

# 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.

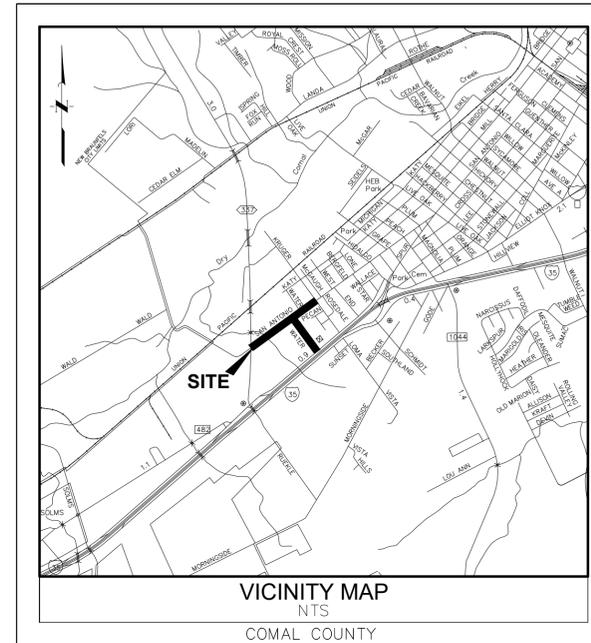
GPS POINTS SHALL BE REQUIRED FROM THE CONTRACTOR. A MINIMUM OF THREE COORDINATE POINTS FOR GEOREFERENCING SHALL BE REQUIRED. THE WATER AND WASTEWATER GPS POINTS SHALL BE TO SURVEY GRADE AND ELECTRIC GPS POINTS SHALL BE TO MAP GRADE. REFERENCE NBU'S WATER CONNECTION POLICY FOR ADDITIONAL CAD DELIVERABLE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



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**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NOT COMMENCED WITHIN ONE-YEAR OF NEW BRAUNFELS UTILITIES (NBU) APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.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 CONSTRUCTION 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:



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NO.	DATE	REVISIONS	APP.

**NEW BRAUNFELS UTILITIES – GENERAL NOTES:**

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL BE APPROVED BY NEW BRAUNFELS UTILITIES AND COMPLY WITH THE CURRENT NEW BRAUNFELS UTILITIES WATER SYSTEMS CONNECTION/CONSTRUCTION POLICY.
- CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE PLANS FROM THE CONSULTANT OR ENGINEER AND NOTIFY NBU WATER SYSTEMS ENGINEERING AT 830-608-8971 WITH AT LEAST TWO (2) WORKING DAYS (48 HOURS) NOTICE. WORK COMPLETED BY THE CONTRACTOR, WHICH HAS NOT RECEIVED A NOTICE TO PROCEED FROM NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
- CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS OFFICERS, DIRECTORS, OR CONSULTANTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.
- CONTRACTOR TO CONTACT THE ENGINEER--OF-RECORD (EOR) FOR ANY FIELD CHANGES. ANY REVISIONS OR CHANGES TO THE APPROVED CONSTRUCTION PLANS WILL REQUIRE ADDITIONAL APPROVAL BY NBU IN WRITING.
- 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 EXCAVATION.
- CONTRACTOR SHALL PROTECT ALL BUILDINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGES DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES, AND EXISTING UTILITIES (NOT ADJUSTED ON PLANS). COST OF RESTORATIONS, IF ANY, SHALL BE THE CONTRACTOR'S ENTIRE EXPENSE.
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE (1) INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION.
- CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES AND TAXES AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
- NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
- THE CONTRACTOR SHALL NOT PLACE ANY MATERIALS ON THE RECHARGE ZONE OF THE EDWARDS AQUIFER WITHOUT AN APPROVED WATER POLLUTION ABATEMENT PLAN FROM THE TCEQ 31 TAC 313.4 AND 31 TAC 313.9.
- BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (TMUTCD) AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.
- CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.
- THE LOCATION OF UTILITIES, EITHER UNDERGROUND OR OVERHEAD, SHOWN WITHIN THE RIGHT OF WAY OR EASEMENTS ARE APPROXIMATE AND SHALL BE VERIFIED BOTH HORIZONTALLY AND VERTICALLY BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION OPERATIONS.
- OSHA REGULATIONS PROHIBIT OPERATIONS THAT WILL BRING PERSONS OR EQUIPMENT WITHIN 10 FEET OF AN ENERGIZED LINE. WHERE WORKMEN AND/OR EQUIPMENT HAVE TO WORK CLOSE TO AN ENERGIZED ELECTRICAL LINE, THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL POWER COMPANY INVOLVED AND MAKE WHATEVER ADJUSTMENTS NECESSARY TO ENSURE THE SAFETY OF THOSE WORKMEN.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION. CONTRACTORS SHALL CALL THE ONE CALL SYSTEM FOR WATER/WASTEWATER LOCATION.
- DUE TO FEDERAL REGULATIONS TITLE 49, PART 192 (8), GAS COMPANIES 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.
- THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES, AND FLAGGERS. THE CONSTRUCTION METHODS SHALL BE CONDUCTED TO PROVIDE THE LEAST POSSIBLE INTERFERENCE TO TRAFFIC. THE CONTINUOUS MOVEMENT OF THE TRAFFIC IN ONE DIRECTION, AT MINIMUM, SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL CLEAN UP AND REMOVE FROM THE WORK AREA ANY LOOSE MATERIAL RESULTING FROM CONTRACT OPERATIONS AT THE END OF EACH WORKDAY.
- PRIOR TO ORDERING MATERIALS TO BE USED IN CONSTRUCTION, CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FOUR (4) COPIES OF THE SOURCE, TYPE, GRADATION, MATERIAL SPECIFICATION DATA AND / OR SHOP DRAWINGS, AS APPLICABLE, TO SATISFY THE REQUIREMENTS OF THE FOLLOWING ITEMS AND ALL MATERIAL ITEMS REFERRED TO IN THESE LISTED ITEMS:
  - WATER MAINS AND SERVICES
  - WASTEWATER MAINS AND SERVICES
- WATER LETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. WASTEWATER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO NBU CONNECTION AND CONSTRUCTION POLICY MANUAL.
- 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. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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 EXCAVATION.
- UTILITY TRENCH COMPACTION WITH STREET R.O.W.
  - ALL UTILITY TRENCH COMPACTION TEST WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR'S GEO-TECHNICAL ENGINEER.
  - FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE.
  - EACH LAYER OF MATERIAL SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEXT METHODS TEX-113-E, TEX-114-E, TEX-115-E.
  - THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO- TECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR.
  - UPON COMPLETION OF TESTING THE GEO-TECHNICAL 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.

**NBU WASTEWATER NOTES**

- THE POINT OF DELIVERY FOR AN NBU OWNED AND MAINTAINED WASTEWATER LINE IS TYPICALLY THE CLEANOUT, PROPERTY LINE, OR EDGE OF EASEMENT OR AS DETERMINED BY NBU.
- THE CONTRACTOR SHALL MAINTAIN SERVICE TO THE EXISTING WASTEWATER SYSTEM AT ALL TIMES DURING CONSTRUCTION.
- ALL NEW WASTEWATER MAINS AND FITTINGS SHALL BE MINIMUM 8-INCH DIAMETER (ASTM D-3034 SDR-26 PVC).
- ALL RESIDENTIAL WASTEWATER SERVICE LATERALS SHALL BE EXTENDED FOUR (4) FEET INTO THE PUBLIC UTILITY EASEMENT AND A CLEANOUT INSTALLED AT THE ROW LINE PER NBU STANDARD DETAILS. SERVICES TO LOTS WILL EXTEND FOUR (4) FEET PAST THE UNDERGROUND ELECTRIC CONDUIT IF ELECTRIC IS INSTALLED IN THE FRONT EASEMENT.
- ALL SEWER CLEANOUTS THAT LEAD TO NBU MAINS SHALL BE INSTALLED WITH A PROTECTIVE UTILITY SHROUD AND PIVOTING MARKER POLE DURING TIME OF CONSTRUCTION.
- PIPE BEDDING OF WASTEWATER LINES SHALL BE COMPLIANT WITH NBU SPECIFICATION NO. 120, "UTILITY TRENCHING AND BACKFILL".
- WASTEWATER MAINS SHALL HAVE A MINIMUM OF 48 INCHES OF COVER TO FINISHED GRADE AND WASTEWATER LATERALS MUST HAVE A MINIMUM OF 36 INCHES OF COVER TO FINISHED GRADE. CONCRETE ENCASEMENT WILL BE REQUIRED IF MINIMUM COVER CANNOT BE MET.
- ALL GRAVITY WASTEWATER PIPES SHALL HAVE GASKETED, COMPRESSION OR FUSED JOINTS PER 30 TAC §217.53 (C) (2).
- FOR WASTEWATER LINES LESS THAN 24 INCHES IN DIAMETER, SELECT INITIAL BACKFILL MATERIAL SHALL BE PLACED IN TWO LIFTS.
  - THE FIRST LIFT SHALL BE SPREAD UNIFORMLY AND SIMULTANEOUSLY ON EACH SIDE AND UNDER THE SHOULDERS OF THE PIPE TO THE MID-POINT OR SPRING LINE OF THE PIPE.
  - THE SECOND LIFT SHALL BE PLACED TO A DEPTH AS SHOWN ON THE PIPE BACKFILL DETAIL. FOR PIPES LARGER THAN 24-INCH, 12-INCH MAXIMUM LIFTS SHALL BE USED.
- ALL MANHOLES SHALL BE WATER-TIGHT, EITHER MONOLITHIC, CAST-IN-PLACE CONCRETE STRUCTURES OR PREFABRICATED MANHOLES SPECIFICALLY APPROVED BY NBU. POLYMER CONCRETE IS REQUIRED FOR MANHOLES ON MAINS 18-INCH DIAMETER AND LARGER, AT FORCE MAIN DISCHARGE POINTS, OR AT DROP MANHOLES WITH HIGH CORROSION POTENTIAL.
- MANHOLES SHALL HAVE BOLTED WATER-TIGHT RINGS AND COVERS. IN NON-PAVED AREAS, A MANHOLE MARKER ASSEMBLY SHALL BE INSTALLED ON THE MANHOLE COVER.
- MANHOLE VENTS SHALL BE INSTALLED AT INTERVALS NO GREATER THAN 1500 FEET.
- ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS SIX INCHES (6") ABOVE SURROUNDING GROUND IN NON-PAVED AREAS. IN PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH PAVEMENT.
- ALL NEW MANHOLES, UNLESS APPROVED BY NBU, SHALL HAVE COVERS WITH 32-INCH OPENINGS.
- WASTEWATER PIPE CONNECTIONS TO PRE-CAST MANHOLES WILL BE COMPRESSION JOINTS OR MECHANICAL "BOOT TYPE" JOINT AS APPROVED BY NBU.
- EXISTING MANHOLES SHALL BE LINED, COATED, OR REPLACED WITH A CORROSION RESISTANT MATERIAL IF A NEW CONNECTION IS MADE BY A MAIN OR LATERAL.
- WASTEWATER MAINS SHALL BE TESTED FROM MANHOLE TO MANHOLE.
- IN AREAS WHERE A NEW WASTEWATER MANHOLE IS TO BE CONSTRUCTED OVER AN EXISTING WASTEWATER SYSTEM, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO TEST THE EXISTING MANHOLES BEFORE CONSTRUCTION. AFTER THE PROPOSED MANHOLE(S) HAS BEEN BUILT, THE CONTRACTOR SHALL RE-TEST THE EXISTING SYSTEM TO THE SATISFACTION OF THE CONSTRUCTION INSPECTOR, NO SEPARATE PAY.

- NBU INSPECTOR TO BE PRESENT FOR ALL WASTEWATER LINES TO BE INSTALLED AT DEPTHS OF 15 FEET OR GREATER FROM FINAL GRADE.
- WHERE THE MINIMUM 9-FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER 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) (1).
- CONTRACTOR SHALL COORDINATE WITH THE ASSIGNED WATER/WASTEWATER INSPECTOR FOR COMPLETION OF THE FIELD ACCEPTANCE CHECKLIST. NO TESTING WILL BE PERFORMED PRIOR TO 30 DAYS FROM COMPLETE INSTALLATION. ALL TESTING AND ACCEPTANCE SHALL CONFORM TO NBU SPECIFICATIONS BE COMPLETED IN THE FOLLOWING ORDER:
  - PIPE DEFLECTION TEST (MANDREL TEST)
  - PIPE LOW PRESSURE AIR TEST
  - MANHOLE VACUUM TEST
  - MANHOLE PROTECTIVE COATING TEST
  - CCTV INSPECTION (WITHIN 72 HOURS OF CLEANING AND FLUSHING)
- 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.

**NBU WATER NOTES**

- THE POINT OF DELIVERY FOR AN OWNED AND MAINTAINED WATER LINE IS TYPICALLY THE DOMESTIC OR IRRIGATION WATER METER, FIRE LINE UP TO THE CONTAINMENT BACKFLOW DEVICE, OR HYDRANT METER OR AS DETERMINED BY NBU.
- WATER INFRASTRUCTURE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE NBU WATER CONNECTION POLICY.
- ALL WATER MAINS SHALL BE CONSTRUCTED OF AWWA C900 DR 14 PVC, AWWA C900 DR 18 PVC OR MINIMUM CL 250 DUCTILE IRON PIPE.
- 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.
- ALL 2-INCH SERVICE LINES SHALL BE CONSTRUCTED OF AWWA C901 SDR9 CTS POLYETHYLENE TUBING.
- 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.
- PIPE BEDDING OF WATER LINES SHALL BE COMPLIANT WITH NBU SPECIFICATION NO. 120, "UTILITY TRENCHING AND BACKFILL".
- 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:
  - IF THE NUMBER OF RESIDENTIAL CUSTOMERS AFFECTED IS GREATER THAN 20 AND EXPECTED TO LAST MORE THAN 4 HOURS.
  - IF ANY COMMERCIAL CUSTOMERS ARE AFFECTED BY THE OUTAGE THEN THE USE OF LINE STOPPERS WILL BE DETERMINED ON A CASE BY CASE BASIS.
  - 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.
  - SYSTEM CONDITIONS MAY REQUIRE A LINE STOPPER AND MAY NOT BE KNOWN UNTIL CONSTRUCTION COMMENCES.
- CONTRACTOR WILL KEEP THE AREA ON TOP OF, AROUND, AND WITHIN THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
- 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.
- 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.
- METER BOXES FOR 5/8-INCH AND 1-INCH METERS MUST BE DFW PLASTICS DFW38C- 14-AF1MP.
- METER BOXES FOR 1.5" METERS MUST BE DFW PLASTICS DFW65C-14-AF1MP.
- METER BOXES FOR 2" METERS MUST BE DFW PLASTICS DFW1730F-12-AF1MP.
- THRUST 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.
- 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.
- 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:
  - BACTERIOLOGICAL TESTING
  - HYDROSTATIC TESTING (PERFORMED VALVE TO VALVE)
- 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 METER 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
- 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
- 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

**ADDITIONAL NOTES**

- 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.
- CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PLAN FOR BYPASS PUMPING TO NBU FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PLAN FOR PHASING TO NBU FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
- 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.
- FLOWABLE BACKFILL WITHIN TXDOT ROW SHALL MEET THE REQUIREMENTS OF TXDOT ITEM 401 "FLOWABLE BACKFILL" AND IS SUBSIDIARY TO PERTINENT ITEMS.
- NO SEEDING SHALL BE ALLOWED UNTIL THE SEED BED HAS BEEN PREPARED AND APPROVED BY THE NBU INSPECTOR.
- 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).
- 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.
- WATER SERVICE AND SEWER LATERAL TRENCHING, TRENCH SAFETY PROTECTION, BEDDING, BACKFILL, AND SURFACE RESTORATION (ALL TYPES) ARE SUBSIDIARY TO SERVICE INSTALLATION.

NO.	DATE	REVISIONS	APP.



SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT

**GENERAL NOTES I**



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



**GENERAL NOTES:**

**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).

**ENVIRONMENTAL PROTECTION NOTES**

- 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, DECANT 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.

**WASTEWATER CONSTRUCTION NOTES:**

- 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 TEMPORARY 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.

**TRAFFIC CONTROL NOTES:**

- 1. GENERAL
  - a. PRIOR TO ANY WORK THE CONTRACTOR WILL 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

PROTECT THE PAVEMENT FROM DAMAGE AS DIRECTED/APPROVED BY THE CITY. THROUGHOUT CONSTRUCTION OPERATIONS, THE CONTRACTOR WILL BE REQUIRED TO CONDUCT THEIR HAULING OPERATIONS IN A MANNER SUCH THAT VEHICLES WILL NOT HAUL OVER PREVIOUSLY RECOMPACTED SUBGRADE OR COMPACTED BASE MATERIAL, EXCEPT IN SHORT SECTIONS FOR DUMPING MANIPULATIONS.

- 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.

**CITY OF NEW BRAUNFELS NOTES**

**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 INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- 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.

**GROUNDWATER**

- 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 UPON RECEIPT OF THE MITIGATION PLAN. ALL CONSTRUCTION ACTIVITY IMPACTED BY THE DISCOVERY OF GROUNDWATER, SHALL BE SUSPENDED UNTIL THE CITY ENGINEER GRANTS A WRITTEN APPROVAL OF THE GROUNDWATER MITIGATION PLAN.

**RECORD DRAWINGS**

- 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.

**CONSTRUCTION NOTE**

- 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.

**DRAINAGE NOTE**

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

**SOILS TESTING**

- 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.

**UTILITY TRENCH COMPACTION**

- 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, 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.

**CONSTRUCTION STABILIZED ENTRANCE**

- 14. SAWCUT CURB FOR CONSTRUCTION ENTRANCE.
- 15. STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3"x5" ROCK TO BE PLACED A MINIMUM LENGTH OF 25-FT. AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE CITY RIGHT-OF-WAY. RIGHT-OF-WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.

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

- 16. SEEDING FOR THE PURPOSE OF ESTABLISHING VEGETATION WITHIN CONSTRUCTED EARTHEN CHANNELS, BASINS AND DISTURBED AREAS SHALL BE CONDUCTED IN ACCORDANCE WITH 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 BRAUNFELS DESCRIBING THE MEASURES THAT WILL BE TAKEN TO STABILIZE EARTHEN DRAINAGE INFRASTRUCTURE UNTIL A TIME WHEN GROWING CONDITIONS BECOME MORE FAVORABLE.

**UTILITIES**

- 21. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.

**AT&T TEXAS/SWB T FACILITIES:**

- 1. THE LOCATIONS OF AT&T TEXAS/SWB T 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 T FACILITIES, ALL EXCAVATIONS MUST BE ACCOMPLISHED USING NON-MECHANIZED EXCAVATION PROCEDURES. WHEN BORING, THE CONTRACTOR SHALL EXPOSE THE AT&T TEXAS/SWB T FACILITIES.
- 4. WHEN AT&T TEXAS/SWB T 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 T 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.

**SHEET SCALE NOTE:**

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

NO.	DATE	REVISIONS	APP.



SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT

**GENERAL NOTES II**



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
2967 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



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**PROPOSED LEGEND**

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

**EXISTING LEGEND**

---	ROW/PROPERTY LINE
---	EASEMENT
——	PAVEMENT
---	EDGE OF GRAVEL
— 100 —	CONTOUR
◇ ◇ ◇ ◇	CHAIN LINK FENCE
/// /// /// ///	WOOD FENCE
○ ○ ○ ○ ○ ○ ○ ○	GUARD FENCE
— OHE —	OVERHEAD ELECTRIC
— x x x x x x x x —	ABANDONED UTILITY
— ww —	SANITARY SEWER
— c1 —	QL"B" — AT&T (FIBER OPTIC/DUCT)
— c2 —	QL"B" — AT&T (TELE)
— c3 —	QL"B" — FIBERLIGHT (FIBER OPTIC/DUCT)
— c4 —	QL"B" — MCI (FIBER OPTIC/DUCT)
— c5 —	QL"B" — SPECTRUM (FIBER OPTIC/DUCT)
— c6 —	QL"B" — SPECTRUM (CABLE TV)
— G1 —	QL"B" — CENTERPOINT ENERGY GAS
— TS1 —	QL"B" — TXDOT TRAFFIC SIGNAL
— W1 —	QL"B" — WATER
— (C1) —	QL"C/D" — AT&T (FIBER OPTIC/DUCT)
— (C2) —	QL"C/D" — AT&T (TELE)
— (C3) —	QL"C/D" — FIBERLIGHT (FIBER OPTIC/DUCT)
— (C4) —	QL"C/D" — MCI (FIBER OPTIC/DUCT)
— (C5) —	QL"C/D" — SPECTRUM (FIBER OPTIC/DUCT)
— (C6) —	QL"C/D" — SPECTRUM (CABLE TV)
— (G1) —	QL"C/D" — CENTERPOINT ENERGY GAS
— (TS1) —	QL"C/D" — TXDOT TRAFFIC SIGNAL
— (W1) —	QL"C/D" — WATER

**EXISTING LEGEND**

●	POWER POLE
←	GUY WIRE
W	WATER METER
●	WATER VALVE
● S	IRRIGATION
●	FIRE HYDRANT
○	MANHOLE
○	SEWER CLEANOUT
○ TSP	TRAFFIC SIGNAL POLE
TSB	TRAFFIC SIGNAL BOX
⊕	TELEPHONE PEDESTAL
G	GAS METER
● G	GAS VALVE
NG	GAS TEST STATION
⊗	LIGHT
M	MAILBOX
●	SIGN
○	TREE
4 4	CONCRETE
GRAVEL	GRAVEL

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NO.	DATE	REVISIONS	APP.



**SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT**

**LEGEND**



Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23220  
2967 Oak Run Parkway, Suite 215 • New Braunfels, TX 78132 • 830.203.6630

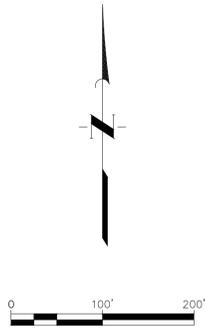
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DATE: AS NOTED	DWN. BY: JFR
JOB NO. 05487-0023-01	DWG. NO. --
SUBMITTED: ---	SURV. BY: QUIDDITY



*Alex Zertuche*

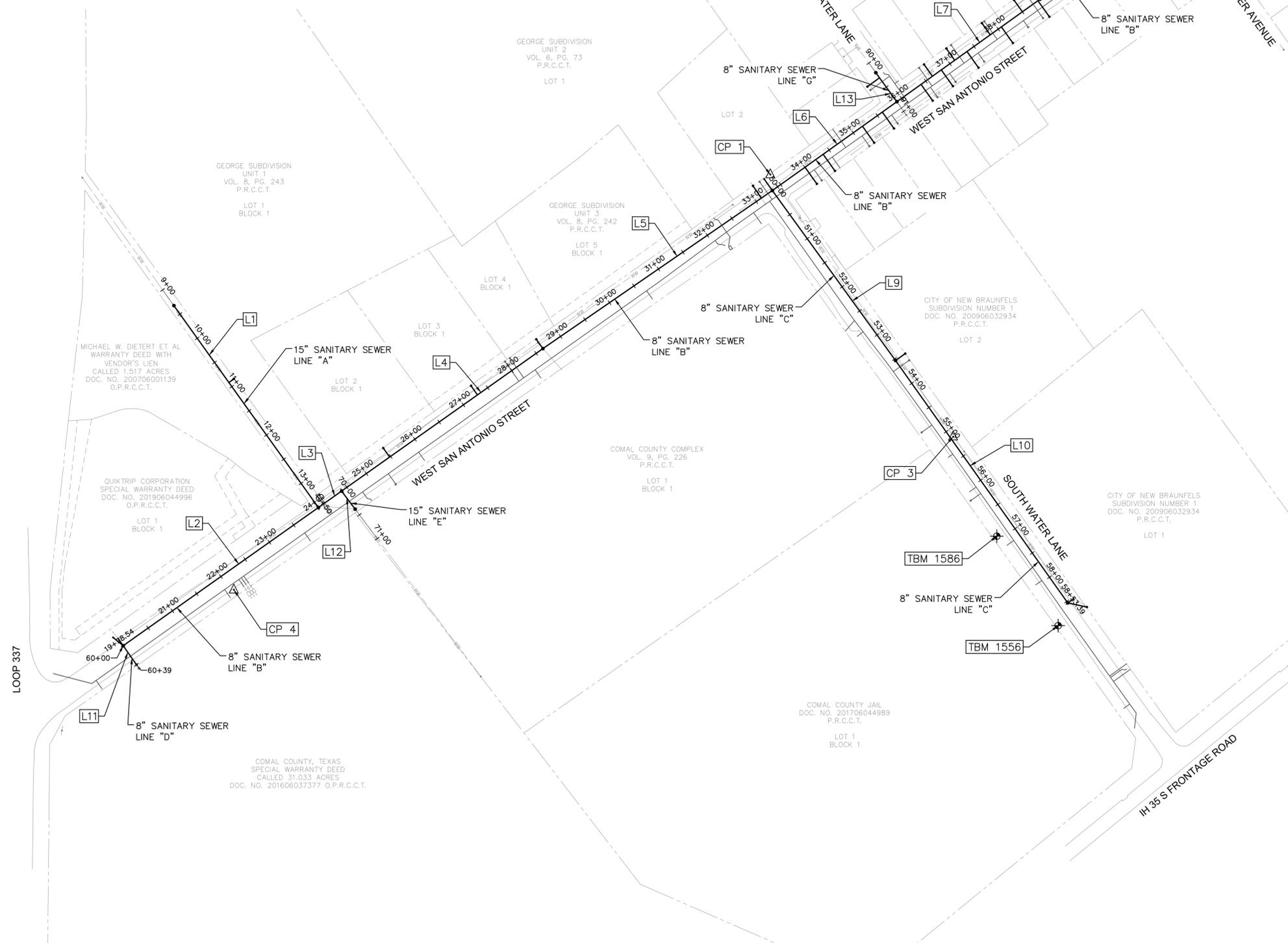
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CONTROL POINTS				
CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	2238116.87	13796347.93	673.42	5/8 ROD W/ "QUIDDITY" CAP
2	2238838.70	13796802.08	680.31	5/8 ROD W/ "QUIDDITY" CAP
3	2238424.78	13795907.49	685.63	MAG NAIL W/ "QUIDDITY" WASHER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

**NBU**  
New Braunfels Utilities

SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT

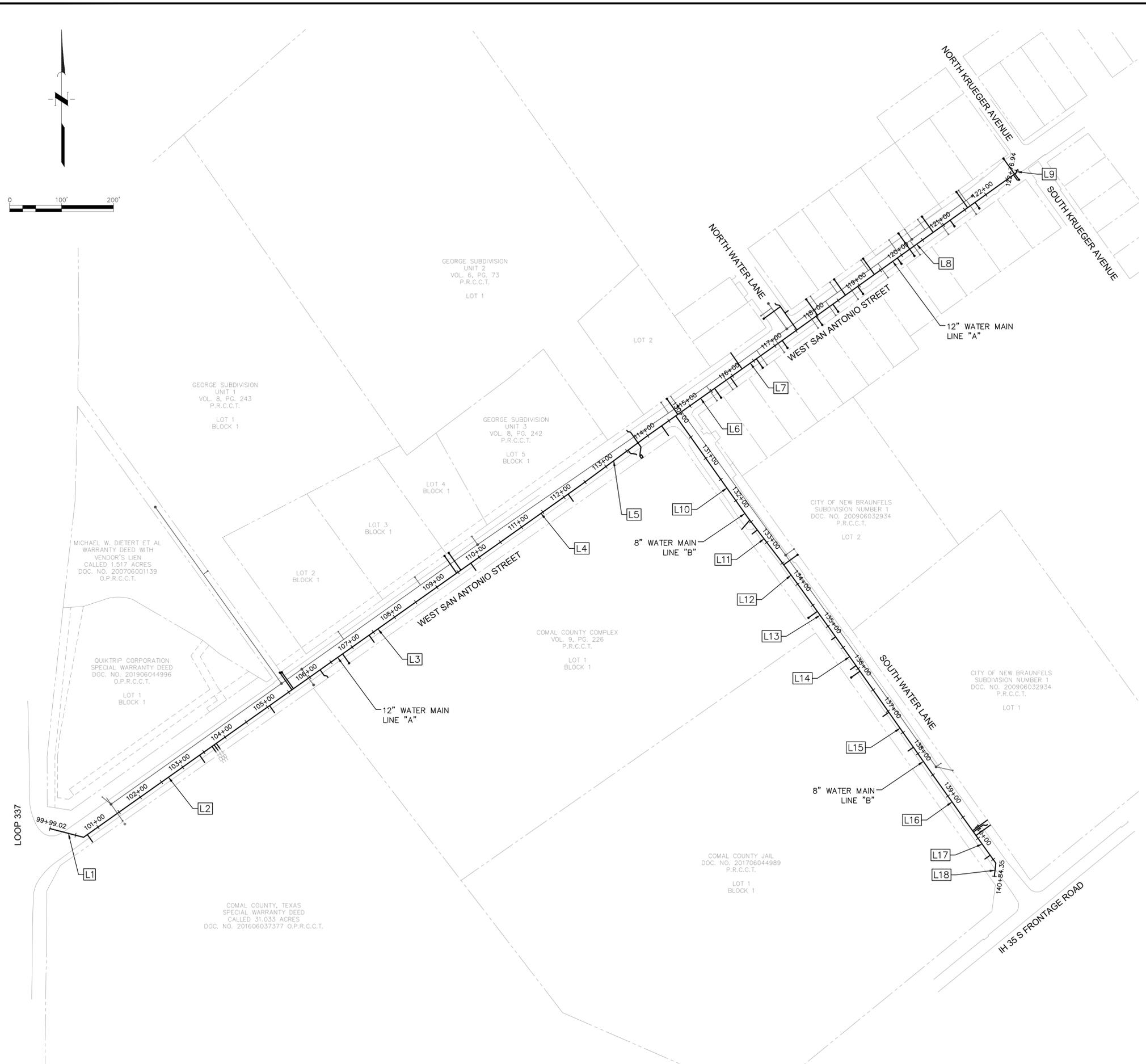
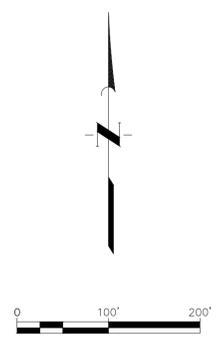
**SANITARY SEWER  
ALIGNMENT AND  
BENCHMARK CONTROL DATA**

