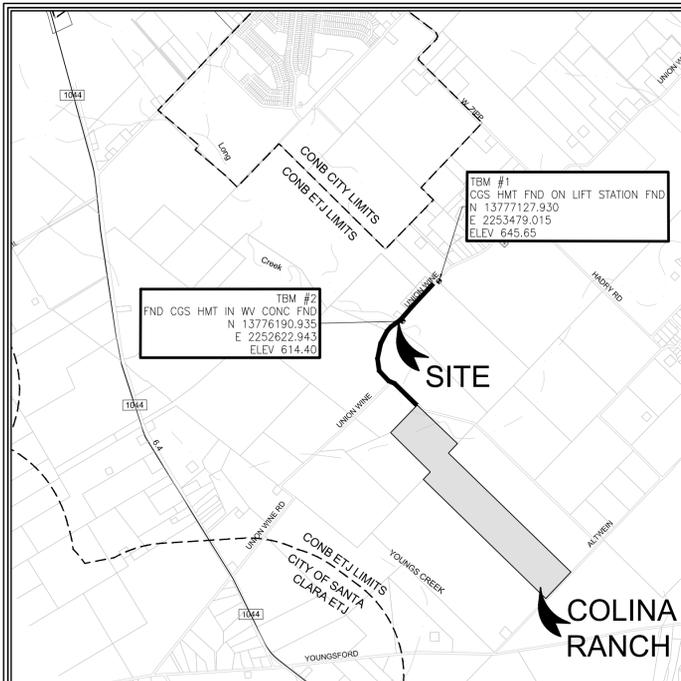


COLINA RANCH WEST OFFSITE WATER IMPROVEMENTS NEW BRAUNFELS, TEXAS CIVIL SITE CONSTRUCTION PLANS

LENNAR HOMES OF TEXAS & CONSTRUCTION, LTD
100 NE LOOP 410, SUITE 1155
SAN ANTONIO, TEXAS 78216



PROJECT LOCATION MAP SCALE: N.T.S.

PROJECT BENCHMARK

SITE TBM #1
SET HMT FND ON LIFTSTATION FND
N: 13777127.930
E: 2253479.015
ELEV: 645.65'

SITE TBM #2
SET FND CGS HMT IN WV CONC FND
N: 13776190.935
E: 2252622.943
ELEV: 614.40'

REQUIRED PERMITS	NUMBER
1. GVSUD	#
2. GUADALUPE COUNTY	#

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C1.03	EROSION DETAILS
C2.01	UNION WINE OVERALL WATER PLAN
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C2.07	WATER DETAILS (2 OF 2)

FEBRUARY 2026



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.

Robert Drew Burnett
Robert Drew Burnett P.E.
License No. 154995

PREPARED BY:



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
HMTNB.COM
(830) 625-8555
TBPELS FIRM F-10961
TBPELS FIRM 10153600

NOTE TO CONTRACTOR:

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

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

ANY QUANTITIES PROVIDED BY HMT OR OWNER ON THE PLANS, OPINION OF PROBABLE COST, BID SUMMARIES, ETC. ARE FOR CURSORY USE ONLY. CONTRACTOR IS RESPONSIBLE FOR BIDDING SIGNED AND SEALED CONSTRUCTION PLANS. IF A DISCREPANCY EXIST, CONTRACTOR SHALL CONTACT ENGINEER IMMEDIATELY.

CONTRACTOR IS RESPONSIBLE FOR CONFIRMING THE LOCATION AND ELEVATION OF ALL DOWNSTREAM CONNECTION POINTS PRIOR TO CONSTRUCTION. IF A DISCREPANCY EXIST, CONTRACTOR SHALL CONTACT ENGINEER IMMEDIATELY.

CONTRACTOR SHALL INSTALL ALL GRAVITY SEWER, GRAVITY STORM SEWER, CURBS AND PAVEMENT FROM THE MOST DOWNSTREAM POINT OF CONNECTION. IF IMPROVEMENTS ARE CONSTRUCTED FROM UPSTREAM TO DOWNSTREAM, THEN THE CONTRACTOR WILL TAKE FULL RISK AND LIABILITY OF ANY ISSUES THAT MIGHT ARISE FROM FLOWLINE ELEVATION DISCREPANCIES, UTILITY CONFLICTS, ETC.

CONTRACTOR IS RESPONSIBLE FOR THE STOCKPILING OF ANY EXCESS DIRT. ALL BIDS FROM CONTRACTOR SHOULD ACCOUNT FOR THE REMOVAL AND PLACEMENT OF ALL EARTHWORK TO INCLUDE STOCKPILING, EXPORT, IMPORT, ETC. IF A LOCATION OF PLACEMENT OF EXCESS DIRT IS NOT SHOWN ON THE PLANS, THEN CONTRACTOR SHALL CONTACT ENGINEER IMMEDIATELY TO DETERMINE THE MOST SUITABLE STOCKPILE LOCATION.

GENERAL NOTES:

- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID. THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER IN RECORD.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SET A PRE-CONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED FOR ALL INSPECTION AND MEETING REQUESTS.
 - ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,
 - FAXED IN AT 830-608-2117 OR,
 - E-MAILED AT INSPECTIONS@NEWBRAUNFELS.GOV.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
- A PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE GUADALUPE COUNTY, TEXAS, FIRM PANEL NUMBER 48187C0115G EFFECTIVE DATE MARCH 27, 2024 AND 48187C0255F, EFFECTIVE DATE NOVEMBER 02, 2007, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- THIS PROJECT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE, TRANSITION OR CONTRIBUTING ZONE.
- 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, IF APPLICABLE.
- THE ENGINEER OF RECORD ACKNOWLEDGES THAT ALL PROPOSED WATER AND WASTEWATER IMPROVEMENTS MUST COMPLY WITH TCEQ, CITY OF NEW BRAUNFELS, SOUND ENGINEERING JUDGEMENT AND ANY OTHER GOVERNING ENTITY ORDINANCES OR CODES.

NO.	REVISION DESCRIPTION	REVISION DATE
△	WATER REVISIONS	02/12/2026
△	EROSION REVISIONS, ADDED WATER NOTE	02/13/2026



GVSUD WATER NOTES

General:

- PVC mains 12-inches and below shall conform to AWWA C-909 pressure class 235 or above. PVC main greater than 12-inches shall conform to AWWA C-900 DR 18 or above. Water mains shall have an absolute minimum depth of 48-inches in all areas.
- All water pipe shall be installed minimum 4-feet beyond back of curb.
- All water mains to be installed 4-feet minimum behind back of curb.
- No pressurized fittings under roadways, pavement, or sidewalks.
- All water main ductile iron fittings shall be mechanical joint and conform to ANSI/AWWA C-153 or C-110. All bolts shall have copper anti-seize corrosion resistant coating. Valves shall be attached to tees by foster adaptor or anchor nipple. Foster adaptor, anchor nipple, or Ford Uni-Flange retainer glands and thrust blocks shall be used on all fittings and valves.
- Tracer wire shall be installed on all pipelines including service lines and brought into valve and meter boxes for locating purposes. Insulated water proof connectors shall be used to splice wires together. A 6-inch or 12-inch-wide detectable metal tape shall be placed above bedding initial backfill.
- Over inserting bell joints and passing the insertion reference mark is prohibited and will require removal and reinstallation.
- Standard fire hydrant shall include hydrant, 6-inch resilient wedge gate valve and box, anchor fittings, ductile iron pipe, and all appurtenances. Hydrants shall be limited to those manufactured by Mueller, AVK, American Flow, Clow, Or East Jordan. Only Mueller hydrants and EJ shall be used in City of Cibolo's jurisdiction. Hydrant upper barrel shall be factory painted red. Hydrants shall have a Stortz connection on steamer nozzle. Fittings for plug shall be fully restrained and tied to valve.
- All fire hydrant assemblies shall have an in-line upstream and downstream valve.
- All tees shall include three (3) valves.
- Valves shall be AWWA approved resilient wedge seated gate valve, open left, and limited to those manufactured by Mueller, AVK, American Flow, Clow, Or East Jordan.
- Valves are prohibited in ADA ramps, curbs, and roadways. Valves are prohibited in sidewalks in City of New Braunfels.
- Meter boxes are prohibited in any sidewalks, driveways, or roadways.
- Small service taps shall be 1-inch Rehau Municipex with CTS 200 PSI plastic insert or 2-inch Yelomine PVC ASTM D1784 with Harco fittings or approved equivalent.
- Service taps to be made with single brass strap tapping saddle or dual banded stainless-steel flat-strap epoxy saddle with iron pipe threads.
- Casing required for all long small services. 1-inch service requires 3-inch casing and 2-inch service requires 4-inch casing. Casing shall be white color PVC schedule 40 or approved equal.
- 5/8" & 3/4" meter boxes shall be DFW36C 16" x 11". All meter boxes shall be plastic with lids and knockout.
- Dual services are not permitted.
- Tapping machines must retain coupon.
- Contractor to curb cut v/s for valves and x's for meters and paint blue.
- Water lines crossing cul-de-sacs shall be fully restrained under pavement and cased.
- All street crossings are to be cased from edge of impermeable cover to edge of impermeable cover.
- All bends, fittings, and valves shall have one (1) restraint upstream and downstream regardless of length.

Construction Notes:

- All work shall be in accordance with GVSUD standards as published at the following website: <http://www.gvsud.org/>
- Material submittals shall be provided for GVSUD review and approval. Allow 21 calendar days for review.
- All water installations must be inspected and approved by GVSUD prior to backfilling or otherwise covering the work. GVSUD will reject anything backfilled prior to GVSUD approval. This includes crossings of water and wastewater by other utilities. GVSUD will perform a maximum of one (1) inspection daily for one (1) hour duration between 7:30am and 4:00pm excluding weekends and holidays. Call to schedule inspections (48-hours advance notice is required for all inspections).
- Trench excavation and pipe installation will not be permitted until subgrade has been established. Survey staking must be installed prior to and maintained during trench excavation and pipe installation. Survey staking shall include horizontal and vertical control at a minimum of 50-foot station intervals. Survey staking shall be performed by the contractor.
- Proper shoring and/or benching must be present at all times for anything 4-feet in depth or deeper. GVSUD will stop work until proper safety protocols have been established.
- Backflow prevention in the form of a reduced pressure zone backflow prevention assembly must be provided for temporary connections to existing water lines. Backflow prevention assemblies shall be tested by a licensed backflow prevention assembly tester.
- All piping shall be installed in straight alignment. Pipe deflection is not allowed.
- Install concrete thrust blocking and mechanical restraints for pressurized piping systems.
- Water pipe shall be installed above wastewater and all pipe joints shall be centered at crossings with all other utilities. Both pipe joints shall be centered where water crosses wastewater mains and laterals 10-feet in either direction.
- Maintain a minimum of 10-feet horizontal and 24-inch vertical clearance between water and wastewater and other utilities. Shared trenches are not allowed.
- Water piping shall be sleeved if located under box culverts, single barrel, or multiple barrel storm sewer crossings regardless of size.
- Valve boxes and appurtenances shall be painted. Provide painted curb cut markings at valves and services.
- All exposed vertical and horizontal concrete edges shall be formed with 3/4" chamfer strips. Concrete in unpaved areas shall be 2" above finish grade.



