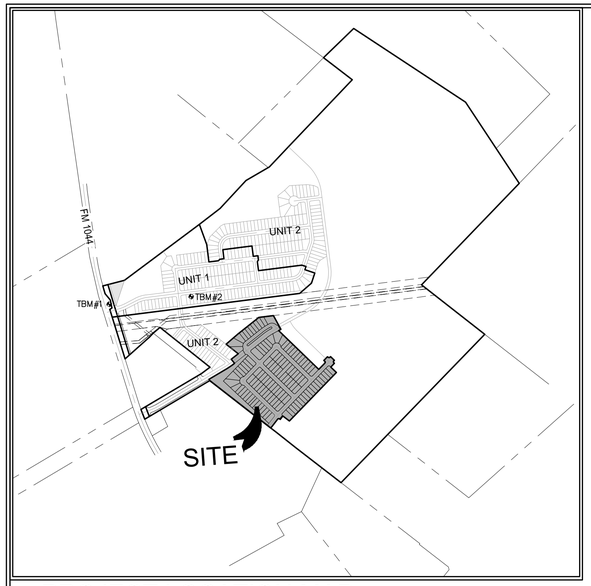
WINDING CREEK RANCH UNIT 3

NEW BRAUNFELS, TEXAS

CIVIL SITE CONSTRUCTION PLANS



PROJECT LOCATION MAP SCALE: N.T.S.

PROJECT BENCHMARK

SITE TBM #1
SET COTTON SPINDLE W/ WASHER STAMPED "HMT"
N: 13775083.3523
E: 2246121.2265
ELEV: 654.55'

SITE TBM #2
SET COTTON SPINDLE W/ WASHER STAMPED "HMT"
N: 13775172.1357
E: 2247065.2727
ELEV: 675.65'

LEGAL DESCRIPTION

BEING A 22.24 ACRE TRACT OF LAND SITUATED IN THE DANIEL CHANDLER SURVEY NO. 489, ABSTRACT NO. 100 AND THE J.O. BLAIR SURVEY, ABSTRACT NO. 60, ALL LOCATED IN GUADALUPE COUNTY, TEXAS. BEING A PORTION OF A 191.134 ACRE TRACT, CALLED TRACT 1, AND ALL OF A 2.285 ACRE TRACT, CALLED TRACT II, DESCRIBED IN DOCUMENT NO. 20199000169, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS. ALSO BEING A PORTION OF A 270.62 ACRE TRACT, CALLED TRACT IV, RECORDED IN VOLUME 1947, PAGE 408, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS.

CONFORMED
DATE: 02/11/2025

REQUIRED PERMITS	NUMBER
1. CITY OF NEW BRAUNFELS	PI2022 – 0050
2. GVSUD	
3. GBRA	
4. GUADALUPE COUNTY (FLOOD PLAIN PERMIT)	

JUNE 2023

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

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.

Christopher P. Van Heerde, P.E.
Christopher P. Van Heerde
P.E. Registration No. 93047

PREPARED BY:

HMT
ENGINEERING & SURVEYING

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
HMTNB.COM
P(830)625-8555*F(830)625-8556
TBPE FIRM F-10961
TBPLS FIRM 1053600

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.

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 IN RECORD.
4. 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.

   4.1 ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,
   4.2 FAXED IN AT 830-608-2117 OR,
   4.3 E-MAILED AT INSPECTIONS@NBTEXAS.ORG.

5. 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.
6. DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
7. THIS DEVELOPMENT IS A TYPE 3 DEVELOPMENT.
8. SOME PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE GUADALUPE COUNTY, TEXAS, FIRM PANEL NUMBERS 48187C0235F, 48187C0255F AND 48187C0115F EFFECTIVE DATE NOVEMBER 2, 2007, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
9. THIS PROJECT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
10. GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY.

SHEET LIST TABLE

SHEET NO.	SHEET TITLE
C0.01	COVER
C0.02	CONSTRUCTION NOTES (1 OF 2)
C0.03	CONSTRUCTION NOTES (2 OF 2)
C1.00	MASTER PLAN
C1.01	SUBDIVISION PLAT (1 OF 2)
C1.02	SUBDIVISION PLAT (2 OF 2)
C2.00	EXISTING DRAINAGE AREA MAP
C2.01	ULTIMATE CONDITIONS DRAINAGE AREA MAP
C2.02	ULTIMATE CONDITIONS DRAINAGE AREA MAP INSET
C2.03	PROPOSED INTERMEDIATE UNIT 3 DRAINAGE AREA MAP
C2.04	PROPOSED INTERMEDIATE DRAINAGE AREA MAP INSET
C3.00	OVERALL EROSION PLANVIEW
C3.01	EROSION CONTROL PLAN (1 OF 5)
C3.02	EROSION CONTROL PLAN (2 OF 5)
C3.03	EROSION CONTROL PLAN (3 OF 5)
C3.04	EROSION CONTROL PLAN (4 OF 5)
C3.05	EROSION CONTROL PLAN (5 OF 5)
C3.06	EROSION CONTROL DETAILS
C4.00	OVERALL GRADING PLAN
C4.01	DETAILED GRADING PLAN (1 OF 6)
C4.02	DETAILED GRADING PLAN (2 OF 6)
C4.03	DETAILED GRADING PLAN (3 OF 6)
C4.04	DETAILED GRADING PLAN (4 OF 6)
C4.05	DETAILED GRADING PLAN (5 OF 6)
C4.06	DETAILED GRADING PLAN (6 OF 6)
C4.07	GRADING DETAILS
C5.00	BLANC CELLAR PLAN & PROFILE
C5.01	BLANC CELLAR & ESTERS SHARE KNUCKLE
C5.02	CABERNET CASK PLAN & PROFILE
C5.03	CABERNET CASK & ESTERS SHARE KNUCKLE
C5.04	ESTERS SHARE PLAN & PROFILE
C5.05	HEATHER VINE PLAN & PROFILE
C5.06	SAUVIGNON CRK PLAN & PROFILE
C5.07	SCOTCH PASS & TANNIN VALLEY PLAN & PROFILE
C5.08	VINTAGE VINE PLAN & PROFILE
C5.09	SIGNAGE PLAN
C5.10	STREET DETAILS (1 OF 3)
C5.11	STREET DETAILS (2 OF 3)
C5.12	STREET DETAILS (3 OF 3)
C6.00	OVERALL STORM 1 OF 2
C6.01	OVERALL STORM 2 OF 2
C6.02	STORM LN B PLAN & PROFILE
C6.03	STORM LN C PLAN & PROFILE
C6.04	SD LN C3 PLAN & PROFILE
C6.05	DETENTION BASIN 1 PLAN
C6.06	COMBINED WATER QUALITY AND DETENTION BASIN 2 PLAN
C6.07	BASIN SECTION A-A
C6.08	BASIN SECTIONS B-B & C-C
C6.09	COMBINED WATER QUALITY & DETENTION BASIN DETAILS
1 C6.10	WATER QUALITY OUTFALL STRUCTURE DETAILS
C6.11	COMBINED WATER QUALITY AND DETENTION BASIN C
C6.12	BASIN C PLAN & PROFILE
C6.13	STORM DETAILS (1 OF 3)
C6.14	STORM DETAILS (2 OF 3)
C6.15	STORM DETAILS (3 OF 3)
6 C7.00	OVERALL WATER (1 OF 2)
6 C7.01	OVERALL WATER (2 OF2)
C7.02	WTR LN A PLAN & PROFILE
C7.03	WTR LN G PLAN & PROFILE
C7.04	FIRE HYDRANT LAYOUT
6 C7.05	WATER DETAILS (1 OF 2)
6 C7.06	WATER DETAILS (2 OF 2)
C8.00	OVERALL WASTEWATER (1 OF 2)
C8.01	OVERALL WASTEWATER (2 OF 2)
C8.02	WW LN F PLAN & PROFILE (1 OF 2)
C8.03	WW LN F PLAN & PROFILE (2 OF 2)
C8.04	WW LN G PLAN & PROFILE (1 OF 3)
C8.05	WW LN G PLAN & PROFILE (2 OF 3)
C8.06	WW LN G PLAN & PROFILE (3 OF 3)
C8.07	WW LN I PLAN & PROFILE (1 OF 2)
C8.08	WW LN I PLAN & PROFILE (2 OF 2)
C8.09	WW LN J PLAN & PROFILE (1 OF 2)
C8.10	WW LN J PLAN & PROFILE (2 OF 2)
C8.11	WW LN K PLAN & PROFILE
C8.12	WW LN AA PLAN & PROFILE
C8.13	WASTEWATER DETAILS (1 OF 2)
C8.14	WASTEWATER DETAILS (2 OF 2)
5 C9.00	OVERALL UTILITY (1 OF 2)
5 C9.01	OVERALL UTILITY (2 OF 2)

1	UPDATED SLOPE PROTECTION ON BASIN 2	03/20/2024
4	WATER STATIONING UPDATED PRIOR TO STAKING	01/27/2025
5	ADDITIONAL SLEEVES PER GVEC REV	01/28/2025
6	GVSUD NOTES UPDATED	02/06/2025

WINDING CREEK RANCH UNIT 3
CIVIL SITE CONSTRUCTION PLANS
HMT # 031.097

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03c\031.097_COVR.dwg User: reissd Feb 07, 2025 - 10:03am

CITY OF NEW BRAUNFELS GENERAL NOTES

ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL COMPLY WITH:

A. CURRENT CITY OF NEW BRAUNFELS CONSTRUCTION SPECIFICATIONS AND STANDARDS AS OF THE DATE OF THIS CONTRACT

B. THE MOST CURRENT EDITION OF TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES".

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES." ALONG WITH CURRENT CITY OF NEW BRAUNFELS AND GUADALUPE COUNTY SPECIFICATIONS. ANY DISCREPANCIES BETWEEN SPECIFICATIONS SHALL BE RESOLVED BY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES, AND TAXES AREA AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.

ANY EXISTING OFF-SITE IMPROVEMENTS THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE OWNER OF THE EXISTING IMPROVEMENT AT THE CONTRACTOR'S EXPENSE. (NO SEPARATE PAY ITEM)

WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR CONSENT OF THE OWNER OR ENGINEER WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100YR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" 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.

WHEN MATCHING EXISTING PAVEMENTS, CURBS, DRIVES, AND WALKS, THEY SHALL BE SAW CUT FULL DEPTH AND REMOVED TO ALLOW FOR PROPOSED CONSTRUCTION. IF ANY EXISTING JOINT IS ENCOUNTERED, PRECAUTION SHALL BE TAKEN DURING REMOVAL OF CONCRETE SO AS NOT TO DAMAGE EXISTING DOWELS. ALL EXISTING DOWELS SHALL BE EXPOSED AND CLEANED.

ITEM OF WORK DESIGNATED "BY OTHERS" SHALL NOT BE CONSIDERED PART OF THIS CONTRACT.

ALL "COMPACTED SUBGRADE" SHALL CONSIST OF NATIVE MATERIAL SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES AND COMPACTED TO 95% DENSITY ACCORDING TO DENSITY TEST METHOD TEX-115E OR ACCORDING TO ASTM D-698 AND TESTED BY ASTM D-2922.

ALL "FLEXIBLE BASE" SHALL BE TYPE "A", GRADE 4, ACCORDING TO TXDOT ITEM 247, COMPACTED TO 95% MODIFIED DENSITY AT A MOISTURE CONTENT BETWEEN -2 AND +3 OF OPTIMUM PERCENT MOISTURE ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR) AND TESTED BY ASTM D-2922.

ASPHALT PAVEMENT SHALL BE THE TYPE SPECIFIED ON THE PLANS AND ACCORDING TO TXDOT ITEM 340 "HOT MIX ASPHALT CONCRETE PAVEMENT".

PRIME COAT USING MC-30 AT A RATE OF 0.2 GALLONS PER SQUARE YARD SHALL BE PLACED OVER PREPARED BASE AT LEAST ONE DAY PRIOR TO LAYING ASPHALTIC CONCRETE PAVEMENT. ANY NECESSARY TACK COAT SHALL BE MC-30 AT 0.05 GALLONS PER SQUARE YARD. IT IS REQUIRED THAT BOTH THE PRIME COAT AND THE TACK COAT BE APPLIED AT THE TEMPERATURE SPECIFIED UNDER TXDOT ITEM 300.3.

CONCRETE SHALL BE CLASS "A" ACCORDING TO TXDOT ITEM 421 UNLESS OTHERWISE ON PLANS.

REINFORCING STEEL SHALL BE FROM NEW BILLET AND SHALL CONFORM TO TXDOT ITEM 440. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS EXCEPT WHEN REFERRING TO CLEARANCE.

ALL SAWED JOINTS SHALL BE SAWED WITHIN 24 HOURS OF POURING,

ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED WITHOUT THE SPECIFIC APPROVAL OF THE ENGINEER.

ORDINARY COMPACTION CONTROL IS REQUIRED ON THIS PROJECT.

ALL ROLLING FOR COMPACTION OF ASPHALTIC CONCRETE PAVEMENT SHALL BE COMPLETED BEFORE THE MIXTURE TEMPERATURE DROPS BELOW 175 DEG. (F).

ALL FILL MATERIAL SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL.

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; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO THE NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS, OFFICES, 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.

ALL CMP (CORRUGATED METAL PIPE) USED ON THIS PROJECT SHALL HAVE A MANNING'S "N" VALUE OF 0.024., UNLESS OTHERWISE SHOWN ON PLANS.

CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTING PER CURRENT CITY OF NEW BRAUNFELS REQUIREMENTS. ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. ENGINEER AND OWNER RESERVE THE RIGHT TO HAVE THE CONTRACTOR REMOVE AND REPLACE ANY MATERIAL THAT WAS NOT TESTED OR FAILED TESTING. ALL COST ASSOCIATED WITH THE REMOVAL, REPLACEMENT AND TESTING SHALL BE PAID BY THE CONTRACTOR.

ALL PVC SLEEVES SHALL BE INSTALLED 3 FEET BELOW FINISHED GRADE AND ENDS SHALL BE MARKED SO THAT LOCATIONS OF SLEEVES CAN BE EASILY IDENTIFIED.

PRE-CONSTRUCTION CONFERENCE IS REQUIRED, ENGINEER WILL ARRANGE SUCH CONFERENCE IN COORDINATION WITH CITY OF NEW BRAUNFELS STREET INSPECTOR & NEW BRAUNFELS UTILITIES INSPECTOR. NO CONSTRUCTION MAY BEGIN PRIOR TO THE PRE-CONSTRUCTION CONFERENCE.

CONTRACTOR SHALL COORDINATE WITH DRY UTILITY INSTALLERS AND SHARED TRENCHING SHALL BE UTILIZED. CUTTING THE STREETS AFTER COMPLETION BY DRY UTILITIES SHALL NOT BE ACCEPTABLE.

AS PER PLATTING ORDINANCE SECTION 118-38M.: WHEN ALL 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 DRAWINGS" PLANS, AND A DIGITAL COPY OF ALL PLANS (AUTOCAD 2000 MINIMUM) 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.

EROSION / SEDIMENTATION CONTROL

AT A MINIMUM, THESE CONTROLS SHALL CONSIST OF ROCK BERMS AND/OR SILT FENCES CONSTRUCTED PARALLEL TO AND DOWN GRADIENT FROM THE TRENCHES. THE ROCK BERM OR SILT FENCES SHALL BE INSTALLED IN A MANNER SUCH THAT ANY RAINFALL RUNOFF SHALL BE FILTERED. HAY BALES SHALL NOT BE USED FOR TEMPORARY EROSION AND SEDIMENTATION CONTROLS.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED DURING CONSTRUCTION BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CONTROLS WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED {31 TAC 313.5 (C)(12)}. ADDITIONAL PROTECTION MAY BE REQUIRED IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER/ENGINEER.

PLACEMENT OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS. ACTUAL LOCATIONS MAY VARY SLIGHTLY FROM THE PLANS, BUT WILL BE VERIFIED BY THE ENGINEER/INSPECTOR IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY SIGNIFICANT RAINFALL TO INSURE DISTURBANCE OF THE STRUCTURES HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER A RAINFALL SHALL BE REMOVED FROM THE SITE OR PLACED IN AN ENGINEER APPROVED DESIGNATED DISPOSAL AREA.

CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT NO EROSION CONTROL MEASURES BLOCK THE DRAINAGE SYSTEM FROM WORKING AS DESIGNED.

UTILITIES

LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION, INCLUDING THOSE NOT SHOWN ON THE DRAWINGS.
ANY EXISTING UTILITIES, ON OR OFF THE SITE, THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE RESPECTIVE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.
CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION AT:

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

GREEN VALLEY SPECIAL UTILITY DISTRICT (WATER)	(830) 914-2330
GBRA (SEWER)	(830) 608-8951
GVEC (ELECTRIC)	(800) 223-4832
SPECTRUM CABLE	(800) 245-4545
CENTERPOINT ENERGY (GAS)	(830) 643-6434
AT&T	(830) 303-1333
TEXAS ONE CALL SYSTEM	(800) 245-4545
SAWS (VISTA RIDGE PIPELINE PROJECT)	(210) 704-7297
LCRA ELECTRICITY	(800) 223-7622

CONTRACTOR SHALL REFERENCE GVEC PLANS FOR FINAL ELECTRICAL LINE DESIGNS AND LAYOUT.

GBRA NOTES

MATERIALS

1. GRAVITY WASTEWATER PIPE AND FITTINGS SHALL BE GREEN COLOR GASKETED ASTM D3034 SDR26, & ASTM F679 PS115 FOR 18" OR LARGER. AT WATER CROSSINGS INCLUDING FIRE HYDRANT LEADS, WHITE COLOR GASKETED ASTM D2241 SDR26 (ASTM C900 DR21 FOR 18" OR LARGER) PIPE AND FITTINGS SHALL BE USED FOR MAINS AND LATERALS. SANITARY TAPPING SADDLES ARE NOT ALLOWED.
2. ALL OTHER FASTENERS SHALL BE TYPE 304 STAINLESS STEEL (E.G. HARDWARE, SCREWS, ANCHOR BOLTS, RODS, BOLTS, NUTS, ETC. FOR PIPING, VALVES, PUMPS, MOTORS, EQUIPMENT, ETC.) INCLUDING THOSE FOR FACTORY ASSEMBLY OF COMPONENTS. ALL BOLTS AND NUTS SHALL BE HEAVY HEX. ANCHOR BOLTS INSTALLED WITHIN HYDRAULIC STRUCTURES SHALL BE EPOXY TYPE. FIELD APPLY NICKEL ANTI-SEIZE COMPOUND TO THREADS PRIOR TO ASSEMBLY. STAINLESS STEEL ITEMS SHALL NOT BE PAINTED.
3. PVC MALE ADAPTERS ARE NOT ALLOWED.

TESTING NOTES

1. ALL OTHER UTILITIES MUST BE COMPLETE PRIOR TO PERFORMING ANY WATER OR WASTEWATER TESTING.
2. ALL TESTING MUST BE COMPLETE PRIOR TO PAVING STREETS.
3. ALL TESTING MUST BE COMPLETE PRIOR TO PERFORMING TIE-INS TO EXISTING WATER OR WASTEWATER SYSTEMS.
4. CONTRACTOR SHALL PERFORM PRE-TESTING TO VERIFY PASSING RESULTS PRIOR TO REQUESTING GBRA INSPECTION. PROVIDE CONNECTION POINT FOR GBRA DIGITAL TEST GAUGE.
5. ALL TESTING SHALL BE PERFORMED BY THE CONTRACTOR AND WITNESSED BY GBRA.
6. PERFORM TRENCH BACKFILL DENSITY TESTING AT INTERVALS SPECIFIED BY THE DESIGN ENGINEER, EXACT LOCATIONS TO BE DESIGNATED BY INSPECTOR. SCHEDULE GBRA TO WITNESS TESTING. PROVIDE COPIES OF REPORTS TO GBRA.
7. ALL GRAVITY WASTEWATER PIPING SHALL BE SUBJECT TO LOW PRESSURE AIR TESTING IN ACCORDANCE WITH TCEQ REQUIREMENTS. INFILTRATION AND EXFILTRATION TESTING ARE NOT ALLOWED.
8. MANDREL TESTING SHALL BE PERFORMED FOR ALL GRAVITY WASTEWATER MAINS PRIOR TO INSTALLATION OF CORROSION RESISTANT MANHOLE LINING.
9. ALL MANHOLES, REGARDLESS OF VEHICULAR TRAFFIC DETOURING, SHALL BE VACUUM TESTED AFTER COMPLETION OF BACKFILL, COMPACTION, AND FINAL GRADING OF ROAD BASE BUT PRIOR TO PAVING STREETS AND PRIOR TO CORROSION RESISTANT MANHOLE LINING. VACUUM TESTING SHALL BE PERFORMED WITH A PLATE TYPE TEST HEAD PLACED ON TOP OF COMPLETED MANHOLE METAL CASTING RING WHICH HAS BEEN INSTALLED AND ENCASED IN CONCRETE AT FINAL GRADE. MANHOLES SHALL BE TESTED AT 10 INCHES OF MERCURY FOR 2 MINUTES DURATION. ALLOWABLE LOSS IS 1 INCH OF MERCURY. INFILTRATION AND EXFILTRATION TESTING ARE NOT ALLOWED.
10. PERFORM VIDEO INSPECTION AND GOLF BALL TESTING OF GRAVITY WASTEWATER PIPING AFTER CORROSION RESISTANT MANHOLE LINING BUT PRIOR TO PAVING STREETS. PIPE AND MANHOLES MUST BE CLEANED FREE OF DIRT, ROCKS, SCALE, MUD, SILT, AND ANY OTHER FOREIGN MATTER PRIOR TO PERFORMING VIDEO INSPECTION AND GOLF BALL TESTING. FLOOD SYSTEM WITH WATER IMMEDIATELY PRIOR TO PERFORMING VIDEO INSPECTION. HANG AND DRAG A GOLF BALL IN FRONT OF CAMERA. PIPE GRADE IS OUT OF TOLERANCE IF GOLF BALL BECOMES FULLY SUBMERGED. SCHEDULE GBRA TO WITNESS VIDEO INSPECTION. PROVIDE DVD'S AND WRITTEN REPORTS TO GBRA.

CONSTRUCTION NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH GBRA STANDARDS AS PUBLISHED AT THE FOLLOWING WEBSITE: HTTP://WWW.GBRA.ORG/PUBLIC/WATERWASTEWATERSERVICES.ASPX
2. COPIES OF EACH CONSTRUCTION SUBMITTAL (SHOP DRAWINGS, PRODUCT DATA, ETC.) SHALL BE PROVIDED FOR GBRA REVIEW AND APPROVAL PRIOR TO FABRICATION. USE CLOUDS, BOXES, ARROWS, ETC., TO CLEARLY MARK ALL PROPOSED OPTIONS AND PART NUMBERS. LIST ANY PROPOSED DEVIATIONS ON THE SUBMITTAL COVER SHEET. ALLOW 21 DAYS FOR REVIEW.
3. ALL WATER AND WASTEWATER INSTALLATIONS MUST BE INSPECTED AND APPROVED BY GBRA PRIOR TO BACKFILLING OR OTHERWISE COVERING THE WORK. THIS INCLUDES CROSSINGS OF WATER AND WASTEWATER BY OTHER UTILITIES. GBRA WILL PERFORM A MAXIMUM OF ONE (1) INSPECTION DAILY FOR ONE (1) HOUR DURATION BETWEEN 8:00AM AND 5:00PM EXCLUDING WEEKENDS AND HOLIDAYS. CALL 830-379-5822 TO SCHEDULE INSPECTIONS (48 HOURS ADVANCE NOTICE IS REQUIRED FOR ALL INSPECTIONS).
4. 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. HORIZONTAL OFFSETS SHALL BE 15 FEET MAXIMUM. INSTALL PROPERTY PINS AND STAKES. MARK FINISH GRADE LINES WITH CUT/FILL ON OFFSET STAKES AND PROPERTY STAKES. ALL MARKS SHALL FACE THE PIPELINE. SURVEY STAKING SHALL BE PERFORMED BY THE CONTRACTOR.
5. PVC MALE ADAPTERS ARE NOT ALLOWED.
6. SANITARY TAPPING SADDLES ARE NOT ALLOWED.
7. MANHOLE INTERNAL DROPS ARE NOT ALLOWED.
8. PIPE BELLS SHALL BE INSTALLED IN UPSTREAM DIRECTION.
9. ALL PIPING SHALL BE DESIGNED IN STRAIGHT ALIGNMENT VERTICALLY AND HORIZONTALLY. PIPE CURVATURE AND/OR DEFLECTION ARE NOT ALLOWED.
10. MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL AND 12 INCHES VERTICAL CLEARANCE BETWEEN WATER AND WASTEWATER AND OTHER UTILITIES. SHARED TRENCHES ARE NOT ALLOWED.
11. WATER AND WASTEWATER PIPE LENGTHS SHALL BE CENTERED AT CROSSINGS WITH ALL OTHER UTILITIES, INCLUDING DRY UTILITY SERVICES. BOTH PIPES SHALL BE CENTERED AT WATER AND WASTEWATER CROSSINGS, INCLUDING WASTEWATER SERVICE LATERALS AND FIRE HYDRANT LEADS.
12. WATER AND WASTEWATER PIPING (INCLUDING MAINS, SERVICES, AND LATERALS) SHALL BE SLEEVED IF LOCATED UNDER CONCRETE CHANNELS, BOX CULVERTS, OR MULTIPLE BARREL STORM SEWER CROSSINGS REGARDLESS OF SIZE AND SINGLE BARRELS 30" OR LARGER.
13. ALL EXPOSED VERTICAL AND HORIZONTAL CONCRETE EDGES SHALL BE FORMED WITH ¾" CHAMFER STRIPS.
14. EXISTING FACILITIES THAT ARE DISTURBED SHALL BE RESTORED AND TESTED TO BE IN FULL COMPLIANCE WITH CURRENT GBRA STANDARDS. THE CONTRACTOR SHALL ADJUST EXISTING WATER AND WASTEWATER FACILITIES TO PROPOSED FINISH GRADES INCLUDING BUT NOT LIMITED TO MANHOLES, CLEANOUTS, VALVES, HYDRANTS, APPURTENANCES, ETC.
15. EXISTING MANHOLES THAT ARE DISTURBED SHALL BE RESTORED TO BE IN FULL COMPLIANCE WITH CURRENT GBRA STANDARDS INCLUDING TESTING, CORROSION RESISTANT LINING, RINGS AND COVERS, ETC.
16. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING WATER AND WASTEWATER SYSTEMS AT ALL TIMES DURING CONSTRUCTION. ANY WORK INVOLVING POWER OUTAGES, BYPASS PUMPING, PUMP AND HAUL, OR ANY OTHER INTERRUPTION OF FLOW MUST BE PERFORMED BETWEEN 8:00AM AND 5:00PM EXCLUDING WEEKENDS AND HOLIDAYS. ALL NECESSARY TEMPORARY POWER, BYPASS PUMPING, PUMP AND HAUL, TEMPORARY PLUGS, ETC., SHALL BE FURNISHED AND PERFORMED BY THE CONTRACTOR. COORDINATE AND SCHEDULE ANY SUCH ACTIVITIES WITH GBRA AT LEAST TWO (2) WEEKS IN ADVANCE.
17. EXPLOSIVES AND BLASTING ARE NOT ALLOWED

ASBUILTS

AS-BUILT AND RECORD DRAWINGS: PROVIDE COMPLETE PROJECT DRAWING SETS INCLUDING DRY UTILITIES, ROADS, GRADING, STORM SEWER, SANITARY SEWER, WATER ETC. SUBMIT ELECTRONIC PRELIMINARY COPIES FOR GBRA REVIEW AND APPROVAL PRIOR TO PRINTING FINAL COPIES.

1. CONTRACTOR SHALL PROVIDE (1) CD/PDF ELECTRONIC COPY, EACH SHEET STAMPED "ASBUILT DRAWING."
2. ENGINEER SHALL PREPARE CORRECTED CAD DRAWINGS, EACH SHEET STAMPED "RECORD DRAWING," AND SUBMIT TO GBRA FIVE (5) PRINTED AND BOUND HALF SIZE COPIES AND FIVE (5) CD/PDF SEARCHABLE ELECTRONIC COPIES OF THE CORRECTED CAD DRAWINGS. SCANNED AND OR/PHOTOCOPIES ARE NOT ACCEPTABLE.

GVSUD CONSTRUCTION NOTES

1. ALL WORKMANSHIP AND MATERIALS FOR THE WATER SYSTEM SHALL CONFORM TO THE WATER STANDARDS AND DESIGN CRITERIA OF GREEN VALLEY SPECIAL UTILITY DISTRICT (GVSUD).
2. PVC MAINS 12-INCHES AND BELOW SHALL CONFORM TO AWWA C-909 PRESSURE CLASS 235 OR ABOVE DEPENDING ON SYSTEM PRESSURES. PVC MAIN GREATER THAN 12 INCHES SHALL CONFORM TO AWWA C-900 DR 18 OR ABOVE DEPENDING ON SYSTEM PRESSURES. WATER MAINS SHALL HAVE AN ABSOLUTE MINIMUM DEPTH OF 5-FEET BELOW ROADWAY LEVEL AND 42-INCHES IN ALL OTHER AREAS.
3. ALL WATER MAIN DUCTILE IRON FITTINGS SHALL BE MECHANICAL JOINT AND CONFORM TO ANSI/AWWA C-153 OR C-110. ALL BOLTS SHALL HAVE KOPR KOTE OR APPROVED EQUAL ANTISEIZE CORROSION RESISTANT COATING. VALVES SHALL BE ATTACHED TO TEES BY FOSTER ADAPTOR OR ANCHOR NIPPLE. FOSTER ADAPTER, ANCHOR NIPPLE, OR FORD UNI-FLANGE RETAINER GLANDS AND THRUST BLOCKS SHALL BE USED ON ALL FITTINGS AND VALVES.
4. 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 12-INCH-WIDE DETECTABLE METAL TAPE SHALL BE PLACED ABOVE BEDDING INITIAL BACKFILL.
5. EXCEEDING MAXIMUM DEFLECTION IS PROHIBITED. THE ANGULAR DEFLECTION AT BELLSPIGOT JOINTS SHOULD NOT EXCEED ONE (1) DEGREE. THIS WILL PRODUCE A 4-INCH OFFSET FOR EVERY 20-FOOT SECTION OF PIPE. JOINT DEFLECTION IS ACHIEVED AFTER THE JOINT IS ASSEMBLED IN STRAIGHT ALIGNMENT AND DEFLECTED TO THE REFERENCE MARK. THE BELL SHOULD BE BRACED TO ALLOW THE FREE END TO MOVE LATERALLY UNDER STEADY PRESSURE USING A PRY BAR OR OTHER SUITABLE MEANS. CARE SHOULD BE TAKEN NOT TO EXCEED THE MAXIMUM DEFLECTION ALLOWED OR TO DAMAGE THE PIPE WITH MACHINERY. ABRUPT CHANGES IN DIRECTION SHALL BE ACCOMPLISHED WITH FITTINGS.
6. OVER STRESSING THE BELL BY OVER INSERTING THE JOINTS, OVERBELLING, AND PASSING THE INSERTION REFERENCE MARK IS PROHIBITED AND WILL REQUIRE REMOVAL AND REINSTALLATION.
7. STANDARD FIRE HYDRANT SHALL INCLUDE HYDRANT, 6-INCH RESILIENT 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.
8. 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.
9. VALVES ARE PROHIBITED IN ADA RAMPS, CURBS, AND ROADWAYS. VALVES ARE PROHIBITED IN SIDEWALKS IN CITY OF NEW BRAUNFELS.
10. METER BOXES ARE PROHIBITED IN ANY SIDEWALKS, DRIVEWAYS, OR ROADWAYS.
11. SMALL SERVICE TAPS SHALL BE EITHER 1-INCH OR 2 INCH AND SHALL BE REHAU MUNICIPEX WITH CTS 200 PSI PLASTIC INSERT. SMALL SERVICE TAPS TO BE MADE WITH SINGLE BRASS STRAP TAPPING SADDLE WITH IRON PIPE THREADS. EXCEPTION: IF LOCATED WITHIN CITY OF CIBOLO- SERVICE TAPS TO BE MADE WITH DOUBLE STAINLESS STRAP EPOXY COATING SADDLES WITH IRON PIPE THREADS.
12. 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 PVC SCHEDULE 40 OR APPROVED EQUAL.
13. SINGLE 5/8"& ¾"METER BOXES SHALL BE DFW36C 16"X 11". DUAL 5/8"& ¾"METER BOXES SHALL BE DFW38C 17"X 15". 1-INCH METER BOXES SHALL BE DFW65C-14-1A 15 1/4" X 30 3/8". ALL METER BOXES SHALL BE PLASTIC WITH LIDS HAVING REBAR, ARM, AND KNOCKOUT.
14. THE FORD U BRANCH IS TO BE USED ON ALL DUAL SERVICES (U48-43Q) WITH THE 5/8"X 3/4" FEMALE THREAD ANGLE HEAD. ALL OTHER ANGLE HEADS WILL BE THE FORD Q NUT. ALL CORPORATION STOPS WILL BE IPS X Q NUT. ALL BRASS VALVES TO BE 'BALL'TYPE MINIMUM 200 PSI PRESSURE RATING. "CC" THREADED CORPORATION STOPS PROHIBITED.
15. TAPPING MACHINES UTILIZED FOR INSTALLING ANY TYPE OF TAP 1-INCH TO 2-INCHES WILL BE OF THE PURGE TYPE, WHICH AT THE TIME OF TAPPING SHALL EXPEL ALL CHIPS AND RESIDUE TO ATMOSPHERE THROUGH AN APPROPRIATE OUTLET AND/OR BE ABLE TO RETAIN THE COUPON.
16. ALL WATER MAIN, PIPE, CASINGS, FITTINGS, AND VALVES SHALL BE LAID IN MANUFACTURED SAND EMBEDMENT PER DETAILS. THE SAND SHALL FULLY ENCASE ALL PIPES, INCLUDING FITTINGS AND VALVES, BY A MINIMUM OF 12-INCHES. ALL FITTINGS AND VALVES ARE TO RECEIVE THRUST BLOCKING, FOSTER ADAPTER, ANCHOR NIPPLE, FORD UNI-FLANGE RETAINER GLAND JOINT RESTRAINTS, AND BELL JOINT RESTRAINTS WHEN SPECIFIED BY GVSUD OR THE DISTRICT'S ENGINEER.
17. CONTRACTOR TO CURB CUT V'S FOR VALVES AND X'S FOR METERS.
18. PRIOR TO CONSTRUCTION OF THE SEWER AND WATER MAINS, ALL R.O.W. ROADWAYS AND PARKWAY SHALL HAVE REFERENCE SURVEY STAKING AND BE EXCAVATED OR PROPERLY FILLED TO SUB-GRADE ELEVATION.
19. SURVEY STAKING OFFSETS ARE REQUIRED FOR ALL WATER MAIN AND APPURTENANCES.
20. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED. CONTRACTOR SHALL INVESTIGATE AND FIELD VERIFY UTILITY LOCATIONS A MINIMUM OF 300 LF AHEAD OF CROSSING AND TIE-IN LOCATIONS. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR MAINTENANCE PROTECTION OF THE EXISTING UTILITIES, WHETHER THEY ARE SHOWN ON THE PLANS OR NOT.
21. ALL WASTEWATER PIPES CROSSING THE POTABLE WATER DISTRIBUTION SYSTEM WILL BE HELD IN STRICT ACCORDANCE WITH TCEQ RULES AND REGULATIONS. PROPOSED SUB-GRADE LIMITS AND DIMENSIONS MUST BE SHOWN ON THE PLANS, AND CONSTRUCTION PROCEDURES WILL BE INSPECTED TO VERIFY COMPLIANCE WITH TCEQ 290.44(E).
22. OTHER UTILITIES SHALL NOT BE LOCATED CLOSER THAN 3-FEET TO WATER MAINS.
23. THE GREEN VALLEY INSPECTOR SHALL BE NOTIFIED AT LEAST FORTY-EIGHT HOURS PRIOR TO BACK FILLING OR TESTING.
24. A FIELD PRE-CONSTRUCTION MEETING SHALL BE HELD BEFORE CONSTRUCTION BEGINS AND MATERIAL SHALL BE AVAILABLE ON-SITE FOR INSPECTION.
25. 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.
26. OPERATION OF EXISITNG VALVES IN THE GVSUD WATER DISTRIBUTION SYSTEM SHALL ONLY BE AS APPROVED BY GVSUD AND IN THE PRESENCE OF GVSUD PERSONNEL. THE CONTRACTOR SHALL NOTIFY GVSUD WHEN A VALVE NEEDS TO BE OPERATED AND MAY ONLY OPERATE A VALVE IN THE PRESENCE OF THE GVSUD INSPECTOR.
27. 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.
28. HYDROSTATIC PRESSURE TESTING SHALL BE EVERY 200 LF (MAX) OF 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.
29. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH AND CONFINED SPACE ENTRY SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION AND ALL RELATED WORK. ANY\ TRENCH PROTECTION SAFETY VIOLATION WILL BE DOCUMENTED AND WILL RESULT IN AN IMMEDIATE WORK STOPPAGE BY THE GVSUD INSPECTOR AT MINUMUM UNTIL THE NEXT WORKDAY.
30. CONTRACTOR MUST PROTECT ALL UNATTENDED TRENCHES AND EXCAVATIONS WITH TEMPORARY FENCING.
31. NO TREES MAY BE PLANTED IN THE AREAS DESIGNATED AS WATER OR UTILITY EASEMENTS, OR AREAS WHERE WATER MAINS AND WATER SERVICE CROSSINGS EXIST OR ARE PLANNED TO BE CONSTRUCTED.
32. ALL GARBAGE OR SPOIL MATERIAL FROM THE WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
33. CONTRACTOR SHALL PROVIDE "AS-BUILT"WATER LINE PLANS AT THE PRELIMINARY WALK THRU FOR THE GVSUD INSPECTOR AND ENGINEER. THE PLANS SHALL LIST MATERIAL MANUFACTURERS, LINE LENGTH FROM FITTING TO FITTING, AND TAP LOCATIONS.
34. GPS FILES SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER AND GVSUD INSPECTOR FOR THE PLAN OF RECORD. CONTRACTOR SHALL PROVIDE AN ASCII COMMA DELIMITED OR EXCEL FILE CONTAINING THREE-DIMENSIONAL GPS SURVEY POINTS WITH FOUR (4) DECIMAL PLACES OF PRECISION, LESS THAN FOUR (4) INCHES OF HORIZONTAL POSITION ACCURACY, AND LESS THAN EIGHT (8) INCHES OF VERTICAL POSITION ACCURACY. POINTS SHALL BE PROVIDED FOR A MINIMUM OF THREE (3) CONTROL POINTS AND ALL FITTINGS, APPURTENANCES, ENCASEMENTS, VAULTS, AND TANKS. THE ENGINEER SHALL FURNISH PLAN OF RECORD DRAWINGS TO GVSUD FOR APPROVAL HAVING FINAL MEASUREMENTS AND THAT MATCH THE GPS 'X', 'Y', AND 'Z'COORDINATES.
35. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH ALL THE INFORMATION AS REQUIRED SO THAT THE ENGINEER CAN SUPPLY GVSUD THE GIS PACKAGE FOR APPROVAL.
36. A FINAL WALK THRU FOR FINAL FIELD ACCPETANCE WILL BE SCHEDULED WITH THE CONTRACTOR AFTER THE PRELIMINARY WALK THRU PUNCH LIST ITEMS HAVE BEEN COMPLETED AND AFTER THE GIS PACKAGE IS APPROVED AND ACCEPTED BY GVSUD.
37. GVSUD CONTACT NUMBER: 830-914-2330

CITY OF NEW BRAUNFELS CONSTRUCTION NOTES

REVISED 03/2020

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 OF RECORD.

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SCHEDULE A PRECONSTRUCTION MEETING.

FOR PUBLIC INFRASTRUCTURE PERMIT OR GRADING PERMIT PROJECTS:
- FOR INSPECTIONS, YOU MUST CALL BEFORE 12:00 P.M., 48 HOURS PRIOR TO YOUR INSPECTION REQUEST.
- EACH INSPECTION WILL BE ALLOTTED 1 HOUR UNLESS YOU REQUEST FOR MORE TIME.
- ONCE YOUR REQUEST HAS BEEN ACCEPTED, YOU WILL RECEIVE A CALL FROM THE CITY OF NEW BRAUNFELS INSPECTOR.

FOR COMMERCIAL PERMIT (CP) PROJECTS:
- ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,
- FAXED IN AT 830-608-2117 OR,
- E-MAILED AT INSPECTIONS@NBTEXAS.ORG.

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.

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

IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS, BUILDERS, GEO-TECHNICAL ENGINEER, AND PROJECT 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

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

ENGINEER OF RECORD 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

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

FINISHED FLOOR ELEVATIONS

THE ELEVATION OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE.

SOILS TESTING

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.

ROADWAY

ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FLEXIBLE BASE OR FILL/EMBANKMENT MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") LOOSE. THE REQUIRED DENSITY FOR THE FILL/EMBANKMENT MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 132. THE REQUIRED DENSITY FOR THE FLEXIBLE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 247. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTED AS SPECIFIED 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. UPON COMPLETION OF TESTING, THE GEOTECHNICAL ENGINEER WILL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE BASE, AND FILL MATERIAL, AND SUBGRADE, HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

ITEM 340

ASPHALTIC CONCRETE PAVEMENT SHALL BE THE TYPE OF HOT MIX ASPHALT AS DEFINED IN TXDOT'S STANDARD SPECIFICATIONS FOR CURRENT TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET AND BRIDGES.

THE CITY OF NEW BRAUNFELS WILL NOT ACCEPT THE USE OF RECYCLED ASPHALT PAVEMENT (RAP) OR RECYCLED ASPHALT SHINGLES (RAS) IN ASPHALT MIXTURES FOR NEW ROADWAYS. ANY DEBRIS INCLUSIONS WITHIN NEW ASPHALT PAVEMENTS WILL RESULT IN ASPHALT REMOVAL AND REPLACEMENT FROM CURB TO CURB FOR LIMITS TO BE DETERMINED BY THE CITY OF NEW BRAUNFELS.

THE ASPHALTIC CONCRETE PAVEMENT SURFACE COURSE SHALL BE PLANT MIXED, HOT LAID TYPE "D"MEETING THE SPECIFICATION REQUIREMENTS OF TXDOT ITEM 340. THE ASPHALTIC CONCRETE PAVEMENT SUB-SURFACE COURSES SHALL BE PLANT MIXED, HOT LAID TYPE "B"MEETING THE SPECIFICATION REQUIREMENTS OF TXDOT ITEM 340. THE MIXTURE SHALL BE DESIGNED PER THE DESIGN REQUIREMENTS SPECIFIED IN TXDOT ITEM 340 AND SHALL BE COMPACTED TO BETWEEN 91 AND 95 PERCENT OF THE MAXIMUM THEORETICAL DENSITY AS DETERMINED BY TXDOT TEST METHOD TEX-227-F. PLACE THE MIXTURE WHEN THE ROADWAY SURFACE TEMPERATURE IS AT OR ABOVE 60°F. COMPLETE ALL COMPACTION OPERATIONS BEFORE THE PAVEMENT TEMPERATURE DROPS BELOW 160°F. THE ASPHALT CEMENT CONTENT BY PERCENT OF TOTAL MIXTURE WEIGHT SHALL FALL WITHIN A TOLERANCE OF +0.5 PERCENT FROM A SPECIFIC MIX DESIGN.

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

CONSTRUCTION NOTES (1 OF 2)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C0.02

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\CDs\031.097_COVR.dwg User: reissd Feb 07, 2025 - 10:03am

SEQUENCE OF CONSTRUCTION

1. INSTALL EROSION CONTROLS PER APPROVED PLAN.
2. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
3. CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
4. CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
5. CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
6. CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
7. INSTALL STREETSCAPE AND/OR LANDSCAPING IMPROVEMENTS.
8. CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 70% VEGETATION PRIOR TO COMPLETION
9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
10. TPDES REQUIREMENTS – DISTURBED AREAS ON WITCH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY WILL BEGIN AGAIN WITHIN 21 DAYS

CITY OF NEW BRAUNFELS CONSTRUCTION NOTES (CONTINUED)

REVISED 03/2020

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") 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.

CURB CUT DUE TO CONSTRUCTION OF NEW RIGHT–OF–WAY CONSTRUCTION

(INDICATE THE 2 OPTIONS ON THE CONSTRUCTION PLANS).

1. SAWCUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION.
2. SAWCUT EXISTING CURB TO TIE INTO EXISTING CONSTRUCTION.

CONSTRUCTION STABILIZED ENTRANCE

SAWCUT CURB FOR CONSTRUCTION ENTRANCE.

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. RIGHTOF–WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.

SIGNING AND PAVEMENT MARKING PLAN NOTES

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY AND WARNING SIGNS, STREETS NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CITY WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST TWENTY–FOUR (24 HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.

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

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

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.

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.

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.

IF EXTENDED DROUGHT CONDITIONS EXIST THAT HINDER OR PROHIBIT THE GROWTH AND ESTABLISHMENT OF VEGETATION, THE CONTRACTOR/ DEVELOPER 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.

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

CONSTRUCTION NOTES (2 OF 2)

WINDING CREEK RANCH UNIT 3

NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

SHEET

C0.03

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03a\031.097_COVR.dwg User: nessd Feb 07, 2025 - 10:03am

MASTER PLAN FOR WINDING CREEK RANCH SUBDIVISION

NOTES:

1. ALL LOTS WITHIN THE SUBDIVISION WILL BE PROVIDED WATER SERVICE BY GREEN VALLEY SPECIAL UTILITY DISTRICT (GVSUD). SEWER SERVICES WILL BE PROVIDED BY GUADALUPE–BLANCO RIVER AUTHORITY (GBRA) AND ELECTRIC SERVICES WILL BE PROVIDED BY GUADALUPE VALLEY ELECTRIC COOPERATIVE (GVEC). TELEPHONE AND CABLE SERVICES FOR THE SUBDIVISION WILL BE PROVIDED BY AT&T COMMUNICATIONS AND/OR SPECTRUM.
2. THIS SUBDIVISION IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
3. THIS SUBDIVISION IS WITHIN THE EXTRATERRITORIAL JURISDICTION LIMITS OF THE CITY OF NEW BRAUNFELS IN GUADALUPE COUNTY.
4. THIS SUBDIVISION IS WITHIN THE MARION INDEPENDENT SCHOOL DISTRICT.
5. A PORTION OF THE SUBDIVISION IS LOCATED WITHIN A SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE GUADALUPE COUNTY, TEXAS, FLOOD INSURANCE RATE MAP NUMBER 48187C0115F, EFFECTIVE DATE NOVEMBER 2, 2007, 48187C0235F, EFFECTIVE DATE NOVEMBER 2, 2007 AND 48187C0255F, EFFECTIVE DATE NOVEMBER 2, 2007, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
6. NO STRUCTURES, WALLS OR OTHER OBSTRUCTIONS OF ANY KIND SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT. NO LANDSCAPING, FENCES, OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS SECTIONS OF THE DRAINAGE EASEMENTS OR DECREASE THE HYDRAULIC CAPACITY OF THE EASEMENT, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTOR'S ADJACENT PROPERTY TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.
7. FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.
8. SIX (6) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS BY THE DEVELOPER AT THE TIME OF STREET CONSTRUCTION ALONG:
   A. FM 1044
9. FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS ADJACENT TO NON–BUILDABLE LOTS BY THE OWNER/DEVELOPER AT THE TIME OF SUBDIVISION CONSTRUCTION AND FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS ADJACENT TO RESIDENTIAL LOTS BY THE HOME BUILDER AT THE TIME OF BUILDING CONSTRUCTION.
10. LAND USE FOR THIS SUBDIVISION IS SINGLE–FAMILY RESIDENTIAL.
11. PERMANENT WATER QUALITY CONTROLS ARE REQUIRED FOR THIS SUBDIVISION MASTER PLAN IN ACCORDANCE WITH THE CITY OF NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL.
12. ALL LOTS SHALL HAVE A 5' SIDE SETBACK. NO HOMES ARE ALLOWED TO BE BUILT ON THE LOT LINE.
13. THIS SUBDIVISION IS SUBJECT TO THE 2018 CITY OF NEW BRAUNFELS PARK LAND DEDICATION AND DEVELOPMENT ORDINANCE. THIS MASTER PLAN IS APPROVED FOR ONE DWELLING UNIT PER BUILDABLE LOT WHERE FEES ARE DUE AT THE TIME OF FINAL PLAT RECORDATION. AT SUCH TIME THAT ADDITIONAL DWELLING UNITS ARE CONSTRUCTED, THE OWNER OF THE LOT SHALL CONTACT THE CITY AND COMPLY WITH THE ORDINANCE FOR EACH DWELLING UNIT.
14. THIS SUBDIVISION IS SUBJECT TO SECTION 118–50, SPECIFICALLY THE REQUIREMENTS FOR EASEMENT AND CONSTRUCTION OF A 10' HIKE AND BIKE TRAIL BY THE DEVELOPER. EXACT LOCATION AND ALIGNMENT OF THE HIKE AND BIKE TRAIL WILL BE COORDINATED WITH CITY STAFF DURING DESIGN STAGE.

GVSUD NOTES:

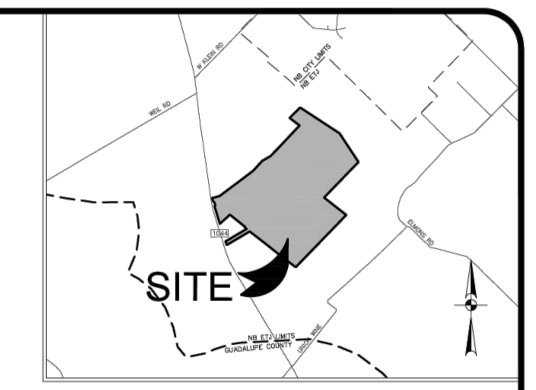
EASEMENT CERTIFICATE
THE OWNER OF THE LAND SHOWN ON THIS PLAT AND WHOSE NAME IS SUBSCRIBED HERETO, IN PERSON OR THROUGH A DULY AUTHORIZED AGENT, DEDICATES TO GREEN VALLEY SPECIAL UTILITY DISTRICT OF MARION, TEXAS, ITS SUCCESSORS AND ASSIGNS, A PERPETUAL EASEMENT WIT THE RIGHT TO ERECT, CONSTRUCT, INSTALL AND LAY OVER AND ACROSS THOSE AREAS MARKED AS "WATERLINE EASEMENT" AND IN ALL STREETS AND BYWAYS, SUCH PIPELINES, SERVICE LINES, WATER METERS, AND OTHER WATER SYSTEM APPURTENANCES AS IT REQUIRES, TOGETHER WIT THE RIGHT OF INGRESS AND EGRESS, THE RIGHT TO REMOVE FROM SAID LAND ALL TREES, SHRUBS, GRASSES, PAVEMENTS, FENCES, STRUCTURES, IMPROVEMENTS OR OTHER OBSTRUCTIONS WHICH MAY INTERFERE WITH THE FACILITY OR THE ACCESS THERETO. IT IS AGREED AND UNDERSTOOD THAT NO BUILDING, CONCRETE SLAB OR WALLS WILL BE PLACED WITHIN SAID EASEMENT AREAS. NO OTHER UTILITY LINES MAY BE LOCATED WITHIN 36" PARALLEL TO WATER LINES.

ANY MONETARY LOSS TO GREEN VALLEY SUD RESULTING FROM MODIFICATIONS REQUIRED OF UTILITY EQUIPMENT LOCATED WITHIN SAID EASEMENTS DUE TO GRADE CHANGE OR GROUND ELEVATION ALTERATION SHALL BE CHARGED TO THE PERSON OR PERSONS DEEMED RESPONSIBLE FOR SAID GRADE CHANGES OR GROUND ELEVATION ALTERATIONS. UPON ENTERING IN AND UPON SAID EASEMENT, THE DISTRICT WILL ENDEAVOR TO RESTORE THE LAND SURFACE TO A USEABLE CONDITION BUT IS NOT OBLIGATED TO RESTORE IT TO A PRE–EXISTING CONDITION.

THE EASEMENT CONVEYED HEREIN WAS OBTAINED OR IMPROVED THROUGH FEDERAL FINANCIAL ASSISTANCE. THIS EASEMENT IS SUBJECT TO THE PROVISION OF TITLE VI OF THE CIVIL RIGHTS ACT OF 1964, AND THE REGULATION ISSUED PURSUANT THERETO FOR SO LONG AS THE EASEMENT CONTINUES TO BE USED FOR THE SAME OR SIMILAR PURPOSE FOR WHICH FINANCIAL ASSISTANCE WAS EXTENDED OR FOR AS LONG AS THE GRANTEE OWNS IT, WHICHEVER IS LONGER.

GVEC NOTES:

1. GVEC WILL POSSESS A 5–FOOT WIDE EASEMENT TO THE SERVICE METER LOCATION. EASEMENT TO FOLLOW SERVICE LINE AND WILL VARY DEPENDING ON LOCATION OF BUILDING OR STRUCTURE.
2. GVEC SHALL HAVE ACCESS TO METER LOCATIONS FROM THE FRONT YARD WITH THE LOCATION NOT BEING WITHIN A FENCED AREA.
3. ANY EASEMENT DESIGNATED AS A GVEC 20'x20' UTILITY EASEMENT SHALL REMAIN OPEN FOR ACCESS AT ALL TIMES AND SHALL NOT BE WITHIN A FENCED AREA.
4. ALL UTILITY EASEMENTS ARE FOR THE CONSTRUCTION, MAINTENANCE (INCLUDING BUT NOT LIMITED TO REMOVAL OF TREES AND OTHER OBSTRUCTIONS), READING OF METERS, AND REPAIR OF ALL OVERHEAD AND UNDERGROUND UTILITIES.



0 100 200 400
HORIZONTAL SCALE: 1:200

LEGEND:

- DRNG = DRAINAGE
- R.O.W. = RIGHT–OF–WAY
- M.P.R.G.C.T. = MAP AND PLAT RECORDS, GUADALUPE COUNTY, TEXAS
- O.P.R.G.C.T. = OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS
- (dotted pattern) = OPEN SPACE/PARKS/LANDSCAPE AREAS
- (dashed line) = PROPOSED PHASING
- XX = CURRENT LAND USE
- (grey fill) = DRAINAGE/DETENTION AREAS

GBRA NOTES:

1. PROVIDE DEDICATED EASEMENTS IN THE NAME OF GBRA. EASEMENTS SHALL NOT OVERLAP OR BE WITHIN RESIDENTIAL LOTS.
2. WHERE OUTSIDE OF PUBLIC RIGHT–OF–WAY, PROVIDE DEDICATED EASEMENTS WITH A MINIMUM WIDTH EQUAL TO PIPE OUTSIDE DIAMETER, ROUNDED UP TO THE NEAREST FOOT, PLUS 10 FEET MINIMUM ON EACH SIDE. FOR EASEMENTS WITH MULTIPLE PIPES, PROVIDE 10 FEET MINIMUM HORIZONTAL CLEARANCE BETWEEN PIPES. PROVIDE ADDITIONAL WIDTH FOR EASEMENTS THAT ARE NOT LOCATED ADJACENT TO PUBLIC RIGHT–OF–WAY.
3. THE GUADALUPE–BLANCO RIVER AUTHORITY (GBRA) IS HEREBY DEDICATED THE EASEMENT AND RIGHTS–OF–WAY IN THE AREAS DESIGNATED ON THIS PLAN FOR WASTEWATER FACILITIES FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, RECONSTRUCTING, OPERATING, MAINTAINING, INSPECTING, REPAIRING, REMOVING, AND RELOCATING BURIED AND/OR EXPOSED WASTEWATER FACILITIES AND APPURTENANCES.
4. TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS, GBRA SHALL HAVE THE RIGHT TO REMOVE SAID LANDS OF ALL TREES OR PARTS THEREOF, OR ANY OTHER OBSTRUCTIONS WHICH MAY ENDANGER, OR INTERFERE WITH MAINTENANCE OF THE FACILITIES AND APPURTENANCES.
5. OTHER UTILITIES, STRUCTURES, GRADING, DRAINAGE, DETENTION/RETENTION PONDS, LANDSCAPING, TREES, ROADS, PARKING LOTS, FENCES, WALLS, CONSTRUCTION OF ANY TYPE, OR ANY OTHER IMPROVEMENTS OR OBSTRUCTIONS, ARE NOT ALLOWED WITHIN GBRA EASEMENTS.
6. DESIGNS FOR ANY PROPOSED ALTERATIONS OR CROSSINGS OF GBRA EASEMENTS MUST BE APPROVED IN WRITING BY GBRA AND THE INSTALLATION OF SUCH MUST BE INSPECTED AND APPROVED BY GBRA.
7. MAINTENANCE OF EASEMENTS IS THE RESPONSIBILITY OF THE PROPERTY OWNER.
8. THE PROPERTY OWNER MUST INSTALL 16–FOOT GATES IN ANY FENCES THAT CROSS GBRA UTILITIES; GATES MUST BE CENTERED ACROSS GBRA UTILITIES.
9. CUSTOMER WASTEWATER SERVICES SHALL NOT BE INSTALLED WITHIN FENCED AREAS.

OWNER:
RICHARD & ANDREW HEYDEN
178 LAKEVIEW BOULEVARD
NEW BRAUNFELS, TEXAS 78130

OWNER:
JACKIE NOLTE & CHARLENE TIMMERMANN
4907 FM 1044
NEW BRAUNFELS, TEXAS 78130

DEVELOPER:
DR HORTON
5419 NORTH LOOP 1604 EAST
SAN ANTONIO, TEXAS 78247

ENGINEER/SURVEYOR:
HMT ENGINEERING AND SURVEYING
290 S. CASTELL AVE., SUITE 100
NEW BRAUNFELS, TX 78130
PH: (830) 625–8555

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 10153600

TXDOT NOTES:

1. FOR RESIDENTIAL DEVELOPMENT DIRECTLY ADJACENT TO STATE RIGHT–OF–WAY, THE DEVELOPER SHALL BE RESPONSIBLE FOR ADEQUATE SETBACK AND/OR SOUND ABATEMENT MEASURES FOR FUTURE NOISE MITIGATION.
2. OWNER/DEVELOPER IS RESPONSIBLE FOR PREVENTING ANY ADVERSE IMPACT TO THE EXISTING DRAINAGE SYSTEM WITHIN THE HIGHWAY RIGHT–OF–WAY. FOR PROJECTS IN THE EDWARDS AQUIFER RECHARGE OR CONTRIBUTING ZONES, OUTFALLS FOR WATER QUALITY AND/OR DETENTION PONDS TREATING IMPERVIOUS COVER RELATED TO THE DEVELOPMENT, WILL NOT ENCROACH BY STRUCTURE OR GRADING INTO STATE R.O.W. PLACEMENT OF PERMANENT STRUCTURAL BEST MANAGEMENT PRACTICE DEVICES OR VEGETATIVE FILTER STRIPS WITHIN STATE R.O.W. WILL NOT BE ALLOWED.
3. MAXIMUM ACCESS POINTS TO STATE HIGHWAY FROM THIS PROPERTY WILL BE REGULATED AS DIRECTED BY TXDOT'S "ACCESS MANAGEMENT MANUAL". THIS PROPERTY IS ELIGIBLE FOR TWO (2) POINTS OF ACCESS TO FM 1044 BASED ON AN APPROXIMATE OVERALL FRONTAGE OF 995.55 FEET. WHERE TOPOGRAPHY OR OTHER EXISTING CONDITIONS MAKE IT INAPPROPRIATE OR NOT FEASIBLE TO CONFORM TO THE CONNECTION SPACING INTERVALS, THE LOCATION OF REASONABLE ACCESS WILL BE DETERMINED WITH CONSIDERATION GIVEN TO TOPOGRAPHY, ESTABLISHED PROPERTY OWNERSHIPS, UNIQUE PHYSICAL LIMITATIONS, AND/OR PHYSICAL DESIGN CONSTRAINTS. THE SELECTED LOCATION SHOULD SERVE AS MANY PROPERTIES AND INTERESTS AS POSSIBLE TO REDUCE THE NEED FOR ADDITIONAL DIRECT ACCESS TO THE HIGHWAY. IN SELECTING LOCATIONS FOR FULL MOVEMENT INTERSECTIONS, PREFERENCE WILL BE GIVEN TO PUBLIC ROADWAYS THAT ARE ON LOCAL THOROUGHFARE PLANS.
4. IF SIDEWALKS ARE REQUIRED BY APPROPRIATE CITY ORDINANCE, A SIDEWALK PERMIT MUST BE APPROVED BY TXDOT, PRIOR TO CONSTRUCTION WITHIN STATE RIGHT–OF–WAY. LOCATIONS OF SIDEWALKS WITHIN STATE RIGHT–OF–WAY SHALL BE AS DIRECTED BY TXDOT.
5. ANY TRAFFIC CONTROL MEASURES (LEFT–TURN LANE, RIGHT–TURN LANE, SIGNAL, ETC.) FOR ANY ACCESS FRONTING A STATE MAINTAINED ROADWAY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/OWNER.

FM 1044 TRAFFIC MITIGATION IMPROVEMENTS:

1. WHEN CHIANTI PASS CONNECTS WITH FM 1044, CONSTRUCT A SOUTHBOUND LEFT–TURN DECELERATION LANE FOR TRAFFIC TURNING FROM SOUTHBOUND FM 1044 ONTO EASTBOUND CHIANTI PASS AND CONSTRUCT A RIGHT–TURN DECELERATION LANE FOR TRAFFIC TURNING FROM NORTHBOUND FM 1044 ONTO CHIANTI PASS. (WITH UNIT 1).
2. WHEN UNIT 1 OR UNIT 2 CONSIST OF MORE THAN 97 DWELLING UNITS OR GENERATE MORE THAN 72 AM PEAK HOUR TRIPS, ADD PAVEMENT MARKINGS ON THE WESTBOUND APPROACH OF CHIANTI PASS THAT PROVIDE A DEDICATED LEFT–TURN ONLY LANE AND DEDICATED RIGHT–TURN ONLY LANE. (WITH UNIT 1).
3. WHEN SAUVIGNON CREEK CONNECTS WITH FM 1044, CONSTRUCT A SOUTHBOUND LEFT–TURN DECELERATION LANE FOR TRAFFIC TURNING FROM SOUTHBOUND FM 1044 ONTO EASTBOUND SAUVIGNON CREEK. (WITH UNIT 2).
4. WHEN SAUVIGNON CREEK CONNECTS WITH FM 1044, CONSTRUCT A NORTHBOUND RIGHT–TURN DECELERATION LANE FOR TRAFFIC TURNING FROM NORTHBOUND FM 1044 ONTO EASTBOUND SAUVIGNON CREEK. (WITH UNIT 2).
5. DEVELOPER SHALL INSTALL ROADSIDE FLASHING BEACON ASSEMBLY WITH A W2–2 INTERSECTION WARNING SIGN IN ADVANCE OF SAUVIGNON CREEK TO NOTIFY VEHICLES HEADING NORTHBOUND ON FM 1044 OF THE POTENTIAL FOR VEHICLES ENTERING THE ROADWAY. THIS SIGN WOULD BE REMOVED (OR REPLACED WITH A W3–3 TRAFFIC SIGNAL AHEAD WARNING SIGN) WHEN THE INTERSECTION BECOMES SIGNALIZED.
6. WHEN WARRANTED, CONSTRUCT A TRAFFIC SIGNAL AT THE INTERSECTION OF FM 1044 AT SAUVIGNON CREEK. THIS IS ANTICIPATED TO OCCUR WHEN THE DEVELOPMENT EXCEEDS 485 SINGLE–FAMILY LOTS OR GENERATES OVER 481 PM PEAK HOUR TRIPS.

LOT SUMMARY TABLE

	# OF LOTS
UNIT 1 (28.59 AC.)	125
UNIT 2 (53.71 AC.)	144
UNIT 3 (22.25 AC.)	115
UNIT 4 (29.56 AC.)	155
UNIT 5 (19.20 AC.)	115
UNIT 6 (23.69 AC.)	129
UNIT 7 (19.87 AC.)	115
UNIT 8 (84.81 AC.)	122
TOTAL RESIDENTIAL LOTS	1020
DRAINAGE LOTS (83.156 AC.)	19
PARK LOTS (3.902 AC.)	1
TOTAL LOTS	1040
TOTAL ACREAGE	281.68 AC.

LOT DENSITY (LOTS/AC) = 3.69 UNITS PER ACRE

FOR REFERENCE ONLY

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600
HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER
[signature] P.E.

06/19/2023

MASTER PLAN

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C1.00

Drawing Name: N:_Projects\031 – DR Horton\031.097 – Winding Creek Ranch Unit 3\CDs\031.097_PLAT.dwg User: reissd Feb 07, 2025 – 10:03am

FINAL PLAT ESTABLISHING

WINDING CREEK RANCH, UNIT 3

BEING A 22.253 ACRE TRACT OF LAND SITUATED IN THE DANIEL CHANDLER SURVEY NO. 489, ABSTRACT NO. 100, LOCATED IN GUADALUPE COUNTY, TEXAS. BEING A PORTION OF A 193.397 ACRE TRACT, RECORDED IN DOCUMENT NO. 202199023875, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS. ALSO BEING A PORTION OF A 88.288 ACRE TRACT, CALLED TRACT I, RECORDED IN DOCUMENT NO. 202199024147, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS.

PLAT NOTES:

1. ALL LOTS WITHIN THE SUBDIVISION WILL BE PROVIDED WATER SERVICES BY GREEN VALLEY SPECIAL UTILITY DISTRICT (GVSUD). SEWER SERVICES WILL BE PROVIDED BY GUADALUPE-BLANCO RIVER AUTHORITY (GBRA) AND ELECTRIC SERVICES WILL BE PROVIDED BY GUADALUPE VALLEY ELECTRIC CORPORATION (GVEC). TELEPHONE AND CABLE SERVICES FOR THE SUBDIVISION WILL BE PROVIDED BY AT&T COMMUNICATIONS AND/OR SPECTRUM.
2. ALL BEARINGS AND COORDINATES SHOWN HEREON ARE BASED UPON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1983, GRID. DISTANCES SHOWN HEREON ARE BASED UPON SURFACE MEASUREMENTS. TO CONVERT SURFACE DISTANCES TO GRID, APPLY A COMBINED SCALE FACTOR OF 1.00015.
3. MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION. MONUMENTS AND LOT MARKERS WILL BE SET WITH 1/2" IRON PINS WITH PLASTIC CAP STAMPED "HMT" IMMEDIATELY AFTER COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
4. THIS SUBDIVISION IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
5. THIS SUBDIVISION IS WITHIN THE EXTRATERRITORIAL JURISDICTION LIMITS OF THE CITY LIMITS OF THE CITY OF NEW BRAUNFELS, TEXAS.
6. THIS SUBDIVISION IS WITHIN THE MARION INDEPENDENT SCHOOL DISTRICT.
7. NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE GUADALUPE COUNTY, TEXAS, FLOOD INSURANCE RATE MAP AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
8. NO STRUCTURES, WALLS OR OTHER OBSTRUCTIONS OF ANY KIND SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT, NO LANDSCAPING, FENCES, OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS SECTIONS OF THE DRAINAGE EASEMENTS OR DECREASE THE HYDRAULIC CAPACITY OF THE EASEMENT, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTOR'S ADJACENT PROPERTY TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.
9. FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.
10. FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS ADJACENT TO THE CURB BY THE DEVELOPER AT THE TIME OF STREET CONSTRUCTION ALONG:
    A. SCOTCH PASS – LOT 916, BLOCK 7.
    B. BLANC CELLAR – LOT 916, BLOCK 10.
    C. HEATHER VINE – LOT 919, BLOCK 17.
    D. CABERNET CASK – LOT 915, BLOCK 17, AND LOT 920, BLOCK 18.
11. FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS ADJACENT TO THE CURB BY THE HOMEBUILDER AT THE TIME OF BUILDING CONSTRUCTION ALONG:
    A. SCOTCH PASS, BLANC CELLAR, ESTERS SHARE, HEATHER VINE, VINTAGE VINE, AND CABERNET CASK.
12. SIX (6) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED ON BOTH SIDES OF THE STREET PER CITY STANDARDS ADJACENT TO THE CURB BY THE DEVELOPER AT THE TIME OF STREET CONSTRUCTION ALONG:
    A. SAUVIGNON CRK
13. THE ELEVATION OF THE LOWEST FLOOR OF A STRUCTURE SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE A FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE AND SHALL PREVENT WATER FROM LEAVING THE STREET.
14. THIS SUBDIVISION IS SUBJECT TO THE 2018 CITY OF NEW BRAUNFELS PARK LAND DEDICATION AND DEVELOPMENT ORDINANCE. THIS PLAT IS APPROVED FOR ONE DWELLING UNIT(S) PER BUILDABLE LOT WITH A MAXIMUM OF 114 BUILDABLE LOTS. AT SUCH TIME THAT ADDITIONAL DWELLING UNITS ARE CONSTRUCTED, THE OWNER OF THE LOT(S) SHALL NOTIFY THE CITY AND COMPLY WITH THE ORDINANCE FOR EACH DWELLING UNIT.
15. ALL DRAINAGE EASEMENTS WITHIN THE LOTS WILL BE OWNED AND MAINTAINED BY PROPERTY OWNER.
16. PERMANENT WATER QUALITY CONTROLS ARE REQUIRED FOR THIS SUBDIVISION PLAT IN ACCORDANCE WITH THE CITY OF NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL.
17. LOT 918, BLOCK 7 (OPEN SPACE), LOT 915, BLOCK 10 (OPEN SPACE), LOT 916, BLOCK 10, (DRAINAGE), LOT 350, BLOCK 17 (DRAINAGE), LOT 373, BLOCK 18 (DRAINAGE) WILL BE OWNED AND MAINTAINED BY THE HOME OWNERS ASSOCIATION, ITS SUCCESSORS AND/OR ASSIGNS.
18. ALL OPEN SPACE AND DRAINAGE AREA LOTS ARE TO BE MAINTAINED BY THE PROPERTY OWNER.

KNOW ALL MEN BY THESE PRESENTS:

I, THE UNDERSIGNED DOROTHY J. TAYLOR, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECTLY MADE UNDER MY SUPERVISION AND IN COMPLIANCE WITH CITY AND STATE SURVEY REGULATIONS AND LAWS AND MADE ON THE GROUND AND THAT THE CORNER MONUMENTS WERE PROPERLY PLACED UNDER MY SUPERVISION.

_____
DOROTHY J. TAYLOR
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 6295
290 S. CASTELL AVE., SUITE 100, NEW BRAUNFELS, TEXAS 78130

PLAT PREPARED OCT 17, 2023

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 10153600

GVSUD NOTES:

EASEMENT CERTIFICATE
THE OWNER OF THE LAND SHOWN ON THIS PLAT AND WHOSE NAME IS SUBSCRIBED HERETO, IN PERSON OR THROUGH A DULY AUTHORIZED AGENT, DEDICATES TO GREEN VALLEY SPECIAL UTILITY DISTRICT OF MARION, TEXAS, ITS SUCCESSORS AND ASSIGNS, A PERPETUAL EASEMENT WIT THE RIGHT TO ERECT, CONSTRUCT, INSTALL AND LAY OVER AND ACROSS THOSE AREAS MARKED AS "WATERLINE EASEMENT" AND IN ALL STREETS AND BYWAYS, SUCH PIPELINES, SERVICE LINES, WATER METERS, AND OTHER WATER SYSTEM APPURTENANCES AS IT REQUIRES, TOGETHER WIT THE RIGHT OF INGRESS AND EGRESS, THE RIGHT TO REMOVE FROM SAID LAND ALL TREES, SHRUBS, GRASSES, PAVEMENTS, FENCES, STRUCTURES, IMPROVEMENTS OR OTHER OBSTRUCTIONS WHICH MAY INTERFERE WITH THE FACILITY OR THE ACCESS THERETO. IT IS AGREED AND UNDERSTOOD THAT NO BUILDING, CONCRETE SLAB OR WALLS WILL BE PLACED WITHIN SAID EASEMENT AREAS. NO OTHER UTILITY LINES MAY BE LOCATED WITHIN 36" PARALLEL TO WATER LINES.

ANY MONETARY LOSS TO GREEN VALLEY SUD RESULTING FROM MODIFICATIONS REQUIRED OF UTILITY EQUIPMENT LOCTED WITHIN SAID EASEMENTS DUE TO GRADE CHANGE OR GROUND ELEVATION ALTERATION SHALL BE CHARGED TO THE PERSON OR PERSONS DEEMED RESPONSIBLE FOR SAID GRADE CHANGES OR GROUND ELEVATION ALTERATIONS. UPON ENTERING IN AND UPON SAID EASEMENT, THE DISTRICT WILL ENDEAVOR TO RESTORE THE LAND SURFACE TO A USEABLE CONDITION BUT IS NOT OBLIGATED TO RESTORE IT TO A PRE-EXISTING CONDITION.