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
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SCALE: AS NOTED      DGN. BY: AZ  
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SUBMITTED: ---      SURV. BY: QUIDDITY

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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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JOB NO. 05487-0023-01 DWG. NO. --  
SUBMITTED: --- SURV. BY: QUIDDITY

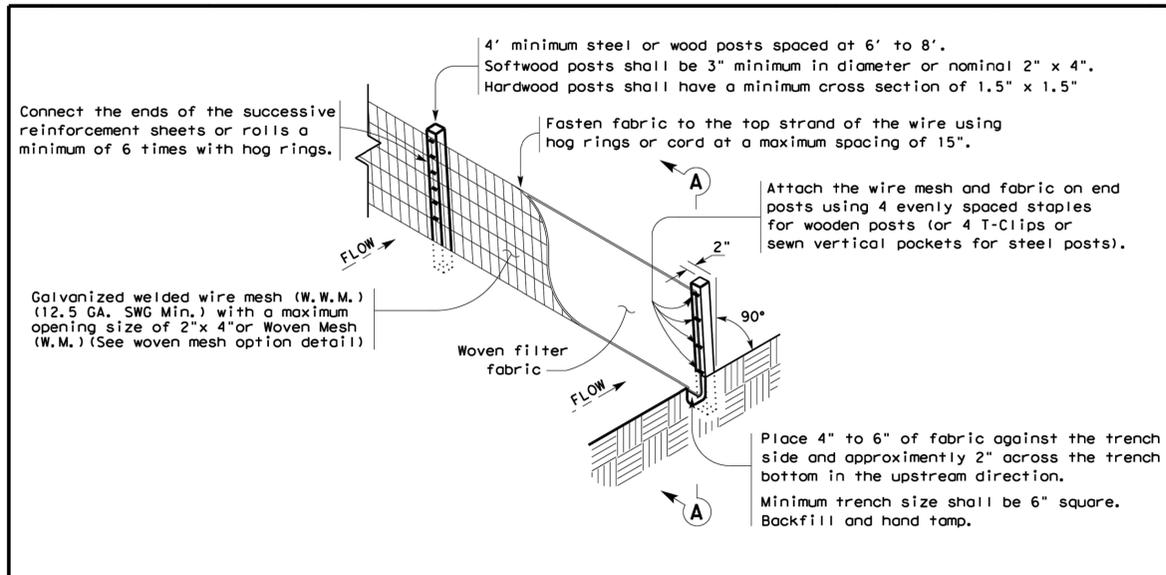


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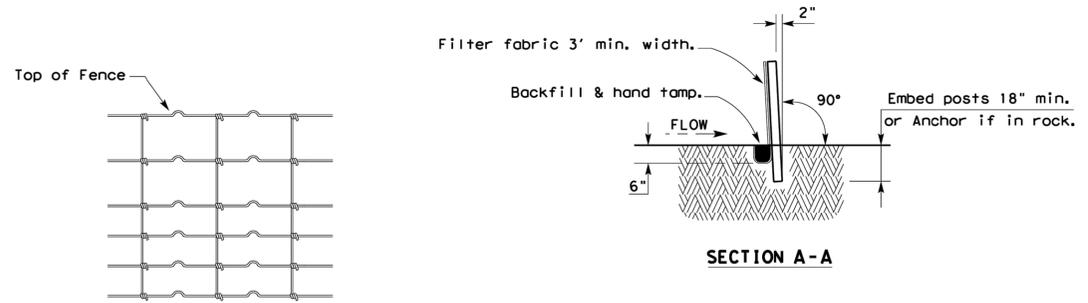
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**TEMPORARY SEDIMENT CONTROL FENCE**

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/FT<sup>2</sup>. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

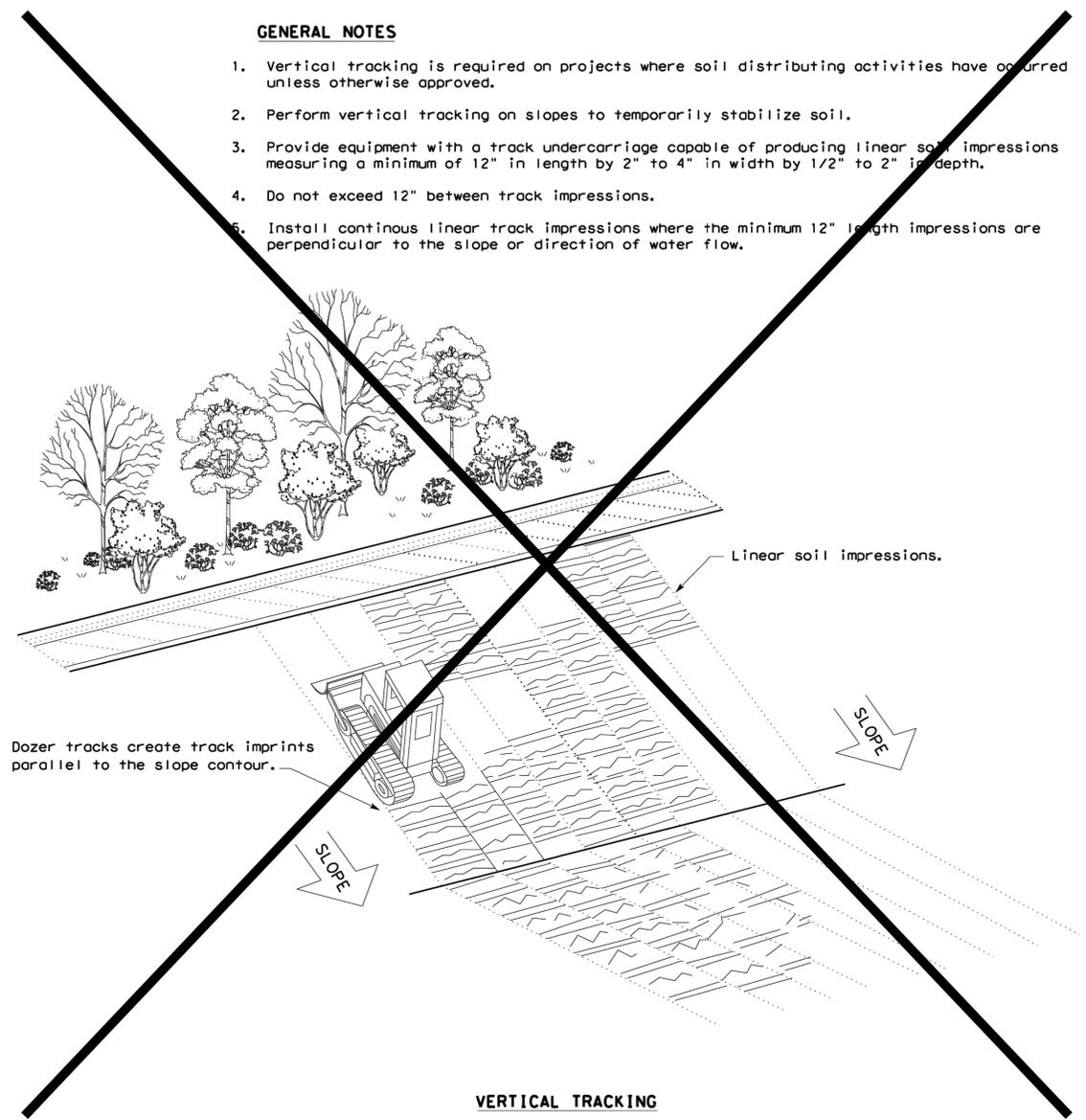
**LEGEND**

Sediment Control Fence

SCF

**GENERAL NOTES**

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



**VERTICAL TRACKING**



**TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES FENCE & VERTICAL TRACKING**

**EC(1)-16**

FILE: ec116	DN: TxDOT	CK: KM	DN: VP	DN: CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY	SHEET NO.	

NO.	DATE	REVISIONS	APP.



SAN ANTONIO STREET REHABILITATION PHASE 3 PROJECT

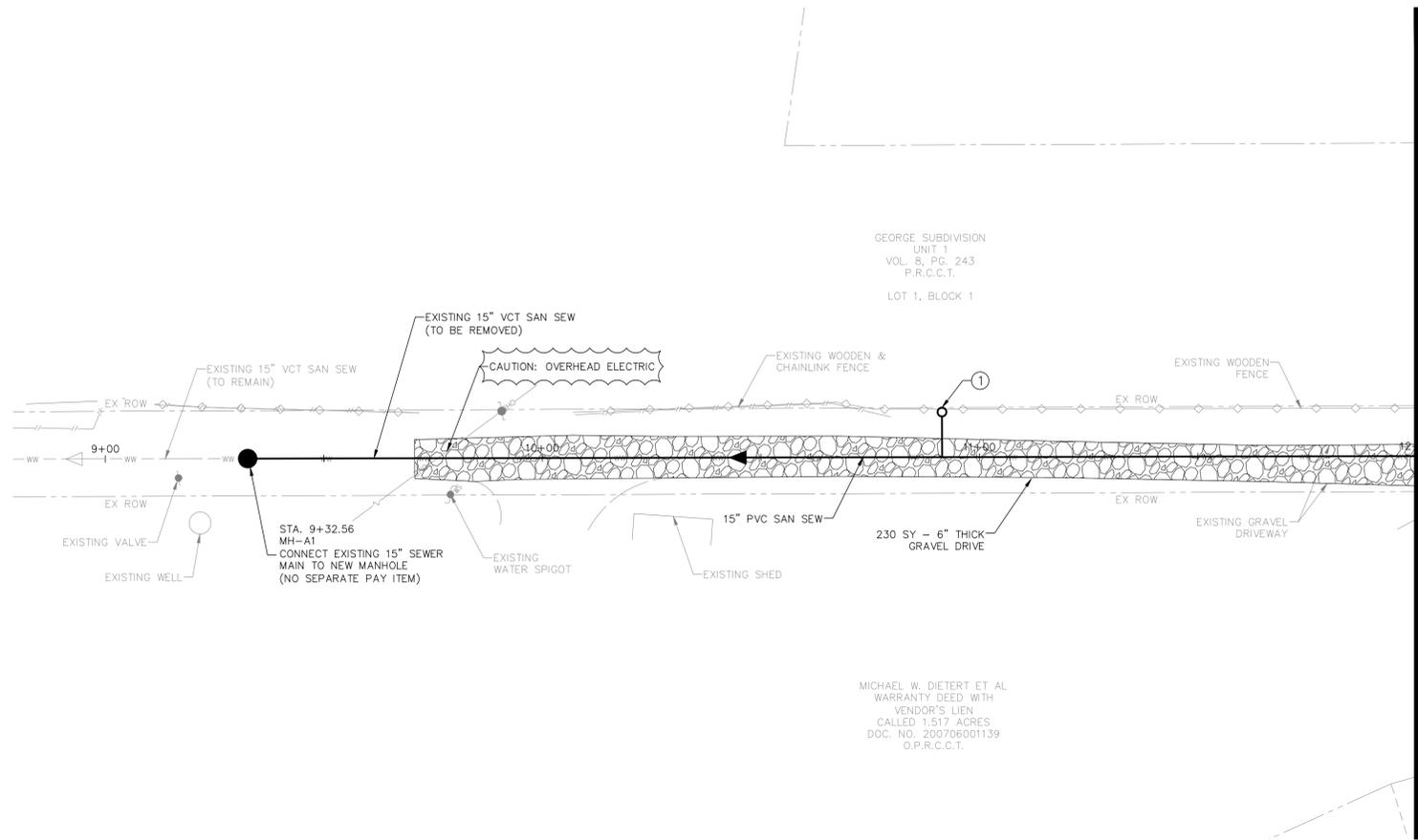
**EROSION CONTROL DETAILS I**



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 JOB NO. 05487-0023-01 DWG. NO. --  
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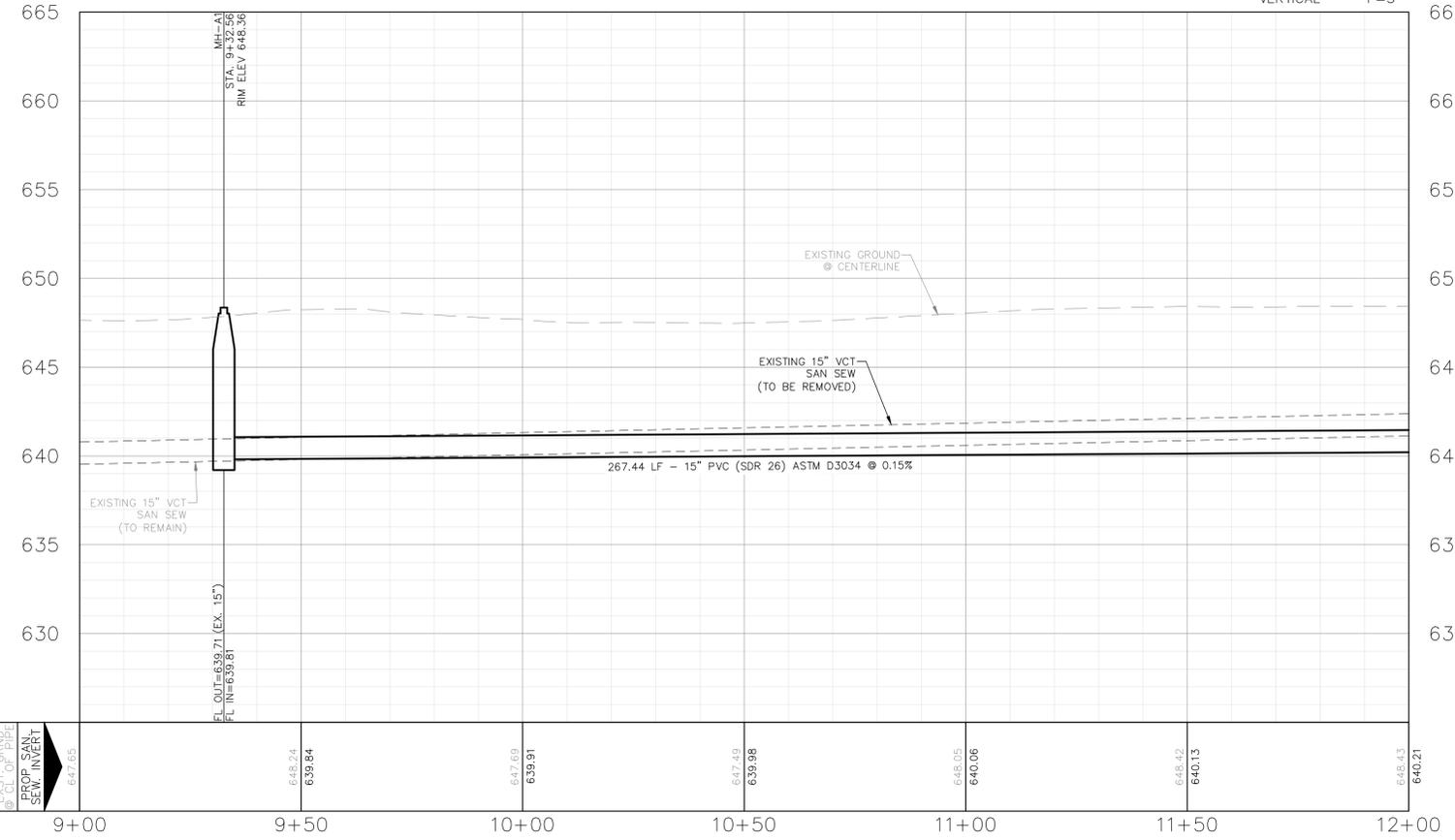
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MATCHLINE STA 12+00

SANITARY SEWER LINE "A" BEGIN TO 12+00

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



- 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 COMPACTING THICKNESS 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.

- 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.



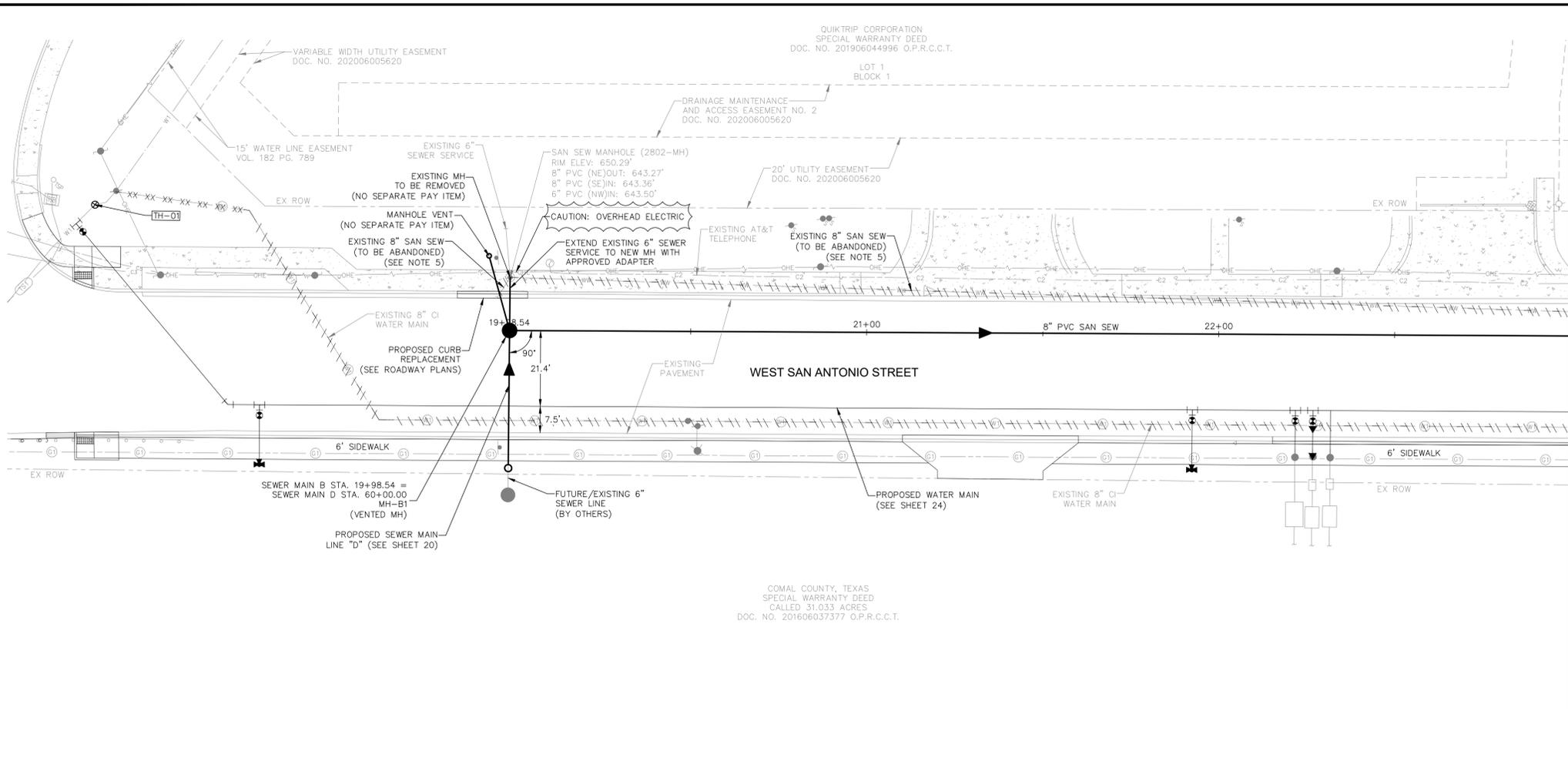
SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT  
SANITARY SEWER LINE A  
BEGIN TO 12+00



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SUBMITTED: --- SURV. BY: QUIDDITY

STATE OF TEXAS  
ALEX ZERTUCHE  
92080  
LICENSED PROFESSIONAL ENGINEER  
5/9/2025  
9 / 35



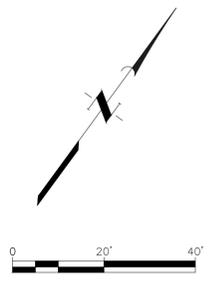


SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-01	18" CSC WATER	13795516.96	2236910.49	650.58	641.49	*TRGs target utility was an 18" CSC water line. Crew exposed the west edge of the utility. Size & material per record. Owner: New Braunfels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

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

**KEYED NOTES**

- 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.



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	(830) 273-4250
JOEY PUENTE	(830) 273-4250
SPECTRUM	(830) 273-4250
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 1-800-545-8005. 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.

**CONSTRUCTION NOTES:**

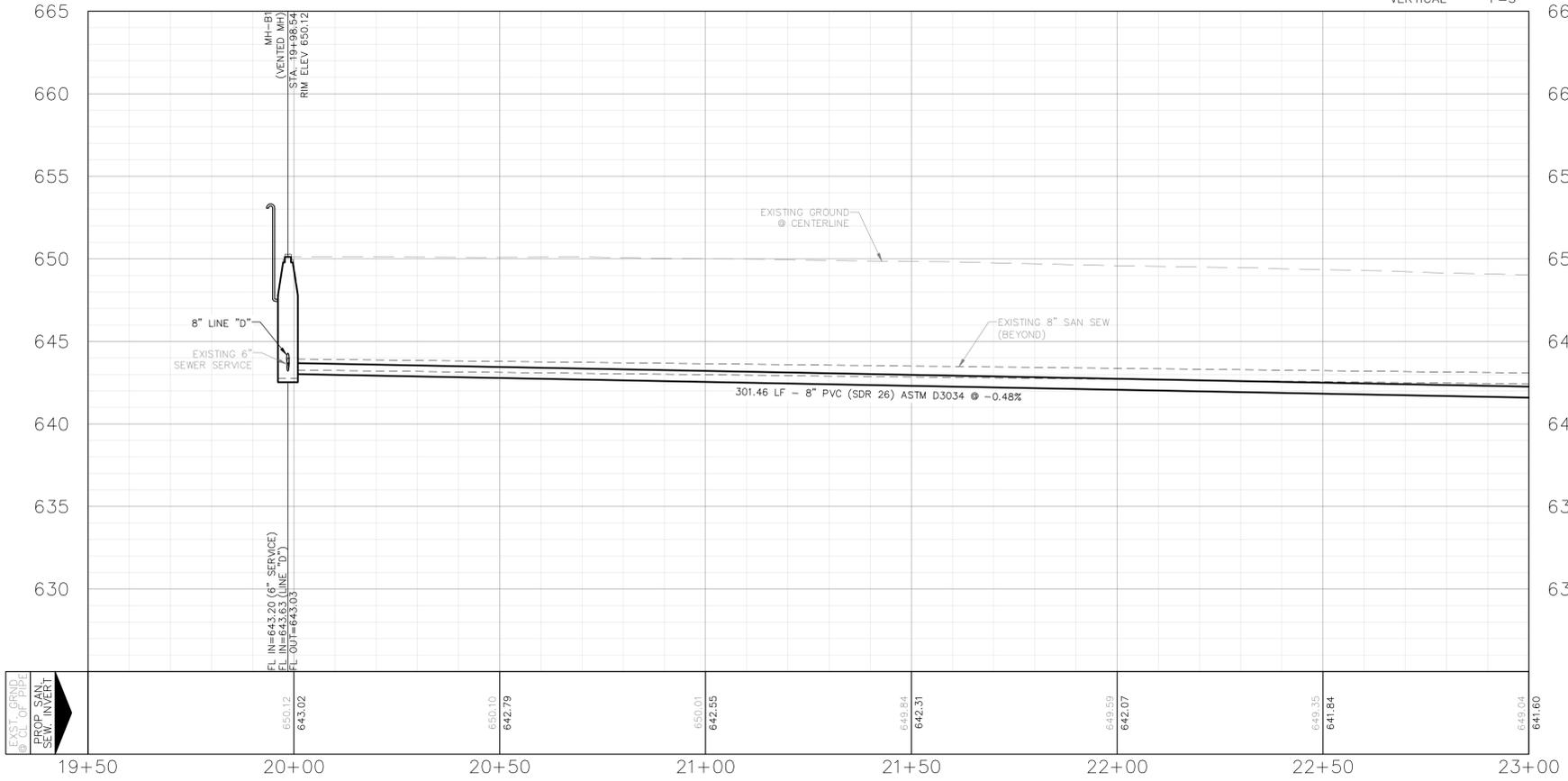
- WHERE WATER MAINS AND SERVICES AND SEWER MAINS AND LATERALS ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION). (NO SEPARATE PAY ITEM).
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- 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 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.
- 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.

**SANITARY SEWER LINE "B" BEGIN TO 23+00**

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



NO.	DATE	REVISIONS	APP.



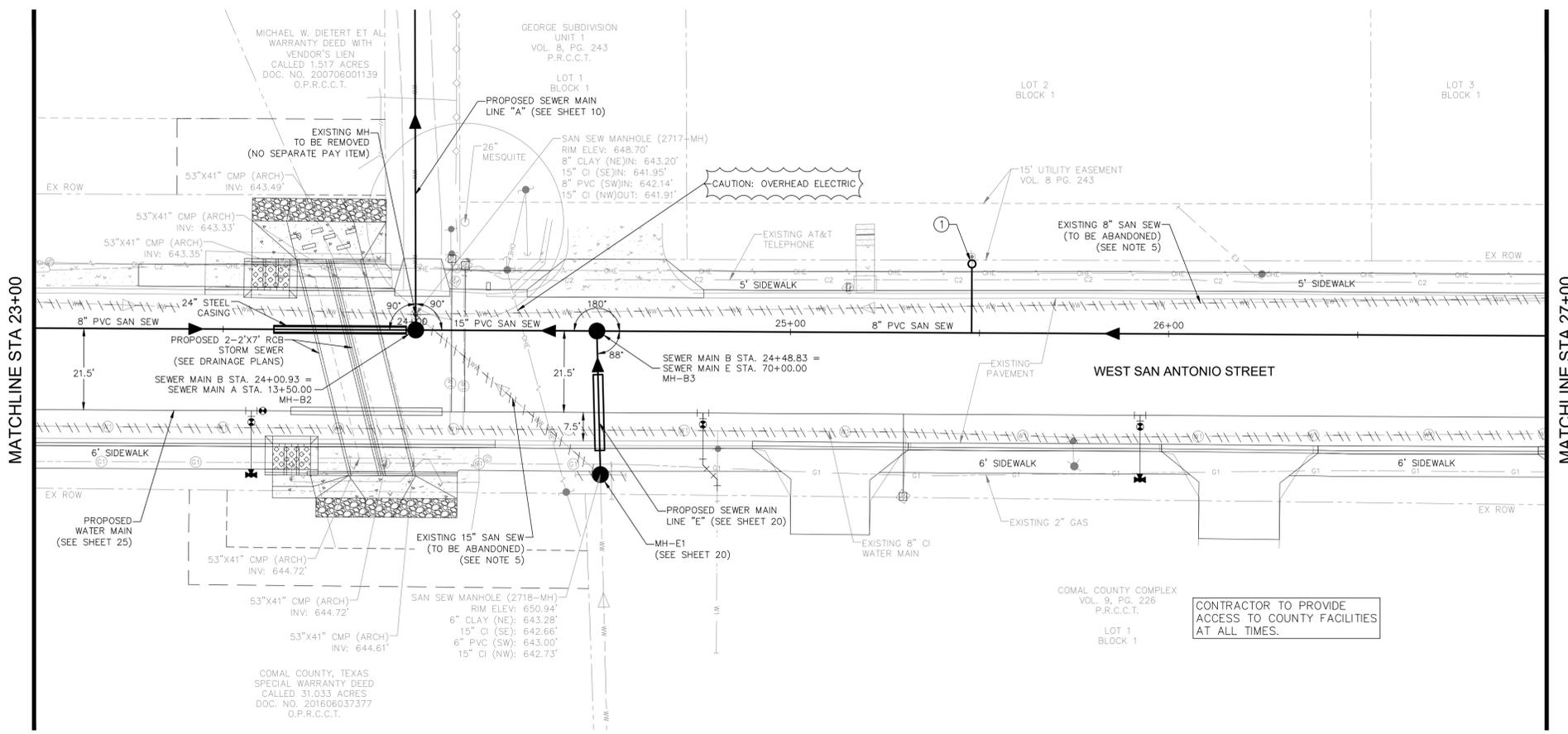
**SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT  
SANITARY SEWER LINE B  
BEGIN TO 23+00**



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  
11/35

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 10/15/2025 10:15am JFR



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

**KEYED NOTES**

- 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.



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	(830) 273-4250
JOEY PUENTE	(830) 273-4250
SPECTRUM	(210) 793-8066
LEO GARCIA	811
TEXAS ONE CALL SYSTEM	

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.

