

SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT
WATER & SEWER IMPROVEMENTS
NEW BRAUNFELS, TEXAS

PLEASE NOTE: NBU REQUIRES GPS POINTS FOR CERTAIN ELECTRIC, WATER, AND WASTEWATER ATTRIBUTES, SOME OF WHICH MUST BE TAKEN PRIOR TO BACKFILL DURING CONSTRUCTION.

GPS POINTS SHALL BE REQUIRED FROM THE CONTRACTOR. A MINIMUM OF THREE COORDINATE POINTS FOR GEOREFERENCING SHALL BE REQUIRED. THE WATER AND WASTEWATER GPS POINTS SHALL BE TO SURVEY GRADE AND ELECTRIC GPS POINTS SHALL BE TO MAP GRADE. REFERENCE NBU’S WATER CONNECTION POLICY FOR ADDITIONAL CAD DELIVERABLE REQUIREMENTS.

WATER
VERTICAL BENDS AND EDGE OF STEEL CASING (IF APPLICABLE) PRIOR TO BACKFILL
HORIZONTAL BENDS PRIOR TO BACKFILL
TEES PRIOR TO BACKFILL
FITTINGS (REDUCERS AND COUPLINGS) PRIOR TO BACKFILL
FIRE HYDRANTS (TOP OF FLANGE)
VALVES
METERS (TOP CENTER OF BOX)
BLOW OFF ASSEMBLY
CORNER SLAB OF WATER TANK & GATE VALVE ON THE WATER TANK

WASTEWATER
MANHOLES
CLEANOUTS
CORNER SLAB OF LIFT STATION

ELECTRIC
POLES
TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK)
PULL BOXES
STREET LIGHTS

COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

GENERAL NOTES

- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF NEW BRAUNFELS UTILITIES (NBU) APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, NEW BRAUNFELS UTILITIES MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
- NO PORTION OF THE PROJECT IS LOCATED WITHIN THE EXISTING SPECIAL FLOOD HAZARD ZONE A, 100-YEAR FLOOD BOUNDARY, AS DEFINED BY THE COMAL COUNTY, TEXAS COMMUNITY PANEL NUMBER 48091C0445F, REVISED SEPTEMBER 02, 2009 AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- NO PORTION OF THIS PROJECT IS LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE, RECHARGE ZONE, OR TRANSITION ZONE.
- THIS PROJECT IS A UTILITY INSTALLATION, DEVELOPMENT TYPE 3.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT NEW BRAUNFELS UTILITIES (NBU) TO SET A PRE-CONSTRUCTION MEETING, A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED.
 - ALL CONB INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 (PHONE)
 - FAXED IN AT 830-608-2117 (FAX)
 - EMAILED AT inspections@nbtexas.org (EMAIL).
 - NBU INSPECTIONS ARE TO BE CALLED AT 830-608-8971
- GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY.

NOTE TO CONTRACTOR:

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

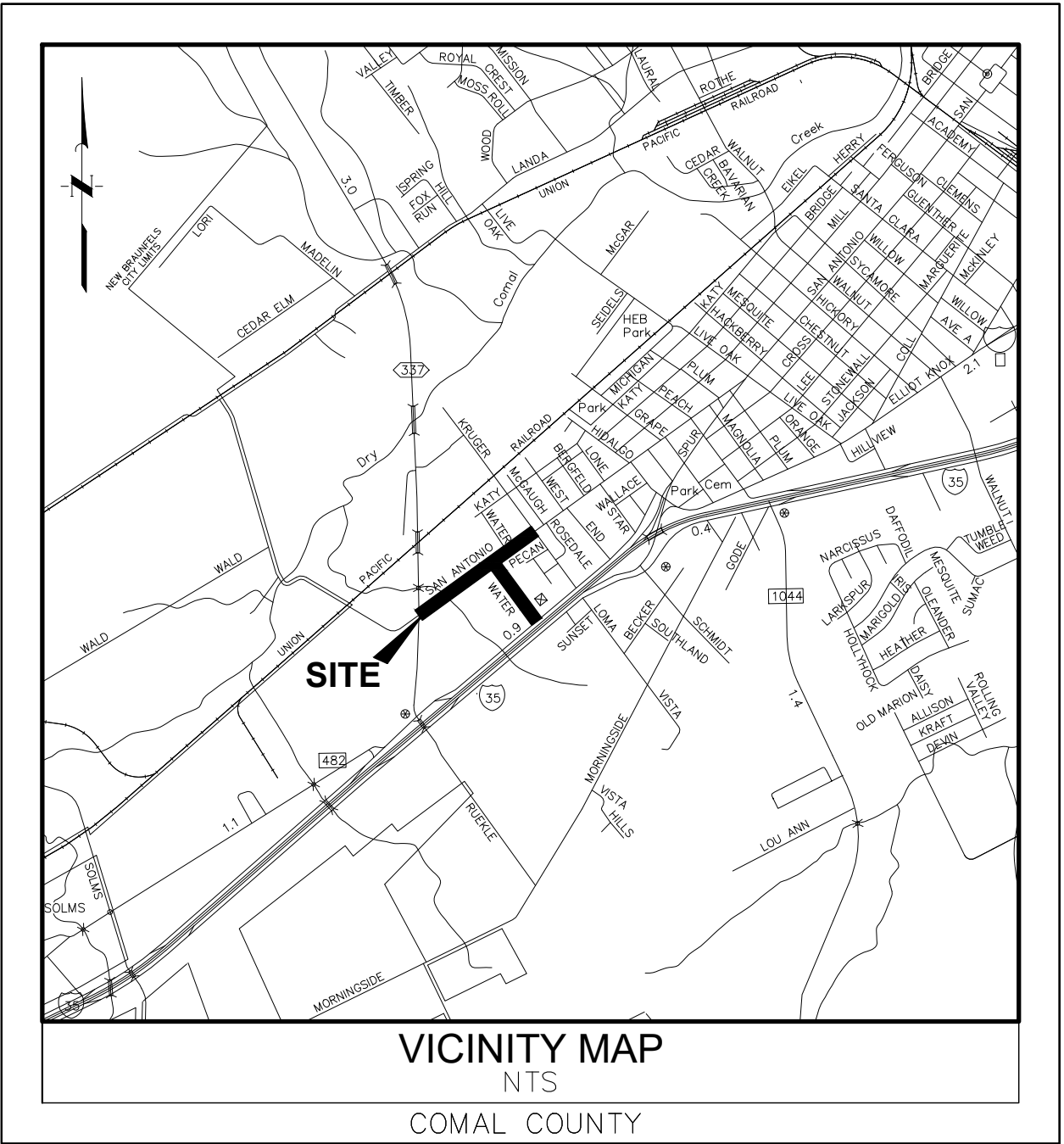
THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS HAS BEEN BASED UPON RECORD INFORMATION ONLY AND MAY NOT MATCH LOCATIONS AND/OR DEPTHS AS CONSTRUCTED. THE CONTRACTOR SHALL CONTACT EACH OF THE INDIVIDUAL UTILITIES FOR ASSISTANCE IN DETERMINING EXISTING UTILITY LOCATIONS AND DEPTHS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTRACTOR SHALL FIELD VERIFY HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITY CROSSINGS AND CONNECTIONS PRIOR TO ORDERING MATERIALS AND BEGINNING ANY CONSTRUCTION. ALL PROPOSED IMPROVEMENT REPAIRS, REPLACEMENTS OR ADJUSTMENTS, REQUIRED DUE TO CONTRACTOR’S FAILURE TO PERFORM SAID EXISTING UTILITY FIELD VERIFICATION, SHALL BE AT CONTRACTOR’S ENTIRE EXPENSE.

C.P.E LOCATOR

CALL CENTER POINT ENERGY LOCATOR AT 1-800-545-6005, 48 HRS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTER POINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.



NEW BRAUNFELS UTILITIES
355 FM 306
NEW BRAUNFELS, TEXAS 78130
BID SET



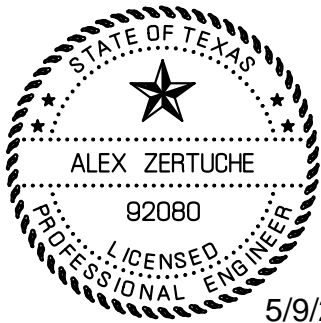
NEW BRAUNFELS UTILITIES
WATER SYSTEMS ENGINEERING

PREPARED BY:



QUIDDITY

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NO.	DATE	REVISIONS	APP.

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- NBU WASTEWATER NOTES

19. NBU INSPECTOR TO BE PRESENT FOR ALL WASTEWATER LINES TO BE INSTALLED AT DEPTHS OF 15 FEET OR GREATER FROM FINAL GRADE.
20. WHERE THE MINIMUM 9-FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF THESE LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ REQUIREMENTS. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF ASTM D2241 PVC OR AWWA C900 PVC WITH PRESSURE RATING OF 150 PSI AND SHALL BE IN ACCORDANCE WITH 30 TAC §217.53 (D) (3) (A) (I).
21. CONTRACTOR SHALL COORDINATE WITH THE ASSIGNED WATER/WASTEWATER INSPECTOR FOR COMPLETION OF THE FIELD ACCEPTANCE CHECKLIST. NO TESTING WILL BE PERFORMED PRIOR TO SIGN-OFFS FROM COMPLETE INSTALLATION. ALL TESTING AND ACCEPTANCE SHALL CONFORM TO NBU SPECIFICATIONS BE COMPLETED IN THE FOLLOWING ORDER:
- a. PIPE DEFLECTION TEST (MANDREL TEST)
 - b. PIPE LOW PRESSURE AIR TEST
 - c. MANHOLE VACUUM TEST
 - d. MANHOLE PROTECTIVE COATING TEST
 - e. CCTV INSPECTION (WITHIN 72 HOURS OF CLEANING AND FLUSHING)
22. TCEQ AND EPA REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF WASTEWATER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN AND PROFILE SHEETS. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY NBU WATER SYSTEMS.


1. THE POINT OF DELIVERY FOR AN OWNED AND MAINTAINED WATER LINE IS TYPICALLY THE DOMESTIC WATER IRRIGATION WATER METER, FIRE LINE UP TO THE CONTAINMENT BACKFLOW DEVICE, OR HYDRANT METER OR AS DETERMINED BY NBU.
2. WATER INFRASTRUCTURE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE NBU WATER CONNECTION POLICY.
3. ALL WATER MAINS SHALL BE CONSTRUCTED OF AWWA C900 DR 14 PVC, AWWA C900 DR 18 PVC OR MINIMUM CL 250 DUCTILE IRON PIPE.
4. ALL RESIDENTIAL WATER SERVICES SHALL BE SINGLE SERVICES CONSTRUCTED OF 1-INCH ASTM B88 TYPE K COPPER TUBING. 1-INCH AWWA C901 SDR9 CTS POLYETHYLENE TUBING MAY BE PERMITTED WITH SPECIAL APPROVAL FROM NBU ONLY.
5. ALL 2-INCH SERVICE LINES SHALL BE CONSTRUCTED OF AWWA C901 SDR9 CTS POLYETHYLENE TUBING.
6. WATER MAINS SHALL HAVE A MINIMUM OF 48 INCHES OF COVER TO FINISHED GRADE. CONCRETE ENCASEMENT WILL BE REQUIRED IF MINIMUM COVER CANNOT BE MET.
7. PIPE BEDDING OF WATER LINES SHALL BE COMPLIANT WITH NBU SPECIFICATION NO. 120, 'UTILITY TRENCHING AND BACKFILL'.
8. CONTRACTOR SHALL INSTALL LINE STOPPERS AT THEIR COST FOR AN OUTAGE DURING CONSTRUCTION IF SYSTEM VALVES ARE NOT AVAILABLE OR THE EXISTING VALVES DO NOT FUNCTION. LINE STOPPERS WILL BE REQUIRED BASED ON THE FOLLOWING CRITERIA:
 - a. IF THE NUMBER OF RESIDENTIAL CUSTOMERS AFFECTED IS GREATER THAN 20 AND EXPECTED TO LAST MORE THAN 4 HOURS.
 - b. IF ANY COMMERCIAL CUSTOMERS ARE AFFECTED BY THE OUTAGE THEN THE USE OF LINE STOPPERS WILL BE DETERMINED ON A CASE BY CASE BASIS.
 - c. IF ANY CRITICAL CARE CUSTOMERS ARE AFFECTED BY THE OUTAGE THEN THE USE OF LINE STOPPERS WILL BE DETERMINED ON A CASE BY CASE BASIS.
9. SYSTEM CONDITIONS MAY REQUIRE A LINE STOPPER AND MAY NOT BE KNOWN UNTIL CONSTRUCTION COMMENCES.
10. CONTRACTOR WILL KEEP THE AREA ON TOP OF, AROUND, AND WITHIN THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
11. PLACEMENT OF METER BOXES OR VAULTS IN SIDEWALKS, DRIVEWAYS, DRIVE AISLES, PARKING AREAS, OR OTHER AREAS EXPOSED TO VEHICULAR TRAFFIC IS NOT PERMITTED. ANY METER BOXES OR VAULTS SET IN THESE AREAS WILL BE RELOCATED AT THE CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
12. METER BOXES OR VAULTS MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
13. METER BOXES FOR 5/8-INCH AND 1-INCH METERS MUST BE DFW PLASTICS DFW38C- 14-AFIMP.
14. METER BOXES FOR 1.5" METERS MUST BE DFW PLASTICS DFW65C-14-AFIMP.
15. METER BOXES FOR 2" METERS MUST BE DFW PLASTICS DFW1730F-12-AFIMP.
16. THRU BLOCKS ARE NOT PERMITTED WITHOUT SPECIAL APPROVAL. JOINTS MUST BE RESTRAINED WITH RESTRAINING SYSTEMS APPROVED BY NBU AND RESTRAINT LENGTH SHALL BE SUBMITTED TO NBU AT THE TIME OF PLAN SUBMITTAL.
17. CONTRACTOR SHALL INSTALL TRACER WIRE ON TOP OF NON-FERROUS WATER MAINS IN ACCORDANCE WITH NBU SPECIFICATIONS. TRACER WIRE SHOULD RUN FROM VALVE TO VALVE AND EXIT AT A TRACER WIRE ACCESS POINT. THE TRACER WIRE SHOULD BE ATTACHED TO THE TOP OF THE PIPE USING TAPE. EXCESS WIRE SHOULD BE COILED WITHIN THE TRACER WIRE ACCESS POINT RISER.
18. CONTRACTOR SHALL COORDINATE WITH THE ASSIGNED WATER/WASTEWATER INSPECTOR FOR COMPLETION OF THE FIELD ACCEPTANCE CHECKLIST. ALL TESTING AND ACCEPTANCE SHALL CONFORM TO NBU SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO:
 - a. BACTERIOLOGICAL TESTING
 - b. HYDROSTATIC TESTING (PERFORMED VALVE TO VALVE)
19. THE NBU WATER SYSTEM SHALL BE PROTECTED FROM HAZARDS WITH APPROPRIATE BACKFLOW PREVENTION ASSEMBLIES INSTALLED ON ALL IRRIGATION SYSTEMS, FIRE SUPPRESSION SYSTEMS AND MULTI-UNIT COMPLEXES ALONG WITH MULTI-LEVEL PROPERTIES ON THE DOMESTIC WATER CONTAINMENT. NBU CAN ASSIST WITH THE DECISION ON APPROPRIATE BACKFLOW ASSEMBLIES ON A CASE-BY-CASE BASIS. CONTACT NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM
20. ALL BACKFLOW PREVENTION ASSEMBLIES SHALL BE TESTED UPON INSTALLATION AND REPORTS SENT TO NBU VIA THE ONLINE TRACKING SYSTEM. CONTACT AN NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM
21. ALL RESIDENTIAL AND COMMERCIAL PROPERTIES SHALL HAVE A CUSTOMER SERVICE INSPECTION CERTIFICATE (CSI INSPECTION) COMPLETED UPON COMPLETION OF THE BUILDING OR HOME STRUCTURE. CONTACT AN NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM

1. UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE NBU INSPECTOR, TREES LOCATED WITHIN THE LIMITS OF NBU EASEMENTS OR STREET RIGHT-OF-WAY AND IN CONFLICT WITH THE NEW MAIN INSTALLATION SHALL BE REMOVED. CONTRACTOR SHALL PROTECT ALL TREES AND IMPROVEMENTS LOCATED OUTSIDE THE LIMITS OF NBU EASEMENTS OR STREET RIGHT-OF-WAY.
2. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PLAN FOR BYPASS PUMPING TO NBU FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PLAN FOR PHASING TO NBU FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
4. ALL DRIVEWAY, PAVEMENT, SIDEWALK/WALKWAY SURFACES SHOWN ON PLANS (ALL TYPES) AND DAMAGED OR REMOVED BY THE CONTRACTOR, AND NOT PROPOSED TO BE REPLACED BY ROADWAY CONSTRUCTION, SHALL BE REPLACED IN LIKE KIND TO EXISTING CONDITIONS AND ARE SUBSIDIARY TO PIPE INSTALLATION. (NO SEPARATE PAY ITEM). ALLOWANCE (ITEMS TO REPAIR DRIVEWAY, PAVEMENT, AND SIDEWALK/WALKWAY SURFACES NOT SHOWN IN THE PLANS (SOLELY DUE TO NEW WATER AND SEWER IMPROVEMENTS) ARE INCLUDED IN THE BID FORM.
5. FLOWABLE BACKFILL WITHIN TxDOT ROW SHALL MEET THE REQUIREMENTS OF TxDOT ITEM 401 "FLOWABLE BACKFILL" AND IS SUBSIDIARY TO PERTINENT ITEMS.
6. NO SEEDING SHALL BE ALLOWED UNTIL THE SEED BED HAS BEEN PREPARED AND APPROVED BY THE NBU INSPECTOR.
7. UTILITY TRENCHES SHALL BE FENCED IN OR COVERED (AND PLATED IN PAVED AREAS) EVERY NIGHT AS A PREVENTATIVE SAFETY MEASURE DURING THE ENTIRE PROJECT (NO SEPARATE PAY ITEM).
8. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5-FEET IN DEPTH. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO THE CITY PRIOR TO UTILITY INSTALLATION.
9. WATER SERVICE AND SEWER LATERAL TRENCHING, TRENCH SAFETY PROTECTION, BEDDING, BACKFILL, AND SURFACE RESTORATION (ALL TYPES) ARE SUBSIDIARY TO SERVICE INSTALLATION.



NBU
New Braunfels Utilities

GENERAL NOTES I


 5/9/2025

WATER AND SEWER ABANDONMENT AND REMOVAL NOTES:

1. ALL ABANDONED WATER AND SEWER LINES SHALL BE PLUGGED AND FILLED PER NBU ITEM 510 "PIPE" AND TXDOT ITEM 401 "FLOWABLE BACKFILL" WITHIN TXDOT ROW (NO SEPARATE PAY ITEM).
2. ALL ABANDONED SEWER MANHOLES SHALL BE PLUGGED AND FILLED PER NBU STANDARD DETAIL 340 "ABANDONED MANHOLE". (NO SEPARATE PAY ITEM).
3. TO ACCOMMODATE NEW SEWER OR WATER INFRASTRUCTURE, OR AS REQUIRED BY OTHER JURISDICTIONS, EXISTING SEWER MAINS, SEWER MANHOLES, AND WATER MAINS SHALL BE REMOVED AS SHOWN ON THE PLANS OR AS NECESSARY (NO SEPARATE PAY ITEM).

1. FOR THE PURPOSE OF THESE NOTES, ENVIRONMENTAL POLLUTION IS DEFINED AS THE PRESENCE OF CHEMICAL, PHYSICAL, OR BIOLOGICAL ELEMENTS OR AGENTS WHICH ADVERSELY AFFECT HUMAN HEALTH OR WELFARE; UNFAVORABLY ALTER ECOLOGICAL BALANCES OF IMPORTANCE TO HUMAN LIFE; AFFECT OTHER SPECIES OF IMPORTANCE TO MAN; OR DEGRADE THE UTILITY OF THE ENVIRONMENT FOR AESTHETIC AND/OR RECREATIONAL PURPOSES.
2. THE CONTRACTOR SHALL OBSERVE THE RULES AND REGULATIONS OF THE STATE OF TEXAS AND AGENCIES OF THE U.S. GOVERNMENT PROHIBITING THE POLLUTION OF ANY LAKE, STREAM, RIVER, OR WETLAND BY THE DUMPING OF ANY REFUSE, RUBBISH, DREDGE MATERIAL, OR DEBRIS THEREIN.
3. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT DISPOSAL OF MATERIALS INTO ANY WATERS OF THE STATE MUST CONFORM WITH THE REQUIREMENTS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, AND AN APPLICABLE PERMIT FROM THE U.S. ARMY CORPS OF ENGINEERS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HOLDING PONDS OR AN APPROVED METHOD WHICH WILL HANDLE, CARRY THROUGH, OR DIVERT AROUND HIS WORK ALL FLOWS, INCLUDING STORM FLOWS AND FLOWS CREATED BY CONSTRUCTION ACTIVITY, SO AS TO PREVENT SILTING OF WATERWAYS OR FLOODING DAMAGE TO THE PROPERTY OR ADJACENT PROPERTIES.
 - a. ANY MATERIALS REMOVED FROM WATER BODIES ARE TO BE DEWATERED IN A MANNER THAT PREVENTS SILTING OR RETURN OF MATERIAL TO WATER BODY.
 - b. LIQUID/SOLID SEPARATION TO BE PERFORMED MECHANICALLY, BY GRAVITY SEPARATION IN HOLDING PONDS OR BY OTHER MEANS THAT COMPLY WITH THE REQUIREMENTS. HOLDING PONDS TO INCORPORATE MEANS TO REMOVE LIQUID SUCH AS FILTERED RISE PIPES, DECAT PIPES, UNDERDRAINS, ETC.
5. THE CONTRACTOR IS RESPONSIBLE FOR RESEARCHING THE NEED FOR A U.S. EPA NPDES (STORMWATER POLLUTION PREVENTION PLAN) PERMIT FOR THE CONSTRUCTION SITE. IF ONE IS REQUIRED, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE PERMIT AND FOR MONITORING THE SITE PER THE PERMIT REQUIREMENTS UNTIL FINAL COMPLETION. COSTS ASSOCIATED WITH THIS ACTIVITY SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
6. MATERIAL NOT SUITABLE FOR BACKFILL AND OTHER WASTE MATERIAL MUST BE DISPOSED OF AT SITES APPROVED BY THE OWNER AND ENGINEER. EXCESS EXCAVATED MATERIAL SUITABLE FOR BACKFILL, BUT NOT USED, SHALL BE SPREAD AND COMPACTED IN THE DESIGNATED SPOILS AREA AS SHOWN ON THE DRAWINGS.
7. UNACCEPTABLE DISPOSAL SITES, INCLUDE, BUT ARE NOT LIMITED TO, SITES WITHIN A WETLAND OR CRITICAL HABITAT AND SITES WHERE DISPOSAL WILL HAVE A DETRIMENTAL EFFECT ON SURFACE WATER OR GROUNDWATER QUALITY.
8. THE CONTRACTOR MAY MAKE HIS OWN ARRANGEMENTS FOR DISPOSAL SUBJECT TO SUBMISSION OF PROOF TO THE ENGINEER THAT THE OWNER OF THE PROPOSED SITE(S) HAS A VALID FILL PERMIT ISSUED BY THE APPROPRIATE GOVERNMENTAL AGENCY AND SUBMISSION OF A HAUL ROUTE PLAN INCLUDING A MAP OF THE PROPOSED ROUTE(S).
9. THE CONTRACTOR SHALL PROVIDE WATERTIGHT CONVEYANCE OF ANY LIQUID, SEMI-LIQUID, OR SATURATED SOLIDS WHICH TEND TO BLEED OR LEAK DURING TRANSPORT. NO LIQUID LOSS FROM TRANSPORTED MATERIALS WILL BE PERMITTED WHETHER BEING DELIVERED TO THE CONSTRUCTION SITE OR BEING HAULED AWAY FOR DISPOSAL. FLUID MATERIALS HAULED FOR DISPOSAL MUST BE SPECIFICALLY ACCEPTABLE AT THE SELECTED DISPOSAL SITE.

1. WASTEWATER SERVICES TO BE REMOVED TO R.O.W., REPLACED PER NBU DETAIL AND CONNECTED TO NEW WASTEWATER MAIN. TOP OF CLEANOUT AT R.O.W. TO BE ON GRADE.
2. ALL EXISTING AND PROPOSED SEWER SERVICES MAY NOT BE SHOWN. CONTRACTOR TO LOCATE ALL EXISTING SEWER SERVICES IN THE FIELD AND REPLACE.
3. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NO SEPARATE PAY)
4. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND PROTECT THE SAME DURING CONSTRUCTION.
5. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NO SEPARATE PAY)
6. DRY UTILITIES SHOWN ON THESE PLANS ARE FOR REFERENCE ONLY AND MAY NOT BE ACCURATE.
7. CONTRACTOR SHALL BE REQUIRED TO INSTALL TEMPORARY SEWER MAIN, AND/OR PERFORM BYPASS PUMPING, IN ORDER TO MAINTAIN EXISTING SEWER SERVICE TO THE PROJECT AREA UNTIL THE NEW SEWER MAINS ARE APPROVED AND ACCEPTED BY NBU. CONTRACTOR SHALL DEVELOP A PLAN THAT SHOWS ALL TEMPORARY MEASURES PROPOSED TO MAINTAIN EXISTING SEWER SERVICE. PLAN SHALL BE SUBMITTED TO, AND APPROVED BY NBU INSPECTIONS PRIOR TO THE INSTALLATION OF ANY TEMPORARY MEASURES. ALL TEMPORARY MEASURES, INCLUDING, BUT NOT LIMITED TO, MAINS AND BYPASS PUMPING, WILL BE PAID FOR UNDER NBU ITEM 510 PIPE, SPECIFICALLY UNDER 510.5(1)(U). NO SEPARATE PAYMENT WILL BE MADE FOR THIS WORK.

GENERAL

- a. PRIOR TO ANY WORK THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH NEW BRAUNFELS UTILITIES AND THE CITY OF NEW BRAUNFELS. THE PRE-CONSTRUCTION MEETING SHOULD BE SCHEDULED 1 WEEK IN ADVANCE OF ALL PROPOSED CONSTRUCTION ACTIVITIES.
- b. THE PROTECTION AND CONVENIENCE OF THE PUBLIC DURING CONSTRUCTION OF THIS PROJECT ARE OF PRIMARY IMPORTANCE. TRAFFIC MUST BE HANDLED THROUGHOUT THE PROJECT CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A SAFE AND COMFORTABLE PASSAGE FOR VEHICULAR TRAFFIC WITH MINIMAL INCONVENIENCE TO THE PUBLIC, AS SHOWN IN THE PLANS OR AS DIRECTED/APPROVED BY THE CITY. AT LOCATIONS WHERE IT IS NECESSARY FOR CONSTRUCTION TRAFFIC TO OPERATE NEAR TRAFFIC, WARNING SIGNS, FLAGGERS, PORTABLE CHANGEABLE MESSAGE SIGNS, AND WHERE NECESSARY, POLICE SHALL BE PROVIDED TO ADEQUATELY PROTECT AND INFORM THE TRAVELING PUBLIC.
- c. ACCESS TO ADJOINING PROPERTY MUST BE MAINTAINED AT ALL TIMES.
- d. CONTRACTOR IS TO MAINTAIN TEMPORARY DRAINAGE AT ALL TIMES.
- e. PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) PER TMUTCD, WHEN REQUIRED, MUST BE PLACED 72 HOURS IN ADVANCE OF THE WORK. THE CITY SHALL APPROVE THE LOCATION OF THE PCMS PRIOR TO RELOCATING THE PCMS. THE WORDING OF THE PCMS SHALL BE APPROVED BY THE CITY.
- f. ALL SEQUENCE OF WORK ON THIS PROJECT SHALL BE COORDINATED TO COINCIDE WITH ANY PROJECTS WITHIN OR ADJACENT TO THIS PROJECT.
- g. IF LEFT OVERNIGHT, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE A 3:1 SAFETY SLOPE FOR EDGE CONDITIONS WITH A DROP OF GREATER THAN 2 IN. PLACEMENT AND REMOVAL OF THE SAFETY SLOPE WILL BE SUBSIDIARY TO PERTINENT ITEMS.
- h. LANE CLOSURES DURING THE WEEK WILL ONLY BE ALLOWED BETWEEN 8:30 AM AND 4:30 PM UNLESS APPROVED BY THE ENGINEER.
- i. CAUTION UNDERGROUND UTILITIES. CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION.
- j. CONTRACTOR TO COORDINATE WITH THE APPROPRIATE SCHOOL DISTRICT PRIOR TO ANY PROPOSED CONSTRUCTION THAT WOULD AFFECT BUS ROUTES OR DROP OFF AND PICK UP OPERATIONS.

2. LANE CLOSURES

- a. IN ADDITION TO THE PREVIOUSLY MENTIONED REQUIREMENTS, THE FOLLOWING PROVISIONS SHALL; ALSO GOVERN ON THIS CONTRACT:
 - i. ALL DETOURS, HORIZONTAL TRAFFIC MOVEMENTS, LANE CLOSURES, ETC. ARE DIRECTLY RELATED TO THE SEQUENCE OF WORK.
 - ii. THE CONTRACTOR SHALL NOTIFY THE CITY OF IMPENDING/UPCOMING LANE CLOSURES AT LEAST FIVE WORKING DAYS IN ADVANCE.
 - iii. FOR THIS PROJECT, UNLESS OTHERWISE NOTED IN THE PLANS AND/OR AS DIRECTED BY THE CITY, LANE CLOSURES SHALL BE LIMITED ACCORDINGLY TO THE FOLLOWING RESTRICTIONS:
 - b. NO CLOSURES WILL BE PERMITTED BETWEEN DECEMBER 15 AND JANUARY 1 (UNLESS OTHERWISE NOTED AND/OR APPROVED BY THE CITY)
 - c. NO CLOSURES WILL BE PERMITTED THE WEDNESDAY, THURSDAY, FRIDAY, SATURDAY AND SUNDAY OF THANKSGIVING.
 - d. NO CLOSURES WILL BE PERMITTED THE SATURDAY AND SUNDAY BEFORE MEMORIAL DAY AND LABOR DAY.
 - e. NO CLOSURES WILL BE PERMITTED ON SATURDAY OR SUNDAY WHEN JULY 4TH FALLS ON A FRIDAY OR MONDAY.
 - f. ADVANCE NOTIFICATION OF LANE CLOSURES SHALL BE POSTED VIA PORTABLE CHANGEABLE MESSAGE SIGNS 5 DAYS IN ADVANCE OF ANY WORK.
 - g. FOR ALL DETOURS, PLACE MESSAGE BOARDS AND ADVANCE WARNING SIGNS 7 DAYS IN ADVANCE TO ADVISE TRAFFIC.