THE EASEMENT CONVEYED HEREIN WAS OBTAINED OR IMPROVED THROUGH FEDERAL FINANCIAL ASSISTANCE. THIS EASEMENT IS SUBJECT TO THE PROVISION OF TITLE VI OF THE CIVIL RIGHTS ACT OF 1964, AND THE REGULATION ISSUED PURSUANT THERETO FOR SO LONG AS THE EASEMENT CONTINUES TO BE USED FOR THE SAME OR SIMILAR PURPOSE FOR WHICH FINANCIAL ASSISTANCE WAS EXTENDED OR FOR AS LONG AS THE GRANTEE OWNS IT, WHICHEVER IS LONGER.

THIS SUBDIVISION PLAT HAS BEEN SUBMITTED TO AND APPROVED FOR EASEMENTS. UPON REQUEST OF THE CUSTOMER AND PAYMENT OF THE REQUIRED FEES, THE DISTRICT WILL PROVIDE DOMESTIC WATER SERVICE TO EACH LOT IN THIS SUBDIVISION, BY AGREEMENT WITH THE DEVELOPER.

GREEN VALLEY SPECIAL UTILITY DISTRICT _____ DATE _____

STATE OF TEXAS
COUNTY OF GUADALUPE

I (WE) THE UNDERSIGNED OWNER(S) OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS THE WINDING CREEK RANCH, UNIT 3 A SUBDIVISION TO THE CITY OF NEW BRAUNFELS, COUNTY OF GUADALUPE, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY SUBDIVIDE SUCH PROPERTY AND DEDICATE TO THE USE OF THE PUBLIC ALL STREETS, ALLEYS, PARKS, DRAINS, EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

_____
CONTINENTAL HOMES OF TEXAS, LP
A TEXAS LIMITED PARTNERSHIP
BY: CHTEX OF TEXAS, INC.
A DELAWARE CORPORATION, ITS SOLE GENERAL PARTNER
BY: LESLIE OSTRANDER – ASSISTANT SECRETARY
5419 NORTH LOOP 1604 EAST
SAN ANTONIO, TEXAS 78247

STATE OF TEXAS
COUNTY OF _____.

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS
_____ DAY OF _____, 20___,
BY _____

_____
NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES: _____

GVEC NOTES:

1. WHERE UNDERGROUD SERVICES ARE UTILIZED GVEC WILL POSSESS A 5-FOOT WIDE EASEMENT TO THE SERVICE METER LOCATION. EASEMENT TO FOLLOW SERVICE LINE AND WILL VARY DEPENDING ON LOCATION OF BUILDING OR STRUCTURE.
2. GVEC SHALL HAVE ACCESS TO METER LOCATIONS FROM THE FRONT YARD WITH THE LOCATION NOT BEING WITHIN A FENCED AREA.
3. ANY EASEMENT DESIGNATED AS A GVEC 20'x20' UTILITY EASEMENT SHALL REMAIN OPEN FOR ACCESS AT ALL TIMES AND SHALL NOT BE WITHIN A FENCED AREA.
4. ALL UTILITY EASEMENTS ARE FOR THE CONSTRUCTION, UPGRADE, MAINTENANCE (INCLUDING BUT NOT LIMITED TO REMOVAL OF TREES AND OTHER OBSTRUCTIONS), READING OF METERS, AND REPAIR OF ALL OVERHEAD AND UNDERGROUND UTILITIES AND SHALL REMAIN AT FINAL GRADE.
5. ALL ELECTRIC EASEMENTS, FOR BOTH PRIMARY AND SECONDARY ELECTRIC SERVICE, INCLUDE RIGHTS OF INGRESS AND EGRESS ACROSS THE SUBDIVISION FOR THE PURPOSE OF INSTALLING, SERVICING, UPGRADING, AND MAINTAINING THE ELECTRICAL FACILITIES AND SHALL REMAIN AT FINAL GRADE.
6. ANY REQUEST TO SUBSEQUENTLY RELOCATE ANY PORTION OF THE ELECTRIC FACILITIES INSTALLED SHALL BE SUBJECT TO THE COOPERATIVE'S REASONABLE DISCRETION AND THE REQUESTING PARTY SHALL BEAR ALL COSTS ASSOCIATED WITH SUCH RELOCATION.
7. THE COOPERATIVE SHALL ONLY BE REQUIRED TO FILL, GRADE, AND RESTORE GROUND COVER BACK TO ORIGINAL GRADE AS A RESULT OF ANY EXCAVATION BY OR ON BEHALF OF THE COOPERATIVE.

THIS SUBDIVISION PLAT OF WINDING CREEK RANCH, UNIT 3 HAS BEEN SUBMITTED TO AND APPROVED BY GUADALUPE VALLEY ELECTRIC COOPERATIVE, INC. FOR EASEMENTS.
COOPERATIVE, INC. FOR EASEMENTS.

_____
AGENT FOR GUADALUPE VALLEY ELECTRIC COOP., INC. DATE

GBRA NOTES:

1. THE GUADALUPE-BLANCO RIVER AUTHORITY (GBRA) IS HEREBY DEDICATED THE EASEMENT AND RIGHTS-OF-WAY IN THE AREAS DESIGNATED ON THIS PLAT AS "SANITARY SEWER" AS WELL AS THOSE EASEMENTS AND RIGHTS-OFWAY SPECIFICALLY DEDICATED TO IT FOR THE PURPOSE OF ACCESSING, INSTALLING, CONSTRUCTING, RECONSTRUCTING, OPERATING, MAINTAINING, INSPECTING, REPAIRING, REMOVING, AND RELOCATING BURIED AND/OR EXPOSED SANITARY SEWER FACILITIES AND APPURTENANCES.
2. TOGETHER WITH THE RIGHT OF INGRESS AND EGRESS, GBRA SHALL HAVE THE RIGHT TO REMOVE SAID LANDS OF ALL TREES OR PARTS THEREOF, OR ANY OTHER OBSTRUCTIONS WHICH MAY ENDANGER, OR INTERFERE WITH MAINTENANCE OF THE FACILITIES AND APPURTENANCES.
3. OTHER UTILITIES, STRUCTURES, GRADING, DRAINAGE, DETENTION/RETENTION PONDS, LANDSCAPING, TREES, ROADS, PARKING LOTS, FENCES, WALLS, CONSTRUCTION OF ANY TYPE, OR ANY OTHER IMPROVEMENTS OR OBSTRUCTIONS, ARE NOT ALLOWED WITHIN GBRA EASEMENT.
4. DESIGNS FOR ANY PROPOSED ALTERATIONS OR CROSSINGS OF GBRA EASEMENTS MUST BE APPROVED IN WRITING BY GBRA AND THE INSTALLATION OF SUCH MUST BE INSPECTED AND APPROVED BY GBRA.
5. MAINTENANCE OF EASEMENTS IS THE RESPONSIBILITY OF THE PROPERTY OWNER.
6. THE PROPERTY OWNER MUST INSTALL 16-FOOT GATES IN ANY FENCES THAT CROSS GBRA UTILITIES; GATES MUST BE CENTERED ACROSS GBRA UTILITIES.
7. CUSTOMER SANITARY SEWER SERVICES SHALL NOT BE INSTALLED WITHIN FENCED AREAS.

THIS SUBDIVISION PLAT HAS BEEN SUBMITTED TO AND APPROVED FOR EASEMENTS. UPON REQUEST OF THE CUSTOMER AND PAYMENT OF THE REQUIRED FEES, GBRA WILL PROVIDE DOMESTIC SEWER SERVICE TO EACH LOT IN THIS SUBDIVISION, BY AGREEMENT WITH THE DEVELOPER.

STATE OF TEXAS
COUNTY OF GUADALUPE

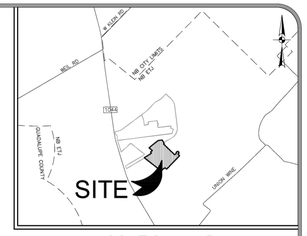
I (WE) THE UNDERSIGNED OWNER(S) OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS THE WINDING CREEK RANCH, UNIT 3 A SUBDIVISION TO THE CITY OF NEW BRAUNFELS, COUNTY OF GUADALUPE, TEXAS, AND WHOSE NAME IS SUBSCRIBED HERETO, DO HEREBY SUBDIVIDE SUCH PROPERTY AND DEDICATE TO THE USE OF THE PUBLIC ALL STREETS, ALLEYS, PARKS, DRAINS, EASEMENTS, AND PUBLIC PLACES THEREON SHOWN FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED.

_____
190 WINDING CREEK INVESTMENTS, LTD.
BY: ISRAEL FOGIEL
10003 NW MILITARY HWY SUITE 2201
SAN ANTONIO, TEXAS 78231

STATE OF TEXAS
COUNTY OF _____.

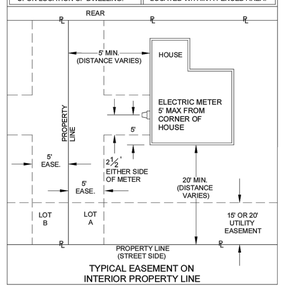
THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS
_____ DAY OF _____, 20___,
BY _____

_____
NOTARY PUBLIC, STATE OF TEXAS
MY COMMISSION EXPIRES: _____



LOCATION MAP
NOT TO SCALE

NOTE: G.V.E.C. WILL MAINTAIN 5' EASEMENT FOR SERVICE ENTRANCE TO DWELLING. THIS EASEMENT WILL VARY DEPENDING UPON LOCATION OF DWELLING.	G.V.E.C. SHALL HAVE ACCESS TO THE METER LOCATIONS FROM THE FRONT YARDS WITH THE METER LOCATIONS NOT BEING LOCATED WITHIN A FENCED AREA.



TYPICAL EASEMENT ON
INTERIOR PROPERTY LINE

APPROVED THIS THE _____ DAY OF _____, 20___,
BY THE PLANNING COMMISSION OF THE CITY OF NEW BRAUNFELS, TEXAS.

_____
CHAIRMAN

APPROVED FOR ACCEPTANCE

_____ _____
DATE PLANNING DIRECTOR

_____ _____
DATE CITY ENGINEER

STATE OF TEXAS
COUNTY OF GUADALUPE

COUNTY CLERK, GUADALUPE COUNTY, TEXAS

_____
DEPUTY

PLAT STATUS: FOR REFERENCE ONLY,
HAS NOT BEEN SUBMITTED FOR FINAL
PLAT REVIEW BY CITY.

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

SUBDIVISION PLAT (1 OF 2)
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C1.01

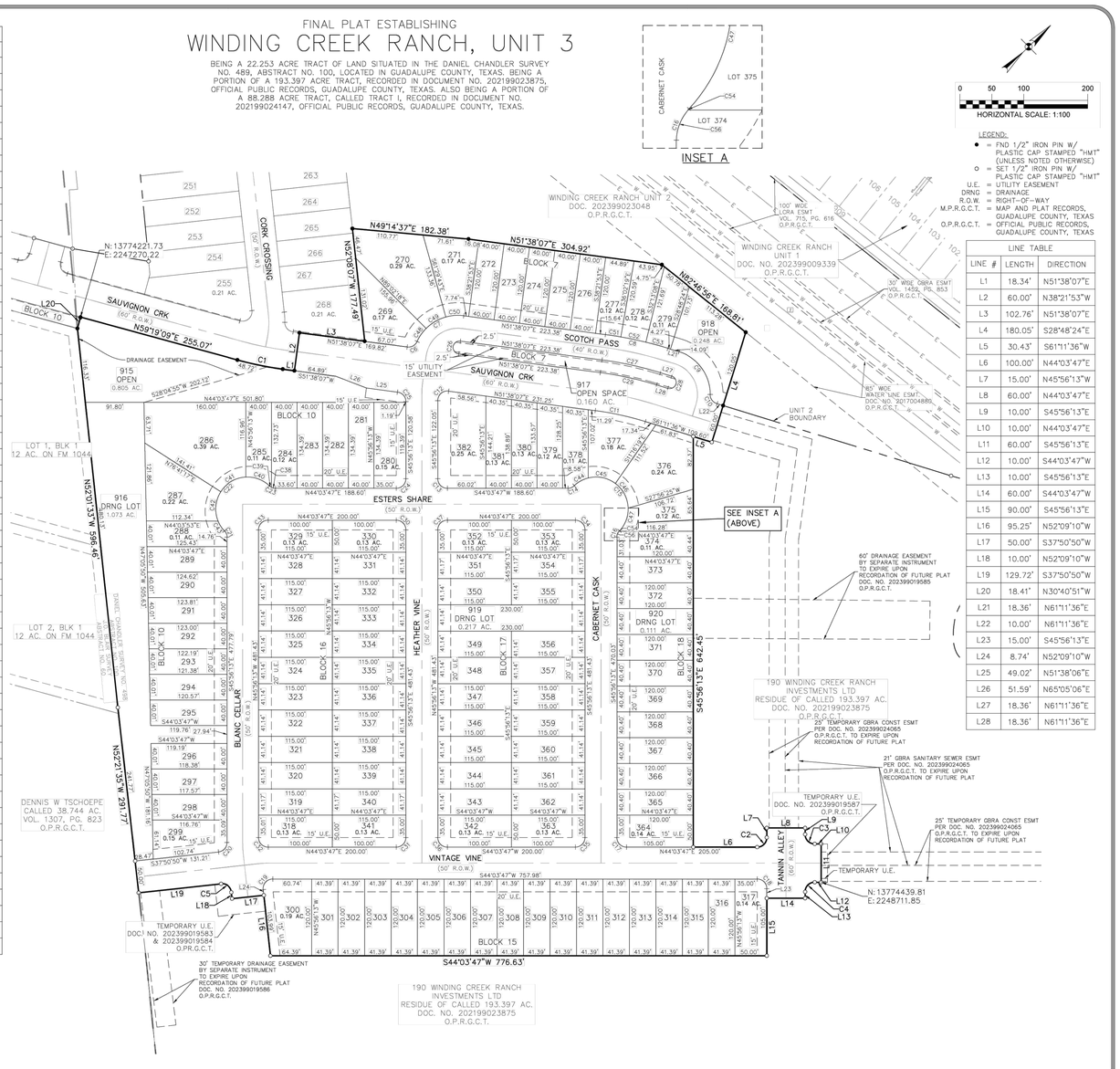
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cbk\031.097_PLAT.dwg User: reissd Feb 07, 2025 - 10:03am
Drawing Name: C:\Users\chrisvh\AppData\Local\Temp\AcPublish_7516\Winding Creek Ranch Unit 3 Plat.dwg User: chrisvh Nov 28, 2023 - 12:22pm

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C1	72.42'	540.00'	007°41'03"	36.26'	72.37'	N55°28'38"E
C2	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°56'13"W
C3	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°03'47"E
C4	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°56'13"E
C5	23.56'	15.00'	090°00'00"	15.00'	21.21'	S82°50'50"W
C6	19.08'	15.00'	072°53'43"	11.08'	17.82'	N15°11'15"E
C7	89.06'	70.00'	072°53'43"	51.70'	83.17'	N15°11'15"E
C8	100.09'	600.00'	009°33'30"	50.16'	99.98'	S56°24'52"W
C9	89.06'	70.00'	072°53'43"	51.70'	83.17'	N82°21'32"W
C10	19.08'	15.00'	072°53'43"	11.08'	17.82'	S82°21'32"E
C11	80.07'	480.00'	009°33'30"	40.13'	79.98'	S56°24'52"W
C12	25.54'	15.00'	097°34'19"	17.13'	22.57'	S02°50'57"W
C13	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°03'47"E
C14	10.80'	15.00'	041°15'24"	5.65'	10.57'	N21°35'58"E
C15	153.67'	50.00'	176°05'53"	1467.86'	99.94'	S89°03'47"W
C16	10.80'	15.00'	041°15'24"	5.65'	10.57'	S23°28'23"E
C17	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°03'47"E
C18	23.56'	15.00'	090°00'00"	15.00'	21.21'	S89°03'47"W
C19	25.19'	15.00'	096°12'57"	16.72'	22.33'	S04°02'41"E
C20	21.94'	15.00'	083°46'57"	13.46'	20.04'	N04°01'40"W
C21	10.78'	15.00'	041°10'19"	5.63'	10.55'	N68°26'47"W
C22	153.67'	50.00'	176°05'50"	1467.49'	99.94'	S00°56'11"E
C23	10.80'	15.00'	041°15'24"	5.65'	10.57'	N66°31'37"E
C24	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°56'13"W
C25	21.58'	15.00'	082°25'41"	13.14'	19.77'	N87°09'03"W
C26	31.42'	10.00'	180°00'00"	INFINITY'	20.00'	S38°21'53"E
C27	93.42'	560.00'	009°33'30"	46.82'	93.31'	S56°24'52"W
C28	31.42'	10.00'	180°00'00"	INFINITY'	20.00'	N28°48'24"W
C29	90.08'	540.00'	009°33'30"	45.15'	89.98'	S56°24'52"W
C30	23.56'	15.00'	090°00'00"	15.00'	21.21'	S89°03'47"W
C31	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°56'13"W
C32	23.55'	15.00'	089°58'16"	14.99'	21.21'	N89°02'56"E
C33	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°56'13"E
C34	23.56'	15.00'	090°00'00"	15.00'	21.21'	S89°03'47"W
C35	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°56'13"W
C36	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°03'47"E
C37	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°56'13"E
C38	6.67'	15.00'	025°27'40"	3.39'	6.61'	N58°37'45"E
C39	4.14'	15.00'	015°47'45"	2.08'	4.12'	N79°15'27"E
C40	40.07'	50.00'	045°54'54"	21.18'	39.00'	S64°09'17"W
C41	47.57'	50.00'	054°30'33"	25.76'	45.79'	S13°56'34"W
C42	47.57'	50.00'	054°30'33"	25.76'	45.79'	S40°33'59"E
C43	18.47'	50.00'	021°09'51"	9.34'	18.36'	S78°24'10"E
C44	24.96'	50.00'	028°35'58"	12.74'	24.70'	S15°18'50"W
C45	44.76'	50.00'	051°17'45"	24.01'	43.28'	S55°15'41"W
C46	44.87'	50.00'	051°25'03"	24.07'	43.38'	N73°22'55"W
C47	39.08'	50.00'	044°47'08"	20.60'	38.10'	N25°16'50"W
C48	24.80'	70.00'	020°17'55"	12.53'	24.67'	S11°06'39"E
C49	36.00'	70.00'	029°27'59"	18.41'	35.60'	S13°46'18"W
C50	28.26'	70.00'	023°07'49"	14.32'	28.07'	S40°04'12"W
C51	24.36'	600.00'	002°19'34"	12.18'	24.36'	S52°47'54"W
C52	40.00'	600.00'	003°49'11"	20.01'	39.99'	S55°52'17"W
C53	35.73'	600.00'	003°24'44"	17.87'	35.73'	S59°29'14"W
C54	0.48'	15.00'	001°49'24"	0.24'	0.48'	S03°45'23"E
C56	10.32'	15.00'	039°26'01"	5.38'	10.12'	S24°23'05"E

FINAL PLAT ESTABLISHING

WINDING CREEK RANCH, UNIT 3

BEING A 22.253 ACRE TRACT OF LAND SITUATED IN THE DANIEL CHANDLER SURVEY NO. 489, ABSTRACT NO. 100, LOCATED IN GUADALUPE COUNTY, TEXAS, BEING A PORTION OF A 193.397 ACRE TRACT, RECORDED IN DOCUMENT NO. 202199023875, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS. ALSO BEING A PORTION OF A 88.288 ACRE TRACT, CALLED TRACT I, RECORDED IN DOCUMENT NO. 202199024147, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS.



LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	18.34'	N51°38'07"E
L2	60.00'	N38°21'53"W
L3	102.76'	N51°38'07"E
L4	180.05'	S28°48'24"E
L5	30.43'	S61°11'36"W
L6	100.00'	N44°03'47"E
L7	15.00'	N45°56'13"W
L8	60.00'	N44°03'47"E
L9	10.00'	S45°56'13"E
L10	10.00'	N44°03'47"E
L11	60.00'	S45°56'13"E
L12	10.00'	S44°03'47"W
L13	10.00'	S45°56'13"E
L14	60.00'	S44°03'47"W
L15	90.00'	S45°56'13"E
L16	95.25'	N52°09'10"W
L17	50.00'	S37°50'50"W
L18	10.00'	N52°09'10"W
L19	129.72'	S37°50'50"W
L20	18.41'	N30°40'51"W
L21	18.36'	N61°11'36"E
L22	10.00'	N61°11'36"E
L23	15.00'	S45°56'13"E
L24	8.74'	N52°09'10"W
L25	49.02'	N51°38'06"E
L26	51.59'	N65°05'06"E
L27	18.36'	N61°11'36"E
L28	18.36'	N61°11'36"E

REVISED JULY 25, 2023
REVISED JULY 11, 2023
REVISED MAY 25, 2023
REVISED MAY 16, 2023
REVISED JULY 19, 2022
PLAT PREPARED FEB 25, 2022

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 10153600

PLAT STATUS: FOR REFERENCE ONLY,
HAS NOT BEEN SUBMITTED FOR FINAL
PLAT REVIEW BY CITY.

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

SUBDIVISION PLAT (2 OF 2)

WINDING CREEK RANCH UNIT 3

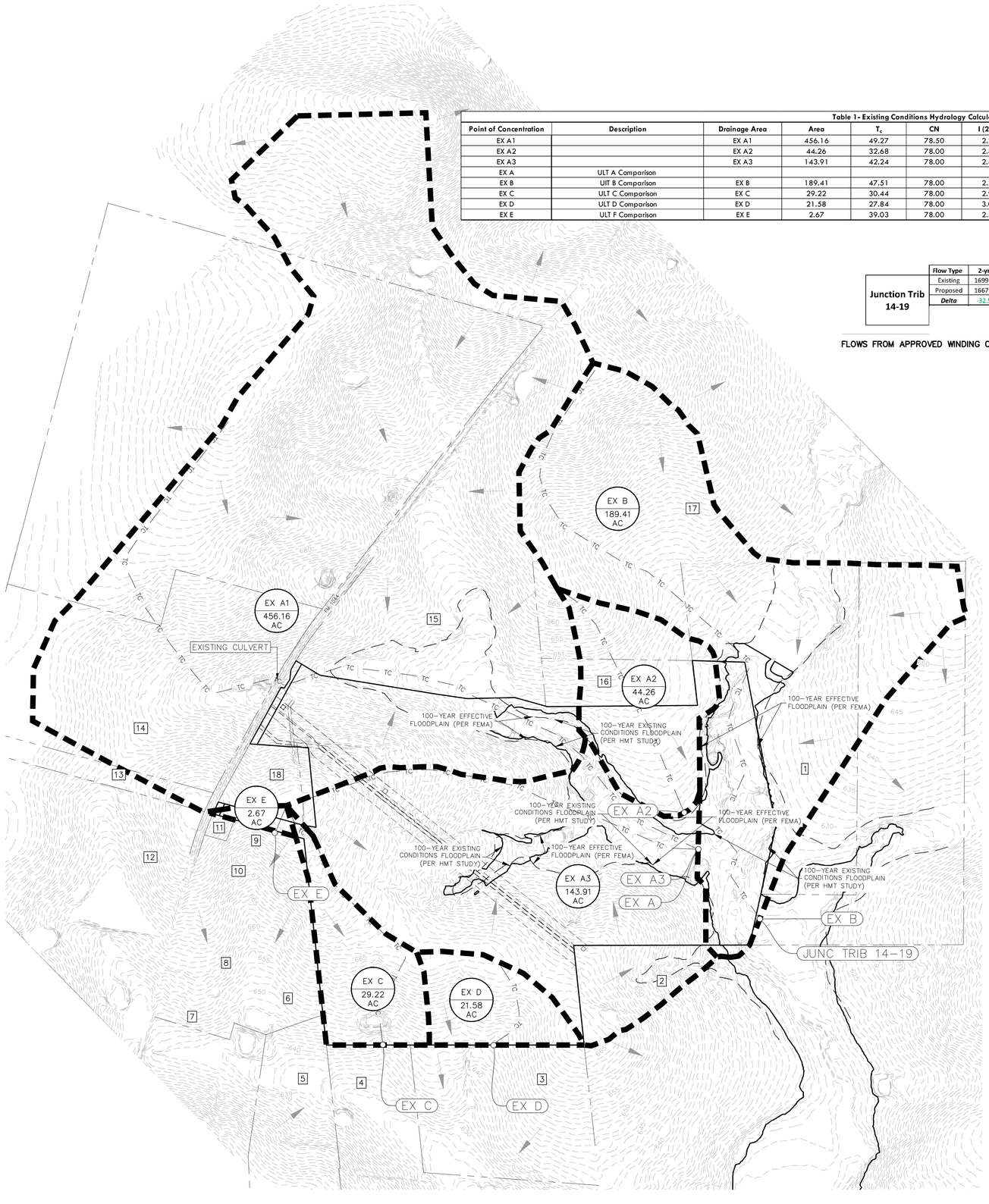
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

SHEET
C1.02

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cts\031.097_PLAT.dwg User: phillipm Dec 19, 2023 - 4:36pm User: reissl Feb 07, 2025 - 10:03am
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Plat\Winding Creek Ranch Unit 3 Plat.dwg



0 250 500 1000

HORIZONTAL SCALE: 1:500

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- DRAINAGE AREA
- TC TC TIME OF CONCENTRATION
- A–1 POINT OF CONCENTRATION
- DRAINAGE FLOW DIRECTION
- DA / ACRES DRAINAGE AREA LABEL

Table 1- Existing Conditions Hydrology Calculations - City of New Braunfels

Point of Concentration	Description	Drainage Area	Area	T_c	CN	I (2 yr)	I (10yr)	I (25yr)	I (100yr)	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
EX A1		EX A1	456.16	49.27	78.50	2.26	3.31	4.00	5.11	482.80	1072.73	1541.49	1963.25	2447.83
EX A2		EX A2	44.26	32.68	78.00	2.88	4.22	5.07	6.44	57.06	127.89	184.08	234.64	292.73
EX A3		EX A3	143.91	42.24	78.00	2.48	3.64	4.38	5.58	162.22	363.43	523.72	668.05	833.99
EX A	ULT A Comparison									694.92	1546.70	2222.75	2832.37	3532.87
EX B	UlT B Comparison	EX B	189.41	47.51	78.00	2.29	3.36	4.06	5.17	196.28	440.15	634.58	809.72	1011.05
EX C	ULT C Comparison	EX C	29.22	30.44	78.00	2.98	4.36	5.24	6.66	37.67	84.43	121.53	154.91	193.26
EX D	ULT D Comparison	EX D	21.58	27.84	78.00	3.09	4.52	5.43	6.90	29.05	65.06	93.58	119.22	148.68
EX E	ULT F Comparison	EX E	2.67	39.03	78.00	2.59	3.79	4.57	5.80	3.13	7.01	10.09	12.87	16.06

Junction Trib 14-19

Flow Type	2-yr	10-yr	25-yr	50-yr	100-yr
Existing	1699.9	3591.0	4896.5	5959.7	7113.1
Proposed	1667.4	3549.4	4848.2	5912.2	7067.3
Delta	-32.5	-41.6	-48.3	-47.5	-45.8

FLOWS FROM APPROVED WINDING CREEK RANCH CLOMR

PARCEL DATA TABLE

KEY	DATA
1	NANCY & W A GRIER CALLED 111.48 AC VOL. 966, PG. 244 O.P.R.G.C.T.
2	H & L M SCHEFFEL WILBURN CALLED 88.00 AC VOL. 748, PG. 840
3	REBA JOE WIEDNER CALLED 45.80 AC DOC. NO. 201999001898 O.P.R.G.C.T.
4	ELTON C SEEWALD CALLED 22.03 AC DOC. NO. 201999005658 O.P.R.G.C.T.
5	EDWARD JOSEPH & GAIL MARIE DEML CALLED 29.5950 AC VOL. 1425, PG. 361 O.P.R.G.C.T.
6	CALLED 12.000 ACRES VOL. 2736, PG. 556 O.P.R.G.C.T.
7	CALLED 2.000 ACRES VOL. 2753, PG. 110 O.P.R.G.C.T.
8	REMAINDER OF A CALLED 51.733 ACRES VOL. 1307, PG. 823 O.P.R.G.C.T.
9	12.00 ACRES ON FM 1044 LOT 1, BLOCK 1 DOC. NO. 201999026855 O.P.R.G.C.T.
10	12.00 ACRES ON FM 1044 LOT 2, BLOCK 1 DOC. NO. 201999026855 O.P.R.G.C.T.
11	CALLED 0.998 AC VOL. 3515, PG. 989 O.P.R.G.C.T.
12	TERRY & KAREN CANHAM CALLED 59.786 AC VOL. 4140, PG. 92 O.P.R.G.C.T.
13	ZACHARY GRIER CALLED 3.00 AC DOC. NO. 201999005210 O.P.R.G.C.T.
14	FRED HEIMER TRUST CALLED 91.63 AC VOL. 4157, PG. 19 O.P.R.G.C.T.
15	MARY JO ZIPP CALLED 90.0120 AC VOL. 4255, PG. 680 O.P.R.G.C.T.
16	MARY JO ZIPP CALLED 90.0120 AC VOL. 4255, PG. 680 O.P.R.G.C.T.
17	MARY JO ZIPP CALLED 90.0120 AC VOL. 4255, PG. 680 O.P.R.G.C.T.
18	JACKIE & CHARLENE NOLTE CALLED 8.026 AC. VOL. 1503, PG. 801 O.P.R.G.C.T.

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

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CHRISTOPHER P. VAN HEERDE
93047
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PROFESSIONAL ENGINEER

06/19/2023

EXISTING DRAINAGE AREA MAP

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C2.00

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03a\031.097_DRNG EX.dwg User: rossd Feb 07, 2025 - 10:04am

Table 2 - Ultimate Proposed Conditions Hydrology Calculations - City of New Braunfels

Point of Concentration	Description	Drainage Area	Area	T_c	CN	I (2yr)	I (10yr)	I (25yr)	I (100yr)	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
ULT A		ULT A	445.59	49.27	85.13	2.26	3.31	4.00	5.11	604.79	1202.67	1660.58	2068.46	2535.17
ULT B		ULT B	385.35	34.76	81.65	4.87	7.23	8.78	11.70	529.00	1140.70	1559.80	1905.10	2280.30
ULT C1	Inlet & Street Calcs	ULT C1	2.42	23.24	85.85	3.41	4.99	6.00	7.64	3.79	7.45	10.25	12.75	15.60
ULT C2	Street Calcs & Basin C	ULT C2	26.08	23.11	86.89	4.10	6.03	7.26	9.64	42.35	81.79	111.93	138.74	169.42
ULT C										23.44	75.67	116.20	151.13	191.25
ULT D	Detention Basin D Sizing	ULT D	19.20	16.17	87.00	4.10	6.03	7.26	9.29	37.19	71.71	97.96	121.40	148.22
ULT E1	Free Release	ULT E1	4.92	10.26	87.00	5.05	7.50	9.12	11.70	10.32	19.91	27.20	33.68	41.09
ULT E2	Free Release	ULT E2	2.51	10.37	87.00	5.05	7.50	9.12	11.70	5.26	10.16	13.87	17.18	20.96
ULT E	Free Release									15.58	30.06	41.07	50.86	62.06
ULT F	Street Calcs	ULT F	0.96	10.00	87.00	5.05	7.50	9.12	11.70	2.01	3.88	5.31	6.57	8.02

Table 3 - Detention Basin 1

	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
Discharge (cfs)	78.50	141.90	192.70	237.20	288.00
Volume (AC-FT)	7.40	14.20	18.80	22.60	26.80
Time to Drain (hrs)	25.00	25.17	25.17	25.17	25.50
Water Surface Elevation	633.60	634.80	635.60	636.20	636.90
Freeboard (ft)	4.40	3.20	2.40	1.80	1.10

Table 4 - Combined Water Quality and Detention Basin 2

	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
Discharge (cfs)	529.00	1140.70	1559.80	1905.10	2280.30
Volume (AC-FT)	22.60	34.20	41.30	46.70	52.30
Time to Drain (hrs)	48.83	50.33	50.50	50.67	50.67
Water Surface Elevation	624.60	625.50	625.90	626.30	626.70
Freeboard (ft)	3.14	2.24	1.84	1.44	1.04

Table 5 - Combined Water Quality and Detention Basin C Ultimate Conditions

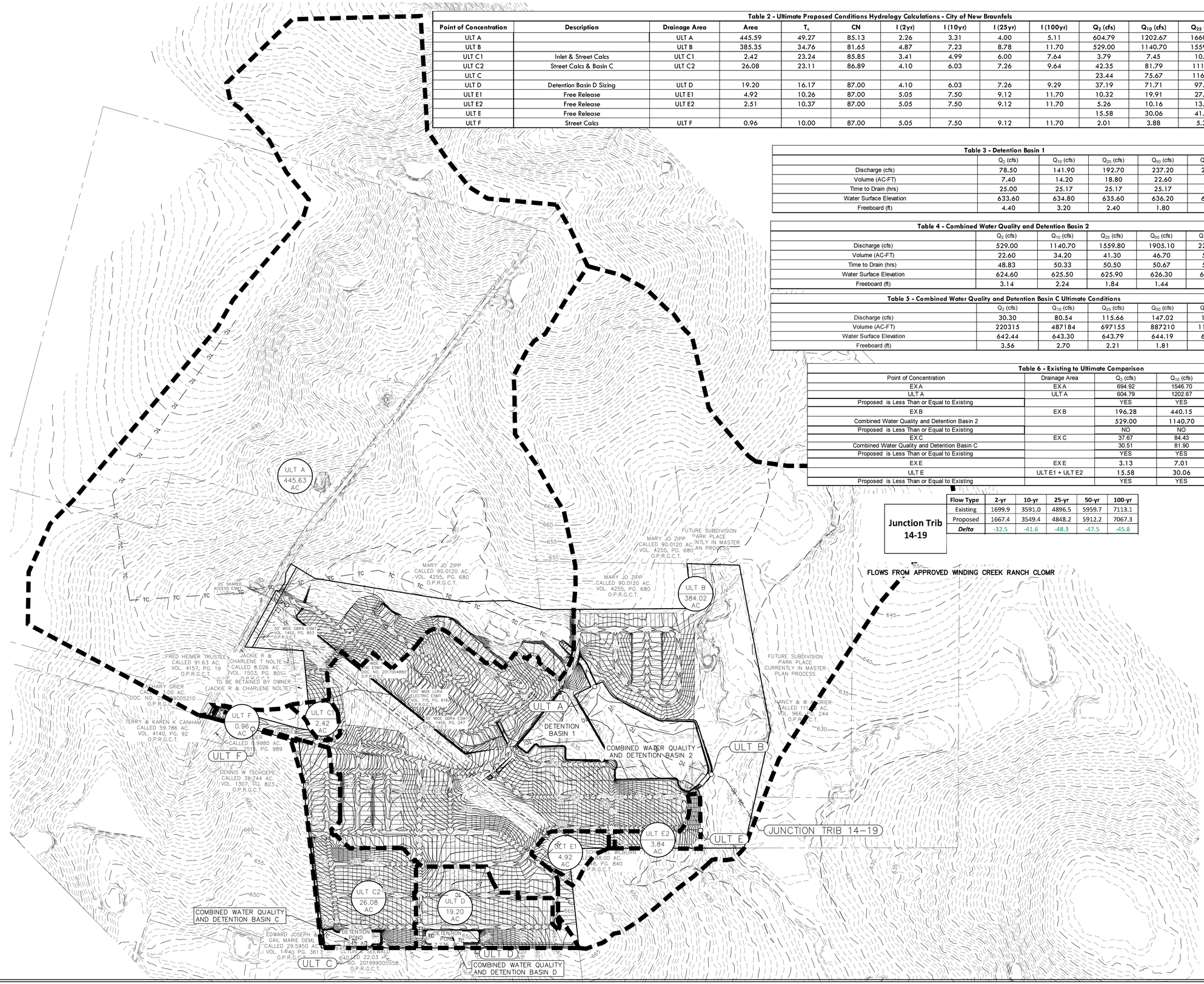
	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
Discharge (cfs)	30.30	80.54	115.66	147.02	183.75
Volume (AC-FT)	220315	487184	697155	887210	1107294
Water Surface Elevation	642.44	643.30	643.79	644.19	644.62
Freeboard (ft)	3.56	2.70	2.21	1.81	1.38

Table 6 - Existing to Ultimate Comparison

Point of Concentration	Drainage Area	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
EX A	EX A	694.92	1546.70	2222.75	2832.37	3532.87
ULT A	ULT A	604.79	1202.67	1660.58	2068.46	2535.17
Proposed is Less Than or Equal to Existing		YES	YES	YES	YES	YES
EX B	EX B	196.28	440.15	634.58	809.72	1011.05
Combined Water Quality and Detention Basin 2		529.00	1140.70	1559.80	1905.10	2280.30
Proposed is Less Than or Equal to Existing		NO	NO	NO	NO	NO
EX C	EX C	37.67	84.43	121.53	154.91	193.26
Combined Water Quality and Detention Basin C		30.51	81.90	117.48	149.18	185.95
Proposed is Less Than or Equal to Existing		YES	YES	YES	YES	YES
EX E	EX E	3.13	7.01	10.09	12.87	16.06
ULT E	ULT E1 + ULT E2	15.58	30.06	41.07	50.86	62.06
Proposed is Less Than or Equal to Existing		YES	YES	YES	YES	YES

Junction Trib 14-19

Flow Type	2-yr	10-yr	25-yr	50-yr	100-yr
Existing	1699.9	3591.0	4896.5	5959.7	7113.1
Proposed	1667.4	3549.4	4848.2	5912.2	7067.3
Delta	-32.5	-41.6	-48.3	-47.5	-45.8



290 S. CASTELL AVE., STE. 100
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TBPLS FIRM 1053600

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CHRISTOPHER P. VAN HEERDE
93047
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PROFESSIONAL ENGINEER

06/19/2023

ULTIMATE CONDITIONS DRAINAGE AREA MAP

WINDING CREEK RANCH UNIT 3

NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

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C2.01

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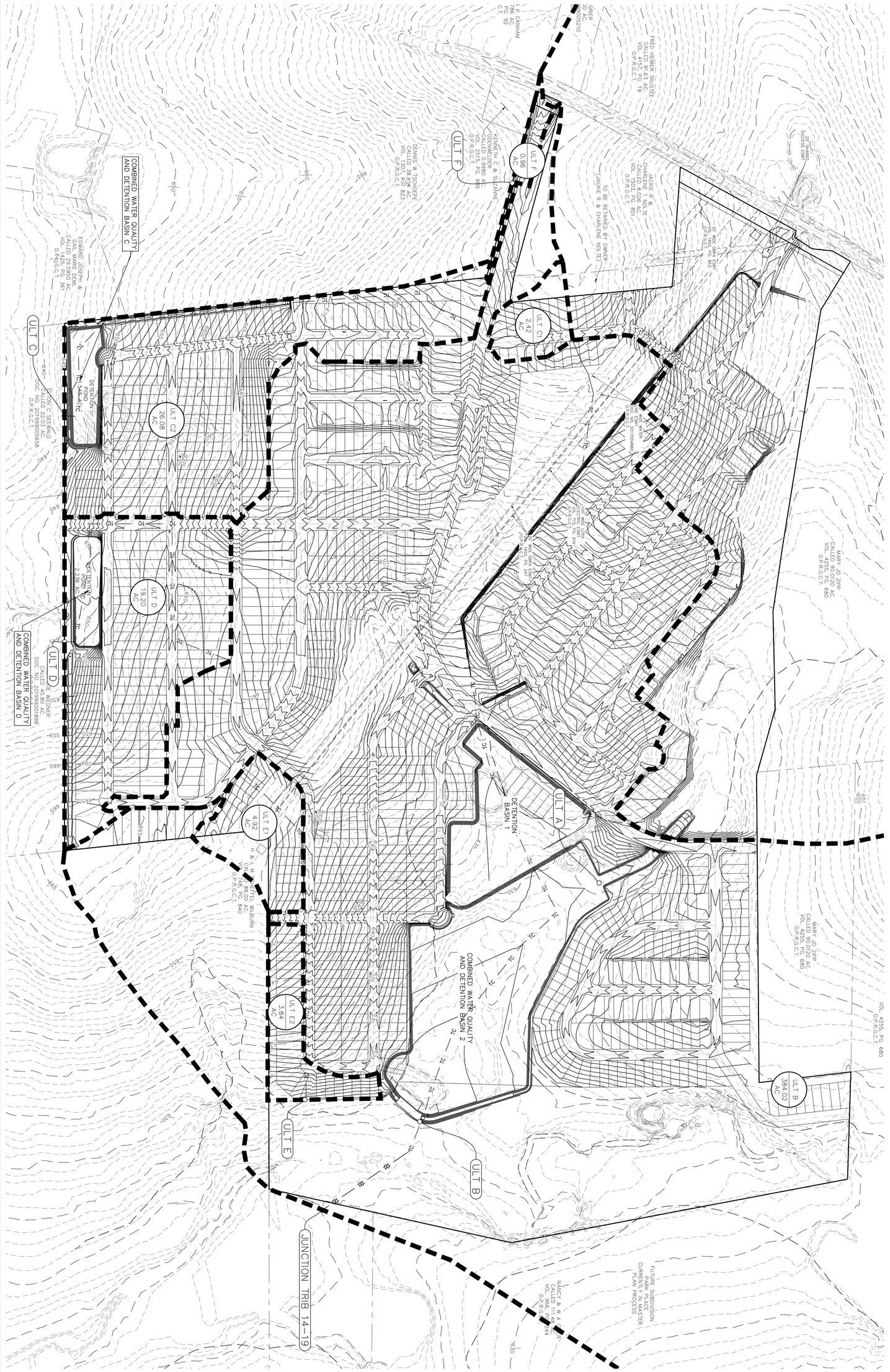

ULTIMATE CONDITIONS DRAINAGE AREA MAP INSET

WINDING CREEK RANCH UNIT 3

NEW BRAUNFELS, TEXAS

06/19/2023

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
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HMT PROJECT NO.: 031.097

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CHRISTOPHER V. HANEBERG 150041 LICENSED PROFESSIONAL ENGINEER STATE OF TEXAS

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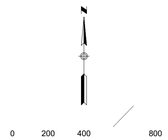
Table 6 - Intermediate Unit 3 Proposed Conditions Hydrology Calculations - City of New Braunfels

Point of Concentration	Description	Drainage Area	Area	T_c	CN	I 2(yr)	I (10yr)	I (25yr)	I (100yr)	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
P3 A		P3 A	445.59	49.27	78.59	2.26	3.31	4.00	5.11	586.36	1182.81	1641.39	2050.20	2518.07
P3 B1		P3 B1	19.23	36.19	87.00	2.71	3.96	4.77	6.06	32.62	62.80	85.74	106.15	129.51
P3 B2		P3 B2	22.18	16.90	87.00	3.97	5.83	7.02	8.98	49.09	94.49	128.99	159.67	194.76
P3 B3		P3 B3	44.28	32.82	78.00	2.84	4.15	4.99	6.34	57..09	127.94	184.16	234.75	292.86
P3 B4		P3 B4	303.97	47.51	78.00	2.32	3.40	4.11	5.23	315.00	706.36	1018.39	1299.45	1622.55
P3 B										420.60	926.56	1326.67	1686.64	2100.29
P3 C1		P3 C1	2.45	23.24	85.42	3.41	4.99	6.00	7.64	5.07	9.82	13.45	16.68	20.37
P3 C2		P3 C2	6.05	18.40	86.54	3.86	5.66	6.81	8.71	13.35	25.70	35.15	43.52	53.09
P3 C3		P3 C3	20.95	13.84	78.00	4.54	6.72	8.13	10.42	35.26	79.01	113.65	144.74	180.47
P3 C		P3 C								53.49	113.46	160.26	202.54	251.08
P3 D		P3 D	21.45	27.84	78.00	3.09	4.44	5.33	6.90	28.88	64.67	93.01	118.51	147.79
P3 F		P3 F	0.96	10.00	87.00	5.05	7.50	9.12	11.70	2.53	4.85	6.62	8.19	9.99

Table 7 - Combined Water Quality and Detention Basin C Intermediate Conditions

	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
Discharge (cfs)	19.27	71.33	109.27	142.56	180.48
Volume (AC-FT)	172816	432149	642050	834195	645
Water Surface Elevation	642.19	643.16	643.71	644.14	644.59
Freeboard (ft)	3.81	2.84	2.29	1.86	1.41



LEGEND

- 700 — EXISTING CONTOURS
- 700 — PROPOSED CONTOURS
- B.L. — BUILDING SETBACK LINE
- U.E. — UTILITY EASEMENT
- D.E. — DRAINAGE EASEMENT
- DRAINAGE AREA
- TC — TC — TIME OF CONCENTRATION
- A–1 — POINT OF CONCENTRATION
- DRAINAGE FLOW DIRECTION
- DA / ACRES — DRAINAGE AREA LABEL

Table 8 - Existing to Intermediate Unit 3 Proposed Comparison

Point of Concentration	Draiange Area	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
EX C	EX C	37.67	84.43	121.53	154.91	193.26
Combined Water Quality and Detention Basin C	P3 C	19.27	80.54	115.66	147.02	180.48
Proposed is Less Than or Equal to Existing		YES	YES	YES	YES	YES
Point of Concentration	Draiange Area	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
EX D	EX D	29.05	65.06	93.58	119.22	148.68
P3 D	P3 D	28.88	64.67	93.01	118.51	147.79
Proposed is Less Than or Equal to Existing		YES	YES	YES	YES	YES
Point of Concentration	Draiange Area	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
EX E	EX E	3.13	7.01	10.09	12.87	16.06
P3 F	P3 F	2.53	4.85	6.62	8.19	9.99
Proposed is Less Than or Equal to Existing		YES	YES	YES	YES	YES

290 S. CASTELL AVE., STE. 100
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TBPE FIRM F-10961
TBPLS FIRM 1053600

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STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

PROPOSED INTERMEDIATE UNIT 3 DRAINAGE AREA MAP

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

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C2.03

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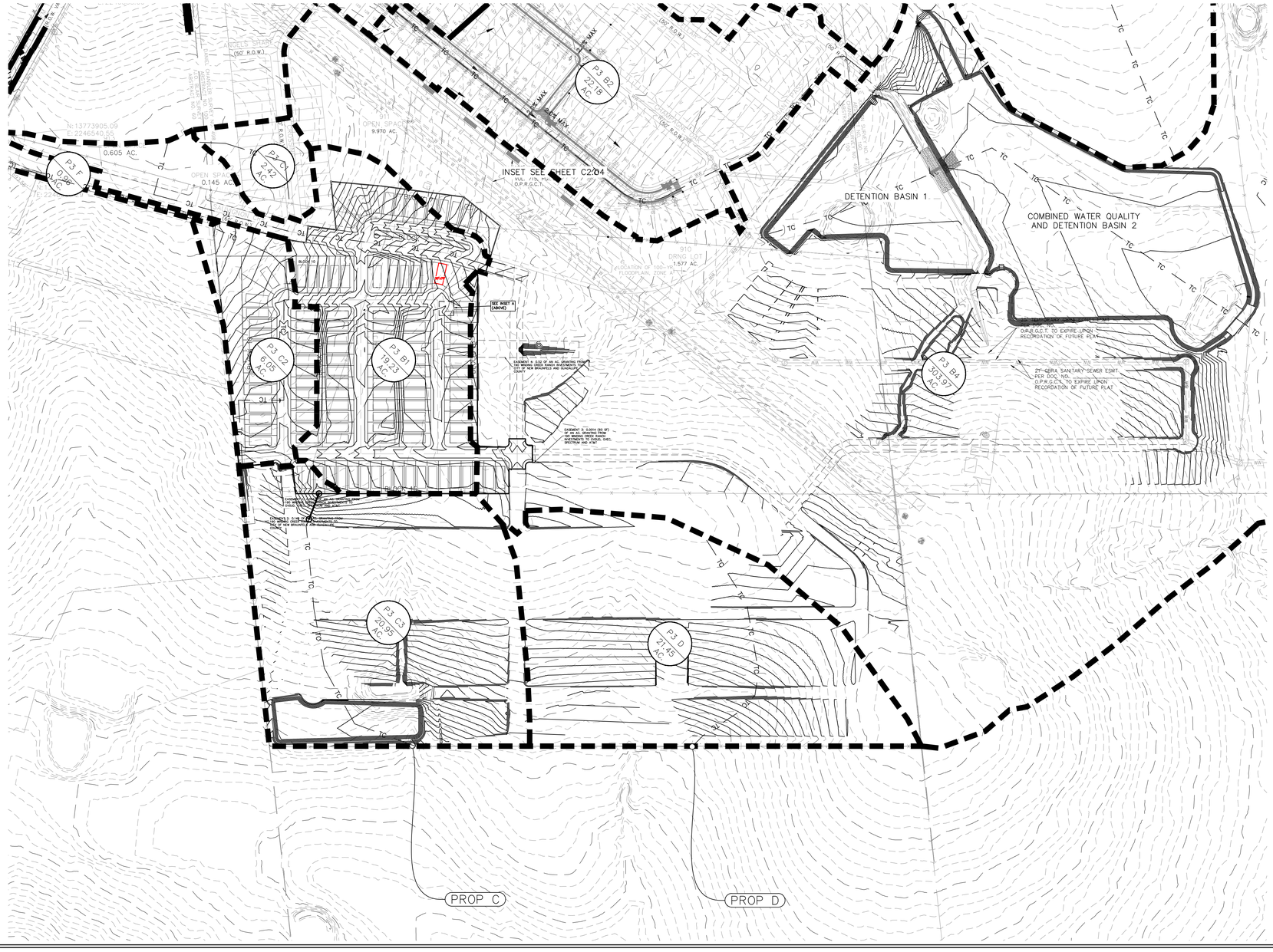

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- DRAINAGE AREA
- TC TC TIME OF CONCENTRATION
- A–1 POINT OF CONCENTRATION
- DRAINAGE FLOW DIRECTION
- DA / ACRES DRAINAGE AREA LABEL

0 50 100 200
HORIZONTAL SCALE: 1:100

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PROPOSED INTERMEDIATE DRAINAGE AREA MAP INSET

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

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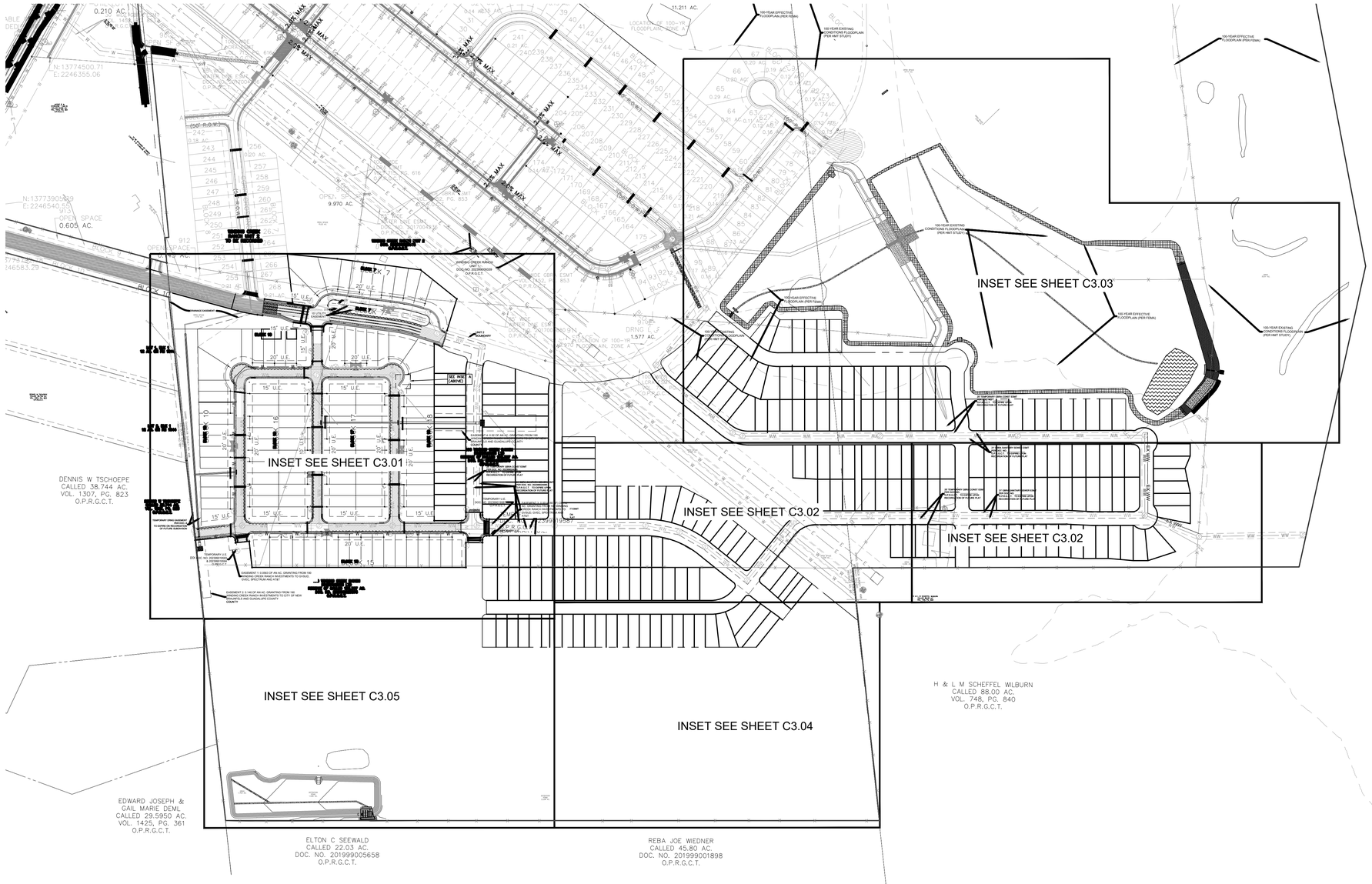

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- DRAINAGE FLOW DIRECTION
- SF SF SILT FENCE
- LOC LOC LIMIT OF CONSTRUCTION
- STABILIZED CONSTRUCTION ENTRANCE
- FILTER DIKE CURB INLET PROTECTION
- ROCK BERM

NOTE:

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

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

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.

HMT
ENGINEERING & SURVEYING
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NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
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STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
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LICENSED
PROFESSIONAL ENGINEER

06/19/2023

OVERALL EROSION PLANVIEW

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	DESCRIPTION	DATE

REVISION DESCRIPTION
REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

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C3.00

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EXISTING WINDING CREEK UNIT 2

STABILIZED CONSTRUCTION ENTRANCE

EXISTING STORM DRAIN CONSTRUCTED WITH WINDING CREEK RANCH UNIT 2

SCOTCH PASS

SAUVIGNON CRK

396 LF SILT FENCE

300 LF SILT FENCE

325 LF SILT FENCE

CONCRETE WASHOUT PIT

225 LF SILT FENCE

TEMPORARY SPOILS & STAGING AREA

542 LF SILT FENCE

136 LF SILT FENCE

108 LF SILT FENCE

SEE INSET A (ABOVE)

75 S.F. 8"–12" ROCK RIP RAP

523 LF SILT FENCE

19 L.F. FILTER DIKE CURB INLET PROTECTION

122 LF SILT FENCE

164 LF SILT FENCE

302 LF SILT FENCE

19 L.F. FILTER DIKE CURB INLET PROTECTION

9 L.F. FILTER DIKE CURB INLET PROTECTION

128 S.F. 8"–12" ROCK RIP RAP

894 LF SILT FENCE

40 LF SILT FENCE

567 LF SILT FENCE

1237 LF SILT FENCE

BLANC CELLAR

HEATHER VINE

CABERNET CASK

VINTAGE VINE

BLOCK 7

BLOCK 10

BLOCK 15

BLOCK 16

BLOCK 17

BLOCK 18

UNIT 2 BOUNDARY

WINDING CREEK RANCH UNIT 1 DOC. NO. 202399009339

DENNIS W TSCHOEPE CALLED 38.744 AC. VOL. 1307, PG. 823 O.P.R.G.C.T.

190 WINDING CREEK RANCH INVESTMENTS LTD RESIDUE OF CALLED 193.397 AC. DOC. NO. 202190023875 O.P.R.G.C.T.

EASEMENT 4: 0.0563 OF AN AC. GRANTING FROM 190 WINDING CREEK RANCH INVESTMENTS TO CITY OF BRAUNFELS AND GUADALUPE COUNTY

EASEMENT 2: 0.146 OF AN AC. GRANTING FROM 190 WINDING CREEK RANCH INVESTMENTS TO CITY OF NEW BRAUNFELS AND GUADALUPE COUNTY

EASEMENT 3: 0.0014 (60 SF) OF AN AC. GRANTING FROM 190 WINDING CREEK RANCH INVESTMENTS TO GVSUD, GVEC, SPECTRUM AND AT&T

TEMPORARY U.E. DOC. NO. 202399019567

TEMPORARY U.E. DOC. NO. 202399019583 & 202399019584 O.P.R.G.C.T.

25' TEMPORARY GBRA CONST ESMT PER DOC. NO. 202299024065 O.P.R.G.C.T. TO EXPIRE UPON RECORDATION OF FUTURE PLAT

21' GBRA SANITARY SEWER ESMT PER DOC. NO. 202299024065 O.P.R.G.C.T. TO EXPIRE UPON RECORDATION OF FUTURE PLAT

MATCHLINE SEE SHEET C3.02

MATCHLINE SEE SHEET C3.05

0 30 60 120
SCALE: 1" = 60'

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- DRAINAGE FLOW DIRECTION
- SF SILT FENCE
- LOC LIMIT OF CONSTRUCTION
- STABILIZED CONSTRUCTION ENTRANCE
- FILTER DIKE CURB INLET PROTECTION
- ROCK BERM

NOTE:

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

KEY MAP

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.

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

EROSION CONTROL PLAN (1 OF 5)

WINDING CREEK RANCH UNIT 3

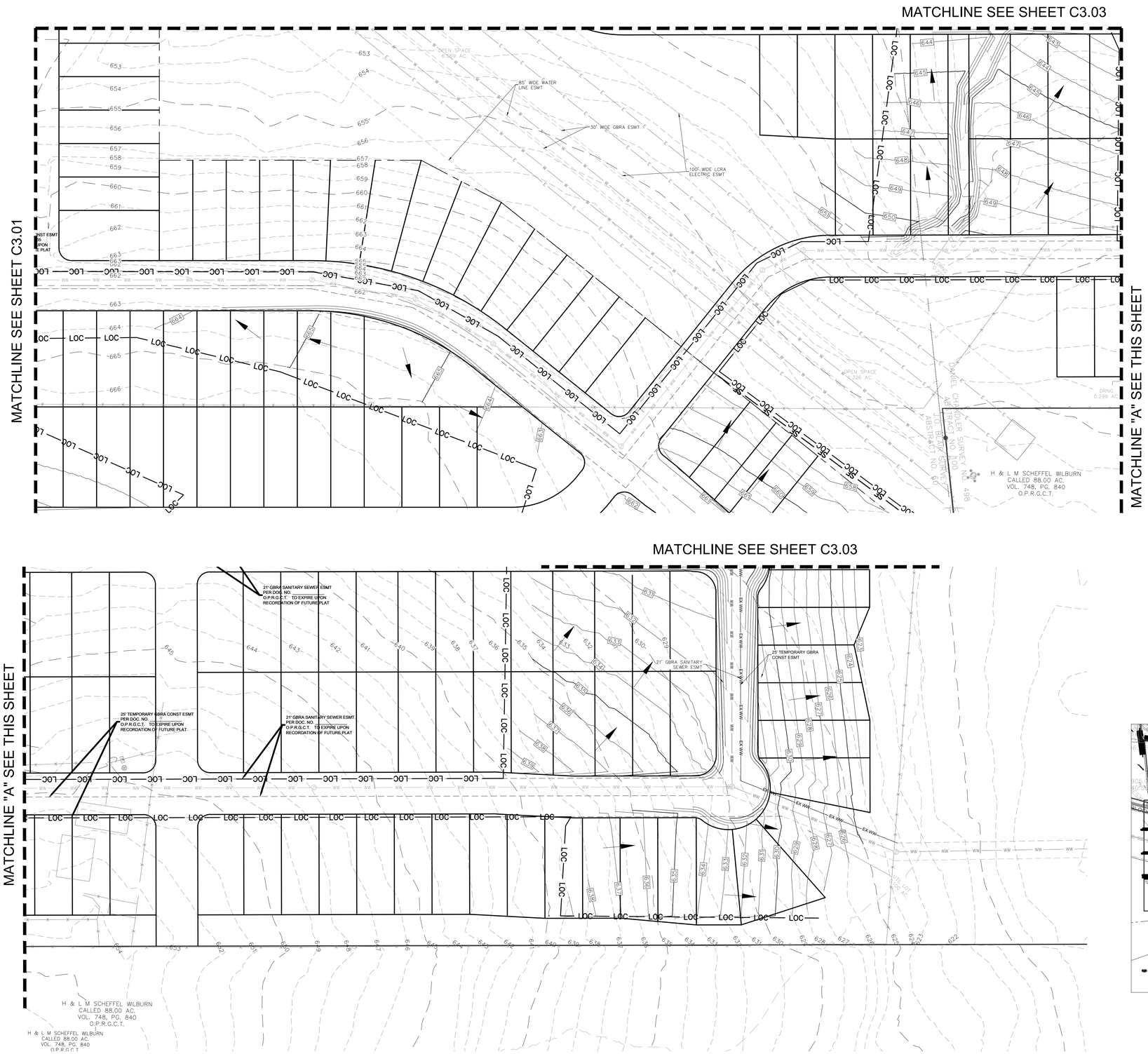
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C3.01

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03s\031.097_ER05.dwg User: reissd Feb 07, 2025 - 10:09am



0 30 60 120
SCALE: 1" = 60'

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
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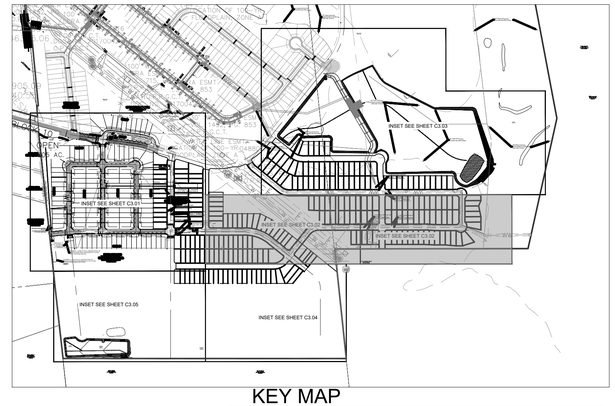

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HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

EROSION CONTROL PLAN (2 OF 5)

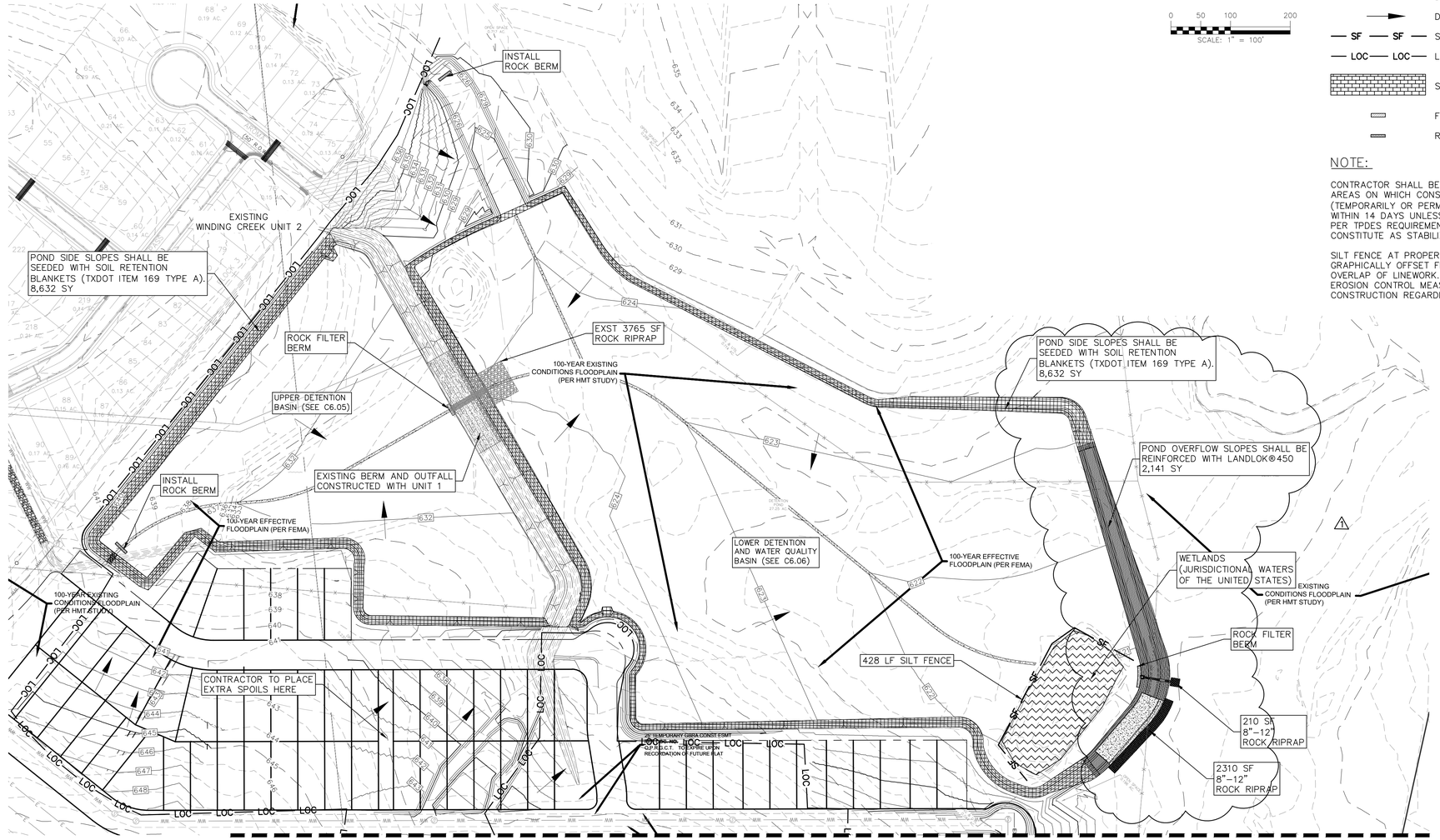
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	DESCRIPTION	DATE
	REVISION DESCRIPTION	REVISION DATE

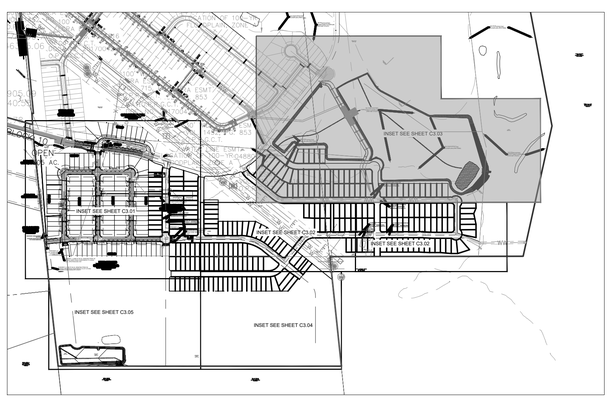
DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C3.02

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\CDs\031.097_ERO5.dwg User: reissd Feb 07, 2025 - 10:10am



MATCHLINE SEE SHEET C3.02



KEY MAP

LEGEND

- EXISTING CONTOURS
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HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

EROSION CONTROL PLAN (3 OF 5)

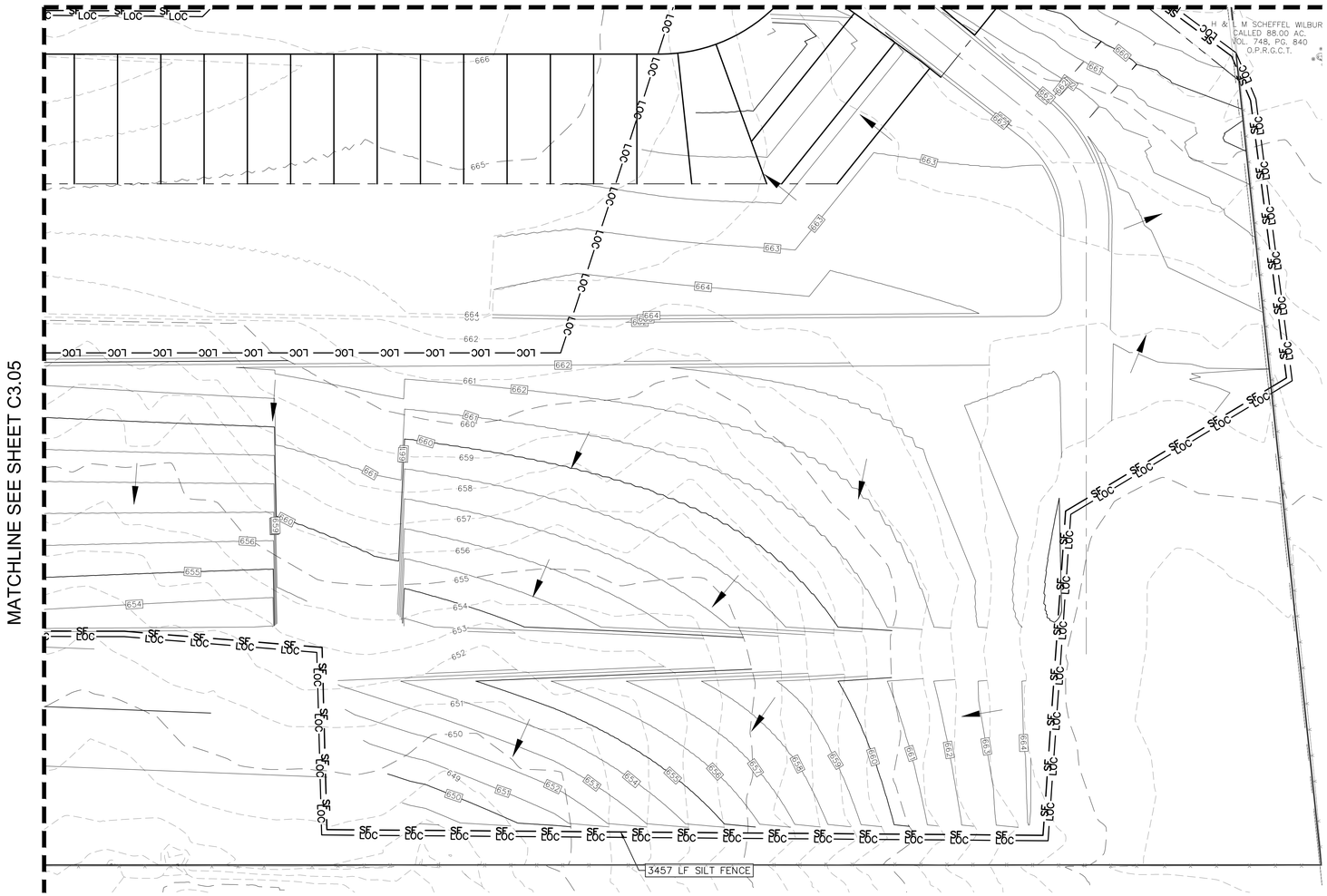
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

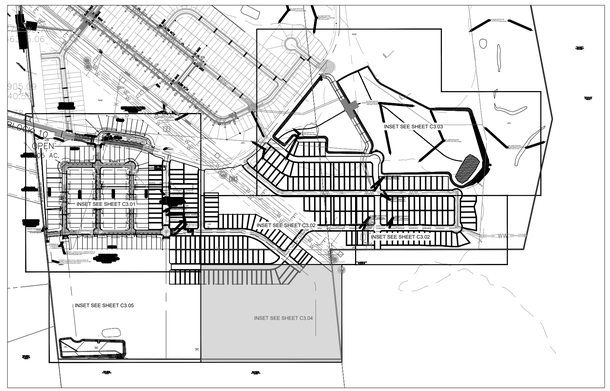
NO.	REVISION DESCRIPTION	REVISION DATE
1	UPDATING SLOPE REINFORCEMENT	03/28/2024

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

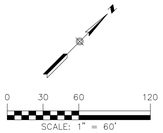
SHEET
C3.03

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\CDs\031.097_ER05.dwg User: reissd Feb 07, 2025 - 10:10am





KEY MAP



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HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

EROSION CONTROL PLAN (4 OF 5)

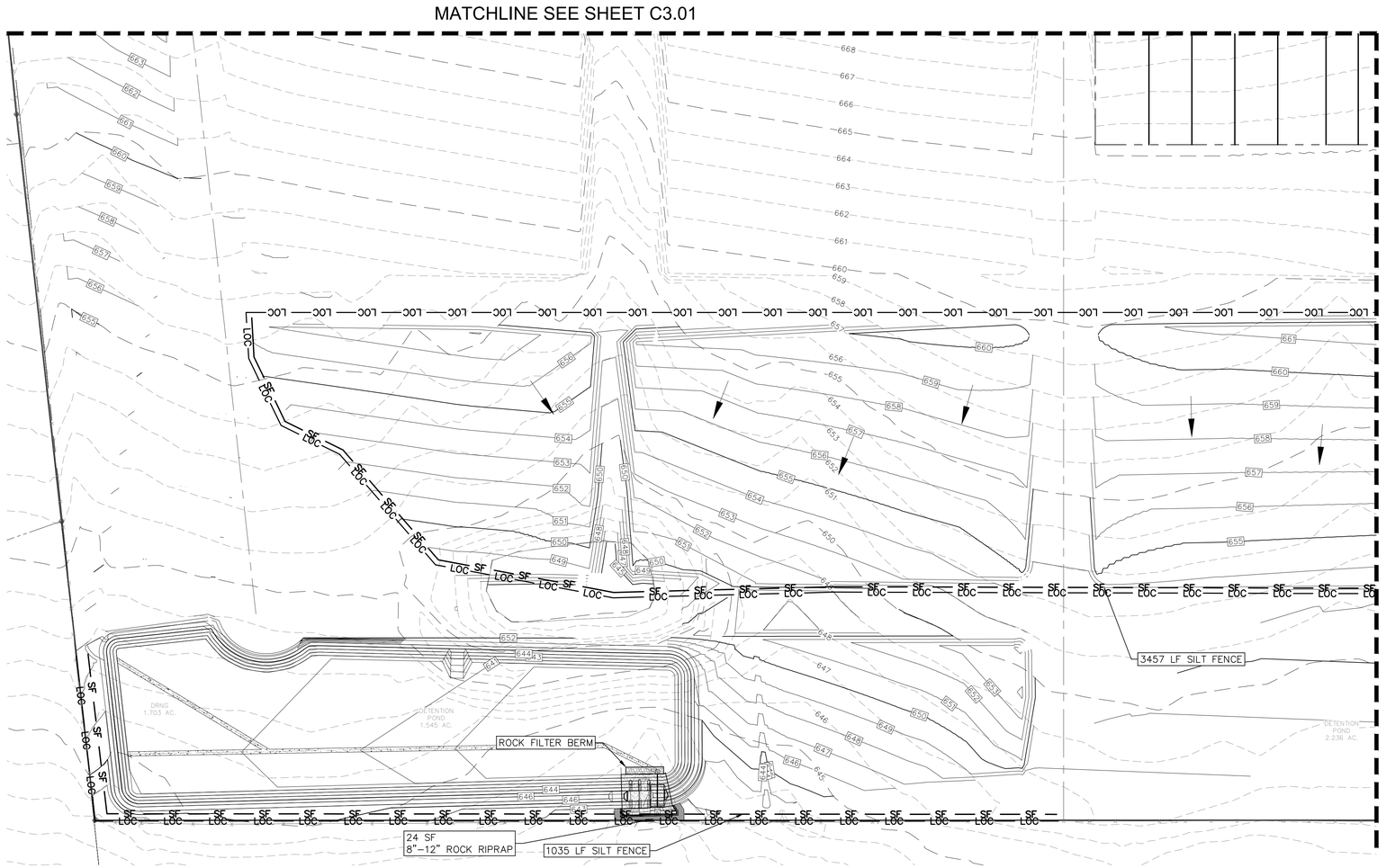
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

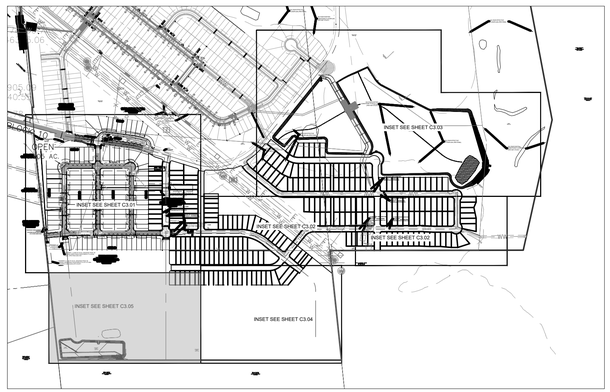
NO.	DESCRIPTION	DATE
	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

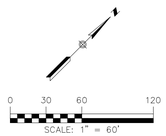
SHEET
C3.04

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\02s\031.097_EROS.dwg User: rebsd Feb 07, 2025 - 10:11am





KEY MAP



LEGEND

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HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

EROSION CONTROL PLAN (5 OF 5)

WINDING CREEK RANCH UNIT 3

NEW BRAUNFELS, TEXAS

NO.	DESCRIPTION	REVISION DESCRIPTION	DATE	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET

C3.05

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03s\031.097_EROS.dwg User: rebsd Feb 07, 2025 - 10:11am

CONCRETE WASHOUT AREAS

THE PURPOSE OF CONCRETE WASHOUT AREAS IS TO PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORMWATER FROM CONCRETE WASTE BY CONDUCTING WASHOUT OFFSITE, PERFORMING ONSITE WASHOUT IN A DESIGNATED AREA, AND TRAINING EMPLOYEES AND SUBCONTRACTORS.