GVSUD WATER NOTES

- Contractor shall chlorinate new mains per TCEQ and ANSI/AWWA C651 and dechlorinate during flushing per ANSI/AWWA C655; the contractor shall coordinate with the GVSUD inspector to witness chlorinating and pressure testing of new mains. All test results must be provided to GVSUD.
- Operation of existing valves in the GVSUD water distribution system shall be operated by GVSUD personnel only, unless approved by GVSUD inspector.
- New water mains and appurtenances shall pass pressure testing and pass the minimum public health standards for bacteriological quality testing prior to any tie in to the existing GVSUD water system as required by TCEQ and ANSI/AWWA.
- Hydrostatic pressure testing shall be every 1200 LF (max) of water line or as approved by the engineer. All errors of workmanship shall be corrected immediately. All parts of the pipeline shall be backfilled and braced sufficiently to prevent movement under pressure.
- The contractor shall provide the engineer with all the information as required so that the engineer can supply GVSUD the GIS package for approval.
- A final walk through for field acceptance will be scheduled with the contractor after the preliminary walk-through punch list items have been completed.
- Provide restraint lengths at all bends, valves, tees, and all other fittings.
- All master metered distribution lines shall be protected by an RPZ backflow preventer.
- All non-chemical fire lines shall be protected by a DCDA backflow preventer.
- All chemically injected fire lines shall be protected by an RPZ backflow preventer.

Materials:

- PVC mains 12 inches and below shall conform to AWWA C-909 pressure class 235 or above. PVC main greater than 12 inches shall conform to AWWA C-900 DR 18 or above. Water mains shall have an absolute minimum depth of 48 inches in all areas.
- 2-inch service crossings shall be Yelomine ASTM D2241 or approved equivalent.
- Tapping saddles shall be single brass strap or dual banded stainless-steel flat-strap epoxy saddle with iron pipe threads.
- All fasteners shall be 304 stainless-steel (e.g. hardware, screws, anchor bolts, rods, flange bolts and nuts, etc.). All bolts and nuts shall be heavy hex. Field-apply nickel anti-seize compound prior to assembly. Bolts and nuts shall not be painted.
- All buried metal pipe, fittings, and valves shall be wrapped with 8mil poly.
- Paint shall be high-build epoxy with topcoat of polyurethane.
- All fire hydrant leads shall be ductile iron C151 or approved equivalent.

Testing:

- All testing shall be arranged and paid for by the contractor and witnessed by GVSUD.
- All testing must be complete prior to paving streets.
- The Contractor shall provide GVSUD copies of all test results prior to acceptance of the project.
- All testing must be complete prior to performing tie-ins to existing water systems.
- All other utilities must be complete and offsite prior to performing hydrostatic pressure testing.



TCEQ WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES

- THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 30 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D. WHEN CONFLICTS ARE NOTED WITH LOCAL STANDARDS, THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED. AT A MINIMUM, CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS MEET TCEQ'S "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS."
- ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)/NSF INTERNATIONAL STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI [§290.44(A)(1)].
- PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NSF INTERNATIONAL SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS [§290.44(A)(2)].
- NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY [§290.44(A)(3)].
- ALL WATER LINE CROSSINGS OF WASTEWATER MAINS SHALL BE PERPENDICULAR [§290.44(E)(4)(B)].
- WATER TRANSMISSION AND DISTRIBUTION LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS; HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 24 INCHES BELOW GROUND SURFACE [§290.44(A)(4)].
- THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES IS 0.25 PERCENT [§290.44(B)].
- THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES WITH VENT OPENINGS TO THE ATMOSPHERE COVERED WITH 16-MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN ACCEPTABLE EQUIVALENT [§290.44(D)(1)].
- THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION [§290.44(F)(1)].
- WHEN WATERLINES ARE LAID UNDER ANY FLOWING OR INTERMITTENT STREAM OR SEMI-PERMANENT BODY OF WATER THE WATERLINE SHALL BE INSTALLED IN A SEPARATE WATERTIGHT PIPE ENCASEMENT. VALVES MUST BE PROVIDED ON EACH SIDE OF THE CROSSING WITH FACILITIES TO ALLOW THE UNDERWATER PORTION OF THE SYSTEM TO BE ISOLATED AND TESTED [§290.44(F)(2)].
- PURSUANT TO 30 TAC §290.44(A)(5), THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY THE MOST CURRENT AWWA FORMULAS FOR PVC PIPE, CAST IRON AND DUCTILE IRON PIPE. INCLUDE THE FORMULAS IN THE NOTES ON THE PLANS.
 - THE HYDROSTATIC LEAKAGE RATE FOR POLYVINYL CHLORIDE (PVC) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-605 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

$$Q = \frac{L \cdot P}{148,000}$$
 WHERE:
 - Q = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
 - L = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
 - D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
 - P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).
 - THE HYDROSTATIC LEAKAGE RATE FOR DUCTILE IRON (DI) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-605 AS REQUIRED IN 30 TAC §290.44(A)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

$$Q = \frac{SD \cdot P}{148,000}$$
 WHERE:
 - L = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
 - S = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
 - D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
 - P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).

- THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE FEET BETWEEN THE PROPOSED WATERLINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES. IF THIS DISTANCE CANNOT BE MAINTAINED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTION. SEPARATION DISTANCES, INSTALLATION METHODS, AND MATERIALS UTILIZED MUST MEET §290.44(E)(1)-(4).
- THE SEPARATION DISTANCE FROM A POTABLE WATERLINE TO A WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE-FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT [§290.44(E)(5)].
- FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER LINE, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION [§290.44(E)(6)].
- SUCTION MAINS TO PUMPING EQUIPMENT SHALL NOT CROSS WASTEWATER MAINS, WASTEWATER LATERALS, OR WASTEWATER SERVICE LINES. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN FIVE FEET OF ANY TILE OR CONCRETE WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE [§290.44(E)(7)].
- WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAINFIELDS [§290.44(E)(8)].
- THE CONTRACTOR SHALL DISINFECT THE NEW WATERLINES IN ACCORDANCE WITH AWWA STANDARD C-651-14 OR MOST RECENT, THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATERLINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER [§290.44(F)(3)].
- DECHLORINATION OF DISINFECTING WATER SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C655-09 OR MOST RECENT.

Drawing Name: N:_Projects\337 - Lenses\115 - Overall Improvements - Sewer, Water, Drainage, Permitting & Construction\337-115_COAR_UNION_WINE.dwg User: kolopj Feb. 13, 2026 - 10:52am



GVSUD WATER NOTES

- Contractor shall perform spike test at 200 PSI for 15 minutes then reduce pressure to 150 PSI for 2 hours.
- Contractor shall perform pre-testing to verify passing results prior to requesting GVSUD inspection. Provide connection point for GVSUD digital test gauge (quick connect).
- Perform trench backfill density testing at intervals specified by the design engineer, exact locations to be designated by inspector. Schedule with GVSUD to witness 48 hours prior to test. Provide copies of reports to GVSUD.
- Hydrostatic pressure testing shall be every 1200 LF (max) of water line or as approved by the engineer. All errors of workmanship shall be corrected immediately. All parts of the pipeline shall be backfilled and braced sufficiently to prevent movement under pressure.

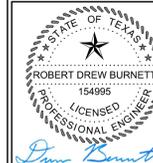


GVSUD WATER NOTES

- The contractor shall provide a competent and qualified superintendent to supervise all work. The superintendent shall be present during all construction activities, including inspections.
- No separate pay will be given to de-water trenches or other excavated areas.



290 S. CASTELL AVE., STE. 100
 NEW BRAUNFELS, TX 78130
 TBPBLS FIRM F-10961
 TBPBLS FIRM 10153600



02/13/2026

GENERAL NOTES
(2 OF 2)

COLINA RANCH WEST WATER IMPROVEMENTS
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **FEBRUARY 2026**

DRAWN BY: **LB**

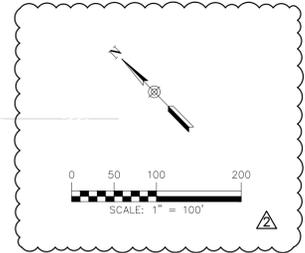
DESIGNED BY: **ROB**

REVIEWED BY: **CVH**

HMT PROJECT NO.: **337.115**

SHEET
C0.02

Drawing Name: N:\Projects\337 - Lenses\115 - Overall Improvements - Sewer, Water, Drainage, Permitting & Construction\CD\CD-Water\Union Mine\337_115_EROSION UNIFORM WME.dwg User: kolbyp Feb 13, 2026 - 10:52am



- LEGEND**
- 700 — EXISTING CONTOURS
 - 700 — PROPOSED CONTOURS
 - B.L. BUILDING SETBACK LINE
 - U.E. UTILITY EASEMENT
 - D.E. DRAINAGE EASEMENT
 - DRAINAGE FLOW DIRECTION
 - LOGSF — LIMIT OF CONSTRUCTION / SILT FENCE
 - 100-YEAR FLOODPLAIN
 - FILTER DIKE CURB INLET PROTECTION
 - ROCK BERM

NOTE:

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

SILT FENCE AT PROPERTY LINE MAY BE SHOWN GRAPHICALLY OFFSET FROM PROPERTY LINE TO AVOID OVERLAP OF LINWORK. CONTRACTOR SHALL NOT INSTALL EROSION CONTROL MEASURES BEYOND LIMITS OF CONSTRUCTION REGARDLESS OF GRAPHIC REPRESENTATION.

290 S. CASTELL AVE., STE. 100
 NEW BRAUNFELS, TX 78130
 TBPELS FIRM F-10961
 TBPELS FIRM 10153600



02/13/2026

EROSION CONTROL PLAN SHEET (1 OF 2)