3. SAFETY

- a. THE CONTRACTOR WILL PROVIDE, CONSTRUCT AND MAINTAIN BARRICADES AND SIGNS IN ACCORDANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND THE "STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS".
- b. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN BARRICADES AND SIGNS DEEMED NECESSARY BUT THE CITY OR AS DIRECTED BY FIELD CONDITIONS, TO PROVIDE FOR THE PASSAGE OF TRAFFIC SAFELY AT ALL TIMES. THE CONTRACTOR SHALL KEEP THE ROADWAY CLEAN AND FREE OF DIRT OR OTHER MATERIALS DURING HAULING OPERATIONS. IF THE CONTRACTOR DOES NOT MAINTAIN A CLEAN ROADWAY, THEY SHALL CEASE ALL CONSTRUCTION OPERATIONS, WHEN DIRECTED TO CLEAN THE ROADWAY TO THE SATISFACTION OF THE CITY.

4. HAULING EQUIPMENT

- a. THE USE OF RUBBER-TIRED EQUIPMENT WILL BE REQUIRED FOR MOVING DIRT OR OTHER MATERIALS ALONG OR ACROSS PAVEMENT SURFACES. WHERE THE CONTRACTOR DESIRES TO MOVE ANY EQUIPMENT NOT LICENSED FOR OPERATION ON PUBLIC HIGHWAYS, ON OR ACROSS PAVEMENT, THEY SHALL

5. FINAL CLEAN UP

a. UPON COMPLETION OF THE WORK AND BEFORE FINAL ACCEPTANCE AND FINAL PAYMENT IS MADE, THE CONTRACTOR SHALL CLEAR AND REMOVE FROM THE SITE ALL SURPLUS AND DISCARDED MATERIALS AND DEBRIS OF EVERY KIND AND LEAVE THE ENTIRE PROJECT IN A SMOOTH, NEAT AND SLIGHTLY CONDITION.

6. PAYMENT

a. PER NBU ITEM 703 "BARRICADES, SIGNS AND TRAFFIC HANDLING", TRAFFIC CONTROL IS SUBSIDIARY TO THE PERTINENT ITEMS REQUIRED BY THE BID.

GENERAL NOTES

1. IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
2. THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
3. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
4. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SCHEDULE A PRECONSTRUCTION MEETING.
5. FOR PUBLIC INFRASTRUCTURE PERMIT OR GRADING PERMIT PROJECTS:
 - a. FOR INSPECTIONS, YOU MUST CALL BEFORE 12:00 P.M., 48 HOURS PRIOR TO YOUR INSPECTION REQUEST.
 - b. EACH INSPECTION WILL BE ALLOTTED 1 HOUR UNLESS YOU REQUEST FOR MORE TIME.
 - c. ONCE YOUR REQUEST HAS BEEN ACCEPTED, YOU WILL RECEIVE A CALL FROM THE CITY OF NEW BRAUNFELS INSPECTOR.
6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF, IN THE OPINION OF THE ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE IMPROPERLY PLACED OR OTHERWISE INADEQUATE TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
7. A TxDOT TYPE II B-B BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE ROADWAY ADJACENT TO ALL FIRE HYDRANTS. IN LOCATIONS WHERE HYDRANTS ARE SITUATED ON CORNERS, BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH FRONT THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET TxDOT MATERIAL, EPOXY AND ADHESIVE SPECIFICATIONS.

8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, SUBCONTRACTORS, AND CONTRACTOR'S GEO-TECHNICAL ENGINEER TO IMMEDIATELY NOTIFY THE OFFICE OF THE CITY ENGINEER AND PROJECT ENGINEER IF THE PRESENCE OF GROUNDWATER WITHIN THE SITE IS EVIDENT. UPON NOTIFICATION THE PROJECT ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. THE CITY ENGINEER SHALL RESPOND WITHIN TWO (2) BUSINESS DAYS TO THE PROJECT ENGINEER'S REQUEST FOR ACTION. IF THE CONSTRUCTION ACTIVITIES DO NOT REVEAL THE DISCOVERY OF GROUNDWATER, SHALL BE SUSPENDED UNTIL THE CITY ENGINEER GRANTS A WRITTEN APPROVAL OF THE GROUNDWATER MITIGATION PLAN.

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

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

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

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

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

14. SAWCUT CURB FOR CONSTRUCTION ENTRANCE.

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

17. IT MAY BE DEEMED NECESSARY TO INCORPORATE TOPSOIL AND SOIL AMENDMENTS (I.E. COMPOST/ FERTILIZER INTO EXISTING SOIL) IN ORDER TO FACILITATE VEGETATION GROWTH. TOPSOIL, COMPOST AND FERTILIZER ADDITIONS SHALL BE CONDUCTED ACCORDING TO ITEMS 160, 161 AND 166 OF TXDOT'S STANDARD SPECIFICATIONS MANUAL, RESPECTIVELY.
18. AREAS REQUIRING PERMANENT VEGETATION (EARTHEN CHANNELS, PONDS, ETC.) ARE REQUIRED TO MEET TXDOT SPECIFICATIONS FOR ITEM 160 TOPSOIL. TESTING PER TEX-128-E WILL BE REQUIRED AT THE CITY'S REQUEST.
19. WATERING MAY ALSO BE NECESSARY TO FACILITATE AND EXPEDITE THE SPROUTING AND GROWTH OF VEGETATION. ITEM 168 OF TXDOT'S STANDARD SPECIFICATIONS MANUAL SHALL BE ADHERED TO FOR VEGETATIVE WATERING.
20. IF EXTENDED DROUGHT CONDITIONS EXIST THAT HINDER OR PROHIBIT THE GROWTH AND ESTABLISHMENT OF VEGETATION, THE CONTRACTOR SHALL PROVIDE A PLAN TO THE CITY OF NEW BRUNSWICK DESCRIBING THE MEASURES THAT WILL BE TAKEN TO STABILIZE EARTHEN DRAINAGE INFRASTRUCTURE UNTIL A TIME WHEN GROWING CONDITIONS BECOME MORE FAVORABLE.

21. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.

1. THE LOCATIONS OF AT&T TEXAS/SWBT FACILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THIS FAILURE TO EXACTLY LOCATE AND PRESERVE THESE UNDERGROUND UTILITIES.

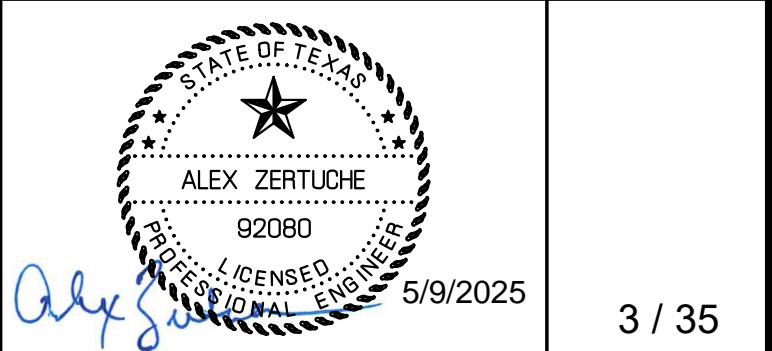
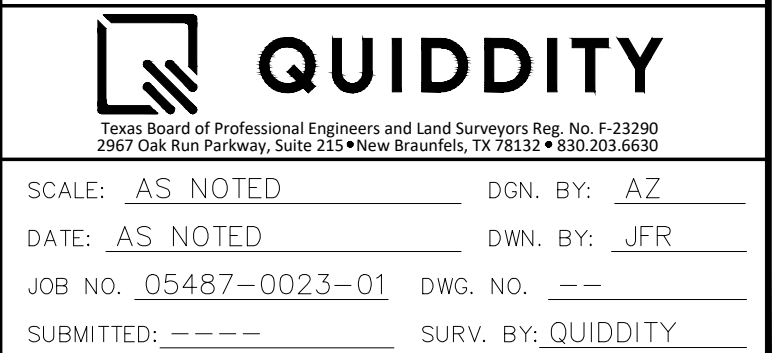
2. THE CONTRACTOR SHALL CALL 1-800-344-8377 (TEXAS 811) A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION TO HAVE UNDERGROUND LINES FIELD LOCATED.
3. WHEN EXCAVATING WITHIN EIGHTEEN INCHES (18") OF THE INDICATED LOCATION OF AT&T TEXAS/SWB/FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE AT&T TEXAS/SWB/FACILITIES.
4. WHEN AT&T TEXAS/SWB/FACILITIES ARE EXPOSED, THE CONTRACTOR WILL PROVIDE SUPPORT TO PREVENT DAMAGE TO THE CONDUIT DUCTS OR CABLES. WHEN EXCAVATING NEAR TELEPHONE POLES THE CONTRACTOR SHALL BRACE THE POLE FOR SUPPORT.
5. THE PRESENCE OR ABSENCE OF AT&T TEXAS/SWB UNDERGROUND CONDUIT FACILITIES OR BURIED CABLE FACILITIES SHOWN ON THESE PLANS DOES NOT MEAN THAT THERE ARE NO DIRECT BURIED CABLES OR OTHER CABLES IN CONDUIT IN THE AREA.

1. ALL SCALES SHOWN ARE FOR 22"x34" SHEETS. ADJUST SCALE ACCORDINGLY FOR HALF SIZED (11"x17") SHEETS.



SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

GENERAL NOTES II
































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



PROPOSED LEGEND



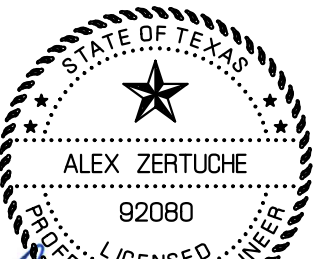
— LOC —	EASEMENT
— SF — SF —	LIMITS OF CONSTRUCTION
- XX XX XX XX XX XX -	SILT FENCE
- \ / \ / \ / \ / \ / \ / -	REMOVE EXISTING UTILITY
—	ABANDON EXISTING UTILITY
●	UTILITY
○	SEWER MANHOLE
○	SEWER CLEANOUT
]	MANHOLE VENT
⊥	PLUG
⊥	TEE
⊥	CROSS
⊥ ⊥ ⊥ ⊥ ⊥	BENDS
▶	REDUCER
⊗	GATE VALVE
□	METER BOX
□	METER VAULT

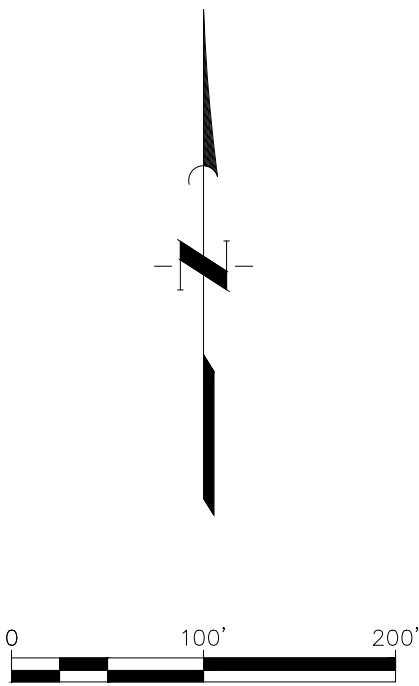
EXISTING LEGEND

	ROW/PROPERTY LINE
	EASEMENT
	PAVEMENT
	EDGE OF GRAVEL
	CONTOUR
	CHAIN LINK FENCE
	WOOD FENCE
	GUARD FENCE
	OVERHEAD ELECTRIC
	ABANDONED UTILITY
	SANITARY SEWER
	QL"B" - AT&T (FIBER OPTIC/DUCT)
	QL"B" - AT&T (TELE)
	QL"B" - FIBERLIGHT (FIBER OPTIC/DUCT)
	QL"B" - MCI (FIBER OPTIC/DUCT)
	QL"B" - SPECTRUM (FIBER OPTIC/DUCT)
	QL"B" - SPECTRUM (CABLE TV)
	QL"B" - CENTERPOINT ENERGY GAS
	QL"B" - TXDOT TRAFFIC SIGNAL
	QL"B" - WATER
	QL"C/D" - AT&T (FIBER OPTIC/DUCT)
	QL"C/D" - AT&T (TELE)
	QL"C/D" - FIBERLIGHT (FIBER OPTIC/DUCT)
	QL"C/D" - MCI (FIBER OPTIC/DUCT)
	QL"C/D" - SPECTRUM (FIBER OPTIC/DUCT)
	QL"C/D" - SPECTRUM (CABLE TV)
	QL"C/D" - CENTERPOINT ENERGY GAS
	QL"C/D" - TXDOT TRAFFIC SIGNAL
	QL"C/D" - WATER

EXISTING LEGEND

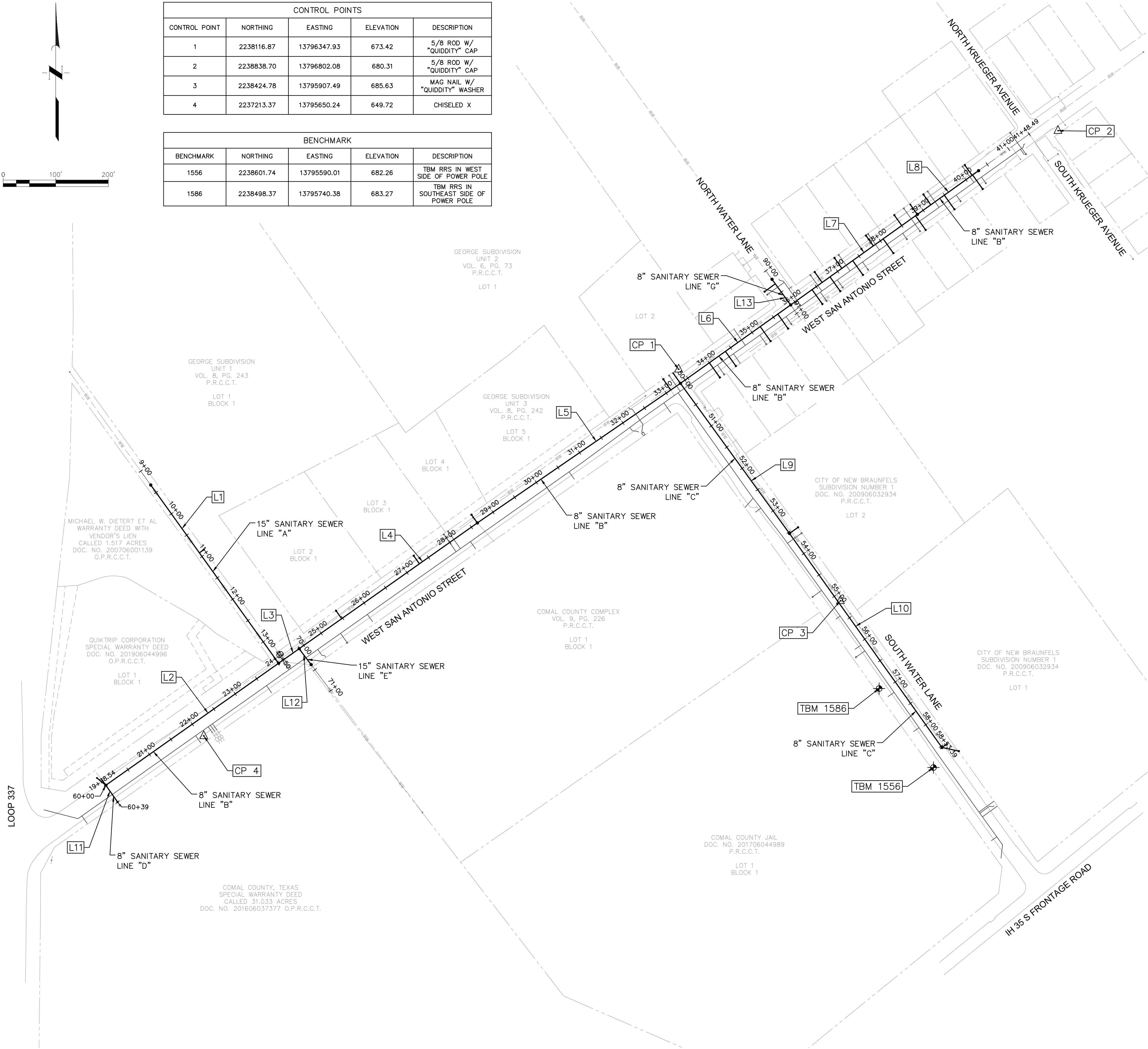
	POWER WIRE
	GUY WIRE
	WATER METER
	WATER VALVE
	IRRIGATION
	FIRE HYDRANT
	MANHOLE
	SEWER CLEANOUT
	TRAFFIC SIGNAL POLE
	TRAFFIC SIGNAL BOX
	TELEPHONE PEDESTAL
	GAS METER
	GAS VALVE
	GAS TEST STATION
	LIGHT
	MAILBOX
	SIGN
	TREE
	CONCRETE
	GRAVEL

No.	Date	Revisions						App.	
<div style="text-align: center;"> New Braunfels Utilities</div>									
SAN ANTONIO STREET REHABILITATION PHASE 3 PROJECT									
LEGEND									
<div style="display: flex; align-items: center; justify-content: space-around;"><div style="text-align: center;"></div><div><h1>QUIDDITY</h1></div></div> <div style="font-size: small; margin-top: 5px; text-align: center;">Texas Board of Professional Engineers and Land Surveyors Reg. No. F-33290 2967 Oak Run Parkway, Suite 215 • New Braunfels, TX 78132 • 830.203.6630</div>									
SCALE:		<u>AS NOTED</u>				DGN. BY:		<u>AZ</u>	
DATE:		<u>AS NOTED</u>				D.W.N. BY:		<u>JFR</u>	
JOB NO.		<u>05487-0023-01</u>				DWG. NO.		<u>--</u>	
SUBMITTED:		<u>---</u>				SURV. BY:		<u>QUIDDITY</u>	
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						5/9/2025			
4 / 35									



CONTROL POINTS				
CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	2238116.87	13796347.93	673.42	5/8 ROD W/ "QUIDDITY" CAP
2	2238838.70	13796802.08	680.31	5/8 ROD W/ "QUIDDITY" CAP
3	2238424.78	13795907.49	685.63	MAG NAIL W/ "QUIDDITY" WASHER
4	2237213.37	13795650.24	649.72	CHISELED X

BENCHMARK				
BENCHMARK	NORTHING	EASTING	ELEVATION	DESCRIPTION
1556	2238601.74	13795590.01	682.26	TBM RRS IN WEST SIDE OF POWER POLE
1586	2238498.37	13795740.38	683.27	TBM RRS IN SOUTHEAST SIDE OF POWER POLE



SEWER MAIN ALIGNMENT A LINE TABLE				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L1	450.00	S35° 39' 02.69"E	(2237093.45,13796154.18)	(2237355.73,13795788.51)

SEWER MAIN ALIGNMENT B LINE TABLE				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L2	402.39	N54° 46' 05.64"E	(2237027.05,13795556.38)	(2237355.73,13795788.51)
L3	47.90	N54° 46' 05.64"E	(2237355.73,13795788.51)	(2237394.85,13795816.15)
L4	415.04	N54° 46' 05.61"E	(2237394.85,13795816.15)	(2237733.87,13796055.58)
L5	468.87	N55° 30' 05.28"E	(2237733.87,13796055.58)	(2238120.28,13796321.14)
L6	257.45	N54° 33' 32.31"E	(2238120.28,13796321.14)	(2238330.04,13796470.43)
L7	296.29	N54° 27' 59.36"E	(2238330.04,13796470.43)	(2238571.15,13796642.63)
L8	143.01	N54° 26' 44.42"E	(2238571.15,13796642.63)	(2238687.50,13796725.78)

SEWER MAIN ALIGNMENT C LINE TABLE				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L9	353.06	S36° 00' 00.81"E	(2238120.28,13796321.14)	(2238327.81,13796035.50)
L10	500.33	S35° 27' 19.16"E	(2238327.81,13796035.50)	(2238618.04,13795627.95)

SEWER MAIN ALIGNMENT D LINE TABLE				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L11	39.00	S34° 56' 25.73"E	(2237027.05,13795556.38)	(2237049.38,13795524.41)

SEWER MAIN ALIGNMENT E LINE TABLE				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L12	100.00	S36° 57' 27.09"E	(2237394.85,13795816.15)	(2237454.98,13795736.24)

SEWER MAIN ALIGNMENT G LINE TABLE				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L13	80.27	S36° 02' 47.24"E	(2238282.80,13796535.33)	(2238330.04,13796470.43)

NO.	DATE	REVISIONS	APP.



SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

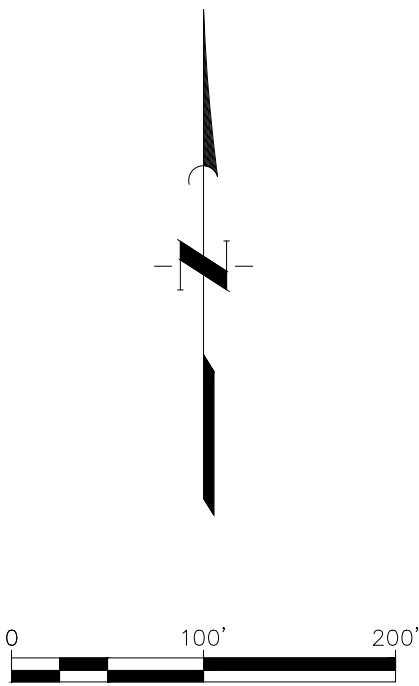
**SANITARY SEWER
ALIGNMENT AND
BENCHMARK CONTROL DATA**



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23220
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DATE: AS NOTED DWN. BY: JFR
JOB NO. 05487-0023-01 DWG. NO. --
SUBMITTED: --- SURV. BY: QUIDDITY





WATER MAIN ALIGNMENT A LINE TABLE				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L1	67.01	S75° 35' 15.11"E	(2236909.23,13795509.48)	(2236974.13,13795492.80)
L2	351.83	N54° 46' 58.79"E	(2236974.13,13795492.80)	(2237261.57,13795695.69)
L3	634.96	N54° 46' 05.64"E	(2237261.57,13795695.69)	(2237780.22,13796061.99)
L4	185.82	N54° 42' 06.39"E	(2237780.22,13796061.99)	(2237931.88,13796169.37)
L5	160.01	N53° 38' 30.28"E	(2237931.88,13796169.37)	(2238060.74,13796264.22)
L6	176.61	N54° 47' 34.33"E	(2238060.74,13796264.22)	(2238205.04,13796366.04)
L7	131.43	N54° 46' 17.98"E	(2238205.04,13796366.04)	(2238312.40,13796441.86)
L8	565.43	N54° 27' 59.36"E	(2238312.40,13796441.86)	(2238772.54,13796770.48)
L9	4.81	N10° 15' 50.25"E	(2238772.54,13796770.48)	(2238773.39,13796775.21)

WATER MAIN ALIGNMENT B LINE TABLE				
LINE #	LENGTH	DIRECTION	START POINT	END POINT
L10	241.51	S35° 24' 45.91"E	(2238115.90,13796303.14)	(2238255.85,13796106.31)
L11	99.80	S37° 29' 34.64"E	(2238255.85,13796106.31)	(2238316.59,13796027.13)
L12	74.26	S35° 57' 34.13"E	(2238316.59,13796027.13)	(2238360.20,13795967.02)
L13	116.59	S35° 47' 35.25"E	(2238360.20,13795967.02)	(2238428.38,13795872.45)
L14	79.52	S35° 18' 34.95"E	(2238428.38,13795872.45)	(2238474.35,13795807.56)
L15	240.13	S35° 10' 14.27"E	(2238474.35,13795807.56)	(2238612.67,13795611.26)
L16	117.78	S35° 32' 54.25"E	(2238612.67,13795611.26)	(2238681.14,13795515.44)
L17	89.21	S35° 42' 08.29"E	(2238681.14,13795515.44)	(2238733.20,13795443.00)
L18	25.55	S6° 31' 35.54"W	(2238733.20,13795443.00)	(2238730.30,13795417.61)

NO.	DATE	REVISIONS	APP.



SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

WATER ALIGNMENT DATA

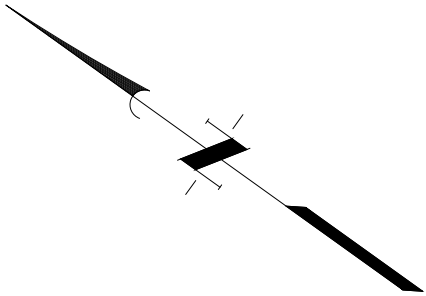
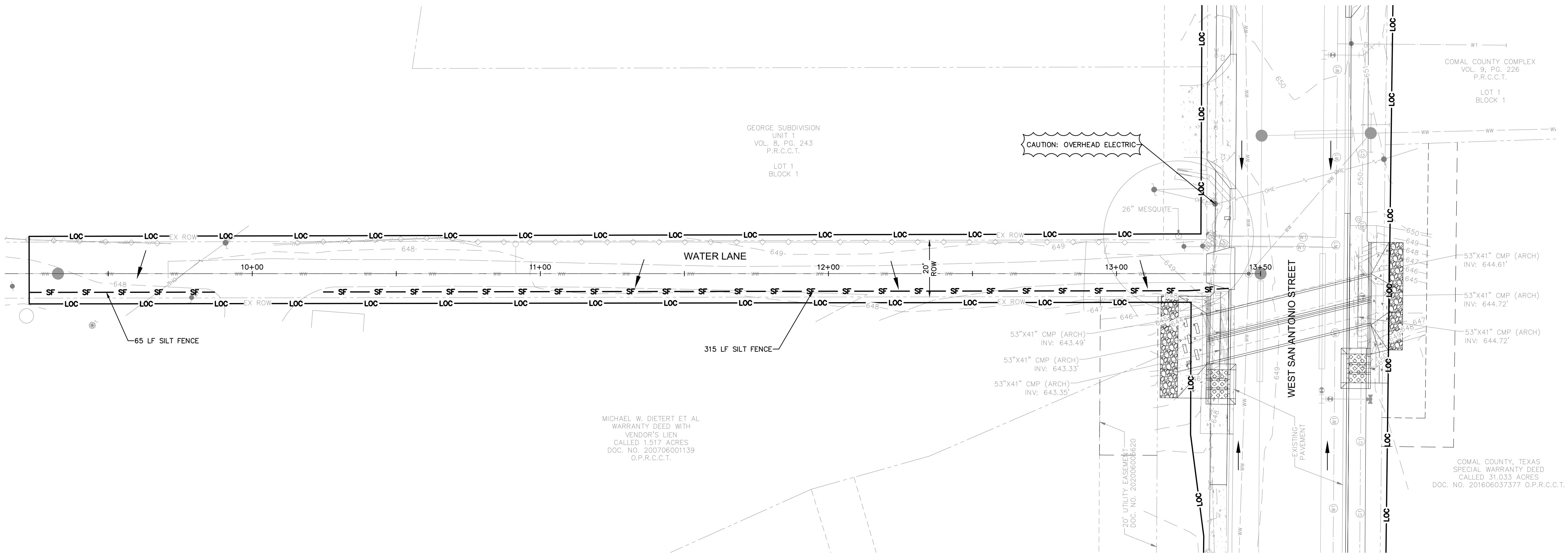


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LEGEND

- SF SILT FENCE
- LOC LIMITS OF CONSTRUCTION
- DRAINAGE DIRECTION

EROSION CONTROL NOTES:

- ALL SILT FENCING AND OTHER EROSION CONTROL MEASURES SHALL BE LOCATED AT OR WITHIN PUBLIC RIGHT OF WAY OR UTILITY EASEMENTS.
- PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.

NOTE:
SEE "CITYWIDE STREETS IMPROVEMENT PROJECTS (SAN ANTONIO STREET & WATER LANE)" FOR CONTINUATION OF PROPOSED EROSION CONTROL

NO.	DATE	REVISIONS	APP.