THE FOLLOWING STEPS WILL HELP REDUCE STORMWATER POLLUTION FROM CONCRETE WASTES:

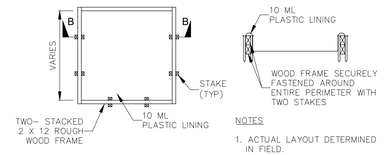
- INCORPORATE REQUIREMENTS FOR CONCRETE WASTE MANAGEMENT INTO MATERIAL SUPPLIER AND SUBCONTRACTOR AGREEMENTS.
- AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE.
- PERFORM WASHOUT OF CONCRETE TRUCKS IN DESIGNATED AREAS ONLY.
- DO NOT WASH OUT CONCRETE TRUCKS INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
- DO NOT ALLOW EXCESS CONCRETE TO BE DUMPED ONSITE, EXCEPT IN DESIGNATED AREAS.

FOR ONSITE WASHOUT:

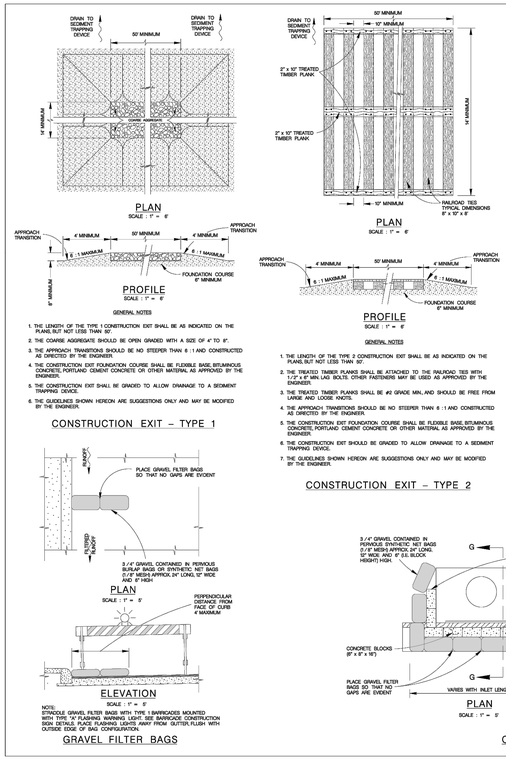
- LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES, OR WATER BODIES. DO NOT ALLOW RUNOFF FROM THIS AREA BY CONSTRUCTING A TEMPORARY PIT OR BERMED AREA LARGE ENOUGH FOR LIQUID AND SOLID WASTE.
- WASH OUT WASTES INTO THE TEMPORARY PIT WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND THEN DISPOSED PROPERLY.

BELOW GRADE CONCRETE WASHOUT FACILITIES ARE TYPICAL. THESE CONSIST OF A LINED EXCAVATION SUFFICIENTLY LARGE TO HOLD EXPECTED VOLUME OF WASHOUT MATERIAL. ABOVE GRADE FACILITIES ARE USED IF EXCAVATION IS NOT PRACTICAL. TEMPORARY CONCRETE WASHOUT FACILITY (TYPE ABOVE GRADE) SHOULD BE CONSTRUCTED AS SHOWN ON THE DETAILS AT THE END OF THIS SECTION, WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

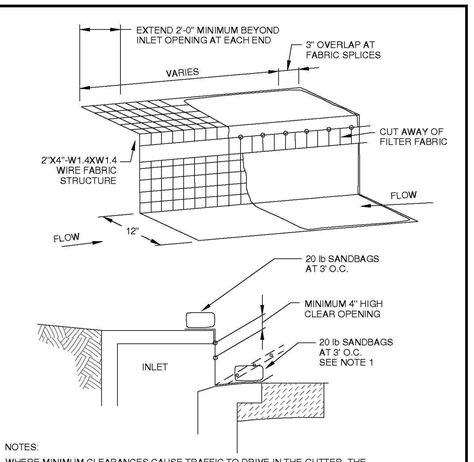


CONCRETE WASHOUT PIT DETAIL
TYPE "ABOVE GRADE"
NOT TO SCALE



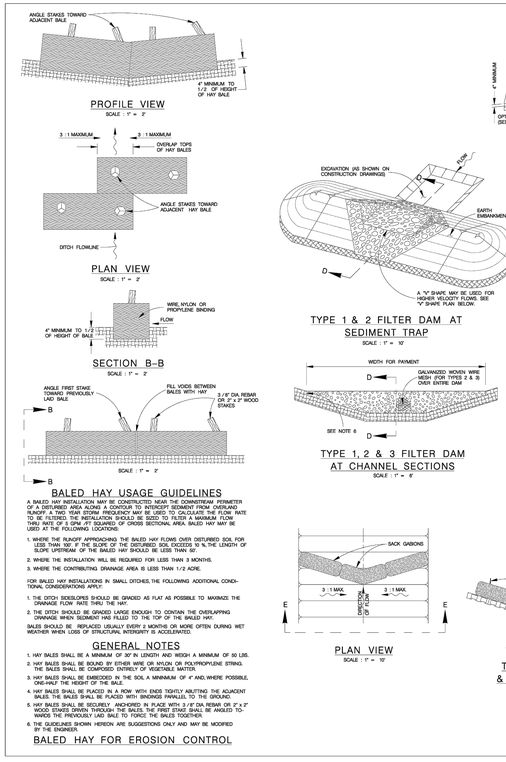
JANUARY 2005
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
TEMPORARY EROSION, SEDIMENT & WATER POLLUTION CONTROL MEASURES STANDARDS 1

NO.	SUBMITTAL	PROJECT NO.:	DATE:
DRAWN BY: V. VASQUEZ	DESIGN BY:	CHKD. BY:	SHEET NO.: OF



DRAWN BY: H Shadrock	STANDARD DRAWING:	FILTER DIKE CURB INLET PROTECTION			
APPROVED BY:					
	UPDATED: 4-29-03	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO.: 505	

NBU
NEW BRAUNFELS UTILITIES
WATER SYSTEMS ENGINEERING



ROCK FILTER DAM USAGE GUIDELINES

ROCK FILTER DAMS SHOULD BE CONSTRUCTED DOWNSTREAM FROM DISTURBED AREAS TO INTERCEPT SEDIMENT FROM OVERLOAD RUNOFF AND / OR CONCENTRATED FLOW. THE DAMS SHOULD BE SIZED TO FILTER A MAXIMUM FLOW THRU RATE OF 60 GPM / FT SQUARED OF CROSS SECTIONAL AREA. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE.

TYPE 1 (18" HIGH, WITH NO WIRE MESH):

TYPE 1 MAY BE USED AT THE TOE OF SLOPES AROUND INLETS, IN SMALL DITCHES AND AT DIKE OR SWALE OUTLETS. THIS TYPE OF DAM IS RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA OF 5 ACRES OR LESS. TYPE 1 MAY NOT BE USED IN CONCENTRATED FLOW OR WHERE SEDIMENT CONTROL IS REQUIRED FOR A LONG PERIOD. INTERMITTENT WASH OUT MAY OCCUR. SANDBAGS MAY BE USED AT THE EMBEDDED FOUNDATION (4" DEEP MIN.) FOR BETTER FILTERING EFFICIENCY OF LOW FLOWS IF CALLED FOR ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

TYPE 2 (18" HIGH, WITH WIRE MESH):

TYPE 2 MAY BE USED IN DITCHES AND AT DIKE OR SWALE OUTLETS.

TYPE 3 (18" HIGH, WITH WIRE MESH):

TYPE 3 MAY BE USED IN STREAM FLOW AND SHOULD BE SECURED TO THE STREAM BED.

TYPE 4 (SACK GABIONS):

TYPE 4 MAY BE USED IN DITCHES AND SMALLER CHANNELS TO FORM AN EROSION CONTROL DAM

GENERAL NOTES

1. IF SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER, FILTER DAMS SHOULD BE PLACED NEAR THE TOE OF SLOPES WHERE EROSION IS ANTICIPATED, UPSTREAM AND / OR DOWNSTREAM AT DRAINAGE STRUCTURES, AND IN ROADWAY DITCHES AND CHANNELS TO COLLECT SEDIMENT.
2. MATERIALS (AGGREGATE, WIRE MESH, SANDBAGS, ETC.) SHALL BE AS INDICATED BY THE SPECIFICATION FOR ROCK FILTER DAMS FOR EROSION AND SEDIMENTATION CONTROL.
3. THE ROCK FILTER DAM DIMENSIONS SHALL BE AS INDICATED ON THE STORM WATER POLLUTION PREVENTION PLANS.
4. SIDE SLOPES SHOULD BE 2 : 1 OR FLATTER. DAMS WITHIN THE SAFETY ZONE SHALL HAVE SIDE SLOPES OF 6 : 1 OR FLATTER.
5. MAINTAIN A MINIMUM OF 1' BETWEEN TOP OF ROCK FILTER DAM WEIR AND TOP OF EMBANKMENT FOR FILTER DAMS AT SEDIMENT TRAPS.
6. FILTER DAMS SHOULD BE EMBEDDED A MINIMUM OF 4" INTO THE EXISTING GROUND.
7. THE SEDIMENT TRAP FOR PONDING OF SEDIMENT LADEN RUNOFF SHALL BE OF THE DIMENSIONS SHOWN ON THE PLANS.
8. ROCK FILTER DAM TYPES 2 & 3 SHALL BE SECURED WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH (WITH 1" DIAMETER HEXAGONAL OPENING) THE AGGREGATE SHALL BE PLACED ON THE WIRE MESH. EXCESS WIRE MESH AT EACH END OF THE MESH SHALL BE FOLDED AT THE UPSTREAM SIDE OVER THE AGGREGATE AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS. IN STREAM APPLICATIONS, MESH SHOULD BE SECURED OR STAKED TO THE STREAM BED PRIOR TO AGGREGATE PLACEMENT.
9. SACK GABIONS SHOULD BE STAKED DOWN WITH 3 /4" DIA REBAR STAKES.
10. FLOW OUTLET SHOULD BE ONTO A STABILIZED AREA (VEGETATION, ROCK, ETC.)
11. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

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4. SIDE SLOPES SHOULD BE 2 : 1 OR FLATTER. DAMS WITHIN THE SAFETY ZONE SHALL HAVE SIDE SLOPES OF 6 : 1 OR FLATTER.
5. MAINTAIN A MINIMUM OF 1' BETWEEN TOP OF ROCK FILTER DAM WEIR AND TOP OF EMBANKMENT FOR FILTER DAMS AT SEDIMENT TRAPS.
6. FILTER DAMS SHOULD BE EMBEDDED A MINIMUM OF 4" INTO THE EXISTING GROUND.
7. THE SEDIMENT TRAP FOR PONDING OF SEDIMENT LADEN RUNOFF SHALL BE OF THE DIMENSIONS SHOWN ON THE PLANS.
8. ROCK FILTER DAM TYPES 2 & 3 SHALL BE SECURED WITH 20 GAUGE GALVANIZED WOVEN WIRE MESH (WITH 1" DIAMETER HEXAGONAL OPENING) THE AGGREGATE SHALL BE PLACED ON THE WIRE MESH. EXCESS WIRE MESH AT EACH END OF THE MESH SHALL BE FOLDED AT THE UPSTREAM SIDE OVER THE AGGREGATE AND TIGHTLY SECURED TO ITSELF ON THE DOWNSTREAM SIDE USING WIRE TIES OR HOG RINGS. IN STREAM APPLICATIONS, MESH SHOULD BE SECURED OR STAKED TO THE STREAM BED PRIOR TO AGGREGATE PLACEMENT.
9. SACK GABIONS SHOULD BE STAKED DOWN WITH 3 /4" DIA REBAR STAKES.
10. FLOW OUTLET SHOULD BE ONTO A STABILIZED AREA (VEGETATION, ROCK, ETC.)
11. THE GUIDELINES SHOWN HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

JANUARY 2005
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
TEMPORARY EROSION, SEDIMENT & WATER POLLUTION CONTROL MEASURES STANDARDS 2

NO.	SUBMITTAL	PROJECT NO.:	DATE:
DRAWN BY: V. VASQUEZ	DESIGN BY:	CHKD. BY:	SHEET NO.: OF

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600
HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

EROSION CONTROL DETAILS

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C3.06

Drawing Name: N:_Projects\031 – DR Horton\031.097 – Winding Creek Ranch Unit 3\C0s\031.097_EROS.dwg User: rossd Feb 07, 2025 – 10:11am

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.

EARTHWORK VOLUMES

EXCAVATION & EMBANKMENT	VOLUME (CY)
CUT	130,711
FILL	123,384
NET	7327 [CUT]

SCALE: 1" = 200'

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- (A) LOT GRADING SEE DETAILS SHEET **C4.07**
- DRAINAGE FLOW DIRECTION
- FF=XXX.X MINIMUM FINISHED FLOOR ELEVATION

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

OVERALL GRADING PLAN

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

SHEET
C4.00

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cds\031.097_GR40.dwg User: reiss8 Feb 07, 2025 - 10:13am

NOTES:

1. DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
2. ALL FINISHED FLOOR ELEVATIONS SHALL MEET THE FOLLOWING REQUIREMENTS:
   2.A. PER NOTE 10 ON PLAT SHEET C1.01.
   2.B. HUD DETAILS SHOWN ON SHEET C4.07.
3. WHEN POSSIBLE, CONTRACTOR SHALL PHASE GRADING SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST PERIOD OF TIME.
4. FOR ANY LOTS ADJACENT TO A DRAINAGE STRUCTURE, HOME BUILDER TO ENSURE FINISHED FLOOR HAS A MINIMUM ELEVATION AS LABELED OR AS PER NOTE 2 ABOVE, WHICHEVER IS GREATER.
5. STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 12.2(N).

REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

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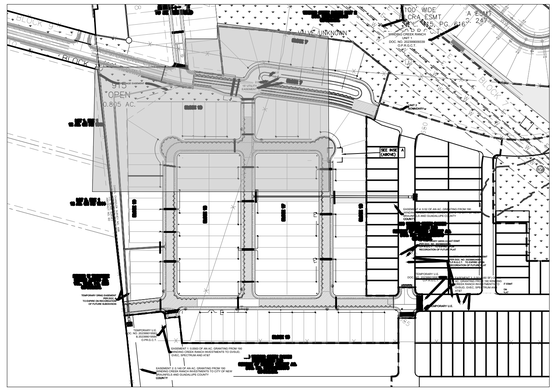
0 15 30 60
SCALE: 1" = 30' HORIZ.

LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
A	LOT GRADING SEE DETAILS SHEET **C4.07**
	DRAINAGE FLOW DIRECTION
FF=XXX.X'	MINIMUM FINISHED FLOOR ELEVATION



KEY MAP

EXISTING WINDING CREEK RANCH UNIT 2

SCOTCH PASS

SAUVIGNON CRK

ESTERS SHARE

BLANC CELLAR

HEATHER VINE

CABERNET CASK

GRADE BREAK

915 OPEN 0.805 AC.

OPEN SPACE 1.175 AC.

916 DRNG LOT 1.079 AC.

917 OPEN SPACE 0.160 AC.

MATCHLINE SEE SHEET C4.02

MATCHLINE SEE SHEET C4.03

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

DETAILED GRADING PLAN (1 OF 6)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C4.01

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cds\031.097_GRAD.dwg User: rossd Feb 07, 2025 - 10:14am

NOTES:

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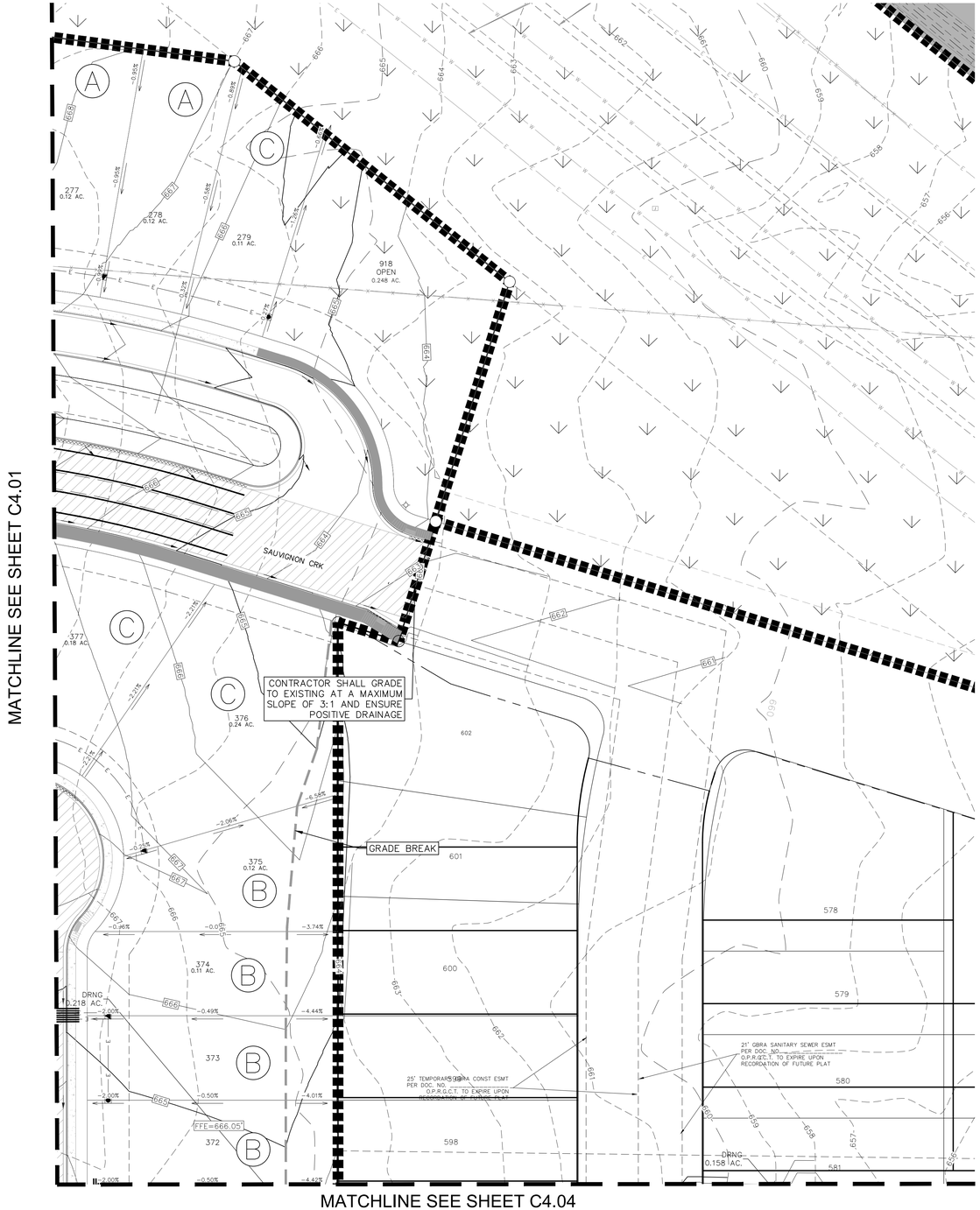

0 15 30 60
SCALE: 1" = 30' HORIZ.

LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
A	LOT GRADING SEE DETAILS SHEET **C4.07**
	DRAINAGE FLOW DIRECTION
FF=XXX.X	MINIMUM FINISHED FLOOR ELEVATION

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

DETAILED GRADING PLAN (2 OF 6)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

SHEET
C4.02

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cds\031.097_GRAD.dwg User: rossd Feb 07, 2025 - 10:14am

NOTES:

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   2.B. HUD DETAILS SHOWN ON SHEET C4.07.
3. WHEN POSSIBLE, CONTRACTOR SHALL PHASE GRADING SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST PERIOD OF TIME.
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REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

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0 15 30 60
SCALE: 1" = 30' HORIZ.

LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
A	LOT GRADING SEE DETAILS SHEET **C4.07**
	DRAINAGE FLOW DIRECTION
FF=XXX.X	MINIMUM FINISHED FLOOR ELEVATION

MATCHLINE SEE SHEET C4.01

MATCHLINE SEE SHEET C4.04

MATCHLINE SEE SHEET C4.03

BLANC CELLAR
BLOCK 10
BLOCK 16
BLOCK 17
BLOCK 18
BLOCK 15
HEATHER VINE
CABERNET CASK
VINTAGE VINE
20' U.E.
15' U.E.
GRADE BREAK
PROPOSED STORM DRAIN LN B1
CONTRACTOR SHALL GRADE TO EXISTING AT A MAXIMUM SLOPE OF 3:1 AND ENSURE POSITIVE DRAINAGE
CONTRACTOR SHALL GRADE TO EXISTING AT A MAXIMUM SLOPE OF 3:1 AND ENSURE POSITIVE DRAINAGE
FFE=671.50'
FFE=666.92'
FFE=665.95'
919 DRNG LOT 0.217 AC.
920 DRNG LOT 0.111 AC.
299 0.15 AC.
318 0.13 AC.
341 0.13 AC.
342 0.13 AC.
363 0.13 AC.
364 0.14 AC.
300 0.19 AC.
903
902

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

DETAILED GRADING PLAN (3 OF 6)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C4.03

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cbr\031.097_GRAD.dwg User: reissd Feb 07, 2025 - 10:15am

NOTES:

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0 15 30 60
SCALE: 1" = 30' HORIZ.

LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
A	LOT GRADING SEE DETAILS SHEET **C4.07**
	DRAINAGE FLOW DIRECTION
FF=XXX.X	MINIMUM FINISHED FLOOR ELEVATION

MATCHLINE SEE SHEET C4.02

MATCHLINE SEE SHEET C4.03

N:13774846.13
E:2248588.00
652.90'

100-YEAR EXISTING CONDITIONS FLOODPLAIN (PER HMT STUDY)

100-YR EFFECTIVE FLOODPLAIN (PER FEMA)

100-YEAR EXISTING CONDITIONS FLOODPLAIN (PER HMT STUDY)

N:13774765.42
E:2248664.87
657.03'

N:13774578.52
E:2248530.85
659.62'

25' TEMPORARY GBRA CONST ESMT PER DOC. NO. O.P.R.O.C.T. TO EXPIRE UPON RECORDATION OF FUTURE PLAT

FILL AREA 18

CONTRACTOR SHALL FILL AND COMPACT LOTS ACCORDING TO GEOTECHNICAL SPECIFICATIONS AND COORDINATE A 79G FORM FOR THE LOTS AS REQUIRED BY DR HORTON

WINDING CREEK RANCH FUTURE UNIT 5

N:13774620.95
E:2248678.44
660.25'

CONTRACTOR SHALL GRADE TO EXISTING AT A MAXIMUM SLOPE OF 3:1 AND ENSURE POSITIVE DRAINAGE

21' GBRA SANITARY SEWER ESMT PER DOC. NO. O.P.R.O.C.T. TO EXPIRE UPON RECORDATION OF FUTURE PLAT

CONTRACTOR SHALL GRADE TO EXISTING AT A MAXIMUM SLOPE OF 3:1 AND ENSURE POSITIVE DRAINAGE

TEMPORARY U.E.

N:13774699.80
E:2248965.01
663.62'

25' TEMPORARY GBRA CONST ESMT PER DOC. NO. O.P.R.O.C.T. TO EXPIRE UPON RECORDATION OF FUTURE PLAT

N:13774528.82
E:2248833.52
???'

FILL AREA 03

FILL AREA 04

CONTRACTOR SHALL GRADE TO EXISTING AT A MAXIMUM SLOPE OF 3:1 AND ENSURE POSITIVE DRAINAGE

WINDING CREEK RANCH FUTURE UNIT 5

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

DETAILED GRADING PLAN (4 OF 6)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C4.04

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03\031.097_GRAD.dwg User: reissd Feb 07, 2025 - 10:15am

NOTES:

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   2.B. HUD DETAILS SHOWN ON SHEET C4.07.
3. WHEN POSSIBLE, CONTRACTOR SHALL PHASE GRADING SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST PERIOD OF TIME.
4. FOR ANY LOTS ADJACENT TO A DRAINAGE STRUCTURE, HOME BUILDER TO ENSURE FINISHED FLOOR HAS A MINIMUM ELEVATION AS LABELED OR AS PER NOTE 2 ABOVE, WHICHEVER IS GREATER.
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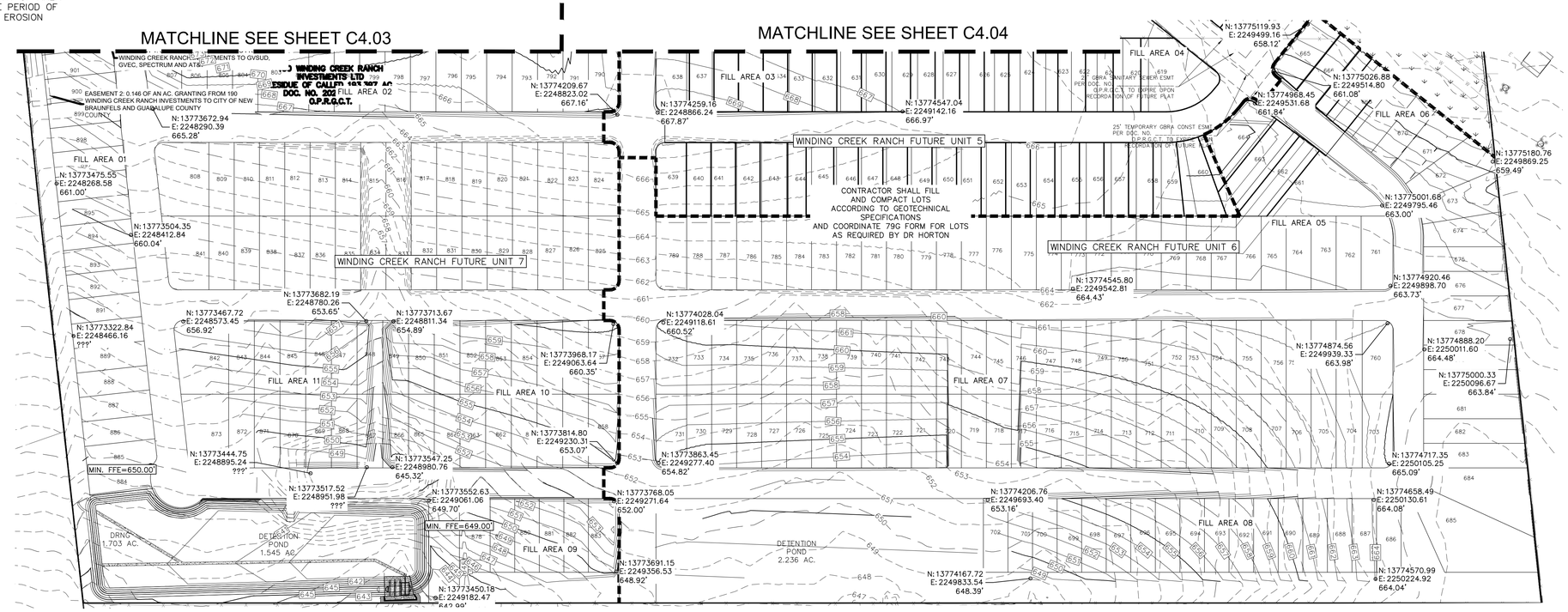
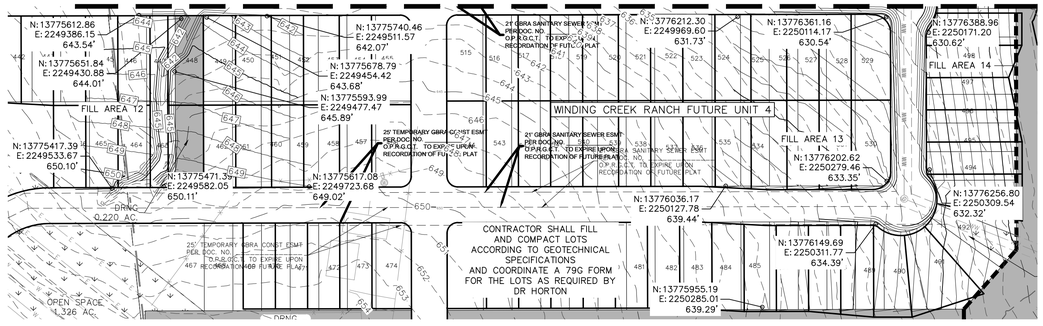
0 50 100 200
SCALE: 1" = 100'

LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
A	LOT GRADING SEE DETAILS SHEET **C4.07**
	DRAINAGE FLOW DIRECTION
FF=XXX.X	MINIMUM FINISHED FLOOR ELEVATION





290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
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HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

DETAILED GRADING PLAN (5 OF 6)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

SHEET
C4.05

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\C3\031.097_GRAD.dwg User: reised Feb 07, 2025 - 10:16am

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.

0 30 60 120
SCALE: 1" = 60'

LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
A	LOT GRADING SEE DETAILS SHEET **C4.07**
	DRAINAGE FLOW DIRECTION
FF=XXX.X	MINIMUM FINISHED FLOOR ELEVATION

NOTES:

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WINDING CREEK RANCH FUTURE UNIT 8
MIN. FFE=629.00'
EXISTING WINDING CREEK RANCH UNIT 2
100-YR EFFECTIVE FLOODPLAIN (PER FEMA)
100-YEAR EXISTING CONDITIONS FLOODPLAIN (PER HMT STUDY)
DETENTION BASIN 1 (SEE C6.05)
100-YEAR EFFECTIVE FLOODPLAIN (PER FEMA)
100-YEAR EXISTING CONDITIONS FLOODPLAIN (PER HMT STUDY)
MIN. FFE=639.00'
COMBINED DETENTION AND WATER QUALITY BASIN 2 (SEE C6.06)
100-YEAR EFFECTIVE FLOODPLAIN (PER FEMA)
WETLAND AREA (JURISDICTIONAL WATERS OF THE U.S.) NO WORK TO BE PERFORMED WITHIN BOUNDARY
100-YR EFFECTIVE FLOODPLAIN (PER FEMA)
100-YEAR EXISTING CONDITIONS FLOODPLAIN (PER HMT STUDY)
MIN. FFE=629.50'
25' TEMPORARY DRAINAGE EASEMENT PER DOC. NO. _____ O.P.R.R.C.T. TO EXPIRE UPON RECORDATION OF FUTURE PLAT

N: 13775565.56 E: 2248786.30 640.32'
N: 13775644.69 E: 2249001.04 641.39'
N: 13775738.69 E: 2249093.33 641.44'
N: 13775953.99 E: 2249301.05 636.05'
N: 13776042.62 E: 2249385.42 633.52'
N: 13776090.65 E: 2249437.11 632.29'
N: 13775943.23 E: 2249380.27 636.48'
N: 13775978.38 E: 2249427.30 635.35'
N: 13775914.67 E: 2249404.23 637.28'
N: 13776030.64 E: 2249497.19 633.28'
N: 13775547.06 E: 2249042.41 644.10'
N: 13775335.52 E: 2248904.39 646.84'
N: 13775782.57 E: 2249375.14 641.48'
N: 13775917.48 E: 2249434.69 637.61'
N: 13775804.28 E: 2249501.97 641.29'
N: 13775625.97 E: 2249330.38 643.17'
N: 13775698.93 E: 2249402.20 643.52'
N: 13775781.51 E: 2249479.53 641.85'
N: 13775881.13 E: 2249557.36 638.99'
N: 13775727.63 E: 2249428.77 643.14'
N: 13775446.07 E: 2249152.91 648.12'
N: 13776276.61 E: 2249782.18 627.93'
N: 13776182.83 E: 2249865.63 633.14'
N: 13776387.14 E: 2250060.74 630.31'

MATCHLINE SEE SHEET C4.05

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600
HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

DETAILED GRADING PLAN (6 OF 6)

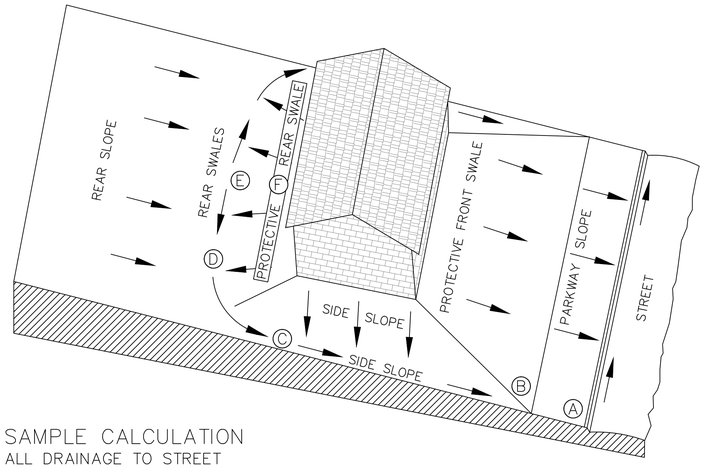
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C4.06

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cds\031.097_GP40.dwg User: reissd Feb 07, 2025 - 10:16am



SAMPLE CALCULATION
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 0.5% STREET, WITH 60' BUILDING DEPTH AND 2% SWALES.				RESULTS OF 1% SWALES	
A	CURB–TOP ON LOT LINE EXTENSION AT HIGH LOT CORNER				
$\overline{AB}$	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')
$\overline{BC}$	SIDE SWALE: 85' GRASS AT 1/4"/FT. (2%)	21"	(1.8')	11"	(0.9')
$\overline{CD}$	SWALE TURN WITH 10' RADIUS:16' GRASS AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')
$\overline{DE}$**	REAR SWALE: 13' GRASS AT 1/4"/FT. (2%)	3"	(0.3')	2"	(0.2')
$\overline{EF}$*	PROTECTIVE REAR SLOPE UP FROM HIGH POINT OF SWALES	3"	(0.3')	3"	(0.3')
SUB–TOTAL $\overline{AF}$ FROM CURB TOP TO GROUND AT REAL BLDG WALL		35"	(3.0')	20"	(1.7')
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 35" + 8"		43"	(3.6')	28"	(2.3')
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		54"	(4.5')	39"	(3.3')

CALCULATIONS FOR 2% SWALES

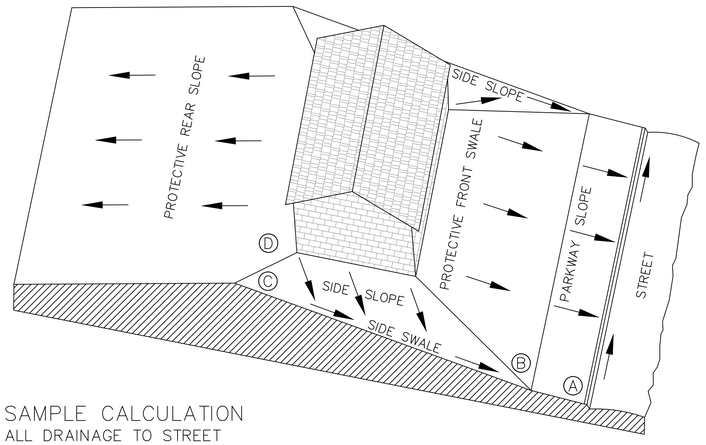
15 x 0.25' = 3¾"
85 x 0.25' = 21¼"
16 x 0.25' = 4"
13 x 0.25' = 3¼"
10 x 0.25' = 2½"
34¾"

CALCULATIONS USE 0.25" PER FOOT GRADIENT FOR A 2% SWALE.

* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.

** LENGTH $\overline{DE}$ = [1/2(LOT WIDTH – (2x SWALE TURN RADIUS))] – [LOT WIDTH x (STREET GRADIENT x SWALE GRADIENT)]

LOT TYPE Ⓐ



SAMPLE CALCULATION
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 0.5% STREET, WITH 60' BUILDING DEPTH AND 2% SWALES.				RESULTS OF 1% SWALES	
A	CURB–TOP ON LOT LINE EXTENSION AT HIGH LOT CORNER				
$\overline{AB}$	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')
$\overline{BC}$	SIDE SWALE: 85' GRASS AT 1/4"/FT. (2%)	21"	(1.8')	11"	(0.9')
$\overline{CD}$*	PROTECTIVE SIDE SLOPE @ REAR BLDG. WALL EXTENSION	3"	(0.3')	3"	(0.3')
SUB–TOTAL $\overline{AD}$ FROM CURB TOP TO GROUND AT REAL BLDG WALL		27"	(2.4')	16"	(1.4')
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 27" + 8"		35"	(2.9')	24"	(2.0')
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		46"	(3.8')	35"	(2.9')

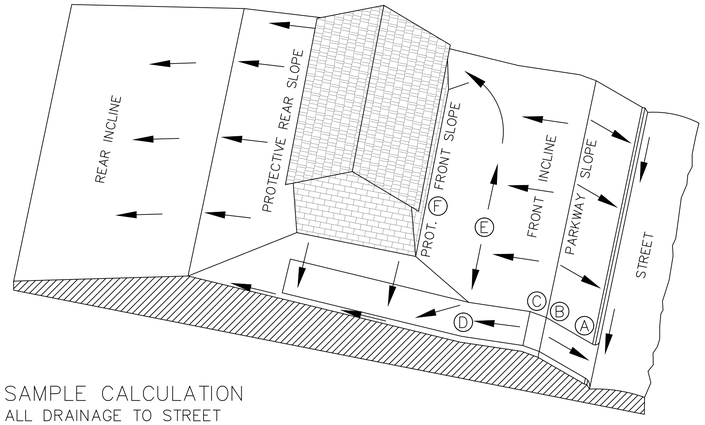
CALCULATIONS FOR 2% SWALES

15 x 0.25' = 3¾"
85 x 0.25' = 21¼"
6 x 0.25' = 1½"
26½"

CALCULATIONS USE 0.25" PER FOOT GRADIENT FOR A 2% SWALE.

* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.

LOT TYPE Ⓑ



SAMPLE CALCULATION
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE $\overline{AF}$ FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 13.5% DRIVEWAY, AND 16' FRONT SWALE $\overline{DE}$ AT 2.0%.				RESULTS OF 1% SWALES	
A	CURB–TOP HIGH SIDE OF DRIVE NEAR LOW LOT CORNER				
$\overline{AB}$	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')
$\overline{BC}$	DRIVEWAY GRADE CHANGE: 4' VERTICAL CURVE FROM UP–GRADE DRIVE IN STREET TO DOWN–GRADE DRIVE ON LOT	0"	(0.0')	0"	(0.0')
$\overline{CD}$	DRIVEWAY DOWN–GRADE TO POINT 10 FEET OUT FROM FRONT OF BUILDING: –11' AT 1⅜"/FT (13.5%)	–18"	(–1.5')	–18"	(–1.5')
$\overline{DE}$	FRONT SWALE: 16' GRASS AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')
$\overline{EF}$*	PROT. FRONT SLOPE UP FROM HIGH POINT OF SWALES	3"	(0.3')	3"	(0.3')
SUB–TOTAL $\overline{AF}$ FROM CURB TOP TO GROUND AT FRONT BLDG WALL		–7"	(–1.0')	–11"	(1.3')
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: –7" + 8"		1"	(–0.3')	–3"	(0.7')
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: –7" + 19"		12"	(–0.6')	8"	(0.3')

CALCULATIONS FOR SWALES

15 x 0.25' = 3¾"
0 x 0.25' = 0"
–11 x 1.625' = –17⅞"
16 x 0.25' = 4"
10 x 0.25' = 2½"
–7½"

CALCULATION:

USE 0.25" PER FOOT GRADIENT FOR A 2% SWALE.

USE 1.625" PER FOOT GRADIENT FOR A 13.5% SWALE.

* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.

LOT TYPE Ⓒ

GENERAL SPECIFICATIONS FOR SITE PREPARATION

GENERAL DESCRIPTION
THIS ITEM SHALL CONSIST OF ALL CLEARING AND PREPARATION OF LAND TO BE FILLED, FILLING OF THE LAND, SPREADING, COMPACTION TESTING AND INSPECTION OF THE FILL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADES AND SLOPES AS SHOWN ON THE APPROVED PLANS.

SCARIFYING THE AREA TO BE FILLED
ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED, AND SURFACE SHALL BE DISKED OR SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES (6"), ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE LEVELED PRIOR TO FIELD DENSITY TESTING.

COMPACTING THE AREA TO BE FILLED
FOLLOWING THE CLEARING AND DISKING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS. THE AREA SHALL BE BROUGHT TO ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT (90%) OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE THD–TEX–113–E COMPACTION PROCEDURE. ALL AREAS EXCEEDING (6") SIX INCHES IN DEPTH, MUST MEET WITH FHA/HUD HANDBOOK 4140.30 SPECIFICATIONS FOR LAND DEVELOPMENTS ON CONTROLLED EARTHWORK, DATASHEET 79G.

FILL MATERIALS
THE MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, SUCH AS TREES, BRUSH AND RUBBISH.

DEPTH AND MIXING OF FILL LAYERS

THE SELECTED FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS WHICH, WHEN COMPACTED, SHALL HAVE A DENSITY CONFORMING TO THE STIPULATED ABOVE.
EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. COMPACTED LAYER THICKNESS MAY VARY DEPENDING ON THE COMAPCTION EQUIPMENT OF THE DEMONSTRATED CAPABILITY.

ROCK
WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO NEST AND ALL VOIDS MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED.

COMPACTION OF FILL LAYER
COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE FILL TO THE SPECIFIED DENSITY. COMPACTION SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER THE ENTIRE STRUCTURAL AREA (BENEATH PROPOSED STRUCTURES).

COMPACTION OF SLOPES
THE FACES OF FILL SLOPES SHALL BE COMPACTED. COMPACTING OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TO DENSE FOR PLANTING ON THE SLOPES. COMPACTION OF THE SLOPE FACE MAY BE DONE PROGRESSIVELY
IN INCREMENTS OF THREE TO FIVE FEET (3' TO 5') IN FILL HEIGHT AS THIS FILL PROGRESSES OR AFTER THE FILL HAS BEEN BROUGHT TO ITS TOTAL HEIGHT.

DENSITY TEST
FIELD DENSITY TESTS SHALL BE PERFORMED ON ALL LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE TWELVE INCHES (12"). ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. NOTIFICATION BY THE CONTRACTOR TO CONDUCT TESTS SHALL BE AT LEAST THE DAY BEFORE. THIS NOTIFICATION SHALL INCLUDE THE FILL AREA LOCATION (LOT AND BLOCK), THE LIFT OR HEIGHT OF FILL AND APPROXIMATED DESIRED TIME OF TESTING. WHEN THESE TEST INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED AND RETESTED AT THE EXPENSE OF THE CONTRACTOR UNLESS THE CONTRACTOR CAN SHOW EVIDENCE THAT CIRCUMSTANCES BEYOND HIS CONTROL REQUIRED THE RETESTING. GENERALLY, THE SPECIFIC TESTING WILL BE AS FOLLOWS AND CONDUCTED BY A GEO–TECHNICAL ENGINEER OR STAFF.

1. THE LAND TO BE FILLED (PREPARED SUBGRADE) SHALL BE PREPARED AND TESTED AT A FREQUENCY AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
2. THE FIRST LIFT OF COMPACTED FILL (GENERALLY 8–12 IN.) SHALL BE TESTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER. ANY AREAS SUPPORTING THE PROPOSED STRUCTURES REQUIRING FILL SHALL BE TESTED FOR DENSITY COMPLIANCE.
3. FILLS SHALL BE TESTED AT A MAXIMUM OF EACH TWELVE INCHES (12") OF FILL.
4. TEST RESULTS WILL BE PROVIDED BY THE FIELD TECHNICIAN TO THE CONTRACTOR WHEN POSSIBLE: HOWEVER, ALL TEST RESULTS ARE TO BE REVIEWED BY THE GEOTECHNICAL ENGINEER FOR COMPLIANCE. THE ENGINEER WILL NOTIFY THE CONTRACTOR OF ALL TEST RESULTS.

CUT/FILL LOTS
AREAS INVOLVING CUT ON THE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6 IN., AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE OF DETERMINING UNIFORMITY OF THE AREA SUPPORTING THE PROPOSED STRUCTURES.

HUD 79–G
HUD 79–G REQUIREMENT FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUD 79–G COMPACTION TESTING. IN ADDITION, ENGINEERS MUST PROVIDE VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79–G. AFTER SITE GRADING IS COMPLETED, GEO–TECHNICAL ENGINEER SHALL PROVIDE THE CONTRACTOR AND OWNER A 79–G LETTER.

DRAINAGE NOTE
FINISHED FLOOR ELEVATIONS
THE ELEVATION OF THE LOWEST FLOOR SHALL BE AT LEAST 10 INCHES ABOVE THE FINISHED GRADE OF THE SURROUNDING GROUND, WHICH SHALL BE SLOPED IN A FASHION SO AS TO DIRECT STORMWATER AWAY FROM THE STRUCTURE. PROPERTIES ADJACENT TO STORMWATER CONVEYANCE STRUCTURES MUST HAVE FLOOR SLAB ELEVATION OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100–YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE.

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

GRADING DETAILS

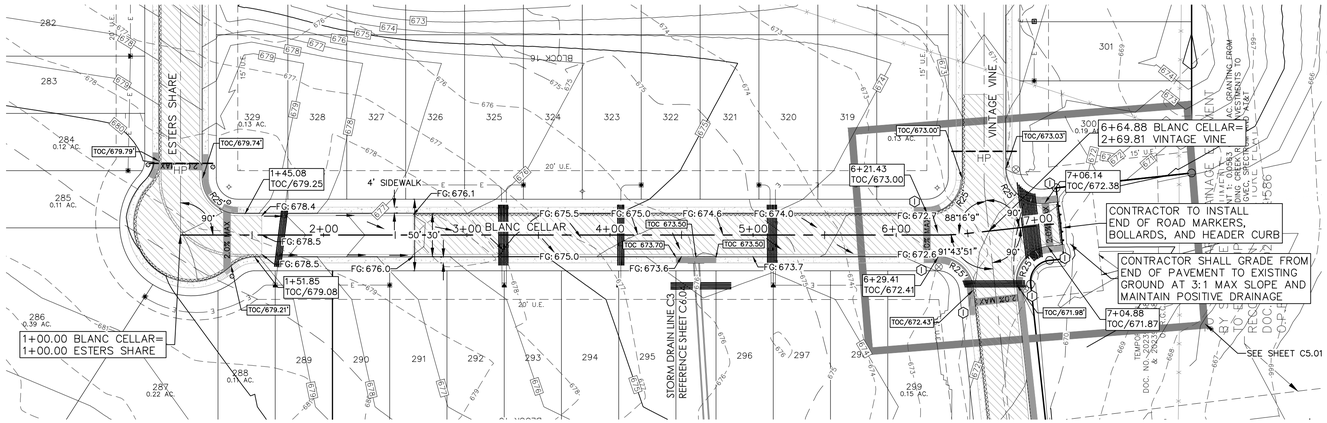
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C4.07

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\C0s\031.097_DETL.dwg User: reissd Feb 07, 2025 - 10:16am



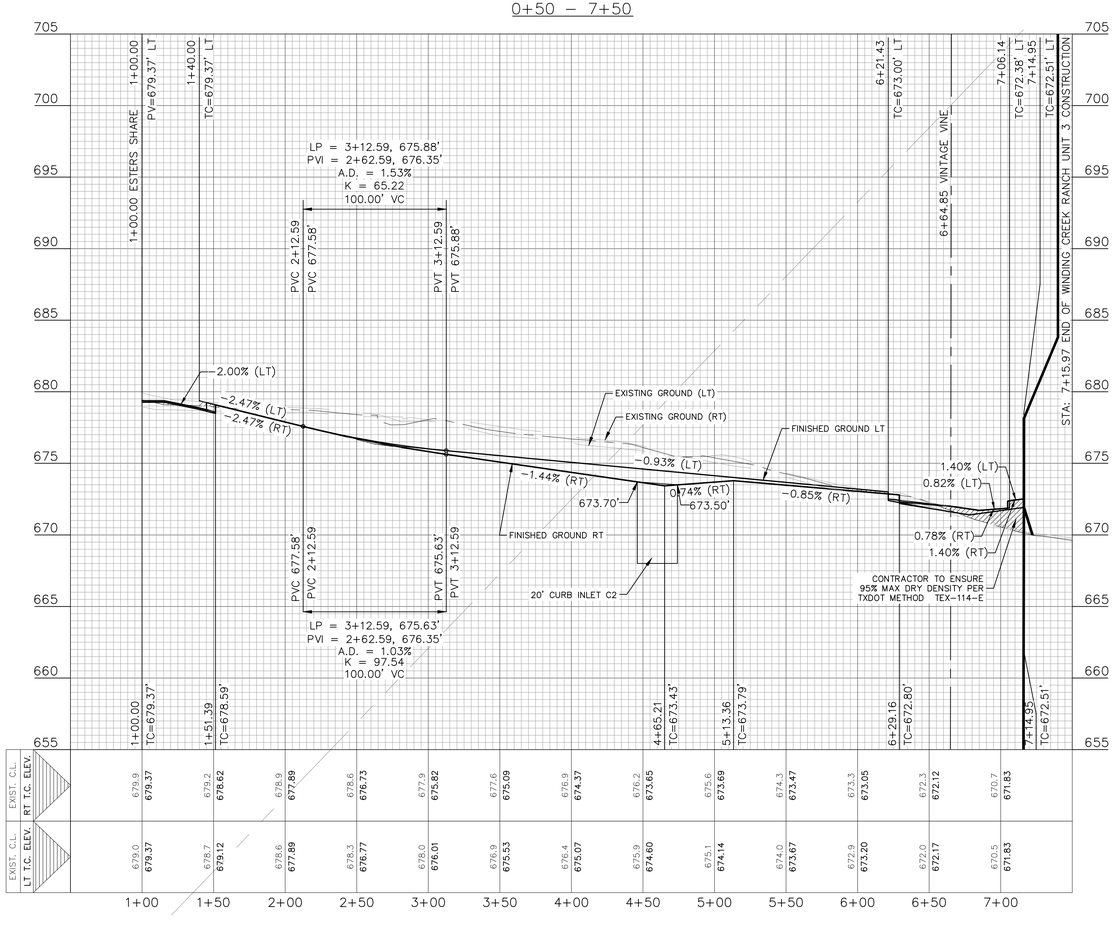
LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- A.D.A. RAMP
- FLOW ARROW
- WASHOUT CROWN AREAS
- SPILL CURB
- EXISTING GROUND LEFT (EG LT)
- EXISTING GROUND RIGHT (EG RT)
- EXISTING GROUND CENTER (EG CTR)
- PROPOSED TOP OF CURB (PR TC)
- ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
- SIDEWALK RAMP TYPE TO BE CONSTRUCTED AT TIME OF STREET CONSTRUCTION (SEE DETAIL SHEET **C5.7**)
- SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR
- SIDEWALK TO BE CONSTRUCTED DURING HOME CONSTRUCTION BY BUILDER

NOTES

1. LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF **25** MPH.
2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
3. CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
5. PER NEW BRAUNFELS ORDINANCE SEC. 114-98(a)(6) ALL DRIVEWAY LOCATED ON A SINGLE FAMILY RESIDENCE ON A LOCAL STREET SHALL HAVE A MINIMUM SPACING OF 20'

BLANC CELLAR
0+50 – 7+50



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.

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

BLANC CELLAR
PLAN & PROFILE

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C5.00

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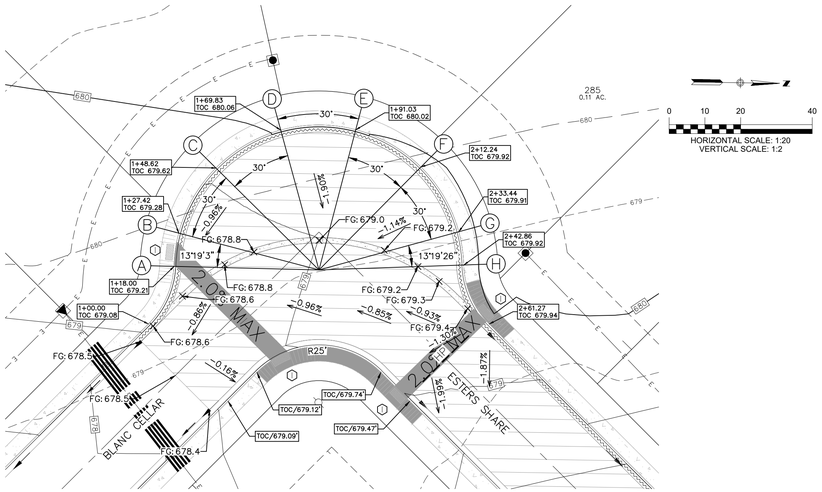
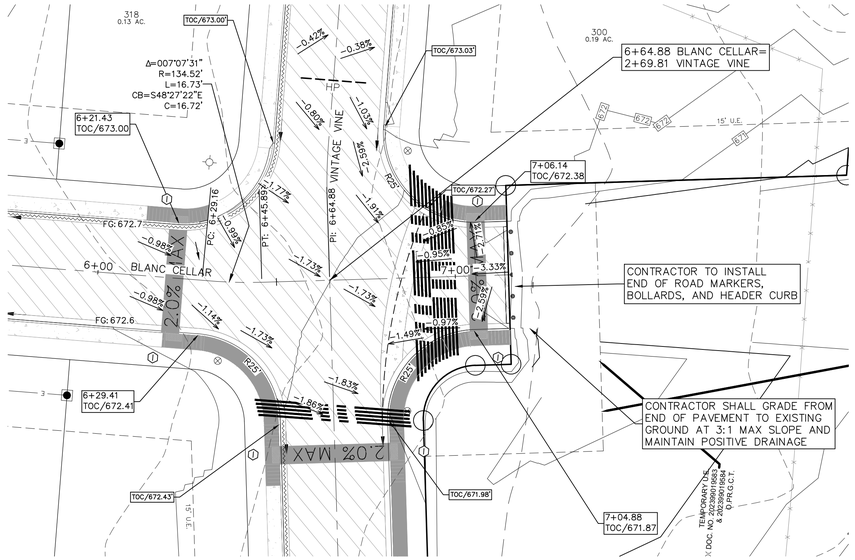
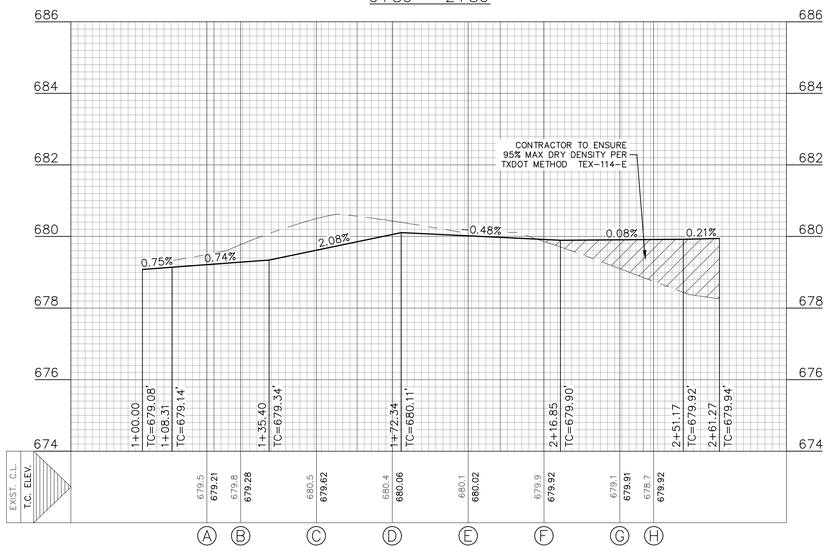
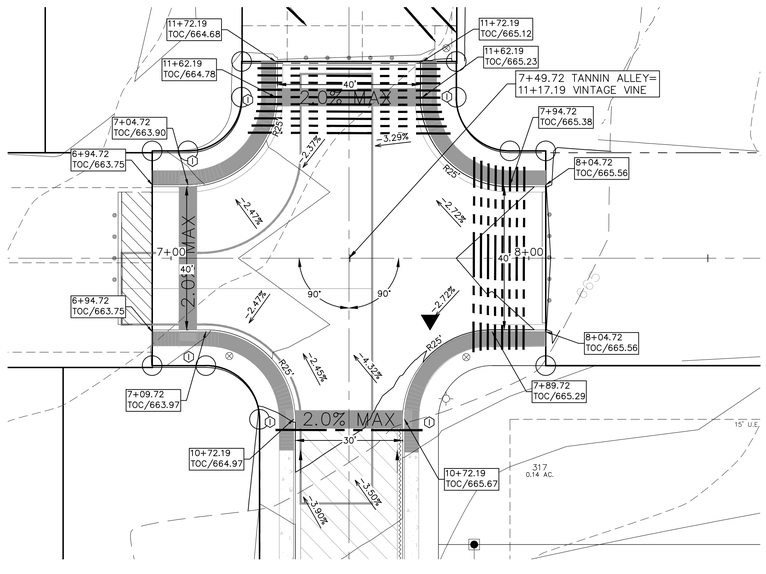




BLANC CELLAR AND VINTAGE VINE
INTERSECTION DETAIL





TANNIN ALLEY AND VINTAGE VINE
INTERSECTION DETAIL

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
- A.D.A. RAMP
- FLOW ARROW
- WASHOUT CROWN AREAS
- SPILL CURB
- EXISTING GROUND LEFT (EG LT)
- EXISTING GROUND RIGHT (EG RT)
- EXISTING GROUND CENTER (EG CTR)
- PROPOSED TOP OF CURB (PR TC)
- 2.0% MAX — ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
- SIDEWALK RAMP TYPE TO BE CONSTRUCTED AT TIME OF STREET CONSTRUCTION (SEE DETAIL SHEET **C5.7**)
- SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR AT THE TIME OF ROADWAY CONSTRUCTION
- SIDEWALK TO BE CONSTRUCTED DURING HOME CONSTRUCTION BY BUILDER

NOTES

1. LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF **25** MPH.
2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
3. CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
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06/19/2023

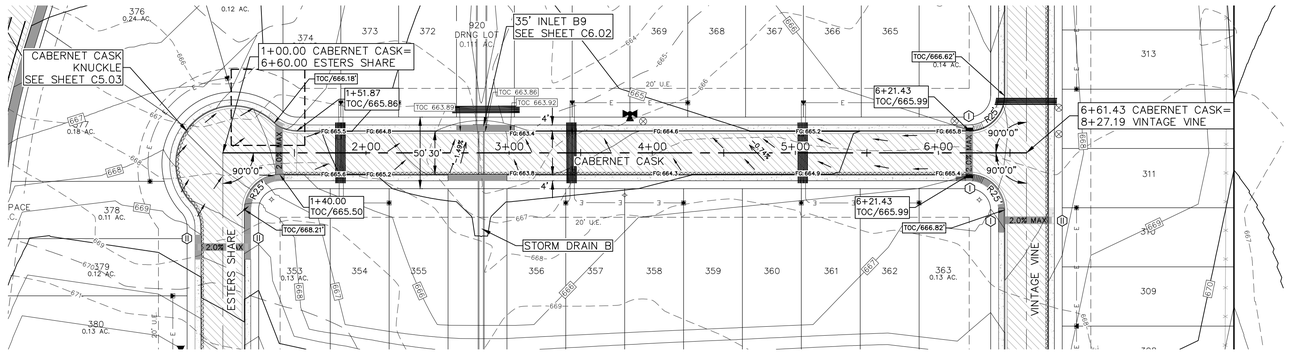
BLANC CELLAR & ESTERS SHARE KNUCKLE
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C5.01

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cbs\031.097_BLANC CELLAR.dwg User: reized Feb 07, 2025 - 10:19am



0 25 50 100

HORIZONTAL SCALE: 1:50
VERTICAL SCALE: 1:5

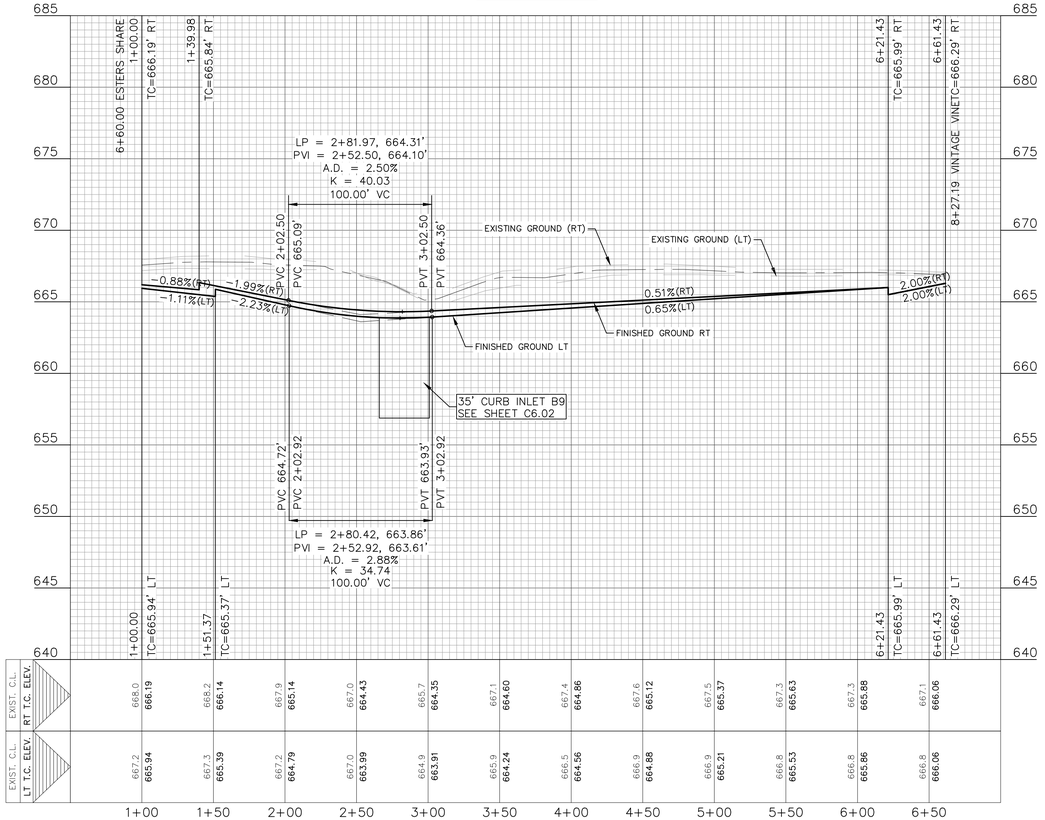
LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- A.D.A. RAMP
- FLOW ARROW
- WASHOUT CROWN AREAS
- SPILL CURB
- EXISTING GROUND LEFT (EG LT)
- EXISTING GROUND RIGHT (EG RT)
- EXISTING GROUND CENTER (EG CTR)
- PROPOSED TOP OF CURB (PR TC)
- 2.0% MAX — ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
- SIDEWALK RAMP TYPE TO BE CONSTRUCTED AT TIME OF STREET CONSTRUCTION (SEE DETAIL SHEET **C5.7**)
- SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR AT THE TIME OF ROADWAY CONSTRUCTION
- SIDEWALK TO BE CONSTRUCTED DURING HOME CONSTRUCTION BY BUILDER

NOTES

1. LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF **25** MPH.
2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
3. CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
5. PER NEW BRAUNFELS ORDINANCE SEC. 114-98(a)(6) ALL DRIVEWAY LOCATED ON A SINGLE FAMILY RESIDENCE ON A LOCAL STREET SHALL HAVE A MINIMUM SPACING OF 20'

CABERNET CASK
0+50 – 7+00



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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

CABERNET CASK
PLAN & PROFILE

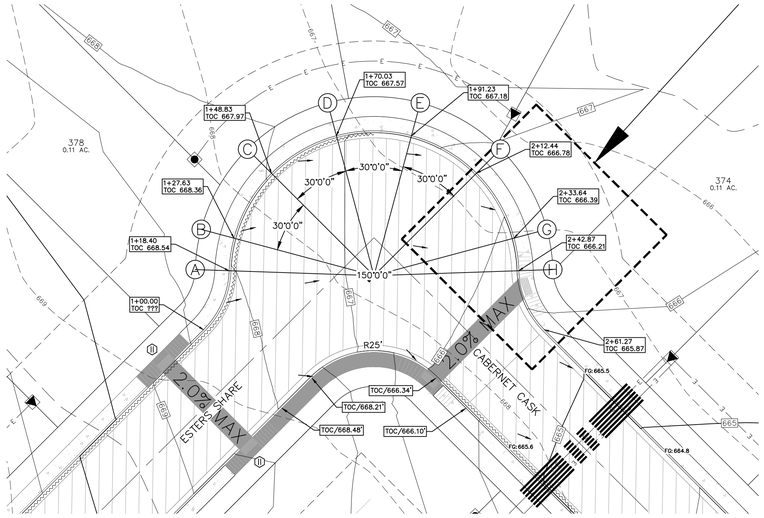
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

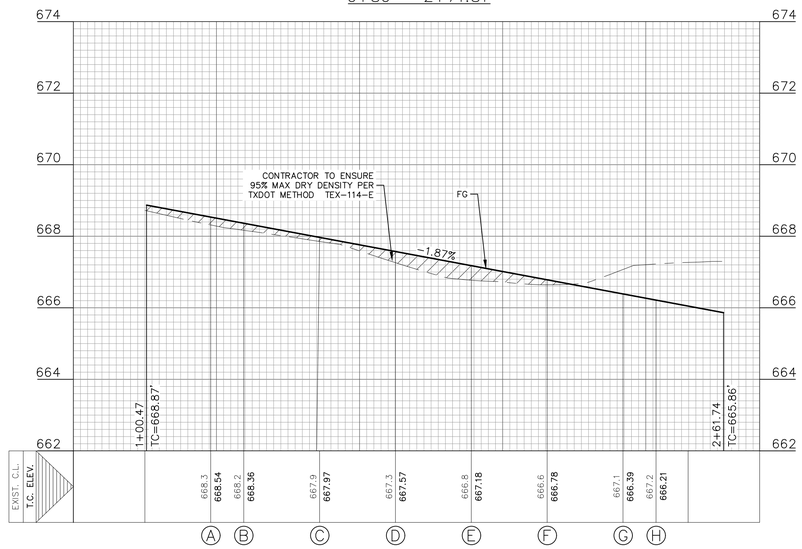
DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

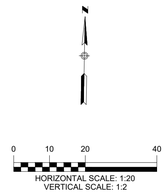
SHEET
C5.02

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cds\031.097_CABERNET CASK.dwg User: reized Feb 07, 2025 - 10:20am



ESTER CABERNET KNUCKLE
0+80 – 2+71.81





LEGEND

- 700 — EXISTING CONTOURS
- 700 — PROPOSED CONTOURS
- B.L. — BUILDING SETBACK LINE
- U.E. — UTILITY EASEMENT
- D.E. — DRAINAGE EASEMENT
- A.D.A. RAMP
- FLOW ARROW
- WASHOUT CROWN AREAS
- SPILL CURB
- EXISTING GROUND LEFT (EG LT)
- EXISTING GROUND RIGHT (EG RT)
- EXISTING GROUND CENTER (EG CTR)
- PROPOSED TOP OF CURB (PR TC)
- 2.0% MAX — ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
- U — SIDEWALK RAMP TYPE TO BE CONSTRUCTED AT TIME OF STREET CONSTRUCTION (SEE DETAIL SHEET **C5.7**)
- SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR
- SIDEWALK TO BE CONSTRUCTED DURING HOME CONSTRUCTION BY BUILDER

NOTES

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4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
5. PER NEW BRAUNFELS ORDINANCE SEC. 114-98(a)(6) ALL DRIVEWAY LOCATED ON A SINGLE FAMILY RESIDENCE ON A LOCAL STREET SHALL HAVE A MINIMUM SPACING OF 20'

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HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

CABERNET CASK & ESTERS SHARE KNUCKLE

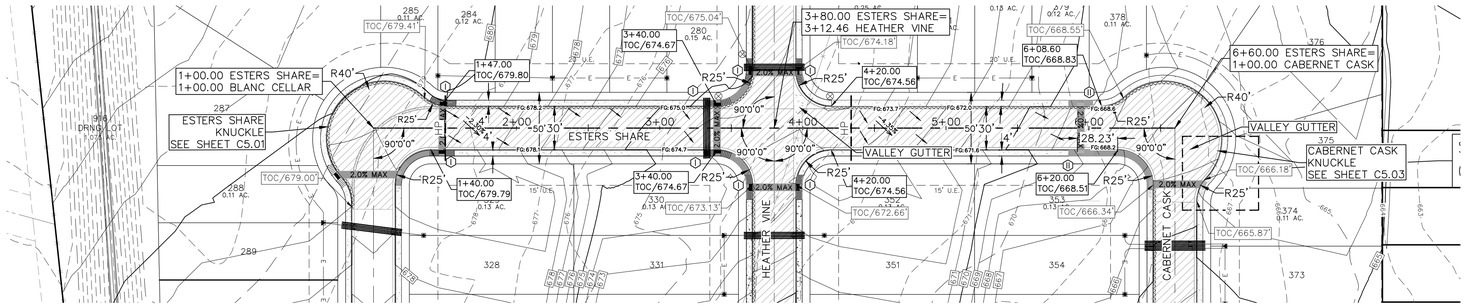
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C5.03

