

CONSTRUCTION PLANS FOR
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
PAVING, DRAINAGE, WATER AND WASTEWATER IMPROVEMENTS
CITY OF ROCKWALL, TEXAS
SEPTEMBER 2018

MAYOR
JIM PRUITT

MAYOR PRO-TEM
KEVIN FOWLER (PLACE 3)

COUNCIL MEMBERS

BENNIE DANIELS	PLACE 1
JOHN HOHENSHELT	PLACE 2
TRACE JOHANNESSEN	PLACE 4
DANA MACALIK	PLACE 5
PATRICK TROWBRIDGE	PLACE 6

CITY MANAGER
RICK CROWLEY

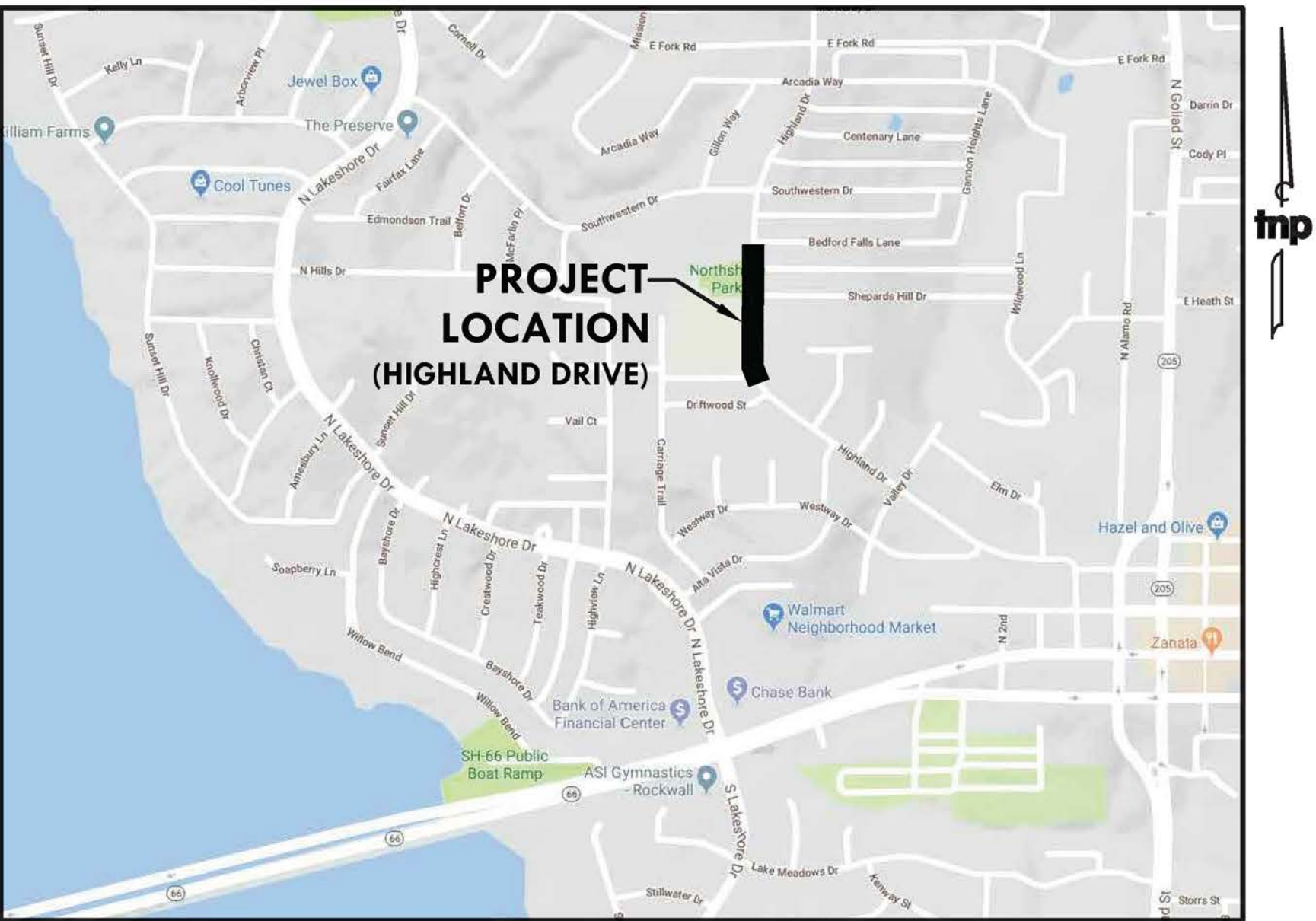
DIRECTOR OF PUBLIC WORKS/ CITY ENGINEER
AMY WILLIAMS , P.E.

PROJECT MANAGER
JEREMY WHITE, P.E.



OWNER
CITY OF ROCKWALL
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CITY CIP NO. : CIP-TR2018-001



LOCATION MAP
NOT TO SCALE

RECORD DOCUMENTS

THESE PLANS ARE FOR THE OWNER'S USE AS RECORD SET OF THE CONSTRUCTED PROJECT, AND REFLECT REVISIONS AND CONSTRUCTION RELATED CHANGES AS RECORDED BY THE CONTRACTOR. CHANGES MADE FROM THE ORIGINAL CONSTRUCTION DOCUMENTS DO NOT DEPICT ENGINEERING AND ARE NOT THE RESPONSIBILITY OF TEAGUE MALL & PERKINS, INC. OR THE ENGINEER OF RECORD ON THE ORIGINAL DOCUMENTS. ORIGINAL PLANS RELEASED FOR CONSTRUCTION WERE SEALED BY GYANENDRA POKHREL, P.E. NO. 118159 ON 09/28/2018.

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CONSTRUCTION NOTES

GENERAL ITEMS

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS PROJECT SHALL BE APPROVED BY THE CITY OF ROCKWALL AND SHALL COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS, AND WITH THE FOLLOWING AS APPLICABLE.

A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217.

B. CURRENT CITY OF ROCKWALL STANDARDS OF DESIGN AND CONSTRUCTION, INCLUDING ANY UPDATES.

C. NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS (NCTCOG) STANDARDS SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 4TH EDITION (OCT 2004), AS AMENDED BY THE CITY OF ROCKWALL SPECIAL PROVISIONS.

THE CONTRACTOR SHALL POSSESS ONE SET OF THE NCTCOG STANDARD SPECIFICATIONS AND DETAILS AND THE CITY OF ROCKWALL'S "STANDARDS OF DESIGN AND CONSTRUCTION" MANUAL, AND CITY OF ROCKWALL CONSTRUCTION DETAILS ON THE PROJECT SITE AT ALL TIMES.

2. EXISTING UTILITY INFORMATION IS BASED UPON AVAILABLE EXISTING RECORD DRAWINGS AND FIELD DATA. FIELD DATA IS LIMITED TO THAT WHICH IS VISIBLE AND CAN BE MEASURED. THIS DOES NOT PRECLUDE THE EXISTENCE OF OTHER UNDERGROUND UTILITIES. THE COMPLETENESS AND/OR ACCURATENESS OF THE EXISTING PUBLIC AND PRIVATE UTILITIES SHOWN IN THESE PLANS CANNOT BE GUARANTEED. THE CONTRACTOR SHALL AVOID DAMAGE TO ALL UNDERGROUND UTILITIES (SOME OF WHICH MAY NOT HAVE BEEN SHOWN IN THE DRAWINGS) AND SHALL RECORD LOCATIONS AND ELEVATIONS OF ALL SUCH UTILITIES UNCOVERED DURING EXCAVATION ON THE AS-BUILT DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND UNCOVERING ALL EXISTING UTILITIES TO VERIFY THE TYPE, ACTUAL LOCATION, DEPTH AND CONDITION PRIOR TO BEGINNING THE ACTUAL WORK. UTILITY LOCATIONS SHALL BE VERIFIED AT LEAST 100' (FT) IN ADVANCE OF TRENCHING, SO THAT CHANGES IN THE GRADE AND/OR ALIGNMENT MAY BE MADE IN CASES OF CONFLICT. THE CONTRACTOR SHALL NOTIFY EACH OF THE APPROPRIATE UTILITY COMPANIES, A MINIMUM OF TWO WORKING DAYS PRIOR TO CONSTRUCTION. FOLLOWING IS A PARTIAL LIST OF UTILITY COMPANIES THAT HAVE OR MAY HAVE UTILITIES IN THE PROJECT AREA:

- A. CITY OF ROCKWALL, JEREMY WHITE,, PROJECT MANAGER, PHONE: 972-771-7746
- B. CITY OF ROCKWALL, STREET MAINTENANCE, BILLY CHAFFIN, PHONE: 972-772-7783
- C. CITY OF ROCKWALL, WATER FIELD SUPERVISOR, CURTIS MCADEN PHONE: 972-345-4175
- D. CITY OF ROCKWALL, WASTEWATER FIELD SUPERVISOR, STEVE CLAWSON, PHONE: 972-771-7730
- E. CITY OF ROCKWALL, WATER/WASTEWATER MANAGER, RICK SHEFER, PHONE: 972-772-6332
- F. CABLE TELEVISION: CHARTER, MARK TIMS, 817-825-1912, www.texas811.org
- G. TELEPHONE: AT&T, CHARLES BYFORD, PHONE: 903-467-2092, www.texas811.org
- H. ELECTRIC: ONCOR, CINDY TAYLOR, PHONE: 972-551-6721, www.texas811.org
- I. GAS: ATMOS, DINAH WOOD, 972-771-0603, www.texas811.org
- J. FIBER OPTIC: www.texas811.org
- K. UTILITY LOCATES, www.texas811.org

3. ALL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" BY THE NORTH TEXAS CENTRAL COUNCIL OF GOVERNMENTS, 4TH EDITION AMENDED BY THE CITY OF ROCKWALL. THE CONTRACTOR SHALL REFERENCE THE LATEST CITY OF ROCKWALL STANDARD DETAILS PROVIDED IN THE ROCKWALL PUBLIC WORKS DEPARTMENT, ENGINEERING DIVISIONS "STANDARDS OF DESIGN AND CONSTRUCTION" MANUAL FOR DETAILS NOT PROVIDED IN THESE PLANS. THE CONTRACTOR SHALL POSSESS ONE SET OF THE NCTCOG STANDARD SPECIFICATIONS AND DETAILS AND THE CITY OF ROCKWALL'S "STANDARDS OF DESIGN AND CONSTRUCTION" MANUAL ON THE PROJECT SITE AT ALL TIMES.

4. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY MONUMENTATION AND PRIMARY CONTROL. ANY SUCH POINTS WHICH THE CONTRACTOR BELIEVES WILL BE DESTROYED SHALL HAVE OFFSET POINTS ESTABLISHED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY MONUMENTATION DESTROYED BY THE CONTRACTOR SHALL BE RE-ESTABLISHED AT CONTRACTOR'S EXPENSE BY A REGISTERED PROFESSIONAL LAND SURVEYOR.

5. UPON THE CITIES REQUEST THE CONTRACTOR SHALL PROVIDE SURVEY NORTHINGS, EASTINGS AND ELEVATIONS BY REGISTERED PROFESSIONAL LAND SURVEYOR FOR: ANY EXISTING UTILITIES THAT MAY BE IN CONFLICT WITH THE PROPOSED IMPROVEMENTS OF THE CONSTRUCTION PLANS, AND ANY PROPOSED INSTALLATION TO VERIFY IT HAS BEEN INSTALLED PER PLAN. (NO SEPARATE PAY)

6. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PERFORMING ALL CONSTRUCTION LAYOUTS FROM THE SITE LAYOUT CONTROL POINTS, AND FROM THE DIMENSIONS AND CENTERLINES SHOWN. THE CONTRACTOR MUST NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

7. CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING WATER (NO SEPARATE PAY), OR AS APPROVED BY THE CITY AND ENGINEER.

8. ANY CONSTRUCTION ITEM OR REQUIRED WORK SHOWN ON THESE PLANS FOR WHICH THERE IS NO SPECIFIC BID ITEM IN THE PROPOSAL SHALL BE CONSIDERED SUBSIDIARY TO THE OTHER BID ITEMS AND NO SEPARATE PAYMENT SHALL BE MADE.

9. CONTRACTOR SHALL PREPARE PHOTOGRAPHS AND A VIDEO RECORD OF THE PROJECT SITE DOCUMENTING SITE CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. VIDEO SHALL CLEARLY SHOW ALL PUBLIC AND PRIVATE IMPROVEMENTS WITHIN AND ADJACENT TO THE PROJECT LIMITS INCLUDING, BUT NOT LIMITED TO, DRIVEWAYS, FENCES, STRUCTURES, LANDSCAPING, POOLS, ABOVE GROUND UTILITIES, RETAINING WALLS, ETC. A COPY OF VIDEO RECORD SHALL BE PROVIDED TO CONSTRUCTION INSPECTOR BEFORE THE CONSTRUCTION STARTS. NO SEPARATE PAYMENT SHALL BE MADE FOR PREPARATION OF PHOTOGRAPHS AND VIDEO.

10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN A NEAT AND ACCURATE REDLINE RECORD OF CONSTRUCTION FOR THE CITY'S RECORDS. THE CONTRACTOR SHALL PROVIDE THE CITY FULL SIZE REPRODUCIBLE MARKUPS THAT RECORD ALL CONSTRUCTION DEVIATING FROM PLANS. THESE REDLINE CONSTRUCTION PLAN RECORDS SHALL BE SUBMITTED TO THE CITY AT THE END OF THE JOB AND SIGN BY THE CONTRACTOR. THESE RECORD MUST BE RECEIVED OR THE CITY WILL NOT RELEASE FINAL RETAINAGE OR ACCEPTANCE ON THE JOB.

11. THE CONTRACTOR SHALL BE REQUIRED TO PROMDE LINES AND GRADES OR OTHER CONSTRUCTION STAKING. NO SEPARATE PAY.

12. THE CONTRACTOR SHALL NOTIFY THE CHIEF OF POLICE, THE FIRE MARSHALL, SCHOOL DISTRICT, EMS, AND LOCAL POST OFFICE IN WRITING AT LEAST FIVE WORKING DAYS PRIOR TO CLOSING AND OPENING OF A PORTION OF ALL OF STREETS FOR THE PROJECT. A COPY OF THE NOTIFICATION SHALL BE SUBMITTED TO CITY OF ROCKWALL.

13. ANY DISCREPANCIES OR CONFLICT WITHIN THE DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. DISCREPANCIES OR CONFLICTS NOT BROUGHT TO ENGINEER'S ATTENTION AND CLARIFIED DURING THE BIDDING OF THE PROJECT WILL BE DEEMED TO HAVE BEEN BID OR PROPOSED IN THE MORE COSTLY OR DIFFICULT MANNER, AND THE BETTER QUALITY OR GREATER QUANTITY OF THE WORK SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE ENGINEER'S INTERPRETATION.

ALL ITEMS, WORK, AND IMPROVEMENTS SHOWN OR INDICATED IN THE CONSTRUCTION DOCUMENTS SHALL BE COMPLETED FOR THE PRICES BID, WHETHER OR NOT A SEPARATE PAY ITEM IS INCLUDED IN THE CONTRACT.

14. THESE PLANS, PREPARED BY TEAGUE NALL & PERKINS, INC. DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVE IN THE PERFORMANCE OF THE WORK. THE SEAL OF TEAGUE NALL & PERKINS, INC. LICENSED PROFESSIONAL ENGINEER(S) HERON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THE WORK. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS.

15. ALL EXISTING PAVEMENTS, STRUCTURES, UTILITIES, WALKS, ETC. WHICH ARE INTENDED TO REMAIN AND ARE DAMAGED BY THE CONTRACTOR SHALL BE FULLY RESTORED OR REPLACED BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION. ALL ITEMS SHALL BE RESTORED TO EXISTING OR BETTER CONDITION AS PER STANDARD DRAWINGS OR AS DIRECTED BY CITY OF ROCKWALL.

16. CONTRACTOR IS REQUIRED TO VERIFY THE PROJECT ELEVATIONS. "MATCH EXISTING SHALL BE UNDERSTOOD TO SIGNIFY VERTICAL AND HORIZONTAL ALIGNMENTS."

EROSION CONTROL & VEGETATION

1. THE CONTRACTOR OR DEVELOPER SHALL BE RESPONSIBLE, AS THE ENTITY EXERCISING OPERATIONAL CONTROL, FOR ALL PERMITTING AS REQUIRED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA) AND THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ). THIS INCLUDES, BUT IS NOT LIMITED TO, PREPARATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP), THE CONSTRUCTION SITE NOTICE (CSN), THE NOTICE OF INTENT (NOI), THE NOTICE OF TERMINATION (NOT) AND ANY NOTICE OF CHANGE (NOC) AND IS REQUIRED TO PAY ALL ASSOCIATED FEES.

2. EROSION CONTROL DEVICES AS SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBING ACTIVITIES.

3. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS, SPECIFICATIONS AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE PROJECT. EROSION CONTROL DEVICES SHALL BE PLACED AND IN WORKING ORDER PRIOR TO START OF CONSTRUCTION. CHANGES ARE TO BE REVIEWED BY THE DESIGN ENGINEER AND THE CITY OF ROCKWALL PRIOR TO IMPLEMENTATION.

4. IF THE EROSION CONTROL PLANS AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AS APPROVED CANNOT APPROPRIATELY CONTROL EROSION AND OFF-SITE SEDIMENTATION FROM THE PROJECT, THE EROSION CONTROL PLAN AND/OR THE SWPPP IS REQUIRED TO BE REVISED AND ANY CHANGES REPORTED TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), WHEN APPLICABLE.

5. ALL EROSION CONTROL DEVICES SHALL BE INSPECTED WEEKLY BY THE CONTRACTOR AND AFTER ALL MAJOR RAIN EVENTS, OR MORE FREQUENTLY AS DICTATED IN THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP). CONTRACTOR SHALL PROVIDE COPIES OF INSPECTION'S REPORTS TO THE ENGINEERING INSPECTION AFTER EACH INSPECTION.

6. THE CONTRACTOR SHALL NOT DISPOSE OF WASTE OR ANY MATERIALS INTO STREAMS, WATERWAYS OR FLOODPLAINS. THE CONTRACTOR SHALL SECURE ALL EXCAVATION AT THE END OF EACH DAY AND DISPOSE OF ALL EXCESS MATERIALS. DISPOSAL SITE SHALL BE DOCUMENTED AND PROVIDED TO THE CITY.

7. CONTRACTOR SHALL GRADE GROUND AND DITCHES DISTURBED BY CONSTRUCTION TO PREVENT PONDING OF STORM WATER RUNOFF. GRADING SHALL BE SUBSIDIARY TO THE APPROPRIATE BID ITEM FOR UNCLASSIFIED STREET AND UNCLASSIFIED CHANNEL EXCAVATION. TOPSOIL SHALL BE STOCKPILED AND REPLACED TO A MINIMUM DEPTH OF 6-INCHES AND DISC HARROWED TO A MINIMUM DEPTH OF 4-INCHES (NO PAY ITEM). CONTRACTOR SHALL REPLACE GRASS AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH SOLID SOD. SODDED AREAS SHALL BE WATERED AND MAINTAINED UNTIL ESTABLISHED.

8. THE CONTRACTOR SHALL PROVIDE 4 INCHES OF TOP SOIL IN ALL PARKWAYS THAT ARE TO BE SODDED. TOP SOIL SHALL BE APPROVED BY THE CITY IN WRITING PRIOR TO INSTALLATION. TOP SOIL SHALL BE SUBSIDIARY TO PLACEMENT OF GRASS/SOD.

9. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION TO EXISTING HOMEOWNER LAWNS, FENCES AND SHRUBBERY IRRIGATION SYSTEMS. ALL DAMAGED GRASS AREAS ARE TO BE REPLACED WITH SOD. (NO SEPARATE PAY). AREAS DISTURBED OUTSIDE THE R.O.W. OR LIMITS OF CONSTRUCTION SHALL HAVE GRASS SOD ESTABLISHED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. THE NEW GRASS (SOD) SHALL MATCH EXISTING.

FRANCHISE UTILITY NOTES

1. REASONABLE EFFORT HAS BEEN MADE TO SHOW THE LOCATION OF ALL KNOWN UNDERGROUND FRANCHISE UTILITIES AND SERVICE LINES. HOWEVER, THE OWNER ASSUMES NO RESPONSIBILITY FOR FAILURE TO SHOW ANY OR ALL EXISTING SUBSURFACE FRANCHISE UTILITIES OR UTILITY LINE, OR TO SHOW THEM IN THEIR EXACT LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES, SERVICE LINES OR THE LIKE, WHICH ARE EXPOSED BY THE CONSTRUCTION OPERATION.

2. EXISTING FRANCHISE UTILITIES SHOWN IN THESE PLANS REFLECT APPROXIMATE LOCATIONS PRIOR TO RELOCATIONS. SOME RELOCATIONS HAVE OCCURRED WITH UTILITY POLE, GAS, PHONE AND CABLE UTILITIES. THE CONTRACTOR SHALL CONTACT DIG-TESS TO LOCATE EXISTING AND NEW UTILITIES NOT SHOWN IN THESE PLANS.

3. CONTRACTOR SHALL SUPPORT UTILITIES WHERE CROSSING WITH PROPOSED STORM SEWER, WATER LINES AND SANITARY SEWERS. METHOD OF SUPPORT SHALL BE PROVIDED TO THE OWNER 24 HOURS PRIOR TO CROSSING.

4. THE LOCATION OFF ALL ATMOS GAS LINES, AT&T, CHARTER AND TXU/ONCOR ELECTRIC UNDERGROUND PHONE LINES IN THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL CONTACT ATMOS, TXU/ONCOR, AT&T AND CHARTER TO VERIFY LOCATION AND DEPTH OF ALL EXISTING GAS, ELECTRIC AND PHONE LINES PRIOR TO CONSTRUCTION.

5. CONTRACTOR SHALL HAVE AND PAY FOR TXU/ONCOR, AT&T AND/OR CHARTER SUPPORT AND PROTECT ALL POWER, GUY WIRES OR CABLE AND/OR LIGHT POLES IN THE WORK AREA. ANY DAMAGE INCURRED TO EXISTING FRANCHISE UTILITIES, APPURTENANCES, UTILITY POLES, LIGHT STANDARDS, ETC. BY CONSTRUCTION RELATED ACTIVITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

TRAFFIC CONTROL

1. A SUGGESTED TRAFFIC CONTROL PLANS ARE PROVIDED IN THE PLAN SET. CONTRACTOR IS REQUIRED TO USE THE SUGGESTED SEQUENCE AND TRAFFIC CONTROL PLANS AT A MINIMUM. IF CONTRACTOR CHOOSES TO PERFORM THE SEQUENCING OTHER THAN SUGGESTED, A TRAFFIC CONTROL AND SEQUENCING PLAN SHALL BE PROVIDED AND GET APPROVAL FROM THE CITY. ALL PLANS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS.

2. PEDESTRIAN AND VEHICULAR TRAFFIC FLOW, SAFETY AND ACCESS SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION. BARRICADING AND TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST EDITION, PART IV IN PARTICULAR. TRAFFIC FLOW AND ACCESS SHALL BE MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNLESS OTHERWISE NOTED ON THE TRAFFIC CONTROL PLAN. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC SAFETY MEASURES FOR WORK ON THE PROJECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR PUBLIC SAFETY IN THE CONSTRUCTION AREA DURING THE DURATION OF CONSTRUCTION ACTIVITIES.

3. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE ALL NECESSARY TRAFFIC CONTROL DEVICES IN CONFORMANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (PART 6). THE CONTRACTOR SHALL PROVIDE ACCESS TO PROPERTIES AT ALL TIMES DURING EACH PHASE OF CONSTRUCTION TO ALL LOCAL RESIDENTS, BUSINESSES, MAIL SERVICE, TRASH PICK-UP AND EMERGENCY SERVICES.

4. NO TRAFFIC SIGNS SHALL BE TAKEN DOWN WITHOUT PERMISSION FROM THE CITY. CONTRACTOR NEEDING TO MOVE AND REPLACE TRAFFIC SIGN FOR CONSTRUCTION PURPOSES SHOULD BE PAID FOR UNDER TRAFFIC CONTROL BID ITEM.

5. CONTRACTOR WILL FURNISH AND INSTALL ALL SIGNAGE IN ACCORDANCE WITH TMUTCD GUIDELINES. PRIOR TO INSTALLATION OF SIGNAGE, CONTRACTOR SHALL STAKE LOCATIONS AND RECEIVE APPROVAL FROM CITY ON LOCATIONS. ALL SIGNAGE THAT IS REMOVED BY THE CONTRACTOR SHALL BE SAVED AND DELIVERED TO MUNICIPAL SERVICE CENTER, STREETS DIVISION. ALL REPLACED SIGNS SHALL BE NEW. SEE CITY REQUIREMENTS FOR SIGN MATERIALS.

MAILBOX, MAIL SERVICE AND TRASH SERVICE

1. EXISTING MAILBOXES IN CONFLICT WITH CONSTRUCTION SHALL BE TAKEN OUT OF SERVICE, REMOVED AND REPLACE TO THE SAME OR BETTER CONDITION AND PLACED IN A LOCATION APPROVED BY THE CITY/PROPERTY OWNER. PHOTOGRAPHS OF THE MAILBOX SHALL BE TAKEN WITH THE ADDRESS SHOWN, SHALL BE PROVIDED TO THE CITY PRIOR TO BEING REMOVED.

2. TEMPORARY MAILBOX SHALL BE PROVIDED AND MAINTAINED THROUGHOUT THE PROJECT WHERE EXISTING MAIL BOXES ARE BEING REMOVED. ADDRESSES SHALL BE PROVIDED ON ALL TEMPORARY MAIL BOXES.

3. PAYMENT FOR REMOVAL AND REPLACEMENT OF EXISTING MAILBOX WILL BE PAID FOR UNDER THE APPROPRIATE BID ITEM. BRICK MAILBOX SHALL MATCH EXISTING BRICK.

4. CONTRACTOR SHALL COORDINATE WITH LOCAL TRASH COLLECTION COMPANY TO MAINTAIN SERVICE TO ALL RESIDENT WITHIN THE PROJECT LIMITS. WHEN ACCESS TO PROPERTIES IS NOT AVAILABLE, CONTRACTOR SHALL ROLL CONTAINERS ACROSS THE CONSTRUCTION AREA, PICK UP AND RETURN TO THE RESIDENTS PROPERTY. CONTRACTOR SHALL PLACE ADDRESS ON CONTAINERS. (NO SEPARATE PAY)

FENCES, TREES, LANDSCAPING AND IRRIGATION

1. THE REMOVAL, REPLACEMENT OR RECONSTRUCTION OF ANY FENCE FOR THE CONVENIENCE OF CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE (NO SEPARATE PAY). NEW MATERIALS SHALL MATCH EXISTING FENCES. ALL WOOD FENCES SHALL BE REPLACED WITH NEW CEDAR WITH THE POST MATCHING CITY REQUIREMENTS.

2. TEMPORARY FENCING SHALL BE REQUIRED WHERE THERE IS EVIDENCE OF LIVESTOCK AND WHERE DAMAGED OR REMOVED FENCES ARE NOT TO BE REPLACED BY THE END OF THE SAME WORK DAY.

3. THE REMOVAL AND REPLACEMENT OF ALL SHRUBS, PLANTS, TREES, ETC. FOR THE CONVENIENCE OF CONSTRUCTION SHALL BE AT THE CONTRACTOR'S EXPENSE (NO SEPARATE PAY). NEW SHRUBS, TREE, ETC. SHALL BE EQUAL TO OR BETTER THAN EXISTING ONES OR MEET.

4. ALL SHRUBS, PLANTS, TREES, ETC. MUST BE APPROVED BY THE CITY BEFORE REMOVAL.

5. THE CONTRACTOR SHALL LOCATE AND RECORD EXISTING IRRIGATION SYSTEMS PRIOR TO CONSTRUCTION. IF IRRIGATIONS SYSTEMS ARE DAMAGED DURING CONSTRUCTION THE CONTRACTOR SHALL REPAIR TO SAME OR BETTER CONDITION. AN IRRIGATOR LICENSED IN THE STATE OF TEXAS SHALL REPAIR ALL DAMAGED CAUSED BY CONSTRUCTION. CONTRACTOR SHALL COORDINATE ANY IRRIGATION WORK WITH THE CITY OF ROCKWALL AND PROPERTY OWNER'S REPRESENTATIVES.

6. CONTRACTOR SHALL REPLACE ANY TREES REMOVED OR DESTROYED THAT ARE NOT SHOWN IN THESE PLANS TO BE REMOVED OR SHALL PAY FAIR MARKET VALUE TO THE OWNER AS DETERMINED BY THE OWNER. (NO SEPARATE PAY).

DRAINAGE/ STORM SEWER

1. THE CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION. PONDING OF WATER IN STREETS, DRIVES, TRENCHES, ETC. WILL NOT BE ALLOWED. EXISTING DRAINAGE WAYS SHALL NOT BE BLOCKED OR REMOVED UNLESS EXPLICITLY STATED IN THE PLANS OR WRITTEN APPROVAL IS GIVEN BY THE CITY.

2. ALL STRUCTURAL CONCRETE SHALL BE CLASS "C" (4200 PSI COMPRESSIVE STRENGTH AT 28 DAYS, MINIMUM OF 7.0 SACK), AIR ENTRAINED, UNLESS NOTED OTHERWISE.

3. PROPOSED STORM SEWER EMBEDMENT SHALL BE NCTCOG CLASS 'B' AS AMENDED BY THE CITY OF ROCKWALL PUBLIC WORKS, ENGINEERING DIVISION STANDARDS OF DESIGN AND CONSTRUCTION MANUAL.

4. ALL STORM PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP), CLASS III, UNLESS OTHERWISE NOTED.

DEMOLITION, REMOVAL, DISPOSAL AND EXCAVATION

1. CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL EXISTING CONCRETE AND HMAC PAVEMENT OUTSIDE OF THE CITY LIMITS AS REQUIRED FOR CONSTRUCTION OF THE PROJECT. ALL COST SHALL BE INCLUDED IN THE APPROPRIATE ITEM IN THE BID SCHEDULE. PAYMENTS FOR REMOVAL AND REPLACEMENT OF STREET, DRIVEWAY AND SIDEWALK PAVEMENT SHALL BE BASED ON PLAN QUANTITY AND NO ADJUSTMENTS WILL BE MADE UNLESS APPROVED IN WRITING BY THE CITY ENGINEER.

2. ALL PAVEMENTS TO BE REMOVED AND REPLACED SHALL BE SAW CUT TO FULL DEPTH ALONG NEAT LINES SHOWN IN THE PLANS. PROPOSED CONCRETE PAVEMENT SHALL BE CONSTRUCTED WITH LONGITUDINAL BUTT CONSTRUCTION JOINTS AT ALL CONNECTIONS TO EXISTING CONCRETE PAVEMENT.

3. THE CONTRACTOR SHALL REMOVE FROM THE PROJECT AREA ALL SURPLUS MATERIAL. THIS WORK SHALL BE INCIDENTAL AND NOT A SEPARATE PAY ITEM. SURPLUS MATERIALS FROM EXCAVATION INCLUDE DIRT, TRASH, ROCK MEASURING GREATER THAN 6" IN THE LARGEST DIMENSION, ETC. SHALL BE PROPERLY DISPOSED OF AT A SITE ACCEPTABLE TO THE CITY OF ROCKWALL IF WITHIN THE CITY LIMITS. NO EXCESS EXCAVATED MATERIAL SHALL BE DEPOSITED IN LOW AREAS OR ALONG NATURAL DRAINAGE WAYS WITHOUT WRITTEN PERMISSION FROM THE AFFECTED PROPERTY OWNER AND THE CITY OF ROCKWALL. IF THE CONTRACTOR PLACES EXCESS MATERIALS IN THESE AREAS WITHOUT WRITTEN PERMISSION, HE WILL BE RESPONSIBLE FOR ALL DAMAGES RESULTING FROM SUCH FILL AND HE SHALL REMOVE THE MATERIAL AT HIS OWN COST.

4. ALL EXCAVATION ON THE PROJECT IS UNCLASSIFIED. IF SOIL BORINGS WERE CONDUCTED THEY ARE PROVIDED IN THE BID/CONTRACT DOCUMENTS.

PAVING

1. ALL PAVING ROADWAY SECTIONS THICKNESS, STRENGTH, REINFORCEMENT, JOINT TYPE, JOINT SPACING AND SUBGRADE TREATMENT SHALL MATCH THE TYPICAL SECTIONS AND DETAILS CALLED OUT IN THE PLANS. IF NOT CALLED OUT ON THE PLANS ALL CONCRETE PAVING SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF TABLE 2.3 IN THE STANDARDS OF DESIGN AND CONSTRUCTION.

2. REINFORCING STEEL SHALL BE TIED (100%). REINFORCING STEEL SHALL BE SET ON PLASTIC CHAIRS. BAR LAPS SHALL BE MINIMUM 30 DIAMETERS. SAVED TRANSVERSE DUMMY JOINTS SHALL BE SPACED EVERY 15 FEET OR 1.25 TIME LONGITUDINAL BUTT JOINT SPACING WHICHEVER IS LESS. SAWING SHALL OCCUR WITHIN 5 TO 12 HOURS AFTER THE POUR, INCLUDING SEALING. OTHERWISE, THE SECTION SHALL BE REMOVED AND LONGITUDINAL BUTT JOINT CONSTRUCTED.

3. ALL PROPOSED HMAC STREET PAVEMENT SHALL CONSIST OF 4 INCHES OF TYPE B (BASE) WITH 2 INCHES OF TYPE D (SURFACE) ON TOP OF 6" FLEX BASE (IF NOT SPECIFIED IN THE PLANS).

4. NO SAND SHALL BE ALLOWED UNDER ANY PAVING.

5. CONCRETE MIX DESIGN SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT.

6. FLY ASH MAY BE USED IN CONCRETE PAVEMENT LOCATIONS PROVIDED THAT THE MAXIMUM CEMENT REDUCTION DOES NOT EXCEED 20% BY WEIGHT PER C.Y. OF CONCRETE. THE FLY ASH REPLACEMENT SHALL BE 1.25 LBS PER 1.0 LB CEMENT REDUCTION.

7. ALL CURB AND GUTTER SHALL BE INTEGRAL (MONOLITHIC) WITH THE PAVEMENT.

8. ALL FILL SHALL BE COMPACTED BY SHEEP'S FOOT ROLLER TO A MINIMUM 95% STANDARD PROCTOR. MAXIMUM LOOSE LIFT FOR COMPACTION SHALL BE 8 INCHES. ALL LIFTS SHALL BE TESTED FOR DENSITY BY AN INDEPENDENT LABORATORY APPROVED BY THE CITY.

9. ALL PROPOSED SIDEWALKS SHALL INCLUDE BARRIER FREE RAMPS AT INTERSECTING STREETS, ALLEYS, ETC. BARRIER FREE RAMPS SHALL MEET CURRENT CITY AND ADA REQUIREMENTS AND BE APPROVED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION (TDLR).

10. SIDEWALKS SHALL BE DOWELED INTO PAVEMENT WHERE IT ABUTS CURBS AND DRIVEWAYS. EXPANSION JOINT MATERIAL SHALL BE USED AT THESE LOCATIONS (NO PAY ITEM).

11. ALL CONNECTION OF PROPOSED CONCRETE PAVEMENT TO EXISTING CONCRETE PAVEMENT SHALL INCLUDE A LONGITUDINAL BUTT JOINT AS THE LOAD TRANSFER DEVICE. CONCRETE SAW CUTS FOR ALL DRIVEWAYS AND SIDEWALKS SHALL BE SUBSIDIARY TO THE APPROPRIATE BID ITEM FOR DRIVEWAY AND SIDEWALK REPLACEMENT AND NO SEPARATE PAYMENT SHALL BE MADE. ALL LONGITUDINAL BUTT JOINTS SHALL BE CLEAN, STRAIGHT AND SMOOTH (NOT JAGGED IN APPEARANCE).

12. THERE SHALL BE NO SEPARATE PAYMENT FOR SUBGRADE PREPARATION UNDER DRIVEWAY AND SIDEWALK AREAS AND ALL COST SHALL BE INCLUDED IN THE APPROPRIATE ITEMS OF THE BID SCHEDULE.

13. CRACKS FORMED IN CONCRETE PAVEMENT SHALL BE REPAIRED OR REMOVED BY THE CONTRACTOR AT THE CITY'S DISCRETION.

14. THE LOCATION OF DRIVEWAYS, STEPS, ETC., AS SHOWN ON THESE PLANS ARE APPROXIMATE. ACCURATE LOCATION SHALL BE DETERMINED AT THE TIME OF CONSTRUCTION AFTER CONSULTATION WITH THE PROPERTY OWNER.

15. CONTRACTOR SHALL MATCH EXISTING PAVEMENT GRADES AND ELEVATIONS, INCLUDING CURB LINES, WITH PROPOSED PAVEMENT REPLACEMENT; HOWEVER, CONTRACTOR SHALL ENDEAVOR TO CORRECT ANY EXISTING LOW SPOT IN PAVEMENT OR CURB TO PREVENT PONDING.

16. CONTRACTOR SHALL COORDINATE WITH CITY FOR ALL THE EXISTING LANDSCAPE CONFLICTS WITHIN PROPOSED IMPROVEMENTS. CONTRACTOR SHALL NOT REMOVE EXISTING LANDSCAPE IN CONFLICT UNTIL HAVING COORDINATED WITH CITY.

17. ALL PRIVATE LEAD WALKS REMOVED SHALL BE REPLACED WITH THE SAME MATERIAL TO EXISTING OR BETTER CONDITION.

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Graphic: GENERAL NOTES OF 2
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City of Rockwall

The New Horizon

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SEP 2019



RECORD DOCUMENTS

THESE PLANS ARE FOR THE OWNER'S USE AS RECORD SET OF THE CONSTRUCTED PROJECT, AND REFLECT REVISIONS AND CONSTRUCTION RELATED CHANGES AS RECORDED BY THE CONTRACTOR. CHANGES MADE FROM THE ORIGINAL CONSTRUCTION DOCUMENTS DO NOT DEPICT ENGINEERING AND ARE NOT THE RESPONSIBILITY OF TEAGUE NALL & PERKINS, INC. OR THE ENGINEER OF RECORD ON THE ORIGINAL DOCUMENTS. ORIGINAL PLANS RELEASED FOR CONSTRUCTION WERE SEALED BY GYANENDRA POKHREL, P.E. NO. 118159 ON 09/28/2018.

CITY OF ROCKWALL, TEXAS

HIGHLAND DRIVE RECONSTRUCTION, PHASE I

(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

GENERAL NOTES

tnp project

RWL18219

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01

CONSTRUCTION NOTES

WASTEWATER LINE NOTES

1. ALL ABANDONMENT IN PLACE OF UTILITY LINES AND APPURTENANCES SHALL BE AS PER STANDARD DRAWING AS DIRECTED BY CITY OF ROCKWALL. NO SEPARATE PAYMENT FOR THIS ITEM.
2. THE CONTRACTOR SHALL MAINTAIN EXISTING WASTEWATER SERVICE AT ALL TIMES DURING CONSTRUCTION.
2. PROPOSED WASTEWATER LINE EMBEDMENT SHALL BE NCTCOG CLASS "B-2" AS AMENDED BY THE CITY OF ROCKWALL'S PUBLIC WORKS STANDARD DESIGN AND CONSTRUCTION MANUAL.
3. GREEN EMS PADS SHALL BE INSTALLED AT EVERY MANHOLE, CLEAN OUT AND SERVICE LATERAL ON PROPOSED WASTEWATER LINES.
4. ALL EXISTING WASTEWATER SERVICES SHALL BE TRANSFERRED FROM WASTEWATER LINES BEING ABANDONED TO PROPOSED WASTEWATER LINES. TRANSFERRING WASTEWATER SERVICES SHALL INCLUDE DOUBLE CLEAN OUTS AT THE PROPERTY LINES, CAPS, TEES, WYES, PLUGS AND CONNECTION. PAYMENT FOR TRANSFERRING WASTEWATER SERVICES SHALL BE PAID PER EACH, UNDER THE APPROPRIATE BID SCHEDULE ITEM.
5. CONTRACTOR SHALL CCTV ALL EXISTING WASTEWATER LINES THAT ARE TO BE ABANDONED TO ENSURE THAT ALL LATERALS ARE ACCOUNTED FOR AND TRANSFERRED TO PROPOSED WASTEWATER LINES. (NO SEPARATE PAY).
6. EXISTING MANHOLES AND CLEANOUTS NOT SPECIFICALLY CALLED TO BE RELOCATED SHALL BE ADJUSTED TO MATCH FINAL GRADES (NO PAY ITEM).
7. ALL WASTEWATER PIPES AND PUBLIC SERVICES SHALL BE INSPECTED BY PHOTOGRAPHIC MEANS (TELEVISION AND DVD) PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL FURNISH A DVD TO THE ENGINEERING DIVISION CONSTRUCTION INSPECTOR FOR REVIEW. ANY SAGS, OPEN JOINTS, CRACKED ENGINEERING, ETC. SHALL BE REPAIRED OR REMOVED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. A TELEVISION SURVEY WILL BE PERFORMED AS PART OF THE FINAL TESTING IN THE TWENTIETH (20TH) MONTH OF THE MAINTENANCE PERIOD.
8. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT NO OVERFLOWS OR SPILLAGE OF SEWAGE OCCURS. SHOULD THIS OCCUR, THE CONTRACTOR SHALL:
- A. IDENTIFY THE SOURCE OF THE SPILL AND ATTEMPT TO ELIMINATE ANY ADDITIONAL SPILLAGE. NOTIFY THE CITY OF ROCKWALL AT 972-771-7730
- B. CONTAIN THE SPILL IN PLACE AND PREVENT CONTAMINATION OF THE STREAMS.
- C. CLEAN UP THE SPILL AND DISPOSE OF CONTAMINATED MATERIALS.
- D. DISINFECT THE AREA OF THE SPILL WITH A MIXTURE OF HTH CHLORINE AND WATER.
- E. IDENTIFY AND TRAIN PERSONNEL RESPONSIBLE FOR SPILLAGE PREVENTION AND CONTROL.
- NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO THE GUIDELINES SET BY THE TCEQ AND THE CITY OF ROCKWALL.
8. WHERE NEW SEWER LINES CROSS WATERLINES AND ARE INSTALLED WITH A SEPARATE DISTANCE OF LESS THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC 217.53 (D) (PIPE DESIGN) AND 290.44 (E) (WATER DISTRIBUTION)
9. THE CONTRACTOR SHALL PERFORM FLOW MANAGEMENT AND BYPASS PUMPING IN ACCORDANCE WITH THE REQUIREMENTS OUTLINED IN THESE PLANS AND SPECIFICATIONS.
10. THE LOCATIONS AND DEPTH OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, SHOWN ON THE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR 48 HOURS PRIOR TO CONSTRUCTION AND SHALL BE THE CONTRACTORS RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO THE CITY OF ROCKWALL.
11. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE CITY OF ROCKWALL WASTEWATER DEPARTMENT AT LEAST TWO WEEKS IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO THE CITY OF ROCKWALL AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.
12. ALL MANHOLES (INCLUDING EXISTING MANHOLE TIE-INS) ARE TO BE LINED WITH RAVEN 405 OR APPROVED EQUAL. RAVEN APPLICATOR MUST BE LICENSED/CERTIFIED BY RAVEN. COST OF RAVEN 405 SHALL BE SUBSIDIARY TO THE MANHOLE PAY ITEM. CONSHIELD CAN BE USED IN LIEU OF RAVEN 405 LINER FOR MANHOLES.

OVERALL SEQUENCE OF CONSTRUCTION

THE FOLLOWING SEQUENCE IS NOT INTENDED TO DIRECT OR CONTROL THE CONTRACTOR'S MEANS OR METHODS, BUT IS FOR THE INTENT OF PROVIDING FOR A WORKABLE SEQUENCE OF CONSTRUCTION WHICH MAINTAINS SERVICE TO CUSTOMERS AND MAINTAINS THE TRAFFIC FLOW. THE SEQUENCE DESCRIBED BELOW IS GENERAL IN NATURE, AND NOT INTENDED TO INCLUDE DETAILS OR ALL WORK NECESSARY TO COMPLETE THE PROJECT. CONTRACTOR SHALL INCORPORATE ANY REQUIRED ITEMS NOT SPECIFICALLY DESCRIBED BELOW INTO THE CONTRACTOR'S SEQUENCE OF CONSTRUCTION. CONTRACTOR SHALL REVIEW GENERAL SEQUENCE OF CONSTRUCTION, AND SUBMIT REQUEST FOR ANY DEVIATION PRIOR TO COMMENCING WORK.

1. LOCATE EXISTING UTILITIES AS NECESSARY.
2. VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF EXISTING WASTEWATER LINES AND LATERAL/SERVICES, STORM SEWER, POTABLE WATER, AND OTHER FACILITIES.
3. PROVIDE TRAFFIC CONTROL PLAN AS NECESSARY.
4. PROVIDE EROSION AND SEDIMENT CONTROL BMPs AS NECESSARY.
5. INSTALL PROPOSED WASTEWATER LINES INCLUDING MANHOLES AND CLEANOUTS. CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING HOMES ALL TIMES DURING CONSTRUCTION.
6. PERFORM TESTING ON WASTEWATER LINES AND MANHOLES AS REQUIRED BY CITY OF ROCKWALL.
7. INSTALL NEW WASTEWATER SERVICES AND MOVE SERVICES OVER FROM OLD LINES.
8. UPON ENSURING THAT ALL SERVICES HAVE BEEN MOVED OVER TO NEW MAINS, PLUG AND ABANDON OLD WASTEWATER LINES AS SHOWN ON THE PLANS. CONTRACTOR SHALL EXCAVATE AND REMOVE OLD LINE WHERE THE NEW LINE IS AT THE SAME LOCATION AS EXISTING.
9. AFTER ABANDONMENT/REMOVAL OF OLD WW LINES, INSTALL PROPOSED WATER MAIN.
10. PERFORM TESTING ON NEW WATER MAINS AS REQUIRED BY CITY OF ROCKWALL.

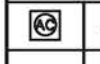

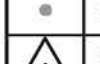







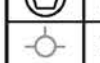

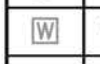







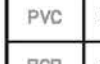





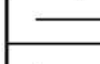



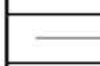




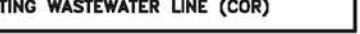










WATER LINE NOTES

1. THE CONTRACTOR SHALL MAINTAIN EXISTING WATER SERVICE AT ALL TIMES DURING CONSTRUCTION.
2. PROPOSED WATER LINES SHALL BE AWWA C-900 PVC, DR 14 PC 305 (BLUE IN COLOR) UNLESS OTHERWISE SHOWN ON WATER PLAN AND PROFILES SHEETS. PROPOSED WATER LINES SHALL BE CONSTRUCTED WITH MINIMUM COVER OF 4 FEET. PROPOSED WATER LINE EMBEDMENT SHALL BE NCTCOG CLASS "B-3" AS AMENDED BY THE CITY OF ROCKWALL'S PUBLIC WORKS STANDARDS OF DESIGN AND CONSTRUCTION MANUAL.
3. CONTRACTOR SHALL COORDINATE THE SHUTTING DOWN OF ALL WATER LINES WITH THE CITY OF ROCKWALL, PUBLIC WORKS, WATER DIVISION. ALL EXISTING WATER LINES SHOWN TO BE ABANDONED SHALL BE CUT, PLUGGED, AND ABANDONED IN PLACE. COST OF ABANDONMENT SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT AND REFLECTED IN THE UNIT BID PROCESS. THE CITY SHALL OPERATE ALL WATER VALVES.
4. ELEVATION ADJUSTMENTS AT CONNECTIONS MAY BE MADE WITH BENDS, OFFSETS, OR JOINT DEFLECTIONS. ALL NONSTANDARD BENDS SHALL BE MADE WITH THE CLOSEST STANDARD MJ FITTINGS WITH THE ALLOWED JOINT DEFLECTIONS. ANY ADDITIONAL BENDS, OFFSETS, OR JOINT DEFLECTIONS NOT SPECIFICALLY SHOWN IN THE PLANS BUT NEEDED TO MAKE ELEVATION ADJUSTMENTS SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND REFLECTED IN THE UNIT BID PRICES FOR THE VARIOUS BID ITEMS LIST D IN THE PROPOSAL.
5. CONTRACTOR SHALL NOT EXCEED 80% OF THE MANUFACTURER'S MAXIMUM ALLOWABLE ANGULAR DEFLECTION AT ANY JOINT LOCATION. IF THE PLANS INDICATE DEFLECTION IN EXCESS OF THIS REQUIREMENT, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ACHIEVE THIS DEFLECTION OVER MULTIPLE JOINTS IN ORDER TO MEET THE MANUFACTURER'S REQUIREMENTS AS WELL AS THE GENERAL INTENT OF PROPOSED HORIZONTAL AND VERTICAL PIPE ALIGNMENT. LONGITUDINAL BENDING OF THE PIPE WILL NOT BE ALLOWED.
6. CONCRETE THRUST BLOCKING SHALL BE USED AT HORIZONTAL BENDS, TEES, AND WYES FOR 6" DIAMETER AND LARGER WATER LINES. THIS DOES NOT ELIMINATE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THRUST RESTRAINT AS REQUIRED BY THE PLANS AND SPECIFICATIONS.
7. ALL FITTINGS SHALL BE MECHANICALLY RESTRAINED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE WATER LINE CONNECTIONS AS SPECIFIED IN THE PLANS. ANY ADDITIONAL PIPE, FITTINGS, OR MATERIALS NOT SPECIFICALLY SHOWN IN THE PLANS BUT NEEDED TO MAKE THE CONNECTIONS SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND REFLECTED IN THE UNIT BID PRICES FOR THE VARIOUS BID ITEMS LISTED IN THE PROPOSAL.
9. THE CONTRACTOR SHALL MAINTAIN 24-INCHES OF CLEARANCE FROM ALL UTILITIES UNLESS OTHERWISE SHOWN.
10. CONTRACTOR SHALL FURNISH AND INSTALL GASKETS ON WATER LINES BETWEEN ALL DISSIMILAR METALS AND AT VALVES (BOTH EXISTING AND PROPOSED).
11. ALL FIRE HYDRANTS AND VALVES REMOVED AND SALVAGED SHALL BE RETURNED TO THE CITY OF ROCKWALL MUNICIPAL SERVICE CENTER.
12. BLUE EMS PADS SHALL BE INSTALLED AT EVERY CHANGE IN DIRECTION, VALVE AND SERVICE TAP ON THE PROPOSED WATER LINE AND EVERY 250'.
13. CONTRACTOR TO INSTALL NEW METER BOXES AT ALL RESIDENCES UNLESS OTHERWISE NOTED. EXISTING WATER METERS WILL BE SALVAGED AND RELOCATED TO PROPOSED LOCATIONS. LIMIT OF RECONSTRUCTION WILL CONNECT PROPOSED BOX LOCATION BACK TO EXISTING LOCATION.
14. EXISTING METER AND METER BOXES, AND VALVE STEM AND COVERS NOT SPECIFICALLY CALLED TO BE RELOCATED SHALL BE ADJUSTED TO MATCH FINAL GRADES (NO PAY ITEM). ANY METER IN PAVEMENT SHALL HAVE A TRAFFIC RATED LID.
15. ALL WATER VALVE EXTENSIONS, BOLTS, NUTS, AND WASHERS SHALL BE 316 STAINLESS STEEL.

11. INSTALL NEW WATER SERVICES/MOVE SERVICES OVER TO NEW WATER MAIN.
12. AFTER COMPLETION OF WASTEWATER AND WATER LINES, DEMOLISH EXISTING PAVEMENT AS SHOWN ON SUGGESTED TRAFFIC CONTROL AND CONSTRUCTION PHASING PLANS.
13. PERFORM SUBGRADE PREPARATION.
14. COMPLETE PAVEMENT REPLACEMENT AS DIRECTED IN PLANS.
15. AFTER COMPLETION OF PAVING OPERATION, RESTORE ALL DISTURBED AREAS BY SOD.
16. AFTER SITE HAS BEEN STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL DEVICES AND TRAFFIC CONTROL DEVICES, AND RETURN TRAFFIC TO NORMAL FLOW.

UTILITY

1. REASONABLE EFFORT HAS BEEN MADE TO SHOW THE LOCATION OF ALL KNOWN CITY OF ROCKWALL UNDERGROUND WET UTILITIES AND SERVICE LINES. HOWEVER, THE CITY OF ROCKWALL ASSUMES NO RESPONSIBILITY FOR FAILURE TO SHOW ANY OR ALL EXISTING CITY OF ROCKWALL UNDERGROUND WET UTILITIES AND SERVICE LINES, OR TO SHOW THEM IN THEIR EXACT LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES, SERVICE LINES OR THE LIKE, WHICH ARE EXPOSED BY THE CONSTRUCTION OPERATION.
2. BIDDERS SHALL MAKE ANY INVESTIGATION OF EXISTING SUBSURFACE CONDITIONS AS DEEMED NECESSARY AT NO EXPENSE TO THE CITY OF ROCKWALL. NEITHER THE CITY OF ROCKWALL NOR THE ENGINEER WILL BE RESPONSIBLE IN ANY WAY FOR ADDITIONAL COMPENSATION FOR EXCAVATION WORK PERFORMED UNDER THIS CONTRACT DUE TO THE CONTRACTOR'S ASSUMPTIONS.
3. CONTRACTOR SHALL ADJUST ALL CITY OF ROCKWALL UTILITIES TO THE FINAL GRADES.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SERVICE LINES CROSSED OR EXPOSED BY CONSTRUCTION OPERATIONS. WHERE EXISTING SERVICE LINES ARE CUT, BROKEN OR DAMAGED, THE CONTRACTOR SHALL IMMEDIATELY REPLACE THE SERVICE LINE WITH SAME TYPE OF ORIGINAL CONSTRUCTION OR BETTER.
5. THE CONTRACTOR SHALL EXCAVATE AND FIELD LOCATE THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITY CROSSING LOCATIONS UTILIZING PROVIDED PROJECT CONTROL. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES IDENTIFIED BETWEEN THE CONTRACTORS FIELD VERIFIED EXISTING UTILITY LOCATION AND PROPOSED LOCATION OF UTILITIES FOR THE PROJECT.
6. THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS GOVERNING EXCAVATION. THE CONTRACTOR SHALL PROVIDE DETAILED PLANS AND SPECIFICATIONS FOR TRENCH SAFETY SYSTEMS THAT COMPLY WITH APPLICABLE LAWS GOVERNING EXCAVATION. THESE PLANS SHALL BE SEALED BY AN ENGINEER EXPERIENCED IN THE DESIGN OF TRENCH SAFETY SYSTEMS, REGISTERED IN THE STATE OF TEXAS. THE CONTRACTOR SHALL SUBMIT COMPLETED TRENCH SAFETY PLAN TO THE ENGINEER AND CITY PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL ASPECTS OF WORK RELATED TO EXCAVATIONS.
7. DEWATERING OF UTILITY TRENCHES, BORES PITS, AND ANY OTHER EXCAVATIONS SHALL BE NO SEPARATE PAY AND SHALL BE SUBSIDIARY TO THE OTHER PAY ITEMS ON THE PROJECT.
5. CONTRACTOR SHALL COORDINATE WITH THE CITY OF ROCKWALL WATER AND WASTEWATER DEPARTMENT A MINIMUM OF 72 HOURS PRIOR TO CUTTING OR CONNECTING TO EXISTING UTILITY LINES. CONTRACTOR SHALL PROVIDE MINIMUM OF 48 HOURS NOTICE TO RESIDENTS FOR WATER TURN OFFS.
6. THE CONTRACTOR MAY NOT ADJUST ANY LINE, GRADE OR LOCATION OF ANY PROPOSED STORM DRAIN OR WASTEWATER MAIN IN THE FIELD WITHOUT THE EXPRESS WRITTEN PERMISSION OF CITY OF ROCKWALL, EVEN IF NO CONFLICT IS APPARENT.
7. THE CONTRACTOR SHALL ENSURE THAT FIRE HYDRANTS REMAIN ACCESSIBLE TO FIRE TRUCKS AT ALL TIMES.
8. THE CONTRACTOR SHALL PROTECT ALL PUBLIC UTILITIES DURING CONSTRUCTION OPERATIONS TO ENSURE THAT THERE IS NO INTERRUPTION IN SERVICE. TEMPORARY RE-ROUTES OF SERVICE MAY BE REQUIRED.

EXISTING SYMBOL/LINE LEGEND			
	AIR CONDITIONER UNIT		SPRINKLER HEAD
	BOLLARD		SAN SEWER CLEANOUT
	CONTROL POINT		SAN SEWER MANHOLE
	TEMPORARY BENCH MARK		POWER POLE
	CONTROL POINT & BENCH MARK		LIGHT POLE
	ELECTRIC HANDBOX		MAIL BOX
	ELECTRIC MANHOLE		GUY WIRE
	FIRE HYDRANT		LANDSCAPE LIGHTING
	WATER METER		FIBER OPTIC PEDESTAL
	WATER VALVE		GAS METER
	SPRINKLER VALVE		TELEPHONE PEDESTAL
	STORM DRAIN MANHOLE		TELEVISION PEDESTAL
	STORM DRAIN OUTFALL		SIGN
	STORM DRAIN PVC PIPE		TELEPHONE BOX
	STORM DRAIN RCP		TELEPHONE HANDBOX
	ROOF DRAIN		SHRUB
	SQUARE INLET		TREE
	GAS		EXISTING GAS LINE (ATMOS)
	OHE		EXISTING OVERHEAD ELECTRIC (ONCOR)
	UGE		EXISTING UNDERGROUND ELECTRIC (ONCOR)
	TEL		EXISTING UNDERGROUND TELEPHONE (AT&T)
	W		EXISTING WATER LINE (COR)
	SS		EXISTING WASTEWATER LINE (COR)

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SEP 2019



RECORD DOCUMENTS

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CITY OF ROCKWALL, TEXAS

HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

GENERAL NOTES AND LEGEND

tnp project
RW18219

sheet
02

DATUM BASE NOTE:
BEARINGS ARE REFERENCED TO GRID NORTH OF THE TEXAS COORDINATE SYSTEM OF 1983 (NORTH CENTRAL ZONE 4202; NAD83(2011) EPOCH 2011) AS DERIVED FROM THE CITY OF ROCKWALL MONUMENT NETWORK COR-13 AND COR-15. ALL DISTANCES SHOWN ARE SURFACE DISTANCES USING A COMBINED SCALE FACTOR OF 1.000146912. THE BOUNDARY LINES SHOWN IN THIS DRAWING ARE APPROXIMATE. A BOUNDARY SURVEY WAS NOT PERFORMED ON THESE PROPERTIES. THIS DRAWING SHOULD NOT BE RELIED ON FOR THE ACTUAL LOCATION OF PROPERTY LINES.

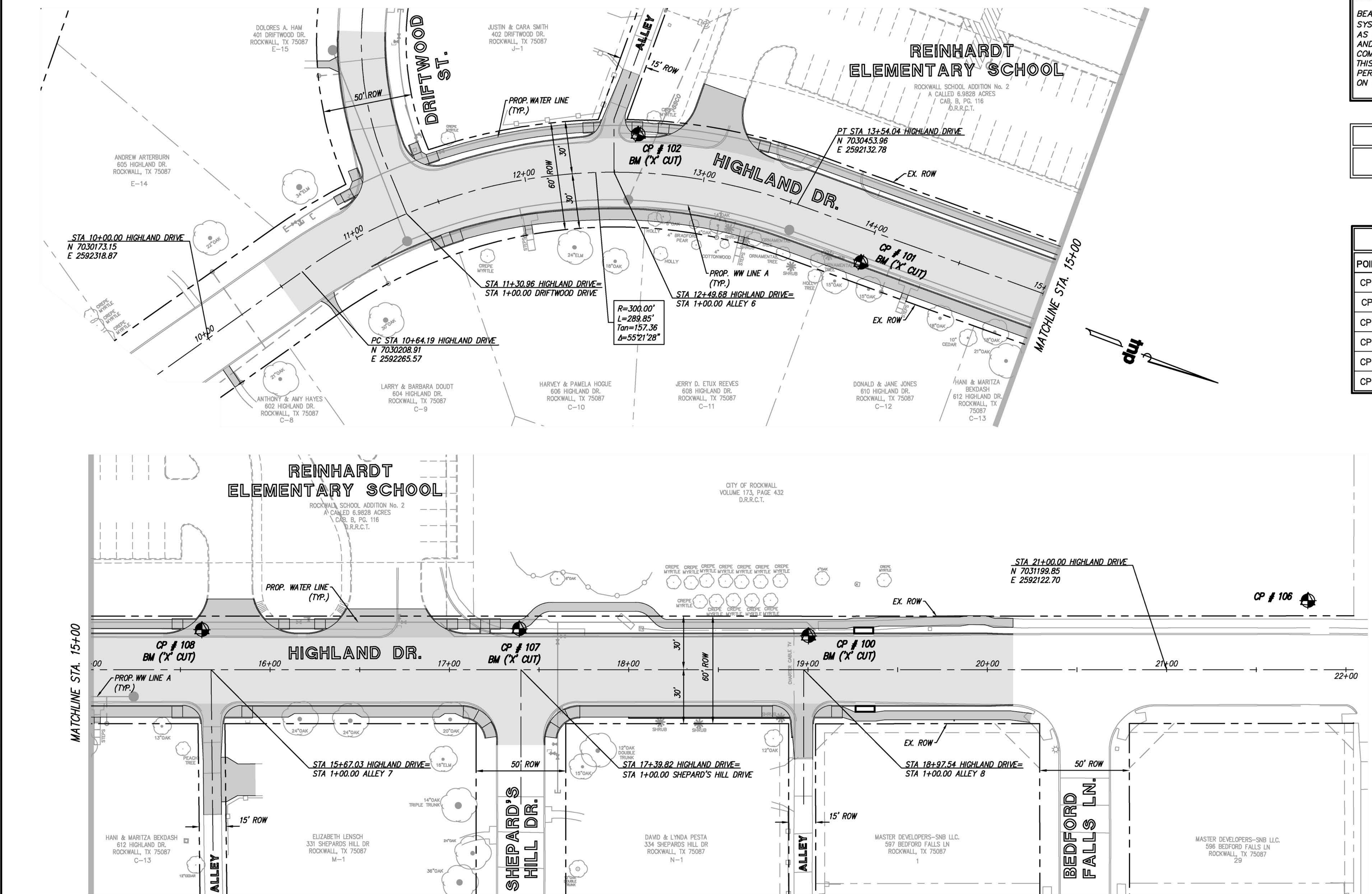
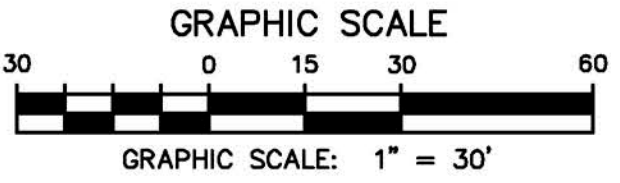
LEGEND

LIMIT OF PAVING IMPROVEMENTS

CONTROL POINT TABLE			
POINT No.	NORTHING	EASTING	DESCRIPTION
CP #100	7030999.82	2592106.54	CP X-CUT SET
CP #101	7030498.60	2592150.53	CP X-CUT SET
CP #102	7030357.13	2592127.61	CP X-CUT SET
CP #106	7031278.09	2592083.12	60D-NAIL
CP #107	7030838.49	2592104.80	CP X-CUT SET
CP #108	7030661.56	2592107.71	CP X-CUT SET

PROJECT BENCHMARKS

- BM-100
"X" CUT ON TOP OF CURB ON THE WEST CURB OF HIGHLAND DRIVE, APPROXIMATELY 200 FEET NORTH OF THE NORTHERN DRIVEWAY TO SCHOOL. ELEVATION =551.39
- BM-101
"X" CUT ON TOP OF CURB ON THE EAST CURB OF HIGHLAND DRIVE, APPROXIMATELY 340 FEET SOUTH OF SHEPARD'S HILL DRIVE. ELEVATION =548.23
- BM-102
"X" CUT ON TOP OF CURB AT NW CORNER OF THE INTERSECTION OF HIGHLAND DRIVE AND ALLEY, SOUTH OF THE SOUTH DRIVEWAY TO ELEMENTARY SCHOOL. ELEVATION =545.14
- BM-107
"X" CUT ON TOP OF SW ON THE WEST SIDE OF HIGHLAND DRIVE, APPROXIMATELY 20 FEET NORTH OF THE NORTH DRIVEWAY TO SCHOOL. ELEVATION =552.92
- BM-108
"X" CUT ON TOP OF CURB ON THE WEST CURB OF HIGHLAND DRIVE, APPROXIMATELY 105 FEET SOUTH OF THE NORTH DRIVEWAY TO SCHOOL. ELEVATION =551.66



Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\03 PROJECT CONTROL LAYOUT.dwg at Sep 27, 2019 10:33am by Jbedalle
Layout: 1 - teague nall and perkins, inc - add sewer - add water - add parking - add school siting

no.	revision	by	date

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Allen, Texas 75013
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TBPE: F-230; TBPLS: 10011600, 10011601, 10194381

City of Rockwall
The New Horizon

scale
when bar is
1 inch long

horiz
1" = 30'

vert
N/A

SEP 2019

tnp

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CITY OF ROCKWALL, TEXAS

HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

PROJECT CONTROL LAYOUT

tnp project
RWL18219

sheet
03

SUMMARY OF QUANTITIES

Item No.	Unit	Item Description	Total Quantity	Plans Qty.	Sheet Number										
					10	15	16	23	24	30	33	34	35	55	56
GENERAL, SITE PREPARATION AND DEMOLITION ITEMS															
1	LS	MOBILIZATION	1	1											
2	LS	TRAFFIC CONTROL PLAN, BARRICADES, SIGNS & RELATED DEVICES, IMPLEMENTATION & MAINTENANCE	1	1											
3	EA	PROJECT SIGN	1	1											
4	SY	REMOVE AND DISPOSE OF CONCRETE PAVEMENT (INCLUDING CURB), DRIVEWAYS, ALLEYS (ALL DEPTHS AND TYPES)	4,729			4729									
5	CY	UNCLASSIFIED STREET EXCAVATION	3,000			3000									
6	SY	REMOVE AND DISPOSE OF CONCRETE SIDEWALK	291			291									
7	EA	REMOVE AND DISPOSE OF TREES (REGARDLESS OF SIZE)	7			7									
8	EA	REMOVE AND REINSTALL MAIL BOXES (POST STYLE)	1			1									
9	EA	REMOVE AND REINSTALL MAIL BOXES (BRICK TYPE)	6			6									
10	LF	REMOVE AND DISPOSE OF 18" STORM DRAIN PIPE (RCP)	5			5									
11	LF	REMOVE AND DISPOSE OF 24" STORM DRAIN PIPE (RCP)	5			5									
12	EA	REMOVE AND DISPOSE OF 10' STD. CURB INLET	2			2									
SWP3 AND EROSION CONTROL															
13	LS	STORMWATER POLLUTION PREVENTION PLAN & EROSION CONTROL (INSTALL, MAINTAIN AND REMOVE)	1		1										
14	SY	FURNISH AND INSTALL BLOCK SOD FOR DISTURBED AREA	1,100		1,100										
PAVING AND DRAINAGE ITEMS															
15	SY	8" THICK REINFORCED CONCRETE STREET PAVEMENT INCL. CURB (3600 PSI)	4,358								1530	1852	976		
16	SY	6" THICK REINFORCED CONCRETE STREET PAVEMENT INCL. CURB (3600 PSI)	355								272	83			
17	SY	6" THICK REINFORCED CONCRETE DRIVEWAY (3600 PSI)	294								83	211			
18	SY	7"- 5"-7" REINFORCED CONCRETE ALLEY	192								75	75	42		
19	SY	REINFORCED CONCRETE SIDEWALK INCLUDING LEADWALK (4" THICK, 3000 PSI)	833								266	336	231		
20	SY	EXPOSED AGGREGATE CONCRETE LIDEWALK (4" THICK, 3000 PSI)	4								2	2			
21	LF	12" WALL INTEGRAL TO SIDEWALK W/ STONE VENEER (3000 PSI)	101										101		
22	SY	6" THICK FLEXBASE (COMPACT IN PLACE)	5,023								1955	1998	1070		
23	EA	BARRIER FREE RAMP- COR DIRECTIONAL CURB RAMP	4								2	2			
24	EA	BARRIER FREE RAMP- TXDOT TYPE 7	8								4	4			
25	EA	BARRIER FREE RAMP- TXDOT TYPE 10	4									2	2		
26	EA	BARRIER FREE RAMP- MIDBLOCK, TXDOT TYPE 2	2								1	1			
27	LF	CONSTRUCT STREET HEADER	37								37				
28	LF	CONSTRUCT LONGITUDINAL BUTT JOINT	525									173	262	90	
29	LF	STORM SEWER 18" RCP CLASS III	5							5					
30	LF	STORM SEWER 24" RCP CLASS III	7							7					
31	EA	CONSRUCT 10' STD. CURB INLET	2							2					
32	LF	TRENCH SAFETY FOR SD PIPE INSTALLATION	12							12					
WATER ITEMS															
33	LF	INSTALL 8" WATER LINE AWWA C900-DR14 PVC PIPE BY OPEN CUT	1,036				1036								
34	EA	INSTALL 8" AWWA C509 RESILIENT-SEATED GATE VALVE	13				13								
35	EA	INSTALL 6" AWWA C509 RESILIENT-SEATED GATE VALVE	4				4								
36	EA	INSTALL STD. FIRE HYDRANT ASSEMBLY AND LEAD	2				2								
37	EA	ABANDON WATER VALVE IN PLACE (REGARDLESS OF SIZE)	7				7								
38	EA	REMOVE AND REPLACE 1" SERVICE (SHORT SIDE)	1				1								
39	EA	REMOVE AND REPLACE 1" SERVICE (LONG SIDE)	6				6								
40	EA	REMOVE AND REPLACE 2" SERVICE LINE	1				1								
41	TON	DUCTILE IRON FITTINGS	2.0				2.0								
42	EA	CUT AND PLUG EXISTING 8" WATER LINE	5				5								
43	EA	CUT AND PLUG EXISTING 6" WATER LINE	1				1								
44	LF	12" WATER LINE CONCRETE ENCASEMENT (6" MINIMUM, 2,000PSI OR GREATER)	21							21					
45	LF	TRENCH SAFETY DESIGN & IMPLEMENTATION FOR WATER LINE CONSTRUCTION	1,036				1036								
46	EA	REMOVE AND REPLACE WATER METER BOX	8				8								
47	EA	RELOCATE WATER METER	6				6								
48	EA	RECONNECT EX. FIRE HYDRANT INCLUDING LEAD	2				2								
49	EA	REMOVE AND SALVAGE FIRE HYDRANT AND RETURN TO CITY	1				1								
50	LS	WATER LINE TESTING AND STERILIZATION	1				1								
WASTEWATER ITEMS															
51	LF	REMOVE AND DISPOSE OF EXISTING 6" WASTEWATER PIPE INCL. TRENCH BACKFILL	55						55						
52	EA	ABANDON CONCRETE MANHOLE	1				1								
53	EA	REMOVE/ABANDON AND DISPOSE OF WASTEWATER CLEANOUT	2				1	1							
54	LF	INSTALL 8" SDR-26 PVC WASTEWATER PIPE (INCL. EMBEDMENT)	745				502	243							
55	EA	INSTALL 4' DIA STD. CONCRETE MANHOLE	5				5								
56	EA	INSTALL STD. WASTEWATER CLEANOUT ON 8" MAIN	2					2							
57	EA	INSTALL 4" WASTEWATER SERVICE LINE (INCL. CLEANOUT) AND CONNECT TO EXISITNG	8				5	3							
58	EA	CORE DRILL INTO EX. MANHOLE AND REBUILD INVERT	1					1							
59	LF	TRENCH SAFETY DESIGN & IMPLEMENTATION FOR WASTEWATER LINE CONSTRUCTION	745					502	243						
60	LF	VIDEO INSPECTION OF WASTEWATER LINES (PRE-, AND POST PROJECT)	745					502	243						
SIGNAGE AND STRIPING															
61	EA	REMOVE AND SALVAGE EXISTING SIGN AND RETURN TO CITY (REGARDLESS OF SIZE AND TYPE)	8											7	1
62	EA	REMOVE AND DISPOSE OF EXISTING FOUNDATION FOR FOR SCHOOL ZONE FLASHING SIGN	1											1	
63	LF	INSTALL 24" PIANO BAR STYLE CROSSWALK THERMOPLASTIC STRIPING (W)	288											288	
64	LF	INSTALL 12" SCHOOL ZONE THERMOPLASTIC STRIPING BAR (W)	130											26	104
65	EA	INSTALL TRAFFIC SIGN (INCL. POLE, HARDWARE AND FOUNDATION) (REGARDLESS OF TYPE, NUMBER OF PLATES AND SIZE)	30											16	14
66	EA	REMOVE AND RELOCATE/REINSTALL EXISTING SIGN (REGARDLESS OF SIZE AND TYPE)	1											1	
67	EA	INSTALL SCHOOL ZONE FLASHING BEACON SIGN WITH SOLAR PANEL (INCL. POLE, HARDWARE AND FOUNDATION)	2											2	
ALTERNATE BID															
A1	SY	10" THICK FLEXBASE (COMPACT IN PLACE)	5,023								1955	1998	1070		
A2	CY	UNCLASSIFIED STREET EXCAVATION	3,635	3635											

Drawing: P:\PROJECTS\RWL18219\CA01\Sheets\PHASE 1 - NORTH\04 QUANTITY SHEET.dwg at Sep 27, 2019--2:41pm by jpskille
Layout: QUANTITY SHEET - Area: tnp-ar-dr.dwg

no.	revision	by	date

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scale
when bar is
1 inch long

horiz
N/A

vert
N/A

SEP 2019



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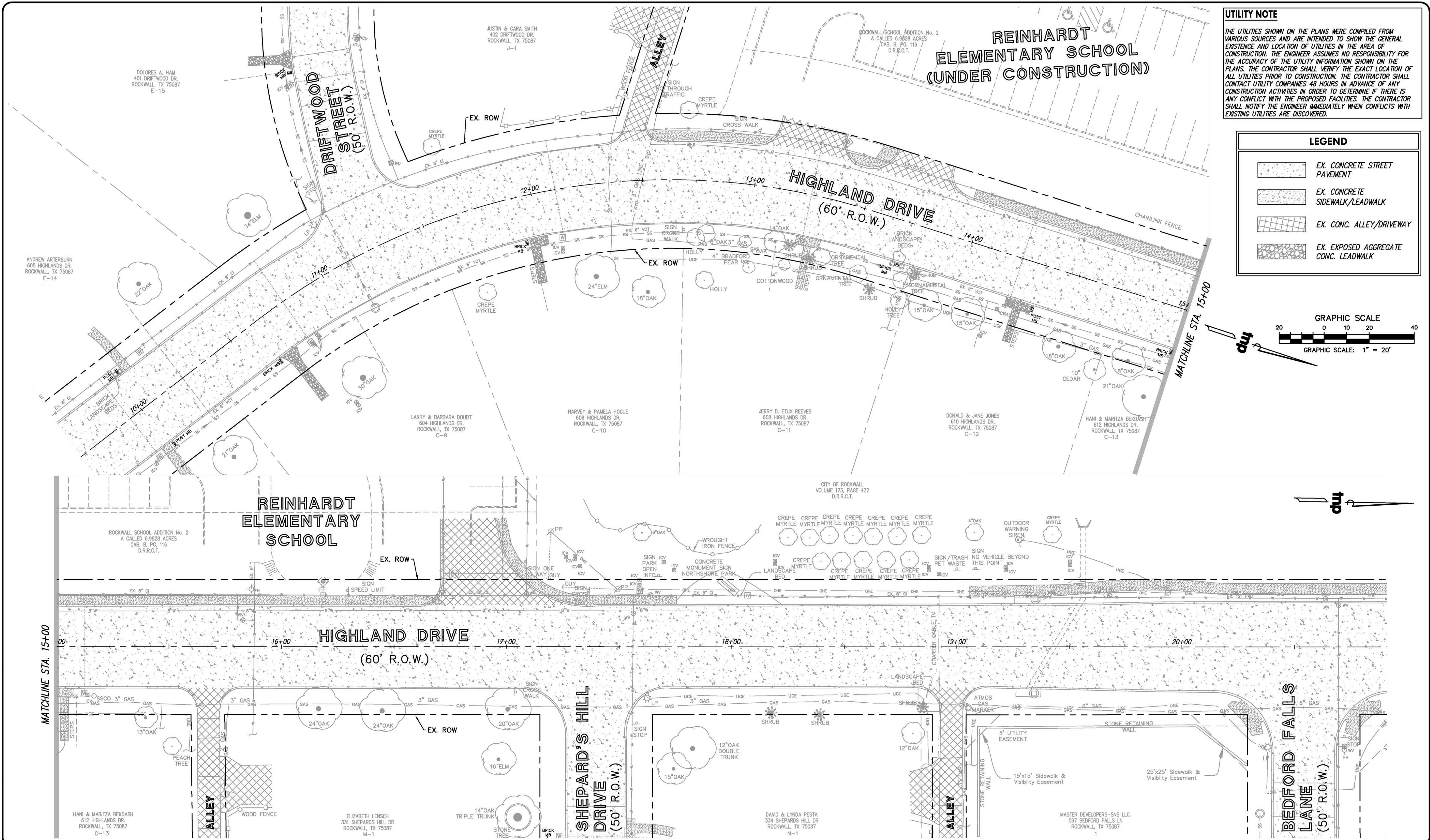
CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

QUANTITY SHEET

tnp project
RWL18219

sheet
04

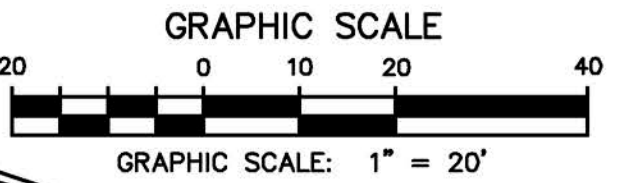
Drawing: P:\PROJECTS\RWL18219\CAD\Sheep\PHASE 1 - NORTH\06 EXISTING CONDITIONS.dwg at Sep 27, 2019-10:35am by Janelle
Layout: EXISTING CONDITIONS
Notes: XREF-EXTERIOR.dwg - X3D-SCHOOL SITE.dwg



UTILITY NOTE

THE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE IS ANY CONFLICT WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.

LEGEND	
	EX. CONCRETE STREET PAVEMENT
	EX. CONCRETE SIDEWALK/LEADWALK
	EX. CONC. ALLEY/DRIVEWAY
	EX. EXPOSED AGGREGATE CONC. LEADWALK



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scale
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1 inch long
horiz
1" = 20'
vert
N/A
SEP 2019



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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
EXISTING CONDITIONS

tnp project
RWL18219
sheet
06

LINESTYLE LEGEND

TELEPHONE	----- T1 -----	AT&T
TELEPHONE	----- T1 (C) -----	AT&T
TELEPHONE	----- T1 (D) -----	AT&T
CABLE TV	----- CATV1 -----	Charter
CABLE TV	----- CATV1 (C) -----	Charter
CABLE TV	----- CATV1 (D) -----	Charter
ELECTRIC	----- E1 -----	Oncor
ELECTRIC	----- E1 (C) -----	Oncor
ELECTRIC	----- E1 (D) -----	Oncor
ELECTRIC	----- E2 -----	City of Rockwall
ELECTRIC	----- E2 (C) -----	City of Rockwall
ELECTRIC	----- E2 (D) -----	City of Rockwall
GAS	----- G1 -----	Atmos Energy
GAS	----- G1 (C) -----	Atmos Energy
GAS	----- G1 (D) -----	Atmos Energy
STORM SEWER	----- STM1 -----	City of Rockwall
STORM SEWER	----- STM1 (C) -----	City of Rockwall
STORM SEWER	----- STM1 (D) -----	City of Rockwall
WATER	----- W1 -----	City of Rockwall
WATER	----- W1 (C) -----	City of Rockwall
WATER	----- W1 (D) -----	City of Rockwall
WASTEWATER	----- WW1 -----	City of Rockwall
WASTEWATER	----- WW1 (C) -----	City of Rockwall
WASTEWATER	----- WW1 (D) -----	City of Rockwall

SYMBOL LEGEND

○ WATER VENT PIPE	⊙ WATER MANHOLE
⊙ FIRE HYDRANT	⊙ WATER METER
⊙ WATER VALVE BOX	⊙ WATER VALVE
⊙ WATER MARKER POST	⊙ ELECTRIC PEDESTAL
⊙ CATHODIC PROTECTION	⊙ ELECTRIC MANHOLE
⊙ PHOTO TAKEN HERE	⊙ ELECTRIC METER
⊙ WASTEWATER MANHOLE	⊙ ELECTRIC PULLBOX
⊙ SEWER CLEAN OUT	⊙ HIGH MAST LIGHTING TOWER
⊙ STORM MANHOLE	⊙ ELECTRICAL PEDESTAL
⊙ STORM SEWER INLET	⊙ TRAFFIC SIGNAL PEDESTAL
⊙ STORM CLEAN OUT	⊙ ELECTRIC TRANSFORMER
⊙ GAS MANHOLE	⊙ TRAFFIC CAMERA
⊙ GAS METER	⊙ LUMINAIRE STANDARD
⊙ GAS VALVE	⊙ SIGNAL CONTROL PANEL
⊙ GAS TEST STATION	⊙ POWER POLE
⊙ CATV PEDESTAL	⊙ POWER POLE WITH RISER
⊙ CATV SERVICE BOX	⊙ ILLUMINATION POLE
⊙ TELEPHONE MANHOLE	⊙ GUY ANCHOR
⊙ TELEPHONE PEDESTAL	⊙ GUY POLE DEADMAN
⊙ TELEPHONE MARKER POST	⊙ SOLAR PANEL
⊙ TELEPHONE POLE	⊙ TRAFFIC SIGNAL BOX
⊙ TELEPHONE HAND HOLE	⊙ STREET SIGN
⊙ TELEPHONE REPEATER POINT	⊙ TRAFFIC SIGNAL POLE
⊙ FIBER OPTIC HAND HOLE	⊙ GENERIC MANHOLE
⊙ FIBER OPTIC MARKER POST	⊙ BENCH MARK
⊙ FIBER OPTIC MANHOLE	⊙ CONTROL POINT
⊙ RAILROAD SIGNAL	
⊙ TOWER	

GENERAL NOTES

SIZE INFORMATION SHOWN IS TAKEN FROM AVAILABLE UTILITY RECORDS.

UTILITY QUALITY LEVEL A:

PRECISE HORIZONTAL AND VERTICAL LOCATION OF UTILITIES OBTAINED BY THE ACTUAL EXPOSURE (OR VERIFICATION OF PREVIOUSLY EXPOSED AND SURVEYED UTILITIES) AND SUBSEQUENT MEASUREMENT OF SUBSURFACE UTILITIES, USUALLY AT A SPECIFIC POINT.

