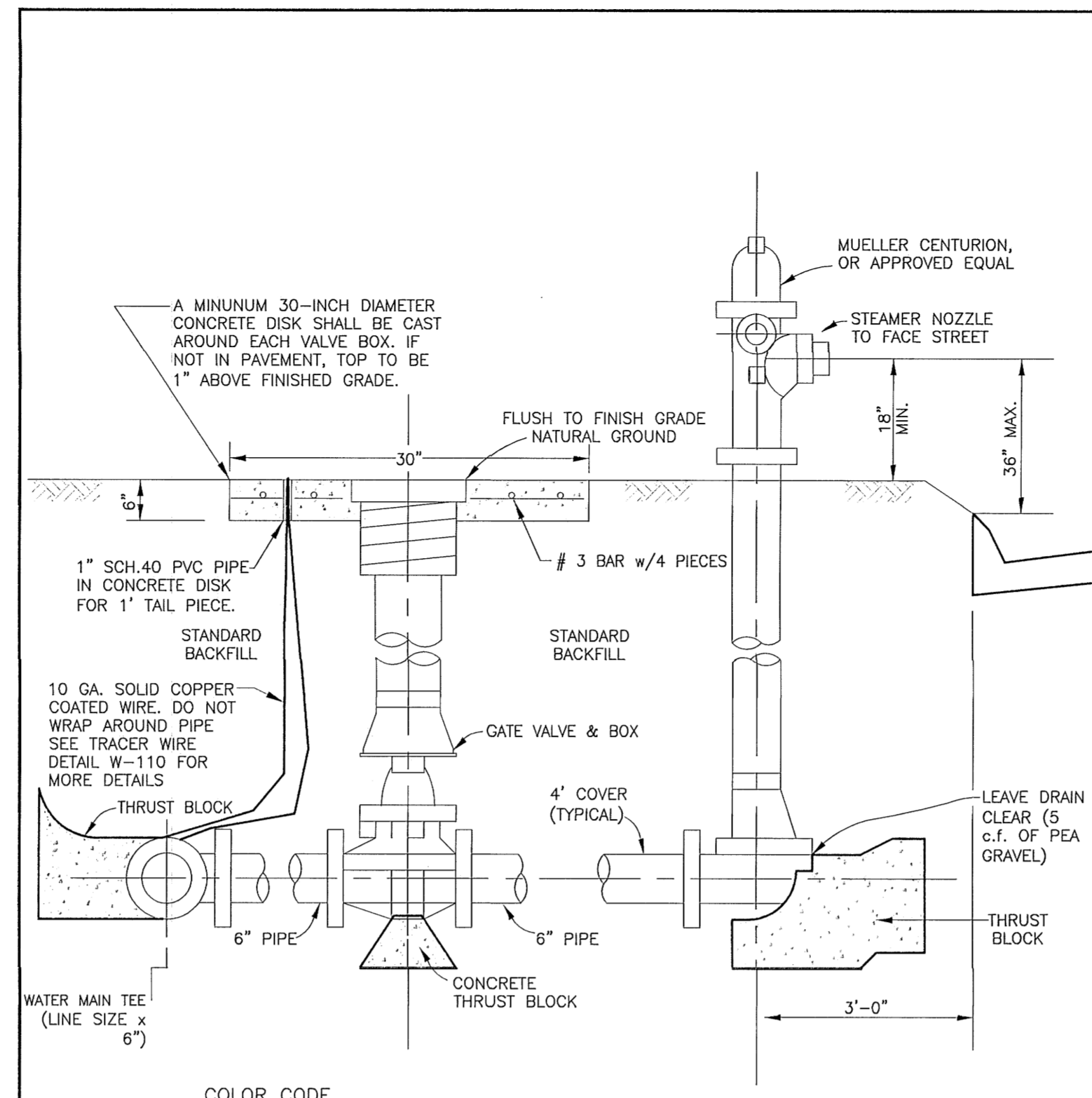


- NOTES:
1. BACKFILL SHALL BE NATIVE SOIL, FREE OF DEBRIS, PLACED IN LIFTS, 8" THICK OR LESS, COMPACTED TO 95% STANDARD PROCTOR DENSITY, EXCEPT AS REQUIRED BELOW.
 2. BACKFILL UNDER PAVEMENT AND PUBLIC STREETS SHALL BE CEMENT STABILIZED SAND (1.5 SACKS OF CEMENT PER CUBIC YARD OF SAND), COMPACTED TO 95% STANDARD PROCTOR DENSITY.
 3. TRENCH SHORING, IN ACCORDANCE WITH OSHA, SHALL BE INSTALLED AS REQUIRED.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS

**WATER MAIN
BEDDING & BACKFILL**

DESIGNER:	CAD:	SCALE:	DATE:	DRAWING:
CAK	STAFF	NTS	02/11	W-106

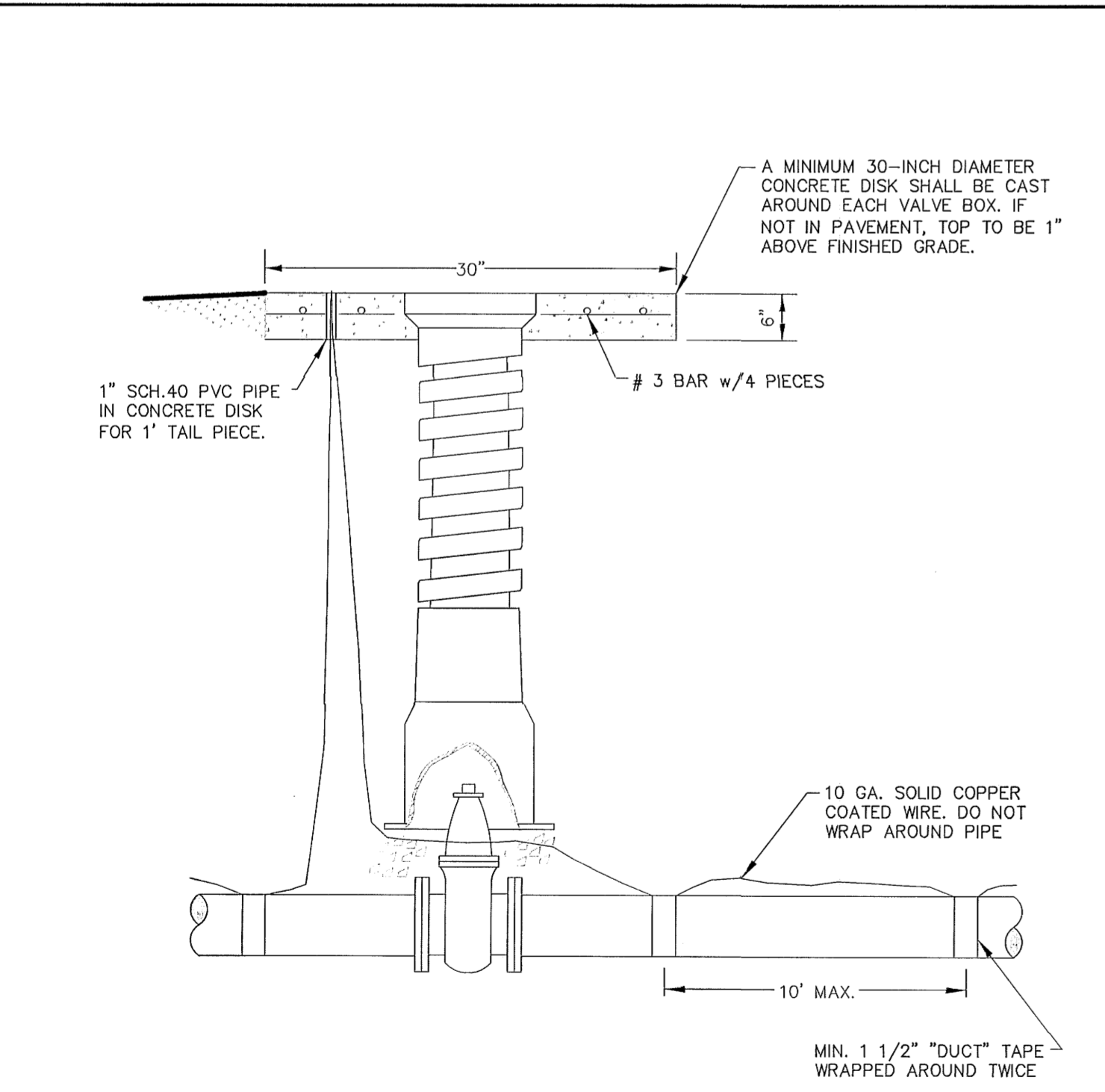


- NOTE:
1. ALL FITTINGS SHALL BE (MJ) MECHANICAL JOINT.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS

FIRE HYDRANT ASSEMBLY

DESIGNER:	CAD:	SCALE:	DATE:	DRAWING:
CAK	STAFF	NTS	02/16	W-107



- NOTES:
1. TRACER WIRE FOR PVC PIPE SHALL BE NO. 10 AWG GAUGE COATED COPPER WIRE AND ALL SPLICES SHALL BE MADE WITH A MECHANICAL WATER PROOF CONNECTION.
 2. TRACER WIRE SHALL COME UP ON VALVE EXTENSIONS AND FIRE HYDRANT VALVES.
 3. TRACER WIRE MUST BE "DUCT" TAPED TO THE WATER MAIN PIPE AT INTERVALS NOT TO EXCEED TEN (10)-FEET AND TAPE WRAPPED AROUND MAIN TWICE.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS

**TRACER WIRE
FOR PLASTIC WATER PIPING**

DESIGNER:	CAD:	SCALE:	DATE:	DRAWING:
CAK	STAFF	NTS	02/11	W-110

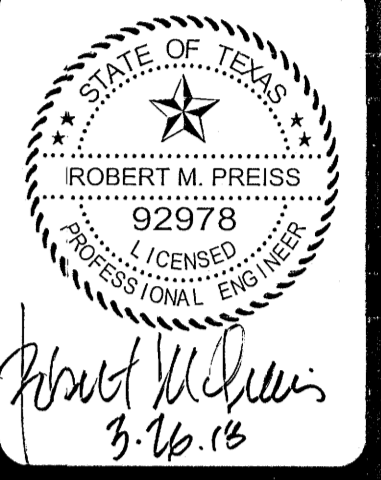
- NOTES:
1. PRESSURE TEST OF ALL WATER LINES SHALL BE AT 125 PSI FOR DURATION OF 8 HOURS.
 2. FIRE HYDRANT THREAD SIZE: PUMPER CONNECTION-4-492 SIZE=4.492".
 3. PROVIDE "UNI-FLANGE", "CERTA-LOK", OR APPROVED EQUAL PIPE RESTRAINTS AND CASING SYSTEM ON UNDERGROUND PRESSURE PIPE SYSTEMS, WHERE RESTRAINED JOINTS ARE SPECIFIED ON PLANS.
 4. FIRE HYDRANT ASSEMBLIES SHALL NORMALLY BE LOCATED THREE FEET BEHIND BACK OF CURB, DEFLECT WATERLINES AS NECESSARY TO MAINTAIN THREE FOOT CLEARANCE. REQUIRED ASSEMBLY SHALL INCLUDE ONE LINE SIZE BY SIX INCH TEE, ONE SIX INCH GATE VALVE AND BOX, ONE FIRE HYDRANT AND SIX INCH LEAD PIPING AND TIE BACKS.
 5. ALL CONCRETE THRUST BLOCKING SHALL BE PLACED TO FORM A SOLID CONNECTION BETWEEN FITTINGS, VALVES, AND FIRE HYDRANTS AND UNDISTURBED EARTH. CONCRETE FOR THRUST BLOCKING SHALL HAVE A MINIMUM OF 2500 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
 6. INSTALL CONCRETE BLOCK BENEATH FIRE HYDRANTS BEFORE PLACING CONCRETE THRUST BLOCKING TO INSURE THAT FIRE HYDRANTS ARE INSTALLED LEVEL.
 7. ALL FIRE HYDRANTS AND VALVE BOXES ARE TO BE ADJUSTED TO FINISH GRADE AFTER PAVING IS COMPLETE.
 8. ALL FIRE HYDRANTS ARE TO BE EQUIPPED WITH HYDR-ATORZ QUICK CONNECT HYDRANT SYSTEMS (1/4 X 5" BASE) WITH DEBRIS CAP. MANUFACTURED BY HYDRA-SHIELD, INC. OR APPROVED EQUAL. DEBRIS CAP IS TO BE TETHERED WITH A 12" STAINLESS STEEL CABLE, UTILIZING THE EYELET ON THE FIRE HYDRANT AND THE DEBRIS CAP.
 9. CONTRACTOR SHALL NOTIFY CITY ENGINEER 72 HOURS BEFORE START OF CONSTRUCTION.



APPROVED: _____
FORT BEND COUNTY
DEVELOPMENT COORDINATOR

DATE: _____

NO.	REVISION	DATE



**PAPE-DAWSON
ENGINEERS**

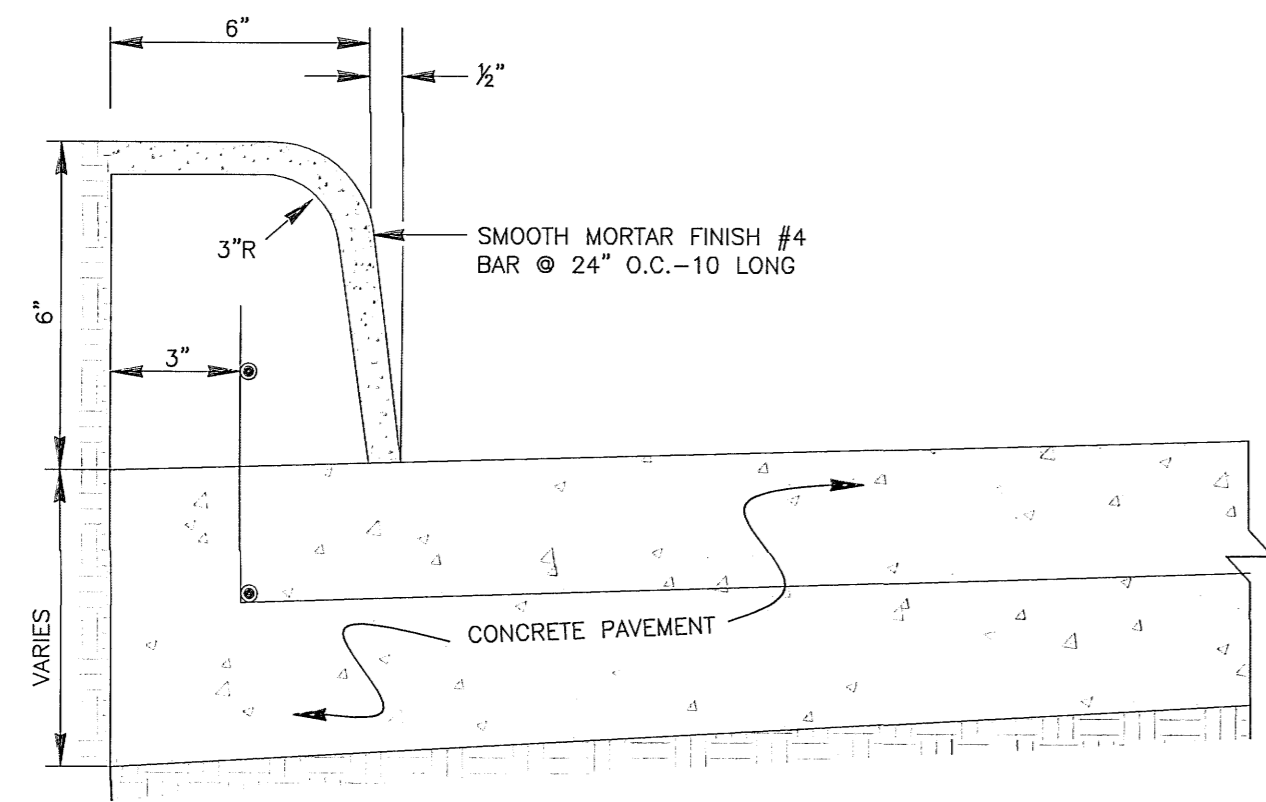
HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10550 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.425.2400
TYPE FIRM REGISTRATION 4479 | TEPALS FIRM REGISTRATION #10189374

SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS

WATER LINE DETAILS (SHEET 2 OF 2)

PLAT NO.	40166-20
JOB NO.	40166-21
DATE	MARCH 2018
DESIGNER	LS
CHECKED	JCD
DRAWN	ALL
SHEET	35 OF 44

DATE: MAR 21, 2018 10:08AM USER: D:\ANENTON File: K:\Projects\40166\10166\10166-21-1.dwg DWGSCALE: BRYAN ROAD\18-4016600-DT-BRYAN-PH1.dwg



NOTES:

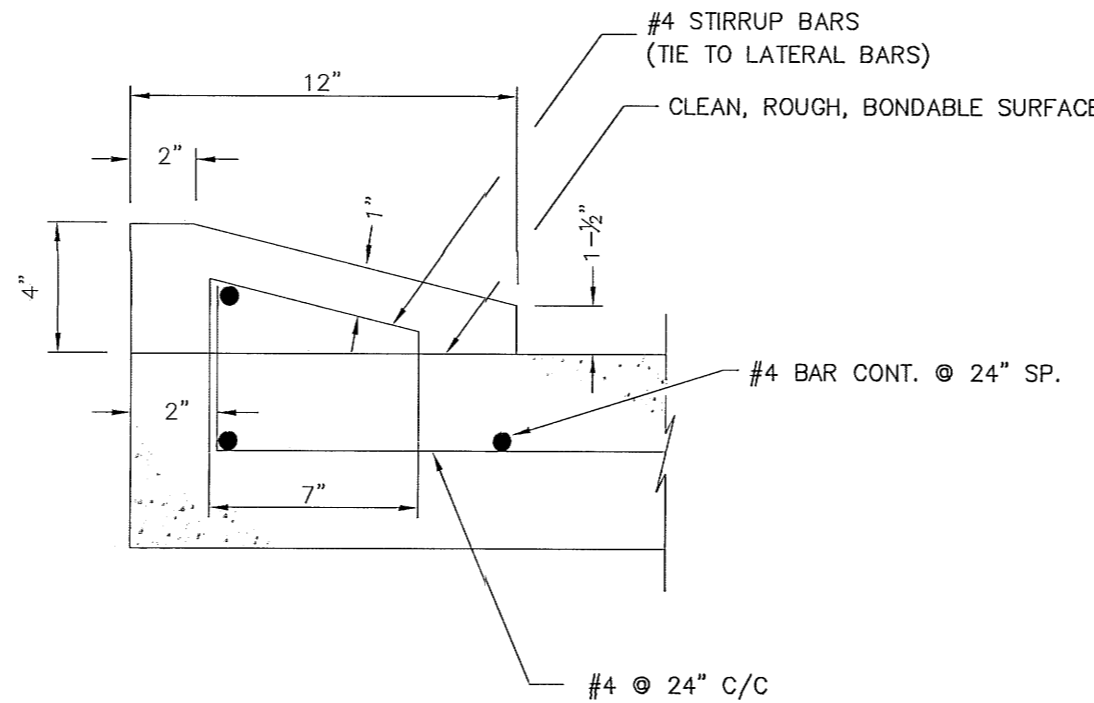
1. MORTAR FINISH NOT REQUIRED WHEN CURB IS POURED BY A MACHINE, BUT CURB WILL HAVE THE SAME OUTSIDE DIMENSIONS.
2. WHEN CONCRETE CURB IS TO BE PLACED ON EXISTING CONCRETE BASE, USE #4 DEFORMED BARS, 10" LONG, 24" O.C., DOWELLED, AND SET IN QUICK SETTING CEMENT MORTAR.
3. REDWOOD EXPANSION JOINTS SHALL BE INSTALLED IN CURB AT ALL PAVEMENT EXPANSION JOINTS.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS

CONCRETE CURB

DESIGN:	DATE:	SCALE:	DATE:	DRAWING:
CAK	STAFF	NTS	12/10	P-100g

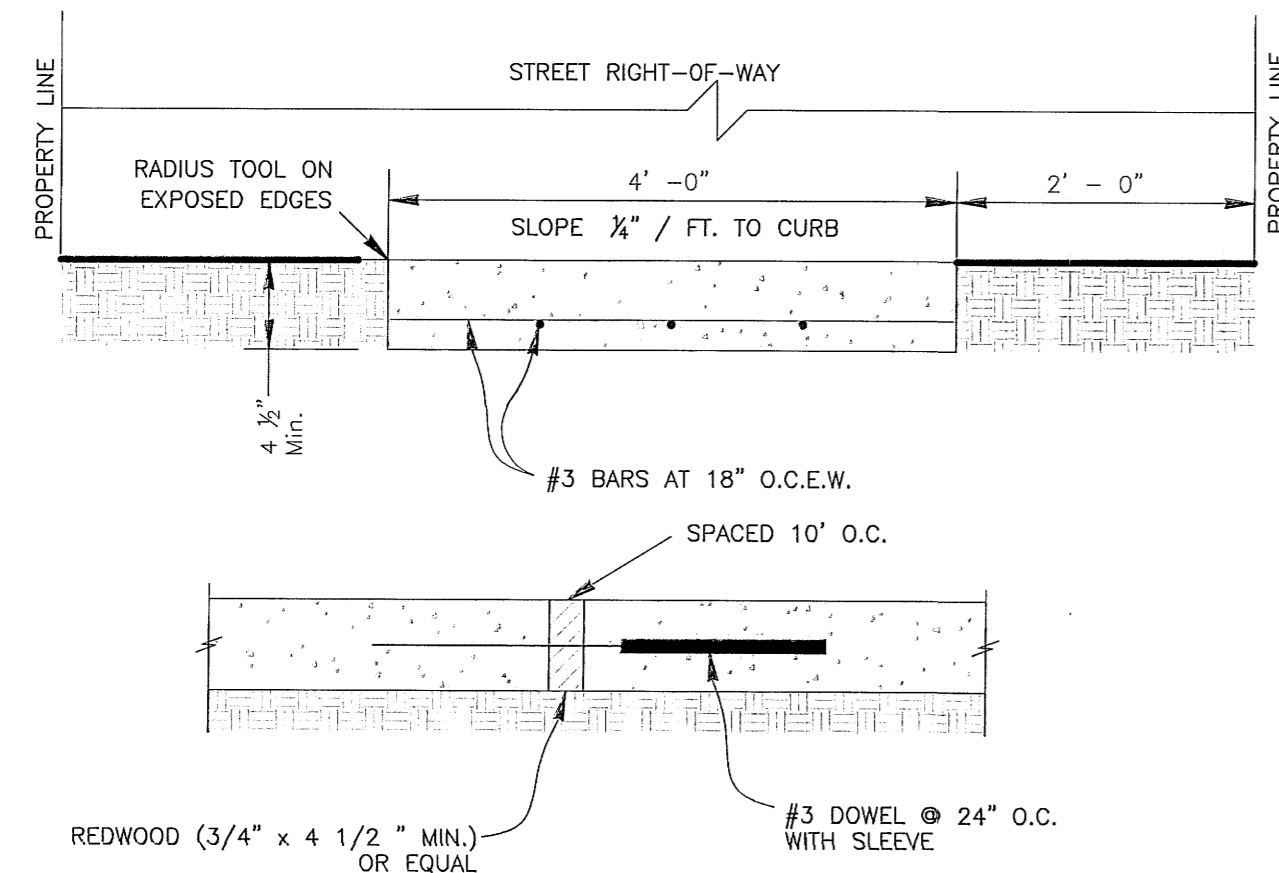
- NOTE:
1. CONCRETE FOR CURB SHALL BE 6-SACK MIX. SLUMP 1-1/2" - 3"



THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS

**CONCRETE CURB
4"x12" APPLIED MOUNTABLE**

DESIGN:	DATE:	SCALE:	DATE:	DRAWING:
CAK	STAFF	NTS	12/10	P-100b



EXPANSION JOINT

Contraction joints shall be spaced 5' O.C.
Concrete shall have five (5) sacks of cement per cubic yard of concrete.