COLINA RANCH WEST WATER IMPROVEMENTS
 NEW BRAUNFELS, TEXAS

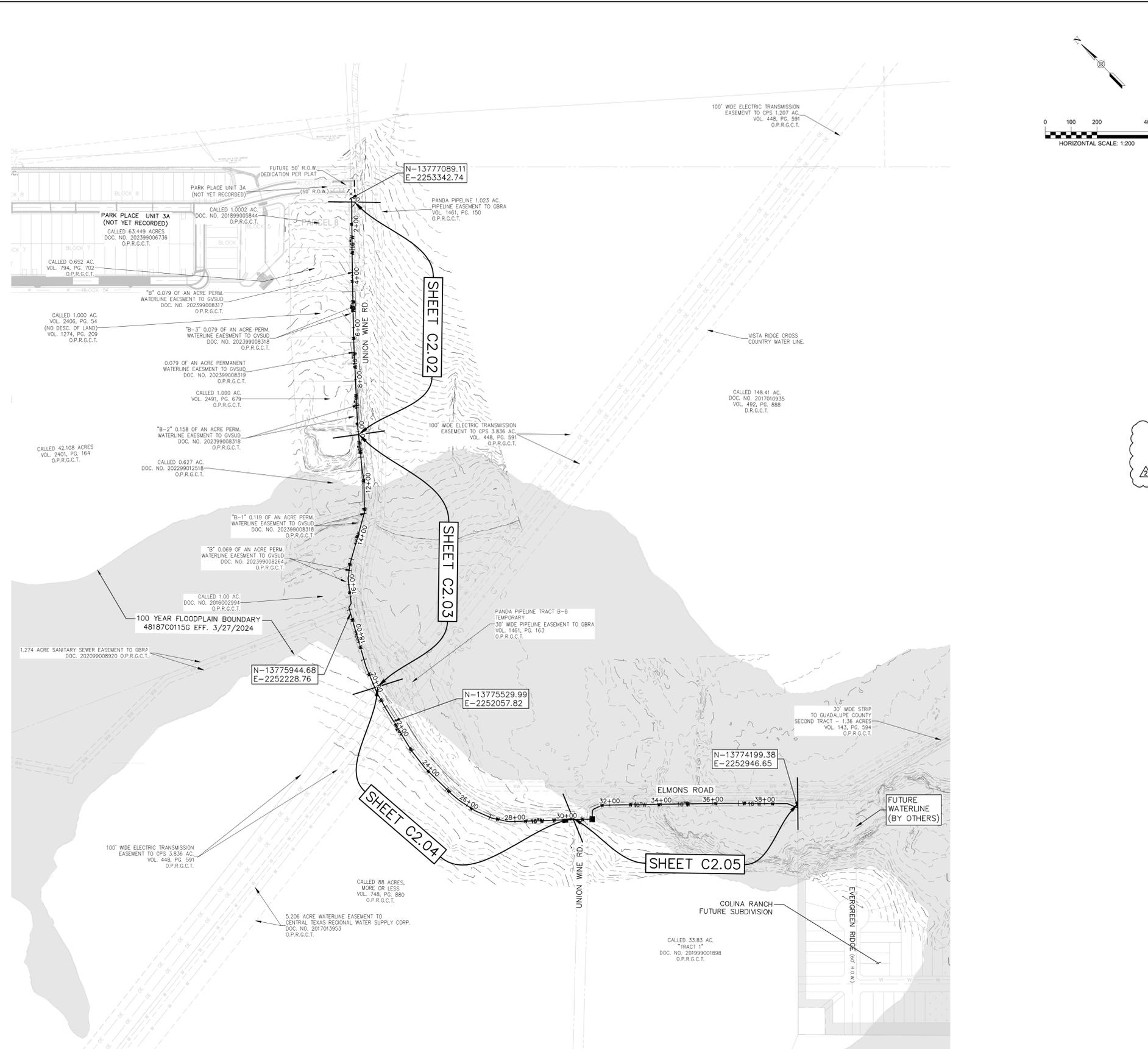
NO.	REVISION DESCRIPTION	REVISION DATE
1	CORRECTED SCALE	02/13/2026

DATE: FEBRUARY 2026
 DRAWN BY: LB
 DESIGNED BY: ROB
 REVIEWED BY: CVH

HMT PROJECT NO.: 337.115

SHEET C1.01

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



LEGEND

- 700 — EXISTING CONTOURS
- 700 — PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- w — w — EXISTING WATER LINE
- w — w — PROPOSED WATER LINE
- w — w — PROPOSED WATER SERVICE
- ⊗ UTILITY CROSSING
- 100-YEAR FLOODPLAIN

HORIZONTAL SCALE: 1:200

- UTILITY NOTES:**
1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
 2. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
 3. ALL WATER SERVICES ARE TO BE 1-INCH SERVICES AND METERS LOCATED 2- FEET FROM THE PROPERTY LINE.
 4. ALL DIMENSIONS ARE FROM FACE OF CURB.
 5. REFER TO COVER SHEET FOR BENCHMARK INFORMATION.
 6. FIRE HYDRANTS ARE TO BE INSTALLED OUTSIDE OF THE SIDEWALK AND NO GREATER THAN 9 FEET FROM THE BACK OF CURB.
 7. CONTRACTOR TO COORDINATE WITH GVSUD ON TIMING OF TIE-INS AND ABANDONMENT.
 8. CONTRACTOR TO CURB CUT V'S FOR ADJACENT VALVES AND X'S FOR ADJACENT METER BOXES.
 9. CONTRACTOR TO VERIFY LOCATION OF EXISTING WATER MAIN A MINIMUM OF 300 LF AHEAD OF NEW MAIN INSTALLATION AT ALL TIE-IN LOCATIONS OR CROSSINGS, AND NOTIFY GVSUD INSPECTOR.
 10. CONTRACTOR MUST PROTECT ALL UNATTENDED TRENCHES AND EXCAVATIONS WITH TEMPORARY FENCING OR OTHER APPROVED MEANS.
 11. CONTRACTOR TO UTILIZE APPROVED WATER LINE STOPS AND/OR MUELLER INSERTION-VALVES TO MINIMIZE WATER OUTAGES AS REQUIRED BY GVSUD DURING CONSTRUCTION.
 12. DISINFECTION SHALL BE BY MACHINE CHLORINATION.
 13. MOISTURE DENSITY COMPACTION TESTING FREQUENCY- WATER MAIN TRENCHES REQUIRED EVERY 300 LF FOR EACH VERTICAL FOOT OF COMPLETED BACKFILL. SERVICES RANDOMLY SELECTED AS REQUIRED BY GVSUD INSPECTOR.
 14. ALL TESTING AND TEST REPORTS SHALL BE COORDINATED WITH GVSUD INSPECTOR BY THE CONTRACTOR.
 15. ALL DUCTILE IRON PIPE TO BE AMERICAN, ZINC COATED, AWWA/ANSI C-151.
 16. THE DESIGN INTENT OF THESE PLANS IS FOR THE EXISTING GVSUD WATER LINE ALONG UNION WINE TO REMAIN IN SERVICE DURING THE CONSTRUCTION OF THE PROPOSED 16" WATER LINE. THE EXISTING WATERLINE AS SHOWN WITHIN THE PLANS, IS BASED ON GIS DATA AND ITS LOCATION MAY VARY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE GVSUD INSPECTOR FOR MINOR ALIGNMENT CHANGES DUE TO THE PROXIMITY OF THE EXISTING LINE.

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 TO CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO PRIOR TO UTILITY INSTALLATION.

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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPBLS FIRM F-10961
TBPBLS FIRM 10153600



02/13/2026

UNION WINE OVERALL WATER PLAN
COLINA RANCH WEST WATER IMPROVEMENTS
NEW BRAUNFELS, TEXAS

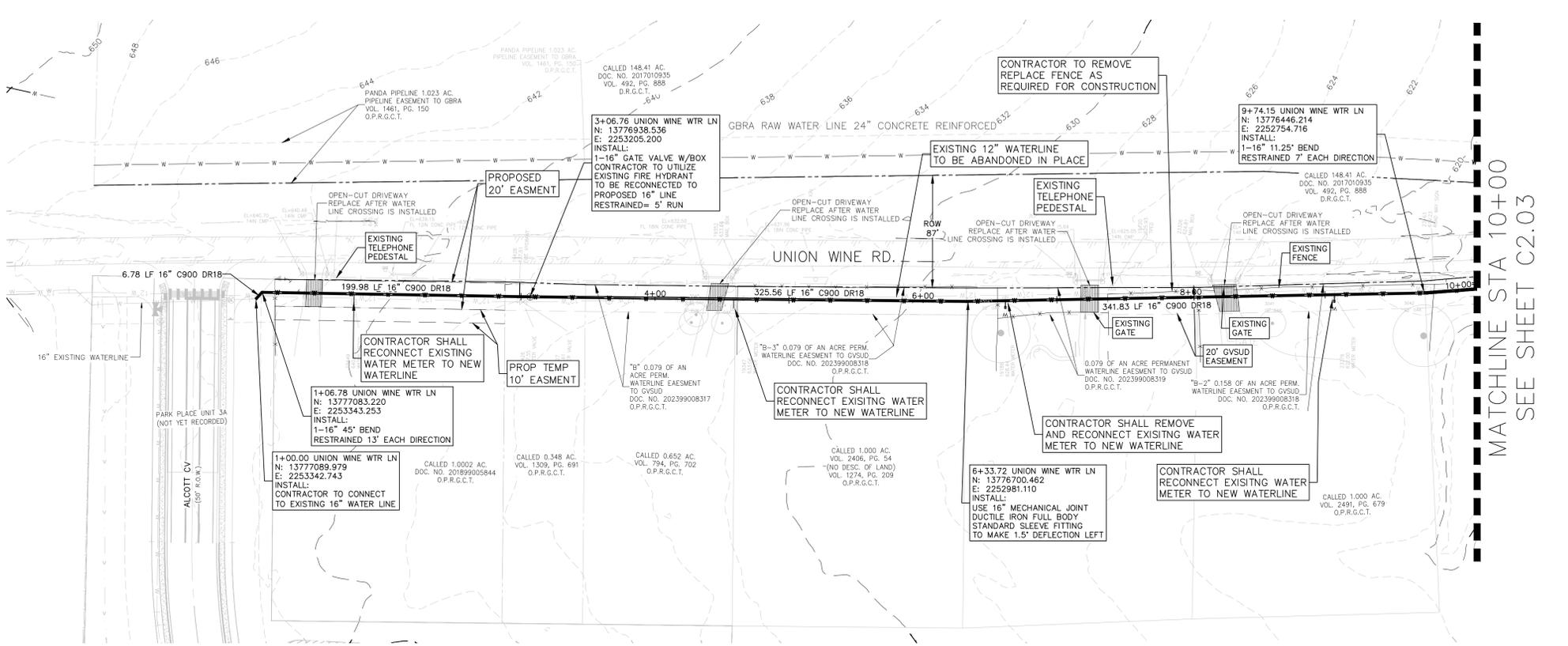
NO.	ADDED NOTE	REVISION DATE
1		02/13/2026

DATE: FEBRUARY 2026
DRAWN BY: LB
DESIGNED BY: ROB
REVIEWED BY: CVH

HMT PROJECT NO.: 337.115

SHEET C2.01

Drawing Name: N:\Projects\337 - Lenses\115 - Overall Improvements - Sewer, Water, Drainage, Permitting & Construction\CD\CD-Water\Union Wine\337.115_WARP_PP_UNION_WINE.dwg User: kolobp Feb. 13, 2026 - 10:53am



LEGEND

- 700 EXISTING CONTOURS
- 700 PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- EXISTING WATER LINE
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UTILITY NOTES:

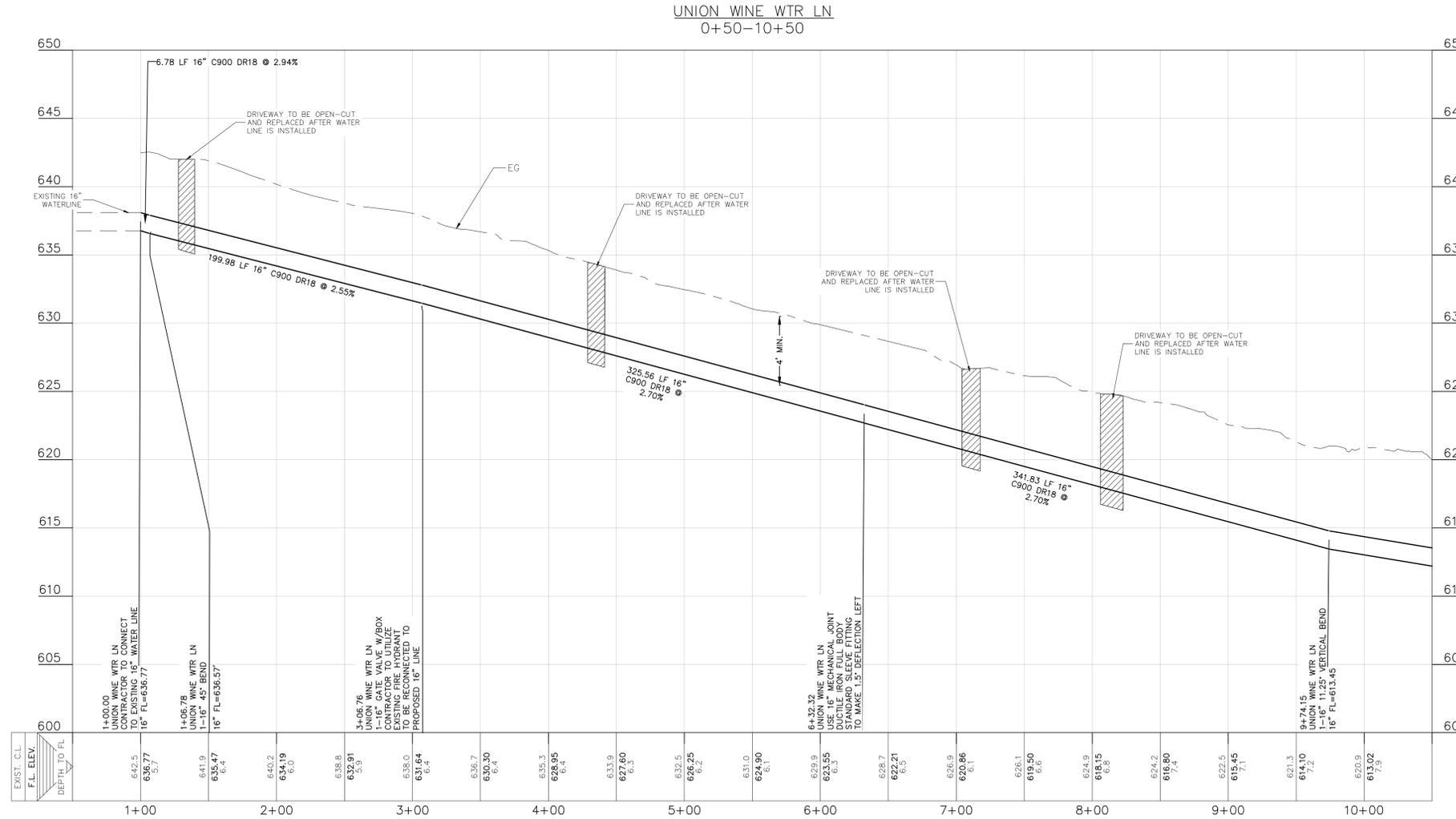
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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPBLS FIRM F-10961
TBPBLS FIRM 10153600