UTILITY QUALITY LEVEL B:

INFORMATION OBTAINED THROUGH THE APPLICATION OF APPROPRIATE SURFACE GEOPHYSICAL METHODS TO DETERMINE THE EXISTENCE AND APPROXIMATE HORIZONTAL POSITION OF SUBSURFACE UTILITIES. QUALITY LEVEL B DATA SHOULD BE REPRODUCIBLE BY SURFACE GEOPHYSICS AT ANY POINT OF THEIR DEPICTION. THIS INFORMATION IS SURVEYED TO APPLICABLE TOLERANCES DEFINED BY THE PROJECT AND REDUCED ONTO PLAN DOCUMENTS.

UTILITY QUALITY LEVEL C:

INFORMATION OBTAINED BY SURVEYING AND PLOTTING VISIBLE ABOVE-GROUND UTILITY FEATURES AND BY USING PROFESSIONAL JUDGEMENT IN CORRELATING THIS INFORMATION TO QUALITY LEVEL D INFORMATION

UTILITY QUALITY LEVEL D:

INFORMATION DERIVED FROM EXISTING RECORDS OR ORAL RECOLLECTIONS.

ALL IRRIGATION AND UTILITY SERVICE LINES WERE NOT INVESTIGATED AND ARE NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO BEGINNING WORK AND NOTIFY THE ENGINEER FOR ANY DISCREPANCY. ANY DAMAGE TO UTILITIES WILL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT ITS OWN EXPENSES.

QUALITY LEVEL LEGEND

----- WW1 -----	WW1	QUALITY LEVEL B
----- WW1 (C) -----	WW1 (C)	QUALITY LEVEL C
----- WW1 (D) -----	WW1 (D)	QUALITY LEVEL D

CONTACT LIST

COMPANY	UTILITES COORDINATOR	PHONE	E-mail	ADDRESS
AT&T	Christopher Holmes	903-457-2303	ch7658@att.com	2702 Wesley Street, Greenville Texas 75401
Atmos	John Crane	817-207-2831	Map.Requests@atmosenergy.com	100 W. Morningside Drive, Fort Worth, TX 76110
Charter			john.crane@atmosenergy.com	
Oncor	Katie Morton		west-engineering-relo@charter.com	wayne.carter@charter.com
			DistributionGIS@oncor.com	

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City of Rockwall
The New Horizon

scale when bar is 1 inch long
horiz N/A
vert N/A
SEP 2018



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CITY OF ROCKWALL, TEXAS

PAVING, DRAINAGE, WATER AND WASTEWATER IMPROVEMENTS FOR
HIGHLAND DRIVE

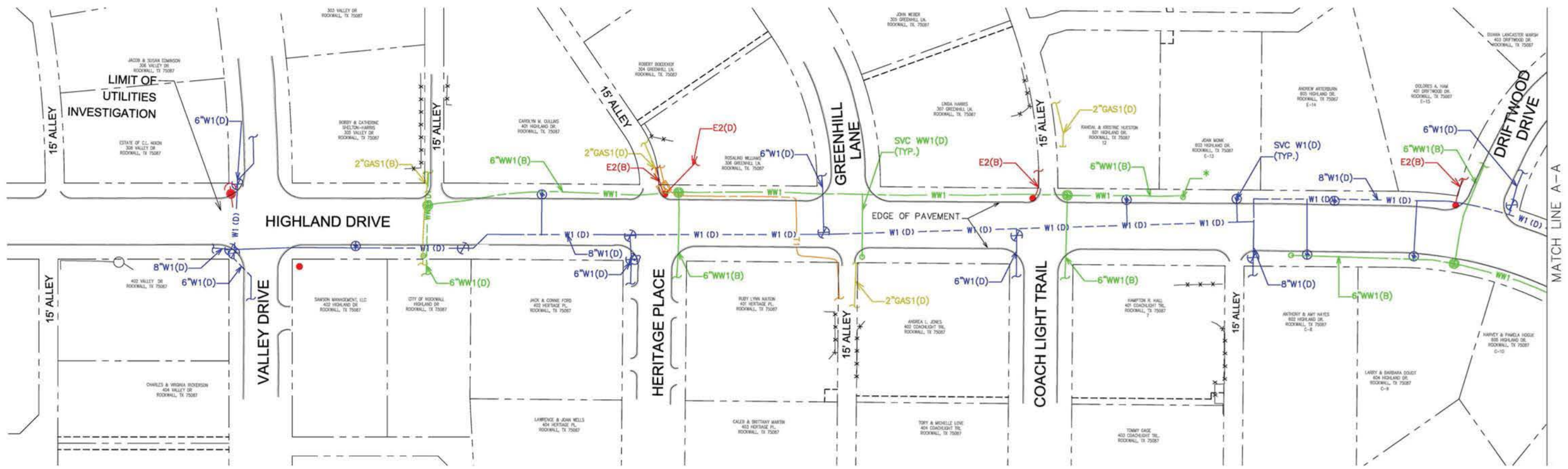
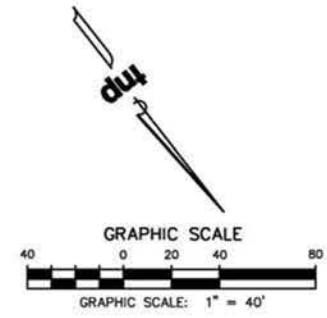
General Notes & Legends
for Existing Utilities Layout

tnp project
RWL18219

sheet

07

* NOT FOUND IN THE FIELD AND DRAWN IN
PER AS-BUILT DRAWINGS



Tracing: N:\PROJECTS\RWL18219\01-PLAN\02-Utilities\02-Utilities.dwg - TNP Level B & C.dwg
Layout: RWL18219\01-PLAN\02-Utilities\02-Utilities.dwg - TNP Level B & C.dwg
Project: RWL18219 - PAVING, DRAINAGE, WATER AND WASTEWATER IMPROVEMENTS FOR HIGHLAND DRIVE
Sheet: 08 - Existing Utilities from Beginning to Match Line A-A
Date: 09/21/2018
By: [Signature]

no.	revision	by	date

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scale
when bar is
1 inch long
horiz
1"=40'
vert
N/A
SEP 2018



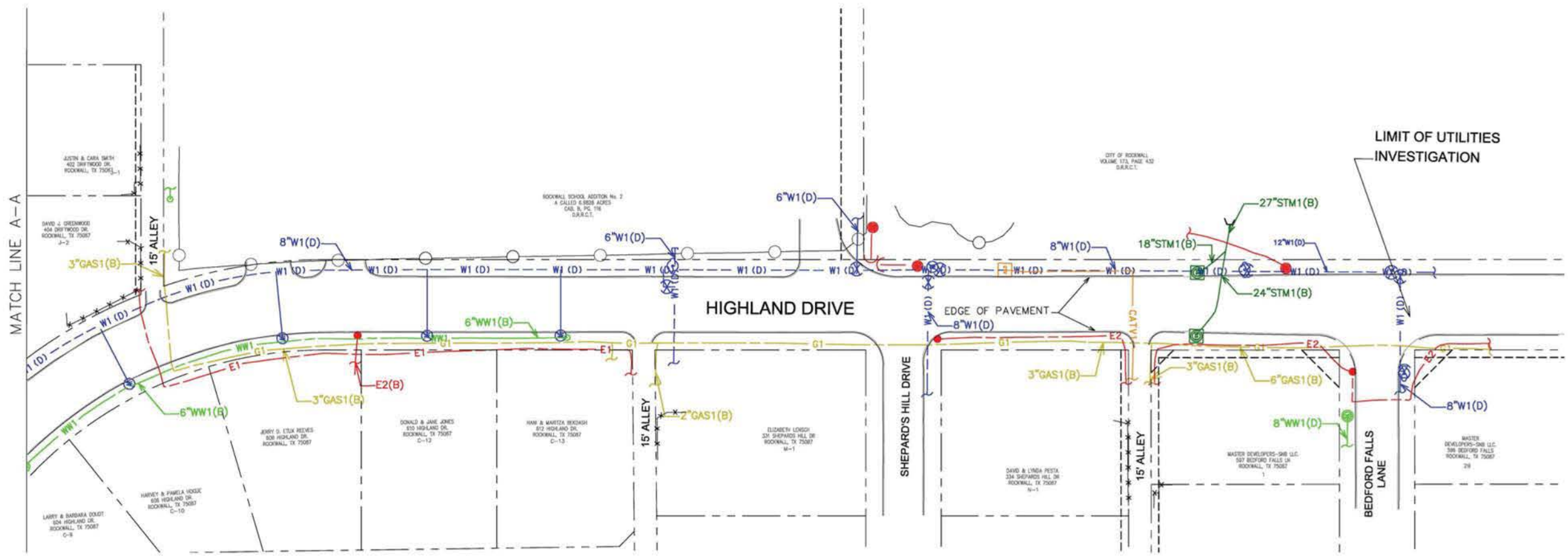
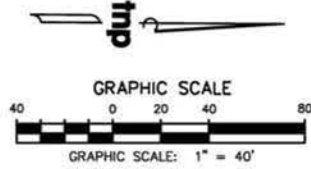
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CITY OF ROCKWALL, TEXAS
PAVING, DRAINAGE, WATER AND WASTEWATER IMPROVEMENTS FOR
HIGHLAND DRIVE
Existing Utilities from
Beginning to Match Line A-A

tnp project
RWL18219
sheet
08

Drawn by: N:\PROJECTS\1818219\1818219.dwg, Sep 21, 2018 10:57 am by: kshah
Checked by: N:\PROJECTS\1818219\1818219.dwg, Sep 21, 2018 10:57 am by: kshah
Project: HIGHWAY IMPROVEMENTS - FROM MATCH LINE A-A TO END
Title: HIGHWAY IMPROVEMENTS - FROM MATCH LINE A-A TO END
Scale: 1"=40'
Sheet: 09 of 09
Revision: 0
Date: 09/21/2018

* NOT FOUND IN THE FIELD AND DRAWN IN
PER AS-BUILT DRAWINGS



no.	revision	by	date

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Allen, Texas 75013
214.461.9867 ph 214.461.9864 fx
www.tnppinc.com
TBPE: F-230; TBPLS: 10011600, 10011601, 10194381



scale
when bar is
1 inch long
horiz
1"=40'
vert
N/A
SEP 2018


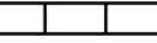









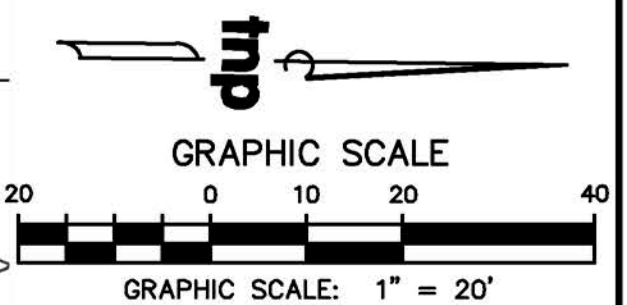
RECORD DOCUMENTS
THESE PLANS ARE FOR THE OWNER'S USE AS RECORD SET
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AND CONSTRUCTION RELATED CHANGES AS RECORDED BY
THE CONTRACTOR. CHANGES MADE FROM THE ORIGINAL
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AND ARE NOT THE RESPONSIBILITY OF TEAGUE NALL &
PERKINS, INC. OR THE ENGINEER OF RECORD ON THE
ORIGINAL DOCUMENTS. ORIGINAL PLANS RELEASED FOR
CONSTRUCTION WERE SEALED BY LINA NAJEEB OBEIDAT, P.E.
NO. 123510 ON 09/21/2018.

CITY OF ROCKWALL, TEXAS
PAVING, DRAINAGE, WATER AND WASTEWATER IMPROVEMENTS FOR
HIGHLAND DRIVE
Existing Utilities from
Matchline Line A-A to End

tnp project
RWL18219
sheet
09

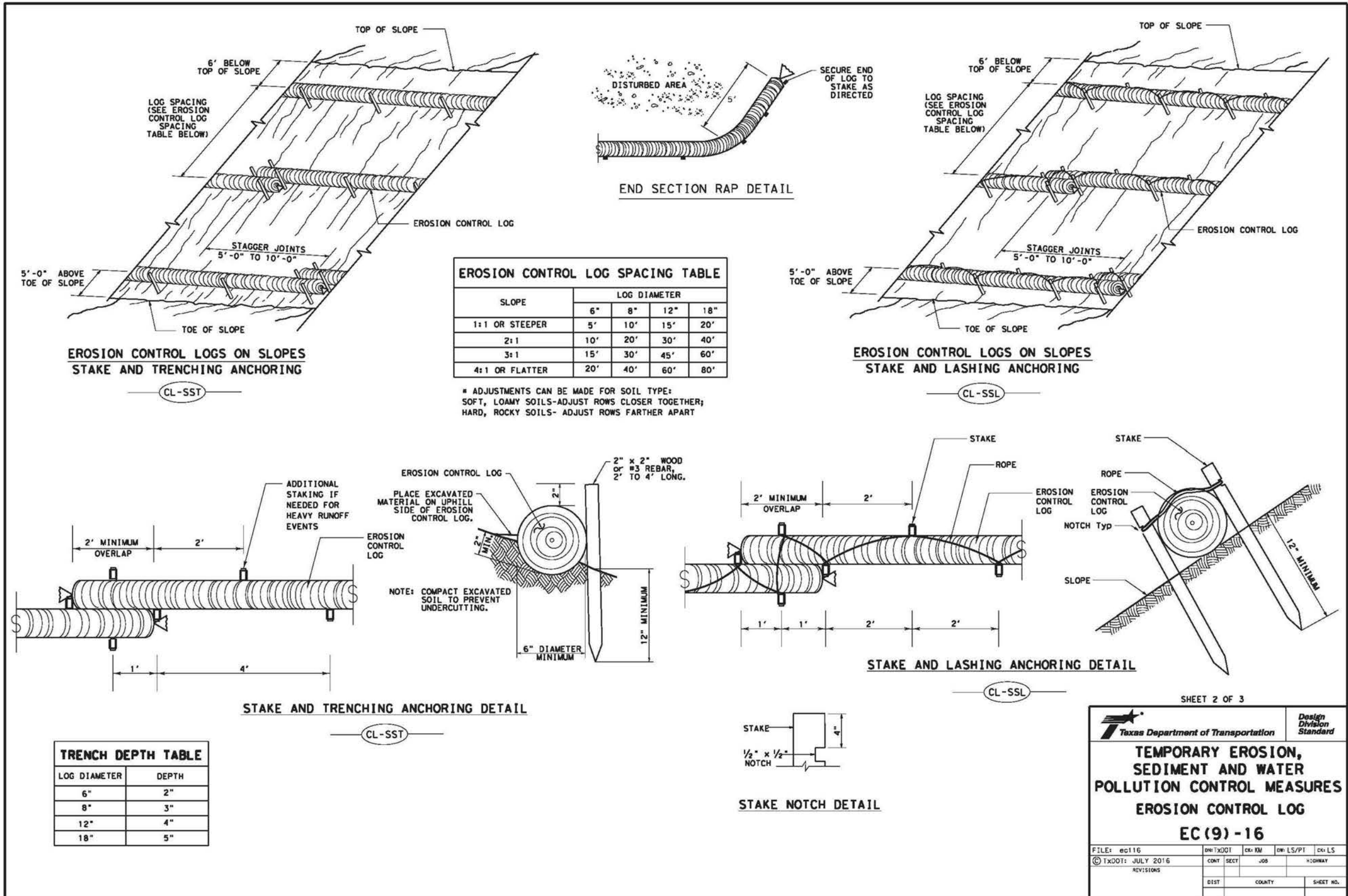
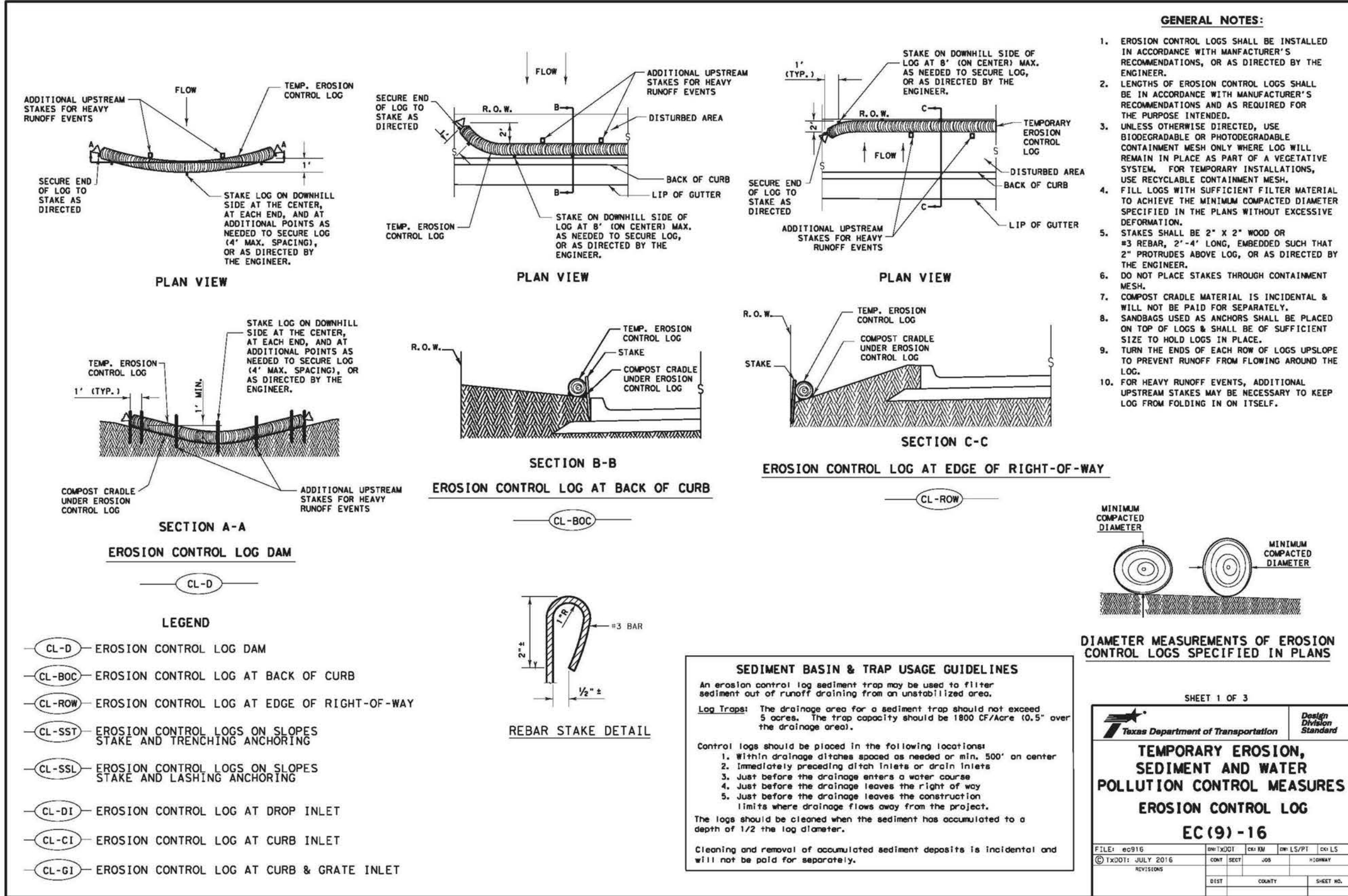


- | LEGEND | |
|---|---------------------------|
|  | EROSION CONTROL LOG |
|  | INLET PROTECTION |
|  | PROPOSED CONCRETE P.V.T. |
|  | PROPOSED SOD AREA |
|  | FLOW ARROW |
|  | EXISTING MINOR CONTOUR |
|  | EXISTING MAJOR CONTOUR |
|  | PROPOSED STORM DRAIN LINE |
|  | EXISTING STORM DRAIN LINE |



Inp project
 WL18219
 sheet
 10

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\9 EROSION DETAILS 2 OF 2.dwg at Sep 27, 2019-10:34am by jhaskille
Layout: 8 EROSION DETAILS 1 OF 2
Xrefs: xref-Border.dwg



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scale
when bar is
1 inch long
horiz
N/A
vert
N/A
SEP 2019

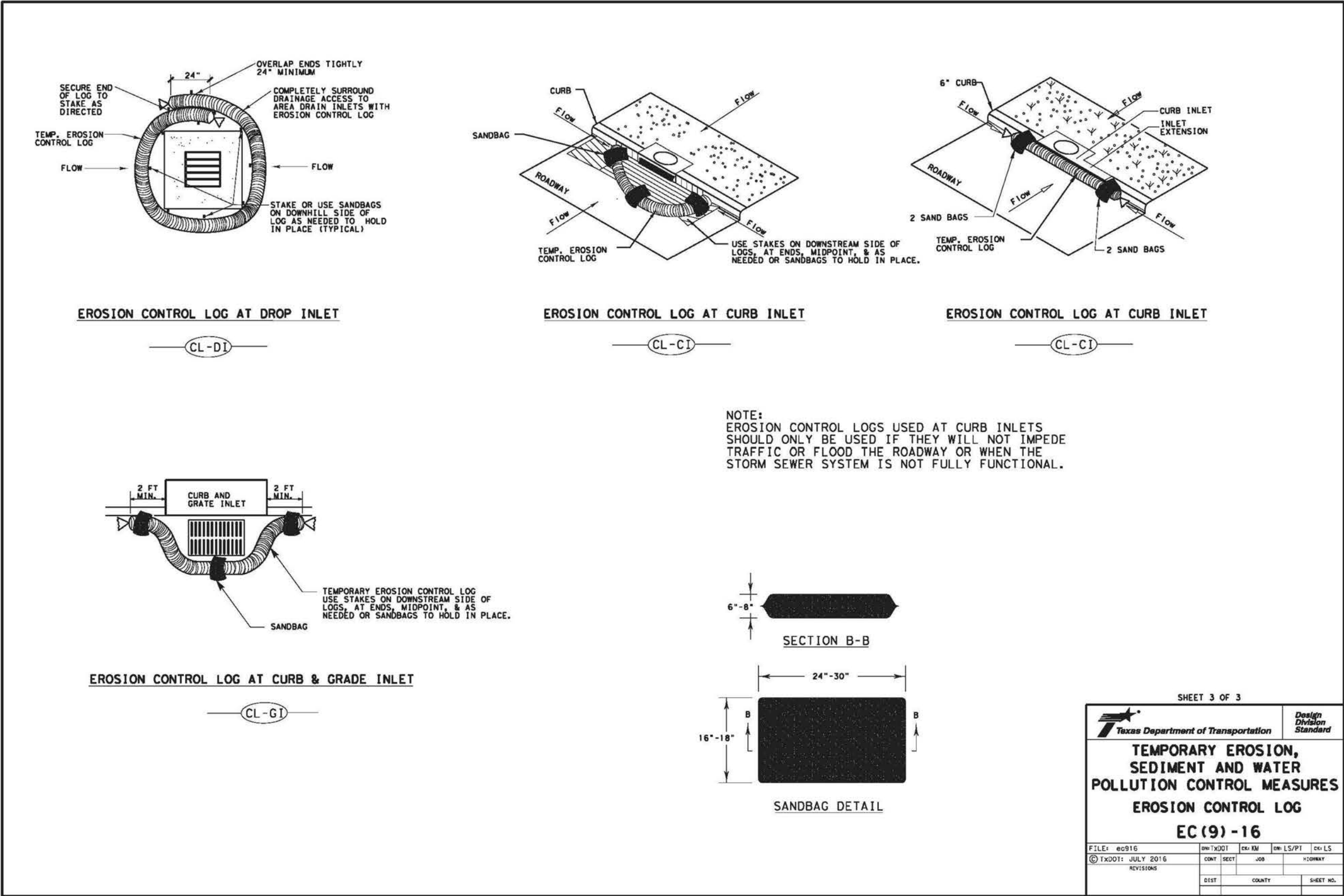
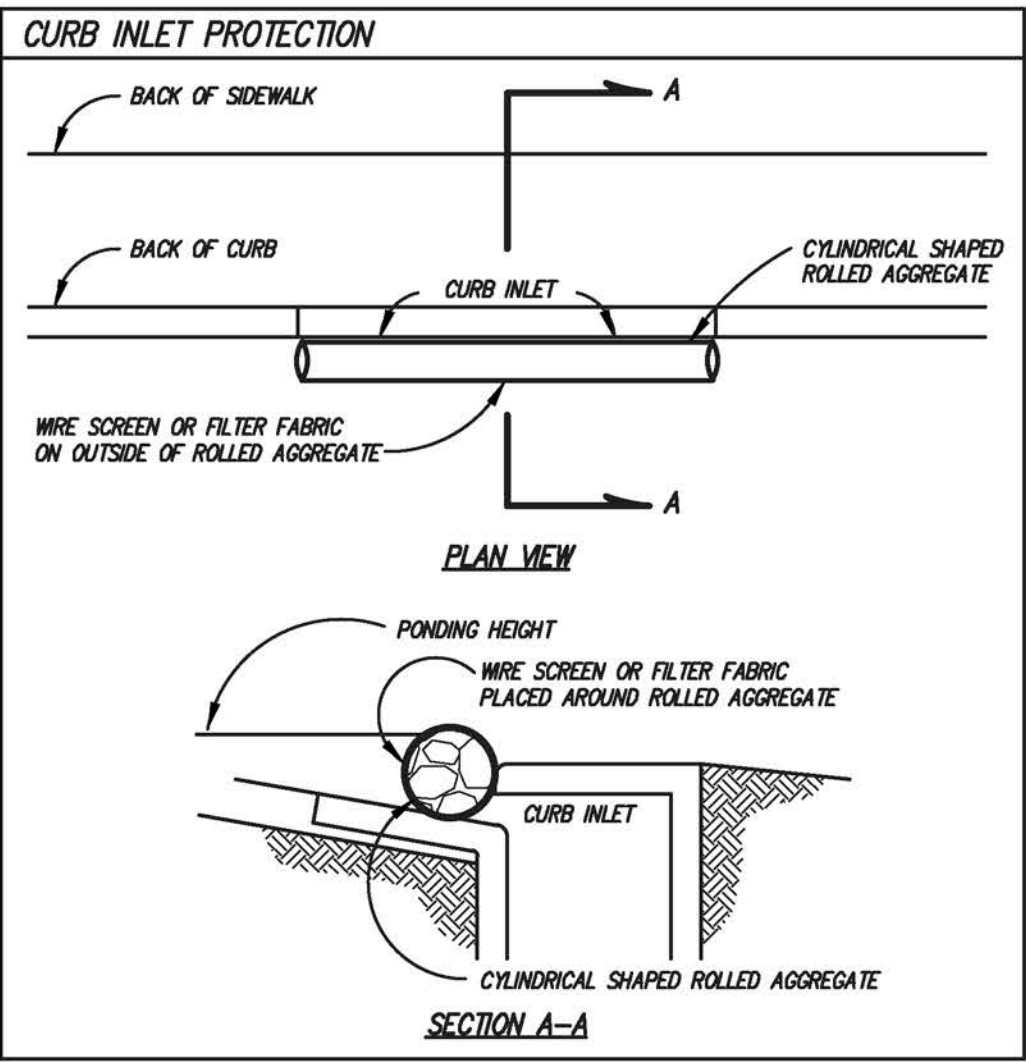


RECORD DOCUMENTS
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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
EROSION DETAILS 1 OF 2

tnp project
RWL18219
sheet
11

Drawing: P:\PROJECTS\RWL18219\CAD Sheets\PHASE 1 - NORTH\9 EROSION DETAILS 2 OF 2.dwg at Sep 27, 2019-10:34am by jbsalle
Layout: 9 EROSION DETAILS 2 OF 2 - Arctis_xref-borders.dwg



no.	revision	by	date

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scale
when bar is
1 inch long
horiz
N/A
vert
N/A
SEP 2019

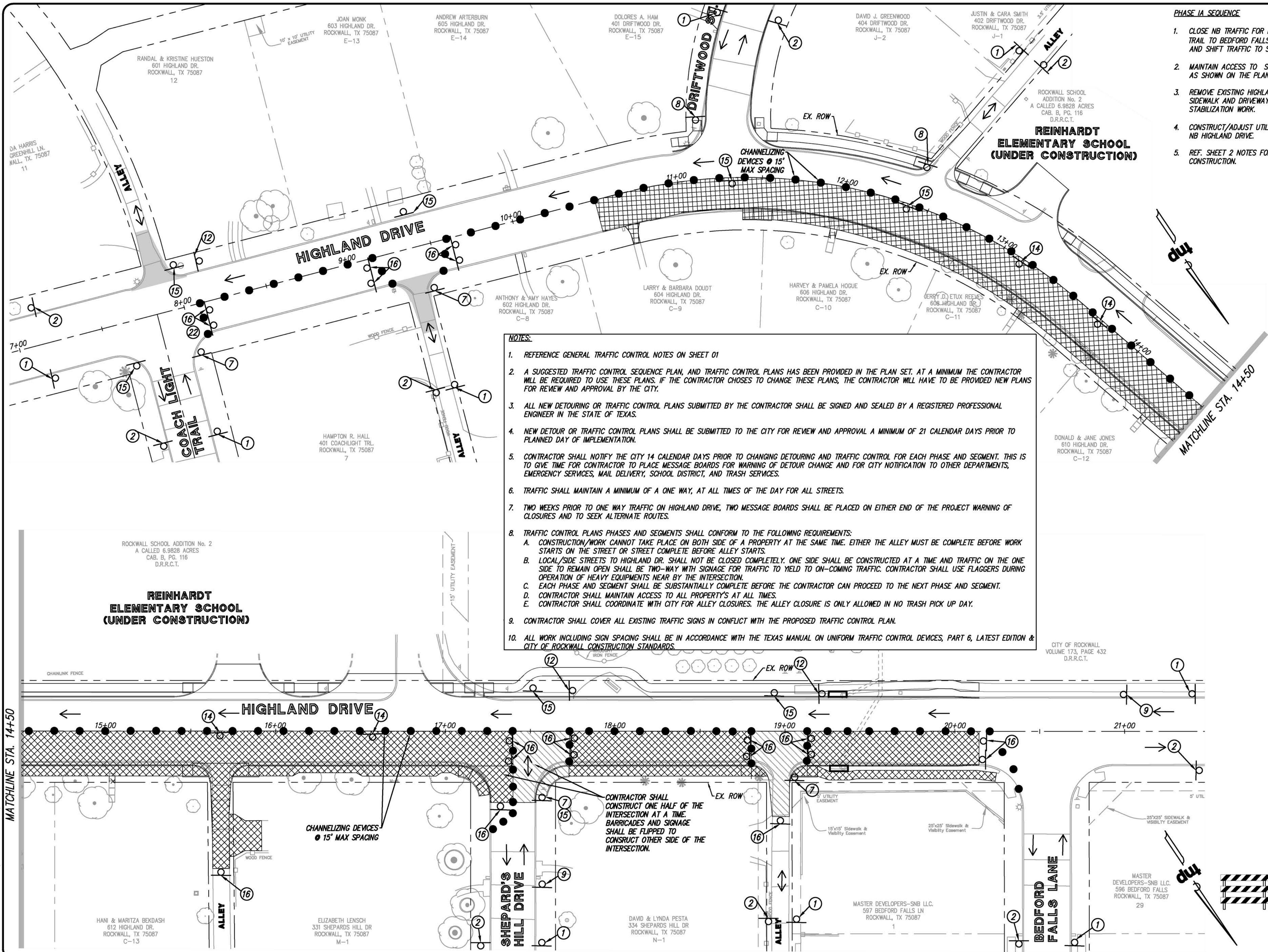


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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
EROSION DETAILS 2 OF 2

tnp project
RWL18219
sheet
12

Drawing: P:\PROJECTS\RW18219\CAD\Sheet\PHASE 1 - NORTH\11 TRAFFIC CONTROL PHASE 1.dwg at Sep 27, 2019-10:34am by Jbedelle
Layout: 10 TRAFFIC CONTROL PHASE 1 - Aets: xref-border.dwg - XBD-PAVING.dwg - XBD-SCHOOL SITE.dwg - XBD-BASED.WG



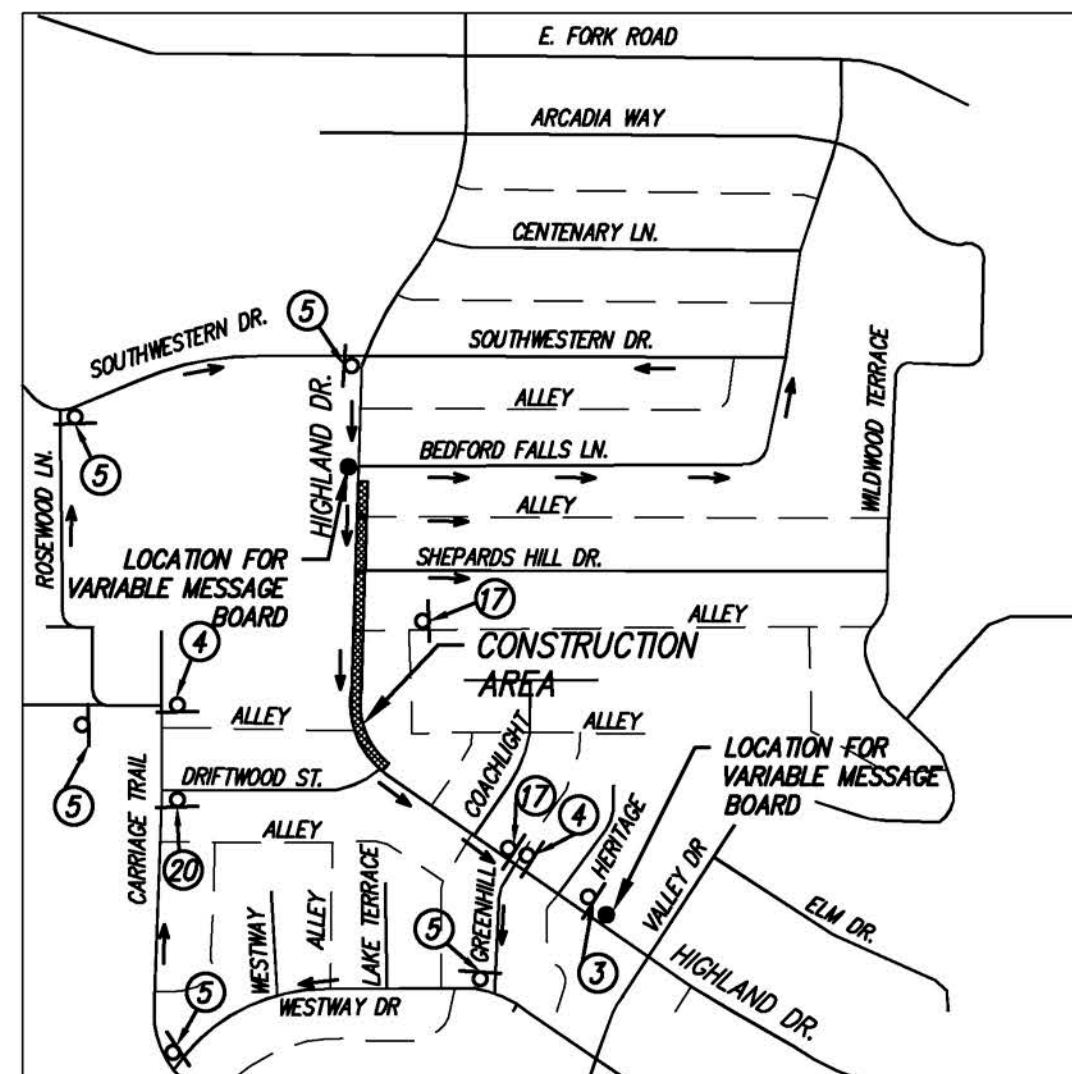
- NOTES:**
- REFERENCE GENERAL TRAFFIC CONTROL NOTES ON SHEET 01
 - A SUGGESTED TRAFFIC CONTROL SEQUENCE PLAN, AND TRAFFIC CONTROL PLANS HAS BEEN PROVIDED IN THE PLAN SET. AT A MINIMUM THE CONTRACTOR WILL BE REQUIRED TO USE THESE PLANS. IF THE CONTRACTOR CHOSE TO CHANGE THESE PLANS, THE CONTRACTOR WILL HAVE TO BE PROVIDED NEW PLANS FOR REVIEW AND APPROVAL BY THE CITY.
 - ALL NEW DETOURING OR TRAFFIC CONTROL PLANS SUBMITTED BY THE CONTRACTOR SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS.
 - NEW DETOUR OR TRAFFIC CONTROL PLANS SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL A MINIMUM OF 21 CALENDAR DAYS PRIOR TO PLANNED DAY OF IMPLEMENTATION.
 - CONTRACTOR SHALL NOTIFY THE CITY 14 CALENDAR DAYS PRIOR TO CHANGING DETOURING AND TRAFFIC CONTROL FOR EACH PHASE AND SEGMENT. THIS IS TO GIVE TIME FOR CONTRACTOR TO PLACE MESSAGE BOARDS FOR WARNING OF DETOUR CHANGE AND FOR CITY NOTIFICATION TO OTHER DEPARTMENTS, EMERGENCY SERVICES, MAIL DELIVERY, SCHOOL DISTRICT, AND TRASH SERVICES.
 - TRAFFIC SHALL MAINTAIN A MINIMUM OF A ONE WAY, AT ALL TIMES OF THE DAY FOR ALL STREETS.
 - TWO WEEKS PRIOR TO ONE WAY TRAFFIC ON HIGHLAND DRIVE, TWO MESSAGE BOARDS SHALL BE PLACED ON EITHER END OF THE PROJECT WARNING OF CLOSURES AND TO SEEK ALTERNATE ROUTES.
 - TRAFFIC CONTROL PLANS PHASES AND SEGMENTS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - CONSTRUCTION/WORK CANNOT TAKE PLACE ON BOTH SIDE OF A PROPERTY AT THE SAME TIME. EITHER THE ALLEY MUST BE COMPLETE BEFORE WORK STARTS ON THE STREET OR STREET COMPLETE BEFORE ALLEY STARTS.
 - LOCAL/SIDE STREETS TO HIGHLAND DR. SHALL NOT BE CLOSED COMPLETELY. ONE SIDE SHALL BE CONSTRUCTED AT A TIME AND TRAFFIC ON THE ONE SIDE TO REMAIN OPEN SHALL BE TWO-WAY WITH SIGNAGE FOR TRAFFIC TO YIELD TO ON-COMING TRAFFIC. CONTRACTOR SHALL USE FLAGGERS DURING OPERATION OF HEAVY EQUIPMENTS NEAR BY THE INTERSECTION.
 - EACH PHASE AND SEGMENT SHALL BE SUBSTANTIALLY COMPLETE BEFORE THE CONTRACTOR CAN PROCEED TO THE NEXT PHASE AND SEGMENT.
 - CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTY'S AT ALL TIMES.
 - CONTRACTOR SHALL COORDINATE WITH CITY FOR ALLEY CLOSURES. THE ALLEY CLOSURE IS ONLY ALLOWED IN NO TRASH PICK UP DAY.
 - CONTRACTOR SHALL COVER ALL EXISTING TRAFFIC SIGNS IN CONFLICT WITH THE PROPOSED TRAFFIC CONTROL PLAN.
 - ALL WORK INCLUDING SIGN SPACING SHALL BE IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, PART 6, LATEST EDITION & CITY OF ROCKWALL CONSTRUCTION STANDARDS.

PHASE 1A SEQUENCE

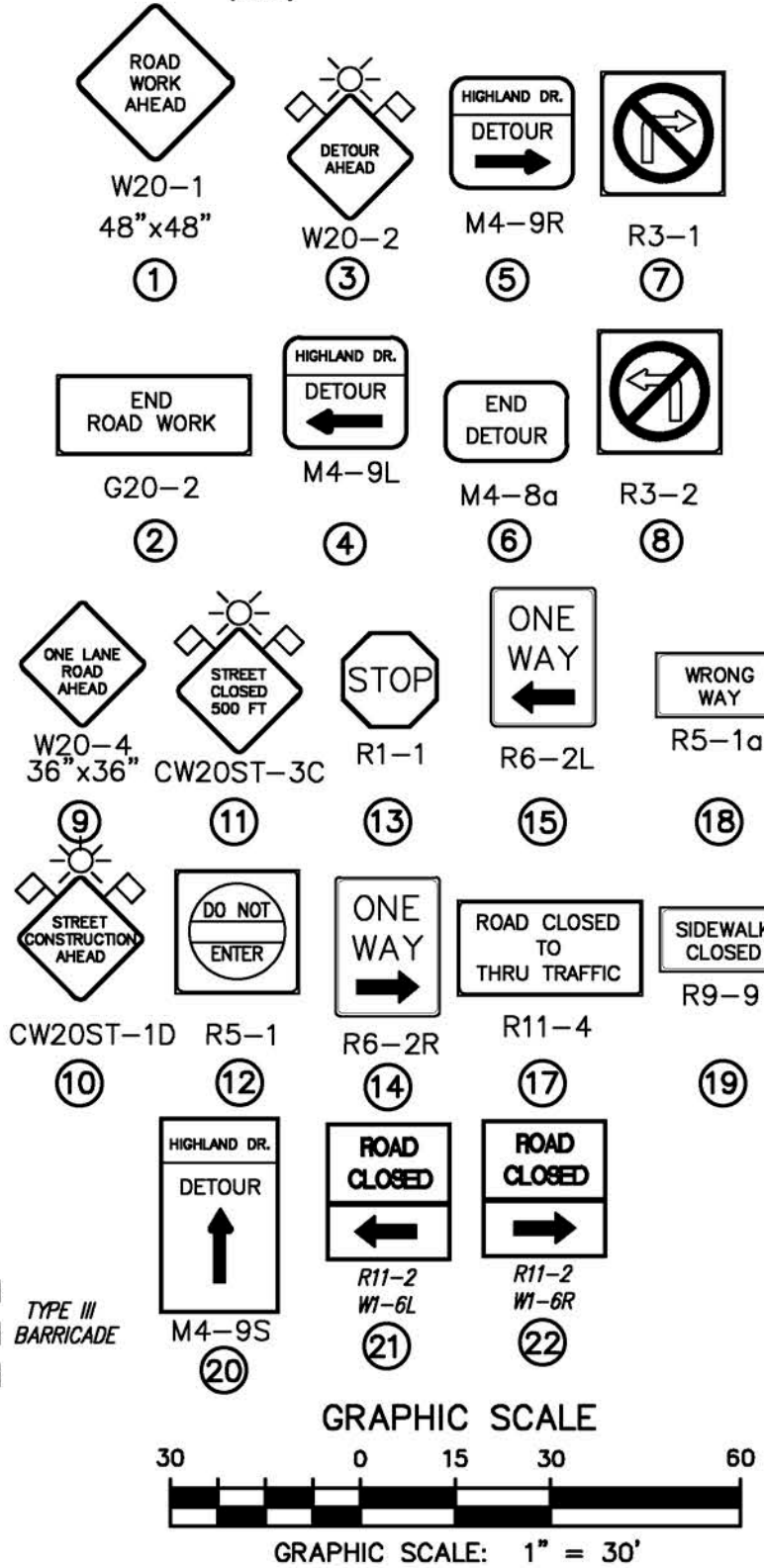
- CLOSE NB TRAFFIC FOR HIGHLAND DRIVE (FROM COACH LIGHT TRAIL TO BEDFORD FALLS). INSTALL CHANNELIZING DEVICES, AND SHIFT TRAFFIC TO SB LANE - ONE WAY ONLY.
- MAINTAIN ACCESS TO SHEPARD'S HILL DRIVE AND AN ALLEY AS SHOWN ON THE PLAN.
- REMOVE EXISTING HIGHLAND DRIVE NB LANE PAVEMENT, SIDEWALK AND DRIVEWAYS, AND PERFORM SUBGRADE STABILIZATION WORK.
- CONSTRUCT/ADJUST UTILITIES AND CONSTRUCT PAVEMENT IN NB HIGHLAND DRIVE.
- REF. SHEET 2 NOTES FOR OVERALL SEQUENCE OF CONSTRUCTION.

LEGEND

- CONSTRUCTION ZONE/AREA PHASE 1A
- CONSTRUCTION ZONE/AREA PHASE 1B
- NEW CONCRETE PVMT. (PREVIOUS STAGE)
- CHANNELIZING DEVICES (CONE OR BARREL OR PANEL)
- CONSTRUCTION WARNING SIGN
- TEMP. CONSTRUCTION SIGN
- DIRECTION OF TRAFFIC DURING CONSTRUCTION



CONCEPT DETOUR PLAN (N.T.S.)



no.	revision	by	date

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City of Rockwall
The New Horizon

scale
when bar is
1 inch long
horiz
1" = 30'
vert
N/A
SEP 2019



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CITY OF ROCKWALL, TEXAS

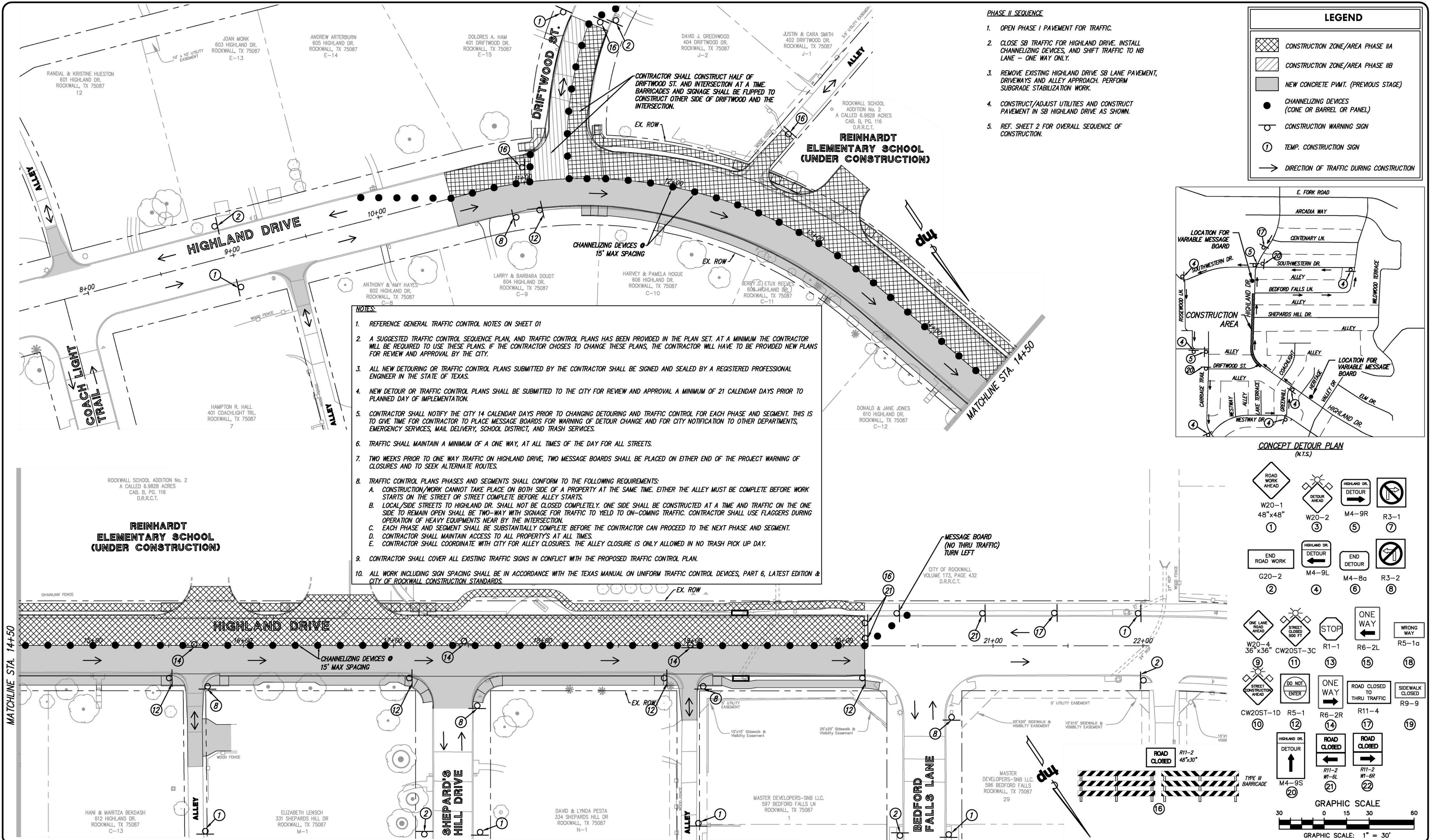
HIGHLAND DRIVE RECONSTRUCTION, PHASE I

(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

SUGGESTED TRAFFIC CONTROL AND SEQUENCING - PHASE I

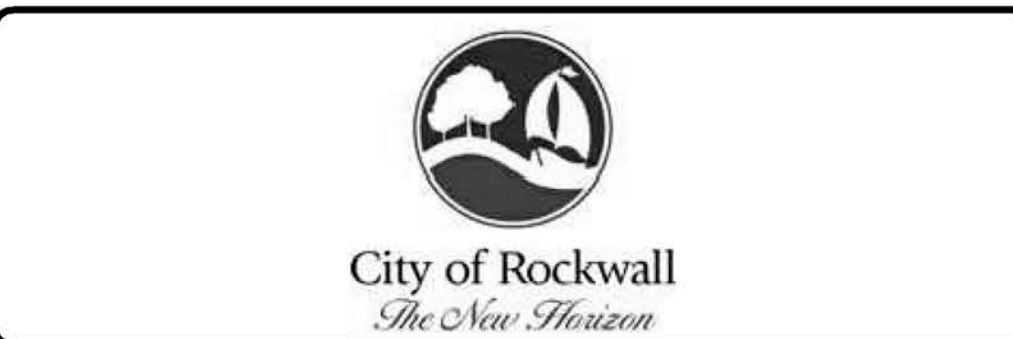
tnp project
RW18219
sheet
13

Drawing: P:\PROJECTS\RW18219\CAD\Sheets\PHASE 1 - NORTH\11 TRAFFIC CONTROL PHASE II.dwg, 27-Sep-2019 10:34am by Jbedelle
Layout: 11 TRAFFIC CONTROL PHASE II, 27-Sep-2019 10:34am by Jbedelle
Accts: xref-bor-ang - X3D-PAVING - X3D-SCHOOL SILENCING - X3D-BASEDING



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scale
when bar is
1 inch long
horiz
1" = 30'
vert
N/A
SEP 2019

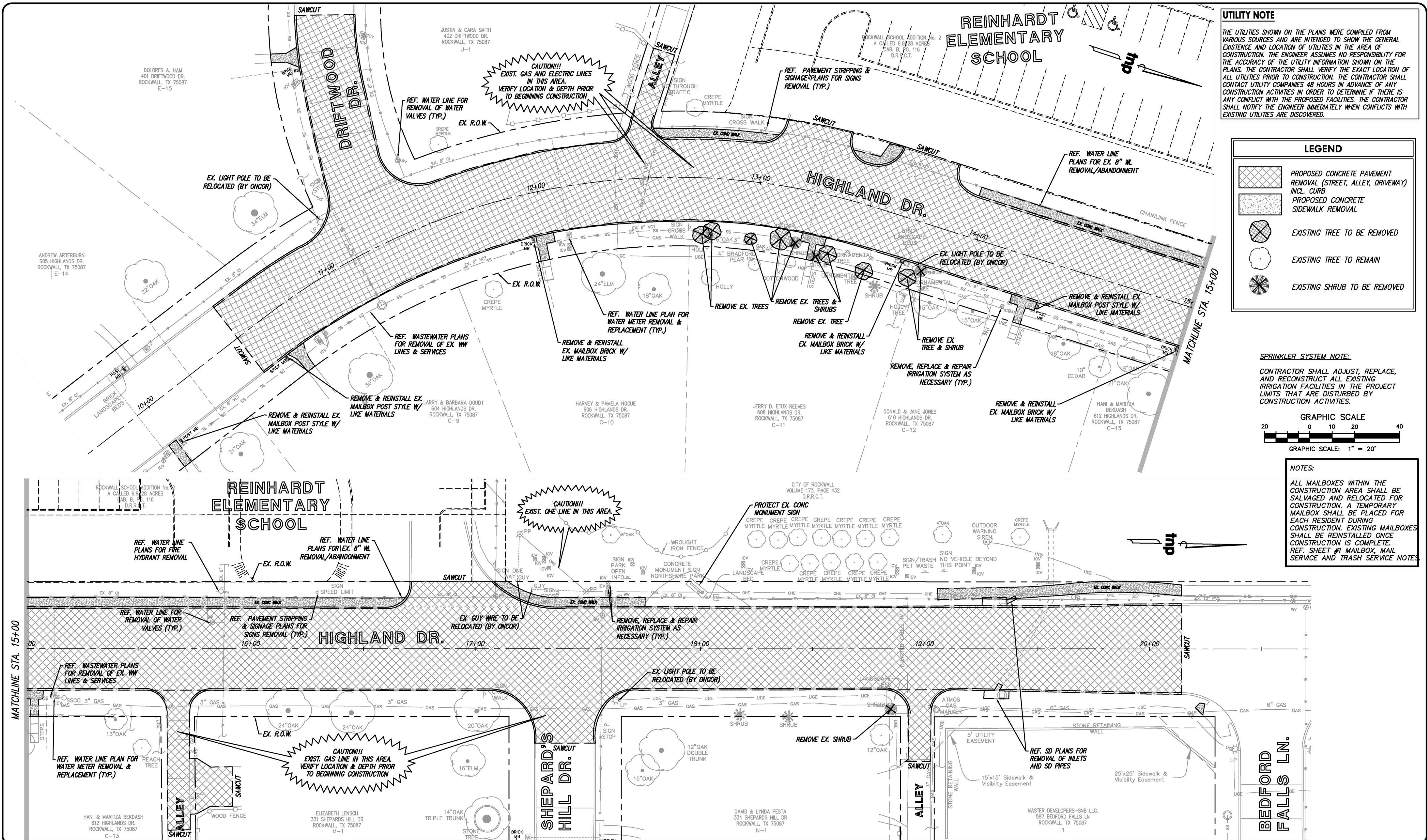


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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
SUGGESTED TRAFFIC CONTROL AND SEQUENCING - PHASE II

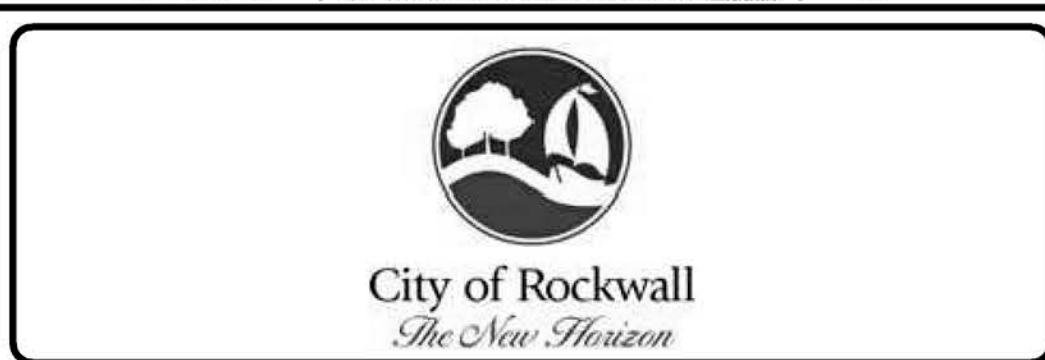
tnp project
RW18219
sheet
14

Drawing: P:\PROJECTS\RW18219\CAD\Sheets\PHASE 1 - NORTH\12 DEMOLITION PLAN.dwg at Sep 27, 2019-10:34am by bedelle
Layout: 12 DEMOLITION PLAN
Notes: xref: 12 DEMOLITION PLAN - 1201-DEMOLITION PLAN



no.	revision	by	date

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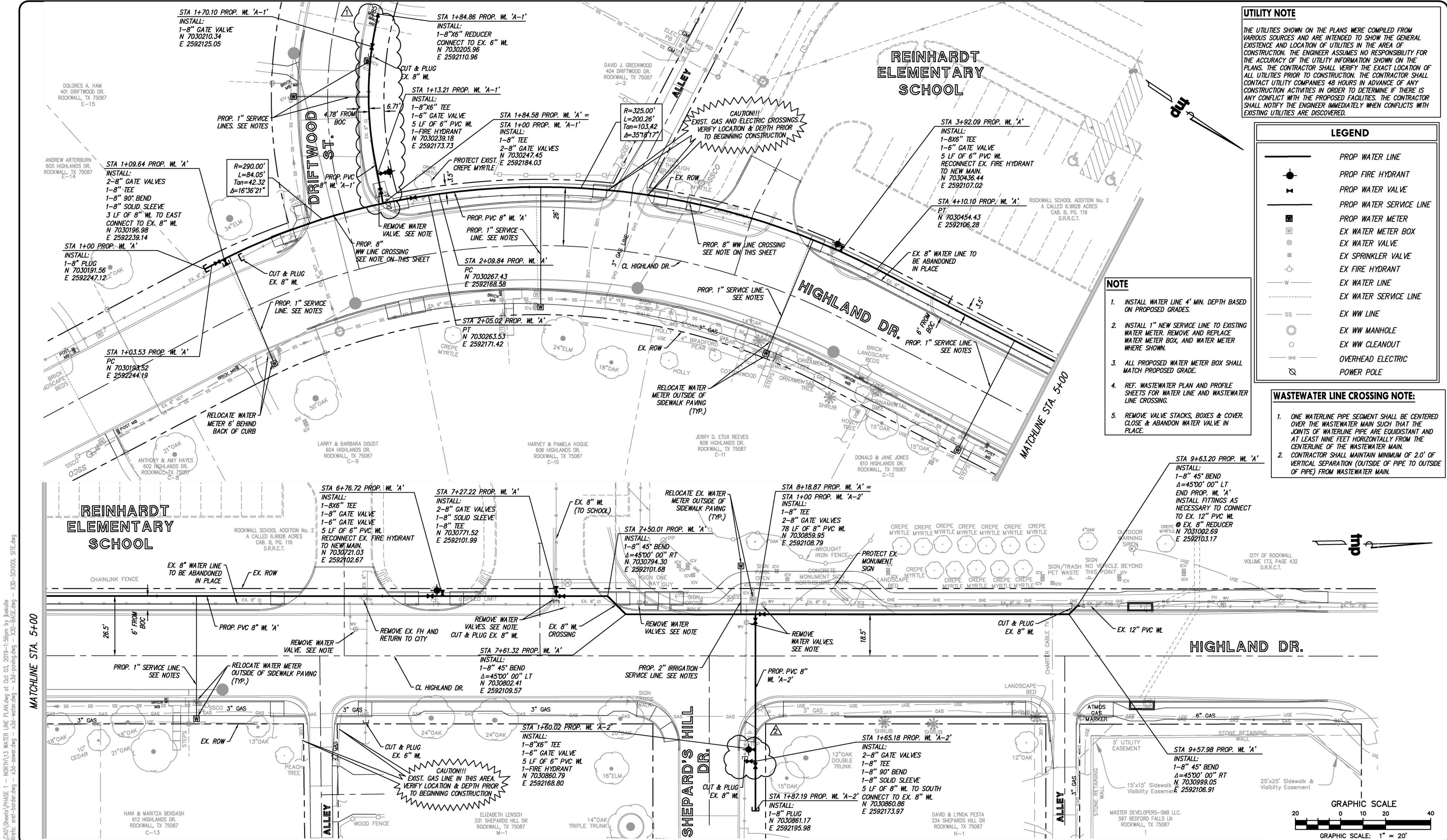
scale
when bar is
1 inch long
horiz
1" = 20'
vert
1" = 4'
SEP 2019



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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
DEMOLITION PLAN

tnp project
RW18219
sheet
15



UPDATED PROP. WL LOCATION PER AS BUILTS	JB	09/27/19
UPDATED FIRE HYDRANT LOCATION PER AS BUILTS	JB	09/27/19
no.	revision	by date

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TBPE: F-230; TBPLS: 10011600, 10011601, 10194381

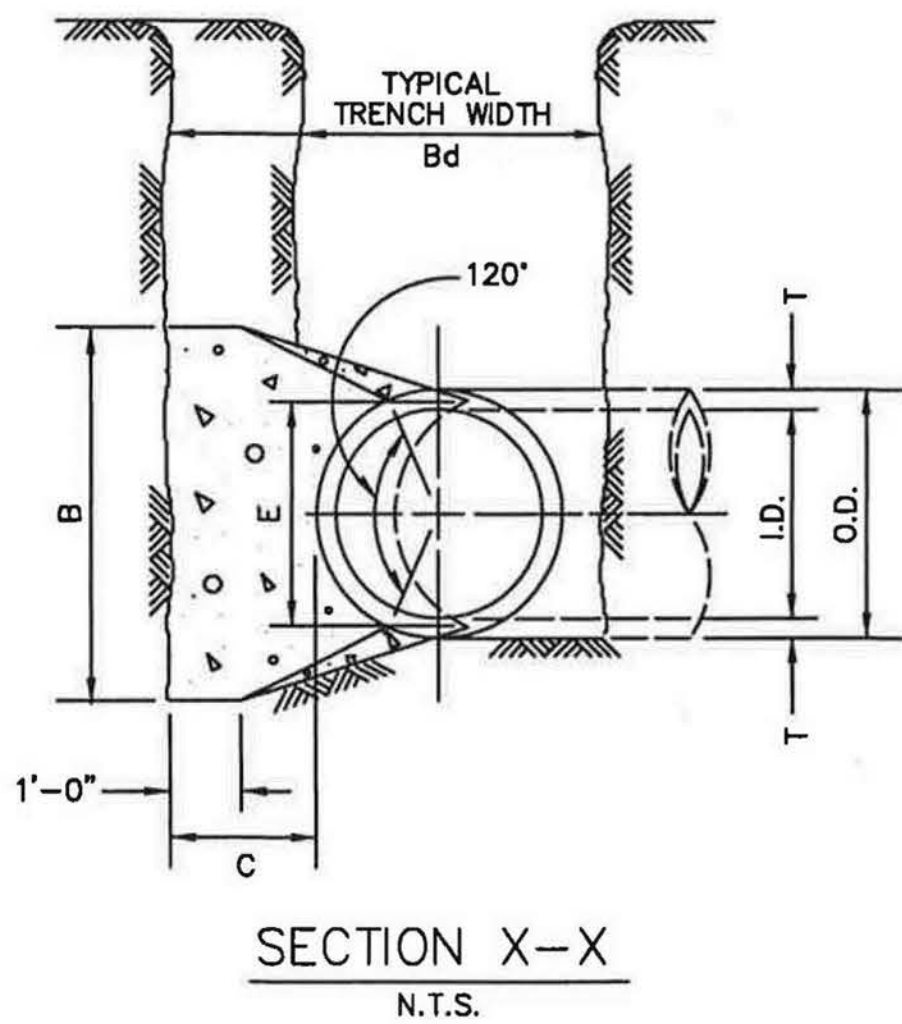
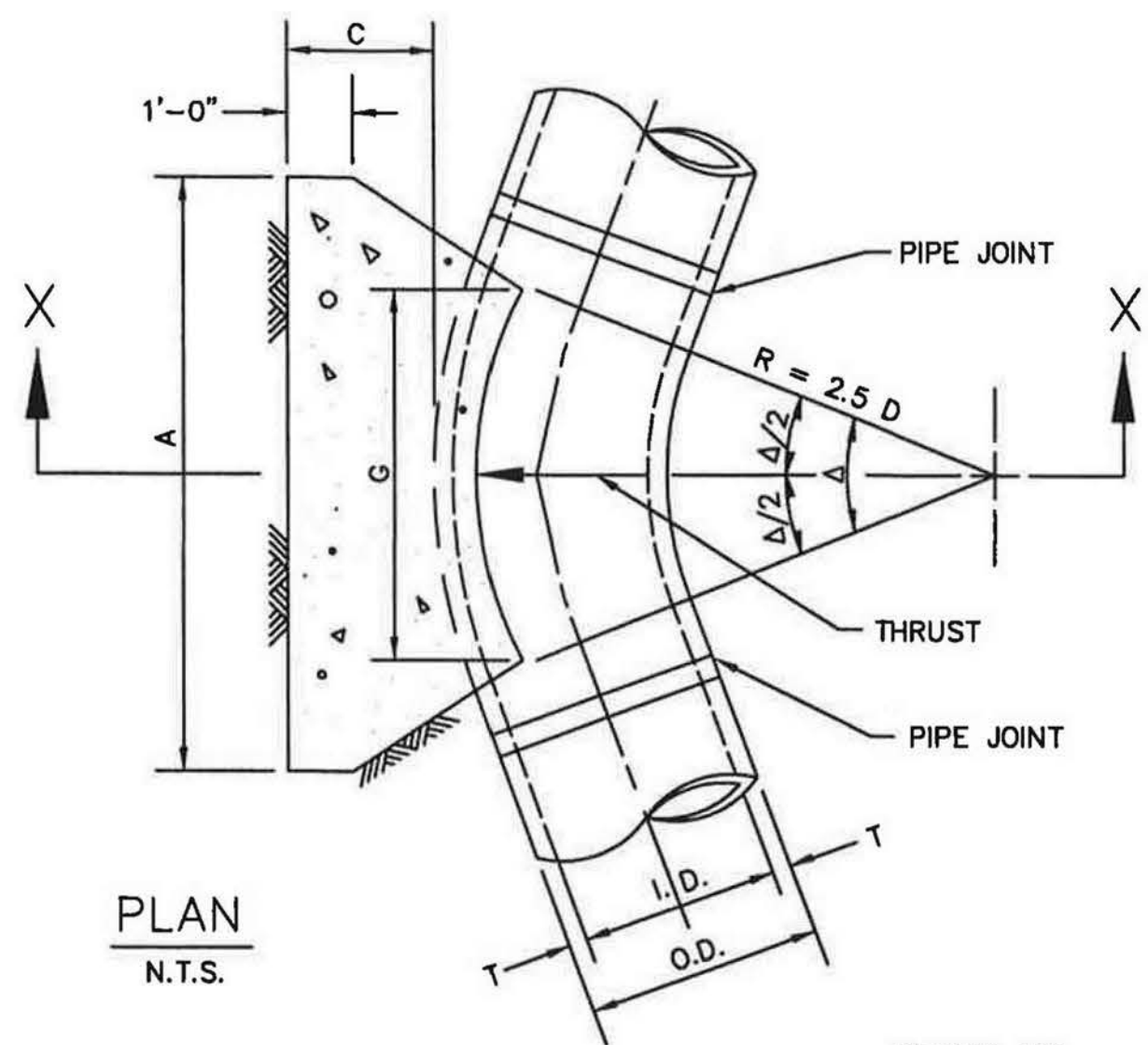
City of Rockwall
The New Horizon

scale
when bar is 1 inch long
horiz 1" = 20'
vert 1" = 4'
SEP 2019

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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
WATER LINE PLAN

tnp project
RWL18219
sheet
16



REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

I.D. (IN.)	T (IN.)	Δ = 11.25° C (FT.)	Δ = 22.50° C (FT.)	E (FT.)
4,6,8	0.4	1.5	1.5	0.9
10,12	0.5	1.5	1.5	1.2
16,18	0.6	1.5	1.5	1.6
20	0.7	1.5	1.5	1.8
24	0.9	1.5	1.5	2.1
30	2.9	1.5	1.9	2.6
36	4.5	1.5	2.3	3.3
42	5.0	1.8	2.6	3.8
48	5.5	2.0	3.0	4.3
54	6.0	2.3	3.4	4.8
60	6.5	2.5	3.8	5.3
66	6.8	2.8	4.1	5.7
72	7.5	3.0	4.5	6.3
78	7.5	3.3	4.9	6.7
84	8.0	3.5	5.3	7.2
90	8.5	3.8	5.6	7.7
96	9.0	4.0	6.0	8.2

Δ = 11.25°										Δ = 22.50°									
I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)		
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1	1.0	1.0	0.1	10,12	1.1
10,12	0.6	2.2	1.5	1.5	0.1	1.0	1.5	0.1	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1	16,18	1.6
16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.2	16,18	1.6	9.9	3.0	3.5	0.6	2.0	2.5	0.3	20	1.8
20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.3	20	1.8	12.3	3.5	3.5	0.7	2.0	3.0	0.4	24	2.2
24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.3	24	2.2	17.7	4.0	4.5	1.0	3.0	3.5	0.5	30	2.7
30	1.4	10.4	3.0	3.5	0.6	2.0	3.5	0.4	30	2.7	20.7	5.0	4.5	1.5	3.0	4.0	0.8	36	3.3
36	1.7	15.0	3.5	4.5	0.9	2.0	4.0	0.5	36	3.3	29.8	5.5	5.5	2.3	4.0	4.0	1.3	42	3.8
42	1.9	20.4	4.5	5.0	1.5	2.5	5.0	0.8	42	3.8	40.5	7.0	6.0	3.9	4.5	5.0	2.1	48	4.4
48	2.2	26.6	4.5	6.0	2.0	2.5	6.0	1.1	48	4.4	52.9	8.0	7.0	5.7	4.5	6.0	2.8	54	4.9
54	2.5	33.7	6.0	6.0	3.0	3.0	6.0	1.4	54	4.9	67.0	9.0	8.0	8.0	6.0	6.0	4.1	60	5.5
60	2.7	41.6	6.0	7.0	3.8	3.0	7.0	1.8	60	5.5	82.7	9.5	9.0	10.6	6.0	7.0	5.3	66	6.0
66	3.0	50.3	6.5	8.0	5.1	3.5	8.0	2.7	66	6.0	100.1	10.5	10.0	14.1	6.5	8.0	7.2	72	6.6
72	3.3	59.9	7.5	8.0	6.3	4.0	8.0	3.3	72	6.6	119.1	11.0	11.0	17.6	7.5	8.0	9.1	78	7.1
78	3.6	70.2	8.0	9.0	8.1	4.0	9.0	3.9	78	7.1	139.8	12.0	12.0	22.5	8.0	9.0	11.7	84	7.6
84	3.8	81.5	8.5	10.0	10.3	4.5	10.0	5.3	84	7.6	162.1	13.0	12.5	27.2	8.5	10.0	14.8	90	8.2
90	4.1	93.5	9.5	10.0	12.2	5.0	10.0	6.3	90	8.2	186.1	14.0	13.5	33.7	9.5	10.0	17.7	96	8.7
96	4.4	106.4	10.0	11.0	15.0	5.0	11.0	7.4	96	8.7	211.7	15.0	14.5	41.2	10.0	11.0	21.8		

TABLES OF DIMENSIONS AND QUANTITIES

HORIZONTAL THRUST BLOCK
AT PIPE BEND



STANDARD SPECIFICATION REFERENCE
502.4
DATE
OCT. '04
STANDARD DRAWING NO.
4010A

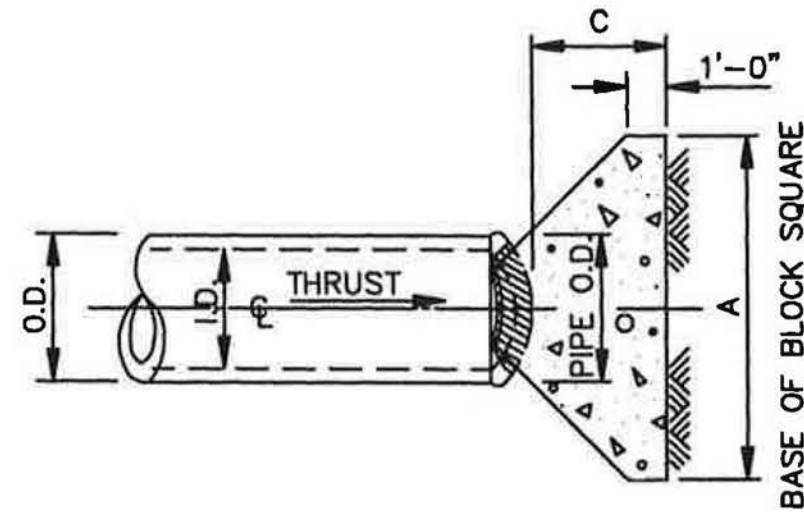
HORIZONTAL THRUST BLOCK
AT PIPE BEND



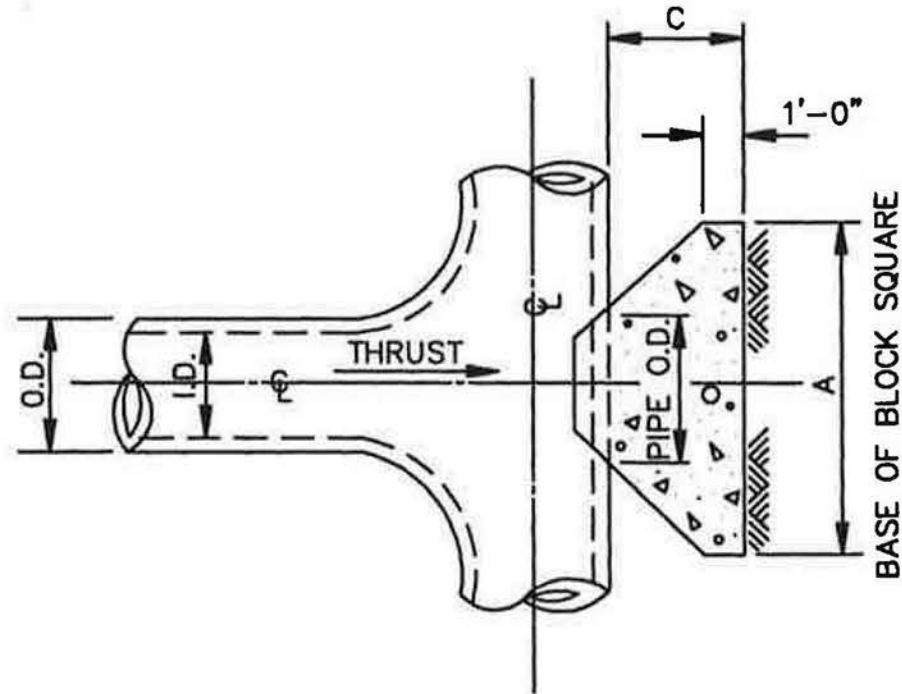
STANDARD SPECIFICATION REFERENCE
502.4
DATE
OCT. '04
STANDARD DRAWING NO.
4010B

Δ = 30°										Δ = 45°									
I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)		
4,6,8	1.0	2.6	2.0	1.5	0.2	1.0	1.5	0.1	4,6,8	1.5	3.9	2.0	2.0	0.2	1.5	1.5	0.1	10,12	2.2
10,12	1.5	5.9	2.5	2.5	0.3	2.0	1.5	0.2	10,12	2.2	8.7	3.5	2.5	0.5	2.0	2.5	0.3	16,18	3.2
16,18	2.2	13.2	3.5	4.0	0.8	2.5	3.0	0.4	16,18	3.2	19.5	4.5	4.5	1.2	3.0	3.5	0.6	20	3.6
20	2.4	16.3	4.5	4.0	1.0	3.0	3.0	0.5	20	3.6	24.1	5.5	4.5	1.5	3.5	3.5	0.7	24	4.3
24	2.9	23.4	6.0	4.0	1.4	3.5	3.5	0.7	24	4.3	34.6	8.0	4.5	2.3	4.5	4.0	1.1	30	5.4
30	3.6	27.5	6.5	5.0	1.9	3.5	4.0	0.9	30	5.4	40.6	8.5	5.0	3.2	5.5	4.0	1.6	36	6.5
36	4.4	39.5	7.0	6.0	3.4	4.5	4.5	1.6	36	6.5	58.5	10.0	6.0	5.3	6.5	4.5	2.6	42	7.5
42	5.1	53.8	8.0	7.0	5.1	5.5	5.0	2.5	42	7.5	79.6	11.5	7.0	8.1	8.0	5.0	4.2	48	8.6
48	5.8	70.3	9.0	8.0	7.4	6.0	6.0	3.7	48	8.6	104.0	13.0	8.0	11.9	9.0	6.0	6.3	54	9.7
54	6.5	89.0	10.0	9.0	10.3	7.0	6.5	5.3	54	9.7	131.5	15.0	9.0	17.1	10.5	6.5	8.9	60	10.7
60	7.3	110.0	11.0	10.0	13.9	7.5	7.5	7.3	60	10.7	162.4	16.5	10.0	23.1	11.0	7.5	12.0	66	11.8
66	8.0	132.9	12.5	11.0	18.9	8.5	8.0	9.6	66	11.8	196.5	18.0	11.0	30.1	12.0	8.5	16.2	72	12.9
72	8.7	158.2	13.5	12.0	24.0	9.0	9.0	12.3	72	12.9	233.9	19.5	12.0	38.6	14.0	8.5	20.7	78	13.9
78	9.4	185.6	14.5	13.0	30.0	10.0	9.5	15.6	78	13.9	274.5	21.5	13.0	49.8	14.5	9.5	25.9	84	15.0
84	10.1	215.3	15.5	14.0	37.1	10.5	10.5	19.5	84	15.0	318.4	23.0	14.0	61.2	15.5	10.5	32.6	90	16.1
90	10.9	247.1	16.5	15.0	45.0	11.5	11.0	23.9	90	16.1	365.5	24.5	15.0	74.5	17.5	10.5	39.6	96	17.1
96	11.6	281.2	18.0	16.0	55.5	12.5	11.5	28.9	96	17.1	415.6	26.0	16.0	89.5	18.5	11.5	48.5		

Δ = 67.50°									Δ = 90°								
I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK		
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)				A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)
4,6,8	2.1	5.6	3.0	2.0	0.3	2.0	1.5	0.2	4,6,8	2.7	7.1	5.0	1.5	0.4	2.0	2.0	0.2
10,12	3.1	12.6	5.5	2.5	0.8	3.5	2.0	0.4	10,12	4.0	16.0	6.5	2.5	1.0	3.5	2.5	0.5
16,18	4.7	28.3	7.5	4.0	1.9	5.5	3.0	0.9	16,18	6.0	36.0	9.0	4.0	2.4	4.5	4.0	1.0
20	5.2	34.9	9.0	4.0	2.3	5.5	3.5	1.2	20	6.6	44.4	10.0	4.5	3.1	6.0	4.0	1.5
24	6.2	50.3	11.5	4.5	3.5	6.5	4.0	1.6	24	7.9	64.0	14.5	4.5	5.0	8.0	4.0	2.1
30	7.8	58.9	12.0	5.0	4.8	7.5	4.0	2.2	30	9.9	75.0	15.0	5.0	6.7	10.0	4.0	3.3
36	9.4	84.9	14.5	6.0	8.2	9.5	4.5	3.8	36	11.9	108.0	18.0	6.0	11.4	12.0	4.5	5.3
42	10.9	115.5	17.0	7.0	12.8	11.0	5.5	6.3	42	13.9	147.0	21.0	7.0	17.8	14.0	5.5	8.7
48	12.5	150.9	19.0	8.0	18.4	13.0	6.0	9.2	48	15.9	192.0	24.0	8.0	26.2	16.0	6.0	12.4
54	14.0	191.0	21.5	9.0	26.0	15.0	6.5	12.9	54	17.9	243.0	27.0	9.0	36.9	18.0	7.0	18.1
60	15.6	235.8	24.0	10.0	35.6	16.0	7.5	17.6	60	19.9	299.8	30.0	10.0	50.3	20.0	7.5	24.0
66	17.1	285.3	26.0	11.0	46.0	18.0	8.0	23.0	66	21.8	362.8	33.0	11.0	66.2	22.0	8.5	32.5
72	18.7	339.5	28.5	12.0	57.8	19.0	9.0	28.4	72	23.8	431.8	36.0	12.0	85.6	24.0	9.0	41.0
78	20.2	398.5	31.0	13.0	75.7	21.0	9.5	37.4	78	25.7	506.7	39.0	13.0	108.2	26.0	10.0	53.2
84	21.8	462.1	33.5	14.0	94.7	22.0	10.5	46.5	84	27.7	587.7	42.0	14.0	134.4	28.0	10.5	64.8
90	23.3	530.5	35.5	15.0	114.4	24.5	11.0	58.2	90	29.0	674.6	45.0	15.0	164.9	30.0	11.5	81.2
96	24.9	603.6	38.0	16.0	138.9	25.5	12.0	70.0	96	31.6	767.5	48.0	16.0	199.0	32.0	12.0	95.1



PLAN OF PLUG THRUST BLOCK
N.T.S.



PLAN OF TEE THRUST BLOCK
N.T.S.

