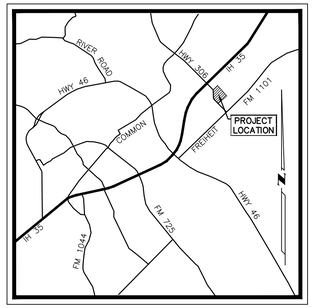
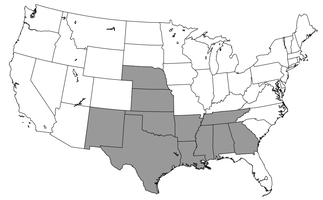


LOCATION MAP
N.T.S.

ZIP CODE: 78130

CIVIL PLANS
FOR
CREEKSIDE TOWN CENTER
TRACT 25'B'
LOCATED AT
323 CREEKSIDE CROSSING
CITY OF NEW BRAUNFELS, TEXAS
NEW BRAUNFELS TOWN CENTER
AT CREEKSIDE BLOCK 1, LOT 14
TYPE 3 DEVELOPMENT



*LICENSED IN AL, AR, GA, KS, LA, MS, NE, NM, OK, TN, & TX

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.

THE ENGINEER OF RECORD ACKNOWLEDGES THAT ALL PROPOSED WATER OR WASTEWATER IMPROVEMENTS MUST COMPLY WITH CRITERIA FROM THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, THE CITY OF NEW BRAUNFELS, NBU W&WW DESIGN CRITERIA, ANY OTHER GOVERNING ENTITY ORDINANCES OR CODES, AND SOUND ENGINEERING JUDGEMENT.

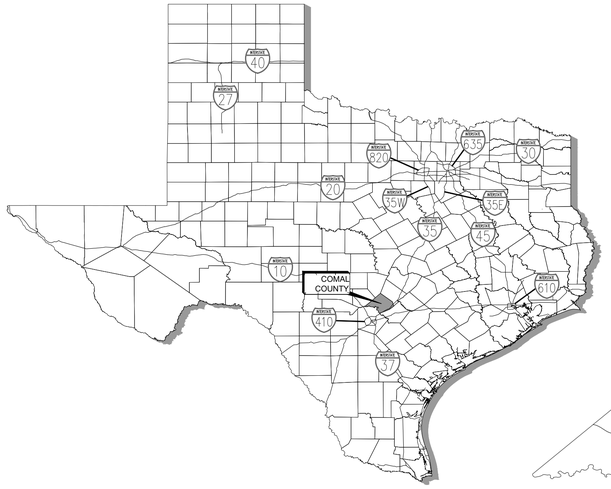
THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR THE NBU WATER SYSTEM IS THE MAIN SIDE OF THE SERVICE/LATERAL/LEAD FROM THE CUSTOMER'S METER, BACKFLOW PREVENTER, OR EASEMENT EDGE. THE CUSTOMER IS RESPONSIBLE FOR THE DESIGN, PERMITTING, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER ITS INSTALLATION.

THE ENGINEER OF RECORD ACKNOWLEDGES THAT THE POINT OF DELIVERY FOR A NBU WASTEWATER SYSTEM IS THE MAIN SIDE OF THE SERVICE LATERAL FROM THE CUSTOMER'S CLEAN OUT OR PROPERTY LINE, WHICHEVER IS NEARER. THE CUSTOMER IS RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE BEYOND THE POINT OF DELIVERY AND HAS SOLE CONTROL AND SUPERVISION OVER ITS INSTALLATION.

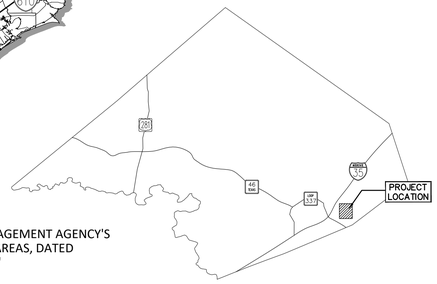
WATER IS A PRECIOUS COMMODITY IN THE STATE OF TEXAS AND NEW BRAUNFELS UTILITIES (NBU) IS PASSIONATE ABOUT PROTECTING THE LOCAL RESOURCE. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ACQUIRING A FIRE HYDRANT METER SO THAT ALL WATER USED FOR CONSTRUCTION OR TESTING PURPOSES ARE PROPERLY ACCOUNTED FOR. NBU WILL 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.

PLANS SUBMITTAL/REVIEW LOG

90% COORDINATION SET -NOT FOR CONSTRUCTION	08/28/2024
ISSUE FOR PERMIT -NOT FOR CONSTRUCTION	09/24/2024
SUBMIT TO NBU -NOT FOR CONSTRUCTION	10/18/2024
SUBMIT TO CONB -ISSUE FOR PERMIT	11/19/2024
RESUBMIT TO NBU -ISSUE FOR PERMIT	03/11/2025
RESUBMIT TO CONB -ISSUE FOR PERMIT	03/28/2025
RESUBMIT TO NBU -ISSUE FOR PERMIT	04/29/2025
RESUBMIT TO CONB -ISSUE FOR PERMIT	05/16/2025
SUBMIT FOR BID -NOT FOR CONSTRUCTION	07/09/2025



COMAL COUNTY



ACCORDING TO MAP NO. 48091C0455F OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAPS FOR COMAL COUNTY AND INCORPORATED AREAS, DATED 09/02/2009, THE SUBJECT TRACT IS SITUATED WITHIN: UNSHADED ZONE "X"

PROJECT TEAM:

DEVELOPER
A-L 95 CREEKSIDE TOWN CENTER L.P.
ATTN: MICHAEL HARNEY
8807 W. SAM HOUSTON PARKWAY N., SUITE 200
HOUSTON, TX 77040
281.477.4357

CIVIL ENGINEER
ALJ LINDSEY, LLC.
18635 N. ELDRIDGE PKWY, SUITE 200
TOMBALL, TEXAS 77377
281.301.5955
CONTACT: BRETT T. HANRAHAN, P.E.

THE SUBJECT TRACT IS NOT LOCATED WITHIN AN EDWARDS AQUIFER JURISDICTIONAL ZONE

CREEKSIDE CROSSING IS NOT A TXDOT ROADWAY. TXDOT PERMITS OR INSPECTIONS WILL NOT BE REQUIRED. CREEKSIDE CROSSING IS A CITY OF NEW BRAUNFELS ROADWAY.

PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SET A PRECONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED.

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

IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, APPROVAL OF THESE PLANS IS NO LONGER VALID.

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.

NBU PERMIT NO.: W-251193, WW-251194
CITY OF NEW BRAUNFELS PERMIT NO.: CP2024-846
PLAT PERMIT NO.: REP23-473

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST 72 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST - STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

INDEX OF SHEETS

CIVIL ENGINEERING (ALJ LINDSEY, LLC)	
SHEET NO.	DESCRIPTION
C0.0	COVER SHEET
C0.1	GENERAL NOTES
C0.2	TOPOGRAPHIC SURVEY
C0.3	PLAT (1 OF 3)
C0.4	PLAT (2 OF 3)
C0.5	PLAT (3 OF 3)
C1.0	DIMENSION CONTROL PLAN
C2.0	WATER PLAN
C2.1	WATER PLAN & PROFILE
C2.2	SANITARY SEWER PLAN
C2.3	SANITARY SEWER PLAN & PROFILE (1 OF 2)
C2.4	SANITARY SEWER PLAN & PROFILE (2 OF 2)
C3.0	EX DRAINAGE AREA MAP
C3.1	ULTIMATE DRAINAGE AREA MAP
C3.2	STORM SEWER PLAN
C3.3	STORM SEWER CALCULATIONS (1 OF 2)
C3.4	STORM SEWER CALCULATIONS (2 OF 2)
C3.5	STORM SEWER PLAN & PROFILE (1 OF 3)
C3.6	STORM SEWER PLAN & PROFILE (2 OF 3)
C3.7	STORM SEWER PLAN & PROFILE (3 OF 3)
C4.0	GRADING PLAN
C5.0	PAVING PLAN
C6.0	EROSION CONTROL PLAN
C7.0	CONSTRUCTION DETAILS (1 OF 2)
C7.1	CONSTRUCTION DETAILS (2 OF 2)
C7.2	SANITARY SEWER DETAILS (1 OF 2)
C7.3	SANITARY SEWER DETAILS (2 OF 2)
C7.4	WATER UTILITY DETAILS
C7.5	DRAINAGE DETAILS
C7.6	EROSION CONTROL DETAILS
C8.0	NBU NOTES

NO.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.301.5955
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
09 JULY 2025

ALJ PROJECT NO.: 028.24.CV.154
DATE: JULY 2025
SCALE: N/A
DRAWN BY: ZAR
CHECKED BY: BTH

COVER SHEET

CREEKSIDE TOWN CENTER
TRACT 25'B'
CITY OF NEW BRAUNFELS, TEXAS

SHEET
C0.0

GENERAL NOTES

1) THE LOCATION OF ALL UTILITIES SHOWN ON THESE PLANS WAS TAKEN FROM AVAILABLE SURVEY INFORMATION AND/OR EXISTING PUBLIC RECORDS. THE EXACT LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES MUST BE DETERMINED BY CONTRACTOR. IT SHALL BE THE DUTY AND RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF A DISCREPANCY AND/OR CONFLICT IS DISCOVERED. CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING UTILITIES DURING CONSTRUCTION.

2) CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC UTILITIES, PAVEMENT TO REMAIN, CURBS, SIDEWALKS, SIGNS, TREES, ETC., IN THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES. DURING CONSTRUCTION ALL DAMAGES SHALL BE REPAIRED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE OWNING/OPERATING AUTHORITY, WITH NO COST TO THE CITY, COUNTY, PRIVATE UTILITY OWNERS, ENGINEER, OR THE OWNER.

3) CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITY LINES AND SHALL NOTIFY THE FOLLOWING AGENCIES 72 HOURS PRIOR TO EXCAVATING OR AUGERING NEAR EXISTING FACILITIES.
1) TEXAS ONE CALL SYSTEM AT 1–800–245–4545
2) LONE STAR NOTIFICATION CENTER AT 1–800–669–8344
3) TEXAS EXCAVATION SAFETY SYSTEM AT 1–800–344–8377

4) PRIOR TO ANY CONSTRUCTION ACTIVITY, CONTRACTOR IS TO ACQUIRE ALL REQUIRED CONSTRUCTION PERMITS FROM APPROPRIATE AUTHORITIES. CONTRACTOR SHALL GIVE AT LEAST 48 HOURS NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PUBLIC AND PRIVATE UTILITY LINES AFFECTED BY HIS OPERATIONS PRIOR TO COMMENCEMENT OF WORK.

5) THE ENGINEER, THE CITY/COUNTY AND NBU SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE CONTRACTOR CONNECTING TO ANY EXISTING UTILITY LINES.

6) NO CONNECTIONS SHALL BE MADE TO EXISTING PUBLIC WATER LINES OR PUBLIC SANITARY SEWERS UNTIL ALL PROPOSED WATER OR SEWER LINES HAVE BEEN THOROUGHLY CLEANED, TESTED (AS REQUIRED) AND APPROVED BY THE APPROPRIATE AUTHORITIES.

7) CONTRACTOR IS RESPONSIBLE FOR CONTROL OF GROUNDWATER AS REQUIRED TO COMPLETE CONSTRUCTION OF PROPOSED IMPROVEMENTS.

8) ALL APPURTENANCES WILL BE ASSUMED TO BE IN GOOD CONDITION UNLESS OTHERWISE CONFIRMED IN WRITING PRIOR TO COMMENCEMENT OF WORK.

9) OVERHEAD LINES EXIST ON THE PROPERTY. WE HAVE NOT ATTEMPTED TO MARK THOSE LINES SINCE THEY ARE CLEARLY VISIBLE, BUT YOU SHOULD LOCATE THEM PRIOR TO BEGINNING CONSTRUCTION. TEXAS LAW, SECTION 752, HEALTH AND SAFETY CODE, FORBIDS ALL ACTIVITIES IN WHICH PERSON OR EQUIPMENT MAY COME WITHIN 6 FEET OF LIVE OVERHEAD HIGH VOLTAGE LINES. CONTRACTORS ARE LEGALLY RESPONSIBLE FOR SAFETY OF CONSTRUCTION WORKERS UNDER THIS LAW. THIS LAW CARRIES BOTH CIVIL AND CRIMINAL LIABILITY.

10) CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND ALL REGULATIONS OF UTILITY COMPANIES CONCERNING SAFETY AND HEALTH PRACTICES. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SITE TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY/COUNTY STANDARDS, TEXAS STATE LAW, AND O.S.H.A. STANDARDS FOR ALL EXCAVATION.

11) PRIOR TO THE START OF CONSTRUCTION, OWNER AND CONTRACTOR ARE RESPONSIBLE FOR SUBMITTING THE "NOTICE OF INTENT" (N.O.I.) AND ANY ADDITIONAL INFORMATION REQUIRED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ). UPON COMPLETION OF THE PROJECT, OWNER AND CONTRACTOR ARE RESPONSIBLE FOR SUBMITTING THE "NOTICE OF TERMINATION" (N.O.T.).

12) CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION

13) CONTRACTOR SHALL REMOVE ALL MUD, DIRT, AND DEBRIS DEPOSITED OR DROPPED ON THE EXISTING ROADWAY AT THE END OF EACH WORK DAY. MATERIAL THAT IS HAZARDOUS TO TRAFFIC OR OTHERWISE PRESENTS A SAFETY CONCERN, SHALL BE REMOVED IMMEDIATELY.

14) CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL STATE AND LOCAL REGULATIONS RELATED TO STORM WATER POLLUTION AND QUALITY. REFER TO EROSION CONTROL PLAN.

15) CONTRACTOR SHALL REESTABLISH ALL TURF DISTURBED DURING CONSTRUCTION TO ACCEPTABLE OPERATING CONDITION, AS DETERMINED BY OWNER AND/OR REGULATORY AGENCIES.

16) CONTRACTOR SHALL MAINTAIN A WORKSITE FREE OF TRASH AND DEBRIS.

17) CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES. NO TREE SHALL BE REMOVED OR ALTERED WITHOUT WRITTEN PERMISSION FROM OWNER OR ENGINEER. EQUIPMENT OR MATERIALS SHALL NOT BE STAGED UNDER THE DRIP LINE OF EXISTING TREES, HOWEVER CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES AS REQUIRED FOR COMPLETION OF WORK.

18) CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A SET OF "AS BUILT" PLANS FOR ALL WORK PERFORMED ON AND OFF SITE. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL PROVIDE AS–BUILT PLANS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM ORIGINAL PLANS TO THE OWNER AND THE ENGINEER.

19) ALL TRAFFIC CONTROL AND WARNING SIGNS SHALL BE IN ACCORDANCE WITH TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

20) ALL WATER/SEWER MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE CONSTRUCTION DETAILS AND SPECIFICATIONS OF NBU. ALL PAVING/DRAINAGE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE CONSTRUCTION DETAILS AND SPECIFICATIONS OF THE CITY OF SAN ANTONIO. WHERE A DISCREPANCY EXISTS BETWEEN THESE PLANS AND THE NBU/COSA REQUIREMENTS, THE MORE RESTRICTIVE CRITERIA SHALL BE APPLIED.

21) ALL SPOIL MATERIAL GENERATED FROM CONSTRUCTION ACTIVITY TO BE PLACED WITHIN THE BOUNDARIES OF CREEKSIDE TOWN CENTER AS DIRECTED BY THE OWNER OR AS REQUIRED BY SITE GRADING (IF MATERIAL MEETS REQUIREMENTS OF GEO REPORT).

22) AT THE END OF ALL CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL RESTORE THE EXISTING FACILITIES, TO EQUAL TO BETTER THAN EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION. ALL FINISHED GRADES SHALL VARY UNIFORMLY BETWEEN THE FINISHED ELEVATIONS SHOWN.

BACKFILL REQUIREMENTS

STORM PIPE:

INITIAL BACKFILL (COSA SPEC 400.3.E.2)
– THE INITIAL BEDDING AND BACKFILL SHALL BE CEMENT STABILIZED SAND AND EXTEND FROM 4" BELOW THE PIPE TO 12" ABOVE THE PIPE. THE INITIAL BACKFILL SHALL BE SHALL BE PLACED IN MAXIMUM 8" LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95% OF MAX DRY DENSITY PER TEX–120–E, PART II.

SECONDARY BACKFILL (COSA SPEC 400.3.E.2F)
– THE SECONDARY BACKFILL SHALL BE EITHER:

1) FOR AREAS NOT BELOW FUTURE OR PROPOSED PAVING, SECONDARY BACKFILL WILL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT AND IN CONFORMANCE WITH CITY OF NEW BRAUNFELS STANDARDS.

2) CEMENT STABILIZED SAND PER INITIAL BACKFILL REQUIREMENTS WHEN BELOW FUTURE/PROPOSED PAVING.

SANITARY SEWER AND WATER LINE: (REFER TO NBU NOTES ON SHEET C8.0).

THE INITIAL BEDDING AND BACKFILL SHALL BE NATURAL OR MANUFACTURED SAND AND EXTEND FROM 6" BELOW THE PIPE TO 12" ABOVE THE PIPE. THE INITIAL BACKFILL SHALL BE SHALL BE PLACED IN MAXIMUM 8" LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95% OF MAX DRY DENSITY PER TEX–114–E.

THE SECONDARY BACKFILL SHALL BE EITHER:

1) FOR AREAS NOT BELOW FUTURE OR PROPOSED PAVING, SECONDARY BACKFILL WILL BE IN ACCORDANCE WITH GEOTECHNICAL REPORT AND IN CONFORMANCE WITH CITY OF NEW BRAUNFELS STANDARDS.

2) CEMENT STABILIZED SAND PER INITIAL BACKFILL REQUIREMENTS WHEN BELOW FUTURE/PROPOSED PAVING.

**IN PLACE NUCLEAR MOISTURE DENSITY TESTING: AT LEAST ONE TEST PER 50 LINEAR FEET PER LIFT. AT LEAST 3 TESTS PER LIFT. IF SPACE OR SAFETY CONSTRAINTS DO NOT ALLOW THE USE OF A NUCLEAR GAUGE, MONITOR MOISTURE CONTENT AND COMPACTION VISUALLY ON A FULL TIME BASIS.

SELECT FILL NOTES:

BASE BID: CONTRACTOR SHALL IMPORT SELECT FILL AND PLACE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.

ALTERNATE BID ITEM: SELECT FILL TO BE OBTAINED FROM OWNER'S PIT ON F.M. 1101. CONTRACTOR IS RESPONSIBLE FOR LOADING AND HAULING. ALL MATERIAL SHALL BE APPROVED BY OWNER'S ONSITE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.

CONFLICT NOTES:

1) PRIOR TO COMMENCEMENT OF CONSTRUCTION, GENERAL CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL UTILITY CONNECTION POINTS AND SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL UTILITY CROSSINGS (INCLUDING ALL UTILITIES SHOWN ON THESE DRAWINGS, TOPO SURVEY, FIELD OBSERVATIONS AND UTILITY LOCATES. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING WITHIN 24 HOURS AND PRIOR TO COMMENCEMENT OF CONSTRUCTION.

TXDOT NOTES:

1) OAK CREEK WAY IS NOT A TXDOT ROADWAY. TXDOT PERMITS OR INSPECTIONS WILL NOT BE REQUIRED. OAK CREEK WAY IS A CITY OF NEW BRAUNFELS ROADWAY.

AS–BUILT NOTES:

1) CONTRACTOR IS RESPONSIBLE FOR PROVIDING ELECTRONIC SURVEY DATA OF ALL PROPOSED SANITARY SEWER AND WATER FACILITIES PER NBU AS–BUILT REQUIREMENTS. THE REQUIRED INFORMATION INCLUDES WATER LINE BENDS AND VALVES, AND OTHER INFORMATION THAT MUST BE OBTAINED DURING CONSTRUCTION.

FRANCHISE UTILITY NOTES

1) CONTRACTOR SHALL CALL THE TEXAS ONE CALL AND DIG–TESS AT LEAST 72 HOURS PRIOR TO COMMENCING DEMOLITION OR CONSTRUCTION ACTIVITIES. THE CONTRACTOR BEARS SOLE RESPONSIBILITY FOR VERIFYING LOCATIONS OF EXISTING UTILITIES, SHOWN OR NOT SHOWN, AND FOR ANY DAMAGE TO THESE FACILITIES.

NBU AS–BUILT REQUIREMENTS

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 GPS POINTS SHALL BE MEASURED TO MAP GRADE. PLEASE REFERENCE NBU'S WATER CONNECTION POLICY FOR ADDITIONAL CAD DELIVERABLE REQUIREMENTS.

WATER
1. VERTICAL BENDS AND EDGE OF STEEL CASING (IF APPLICABLE) PRIOR TO BACKFILL
2. HORIZONTAL BENDS PRIOR TO BACKFILL
3. TEES PRIOR TO BACKFILL
4. FITTINGS (REDUCERS AND COUPLINGS) PRIOR TO BACKFILL
5. FIRE HYDRANTS (TOP FLANGE)
6. VALVES
7. METERS (TOP CENTER OF BOX)
8. BLOW OFF ASSEMBLIES
9. CORNER SLAB OF ALL WATER TANK AND THE ISOLATION GATE VALVE ON THE WATER TANK

WASTEWATER
1. MANHOLES
2. CLEANOUTS
3. CORNER SLAB OF LIFT STATIONS

ELECTRIC
1. POLES
2. TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK)
3. PULL BOXES
4. STREET LIGHTS. COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

GRADING NOTES

1) GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE START OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.

2) BEFORE STARTING CONSTRUCTION, CONTRACTOR SHALL VERIFY BENCHMARK ELEVATION AND NOTIFY ENGINEER IF ANY DISCREPANCY AND/OR CONFLICT IS FOUND.

3) CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE WITHIN THE SITE AND NO PONDING IN PAVED AREAS, AND SHALL NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.

4) CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.

5) ALL EXISTING CONCRETE PAVING, SIDEWALK, AND CURB DEMOLITION SHALL BE REMOVED AND DISPOSED OF BY CONTRACTOR. DISPOSAL SHALL BE AT AN APPROVED OFF–SITE, LAWFUL LOCATION, UNLESS DIRECTED OTHERWISE BY THE OWNER.

6) ALL MATERIAL SHALL BE PLACED IN LOOSE LIFTS AND COMPACTED TO THE SPECIFIED STANDARD PROCTOR DENSITY PER GEOTECHNICAL RECOMMENDATION PROVIDED BY OWNER.

7) EXISTING FEATURES SUCH AS; MANHOLES, INLETS, WATER VALVES & HYDRANTS, BOXES, AND OTHER APPURTENANCES MAY EXIST WITHIN THE PROJECT AREA AND IMMEDIATE VICINITY. THESE IMPROVEMENTS ARE EITHER SHOWN ON THE TOPOGRAPHIC SURVEY OR ARE READILY APPARENT DURING A SITE VISIT. CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THESE FEATURES AS REQUIRED TO COMPLETE CONSTRUCTION AND ACCEPTANCE.

8) TOPOGRAPHIC SURVEY INFORMATION PROVIDED BY TEAMS
9) ALL STRIPPING OF EXISTING VEGETATION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, SEC 4.2.1 "GENERAL SITE PREPARATION." DISPOSAL OF EXCESS STRIPPING WILL BE AT CONTRACTOR'S EXPENSE.

STORM SEWERS

1) STORM SEWER PIPE USED FOR CONNECTION TO STORM SEWER IN PUBLIC RIGHT–OF–WAY SHALL BE REINFORCED CONCRETE PIPE ASTM C–76, CLASS III, WITH RUBBER GASKET PER ASTM C–443. ALL OTHER PRIVATE STORM SEWER MAY BE SELECTED PER THE FOLLOWING CRITERIA.
A) CORRUGATED HIGH–DENSITY POLYETHYLENE (HDPE) (4 INCHES TO 48 INCHES IN DIAMETER): AASHTO M 294, DUAL WALL WITH WATER TIGHT (ASTM D3212) BELL–TO–BELL COUPLER, TRADE NAME N–12 BY ADS OR EQUAL

B) POLYVINYL CHLORIDE (PVC) CORRUGATED PIPE WITH SMOOTH INTERIOR PER ASTM F 949 (4 INCHES TO 36–INCHES (102–MM TO 914–MM)) WITH ELASTOMETRIC GASKET JOINTS, TRADE NAME A–2000 BY CONTECH OR EQUAL

C) STEEL REINFORCED HIGH–DENSITY POLYETHYLENE (HDPE) (24 INCHES TO 48 INCHES IN DIAMETER): AASHTO M 294, HIGH PERFORMANCE JOINTS (ASTM D3212), TRADE NAME DUROMAXX OR EQUAL

D) REINFORCED CONCRETE PIPE (RCP): ASTM C76, CLASS III WITH RUBBER GASKET JOINTS PER ASTM C–443

2) STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST CITY OF SAN ANTONIO OR TxDOT STANDARD CONSTRUCTION SPECIFICATIONS FOR STORM DRAINAGE INCLUDING ALL CURRENT AMENDMENTS THERETO.

3) NOT USED.

4) NOT USED.

5) PROPOSED PIPE STUB–OUTS ARE TO BE PLUGGED WITH 8" BRICK WALLS, UNLESS OTHERWISE NOTED.

PAVING AND STRIPING NOTES

1. PAVEMENT DESIGN AND SOIL PREPARATION RECOMMENDATIONS GIVEN IN THE GEOTECHNICAL REPORT PROVIDED BY OWNER. SHALL BE ADHERED TO FOR BOTH MATERIALS AND PRACTICE OF INSTALLATION.

2. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND CITY/COUNTY STANDARDS.

3. CONTRACTOR SHALL FURNISH ALL PAVEMENT MARKINGS FOR FIRE LANES, ROADWAY LANES, PARKING STALLS, HANDICAPPED PARKING SYMBOLS, ACCESS AISLES, STOP BARS AND SIGNS, AND MISCELLANEOUS STRIPING WITHIN PARKING LOT AS SHOWN ON THE PLANS.

4. ALL JOINTS SHALL BE SEALED PER CITY/COUNTY SPECIFICATIONS. ALL JOINTS SHALL EXTEND THROUGH THE CURB.

5. THE MATERIALS AND PROPERTIES OF CONCRETE SHALL MEET THE APPLICABLE REQUIREMENTS IN THE A.C.I. (AMERICAN CONCRETE INSTITUTE) MANUAL OF CONCRETE PRACTICE AS WELL AS CITY OF SAN ANTONIO STANDARDS.

6. ANY DAMAGED PAVEMENT, CURB AND/OR SIDEWALK WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE TO THE SATISFACTION OF THE ENGINEER AND OWNER.

7. ALL FILL (INCLUDING TRENCH BACKFILL) WITHIN 2' OF BOTTOM OF PROPOSED CONCRETE PAVEMENT SHALL BE COMPACTED TO 98% STD PROCTOR DENSITY, ASTM D698. REFERENCE GEOTECHNICAL REPORT FOR MOISTURE CONTENT REQUIREMENTS.

SANITARY SEWERS

1. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING WASTEWATER SYSTEM AT ALL TIMES DURING CONSTRUCTION.

2. ALL 8"WASTEWATER PIPE AND FITTINGS IN THIS PROJECT ARE P.V.C. SDR–26, ASTM D–3034, D–3212, F–477. AT WATERLINE CROSSINGS AND WHERE WATER AND WASTEWATER MAINS OR LATERALS ARE PARALLEL AND SEPARATION DISTANCE CAN NOT BE ACHIEVED AS PER 30 TAC §217.13, PRESSURE RATED PIPE P.V.C. SDR–26, ASTM D–2241, ASTM D–3139 IS USED INSTEAD.

3. AT ALL WATERLINE CROSSINGS AND WHERE WATER AND SEWER MAINS ARE PARALLEL AND SEPARATION DISTANCE CAN NOT BE ACHIEVED AS PER 30 TAC §217.13, PRESSURE RATED PIPE P.V.C. SDR–26, ASTM D–2241, ASTM D–3139 IS USED INSTEAD.

4. ALL RESIDENTIAL WASTEWATER SERVICE LATERALS SHALL BE EXTENDED TO THE PROPERTY LINE AND A CLEANOUT SHALL BE INSTALLED AT THE PROPERTY LINE. SERVICES TO LOTS WILL EXTEND FOUR (4) FEET PAST THE UNDERGROUND ELECTRIC CONDUIT IF ELECTRIC IS INSTALLED IN THE FRONT EASEMENT.

5. ALL MANHOLES SHALL BE CONSTRUCTED OF OR LINED WITH A CORROSION RESISTANT MATERIAL.

6. NOT USED.

7. ALL WASTEWATER PIPES SHALL HAVE COMPRESSION OR MECHANICAL JOINTS AS PER 30 TAC §217.53 (C) (2).

8. FOR WASTEWATER LINES LESS THAN 24"IN DIAMETER, SELECT INITIAL BACKFILL MATERIAL SHALL BE PLACED IN TWO LIFTS.
A. THE FIRST LIFT SHALL BE SPREAD UNIFORMLY AND SIMULTANEOUSLY ON EACH SIDE AND UNDER THE SHOULDERS OF THE PIPE TO THE MID POINT OR SPRING LINE OF THE PIPE.
B. THE SECOND LIFT SHALL BE PLACED TO A DEPTH AS SHOWN ON THE PIPE BACKFILL DETAIL. FOR PIPES LARGER THAN 24", 12"MAXIMUM LIFTS SHALL BE USED.

9. ALL MANHOLES MUST BE WATER TIGHT, EITHER MONOLITHIC, CAST–IN–PLACE CONCRETE STRUCTURES OR PREFABRICATED MANHOLES SPECIFICALLY APPROVED BY NBU. THE MANHOLES SHALL HAVE WATER–TIGHT RINGS AND COVERS. WHEREVER THEY ARE WITHIN THE 100 YEAR FLOODPLAIN, THE MANHOLE COVERS SHALL BE BOLTED. EVERY THIRD MANHOLE IN SEQUENCE SHALL HAVE AN ALTERNATE MEANS OF VENTING. 30 TAC §213.5 (C) (3) (A) AND 30 TAC §217.55 (O).

10. ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS TWO INCHES (2") ABOVE SURROUNDING GROUND EXCEPT WHEN LOCATED IN PAVED AREA. IN PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH PAVEMENT.

11. ALL NEW MANHOLES, UNLESS APPROVED BY NBU ENGINEERING, ARE TO HAVE COVERS WITH 32"OPENINGS.

12. WASTEWATER PIPE CONNECTIONS TO PRE–CAST MANHOLES WILL BE COMPRESSION JOINTS OR MECHANICAL "BOOT TYPE"JOINT AS APPROVED BY NBU.

13. WASTEWATER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE.

14. IN AREAS WHERE A NEW WASTEWATER MANHOLE IS TO BE CONSTRUCTED OVER AN EXISTING WASTEWATER SYSTEM, IT SHALL BE THE CONTACTOR'S RESPONSIBILITY TO TEST THE EXISTING MANHOLES BEFORE CONSTRUCTION. AFTER THE PROPOSED MANHOLE(S) HAS BEEN BUILT, THE CONTRACTOR SHALL RE–TEST THE EXISTING SYSTEM TO THE SATISFACTION OF THE CONSTRUCTION INSPECTOR. (NO SEPARATE PAY ITEM).

15. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING THE ASTM SPECIFICATION FOR BOTH PIPES AND JOINTS OF 150 PSI AND SHALL BE IN ACCORDANCE WITH 30 TAC §217.53 (D) (3) (A) (I).

16. NO TESTING WILL BE PERFORMED PRIOR TO 30 DAYS FROM COMPLETE INSTALLATION OF THE WASTEWATER LINES. THE FOLLOWING SEQUENCE WILL BE STRICTLY ADHERED TO:
A. PULL MANDREL
B. PERFORM AIR TEST
C. CLEANING OF ANY DEBRIS
D. FLUSHING OF SYSTEM
E. TV INSPECTION (WITHIN 72 HOURS OF FLUSHING)

17. A MINIMUM OF 3 FEET OF COVER IS TO BE MAINTAINED OVER THE WASTEWATER MAIN AND LATERALS AT SUBGRADE, OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED.

18. WASTEWATER MAIN CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WILL REQUIRE SUCCESSFUL TESTING OF THE MANHOLE IN ACCORDANCE WITH NBU CONNECTION & CONSTRUCTION POLICY MANUAL.

19. TCEQ AND EPA REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF WASTEWATER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN AND PROFILE SHEETS. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY NBU WATER SYSTEMS.

20. ALL MANHOLES NOT WITHIN PAVED STREETS SHALL HAVE LOCKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBU DETAIL DRAWING #329.

21. ALL MANHOLES OVER THE EDWARDS AQUIFER RECHARGE ZONE SHALL HAVE LOCKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBU DETAIL DRAWING #329.

UTILITY GENERAL NOTES

1) THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR 48 HOURS PRIOR TO CONSTRUCTION AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION. THE CONTRACTOR AT HIS EXPENSE SHALL REPAIR ANY DAMAGES TO EXISTING UTILITIES, WHETHER SHOWN ON PLANS OR NOT. CONTRACTOR SHALL NOTIFY THE FOLLOWING ENTITIES 48 HOURS PRIOR TO STARTING WORK:

DIG–TESS		1–800–DIG–TESS
CENTER POINT ENERGY	WENDY LAMB	830–643–6938
ENERGY TRANSFER	CALVIN DODD	832–668–1000
AT&T	DON KELLNER	210–317–9654
TIME WARNER CABLE	JOEL GONZALES	210–352–4600
N.B.U.		830–629–8400
CITY OF NEW BRAUNFELS		830–221–4068

ALL INSPECTIONS ARE TO BE:

- CALLED IN AT 830–221–4068 OR,
- FAXED IN AT 830–608–2117 OR,
- EMAILED AT inspections@nbtexas.org

WATER NOTES

1. ALL WATER MAINS SHALL BE AWWA C900 (CLASS 150 OR GREATER).
2. WATER SERVICES SHALL BE SINGLE 1" COPPER TUBING.
3. WATER LINE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE NBU SYSTEMS CONNECTION & CONSTRUCTION POLICY.
4. WATER MAIN SHALL HAVE A MINIMUM OF 42 INCHES OF COVER, OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED.
5. EACH UNIT IN A DUPLEX, TRIPLEX, FOURPLEX, OR CONDOMINIUM SHALL BE PROVIDED WITH AN INDIVIDUAL WATER METER. A MASTER METER CAN BE CONSIDERED FOR SEPARATE BUILDINGS, HOWEVER, THOSE BUILDINGS MUST BE PLUMBED TO ALLOW SEPARATE METERS FOR FUTURE CONSIDERATION.
6. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
7. INITIAL BACKFILL OF WATER LINES SHALL BE MANUFACTURED SAND OR PEA GRAVEL AS PER NBU SYSTEMS CONNECTION & CONSTRUCTION POLICY.
8. SECONDARY BACKFILL OF WATER LINES SHALL GENERALLY CONSIST OF MATERIAL REMOVED FROM THE TRENCH AND SHALL BE FREE FROM BRUSH, DEBRIS AND TRASH OR STONES HAVING ANY DIMENSION LARGER THAN 6" INCHES AT THE LARGEST DIMENSION.
9. HYDROSTATIC TESTING IS DONE FROM VALVE TO VALVE.
10. NO METER BOXES TO BE SET IN DRIVEWAYS OR SIDEWALKS. ANY METER BOXES SET IN DRIVEWAYS OR SIDEWALKS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
11. METER BOXES MUST BE SET AT THE PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
12. MATERIAL FOR METER BOX'S BODY AND LID SHOULD BE OF POLYMER (PLASTIC) CONSTRUCTION. METER BOXES SHOULD BE DESIGNED FOR AMR'S. METAL FRAMES OR LIDS WILL NOT BE ACCEPTABLE.
13. THRUST BLOCKS WILL NOT BE ALLOWED ON THE SYSTEM WITHOUT SPECIAL APPROVAL. JOINTS WILL BE RESTRAINED WITH RESTRAINING SYSTEMS APPROVED BY NBU AND RESTRAINT LENGTH SHALL BE SUBMITTED TO NBU AT THE TIME OF PLAN SUBMITTAL.
14. CONTRACTOR SHALL PLACE TRACER WIRE ON TOP OF THE WATER MAINS. TRACER WIRE SHOULD RUN FROM VALVE TO VALVE AND EXIT AT THE VALVE BOX. THE TRACER WIRE SHOULD BE ATTACHED TO THE TOP OF THE PIPE USING TAPE. EXCESS WIRE SHOULD BE LEFT WITHIN VALVE BOXES TO BE PLACED WITHIN LID OF COVER.