02/13/2026

**UNION WINE WATER LINE
PLAN & PROFILE (1 OF 4)**

COLINA RANCH WEST WATER IMPROVEMENTS
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	DATE
1	ADDED NOTE	02/13/2026

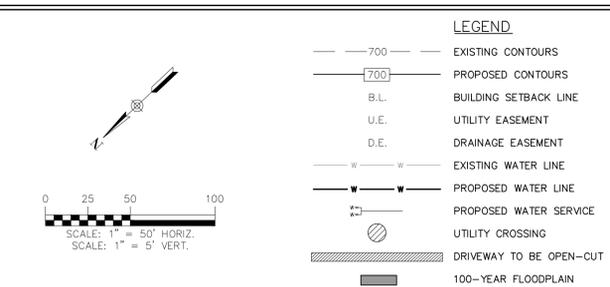
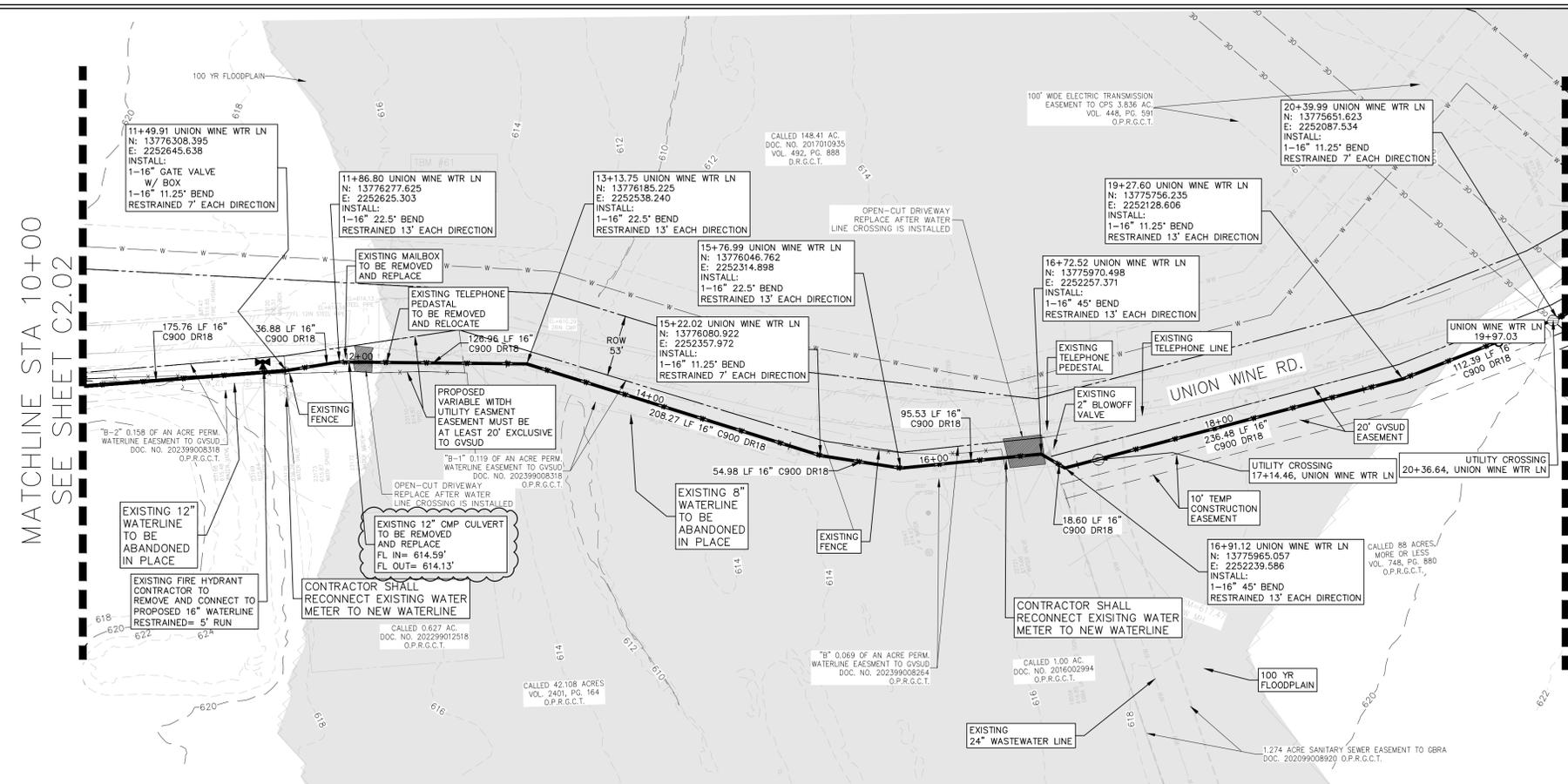
DATE: FEBRUARY 2026
DRAWN BY: LB
DESIGNED BY: RDB
REVIEWED BY: CVH
HMT PROJECT NO.: 337.115

**SHEET
C2.02**

Drawing Name: N:\Projects\337 - Lennex\115 - Overall Improvements - Sewer, Water, Drainage, Permitting & Construction\CD\3D-Water\Union Wine\337-115_WARP_PP_Union Wine.dwg User: kolopy Feb. 13, 2026 - 10:55am

MATCHLINE STA 10+00
SEE SHEET C2.02

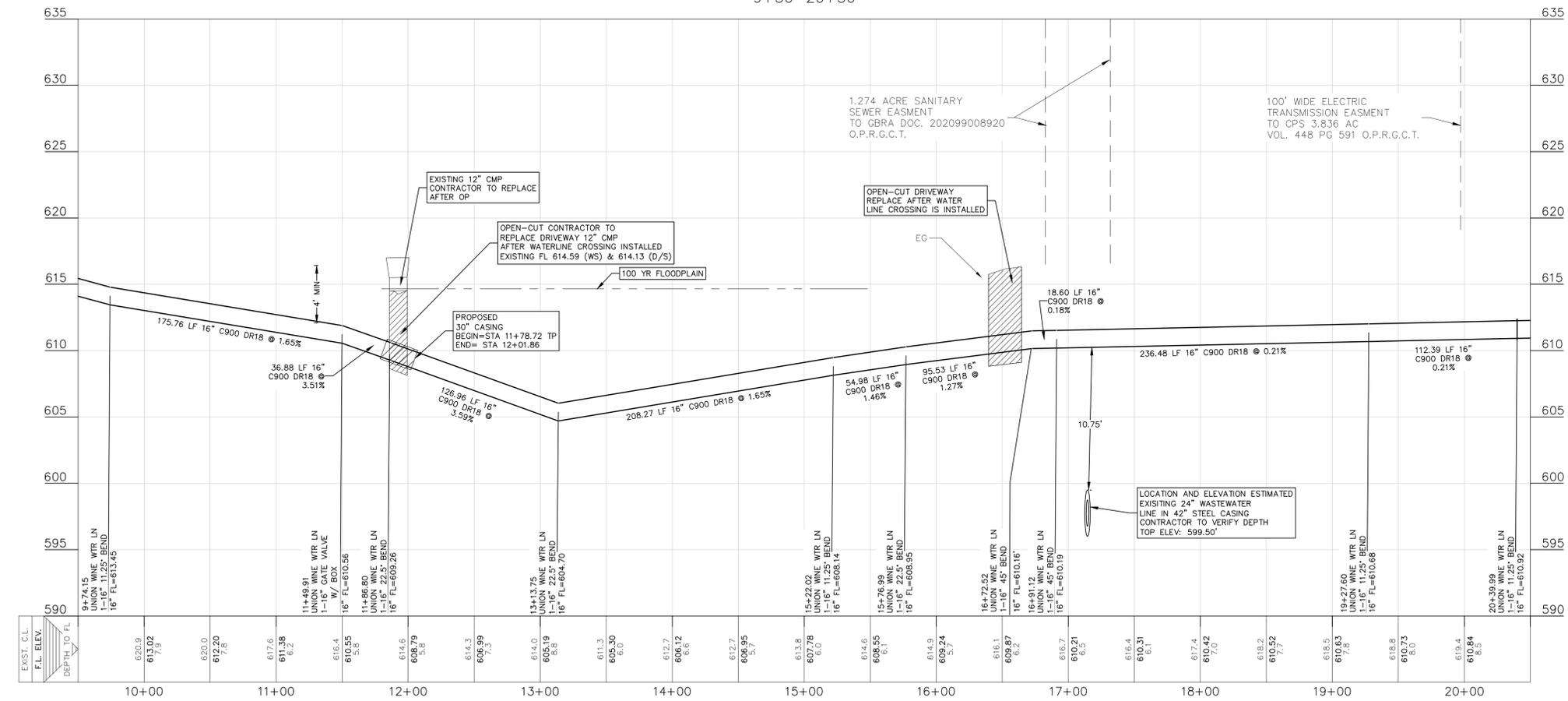
MATCHLINE STA 20+50
SEE SHEET C2.04



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UNION WINE WTR LN
9+50-20+50



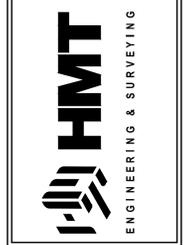
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NEW BRAUNFELS, TX 78130
TBPBLS FIRM F-10961
TBPBLS FIRM 10153600