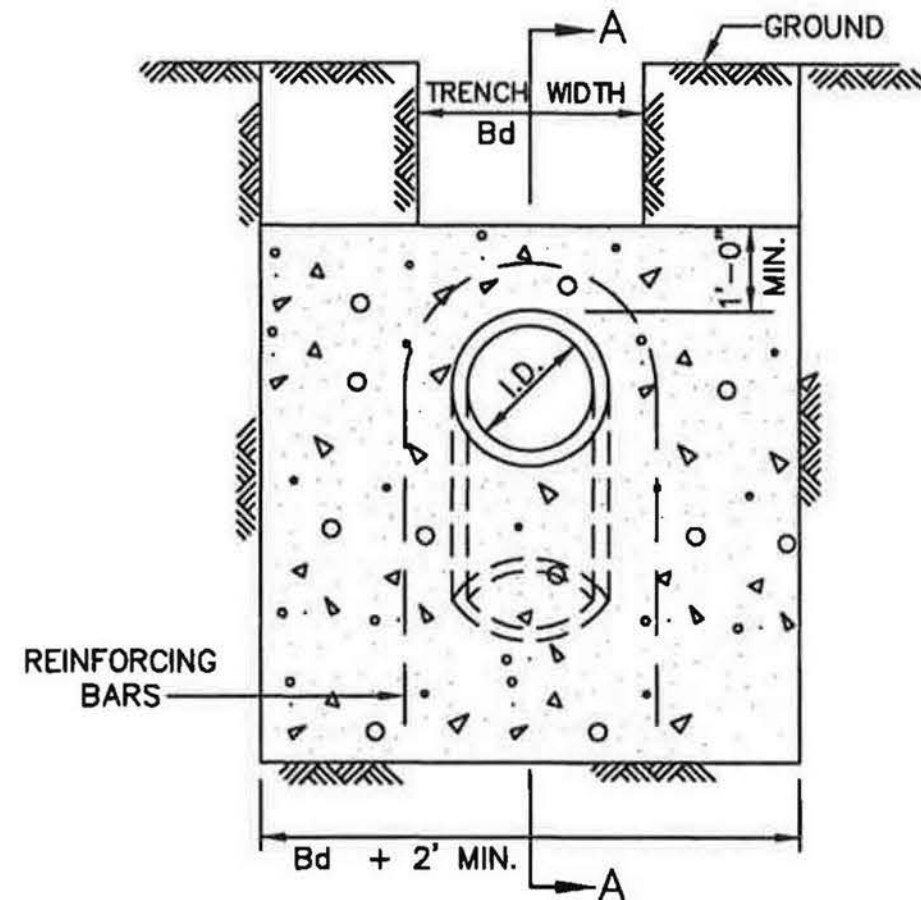
I.D. (IN.)	THRUST (TONS)	C (FT.)	EARTH		ROCK	
			A (FT.)	VOL. (C.Y.)	A (FT.)	VOL. (C.Y.)
4,6,8	5.1	1.5	2.5	0.3	2.0	0.2
10,12	11.3	1.5	3.5	0.6	2.5	0.3
16,18	25.5	2.0	5.5	1.6	4.0	0.9
20	31.5	2.0	6.0	1.9	4.0	0.9
24	45.2	2.5	7.0	3.1	5.0	1.7
30	53.0	3.0	7.5	4.1	5.5	2.4
36	76.3	4.0	9.0	7.3	6.5	4.2
42	104.0	4.5	10.5	11.0	7.5	6.2
48	136.0	5.0	12.0	15.6	8.5	8.7
54	172.0	5.5	13.5	21.4	9.5	11.9
60	212.0	6.0	15.0	28.4	10.5	15.7
66	257.0	6.5	16.5	36.8	11.5	20.5
72	305.0	7.5	17.5	47.2	12.5	27.2
78	358.0	8.0	19.0	58.9	13.5	33.7
84	416.0	8.5	20.5	72.3	14.5	41.2
90	477.0	9.0	22.0	87.7	15.5	49.7
96	543.0	9.5	23.5	104.8	16.5	61.0

HORIZONTAL THRUST BLOCK
AT TEES AND PLUGS

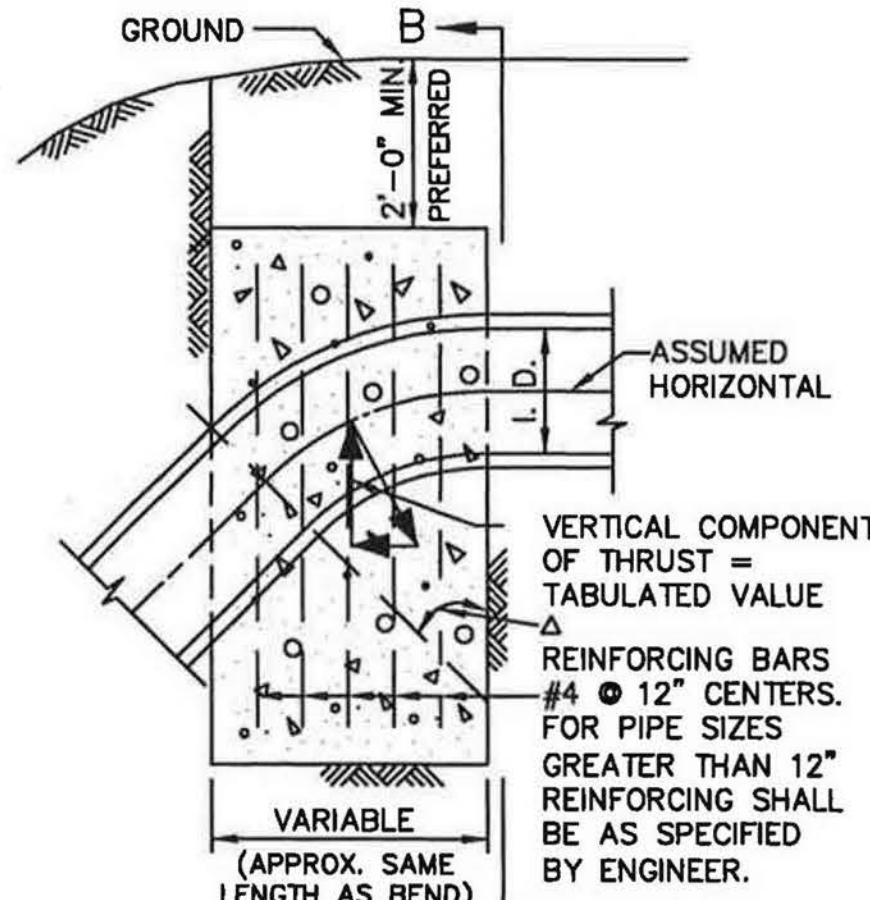


STANDARD SPECIFICATION REFERENCE
502.4
DATE
OCT. '04
STANDARD DRAWING NO.
4020

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.



ELEVATION "B-B"
N.T.S.



SECTION "A-A"
N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

Δ	11.25'		22.50'		30'		45'		67.50'		90'		Δ
I.D. (IN.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	THRUST (TONS)	VOL. (C.Y.)	I.D. (IN.)
4,6,8	1.0	0.5	2.0	1.0	2.5	1.3	3.6	1.8	4.6	2.3	5.0	2.5	4,6,8
10,12	2.2	1.1	4.3	2.2	5.7	2.8	8.0	4.0	10.5	5.2	11.3	5.7	10,12
16,18	5.0	2.5	9.7	4.9	12.7	6.4	18.0	9.0	23.5	11.8	25.5	12.7	16,18
20	6.1	3.1	12.0	6.0	15.7	7.9	22.2	11.1	29.2	14.5	31.4	15.7	20
24	8.2	4.4	17.3	8.7	22.6	11.3	32.0	16.0	41.8	20.9	45.2	22.6	24
30	10.5	5.2	20.3	10.1	26.5	13.3	37.5	18.8	49.0	24.5	53.1	26.5	30
36	14.9	7.5	29.2	14.6	38.2	19.1	54.0	27.0	70.5	35.3	76.4	38.2	36
42	20.3	10.1	39.8	19.9	52.0	26.0	73.5	36.7	96.0	48.0	104.0	52.0	42
48	26.5	13.2	51.9	26.0	67.9	33.9	96.0	48.0	126.0	62.7	136.0	67.9	48
54	33.5	16.8	65.7	32.9	85.9	42.9	122.0	60.7	159.0	79.4	172.0	85.9	54
60	41.4	20.7	81.2	40.6	106.0	53.0	150.0	75.0	196.0	98.0	212.0	106.0	60
66	50.1	25.0	98.2	49.1	128.0	64.2	182.0	90.7	237.0	119.0	257.0	128.0	66
72	59.6	29.8	117.0	58.4	153.0	76.3	216.0	108.0	282.0	141.0	305.0	153.0	72
78	69.9	35.0	137.0	68.6	179.0	90.0	254.0	127.0	331.0	166.0	358.0	179.0	78
84	81.1	40.5	159.0	79.5	208.0	104.0	294.0	147.0	384.0	192.0	416.0	208.0	84
90	93.1	46.5	183.0	91.3	239.0	119.0	337.0	169.0	441.0	221.0	477.0	239.0	90
96	106.0	53.0	208.0	104.0	272.0	136.0	384.0	192.0	502.0	251.0	543.0	272.0	96

VERTICAL THRUST BLOCK
AT PIPE BEND



STANDARD SPECIFICATION REFERENCE
502.4
DATE
OCT. '04
STANDARD DRAWING NO.
4030

GENERAL NOTES FOR ALL THRUST BLOCKS:

- CONCRETE FOR BLOCKING SHALL BE CLASS "B".
- ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 PSI FOR DUCTILE IRON, P.V.C., AND 150 PSI FOR CONCRETE PIPE.
- VOLUMES OF THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS "B") IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THE THRUST ON THE VERTICAL BEND.
- WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
- POUR CONCRETE FOR BLOCK AGAINST UNDISTURBED EARTH.
- DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
- THE SOIL BEARING PRESSURES ARE BASED ON 1000 LBS./S.F. IN SOIL AND 2000 LBS./S.F. IN ROCK.
- USE POLYETHYLENE WRAP OR EQUAL BETWEEN CONCRETE AND BEND, TEE, OR PLUG TO PREVENT THE CONCRETE FROM STICKING TO IT.
- CONCRETE SHALL NOT EXTEND BEYOND JOINTS.

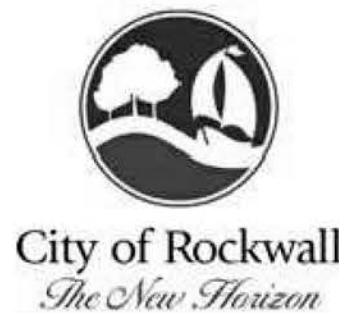
THRUST BLOCK
GENERAL NOTES



STANDARD SPECIFICATION REFERENCE
502.4
DATE
OCT. '04
STANDARD DRAWING NO.
4040

no.	revision	by	date

teague nall and perkins, inc
825 Watters Creek Blvd., Suite M300
Allen, Texas 75013
214.461.9867 ph 214.461.9864 fx
www.tnppinc.com
TBPE: F-230; TBPLS: 10011600, 10011601, 10194381



scale
when bar is
1 inch long
horiz
N/A
vert
N/A
SEP 2019



RECORD DOCUMENTS
THESE PLANS ARE FOR THE OWNER'S USE AS RECORD SET OF THE CONSTRUCTED PROJECT, AND REFLECT REVISIONS AND CONSTRUCTION RELATED CHANGES AS RECORDED BY THE CONTRACTOR. CHANGES MADE FROM THE ORIGINAL CONSTRUCTION DOCUMENTS DO NOT DEPORT ENGINEERING AND ARE NOT THE RESPONSIBILITY OF TEAGUE NALL & PERKINS, INC. OR THE ENGINEER OF RECORD ON THE ORIGINAL DOCUMENTS. ORIGINAL PLANS RELEASED FOR CONSTRUCTION WERE SEALED BY GYANENDRA POKHREL, P.E. NO. 118159 ON 09/28/2018.

CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
WATER DETAILS 2 OF 5

tnp project
RWL18219
sheet
18

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\18 WATER DETAILS 5 OF 5.dwg at Sep 27, 2019-10:35am by jekolla
Layout: 14 WATER DETAILS 1 of 5 Wks: xref-border.dwg

no.	revision	by	date

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Allen, Texas 75013
214.461.9867 ph 214.461.9864 fx
www.tnpinc.com
TBPE: F-230; TBPLS: 10011600, 10011601, 10194381



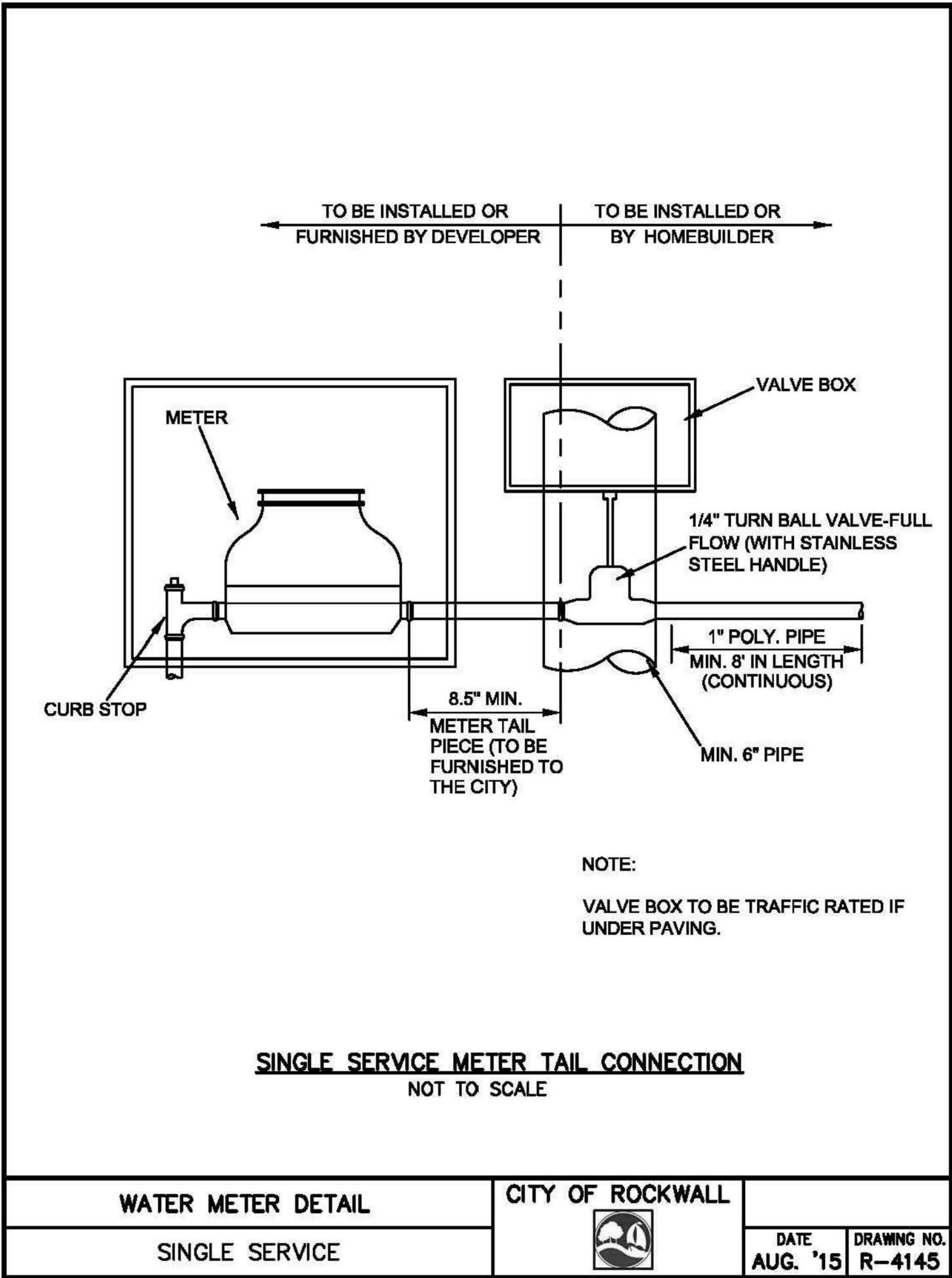
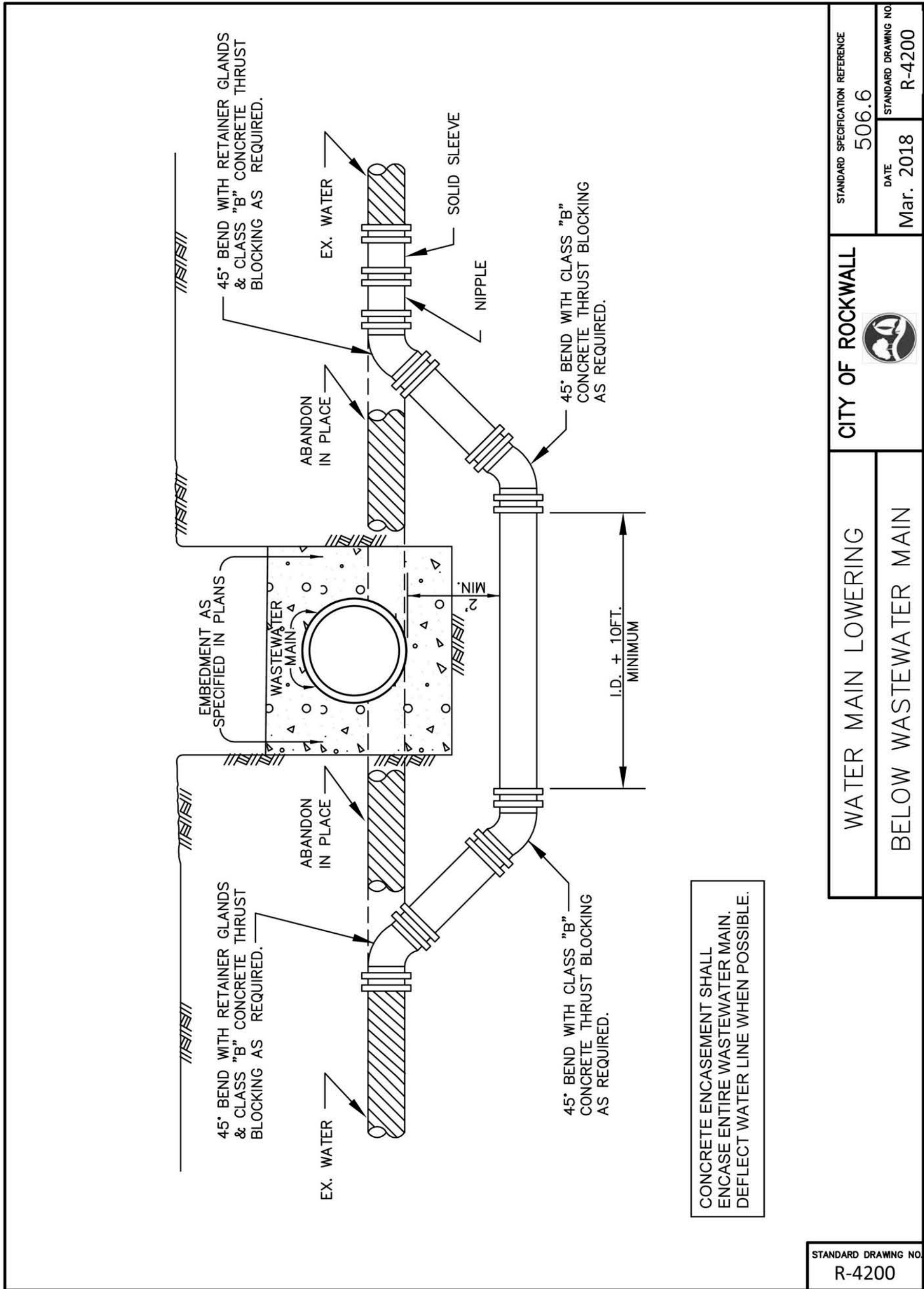
scale when bar is 1 inch long
horiz N/A
vert N/A
SEP 2019



RECORD DOCUMENTS
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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
WATER DETAILS 3 OF 5

tnp project
RWL18219
sheet
19



Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\18 WATER DETAILS 5 OF 5.dwg at Sep 27, 2019-10:35am by Jekelle
Layout: 15 WATER DETAILS 2 OF 5 Pctrs: xref-border.dwg

no.	revision	by	date

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214.461.9867 ph 214.461.9864 fx
www.tnpsc.com
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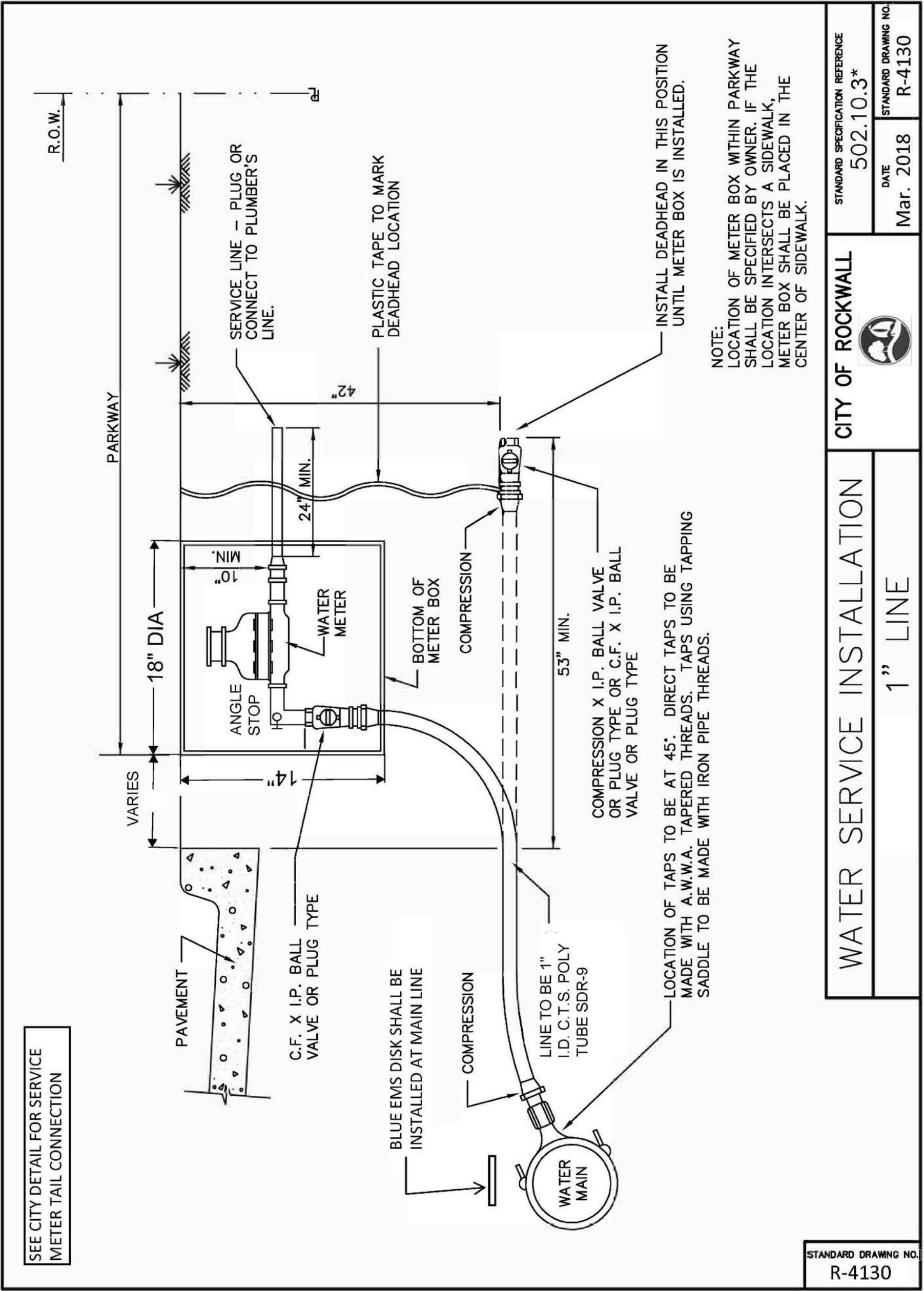
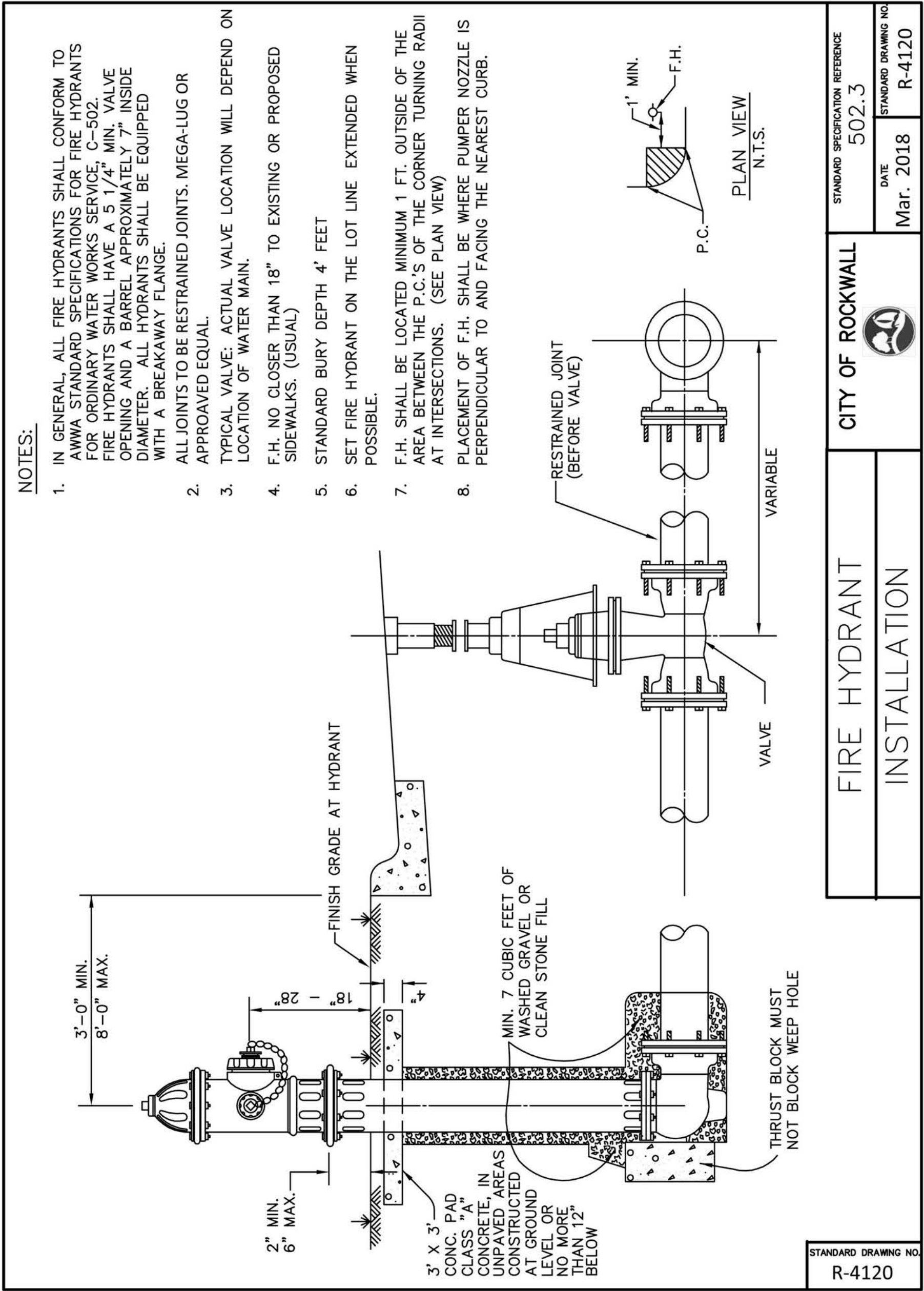
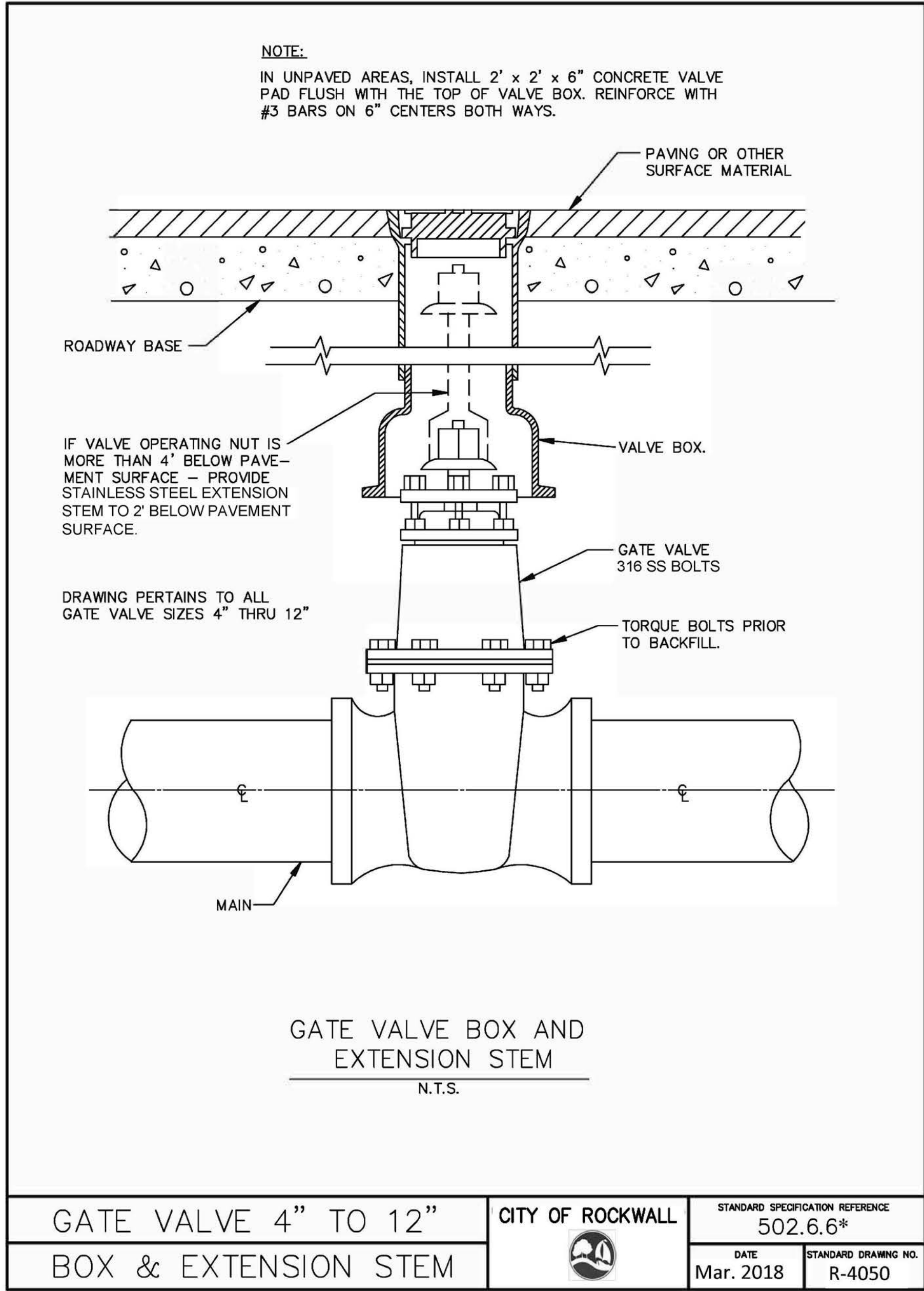
scale when bar is 1 inch long
horiz N/A
vert N/A
SEP 2019



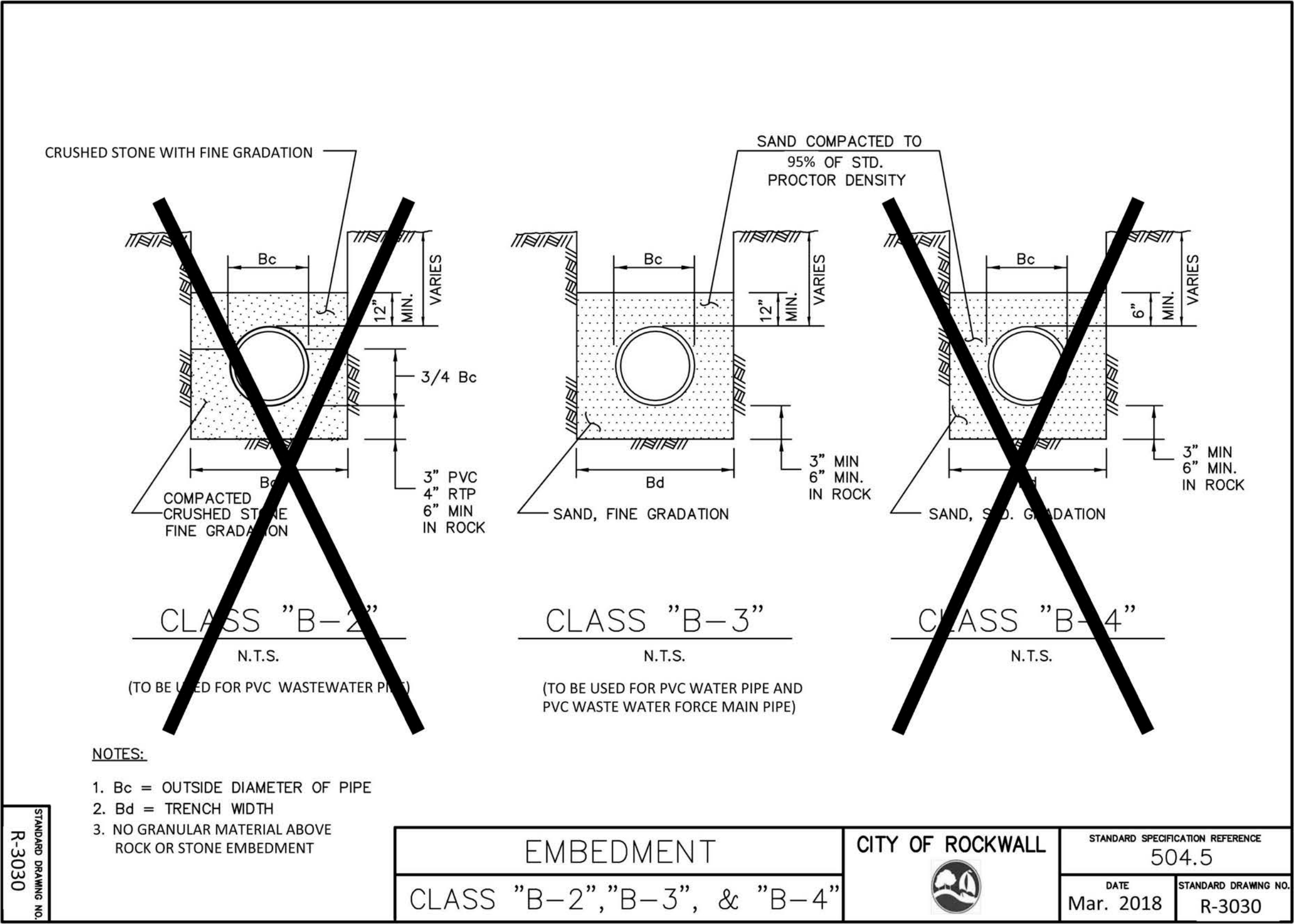
RECORD DOCUMENTS
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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
WATER DETAILS 4 OF 5

tnp project RWL18219
sheet 20



Drawing: P:\PROJECTS\RWL18219\CAD Sheets\PHASE 1 - NORTH\18 WATER DETAILS 5 OF 5.dwg at Sep 27, 2019-10:35am by jekelle
Layout: 18 WATER DETAILS 5 OF 5 - 18x24 - xref-border.dwg



no.	revision	by	date

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TBPE: F-230; TBPLS: 10011600, 10011601, 10194381


City of Rockwall
The New Horizon

scale
when bar is
1 inch long

horiz
N/A

vert
N/A

SEP 2019



RECORD DOCUMENTS
THESE PLANS ARE FOR THE OWNER'S USE AS RECORD SET OF THE CONSTRUCTED PROJECT, AND REFLECT REVISIONS AND CONSTRUCTION RELATED CHANGES AS RECORDED BY THE CONTRACTOR. CHANGES MADE FROM THE ORIGINAL CONSTRUCTION DOCUMENTS DO NOT DEPICT ENGINEERING AND ARE NOT THE RESPONSIBILITY OF TEAGUE NALL & PERKINS, INC. OR THE ENGINEER OF RECORD ON THE ORIGINAL DOCUMENTS. ORIGINAL PLANS RELEASED FOR CONSTRUCTION WERE SEALED BY GYANENDRA POKHREL, P.E. NO. 118159 ON 09/28/2018.

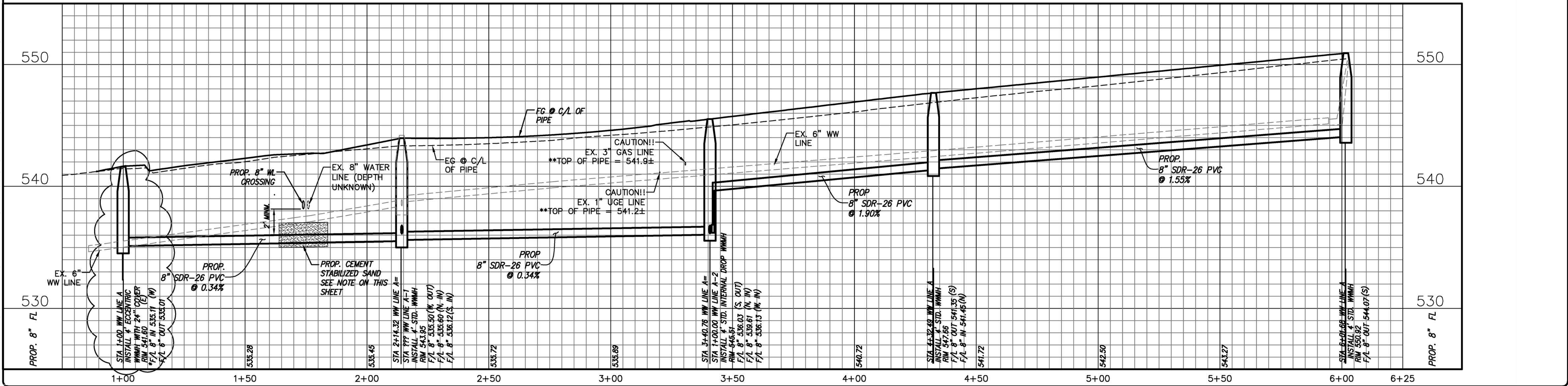
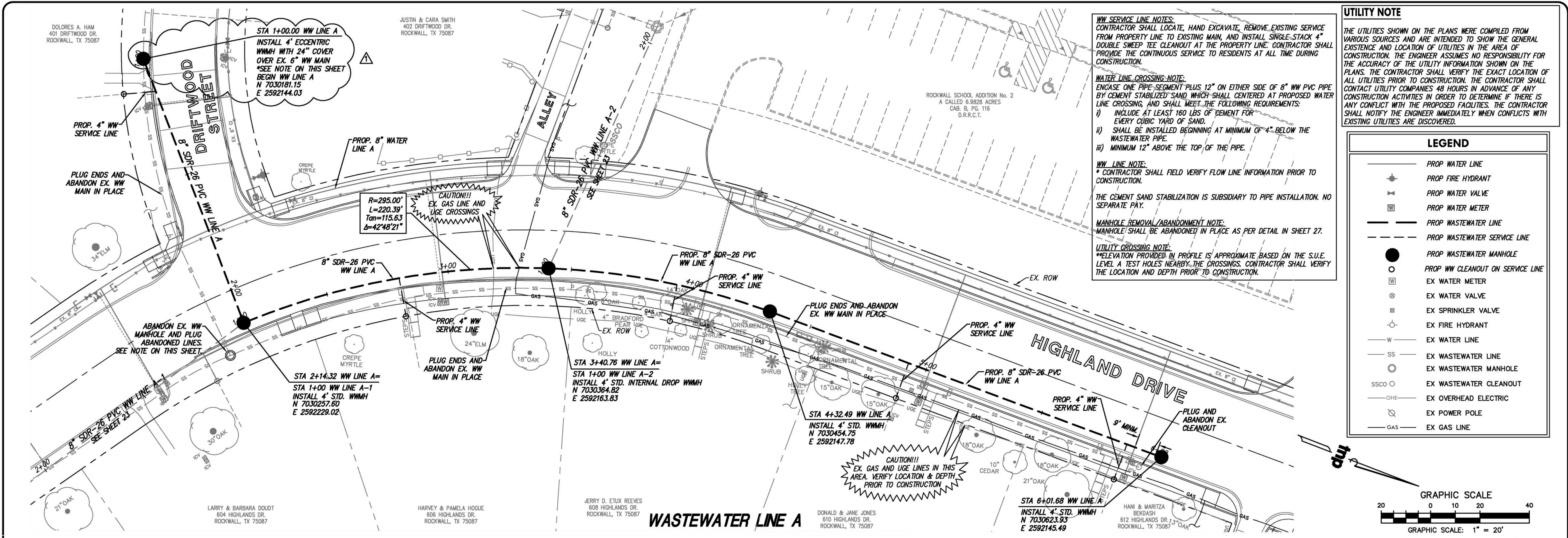
CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

WATER DETAILS 5 OF 5

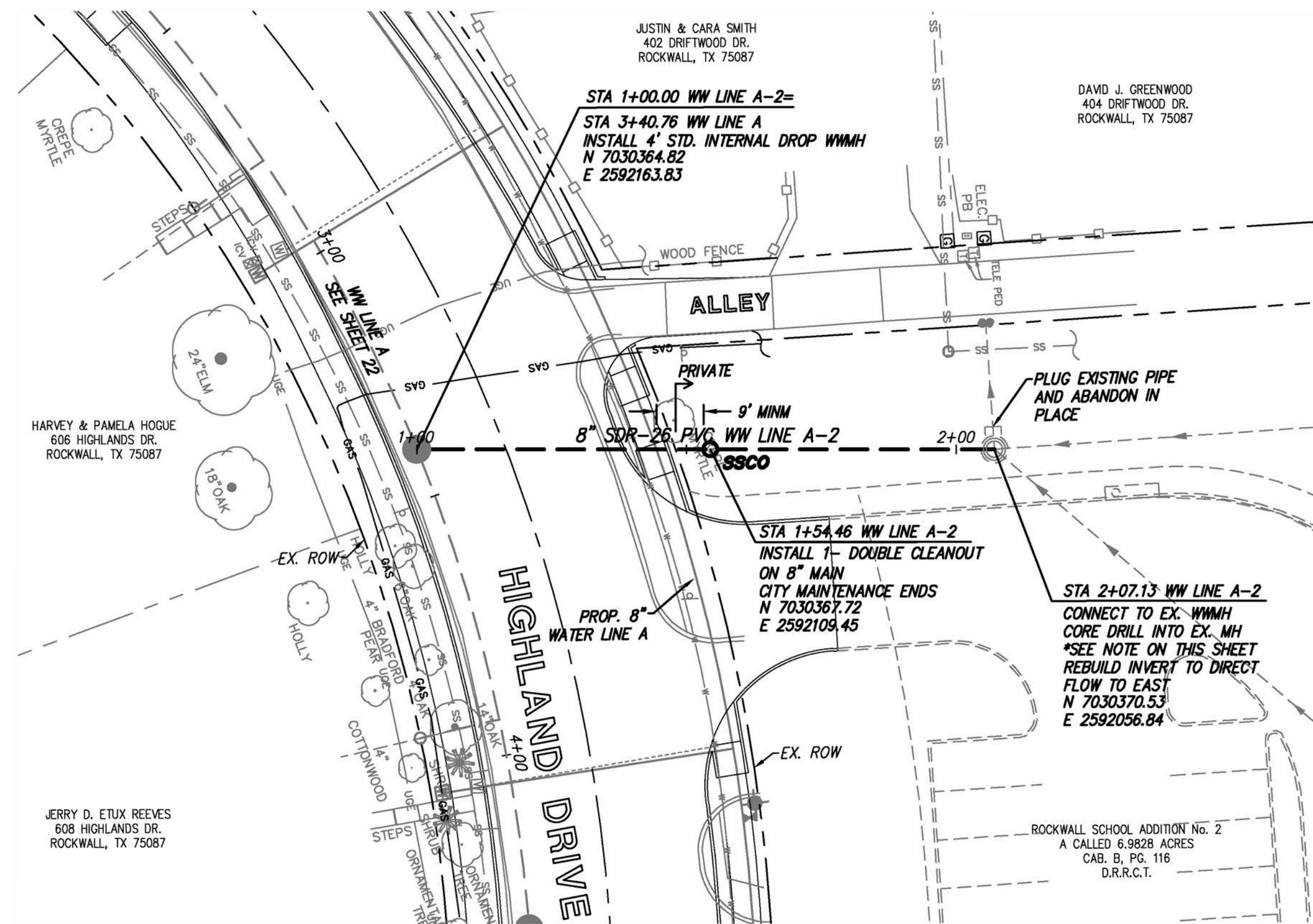
tnp project
RWL18219

sheet
21

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\20 WASTEWATER LINE A-1 & A-2.dwg at Oct 03, 2019 - 3:06pm by jekelle
Layout: 19 WASTEWATER LINE A - xctd - water.dwg - xctd - water.dwg - xctd - water.dwg - xctd - water.dwg - xctd - water.dwg - xctd - water.dwg - xctd - water.dwg - xctd - water.dwg - xctd - water.dwg - xctd - water.dwg

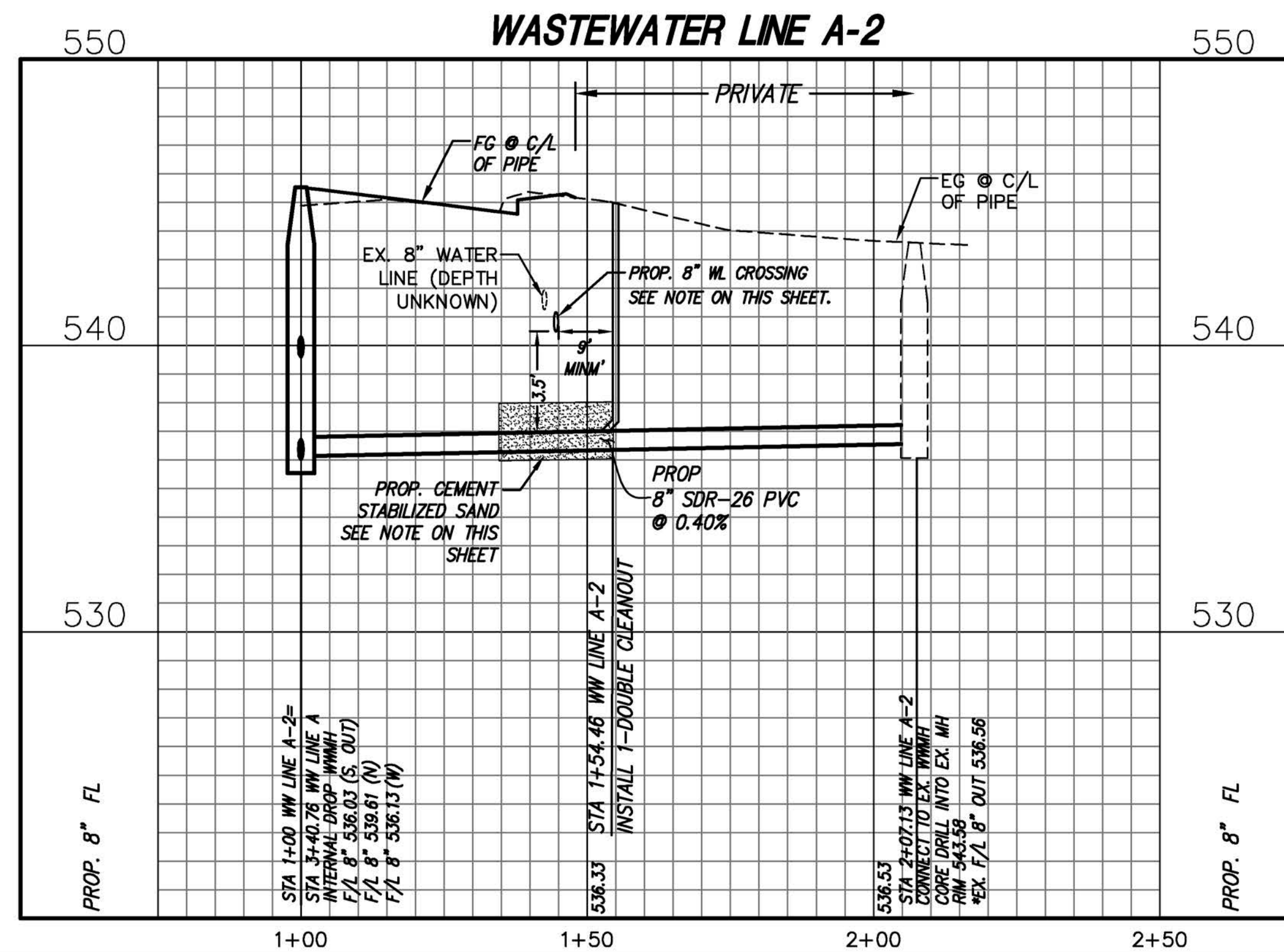
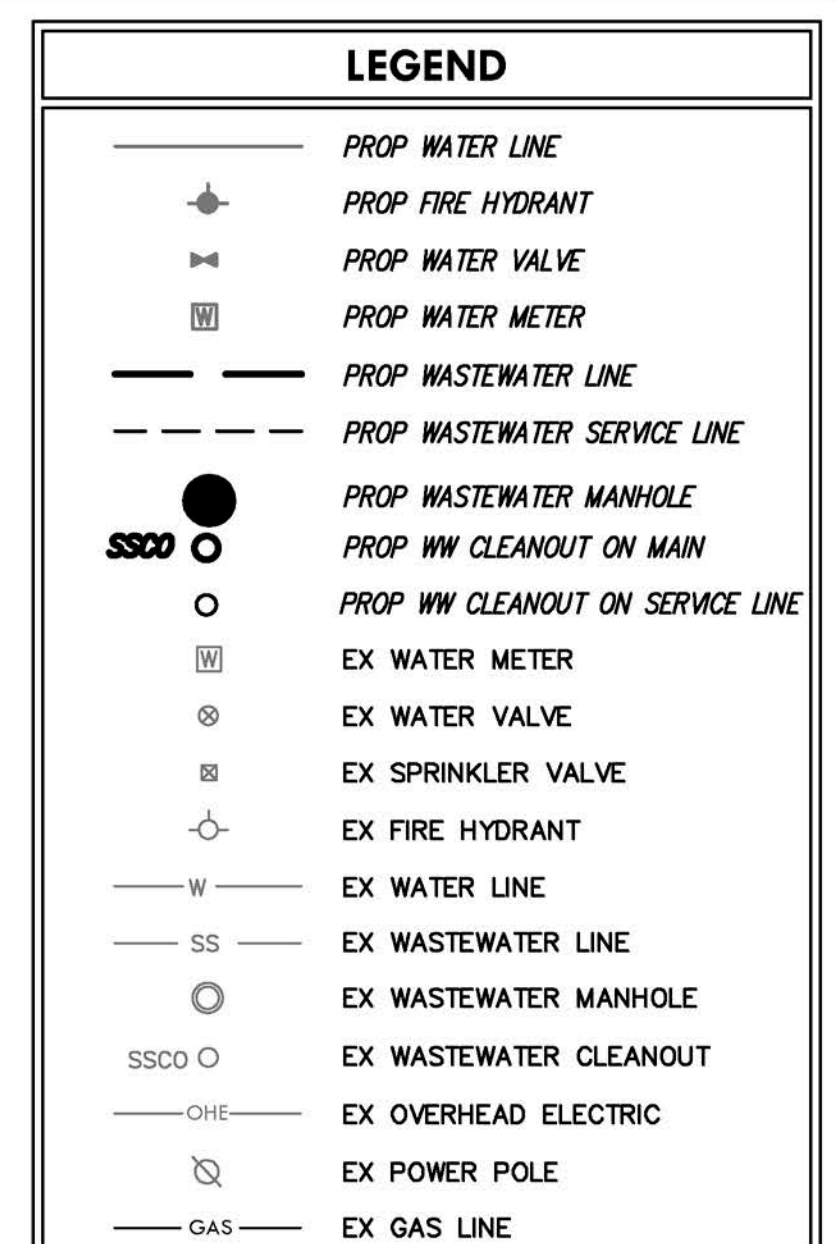


<p>CHANGED TO ECCENTRIC MH WITH 24" COVER PER AS BUILTS</p> <p>JB 09/27/19</p> <p>no. revision by date</p>	<p>teague nall and perkins, inc</p> <p>825 Watters Creek Blvd., Suite M300 Allen, Texas 75013 214.461.9867 ph 214.461.9864 fx www.tnppinc.com</p> <p>TBPE: F-230; TBPLS: 10011600, 10011601, 10194381</p>	<p>City of Rockwall The New Horizon</p>	<p>scale when bar is 1 inch long horiz 1" = 20' vert 1" = 4' SEP 2019</p>	<p>tnp</p>	<p>RECORD DOCUMENTS</p> <p>THESE PLANS ARE FOR THE OWNER'S USE AS RECORD SET OF THE CONSTRUCTED PROJECT, AND REFLECT REVISIONS AND CONSTRUCTION RELATED CHANGES AS RECORDED BY THE CONTRACTOR. CHANGES MADE FROM THE ORIGINAL CONSTRUCTION DOCUMENTS DO NOT DEPICT ENGINEERING AND ARE NOT THE RESPONSIBILITY OF TEAGUE NALL & PERKINS, INC. OR THE ENGINEER OF RECORD ON THE ORIGINAL DOCUMENTS. ORIGINAL PLANS RELEASED FOR CONSTRUCTION WERE SEALED BY GYANENDRA POKHREL, P.E. NO. 118159 ON 09/28/2018.</p>	<p>CITY OF ROCKWALL, TEXAS</p> <p>HIGHLAND DRIVE RECONSTRUCTION, PHASE I (DRIFTWOOD STREET TO BEDFORD FALLS LANE)</p> <p>WASTEWATER LINE A</p>	<p>tnp project RWL18219</p> <p>sheet 22</p>
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UTILITY NOTE

THE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE IS ANY CONFLICT WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.



GRAPHIC SCALE

20 0 10 20 40

GRAPHIC SCALE: 1" = 20'

HW SERVICE LINE NOTE:
CONTRACTOR SHALL INSTALL SINGLE STACK 4" DOUBLE SWEEP TEE CLEANOUT AT THE PROPERTY LINE AND CONNECT TO EXISTING SERVICE LINE.

WATER LINE CROSSING NOTE:
ENCASE 20 LF OF 8" PVC PIPE BY CEMENT STABILIZED SAND WHICH SHALL CENTERED AT PROPOSED WATER LINE CROSSING, AND SHALL MEET THE FOLLOWING REQUIREMENTS:

- INCLUDE AT LEAST 160 LBS OF CEMENT FOR EVERY CUBIC YARD OF SAND.
- SHALL BE INSTALLED BEGINNING ONE-QUARTER PIPE DIAMETER BELOW THE CENTERLINE OF PIPE.
- MINIMUM 12" ABOVE THE TOP OF THE PIPE.


THE CEMENT SAND STABILIZATION IS SUBSIDIARY TO PIPE INSTALLATION. NO SEPARATE PAY.

HW LINE NOTE:
* CONTRACTOR SHALL FIELD VERIFY FLOW LINE INFORMATION PRIOR TO CONSTRUCTION.

no.	revision	by	date

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<p>scale when bar is 1 inch long</p> 
<p>horiz 1" = 20'</p>
<p>vert 1" = 4'</p>
<p>SEP 2019</p>



RECORD DOCUMENTS

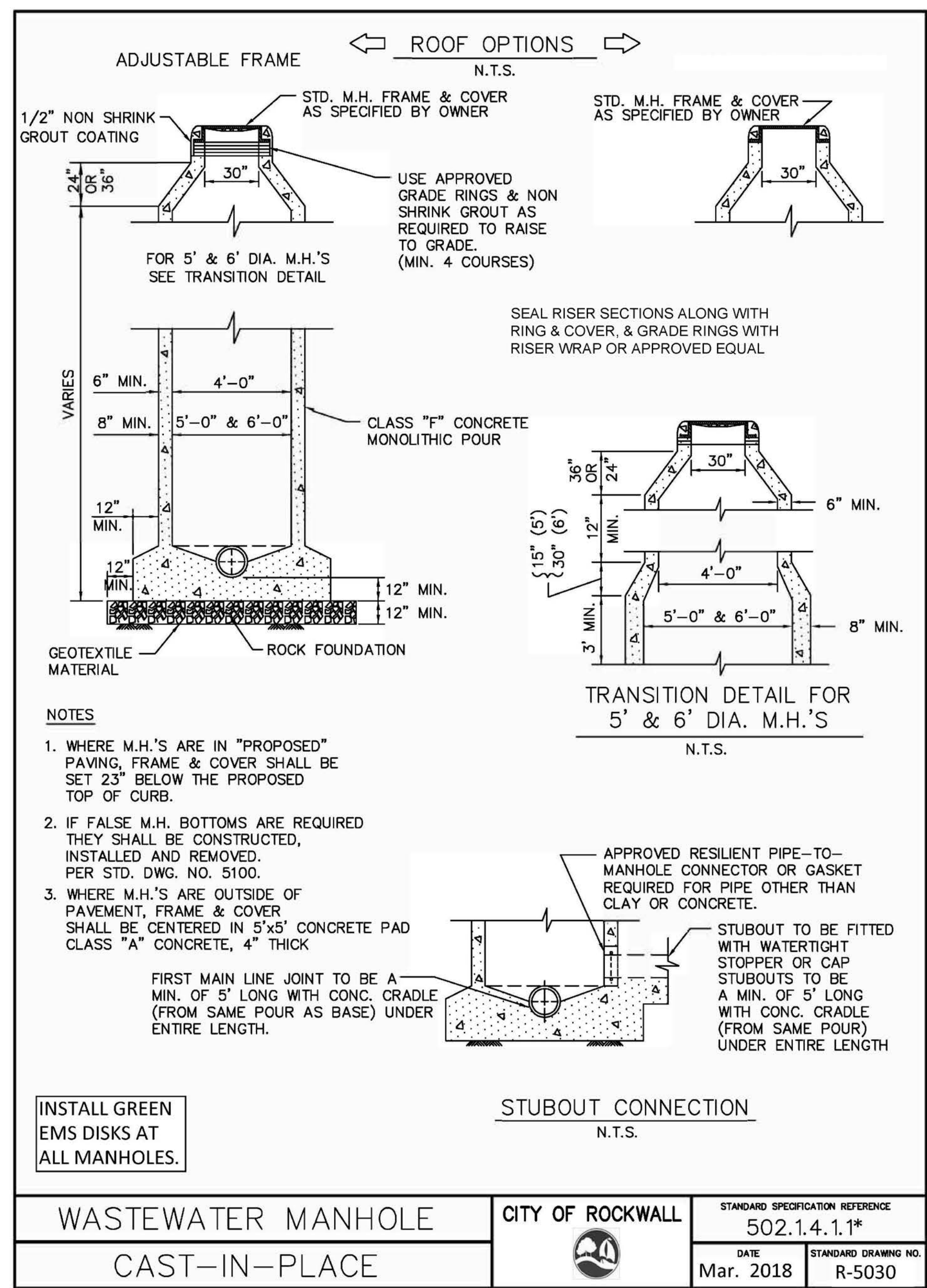
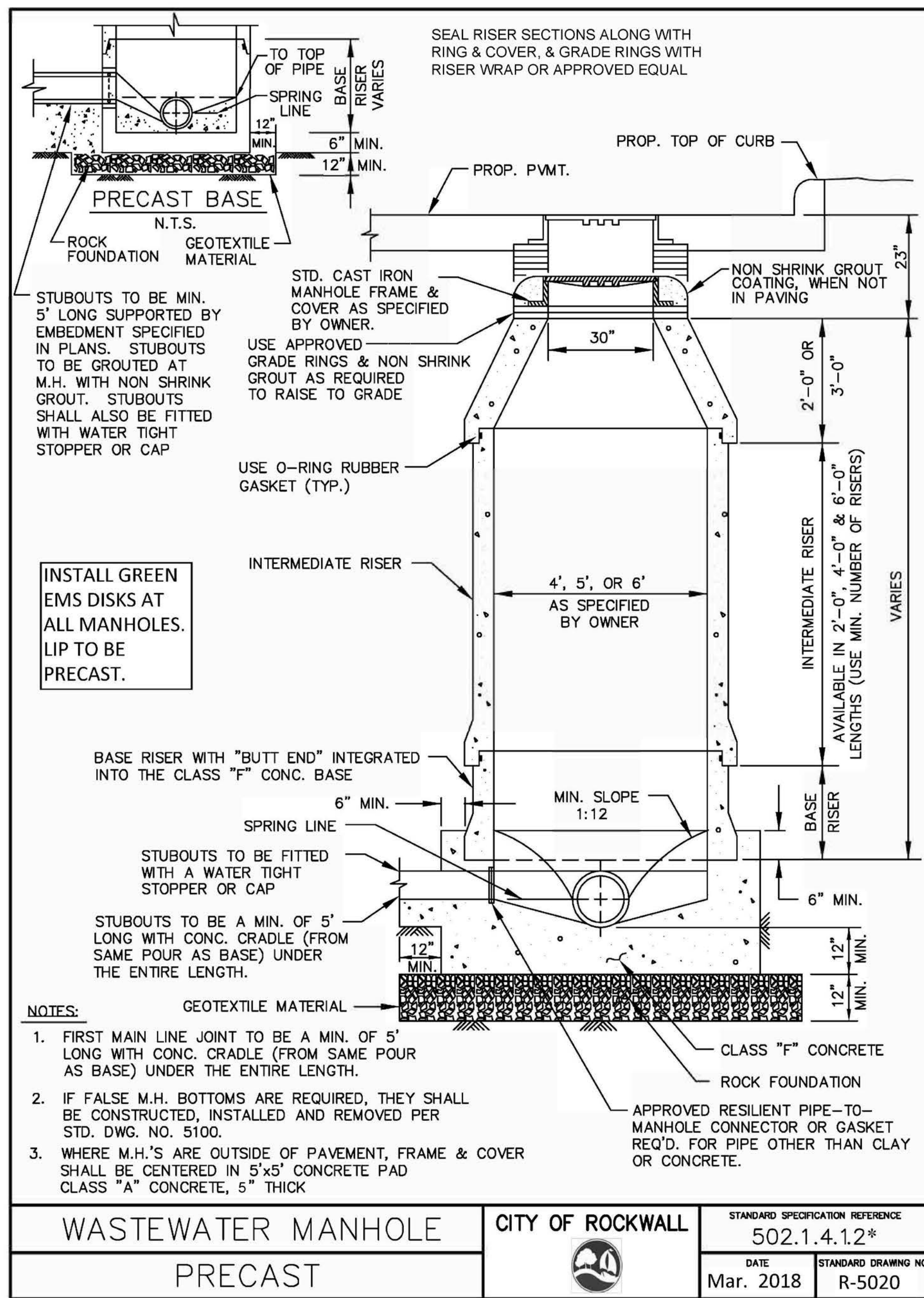
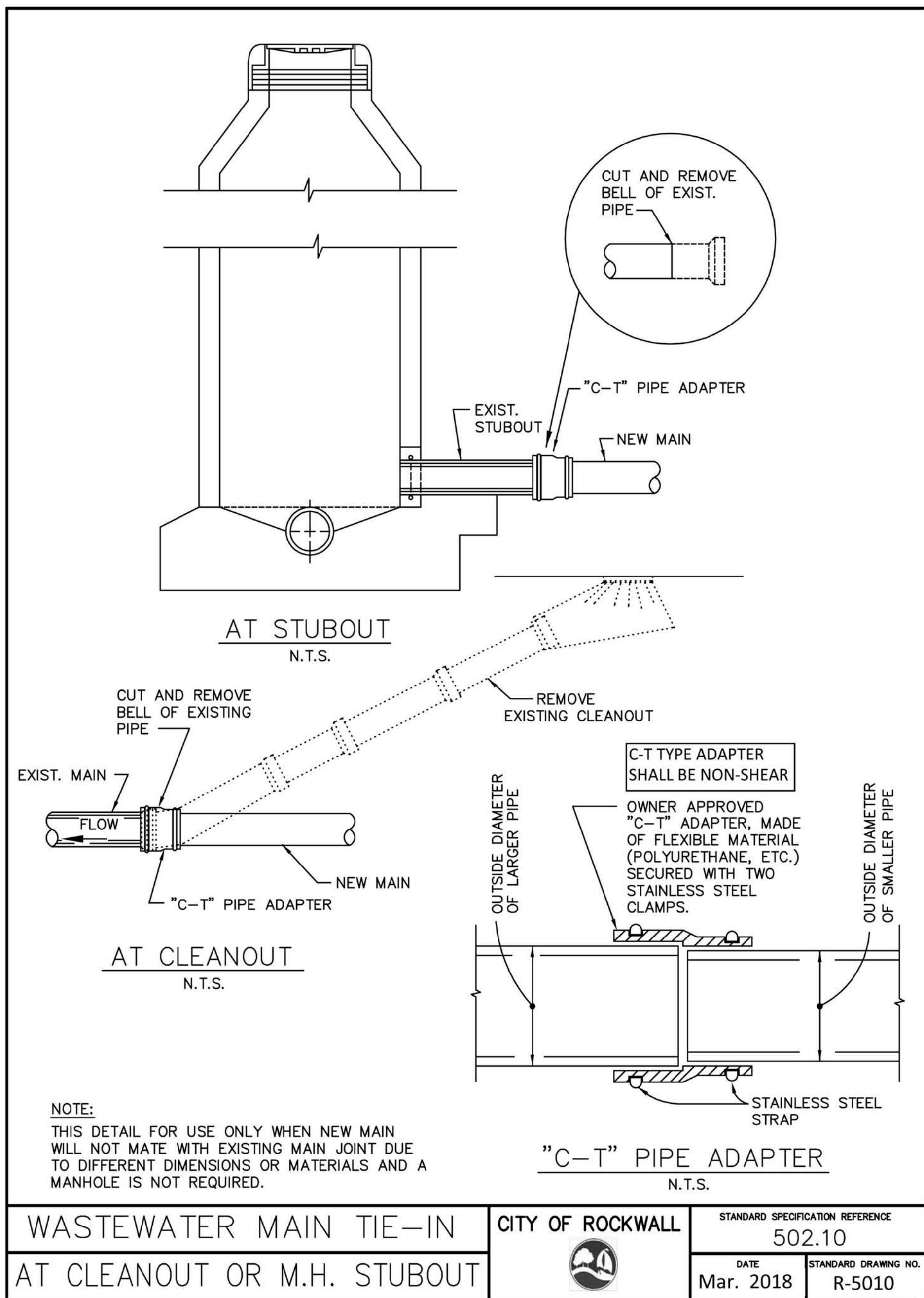
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<p align="center">CITY OF ROCKWALL, TEXAS</p> <p align="center">HIGHLAND DRIVE RECONSTRUCTION, PHASE I</p> <p align="center">(DRIFTWOOD STREET TO BEDFORD FALLS LANE)</p> <p align="center">WASTEWATER LINE A-1 & A-2</p>
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tnp project
RWL18219
sheet
23

Drawing: P:\PROJECTS\RW18219\CAD\Sheets\PHASE 1 - NORTH\20 WASTE\WATER LINE A-1 & A-2.dwg at Oct 03, 2019-3:16pm by Jekelle
Layout: 20 WASTE\WATER LINE A-1 & A-2 Xrefs: xref-border.dwg - x3d-sewer.dwg - x3d-WATER.dwg - x3d-paving.dwg - x3d-base.dwg - x3d-SCHOOL SITE.dwg

Drawing: P:\PROJECTS\RW18219\CD\Sheets\PHASE 1 - NORTH\28 WASTEWATER DETAILS 4 OF 4.dwg at Sep 27, 2019-10:35am by jekalla
Layout: 23 WASTEWATER DETAILS 1 OF 4 Pkgs: xref-border.dwg



no.	revision	by	date

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scale
when bar is
1 inch long
horiz
N/A
vert
N/A
SEP 2019

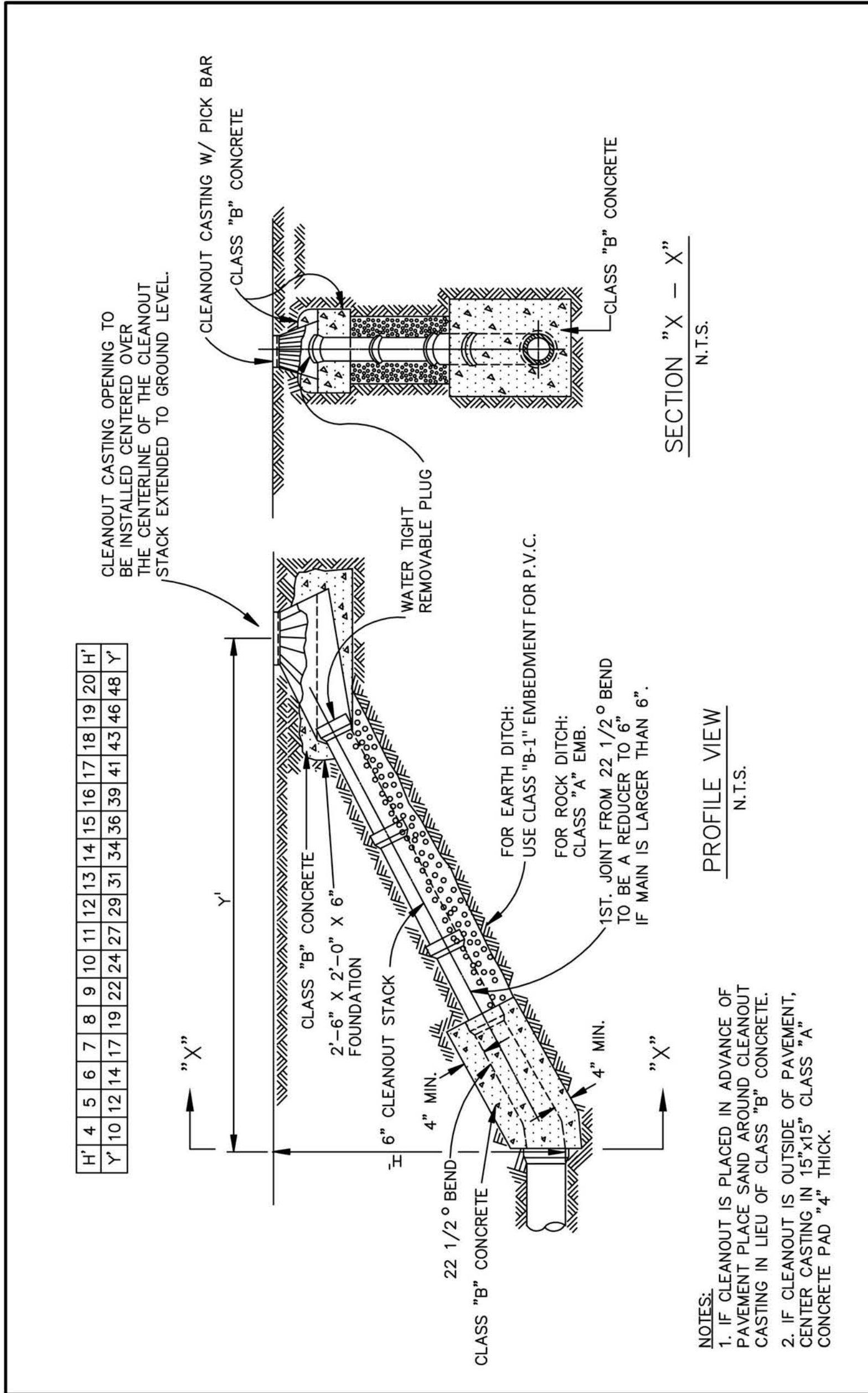


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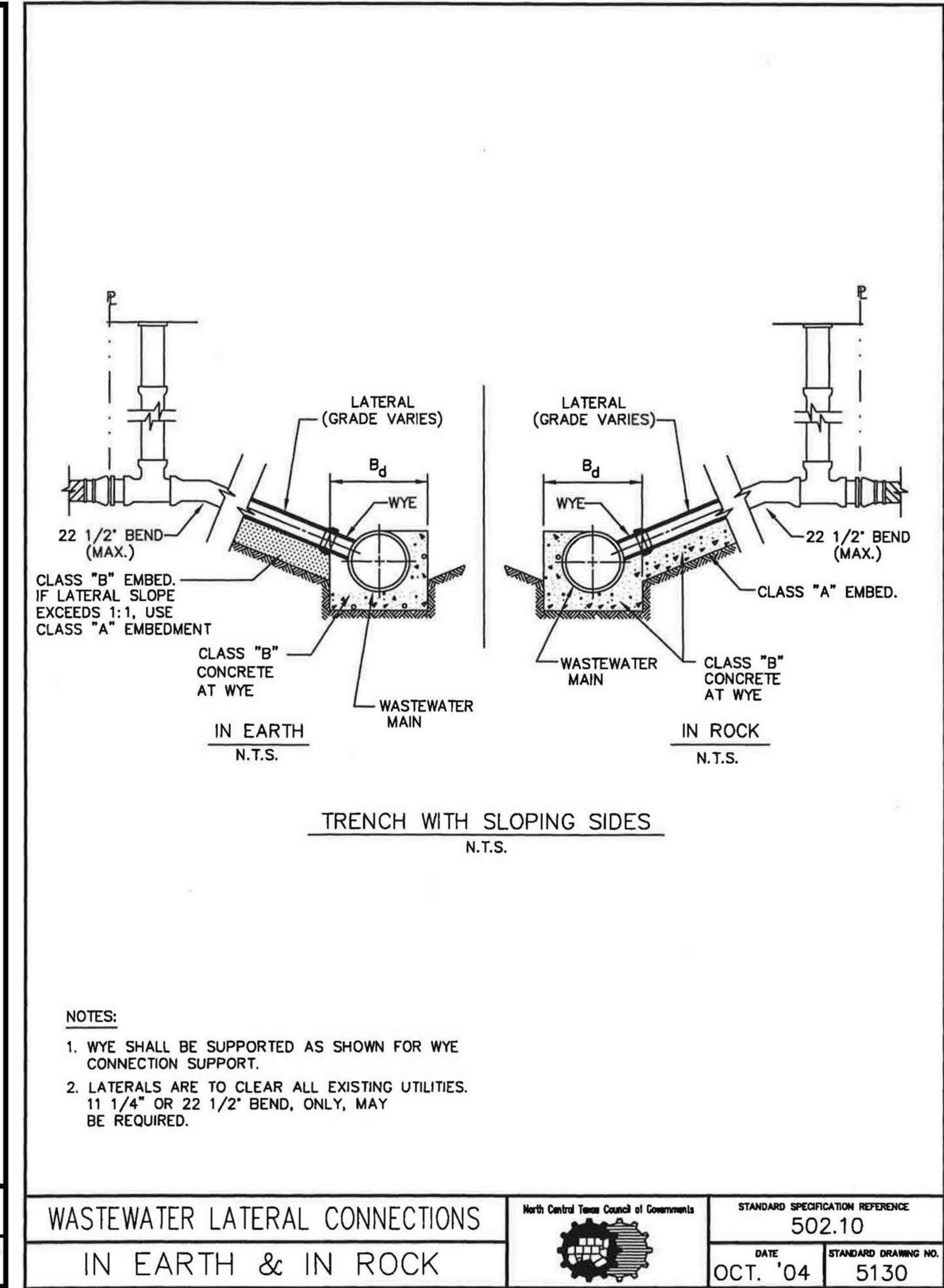
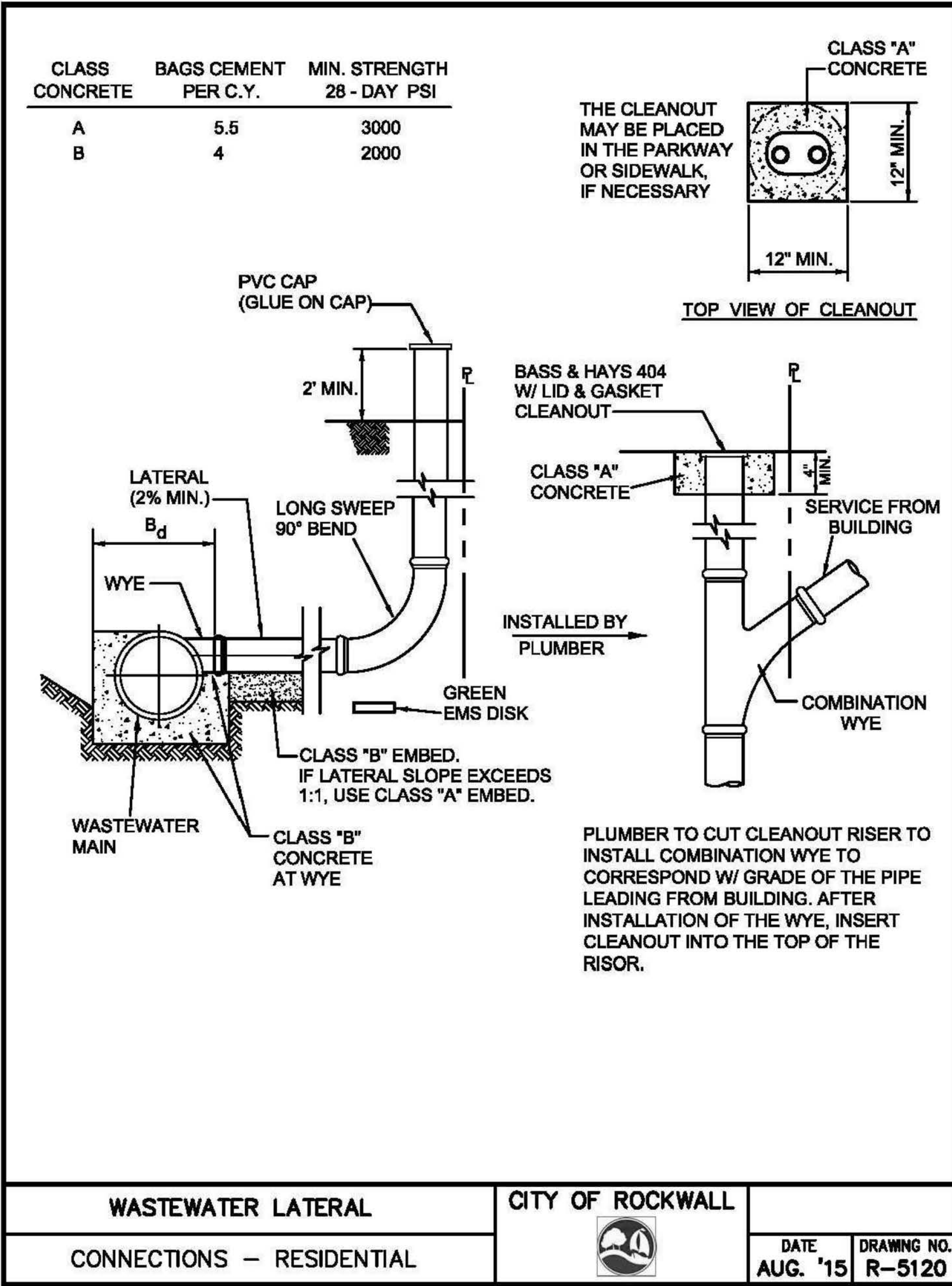
CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
WASTEWATER DETAILS 1 OF 4

tnp project
RW18219
sheet
24

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\26 WASTEWATER DETAILS 4 OF 4.dwg at Sep 27, 2019-10:35am by jekalla
Layout: 24 WASTEWATER DETAILS 2 OF 4 Xrefs: xref-borders.dwg



STANDARD SPECIFICATION REFERENCE	CITY OF ROCKWALL	
	WASTEWATER MAIN	
502.2	CLEANOUT	
DATE	Mar. 2018	
STANDARD DRAWING NO.	R-5110	



no.	revision	by	date

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City of Rockwall
The New Horizon

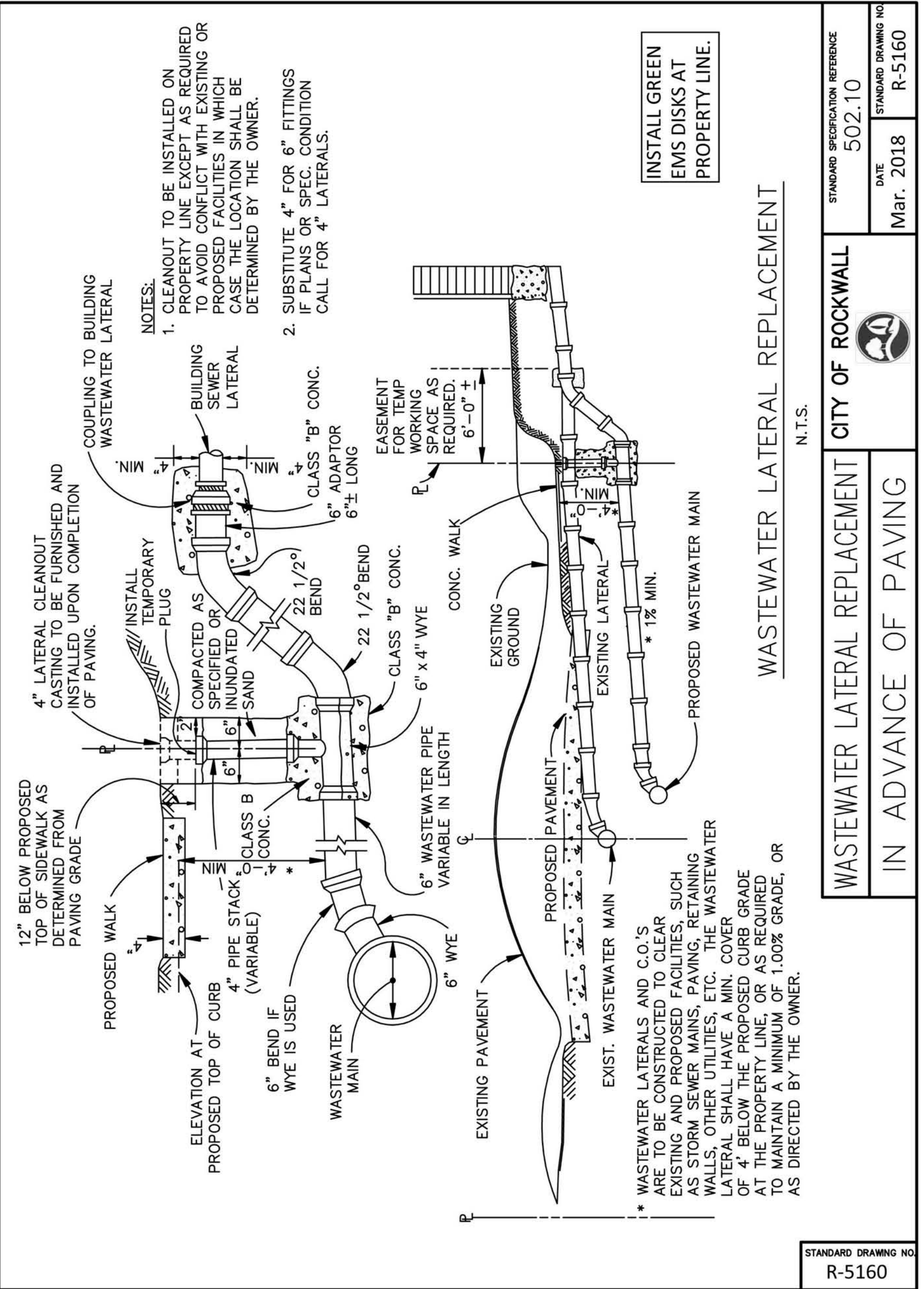
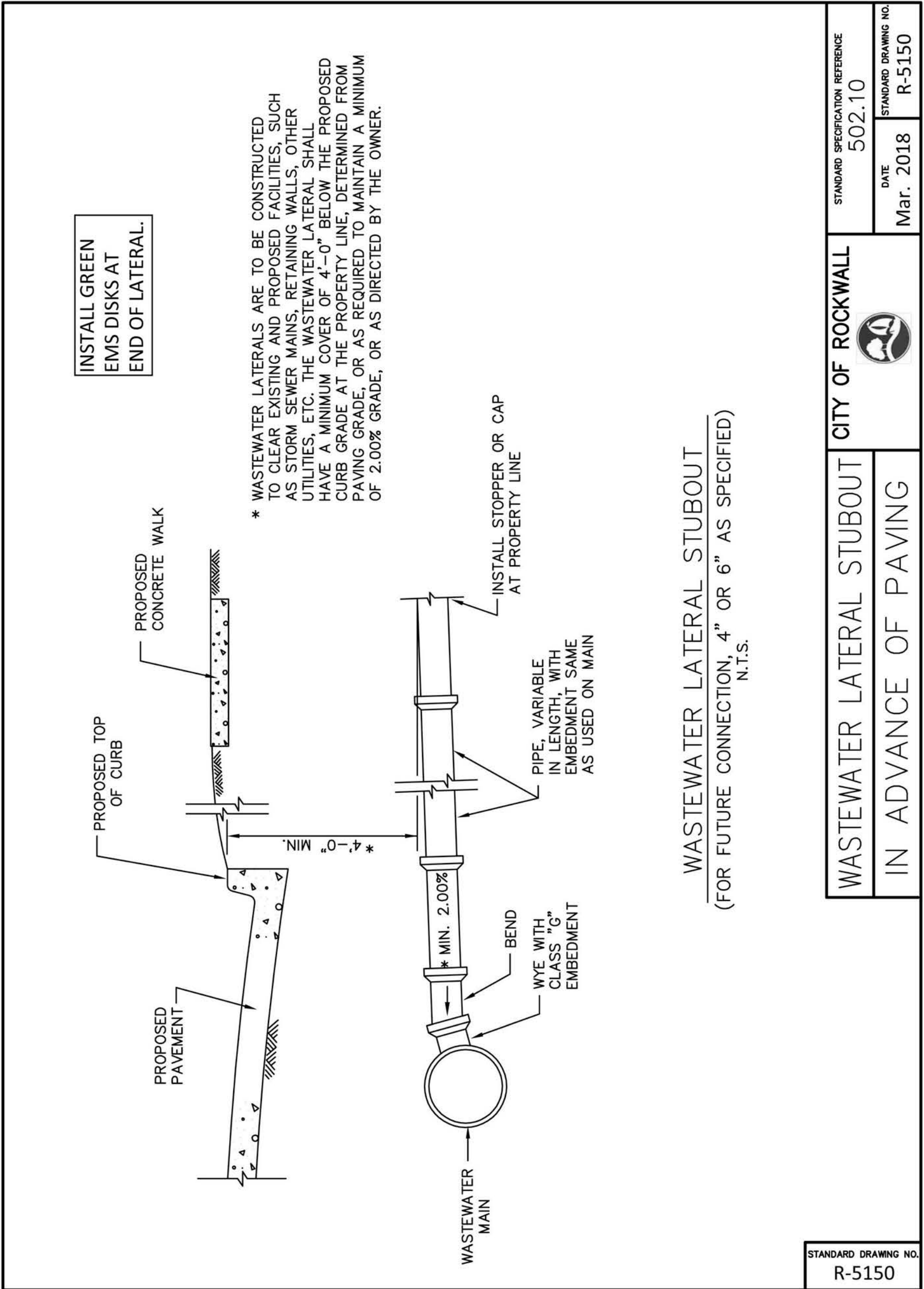
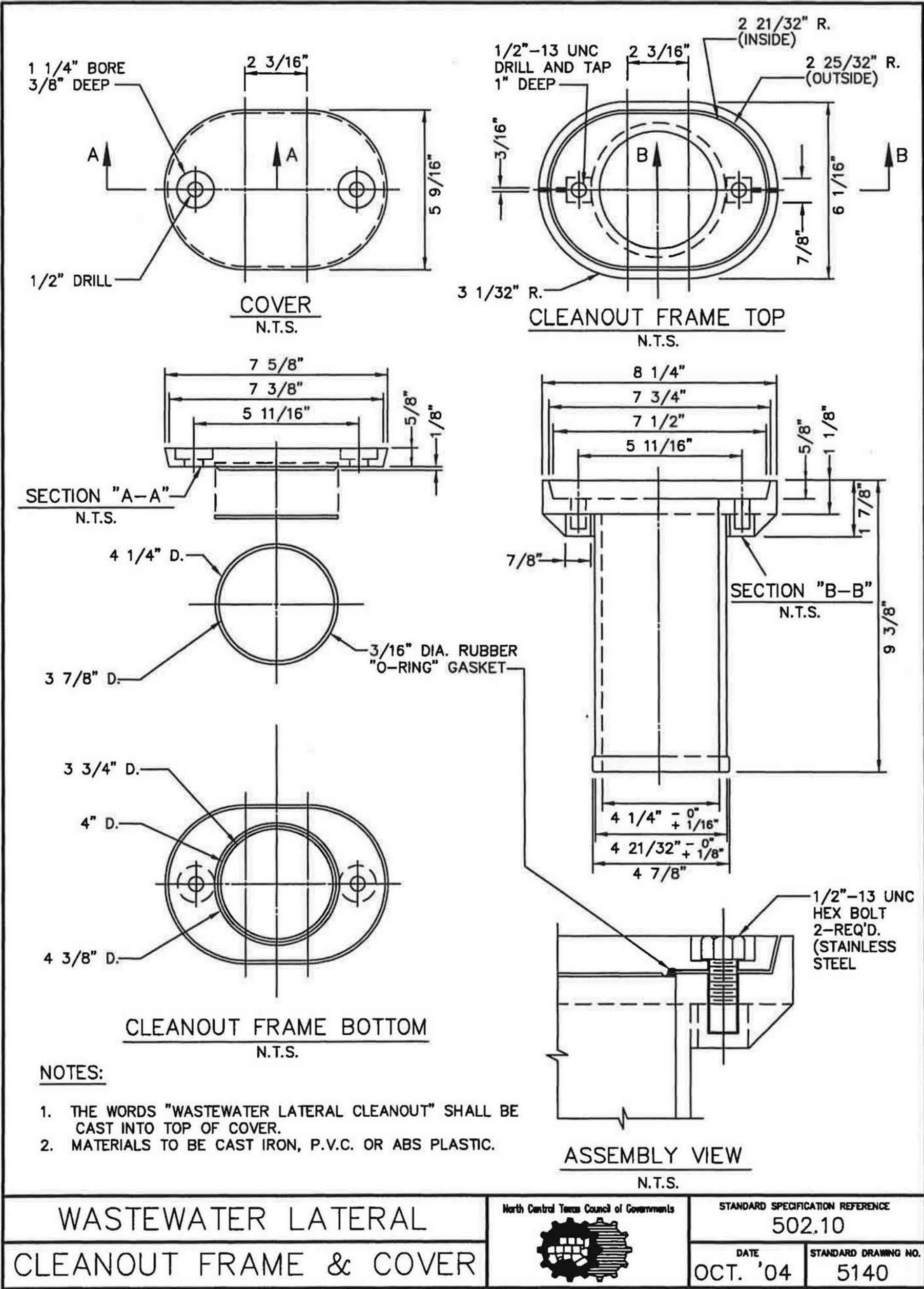
scale
when bar is
1 inch long
horiz
N/A
vert
N/A
SEP 2019

