Point Table				
Point #	Northing	Easting	Elevation	Raw Description
100	13801811.8100	2269539.5100	647.36	CP SET 1/2IRWRC
101	13801924.4500	2269647.1100	647.42	CP SET1/2IRWRC

DESIGN SPEED = 35 MPH

PERMITS OR APPROVALS:	
CITY OF NEW BRAUNFELS	PENDING
CITY OF NEW BRAUNFELS FIRE DEPARTMENT	PENDING
NEW BRAUNFELS UTILITIES	PENDING
TCEQ	N/A
TXDOT	N/A
UNION PACIFIC RAILROAD	N/A
CENTERPOINT ENERGY	N/A

NBU NOTES:

1. *ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, NEW BRAUNFELS UTILITIES MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.*
2. *THE ENGINEER OF RECORD ACKNOWLEDGES THAT ALL PROPOSED WATER OR WASTEWATER IMPROVEMENTS MUST COMPLY WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ), THE CITY OF NEW BRAUNFELS, NBU WATER & WASTEWATER DESIGN CRITERIA, SOUND ENGINEERING JUDGEMENT, AND ANY OTHER GOVERNING ENTITY ORDINANCES OR CODES.*
3. THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR AN NBU-OWNED AND MAINTAINED WATER SERVICE LATERAL IS THE LINE SIDE FROM THE WATER MAIN TO THE WATER METER. THE CUSTOMER IS RESPONSIBLE FOR THE LINE FROM THE METER TO THE PRIVATE PLUMBING WHICH INCLUDES, BUT MAY NOT ALWAYS BE THE CASE, A CUSTOMER YARD CUT-OFF. THE CUSTOMER IS RESPONSIBLE FOR DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE OF CUSTOMER'S INSTALLATION BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER CUSTOMER'S INSTALLATION, INCLUDING COMPLIANCE WITH ALL CITY PLUMBING CODES.
4. THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR AN NBU-OWNED AND MAINTAINED WASTEWATER SERVICE LATERAL IS THE LINE SIDE FROM THE WASTEWATER MAIN TO THE CLEANOUT OR PROPERTY LINE (IN CASES WHERE CLEANOUT IS NOT INSTALLED OR INSTALLED PROPERLY NEAR THE PROPERTY LINE). THE CUSTOMER IS RESPONSIBLE FOR THE LINE FROM THE CLEANOUT/PROPERTY LINE TO THE PRIVATE PLUMBING. THE CUSTOMER IS RESPONSIBLE FOR DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE OF CUSTOMER'S INSTALLATION BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER CUSTOMER'S INSTALLATION, INCLUDING COMPLIANCE WITH ALL CITY PLUMBING CODES.
5. *WATER IS A PRECIOUS COMMODITY IN THE STATE OF TEXAS AND NEW BRAUNFELS UTILITIES (NBU) IS PASSIONATE ABOUT PROTECTING THE LOCAL RESOURCE. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ACQUIRING A FIRE HYDRANT METER SO THAT ALL WATER USED FOR CONSTRUCTION OR TESTING PURPOSES IS PROPERLY ACCOUNTED FOR. NBU WILL NOT TOLERATE ANY WATER THEFT, REGARDLESS OF THE AMOUNT. IF WATER THEFT IS DISCOVERED, THE CONTRACTOR SHALL BE SUBJECT TO MONETARY PENALTIES, CRIMINAL CHARGES, AND STOPPAGE OF ALL CONSTRUCTION ACTIVITIES RELATED TO THE PROJECT. COSTS ASSOCIATED WITH ANY WORK STOPPAGE RESULTING FROM WATER THEFT SHALL BE AT THE FULL EXPENSE OF THE CONTRACTOR.*

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

GPS POINTS ARE REQUIRED FROM THE DEVELOPER'S CONTRACTOR OR ENGINEER. A MINIMUM OF THREE (3) COORDINATE POINTS FOR GEOREFERENCING ARE REQUIRED. THE WATER AND WASTEWATER GPS POINTS SHALL BE TO SURVEY GRADE AND ELECTRIC GPS POINTS SHALL BE MEASURED TO MAP GRADE. PLEASE REFERENCE NBU'S WATER CONNECTION POLICY FOR ADDITIONAL CAD DELIVERABLE REQUIREMENTS

REQUIRED MEASUREMENTS FOR THE WATER SYSTEM INCLUDE:
VERTICAL BENDS AND EDGES OF STEEL CASING (IF APPLICABLE) PRIOR TO BACKFILL
HORIZONTAL BENDS PRIOR TO BACKFILL
TEES PRIOR TO BACKFILL
FITTINGS (REDUCERS AND COUPLINGS) PRIOR TO BACKFILL
FIRE HYDRANTS (TOP OF FLANGE)
VALVES
METERS (TOP CENTER OF BOX)
BLOW OFF ASSEMBLIES
CORNER SLAB OF WATER TANKS & THE ISOLATION GATE VALVE ON THE WATER TANK

REQUIRED MEASUREMENTS FOR THE WASTEWATER SYSTEM
MANHOLES
CLEANOUTS
CORNER SLAB OF LIFT ALL STATIONS

REQUIRED MEASUREMENTS FOR THE ELECTRIC SYSTEM
POLES
TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK)
PULL BOXES
STREET LIGHTS

COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

GENERAL NOTES:

1. IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY OF NEW BRAUNFELS AND NEW BRAUNFELS UTILITIES (NBU) APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
2. 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.
3. NO PORTION OF THE PROJECT IS LOCATED WITHIN THE EXISTING SPECIAL FLOOD HAZARD ZONE A, 100-YEAR FLOOD BOUNDARY, AS DEFINED BY THE GUADALUPE COUNTY, TEXAS MAP NUMBER 48187C0110F, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, EFFECTIVE DATE NOVEMBER 2, 2007.
4. THIS PROJECT IS NOT LOCATED WITHIN THE EAA JURISDICTIONAL BOUNDARY AND IS NOT LOCATED WITHIN ANY EDWARDS AQUIFER RECHARGE ZONES.
5. THIS PROJECT IS A RESIDENTIAL DEVELOPMENT, DEVELOPMENT TYPE 3.
6. PRIOR TO THE START OF CONSTRUCTION, CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS (CONB) AND NEW BRAUNFELS UTILITIES (NBU) TO SET A PRE-CONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED.
   - 6.1. ALL CONB INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 (PHONE)
   - 6.2. FAXED IN AT 830-608-2117 (FAX)
   - 6.3. NBU INSPECTIONS ARE TO BE EMAILED AT wtropsinsp@nbtexas.com (EMAIL).
7. 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.
8. GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY.

NOTE TO CONTRACTOR:

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

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

HERITAGE FARMS PHASE 1

SAENGERHALLE ROAD, NEW BRAUNFELS, TX 78130

STREETS, DRAINAGE, WATER AND SANITARY SEWER IMPROVEMENT PROJECT

BEING 28.84 ACRES OF A 39.88 ACRE TRACT OF LAND SITUATED IN THE CITY OF NEW BRAUNFELS, GUADALUPE COUNTY, TEXAS, OUT OF THE ANTONIO MARIA ESNAURIZAR SURVEY, ABSTRACT NO.20, GUADALUPE COUNTY, TEXAS, BEING ALL OF THE REMAINDER 23.11 ACRE TRACT, CALLED TRACT 1, DESCRIBED IN DEED TO LEONA NOVOTKA SCHUETZ AND ALTON SCHUETZ OF RECORD IN VOLUME 531, PAGE 565, DEED RECORDS, GUADALUPE COUNTY, TEXAS, AND ALL OF A 17.09 ACRE TRACT, CALLED TRACT 1, DESCRIBED IN DEED TO GEORGE J. KIRST OF RECORD IN VOLUME 445, PAGE 574, DEED RECORDS, GUADALUPE COUNTY, TEXAS.



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3	SUBDIVISION PLAT
4	SUBDIVISION PLAT II
5	AERIAL EXHIBIT
6	STREET F PLAN AND PROFILE STA 10+00 TO STA 17+00
7	STREET F PLAN AND PROFILE STA 17+00 TO STA 23+96.48
8	STREET E PLAN & PROFILE
9	STREETS B, G AND H PLAN & PROFILE
10	STREET SECTIONS AND DETAILS I
11	STREET SECTIONS & DETAILS II
12	TRAFFIC SIGNAGE & SIDEWALK PLAN
13	TRAFFIC SIGNAGE DETAILS
14	EXISTING SCS DRAINAGE AREA MAP
15	ULTIMATE SCS DRAINAGE AREA MAP
16	ULTIMATE RATIONAL DRAINAGE AREA MAP
17	CHANNEL A PLAN AND PROFILE STA 10+00 TO STA 21+50
18	CHANNEL A PLAN AND PROFILE STA 21+50 TO STA 32+50
19	CHANNEL A PLAN AND PROFILE STA 32+50 TO STA 43+50
20	CHANNEL A PLAN AND PROFILE STA 43+50 TO STA 53+00
21	CHANNEL A PLAN AND PROFILE STA 53+00 TO END
22	CHANNEL B PLAN & PROFILE
23	CHANNEL C PLAN AND PROFILE
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25	GRADING PLAN I
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27	OVERALL UTILITY PLAN
28	WATER DISTRIBUTION PLAN
29	OVERALL SANITARY SEWER PLAN
30	SANITARY SEWER LINE A 19+50.00 TO 33+00.00 PLAN & PROFILE
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32	SANITARY SEWER LINE E STA 10+00.00 TO 22+41.00 PLAN & PROFILE
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34	WATER DETAILS I
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38	EROSION CONTROL PLAN
39	EROSION CONTROL PLAN II
40	EROSION CONTROL DETAILS
41	EROSION CONTROL DETAILS II

OWNER/DEVELOPER:
DAVID ORR
REGIONAL DIRECTOR - CENTRAL TEXAS
ROCKSPRING
9901 W. INTERSTATE 10. SUITE 725
SAN ANTONIO, TX 78230

ENGINEER/SURVEYOR:
INK CIVIL
JAMES INGALLS, P.E. - ENGINEER
2021 SH 46 W. STE 105.
NEW BRAUNFELS, TX. 78130
(830) 358-7127

D.A. MAWYER LAND SURVEYING, INC.
DREW MAWYER, R.P.L.S. - SURVEYOR
5151 W. SH46
NEW BRAUNFELS, TEXAS 78132
(210) 325-0858

HERITAGE FARMS PHASE 1
PERMIT SET

LOCATION MAP
SCALE: 1" = 1,000'

PREPARED BY:

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

SUBMITTED BY:

JAMES INGALLS, P.E. #107416
INK CIVIL
TBPE FIRM #F-13351
2021 W SH46, STE 105
NEW BRAUNFELS, TX 78132

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

SUBMITTAL DATE: 9-30-2025

NO	DATE	ISSUES AND REVISIONS

Drawing Name: N:\Projects\080001 Saur Ln Development\Civil\Construction Drawings\PHASE 1\0 COVER SHEET.dwg User: chuckware Sep 30, 2025 - 5:26pm

STANDARD ABBREVIATIONS

AC	ASBESTOS CONCRETE	HMAC	HOT MIX ASPHALTIC CONCRETE	PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
AH	AHEAD	HRS	HOURS	PL	PROPERTY LINE
ASPH	ASPHALT	IAW	IN ACCORDANCE WITH	R	RADIUS
B-B	BACK TO BACK	I.D.	INSIDE DIAMETER	RR	RAILROAD
BC	BACK OF CURB	IP	IRON PIN	RCP	REINFORCED CONCRETE PIPE
BK	BACK	LF	LINEAR FEET	REQ'D	REQUIRED
BSL	BUILDING SETBACK LINE	LT	LEFT	RT	RIGHT
CI	CAST IRON	L	LENGTH	ROW	RIGHT-OF-WAY
CL	CENTERLINE	LP	LIGHT POLE	RWL	RECYCLE WATER LINE
CONC	CONCRETE	MH	MANHOLE	S	SLOPE
CP	CONTROL PANEL	MAX	MAXIMUM	SS	SANITARY SEWER
CSC	CONCRETE STEEL CYLINDER PIPE	MJ	MECHANICAL JOINT	SE	SOUTHEAST
CORP	CORPORATION	MIN	MINIMUM	SW	SOUTHWEST
CMP	CORRUGATED METAL PIPE	N	NORTH	STA	STATION
CPL	COUPLING	NE	NORTHEAST	STD	STANDARD
DWG	DRAWING	NW	NORTHWEST	SD	STORM SEWER/DRAINAGE
DI	DUCTILE IRON	NA	NOT APPLICABLE	T	TANGENT
E	EAST	NTS	NOT TO SCALE	T/P	TOP OF PIPE
ELEV / EL	ELEVATION	OC	ON CENTER	T/G	TOP OF GROUND
EP	EDGE OF PAVEMENT				
EX / EXIST	EXISTING	OD	OUTER DIAMETER	TEL	TELEPHONE
EW	EACH WAY	OHE	OVERHEAD ELECTRICAL	TBM	TEMPORARY BENCHMARK
EWEF	EACH WAY EACH FACE	OHT	OVERHEAD TELEPHONE	THD	THREADED
FC	FACE OF CURB	OHETC	OVERHEAD ELECTRICAL/TELEPHONE/CABLE	TYP	TYPICAL
FO	FIBER OPTIC	PVMT	PAVEMENT	UG	UNDERGROUND
FH	FIRE HYDRANT	+/-	PLUS OR MINUS	UN	UNLESS NOTED
FL	FLOWLINE	PC	POINT OF CURVATURE	UNK	UNKNOWN
FND	FOUND	PE	PLAIN END	VERT	VERTICAL
GA	GAUGE	PI	POINT OF INTERSECTION	VPI	VERTICAL POINT OF INFLECTION
GI	GALVANIZED IRON	PT	POINT OF TANGENCY	VPC	VERTICAL POINT OF CURVATURE
GPS	GLOBAL POSITION STATION	PVC	POLYVINYL CHLORIDE PIPE	VPT	VERTICAL POINT OF TANGENCY
GRND	GROUND	PSI	POUNDS PER SQUARE INCH	WWF	WELDED WIRE FABRIC
HDPE	HIGH DENSITY POLYETHYLENE PIPE	PP	POWER POLE	TS	TEST STATION
HORZ	HORIZONTAL	PVI	POINT OF VERTICAL INTERSECTION		

SEQUENCE OF CONSTRUCTION:

1. OBTAIN CITY APPROVED SITE PREPARATION PLANS, AND TPDES PERMIT (NOT A COPY OF THE TPDES APPLICATION TO TCEQ), IF APPLICABLE.
2. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.
3. BEGIN DEMOLITION ACTIVITIES, IF APPLICABLE.
4. BEGIN SITE CLEARING AND GRADING.
5. INSTALL SEWER AND WATER IMPROVEMENTS.
6. INSTALL ELECTRIC IMPROVEMENTS.
7. INSTALL ROADWAY IMPROVEMENTS (ASPHALT, CURBS, SIDEWALKS, ETC.)
8. RESTORE AND REVEGETATE ALL DISTURBED AREAS NOT UNDER IMPERMEABLE IMPROVEMENTS.
9. COMPLETE ANY REMAINING "PUNCH LIST" ITEMS.
10. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROLS AFTER PERMANENT STABILIZATION IS AT LEAST 70% EVENLY ESTABLISHED. RYE IS NOT ACCEPTED.

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

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

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

TELEPHONE LOCATOR

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

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN 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.

CITY OF NEW BRAUNFELS – CONSTRUCTION NOTES – (REV 3-2020)

1. IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
2. THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
3. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
4. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SCHEDULE A PRECONSTRUCTION MEETING.

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

   FOR COMMERCIAL PERMIT (CP) PROJECTS:
   4.4 ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,
   4.5 FAXED IN AT 830-608-2117 OR,
   4.6 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, 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.
6. 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

7. 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

8. 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

9. 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

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

FINISHED FLOOR ELEVATIONS

11. 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

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

ROADWAY

13. 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 TXDOTS 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

14. ASPHALTIC CONCRETE PAVEMENT SHALL BE THE TYPE OF HOT MIX ASPHALT AS DEFINED IN TXDOTS STANDARD SPECIFICATIONS FOR CURRENT TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET AND BRIDGES.
15. 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.
16. 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 AT A MINIMUM SURFACE TEMPERATURE OF 250°F AND 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.

UTILITY TRENCH COMPACTION

17. 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

18. CURB CUTS SHALL BE THE FOLLOWING METHODS AND INDICATED ON THE PLANS IN DETAIL WHERE APPLICABLE.
    18.1 SAWCUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION.
    18.2 SAWCUT EXISTING CURB TO TIE INTO EXISTING CONSTRUCTION.

CONSTRUCTION STABILIZED ENTRANCE

19. SAWCUT CURB FOR CONSTRUCTION ENTRANCE.
20. STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3"X5" ROCK TO BE PLACED A MINIMUM LENGTH OF 25-FT. AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE CITY RIGHT-OF-WAY. RIGHT-OF-WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.

SIGNING AND PAVEMENT MARKING PLAN NOTES

21. 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.
22. THE CONTRACTOR SHALL INSTALL ALL PAVEMENT MARKINGS IN ACCORDANCE WITH APPROVED ENGINEERING PLANS.
23. 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

24. 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.
25. 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.
26. 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.
27. 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.
28. IF EXTENDED DROUGHT CONDITIONS EXIST THAT HINDER OR PROHIBIT THE GROWTH AND ESTABLISHMENT OF VEGETATION, THE CONTRACT/ 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.

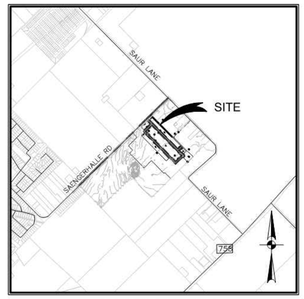
NEW BRAUNFELS UTILITIES – GENERAL NOTES (REV 1-1-2024)

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL BE APPROVED BY NEW BRAUNFELS UTILITIES AND COMPLY WITH THE CURRENT "NEW BRAUNFELS UTILITIES WATER SYSTEMS CONNECTION/CONSTRUCTION POLICY".
2. CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE PLANS FROM THE CONSULTANT OR ENGINEER AND NOTIFY NBU WATER SYSTEMS ENGINEERING AT 830-608-8971 WITH AT LEAST TWO (2) WORKING DAYS (48 HOURS) NOTICE. WORK COMPLETED BY THE CONTRACTOR, WHICH HAS NOT RECEIVED A NOTICE TO PROCEED FROM NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
3. THE DEVELOPER DEDICATES THE WATER / WASTEWATER MAINS UPON COMPLETION BY THE CONTRACTOR AND ACCEPTANCE BY THE NEW BRAUNFELS UTILITIES WATER SYSTEM. NBU WILL OWN AND MAINTAIN SAID WATER / WASTEWATER MAINS WHICH ARE LOCATED WITHIN PLATTED UTILITY EASEMENTS OR PUBLIC ROW OF PROPOSED DEVELOPMENTS. (AS APPLICABLE).
4. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS OFFICERS, DIRECTORS, OR CONSULTANTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.
5. CONTRACTOR TO CONTACT THE ENGINEER-OF-RECORD (EOR) FOR ANY FIELD CHANGES. ANY REVISIONS OR CHANGES TO THE APPROVED CONSTRUCTION PLANS WILL REQUIRE ADDITIONAL APPROVAL BY NBU IN WRITING.
6. CONTRACTOR AND / OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES, AND EXISTING UTILITIES (NOT ADJUSTED ON PLANS). COST OF RESTORATIONS, IF ANY, SHALL BE THE CONTRACTOR'S ENTIRE EXPENSE.
8. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE (1) INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION.
9. CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES AND TAXES AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
10. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.
11. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
12. THE CONTRACTOR SHALL NOT PLACE ANY MATERIALS ON THE RECHARGE ZONE OF THE EDWARDS AQUIFER WITHOUT AN APPROVED WATER POLLUTION ABATEMENT PLAN FROM THE TCEQ 31 TAC 313.4 AND 31 TAC 313.9.
13. BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (TMUTCD) AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.
14. CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.
15. THE LOCATION OF UTILITIES, EITHER UNDERGROUND OR OVERHEAD, SHOWN WITHIN THE RIGHT OF WAY ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION OPERATIONS.
16. OSHA REGULATIONS PROHIBIT OPERATIONS THAT WILL BRING PERSONS OR EQUIPMENT WITHIN 10 FEET OF AN ENERGIZED LINE. WHERE WORKMEN AND/OR EQUIPMENT HAVE TO WORK CLOSE TO AN ENERGIZED ELECTRICAL LINE, THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL POWER COMPANY INVOLVED AND MAKE WHATEVER ADJUSTMENTS NECESSARY TO ENSURE THE SAFETY OF THOSE WORKMEN.
17. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION. CONTRACTORS SHALL CALL THE ONE CALL SYSTEM FOR WATER/WASTEWATER LOCATION.
18. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192 (8), GAS COMPANIES MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
19. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES, AND FLAGGERS. THE CONSTRUCTION METHODS SHALL BE CONDUCTED TO PROVIDE THE LEAST POSSIBLE INTERFERENCE TO TRAFFIC. THE CONTINUOUS MOVEMENT OF THE TRAFFIC IN ONE DIRECTION,AT MINIMUM, SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL CLEAN UP AND REMOVE FROM THE WORK AREA ANY LOOSE MATERIAL RESULTING FROM CONTRACT OPERATIONS AT THE END OF EACH WORKDAY.
20. PRIOR TO ORDERING MATERIALS TO BE USED IN CONSTRUCTION, CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FOUR (4) COPIES OF THE SOURCE, TYPE, GRADATION, MATERIAL SPECIFICATION DATA AND / OR SHOP DRAWINGS, AS APPLICABLE, TO SATISFY THE REQUIREMENTS OF THE FOLLOWING ITEMS AND ALL MATERIAL ITEMS REFERRED TO IN THESE LISTED ITEMS:
    20.1. WATER MAINS AND SERVICES
    20.2. WASTEWATER MAINS AND SERVICES
21. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. WASTEWATER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO NBU CONNECTION AND CONSTRUCTION POLICY MANUAL.
22. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFET

FINAL PLAT ESTABLISHING

HERITAGE FARMS UNIT 1

BEING 28.84 ACRES OF A 39.88 ACRE TRACT OF LAND SITUATED IN THE CITY OF NEW BRAUNFELS, GUADALUPE COUNTY, TEXAS, OUT OF THE ANTONIO MARIA ESNAURIZAR SURVEY, ABSTRACT NO.20, GUADALUPE COUNTY, TEXAS, BEING ALL OF THE REMAINDER 23.11 ACRE TRACT, CALLED TRACT 1, DESCRIBED IN DEED TO LEONA NOVOTKA SCHUETZ AND ALTON SCHUETZ OF RECORD IN VOLUME 531, PAGE 565, DEED RECORDS, GUADALUPE COUNTY, TEXAS, AND ALL OF A 17.09 ACRE TRACT, CALLED TRACT 1, DESCRIBED IN DEED TO GEORGE J. KIRST OF RECORD IN VOLUME 445, PAGE 574, DEED RECORDS, GUADALUPE COUNTY, TEXAS.



LOCATION MAP
SCALE: 1"=2,000'

NOTES:

1. ALL LOTS WITHIN THE SUBDIVISION WILL BE PROVIDED WATER, SEWER AND ELECTRIC BY NEW BRAUNFELS UTILITIES.
2. ALL STREETS ARE PROPOSED TO BE OF A LOCAL TYPE FUNCTIONAL CLASSIFICATION WITH 50 FOOT RIGHT-OF-WAYS UNLESS NOTED OTHERWISE.
3. SIDEWALK NOTES:
   3.1. FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED BY THE HOME BUILDER PER CITY STANDARDS AT THE TIME OF BUILDING CONSTRUCTION, UNLESS OTHERWISE NOTED ON THE PLAT, ALONG:
      - STREET B, STREET E, STREET F, STREET G, STREET H
   3.1. FOUR (4) FOOT WIDE SIDEWALKS WILL BE CONSTRUCTED BY THE DEVELOPER PER CITY STANDARDS AT THE TIME OF SUBDIVISION STREET CONSTRUCTION ALONG:
      - STREET G, STREET F, BLOCK 2, LOT 2
4. LOT 2 BLOCK 2, IS AN HOA LOT AND ARE NON-BUILDABLE LOTS. THESE LOTS WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER'S ASSOCIATION, THEIR SUCCESSOR'S OR ASSIGNS, AND SHALL NOT BE THE RESPONSIBILITY OF THE CITY OF NEW BRAUNFELS OR GUADALUPE COUNTY.
5. THE SUBDIVISION IS WITHIN THE COMAL INDEPENDENT SCHOOL DISTRICT.
6. ALL BEARINGS AND COORDINATES SHOWN HEREON ARE IN GRID BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1983. DISTANCES SHOWN HEREON ARE SURFACE USING COMBINED SCALE FACTOR OF 1.00015.
7. MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION. MONUMENTS AND MARKERS WILL BE SET WITH 1/2" IRON PIN WITH PLASTIC CAP STAMPED "DAM #5348 PROP. COR." IMMEDIATELY AFTER COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
8. HERITAGE FARMS UNIT 1, DOES FALL WITHIN THE CITY LIMITS OF THE CITY OF NEW BRAUNFELS.
9. THE PROPOSED USE OF THE SUBDIVISION IS FOR FAMILY RESIDENTIAL.
10. HERITAGE FARMS UNIT 1, ESTABLISHING A TOTAL OF 6 LOTS, WITH 5 BEING BUILDABLE.
11. THIS SUBDIVISION IS SUBJECT TO THE 2018 CITY OF NEW BRAUNFELS PARK LAND DEDICATION AND DEVELOPMENT ORDINANCE. THIS PLAT IS APPROVED FOR 1 DWELLING UNIT PER BUILDABLE LOT WITH A MAXIMUM OF 2 BUILDABLE LOTS. 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.
12. 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 DECREASES THE HYDRAULIC CAPACITY OF THE EASEMENT, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS AND GUADALUPE COUNTY SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTORS 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.
13. 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 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. NO STRUCTURES IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO A PUBLIC WATER AND SEWER SYSTEM WHICH HAS BEEN APPROVED BY NEW BRAUNFELS UTILITIES.
15. MAINTENANCE OF DRAINAGE EASEMENT DESIGNATED WITHIN A LOT SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNERS ASSOCIATION.
16. NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN THE EXISTING SPECIAL FLOOD HAZARD ZONE A, 100-YEAR FLOOD BOUNDARY, AS DEFINED BY THE GUADALUPE COUNTY, TEXAS COMMUNITY PANEL NUMBER 48187C0110F, REVISED NOVEMBER 02, 2007 AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
17. EACH LOT OWNER SHALL BE RESPONSIBLE FOR VERIFYING THE DEPTH OF THE SEWER SERVICE STUB OUT AND DETERMINING THE MINIMUM SERVICEABLE FINISH FLOOR ELEVATION.
18. FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS, AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.
19. ANY DRIVEWAY CONSTRUCTION ON COUNTY ROADS WITHIN THE UNINCORPORATED AREAS OF GUADALUPE COUNTY MUST BE PERMITTED BY THE GUADALUPE COUNTY ROAD DEPARTMENT.
20. NO PORTION OF THIS PROPERTY IS WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
21. 1' CONTOURS ARE SOURCED FROM THE CITY OF NEW BRAUNFELS LIDAR GIS DATABASE AND ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1988.

NEW BRAUNFELS UTILITIES NOTES:

1. MAINTENANCE OF DEDICATED UTILITY EASEMENTS IS THE RESPONSIBILITY OF THE PROPERTY OWNER. ANY USE OF AN EASEMENT, OR ANY PORTION OF IT, INCLUDING LANDSCAPING OR DRAINAGE FEATURES, IS SUBJECT TO AND SHALL NOT CONFLICT WITH THE TERMS AND CONDITIONS IN THE EASEMENT, MUST NOT ENDANGER OR INTERFERE WITH THE RIGHTS GRANTED BY THE EASEMENT TO NEW BRAUNFELS UTILITIES, ITS SUCCESSORS AND ASSIGNS, AND SHALL BE SUBJECT TO APPLICABLE PERMIT REQUIREMENTS OF THE CITY OF NEW BRAUNFELS OR ANY OTHER GOVERNING BODY. THE PROPERTY OWNER MUST OBTAIN, IN ADVANCE, WRITTEN AGREEMENT WITH THE UTILITIES TO UTILIZE THE EASEMENT, OR ANY PART OF IT.
2. UTILITIES WILL POSSESS A 5' WIDE SERVICE EASEMENT TO THE BUILDING STRUCTURE ALONG THE SERVICE LINE TO THE SERVICE ENTRANCE. THIS EASEMENT WILL VARY DEPENDING UPON LOCATION OF DWELLING AND SERVICE.
3. UTILITIES SHALL HAVE ACCESS TO THE METER LOCATIONS FROM THE FRONT YARD AND METER LOCATIONS SHALL NOT BE LOCATED WITHIN A FENCED AREA.
4. EACH LOT MUST HAVE ITS OWN WATER AND SEWER SERVICE AT THE OWNER'S/DEVELOPER'S EXPENSE.
5. DO NOT COMBINE ANY NEW UTILITY EASEMENTS (U.E.) WITH DRAINAGE EASEMENTS (D.E.) OR MAKE CHANGES IN GRADE WITHIN THE UTILITY EASEMENTS (U.E.) WITHOUT WRITTEN APPROVAL FROM NEW BRAUNFELS UTILITIES.

STATE OF TEXAS
COUNTY OF GUADALUPE

I, THE UNDERSIGNED OWNER OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS THE HERITAGE FARMS UNIT 1, 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.

_____.
OWNER:
9901 W. I-10, STE 725
SAN ANTONIO, TX 78230

STATE OF TEXAS
COUNTY OF COMAL

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS ___DAY OF_____20___.

BY _____.

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

KNOW ALL MEN BY THESE PRESENTS:

I, THE UNDERSIGNED, DREW A. MAWYER, 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.

_____
DREW A. MAWYER
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5348
D.A. MAWYER LAND SURVEYING, INC.
5151 W. SH46
NEW BRAUNFELS, TEXAS 78132
FIRM #10191500

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

LEGEND:

P.O.B.	= POINT OF BEGINNING
B.L.	= BUILDING SETBACK LINE
D.E.	= DRAINAGE EASEMENT
U.E.	= UTILITY EASEMENT
R.O.W.	= RIGHT-OF-WAY
O.S.	= OPEN SPACE LOT
OPRCCT	= OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS
MPRCCT	= OFFICIAL MAP AND PLAT RECORDS OF COMAL COUNTY, TEXAS
DRCCT	= DEED RECORDS OF COMAL COUNTY, TEXAS
	= PAGE MATCH LINE
○	= 1/2" IRON PIN SET WITH CAP STAMPED "DAM #5348 PROP. COR."
●	= IRON PIN FOUND
⊡	= TXDOT MONUMENT FOUND

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

I, _____, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT WAS FILED FOR RECORD IN THE MAP AND PLAT RECORDS, DOC# _____ OF GUADALUPE COUNTY ON THE _____ DAY OF _____, 20_____ AT _____ M.
WITNESS MY HAND OFFICIAL SEAL, THIS THE _____ DAY OF_____, A.D. 20____.

COUNTY CLERK, GUADALUPE COUNTY, TEXAS

_____
DEPUTY

PREPARED: September 29, 2025

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

SUBDIVISION PLAT

SHEET 3 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

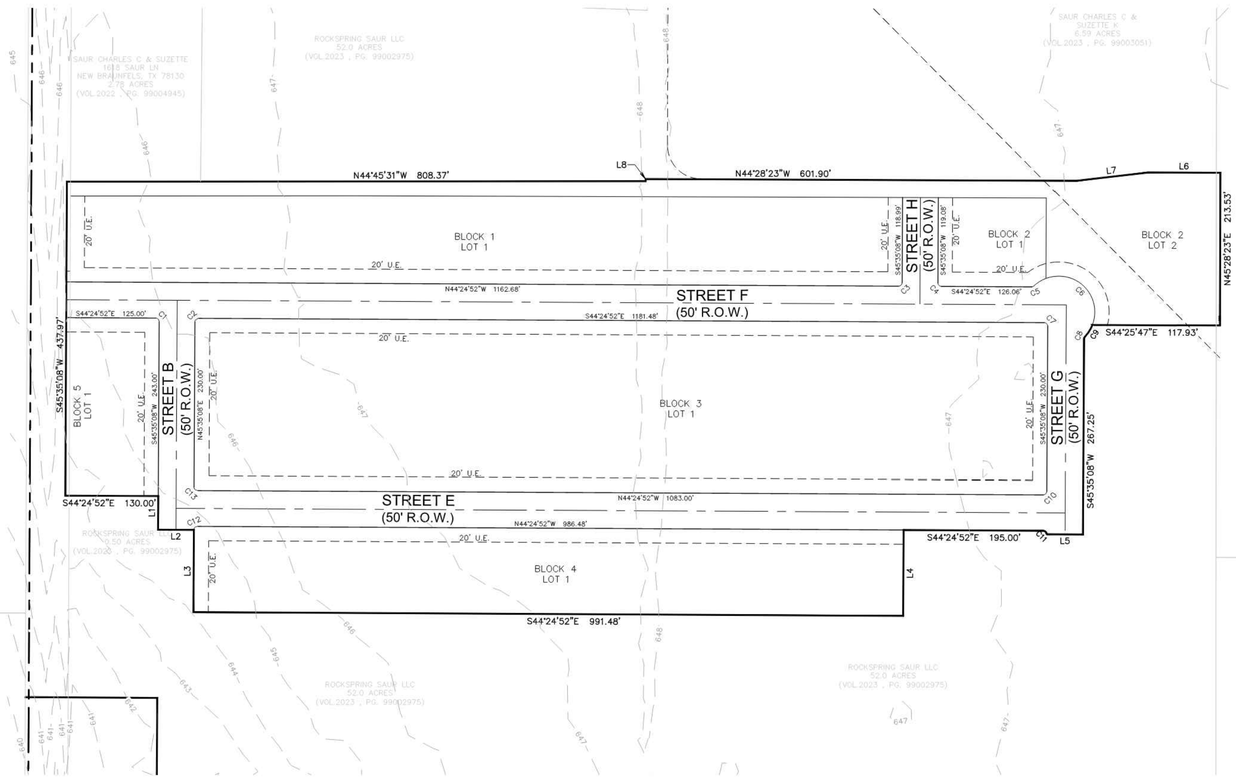
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Drawing Name: N:\Projects\QR6001 Saur Ln Development\Planning\Platting\Heritage Farms Plat.dwg User: chuckware Sep 29, 2025 - 6:33pm

FINAL PLAT ESTABLISHING

HERITAGE FARMS UNIT 1

BEING 28.84 ACRES OF A 39.88 ACRE TRACT OF LAND SITUATED IN THE CITY OF NEW BRAUNFELS, GUADALUPE COUNTY, TEXAS, OUT OF THE ANTONIO MARIA ESNAURIZAR SURVEY, ABSTRACT NO.20, GUADALUPE COUNTY, TEXAS, BEING ALL OF THE REMAINDER 23.11 ACRE TRACT, CALLED TRACT 1, DESCRIBED IN DEED TO LEONIA NOVOTKA SCHUETZ AND ALTON SCHUETZ OF RECORD IN VOLUME 531, PAGE 565, DEED RECORDS, GUADALUPE COUNTY, TEXAS, AND ALL OF A 17.09 ACRE TRACT, CALLED TRACT 1, DESCRIBED IN DEED TO GEORGE J. KIRST OF RECORD IN VOLUME 445, PAGE 574, DEED RECORDS, GUADALUPE COUNTY, TEXAS.