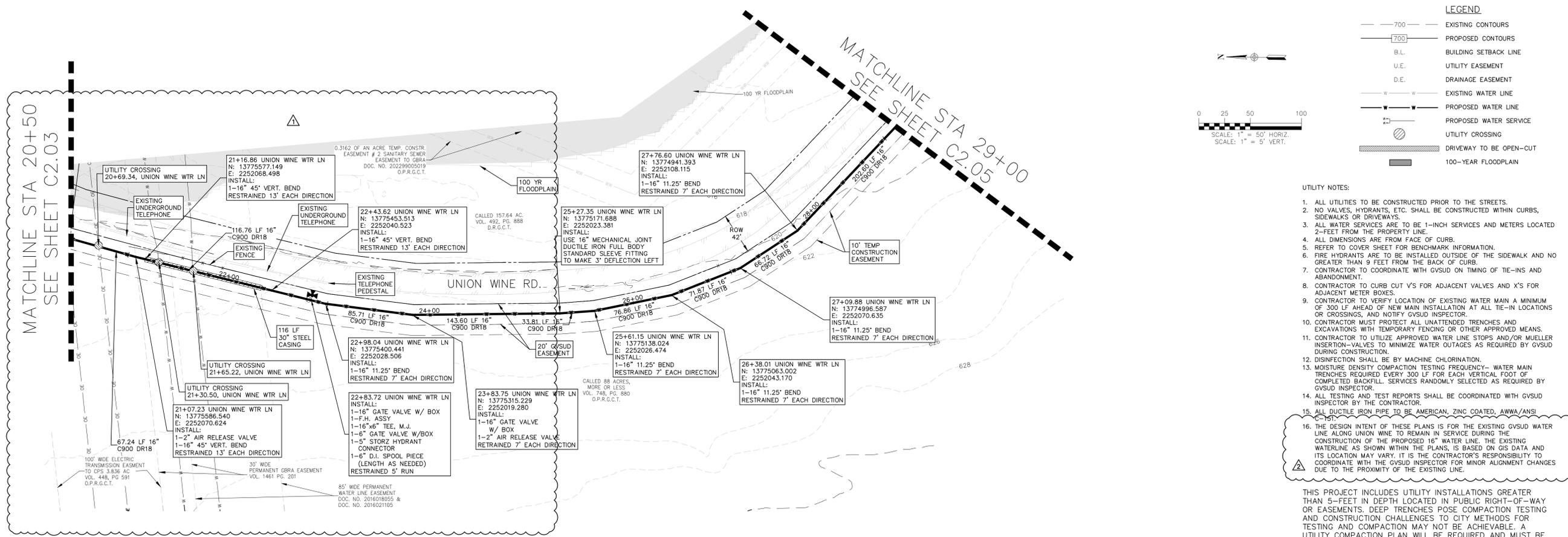
02/13/2026

UNION WINE WATER LINE
PLAN & PROFILE (2 OF 4)
COLINA RANCH WEST WATER IMPROVEMENTS
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
1	REVISED CALLOUTS	02/12/2026
2	ADDED NOTE	02/13/2026

DATE: FEBRUARY 2026
DRAWN BY: LB
DESIGNED BY: ROB
REVIEWED BY: CVH
HMT PROJECT NO.: 337-115

SHEET
C2.03



LEGEND

- 700 EXISTING CONTOURS
- 700 PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- EXISTING WATER LINE
- PROPOSED WATER LINE
- PROPOSED WATER SERVICE
- UTILITY CROSSING
- DRIVEWAY TO BE OPEN-CUT
- 100-YEAR FLOODPLAIN

SCALE: 1" = 50' HORIZ.
SCALE: 1" = 5' VERT.

- UTILITY NOTES:**
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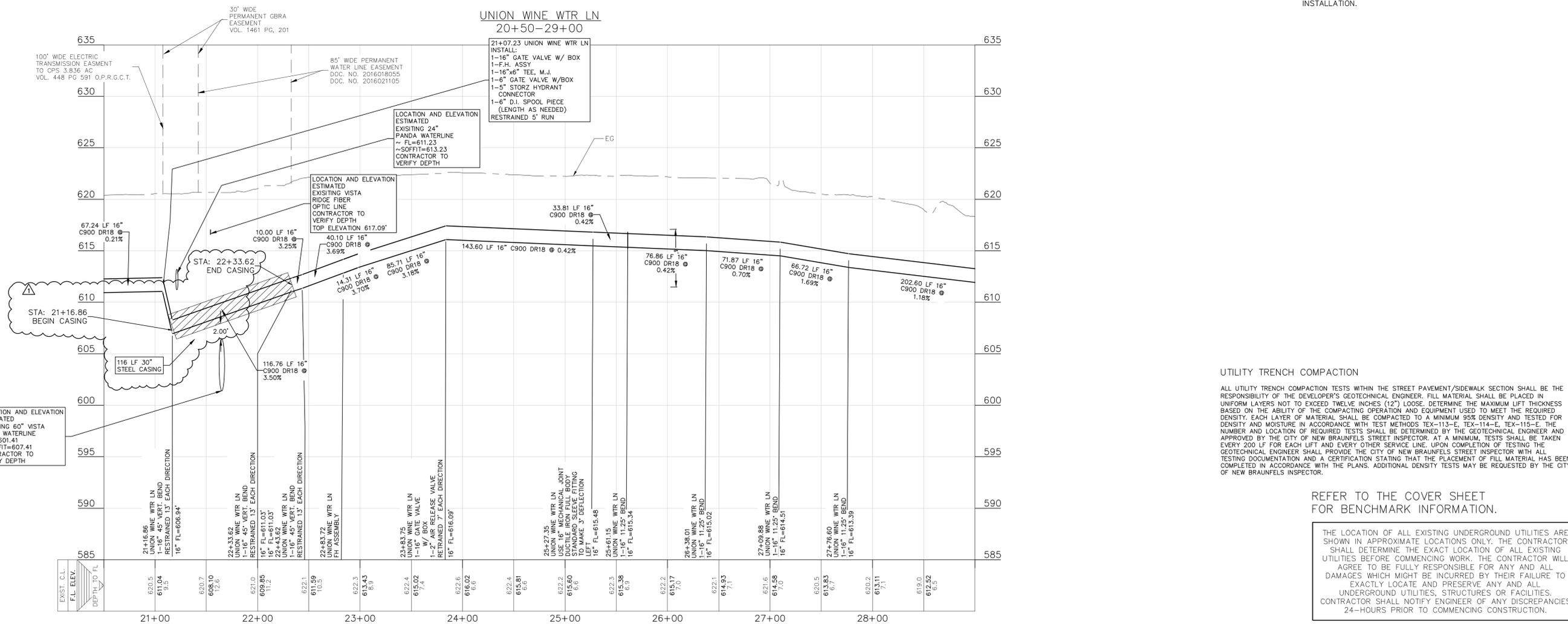
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02/13/2026

**UNION WINE WATER LINE
PLAN & PROFILE (3 OF 4)**
COLINA RANCH WEST WATER IMPROVEMENTS
NEW BRAUNFELS, TEXAS



UTILITY TRENCH COMPACTION

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2	ADDED NOTE	02/13/2026

DATE: FEBRUARY 2026

DRAWN BY: LB

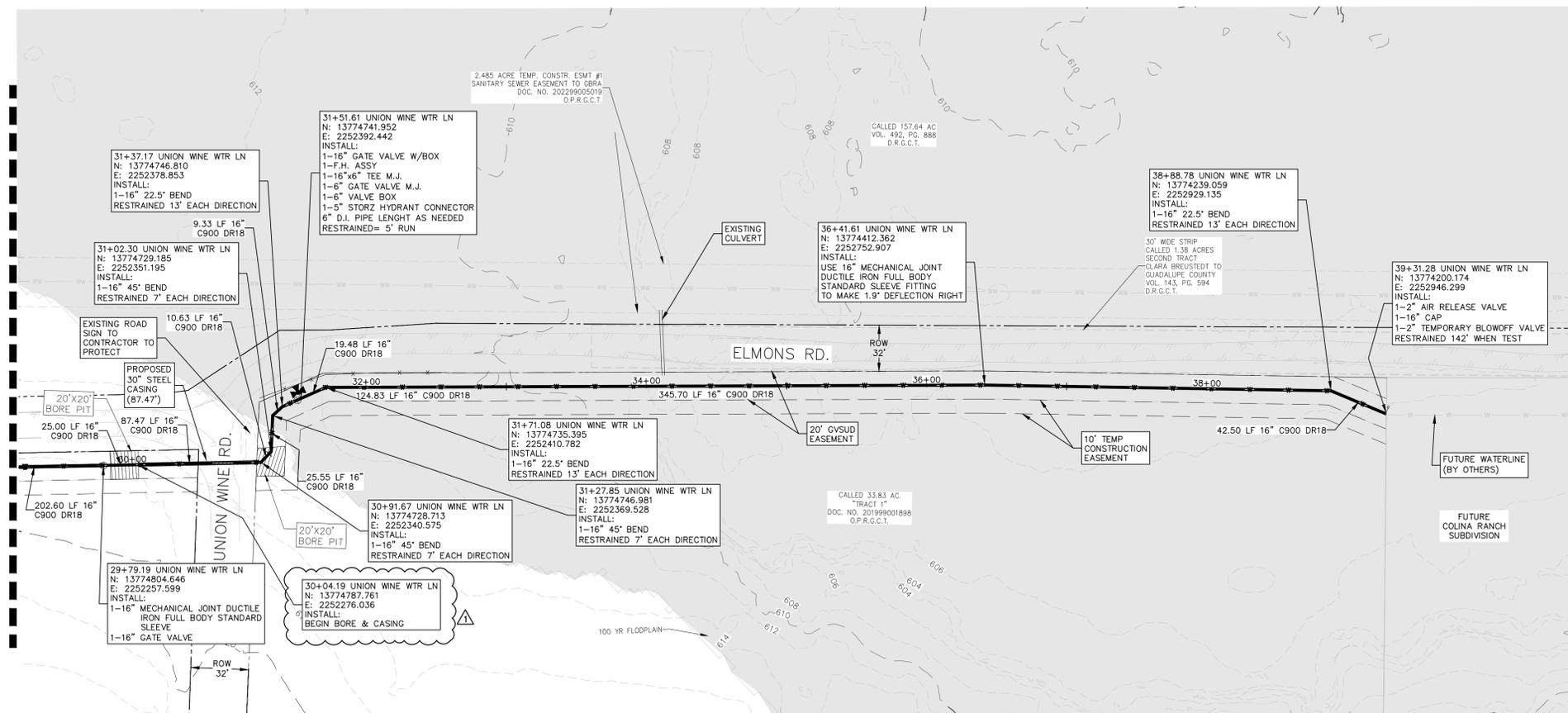
DESIGNED BY: RDB

REVIEWED BY: CVH

HMT PROJECT NO.: 337.115

SHEET C2.04

MATCHLINE STA 29+00
SEE SHEET C2.04



LEGEND

- 700 --- EXISTING CONTOURS
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- D.E. DRAINAGE EASEMENT
- W --- EXISTING WATER LINE
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 - ALL TESTING AND TEST REPORTS SHALL BE COORDINATED WITH GVSUD INSPECTOR BY THE CONTRACTOR.
 - ALL DUCTILE IRON PIPE TO BE AMERICAN, ZINC COATED, AWWA/ANSI C-151.
 - THE DESIGN INTENT OF THESE PLANS IS FOR THE EXISTING GVSUD WATER LINE ALONG UNION WINE TO REMAIN IN SERVICE DURING THE CONSTRUCTION OF THE PROPOSED 16" WATER LINE. THE EXISTING WATERLINE AS SHOWN WITHIN THE PLANS, IS BASED ON GIS DATA AND ITS LOCATION MAY VARY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE GVSUD INSPECTOR FOR MINOR ALIGNMENT CHANGES DUE TO THE PROXIMITY OF THE EXISTING LINE.