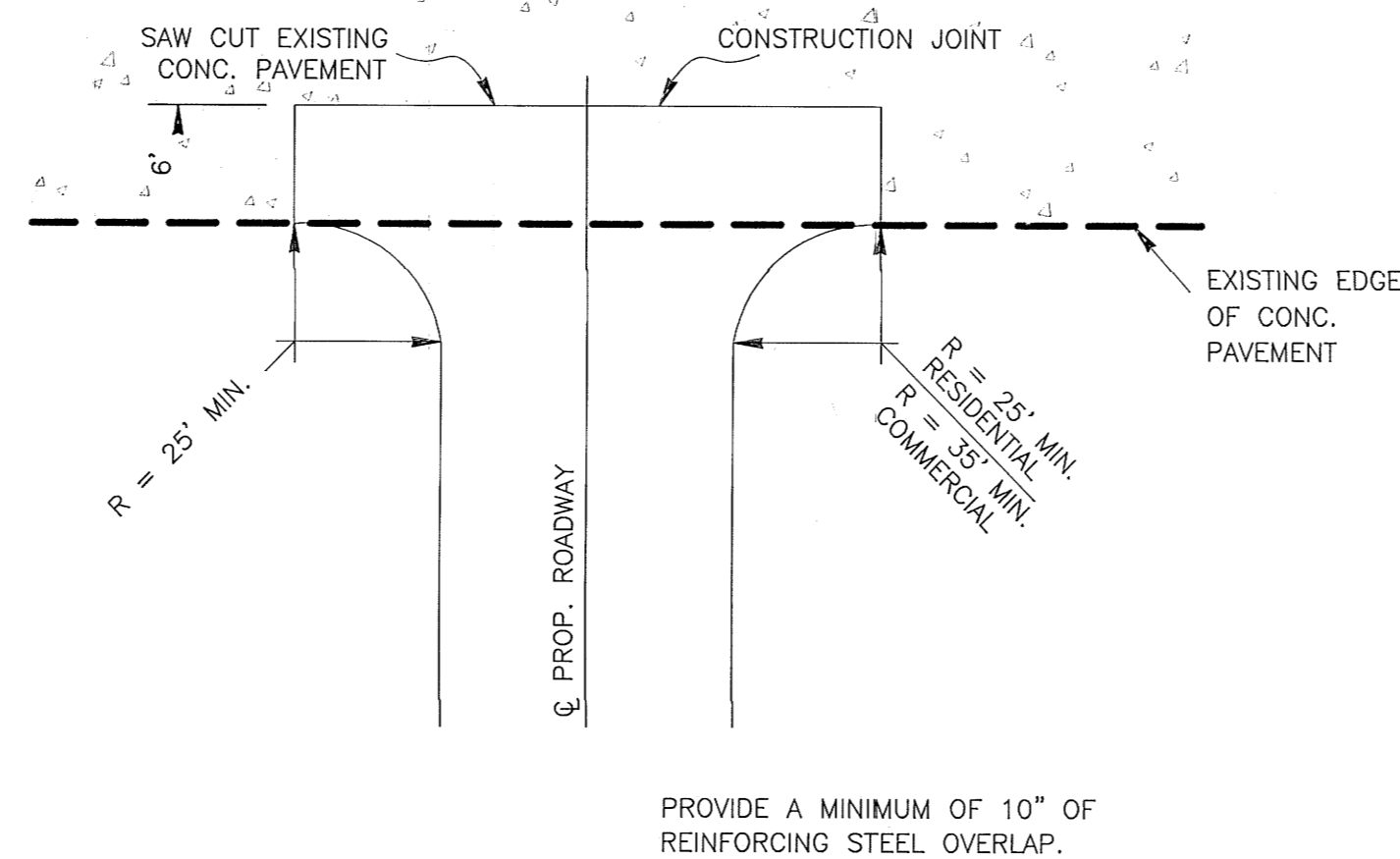
NOTE:

1. The Sidewalk Cross Slope Applies To The Driveway Inline With The Sidewalk Crossing It.
2. No water Meters Allowed In Sidewalks Or Driveways.
3. When A Manhole Or Water Valve Is Located In A Driveway Or Sidewalk, Public Works Must Inspect And Approve Before Code Enforcement Is Called [Phone (832) 595-3500] For Inspections.
4. No Welded Wire Mesh In Public Right Of Way.
5. Expansion Joints Shall Be Redwood Or Tar Felt Board.
6. Match Any Existing Flatwork.
7. Private Walkways*, Patios* And Stoops* May Use Wire Mesh 6x6 #10 On Chairs.
8. Two (2) Dowels Minimum Shall Be Used In The Expansion Joints.
9. Sleeve Same Side Of Expansion Joint Through Out Project.
- * Non Structural Support - Flatwork Only
10. All Form Boards And Expansion Joints Shall Be A Minimum Of Four (4 1/2") & Half Inches In Depth And Shall Rest On Subgrade.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS

**CONCRETE SIDEWALK
SINGLE FAMILY RESIDENCE**

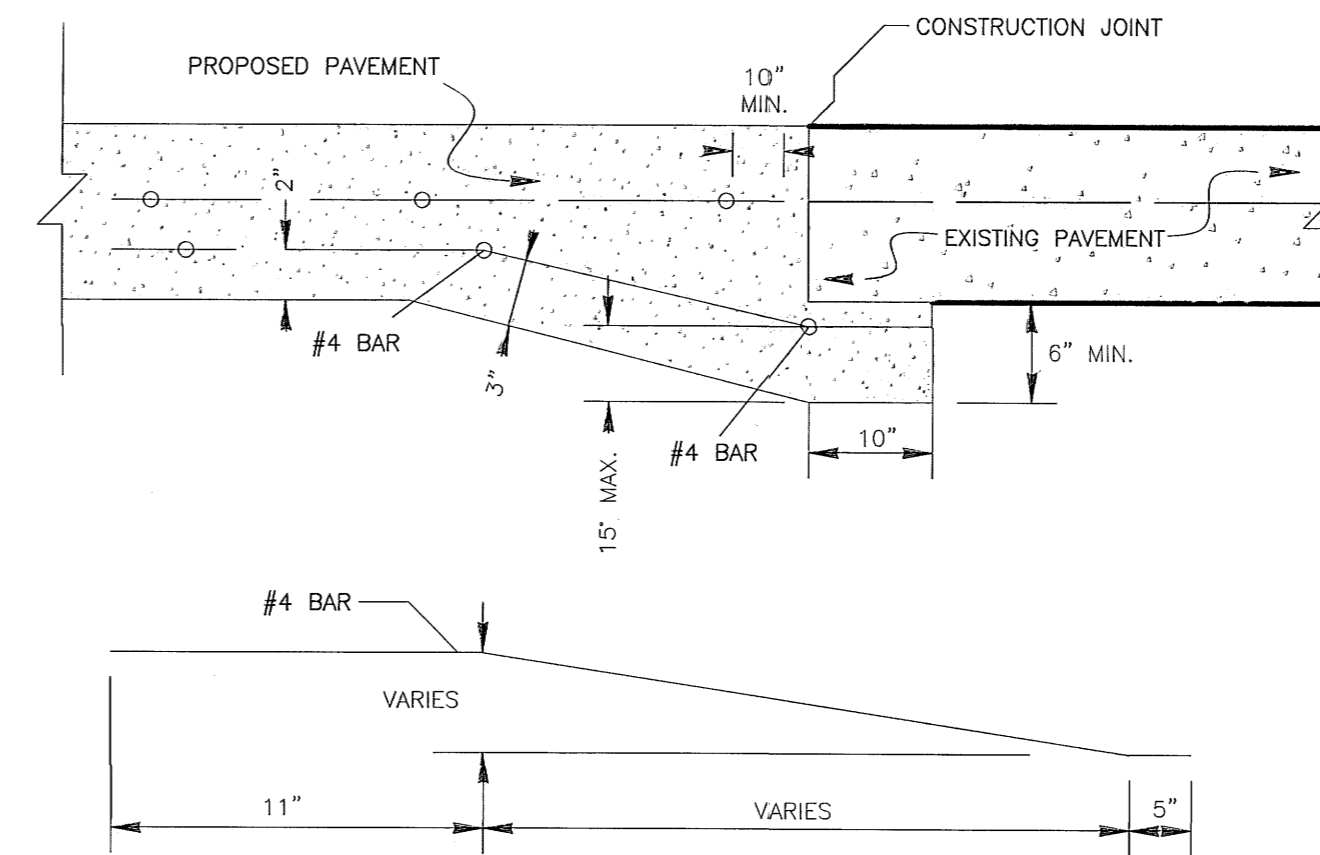
DESIGN:	DATE:	SCALE:	DATE:	DRAWING:
CAK	STAFF	NTS	12/14	P-101b



THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS

METROPOLITAN INTERSECTION

DESIGN:	DATE:	SCALE:	DATE:	DRAWING:
CAK	STAFF	NTS	12/10	P-102

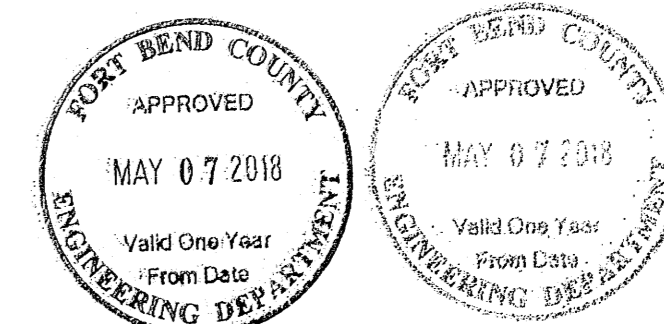


UNDERCUT BAR LAYOUT

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS

PAVEMENT UNDERCUT

DESIGN:	DATE:	SCALE:	DATE:	DRAWING:
CAK	STAFF	NTS	12/10	P-103



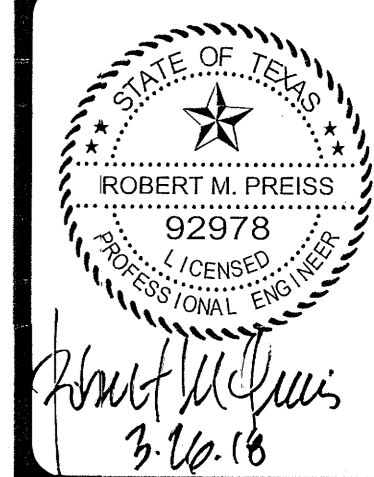
APPROVED: FORT BEND COUNTY DEVELOPMENT COORDINATOR

DATE:

SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS
PAVING DETAILS (SHEET 1 OF 3)

PLAT NO. 40166-20
JOB NO. 40166-21
DATE MARCH 2018
DESIGNER LS
CHECKED BY DRAWN ALL
SHEET 36 OF 44

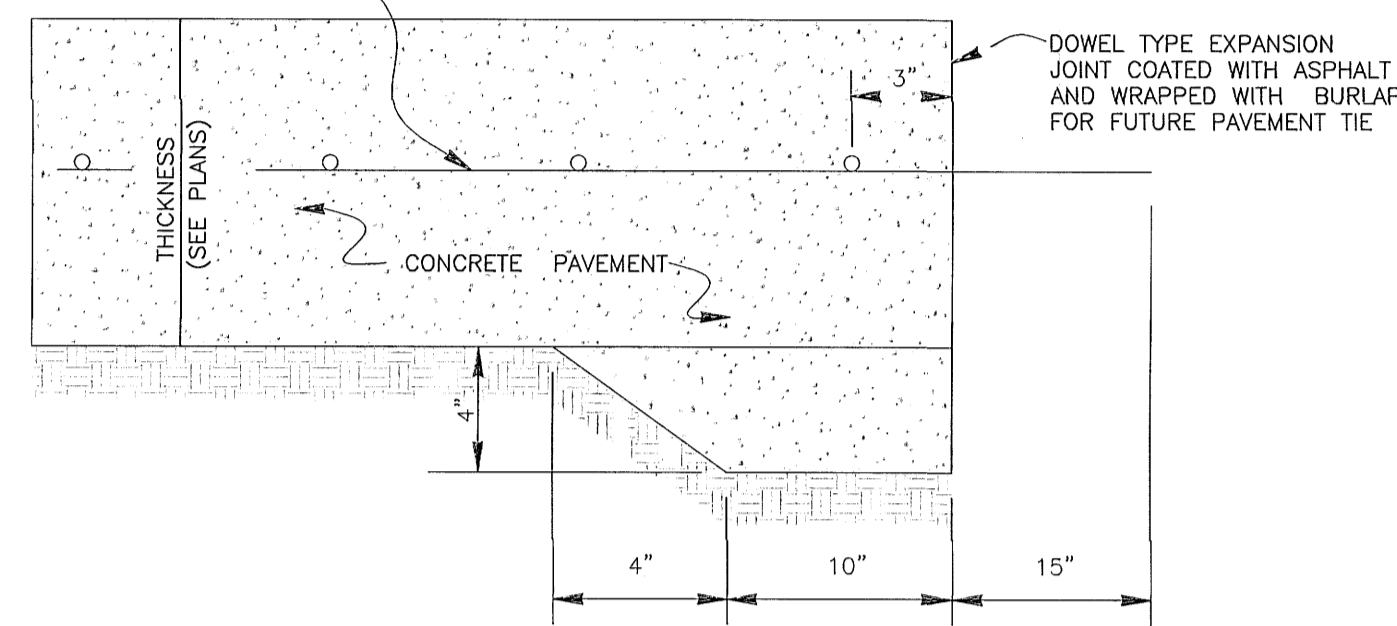
NO.	REVISION	DATE



**PAPE-DAWSON
ENGINEERS**
HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
TBP# FIRM REGISTRATION #470 | TBP#S FIRM REGISTRATION #1018974

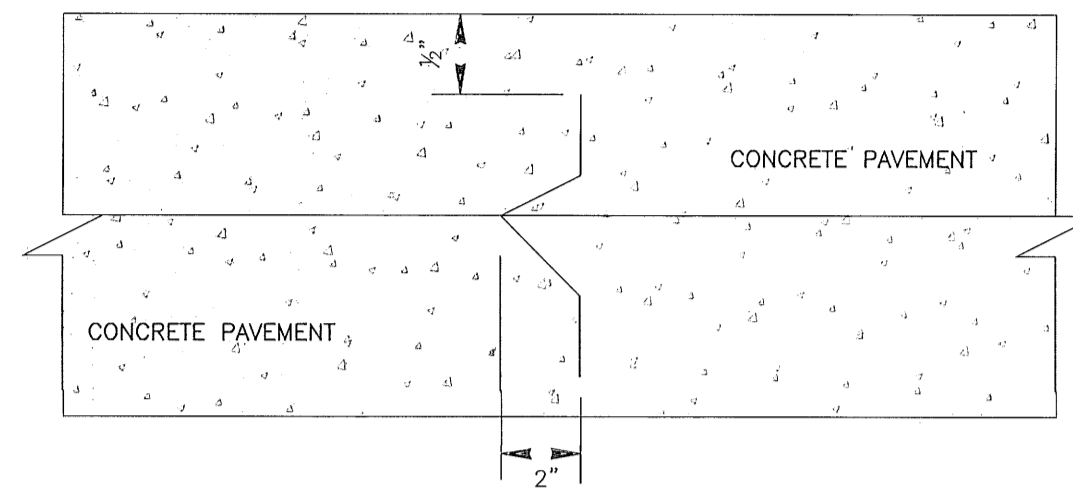
Date: Mar 21, 2018, 12:08pm User: C:\ANEWTON File: K:\projects\40166\002-0 Design\2-1 Civil\DWGS\BRYAN ROAD\16-4016600-DT-BRYN-PH1.dwg

SEE ROADWAY SECTION FOR REBAR SCHEDULE



THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS
PAVEMENT HEADER

DESIGN: CAK DATE: 12/10 DRAWING: P-104
CDS: STAFF SCALE: NTS

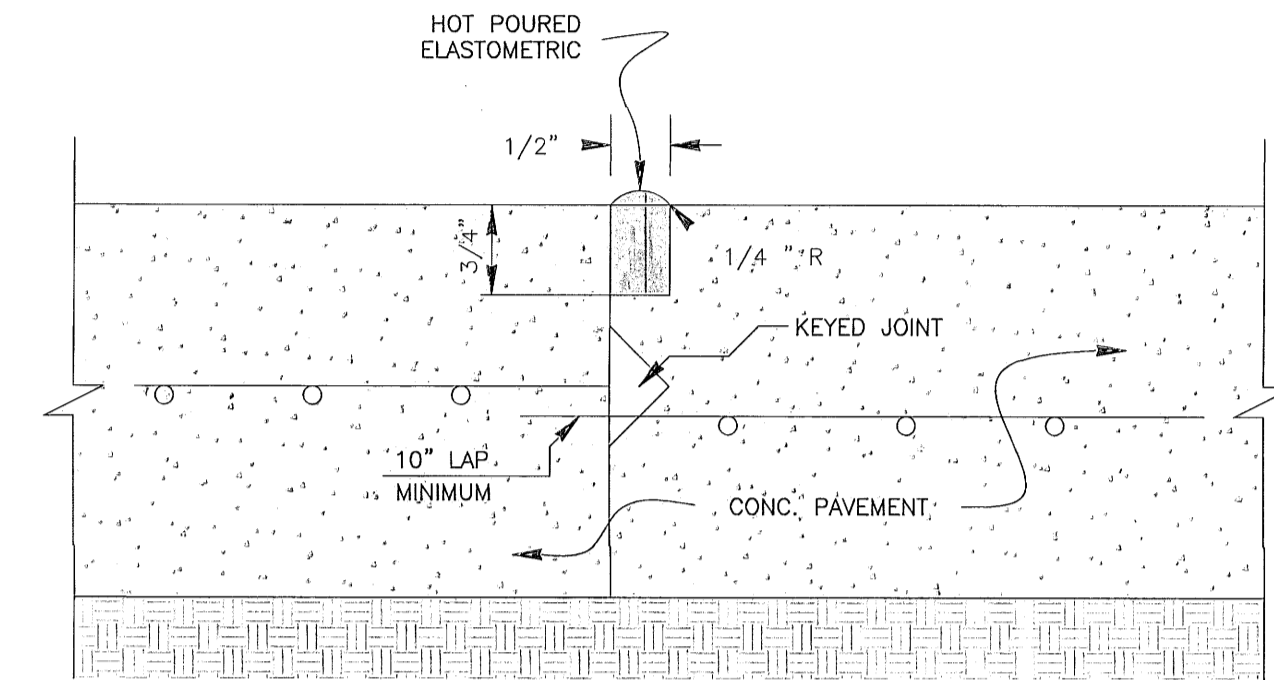


THE LOCATION OF DEFORMED STRIPS MAY BE VARIED, WITH THE APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS, TO SUIT THE PROPOSED CONSTRUCTION METHODS OF THE CONTRACTOR. MAXIMUM LONGITUDINAL SPACING FOR DEFORMED STRIPS IS 14'-0". DEFORMED METAL STRIPS SHALL BE PLACED VERTICALLY ALONG A STRAIGHT ALIGNMENT.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS
DEFORMED METAL STRIP

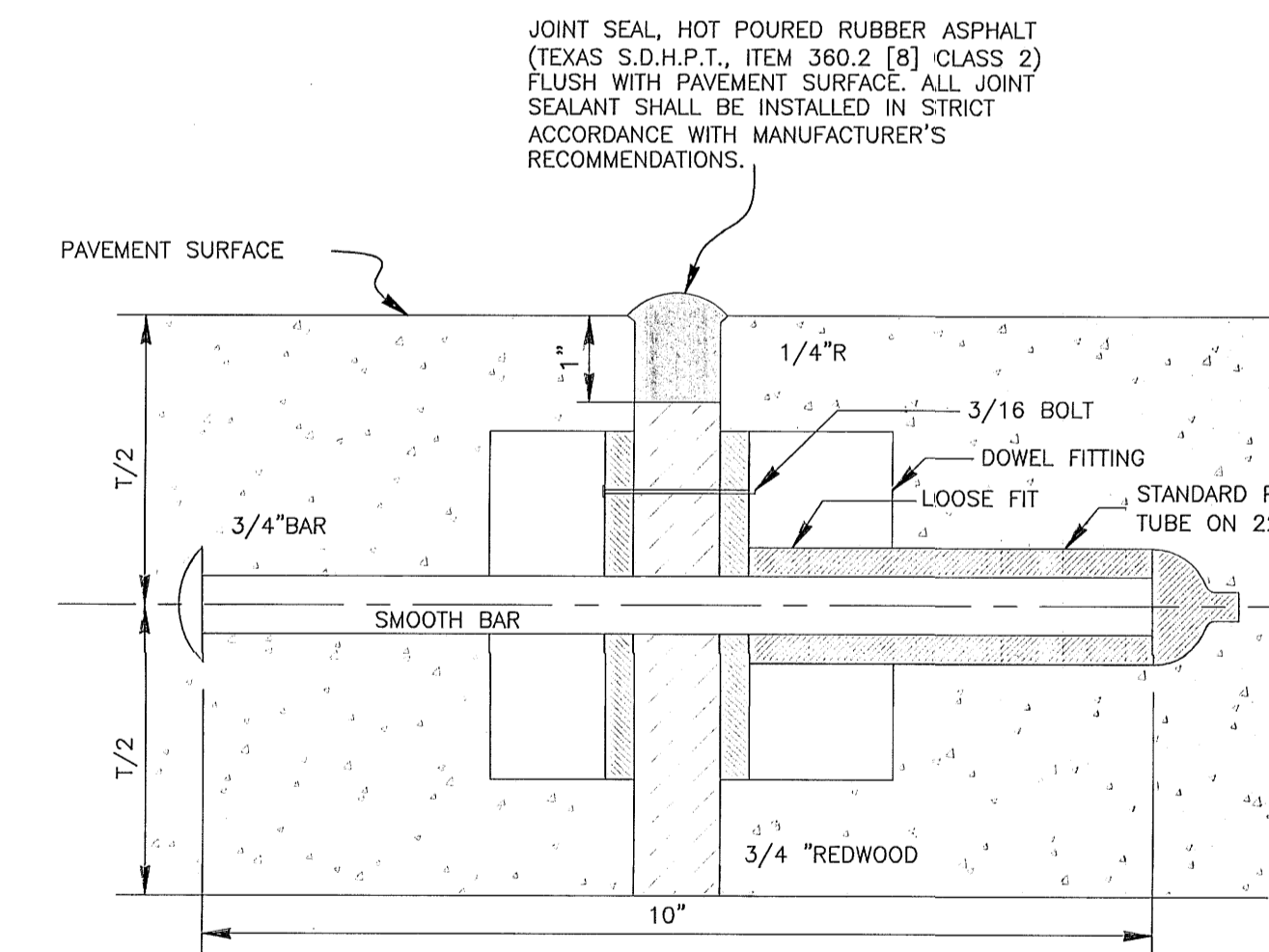
DESIGN: CAK DATE: 12/10 DRAWING: P-105
CDS: STAFF SCALE: NTS

JOINT SEAL, HOT POURED RUBBER ASPHALT (TEXAS S.D.H.P.T., ITEM 360.2 [8] CLASS 2) FLUSH WITH PAVEMENT SURFACE. ALL JOINT SEALANT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.



THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS
CONSTRUCTION JOINT

DESIGN: CAK DATE: 12/10 DRAWING: P-106
CDS: STAFF SCALE: NTS

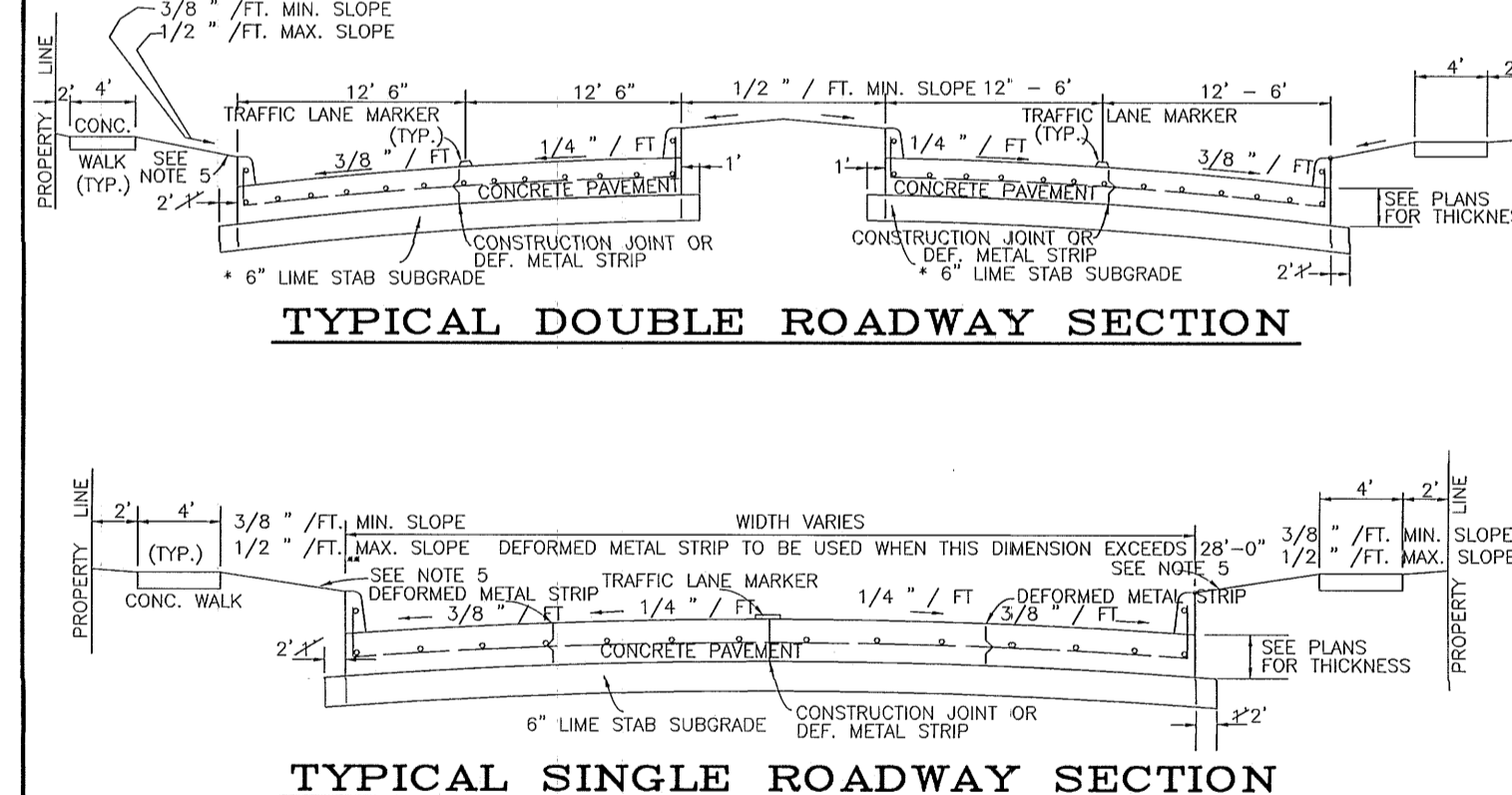


NOTES:

- EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB RADIUS AND SPACED A MAXIMUM OF 60'-0" APART.
- STAKES FOR TRANSVERSE JOINTS SHALL NOT BE PLACED CLOSER THAN 6" TO A LONGITUDINAL JOINT. THE TOP OF EACH STAKE SHALL NOT BE LESS THAN 1" BELOW THE FINISHED SURFACE.
- ALTERNATIVE DOWEL IS A CANTILEVER TYPE, CAST MALLEABLE IRON LOAD TRANSMISSION UNIT, STAR-LUG, MODEL D-27, OR EQUAL, ON 22" C-C.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS
DOWEL TYPE EXPANSION JOINT

DESIGN: CAK DATE: 12/10 DRAWING: P-107
CDS: STAFF SCALE: NTS



TYPICAL DOUBLE ROADWAY SECTION

TYPICAL SINGLE ROADWAY SECTION

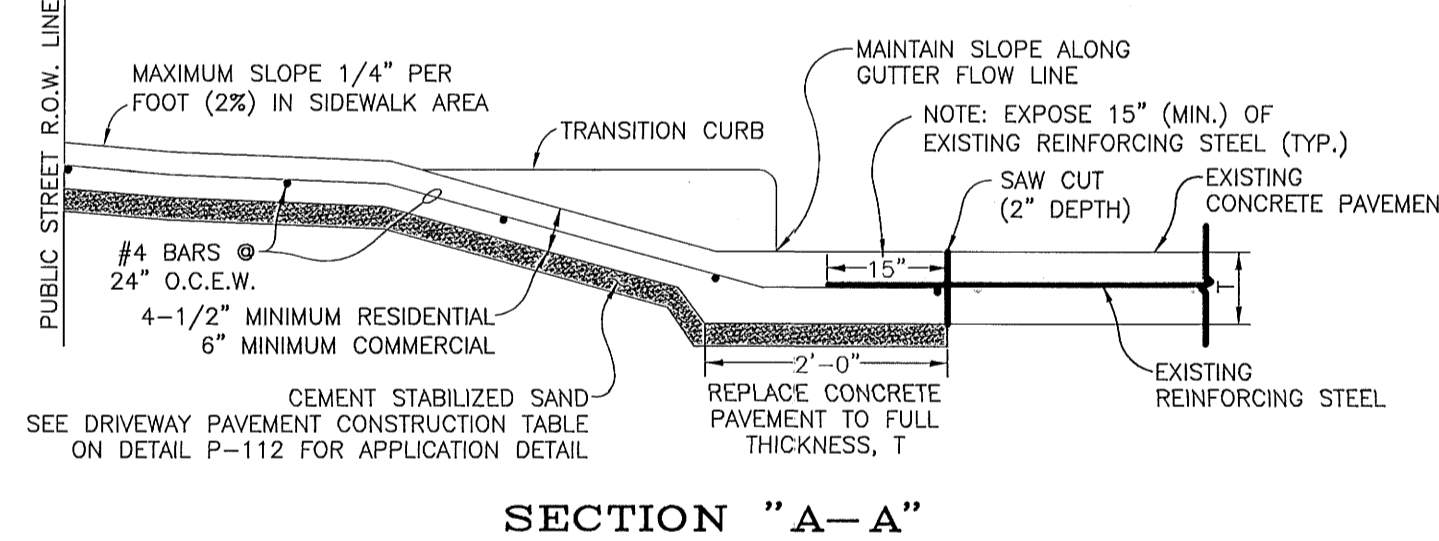
MINIMUM REINFORCEMENT SCHEDULE
Six (6) inch pavement ~ # 4 - 24" O.C.E.W.
Seven (7) inch pavement ~ # 4 - 18" O.C.E.W.
Eight (8) inch pavement ~ # 4 - 18" O.C.E.W.