LINE TABLE		
LINE	LENGTH	BEARING
L1	47.00'	S45°35'08"W
L2	50.00'	S44°24'52"E
L3	115.00'	S45°35'08"W
L4	120.00'	N45°35'08"E
L5	50.01'	S44°24'57"E
L6	101.69'	N44°31'37"W
L7	99.84'	N51°25'35"W
L8	3.01'	S45°51'48"W

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C1	7.85'	5.00'	90°00'00"	5.00'	7.07'	N00°35'08"E
C2	7.85'	5.00'	90°00'00"	5.00'	7.07'	S89°24'52"E
C3	7.85'	5.00'	90°00'00"	5.00'	7.07'	S89°24'52"E
C4	7.85'	5.00'	90°00'00"	5.00'	7.07'	S00°35'08"W
C5	3.78'	5.00'	43°20'30"	1.99'	3.69'	S66°05'07"E
C6	154.19'	50.00'	176°41'01"	1727.12'	99.96'	S00°35'08"W
C7	7.85'	5.00'	90°00'00"	5.00'	7.07'	S00°35'08"W
C8	3.78'	5.00'	43°20'30"	1.99'	3.69'	N67°15'23"E
C9	19.57'	50.00'	22°25'43"	9.91'	19.45'	N77°42'47"E
C10	7.85'	5.00'	90°00'00"	5.00'	7.07'	N89°24'52"W
C11	7.85'	5.00'	90°00'00"	5.00'	7.07'	S00°35'08"W
C12	7.85'	5.00'	90°00'00"	5.00'	7.07'	N89°24'52"W
C13	7.85'	5.00'	90°00'00"	5.00'	7.07'	N00°35'08"E

LEGEND:
P.O.B. = POINT OF BEGINNING
B.L. = BUILDING SETBACK LINE
D.E. = DRAINAGE EASEMENT
U.E. = UTILITY EASEMENT
R.O.W. = RIGHT-OF-WAY
O.S. = OPEN SPACE LOT
OPRCCT = OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS
MPRCCT = OFFICIAL MAP AND PLAT RECORDS OF COMAL COUNTY, TEXAS
DRCCT = DEED RECORDS OF COMAL COUNTY, TEXAS
= PAGE MATCH LINE
○ = 1/2" IRON PIN SET WITH CAP STAMPED "DAM #5348 PROP. COR."
● = IRON PIN FOUND
▣ = TXDOT MONUMENT FOUND

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

PREPARED: September 30, 2025

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

SUBDIVISION PLAT II

SHEET 4 OF 41

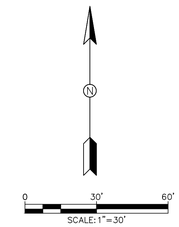
NO	DATE	ISSUES AND REVISIONS
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Drawing Name: N:\Projects\OR6001 Saur Ln Development\Civil\Construction Drawings\PHASE 1\4 SUBDIVISION PLAT II.dwg User: chuckware Sep 30, 2025 - 5:26pm
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HERITAGE FARMS PHASE 1

AERIAL EXHIBIT

SHEET 5 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

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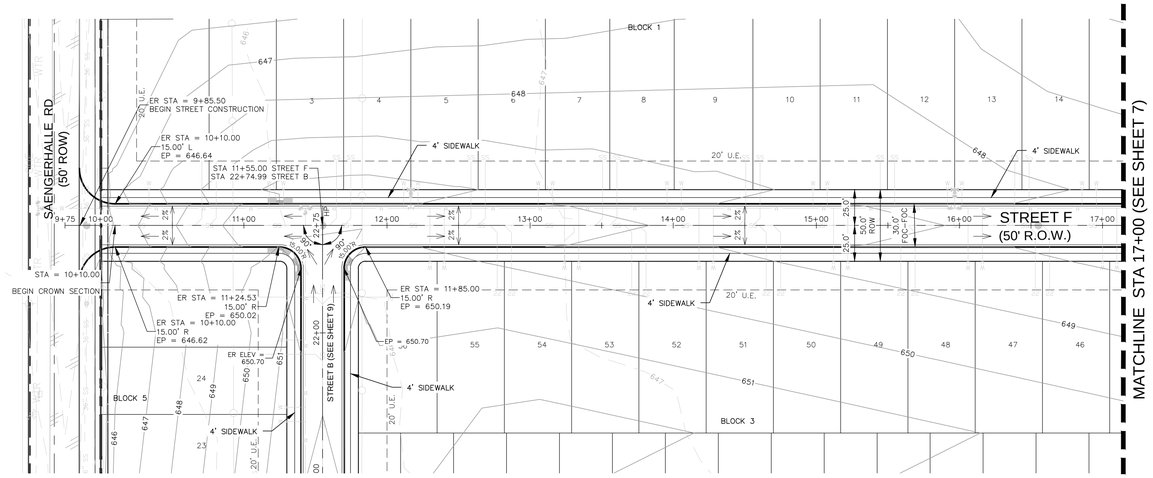
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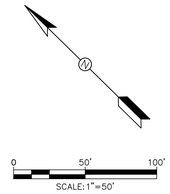
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CONSTRUCTION NOTES:

1. DIMENSIONS SHOWN ARE TYPICALLY TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. SEE STREET SECTIONS AND CURB DETAILS FOR ADDITIONAL DETAIL.
2. SEE SHEET 10 FOR STREET SECTIONS AND DETAILS.
3. SEE SHEET 12 FOR STREET SIGNAGE.
4. SEE SHEET 11 FOR SIDEWALK RAMP DETAILS.
5. ALL CURB & GUTTER IS CATCH CURB UNLESS OTHERWISE NOTED.
6. ALL RAMPS AND ANY SIDEWALKS THAT DO NOT FRONT PROPOSED RESIDENTIAL LOTS ARE REQUIRED TO BE CONSTRUCTED WITH STREET CONSTRUCTION.

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN 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.



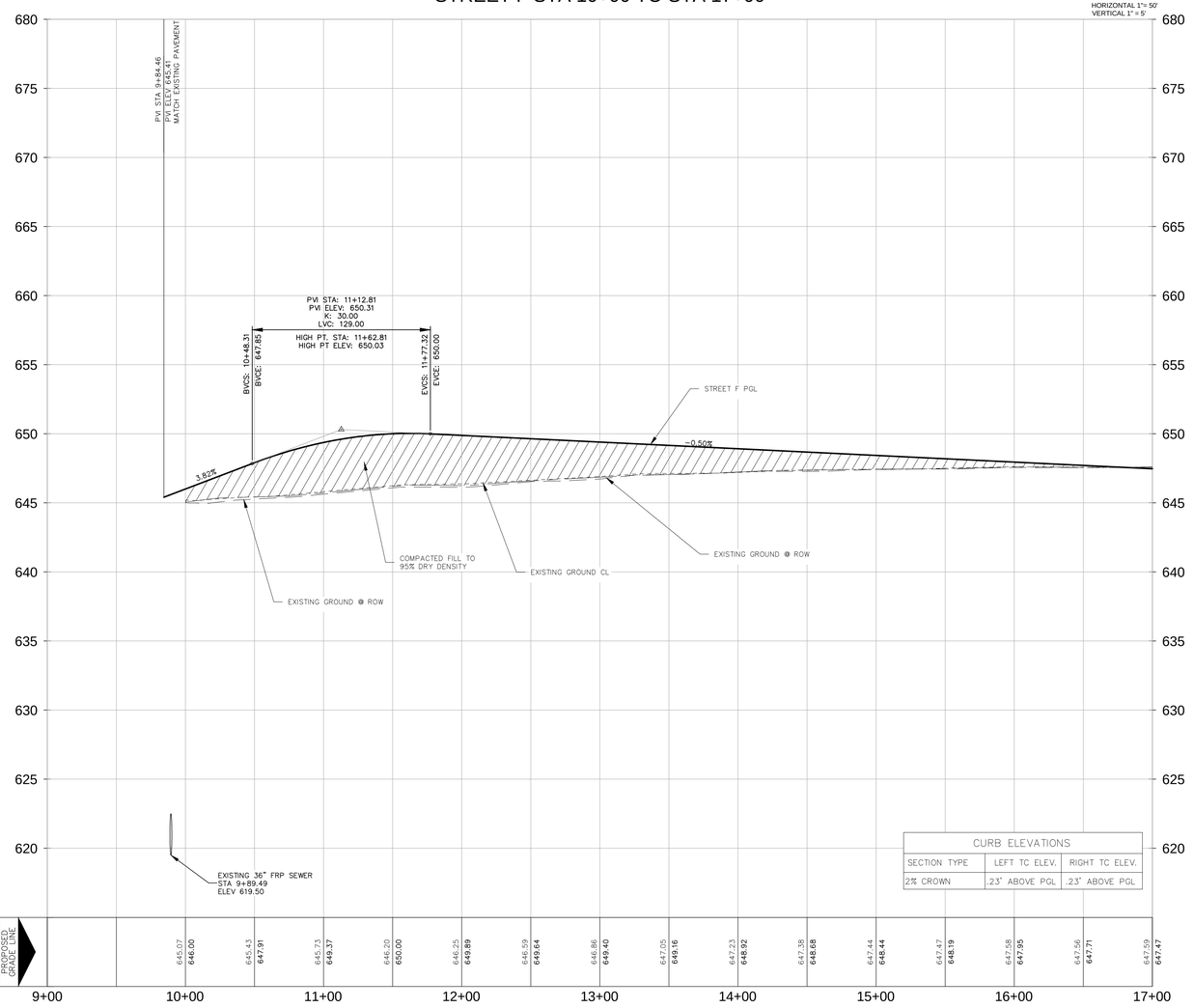


LEGEND

- VERTICAL PAVEMENT TRANSITION (WASHOUT CROWN)
- VALLEY GUTTER
- 650 EXISTING CONTOUR
- 900 PROPOSED CONTOUR

STREET F STA 10+00 TO STA 17+00

SCALE:
HORIZONTAL 1"= 50'
VERTICAL 1" = 5'



CURB ELEVATIONS		
SECTION TYPE	LEFT TC ELEV.	RIGHT TC ELEV.
2% CROWN	.23" ABOVE PGL	.23" ABOVE PGL



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HERITAGE FARMS PHASE 1

STREET F PLAN AND PROFILE
STA 10+00 TO STA 17+00

SHEET 6 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

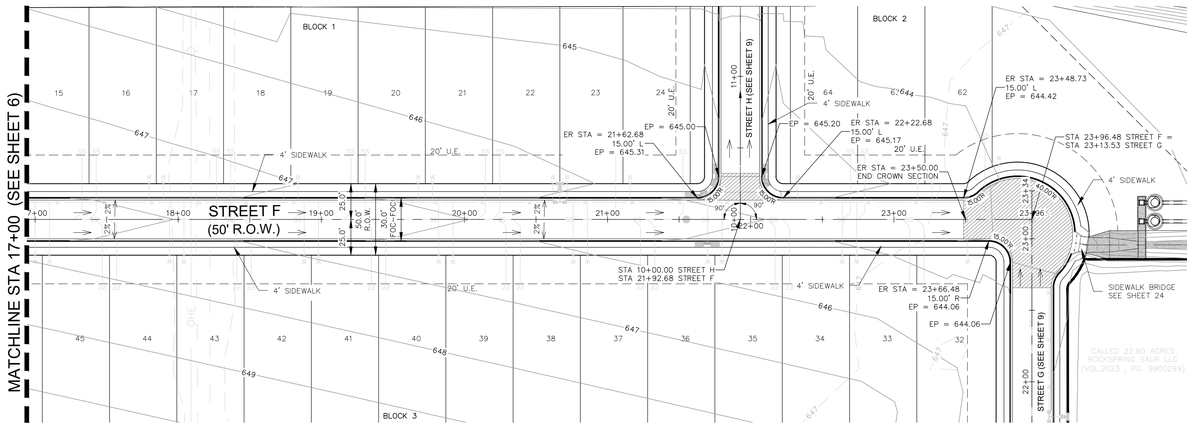
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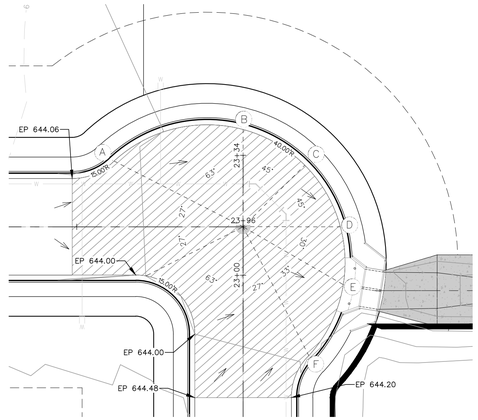
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CONSTRUCTION NOTES:

1. DIMENSIONS SHOWN ARE TYPICALLY TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. SEE STREET SECTIONS AND CURB DETAILS FOR ADDITIONAL DETAIL.
2. SEE SHEET 10 FOR STREET SECTIONS AND DETAILS.
3. SEE SHEET 12 FOR STREET SIGNAGE.
4. SEE SHEET 11 FOR SIDEWALK RAMP DETAILS.
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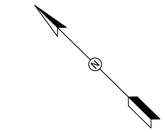




KNUCKLE SAC DETAIL

Scale: 1" = 20'

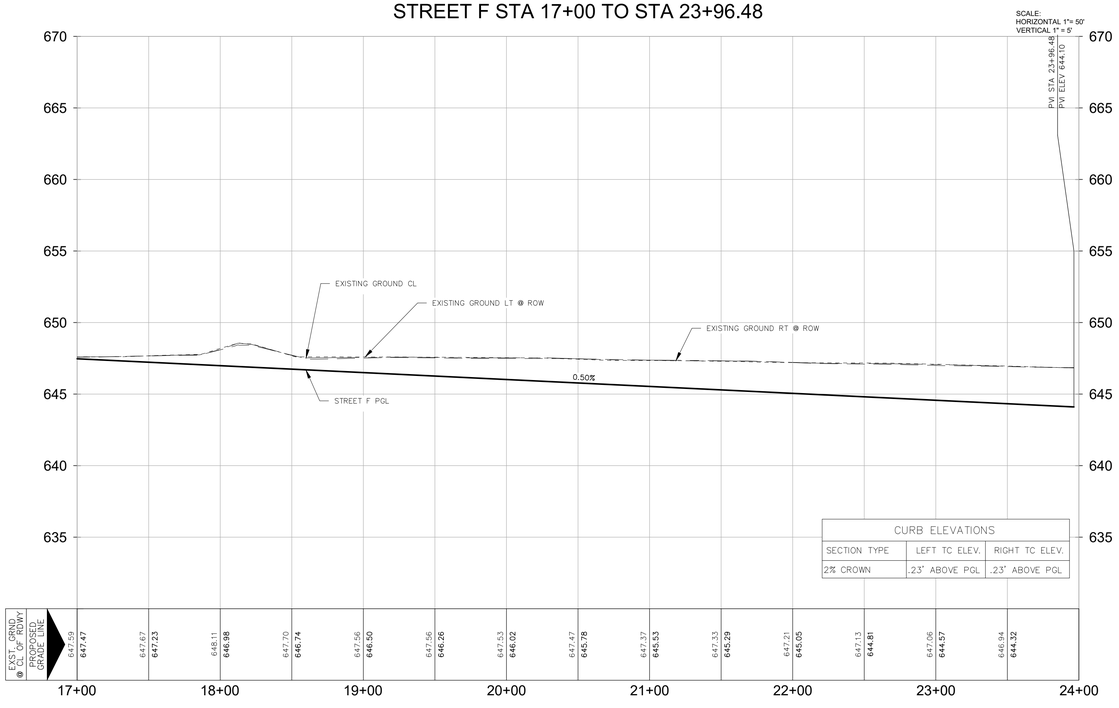
KNUCKLE SAC HUB ELEV	
HUB	EP
A	644.03
B	643.91
C	643.85
D	643.80
E	643.75
F	643.95



LEGEND

- VERTICAL PAVEMENT TRANSITION (WASHOUT CROWN)
- VALLEY GUTTER
- 900 EXISTING CONTOUR
- 900 PROPOSED CONTOUR

STREET F STA 17+00 TO STA 23+96.48



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HERITAGE FARMS PHASE 1

STREET F PLAN AND PROFILE
STA 17+00 TO STA 23+96.48

SHEET 7 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

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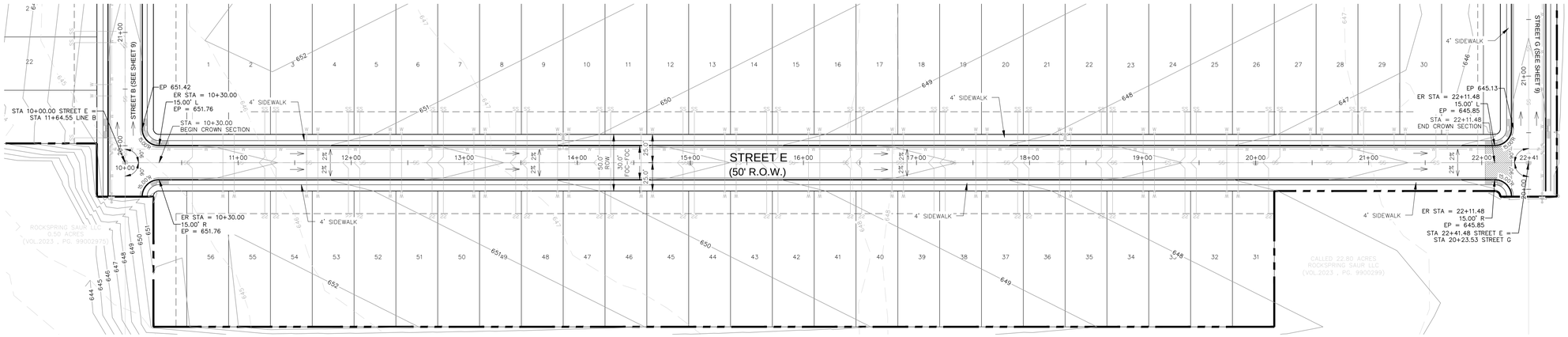
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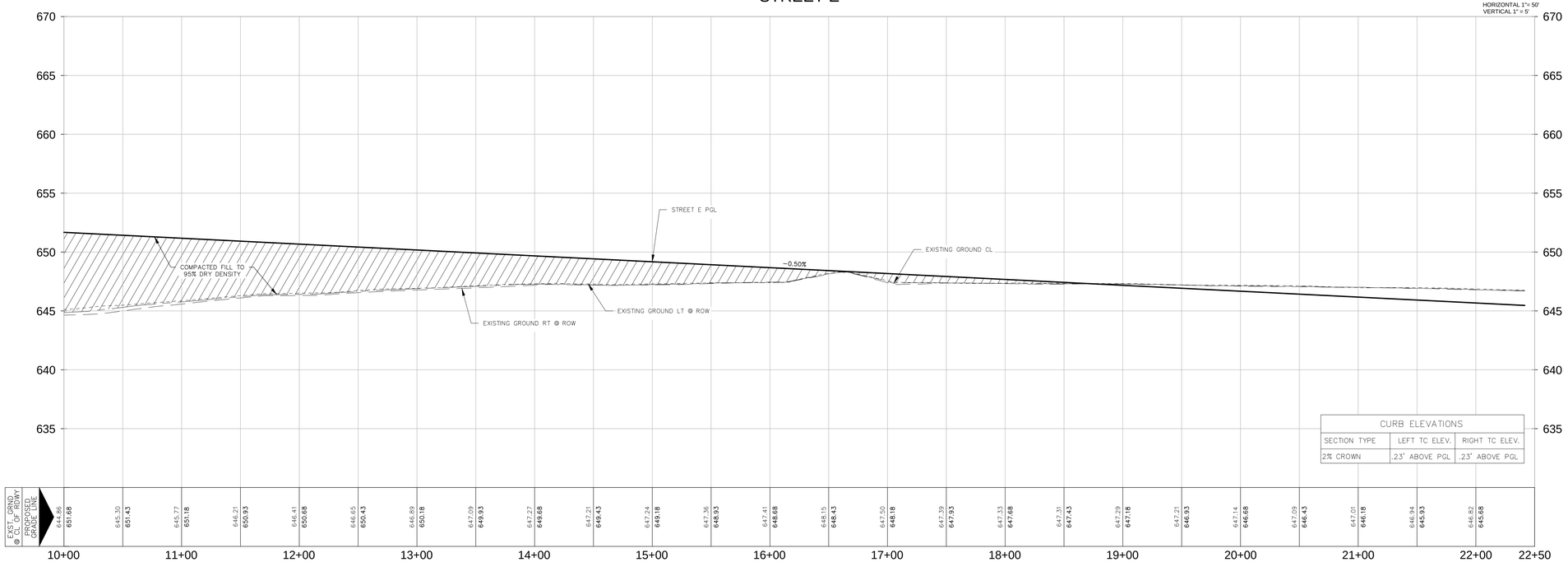
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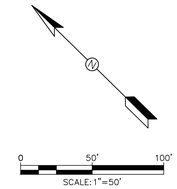
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LEGEND

- VERTICAL PAVEMENT TRANSITION (WASHOUT CROWN)
- VALLEY GUTTER
- LP — LOW POINT
- HP — HIGH POINT
- PROPERTY LINE
- 900 — EXISTING CONTOUR
- 900 — PROPOSED CONTOUR
- DRAINAGE FLOW ARROW



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HERITAGE FARMS PHASE 1

STREET E PLAN & PROFILE

SHEET 8 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

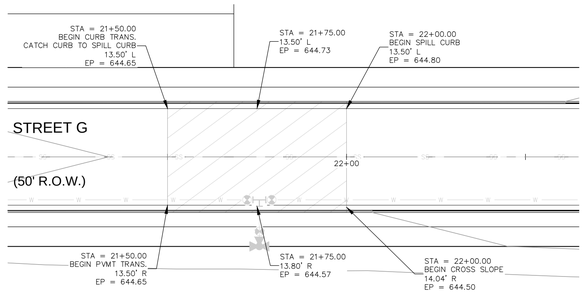
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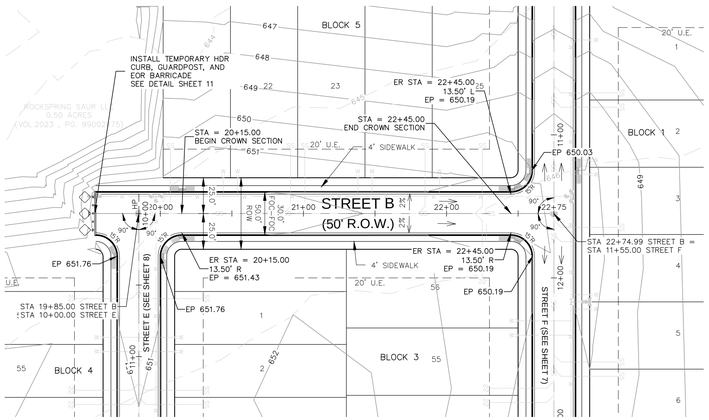
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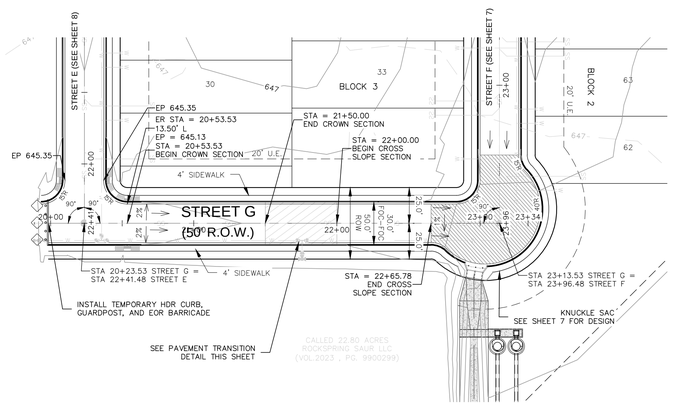
1. DIMENSIONS SHOWN ARE TYPICALLY TO EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. SEE STREET SECTIONS AND CURB DETAILS FOR ADDITIONAL DETAIL.
2. SEE SHEET 10 FOR STREET SECTIONS AND DETAILS.
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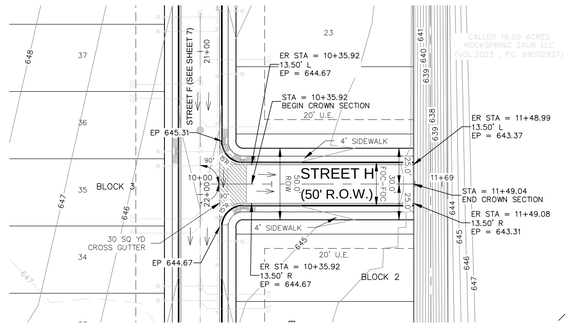


PAVEMENT TRANSTION DETAIL

Scale: 1" = 30'

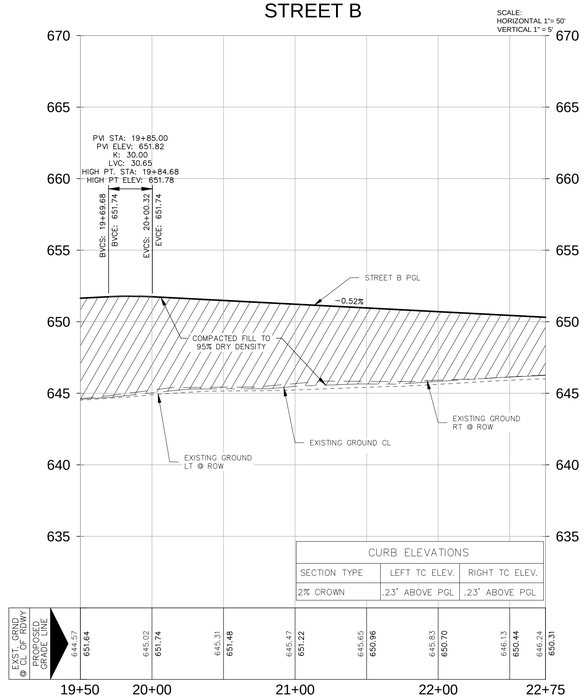






STREET B

SCALE:
HORIZONTAL 1"= 50'
VERTICAL 1" = 5'

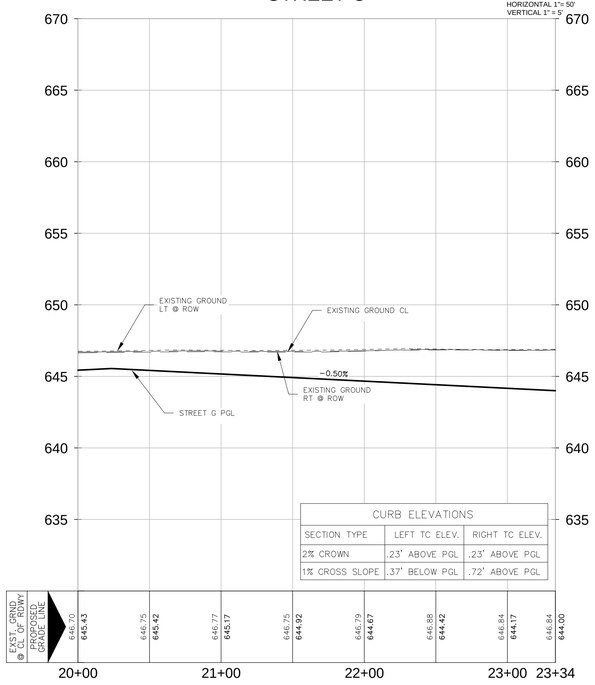


CURB ELEVATIONS

SECTION TYPE	LEFT TC ELEV.	RIGHT TC ELEV.
2% CROWN	.23' ABOVE PGL	.23' ABOVE PGL

STREET G

SCALE:
HORIZONTAL 1"= 50'
VERTICAL 1" = 5'

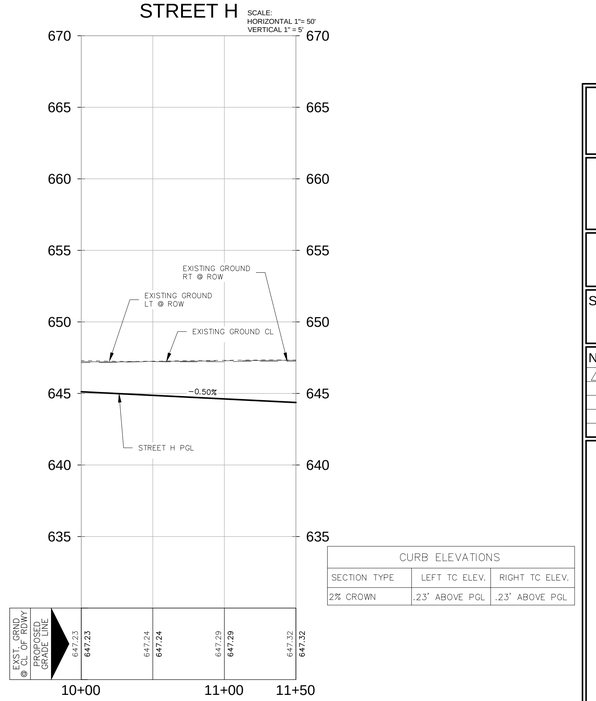


CURB ELEVATIONS

SECTION TYPE	LEFT TC ELEV.	RIGHT TC ELEV.
2% CROWN	.23' ABOVE PGL	.23' ABOVE PGL
1% CROSS SLOPE	.37' BELOW PGL	.72' ABOVE PGL

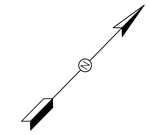
STREET H

SCALE:
HORIZONTAL 1"= 50'
VERTICAL 1" = 5'



CURB ELEVATIONS

SECTION TYPE	LEFT TC ELEV.	RIGHT TC ELEV.
2% CROWN	.23' ABOVE PGL	.23' ABOVE PGL



0 50' 100'
SCALE: 1"=50'

LEGEND

- VERTICAL PAVEMENT TRANSITION (WASHOUT CROWN)
- VALLEY GUTTER
- 900 EXISTING CONTOUR
- 900 PROPOSED CONTOUR

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

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SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

STREETS B, G AND H PLAN & PROFILE

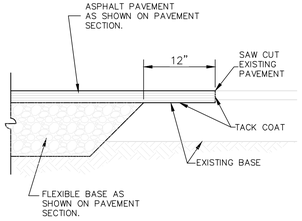
SHEET 9 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

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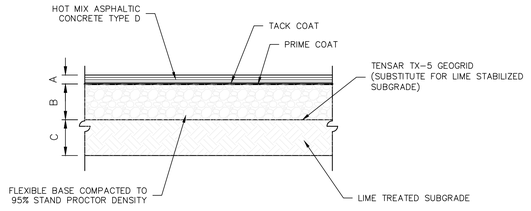
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NEW PAVEMENT TO EXISTING

SCALE: NTS



TYPICAL PAVEMENT SECTION - LOCAL TYPE A

NOTE: PAVEMENT SECTION MEETS THE MINIMUM REQUIREMENTS AS PER CITY OF NEW BRAUNFELS

Scale: NTS

	URBAN COLLECTOR LOW TRAFFIC – (W18 700,000 ESALs)			
	Pavement Components	**Thickness, inches**	**Thickness, inches**	**Thickness, inches**
A	Hot Mix Asphaltic Concrete (HMAC) Surface Course – Type D	3.5	4.0	4.5
B	Flexible Base	19.0	17.0	15.0
C	Lime Treated Subgrade *(No Structural Credit)*	6.0	6.0	6.0

Note: Alternative pavement sections with relatively thicker asphalt concrete and thinner flexible base could be utilized. UES would be pleased to discuss alternative pavement sections if desired.

NOTE:

1. RESIDENTIAL LOCAL PAVEMENT SECTION LIMITS

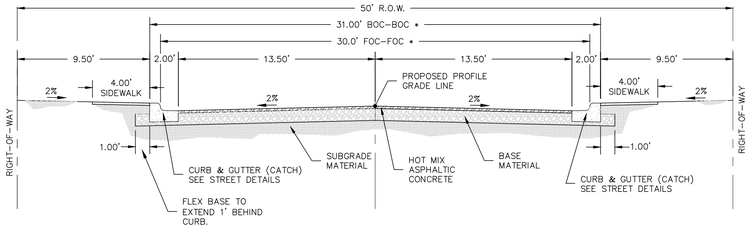
   CROWN SECTION
   – STREET B STA 20+15.00 TO STA 22+45.00
   – STREET G STA 20+53.53 TO STA 21+50.00
   – STREET H STA 10+35.92 TO STA 11+48.98
   – STREET E STA 10+30.00 TO STA 22+11.48
   – STREET F STA 10+10.00 TO STA 23+50.00

   CROSS SLOPE SECTION
   – STREET G STA 22+00.00 TO 22+65.78

2. CONTRACTOR TO REFERENCE GEOTECHNICAL ENGINEERING REPORT – SAENGERHALLE ROAD IMPROVEMENTS PREPARED BY UES. PROJECT NO.: 24–110 DATED JULY 11, 2025.

   ACCORDING TO THE PRELIMINARY GEOTECHNICAL ENGINEERING STUDY PREPARED BY THE SUBGRADE SOILS SHALL BE TESTED AT TIME OF CONSTRUCTION TO DETERMINE THE LIME REQUIREMENT TO ACHIEVE A PH VALUE OF 12.4 OR GREATER.

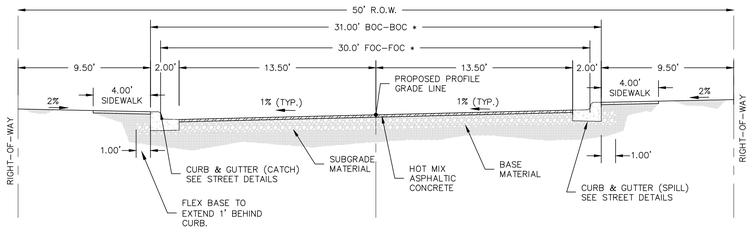
3. SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULFATE CONTENT PRIOR TO TREATMENT.



CROWN SECTION 50' R.O.W.

Scale: 1" = 5'

*FOC – FACE OF CURB
*BOC– BACK OF CURB



CROSS SLOPE SECTION 50' R.O.W.

Scale: 1" = 5'

TYPICAL STREET CROSS SECTIONS

STREET SECTION NOTES:

1. ALL CONCRETE CURBING SHALL BE CONCRETE CURB AND GUTTER, (I.E. CATCH OR SPILL) UNLESS OTHERWISE SPECIFIED ON THE PLANS (I.E. RIBBON CURB)
2. CROSS SLOPE VARIES WITHIN VERTICAL TRANSITIONS. THE TYPICAL CROSS SLOPE SHALL BE 1% UNLESS OTHERWISE SPECIFIED ON PLANS.
3. BASE MATERIAL SHALL EXTEND 12" BEHIND BACK OF CURB.
4. SEE GRADING PLAN FOR LOT GRADING BEYOND RIGHT OF WAY LINE.

Drawing Name: N:\Projects\080001 Sour Ln Development\Civil\Construction Drawings\PHASE 1\11 STREET SECTIONS & DETAILS II.dwg User: chuckware Sep 30, 2025 - 5:27pm

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

STREET SECTIONS AND DETAILS I

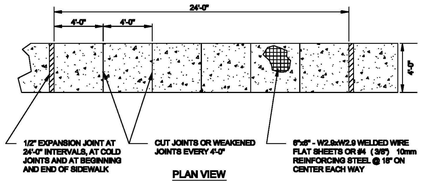
SHEET 10 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

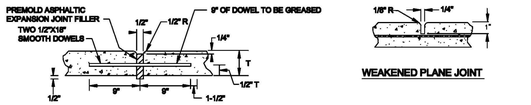
INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830–358–7127 ink–civil.com
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SIDEWALK
(RESIDENTIAL)

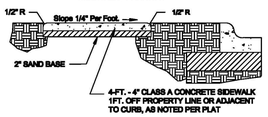


PLAN VIEW



EXPANSION JOINT

WEAKENED PLANE JOINT



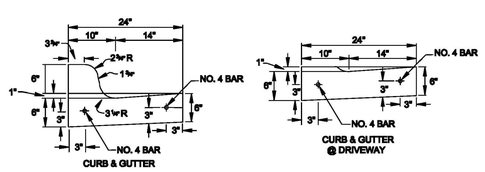
TYPICAL SECTION

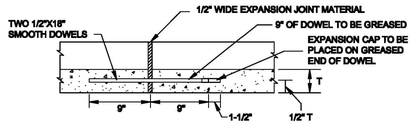
NOTES:

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 1/3 rd. 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.	City of New Braunfels — ENGINEERING DEPARTMENT
DRAWN BY: RAS	SHEET: 1 OF 1		
FILENAME: SIDEWALK (Residential)			
P:\CURRENT NEW BRAUNFELS DETAILS\2009\			

CURB AND GUTTER





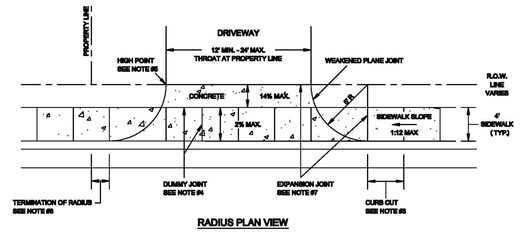
LONGITUDINAL SECTION THRU CURB AND GUTTER SHOWING TYPICAL EXPANSION JOINT DETAILS.
REINFORCING STEEL SHALL NOT CROSS EXPANSION JOINTS.
STEEL SHALL BE TERMINATED 3" (+ OR -) 1" FROM FACE OF THE JOINT.

NOTES:

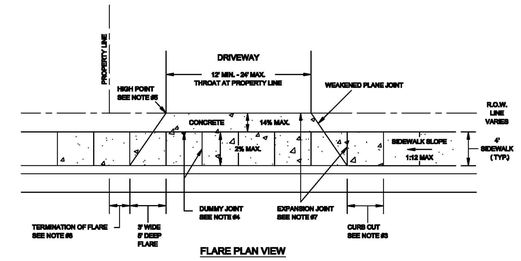
1. **REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 18".**
2. **CURB AND GUTTER SHALL HAVE FORMED TOOLED OR SAWED CONTRACTION JOINTS AT ± 10'. THE DEPTH OF THESE JOINTS SHALL BE SUFFICIENT TO ENSURE CRACKING AT THE JOINTS.**
3. **CURB OR CURB AND GUTTER SHALL HAVE EXPANSION JOINTS AT POINTS OF CURVATURE, 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: 7/08	DWG. NO: ST-013	SCALE: N.T.S.	City of New Braunfels — ENGINEERING DEPARTMENT
DRAWN BY: RAS	SHEET: 1 OF 1		
FILENAME: Curb & Gutter			
P:\CURRENT NEW BRAUNFELS DETAILS\2009\			

DRIVEWAY APRON
(RESIDENTIAL - RADIAL/FLARED)



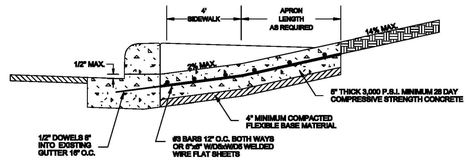
RADIUS PLAN VIEW



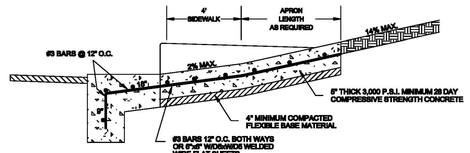
FLARE PLAN VIEW

DATE APPROVED: 7/08	DWG. NO: ST-014.1	SCALE: N.T.S.	City of New Braunfels — ENGINEERING DEPARTMENT
DRAWN BY: RAS	SHEET: 1 OF 2		
FILENAME: DRIVEWAY (Residential - Radial/Flares)			
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DRIVEWAY APRON
(ONE OR TWO FAMILY RESIDENTIAL)



STRUCTURAL SECTION

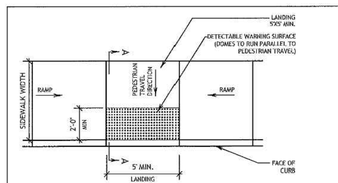


NO EXISTING CURB STRUCTURAL SECTION

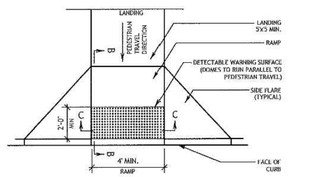
NOTES:

1. **WHERE GUTTER DOES NOT EXIST DRIVEWAY APRON SHALL EXTEND TO EDGE OF ASPHALT AND SHALL HAVE A MINIMUM 6" WIDE 1' DEEP GRADE BEAM MONOLITHIC AND REINFORCED SIMILAR TO APRON.**
2. **PLACEMENT OF SIDEWALK SHOWN IS TYPICAL; HOWEVER, ALTERNATIVE SIDEWALK PLACEMENT COMMON TO DRIVEWAY APRON WILL BE CONSIDERED PROVIDED CROSS SLOPE OF SIDEWALK IS NO GREATER THAN 2%.**
3. **CURB CUT LENGTH NO GREATER THAN AS REQUIRED TO MATCH SLOPE OF ADJACENT SIDEWALK.**
4. **DUMMY JOINTS TO BE PROVIDED AT MINIMUM 4-FT. INTERVALS PERPENDICULAR TO THE CURB LINE WITHIN THE SIDEWALK AREA AND PARALLEL TO THE SIDEWALK AREA.**
5. **PROVIDE A MINIMUM 7" HIGH POINT. HIGH POINT HEIGHT SHALL BE MEASURED FROM THE GUTTER FLOW LINE TO THE DRIVEWAY APRON. NOTE HIGH POINT MAY OCCUR OUTSIDE OF ROW.**
6. **DRIVEWAY THROAT TRANSITION MAY OCCUR OUTSIDE OF ROW.**
7. **PROVIDE EXPANSION JOINTS AT ALL SIDEWALK AND DRIVEWAY THROAT JOINTS. EXPANSION JOINTS SHALL BE PLACED USING 1/2" ASPHALTIC MATERIAL WITH 1/2" DOWELS 18" O.C.**
8. **THE TANGENT POINT OF THE DRIVEWAY CURB RETURN AT THE PUBLIC ROADWAY LINE OR FLARE SHALL BE A MINIMUM DISTANCE OF 1' OFF THE PROPERTY PROJECTED PERPENDICULAR TO THE STREET CENTERLINE, EXCEPT SINGLE FAMILY OR ZERO LOT LINE LOTS. ON SINGLE FAMILY ZERO LOT LINE LOTS WHERE THE DRIVE IS ON THE ZERO LOT LINE, THE TANGENT POINT OR FLARE SHALL BE NO GREATER THAN 3' BEYOND THE ADJOINING PROPERTY LINE PROJECTED PERPENDICULAR TO THE STREET CENTERLINE.**
9. **ALL SIDEWALK AND DRIVEWAY CONSTRUCTION SHALL MEET A.D.A. SPECIFICATIONS.**

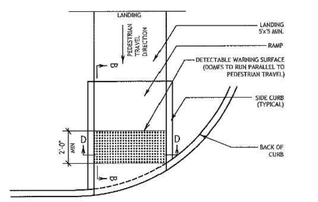
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DRAWN BY: RAS	SHEET: 2 OF 2		
FILENAME: DRIVEWAY (Residential - Radial/Flares)			
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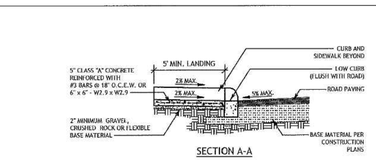
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING FOR PARALLEL CURB RAMP.