CONSTRUCTION PLAN NOTES

REVISED 03/2020

THESE NOTES MUST APPEAR ON THE COVER AND/OR "NOTES" SHEET OF ALL SUBDIVISION CONSTRUCTION PLANS AND ON COMMERCIAL PLANS WHERE APPLICABLE:

IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.

THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.

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

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

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

IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF, IN THE OPINION OF THE ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

A TXDOT TYPE II B-B BLUE REFLECTIVE RAISED PAVEMENT MARKER SHALL BE INSTALLED IN THE CENTER OF THE ROADWAY ADJACENT TO ALL FIRE HYDRANTS. IN LOCATIONS WHERE HYDRANTS ARE SITUATED ON CORNERS, BLUE REFLECTIVE RAISED PAVEMENT MARKERS SHALL BE INSTALLED ON BOTH APPROACHES WHICH FRONT THE HYDRANT. THE RAISED PAVEMENT MARKER SHALL MEET TXDOT MATERIAL, EPOXY AND ADHESIVE SPECIFICATIONS.

GROUNDWATER
IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS, BUILDERS, GEO-TECHNICAL ENGINEER, AND PROJECT ENGINEER TO IMMEDIATELY NOTIFY THE OFFICE OF THE CITY ENGINEER AND PROJECT ENGINEER IF THE PRESENCE OF GROUNDWATER WITHIN THE SITE IS EVIDENT. UPON NOTIFICATION THE PROJECT ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. THE CITY ENGINEER SHALL RESPOND WITHIN TWO (2) BUSINESS DAYS UPON RECEIPT OF THE MITIGATION PLAN. ALL CONSTRUCTION ACTIVITY, IMPACTED BY THE DISCOVERY OF GROUNDWATER, SHALL BE SUSPENDED UNTIL THE CITY ENGINEER GRANTS A WRITTEN APPROVAL OF THE GROUNDWATER MITIGATION PLAN.

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

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

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

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

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

ROADWAY
ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FLEXIBLE BASE OR FILL/EMBANKMENT MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") LOOSE. THE REQUIRED DENSITY FOR THE FILL/EMBANKMENT MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 132. THE REQUIRED DENSITY FOR THE FLEXIBLE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 247. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT. UPON COMPLETION OF TESTING, THE GEOTECHNICAL ENGINEER WILL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE BASE, AND FILL MATERIAL, AND SUBGRADE, HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

ITEM 340
ASPHALTIC CONCRETE PAVEMENT SHALL BE THE TYPE OF HOT MIX ASPHALT AS DEFINED IN TXDOT'S STANDARD SPECIFICATIONS FOR CURRENT TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREET AND BRIDGES.

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

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

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

CURB CUT DUE TO CONSTRUCTION OF NEW RIGHT-OF-WAY CONSTRUCTION
(INDICATE THE 2 OPTIONS ON THE CONSTRUCTION PLANS).
1. SAWCUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION.
2. SAWCUT EXISTING CURB TO TIE INTO EXISTING CONSTRUCTION.

CONSTRUCTION STABILIZED ENTRANCE
SAWCUT CURB FOR CONSTRUCTION ENTRANCE.

STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3â€ X5â€ 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.

(NOTES TO BE PLACED ON ALL WW PLAN & DETAIL SHEETS)
ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS.

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

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

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

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

IT MAY BE DEEMED NECESSARY TO INCORPORATE TOPSOIL AND SOIL AMENDMENTS (I.E. COMPOST/ FERTILIZER INTO EXISTING SOIL IN ORDER TO FACILITATE VEGETATION GROWTH. TOPSOIL, COMPOST AND FERTILIZER ADDITIONS SHALL BE CONDUCTED ACCORDING TO ITEMS 160, 161 AND 166 OF TXDOT'S STANDARD SPECIFICATIONS MANUAL, RESPECTIVELY.

AREAS REQUIRING PERMANENT VEGETATION (EARTHEN CHANNELS, PONDS, ETC.) ARE REQUIRED TO MEET TXDOT SPECIFICATIONS FOR ITEM 160 TOPSOIL. TESTING PER TEX-128-E WILL BE REQUIRED AT THE CITY'S REQUEST.

WATERING MAY ALSO BE NECESSARY TO FACILITATE AND EXPEDITE THE SPROUTING AND GROWTH OF VEGETATION. ITEM 168 OF TXDOT'S STANDARD SPECIFICATIONS MANUAL SHALL BE ADHERED TO FOR VEGETATIVE WATERING.

IF EXTENDED DROUGHT CONDITIONS EXIST THAT HINDER OR PROHIBIT THE GROWTH AND ESTABLISHMENT OF VEGETATION, THE CONTRACTOR/ DEVELOPER SHALL PROVIDE A PLAN TO THE CITY OF NEW BRAUNFELS DESCRIBING THE MEASURES THAT WILL BE TAKEN TO STABILIZE EARTHEN DRAINAGE INFRASTRUCTURE UNTIL A TIME WHEN GROWING CONDITIONS BECOME MORE FAVORABLE

No.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.301.5955
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER
09 JULY 2025

ALJ PROJECT NO. **028.24.CV.154**
DATE: **JULY 2025**
SCALE: **N/A**
DRAWN BY: **ZAR**
CHECKED BY: **BTH**

GENERAL NOTES

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C0.1

TOPOGRAPHIC SURVEY

BEING A PORTION OF THE REMAINDER OF LOT 1, BLOCK 1, NEW BRAUNFELS TOWN CENTER AT CREEKSIDE, PHASE 4, RECORDED IN DOCUMENT NO. 201306031137, MAP AND PLAT RECORDS, COMAL COUNTY, TEXAS.

SURVEY NOTES:

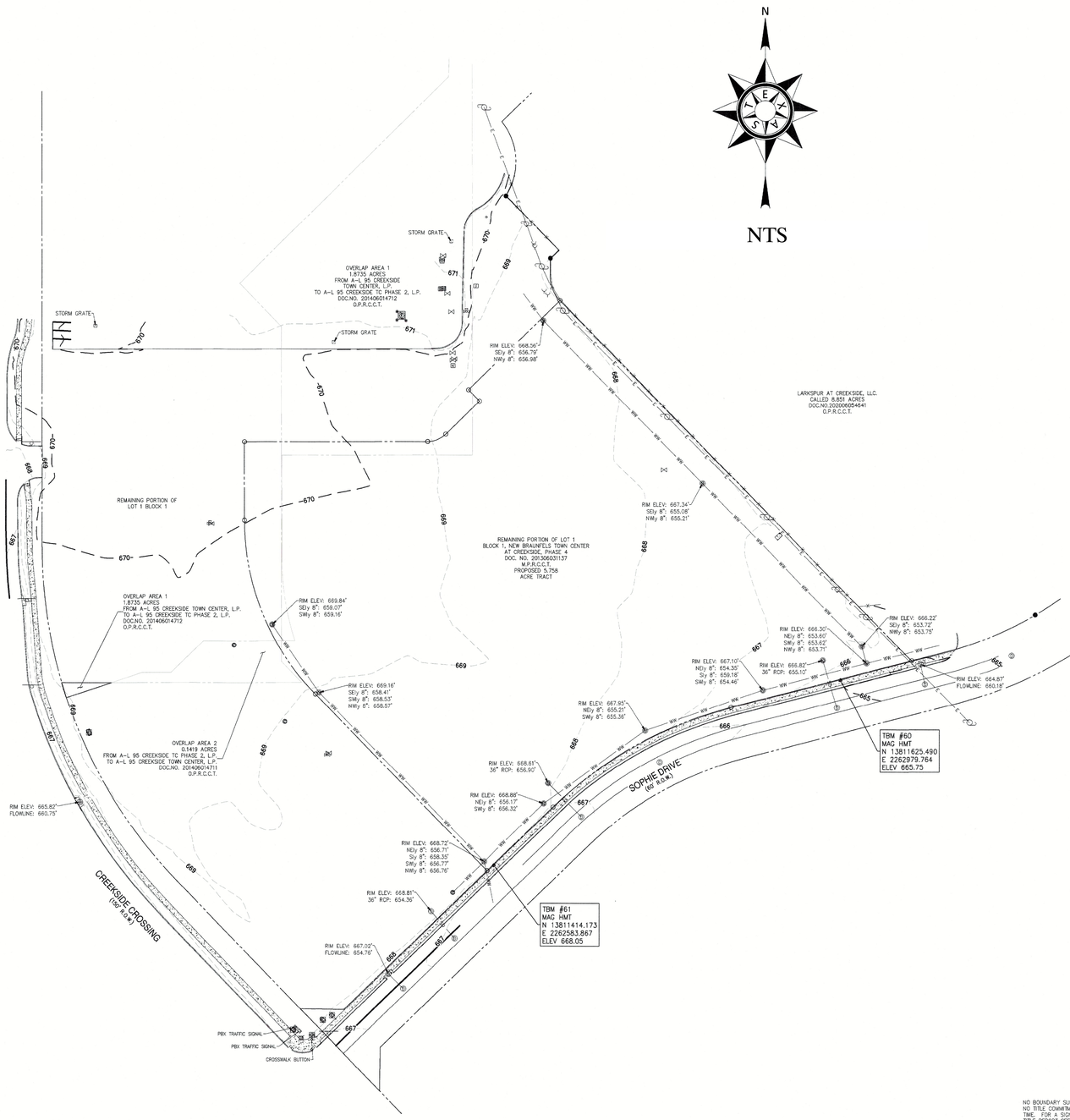
THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT.

THIS SURVEYOR HAS NOT CONDUCTED A TITLE SEARCH TO DEPICT OTHER MATTERS OF RECORD, SUCH AS EASEMENTS, SETBACKS, RESTRICTIONS OR OTHER ENCUMBRANCES THAT MAY AFFECT THIS PROPERTY.

NO ATTEMPT HAS BEEN MADE TO LOCATE ANY IMPROVEMENTS, EASEMENTS, OR RIGHTS OF WAY NOT SHOWN HEREON.

BEARINGS SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NAD 83 (NA2011) EPOCH 2010.

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.



LEGEND:

- ● = FND. 1/2" IRON PIN UNLESS OTHERWISE NOTED
- ○ = SET 1/2" IRON PIN W/ PLASTIC CAP STAMPED "HMT" UNLESS OTHERWISE NOTED
- B.L. = BUILDING SETBACK LINE
- U.E. = UTILITY EASEMENT
- D.E. = DRAINAGE EASEMENT
- R.O.W. = RIGHT-OF-WAY
- ( ) = RECORD CALLS
- O.P.R.C.C.T. = OFFICIAL PUBLIC RECORDS OF COMAL COUNTY, TEXAS
- M.P.R.C.C.T. = MAP & PLAT RECORDS OF COMAL COUNTY, TEXAS
- = TRANSFORMER
- = WATER METER
- = ELECTRIC JUNCTION BOX
- = FIRE HYDRANT
- = WATER VALVE
- = CLEAN OUT
- = SANITARY SEWER MANHOLE
- = STORM DRAIN MANHOLE
- = TRAFFIC CONTROL BOX
- = TRAFFIC SIGNAL POLE
- = POWER POLE W/ CONDUIT
- = POWER POLE
- = GUY ANCHOR
- = OVERHEAD ELECTRIC
- = WIRE FENCE
- = CONCRETE
- = TEMPORARY BENCHMARK

SOPHIE LANE & CREEKSIDE CROSSING
NEW BRAUNFELS , TEXAS

THIS SURVEY IS CERTIFIED TO:
MICHAEL HARNEY, NEW QUEST PROPERTIES

NO BOUNDARY SURVEY WAS DONE AT THIS TIME. NO TITLE COMMITMENT WAS PROVIDED AT THIS TIME. FOR A SIGNED BOUNDARY SURVEY WITH A TITLE REPORT SEE JOB NO. 515.001, SIGNED ON 11-07-23.

FIELD WORK DATE: 6-27-2023

I HEREBY CERTIFY THAT THIS SURVEY WAS MADE ON THE GROUND UNDER MY SUPERVISION

THIS 19TH DAY OF NOVEMBER 2024

DOROTHY J. TAYLOR
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 6295

11-20-24

515.002

DRAWN BY: I AFL

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

NO.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.320.9955
FRN F-11526

BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS

09 JULY 2025

ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE:
DRAWN BY: ZAR
CHECKED BY: BTH

TOPOGRAPHIC SURVEY

CREEKSIDE TOWN CENTER TRACT 25'B'
CITY OF NEW BRAUNFELS, TEXAS

SHEET
C0.2

20130603113 7

STATE OF TEXAS
COUNTY OF HARRIS

WE, A-L 95 CREEKSIDE TOWN CENTER, L.P., A TEXAS LIMITED PARTNERSHIP, ACTING BY AND THROUGH STEVEN D. ALVIS, MANAGER OF A-L 95, L.C., A TEXAS LIMITED LIABILITY COMPANY, ITS GENERAL PARTNER; THE UNDERSIGNED OWNERS OF THE LAND SHOWN ON THIS PLAT, AND DESIGNATED HEREIN AS THE **NEW BRAUNFELS TOWN CENTER AT CREEKSIDE PHASE 4** SUBDIVISION TO THE CITY OF NEW BRAUNFELS, COUNTY OF COMAL, 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.

A-L 95 CREEKSIDE TOWN CENTER, L.P.,
A TEXAS LIMITED PARTNERSHIP

BY: A-L 95, L.C.,
A TEXAS LIMITED LIABILITY COMPANY,
ITS GENERAL PARTNER

BY: _____ DATE: 12-21-12
STEVEN D. ALVIS
MANAGER

8827 W. SAM HOUSTON PARKWAY N.,
SUITE 200,
HOUSTON, TEXAS 77040

STATE OF TEXAS
COUNTY OF HARRIS

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED STEVEN D. ALVIS, MANAGER OF A-L 95, L.C., A TEXAS LIMITED LIABILITY COMPANY, GENERAL PARTNER OF A-L 95 CREEKSIDE TOWN CENTER, L.P., A TEXAS LIMITED PARTNERSHIP, KNOWN TO ME TO BE THE PERSON AND OFFICER WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED AND AS THE ACT AND DEED OF SAID LIMITED LIABILITY COMPANY ACTING ON BEHALF OF SAID LIMITED PARTNERSHIP.

GIVEN UNDER HAND AND SEAL OF THIS OFFICE, THIS 21st DAY OF December, ~~2013.~~ 2012

NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

MY COMMISSION EXPIRES 4-17-13

Nancee Ost
NOTARY PUBLIC

NANCEE OST
Notary Public, State of Texas
My Commission Expires
April 17, 2013

We, Compass Bank, an Alabama banking corporation, successor-in-interest to Guaranty Bank, a federal savings bank, owners and holder of a lien against the property described in the plat known as **NEW BRAUNFELS TOWN CENTER AT CREEKSIDE PHASE 4**, said lien being evidenced by instrument of record in the Clerk's File Nos. 200606053626, 200706016881, 200706004198, 200706009185, 200706016880, 200706023125, 200706036331, 201006000822, 200706036332, 200706036333, and 201006000821 of the O.P.R.O.R.P. of Comal County, Texas, do hereby in all things subordinate our interest in said property to the purposes and effects of said plat and the dedications and restrictions shown herein to said plat and we hereby confirm that we are the present owners of said lien and have not assigned the same nor any part thereof.

By: _____ Attest: _____
Signature Signature
Brock Tantenhaha, SVP G. Matthew Lueckenhoff, Associate Counsel
Print Name & Title Print Name & Title

STATE OF TEXAS
COUNTY OF HARRIS

BEFORE ME, the undersigned authority, on this day personally appeared Brock Tantenhahn and G. Matthew Lueckenhoff, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same for the purposes and considerations therein expressed and in the capacity therein and herein stated, and as the act and deed of said banking association.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 21 day of December, 2012.

Notary Public in and for the State of Texas
My Commission Expires: 11-27-16

Anita Cable
Notary

ANITA CABLE
My Commission Expires
November 27, 2016

We, Whitney Bank, a Louisiana state chartered bank, owners and holder of a lien against the property described in the plat known as **NEW BRAUNFELS TOWN CENTER AT CREEKSIDE PHASE 4**, said lien being evidenced by instrument of record in the Clerk's File No. 201206028966 of the O.P.R.O.R.P. of Comal County, Texas, do hereby in all things subordinate our interest in said property to the purposes and effects of said plat and the dedications and restrictions shown herein to said plat and we hereby confirm that we are the present owners of said lien and have not assigned the same nor any part thereof.

By: _____ Attest: Patricia Nettles - VP
Signature Signature
Print Name & Title Patricia Nettles - VP
Print Name & Title

STATE OF TEXAS
COUNTY OF HARRIS

BEFORE ME, the undersigned authority, on this day personally appeared Zachary Harris and Patricia Nettles, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same for the purposes and considerations therein expressed and in the capacity therein and herein stated, and as the act and deed of said banking association.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this 26 day of December, 2013.

Notary Public in and for the State of Texas
My Commission Expires: 6.17.2015

Alexis Durham
Notary

ALEXIS DURHAM
Notary Public, State of Texas
My Commission Expires
June 17, 2015

THIS PLAT OF **NEW BRAUNFELS TOWN CENTER AT CREEKSIDE PHASE 4** HAS BEEN SUBMITTED TO AND CONSIDERED BY THE CITY PLANNING COMMISSION, THE CITY OF NEW BRAUNFELS, TEXAS AND IS HEREBY APPROVED BY SUCH COMMISSION.

APPROVED THIS 5th DAY OF June, 2013.

7/16/2013 _____
DATE PLANNING COMMISSION CHAIRMAN Coy Elrod

7/18/2013 _____
DATE CITY ENGINEER

7/22/13 _____
DATE PLANNING DIRECTOR

7/16/2013 _____
DATE NEW BRAUNFELS UTILITIES

STATE OF TEXAS:
COUNTY OF COMAL:

I, Joy Streater, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT WAS FILED FOR RECORD IN THE MAP AND PLAT RECORDS, DOCUMENT NO. 201306031137 OF COMAL COUNTY, TEXAS, IN ON THE 23 DAY OF July, 2013 A.D., AT 1:54 O'CLOCK P.M.

WITNESS MY HAND AND OFFICIAL SEAL OF OFFICE THIS 23 DAY OF July, 2013 A.D.

JOY STREATER, COUNTY CLERK
COMAL COUNTY, TEXAS
By: Joy Streater
DEPUTY Tammy Kowalski

COUNTY COURT OF COMAL COUNTY, TEXAS

KNOW ALL MEN BY THESE PRESENTS:

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

BRIAN NESVADBA
REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF TEXAS NO. 5776

12810 CENTURY DRIVE
STAFFORD, TEXAS 77477

STATE OF TEXAS
REGISTERED
BRIAN NESVADBA
5776
PROFESSIONAL
LAND SURVEYOR

NOTES:

1.) BEARINGS SHOWN HEREON ARE BASED ON TEXAS STATE PLANE COORDINATE SYSTEM, SOUTH CENTRAL ZONE (NAD83) USING NGS CONTINUOUSLY OPERATING REFERENCE STATIONS

2.) THE SURVEYOR HAS NOT ABSTRACTED THIS PROPERTY. DEED INFORMATION SHOWN HEREON WAS RESEARCHED AND PROVIDED BY OTHERS.

3.) ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP FOR CITY OF NEW BRAUNFELS, COMAL AND GUADALUPE COUNTIES, TEXAS, COMMUNITY PANEL NOS. 48091-C-0455F, AS REFLECTED ON LOMR EFFECTIVELY DATED ON DECEMBER 21, 2010, THIS PROPERTY LIES IN ZONE "X", AN AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.

4.) THE PROPERTY WILL BE SERVED BY THE FOLLOWING UTILITY PROVIDERS:

NEW BRAUNFELS UTILITIES – WATER, SANITARY SEWER, ELECTRIC
CENTERPOINT ENERGY – GAS
TIME WARNER – CABLE
AT&T – TELEPHONE

5.) 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.

6.) UTILITIES WILL POSSESS A 5-FOOT WIDE SERVICE EASEMENT TO THE BUILDING STRUCTURE ALONG THE SERVICE LINE TO THE SERVICE ENTRANCE. THIS EASEMENT WILL VARY DEPENDING UPON LOCATION OF BUILDING STRUCTURE AND SERVICE.

7.) UTILITIES SHALL HAVE ACCESS TO THE METER LOCATIONS FROM THE FRONT YARD AND METER LOCATIONS SHALL NOT BE LOCATED WITHIN A FENCED AREA.

8.) EACH TRACT IS SUBJECT TO FLOATING GUY WIRE EASEMENT/S AND ITS DIMENSIONS SHALL BE DETERMINED BY THE NEED OF THE UTILITIES.

9.) DO NOT COMBINE ANY NEW UTILITY EASEMENTS (UE) WITH DRAINAGE EASEMENTS (DE) OR MAKE CHANGES IN GRADE WITHIN THE UTILITY EASEMENTS (UE) WITHOUT WRITTEN APPROVAL FROM THE NEW BRAUNFELS UTILITIES.

10.) THIS PROPERTY IS LOCATED WITHIN THE COMAL INDEPENDENT SCHOOL DISTRICT.

11.) LANDSCAPING AND PARKING WITHIN THE PLATTED AREA TO BE MAINTAINED OR CAUSED TO BE MAINTAINED BY THE DEVELOPER.

12.) SIDEWALKS WILL BE INSTALLED FOR THIS DEVELOPMENT AS PER THE APPROVED MASTER DEVELOPMENT AGREEMENT.

13.) • – INDICATES A SET 5/8" IRON ROD WITH CAP STAMPED: T.E.A.M. – 281-491-2525, UNLESS OTHERWISE NOTED.

14.) IF SIDEWALKS ARE REQUIRED BY APPROPRIATE CITY ORDINANCE, A SIDEWALK PERMIT MUST BE APPROVED BY TXDOT, PRIOR TO CONSTRUCTION WITHIN STATE RIGHT-OF-WAY. LOCATIONS OF SIDEWALKS WITHIN STATE RIGHT-OF-WAY SHALL BE AS DIRECTED BY TXDOT.

15.) SUBJECT TO TERMS, CONDITIONS, AND STIPULATIONS AS SET FORTH IN GRANT OF ACCESS EASEMENT AND USE RESTRICTION AGREEMENT RECORDED IN COMAL COUNTY CLERK'S FILE NOS. 201106000416 AND 201106044274.

16.) NO STRUCTURES, WALLS OR OTHER OBSTRUCTIONS OF ANY KIND SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT. NO LANDSCAPING, FENCES, OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS SECTIONS OF THE DRAINAGE EASEMENTS OR DECREASE THE HYDRAULIC CAPACITY OF THE EASEMENT, AS APPROVED, SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTOR'S ADJACENT PROPERTY TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.

17.) FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.

18.) FOR RESIDENTIAL DEVELOPMENT DIRECTLY ADJACENT TO STATE RIGHT-OF-WAY, THE DEVELOPER SHALL BE RESPONSIBLE FOR ADEQUATE SETBACK AND/OR SOUND ABATEMENT MEASURES FOR FUTURE NOISE MITIGATION.

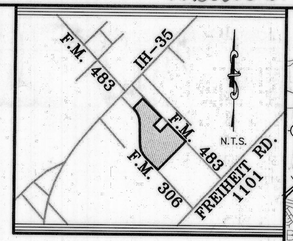
19.) OWNER/DEVELOPER IS RESPONSIBLE FOR PREVENTING ANY ADVERSE IMPACT TO THE EXISTING DRAINAGE SYSTEM WITHIN THE HIGHWAY RIGHT-OF-WAY.

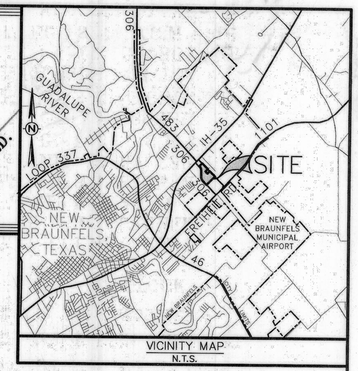
20.) CONSTRUCTION ACTIVITY WITHIN PIPELINE EASEMENTS DEPICTED WITHIN THE PLATTED AREA WILL BE IN CONFORMANCE WITH THE TERMS AND CONDITIONS OF THE UNDERLYING EASEMENTS.

21.) AT TIME OF PLAT THIS SUBDIVISION IS FOR COMMERCIAL USES. IF THE USE OF THIS PROPERTY CHANGES TO RESIDENTIAL, THE OWNERS SHALL IMMEDIATELY CONTACT THE CITY OF NEW BRAUNFELS. THE PARKLAND ORDINANCE WILL BE APPLIED BEFORE CERTIFICATE OF OCCUPANCY IS ISSUED BY THE CITY.

22.) ANY TRAFFIC CONTROL MEASURES (LEFT-TURN LANE, RIGHT-TURN LANE, SIGNAL, ETC.) FOR ANY ACCESS FRONTING A STATE MAINTAINED ROADWAY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/OWNER IF REQUIRED AT THE TIME OF DRIVEWAY CONSTRUCTION.

23.) MAXIMUM ACCESS POINTS TO STATE HIGHWAY FROM THIS PROPERTY WILL BE REGULATED AS DIRECTED BY "REGULATIONS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS." LOT 1 OF THIS PROPERTY IS ELIGIBLE FOR ONE (1) RIGHT-IN/OUT ONLY ACCESS POINT TO ROADWAY STATION 26+88; ONE (1) FULL ACCESS POINT AT APPROXIMATE ROADWAY STATION 33+80, ONE (1) FULL ACCESS POINT AT APPROXIMATE ROADWAY STATION 43+80. THE OVERALL PLATTED HIGHWAY FRONTAGE OF F.M. 306 IS APPROXIMATELY 2,341.85 FEET. NO OTHER MEDIAN OPENINGS WILL BE ALLOWED. OTHER RIGHT-IN/OUT ONLY ACCESS POINTS MAY BE PERMITTED BY TXDOT.





VICINITY MAP
N.T.S.

NEW BRAUNFELS TOWN CENTER AT CREEKSIDE PHASE 4

A 43.8825 ACRE TRACT OF LAND BEING OUT OF LOTS 3C & 3A, RESUBDIVISION PLAT OF LOT 3, MARTIN SOEFJE SUBDIVISION (VOL. 7, PG. 22; C.C.M&P.R.), LOTS 1 & 2, JEFF SOEFJE SUBDIVISION (VOL. 12, PG. 221; C.C.M.&P.R.), LOT 1R & 2R, RESUBDIVISION PLAT OF LOTS 1R & 2R, FRED SOEFJE SUBDIVISION (VOL. 9, PG. 191; C.C.M.&P.R.), LOTS 3R & 4R, A VACATING AND REPLAT OF TRACT 3 AND TRACT 4, OUT OF THE FRED SOEFJE SUBDIVISION (VOL. 11, PG. 244; C.C.M.&P.R.), LOTS 1A, 1B, & 1C, GEORGE SOEFJE RESUBDIVISION OF LOT 1 (VOL. 5, PG. 210; C.C.M.&P.R.) AND LOTS 2 & 3, GEORGE SOEFJE SUBDIVISION (VOL. 5, PG. 147; C.C.M.&P.R.) IN THE ANTONIO MARIA ESNAURIZAR ELEVEN LEAGUE GRANT, ABSTRACT NO. 1 CITY OF NEW BRAUNFELS, COMAL COUNTY, TEXAS

1 LOT 1 BLOCK

~ OWNERS AND SUBDIVIDER ~

A-L 95 CREEKSIDE TOWN CENTER, L.P.

8827 W. Sam Houston Park N., Suite 200
Houston, TX 77040
(281) 477-4310

~ SURVEYOR ~

TEXAS ENGINEERING AND MAPPING

12810 Century Drive
Stafford, Texas 77477
PHONE: (281) 491-2525 FAX: (281) 491-2535
JOB NO. 356-130

DECEMBER 21, 2012

SHEET 1 OF 3

NO.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.320.8555
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
09 JULY 2025

ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE:
DRAWN BY: ZAR
CHECKED BY: BTH

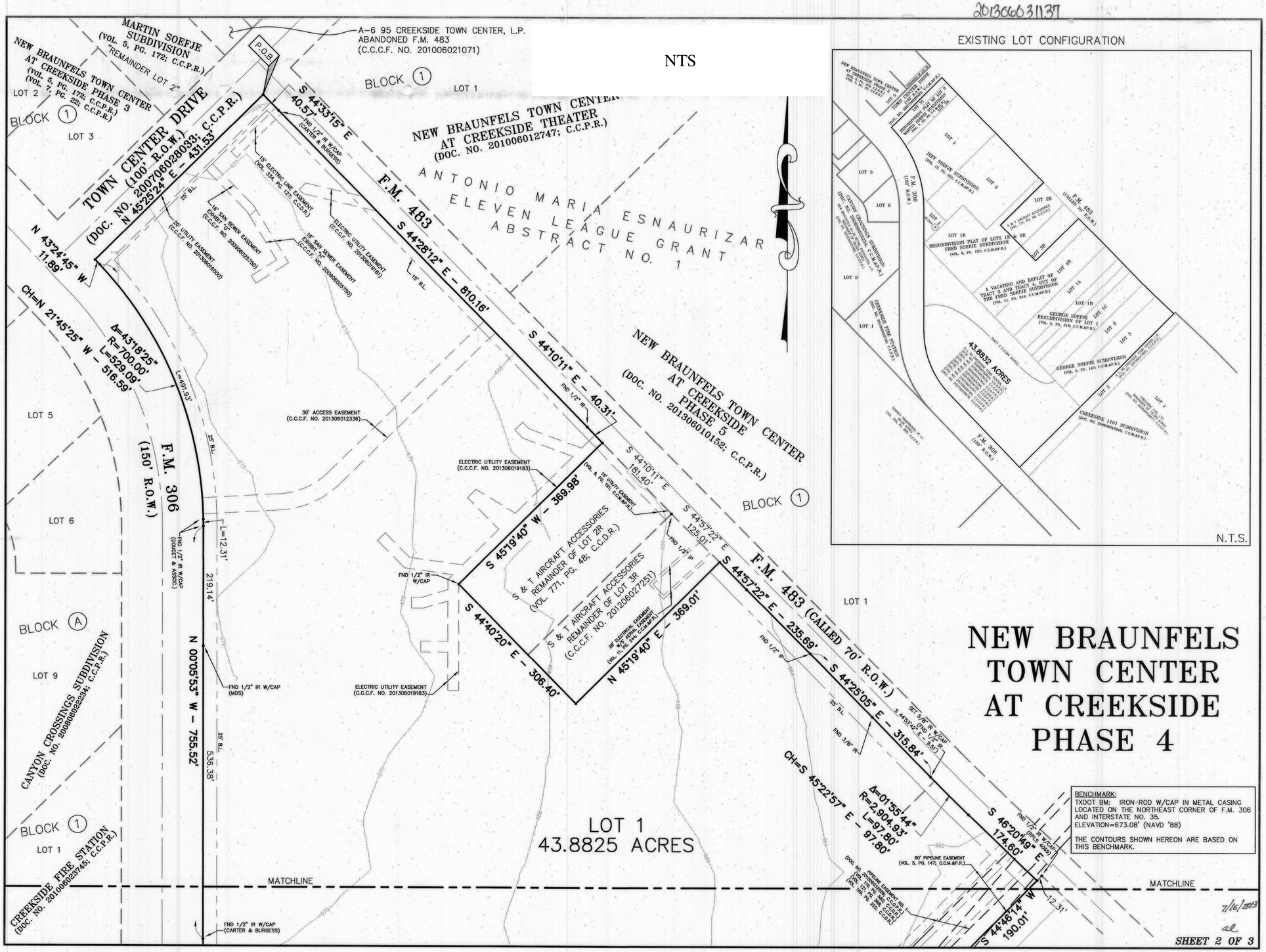
PLAT (1 OF 3)

CREEKSIDE TOWN CENTER
TRACT 25'B'
CITY OF NEW BRAUNFELS, TEXAS

SHEET
C0.3

20130603 11137

NTS



EXISTING LOT CONFIGURATION

NEW BRAUNFELS TOWN CENTER AT CREEKSIDE PHASE 4

LOT 1
43.8825 ACRES

DRAWING INFO: Z:\job#\356-130\dwg\356-130_P8_S1 and S2_OPT 2.dwg JUL 09, 2013 2:42 PM

No.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18638 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.304.2063
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER
09 JULY 2025

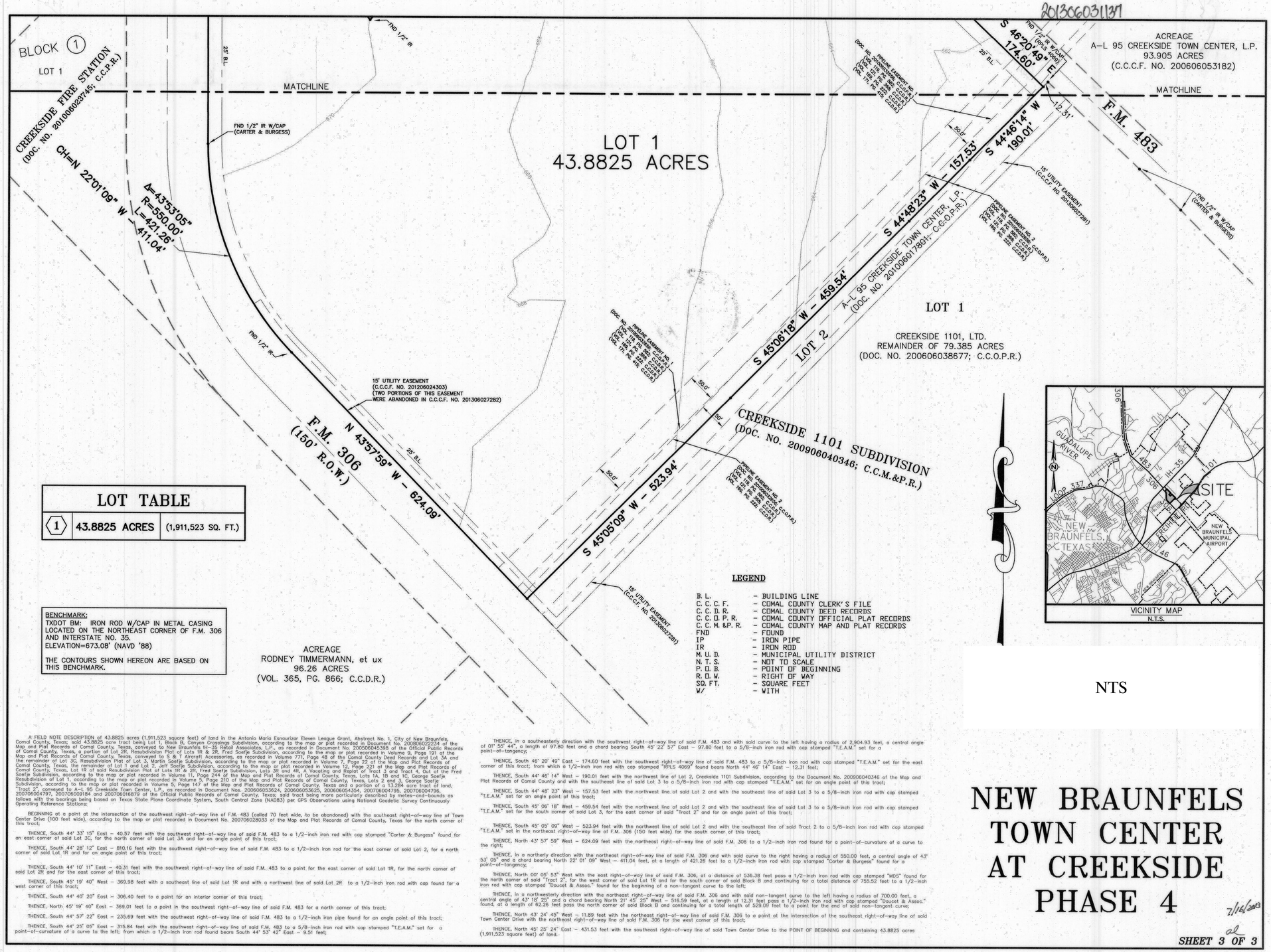
ALJ PROJECT NO: 028.24.CV.154
DATE: JULY 2025
SCALE:
DRAWN BY: ZAR
CHECKED BY: BTH

PLAT (2 OF 3)

CREEKSIDE TOWN CENTER TRACT 25'B'
CITY OF NEW BRAUNFELS, TEXAS

SHEET
C0.4

20130603113?