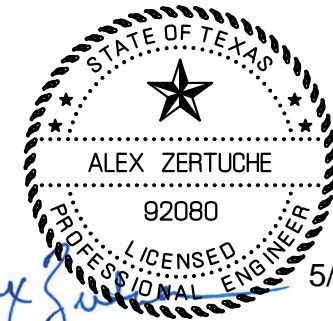
SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

EROSION CONTROL



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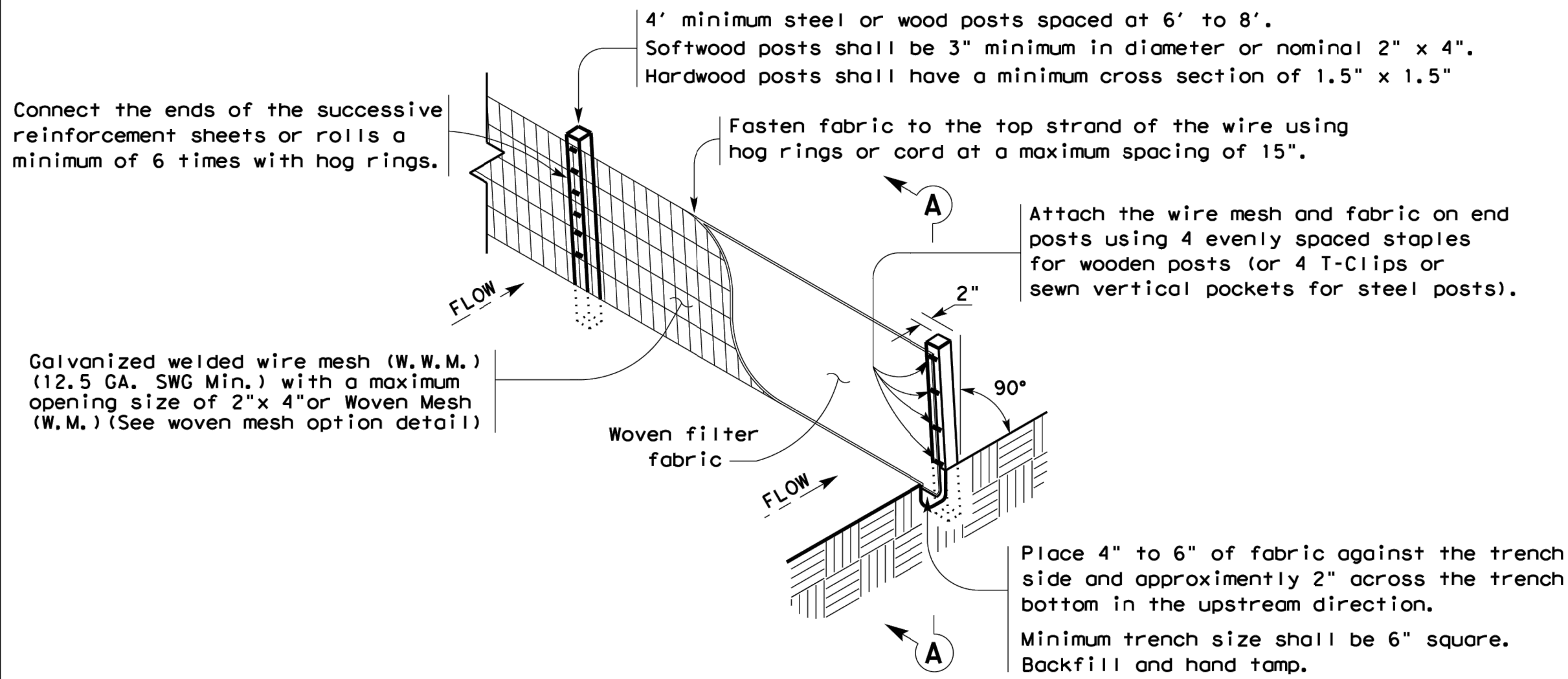
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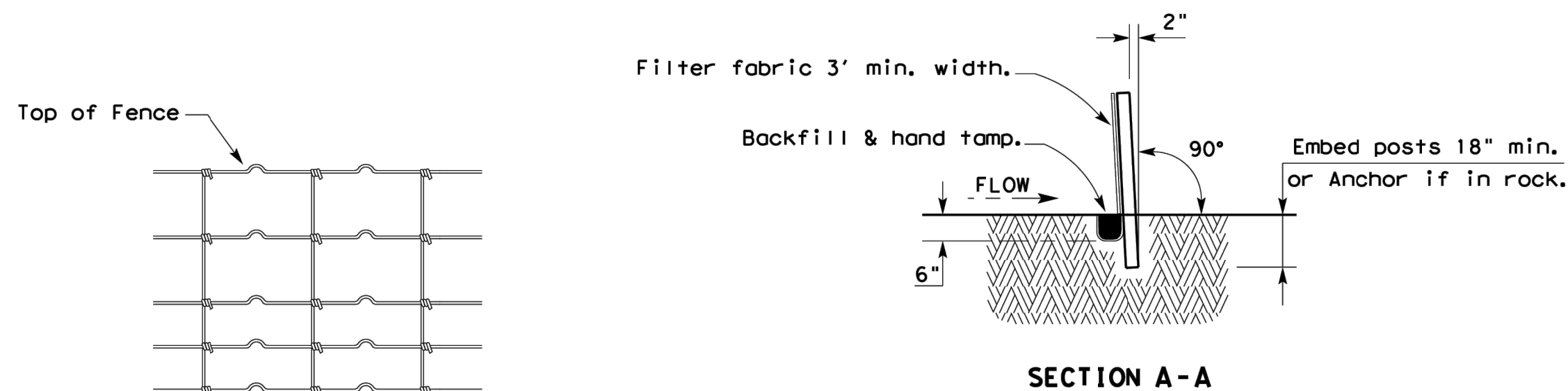
DISCLAIMER:
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DATE
FILE



TEMPORARY SEDIMENT CONTROL FENCE

SCF



HINGE JOINT KNOT WOVEN MESH (OPTION) DETAIL

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

SEDIMENT CONTROL FENCE USAGE GUIDELINES

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

Sediment control fence should be sized to filter a maximum flow through rate of 100 GPM/FT². Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

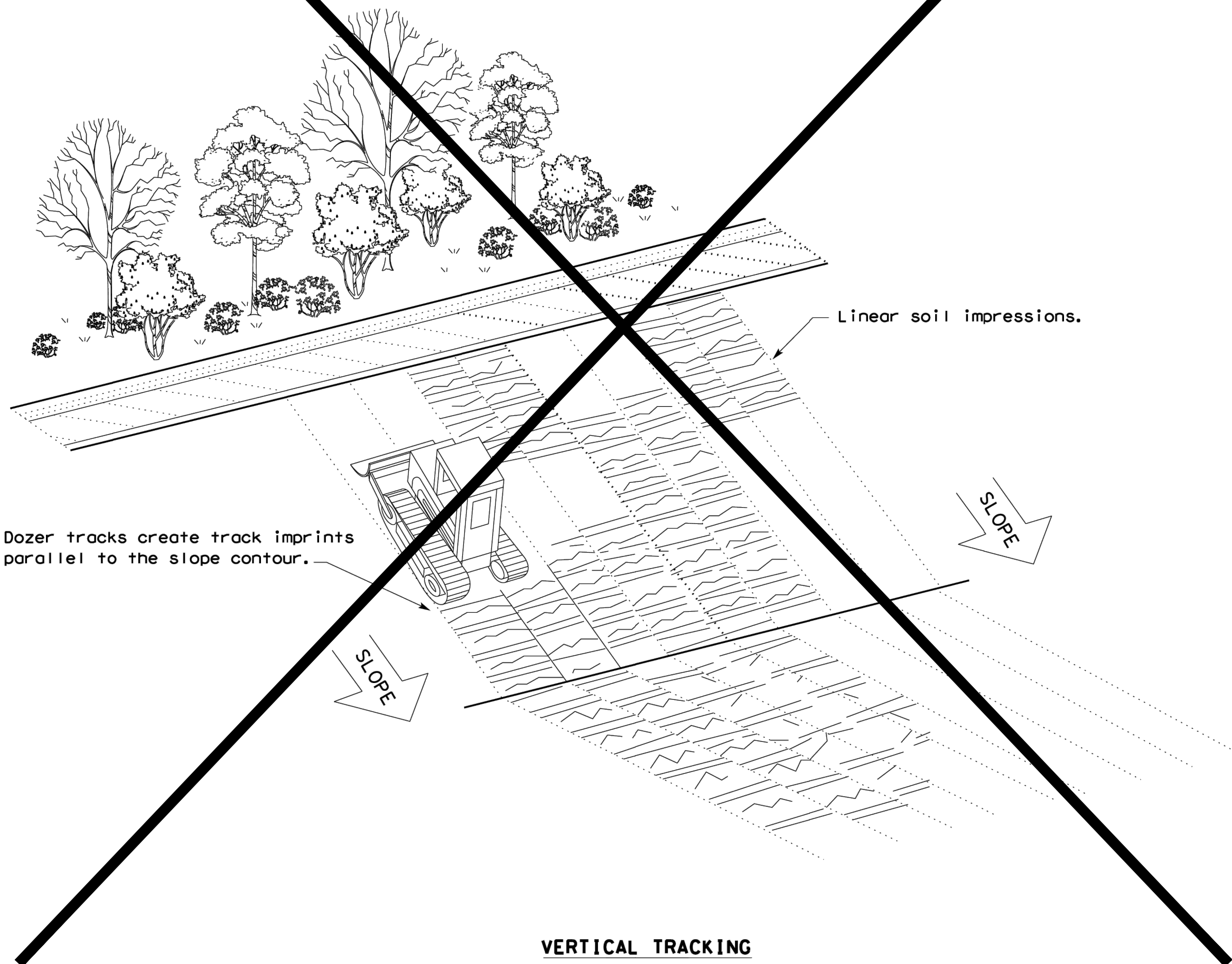
LEGEND


Sediment Control Fence

SCF


GENERAL NOTES

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



		Design Division Standard	
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES FENCE & VERTICAL TRACKING			
EC(1)-16			
FILE: ec116	DN: TxDOT	CK: KM	DN: VP
© TxDOT: JULY 2016	CONT	SECT	JOB
REVISIONS	DIST	COUNTY	SHEET NO.


NO.	DATE	REVISIONS	APP.



NBU
New Braunfels Utilities


SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

EROSION CONTROL DETAILS I



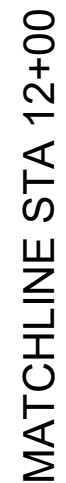
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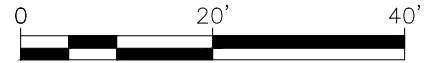
ALEX ZERTUCHE
92080
LICENSED PROFESSIONAL ENGINEER
5/9/2025

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KEYED NOTES

-



AT&T	(210) 213-1893
PARISH AUSTIN	
CENTERPOINT ENERGY	
CLIFFORD WHARTON	(830) 237-6350
FIBERLIGHT	
JOEY PUENTE	(830) 273-4250
SPECTRUM	
LEO GARCIA	(210) 793-8066
TEXAS ONE CALL SYSTEM	811

TELEPHONE LOCATOR

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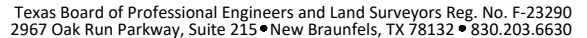
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5. ABANDONMENT OF EXISTING SANITARY SEWER AND WATER PIPE SHALL BE PER NBU SPEC 510.

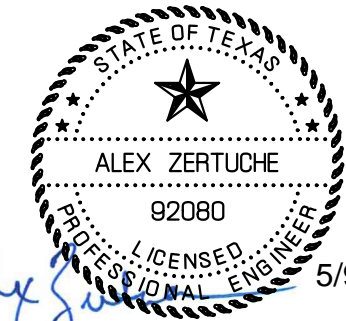
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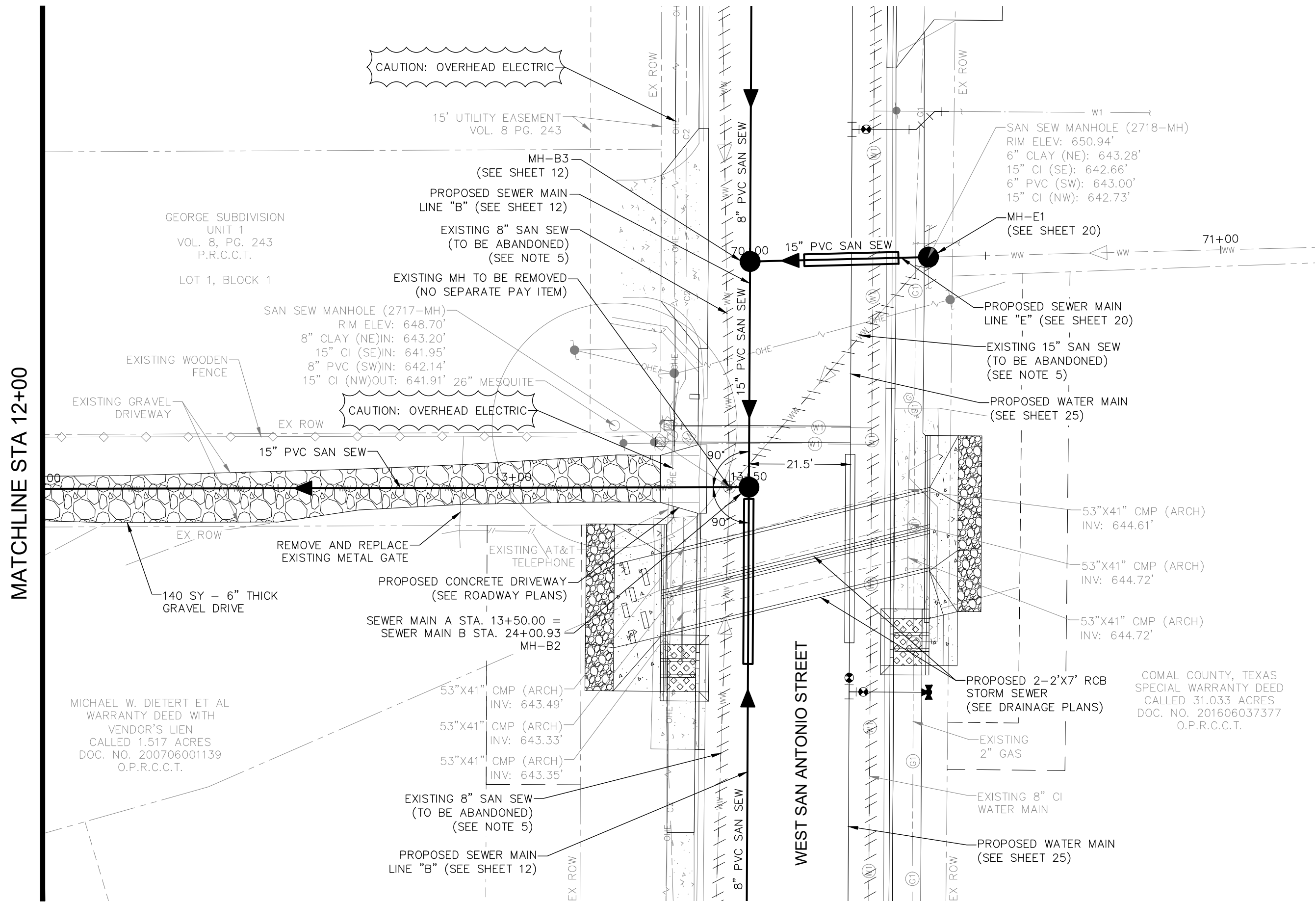
SANITARY SEWER LINE A
BEGIN TO 12+00



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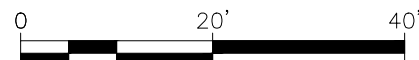
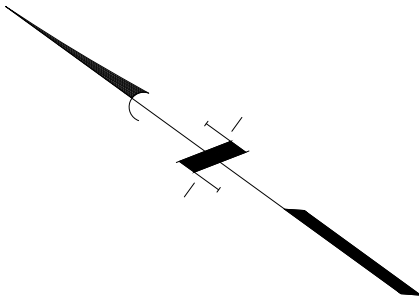
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CENTERPOINT ENERGY	(830) 237-6350
CLIFFORD WHARTON	(830) 273-4250
FIBERLIGHT	(210) 793-8066
JOEY PUENTE	811
SPECTRUM	
LEO GARCIA	
TEXAS ONE CALL SYSTEM	

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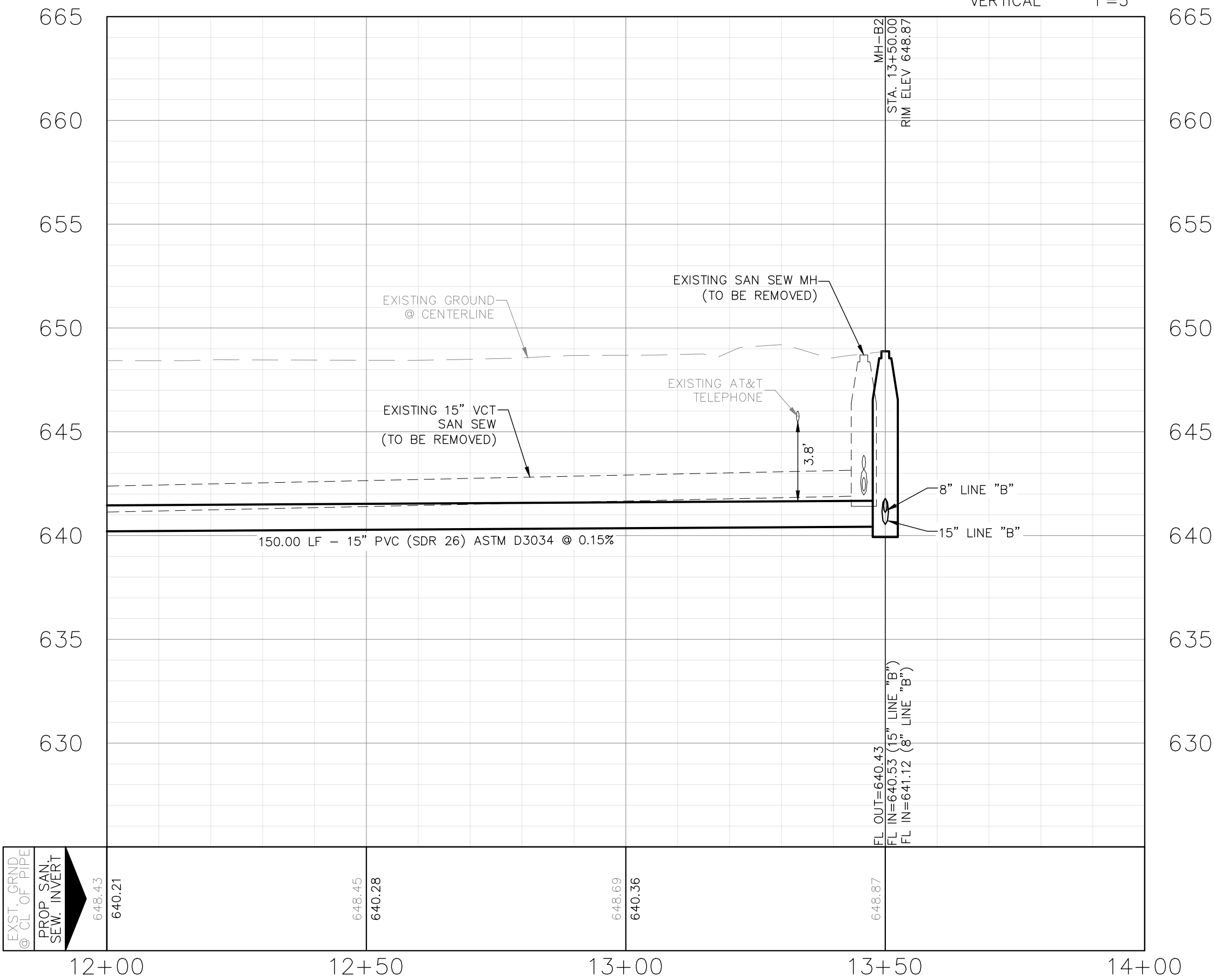
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SANITARY SEWER LINE "A" STA 12+00 TO END

SCALE
HORIZONTAL 1"=20'
VERTICAL 1"=5'



NO.	DATE	REVISIONS	APP.

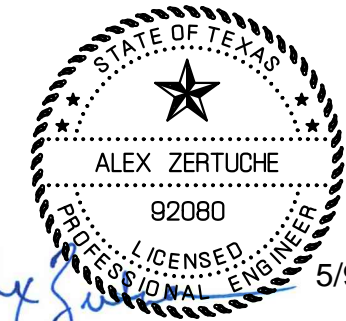


SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

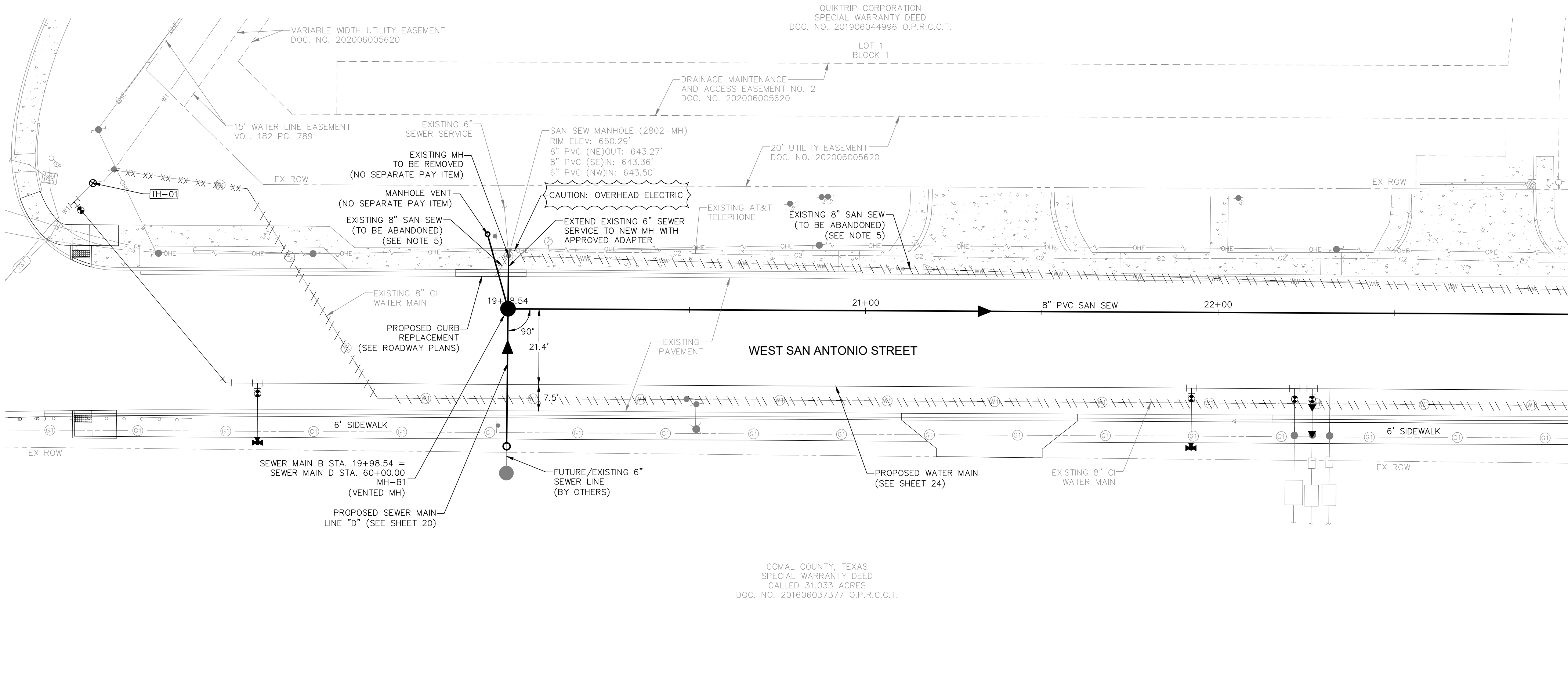
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STA 12+00 TO END



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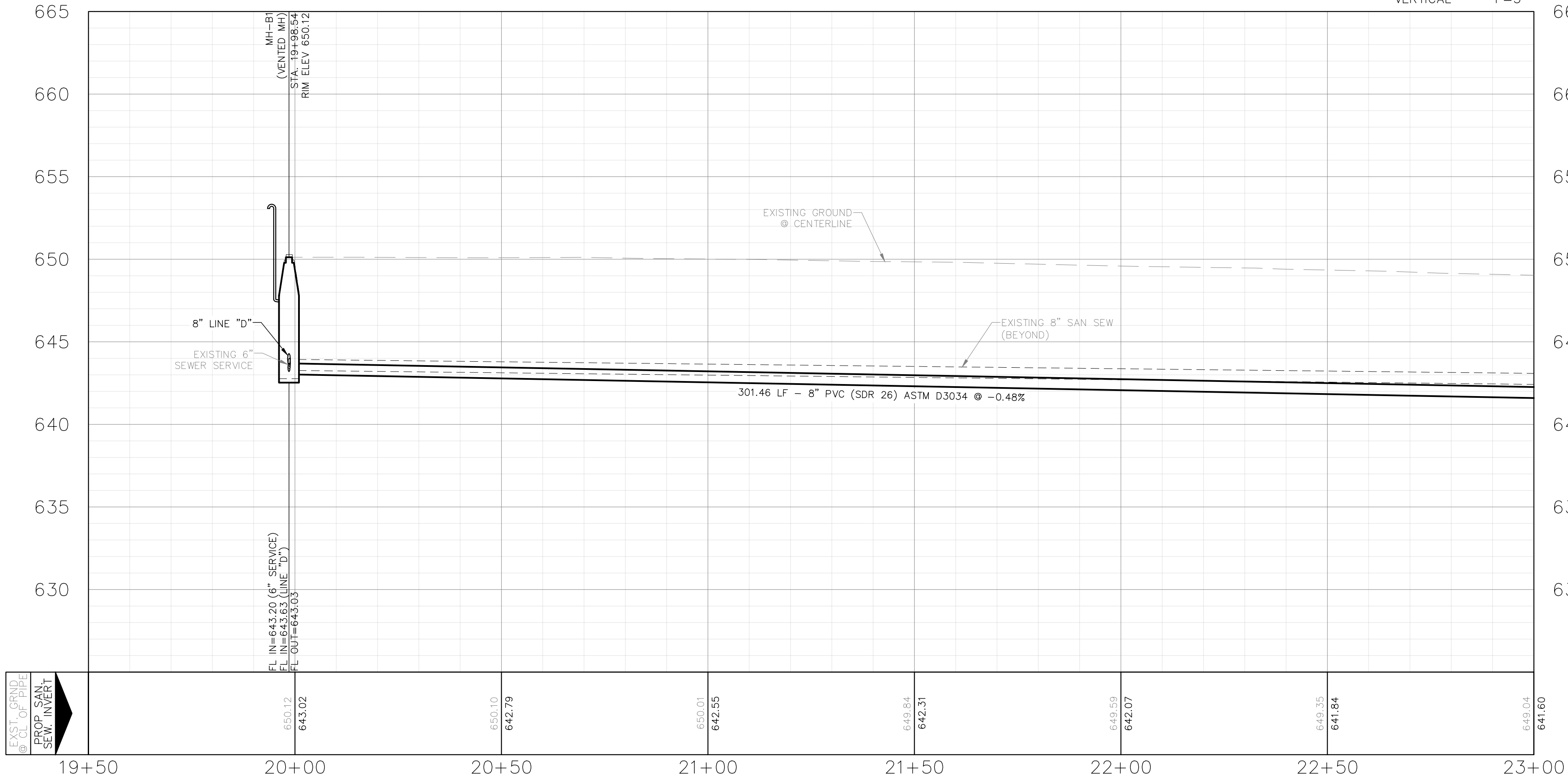


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SANITARY SEWER LINE "B" BEGIN TO 23+00

SCALE
HORIZONTAL 1"=20'
VERTICAL 1"=5'



SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-01	18" CSC WATER	13795516.96	2236910.49	650.58	641.49	*TRGs target utility was an 18" CSC water line. Crew exposed the west edge of the utility. Size & material per record. Owner: New Braunfels Utilities

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FIBERLIGHT	
JOEY PUENTE	(830) 273-4250
SPECTRUM	
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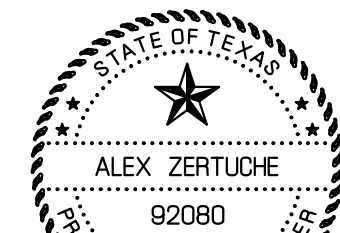
SAN ANTONIO STREET REHABILITATION
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SANITARY SEWER LINE B
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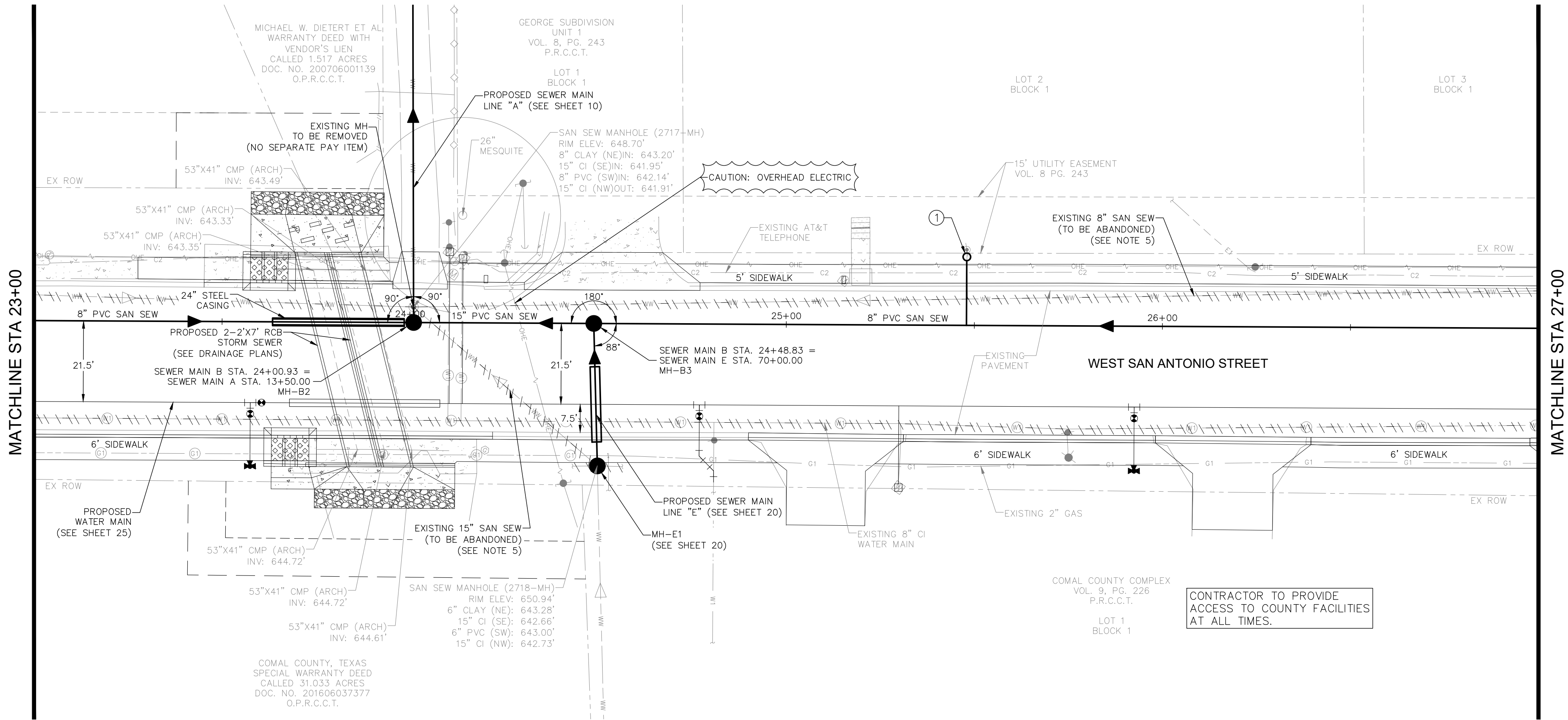
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23220
2987 Oak Run Parkway, Suite 215 • New Braunfels, TX 78131 • 830.203.6630

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5/9/2025

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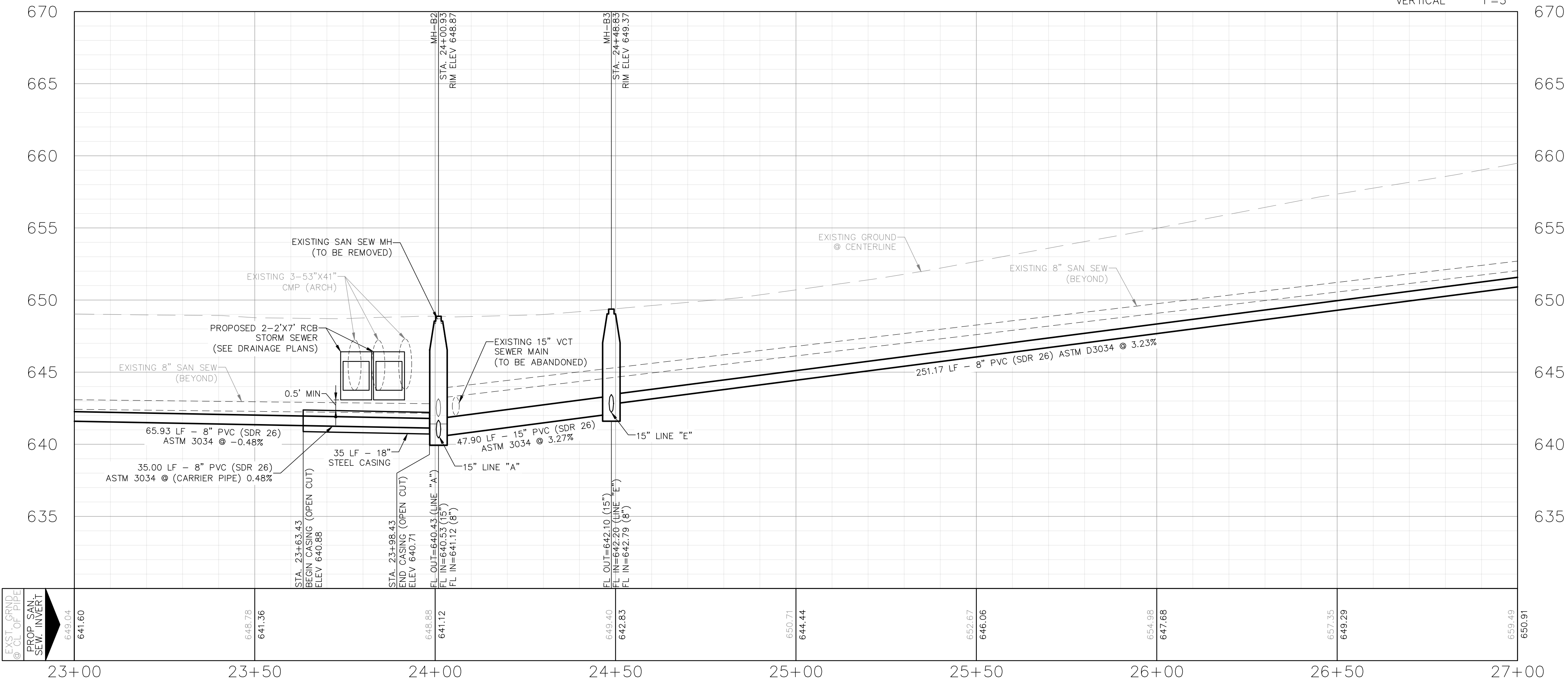
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SCALE
HORIZONTAL 1"=20'
VERTICAL 1"=5'

SANITARY SEWER LINE "B" STA 23+00 TO 27+00



- CONSTRUCTION NOTES:
- WHERE WATER MAINS AND SERVICES AND SEWER MAINS AND LATERALS ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER 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 30 TAC §290.44(E) (WATER DISTRIBUTION). (NO SEPARATE PAY ITEM).
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NO.	DATE	REVISIONS	APP.