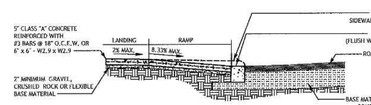
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE FOR PERPENDICULAR CURB RAMP.



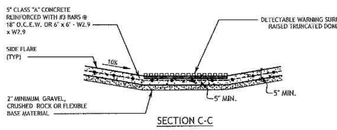
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN FOR DIRECTIONAL CURB RAMP.



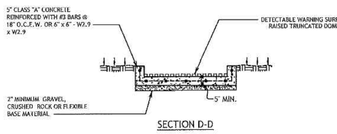
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

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 AMERICANS 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.
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% (1V:12H). MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 2% (1V:50H).
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% (1V:10H) 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 ROARD 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 5" 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

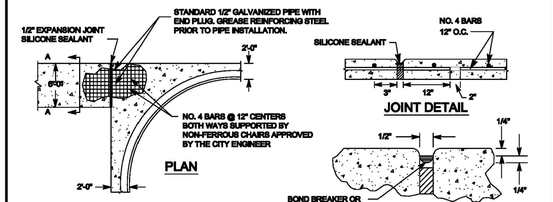
1. CURB RAMPS OR LANDINGS ABUTTING THE CROSSWALK MUST HAVE A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES COMPLYING WITH SECTION 705 OF THE TEXAS ACCESSIBILITY STANDARDS (TAS). THE SURFACE MUST CONTRAST VISUALLY WITH ADJOINING SURFACES, INCLUDING SIDE FLARES. FURNISH DARK BROWN 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 AT THE BACK OF CURB. ALIGN THE ROWS OF DOMES TO BE PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER RADIUS.
6. DETECTABLE WARNING MATERIALS MUST MEET TXDOT DEPARTMENTAL MATERIALS SPECIFICATION DMS 4350 AND BE LISTED ON THE MATERIAL PRODUCER LIST. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
7. DETECTABLE WARNING PAVERS SHALL NOT BE PERMITTED WITHOUT THE APPROVAL BY THE PUBLIC WORKS DEPARTMENT.

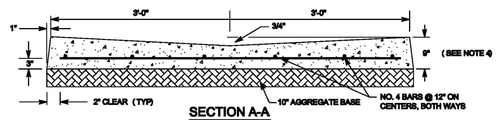
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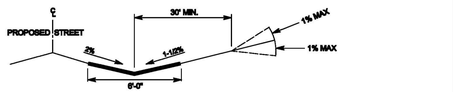
City of New Braunfels
ENGINEERING DIVISION
550 LANDA STREET
NEW BRAUNFELS, TEXAS 78130
PHONE: 830 221 4020
FAX: 830 628 3600

CURB RAMP STANDARDS			
APPROVED DATE: 05/18/2017	DWG. NO.: ST-019	SCALE: AS NOTED	
DRAWN BY: RC	CONTACT: GF	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.	City of New Braunfels — ENGINEERING DEPARTMENT
DRAWN BY: RAS	SHEET: 1 OF 1		
FILENAME: CROSS GUTTER			
P:\CURRENT NEW BRAUNFELS DETAILS\2009\			

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

STREET SECTIONS & DETAILS II

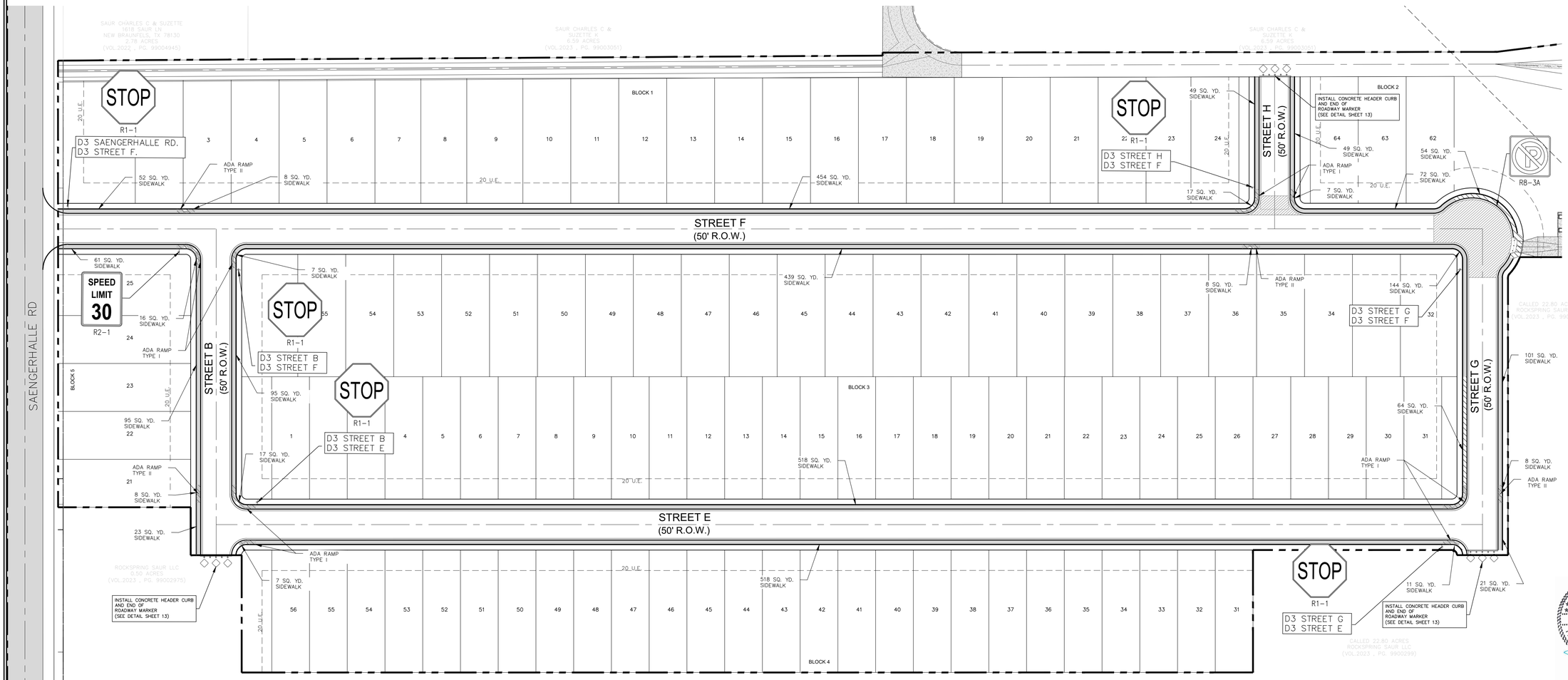
SHEET 11 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\080001 Sour Lo Development\Civil\Construction Drawings\PHASE 1\1 STREET SECTIONS & DETAILS II.dwg User: chuckware Sep 30, 2025 - 5:27pm





ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

TRAFFIC SIGNAGE & SIDEWALK PLAN

SHEET 12 OF 41

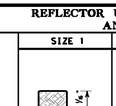
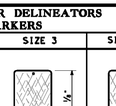
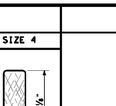
NO	DATE	ISSUES AND REVISIONS
1		

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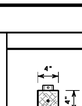
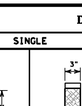
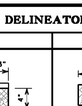
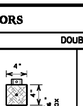
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Drawing Name: N:\Projects\080001 Saur Ln Development\Civil\Construction Drawings\Phase 1\13 TRAFFIC SIGNAGE DETAILS.dwg User: chuckware Sep 30, 2025 - 5:28pm

REFLECTOR UNIT SIZES FOR DELINEATORS AND OBJECT MARKERS

	SIZE 1	SIZE 2	SIZE 3	SIZE 4
DEVICE				
SHEETING	Yellow, White or Red Type B or C reflective sheeting			
NOTE	1. Size 1 and 4 - Direct applied reflective sheeting for use on flexible post (fix). 2. Size 2 and 3 - For use on wing channel (wc) post only. Use approved metal, plastic or fiberglass backplate with 17/64" mounting holes.			

DELINEATORS

	SINGLE		DOUBLE	
DEVICE				
	1-Size 2 reflector unit	1-Size 1 reflector unit	2-Size 2 reflector units	2-Size 1 reflector units
SHEETING	Yellow, White or Red Type B or C Reflective Sheeting			
POST TYPE	WC	FLX	WC	FLX
MOUNT TYPE	GND	GND, SRF	GND	GND, SRF

D & OM DESCRIPTIVE CODES

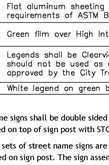
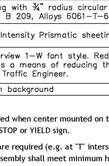
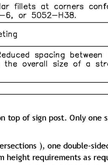
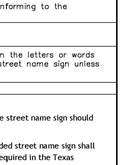
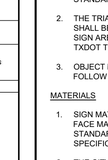
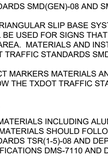
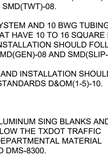
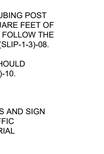
INSTL DEL ASSM (D-XX)SZ X (XXX)XXX(XX)

- NUMBER OF REFLECTORS: S = Single; D = Double
- COLOR OF REFLECTORS: W = White; Y = Yellow; R = Red
- REFLECTOR UNIT SIZE: 1 or 2
- TYPE OF POST OR DELINEATOR: WC = Wing Channel Post; FLX = Flexible Post; BRF = Barrier Reflector
- TYPE OF MOUNT: GND = Embedded (drivable or set in concrete); CTB = Concrete Barrier Mount; GF1 or GF2 = Guard Fence Attachment; SRF = Surface Mount
- DIRECTION: If Required; BI = Bi-Directional; BR = Bi-Directional post with red on back

INSTL OM ASSM (OM-XX) (XXX)XXX(XX)

- TYPE OF OBJECT MARKER: 1, 2, 3, or 4
- NUMBER OF REFLECTORS OR DIRECTION: S = 1-Size 2 reflector units (Type 2 only); Y = 1-Size 1 reflector unit (Type 2 only); Z = 2-Size 1 or 1-Size 4 reflector units(Type 2 only); L = Left Side (Type 3 Object Marker only); R = Right Side (Type 3 Object Marker only); C = Center (Type 3 Object Marker only)
- TYPE OF POST: WC = Wing Channel Post; FLX = Flexible Post; TWT = Thin Walled Tubing
- TYPE OF MOUNT: GND = Embedded (drivable); SRF = Surface Mount; WAS = Wedge Anchor Steel; WAP = Wedge Anchor Plastic
- DIRECTION: If Required; BI = Bi-Directional

OBJECT MARKERS

	Type 1 (OM-1)	Type 2 (OM-2)			Type 3 (OM-3)			Type 4 (OM-4)
	OM-1	OM-2X	OM-2Y	OM-2Z	OM-3L	OM-3R	OM-3C	OM-4
DEVICE								
		3-Size 2 reflector units	1-Size 3 reflector unit	3-Size 1 reflector units or 1-Size 4 reflector unit				
SHEETING	Yellow-Type B_L or C_L Sheeting	Yellow - Type B or C Sheeting			Alternating acrylic black and retroflective yellow - Type B_L or C_L Sheeting			Red -Type B_L or C_L Sheeting
POST TYPE	TWT	WC	WC	FLX	TWT			TWT
MOUNT TYPE	WAS, WAP	GND	GND	GND, SRF	WAS, WAP			WAS, WAP

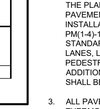
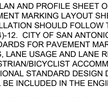
DEPARTMENTAL MATERIAL SPECIFICATIONS

FLEXIBLE DELINEATOR & OBJECT MARKER POSTS (EMBEDDED & SURFACE MOUNT TYPES)	DMS-4400
SIGN FACE MATERIALS	DMS-8300
DELINEATORS, OBJECT MARKERS AND BARRIER REFLECTORS	DMS-8600

BARRIER REFLECTORS (BRF)

	GF1	GF2	CTB
DEVICE			
NOTE	1. Barrier reflectors shall meet the requirements of DMS 8600. 2. Approved Barrier Reflectors are listed on the "Barrier Reflectors" Material Producer List at: www.txdot.gov.		
SHEETING	Yellow, White, Red		
NOTE	1. Minimum 9 square inches of reflective sheeting surface area.		

CHEVRONS

DEVICE	 W1-8	
SIZE (W x L)	18"x 24" (Conventional)	24"x 30" (Conventional Oversize)
MOUNTING HEIGHT	4'-0" or 7'-0"	
SIZE (W x L)	30"x 36" (Expressway)	36" x 48" (Freeway)
MOUNTING HEIGHT	7'-0" Only	
NOTE	1. CHEVRON (W1-8) signs and ONE DIRECTION LARGE ARROW (W1-6) Signs shall be installed per Sign Mounting Details (SMD) Standard Sheets and paid under Item 644 (Small Roadside Sign Assemblies). 2. The Texas version of the ONE DIRECTION LARGE ARROW sign (W1-9T) may be used instead of the ONE DIRECTIONAL LARGE ARROW (W1-6).	

ONE DIRECTION LARGE ARROW

DEVICE	 W1-6	
SIZE (W x L)	48" x 24" (Conventional)	60" x 30" (Expressway & Freeway)
MOUNTING HEIGHT	7'-0"	

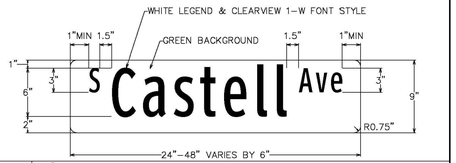
NOTE:
Delineator and object marker backplates and sign substrates shall be 0.080" Aluminum sign blank to conform to ASTM B-209 Alloy 6061-T6 or approved alternative.

Texas Department of Transportation — Traffic Operations Division Standard

DELINEATOR & OBJECT MARKER MATERIAL DESCRIPTION
D & OM(1)-15

FILE: dant-15.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS				
10-09 3-15	DIST	COUNTY		SHEET NO.
4-10				

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		
ISSUE DATE: February 2013	DWG. NO: ST-024	SCALE: N.T.S.
DRAWN BY: RAS	CONTACT: GF	SHEET: 1 OF 1

City of New Braunfels — ENGINEERING DIVISION
424 S. CASTELL AVE.
NEW BRAUNFELS, TEXAS 78130
PHONE: 830.221.4020
FAX: 830.626.3600

P:\2010 ENGINEERING-AUTOCAD\DETAILS\NB-PUBLIC WORKS DETAILS\NB-UNAPPROVED DETAILS-2013\ST-2013.024 STREET SIGN DETAIL - GROUND MOUNT.DWG

SIGN REQUIREMENTS

1. TRAFFIC SIGNS SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND WHERE JUSTIFIED BY ENGINEERING JUDGMENT OR STUDY. TRAFFIC SIGNS INCLUDE REGULATOR SIGNS, WARNING SIGNS, STREET NAME SIGNS AND OBJECT MARKERS.
2. ALL SIGNS SHALL BE SHOWN IN THE ENGINEERING PLANS FOR REVIEW AND APPROVAL AS PART OF THE PLAN AND PROFILE SHEET OR SEPARATE SIGNING AND PAVEMENT MARKING LAYOUT SHEET. THE ENGINEERING PLANS SHALL INCLUDE SIGN LOCATION, NAME, DESIGNATION AND SIZE. SIGN STANDARDS SHALL BE INCLUDED IN THE ENGINEERING PLANS.

INSTALLATION

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

MOUNTING

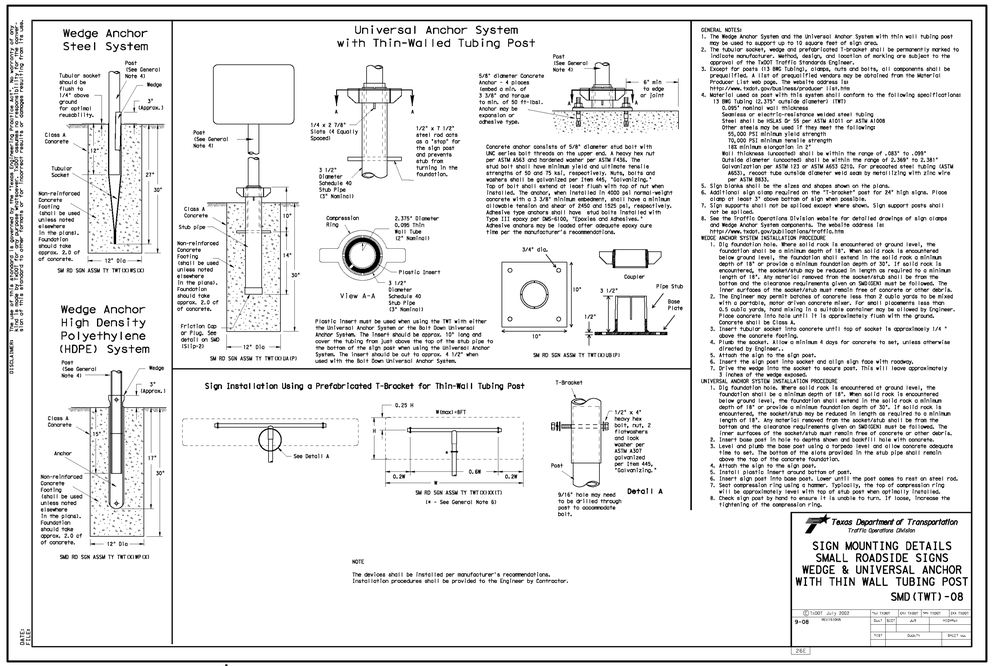
1. THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TRAFFIC STANDARDS SMD(GEN)-08 AND SMD(TWT)-08.
2. THE TRIANGULAR SLIP BASE SYSTEM AND 10 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.
3. OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D&OM(1-9)-10.

MATERIALS

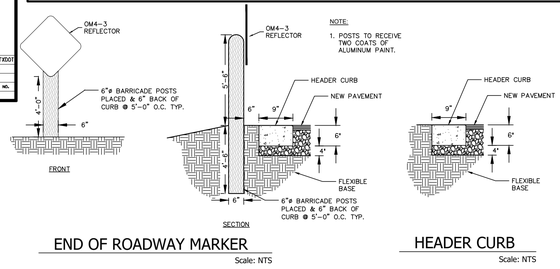
1. SIGN MATERIALS INCLUDING ALUMINUM SING BLANKS AND SIGN FACE MATERIALS SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS TSR(1-5)-08 AND DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-7110 AND DMS-8300.
2. THE CITY OF NEW BRAUNFELS WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

PAVEMENT MARKING REQUIREMENTS

1. PAVEMENT MARKINGS SHALL BE USED IN ACCORDANCE WITH THE LATEST REVISION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND WHERE JUSTIFIED BY ENGINEERING JUDGMENT OR STUDY.
2. ALL PAVEMENT MARKINGS SHALL BE SHOWN IN THE ENGINEERING PLANS FOR REVIEW AND APPROVAL AS PART OF THE PLAN AND PROFILE SHEET OR SEPARATE SIGNING AND PAVEMENT MARKING LAYOUT SHEET. DESIGN, MATERIALS AND INSTALLATION SHOULD FOLLOW TXDOT TRAFFIC STANDARDS PM(1-4)-12. CITY OF SAN ANTONIO TRAFFIC ENGINEERING STANDARDS FOR PAVEMENT MARKINGS DESIGNATING TRAFFIC LANES, LANE USAGE AND LANE REGULATIONS AND PEDESTRIAN/BICYCLIST ACCOMMODATIONS MAY BE USED FOR ADDITIONAL STANDARD DESIGN DETAILS. MARKING STANDARDS SHALL BE INCLUDED IN THE ENGINEERING PLANS.
3. ALL PAVEMENT MARKINGS SHALL BE TYPE I HOT APPLIED THERMOPLASTIC AND MEET TXDOT DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-8200.
4. THE CONTRACTOR SHALL NOTIFY THE CITY OF NEW BRAUNFELS AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO THE INSTALLATION OF ALL SEALER AND FINAL MARKINGS. THE CONTRACTOR MAY BE RESPONSIBLE FOR PLACING SPOT TABS BEFORE MARKING APPLICATION. THE CITY WILL INSPECT ALL MARKINGS AT FINAL APPLICATION.



NOTE
The devices shall be installed per manufacturer's recommendations. Installation procedures shall be provided to the Engineer by Contractor.



NOTE:
1. POSTS TO RECEIVE TWO COATS OF ALUMINUM PAINT.

END OF ROADWAY MARKER
Scale: NTS

HEADER CURB
Scale: NTS

ALL PROPOSED SIDEWALKS ARE 4' IN WIDTH.

NOTE:
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.

ALL RAMPS AND ANY PROPOSED SIDEWALKS THAT DO NOT FRONT PROPOSED RESIDENTIAL LOTS ARE REQUIRED TO BE CONSTRUCTED WITH THE STREET CONSTRUCTION.

Texas Department of Transportation — Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS WEDGE & UNIVERSAL ANCHOR WITH THIN WALL TUBING POST
SMD(TWT)-08

©TxDOT JULY 2002	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
9-08 REVISIONS	DIST	SECT	JOB	HIGHWAY
			1-0(XX)	
	DIST	COUNTY		SHEET NO.

STATE OF TEXAS — JAMES INGALLS — 107416 — LICENSED PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

TRAFFIC SIGNAGE DETAILS

SHEET 13 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

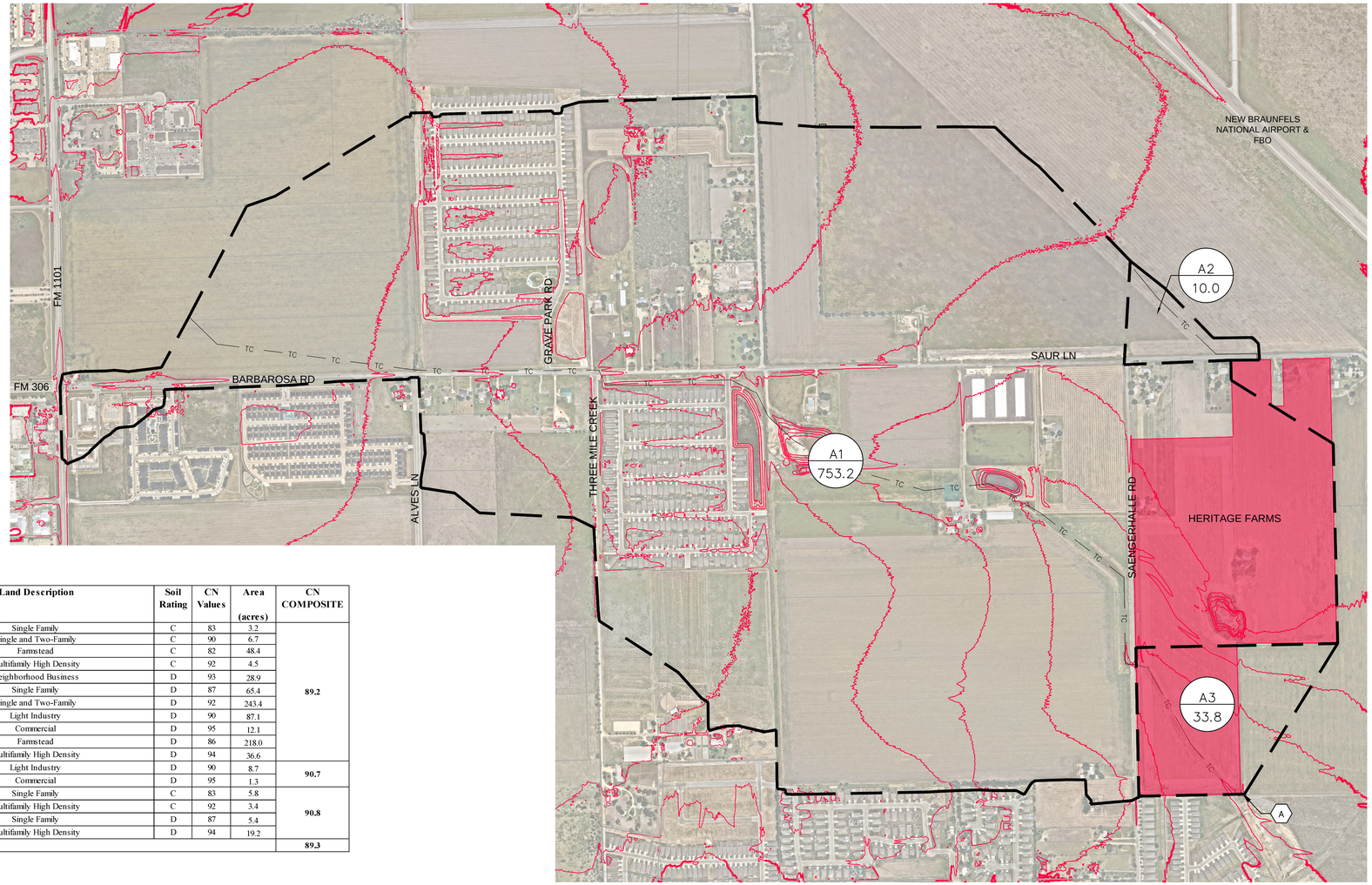
INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\080001 Spur 14 Development\Civil\Construction Drawings\PHASE 1\13 TRAFFIC SIGNAGE DETAILS.dwg User: shackware Sep 30, 2025 - 5:28pm

EXISTING CONDITIONS



Drainage Area	Tot. Area (acres)	Land Description	Soil Rating	CN Values	Area (acres)	CN COMPOSITE
A1	753.2	Single Family	C	83	3.2	89.2
		Single and Two-Family	C	90	6.7	
		Farmstead	C	82	48.4	
		Multifamily High Density	C	92	4.5	
		Neighborhood Business	D	93	28.9	
		Single Family	D	87	65.4	
		Single and Two-Family	D	92	243.4	
		Light Industry	D	90	87.1	
		Commercial	D	95	12.1	
		Farmstead	D	86	218.0	
		Multifamily High Density	D	94	36.6	
A2	10.0	Light Industry	D	90	8.7	90.7
		Commercial	D	95	1.3	
A3	33.8	Single Family	C	83	5.8	90.8
		Multifamily High Density	C	92	3.4	
		Single Family	D	87	5.4	
		Multifamily High Density	D	94	19.2	
A1-A3	797.0					89.3

HYDROLOGY CALCULATIONS

Inlet/Study Point	Structure/ Description	Contributing Areas	Area	CN	Initial Abstraction (Eq. 2-2 TR-55)	Overland Flow (Equation 4-4, NB DCM)						Shallow Concentrated Flow (Equation 4-5 & 4-6, NB DCM)				Channel Flow			Total Time of Conc.	T Lag (0.6*Tc)	Q2	Q10	Q25	Q50	Q100
						Surface Description	Manning's "n"	P2	Length	Slope	Tov.	Surface Roughness	Length	Slope	Tsc.	Length	Velocity	Tch	Tc	Tc Lag					
			(acres)					(in.)	(ft)	(ft/ft)	(min)		(ft)	(ft/ft)	(min)	(ft)	(ft/s)	(min)	(min)	(min)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)
Existing Conditions																									
1	Saenghalle Rd	A1	753.20	89.20	0.24	Short Grass Prairie	0.15	4.08	300	0.003	44.6	Unpaved	1609	0.003	30.4	5467	6.0	15.2	90	54	915.3	1722.5	2336.0	2882.0	3507.1
2	Saur Ln	A2	10.00	90.70	0.21	Short Grass Prairie	0.15	4.08	300	0.003	44.6	Unpaved	650	0.003	12.3	378	6.0	1.1	58	35	17.1	31.3	42.1	51.8	62.8
3	Saengerrunde Meadows	A1-A3	797.00	89.29	0.24	Short Grass Prairie	0.15	4.08	300	0.003	44.6	Unpaved	1609	0.003	30.4	6815	6.0	18.9	94	56	946.7	1779.2	2412.0	2975.3	3620.2

N

0 500' 1000'
SCALE:1"=500'

LEGEND

- LIMITS OF DRAINAGE AREA
- PROPERTY BOUNDARY
- TC TC — TIME OF CONCENTRATION
- 905 — EXISTING CONTOURS
- FLOW ARROWS
- A / 9.0 — DRAINAGE BASIN LABEL / BASIN AREA (AC)
- A1 — ANALYSIS POINT LABEL

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

EXISTING SCS DRAINAGE AREA MAP

SHEET 14 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

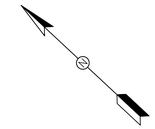
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TBPE FIRM F-13351

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Drawing Name: N:\Projects\0060001 Saur Ln Development\Civil\Construction Drawings\PHASE 1\14 EXISTING SCS DRAINAGE AREA MAP.dwg User: chuckwire Sep 30, 2025 - 5:37pm

ULTIMATE OVERALL SCS CONDITIONS





0 100' 200'
SCALE: 1"=100'

LEGEND

- LIMITS OF DRAINAGE AREA
- TC — TC — TIME OF CONCENTRATION
- 900 EXISTING CONTOURS
- 900 PROPOSED CONTOURS
- FLOW ARROWS
- A / 9.0 DRAINAGE BASIN LABEL / BASIN AREA (AC)
- A1 ANALYSIS POINT LABEL

Drainage Area	Tot. Area (acres)	Land Description	Soil Rating	CN Values	Area (acres)	CN COMPOSITE
ULTIMATE	798.0	Single Family	C	83	9.0	89.0
		Single and Two-Family	C	90	6.7	
		Farmstead	C	82	48.4	
		Multifamily High Density	C	92	7.9	
		Neighborhood Business	D	93	28.9	
		Single Family	D	87	70.8	
		Single and Two-Family	D	92	243.4	
		Light Industry	D	90	95.8	
		Commercial	D	95	13.4	
		Farmstead	D	86	238.1	
		Multifamily High Density	D	94	35.6	

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

ULTIMATE SCS
DRAINAGE AREA MAP

SHEET 15 OF 41

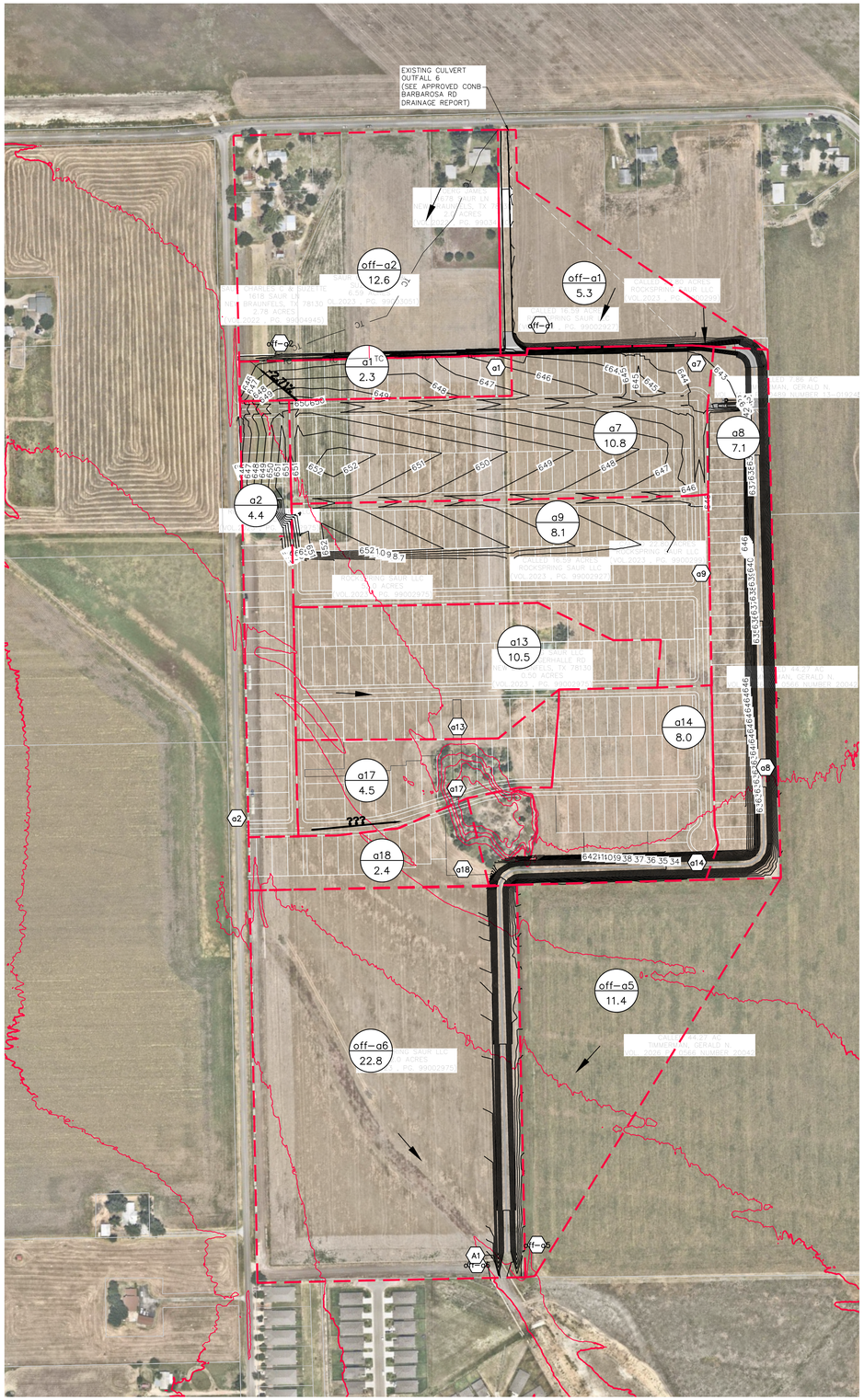
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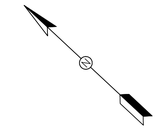
INK CIVIL
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Drawing Name: N:\Projects\080001 Saur Ln Development\Civil\Construction Drawings\PHASE 1\15 ULTIMATE SCS DRAINAGE AREA MAP.dwg User: chuckwire Sep 30, 2025 - 5:39pm

PROPOSED ON-SITE RATIONAL CONDITIONS





0 100' 200'
SCALE: 1"=100'

LEGEND

- LIMITS OF DRAINAGE AREA
- TC — TC — TIME OF CONCENTRATION
- 900 EXISTING CONTOURS
- 900 PROPOSED CONTOURS
- FLOW ARROWS
- A / 9.0 DRAINAGE BASIN LABEL / BASIN AREA (AC)
- A1 ANALYSIS POINT LABEL



ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

ULTIMATE RATIONAL
DRAINAGE AREA MAP

SHEET 16 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

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Drawing Name: N:\Projects\QR0001 Sour Un Development\Civil\Construction Drawings\Phase 1\16 ULTIMATE RATIONAL DRAINAGE AREA MAP.dwg User: chuckwyre Sep 30, 2025 - 5:41pm

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

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

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

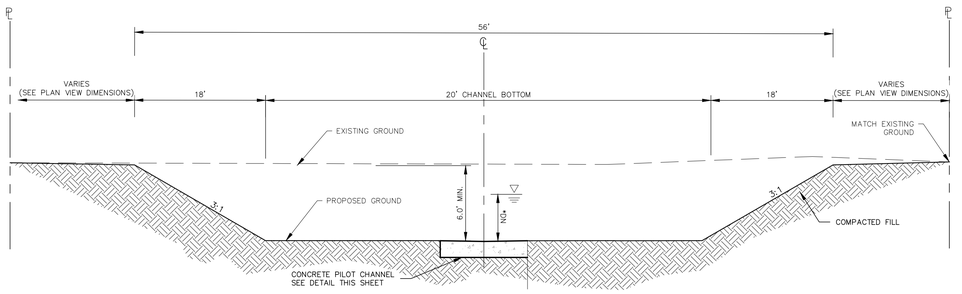
TELEPHONE LOCATOR

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

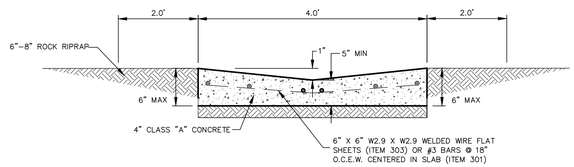
THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE INCURRED BY THEIR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