NTS

LOT TABLE		
1	43.8825 ACRES	(1,911,523 SQ. FT.)

BENCHMARK:
TXDOT BM: IRON ROD W/CAP IN METAL CASING LOCATED ON THE NORTHEAST CORNER OF F.M. 306 AND INTERSTATE NO. 35.
ELEVATION=673.08' (NAVD '88)

THE CONTOURS SHOWN HEREON ARE BASED ON THIS BENCHMARK.

LEGEND

B. L.	- BUILDING LINE
C. C. C. F.	- COMAL COUNTY CLERK'S FILE
C. C. D. R.	- COMAL COUNTY DEED RECORDS
C. C. O. P. R.	- COMAL COUNTY OFFICIAL PLAT RECORDS
C. C. M. &P. R.	- COMAL COUNTY MAP AND PLAT RECORDS
FND	- FOUND
IP	- IRON PIPE
IR	- IRON ROD
M. U. D.	- MUNICIPAL UTILITY DISTRICT
N. T. S.	- NOT TO SCALE
P. O. B.	- POINT OF BEGINNING
R. O. W.	- RIGHT OF WAY
SQ. FT.	- SQUARE FEET
W/	- WITH

A FIELD NOTE DESCRIPTION of 43.8825 acres (1,911,523 square feet) of land in the Antonio Maria Esnaurizar Eleven League Grant, Abstract No. 1, City of New Braunfels, Comal County, Texas; said 43.8825 acre tract being Lot 1, Block B, Canyon Crossings Subdivision, according to the map or plat recorded in Document No. 200806022234 of the Map and Plat Records of Comal County, Texas, conveyed to New Braunfels IH-35 Retail Associates, L.P., as recorded in Document No. 200506045398 of the Official Public Records of Comal County, Texas, a portion of Lot 2R, Resubdivision Plat of Lots 1R & 2R, Fred Soefje Subdivision, according to the map or plat recorded in Volume 9, Page 191 of the Map and Plat Records of Comal County, Texas, conveyed to S & T Aircraft Accessories, as recorded in Volume 771, Page 48 of the Comal County Deed Records and Lot 3A and the remainder of Lot 3C, Resubdivision Plat of Lot 3, Martin Soefje Subdivision, according to the map or plat recorded in Volume 7, Page 22 of the Map and Plat Records of Comal County, Texas, the remainder of Lot 1 and Lot 2, Jeff Soefje Subdivision, according to the map or plat recorded in Volume 12, Page 221 of the Map and Plat Records of Comal County, Texas, Lot 1R of said Resubdivision Plat of Lots 1R & 2R, Fred Soefje Subdivision, Lots 3R and 4R, A Vacating and Replat of Tract 3 and Tract 4, Out of the Fred Soefje Subdivision, according to the map or plat recorded in Volume 11, Page 244 of the Map and Plat Records of Comal County, Texas, Lots 1A, 1B and 1C, George Soefje Resubdivision of Lot 1, according to the map or plat recorded in Volume 5, Page 210 of the Map and Plat Records of Comal County, Texas, Lots 2 and 3, George Soefje Subdivision, according to the map or plat recorded in Volume 5, Page 147 of the Map and Plat Records of Comal County, Texas and a portion of a 13.284 acre tract of land, "Tract 2", conveyed to A-L 95 Creekside Town Center, L.P., as recorded in Document Nos. 200606053624, 200606053625, 200606054354, 200706004795, 200706004796, 200706004797, 200706009184 and 200706016879 of the Official Public Records of Comal County, Texas; said tract being more particularly described by metes-and-bounds as follows with the bearings being based on Texas State Plane Coordinate System, South Central Zone (NAD83) per GPS Observations using National Geodetic Survey Continuously Operating Reference Stations:

BEGINNING at a point at the intersection of the southwest right-of-way line of F.M. 483 (called 70 feet wide, to be abandoned) with the southeast right-of-way line of Town Center Drive (100 feet wide), according to the map or plat recorded in Document No. 200706028033 of the Map and Plat Records of Comal County, Texas for the north corner of this tract;

THENCE, South 44° 33' 15" East – 40.57 feet with the southwest right-of-way line of said F.M. 483 to a 1/2-inch iron rod with cap stamped "Carter & Burgess" found for an east corner of said Lot 3C, for the north corner of said Lot 3A and for an angle point of this tract;

THENCE, South 44° 28' 12" East – 810.16 feet with the southwest right-of-way line of said F.M. 483 to a 1/2-inch iron rod for the east corner of said Lot 2, for a north corner of said Lot 1R and for an angle point of this tract;

THENCE, South 44° 10' 11" East – 40.31 feet with the southwest right-of-way line of said F.M. 483 to a point for the east corner of said Lot 1R, for the north corner of said Lot 2R and for the east corner of this tract;

THENCE, South 45° 19' 40" West – 369.98 feet with a southeast line of said Lot 1R and with a northwest line of said Lot 2R to a 1/2-inch iron rod with cap found for a west corner of this tract;

THENCE, South 44° 40' 20" East – 306.40 feet to a point for an interior corner of this tract;

THENCE, North 45° 19' 40" East – 369.01 feet to a point in the southwest right-of-way line of said F.M. 483 for a north corner of this tract;

THENCE, South 44° 57' 22" East – 235.69 feet with the southwest right-of-way line of said F.M. 483 to a 1/2-inch iron pipe found for an angle point of this tract;

THENCE, South 44° 25' 05" East – 315.84 feet with the southwest right-of-way line of said F.M. 483 to a 5/8-inch iron rod with cap stamped "T.E.A.M." set for a point-of-curvature of a curve to the left; from which a 1/2-inch iron rod found bears South 44° 53' 42" East – 9.51 feet;

THENCE, in a southeasterly direction with the southwest right-of-way line of said F.M. 483 and with said curve to the left having a radius of 2,904.93 feet, a central angle of 01° 55' 44", a length of 97.80 feet and a chord bearing South 45° 22' 57" East – 97.80 feet to a 5/8-inch iron rod with cap stamped "T.E.A.M." set for a point-of-tangency;

THENCE, South 46° 20' 49" East – 174.60 feet with the southwest right-of-way line of said F.M. 483 to a 5/8-inch iron rod with cap stamped "T.E.A.M." set for the east corner of this tract; from which a 1/2-inch iron rod with cap stamped "RPLS 4069" found bears North 44° 46' 14" East – 12.31 feet;

THENCE, South 44° 46' 14" West – 190.01 feet with the northwest line of Lot 2, Creekside 1101 Subdivision, according to the Document No. 200906040346 of the Map and Plat Records of Comal County and with the southeast line of said Lot 3 to a 5/8-inch iron rod with cap stamped "T.E.A.M." set for an angle point of this tract;

THENCE, South 44° 48' 23" West – 157.53 feet with the northwest line of said Lot 2 and with the southeast line of said Lot 3 to a 5/8-inch iron rod with cap stamped "T.E.A.M." set for an angle point of this tract;

THENCE, South 45° 06' 18" West – 459.54 feet with the northwest line of said Lot 2 and with the southeast line of said Lot 3 to a 5/8-inch iron rod with cap stamped "T.E.A.M." set for the south corner of said Lot 3, for the east corner of said "Tract 2" and for an angle point of this tract;

THENCE, South 45° 05' 09" West – 523.94 feet with the northwest line of said Lot 2 and with the southeast line of said Tract 2 to a 5/8-inch iron rod with cap stamped "T.E.A.M." set in the northeast right-of-way line of F.M. 306 (150 feet wide) for the south corner of this tract;

THENCE, North 43° 57' 59" West – 624.09 feet with the northeast right-of-way line of said F.M. 306 to a 1/2-inch iron rod found for a point-of-curvature of a curve to the right;

THENCE, in a northerly direction with the northeast right-of-way line of said F.M. 306 and with said curve to the right having a radius of 550.00 feet, a central angle of 43° 53' 05" and a chord bearing North 22° 01' 09" West – 411.04 feet, at a length of 421.26 feet to a 1/2-inch iron rod with cap stamped "Carter & Burgess" found for a point-of-tangency;

THENCE, North 00° 05' 53" West with the east right-of-way line of said F.M. 306, at a distance of 536.38 feet pass a 1/2-inch iron rod with cap stamped "MDS" found for the north corner of said "Tract 2", for the west corner of said Lot 1R and for the south corner of said Block B and continuing for a total distance of 755.52 feet to a 1/2-inch iron rod with cap stamped "Doucet & Assoc." found for the beginning of a non-tangent curve to the left;

THENCE, in a northwesterly direction with the northeast right-of-way line of said F.M. 306 and with said non-tangent curve to the left having a radius of 700.00 feet, a central angle of 43° 18' 25" and a chord bearing North 21° 45' 25" West – 516.59 feet, at a length of 12.31 feet pass a 1/2-inch iron rod with cap stamped "Doucet & Assoc." found, at a length of 62.26 feet pass the north corner of said Block B and continuing for a total length of 529.09 feet to a point for the end of said non-tangent curve;

THENCE, North 43° 24' 45" West – 11.89 feet with the northeast right-of-way line of said F.M. 306 to a point at the intersection of the southeast right-of-way line of said Town Center Drive with the northeast right-of-way line of said F.M. 306 for the west corner of this tract;

THENCE, North 45° 25' 24" East – 431.53 feet with the southeast right-of-way line of said Town Center Drive to the POINT OF BEGINNING and containing 43.8825 acres (1,911,523 square feet) of land.

NEW BRAUNFELS TOWN CENTER AT CREEKSIDE PHASE 4

7/16/2013

SHEET 3 OF 3

DRAWING INFO: Z:\job#\356-130\dwg\356-130_P8_S3_OPT 2.dwg JUL 09, 2013 2:43 PM

No.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.351.8989
FRN F-11526

BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
STATE OF TEXAS

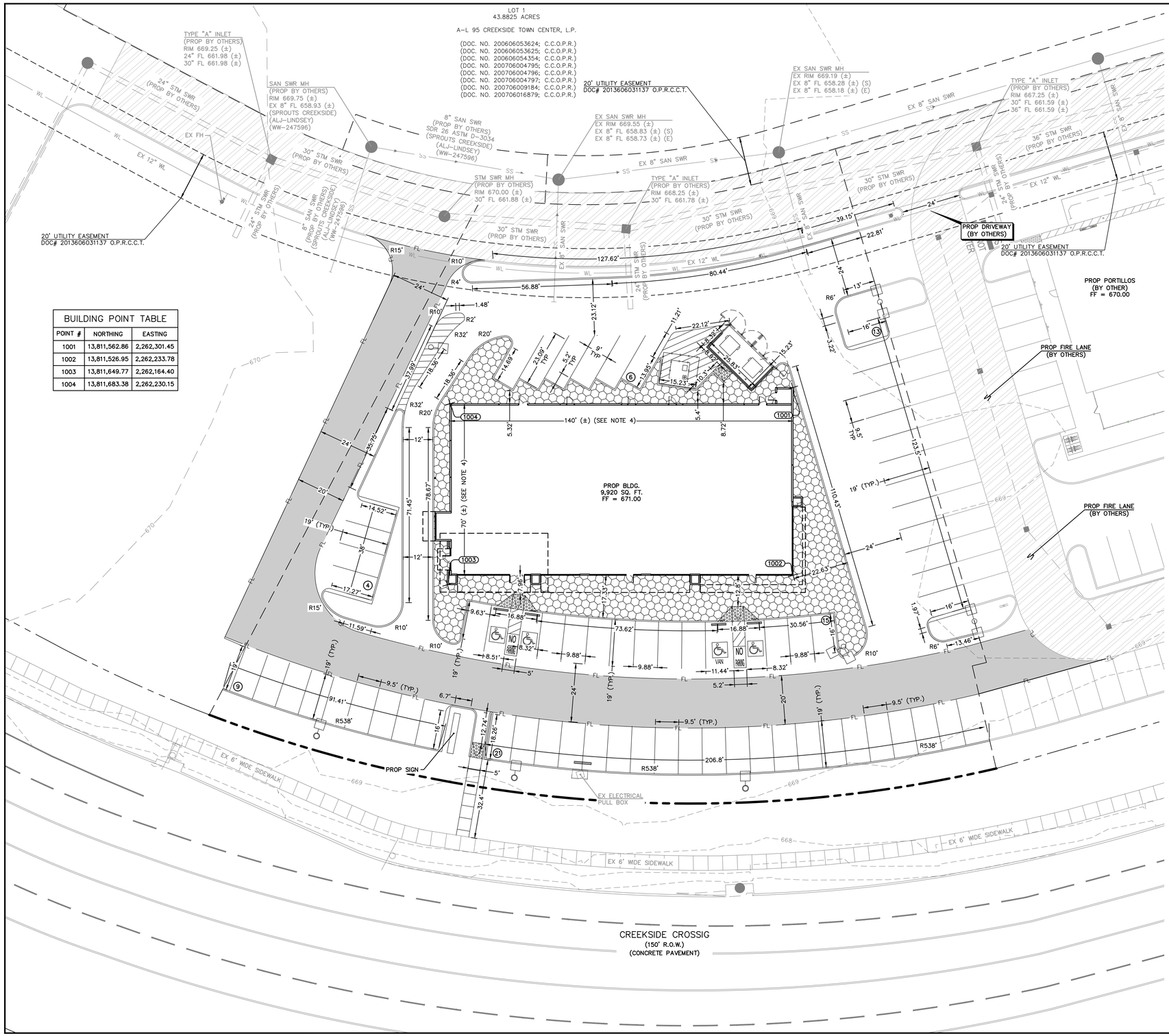
09 JULY 2025

ALJ PROJECT NO. 028.24.CV.154			
DATE: JULY 2025	SCALE:	DRAWN BY: ZAR	CHECKED BY: BTH

PLAT (3 OF 3)

CREEKSIDE TOWN CENTER TRACT 25'B'
CITY OF NEW BRAUNFELS, TEXAS

SHEET
C0.5



BUILDING POINT TABLE		
POINT #	NORTHING	EASTING
1001	13,811,562.86	2,262,301.45
1002	13,811,526.95	2,262,233.78
1003	13,811,649.77	2,262,164.40
1004	13,811,683.38	2,262,230.15

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.

0 10 20 40

1 inch = 20 ft.

GRAPHIC SCALE

LEGEND

- EXISTING FIRE LANE (RED STRIPING)
- PROPOSED FIRE LANE (RED STRIPING)
- PROPOSED BUILDING PERIMETER SIDEWALK
- PROPOSED CURB RAMP
- PARKING COUNT
- EX. MANHOLE
- EX. STORM SEWER
- EX. WATER LINE
- EX. SANITARY SEWER LINE
- EX. OVERHEAD POWER LINE
- EX. UNDERGROUND GAS LINE
- EX. MAJOR CONTOUR
- EX MINOR. CONTOUR

GENERAL NOTES

1. PAVEMENT DIMENSIONS AND RADII ARE FACE TO FACE OF CURB, UNLESS OTHERWISE NOTED.
2. RADII ARE 3' UNLESS OTHERWISE NOTED.
3. REFER TO SITE ELECTRICAL PLAN FOR PROPOSED SITE LIGHTING LAYOUT.
4. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING/FOUNDATION DIMENSIONS.

FIRE LANE MARKING NOTES

CURBS LOCATED ON EITHER SIDE OF A FIRE LANE SHALL BE PAINTED **RED** OR A **RED** STRIPE SHALL BE PLACED ALONG THE PAVEMENT WHERE THERE IS NO CURB. WHERE A FIRE LANE PASSES BETWEEN HEAD-IN PARKING SPACES, THE RED STRIPE SHOULD BE PLACED ALONG THE REAR OF THESE SPACES CLEARLY DEFINING THE FIRE LANE. PAINTED CURBS AND FIRE LANE STRIPES SHALL ALSO BE CONSPICUOUSLY AND LEGIBLY MARKED WITH THE WARNING "**FIRE LANE-TOW AWAY ZONE**" IN WHITE LETTERS AT LEAST THREE (3) INCHES IN HEIGHT, AT INTERVALS NOT EXCEEDING (50) FEET

SEQUENCE OF CONSTRUCTION:

1. INSTALL TEMPORARY EROSION CONTROLS ON THE SITE AS INDICATED ON THE EROSION CONTROL PLAN SHEET.
2. GRADE THE SITE AS INDICATED ON THE GRADING PLAN SHEET.
3. INSTALL ALL UNDERGROUND UTILITIES, INCLUDING WATER AND WASTEWATER LINES AS INDICATED ON THE UTILITY PLAN SHEET.
4. CONSTRUCT THE PROPOSED BUILDINGS, SIDEWALKS, PAVEMENT AREAS AND ALL OTHER ANCILLARY CONSTRUCTION.
5. INSTALL LANDSCAPING AS INDICATED ON THE LANDSCAPE PLAN SHEET.
6. REMOVE ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST
72 HOURS NOTICE BEFORE YOU DIG, DRILL
OR BLAST – STOP! CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

NO.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.304.2053
FRN F-11526

BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
STATE OF TEXAS
09 JULY 2025

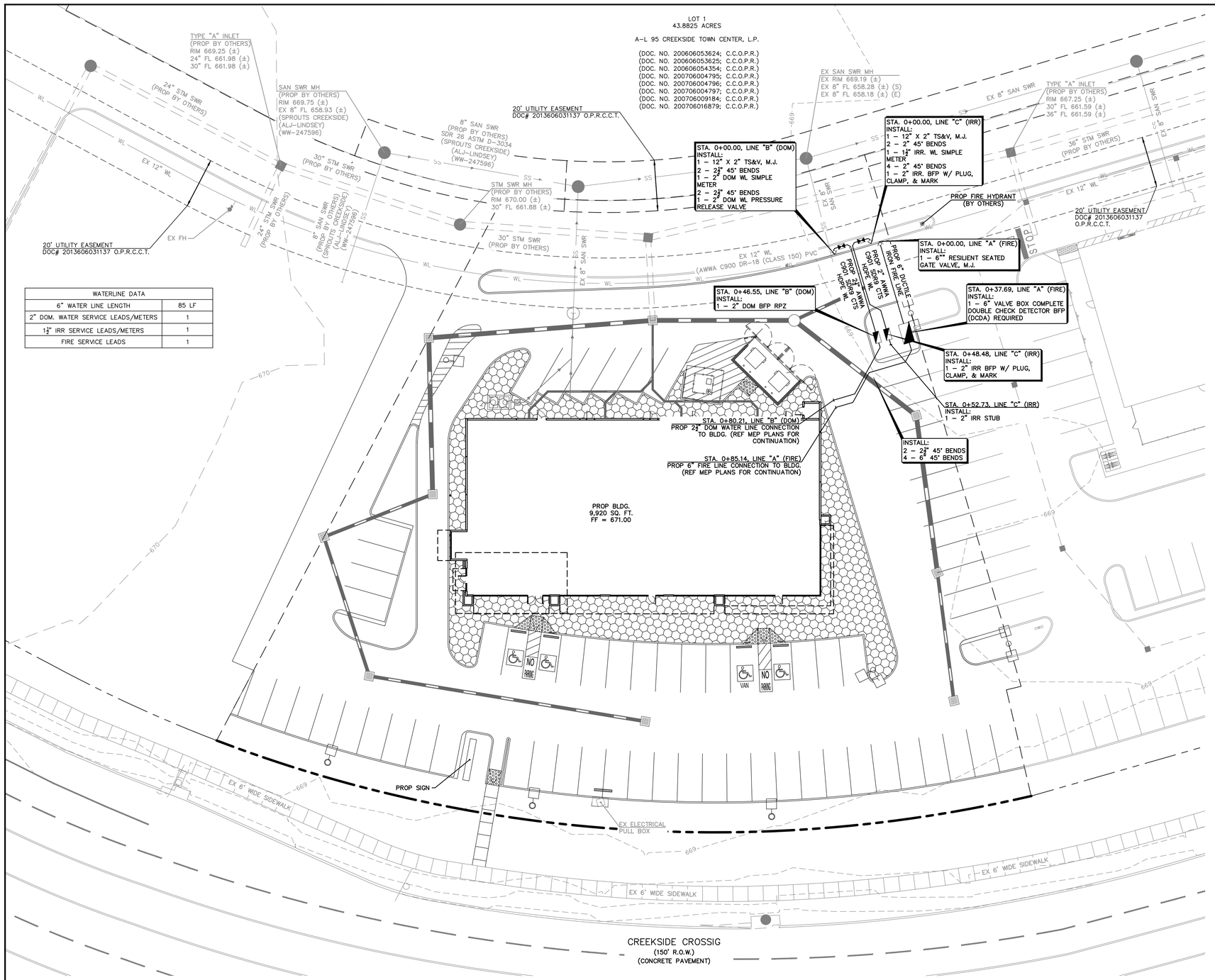
ALJ PROJECT NO. 028.24.CV.154	SCALE: 1:20	DRAWN BY: ZAR	CHECKED BY: BTH
DATE: JULY 2025			

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

DIMENSION CONTROL PLAN

SHEET
C1.0



WATERLINE DATA	
6" WATER LINE LENGTH	85 LF
2" DOM. WATER SERVICE LEADS/METERS	1
1½" IRR SERVICE LEADS/METERS	1
FIRE SERVICE LEADS	1

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.

0 10 20 40

1 inch = 20 ft.

GRAPHIC SCALE

LEGEND

- W/ CLEAN OUT
- SS — PROPOSED SANITARY SEWER
- WL — PROPOSED WATER LINE
- FIRE — PROPOSED FIRE LINE
- PROPOSED STORM SEWER
- EX. STORM SEWER
- WL — EX. WATER LINE
- SS — EX. SANITARY SEWER LINE
- PROPERTY LINE
- PROP. WATER METER
- PROP. BACKFLOW PREVENTER
- PROP. WATER VALVE
- PROP. FIRE HYDRANT ASSEMBLY
- EX. WATER METER
- EX. BACKFLOW PREVENTER
- EX. WATER VALVE
- EX. SANITARY SEWER MANHOLE
- 100 — EX. MAJOR CONTOUR
- 99 — EX. MINOR CONTOUR

GENERAL NOTES

1. REFERENCE WATER LINE NOTES ON SHEET C0.1 FOR PIPE MATERIAL REQUIREMENTS.
2. REFER TO SITE ELECTRICAL PLAN FOR PROPOSED SITE LIGHTING LAYOUT.
3. REFERENCE MEP PLANS FOR CONTINUATION OF WATER FACILITIES INSIDE BUILDING.
4. ALL UTILITY APPURTENANCES LOCATED WITHIN CONCRETE PAVEMENT TO BE TRAFFIC RATED.
5. CONTRACTOR TO VERIFY ALL PROPOSED UTILITY CONNECTIONS FOR BOTH LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS OR COMMENCEMENT OF WORK.
6. FIRE LINE IS SHOWN FOR ALIGNMENT AND POINT OF CONNECTION PURPOSES ONLY. ALL FIRE LINES ARE TO BE DESIGNED AND INSTALLED BY A LICENSED RME-U, INCLUDING BUT NOT LIMITED TO MATERIALS, THRUST BLOCKING, APPURTENANCES, ETC..

UTILITY CONSTRUCTION NOTES

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
2. NO VALVES, HYDRANTS, CLEANOUTS ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
3. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AN 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 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BARUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATIONS STATING THAT THE PALCEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

NBU BACKFLOW PREVENTION ASSEMBLY NOTE

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.

TRENCH SAFETY NOTE

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

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST
72 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST - STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

NO.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.304.2053
FRN F-11526

BRETT T. HANRAHAN
STATE OF TEXAS
112908
REGISTERED
PROFESSIONAL ENGINEER
09 JULY 2025

ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: 1:20
DRAWN BY: ZAR
CHECKED BY: BTH

WATER PLAN

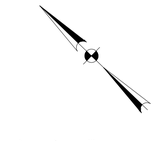
CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C2.0

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88.

PAGE IS VOID. THE PROPOSED FIRE HYDRANT IS NO LONGER SHOWN IN THIS SET AND IS SHOWN IN THE SET TITLED, "PORTILLO'S HOT DOGS", DRAWN BY, PEA GROUP.



GRAPHIC SCALE

LEGEND

W/ CLEAN OUT	
SS	PROPOSED SANITARY SEWER
WL	PROPOSED WATER LINE
FIRE	PROPOSED FIRE LINE
	PROPOSED STORM SEWER
	EX. STORM SEWER
WL	EX. WATER LINE
SS	EX. SANITARY SEWER LINE
	PROPERTY LINE
	PROP. WATER METER
	PROP. BACKFLOW PREVENTER
	PROP. WATER VALVE
	PROP. FIRE HYDRANT ASSEMBLY
	EX. WATER METER
	EX. BACKFLOW PREVENTER
	EX. WATER VALVE
	EX. SANITARY SEWER MANHOLE
100	EX. MAJOR CONTOUR
99	EX. MINOR CONTOUR

FIRE HYDRANT NOTE

CONTRACTOR TO CONFIRM THAT ALL FIRE HYDRANTS HAVE A MINIMUM 10 FEET OF CLEARANCE IN ALL DIRECTIONS.

TRENCH SAFETY NOTE

CONTRACTOR AND / OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION

UTILITY CONSTRUCTION NOTES

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
2. NO VALVES, HYDRANTS, CLEANOUTS ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
3. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO AT 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 AN 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 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BARUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATIONS STATING THAT THE PALCEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

GENERAL NOTES

1. REFERENCE WATER LINE NOTES ON SHEET C0.1 FOR PIPE MATERIAL REQUIREMENTS.
2. REFER TO SITE ELECTRICAL PLAN FOR PROPOSED SITE LIGHTING LAYOUT.
3. REFERENCE MEP PLANS FOR CONTINUATION OF WATER FACILITIES INSIDE BUILDING.
4. ALL UTILITY APPURTENANCES LOCATED WITHIN CONCRETE PAVEMENT TO BE TRAFFIC RATED.
5. CONTRACTOR TO VERIFY ALL PROPOSED UTILITY CONNECTIONS FOR BOTH LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS OR COMMENCEMENT OF WORK.
6. FIRE LINE IS SHOWN FOR ALIGNMENT AND POINT OF CONNECTION PURPOSES ONLY. ALL FIRE LINES ARE TO BE DESIGNED AND INSTALLED BY A LICENSED RME-U, INCLUDING BUT NOT LIMITED TO MATERIALS, THRUST BLOCKING, APPURTENANCES, ETC..

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST
72 HOURS NOTICE BEFORE YOU DIG, DRILL
OR BLAST – STOP AND
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

NO.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.370.0555
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
09 JULY 2025

ALJ PROJECT NO. 028.24.CV.154 | DATE: JULY 2025 | SCALE: 1:10 | DRAWN BY: ZAR | CHECKED BY: BTH

WATER PLAN & PROFILE

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C2.1

LOT 1
43.8825 ACRES

A-L 95 CREEKSIDE TOWN CENTER, L.P.

(DOC. NO. 200606053624; C.C.O.P.R.)
(DOC. NO. 200606053625; C.C.O.P.R.)
(DOC. NO. 200606054354; C.C.O.P.R.)
(DOC. NO. 200706004795; C.C.O.P.R.)
(DOC. NO. 200706004796; C.C.O.P.R.)
(DOC. NO. 200706004797; C.C.O.P.R.)
(DOC. NO. 200706009184; C.C.O.P.R.)
(DOC. NO. 200706016879; C.C.O.P.R.)

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.

0 10 20 40
1 inch = 20 ft.
GRAPHIC SCALE

TYPE "A" INLET (PROP BY OTHERS) RIM 669.25 (±) 24" FL 661.98 (±) 30" FL 661.98 (±)
24" STM SWR (PROP BY OTHERS)
SAN SWR MH (PROP BY OTHERS) RIM 669.75 (±) EX 8" FL 658.93 (±) (SPROUTS CREEKSIDE) (ALJ-LINDSEY) (WW-247596)
8" SAN SWR (PROP BY OTHERS) SDR 26 ASTM D-3034 (SPROUTS CREEKSIDE) (ALJ-LINDSEY) (WW-247596)
30" STM SWR (PROP BY OTHERS)
EX 12" WL
EX FH
20' UTILITY EASEMENT DOC# 20136060311137 O.P.R.C.C.T.
STM SWR MH (PROP BY OTHERS) RIM 670.00 (±) 30" FL 661.88 (±)
EX SAN SWR MH EX RIM 669.55 (±) EX 8" FL 658.83 (±) (S) EX 8" FL 658.73 (±) (E)
20' UTILITY EASEMENT DOC# 20136060311137 O.P.R.C.C.T.
EX SAN SWR MH EX RIM 669.19 (±) EX 8" FL 658.28 (±) (S) EX 8" FL 658.18 (±) (E)
EX 8" SAN SWR SDR 26 ASTM D-3034
TYPE "A" INLET (PROP BY OTHERS) RIM 668.25 (±) 30" FL 661.78 (±)
TYPE "A" INLET (PROP BY OTHERS) RIM 667.25 (±) 30" FL 661.59 (±) 36" FL 661.59 (±)
36" STM SWR (PROP BY OTHERS)
24" SAN SWR (PROP BY OTHERS)
DO NOT ENTER
20' UTILITY EASEMENT DOC# 20136060311137 O.P.R.C.C.T.
SAN SWR LINES ENTER & LEAVE SAN SWR MH AT THE SAME ANGLE. THERE IS NO DEGREE OF DEFLECTION IN THIS SAN SWR MH.
CONTRACTOR TO INSTALL CONCRETE ENCASEMENT AS NECESSARY TO MAINTAIN 2' CLEARANCE BETWEEN UTILITY LINES
STA. 0+00.00 LINE A, PROP CORROSION RESISTANT SAN SWR MH W/ EXTERNAL DROP CONNECTION ON EX SAN SWR STUB RIM 670.00 PROP 6" FL 663.81 EX 8" FL 659.08 (±)
STA. 0+17.87, LINE A
STA. 0+00.00, LINE B
PROP 6" X 6" WYE PROP 6" FL 664.17
STA. 0+28.09, LINE B PROP SAMPLE WELL PROP 6" FL 664.73
STA. 0+35.26, LINE B PROP GREASE TRAP PROP 6" FL 665.12 (IN) PROP 6" FL 664.87 (OUT)
PROP 6" PVC SDR 26 ASTM D-2241 F-477 SSWR @ 2.00%
PROP 5' X 5' NBU UTILITY EASEMENT
STA. 0+34.57, LINE A PROP SAN SWR CONN. TO PROP BLDG. (REF MEP. PLANS FOR CONTINUATION) PROP 6" FL 664.50
STA. 0+43.12, LINE B PROP SAN SWR CONN. TO PROP BLDG. (REF MEP. PLANS FOR CONTINUATION) PROP 6" FL 665.28
3.18 LF - HORIZONTAL CLEARANCE
PROP BLDG. 9,920 SQ. FT. FF = 671.50
NO PARKING
VAN
PROP SIGN
EX ELECTRICAL PULL BOX
EX 6' WIDE SIDEWALK
CREEKSIDE CROSSIG
(150' R.O.W.)
(CONCRETE PAVEMENT)

SANITARY SEWER DATA	
MANHOLES	1
6" WASTEWATER SERVICE LEADS	2
GREASE TRAP	1
SAMPLE WELL	1

SANITARY SEWER CROSSING NOTE:

CONCRETE ENCASEMENT MUST BE USED IF THERE IS LESS THAN 2 FEET BETWEEN OUTSIDE DIAMETERS OF STORM & SANITARY SEWER. CONTRACT TO INSTALL AS NECESSARY AND SHALL CONTACT THE ENGINEER IF ANY CONFLICTS ARISE.

SANITARY SEWER COVER NOTE:

ALL PROPOSED WASTEWATER SERVICE LATERALS SHALL BE LAID WITH AT LEAST 36 INCHES OF COVER. CONTRACTOR TO CALL ENGINEER IMMEDIATELY IF CONFLICT ARISES.

LEGEND

SS (W/ CLEAN OUT)	PROPOSED SANITARY SEWER
WL	PROPOSED WATER LINE
FIRE	PROPOSED FIRE LINE
	PROPOSED STORM SEWER
	EX. STORM SEWER
WL	EX. WATER LINE
SS	EX. SANITARY SEWER LINE
100	EX. MAJOR CONTOUR
99	EX. MINOR CONTOUR

GENERAL NOTES

1. REFERENCE SANITARY SEWER NOTES ON SHEET C0.1 FOR PIPE MATERIAL REQUIREMENTS.
2. REFER TO SITE ELECTRICAL PLAN FOR PROPOSED SITE LIGHTING LAYOUT.
3. REFERENCE MEP PLANS FOR CONTINUATION OF SANITARY FACILITIES INSIDE BUILDING.
4. ALL CLEANOUTS LOCATED WITHIN CONCRETE PAVEMENT TO BE TRAFFIC RATED.
5. CONTRACTOR TO VERIFY ALL PROPOSED UTILITY CONNECTIONS FOR BOTH LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS OR COMMENCEMENT OF WORK.
6. ALL GRAVITY BASED SANITARY SEWER LINES ARE TO BE CONSTRUCTED FROM POINT OF CONNECTION AND WORKED UP IN ELEVATION.

TRENCH SAFETY NOTE

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

SANITARY SEWER MANHOLE NOTE:

ALL PROPOSED MANHOLES SHALL HAVE BOLTED, WATERTIGHT COVERS. MANHOLES CONSTRUCTED OF POLYMER CONCRETE SHALL HAVE COMPOSITE COVERS PER NBU SPECIFICATIONS. ALL SANITARY SEWER MANHOLES SHOULD BE CONSTRUCTED OR LINED WITH CORROSION RESISTANT MATERIAL.

UTILITY CONSTRUCTION NOTES

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
2. NO VALVES, HYDRANTS, CLEANOUTS ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
3. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AN 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 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BARUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATIONS STATING THAT THE PALCEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST 72 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST - STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

NO.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.304.2053
FRN F-11526

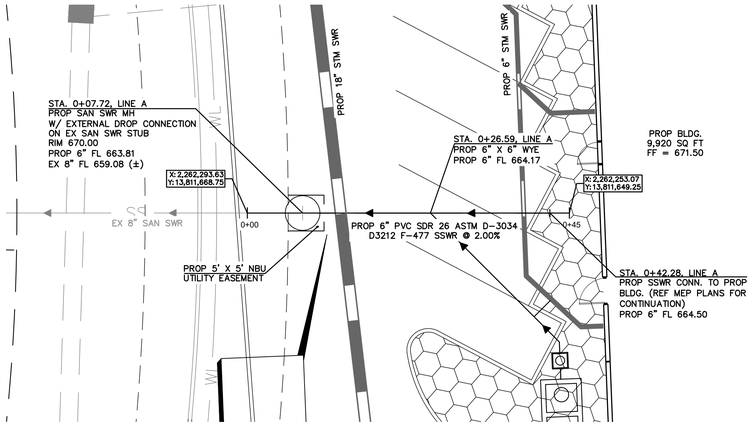
BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS
09 JULY 2025

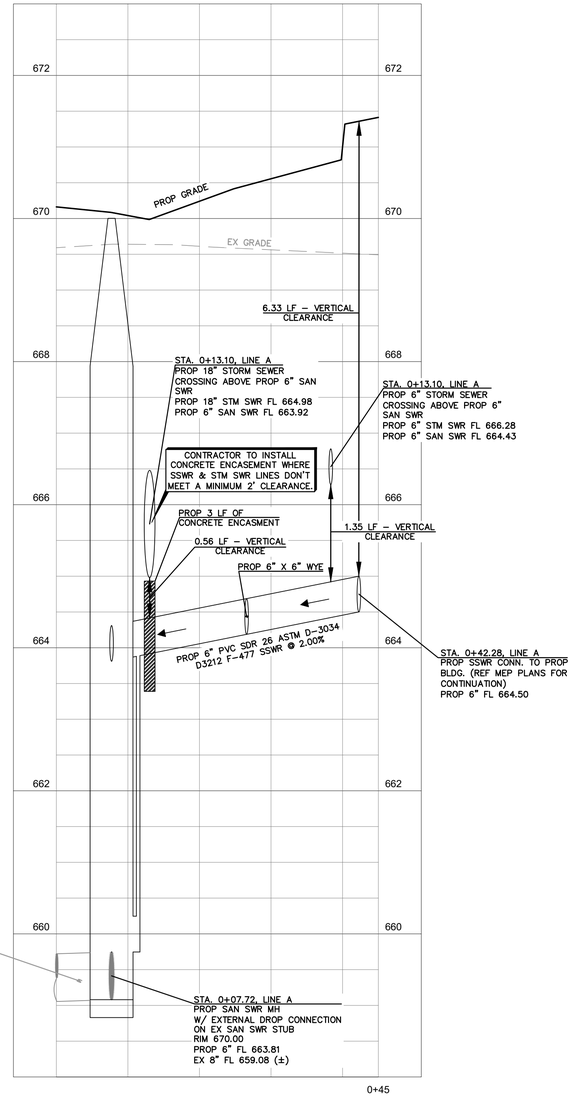
ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: 1:20
DRAWN BY: ZAR
CHECKED BY: BTH

SANITARY SEWER PLAN

CREEKSIDE TOWN CENTER TRACT 25'B'
CITY OF NEW BRAUNFELS, TEXAS

SHEET
C2.2

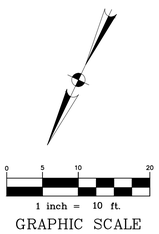




SANITARY SEWER TRUNK LINE PROFILE

SCALE: 1"=10' H; 1"=2'V

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.