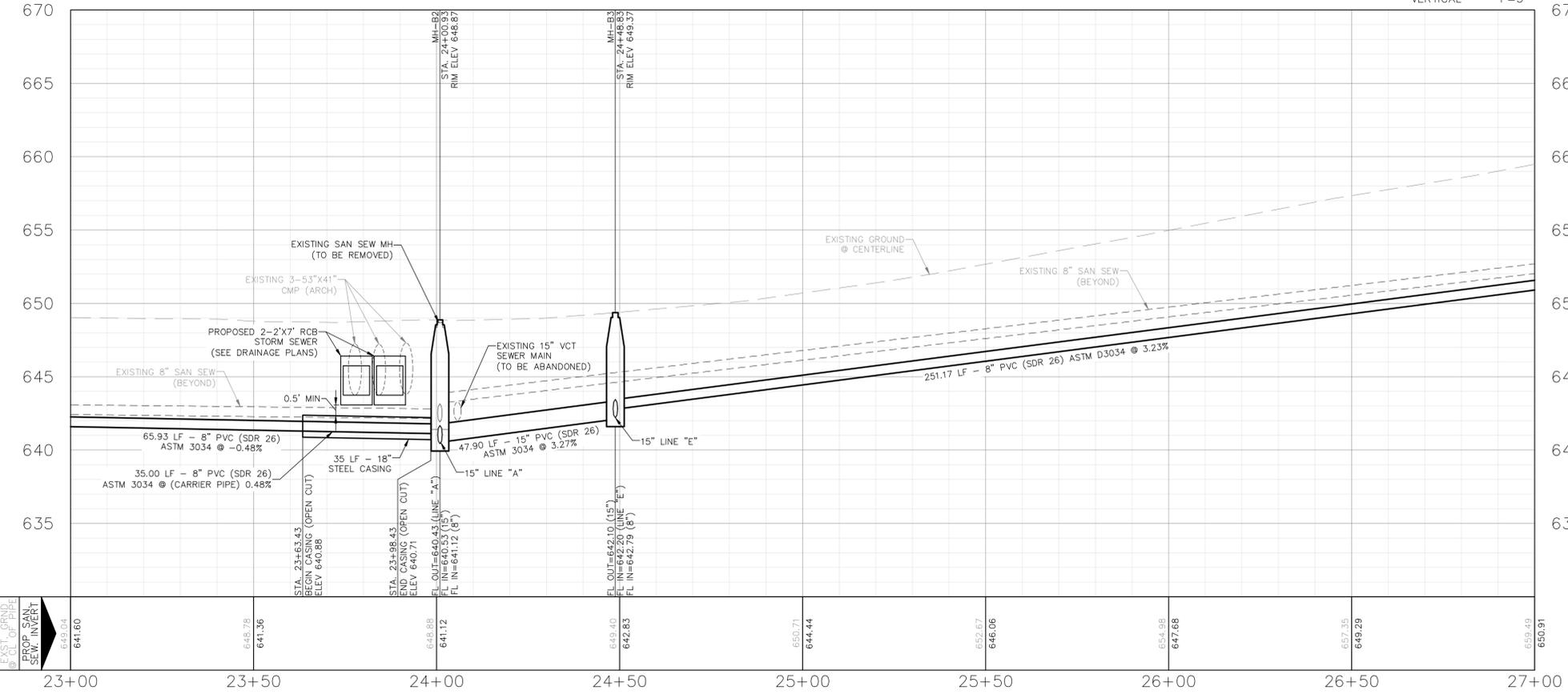
TELEPHONE LOCATOR  
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TRENCH SAFETY EXCAVATION SAFETY PROTECTION  
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL 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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**SANITARY SEWER LINE "B" STA 23+00 TO 27+00**

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



- 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 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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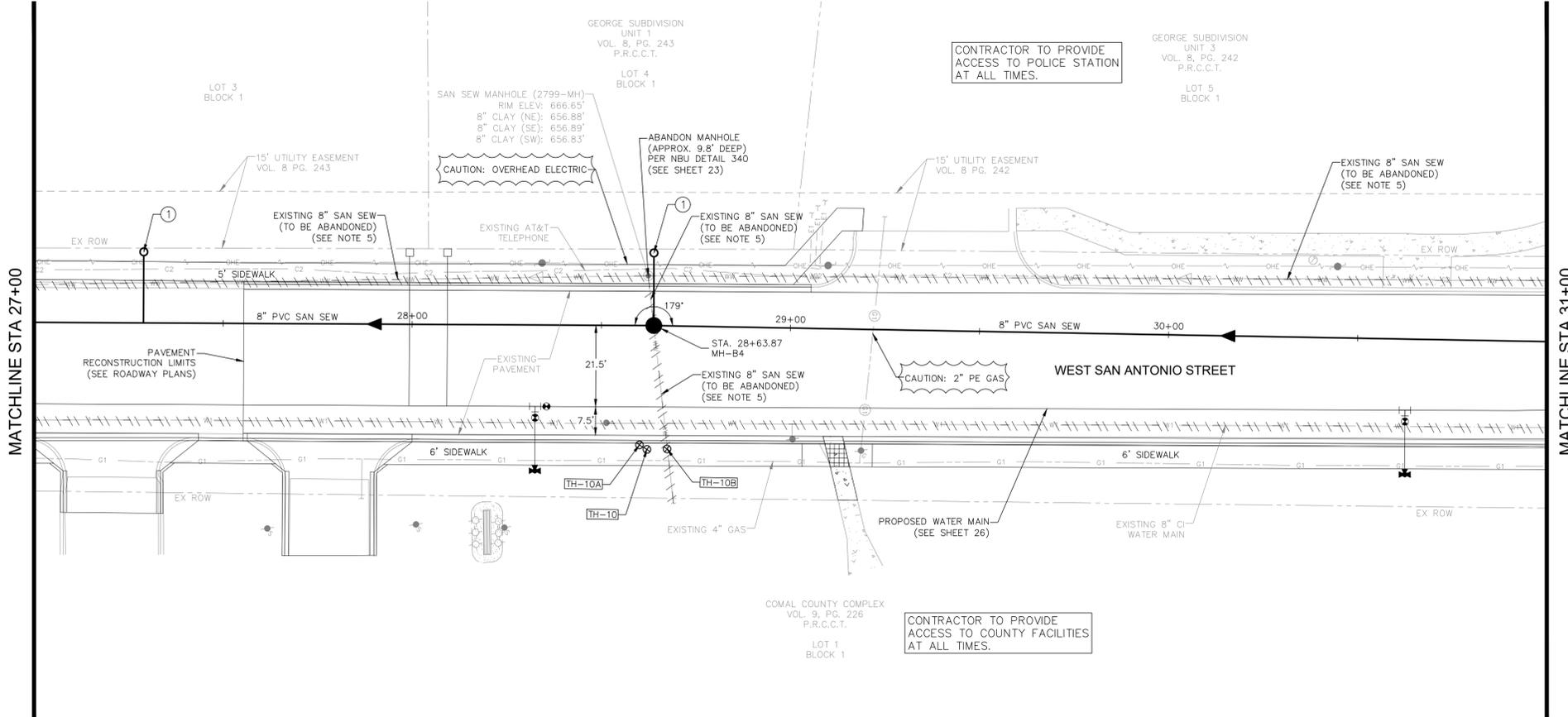


SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT  
**SANITARY SEWER LINE B  
STA 23+00 TO 27+00**



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

Alex Zertuche  
5/9/2025

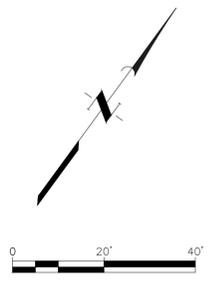


SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-10	N/A	13796027.91	2237751.39	667.31	N/A	*TRG's target utility was a 6" unknown material sewer line. Crew excavated to 10.90 feet and did not expose utility. Owner: New Braunfels Utilities
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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AT&T	(210) 213-1893
PARRISH AUSTIN CENTERPOINT ENERGY	(830) 237-6350
CLIFFORD WHARTON FIBERLIGHT	(830) 273-4250
JOEY PUENTE SPECTRUM	(210) 793-8066
LEO GARCIA 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.

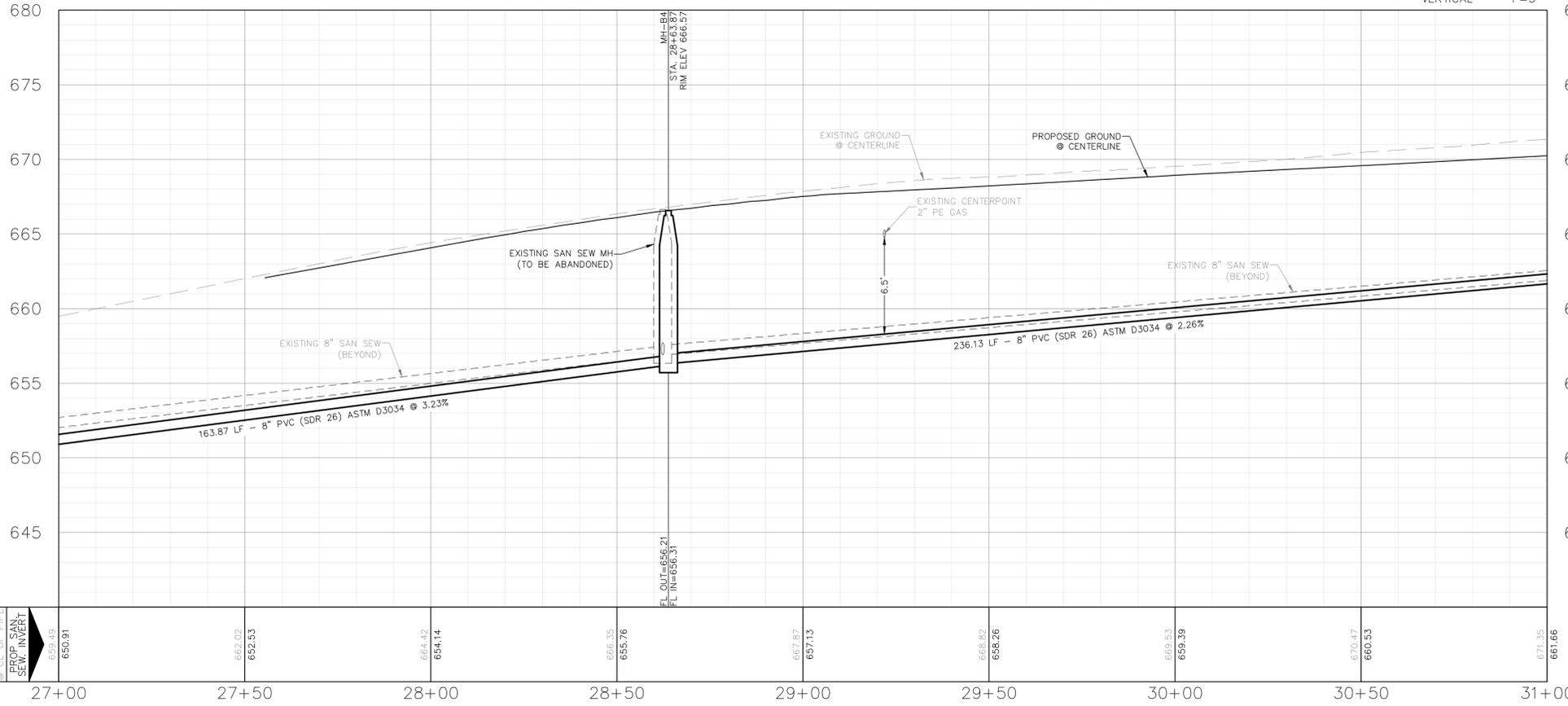
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**SANITARY SEWER LINE "B" STA 27+00 TO 31+00**

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



- 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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**UTILITY TRENCH COMPACTION NOTES:**

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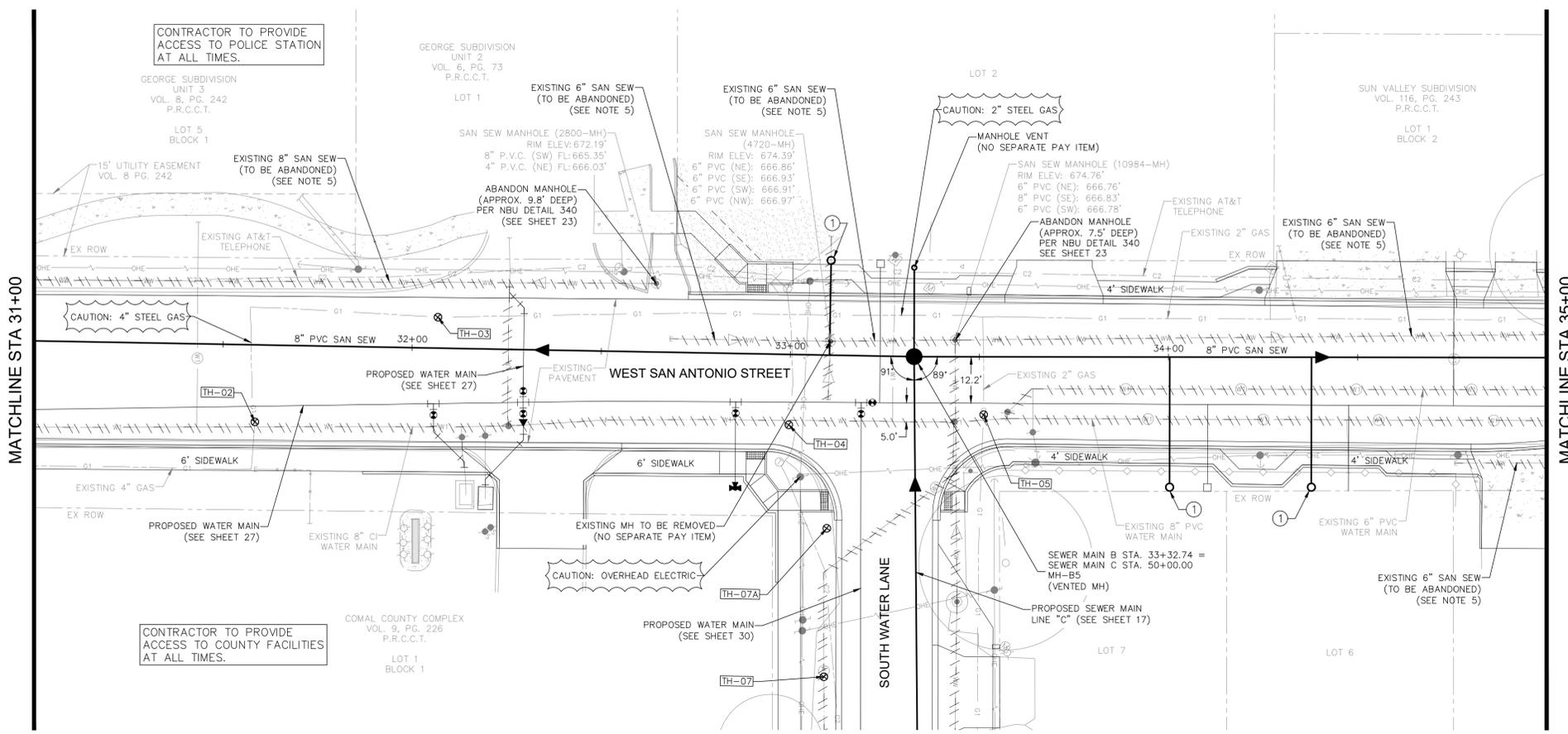


SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT  
**SANITARY SEWER LINE B  
STA 27+00 TO 31+00**



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





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

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

**KEYED NOTES**

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.

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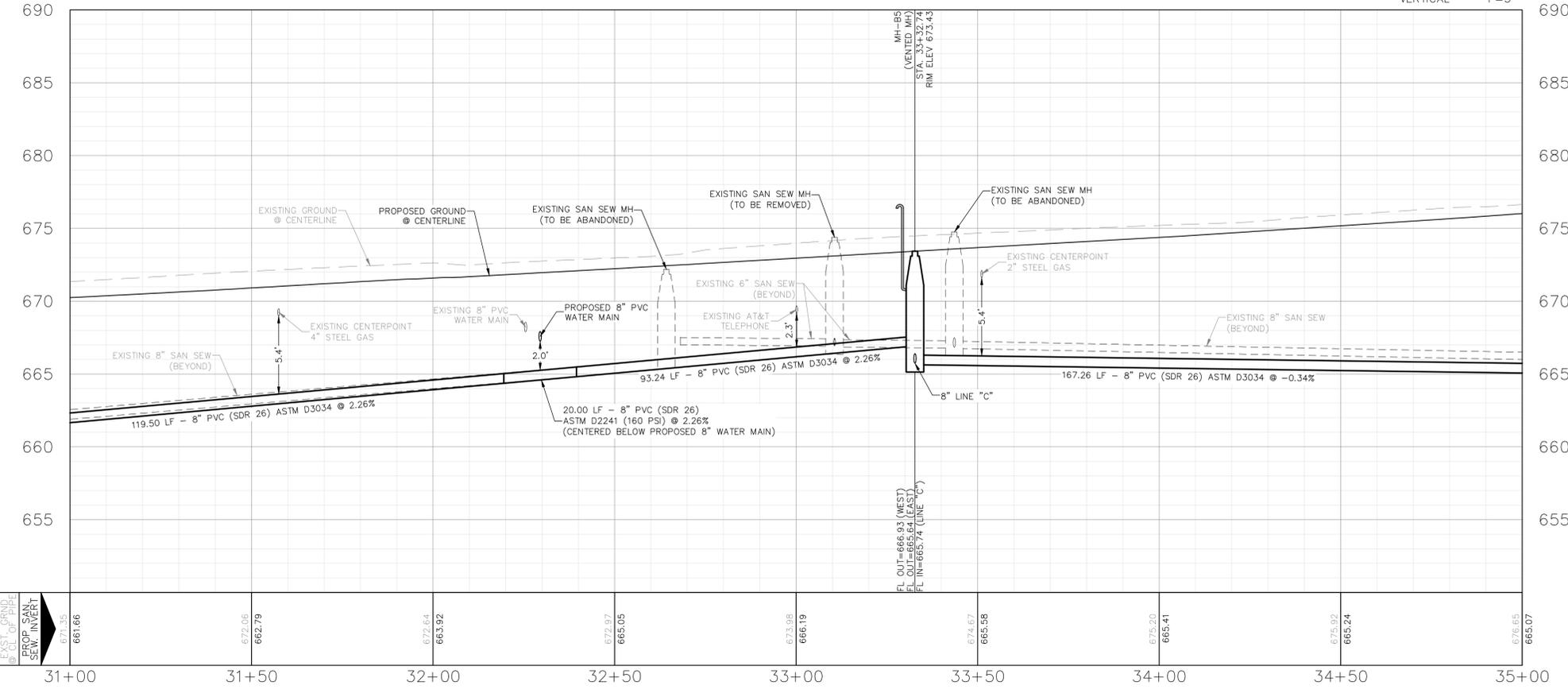
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**SANITARY SEWER LINE "B" STA 31+00 TO 35+00**

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



NO.	DATE	REVISIONS	APP.

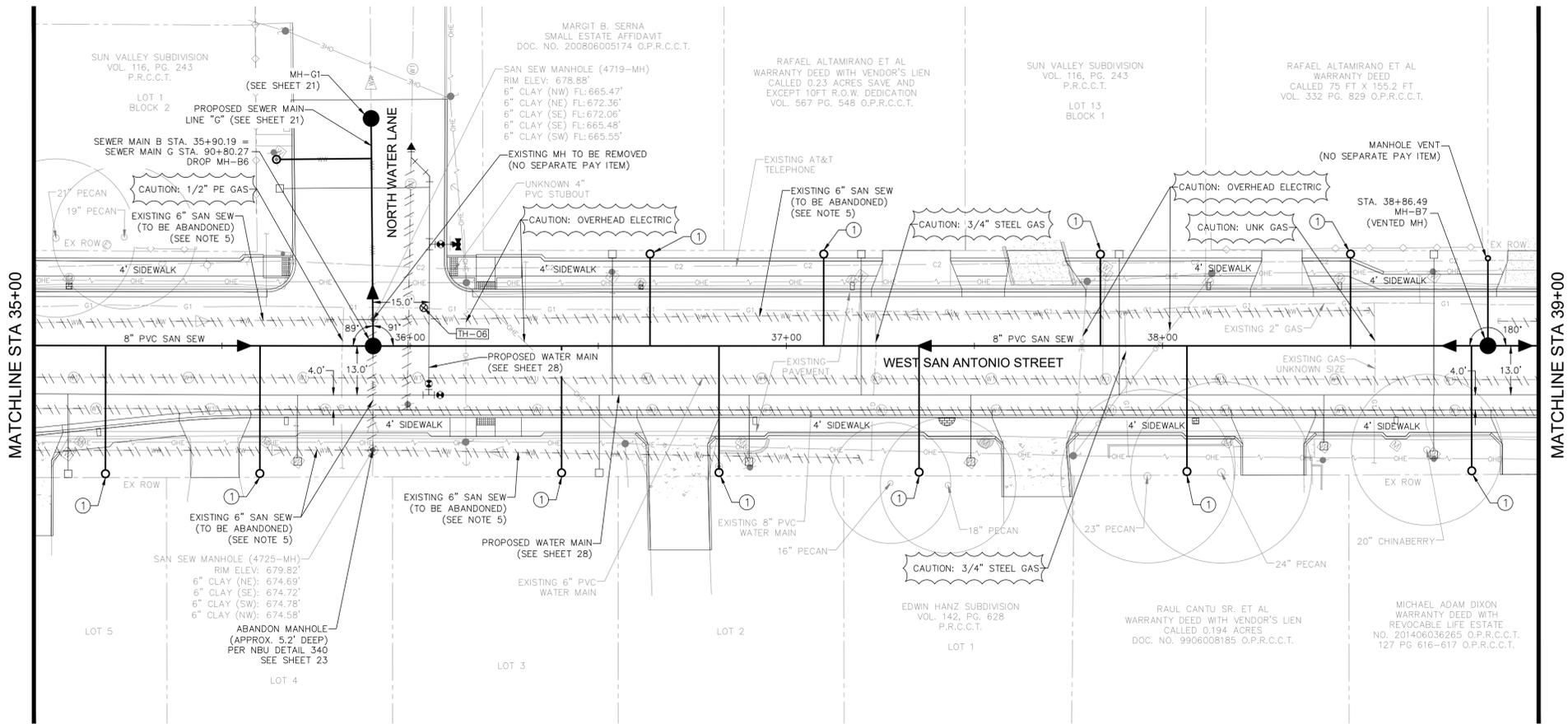


SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT  
**SANITARY SEWER LINE B  
STA 31+00 TO 35+00**



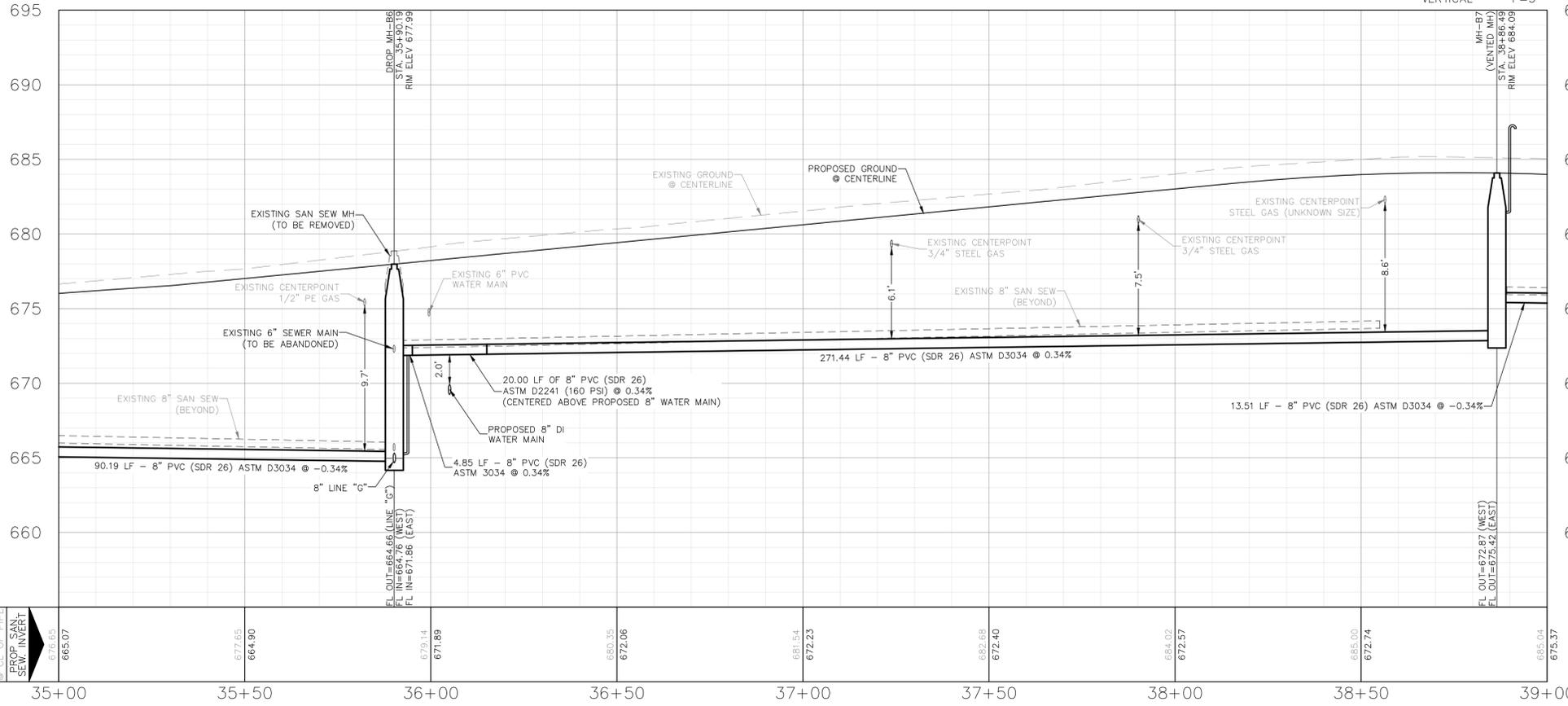
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**SANITARY SEWER LINE "B" STA 35+00 TO 39+00**

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-06	2" STEEL GAS	13796486.46	223835.1	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**

- 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.
- 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  
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.
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- 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:**

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.
- 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.



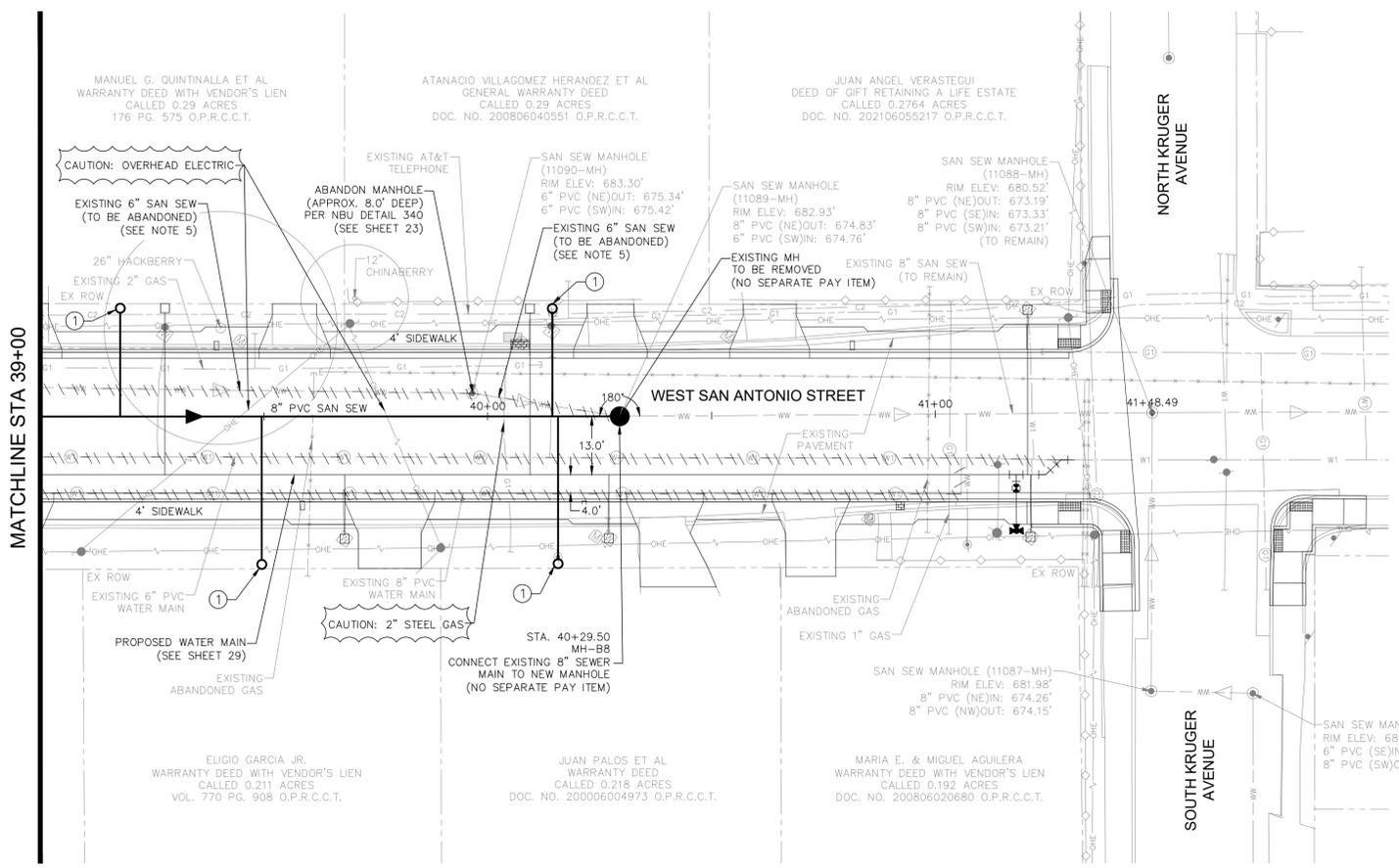
**SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT**

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



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





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

**KEYED NOTES**

- 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.