SECTION A1 - A1

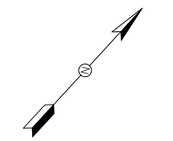
NOT TO SCALE

*NOTE: - SEE CHANNEL HYDRAULIC TABLE THIS SHEET



PILOT CHANNEL DETAIL

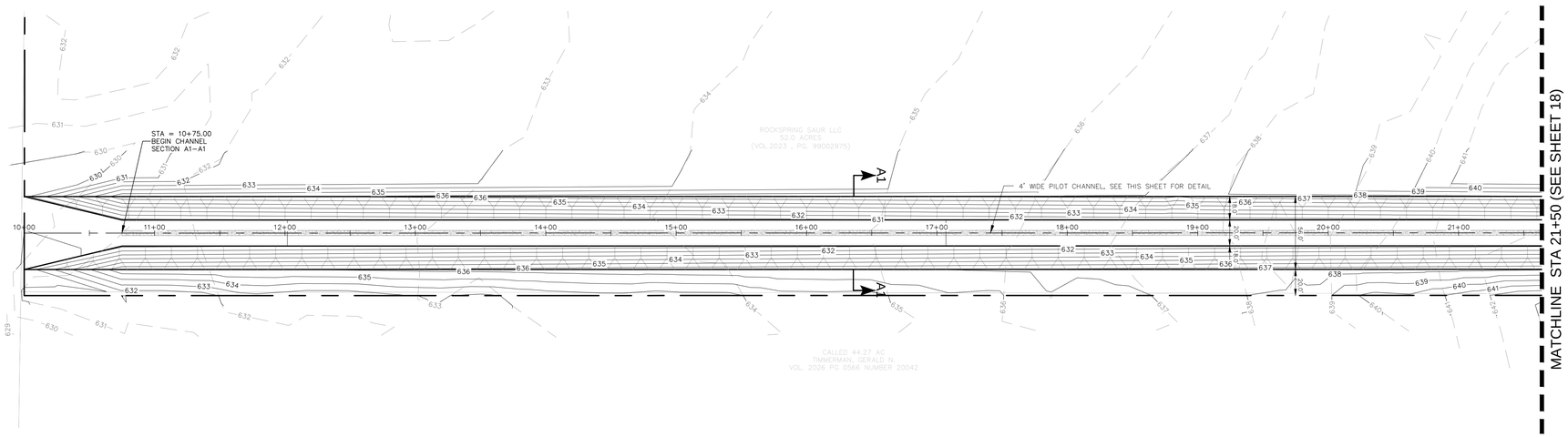
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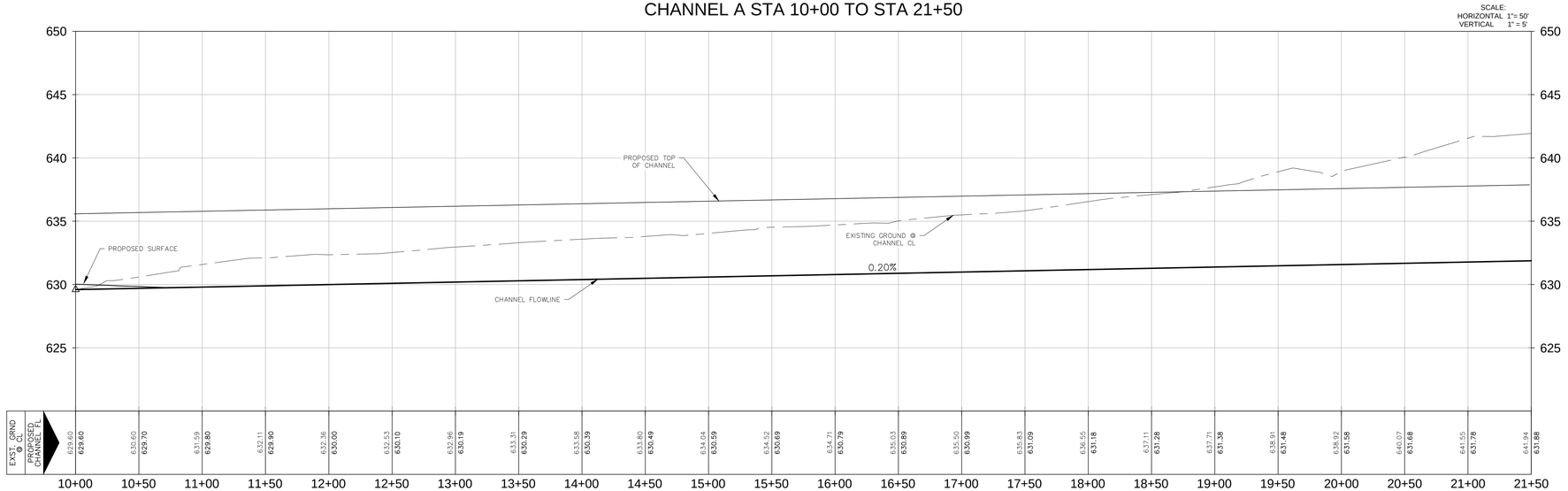
LEGEND

- COMPACTED FILL
- CONCRETE
- CHANNEL CENTERLINE
- EXISTING CONTOUR
- 900 PROPOSED CONTOUR
- PROPERTY LINE

PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITES AND REPORT ANY DISCREPANCIES TO ENGINEER



CHANNEL A STA 10+00 TO STA 21+50



STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

CHANNEL A PLAN AND PROFILE
STA 10+00 TO STA 21+50

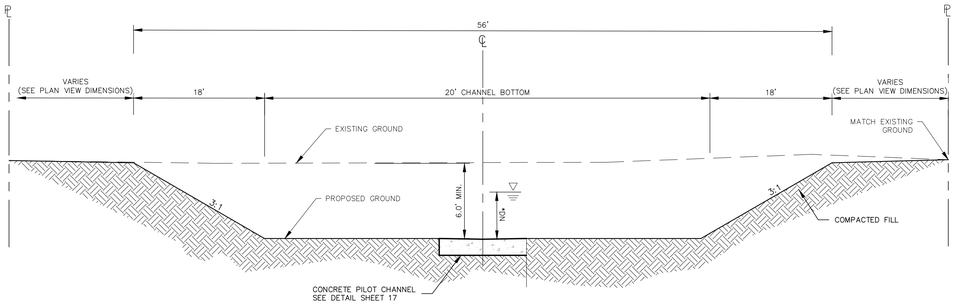
SHEET 17 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

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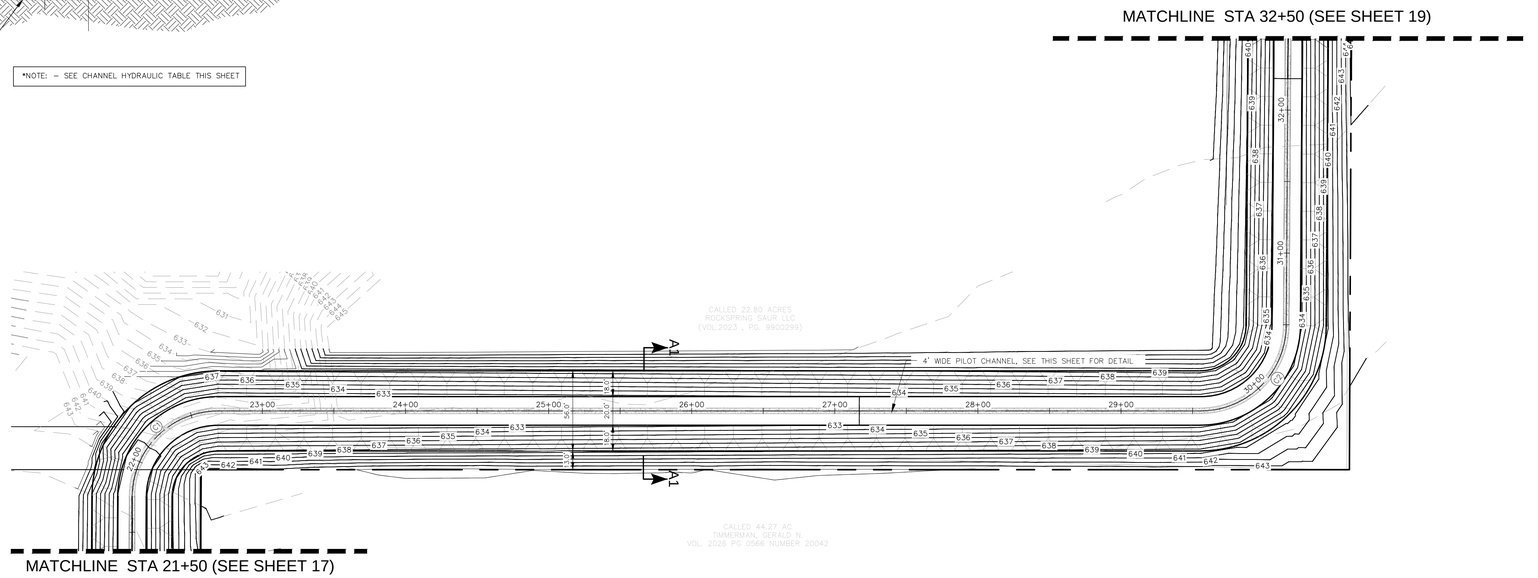
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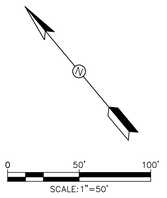


SECTION A1 - A1

NOT TO SCALE

*NOTE: – SEE CHANNEL HYDRAULIC TABLE THIS SHEET





LEGEND

- COMPACTED FILL
- CONCRETE
- CHANNEL CENTERLINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY LINE

PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITES AND REPORT ANY DISCREPANCIES TO ENGINEER

CURVE TABLE					
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	CHORD LENGTH	TANGENT
C1	60	92.18	S88° 53' 41.94"E	83.29	58.12
C2	60	93.98	S89° 39' 20.52"E	84.66	59.73

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

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

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

TELEPHONE LOCATOR

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

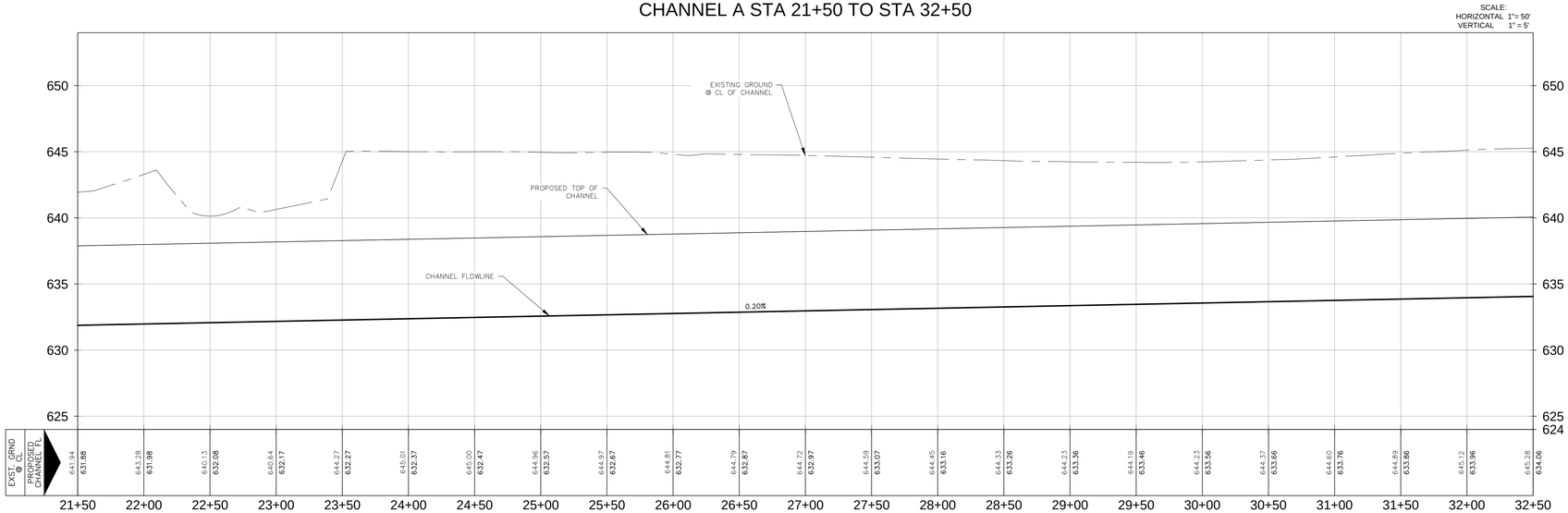
TRENCH EXCAVATION SAFETY PROTECTION

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CHANNEL A STA 21+50 TO STA 32+50

SCALE:
HORIZONTAL 1"= 50'
VERTICAL 1" = 5'



STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

CHANNEL A PLAN AND PROFILE
STA 21+50 TO STA 32+50

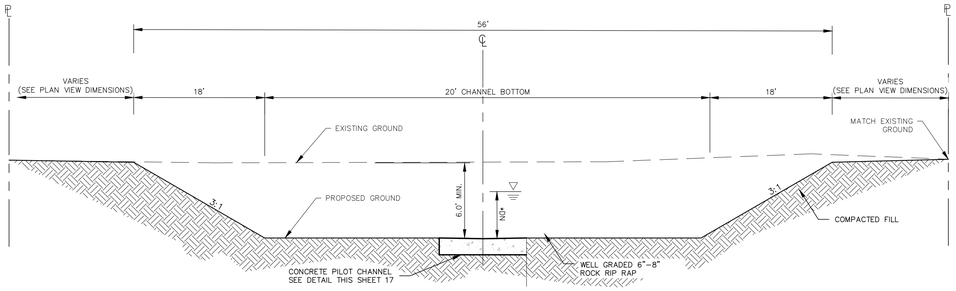
SHEET 18 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

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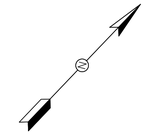
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SECTION A1 - A1

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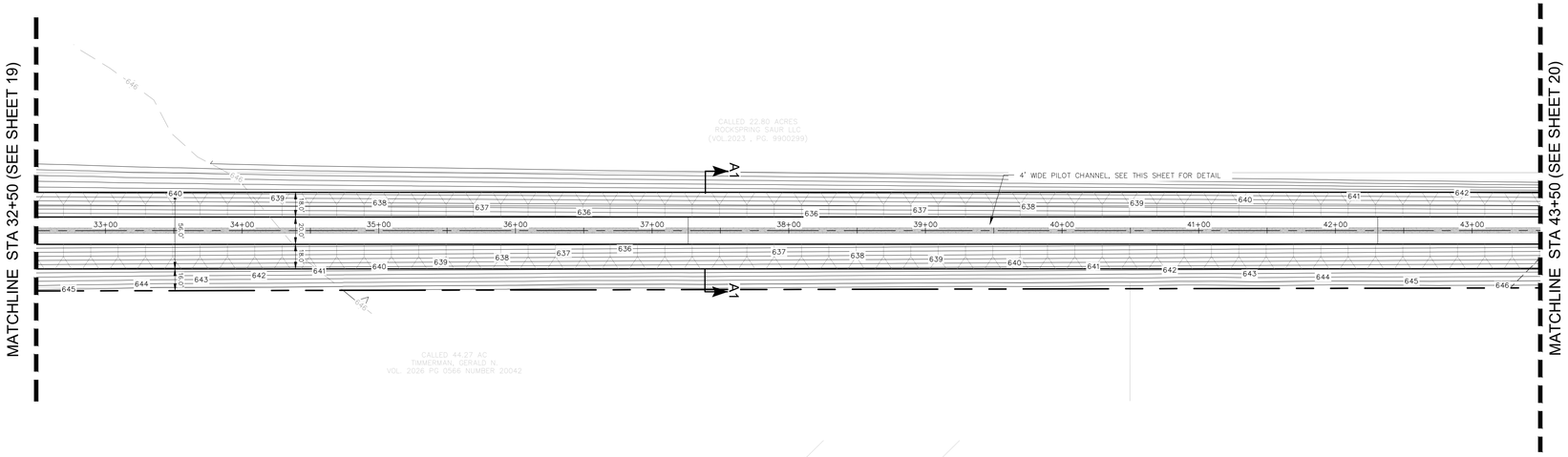
•NOTE: – SEE CHANNEL HYDRAULIC TABLE THIS SHEET



LEGEND

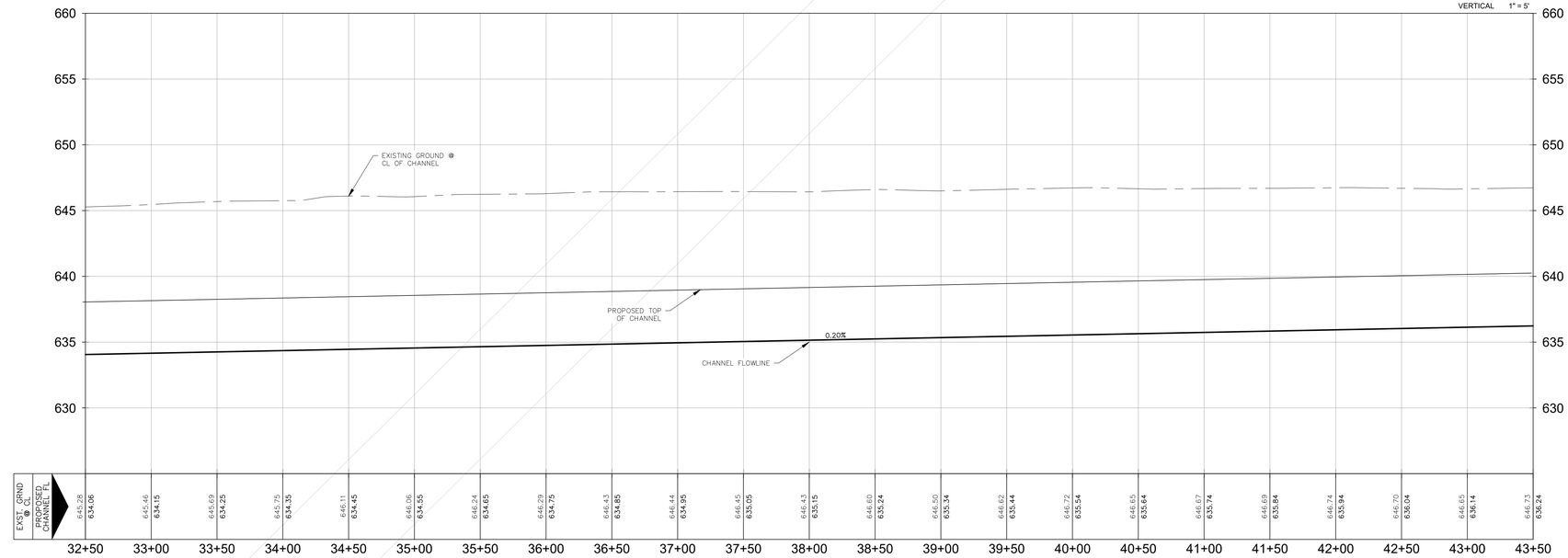
- COMPACTED FILL
- CHANNEL CENTERLINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY LINE

PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITES AND REPORT ANY DISCREPANCIES TO ENGINEER



CHANNEL A STA 32+50 TO STA 43+50

SCALE:
HORIZONTAL 1"= 50'
VERTICAL 1" = 5'



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

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

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TELEPHONE LOCATOR

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

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ROCKSPRING
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SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

CHANNEL A PLAN AND PROFILE
STA 32+50 TO STA 43+50

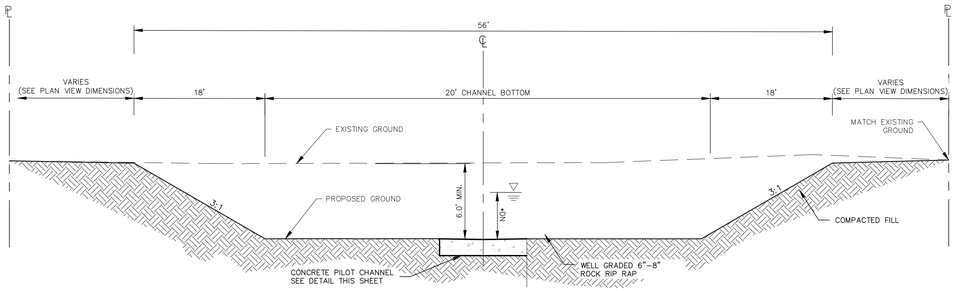
SHEET 19 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

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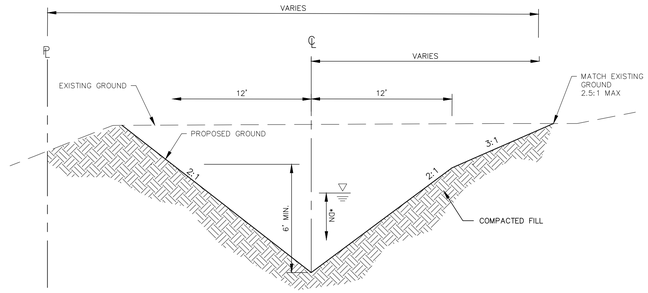
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SECTION A1 - A1

NOT TO SCALE

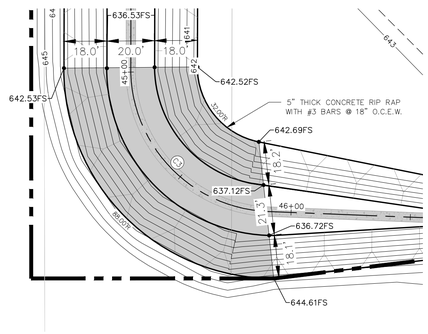
*NOTE: – SEE CHANNEL HYDRAULIC TABLE THIS SHEET

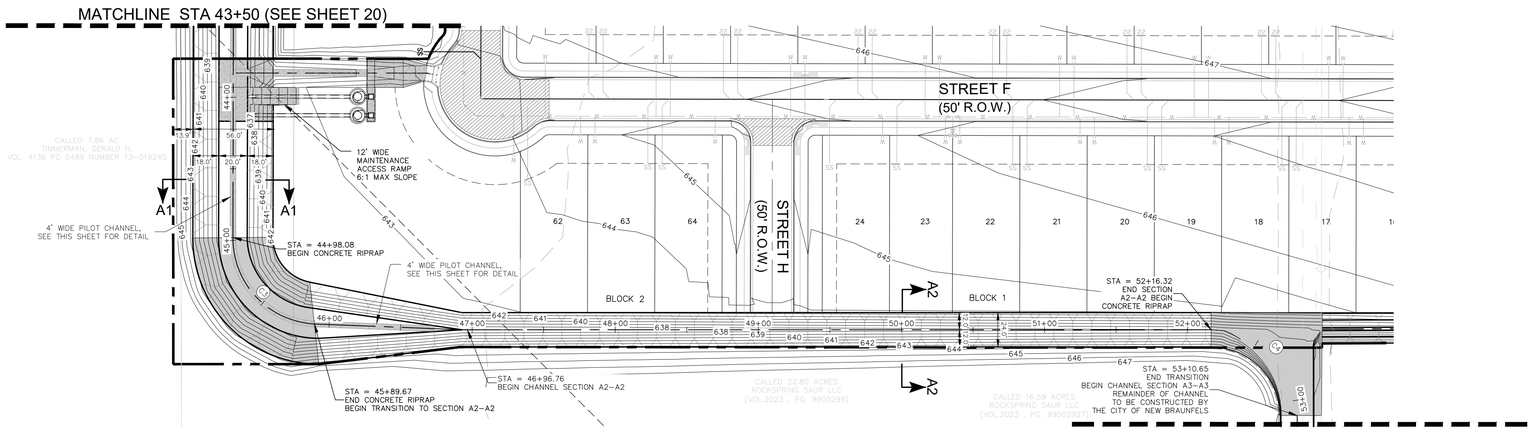


SECTION A2 - A2

NOT TO SCALE

*NOTE: – SEE CHANNEL HYDRAULIC TABLE THIS SHEET





CURVE TABLE					
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	CHORD LENGTH	TANGENT
C3	60	91.98	N01° 40' 55.27"E	83.22	57.81
C4	60	94.15	N00° 25' 44.70"E	84.78	59.90

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

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
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C.P.E. LOCATOR

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TELEPHONE LOCATOR

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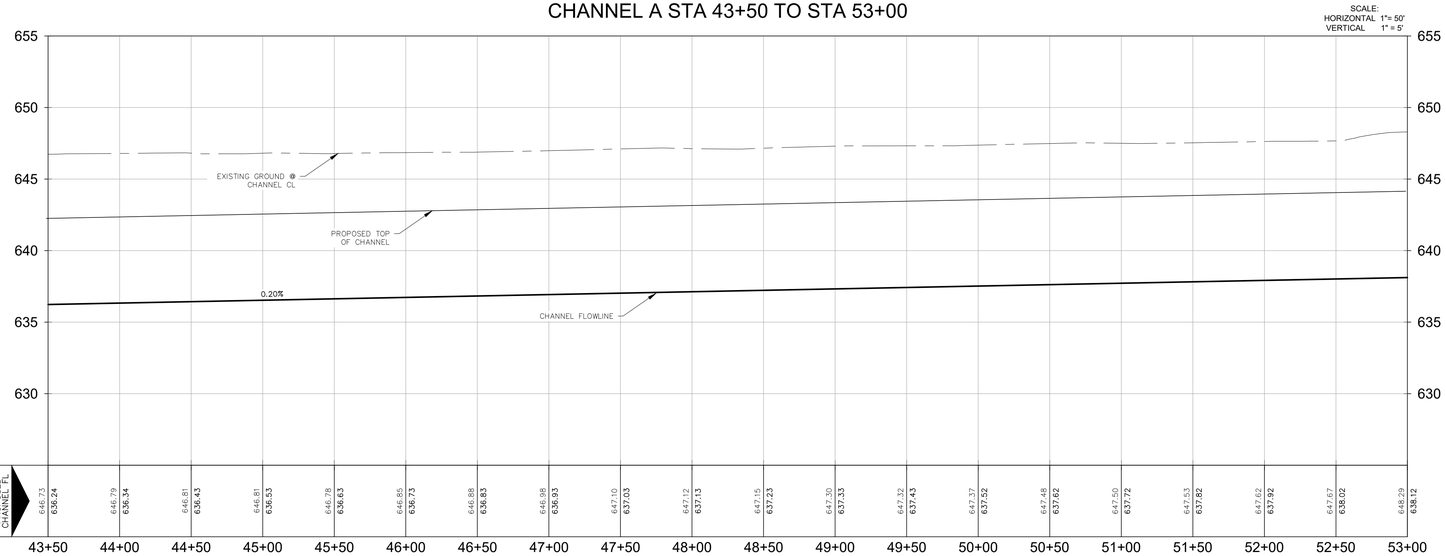
TRENCH EXCAVATION SAFETY PROTECTION

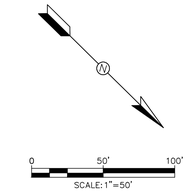
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CHANNEL A STA 43+50 TO STA 53+00

SCALE:
HORIZONTAL 1"= 50'
VERTICAL 1" = 5'





LEGEND

- COMPACTED FILL
- CONCRETE
- ROCK RIP-RAP
- CHANNEL CENTERLINE
- 905 EXISTING CONTOUR
- 900 PROPOSED CONTOUR
- PROPERTY LINE

PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITES AND REPORT ANY DISCREPANCIES TO ENGINEER



ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

CHANNEL A PLAN AND PROFILE
STA 43+50 TO STA 53+00

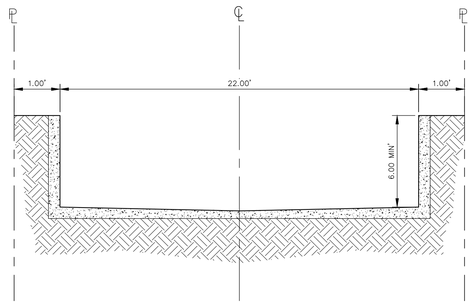
SHEET 20 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

INK CIVIL
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NEW BRAUNFELS, TX. 78132
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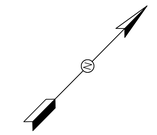
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SECTION A3 - A3

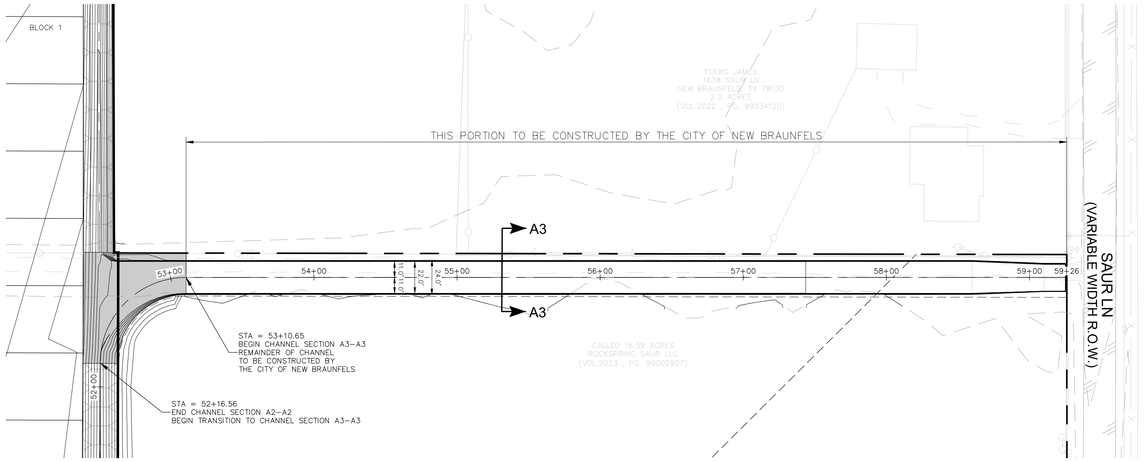
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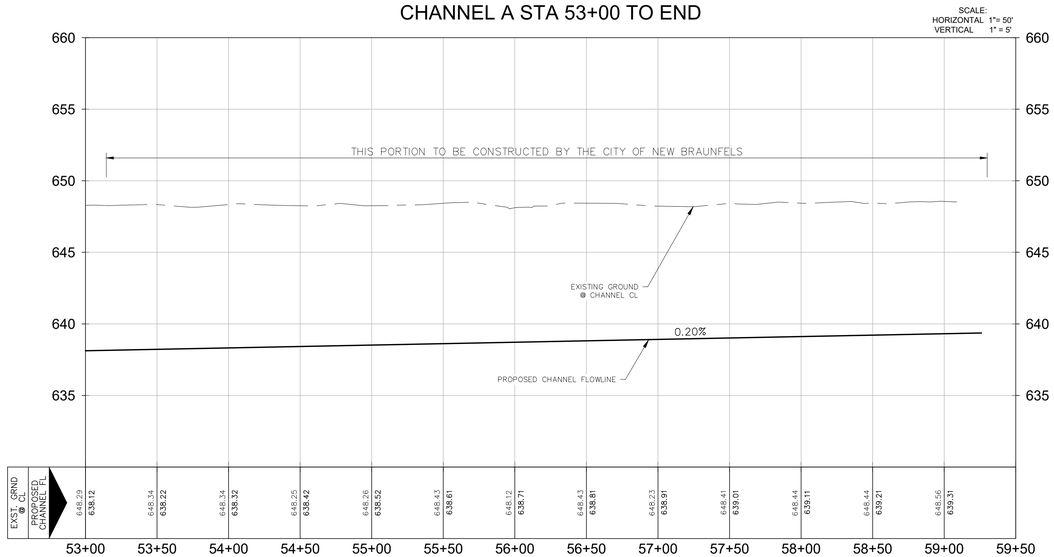
•NOTE: – SEE CHANNEL HYDRAULIC TABLE THIS SHEET



LEGEND

- CHANNEL CENTERLINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY LINE
- COMPACTED FILL
- CONCRETE





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

New Braunfels Utilities	830–629–8400
Spectrum Cable	830–625–3408
Centerpoint Gas	830–643–6434
Robert Sanders	830–643–6903
Damaged Line	888–876–5786
AT&T Telephone	830–303–1333
Erick White PM	210–283–1706
Scott McBrearty (Construction)	210–658–4886
Texas One Call	830–545–6005

C.P.E. LOCATOR

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

TELEPHONE LOCATOR

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

TRENCH EXCAVATION SAFETY PROTECTION

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STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

CHANNEL A PLAN AND PROFILE
STA 53+00 TO END

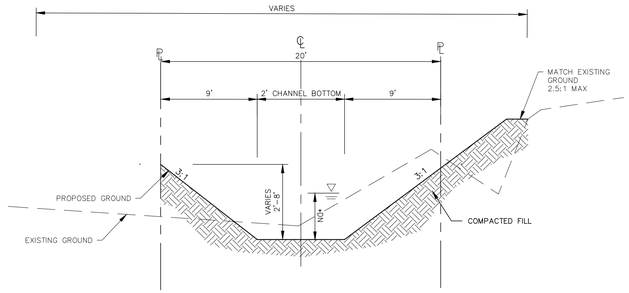
SHEET 21 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

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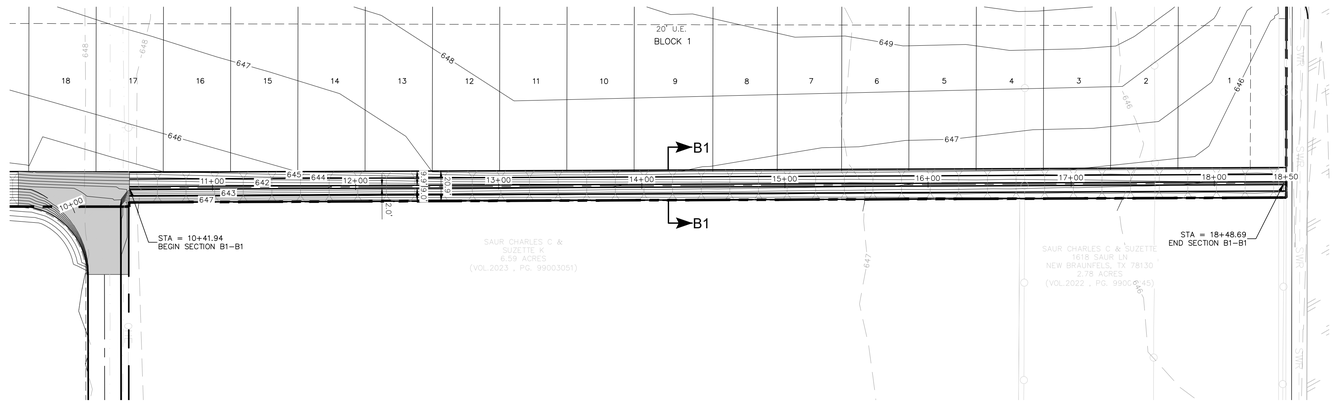
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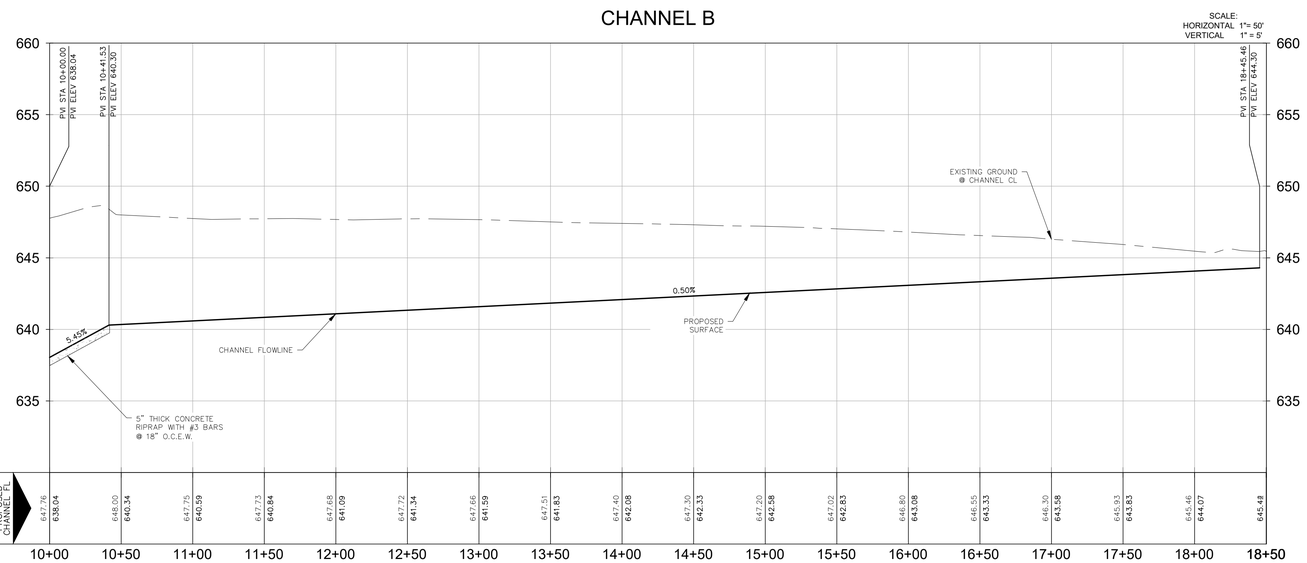


SECTION B1 - B1

NOT TO SCALE

*NOTE: – SEE CHANNEL HYDRAULIC TABLE THIS SHEET





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Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
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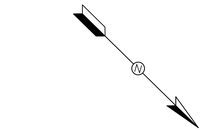
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TRENCH EXCAVATION SAFETY PROTECTION

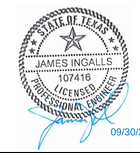
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LEGEND

- COMPACTED FILL
- CONCRETE
- ROCK RIP-RAP
- CHANNEL CENTERLINE
- 900 EXISTING CONTOUR
- 900 PROPOSED CONTOUR
- PROPERTY LINE



ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

CHANNEL B PLAN & PROFILE

SHEET 22 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

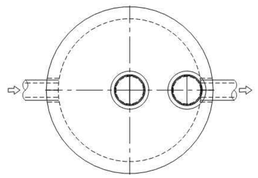
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PH: 830-358-7127 ink-civil.com
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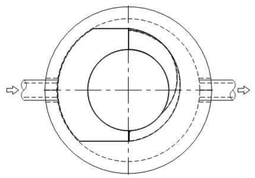
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PROJECT SUMMARY

DESIGN PARAMETERS
- TREATMENT METHOD = CDS
- MODEL = CDS5678-10

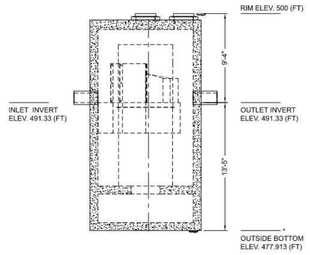


PLAN VIEW
(INTERNALS NOT SHOWN)
SCALE: 1"=60'



SECTION FOR PIPE ORIENTATION
(TOP SLAB NOT SHOWN)
SCALE: 1"=60'

MATERIAL LIST		
COUNT	DESCRIPTION	INSTALLED BY
1	CDS5678-10 CYLINDER INSERT, STD	CONTRACTOR
1	SEALANT FOR JOINTS	CONTRACTOR
1	24"Ø 4" FRAME & COVER, EJ#41600389, OR EQUIV.	CONTRACTOR
1	24"Ø 4" FRAME & COVER, EJ#41600389, OR EQUIV.	CONTRACTOR



ELEVATION VIEW

SCALE: 1"=90'

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR FABRICATION DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. CDS WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. STRUCTURE SHALL MEET AASHTO HS-20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2', AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. IF REQUIRED, PVC HYDRAULIC SHEAR PLATE IS PLACED ON SHELF AT BOTTOM OF SCREEN CYLINDER. REMOVE AND REPLACE AS NECESSARY DURING MAINTENANCE CLEANING.
6. CDS STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-478 AND AASHTO LOAD FACTOR DESIGN METHOD.