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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
WASTEWATER DETAILS 2 OF 4

tnp project
RWL18219
sheet
25

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\26 WASTEWATER DETAILS 4 OF 4.dwg at Sep 27, 2019-10:35am by Jekelle
Layout: 25 WASTEWATER DETAILS 3 OF 4 Xrefs: xref-borders.dwg



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City of Rockwall
The New Horizon

scale
when bar is
1 inch long
horiz
N/A
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N/A
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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
WASTEWATER DETAILS 3 OF 4

tnp project
RWL18219
sheet
26

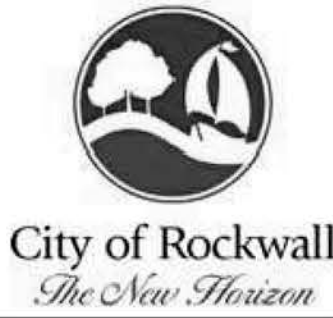
Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\28 DRAINAGE AREA MAP CALCS.dwg at Sep 27, 2019 10:37am by jbedalla
Layout: 28 DRAINAGE AREA MAP CALCS - Area: Inter-boarding - XBD-Boarding - XBD-School Site.dwg

INLET DESIGN CALCULATIONS TABLE																																								
INLET ID	LOCATION			DESIGN STORM FREQUENCY	AREA RUNOFF Q = CIA						BYPASS FROM UPSTREAM C _{XA}	TOTAL GUTTER FLOW Q _a	GUTTER FLOW										MAXIMUM ALLOWABLE FLOW BASED ON MAX. ALLOWABLE PONDING WIDTH Q _{allow gutter (one side)}	INLET CAPACITY										INLET BY-PASS				REMARKS		
					C	AREA ID	TIME OF CONCENTRATION T _c	INTENSITY I	AREA A	RUNOFF Q			THROUGHFARE TYPE	ON-GRADE SAG	MANNING'S n	LONGITUDINAL SLOPE	CROWN TYPE	CROSS SLOPE S _x	DEPRESSION		PONDING WIDTH/SPREAD			DEPTH OF GUTTER FLOW		DEPRESSED GUTTER SECTION		SECTION BEYOND DEPRESSION		CONVEYANCE		RATIO OF DEPRESSION FLOW TO TOTAL FLOW E ₀	EQUIVALENT CROSS SLOPE S _e	INLET LENGTH		INLET CAPACITY Q _c	FLOW Q _{bypass}		C'A	TO INLET ID
	DEPTH a	WIDTH W	(ALLOW) T _{allow}																(ACTUAL) T _{actual}	(ALLOW) Y _{allow}	(ACTUAL) Y _{actual}	AREA A _w		WETTED PERIMETER P _w	AREA A ₀	WETTED PERIMETER P ₀	DEPRESSION SECTION K _w	SECTION BEYOND DEPRESSION K ₀	REQUIRED L _{req'd}	ACTUAL L _{actual}										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
A1	HIGHLAND DR.	21+85.30	20.2 LT	100	0.50	A-1	10	9.80	0.13	0.64	0.00	0.64	RES COLLEC.	ON-GRADE	0.0175	0.024	ROOF TOP	0.025	0.50	2.00	20.00	4.64	0.50	0.12	31.23	0.68	2.07	0.09	2.64	27.57	0.76	0.97	0.27	4.05	10.00	4.10	0.00	0.00	A3	
A2	HIGHLAND DR.	21+80.02	20.2 RT	100	0.50	A-2	10	9.80	0.84	4.12	0.00	4.12	RES COLLEC.	ON-GRADE	0.0175	0.024	ROOF TOP	0.025	0.50	2.00	20.00	9.33	0.50	0.23	31.23	0.92	2.07	0.67	7.33	45.16	11.60	0.80	0.22	9.87	10.00	4.10	0.02	0.00	A4	
A3	HIGHLAND DR.	19+31.08	20 LT	100	0.50	A-3 & A-5	10	9.80	1.55	7.60	0.00	7.60	RES COLLEC.	SAG	0.0175	0.010	ROOF TOP	0.025	0.50	2.00	20.00	13.84	0.50	0.35	20.16	1.14	2.07	1.75	11.84	65.13	41.61	0.61	0.18	5.74	10.00	11.06	0.00	0.00	N/A	
A4	HIGHLAND DR.	19+31.80	20 RT	100	0.50	A-4 & A-6	10	9.80	2.25	11.03	0.02	11.04	RES COLLEC.	SAG	0.0175	0.010	ROOF TOP	0.025	0.50	2.00	20.00	15.91	0.50	0.40	20.16	1.25	2.07	2.42	13.91	75.29	64.01	0.54	0.16	9.96	10.00	11.06	0.00	0.00	N/A	
A7	HIGHLAND DR.	11+58.52	18 LT	100	0.50	A-7	10	9.80	3.11	15.24		15.24	RES COLLEC.	N/A	0.0175	0.0225	ROOF TOP	0.039	0.50	2.00	18.00	11.69	0.50	0.46	47.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
A8	HIGHLAND DR.	10+99.52	18 RT	100	0.50	A-8	10	9.80	1.95	9.56		9.56	RES COLLEC.	N/A	0.0175	0.012	ROOF TOP	0.039	0.50	2.00	18.00	11.04	0.50	0.43	34.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
A9	HIGHLAND DR.	2+00.64	18 LT	100	0.50	A-9	10	9.80	0.63	3.09		3.09	RES COLLEC.	N/A	0.0175	0.007	ROOF TOP	0.028	0.50	2.00	18.00	9.83	0.50	0.28	15.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
A10	HIGHLAND DR.	2+00.65	18 RT	100	0.50	A-10	10	9.80	2.78	13.62		13.62	RES COLLEC.	N/A	0.0175	0.007	ROOF TOP	0.028	0.50	2.00	18.00	17.16	0.50	0.48	15.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
DRIFTWOOD STREET CAPACITY CHECK (IMMEDIATELY D/S OF INTERSECTION)																																								
RT SIDE	DRIFTWOOD ST.			100	0.5	A-7	10	9.80	3.11	15.24		15.24	RES	N/A	0.0175	0.020	ROOF TOP	0.0385	0.50	2.00	13.00	12.05	0.50	0.46	18.56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRFTWOOD IMMEDIATELY D/S OF INTERSECTION
LT SIDE	DRIFTWOOD ST.			100	0.5	A-8	10	9.80	1.95	9.56		9.56	RES	N/A	0.0175	0.020	ROOF TOP	0.0385	0.50	2.00	13.00	10.11	0.50	0.39	18.56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	DRFTWOOD IMMEDIATELY D/S OF INTERSECTION	

STORM SEWER CALCULATIONS TABLE																																										
SYSTEM ID	CONDUIT PROPERTIES														INCREMENTAL DRAINAGE AREA					ACCUMULATED CA	UP-STREAM Tc	DESIGN STORM FREQUENCY (YR)	INTENSITY I	RUNOFF Q	CONDUIT CAPACITY Qc	PARTIAL FLOW	VELOCITY V	TIME IN CONDUIT	FRICTION SLOPE Sf	FRICTION HEAD-LOSS	HGL		HEADLOSS CALCULATIONS						DESIGN HGL	TOP OF CURB ELEV.	HGL DEPTH BELOW TIC	REMARKS
	COLLECTION POINT STATION		LENGT H "L"	# OF BARRELS	PIPE SIZE	BOX		TYPE	AREA	WETTED PERIMETER Pw	HYDRAULIC RADIUS	MANNINGS n	FLOWLINE ELEVATION		SLOPE	INLET ID	AREA	RUNOFF COEFF	INCREMENTAL CA												U/S	DIS	V1 1/2g	V2 1/2g	JUNCTION TYPE	COEFF Kf	HEAD LOSS Hf					
	US	DS				SPAN	RISE						UPSTREAM	DOWNSTREAM																												
																																						(FT)				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
EXISTING TRUNK LINE A																																										
EX. LINE A	01+79.74	01+33.87	45.9	1	24	-	-	RCP	3.14	6.28	0.50	0.013	546.83	546.51	0.007	A3	1.55	0.50	0.78	0.78	10.0	100	9.80	7.60	18.90	YES	6.01	0.13	0.0004	0.020	549.24	549.24	-	0.56	INLET	1.25	0.70	549.94	551.15	1.21		
EX. LINE A	01+33.87	01+22.47	11.4	1	24	-	-	RCP	3.14	6.28	0.50	0.013	546.51	546.43	0.007	-	-	-	0.00	0.78	10.0	100	9.80	7.60	18.95	YES	6.03	0.03	0.0004	0.005	548.99	548.99	0.56	0.57	60d BEND	0.43	0.24	549.24	-			
EX. LINE A	01+22.47	01+00.00	22.5	1	27	-	-	RCP	3.98	7.07	0.56	0.013	546.43	546.27	0.007	A4	2.25	0.50	1.13	1.90	10.0	100	9.79	18.61	26.13	YES	6.57	0.06	0.0008	0.018	548.52	548.52	0.57	0.67	WYE	0.35	0.47	548.99	551.00	2.01		
																														STARTING HGL												
LATERAL A1																																										
EX. LAT. LINE	01+21.40	01+00.00	21.4	1	18	-	-	RCP	1.77	4.71	0.38	0.013	547.24	546.95	0.014	A3	0.17	0.50	0.09	0.09	10.0	100	9.80	0.83	12.23	YES	6.92	0.05	0.0001	0.002	548.99	548.99	-	0.74	INLET	1.25	0.93	549.92	551.00	1.08		
*INSIDE TOP OF PIPE ELEVATION AT OUTFALL IS USED FOR THE STARTING HGL.																																										

no.	revision			by date

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scale
when bar is
1 inch long
horiz
N/A
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N/A
SEP 2019

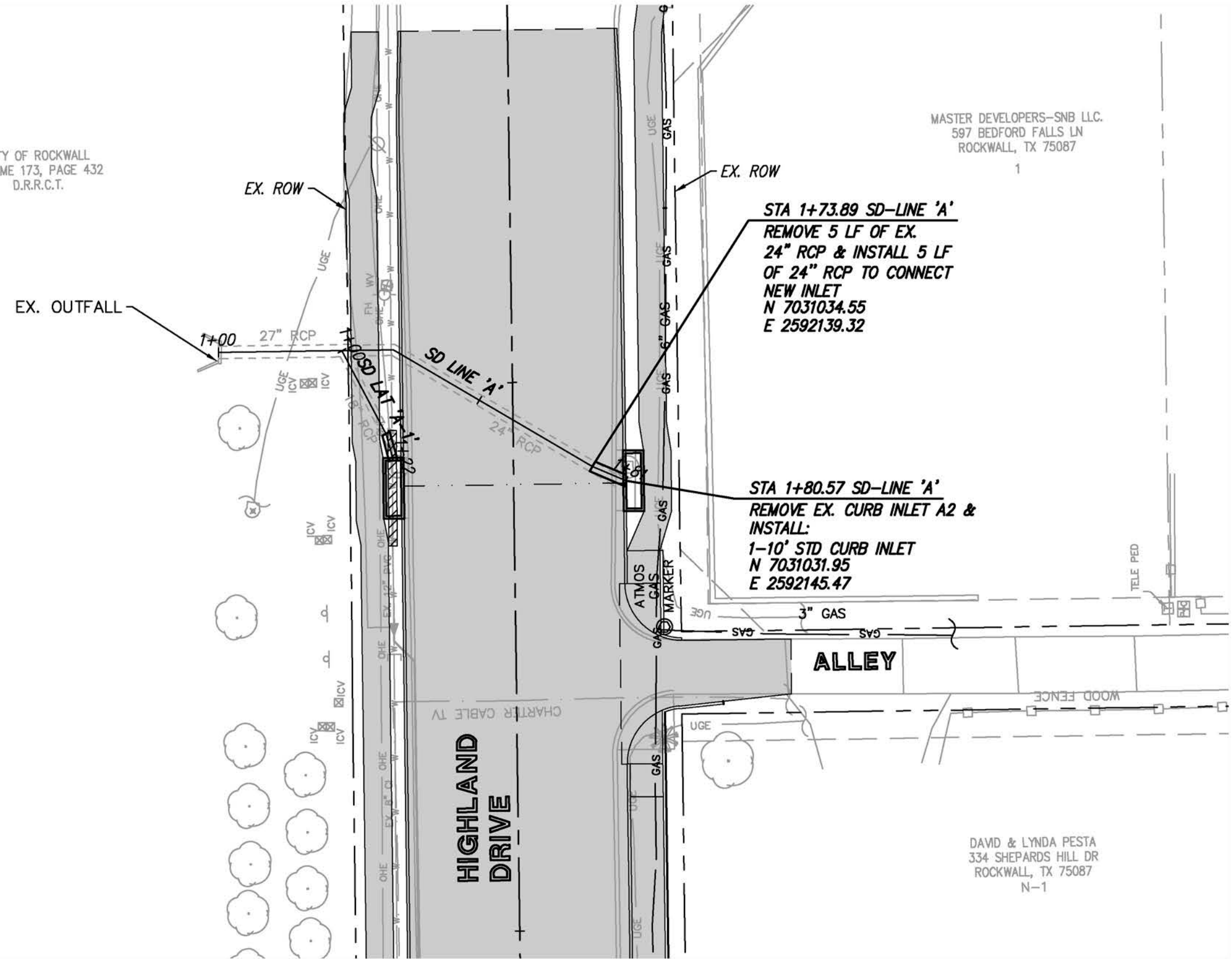


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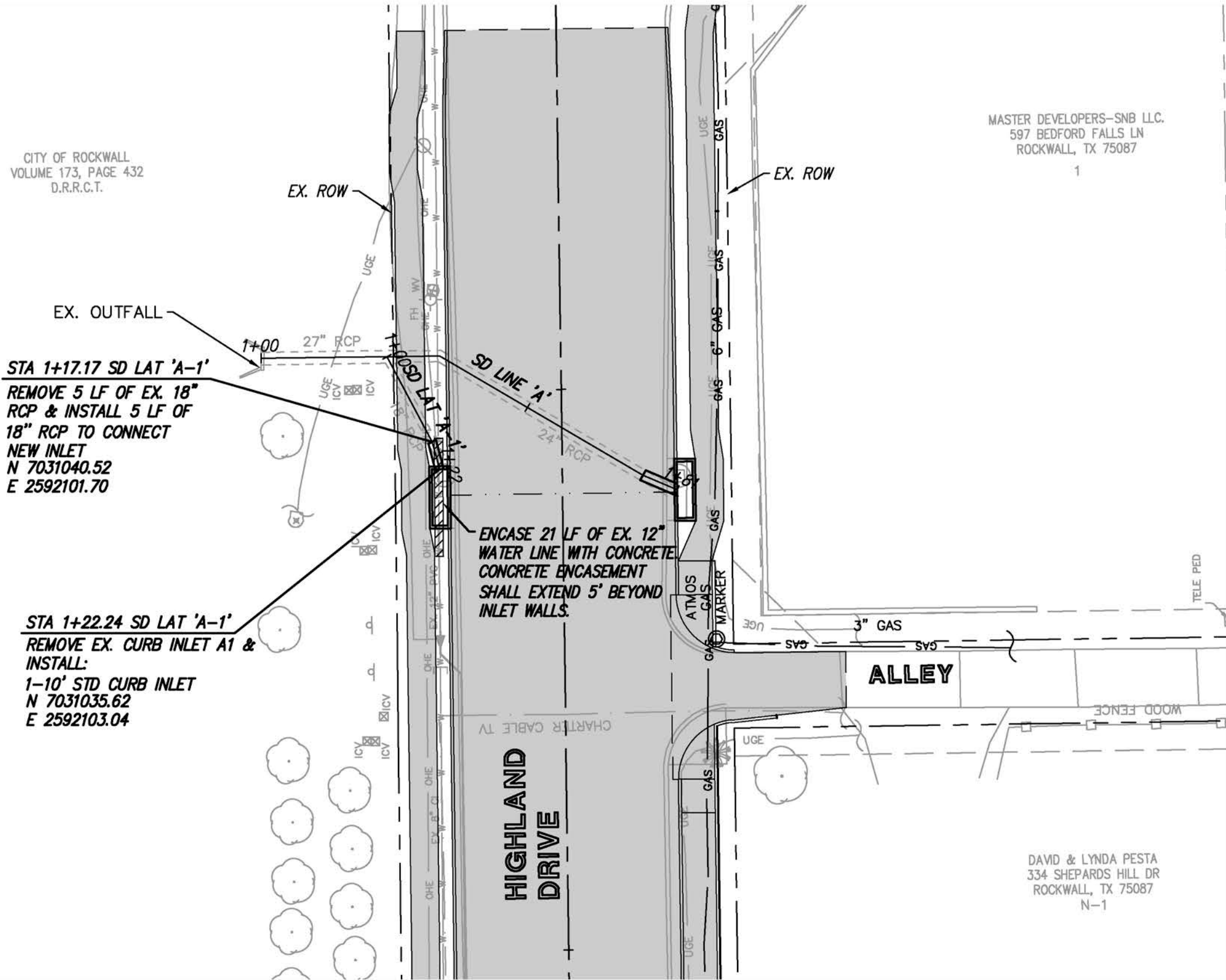
CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
DRAINAGE AREA MAP CALCS

tnp project
RWL18219
sheet
29

Drawing: P:\PROJECTS\RWL18219\SD Lateral Plan & Profile.dwg at Sep 27, 2019 2:36pm by jbelkale
Layout: 29 SD Lateral Plan & Profile - Notes: XREF-BORDER.dwg - X3D-BASE.dwg - X3D-SEWER.dwg - X3D-WATER.dwg - X3D-PAVING.dwg - X3D-SCHOOL SITE.dwg - X3D-SD.dwg



STORM DRAIN LINE 'A'



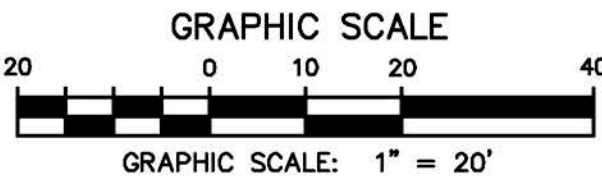
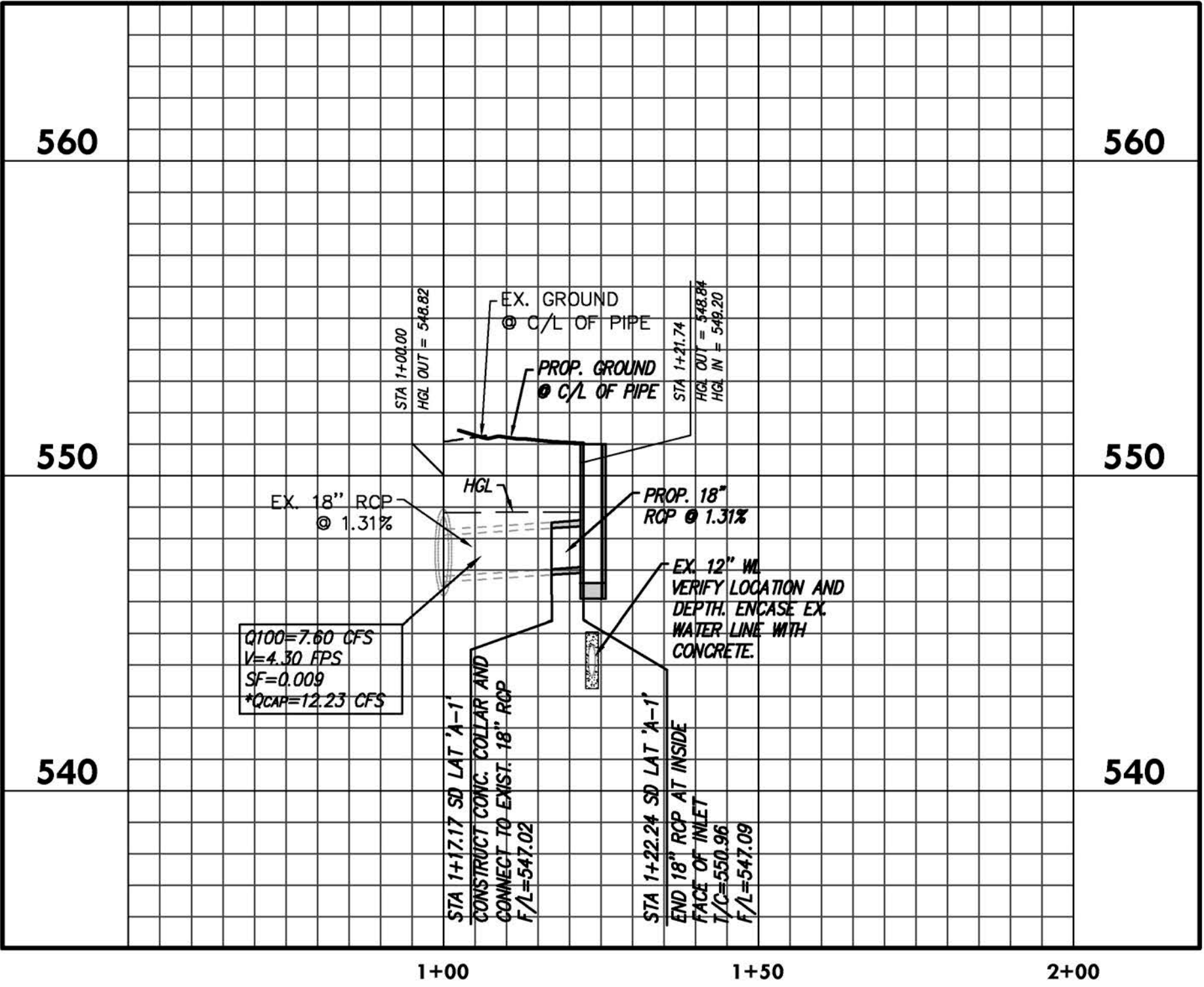
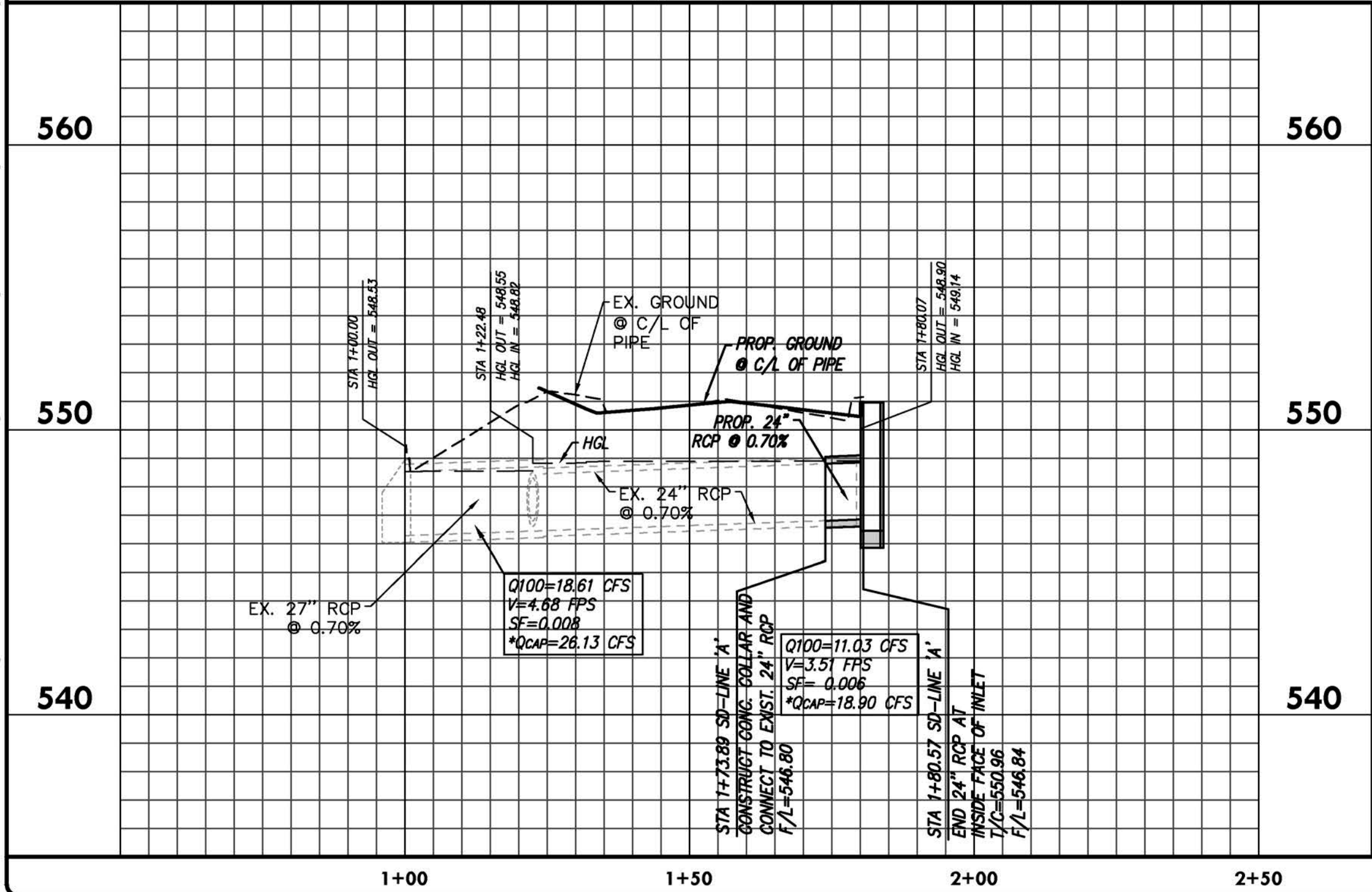
STORM DRAIN LAT 'A-1'

UTILITY NOTE

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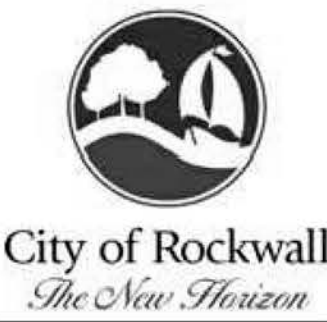
LEGEND	
	PROPOSED STORM DRAIN PIPE
	PROPOSED STORM INLET
	EX FIRE HYDRANT
	EX WATER LINE
	EX WASTEWATER LINE
	EX OVERHEAD ELECTRIC
	EX POWER POLE
	EX GAS LINE

NOTE: * PIPE CAPACITIES (QCAP) ARE CALCULATED BASED ON FREE FLOW CONDITION WITH HYDRAULIC GRADIENT SAME AS SLOPE OF PIPE.



no.	revision	by	date

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825 Watters Creek Blvd., Suite M300
Allen, Texas 75013
214.461.9867 ph 214.461.9864 fx
www.tnpsc.com
TBPE: F-230; TBPLS: 10011600, 10011601, 10194381



scale
when bar is
1 inch long
horiz
1" = 20'
vert
1" = 4'
SEP 2019



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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
SD LATERAL PLAN & PROFILE

tnp project
RWL18219
sheet
30

no.	revision	by	date

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Allen, Texas 75013
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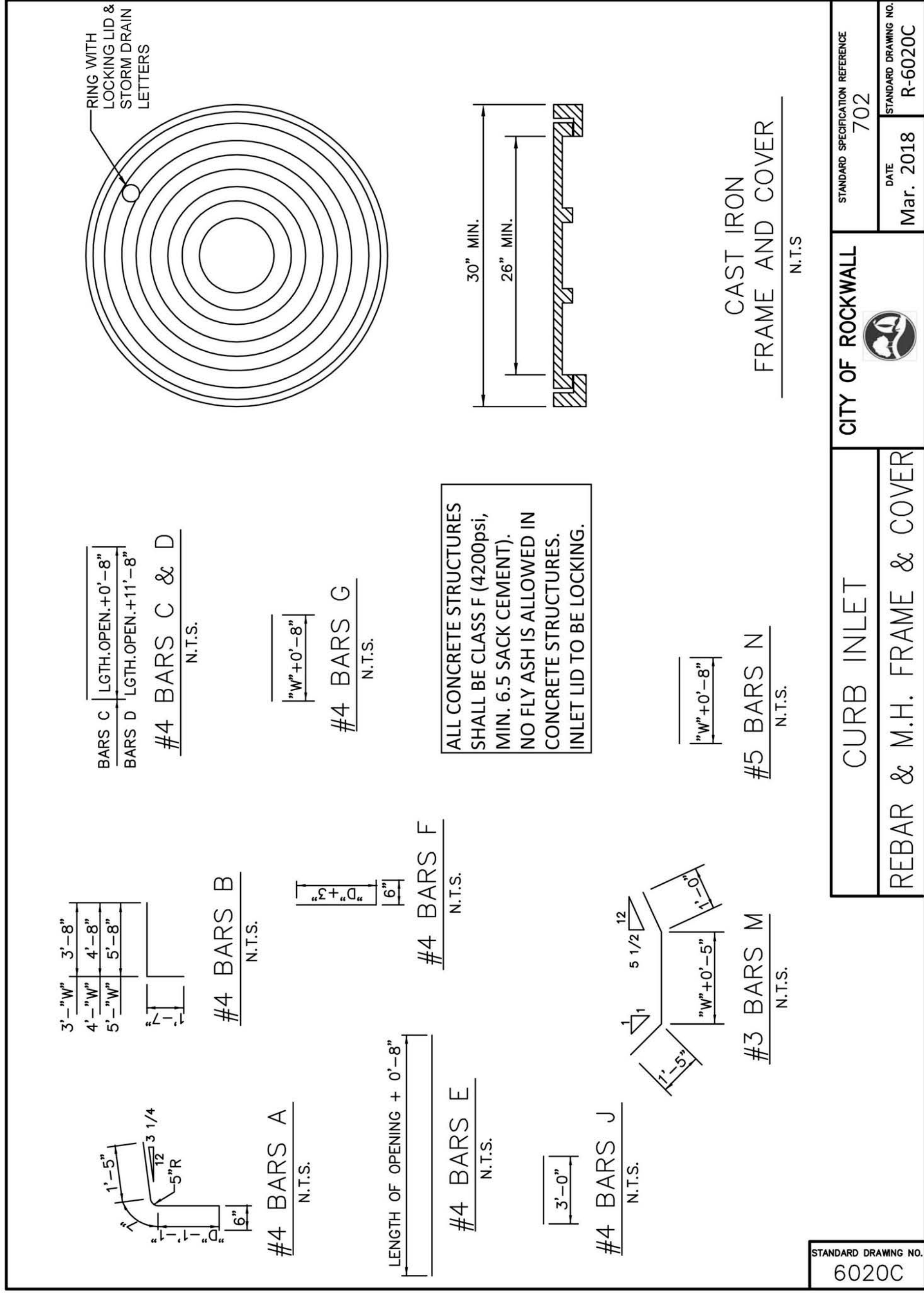
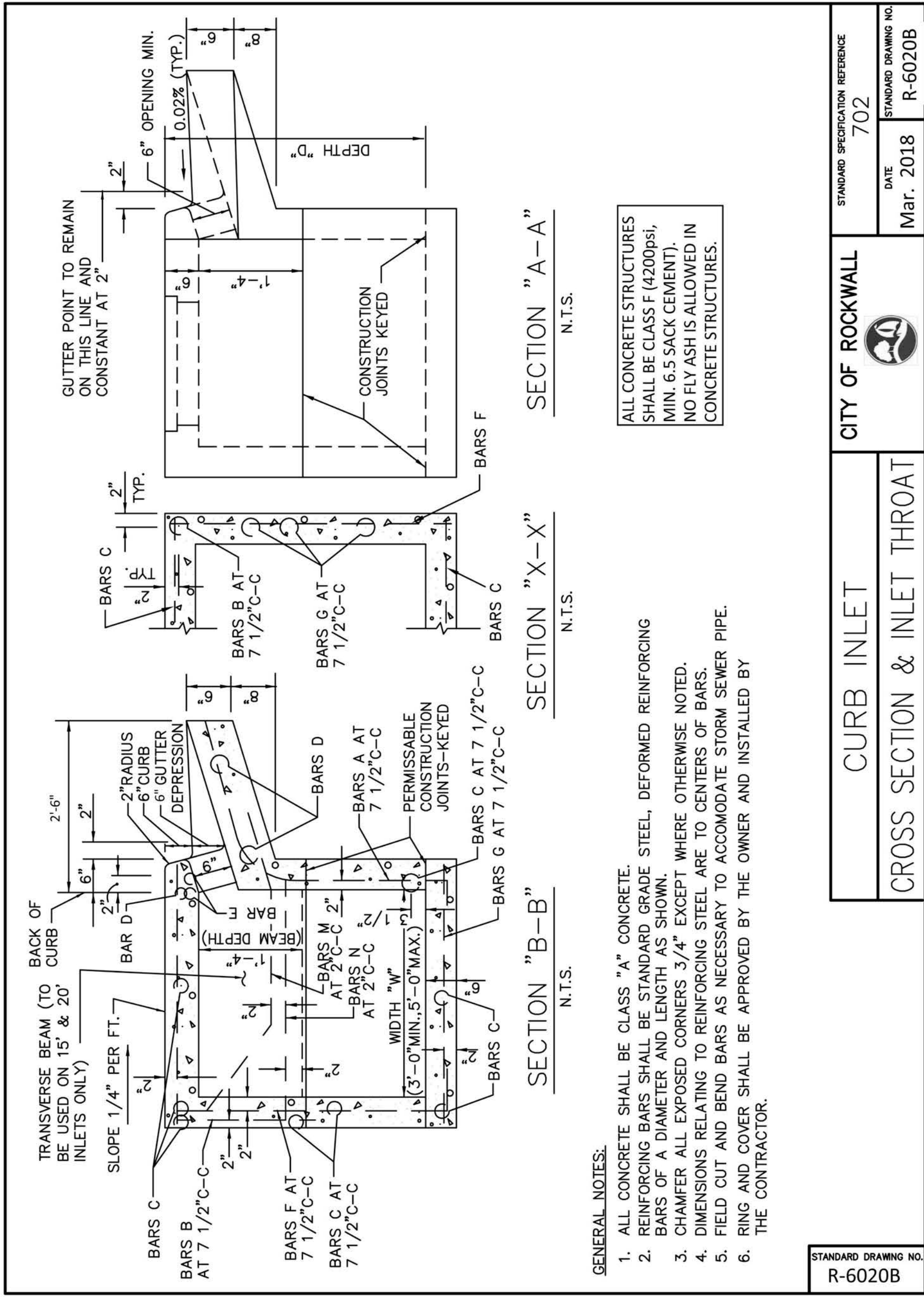
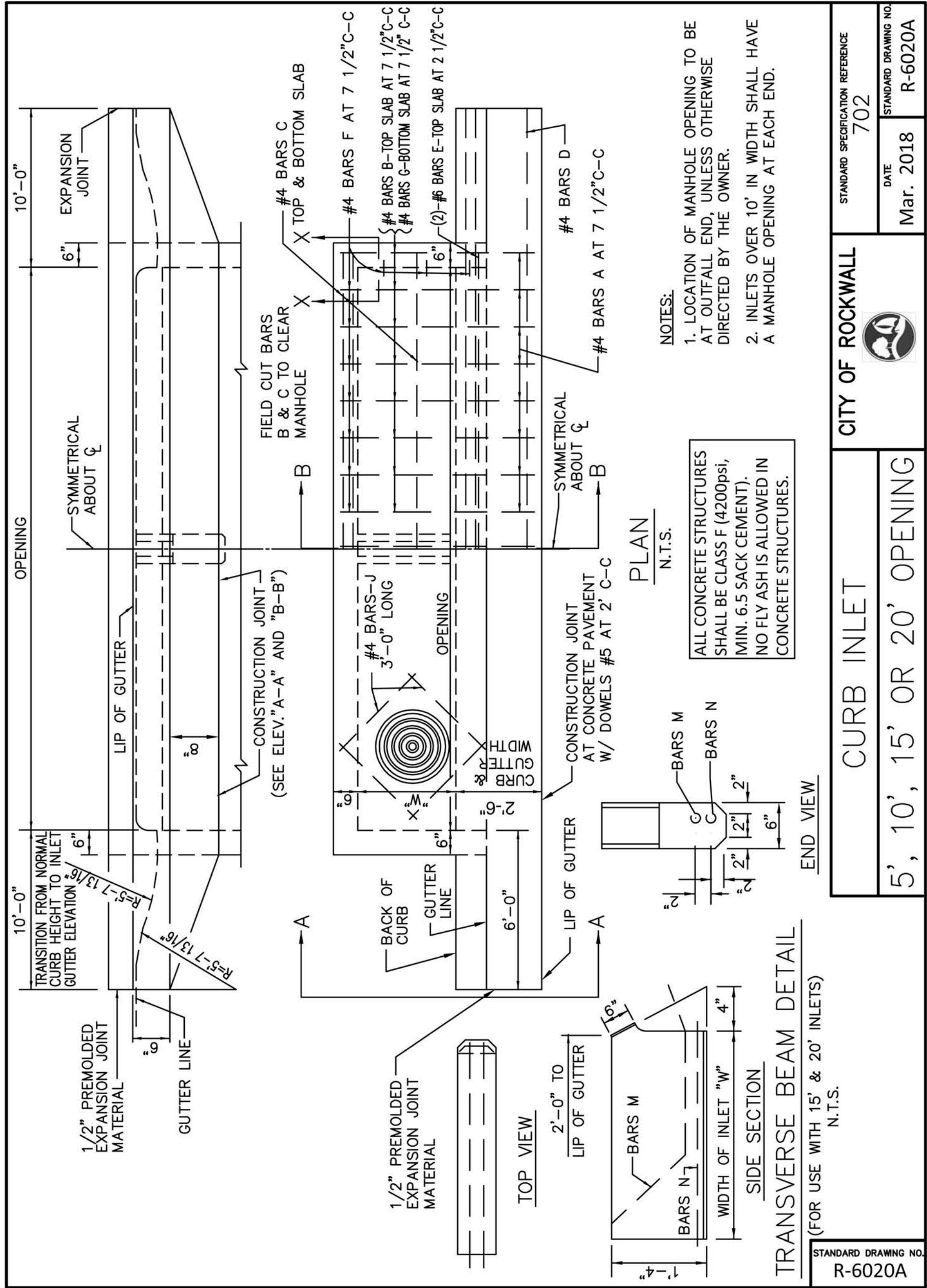
scale when bar is 1 inch long
horiz N/A
vert N/A
SEP 2019



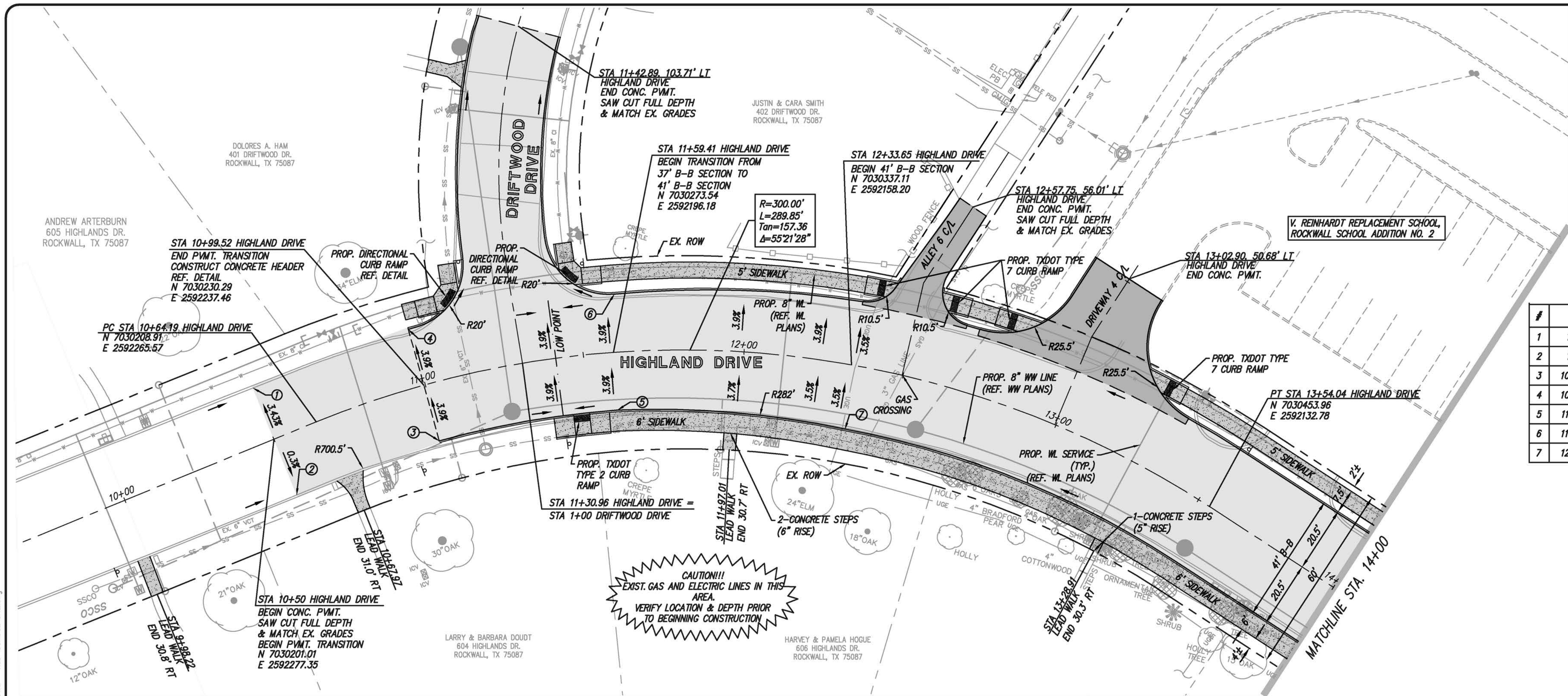
RECORD DOCUMENTS
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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
DRAINAGE DETAILS 1 OF 2

tnp project
RWL18219
sheet
31



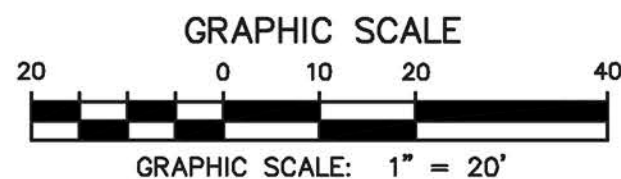
Drawing: P:\PROJECTS\RWL18219\CAD\Sheet\PHASE 1 - NORTH\37 PAVING PLAN & PROFILE - STA 10+80 TO 14+00.dwg at Sep 27, 2019-10:10am by Isakelle
Layout: 35 PAVING PLAN & PROFILE - STA 10+80 TO 14+00 Area: ver-wat.dwg - XSD-SEWER.dwg - XSD-WATER.dwg - XSD-PAVING SW CHANGES.dwg - XSD-BASE.dwg - XSD-SCHOOL SITE.dwg



UTILITY NOTE

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#	STA	OFFSET	DESC	T/P
1	10+50	17.18 LT	PI	544.30
2	10+50	18.70 RT	PI	544.84
3	10+99.52	18.00 RT	PI	544.29
4	10+99.52	18.00 LT	PI	0.00
5	11+59.39	18.00 RT	PCC	544.11
6	11+60.87	18.03 LT	PC	542.71
7	12+35.26	20.00 RT	PI	545.17

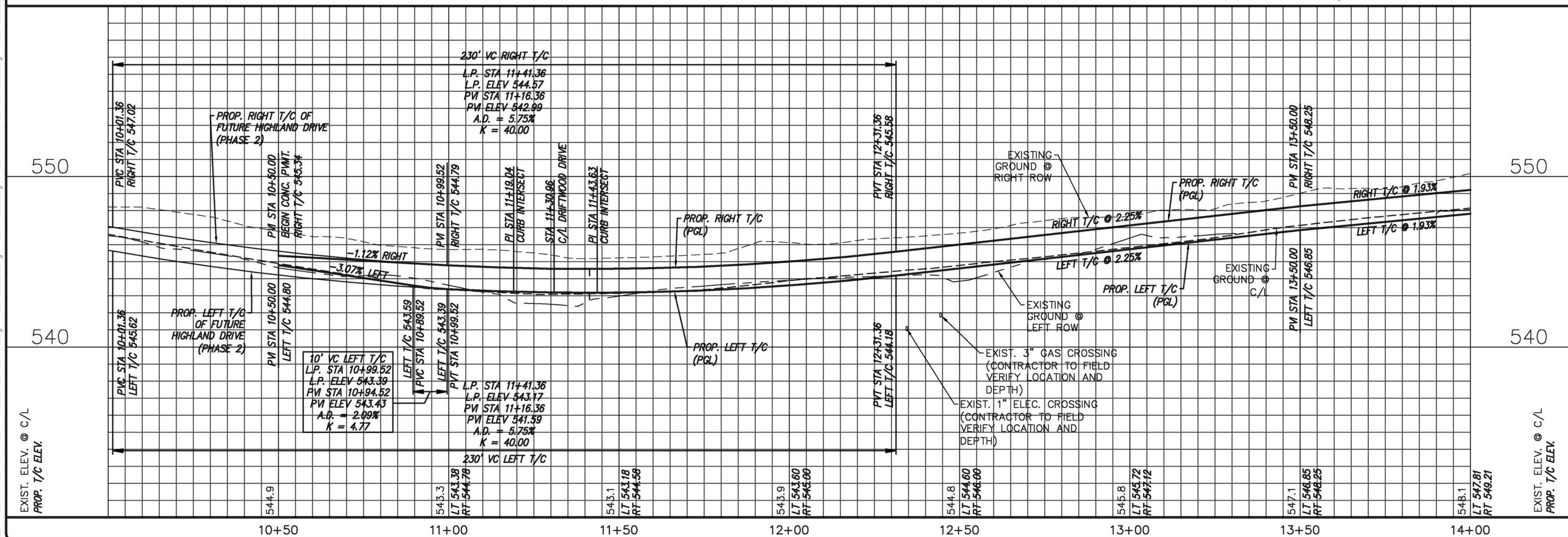


LEGEND

- PROP. CONCRETE DRIVEWAY/ALLEY (6" DRIVEWAY, 7"-5"-7" ALLEY)
- PROP. 8" CONC. PAVEMENT HIGHLAND DR. PROP. 6" CONC. PAVEMENT DRIFTWOOD ST.
- PROP. 4" CONCRETE SIDEWALK
- TREE TO BE REMOVED
- TREE TO REMAIN

NOTES:

- ALL CURB RADII ARE SHOWN TO FACE OF CURB.
- ALL EXISTING ROADWAY SIGNS SHALL BE REMOVED AND RETURNED TO THE CITY. REFERENCE PAVEMENT SIGNAGE & STRIPING PLANS.
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- ALL SIDEWALK LOCATED AGAINST BACK OF CURB TO BE LUGGED. REFERENCE JOINT LUG DETAIL ON CITY STANDARD DETAIL R-2170.
- ALL CONCRETE STEPS SHOULD HAVE A MAXIMUM RISE OF 6 INCHES AND A MINIMUM RUN OF 11 INCHES.



no.	revision	by	date

teague nall and perkins, inc

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Allen, Texas 75013

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City of Rockwall
The New Horizon

scale
when bar is
1 inch long
horiz
1" = 20'
vert
1" = 4'
SEP 2019



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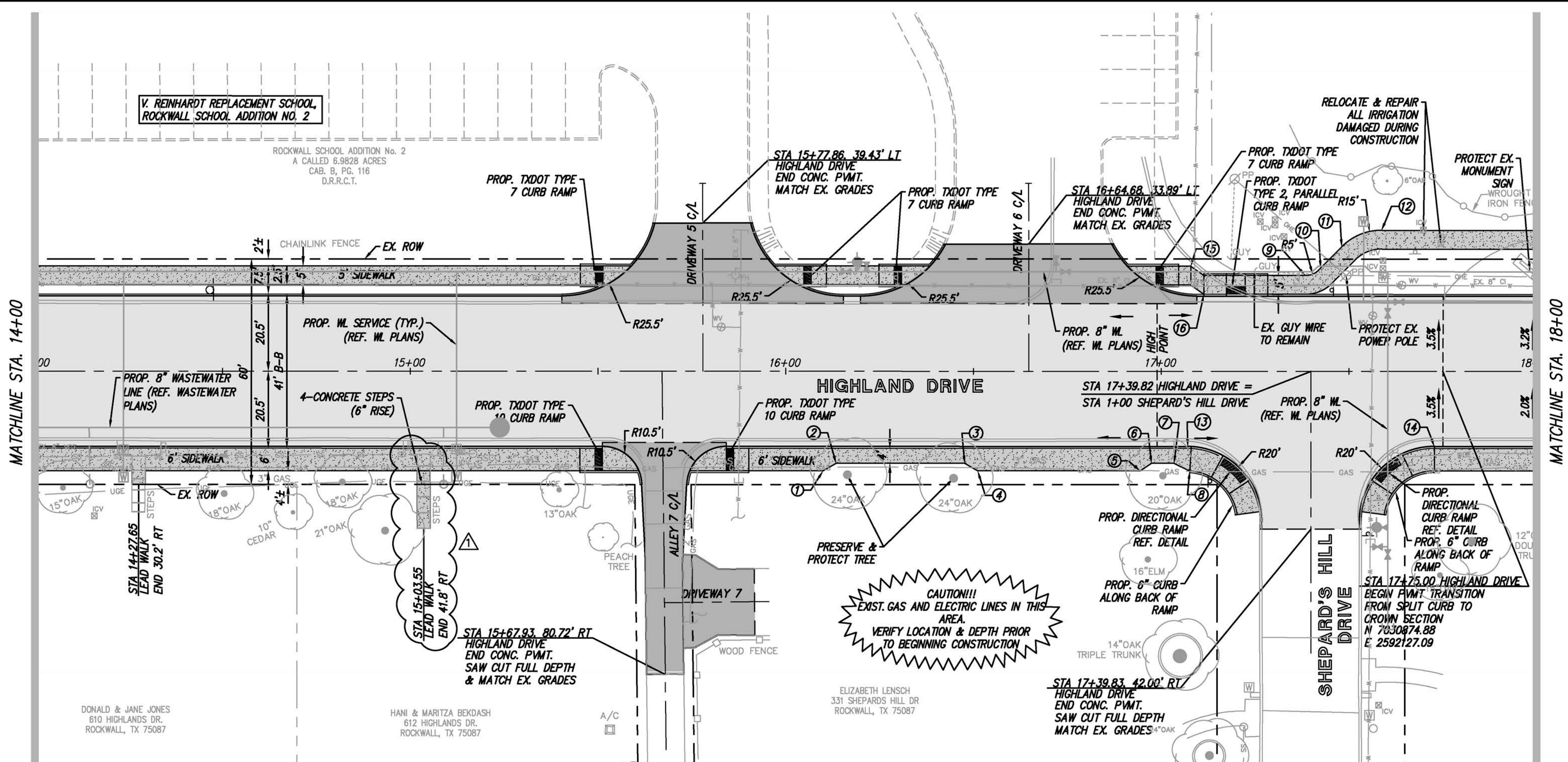
CITY OF ROCKWALL, TEXAS

HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

PAVING PLAN & PROFILE
STA 10+80 TO 14+00

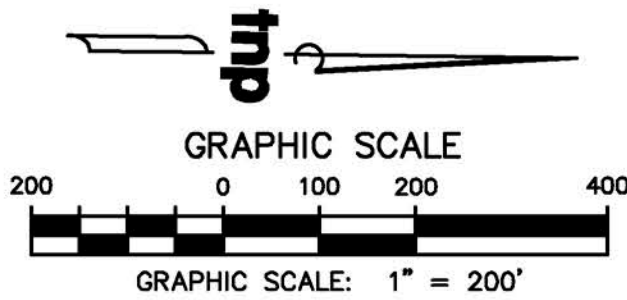
tnp project
RWL18219
sheet
33

Drawing: P:\PROJECTS\RM\18219\CD\Shepard's Hill.dwg at Oct 03 2018-2:10pm by Jbedelle
Copyright: 35 PAVING PLAN & PROFILE - STA 14+00 TO 18+00 Areas: ver-updating - XSD-mat.dwg - XSD-PAVING-SH CD\CHANGES.dwg - XSD-BASE.DWG - XSD-SCHOOL SITE.dwg
© C/L PROP. T/C ELEV.



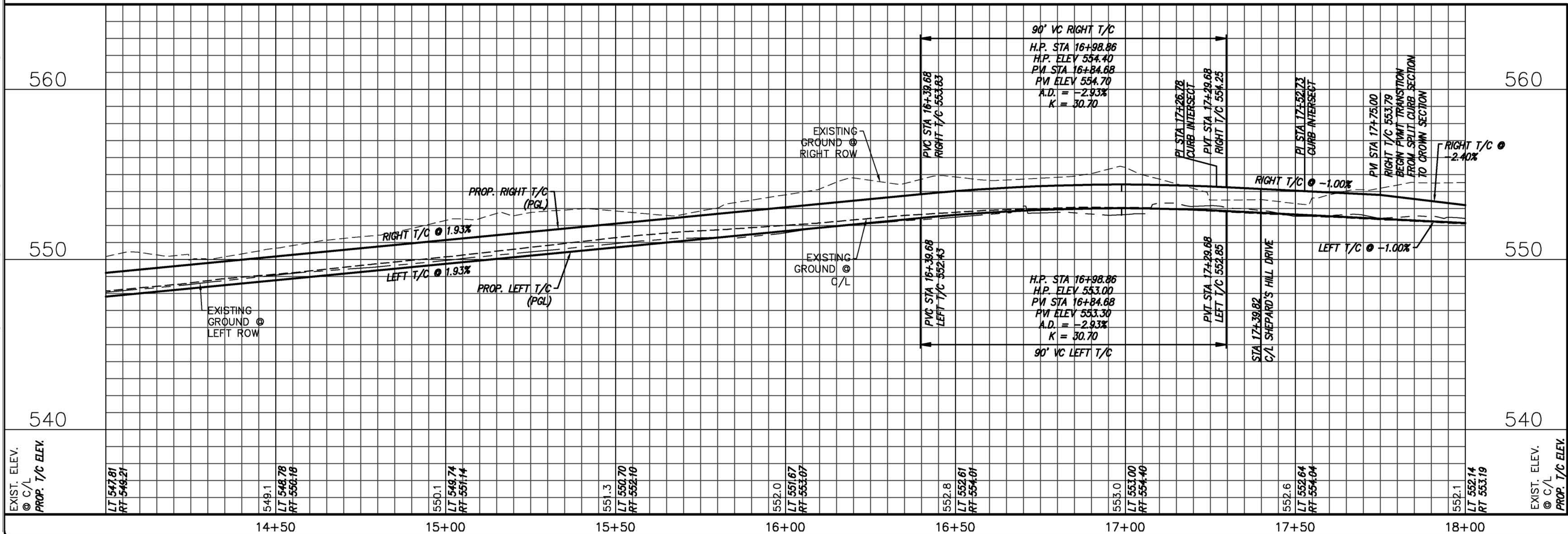
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2	16+13.42	24.50 RT	PI	553.41
3	16+47.65	24.50 RT	PI	554.05
4	16+51.11	26.50 RT	PI	554.15
5	16+94.40	26.50 RT	PI	554.52
6	16+97.40	24.50 RT	PI	554.48
7	17+03.40	24.50 RT	PI	554.48
8	17+07.60	26.53 RT	PI	554.51
9	17+38.37	25.50 LT	PC	552.86
10	17+42.40	27.46 LT	PT	552.86
11	17+48.04	33.11 LT	PC	552.71
12	17+58.65	37.50 RT	PT	552.55
13	17+07.05	20.00 RT	PC	553.89
14	17+72.71	20.00 RT	PC	553.32
15	17+07.86	28.00 LT	PI	553.14
16	17+11.33	20.50 LT	PI	552.98

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LEGEND	
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	PROP. 8" CONC. PAVEMENT HIGHLAND DR. PROP. 6" CONC. PAVEMENT SHEPARD'S HILL DR.
	PROP. 4" CONCRETE SIDEWALK
	TREE TO BE REMOVED
	TREE TO REMAIN

- NOTES:
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no.	revision	by	date
1	UPDATED LEAD WALK LIMITS PER AS BUILTS	JB	09/27/19

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scale
when bar is
1 inch long
horiz
1" = 20'
vert
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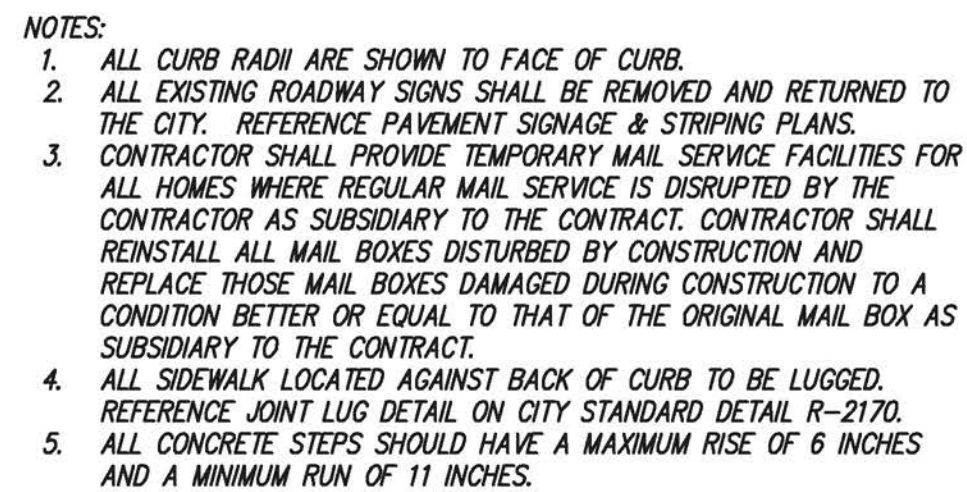
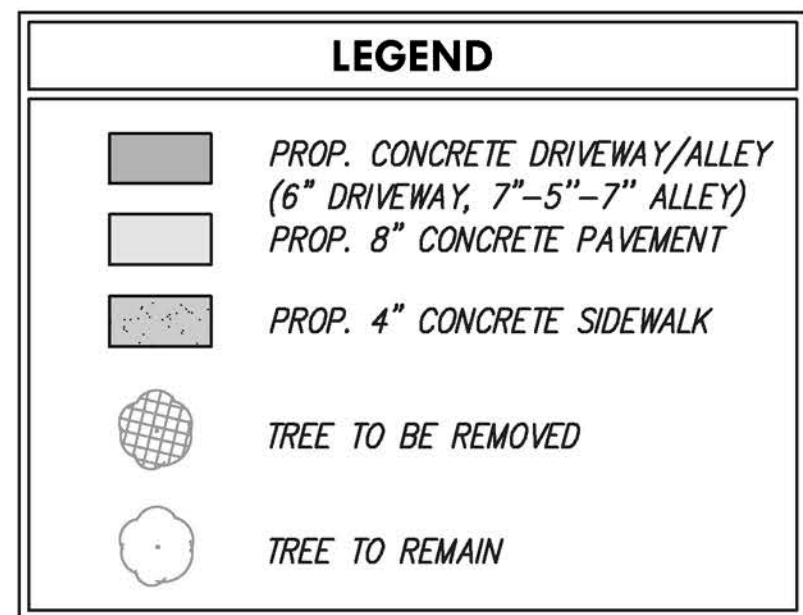
CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
PAVING PLAN & PROFILE
STA 14+00 TO 18+00

tnp project
RWL18219
sheet
34

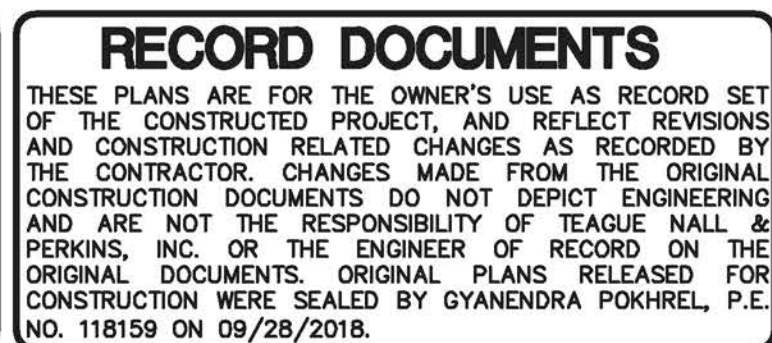
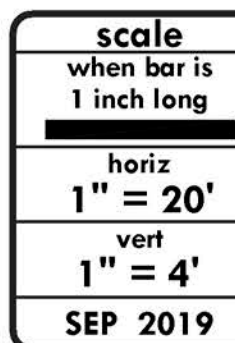


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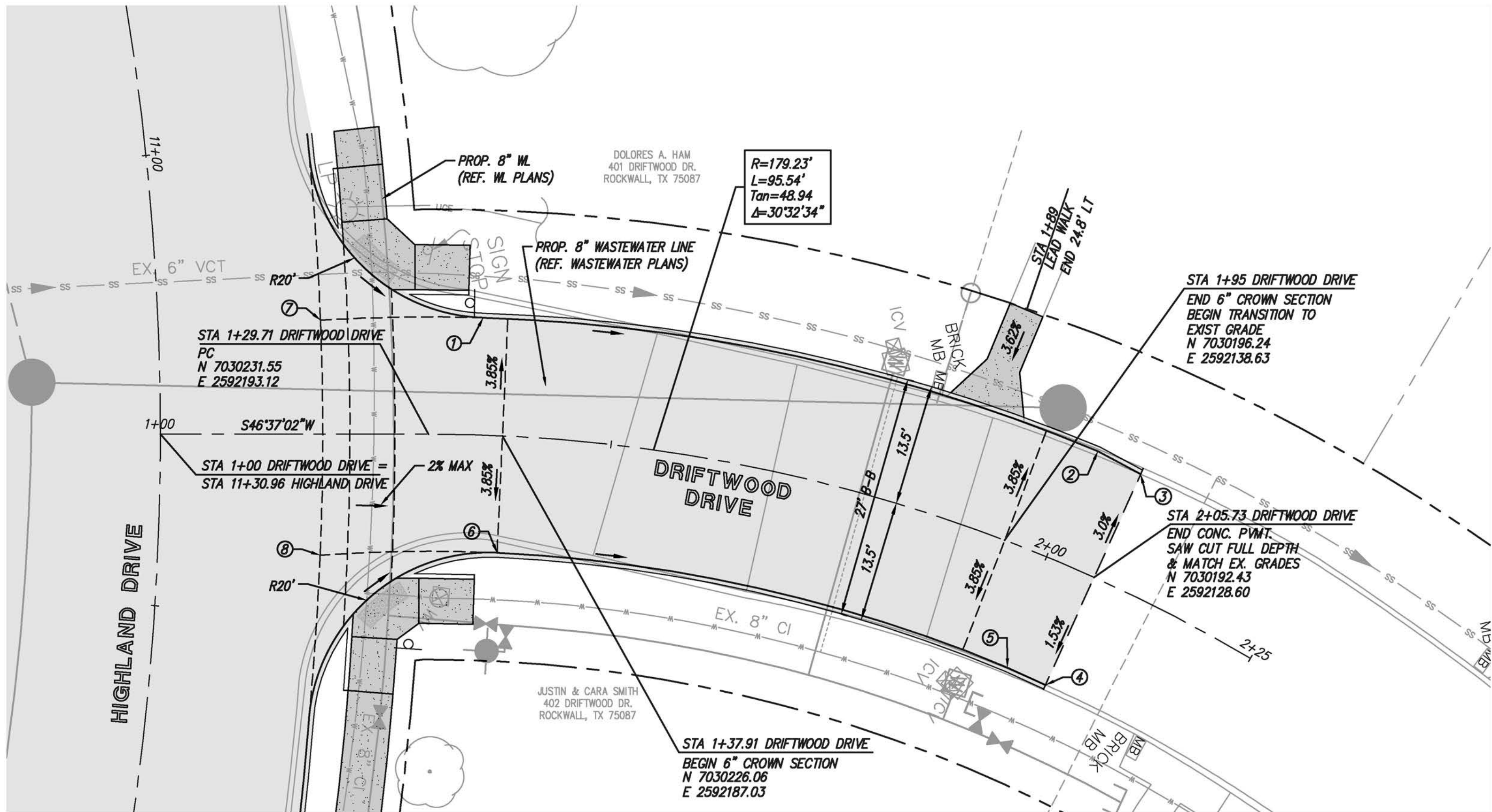


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tnp project
RWL18219
sheet
35

Drawing: P:\PROJECTS\RWL18219\CD\Sheets\PHASE 1 - NORTH\39 SHEPARD'S HILL PLAN & PROFILE.dwg at Sep 27, 2019 - 10:40am by jbedelle
Layout: 38 DRIFTWOOD DRIVE PLAN & PROFILE - Area: ver-border.dwg - Add-water.dwg - Add-paving.dwg - X3D-SCHOOL SITE.dwg



UTILITY NOTE

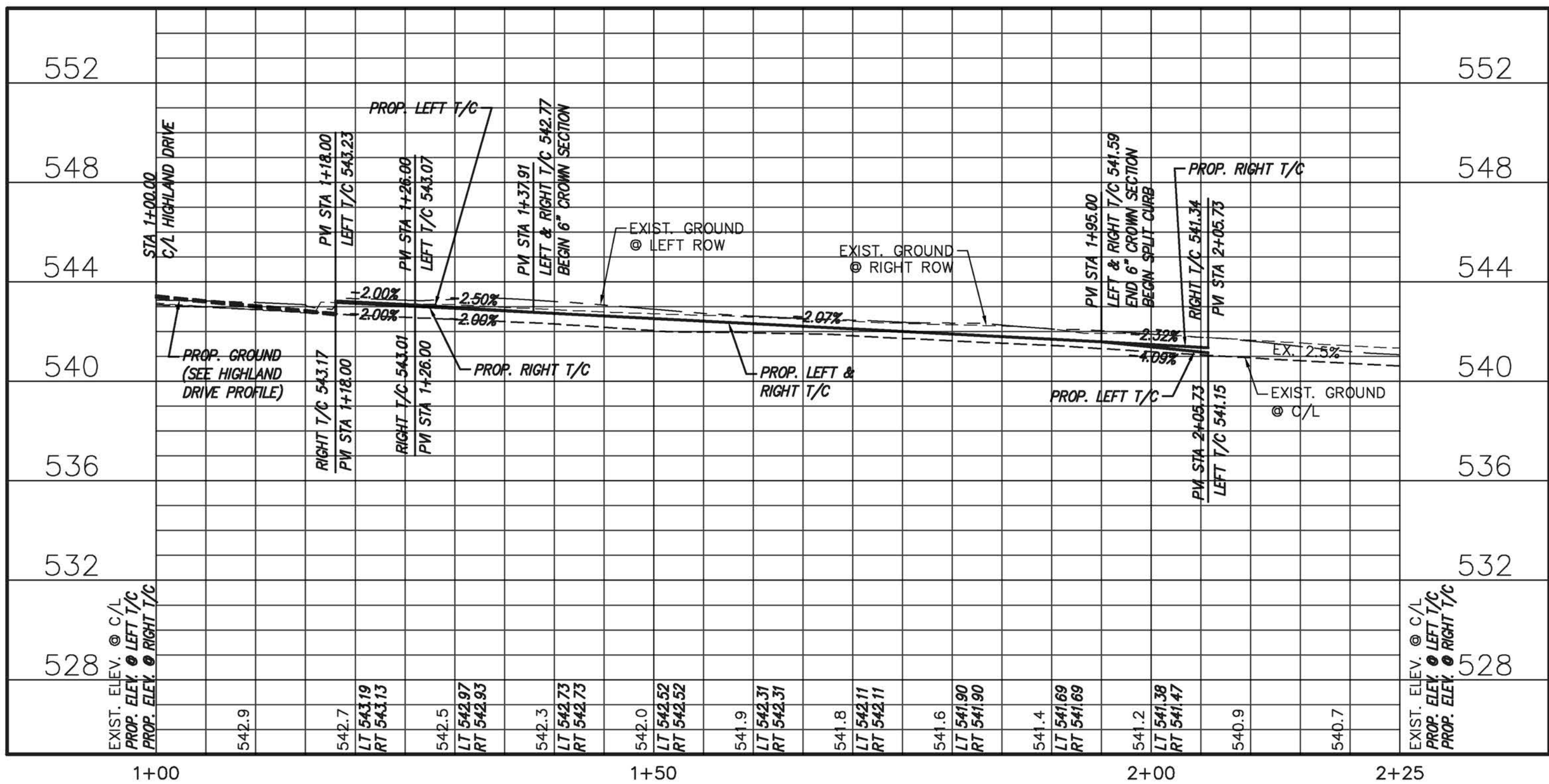
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POINT TABLE: DRIFTWOOD DRIVE				
#	STA	OFFSET	DESC	T/P
1	1+35.36	13.00 LT	PCC	542.29
2	2+00.73	13.00 LT	PI	540.86
3	2+05.73	12.55 LT	PI	540.65
4	2+05.73	13.09 RT	PI	540.84
5	2+00.73	13.00 RT	PI	540.96
6	1+37.91	13.00 RT	PCC	542.27
7	1+17.75	12.63 LT	PI	542.73
8	1+17.72	13.43 RT	PI	542.67

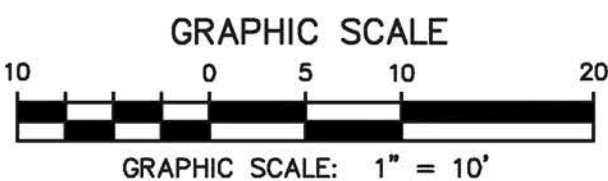
CL

LEGEND

- PROP. 8" CONC. PAVEMENT HIGHLAND DR.
- PROP. 6" CONC. PAVEMENT DRIFTWOOD ST.
- PROP. 4" CONCRETE SIDEWALK



DRIFTWOOD DRIVE



no.	revision	by	date

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City of Rockwall
The New Horizon

scale
when bar is
1 inch long

horiz
1" = 10'

vert
1" = 4'

SEP 2019



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CITY OF ROCKWALL, TEXAS

HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

DRIFTWOOD DRIVE PLAN & PROFILE

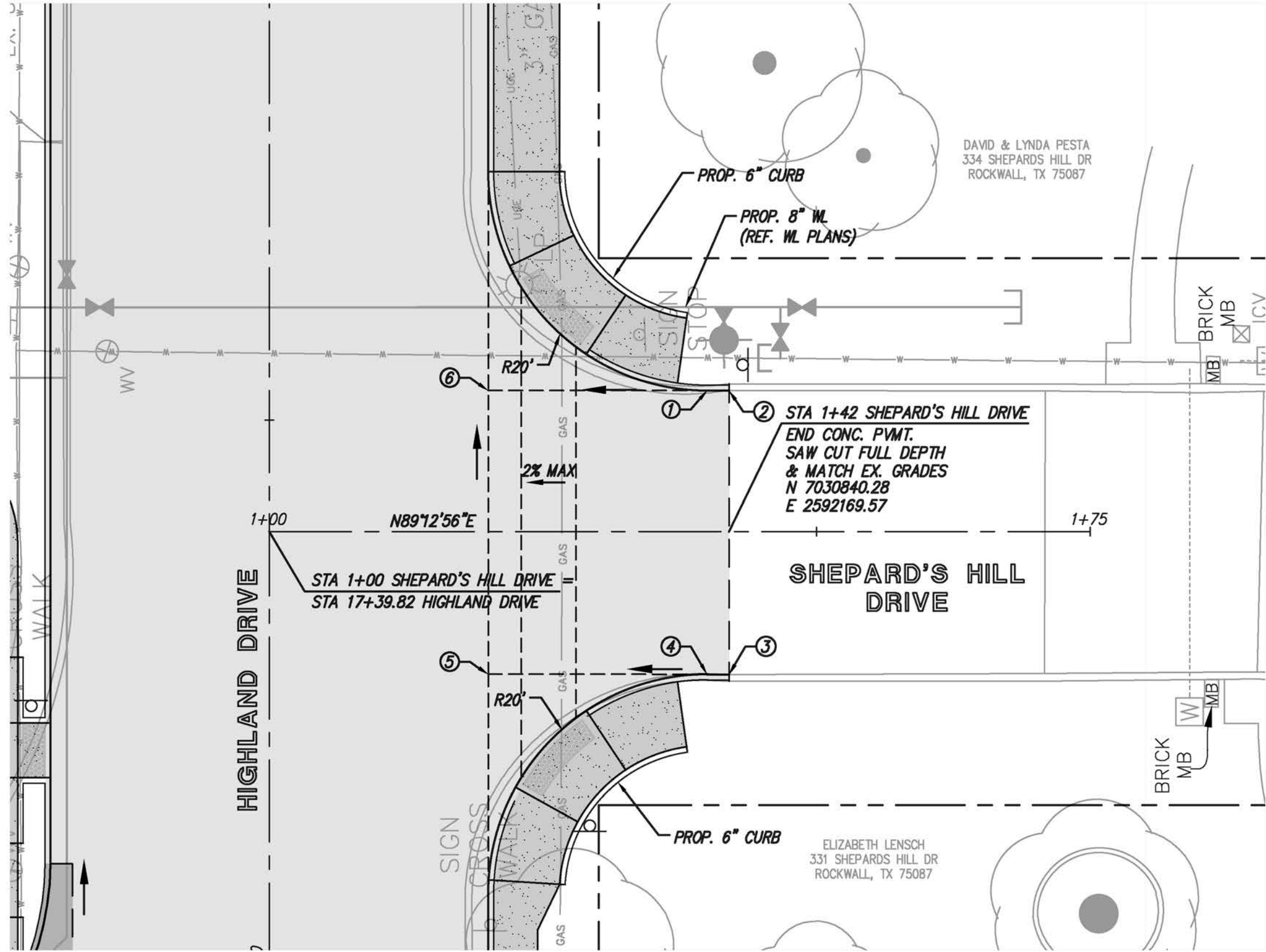
tnp project

RWL18219

sheet

36

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\29 SHEPARD'S HILL PLAN & PROFILE.dwg at Sep 27, 2019 - 10:41am by jbselle
Layout: 29 SHEPARD'S HILL PLAN & PROFILE Xref: xref-border.dwg - xdb-border.dwg - xdb-water.dwg - xdb-paving.dwg - xdb-school SITE.dwg



UTILITY NOTE

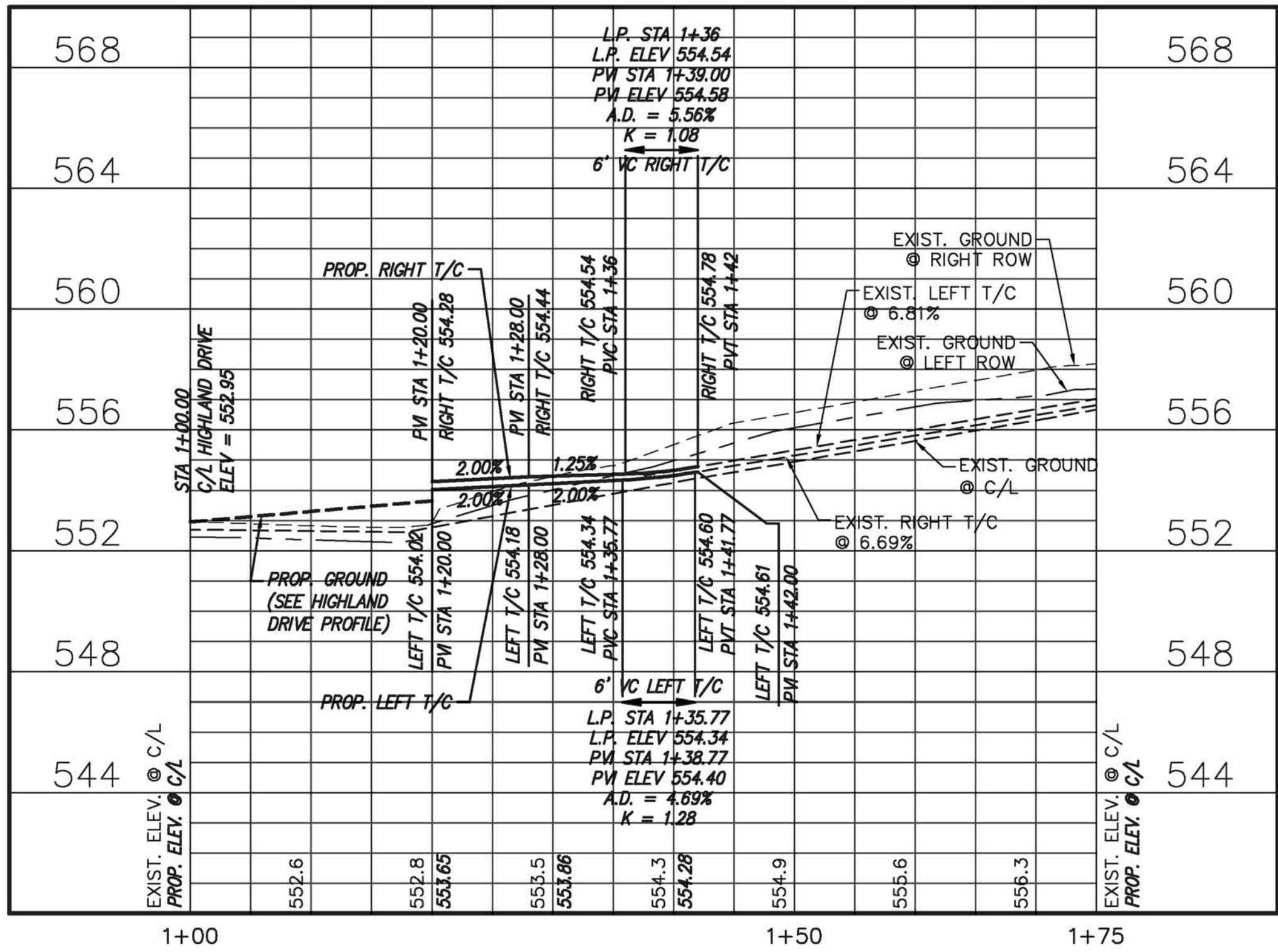
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POINT TABLE: SHEPARD'S HILL DRIVE				
#	STA	OFFSET	DESC	T/P
1	1+40	12.90 LT	PT	553.99
2	1+42	12.89 LT	PI	554.11
3	1+42	13.05 RT	PI	554.28
4	1+40	13.05 RT	PT	554.16
5	1+20	13.05 RT	PI	553.78
6	1+20	12.90 LT	PI	553.52