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LEO GARCIA	
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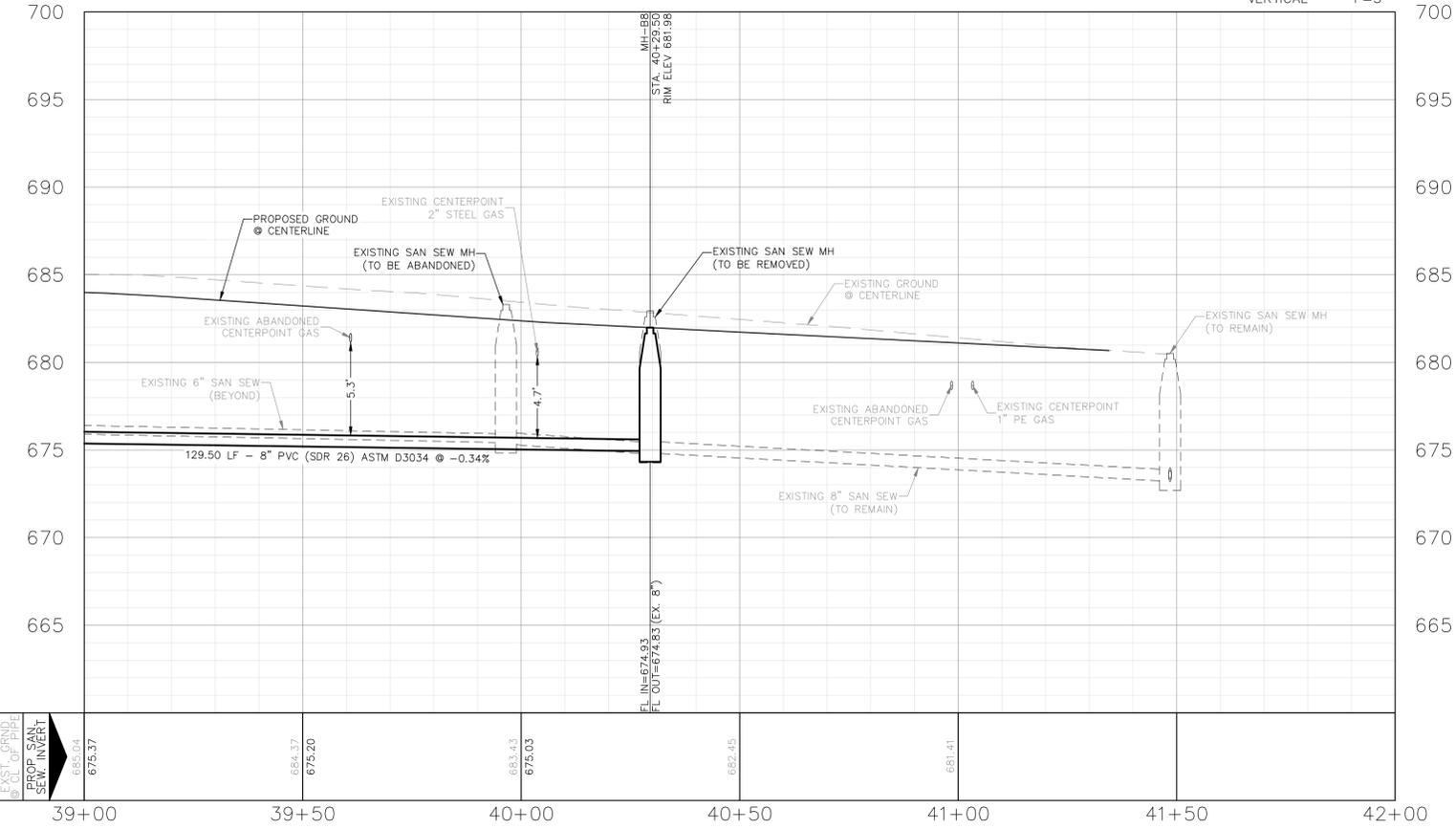
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**SANITARY SEWER LINE "B" STA 39+00 TO END**

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



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NO.	DATE	REVISIONS	APP.

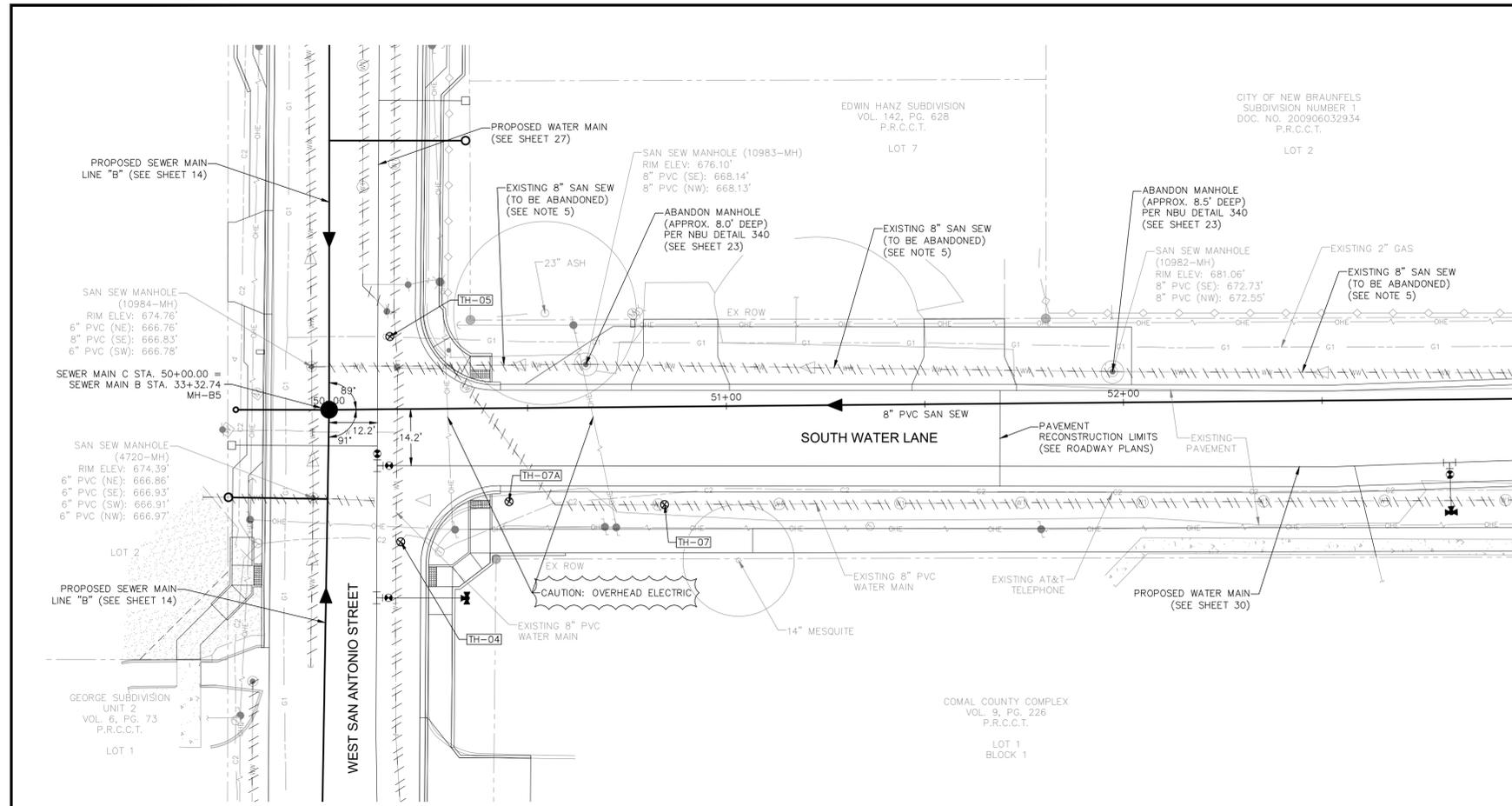


SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT  
**SANITARY SEWER LINE B  
STA 39+00 TO END**



SCALE: AS NOTED DGN. BY: AZ  
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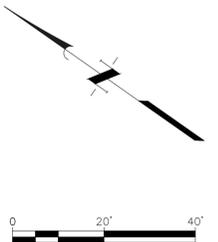


SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-04	1" DBC TELE	13796287.24	2238103.75	674.06	669.92	Owner: AT&T
TH-05	2" STEEL GAS	13796319.37	2238144.12	674.62	672.12	Owner: Centerpoint Energy
TH-07	8" PVC WATER	13796238.56	2238149.9	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

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

**KEYED NOTES**

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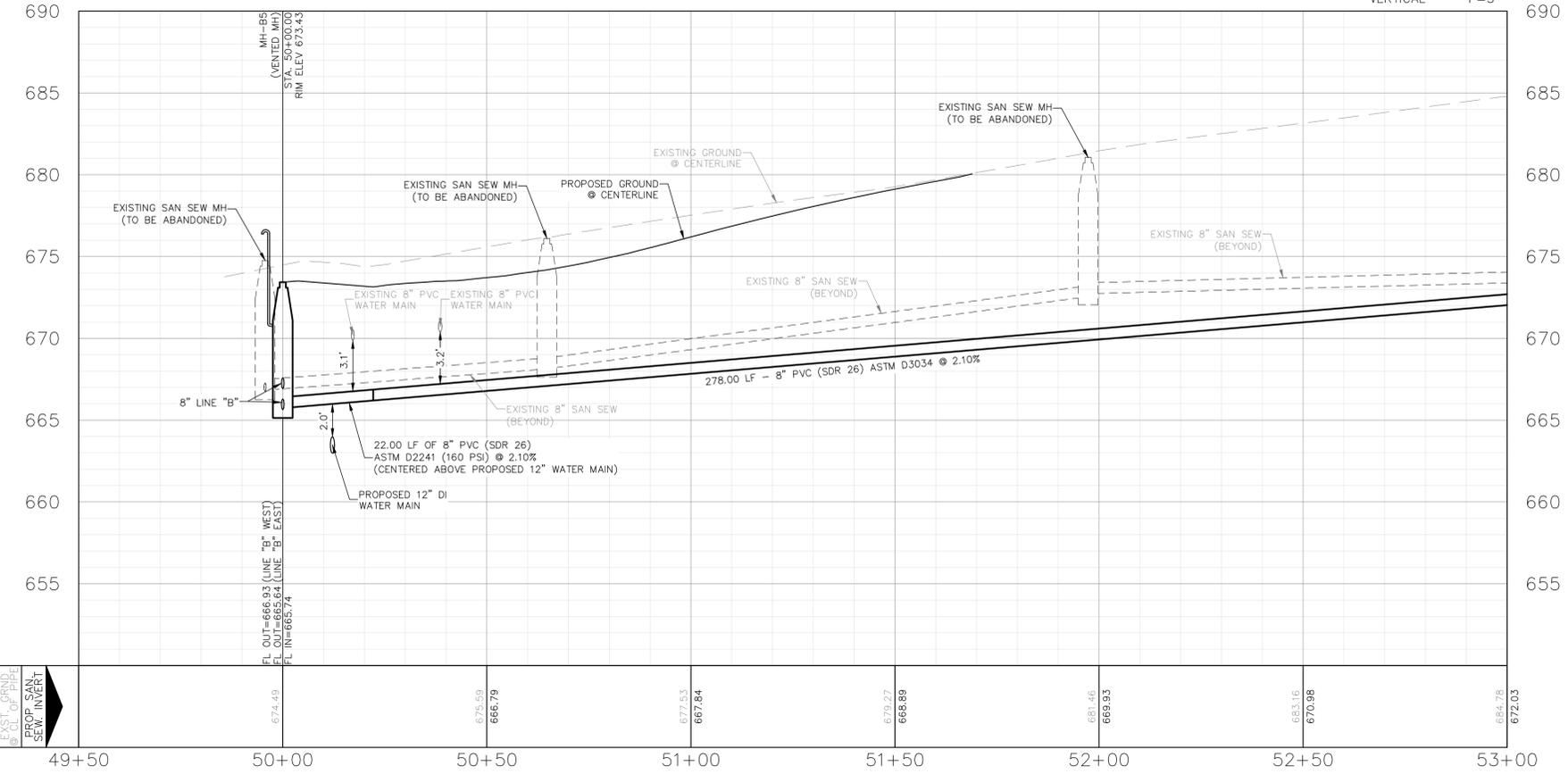
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**SANITARY SEWER LINE "C" BEGIN TO 53+00**

SCALE  
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VERTICAL 1"=5'



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NO.	DATE	REVISIONS	APP.



SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT  
**SANITARY SEWER LINE C  
BEGIN TO 53+00**

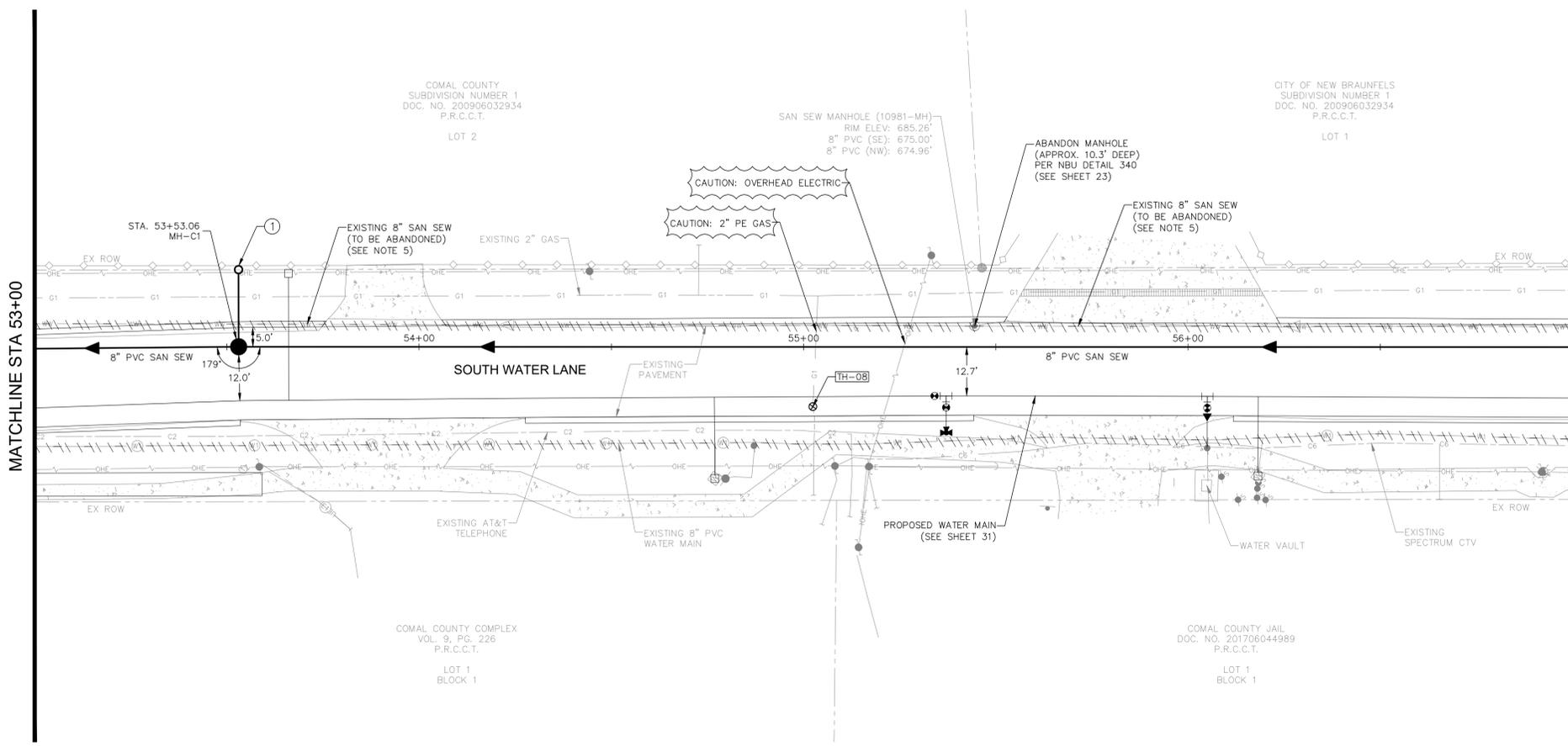


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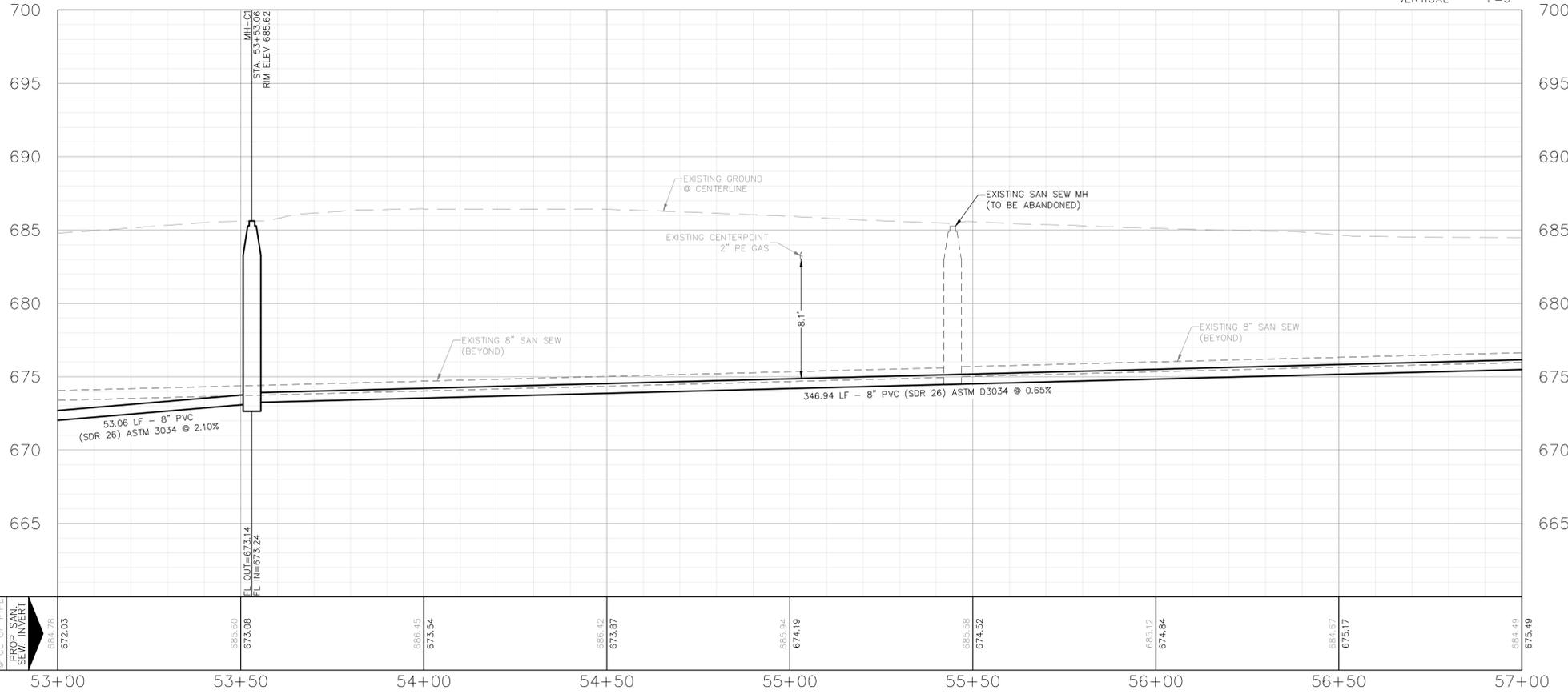
MATCHLINE STA 53+00

MATCHLINE STA 57+00



SANITARY SEWER LINE "C" STA 53+00 TO 57+00

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

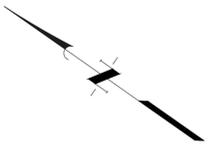


SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
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CONTRACTOR SHALL BRACE AND PROTECT EXISTING UTILITIES LOCATED WITHIN PROPOSED UTILITY TRENCHES (NO SEPARATE PAY ITEM)

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- 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:

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NO.	DATE	REVISIONS	APP.



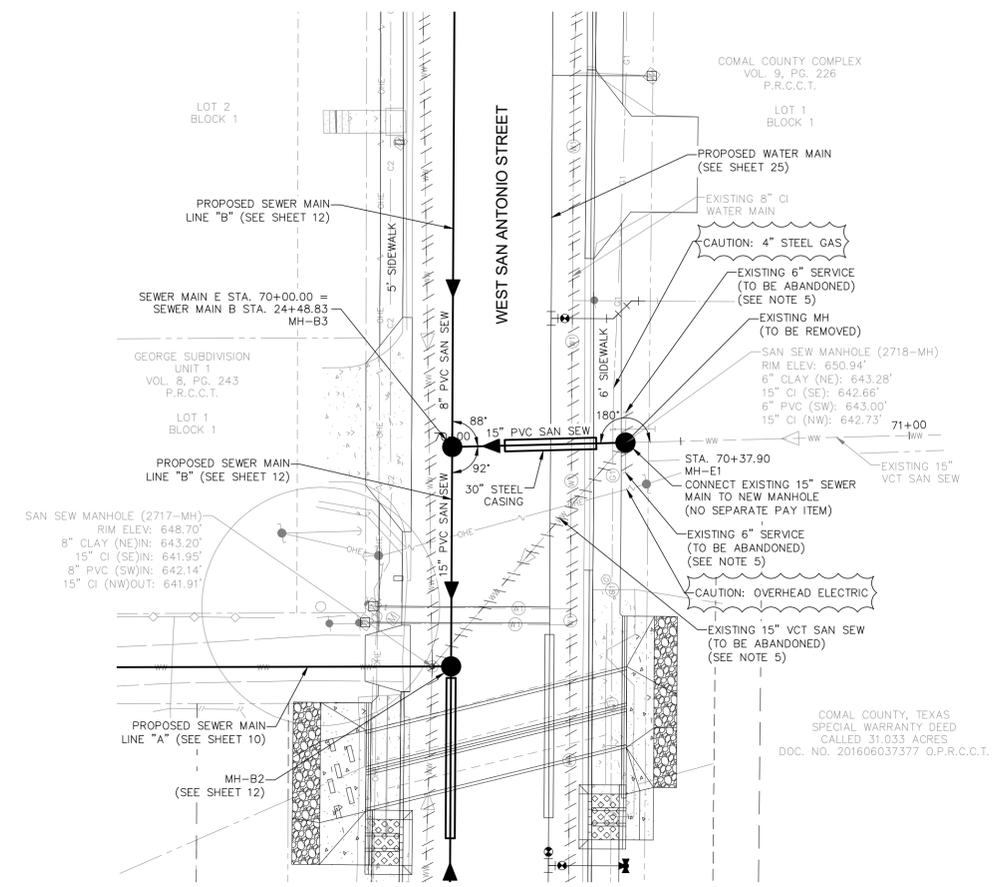
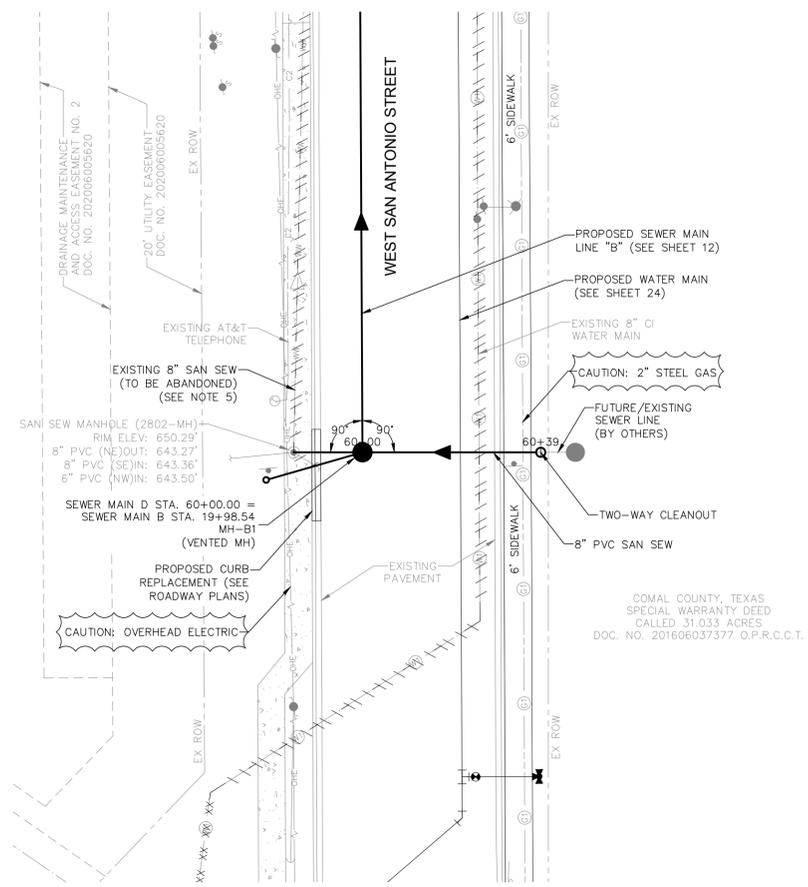
SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT  
**SANITARY SEWER LINE C  
STA 53+00 TO 57+00**



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



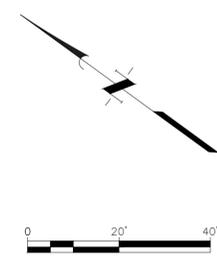




CONTRACTOR SHALL BRACE AND PROTECT EXISTING UTILITIES LOCATED WITHIN PROPOSED UTILITY TRENCHES (NO SEPARATE PAY ITEM)

**KEYED NOTES**

- 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.



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  
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.

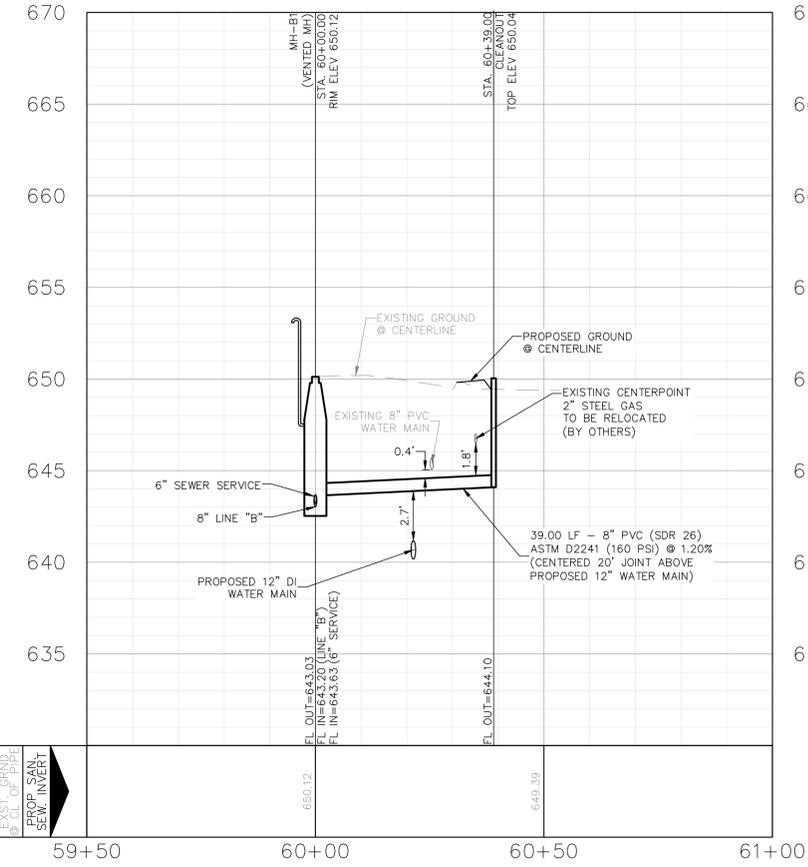
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THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48-HOURS PRIOR TO EXCAVATION AT 1-800-545-6005. 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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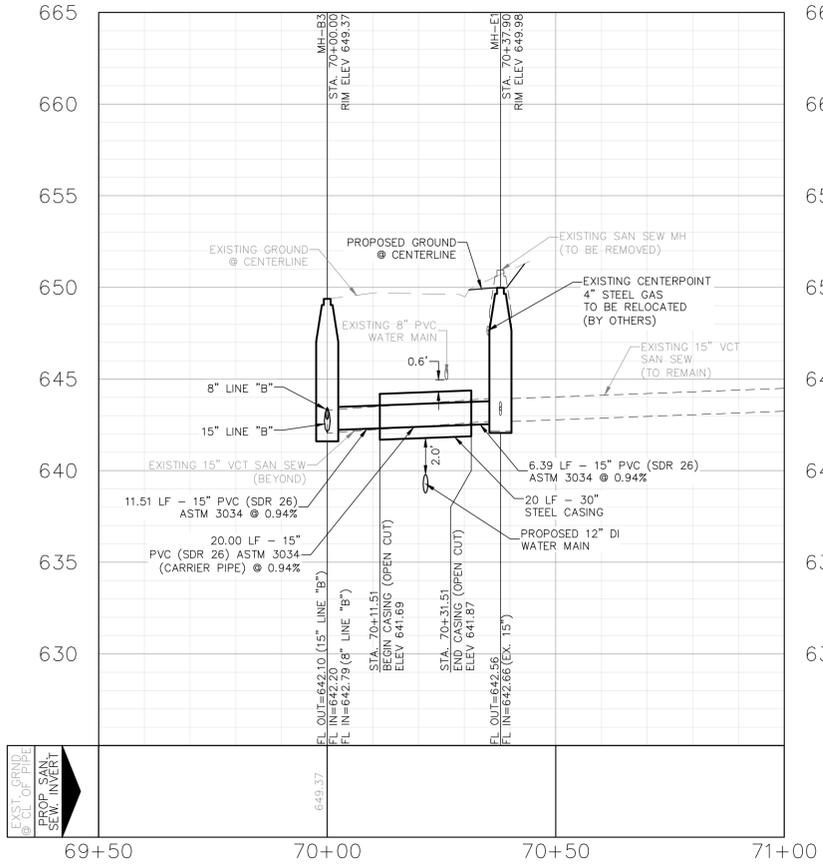
**SANITARY SEWER LINE "D" STA 60+00 TO END**

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



**SANITARY SEWER LINE "E" STA 70+00 TO END**

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



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NO.	DATE	REVISIONS	APP.



**SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT  
SANITARY SEWER LINE D & E**



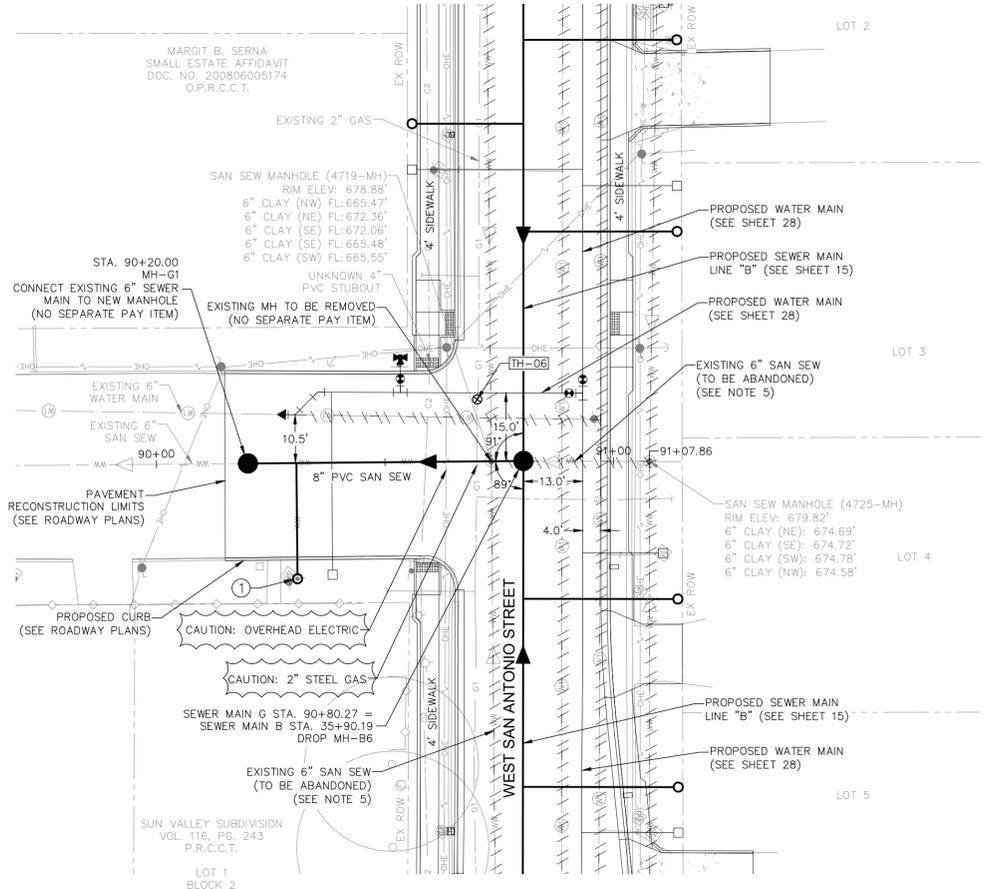
SCALE: AS NOTED DGN. BY: AZ  
DATE: AS NOTED DWN. BY: JFR  
JOB NO. 05487-0023-01 DWG. NO. ---  
SUBMITTED: --- SURV. BY: QUIDDITY



5/9/2025 20 / 35

I:\05487\05487-0023-01\_san\_antonio\_street\_rehabilitation\_phase\_3\_project\2\_dwg\plans\05487-0023-01\_SF-WP\_San\_Antonio\_Street\_Rehabilitation\_Phase\_3.dwg, 10:15am, JFR

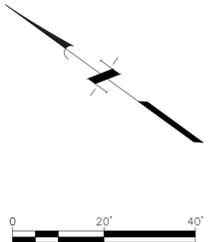
SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-06	2" STEEL GAS	13796486.46	2238335.1	678.84	676.29	Owner: Centerpoint Energy



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NO.	DATE	REVISIONS	APP.



SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT  
**SANITARY SEWER LINE G**

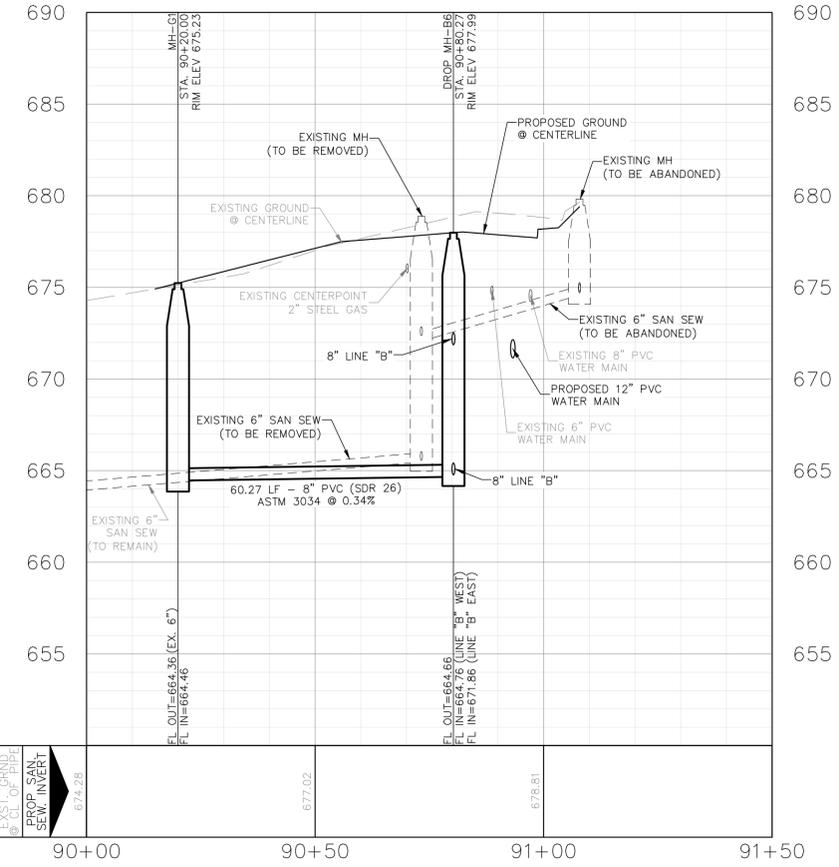


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DATE: AS NOTED DWN. BY: JFR  
JOB NO. 05487-0023-01 DWG. NO. --  
SUBMITTED: --- SURV. BY: QUIDDITY

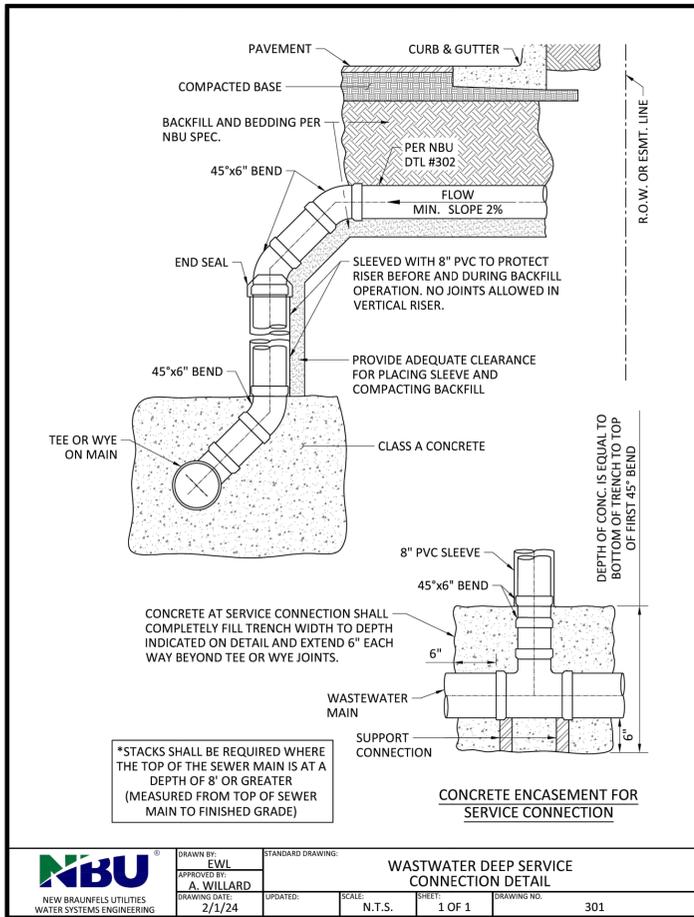


**SANITARY SEWER LINE "G" STA 90+00 TO END**

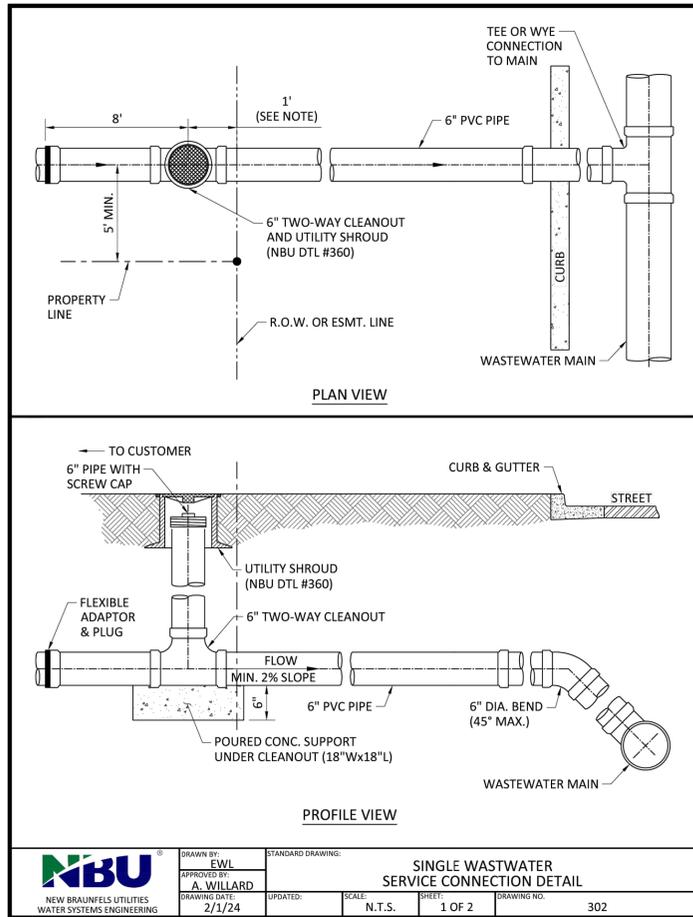
SCALE  
HORIZONTAL 1"=20'  
VERTICAL 1"=5'



I:\05487\05487-0023-01\_san\_antonio\_street\_rehabilitation\_phase\_3\_project\dwg\civil\san\_sewer\_inset.dwg 3/15/2025 10:15am JFR



<b>NBU</b> NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: E.W.L.	STANDARD DRAWING:	WASTEWATER DEEP SERVICE CONNECTION DETAIL		
	APPROVED BY: A. WILLARD	DATE: 2/1/24	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO.: 301

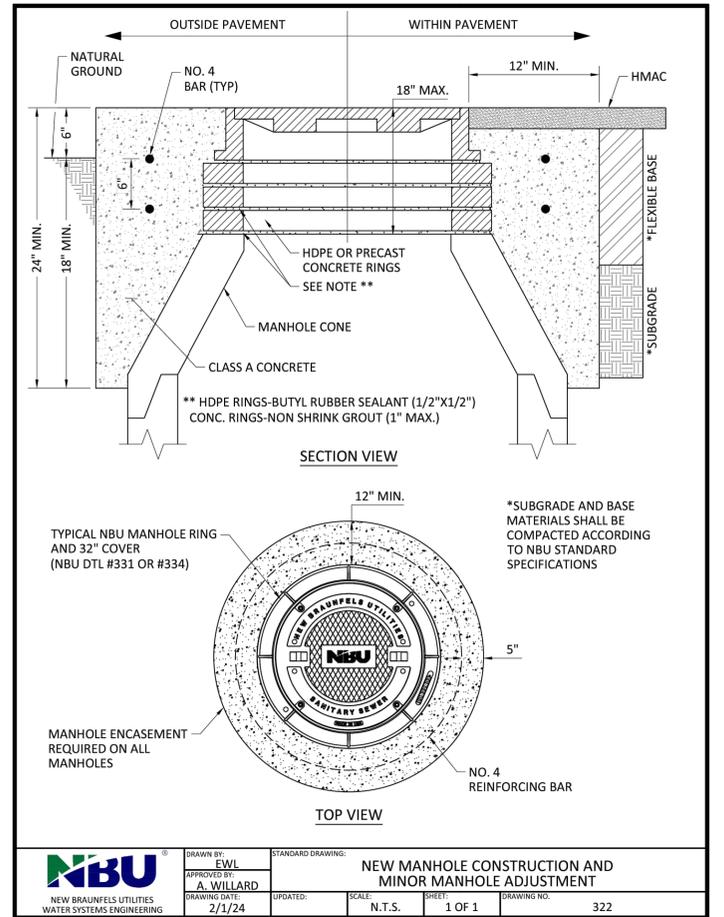


<b>NBU</b> NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: E.W.L.	STANDARD DRAWING:	SINGLE WASTEWATER SERVICE CONNECTION DETAIL		
	APPROVED BY: A. WILLARD	DATE: 2/1/24	SCALE: N.T.S.	SHEET: 1 OF 2	DRAWING NO.: 302

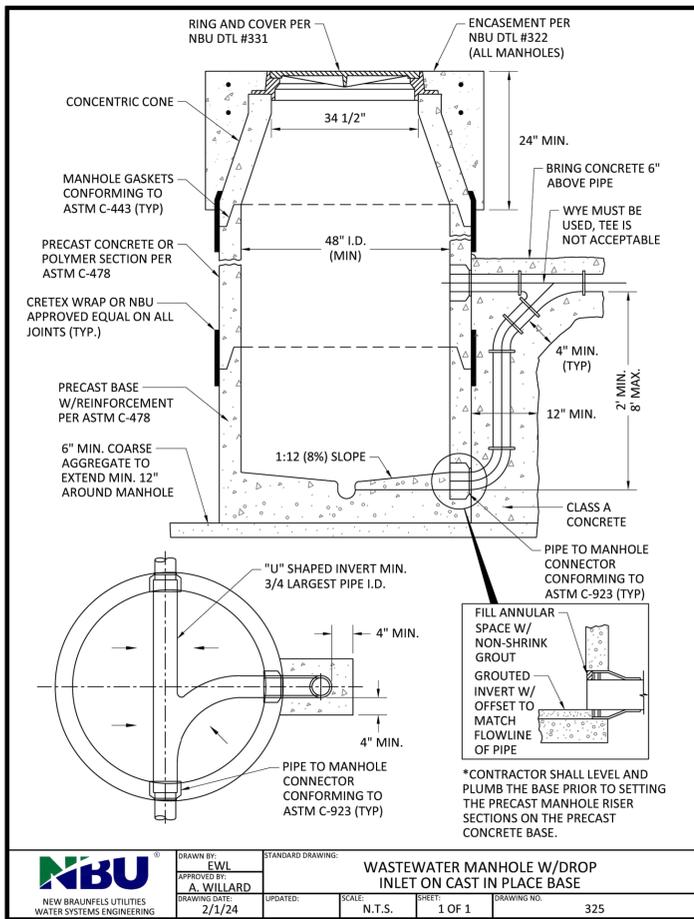
NOTES:

- UTILITY CONTRACTOR, DURING SUBDIVISION CONSTRUCTION, SHALL INSTALL WASTEWATER CONNECTION TO MAIN, 6" STUB WITH 6" SERVICE BRANCH WITH 2-WAY CLEANOUT, CONCRETE SUPPORT (MIN. 18"Wx18"Lx6"H), RISER FOR CLEAN OUT (CAPPED), UTILITY SHROUD, 7' EXTENSION, AND PLUG. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SHALL SLOPE DOWNWARD TO MAIN AT A MINIMUM 2% SLOPE, 1" PER FOOT, MINIMUM TO 45" MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER OR DESIGNATED REPRESENTATIVE IF GREATER THAN 6'. OTHERWISE, THE INSTALLED DEPTH WILL TYPICALLY BE 4' TO 6'. IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45", REFER TO DETAIL 301. ALL INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STANDARD DRAWINGS AND WILL BE INSPECTED BY NBU CONSTRUCTION INSPECTION PERSONNEL.
- CUSTOMER SHALL REMOVE PLUG, INSTALL 4" WASTEWATER LINE [EXTEND 4" PIPE 6" MINIMUM INTO 6" PIPE AND JOINT WITH FLEXIBLE ADAPTOR]. IF WASTEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROPERTY, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PART OF CUSTOMER'S WASTEWATER SYSTEM.
- CUSTOMER IS RESPONSIBLE FOR PIPING SYSTEM UNTIL WASTEWATER IS CONNECTED. ANY MISSING OR DAMAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WHO SHALL GUARANTEE, FOR A PERIOD OF TWO (2) YEARS FROM DATE OF FINAL ACCEPTANCE, THAT CONNECTIONS TO NBU SYSTEMS ARE FREE FROM DEFECTS IN WORKMANSHIP OR MATERIALS. CUSTOMER MUST ENSURE THAT 2-WAY CLEANOUTS REMAIN CLEAR OF SIDEWALKS AND OTHER OBSTRUCTIONS.
- NBU ACTIVITY IS LIMITED TO INSPECTION OF CONNECTIONS TO NBU'S WASTEWATER SYSTEM. NBU'S MAINTENANCE RESPONSIBILITY ENDS AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE 2-WAY CLEANOUT OR THE PROPERTY LINE, WHICHEVER IS CLOSER TO WASTEWATER MAIN.
- PIPING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AND BACKFILLED AS REQUIRED BY NBU STANDARD SPECIFICATIONS. SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 42"; ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY NBU WATER ENGINEERING.

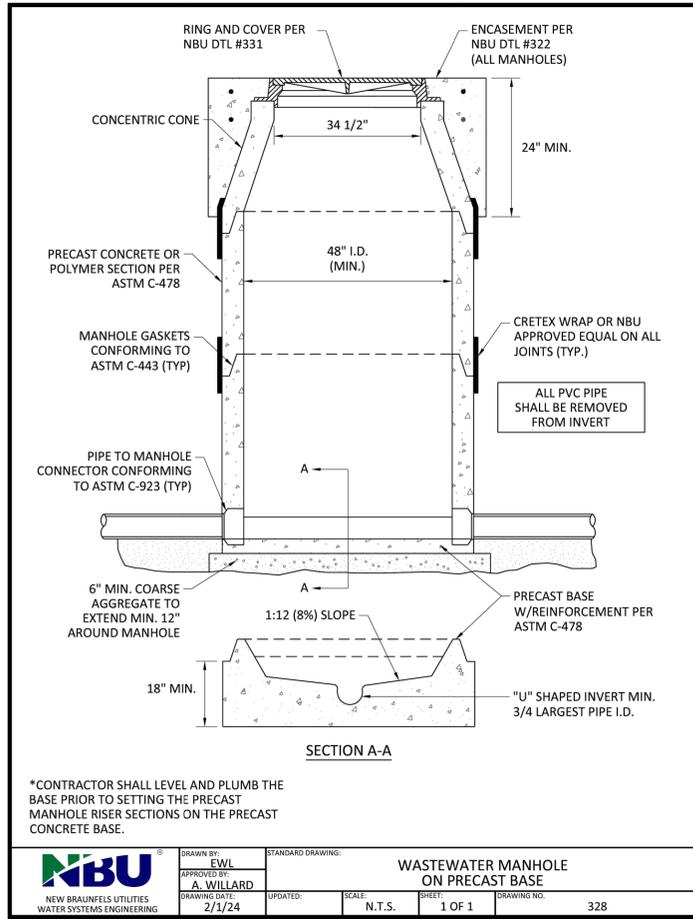
<b>NBU</b> NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: E.W.L.	STANDARD DRAWING:	SINGLE WASTEWATER SERVICE CONNECTION DETAIL		
	APPROVED BY: A. WILLARD	DATE: 2/1/24	SCALE: N.T.S.	SHEET: 2 OF 2	DRAWING NO.: 302



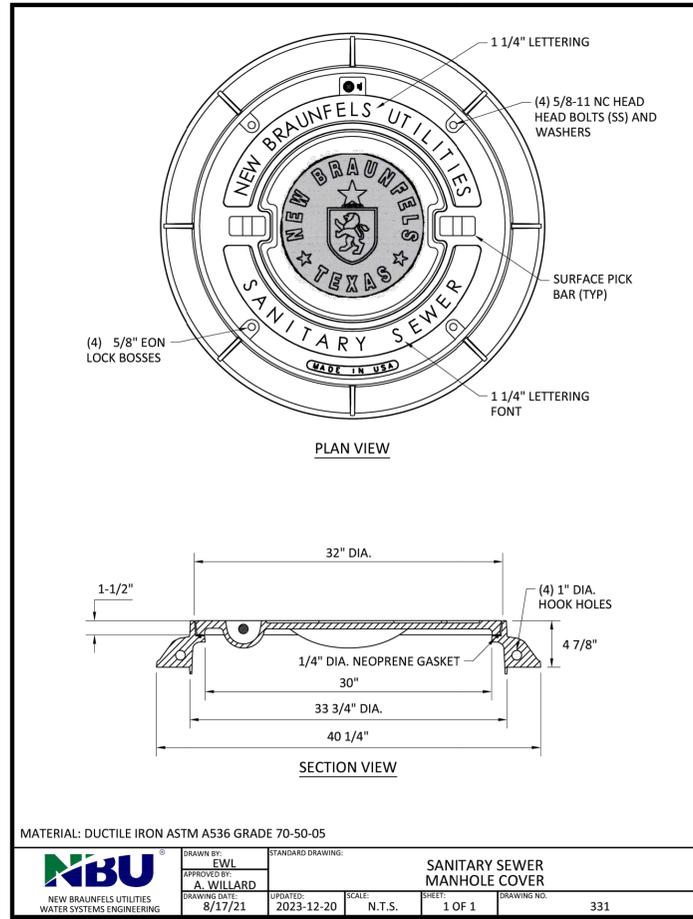
<b>NBU</b> NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: E.W.L.	STANDARD DRAWING:	NEW MANHOLE CONSTRUCTION AND MINOR MANHOLE ADJUSTMENT		
	APPROVED BY: A. WILLARD	DATE: 2/1/24	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO.: 322



<b>NBU</b> NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: E.W.L.	STANDARD DRAWING:	WASTEWATER MANHOLE W/DROP INLET ON CAST IN PLACE BASE		
	APPROVED BY: A. WILLARD	DATE: 2/1/24	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO.: 325



<b>NBU</b> NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: E.W.L.	STANDARD DRAWING:	WASTEWATER MANHOLE ON PRECAST BASE		
	APPROVED BY: A. WILLARD	DATE: 2/1/24	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO.: 328



<b>NBU</b> NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: E.W.L.	STANDARD DRAWING:	SANITARY SEWER MANHOLE COVER		
	APPROVED BY: A. WILLARD	DATE: 8/17/21	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO.: 331

NO.	DATE	REVISIONS	APP.