GRAPHIC SCALE

LEGEND

SS (W/ CLEAN OUT)	PROPOSED SANITARY SEWER
WL	PROPOSED WATER LINE
FIRE	PROPOSED FIRE LINE
	PROPOSED STORM SEWER
	EX. STORM SEWER
WL	EX. WATER LINE
SS	EX. SANITARY SEWER LINE
100	EX. MAJOR CONTOUR
99	EX. MINOR CONTOUR

GENERAL NOTES

1. REFERENCE SANITARY SEWER NOTES ON SHEET C0.1 FOR PIPE MATERIAL REQUIREMENTS.
2. REFER TO SITE ELECTRICAL PLAN FOR PROPOSED SITE LIGHTING LAYOUT.
3. REFERENCE MEP PLANS FOR CONTINUATION OF SANITARY FACILITIES INSIDE BUILDING.
4. ALL CLEANOUTS LOCATED WITHIN CONCRETE PAVEMENT TO BE TRAFFIC RATED.
5. CONTRACTOR TO VERIFY ALL PROPOSED UTILITY CONNECTIONS FOR BOTH LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS OR COMMENCEMENT OF WORK.
6. ALL GRAVITY BASED SANITARY SEWER LINES ARE TO BE CONSTRUCTED FROM POINT OF CONNECTION AND WORKED UP IN ELEVATION.

UTILITY CONSTRUCTION NOTES

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
2. NO VALVES, HYDRANTS, CLEANOUTS ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
3. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AN 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 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BARUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATIONS STATING THAT THE PALCEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

SANITARY SEWER MANHOLE NOTE:

ALL PROPOSED MANHOLES SHALL HAVE BOLTED, WATERTIGHT COVERS. MANHOLES CONSTRUCTED OF POLYMER CONCRETE SHALL HAVE COMPOSITE COVERS PER NBU SPECIFICATIONS. ALL SANITARY SEWER MANHOLES SHOULD BE CONSTRUCTED OR LINED WITH CORROSION RESISTANT MATERIAL.

SANITARY SEWER COVER NOTE:

ALL PROPOSED WASTEWATER SERVICE LATERALS SHALL BE LAID WITH AT LEAST 36 INCHES OF COVER. CONTRACTOR TO CALL ENGINEER IMMEDIATELY IF CONFLICT ARISES.

TRENCH SAFETY NOTE

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

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST
72 HOURS NOTICE BEFORE YOU DIG, DRILL
OR BLAST – STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

No.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.320.9955
FRN F-11526

BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
STATE OF TEXAS
09 JULY 2025

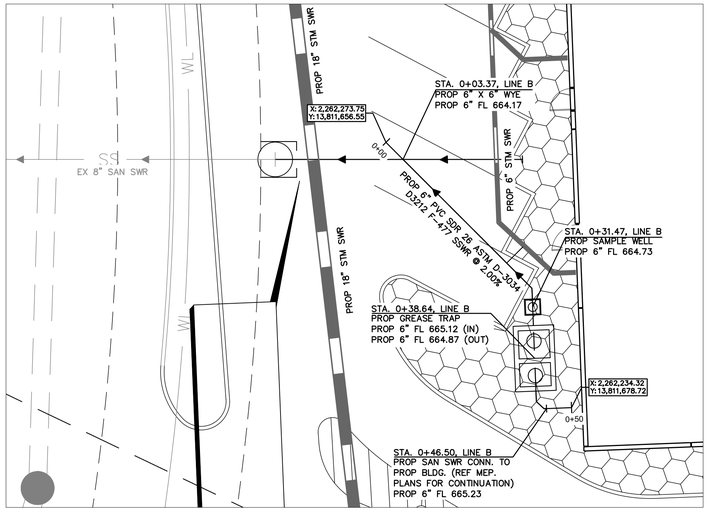
ALJ PROJECT NO.	028.24.CV.154
DATE:	JULY 2025
SCALE:	1:10
DRAWN BY:	ZAR
CHECKED BY:	BTH

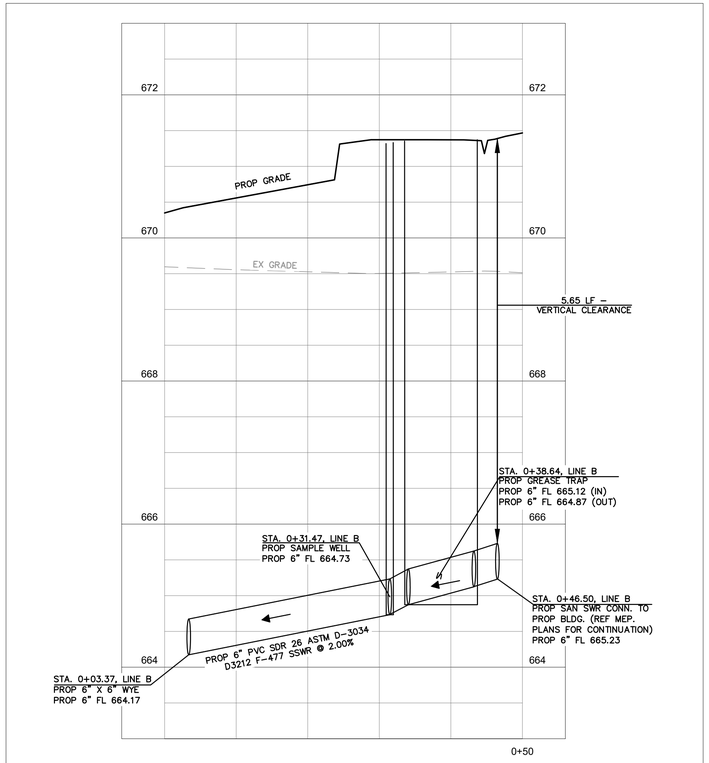
SANITARY SEWER PLAN & PROFILE (1 OF 2)

CREEKSIDE TOWN CENTER TRACT 25'B'

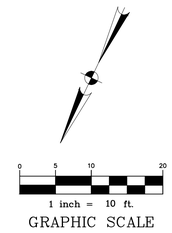
CITY OF NEW BRAUNFELS, TEXAS

SHEET
C2.3





ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.



GRAPHIC SCALE

LEGEND

SS — W/ CLEAN OUT	PROPOSED SANITARY SEWER
WL	PROPOSED WATER LINE
FIRE	PROPOSED FIRE LINE
	PROPOSED STORM SEWER
	EX. STORM SEWER
WL	EX. WATER LINE
SS	EX. SANITARY SEWER LINE
100	EX. MAJOR CONTOUR
99	EX. MINOR CONTOUR

GENERAL NOTES

1. REFERENCE SANITARY SEWER NOTES ON SHEET C0.1 FOR PIPE MATERIAL REQUIREMENTS.
2. REFER TO SITE ELECTRICAL PLAN FOR PROPOSED SITE LIGHTING LAYOUT.
3. REFERENCE MEP PLANS FOR CONTINUATION OF SANITARY FACILITIES INSIDE BUILDING.
4. ALL CLEANOUTS LOCATED WITHIN CONCRETE PAVEMENT TO BE TRAFFIC RATED.
5. CONTRACTOR TO VERIFY ALL PROPOSED UTILITY CONNECTIONS FOR BOTH LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS OR COMMENCEMENT OF WORK.
6. ALL GRAVITY BASED SANITARY SEWER LINES ARE TO BE CONSTRUCTED FROM POINT OF CONNECTION AND WORKED UP IN ELEVATION.

UTILITY CONSTRUCTION NOTES

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.
2. NO VALVES, HYDRANTS, CLEANOUTS ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
3. ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AN 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 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BARUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATIONS STATING THAT THE PALCEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

SANITARY SEWER MANHOLE NOTE:

ALL PROPOSED MANHOLES SHALL HAVE BOLTED, WATERTIGHT COVERS. MANHOLES CONSTRUCTED OF POLYMER CONCRETE SHALL HAVE COMPOSITE COVERS PER NBU SPECIFICATIONS. ALL SANITARY SEWER MANHOLES SHOULD BE CONSTRUCTED OR LINED WITH CORROSION RESISTANT MATERIAL.

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST
72 HOURS NOTICE BEFORE YOU DIG, DRILL
OR BLAST – STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

SANITARY SEWER COVER NOTE:

ALL PROPOSED WASTEWATER SERVICE LATERALS SHALL BE LAID WITH AT LEAST 36 INCHES OF COVER. CONTRACTOR TO CALL ENGINEER IMMEDIATELY IF CONFLICT ARISES.

TRENCH SAFETY NOTE

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

NO.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.304.2583
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
09 JULY 2025

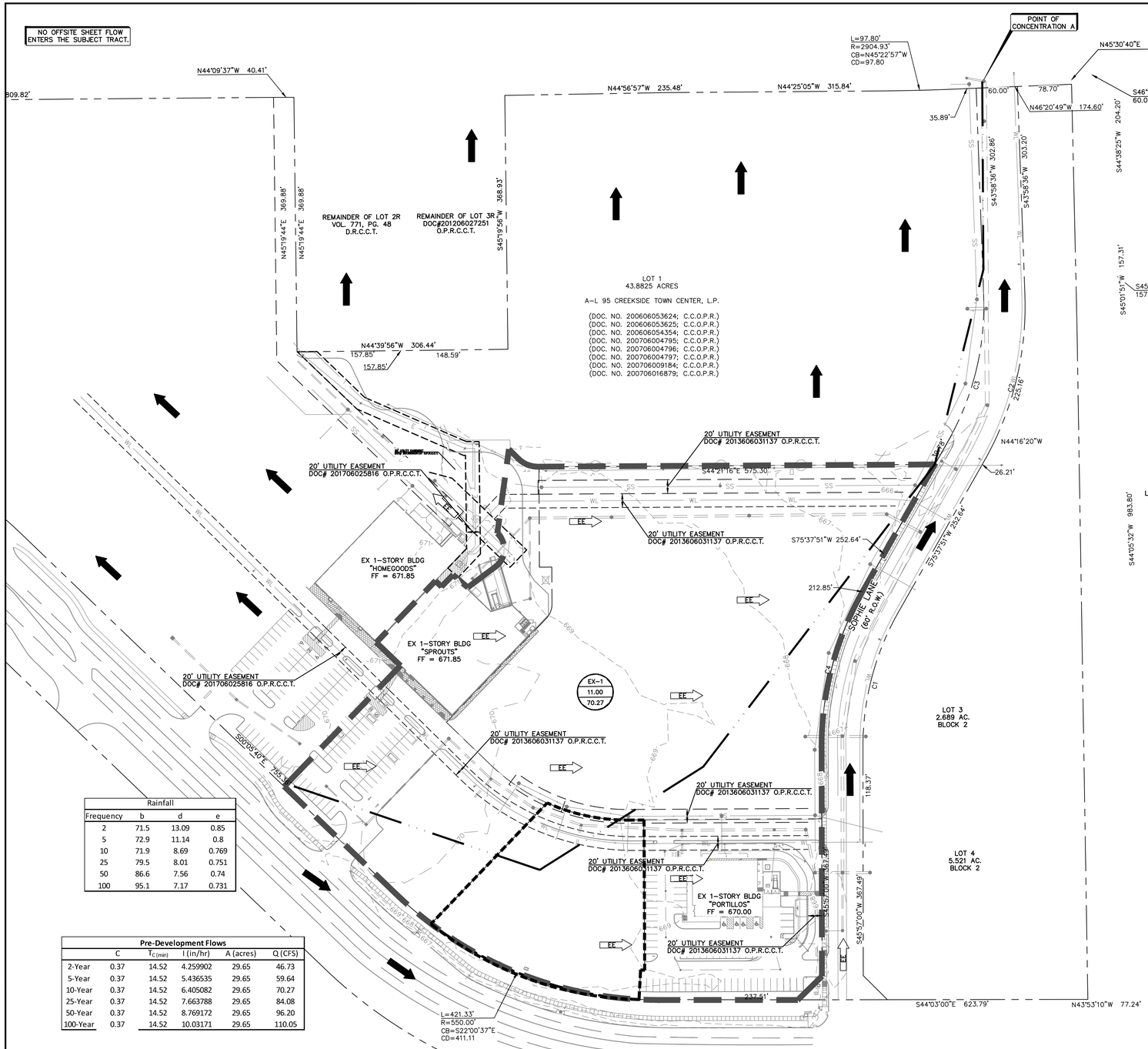
ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: 1:10
DRAWN BY: ZAR
CHECKED BY: BTH

SANITARY SEWER PLAN & PROFILE (2 OF 2)

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C2.4



ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.

0 40 80 160

1 inch = 80 ft.

GRAPHIC SCALE

LEGEND

- D-A / AC / CFS — DRAINAGE AREA NUMBER; ACREAGE (AC); 10-YR DRAINAGE AREA FLOW (CFS)
- EX. DRAINAGE AREA BOUNDARY
- TRACT 25B DRAINAGE AREA BOUNDARY
- EE — EXTREME EVENT OVERLAND FLOW
- EXISTING OFFSITE DRAINAGE FLOW
- TIME OF CONCENTRATION FLOW PATH
- EX. STORM SEWER
- WL — EX. WATER LINE
- SS — EX. SANITARY SEWER LINE
- 100 — EX. MAJOR CONTOUR

MAINTENANCE SCHEDULE

1. ALL INLETS WILL BE INSPECTED ON A QUARTERLY BASIS FOR TRASH/SEDIMENT BUILD UP.

Rainfall			
Frequency	b	d	e
2	71.5	13.09	0.85
5	72.9	11.14	0.8
10	71.9	8.69	0.769
25	79.5	8.01	0.751
50	86.6	7.56	0.74
100	95.1	7.17	0.731

Pre-Development Flows

	C	$T_{C\,(min)}$	I (in/hr)	A (acres)	Q (CFS)
2-Year	0.37	14.52	4.259902	29.65	46.73
5-Year	0.37	14.52	5.436535	29.65	59.64
10-Year	0.37	14.52	6.405082	29.65	70.27
25-Year	0.37	14.52	7.663788	29.65	84.08
50-Year	0.37	14.52	8.769172	29.65	96.20
100-Year	0.37	14.52	10.03171	29.65	110.05

Pre-Development Conditions

DA	Total Flow Length (ft)	Sheet Flow: Flow Length (ft)	Sheet Flow: Slope (ft/ft)	Sheet Flow: Description	Sheet Flow: n	Sheet Flow: P_2 (in)	Sheet Flow: Tt (min)	Shallow Concentrated Flow: Flow Length (ft)2	Shallow Concentrated Flow: Flow Type	Shallow Concentrated Flow: Slope (ft/ft)3	Shallow Concentrated Flow: Tt (min)4	Channel/Culvert Flow: Flow Length (ft)5	Channel/Culvert Flow: Avg. Velocity (ft/s)	Channel/Culvert Flow: Slope (ft/ft)6	Channel/Culvert Flow: Area (ft^2)	Channel/Culvert Flow: Tt (min)7	Total Time: Total Tc (min)	Total Time: Tlag (min)
A8A	2090	100	0.003	Concrete	0.013	3.98	2.65	1990	Unpaved	0.03	11.87	0	2.5	-	-	0.00	14.52	8.71

No.	DATE	REVISIONS
1	11/22/2024	CCD #3

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.304.3583
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER
09 JULY 2025

ALJ PROJECT NO.	028.24.CV.154
DATE:	JULY 2025
SCALE:	1:30
DRAWN BY:	ZAR
CHECKED BY:	BTH

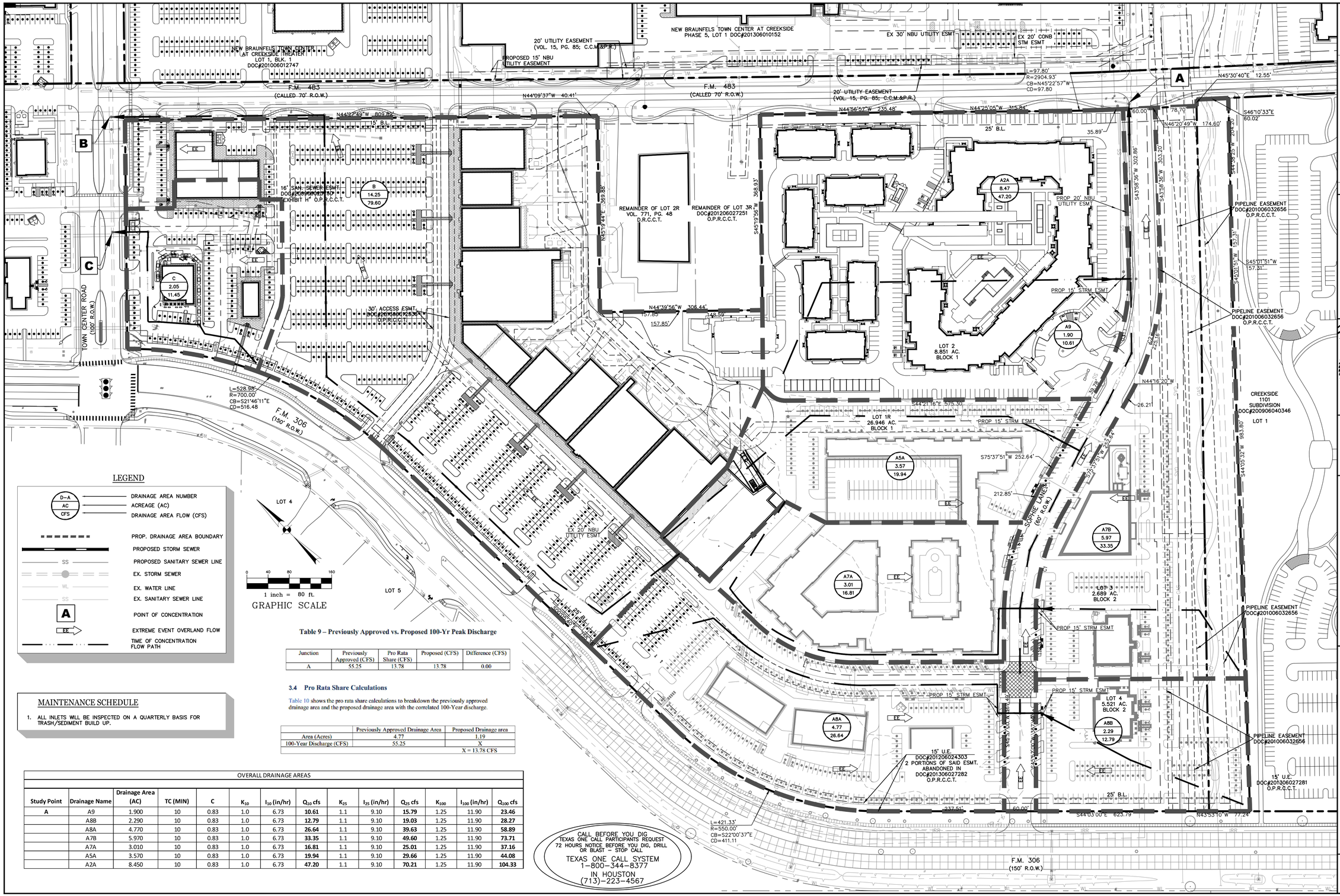
EX DRAINAGE AREA MAP

CREEKSIDE TOWN CENTER TRACT 25B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C3.0

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST
72 HOURS NOTICE BEFORE YOU DIG, DRILL
OR BLAST – STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567



LEGEND

- D–A / AC / CFS — DRAINAGE AREA NUMBER; ACREAGE (AC); DRAINAGE AREA FLOW (CFS)
- PROP. DRAINAGE AREA BOUNDARY
- PROPOSED STORM SEWER
- SS — PROPOSED SANITARY SEWER LINE
- EX. STORM SEWER
- WL — EX. WATER LINE
- SS — EX. SANITARY SEWER LINE
- A — POINT OF CONCENTRATION
- EE — EXTREME EVENT OVERLAND FLOW
- TIME OF CONCENTRATION FLOW PATH

MAINTENANCE SCHEDULE

1. ALL INLETS WILL BE INSPECTED ON A QUARTERLY BASIS FOR TRASH/SEDIMENT BUILD UP.

Table 9 – Previously Approved vs. Proposed 100-Yr Peak Discharge

Junction	Previously Approved (CFS)	Pro Rata Share (CFS)	Proposed (CFS)	Difference (CFS)
A	55.25	13.78	13.78	0.00

3.4 Pro Rata Share Calculations

Table 10 shows the pro rata share calculations to breakdown the previously approved drainage area and the proposed drainage area with the correlated 100-Year discharge.

	Previously Approved Drainage Area	Proposed Drainage area
Area (Acres)	4.77	1.19
100-Year Discharge (CFS)	55.25	X
		X = 13.78 CFS

OVERALL DRAINAGE AREAS

Study Point	Drainage Name	Drainage Area (AC)	TC (MIN)	C	K_{10}	I_{10} (in/hr)	Q_{10} cfs	K_{25}	I_{25} (in/hr)	Q_{25} cfs	K_{100}	I_{100} (in/hr)	Q_{100} cfs
A	A9	1.900	10	0.83	1.0	6.73	**10.61**	1.1	9.10	**15.79**	1.25	11.90	**23.46**
	A8B	2.290	10	0.83	1.0	6.73	**12.79**	1.1	9.10	**19.03**	1.25	11.90	**28.27**
	A8A	4.770	10	0.83	1.0	6.73	**26.64**	1.1	9.10	**39.63**	1.25	11.90	**58.89**
	A7B	5.970	10	0.83	1.0	6.73	**33.35**	1.1	9.10	**49.60**	1.25	11.90	**73.71**
	A7A	3.010	10	0.83	1.0	6.73	**16.81**	1.1	9.10	**25.01**	1.25	11.90	**37.16**
	A5A	3.570	10	0.83	1.0	6.73	**19.94**	1.1	9.10	**29.66**	1.25	11.90	**44.08**
	A2A	8.450	10	0.83	1.0	6.73	**47.20**	1.1	9.10	**70.21**	1.25	11.90	**104.33**

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST 72 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST – STOP CALL
TEXAS ONE CALL SYSTEM
1–800–344–8377
IN HOUSTON
(713)–223–4567

No.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.516.8863
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER
09 JULY 2025

ALJ PROJECT NO: 028.24.CV.154
DATE: JULY 2025
SCALE: 1:30
DRAWN BY: ZAR
CHECKED BY: BTH

ULTIMATE DRAINAGE AREA MAP

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C3.1

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.

0 10 20 40

1 inch = 20 ft.

GRAPHIC SCALE

LEGEND

- D–A / AC / CFS — DRAINAGE AREA NUMBER; ACREAGE (AC); DRAINAGE AREA FLOW (CFS)
- PROP. DRAINAGE AREA BOUNDARY
- EXISTING OFFSITE DRAINAGE FLOW DIRECTION
- EE — EXTREME EVENT OVERLAND FLOW
- PROPOSED STORM SEWER
- SS — PROPOSED SANITARY SEWER LINE
- WL — PROPOSED WATER LINE
- PROPOSED GRATE INLET
- A — UTILITY CROSSING
- 1 — PROPOSED DOWNSPOUT CONNECTION (REF. ARCHITECTURAL PLANS)
- EX. STORM SEWER
- WL — EX. WATER LINE
- SS — EX. SANITARY SEWER LINE
- 100 — EX. MAJOR CONTOUR
- 99 — EX. MINOR CONTOUR

LOT 1
43.8825 ACRES
A–L 95 CREEKSIDE TOWN CENTER, L.P.
(DOC. NO. 20060605362[illegible]; C.C.O.P.R.)
(DOC. NO. 20060605362[illegible]; C.C.O.P.R.)
(DOC. NO. 20060605435[illegible]; C.C.O.P.R.)
(DOC. NO. 20070600479[illegible]; C.C.O.P.R.)
(DOC. NO. 20070600479[illegible]; C.C.O.P.R.)
(DOC. NO. 20070600479[illegible]; C.C.O.P.R.)
(DOC. NO. 20070600918[illegible]; C.C.O.P.R.)
(DOC. NO. 20070601687[illegible]; C.C.O.P.R.)

20' UTILITY EASEMENT
DOC# 20136060311[illegible] O.P.R.C.C.T.

20' UTILITY EASEMENT
DOC# 20136060311[illegible] O.P.R.C.C.T.

20' UTILITY EASEMENT
DOC# 20136060311[illegible] O.P.R.C.C.T.

TYPE "A" INLET (PROP BY OTHERS) RIM 669.25 (±) 24" FL 661.98 (±) 30" FL 661.98 (±)

SAN SWR MH (PROP BY OTHERS) RIM 669.75 (±) EX 8" FL 658.93 (±) (SPROUTS CREEKSIDE) (ALJ–LINDSEY) (WW–247596)

24" STM SWR (PROP BY OTHERS)

30" STM SWR (PROP BY OTHERS)

8" SAN SWR (PROP BY OTHERS) SDR 26 ASTM D–3034 (SPROUTS CREEKSIDE) (ALJ–LINDSEY) (WW–247596)

EX 12" WL

EX FH

EX SAN SWR MH EX RIM 669.55 (±) EX 8" FL 658.83 (±) (S) EX 8" FL 658.73 (±) (E)

EX 8" SAN SWR

TYPE "A" INLET (PROP BY OTHERS) RIM 668.25 (±) 30" FL 662.78 (±)

STM SWR MH (PROP BY OTHERS) RIM 670.00 (±) 30" FL 661.88 (±)

EX–5

STA. 0+00.00, STM LINE A
STA. 0+00.00, STM LAT A1
PROP. TYPE 'A' INLET ON EX–24" STM STUB
TG 669.25
EX 24" FL 662.84
FL 18" 664.40(SE)
FL 18" 664.90(NW)
FL 6" 666.70(SW)

STA. 0+88.50, STM LAT A1
PROP. TYPE 'A' INLET
TG 669.50
FL 18" 665.13(SW)
FL 18" 665.13(SE)

88 LF – 18" STM SWR @ 0.26%

56 LF – 18" STM SWR @ 0.26%

PROP 10' STORM SEWER EASEMENT

STA. 0+55.81, STM LINE A
PROP. STM SWR MH
TG 669.44
FL 12" 665.05(SE)
FL 18" 664.55(S)
FL 18" 664.55(NW)

A1 0.11 0.41

A1A 0.08 0.30

A1B 0.02 0.07

A1C 0.06 0.22

A1D 0.14 0.52

A1E 0.17 0.63

A2 36 LF – 12" STM SWR @ 0.45%

A2A 0.07 0.26

STA. 0+35.91, STM LAT A2
PROP. TYPE 'A' INLET
TG 668.25
FL 12" 665.21(NW)

61 LF – 18" STM SWR @ 0.26%

STA. 1+16.79, STM LINE A
PROP. TYPE 'A' INLET
TG 668.75
FL 18" 664.71(SW)
FL 18" 664.71(N)

A3 0.07 0.26

62 LF – 18" STM SWR @ 0.26%

STA. 1+79.26, STM LINE A
PROP. TYPE 'A' INLET
TG 668.70
FL 12" 665.37(SW)
FL 18" 664.87(NE)

A4 0.09 0.33

51 LF – 12" STM SWR @ 0.45%

STA. 2+30.16, STM LINE A
PROP. TYPE 'A' INLET
TG 668.75
FL 12" 665.60(NE)

A5 0.13 0.48

STA. 1+96.18, STM LAT A1
PROP. TYPE 'A' INLET
TG 669.25
FL 12" 666.00(SW)
FL 12" 666.00(SE)

46 LF – 12" STM SWR @ 0.45%

STA. 1+50.13, STM LAT A1
PROP. TYPE 'A' INLET
TG 670.20
FL 12" 665.79(NW)
FL 18" 665.29(NE)

PROP BLDG. 9,920 SQ. FT. FF = 671.50

R1 0.23 0.85

62 LF – 18" STM SWR @ 0.26%

110 LF – 12" STM SWR @ 0.45%

STA. 2+53.86, STM LAT A1
PROP. TYPE 'A' INLET
TG 669.00
FL 12" 666.26(S)
FL 12" 666.26(NE)

STA. 3+64.05, STM LAT A1
PROP. TYPE 'A' INLET
TG 669.25
FL 12" 666.76(N)

PROP SIGN

EX ELECTRICAL PULL BOX

EX 6' WIDE SIDEWALK

CREEKSIDE CROSSIG
(150' R.O.W.)
(CONCRETE PAVEMENT)

TYPE "A" INLET (PROP BY OTHERS) RIM 667.25 (±) 30" FL 661.59 (±) 36" FL 661.59 (±)

36" STM SWR (PROP BY OTHERS)

30" STM SWR (PROP BY OTHERS)

EX 12" WL

EX 8" SAN SWR

EX SAN SWR MH EX RIM 669.19 (±) EX 8" FL 658.28 (±) (S) EX 8" FL 658.18 (±) (E)

DO NOT ENTER

VAN

CROSSING TABLE

	SAN	STM	CLR
A	6" 663.92'	18" 664.98'	0.56'
B	6" 664.43'	6" 666.28'	1.35'

INLET CAPACITY CALCULATIONS

Inlet	#Inlets	Open Area (sq in)	Inlet Ponding (ft)	Top of Grate (ft)	Depth (ft)	Capacity	DA Flow (25-Year)
A1	1.00	434.00	0.50	669.75	670.25	11.48	1.04
A3	1.00	434.00	0.6	670.00	670.6	12.58	1.04
A4	1.00	434.00	0.4	670.00	670.4	10.27	1.12
A5	1.00	434.00	0.39	669.75	670.14	10.14	1.36
A1A	1.00	434.00	0.25	670.00	670.25	8.12	0.56
A1B	1.00	434.00	0.17	670.70	670.87	6.69	0.16
A1C	1.00	434.00	0.65	669.75	670.4	13.09	0.48
A1D	1.00	720.00	0.64	669.5	670.14	21.55	1.2
A2A	1.00	434.00	0.25	668.5	668.75	8.12	0.72

Post-Development Conditions																	
		Sheet Flow						Shallow Concentrated Flow				Channel/Culvert Flow					Total Time
DA	Total Flow Length (ft)	Flow Length (m)	Slope (ft/ft)	Description	n	P_2 (in)	Tt (min)	Flow Length (m)2	Flow Type	Slope (ft/ft)3	Tt (min)4	Flow Length (m)5	Avg. Velocity (ft/s)	Slope (ft/ft)6	Area (ft^2)	Tt (min)7	Total Tc (min)	Tlag (min)
A8A	2090	100	0.02	Concrete	0.013	3.98	1.24	125	Paved	0.03	0.59	1865	2.5	-	-	12.43	14.27	8.56

GENERAL NOTES

1. REFERENCE STORM SEWER NOTES SHEET C0.1 FOR PIPE MATERIAL REQUIREMENTS.
2. REFERENCE MEP PLANS FOR EXACT CONTINUATION OF PROPOSED STORM SEWER INSIDE OF BUILDING.
3. FOR TYPE "A" INLET, JUNCTION BOX, AND BACKFILL DETAILS, SEE SHEET C7.2.
4. CONTRACTOR TO VERIFY STORM SEWER CONNECTION FOR LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS OR COMMENCEMENT OF WORK.
5. TOP OF GRATE ELEVATIONS SHOWN ARE FOR REFERENCE ONLY. SEE GRADING ON SHEET C4.0 FOR FINAL TOP OF GRATE ELEVATIONS.
6. ALL GRAVITY STORM LINES TO BE CONSTRUCTED STARTED FROM THE LOWEST POINT.