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cds\031.097_CABERNET CASK.dwg User: rossd Feb 07, 2025 - 10:20am



HORIZONTAL SCALE: 1:50
VERTICAL SCALE: 1:5

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- A.D.A. RAMP
- FLOW ARROW
- WASHOUT CROWN AREAS
- SPILL CURB
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- EXISTING GROUND RIGHT (EG RT)
- EXISTING GROUND CENTER (EG CTR)
- PROPOSED TOP OF CURB (PR TC)
- 2.0% MAX — ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
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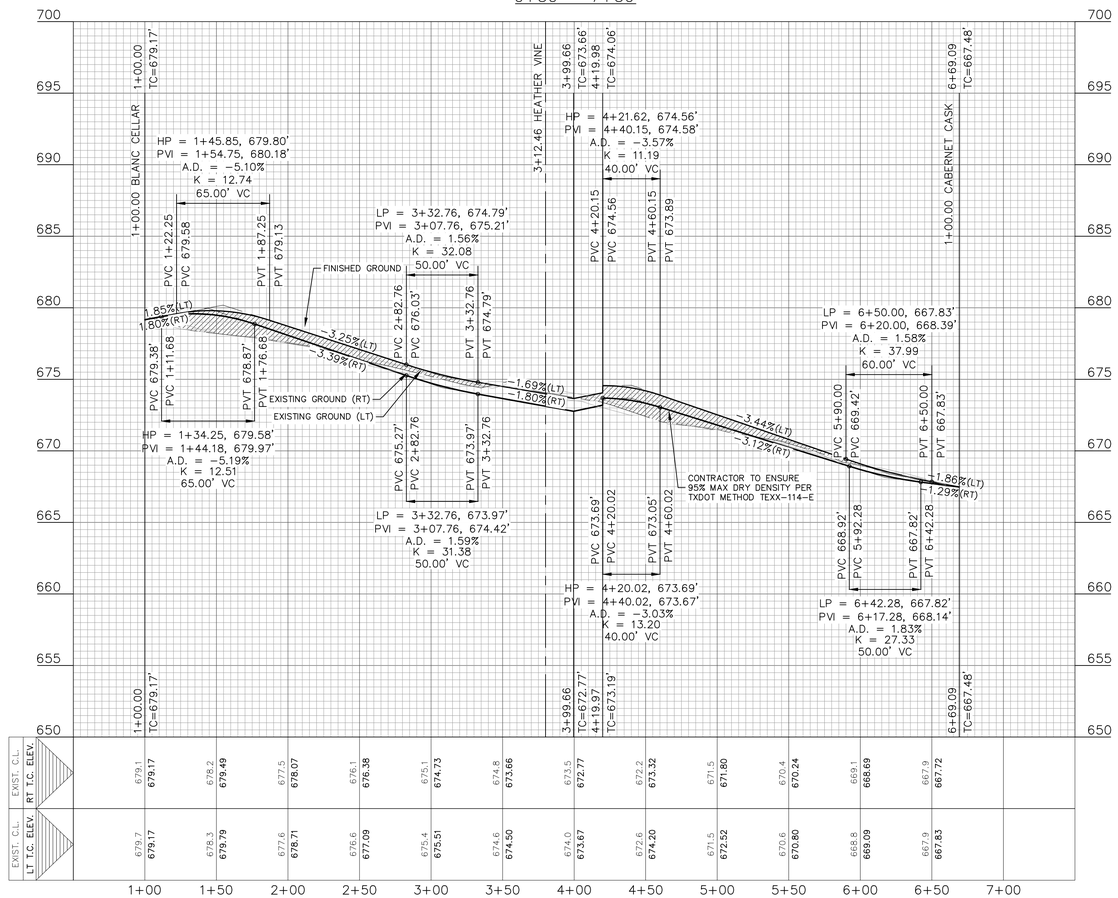
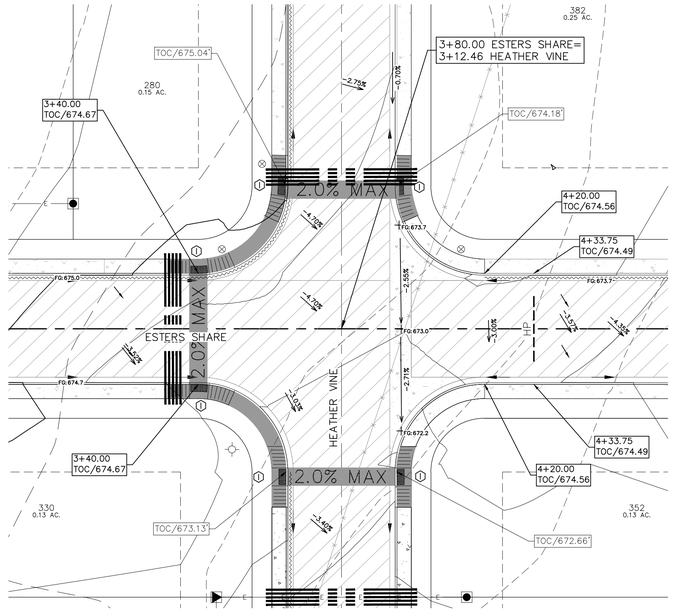
ESTERS SHARE
0+50 – 7+50





SCALE: 1" = 20'

ESTERS SHARE AND HEATHER VINE INTERSECTION DETAIL

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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600
HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

ESTERS SHARE PLAN & PROFILE

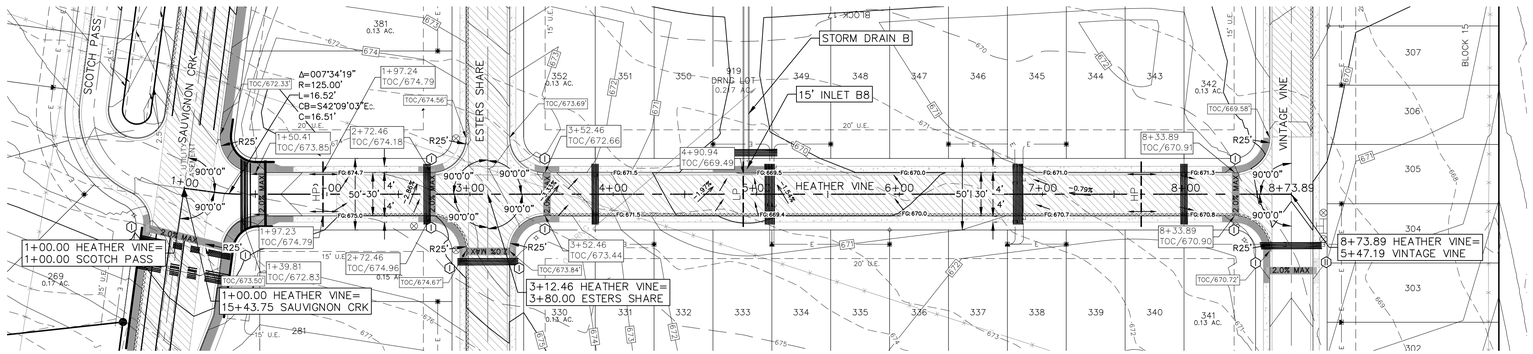
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

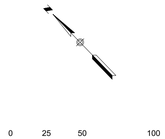
NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAM**
REVIEWED BY: **CMH**
HMT PROJECT NO.: **031.097**

SHEET
C5.04

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cbs\031.097_ESTERS SHARE.dwg User: reisd Feb 07, 2025 - 10:22am





LEGEND

- EXISTING CONTOURS
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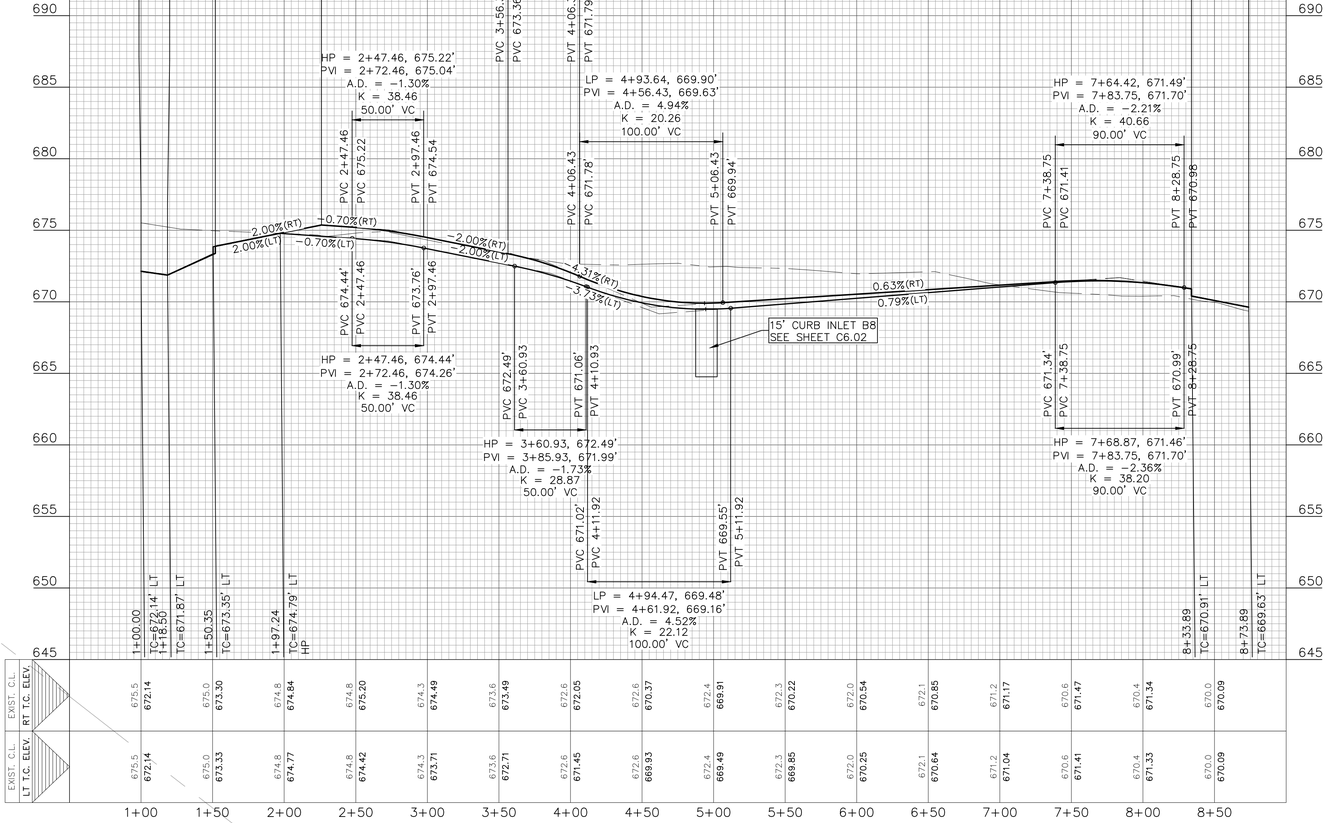
HEATHER VINE
0+50 – 9+00



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NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

HEATHER VINE
PLAN & PROFILE

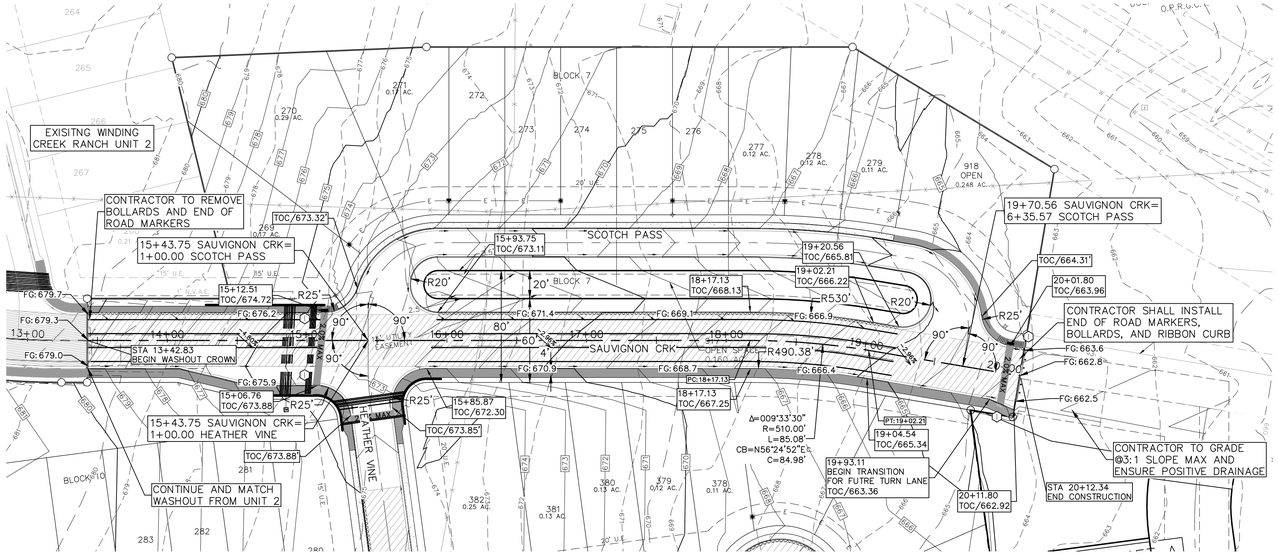
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

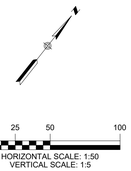
NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

SHEET
C5.05

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\C0s\031.097_HEATHER VINE.dwg User: reissd Feb 07, 2025 - 10:23am





LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
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- D.E. DRAINAGE EASEMENT
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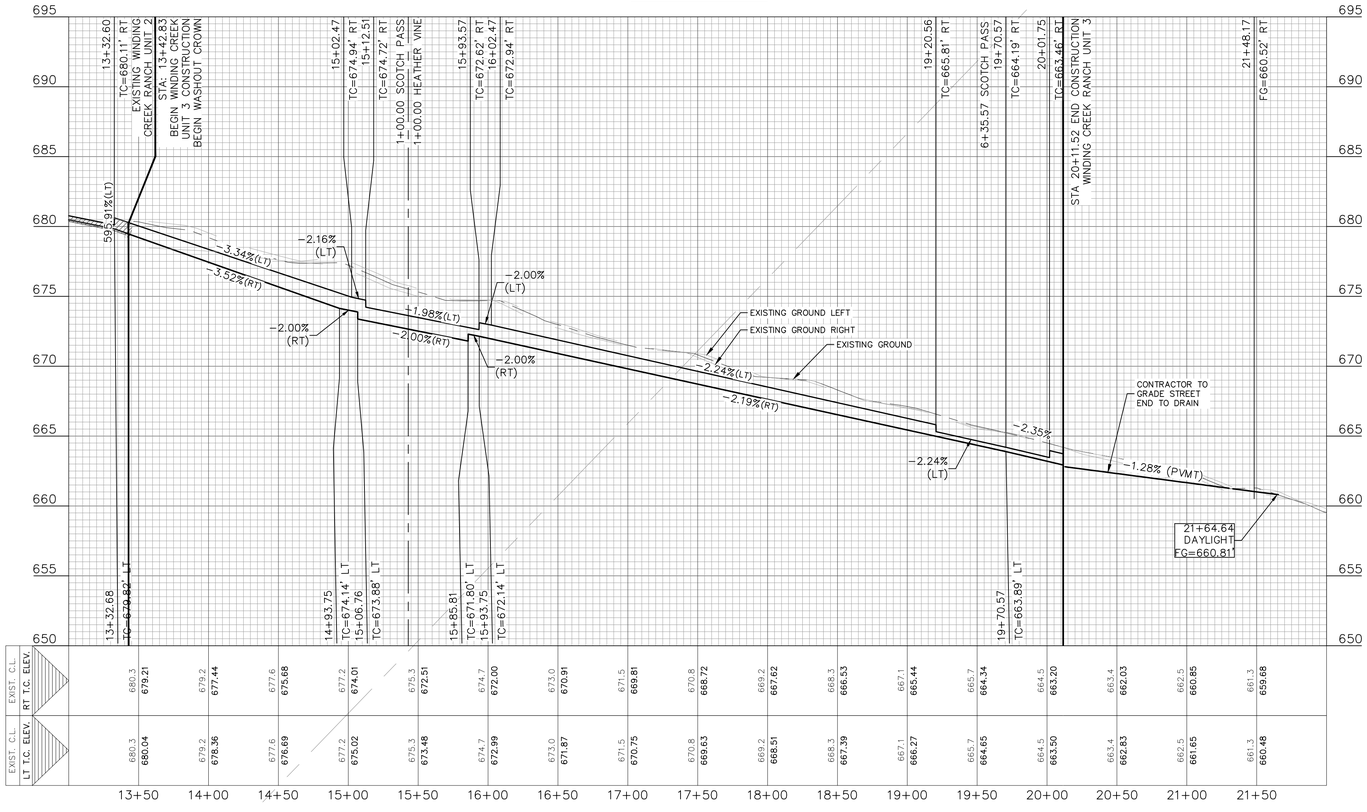
SAUVIGNON CRK
13+00 – 22+00



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HMT
ENGINEERING & SURVEYING
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NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

SAUVIGNON CRK PLAN & PROFILE

WINDING CREEK RANCH UNIT 3

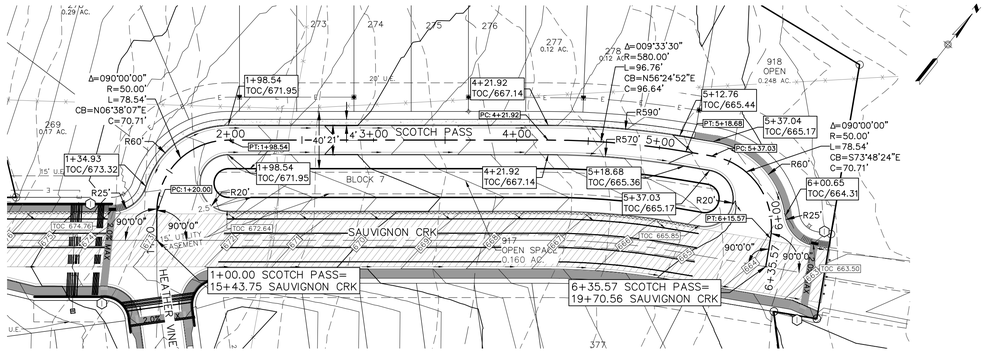
NEW BRAUNFELS, TEXAS

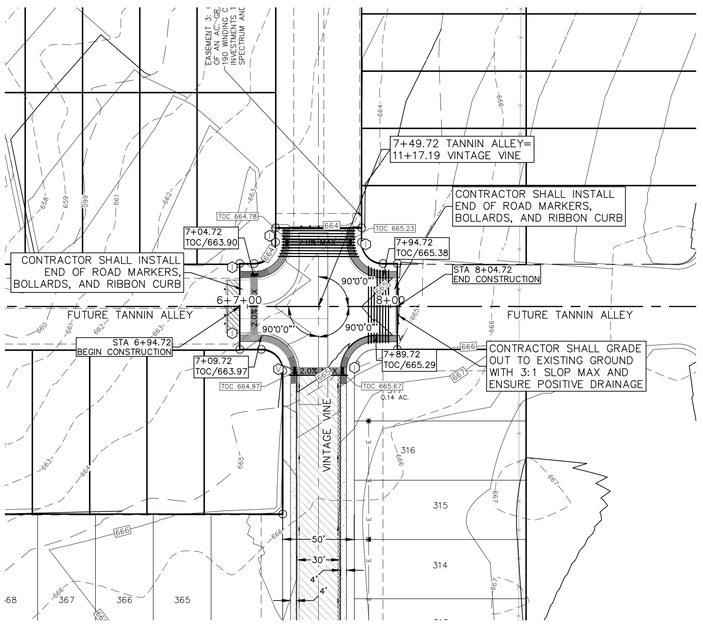
NO.	REVISION DESCRIPTION	REVISION DATE

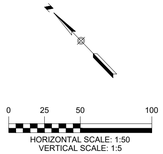
DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C5.06

Drawing Name: N:_Projects\031 – DR Horton\031.097 – Winding Creek Ranch Unit 3\Cbs\031.097_SAUVIGNON CRK.dwg User: reissd Feb 07, 2025 – 10:24am







LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
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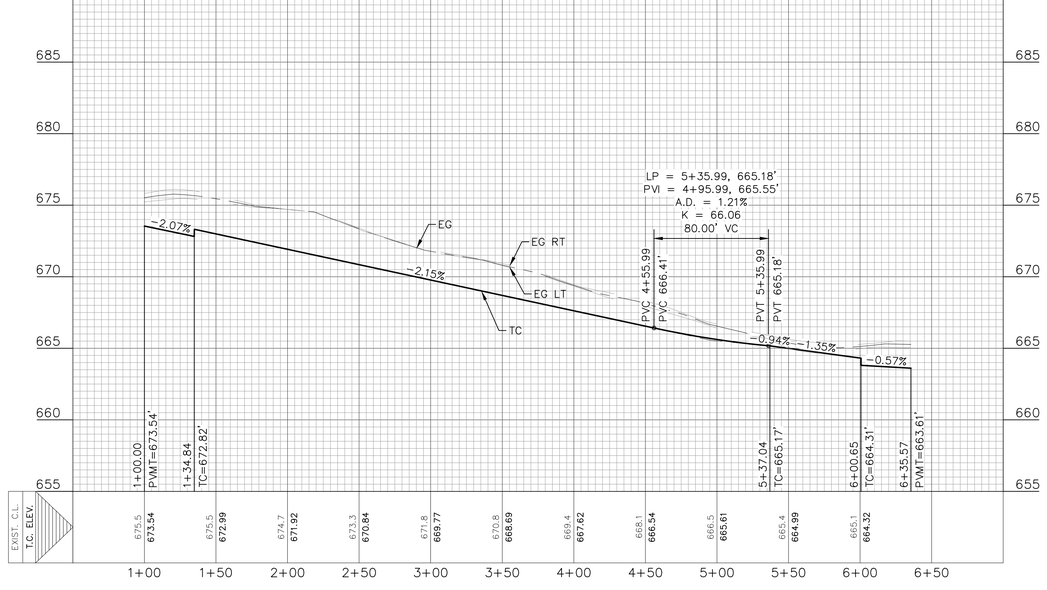
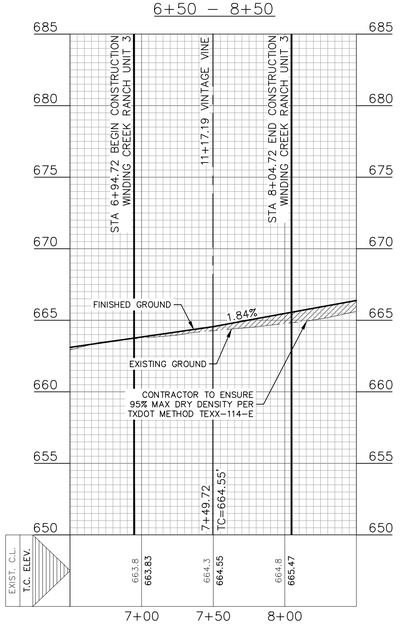
SCOTCH PASS
0+50 – 7+00



TANNIN ALLEY
6+50 – 8+50



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HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

SCOTCH PASS & TANNIN VALLEY PLAN & PROFILE

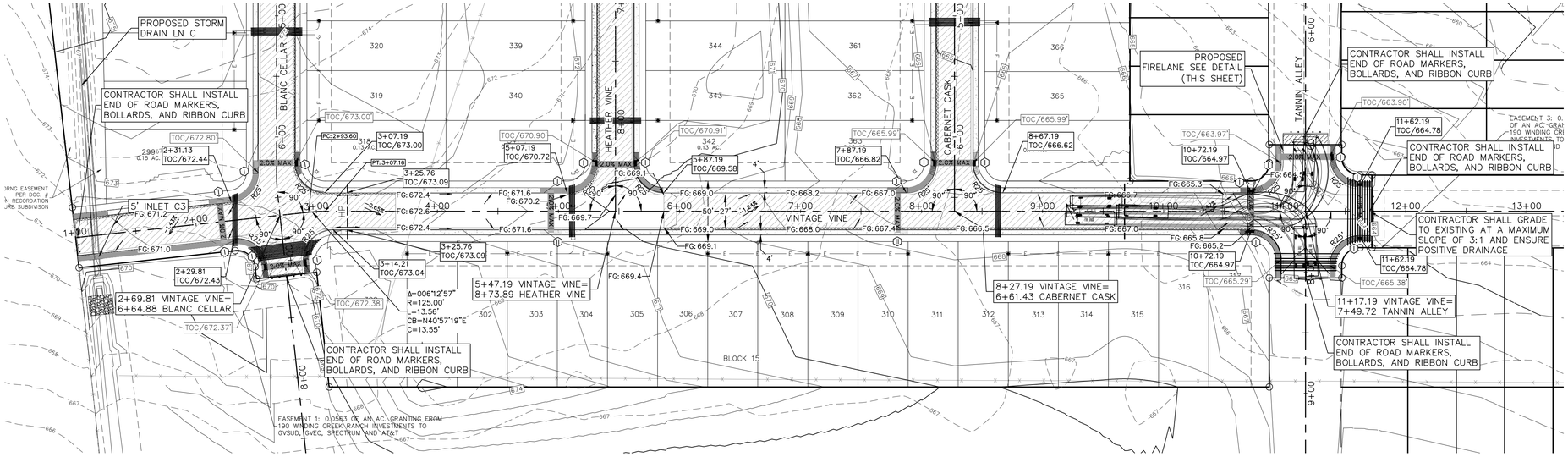
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

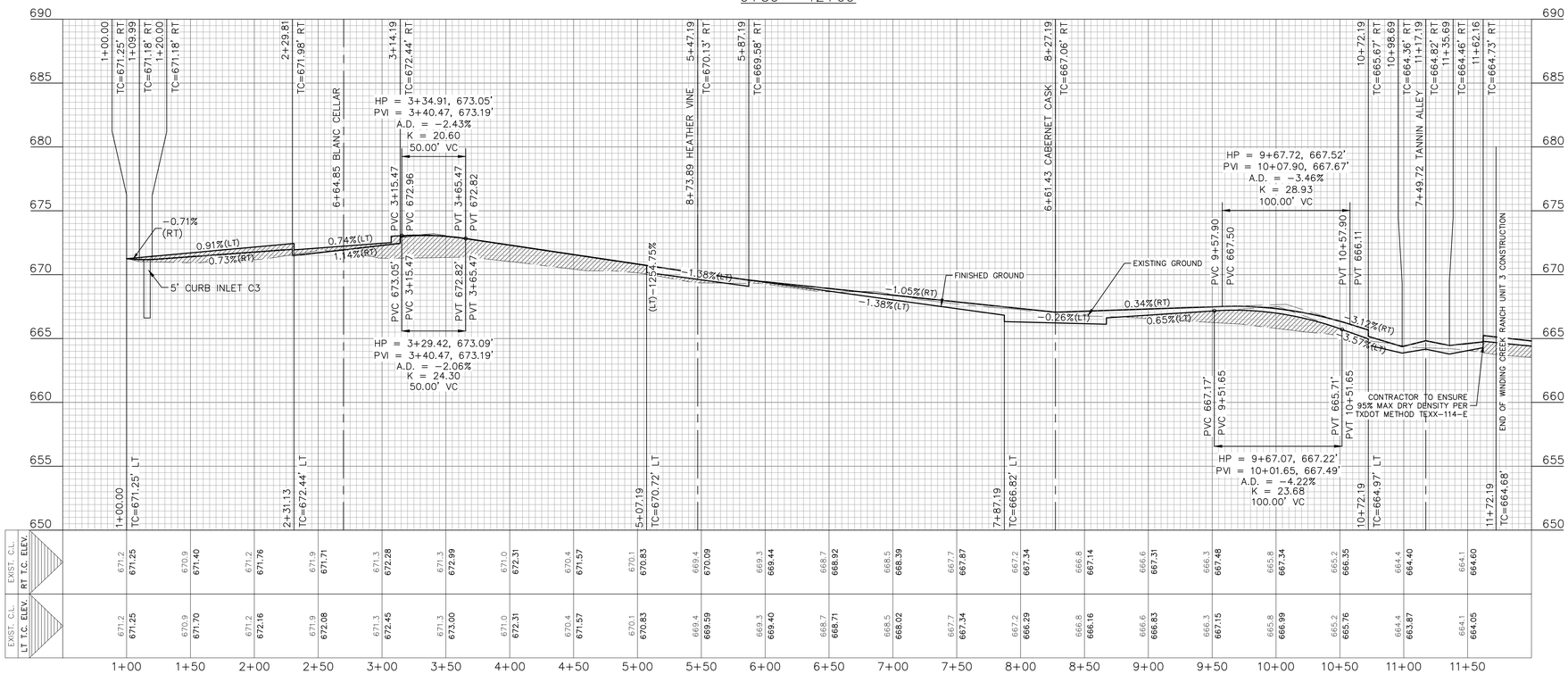
DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C5.07

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cds\031.097_TANNIN VALLEY.dwg User: reissd Feb 07, 2025 - 10:25am

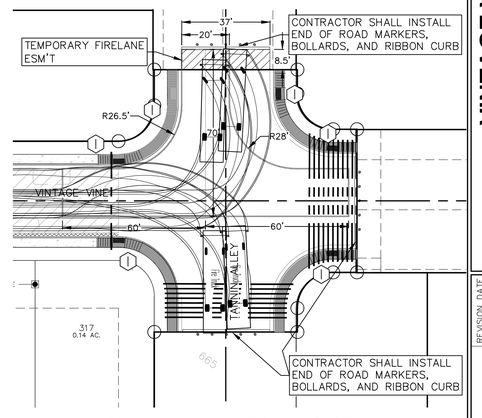


VINTAGE VINE
0+50 – 12+00



EXIST. C.L.	671.2	670.9	671.2	671.9	671.3	671.3	671.0	670.4	670.1	669.4	669.3	668.7	668.5	667.7	667.2	666.8	666.6	666.3	665.8	665.2	664.4	664.1
RT T.C. ELEV.	671.25	671.40	671.76	671.71	672.28	672.99	672.31	671.57	670.83	670.09	669.44	668.92	668.39	667.87	667.34	667.14	666.31	667.48	667.34	666.35	664.40	664.60
EXIST. C.L.	671.2	670.9	671.2	671.9	671.3	671.3	671.0	670.4	670.1	669.4	669.3	668.7	668.5	667.7	667.2	666.8	666.6	666.3	665.8	665.2	664.4	664.1
LT T.C. ELEV.	671.25	671.70	672.16	672.08	672.45	673.00	672.31	671.57	670.83	669.59	669.40	668.71	668.02	667.34	666.29	666.16	666.83	667.15	666.99	665.76	663.87	664.05

1+00 1+50 2+00 2+50 3+00 3+50 4+00 4+50 5+00 5+50 6+00 6+50 7+00 7+50 8+00 8+50 9+00 9+50 10+00 10+50 11+00 11+50



FIRELANE HAMMERHEAD DETAIL
SCALE: 1"=30'

0 25 50 100
SCALE: 1" = 50' HORIZ.
SCALE: 1" = 5' VERT.

LEGEND

- 700 EXISTING CONTOURS
- 700 PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- A.D.A. RAMP
- FLOW ARROW
- WASHOUT CROWN AREAS
- SPILL CURB
- EXISTING GROUND LEFT (EG LT)
- EXISTING GROUND RIGHT (EG RT)
- EXISTING GROUND CENTER (EG CTR)
- PROPOSED TOP OF CURB (PR TC)
- 2.0% MAX ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
- SIDEWALK RAMP TYPE TO BE CONSTRUCTED AT TIME OF STREET CONSTRUCTION (SEE DETAIL SHEET **C5.7**)
- SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR AT THE TIME OF ROADWAY CONSTRUCTION
- SIDEWALK TO BE CONSTRUCTED DURING HOME CONSTRUCTION BY BUILDER

NOTES

1. LOCAL STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF **25** MPH.
2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
3. CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
5. PER NEW BRAUNFELS ORDINANCE SEC. 114-98(a)(6) ALL DRIVEWAY LOCATED ON A SINGLE FAMILY RESIDENCE ON A LOCAL STREET SHALL HAVE A MINIMUM SPACING OF 20'

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HMT ENGINEERING & SURVEYING
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NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

VINTAGE VINE PLAN & PROFILE

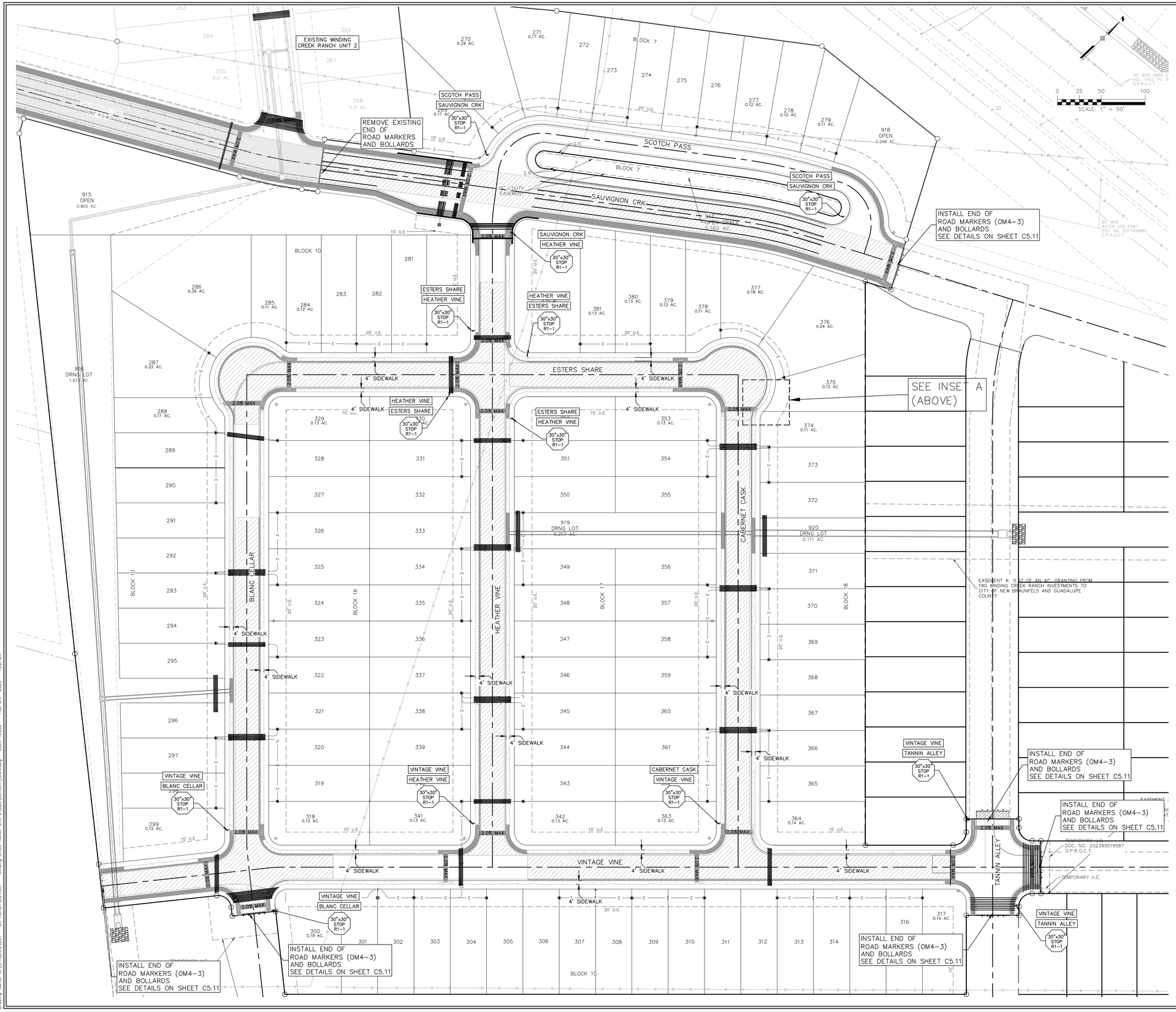
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C5.08

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\02s\031.097_VINTAGE VINE.dwg User: reissd Feb 07, 2025 - 10:26am



LEGEND

- 700 — EXISTING CONTOURS
- 700 — PROPOSED CONTOURS
- B.L. — BUILDING SETBACK LINE
- U.E. — UTILITY EASEMENT
- D.E. — DRAINAGE EASEMENT
- A.D.A. RAMP
- FLOW ARROW
- WASHOUT CROWN AREAS
- SPILL CURB
- EXISTING GROUND LEFT (EG LT)
- EXISTING GROUND RIGHT (EG RT)
- EXISTING GROUND CENTER (EG CTR)
- PROPOSED TOP OF CURB (PR TC)
- 2.0% MAX — ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
- SIDEWALK RAMP TYPE TO BE CONSTRUCTED AT TIME OF STREET CONSTRUCTION (SEE DETAIL SHEET **C5.7**)
- SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR
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SIGNAGE NOTES

INSTALLATION

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL REGULATORY, WARNING AND STREET NAME SIGNS AND SIGN MOUNTS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.

MOUNTING

THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TRAFFIC STANDARDS SMD (GEN) ? 08 AND SMD (TWT) ? 08.

THE TRIANGULAR SLIP BASE SYSTEM AND 10 BWG TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS SMD (GEN) ? 08 AND SMD (SLIP-1-3)- 08.

OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D & OM (1 ? 5) ? 10.

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STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

SIGNAGE PLAN

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE:	APRIL 2023
DRAWN BY:	JAD
DESIGNED BY:	CAT
REVIEWED BY:	CVH
HMT PROJECT NO.:	031.097

SHEET

C5.09

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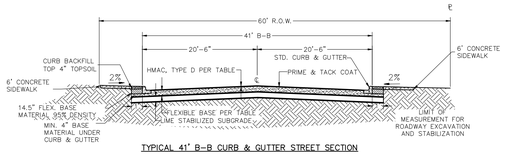
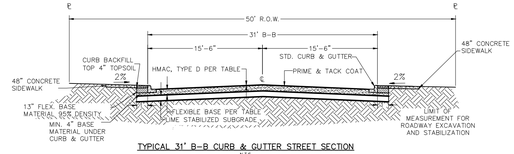


TYPICAL 41' B-B CURB & GUTTER STREET SECTION

N.T.S.



TYPICAL 31' B-B CURB & GUTTER STREET SECTION

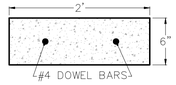
N.T.S.

FLEXIBLE PAVEMENT - RESIDENTIAL COLLECTOR		FLEXIBLE PAVEMENT - LOCAL "A"	
PAVEMENT MATERIAL		PAVEMENT MATERIAL	
TYPE "D" HMAC	2"	TYPE "D" HMAC	2"
TYPE C/D BINDER COURSE	3"	TYPE C/D BINDER COURSE	2"
CRUSHED LIMESTONE FLEXIBLE BASE, IN.	16"	CRUSHED LIMESTONE FLEXIBLE BASE, IN.	10"
COMPACTED SUBGRADE	-	COMPACTED SUBGRADE	-
LIME SUBGRADE	8"	LIME SUBGRADE	8"
GEOGRID TENSAR TX5	YES	GEOGRID TENSAR TX5	YES

NOTE:

1. ALL PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE TO THE "SUBSURFACE EXPLORATION AND PAVEMENT ANALYSIS, PROPOSED NEW STREETS, WINDING CREEK RANCH", BY RABA KISTNER, INC. DATED JANUARY 4, 2022.
2. ALL PAVEMENT SECTIONS SHOWN ON THE ABOVE TABLE SHALL SUPERCEDE ANY STANDARD DETAILS WITH RESPECT TO DEPTH OF MATERIALS ASSOCIATED WITH THIS PROJECT.
3. THE SUBGRADE SHOULD BE STABILIZED USING LIME IN ACCORDANCE WITH THE GEOTECHNICAL REPORT IN ORDER TO ACHIEVE THE FOLLOWING:
   - 3.1. PLASTICITY INDEX OF 20 OR LESS
   - 3.2. PH OF 12.4 OR GREATER
4. THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF THE LIME OR CEMENT.

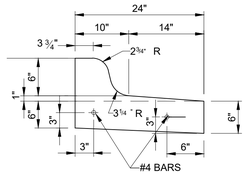
TYPICAL PAVEMENT SECTION



1. MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF NEW BRAUNFELS STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
2. DOWEL BARS IF REQUIRED SHALL BE PLACED AS SHOWN.
3. EXPANSION JOINTS SHALL BE INSTALLED AT INTERVALS NOT TO EXCEED 40 FEET.

RIBBON CURB DETAIL

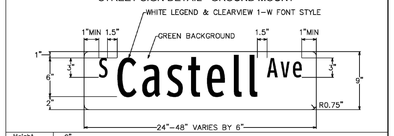
NOT TO SCALE



SPILL CURB DETAIL

NOT TO SCALE

STREET SIGN DETAIL - GROUND MOUNT



Height	9"
Length	24" min 48" max 6" increments in length
Thickness	0.080"
Substrate	Flat aluminum sheeting with ¾" radius circular fillets at corners conforming to the requirements of ASTM B 209, Alloys 6061-T-6, or 5052-H38.
Sign Face Materials	Green film over High Intensity Prismatic sheeting
Legend	Legends shall be Clearview 1-W font style. Reduced spacing between the letters or words should not be used as a means of reducing the overall size of a street name sign unless approved by the City Traffic Engineer.
Color	White legend on green background

Notes:

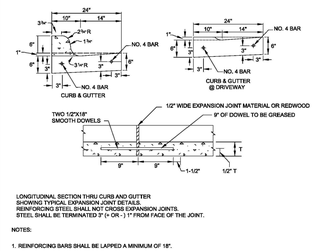
1. Street name signs shall be double sided when center mounted on top of sign post. Only one street name sign should be installed on top of sign post with STOP or YIELD sign.
2. When two sets of street name signs are required (e.g. at "T" intersections), one double-sided street name sign shall be mounted on sign post. The sign assembly shall meet minimum height requirements as required in the Texas Manual on Uniform Traffic Control Devices (TMUTCD). When required, DEAD END (W14-1a) or NO OUTLET (W14-2a) signs shall also be mounted on the sign post.
3. Street name signs greater than 36" long and center mounted on top of sign post shall be mounted on post top bracket with 12" slot. All other street name signs center mounted on top of sign post shall be mounted on post top bracket with 5 ½" slot.
4. Street name signs mounted on sign post shall be mounted with double-sided round pole brackets. Two holes should be punched in the center of the 9" street name sign blank 1" from edge of the blank with 7"spacing between holes.
5. The lettering for names of streets shall be composed of a combination of lower-case letters with initial upper-case letters. Acceptable abbreviations per TMUTCD may be used except for the street name itself.
6. Red background (red film over High Intensity Prismatic) should be used for private street name signs.

Street Sign Detail - Ground Mount		ENGINEERING DIVISION 424 S. CASTELL AVE. NEW BRAUNFELS, TEXAS 78130 PHONE: 830.221.4020 FAX: 830.626.3600
ISSUE DATE: February 2013	DWG. NO: ST-024	SCALE: N.T.S.
DRAWN BY: RAG	CONTACT: GF	SHEET: 1 OF 1

P:\DATE ENGINEERING-AUTOCAD\DETAILS\NBS-PUBLIC WORKS DETAILS\NBL-LIVE\APPROVED DETAILS\2013\ST-201-024 STREET SIGN DETAILS - GROUND MOUNT.DWG

TYPICAL PAVEMENT SECTION

CURB AND GUTTER

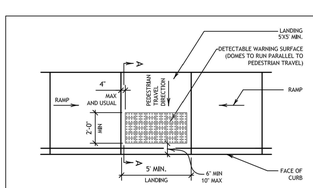


LONGITUDINAL SECTION THRU CURB AND GUTTER
SHOWING TYPICAL EXPANSION JOINT DETAILS.
REINFORCING STEEL SHALL NOT CROSS EXPANSION JOINTS.
STEEL SHALL BE TERMINATED 3" (+ OR -) 1" FROM FACE OF THE JOINT.

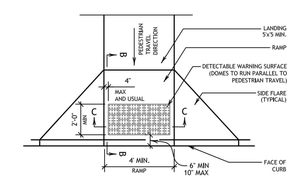
NOTES:

1. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 18".
2. CURB AND GUTTER SHALL HAVE FORMED TOOLED OR SAWED CONTRACTION JOINTS AT ± 10', THE DEPTH OF THESE JOINTS SHALL BE SUFFICIENT TO ENSURE CRACKING AT THE JOINTS.
3. CURB OR CURB AND GUTTER SHALL HAVE EXPANSION JOINTS AT POINTS OF CURVATURE, AT INTERVALS NO GREATER THAN 100' AND AT ALL ADJACENT STRUCTURES.
4. UNLESS OTHERWISE SHOWN, TRANSITIONS BETWEEN CURBS OR CURBS AND GUTTER OF DIFFERING CROSS SECTION SHALL BE ACCOMPLISHED OVER A 10' LENGTH OR AS APPROVED BY THE CITY ENGINEER.
5. ALL CONCRETE TO BE CLASS "A" 3000 PSI CONCRETE.
6. ALL EXPOSED CONCRETE SURFACES TO BE BRUSHED SMOOTH AND UNIFORM.

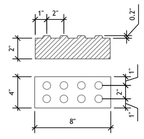
DATE APPROVED: 07/2008	DWG. NO: ST-013	SCALE: N.T.S.
DRAWN BY: RAS	SHEET: 1 OF 1	
FILENAME: CURB & GUTTER		ENGINEERING DEPARTMENT



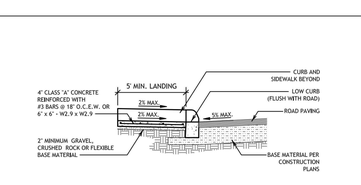
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.



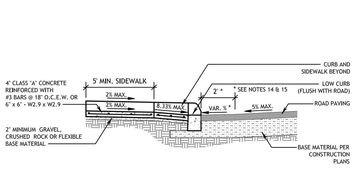
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



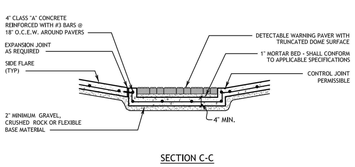
DETECTABLE WARNING PAVER



SECTION A-A



SECTION B-B



SECTION C-C

CURB RAMP NOTES

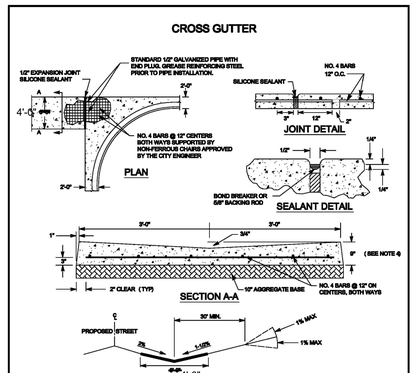
1. ALL SLOPES ARE MAXIMUM ALLOWABLE. THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS AS DIRECTED.
2. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF CURB RAMPS ARE TO BE SHOWN ON THE CONSTRUCTION PLANS. ALL ACCESSIBLE WALK WAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE AMERICAN'S WITH DISABILITIES ACT (ADA) AND TEXAS ACCESSIBILITY STANDARDS (TAS). CITY ENGINEER OR BUILDING OFFICIAL MAY ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
3. THE MINIMUM STANDARD SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 118-49 OF THE NEW BRAUNFELS CODE OF ORDINANCES AND MAINTAIN A MINIMUM UNOBSTRUCTED WIDTH OF 3' (36").
4. ALL LANDINGS WHERE REQUIRED SHALL BE 5'X 5' (60"X60") MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
5. RAMP LENGTHS SHALL BE SUFFICIENT TO MAINTAIN A MAXIMUM SLOPE OF 8.33% (1:12). MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2% (1:50).
6. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY. ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE GRADE OF THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS, AND LANDINGS IN ACCORDANCE WITH CURRENT ADA AND TAS REQUIREMENTS.
7. PROVIDE FLARED RAMP SIDES WITH A MAXIMUM SLOPE OF 10% (1:10) MEASURED ALONG THE CURB LINE. CURB RETURNS MAY BE USED IN-LIEU OF SIDE FLARES IN AREAS NOT NORMALLY WALKED ACROSS BY PEDESTRIANS, BECAUSE THE ADJACENT SURFACE IS VEGETATION OR OTHER NON-WALKING SURFACE OR WHERE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
8. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X 4' (48"X48") WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PATH.
9. CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS. AT INTERSECTIONS WHERE CROSSWALK MARKINGS ARE NOT REQUIRED, CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
10. EXISTING FEATURES THAT COMPLY WITH CURRENT TAS REQUIREMENTS MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.
11. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. PROVIDE CURB RAMPS WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
12. SEPARATE CURB RAMP AND LANDINGS FROM ADJACENT SIDEWALK AND ANY OTHER ELEMENTS WITH PRE-MOLD OR BOARD JOINT OF 1/2" UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
13. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
14. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (I.E. 8.33-(-2.67)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
15. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
16. ADA RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE WITH 2" MINIMUM GRAVEL,CRUSHED ROCK OR FLEXIBLE BASE MATERIAL. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6"x6" - W2.9 X W2.9 WIRE MESH.
17. THE EXTENTS OF ADA COMPLIANCE IN ALTERATIONS SHALL BE WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT AND AS DETERMINED BY THE CITY BUILDING OFFICIAL.

DETECTABLE WARNING NOTES

1. CURB RAMPS OR LANDINGS ABUTTING THE CROSSWALK MUST HAVE A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES COMPLYING WITH SECTION 4.29 OF THE TEXAS ACCESSIBILITY STANDARDS (TAS). THE SURFACE MUST CONTRAST VISUALLY WITH ADJOINING SURFACES, INCLUDING SIDE FLARES. FURNISH DARK BROWN OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNCOLORED CONCRETE, UNLESS SPECIFIED ELSEWHERE IN THE PLANS.
2. DETECTABLE WARNING SURFACES MUST BE SLIP RESISTANT AND NOT ALLOW WATER TO ACCUMULATE.
3. ALIGN TRUNCATED DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
4. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.
5. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS A MINIMUM OF 6" AND A MAXIMUM OF 10" FROM THE EXTENSION OF THE FACE OF CURB. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADIUS.
7. WITHIN CITY RIGHT OF WAY AND WHERE APPLICABLE FURNISH DETECTABLE WARNING PAVER UNITS MEETING ALL REQUIREMENTS OF ASTM C-936, C-33. LAY IN A TWO BY TWO UNIT BASKET WEAVE PATTERN OR AS DIRECTED.
8. LAY FULL-SIZE UNITS FIRST FOLLOWED BY CLOSURE UNITS CONSISTING OF AT LEAST 25 PERCENT OF A FULL UNIT. CUT DETECTABLE WARNING PAVER UNITS USING A POWER SAW.

City of New Braunfels	ENGINEERING DIVISION 424 S. CASTELL AVE. NEW BRAUNFELS, TEXAS 78130 PHONE: 830 221 4020 FAX: 830 626 3600	ADA RAMP STANDARDS
	APPROVED DATE: 7/5/2011	DWG. NO.:
	DRAWN BY: AM	CONTACT: JK
		SCALE: AS NOTED
		SHEET: 1 OF 1

CROSS GUTTER



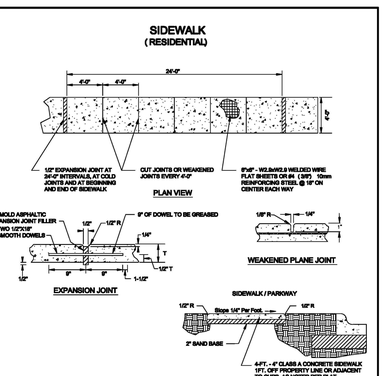
TYPICAL PROFILE AT LOCAL RESIDENTIAL STREET INTERSECTION

NOTES:

1. ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI.
2. FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.
3. CONSTRUCTION OF CROSS GUTTER IS NOT ALLOWED ACROSS MAJOR COLLECTOR OR ARTERIAL STREETS.
4. ADJACENT SPANDREL SHALL BE 9" THICK CLASS "A" 3,000 PSI CONCRETE.

DATE APPROVED: 7/08	DWG. NO: ST-020	SCALE: N.T.S.
DRAWN BY: RAS	SHEET: 1 OF 1	
FILENAME: CROSS GUTTER		ENGINEERING DEPARTMENT
P:\CURRENT NEW BRAUNFELS DETAILS\2020\		

SIDEWALK (RESIDENTIAL)



TYPICAL SECTION

NOTES:

1. EXPANSION JOINTS ARE TO BE USED BETWEEN CONCRETE DRIVEWAY AND SIDEWALK.
2. SCORED JOINTS DENOTE SIDEWALK ACROSS THE DRIVEWAY AND ARE TO BE PLACED AT LEAST 1/5 HL THROUGH THE SLAB THICKNESS.
3. ALL SIDEWALK AND DRIVEWAY CONSTRUCTION SHALL MEET A.D.A. SPECIFICATIONS.

DATE APPROVED: 7/08	DWG. NO: ST-016	SCALE: N.T.S.
DRAWN BY: RAS	SHEET: 1 OF 1	
FILENAME: SIDEWALK (Residential)		ENGINEERING DEPARTMENT
P:\CURRENT NEW BRAUNFELS DETAILS\2020\		

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

STREET DETAILS (1 OF 3)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

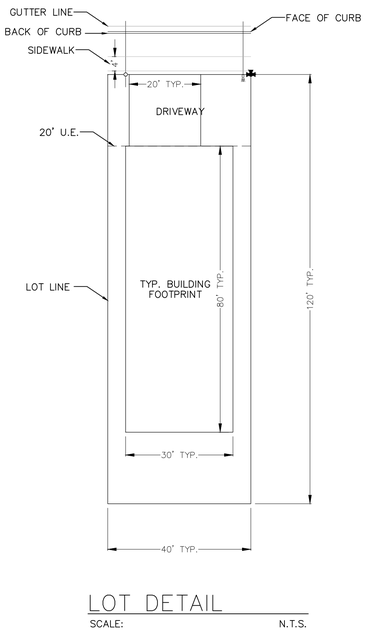
NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET

C5.10

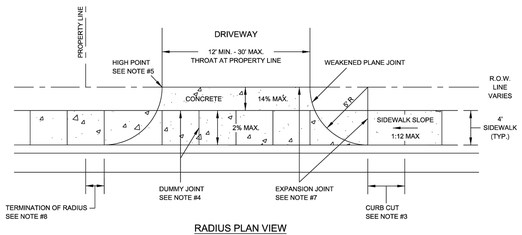
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\C2d\031.097_DETL.dwg User: rossd Feb 07, 2025 - 10:27am



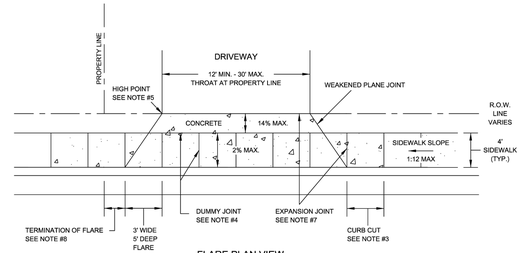
LOT DETAIL

SCALE: N.T.S.

DRIVEWAY APRON
(RESIDENTIAL - ONE OR TWO FAMILY)

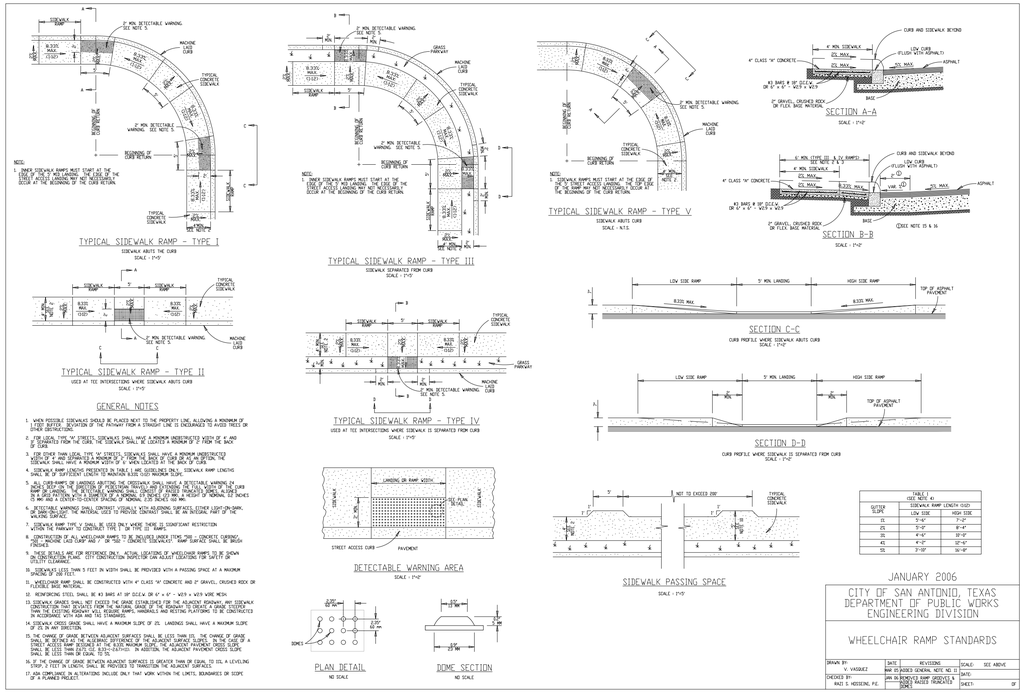


RADIUS PLAN VIEW



FLARE PLAN VIEW

DATE APPROVED: 04/2016	DWG. NO: ST-014.1	SCALE: N.T.S.
DRAWN BY: RAS	SHEET: 1 OF 2	City of New Braunfels ENGINEERING DEPARTMENT
FILENAME: DRIVEWAY (RESIDENTIAL - ONE OR TWO FAMILY)		



GENERAL NOTES

1. WHEN POSSIBLE SIDEWALKS SHOULD BE PLACED NEXT TO THE PROPERTY LINE, ALLOWING A MINIMUM OF 1 FOOT BUFFER, DEVIATION OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.
2. FOR LOCAL TYPE 'A' STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 6' AND BE SEPARATED FROM THE CURB. THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 1' FROM THE BACK OF RIGHT-OF-WAY.
3. FOR OTHER THAN LOCAL TYPE 'A' STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 5' AND SEPARATED A MINIMUM OF 5' FROM THE BACK OF CURB OR AT AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
4. SIDEWALK RAMP LENGTHS REFERENCED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE ADJUSTED AS NEEDED TO ACHIEVE THE REQUIRED SLOPES.
5. SIDEWALK RAMPS SHALL HAVE LANDINGS ADJOINING THE PERPENDICULAR RAMPS AND A DETECTABLE WARNING 24 INCH DEEP FOR THE DIRECTION OF INTERSECTING TRAFFIC AND EXTENDING THE FULL WIDTH OF THE CURB RAMP. THE DETECTABLE WARNING SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB IS 6 INCHES BUT NOT MORE THAN 8 INCHES FROM THE BACK OF CURB. THE DETECTABLE WARNING SHALL CONSIST OF TRUNCATED DOMES IN A GRID PATTERN, A MINIMUM OF 24 INCHES WIDE, 60 INCHES LONG AND 0.20 INCHES HIGH MIN.
6. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE CONCRETE.
7. SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE DUE TO SIGNIFICANT RESTRICTION WITHIN THE RIGHTWAY TO CONSTRUCT TYPE I, II OR III RAMPS.
8. CONSTRUCTION OF A DETECTABLE WARNING TO INCLUDE EITHER TRUNCATED DOMES CUT INTO THE CONCRETE CURRING, OR PRE-MANUFACTURED CAST IRON PLATE OR TILE CONCRETE SIDEWALKS. RAMP SURFACE SHALL BE BRUSH FINISH.
9. ALL BUILDING AND TOP REFERENCE ARE FINAL FINISH ELEVATIONS. A MINIMUM RAMP SLOPE SHOWN ON THE PLANS SHALL BE MAINTAINED AT ALL LOCATIONS, INCLUDING RAMP TIE-IN POINTS OR UTILITY CLEARANCE.
10. SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET.
11. WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS 'A' CONCRETE AND 2" GRAVEL, CRUSHED ROCK OR FLEX BASE MATERIAL.
12. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.W. OR 6" x 6" - W2.9 x W2.9 WIRE MESH.
13. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY. ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE SYSTEM OTHER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND TAS STANDARDS.
14. SIDEWALK CROSS SLOPE SHALL HAVE A MAXIMUM SLOPE OF 2%. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
15. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 1/2. THE CHANGE OF GRADE SHALL BE DEFINED AT THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A CURVED SURFACE, THE CHANGE OF GRADE SHALL BE DEFINED AT THE POINT OF MAXIMUM CHANGE. THE CHANGE SHALL BE LESS THAN EXISTS 1/2. E.G.S.=EXISTING. IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
16. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 1/2, A LEVELING STRIP 5 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
17. ADA COMPLIANCE IN ALL STARTING INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT.

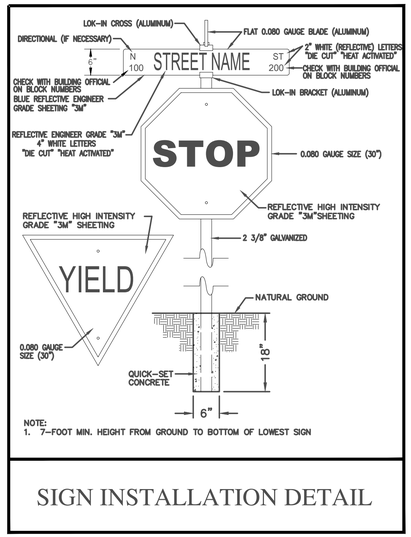
TABLE 1 (SEE NOTE 4)		
GUTTER SLOPE	SIDEWALK RAMP LENGTH (SEE)	
	LOW SIDE	HIGH SIDE
1%	5'-0"	7'-0"
2%	5'-0"	8'-4"
3%	4'-6"	10'-0"
4%	4'-0"	12'-6"
5%	3'-10"	14'-0"

JANUARY 2006

CITY OF SAN ANTONIO, TEXAS
DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

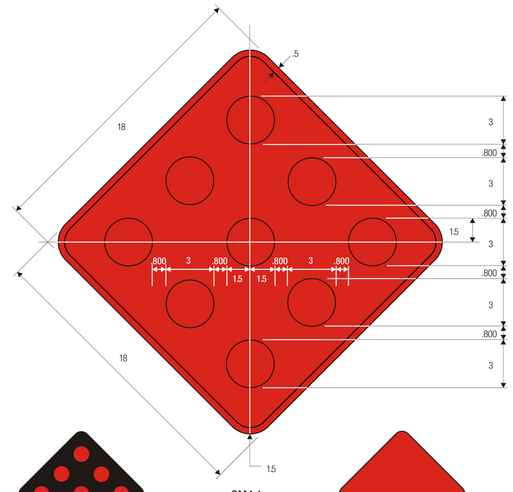
WHEELCHAIR RAMP STANDARDS

DRAWN BY: V. VASQUEZ	DATE	REVISIONS	SCALE: SEE ABOVE
	MAR 05	ADDED GENERAL NOTE NO 17	
CHECKED BY: RAUL S. HOSSEINI, P.E.	JAN 06	REVISED RAMP GRADES & ADDED TABLE REGARDING SAME	DATE:
			SHEET: 1F



NOTE:
1. 7'-FOOT MIN. HEIGHT FROM GROUND TO BOTTOM OF LOWEST SIGN

SIGN INSTALLATION DETAIL



OM4-1

OM4-2

OM4-1 COLORS:

REFLECTORS – RED (RETROREFLECTIVE)
BACKGROUND – RED
BORDER – RED (RETROREFLECTIVE)

OM4-3

OM4-2 COLORS:

REFLECTORS – RED (RETROREFLECTIVE)
BACKGROUND – BLACK

OM4-3 COLORS:

SIGN PANEL – RED (RETROREFLECTIVE)

11-4

HMT
ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

STREET DETAILS (2 OF 3)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

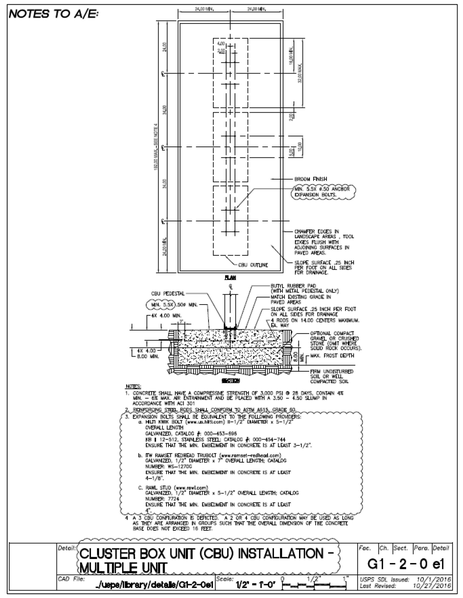
NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

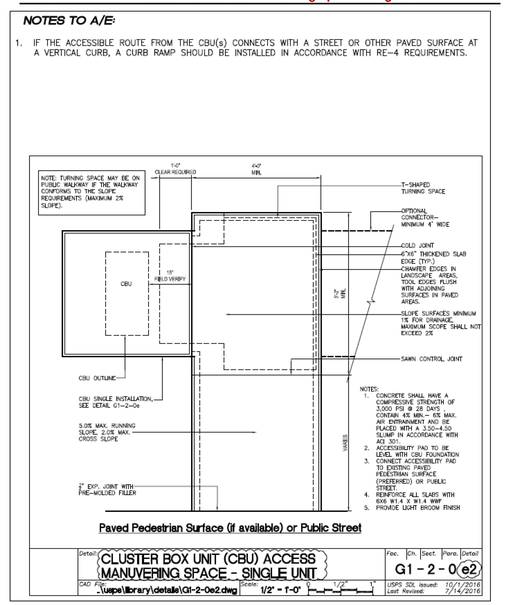
SHEET
C5.11

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cds\031.097_DETL.dwg User: rossd Feb 07, 2025 - 10:27am

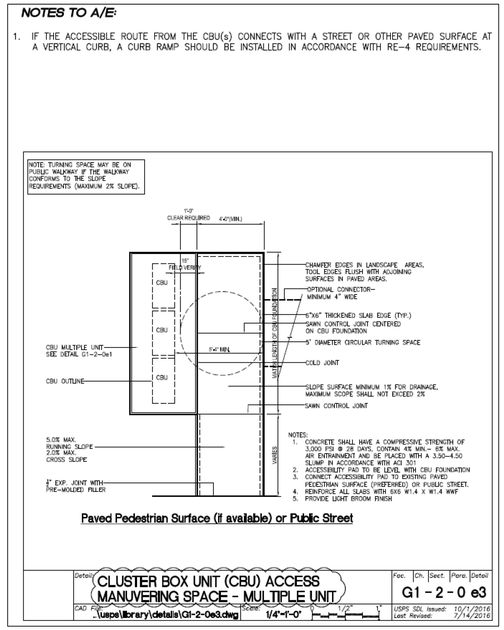
APPENDIX B – Cluster Box Unit Installation Multiple Unit

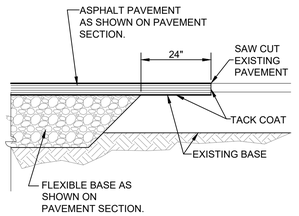


APPENDIX C – Cluster Box Unit Access Maneuvering Space – Single Unit

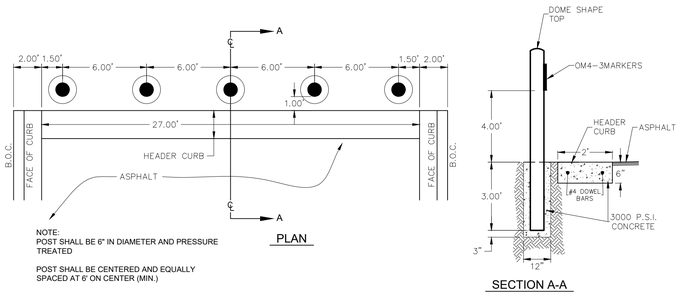


APPENDIX D – Cluster Box Unit Access Maneuvering Space – Single Unit





NEW PAVEMENT TO EXISTING
NOT TO SCALE



BOLLARD DETAIL
NOT TO SCALE

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600
HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

STREET DETAILS (3 OF 3)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

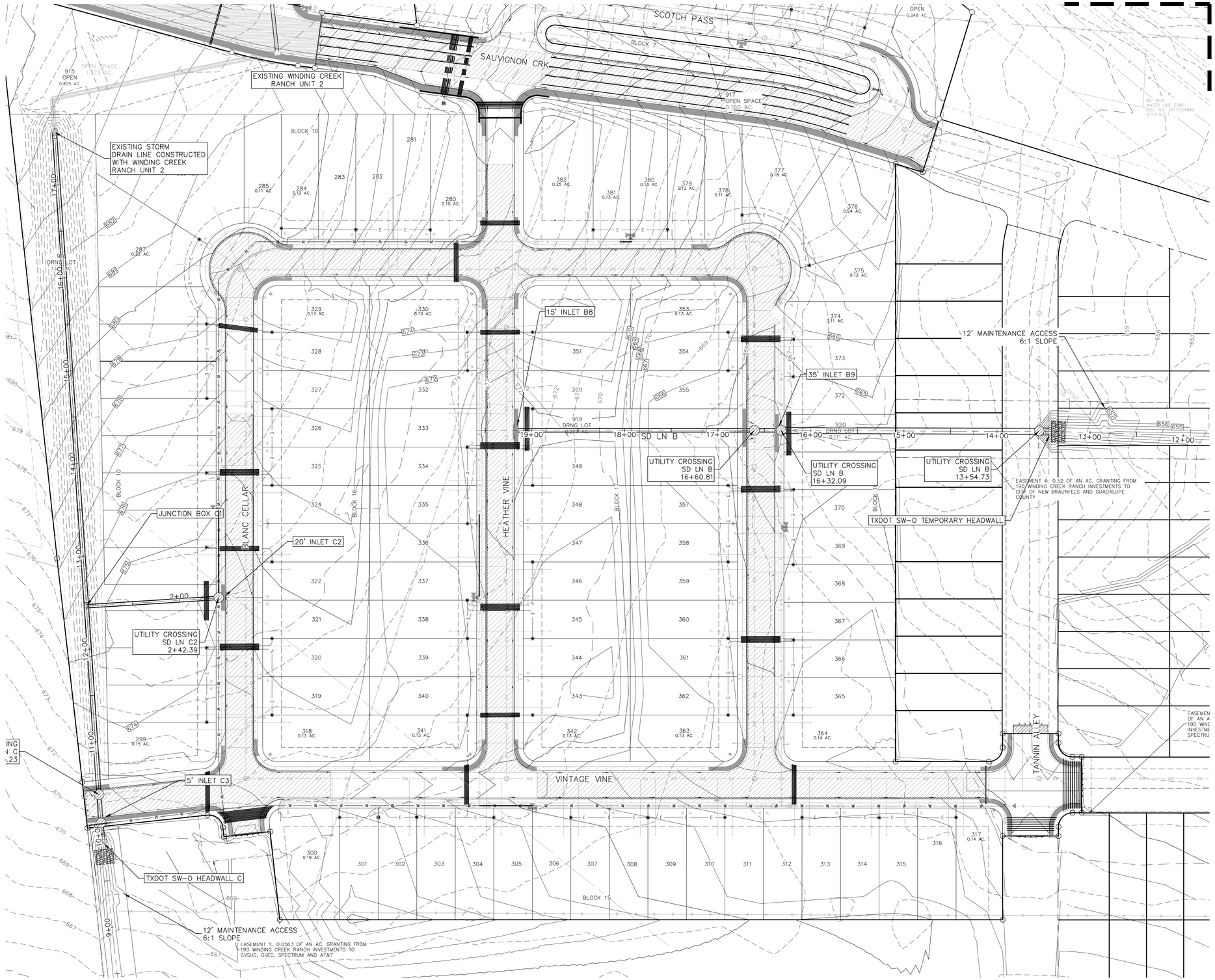
NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C5.12

Drawing Name: N:_Projects\031 – DR Horton\031.097 – Winding Creek Ranch Unit 3\CDs\031.097_DETL.dwg User: reissd Feb 07, 2025 – 10:27am

MATCHLINE SEE SHEET C6.01



LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
S.B.C.	SINGLE BOX CULVERT
	PROPOSED STORM DRAIN LINE
	UTILITY CROSSING

0 25 50 100
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

DRAINAGE FEATURE SHEET REFERENCE

DRAINAGE FEATURE	SHEET NUMBER
15' INLET B8	C6.02
35' INLET B9	C6.02
TXDOT SW-0 TEMPORARY HEADWALL	C6.02
JUNCTION BOX C1	C6.03
5' INLET C3	C6.03
TXDOT SW-0 HEADWALL C	C6.03
20' INLET C2	C6.04
DETENTION BASIN 1	C6.05
COMBINED DETENTION AND WATER QUALITY BASIN 2	C6.06

MAINTENANCE SCHEDULE:

1. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO ENSURE PROPER FUNCTION OF THE STORM SEWER SYSTEM AND CULVERTS.
2. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM THE CULVERT EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.

DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.

A. TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.

B. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.

C. BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.

D. CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).

E. STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.

F. MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.

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.

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

OVERALL STORM 1 OF 2

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION NOTES	REVISION DESCRIPTION	DATE	REVISION DATE

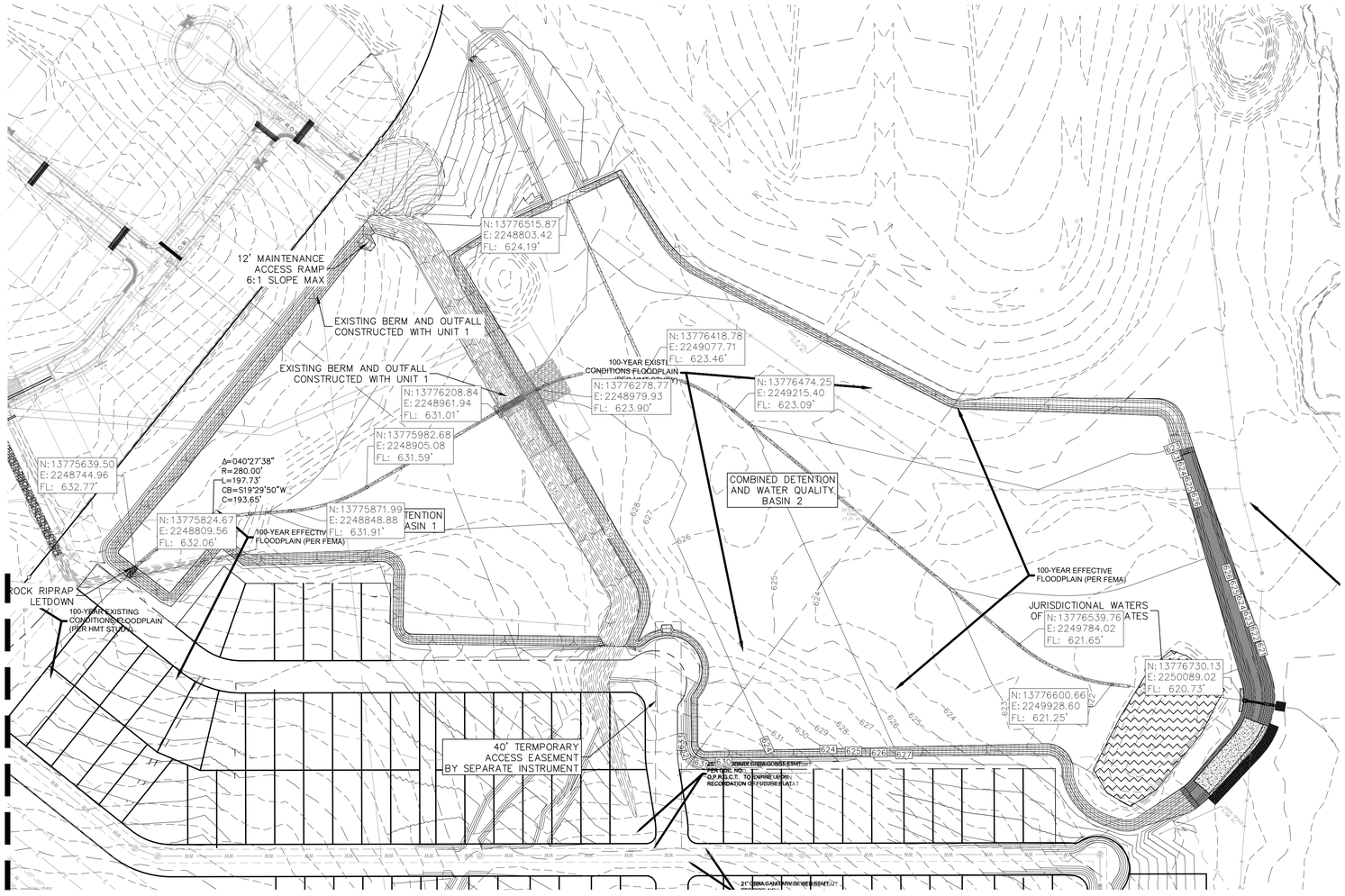
DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C6.00

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\C0s\031.097_STRM.dwg User: reissd Feb 07, 2025 - 10:29am

LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
S.B.C.	SINGLE BOX CULVERT
	PROPOSED STORM DRAIN LINE
	UTILITY CROSSING



0 50 100 200

SCALE: 1" = 100'

DRAINAGE FEATURE SHEET REFERENCE	
DRAINAGE FEATURE	SHEET NUMBER
15' INLET B8	C6.02
35' INLET B9	C6.02
TXDOT SW-0 TEMPORARY HEADWALL	C6.02
JUNCTION BOX C1	C6.03
5' INLET C3	C6.03
TXDOT SW-0 HEADWALL C	C6.03
20' INLET C2	C6.04
DETENTION BASIN 1	C6.05
COMBINED DETENTION AND WATER QUALITY BASIN 2	C6.06

DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.

A. TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.

B. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.

C. BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.

D. CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).

E. STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.

F. MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.

REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

OVERALL STORM 2 OF 2

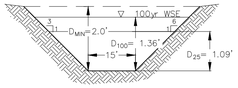
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION NOTES	REVISION DESCRIPTION	DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C6.01

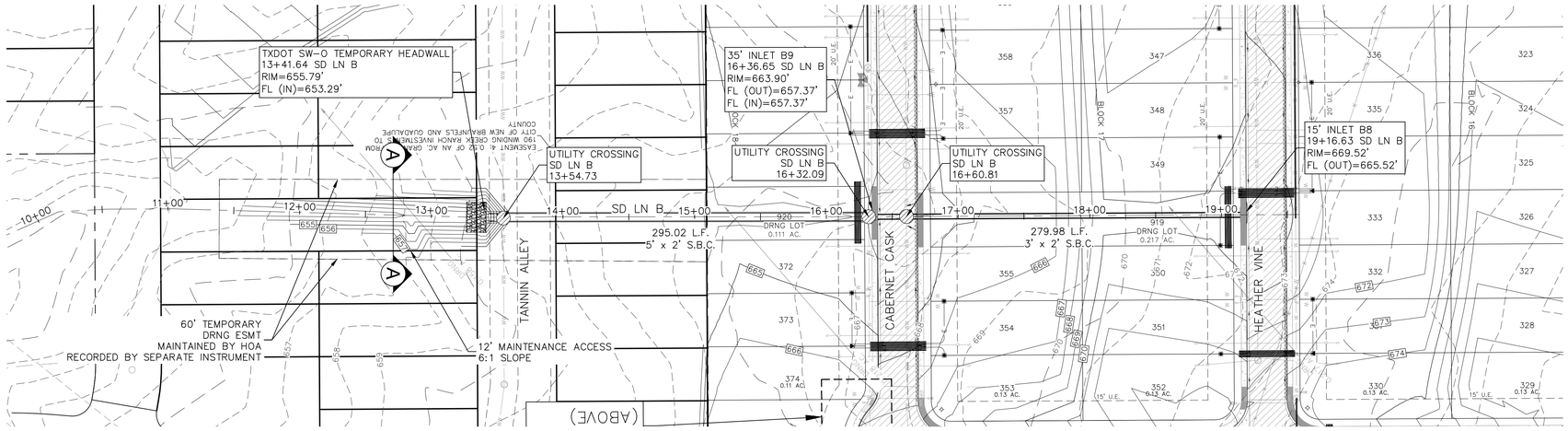
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\02a\031.097_STRM.dwg User: rossd Feb 07, 2025 - 10:29am



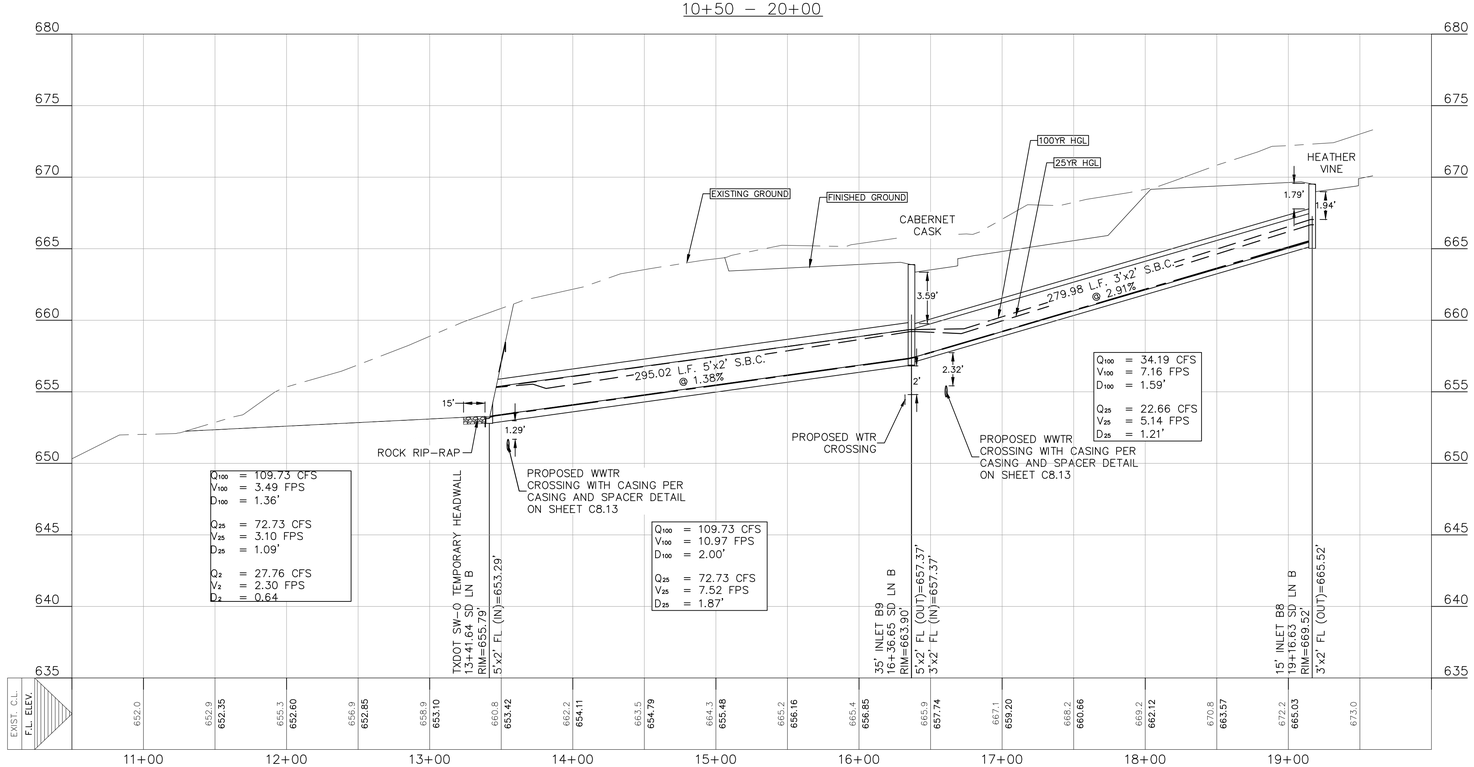
A TEMPORARY SWALE 1
N.T.S.

LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
S.B.C.	SINGLE BOX CULVERT
	PROPOSED STORM DRAIN LINE
	UTILITY CROSSING



CHANNEL B
10+50 – 20+00



Energy Dissipation - SD LN B Culverts Outfall		
Velocity out of Pipe	**10.97**	
Suggested Outlet Protection	WIRE ENCLOSED OR GROUTED ROCK RIPRAP Table 10-3 CoNB DECDM	
Riprap Run Out Apron		
L_R(ft)=1.7d*Q/$D^{2.5}$+8		Eq. 10-6 CoNB DECDM
d=	2.00 ft	
D=	5.0 ft	
Q=	109.73 ft^3	
L_R= 14.67 ft		
Channel Shear Stress		
$\tau_d = \gamma d S_0$		HEC 15 (Eq 2.4)
S_0=	0.0124 ft/ft	Average Bottom Slope
d=	1.37 ft	Maximum Depth of Flow in the Channel for the Design Discharge
γ=	62.4 lb/ft^3	Unit Weight of Water
τd=	1.06 lb/ft^2	
Minimum Use		
D_{50}= 0.5 ft	**Rock Riprap**	per HEC 15 (Table 2.3)

MAINTENANCE SCHEDULE:

1. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO ENSURE PROPER FUNCTION OF THE STORM SEWER SYSTEM AND CULVERTS.
2. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM THE CULVERT EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.

DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.

A. TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.

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C. BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.

D. CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).

E. STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.

F. MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.

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HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
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LICENSED PROFESSIONAL ENGINEER
06/19/2023

STORM LN B PLAN & PROFILE

WINDING CREEK RANCH UNIT 3

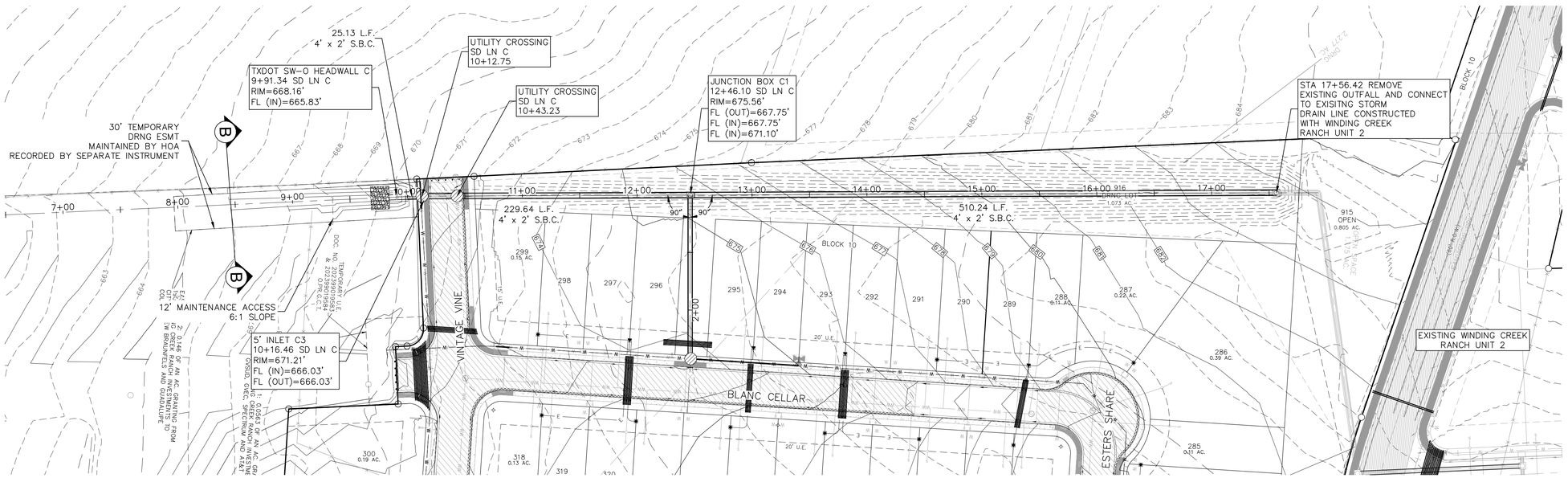
NEW BRAUNFELS, TEXAS

NO.	REVISION NOTES	REVISION DESCRIPTION	DATE	REVISION DATE
1				

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C6.02

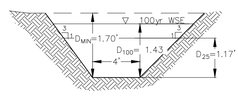
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\C6x\031.097_STRM.dwg User: rossd Feb 07, 2025 - 10:30am



LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
S.B.C.	SINGLE BOX CULVERT
	PROPOSED STORM DRAIN LINE
	UTILITY CROSSING

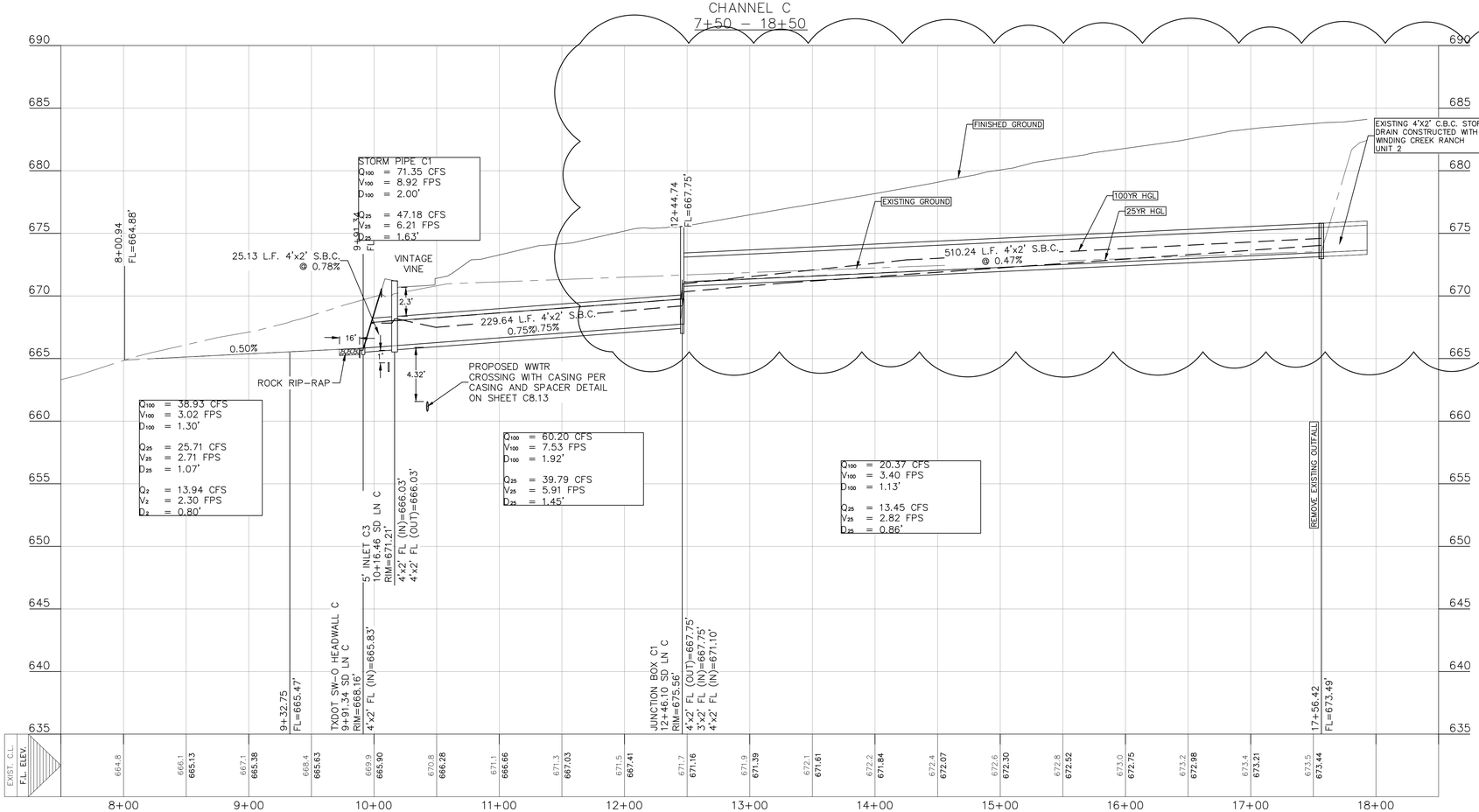
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.



(B) TEMPORARY SWALE 2
N.T.S.

MAINTENANCE SCHEDULE:

1. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO ENSURE PROPER FUNCTION OF THE STORM SEWER SYSTEM AND CULVERTS.
2. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM THE CULVERT EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.



Energy Dissipation - SD LN C Culverts Outfall		
Velocity out of Pipe	8.92	
Suggested Outlet Protection	DUMP ROCK RIPRAP	Table 10-3 CoNB DECDM

Riprap Run Out Apron		
L_R (ft)=$0.7dQ/D^{2.5}+8$		Eq. 10-6 CoNB DECDM
d=	2.00 ft	
D=	4.0 ft	
Q=	71.35 ft^3	
L_R=	15.58 ft	

Channel Shear Stress		
$\tau_d = \gamma dS_0$		HEC 15 (Eq 2.4)
S_0=	0.0124 ft/ft	Average Bottom Slope
d=	1.37 ft	Maximum Depth of Flow in the Channel for the Design Discharge
γ=	62.4 lb/ft^3	Unit Weight of Water
τd=	1.06 lb/ft^2	
Minimum Use		
D_{50}= 0.5 ft	Rock Riprap	per HEC 15 (Table 2.3)

DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

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TBPE FIRM F-10961
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HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

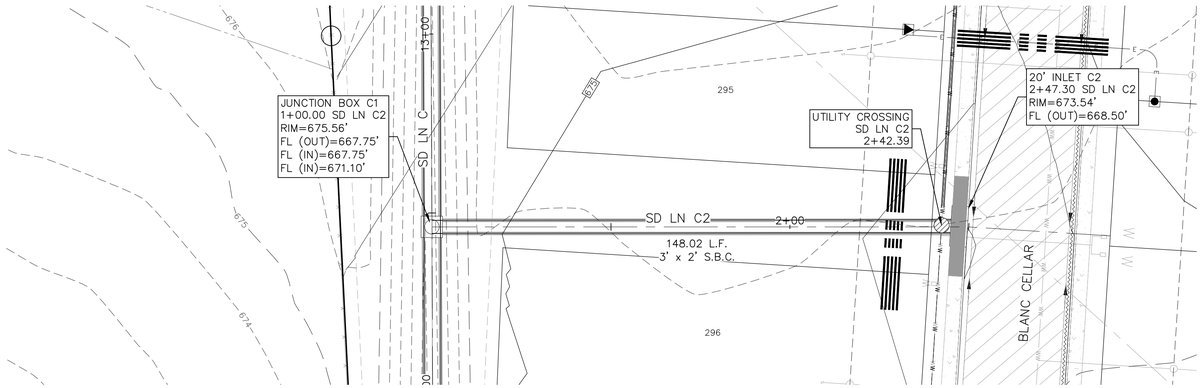
STORM LN C
PLAN & PROFILE
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

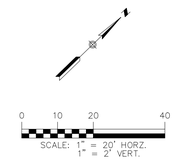
NO.	REVISION DESCRIPTION	REVISION DATE
1	CHANGE TO 4'X2' SBC	07/03/23

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C6.03

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\C6\031.097_STRM.dwg User: reissd Feb 07, 2025 - 10:30am

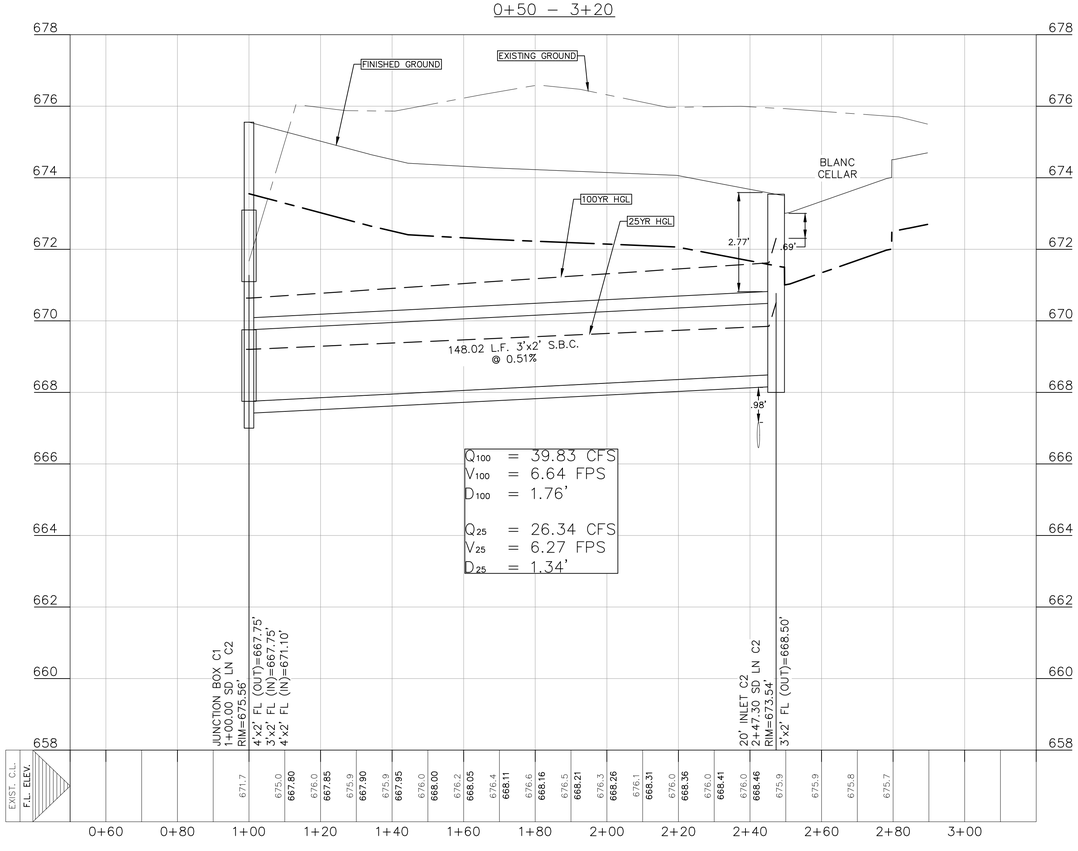




LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
S.B.C.	SINGLE BOX CULVERT
	PROPOSED STORM DRAIN LINE
	UTILITY CROSSING

SD LN C2
0+50 – 3+20



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TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

SD LN C3 PLAN & PROFILE

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION NOTES	REVISION DESCRIPTION	DATE	REVISION DATE
1				

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C6.04

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03a\031.097_STRM.dwg User: rossd Feb 07, 2025 - 10:31am

REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

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G. COMPACTION OF ALL EARTHEN EMBANKMENTS SHALL HAVE A NON-PERMEABLE CORE AND SHALL BE COMPACTED TO 90% STANDARD PROCTOR.

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- S.B.C. SINGLE BOX CULVERT
- PROPOSED STORM DRAIN LINE
- UTILITY CROSSING

0 25 50 100
SCALE: 1" = 50'

MATCHLINE SEE SHEET C6.06

N: 13776259.45
E: 2248628.71
633.00'

N: 13776282.08
E: 2248606.00
637.18'

N: 13776265.96
E: 2248630.21
633.04'

N: 13776331.51
E: 2248700.02
629.50'

N: 13776252.20
E: 2248617.57
637.00'

N: 13776237.57
E: 2248619.51
637.00'

N: 13776234.57
E: 2248632.01
633.00'

12' MAINTENANCE ACCESS RAMP 6:1 SLOPE MAX

N: 13776515.87
E: 2248803.42
FL: 624.19'

N: 13776242.34
E: 2248646.12
633.00'

N: 13776286.44
E: 2248688.61
632.59'

N: 13776254.20
E: 2248644.55
633.00'

N: 13776284.57
E: 2248664.60
632.64'

EXISTING BERM AND OUTFALL CONSTRUCTED WITH UNIT 1

N: 13776418.78
E: 2249077.71
FL: 623.46'

EXISTING BERM AND OUTFALL CONSTRUCTED WITH UNIT 1

N: 13776208.84
E: 2248961.94
FL: 631.01'

N: 13776278.77
E: 2248979.93
FL: 623.90'

Δ=069°18'59"
R=280.00'
L=338.74'
CB=S48°46'11"W
C=318.46'

N: 13776474.25
E: 2249215.40
FL: 623.09'

PC: 12+78.43

N: 13775982.68
E: 2248905.08
FL: 631.59'

Δ=025°36'57"
R=280.00'
L=125.18'
CB=S26°55'11"W
C=124.14'

Δ=040°27'38"
R=280.00'
L=197.73'
CB=S19°29'50"W
C=193.65'

N: 13775639.50
E: 2248744.96
FL: 632.77'

N: 13775638.99
E: 2248708.40
632.76'

N: 13775634.50
E: 2248689.19
638.02'

N: 13775824.67
E: 2248809.56
FL: 632.06'

PC: 20+94.32
PT: 20+32.80

N: 13775871.99
E: 2248848.88
FL: 631.91'

DETENTION BASIN 1

N: 13775920.21
E: 2249004.62
638.00'

PC: 19+07.62

COMBINED DETENTION AND WATER QUALITY BASIN 2

N: 13775634.93
E: 2248713.94
632.74'

N: 13775615.34
E: 2248716.97
638.02'

PC: 22+92.05

8' x 20' ROCK RIPRAP LETDOWN

N: 13775761.54
E: 2248859.57
638.00'

N: 13775772.10
E: 2248814.25
632.34'

N: 13775755.28
E: 2248816.66
638.00'

N: 13775747.21
E: 2248800.50
632.42'

N: 13775914.72
E: 2249035.21
638.00'

N: 13775925.28
E: 2249048.57
632.40'

N: 13775865.60
E: 2249085.15
638.00'

N: 13775875.69
E: 2249097.35
632.75'

N: 13775629.77
E: 2248812.13
638.02'

N: 13775648.97
E: 2248809.21
632.86'

N: 13775650.11
E: 2248810.55
632.89'

N: 13775875.08
E: 2249117.81
632.84'

N: 13775863.79
E: 2249128.39
638.00'

40' TEMPORARY ACCESS EASEMENT BY SEPARATE INSTRUMENT

TEMPORARY CORRA CONVEYANCE PER DOC. NO. O.P.R.C.C.T. TO EXPIRE UPON RECONVEYANCE OF FUTURE PLAT

Table 3 - Detention Basin 1

	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
Discharge (cfs)	78.50	141.90	192.70	237.20	288.00
Volume (AC-FT)	7.40	14.20	18.80	22.60	26.80
Time to Drain (hrs)	25.00	25.17	25.17	25.17	25.50
Water Surface Elevation	633.60	634.80	635.60	636.20	636.90
Freeboard (ft)	4.40	3.20	2.40	1.80	1.10

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HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
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LICENSED
PROFESSIONAL ENGINEER

06/19/2023

DETENTION BASIN 1 PLAN

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION NOTES	REVISION DESCRIPTION	DATE	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C6.05

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Civil\031.097_STRM.dwg User: reissd Feb 07, 2025 - 10:31am

Table 4 - Combined Water Quality and Detention Basin 2					
	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
Discharge (cfs)	529.00	1140.70	1559.80	1905.10	2280.30
Volume (AC-FT)	22.60	34.20	41.30	46.70	52.30
Time to Drain (hrs)	48.83	50.33	50.50	50.67	50.67
Water Surface Elevation	624.60	625.50	625.90	626.30	626.70
Freeboard (ft)	3.14	2.24	1.84	1.44	1.04

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C. BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.

D. CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).

E. STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.

F. MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.

G. COMPACTION OF ALL EARTHEN EMBANKMENTS SHALL HAVE A NON-PERMEABLE CORE AND SHALL BE COMPACTED TO 90% STANDARD PROCTOR.

LEGEND

- 700 — EXISTING CONTOURS
- 700 — PROPOSED CONTOURS
- B.L. — BUILDING SETBACK LINE
- U.E. — UTILITY EASEMENT
- D.E. — DRAINAGE EASEMENT
- S.B.C. — SINGLE BOX CULVERT
- PROPOSED STORM DRAIN LINE
- UTILITY CROSSING

0 25 50 100
SCALE: 1" = 50'

N: 13776515.87
E: 2248803.42
624.19'

N: 13776597.90
E: 2248831.68
624.66'

N: 13776515.87
E: 2248803.42
FL: 624.19'

N: 13776337.43
E: 2248747.32
625.12'

N: 13776332.03
E: 2248751.62
625.09'

N: 13776418.78
E: 2249077.71
623.46'

N: 13776418.78
E: 2249077.71
FL: 623.46'

COMPACTION OF ALL EARTHEN EMBANKMENTS SHALL HAVE A NON-PERMEABLE CORE AND SHALL BE COMPACTED TO 90% STANDARD PROCTOR

N: 13776729.17
E: 2249434.05
627.74'

N: 13776208.84
E: 2248961.94
FL: 631.01'

N: 13776278.77
E: 2248979.93
FL: 623.90'

Δ=069°18'59"
R=280.00'
L=338.74'
CB=S48°46'11"W
C=318.46'

N: 13776474.25
E: 2249215.40
FL: 623.09'

N: 13776717.26
E: 2249438.12
623.55'

N: 13776737.61
E: 2249448.92
627.74'

N: 13776727.95
E: 2249457.14
623.53'

N: 13776959.65
E: 2249658.45
624.70'

N: 13776968.98
E: 2249708.17
624.29'

N: 13776940.58
E: 2249676.99
623.29'

N: 13776943.15
E: 2249697.40
623.23'

WEIR OUTFALL SEE SHHET C6.09

EXISTING BERM AND OUTFALL CONSTRUCTED WITH UNIT 1

COMBINED DETENTION AND WATER QUALITY BASIN 2

DETENTION BASIN 1

DETENTION POND 27.25 AC.

N: 13776163.19
E: 2249377.03
625.01'

12' MAINTENANCE ACCESS RAMP 6:1 SLOPE MAX

N: 13776174.17
E: 2249387.18
625.00'

14.96'

12.73'

N: 13776170.64
E: 2249395.61
625.00'

N: 13776165.27
E: 2249395.32
627.01'

N: 13776164.32
E: 2249397.59
627.01'

N: 13776122.63
E: 2249499.11
624.39'

N: 13776120.70
E: 2249370.46
624.66'

N: 13776155.88
E: 2249381.91
625.01'

N: 13776154.00
E: 2249387.94
627.01'

N: 13776155.97
E: 2249386.62
627.01'

25' TEMPORARY CRRA CONST. ENTT. PER DOC. No. 2025-[illegible] O.P.R.G.C.T. TO EXPIRE UPON RECORDATION OF FUTURE PLAT

N: 13776539.76
E: 2249784.02
FL: 621.65'

JURISDICTIONAL WATERS OF THE UNITED STATES

STATION=5+19.22

Δ=032°32'24"
R=280.00'
L=159.02'
CB=S67°09'29"W
C=156.89'

N: 13776600.66
E: 2249928.60
FL: 621.25'

PC: 5+47.03

PT: 7+06.05

N: 13776730.13
E: 2250089.02
FL: 620.73'

WATER QUALITY OUTFALL SEE SHEET C6.10

REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

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MATCHLINE SEE SHEET C6.05

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

COMBINED WATER QUALITY AND DETENTION BASIN 2 PLAN

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

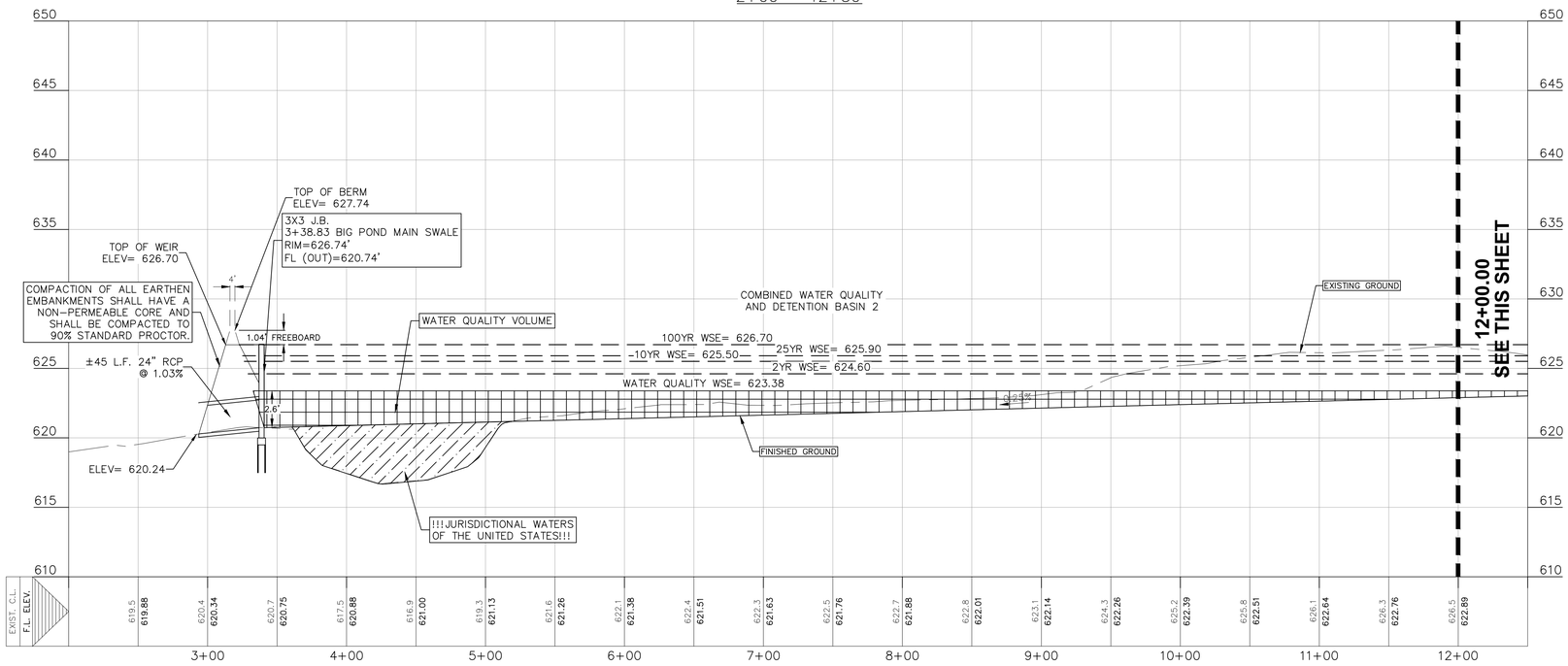
NO.	REVISION NOTES	REVISION DESCRIPTION	DATE
1			

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C6.06

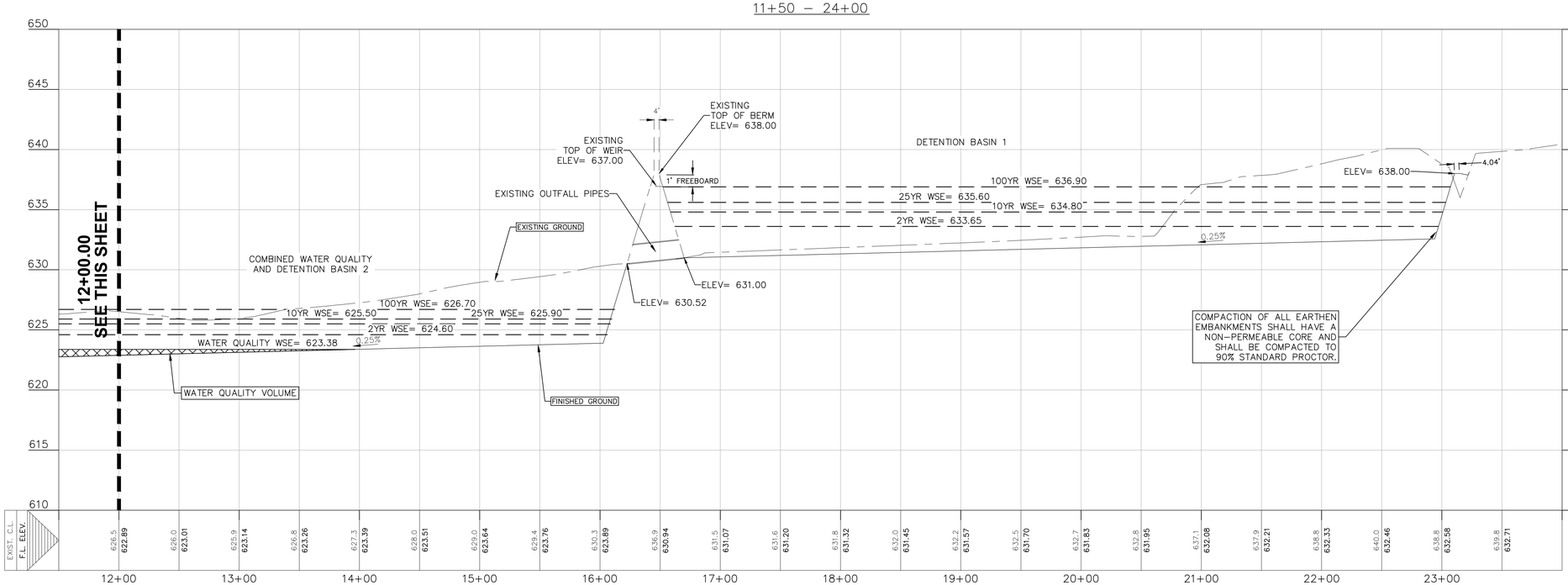
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\C0x\031.097_STRM.dwg User: rebsd Feb 07, 2025 - 10:31am

BASIN SECTION A–A
2+00 – 12+50



0 25 50 100
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

BASIN SECTION A–A CONT.
11+50 – 24+00



DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

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HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

BASIN SECTION A-A

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

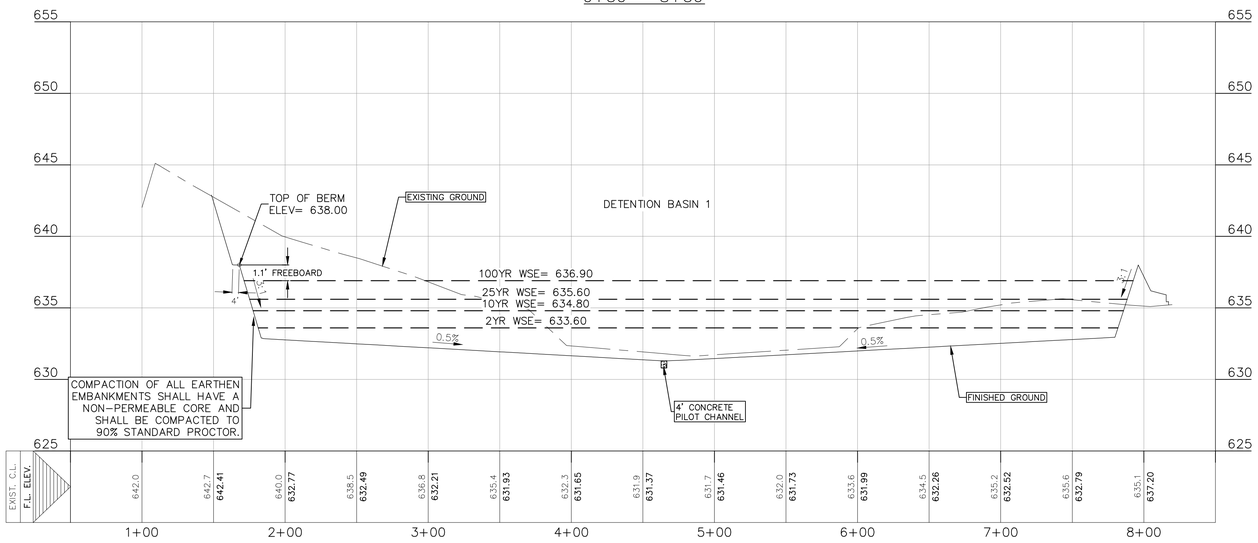
NO.	REVISION NOTES	DATE
		REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C6.07

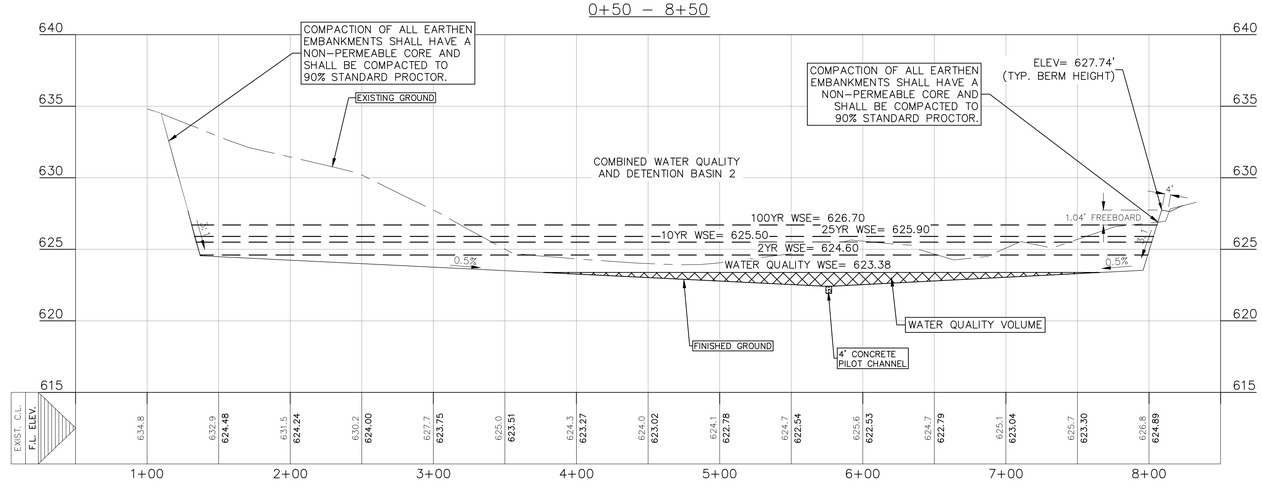
Drawing Name: N:_Projects\031 – DR Horton\031.097 – Winding Creek Ranch Unit 3\Civil\031.097_STRM.dwg User: rossd Feb 07, 2025 - 10:31am

BASIN SECTION B–B
0+50 – 8+50



0 25 50 100
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

BASIN 2 SECTION C–C
0+50 – 8+50



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600
HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
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06/19/2023

BASIN SECTIONS B-B & C-C

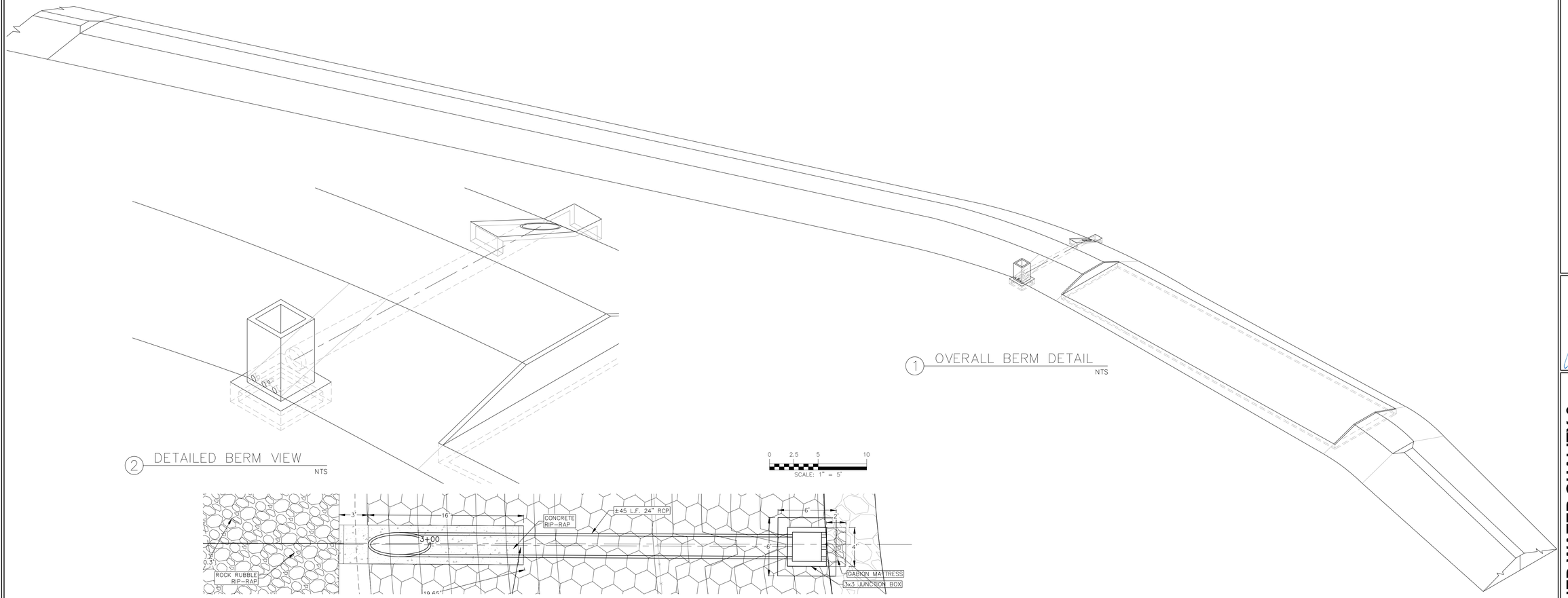
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION NOTES	REVISION DESCRIPTION	DATE	REVISION DATE
1				

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

SHEET
C6.08

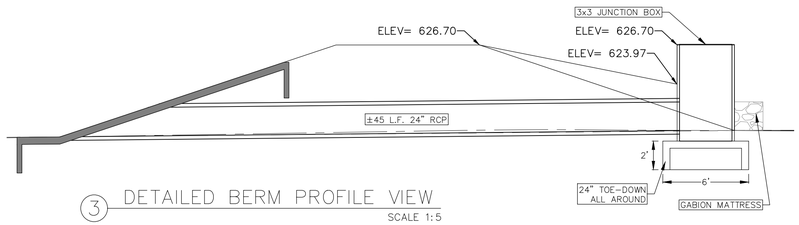
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Civil\031.097_STRM.dwg User: reissd Feb 07, 2025 - 10:32am



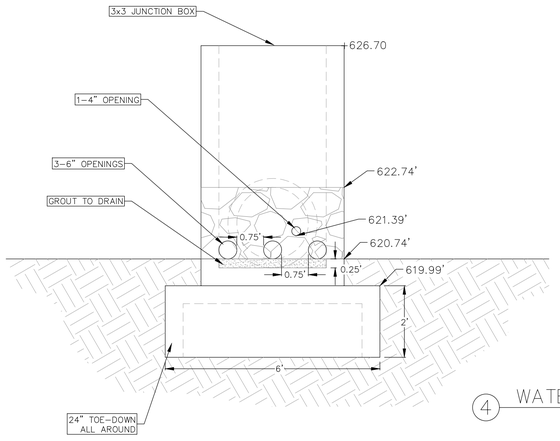
1 OVERALL BERM DETAIL
NTS

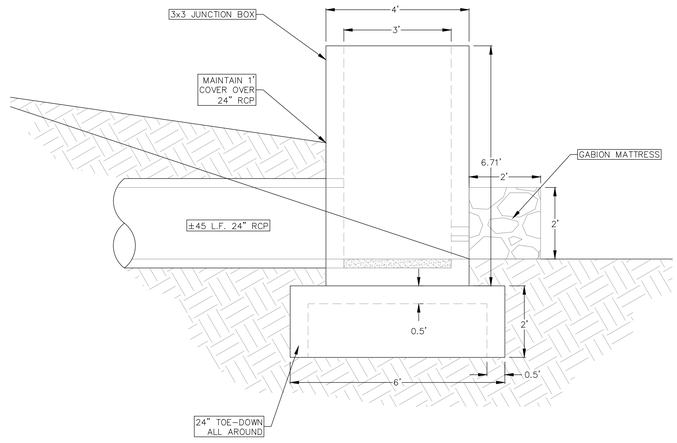
2 DETAILED BERM VIEW
NTS

0 2.5 5 10
SCALE: 1" = 5'



3 DETAILED BERM PROFILE VIEW
SCALE 1:5





4 WATER QUALITY OUTFALL SECTION VIEWS
SCALE 1:2

REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

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HMT
ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

COMBINED WATER QUALITY & DETENTION BASIN DETAILS

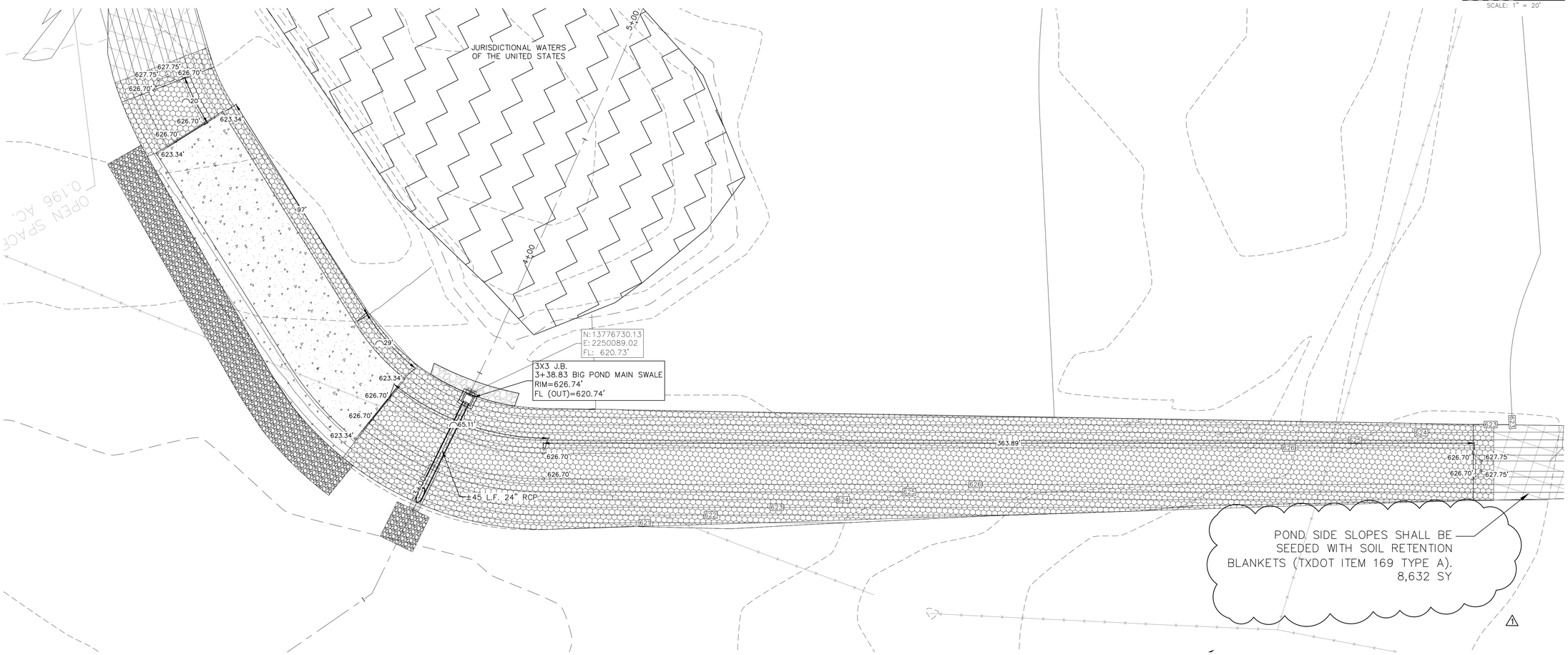
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION NOTES	REVISION DESCRIPTION	DATE	REVISION DATE
1				

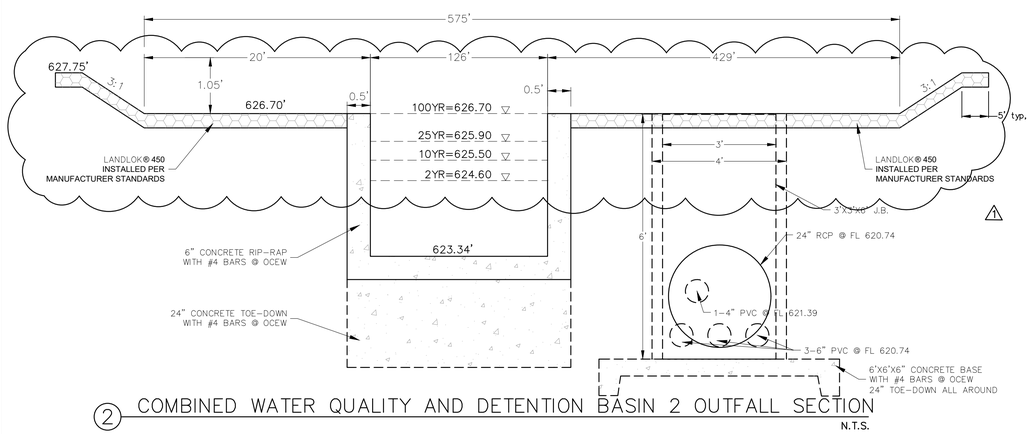
DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: **031.097**

SHEET
C6.09

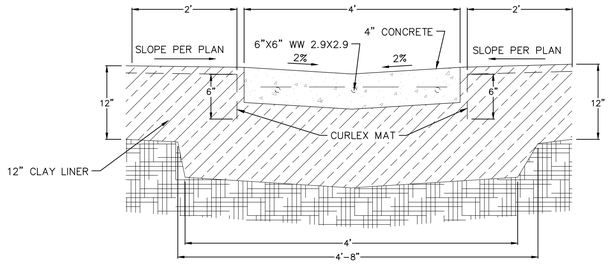
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03a\031.097_STRM.dwg User: rossd Feb 07, 2023 - 10:33am



COMBINED WATER QUALITY AND DETENTION BASIN 2
OUTFALL PLAN VIEW



2 COMBINED WATER QUALITY AND DETENTION BASIN 2 OUTFALL SECTION
N.T.S.



1 CONCRETE PILOT CHANNEL
N.T.S.

REFER TO THE COVER SHEET
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HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

WATER QUALITY OUTFALL STRUCTURE DETAILS

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
1	UPDATING SLOPE REINFORCEMENT	02/20/2024

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C6.10

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03s\031.097_STRM.dwg User: reissd Feb 07, 2025 - 10:33am

REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

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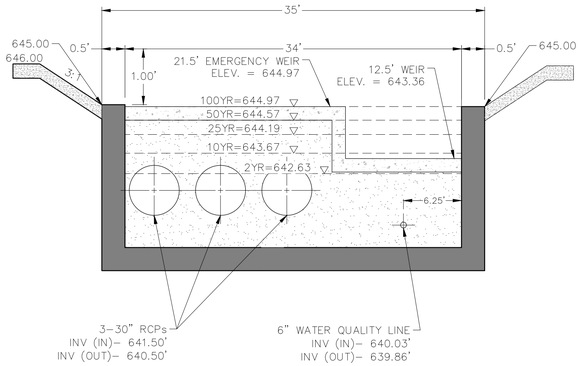
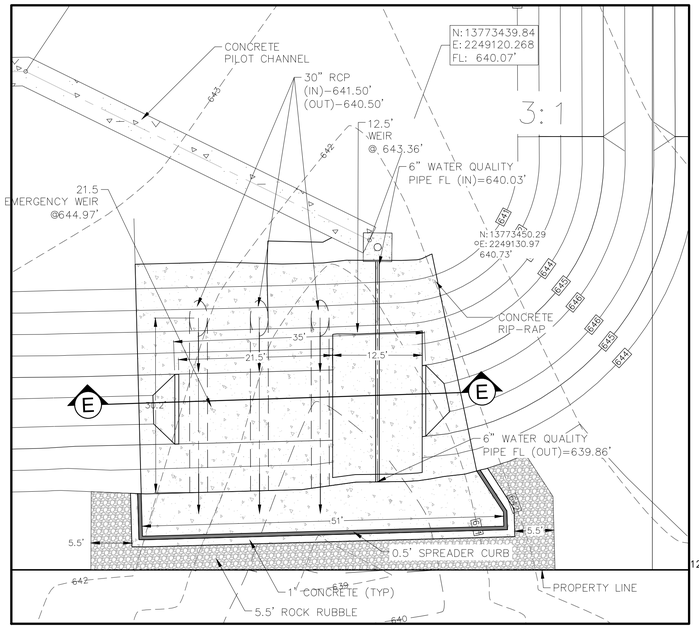
0 5 10 20
SCALE: 1" = 10'



BASIN C OUTFALL SECTION
N.T.S.



INSET 'A'

DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.

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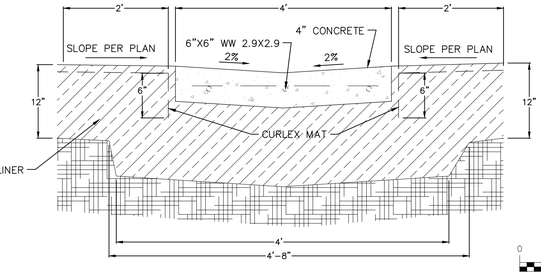
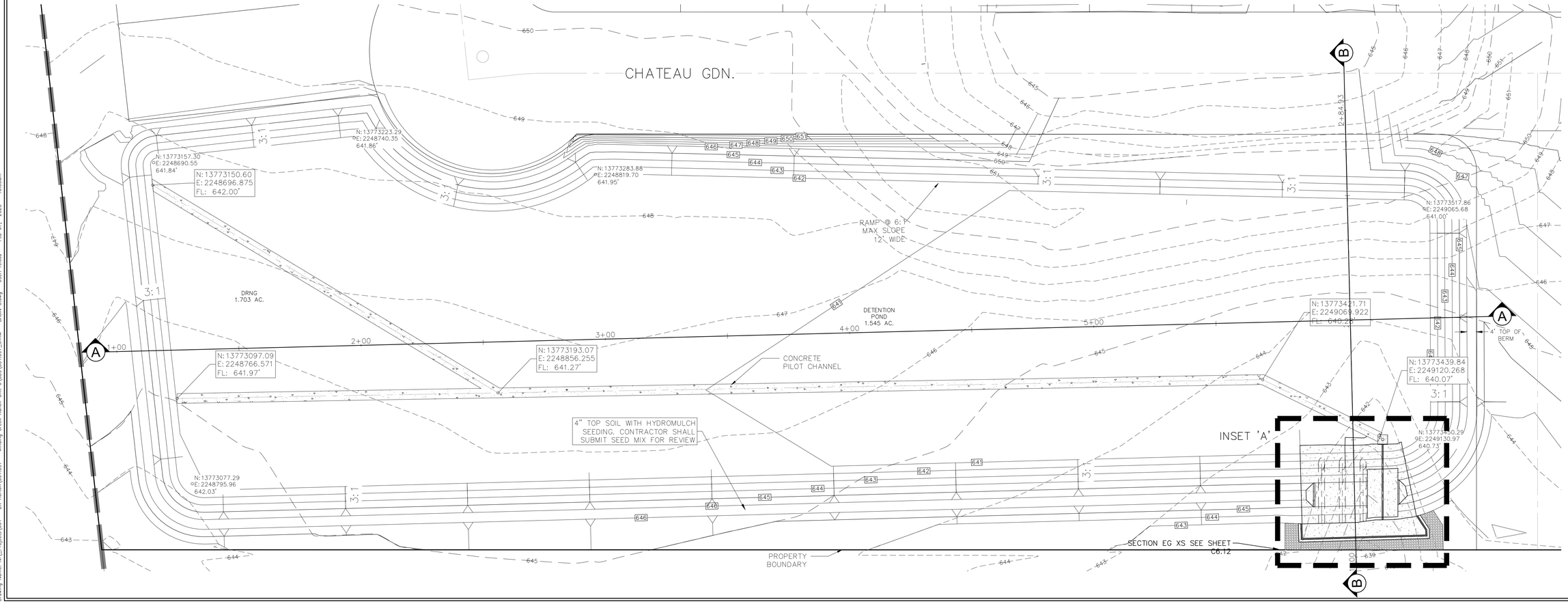
LEGEND

700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
S.B.C.	SINGLE BOX CULVERT
	PROPOSED STORM DRAIN LINE
	UTILITY CROSSING



1 CONCRETE PILOT CHANNEL
N.T.S.

0 15 30 60
SCALE: 1" = 30'



290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

COMBINED WATER QUALITY AND DETENTION BASIN C

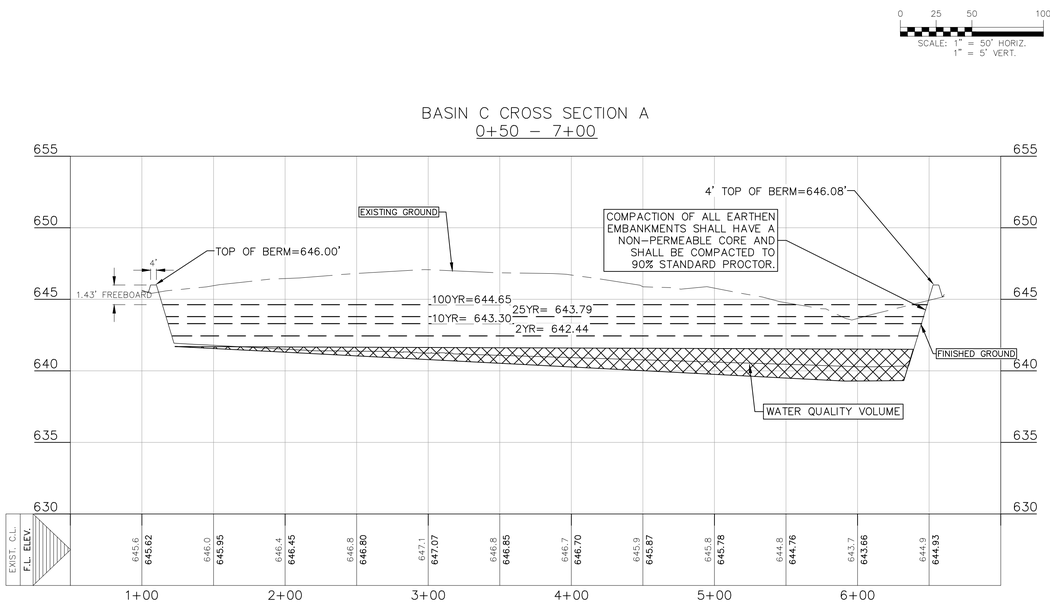
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C6.11

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03a\031.097_STRM - BASIN C.dwg User: rossd Feb 07, 2025 - 10:35am



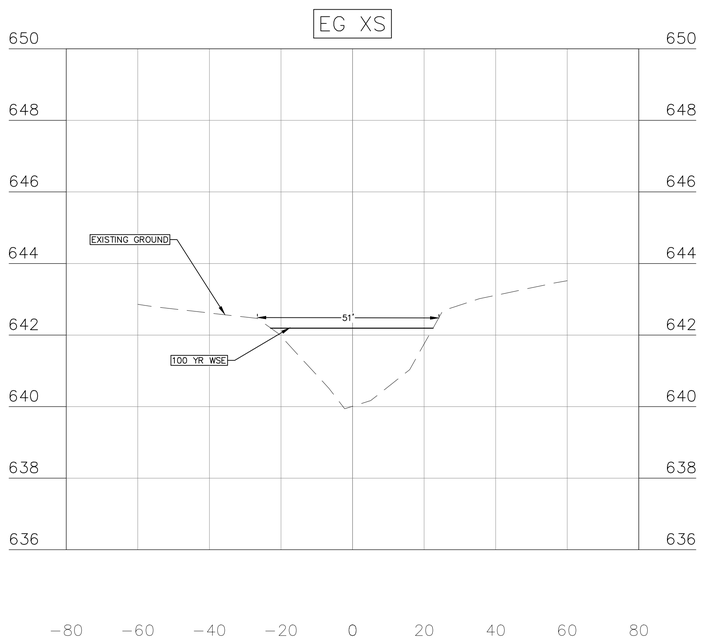
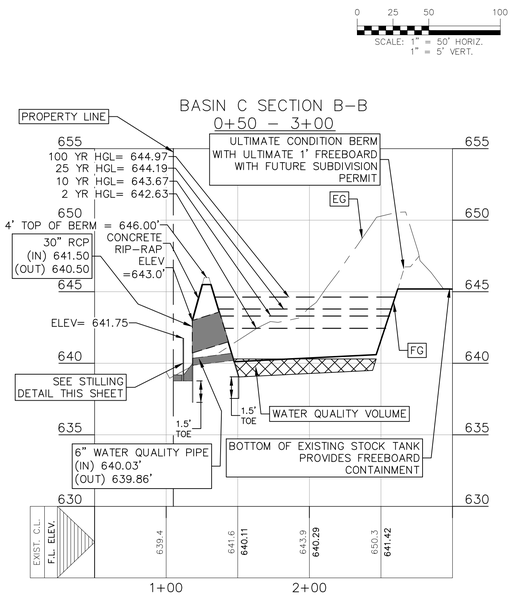
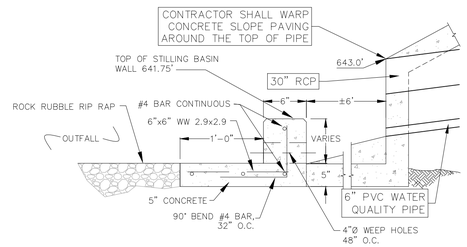
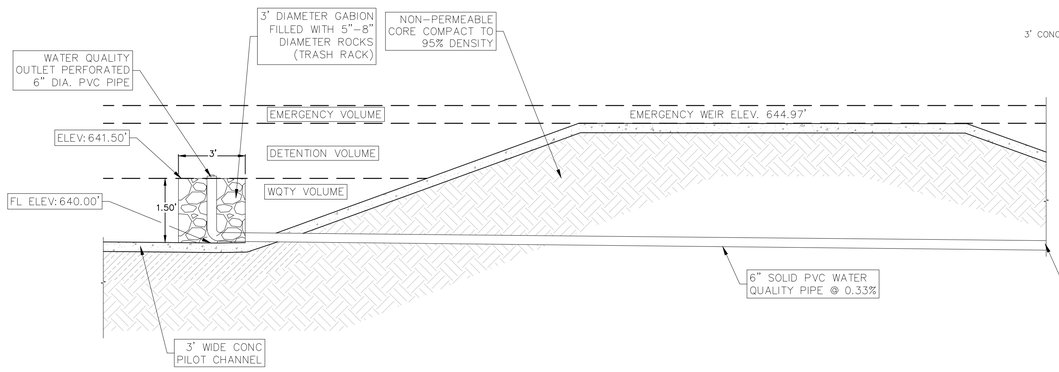


Table 5 - Combined Water Quality and Detention Basin C Ultimate Conditions					
	Q_2 (cfs)	Q_{10} (cfs)	Q_{25} (cfs)	Q_{50} (cfs)	Q_{100} (cfs)
Discharge (cfs)	23.44	75.67	116.20	151.13	191.35
Volume (AC-FT)	218,719	485,583	695,552	885,608	1,105,693
Water Surface Elevation	642.63	643.67	644.19	644.57	644.97
Freeboard (ft)	3.37	2.33	1.81	1.43	1.03

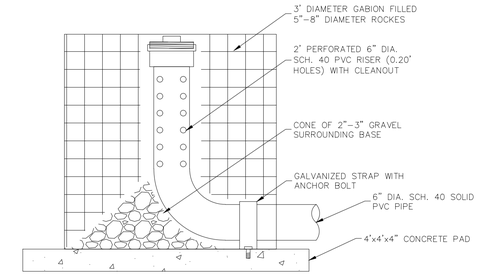


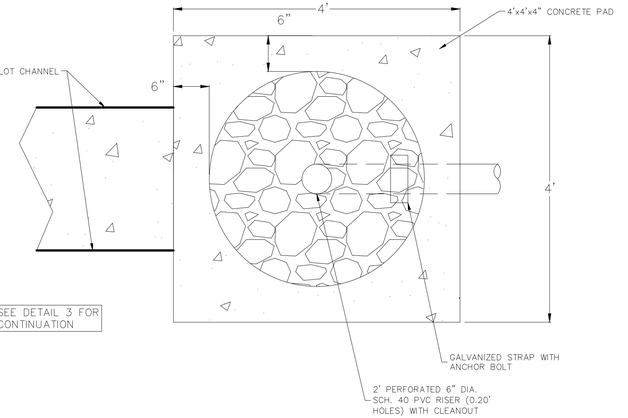


3 STILLING BASIN DETAIL
N.T.S.



2 WATER QUALITY OUTFALL
N.T.S.





PERFORATED PIPE IN ROCK GABION
NOT–TO–SCALE

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600
HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

BASIN C PLAN & PROFILE

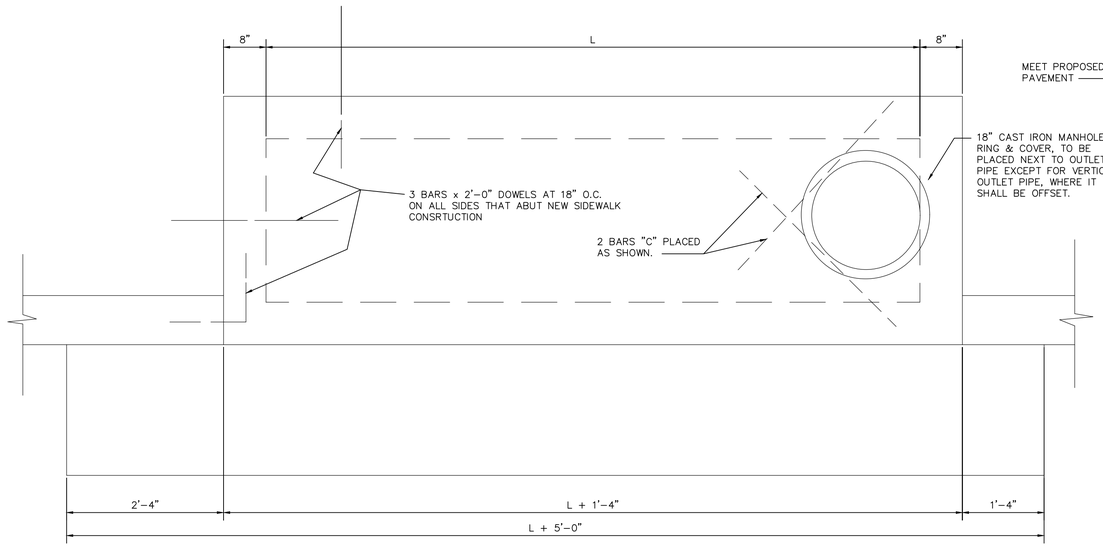
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

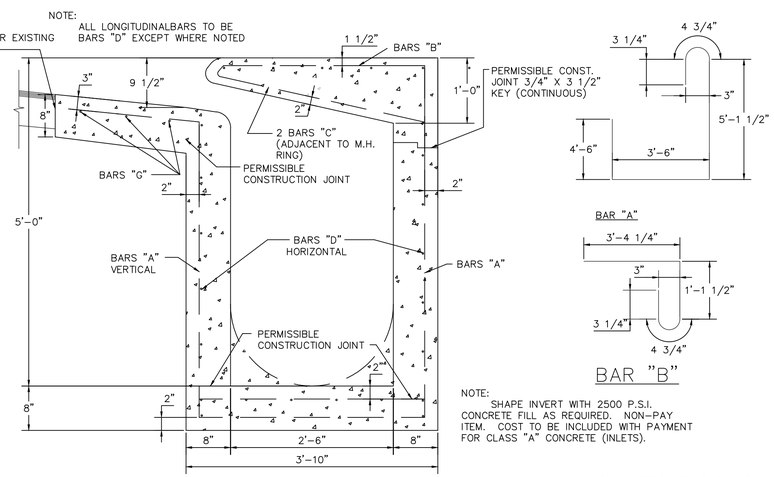
SHEET
C6.12

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\CDs\031.097_STRM - BASIN C.dwg User: reissd Feb 07, 2025 - 10:35am



PLAN VIEW

SCALE: N.T.S.