NOTES:

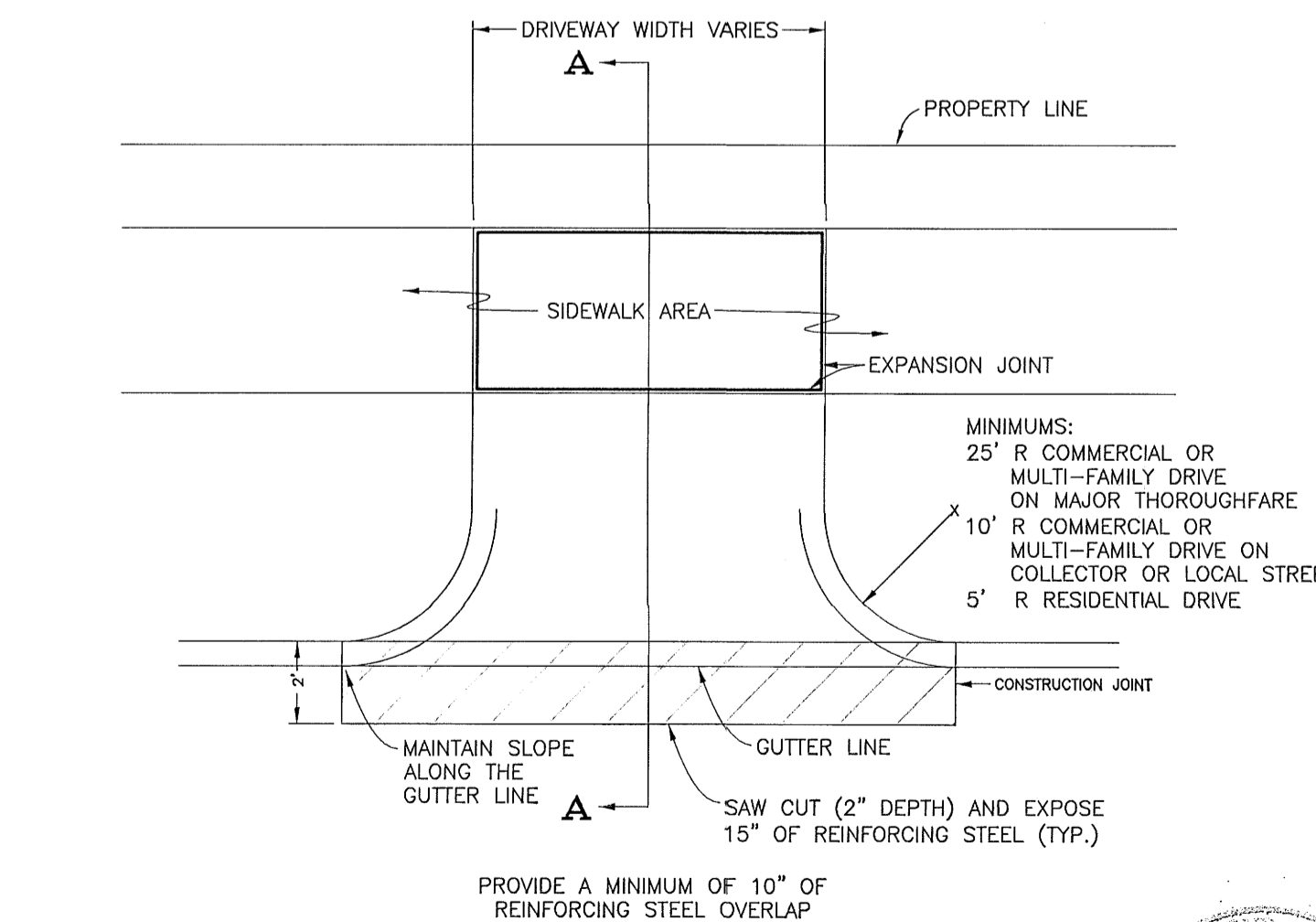
- All reinforcing steel shall conform to ASTM A-615, current grade 40. Minimum lap at all splices shall be 10".
- Concrete shall be a minimum of five (5 1/2) sacks of cement per cubic yard of concrete, compressive strength 3500 psi at 28 days.
- The location of construction joints and deformed metal strips may be varied, with the approval of the Department of Community Services, to suit the proposed construction methods of the Contractor. The minimum width between longitudinal joints shall not exceed 14'-0".
- 6" lime stabilized subgrade shall be a minimum of 6% lime, unless specifically approved by the Department of Community Services.
- The slope behind pavement may be increased, with approval of the Public Works.

THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS
ROADWAY CROSS-SECTION

DESIGN: CAK DATE: 12/10 DRAWING: P-108
CDS: STAFF SCALE: NTS

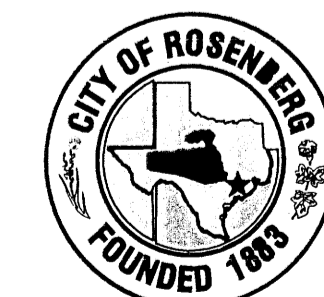


SECTION "A-A"



THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
DEPARTMENT OF PUBLIC WORKS
DRIVEWAY

DESIGN: CAK DATE: 03/12 DRAWING: P-109
CDS: STAFF SCALE: NTS

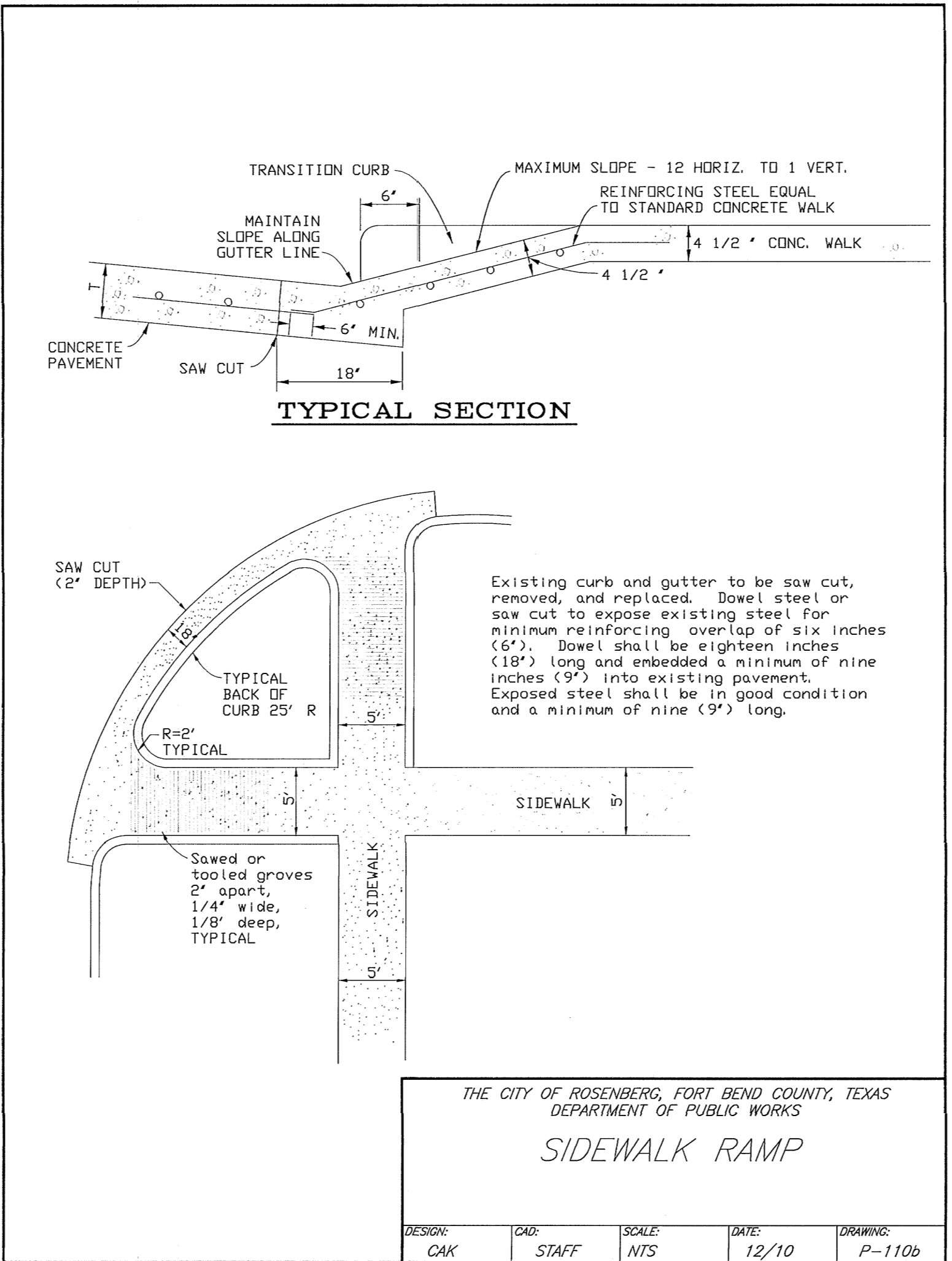
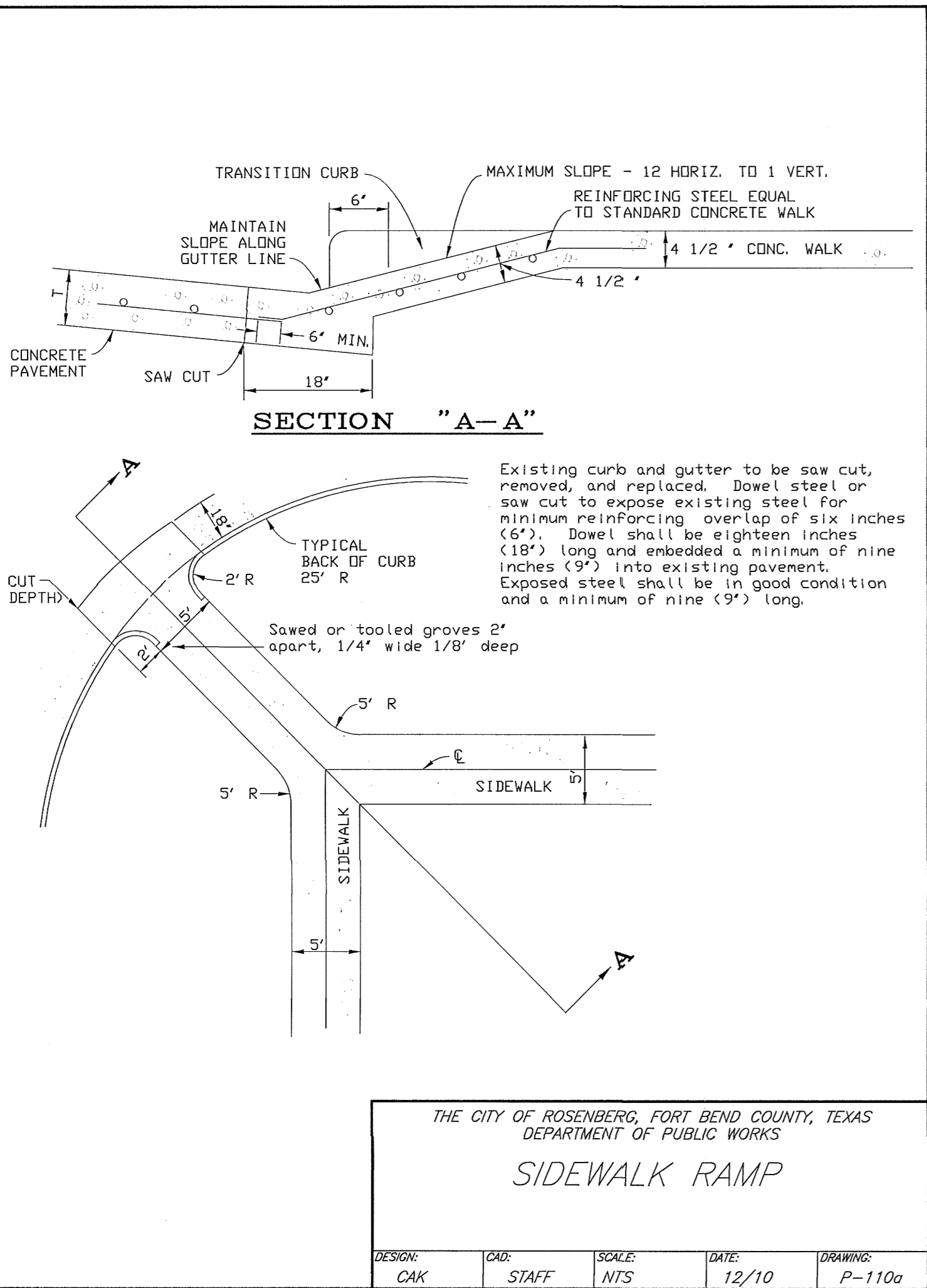


APPROVED: FORT BEND COUNTY
DEVELOPMENT COORDINATOR

DATE:

SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS
PAVING DETAILS (SHEET 2 OF 3)

PLAT NO. 40166-20
JOB NO. 40166-21
DATE MARCH 2018
DESIGNER LS
CHECKED JCV DRAWN ALL
SHEET 37 OF 44



CEMENT STABILIZED SAND 2-SK/C.Y.	
RESIDENTIAL	4" MINIMUM
COMMERCIAL	6" MINIMUM
INDUSTRIAL	8" MINIMUM
REINFORCED CONCRETE PAVEMENT 3,500 PSI MIN.	
RESIDENTIAL	4" MINIMUM
COMMERCIAL	6" MINIMUM
INDUSTRIAL	8" MINIMUM

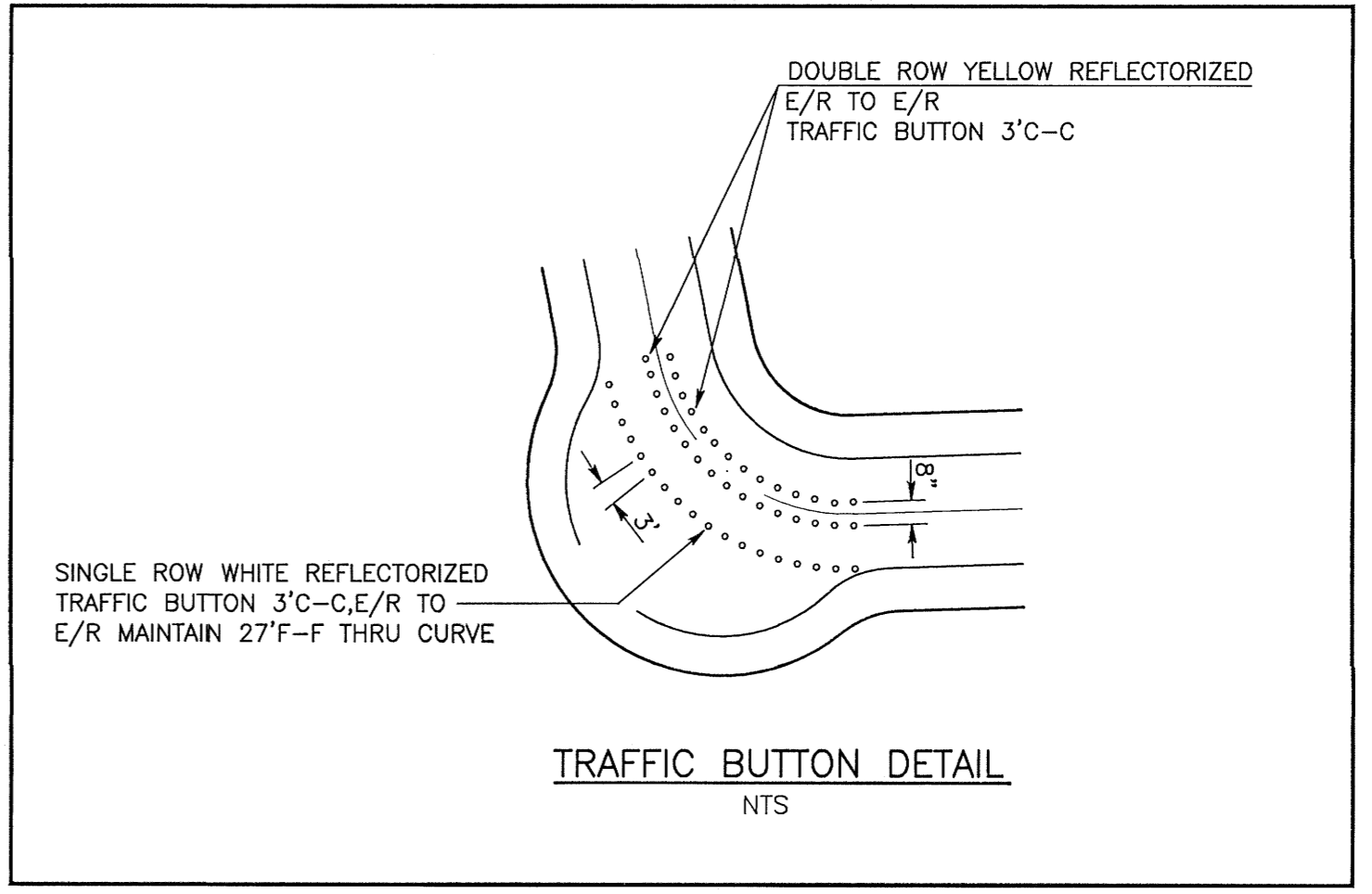
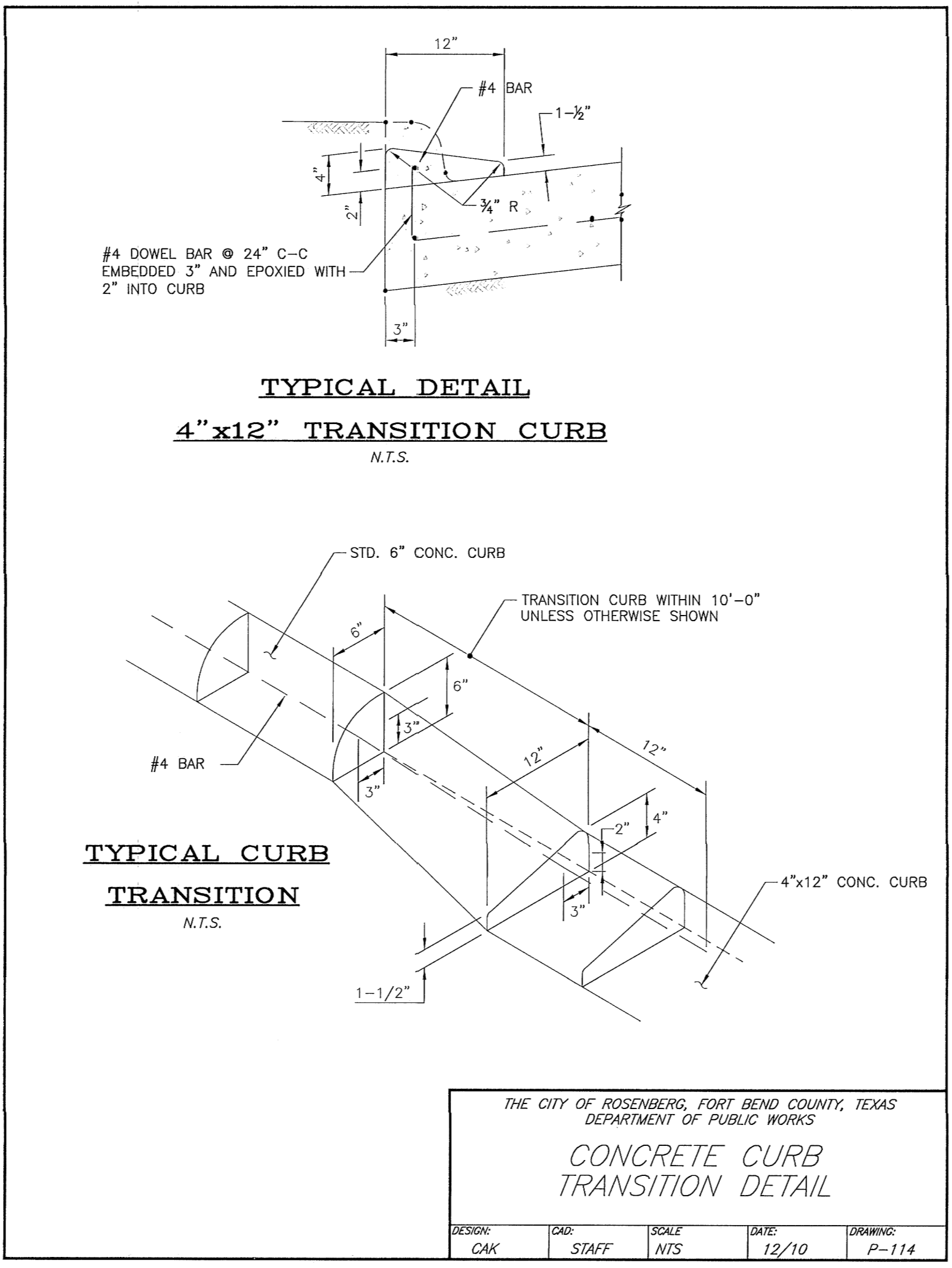
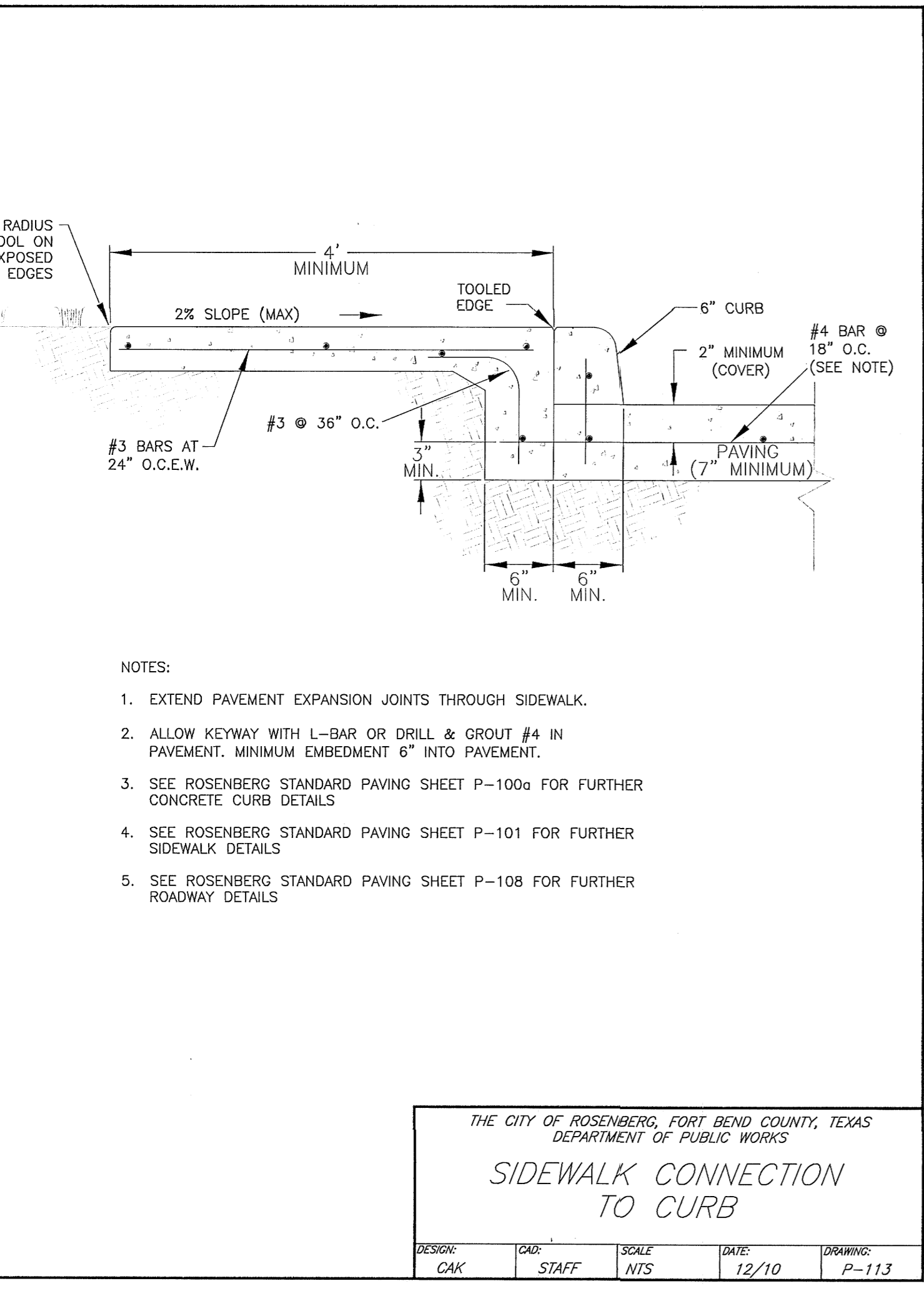
DRIVEWAY PAVEMENT CONSTRUCTION TABLE