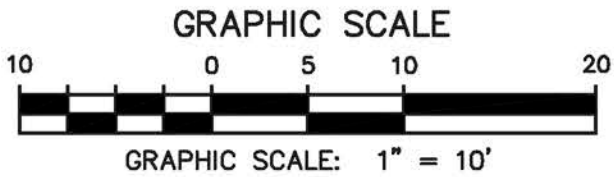
tnp

LEGEND

- PROP. 8" CONC. PAVEMENT HIGHLAND DR.
- PROP. 6" CONC. PAVEMENT SHEPARD'S HILL DR.
- PROP. 4" CONCRETE SIDEWALK



SHEPARD'S HILL DRIVE



no.	revision	by	date

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City of Rockwall
The New Horizon

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1 inch long
horiz
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vert
1" = 4'
SEP 2019



RECORD DOCUMENTS

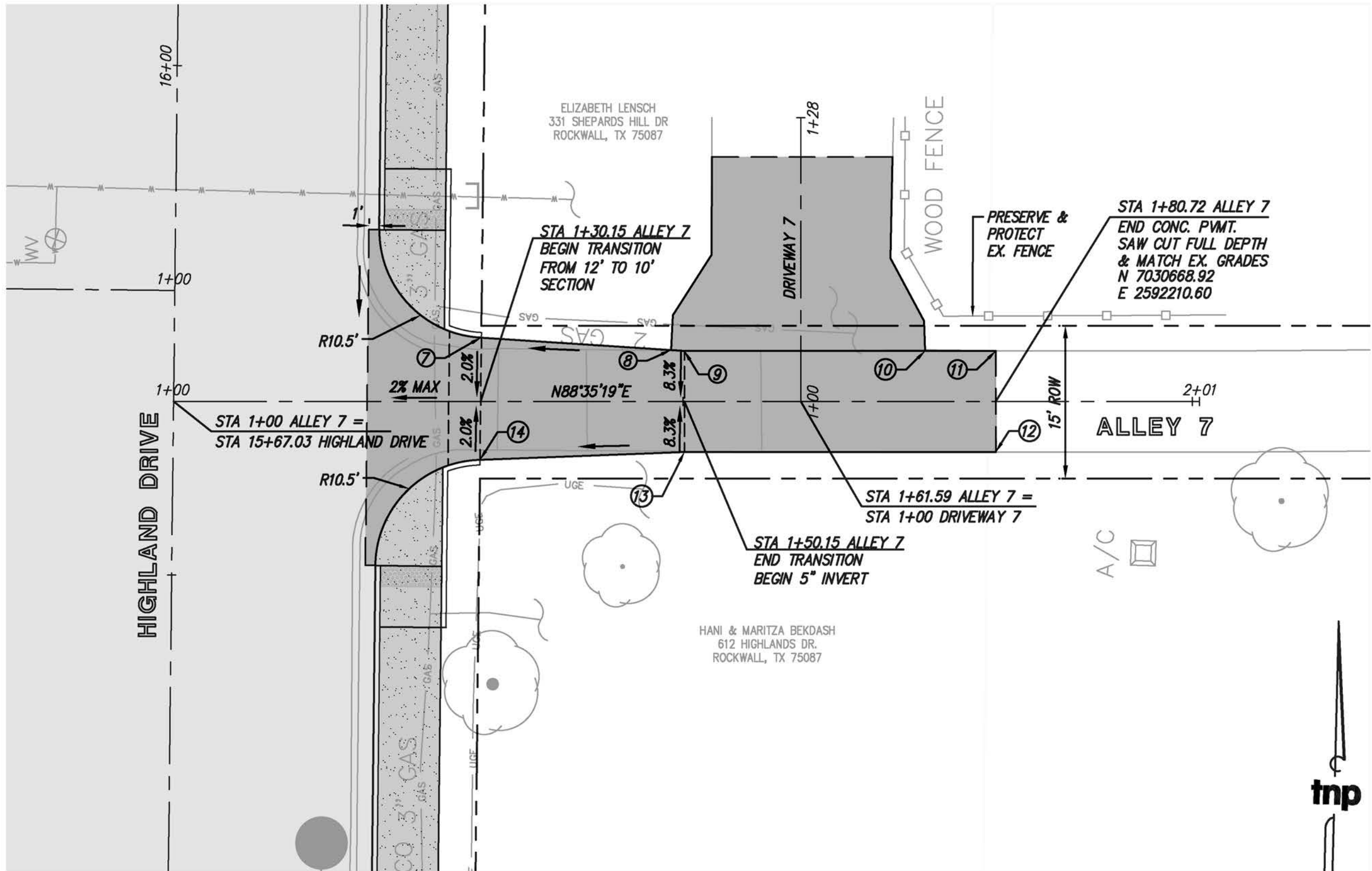
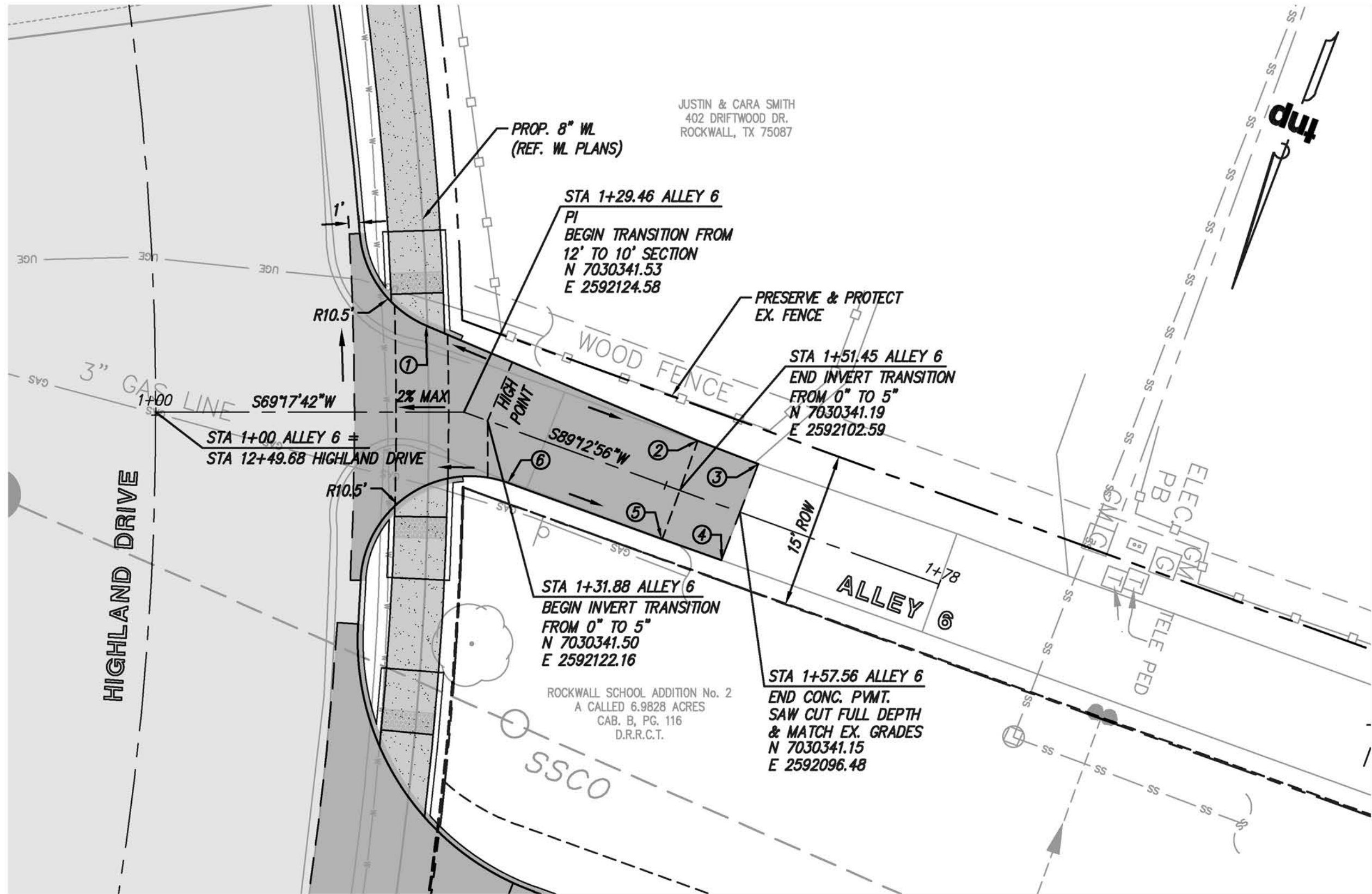
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CITY OF ROCKWALL, TEXAS

HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

SHEPARD'S HILL PLAN & PROFILE

tnp project
RWL18219
sheet
37

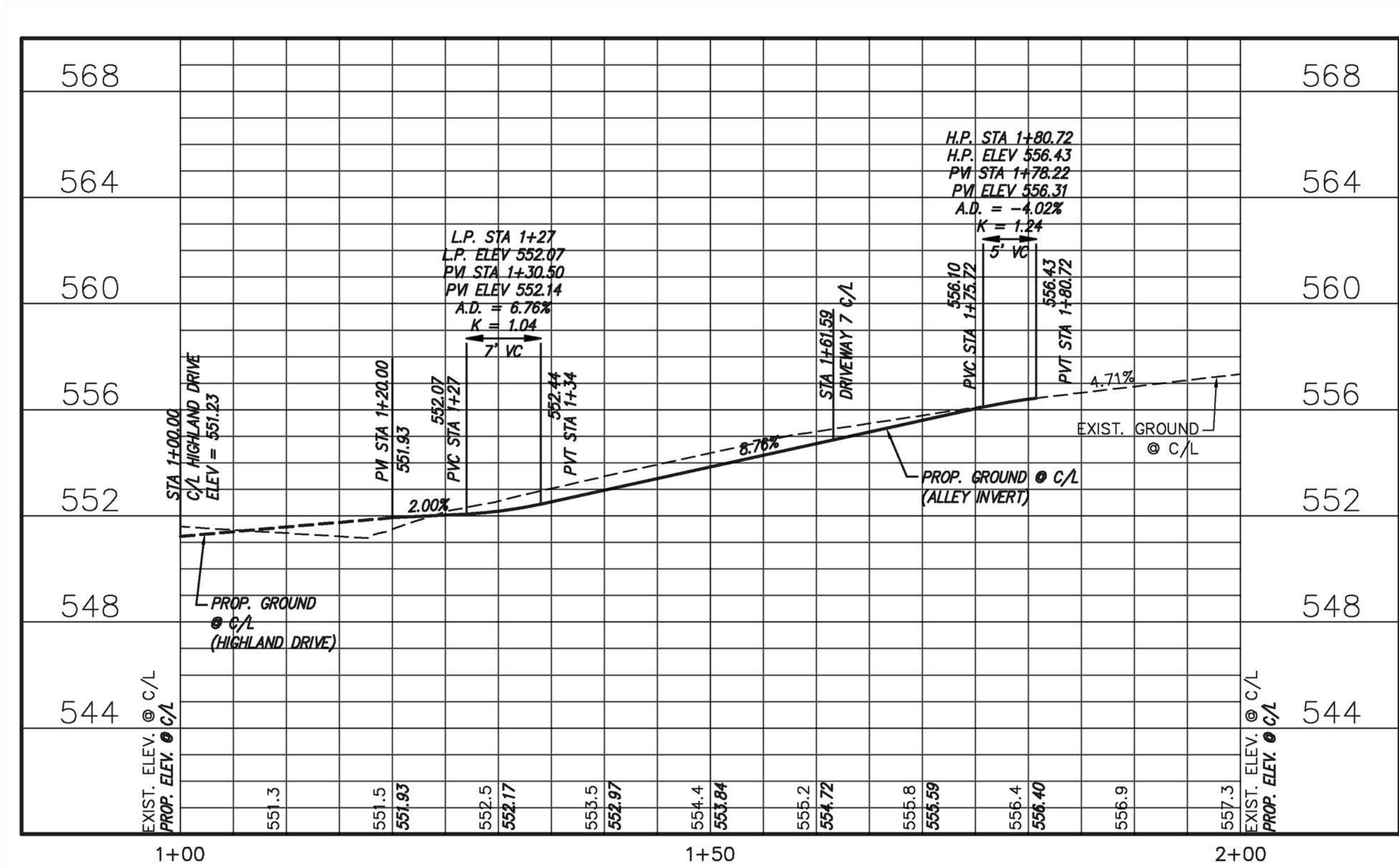
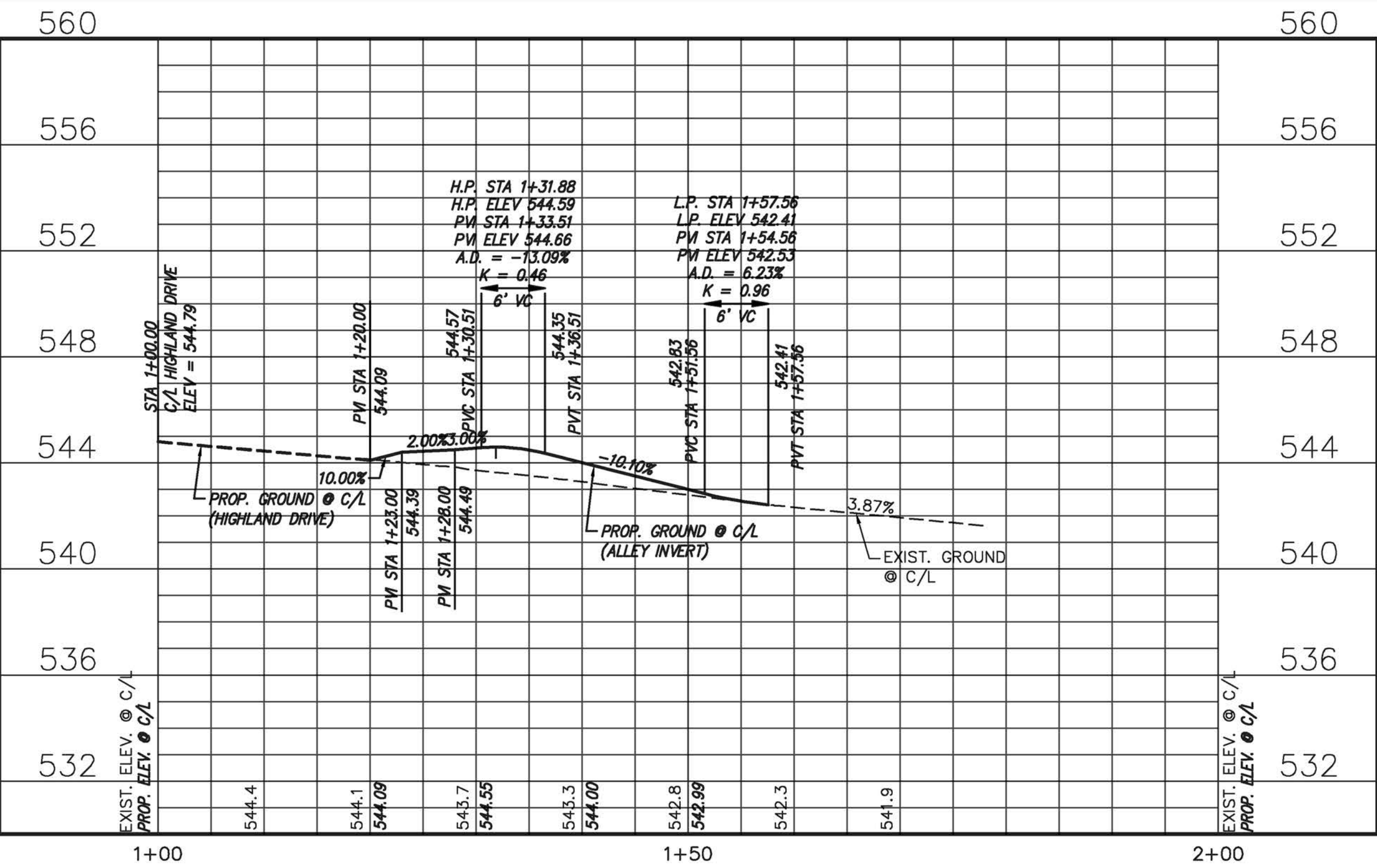





UTILITY NOTE

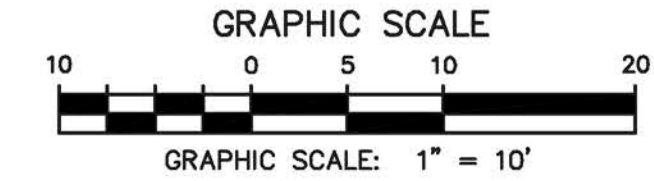
THE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE IS ANY CONFLICT WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.

POINT TABLE: ALLEY 6				
#	STA	OFFSET	DESC	T/P
1	1+25.86	8.24	LT	PT
2	1+51.38	4.97	LT	PI
3	1+57.66	4.93	LT	PI
4	1+57.46	4.93	RT	PI
5	1+51.37	4.96	RT	PI
6	1+35.73	4.93	RT	PT

POINT TABLE: ALLEY 7				
#	STA	OFFSET	DESC	T/P
7	1+30.18	6.27	LT	PT
8	1+48.83	5.05	LT	PI
9	1+50.15	4.96	LT	PI
10	1+73.77	4.96	LT	PI
11	1+80.72	4.96	LT	PI
12	1+80.72	4.96	RT	PI
13	1+50.15	4.96	RT	PI
14	1+30.07	5.73	RT	PT



LEGEND	
	PROP. 7"-5"-7" CONCRETE ALLEY
	PROP. 8" CONCRETE PAVEMENT
	PROP. 4" CONCRETE SIDEWALK



Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\41 PAVING PLAN & PROFILE - ALLEY 6.dwg at Sep 27, 2019 10:14am by jehalle
Layout: 40 PAVING PLAN & PROFILE - ALLEY 6 & 7
Notes: ref-borndring - 33d-borndring - 33d-borndring - 33d-borndring - 33d-borndring - 33d-borndring - 33d-borndring - 33d-borndring - 33d-borndring - 33d-borndring

no.	revision	by	date

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TBPE: F-230; TBPLS: 10011600, 10011601, 10194381



scale
when bar is
1 inch long
horiz
1" = 10'
vert
1" = 4'
SEP 2019



RECORD DOCUMENTS
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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
PAVING PLAN & PROFILE - ALLEY 6 & 7

tnp project
RWL18219
sheet
38

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\41 PAVING PLAN & PROFILE - ALLEY 8.dwg at Sep 27, 2019-10:42am by Janelle Loyalt
Layout: 41 PAVING PLAN & PROFILE - ALLEY 8 Xrefs: xref-borndrawing - x3d-borndrawing - x3d-sewer.dwg - x3d-water.dwg - x3d-paving.dwg - x3d-school_site.dwg

no.	revision	by	date

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scale

when bar is 1 inch long

horiz

1" = 10'

vert

1" = 4'

SEP 2019



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CITY OF ROCKWALL, TEXAS

HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

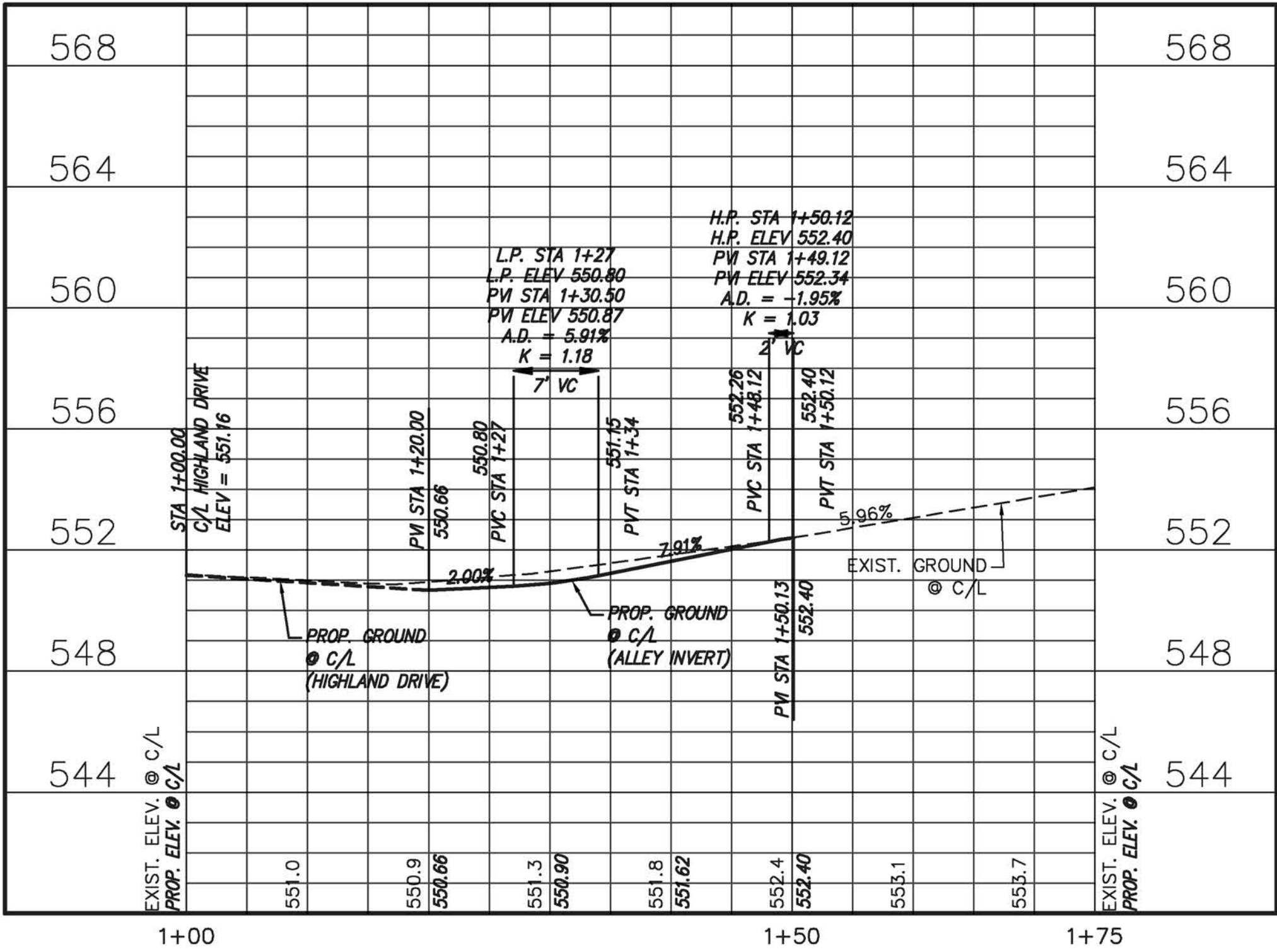
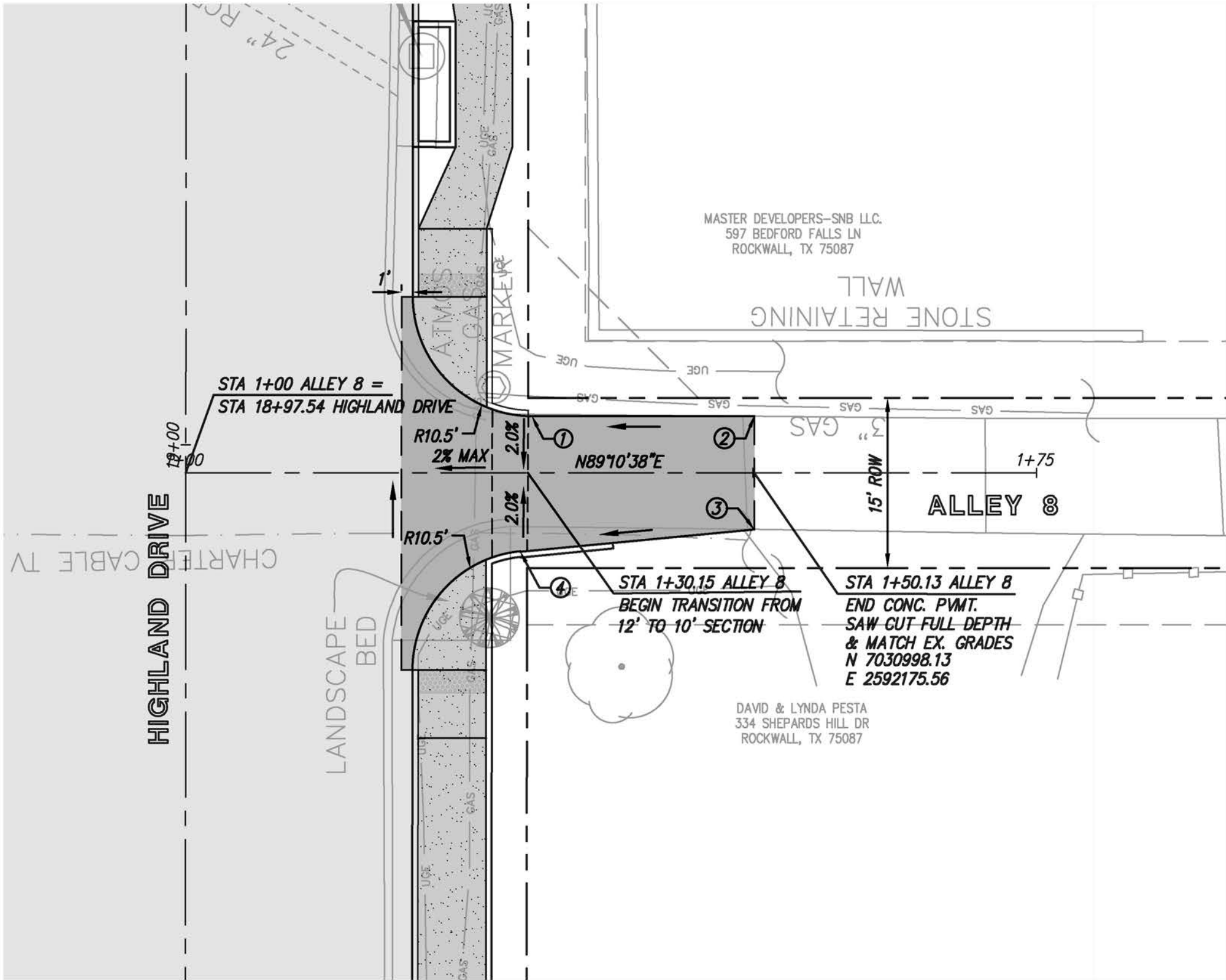
PAVING PLAN & PROFILE - ALLEY 8

tnp project

RWL18219

sheet

39



ALLEY 8

UTILITY NOTE

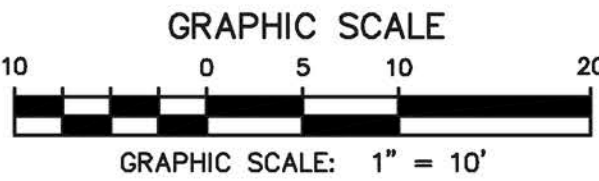
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POINT TABLE: ALLEY 8				
#	STA	OFFSET	DESC	T/P
1	1+30.51	5.00 LT	PT	550.98
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3	1+50.13	4.99 RT	PI	552.67
4	1+29.49	6.96 RT	PT	551.02

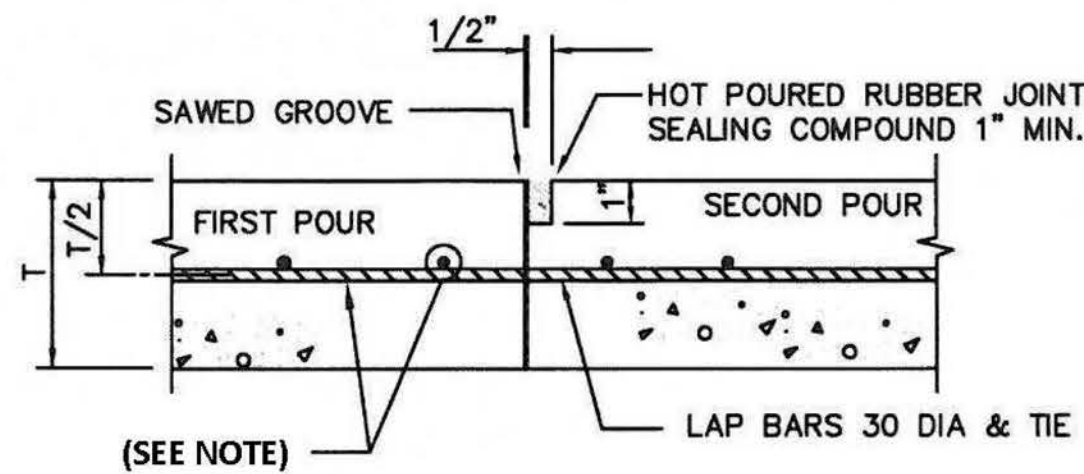


LEGEND

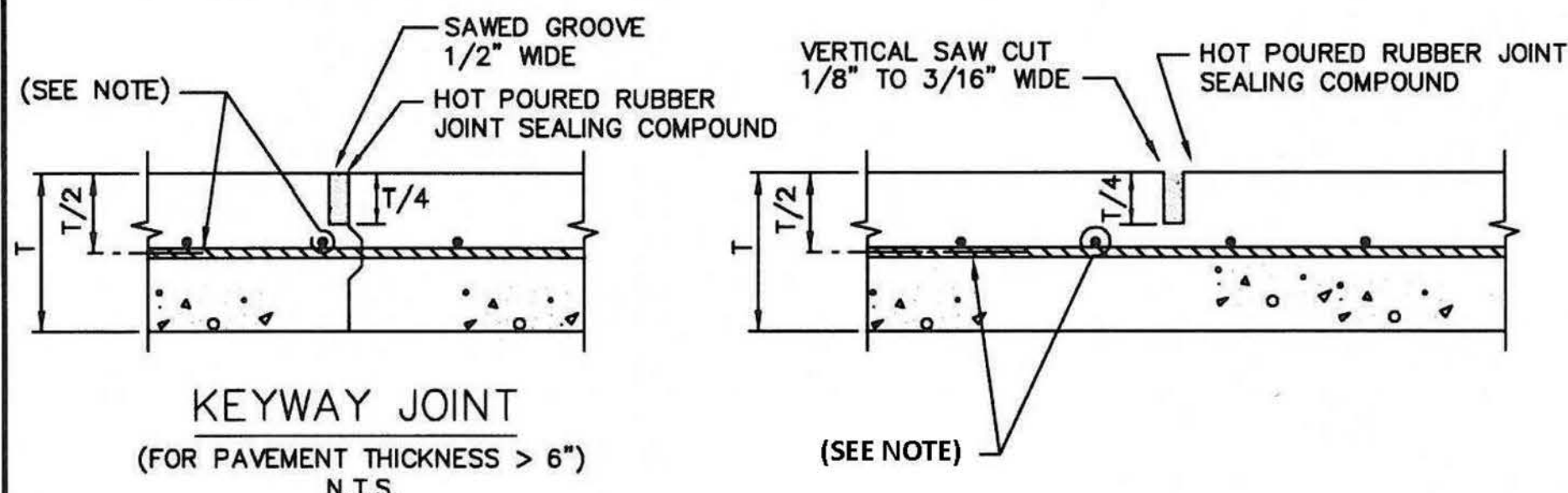
- PROP. 7"-5"-7" CONCRETE ALLEY
- PROP. 8" CONCRETE PAVEMENT
- PROP. 4" CONCRETE SIDEWALK



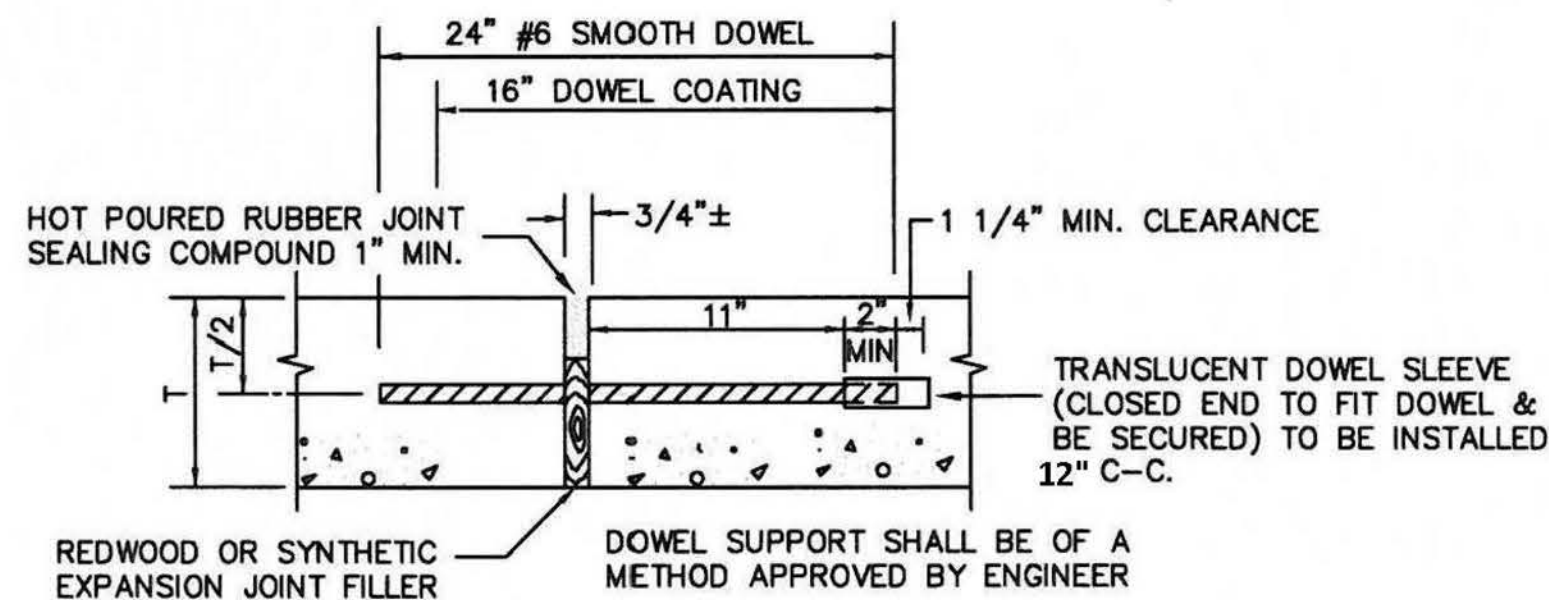
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Layout: 44 PAVING DETAILS 1 OF 9.dwg




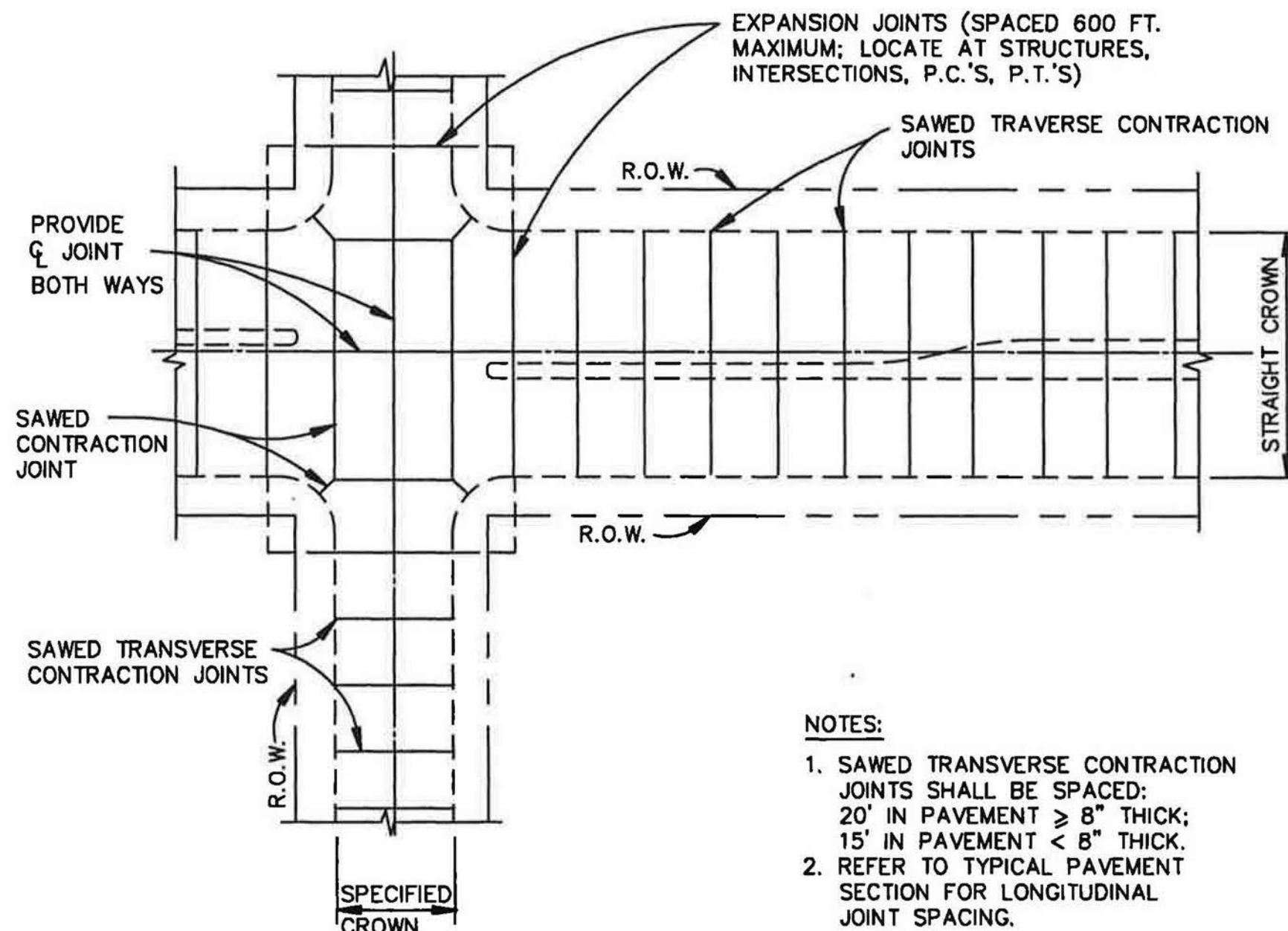
CONSTRUCTION JOINT
N.T.S.




NOTE:
REINFORCING SHALL BE - #3 BARS AT 24" FOR 6"
THICK PAVEMENT AND LESS. #4 BARS AT 18"
FOR 8" THICK PAVEMENT AND GREATER.

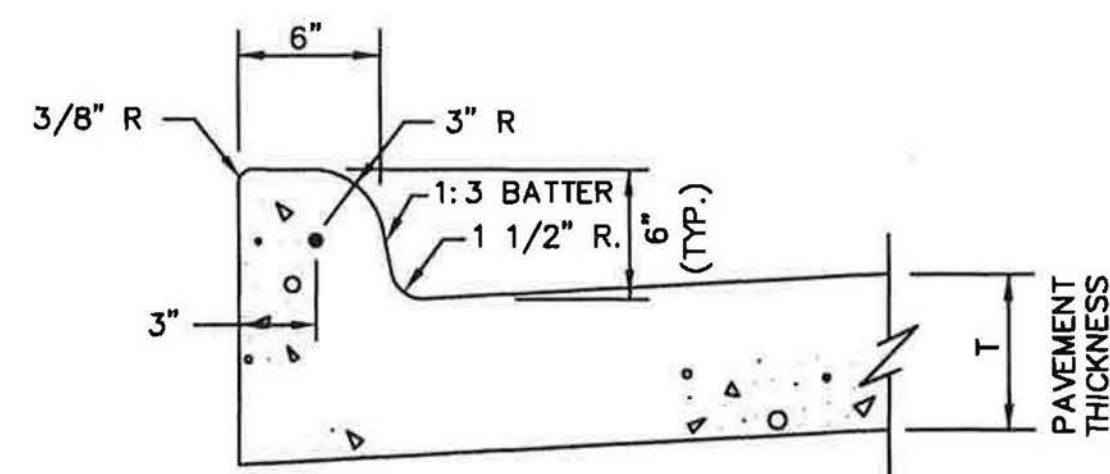


REINFORCED CONCRETE PAVEMENT	CITY OF ROCKWALL	STANDARD SPECIFICATION REFERENCE
JOINTS		303.5.4.
		DATE: Mar. 2018
		STANDARD DRAWING NO. R-2050

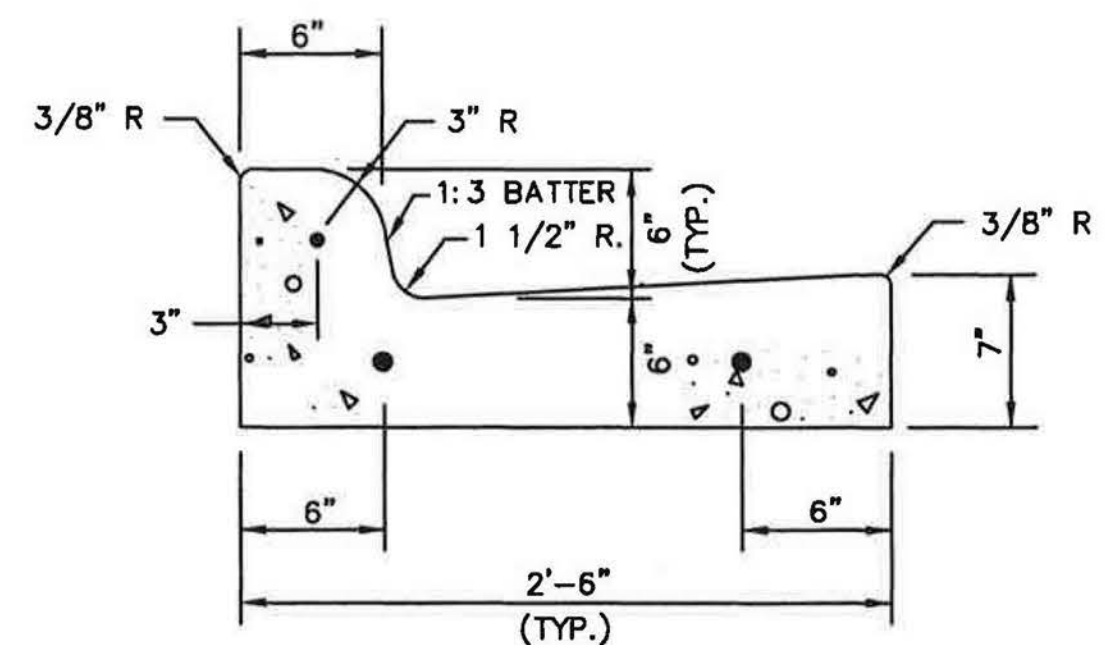


SPACING DIAGRAM FOR TRANSVERSE JOINTS
N.T.S.

REINFORCED CONCRETE PAVEMENT	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE
TRANSVERSE JOINT SPACING		303.5.4.
		DATE: OCT. '04
		STANDARD DRAWING NO. 2060




INTEGRAL CURB & GUTTER
N.T.S.



SEPARATE CURB & GUTTER
N.T.S.

NOTES:
1. REINFORCEMENT SHALL BE NO. 4 BARS, UNLESS OTHERWISE SPECIFIED.
2. CONCRETE SHALL BE CLASS "C" OR "PC".
3. "CF" IS 6" UNLESS OTHERWISE SPECIFIED.
4. ALL CURBS ARE CONSTRUCTED OF PORTLAND CEMENT CONCRETE UNLESS OTHERWISE SHOWN.
5. GRADE SHALL BE MEASURED AT BACK OF CURB.

CONCRETE CURB & GUTTER	North Central Texas Council of Governments	STANDARD SPECIFICATION REFERENCE
INTEGRAL, SEPARATE, & DOWELED		305.1
		DATE: OCT. '04
		STANDARD DRAWING NO. 2120

no.	revision	by	date

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scale
when bar is 1 inch long
horiz N/A
vert N/A
SEP 2019

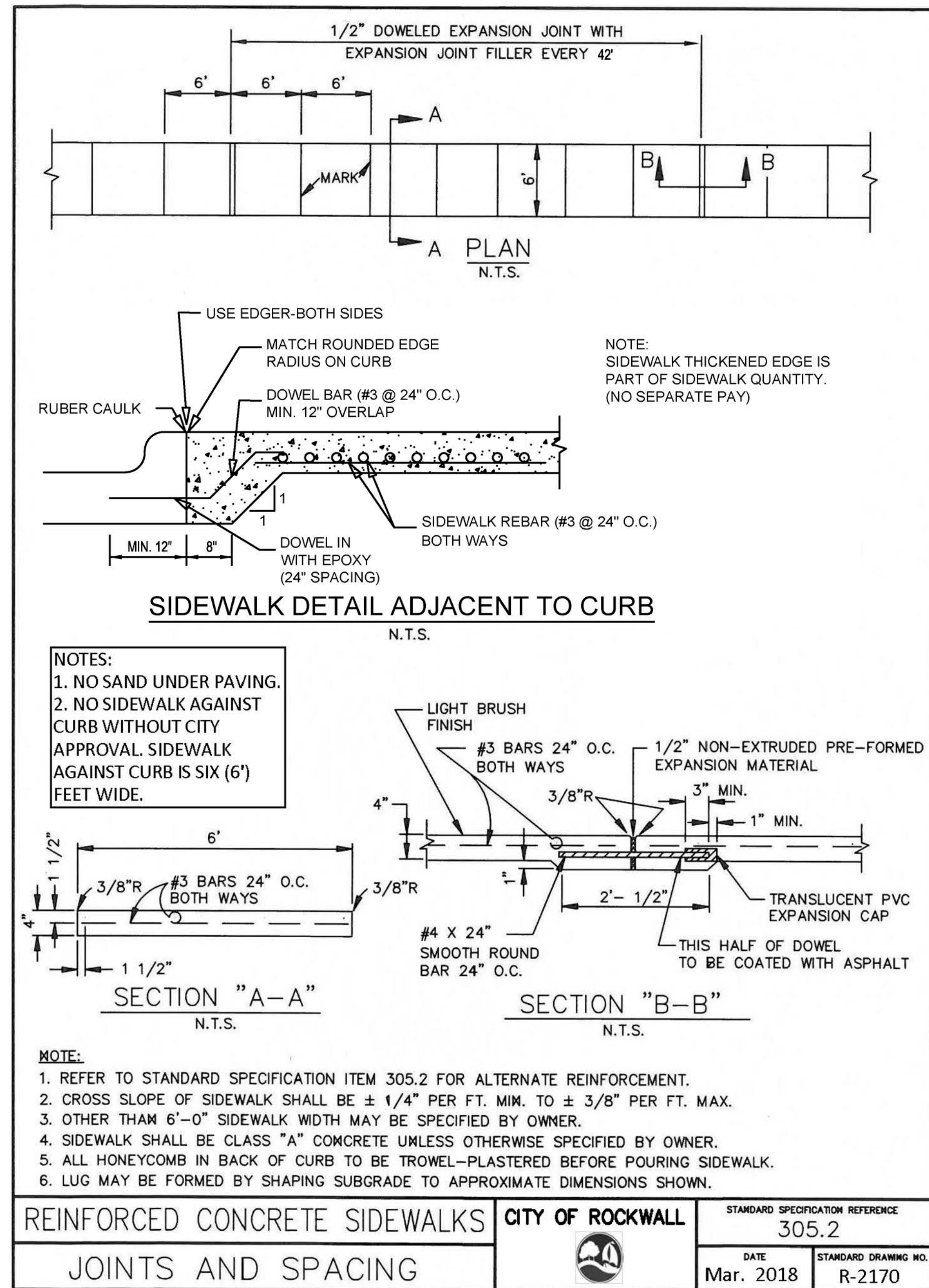
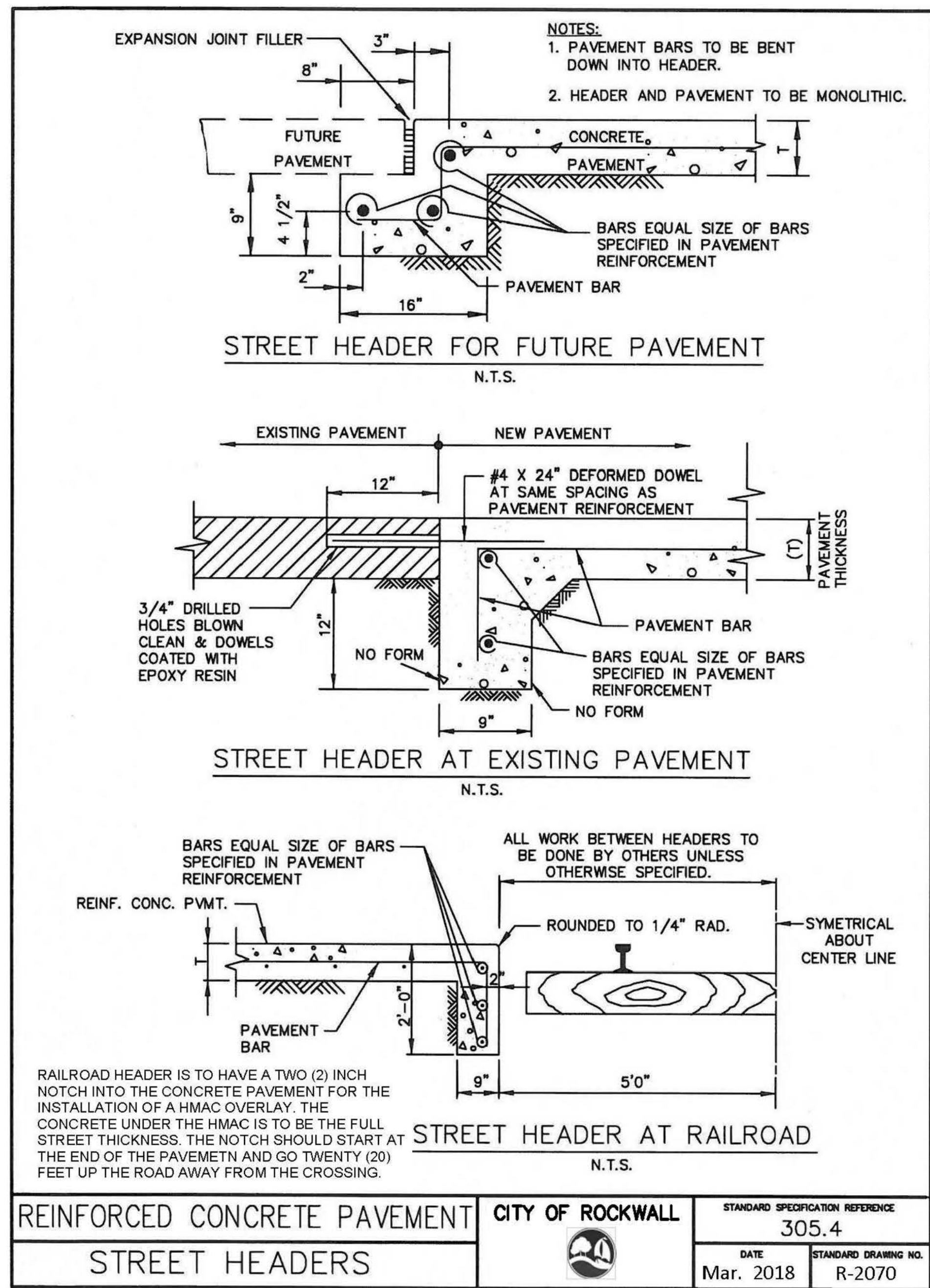
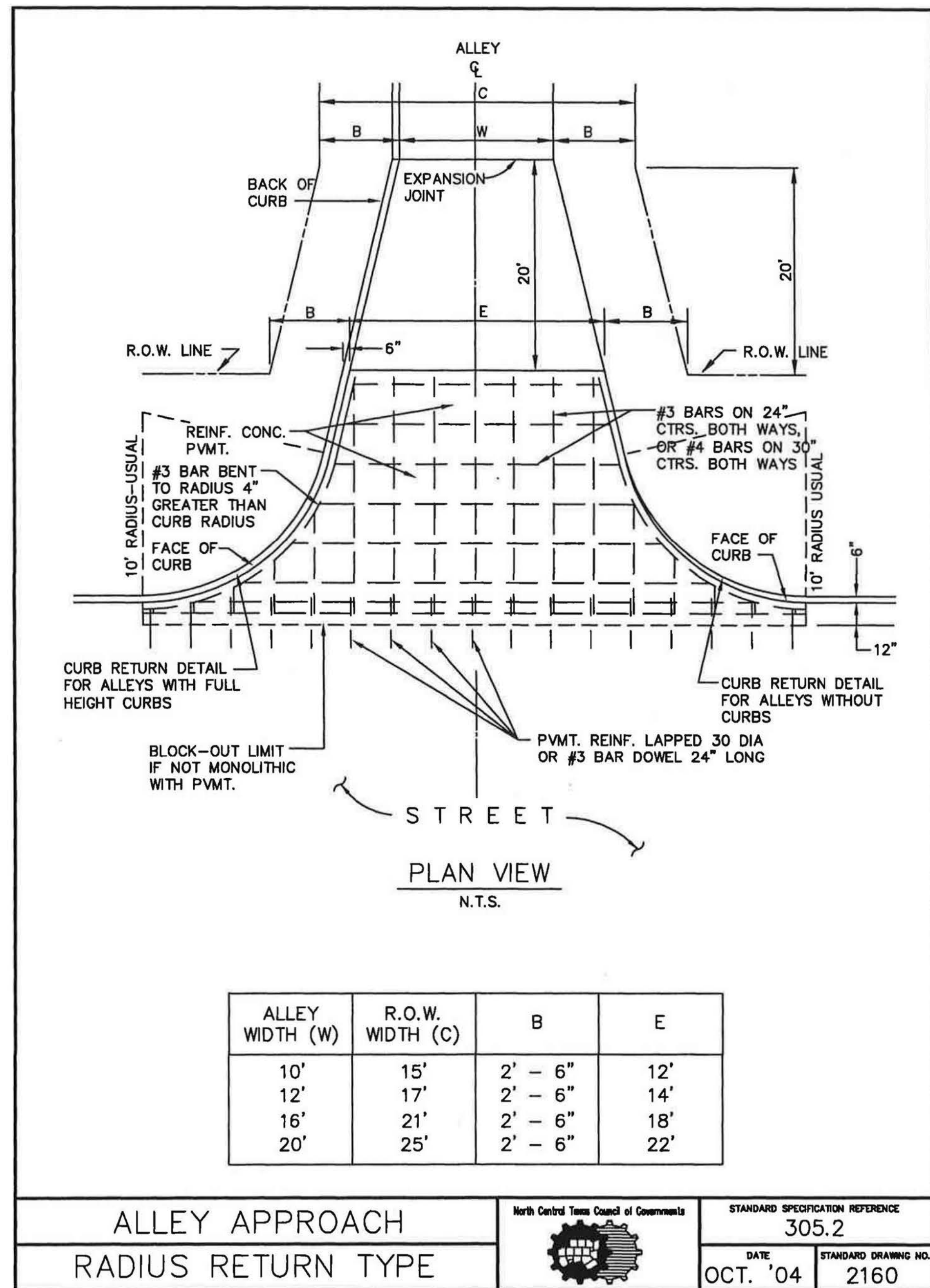


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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
PAVING DETAILS 1 OF 9

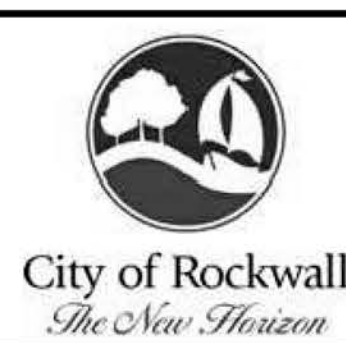
tnp project
RWL18219
sheet
42

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Layout: 45 PAVING DETAILS 2 OF 9 - A0000_xref.dwg



no.	revision	by	date

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scale
when bar is
1 inch long
horiz
N/A
vert
N/A
SEP 2019

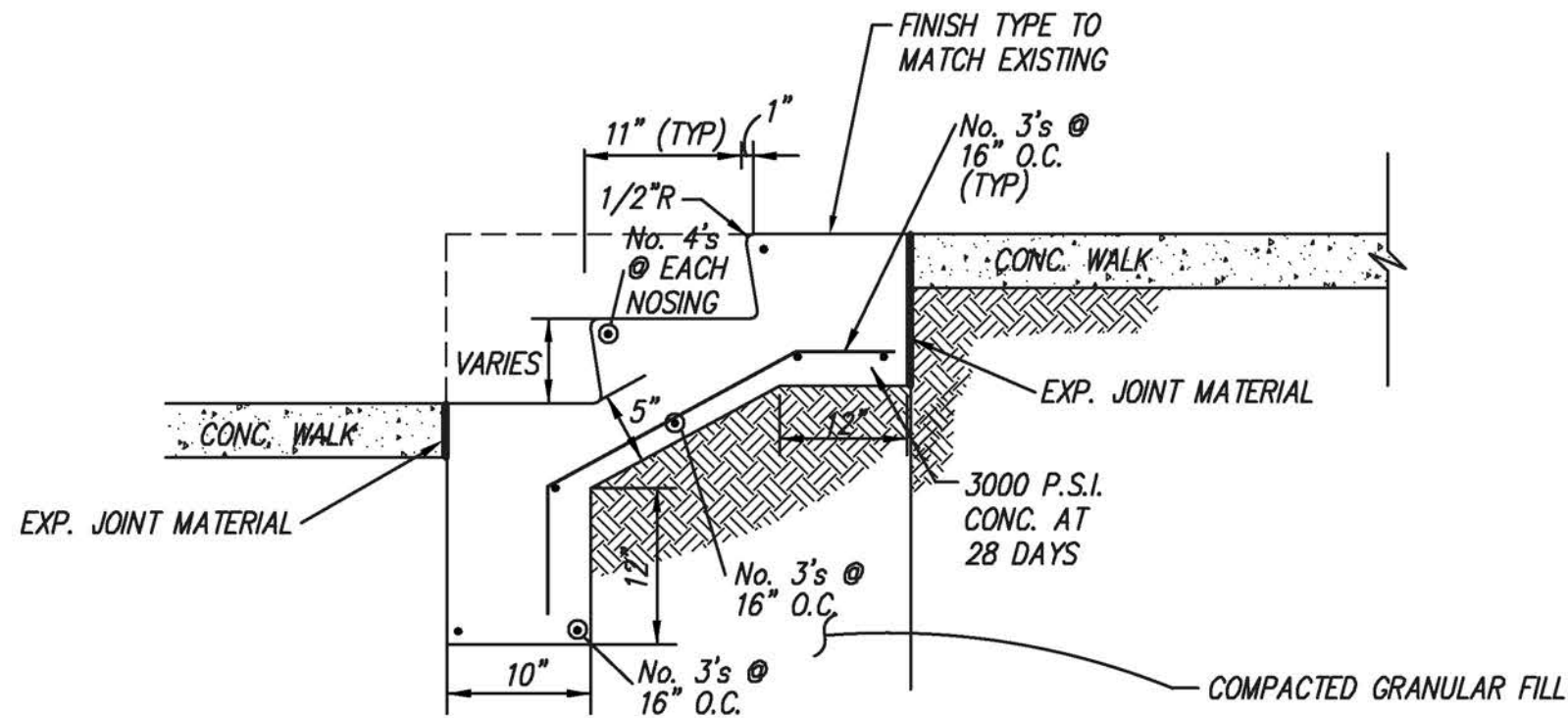


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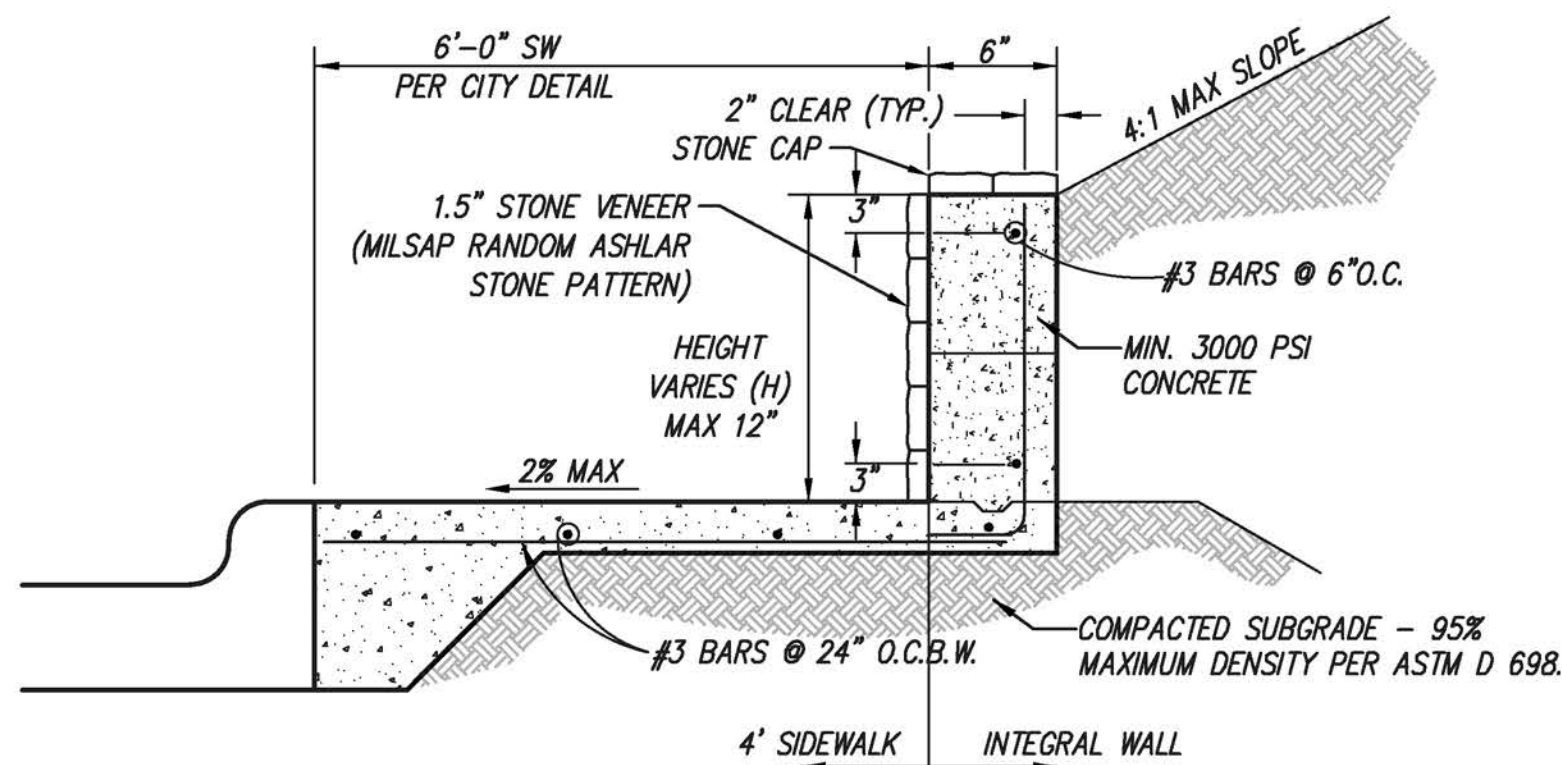
CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
PAVING DETAILS 2 OF 9

tnp project
RWL18219
sheet
43

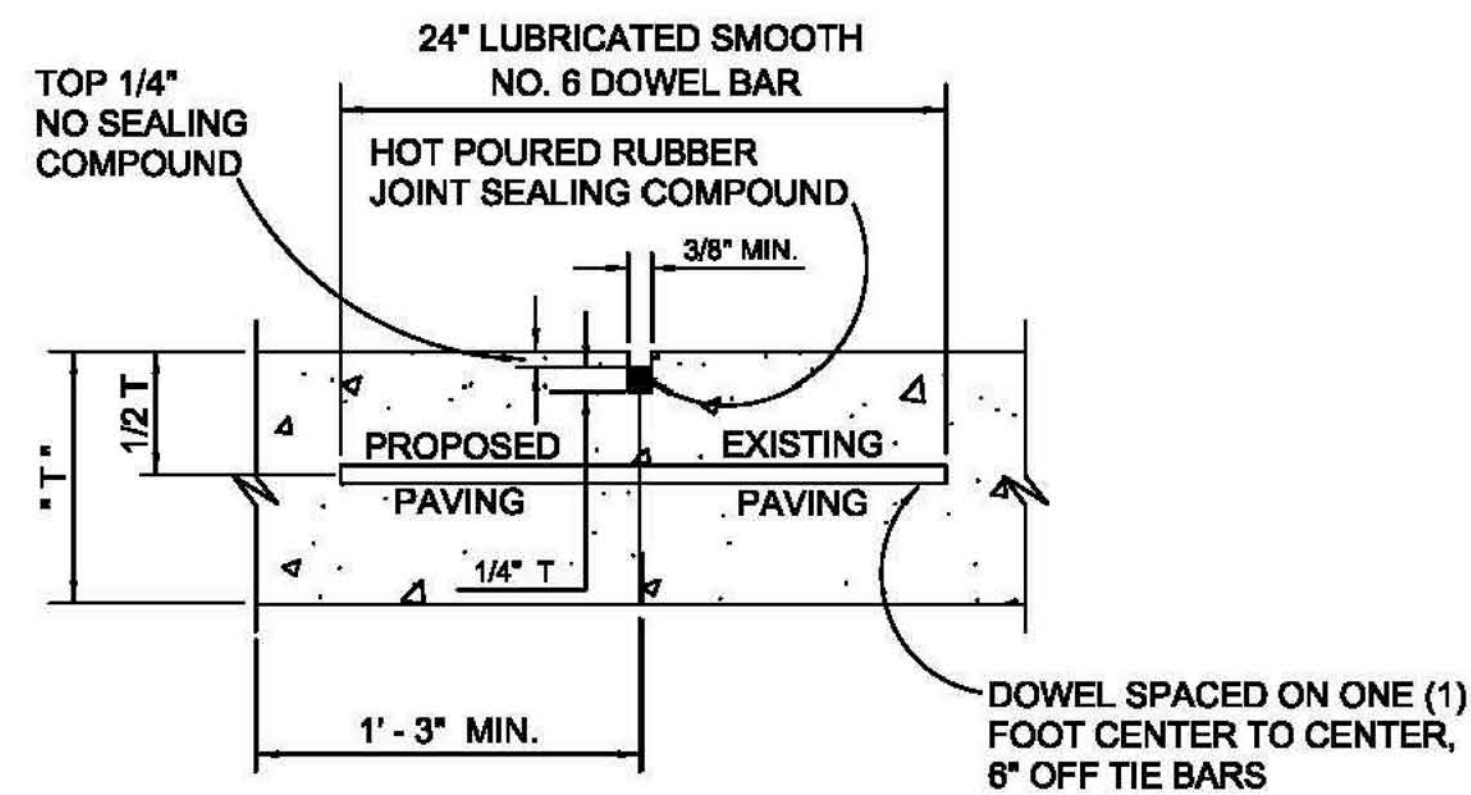
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Layout: 46 PAVING DETAILS 3 OF 9
Xrefs: xref-borders.dwg



TYPICAL STEP SECTION
N.T.S.




SIDEWALK WALL
N.T.S.



NOTES: T = PAVEMENT

1. LONGITUDINAL BUTT CONSTRUCTION MAY BE UTILIZED IN PLACE OF LONGITUDINAL HINGED (KEYWAY) JOINT AT CONTRACTORS OPTION.
2. DOWEL BARS SHALL BE DRILLED INTO PAVEMENT HORIZONTALLY BY USE OF A MECHANICAL RIG.
3. DRILLING BY HAND IS NOT ACCEPTABLE, PUSHING DOWEL BARS INTO GREEN CONCRETE NOT ACCEPTABLE.

LONGITUDINAL BUTT JOINT
NOT TO SCALE

REINFORCED CONCRETE PAVEMENT	CITY OF ROCKWALL		
LONGITUDINAL BUTT JOINT		DATE OCT. '17	DRAWING NO. R-2051

no.	revision	by	date

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City of Rockwall
The New Horizon

scale when bar is 1 inch long
horiz N/A
vert N/A
SEP 2019

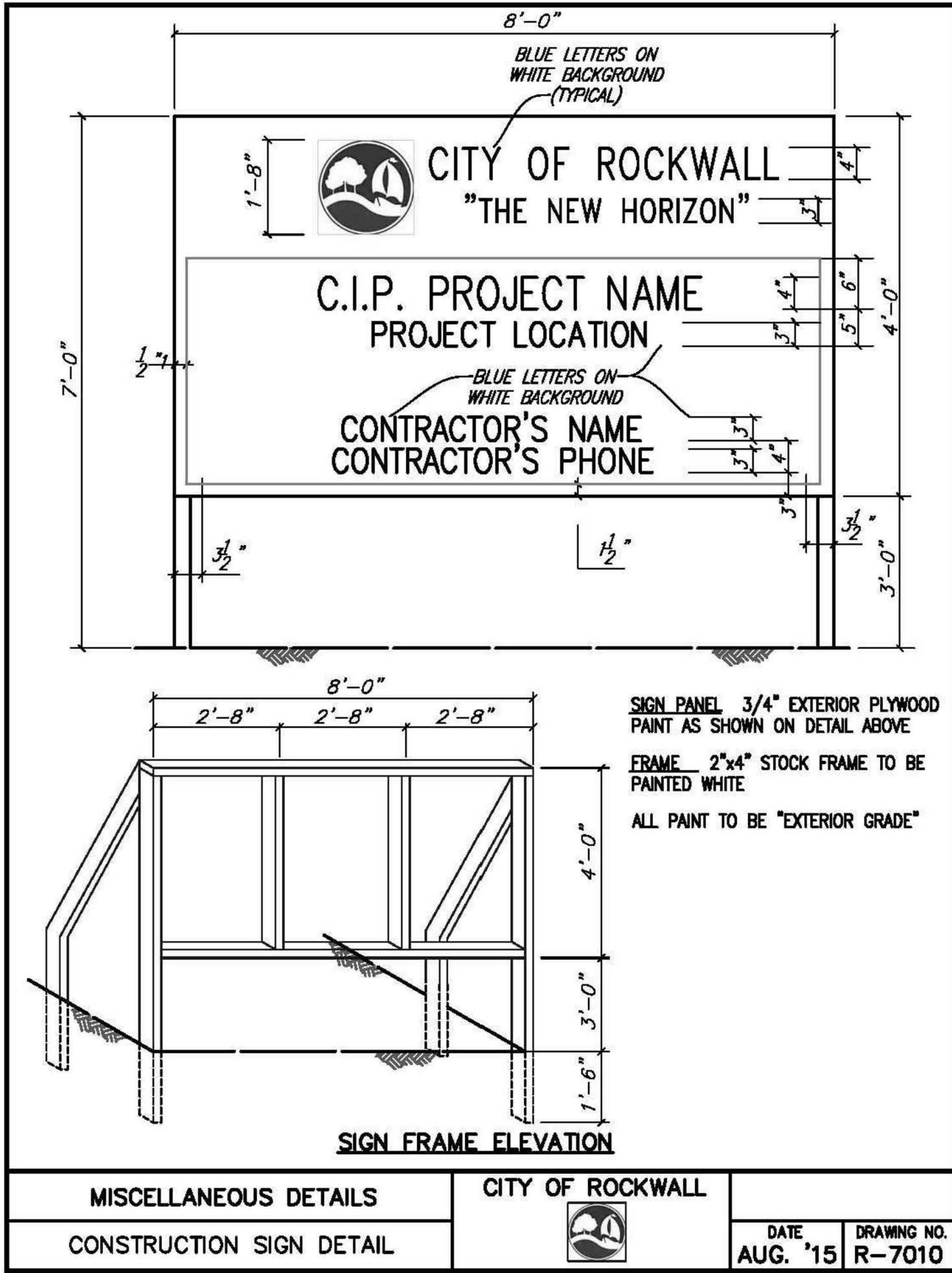
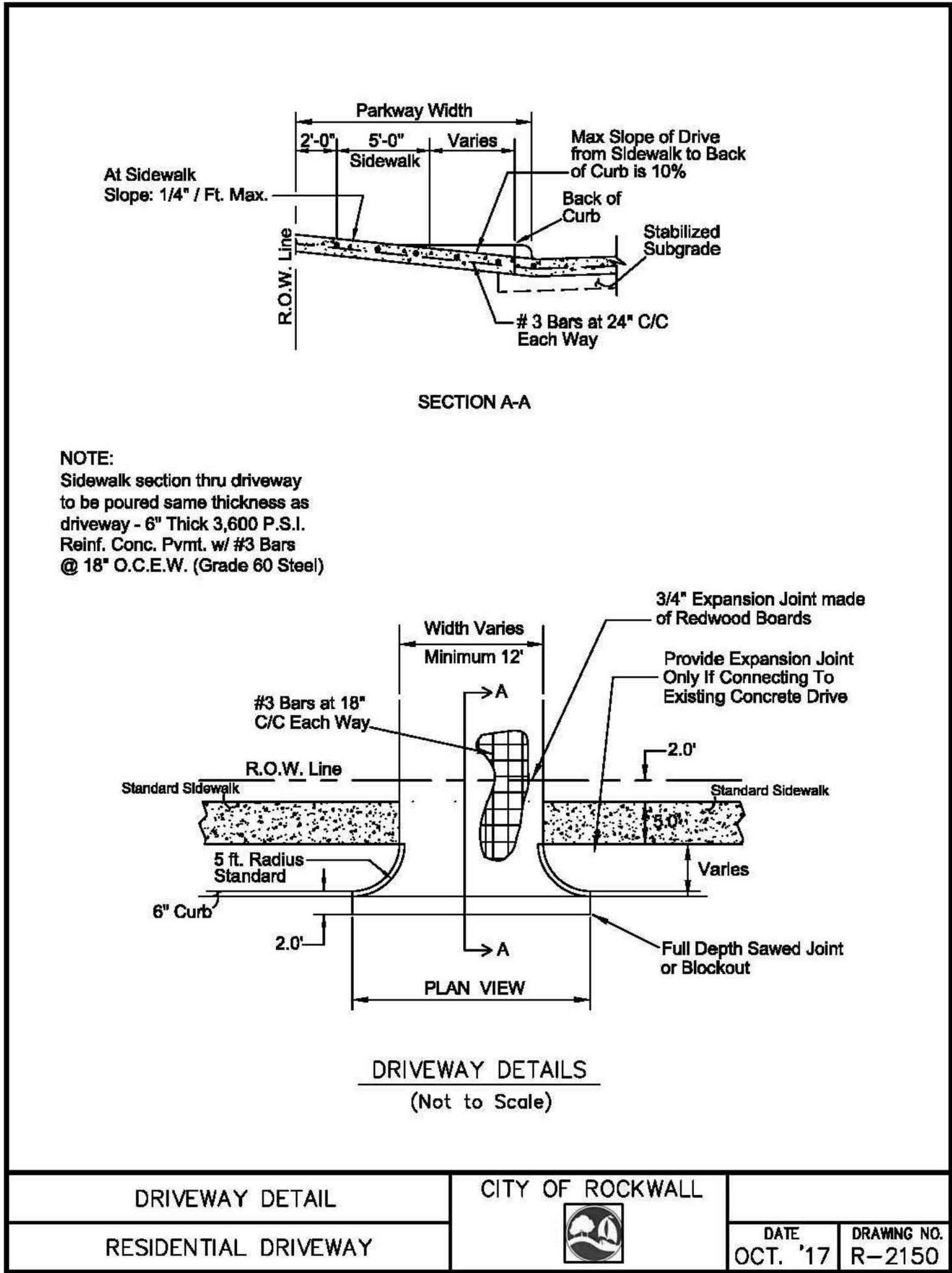


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CITY OF ROCKWALL, TEXAS	tnp project RWL18219
HIGHLAND DRIVE RECONSTRUCTION, PHASE I (DRIFTWOOD STREET TO BEDFORD FALLS LANE)	sheet 44
PAVING DETAILS 3 OF 9	

Drawing: P:\PROJECTS\DWG\18219\DWG\18219.dwg (PHASE 1 - NORTH\52 PAVING DETAILS 9 OF 9.dwg at Sep 27, 2019-10:44am by jbedalle
Layout: 47 PAVING DETAILS 4 OF 9 - A.ctb xref:standard.ctb