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CDS MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

* OUTSIDE TOP AND BOTTOM OF SYSTEM MAY DIFFER DEPENDING ON MANUFACTURING LOCATION.

CONTECH
DYOHDS
DRAWING

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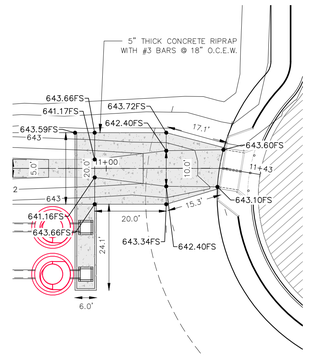
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CDS CDS5678-10
HERITAGE FARMS UNIT 1
OUTFALL A
NEW BRAUNFELS,TX

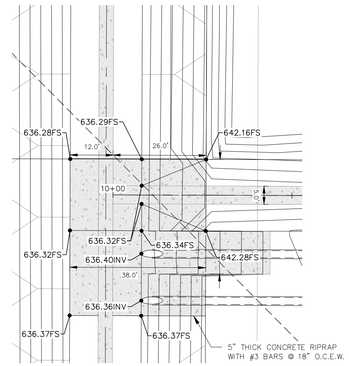
CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com

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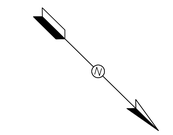
DATE:	09/29/2025
DESIGNED: DYO	DRAWN: DYO
CHECKED: DYO	APPROVED: DYO
PROJECT NO.: 63875	SEQUENCE NO.: 87597
SHEET:	1 OF 1



RIPRAP DETAIL "A"
NOT TO SCALE



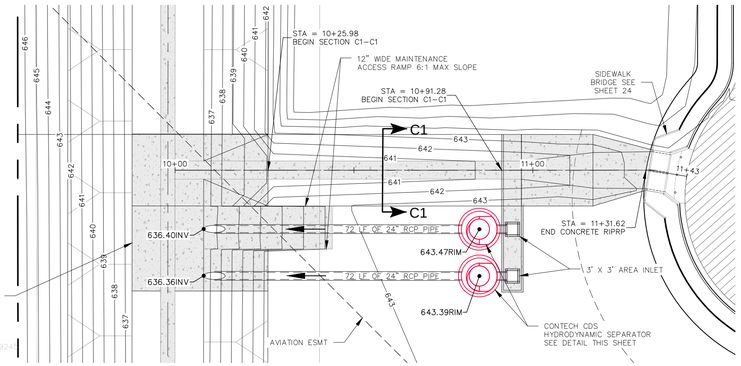
RIPRAP DETAIL "B"
NOT TO SCALE



0 20' 40'
SCALE: 1"=20'

LEGEND

- COMPACTED FILL
- CONCRETE
- ROCK RIP-RAP
- CHANNEL CENTERLINE
- 650 EXISTING CONTOUR
- 900 PROPOSED CONTOUR
- PROPERTY LINE



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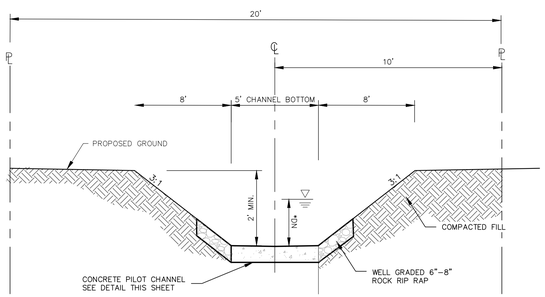
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Robert Sanders	830-643-6903
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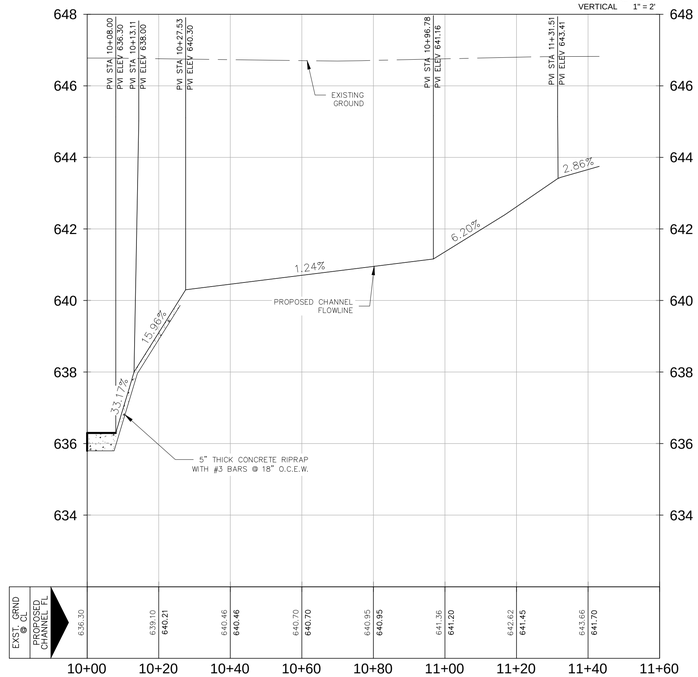


SECTION C1 - C1
NOT TO SCALE

*NOTE: - SEE CHANNEL HYDRAULIC TABLE THIS SHEET

CHANNEL C

SCALE:
HORIZONTAL 1"= 20'
VERTICAL 1"= 2'





ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

CHANNEL C PLAN AND PROFILE

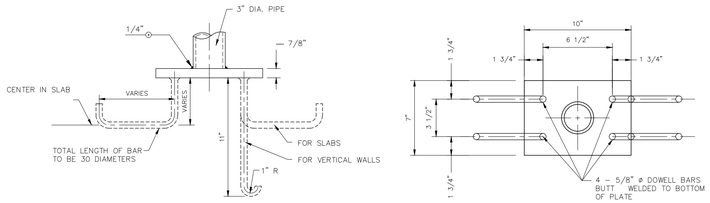
SHEET 23 OF 41

NO	DATE	ISSUES AND REVISIONS
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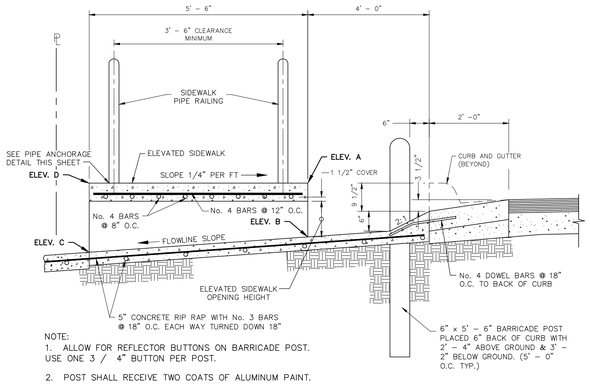
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Drawing Name: N:\Projects\QM001 Star Ln Development\Civil\Construction Drawings\PHASE 1\23 CHANNEL C PLAN AND PROFILE.dwg User: jonathanjallen Sep 30, 2025 - 5:59pm



PIPE ANCHORAGE DETAILS

NOT TO SCALE



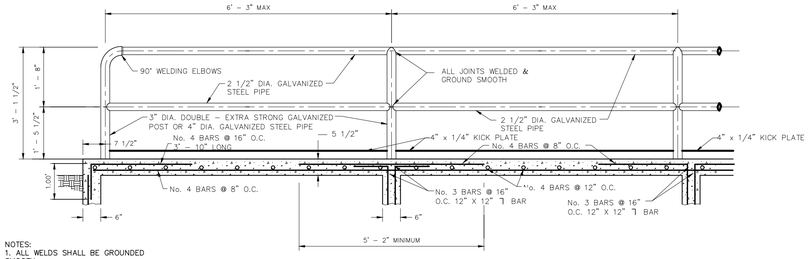
NOTE:
1. ALLOW FOR REFLECTOR BUTTONS ON BARRICADE POST. USE ONE 3 / 4" BUTTON PER POST.

2. POST SHALL RECEIVE TWO COATS OF ALUMINUM PAINT.

SECTION A-A ELEVATED SIDEWALK

NOT TO SCALE

SIDEWALK BRIDGE ELEVATION TABLE				
OPENING HEIGHT	ELEVATION			
	A	B	C	D
1 FT	645.09	644.59	644.43	644.93

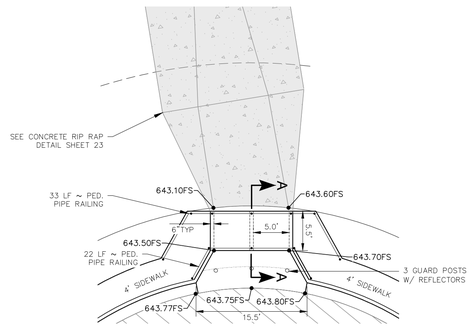


NOTES:
1. ALL WELDS SHALL BE GROUNDED SMOOTH.

2. HANDRAIL SHALL BE PRIMED W/RED OXIDE AND PAINTED W/(2) COATS OF AN EXTERIOR RATED LATEX ENAMEL. COLOR TO BE DETERMINED BY OWNER.

3. ALL EXPOSED CONCRETE EDGES TO BE CHAMFERED 3/4".

TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION



SIDEWALK BRIDGE DETAIL

1" = 10'

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

DRAINAGE DETAILS I

SHEET 24 OF 41

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GENERAL SPECIFICATIONS FOR SITE PREPARATION

GENERAL DESCRIPTION
THIS ITEM SHALL CONSIST OF ALL CLEARING AND PREPARATION OF LAND TOO 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 MATERIAL
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 4140.3D 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 COMPACTION 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).

GRADING NOTES:

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES THAT ARE NOT SPECIFICALLY COVERED IN THE SPECIFICATIONS OR GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY AND TXDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS AND CONSTRUCTION (LATEST EDITION).
2. SITE PREPARATION, GRADING, EXCAVATION AND FILL SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT AND SPECIFICATIONS.
3. ALL SELECT FILL MATERIAL PROVIDED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING AND COMPACTING.
4. ALL ELEVATIONS AND PROPOSED CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVING, BASE, GRASS, TOPSOIL, AND MULCH MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
5. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF GRADES OR DIMENSIONS NECESSARY FOR THE CONSTRUCTION OF THE PROJECT.
6. THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
8. THE CONTRACTOR SHALL REMOVE TOP SOIL, GRASS, ROOTS, DEBRIS, ETC., AND DISPOSE OFFSITE THOSE MATERIALS NOT SUITABLE FOR EMBANKMENT AND TOPSOIL. CLEAN STRIPING AND TOPSOIL MAY BE STOCKPILED ON SITE FOR REUSE IN A LOCATION SPECIFIED BY THE OWNER.
9. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE STABILIZATION. ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TPDES/SWPPP REQUIREMENTS.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS (USE OF SILT FENCES, ETC.) TO KEEP DEBRIS AND SILT FROM WASHING ONTO ADJACENT PROPERTY, STREETS, OR DRAINAGE WAYS. CONTRACTOR SHALL IMMEDIATELY REMOVE SILT/DEBRIS WHICH WASHES OFFSITE OR INTO EXISTING STORM DRAIN SYSTEMS. (SEE SWPPP PLANS & TPDES BOOK).

COMPACTION OF SLOPES
THE FACES OF FILL SLOPES SHALL BE COMPACTED. COMPACTING OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TOO 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.

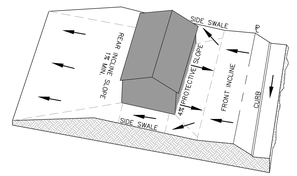
DENSITY TEST
FIELD DENSITY TESTS SHALL BE PERFORMED ON ALL LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE TWELVE INCHES (12"). ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. NOTIFICATION BY THE CONTRACTOR TO CONDUCT TESTS SHALL BE AT LEAST ONE DAY BEFORE. THIS NOTIFICATION SHALL INCLUDE THE FILL AREA LOCATION (LOT AND BLOCK), THE LIFT OR HEIGHT OF FILL AND APPROXIMATE DESIRED TIME OF TESTING. WHEN THESE TESTS 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 GEOTECHNICAL ENGINEER OR STAFF.

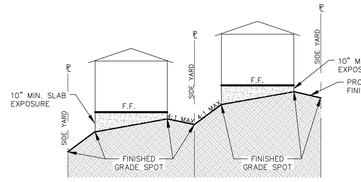
1. THE LAND TO BE FILLED (PREPARED SUBGRADE) SHALL BE PREPARED AND TESTED AT A FREQUENCY AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
2. THE FIRST LIFT OF COMPACTED FILL (GENERALLY 8-12 IN.) SHALL BE TESTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER. ANY AREAS SUPPORTING THE PROPOSED STRUCTURES REQUIRING FILL SHALL BE TESTED FOR DENSITY COMPLIANCE.
3. FILL AREAS 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.

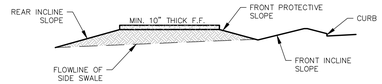
HUD 79-G
HUD 79-G REQUIREMENT FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUD 79-G COMPACTION TESTING. IN ADDITION, CONTRACTOR MUST RETAIN A GEOTECHNICAL ENGINEER TO PROVIDE VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79-G. AFTER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

11. THE CONTRACTOR SHALL OBTAIN FINISHED NATURAL GROUND GRADES SHOWN HEREON WITHIN +/_ ONE-TENTH (0.10) FOOT.
12. IN PROPOSED PAVING AREAS, IT IS INTENDED THAT THE MINIMUM GRADE IS 1%. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM GRADE OF 2% UNLESS OTHERWISE SHOWN.
13. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING SITE AND PROPOSED IMPROVEMENTS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL, OR BETTER, CONDITION ANY DAMAGE DONE TO EXISTING TREES, BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS OR DRIVEWAYS (NO SEPARATE PAY ITEMS).
15. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN WORKING NEAR UTILITIES, GAS LINES, SEWER, OR EXISTING APPURTENANCES.
16. UTILITIES SHOWN ON THE PLANS ARE FROM INFORMATION SOURCES AVAILABLE AT THE TIME OF DESIGN BUT MAY NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL CONTACT THE RESPECTIVE UTILITY COMPANIES AND SHALL UNCOVER EXISTING UTILITIES TO VERIFY SIZE, GRADE AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS OWN EXPENSE.
17. POSITIVE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE SCOPE OF THE PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
18. FOR FILL PLACEMENT ON HILL SIDES OR STEEP SLOPE AREAS, THE CONTRACTOR SHALL REFERENCE THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT FOR SPECIAL INSTRUCTIONS REGARDING BENCHING.
19. NO WORK SHALL BE PERFORMED IN A PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT.
20. 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).

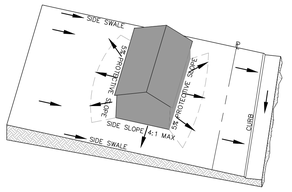


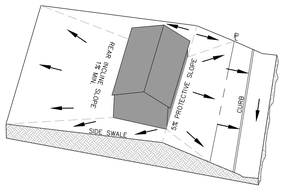


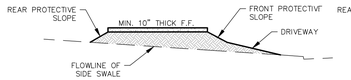
TYPICAL SIDE YARD GRADING
NOT TO SCALE



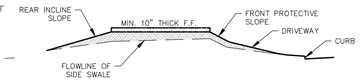
TYPE C LOT GRADING
NOT TO SCALE







TYPE A LOT GRADING
NOT TO SCALE

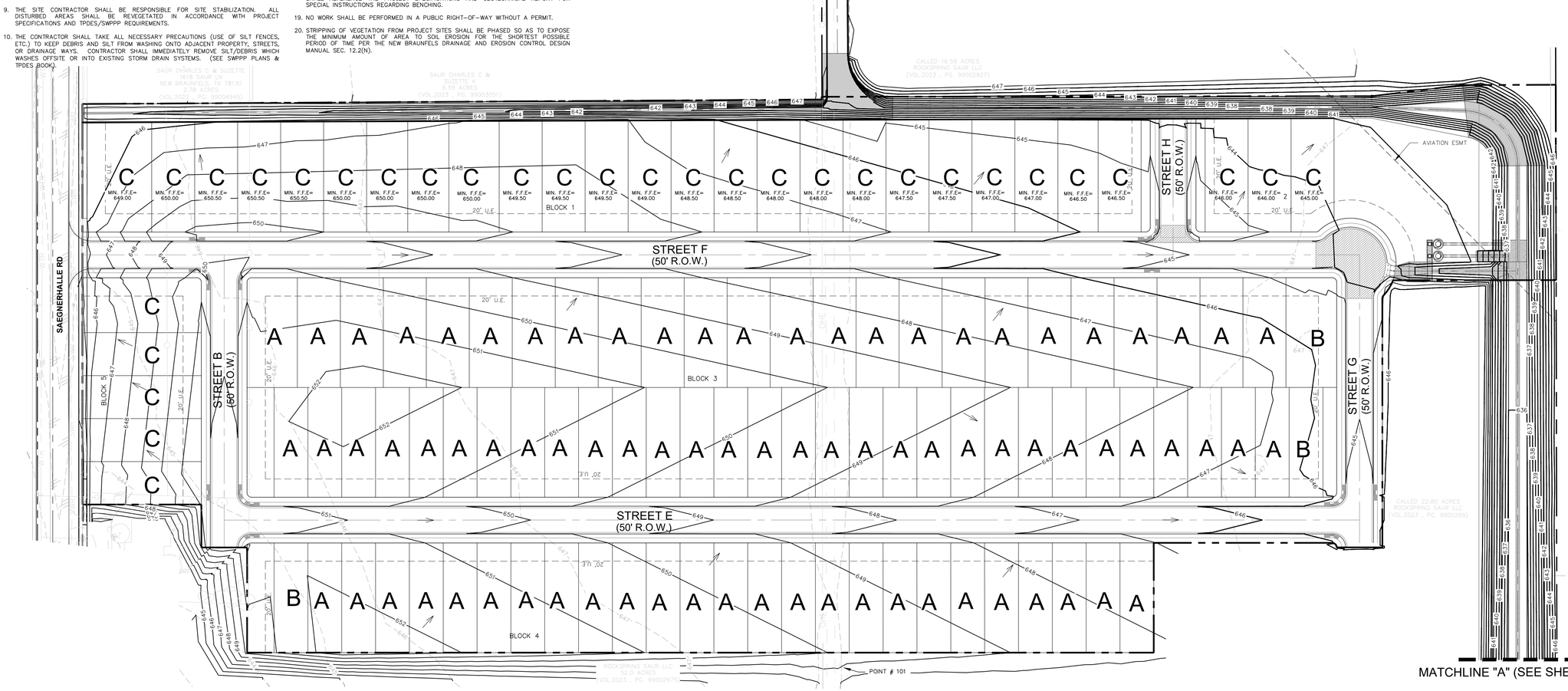


TYPE B LOT GRADING
NOT TO SCALE

0 60' 120'
SCALE: 1"=60'

LEGEND

- 900 — PROPOSED CONTOUR
- 900 — EXISTING CONTOUR
- DRAINAGE FLOW ARROW
- GRADE BREAK/SWALE



STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

GRADING PLAN I

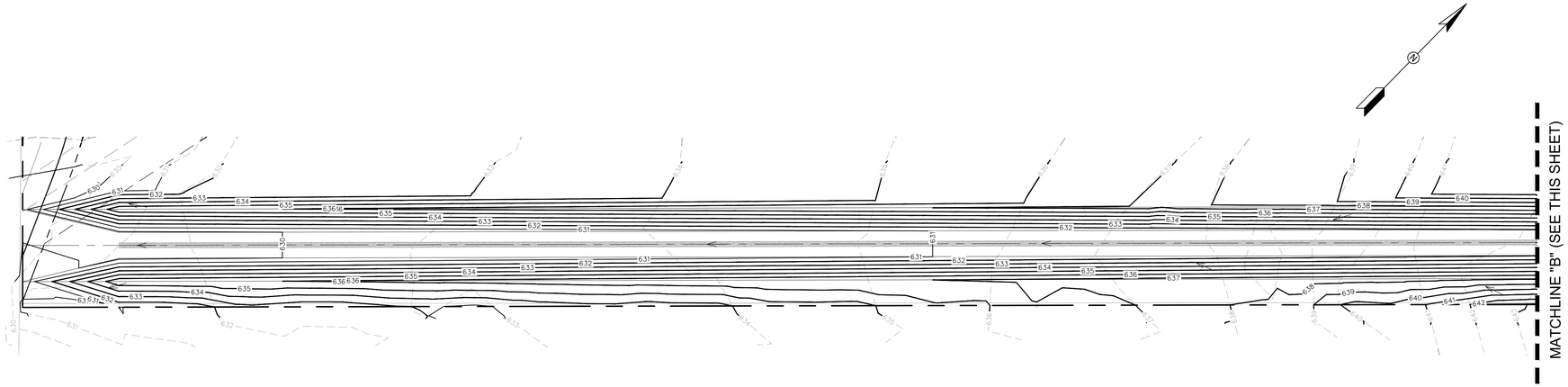
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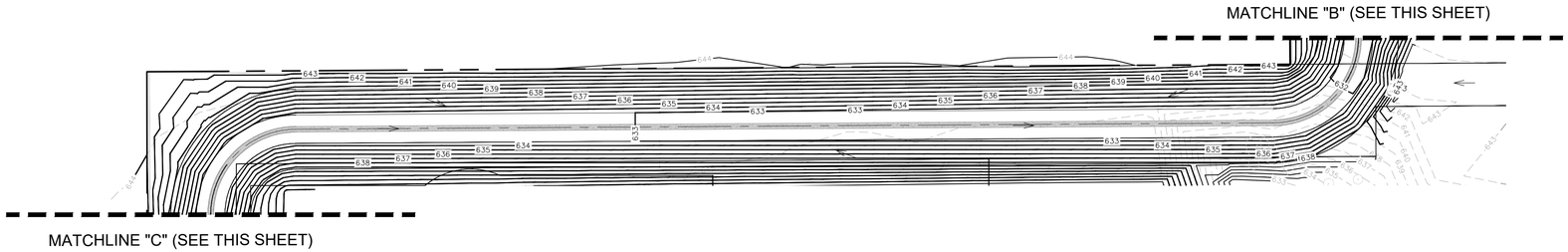
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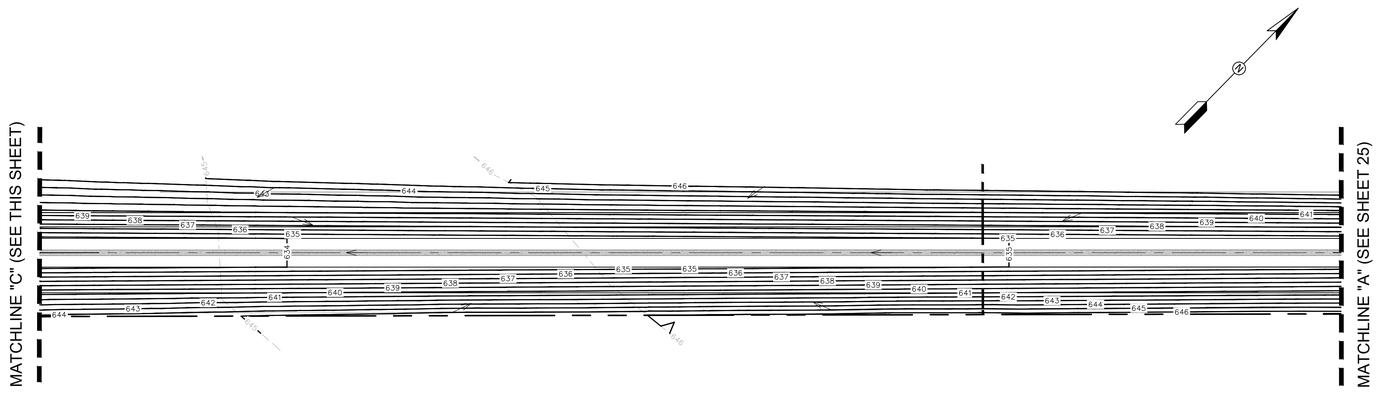
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0 50' 100'
SCALE: 1"=50'

LEGEND

- 900 PROPOSED CONTOUR
- 900 EXISTING CONTOUR
- DRAINAGE FLOW ARROW
- GRADE BREAK/SWALE

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

GRADING PLAN II

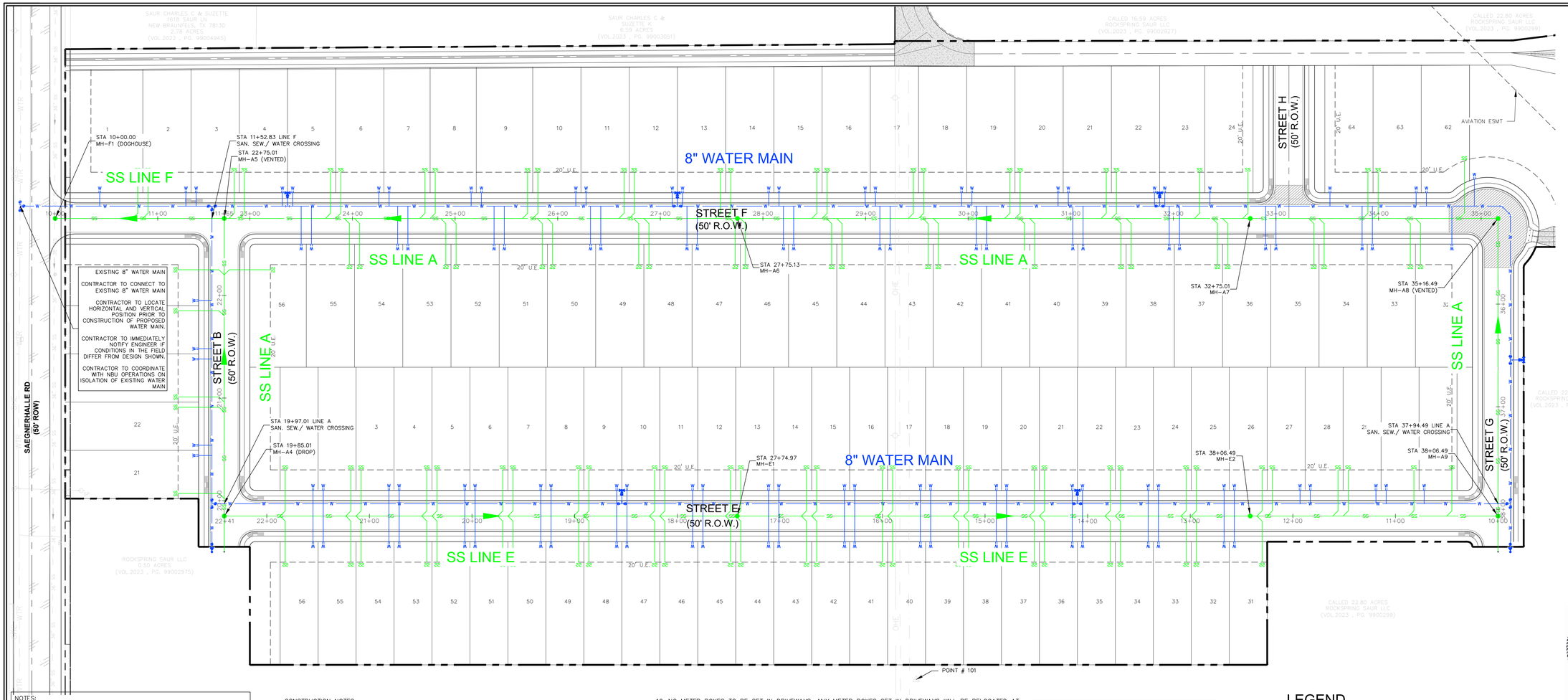
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NOTES:

1. GATE VALVES ON FIRE HYDRANT LEADS SHALL BE RESTRAINED AT THE TEE. SEE SHEET 28 FOR CALLOUTS FOR ANCHOR TEES FOR FIRE HYDRANTS.
2. THE MAIN SUPPLY LINE THAT SUPPLIES ALL DOMESTIC METERS WITHIN THIS PROJECT SHALL REQUIRE AN RP BACKFLOW PREVENTION.
3. ALL IRRIGATION METERS SHALL HAVE AN RP BACKFLOW PREVENTION.
4. THE ENTIRE HYDRANT ASSEMBLY FROM THE MAIN TO THE HYDRANT IS TO BE RESTRAINED.
5. MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALLS SHALL BE 2%

TCEQ (CSI) CUSTOMER SERVICE INSPECTION WILL BE COMPLETED BY NBU WATER PROTECTION SPECIALIST PERSONNEL WHERE ADDITIONAL BACKFLOW PREVENTION ASSEMBLIES MAY BE REQUIRED TO BE INSTALLED PER WATER SERVICE(S) AND/OR WATER USING EQUIPMENT. ANY QUESTIONS REGARDING BACKFLOW PREVENTION AND CROSS CONNECTION CONTROL, CONTACT NBU BACKFLOW PREVENTION SPECIALIST AT 830.608.8880

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

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-743-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

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

TELEPHONE LOCATOR

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

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

CONSTRUCTION NOTES:

1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
4. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I), AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM. A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
5. UTILITY SERVICES TO HAVE A MINIMUM A 3' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.
6. METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINALE GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
8. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.
10. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
11. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)
12. REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.
13. INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
14. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
15. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)
16. CONTRACTOR TO UTILIZE WATER LINE STOPPERS TO MINIMIZE OUTAGES. USE OF LINE STOPPERS, INSTEAD OF EXISTING VALVES, MUST BE APPROVED BY NBU INSPECTIONS PRIOR TO INSTALLATION.
17. SIZES ON SIZE WATER TAPS ARE ACCEPTABLE ONLY IF SOLID TAPS ARE USED.
18. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
19. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
20. METER BOXES MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
21. EXISTING PIPE MATERIALS ARE UNKNOWN. CONTRACTOR WILL BE REQUIRED TO TIE PROPOSED WATER MAINS TO EXISTING WATER MAINS PER NBU SPECIFICATIONS. ADDITIONAL PIPE NEEDED TO MAKE THE TIE IN WILL BE PAID FOR UNDER THE UNIT BID PRICE OF WATER PIPE OF THE SIZE INSTALLED. FITTINGS NEEDED TO MAKE THE CONNECTION TO THE EXISTING PIPE WILL BE PAID AS PART OF ITEM 510, PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THESE FITTINGS.
22. DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS: WATTS SERIES 909M1QT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL
23. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
24. 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-115E. 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 EERY 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.
25. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPURTENANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.
26. CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.
27. CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.
28. THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.
29. MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 48 INCHES, IF COVER IS LESS 48 INCHES ADD A CONCRETE CAP OR ENCASEMENT.
30. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FEET IN DEPTH LOCATED IN PUBLIC RIGHT OF WAY OR EASEMENTS, DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.

HERITAGE FARMS PHASE 1	
ITEM	QTY.
8" PVC (C-900) WATER MAIN	3385 LF
1" DOMESTIC WATER SERV (888 TYPE K COPPER)	114 EA.
5/8" DOMESTIC WATER METER	114 EA.
5/8" IRRIGATION METER	1 EA.
1" IRRIGATION SERVICE (888 TYPE K COPPER)	1 EA.
STANDARD FIRE HYDRANT	6 EA.
8" GATE VALVE	21 EA.
6" GATE VALVE	6 EA.
2" BLOWOFF ASSEMBLY	2 EA.
SANITARY SEWER MAIN (8" PVC SDR-26)	3,300 LF
6" SANITARY SEWER SERVICE (6" PVC SDR-26)	114 EA.
STANDARD MANHOLE	8 EA.
DOGHOUSE MANHOLE	1 EA.
8" SEWER CAP	2 EA.

Point Table

Point #	Northing	Easting	Elevation	Raw Description
100	13801811.8100	2269539.5100	647.36	CP SET 1/2IRWRC
101	13801924.4500	2269647.1100	647.42	CP SET1/2IRWRC

LEGEND

- EXISTING 8" PVC WATER MAIN
- EXISTING 36" FRP SANITARY SEWER
- PROPOSED UTILITY EASEMENT
- PROPOSED 8" PVC WATER MAIN
- PROPOSED 8" PVC SANITARY SEWER
- PROPERTY LINE
- PROPOSED MANHOLE
- PROPOSED SINGLE WASTEWATER SERVICE LATERAL
- PROPOSED SINGLE METERED WATER SERVICE
- PROPOSED FIRE HYDRANT
- EXISTING OVERHEAD ELECTRIC
- EXISTING FENCE



ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

OVERALL UTILITY PLAN

SHEET 27 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\080001 Saur Ln Development\Civil\Construction Drawings\PHASE 1\27 OVERALL UTILITY PLAN.dwg User: chuckware Sep 30, 2025 - 5:30pm

NOTE:
CONTRACTOR TO BORE UNDER SAENGERHALLE RD. IF STREET CONSTRUCTION IS COMPLETED BEFORE THE INSTALLATION OF PROPOSED WATER MAIN.

1 – 8" x 8" CUT IN TEE
3 – 8" GATE VALVE, MJ
3 – 6" VALVE BOX COMPL.

CONTRACTOR TO SAW CUT AND REPLACE APPROX 12.4 SQ YDS OF ASPHALT PVMT. TRENCH TO BE FILLED WITH FLOWABLE FILL AND PVMT. REPLACED PER CONB TRENCH REPAIR DETAIL. SEE SHEET 35

STA 11+43 12.0' L STREET F
– 8" X 8" TEE, MJ
3 – 8" GATE VALVE, MJ
3 – 6" VALVE BOX COMPL.

STA 12+17 12.0' L STREET F
1 – 8" X 6" ANCHOR TEE, MJ
1 – STD. FIRE HYDRANT
1 – 6" GATE VALVE, MJ
1 – 6" VALVE BOX COMPL.
6" D.I. AS REQ'D.

STA 15+97 12.0' L STREET F
1 – 8" X 6" ANCHOR TEE, MJ
1 – STD. FIRE HYDRANT
1 – 6" GATE VALVE, MJ
2 – GATE VALVE, MJ
3 – 6" VALVE BOX COMPL.
6" D.I. AS REQ'D.

STA 20+67 12.0' L STREET F
1 – 8" X 6" ANCHOR TEE, MJ
1 – STD. FIRE HYDRANT
1 – 6" GATE VALVE, MJ
2 – 8" GATE VALVE, MJ
3 – 6" VALVE BOX COMPL.
6" D.I. AS REQ'D.

STA 23+96 12.0' L
1 – 8" 45° BEND, MJ

1" IRRIGATION SERVICE W/ 5/8" IRRIGATION METER

12 LF 8" PVC (C–900)

STA 23+14 12.0' R
1 – 8" 45° BEND, MJ

AVIATION ESMT

CALLED 16.59 ACRES
ROCKSPRING SAUR LLC
(VOL.2023 , PG. 99002299)

CALLED 22.80 ACRES
ROCKSPRING SAUR LLC
(VOL.2023 , PG. 99002299)

SAUR, CHARLES C & SUZETTE K
6.59 ACRES
(VOL.2023 , PG. 99003051)

ROCKSPRING SAUR LLC
0.50 ACRES
(VOL.2023 , PG. 99002975)

SAENGERHALLE RD
(50' ROW)

STREET B
(50' R.O.W.)

STREET E
(50' R.O.W.)

STREET F
(50' R.O.W.)

STREET G
(50' R.O.W.)

BLOCK 1
BLOCK 2
BLOCK 3
BLOCK 4

74 LF 8" PVC (C–900)
167 LF 8" PVC (C–900)
381 LF 8" PVC (C–900)
470 LF 8" PVC (C–900)
334 LF 8" PVC (C–900)
142 LF 8" PVC (C–900)
290 LF 8" PVC (C–900)
400 LF 8" PVC (C–900)
444 LF 8" PVC (C–900)
422 LF 8" PVC (C–900)
141 LF 8" PVC (C–900)
46 LF 8" PVC (C–900)

STA 11+43 LINE
SAN. SEW./ WATER CROSSING

EXISTING 8" WATER MAIN

CONTRACTOR TO CONNECT TO EXISTING 8" WATER MAIN

CONTRACTOR TO LOCATE HORIZONTAL AND VERTICAL POSITION PRIOR TO CONSTRUCTION OF PROPOSED WATER MAIN.

CONTRACTOR TO IMMEDIATELY NOTIFY ENGINEER IF CONDITIONS IN THE FIELD DIFFER FROM DESIGN SHOWN.