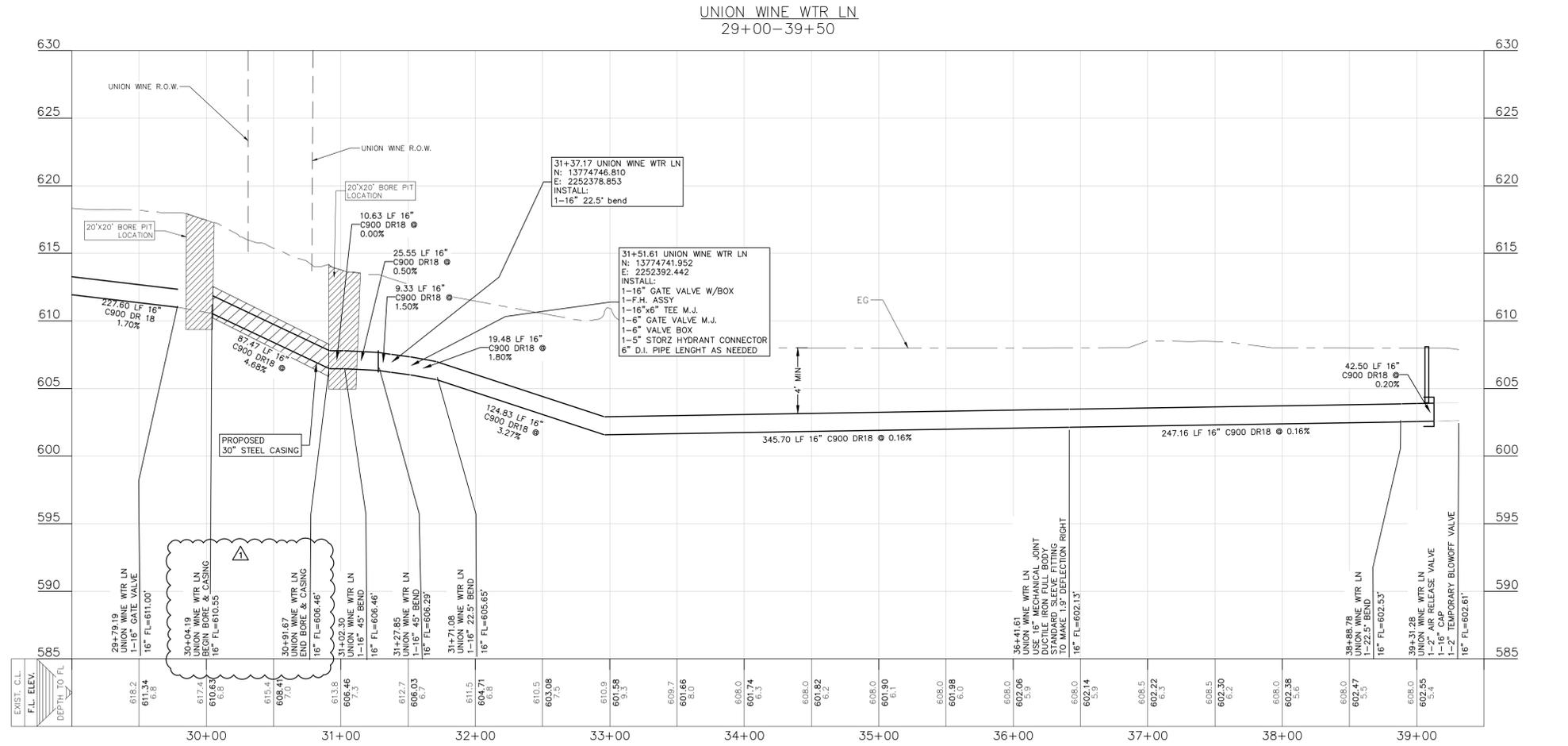
THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5- FEET IN DEPTH LOCATED IN PUBLIC RIGHT-OF- WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES TO CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO PRIOR TO UTILITY INSTALLATION.

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPBELS FIRM F-10961
TBPBELS FIRM 10153600



02/13/2026

**UNION WINE WATER LINE
PLAN & PROFILE (4 OF 4)**
COLINA RANCH WEST WATER IMPROVEMENTS
NEW BRAUNFELS, TEXAS



UTILITY TRENCH COMPACTION

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") THICK. 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.

REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

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

NO.	REVISION DESCRIPTION	DATE
1	REVISED CALLOUTS	02/12/2026
2	ADDED NOTE	02/13/2026

DATE: FEBRUARY 2026

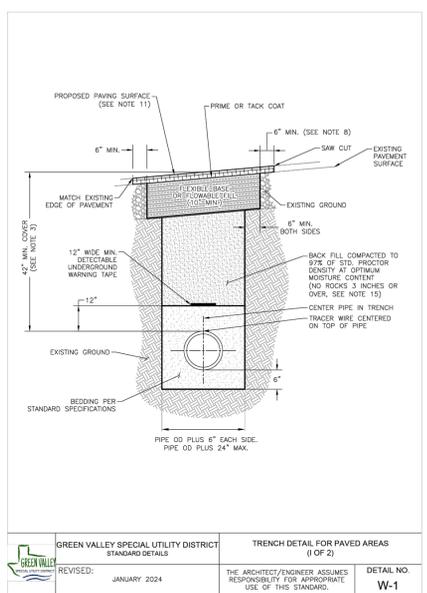
DRAWN BY: LB

DESIGNED BY: ROB

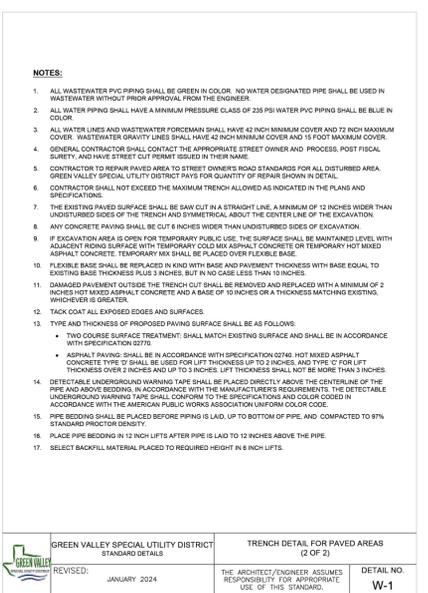
REVIEWED BY: CVH

HMT PROJECT NO.: 337.115

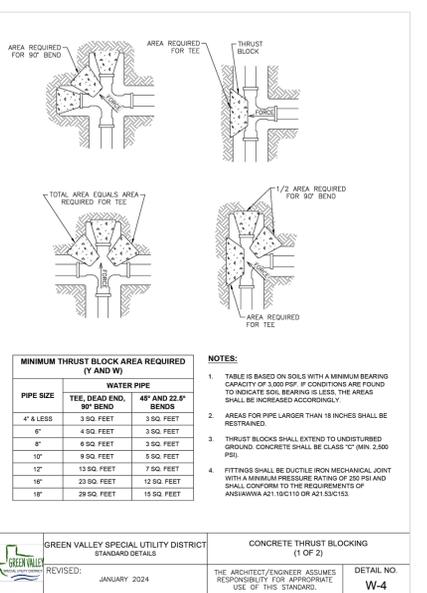
**SHEET
C2.05**



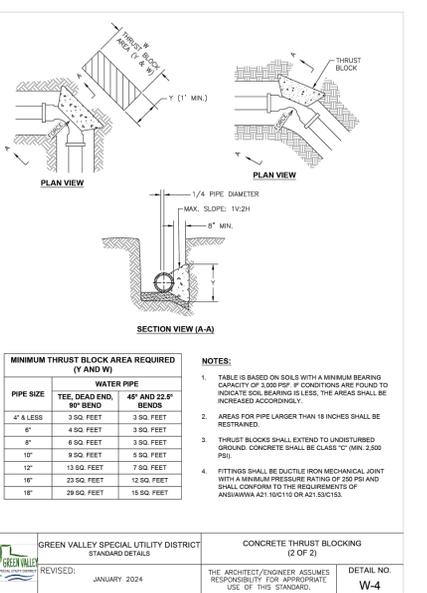
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	TRENCH DETAIL FOR PAVED AREAS (1 OF 2)	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-1			



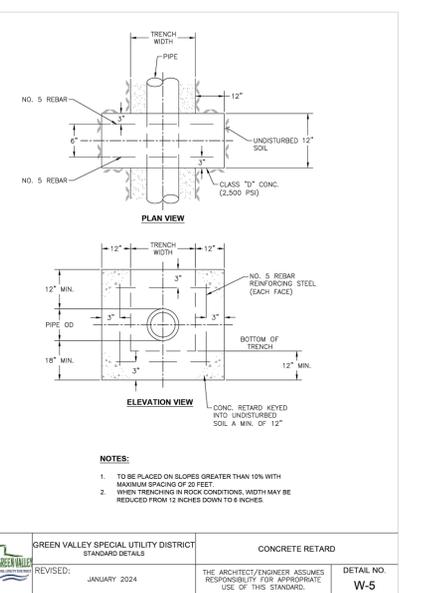
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	TRENCH DETAIL FOR PAVED AREAS (2 OF 2)	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-1			



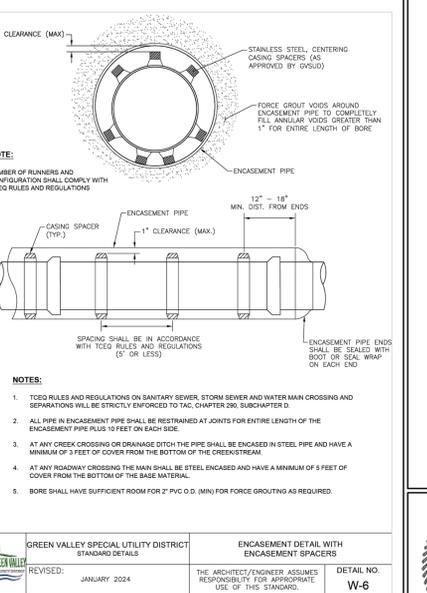
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	CONCRETE THRUST BLOCKING (1 OF 2)	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-4			



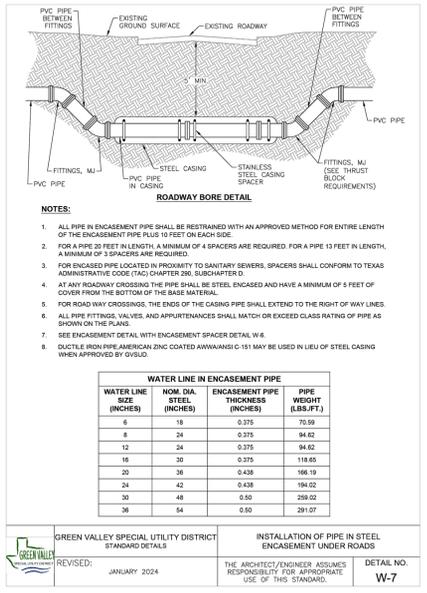
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	CONCRETE THRUST BLOCKING (2 OF 2)	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-4			



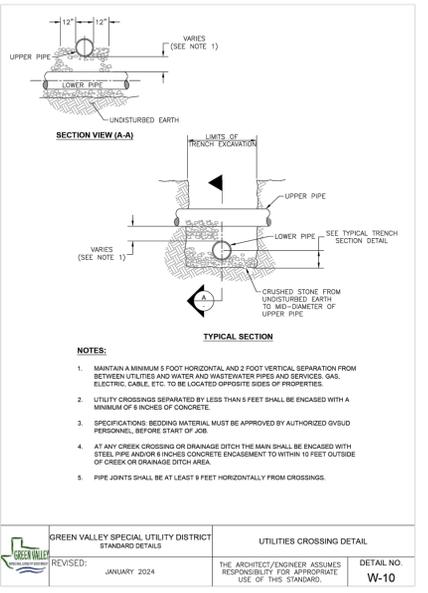
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	CONCRETE RETARD	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-5			



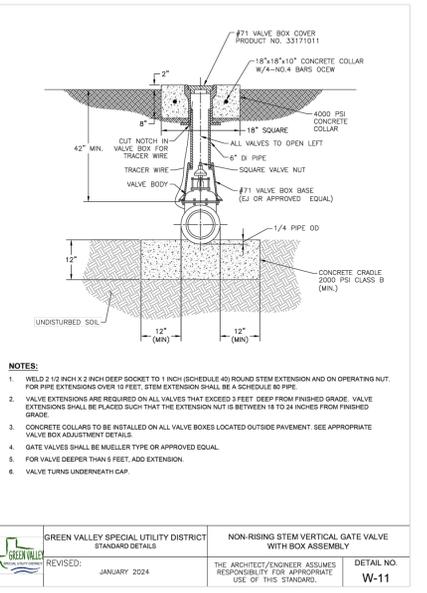
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	ENCASUREMENT DETAIL WITH ENCASEMENT SPACERS	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-6			