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City of Rockwall

The New Horizon

scale

when bar is 1 inch long

horiz N/A

vert N/A

SEP 2019

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CITY OF ROCKWALL, TEXAS

HIGHLAND DRIVE RECONSTRUCTION, PHASE I

(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

PAVING DETAILS 4 OF 9

tnp project

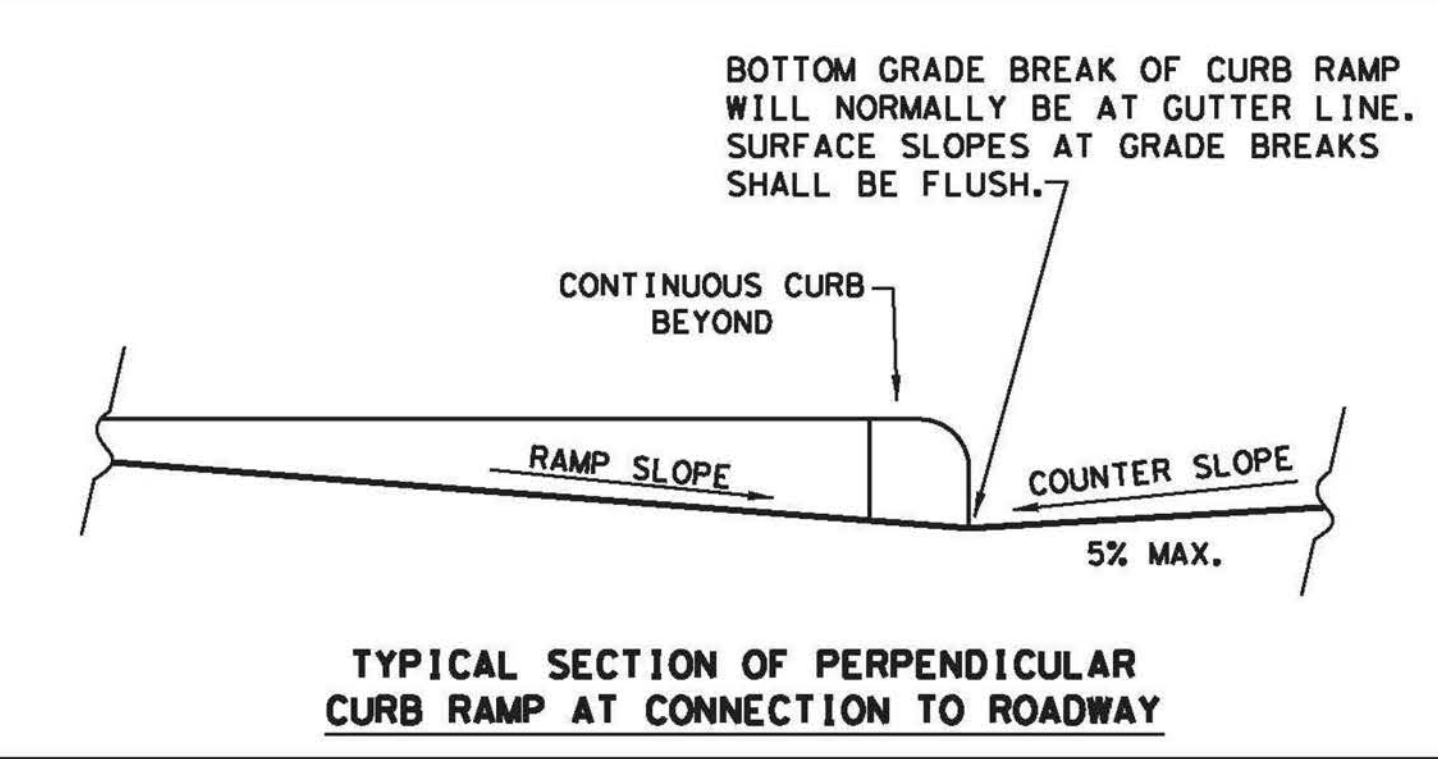
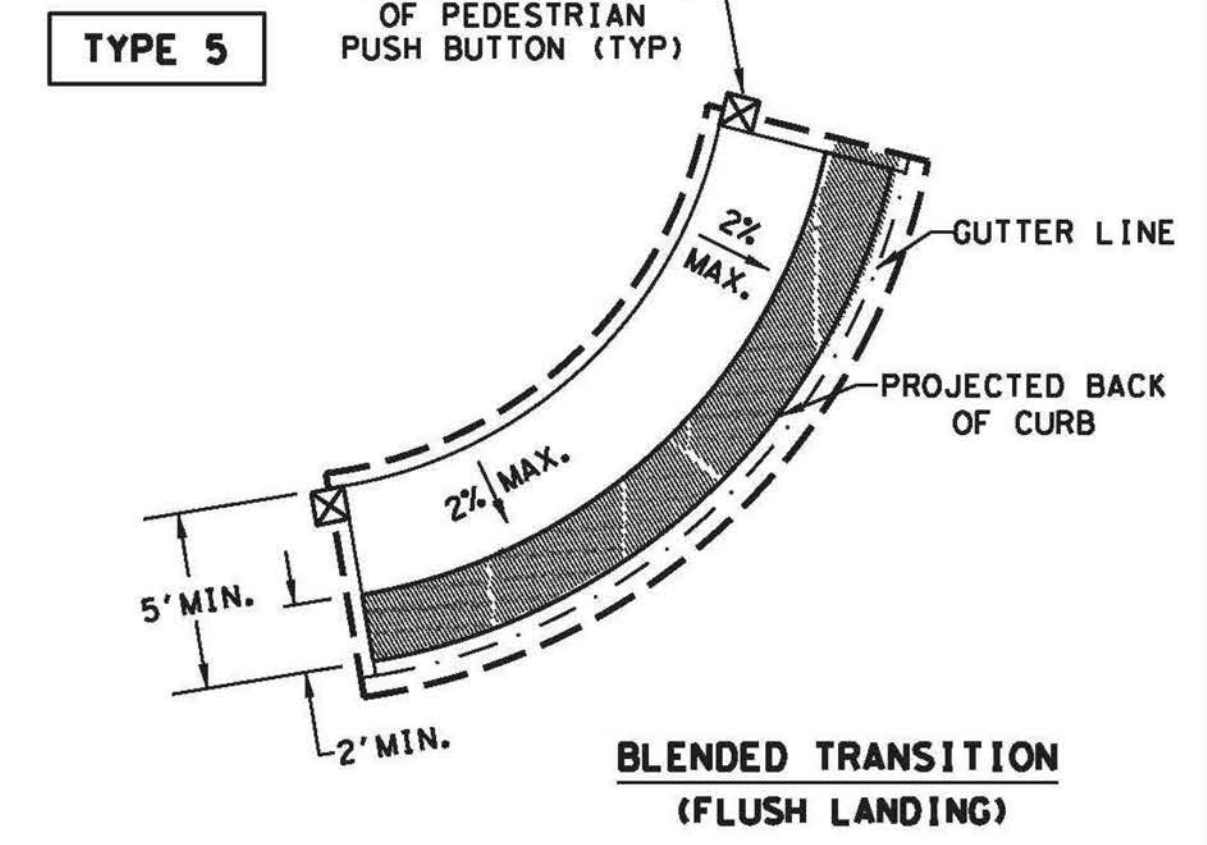
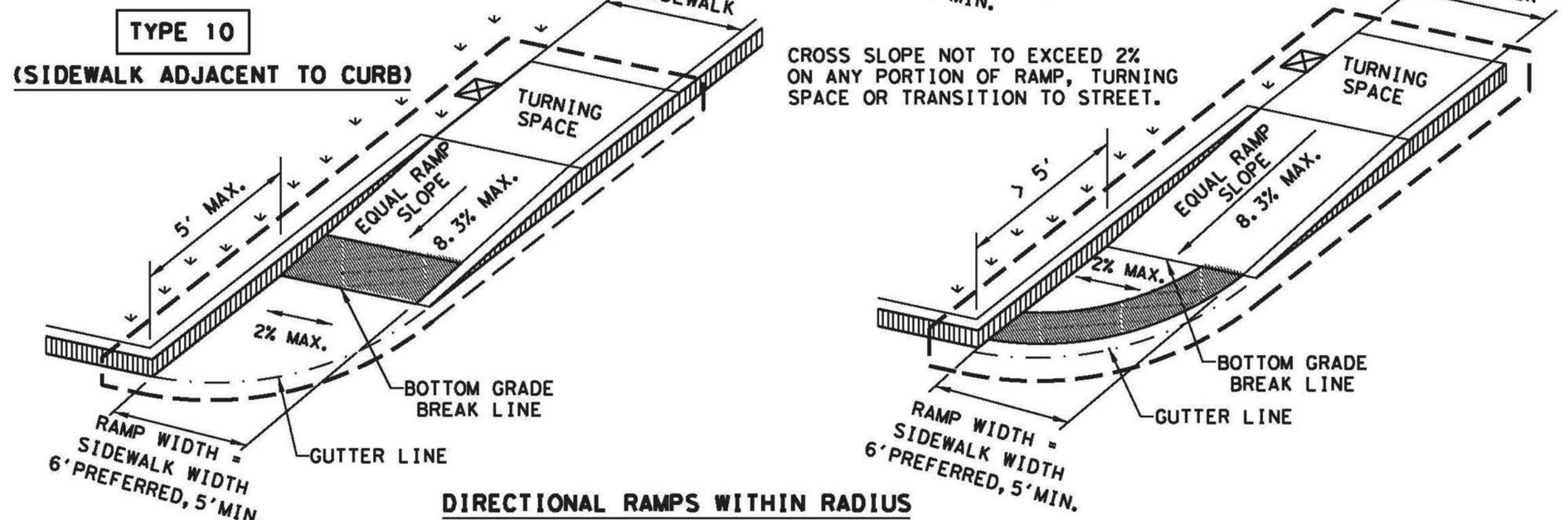
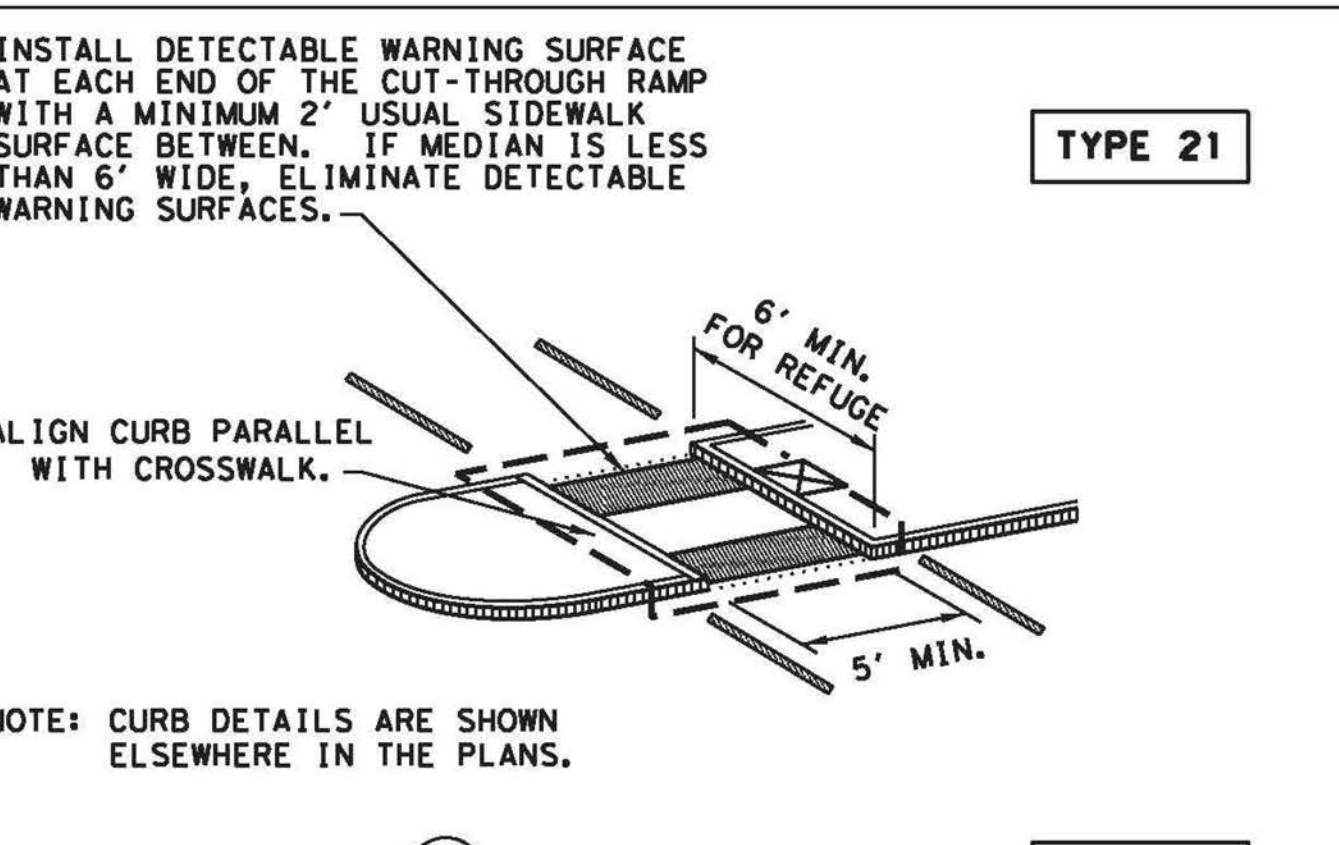
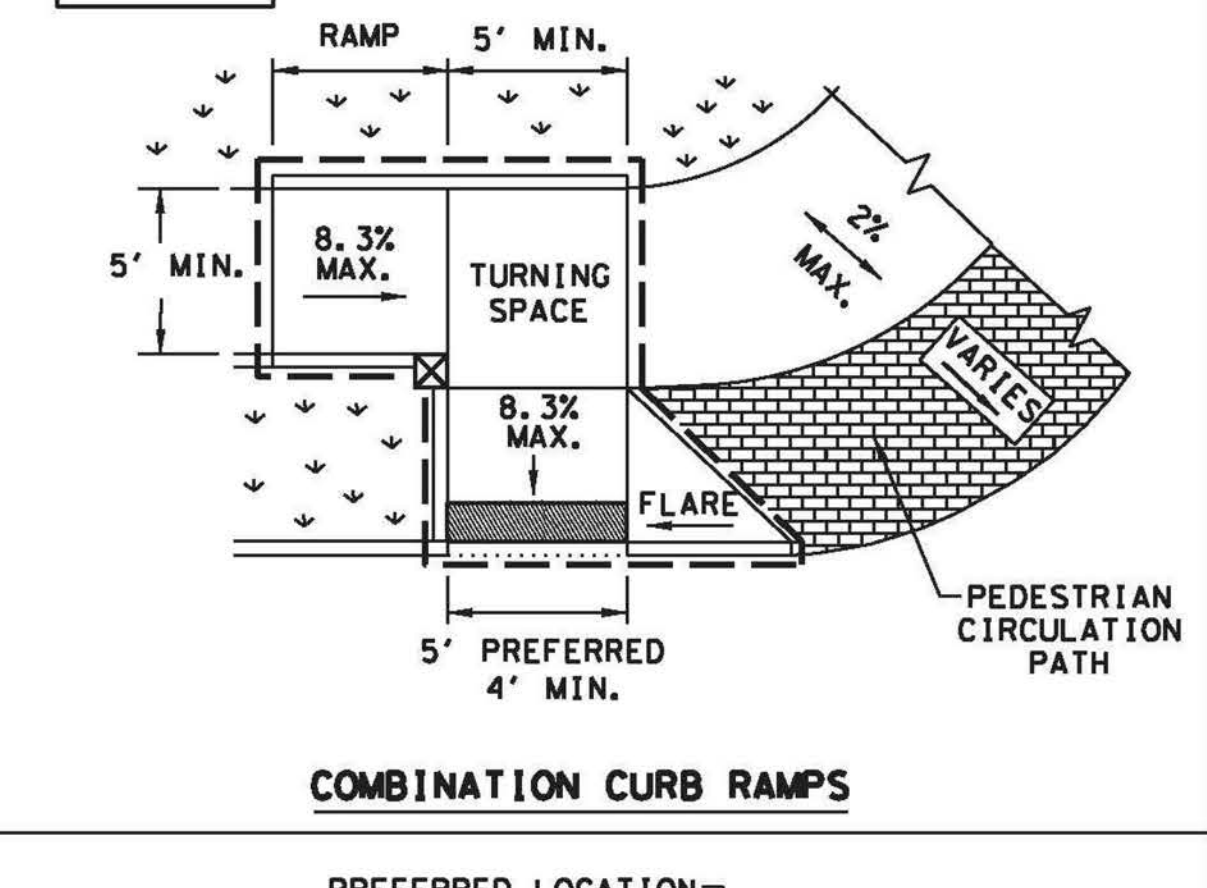
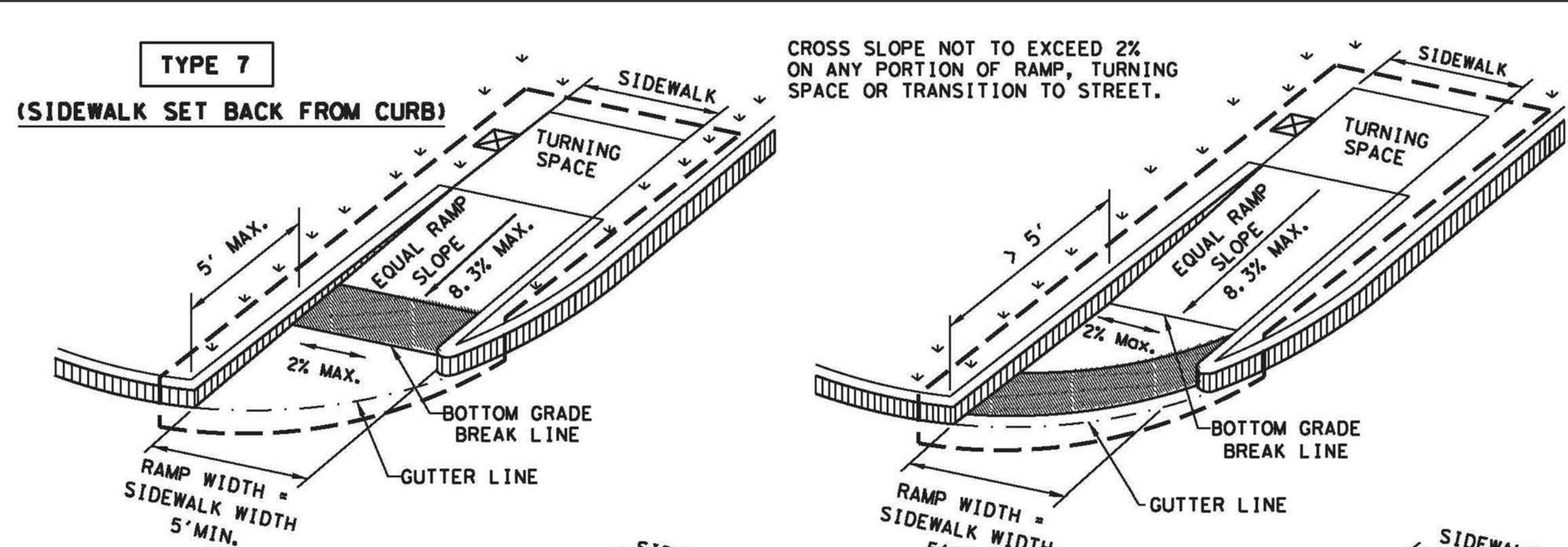
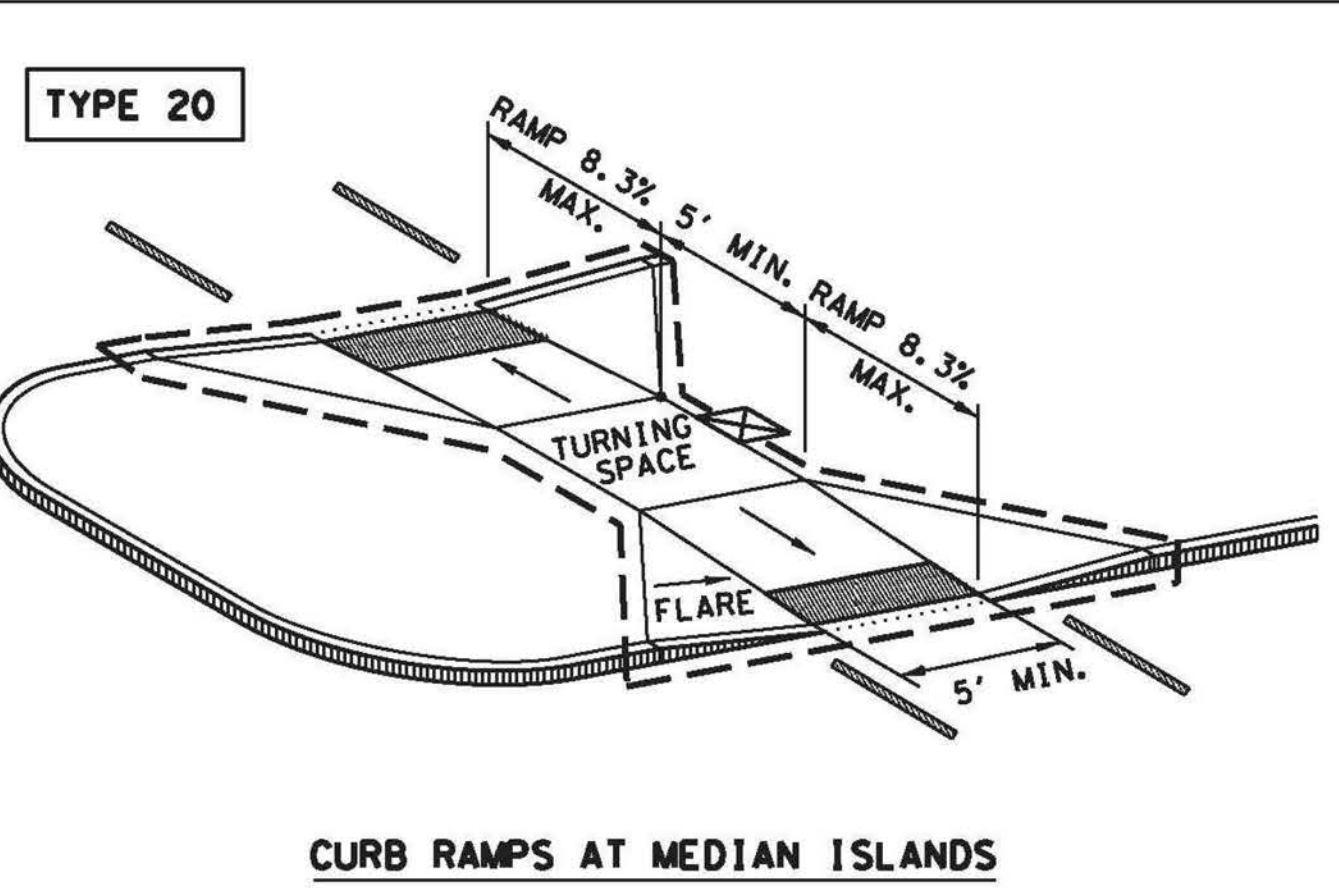
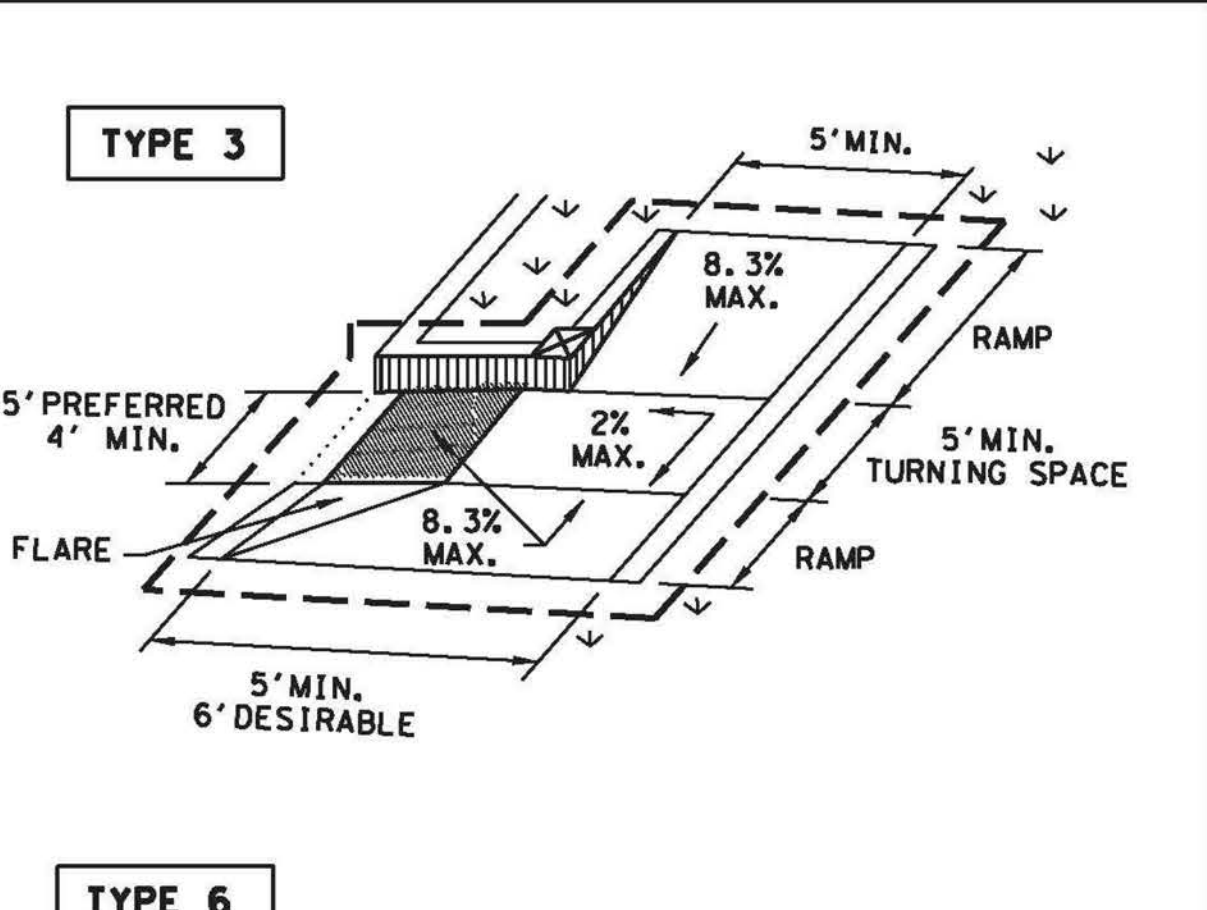
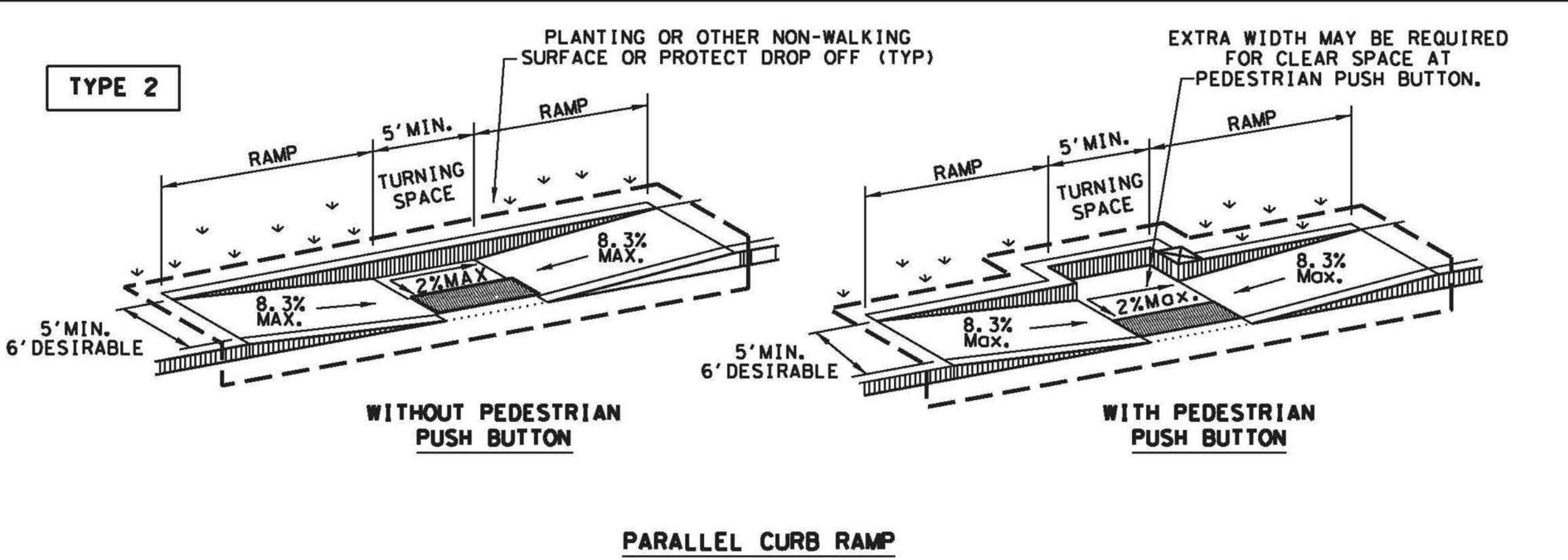
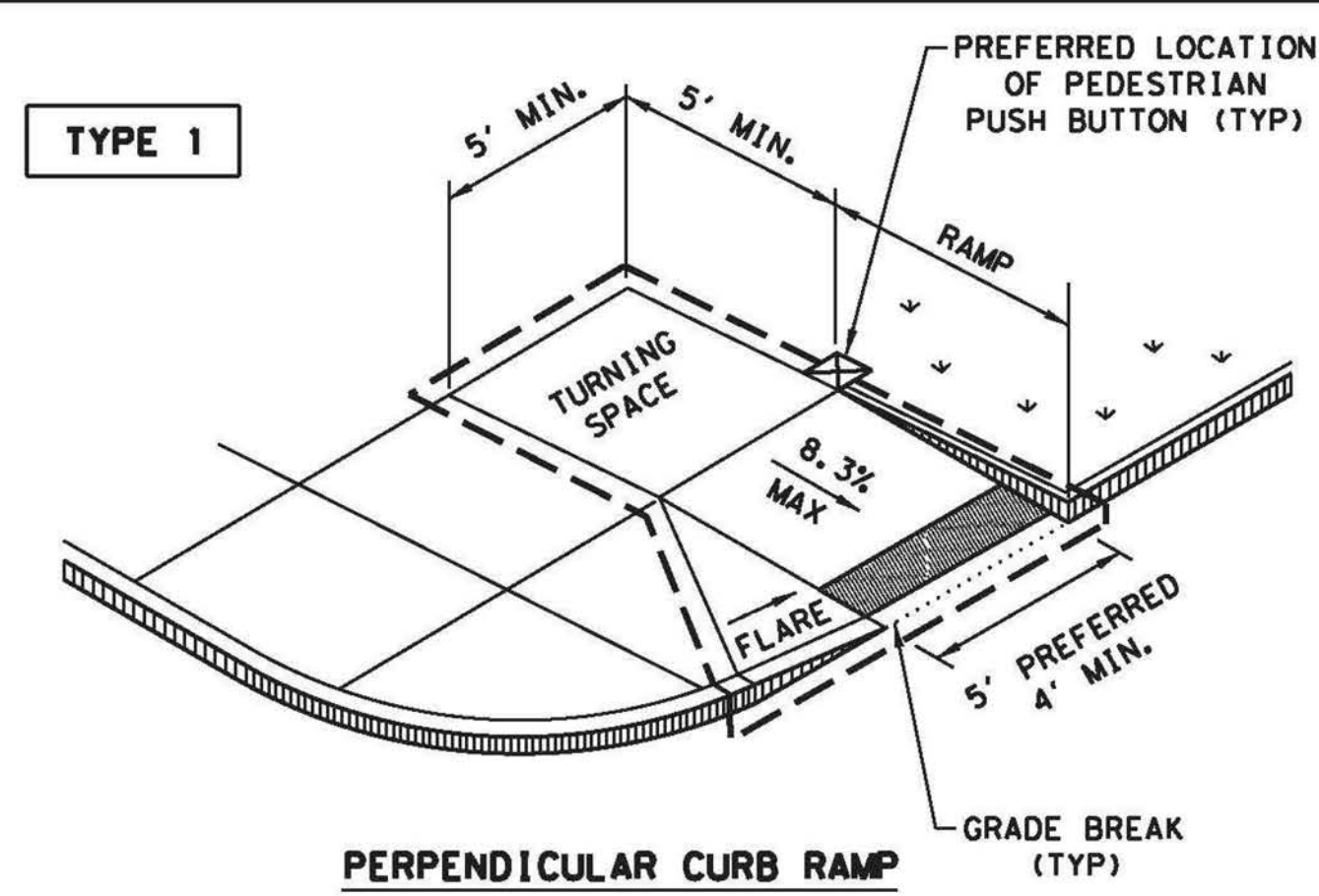
RWL18219

sheet

45

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DATE: FILE:



NOTES / LEGEND:

SEE GENERAL NOTES ON SHEET 2 OF 4 FOR MORE INFORMATION.

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

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.

GUTTER LINE

GRADE BREAK

RAMP LIMITS OF PAYMENT

SHEET 1 OF 4

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18

© TxDOT: MARCH, 2002

REVISIONS

REVISED 06/2005

REVISED 06/2012

REVISED 01/2018

DIST

COUNTY

SHEET NO.

Drawing: P:\PROJECTS\DWG\18219\CD\Sheet\PHASE 1 - NORTH\52 PAVING DETAILS 9 OF 9.dwg at Sep 27, 2019-10:44am by jvalle
Layout: 48 PAVING DETAILS 5 OF 9

no.	revision	by	date

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City of Rockwall

The New Horizon

scale
when bar is
1 inch long

horiz
N/A

vert
N/A

SEP 2019



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CITY OF ROCKWALL, TEXAS

HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

PAVING DETAILS 5 OF 9

tnp project
RWL18219

sheet
46

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\52 PAVING DETAILS 6 OF 9.dwg at Sep 27, 2019-10:44am by jbealle
Layout: 43 PAVING DETAILS 6 OF 9 Xrefs: xref-borders.dwg

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FILE:

GENERAL NOTES

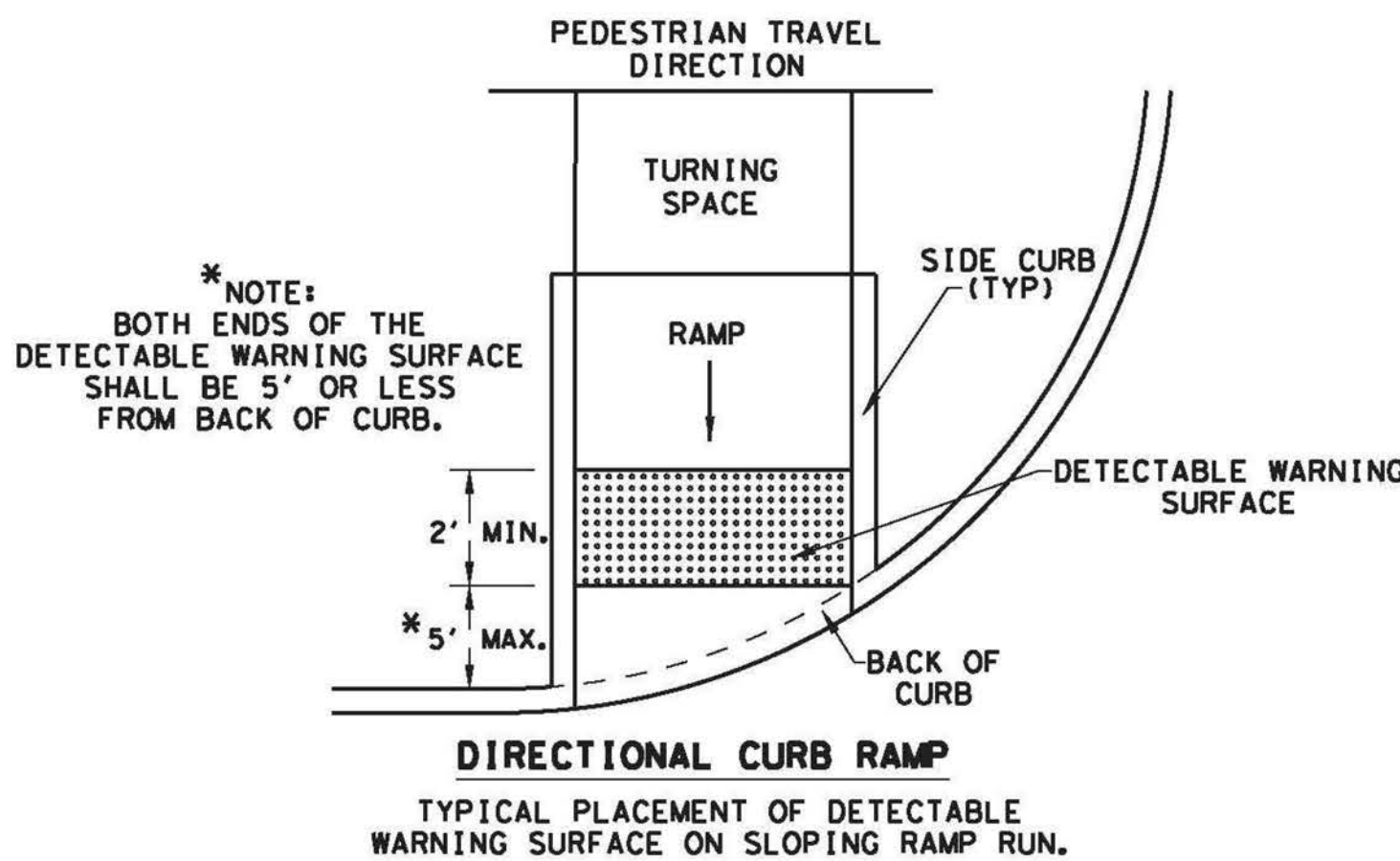
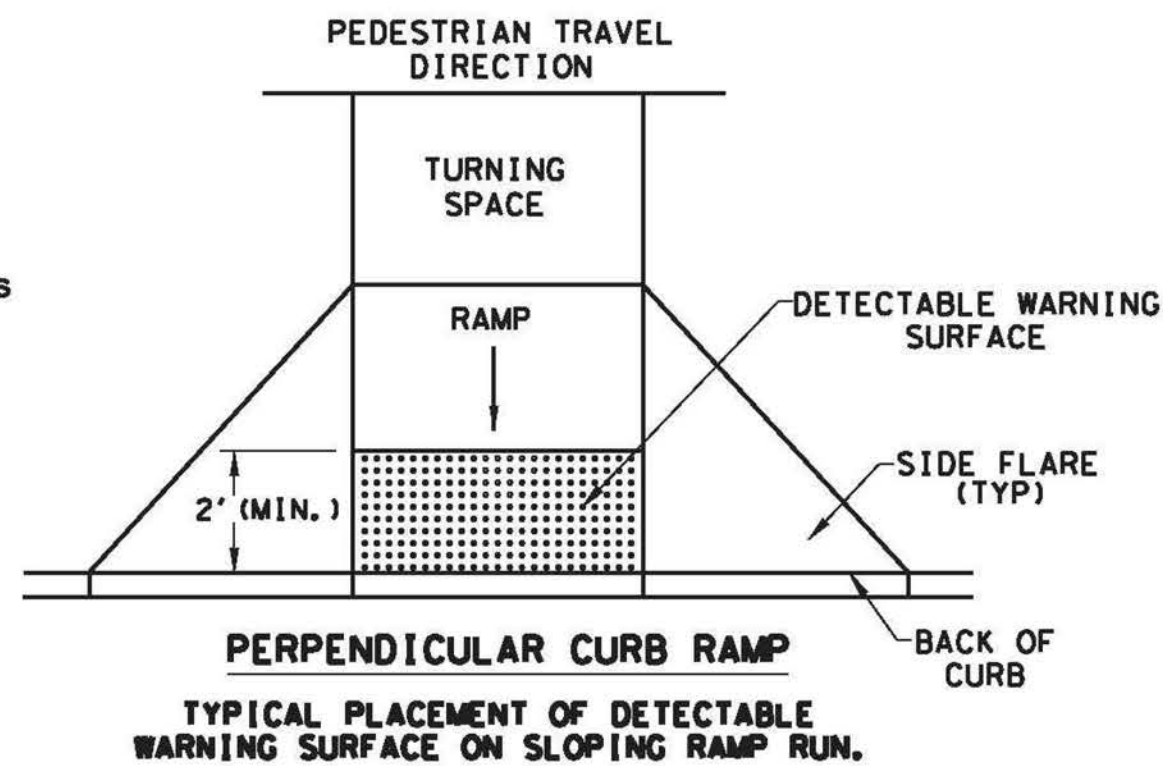
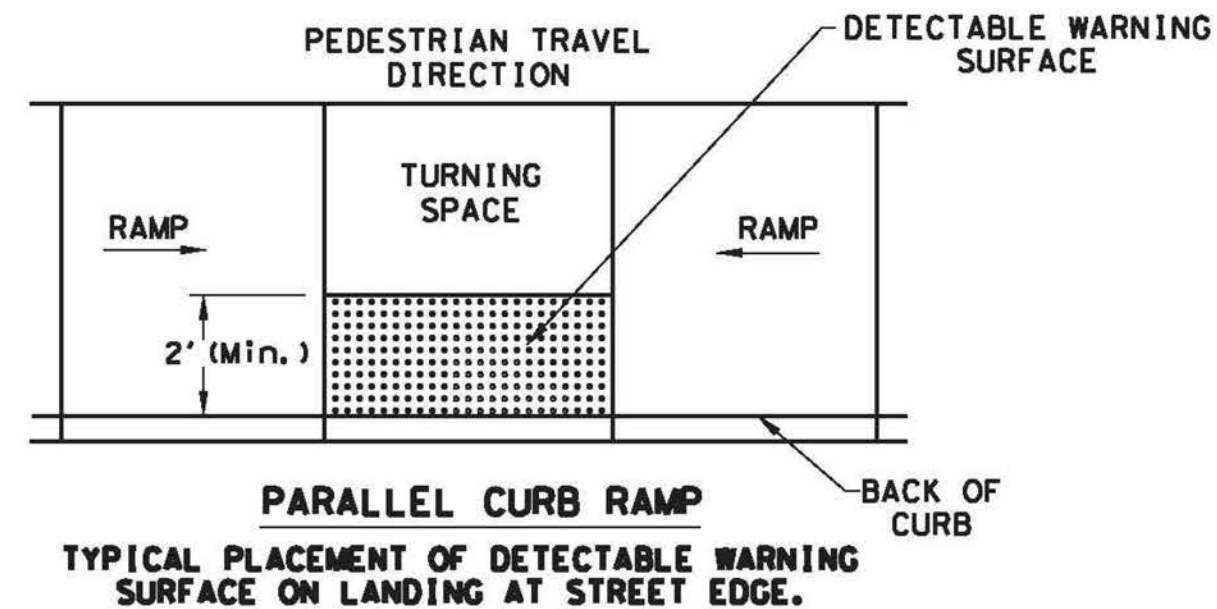
CURB RAMPS

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
4. 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.
5. Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%.
6. Clear 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.
7. 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.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. 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.
12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the street.
17. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
18. Existing features that comply with applicable standards may remain in place unless otherwise shown on the plans.

SIDEWALKS

27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. 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.
29. Street grades and cross slopes shall be as shown elsewhere in the plans.
30. Changes in level greater than 1/4 inch are not permitted.
31. 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 five percent (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 PROWAG R409.
32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
33. 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".
34. Sidewalk details are shown elsewhere in the plans.

DETECTABLE WARNING SURFACE DETAILS



SHEET 2 OF 4

		Design Division Standard	
PEDESTRIAN FACILITIES			
CURB RAMPS			
PED-18			
FILE: ped18	DN: TxDOT	DN: VP	CK: KM
© TxDOT: MARCH, 2002	CONT	SECT	JOB
REVISIONS		HIGHWAY	
REVISED 08, 2005			
REVISED 06, 2012			
REVISED 01, 2018			
	DIST	COUNTY	SHEET NO.

no.	revision	by	date

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City of Rockwall
The New Horizon

scale
when bar is
1 inch long
horiz
N/A
vert
N/A
SEP 2019

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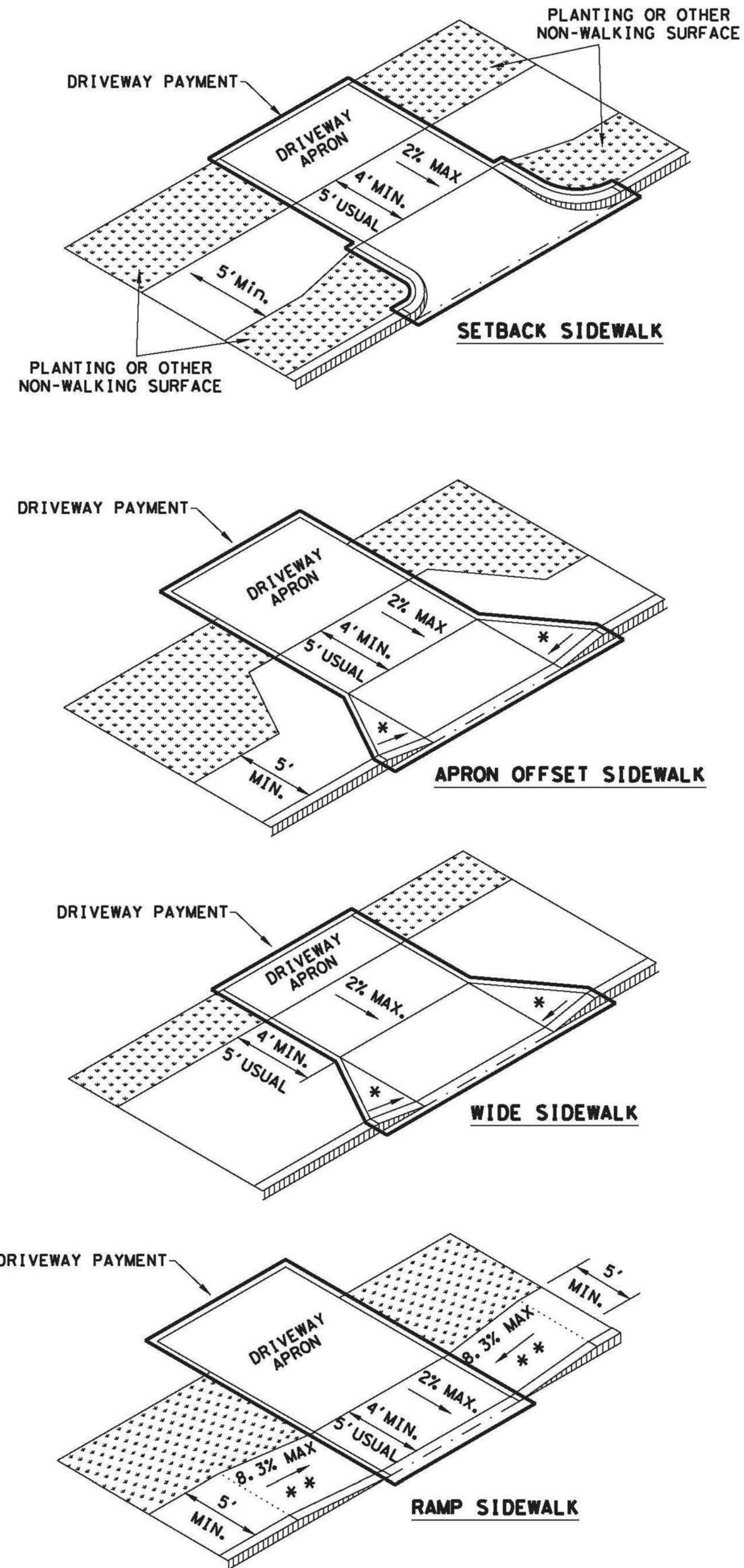
CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
PAVING DETAILS 6 OF 9

tnp project
RWL18219
sheet
47

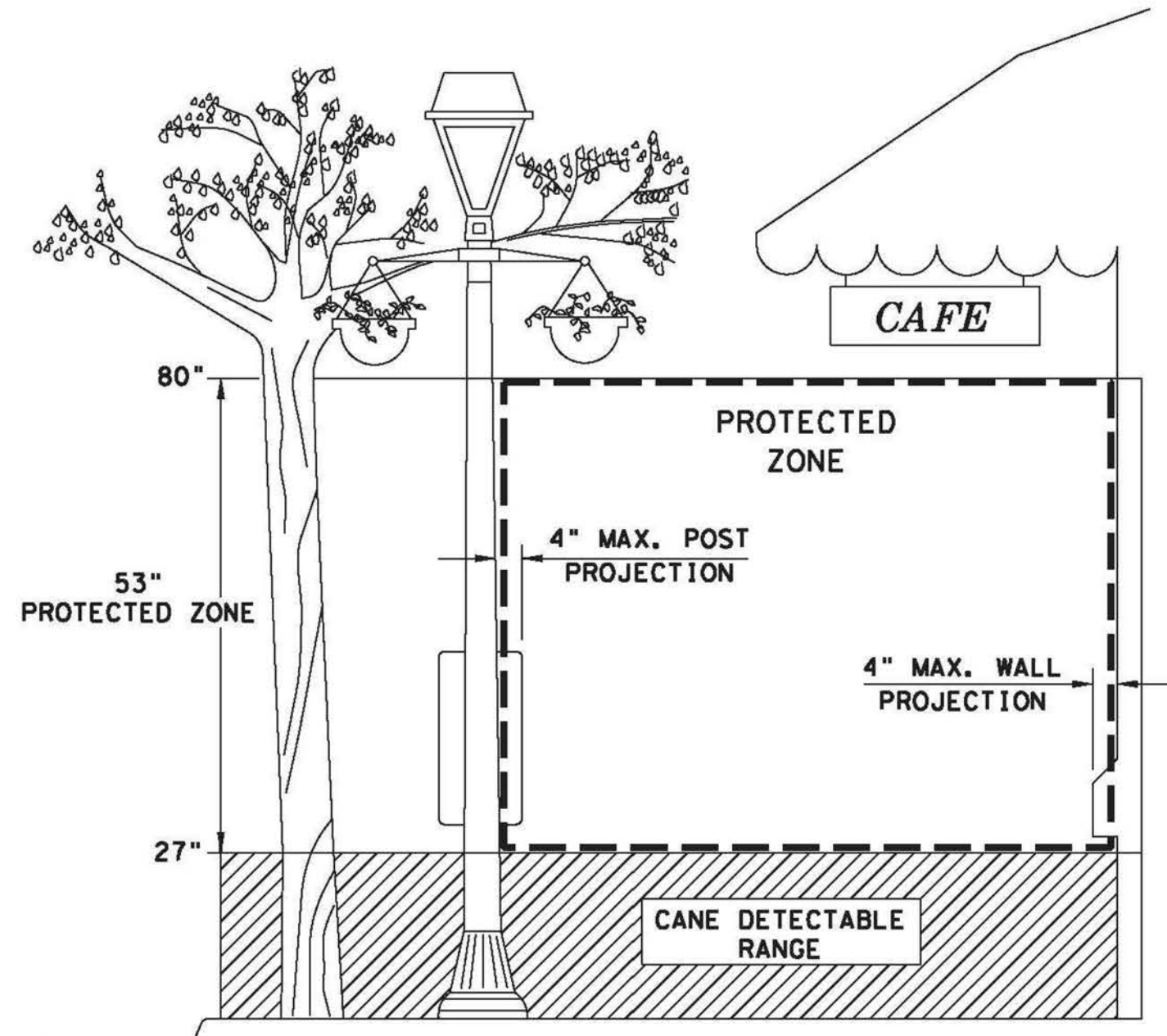
DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

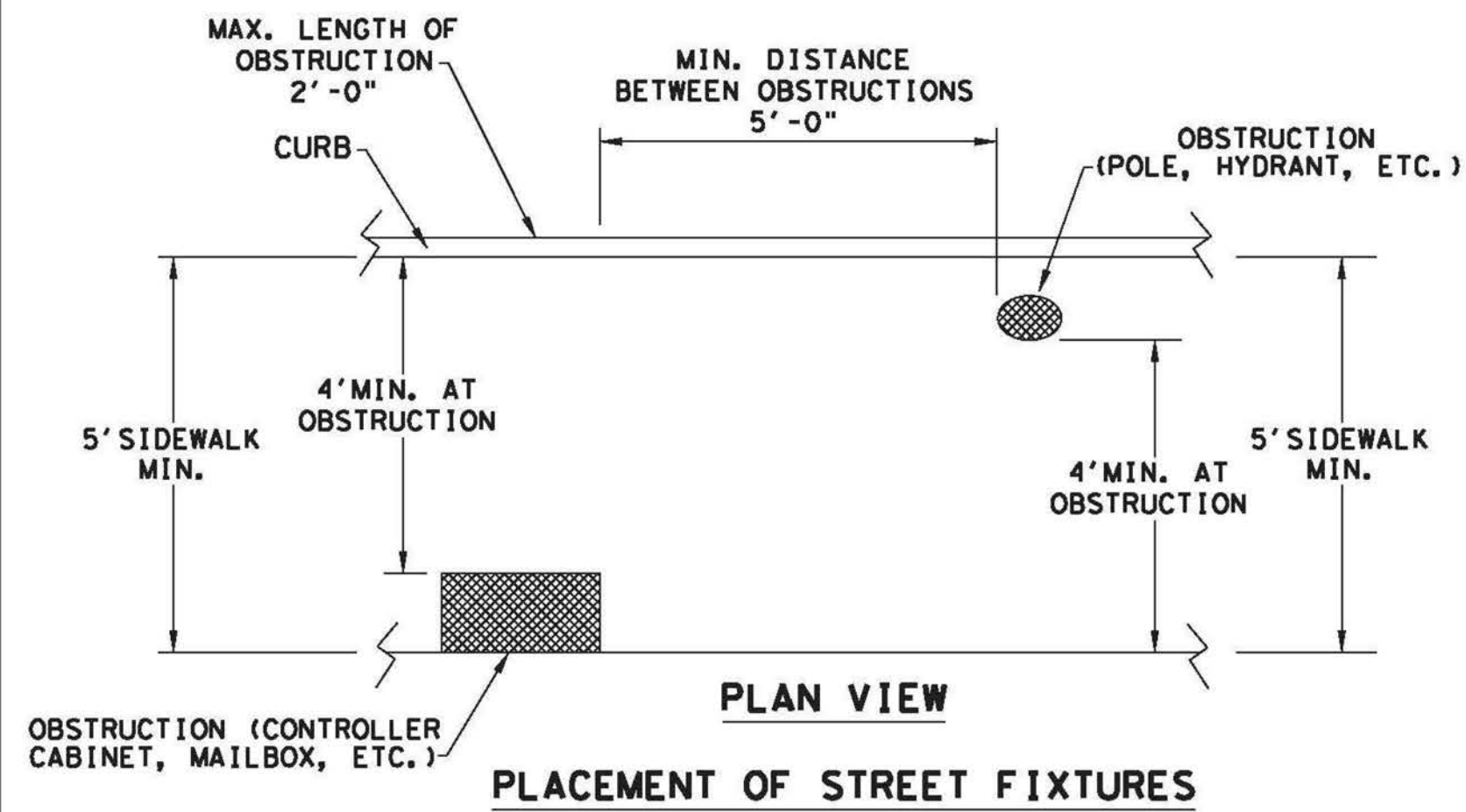
SIDEWALK TREATMENT AT DRIVEWAYS



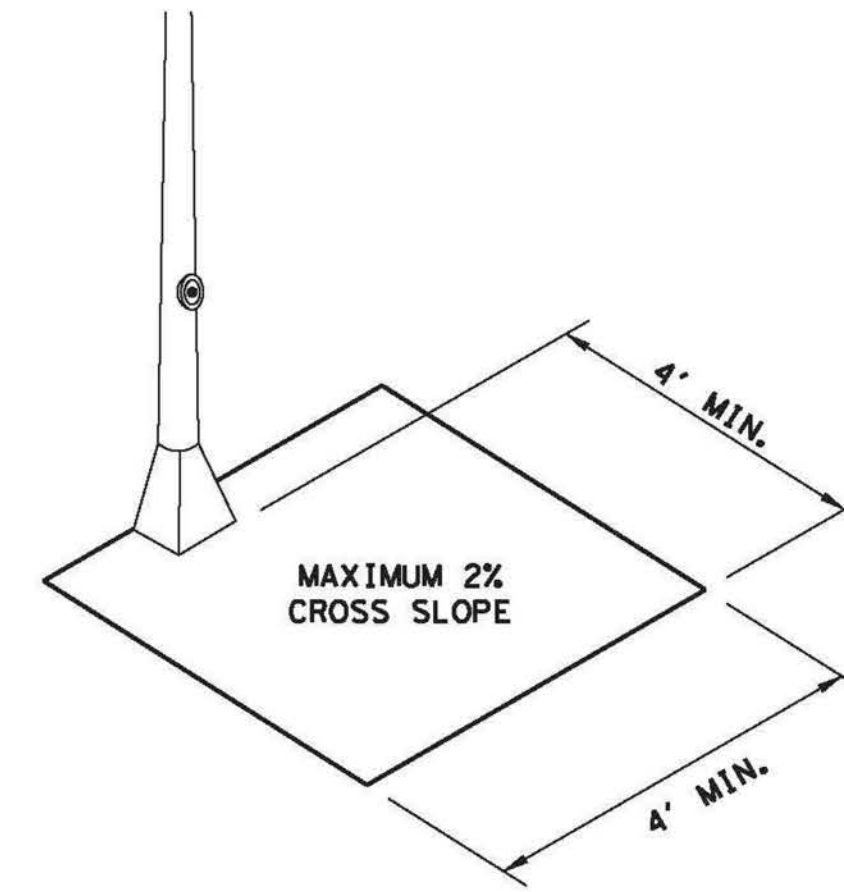
- NOTES:
- * WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.
 - * * IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.



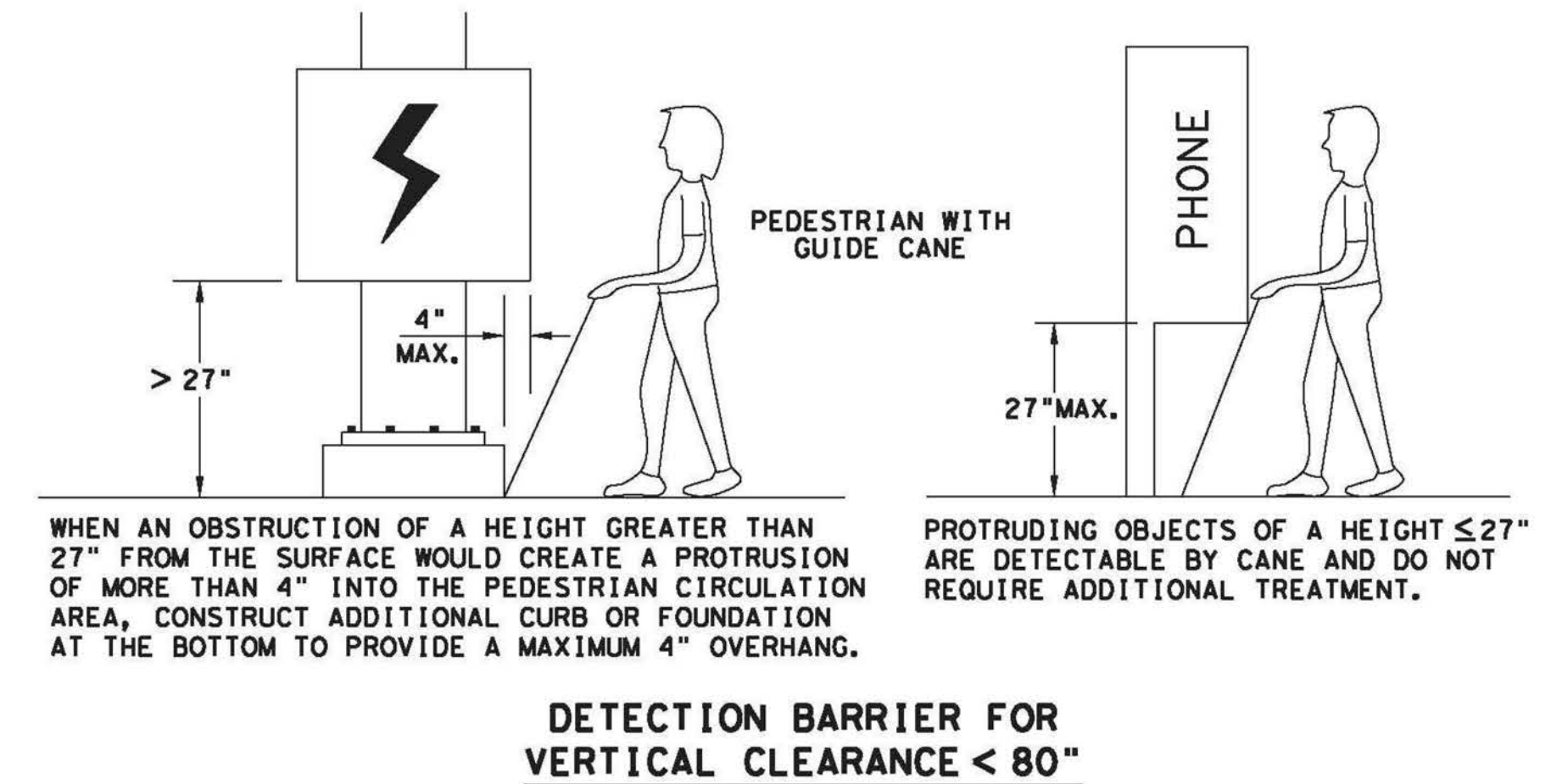
NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



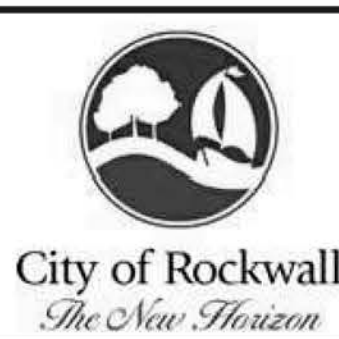
DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

SHEET 3 OF 4

Texas Department of Transportation		Design Division Standard	
PEDESTRIAN FACILITIES			
CURB RAMPS			
PED-18			
FILE: ped18	DR: TxDOT	DR: VP	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB
REVISIONS		HIGHWAY	
REVISED 08/2005	DIST	COUNTY	SHEET NO.
REVISED 06/2012			
REVISED 01/2018			

no.	revision	by	date

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scale
when bar is
1 inch long
horiz
N/A
vert
N/A
SEP 2019



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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
PAVING DETAILS 7 OF 9

tnp project
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sheet
48

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\52 PAVING DETAILS 9 OF 9.dwg at Sep 27, 2019-10:44am by jbealle
Layout: 52 PAVING DETAILS 9 OF 9 - Arx: xref-purging.dwg

PEDESTRIAN ACCESSIBILITY (WITHIN PUBLIC R.O.W.)

All newly constructed sidewalks, curb ramps and crosswalks installed within City of Rockwall public rights-of-way shall be considered a pedestrian access route and shall conform to the most current Guidelines for Public Rights-of-Way created by the United States Access Board.

CURB RAMPS

1. 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.
2. Landings shall be 5'x 5' minimum with a maximum 2% slope in the transverse and longitudinal directions..
3. Clear space at the bottom of curb ramps shall be a minimum of 5'x 5' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
4. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
5. Additional information on curb ramp location, design, light reflective value and texture may be found in the most current edition of the Texas Accessibility Standards (TAS) and 16 TAC 68.102. Federal guidelines shall supersede any conflicts.
6. 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 and accessible routes shall align with theoretical crosswalks unless otherwise directed.
7. Handrails are not required on curb ramps.
8. Provide a flush transition where the curb ramps connect to the street.
9. Accessible routes are considered "ramps" when longitudinal slopes are between 5% and 8.3% (maximum allowable). Sidewalks under 5% longitudinal slope are deemed accessible routes and must follow all applicable guidelines.

DETECTABLE WARNING DEVICE

10. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 705 of the TAS. The surface must contrast visually with adjoining surfaces. Furnish and install an approved cast-in-place dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
11. Detectable Warning Materials shall be truncated dome plates in the color approved by the City. Install products in accordance with manufacturer's specifications.
12. Detectable warning surfaces must be slip resistant and not allow water to accumulate.
13. Detectable warning surfaces shall be a minimum of 24" in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
14. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb. When placed on the ramp, align the rows of domes to be perpendicular to the grade break between the ramp run and the street. Where detectable warning surfaces are provided on a surface with a slope that is less than 5 percent, dome orientation is less critical. Detectable warning surfaces may be curved along the corner radius.

SIDEWALKS

15. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within one or more reach ranges specified in TAS 308.
16. 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.
17. Street grades and cross slopes shall be as shown elsewhere in the plans.
18. Changes in level greater than 1/4 inch are not permitted (1/2 inch with bevel).
19. 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 TAS 505.
20. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.

DIRECTIONAL CURB RAMP

CITY OF ROCKWALL



DATE
MAR. '17

DRAWING NO.
R-21250

GENERAL UNDERGROUND CONDUIT

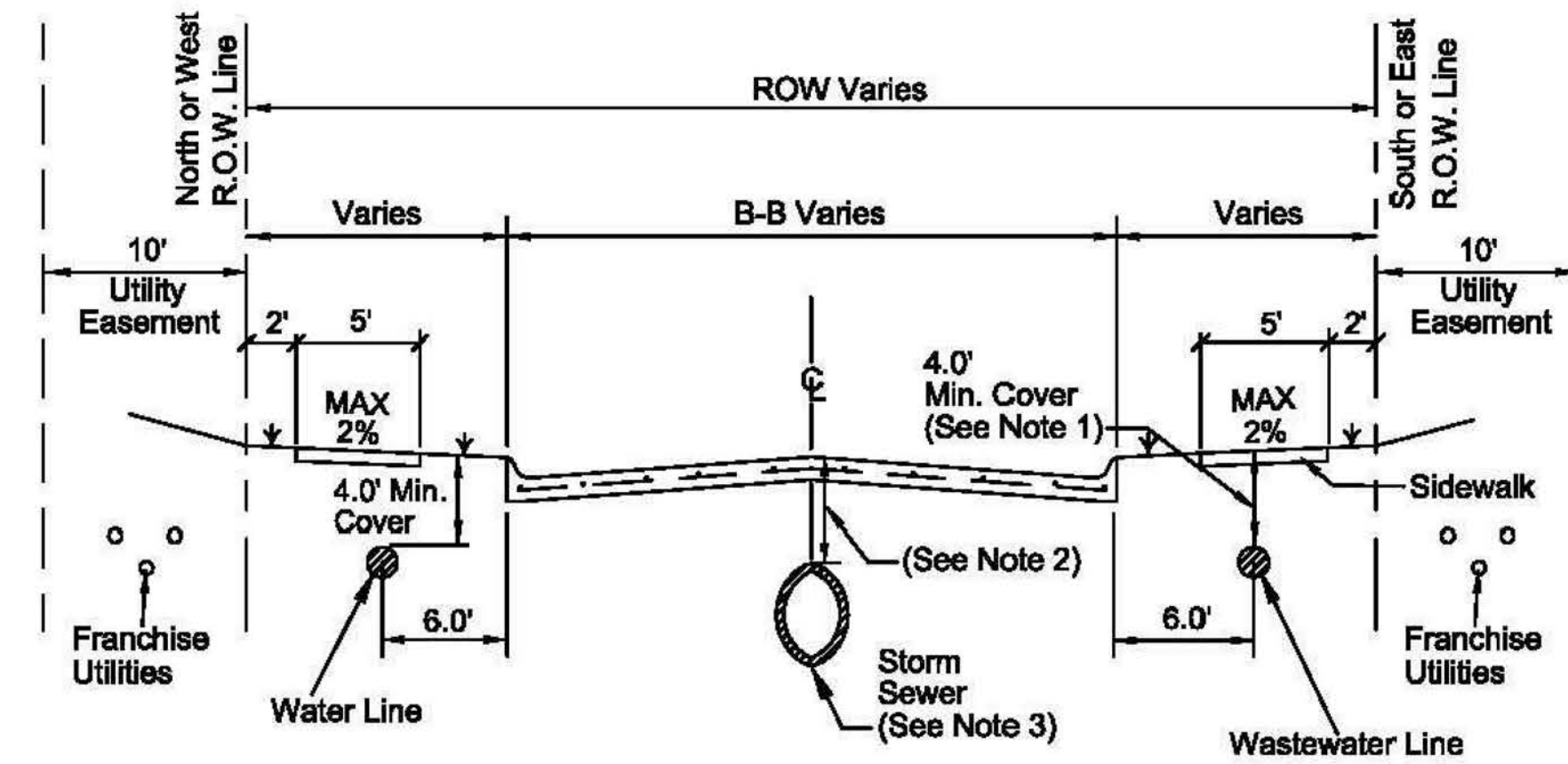
CITY OF ROCKWALL



DATE
OCT. '17

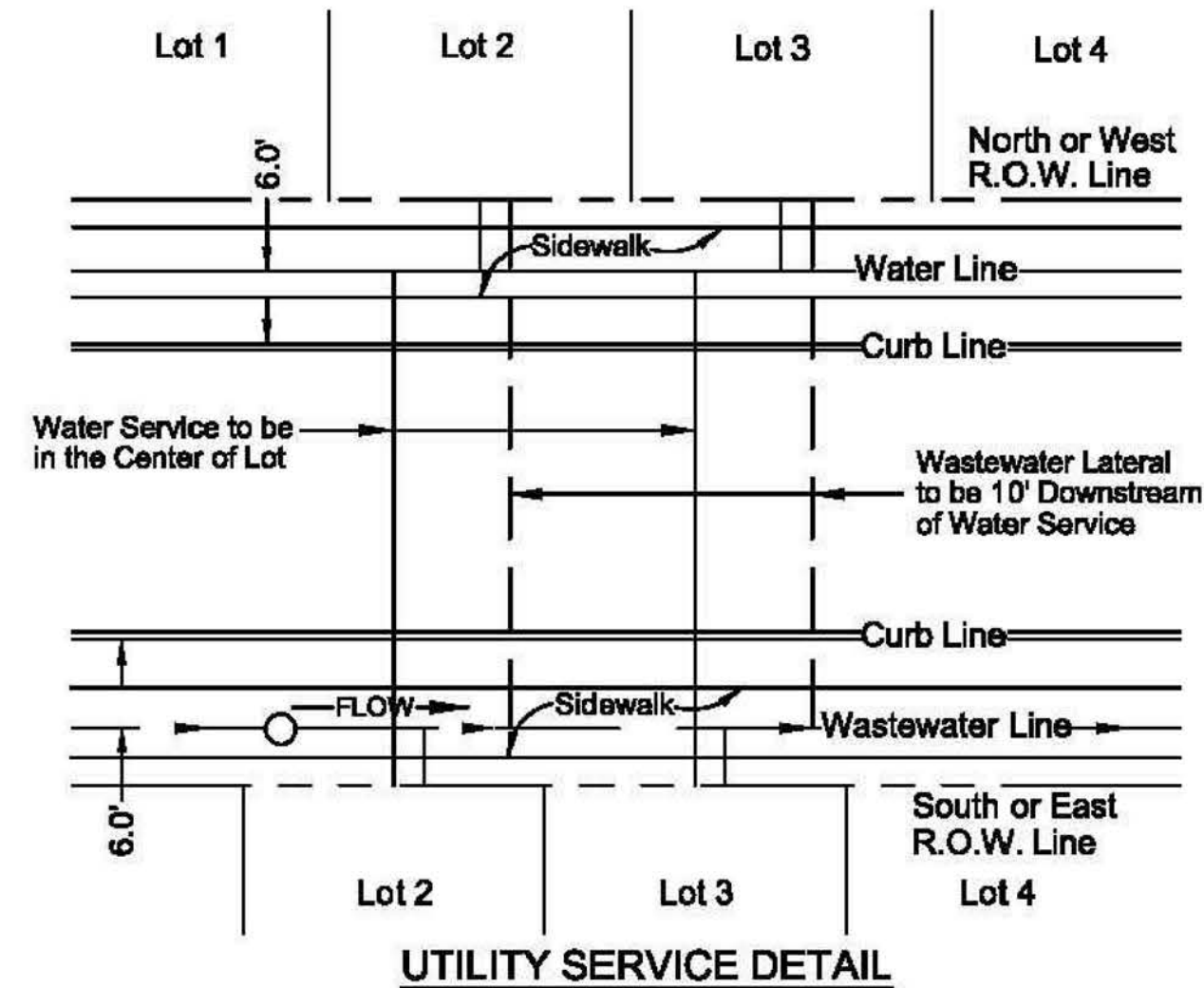
DRAWING NO.
R-3000

UTILITIES LOCATION DETAIL



NOTE:

1. If wastewater line has a cover greater than ten feet (10') than pipe shall be minimum SDR 26 and no services allowed.
2. If cover is two (2) feet or less than Class IV RCP is required.
3. Horizontal location of storm sewer for divided roads to be determined by design engineer. Not to be placed in the pathway.



no.	revision	by	date

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City of Rockwall
The New Horizon