- NOTES:
- SAW CUT & BREAKOUT NO MORE THAN 72 HOURS PRIOR TO PROPOSED CONCRETE PLACEMENT. NOTIFY CITY OF ROSENBERG PRIOR TO CUT.
 - UNSTABLE SUBGRADE SHALL BE EXCAVATED & REPLACED WITH CONCRETE.
 - IT IS CONTRACTOR'S RESPONSIBILITY TO NOTIFY CITY OF ROSENBERG OF ANY BIRD BATH PROBLEMS PRIOR TO CONSTRUCTION OF DRIVEWAY.
 - USE 1"x2" TREATED STAKES FOR HEADER.
 - EDGE ALL SIDES WITH EDGING TOOL AND BROOM FINISH.
 - FOR INDUSTRIAL DRIVES, PAVEMENT SHALL HAVE A DEPTH OF 8" (IN.).
 - EXPANSION JOINT AT PROPERTY LINE REQUIRED. 3/4" REDWOOD BOARD WITH NO. 4 DOWELS MINIMUM.
 - MAXIMUM ALLOWABLE DRIVEWAY GRADE IN PUBLIC RIGHT-OF-WAY IS 5%.
 - DRIVEWAY GRADE MUST MEET A.D.A. AND T.A.S. SIDEWALK SLOPE. SIDEWALKS MUST BE SCORED TO MATCH ADJACENT SIDEWALK. IF SLOPE IS CONTINUED THROUGH THE RIGHT-OF-WAY LINE, PROVIDE A 3/4" REDWOOD EXPANSION JOINT WITH DOWELS AT RIGHT-OF-WAY LINE.
 - REFER TO GENERAL, C.S.S., ASPHALT, AND CONCRETE PAVEMENT NOTES.

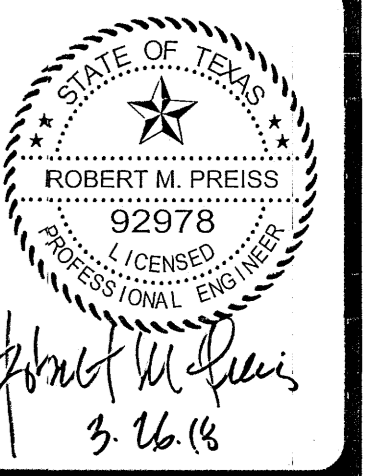
THE CITY OF ROSENBERG, FORT BEND COUNTY, TEXAS
 DEPARTMENT OF PUBLIC WORKS

STANDARD DRIVEWAY CONSTRUCTION TABLE & NOTES

DESIGN:	CAK	DATE:	04/15
CAD:	STAFF	SCALE:	NTS
DRAWING:	P-112		



DATE	
NO.	
REVISION	



PAPE-DAWSON ENGINEERS

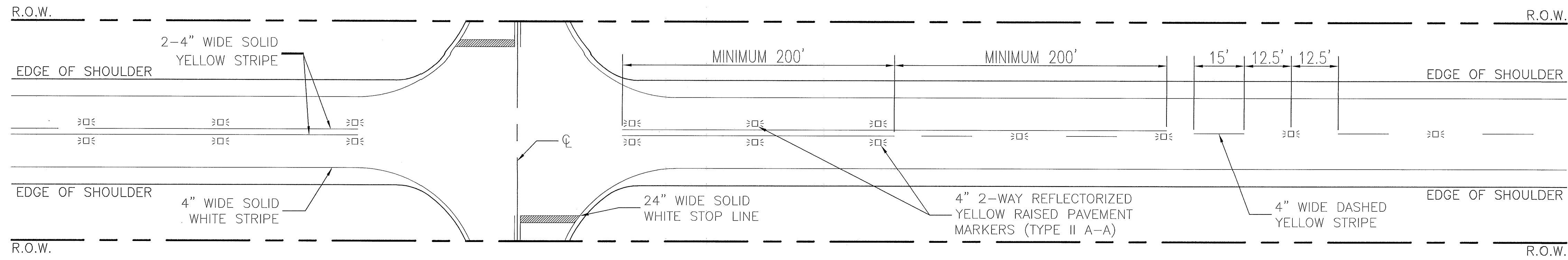
HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10650 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713-458-2400
 TYPIC FIRM REGISTRATION #475 | TYPICAL FIRM REGISTRATION #0183874

SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS
 PAVING DETAILS (SHEET 3 OF 3)



APPROVED: FORT BEND COUNTY DEVELOPMENT COORDINATOR
 DATE:

PLAT NO.	40166-20
JOB NO.	40166-21
DATE	MARCH 2018
DESIGNER	LS
CHECKED	JCL
DRAWN	ALL
SHEET	38 OF 44

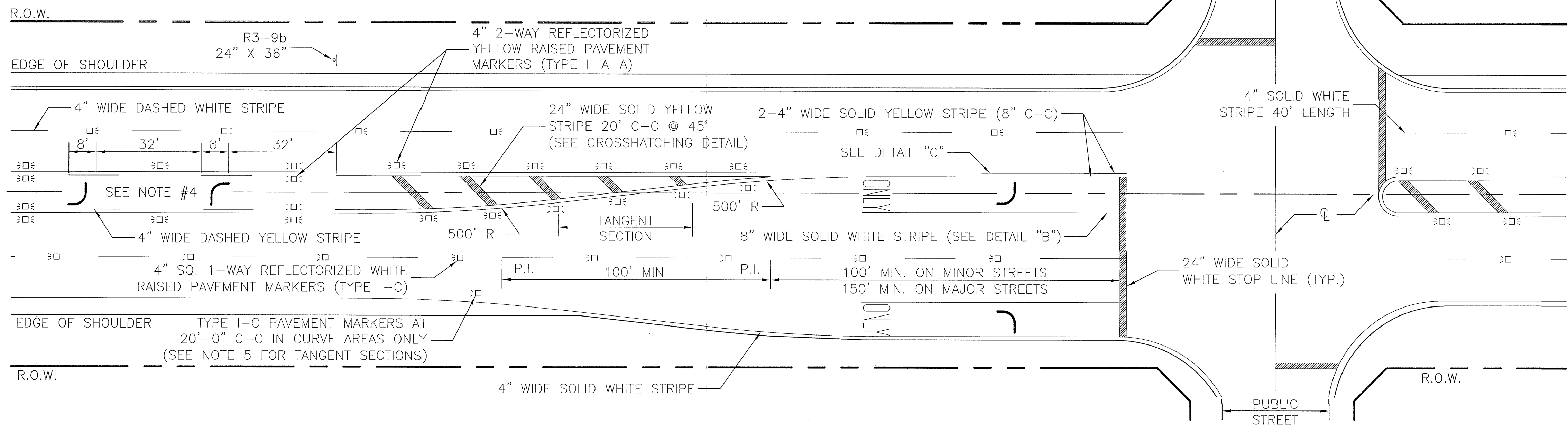


TYPICAL TWO LANE TWO-WAY ROAD

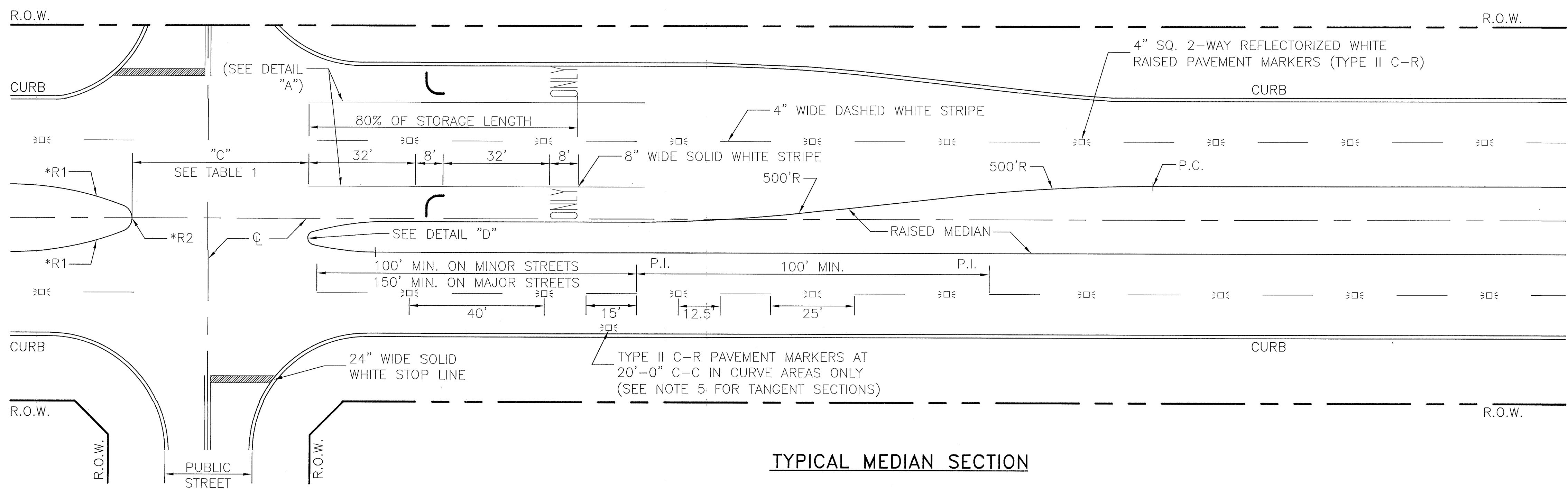
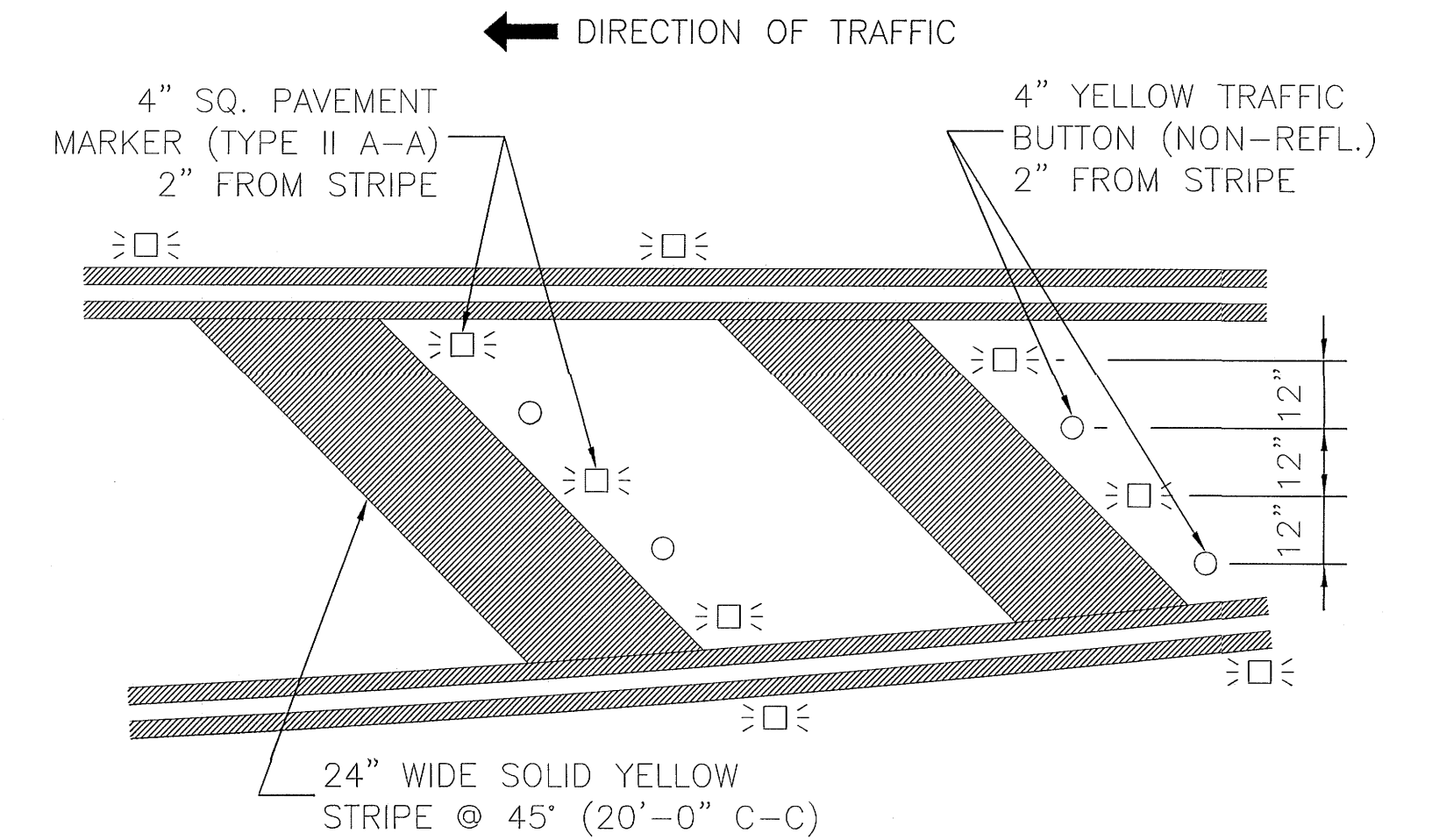
NOTES:

1. ALL PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (TMUTCD).
2. ALL TRAFFIC BUTTONS AND MARKERS SHALL BE INSTALLED ADJACENT TO STRIPES (APPROXIMATELY 2").
3. LEFT TURN STORAGE BAYS SHALL BE A MIN. OF 100' ON MINOR STREETS AND A MIN. 150' ON MAJOR STREETS.
4. REPEAT ARROWS AT APPROXIMATELY 1000' INTERVALS WITHIN TWO-WAY LEFT TURN SECTION.
5. WITHIN A TANGENT SECTION THE TYPE I-C PAVEMENT MARKERS SHALL BE PLACED AT 40' C-C ON ROADWAYS WITHOUT CURB AND GUTTERS.
6. WHEN PAVEMENT MARKINGS EXTEND INTO OR CONTINUE THROUGH AN INTERSECTION AREA, THEY SHALL BE THE SAME COLOR AND AT LEAST THE SAME WIDTH AS THE LINE MARKINGS THEY EXTEND.
7. WHEN CROSSWALK MARKINGS ARE USED WITHIN AN ESTABLISHED SCHOOL ZONE AREA, CONTINENTAL TYPE MARKINGS SHALL BE USED.
8. ADDITIONAL SET OF "WORD" AND "ARROW" PAVEMENT MARKINGS SHALL BE USED WHEN TURN LANE STORAGE LENGTH IS 160 FEET OR GREATER.

TYPICAL TWO-WAY LEFT TURN SECTION

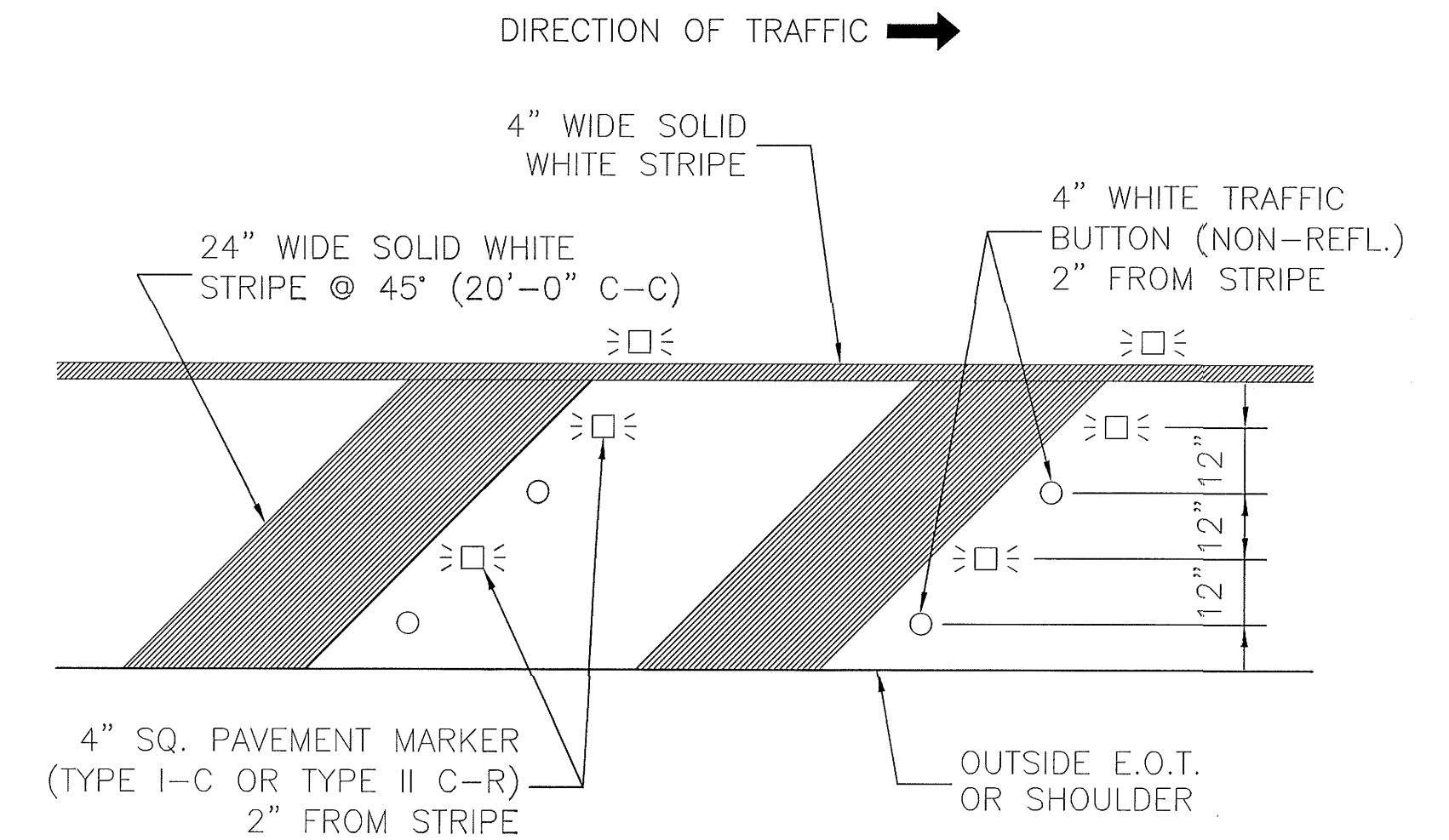


CROSSHATCHING DETAIL



TYPICAL MEDIAN SECTION

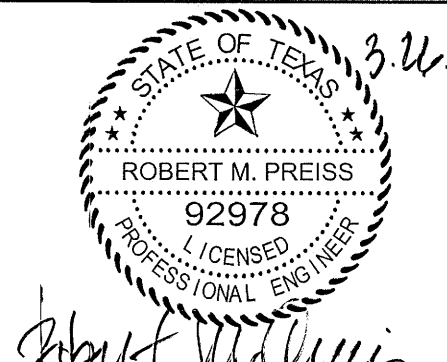
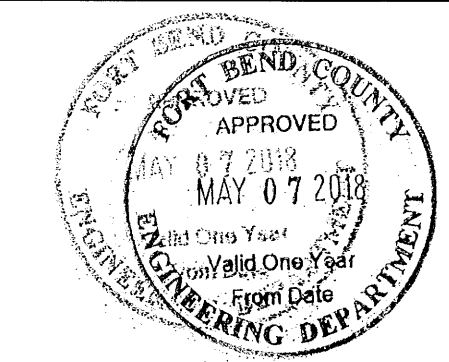
OUTSIDE EDGE CROSSHATCHING DETAIL