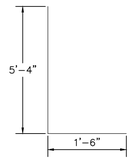


SECTION A-A

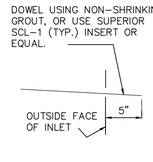
SCALE: N.T.S.

BAR "B"

NOTE:
SHAPE INVERT WITH 2500 P.S.I. CONCRETE FILL AS REQUIRED. NON-PAY ITEM. COST TO BE INCLUDED WITH PAYMENT FOR CLASS "A" CONCRETE (INLETS).

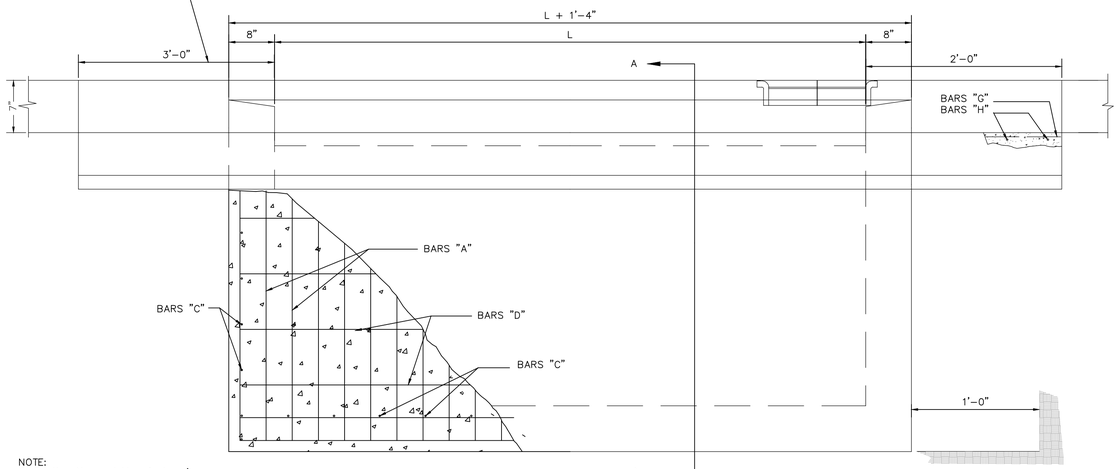


BAR "E"



BAR "F"

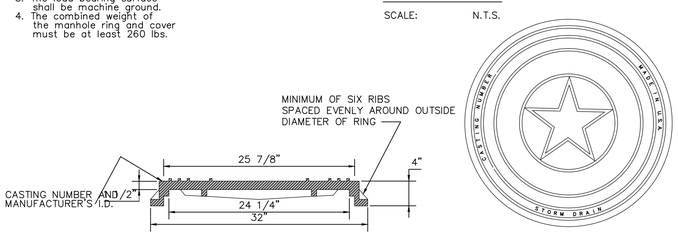
3'-0" SHALL BE FOR UPSTREAM END OF ON-GRADE INLET: FOR INLETS IN SUMP CONDITUION, THIS DIMENSION SHALL BE 2'-0"



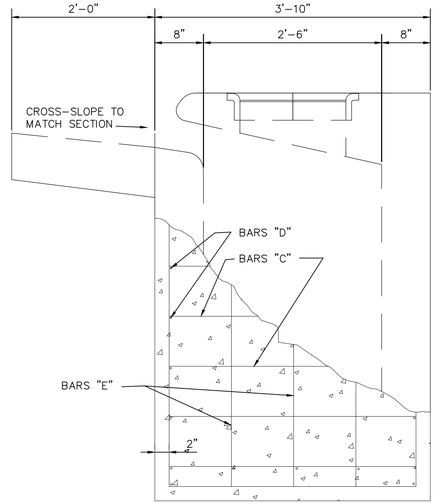
FRONT VIEW

SCALE: N.T.S.

NOTE:
1. Casting No. and Manufacturer's I.D. on lid and ring.
2. Load bearing capability of N-20 minimum.
3. The load bearing surface shall be machine ground.
4. The combined weight of the manhole ring and cover must be at least 260 lbs.

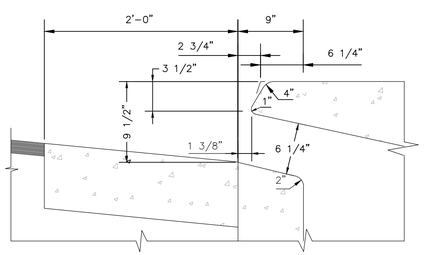


MANHOLE RING & COVER DETAILS

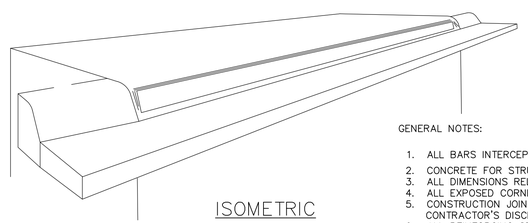


SIDE VIEW

SCALE: N.T.S.



OPENING DETAIL FOR CURB SECTION



ISOMETRIC

GENERAL NOTES:

1. ALL BARS INTERCEPTING MANHOLE RING & REINFORCING CONCRETE PIPE SHALL BE FIELD CUT.
2. CONCRETE FOR STRUCTURES SHALL BE CLASS "A", 3000 P.S.I. IN 28 DAYS.
3. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED TO 3/4"
5. CONSTRUCTION JOINT SHOWN AT FLOWLINE MAY BE RAISED A MAXIMUM OF 6" AT THE CONTRACTOR'S DISCRESION. ADJUST LENGTH OF VERTICAL STEEL AS REQUIRED.
6. ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A-615, GRADE 60.

Reinforcing Steel Schedule

	BAR	NO.	SIZE	SPA.	LENGTH	WEIGHT
L=5'-00"	A	15	4	5"OC	13"-9 1/2"	138
	B	15	4	5"	5'-1"	52
	C	23	4	9"	3'-6"	54
	D	22	4	10"	6'-1"	89
	E	10	4	10 1/2"	6'-10"	46
	F	6	5	12"	2'-3"	14
	G	3	4	12"	9'-8"	20
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=3.53 CY. MANHOLE CASTING=100 LBS. STEEL TOTAL=422 LBS.						
10'	A	27	4	5"OC	13"-9 1/2"	249
	B	27	4	5"	5'-1"	93
	C	30	4	9"	3'-6"	70
	D	22	4	10"	11'-1"	163
	E	10	4	10 1/2"	6'-10"	46
	F	12	5	12"	2'-3"	27
	G	3	4	12"	14'-8"	30
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=5.75CY MANHOLE CASTING=100LBS. STEEL TOTAL=687LBS						
15'	A	39	4	5"OC	13"-9 1/2"	359
	B	39	4	5"	5'-1"	134
	C	36	4	9"	3'-6"	84
	D	22	4	10"	16'-1"	236
	E	10	4	10 1/2"	6'-10"	46
	F	17	5	12"	2'-3"	38
	G	3	4	12"	19'-8"	40
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=7.97CY. MANHOLE CASTING=100LBS STEEL TOTAL=946LBS						
20'	A	51	4	5"OC	13"-9 1/2"	470
	B	51	4	5"	5'-1"	175
	C	43	4	9"	3'-6"	101
	D	22	4	10"	6'-1"	310
	E	10	4	10 1/2"	6'-10"	46
	F	22	5	12"	2'-3"	50
	G	3	4	12"	9'-8"	50
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=10.19CY MANHOLE CASTING=100LBS STEEL TOTAL=1211LBS						
25'	A	63	4	5"OC	13"-9 1/2"	580
	B	63	4	5"	5'-1"	217
	C	50	4	9"	3'-6"	117
	D	22	4	10"	6'-1"	383
	E	10	4	10 1/2"	6'-10"	46
	F	27	5	12"	2'-3"	61
	G	3	4	12"	9'-8"	60
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=12.41CY. MANHOLE CASTING=100LBS STEEL TOTAL=1473LB						
30'	A	75	4	5"OC	13"-9 1/2"	691
	B	75	4	5"	5'-1"	258
	C	56	4	9"	3'-6"	131
	D	22	4	10"	6'-1"	457
	E	10	4	10 1/2"	6'-10"	46
	F	32	5	12"	2'-3"	72
	G	3	4	12"	9'-8"	70
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=14.63CY MANHOLE CASTING=100LBS STEEL TOTAL=1734LB						

*These figures do not exclude concrete and steel intercepted by Manhole and Reinforced Concrete Pipe.
*Includes concrete gutter for on-grade inlet. Reduce by .05 cy for inlets in sump.

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

STORM DETAILS (1 OF 3)

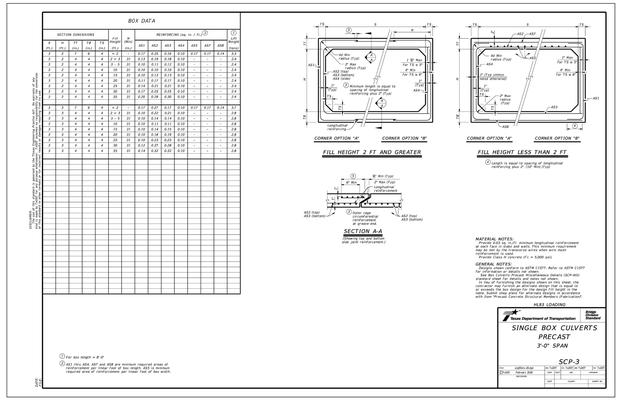
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

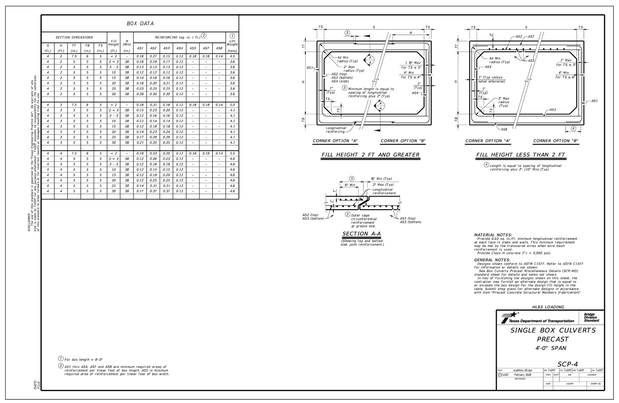
NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

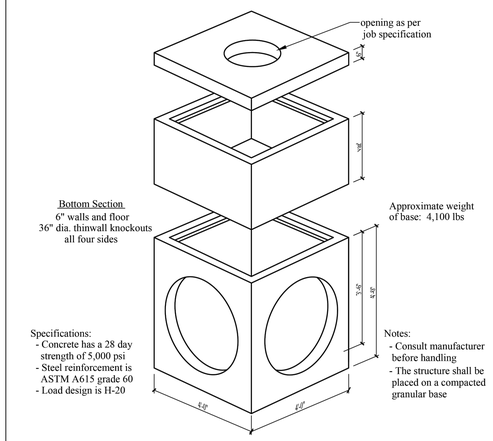
SHEET
C6.13

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cbs\031.097_DETL.dwg User: reissd Feb 07, 2025 - 10:35am





3' x 3' x var' Junction Box



Capital Precast

CAPITAL PRECAST, INC.
800 WATSON LANE EAST
NEW BRAUNFELS, TEXAS 78130
PH. (830) 606-6200

FOR: 3' x 3' x var' Junction Box
JOB:
DRAWN: RW | DATE: 2/15/2008 | Rev. No.:
FILE: f:\users\renee\brochure\junctionboxes\3x3JB
SHEET: 1 OF 1

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600
HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
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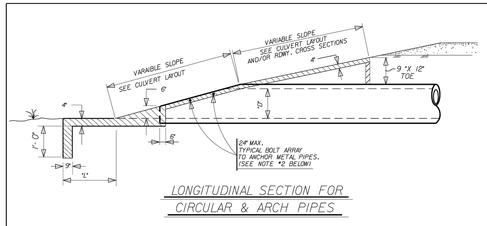
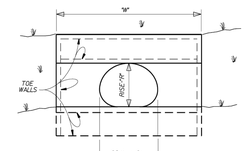
PROFESSIONAL ENGINEER

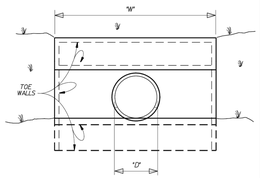
06/19/2023

STORM DETAILS (2 OF 3)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS



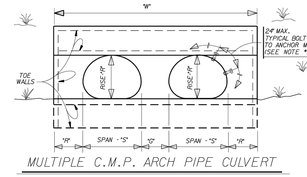


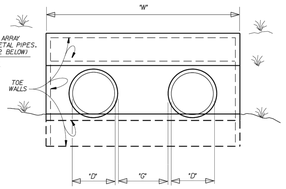


DIMENSIONS FOR CIRCULAR (CMP and RCP) PIPE CULVERTS

"D" INSIDE DIA. of PIPE	"L"	"S"		SINGLE	DOUBLE	TRIPLE	QUADRUPLE
		CSM	RCP	"W"			
18"	2'-0"	1'-2"	0'-9"	4'-6"	7'-2"	9'-10"	12'-6"
21"	2'-6"	1'-3"	0'-10"	5'-3"	8'-4"	11'-4"	13'-4"
24"	3'-0"	1'-5"	0'-11"	6'-0"	9'-5"	12'-10"	16'-3"
30"	4'-0"	1'-8"	1'-1"	7'-6"	11'-8"	15'-10"	20'-0"
36"	5'-0"	1'-11"	1'-3"	9'-0"	13'-11"	18'-10"	23'-9"
42"	6'-0"	2'-2"	1'-5"	10'-6"	16'-2"	21'-10"	27'-6"
48"	7'-0"	2'-5"	1'-7"	12'-0"	18'-5"	24'-10"	31'-3"
54"	8'-0"	2'-10"	1'-11"	13'-6"	20'-10"	28'-2"	35'-6"
60"	9'-0"	3'-2"	2'-1"	15'-0"	23'-2"	31'-4"	39'-6"

"D" IS MEASURED BETWEEN THE OUTER SURFACES OF THE PIPES.





DIMENSIONS FOR C.M.P. ARCH PIPE CULVERTS

DESIGN SIZE	APPROX. ARCH DIM. SPAN "S"	APPROX. ARCH DIM. RISE "R"	"L"	"D"	SINGLE	DOUBLE	TRIPLE	QUADRUPLE
					"W"			
2	21"	15"	2'-0"	1'-2"	4'-3"	7'-2"	10'-1"	13'-0"
3	28"	20"	3'-0"	1'-5"	5'-8"	9'-5"	13'-2"	16'-11"
4	35"	24"	4'-0"	1'-8"	6'-11"	11'-6"	16'-1"	20'-8"
5	42"	29"	5'-0"	1'-11"	8'-4"	13'-9"	19'-2"	24'-7"
6	49"	33"	6'-0"	2'-2"	9'-7"	15'-10"	22'-1"	28'-4"
7	57"	38"	7'-0"	2'-5"	11'-1"	18'-3"	25'-5"	32'-7"
8	64"	43"	8'-0"	2'-10"	12'-5"	20'-8"	28'-10"	37'-0"
9	71"	47"	9'-0"	3'-2"	13'-9"	22'-10"	31'-11"	41'-0"

BASED ON 2-2/3" x 1/2" CORRUGATION
"D" IS MEASURED BETWEEN THE OUTER SURFACES OF THE PIPES.

NOTES:

1.) FOR RIPRAP QUANTITIES AND SLOPES, SEE CULVERT LAYOUT SHEET. CONCRETE SHALL BE CLASS 'B' UNLESS OTHERWISE SHOWN IN THE PLANS.

2.) ALL METAL PIPES (CIRCULAR AND/OR ARCH) SHALL HAVE 5/8" X 6" GALVANIZED BOLTS WITH 2 HEX NUTS AT 24" CENTERS TO ANCHOR THE PIPE TO THE CONCRETE. THIS WORK WILL BE SUBSIDIARY TO THE RIPRAP HEADWALL.

3.) FOR CONCRETE ARCH PIPES, THE CMP ARCH PIPE CULVERT DIMENSIONS WILL HAVE TO BE ADJUSTED FOR THE PIPE WALL THICKNESS.

4.) FOR PIPES LARGER THAN SHOWN, USE THE CLEAR DISTANCE BETWEEN PIPES SHOWN IN ITEMS 460 AND/OR 464.

5.) IF THE SIDES OF THE HEADWALL IS ADJACENT TO A RIPRAP SLOPE AND IF THE TOP OF THE HEADWALL IS ADJACENT TO THE ROADWAY FOUNDATION OR RIPRAP SLOPE, THE SIDE AND TOP TOE WALLS MAY BE ELIMINATED IF APPROVED BY THE ENGINEER.

SAN ANTONIO DISTRICT STANDARD
RIPRAP HEADWALL

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REVISIONS 08-96	PROJECT NO.		SHEET NO.
6			
STATE	DIST.	COUNTY	
TEXAS	SAT		
CONT.	SECT.	JOB	HIGHWAY NO.

10/95

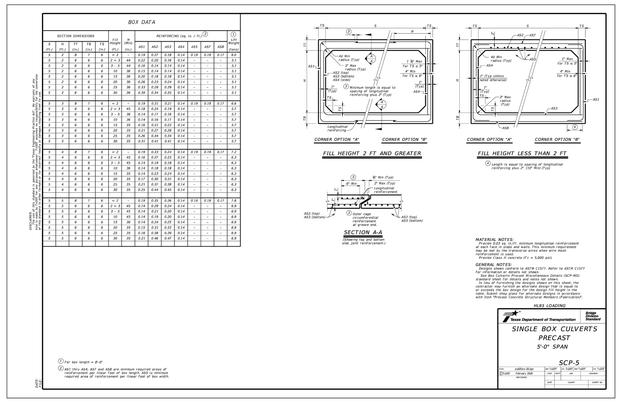
STRUCTURE DESIGN
SHEETS\STDS\SHSAN.dgn

REVISION NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C6.14

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\CDs\031.097_DETL.dwg User: rossd Feb 07, 2025 - 10:35am



BOX DATA

SECTION DIMENSIONS						REINFORCING (sq. in. / ft.) [2]									
A	H	T1	T2	T3	Fill Height	As Required	A01	A02	A03	A04	A05	A07	A08	[1] Unit Weight
3'	3'	6"	6"	6"	2' to 10'	0.12	0.12	0.18	0.14	0.14	–	–	–	3.1
3'	4'	6"	6"	6"	2' to 10'	0.16	0.16	0.18	0.14	0.14	–	–	–	3.1
3'	5'	6"	6"	6"	2' to 10'	0.20	0.20	0.18	0.14	0.14	–	–	–	3.1
3'	6'	6"	6"	6"	2' to 10'	0.24	0.24	0.18	0.14	0.14	–	–	–	3.1
4'	3'	6"	6"	6"	2' to 10'	0.16	0.16	0.18	0.14	0.14	–	–	–	3.1
4'	4'	6"	6"	6"	2' to 10'	0.21	0.21	0.18	0.14	0.14	–	–	–	3.1
4'	5'	6"	6"	6"	2' to 10'	0.26	0.26	0.18	0.14	0.14	–	–	–	3.1
4'	6'	6"	6"	6"	2' to 10'	0.30	0.30	0.18	0.14	0.14	–	–	–	3.1
5'	3'	6"	6"	6"	2' to 10'	0.20	0.20	0.18	0.14	0.14	–	–	–	3.1
5'	4'	6"	6"	6"	2' to 10'	0.26	0.26	0.18	0.14	0.14	–	–	–	3.1
5'	5'	6"	6"	6"	2' to 10'	0.32	0.32	0.18	0.14	0.14	–	–	–	3.1
5'	6'	6"	6"	6"	2' to 10'	0.38	0.38	0.18	0.14	0.14	–	–	–	3.1
6'	3'	6"	6"	6"	2' to 10'	0.24	0.24	0.18	0.14	0.14	–	–	–	3.1
6'	4'	6"	6"	6"	2' to 10'	0.31	0.31	0.18	0.14	0.14	–	–	–	3.1
6'	5'	6"	6"	6"	2' to 10'	0.38	0.38	0.18	0.14	0.14	–	–	–	3.1
6'	6'	6"	6"	6"	2' to 10'	0.45	0.45	0.18	0.14	0.14	–	–	–	3.1
3'	3'	6"	6"	6"	10' to 20'	0.16	0.16	0.18	0.14	0.14	0.18	0.18	0.17	3.6
3'	4'	6"	6"	6"	10' to 20'	0.21	0.21	0.18	0.14	0.14	–	–	–	3.7
3'	5'	6"	6"	6"	10' to 20'	0.26	0.26	0.18	0.14	0.14	–	–	–	3.7
3'	6'	6"	6"	6"	10' to 20'	0.30	0.30	0.18	0.14	0.14	–	–	–	3.7
4'	3'	6"	6"	6"	10' to 20'	0.21	0.21	0.18	0.14	0.14	0.18	0.18	0.17	3.6
4'	4'	6"	6"	6"	10' to 20'	0.27	0.27	0.18	0.14	0.14	–	–	–	3.7
4'	5'	6"	6"	6"	10' to 20'	0.33	0.33	0.18	0.14	0.14	–	–	–	3.7
4'	6'	6"	6"	6"	10' to 20'	0.39	0.39	0.18	0.14	0.14	–	–	–	3.7
5'	3'	6"	6"	6"	10' to 20'	0.26	0.26	0.18	0.14	0.14	0.18	0.18	0.17	3.6
5'	4'	6"	6"	6"	10' to 20'	0.33	0.33	0.18	0.14	0.14	–	–	–	3.7
5'	5'	6"	6"	6"	10' to 20'	0.40	0.40	0.18	0.14	0.14	–	–	–	3.7
5'	6'	6"	6"	6"	10' to 20'	0.46	0.46	0.18	0.14	0.14	–	–	–	3.7
6'	3'	6"	6"	6"	10' to 20'	0.31	0.31	0.18	0.14	0.14	0.18	0.18	0.17	3.6
6'	4'	6"	6"	6"	10' to 20'	0.39	0.39	0.18	0.14	0.14	–	–	–	3.7
6'	5'	6"	6"	6"	10' to 20'	0.47	0.47	0.18	0.14	0.14	–	–	–	3.7
6'	6'	6"	6"	6"	10' to 20'	0.54	0.54	0.18	0.14	0.14	–	–	–	3.7
3'	3'	6"	6"	6"	20' to 30'	0.16	0.16	0.18	0.14	0.14	0.18	0.18	0.17	3.6
3'	4'	6"	6"	6"	20' to 30'	0.21	0.21	0.18	0.14	0.14	–	–	–	3.7
3'	5'	6"	6"	6"	20' to 30'	0.26	0.26	0.18	0.14	0.14	–	–	–	3.7
3'	6'	6"	6"	6"	20' to 30'	0.30	0.30	0.18	0.14	0.14	–	–	–	3.7
4'	3'	6"	6"	6"	20' to 30'	0.21	0.21	0.18	0.14	0.14	0.18	0.18	0.17	3.6
4'	4'	6"	6"	6"	20' to 30'	0.27	0.27	0.18	0.14	0.14	–	–	–	3.7
4'	5'	6"	6"	6"	20' to 30'	0.33	0.33	0.18	0.14	0.14	–	–	–	3.7
4'	6'	6"	6"	6"	20' to 30'	0.39	0.39	0.18	0.14	0.14	–	–	–	3.7
5'	3'	6"	6"	6"	20' to 30'	0.26	0.26	0.18	0.14	0.14	0.18	0.18	0.17	3.6
5'	4'	6"	6"	6"	20' to 30'	0.33	0.33	0.18	0.14	0.14	–	–	–	3.7
5'	5'	6"	6"	6"	20' to 30'	0.40	0.40	0.18	0.14	0.14	–	–	–	3.7
5'	6'	6"	6"	6"	20' to 30'	0.46	0.46	0.18	0.14	0.14	–	–	–	3.7
6'	3'	6"	6"	6"	20' to 30'	0.31	0.31	0.18	0.14	0.14	0.18	0.18	0.17	3.6
6'	4'	6"	6"	6"	20' to 30'	0.39	0.39	0.18	0.14	0.14	–	–	–	3.7
6'	5'	6"	6"	6"	20' to 30'	0.47	0.47	0.18	0.14	0.14	–	–	–	3.7
6'	6'	6"	6"	6"	20' to 30'	0.54	0.54	0.18	0.14	0.14	–	–	–	3.7

[1] For box length = 6'-0"

[2] A01 thru A04, A07 and A08 are minimum required areas of reinforcement per linear foot of box length; A05 is minimum required area of reinforcement per linear foot of box width.

CORNER OPTION "A" | CORNER OPTION "B" | CORNER OPTION "A" | CORNER OPTION "B"

FILL HEIGHT 2 FT AND GREATER

FILL HEIGHT LESS THAN 2 FT.

[1] Length C least H, lapping A1 longitudinal reinforcing bars 3" (76 mm) thick (typ).

SECTION A-A
(Showing top and bottom slab joint reinforcement)

MATERIAL NOTES:
- Provide Class C concrete. Minimum longitudinal reinforcement at each face in slabs and walls. This minimum requirement may be waived for slabs and walls where analysis shows reinforcement is used.
- Provide Class B concrete for F'c = 5,000 psi.

GENERAL NOTES:
- Designs shown conform to ASTM C1577. Refer to ASTM C1577 for additional information and requirements.
- See Box Culvert Precast Miscellaneous Details (SCP-MD) for additional information and requirements.
- In lieu of furnishing the designs shown on this sheet, the Contractor may submit designs prepared by a Texas engineer or complete the box design for the design H1 height in the table. Submit shop plans for precast designs in accordance with Item "Precast Concrete Structural Members (Culverts)".

HL93 LOADING

Texas Department of Transportation — Bridge Division Standard

SINGLE BOX CULVERTS
PRECAST
5'-0" SPAN

SCP-5

File:	scp05-19.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT	February 2019	CONT	SECT	JOB	HIGHWAY
	REVISED	DIST	COUNTY		SHEET NO.

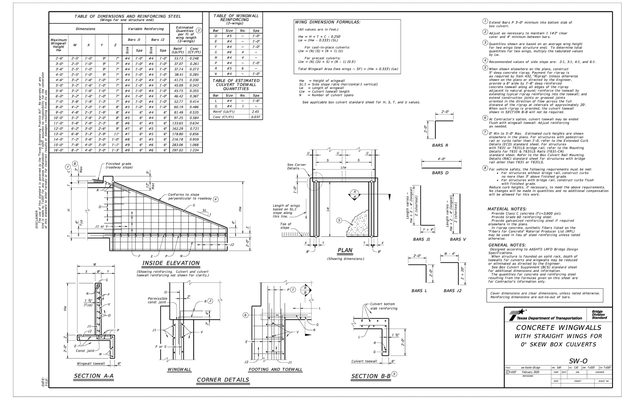


TABLE OF DIMENSIONS AND REINFORCING STEEL
(Wings for two structure ends)

Dimensions					Variable Reinforcing				Estimated Concrete (yd³) and Steel (lb) Quantities (Straight)	
Minimum Wingwall Length (ft)	W	A	T	C	Bars A		Bars J2			
					No.	Size	No.	Size	Concrete	Steel
3'-0"	3'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	1.2 (1)	0.298
3'-0"	3'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	1.2 (2)	0.261
4'-0"	3'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	37.74	0.372
4'-0"	3'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	39.41	0.395
5'-0"	3'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	40.74	0.412
5'-0"	3'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	43.08	0.450
6'-0"	3'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	45.74	0.503
6'-0"	3'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	47.41	0.527
7'-0"	3'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	53.71	0.643
8'-0"	3'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#4	1'-0"	60.18	0.686
9'-0"	3'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	61.46	0.723
10'-0"	3'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	67.23	0.864
11'-0"	3'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	68.50	0.901
12'-0"	3'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	102.26	2.723
13'-0"	3'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	178.88	0.858
14'-0"	3'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	216.78	0.858
15'-0"	3'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	263.06	1.066
16'-0"	3'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	341.81	1.066
3'-0"	4'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	1.2 (1)	0.298
3'-0"	4'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	1.2 (2)	0.261
4'-0"	4'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	37.74	0.372
4'-0"	4'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	39.41	0.395
5'-0"	4'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	40.74	0.412
5'-0"	4'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	43.08	0.450
6'-0"	4'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	45.74	0.503
6'-0"	4'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	47.41	0.527
7'-0"	4'-0"	1'-0"	9"	3'-0"	#4	1'-0"	#4	1'-0"	53.71	0.643
8'-0"	4'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#4	1'-0"	60.18	0.686
9'-0"	4'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	61.46	0.723
10'-0"	4'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	67.23	0.864
11'-0"	4'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	68.50	0.901
12'-0"	4'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	102.26	2.723
13'-0"	4'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	178.88	0.858
14'-0"	4'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	216.78	0.858
15'-0"	4'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	263.06	1.066
16'-0"	4'-0"	1'-0"	9"	3'-0"	#5	1'-0"	#5	1'-0"	341.81	1.066

TABLE OF WINGWALL REINFORCING QUANTITIES

Bar	Size	No.	Type
a	#5	–	L or T
b	#5	–	L or T
c	#4	–	L or T
d	#4	–	L
e	#4	–	L
f	#4	–	L
g	#5	1	L

TABLE OF ESTIMATED CULVERT TOENAIL QUANTITIES

Bar	Size	No.	Type
1	#4	2	T
2	#4	2	T
Nail (LF)			2.67
Lbs (CVS)			0.659

WING DIMENSION FORMULAS:

(All values are in feet.)

He = H + T + C – 0.292
Le = He ÷ 0.5551 (1v)

For (not-in-place cylindric concrete) Le = He ÷ 0.5 (2v)

For precast (slant):
Lbe = He (SIN A ÷ SIN W) (3,5,6)

Total Wingwall Area (two wings) = W(Le + (He ÷ 0.333)) (4v)

Where:
He = Height of wingwall
(1) = true slope cut(s) (horizontal:1 vertical)
(2) = 1:1 slope cut(s)
Lbe = Culvert (sweat) length
N = Number of culvert (bars)

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

[1] Extend Bars # 3-6" minimum into bottom slab of box culvert.

[2] Adjust as necessary to maintain 1' 193° clear distance from edge of roadway.

[3] Quantities shown are based on an average wing height. For box wings (see structure web). To determine total quantities for box wings, multiply the tabulated values by six.

[4] Recommended values of side slope are: 2:1, 3:1, 4:1, and 6:1.

[5] When shown otherwise in the plans, construct wingwalls with straight wingwalls (0° skew) as required by Item 420, "Riprap", Unless otherwise shown in the plans, for Type C, D, and F slopes, provide a 6' wide by 1'-0" deep reinforced concrete slope paving collar around the culvert adjacent to natural ground. Reinforce the tabwall to accommodate the slope paving collar. Construct and extend construction joints or grooved joints transversely across the slope paving collar at a distance of the curve at intervals of approximately 20'-0". Slope paving collar for Type A and B slopes shown in SCP-SW-B-A-01 will not be required.

[6] At Contractor's option, culvert tabwall may be ended with a vertical wingwall tabwall. Adjust reinforcing as needed.

[7] For 45 to 0-0" Max. Estimated curb heights are shown for reference only. Provide curb heights sufficient to set or curbs taller than 0-0, refer to the Extended Curb Heights detail sheet. Refer to the Box Culvert Rail Mounting Details (RMD) standard sheet for structures with bridge rail mounted on top of slab.

[8] For vehicle safety, the following requirements must be met:
- For structures without bridge rail, construct curbs flush with the inside face of wall.
- For structures with bridge rail, construct curbs flush with the inside face of rail.

Reduce curb heights, if necessary, to meet the above requirements. Adjust the "H" dimension accordingly and no additional compensation will be allowed for this work.

MATERIAL NOTES:
Provide Class C concrete (f'c=3,600 psi).
Provide Grade 60 reinforcing steel.
Provide a minimum 2" clear cover or required elsewhere in the plans.
Provide Type 2 Polymer Concrete Epoxy Grout as the "Class F for Concrete" Material Producer List (MPL) or approved in lieu of other reinforcing unless noted otherwise.

GENERAL NOTES:
Designs shown conform to AASHTO LRFD Bridge Design Specifications.
When W (skew) is rounded up within two degrees of the next lower value, the Le and Lbe values may be rounded down to the next lower value.
See Box Culvert Supplemental (BCS) standard sheet for additional dimensions and information.
Refer to the Box Culvert Standard Detailing sheet for Curb-Joint Information given on this sheet are for Curb-Joint Information only.

Favor dimensions are clear dimensions, unless noted otherwise. Reinforcing dimensions are out-to-out of bars.

INSIDE ELEVATION
(Showing reinforcing. Culvert and culvert tabwall reinforcing not shown for clarity)

PLAN
(Showing dimensions.)

BARS A, D, J2, V, L, J2

SECTION A-A

WINGWALL

CORNER DETAILS

FOOTING AND TOENAIL

SECTION B-B [4]

Texas Department of Transportation — Bridge Division Standard

CONCRETE WINGWALLS
WITH STRAIGHT WINGS FOR
0° SKEW BOX CULVERTS

SW-0

File:	sw0-19.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT	February 2019	CONT	SECT	JOB	HIGHWAY
	REVISED	DIST	COUNTY		SHEET NO.

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

STORM DETAILS (3 OF 3)

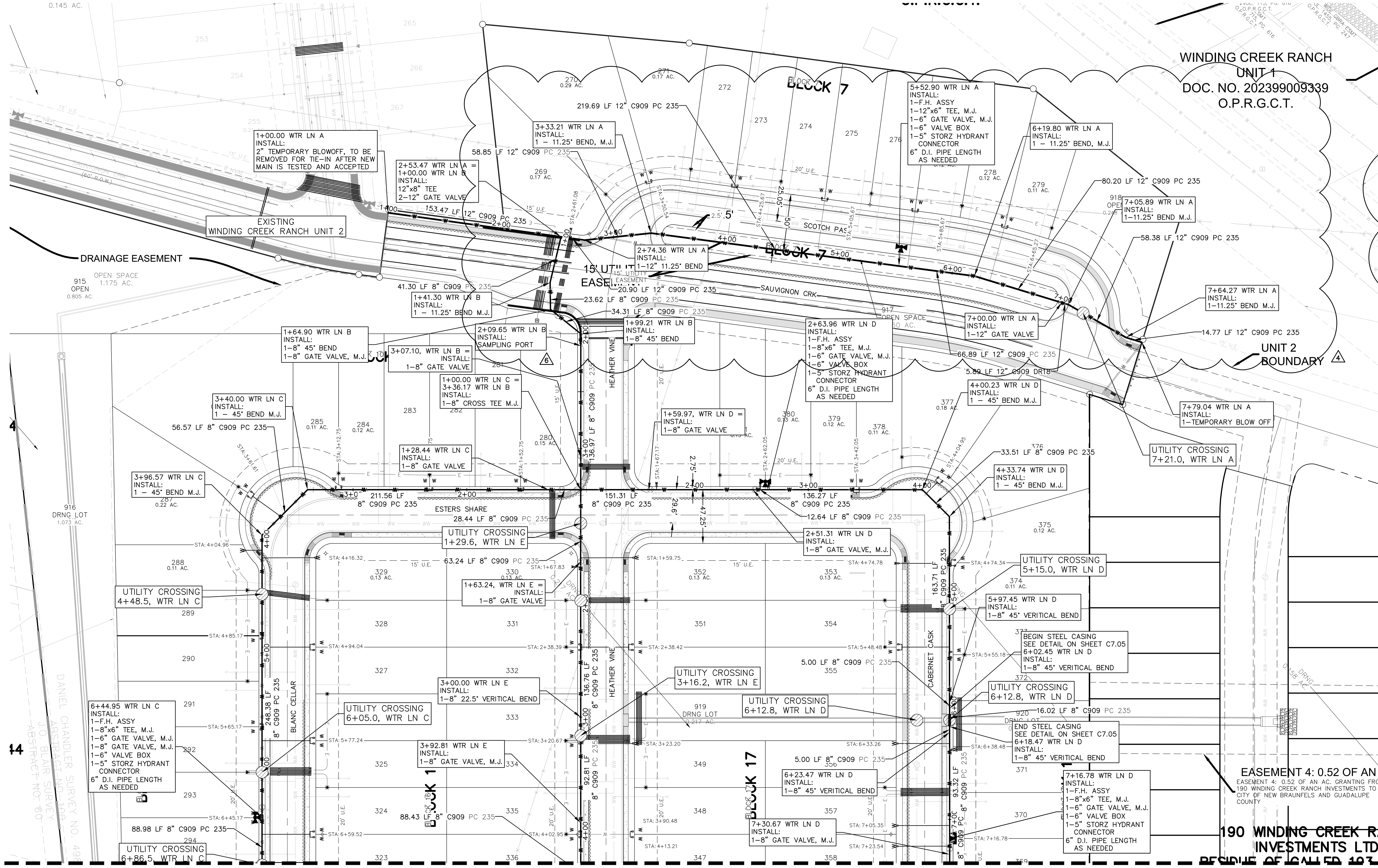
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

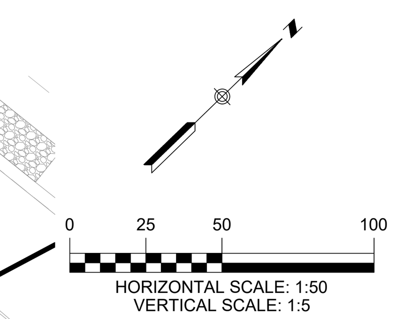
DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C6.15

Drawing Name: N:_Projects\031 – DR Horton\031.097 – Winding Creek Ranch Unit 3\CDs\031.097_DETL.dwg User: rossd Feb 07, 2025 – 10:35am



MATCHLINE
SEE SHEET C7.01



LEGEND

B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
—W—W—	EXISTING WATER LINE
———	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	UTILITY CROSSING

CONSTRUCTION NOTES:

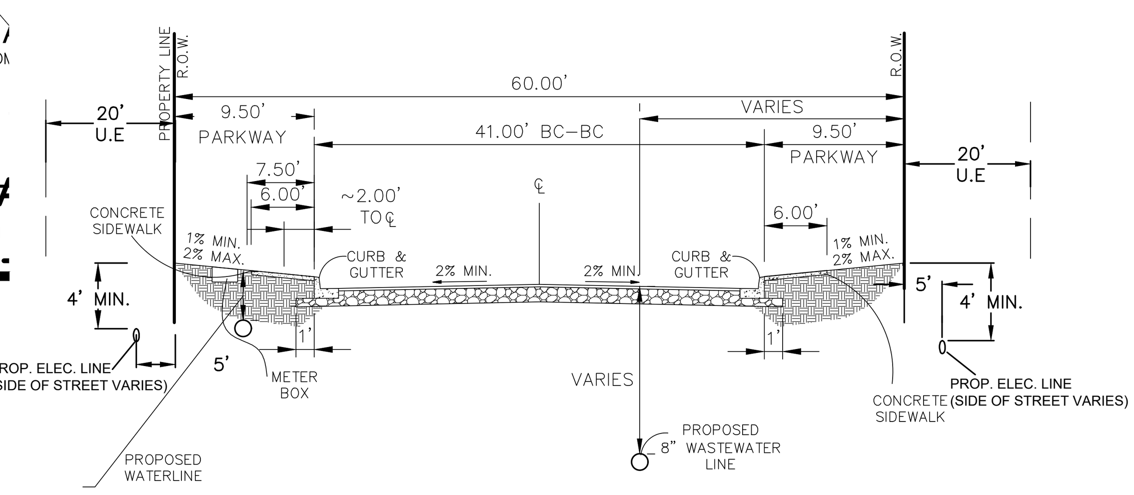
1. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
2. THE CITY ENGINEER IS RESPONSIBLE FOR THE COMPACTION OF ALL UTILITY TRENCHES WITHIN THE RIGHT-OF-WAY.
3. THIS PROJECT INCLUDES UTILITY INSTALLATION GREATER THAN 5-FEET IN DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CCNSTRUCTION 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 STRUCTURE TOTALS

PIPE SIZE	PIPE LENGTH	11.25° BENDS	22.5° BENDS	45° BENDS	DOMESTIC METER SIZE	DOMESTIC METERS	FIRE HYDRANTS	FIRE LINES	LUEs
12"	847'	6	2	2	5/8"	11	1	1	
8"	3737'	1	0	6	5/8"	104	5	5	114

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") 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.



COLLECTOR STREET UTILITIES SECTION A-A (60' R-O-W)
NOT TO SCALE

UTILITY NOTES:

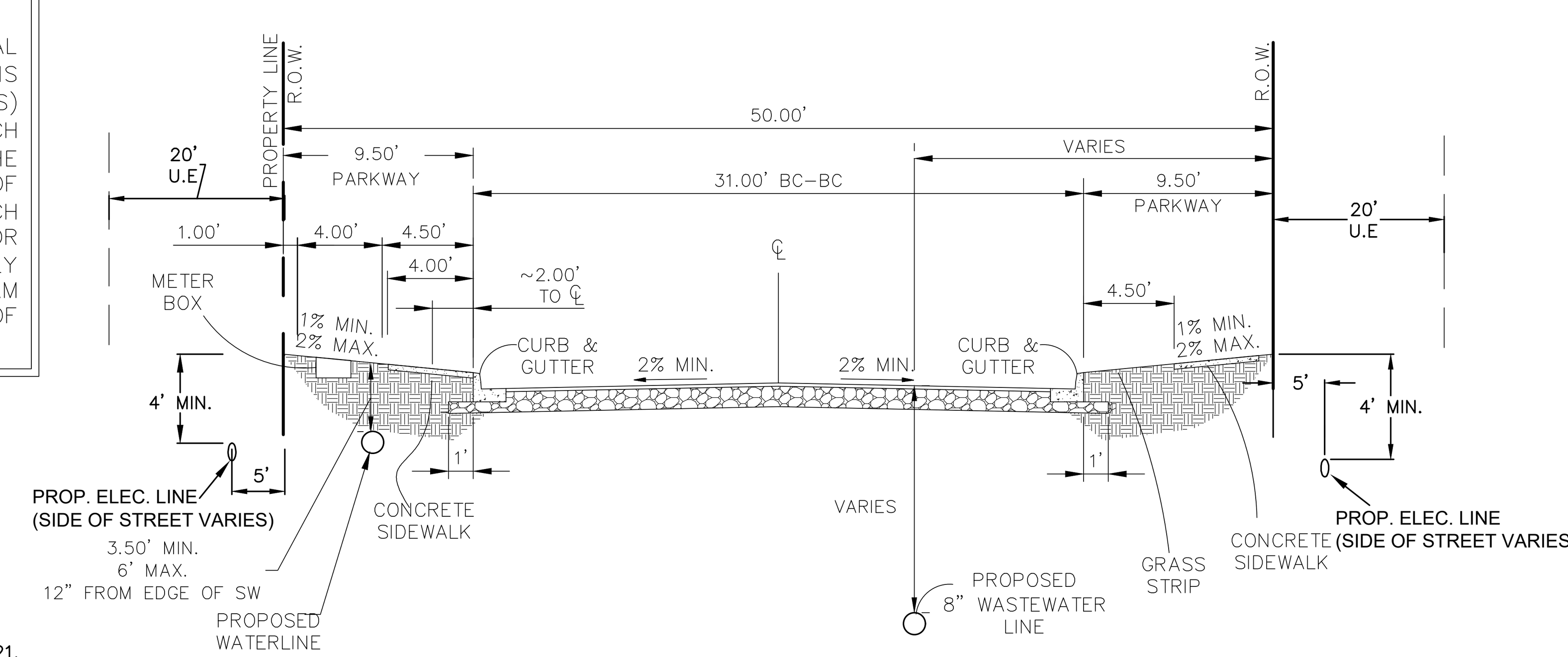
1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
2. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
3. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. 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 PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
4. TYPICAL WATER SECTIONS ARE ON SHEETS C7.0 & C7.1.
5. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FT IN DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND THE 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.
6. CONTRACTOR TO CHISEL IN CURB V'S FOR VALVES AND X'S FOR METERS.
7. 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
8. CONTRACTOR MUST PROTECT ALL UNATTENDED TRENCHES AND EXCAVATIONS WITH TEMPORARY FENCING OR OTHER APPROVED MEANS.
9. DISINFECTION SHALL BE BY MACHINE CHLORINATION.
10. MOISTURE DENSITY COMPACTION TESTING SHALL BE REQUIRED EVERY 300 LF FOR EACH VERTICAL FOOT OF COMPACTED BACKFILL.
11. ALL TESTING AND TEST REPORTS SHALL BE COORDINATED WITH GVSUD INSPECTOR BY THE CONTRACTOR.
12. ALL DUCTILE IRON PIPE TO BE AMERICAN, ZINC COATED, AWWA/ANSI C-151
13. CONTRACTOR TO UTILIZE APPROVED WATER LINE STOPS AND/OR MUELLER INSERTION-VALVES TO MINIMIZE WATER OUTAGES AS REQUIRED BY GVSUD DURING CONSTRUCTION.

TRENCH 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 CONTRACT DOCUMENTS. THE CONTRACTORS 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.

RESTRAINED LENGTH NOTES:

1. CONTRACTOR TO COORDINATE WITH GREEN VALLEY SPECIAL UTILITY DISTRICT (G.V.S.U.D)
2. ALL IN-LINE VALVES, BENDS & PLUGS SHALL BE RESTRAINED, RESTRAINT TO BE PROVIDED ON EACH SIDE OF THE VALVE, FITTING OR ANY REQUIRED JOINT, PER GVSUD DETAILS W18 THROUGH W21.
3. RL=RESTRAINT LENGTH
4. CONTRACTOR SHALL DETERMINE RESTRAINT LENGTH REQUIRED FOR HORIZONTAL VERTICAL FITTINGS BASED ON RESTRAINT LENGTH TABLE SHOWN BELOW, PER GVSUD DETAILS W18 THROUGH W21.



LOCAL STREET UTILITIES SECTION A-A (50' R-O-W)
NOT TO SCALE

REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

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HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS — CHRISTOPHER P. VAN HEERDE — 93047 — LICENSED PROFESSIONAL ENGINEER — P.E.

06/19/2023

OVERALL WATER (1 OF 2)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
4	WATER STATIONING UPDATED PRIOR TO STAKING	01/27/2025
6	GVSUD	02/06/2025

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C7.00

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 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") LOOSE. 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 PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
4. TYPICAL WATER SECTIONS ARE ON SHEETS C7.0 & C7.1.
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6. CONTRACTOR TO CHISEL IN CURB V'S FOR VALVES AND X'S FOR METERS.
7. 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
8. CONTRACTOR MUST PROTECT ALL UNATTENDED TRENCHES AND EXCAVATIONS WITH TEMPORARY FENCING OR OTHER APPROVED MEANS.
9. DISINFECTION SHALL BE BY MACHINE CHLORINATION.
10. MOISTURE DENSITY COMPACTION TESTING SHALL BE REQUIRED EVERY 300 LF FOR EACH VERTICAL FOOT OF COMPACTED BACKFILL.
11. ALL TESTING AND TEST REPORTS SHALL BE COORDINATED WITH GVSUD INSPECTOR BY THE CONTRACTOR.
12. ALL DUCTILE IRON PIPE TO BE AMERICAN, ZINC COATED, AWWA/ANSI C-151
13. CONTRACTOR TO UTILIZE APPROVED WATER LINE STOPS AND/OR MUELLER INSERTION-VALVES TO MINIMIZE WATER OUTAGES AS REQUIRED BY GVSUD DURING CONSTRUCTION.

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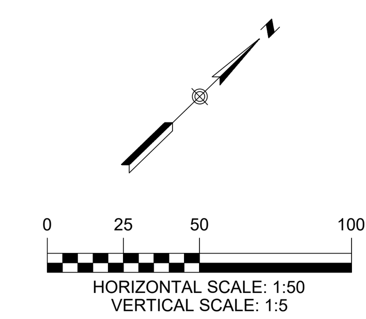
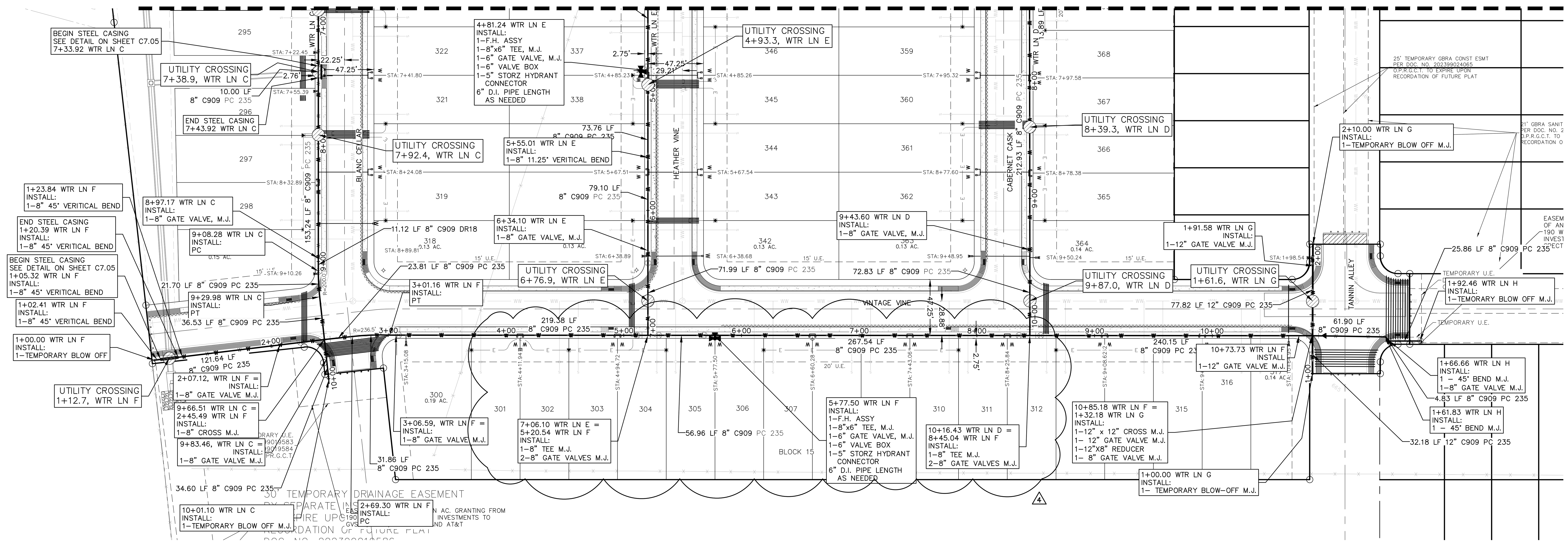
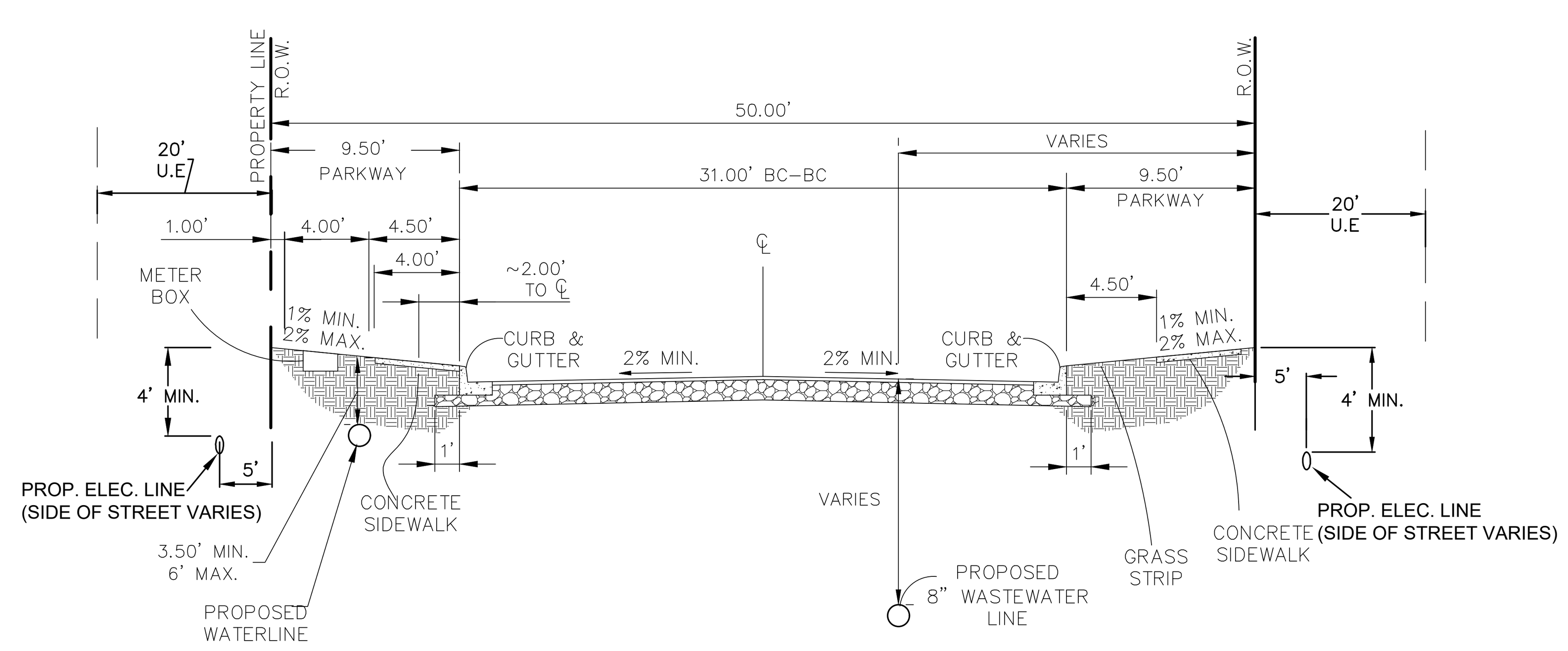


LEGEND

B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
—W—W—	EXISTING WATER LINE
——	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	UTILITY CROSSING

MATCHLINE
SEE SHEET C7.00





LOCAL STREET UTILITIES SECTION A-A (50' R-O-W)

NOT TO SCALE

TRENCH EXCAVATION SAFETY PROTECTION

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OVERALL WATER (2 OF2)

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DATE: APRIL 2023
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REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET C7.01

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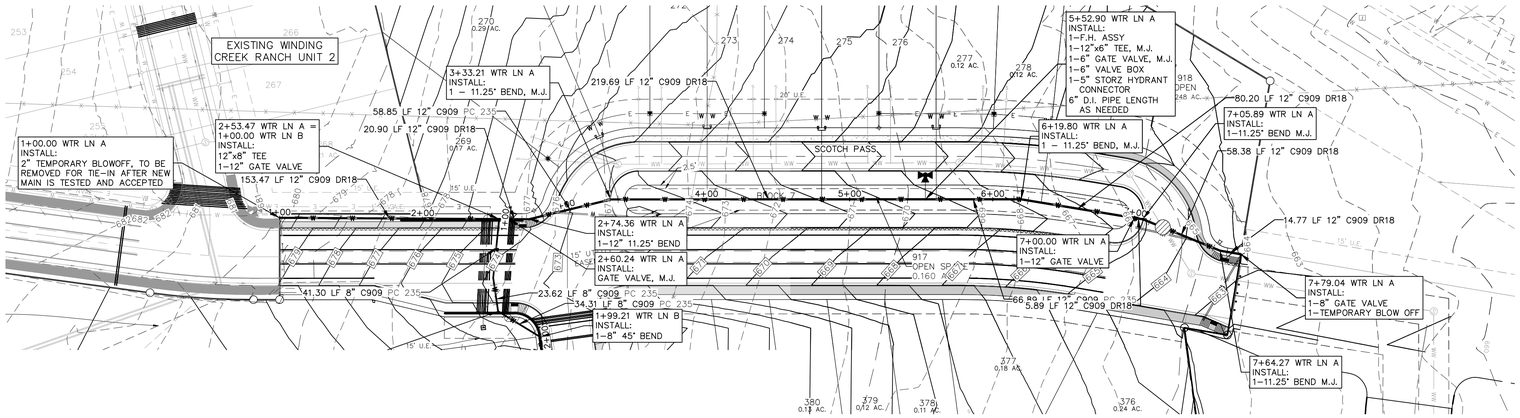

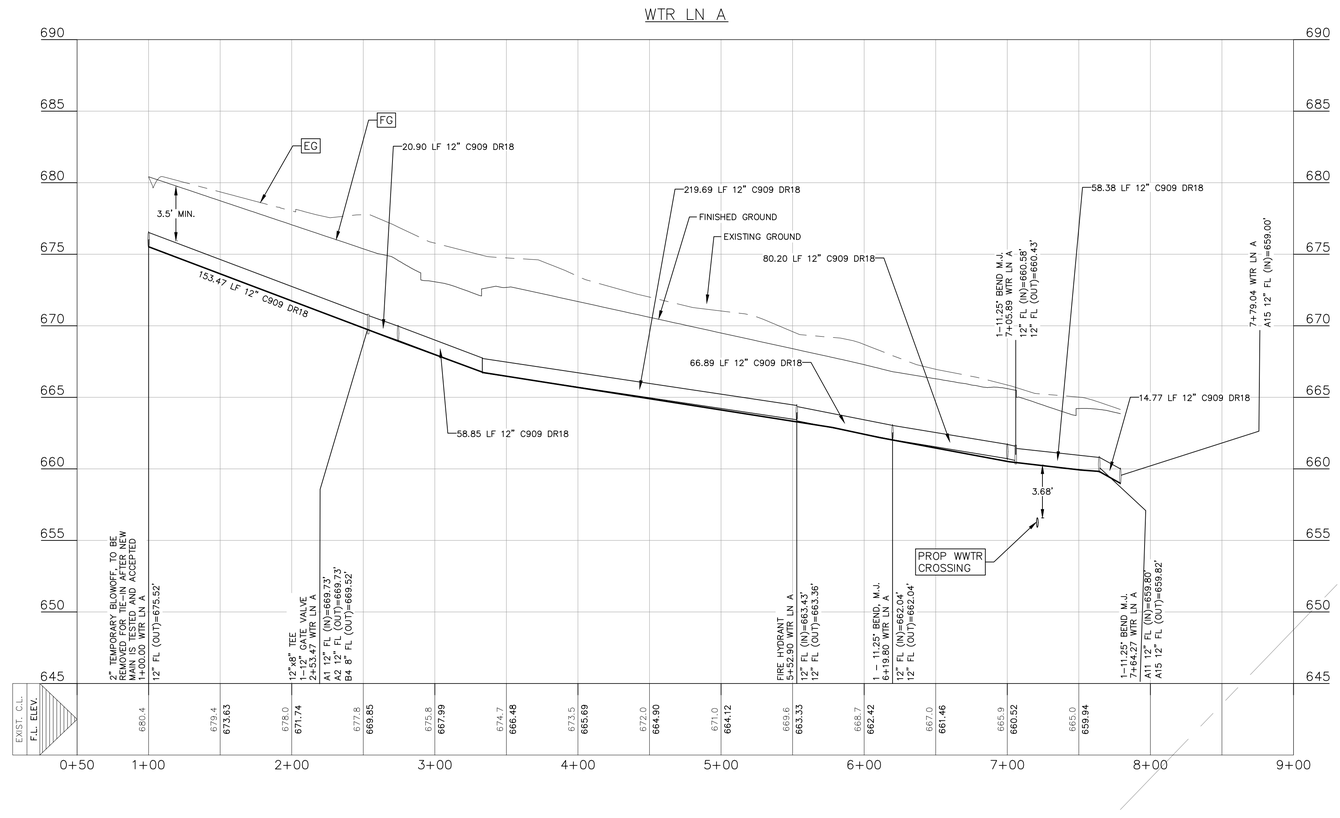

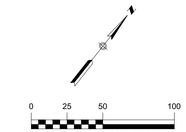

LEGEND

- B.L. — BUILDING SETBACK LINE
- U.E. — UTILITY EASEMENT
- D.E. — DRAINAGE EASEMENT
- EXISTING WATER LINE
- PROPOSED WATER LINE
- PROPOSED WATER SERVICE
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CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER

06/19/2023

WTR LN A PLAN & PROFILE

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C7.02

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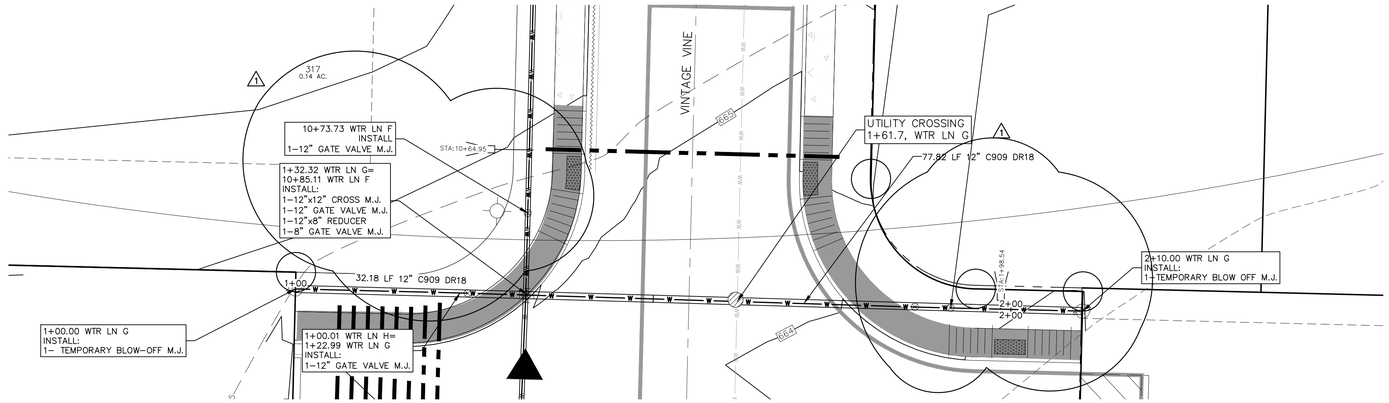

WTR LN G

LEGEND

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290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

WTR LN G PLAN & PROFILE

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C7.03

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03a\031.097_WTR.dwg User: reissd Feb 07, 2025 - 10:37am

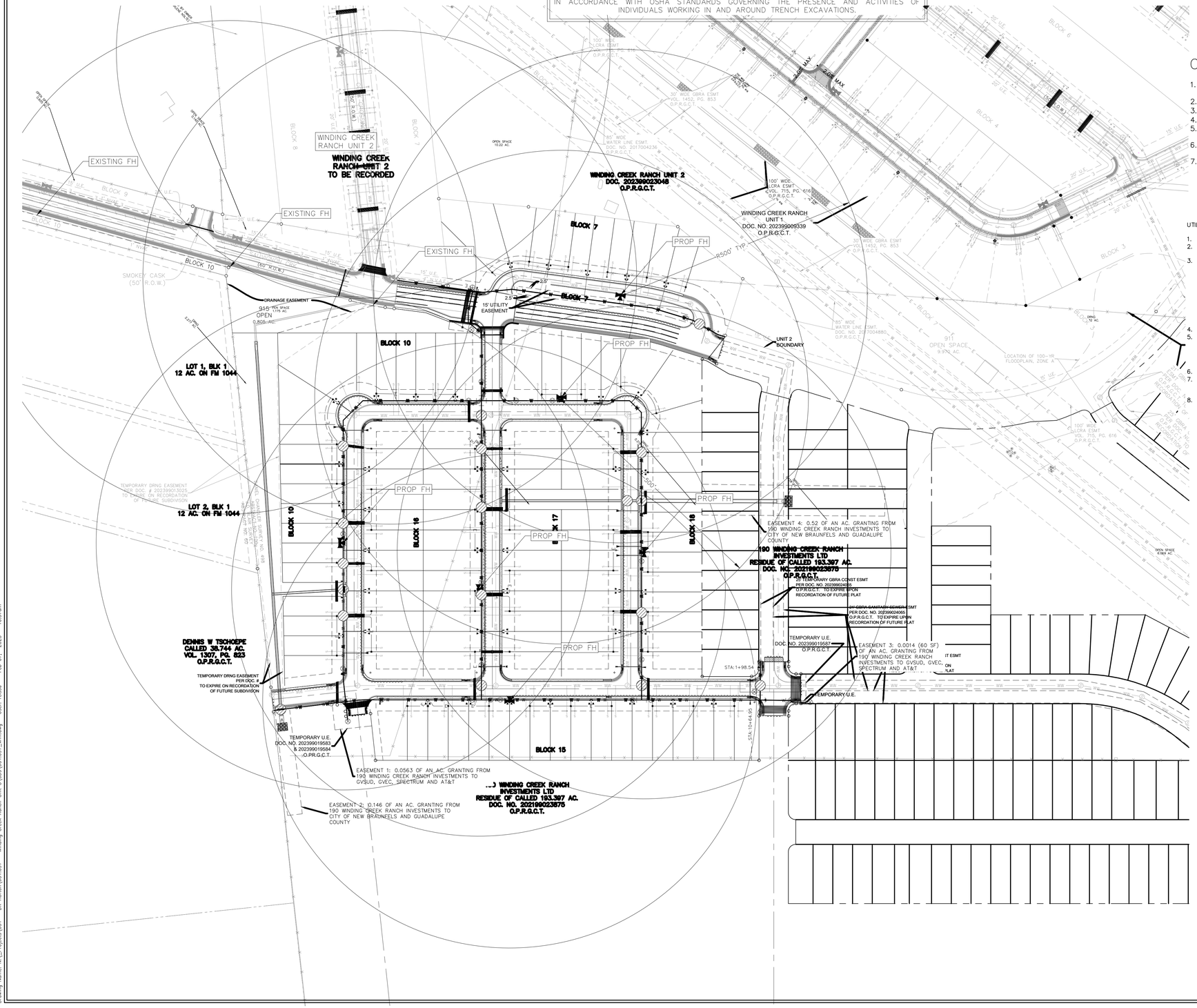
TRENCH EXCAVATION SAFETY PROTECTION

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 CONTRACT DOCUMENTS. THE CONTRACTORS 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.

0 50 100 200
HORIZONTAL SCALE: 1:100

LEGEND

B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
W W	EXISTING WATER LINE
	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	UTILITY CROSSING



CONSTRUCTION NOTES:

1. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
2. ALL SEWER PIPE ASTM 3034 (115 PSI)
3. ALL MANHOLES SHALL BE 48" DIAMETER.
4. ALL RING AND COVER SHALL BE 32" DIAMETER.
5. POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH NBU WATER AND WASTEWATER DESIGN CRITERIA MANUAL, SECTION 2.3.0.
6. THE CITY ENGINEER IS RESPONSIBLE FOR THE COMPACTIONOF ALL UTILITY TRENCHES WITHIN THE RIGHT-OF-WAY.
7. THIS PROJECT INCLUDES UTILITY INSTALLATION GREATER THAN 5-FEET IN DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASMENTS. 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.

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 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") LOOSE. 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 PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
4. TYPICAL WATER SECTIONS ARE ON SHEETS C7.0 & C7.1.
5. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FT IN DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND THE 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.
6. CONTRACTOR TO CHISEL IN CURB V'S FOR VALVES AND X'S FOR METERS.
7. 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
8. CONTRACTOR MUST PROTECT ALL UNATTENDED TRENCHES AND EXCAVATIONS WITH TEMPORARY FENCING OR OTHER APPROVED MEANS.

RESTRAINED LENGTH NOTES:

1. CONTRACTOR TO COORDINATE WITH GREEN VALLEY SPECIAL UTILITY DISTRICT (G.V.S.U.D)
2. ALL IN-LINE VALVES, BENDS & PLUGS SHALL BE RESTRAINED, RESTRAINT TO BE PROVIDED ON EACH SIDE OF THE VALVE, FITTING OR ANY REQUIRED JOINT, PER GVSUD DETAILS W18 THROUGH W21.
3. RL=RESTRAINT LENGTH
4. CONTRACTOR SHALL DETERMINE RESTRAINT LENGTH REQUIRED FOR HORIZONTAL VERTICAL FITTINGS BASED ON RESTRAINT LENGTH TABLE SHOWN BELOW, PER GVSUD DETAILS W18 THROUGH W21.

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") 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.

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.

290 S. CASTELL AVE., STE. 100
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TBPE FIRM F-10961
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HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

FIRE HYDRANT LAYOUT

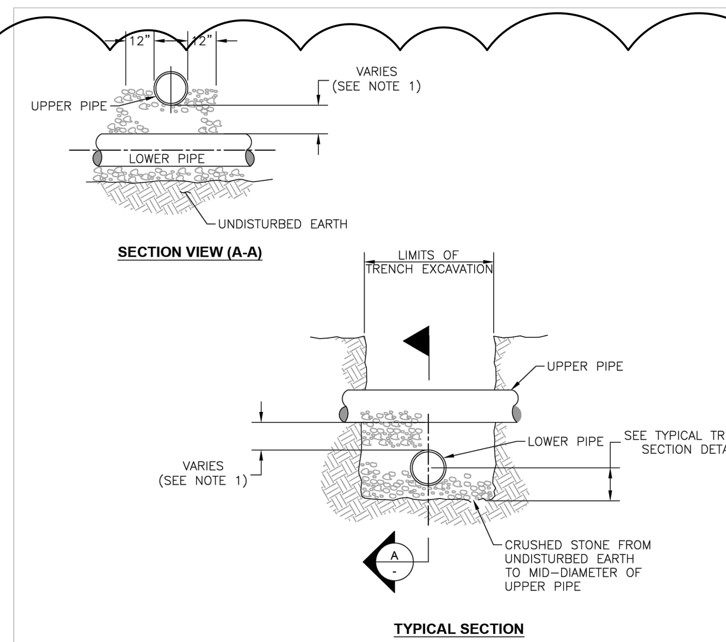
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C7.04

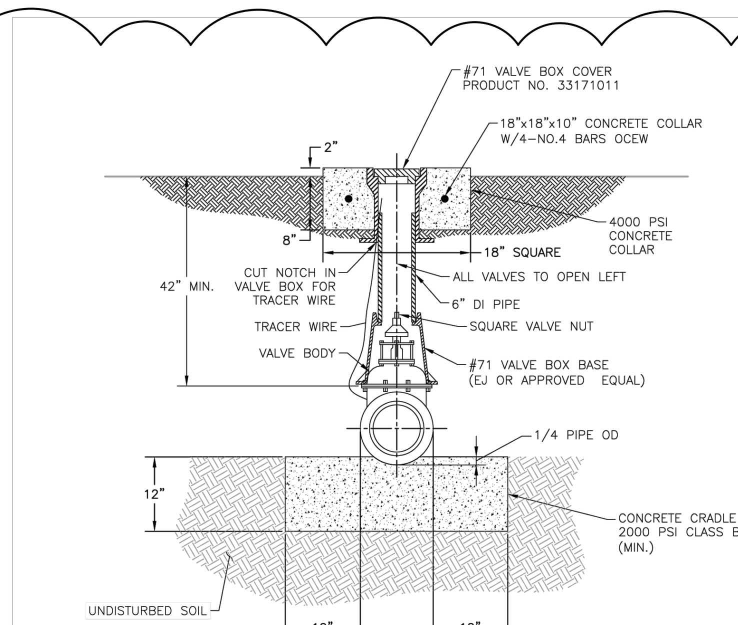
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cbs\031.097_WTR.dwg User: reissd Feb 07, 2025 - 10:37am



NOTES:

1. MAINTAIN A MINIMUM 5 FOOT HORIZONTAL AND 2 FOOT VERTICAL SEPARATION FROM BETWEEN UTILITIES AND WATER AND WASTEWATER PIPES AND SERVICES. GAS, ELECTRIC, CABLE, ETC. TO BE LOCATED OPPOSITE SIDES OF PROPERTIES.
2. UTILITY CROSSINGS SEPARATED BY LESS THAN 5 FEET SHALL BE ENCASED WITH A MINIMUM OF 6 INCHES OF CONCRETE.
3. SPECIFICATIONS: BEDDING MATERIAL MUST BE APPROVED BY AUTHORIZED GVSUD PERSONNEL, BEFORE START OF JOB.
4. AT ANY CREEK CROSSING OR DRAINAGE DITCH THE MAIN SHALL BE ENCASED WITH STEEL PIPE AND/OR 6 INCHES CONCRETE ENCASEMENT TO WITHIN 10 FEET OUTSIDE OF CREEK OR DRAINAGE DITCH AREA.
5. PIPE JOINTS SHALL BE AT LEAST 9 FEET HORIZONTALLY FROM CROSSINGS.