CONTRACTOR TO COORDINATE WITH NBU OPERATIONS ON ISOLATION OF EXISTING WATER MAIN.

STA 13+87 12.0' L STREET E
1 – 8" X 6" ANCHOR TEE, MJ
1 – STD. FIRE HYDRANT
1 – 6" GATE VALVE, MJ
1 – 6" VALVE BOX COMPL.
6" D.I. AS REQ'D.

STA 18+31 12.0' L STREET E
1 – 8" X 6" ANCHOR TEE, MJ
1 – STD. FIRE HYDRANT
1 – 6" GATE VALVE, MJ
2 – 8" GATE VALVE, MJ
3 – 6" VALVE BOX COMPL.
6" D.I. AS REQ'D.

STA 21+76 12.0' R STREET G
1 – 8" X 6" ANCHOR TEE, MJ
1 – STD. FIRE HYDRANT
2 – 8" GATE VALVE, MJ
1 – 6" GATE VALVE, MJ
3 – 6" VALVE BOX COMPL.
6" D.I. AS REQ'D.

STA 20+36 12.0' R STREET G
1 – 8" X 8" TEE, MJ
3 – 8" GATE VALVE, MJ
3 – 6" VALVE BOX COMPL.

STA 20+36 LINE
SAN. SEW./ WATER CROSSING

STA 19+97 12.0' L STREET B
1 – 8" X 8" TEE, MJ
3 – 8" GATE VALVE, MJ
3 – 6" VALVE BOX COMPL.

STA 19+97 LINE
SAN. SEW./ WATER CROSSING

STA 19+50 STREET B
1 – 2" BLOWOFF (PERM)
1 – 8" GATE VALVE, MJ
1 – 6" VALVE BOX COMPL.

STA 19+88 STREET G
1 – 2" BLOWOFF (PERM)
1 – 8" GATE VALVE, MJ
1 – 6" VALVE BOX COMPL.

POINT # 101

0 50' 100'
SCALE:1"=50'

PRIOR TO CONSTRUCTION CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND REPORT ANY DISCREPANCIES TO ENGINEER

TCEQ (CSI) CUSTOMER SERVICE INSPECTION WILL BE COMPLETED BY NBU WATER PROTECTION SPECIALIST PERSONNEL WHERE ADDITIONAL BACKFLOW PREVENTION ASSEMBLIES MAY BE REQUIRED TO BE INSTALLED PER METER SERVICE(S) AND/OR WATER USING EQUIPMENT. ANY QUESTIONS REGARDING BACKFLOW PREVENTION AND CROSS CONNECTION CONTROL, CONTACT NBU BACKFLOW PREVENTION SPECIALIST AT 830.608.8880

NOTES:
1. STATIONING FOR 8" WATER MAINS ARE BASED ON ROAD ALIGNMENTS.
2. GATE VALVES ON FIRE HYDRANT LEADS SHALL BE RESTRAINED AT THE TEE. SEE THIS SHEET FOR CALLOUTS FOR ANCHOR TEES FOR FIRE HYDRANTS.
3. SEE JOINT RESTRAINT TABLE SHEET 35

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

New Braunfels Utilities	830–629–8400
Spectrum Cable	830–625–3408
Centerpoint Gas	830–643–6434
Robert Sanders	830–643–6903
Damaged Line	888–876–5786
AT&T Telephone	830–303–1333
Erick White PM	210–283–1706
Scott McBrearty (Construction)	210–658–4886
Texas One Call	830–545–6005

C.P.E. LOCATOR

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

TELEPHONE LOCATOR

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

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

CONSTRUCTION NOTES:

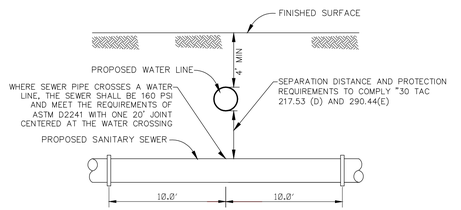
1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER/SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
4. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
5. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
6. METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COSTS.
7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
8. ALL UTILITIES SHALL BE CONSTRUCTED PRIOR TO STREETS.
9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.
10. NO VALVES, FIRE HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
11. 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. 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 GEO–TECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEO–TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.
12. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5–FEET IN DEPTH LOCATED IN PUBLIC RIGHT–OF–WAY OR EASEMENTS. DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
13. THE POINT OF DELIVERY IS WATER METER. NBU IS RESPONSIBLE FROM WATER MAIN TO WATER METER. CUSTOMER IS RESPONSIBLE FOR LINE FROM THE METER TO PRIVATE PLUMBING, INCLUDING DESIGN, CONSTRUCTION, OPERATION, AND COMPLIANCE WITH CITY CODES.
14. MINIMUM DEPTH OF COVER FOR THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 48 INCHES. ADD CONCRETE CAP OR ENCASEMENT IF COVER IS LESS THAN 48 INCHES.
15. GATE VALVES ON FIRE HYDRANT LEADS SHALL BE RESTRAINED AT THE TEE. SEE THIS SHEET FOR CALLOUTS FOR ANCHOR TEES FOR FIRE HYDRANTS.
16. THE MAIN SUPPLY LINE THAT SUPPLIES ALL DOMESTIC METERS WITHIN THIS PROJECT SHALL REQUIRE AN RP BACKFLOW PREVENTION.
17. ALL IRRIGATION METERS SHALL HAVE AN RP BACKFLOW PREVENTION.

Point Table				
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HERITAGE FARMS PHASE 1	
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5/8" IRRIGATION METER	1 EA.
1" IRRIGATION SERVICE (B88 TYPE K COPPER)	1 EA.
STANDARD FIRE HYDRANT	6 EA.
8" GATE VALVE	21 EA.
6" GATE VALVE	6 EA.
2" BLOWOFF ASSEMBLY	2 EA.
6" DI FIRE LINE	80 LF

LEGEND

- WTR — EXISTING 8" PVC WATER MAIN
- 36" SS — EXISTING 36" FRP SANITARY SEWER
- PROPOSED UTILITY EASEMENT
- W — W — PROPOSED 8" PVC WATER MAIN
- SS — PROPOSED 8" PVC SANITARY SEWER
- PROPERTY LINE
- PROPOSED MANHOLE
- PROPOSED SINGLE WASTEWATER SERVICE LATERAL
- PROPOSED SINGLE METERED WATER SERVICE
- PROPOSED FIRE HYDRANT
- OHE — EXISTING OVERHEAD ELECTRIC
- EXISTING FENCE



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
(NOT TO SCALE)

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

WATER DISTRIBUTION PLAN

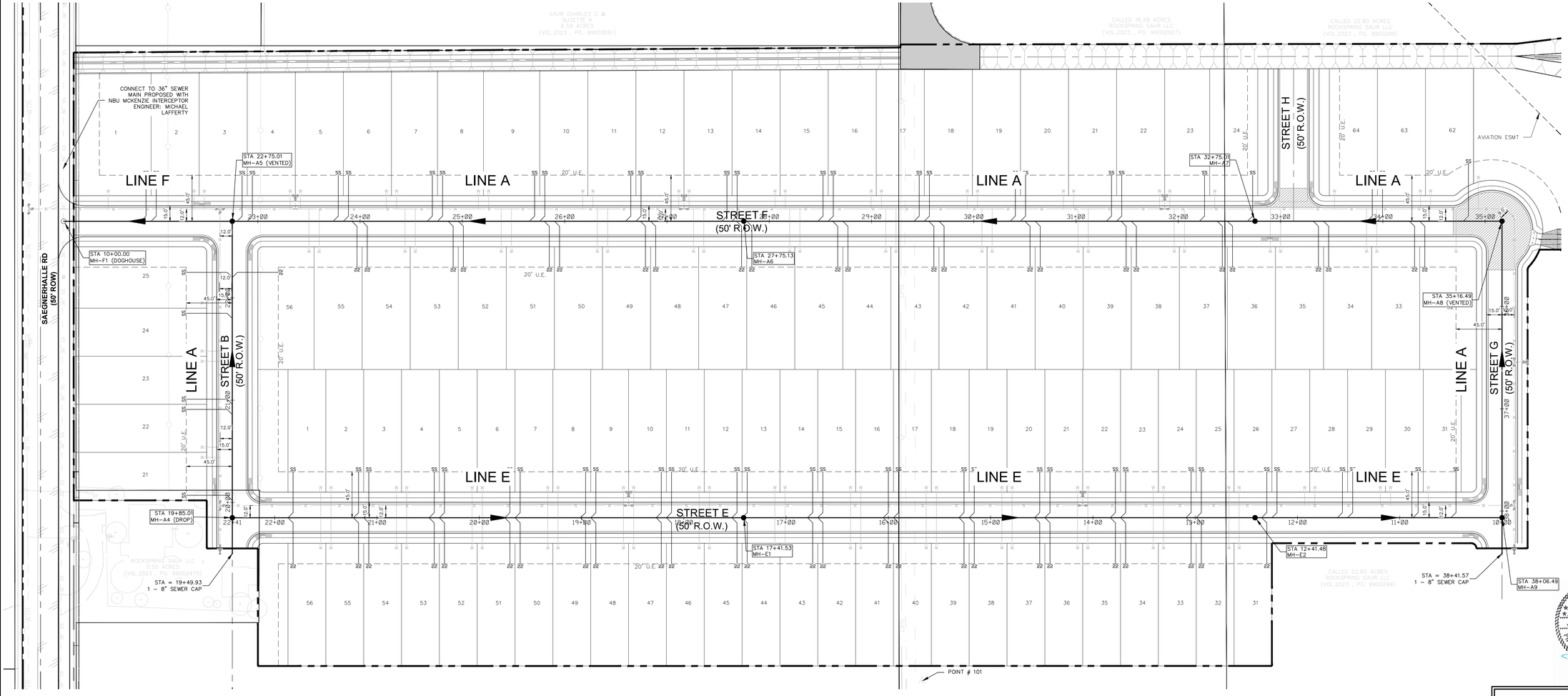
SHEET 28 OF 41

NO	DATE	ISSUES AND REVISIONS
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Drawing Name: N:\Projects\080001 Saur Ln Development\Civil\Construction Drawings\PHASE 1\08 WATER DISTRIBUTION PLAN.dwg User: chuckwire Sep 30, 2025 - 5:30pm



CONSTRUCTION NOTES:

1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
4. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
5. UTILITY SERVICES TO HAVE A MINIMUM A 4' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.
6. METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
8. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.
10. NO MAINS, VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
11. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)
12. REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.
13. INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
14. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
15. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)
16. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
17. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
18. METER BOXES MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
19. EXISTING PIPE MATERIALS ARE UNKNOWN. CONTRACTOR WILL BE REQUIRED TO TIE PROPOSED WATER MAINS TO EXISTING WATER MAINS PER NBU SPECIFICATIONS. ADDITIONAL PIPE NEEDED TO MAKE THE TIE IN WILL BE PAID FOR UNDER THE UNIT BID PRICE OF WATER PIPE OF THE SIZE INSTALLED. FITTINGS NEEDED TO MAKE THE CONNECTION TO THE EXISTING PIPE WILL BE PAID AS PART OF ITEM 510, PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THESE FITTINGS.
20. DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS: WATTS SERIES 909M1DT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL
21. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
22. 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-115E. 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 ERY 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.
23. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPERTUNANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.
24. CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.
25. CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.
26. THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.
27. MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 48 INCHES, IF COVER IS LESS 48 INCHES ADD A CONCRETE CAP OR ENCASEMENT.
28. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FEET IN DEPTH LOCATED IN PUBLIC RIGHT OF WAY OR EASEMENTS, DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
29. NEW MANHOLES MUST BE CONSTRUCTED OF OR LINED WITH A CORROSION RESISTANT MATERIAL OR POLYMER CONCRETE PER MANUFACTURERS APPROVED ON THE NBU SPL POLYMER CONCRETE IS REQUIRED FOR MANHOLES ON MAINS 18-INCH DIAMETER OR LARGER, AT FORCE MAIN DISCHARGE POINTS, OR AT DROP MANHOLES WITH HIGH CORROSION POTENTIAL. WHERE NEW CONSTRUCTION TIES INTO AN EXISTING MANHOLE, THE EXISTING MANHOLES MUST BE LINED, COATED OR REPLACED WITH A CORROSION RESISTANT MATERIAL.
30. MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS SHALL BE 2%
31. IN ALL NEW SYSTEMS, GRADE BREAKS EXCEEDING ALLOWABLE JOINT DEFLECTION MUST BE MADE WITH APPROVED FITTINGS AND SHALL NOT EXCEED CUMULATIVE TOTAL OF 45 DEGREES.
32. WASTEWATER SERVICE LINES, BETWEEN THE MAIN AND PROPERTY LINE, SHALL HAVE AN INSIDE DIAMETER NOT LESS THAN SIX (6) INCHES.
33. MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS IS 2%

SEWER NOTE:

ALL WASTEWATER LINES AND MANHOLES WITH A DEPTH GREATER THAN 15' MUST HAVE AN NBU INSPECTOR PRESENT DURING INSTALLATION

THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN 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.
CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES 48 HOURS PRIOR TO EXCAVATION:

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

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

TELEPHONE LOCATOR

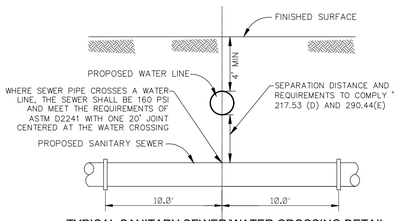
THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE INDICATED ON THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR TO CONTACT THE TELEPHONE COMPANY CABLE LOCATOR 48HRS PRIOR TO EXCAVATION AT 1-800-545-6005, CONTRACTOR HAS THE RESPONSIBILITY TO PROTECT AND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

HERITAGE FARMS PHASE 1

ITEM	QTY.
SANITARY SEWER MAIN (8" PVC SDR-26)	3,300 LF
6" SANITARY SEWER SERVICE	114 EA.
STANDARD MANHOLE	8 EA.
DOGHOUSE MANHOLE	1 EA.
8" SEWER CAP	2 EA.



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
(NOT TO SCALE)

LEGEND

- EXISTING 8" PVC WATER MAIN
- EXISTING 36" FRP SANITARY SEWER
- EXISTING OVERHEAD ELECTRIC
- PROPOSED 8" PVC SANITARY SEWER
- PROPOSED PROPERTY LINE
- EXISTING FENCE
- PROPOSED MANHOLE
- PROPOSED SINGLE 6"WASTEWATER SERVICE LATERAL
- PROPOSED SINGLE METERED WATER SERVICE
- PROPOSED FIRE HYDRANT
- PROPOSED 8" PVC WATER MAIN

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

OVERALL SANITARY SEWER PLAN

SHEET 29 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

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CONSTRUCTION NOTES:

1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).

2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.

3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.

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5. UTILITY SERVICES TO HAVE A MINIMUM A 4' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.

6. METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.

7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.

8. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.

9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.

10. NO MAINS, VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.

11. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)

12. REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.

13. INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.

14. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.

15. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)

16. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.

17. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.

18. METER BOXES MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.

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20. DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS: WATTS SERIES 909M1QT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL

21. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.

22. 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-115E. 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 EERY 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.

23. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPURTENANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.

24. CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.

25. CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.

26. THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.

27. MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 48 INCHES, IF COVER IS LESS 48 INCHES ADD A CONCRETE CAP OR ENCASEMENT.

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

29. NEW MANHOLES MUST BE CONSTRUCTED OF OR LINED WITH A CORROSION RESISTANT MATERIAL OR POLYMER CONCRETE PER MANUFACTURER'S APPROVED ON THE NBU SPL POLYMER CONCRETE IS REQUIRED FOR MANHOLES ON MAINS 18-INCH DIAMETER OR LARGER, AT FORCE MAIN DISCHARGE POINTS, OR AT DROP MANHOLES WITH HIGH CORROSION POTENTIAL. WHERE NEW CONSTRUCTION TIES INTO AN EXISTING MANHOLE, THE EXISTING MANHOLES MUST BE LINED, COATED OR REPLACED WITH A CORROSION RESISTANT MATERIAL.

30. MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS SHALL BE 2%

31. IN ALL NEW SYSTEMS, GRADE BREAKS EXCEEDING ALLOWABLE JOINT DEFLECTION MUST BE MADE WITH APPROVED FITTINGS AND SHALL NOT EXCEED CUMULATIVE TOTAL OF 45 DEGREES.

32. WASTEWATER SERVICE LINES, BETWEEN THE MAIN AND PROPERTY LINE, SHALL HAVE AN INSIDE DIAMETER NOT LESS THAN SIX (6) INCHES.

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Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

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TELEPHONE LOCATOR

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TRENCH EXCAVATION SAFETY PROTECTION

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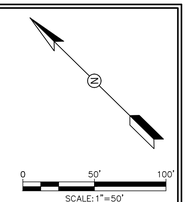
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MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS SHALL BE 2%

THE ASTM DESIGNATION FOR 8" PIPE IS ASTM D3034

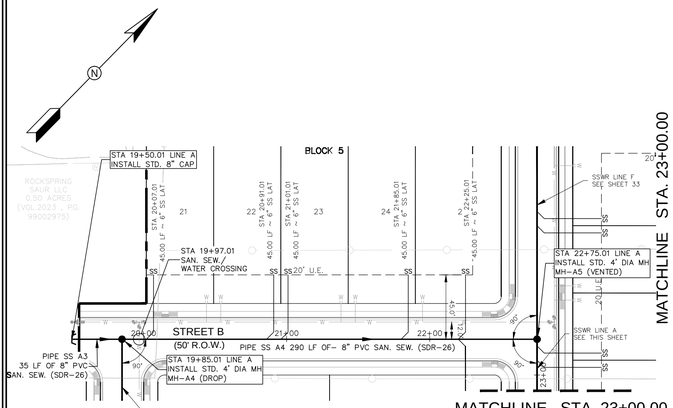
SEWER NOTE:

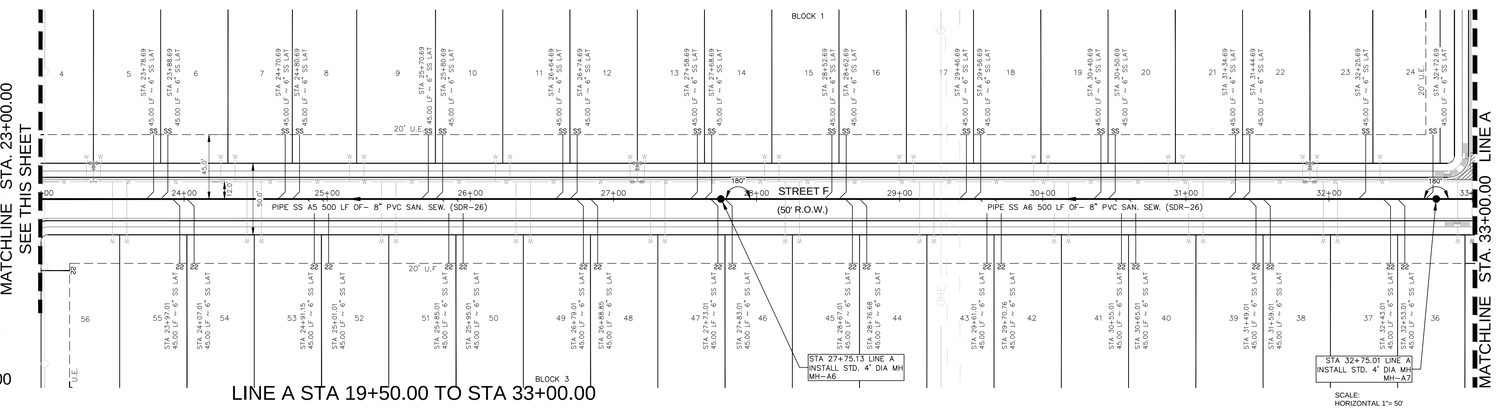
ALL WASTEWATER LINES AND MANHOLES WITH A DEPTH GREATER THAN 15' MUST HAVE AN NBU INSPECTOR PRESENT DURING INSTALLATION



LEGEND

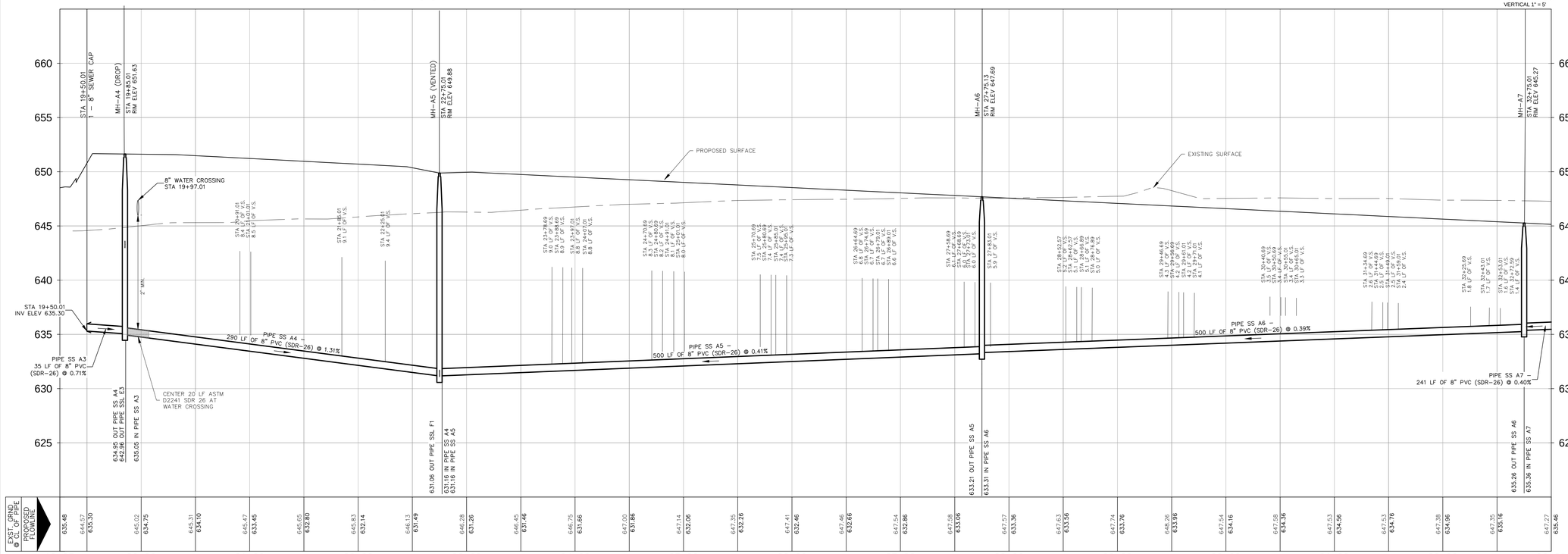
- WTR — EXISTING 8" PVC WATER MAIN
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- PROPOSED PROPERTY LINE
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- SS — PROPOSED SINGLE 6"WASTEWATER SERVICE LATERAL
- PROPOSED SINGLE METERED WATER SERVICE
- PROPOSED FIRE HYDRANT
- W — PROPOSED 8" PVC WATER MAIN





LINE A STA 19+50.00 TO STA 33+00.00

SCALE:
HORIZONTAL 1"= 50'
VERTICAL 1" = 5'





ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

SANITARY SEWER LINE A
19+50.00 TO 33+00.00
PLAN & PROFILE

SHEET 30 OF 41

NO	DATE	ISSUES AND REVISIONS
△		

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\080001 Spur 1a Development\Civil\Construction Drawings\PHASE 1\SS SANITARY SEWER LINE A 19+50.00 TO 33+00.00 PLAN & PROFILE.dwg User: jbrothers Sep 30, 2025 - 6:01pm

CONSTRUCTION NOTES:

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2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL WHENEVER POSSIBLE. THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL, IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
4. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
5. UTILITY SERVICES TO HAVE A MINIMUM A 4' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.
6. METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
8. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.
10. NO MAINS, VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
11. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)
12. REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.
13. INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
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15. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)
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20. DOMESTIC SERVICE BACKFLOW PREVENTER TO BE SPECIFIED AS: WATTS SERIES 909M1QT (REDUCED PRESSURE ZONE ASSEMBLY) OR ENGINEER APPROVED EQUAL
21. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
22. 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 EERY 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.
23. REFER TO ARCHITECTURAL PLANS FOR COORDINATION OF BUILDING, APPURTENANCES, DIMENSIONS, AND UTILITY ENTRANCE LOCATIONS.
24. CONTRACTOR TO COORDINATE SANITARY SEWER AND WATER CONNECTIONS TO BUILDING WITH M.E.P. PLANS.
25. CONTRACTOR TO COORDINATE ELECTRIC, TELEPHONE, AND GAS SERVICES WITH UTILITY PROVIDERS AND M.E.P. PLANS.
26. THE GAS AND TELECOMMUNICATIONS SERVICES SHOWN ARE PRELIMINARY. REFERENCE THE M.E.P. PLANS FOR EXACT LOCATIONS OF ELECTRICAL, GAS, AND TELECOMMUNICATIONS SERVICES ARE NOT PART OF THE CIVIL DESIGN PLANS.
27. MINIMUM DEPTH OF COVER OVER THE UPPERMOST PROJECTION OF THE WATER PIPE AND ALL APPURTENANCES SHALL BE 48 INCHES, IF COVER IS LESS 48 INCHES ADD A CONCRETE CAP OR ENCASEMENT.
28. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5 FEET IN DEPTH LOCATED IN PUBLIC RIGHT OF WAY OR EASEMENTS, DEEP TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
29. NEW MANHOLES MUST BE CONSTRUCTED OF OR LINED WITH A CORROSION RESISTANT MATERIAL OR POLYMER CONCRETE PER MANUFACTURERS APPROVED ON THE NBU SPL POLYMER CONCRETE IS REQUIRED FOR MANHOLES ON MAINS 18-INCH DIAMETER OR LARGER, AT FORCE MAIN DISCHARGE POINTS, OR AT DROP MANHOLES WITH HIGH CORROSION POTENTIAL WHERE NEW CONSTRUCTION TIES INTO AN EXISTING MANHOLE, THE EXISTING MANHOLES MUST BE LINED, COATED OR REPLACED WITH A CORROSION RESISTANT MATERIAL.
30. MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS SHALL BE 2%
31. IN ALL NEW SYSTEMS, GRADE BREAKS EXCEEDING ALLOWABLE JOINT DEFLECTION MUST BE MADE WITH APPROVED FITTINGS AND SHALL NOT EXCEED CUMULATIVE TOTAL OF 45 DEGREES.
32. WASTEWATER SERVICE LINES, BETWEEN THE MAIN AND PROPERTY LINE, SHALL HAVE AN INSIDE DIAMETER NOT LESS THAN SIX (6) INCHES.

MINIMUM SLOPE ALLOWED FOR SEWER SERVICE LATERALS SHALL BE 2%
THE ASTM DESIGNATION FOR 8" PIPE IS ASTM D3034

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

New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

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

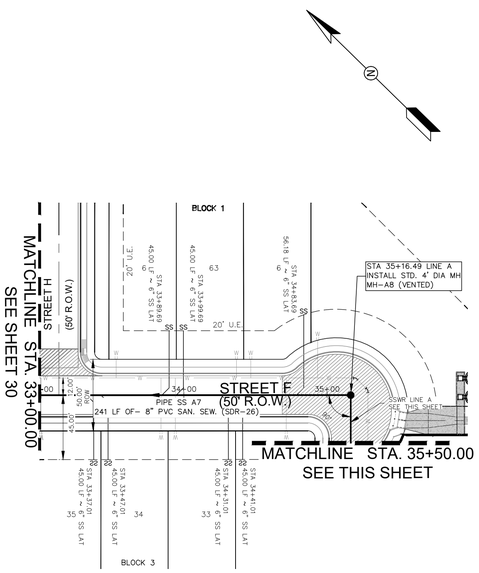
TELEPHONE LOCATOR

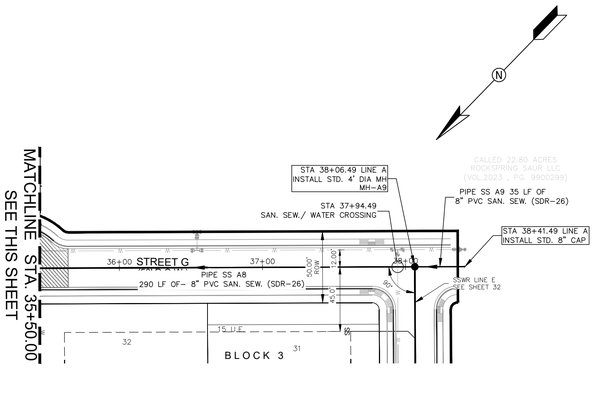
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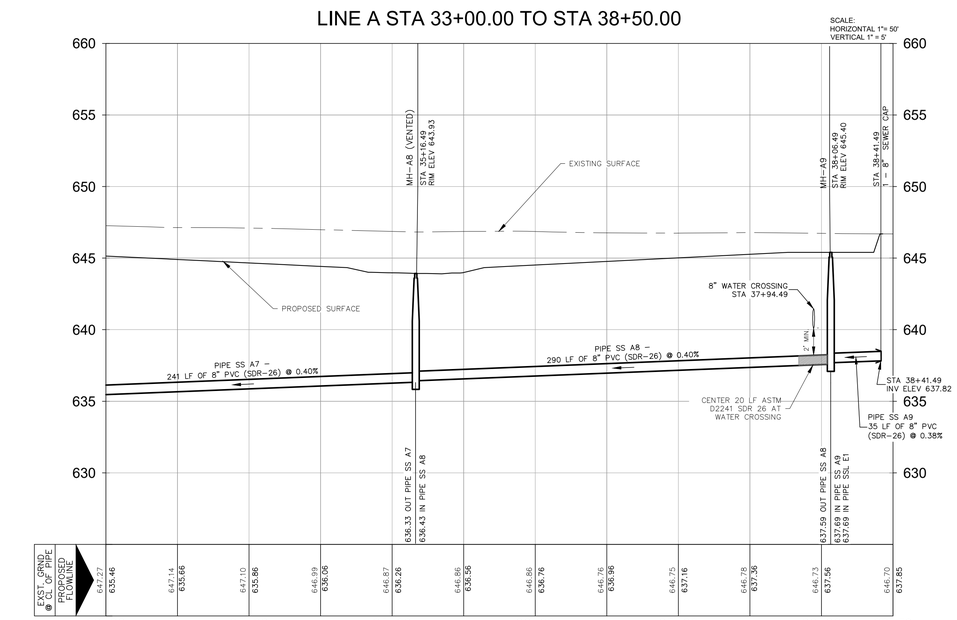
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0 50' 100'
SCALE: 1"=50'

LEGEND

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- PROPOSED SINGLE 6"WASTEWATER SERVICE LATERAL
- PROPOSED SINGLE METERED WATER SERVICE
- PROPOSED FIRE HYDRANT
- PROPOSED 8" PVC WATER MAIN

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

SANITARY SEWER LINE A
33+00.00 TO 38+50.00
PLAN & PROFILE

SHEET 31 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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THE ASTM DESIGNATION FOR 8" PIPE IS ASTM D3034

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New Braunfels Utilities	830-629-8400
Spectrum Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Line	888-876-5786
AT&T Telephone	830-303-1333
Erick White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

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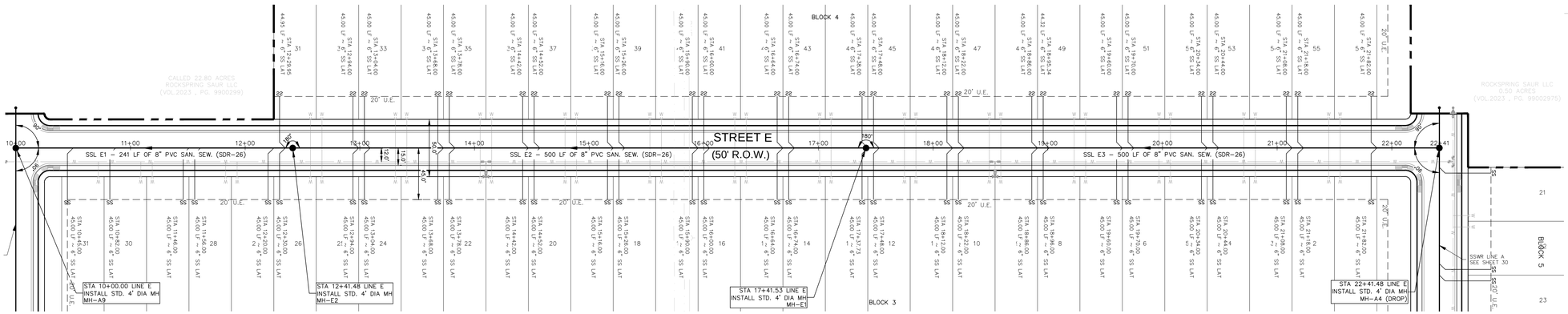
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TRENCH EXCAVATION SAFETY PROTECTION

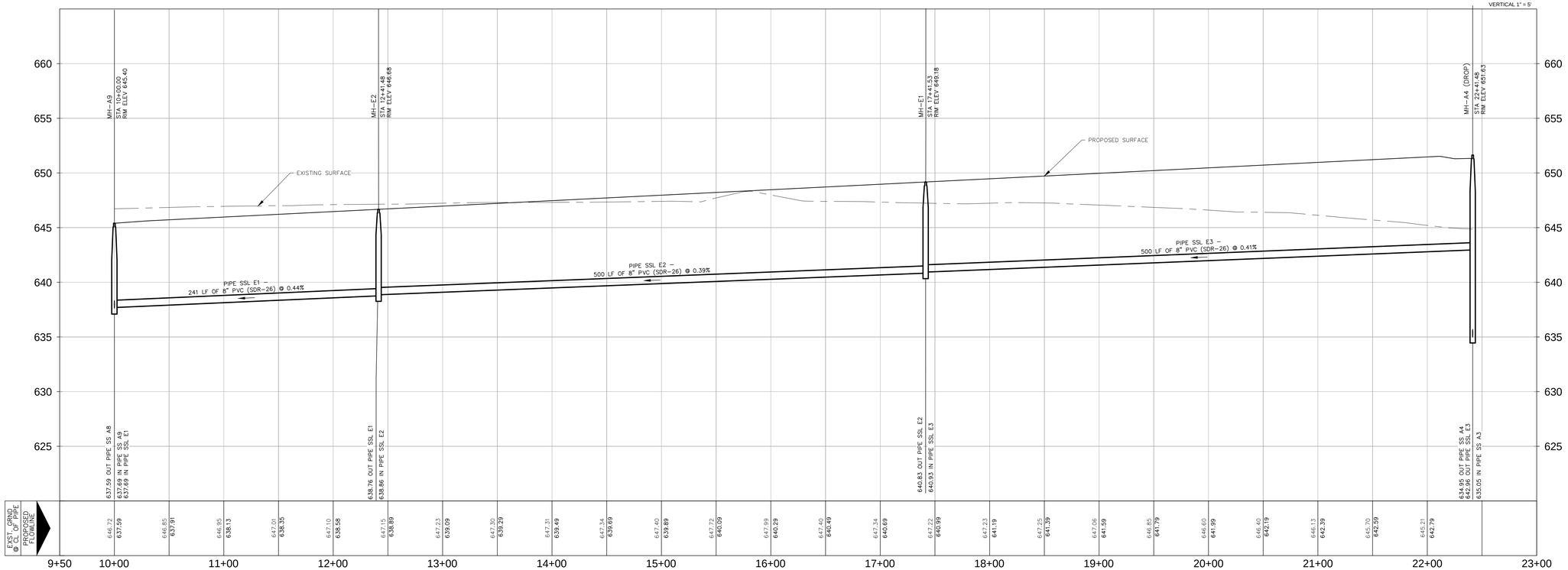
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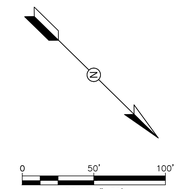
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LINE E STA 10+00.00 TO STA 22+41.00

SCALE:
HORIZONTAL 1"= 50'
VERTICAL 1" = 5'





LEGEND

- WTR — EXISTING 8" PVC WATER MAIN
- 36" SS — EXISTING 36" FRP SANITARY SEWER
- OHE — EXISTING OVERHEAD ELECTRIC
- PROPOSED 8" PVC SANITARY SEWER
- PROPOSED PROPERTY LINE
- EXISTING FENCE
- PROPOSED MANHOLE
- SS — PROPOSED SINGLE 6"WASTEWATER SERVICE LATERAL
- PROPOSED SINGLE METERED WATER SERVICE
- PROPOSED FIRE HYDRANT
- W — PROPOSED 8" PVC WATER MAIN

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

SANITARY SEWER LINE E
STA 10+00.00 TO 22+41.00
PLAN & PROFILE

SHEET 32 OF 41

NO	DATE	ISSUES AND REVISIONS
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INK CIVIL
2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

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Drawing Name: N:\Projects\0980001 Star Ln Development\Civil\Construction Drawings\PHASE 1\32 SANITARY SEWER LINE E STA 10+00.00 TO 22+41.00 PLAN & PROFILE.dwg User: jonathangillen Sep 30, 2025 - 6:02pm

CONSTRUCTION NOTES:

1. WHERE WATER LINES AND NEW SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E., WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(D) (PIPE DESIGN) AND 30 TAC §290.44(E) (WATER DISTRIBUTION).
2. WHERE A 9' (NINE FOOT) SEPARATION FROM WATER AND SEWER LINES CROSSING CANNOT BE MAINTAINED, THE NEW WATER LINE SHALL BE ABOVE THE SEWER LINE AS SHOWN ON THE WATER / SEWER LINE CROSSING DETAIL. AT NO TIME SHALL A WATER LINE OR WATER SERVICE BE PLACED UNDER A SEWER LINE OR SEWER SERVICE.
3. WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
4. ALL PRIVATE SERVICE LATERALS MUST BE INSPECTED AND CERTIFIED IN ACCORDANCE WITH 30 TAC §213.5(C)(3)(I). AFTER INSTALLATION OF AND, PRIOR TO COVERING AND CONNECTING A PRIVATE SERVICE LATERAL TO AN EXISTING ORGANIZED SEWAGE COLLECTION SYSTEM, A TEXAS LICENSED PROFESSIONAL ENGINEER, TEXAS REGISTERED SANITARIAN, OR APPROPRIATE CITY INSPECTOR MUST VISUALLY INSPECT THE PRIVATE SERVICE LATERAL AND THE CONNECTION TO THE SEWAGE COLLECTION SYSTEM, AND CERTIFY THAT IT IS CONSTRUCTED IN CONFORMITY WITH THE APPLICABLE PROVISIONS OF THIS SECTION. THE OWNER OF THE COLLECTION SYSTEM MUST MAINTAIN SUCH CERTIFICATIONS FOR FIVE YEARS AND FORWARD COPIES TO THE APPROPRIATE REGIONAL OFFICE UPON REQUEST. CONNECTIONS MAY ONLY BE MADE TO AN APPROVED SEWAGE COLLECTION SYSTEM.
5. UTILITY SERVICES TO HAVE A MINIMUM A 4' COVER UNLESS OTHERWISE NOTED OR REQUIRED BY THE UTILITY COMPANY.
6. METER BOXES MUST BE SET AT PROPOSED FINISHED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED BY THE CONTRACTOR AT NO ADDITIONAL COST.
7. CONTRACTOR TO COORDINATE WITH NBU IF EXISTING WATER MAINS WILL BE REMOVED FROM SERVICE AT ANY TIME.
8. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION.
9. ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A SPECIFICATIONS.
10. NO MAINS, VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
11. CONTRACTOR TO PROTECT INSTALLED PIPE FROM BEING CONTAMINATED OR DAMAGED PRIOR TO PLACING INTO SERVICE. ANY PIPE NBU INSPECTIONS DETERMINES IS CONTAMINATED, DIRTY, OR DAMAGED, SHALL BE REPLACED. (NSP)
12. REFERENCE TO "CAP" ON THE DESIGN PLANS MEANS CAP OR PLUG. CAPS SHALL BE USED ON ALL SPIGOT ENDS AND PLUGS ON ALL BELL ENDS PER NBU SPECIFICATIONS.
13. INITIAL BACKFILL OF WATER LINES SHALL BE 3/4" TO DUST OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
14. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.
15. CONTRACTOR TO PRE-DIG TO VERIFY SIZE, TYPE AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES MUST BE MAINTAINED UNTIL FINAL ACCEPTANCE OF NEW SYSTEM AND SWITCH OVER OCCURS (NSP)
16. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
17. NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
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19. EXISTING PIPE MATERIALS ARE UNKNOWN. CONTRACTOR WILL BE REQUIRED TO TIE PROPOSED WATER MAINS TO EXISTING WATER MAINS PER NBU SPECIFICATIONS. ADDITIONAL PIPE NEEDED TO MAKE THE TIE IN WILL BE PAID FOR UNDER THE UNIT BID PRICE OF WATER PIPE OF THE SIZE INSTALLED. FITTINGS NEEDED TO MAKE THE CONNECTION TO THE EXISTING PIPE WILL BE PAID AS PART OF ITEM 510, PIPE. NO SEPARATE PAYMENT WILL BE MADE FOR THESE FITTINGS.
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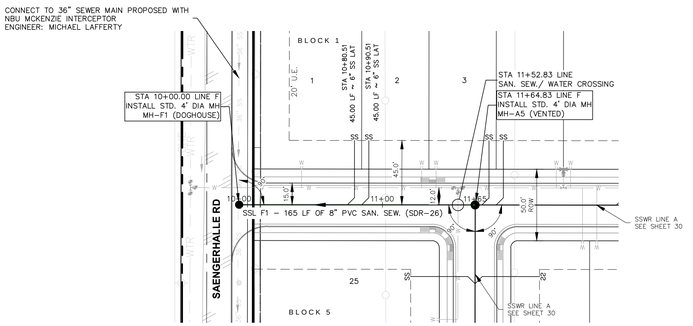
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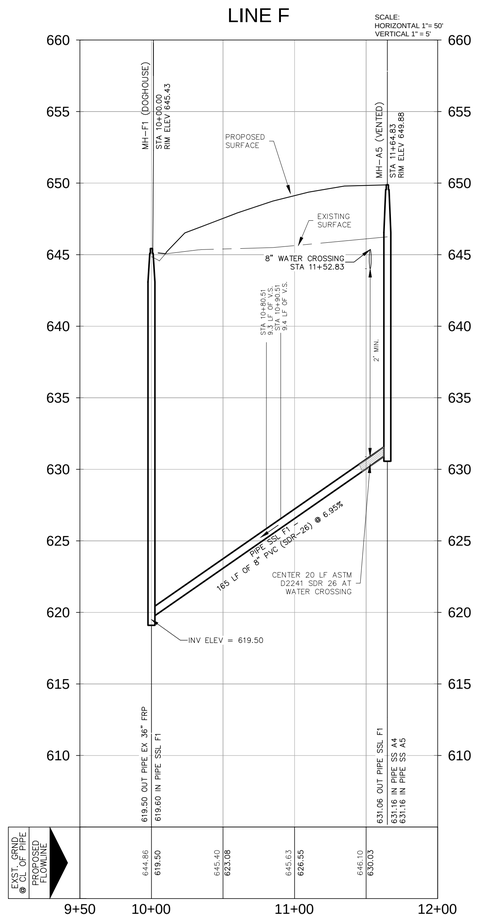
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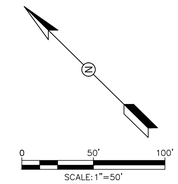
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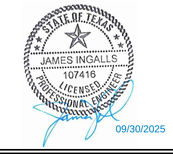






LEGEND

WTR	EXISTING 8" PVC WATER MAIN
SS	EXISTING 36" FRP SANITARY SEWER
OHE	EXISTING OVERHEAD ELECTRIC
	PROPOSED 8" PVC SANITARY SEWER
	PROPOSED PROPERTY LINE
	EXISTING FENCE
	PROPOSED MANHOLE
	PROPOSED SINGLE 6"WASTEWATER SERVICE LATERAL
	PROPOSED SINGLE METERED WATER SERVICE
	PROPOSED FIRE HYDRANT
W	PROPOSED 8" PVC WATER MAIN



ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

SANITARY SEWER LINE F
10+00.00 TO 11+65.00
PLAN & PROFILE

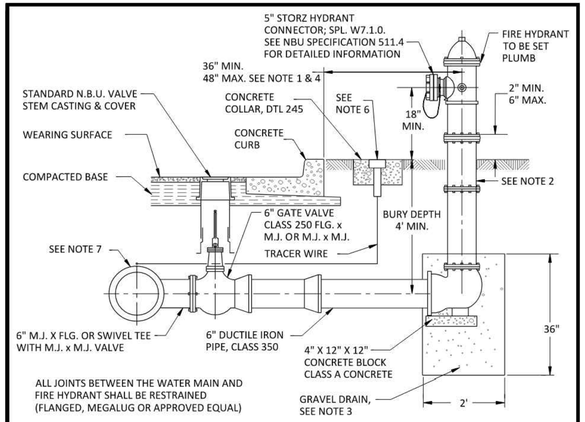
SHEET 33 OF 41

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Drawing Name: N:\Projects\080001 Sour Ln Development\Civil\Construction Drawings\PHASE 1\33 SANITARY SEWER LINE F 10+00.00 TO 11+65.00 PLAN & PROFILE.dwg User: chuckwere Sep 30, 2025 - 6:23pm

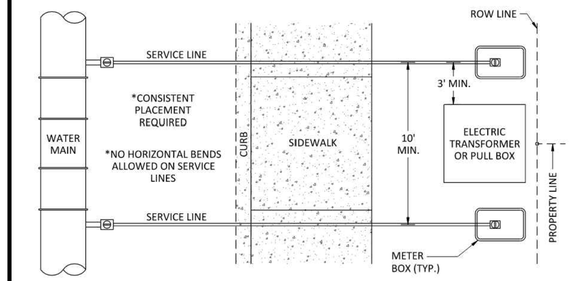


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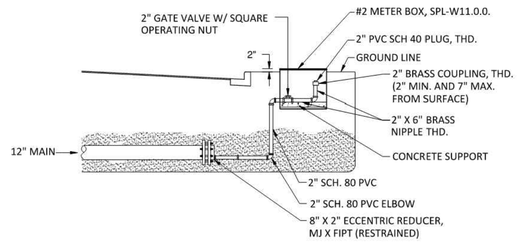
NOTES:

1. DIMENSIONS SHOWN ARE APPLICABLE FOR HYDRANTS INSTALLED BETWEEN CURB AND SIDEWALK. WHERE SIDEWALK ABUTS CURB, IN PUBLIC OR COMMERCIAL AREAS, THE OFFSET FROM BACK OF CURB SHALL BE 6' TO 9'. HYDRANTS ARE NOT TO BE PLACED IN SIDEWALK AREAS. SEE NEW BRAUNFELS UTILITIES STANDARD SPECIFICATIONS FOR LOCATION OF HYDRANT.
2. FOR BURY DEPTHS GREATER THAN 5', ONE BARREL EXTENSION NOT EXCEEDING 2' LENGTH SHALL BE INSTALLED DIRECTLY BELOW THE FIRE HYDRANT. NO MORE THAN ONE EXTENSION IS PERMITTED.
3. CRUSHED STONE OR GRAVEL SHALL BE PLACED AROUND THE BOTTOM OF THE HYDRANT FOR A RADIUS OF AT LEAST 12" AND EXTEND AT LEAST 12" ABOVE THE OUTLET. DO NOT BLOCK DRAIN HOLES.
4. PROVIDE MINIMUM CLEARANCE TO OBSTRUCTIONS AROUND FIRE HYDRANT PER NBU STANDARD DETAIL 242.
5. FIRE HYDRANTS SHALL MEET THE REQUIREMENTS OF NBU SPL W7.0.0.
6. TEST STATION SHALL MEET THE REQUIREMENTS OF NBU SPL W18.1.0. MAX DISTANCE BETWEEN TEST KITS SHALL BE 600 LF. CONCRETE COLLAR SHALL HAVE 1' MINIMUM CLEARANCE TO FIRE HYDRANT ASSEMBLY.
7. PROVIDE THRUST RESTRAINT ON WATER MAIN IN BOTH DIRECTIONS FROM TEE. RESTRAINT LENGTH SHALL BE PER THRUST RESTRAINT CALCULATIONS WITH SAFETY FACTOR NOT LESS THAN 1.5.

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: STANDARD FIRE HYDRANT INSTALLATION WITH 5" STORZ CONNECTOR				
	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 240		

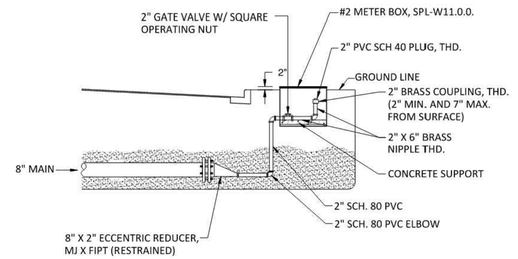


NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: SERVICE TAP: METER BOX PLACEMENT BETWEEN: SIDEWALK AND PROPERTY LINE				
	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 244		



ELEVATION

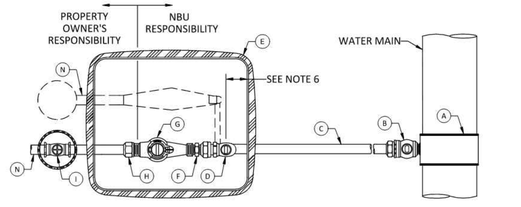
2" BLOW OFF ASSEMBLY ON 12" P.V.C. OR D.I. MAINS

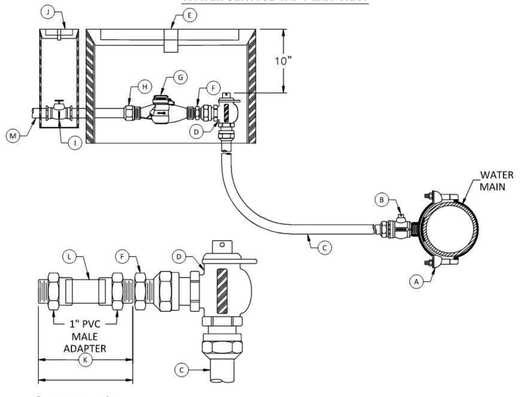


ELEVATION

2" BLOW OFF ASSEMBLY ON 8" P.V.C. OR D.I. MAINS

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: 2" BLOW OFF ASSEMBLY ON 8" & 12" P.V.C. OR D.I. MAINS				
	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 251		





⅝" METER = 7 ¾"
1" METER = 11"

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: STANDARD INSTALLATION DETAIL FOR 5/8" & 1" METER				
	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 2	DRAWING NO. 202		

MATERIALS LIST:

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

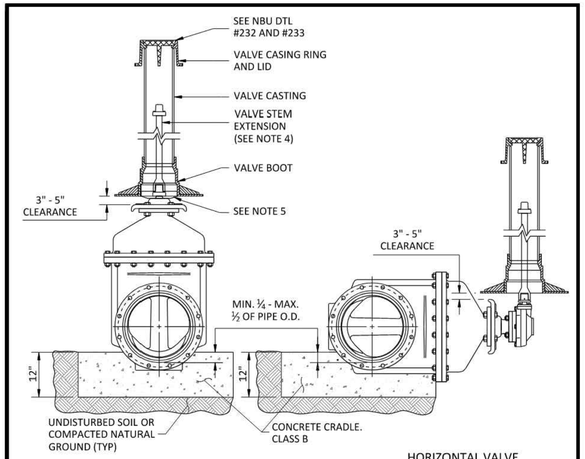
MATERIALS TO BE INSTALLED BY PLUMBER:

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

NOTES:

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

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: STANDARD INSTALLATION DETAIL FOR 5/8" & 1" METER				
	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 2 OF 2	DRAWING NO. 202		



VERTICAL VALVE

HORIZONTAL VALVE
USE ONLY WHEN SPECIFIED IN DRAWINGS AND WITH NBU STAFF APPROVAL

NOTES:

1. WELD SOCKET 2 ¾" X 2" DEEP TO 1" SCH, 40 CARBON STEEL ROUND STEM EXTENSION, FITTED ON OPERATING NUT. [SCH.80 FOR LENGTHS OVER 10'.]
2. VALVE CASTING SHALL BE 6" DI PIPE WITH BELL OR COLLAR CENTERED OVER VALVE BOOT.
3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE SQUARE 2" LONG WELDED TO TOP OF ROD.
4. VALVE STEM EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 12" AND 18" FROM FINISHED GRADE.
5. TRUMBULL VALVE BOX ALIGNMENT DEVICE OR APPROVED EQUAL.

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	STANDARD DRAWING: TYPICAL GATE VALVE				
	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 230		



ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

WATER DETAILS I

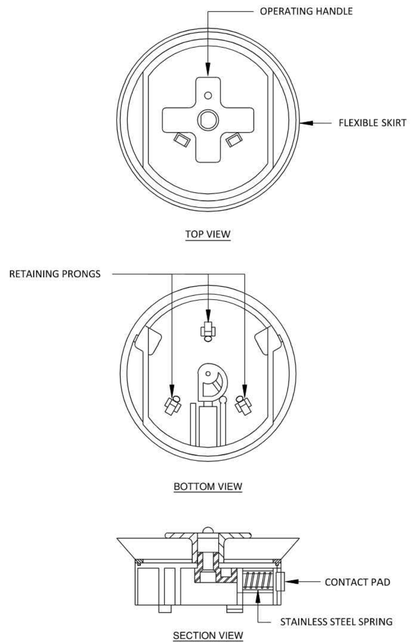
SHEET 34 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

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2021 W SH46, STE 105
NEW BRAUNFELS, TX. 78132
PH: 830-358-7127 ink-civil.com
TBPE FIRM F-13351

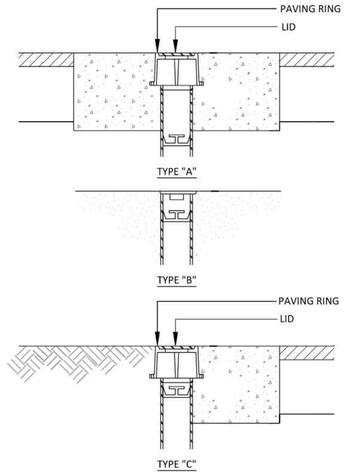
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Drawing Name: N:\Projects\098001 Star Ln Development\Civil\Construction Drawings\PHASE 1\35 WATER DETAILS 1.dwg User: chuckwere Sep 30, 2025 - 5:32pm



NBU — NEW BRAUNFELS UTILITIES, WATER SYSTEMS ENGINEERING

DRAWN BY:	STANDARD DRAWING:	DEBRIS CAP INSTALLATION			
EWL					
APPROVED BY: A. WILLARD					
DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 2	DRAWING NO. 234	

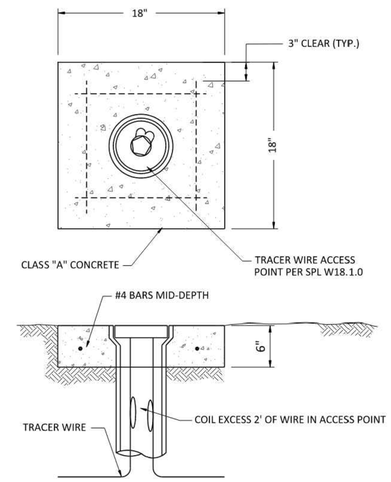


NOTES:

1. DEBRIS CAP SHALL BE INSTALLED AS CLOSE UNDER THE CAST IRON COVER WITHOUT INTERFERING WITH COVER OPERATION.
2. FLEXIBLE SKIRT SHALL BE TRIMMED TO PROVIDE A SMOOTH CONTACT WITH THE INTERIOR DIAMETER OF THE PIPE.
3. DEBRIS CAP SHALL MEET THE REQUIREMENTS OF NBU SPL W20.1.0.

NBU — NEW BRAUNFELS UTILITIES, WATER SYSTEMS ENGINEERING

DRAWN BY:	STANDARD DRAWING:	DEBRIS CAP INSTALLATION			
EWL					
APPROVED BY: A. WILLARD					
DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 2 OF 2	DRAWING NO. 234	



NOTES:

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

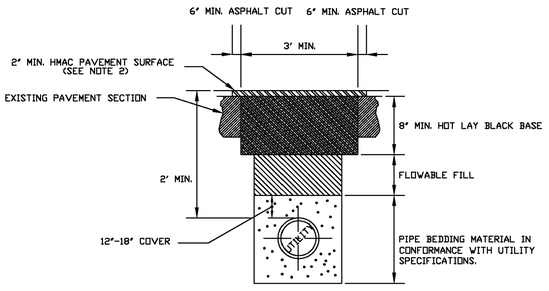
NBU — NEW BRAUNFELS UTILITIES, WATER SYSTEMS ENGINEERING

DRAWN BY:	STANDARD DRAWING:	TRACER WIRE ACCESS POINT			
EWL					
APPROVED BY: A. WILLARD					
DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 245	

RESTRAINED LENGTH FOR PVC PIPE

PIPE INSIDE DIA.	HORIZONTAL BENDS				VERTICAL BENDS						DEAD END/ INLINE VALVES
					UPPER			LOWER			
	90°	45°	22.5°	11.25°	45°	22.5°	11.25°	45°	22.5°	11.25°	
8"	19	8	4	2	25	12	6	7	4	2	60

NOTES:
LENGTHS SHOWN ABOVE WERE COMPUTED BASED ON THE FOLLOWING VALUES:
a. SAFETY FACTOR = 1.5 TO 1
b. TEST PRESSURE – 200 psi
c. SOIL DESIGNATION – WELL GRADED GRAVELS AND GRAVEL–SAND MIXTURES, LITTLE OR NO FINES (PEA GRAVEL)
d. DEPTH OF COVER – 4 feet (TYPICAL AND UPPER BEND)
e. DEPTH OF COVER – 5 feet (LOWER BEND)

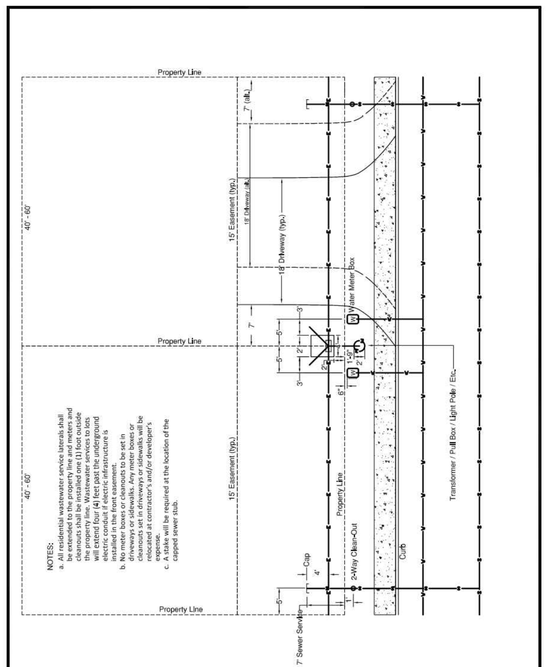


NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE AT A MINIMUM OF 12"WIDER THAN UNDISTURBED SIDES OF THE TRENCH SYMMETRICAL ABOUT THE CENTERLINE OF THE EXCAVATION.
2. REPLACEMENT HMAC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
   A) MIN. 2"HMAC TYPE "D"FOR TRENCH REPAIRS IN LOCAL/RESIDENTIAL STREETS.
   B) MIN. 3"HMAC TYPE "C"FOR TRENCH REPAIRS IN COLLECTOR/ARTERIAL STREETS.
3. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED
4. PRIME AND TACK COAT ALL EXPOSED EDGES AND SURFACES.
5. HOT LAY BLACK BASE LAYED IN 8"LIFTS @ 95% COMPACTION.
6. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE. THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX AC OR TEMPORARY HMAC.
7. CALICHE OR EXISTING MATERIAL SHALL NOT BE USED TO BACKFILL THE UTILITY EXCAVATION.

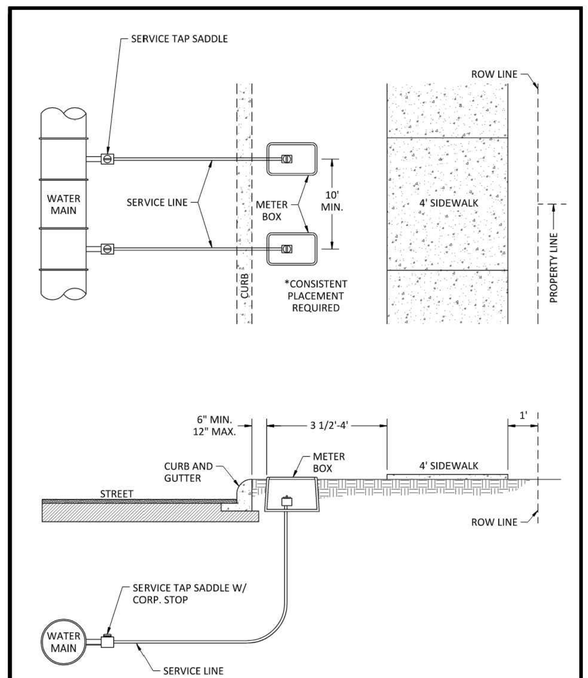
TRENCH REPAIR DETAIL	
ISSUE DATE: APRIL 2015	SCALE: N.T.S
DRAWN BY: AMF	CONTACT: GF

CITY OF NEW BRAUNFELS
ENGINEERING DIVISION
424 S. CASTELL AVE.
NEW BRAUNFELS, TEXAS 78130
PHONE 830 221 4020
FAX 830 626 3600



NBU — NEW BRAUNFELS UTILITIES, WATER SYSTEMS ENGINEERING

DRAWN BY: D. A.	STANDARD DRAWING:	NARROW LOT WATER & SEWER SERVICE ALIGNMENT SCENARIO			
APPROVED BY: N. P.					
DATE: 12/20/18	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 410		



NBU — NEW BRAUNFELS UTILITIES, WATER SYSTEMS ENGINEERING

DRAWN BY: EWL	STANDARD DRAWING:	SERVICE TAP: METER BOX PLACEMENT BETWEEN: SIDEWALK AND CURB			
APPROVED BY: A. WILLARD					
DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 243	

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

WATER DETAILS II

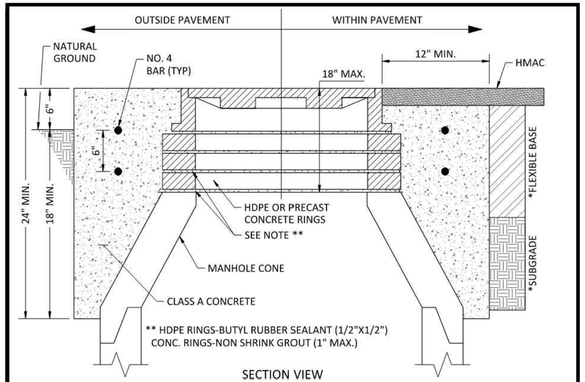
SHEET 35 OF 41

NO	DATE	ISSUES AND REVISIONS
1		

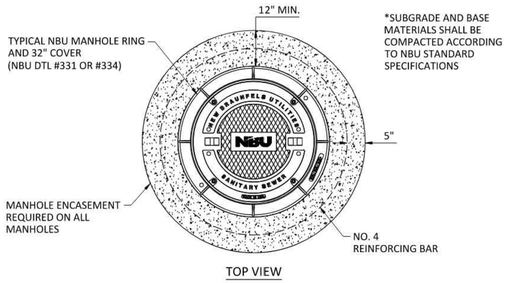
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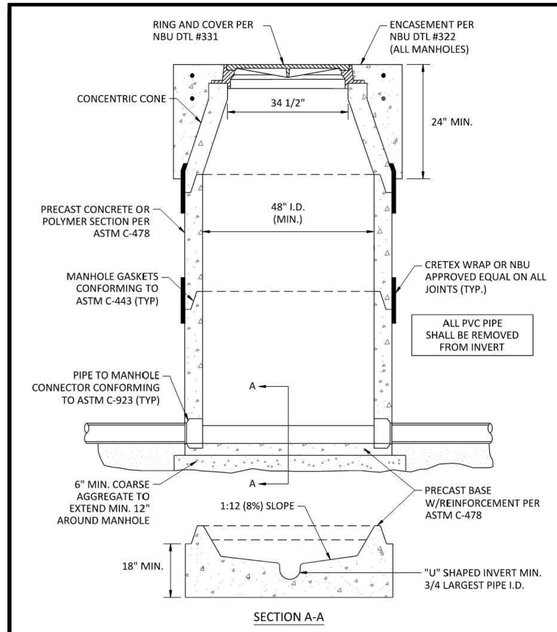
SECTION VIEW



TOP VIEW

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	STANDARD DRAWING:	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 322

NEW MANHOLE CONSTRUCTION AND MINOR MANHOLE ADJUSTMENT

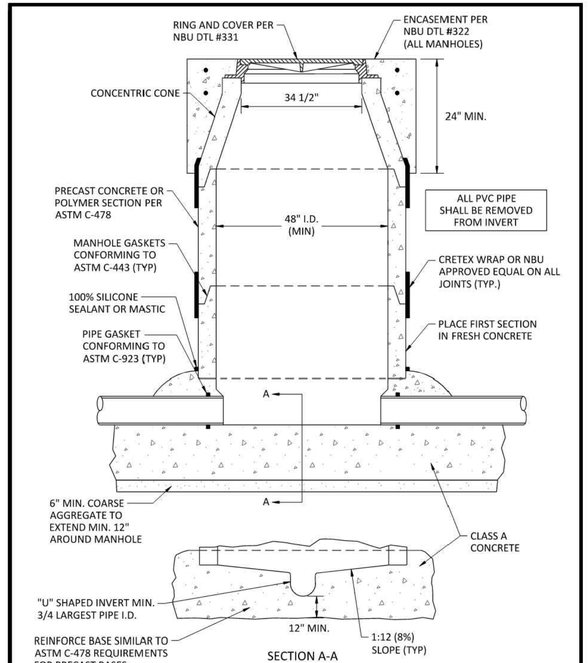


SECTION A-A

*CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	STANDARD DRAWING:	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 328

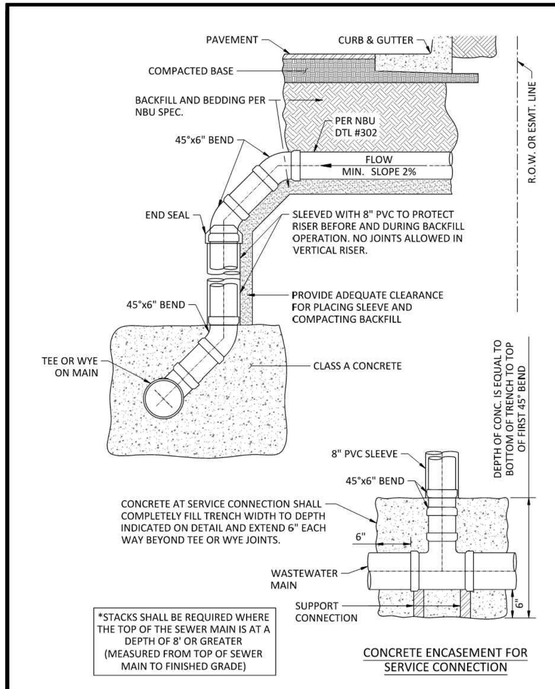
WASTEWATER MANHOLE ON PRECAST BASE



SECTION A-A

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	STANDARD DRAWING:	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 327

WASTEWATER MANHOLE ON CAST IN PLACE FOUNDATION

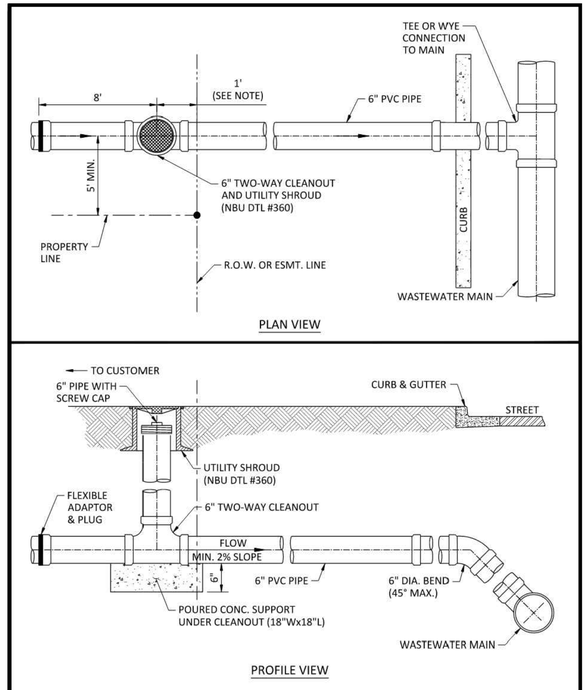


*STACKS SHALL BE REQUIRED WHERE THE TOP OF THE SEWER MAIN IS AT A DEPTH OF 8' OR GREATER (MEASURED FROM TOP OF SEWER MAIN TO FINISHED GRADE)

CONCRETE ENCASEMENT FOR SERVICE CONNECTION

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	STANDARD DRAWING:	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 301

WASTWATER DEEP SERVICE CONNECTION DETAIL



PLAN VIEW

PROFILE VIEW

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	STANDARD DRAWING:	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 2	DRAWING NO. 302

SINGLE WASTWATER SERVICE CONNECTION DETAIL

NOTES:

1. UTILITY CONTRACTOR, DURING SUBDIVISION CONSTRUCTION, SHALL INSTALL WASTEWATER CONNECTION TO MAIN, 6" STUB WITH 6" SERVICE BRANCH WITH 2-WAY CLEANOUT, CONCRETE SUPPORT (MIN. 18"Wx18"Lx6"H), RISER FOR CLEAN OUT (CAPPED), UTILITY SHROUD, 7' EXTENSION, AND PLUG. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SHALL SLOPE DOWNWARD TO MAIN AT A MINIMUM 2% SLOPE, ¼" PER FOOT, MINIMUM TO 45° MAXIMUM. DEPTH OF SERVICE STUB AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER OR DESIGNATED REPRESENTATIVE IF GREATER THAN 6', OTHERWISE, THE INSTALLED DEPTH WILL TYPICALLY BE 4' TO 6'. IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, REFER TO DETAIL 301. ALL INSTALLATIONS SHALL BE MADE IN ACCORDANCE WITH INFORMATION SHOWN ON APPLICABLE STANDARD DRAWINGS AND WILL BE INSPECTED BY NBU CONSTRUCTION INSPECTION PERSONNEL.
2. CUSTOMER SHALL REMOVE PLUG, INSTALL 4" WASTEWATER LINE [EXTEND 4" PIPE 6" MINIMUM INTO 6" PIPE AND JOINT WITH FLEXIBLE ADAPTOR]. IF WASTEWATER WILL NOT SATISFACTORILY FLOW BY GRAVITY TO SEWER MAIN ADJACENT TO PROPERTY, PUMP EQUIPMENT MUST BE PROVIDED BY THE CUSTOMER AS PART OF CUSTOMER'S WASTEWATER SYSTEM.
3. CUSTOMER IS RESPONSIBLE FOR PIPING SYSTEM UNTIL WASTEWATER IS CONNECTED. ANY MISSING OR DAMAGED PARTS SHALL BE REINSTALLED BY CUSTOMER WHO SHALL GUARANTEE, FOR A PERIOD OF TWO (2) YEARS FROM DATE OF FINAL ACCEPTANCE, THAT CONNECTIONS TO NBU SYSTEMS ARE FREE FROM DEFECTS IN WORKMANSHIP OR MATERIALS. CUSTOMER MUST ENSURE THAT 2-WAY CLEANOUTS REMAIN CLEAR OF SIDEWALKS AND OTHER OBSTRUCTIONS.
4. NBU ACTIVITY IS LIMITED TO INSPECTION OF CONNECTIONS TO NBU'S WASTEWATER SYSTEM. NBU'S MAINTENANCE RESPONSIBILITY ENDS AT THE CUSTOMER'S WASTEWATER CONNECTION TO THE 2-WAY CLEANOUT OR THE PROPERTY LINE, WHICHEVER IS CLOSER TO WASTEWATER MAIN.
5. PIPING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AND BACKFILLED AS REQUIRED BY NBU STANDARD SPECIFICATIONS. SERVICE LINES IN THESE AREAS SHALL HAVE A MINIMUM COVER BELOW FINAL STREET GRADE OF 42"; ANY EXCEPTION MUST BE SPECIFICALLY APPROVED BY NBU WATER ENGINEERING.

NBU NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY: EWL	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	STANDARD DRAWING:	UPDATED:	SCALE: N.T.S.	SHEET: 2 OF 2	DRAWING NO. 302

SINGLE WASTWATER SERVICE CONNECTION DETAIL

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

SANITARY SEWER DETAILS

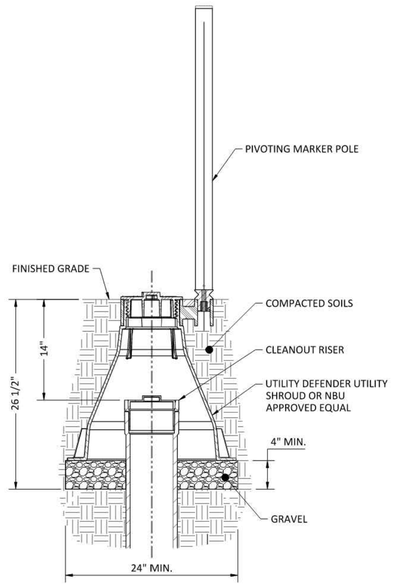
SHEET 36 OF 41

NO	DATE	ISSUES AND REVISIONS
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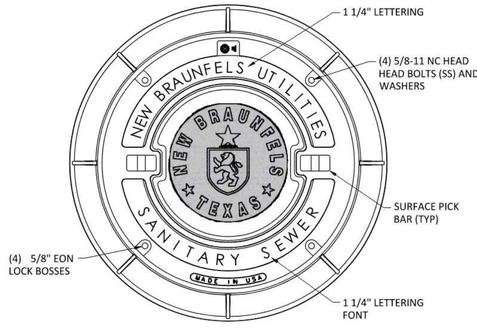
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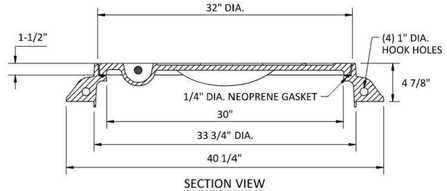


NBU — NEW BRAUNFELS UTILITIES, WATER SYSTEMS ENGINEERING

DRAWN BY:	STANDARD DRAWING:	
EWL	UTILITY SHROUD FOR SEWER CLEANOUT ASSEMBLY	
APPROVED BY: A. WILLARD		
DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S. / SHEET: 1 OF 1 / DRAWING NO.: 360



PLAN VIEW

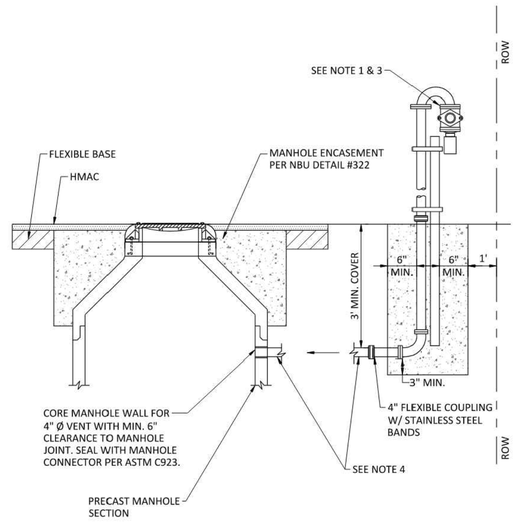


SECTION VIEW

MATERIAL: DUCTILE IRON ASTM A536 GRADE 70-50-05

NBU — NEW BRAUNFELS UTILITIES, WATER SYSTEMS ENGINEERING

DRAWN BY:	STANDARD DRAWING:	
EWL	SANITARY SEWER MANHOLE COVER	
APPROVED BY: A. WILLARD		
DRAWING DATE: 8/17/21	UPDATED: 2023-12-20	SCALE: N.T.S. / SHEET: 1 OF 1 / DRAWING NO.: 331

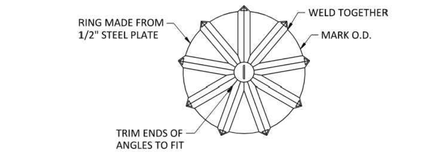


NOTES:

1. VENT PIPING AND COATINGS PER NBU DETAIL 334.
2. MANHOLE VENT AND SUPPORT PIPING SHALL NOT BE INSTALLED IN SIDEWALK, PARKING AREAS, OR DRIVE AISLES.
3. BOTTOM OF FLANGE SHALL BE MIN. 2'-6" ABOVE GRADE, 3'-6" MAX.
4. VENT PIPING FROM MANHOLE TO 90 DEG. VERTICAL BEND MUST BE LAID TO DRAIN TO THE MANHOLE AT MIN. 2% SLOPE.