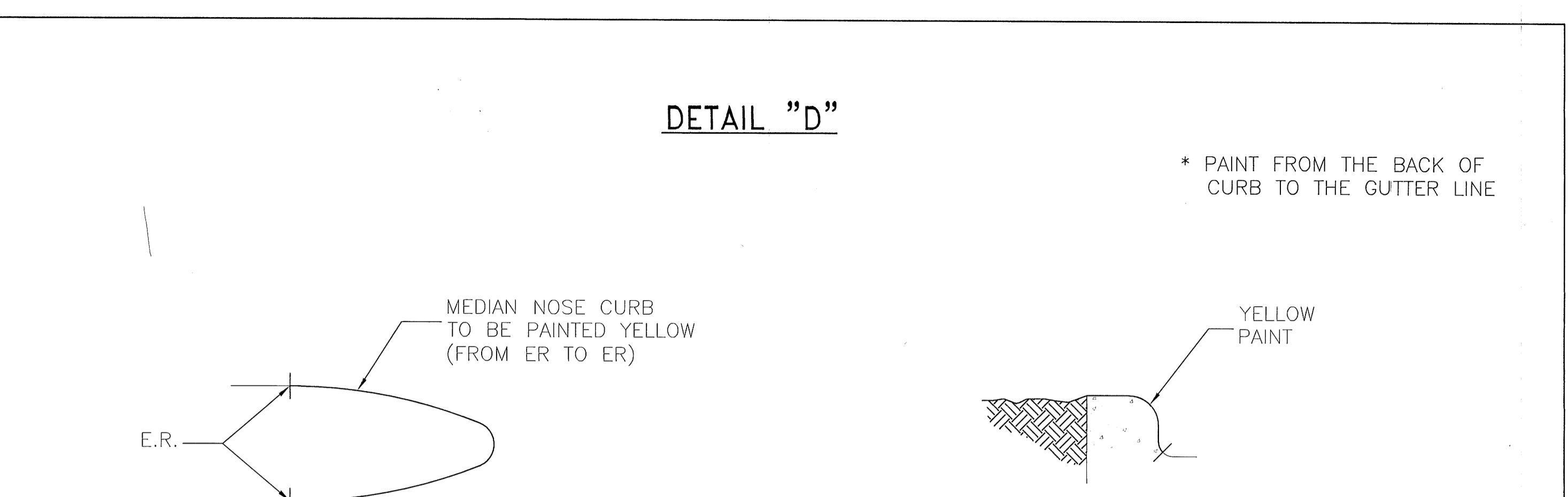
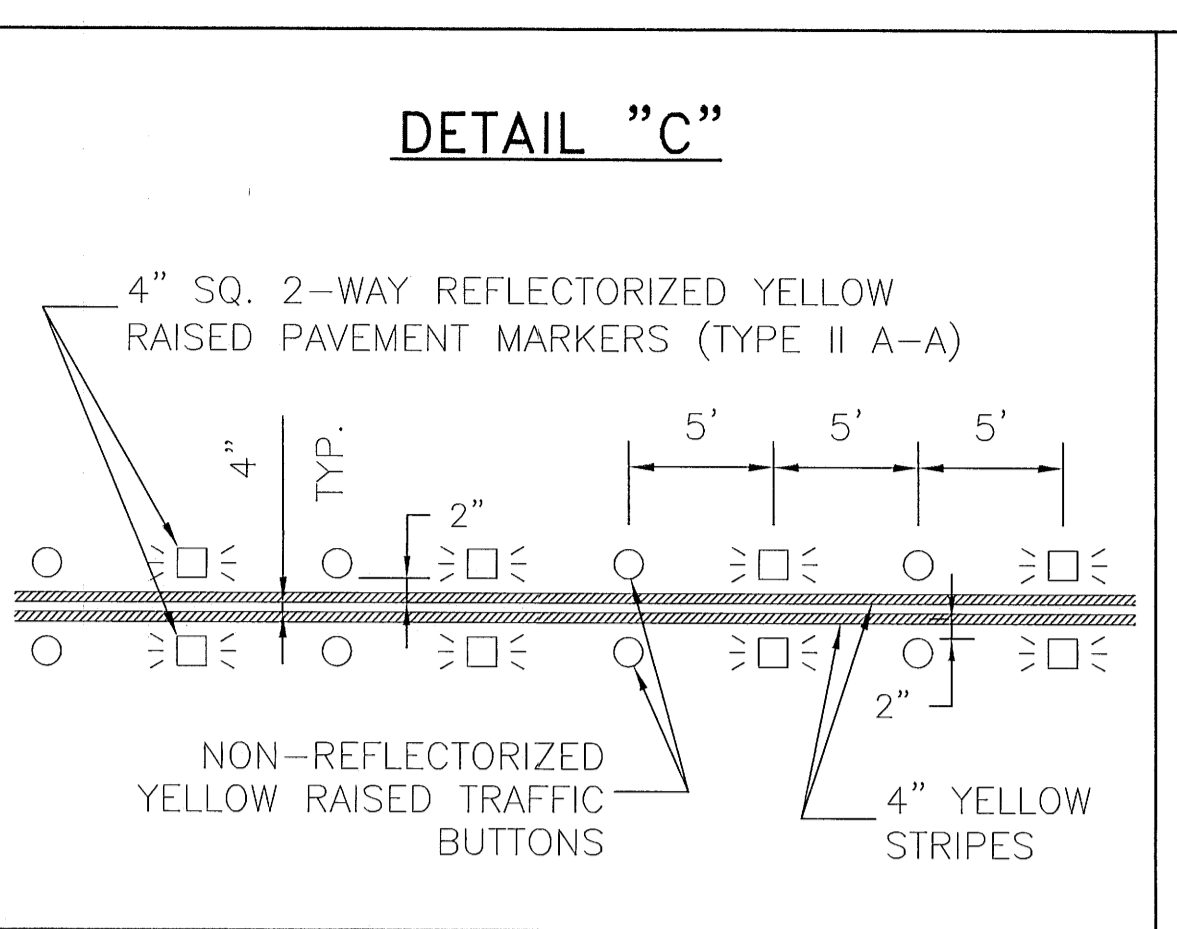
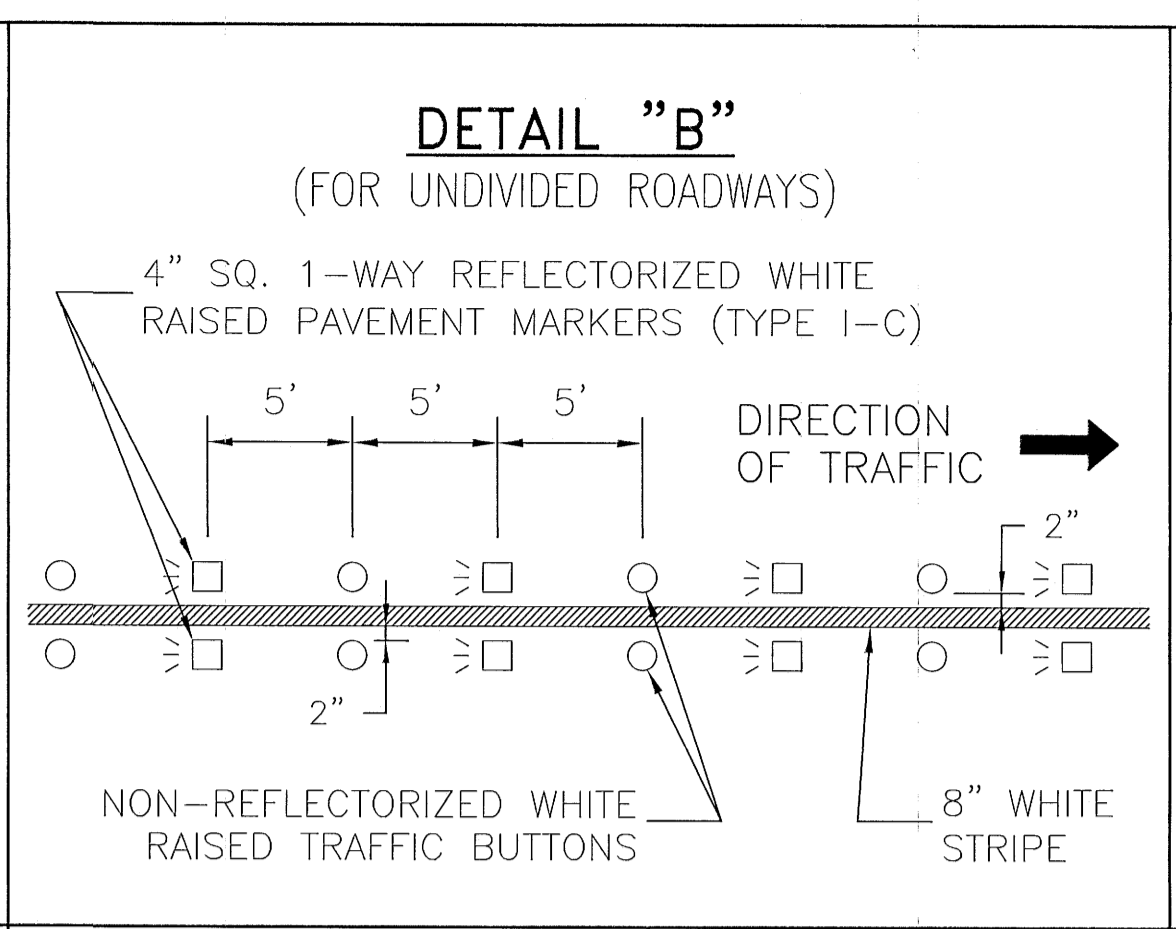
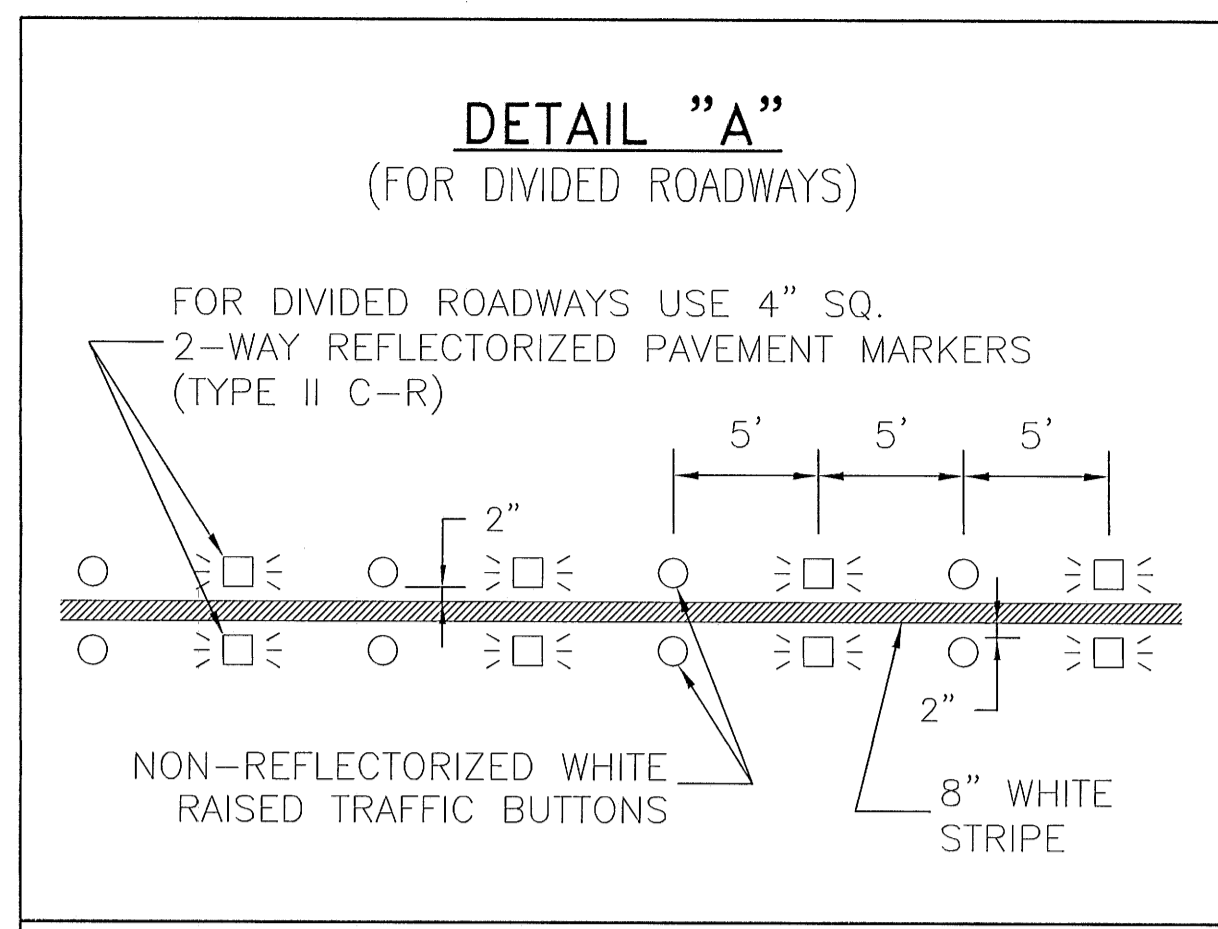
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NO.	REVISIONS	DATE	NAME

HARRIS COUNTY
ENGINEERING DEPARTMENT



PROJECT TITLE: SUNSET CROSSING BRYAN ROAD PHASE ONE		TRAFFIC STANDARD PM
SHEET DESCRIPTION: PAVEMENT MARKING DETAILS (SHEET 1 OF 2)		DATE: 8/18/17
DRAWN BY: JDZ	SCALE: NONE	SHEET NO.:
CK'D BY: BSH		39 / 44



PAVEMENT MARKER LEGEND

SYMBOL	DESCRIPTION
◻◻◻◻	4" x 4" REFLECTORIZED RAISED PAVEMENT MARKER
◻◻◻◻	INDICATED DIRECTION OF TRAFFIC FLOW
○	NON-REFLECTIVE 4" DIA. RAISED TRAFFIC BUTTON

RADIUS DIMENSIONS

MEDIAN	*R1	*R2
≤ 10'	N/A	W/2
> 10' ≤ 40'	90'	W/5
> 40'	N/A	N/A

TABLE 1

TYPICAL MEDIAN OPENING "c"

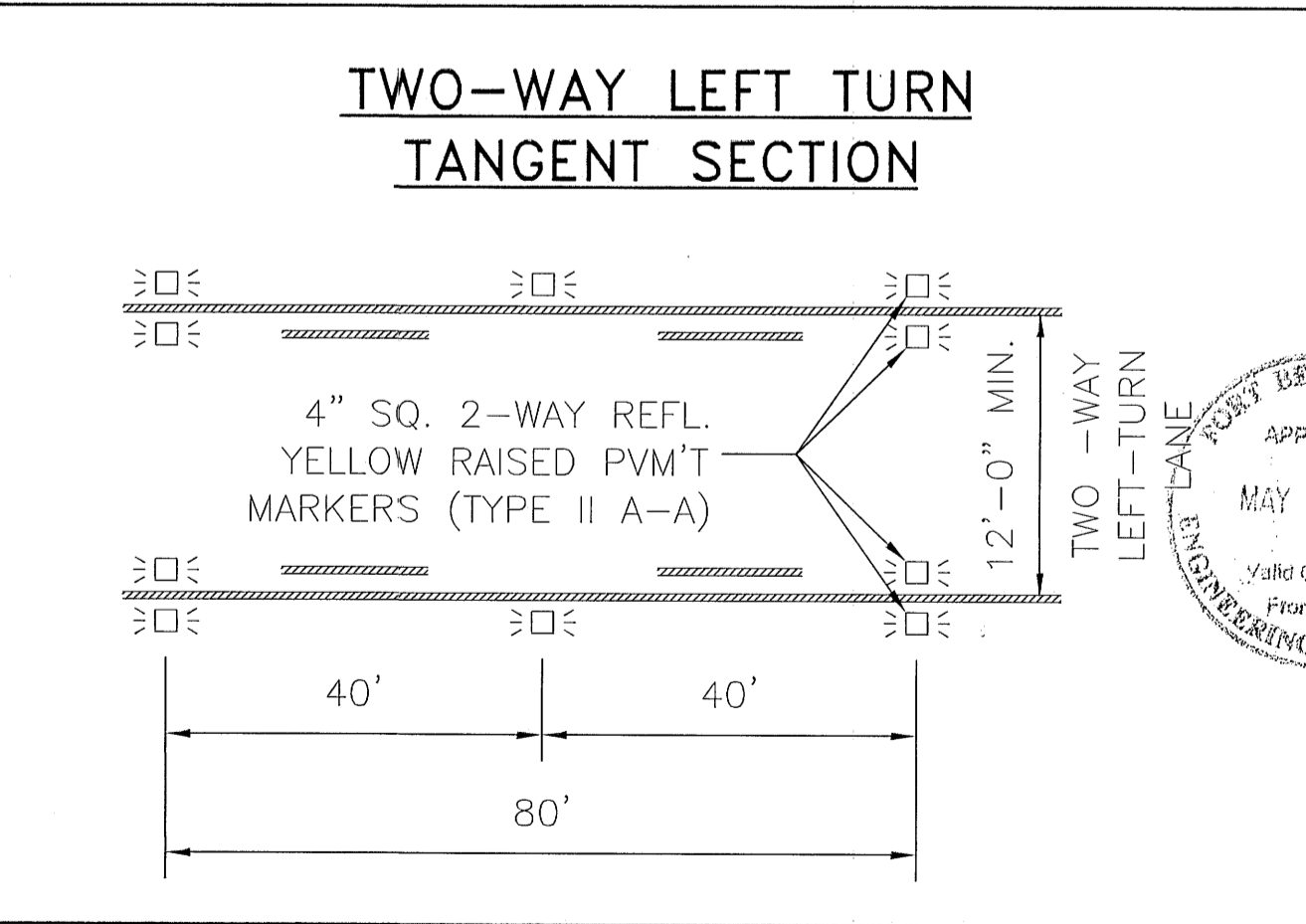
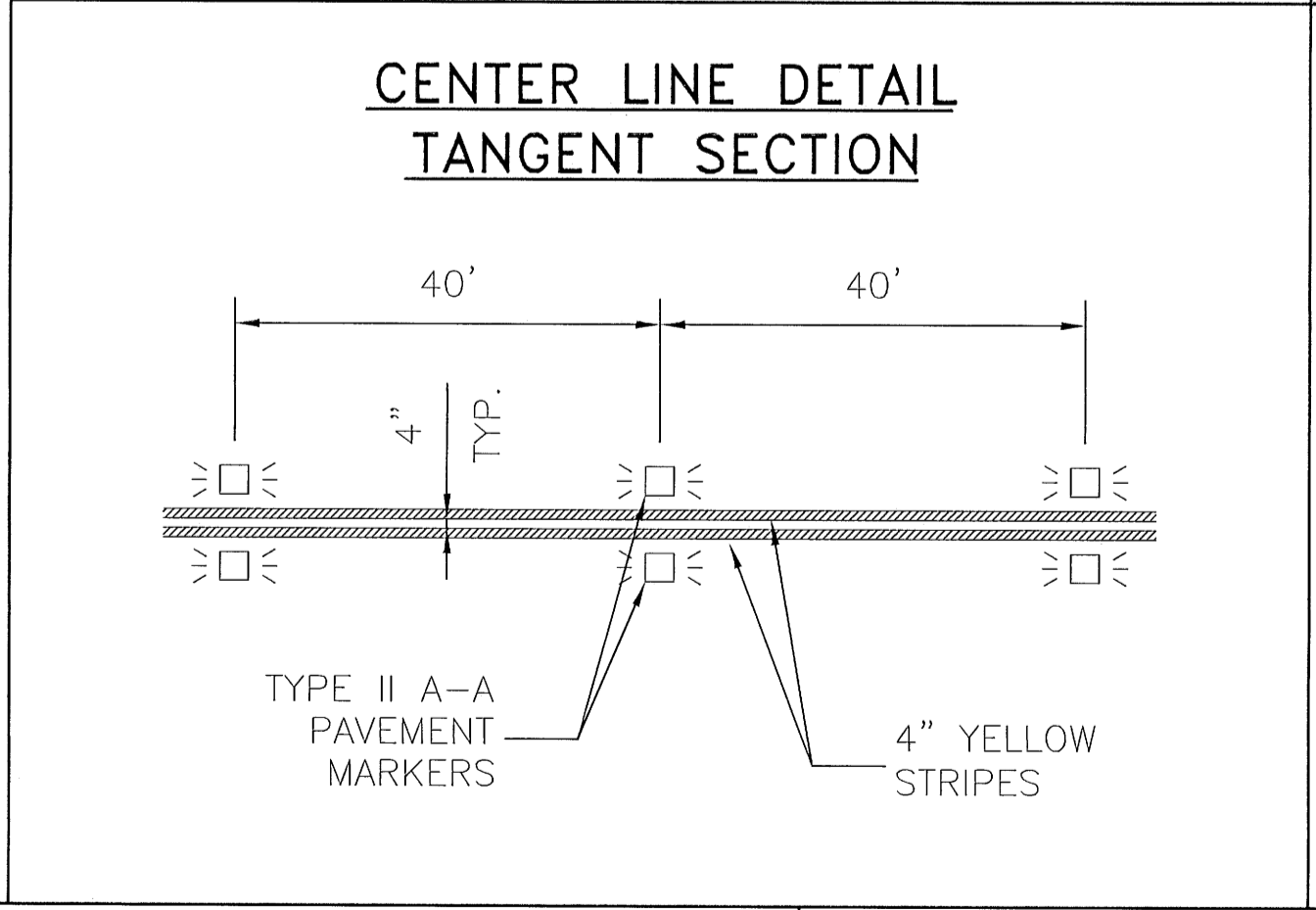
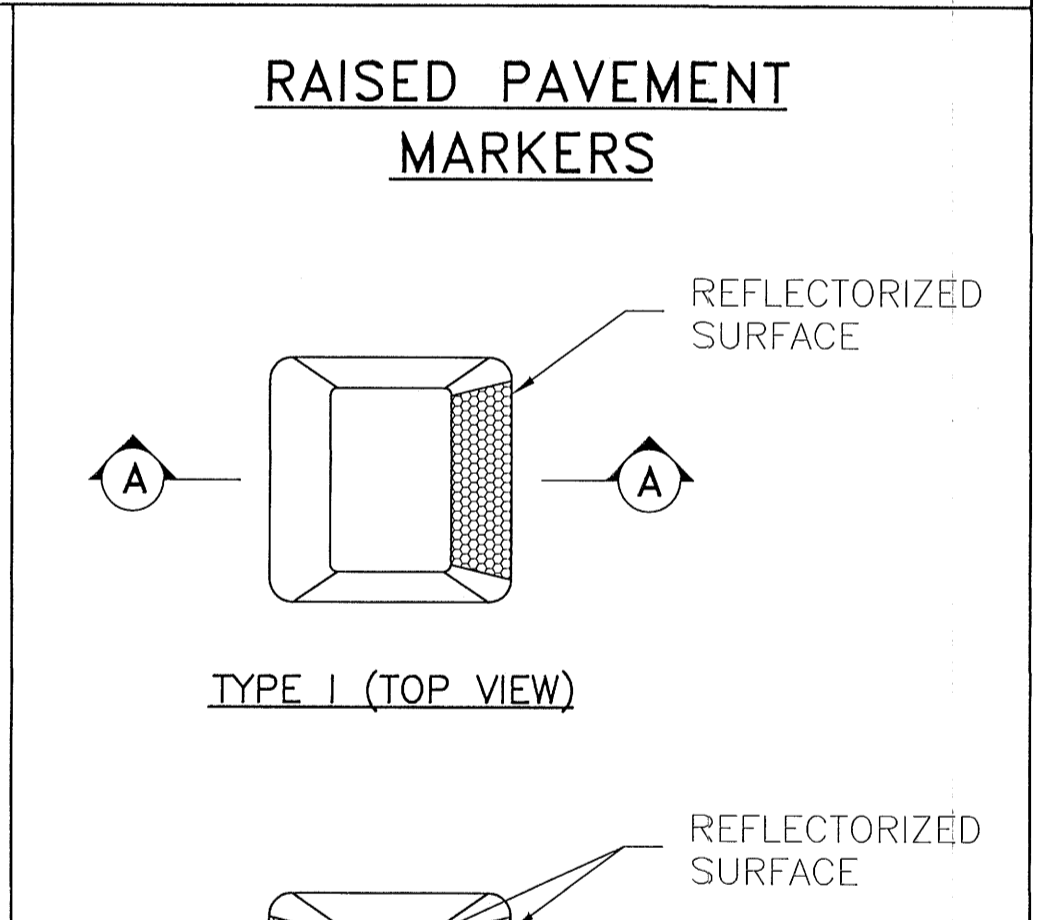
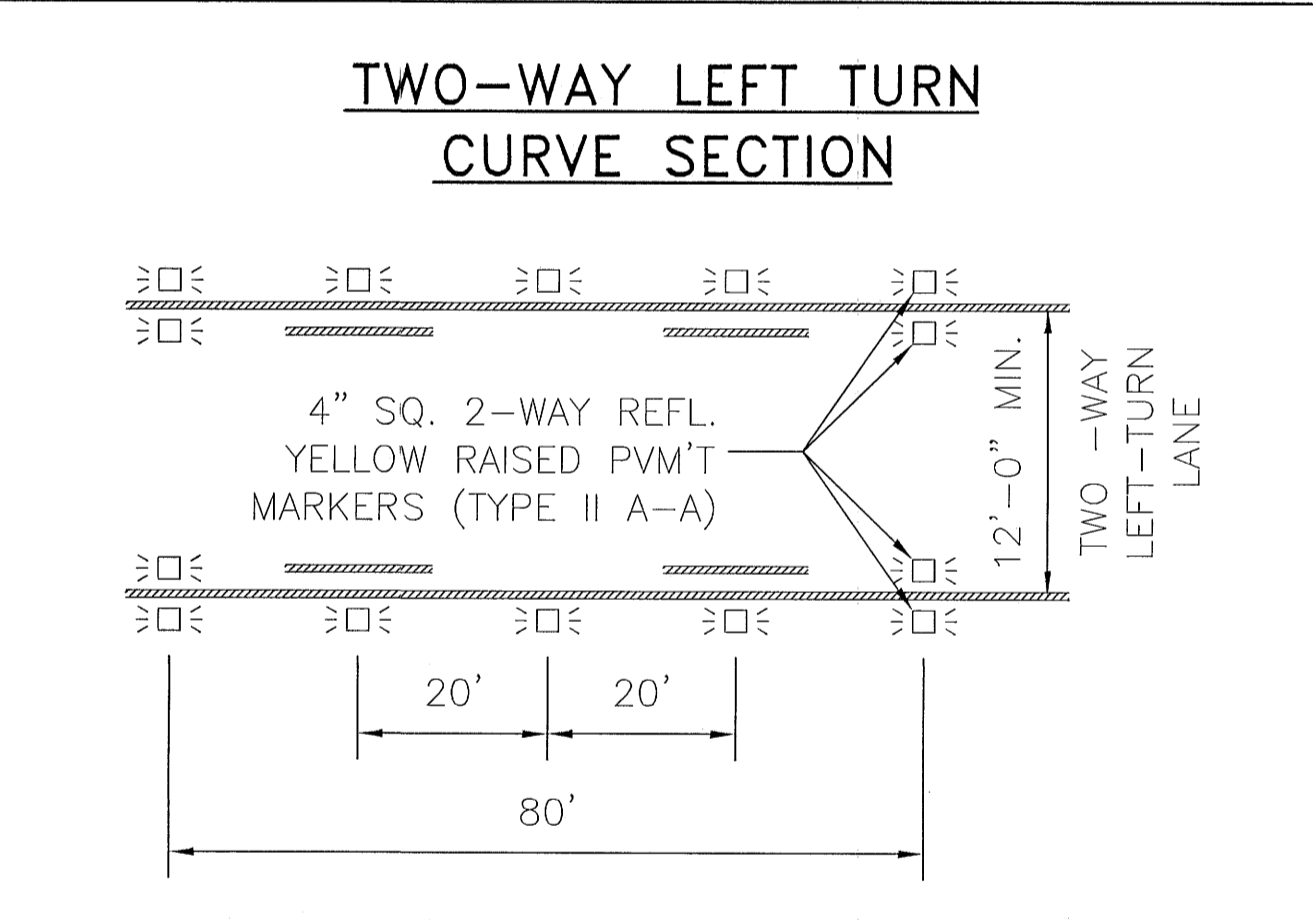
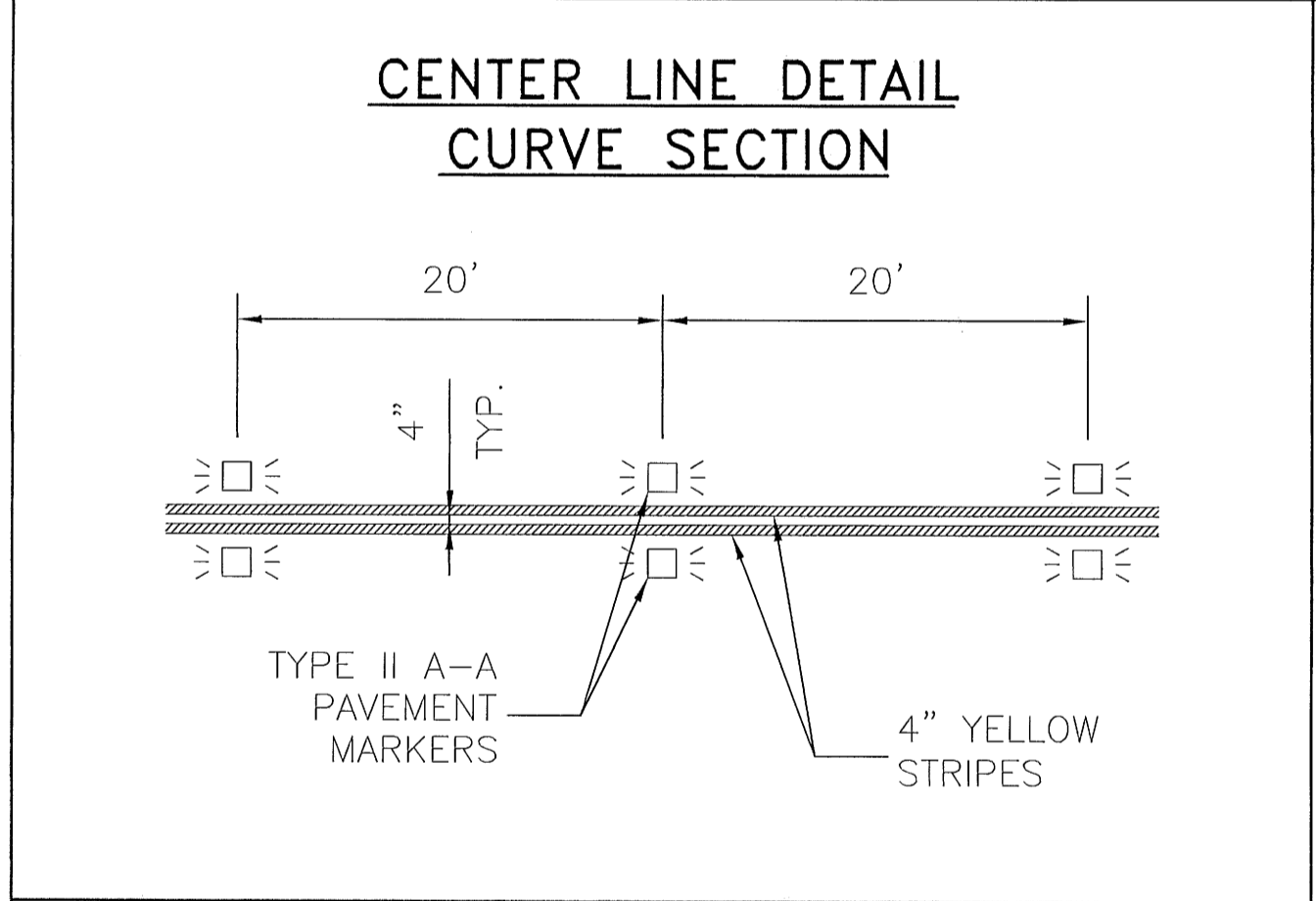
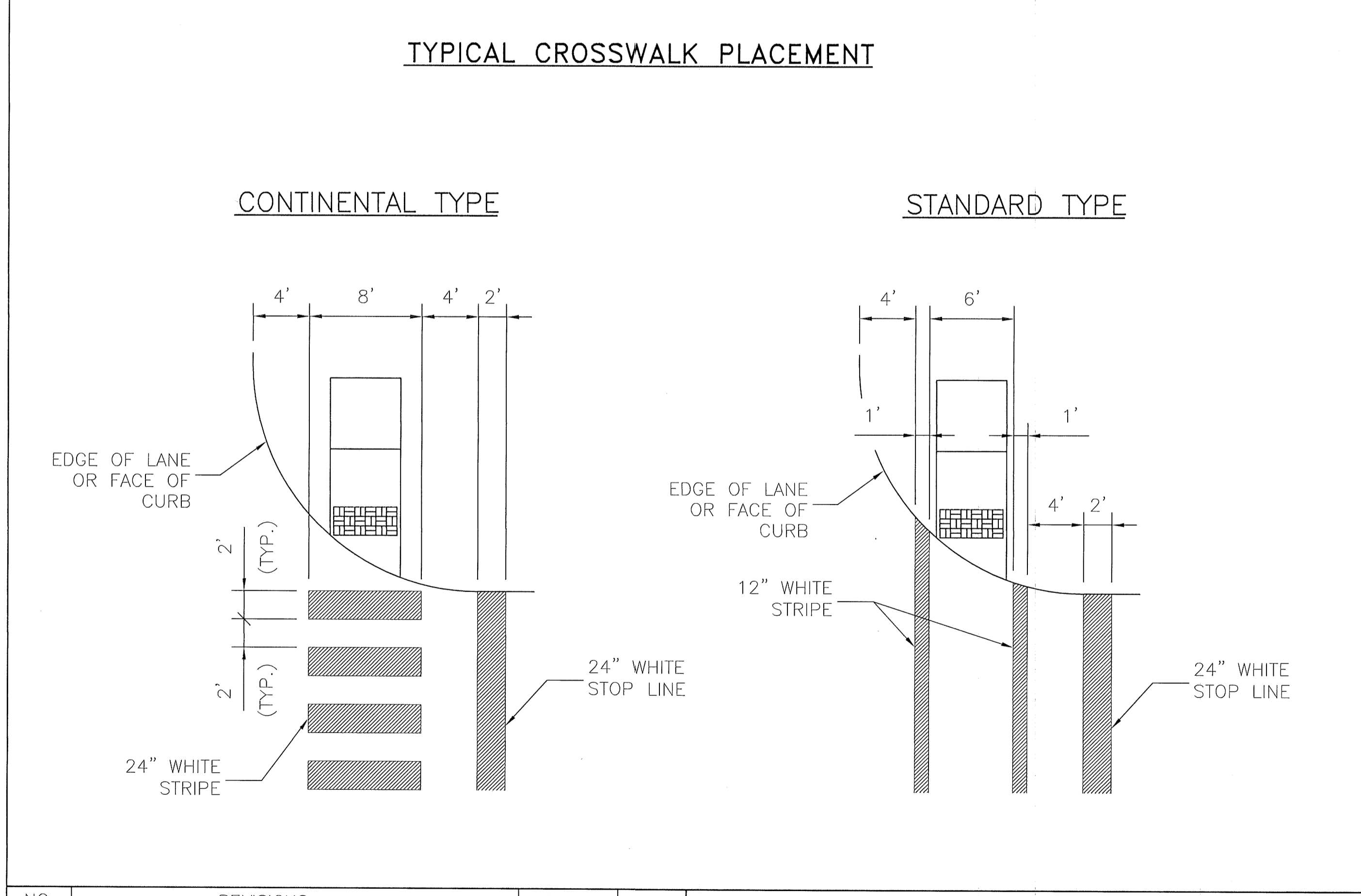
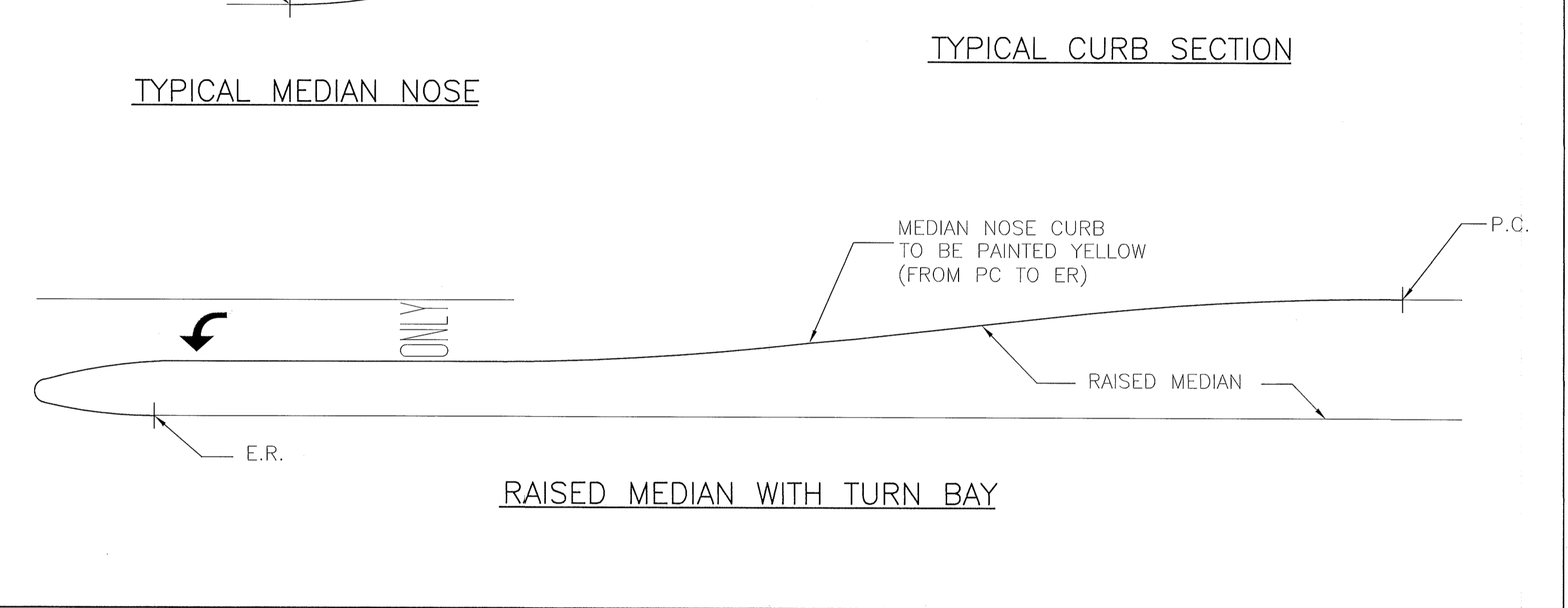
MEDIAN INTERRUPTION	(1) NO LTB	(1) 1 LTB	(1) 2 LTB
PRIVATE DRIVE	45'	52.5'	60'
UNDIVIDED STREET	< 40'	52.5' (2)	60'
	44'	55' (2)	60'
DIVIDED STREET	D+22'	D+22'	D+22'