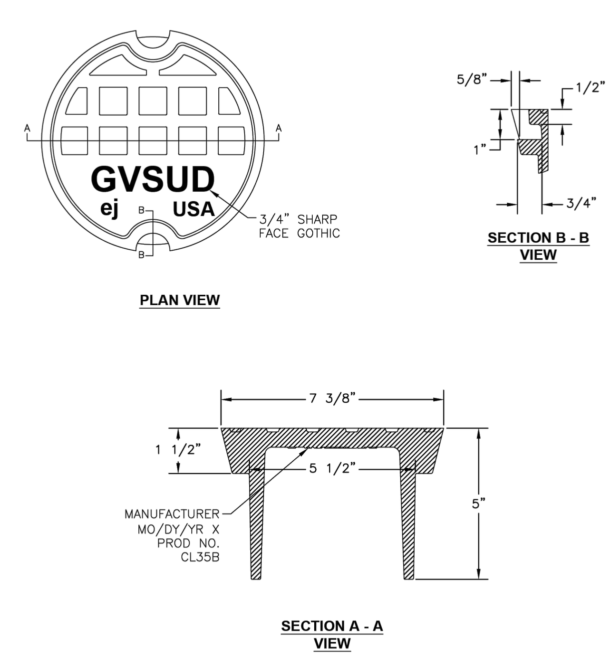
GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
UTILITIES CROSSING DETAIL
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-10



NOTES:

1. WELD 2 1/2 INCH X 2 INCH DEEP SOCKET TO 1 INCH (SCHEDULE 40) ROUND STEM EXTENSION AND ON OPERATING NUT. FOR PIPE EXTENSIONS OVER 10 FEET, STEM EXTENSION SHALL BE A SCHEDULE 80 PIPE.
2. VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3 FEET DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 18 TO 24 INCHES FROM FINISHED GRADE.
3. CONCRETE COLLARS TO BE INSTALLED ON ALL VALVE BOXES LOCATED OUTSIDE PAVEMENT. SEE APPROPRIATE VALVE BOX ADJUSTMENT DETAILS.
4. GATE VALVES SHALL BE MUELLER TYPE OR APPROVED EQUAL.
5. FOR VALVE DEEPER THAN 5 FEET, ADD EXTENSION.
6. VALVE TURNS UNDERNEATH CAP.

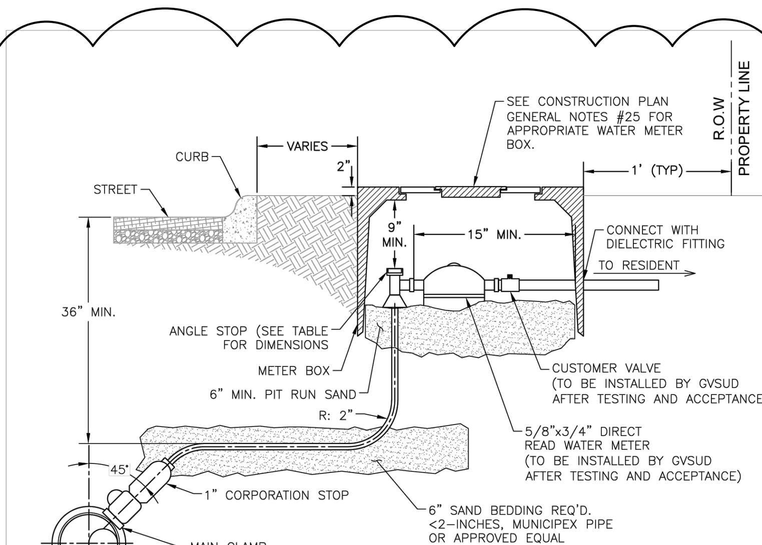
GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
NON-RISING STEM VERTICAL GATE VALVE WITH BOX ASSEMBLY
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-11



NOTES:

1. VALVE BOX COVER SHALL BE EJ GROUP, INC. $71 VALVE BOX COVER PRODUCT NUMBER 33171011, OR APPROVED EQUIVALENT WITH GVSUD LOGO.
2. TYPICAL FILLET IS 3/16 INCH RADIUS.
3. LETTERING SHALL BE 3/4 INCH SHARP FACE GOTHIC AND LOCATED AS SHOWN.
4. LID REQUIRES TWO (2) PICK SLOTS.
5. THE MANUFACTURER'S IDENTIFICATION, CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID.
6. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORDANCE WITH NORMAL FOUNDRY PRACTICE.
7. FINISH BY REMOVING FINS AND FLASHING AND PAINT WITH BLACK ASPHALT COATING.

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

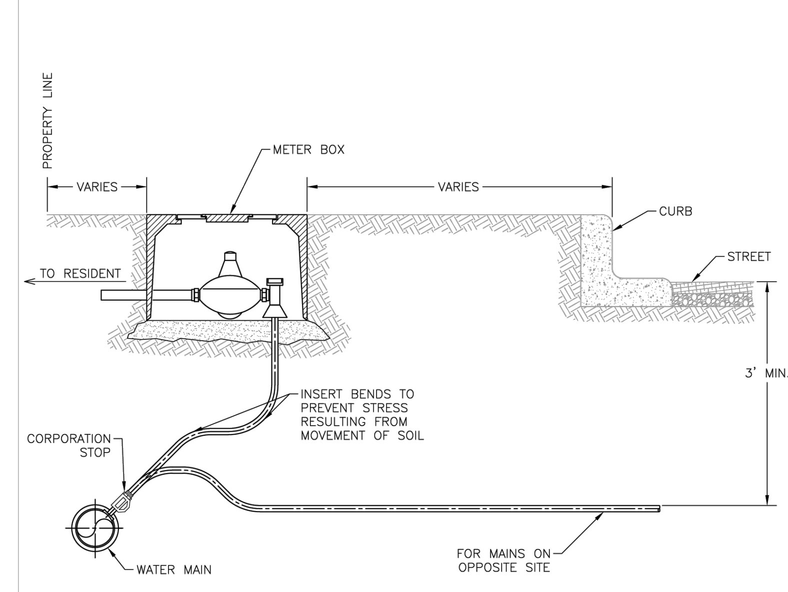


MAIN SIZE	METER SIZE	MAIN SADDLE	CORPORATION	ANGLE STOP
<12"	5/8" OR 3/4"	S-91804 IP	H-15028 IP 1"	B-24258N: 1"x 3/4"
<12"	1"	S-91804 IP	H-15028 IP 1"	B-24258N: 1"X1"

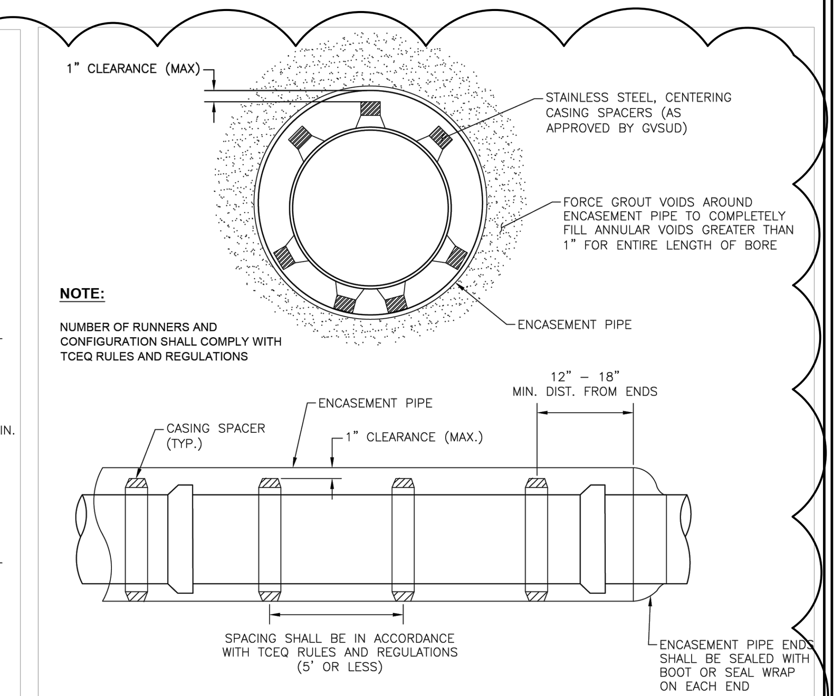
NOTES:

1. FITTINGS SHALL BE MUELLER OR APPROVED EQUAL.
2. A TRACER WIRE SHALL BE INSTALLED ON THE SERVICE LINE TAPED AT 10-INCH INCREMENTS.

GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
STANDARD SERVICE CONNECTION
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-23



GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
TYPICAL SERVICE LOCATION DETAIL
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-24



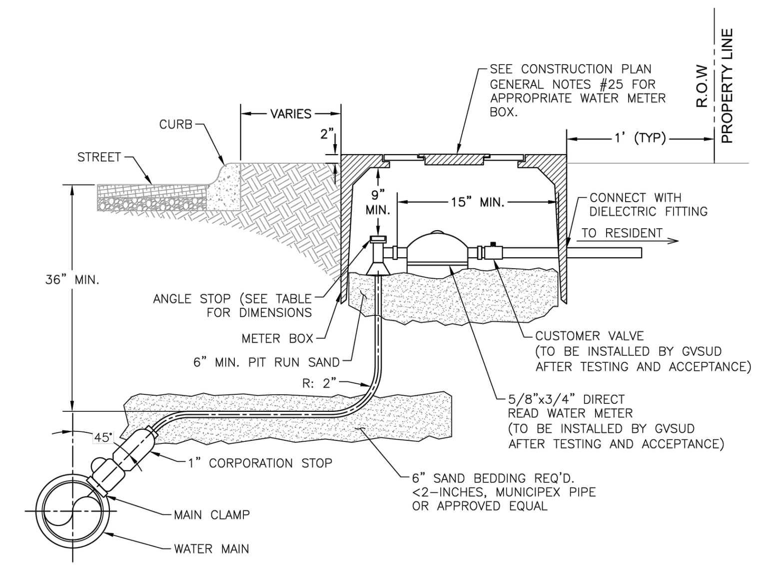
NOTE:

NUMBER OF RUNNERS AND CONFIGURATION SHALL COMPLY WITH TCEQ RULES AND REGULATIONS

NOTES:

1. TCEQ RULES AND REGULATIONS ON SANITARY SEWER, STORM SEWER AND WATER MAIN CROSSING AND SEPARATIONS WILL BE STRICTLY ENFORCED TO TAC, CHAPTER 290, SUBCHAPTER D.
2. ALL PIPE IN ENCASEMENT PIPE SHALL BE RESTRAINED AT JOINTS FOR ENTIRE LENGTH OF THE ENCASEMENT PIPE PLUS 10 FEET ON EACH SIDE.
3. AT ANY CREEK CROSSING OR DRAINAGE DITCH THE PIPE SHALL BE ENCASED IN STEEL PIPE AND HAVE A MINIMUM OF 3 FEET OF COVER FROM THE BOTTOM OF THE CREEK/STREAM.
4. AT ANY ROADWAY CROSSING THE MAIN SHALL BE STEEL ENCASED AND HAVE A MINIMUM OF 5 FEET OF COVER FROM THE BOTTOM OF THE BASE MATERIAL.
5. BORE SHALL HAVE SUFFICIENT ROOM FOR 2" PVC O.D. (MIN) FOR FORCE GROUTING AS REQUIRED.

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

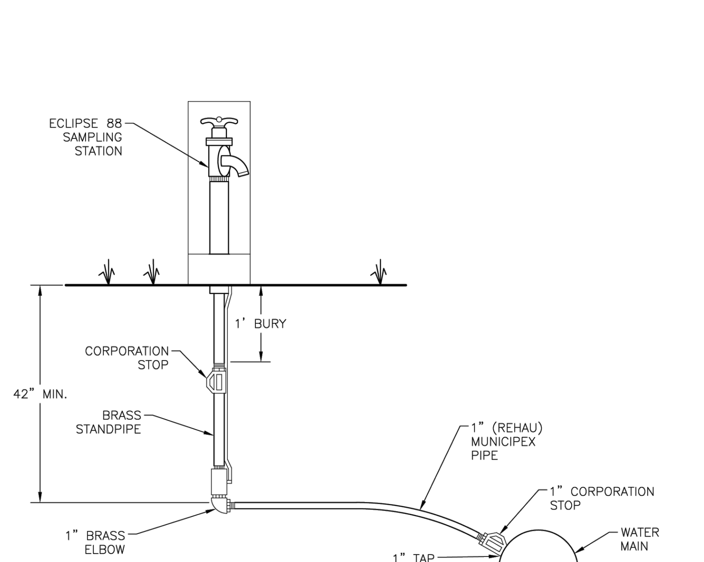


MAIN SIZE	METER SIZE	MAIN SADDLE	CORPORATION	ANGLE STOP
<12"	5/8" OR 3/4"	S-91804 IP	H-15028 IP 1"	B-24258N: 1"x 3/4"
<12"	1"	S-91804 IP	H-15028 IP 1"	B-24258N: 1"X1"

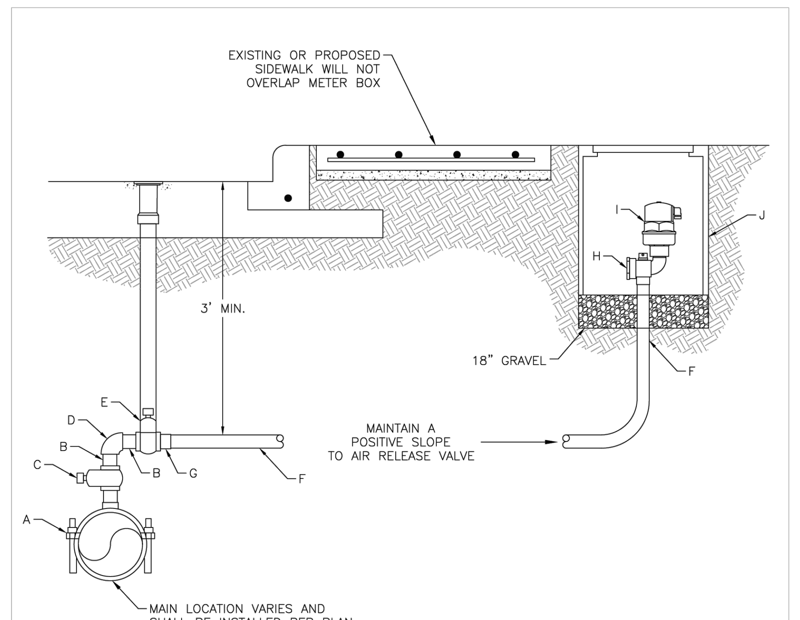
NOTES:

1. FITTINGS SHALL BE MUELLER OR APPROVED EQUAL.
2. A TRACER WIRE SHALL BE INSTALLED ON THE SERVICE LINE TAPED AT 10-INCH INCREMENTS.

GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
STANDARD SERVICE CONNECTION
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-23



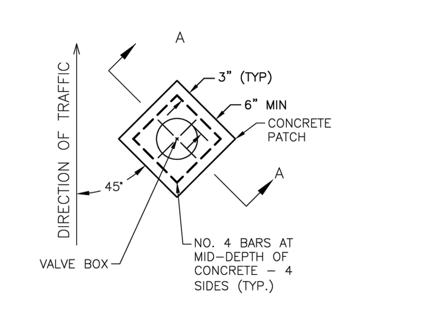
GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
WATER SAMPLING STATION DETAIL
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-33



MATERIAL LIST***	
LABEL	ITEM
A*	2" TAPPING SADDLE/SLEEVE
B	2" BRASS NIPPLE - THREADED
C**	2" BRASS CORPORATION STOP, MIP X FIP
D	2" BRASS 90° BEND, FIP
E	2" VALVE, RESILIENT WEDGE GATE, IRON BODY. FIP X FIP, WITH VALVE BOX
F	2" MUNICIPEX WATER SERVICE LINE
G	2" BRASS ADAPTER, MIP X CTS COMPRESSION
H	2" BRASS STOP, ANGLED OR STRAIGHT, CTS COMPRESSION X FIP
I	2" AIR RELEASE VALVE
J	DFW38CNP-J26-AF1MS VALVE BOX

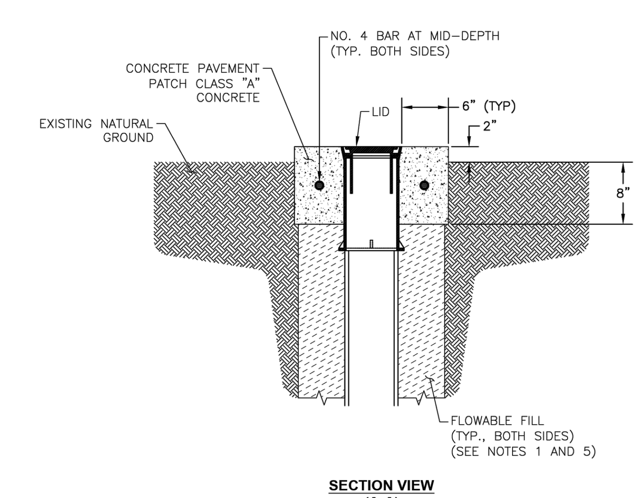
* SERVICE SADDLES SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
** ALL FITTING CONNECTED TO POLYETHYLENE PIPE WILL REQUIRE A STAINLESS STEEL INSERT.
*** MATERIAL LIST TO BE IN ACCORDANCE WITH GVSUD STANDARD PRODUCT LIST.

GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
2" AIR RELEASE VALVE
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-30

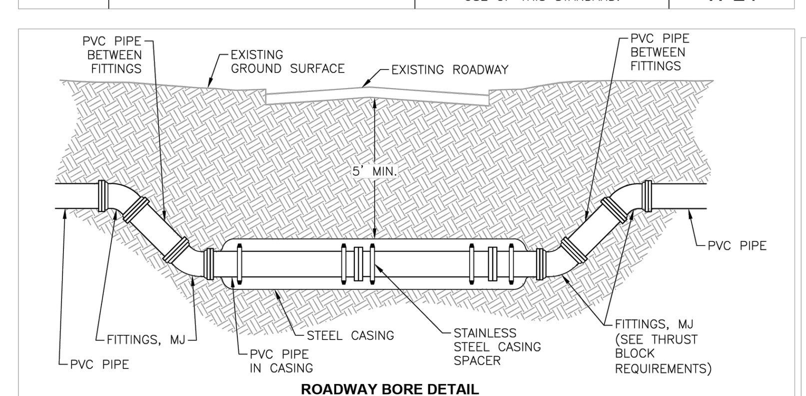


NOTES:

1. SUBGRADE SHALL BE COMPACTED PER SPECIFICATIONS, SUBGRADE PREPARATION.
2. VALVE CASTINGS SHALL BE ADJUSTED TO GRADE AFTER FINAL LIFT OF OVERLAY IS IN PLACE.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO BASE OF THE VALVE.
4. CONTRACTOR TO USE VALVE BOX ADJUSTING RISER TO ADJUST VALVE BOX TO GRADE.
5. WHERE CAST IRON CASTINGS ARE TO BE REMOVED IN EXCAVATION GREATER THAN 20 INCHES DEEP, CONTRACTOR MAY ELECT TO FILL EXCAVATION WITH CONTROLLED LOW STRENGTH MATERIAL TO THE UNDERSIDE OF THE CONCRETE PAVEMENT PATCH IN LIEU OF COMPACTED BACKFILL.
6. REINFORCING STEEL SHALL MEET SPECIFICATIONS FOR REINFORCING STEEL.



GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
VALVE BOX ADJUSTMENT OUTSIDE OF PAVEMENT
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-14

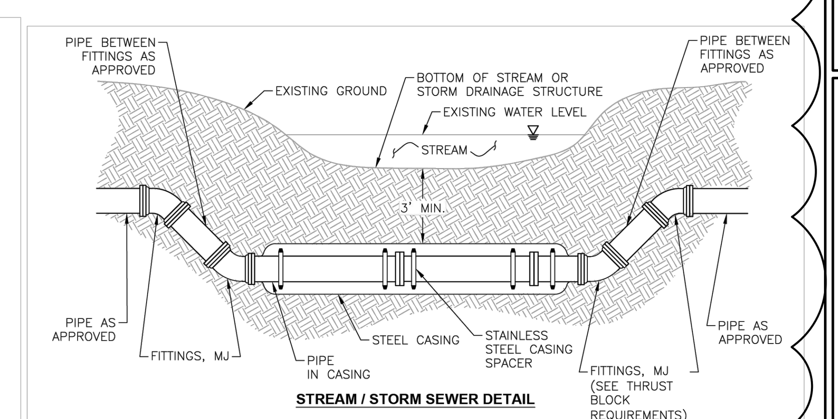


NOTES:

1. ALL PIPE IN ENCASEMENT PIPE SHALL BE RESTRAINED WITH AN APPROVED METHOD FOR ENTIRE LENGTH OF THE ENCASEMENT PIPE PLUS 10 FEET ON EACH SIDE.
2. FOR A PIPE 20 FEET IN LENGTH, A MINIMUM OF 4 SPACERS ARE REQUIRED. FOR A PIPE 13 FEET IN LENGTH, A MINIMUM OF 3 SPACERS ARE REQUIRED.
3. FOR ENCASED PIPE LOCATED IN PROXIMITY TO SANITARY SEWERS, SPACERS SHALL CONFORM TO TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290, SUBCHAPTER D.
4. AT ANY ROADWAY CROSSING THE PIPE SHALL BE STEEL ENCASED AND HAVE A MINIMUM OF 5 FEET OF COVER FROM THE BOTTOM OF THE BASE MATERIAL.
5. FOR ROAD WAY CROSSINGS, THE ENDS OF THE CASING PIPE SHALL EXTEND TO THE RIGHT OF WAY LINES.
6. ALL PIPE FITTINGS, VALVES, AND APPURTENANCES SHALL MATCH OR EXCEED CLASS RATING OF PIPE AS SHOWN ON THE PLANS.
7. SEE ENCASEMENT DETAIL WITH ENCASEMENT SPACER DETAIL W-6.
8. DUCTILE IRON PIPE,AMERICAN ZINC COATED AWWA/ANSI C-151 MAY BE USED IN LIEU OF STEEL CASING WHEN APPROVED BY GVSUD.

WATER LINE IN ENCASEMENT PIPE			
WATER LINE SIZE (INCHES)	NOM. DIA. STEEL (INCHES)	ENCASEMENT PIPE THICKNESS (INCHES)	PIPE WEIGHT (LBS./FT.)
6	18	0.375	70.59
8	24	0.375	94.62
12	24	0.375	94.62
16	30	0.375	118.65
20	36	0.438	166.19
24	42	0.438	194.02
30	48	0.50	259.02
36	54	0.50	291.07

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



NOTES:

1. ALL PIPE IN ENCASEMENT PIPE SHALL BE RESTRAINED WITH AN APPROVED METHOD FOR ENTIRE LENGTH OF THE ENCASEMENT PIPE PLUS 10 FEET ON EACH SIDE.
2. FOR A PIPE 20 FEET IN LENGTH, A MINIMUM OF 4 SPACERS ARE REQUIRED. FOR A PIPE 13 FEET IN LENGTH, A MINIMUM OF 3 SPACERS ARE REQUIRED.
3. FOR ENCASED PIPE LOCATED IN PROXIMITY TO SANITARY SEWERS, SPACERS SHALL CONFORM TO TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290, SUBCHAPTER D.
4. AT ANY CREEK CROSSING OR DRAINAGE DITCH THE PIPE SHALL BE STEEL ENCASED AND HAVE A MINIMUM OF 3 FEET OF COVER FROM THE BOTTOM OF THE CREEK/STREAM.
5. SEE ENCASEMENT DETAIL WITH ENCASEMENT SPACER DETAIL W-6.
6. ANNULAR SPACE TO BE FILLED WITH SAND-CEMENT SLURRY.
7. MINIMUM DEPTH BETWEEN CASING PIPE AND BOX CULVERTS OR STORM SEWER PIPE IS 2 FEET.

WATER LINE IN ENCASEMENT PIPE			
WATER LINE SIZE (INCHES)	NOM. DIA. STEEL (INCHES)	ENCASEMENT PIPE THICKNESS (INCHES)	PIPE WEIGHT (LBS./FT.)
6	18	0.375	70.59
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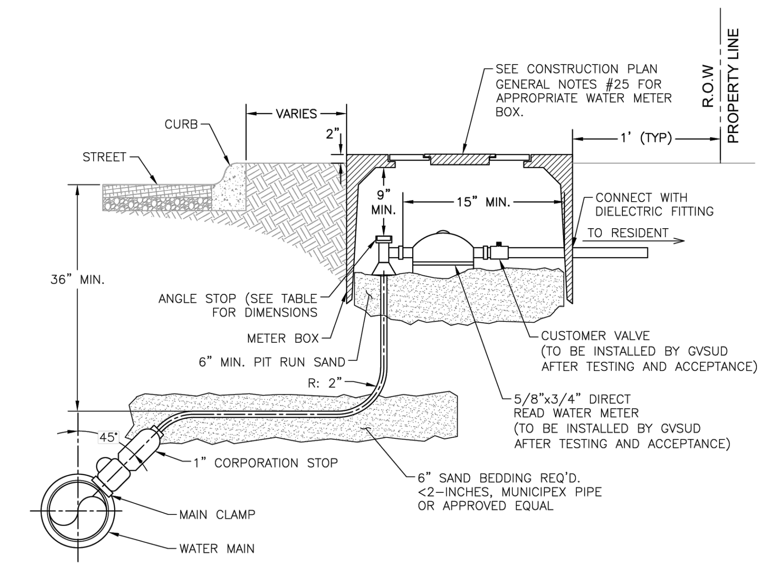
16	30	0.375	118.65
20	36	0.438	166.19
24	42	0.438	194.02
30	48	0.50	259.02
36	54	0.50	291.07

GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
INSTALLATION OF PIPE IN STEEL ENCASEMENT UNDER STREAMS / STORM SEWERS
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-8

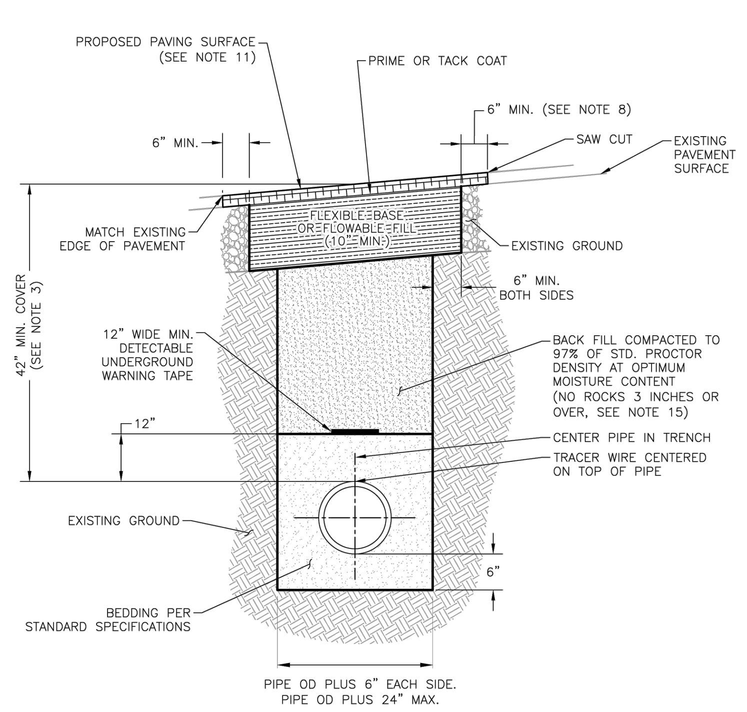


MAIN SIZE	METER SIZE	MAIN SADDLE	CORPORATION	ANGLE STOP
<12"	5/8" OR 3/4"	S-91804 IP	H-15028 IP 1"	B-24258N: 1"x 3/4"
<12"	1"	S-91804 IP	H-15028 IP 1"	B-24258N: 1"X1"

NOTES:

1. FITTINGS SHALL BE MUELLER OR APPROVED EQUAL.
2. A TRACER WIRE SHALL BE INSTALLED ON THE SERVICE LINE TAPED AT 10-INCH INCREMENTS.

GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
STANDARD SERVICE CONNECTION
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-23

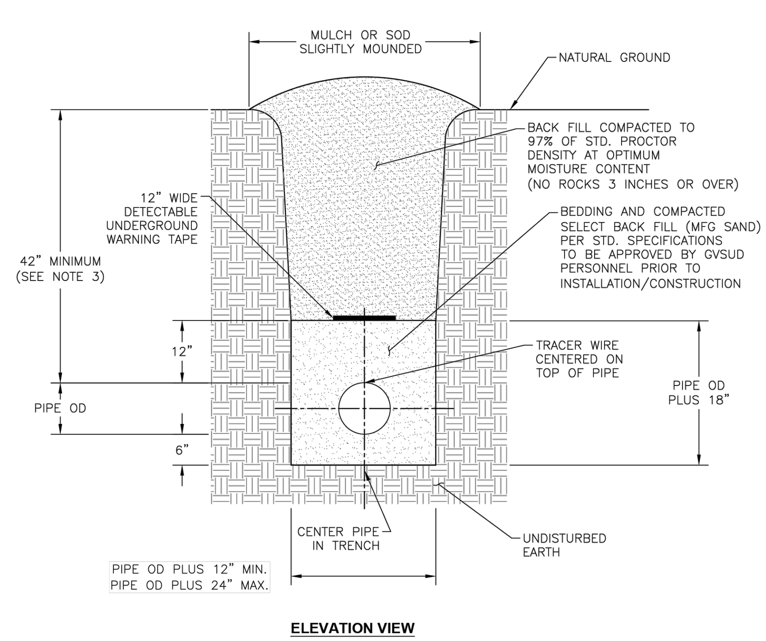


GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
TRENCH DETAIL FOR PAVED AREAS (I OF 2)
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-1

NOTES:

1. ALL WASTEWATER PVC PIPING SHALL BE GREEN IN COLOR. NO WATER DESIGNATED PIPE SHALL BE USED IN WASTEWATER WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
2. ALL WATER PIPING SHALL HAVE A MINIMUM PRESSURE CLASS OF 235 PSI WATER PVC PIPING SHALL BE BLUE IN COLOR.
3. ALL WATER LINES AND WASTEWATER FORCEMAIN SHALL HAVE 42 INCH MINIMUM COVER AND 72 INCH MAXIMUM COVER. WASTEWATER GRAVITY LINES SHALL HAVE 42 INCH MINIMUM COVER AND 15 FOOT MAXIMUM COVER.
4. GENERAL CONTRACTOR SHALL CONTACT THE APPROPRIATE STREET OWNER AND PROCESS, POST FISCAL SURETY, AND HAVE STREET CUT PERMIT ISSUED IN THEIR NAME.
5. CONTRACTOR TO REPAIR PAVED AREA TO STREET OWNER'S ROAD STANDARDS FOR ALL DISTURBED AREA. GREEN VALLEY SPECIAL UTILITY DISTRICT PAYS FOR QUANTITY OF REPAIR SHOWN IN DETAIL.
6. CONTRACTOR SHALL NOT EXCEED THE MAXIMUM TRENCH ALLOWED AS INDICATED IN THE PLANS AND SPECIFICATIONS.
7. THE EXISTING PAVED SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12 INCHES WIDER THAN UNDISTURBED SIDES OF THE TRENCH AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
8. ANY CONCRETE PAVING SHALL BE CUT 6 INCHES WIDER THAN UNDISTURBED SIDES OF EXCAVATION.
9. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH TEMPORARY COLD MIX ASPHALT CONCRETE OR TEMPORARY HOT MIXED ASPHALT CONCRETE. TEMPORARY MIX SHALL BE PLACED OVER FLEXIBLE BASE.
10. FLEXIBLE BASE SHALL BE REPLACED IN KIND WITH BASE AND PAVEMENT THICKNESS WITH BASE EQUAL TO EXISTING BASE THICKNESS PLUS 3 INCHES, BUT IN NO CASE LESS THAN 10 INCHES.
11. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH A MINIMUM OF 2 INCHES HOT MIXED ASPHALT CONCRETE AND A BASE OF 10 INCHES OR A THICKNESS MATCHING EXISTING, WHICHEVER IS GREATER.
12. TACK COAT ALL EXPOSED EDGES AND SURFACES.
13. TYPE AND THICKNESS OF PROPOSED PAVING SURFACE SHALL BE AS FOLLOWS:
    - TWO COURSE SURFACE TREATMENT: SHALL MATCH EXISTING SURFACE AND SHALL BE IN ACCORDANCE WITH SPECIFICATION 02770.
    - ASPHALT PAVING: SHALL BE IN ACCORDANCE WITH SPECIFICATION 02740. HOT MIXED ASPHALT CONCRETE TYPE 'D' SHALL BE USED FOR LIFT THICKNESS UP TO 2 INCHES, AND TYPE 'C' FOR LIFT THICKNESS OVER 2 INCHES AND UP TO 3 INCHES. LIFT THICKNESS SHALL NOT BE MORE THAN 3 INCHES.
14. DETECTABLE UNDERGROUND WARNING TAPE SHALL BE PLACED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND ABOVE BEDDING, IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE DETECTABLE UNDERGROUND WARNING TAPE SHALL CONFORM TO THE SPECIFICATIONS AND COLOR CODED IN ACCORDANCE WITH THE AMERICAN PUBLIC WORKS ASSOCIATION UNIFORM COLOR CODE.
15. PIPE BEDDING SHALL BE PLACED BEFORE PIPING IS LAID, UP TO BOTTOM OF PIPE, AND COMPACTED TO 97% STANDARD PROCTOR DENSITY.
16. PLACE PIPE BEDDING IN 12 INCH LIFTS AFTER PIPE IS LAID TO 12 INCHES ABOVE THE PIPE.
17. SELECT BACKFILL MATERIAL PLACED TO REQUIRED HEIGHT IN 6 INCH LIFTS.

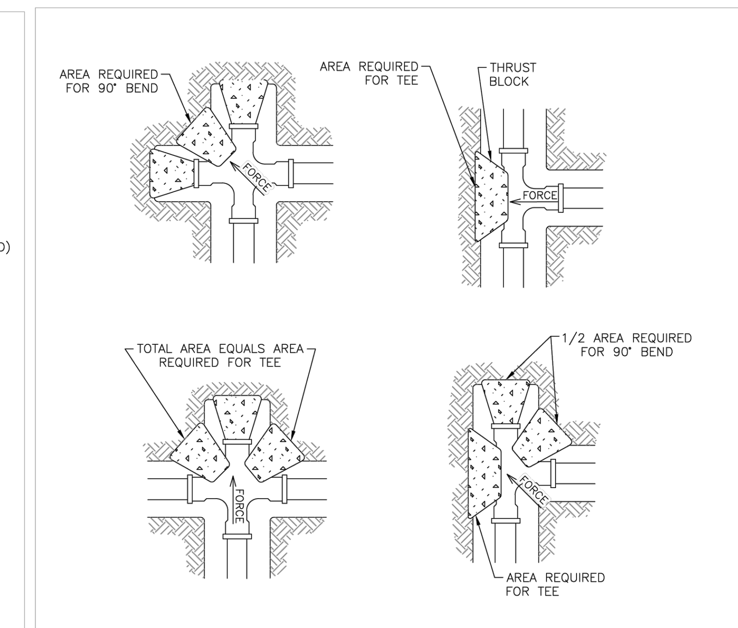
GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
TRENCH DETAIL FOR PAVED AREAS (2 OF 2)
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-1



NOTES:

1. ALL WASTEWATER PVC PIPING SHALL BE GREEN IN COLOR. NO WATER DESIGNATED PIPE WILL BE USED IN WASTEWATER.
2. ALL WATER PIPING SHALL HAVE A MINIMUM PRESSURE CLASS OF 235 PSI WATER PVC PIPING SHALL BE COLOR CODED BLUE.
3. ALL WATER LINES AND WASTEWATER FORCEMAIN SHALL HAVE 42 INCHES MINIMUM COVER AND 72 INCHES MAXIMUM COVER. WASTEWATER GRAVITY LINES SHALL HAVE 42 INCHES MINIMUM COVER AND 15 FEET MAXIMUM COVER.
4. CONTRACTOR SHALL NOT EXCEED THE MAXIMUM TRENCH ALLOWED AS INDICATED IN THE PLANS AND SPECIFICATIONS.
5. DETECTABLE UNDERGROUND WARNING TAPE SHALL BE PLACED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND ABOVE BEDDING, IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. THE TAPE SHALL CONFORM TO THE SPECIFICATIONS AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.
6. PIPE BEDDING PLACED BEFORE PIPING IS LAID UP TO BOTTOM OF PIPE COMPACTED TO 95% AASHTO DENSITY.
7. PLACE IN 12 INCH LIFTS AFTER PIPE IS LAID TO 12 INCHES ABOVE THE PIPE.
8. SELECT BACKFILL MATERIAL PLACED TO REQUIRED HEIGHT IN 6 INCH LIFTS.

GREEN VALLEY SPECIAL UTILITY DISTRICT
STANDARD DETAILS
TRENCH DETAIL FOR NON-PAVED AREAS
REVISED: JANUARY 2024
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
DETAIL NO. W-3

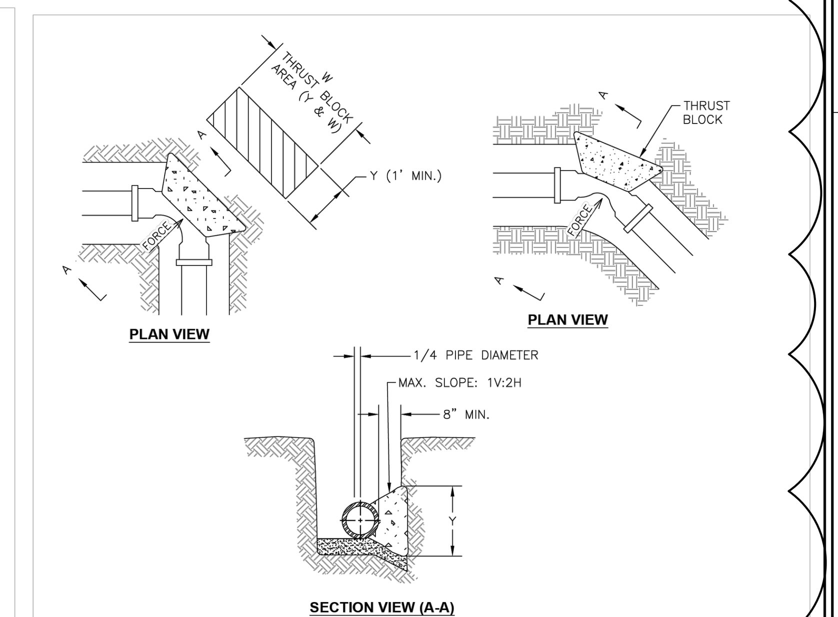


MINIMUM THRUST BLOCK AREA REQUIRED (Y AND W)		
PIPE SIZE	WATER PIPE: TEE, DEAD END, 90° BEND	WATER PIPE: 45° AND 22.5° BENDS
4" & LESS	3 SQ. FEET	3 SQ. FEET
6"	4 SQ. FEET	3 SQ. FEET
8"	6 SQ. FEET	3 SQ. FEET
10"	9 SQ. FEET	5 SQ. FEET
12"	13 SQ. FEET	7 SQ. FEET
16"	23 SQ. FEET	12 SQ. FEET
18"	29 SQ. FEET	15 SQ. FEET

NOTES:

1. TABLE IS BASED ON SOILS WITH A MINIMUM BEARING CAPACITY OF 3,000 PSF. IF CONDITIONS ARE FOUND TO INDICATE SOIL BEARING IS LESS, THE AREAS SHALL BE INCREASED ACCORDINGLY.
2. AREAS FOR PIPE LARGER THAN 18 INCHES SHALL BE RESTRAINED.
3. THRUST BLOCKS SHALL EXTEND TO UNDISTURBED GROUND. CONCRETE SHALL BE CLASS "C" (MIN. 2,500 PSI).
4. FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT WITH A MINIMUM PRESSURE RATING OF 250 PSI AND SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA A21.10/C110 OR A21.53/C153.

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



MINIMUM THRUST BLOCK AREA REQUIRED (Y AND W)		
PIPE SIZE	WATER PIPE: TEE, DEAD END, 90° BEND	WATER PIPE: 45° AND 22.5° BENDS
4" & LESS	3 SQ. FEET	3 SQ. FEET
6"	4 SQ. FEET	3 SQ. FEET
8"	6 SQ. FEET	3 SQ. FEET
10"	9 SQ. FEET	5 SQ. FEET
12"	13 SQ. FEET	7 SQ. FEET
16"	23 SQ. FEET	12 SQ. FEET
18"	29 SQ. FEET	15 SQ. FEET

NOTES:

1. TABLE IS BASED ON SOILS WITH A MINIMUM BEARING CAPACITY OF 3,000 PSF. IF CONDITIONS ARE FOUND TO INDICATE SOIL BEARING IS LESS, THE AREAS SHALL BE INCREASED ACCORDINGLY.
2. AREAS FOR PIPE LARGER THAN 18 INCHES SHALL BE RESTRAINED.
3. THRUST BLOCKS SHALL EXTEND TO UNDISTURBED GROUND. CONCRETE SHALL BE CLASS "C" (MIN. 2,500 PSI).
4. FITTINGS SHALL BE DUCTILE IRON MECHANICAL JOINT WITH A MINIMUM PRESSURE RATING OF 250 PSI AND SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AWWA A21.10/C110 OR A21.53/C153.

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

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER
P.E.

06/19/2023

WATER DETAILS (1 OF 2)

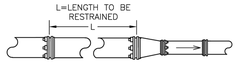
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
6	GVSUD DETAILS UPDATED	02/06/2025

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C7.05

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\CDs\031.097_DETL_UTIL.dwg User: reissd Feb 07, 2025 - 10:37am



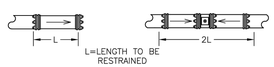
RESTRAINED LENGTH FOR REDUCERS

PIPE SIZE (INCHES)	SMALL SIZE (INCHES)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 PSI
6	4	30
8	4	55
8	6	32
12	4	95
12	6	80
12	8	58
16	4	131
16	6	120
16	8	104
16	12	60
24	16	110

NOTES:

1. RESTRAINED LENGTH CALCULATIONS FOR P.V.C PIPE BEDDED IN COMPACTED GRANULAR MATERIAL EXTENDING TO THE TOP OF THE PIPE. NATIVE SOIL MATERIAL IS ASSUMED TO BE INORGANIC CLAY OF HIGH PLASTICITY. DEPTH OF BURY IS ASSUMED TO BE 4 FEET.
2. THESE CALCULATIONS ARE PROVIDED FOR REFERENCE. THE RESTRAINED LENGTH SHALL BE DESIGNED BASED UPON THE CONDITIONS ENCOUNTERED DURING INSTALLATION.
3. CONTRACTOR SHALL RESTRAIN ALL JOINTS WITHIN THE REQUIRED RESTRAINT DISTANCE PLUS THE NEXT JOINT OUTSIDE THE REQUIRED RESTRAINT DISTANCE.

GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	REDUCER RESTRAINED LENGTH DESIGN	
REVISED: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W-19



RESTRAINED LENGTH FOR DEAD ENDS/INLINE VALVES

PIPE SIZE (INCHES)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 PSI
4	42
6	59
8	77
12	109
16	142
24	202

NOTES:

1. RESTRAINED LENGTH CALCULATIONS FOR P.V.C PIPE BEDDED IN COMPACTED GRANULAR MATERIAL EXTENDING TO THE TOP OF THE PIPE. NATIVE SOIL MATERIAL IS ASSUMED TO BE INORGANIC CLAY OF HIGH PLASTICITY. DEPTH OF BURY IS ASSUMED TO BE 4 FEET.
2. THESE CALCULATIONS ARE PROVIDED FOR REFERENCE. THE RESTRAINED LENGTH SHALL BE DESIGNED BASED UPON THE CONDITIONS ENCOUNTERED DURING INSTALLATION.
3. CONTRACTOR SHALL RESTRAIN ALL JOINTS WITHIN THE REQUIRED RESTRAINT DISTANCE PLUS THE NEXT JOINT OUTSIDE THE REQUIRED RESTRAINT DISTANCE.

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

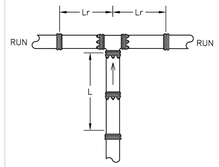
RESTRAINED LENGTH FOR BENDS

PIPE SIZE (INCHES)	BEND ANGLE (DEG)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 PSI
6	90	23
6	45	9
6	22.5	5
6	11.25	2
8	90	30
8	45	12
8	22.5	6
8	11.25	3
12	90	43
12	45	18
12	22.5	8
12	11.25	4
16	90	63
16	45	26
16	22.5	13
16	11.25	7
24	90	85
24	45	35
24	22.5	17
24	11.25	9

NOTES:

1. RESTRAINED LENGTH CALCULATIONS FOR P.V.C PIPE BEDDED IN COMPACTED GRANULAR MATERIAL EXTENDING TO THE TOP OF THE PIPE. NATIVE SOIL MATERIAL IS ASSUMED TO BE INORGANIC CLAY OF HIGH PLASTICITY. DEPTH OF BURY IS ASSUMED TO BE 4 FEET.
2. THESE CALCULATIONS ARE PROVIDED FOR REFERENCE. THE RESTRAINED LENGTH SHALL BE DESIGNED BASED UPON THE CONDITIONS ENCOUNTERED DURING INSTALLATION.
3. CONTRACTOR SHALL RESTRAIN ALL JOINTS WITHIN THE REQUIRED RESTRAINT DISTANCE PLUS THE NEXT JOINT OUTSIDE THE REQUIRED RESTRAINT DISTANCE.

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



Lr=LENGTH OF PIPE ALONG THE RUN FREE OF JOINTS.
L=LENGTH TO BE RESTRAINED

RESTRAINED LENGTH FOR TEES

PIPE SIZE (INCHES)	BRANCH SIZE (INCHES)	LENGTH OF RUN (FEET)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 PSI
6	4	0	42
6	4	5	7
6	4	10	1
6	6	0	59
6	6	5	35
6	6	10	11
8	4	0	42
8	4	5	1
8	6	0	59
8	6	5	28
8	6	10	1
8	8	0	77
8	8	5	53
8	8	10	30
8	8	15	6
12	4	0	42
12	4	5	1
12	6	0	59
12	6	5	13
12	6	10	1
12	8	0	77
12	8	5	42
12	8	10	7
12	8	15	1
12	12	0	109
12	12	5	86
12	12	10	63
12	12	15	39
16	4	0	42
16	4	5	1
16	6	0	59
16	6	5	1
16	8	0	78
16	8	5	39
16	8	10	1
16	12	0	110
16	12	5	84
16	12	10	59
16	12	15	33
16	12	20	7
16	16	0	142
16	16	5	123
16	16	10	104
16	16	15	85
16	16	20	65
24	24	5	169
24	24	10	136
24	24	15	103
24	24	20	70

NOTES:

1. RESTRAINED LENGTH CALCULATIONS FOR P.V.C PIPE BEDDED IN COMPACTED GRANULAR MATERIAL EXTENDING TO THE TOP OF THE PIPE. NATIVE SOIL MATERIAL IS ASSUMED TO BE INORGANIC CLAY OF HIGH PLASTICITY. DEPTH OF BURY IS ASSUMED TO BE 4 FEET.
2. THESE CALCULATIONS ARE PROVIDED FOR REFERENCE. THE RESTRAINED LENGTH SHALL BE DESIGNED BASED UPON THE CONDITIONS ENCOUNTERED DURING INSTALLATION.
3. CONTRACTOR SHALL RESTRAIN ALL JOINTS WITHIN THE REQUIRED RESTRAINT DISTANCE PLUS THE NEXT JOINT OUTSIDE THE REQUIRED RESTRAINT DISTANCE.

GREEN VALLEY SPECIAL UTILITY DISTRICT STANDARD DETAILS	TEE RESTRAINED LENGTH DESIGN	
REVISED: JANUARY 2024	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	DETAIL NO. W-21

HMT ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

WATER DETAILS (2 OF 2)

WINDING CREEK RANCH UNIT 3

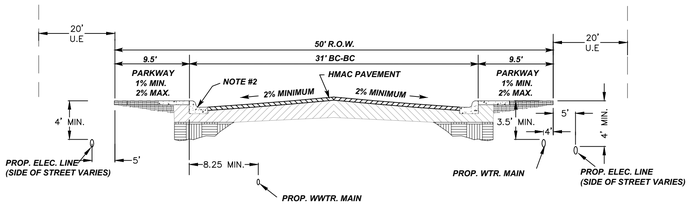
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
6	GVSUD DETAILS UPDATED	02/06/2025

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

SHEET
C7.06

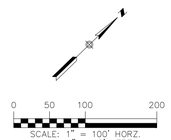
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cbs\031.097_DETL_UTL.dwg User: reisd Feb 07, 2025 - 10:38am



LOCAL STREET UTILITIES (50' R-O-W)
NOT TO SCALE

TRENCH 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 CONTRACT DOCUMENTS. THE CONTRACTORS 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.

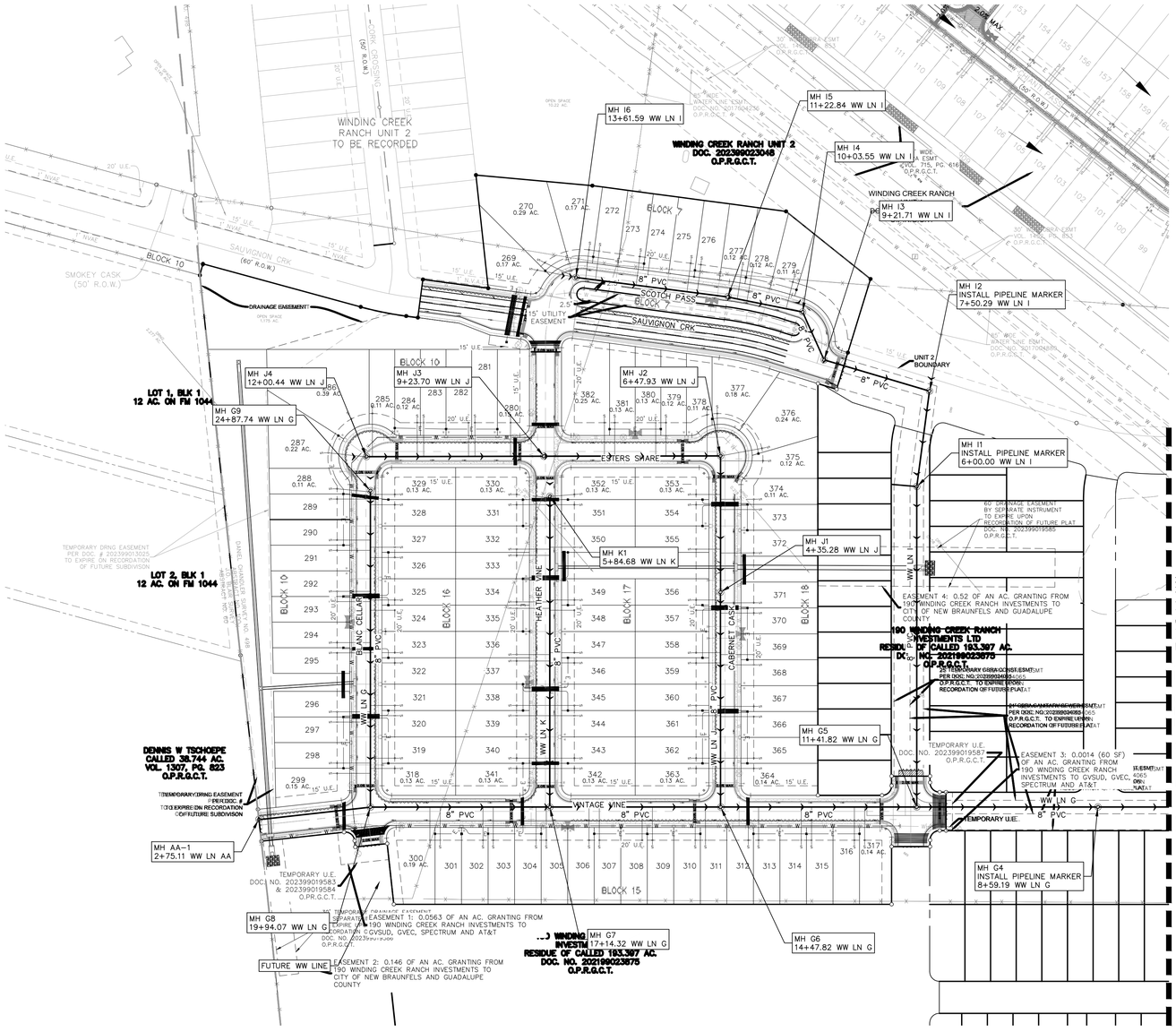


LEGEND

- 700 — EXISTING CONTOURS
- 700 — PROPOSED CONTOURS
- B.L. — BUILDING SETBACK LINE
- U.E. — UTILITY EASEMENT
- D.E. — DRAINAGE EASEMENT
- EXISTING WASTEWATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER SERVICE
- UTILITY CROSSING

UTILITY NOTES:

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.



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") 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.

TRENCHING NOTE

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 TO CITY PRIOR TO UTILITY INSTALLATION.

CONSTRUCTION NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH GBRA STANDARDS AS PUBLISHED AT THE FOLLOWING WEBSITE: HTTP://WWW.GBRA.ORG/PUBLIC/WATERWASTEWATERSERVICES.ASPX
2. COPIES OF EACH CONSTRUCTION SUBMITTAL (SHOP DRAWINGS, PRODUCT DATA, ETC.) SHALL BE PROVIDED FOR GBRA REVIEW AND APPROVAL PRIOR TO FABRICATION. USE CLOUDS, BOXES, ARROWS, ETC., TO CLEARLY MARK ALL PROPOSED OPTIONS AND PART NUMBERS. LIST ANY PROPOSED DEVIATIONS ON THE SUBMITTAL COVER SHEET. ALLOW 21 CALENDAR DAYS FOR REVIEW.
3. ALL WATER AND WASTEWATER INSTALLATIONS MUST BE INSPECTED AND APPROVED BY GBRA PRIOR TO BACKFILLING OR OTHERWISE COVERING THE WORK. THIS INCLUDES CROSSINGS OF WATER AND WASTEWATER BY OTHER UTILITIES. GBRA WILL PERFORM A MAXIMUM OF ONE (1) INSPECTION DAILY FOR ONE (1) HOUR DURATION BETWEEN 8:00 AM AND 5:00 PM EXCLUDING WEEKENDS AND HOLIDAYS. CALL 830-379-5822 TO SCHEDULE INSPECTIONS 48 HOURS ADVANCE NOTICE IS REQUIRED FOR ALL INSPECTIONS).
4. 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. HORIZONTAL OFFSETS SHALL BE 15 FEET MAXIMUM. INSTALL PROPERTY PINS AND STAKES. MARK FINISH GRADE LINES WITH CUT/FILL ON OFFSET STAKES AND PROPERTY STAKES. ALL MARKS SHALL FACE THE PIPELINE. SURVEY STAKING SHALL BE PERFORMED BY THE CONTRACTOR.
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9. ALL PIPING SHALL BE DESIGNED IN A STRAIGHT ALIGNMENT VERTICALLY AND HORIZONTALLY. PIPE CURVATURE AND/OR DEFLECTION ARE NOT ALLOWED.
10. MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL AND 12 INCHES VERTICAL CLEARANCE BETWEEN WATER AND WASTEWATER AND OTHER UTILITIES. SHARED TRENCHES ARE NOT ALLOWED.
11. WATER AND WASTEWATER PIPE LENGTHS SHALL BE CENTERED AT CROSSINGS WITH OTHER UTILITIES, INCLUDING DRY UTILITY SERVICES. BOTH PIPES SHALL BE CENTERED AT WATER AND WASTEWATER CROSSINGS, INCLUDING WASTEWATER SERVICE LATERALS AND FIRE HYDRANT LEADS.
12. WATER AND WASTEWATER PIPING (INCLUDING MAINS, SERVICES, AND LATERALS) SHALL BE SLEEVED IF LOCATED UNDER CONCRETE CHANNELS, BOX CULVERTS, OR MULTIPLE BARREL STORM SEWER CROSSINGS REGARDLESS OF SIZE AND SINGLE BARRELS 30" OR LARGER.
13. VALVE BOXES, EXPOSED PIPING AND VALVES, AND APPURTENANCES SHALL BE PAINTED. PROVIDE PAINTED CURB CUT MARKINGS AT VALVES AND SERVICES.
14. ALL EXPOSED VERTICAL AND HORIZONTAL CONCRETE EDGES SHALL BE FORMED WITH ¾" CHAMFER STRIPS.
15. EXISTING FACILITIES THAT ARE DISTRIBUTED SHALL BE RESTORED AND TESTED TO BE IN FULL COMPLIANCE WITH CURRENT GBRA STANDARDS. THE CONTRACTOR SHALL ADJUST EXISTING WATER AND WASTEWATER FACILITIES TO PROPOSED FINISHED GRADES INCLUDING BUT NOT LIMITED TO MANHOLES, CLEANOUTS, VALVES, HYDRANTS, APPURTENANCES, ETC.
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HMT ENGINEERING & SURVEYING
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NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

OVERALL WASTEWATER (1 OF 2)

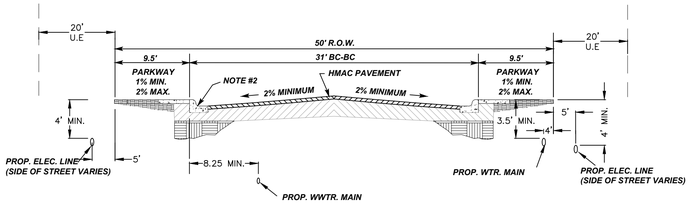
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C8.00

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Civil\031.097_WWTR.dwg User: reissd Feb 07, 2025 - 10:38am



LOCAL STREET UTILITIES (50' R-O-W)

NOT TO SCALE

CONSTRUCTION NOTES:

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UTILITY TRENCH COMPACTION

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TRENCHING NOTE

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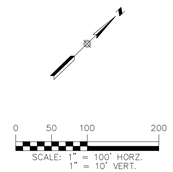

LEGEND

- 700 — EXISTING CONTOURS
- 700 — PROPOSED CONTOURS
- B.L. — BUILDING SETBACK LINE
- U.E. — UTILITY EASEMENT
- D.E. — DRAINAGE EASEMENT
- EXISTING WASTEWATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER SERVICE
- UTILITY CROSSING

UTILITY NOTES:

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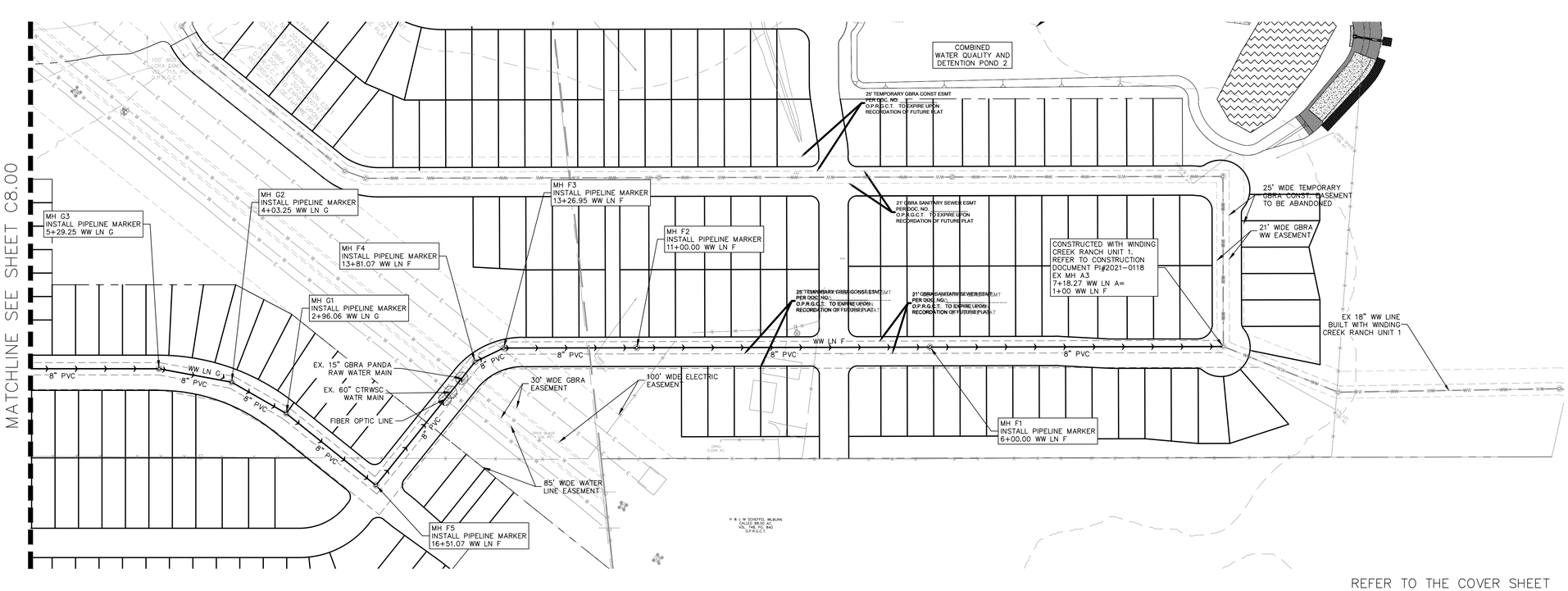

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NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

OVERALL WASTEWATER (2 OF 2)

WINDING CREEK RANCH UNIT 3

NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

SHEET

C8.01

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\CDs\031.097_WWTR.dwg User: reissd Feb 07, 2025 - 10:39am

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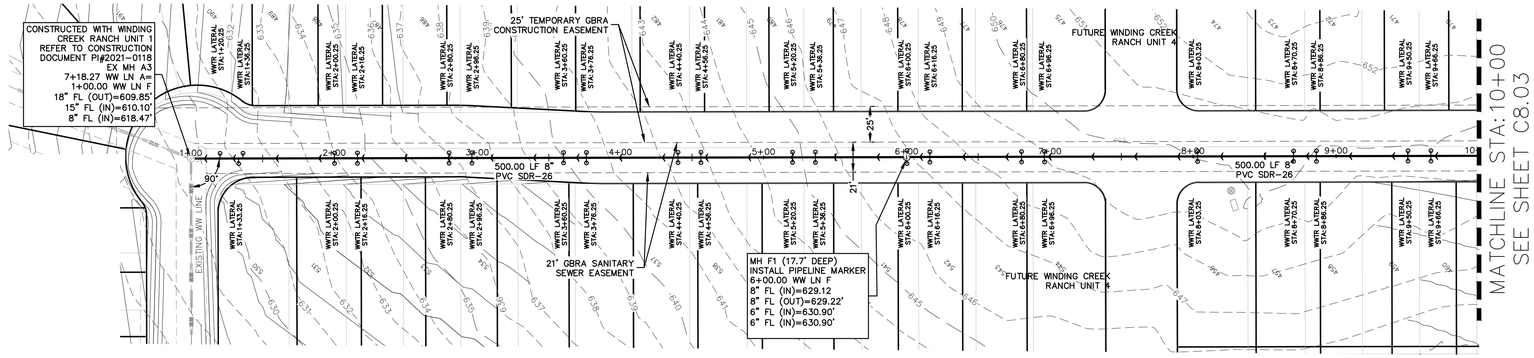
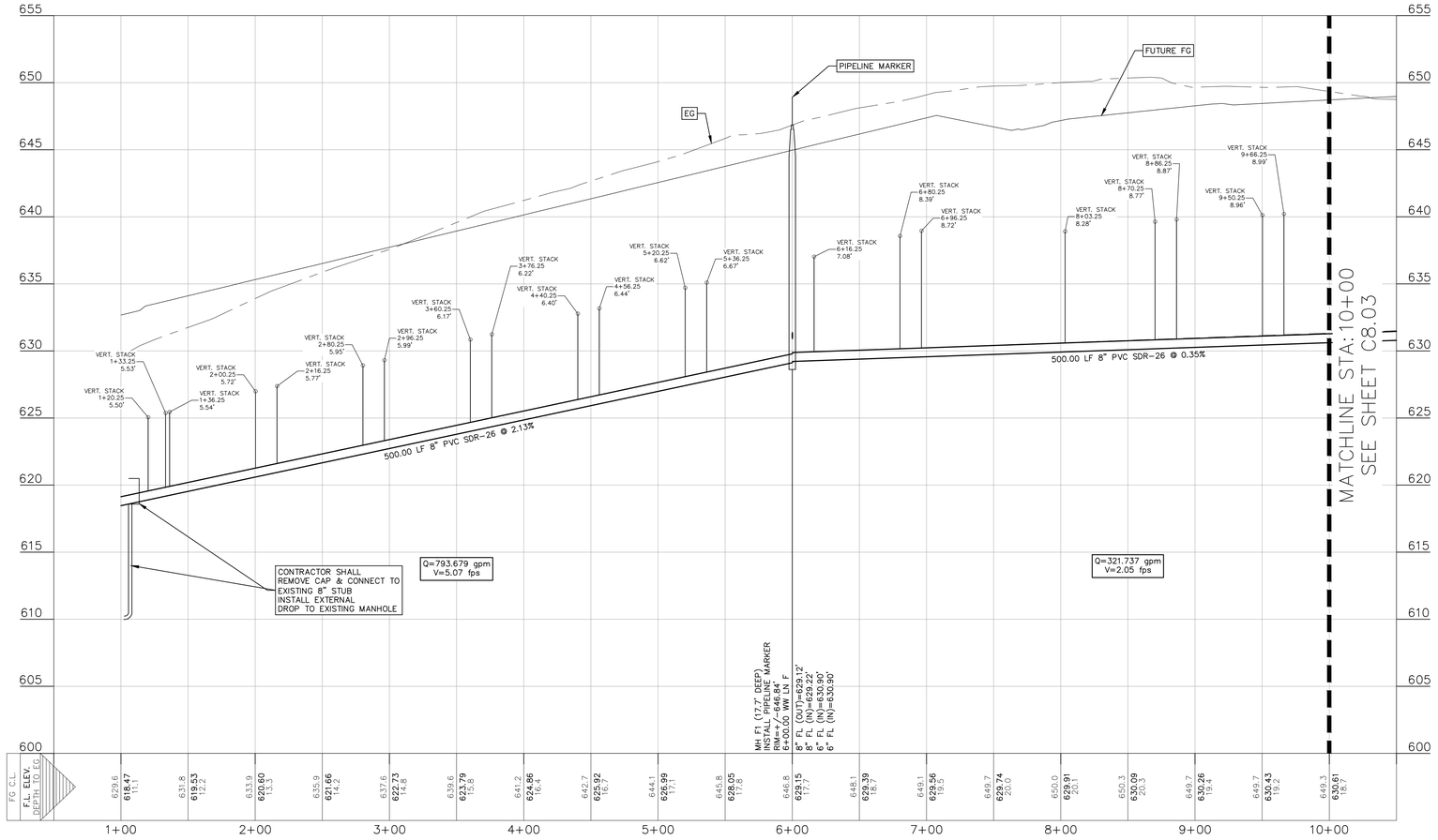
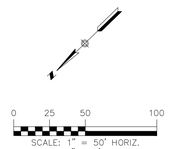
TRENCH EXCAVATION SAFETY PROTECTION

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 CONTRACT DOCUMENTS. THE CONTRACTORS 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.



WW LN F
0+50.01 – 10+50





LEGEND

- 700 — EXISTING CONTOURS
- 700 — BUILDING SETBACK LINE
- U.E. — UTILITY EASEMENT
- D.E. — DRAINAGE EASEMENT
- EXISTING WASTEWATER LINE
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UTILITY NOTES:

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4. CONTRACTOR TO SUBMIT A DEEP TRENCH BENCHING PLAN FOR ENGINEER APPROVAL BENCHING PLAN CONFORM TO OSHA GUIDELINES

CTRWSC UTILITY CROSSING NOTES:

1. CONTRACTOR TO PROVIDE PROTECTION FROM EQUIPMENT AND TRUCKS OVER VR EASEMENT WHICH MEETS HS-20 LOADING CRITERIA. INCLUDE CROSSING LOCATIONS AND PROTECTION MEASURES IN WORK PLAN.
2. NO MECHANICAL EXCAVATION WITHIN 10 FEET FROM CENTERLINE OF VR PIPELINE TO EITHER SIDE OF THE LINE.
3. CRTWSC WILL DESIGNATE A FIELD REPRESENTATIVE FOR FIELD OBSERVATION DURING ANY CROSSING OF THE VR LINE. CONTRACTOR WILL COORDINATE WITH CTRWSC'S DESIGNATED REPRESENTATIVE 3 BUSINESS DAYS BEFORE CROSSING THE VR PIPELINE. CONTRACTOR WILL MAKE ARRANGEMENTS WITH CTRWSC TO PAY FOR OBSERVER TIME INCLUDING TRAVEL TIME TO THE SITE.
4. IF CROSSING OVER THE VR PIPELINE, THE CONTRACTOR WILL HAVE FIELD VERIFIED BOTH THE FIBER OPTIC LINE AND WATER LINE.
5. FOR CROSSING UNDER THE VR PIPELINE, THE PREFERENCE IS TO USE TRENCHLESS METHODS. TRENCHLESS METHODS STILL REQUIRE AN OBSERVER TO BE ONSITE. 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.
6. IF CROSSING UNDER THE VR PIPELINE USING THE OPEN-CUT METHOD, THE CONTRACTOR MUST GET A WORK PLAN APPROVED IN WRITING BY CTRWSC WHICH AT A MINIMUM INCLUDES HOW THE LINE WILL BE INSTALLED UNDER THE VR PIPELINE. TRENCH BACKFILL NEEDS TO BE FLOWABLE FILL FROM THE BEDDING OF THE NEW UTILITY CROSSING UNDER THE VR PIPELINE UP TO AN ELEVATION THAT IS 70% OF THE VR PIPELINE DIAMETER. WORK WILL NEED TO BE OBSERVED BY THE CTRWSC DESIGNATED REPRESENTATIVE.