**NBU**  
New Braunfels Utilities

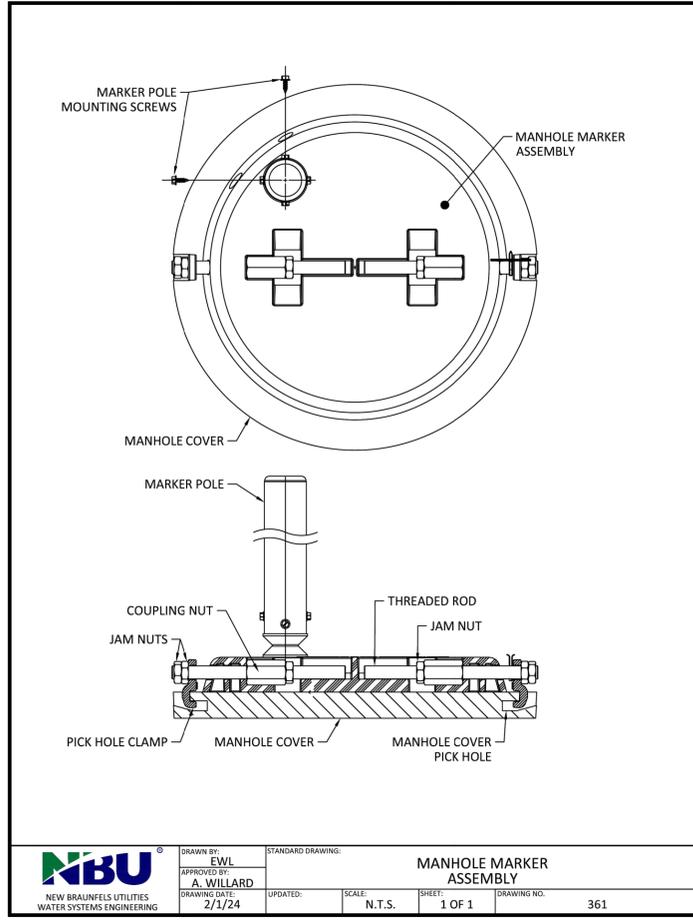
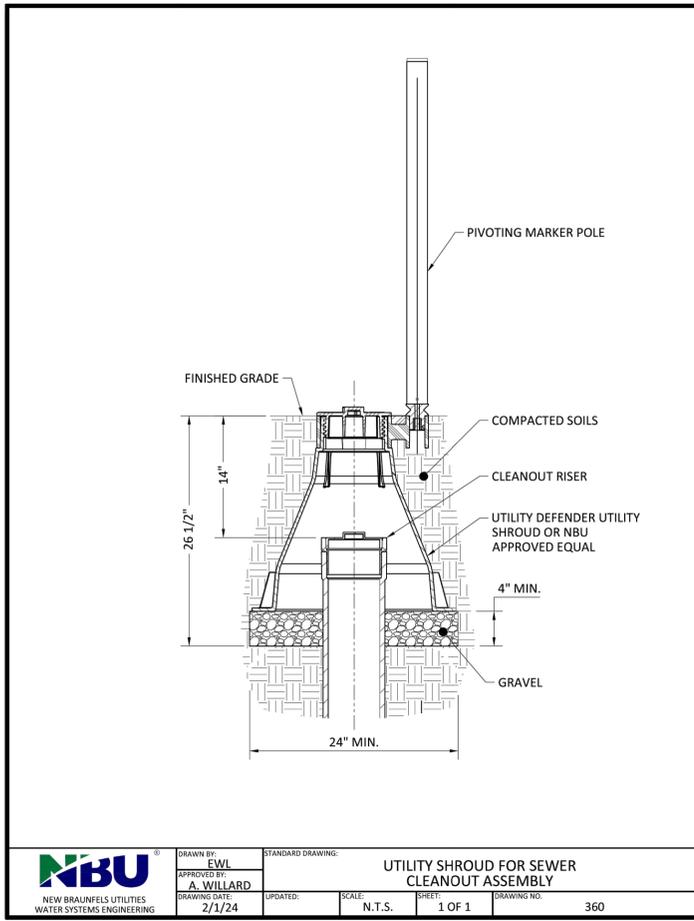
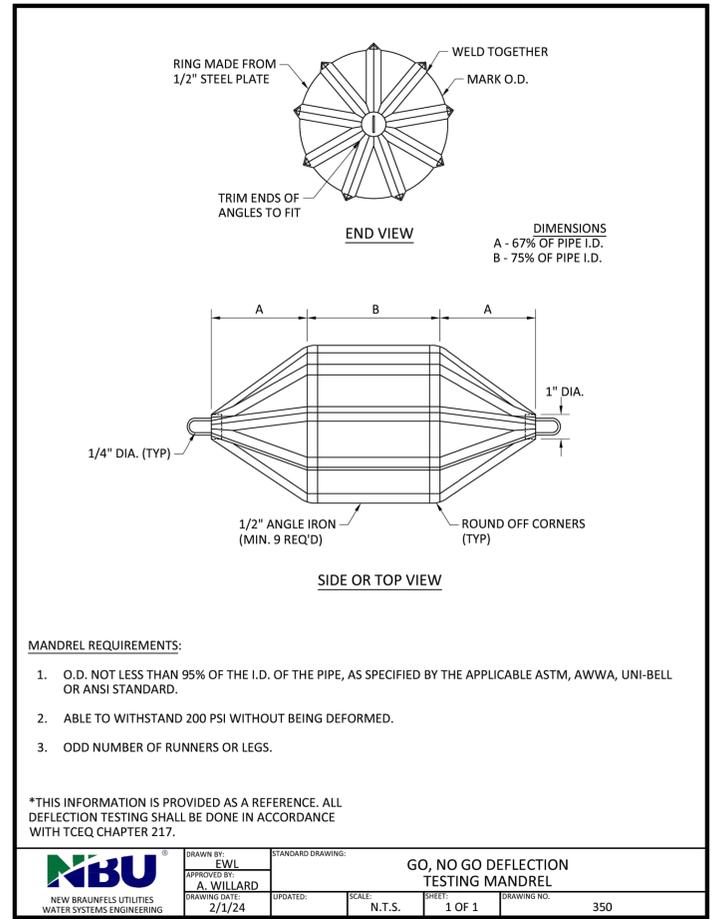
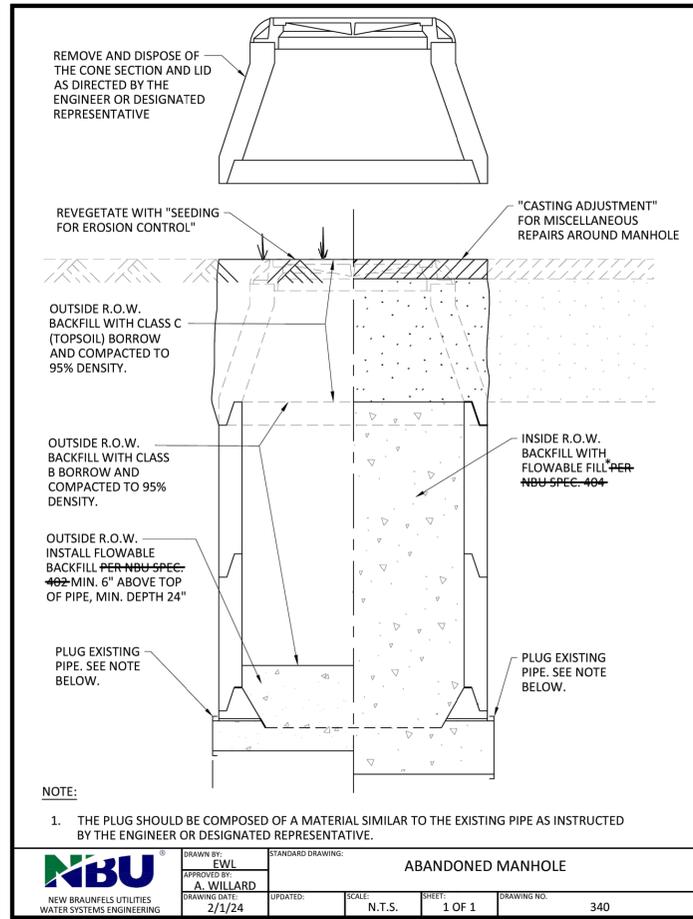
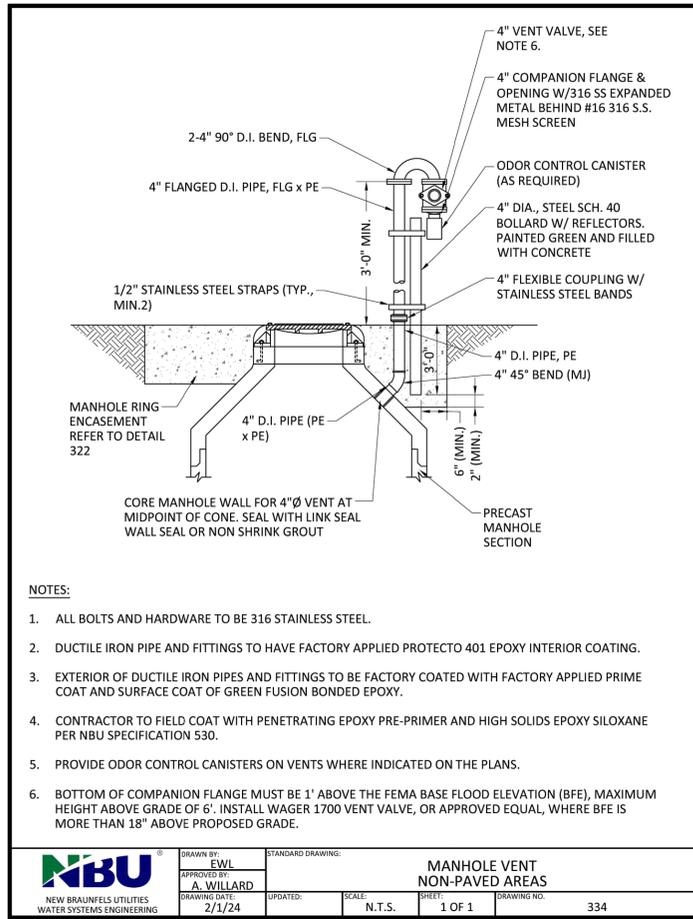
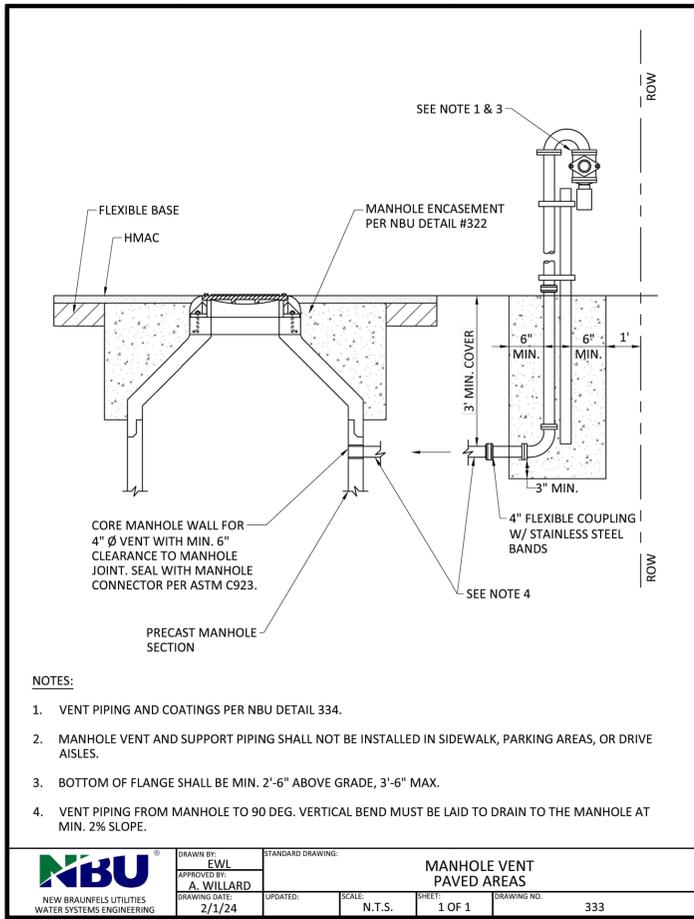
SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT

**SANITARY SEWER DETAILS I**

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
2967 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 ZEITUCHE  
92080  
LICENSED PROFESSIONAL ENGINEER  
5/9/2025



\*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  
2967 Oak Run Parkway, Suite 215 • New Braunfels, TX 78132 • 830.203.6630

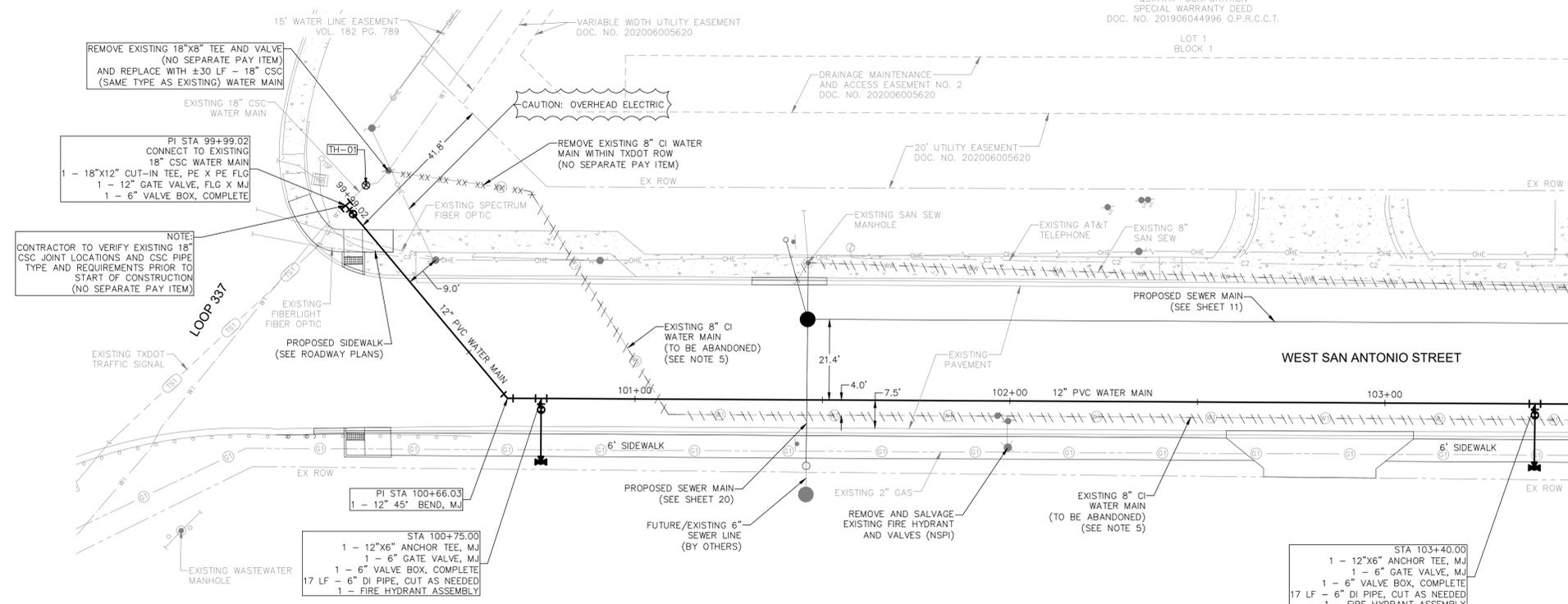
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 SUBMITTED: --- SURV. BY: QUIDDITY

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

23 / 35

QUIKTRIP CORPORATION  
SPECIAL WARRANTY DEED  
DOC. NO. 201906044996 O.P.R.C.C.T.

LOT 1  
BLOCK 1



**CSC CONNECTION NOTES**

- CONTRACTOR SHALL COORDINATE ALL TIE-INS AND VALVE CLOSURES WITH NBU STAFF.
- 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.

COMAL COUNTY, TEXAS  
SPECIAL WARRANTY DEED  
CALLED 31.033 ACRES  
DOC. NO. 201606037377 O.P.R.C.C.T.

MATCHLINE STA 103+50

SUE TEST HOLE DATA						NOTES
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	
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

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	(830) 273-4250
JOEY PUENTE SPECTRUM	(210) 793-8066
LEO GARCIA TEXAS ONE CALL SYSTEM	811

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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.

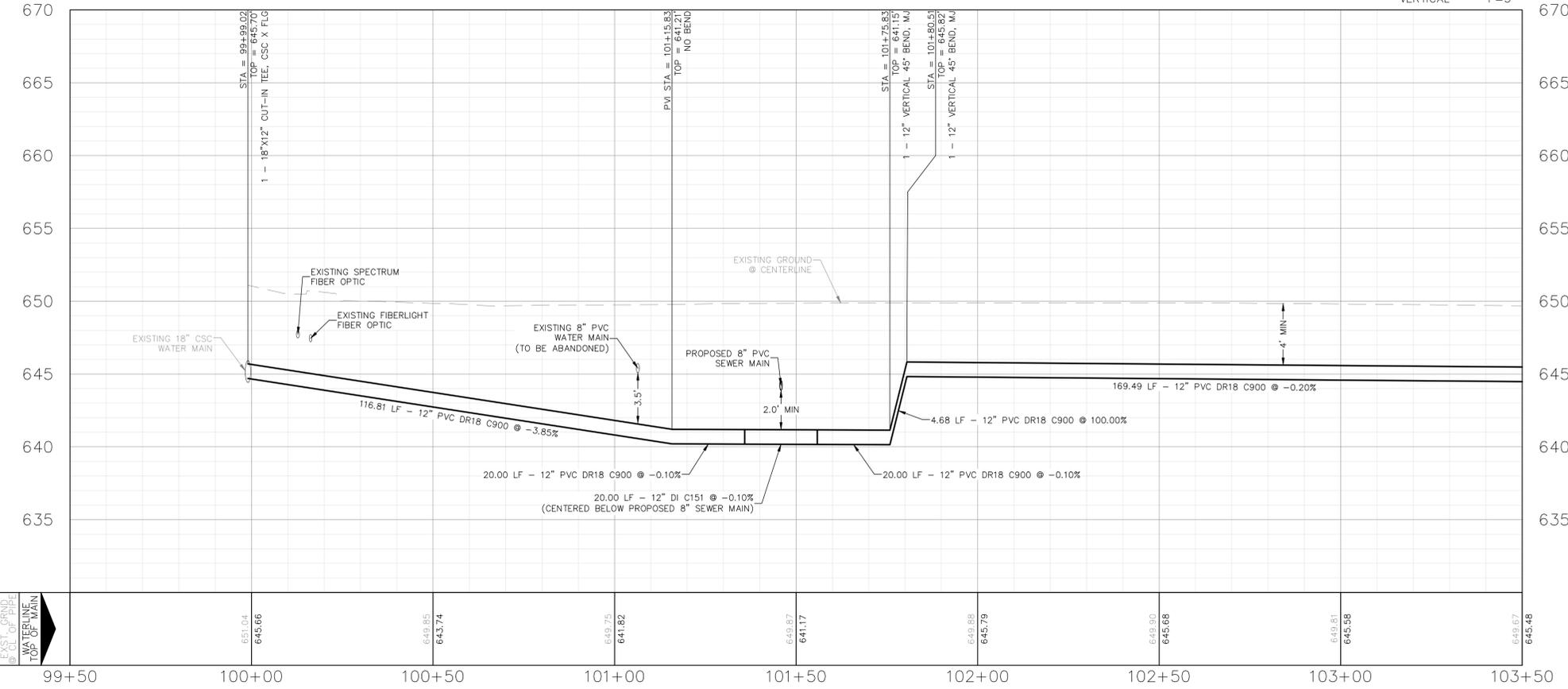
TELEPHONE LOCATOR  
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TRENCH SAFETY EXCAVATION SAFETY PROTECTION  
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL 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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**WATER LINE "A" BEGIN TO 103+50**

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



- 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.
  - JOINT RESTRAINTS REQUIRED AT ALL FITTINGS. SEE TABLE ON SHEET 35.

- 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 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.



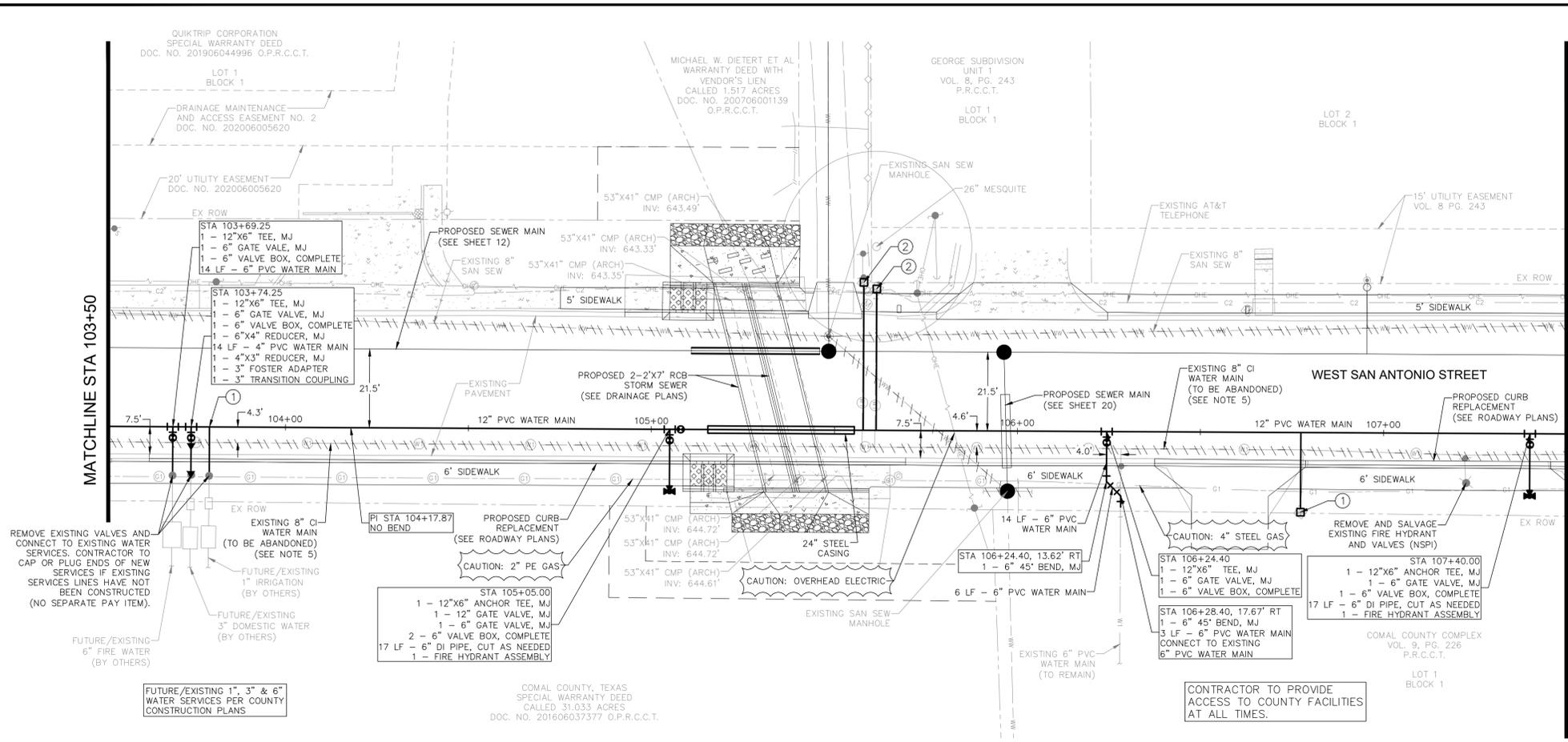
**SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT**

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



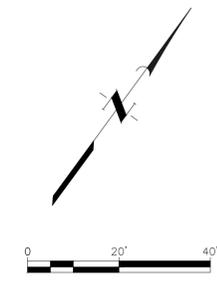
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CONTRACTOR SHALL BRACE AND PROTECT EXISTING UTILITIES LOCATED WITHIN PROPOSED UTILITY TRENCHES (NO SEPARATE PAY ITEM)

- KEYED NOTES**
- ① RELAY 1" SERVICE (SHORT)
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  - NEW METER BOX



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

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JOEY PUENTE	811
SPECTRUM	
LEO GARCIA	
TEXAS ONE CALL SYSTEM	

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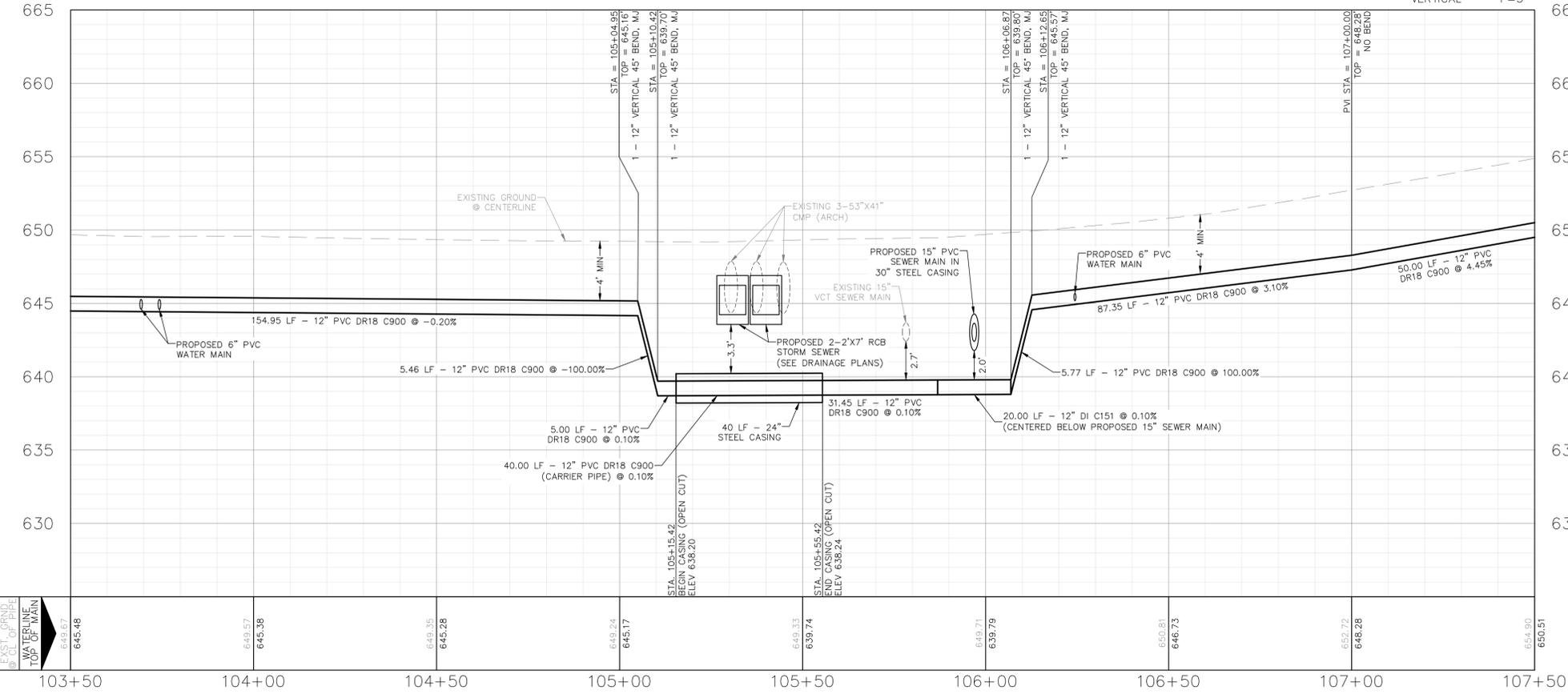
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**WATER LINE "A" STA 103+50 TO 107+50**

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



- 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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  - 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.

NO.	DATE	REVISIONS	APP.

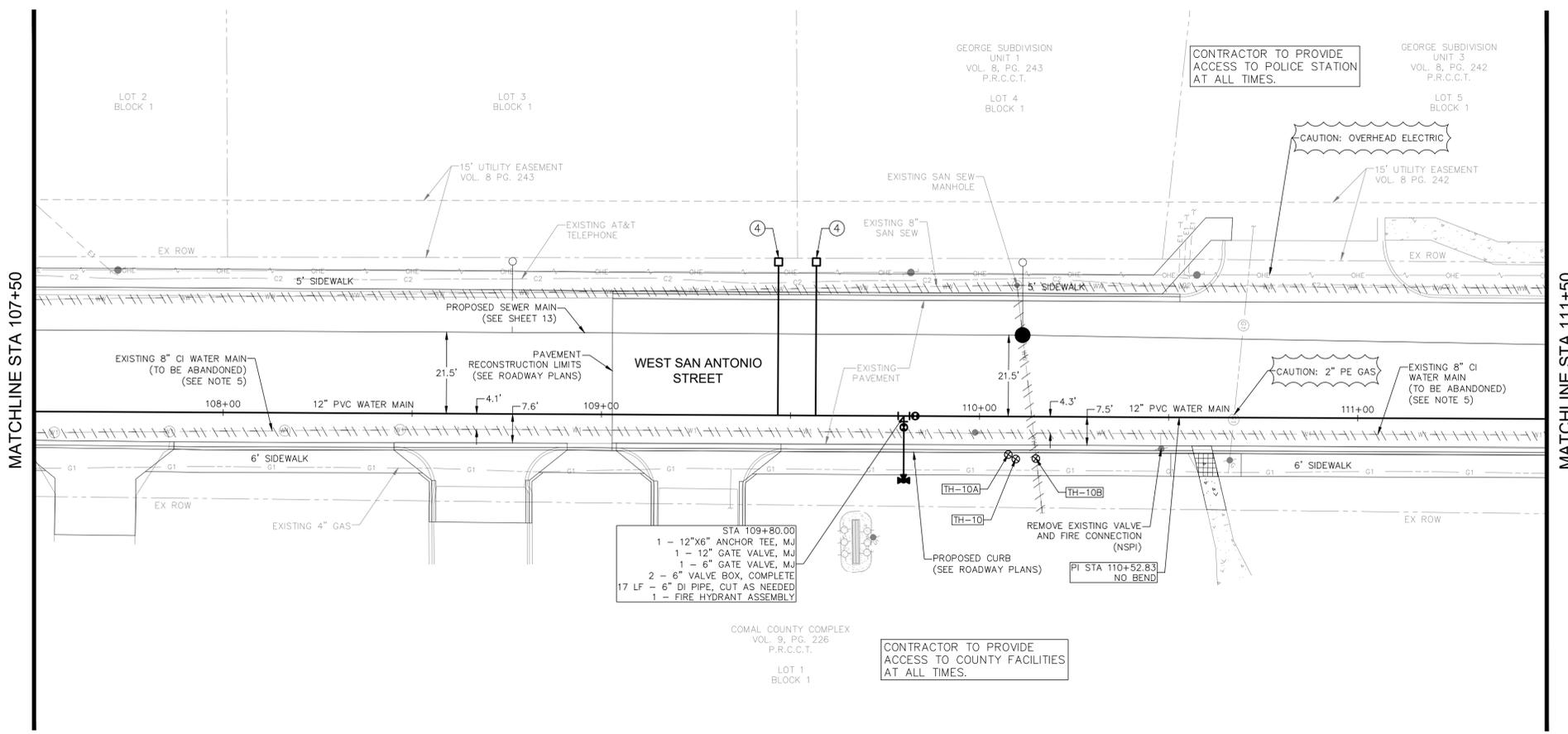
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SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT

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

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

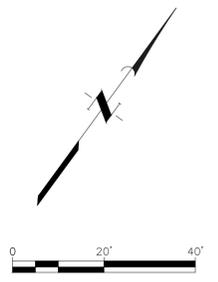
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SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-10	N/A	13796027.91	2237751.39	667.31	N/A	*TRG's target utility was a 6" unknown material sewer line. Crew excavated to 10.90 feet and 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

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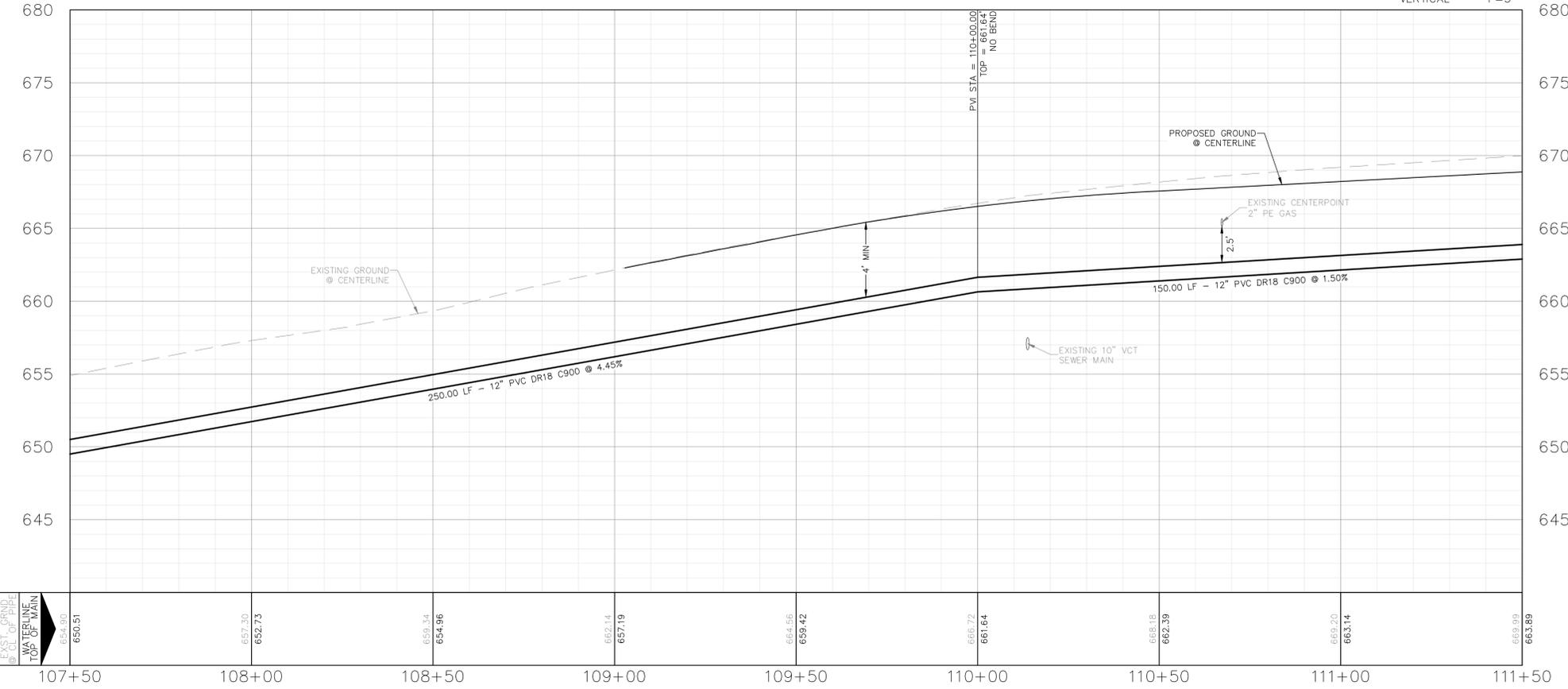
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**WATER LINE "A" STA 107+50 TO 111+50**

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



- CONSTRUCTION NOTES:**
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NO.	DATE	REVISIONS	APP.



**SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT**

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



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

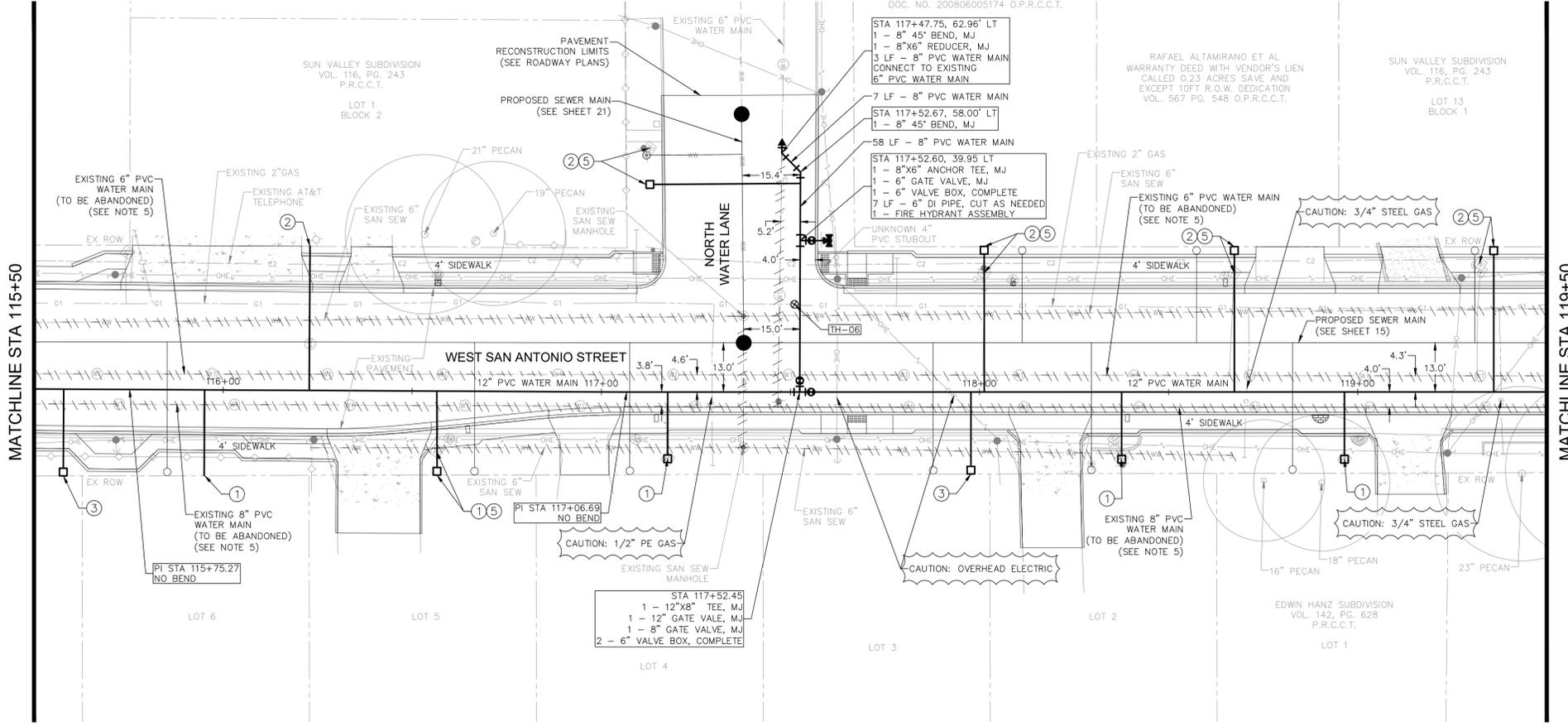




MARGIT B. SERNA  
SMALL ESTATE AFFIDAVIT  
DOC. NO. 200806005174 O.P.R.C.C.T.

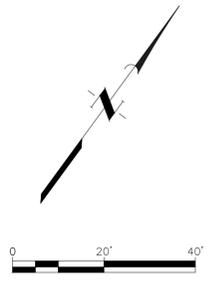
RAFAEL ALTAMIRANO ET AL  
WARRANTY DEED WITH VENDOR'S LIEN  
CALLED 0.23 ACRES SAVE AND  
EXCEPT 10FT R.O.W. DEDICATION  
VOL. 567 PG. 548 O.P.R.C.C.T.

SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-06	2" STEEL GAS	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**
- ① RELAY 1" SERVICE (SHORT)
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  - ⑤ 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  
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.

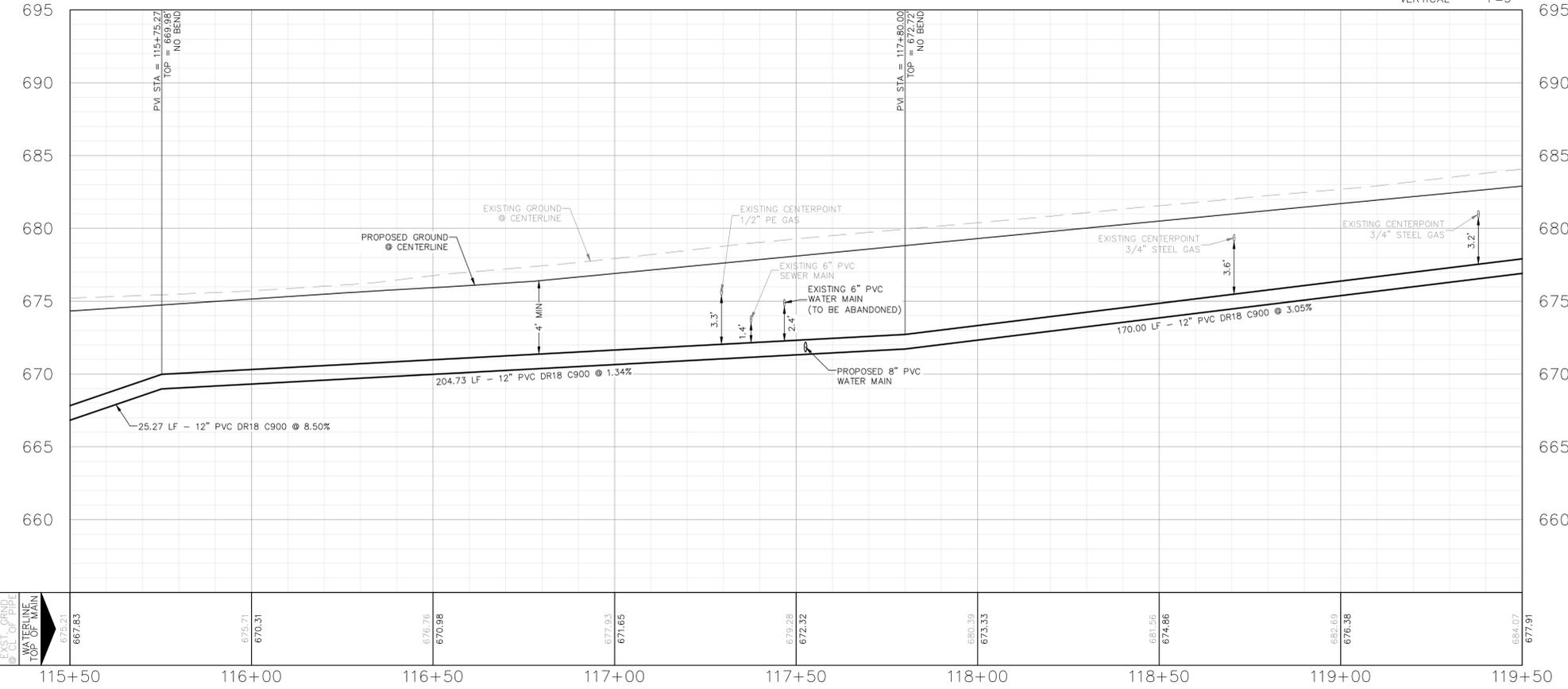
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TRENCH SAFETY EXCAVATION SAFETY PROTECTION  
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**WATER LINE "A" STA 115+50 TO 119+50**

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



- 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 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.
  - JOINT RESTRAINTS REQUIRED AT ALL FITTINGS. SEE TABLE ON SHEET 35.

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NO.	DATE	REVISIONS	APP.



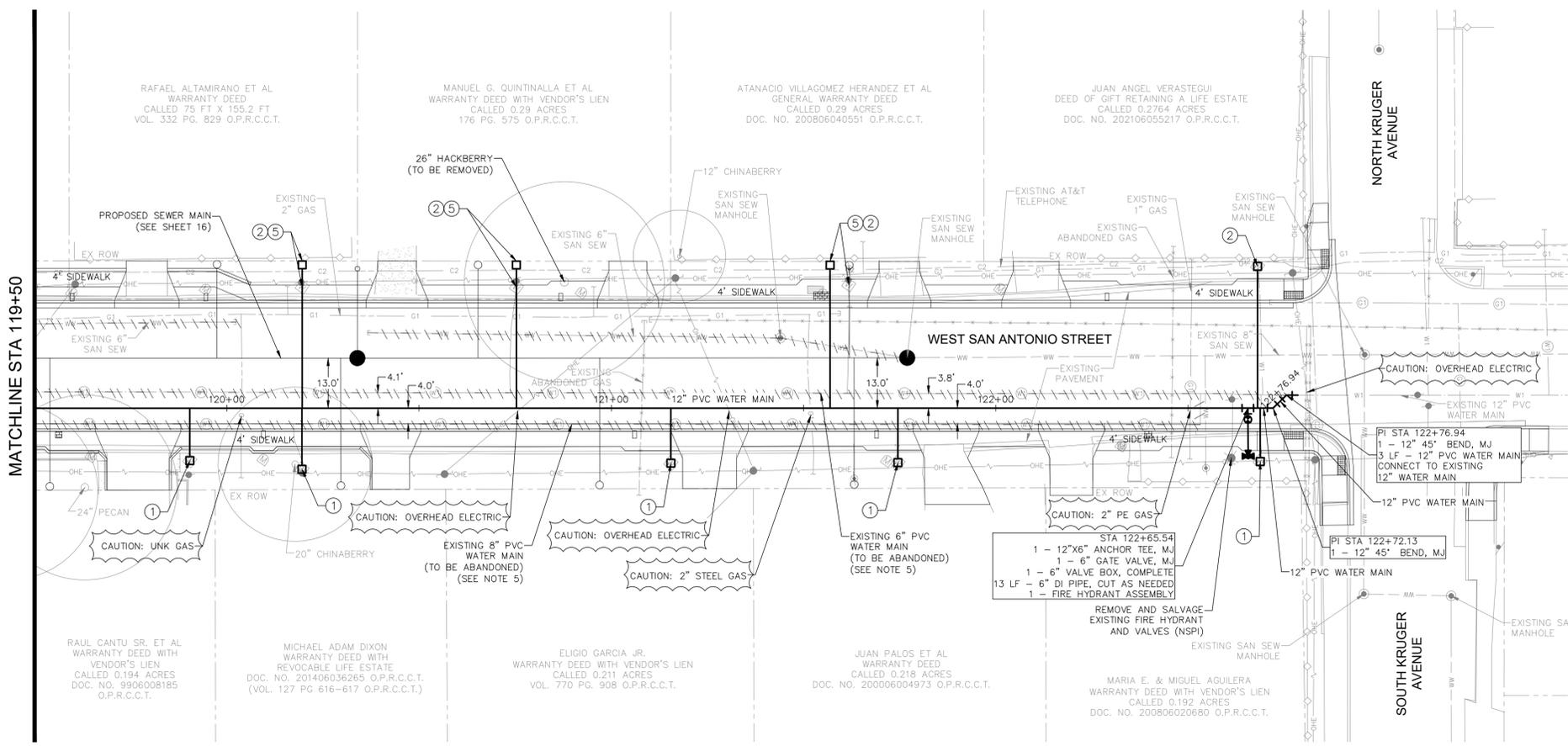
**SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT**

**WATER LINE A  
STA 115+50 TO 119+50**



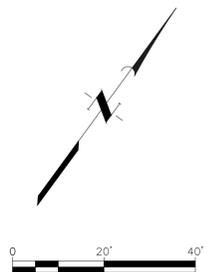
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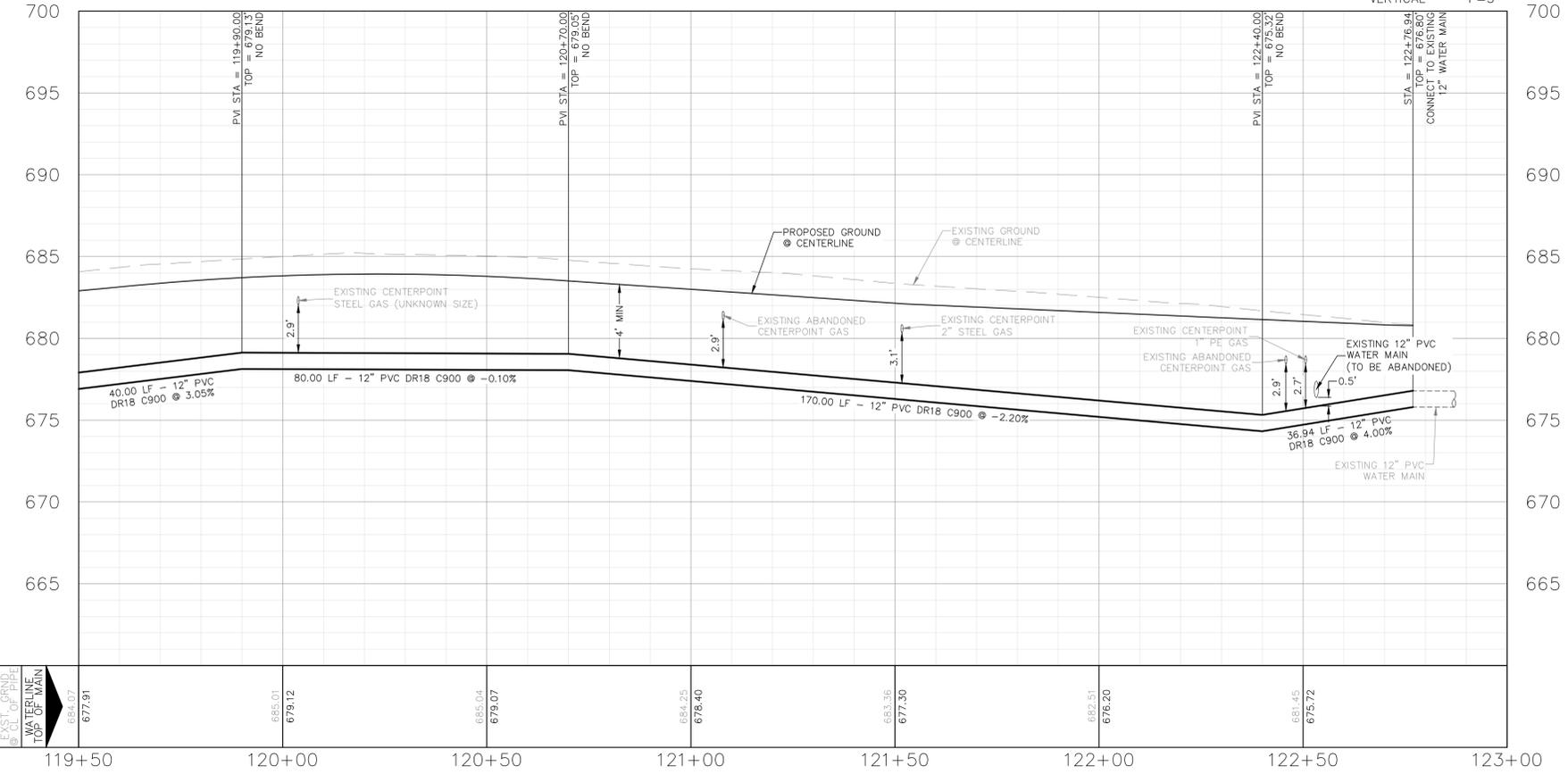
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**WATER LINE "A" STA 119+50 TO END**

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NO.	DATE	REVISIONS	APP.



**SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT**

**WATER LINE A  
STA 119+50 TO END**

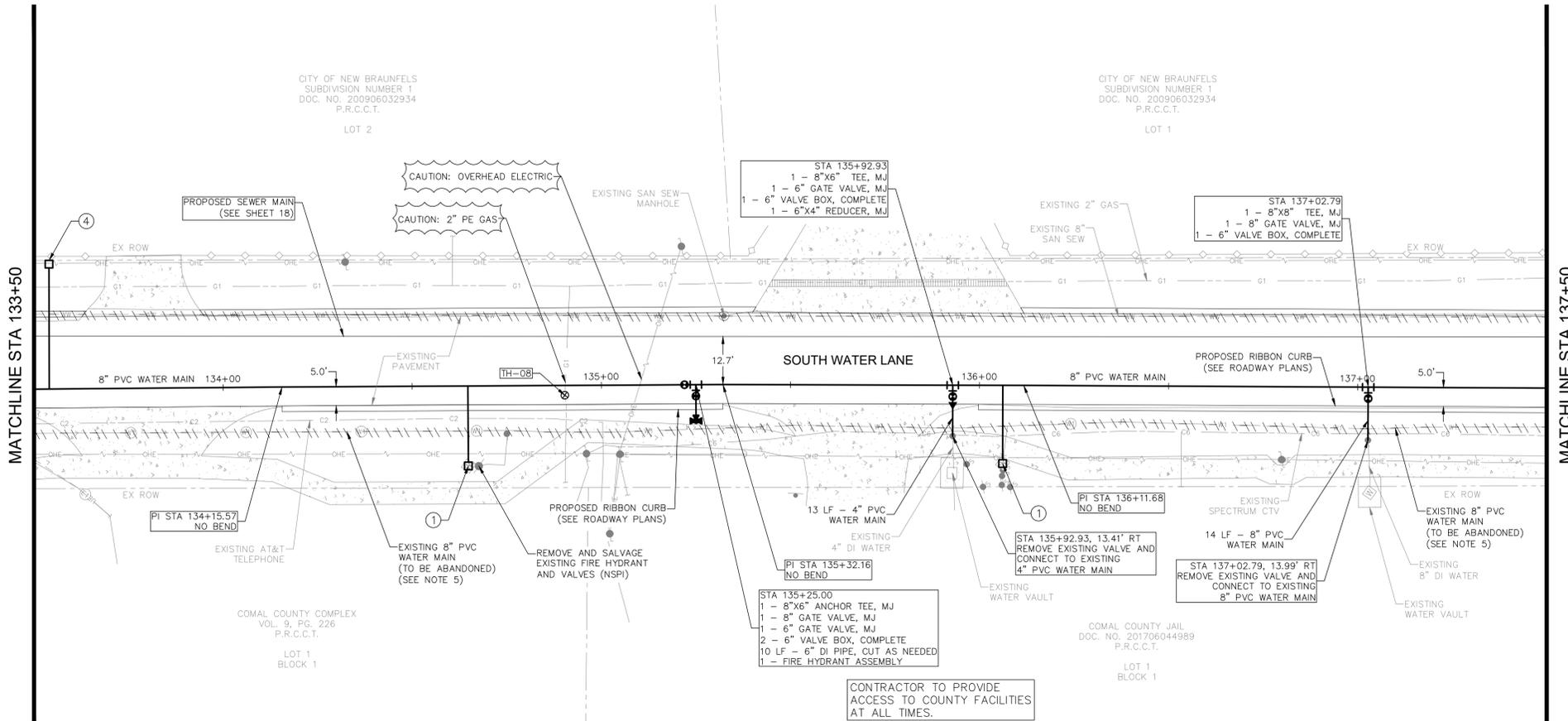


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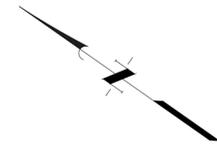
SUE TEST HOLE DATA						
TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
TH-08	2" PE GAS	13795904.87	2238401.82	685.81	683.48	Owner: Centerpoint Energy



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

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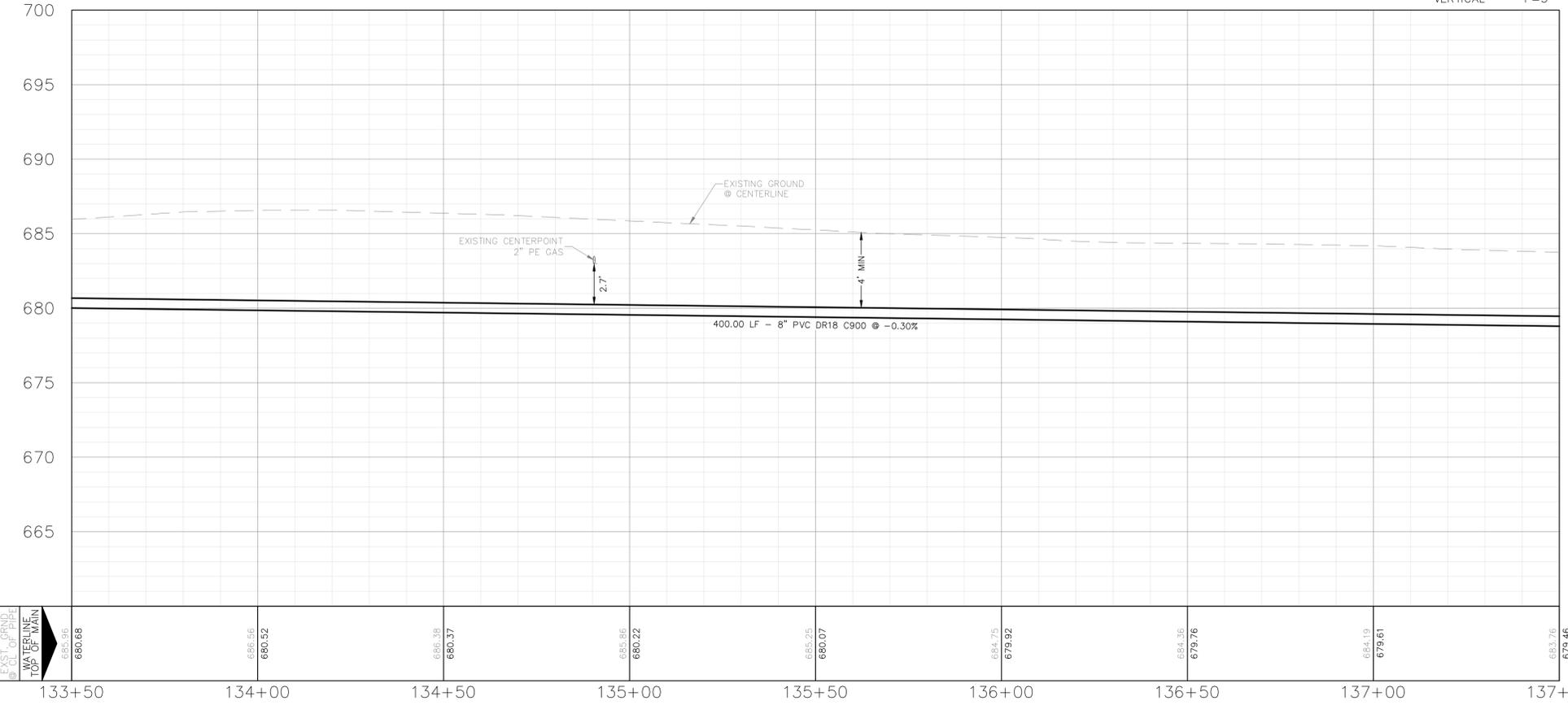
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**WATER LINE "B" STA 133+50 TO 137+50**

SCALE  
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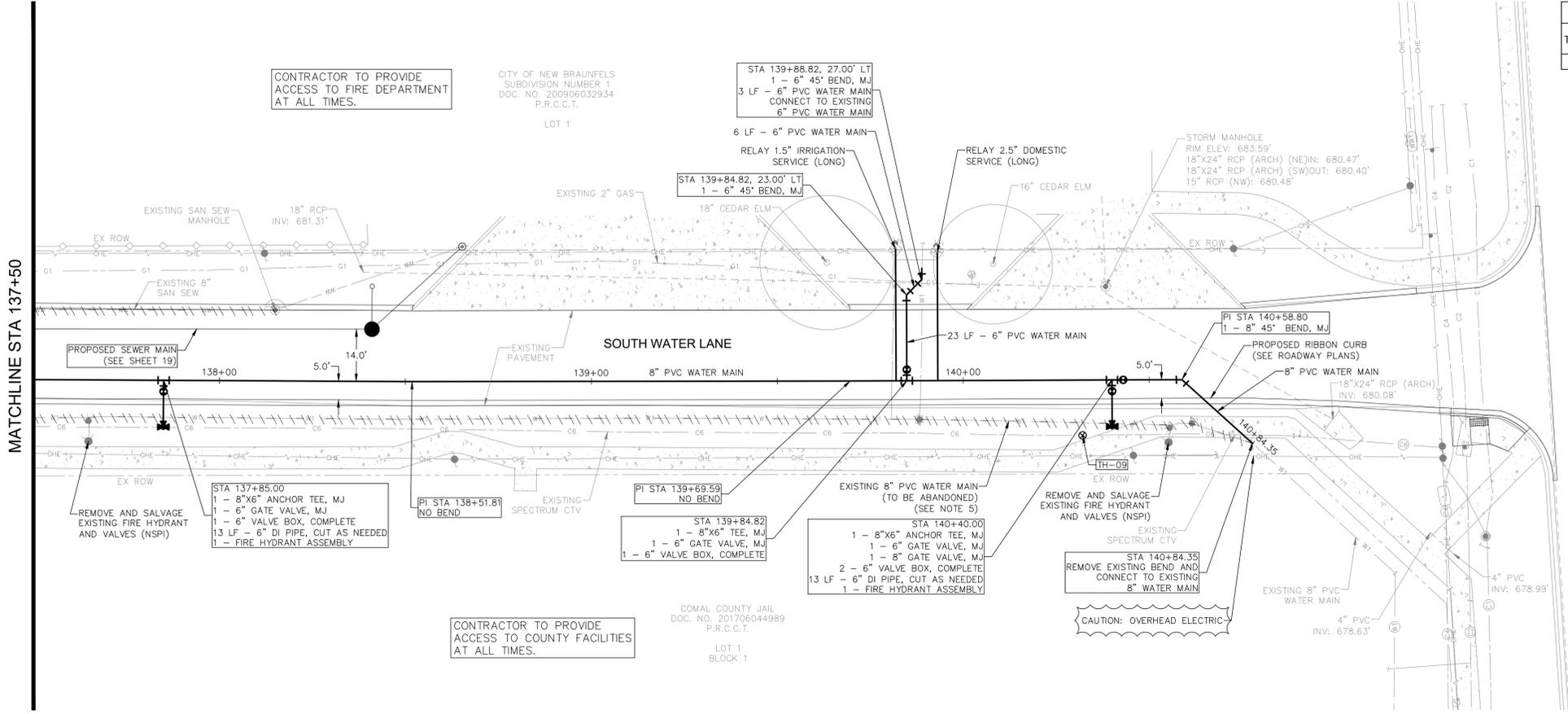
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STA 133+50 TO 137+50**



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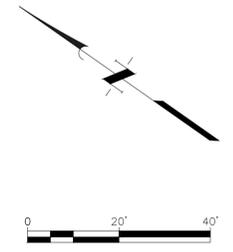




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TEST HOLE	UTILITY TYPE	NORTHING	EASTING	EXIST GROUND ELEV.	TOP OF UTILITY ELEV.	NOTES
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- KEYED NOTES**
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TRENCH SAFETY EXCAVATION SAFETY PROTECTION  
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.