NOTES:

(1) LTB = LEFT TURN BAY

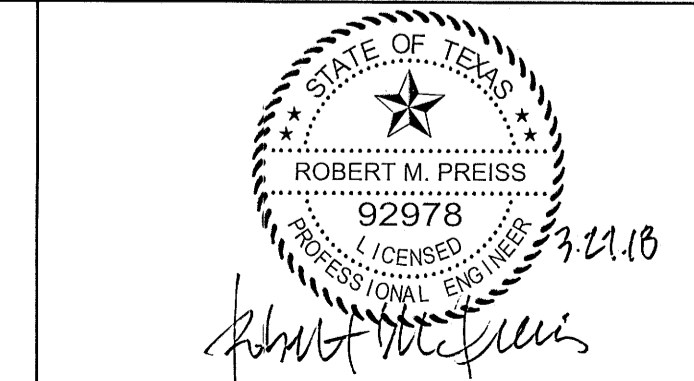
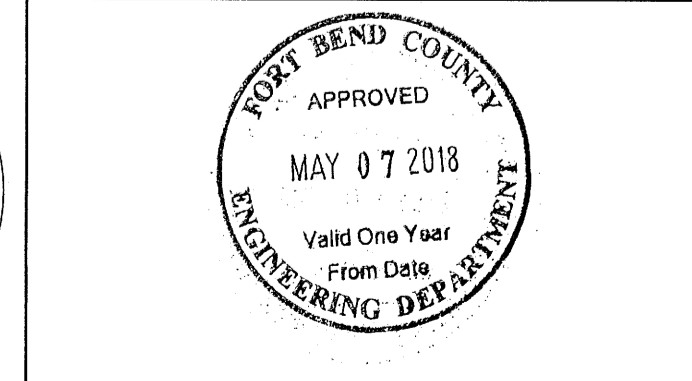
(2) DISTANCE FROM CENTERLINE OF OPENING TO MEDIAN NOSE WITH LEFT TURN LANE IS 30' FOR RIGHT ANGLE INTERSECTIONS, FOR INTERSECTIONS OTHER THAN 90°, APPLY DESIGN VEHICLE TURNING TEMPLATE TO DETERMINE DIMENSION TO MEDIAN NOSE CUT OFF.

(3) D = WIDTH OF DIVIDED STREET



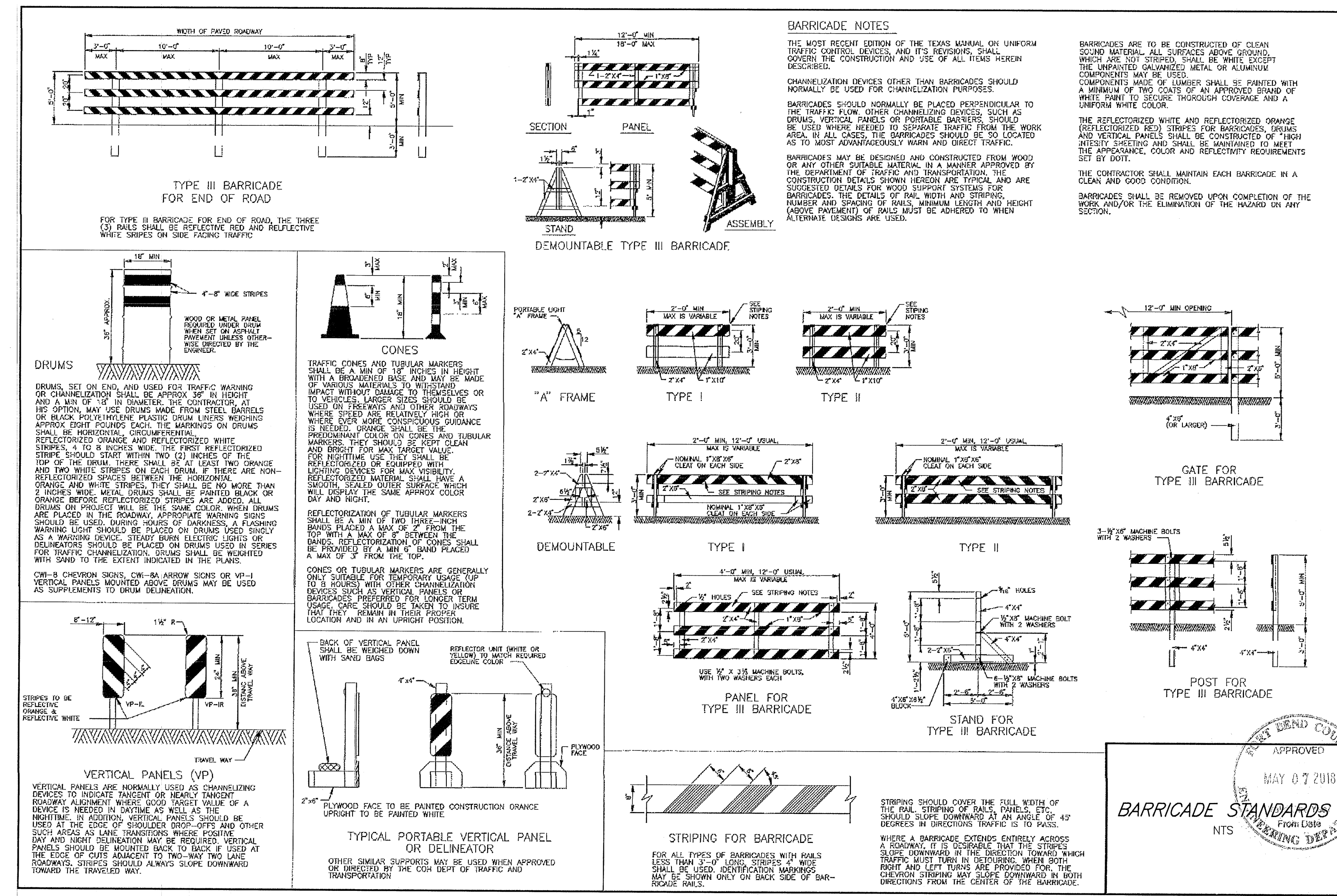
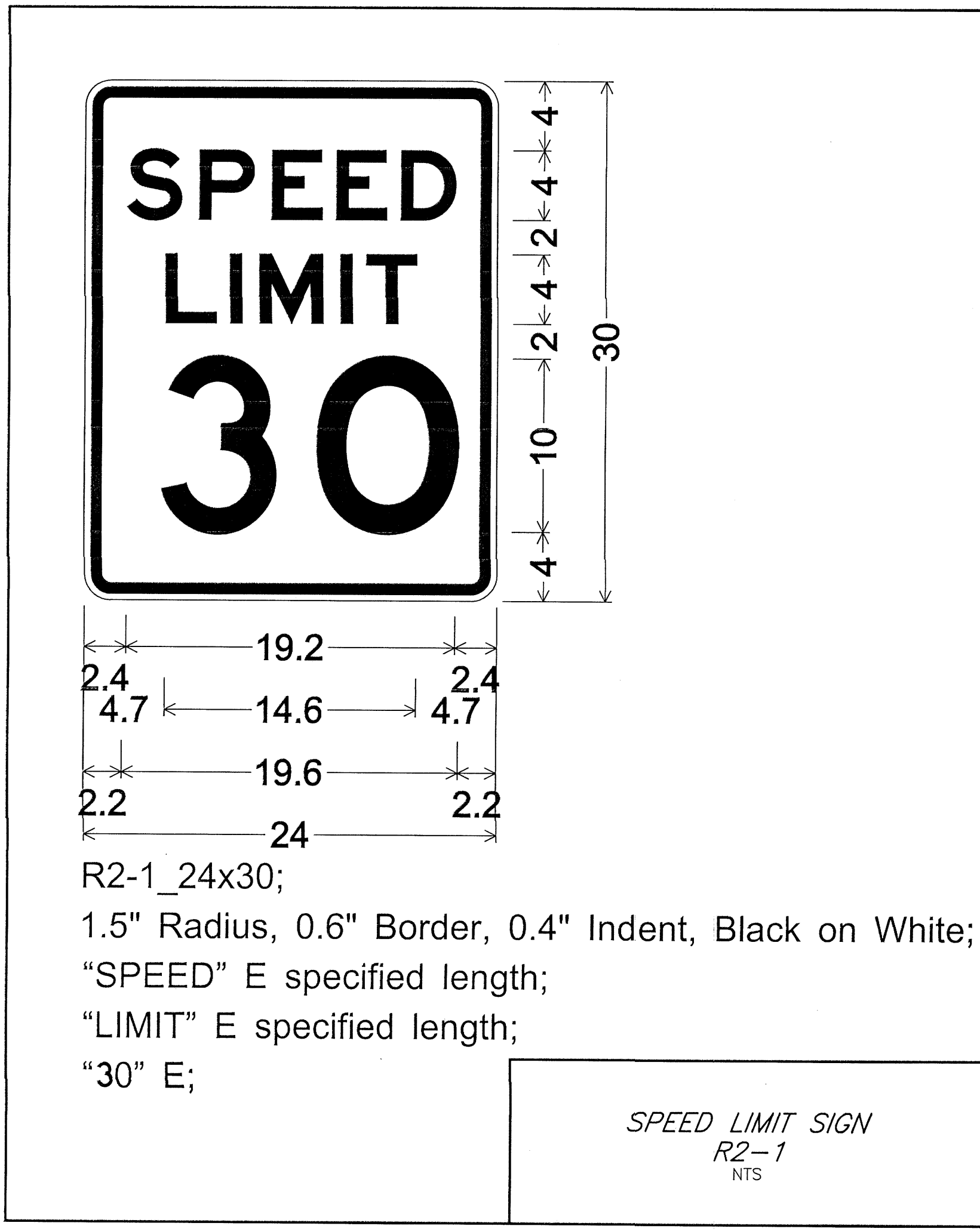
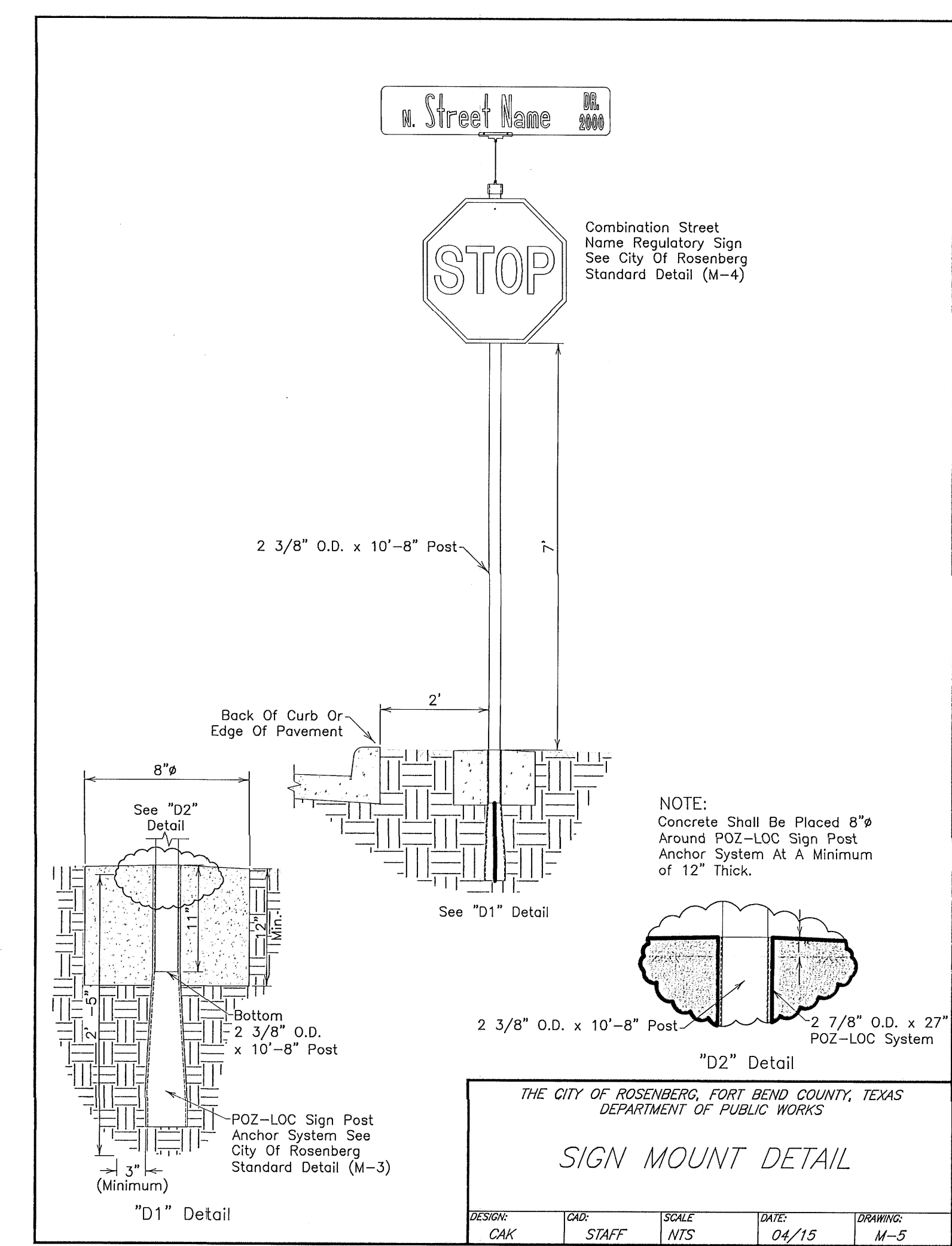
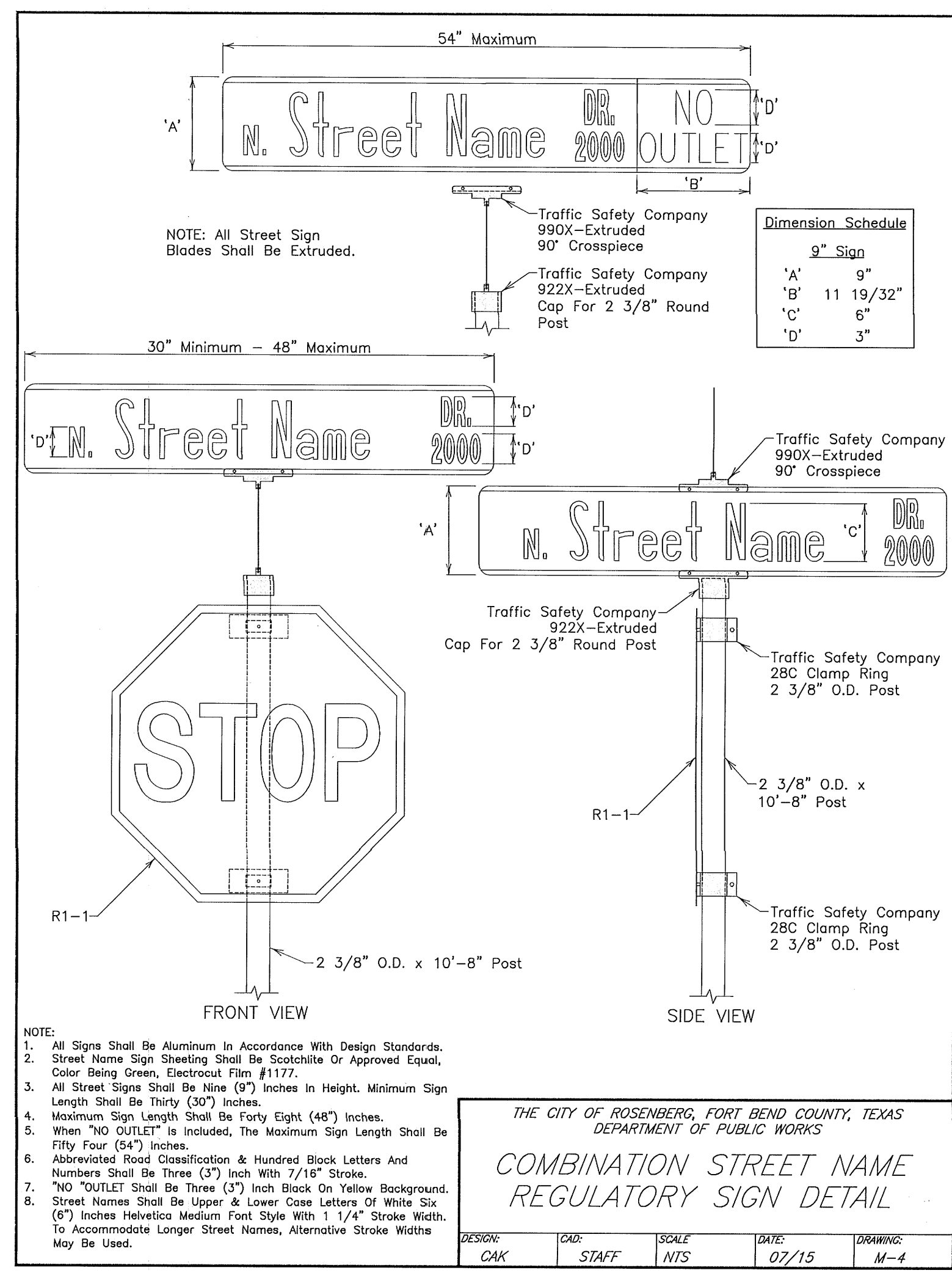
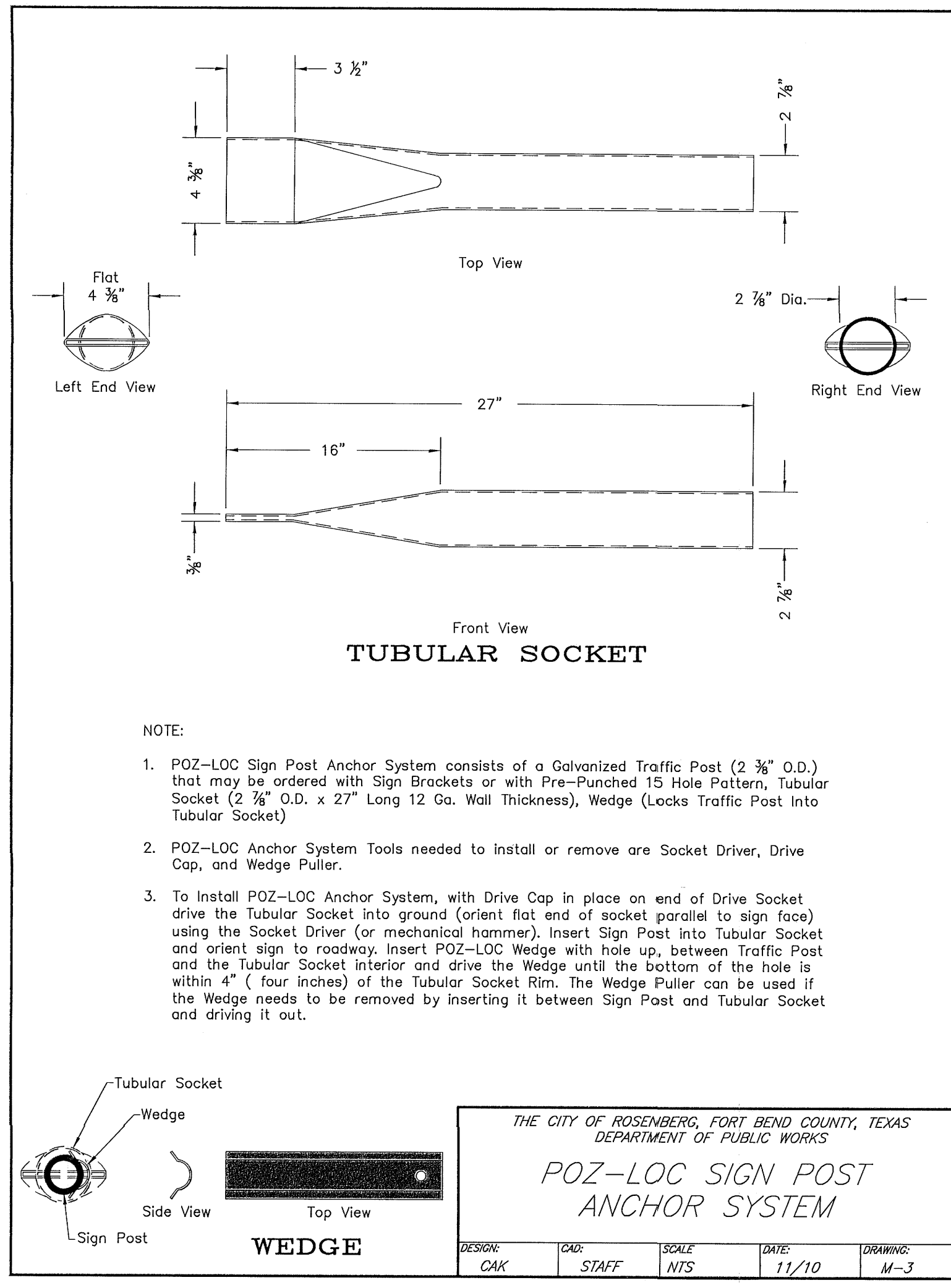
NO.	REVISIONS	DATE	NAME