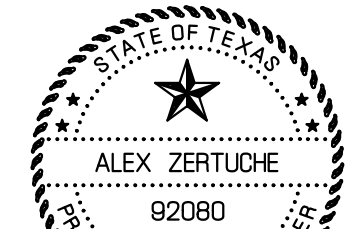
SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

SANITARY SEWER LINE B
STA 23+00 TO 27+00



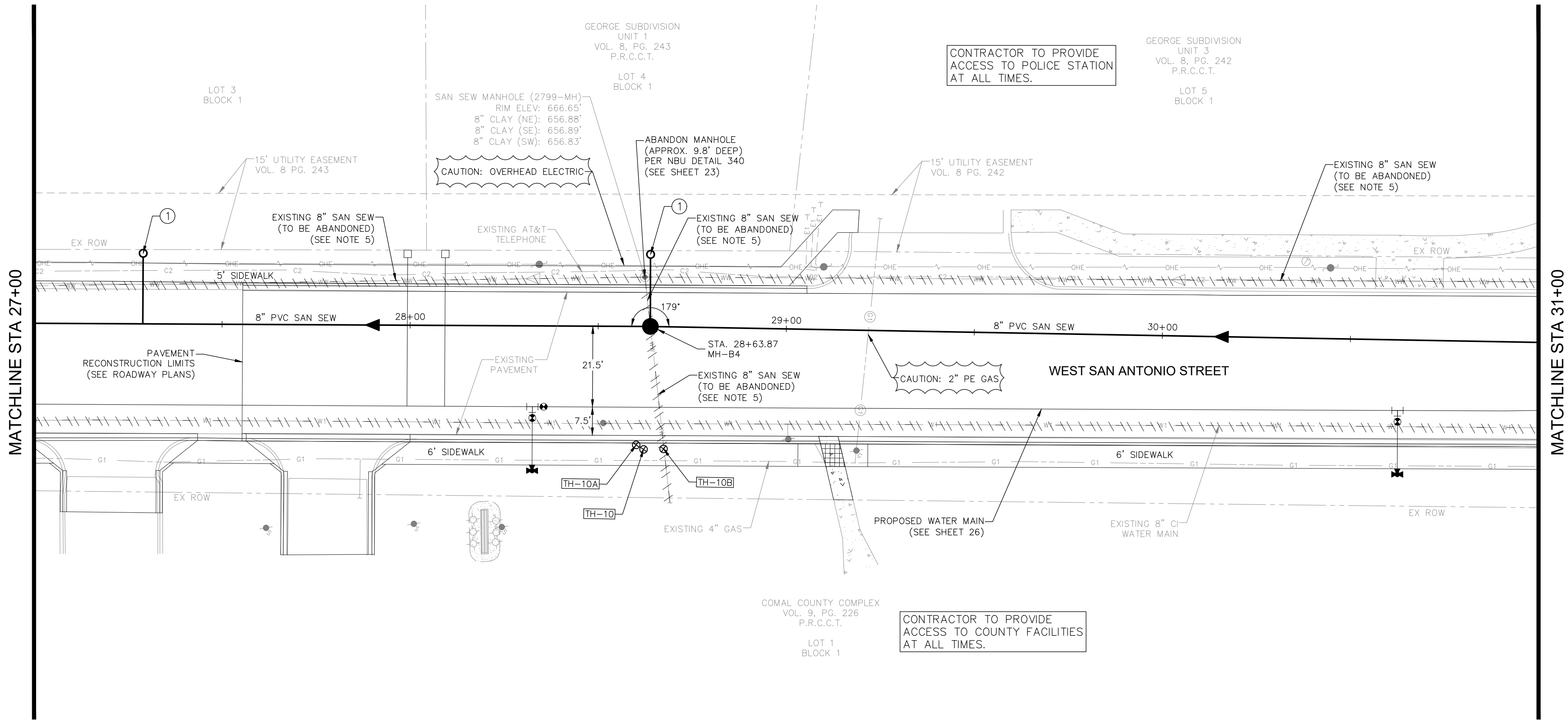
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23220
2957 Oak Run Parkway, Suite 215 • New Braunfels, TX 78131 • 830.203.6630

SCALE: AS NOTED DGN. BY: AZ
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JOB NO. 05487-0023-01 DWG. NO. --
SUBMITTED: --- SURV. BY: QUIDDITY



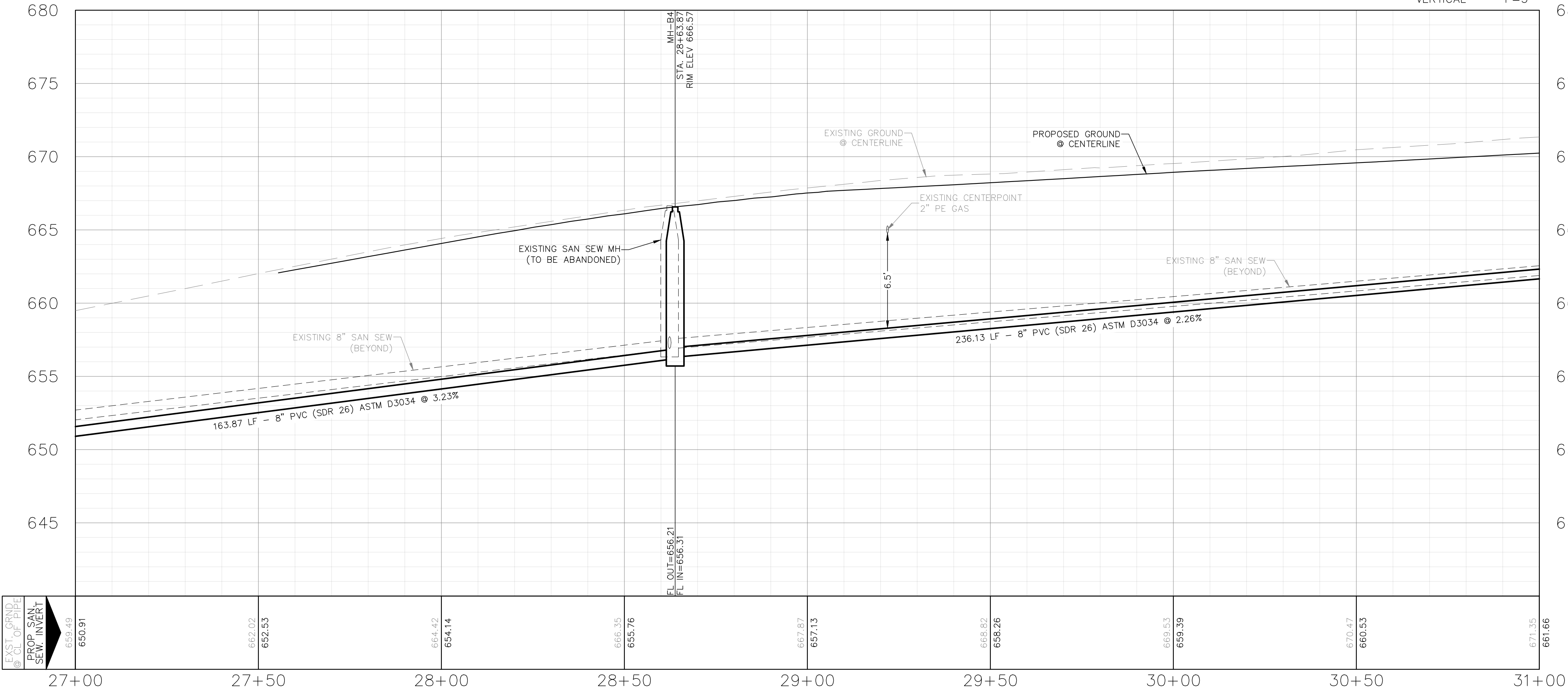
5/9/2025

\\nbs\as7\05487-0023-01 san antonio street rehabilitation phases 3 project\2 design phase\3d\Drawings\05487-0023-01-SF-PLAN San Antonio Street Rehabilitation Phases 3 Project.dwg May 08, 2025 - 10:15am JPR



SANITARY SEWER LINE "B" STA 27+00 TO 31+00

SCALE
HORIZONTAL 1"=20'
VERTICAL 1"=5'



SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-10	N/A	13796027.91	2237751.39	667.31	N/A	*TRG's target utility was a 6" unknown material sewer line. Crew excavated to 10.90 feet and did not expose utility. Owner: New Braunfels Utilities
TH-10A	N/A	13796027.74	2237749.09	667.07	N/A	*Second attempt. TRG's target utility was a 6" unknown material sewer line. Crew excavated to 9.71 feet and did not expose utility. Owner: New Braunfels Utilities
TH-10B	10" VCP SEWER	13796031.1	2237755.64	667.45	657.43	*Third attempt. TRG's target utility was a 6" unknown material sewer line. Crew exposed a 10" VCP sewer line at a pipe joint. Owner: New Braunfels Utilities

CONTRACTOR SHALL BRACE AND PROTECT EXISTING UTILITIES LOCATED WITHIN PROPOSED UTILITY TRENCHES (NO SEPARATE PAY ITEM)

KEYED NOTES

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LEO GARCIA	
TEXAS ONE CALL SYSTEM	

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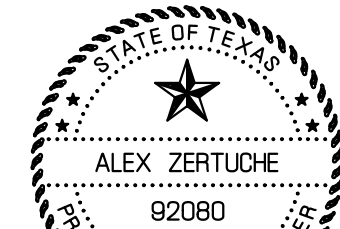
SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

SANITARY SEWER LINE B
STA 27+00 TO 31+00



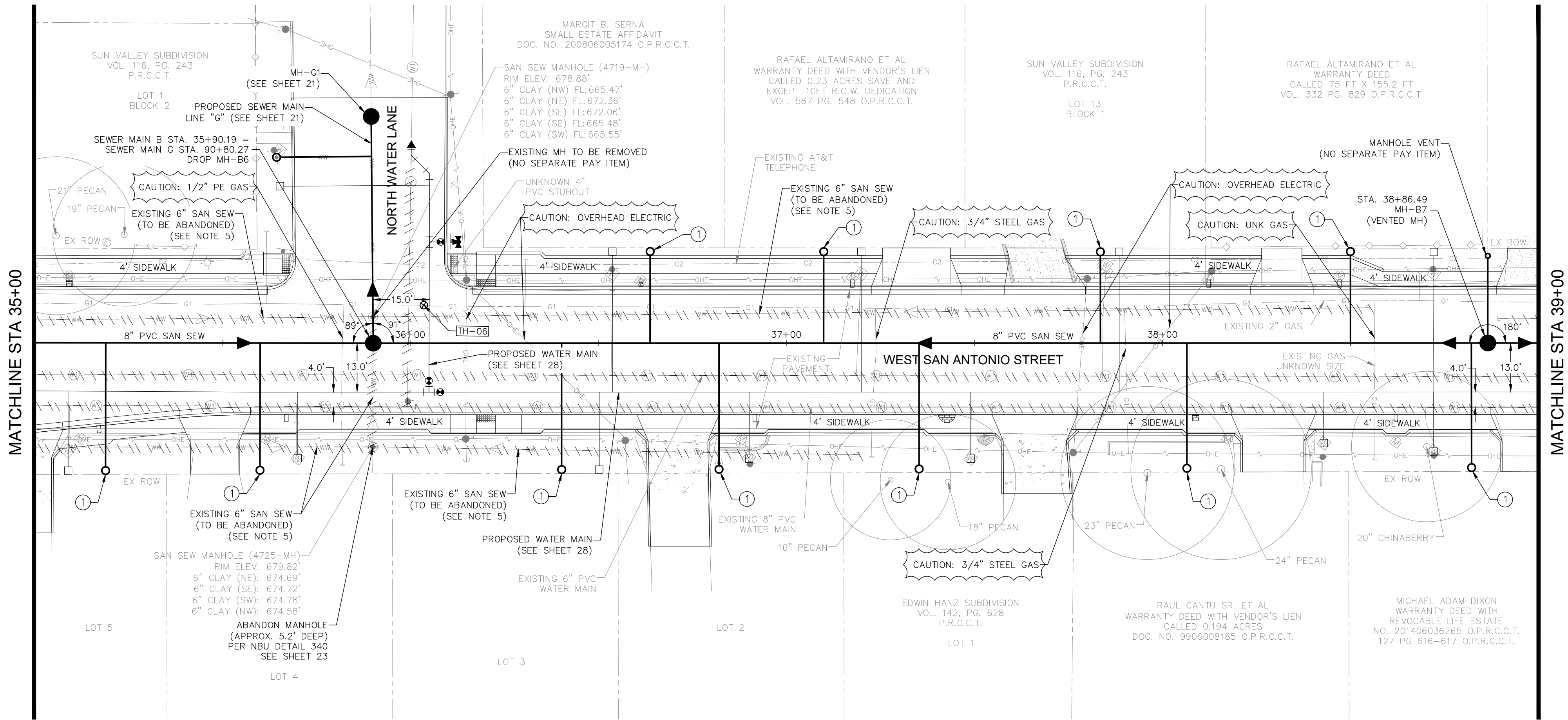
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23220
2957 Oak Run Parkway, Suite 215 • New Braunfels, TX 78131 • 830.203.6630

SCALE: AS NOTED DGN. BY: AZ
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5/9/2025

\\nas87\0487-0025-01 san antonio street rehabilitation phases 3 project\2 design phase\Drawings\0487-0025-01-SF-PLAN San Sew A.dwg, May 08, 2025 - 10:15am, jfr



SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-06	2\"	13796486.46	2238335.1	678.84	676.29	Owner: Centerpoint Energy

CONTRACTOR SHALL BRACE AND PROTECT EXISTING UTILITIES LOCATED WITHIN PROPOSED UTILITY TRENCHES (NO SEPARATE PAY ITEM)

KEYED NOTES

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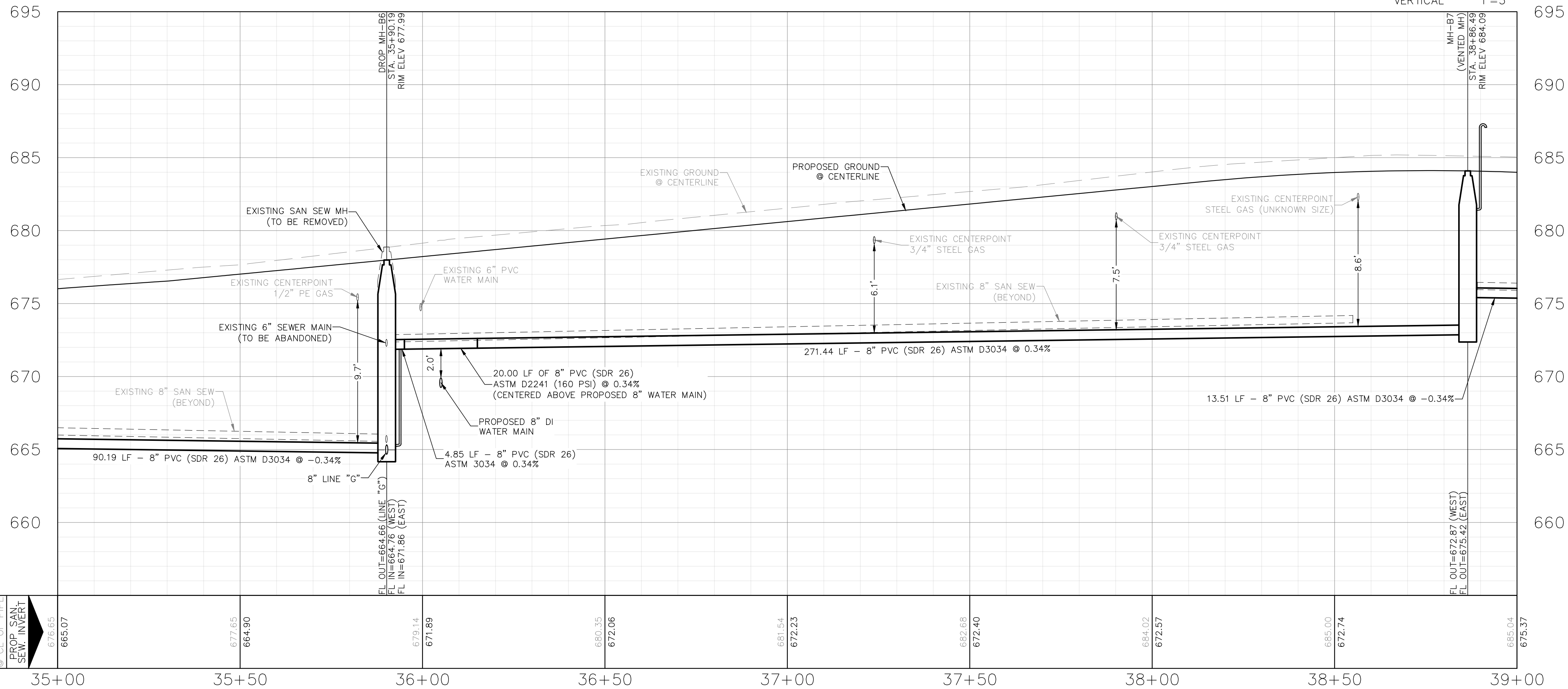
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SANITARY SEWER LINE "B" STA 35+00 TO 39+00

SCALE
HORIZONTAL 1"=20'
VERTICAL 1"=5'



NO.	DATE	REVISIONS	APP.

NBU
New Braunfels Utilities

SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

SANITARY SEWER LINE B
STA 35+00 TO 39+00

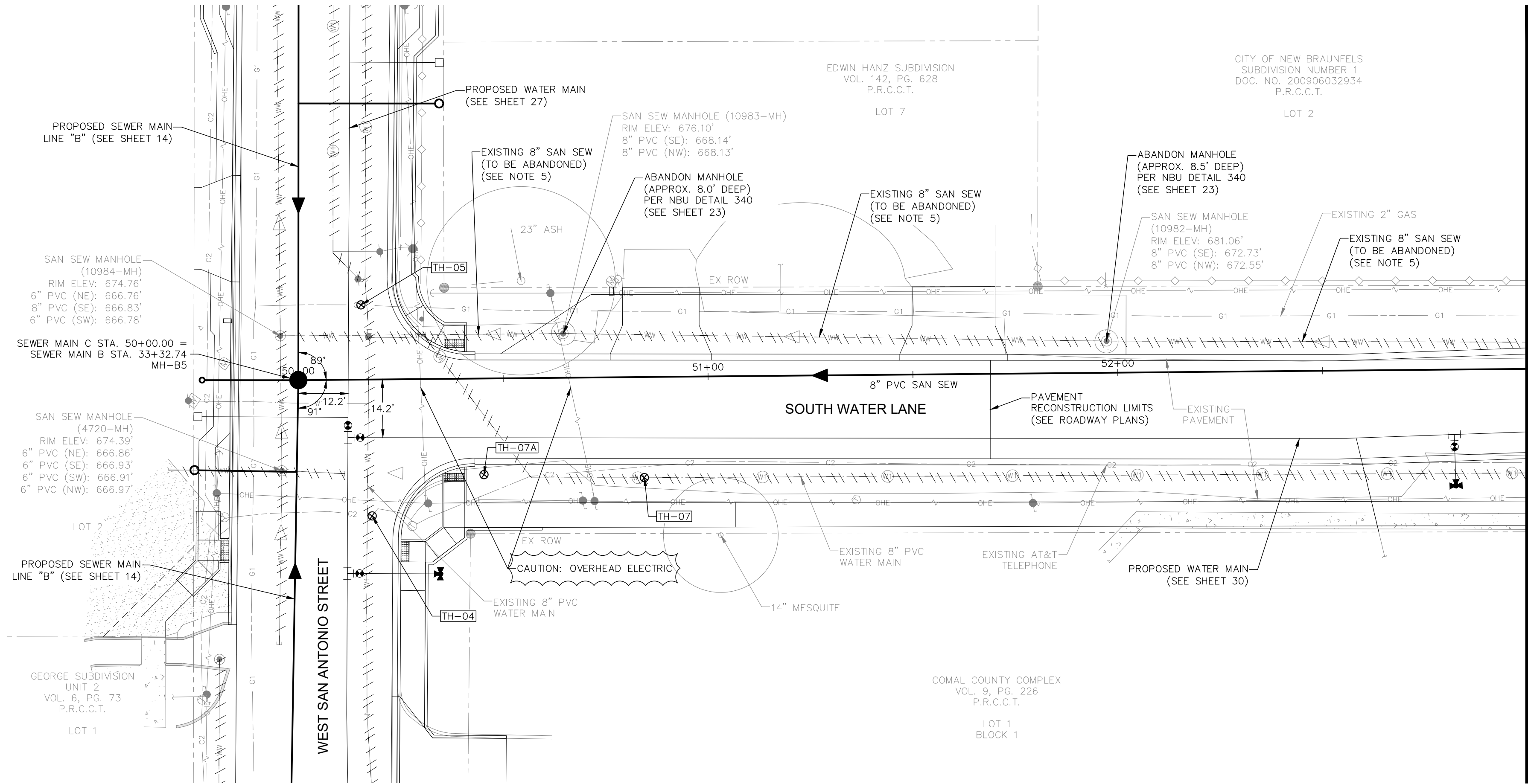
QUIDDITY
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STATE OF TEXAS
ALEX ZERTUCHE
92080
LICENSED PROFESSIONAL ENGINEER
5/9/2025

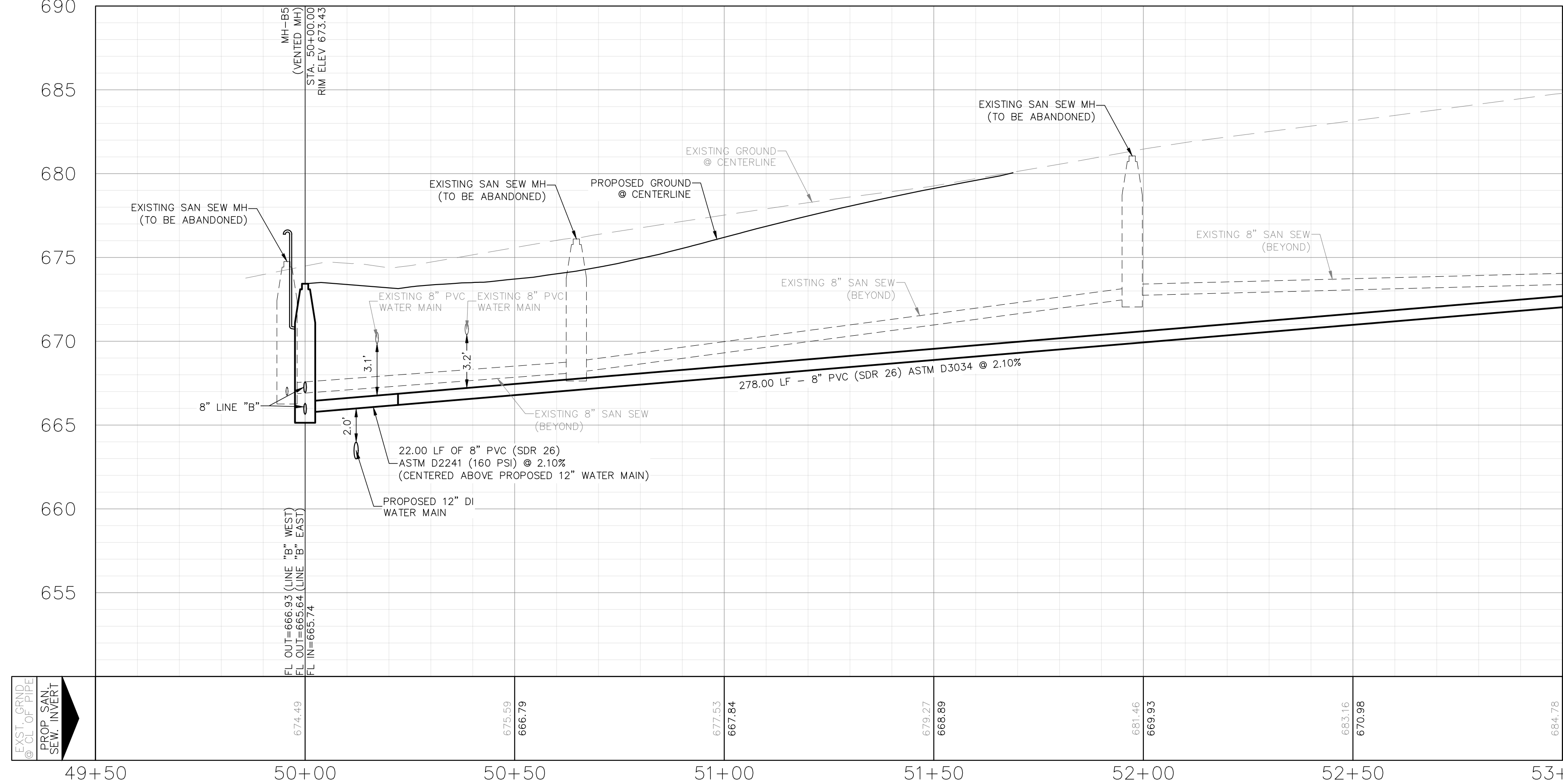
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SANITARY SEWER LINE "C" BEGIN TO 53+00

SCALE
HORIZONTAL 1"=20'
VERTICAL 1"=5'



SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-04	1" DBC TELE	13796287.24	2238103.75	674.06	669.92	Owner: AT&T
TH-05	2" STEEL GAS	13796319.37	2238144.12	674.62	672.12	Owner: Centerpoint Energy
TH-07	8" PVC WATER	13796238.56	2238149.9	676.18	671.07	TRG's target utility was a 6" PVC sewer line. Crew exposed an 8" PVC water line. Owner: New Braunfels Utilities
TH-07A	N/A	13796270.87	2238127.79	675.03	N/A	*Second Attempt. TRG's target utility was a 6" PVC sewer line. Crew excavated to a depth of 8.32' but did not expose utility. Owner: New Braunfels Utilities

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KEYED NOTES

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SPECTRUM	
LEO GARCIA	
TEXAS ONE CALL SYSTEM	(210) 793-8066
	811

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

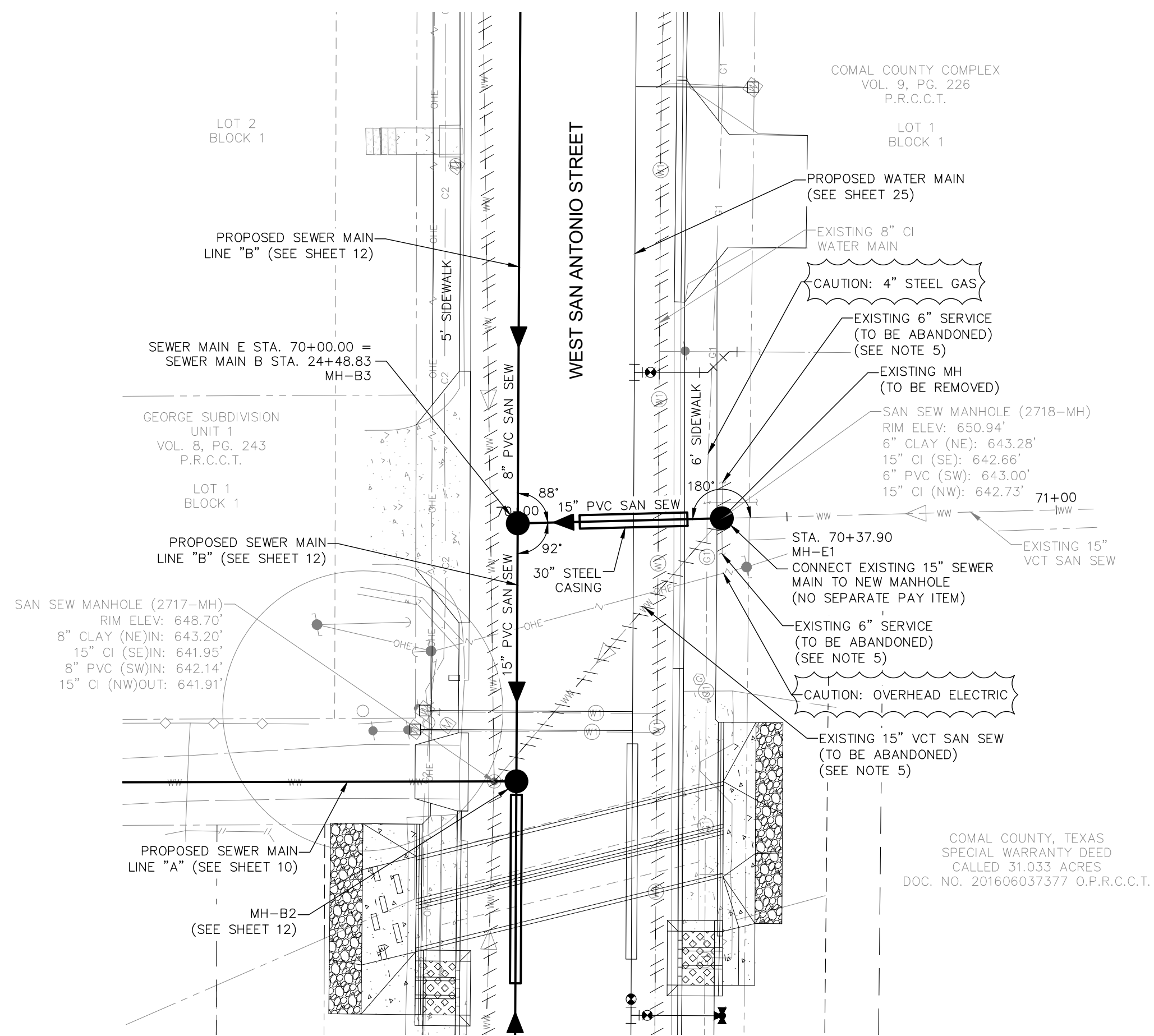
CONSTRUCTION NOTES:

- WHERE WATER MAINS AND SERVICES AND SEWER MAINS AND LATERALS ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER 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 30 TAC §290.44(E) (WATER DISTRIBUTION). (NO SEPARATE PAY ITEM).
- CONTRACTOR IS REQUIRED TO ENSURE PROTECTION OF POLES AND GUYS DURING CONSTRUCTION ACTIVITIES.
- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
- NO VALVES, HYDRANTS, CLEANOUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
- ABANDONMENT OF EXISTING SANITARY SEWER AND WATER PIPE SHALL BE PER NBU SPEC 510.