scale when bar is 1 inch long
horiz N/A
vert N/A
SEP 2019



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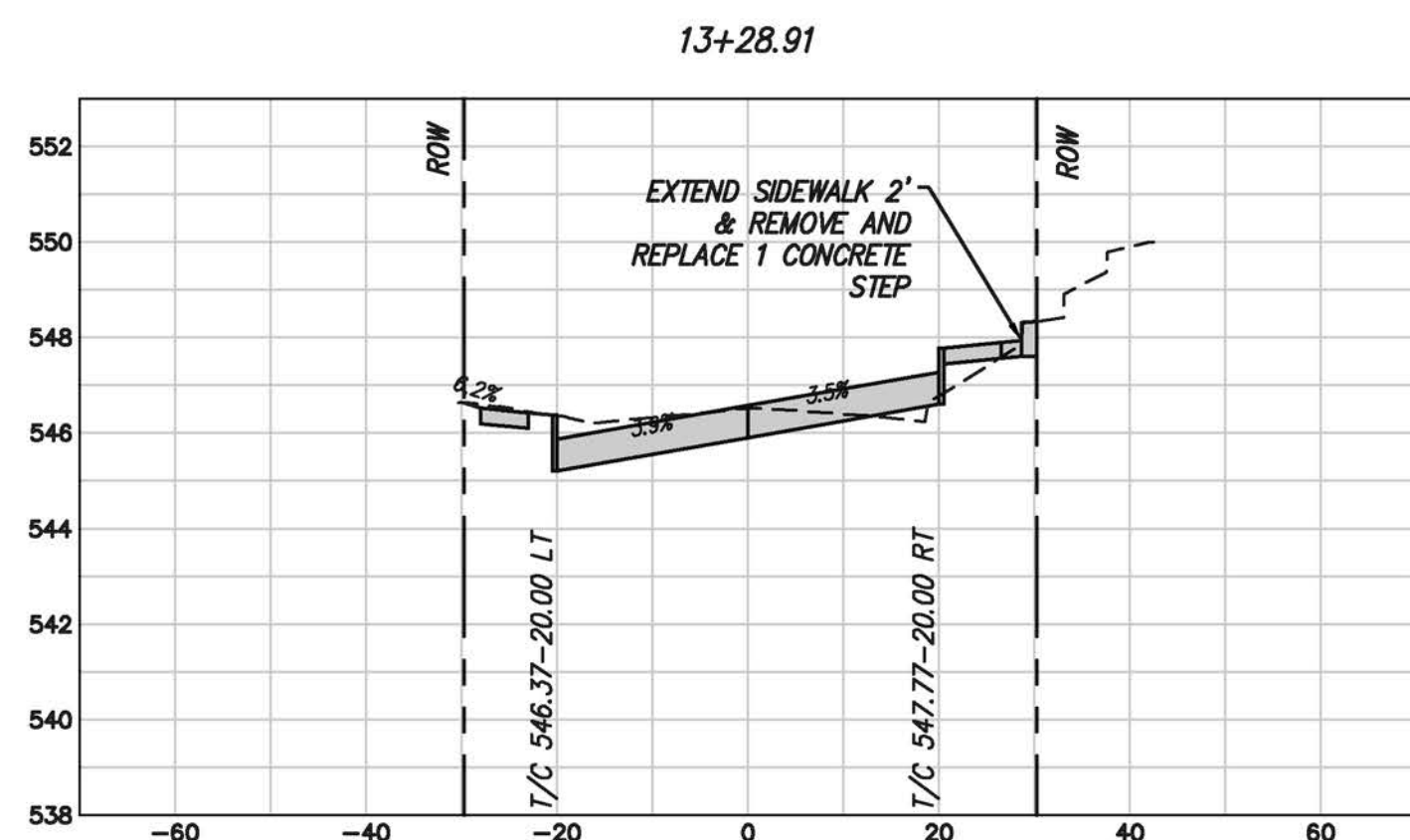
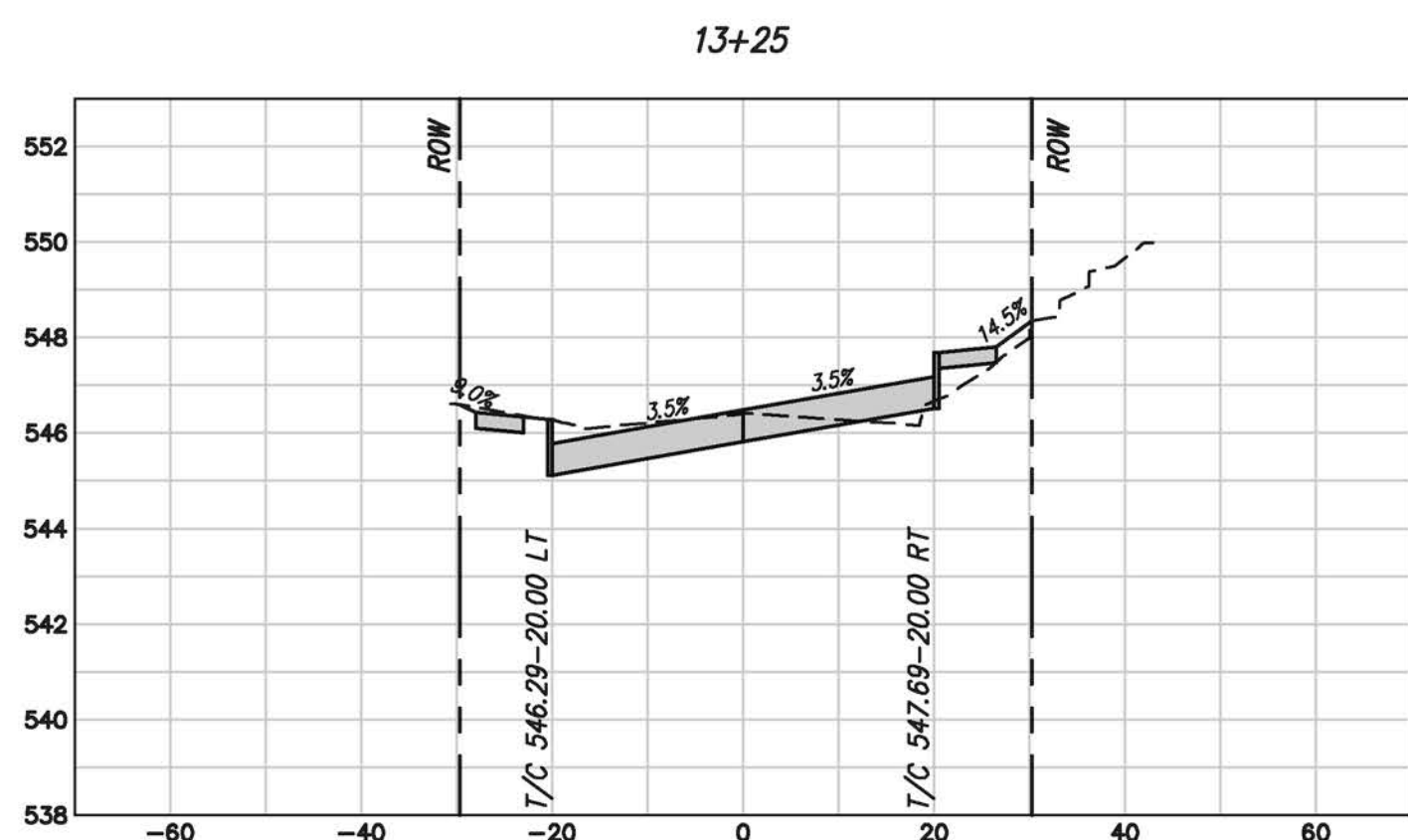
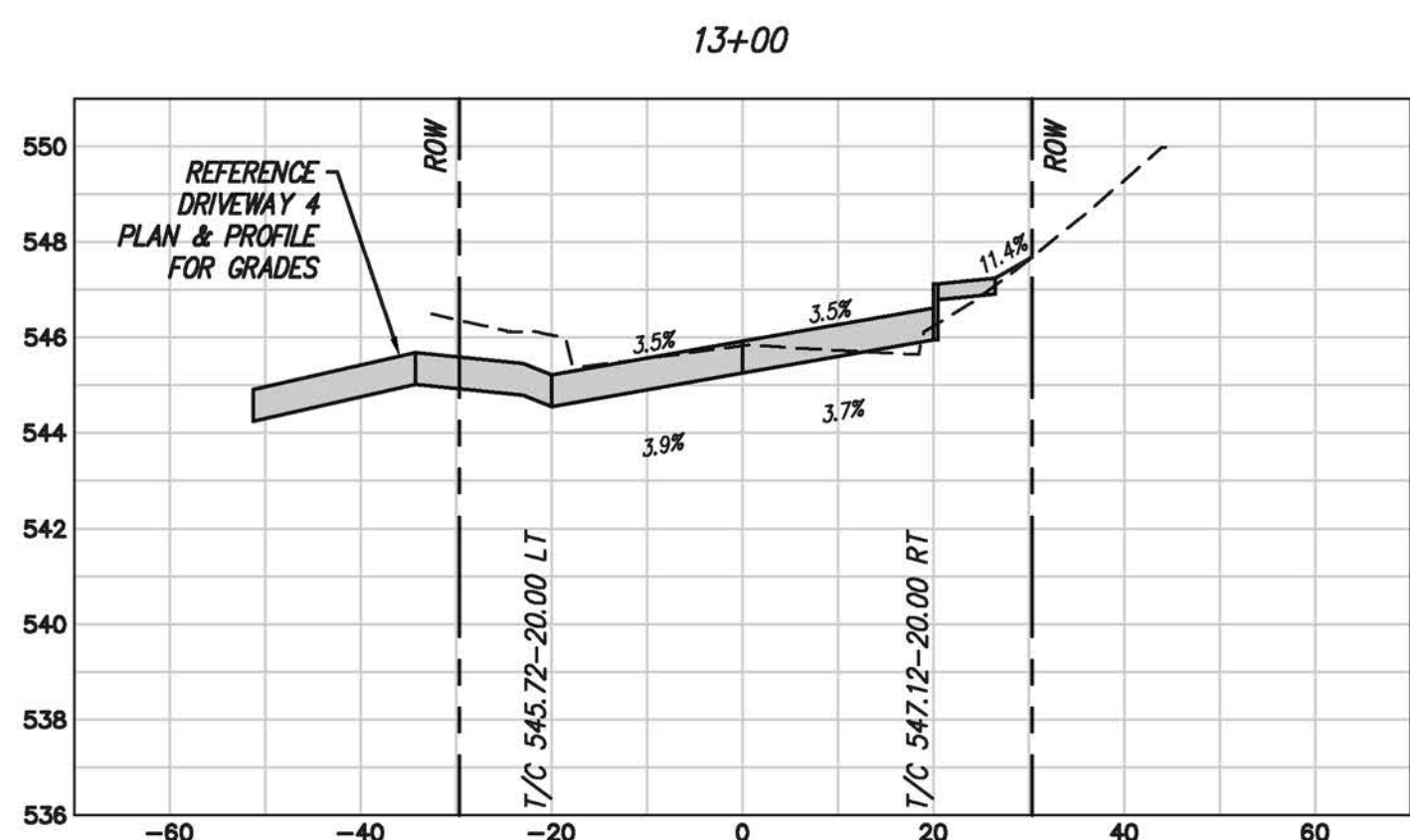
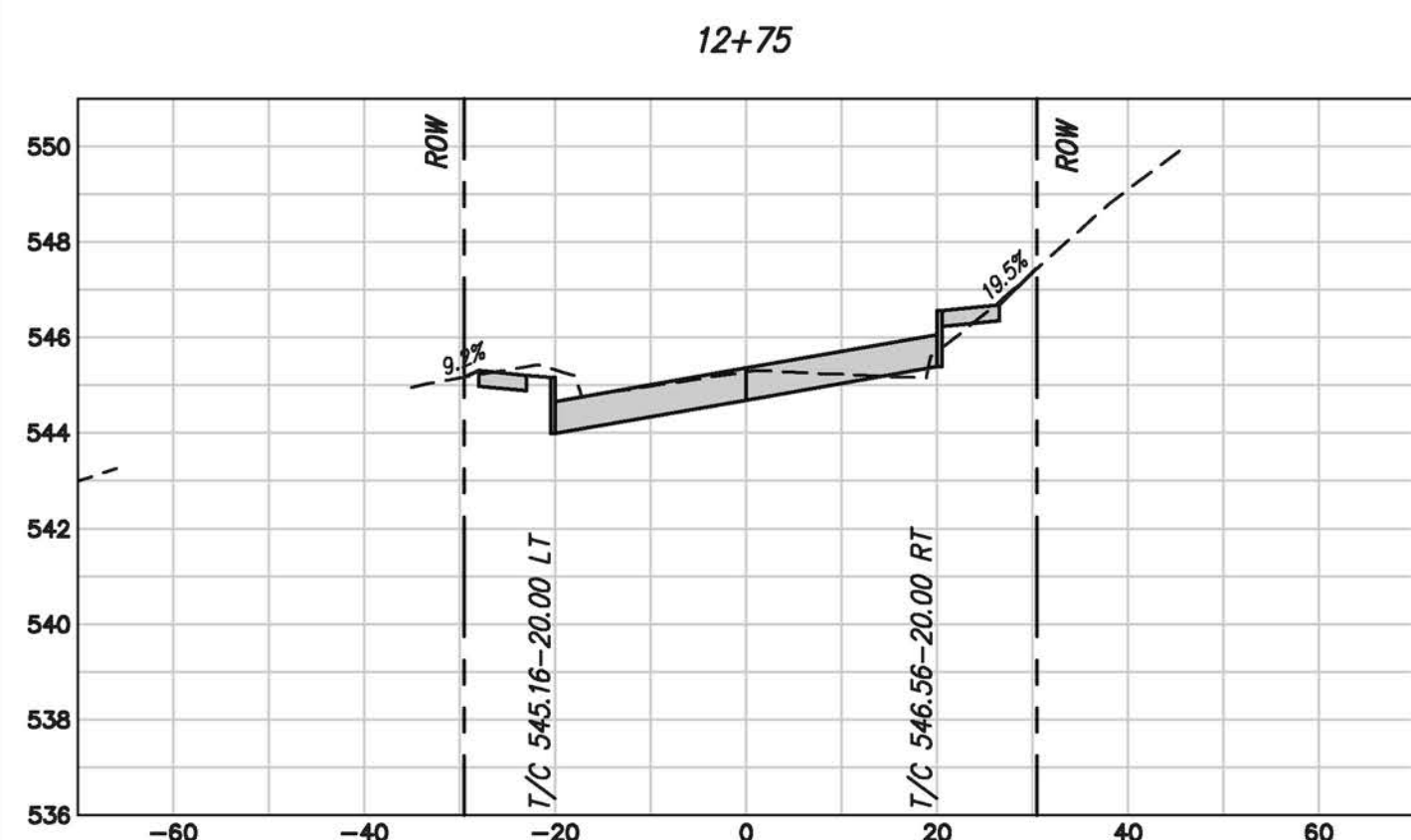
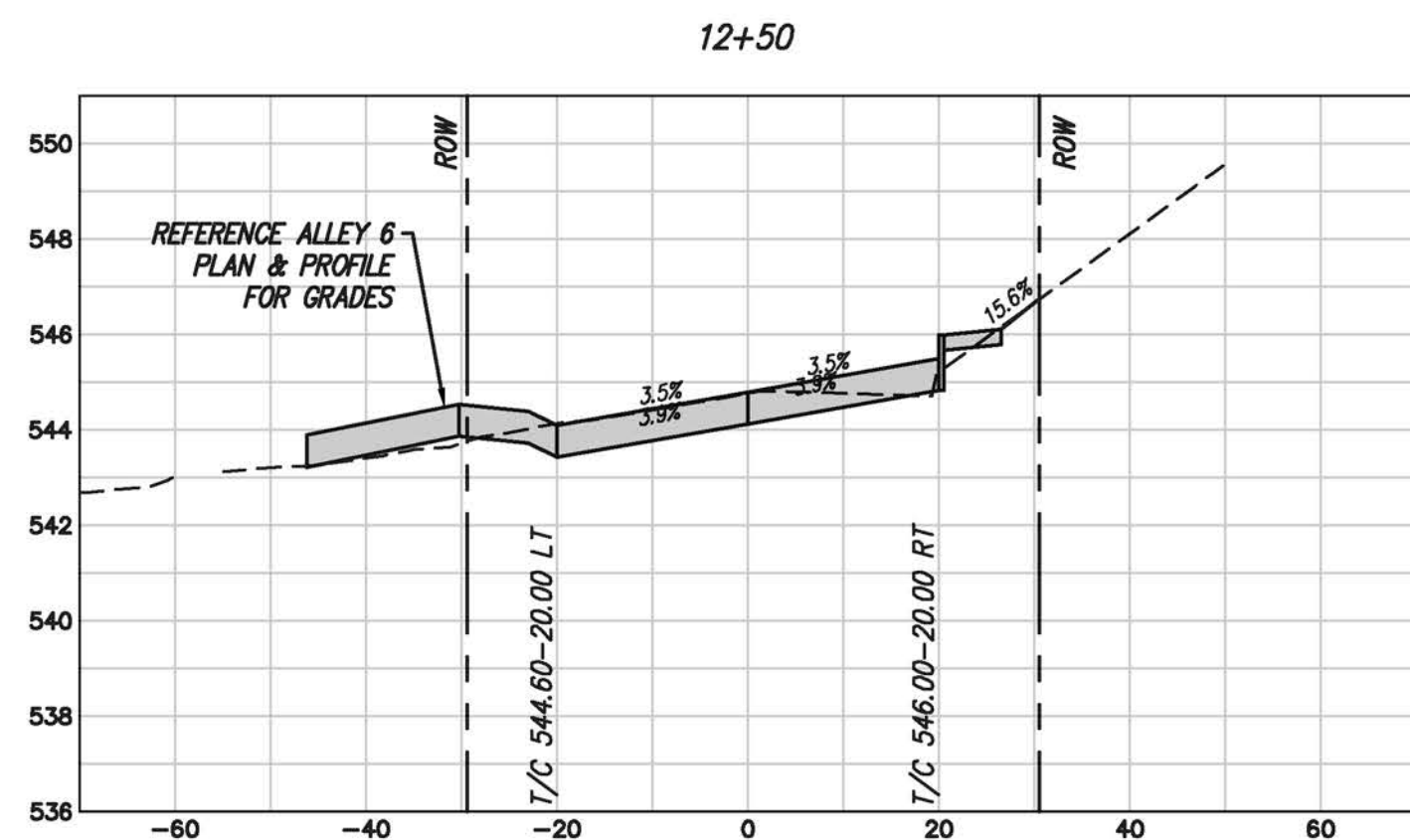
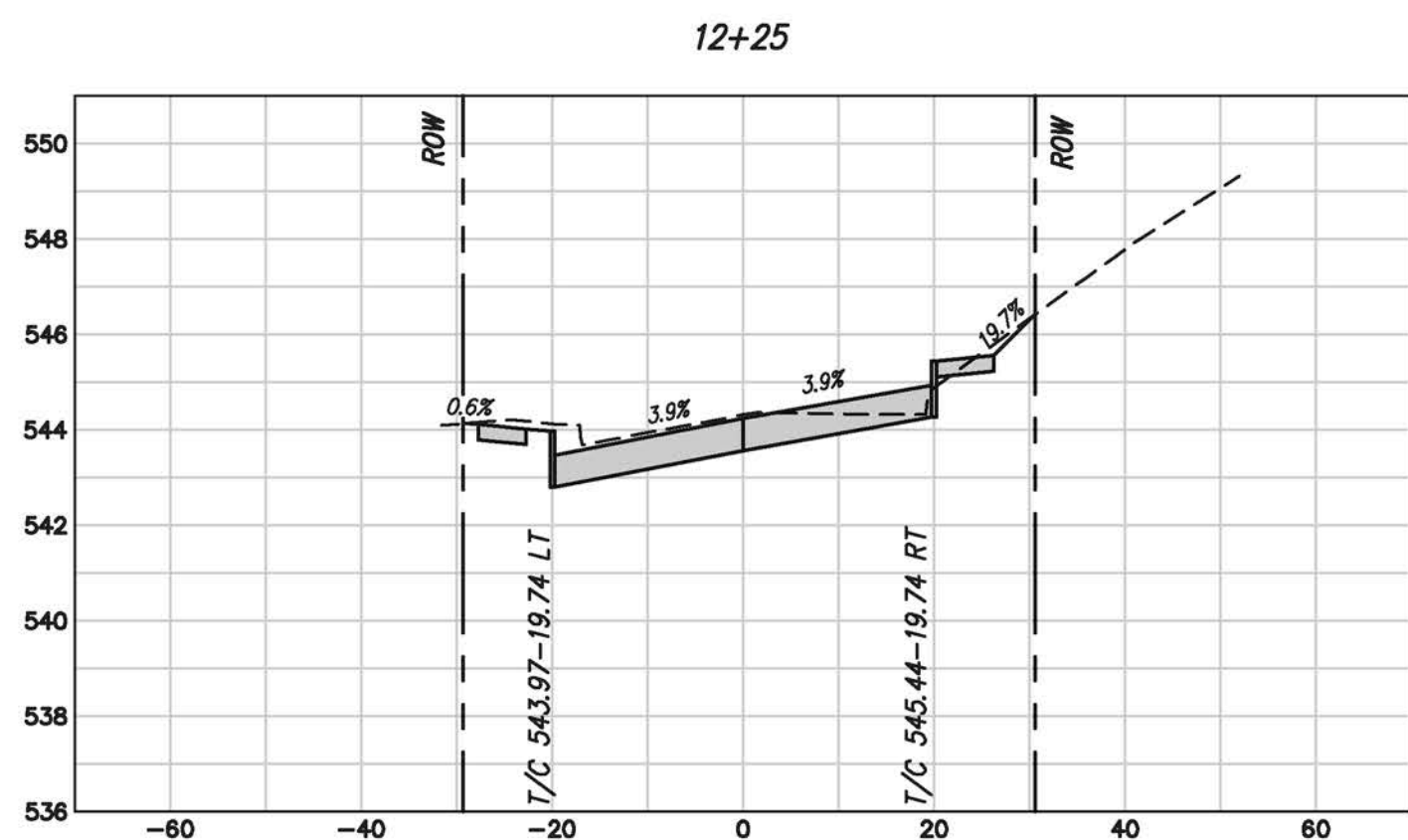
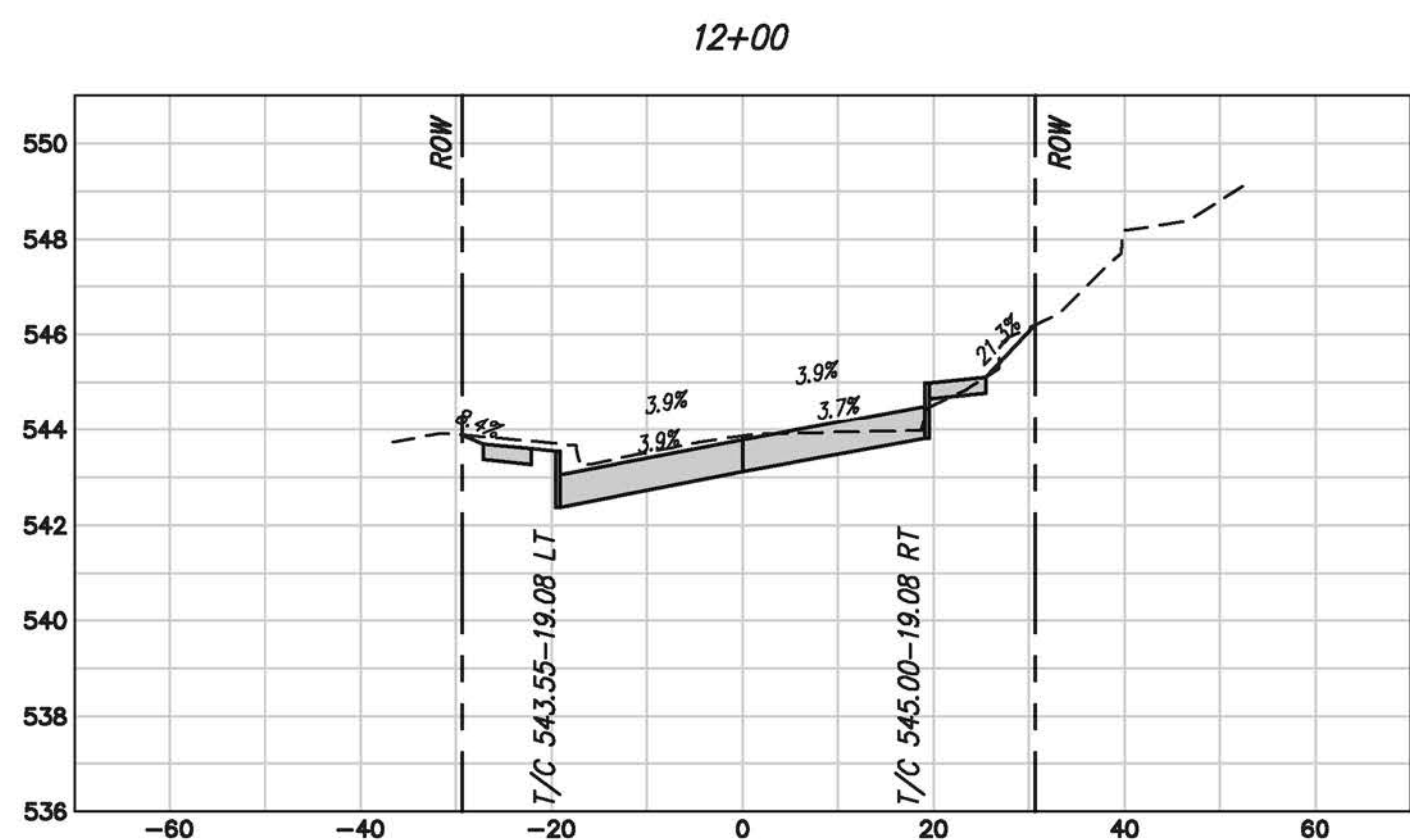
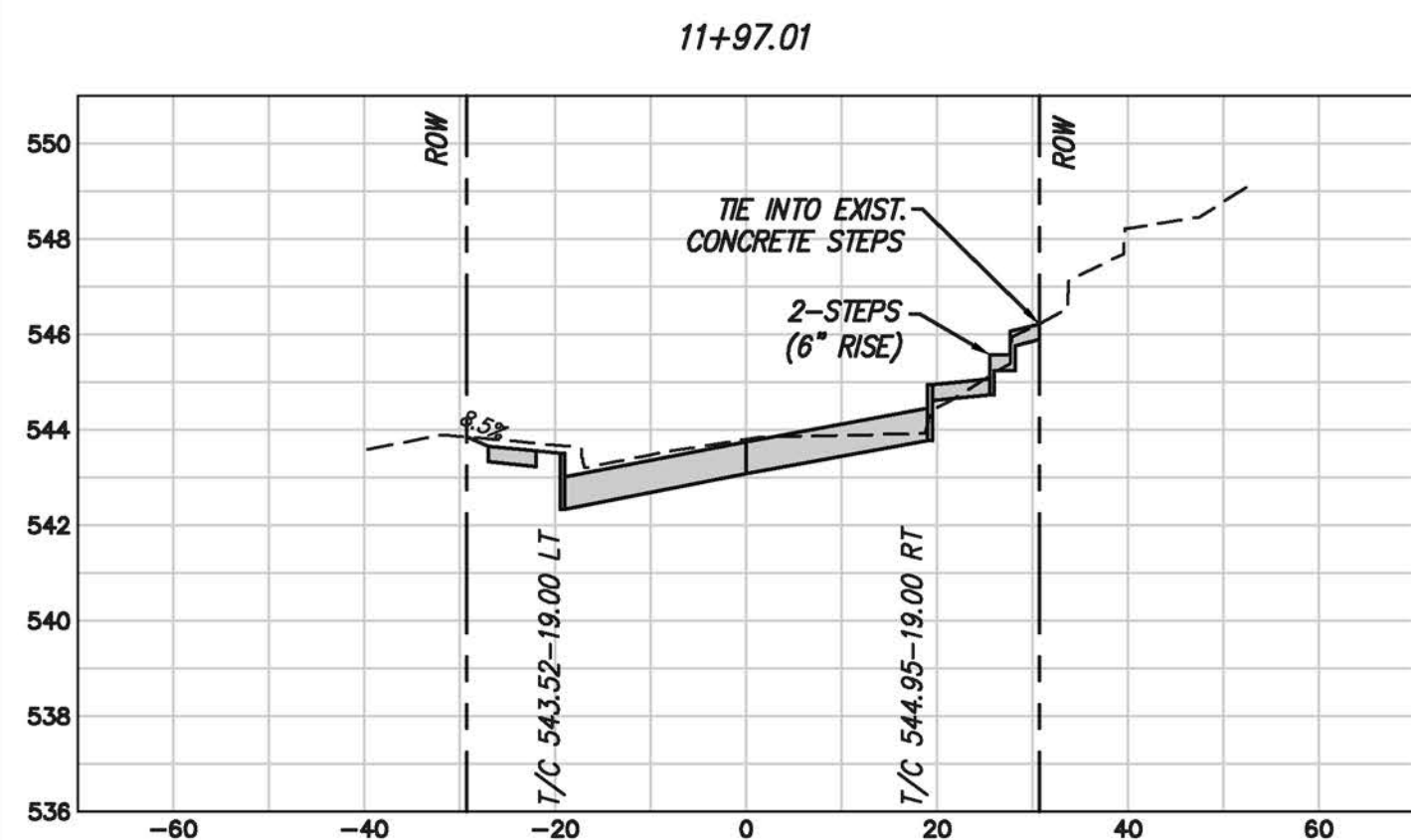
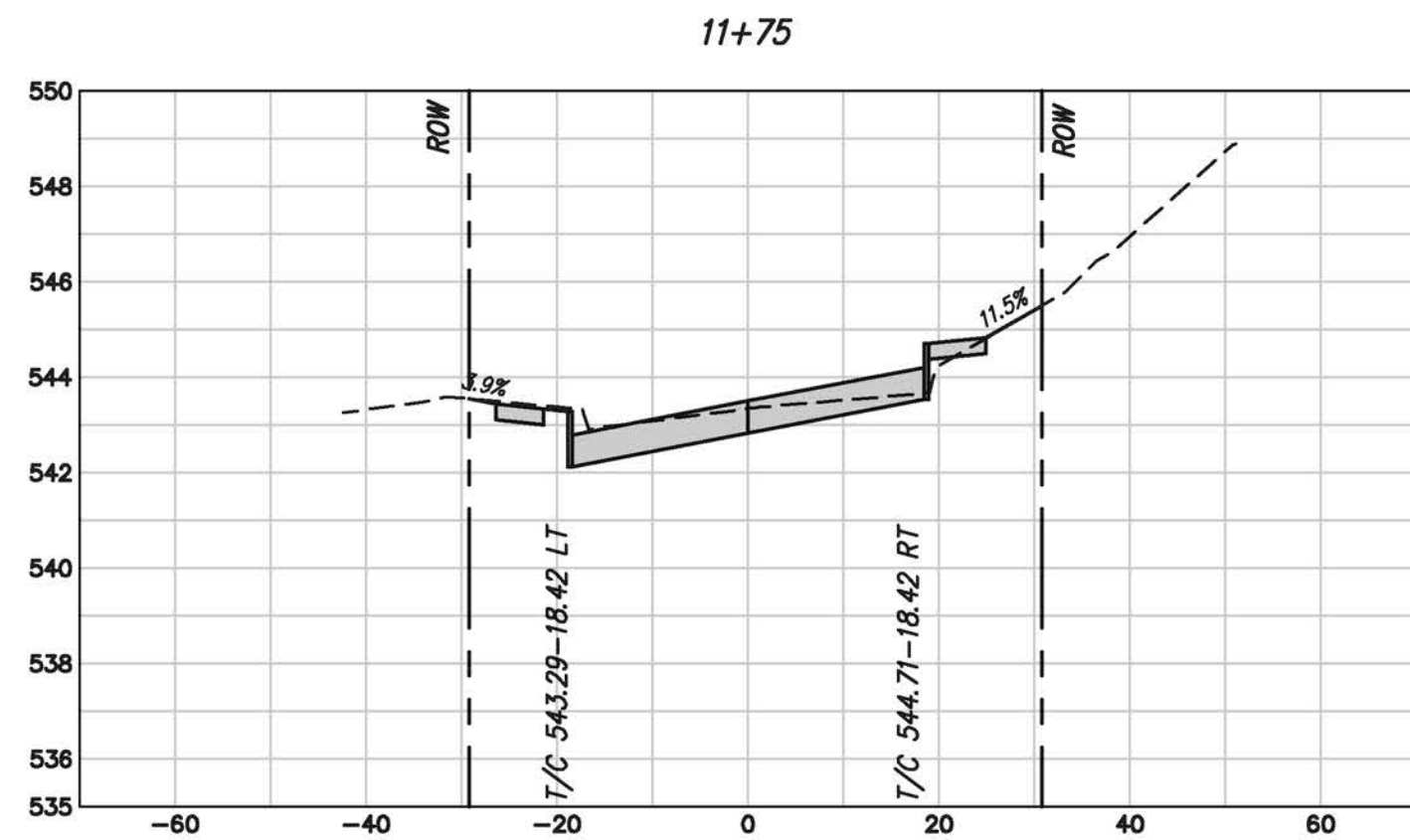
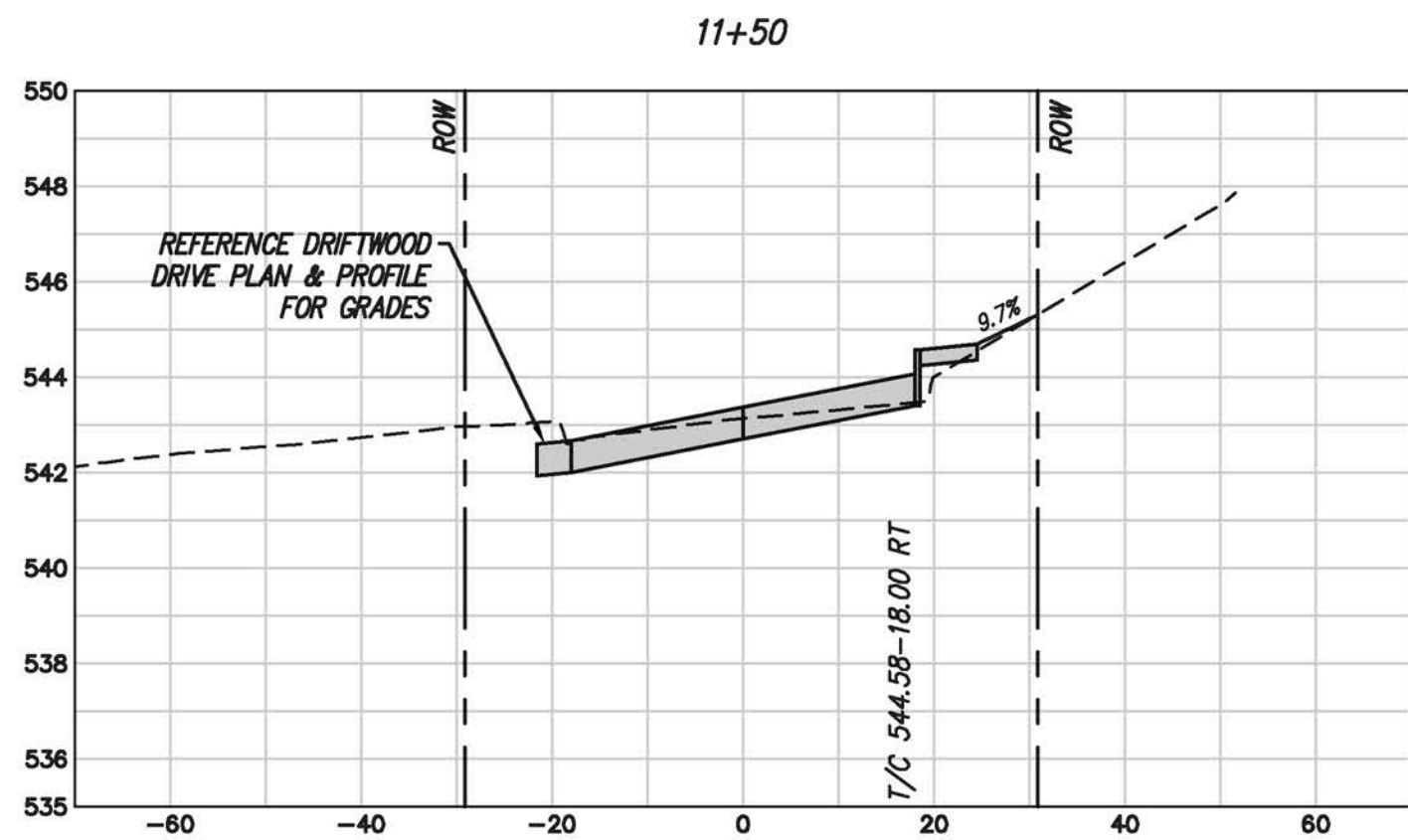
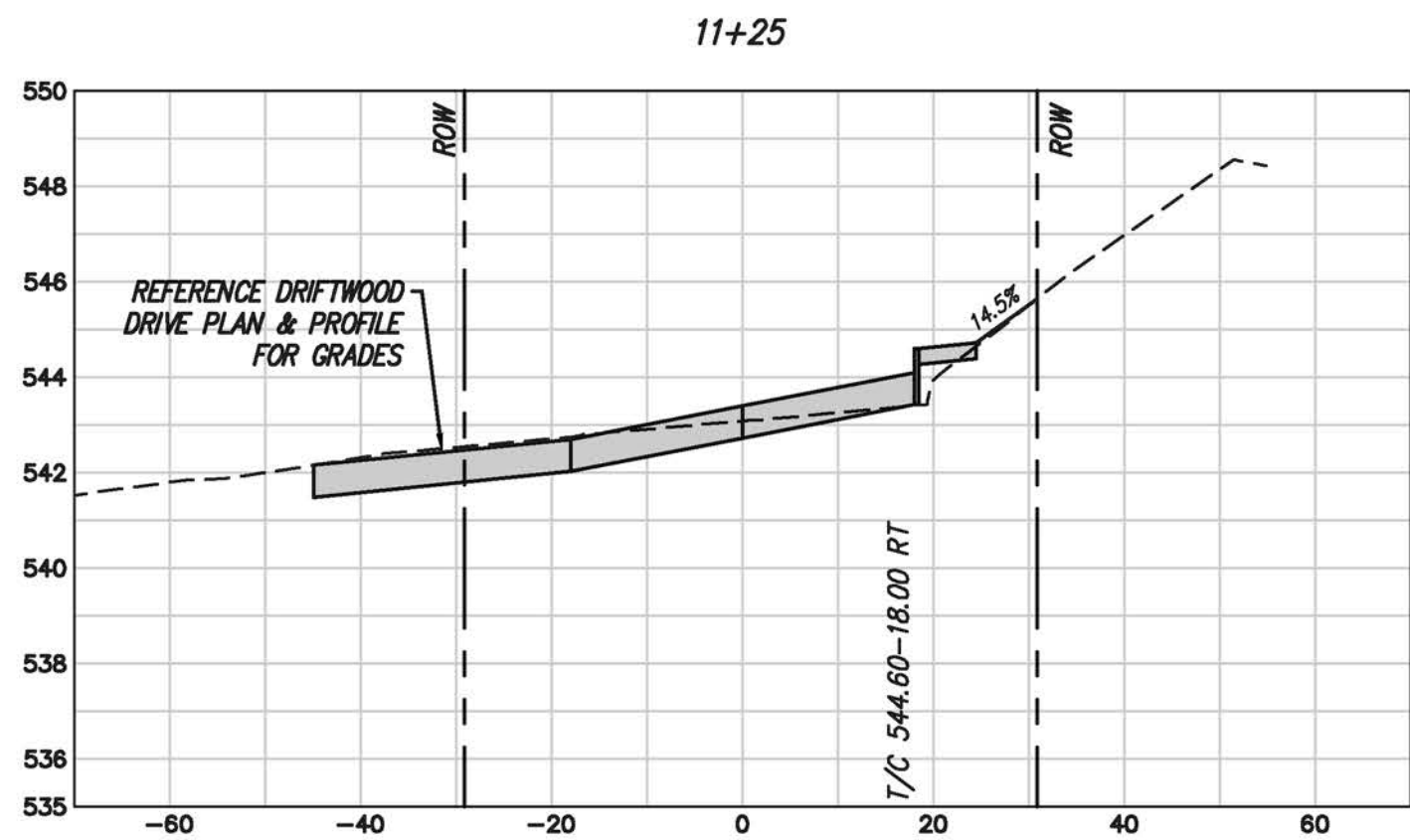
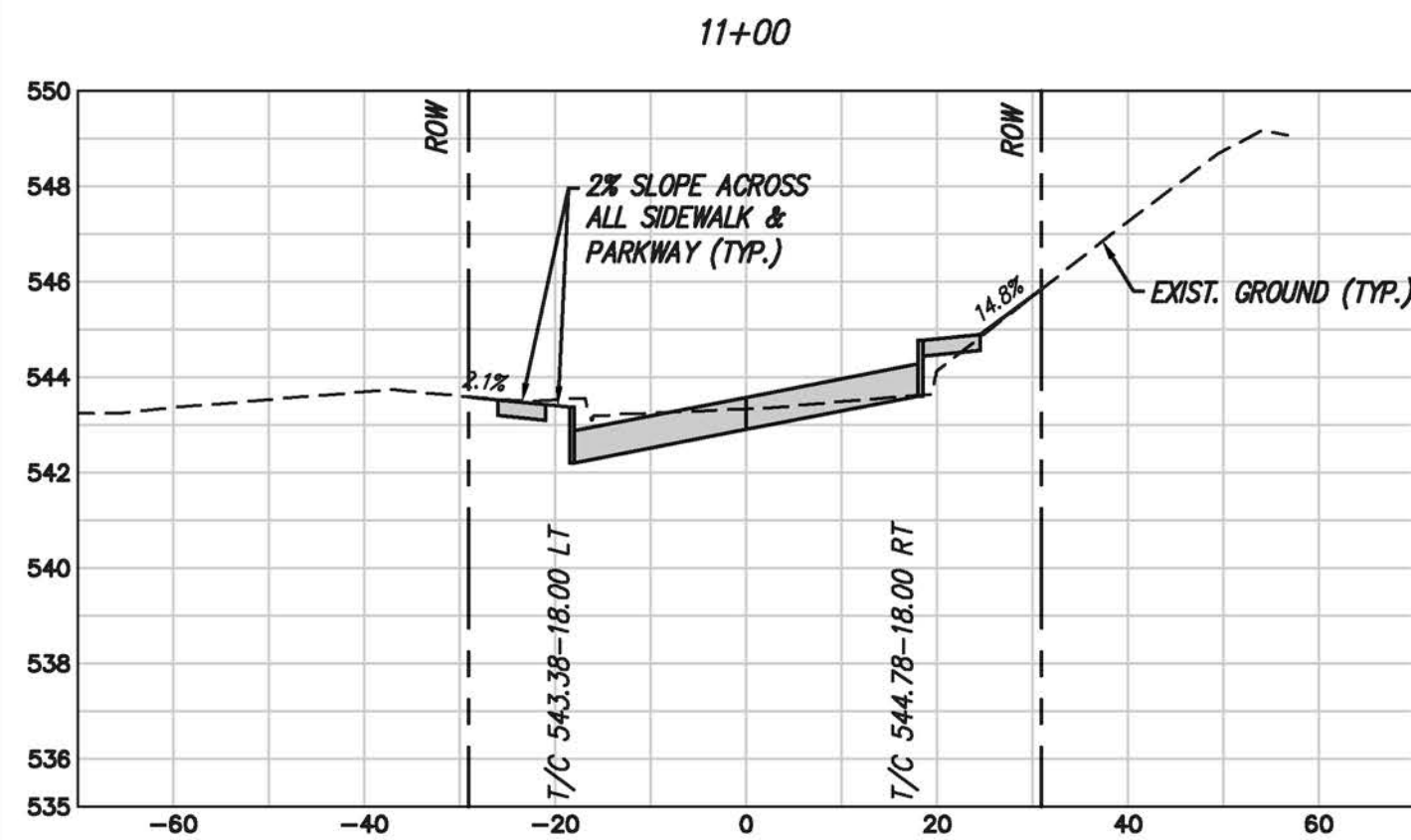
CITY OF ROCKWALL, TEXAS

HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

PAVING DETAILS 9 OF 9

tnp project RWL18219
sheet 50

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no.	revision	by	date

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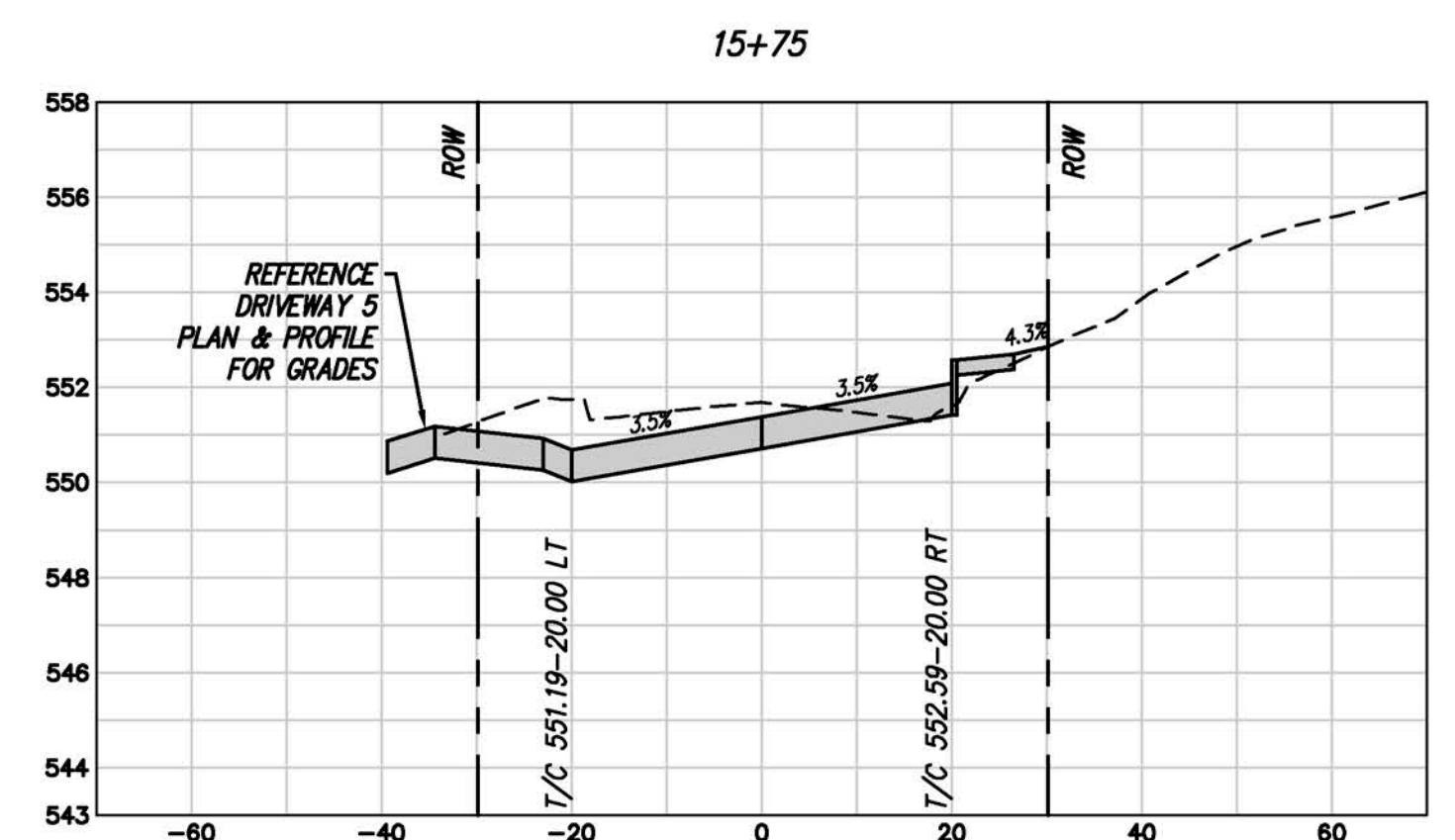
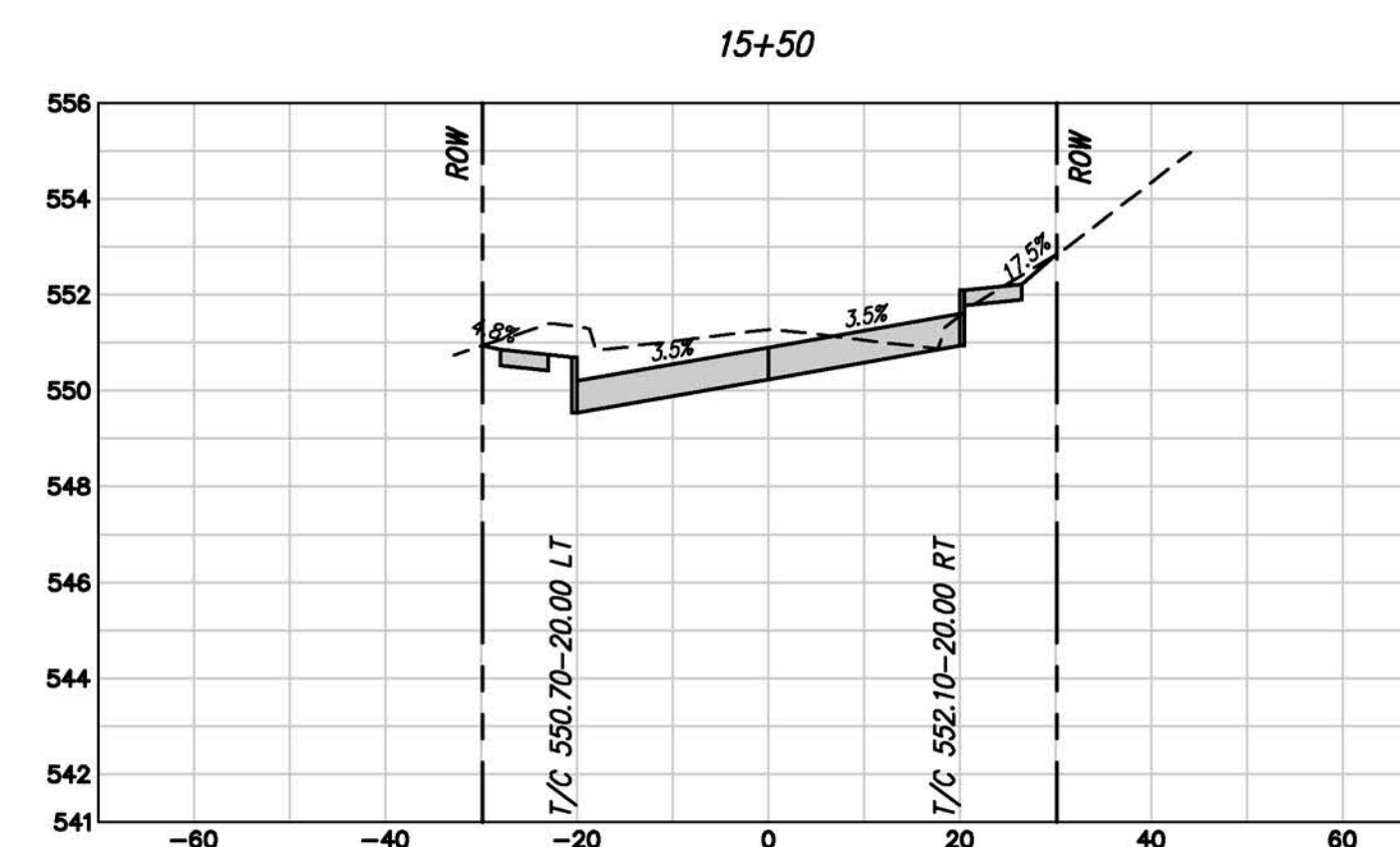
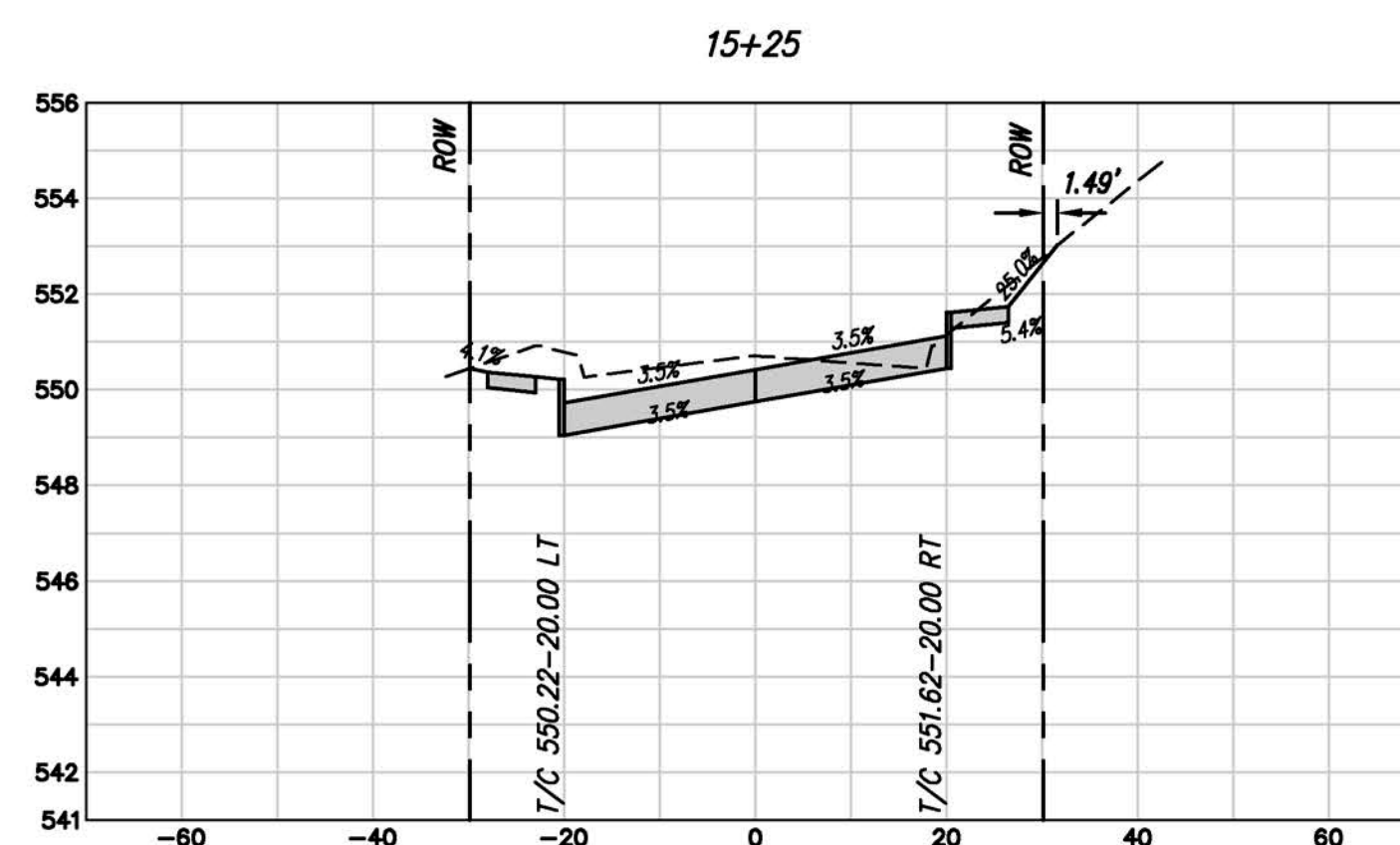
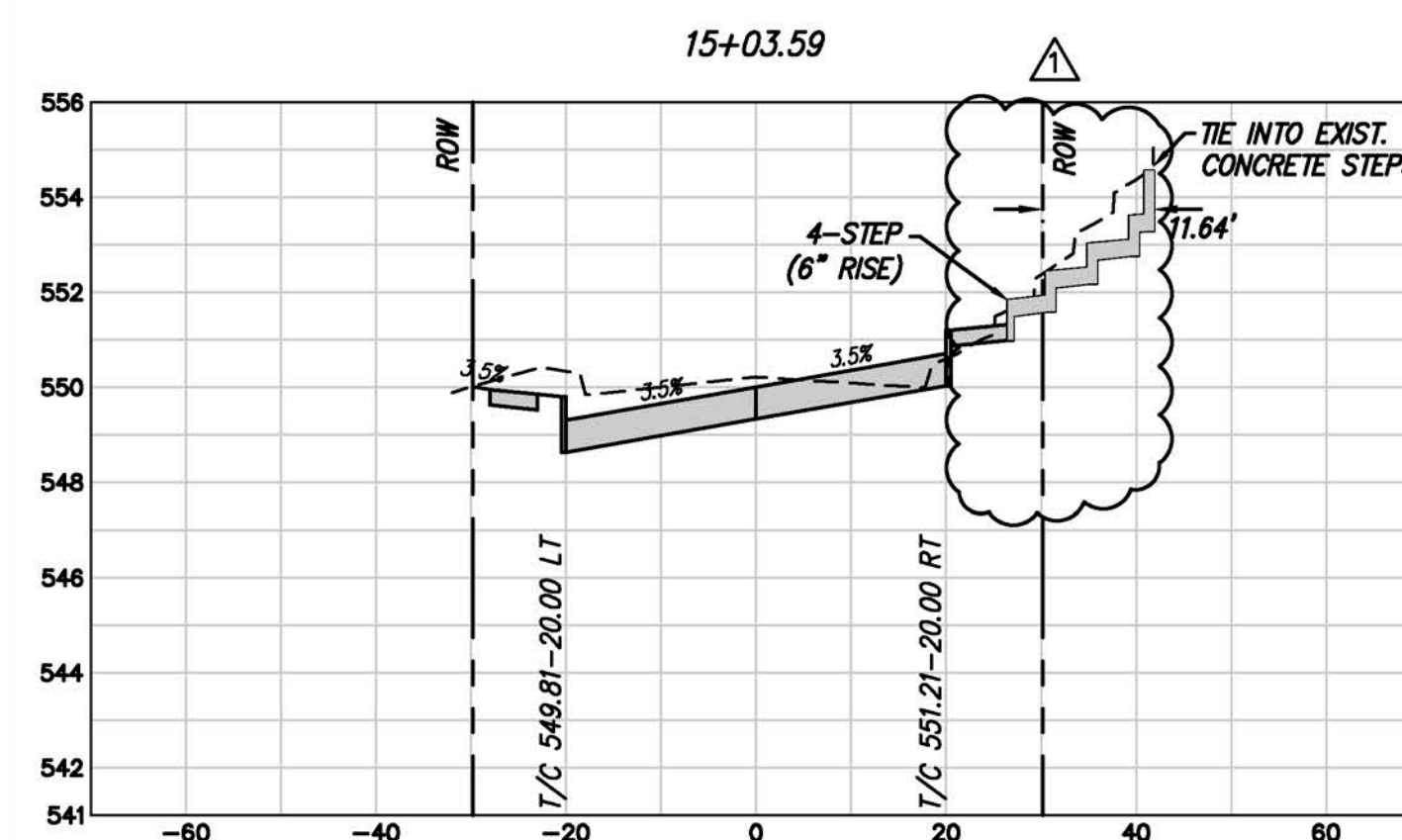
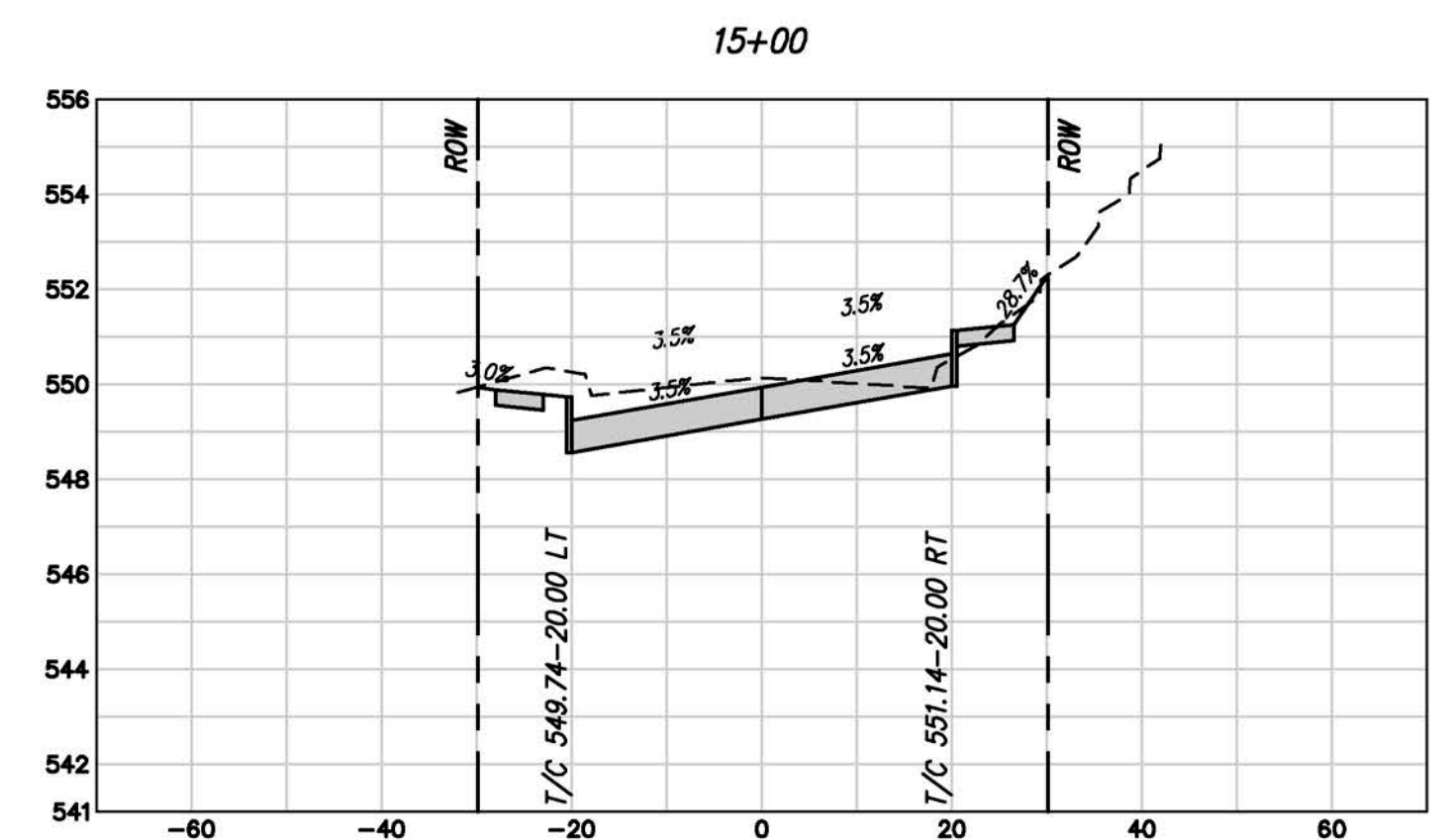
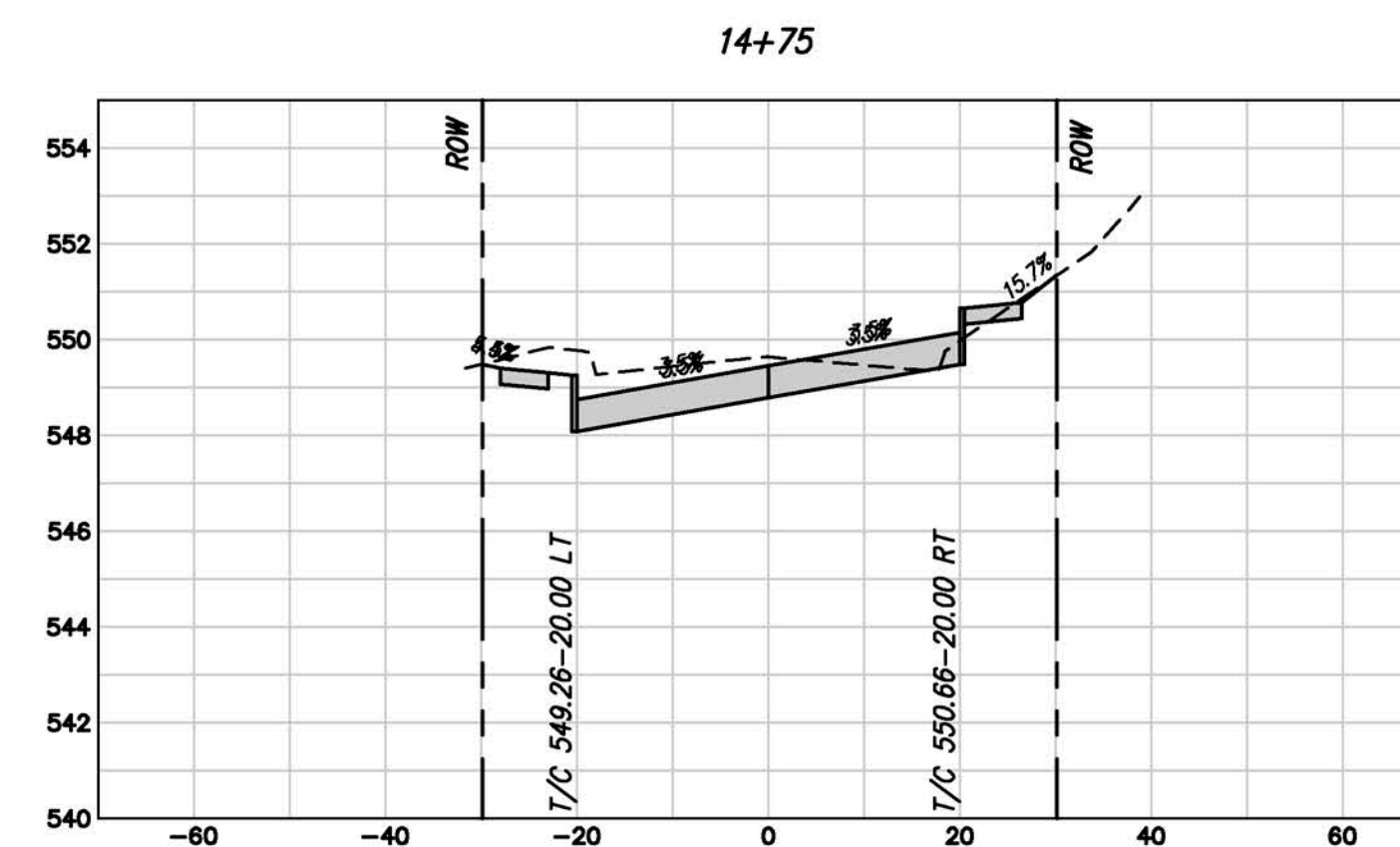
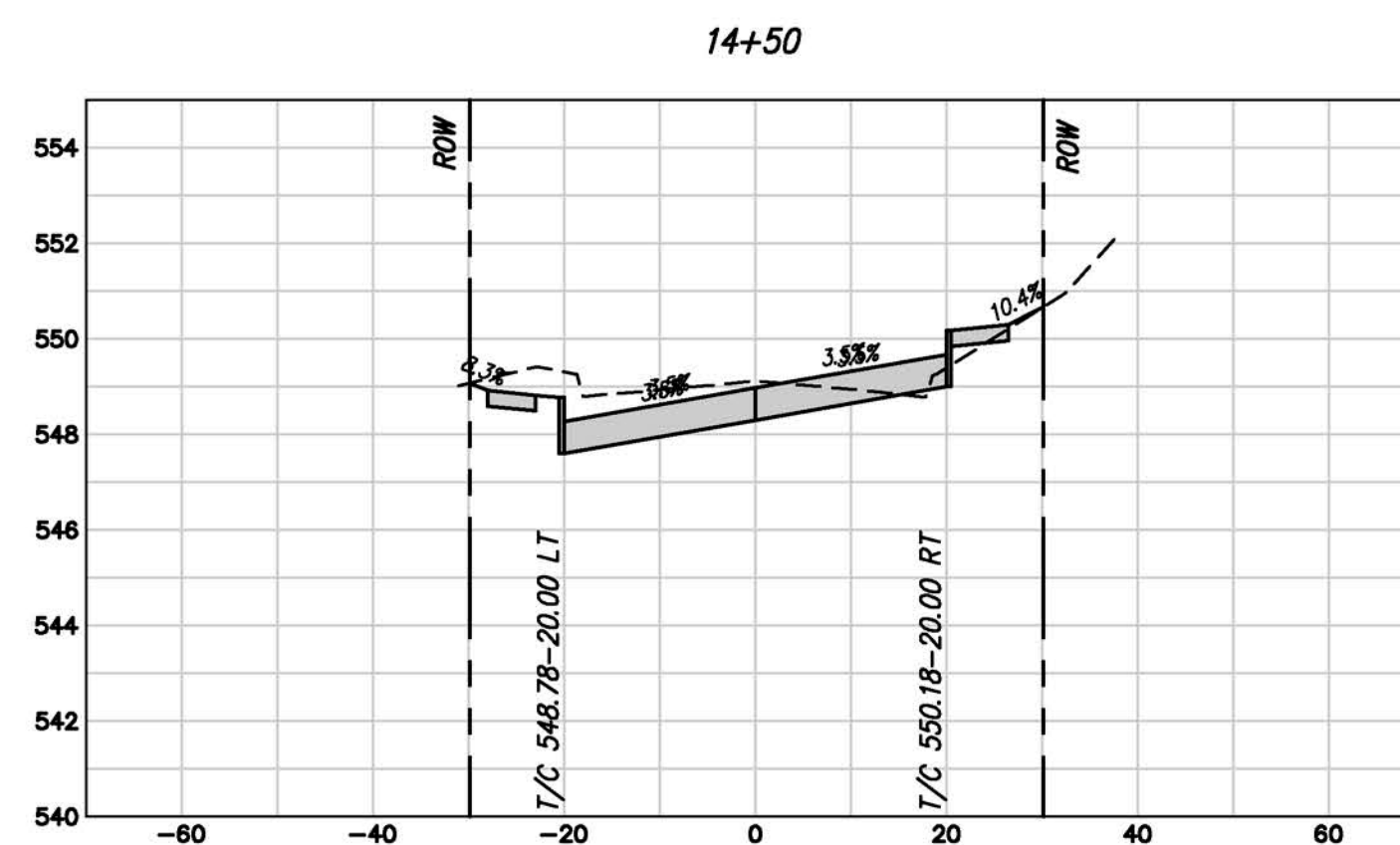
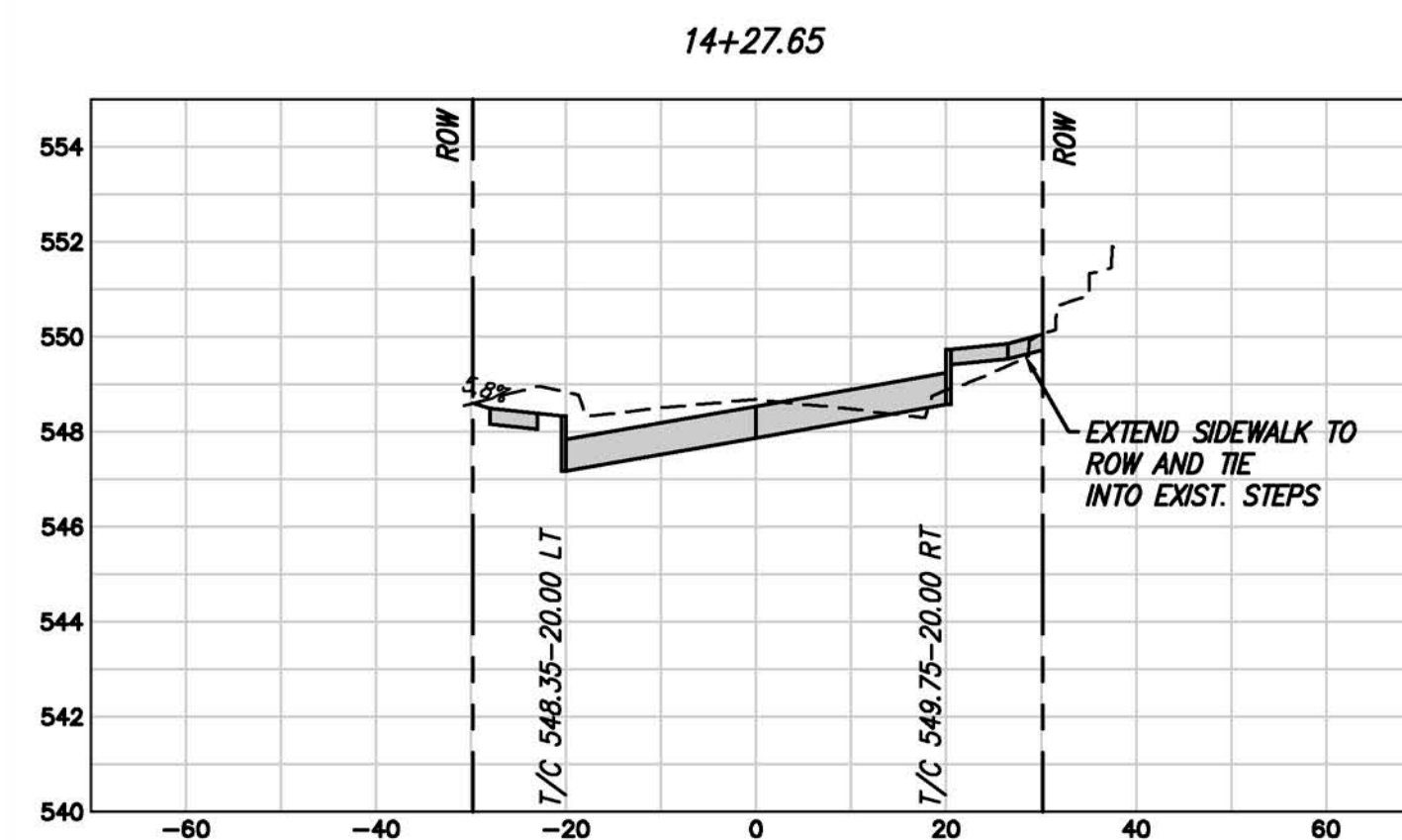
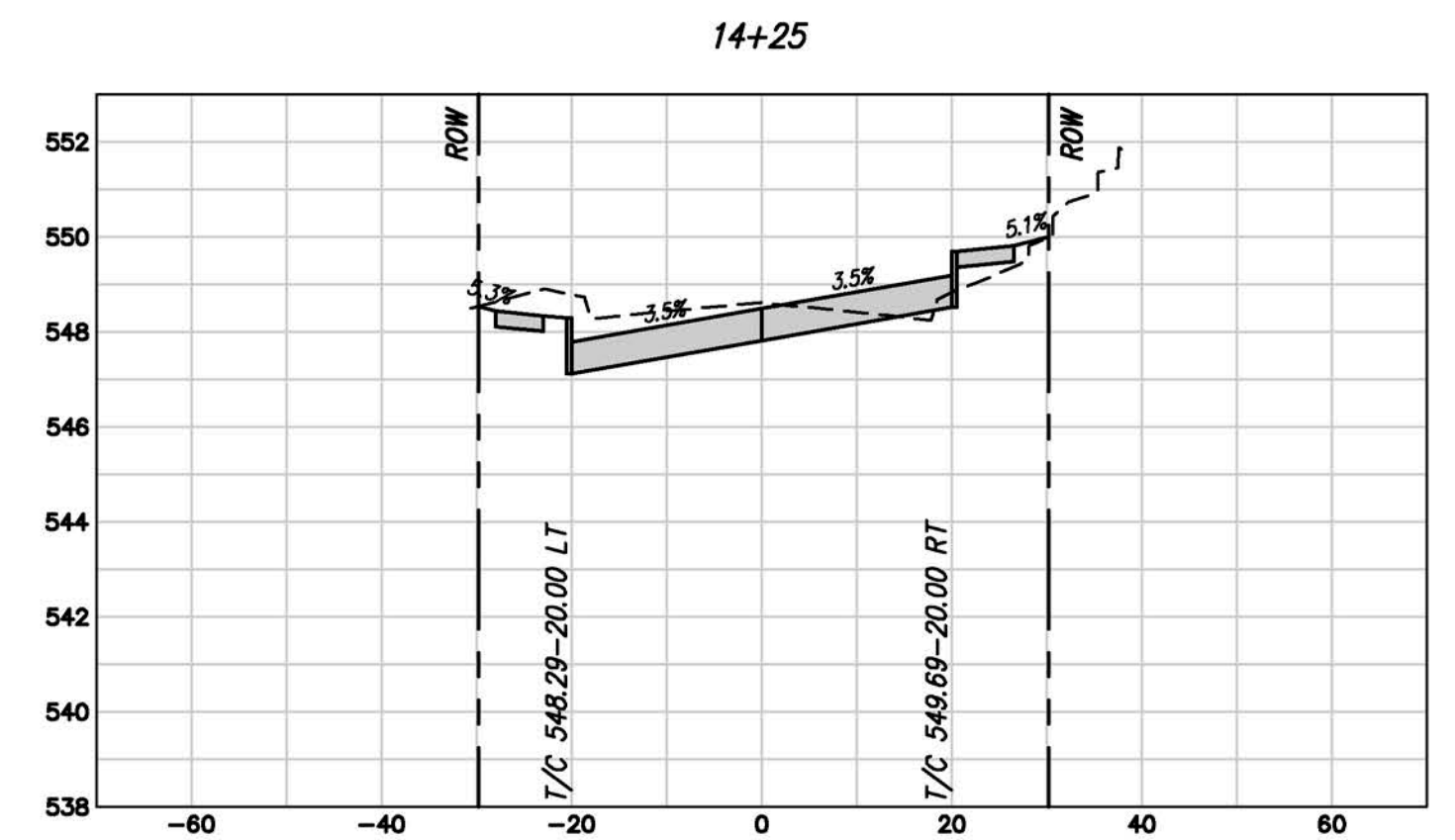
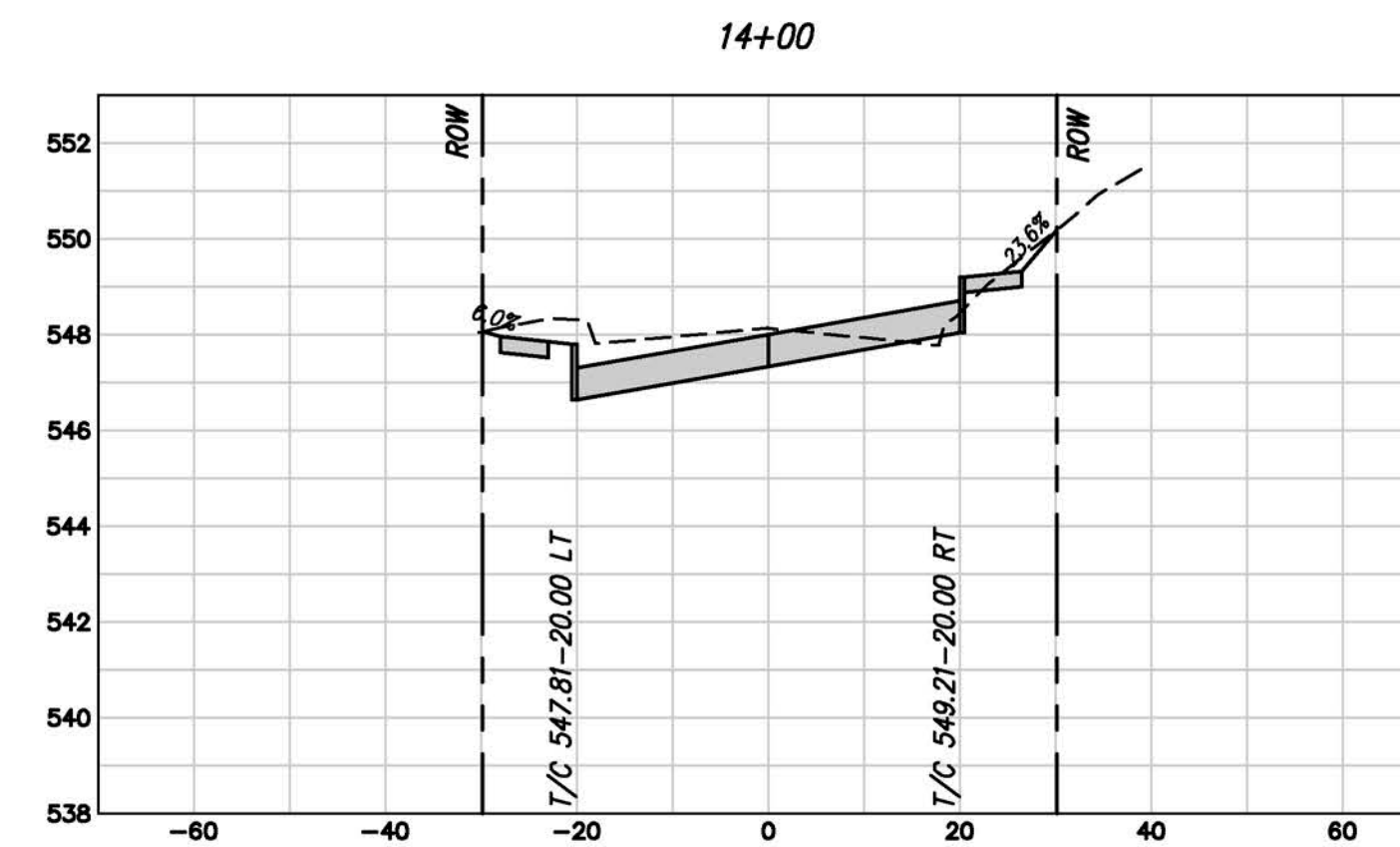
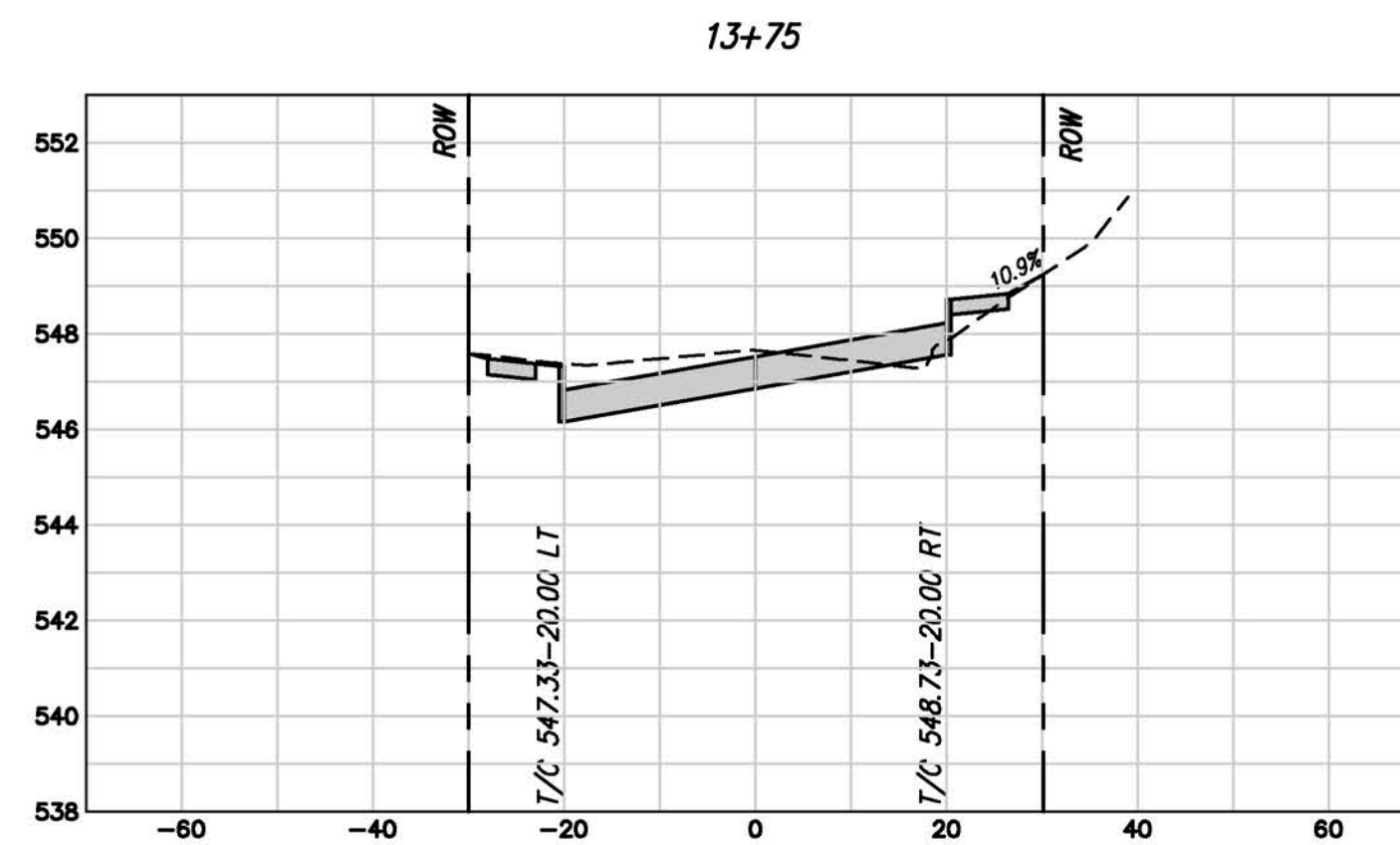
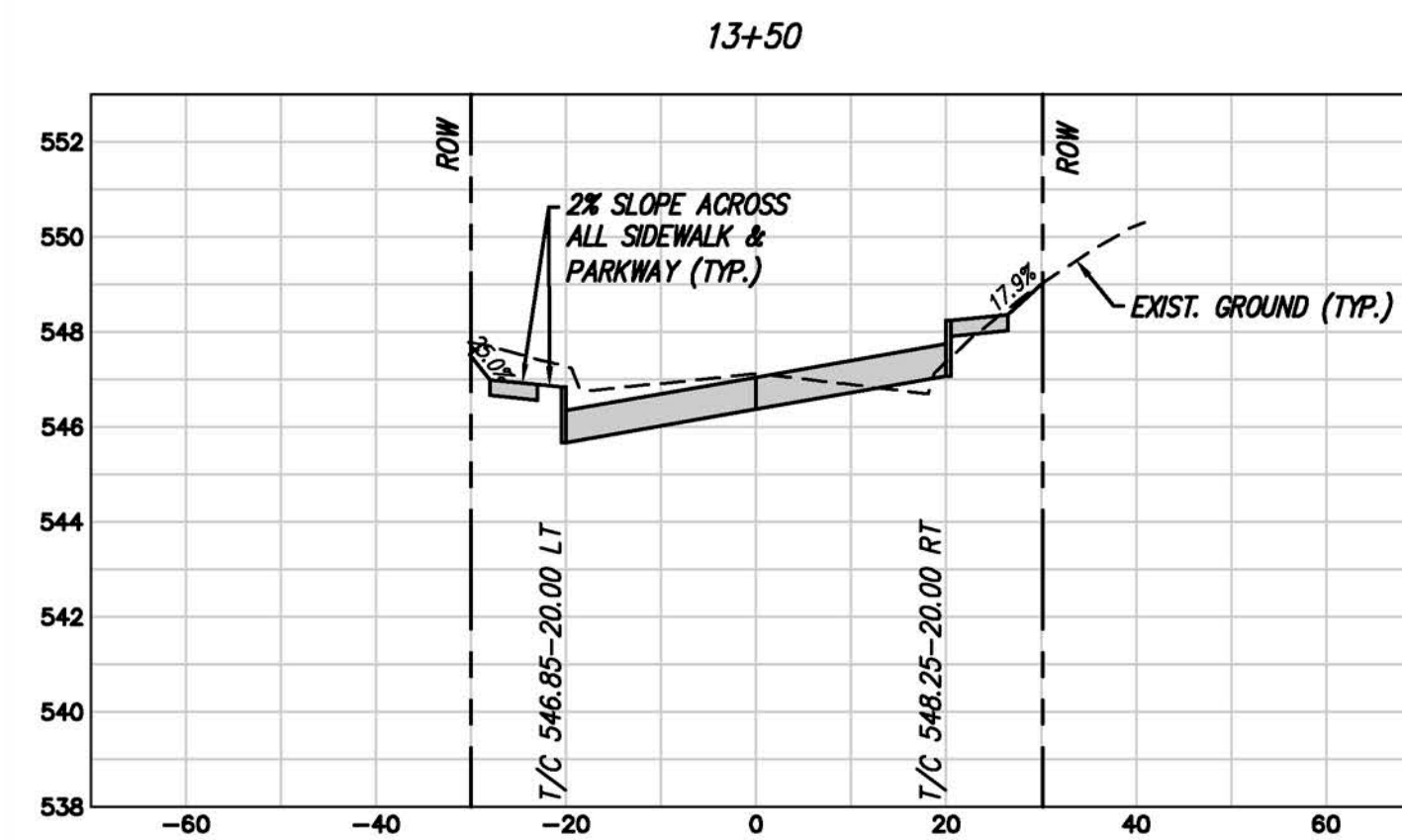
scale
when bar is
1 inch long
horiz
1" = 20'
vert
1" = 4'
SEP 2019




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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
CROSS SECTIONS 1 OF 4

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	UPDATED LEAD WALK LIMITS PER AS BUILTS	JB	09/27/19
no.	revision	by	date

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<p>scale when bar is 1 inch long</p> 
<p>horiz 1" = 20'</p>
<p>vert 1" = 4'</p>
<p>SEP 2019</p>