MAINTENANCE SCHEDULE

1. ALL INLETS WILL BE INSPECTED ON A QUARTERLY BASIS FOR TRASH/SEDIMENT BUILD UP.

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST 72 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST – STOP CALL
TEXAS ONE CALL SYSTEM
1–800–344–8377
IN HOUSTON
(713)–223–4567

NO.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.304.2000
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
09 JULY 2025

ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: 1:20
DRAWN BY: ZAR
CHECKED BY: BTH

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

STORM SEWER PLAN

SHEET
C3.2

Storm Sewer Design Analysis

Design Frequency: 2 years
C-Value: 0.75
25-YEAR HGL 665.46 feet

Overland Manning "n" Value: 0.025
Initial Time of Concentration: 10.00 min.
Overland Avg. Slope: 1.00%

Manhole No. From	to	Drainage Area (acres)	Total Area (acres)	Runoff Coefficient C	DA C * A	Total C * A	Overland Flow Length (feet)	Overland Flow Time (min)	Conduit Flow Time (min)	Time of Conc. (min)	Intensity I (in/hr)	Drainage Area Flow (cfs)	Total Flow (cfs)	Reach Length (ft)	Diameter (in)	Number of Barrels	Slope %	Manning's Roughness Coefficient "n"	Design Capacity (cfs)	Full Pipe Flow			Fall (ft)	Drop from Downstream Manhole (ft)	Flowline Elevation Upstream (ft)	Flowline Elevation Downstream (ft)	Minimum Depth Ratio (y/d or y/h)	Minimum W.S. Elev. Downstream (ft)	Actual Depth Ratio y/d or y/h	Actual Flow per Barrel			Hydraulic Gradient %	Change in Head (ft)	Minor Losses				Elevation of Hyd. Grad. Upstream (ft)	Elevation of Hyd. Grad. Downstream (ft)	Top of Pipe Elevation Upstream (ft)	Top of Pipe Elevation Downstream (ft)	Pvmt / Grate Elevation Upstream (ft)
																				Design Velocity (ft/sec)	Area (sq ft)	Wetted Perimeter (ft)							Actual Velocity (ft/sec)	Area (sq ft)	Wetted Perimeter (ft)			MH/Jct Box Loss (ft)	Non-MH Jct Loss (ft)	Bend Loss (ft)	Total Minor Losses						
A5	A4	0.13	0.13	0.75	0.10	0.10	50	0.21	-	10.00	4.96	0.48	0.48	51	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.23	0.50	665.60	665.37	0.30	665.67	0.30	2.56	0.19	1.14	0.548	0.28	0.000			0.000	665.95	665.67	666.60	666.37	668.75
A4	A3	0.09	0.22	0.75	0.07	0.17	50	0.21	1.38	10.00	4.96	0.33	0.82	62	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	664.87	664.71	0.26	665.10	0.53	0.88	0.93	2.42	0.021	0.01	0.001			0.001	665.51	665.50	666.37	666.21	668.70
A3	A2	0.07	0.29	0.75	0.05	0.22	50	0.21	2.23	10.00	4.96	0.26	1.08	61	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	664.71	664.55	0.30	665.00	0.62	0.94	1.15	2.72	0.021	0.01	0.000			0.000	665.50	665.49	666.21	666.05	668.75
A2	A1	0.00	0.36	0.75	0.00	0.27	50	0.21	1.67	10.00	4.96	0.00	1.34	56	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.15	1.50	664.55	664.40	0.34	664.91	0.71	1.00	1.34	3.01	0.022	0.01	0.002			0.002	665.48	665.47	666.05	665.90	669.45
A1	EX-5	0.11	1.17	0.75	0.08	0.88	50	0.21	1.23	10.00	4.96	0.41	4.35	33	24	1	0.180	0.013	9.6	3.1	3.1	6.3	0.06	0.00	662.90	662.84	0.47	663.78	1.00	1.39	3.14	6.28	0.037	0.01	0.000			0.000	665.47	665.46	664.90	664.84	669.75
A2A	A2	0.07	0.07	0.75	0.05	0.05	50	0.21	-	10.00	4.96	0.26	0.26	36	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.16	0.50	665.21	665.05	0.22	665.27	1.00	0.33	0.79	3.14	0.005	0.00	0.001			0.001	666.05	666.05	666.21	666.05	668.25
A1E	A1D	0.17	0.17	0.75	0.13	0.13	50	0.21	-	10.00	4.96	0.63	0.63	110	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.50	0.00	666.76	666.26	0.35	666.61	0.48	1.70	0.37	1.53	0.145	0.16	0.003			0.003	666.90	666.74	667.76	667.26	669.75
A1D	A1C	0.14	0.31	0.75	0.11	0.23	50	0.21	2.28	10.00	4.96	0.52	1.15	58	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.26	0.00	666.26	666.00	0.48	666.48	0.56	2.60	0.44	1.67	0.305	0.18	0.008			0.008	666.74	666.56	667.26	667.00	669.50
A1C	A1B	0.06	0.37	0.75	0.05	0.28	50	0.21	0.66	10.00	4.96	0.22	1.38	46	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.21	0.50	666.00	665.79	0.54	666.33	0.54	3.26	0.42	1.63	0.491	0.23	0.002			0.002	666.56	666.33	667.00	666.79	669.75
A1B	A1A	0.02	0.39	0.75	0.02	0.29	50	0.21	0.44	10.00	4.96	0.07	1.45	62	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	665.29	665.13	0.35	665.66	0.39	2.27	0.64	2.02	0.184	0.11	0.005			0.005	665.83	665.72	666.79	666.63	670.70
A1A	A1	0.08	0.47	0.75	0.06	0.35	50	0.21	1.26	10.00	4.96	0.30	1.75	88	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.23	2.00	665.13	664.90	0.39	665.49	0.39	2.74	0.64	2.02	0.268	0.24	0.000			0.000	665.72	665.49	666.63	666.40	670.00
R1	A1	0.23	0.23	0.75	0.17	0.17	50	0.21	-	10.00	4.96	0.86	0.86	10	12	1	0.450	0.013																									

Storm Sewer Design Analysis

Design Frequency: 10 years
C-Value: 0.83
25-YEAR HGL 665.46 feet

Overland Manning "n" Value: 0.025
Initial Time of Concentration: 10.00 min.
Overland Avg. Slope: 1.00%

Manhole No. From	to	Drainage Area (acres)	Total Area (acres)	Runoff Coefficient C	DA C * A	Total C * A	Overland Flow Length (feet)	Overland Flow Time (min)	Conduit Flow Time (min)	Time of Conc. (min)	Intensity I (in/hr)	Drainage Area Flow (cfs)	Total Flow (cfs)	Reach Length (ft)	Diameter (in)	Number of Barrels	Slope %	Manning's Roughness Coefficient "n"	Design Capacity (cfs)	Full Pipe Flow			Fall (ft)	Drop from Downstream Manhole (ft)	Flowline Elevation Upstream (ft)	Flowline Elevation Downstream (ft)	Minimum Depth Ratio (y/d or y/h)	Minimum W.S. Elev. Downstream (ft)	Actual Depth Ratio y/d or y/h	Actual Flow per Barrel			Hydraulic Gradient %	Change in Head (ft)	Minor Losses				Elevation of Hyd. Grad. Upstream (ft)	Elevation of Hyd. Grad. Downstream (ft)	Top of Pipe Elevation Upstream (ft)	Top of Pipe Elevation Downstream (ft)	Pvmt / Grate Elevation Upstream (ft)
																				Design Velocity (ft/sec)	Area (sq ft)	Wetted Perimeter (ft)							Actual Velocity (ft/sec)	Area (sq ft)	Wetted Perimeter (ft)			MH/Jct Box Loss (ft)	Non-MH Jct Loss (ft)	Bend Loss (ft)	Total Minor Losses						
A5	A4	0.13	0.13	0.83	0.11	0.11	50	0.21	-	10.00	7.57	0.82	0.82	51	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.23	0.50	665.60	665.37	0.40	665.77	0.40	2.88	0.28	1.35	0.507	0.26	0.001			0.001	666.03	665.77	666.60	666.37	668.75
A4	A3	0.09	0.22	0.83	0.07	0.18	50	0.21	0.82	10.00	7.57	0.57	1.38	62	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	664.87	664.71	0.34	665.22	0.57	1.33	1.04	2.57	0.045	0.03	0.001			0.001	665.60	665.57	666.37	666.21	668.70
A3	A2	0.07	0.29	0.83	0.06	0.24	50	0.21	1.32	10.00	7.57	0.44	1.82	61	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	664.71	664.55	0.40	665.15	0.66	1.50	1.22	2.81	0.053	0.03	0.000			0.000	665.57	665.54	666.21	666.05	668.75
A2	A1	0.00	0.36	0.83	0.00	0.30	50	0.21	0.99	10.00	7.57	0.00	2.26	56	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.15	1.50	664.55	664.40	0.45	665.08	0.73	1.66	1.36	3.04	0.061	0.03	0.007			0.007	665.53	665.49	666.05	665.90	669.45
A1	EX-5	0.11	1.17	0.83	0.09	0.97	50	0.21	0.73	10.00	7.57	0.69	7.35	33	24	1	0.180	0.013	9.6	3.1	3.1	6.3	0.06	0.00	662.90	662.84	0.65	664.14	1.00	2.34	3.14	6.28	0.105	0.03	0.000			0.000	665.49	665.46	664.90	664.84	669.75
A2A	A2	0.07	0.07	0.83	0.06	0.06	50	0.21	-	10.00	7.57	0.44	0.44	36	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.16	0.50	665.21	665.05	0.29	665.34	1.00	0.56	0.79	3.14	0.015	0.01	0.003			0.003	666.06	666.05	666.21	666.05	668.25
A1E	A1D	0.17	0.17	0.83	0.14	0.14	50	0.21	-	10.00	7.57	1.07	1.07	110	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.50	0.00	666.76	666.26	0.46	666.72	0.74	1.74	0.61	2.05	0.115	0.13	0.008			0.008	667.12	667.00	667.76	667.26	669.75
A1D	A1C	0.14	0.31	0.83	0.12	0.26	50	0.21	1.35	10.00	7.57	0.88	1.95	58	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.26	0.00	666.26	666.00	0.68	666.68	0.80	2.93	0.67	2.19	0.320	0.19	0.012			0.012	666.99	666.80	667.26	667.00	669.50
A1C	A1B	0.06	0.37	0.83	0.05	0.31	50	0.21	0.39	10.00	7.57	0.38	2.32	46	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.21	0.50	666.00	665.79	0.79	666.58	0.79	3.53	0.66	2.17	0.469	0.22	0.004			0.004	666.80	666.58	667.00	666.79	669.75
A1B	A1A	0.02	0.39	0.83	0.02	0.32	50	0.21	0.26	10.00	7.57	0.13	2.45	62	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	665.29	665.13	0.47	665.84	0.54	2.58	0.95	2.45	0.179	0.11	0.009			0.009	666.05	665.94	666.79	666.63	670.70
A1A	A1	0.08	0.47	0.83	0.07	0.39	50	0.21	0.75	10.00	7.57	0.50	2.95	88	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.23	2.00	665.13	664.90	0.52	665.68	0.52	3.26	0.91	2.39	0.295	0.26	0.000			0.000	665.94	665.68	666.63	666.40	670.00
R1	A1	0.23	0.23	0.83	0.19	0.19	50	0.21	-	10.00	7.57	1.44	1.44	10	12	1	0.450	0.013																									

REVISIONS

NO.	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.516.8600
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER

09 JULY 2025

ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: 1:XX
DRAWN BY: ZAR
CHECKED BY: BTH

STORM SEWER CALCULATIONS (1 OF 2)

CREEKSIDE TOWN CENTER TRACT 25B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C3.3

Storm Sewer Design Analysis

Design Frequency: 25 years
C-Value: 0.88
25-YEAR HGL 665.46 feet

Overland Manning "n" Value: 0.025
Initial Time of Concentration: 10.00 min.
Overland Avg. Slope: 1.00%

Manhole No. From	to	Drainage Area (acres)	Total Area (acres)	Runoff Coefficient C	DA C * A	Total C * A	Overland Flow Length (feet)	Overland Flow Time (min)	Conduit Flow Time (min)	Time of Conc. (min)	Intensity I (in/hr)	Drainage Area Flow (cfs)	Total Flow (cfs)	Reach Length (ft)	Diameter (in)	Number of Barrels	Slope %	Manning's Roughness Coefficient "n"	Design Capacity (cfs)	Full Pipe Flow			Fall (ft)	Drop from Downstream Manhole (ft)	Flowline Elevation Upstream (ft)	Flowline Elevation Downstream (ft)	Minimum Depth Ratio (y/d or y/h)	Minimum W.S. Elev. Downstream (ft)	Actual Depth Ratio y/d or y/h	Actual Flow per Barrel			Hydraulic Gradient %	Change in Head (ft)	Minor Losses				Elevation of Hyd. Grad. Upstream (ft)	Elevation of Hyd. Grad. Downstream (ft)	Top of Pipe Elevation Upstream (ft)	Top of Pipe Elevation Downstream (ft)	Pvmt / Grate Elevation Upstream (ft)
																				Design Velocity (ft/sec)	Area (sq ft)	Wetted Perimeter (ft)								Actual Velocity (ft/sec)	Area (sq ft)	Wetted Perimeter (ft)			MH/Jct Box Loss (ft)	Non-MH Jct Loss (ft)	Bend Loss (ft)	Total Minor Losses						
A5	A4	0.13	0.13	0.88	0.11	0.11	50	0.21	-	10.00	9.07	1.04	1.04	51	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.23	0.50	665.60	665.37	0.46	665.83	0.46	2.94	0.35	1.49	0.452	0.23	0.001			0.001	666.06	665.83	666.60	666.37	668.75
A4	A3	0.09	0.22	0.88	0.08	0.19	50	0.21	0.64	10.00	9.07	0.72	1.76	62	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	664.87	664.71	0.39	665.30	0.61	1.55	1.13	2.69	0.059	0.04	0.002			0.002	665.66	665.63	666.37	666.21	668.70
A3	A2	0.07	0.29	0.88	0.06	0.26	50	0.21	1.04	10.00	9.07	0.56	2.31	61	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	664.71	664.55	0.45	665.23	0.69	1.81	1.28	2.91	0.075	0.05	0.001			0.001	665.63	665.58	666.21	666.05	668.75
A2	A1	0.00	0.36	0.88	0.00	0.32	50	0.21	0.78	10.00	9.07	0.00	2.87	56	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.15	1.50	664.55	664.40	0.52	665.18	0.74	2.05	1.40	3.11	0.093	0.05	0.012			0.012	665.57	665.52	666.05	665.90	669.45
A1	EX-5	0.11	1.17	0.88	0.10	1.03	50	0.21	0.57	10.00	9.07	0.88	9.34	33	24	1	0.180	0.013	9.6	3.1	3.1	6.3	0.06	0.00	662.90	662.84	0.79	664.42	1.00	2.97	3.14	6.28	0.170	0.06	0.000			0.000	665.52	665.46	664.90	664.84	669.75
A2A	A2	0.07	0.07	0.88	0.06	0.06	50	0.21	-	10.00	9.07	0.56	0.56	36	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.16	0.50	665.21	665.05	0.32	665.37	1.00	0.71	0.79	3.14	0.025	0.01	0.005			0.005	666.06	666.05	666.21	666.05	668.25
A1E	A1D	0.17	0.17	0.88	0.15	0.15	50	0.21	-	10.00	9.07	1.36	1.36	110	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.50	0.00	666.76	666.26	0.53	666.79	1.00	1.73	0.79	3.14	0.145	0.16	0.014			0.014	667.57	667.41	667.76	667.26	669.75
A1D	A1C	0.14	0.31	0.88	0.12	0.27	50	0.21	1.06	10.00	9.07	1.12	2.47	58	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.26	0.00	666.26	666.00	0.85	666.85	1.00	3.15	0.79	3.14	0.482	0.28	0.017			0.017	667.39	667.11	667.26	667.00	669.50
A1C	A1B	0.06	0.37	0.88	0.05	0.33	50	0.21	0.31	10.00	9.07	0.48	2.95	46	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.21	0.50	666.00	665.79	1.00	666.79	1.00	3.76	0.79	3.14	0.687	0.32	0.005			0.005	667.11	666.79	667.00	666.79	669.75
A1B	A1A	0.02	0.39	0.88	0.02	0.34	50	0.21	0.20	10.00	9.07	0.16	3.11	62	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	665.29	665.13	0.54	665.94	0.62	2.70	1.15	2.72	0.176	0.11	0.011			0.011	666.17	666.06	666.79	666.63	670.70
A1A	A1	0.08	0.47	0.88	0.07	0.41	50	0.21	0.59	10.00	9.07	0.64	3.75	88	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.23	2.00	665.13	664.90	0.61	665.82	0.61	3.39	1.11	2.66	0.282	0.25	0.000			0.000	666.06	665.82	666.63	666.40	670.00
R1	A1	0.23	0.23	0.88	0.20	0.20	50	0.21	-	10.00	9.07	1.84	1.84	10	12	1	0.450	0.013																									

Storm Sewer Design Analysis

Design Frequency: 100 years
C-Value: 0.97
25-YEAR HGL 665.46 feet

Overland Manning "n" Value: 0.025
Initial Time of Concentration: 10.00 min.
Overland Avg. Slope: 1.00%

Manhole No. From	to	Drainage Area (acres)	Total Area (acres)	Runoff Coefficient C	DA C * A	Total C * A	Overland Flow Length (feet)	Overland Flow Time (min)	Conduit Flow Time (min)	Time of Conc. (min)	Intensity I (in/hr)	Drainage Area Flow (cfs)	Total Flow (cfs)	Reach Length (ft)	Diameter (in)	Number of Barrels	Slope %	Manning's Roughness Coefficient "n"	Design Capacity (cfs)	Full Pipe Flow			Fall (ft)	Drop from Downstream Manhole (ft)	Flowline Elevation Upstream (ft)	Flowline Elevation Downstream (ft)	Minimum Depth Ratio (y/d or y/h)	Minimum W.S. Elev. Downstream (ft)	Actual Depth Ratio y/d or y/h	Actual Flow per Barrel			Hydraulic Gradient %	Change in Head (ft)	Minor Losses				Elevation of Hyd. Grad. Upstream (ft)	Elevation of Hyd. Grad. Downstream (ft)	Top of Pipe Elevation Upstream (ft)	Top of Pipe Elevation Downstream (ft)	Pvmt / Grate Elevation Upstream (ft)
																				Design Velocity (ft/sec)	Area (sq ft)	Wetted Perimeter (ft)								Actual Velocity (ft/sec)	Area (sq ft)	Wetted Perimeter (ft)			MH/Jct Box Loss (ft)	Non-MH Jct Loss (ft)	Bend Loss (ft)	Total Minor Losses						
A5	A4	0.13	0.13	0.97	0.13	0.13	50	0.21	-	10.00	11.90	1.50	1.50	51	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.23	0.50	665.60	665.37	0.57	665.94	0.57	3.24	0.46	1.71	0.461	0.24	0.002			0.002	666.18	665.94	666.60	666.37	668.75
A4	A3	0.09	0.22	0.97	0.09	0.21	50	0.21	0.44	10.00	11.90	1.04	2.54	62	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	664.87	664.71	0.48	665.43	0.71	1.92	1.32	2.97	0.083	0.05	0.004			0.004	665.83	665.77	666.37	666.21	668.70
A3	A2	0.07	0.29	0.97	0.07	0.28	50	0.21	0.72	10.00	11.90	0.81	3.35	61	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	664.71	664.55	0.57	665.41	0.77	2.32	1.44	3.18	0.118	0.07	0.001			0.001	665.77	665.70	666.21	666.05	668.75
A2	A1	0.00	0.36	0.97	0.00	0.35	50	0.21	0.54	10.00	11.90	0.00	4.16	56	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.15	1.50	664.55	664.40	0.66	665.39	0.79	2.81	1.48	3.25	0.172	0.10	0.026			0.026	665.67	665.58	666.05	665.90	669.45
A1	EX-5	0.11	1.17	0.97	0.11	1.13	50	0.21	0.40	10.00	11.90	1.27	13.51	33	24	1	0.180	0.013	9.6	3.1	3.1	6.3	0.06	0.00	662.90	662.84	1.00	664.84	1.00	4.30	3.14	6.28	0.356	0.12	0.000			0.000	665.58	665.46	664.90	664.84	669.75
A2A	A2	0.07	0.07	0.97	0.07	0.07	50	0.21	-	10.00	11.90	0.81	0.81	36	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.16	0.50	665.21	665.05	0.40	665.45	1.00	1.03	0.79	3.14	0.051	0.02	0.009			0.009	666.07	666.05	666.21	666.05	668.25
A1E	A1D	0.17	0.17	0.97	0.16	0.16	50	0.21	-	10.00	11.90	1.96	1.96	110	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.50	0.00	666.76	666.26	0.68	666.94	1.00	2.50	0.79	3.14	0.303	0.33	0.047			0.047	668.42	668.09	667.76	667.26	669.75
A1D	A1C	0.14	0.31	0.97	0.14	0.30	50	0.21	0.73	10.00	11.90	1.62	3.58	58	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.26	0.00	666.26	666.00	1.00	667.00	1.00	4.56	0.79	3.14	1.009	0.59	0.047			0.047	668.04	667.46	667.26	667.00	669.50
A1C	A1B	0.06	0.37	0.97	0.06	0.36	50	0.21	0.21	10.00	11.90	0.69	4.27	46	12	1	0.450	0.013	2.4	3.0	0.8	3.1	0.21	0.50	666.00	665.79	1.00	666.79	1.00	5.44	0.79	3.14	1.437	0.66	0.007			0.007	667.45	666.79	667.00	666.79	669.75
A1B	A1A	0.02	0.39	0.97	0.02	0.38	50	0.21	0.14	10.00	11.90	0.23	4.50	62	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.16	0.00	665.29	665.13	0.70	666.18	0.83	2.90	1.55	3.40	0.184	0.11	0.014			0.014	666.49	666.37	666.79	666.63	670.70
A1A	A1	0.08	0.47	0.97	0.08	0.46	50	0.21	0.41	10.00	11.90	0.92	5.43	88	18	1	0.260	0.013	5.4	3.0	1.8	4.7	0.23	2.00	665.13	664.90	0.83	666.15	0.83	3.46	1.57	3.44	0.261	0.23	0.000			0.000	666.37	666.15	666.63	666.40	670.00
R1	A1	0.23	0.23	0.97	0.22	0.22	50	0.21	-	10.00	11.90	2.65	2.65	10	12	1	0.450	0.013																									

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.351.8040
FRN F-11526

BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
STATE OF TEXAS
09 JULY 2025

NO.	REVISIONS	DATE

ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: 1:XX
DRAWN BY: ZAR
CHECKED BY: BTH

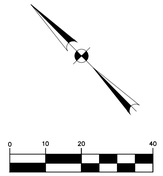
STORM SEWER CALCULATIONS (2 OF 2)

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C3.4

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.



GRAPHIC SCALE

LEGEND

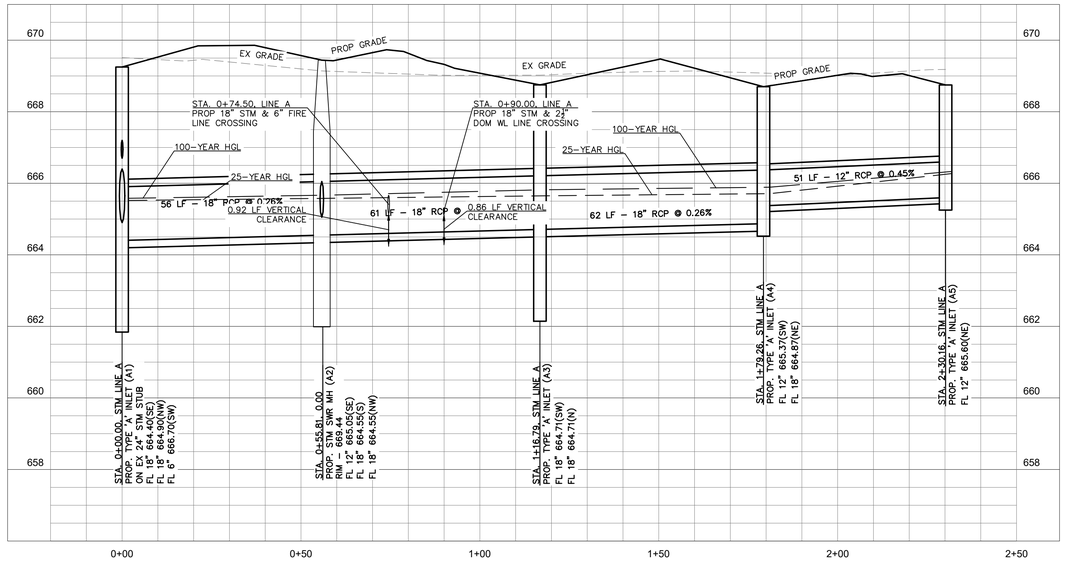
	PROPOSED STORM SEWER
	EX. STORM SEWER
WL	EX. WATER LINE
SS	EX. SANITARY SEWER LINE
100	EX. MAJOR CONTOUR
99	EX. MINOR CONTOUR

GENERAL NOTES

1. REFERENCE STORM SEWER NOTES SHEET C0.1 FOR PIPE MATERIAL REQUIREMENTS.
2. REFERENCE MEP PLANS FOR EXACT CONTINUATION OF PROPOSED STORM SEWER INSIDE OF BUILDING.
3. FOR TYPE "A" INLET, JUNCTION BOX, AND BACKFILL DETAILS, SEE SHEET C7.2.
4. CONTRACTOR TO VERIFY STORM SEWER CONNECTION FOR LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS OR COMMENCEMENT OF WORK.
5. TOP OF GRATE ELEVATIONS SHOWN ARE FOR REFERENCE ONLY. SEE GRADING ON SHEET C4.0 FOR FINAL TOP OF GRATE ELEVATIONS.
6. ALL GRAVITY STORM LINES TO BE CONSTRUCTED STARTED FROM THE LOWEST POINT.

MAINTENANCE SCHEDULE

1. ALL INLETS WILL BE INSPECTED ON A QUARTERLY BASIS FOR TRASH/SEDIMENT BUILD UP.



STORM SEWER LINE A PROFILE

SCALE: 1"=20' H; 1"=2' V

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST
72 HOURS NOTICE BEFORE YOU DIG, DRILL
OR BLAST - STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

NO.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.350.8719
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
09 JULY 2025

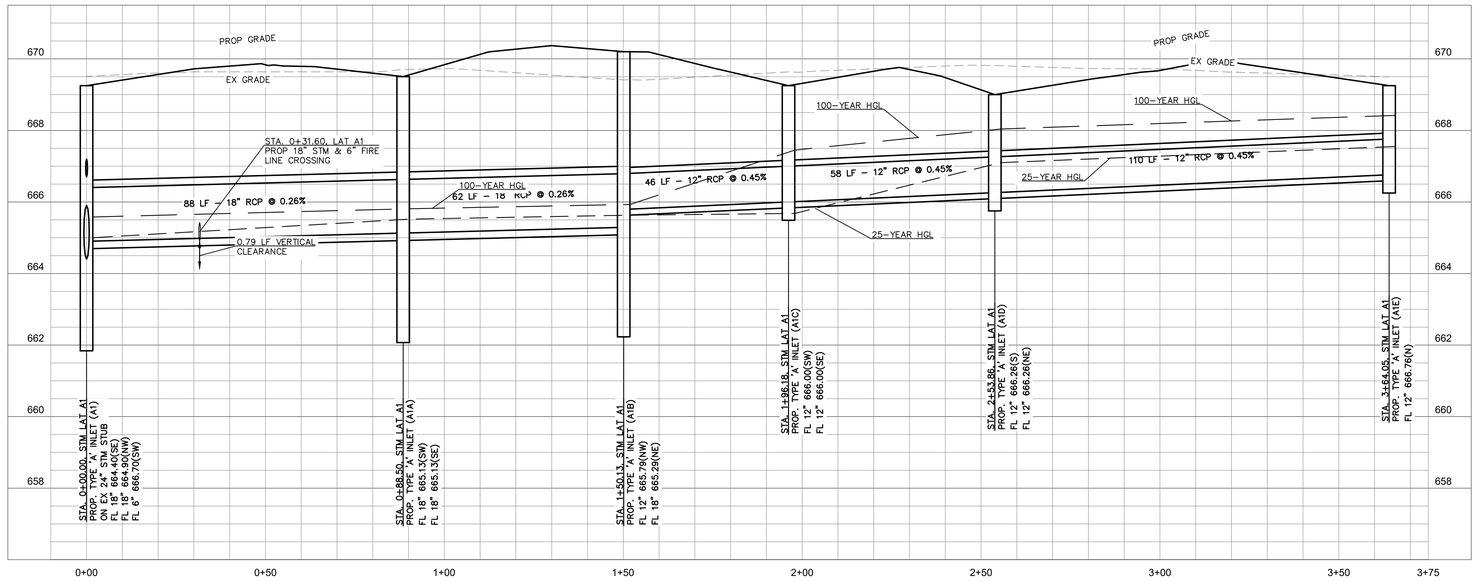
ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: 1:20
DRAWN BY: ZAR
CHECKED BY: BTH

STORM SEWER PLAN & PROFILE (1 OF 3)

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

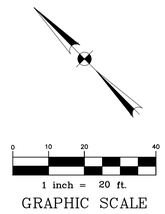
SHEET
C3.5



STORM SEWER LAT A1 PROFILE

SCALE: 1"=20' H; 1"=2' V

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.



GRAPHIC SCALE

LEGEND

	PROPOSED STORM SEWER
	EX. STORM SEWER
WL	EX. WATER LINE
SS	EX. SANITARY SEWER LINE
100	EX. MAJOR CONTOUR
99	EX. MINOR CONTOUR

GENERAL NOTES

1. REFERENCE STORM SEWER NOTES SHEET C0.1 FOR PIPE MATERIAL REQUIREMENTS.
2. REFERENCE MEP PLANS FOR EXACT CONTINUATION OF PROPOSED STORM SEWER INSIDE OF BUILDING.
3. FOR TYPE "A" INLET, JUNCTION BOX, AND BACKFILL DETAILS, SEE SHEET C7.2.
4. CONTRACTOR TO VERIFY STORM SEWER CONNECTION FOR LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS OR COMMENCEMENT OF WORK.
5. TOP OF GRATE ELEVATIONS SHOWN ARE FOR REFERENCE ONLY. SEE GRADING ON SHEET C4.0 FOR FINAL TOP OF GRATE ELEVATIONS.
6. ALL GRAVITY STORM LINES TO BE CONSTRUCTED STARTED FROM THE LOWEST POINT.

MAINTENANCE SCHEDULE

1. ALL INLETS WILL BE INSPECTED ON A QUARTERLY BASIS FOR TRASH/SEDIMENT BUILD UP.

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST
72 HOURS NOTICE BEFORE YOU DIG, DRILL
OR BLAST – STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

NO.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.350.8787
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
09 JULY 2025

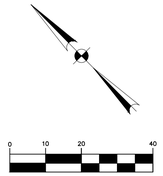
ALJ PROJECT NO. 028.24.CVL154	DATE: JULY 2025	SCALE: 1:20	DRAWN BY: ZAR / CHECKED BY: BTH

STORM SEWER PLAN & PROFILE (2 OF 3)

CREEKSIDE TOWN CENTER
TRACT 25'B'
CITY OF NEW BRAUNFELS, TEXAS

SHEET
C3.6

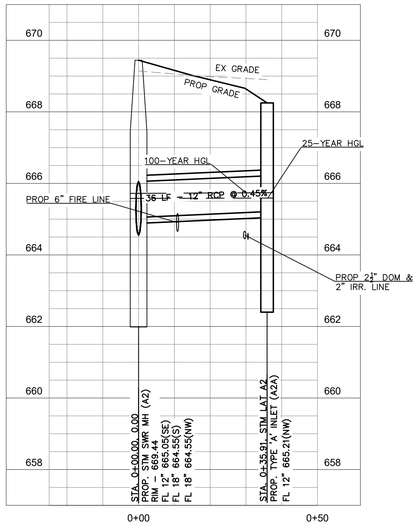
ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.



GRAPHIC SCALE

LEGEND

	PROPOSED STORM SEWER
	EX. STORM SEWER
WL	EX. WATER LINE
SS	EX. SANITARY SEWER LINE
100	EX. MAJOR CONTOUR
99	EX. MINOR CONTOUR



STORM SEWER LAT A2 PROFILE

SCALE: 1"=20' H; 1"=2' V

GENERAL NOTES

1. REFERENCE STORM SEWER NOTES SHEET C0.1 FOR PIPE MATERIAL REQUIREMENTS.
2. REFERENCE MEP PLANS FOR EXACT CONTINUATION OF PROPOSED STORM SEWER INSIDE OF BUILDING.
3. FOR TYPE "A" INLET, JUNCTION BOX, AND BACKFILL DETAILS, SEE SHEET C7.2.
4. CONTRACTOR TO VERIFY STORM SEWER CONNECTION FOR LOCATION AND DEPTH PRIOR TO ORDERING MATERIALS OR COMMENCEMENT OF WORK.
5. TOP OF GRATE ELEVATIONS SHOWN ARE FOR REFERENCE ONLY. SEE GRADING ON SHEET C4.0 FOR FINAL TOP OF GRATE ELEVATIONS.
6. ALL GRAVITY STORM LINES TO BE CONSTRUCTED STARTED FROM THE LOWEST POINT.

MAINTENANCE SCHEDULE

1. ALL INLETS WILL BE INSPECTED ON A QUARTERLY BASIS FOR TRASH/SEDIMENT BUILD UP.

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST
72 HOURS NOTICE BEFORE YOU DIG, DRILL
OR BLAST – STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

NO.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18638 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.907.4909
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
09 JULY 2025

ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: 1:20
DRAWN BY: ZAR
CHECKED BY: BTH

STORM SEWER PLAN & PROFILE (3 OF 3)

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C3.7

ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.

0 10 20 40

1 inch = 20 ft.

GRAPHIC SCALE

LEGEND

- PROPOSED TYPE "A" INLET (SEE DETAIL, SHEET C7.5)
- TG — TOP OF GRADE
- TP — TOP OF PAVEMENT
- TC — TOP OF CURB
- TS — TOP OF SIDEWALK
- FG — FINISHED GROUND
- FF — FINISHED FLOOR
- TR — TOP OF RAMP
- EXISTING SANITARY OR STORM SEWER MANHOLE
- PROPOSED HIGH POINT OF PAVEMENT
- DRAINAGE FLOW ARROWS
- 100 — PROPOSED MAJOR CONTOUR
- 100 — EXISTING MAJOR CONTOUR
- 99 — EXISTING MINOR CONTOUR

GENERAL NOTES

1. REFER TO ARCHITECTURAL PLANS FOR GRADES INSIDE THE BUILDING ENVELOPE.
2. PAVING CONTRACTOR TO CONFIRM AND/OR ADJUST ALL EXISTING AND PROPOSED UTILITIES AND APPURTENANCES TO FINISHED GRADE PRIOR TO PLACEMENT OF ANY PAVING.
3. CONTRACTOR TO MATCH EXISTING TOP OF PAVEMENT AND CURB ELEVATIONS.
4. CONTRACTOR TO INSTALL NEW SIDEWALK IN ADA ACCESSIBLE ROUTES AT MAXIMUM 5% LONGITUDINAL SLOPE AND 2% CROSS SLOPE.

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST
72 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST – STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

NO.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.304.2053
FRN F-11526

BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
STATE OF TEXAS
09 JULY 2025

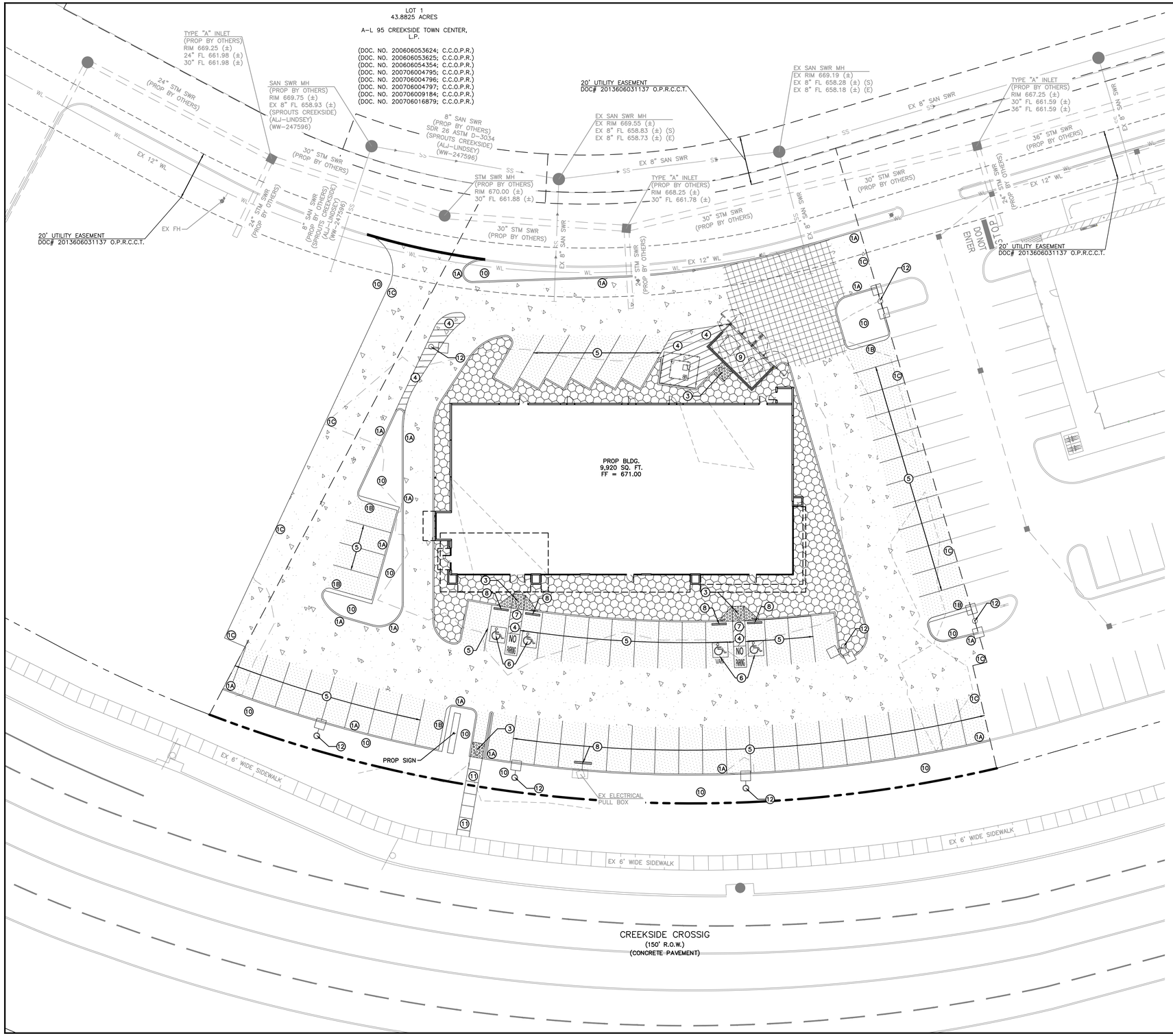
ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: 1:20
DRAWN BY: ZAR
CHECKED BY: BTH

GRADING PLAN

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C4.0



ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.

0 10 20 40

1 inch = 20 ft.