UTILITY TRENCH COMPACTION NOTES:

- ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTION OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 98% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
- THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5-FEET IN DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.

NO.	DATE	REVISIONS	APP.
SAN ANTONIO STREET REHABILITATION PHASE 3 PROJECT			
SANITARY SEWER LINE C BEGIN TO 53+00			
Scale: AS NOTED DGN. BY: AZ DATE: AS NOTED DWN. BY: JFR JOB NO. 05487-0023-01 DWG. NO. -- SUBMITTED: --- SURV. BY: QUIDDITY			
5/9/2025 17 / 35			



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

2. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5-Feet in Depth Located in Public Right-of-Way or Easements Deep Trenches Pose Compaction Testing and Construction Challenges and City Methods for Testing and Compaction May Not be Achievable. A Utility Compaction Plan Will be Required and Must be Submitted for Approval to City Prior to Utility Installation.

5/9/2025



CONTRACTOR SHALL BRACE AND PROTECT
EXISTING UTILITIES LOCATED WITHIN PROPOSED
UTILITY TRENCHES (NO SEPARATE PAY ITEM)

① NEW SEWER LATERAL LOCATIONS ARE APPROXIMATE. CONTRACTOR TO LOCATE EXISTING SEWER LATERALS (NO SEPARATE PAY ITEM), AND RELAY NEW SEWER LATERALS FROM EXISTING LATERAL TO NEW SEWER MAIN. ALL NEW SEWER LATERALS SHALL BE PRESSURE RATED AND INCLUDE A TWO-WAY CLEANOUT AT THE PROPERTY LINE.

AT&T	(210) 213-1893
PARISH AUSTIN	
CENTERPOINT ENERGY	
CLIFFORD WHARTON	(830) 237-6350
FIBERLIGHT	
JOEY PUENTE	(830) 273-4250
SPECTRUM	
LEO GARCIA	(210) 793-8066
TEXAS ONE CALL SYSTEM	811

TELEPHONE LOCATOR

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48-HOURS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

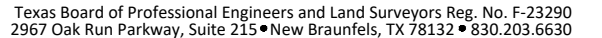
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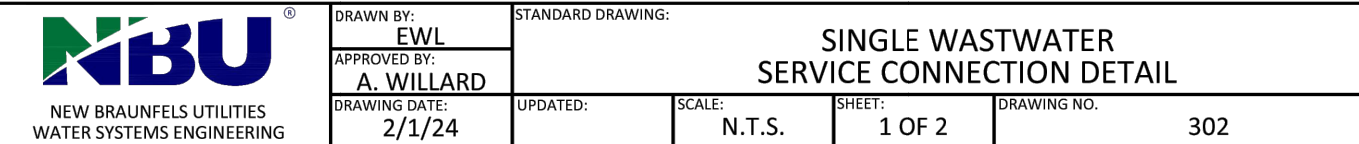
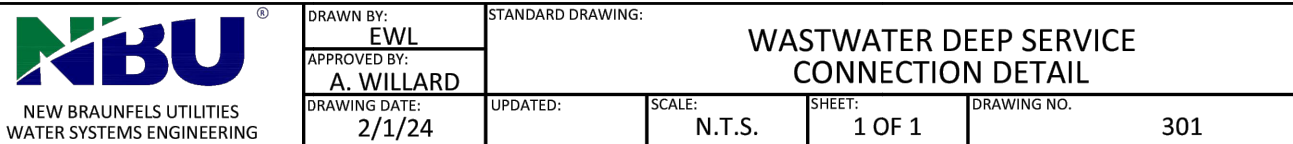
2. CONTRACTOR IS REQUIRED TO ENSURE PROTECTION OF POLES AND GUYS DURING CONSTRUCTION ACTIVITIES.
3. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
4. NO VALVES, HYDRANTS, CLEANOUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
5. ABANDONMENT OF EXISTING SANITARY SEWER AND WATER PIPE SHALL BE PER NBU SPEC 510.


1. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S GEOTECHNICAL ENGINEER. ALL MATERIAL SHALL BE PLACED IN A UNIFORM MANNER AND THE MAXIMUM TYPICAL INCREASE (12") LOOSE, DETERMINE THE NOMINAL LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN A C-195 MANNER WITHIN 15' OF THE CENTERLINE. TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY 400 LF FOR THE ENTIRE TRENCH. THE TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.



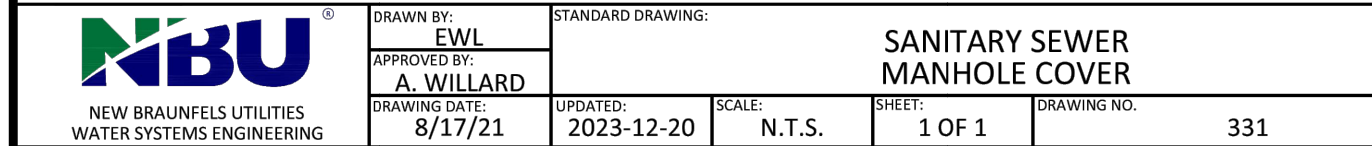
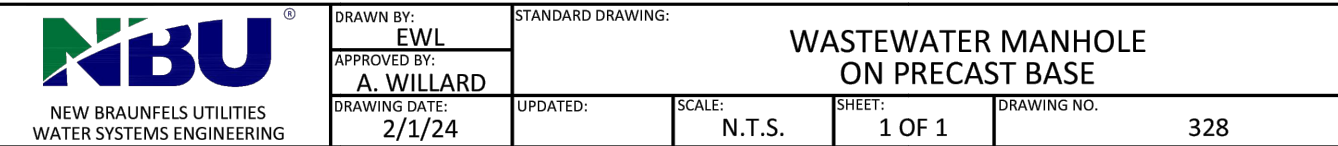
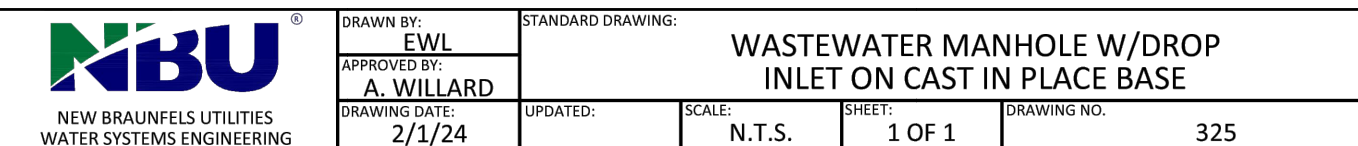
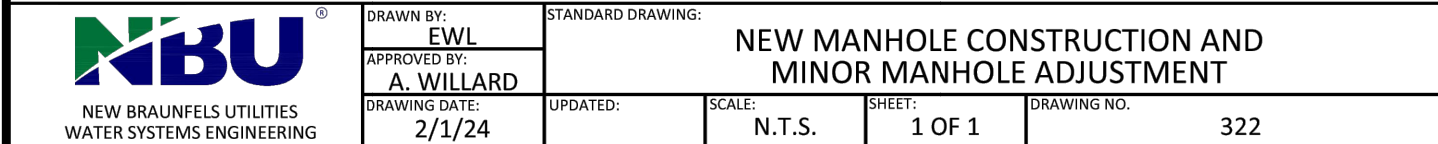
SANITARY SEWER LINE G

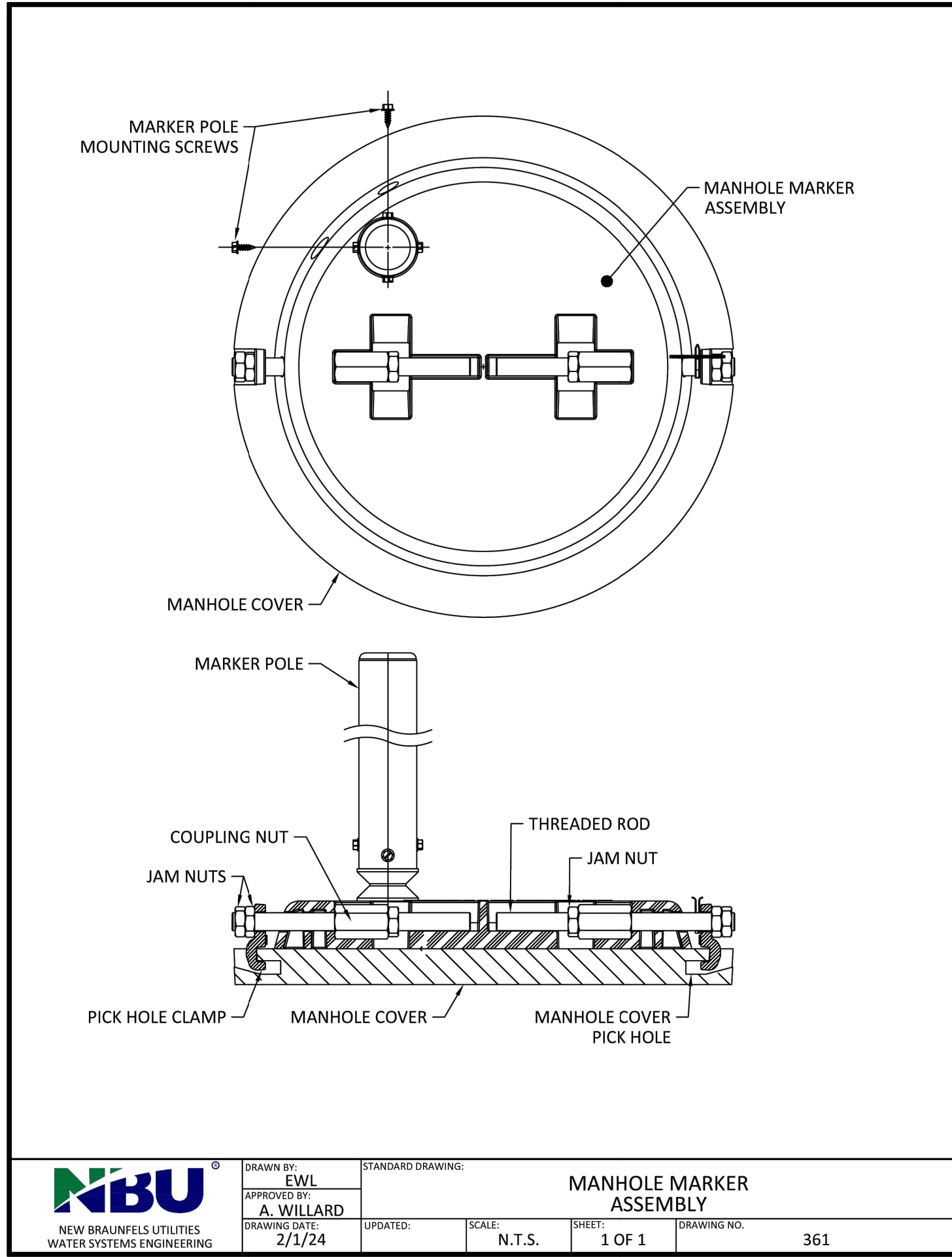
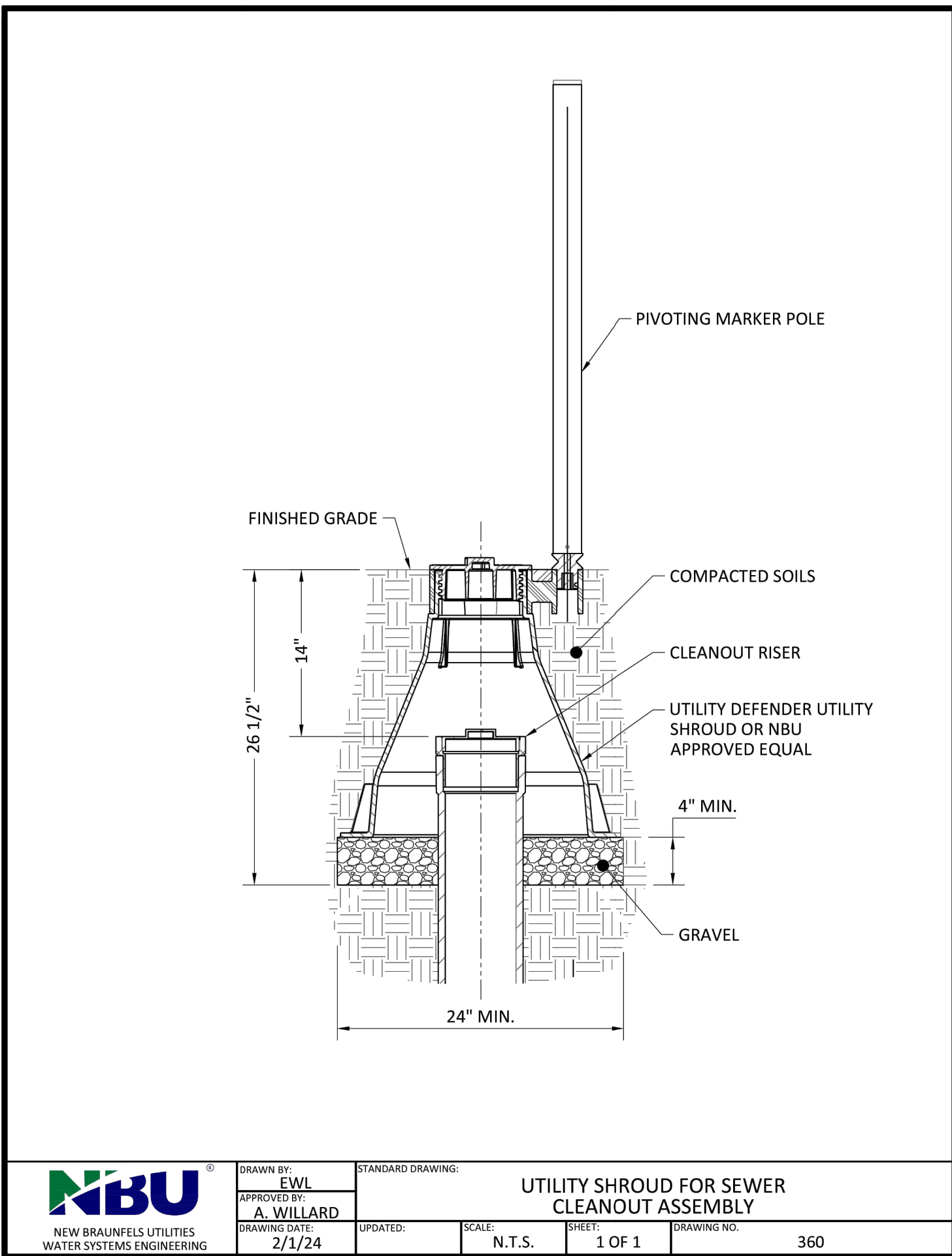
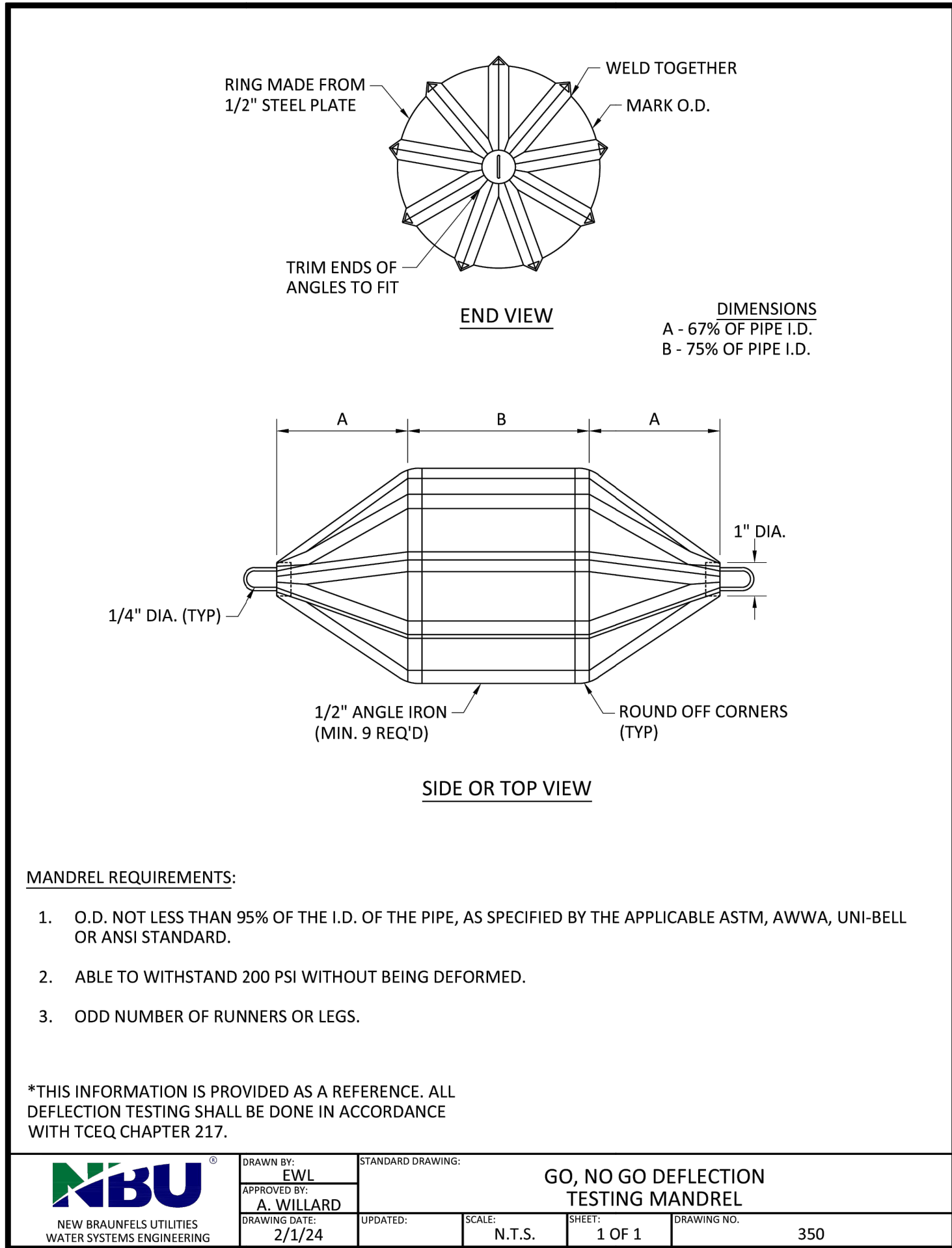
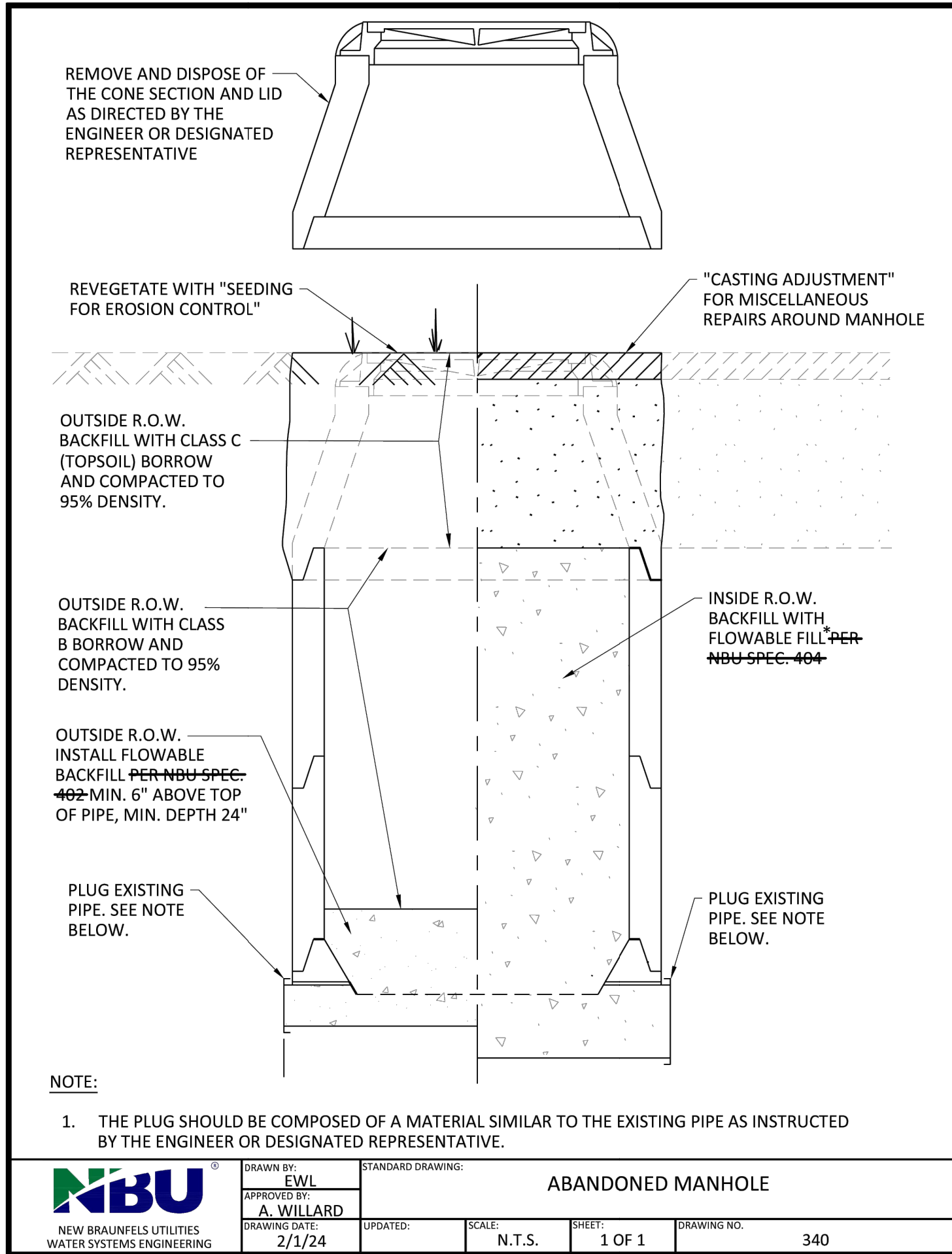
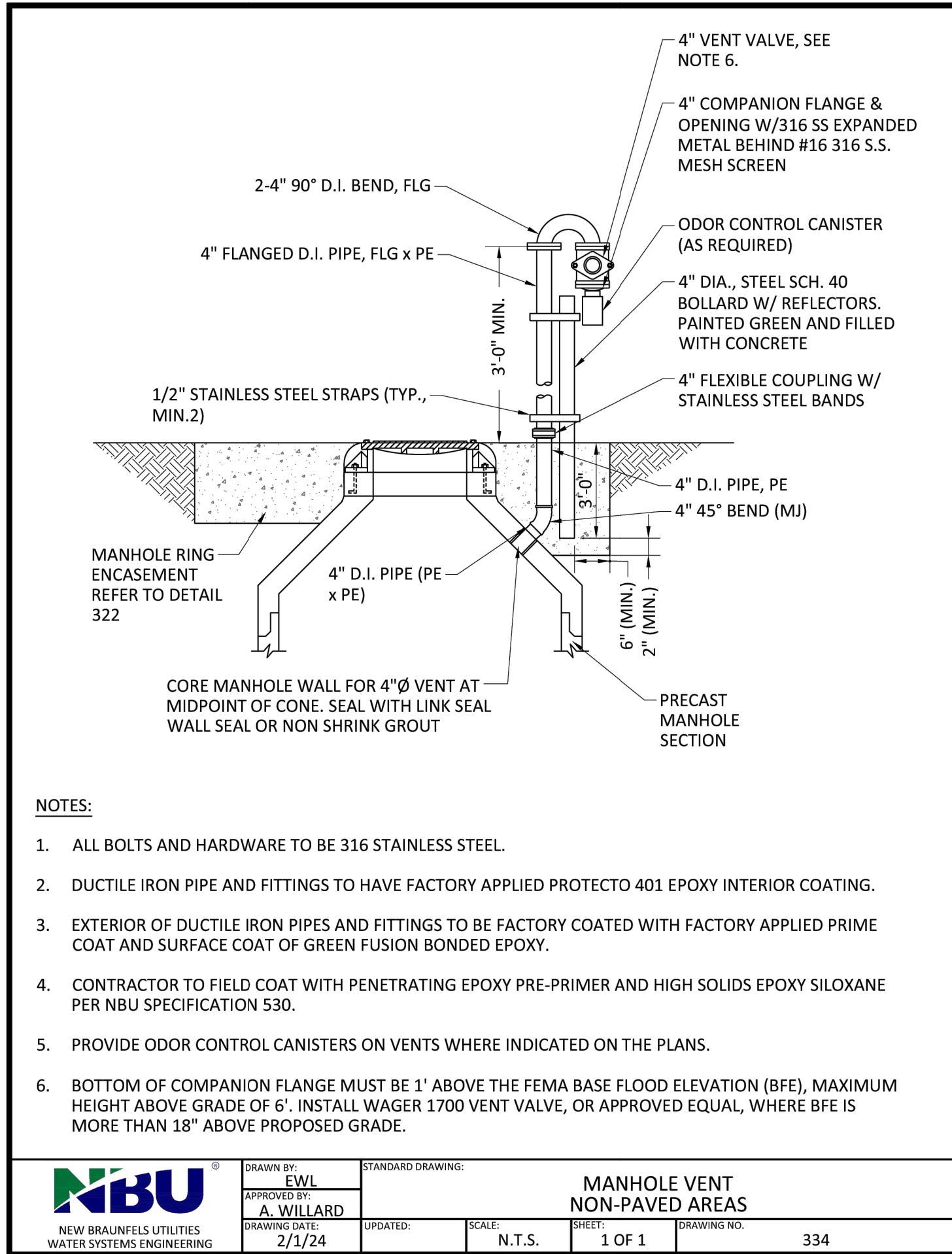
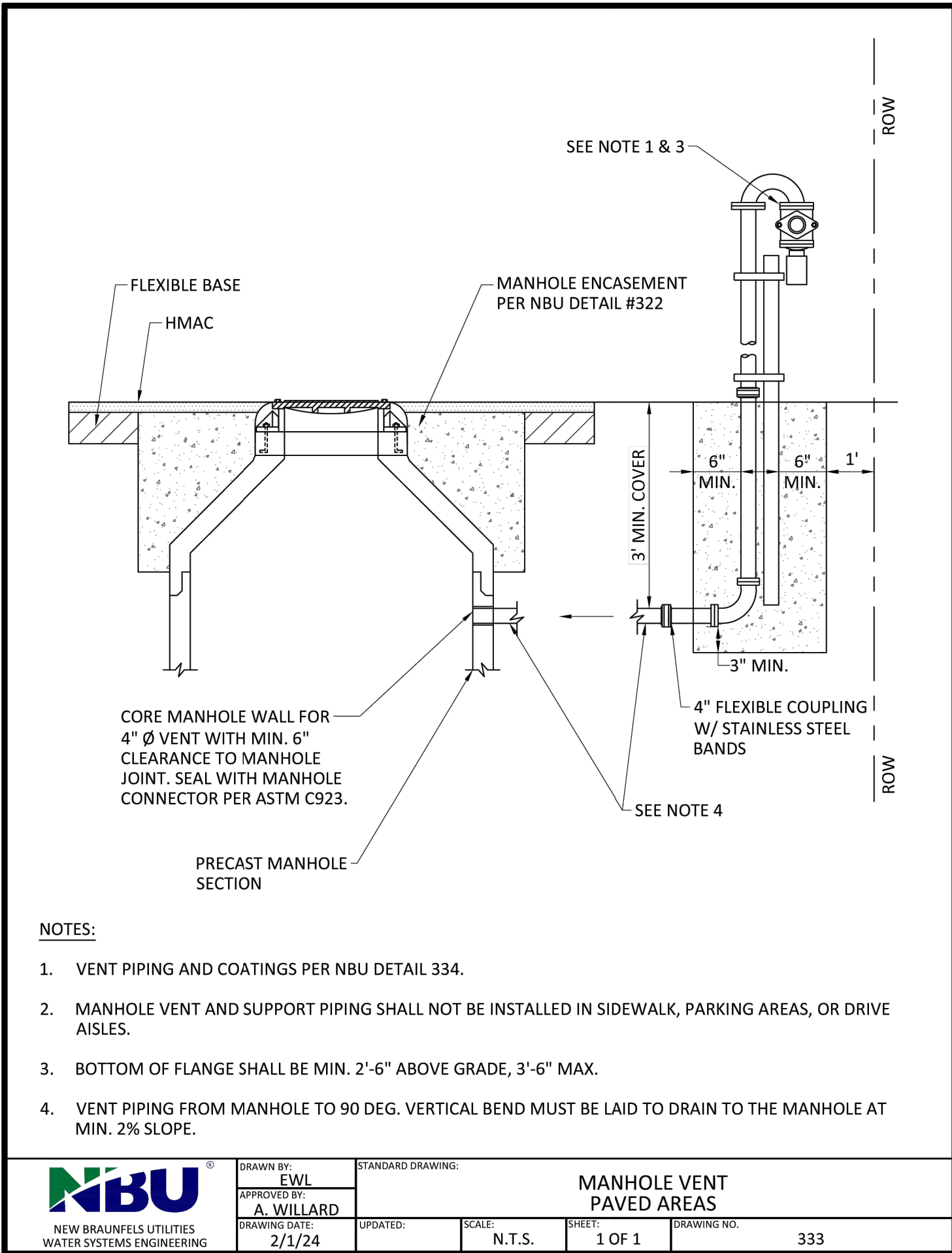




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NBU
NEW BRAUNFELS UTILITIES
WATER SYSTEMS ENGINEERING | DRAWN BY:
EWL | STANDARD DRAWING:

SINGLE WASTEWATER
SERVICE CONNECTION DETAIL | | | | |
| | APPROVED BY:
A. WILLARD | | | | | |
| DRAWING DATE:
2/1/24 | UPDATED: | SCALE:
N.T.S. | SHEET:
2 OF 2 | DRAWING NO.
302 | | |

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*NOTE: FLOWABLE FILL SHALL BE TXDOT SPEC 401 "FLOWABLE BACKFILL"

NO.	DATE	REVISIONS	APP.