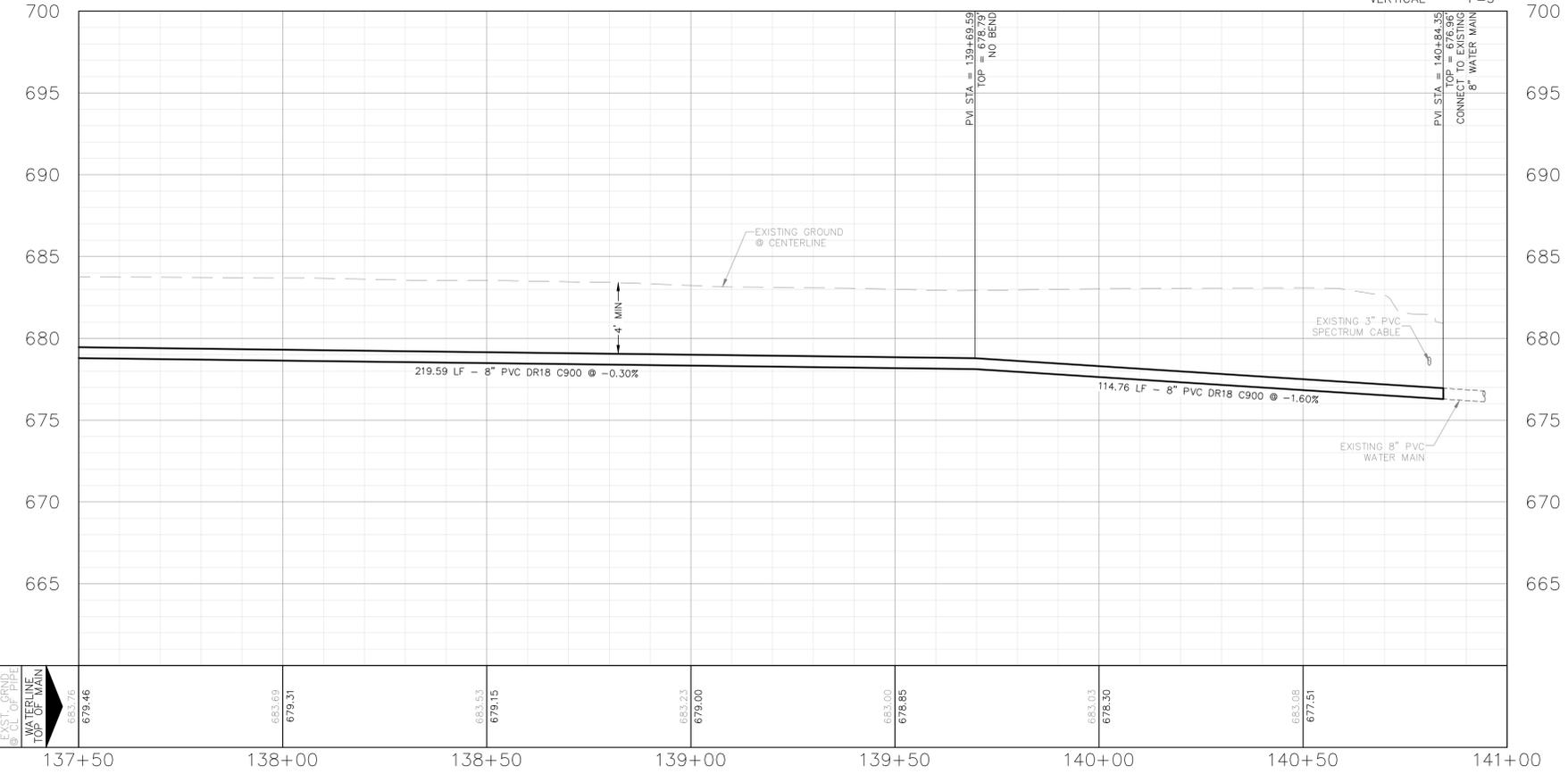
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR FAILURE 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.

- 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.
  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.

**WATER LINE "B" STA 137+50 TO END**

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



NO.	DATE	REVISIONS	APP.

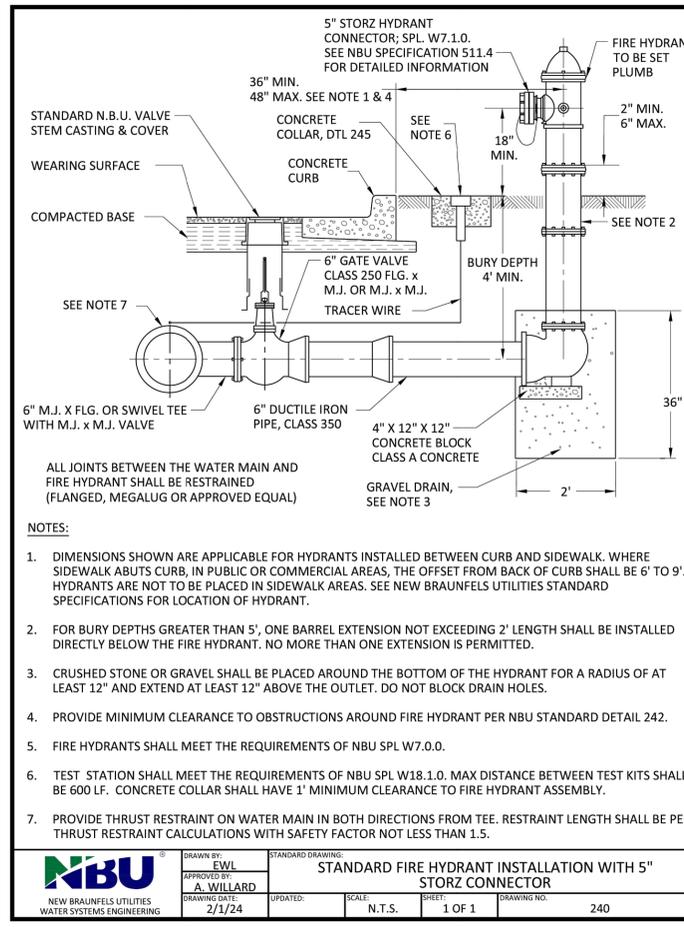
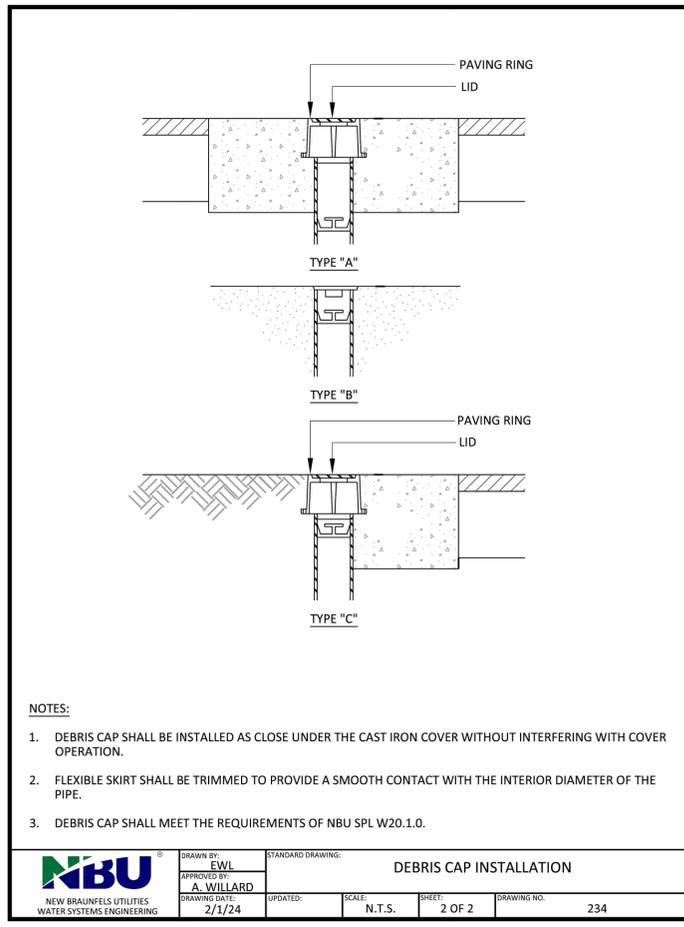
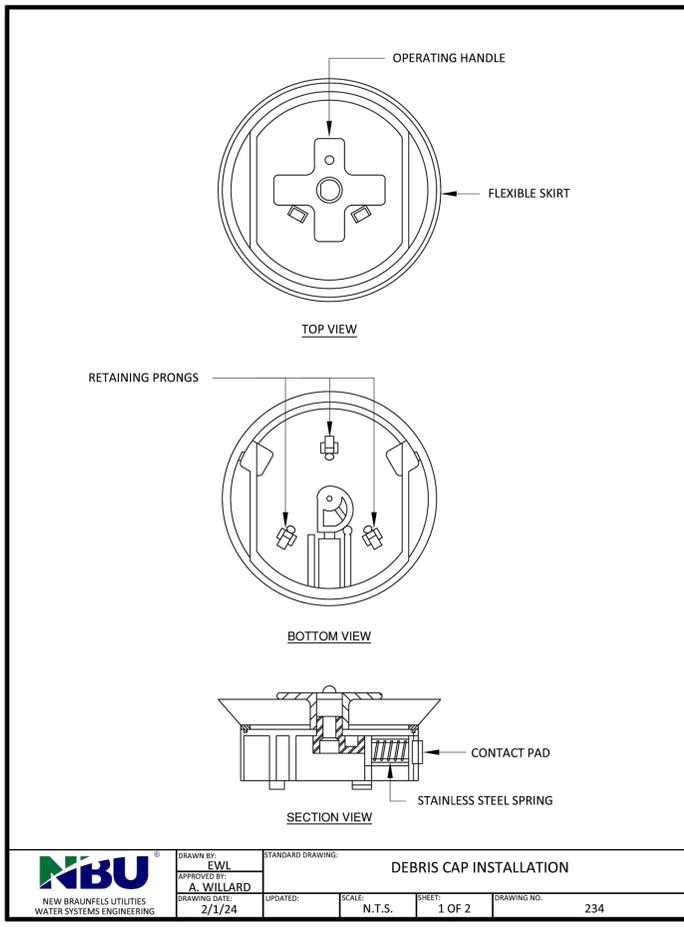
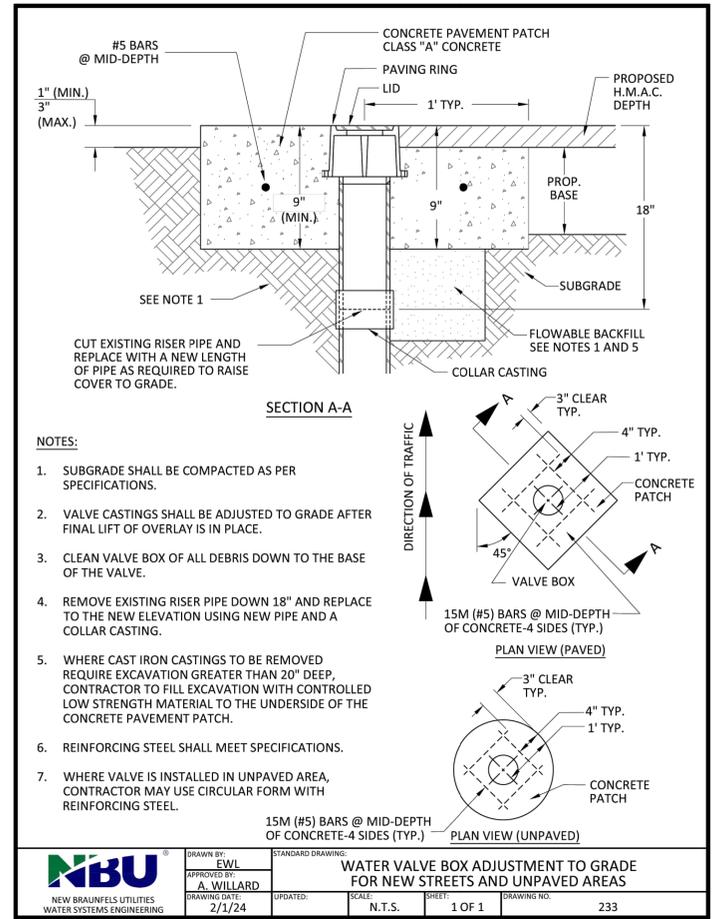
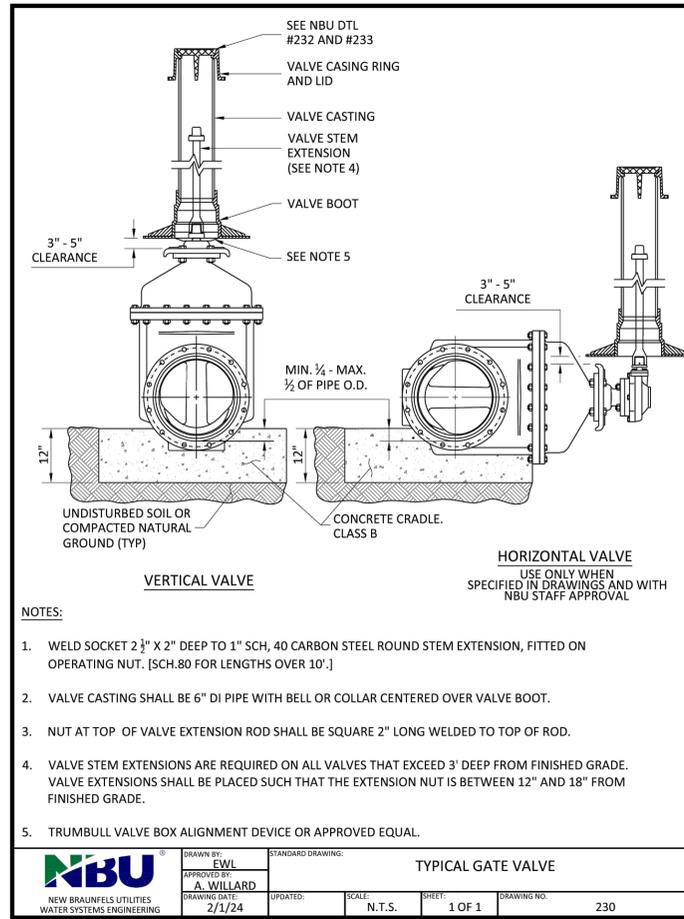
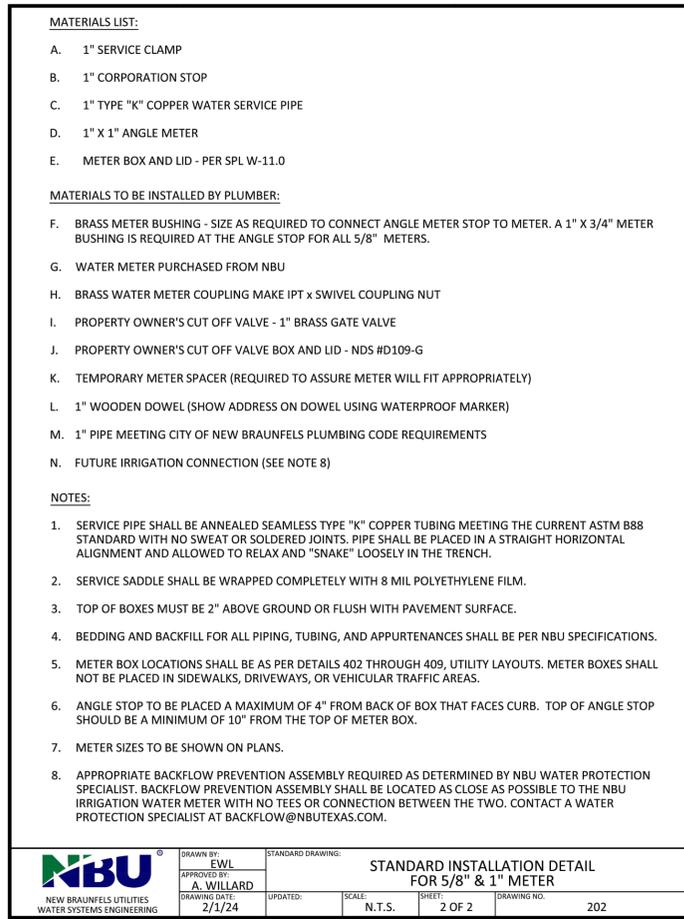
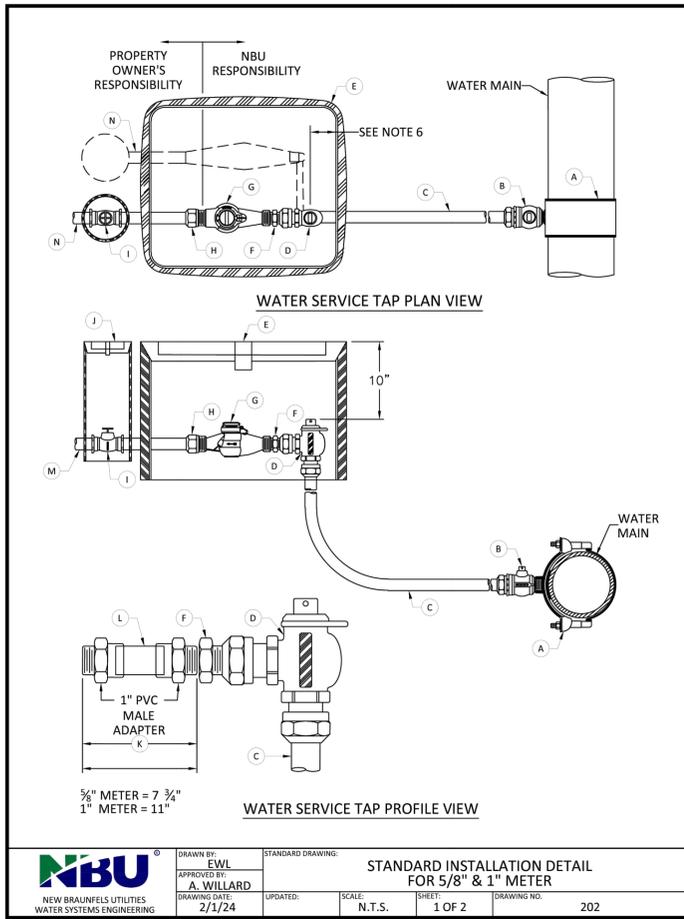


SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT  
**WATER LINE B  
STA 137+50 TO END**



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





NO.	DATE	REVISIONS	APP.

**NBU**  
New Braunfels Utilities

SAN ANTONIO STREET REHABILITATION  
PHASE 3 PROJECT

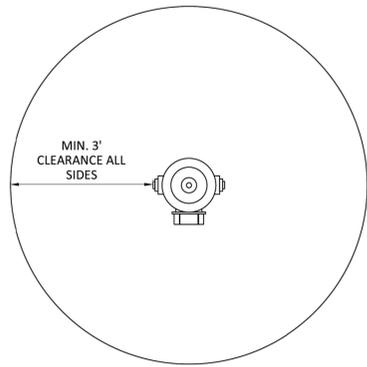
**WATER DETAILS I**

**QUIDDITY**  
Texas Board of Professional Engineers and Land Surveyors Reg. No. F-23290  
2967 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  
02080  
LICENSED PROFESSIONAL ENGINEER  
5/9/2025

V:\05487-0023-01\_san\_antonio\_street\_rehabilitation\_phase\_3\_project\05487-0023-01-SF-Water\_Details.dwg    May 08, 2025    10:18am    JFR



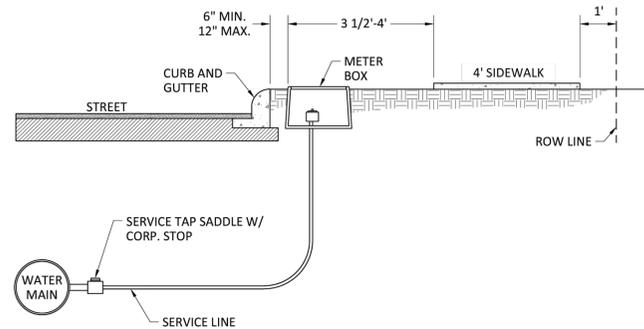
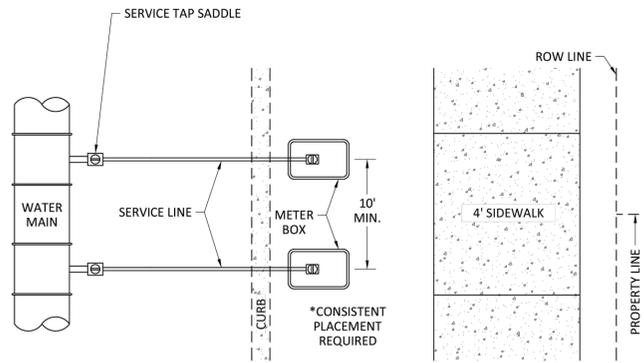
- NOTES:
- HYDRANTS MUST REMAIN UNOBSTRUCTED AT ALL TIMES.
  - A CLEAR SPACE OF 3-FEET MUST BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE FIRE HYDRANT PER SECTION 507 OF THE INTERNATIONAL FIRE CODE EXCEPT AS OTHERWISE REQUIRED OR APPROVED BY THE FIRE CODE OFFICIAL.

**NBU** NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING

DRAWN BY: EWL  
APPROVED BY: A. WILLARD  
DRAWING DATE: 2/1/24

STANDARD DRAWING: STANDARD FIRE HYDRANT CLEARANCE

SCALE: N.T.S. SHEET: 1 OF 1 DRAWING NO.: 242

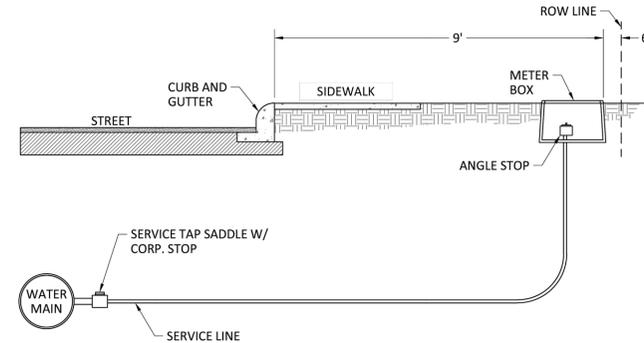
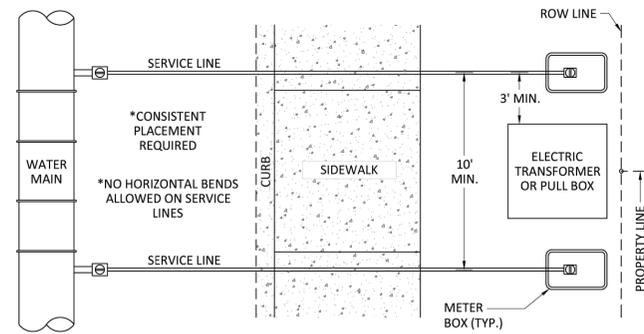


**NBU** NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING

DRAWN BY: EWL  
APPROVED BY: A. WILLARD  
DRAWING DATE: 2/1/24

STANDARD DRAWING: SERVICE TAP: METER BOX PLACEMENT BETWEEN: SIDEWALK AND CURB

SCALE: N.T.S. SHEET: 1 OF 1 DRAWING NO.: 243

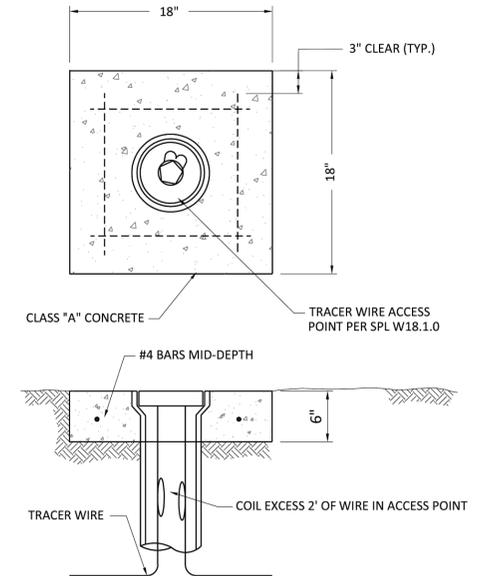


**NBU** NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING

DRAWN BY: EWL  
APPROVED BY: A. WILLARD  
DRAWING DATE: 2/1/24

STANDARD DRAWING: SERVICE TAP: METER BOX PLACEMENT BETWEEN: SIDEWALK AND PROPERTY LINE

SCALE: N.T.S. SHEET: 1 OF 1 DRAWING NO.: 244



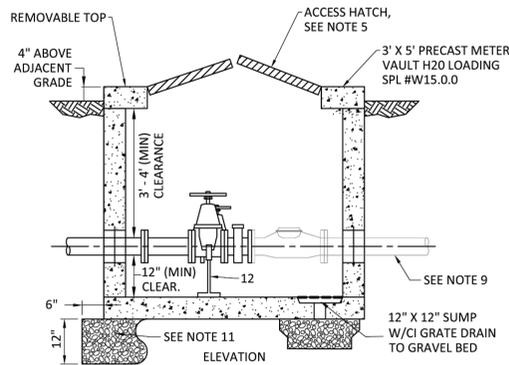
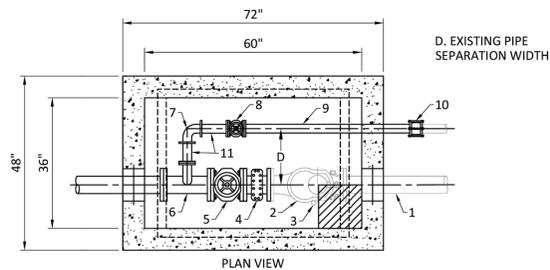
- NOTES:
- TRACER WIRE ACCESS POINTS SHALL BE INSTALLED PER SPECIFICATION ITEM NO. 512 "TRACER WIRE".
  - SEE DETAIL 240 FOR TYPICAL INSTALLATION.
  - TRACER WIRE ACCESS POINTS SHALL NOT BE INSTALLED IN SIDEWALKS, DRIVEWAYS, VALLEY GUTTERS, OR OTHER AREAS OF VEHICULAR TRAFFIC.

**NBU** NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING

DRAWN BY: EWL  
APPROVED BY: A. WILLARD  
DRAWING DATE: 2/1/24

STANDARD DRAWING: TRACER WIRE ACCESS POINT

SCALE: N.T.S. SHEET: 1 OF 1 DRAWING NO.: 245



STANDARD DRAWING: 4" METER VAULT REPLACEMENT

SCALE: N.T.S. SHEET: 1 OF 2

NO.	NAME	LAY LENGTH
1	EXISTING 4" PIPE TO REMAIN	
2	EXISTING 2" COMPOUND METER TO BE REMAIN	
3	EXISTING 1" SAMPLING PORT TO REMAIN	
4	4" STRAINER	7-1/2"
5	4" GATE VALVE WITH HANDWHEEL	9"
6	4" x 2" FLANGED TEE	13"
7	2" FLANGED LONG RADIUS ELBOW 90°	4-1/2"
8	2" BYPASS GATE FLANGED VALVE WITH HANDWHEEL	7"
9	2" BYPASS FLANGED DUCTILE IRON PIPE	±7"
10	2" TRANSITION COUPLING	5"
11	2" FLANGED NIPPLE	VARIES
12	ADJUSTABLE PIPE SADDLE SUPPORT FOR BOTH MAIN AND BYPASS	

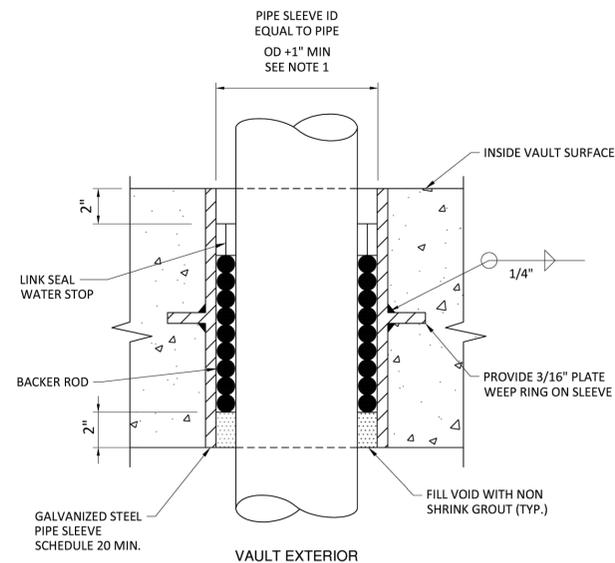
DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR TO CONFIRM EXACT DIMENSIONS. CONFIRM WITH NBU WATER ENGINEERING.

- NOTES:
- 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.
  - METER VAULT MUST BE BEHIND CURB AND/OR WALK AND OUT OF VEHICULAR TRAFFIC.
  - MAIN LINE AND BYPASS VALVES WILL BE RESILIENT SEAT TYPE WITH CORROSION RESISTANT FUSION 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.
  - NBU APPROVAL REQUIRED IF HEIGHT OF VAULT EXCEEDS 72".
  - HATCH SHALL HAVE MIN. 36" X 36" CLEAR OPENING AND BE EQUIPPED WITH SAFETY GRATING, SPL W19.0.0.
  - TAPPING SLEEVE AND PIPING IN RIGHT-OF-WAY AND UTILITY EASEMENTS SHALL BE EMBEDDED IN GRANULAR MATERIALS AND BACKFILLED PER NBU SPECIFICATIONS.
  - DOUBLE HARNESS MJ WITH TIE RODS. ALL OTHER FITTINGS INSIDE VAULT WILL BE FLANGED.
  - CONTACT NEW BRAUNFELS UTILITIES PRIOR TO INSTALLATION OF COMPOUND METERS FOR PROPER DOMESTIC DEMANDS.
  - REFER TO DRAWING 207 FOR WALL PENETRATION DETAIL.
  - THE TOP OF THE METER VAULT SHALL BE AT AN ELEVATION SUCH THAT THE SURROUNDING GROUND SLOPES AWAY FROM THE VAULT.
  - GRAVEL BEDDING PER NBU SPECIFICATIONS. BEDDING MUST EXTEND 6" BEYOND LIMITS OF THE SLAB.

STANDARD DRAWING: 4" METER VAULT REPLACEMENT

SCALE: N.T.S. SHEET: 2 OF 2

VAULT INTERIOR



- NOTES:
- CONTRACTOR TO COORDINATE PIPE SLEEVE O.D. WITH MANUFACTURER.
  - INSTALL BACKER ROD AS NEEDED BETWEEN LINK SEAL AND NON-SHRINK GROUT SEAL.

STANDARD DRAWING: VAULT PIPE PENETRATION DETAIL

SCALE: N.T.S. SHEET: 1 OF 1 DRAWING NO.: 207

NO.	DATE	REVISIONS	APP.



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