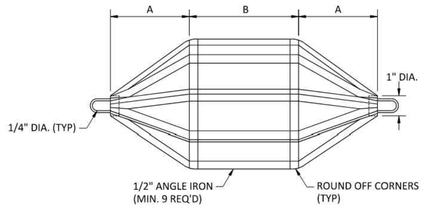
NBU — NEW BRAUNFELS UTILITIES, WATER SYSTEMS ENGINEERING

DRAWN BY:	STANDARD DRAWING:	
EWL	MANHOLE VENT PAVED AREAS	
APPROVED BY: A. WILLARD		
DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S. / SHEET: 1 OF 1 / DRAWING NO.: 333



END VIEW

DIMENSIONS
A - 67% OF PIPE I.D.
B - 75% OF PIPE I.D.



SIDE OR TOP VIEW

MANDREL REQUIREMENTS:

1. O.D. NOT LESS THAN 95% OF THE I.D. OF THE PIPE, AS SPECIFIED BY THE APPLICABLE ASTM, AWWA, UNI-BELL OR ANSI STANDARD.
2. ABLE TO WITHSTAND 200 PSI WITHOUT BEING DEFORMED.
3. ODD NUMBER OF RUNNERS OR LEGS.

*THIS INFORMATION IS PROVIDED AS A REFERENCE. ALL DEFLECTION TESTING SHALL BE DONE IN ACCORDANCE WITH TCEQ CHAPTER 217.

NBU — NEW BRAUNFELS UTILITIES, WATER SYSTEMS ENGINEERING

DRAWN BY:	STANDARD DRAWING:	
EWL	GO, NO GO DEFLECTION TESTING MANDREL	
APPROVED BY: A. WILLARD		
DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S. / SHEET: 1 OF 1 / DRAWING NO.: 350

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

SANITARY SEWER DETAILS II

SHEET 37 OF 41

NO	DATE	ISSUES AND REVISIONS
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SEQUENCE OF CONSTRUCTION:

1. OBTAIN CITY APPROVED SITE PREPARATION PLANS, AND TPDES PERMIT (NOT A COPY OF THE TPDES APPLICATION TO TCEQ), IF APPLICABLE.
2. INSTALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.
3. BEGIN DEMOLITION ACTIVITIES, IF APPLICABLE.
4. BEGIN SITE CLEARING AND GRADING.
5. INSTALL SEWER AND WATER IMPROVEMENTS.
6. INSTALL ELECTRIC IMPROVEMENTS.
7. INSTALL ROADWAY IMPROVEMENTS (ASPHALT, CURBS, SIDEWALKS, ETC.)
8. RESTORE AND REVEGETATE ALL DISTURBED AREAS NOT UNDER IMPERMEABLE IMPROVEMENTS.
9. COMPLETE ANY REMAINING "PUNCH LIST" ITEMS.
10. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROLS AFTER PERMANENT STABILIZATION IS AT LEAST 70% EVENLY ESTABLISHED. RYE IS NOT ACCEPTED.

EROSION CONTROL NOTES:

1. LIMITS OF CONSTRUCTION AND OTHER EROSION CONTROL IMPROVEMENTS SHOWN OUTSIDE THE PROPERTY ARE SHOWN FOR GRAPHICAL PURPOSE ONLY. IF NEAR PROPERTY LINE, THE INTENT IS TO BE PLACED NEAR THE PROPERTY LINE, NOT ON THE ADJACENT PROPERTY.
2. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
3. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.
4. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED IN THE SWPPP DOCUMENTS AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
5. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
6. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.
8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UP-GRADIENT AREAS.
10. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.
11. UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.
12. 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).

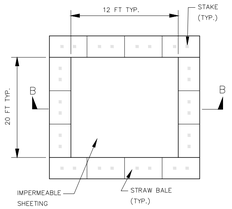
RESIDENTIAL LOT STABILIZATION

1. CURLEX BLANKET (I) (4' MIN WIDTH) OR ENGINEER APPROVED EQUAL
2. CURLEX MUST BE INSTALLED PER MANUFACTURER SPECIFICATIONS.
3. MAX SLOPE FOR CURLEX (I) < 2H : 1V

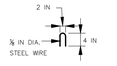
SOIL STABILIZATION NOTE

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

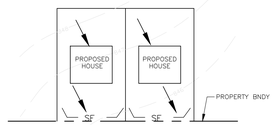
SUBSTANTIAL GRADING IS PROPOSED WITH THIS UNIT. PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 13.2(N), STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE TIME.



PLAN

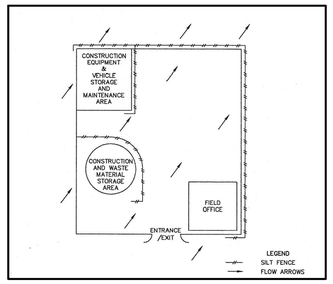


STAPLE DETAIL

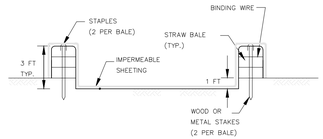


TYPICAL SILT FENCE AT RESIDENTIAL LOT

NOTE:
RESIDENTIAL LOT CONSTRUCTION MUST MEET THE REQUIREMENTS OF THIS WPAP AS WELL AS WITH LOCAL, STATE, AND FEDERAL REGULATIONS. TEMPORARY BMPS MUST BE IN PLACE PRIOR TO ANY RESIDENTIAL LOTS CONSTRUCTION.



TYPICAL CONSTRUCTION STAGING AREA



SECTION B–B

TYPICAL CONCRETE TRUCK WASHOUT PIT

HYDRAULIC MULCH

MATERIALS:

HYDRAULIC MULCHES: WOOD FIBER MULCH CAN BE APPLIED ALONE OR AS A COMPONENT OF HYDRAULIC MATRICES. WOOD FIBER APPLIED ALONE IS TYPICALLY APPLIED AT THE RATE OF 2,000 TO 4,000 LB/ACRE. WOOD FIBER MULCH IS MANUFACTURED FROM WOOD OR WOOD WASTE FROM LUMBER MILLS OR FROM URBAN SOURCES.

HYDRAULIC MATRICES: HYDRAULIC MATRICES INCLUDE A MIXTURE OF WOOD FIBER AND ACRYLIC POLYMER OR OTHER TACKIFIER AS BINDER. APPLY AS A LIQUID SLURRY USING A HYDRAULIC APPLICATION MACHINE (I.E., HYDRO SEEDER) AT THE FOLLOWING MINIMUM RATES, OR AS SPECIFIED BY THE MANUFACTURER TO ACHIEVE COMPLETE COVERAGE OF THE TARGET AREA: 2,000 TO 4,000 LB/ACRE WOOD FIBER MULCH, AND 5 TO 10% (BY WEIGHT) OF TACKIFIER (ACRYLIC COPOLYMER, GUAR, PSYLLIUM, ETC.)

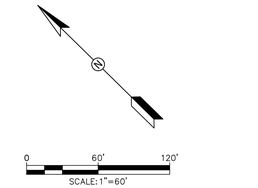
BONDED FIBER MATRIX: BONDED FIBER MATRIX (BFM) IS A HYDRAULICALLY APPLIED SYSTEM OF FIBERS AND ADHESIVES THAT UPON DRYING FORMS AN EROSION RESISTANT BLANKET THAT PROMOTES VEGETATION, AND PREVENTS SOIL EROSION. BFMS ARE TYPICALLY APPLIED AT RATES FROM 3,000 LB/ACRE TO 4,000 LB/ACRE BASED ON THE MANUFACTURER'S RECOMMENDATION. A BIODEGRADABLE BFM IS COMPOSED OF MATERIALS THAT ARE 100% BIODEGRADABLE. THE BINDER IN THE BFM SHOULD ALSO BE BIODEGRADABLE AND SHOULD NOT DISSOLVE OR DISPERSE UPON RE-WETTING. TYPICALLY, BIODEGRADABLE BFMS SHOULD NOT BE APPLIED IMMEDIATELY BEFORE, DURING OR IMMEDIATELY AFTER RAINFALL IF THE SOIL IS SATURATED. DEPENDING ON THE PRODUCT, BFMS TYPICALLY REQUIRE 12 TO 24 HOURS TO DRY AND BECOME EFFECTIVE.

INSTALLATION:

1. PRIOR TO APPLICATION, ROUGHEN EMBANKMENT AND FILL AREAS BY ROLLING WITH A CRIMPING OR PUNCHING TYPE ROLLER OR BY TRACK WALKING. TRACK WALKING SHALL ONLY BE USED WHERE OTHER METHODS ARE IMPRACTICAL.
2. TO BE EFFECTIVE, HYDRAULIC MATRICES REQUIRE 24 HOURS TO DRY BEFORE RAINFALL OCCURS.
3. AVOID MULCH OVER SPRAY ONTO ROADS, SIDEWALKS, DRAINAGE CHANNELS, EXISTING VEGETATION, ETC.
4. 4" OF TOP SOIL SHALL BE PLACED.

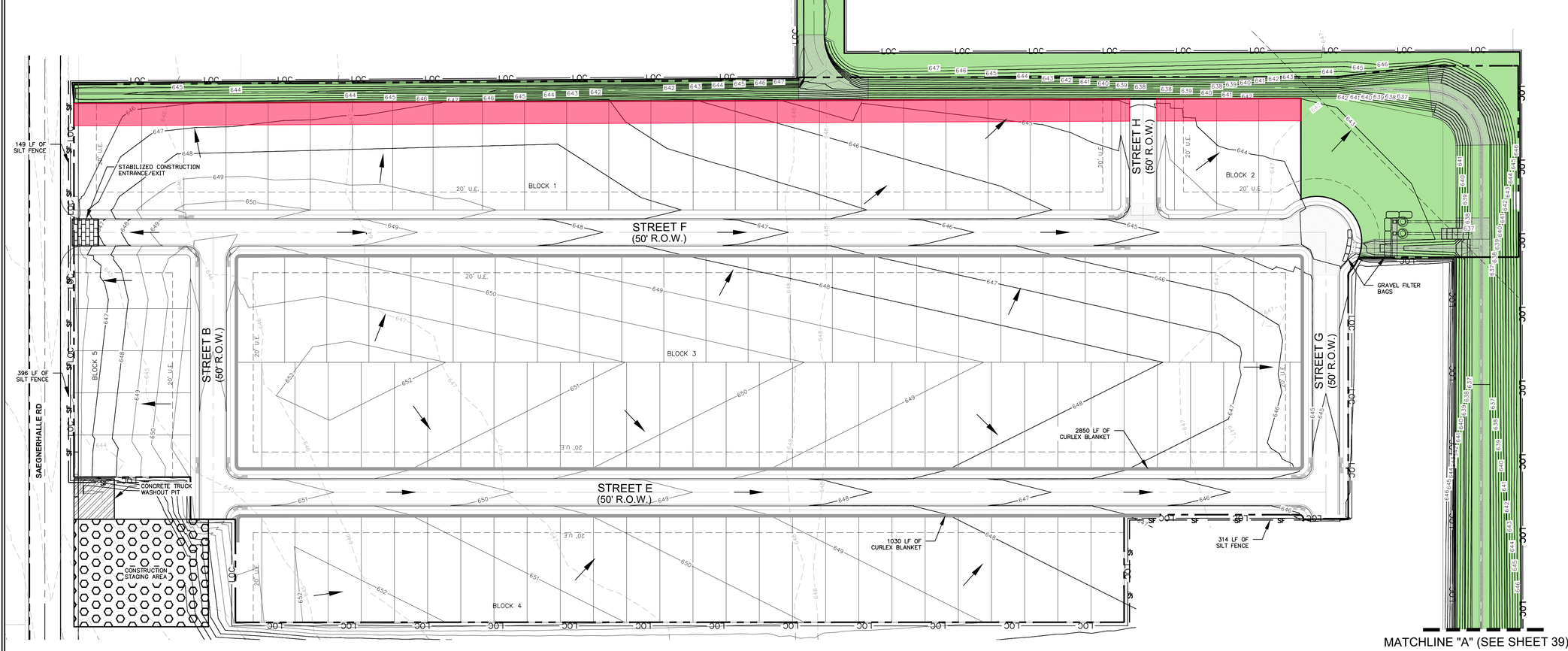
INSPECTION AND MAINTENANCE GUIDELINES:

1. MULCHED AREAS SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.
2. AREAS DAMAGED BY STORMS OR NORMAL CONSTRUCTION ACTIVITIES SHOULD BE REGRADED AND HYDRAULIC MULCH REAPPLIED AS SOON AS PRACTICAL.



LEGEND

- SF — SILT FENCE
- 900 — EXISTING CONTOURS
- 900 — PROPOSED CONTOURS
- EDGE OF PAVEMENT
- FLOW ARROWS
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING TREE
- STABLIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)
- TRUCK WASH OUT PIT (FIELD LOCATE)
- CONSTRUCTION STAGING AREA (FIELD LOCATE)
- ROCK BERM
- GRAVEL FILTER BAGS
- CURLEX BLANKET
- AREA TO BE RE-VEGETATED (HYDRAULIC MULCH) (47,098 SQ. YDS.)
- VEGETATIVE FILTER STRIP (3,719 SQ. YDS.)





09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

EROSION CONTROL PLAN

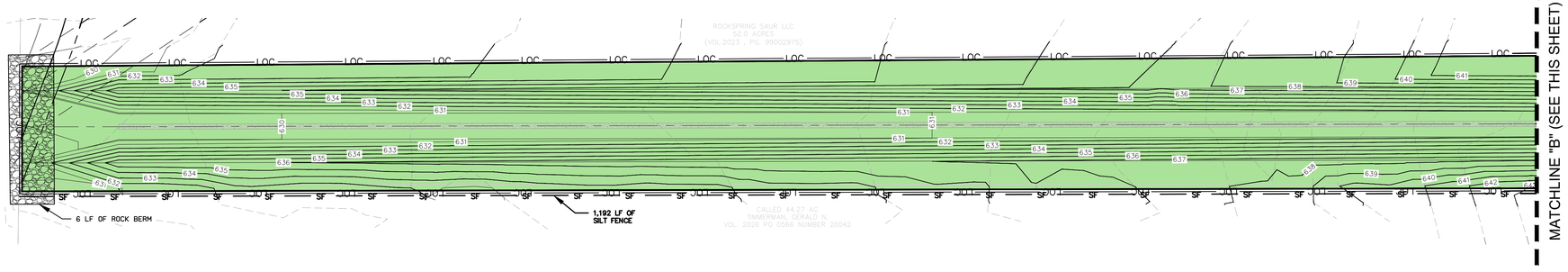
SHEET 38 OF 41

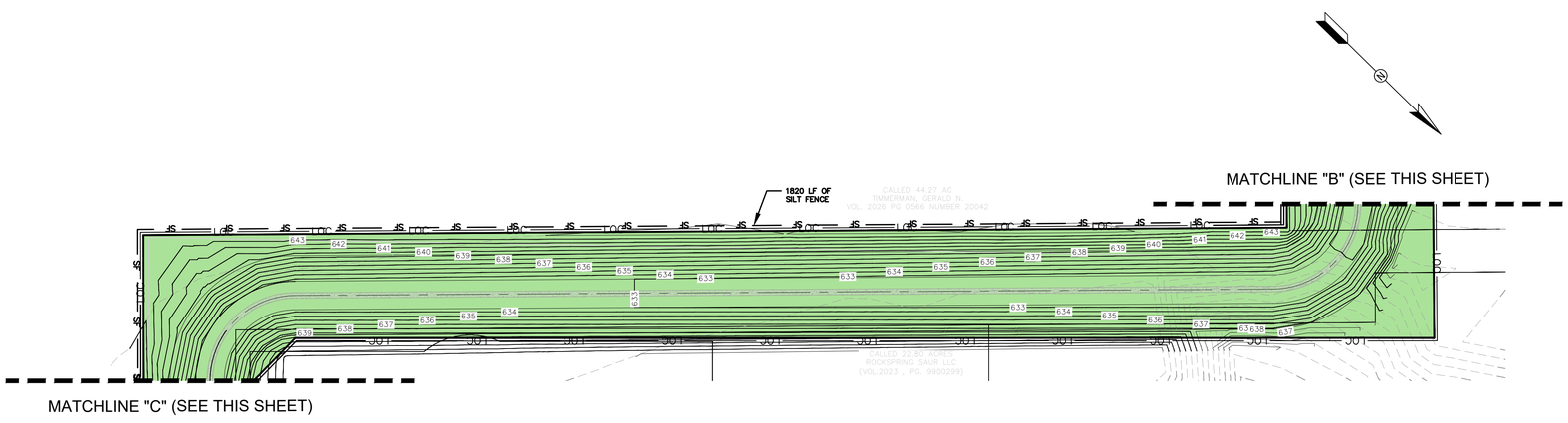
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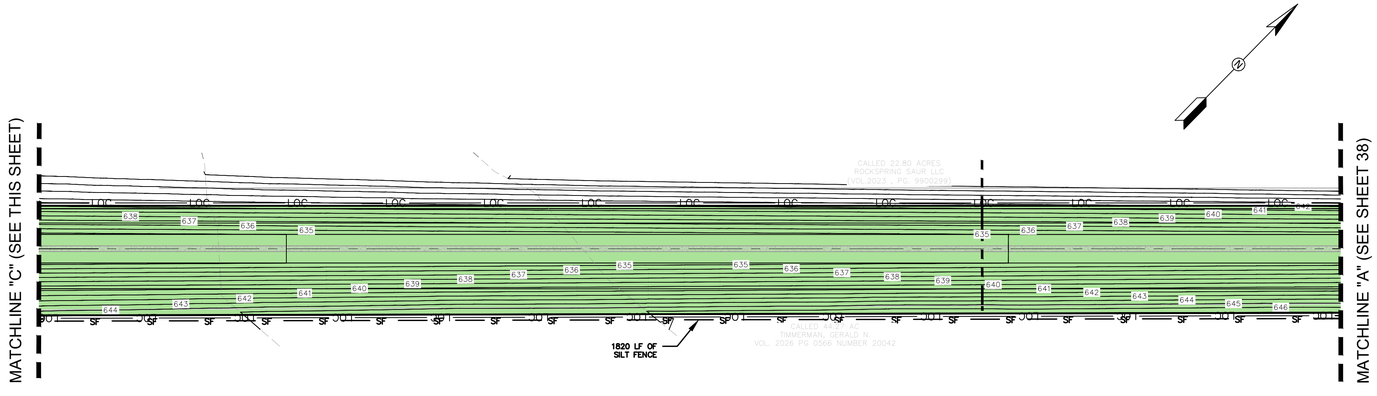
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0 50' 100'
SCALE: 1"=50'

LEGEND

- SF — SILT FENCE
- 900 — EXISTING CONTOURS
- 900 — PROPOSED CONTOURS
- EDGE OF PAVEMENT
- FLOW ARROWS
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING TREE
- STABLIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)
- TRUCK WASH OUT PIT (FIELD LOCATE)
- CONSTRUCTION STAGING AREA (FIELD LOCATE)
- ROCK BERM

STATE OF TEXAS
JAMES INGALLS
107416
LICENSED
PROFESSIONAL ENGINEER
09/30/2025

ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
SAN ANTONIO, TX 78230

HERITAGE FARMS PHASE 1

EROSION CONTROL PLAN II

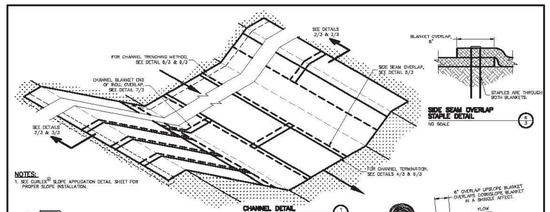
SHEET 39 OF 41

NO	DATE	ISSUES AND REVISIONS
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Curlex® Staple Pattern Guide

For 8 ft wide Curlex Erosion Control Blankets

Adjust horizontal staple spacing for 4 ft and 16 ft wide Curlex Erosion Control Blankets

Channel	
Application	≤ 10.0 lb/ft² (478 Pa) Shear Stress ≤ 17 ft/sec (5.2 m/sec) Velocity
Staple Pattern	C

= Staple Placement

4 ft

2 ft

4 ft

3 ft

2 ft

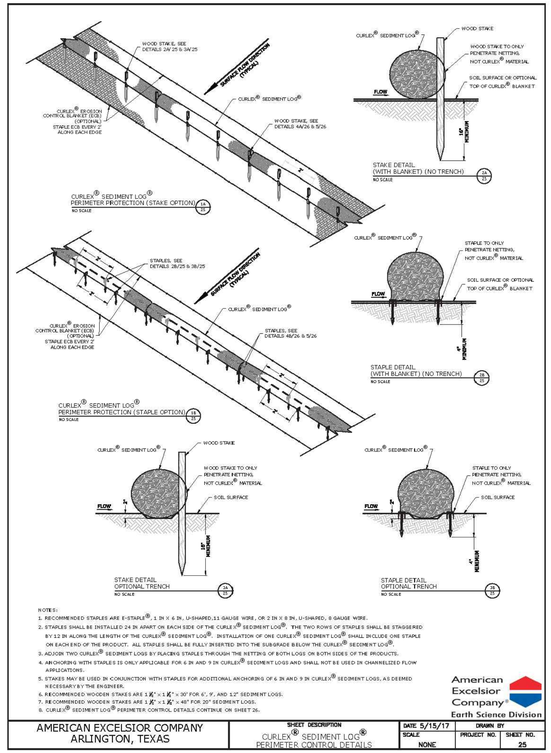
C

1.9 Staples/yd²

Notes:

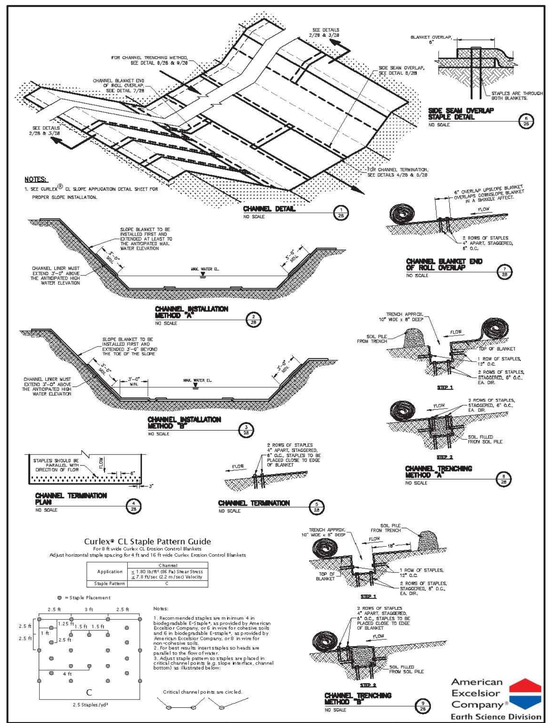
1. Recommended staples are a minimum 4 in biodegradable E-Staple®, as provided by American Excelsior Company, or 6 in wire for cohesive soils and 6 in biodegradable E-staple®, as provided by American Excelsior Company, or 8 in wire for non-cohesive soils.
2. For best results insert staples so heads are parallel to the direction of flow.
3. Adjust staple pattern as staples are placed in critical channel points (e.g. slope interface, channel bottom) as illustrated below.

Critical channel points are circled.



NOTES:

1. RECOMMENDED STAPLES ARE E-STAPLE®, 1 IN × 4 IN, U-SHAPED, 11 GAUGE WIRE, OR 2 IN × 8 IN, U-SHAPED, 8 GAUGE WIRE.
2. STAPLES SHALL BE INSTALLED 24 IN APART ON EACH SIDE OF THE CURLEX® SEDIMENT LOG®. THE TWO ROWS OF STAPLES SHALL BE STAGGERED BY 12 IN ALONG THE LENGTH OF THE CURLEX® SEDIMENT LOG®. INSTALLATION OF ONE CURLEX® SEDIMENT LOG® SHALL INCLUDE ONE STAPLE ON EACH END OF THE PRODUCT. ALL STAPLES SHALL BE FULLY INSERTED INTO THE SUBGRADE BELOW THE CURLEX® SEDIMENT LOG®.
3. ADJOIN TWO CURLEX® SEDIMENT LOGS BY PLACING STAPLES THROUGH THE NETTING OF BOTH LOGS ON BOTH SIDES OF THE PRODUCTS.
4. ANCHORING WITH STAPLES IS ONLY APPLICABLE FOR 6 IN AND 9 IN CURLEX® SEDIMENT LOGS AND SHALL NOT BE USED IN CHANNELIZED FLOW APPLICATIONS.
5. STAKES MAY BE USED IN CONJUNCTION WITH STAPLES FOR ADDITIONAL ANCHORING OF 6 IN AND 9 IN CURLEX® SEDIMENT LOGS, AS DEEMED NECESSARY BY THE ENGINEER.
6. RECOMMENDED WOODEN STAKES ARE 1 ½" × 1 ½" × 30" FOR 6", 9", AND 12" SEDIMENT LOGS.
7. RECOMMENDED WOODEN STAKES ARE 1 ½" × 1 ½" × 48" FOR 20" SEDIMENT LOGS.
8. CURLEX® SEDIMENT LOG® PERIMETER CONTROL DETAILS CONTINUE ON SHEET 26.



Curlex® CL Staple Pattern Guide

For 8 ft wide Curlex CL Erosion Control Blankets

Adjust horizontal staple spacing for 4 ft and 16 ft wide Curlex Erosion Control Blankets

Channel	
Application	≤ 1.90 lb/ft² (91 Pa) Shear Stress ≤ 7.0 ft/sec (2.2 m/sec) Velocity
Staple Pattern	C

= Staple Placement

2.5 ft

3 ft

2.5 ft

1.25 ft

1.5 ft

1.5 ft

2.5 ft

1 ft

2.5 ft

4 ft

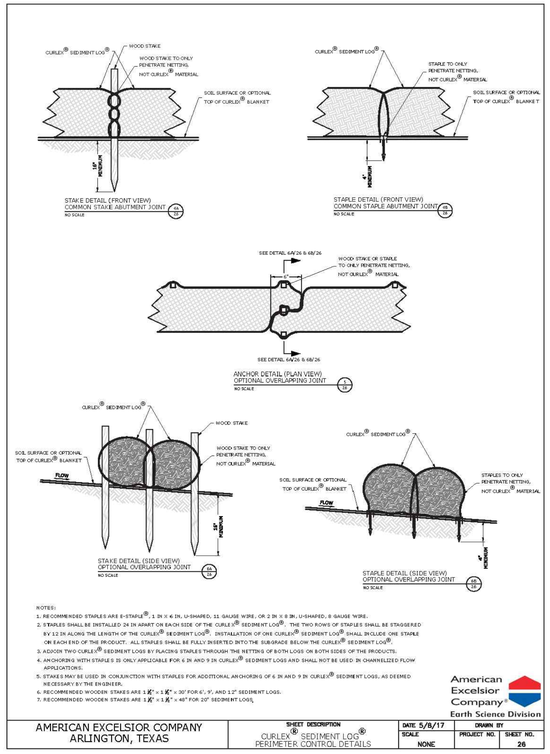
C

2.5 Staples/yd²

Notes:

1. Recommended staples are a minimum 4 in biodegradable E-Staple®, as provided by American Excelsior Company, or 6 in wire for cohesive soils and 6 in biodegradable E-staple®, as provided by American Excelsior Company, or 8 in wire for non-cohesive soils.
2. For best results insert staples so heads are parallel to the direction of flow.
3. Adjust staple pattern as staples are placed in critical channel points (e.g. slope interface, channel bottom) as illustrated below.

Critical channel points are circled.



NOTES:

1. RECOMMENDED STAPLES ARE E-STAPLE®, 1 IN × 4 IN, U-SHAPED, 11 GAUGE WIRE, OR 2 IN × 8 IN, U-SHAPED, 8 GAUGE WIRE.
2. STAPLES SHALL BE INSTALLED 24 IN APART ON EACH SIDE OF THE CURLEX® SEDIMENT LOG®. THE TWO ROWS OF STAPLES SHALL BE STAGGERED BY 12 IN ALONG THE LENGTH OF THE CURLEX® SEDIMENT LOG®. INSTALLATION OF ONE CURLEX® SEDIMENT LOG® SHALL INCLUDE ONE STAPLE ON EACH END OF THE PRODUCT. ALL STAPLES SHALL BE FULLY INSERTED INTO THE SUBGRADE BELOW THE CURLEX® SEDIMENT LOG®.
3. ADJOIN TWO CURLEX® SEDIMENT LOGS BY PLACING STAPLES THROUGH THE NETTING OF BOTH LOGS ON BOTH SIDES OF THE PRODUCTS.
4. ANCHORING WITH STAPLES IS ONLY APPLICABLE FOR 6 IN AND 9 IN CURLEX® SEDIMENT LOGS AND SHALL NOT BE USED IN CHANNELIZED FLOW APPLICATIONS.
5. STAKES MAY BE USED IN CONJUNCTION WITH STAPLES FOR ADDITIONAL ANCHORING OF 6 IN AND 9 IN CURLEX® SEDIMENT LOGS, AS DEEMED NECESSARY BY THE ENGINEER.
6. RECOMMENDED WOODEN STAKES ARE 1 ½" × 1 ½" × 30" FOR 6", 9", AND 12" SEDIMENT LOGS.
7. RECOMMENDED WOODEN STAKES ARE 1 ½" × 1 ½" × 48" FOR 20" SEDIMENT LOGS.

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LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
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ROCKSPRING
9901 W. INTERSTATE 10, SUITE 725
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HERITAGE FARMS PHASE 1

EROSION CONTROL DETAILS

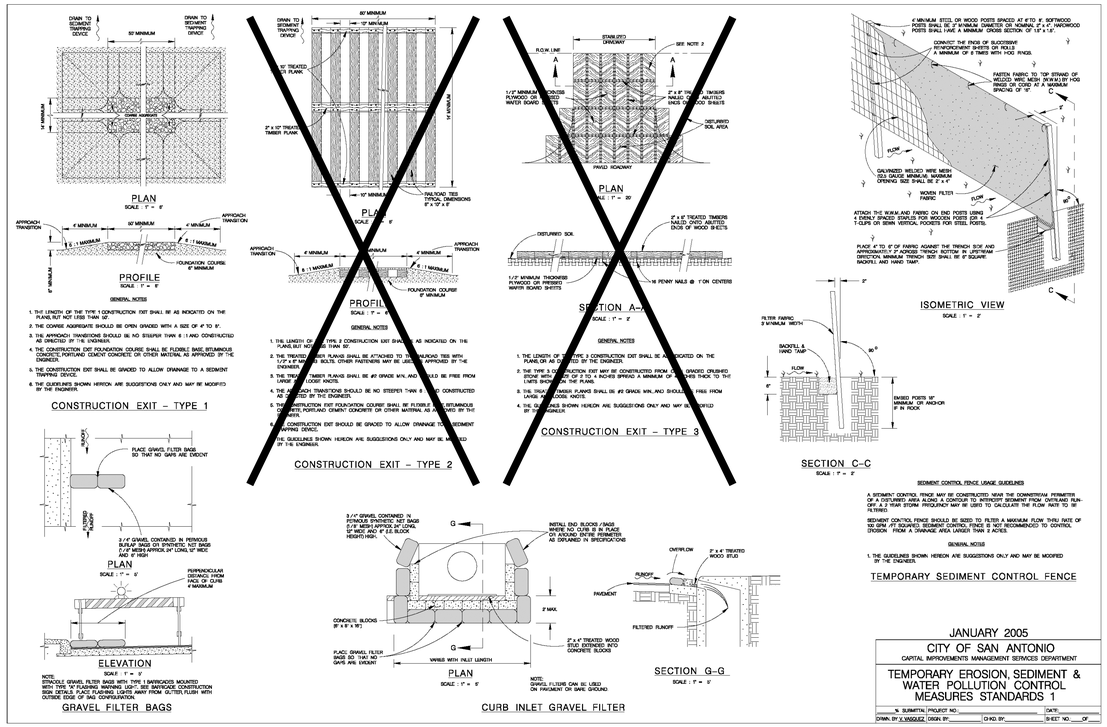
SHEET 40 OF 41

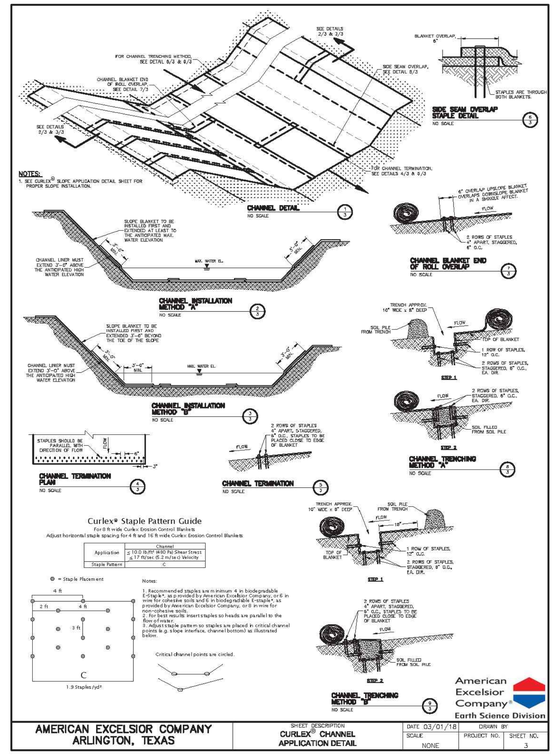
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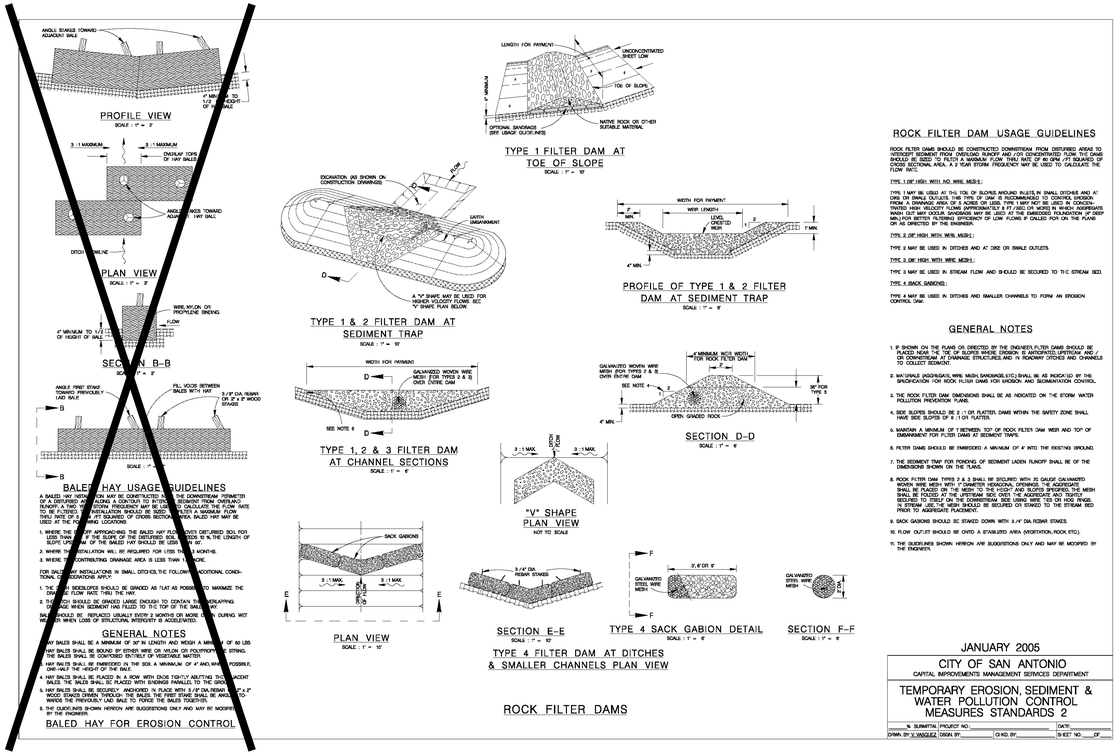
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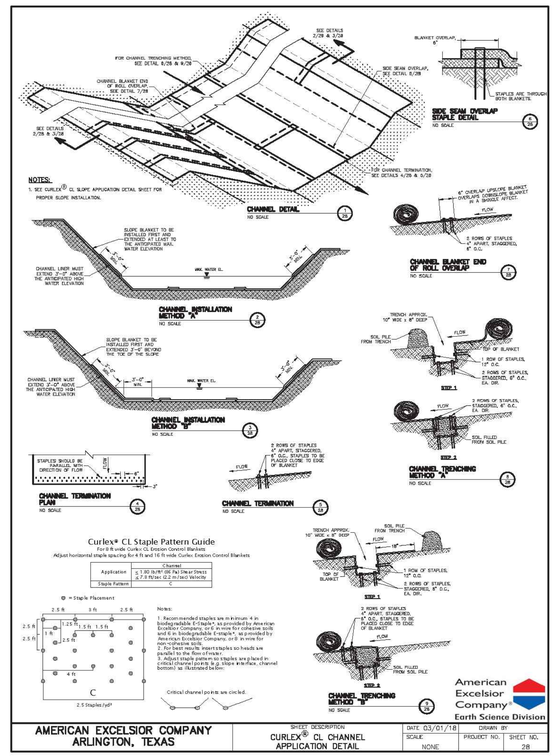
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HERITAGE FARMS PHASE 1

EROSION CONTROL DETAILS II

SHEET 41 OF 41

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