GRAPHIC SCALE

KEYED NOTES

1A PROPOSED 6" MONOLITHIC CONCRETE CURB (SEE DETAIL, SHEET C7.0)

1B PROPOSED 6" X 18" MONOLITHIC CONCRETE CURB (SEE DETAIL, SHEET C7.1)

1C PROPOSED EDGE OF PAVEMENT W/ NO CURB

2 TIE PROPOSED CURB INTO EXISTING CURB

3 CONSTRUCT CURB RAMP (SEE DETAIL, SHEET C7.0)

4 4" PAINTED WHITE STRIPING @ 2' O.C. @ 45°

5 WHITE PARKING LOT STRIPING

6 HANDICAP PARKING SYMBOL W/ SIGNAGE (SEE DETAIL, SHEET C7.0)

7 HANDICAP ACCESSIBLE PARKING STALL STRIPING

8 WHEEL STOP (SEE DETAIL, SHEET C7.1)

9 DUMPSTER ENCLOSURE

10 LANDSCAPED AREA (REF. LANDSCAPE PLANS)

11 CONCRETE SIDEWALK (WIDTH PER PLANS)

12 LIGHT POLE (REF. ARCHITECTURAL PLANS)

PROPOSED LIGHT DUTY CONCRETE PAVEMENT WITH STABILIZED SUBGRADE (SEE NOTE 2 BELOW)

PROPOSED MEDIUM DUTY CONCRETE PAVEMENT WITH STABILIZED SUBGRADE (SEE NOTE 2 BELOW)

PROPOSED HEAVY DUTY CONCRETE PAVEMENT WITH STABILIZED SUBGRADE (SEE NOTE 2 BELOW)

PROPOSED BUILDING PERIMETER SIDEWALK (REF. ARCHITECTURAL PLANS FOR SURFACE FINISH, SEE GRADING ON SHEET C4.0)

PROPOSED IRRIGATION SLEEVE (SEE NOTE 3)

CONCRETE TO CONCRETE PAVEMENT CONNECTION (INCLUDING 2' SAWCUT, EXISTING PAVEMENT REMOVAL, EXISTING CURB REMOVAL, DOWEL INTO EXISTING PAVEMENT, CONCRETE PAVEMENT HEADER AND SEALED JOINTS)

100 EX. MAJOR CONTOUR

99 EX. MINOR CONTOUR

GENERAL NOTES

1. REFER TO SITE ELECTRICAL PLAN FOR PROPOSED SITE LIGHTING LAYOUT.
2. PAVEMENT AND SUBGRADE THICKNESS INCLUDED ON THIS SHEET FOR REFERENCE ONLY. REFER TO GEOTECHNICAL REPORT PREPARED BY TERRACON CONSULTANTS INC., DATED JANUARY 6, 2016 (PROJECT NO. 90125069A).
3. REFER TO IRRIGATION PLAN FOR EXACT LOCATION, SIZE, AND QUANTITY OF IRRIGATION SLEEVES.
4. MAXIMUM CONTROL JOINT SPACING TO BE 15-FT AND EXPANSION JOINT SPACING TO BE 60-FT.
5. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND ALL STEEL TO BE GRADE 60, UNLESS OTHERWISE SPECIFIED IN GEOTECHNICAL REPORT.
6. PAVING CONTRACTOR TO CONFIRM AND/OR ADJUST ALL EXISTING AND PROPOSED UTILITIES AND APPURTENANCES TO FINISHED GRADE PRIOR TO PLACEMENT OF ANY PAVING.

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST
72 HOURS NOTICE BEFORE YOU DIG, DRILL
OR BLAST - STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

NO.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.304.2000
FRN F-11526

BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
STATE OF TEXAS
09 JULY 2025

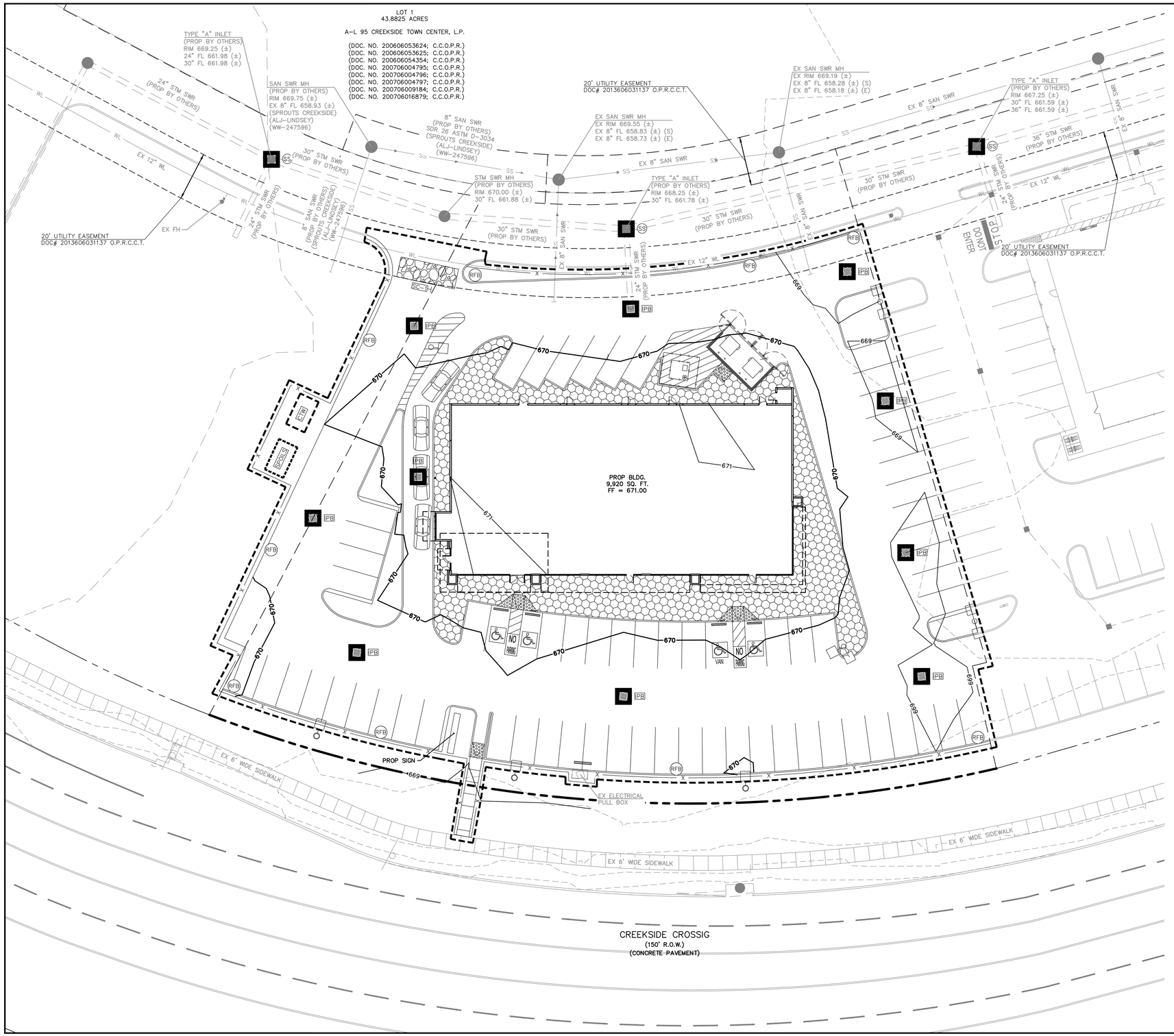
ALJ PROJECT NO.	028.24.CV.154
DATE:	JULY 2025
SCALE:	1:20
DRAWN BY:	ZAR
CHECKED BY:	BTH

PAVING PLAN

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C5.0



ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 1988.

0 10 20 40

1 inch = 20 ft.

GRAPHIC SCALE

LEGEND

- SC-1 — STABILIZED CONSTRUCTION ENTRANCE (SEE DETAIL, SHEET C7.6)
- CTW — CONCRETE TRUCK WASHOUT (SEE DETAIL, SHEET C7.6)
- SPOILS — SPOILS AREA
- RFB — SILT FENCE (SEE DETAIL, SHEET C7.6)
- IPB — INLET PROTECTION BARRIER (STAGE 2) (SEE DETAIL, SHEET C7.6)
- SS — SILT STACK INLET PROTECTION BARRIER (SEE DETAIL, SHEET C7.6)
- LIMITS OF DISTURBED AREA
- 100 — PROP MAJOR CONTOUR
- 100 — EX. MAJOR CONTOUR
- 99 — EX. MINOR CONTOUR

GENERAL NOTES

1. CONTRACTOR TO MAINTAIN A CLEAN PROJECT SITE AND ENSURE THAT ALL DEBRIS IS PLACED IN DESIGNATED AREA PER PLANS. ALL SPOIL MATERIAL GENERATED FROM CONSTRUCTION ACTIVITY TO BE HAULED OFFSITE AND DISPOSED IN ACCORDANCE WITH LOCAL LAWS, RULES, AND REGULATIONS.

SEQUENCE OF CONSTRUCTION:

1. INSTALL TEMPORARY EROSION CONTROLS ON THE SITE AS INDICATED ON THE EROSION CONTROL PLAN SHEET.
2. GRADE THE SITE AS INDICATED ON THE GRADING PLAN SHEET.
3. INSTALL ALL UNDERGROUND UTILITIES, INCLUDING WATER AND WASTEWATER LINES AS INDICATED ON THE UTILITY PLAN SHEET.
4. CONSTRUCT THE PROPOSED BUILDINGS, SIDEWALKS, PAVEMENT AREAS AND ALL OTHER ANCILLARY CONSTRUCTION.
5. INSTALL LANDSCAPING AS INDICATED ON THE LANDSCAPE PLAN SHEET.
6. REMOVE ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS.

TPDES 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.

MULTIPLE EXISTING PUBLIC AND PRIVATE UTILITY LINES EXIST ON THIS SITE. THE UTILITY LINES SHOWN ON THESE DRAWINGS REFLECT INFORMATION OBTAINED FROM RECORD DRAWINGS AND MAY NOT INCLUDE ALL EXISTING UTILITIES. CONTRACTOR IS TO USE EXTREME CAUTION DURING ALL CONSTRUCTION ACTIVITIES AND IS SOLELY RESPONSIBLE FOR DAMAGE TO EXISTING FACILITIES.

CALL BEFORE YOU DIG
TEXAS ONE CALL PARTICIPANTS REQUEST 72 HOURS NOTICE BEFORE YOU DIG, DRILL OR BLAST – STOP CALL
TEXAS ONE CALL SYSTEM
1-800-344-8377
IN HOUSTON
(713)-223-4567

No.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.350.8555
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER
09 JULY 2025

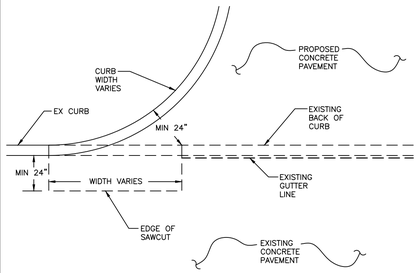
ALJ PROJECT NO:	028.24.CV.154
DATE:	JULY 2025
SCALE:	1:20
DRAWN BY:	ZAR
CHECKED BY:	BTH

EROSION CONTROL PLAN

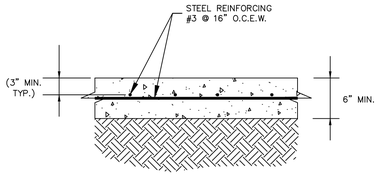
CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C6.0



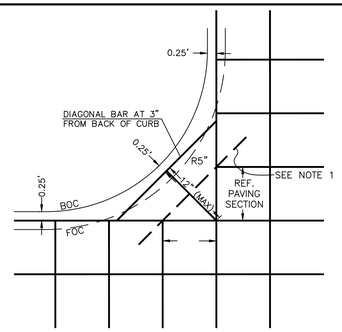
SAWCUT DETAIL
N.T.S.



GENERAL NOTES:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,500 PSI AT 28 DAYS AND ALL STEEL TO BE GRADE 60.
2. CONTRACTOR TO COORDINATE WITH OWNER AND/OR ARCHITECT FOR CONCRETE FINISH.

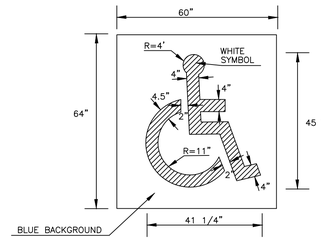
CONCRETE PAVING SECTION
N.T.S.



NOTES

1. CONTRACTOR TO ADD EXTRA DIAGONAL BAR IF DISTANCE TO NEAREST CORNER EXCEEDS 12".
2. FOR RADIUS OVER 10', CONTRACTOR TO PLACE LONG BAR AT 3" FROM BACK OF CURB ALONG ENTIRE RADIUS.

BAR SCHEMATIC FOR SMALL RADIUS CURVE
N.T.S.



HANDICAP SURFACE PAINT DETAIL
N.T.S.

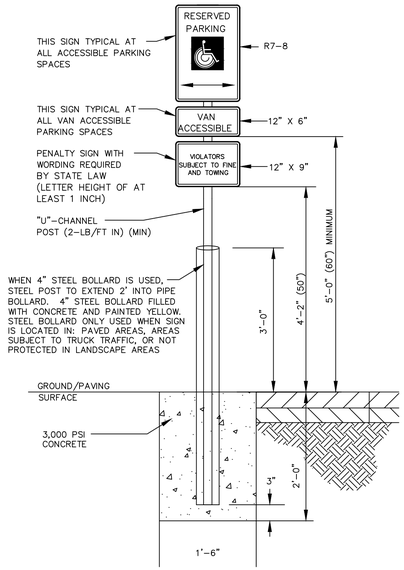
NOTES:

1. PROVIDE IN ACCORDANCE WITH THE TEXAS ACCESSIBILITY STANDARDS (TAS)
2. INSTALL WHERE HANDICAP STALLS ARE INDICATED ON PLAN
3. VAN ACCESSIBLE SIGNAGE ON VAN SPACES ONLY – SEE PLAN FOR LOCATION

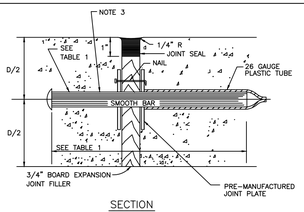
COLOR CHART

BLUE: LETTERS, BORDER, & SYMBOL

WHITE: SIGN BACKGROUND



ACCESSIBLE PARKING SIGN
N.T.S.

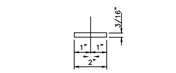


SECTION

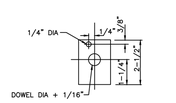
DOWEL TYPE EXPANSION JOINT
NTS

TABLE 1

PAVEMENT THICKNESS (IN)	DOWEL SIZES AND SPACINGS		
	DIAMETER (IN)	LENGTH (IN)	SPACING (IN)
6	3/4	18	12
7	1	18	12
8	1	18	12
9	1 1/4	18	12
10	1 1/4	18	12
11	1 1/4	18	12
12	1 1/4	18	12



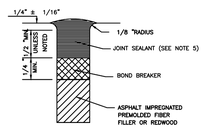
PLAN – JOINT PLATE
NTS



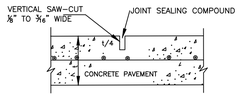
ELEVATION – JOINT PLATE
NTS

NOTES:

1. STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE REINFORCING BARS. SPACING AND BAR SIZE MAY BE REDUCED IF GEOTECHNICAL REPORT PROVIDES RECOMMENDATIONS.
2. CENTER DOWEL HORIZONTALLY ON JOINT.
3. CENTER DOWEL VERTICALLY IN CONCRETE BASE. EXTEND THICKENED CONCRETE AS NEEDED TO MAINTAIN 3" MIN COVER.
4. THE LOCATION OF CONSTRUCTION JOINTS MAY BE VARIED WITH THE APPROVAL OF THE COUNTY ENGINEER.
5. JOINT SEALANT TO BE TWO-PART POURABLE URETHANE JOINT SEALANT, TYPE M, GRADE P, CLASS 25, USE T



EXPANSION JOINT
N.T.S.

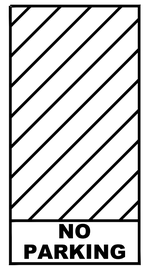


ALL JOINT TO BE PROPERLY SEALED WITH JOINT SEALING COMPOUND CONSISTING OF TWO-PART POURABLE URETHANE JOINT SEALANT, TYPE M, GRADE P, CLASS 25, USE T

CONTROL JOINT
N.T.S.

NOTES:

1. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY PAINTED CONSPICUOUSLY ON THE SURFACE IN A COLOR THAT CONTRASTS THE PAVEMENT.
2. THE WORDS "NO PARKING" PAINTED ON ANY ACCESS AISLE ADJACENT TO THE PARKING SPACE. THE WORDS MUST BE PAINTED:
   2.1. IN ALL CAPITAL LETTERS.
   2.2. WITH A LETTER HEIGHT OF AT LEAST TWELVE INCHES, AND STROKE WIDTH OF AT LEAST TWO INCHES.
   2.3. CENTERED WITHIN EACH ACCESS AISLE ADJACENT TO THE PARKING SPACE.



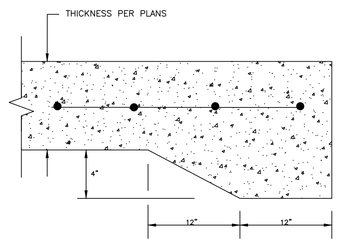
ACCESSIBLE PARKING ACCESS AISLE
N.T.S.

ACCESSIBILITY NOTES:

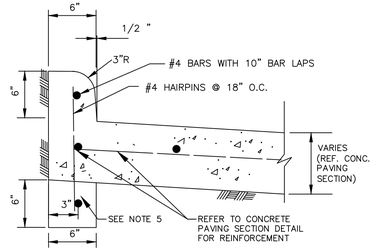
1. ALL ACCESSIBLE SPACES AND ACCESSIBLE ROUTES SHALL COMPLY WITH THE TEXAS ACCESSIBILITY STANDARDS (TAS) AND CITY/COUNTY REQUIREMENTS.
2. ACCESSIBLE PARKING SPACES AND DRIVE AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1:48 (2.08%) IN ALL DIRECTIONS. CURB RAMPS SHALL BE PROVIDED AT ALL PASSENGER LOADING ZONES.
3. EACH ACCESSIBLE PARKING SPACE SHALL BE DESIGNATED AS RESERVED BY AN APPROPRIATE SIGN SHOWING THE SYMBOL OF ACCESSIBILITY PER TAS SECTION 216.5. SPACES COMPLYING WITH TAS SECTION 502.6 SHALL HAVE AN ADDITIONAL SIGN "VAN-ACCESSIBLE" MOUNTED BELOW THE SYMBOL OF ACCESSIBILITY.
   A. SIGNS SHALL BE LOCATED 48" – 80" ABOVE THE GROUND, FLOOR, OR PAVING SURFACE MEASURED TO THE BOTTOM OF THE SIGN SO THEY CANNOT BE OBSCURED BY A VEHICLE PARKED IN THE SPACE.
   B. SIGNS LOCATED WITHIN AN ACCESSIBLE ROUTE SHALL COMPLY WITH TAS SECTION 307.4.
   C. CHARACTERS AND SYMBOLS ON OVERHEAD SIGNS SHALL COMPLY WITH TAS SECTION 703.5.
4. SLOPES OF CURB RAMPS SHALL COMPLY WITH TAS SECTION 405.2. TRANSITIONS FROM RAMPS TO WALKS, GUTTERS, OR STREETS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. MAXIMUM SLOPES OF ADJOINING GUTTERS, ROAD SURFACE IMMEDIATELY ADJACENT TO THE CURB RAMP, OR ACCESSIBLE ROUTE SHALL NOT EXCEED 1:20.
5. SURFACES OF CURB RAMPS SHALL COMPLY WITH TAS SECTIONS 405.4 AND 302.1.

CURB RAMPS IN PUBLIC RIGHT-OF-WAY
ALL CURB RAMPS SHALL COMPLY WITH ARCHITECTURAL BARRIERS ADMINISTRATIVE RULE 68.102(B)(2):
   A. DETECTABLE WARNING STRIP SHALL EXTEND A MINIMUM OF 24" IN DEPTH (IN DIRECTION OF PEDESTRIAN TRAVEL)
   B. DETECTABLE WARNING STRIP SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDING.

CURB RAMPS NOT IN PUBLIC RIGHT-OF-WAY
ALL CURB RAMPS NOT CONSTRUCTED IN PUBLIC RIGHT-OF-WAY SHALL COMPLY WITH TAS 406.
   A. DETECTABLE WARNING STRIPS ARE NOT REQUIRED ON CURB RAMPS NOT IN PUBLIC RIGHT-OF-WAY.

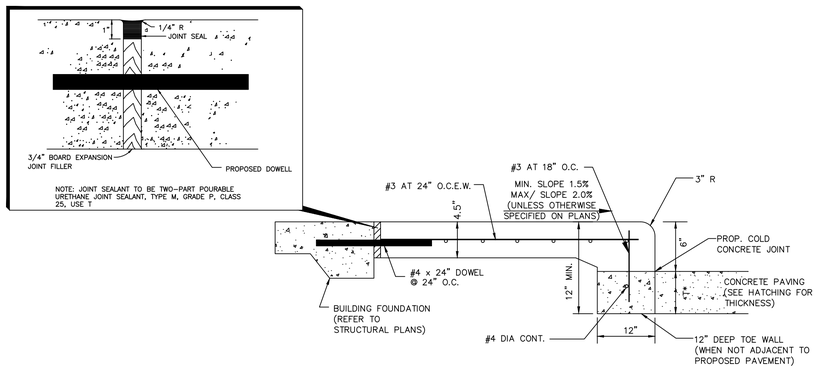


STANDARD PAVING HEADER
N.T.S.



1. PROVIDE EXPANSION JOINTS AT ALL CURVES, TANGENTS AND CORNERS.
2. SUBGRADE TO EXTEND 1' PAST BACK OF CURB.
3. SACK FINISH EXPOSED SURFACES.
4. FINISH TO BE ACCOMPLISHED BY FLOATING, STEEL TROWELLING AND THEN BRUSHING. HAND FINISH NOT REQUIRED WHEN CURB IS NOT POURED BY A MACHINE, BUT CURB WILL HAVE THE SAME OUTSIDE DIMENSIONS, AND HAVE A BRUSHED FINISH.
5. ADD ONLY IF RECOMMENDED BY GEOTECH REPORT

6" MONOLITHIC CONCRETE CURB
N.T.S.



BUILDING PERIMETER SIDEWALK
N.T.S.

* = FOR REQUIRED PAVEMENT/SUBGRADE THICKNESS, SEE HATCHING ON PLAN. REFERENCE GEOTECHNICAL REPORT FOR SPECIFICATIONS.

NO.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.320.9955
FRN F-11526

BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS
09 JULY 2025

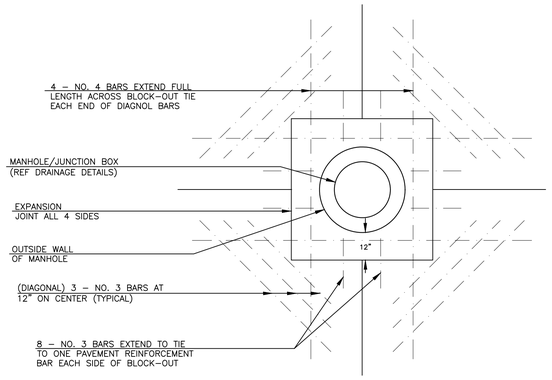
ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: N/A
DRAWN BY: ZAR
CHECKED BY: BTH

CONSTRUCTION DETAILS (1 OF 2)

CREEKSIDE TOWN CENTER TRACT 25'B'

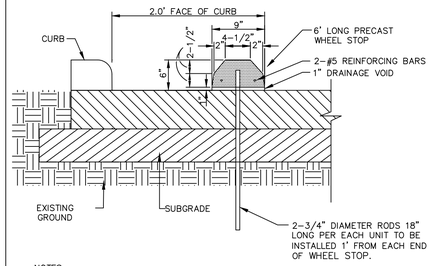
CITY OF NEW BRAUNFELS, TEXAS

SHEET
C7.0



MANHOLE CONCRETE BLOCKOUT

N.T.S.

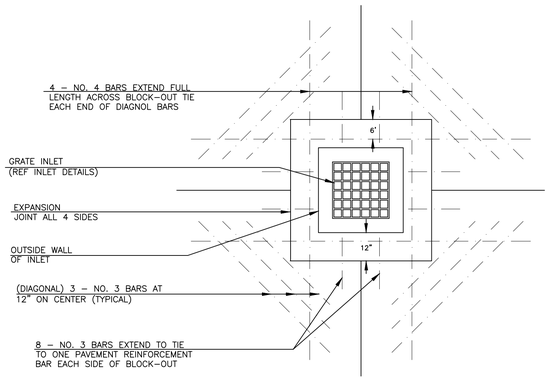


NOTES:

1. CONCRETE USED FOR WHEEL STOP TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI.

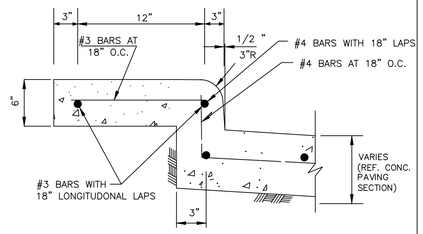
WHEEL STOP

N.T.S.



GRATE INLET CONCRETE BLOCKOUT

N.T.S.



1. PROVIDE EXPANSION JOINTS AT ALL CURVES, TANGENTS AND CORNERS.
2. SUBGRADE TO EXTEND 1' PAST BACK OF CURB.
3. SACK FINISH EXPOSED SURFACES.
4. FINISH TO BE ACCOMPLISHED BY FLOATING, STEEL TROWELLING AND THEN BRUSHING. HAND FINISH NOT REQUIRED WHEN CURB IS NOT POURED BY A MACHINE, BUT CURB WILL HAVE THE SAME OUTSIDE DIMENSIONS, AND HAVE A BRUSHED FINISH.

6" x 18" MONOLITHIC CONCRETE CURB

N.T.S.

NO.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.907.4909
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER

09 JULY 2025

ALJ PROJECT NO.	028.24.CV.154
DATE:	JULY 2025
SCALE:	N/A
DRAWN BY:	ZAR
CHECKED BY:	BTH

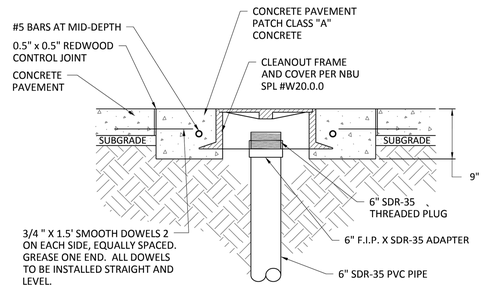
CONSTRUCTION DETAILS (2 OF 2)

CREEKSIDE TOWN CENTER TRACT 25'B'

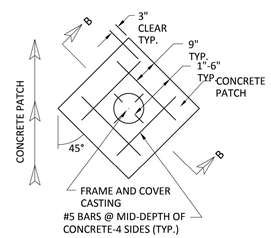
CITY OF NEW BRAUNFELS, TEXAS

SHEET

C7.1



SECTION B-B



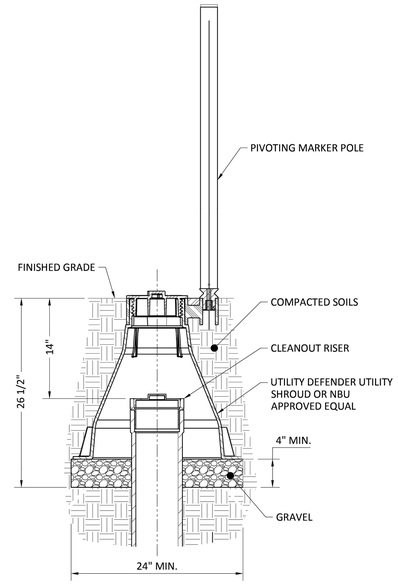
PLAN VIEW

NOTES:

1. SERVICES MUST BE DESIGNED TO AVOID PLACEMENT WITHIN SIDEWALK AND DRIVEWAYS. DETAIL APPROVED FOR USE ON EXISTING SERVICES ONLY.
2. SUBGRADE SHALL BE COMPACTED PER CITY OF NEW BRAUNFELS SPECIFICATIONS.

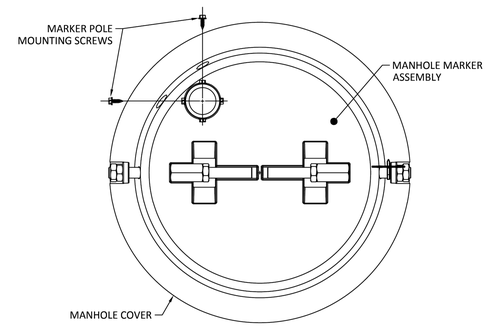
NEW BRAUNFELS UTILITIES
WATER SYSTEMS ENGINEERING

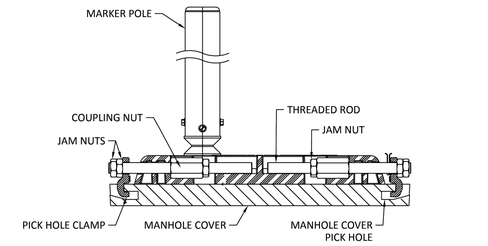
DRAWN BY:	STANDARD DRAWING:				
EWL	WASTEWATER CLEANOUT ADJUSTMENT TO GRADE IN DRIVEWAYS				
APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 306



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





NEW BRAUNFELS UTILITIES
WATER SYSTEMS ENGINEERING

DRAWN BY:	STANDARD DRAWING:				
EWL	MANHOLE MARKER ASSEMBLY				
APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 361

NO.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.350.8055
FRN F-11526

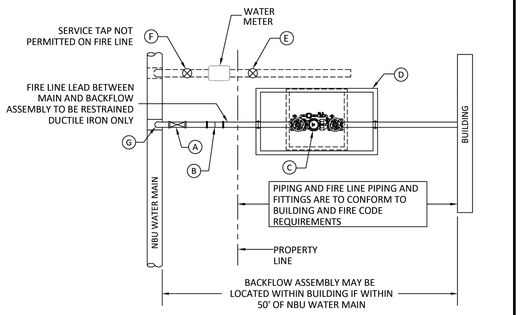
BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS
09 JULY 2025

ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: N/A
DRAWN BY: ZAR
CHECKED BY: BTH

CREEKSIDE TOWN CENTER
TRACT 25'B'
CITY OF NEW BRAUNFELS, TEXAS

SANITARY SEWER DETAILS (2 OF 2)

SHEET
C7.3



MATERIALS:

A. TAPPING VALVE (GATE, IRON BODY WITH M.J. OUTLET), SPL W8.4.0.

B. SLEEVE, M.J., REQUIRED OUTSIDE PROPERTY LINE.

C. CUSTOMER'S BACKFLOW PREVENTION ASSEMBLY AS REQUIRED BY CROSS CONNECTION ORDINANCES. SEE SHEET 2.

D. VAULT SIZING WILL BE DETERMINED BY DETAIL ON SHEET 2. DESIGN AND STRUCTURAL INTEGRITY RATINGS OF EACH VAULT WILL BE DESIGNED AND SEALED BY A LICENSED ENGINEER.

E. CUSTOMER'S SHUT-OFF VALVE ON DOMESTIC WATER LINE.

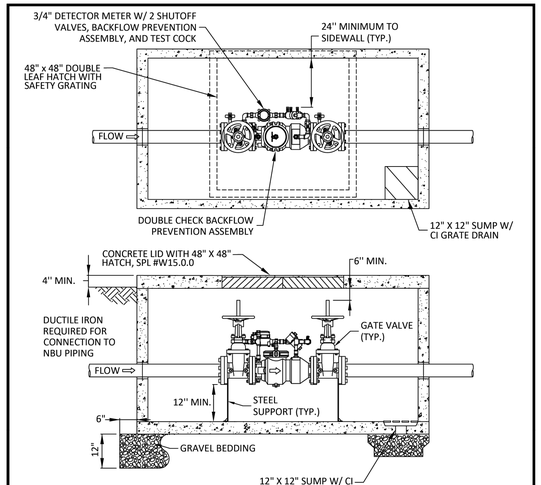
F. DOMESTIC WATER SERVICE LINE VALVE.

G. TAPPING SLEEVE, SPL W14.0.0.

NOTES:

1. PIPE SIZE DETERMINED BY OWNER PENDING APPROVAL FROM NBU WATER SYSTEMS ENGINEERING AND FIRE DEPARTMENT; A MINIMUM DIA. OF 6" IN THE STREET RIGHT-OF-WAY.
2. DUCTILE IRON PIPE AND TAPPING SLEEVE IN THE STREET RIGHT-OF-WAY AND EASEMENTS SHALL BE WRAPPED COMPLETELY WITH A MINIMUM OF 8 MIL POLYETHYLENE FILM.
3. BEDDING AND BACKFILL FOR ALL PIPE AND APPURTENANCES INSTALLED WITHIN STREET RIGHT OF WAY OR PUBLIC EASEMENTS TO BE INSTALLED PER NBU SPECIFICATIONS.
4. BACKFLOW PREVENTION ASSEMBLIES SHALL BE TESTED UPON INSTALLATION, ANNUALLY THEREAFTER AND/OR WHEN REPAIRED, AND IS OWNED AND MAINTAINED BY THE PROPERTY OWNER.

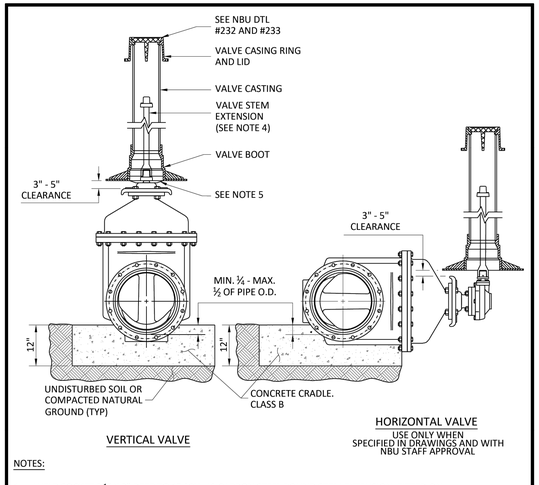
NBU	DRAWN BY: EWL	STANDARD DRAWING: STANDARD FIRE LINE INSTALLATION				
NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 2	DRAWING NO. 210



NOTES:

1. ALL BACKFLOW PREVENTION ASSEMBLIES SHALL HAVE LAB AND FIELD APPROVAL FROM THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS CONNECTION CONTROL AND HYDRAULIC RESEARCH.
2. ALL TEST COCKS MUST BE REDIRECTED UPWARD AND PLUGGED.
3. BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED IN THE UPRIGHT HORIZONTAL POSITION, UNLESS OTHERWISE APPROVED. BACKFLOW PREVENTION ASSEMBLIES SHALL NOT BE ROTATED ON THEIR AXIS.
4. CLEARANCES SHALL BE AS INDICATED IN THE SPECIFICATIONS.
5. ACCESS OPENING MUST BE LARGE ENOUGH TO REMOVE LARGEST PORTION OF BACKFLOW PREVENTER, BUT NOT LESS THAN 48" IN LEAST DIMENSION.
6. ALL PIPE, VALVES, AND FITTINGS WITHIN THE VAULT SHALL RECEIVE A COATING SYSTEM PER NBU SPECIFICATION "HIGH PERFORMANCE COATINGS".

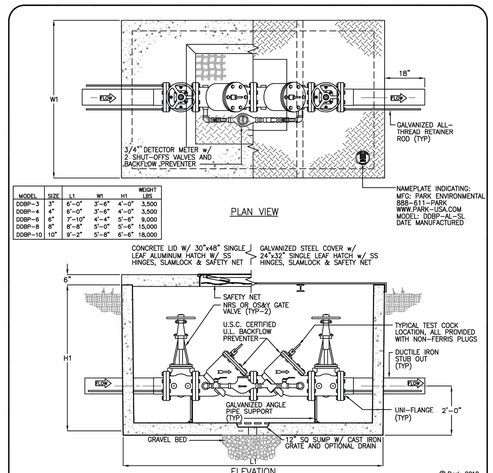
NBU	DRAWN BY: EWL	STANDARD DRAWING: STANDARD FIRE LINE INSTALLATION				
NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 2 OF 2	DRAWING NO. 210



NOTES:

1. WELD SOCKET 2 ½" 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	DRAWN BY: EWL	STANDARD DRAWING: TYPICAL GATE VALVE				
NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	APPROVED BY: A. WILLARD	DRAWING DATE: 2/1/24	UPDATED:	SCALE: N.T.S.	SHEET: 1 OF 1	DRAWING NO. 230



MODEL	SIZE	L1	W1	H1	WEIGHT LBS
DDBP-3	3"	6'-0"	3'-6"	4'-0"	3,500
DDBP-4	4"	6'-0"	3'-6"	4'-0"	3,500
DDBP-6	6"	7'-10"	4'-4"	5'-6"	9,000
DDBP-8	8"	8'-8"	5'-0"	5'-6"	15,000
DDBP-10	10"	9'-2"	5'-6"	6'-0"	18,000

© Park 2010

Specifications

CONCRETE : Class II concrete with design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

STEEL COVER: 1/4" steel skid-resistant floor plate welded to 3" angle frame with (2) 3"x2-3/8" I beam supports (300 PSF).