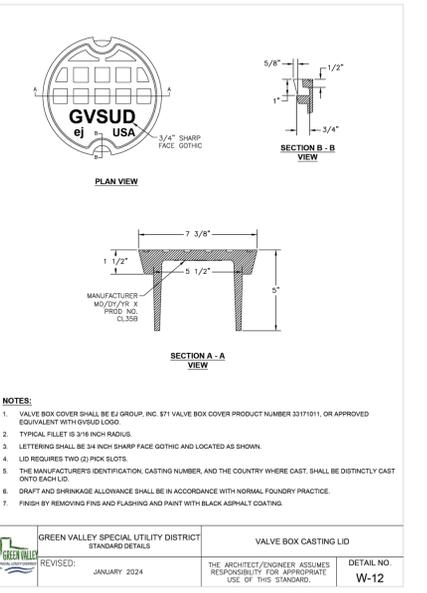
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	INSTALLATION OF PIPE IN STEEL ENCASEMENT UNDER ROADS	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-7			



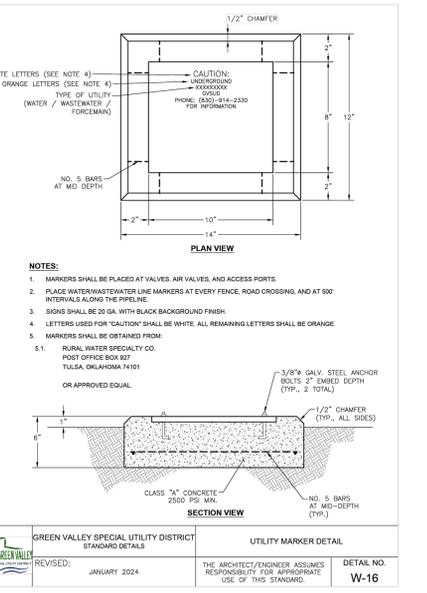
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	UTILITIES CROSSING DETAIL	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-10			



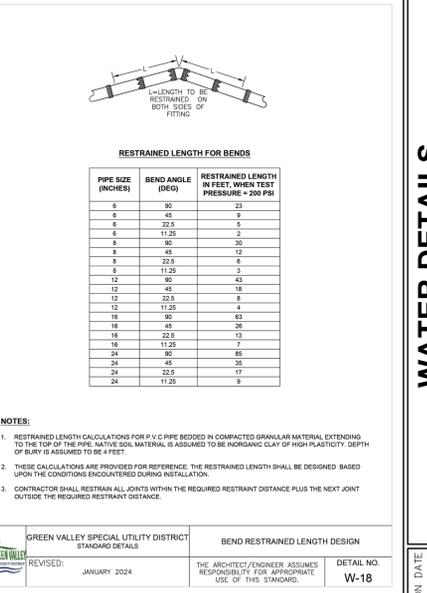
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	NON-RISING STEM VERTICAL GATE VALVE WITH BOX ASSEMBLY	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-11			



GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	VALVE BOX CASTING LID	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-12			



GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	UTILITY MARKER DETAIL	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-16			



GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	BEND RESTRAINED LENGTH DESIGN	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-18			



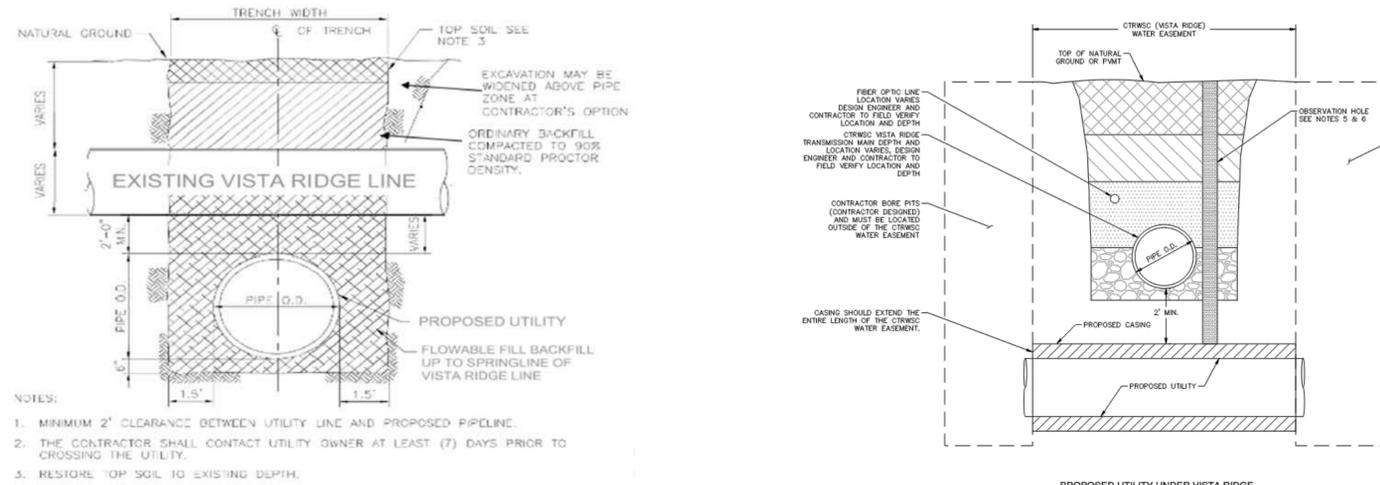
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	COMBINATION AIR-VACUUM RELEASE VALVE	REVISIONS:	REVISIONS:
REVIS: AUGUST 2020	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: AUGUST 2020	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-30			



GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	VALVE AND DEAD END RESTRAINED LENGTH DESIGN	REVISIONS:	REVISIONS:
REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	REVIS: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-20			



EXHIBIT A - CROSSING EXAMPLE

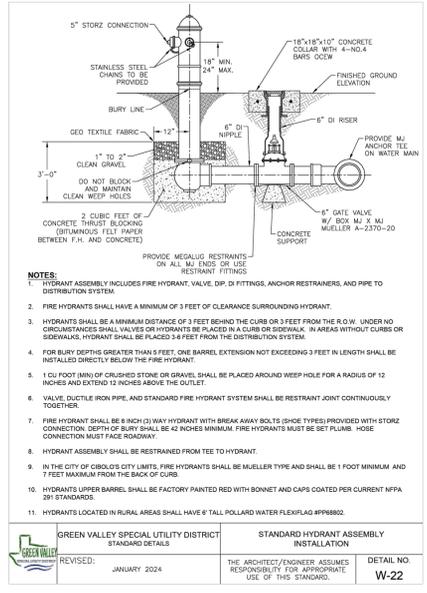


- NOTES:
1. MINIMUM 2' CLEARANCE BETWEEN UTILITY LINE AND PROPOSED PIPELINE.
 2. THE CONTRACTOR SHALL CONTACT UTILITY OWNER AT LEAST (7) DAYS PRIOR TO CROSSING THE UTILITY.
 3. RESTORE TOP SOIL TO EXISTING DEPTH.

PROPOSED UTILITY UNDER VISTA RIDGE FLOWABLE FILL ENCASMENT AT CROSSING
NOT TO SCALE

- NOTES:
1. MINIMUM 2' CLEARANCE BETWEEN UTILITY LINE AND PROPOSED CASING.
 2. THE CONTRACTOR SHALL CONTACT UTILITY OWNER AT LEAST (7) DAYS PRIOR TO CROSSING THE UTILITY.
 3. IF THE CASING MATERIAL IS METALLIC ENGINEER WILL PROVIDE CATHODIC PROTECTION DEVICES THAT PROTECT THE VISTA RIDGE PIPE. DETAILS TO BE COORDINATED WITH CTRWSC.
 4. CONTRACTOR WILL EXPOSE AND MARK THE FIBER OPTIC LINE USING NON-MECHANICAL EXCAVATION.
 5. WITH EPCOR REPRESENTATIVE PRESENT, THE CONTRACTOR WILL EXPOSE THE APPROXIMATE SIDE OF THE V.R. PIPELINE TO A DEPTH TWO FEET (2') THAT THE ACTUAL DISTANCE BETWEEN THE EDGE OF THE V.R. PIPE AND THE PROPOSED PIPE. MEASUREMENTS AND RECORDS SHALL BE AT LEAST TWO FEET USING NON-MECHANICAL EXCAVATION SO THAT CLEARANCES CAN BE VERIFIED DURING CONSTRUCTION. PROTECTION OF THE V.R. LINE FROM CONTRACTOR'S ACTIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
 6. CONTRACTOR TO BACKFILL OBSERVATION HOLE WITH CLSM UPON COMPLETION.

PROPOSED UTILITY UNDER VISTA RIDGE FLOWABLE FILL ENCASMENT AT CROSSING
N.T.S.



- NOTES:
1. HYDRANT ASSEMBLY INCLUDES FIRE HYDRANT, VALVE, D.P. FITTINGS, ANCHOR RESTRAINERS, AND PIPE TO DISTRIBUTION SYSTEM.
 2. FIRE HYDRANTS SHALL HAVE A MINIMUM OF 3 FEET OF CLEARANCE SURROUNDING HYDRANT.
 3. HYDRANTS SHALL BE A MINIMUM DISTANCE OF 3 FEET BEHIND THE CURB OR 3 FEET FROM THE R.O.W. UNDER NO CIRCUMSTANCES SHALL VALVES OR HYDRANTS BE PLACED IN A CURB OR SIDEWALK. IN AREAS WITHOUT CURBS OR SIDEWALKS, HYDRANT SHALL BE PLACED 18 FEET FROM THE DISTRIBUTION SYSTEM.
 4. FOR BURY DEPTHS GREATER THAN 5 FEET, ONE BARREL EXTENSION NOT EXCEEDING 3 FEET IN LENGTH SHALL BE INSTALLED DIRECTLY BELOW THE FIRE HYDRANT.
 5. 1 CU FOOT MIN OF CRUSHED STONE OR GRAVEL SHALL BE PLACED AROUND WEEP HOLE FOR A RADIUS OF 12 INCHES AND EXTEND 12 INCHES ABOVE THE BULLET.
 6. VALVE, DUCTILE IRON PIPE, AND STANDARD FIRE HYDRANT SYSTEM SHALL BE RESTRAINT JOINT CONTINUOUSLY TOGETHER.
 7. FIRE HYDRANT SHALL BE 8 INCH (2) INCH HYDRANT WITH BREAK AWAY BOLTS. SINCE TYPES PROVIDED WITH STORZ CONNECTION, DEPTH OF BURY SHALL BE 42 INCHES MINIMUM. FIRE HYDRANTS MUST BE SET PLUMB. HOSE CONNECTION MUST FACE ROADWAY.
 8. HYDRANT ASSEMBLY SHALL BE RESTRAINED FROM TIE TO HYDRANT.
 9. IN THE CITY OF GROUND CITY LIMITS, FIRE HYDRANTS SHALL BE MULLER TYPE AND SHALL BE 1 FOOT MINIMUM AND 7 FEET MAXIMUM FROM THE BACK OF CURB.
 10. HYDRANTS UPPER BARREL SHALL BE FACTORY PAINTED RED WITH BONNET AND CAPS COATED PER CURRENT NFPA 291 STANDARDS.
 11. HYDRANTS LOCATED IN RURAL AREAS SHALL HAVE 6 TALL POLLARD WATER FLEX/PLAG #P9802.

GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS
STANDARD HYDRANT ASSEMBLY INSTALLATION
REVISION: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-22

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPBELS FIRM F-10961
TBPBELS FIRM 10153600



02/13/2026

WATER DETAILS (2 OF 2)
COLINA RANCH WEST WATER IMPROVEMENTS
NEW BRAUNFELS, TEXAS

ENCROACHMENT AGREEMENT AND WORK PLAN:

- THE CONTRACTOR IS TO SUPPLY WORK PLAN FOR CROSSING UNDER VISTA RIDGE PIPE AND NOTIFICATION PER ENCROACHMENT AGREEMENT BEFORE COMMENCING WORK WITHIN OR OVER VISTA RIDGE EASEMENT.

GENERAL DESIGN NOTES FOR ENCROACHMENT OF VR EASEMENT:

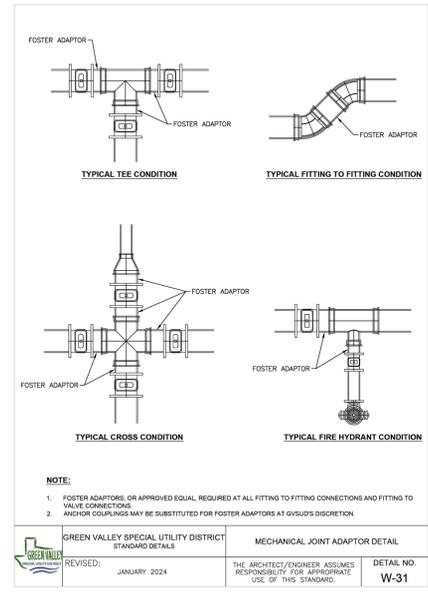
- THE DESIGN ENGINEER IS TO FIELD VERIFY FIBER OPTIC AND WATER LINE AT LOCATIONS WHERE PROPOSED INFRASTRUCTURE CROSSES THE VR EASEMENT.
- NO MECHANICAL EXCAVATION WITHIN 10' OF THE VR WATERLINE AND FIBER OPTIC LINE.
- PROVIDE PLAN AND PROFILE FOR ALL UTILITIES (DRY AND WET), ROADWAYS, DRAINAGE SWALES, OR OTHER IMPROVEMENTS ENCROACHING WITHIN THE VISTA RIDGE EASEMENT.
- FOR CROSSING UNDER THE VR PIPELINE, TRENCHLESS METHODS (WITH CASING) WILL BE REQUIRED. REGARDLESS OF THE INSTALLATION METHOD AND WHETHER THE CROSSING IS GOING ABOVE OR BELOW THE VR PIPELINE, THE PROPOSED UTILITY WILL MAINTAIN A MINIMUM 2'-FEET OF CLEARANCE.
- SEE EXHIBIT A FOR EXAMPLES OF CROSSING BY OPEN-CUT METHODS OVER AND UNDER THE VISTA RIDGE LINE.
- NO STRUCTURES ARE ALLOWED WITHIN THE VR EASEMENT.
- ALL GRADE CHANGES WITHIN EASEMENT MUST BE SHOWN ON PLAN AND PROFILE. THIS INCLUDES CHANGES TO THE GRADE FROM ROADS, SIDEWALKS, DITCHES, ETC. TRAFFIC LOADS MAY REQUIRE DESIGN ENGINEER SEALED CALCULATIONS THAT VERIFY LOADS WON'T ADVERSELY AFFECT THE VR PIPELINE. THE VR PIPELINE IS DESIGNED TO HANDLE HS-20 LOADING WITH UP TO 10 FEET OF COVER. A MINIMUM OF 5 FEET OF COVER IS REQUIRED OVER THE VR PIPE INCLUSIVE OF PAVEMENT THICKNESS.
- MUST OBSERVE ALL TERMS AND CONDITIONS OF THE CTRWSC EASEMENT. PLEASE CONTACT EPCOR FOR EASEMENT INFORMATION.

SPECIAL NOTES TO ADD TO PLANS FOR CONSTRUCTION OF UTILITIES CROSSING THE VR EASEMENT:

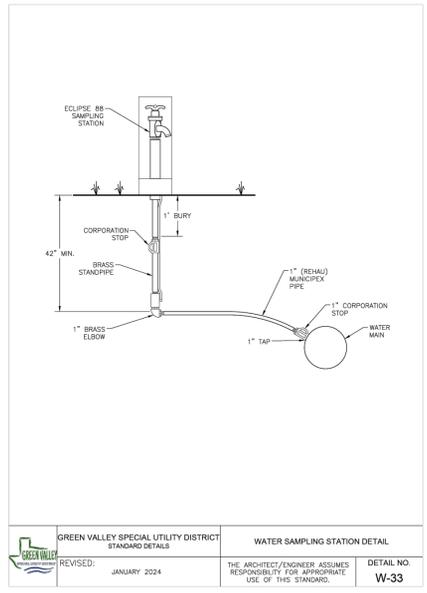
1. THE CONTRACTOR TO SUBMIT A WORK PLAN FOR CROSSING THE VISTA RIDGE PIPE AND NOTIFICATION PER ENCROACHMENT AGREEMENT BEFORE COMMENCING WORK WITHIN OR OVER VISTA RIDGE EASEMENT. THE WORK PLAN WILL PROVIDE DETAILS ON CONSTRUCTION METHODS, PIPE PROTECTION, RESTORATION, AND COORDINATION WITH CTRWSC. THE WORK PLAN REQUIRE WRITTEN APPROVAL BY CTRWSC 14 DAYS BEFORE WORKING WITHIN OR CROSSING THE VISTA RIDGE EASEMENT.
2. THE WORK PLAN MUST PROVIDE A CROSSING PLAN THAT CLEARLY SHOWS DESIGNATED AREAS WHERE HEAVY EQUIPMENT WILL CROSS OVER THE VISTA RIDGE EASEMENT AND PROVIDE DETAILS FOR PIPELINE PROTECTION INCLUDING THE ASSOCIATED FIBER OPTIC AND CATHODIC PROTECTION INFRASTRUCTURE. THE CONTRACTOR WILL CLEARLY DELINEATE CROSSING LOCATIONS IN THE FIELD USING CONSTRUCTION FENCE OR SIMILAR MATERIALS.
3. NO MECHANICAL EXCAVATION WITHIN TEN FEET (10') OF THE CENTERLINE OF THE VISTA RIDGE PIPELINE UNLESS APPROVED IN WRITING BY CTRWSC. ANY AGREEMENT SHOULD BE PART OF THE WORK PLAN PROVIDED BY THE CONTRACTOR.
4. CTRWSC WILL DESIGNATE A REPRESENTATIVE FOR FIELD OBSERVATION DURING ANY CROSSING OF THE VR LINE. THE CONTRACTOR WILL COORDINATE WITH CTRWSC'S DESIGNATED REPRESENTATIVE 3 BUSINESS DAYS BEFORE CROSSING THE VR PIPELINE. THE CONTRACTOR WILL MAKE ARRANGEMENTS WITH CTRWSC.

TO PAY FOR OBSERVER TIME INCLUDING TRAVEL TIME TO THE SITE.

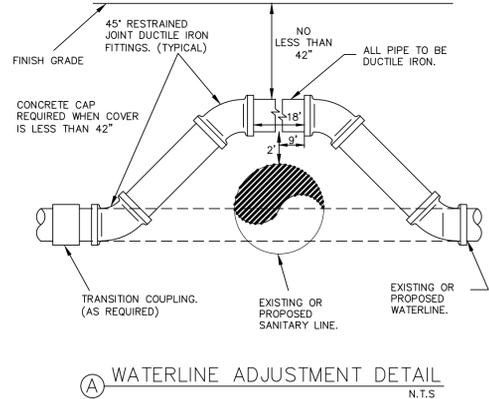
1. NO TEMPORARY STOCKPILING OR STATIONING OF MATERIALS, EQUIPMENT OR FACILITIES WITHIN EASEMENT.
2. IF CROSSING OVER THE VR PIPELINE, THE CONTRACTOR WILL HAVE FIELD VERIFIED BOTH THE FIBER OPTIC LINE AND THE WATER LINE.
3. THE CONTRACTOR IS TO PROVIDE PROTECTION FROM EQUIPMENT AND TRUCKS TRAVELING OVER VISTA RIDGE PIPE WHICH MEETS OR EXCEED HS-20 LOADING CRITERIA.
4. FOR CROSSING UNDER THE VR PIPELINE, A TRENCHLESS METHOD IS REQUIRED. TRENCHLESS METHODS STILL REQUIRE AN OBSERVER TO BE ON-SITE. ADDITIONALLY, CONTRACTOR WILL USE A HYDROVAC OR SIMILAR PIECE OF EQUIPMENT TO CREATE A HOLE ALONGSIDE OF THE VR PIPELINE SO THAT THE OBSERVER AND CONTRACTOR CAN WITNESS THE AUGER OR DRILL PASSING UNDER THE BOTTOM OF THE VR PIPELINE AT THE APPROPRIATE SPACING.
5. IF METALLIC PIPE SUCH AS DUCTILE IRON CROSSES THE VISTA RIDGE EASEMENT, ENGINEER WILL PROVIDE CATHODIC PROTECTION DEVICES THAT PROTECT THE VISTA RIDGE PIPE. DETAILS TO BE COORDINATED WITH CTRWSC.
6. CONTRACTOR SHALL TAKE NECESSARY PRECAUTION TO PROTECT VISTA RIDGE CATHODIC PROTECTION SYSTEM COMPONENTS AND PIPE PROTECTIVE COATING. BACKFILL ACCORDING TO DETAIL XX (REFER TO EXHIBIT A FOR DETAIL AND XX IS THE REFERENCE NUMBER IN THE PLAN SET).
- 7.



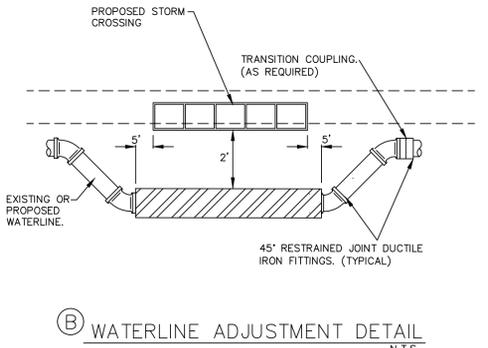
MECHANICAL JOINT ADAPTOR DETAIL
NOTE:
1. FOSTER ADAPTOR, OR APPROVED EQUAL, REQUIRED AT ALL FITTING TO FITTING CONNECTIONS AND FITTING TO VALVE CONNECTIONS.
2. ANCHOR COUPLINGS MAY BE SUBSTITUTED FOR FOSTER ADAPTOR AT GVSU'S DISCRETION.
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS
REVISION: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-31



WATER SAMPLING STATION DETAIL
GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS
REVISION: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-33



WATERLINE ADJUSTMENT DETAIL A
N.T.S.



WATERLINE ADJUSTMENT DETAIL B
N.T.S.

UTILITY TRENCH COMPACTION
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") THICK. 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 100LF FOR EACH LIFT. 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.

DEEP TRENCH COMPACTION TESTING
CITY REQUIREMENTS FOR TESTING SHALL BE ADHERED TO, IN CASES WHERE TRENCH DEPTHS DO NOT ALLOW TECHNICIANS ACCESS. METHODS FOR TESTING SHALL BE PROPOSED AND APPROVED PRIOR TO CONSTRUCTION COMMENCING.

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.	REVISION DESCRIPTION	DATE

DATE: FEBRUARY 2026
DRAWN BY: LB
DESIGNED BY: RDB
REVIEWED BY: CVH
HMT PROJECT NO.: 337.115
SHEET C2.07