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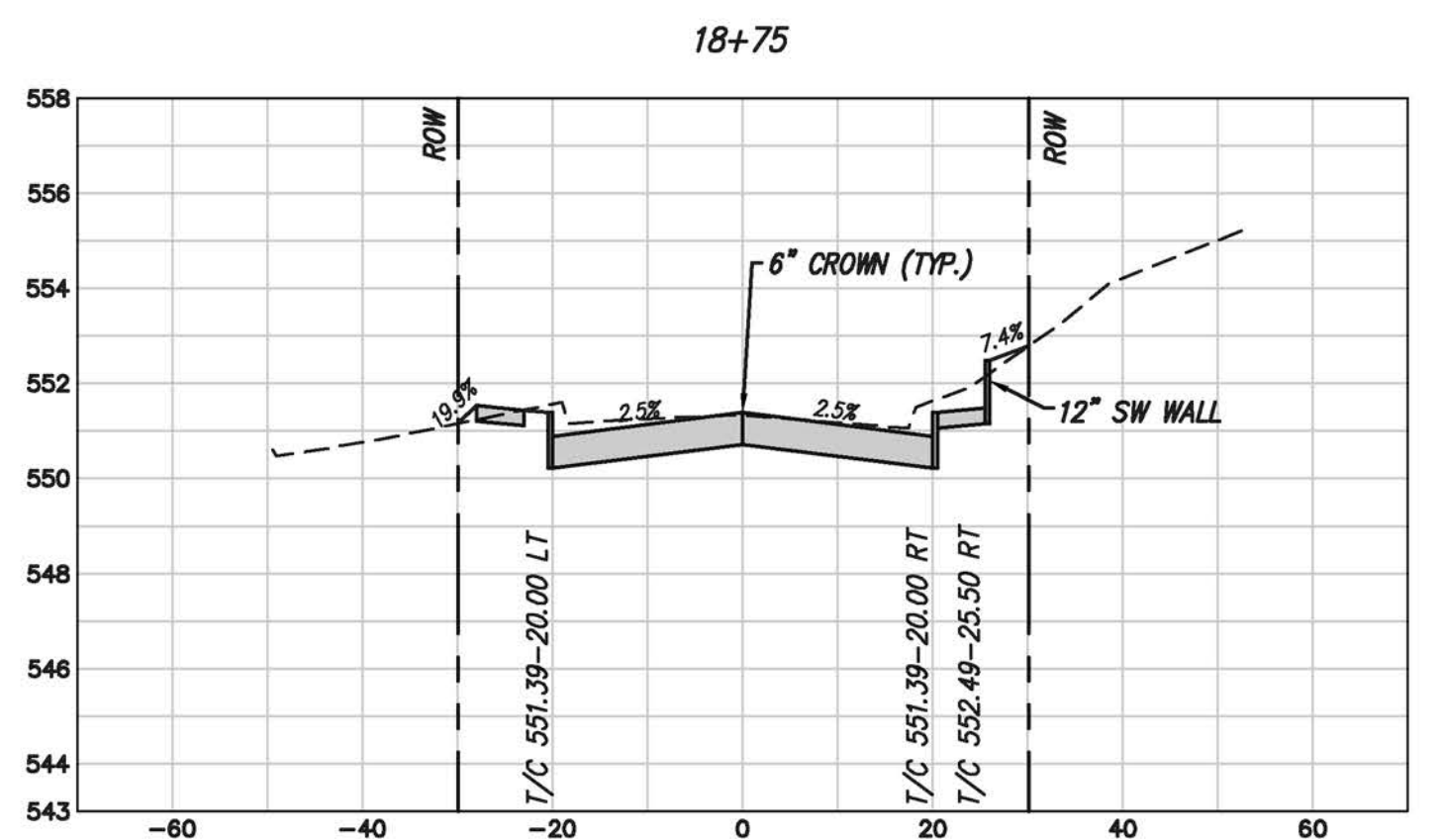
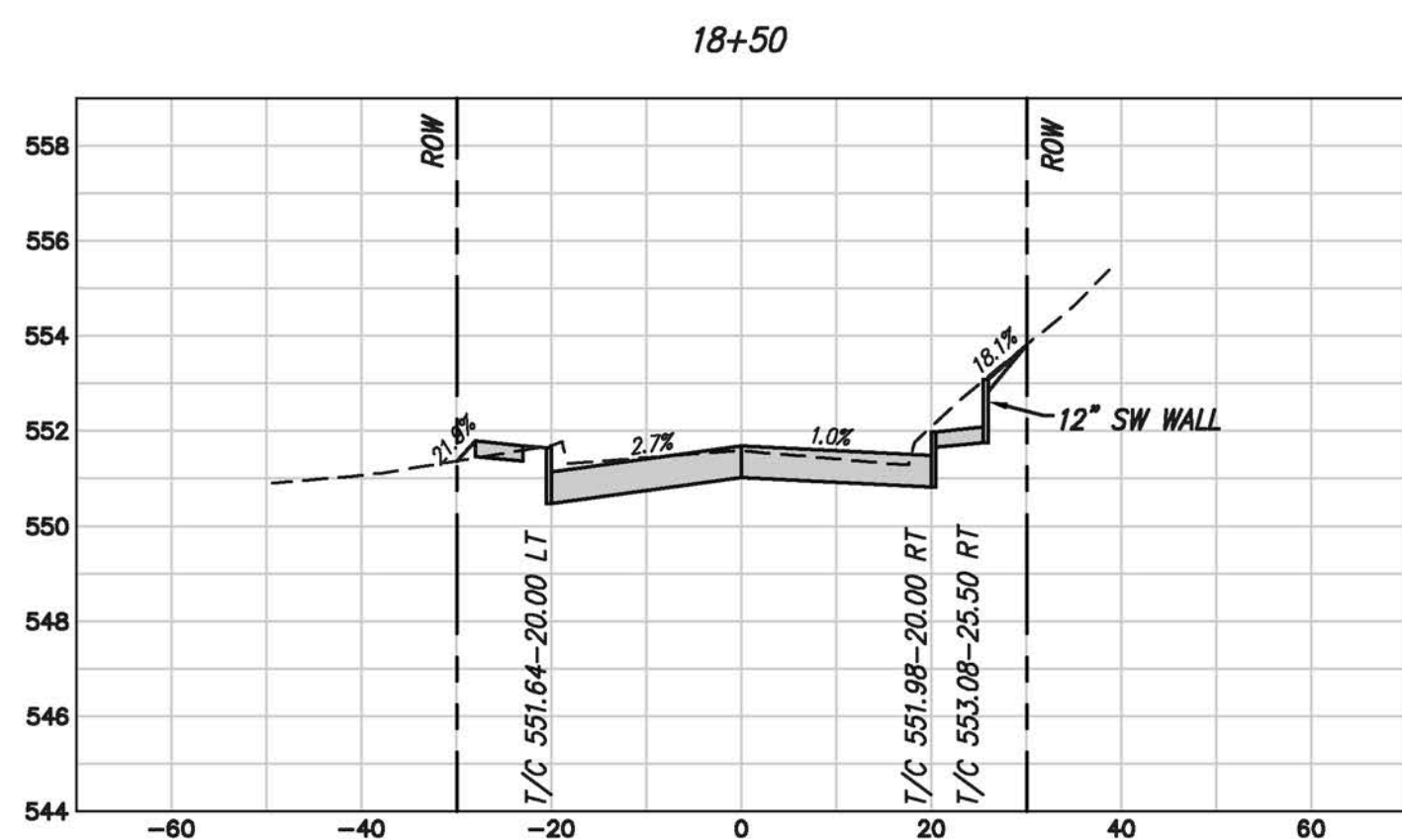
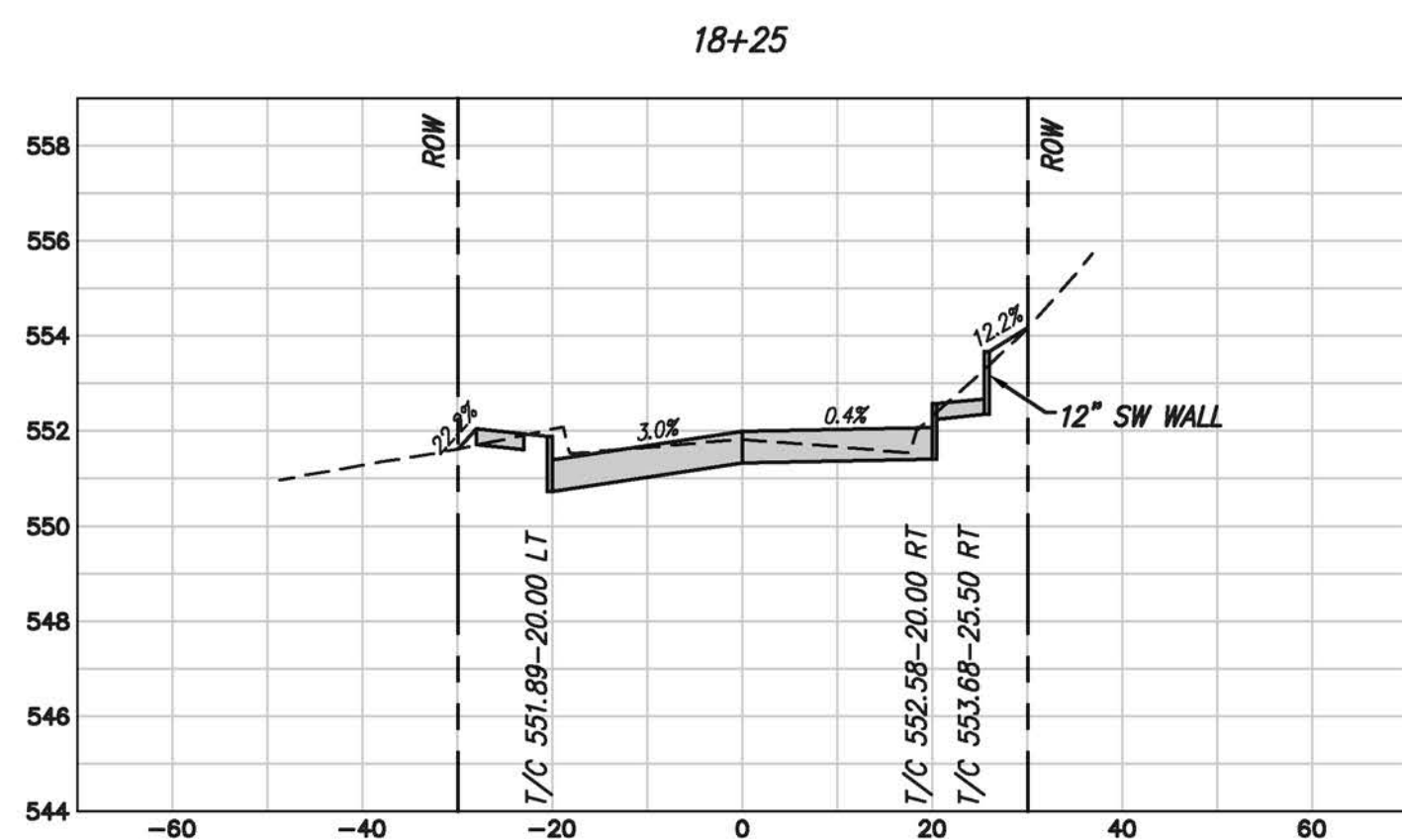
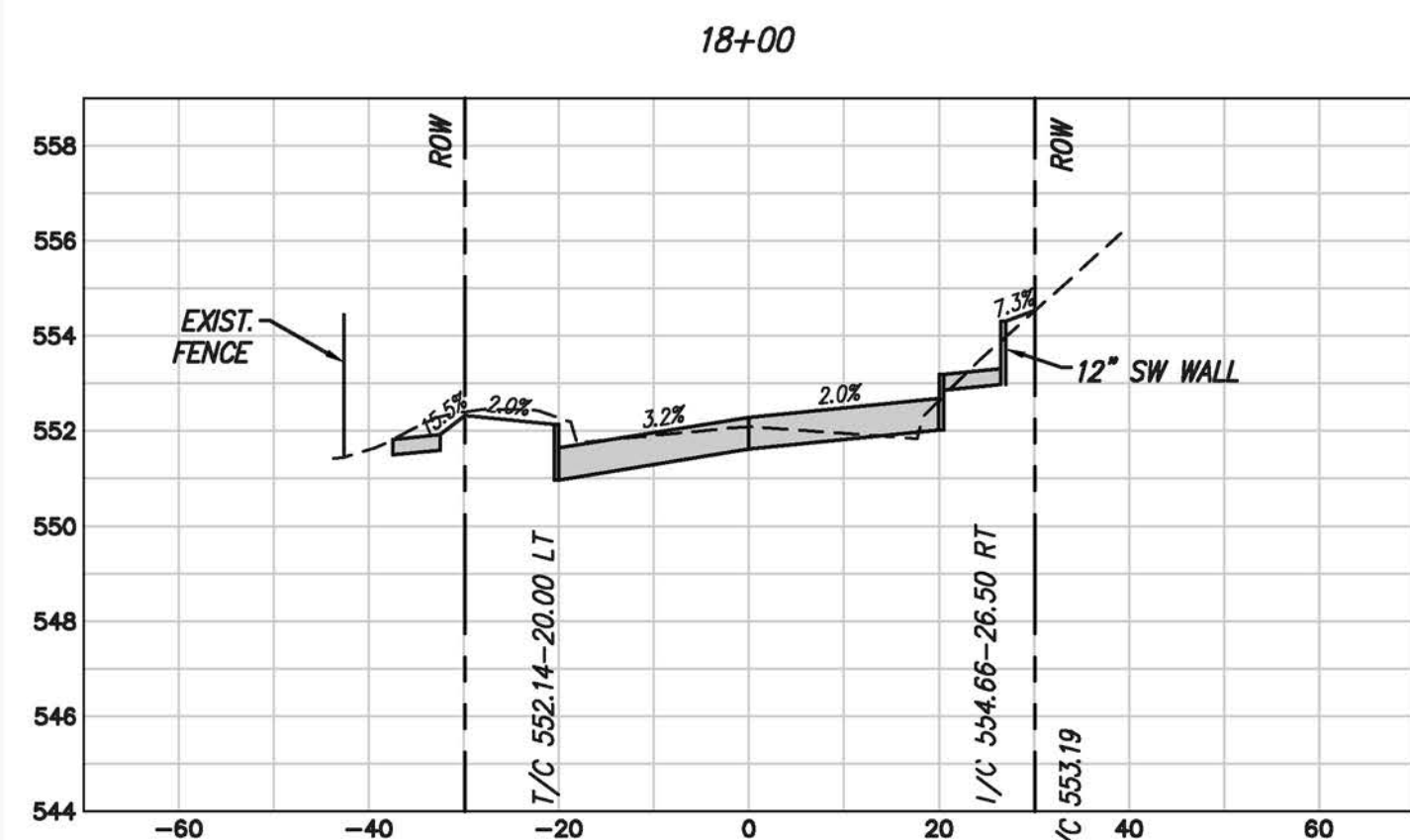
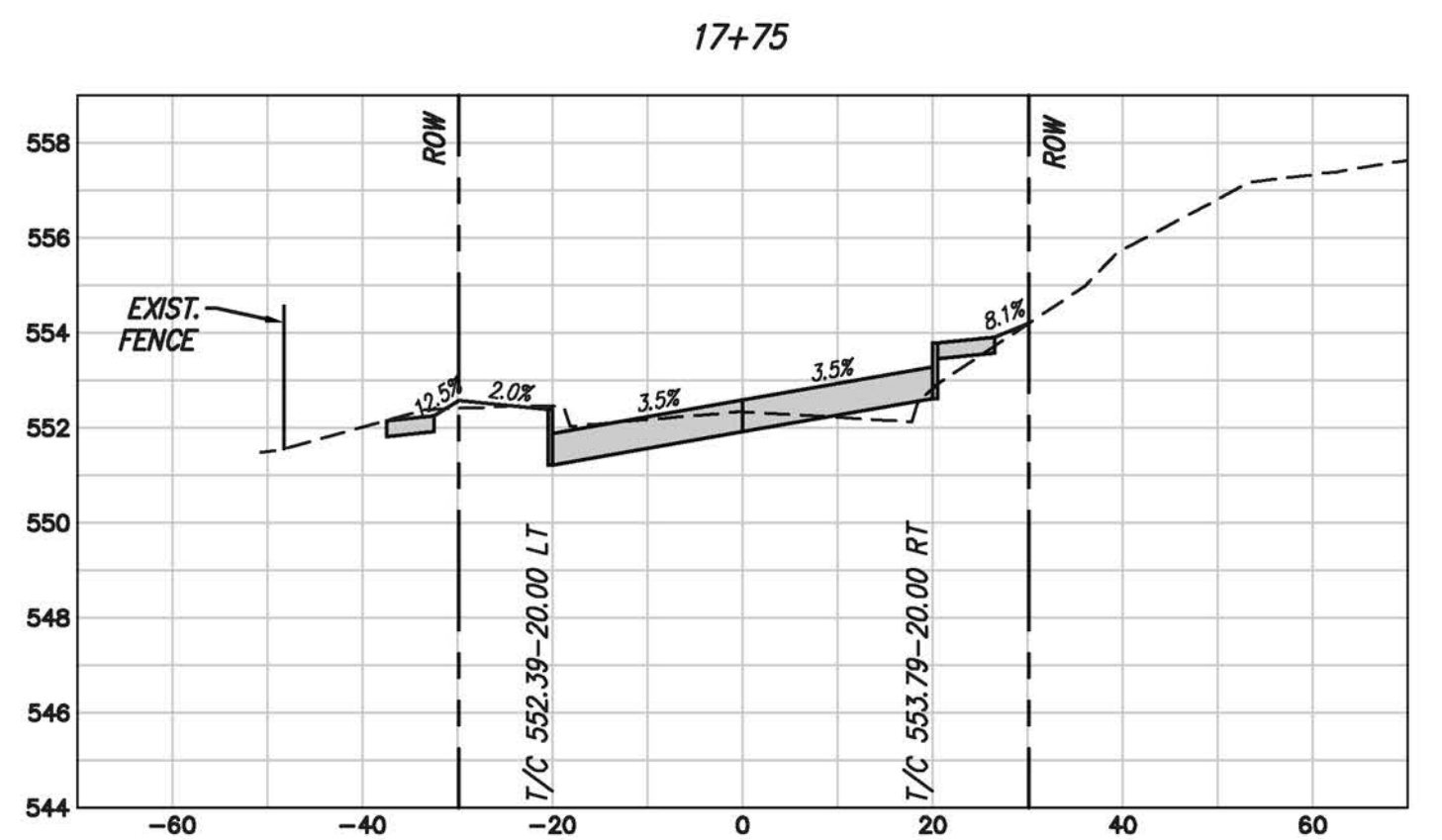
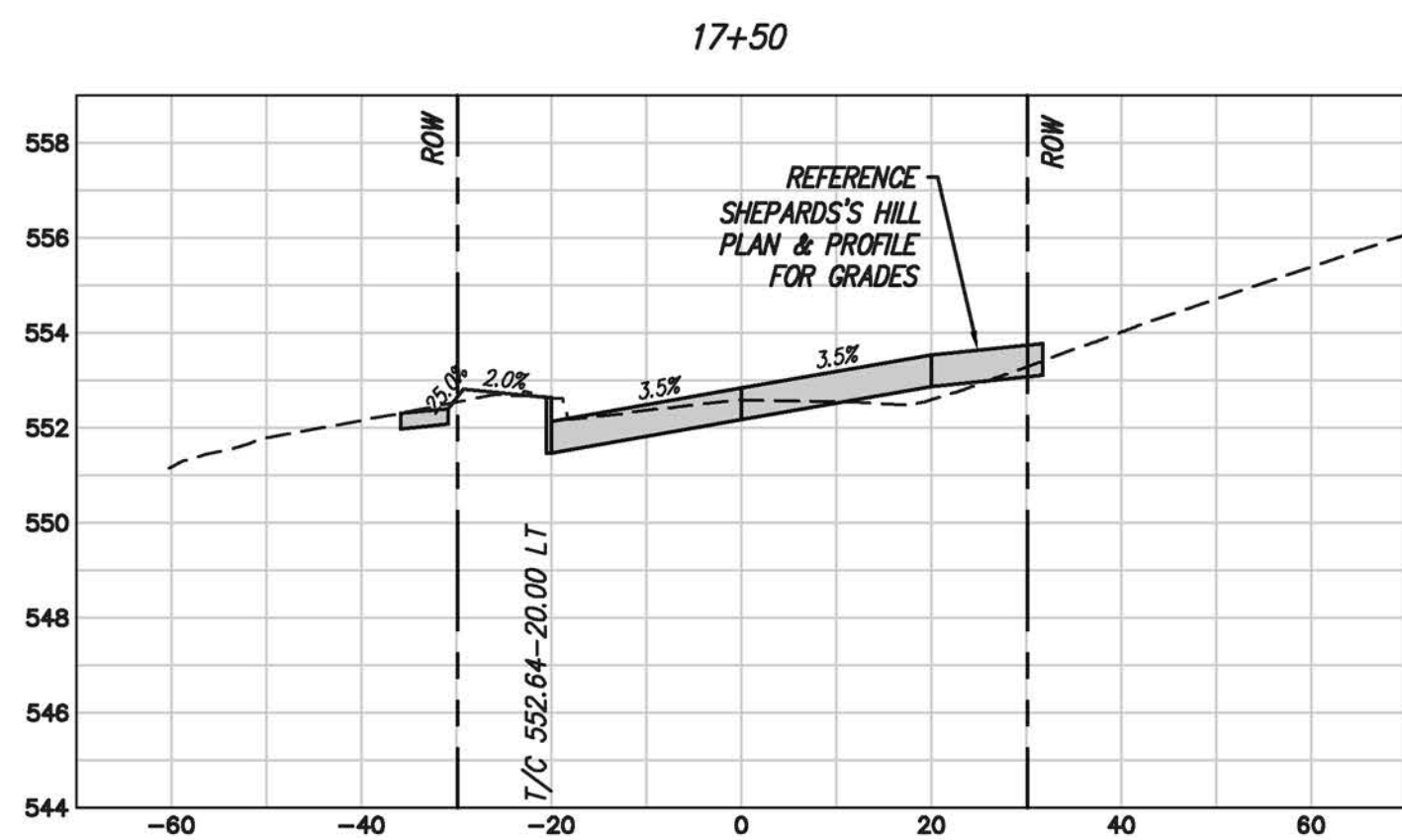
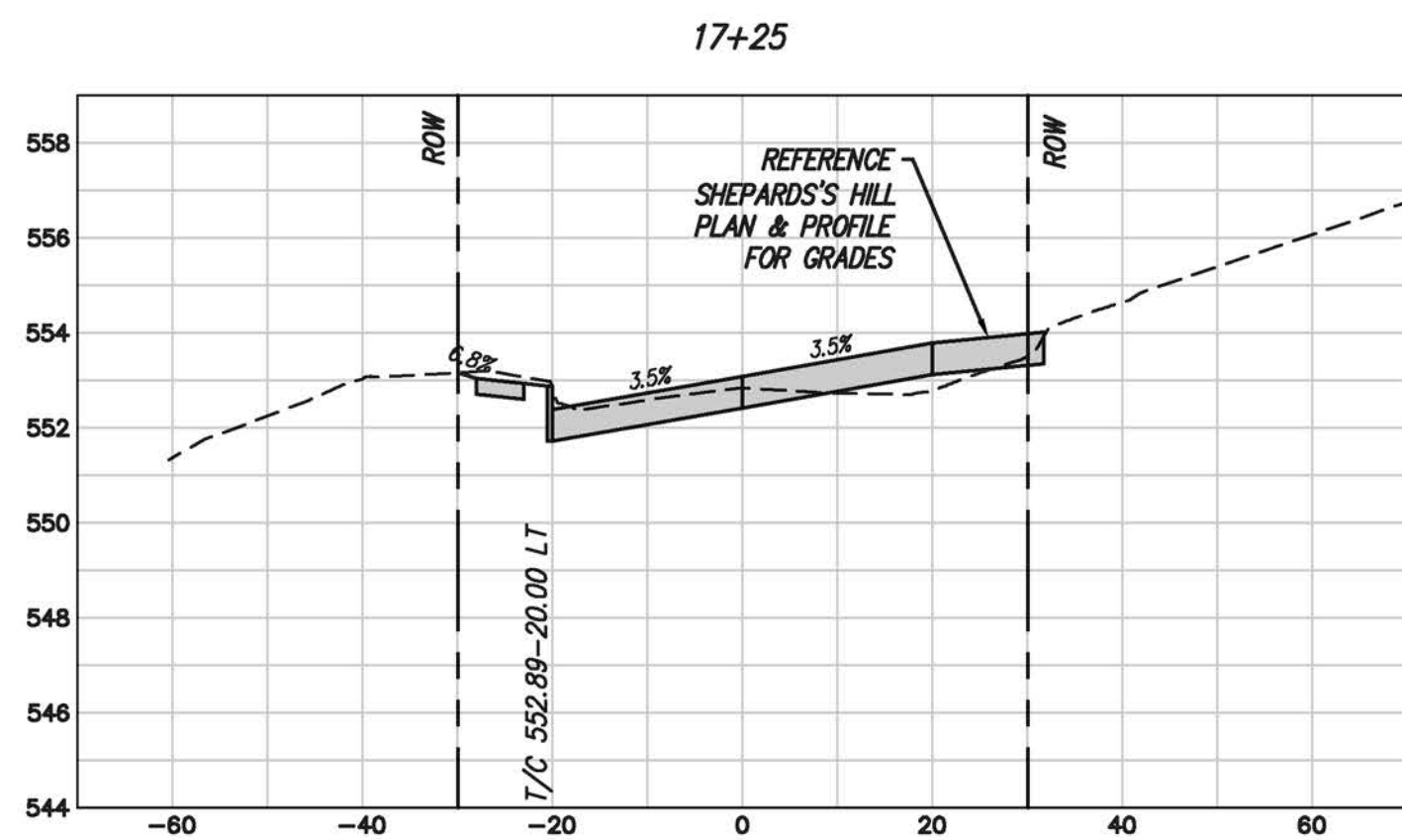
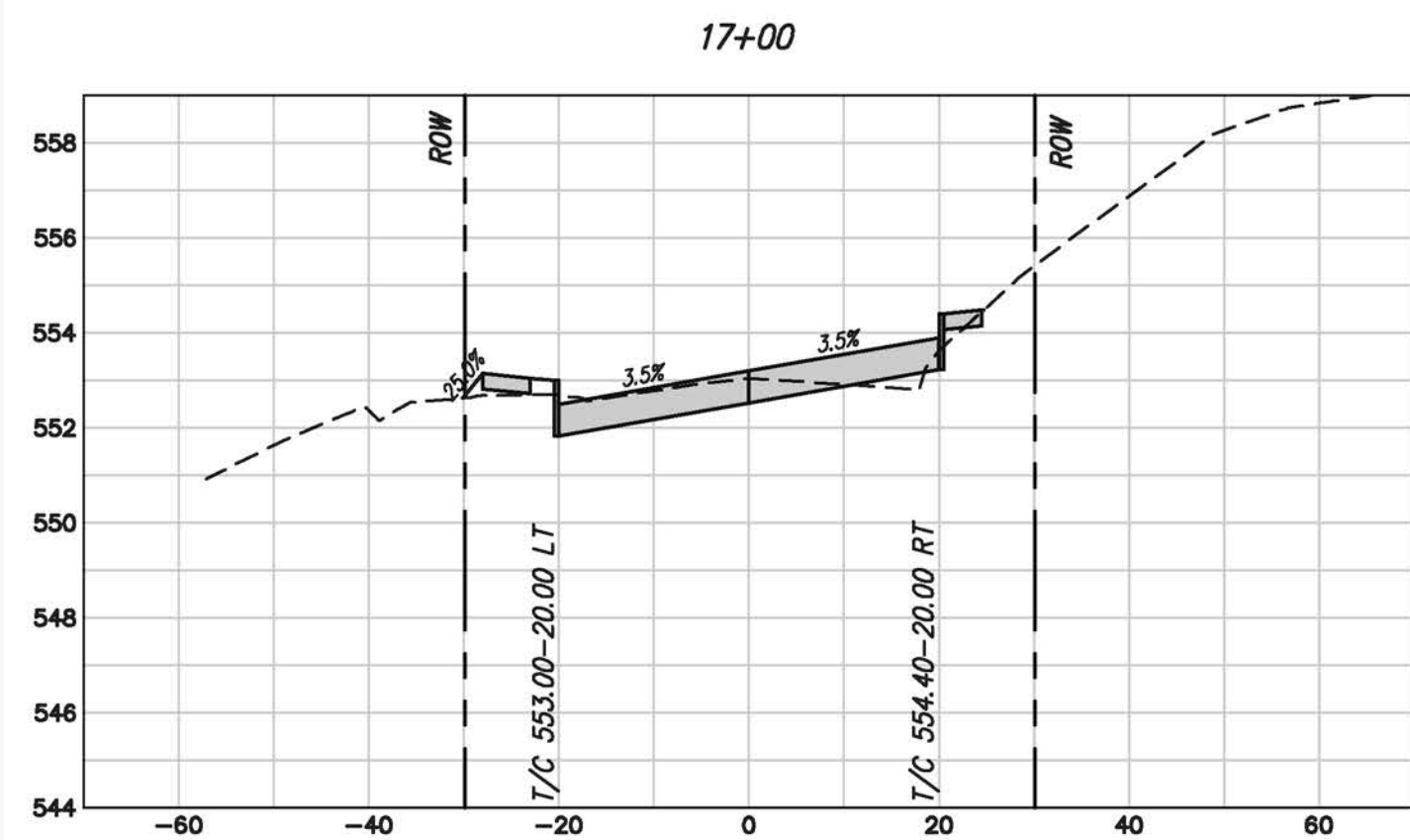
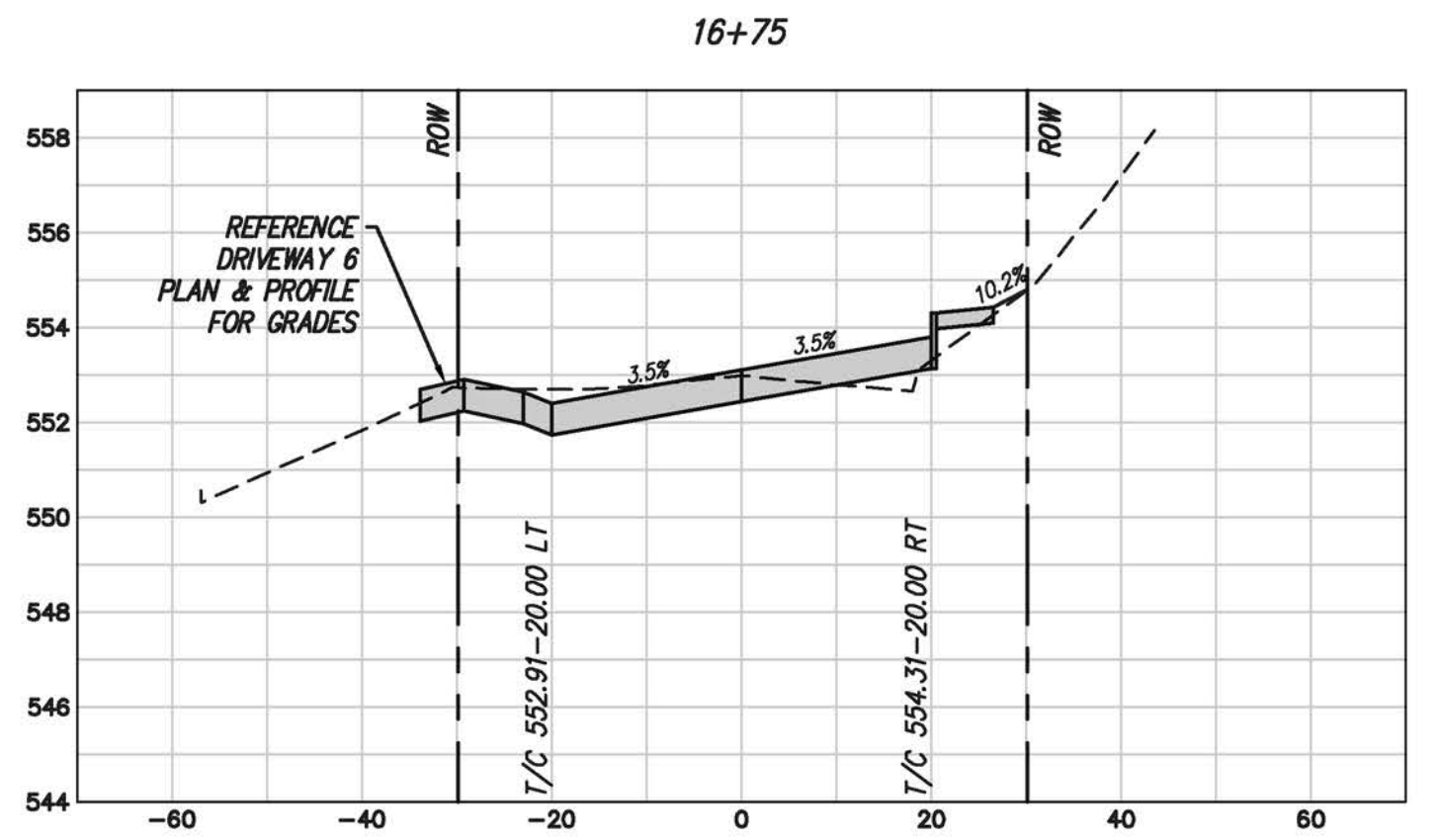
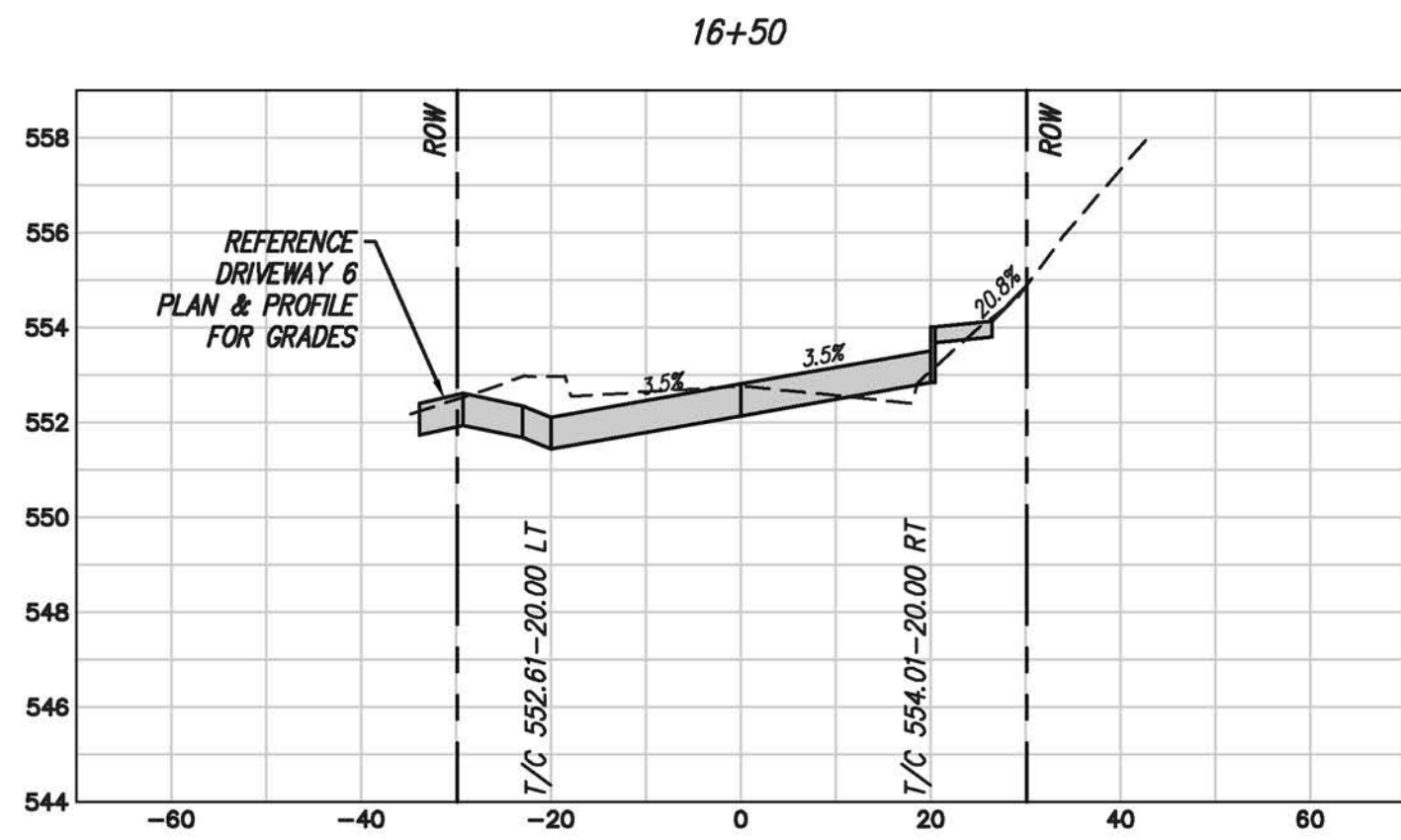
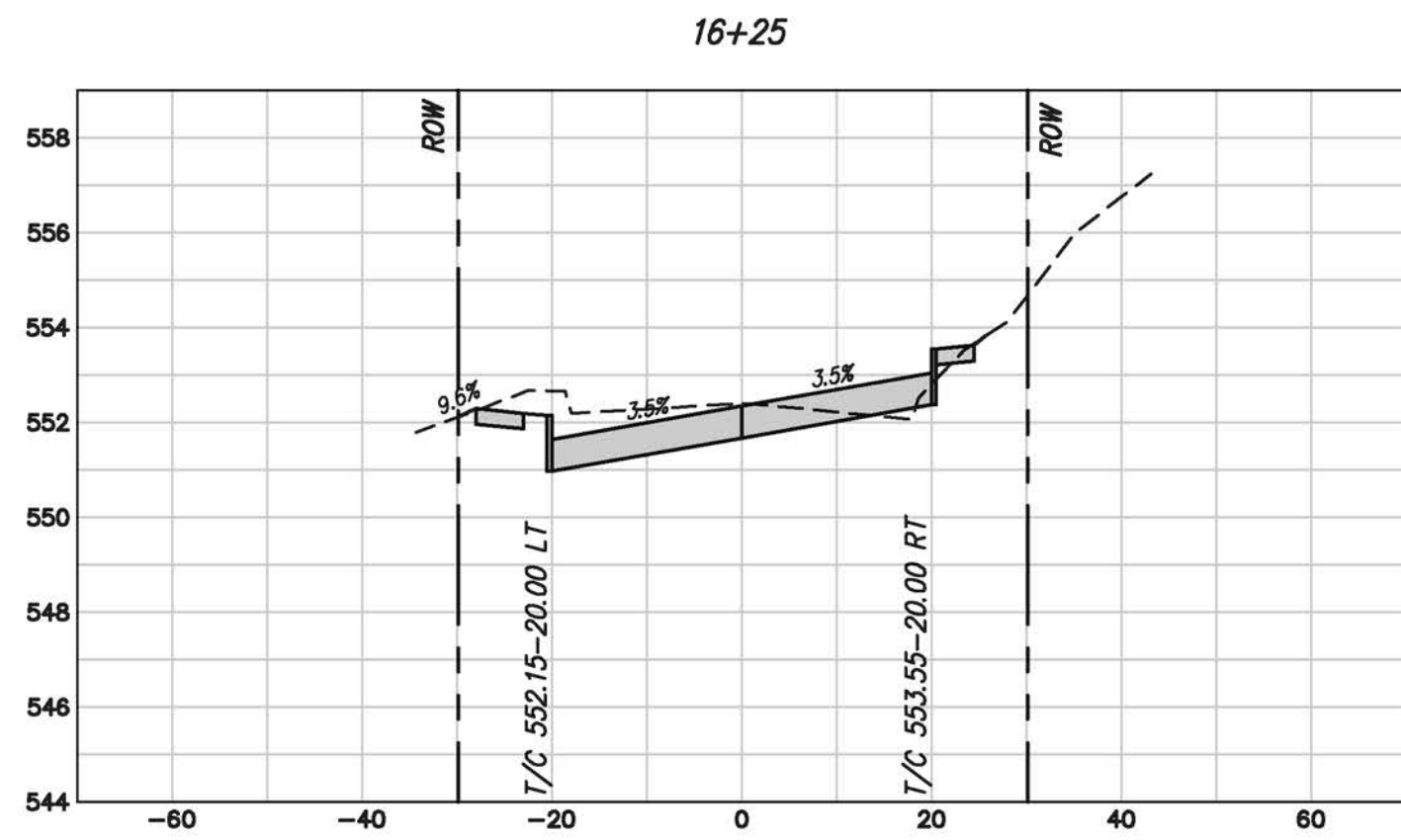
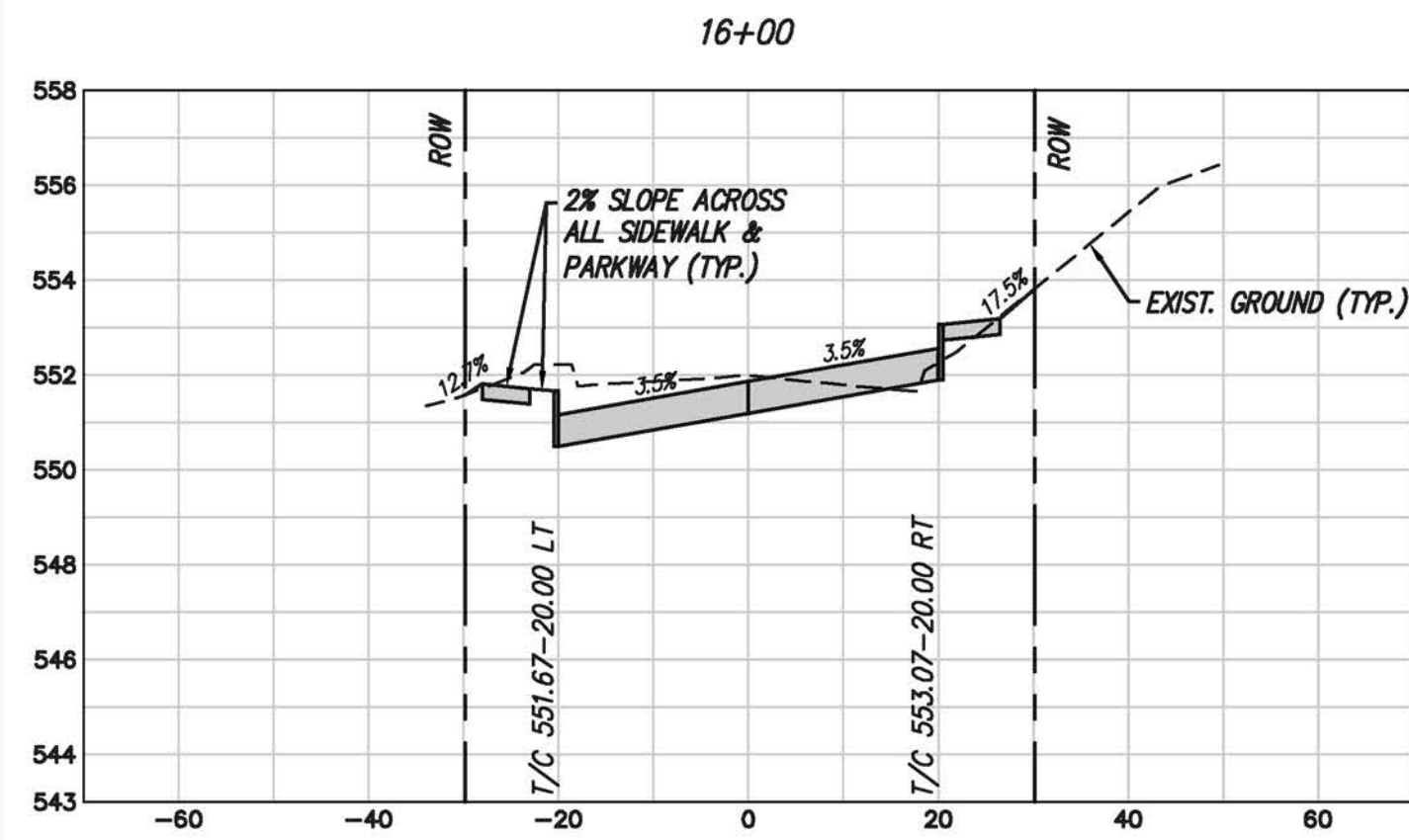
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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)

CROSS SECTIONS 2 OF 4

np project
 WL18219
 sheet
52

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\56 CROSS SECTIONS 4 OF 4.dwg at Sep 27, 2019 - 10:45am by Jbedalle
Layout: 56 CROSS SECTIONS 3 OF 4 - Arefc: tnp-arref.dwg - A3d-rendering: A3d-rendering - A3d-plotting: A3d-plotting - A3d-plotting: A3d-plotting - A3d-plotting: A3d-plotting



no.	revision	by	date

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scale
when bar is
1 inch long
horiz
1" = 20'
vert
1" = 4'
SEP 2019

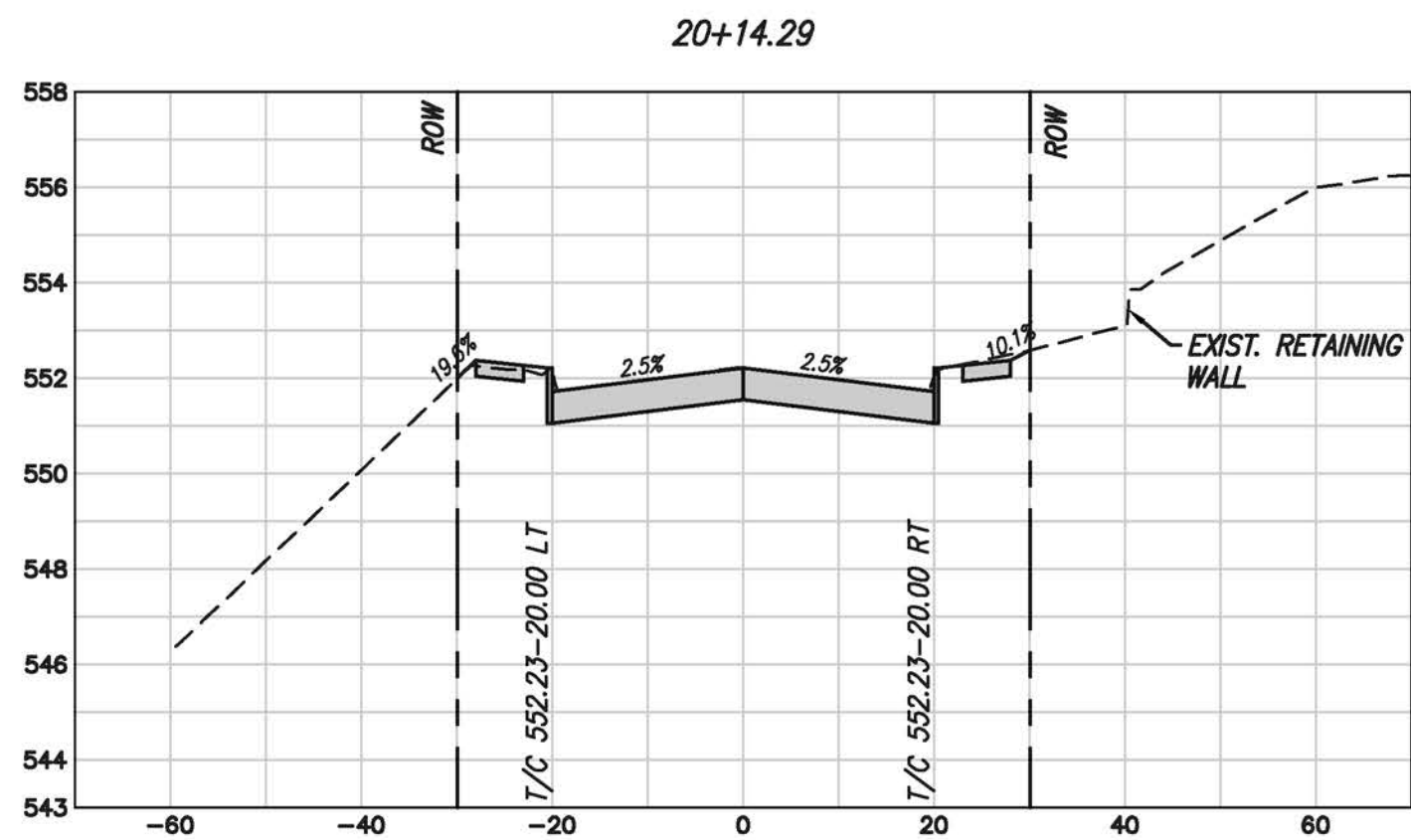
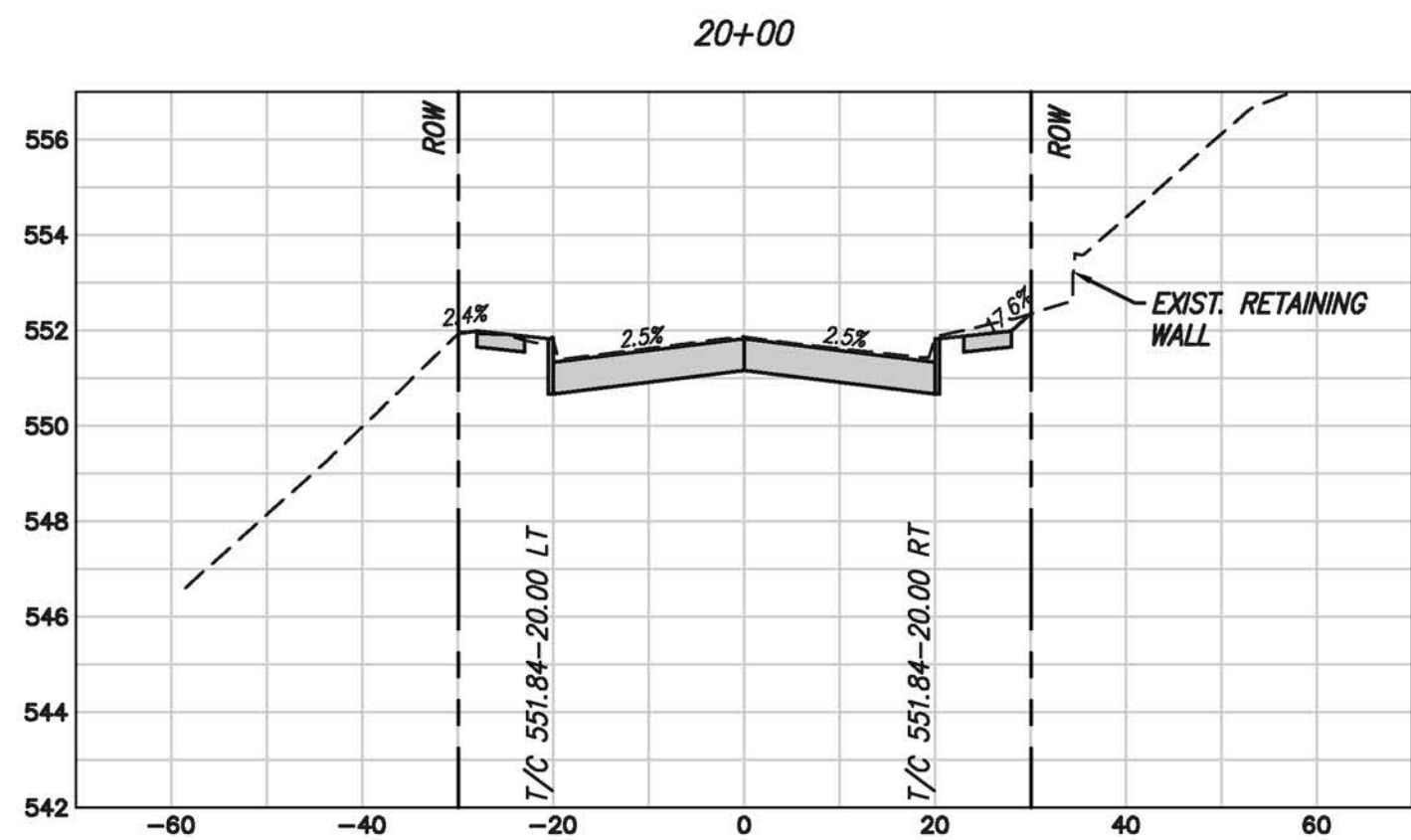
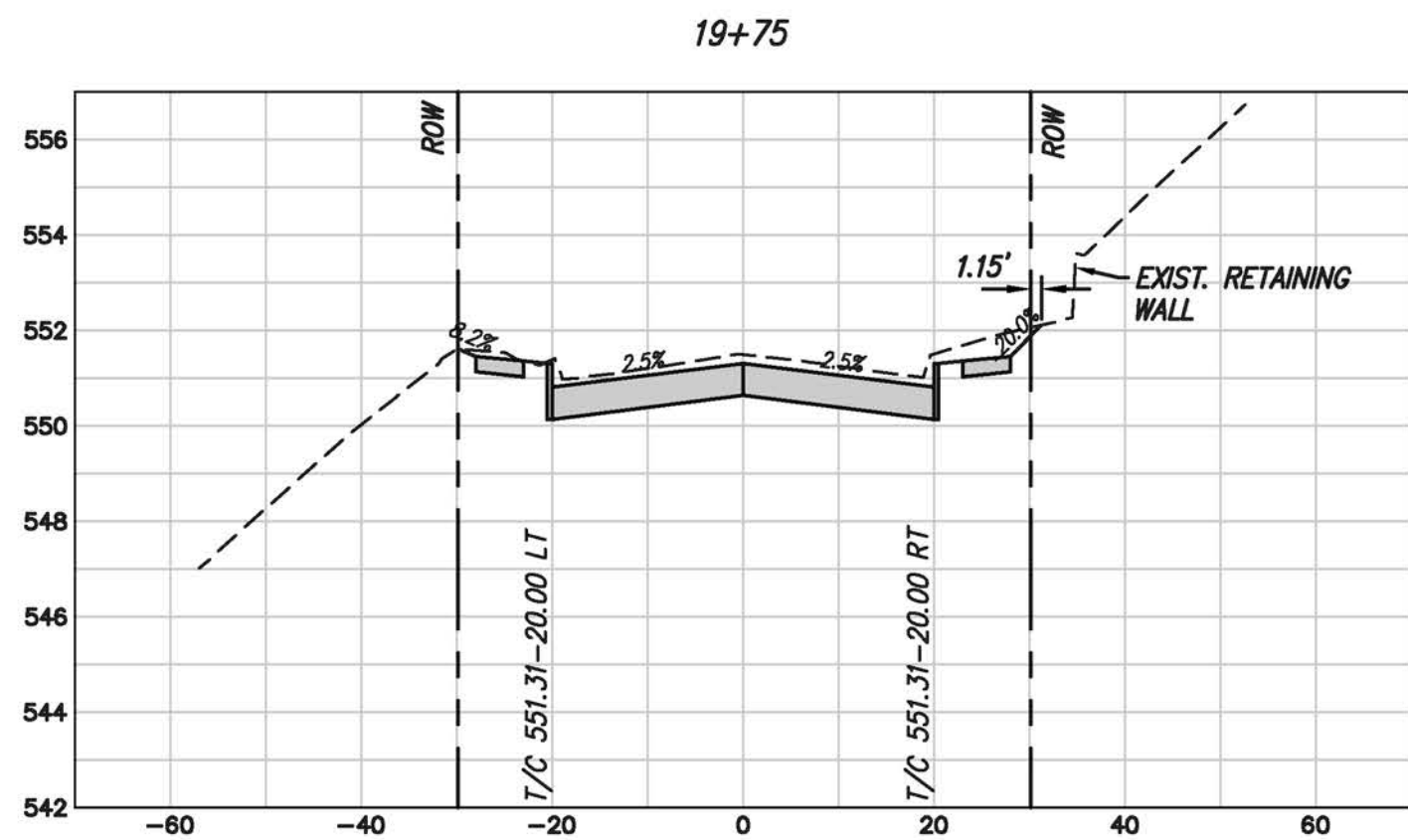
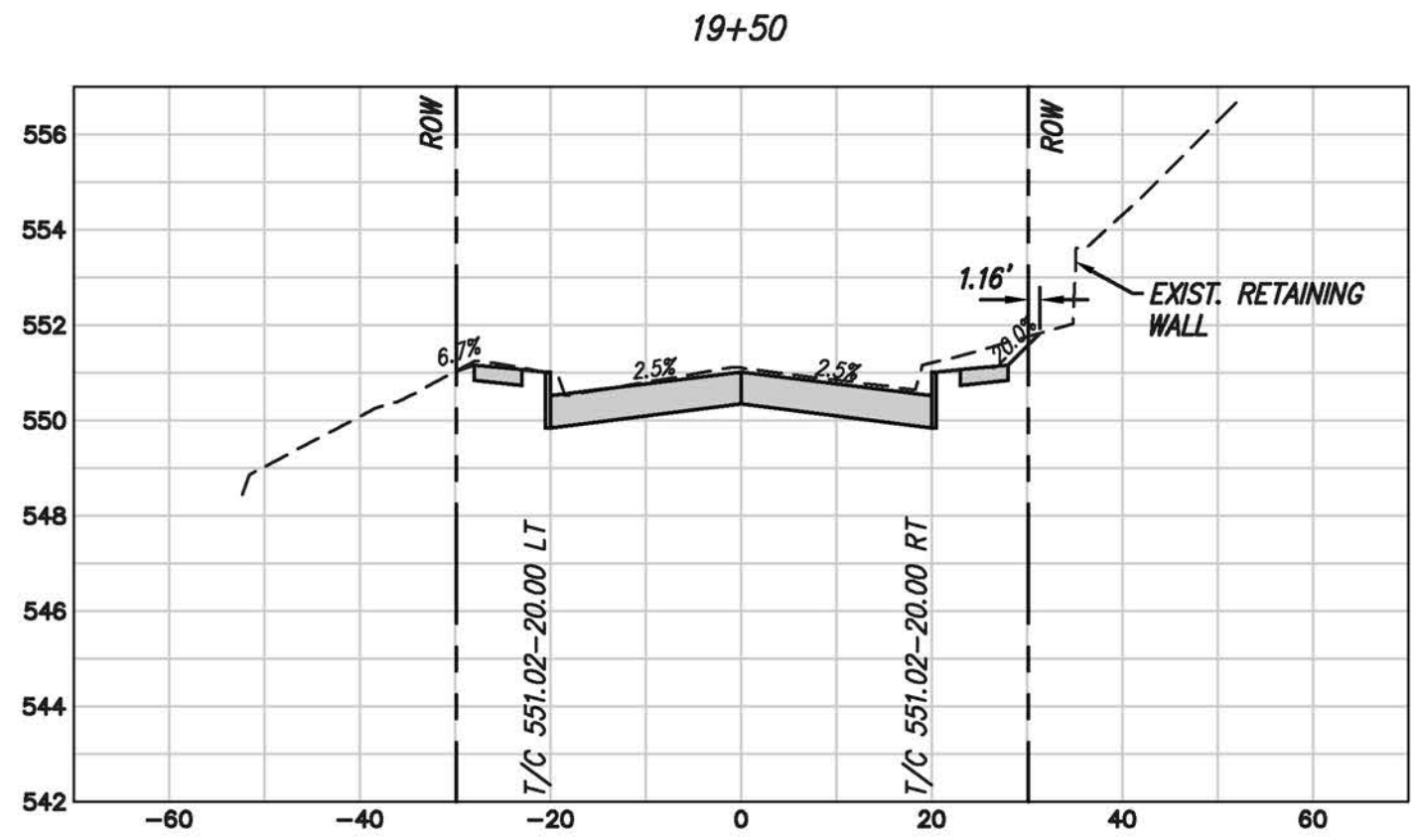
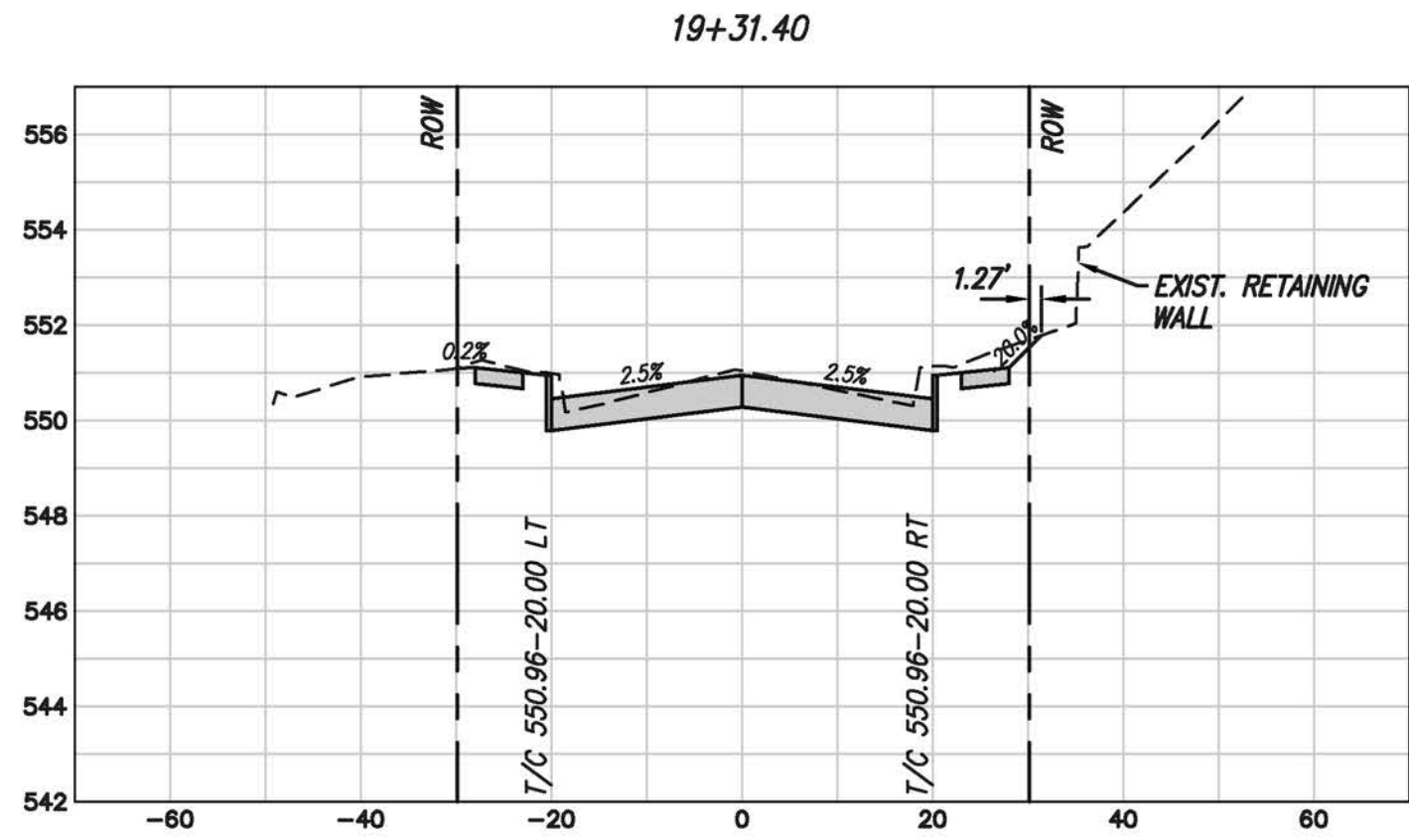
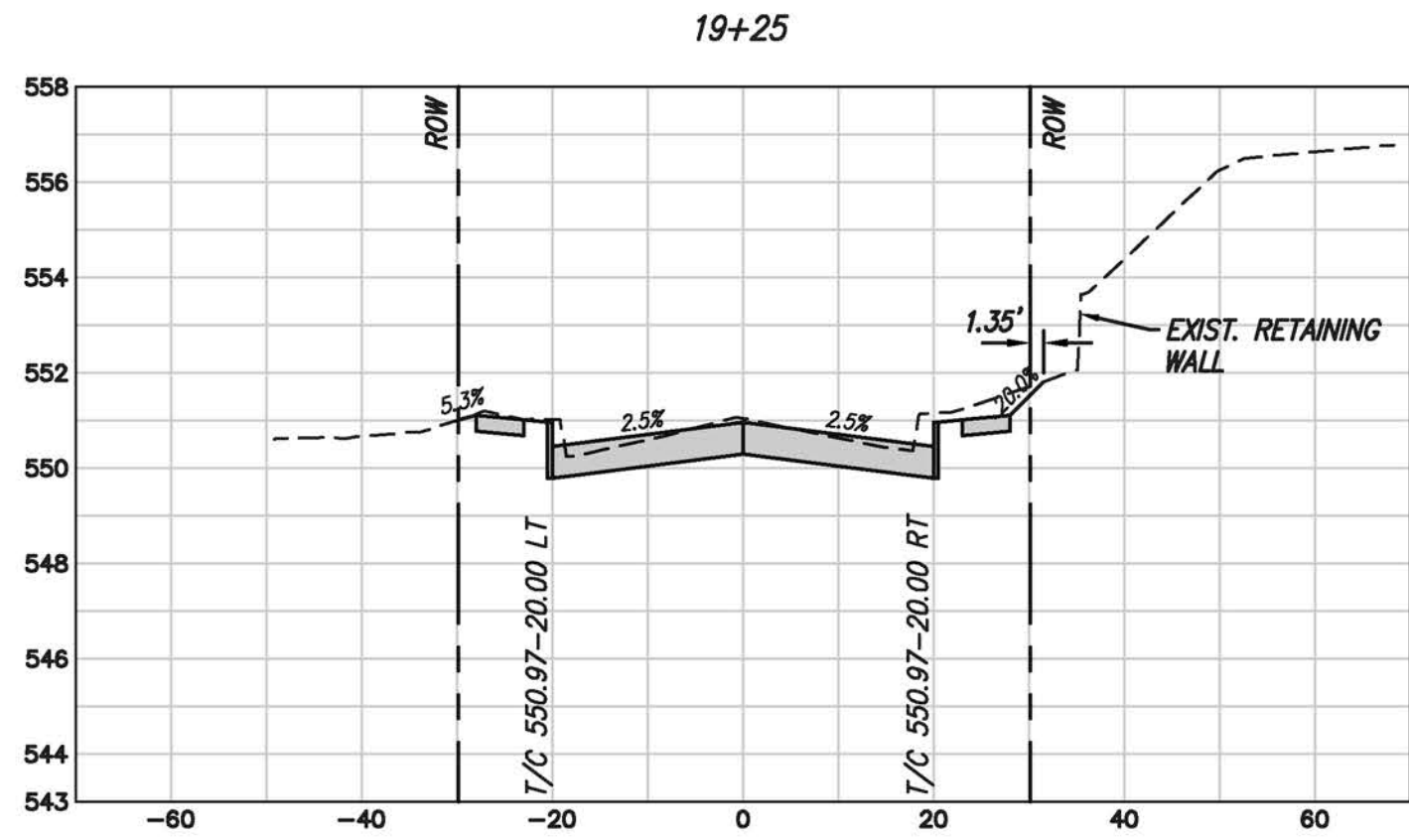
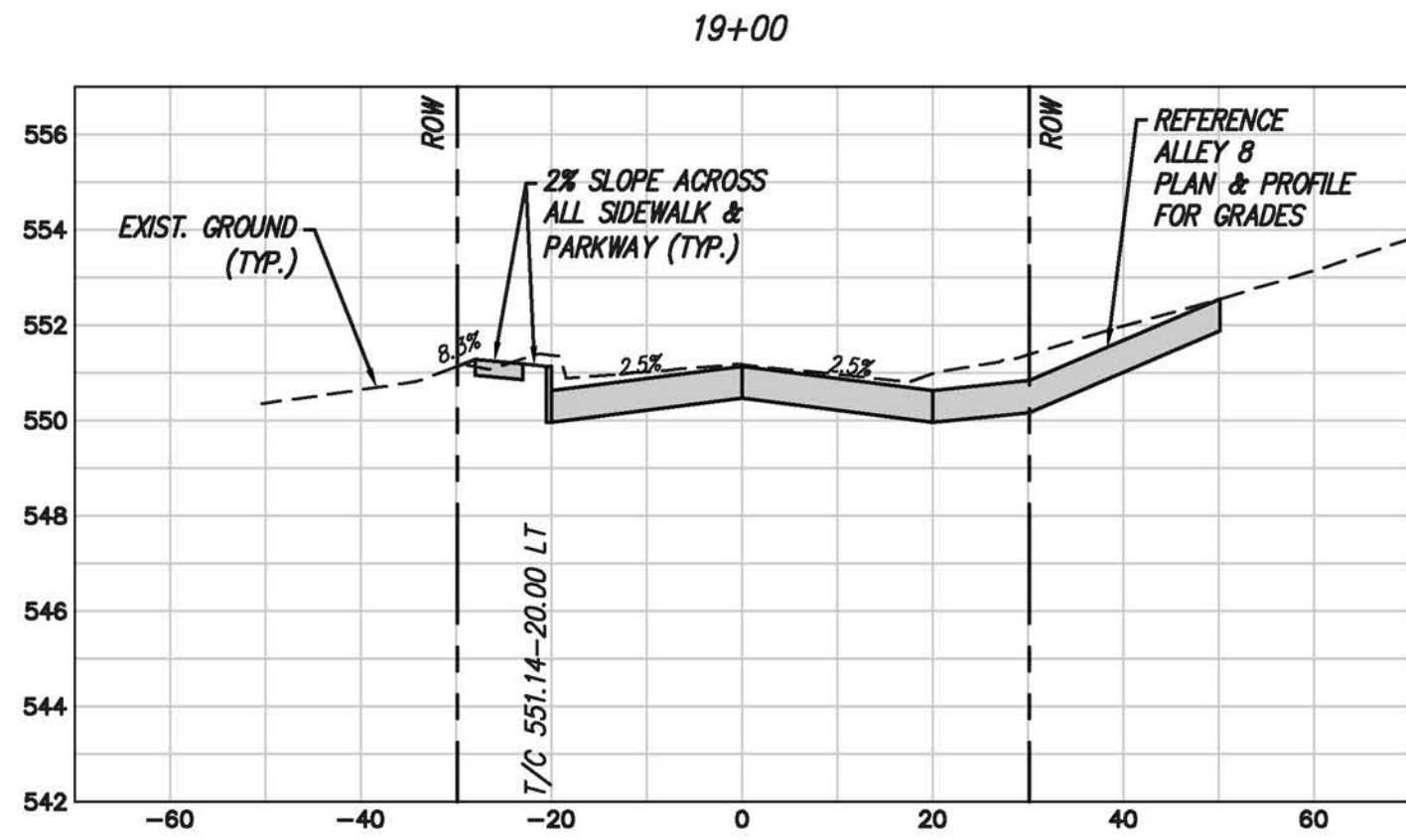


RECORD DOCUMENTS
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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
CROSS SECTIONS 3 OF 4

tnp project
RWL18219
sheet
53

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\56 CROSS SECTIONS 4 OF 4.dwg at Sep 27, 2019 - 10:45am by jbedelle
Layout: 56 CROSS SECTIONS 4 OF 4 - Arefi: nwp-dwg.dwg - X3D: nwp.dwg - X3D: nwp.dwg - X3D: nwp.dwg - X3D: nwp.dwg - X3D: nwp.dwg - X3D: nwp.dwg - X3D: nwp.dwg - X3D: nwp.dwg - X3D: nwp.dwg



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scale
when bar is
1 inch long
horiz
1" = 20'
vert
1" = 4'
SEP 2019

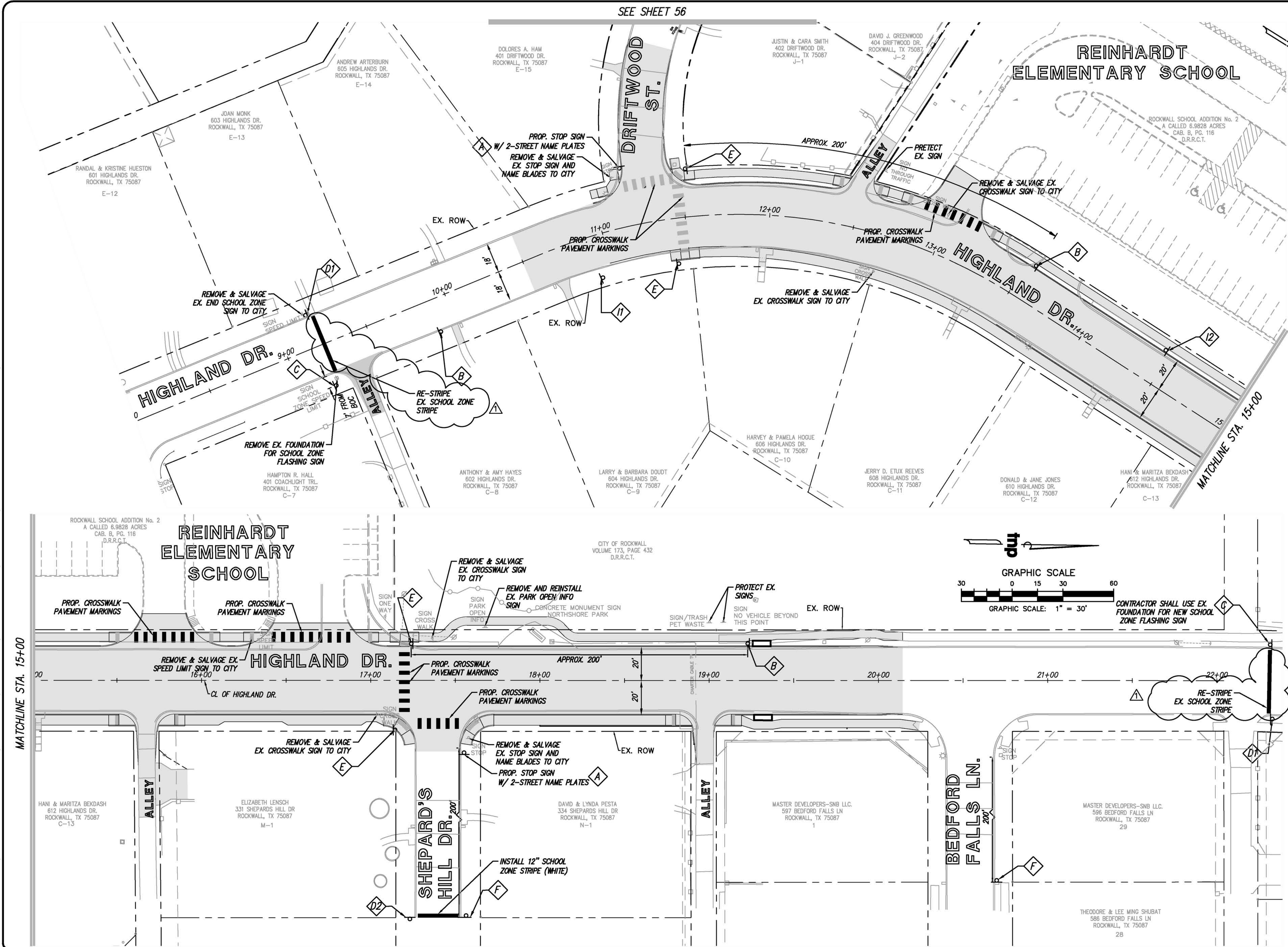


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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
CROSS SECTIONS 4 OF 4

tnp project
RWL18219
sheet
54

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\58 SIGNAGE & STRIPING PLAN.dwg at 04.03.2019-2:04pm by Jbedelle
Layout: 57 SIGNAGE & STRIPING PLAN
Notes: xbd-base.dwg - XBD-BASE.DWG - XBD-WATER.DWG - XBD-SEWER.DWG - XBD-SCHOOL SITE.DWG - XBD-SCHOOL.DWG - XBD-AERIAL.DWG - XBD-BASE - COPIED FROM ALTA PROJECT.DWG



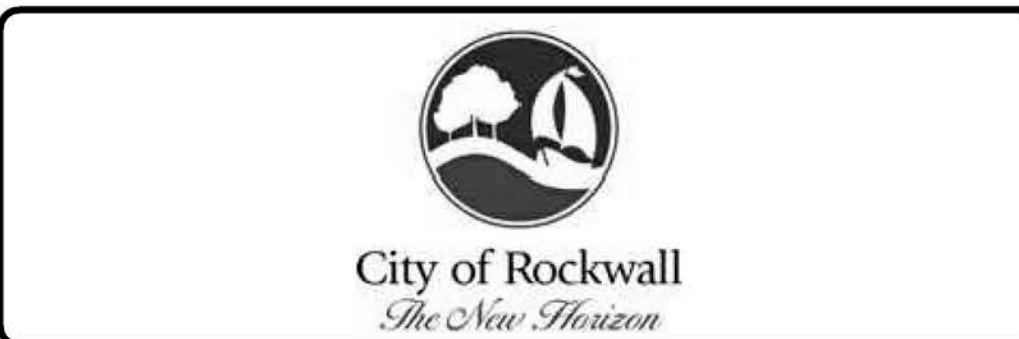
LEGEND	
	PROPOSED P.W.M. MARKING
	SIGN DESIGNATION (SEE SHEET 58)
	PROPOSED SIGN

STOP SIGN WITH STREET NAME PLATE R1-1 A	SCHOOL CROSSING AHEAD S1-1 (36X36) SW16-9P (24X12) B	SCHOOL SPEED LIMIT WITH SOLAR FLASHING BEACON S5-1 (24X48) S7-1T (24X18) C
30 MPH, END SCHOOL ZONE S5-2aTP (24X10) R2-1 (24X30) D1	25 MPH, END SCHOOL ZONE S5-2aTP (24X10) R2-1 (24X30) D2	SCHOOL SPEED LIMIT S4-3P (24X8) R2-1 (24X30) S4-1P (24X10) F
SCHOOL SPEED LIMIT S4-3P (24X8) R2-1 (24X30) S4-1P (24X10) F	SCHOOL CROSSING AHEAD S1-1 (36X36) S4-3P (36X12) G	SCHOOL CROSSING SIGN S1-1 (36X36) SW16-7P (24X12) E
HORIZONTAL ALIGNMENT SIGN W1-1R (30X30) W13-1P (18X18) 25 MPH I1	HORIZONTAL ALIGNMENT SIGN W1-1L (30X30) W13-1P (18X18) 25 MPH I2	END SCHOOL ZONE S5-2 (24X30) H

- NOTES:
- ALL SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND CITY OF ROCKWALL STANDARDS.
 - ALL SCHOOL ZONE SIGNAGE SHALL BE FLUORESCENT YELLOW GREEN.
 - SIGN INSTALLATION SHALL INCLUDE SIGN PLATES, HARDWARE, POLES AND FOUNDATION.
 - STANDARD STREET SIGN POLE SHALL BE 12' LONG MIN. 2 3/8" GALVANIZED STEEL ROUND POLE WITH A MIN. OF 60 MIL WALL THICKNESS.
 - STREET SIGN MOUNT FOR BOTTOM BLADE SHALL BE 18" CAST ALUMINUM ROUND POST.
 - STREET SIGN MOUNT FOR TOP STREET BLADE SHALL BE 12" CAST ALUMINUM TOP CROSSING BRACKET.
 - MOUNTING BRACKET ASSEMBLIES SHALL BE 2 3/8" DIAMETER ALUMINUM ROUND POST INTERLOCKING BRACKET X 2 PER POLE.
 - ALL WHITE PAVEMENT MARKING TO BE THERMOPLASTIC MATERIAL.
 - ALL PROPOSED SCHOOL SIGNS (F,D2) SHALL BE LOCATED CLOSE TO LOT LINE. CONTRACTOR SHALL GET APPROVAL FROM CITY STAFF FOR THE PROPOSED LOCATION.

no.	revision	by	date
1	UPDATED PAVEMENT STRIPING PER AS BUILTS	JB	09/27/19

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scale
when bar is
1 inch long
horiz
1" = 30'
vert
N/A
SEP 2019

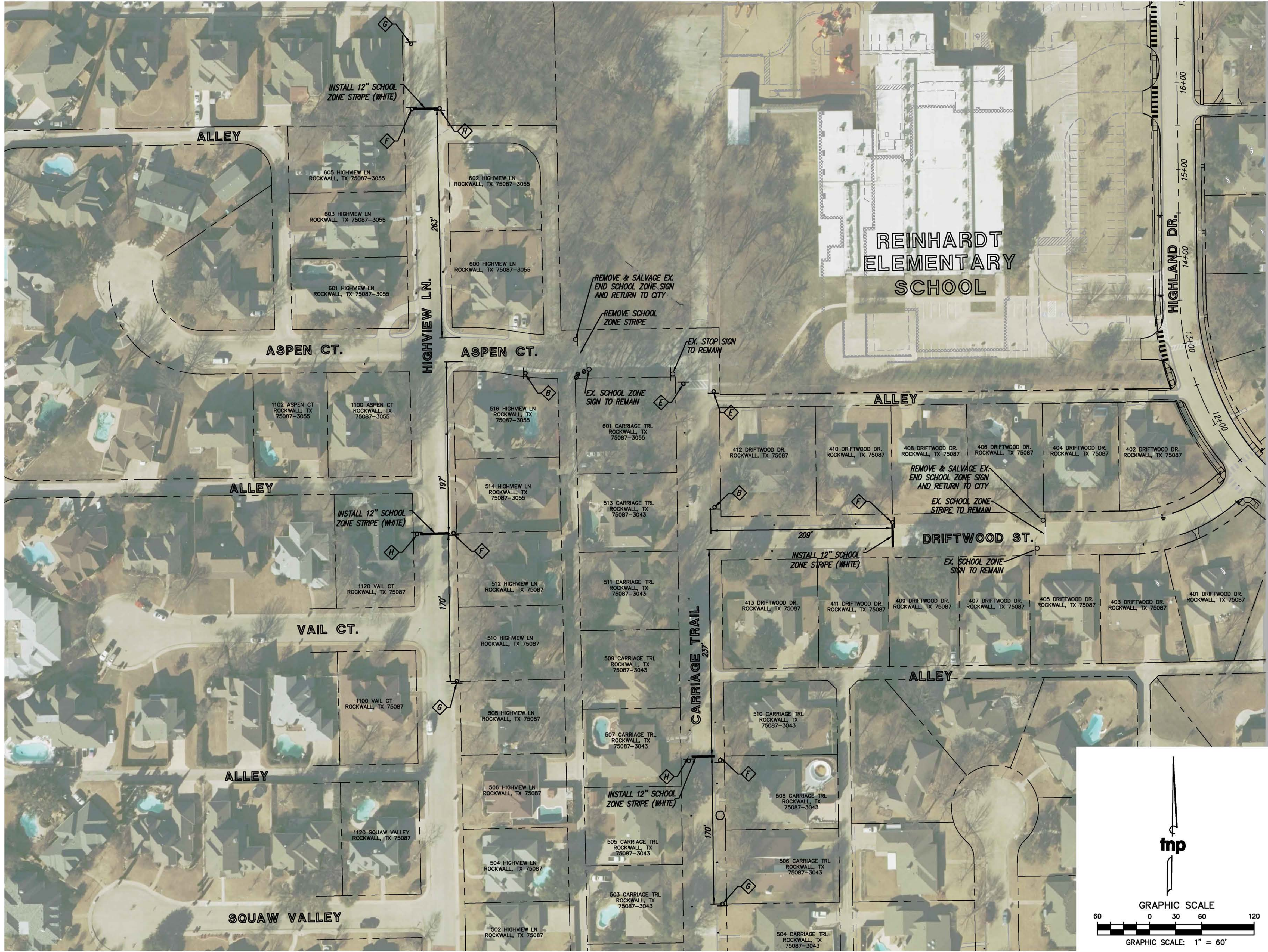


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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
SIGNAGE & STRIPING PLAN
SHEET 1 OF 2

tnp project
RWL18219
sheet
55

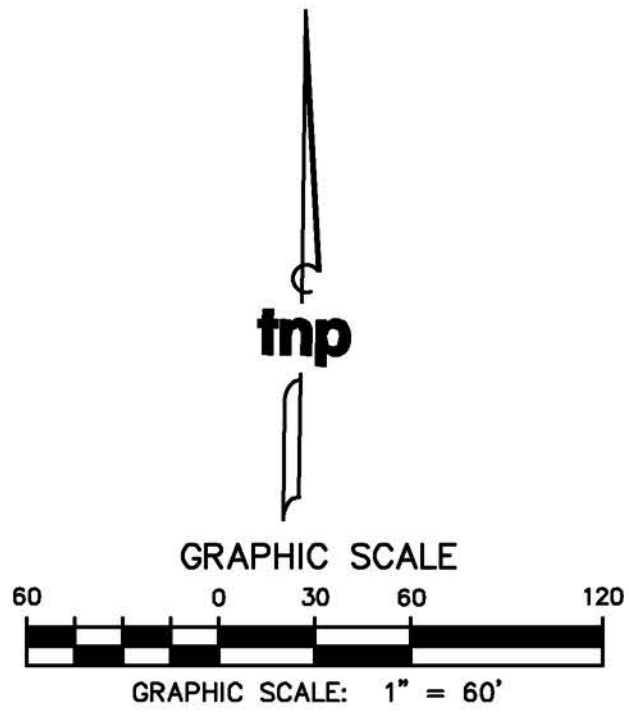
Drawing: P:\PROJECTS\1818219\1818219-01\1818219-01.dwg at Sep 27, 2019 2:21:10pm by tnp
Layout: 58 SIGNAGE & STRIPING PLAN
Paths: xref-border.dwg - XBD-BASE.dwg - XBD-AERIAL.dwg - XBD-SCHOOL SITE.dwg - XBD-SEWER.dwg - XBD-WATER.dwg - XBD-FANING.dwg - XBD-BASE.dwg - XBD-AERIAL.dwg - XBD-SCHOOL SITE.dwg - XBD-SEWER.dwg - XBD-WATER.dwg - XBD-FANING.dwg



LEGEND	
	PROPOSED P.W.M. MARKING
	SIGN DESIGNATION (SEE SHEET 58)
	PROPOSED SIGN

SCHOOL CROSSING AHEAD S1-1 (36X36) SW16-9P (24X12)	SCHOOL CROSSING SIGN S1-1 (36X36) SW16-7P (24X12)	
SCHOOL SPEED LIMIT S4-3P (24X8) R2-1 (24X30) S4-1P (24X10)	SCHOOL CROSSING AHEAD S1-1 (36X36) S4-3P (36X12)	END SCHOOL ZONE SS-2 (24X30)

- NOTES:
- ALL SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND CITY OF ROCKWALL STANDARDS.
 - ALL SCHOOL ZONE SIGNAGE SHALL BE FLUORESCENT YELLOW GREEN.
 - SIGN INSTALLATION SHALL INCLUDE SIGN PLATES, HARDWARE, POLES AND FOUNDATION.
 - STANDARD STREET SIGN POLE SHALL BE 12' LONG MIN. 2 3/8" GALVANIZED STEEL ROUND POLE WITH A MIN. OF 60 MIL WALL THICKNESS.
 - STREET SIGN MOUNT FOR BOTTOM BLADE SHALL BE 18" CAST ALUMINUM ROUND POST.
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scale
when bar is
1 inch long
horiz
1" = 60'
vert
N/A
SEP 2019

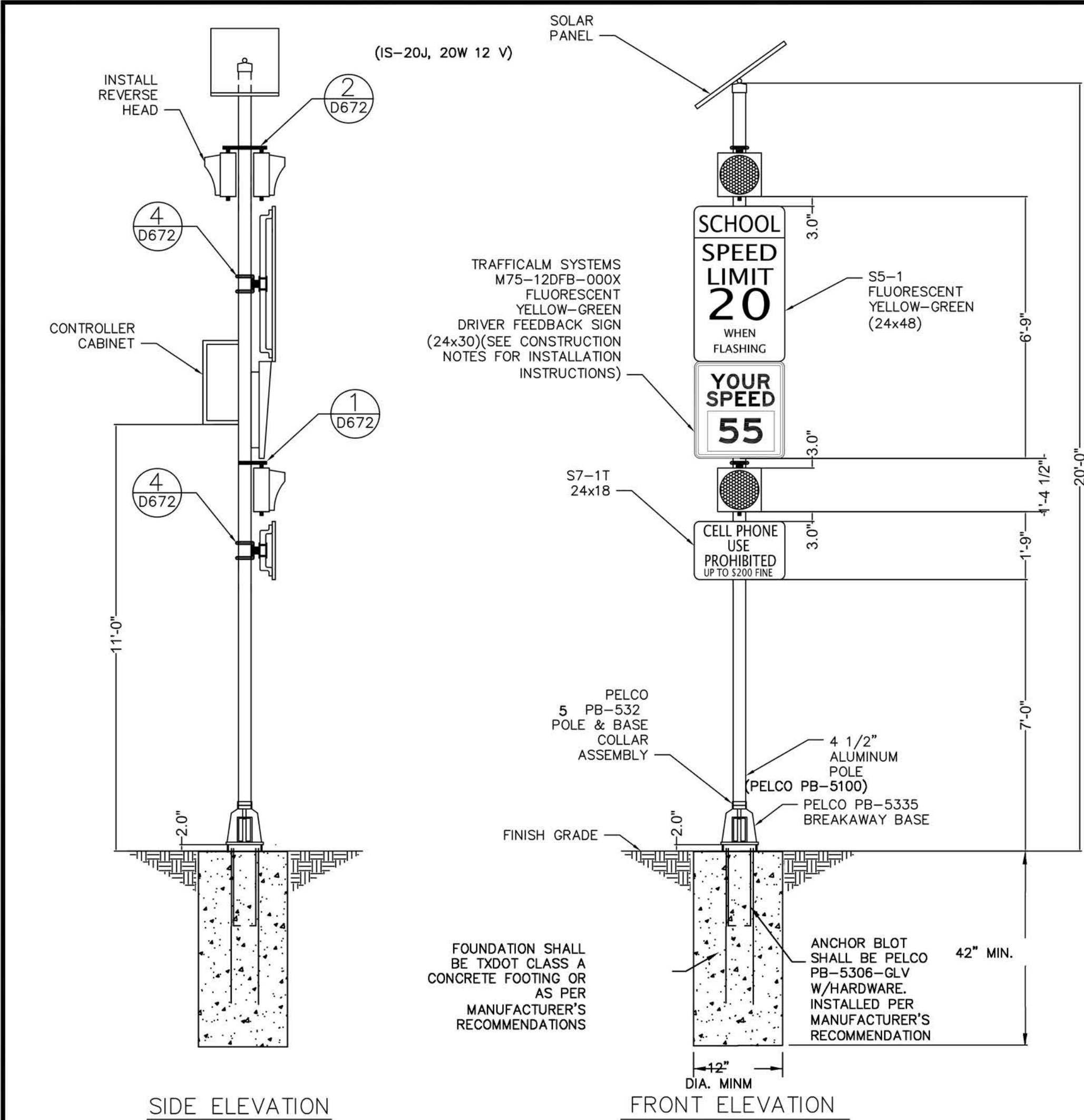


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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I
(DRIFTWOOD STREET TO BEDFORD FALLS LANE)
SIGNAGE & STRIPING PLAN
SHEET 2 OF 2

tnp project
RWL18219
sheet
56

Drawing: P:\PROJECTS\RWL18219\CAD\Sheets\PHASE 1 - NORTH\60 SIGNAGE DETAILS 2 OF 2.dwg at Sep 27, 2019 - 10:45am by jbedalle
Layout: 60 SIGNAGE DETAILS 2 OF 2 - Arx: wcr-jordan.dwg



- NOTES:
1. SOLAR CHARGE CONTROLLER SHALL BE MORNINGSTAR PS-15M 15 amp WITH METER.
 2. CONTROLLER SHALL BE ELTEC TC-18 SCALABLE TIME BASED CONTROLLER.
 3. BATTERY SHALL BE UPG UB-12350.
 4. CONTROLLER CABINET SHALL BE ELTEC NEMA 3R CABINET.
 5. FOUNDATION DIMENSIONS ARE SHOWN MINIMUM AND SHALL BE AS PER MANUFACTURER'S (PELCO) RECOMMENDATIONS.

ADDITIONAL MANUFACTURER'S DATA SHEETS ARE ATTACHED AS APPENDIX IN PROJECT DOCUMENTS AND SPECIFICATION BOOK.

CONSTRUCTION NOTES

1. MOUNT DRIVER FEEDBACK SIGN USING $\frac{7}{16}$ " HOLES, 4 EA. TO MOUNT BRACKET TO POLE. WORK SHALL BE COMPLETED IN A WORKMANLIKE MANNER.
2. USE APPROVED DIRTWORK INSTALLATION/DISPOSAL METHODS
3. 2" CLEARANCE BETWEEN FINISH GRADE AND BOTTOM OF BASE PLATE REQUIRED FOR CARRIAGE BOLT INSTALLATION.
4. IF ADDITIONAL CONDUCTORS ARE REQUIRED, USE XHHW, 14 AWG WIRE OR APPROVED EQUIVALENT.
5. ALL TERMINATIONS MUST BE MADE AT TERMINAL BLOCKS. NO WIRE NUTS/SPLICES ALLOWED.
6. RUBBER GROMMETS TO BE INSTALLED AT ALL HOLES TO PREVENT CONTACT OF WIRING AND POLE.

SCHOOL ZONE FLASHER AND SIGN DETAILS

no.	revision	by	date

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City of Rockwall
The New Horizon

scale
when bar is 1 inch long
horiz N/A
vert N/A
SEP 2019



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CITY OF ROCKWALL, TEXAS
HIGHLAND DRIVE RECONSTRUCTION, PHASE I (DRIFTWOOD STREET TO BEDFORD FALLS LANE)
SIGNAGE DETAILS 2 OF 2

tnp project RWL18219
sheet 58