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PROFESSIONAL ENGINEER

06/19/2023

WW LN F PLAN & PROFILE (1 OF 2)

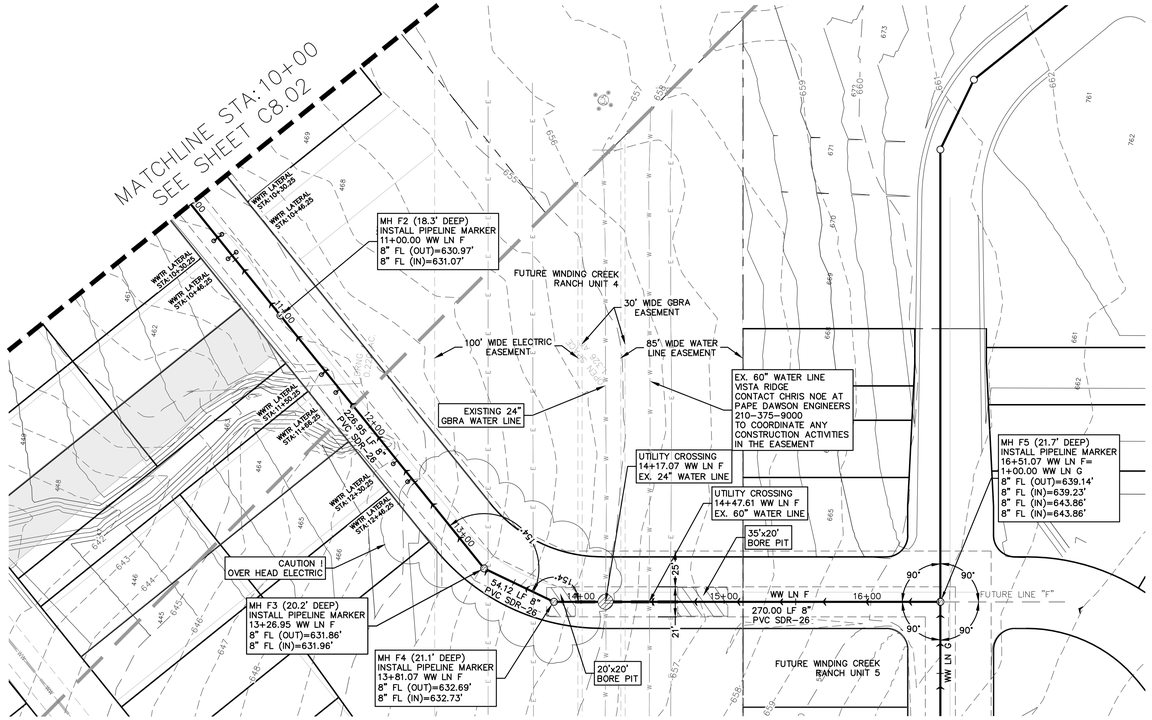
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
1	COMMENTS PER GBRA	05/01/2023

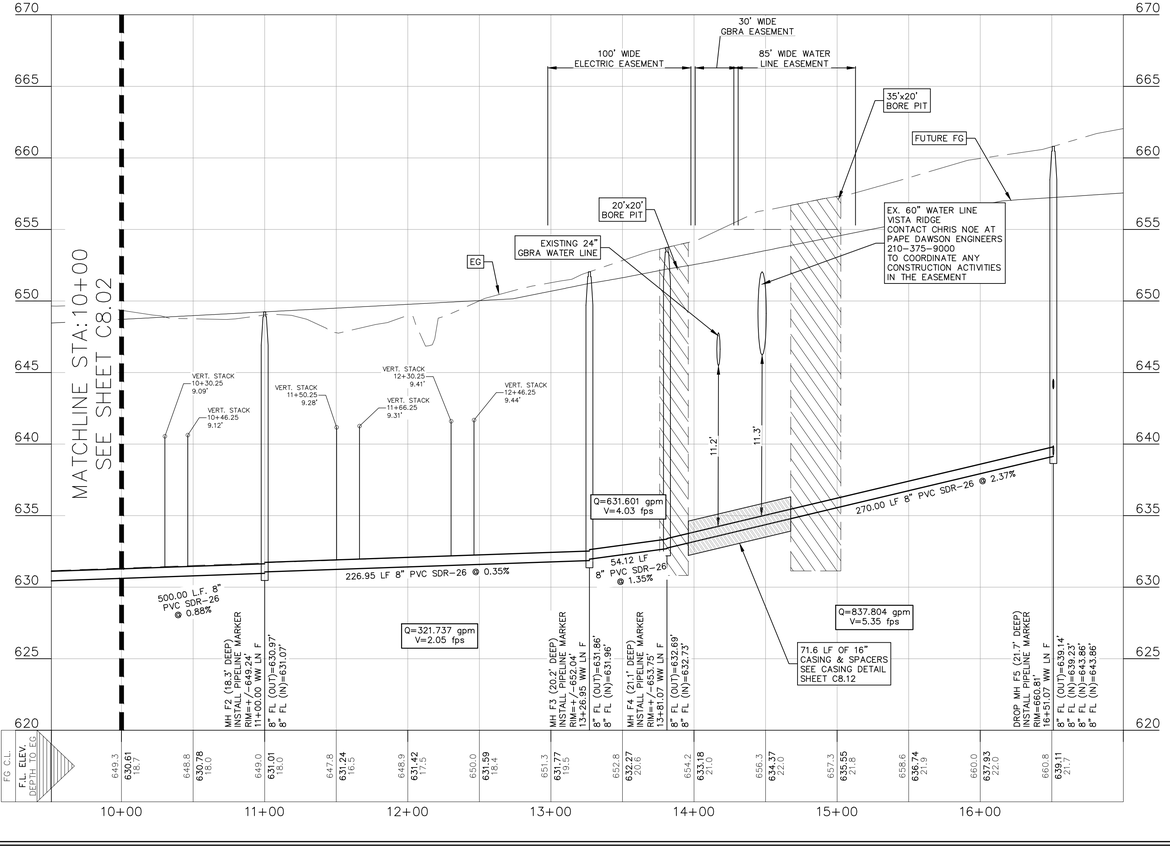
DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

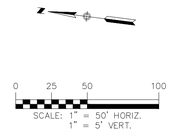
SHEET
C8.02

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Civil\031.097_WWTR P&P.dwg User: reboid Feb 07, 2025 - 10:40am



WW LN F
9+51 – 17+00





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NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

WW LN F PLAN & PROFILE (2 OF 2)

WINDING CREEK RANCH UNIT 3

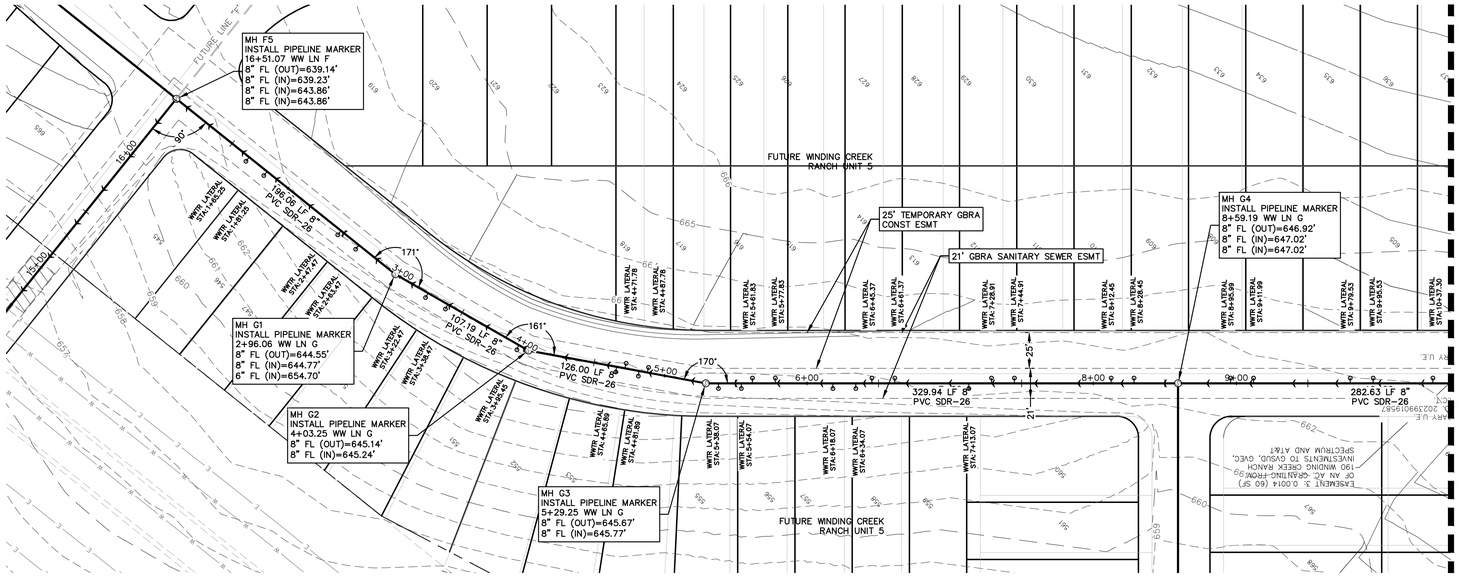
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
1	COMMENTS PER GBRA	05/01/2023

DATE:	APRIL 2023
DRAWN BY:	JAD
DESIGNED BY:	CAT
REVIEWED BY:	CVH
HMT PROJECT NO.:	031.097

SHEET
C8.03

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\CDs\031.097_WWTR P&P.dwg User: rossd Feb 07, 2025 - 10:41am



WW LN G
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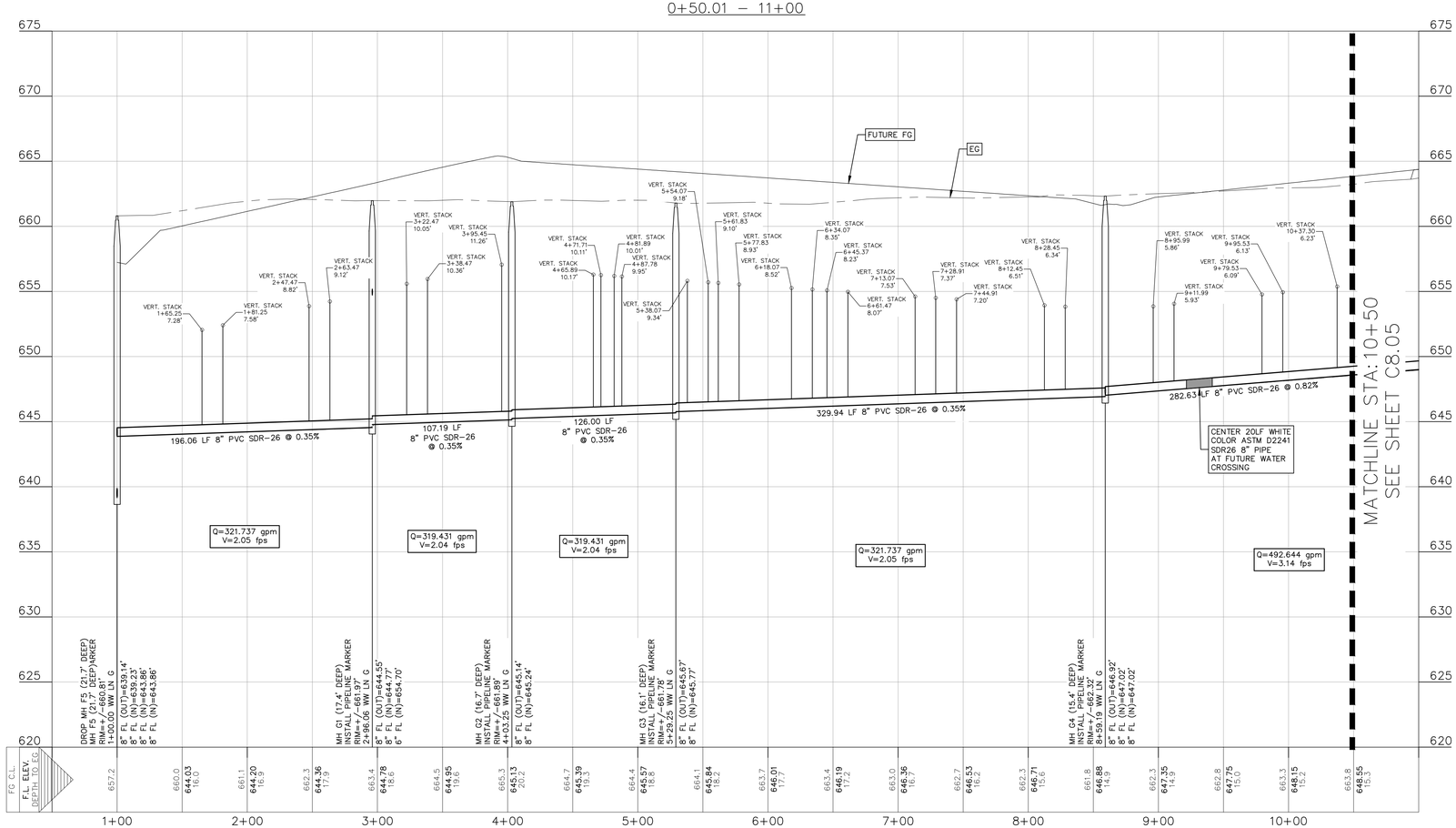

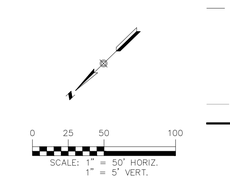

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- 700 — EXISTING CONTOURS
- 700 — BUILDING SETBACK LINE
- U.E. — UTILITY EASEMENT
- D.E. — DRAINAGE EASEMENT
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06/19/2023

WW LN G PLAN & PROFILE (1 OF 3)

WINDING CREEK RANCH UNIT 3

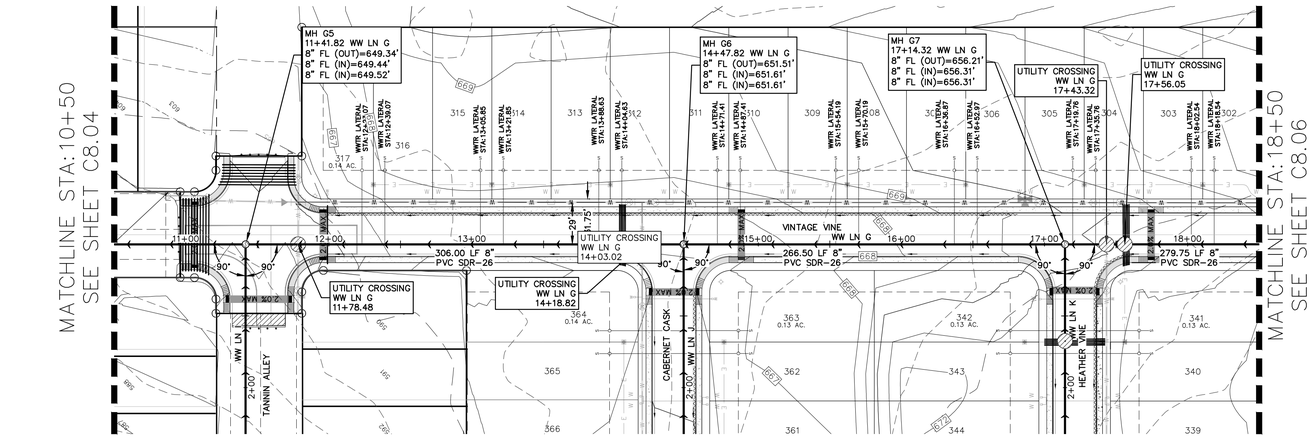
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
1	COMMENTS PER GBRA	05/01/2023

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C8.04

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\CDs\031.097_WWTR P&P.dwg User: rossd Feb 07, 2025 - 10:41am



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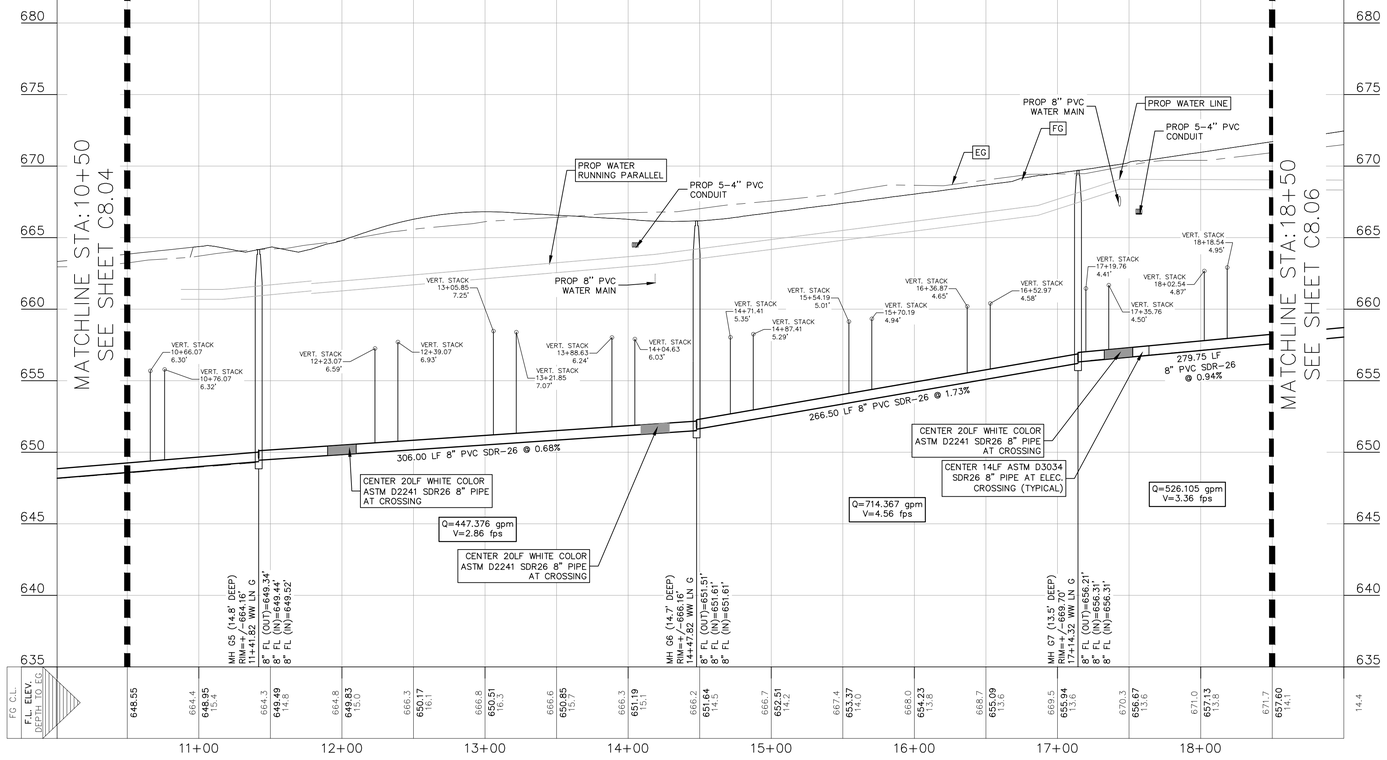

LEGEND

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700	
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U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
	EXISTING WASTEWATER LINE
	PROPOSED WASTEWATER LINE
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0 25 50 100
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

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WW LN G PLAN & PROFILE (2 OF 3)

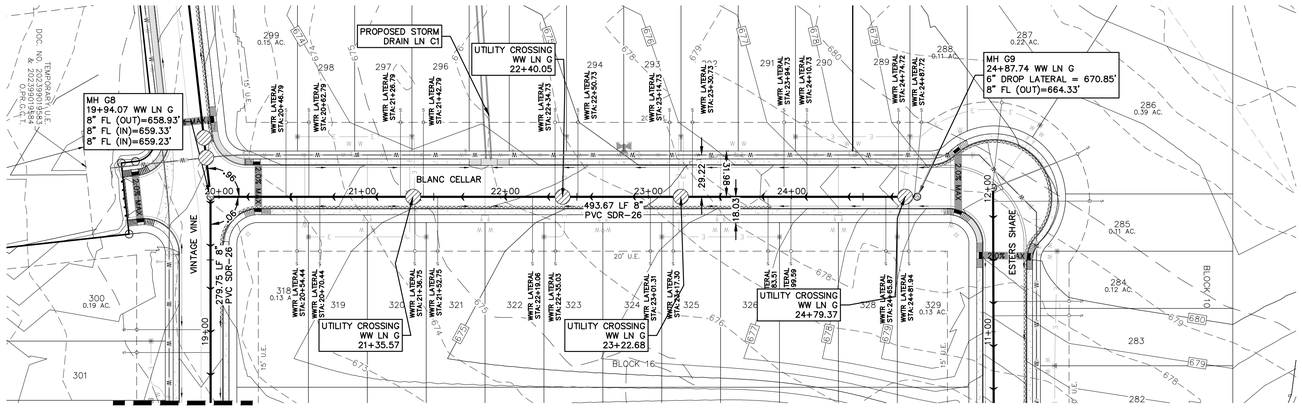
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

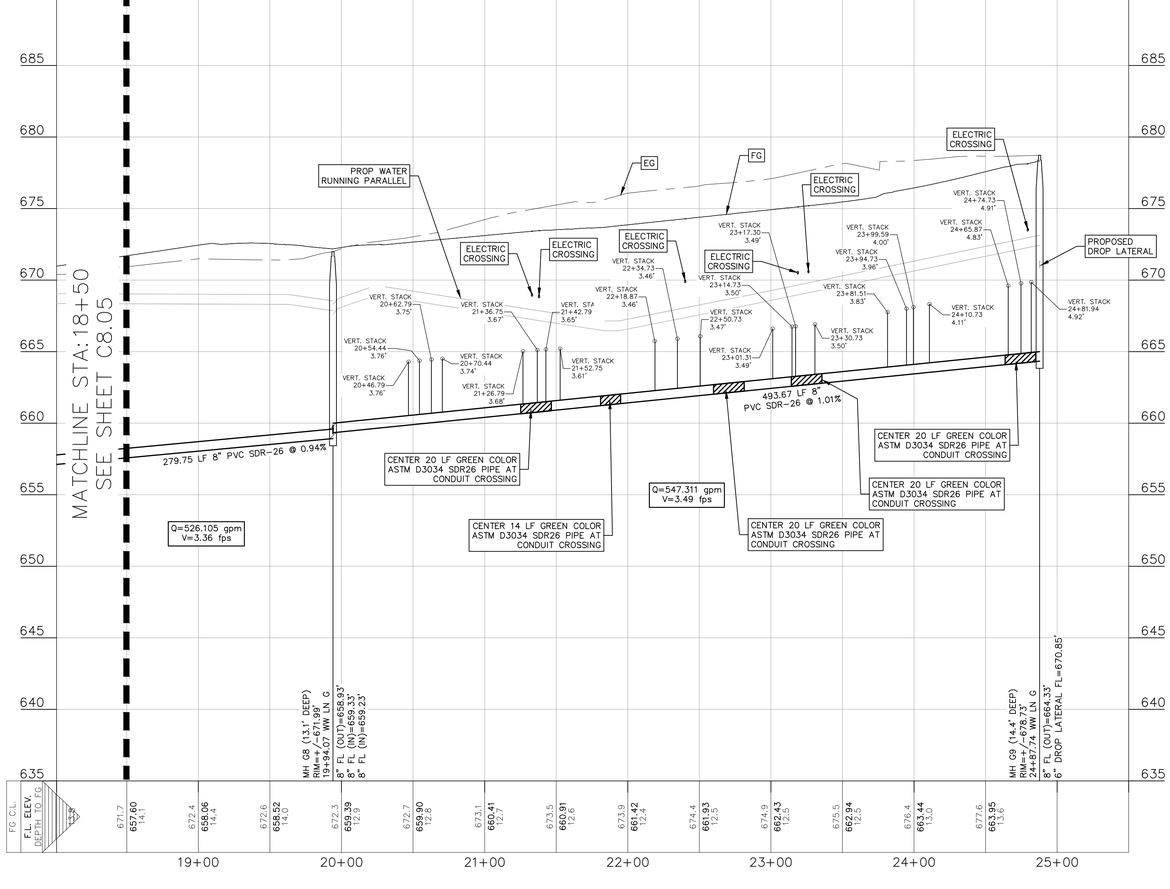
NO.	REVISION DESCRIPTION	REVISION DATE
1	COMMENTS PER GBRA	05/01/2023

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C8.05

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\CDs\031.097_WWTR P&P.dwg User: reissd Feb 07, 2025 - 10:41am





LEGEND

- 700 — EXISTING CONTOURS
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TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

WW LN G PLAN & PROFILE (3 OF 3)

WINDING CREEK RANCH UNIT 3

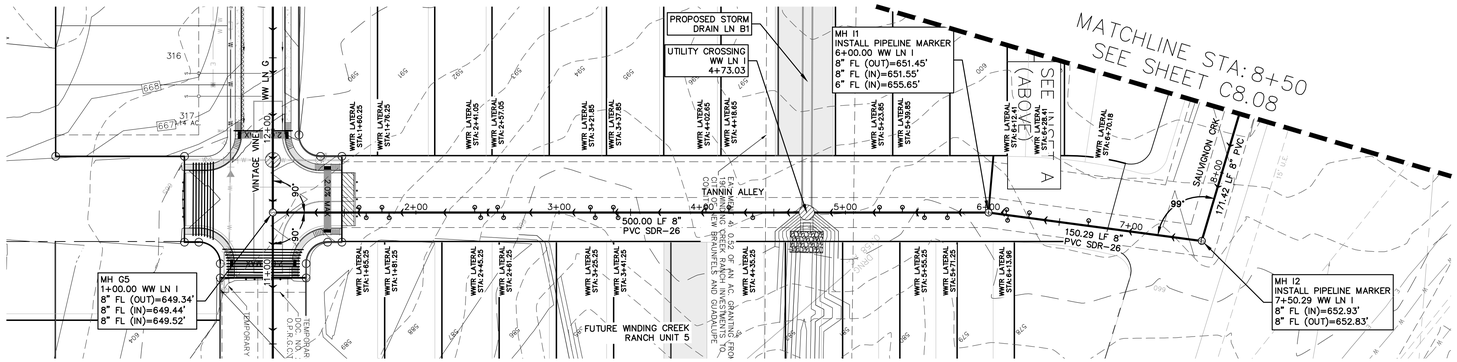
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
1	COMMENTS PER CBRA	05/01/2023

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C8.06

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\C0s\031.097_WWTR P&P.dwg User: reissd Feb 07, 2025 - 10:42am



LEGEND

- EXISTING CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- EXISTING WASTEWATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER SERVICE
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WW LN I
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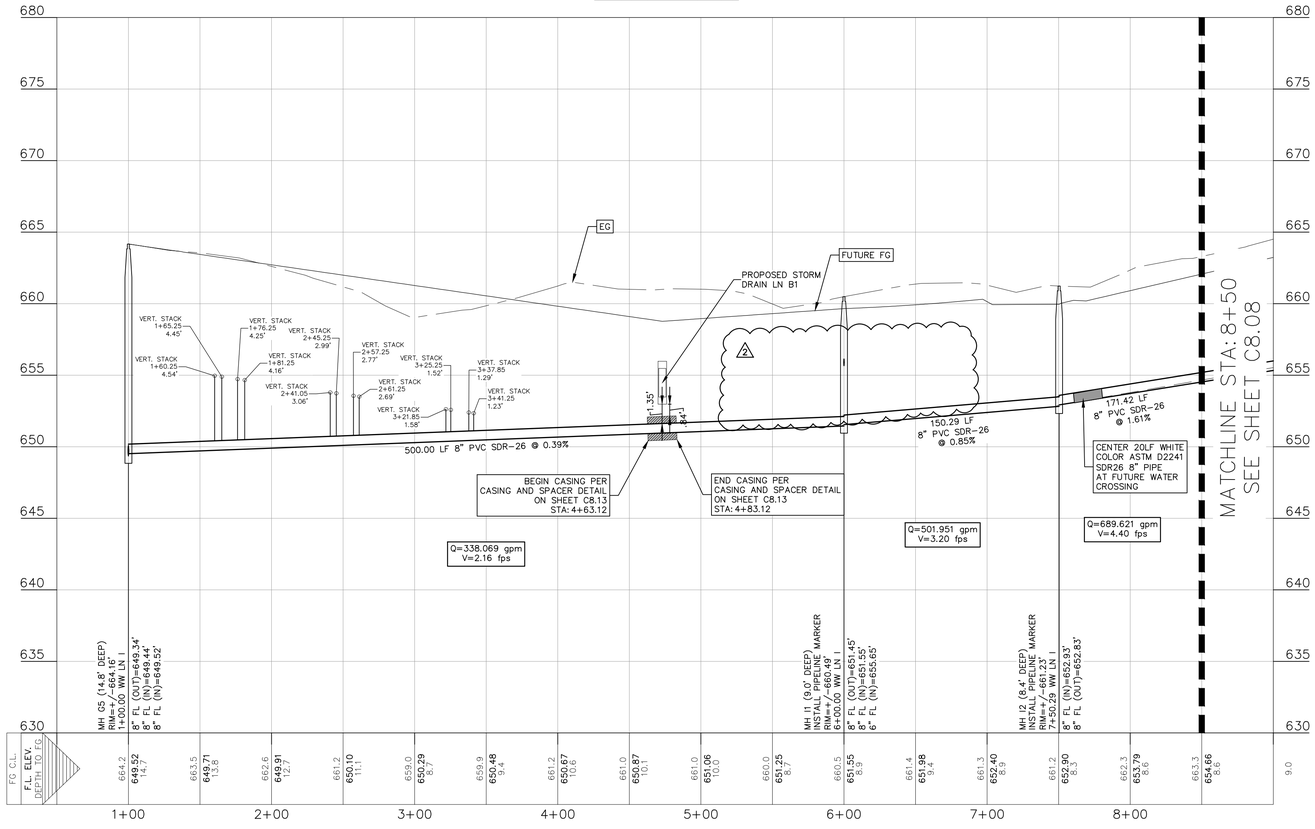

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STATE OF TEXAS
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06/19/2023

WW LN I PLAN & PROFILE (1 OF 2)

WINDING CREEK RANCH UNIT 3

NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
1	COMMENTS PER GBRA	05/01/2023
2	REMOVED UNNECESSARY VERTICAL STACKS	07/10/2023

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C8.07

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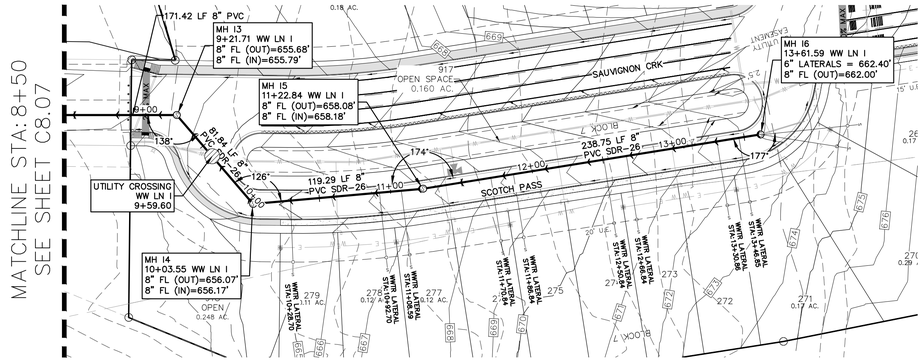

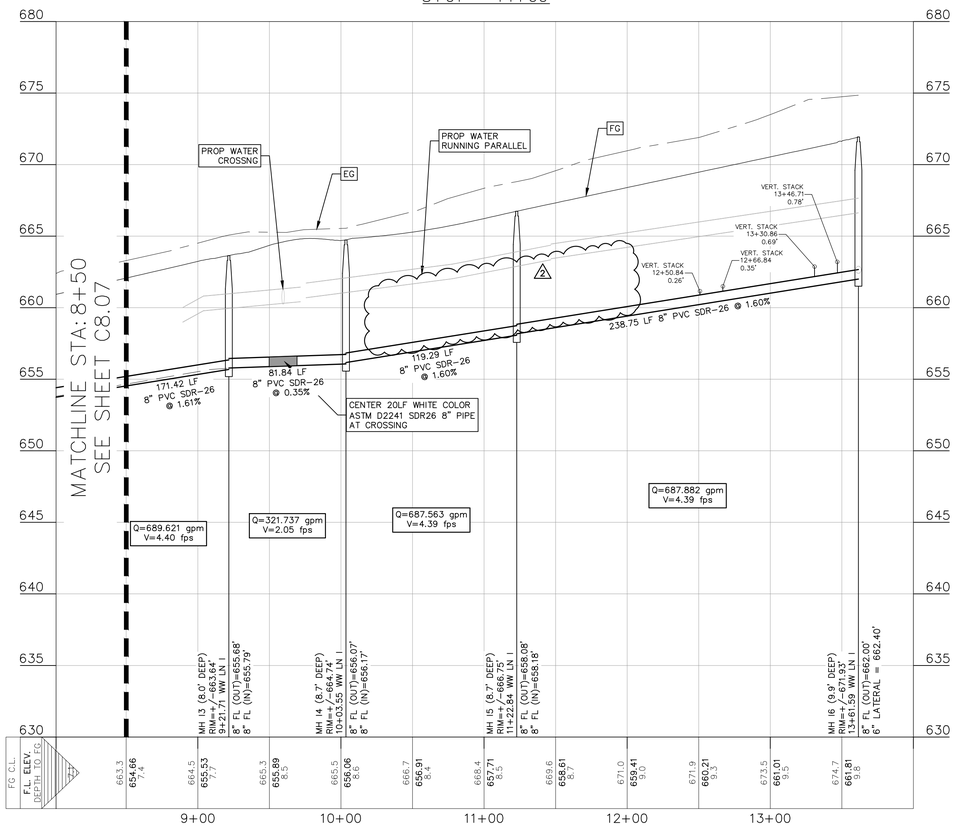

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0 25 50 100
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

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06/19/2023

WW LN I PLAN & PROFILE (2 OF 2)

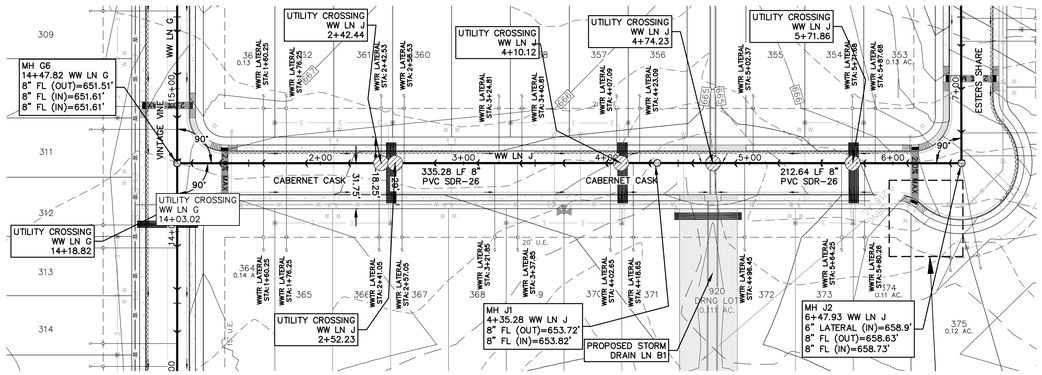
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

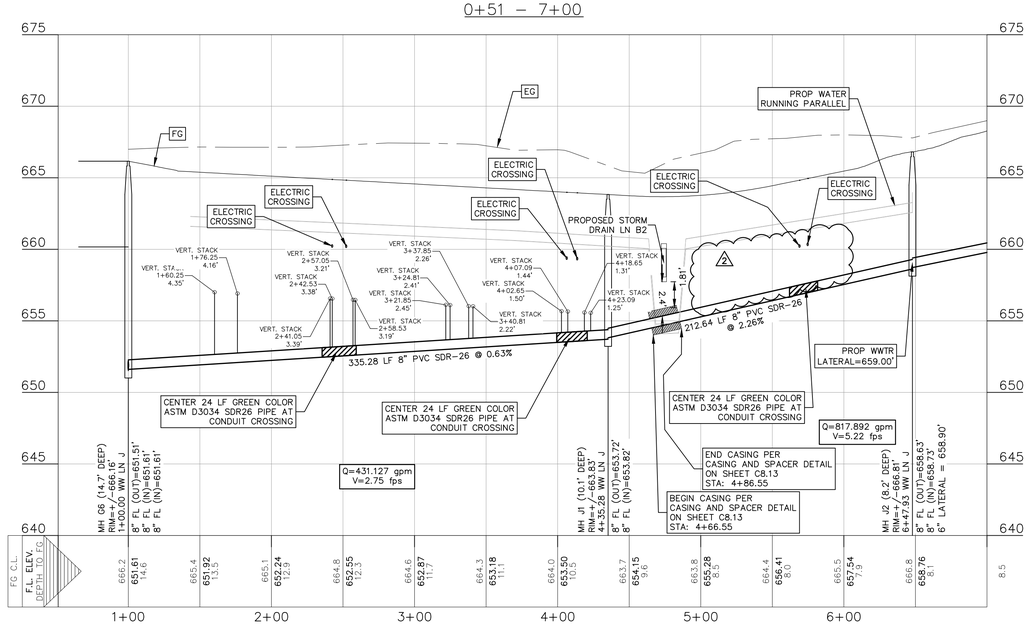
NO.	REVISION DESCRIPTION	REVISION DATE
1	COMMENTS PER GBRA	05/01/2023
2	REMOVED UNNECESSARY VERTICAL STACKS	07/10/2023

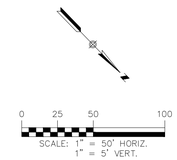
DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C8.08

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\C8s\031.097_WWTR P&P.dwg User: reissd Feb 07, 2025 - 10:42am







LEGEND

- 700 — EXISTING CONTOURS
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TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

WW LN J PLAN & PROFILE (1 OF 2)

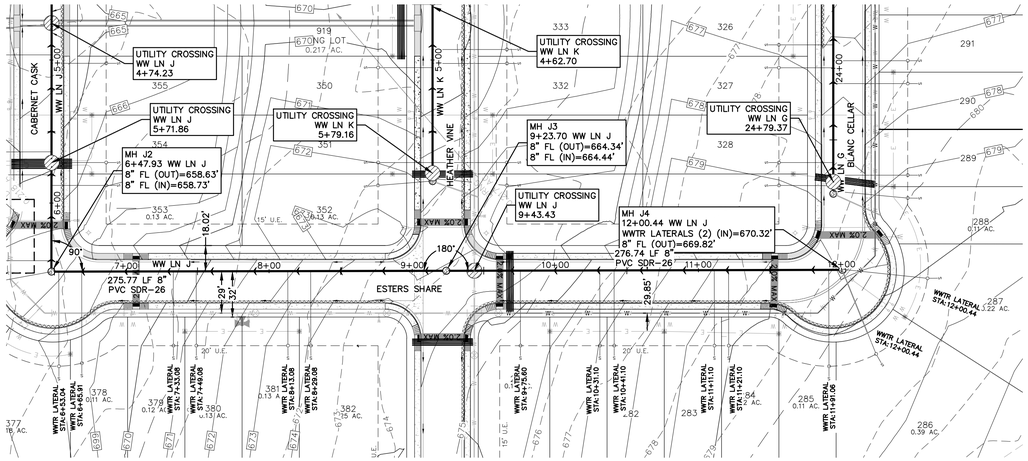
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

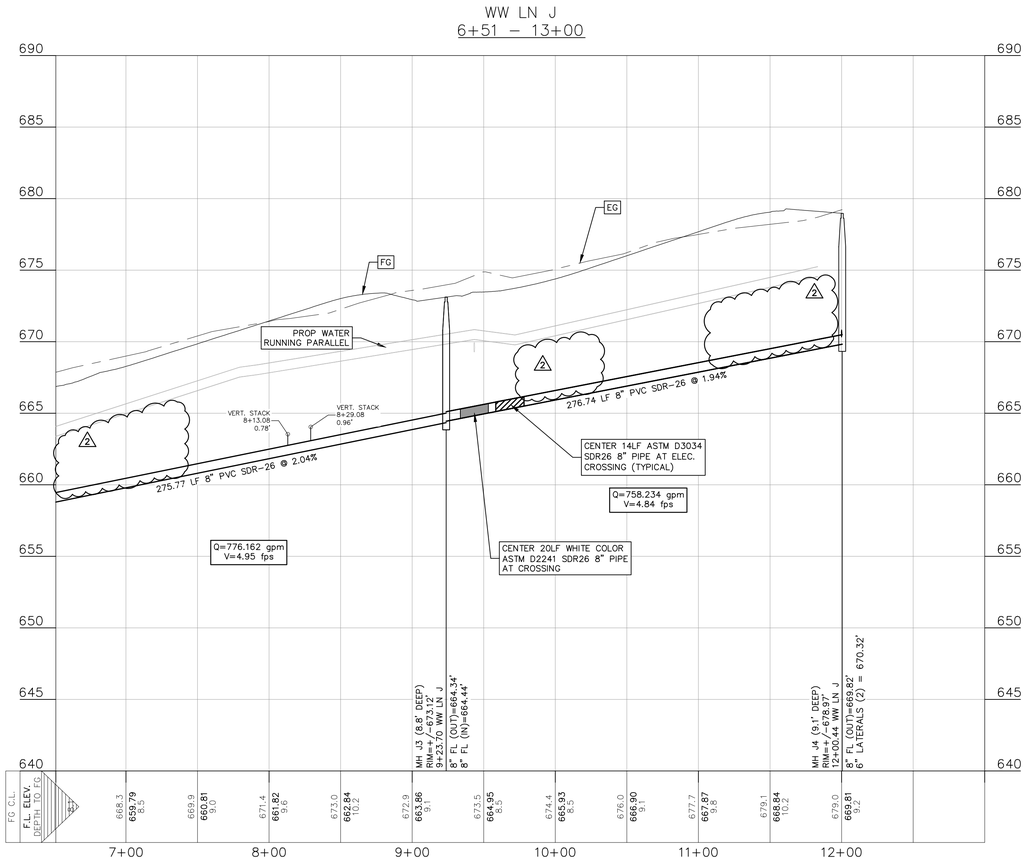
NO.	REVISION DESCRIPTION	REVISION DATE
1	COMMENTS PER GBRA	05/01/2023
2	REMOVED UNNECESSARY VERTICAL STACKS	07/10/2023

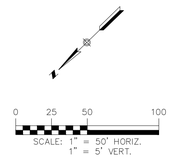
DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C8.09

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\CDs\031.097_WWTR P&P.dwg User: reissd Feb 07, 2025 - 10:45am







LEGEND

- EXISTING CONTOURS
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- D.E. DRAINAGE EASEMENT
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TRENCH EXCAVATION SAFETY PROTECTION

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06/19/2023

WW LN J PLAN & PROFILE (2 OF 2)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
1	COMMENTS PER GBRA	05/01/2023
2	REMOVED UNNECESSARY VERTICAL STACKS	07/10/2023

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C8.10

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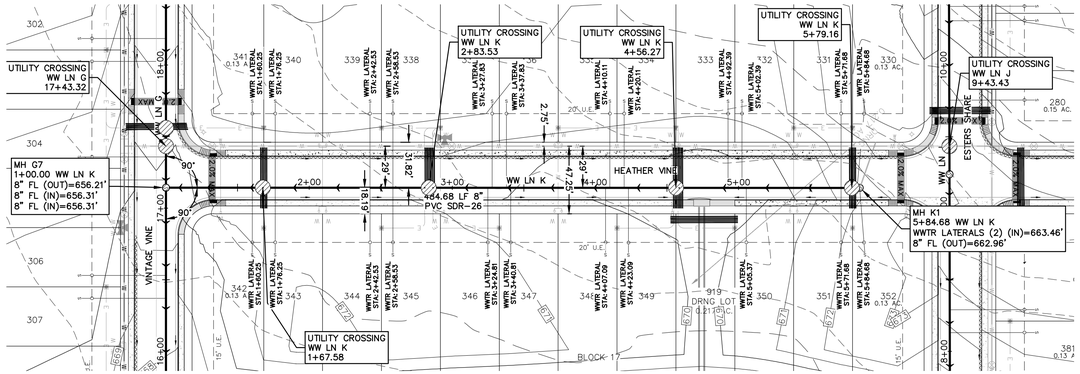

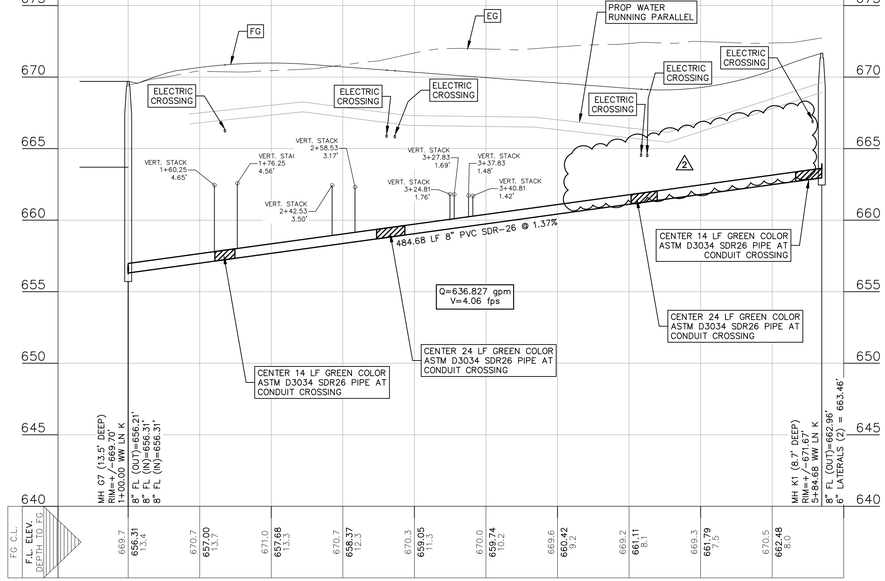

0 25 50 100
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

LEGEND

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WW LN K PLAN & PROFILE

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
1	COMMENTS PER GBRA	05/01/2023
2	REMOVED UNNECESSARY VERTICAL STACKS	07/10/2023

DATE: APRIL 2023
DRAWN BY: JAD
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REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C8.11

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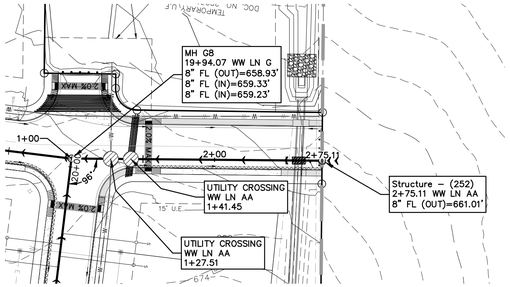

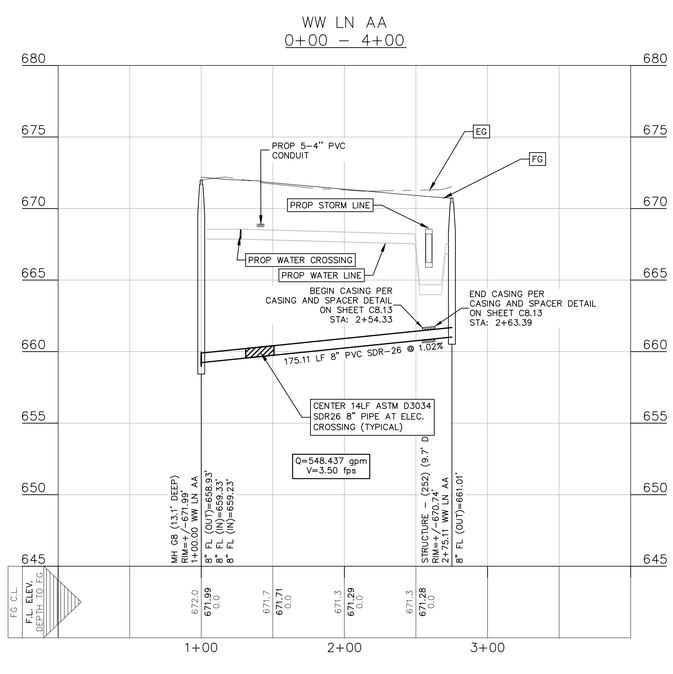

LEGEND

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WW LN AA PLAN & PROFILE

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NO.	REVISION DESCRIPTION	REVISION DATE
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DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
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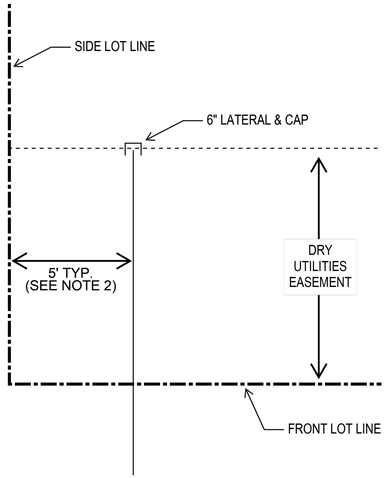
SHEET
C8.12

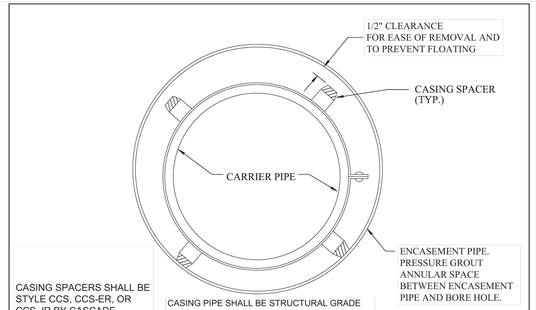
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\C3s\031.097_WWTR P&P.dwg User: reissd Feb 07, 2025 - 10:44am



NOTES:
1. REFERENCE STANDARD LATERAL DETAIL FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE 8 FT WHERE LOT CORNER IS SHARED WITH DRY UTILITIES AND 10 FT WHERE SHARED WITH FIRE HYDRANT OR AIR RELEASE VALVE.

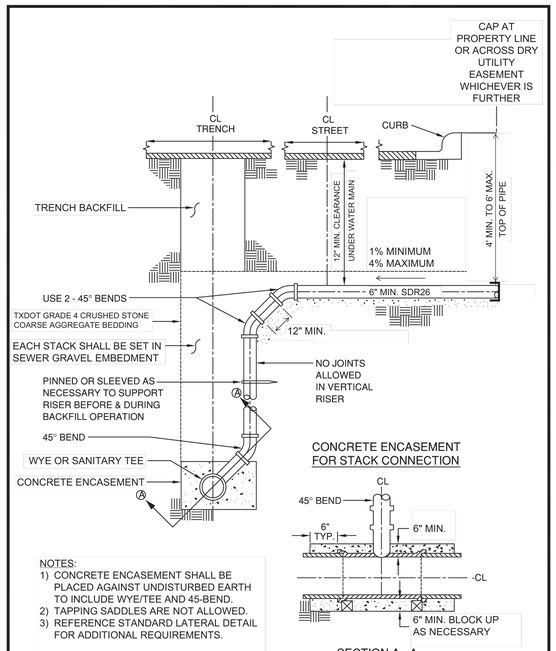
WASTEWATER LATERAL LAYOUT DETAIL (N.T.S.)

GUADALUPE-BLANCO RIVER AUTHORITY, 12/15/2021



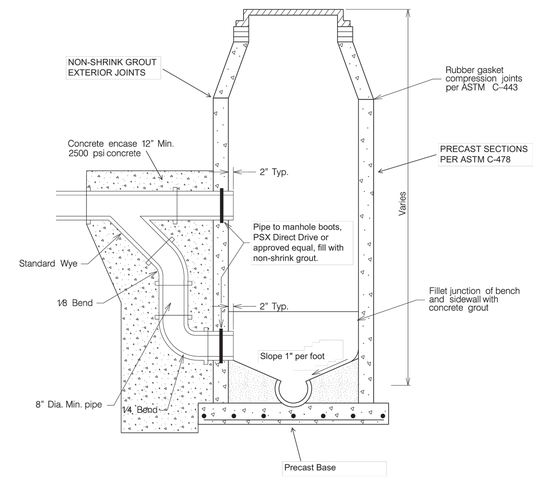
NOTE:
THE MATERIALS SHOWN APPLY TO JACK AND BORE INSTALLATIONS AND STREAM/RIVER CROSSINGS. OPEN CUT SLEEVING OF SUBDIVISION UTILITIES UNDER STORM SEWER MAY BE C900/905 DR18 CASING (COLOR TO MATCH CARRIER PIPE) AND HDPE SPACERS WITH STAINLESS STEEL HARDWARE. THE CLEARANCES AND DIMENSIONS SHOWN APPLY TO ALL INSTALLATIONS.

Guadalupe-Blanco River Authority	CASING AND SPACERS DETAIL	STANDARD NO.
C. LEWIS — JAN. 28, 2018	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	



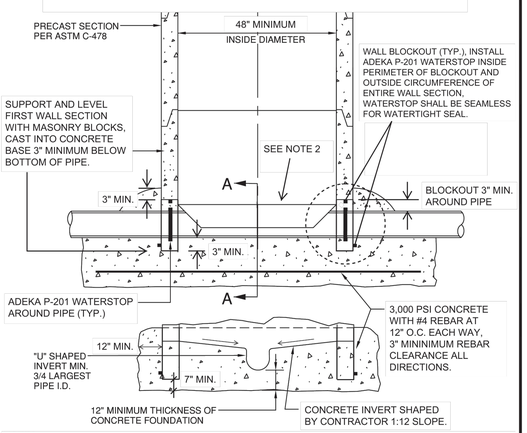
NOTES:
1) CONCRETE ENCASEMENT SHALL BE PLACED AGAINST UNDISTURBED EARTH TO INCLUDE WYE/TEE AND 45-BEND.
2) TAPPING SADDLES ARE NOT ALLOWED.
3) REFERENCE STANDARD LATERAL DETAIL FOR ADDITIONAL REQUIREMENTS.

GUADALUPE-BLANCO RIVER AUTHORITY	APPROVED BY: C. LEWIS	STANDARD DRAWING:	WASTEWATER LATERAL VERTICAL STACK DETAIL
		UPDATED: JAN. 28, 2018 / SCALE: / SHEET: / DRAWING NO.:	



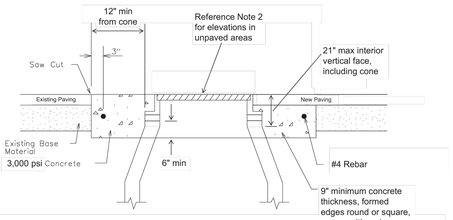
NOTES:
1) A wastewater collection system pipe, including service laterals, entering a manhole more than 24" above the manhole out invert must have an external drop pipe. Internal drops are not allowed.
2) Reference standard precast manhole detail for additional requirements.

Guadalupe-Blanco River Authority	DROP MANHOLE	APPROVED: C. LEWIS	REVISED: JAN. 28, 2018	SHEET



NOTES:
1. THIS DETAIL SHALL BE USED TO INSTALL MANHOLES ON EXISTING MAINS ONLY.
2. REMOVE ENTIRE EXISTING PIPE AND SHAPE INVERTS FOR NEW AND EXISTING PIPES.
3. REFERENCE STANDARD PRECAST MANHOLE DETAIL FOR ADDITIONAL REQUIREMENTS.

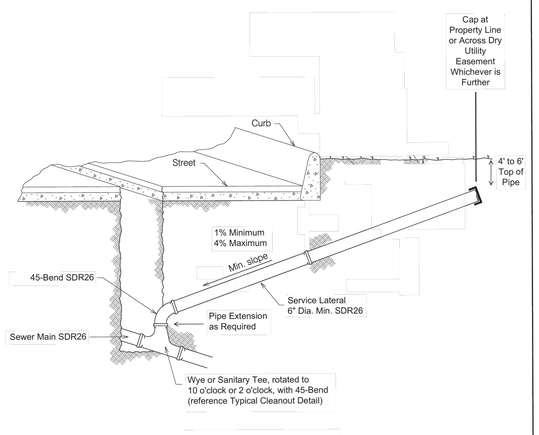
Guadalupe-Blanco River Authority	DRAWN BY: / APPROVED BY: C. LEWIS	STANDARD DRAWING:	MANHOLE CAST IN PLACE BASE
		UPDATED: JAN. 28, 2018 / SCALE: N.T.S. / SHEET: / DRAWING NO.	



NOTES:
1) Manhole ring concrete encasement is required for all manholes.
2) Manhole rim elevations shown in plan and profile views are approximate. Manholes located in unpaved areas shall be installed with top of concrete encasement 2" above finish grade and covers 2" above top of concrete encasement. Square with curb. All exposed vertical and horizontal concrete edges shall be formed with 3/4" chamfer.
3) Use non-shrink grout for grade ring installation. Grade rings shall be precast concrete.
4) Manhole rings and covers shall be East Jordan Product Number 42432109W01.
5) All manhole rings shall have 30" minimum clear access opening.
6) All manhole covers shall have pick bars.
7) All manhole covers shall be stamped "SANITARY SEWER" only without any city references.
8) All manholes shall have traffic rated bolted and gasketed watertight rings and covers. Bolts, nuts, and flat washers shall be 316SS, apply nickel or aluminum anti-seize compound to threads prior to assembly. Bolts shall include gasket washers. Schedule GBRA to witness final bolting of manholes.
9) Install vented covers where required by TCEQ.

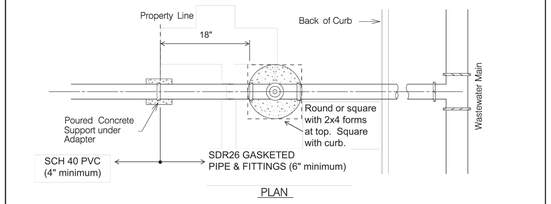
Guadalupe-Blanco River Authority	MANHOLE RING ENCASEMENT DETAIL	APPROVED: C. LEWIS	REVISED: JAN. 28, 2018	SHEET

Depth and grade of service laterals as shown, are typical only. Actual depth, alignment and grade of service laterals shall be determined by the Engineer based on the elevations of the sewer main, street, natural ground and building to be serviced.



NOTES:
1) Install double services where indicated on design drawings.
2) Cleanout to be installed by customer plumber.
3) Pipe and fittings shall be gasketed. Tees and 90-bends are not allowed.
4) Pressure rated pipe and fittings shall be installed for sewer mains and laterals that cross water lines (use ASTM D2241 SDR26). Center both water and sewer pipe lengths at all crossings. Comply with TCEQ Rules.
5) Tapping saddles are not allowed.

Guadalupe-Blanco River Authority	LATERAL DETAIL	APPROVED: C. LEWIS	REVISED: JAN. 28, 2018	SHEET



NOTES:
1) Cleanouts are not allowed within driveways.
2) Tapping saddles are not allowed.
3) Cleanout risers shall be installed plumb/level. Top of concrete shall be 2" above finish grade. Vertical and horizontal edges of exposed concrete shall be formed with 3/4" chamfer strips.
4) Customer plumber must install a separate 2-way cleanout (4" minimum size) at customer facility.
5) Use TXDOT Grade 4 crushed stone coarse aggregate bedding for all piping, 4" minimum below pipe, 6" minimum above pipe.
6) Obtain GBRA inspection prior to backfill (830-379-5822). Minimum 48-hours notice is required.

Guadalupe-Blanco River Authority	TYPICAL CLEANOUT DETAIL	APPROVED: C. LEWIS	REVISED: JAN. 28, 2018	SHEET

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600
HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

WASTEWATER DETAILS (1 OF 2)

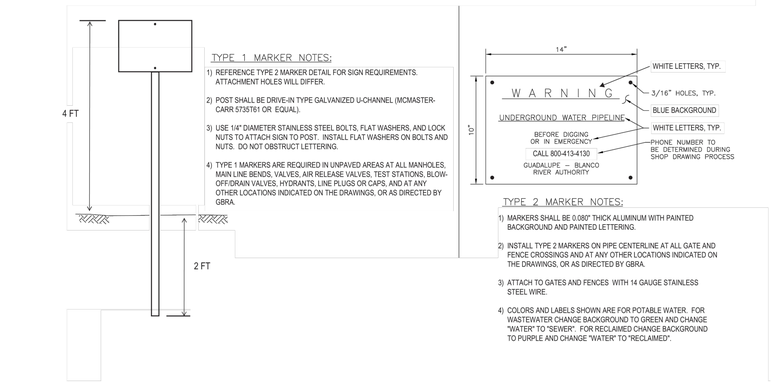
WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION NOTES	REVISION DESCRIPTION	DATE

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

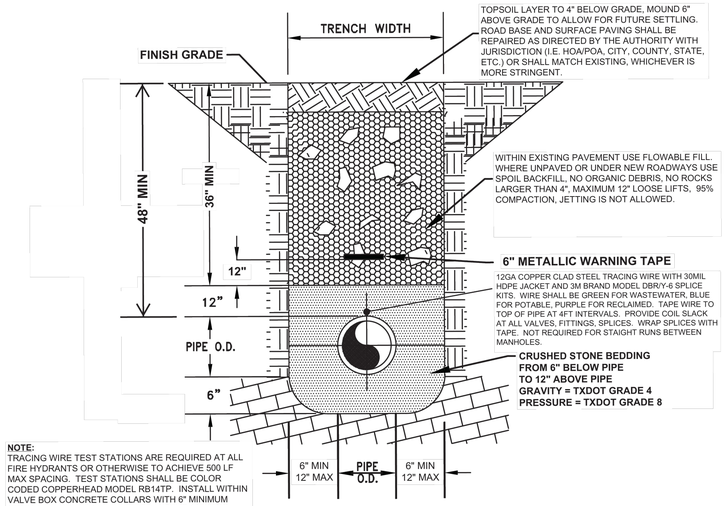
SHEET
C8.13

Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\Cbx\031.097_DETL_Utl.dwg User: rossd Feb 07, 2025 - 10:44am



PIPELINE MARKERS

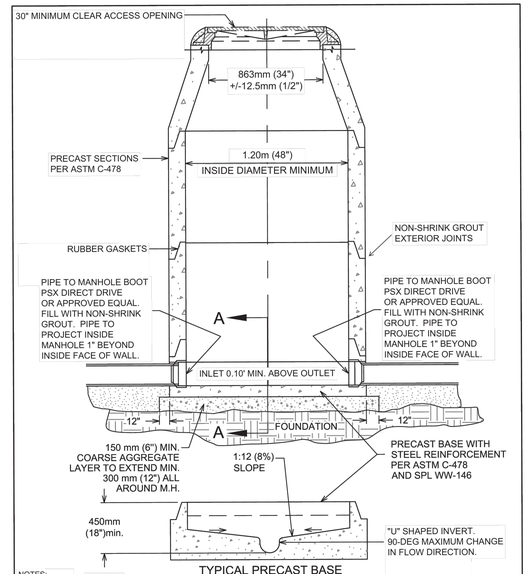
Guadalupe-Blanco River Authority, 01/30/2018



NOTE:
TRACING WIRE TEST STATIONS ARE REQUIRED AT ALL FIRE HYDRANTS OR OTHERWISE TO ACHIEVE 500 LF MAX SPACING. TEST STATIONS SHALL BE COLOR CODED COPPERHEAD MODEL RB14TP. INSTALL WITHIN VALVE BOX CONCRETE COLLARS WITH 6" MINIMUM CONCRETE COVER ON ALL SIDES. LEAVE 12" WIRE SLACK INSIDE TEST STATIONS. NOT REQUIRED FOR STRAIGHT RUNS BETWEEN MANHOLES.

TYPICAL PIPE TRENCH

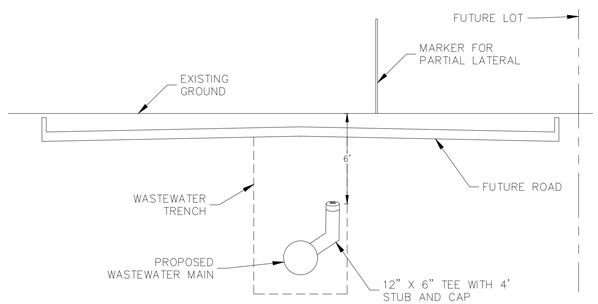
Guadalupe-Blanco River Authority, 02/05/2018



TYPICAL PRECAST BASE

NOTES:
1. MANHOLE BASE SHALL BE BEDDED ON A 6" MINIMUM LAYER OF TXDOT GRADE 4 CRUSHED STONE COARSE AGGREGATE. BASE SHALL BE LEVEL/PLUMB PRIOR TO INSTALLING RISER SECTIONS.
2. SAND BLAST AND LINE ALL INTERIOR SURFACES OF ALL MANHOLES (INCLUDING INVERTS) WITH SEWPERCOAT, REFRATTA HAC 100, OR APPROVED EQUAL CALCIUM ALUMINATE MATERIAL. PROPOSED SUBSTITUTES MUST BE EQUAL IN COMPOSITION AND MANUFACTURER WARRANTY. PRODUCT MUST BE INSTALLED BY A MANUFACTURER CERTIFIED APPLICATOR. MINIMUM 1/2" THICKNESS. SMOOTH TROWEL FINISH. SPRAY CURING COMPOUND.

Guadalupe-Blanco River Authority	WASTEWATER MANHOLE ON PRECAST BASE	C. LEWIS JAN. 28, 2018
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD	



4' LATERAL STUB & CAP DETAIL

NOT TO SCALE

290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600
HMT ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

WASTEWATER DETAILS (2 OF 2)

WINDING CREEK RANCH UNIT 3

NEW BRAUNFELS, TEXAS

NO.	REVISION NOTES	REVISION DESCRIPTION	DATE	REVISION DATE
1				

DATE: **APRIL 2023**
DRAWN BY: **JAD**
DESIGNED BY: **CAT**
REVIEWED BY: **CVH**
HMT PROJECT NO.: 031.097

SHEET
C8.14

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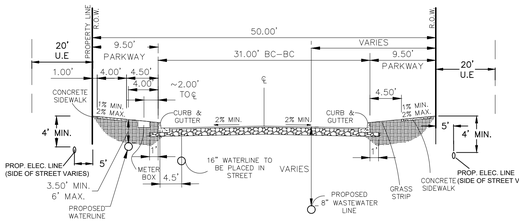


LOCAL STREET UTILITIES SECTION A–A (50' R–O–W)

NOT TO SCALE

CONDUIT CROSSING NOTE:

CONTRACTOR TO REFERENCE GVEC ELECTRIC LAYOUT TO VERIFY PVC CONDUIT CROSSING SPECIFICATIONS.

0 25 50 100

SCALE: 1:50

LEGEND

B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
W W	EXISTING WATER LINE
	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	UTILITY CROSSING

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. THIS SITE IS IN THE KOHLENBERG PRESSURE ZONE ACCORDING TO NEW BRAUNFELS UTILITIES PRESSURE RECORDER LOCATIONS.
4. CONTRACTOR TO VERIFY EXISTING LATERAL HAS A MINIMUM LONGITUDINAL SLOPE OF 2%.
5. POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH NBU WATER AND WASTEWATER DESIGN CRITERIA MANUAL, SECTION 2.3.0.
6. FIRE HYDRANTS ARE TO BE INSTALLED OUTSIDE OF THE SIDEWALK AND NO GREATER THAN 9 FEET FROM THE BACK OF CURB.

EXISTING WINDING CREEK RANCH UNIT 2

(5)–2½" PVC @ 64 LF GVEC
(4)–4" PVC @ 64 LF GVEC
(1)–2½" PVC FIBER OPTICS @ 64 LF GVEC
(1)–4" PVC @ 64 LF AT&T
(1)–4" GREY SCH 40 PVC @ 64 LF SPECTRUM

(4)–4" PVC @ 61 LF GVEC
(1)–2½" PVC FIBER OPTICS @ 61 LF GVEC
(1)–4" PVC @ 61 LV AT&T

(3)–2½" PVC @ 42 LF GVEC
(1)–4" GREY SCH 40 PVC @ 42 LF SPECTRUM
(1)–4" PVC @ 42 LF AT&T

(3)–2½" PVC @ 42 LF GVEC
(1)–4" PVC @ 42 LF ATT
(1)–4" GREY SCH 40 PVC @ 42 LF SPECTRUM

(3)–2½" PVC @ 47 LF GVEC
(1)–4" GREY SCH 40 PVC @ 47 LF SPECTRUM
(1)–4" SCH. PVC @ 47 LF ATT

(2)–4" LANDSCAPE CONDUIT @ 49 LF
(2)–4" LANDSCAPE CONDUIT @ 53 LF
(2)–4" LANDSCAPE CONDUIT @ 42 LF
(2)–4" LANDSCAPE CONDUIT @ 40 LF
(2)–4" LANDSCAPE CONDUIT @ 53 LF

SEE INSET A (ABOVE)

EASEMENT 4: 0.52 OF AN AC. GRANTING FROM 190 WINDING CREEK RANCH INVESTMENTS TO CITY OF NEW BRAUNFELS AND GUADALUPE COUNTY

MATCHLINE
SEE SHEET C9.01

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.

HMT
ENGINEERING & SURVEYING
290 S. CASTELL AVE., STE. 100
NEW BRAUNFELS, TX 78130
TBPE FIRM F-10961
TBPLS FIRM 1053600

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED
PROFESSIONAL ENGINEER

06/19/2023

OVERALL UTILITY (1 OF 2)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

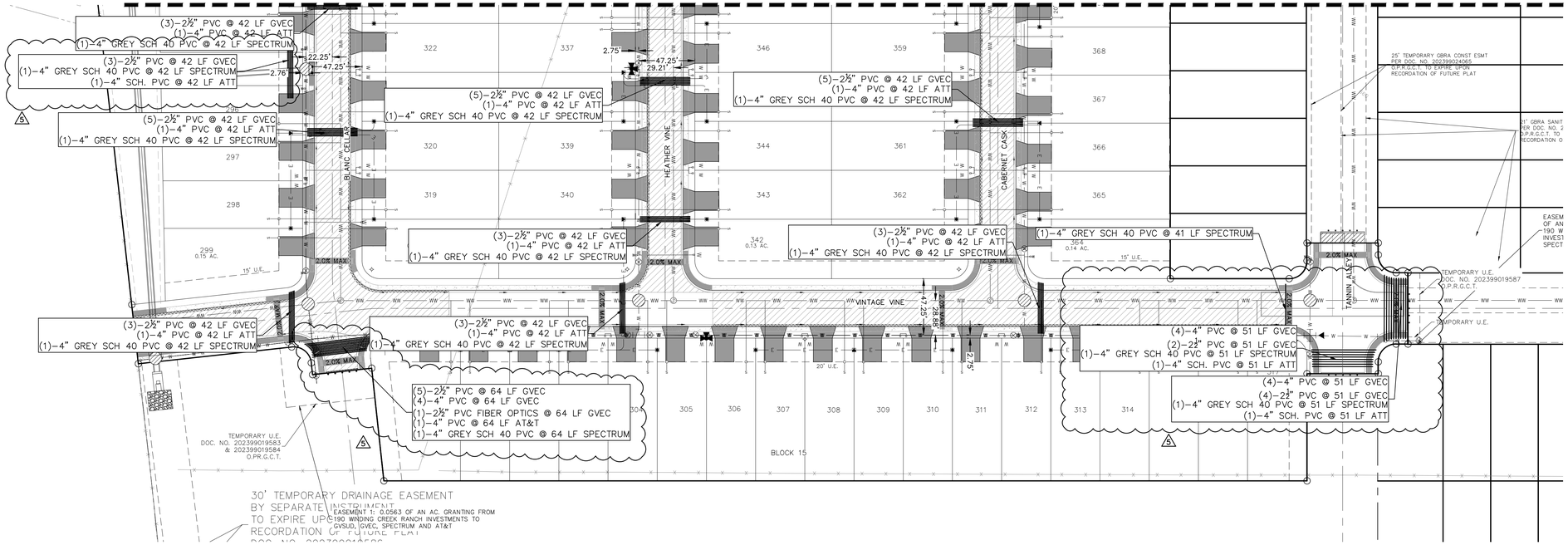
NO.	REVISION DESCRIPTION	REVISION DATE
2	ADDITIONAL SLEEVES PER GVEC REV	01/28/2025

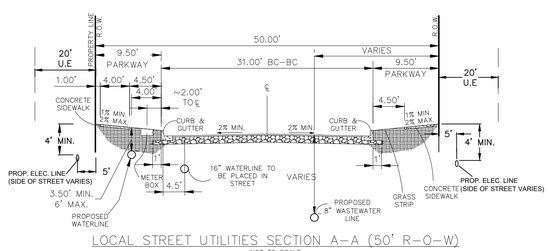
DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C9.00

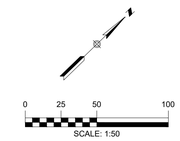
Drawing Name: N:_Projects\031 - DR Horton\031.097 - Winding Creek Ranch Unit 3\03s\031.097_00.dwg User: reissd Feb 07, 2025 - 10:45am

MATCHLINE
SEE SHEET C9.00





LOCAL STREET UTILITIES SECTION A–A (50' R–O–W)
NOT TO SCALE



LEGEND

B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
W W	EXISTING WATER LINE
	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	UTILITY CROSSING

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. THIS SITE IS IN THE KOHLENBERG PRESSURE ZONE ACCORDING TO NEW BRAUNFELS UTILITIES PRESSURE RECORDER LOCATIONS.
4. CONTRACTOR TO VERIFY EXISTING LATERAL HAS A MINIMUM LONGITUDINAL SLOPE OF 2%.
5. POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH NBU WATER AND WASTEWATER DESIGN CRITERIA MANUAL, SECTION 2.3.0.
6. FIRE HYDRANTS ARE TO BE INSTALLED OUTSIDE OF THE SIDEWALK AND NO GREATER THAN 9 FEET FROM THE BACK OF CURB.

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.

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NEW BRAUNFELS, TX 78130
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STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
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PROFESSIONAL ENGINEER

06/19/2023

OVERALL UTILITY (2 OF 2)

WINDING CREEK RANCH UNIT 3
NEW BRAUNFELS, TEXAS

NO.	REVISION DESCRIPTION	REVISION DATE
2	ADDITIONAL SLEEVES PER GVEC REV	01/28/2025

DATE: APRIL 2023
DRAWN BY: JAD
DESIGNED BY: CAT
REVIEWED BY: CVH
HMT PROJECT NO.: 031.097

SHEET
C9.01

Drawing Name: N:_Projects\031 – DR Horton\031.097 – Winding Creek Ranch Unit 3\Cds\031.097_OU.dwg User: reissd Feb 07, 2025 - 10:45am