HARRIS COUNTY
ENGINEERING DEPARTMENT



PROJECT TITLE: SUNSET CROSSING BRYAN ROAD PHASE ONE		TRAFFIC STANDARD PM
SHEET DESCRIPTION: PAVEMENT MARKING DETAILS (SHEET 2 OF 2)		DATE: 8/18/17
DRAWN BY: JDZ	SCALE: NONE	SHEET NO.: 40 / 44

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SUNSET CROSSING BRYAN ROAD PHASE ONE
 CITY OF ROSENBERG, TEXAS

MISCELLANEOUS DETAILS (SHEET 1 OF 4)

PLAT NO. 40166-20
 JOB NO. 40166-21
 DATE MARCH 2018
 DESIGNER LS
 CHECKED JCK/DRAWN ALL

SHEET 41 OF 44

APPROVED: FORT BEND COUNTY DEVELOPMENT COORDINATOR

DATE:

PERMIT SET

DATE

NO. REVISION

STATE OF TEXAS
 ROBERT M. PREISS
 92978
 LICENSED PROFESSIONAL ENGINEER

Robert M. Preiss
 3.16.18

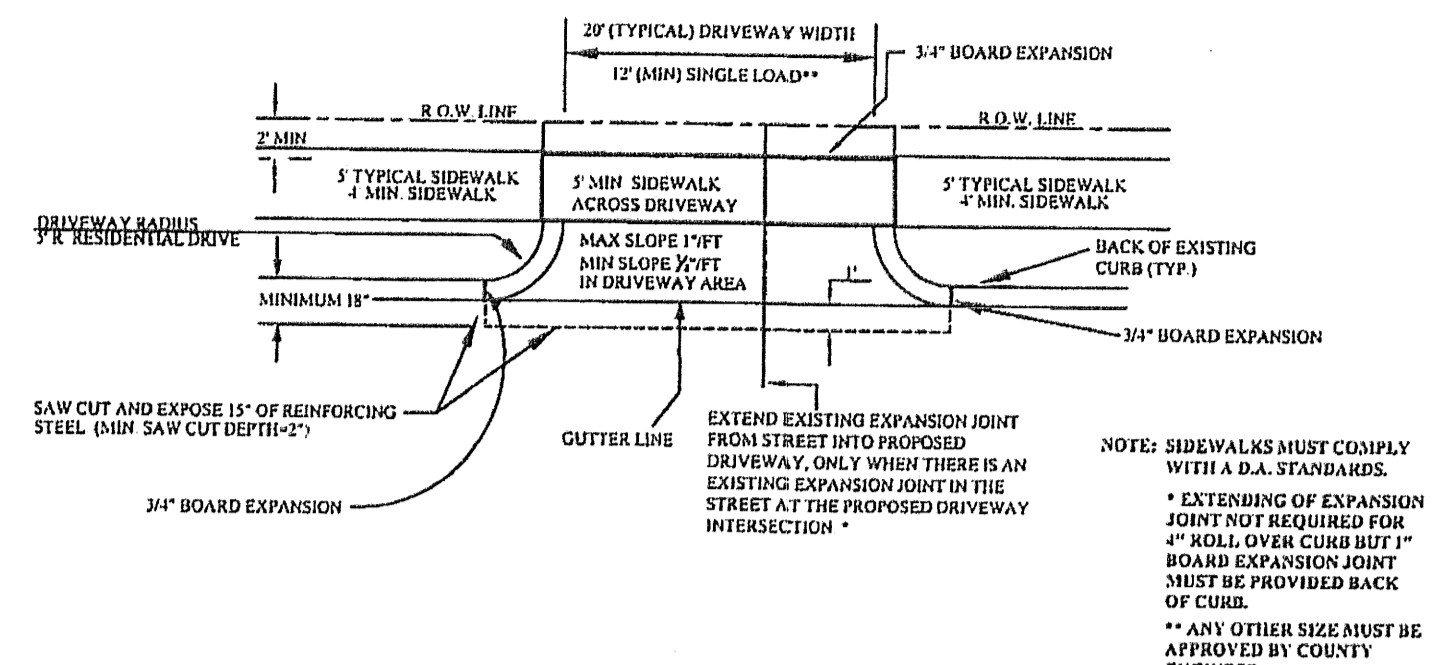
PAPE-DAWSON ENGINEERS

HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
 10350 RICHMOND AVE, STE 200 | HOUSTON, TX 77042 | 713.428.2400
 TEXAS FIRM REGISTRATION #018974

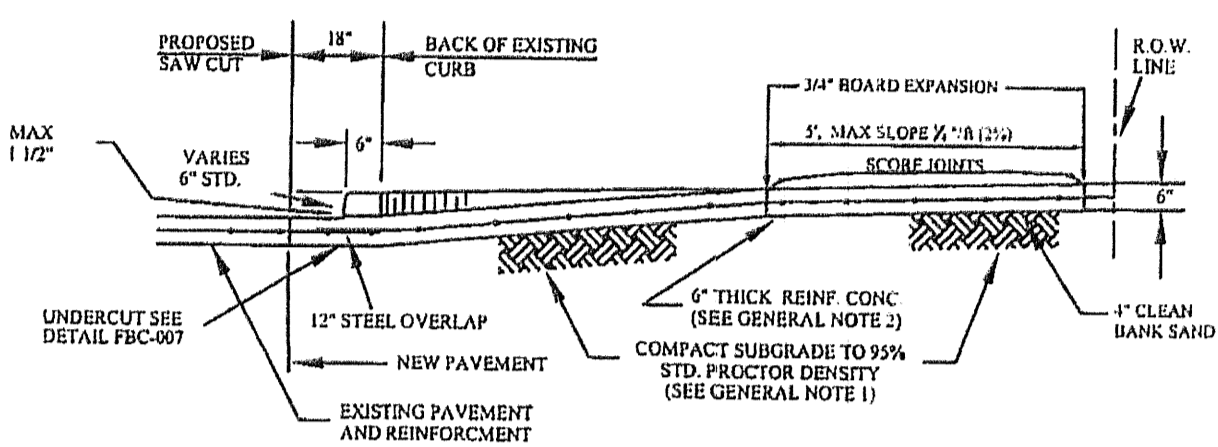
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WHEN A RESIDENTIAL SIDEWALK, DRIVEWAY, CURB OR GUTTER IS CONSTRUCTED, RECONSTRUCTED, REPAIRED OR REGRADED ON COUNTY RIGHT-OF-WAY FOR USE WITH CONCRETE OR ASPHALT CURB TYPE STREETS, USE SECTIONS APPLICABLE.

A. USE FOR ALL PROPOSED EXISTING CURB REMOVAL FOR DRIVEWAYS (PLAN VIEW NOT TO SCALE)



B. USE FOR ALL PROPOSED DRIVES ON CURBED TYPE STREETS



GENERAL NOTES:

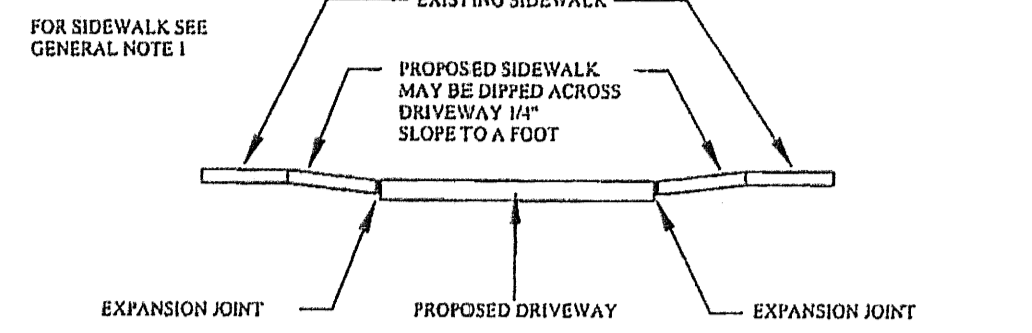
1. COMPACT SUBGRADE FOR PROPOSED DRIVEWAY CONNECTION FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO R.O.W. LINE. COMPACT TO 95% OF STANDARD PROCTOR DENSITY (94-9% OPT. MOISTURE). THE COUNTY ENGINEER RESERVES THE RIGHT TO REQUIRE LABORATORY TESTS TO BE CONDUCTED.
2. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE #4 DEFORMED REINFORCING BARS (ASTM A615, GRADE 60, UNLESS NOTED) SPACED AT 12\"/>

SIDEWALKS & DRIVEWAYS ON CURB TYPE STREETS RESIDENTIAL AREA	DRAWN BY: L. BRDECKA DATE DRAWN: 2-1-94	REVISED BY: J. NETARDUS DATE REVISED: 4-7-09
	APPROVED BY: L. HOOD DATE: 2-1-94	DRAWING NO. FBC-010A

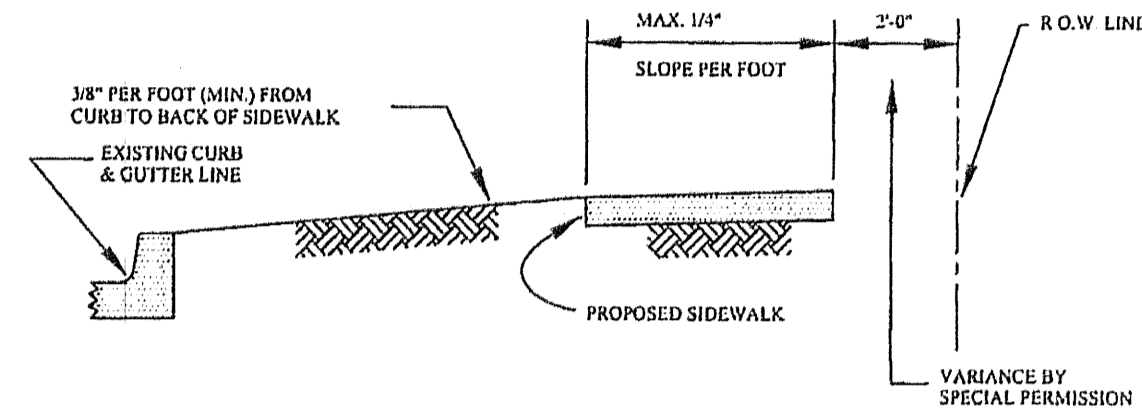
FORT BEND COUNTY ENGINEERING DEPARTMENT

WHEN A RESIDENTIAL SIDEWALK, DRIVEWAY, CURB OR GUTTER IS CONSTRUCTED, RECONSTRUCTED, REPAIRED OR REGRADED ON COUNTY RIGHT-OF-WAY. FOR USE WITH CONCRETE OR ASPHALT CURBED TYPE STREETS, USE SECTIONS APPLICABLE.

C. USE WHEN PROPOSED DRIVEWAY IS TO BE BUILT WITH EXISTING SIDEWALKS WITH EXCESSIVE GRADE:



D. USE WHEN SIDEWALK TO BE BUILT OTHER THAN DRIVEWAY:



GENERAL NOTES:

1. PROPOSED SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT (5 SACKS (900 LBS) OF CEMENT PER CUBIC YARD OF CONCRETE), CLASS "A" STRUCTURAL (REFER TO SPECIFICATION 0330), 4\"/>

SIDEWALKS & DRIVEWAYS ON CURB TYPE STREETS RESIDENTIAL AREA

DRAWN BY: L. BRDECKA
DATE DRAWN: 2-1-94

REVISED BY: R. GOMEZ
DATE REVISED: 11-1-05

APPROVED BY: L. HOOD
DATE: 2-1-94

DRAWING NO. FBC-010B

FORT BEND COUNTY ENGINEERING DEPARTMENT

GENERAL NOTES FOR SIDEWALKS AND DRIVEWAYS

1. PROPOSED DRIVEWAY, SIDEWALK, CURB, GUTTER LINE AND GRADE SHALL MATCH EXISTING STREET.
2. PROPOSED SIDEWALK SHALL BE CONSTRUCTED WITH PORTLAND CEMENT, CLASS A STRUCTURAL (REFER TO SPECIFICATION 0330), 4 INCHES THICK AND 4 FEET MINIMUM WIDTH.
3. PROPOSED DRIVEWAY AND CURB SHALL BE BUILT WITH PORTLAND CEMENT CONCRETE, CLASS A STRUCTURAL (REFER TO SPECIFICATION 0330), 6 INCHES THICK, FROM PROPOSED SAW CUT AT EXISTING PAVEMENT TO RIGHT-OF-WAY LINE AND TO BE REINFORCED WITH #4 DEFORMED REINFORCING BARS (MINIMUM, ASTM A615 GRADE 60, UNLESS NOTED) SPACED AT 24 INCHES C.C., EACH WAY, WITH 10 INCHES MINIMUM LAP.
4. PROPOSED DRIVEWAY REINFORCING STEEL IS TO BE TIED TO EXISTING ROADWAY REINFORCING STEEL WITH A MINIMUM 12 INCHES LAP.
5. PROPOSED GUTTER LINE IS TO BE MAINTAINED AT FACE OF EXISTING CURB.
6. SAW CUT EXISTING CURB AT EACH END OF PROPOSED DRIVEWAY AND KNOCK OUT EXISTING CURB.
7. SAW CUT EXISTING PAVEMENT MINIMUM 2 INCHES AND BREAK OUT TO EXPOSE EXISTING REINFORCEMENT STEEL AT LEAST 12 INCHES AT PROPOSED DRIVEWAY INTERSECTION. FULL DEPTH CUT IS ACCEPTABLE PROVIDING 18\"/>

CONSTRUCTION NOTES FOR SIDEWALKS & DRIVEWAYS ON CURB TYPE STREETS RESIDENTIAL AREA

APPROVED BY:

LOUIS E. HOOD, P.E.

DATE DRAWN: 10-4-95

REVISED: 4-7-09

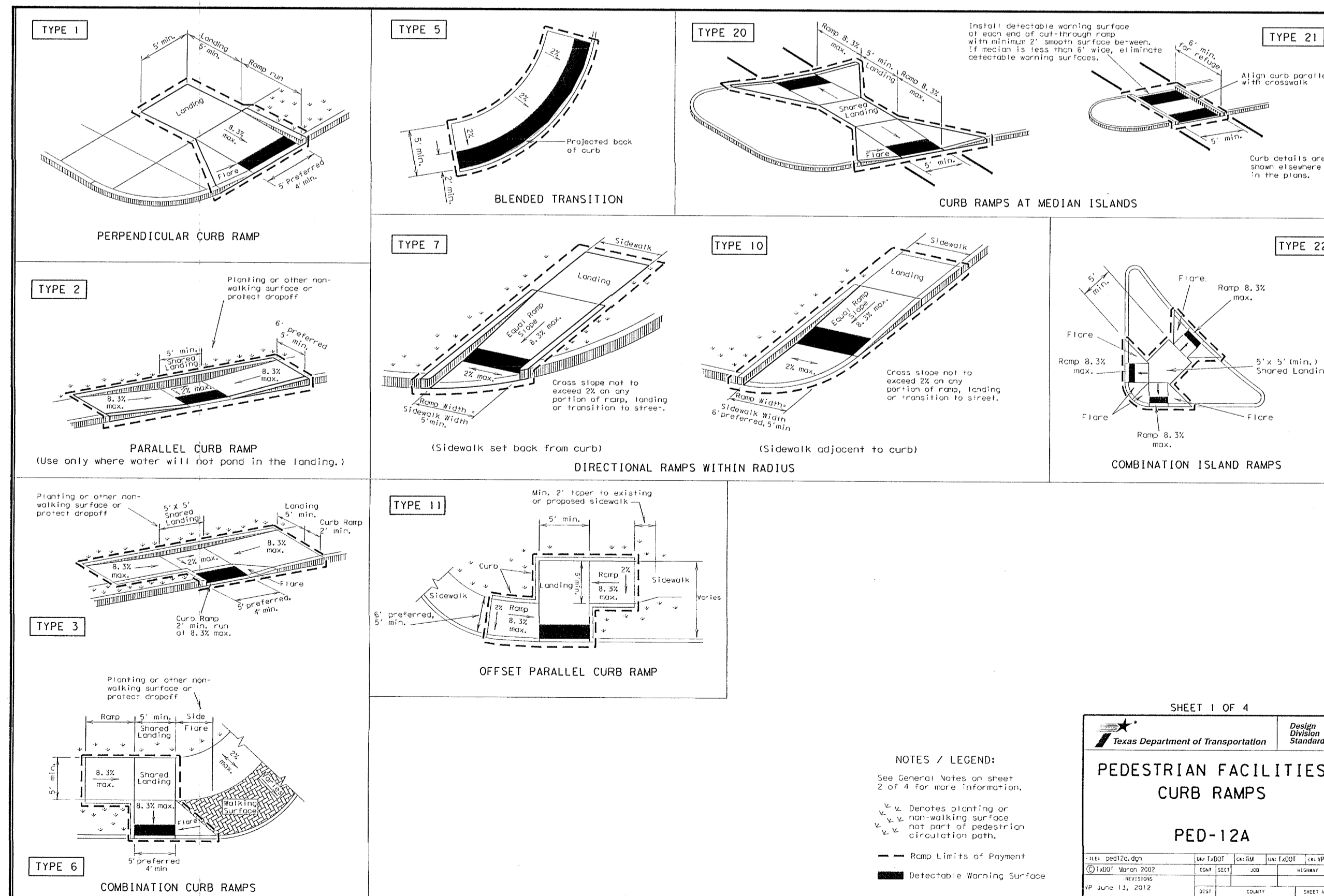
DRAWN BY:

L. BRDECKA

DRAWING NO.:

FBC-010C

FORT BEND COUNTY ENGINEERING DEPARTMENT



NOTES / LEGEND:

- Denotes planting or non-walking surface.
- Denotes non-walking surface.
- Denotes part of pedestrian circulation path.
- Ramp Limits of Project
- ▬ Detectable Warning Surface

SHEET 1 OF 4

TEXAS DEPARTMENT OF TRANSPORTATION

DESIGN DIVISION STANDARD

PEDESTRIAN FACILITIES CURB RAMPS

PED-12A

REVISED: 03/2007

DATE: 03/2007

BY: [Signature]

DATE: 03/2007



APPROVED: FORT BEND COUNTY DEVELOPMENT COORDINATOR

DATE:

NO.	REVISION	DATE

STATE OF TEXAS
ROBERT M. PREISS
92978
LICENSED MECHANICAL ENGINEER
3/26/18

PAPE-DAWSON ENGINEERS
HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
1030 RICHMOND AVE. STE 200 | HOUSTON, TX 77042 | 713-228-2400
TPEL.FIRM.REGISTRATION.#020.L.TPEL.PRM.REGISTRATION.#1018974

SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS
MISCELLANEOUS DETAILS (SHEET 2 OF 4)