NBU
New Braunfels Utilities

SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

SANITARY SEWER DETAILS II

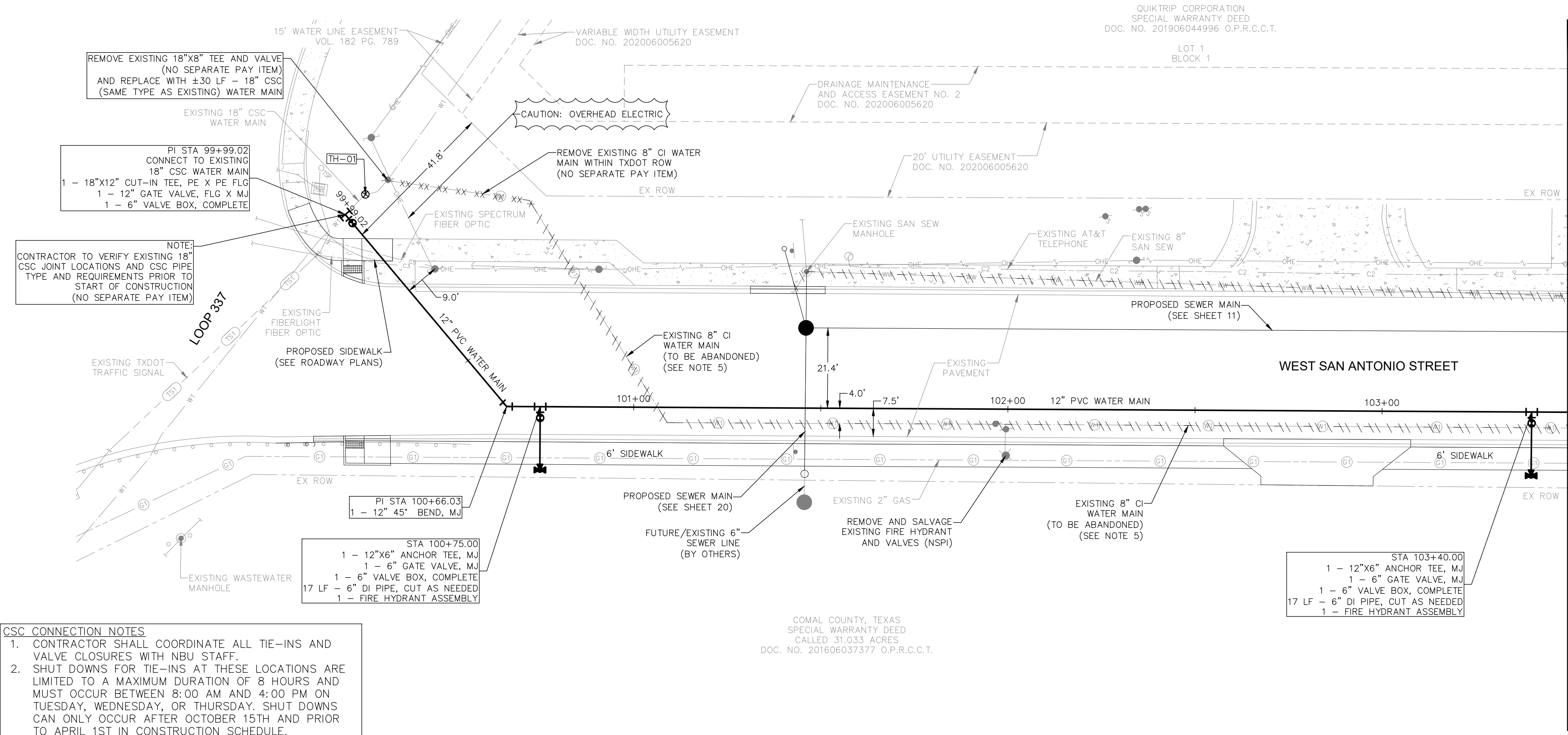
QUIDDITY
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23220
2987 Oak Run Parkway, Suite 215 • New Braunfels, TX 78132 • 830.203.6630

SCALE: AS NOTED DGN. BY: AZ
DATE: AS NOTED DWN. BY: JFR
JOB NO. 05487-0023-01 DWG. NO. --
SUBMITTED: --- SURV. BY: QUIDDITY

STATE OF TEXAS
ALEX ZERTUCHE
92080
LICENSED PROFESSIONAL ENGINEER
5/9/2025

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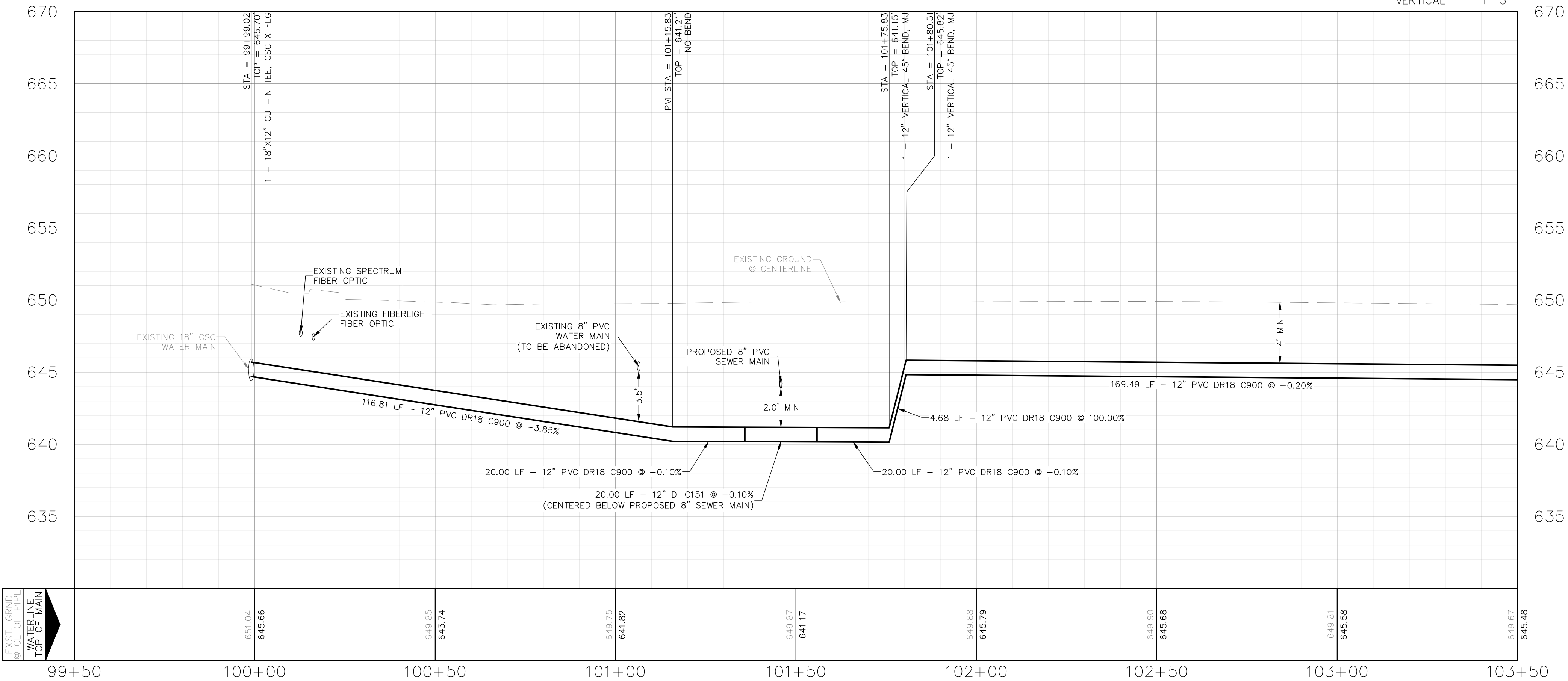


CSC CONNECTION NOTES

1. CONTRACTOR SHALL COORDINATE ALL TIE-INS AND VALVE CLOSURES WITH NBU STAFF.
2. SHUT DOWNS FOR TIE-INS AT THESE LOCATIONS ARE LIMITED TO A MAXIMUM DURATION OF 8 HOURS AND MUST OCCUR BETWEEN 8:00 AM AND 4:00 PM ON TUESDAY, WEDNESDAY, OR THURSDAY. SHUT DOWNS CAN ONLY OCCUR AFTER OCTOBER 15TH AND PRIOR TO APRIL 1ST IN CONSTRUCTION SCHEDULE.

WATER LINE "A" BEGIN TO 103+50

SCALE
HORIZONTAL 1"=20'
VERTICAL 1"=5'



- CONSTRUCTION NOTES:**
1. WHERE WATER MAINS AND SERVICES AND SEWER MAINS AND LATERALS ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER 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 30 TAC §290.44(E) (WATER DISTRIBUTION). (NO SEPARATE PAY ITEM).
 2. CONTRACTOR IS REQUIRED TO ENSURE PROTECTION OF POLES AND GUYS DURING CONSTRUCTION ACTIVITIES.
 3. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
 4. NO VALVES, HYDRANTS, CLEANOUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
 5. ABANDONMENT OF EXISTING SANITARY SEWER AND WATER PIPE SHALL BE PER NBU SPEC 510.
 6. JOINT RESTRAINTS REQUIRED AT ALL FITTINGS. SEE TABLE ON SHEET 35.
- UTILITY TRENCH COMPACTION NOTES:**
1. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
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NO.	DATE	REVISIONS	APP.

**SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT**

**WATER LINE A
BEGIN TO 103+50**

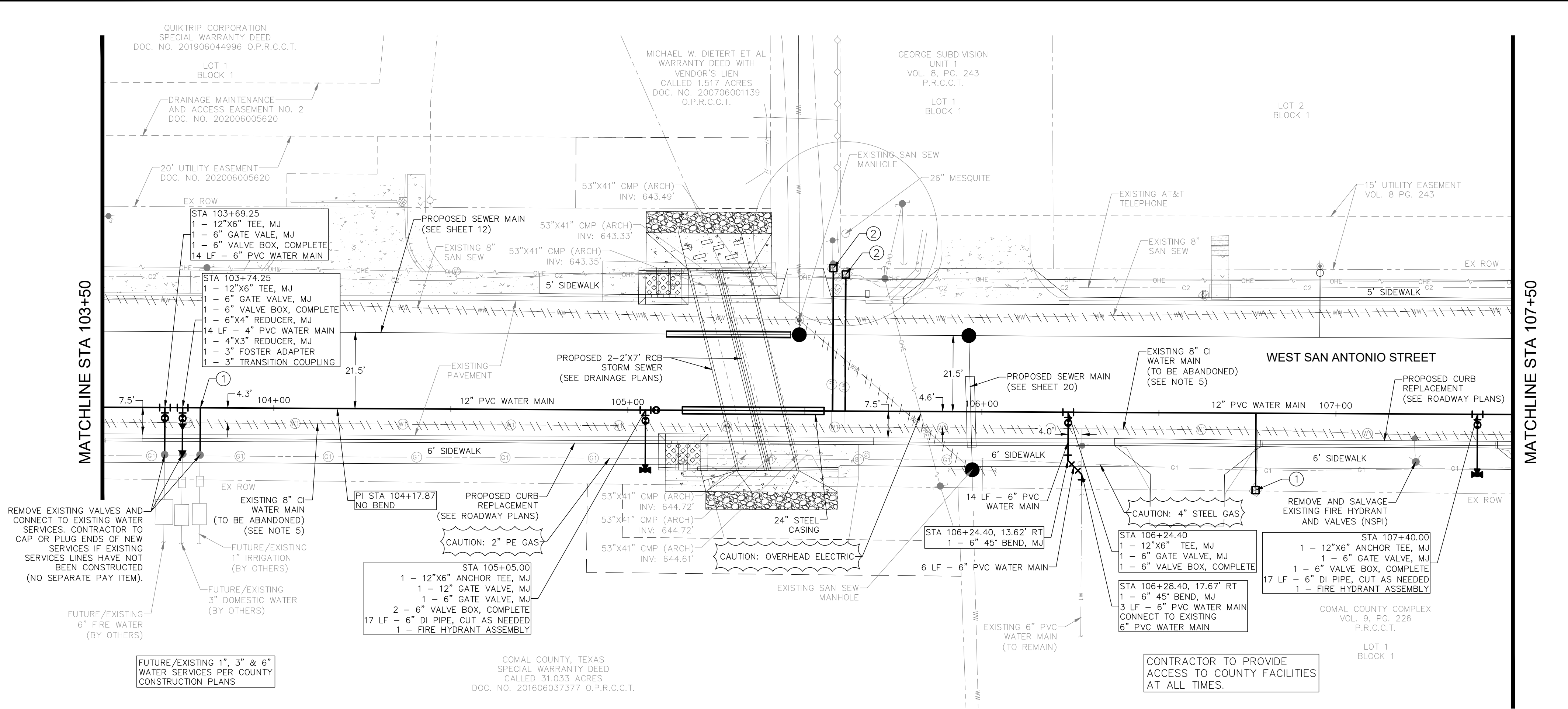
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Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23220
2957 Oak Run Parkway, Suite 215 • New Braunfels, TX 78131 • 830.203.6630

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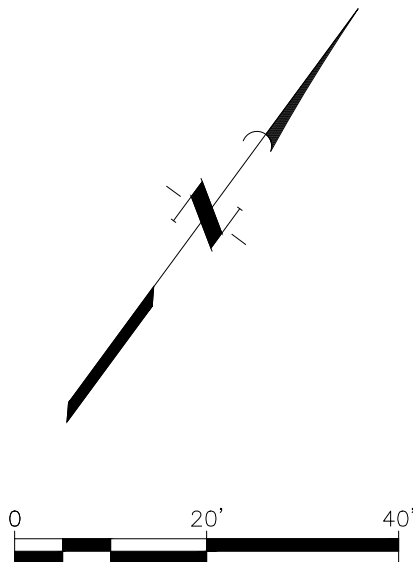
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CONTRACTOR SHALL BRACE AND PROTECT EXISTING UTILITIES LOCATED WITHIN PROPOSED UTILITY TRENCHES (NO SEPARATE PAY ITEM)

KEYED NOTES

- 1 RELAY 1" SERVICE (SHORT)
 - 2 RELAY 1" SERVICE (LONG)
 - 3 NEW 1" UNMETERED SERVICE (SHORT)
 - 4 NEW 1" UNMETERED SERVICE (LONG)
 - 5 RELOCATE METER
- ☐ NEW METER BOX



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

AT&T	(210) 213-1893
PARRISH AUSTIN	
CENTERPOINT ENERGY	(830) 237-6350
CLIFFORD WHARTON	
FIBERLIGHT	
JOEY PUENTE	(830) 273-4250
SPECTRUM	
LEO GARCIA	(210) 793-8066
TEXAS ONE CALL SYSTEM	811

C.P.E. LOCATOR
CALL CENTERPOINT ENERGY LOCATOR AT 1-800-545-6005, 48-HOURS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTERPOINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

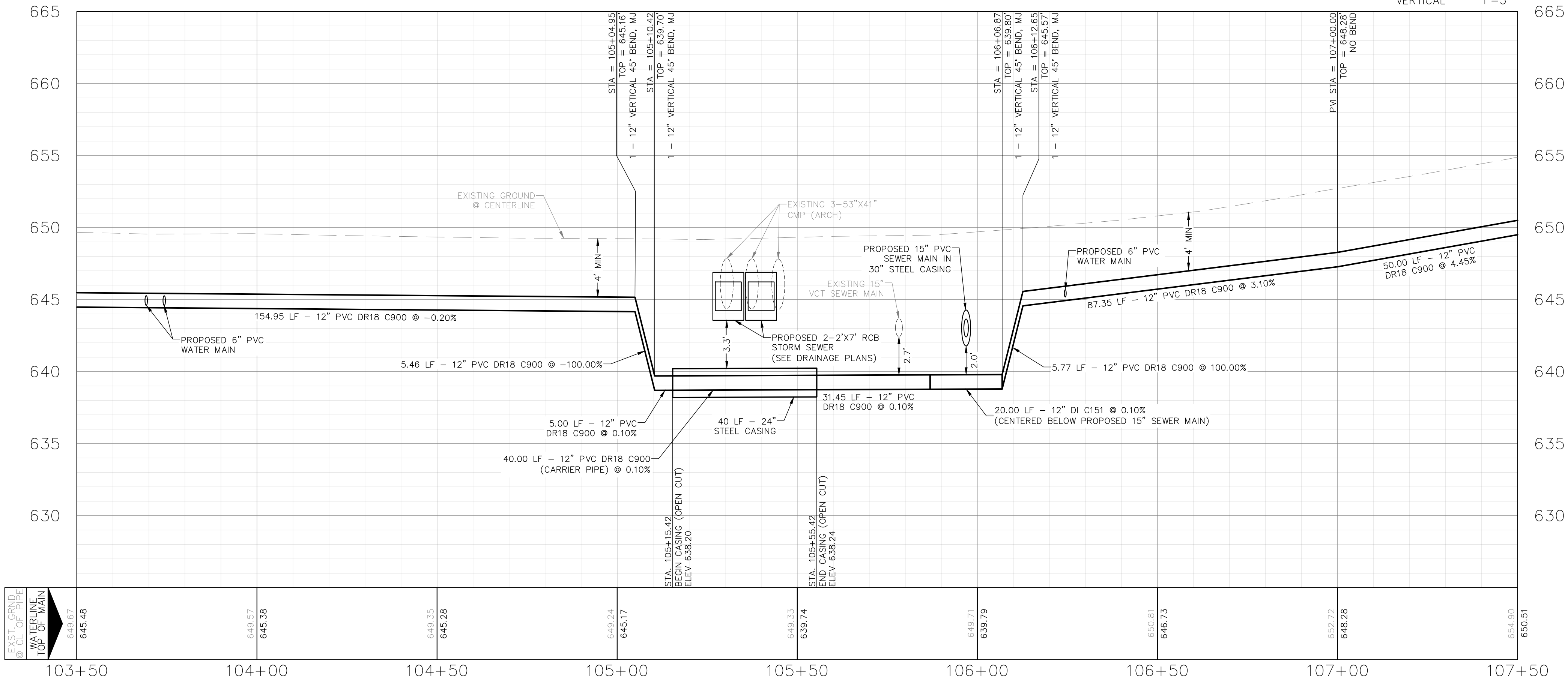
TELEPHONE LOCATOR
THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48-HOURS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

TRENCH SAFETY EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACTOR DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

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

WATER LINE "A" STA 103+50 TO 107+50

SCALE
HORIZONTAL 1"=20'
VERTICAL 1"=5'



CONSTRUCTION NOTES:

1. WHERE WATER MAINS AND SERVICES AND SEWER MAINS AND LATERALS ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER 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 30 TAC §290.44(E) (WATER DISTRIBUTION). (NO SEPARATE PAY ITEM).
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3. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
4. NO VALVES, HYDRANTS, CLEANOUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
5. ABANDONMENT OF EXISTING SANITARY SEWER AND WATER PIPE SHALL BE PER NBU SPEC 510.
6. JOINT RESTRAINTS REQUIRED AT ALL FITTINGS. SEE TABLE ON SHEET 35.

UTILITY TRENCH COMPACTION NOTES:

1. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH RIGHT-OF-WAY OR EASEMENTS. DEE UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
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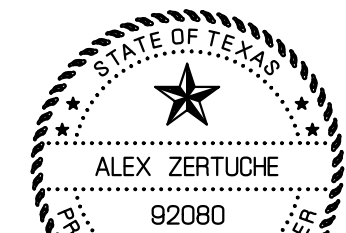
SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

WATER LINE A
STA 103+50 TO 107+50



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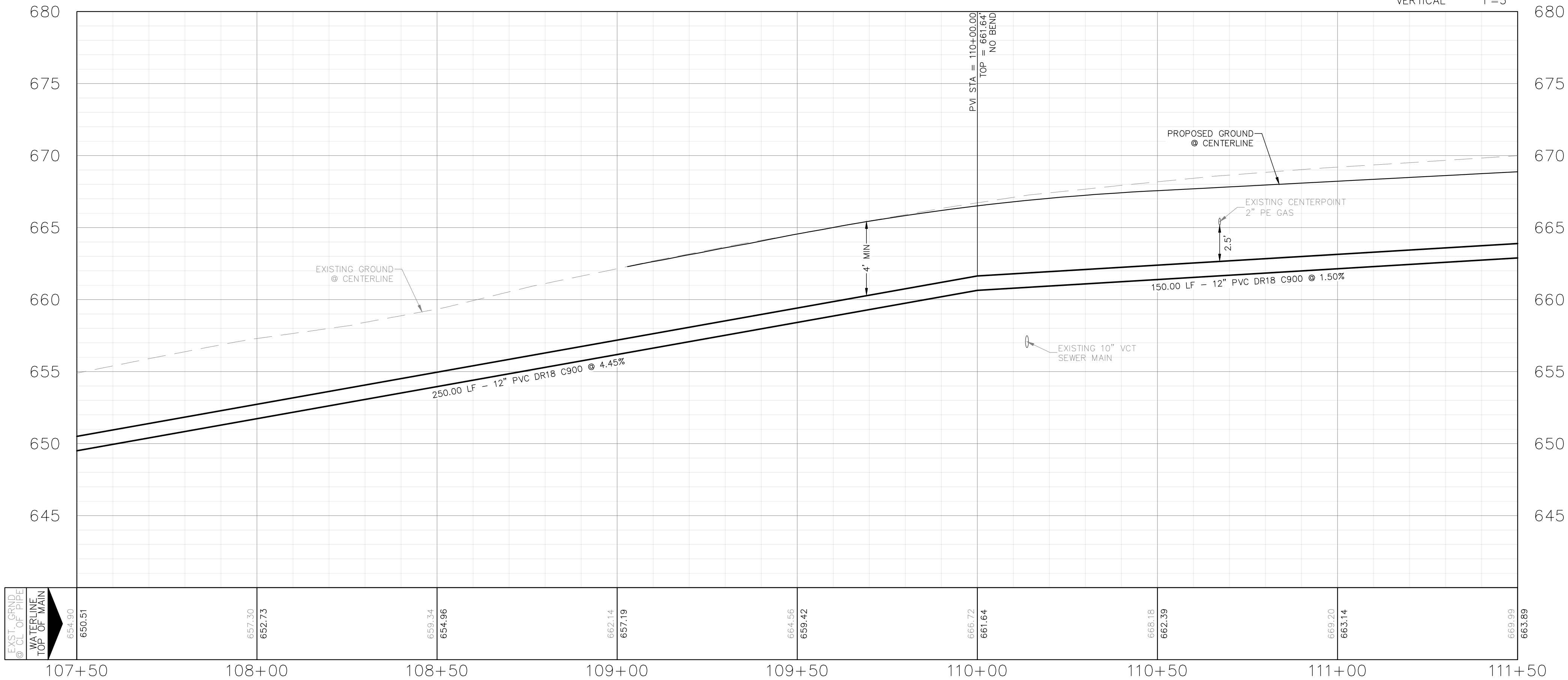
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DATE: AS NOTED DWN. BY: JFR
JOB NO. 05487-0023-01 DWG. NO. --
SUBMITTED: --- SURV. BY: QUIDDITY



5/9/2025 25 / 35

WATER LINE "A" STA 107+50 TO 111+50

SCALE
HORIZONTAL 1"=20'
VERTICAL 1"=5'



SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-10	N/A	13796027.91	2237751.39	667.31	N/A	*TRG's target utility was a 6" unknown material sewer line. Crew excavated to 10.90 feet and did not expose utility. Owner: New Braunfels Utilities
TH-10A	N/A	13796027.74	2237749.09	667.07	N/A	*Second attempt. TRG's target utility was a 6" unknown material sewer line. Crew excavated to 9.71 feet and did not expose utility. Owner: New Braunfels Utilities
TH-10B	10" VCP SEWER	13796031.1	2237755.64	667.45	657.43	*Third attempt. TRG's target utility was a 6" unknown material sewer line. Crew exposed a 10" VCP sewer line at a pipe joint. Owner: New Braunfels Utilities

CONTRACTOR SHALL BRACE AND PROTECT EXISTING UTILITIES LOCATED WITHIN PROPOSED UTILITY TRENCHES (NO SEPARATE PAY ITEM)

KEYED NOTES

- RELAY 1" SERVICE (SHORT)
 - RELAY 1" SERVICE (LONG)
 - NEW 1" UNMETERED SERVICE (SHORT)
 - NEW 1" UNMETERED SERVICE (LONG)
 - RELOCATE METER
- ☐ NEW METER BOX

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

AT&T	(210) 213-1893
PARISH AUSTIN	
CENTERPOINT ENERGY	(830) 237-6350
CLIFFORD WHARTON	
FIBERLIGHT	
JOEY PUENTE	(830) 273-4250
SPECTRUM	
LEO GARCIA	(210) 793-8066
TEXAS ONE CALL SYSTEM	811

C.P.E. LOCATOR
CALL CENTERPOINT ENERGY LOCATOR AT 1-800-545-6005, 48-HOURS BEFORE BEGINNING ANY EXCAVATION. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CENTERPOINT ENERGY MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

TELEPHONE LOCATOR
THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48-HOURS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND SUPPORT TELEPHONE COMPANY DURING CONSTRUCTION.

TRENCH SAFETY EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACTOR DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

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CONSTRUCTION NOTES:

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- ABANDONMENT OF EXISTING SANITARY SEWER AND WATER PIPE SHALL BE PER NBU SPEC 510.
- JOINT RESTRAINTS REQUIRED AT ALL FITTINGS. SEE TABLE ON SHEET 35.