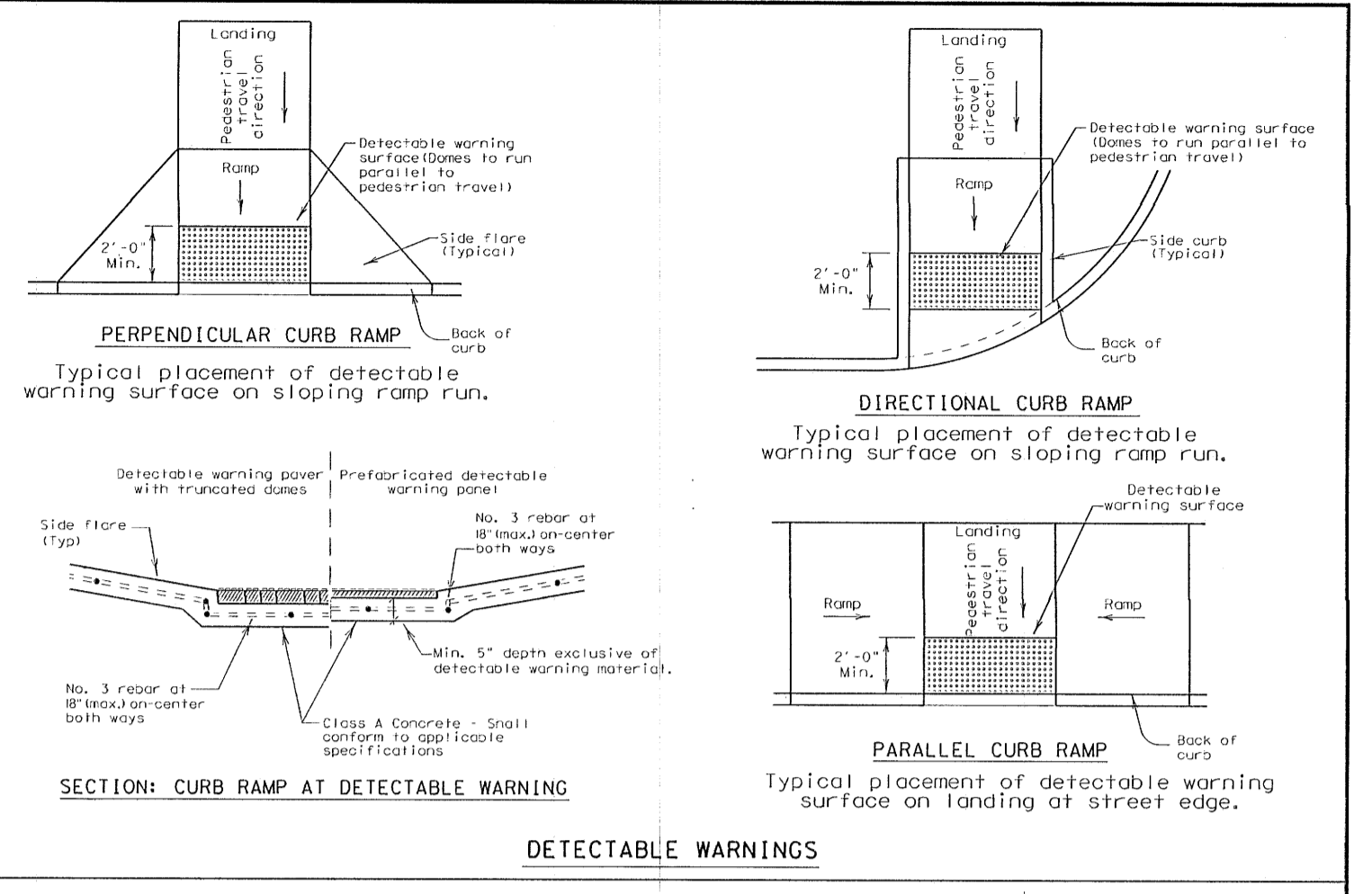
PLAT NO. 40166-20
JOB NO. 40166-21
DATE MARCH 2018
DESIGNER LS
CHECKED JCK/DRAWN ALL
SHEET 42 OF 44

PERMIT SET

Date: Mar 21, 2018, 12:08pm User ID: ANEWTON
File: K:\projects\40166\002-0 Design\2-1 Civil DWG_SUNSET_BRYAN ROAD\16-4016600-DT-BRYN-PHL.dwg

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- ### General Notes
- Install a curb ramp or blended transition at each pedestrian street crossing.
 - All slopes shown are maximum allowable. Lesser slopes that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
 - The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5' x 5' passing areas at intervals not to exceed 200' are required.
 - Landings shall be 5' x 5' minimum with a maximum 2% slope in any direction.
 - Maneuvering space at the bottom of curb ramps shall be a minimum of 4' x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
 - Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
 - Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
 - Additional information on curb ramp location, design, light reflective value and texture may be found in the current edition of the Texas Accessibility Standards (TAS) and in the IBC 107.
 - To serve as a pedestrian refuge area, the median shall be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
 - Split channelization islands, which do not provide a minimum 5' x 5' landing of top of curb ramps, shall be cut through level with the surface of the street.
 - 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 align with theoretical crosswalks unless otherwise directed.
 - Handrails are not required on curb ramps. Provide curb ramps wherever an accessible route crosses (penetrates) a curb.
 - Curb ramps and landings shall be constructed and paid for in accordance with Item 511 "Sidewalks".
 - Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
 - Provide a smooth transition where the curb ramps connect to the street.
 - Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for purposes of whether it is concrete curb, gutter, or combined curb and gutter.
 - Existing features that comply with TAS may remain in place unless otherwise shown on the plans.
- ### Detectable Warning Material
- Curb ramps must contain a detectable warning surface that consists of raised truncated cones complying with Section 709 of the IAS. The surface must contrast visually with adjoining surfaces, including adjacent flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to unopened concrete, unless specified elsewhere in the plans.
 - Detectable Warning Material must meet ASTM D6978 Detectable Warning Material Specification (MS-430) and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
 - Detectable warning surfaces must be slip resistant and not allow water to accumulate.
 - Detectable warning surfaces shall be a minimum of 24" in depth in the direction of the pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
 - Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb. Align the row of cones to be perpendicular to the grade break between the ramp run and the street. Detectable warning surfaces may be curved along the corner radii.
 - Shaded areas on sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.



- ### Detectable Warning Pavers
- Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
 - Lay full-size units first followed by closure units consisting of at least 25 percent of a full unit. Cut detectable warning paver units using a power saw.
- ### Sidewalks
- Provide clear ground space of operable parts, including pedestrian push buttons. Operable parts shall be placed within one or more reach ranges specified in IAS 308.
 - Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
 - Street grades and cross slopes shall be as shown elsewhere in the plans.
 - Changes in level greater than 1/4 inch are not permitted.
 - The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway, where a continuous grade greater than 5% must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with IAS 505.
 - Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
 - Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item "Sidewalks".
 - Sidewalk details are shown elsewhere in the plans.

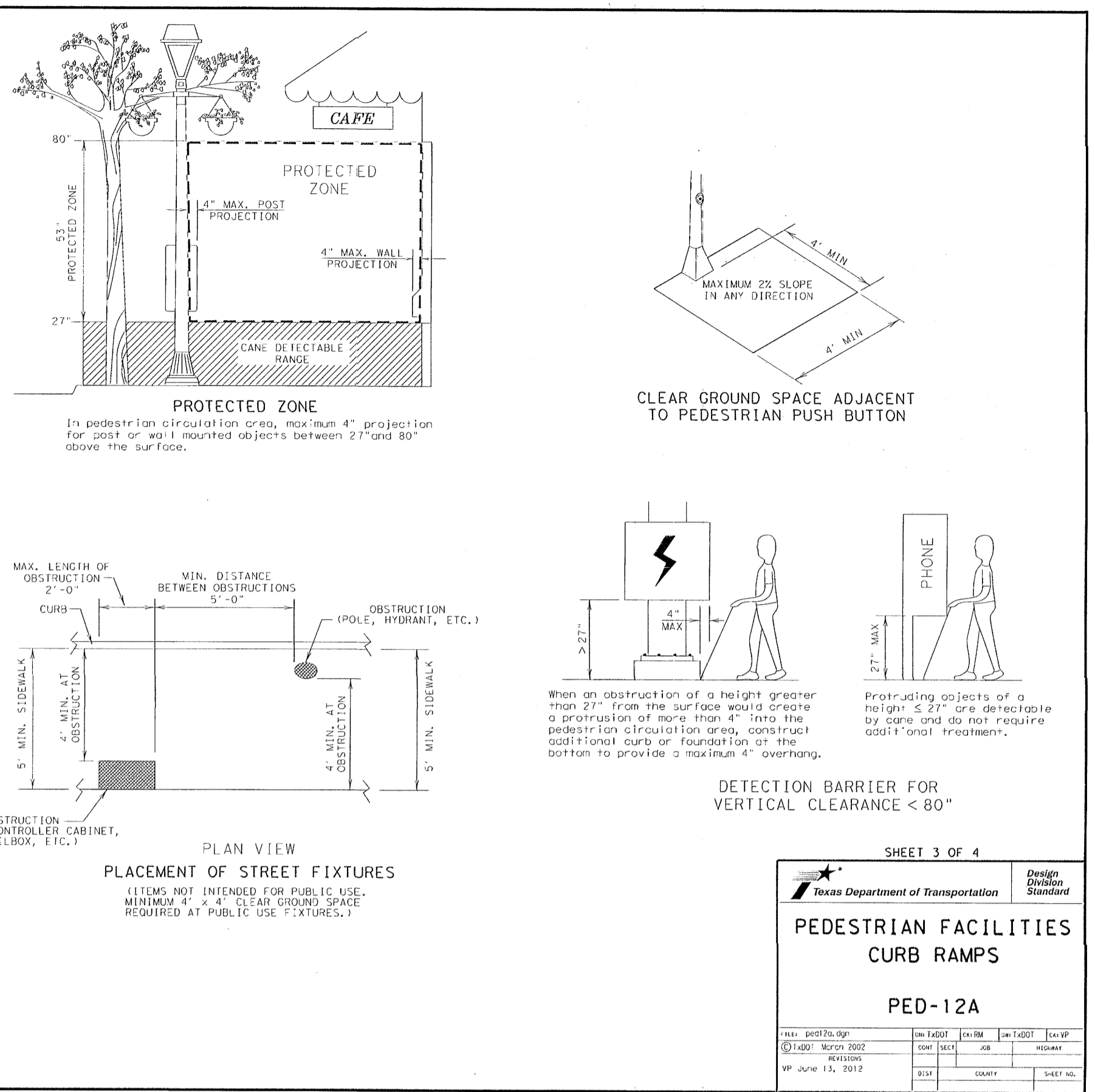
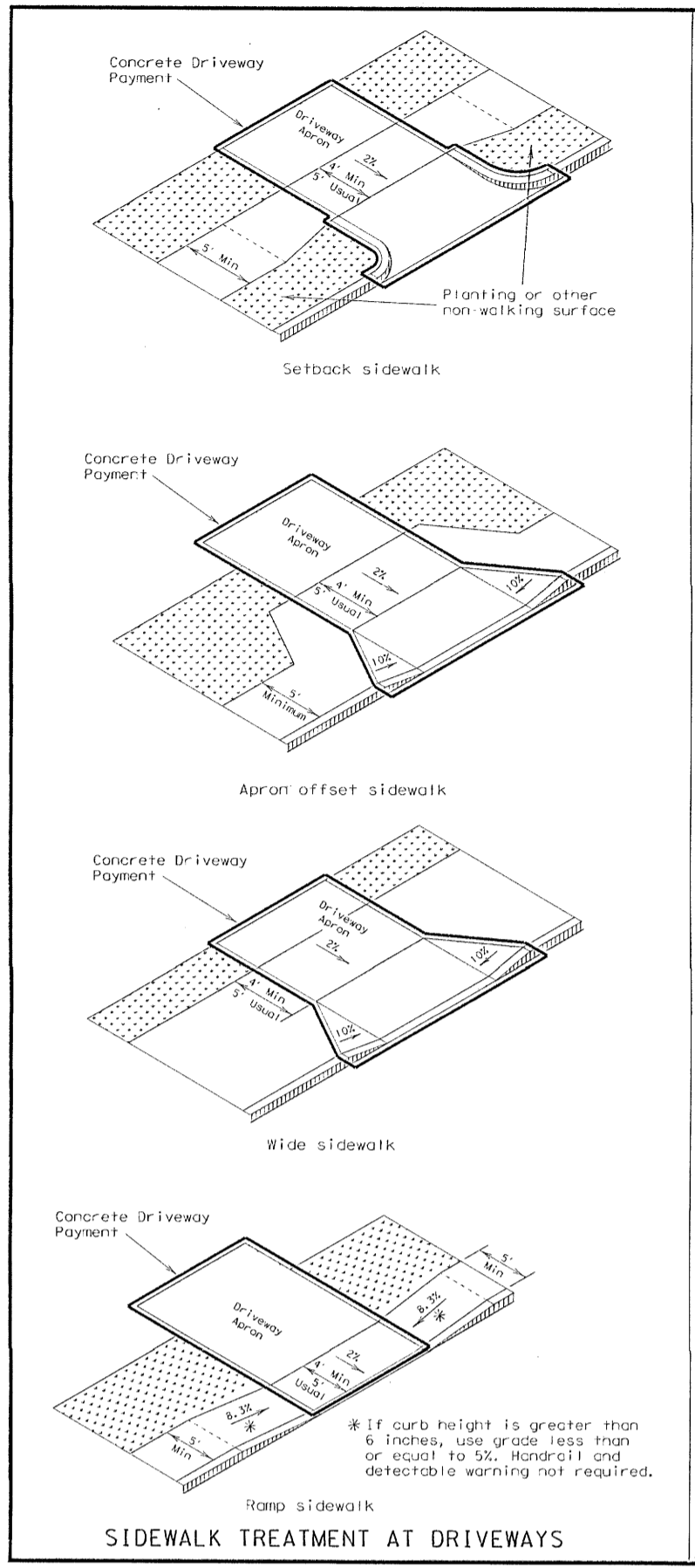
SHEET 2 OF 4

Texas Department of Transportation
Design Division
Standard

**PEDESTRIAN FACILITIES
CURB RAMP**

PED-12A

DATE: 03/14/2012	BY: [Signature]	CHK: [Signature]	APP: [Signature]
DATE: 03/14/2012	BY: [Signature]	CHK: [Signature]	APP: [Signature]
DATE: 03/14/2012	BY: [Signature]	CHK: [Signature]	APP: [Signature]



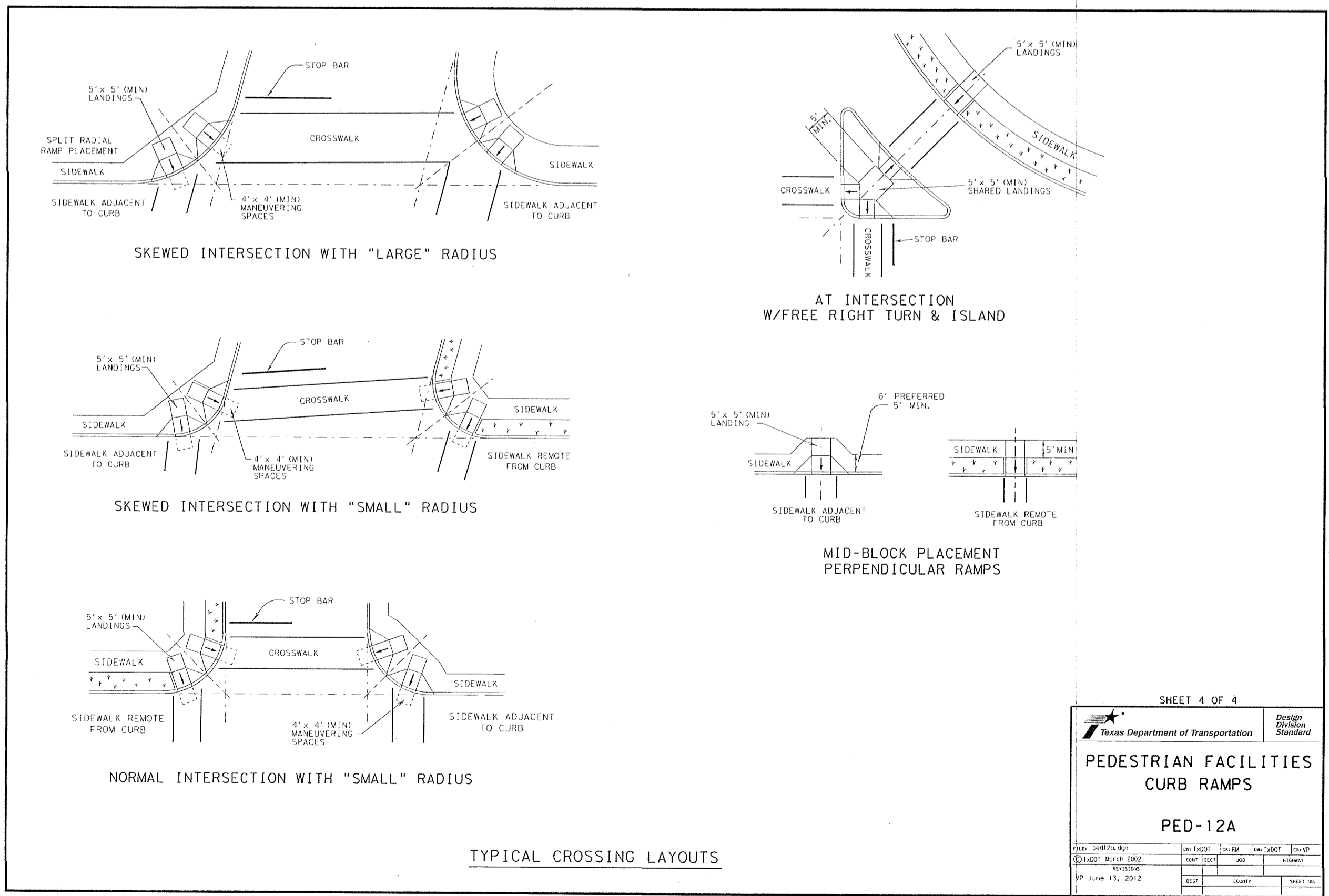
SHEET 3 OF 4

Texas Department of Transportation
Design Division
Standard

**PEDESTRIAN FACILITIES
CURB RAMP**

PED-12A

DATE: 03/14/2012	BY: [Signature]	CHK: [Signature]	APP: [Signature]
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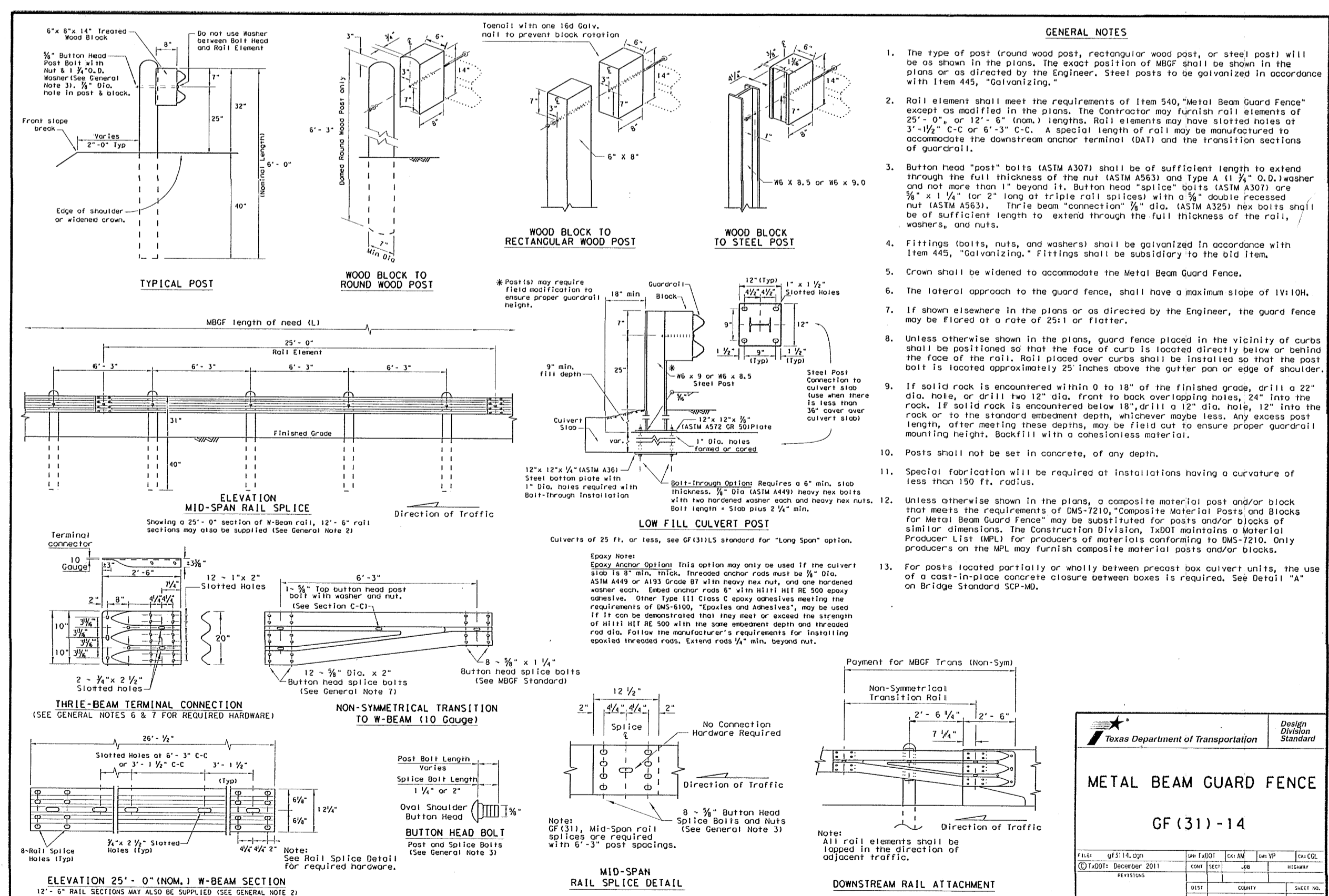
SHEET 4 OF 4

Texas Department of Transportation
Design Division
Standard

**PEDESTRIAN FACILITIES
CURB RAMP**

PED-12A

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DATE: 03/14/2012	BY: [Signature]	CHK: [Signature]	APP: [Signature]
DATE: 03/14/2012	BY: [Signature]	CHK: [Signature]	APP: [Signature]



Texas Department of Transportation
Design Division
Standard

METAL BEAM GUARD FENCE

GF (31)-14

DATE: 03/14/2012	BY: [Signature]	CHK: [Signature]	APP: [Signature]
DATE: 03/14/2012	BY: [Signature]	CHK: [Signature]	APP: [Signature]
DATE: 03/14/2012	BY: [Signature]	CHK: [Signature]	APP: [Signature]

GENERAL NOTES

- The type of post (round wood post, rectangular wood post, or steel post) will be as shown in the plans. The exact position of MGF shall be shown in the plans or as directed by the Engineer. Steel posts to be galvanized in accordance with Item 445, "Galvanizing".
- Roll element shall meet the requirements of Item 510, "Metal Beam Guard Fence" except as modified in the plans. The Contractor may furnish roll elements of 3" x 1/2" C or 6" x 3" C. A special length of roll may be manufactured to accommodate the downstream end terminal (DET) and the transition sections of guardrail.
- Butt end "post" bolts (ASTM A307) shall be of sufficient length to extend through the full thickness of the roll (ASTM A531) and Type A 1/2" O.D. washer and nut more than 1" beyond it. Butt end "splice" bolts (ASTM A307) or roll (ASTM A531). The "splice connection" shall be of sufficient length to extend through the full thickness of the roll, splice washers, and nuts.
- Fittings, nuts, and washers shall be galvanized in accordance with Item 445, "Galvanizing". Fittings shall be satisfactory to the old item.
- The lateral approach to the guard fence shall have a maximum slope of 1:10.
- If shown elsewhere in the plans or as directed by the Engineer, the guard fence may be flared at a rate of 2% or flatter.
- Unless otherwise shown in the plans, guard fence placed in the vicinity of curbs shall be positioned so that the face of curb is located directly below or behind the face of the roll. Roll placed over curbs shall be installed so that the post bolt is located approximately 25 inches above the gutter pan or edge of shoulder.
- If solid rock is encountered within 6 to 18" of the finished grade, drill a 2" dia. hole, or drill two 1 1/2" dia. holes front to back overlapping holes, 24" into the rock. If solid rock is encountered below 18" or 12" dia. hole, 12" into the rock or to the standard embedment depth, whichever is less, and excess post length, after meeting these depths, may be field cut to ensure proper guardrail mounting height. Backfill with a compression material.
- Posts shall not be set in concrete, of any depth.
- Special fabrication will be required at installations having a curvature of less than 150 ft. radius.
- Unless otherwise shown in the plans, composite material posts and blocks that meet the requirements of DG-720, "Composite Material Posts and Blocks for Metal Beam Guard Fence" may be substituted for posts and blocks of similar dimensions. The Construction Division, IASD, maintains a Material Producer List (MPL) for producers of materials conforming to DG-720. Only producers on the MPL may furnish composite material posts and/or blocks.
- For posts located partially or wholly between precast box culvert units, the use of a cast-in-place concrete closure between boxes is required. See Detail "A" on Bridge Standard SGP-10.

APPROVED
MAY 07 2010
Valid One Year
From Date

CITY OF ROSENBERG
ENGINEERING DEPARTMENT
FOUNDED 1890

APPROVED: FORT BEND COUNTY DEVELOPMENT COORDINATOR

DATE:

DATE: _____

NO. _____

REVISION _____

STATE OF TEXAS
ROBERT M. PREISS
92978
LICENSED PROFESSIONAL ENGINEER

Robert M. Preiss
3-16-10

PAPE-DAWSON ENGINEERS

HOUSTON | SAN ANTONIO | AUSTIN | FORT WORTH | DALLAS
10850 RICHMOND AVE., STE. 200 | HOUSTON, TX 77042 | 713.428.2400
TELEPHONE REGISTRATION #670 | TRIPLE FIRM REGISTRATION #0819374

SUNSET CROSSING BRYAN ROAD PHASE ONE
CITY OF ROSENBERG, TEXAS

MISCELLANEOUS DETAILS (SHEET 4 OF 4)

PLAT NO. 40166-20
JOB NO. 40166-21
DATE MARCH 2018
DESIGNER LS
CHECKED JCK DRAWN ALL

SHEET 44 OF 44

PERMIT SET

Date: Mar 21, 2018, 12:09pm User: D:\ANIKTON File: K:\Projects\40166\02-0_Design\2-1_Civil\DWG-BRYAN ROAD\18-4016600-DT-BRYN-PHI.dwg