UTILITY TRENCH COMPACTION NOTES:

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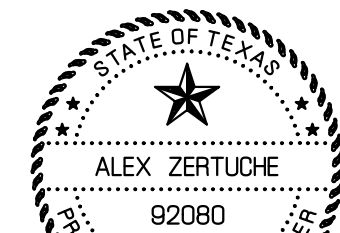
SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

WATER LINE A
STA 107+50 TO 111+50



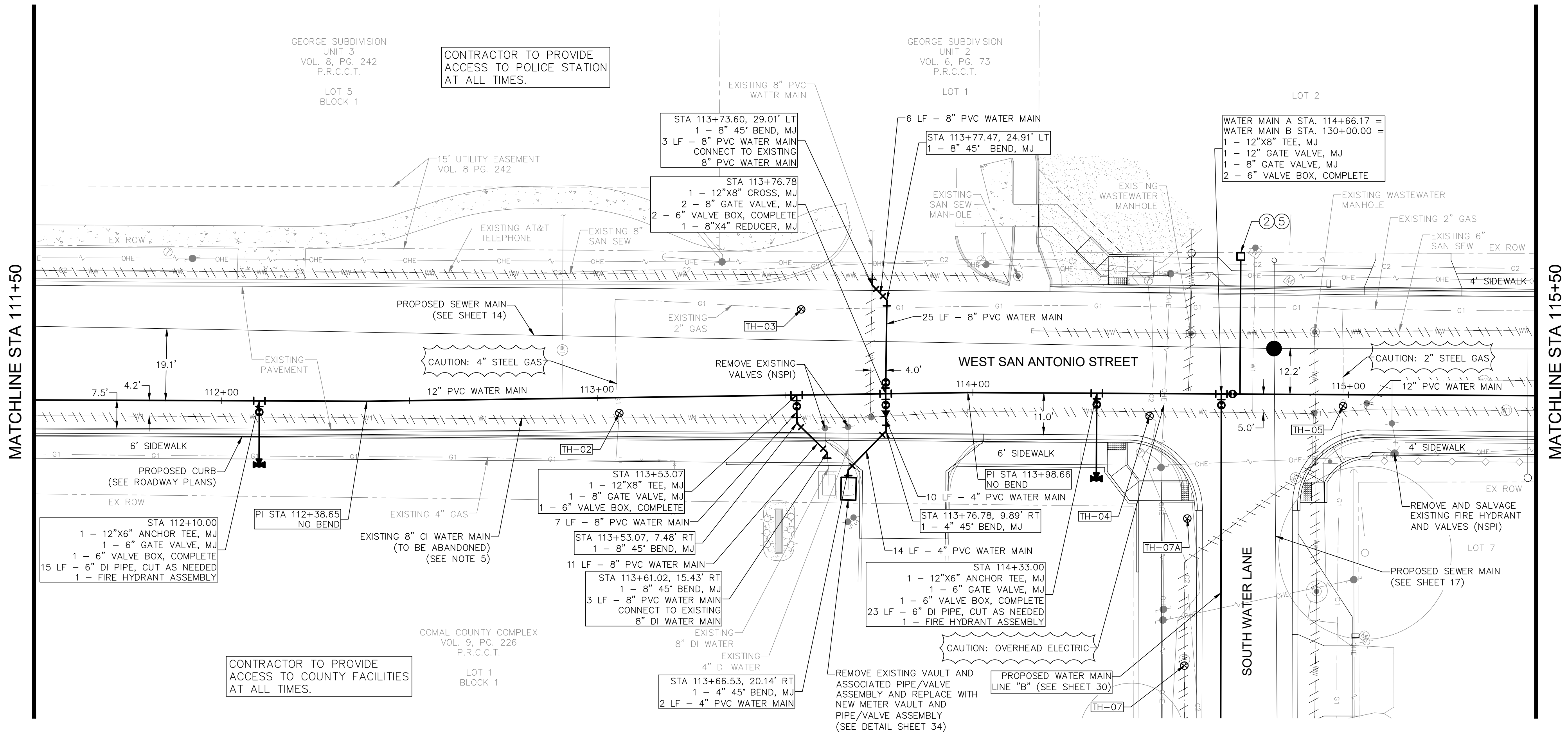
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23220
2967 Oak Run Parkway, Suite 215 • New Braunfels, TX 78131 • 830.203.6630

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5/9/2025
26 / 35

\\s0487\05487-0023-01 san antonio street rehabilitation phases 3 project\2 design phase\CAD\Drawings\05487-0023-01-SF-Water\Water.dwg May 08, 2025 10:12am JFR



SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-02	4" STEEL GAS	13796205.85	2237988.41	671.89	669.49	Owner: Centerpoint Energy
TH-03	2" STEEL GAS	13796256.45	2238011.77	671.6	669.9	Owner: Centerpoint Energy
TH-04	1" DBC TELE	13796287.24	2238103.75	674.06	669.92	Owner: AT&T
TH-05	2" STEEL GAS	13796319.37	2238144.12	674.62	672.12	Owner: Centerpoint Energy
TH-07	8" PVC WATER	13796238.56	2238149.9	676.18	671.07	TRG's target utility was a 6" PVC sewer line. Crew exposed an 8" PVC water line. Owner: New Braunfels Utilities
TH-07A	N/A	13796270.87	2238127.79	675.03	N/A	*Second Attempt. TRG's target utility was a 6" PVC sewer line. Crew excavated to a depth of 8.32' but did not expose utility. Owner: New Braunfels Utilities

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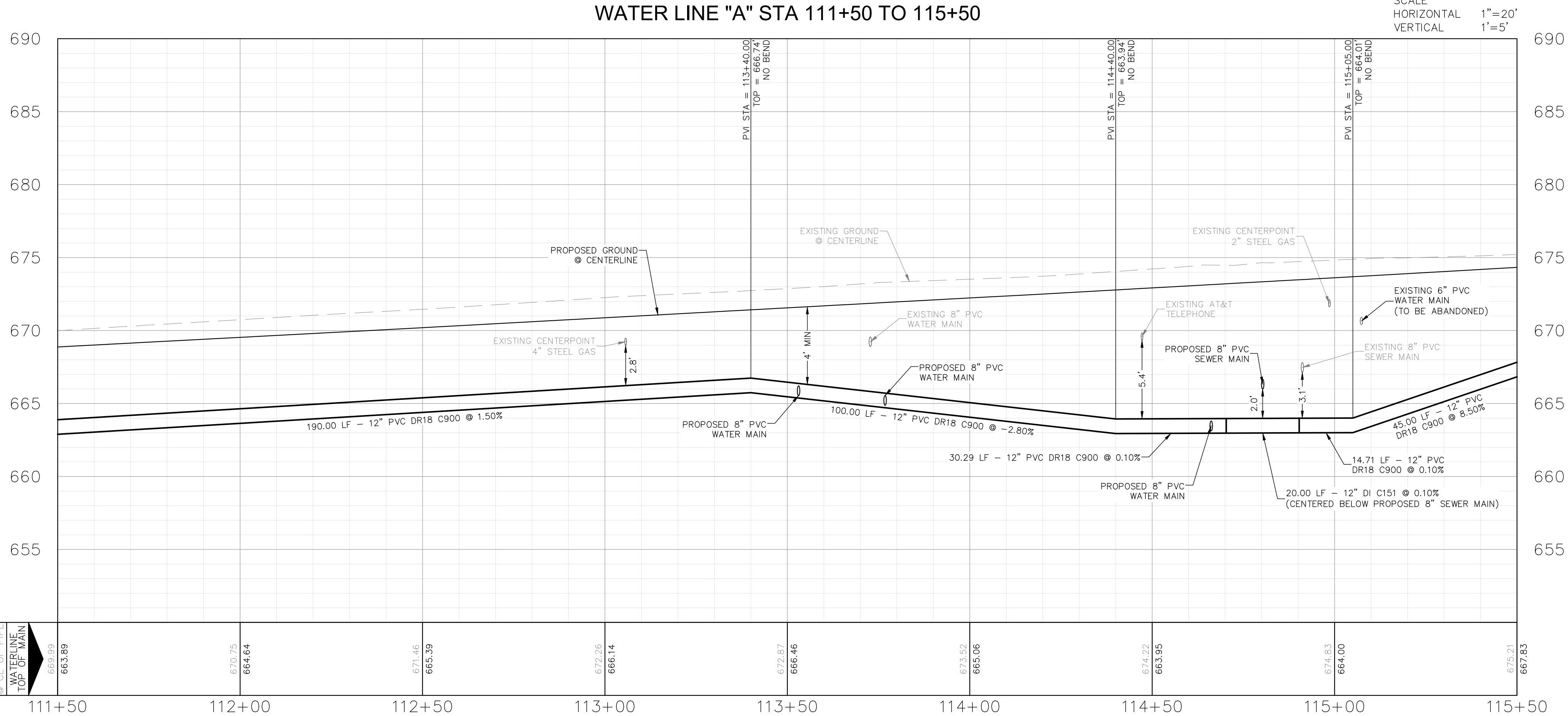
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SCALE
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VERTICAL 1"=5'



CONSTRUCTION NOTES:

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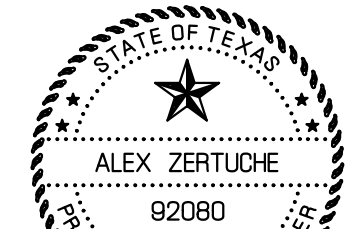
SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

WATER LINE A
STA 111+50 TO 115+50



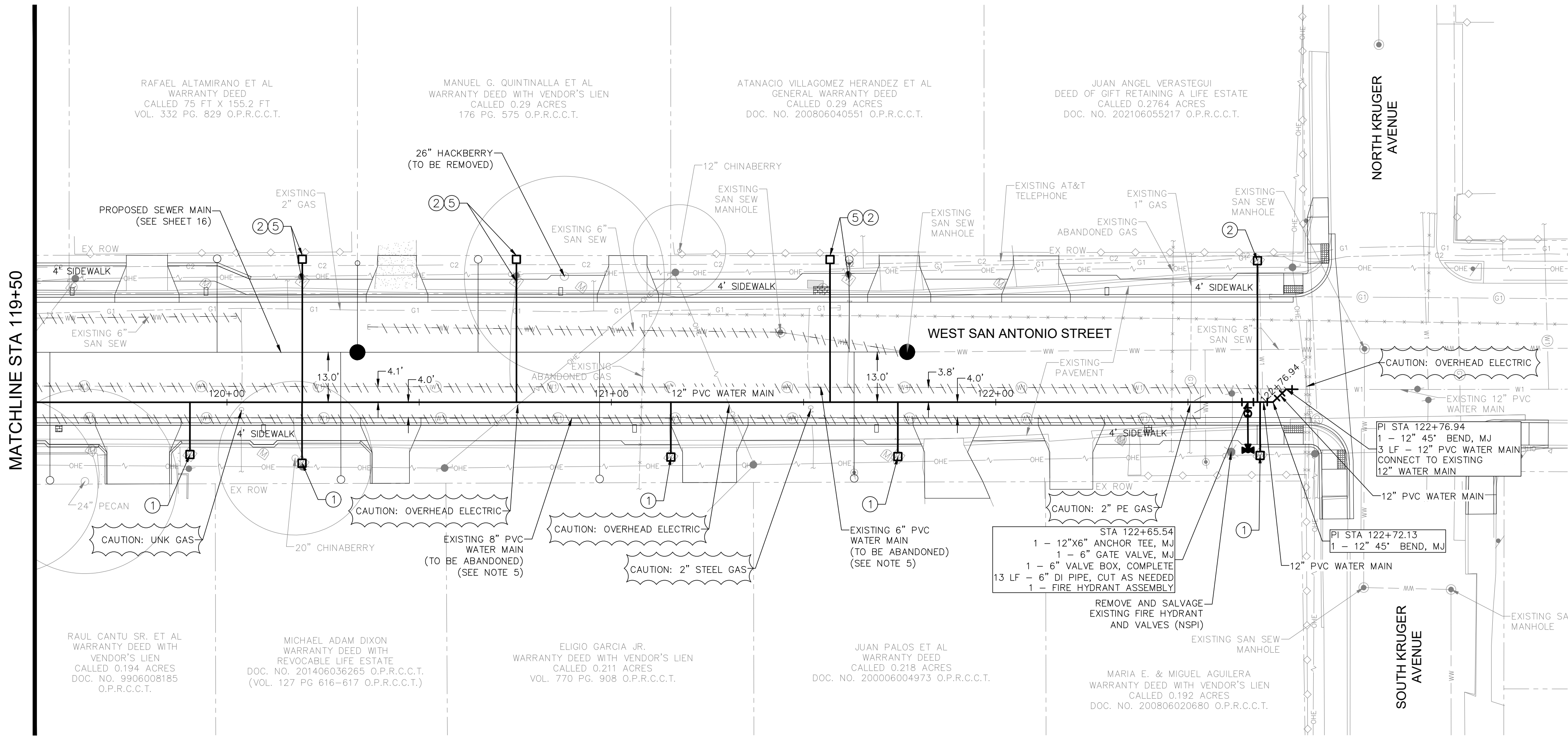
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23220
2957 Oak Run Parkway, Suite 215 • New Braunfels, TX 78131 • 830.203.6630

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5/9/2025 27 / 35

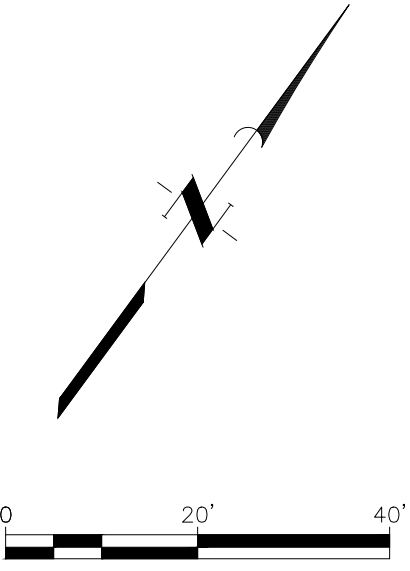
\\nas87\05487-0025-01_san_antonio_street_rehabilitation_phases_3_project\12_drawing_files\CAD\Drawings\05487-0025-01-SF-WWP-Water_A.dwg May 08, 2025 10:28am JFR



CONTRACTOR SHALL BRACE AND PROTECT EXISTING UTILITIES LOCATED WITHIN PROPOSED UTILITY TRENCHES (NO SEPARATE PAY ITEM)

KEYED NOTES

- ① RELAY 1" SERVICE (SHORT)
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SPECTRUM	
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TEXAS ONE CALL SYSTEM	

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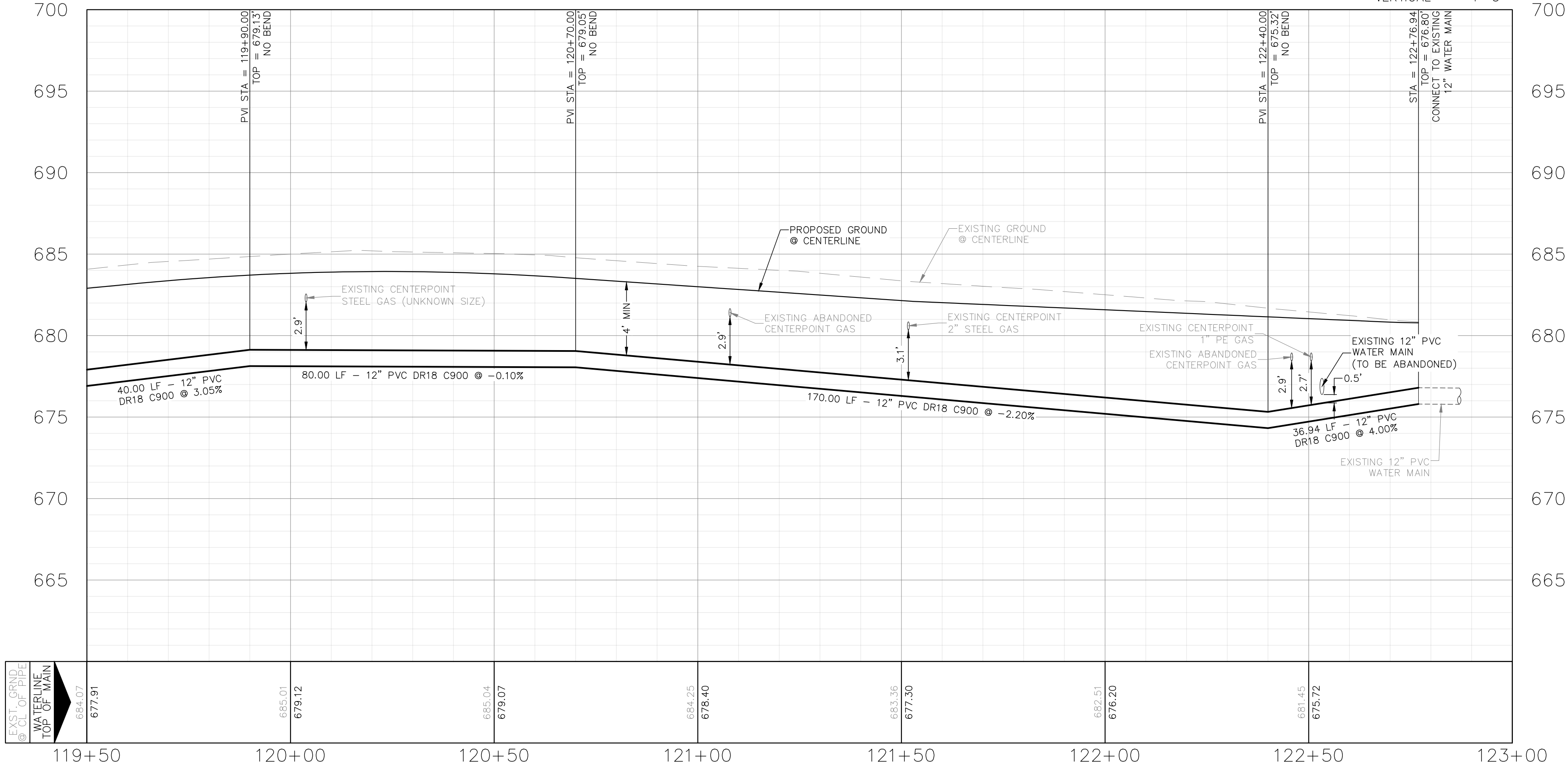
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WATER LINE "A" STA 119+50 TO END

SCALE
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VERTICAL 1"=5'



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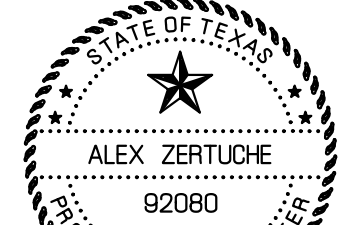
SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

WATER LINE A
STA 119+50 TO END



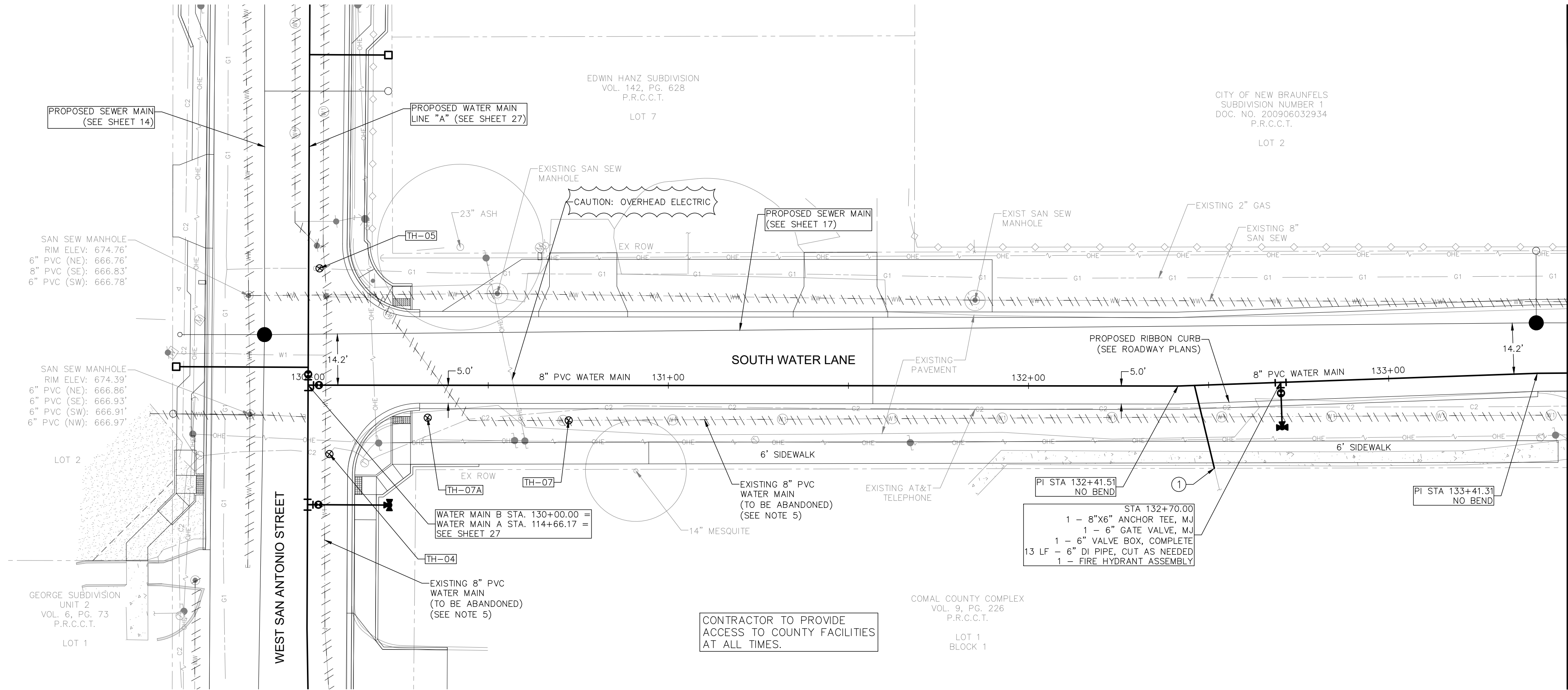
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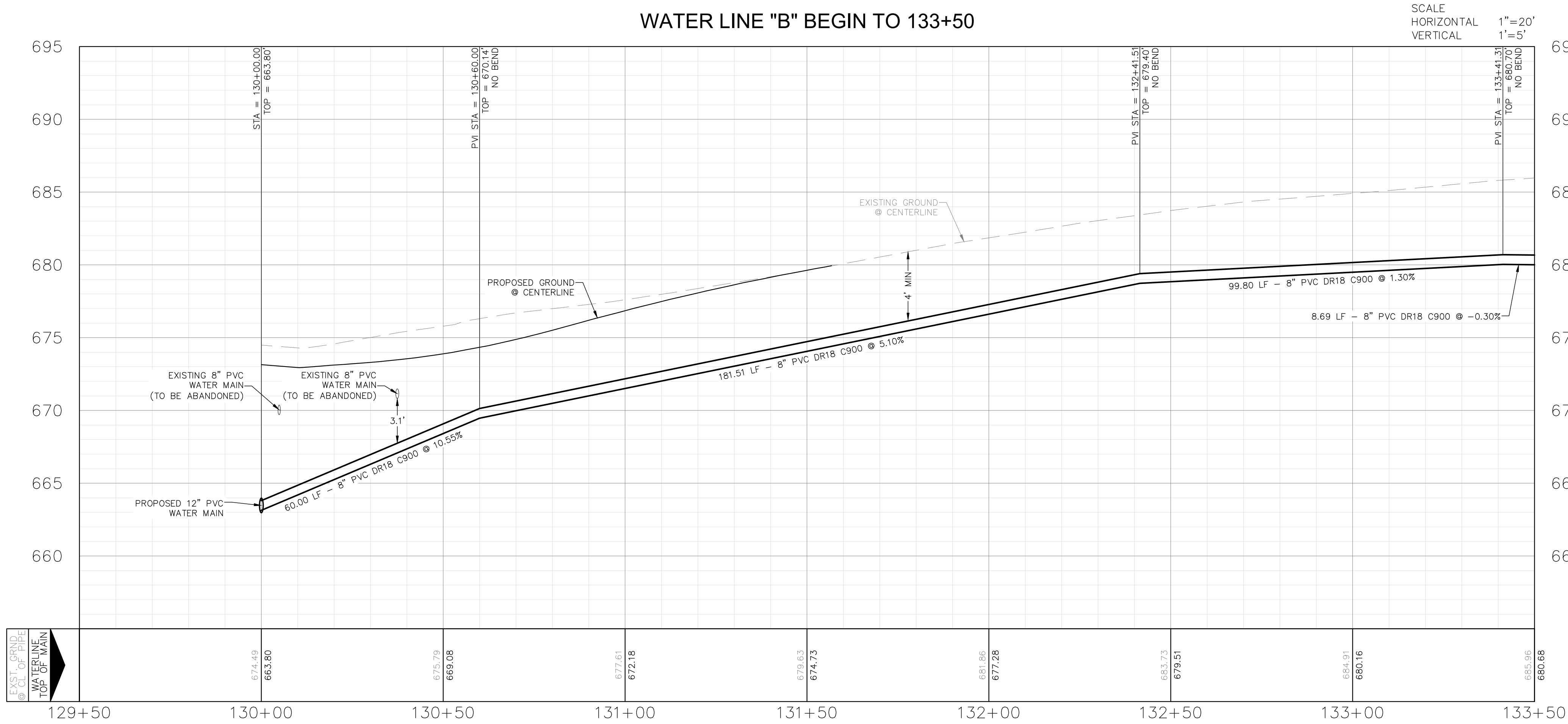


5/9/2025 29 / 35

\\s0487\05487-0025-01 san antonio street rehabilitation phases 3 project\2 design phase\CAD\Drawings\05487-0025-01-SF-WWP Water Bdwg May 08, 2025 - 10:38am JFR



WATER LINE "B" BEGIN TO 133+50



SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-04	1" DBC TELE	13796287.24	2238103.75	674.06	669.92	Owner: AT&T
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NO.	DATE	REVISIONS	APP.



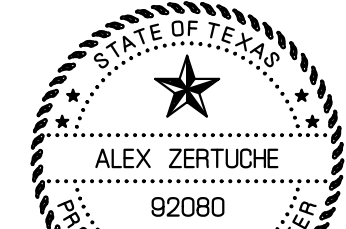
SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

WATER LINE B
BEGIN TO STA 133+50



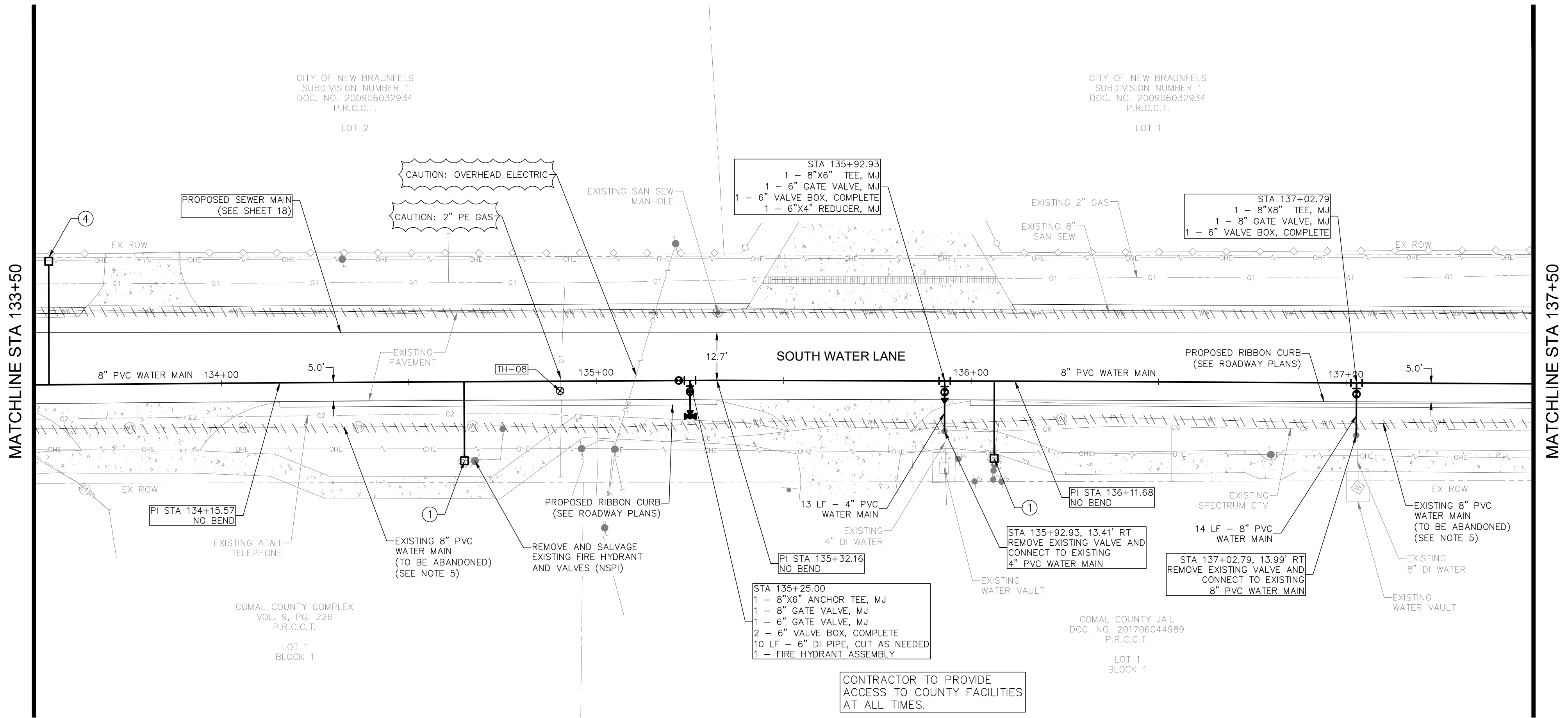
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23220
2957 Oak Run Parkway, Suite 215 • New Braunfels, TX 78131 • 830.203.6630

SCALE: AS NOTED DGN. BY: AZ
DATE: AS NOTED DWN. BY: JFR
JOB NO. 05487-0023-01 DWG. NO. --
SUBMITTED: ---- SURV. BY: QUIDDITY



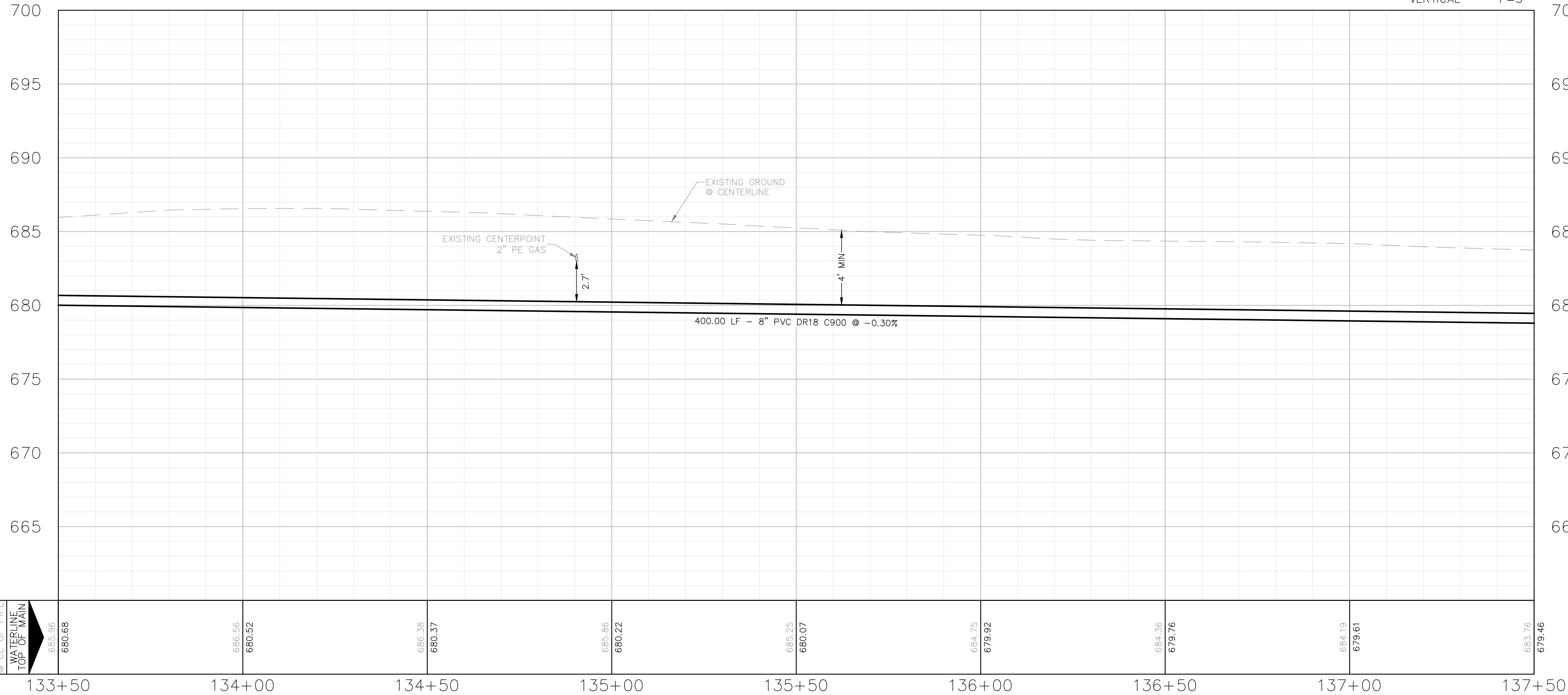
5/9/2025 30 / 35

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WATER LINE "B" STA 133+50 TO 137+50

SCALE
HORIZONTAL 1"=20'
VERTICAL 1"=5'



SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-08	2" PE GAS	13795904.87	2238401.82	685.81	683.48	Owner: Centerpoint Energy

CONTRACTOR SHALL BRACE AND PROTECT EXISTING UTILITIES LOCATED WITHIN PROPOSED UTILITY TRENCHES (NO SEPARATE PAY ITEM)

KEYED NOTES

- RELAY 1" SERVICE (SHORT)
 - RELAY 1" SERVICE (LONG)
 - NEW 1" UNMETERED SERVICE (SHORT)
 - NEW 1" UNMETERED SERVICE (LONG)
 - RELOCATE METER
- ☐ NEW METER BOX

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

AT&T	(210) 213-1893
CENTERPOINT ENERGY	(830) 237-6350
CLIFFORD WHARTON	(830) 273-4250
FIBERLIGHT	(210) 793-8066
JOEY PUENTE	811
SPECTRUM	
LEO GARCIA	
TEXAS ONE CALL SYSTEM	

C.P.E. LOCATOR
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NO.	DATE	REVISIONS	APP.



SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

WATER LINE B
STA 133+50 TO 137+50

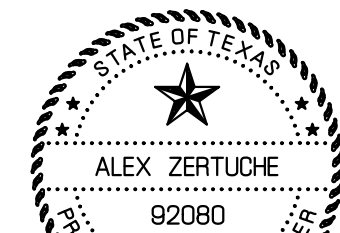


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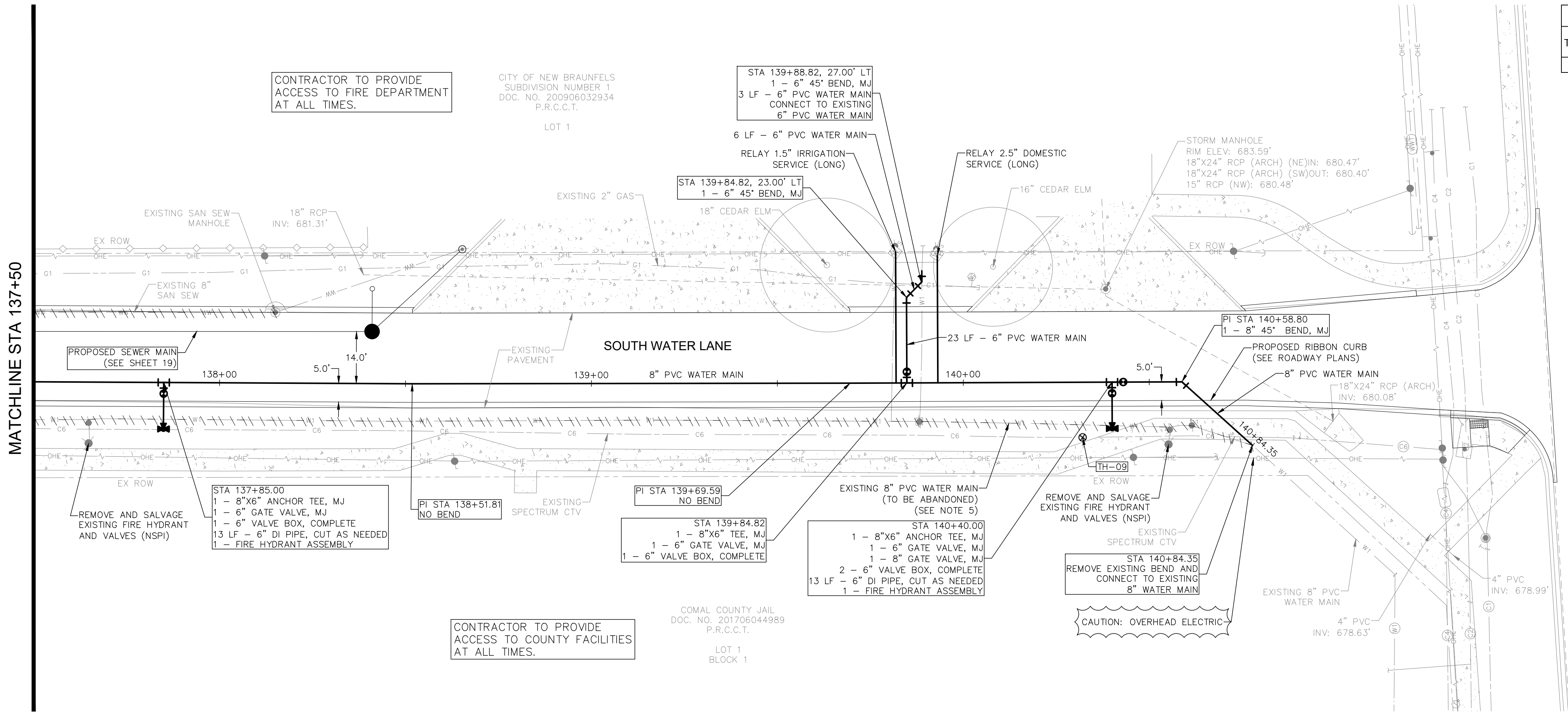
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SUBMITTED: --- SURV. BY: QUIDDITY



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SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-09	3" PVC FIBER	13795456.08	2238705.52	681.06	678.46	Owner: Spectrum

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NO.	DATE	REVISIONS	APP.



SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

WATER LINE B
STA 137+50 TO END



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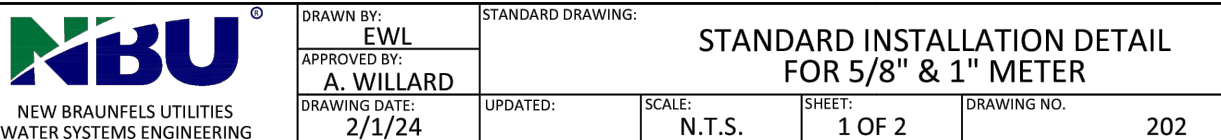
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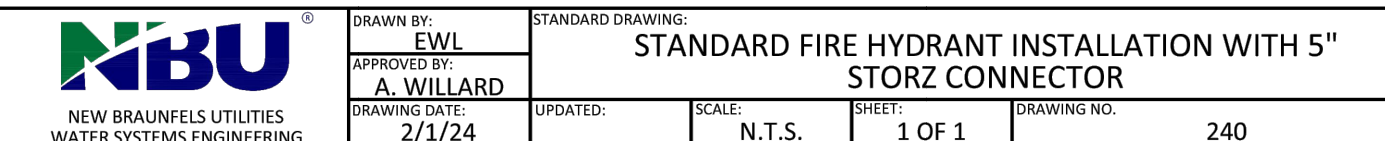
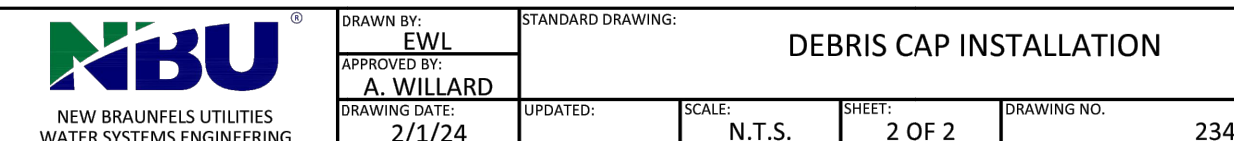
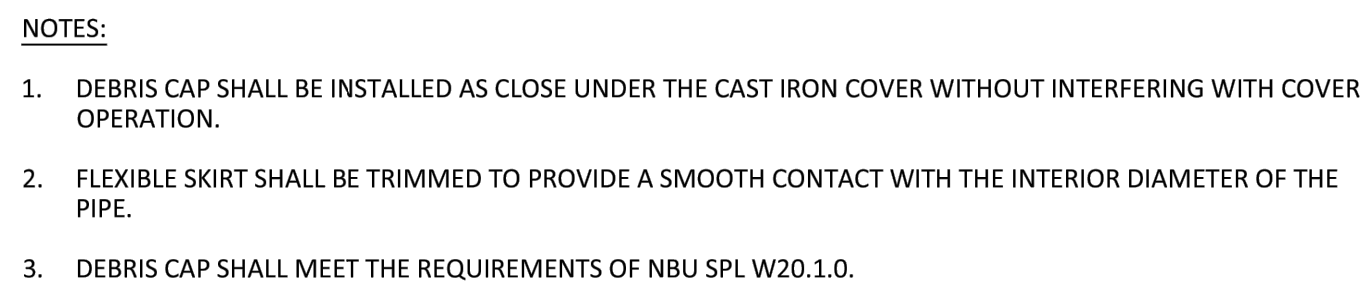
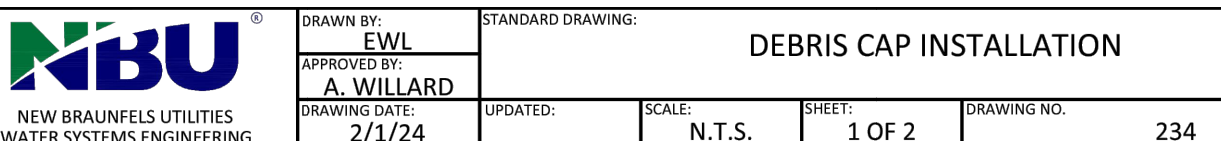
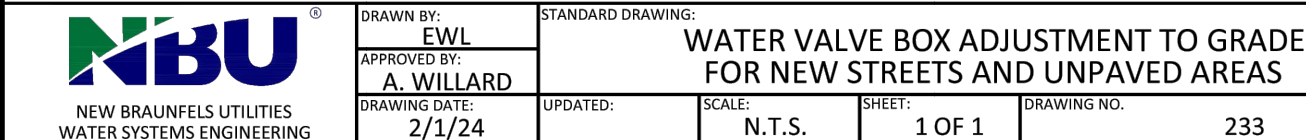
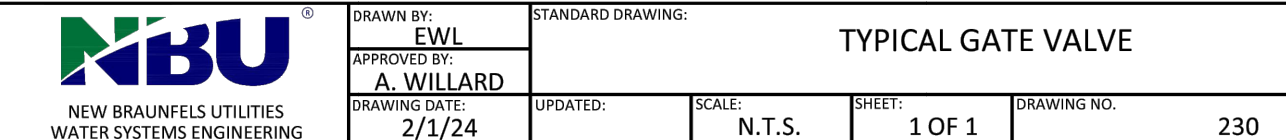
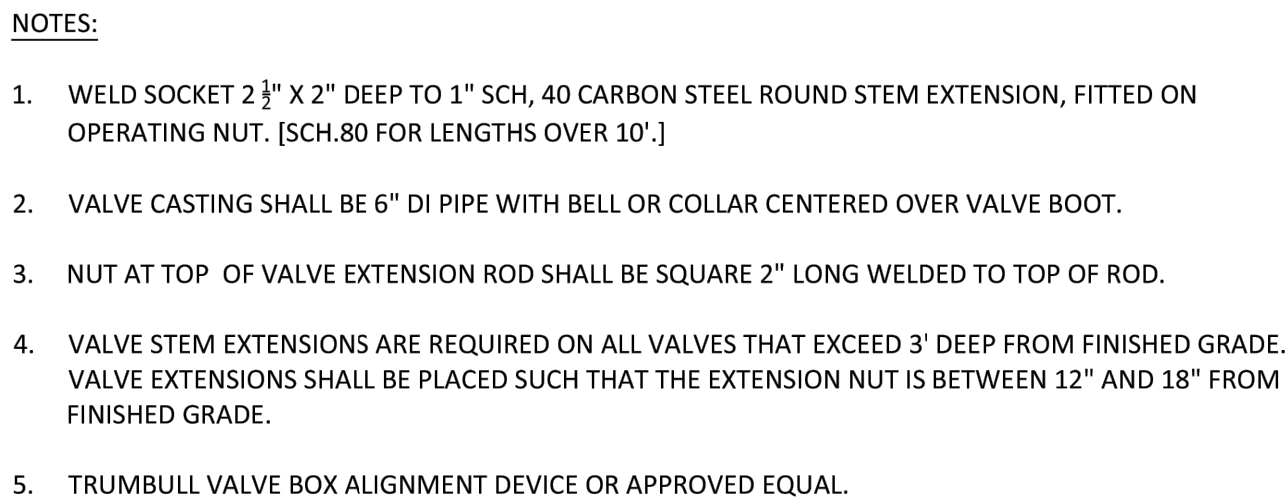
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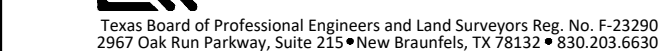
- A. 1" SERVICE CLAMP
- B. 1" CORPORATION STOP
- C. 1" TYPE "K" COPPER WATER SERVICE PIPE
- D. 1" X 1" ANGLE METER
- E. METER BOX AND LID - PER SPL W-11.0

- F. BRASS METER BUSHING - SIZE AS REQUIRED TO CONNECT ANGLE METER STOP TO METER. A 1" X 3/4" METER BUSHING IS REQUIRED AT THE ANGLE STOP FOR ALL 5/8" METERS.
- G. WATER METER PURCHASED FROM NBU
- H. BRASS WATER METER COUPLING MAKE IPT x SWIVEL COUPLING NUT
- I. PROPERTY OWNER'S CUT OFF VALVE - 1" BRASS GATE VALVE
- J. PROPERTY OWNER'S CUT OFF VALVE BOX AND LID - NDS #D109-G
- K. TEMPORARY METER SPACER (REQUIRED TO ASSURE METER WILL FIT APPROPRIATELY)
- L. 1" WOODEN DOWEL (SHOW ADDRESS ON DOWEL USING WATERPROOF MARKER)
- M. 1" PIPE MEETING CITY OF NEW BRAUNFELS PLUMBING CODE REQUIREMENTS
- N. FUTURE IRRIGATION CONNECTION (SEE NOTE 8)

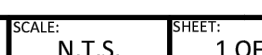
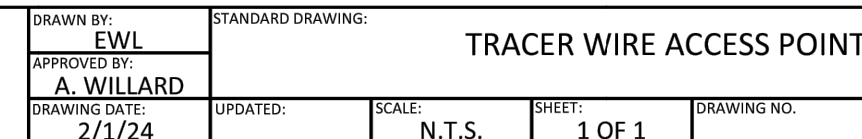
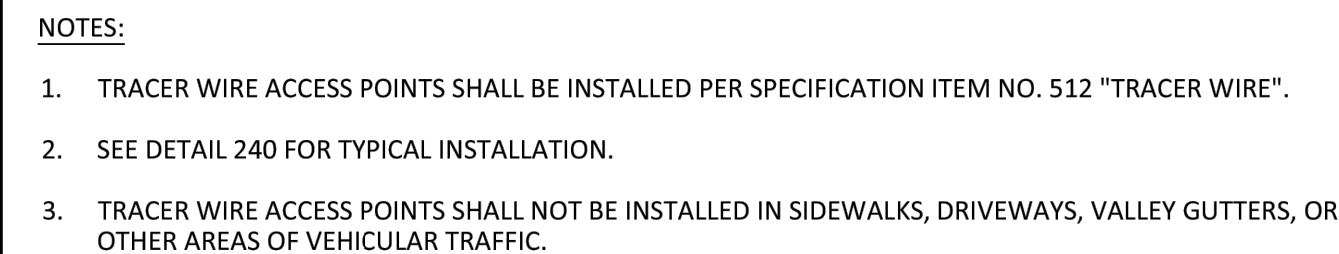
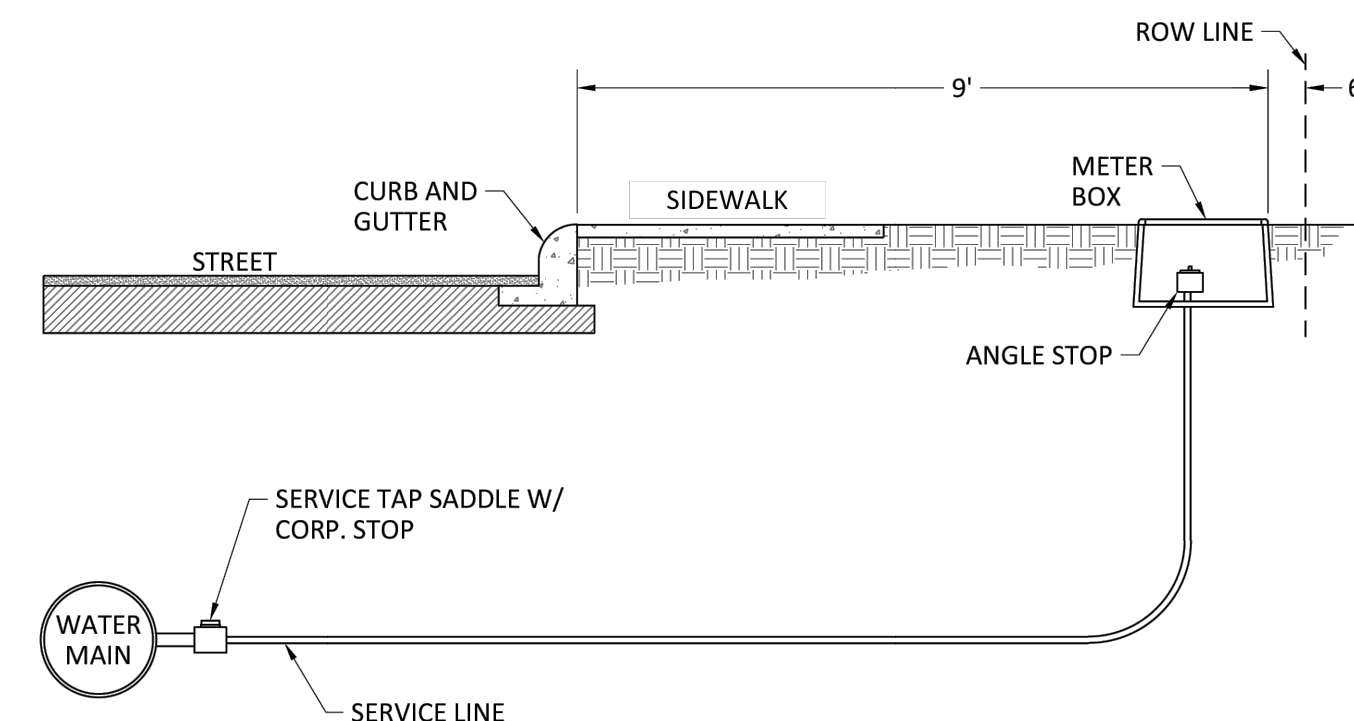
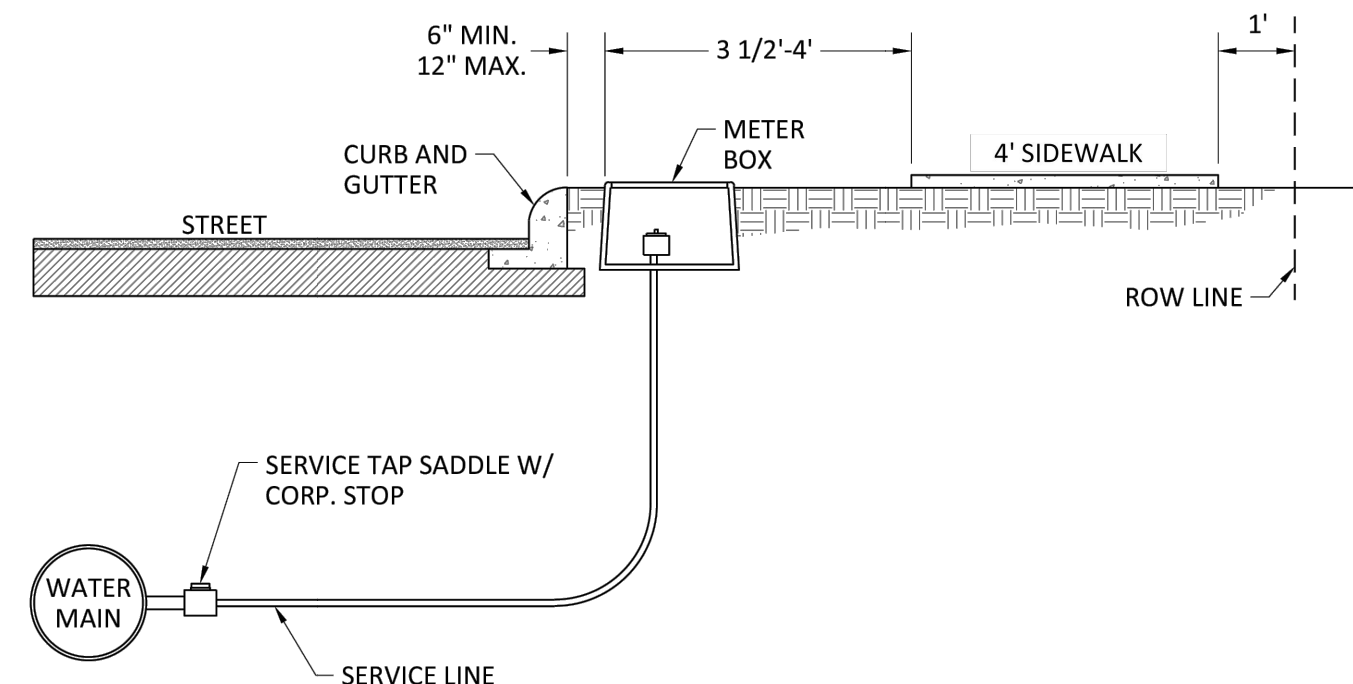
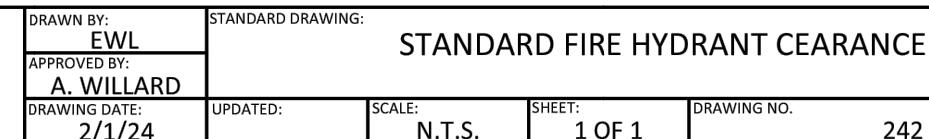
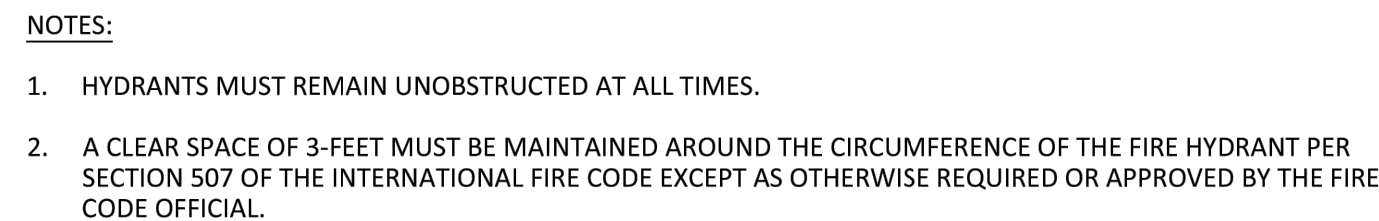
1. SERVICE PIPE SHALL BE ANNEALED SEAMLESS TYPE "K" COPPER TUBING MEETING THE CURRENT ASTM B88 STANDARD WITH NO SWEAT OR SOLDERED JOINTS. PIPE SHALL BE PLACED IN A STRAIGHT HORIZONTAL ALIGNMENT AND ALLOWED TO RELAX AND "SNAKE" LOOSELY IN THE TRENCH.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 8 MIL POLYETHYLENE FILM.
3. TOP OF BOXES MUST BE 2" ABOVE GROUND OR FLUSH WITH PAVEMENT SURFACE.
4. BEDDING AND BACKFILL FOR ALL PIPING, TUBING, AND APPURTENANCES SHALL BE PER NBU SPECIFICATIONS.
5. METER BOX LOCATIONS SHALL BE AS PER DETAILS 402 THROUGH 409, UTILITY LAYOUTS. METER BOXES SHALL NOT BE PLACED IN SIDEWALKS, DRIVEWAYS, OR VEHICULAR TRAFFIC AREAS.
6. ANGLE STOP TO BE PLACED A MAXIMUM OF 4" FROM BACK OF BOX THAT FACES CURB. TOP OF ANGLE STOP SHOULD BE A MINIMUM OF 10" FROM THE TOP OF METER BOX.
7. METER SIZES TO BE SHOWN ON PLANS.
8. APPROPRIATE BACKFLOW PREVENTION ASSEMBLY REQUIRED AS DETERMINED BY NBU WATER PROTECTION SPECIALIST. BACKFLOW PREVENTION ASSEMBLY SHALL BE LOCATED AS CLOSE AS POSSIBLE TO THE NBU IRRIGATION WATER METER WITH NO TEES OR CONNECTION BETWEEN THE TWO. CONTACT A WATER PROTECTION SPECIALIST AT BACKFLOW@NBUTEXAS.COM.



WATER DETAILS I

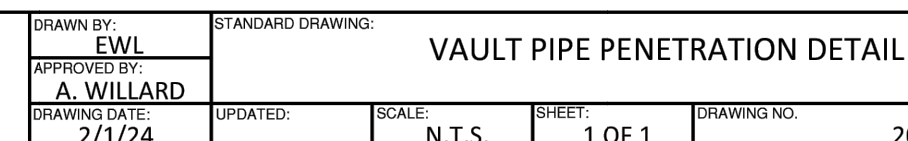
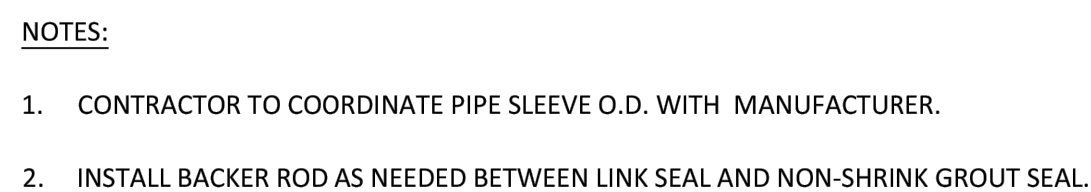
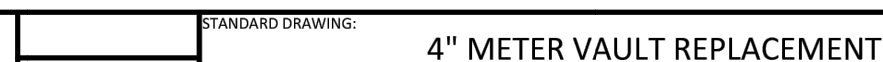


A circular professional engineer seal for the State of Texas. The outer ring contains the text "STATE OF TEXAS" at the top and "PROFESSIONAL ENGINEER" at the bottom, separated by stars. In the center, there is a five-pointed star above the name "ALEX ZERTUCHE" and the license number "92080". The words "LICENSED" and "ENGINEER" are also present in the inner circle. A handwritten signature "Alex Zertuche" is written across the bottom of the seal.



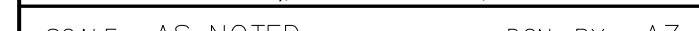
DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR TO CONFIRM EXACT DIMENSIONS. CONFIRM WITH NBU WATER ENGINEERING.

1. PIPE AND METER SIZE SHALL BE AS DETERMINED BY OWNER; APPROVAL BY NBU WATER SYSTEMS ENGINEERING. PLANS MUST BE PREPARED BY LICENSED ENGINEER IF INSTALLATION IN RIGHT-OF-WAY IS BY OTHER THAN NEW BRAUNFELS UTILITIES FORCES.
2. METER VAULT MUST BE BEHIND CURB AND/OR WALK AND OUT OF VEHICULAR TRAFFIC.
3. MAIN LINE AND BYPASS VALVES WILL BE RESILIENT SEAT TYPE WITH CORROSION RESISTANT FUSED BONDED EPOXY COATING INSIDE AND OUTSIDE, NON-RISING STEM. MAIN LINE AND BYPASS VALVES WILL HAVE A HANDWHEEL. PROPERTY OWNER'S VALVE MUST BE LOCATED OUTSIDE OF THE NEW BRAUNFELS UTILITIES METER VAULT.
4. NBU APPROVAL REQUIRED IF HEIGHT OF VAULT EXCEEDS 72".
5. HATCH SHALL HAVE MIN. 36" X 36" CLEAR OPENING AND BE EQUIPPED WITH SAFETY GRATING, SPL W19.0.0.
6. TAPPING SLEEVE AND PIPING IN RIGHT-OF-WAY AND UTILITY EASEMENTS SHALL BE EMBEDDED IN GRANULAR MATERIALS AND BACKFILLED PER NBU SPECIFICATIONS.
7. DOUBLE HARNESS MJ WITH TIE RODS. ALL OTHER FITTINGS INSIDE VAULT WILL BE FLANGED.
8. CONTACT NEW BRAUNFELS UTILITIES PRIOR TO INSTALLATION OF COMPOUND METERS FOR PROPER DOMESTIC DEMANDS.
9. REFER TO DRAWING 207 FOR WALL PENETRATION DETAIL.
10. THE TOP OF THE METER VAULT SHALL BE AT AN ELEVATION SUCH THAT THE SURROUNDING GROUND SLOPES AWAY FROM THE VAULT.
11. GRAVEL BEDDING PER NBU SPECIFICATIONS. BEDDING MUST EXTEND 6" BEYOND LIMITS OF THE SLAB.



SAN ANTONIO STREET REHABILITATION
PHASE 3 PROJECT

WATER DETAILS II



SCALE: AS NOTED DGN. BY: AZ

DATE: AS NOTED DWN. BY: JFR

JOB NO. 05487-0023-01 DWG. NO. --

SUBMITTED: ---- SURV BY: QUIDDITY