HATCHWAY: 1/4" Aluminum diamond plate cover with extruded aluminum frame. Hatch to be furnished with 316 stainless steel snap lock & brass hinges.

Engineering Data

The backflow assembly shall be factory assembled in vault & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:

FM

PROJECT :	
LOCATION:	
CUSTOMER:	
GEN.CONTR.:	
ORDER # :	
DATE:	

PARK ENVIRONMENTAL EQUIPMENT 888-611-PARK www.park-USA.com

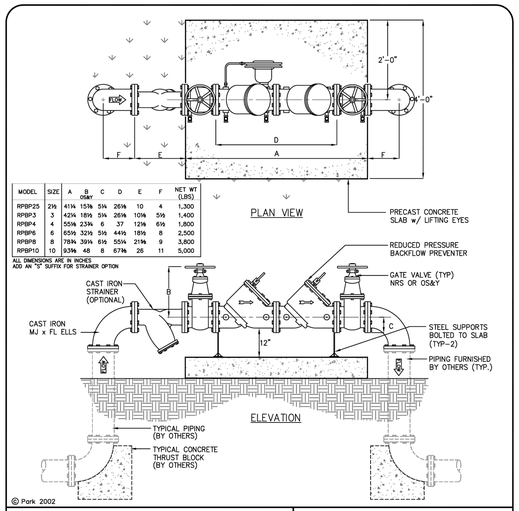
"Expect the Best"

DOUBLE DETECTOR BACKFLOW PREVENTER ASSEMBLY FOR FIRE SERVICE MODEL DDBP - 3" THRU 10"

SCALE: NONE	DWG. NO. DDBP-AL-SL	REV. A
DATE: 2010		

All drawings are availble for download at www.park-usa.com in .dwg & .pdf formats

1-5



MODEL	SIZE	A	B (OS&Y)	C	D	E	F	NET WT (LBS)
RPBP2S	2½	41¾	15¾	5¼	26⅛	10	4	1,300
RPBP3	3	42¾	18⅛	5¼	26⅛	10⅛	5½	1,400
RPBP4	4	55¾	23¾	6	37	12⅛	6½	1,800
RPBP6	6	65¾	32½	5½	44½	18⅛	8	2,500
RPBP8	8	78¾	39¾	6½	55¼	21⅝	9	3,800
RPBP10	10	93¾	48	8	67⅜	26	11	5,000

ALL DIMENSIONS ARE IN INCHES
ADD AN "S" SUFFIX FOR STRAINER OPTION

© Park 2002

Specifications

CONCRETE : Class 1 concrete with design strength of 4500 PSI at 28 days.

REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

Typical Applications

RP devices are used to protect against high hazard (toxic) fluids in water services to industrial plants, hospital facilities, morgues, mortuaries, and chemical plants. They are also used in irrigation systems, boiler feed, water lines and other installations requiring maximum protection.

Engineering Data

The backflow assembly shall be factory assembled on pad & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:

AWWA FM

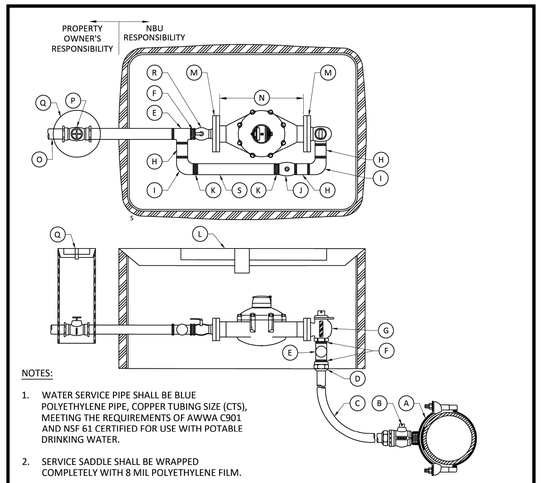
PROJECT :	
CUSTOMER:	
ARCHITECT :	
ENGINEER :	
ORDER # :	
DATE :	

PARK ENVIRONMENTAL EQUIPMENT 888-611-PARK www.park-USA.com

"Expect the Best"

REDUCED PRESSURE BACKFLOW PREVENTER w/ STRAINER ON PRECAST CONCRETE PAD

SCALE: NONE	DWG. NO. RPBPS-1	REV. A
DATE: 1/06		



NOTES:

1. WATER SERVICE PIPE SHALL BE BLUE POLYETHYLENE PIPE, COPPER TUBING SIZE (CTS), MEETING THE REQUIREMENTS OF AWWA C901 AND NSF 61 CERTIFIED FOR USE WITH POTABLE DRINKING WATER.
2. SERVICE SADDLE SHALL BE WRAPPED COMPLETELY WITH 8 MIL POLYETHYLENE FILM.
3. TOP OF BOXES TO BE 1" ABOVE GROUND.
4. ALL 1-1/2" AND 2" METERS SHALL BE INSTALLED ON SEPARATE SERVICE CONNECTIONS.
5. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SPECIFICATIONS.
6. METER BOX LOCATIONS SHALL BE AS PER DETAILS 402 THROUGH 409, UTILITY LAYOUTS.
7. METER BOXES SHALL NOT BE PLACED IN SIDEWALKS, DRIVEWAYS, PARKING AREAS, OR VEHICULAR TRAFFIC AREAS.
8. ANGLE STOP PLACED A MAXIMUM OF 4" FROM BACK OF BOX THAT FACES CURB.
9. SERVICES FOR NON-RESIDENTIAL CUSTOMERS OR IRRIGATION USES SHALL BE EQUIPPED WITH A BACKFLOW PREVENTION ASSEMBLY AS REQUIRED BY THE BACKFLOW PREVENTION POLICY. BYPASS NOT PERMITTED ON SERVICES THAT ARE IRRIGATION ONLY.

NBU	DRAWN BY: EWL	STANDARD DRAWING: STANDARD INSTALLATION DETAIL FOR 1-1/2" & 2" METER INSTALLATION SHOWING BYPASS				
NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	APPROVED BY: A. WILLARD	DRAWING DATE: 8-17-21	UPDATED: 2024-07-01	SCALE: N.T.S.	SHEET: 1 OF 2	DRAWING NO. 203

MATERIALS LIST

A. 2" SERVICE CLAMP PER SPL W2.2.1
B. 2" CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET
C. 2" AWWA C901 CTS SDR 9 WATER SERVICE PIPE PER SPL W1.5.5
D. 2" BRASS COUPLING - COMPRESSION TO MALE IPT
E. 2" BRASS TEE - FEMALE IPT
F. 2" BRASS CLOSE-NIPPLE
G. 2" ANGLE METER STOP, FEMALE IPT X METER FLANGE
H. 2" BRASS NIPPLE
I. 2" BRASS ELBOW, FEMALE IPT
J. 2" LOCKABLE CURB STOP - FEMALE IPT INLET & OUTLET
K. 2" BRASS COUPLING - SERVICE TUBING TO MALE IPT
L. 2" METER BOX PER SPL W19.0.0
M. 2" X 1-1/2" BRASS METER ADAPTER (FOR 1-1/2" METER ONLY - NOT SHOWN)
N. 2" WATER METER, LENGTH 17", PURCHASED FROM NBU; OR
1.5" WATER METER, LENGTH 13", PURCHASED FROM NBU
O. 2" SERVICE TUBING (PRIVATE PLUMBING PER CODE)
P. CUSTOMER CUT-OFF VALVE
Q. CUSTOMER VALVE BOX AND LID
R. 2" BALL VALVE, FEMALE IPT X METER FLANGE, WITH HAND LEVER AND PADLOCK WINGS
S. 2" ANNEALED SEAMLESS TYPE "K" SERVICE TUBING PER ASTM B88

NBU	DRAWN BY: EWL	STANDARD DRAWING: STANDARD INSTALLATION DETAIL FOR 1-1/2" & 2" METER INSTALLATION SHOWING BYPASS				
NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	APPROVED BY: A. WILLARD	DRAWING DATE: 8-17-21	UPDATED: 2024-07-01	SCALE: N.T.S.	SHEET: 2 OF 2	DRAWING NO. 203

NO.	REVISIONS	DATE

ALJ Lindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.304.2000
FRN F-11526

BRETT T. HANRAHAN 112908 REGISTERED PROFESSIONAL ENGINEER
09 JULY 2025

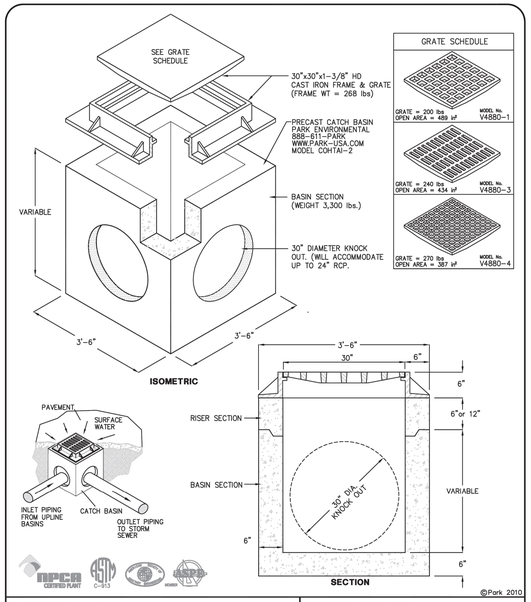
ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: N/A
DRAWN BY: ZAR
CHECKED BY: BTH

WATER UTILITY DETAILS

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C7.4



GRATE SCHEDULE

GRATE = 200 lbs OPEN AREA = 469 in²	MODEL No. V4880-1
GRATE = 240 lbs OPEN AREA = 434 in²	MODEL No. V4880-3
GRATE = 270 lbs OPEN AREA = 387 in²	MODEL No. V4880-4

©Park 2010

SPECIFICATIONS

CONCRETE : Class II concrete with of design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth. Rated for H-20 Loading.

REINFORCEMENT: Grade 60 reinforced with steel rebar to conform to ASTM A615 on required centers or equal.

C.I. CASTINGS: Cast iron frames and grates are manufactured of grey cast iron conforming to ASTM A48-76 Class 30.

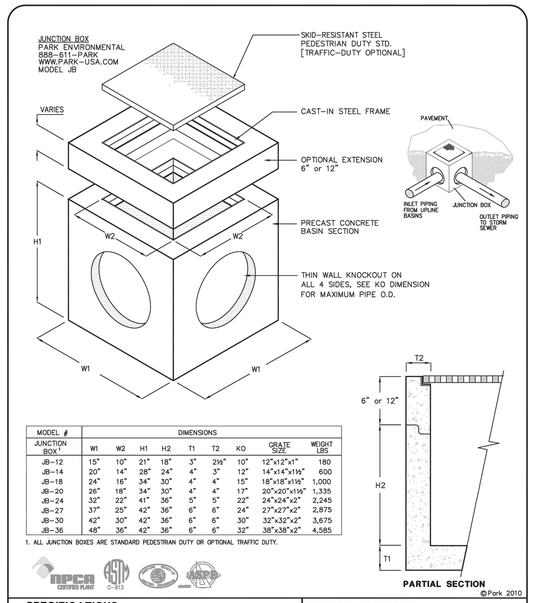
PARK ENVIRONMENTAL EQUIPMENT 888-611-PARK www.park-USA.com

"Expect the Best"

TYPE-A GRATE INLET
MODEL COHTAI - SIZE 30"

SCALE	NONE	DWG. NO.	REV.
DATE	2010	COHTAI-2	A

All drawings are avalible for download at www.park-usa.com in .dwg & .pdf formats



MODEL # JUNCTION BOX[1]	DIMENSIONS W1	W2	H1	H2	T1	T2	KO	GRATE SIZE	WEIGHT LBS
JB-12	15"	10"	21"	18"	3"	2½"	10"	12"x12"x1"	180
JB-14	20"	14"	28"	24"	4"	3"	12"	14"x14"x1½"	600
JB-18	24"	16"	34"	30"	4"	4"	15"	18"x18"x1½"	1,000
JB-20	26"	18"	34"	30"	4"	4"	17"	20"x20"x1½"	1,335
JB-24	32"	22"	41"	36"	5"	5"	22"	24"x24"x2"	2,245
JB-27	37"	25"	42"	36"	6"	6"	24"	27"x27"x2"	2,875
JB-30	42"	30"	42"	36"	6"	6"	30"	32"x32"x2"	3,675
JB-36	48"	36"	42"	36"	6"	6"	32"	38"x38"x2"	4,585

1. ALL JUNCTION BOXES ARE STANDARD PEDESTRIAN DUTY OR OPTIONAL TRAFFIC DUTY.

©Park 2010

SPECIFICATIONS

CONCRETE : Class II concrete with of design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

COVER & FRAME : All steel fabrication shall be in accordance to AWA D1.1. Steel shall be ASTM A36 carbon steel, and hot-dipped galvanized after fabrication in accordance to ASTM A123

PARK ENVIRONMENTAL EQUIPMENT 888-611-PARK www.park-USA.com

"Expect the Best"

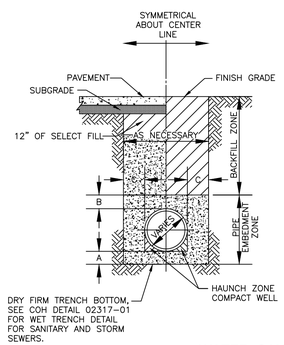
JUNCTION BOX
MODEL JB - 12" THRU 36"

SCALE	NONE	DWG. NO.	REV.
DATE	2010	JB-01	A

All drawings are avalible for download at www.park-usa.com in .dwg & .pdf formats

DIMENSIONAL REQUIREMENTS

PIPE SIZE	A	B	C
20" AND SMALLER	6"	12"	9"
21" THRU 48"	6"	12"	12"
54" THRU 66"	9"	12"	15"
72" AND LARGER	12"	18"	15"



MATERIAL REQUIREMENTS

BACKFILL ZONE

1. IN PAVED AREAS, USE CEMENT STABILIZED SAND, PLACE IN 8" LIFTS AND COMPACT TO 95% STANDARD PROCTOR DENSITY, TO WITHIN 12" OF SUBGRADE.

2. IN UNPAVED AREAS, USE SOIL EXCAVATED FROM TRENCH, PLACE IN 8" LIFTS AND COMPACT TO 95% STANDARD PROCTOR DENSITY.

PIPE EMBEDMENT ZONE

1. FOR STORM AND SANITARY SEWERS, USE CEMENT STABILIZED SAND, PLACE IN 8" LIFTS AND COMPACT TO 95% STANDARD PROCTOR DENSITY.

2. FOR WATER LINES, USE SAND, PLACE IN 8" LIFTS AND COMPACT TO 95% STANDARD PROCTOR DENSITY.

WATER, SANITARY AND STORM
BEDDING AND BACKFILL FOR
DRY STABLE TRENCH

N.T.S.

NO.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, TX 77377
281.320.9079
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED PROFESSIONAL ENGINEER
09 JULY 2025

ALJ PROJECT NO: 028.24.CV.154
DATE: JULY 2025
SCALE: N/A
DRAWN BY: ZAR
CHECKED BY: BTH

DRAINAGE DETAILS

CREEKSIDE TOWN CENTER
TRACT 25'B'
CITY OF NEW BRAUNFELS, TEXAS

SHEET
C7.5

NBU GENERAL NOTES

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 WITH 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 DAMAGES DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES, AND EXISTING UTILITIES (NOT ADJUSTED ON PLANS). COST OF RESTORATIONS, IF ANY, SHALL BE THE CONTRACTOR'S ENTIRE EXPENSE.
8) THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE 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" 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 (B), 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 SO AS TO PERMIT THE CONTINUOUS MOVEMENT OF THE TRAFFIC IN ONE DIRECTION 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:
    A)WATER MAINS AND SERVICES
    B)SEWER 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 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.

23) UTILITY TRENCH COMPACTION WITH STREET R.O.W
    A) ALL UTILITY TRENCH COMPACTION TEST WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER.
    B) FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE
    C) EACH LAYER OF MATERIAL SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEXT METHODS TEX-113-E,TEX-114-E. TEX-115-E
    D) 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.
    E) 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

WASTEWATER NOTES:

1) THE POINT OF DELIVERY FOR AN NBU OWNED AND MAINTAINED WASTEWATER LINE IS TYPICALLY THE CLEANOUT, PROPERTY LINE, OR EDGE OF EASEMENT OR AS DETERMINED BY NBU.
2) THE CONTRACTOR SHALL MAINTAIN SERVICE TO THE EXISTING WASTEWATER SYSTEM AT ALL TIMES DURING CONSTRUCTION.
3) ALL NEW WASTEWATER MAINS AND FITTINGS SHALL BE MINIMUM 8-INCH DIAMETER (ASTM D-3034 SDR-26 PVC).
4) ALL RESIDENTIAL WASTEWATER SERVICE LATERALS SHALL BE EXTENDED FOUR (4) FEET INTO THE PUBLIC UTILITY EASEMENT AND A CLEANOUT INSTALLED AT THE ROW LINE PER NBU STANDARD DETAILS. SERVICES TO LOTS WILL EXTEND FOUR (4) FEET PAST THE UNDERGROUND ELECTRIC CONDUIT IF ELECTRIC IS INSTALLED IN THE FRONT EASEMENT.
5) ALL SEWER CLEANOUTS THAT LEAD TO NBU MAINS SHALL BE INSTALLED WITH A PROTECTIVE UTILITY SHROUD AND PIVOTING MARKER POLE DURING TIME OF CONSTRUCTION.
6) PIPE BEDDING OF WASTEWATER LINES SHALL BE COMPLIANT WITH NBU SPECIFICATION NO. 120, "UTILITY TRENCHING AND BACKFILL".
7) WASTEWATER MAINS SHALL HAVE A MINIMUM OF 48 INCHES OF COVER TO FINISHED GRADE AND WASTEWATER LATERALS MUST HAVE A MINIMUM OF 36 INCHES OF COVER TO FINISHED GRADE. CONCRETE ENCASEMENT WILL BE REQUIRED IF MINIMUM COVER CANNOT BE MET.
8) ALL GRAVITY WASTEWATER PIPES SHALL HAVE GASKETED, COMPRESSION OR FUSED JOINTS PER 30 TAC §217.53 (C) (2).
9) FOR WASTEWATER LINES LESS THAN 24 INCHES IN DIAMETER, SELECT INITIAL BACKFILL MATERIAL SHALL BE PLACED IN TWO LIFTS.
    a) THE FIRST LIFT SHALL BE SPREAD UNIFORMLY AND SIMULTANEOUSLY ON EACH SIDE AND UNDER THE SHOULDERS OF THE PIPE TO THE MID-POINT OR SPRING LINE OF THE PIPE.
    b) THE SECOND LIFT SHALL BE PLACED TO A DEPTH AS SHOWN ON THE PIPE BACKFILL DETAIL. FOR PIPES LARGER THAN 24-INCH, 12-INCH MAXIMUM LIFTS SHALL BE USED.
10) ALL MANHOLES SHALL BE WATER-TIGHT, EITHER MONOLITHIC, CAST-IN-PLACE CONCRETE STRUCTURES OR PREFABRICATED MANHOLES SPECIFICALLY APPROVED BY NBU. POLYMER CONCRETE IS REQUIRED FOR MANHOLES ON MAINS 18-INCH DIAMETER AND LARGER, AT FORCE MAIN DISCHARGE POINTS, OR AT DROP MANHOLES WITH HIGH CORROSION POTENTIAL.
11) MANHOLES SHALL HAVE BOLTED WATER-TIGHT RINGS AND COVERS. IN NON-PAVED AREAS, A MANHOLE MARKER ASSEMBLY SHALL BE INSTALLED ON THE MANHOLE COVER.
12) MANHOLE VENTS SHALL BE INSTALLED AT INTERVALS NO GREATER THAN 1500 FEET.
13) ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS SIX INCHES (6") ABOVE SURROUNDING GROUND IN NON-PAVED AREAS. IN PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH PAVEMENT.
14) ALL NEW MANHOLES, UNLESS APPROVED BY NBU, SHALL HAVE COVERS WITH 32-INCH OPENINGS.
15) WASTEWATER PIPE CONNECTIONS TO PRE-CAST MANHOLES WILL BE COMPRESSION JOINTS OR MECHANICAL "BOOT TYPE" JOINT AS APPROVED BY NBU.
16) EXISTING MANHOLES SHALL BE LINED, COATED, OR REPLACED WITH A CORROSION RESISTANT MATERIAL IF A NEW CONNECTION IS MADE BY A MAIN OR LATERAL.
17) WASTEWATER MAINS SHALL BE TESTED FROM MANHOLE TO MANHOLE.
18) IN AREAS WHERE A NEW WASTEWATER MANHOLE IS TO BE CONSTRUCTED OVER AN EXISTING WASTEWATER SYSTEM, IT SHALL BE THE CONTACTOR'S RESPONSIBILITY TO TEST THE EXISTING MANHOLES BEFORE CONSTRUCTION. AFTER THE PROPOSED MANHOLE(S) HAS BEEN BUILT, THE CONTRACTOR SHALL RE-TEST THE EXISTING SYSTEM TO THE SATISFACTION OF THE CONSTRUCTION INSPECTOR, NO SEPARATE PAY.
19) NBU INSPECTOR TO BE PRESENT FOR ALL WASTEWATER LINES TO BE INSTALLED AT DEPTHS OF 15 FEET OR GREATER FROM FINAL GRADE.
20) WHERE THE MINIMUM 9-FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ REQUIREMENTS. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF ASTM D2241 PVC OR AWWA C900 PVC WITH PRESSURE RATING OF 150 PSI AND SHALL BE IN ACCORDANCE WITH 30 TAC §217.53 (D) (3) (A) (I).
21) CONTRACTOR SHALL COORDINATE WITH THE ASSIGNED WATER/WASTEWATER INSPECTOR FOR COMPLETION OF THE FIELD ACCEPTANCE CHECKLIST. NO TESTING WILL BE PERFORMED PRIOR TO 30 DAYS FROM COMPLETE INSTALLATION. ALL TESTING AND ACCEPTANCE SHALL CONFORM TO NBU SPECIFICATIONS BE COMPLETED IN THE FOLLOWING ORDER:
    a) PIPE DEFLECTION TEST (MANDREL TEST)
    b) PIPE LOW PRESSURE AIR TEST
    c) MANHOLE VACUUM TEST
    d) MANHOLE PROTECTIVE COATING TEST
    e) CCTV INSPECTION (WITHIN 72 HOURS OF CLEANING AND FLUSHING)
22) TCEQ AND EPA REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF WASTEWATER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN AND PROFILE SHEETS. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY NBU WATER SYSTEMS.

WATER NOTES:

1) THE POINT OF DELIVERY FOR AN OWNED AND MAINTAINED WATER LINE IS TYPICALLY THE DOMESTIC OR IRRIGATION WATER METER, FIRE LINE UP TO THE CONTAINMENT BACKFLOW DEVICE, OR HYDRANT METER OR AS DETERMINED BY NBU.
2) WATER INFRASTRUCTURE MUST BE CONSTRUCTED IN ACCORDANCE WITH THE NBU WATER CONNECTION POLICY.
3) ALL WATER MAINS SHALL BE CONSTRUCTED OF AWWA C900 DR 14 PVC, AWWA C900 DR 18 PVC OR MINIMUM CL 250 DUCTILE IRON PIPE.
4) ALL RESIDENTIAL WATER SERVICES SHALL BE SINGLE SERVICES CONSTRUCTED OF 1-INCH ASTM B88 TYPE K COPPER TUBING. 1-INCH AWWA C901 SDR9 CTS POLYETHYLENE TUBING MAY BE PERMITTED WITH SPECIAL APPROVAL FROM NBU ONLY.
5) ALL 2-INCH SERVICE LINES SHALL BE CONSTRUCTED OF AWWA C901 SDR9 CTS POLYETHYLENE TUBING.
6) WATER MAINS SHALL HAVE A MINIMUM OF 48 INCHES OF COVER TO FINISHED GRADE. CONCRETE ENCASEMENT WILL BE REQUIRED IF MINIMUM COVER CANNOT BE MET.
7) PIPE BEDDING OF WATER LINES SHALL BE COMPLIANT WITH NBU SPECIFICATION NO.120, "UTILITY TRENCHING AND BACKFILL".
8) CONTRACTOR SHALL INSTALL LINE STOPPERS AT THEIR COST FOR AN OUTAGE DURING CONSTRUCTION IF SYSTEM VALVES ARE NOT AVAILABLE OR THE EXISTING VALVES DO NOT FUNCTION. LINE STOPPERS WILL BE REQUIRED BASED ON THE FOLLOWING CRITERIA:
    a) IF THE NUMBER OF RESIDENTIAL CUSTOMERS AFFECTED IS GREATER THAN 20 AND EXPECTED TO LAST MORE THAN 4 HOURS.
    b) IF ANY COMMERCIAL CUSTOMERS ARE AFFECTED BY THE OUTAGE THEN THE USE OF LINE STOPPERS WILL BE DETERMINED ON A CASE BY CASE BASIS.
    c) IF ANY CRITICAL CARE CUSTOMERS ARE AFFECTED BY THE OUTAGE THEN THE USE OF LINE STOPPERS WILL BE DETERMINED ON A CASE BY CASE BASIS.
    d) SYSTEM CONDITIONS MAY REQUIRE A LINE STOPPER AND MAY NOT BE KNOWN UNTIL CONSTRUCTION COMMENCES.
9) CONTRACTOR WILL KEEP THE AREA ON TOP OF, AROUND, AND WITHIN THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
10) . PLACEMENT OF METER BOXES OR VAULTS IN SIDEWALKS, DRIVEWAYS, DRIVE AISLES, PARKING AREAS, OR OTHER AREAS EXPOSED TO VEHICULAR TRAFFIC IS NOT PERMITTED. ANY METER BOXES OR VAULTS SET IN THESE AREAS WILL BE RELOCATED AT THE CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
11) METER BOXES OR VAULTS MUST BE SET AT PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
12) METER BOXES FOR 5/8-INCH AND 1-INCH METERS MUST BE DFW PLASTICS DFW38C-14-AF1MP.
13) METER BOXES FOR 1.5"METERS MUST BE DFW PLASTICS DFW65C-14-AF1MP.
14) METER BOXES FOR 2"METERS MUST BE DFW PLASTICS DFW1730F-12-AF1MP.
15) THRUST BLOCKS ARE NOT PERMITTED WITHOUT SPECIAL APPROVAL. JOINTS MUST BE RESTRAINED WITH RESTRAINING SYSTEMS APPROVED BY NBU AND RESTRAINT LENGTH SHALL BE SUBMITTED TO NBU AT THE TIME OF PLAN SUBMITTAL.
16) CONTRACTOR SHALL INSTALL TRACER WIRE ON TOP OF NON-FERROUS WATER MAINS IN ACCORDANCE WITH NBU SPECIFICATIONS. TRACER WIRE SHOULD RUN FROM VALVE TO VALVE AND EXIT AT A TRACER WIRE ACCESS POINT. THE TRACER WIRE SHOULD BE ATTACHED TO THE TOP OF THE PIPE USING TAPE. EXCESS WIRE SHOULD BE COILED WITHIN THE TRACER WIRE ACCESS POINT RISER.
17) CONTRACTOR SHALL COORDINATE WITH THE ASSIGNED WATER/WASTEWATER INSPECTOR FOR COMPLETION OF THE FIELD ACCEPTANCE CHECKLIST. ALL TESTING AND ACCEPTANCE SHALL CONFORM TO NBU SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO:
    a) BACTERIOLOGICAL TESTING
    b) HYDROSTATIC TESTING (PERFORMED VALVE TO VALVE)
18) THE NBU WATER SYSTEM SHALL BE PROTECTED FROM HAZARDS WITH APPROPRIATE BACKFLOW PREVENTION ASSEMBLIES INSTALLED ON ALL IRRIGATION SYSTEMS, FIRE SUPPRESSION SYSTEMS AND MULTI-UNIT COMPLEXES ALONG WITH MULTI-LEVEL PROPERTIES ON THE DOMESTIC METER CONTAINMENT. NBU CAN ASSIST WITH THE DECISION ON APPROPRIATE BACKFLOW ASSEMBLIES ON A CASE-BY-CASE BASIS. CONTACT NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM
19) ALL BACKFLOW PREVENTION ASSEMBLIES SHALL BE TESTED UPON INSTALLATION AND REPORTS SENT TO NBU VIA THE ONLINE TRACKING SYSTEM. CONTACT AN NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM
20) ALL RESIDENTIAL AND COMMERCIAL PROPERTIES SHALL HAVE A CUSTOMER SERVICE INSPECTION CERTIFICATE (CSI INSPECTION) COMPLETED UPON COMPLETION OF THE BUILDING OR HOME STRUCTURE. CONTACT AN NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBUTEXAS.COM

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 GPS POINTS SHALL BE MEASURED TO MAP GRADE. PLEASE REFERENCE NBU'S WATER CONNECTION POLICY FOR ADDITIONAL CAD DELIVERABLE REQUIREMENTS.

WATER
1. VERTICAL BENDS AND EDGE OF STEEL CASING (IF APPLICABLE) PRIOR TO BACKFILL
2. HORIZONTAL BENDS PRIOR TO BACKFILL
3. TEES PRIOR TO BACKFILL
4. FITTINGS (REDUCERS AND COUPLINGS) PRIOR TO BACKFILL
5. FIRE HYDRANTS (TOP FLANGE)
6. VALVES
7. METERS (TOP CENTER OF BOX)
8. BLOW OFF ASSEMBLIES
9. CORNER SLAB OF ALL WATER TANK AND THE ISOLATION GATE VALVE ON THE WATER TANK

WASTEWATER
1. MANHOLES
2. CLEANOUTS
3. CORNER SLAB OF LIFT STATIONS

ELECTRIC
1. POLES
2. TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK)
3. PULL BOXES
4. STREET LIGHTS. COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

APPROVED 12/09/03; REV 1/01/24

NO.	REVISIONS	DATE

ALJLindsey
Civil Engineers
18635 N. Eldridge Pkwy, Suite 200
Tomball, Texas 77377
281.516.8500
FRN F-11526

STATE OF TEXAS
BRETT T. HANRAHAN
112908
REGISTERED
PROFESSIONAL ENGINEER
09 JULY 2025

ALJ PROJECT NO. 028.24.CV.154
DATE: JULY 2025
SCALE: N/A
DRAWN BY: ZAR
CHECKED BY: BTH

NBU NOTES

CREEKSIDE TOWN CENTER TRACT 25'B'

CITY OF NEW BRAUNFELS, TEXAS

SHEET
C8.0

2025-07-08 12:59

PLANT SCHEDULE

SYMBOL	QTY	COMMON NAME	BOTANICAL NAME	SIZE	REMARKS
TREES					
	5	Lacebark Elm	Ulmus parvifolia	45 gal.	10-12' HT.; 5-6' SPRD; CONTAINER GROWN; SPECIMEN; SIZE SPECS SHALL SUPERCEDE CONTAINER SIZE
	9	Live Oak	Quercus virginiana	1.5" Cal.	
	3	Red Rocket Crape Myrtle	Lagerstroemia indica 'Whit IV'	30 gal.	
SHRUBS					
	6	Double Red Knock Out Rose	Rosa x 'Radtko'	3 gal.	
	18	Dwarf Yaupon Holly	Ilex vomitoria 'Nana'	3 gal.	
	49	Indian Hawthorn	Rhaphiolepis indica	3 gal.	
	37	Parsoni Juniper	Juniperus chinensis 'Parsonii'	3 gal.	
	25	Red Drift Rose	Rosa x 'Meigalpio'	3 gal.	12" ht.; 12"sprd. Full, rooted.
	95	Sea Green Juniper	Juniperus chinensis 'Sea Green'	5 gal.	
GROUND COVERS					
	4,116 sf	Bermudagrass	Cynodon dactylon	SOD	

2025-03-14 10:45

REFERENCE NOTES SCHEDULE

SYMBOL	CODE	DESCRIPTION	QTY	DETAIL
	1	BULLROCK 3"-6"River Wash Aggregate 4-6" depth compacted over filter fabric; steel edging; typ.	67 sf	

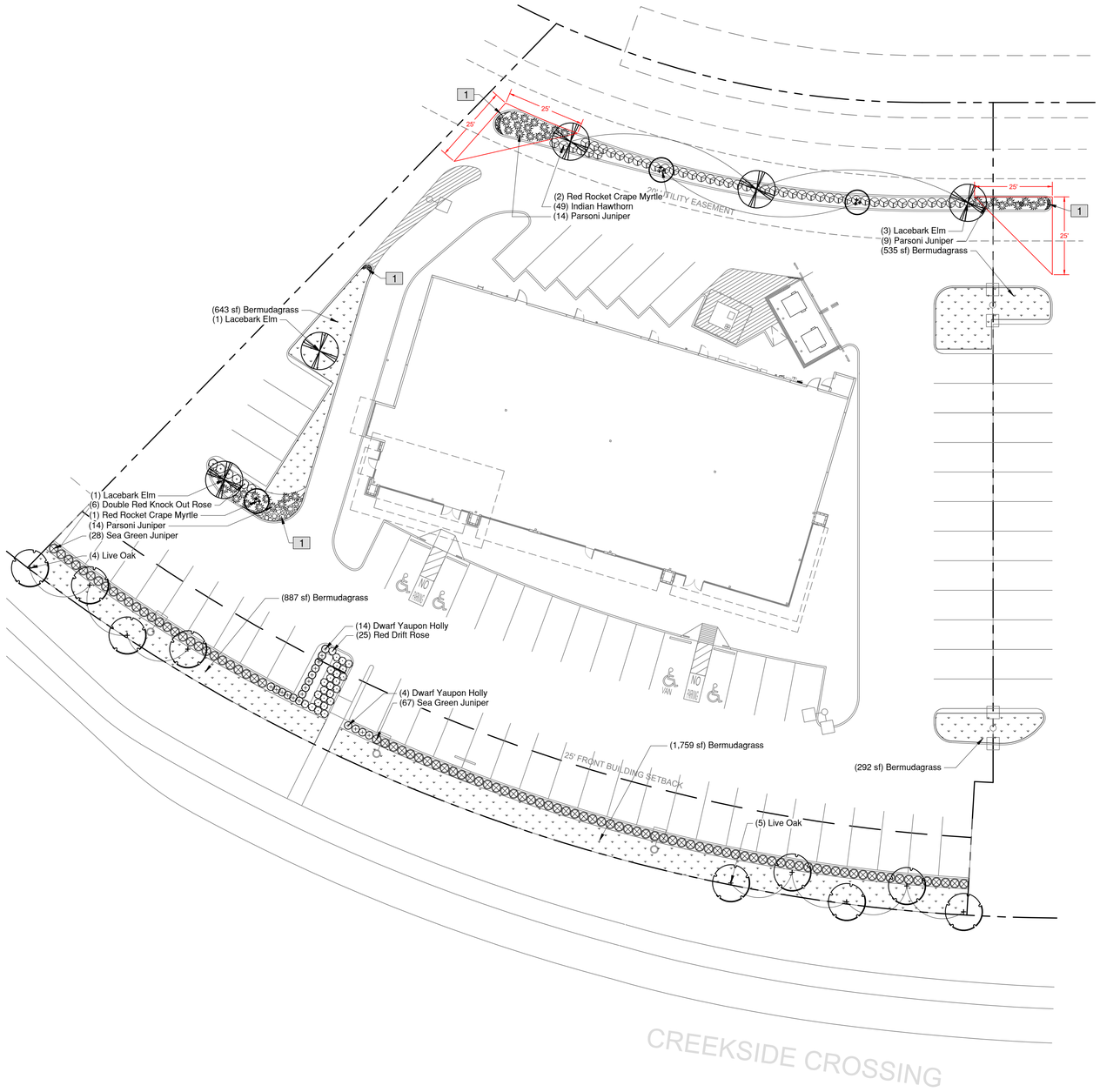
GENERAL LANDSCAPE NOTES:

1. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING LANDSCAPE UNTIL FINAL ACCEPTANCE OF ALL WORK ON JOB SITE. CONTRACTOR SHALL MAINTAIN CONDITIONS OF LAWN, BEDS AND PLANT MATERIAL THROUGHOUT CONSTRUCTION UNTIL 90 DAYS AFTER SUBSTANTIAL COMPLETION.
2. WORK SCHEDULING: CONTRACTOR SHALL SCHEDULE A PRECONSTRUCTION MEETING WITH LANDSCAPE ARCHITECT BEFORE PROCEEDING WITH ANY LANDSCAPING OR IRRIGATION WORK.IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY.
3. CONTRACTOR SHALL APPLY FOR AND PROCURE ALL REQUIRED PERMITS PRIOR TO COMMENCING WORK.
4. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. CONTACT ALL UTILITY COMPANIES MINIMUM 48 HOURS PRIOR TO ANY WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR BECOMING FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES, STRUCTURES, ETC. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COST INCURRED DUE TO DAMAGE OF THESE UTILITIES.
5. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN FORESEEN IN THE DESIGN. SUCH CONDITIONS SHALL BE BROUGHT UP TO THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY NECESSARY CHANGES DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER SUBCONTRACTORS ON THE JOBSITE AS REQUIRED TO COMPLETE CONSTRUCTION.
7. CONTRACTOR TO PROVIDE SAMPLES OF EACH SHRUB AND GROUNDCOVER SPECIES OR NURSERY SOURCE FOR APPROVAL BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. ALL PLANTS ARE TO BE SPECIMEN QUALITY, FULL POT AND HEAD, SYMMETRICAL FOLIAGE AND BRANCHING STRUCTURE. SHRUBS SHALL BE FULL TO GROUND. PLANT MATERIAL OF THE SAME SPECIES SHALL BE OBTAINED FROM THE SAME SOURCE. MATERIAL SHALL BE SHIPPED DIRECTLY FROM NURSERY AND NOT FROM CONTRACTOR'S HOLDING YARD AFTER AN EXTENDED PERIOD. THERE SHALL BE NO SUBSTITUTIONS WITHOUT WRITTEN CONSENT. LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY AND ALL PLANT MATERIAL THAT DOES NOT MEET SATISFACTORY EXPECTATIONS OF LANDSCAPE ARCHITECT.
8. ALL LANDSCAPE DEVIATIONS, INCLUDING SPECIES SUBSTITUTION, NOT APPROVED ON THIS PLAN MUST BE APPROVED BY THE GOVERNING AGENCY THROUGH PLAN SUBMITTAL.
9. CONTRACTOR SHALL PERFORM OWN TAKE-OFFS PER SYMBOLS AND AREAS ON PLANS. ANY DISCREPANCIES SHALL BE BROUGHT UP DURING THE BIDDING PROCESS. CONTRACTOR WILL BE HELD RESPONSIBLE FOR QUANTITIES OF SYMBOLS AND AREAS ON PLANS.
10. PLANTINGS LOCATED IN SITE TRIANGLE CONFORM TO REQUIREMENTS IN ORDINANCE SEC. 144-5.3

SHEET INDEX

#	PLAN NAME	DATE	ISSUE
L1.1	LANDSCAPE PLAN	7/9/25	FOR PRICING
L1.2	LANDSCAPE DETAILS	7/9/25	FOR PRICING
L1.3	LANDSCAPE SPECIFICATIONS	7/9/25	FOR PRICING
L2.1	IRRIGATION PLANS	7/9/25	FOR PRICING
L2.2	IRRIGATION DETAILS	7/9/25	FOR PRICING
L2.3	IRRIGATION SPECIFICATIONS	7/9/25	FOR PRICING

CITY TABULATIONS
CREEKSIDE CROSSING = 326'
326 /40 = 9 (1.5"CAL)TREES, 36 5G SHRUBS
9 TREES PROVIDED, 95 SHRUBS PROVIDED
(9) LIVE OAK 1.5" MIN. CAL., (95) 5g SEA GREEN JUNIPER
PARKING SPACES = 72 SPACES
81 SPACES/ 14 = 6 TREES REQUIRED
(5) 1.5" LACEBARK ELM, (1) 1.5" LIVE OAK PROVIDED



Date issued/revised

31 JULY 2024 - REVIEW
28 AUG. 2024 - 90% SUBMITTAL
19 NOVEMBER 2024 - FOR PERMIT
14 MARCH 2025 - FOR CONSTRUCTION
9 JULY 2025 - FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT
BRANDON S. M. BRANNON
2247
STATE OF TEXAS

7-9-25

OUTPARCEL 25-B

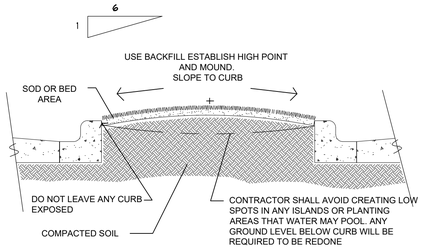
CREEKSIDE TOWN CENTER

323 CREEKSIDE CROSSING
NEW BRAUNFELS, TEXAS 78130

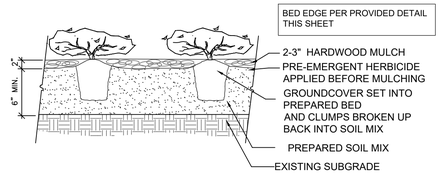
Project No. 24051
Drawn ER
Checked BS

Landscape Plan

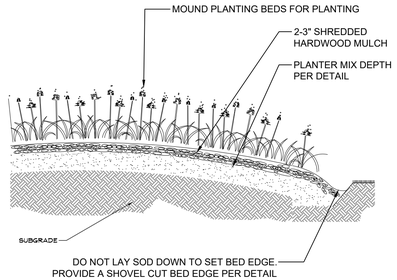
Sheet No. L1.1

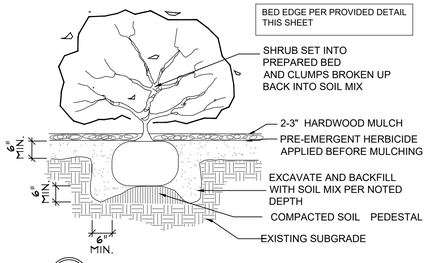


G – ISLAND PLANTING PREP
SCALE: NTS

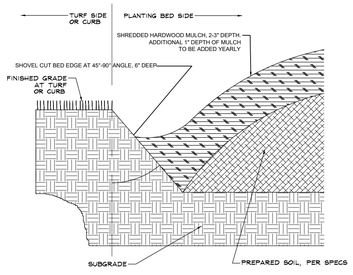


D – GROUNDCOVER PLANTING
SCALE: NTS

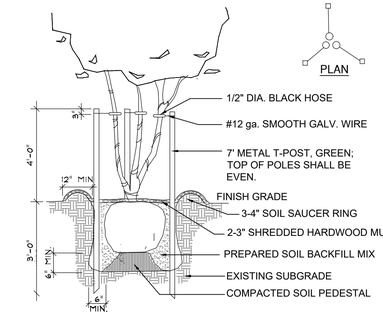




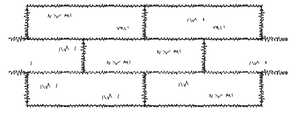
C – SHRUB PLANTING
SCALE: NTS



F – SHOVEL CUT BED EDGE
SCALE: NTS



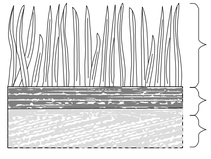
B – MULTI-STEM TREE PLANTING
SCALE: NTS



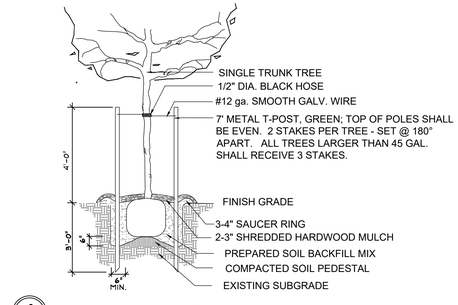
LAY SOD IN A STAGGERED PATTERN. BUTT THE STRIPS TIGHTLY AGAINST EACH OTHER. DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE ENDS AND TRIMMING PIECES.

SOD SHALL BE ROLLED INTO A SMOOTH, LEVEL AND FINISHED APPEARANCE. NO CLUMPS

APPEARANCE OF GOOD SOD



E – SOD PLANTING
SCALE: NTS



A – TREE PLANTING
SCALE: NTS

Date issued/revised

31 JULY 2024 - REVIEW
28 AUG. 2024 - 90% SUBMITTAL
19 NOVEMBER 2024 - FOR PERMIT
14 MARCH 2025 - FOR CONSTRUCTION
9 JULY 2025 - FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT
CHARLES M. BRANDEN
2247
STATE OF TEXAS

7-9-25

OUTPARCEL 25-B
CREEKSIDE TOWN CENTER

323 CREEKSIDE CROSSING
NEW BRAUNFELS, TEXAS 78130

Project No. 24051
Drawn ER
Checked BS

Landscape Details

Sheet No. L1.2

PLANTING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

Drawings and General Provisions of Contract, including General and Supplementary Conditions and all applicable specification sections, apply to this section.

1.02 DESCRIPTION OF WORK

A. This Section specifies the requirements for providing planting materials and their installation as indicated and scheduled. For grass installation refer to sodding section

1.03 QUALITY ASSURANCE

A. Installer: Installation of planting work shall be performed by a single firm specializing in landscape and planting work. Contractor shall be licensed by the Texas Association of Nurserymen, shall possess an agricultural certificate, shall be a licensed pest applicator, and shall have not less than 5 years of experience in this type of work.

B. Quality Control

1. Trees, Shrubs, and Groundcovers:

a. Provide plants of quantity, size, genus, species and variety shown and scheduled for planting work and complying with recommendations and requirements of ANSI Z60.1 " American Standard for Nursery Stock." Provide healthy, vigorous stock, grown in recognized nursery in accordance with good horticultural practice and free of disease, insects, eggs, larvae and defects such as knots, sun-scald, injuries, abrasions, or disfigurement.

b. Label each plant with securely attached waterproof tag bearing legible designation of botanical and common name.

2. Compliance: Ship planting materials with Certificates of Inspection as required by governing authorities. Comply with all applicable local, state, and federal requirements regarding materials, methods of work, and disposal of excess and waste materials.

3. Substitutions: Do not make substitutions unless approved in writing by Landscape Architect. If specified planting material is not obtainable, submit proof of non-availability to Landscape Architect together with proposal for use of equivalent material. Contractor shall submit proposal in bidding period or 3 weeks before installation as to not impact project completion or installation of other work.

4. Analysis and Standards: All packaged products shall be delivered in original manufacturer's sealed containers. For unpackaged materials, submit analysis by recognized laboratory made in accordance with methods established by the Association of Official Agriculture Chemists, wherever applicable.

5. Inspection: Notify Landscape Architect at least 2 weeks prior to installation, of location where materials that have been selected for planting may be inspected, either at place of growth or the site prior to planting. Plant material will be inspected for compliance with requirements for genus, species, variety, size and quality. Landscape Architect retains right to further inspect trees for size and conditions of balls and root systems, insects, injuries and latent defects, and to reject unsatisfactory or defective material at any time during progress of work. Contractor shall remove rejected trees immediately from site and replace with specified materials. Plant material not installed in accordance with Contract will be rejected.

C. Reference standards Applicable to this section:

1. ANSI: American National Standards Institute
a. Z60.1: Nursery Stock
2. Association of Official Agriculture Chemists
3. FS: Federal Specifications and Standards
a. Q-P-166E: Peat, Moss; Peat, Humus; and Peat, Reed-Sedge
4. NBS: National Bureau of Standards
a. PS23: Perlite Product Standard

1.04 SUBMITTALS

A. Work Schedule: Contractor shall submit a work schedule for all planting work prior to purchase and installation of plant material.

B. Certification:

1. Submit for Landscape Architect's review and approval, manufacturer's or vendor's certified analysis of soil amendments. Submit other data substantiating that materials comply with specified and indicated requirements.
2. Fertilizer certification shall be submitted for Landscape Architect's review and approval as to the chemical analysis of the fertilizer, a listing of the elements contained therein and their percentages.

C. Maintenance Instructions: Submit typewritten instructions, including manufacturer's recommendations and instructions recommending procedures to be established by Owner for maintenance of planting work. Submit instructions prior to expiration of contractor's required maintenance period.

D. Submittals: Contractor shall submit in writing materials used on jobsite. Provide company name of product or nursery source.

1.05 DELIVERY, STORAGE AND HANDLING

A. Packaged Materials: Deliver packaged materials in fully labeled original containers showing weight, analysis and names of manufacturer. Protect materials from deterioration during delivery, and while stored at site.

B. Plants:

1. Do not drop stock during delivery.
2. Materials shall not be pruned prior to installation unless otherwise approved by Landscape Architect in writing or to meet standards on plant list. Do not bend or bind-tie trees and shrubs in such a manner as to damage bark, break branches or destroy natural shape. Provide protective covering during delivery.
3. Deliver plants after preparation for planting has been completed and plant immediately. If planting is delayed more than 7 hours after delivery, set plants in shade, protect from weather and mechanical damage. Keep roots moist by covering with mulch, burlap or other acceptable means of retaining moisture, and water as needed.
4. Do not remove container grown stock from containers before time of planting and water immediately after delivery and prior to planting.
5. Plant material shall be shipped directly from source nursery. Material held in a stockyard prior to installation will be rejected.

1.06 JOB CONDITIONS

A. Work Scheduling: Proceed with and complete planting work in a timely manner, working within seasonal limitations for each kind of planting work required.

B. Planting time

1. Correlate planting with specified maintenance periods to provide maintenance from date of Substantial Completion.
2. Plan to frost-tender trees only after danger of frost is past or sufficiently before frost season to allow for establishment before first frost. Do not plant in frozen ground.
3. Plant trees, shrubs and groundcover after final grades are established and prior to planting of lawns, unless otherwise directed by Landscape Architect in writing. If planting occurs after lawn work, protect lawn areas and promptly repair damage to awns resulting from planting operations.

A. Utilities: Refer to engineering drawings and coordinate with Utility Contractor for location of utilities. Contractor shall be responsible for damage to existing utilities and structures.

B. Security: The Owner will not assume any responsibility for security of any materials, equipment, etc. during construction of the project until project acceptance.

C. Excavation: When conditions detrimental to plant growth are encountered, such as rubble fill, adverse drainage conditions beyond the scope of this contract, or obstructions, notify Landscape Architect of such conditions, immediately and before planting.

D. Pollution Control: Control dust caused by planting operations. Dampen surfaces as necessary. Comply with pollution control regulations of governing authorities.

1.07 SUBSTANTIAL COMPLETION AND FINAL ACCEPTANCE

A. Substantial Completion notice for planting work will be issued by Landscape Architect only for entire planting and landscape work.

B. Landscape contractor will be responsible for ongoing maintenance until final acceptance.

C. Substantial Completion notice will be issued only after Owner and Landscape Architect inspect and approve all required planted materials and grassed areas.

D. Final acceptance notice will be issued only after Owner and Landscape Architect inspect and approve all planting work as in accordance with the Contract Documents.

1.08 SPECIAL PROJECT WARRANTY

A. Contractor shall furnish written warranty of trees, shrubs and groundcover for 12 months after date of final acceptance, against defects including death and unsatisfactory growth, except for defects resulting from neglect by Owner or abuse or damage by others.

B. Remove and replace shrubs and groundcover found to be dead or in unhealthy condition during warranty period. Replace shrubs and groundcover which are in doubtful condition at end of warranty period. However, if in the opinion of Owner, such doubtful material may survive, Contractor shall extend the warranty period for a full growing season. Owner will determine which items are in doubtful condition.

C. Another inspection will be conducted by Owner, at end of extended warranty period to determine acceptance or rejection.

PART 2 PRODUCTS

2.01 MATERIALS

A. Fertilizer

1. Granular fertilizer shall be a commercial fertilizer, uniform in composition, free flowing, and suitable for application with approved equipment. Fertilizer which has been exposed to high humidity and moisture, has become caked or otherwise damaged making it unsuitable for use, will not be acceptable. Application shall be Osmocote 13. 13. 13 + Iron by Sierra Chemical, 1-800-492-8255, 1001 Yosemite Dr. Milpitas, CA 95035, or approved equal. Broadcast rototill fertilizer at the rate of 3 lbs. Actual nitrogen per 1000 square feet into prepared planting soil.

A. Sharp Sand: Sand shall be thoroughly washed, coarse grade shape, construction or brick sand, free of clay balls, weeds, and grass. So-called cushion sand, blow sand, or creek silt is not acceptable for substitution where sharp sand is specified.

B. Herbicide

1. Pre-emergent herbicide shall be Eptam 5G or approved equal.
2. Contact herbicide shall be Roundup by Monsanto, or approved equal.

D. Bark Mulch for top dressing: Organic mulch free from deleterious materials and suitable for top dressing of trees, shrubs or plants. Mulch shall be composted, well rotted, shredded hardwood mulch, dark brown in color. Enriched Bark Mulch for bed prep shall be as above with additional organic of peat and/or manure.

E. Root Stimulator: Shall be Hi-Yield Root Stimulator 5-12-3, by Voluntary Purchasing Group, P. O. Box 460, Bonham, TX, 75418, (214) 583-5501, or approved equal. Spreader sticker as needed.

F. Fire Ant control: Durzban or 1% Diazanon Granular as manufactured by Green Light Projects Co., San Antonio, TX, 78217 or Logic by PBI Gordon, Kansas City, MO.

G. Insecticide: Lindane with Adjuvant distributed by Esco Distributors, 514 W. 25th, Street, Houston, TX, 77008, (713) 864-7771.

H. Planting Backfill Mix: Shall be 33% topsoil, 33% sharp sand, and 33% enriched bark mulch or approved commercially available planter's soil mix. Add fertilizer as per specifications. Contractor shall submit source or sample to Landscape Architect.

I. Topsoil

1. Provide topsoil which is fertile, friable, natural loam, surface soil, free of subsoil, clay lumps, brush, weeds and other litter, and free of roots, stumps, stones larger than 2 inches in any dimension and other extraneous or toxic matter harmful to plant growth.
2. Obtain topsoil only from naturally, well-drained sites where topsoil occurs in a depth of not less than 4 inches. Topsoil shall not be collected from sites that are infected with growth of, or the reproductive parts of noxious weeds, especially nut grass. Topsoil shall not be stripped, collected or deposited while wet. Topsoil shall not be excessively acid or alkaline or contain toxic substances which may be harmful to plant growth. Topsoil shall be without admixture of subsoil.

2.02 PLANT MATERIALS

A. Shrubs and Groundcover: Provide specimen quality plant material as described in Construction Documents. Each individual species of plant material shall be obtained and provided from a single source.

PART 3 EXECUTION

3.01 PREPARATION

A. Grading

1. Strip existing vegetation and soil in areas to receive planting and grass to depth shown on drawings. Backfill with topsoil and planting backfill mix to depth shown on drawings. Prepare beds to ensure plant aterial is not planted in ponderin water and avoid "wet feet".
2. Perform grading within Contract limits, including adjacent transition areas, where required, to new elevations, levels, and contours indicated. Provide subgrade surfaces parallel to finished surface grades. Provide uniform levels and slopes.
3. Grade surface to ensure area drain away from structures and to prevent ponding and pockets of surface drainage. Provide subgrade surfaces free from irregular surface changes. Provide subgrade surface free of exposed boulders or stones exceeding 4 inches in greatest dimension in paved areas; 2 inches lawn areas.
4. Provide adequate drainage of the working area at all times.
5. Fine grade topsoil eliminating rough and low areas to ensure positive drainage. Maintain levels, profiles, and contours of subgrades.
6. Remove stones, roots, weeds, and debris while raking topsoil. Rake surface clean of stones 1 inch or larger in any dimension and of all debris. Place planting backfill mix to depth specified on drawings.
7. All finished grades shall meet line and grade of pavement. Finished grades (top of soil prior to hydromulch) shall be maximum of 1 inch below walkway pavement surface. Grade all slopes from rear of landscape easement or center of medians to walkways and curbs at a minimum of 2 percent slope.

B. Plant Layout: Layout individual tree locations of trees to be machine moved by others and areas for multiple plantings as shown on drawings. In case of conflicts or non-contractual conditions, notify Landscape Architect before proceeding with the work.

A. Preparation of Planting Backfill Mix & Bed prep

1. Mix specified soil amendments and fertilizers with topsoil at rates indicated. Amendments shall be incorporated into soil as a part of the soil preparation process prior to fine grading and planting. Each amendment material shall be broadcast or spread evenly at the specified rate over the planting area and rotofilled. Amendments shall be thoroughly incorporated into the topsoil until amendments are pulverized and have become a homogeneous layer of soil ready for planting. Incorporation and mixing shall be accomplished by mechanical means for planting beds, mix planting soil prior to backfilling.

2. Planting bed areas shall be outlined with a shovel cut edge per detail unless plans call for special border edging.

3.02 PLANTING

A. Excavation for Shrubs

1. Excavate pits, beds and trenches with vertical sides and with bottom of excavation slightly raised at center to provide proper drainage.
2. Make excavations at least half again as wide as the ball diameter and equal to the ball depth, plus 3" allowance for setting of ball on a layer of compacted backfill.
3. Dispose of subsoil removed from planting excavations. Do not mix with planting soil or use as backfill.

B. Planting Large Shrubs and Trees

1. Set stock on layer of compacted planting soil mixture, plumb and in center of pit at same elevation as adjacent finished planting grades. Place fertilizer tablets evenly spaced in hole at specified rate. Place additional planter's mix around base and sides of ball and work each layer to settle backfill and eliminate voids and air pockets. When excavation is approximately 2/3 full, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed. Dish top of backfill to allow for mulching.
2. Prune, thin out, and shape shrubs in accordance with standard horticultural practice. Prune shrubs to retain natural character. Remove and replace excessively pruned or misformed stock resulting from improper pruning.

C. Planting Shrubs, Groundcover and Seasonals

1. Excavate hole as necessary to accommodate root ball.
2. Place fertilizer in hole according to recommended rate. Backfill hole with planter's mix. Water after planting to remove voids and place additional prepared soil to cover root ball if necessary.
4. Broadcast pre-emergient herbicide before mulching at the applicable rate.
3. Mulch entire planting bed areas with 2-3 inches dark brown bark mulch spread consistently and evenly across root balls and entire planting bed areas.

3.03 CLEANUP AND PROTECTION

A. During planting work, keep pavements clean and work area in an orderly condition. Sweep site and remove trash at end of each workday as necessary.

B. Protect planting work and materials from damage due to planting operations, operations by other contractors and trades and trespassers. Maintain protection during installation periods. Treat, repair re replace damaged planting work as directed by Landscape Architect.

C. Stockpile, haul from site, and legally dispose of waste materials and debris. Accumulation will not be permitted. Maintain haul and disposal routes clear, clean and free of debris. On-site burning of combustible cleared materials will not be permitted.

D. Upon completion of work, clean areas within Contract limits; remove tools, supplies and equipment Wash down curbs and pavement areas. Scrub curbs and walks as necessary to insure a clean surface. Provide site clean and free of materials and suitable for use as intended.

3.04 MAINTENANCE

A. Contractor shall correctly maintain the planting work throughout the installation process and throughout the landscape maintenance period as specified.

3.05

A. While planting work is completed and at the completion of maintenance period, Owner will make an inspection to determine acceptability.

B. When inspected planting work does not comply with the Contract Document requirements, replace rejected work and continue specified maintenance until reinspected by Owner and found to be acceptable. Contractor shall remove rejected plants and mat4erials promptly from site.

END OF SECTION

SODDING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and all applicable specification sections, apply to this section.

1.02 DESCRIPTION

A. Provide sodding as specified and as indicated.

1.03 SUBMITTALS

A. Sod Certification: Certification shall be submitted from the sod nursery as to the grass species, location of the field from which the sod has been stripped and the date of stripping. Certification shall accompany the delivery of the sod.

B. Fertilizer Certification: Certification shall be submitted from the fertilizer manufacturer as to the chemical analysis of the fertilizer, a listing of the elements contained therein and their percentages. Certification shall also indicate that the fertilizer is in accordance with the requirements of the Texas Fertilizer Law.

1.04 PRODUCT HANDLING

A. Sod Delivery: Sod shall be delivered on pallets with the root system protected from exposure to wind and sun. Stripping and delivery shall be timed so that sod will be placed within 48 fours of stripping.

B. Fertilizer Delivery: Fertilizer shall be delivered in the manufacturer's unopened containers, labeled to indicate the manufacturer's name and product identification. Containers shall be stored protected from ground contact and from the elements.

1.05 JOB CONDITIONS

A. Sod shall be placed during the period between the last freeze in the spring and 6 weeks prior to the average date for the first freeze in the fall according to the National Weather Service for the area in which the work is located.

1.06 GUARANTEE

A. A written guarantee shall be provided guaranteeing the sodded areas are in a healthy, vigorous, undamaged condition for a period of 90 days beginning on the date of final acceptance. Guarantee shall provide for filling, leveling, and repairing eroded areas, or resodding areas exhibiting lack of healthy growth.

PART 2 PRODUCTS

2.01 SOD

A. Sod shall be nursery grown as specified on plans and having a healthy, virile root system of dense, thickly matted roots throughout the soil of the sod for a minimum thickness of 1 inch. Sod shall be free of noxious weeds and undesirable native grasses. Soil attached to the sod shall be free of stones and debris.

B. Sod shall have been mowed within 7 days of being stripped. Sod shall be provided in rectangular pads of not less than 12 inches nor more than 24 inches. Dry sod will be rejected.

2.02 TOPSOIL

A. Provide topsoil which is fertile, friable, natural loam, surface soil, free of subsoil, clay lumps, brush, weeds and other litter, and free of roots, stumps, stones larger than 2" in any dimension and other extraneous or toxic matter harmful to plant growth.

B. Obtain topsoil only from naturally, well-drained sites where topsoil occurs in a depth of not less than 4". Topsoil shall not be collected from sites that are infected with growth of or the reproductive parts of noxious weeks, especially nut grass. Topsoil shall not be stripped, collected or deposited while wet. Topsoil shall not be excessively acid or alkaline or contain toxic substances which may be harmful to plant growth. Topsoil shall be without admixture of subsoil.

C. When topsoil is not required, native soil shall be scratched or raked before laying.

2.03 FERTILIZER

A. Fertilizer shall be granulated fertilizer with an analysis of 16-8-8 + iron, unless otherwise indicated. The figures in the analysis represent the percent of nitrogen, phosphoric acid and potash nutrients respectively.

B. Fertilizer shall be uniform in composition and dry. Fertilizer shall be furnished in unopened containers, labeled to indicate the analysis of the contents. Caked or otherwise damaged material will be rejected.

PART 3 EXECUTION

3.01 INSPECTION

A. Surfaces indicated to be sodded shall be inspected to verify that all preceding work in the area has been completed. Sodding shall not start until all preceding work has been completed.

3.02 SODDING

A. Preparation

1. Strip existing vegetation and 1 inch of existing soil from all areas to receive sod not stripped and graded under previous work or contract.
2. After stripping, loosen soil to a depth of 1-1/2 inches prior to laying sod. Remove all stones, roots, vegetation, rubbish, debris and other foreign matter 1" in diameter or larger from the top 2" of soil. No foreign matter may be buried on site. Hand rake to achieve smooth grade.
3. Fertilizer shall be uniformly spread over the topsoil at the average rate of 400 lbs. per acre and shall be raked into the topsoil to a full 2-inch depth.
4. Immediately prior to placing sod, the fertilized topsoil substrate shall be lightly moistened.

B. Installation

1. All sod shall be carefully laid in parallel rows in a smooth manner, alternating all sod joints. Fit sod strips tightly together so that no joints are visible and tamp firmly. Cut pieces of sod to fill any voids left.
2. Water sod immediately after planting, slowly but thoroughly, to secure at least six (6) inches penetration into the soil below the sod. Do not allow the blades of grass to wilt. The sodded area shall be rolled to form a thoroughly even, solid mat. Any voids left in block sodding shall be filled with cut sod pieces and/or topsoil.
3. Follow the completion of the installation, the sod shall be watered in an amount and as often as necessary to maintain healthy growth of the grass.
4. Treat entire areas of sod for fire ants with Durzban as per manufacturer's instructions.

3.03 MAINTENANCE OF SODDED AREAS

A. Contractor shall correctly maintain the sodded areas throughout the installation.

Contractor shall be responsible for care and maintenance of entire project.

END OF SECTION

HYDROMULCHING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and all applicable specification sections, apply to this section.

1.02 DESCRIPTION

A. This Section specifies the requirements for preparing ground and providing seed, topsoil, water and fertilizer necessary for seeding.

1.03 SUBMITTALS

A. Seed Certification: Certification shall be submitted from the supplier for each type of seed specified. Certification shall accompany the delivery of the seed and shall indicate that the seed is in accordance with the requirements of the Texas Seed Law.

B. Fertilizer Certification: Certification shall be submitted from the fertilizer manufacturer as to the chemical analysis of the fertilizer, a listing of the elements contained therein and their percentages. Certification shall also indicate that the fertilizer is in accordance with the requirements of the Texas Fertilizer Law.

1.04 PRODUCT HANDLING

A. Seed Delivery: Each variety of seed shall be delivered in separate bags or containers, labeled to indicate pure live seed, name and type of seed.

B. Fertilizer Delivery: Fertilizer shall be delivered in the manufacturer's unopened containers, labeled to indicate the manufacturer's name and product identification. Containers shall be stored protected from ground contact and from the elements.

1.05 JOB CONDITIONS

A. Hydromulching of grass shall not occur in planting periods other than the following, unless permission is granted by Owner: April 15 - September 30.

1.06 GUARANTEE

A. A written guarantee shall be provided guaranteeing to maintain the treated areas in a healthy, vigorous, undamaged condition for a period of 90 days beginning on the date of written acceptance of the work.

B. Contractor shall guarantee a full stand of grass, 95% cover with no bare areas in excess of 6 inches diameter.

C. Guarantee shall provide for timely filling, leveling and repairing eroded areas, reseeding areas exhibiting lack of healthy growth and mowing as necessary to maintain a neat appearance.

PART 2 PRODUCTS

2.01 MATERIALS

A. Type: Turfgrass seed shall be appropriate to season. The seed shall be harvested within 1 year prior to planting, free of Johnsongrass, field bind weed, dodder seed, and free of other weed seed to the limits allowable under the Federal Seed Act and applicable seed laws. The seed shall be extra fancy grade, treated with fungicide, and shall have a germination and purity that will produce, after allowance for Federal Seed Act tolerances, a pure live seed content of not less than 85 percent, using the formula: purity percent times (germination percent times plus hard or sound seed percent). Seed shall be labeled in accordance with U.S. Department of Agriculture rules and regulations.

B. Amounts

Item	Rate Per 1000
Seed	As per season, see below
Fertilizer	12 lbs.
Water	As needed
Real Virgin Wood Fiber Mulch	Minimum 50 lbs. to achieve covering of seeded area

C. Spring/Summer Planting (April 15 to October 1)

Hulled Bermuda	2-lbs./1000 sq. ft.

D. Fall/Winter Planting (October 1 to April 15)

Unhulled Bermuda	1 ½ lbs./1000 sq. ft.
Annual Ryegrass	5-lbs./1000 sq. ft.

2.02 TOPSOIL

A. Topsoil shall be friable clay loam surface soil reasonably free of clay lumps, stones, weeds, roots and other objectionable material, a product of on-site operations.

2.03 FIRE ANT INSECTICIDE

A. Broadcast fire ant insecticide over the entire area of seeding as per Section 02480 - Planting.

2.04 FERTILIZER FOR FERTILIZING

A. (Tank Mix) shall be 13-13-13 grade, pelleted, uniform in composition, free flowing, and suitable for application with approved equipment. The fertilizer shall be delivered to the site on bags or other convenient containers, each fully labeled, conforming to the applicable state fertilizer laws, and bearing the name or trademark and warranty of the producer.

2.05 WOOD CELLULOSE FIBER MULCH

Wood cellulose fiber mulch, for use with the hydraulic application of grass seed and fertilizer, shall consist of specially prepared wood cellulose fiber. It shall be processed in such a manner that will not contain germination or growth inhibiting factors. It shall be dyed an appropriate color to allow visual metering of its application. The wood cellulose fibers shall have the property of becoming evenly dispersed and suspended when agitated in water. When sprayed uniformly on the surface of the soil, the fibers shall form a blotter-like groundcover which readily absorbs water and allows infiltration to the underlying soil. Weight specifications from suppliers for all applications shall refer only to air dry weight of the fiber, a standard equivalent to 19 percent moisture. The mulch material shall be supplied in packages having a gross weight not in excess of 100 pounds and be marked by the manufacturer to show the dry weight content. Suppliers shall be prepared to certify that laboratory and field testing of their product has been accomplished and that it meets all of the foregoing requirements.

2.06 SLURRY MIX COMPONENTS PER ACRE

Wood Cellulose Fiber Mulch	2,000 pounds
Grass Seed	As specified
Fertilizer (13-13-13)	As specified

PART 3 EXECUTION

3.01 INSPECTIONS

A. Surfaces indicated to be seeded shall be inspected to verify that all preparatory work in the area has been completed. Seeding shall not start until all preparatory work has been completed. Requests for inspections shall be made at least two days prior to anticipated date of inspection.

3.02 PREPARATION

A. All areas to receive seed shall be stripped and/or treated with a contact herbicide prior to seeding as necessary to remove weeds.

B. Areas to receive seeding shall be loosened by manual or mechanical means to a depth of 1-1/2 inches, leveled and fine graded by hand raking. All stone (1" in diameter and larger in the top 2" of soil) are to be removed, tree stumps, brush, roots, vegetation, rubbish and other foreign matter shall be removed from the site. No foreign matter may be buried on the site. All tree stumps must be removed to a depth of two (2) feet below finish subgrade.

3.03 APPLICATION

A. Special Mulching Equipment and Procedures: Hydraulic equipment used for the application of fertilizer, seed, and slurry of prepared wood fiber mulch shall have a built-in agitation system with an operating capacity sufficient to agitate, suspend and homogeneously mix a slurry containing up to forty (40) pounds of fiber plus a combined total of seventy (70) pounds of fertilizer solids for each one hundred (100) gallons of water. The slurry distribution lines shall be large enough to prevent stoppage. The discharge line shall be equipped with a set of hydraulic spray nozzles which provide even distribution of the slurry on the slopes to be seeded. The slurry tank shall have a minimum capacity of eight hundred (800) gallons and shall be mounted on a traveling unit which may be either self-propelled or drawn with a separate unit which will place the slurry tank and spray nozzles within sufficient proximity to the areas to be seeded so as to provide uniform distribution without waste. The Owner's Representative may authorize equipment with smaller tank capacity provided that the equipment has the necessary agitation system and sufficient pump capacity to spray the slurry in a uniform coat.

B. Mixing: Care shall be taken that the slurry preparation takes place on the site of the work. Spraying shall commence immediately when the tank is full.

C. Operators of hydromulching equipment shall be thoroughly experienced in this type of application. Apply specified slurry mix in motion to form a uniform mat at specified rate. The operator shall spray the area with a uniform, visible coat by using the green color of the wood pulp as a guide. Keep hydromulch within areas designated and keep from contact with other plant material. Slurry mixture which has not been applied within four (4) hours of mixing shall not be used and shall be removed from the site.

D. After installation, the Contractor shall not operate any equipment over the covered area. Immediately after application, thoroughly wash off any plant material, planting areas, or paved areas not intended to receive slurry mix. Keep all paved and planting areas clean during maintenance operations.

E. Seeded Areas: If, in the opinion of the Landscape Architect, unplanted skips and areas are noted after hydromulching, the Contractor shall be required to seed the planted areas with the grasses that were to have been planted at no additional cost to the Owner.

3.04 MAINTENANCE OF SEEDED AREAS

A. Seeded areas shall be maintained in good condition throughout the installation process and throughout the maintenance period as specified in Section 02493, Exterior Landscape Maintenance.

B. Upon completion of work, clean areas within Contract limits; remove tools, supplies and equipment. Wash down curbs and pavement areas. Scrub curbs and walks as necessary to insure a clean surface. Provide site clean and free of materials and suitable for use as intended.

END OF SECTION

CONTRACTOR SHALL PROVIDE SUBMITTALS IN WRITING OR SAMPLES FOR THE FOLLOWING:
1. PICTURES AND/OR LIST NURSERY SOURCE WITH SIZES FOR PLANT MATERIAL
2. SOURCE AND DEPTH OF PLANTER'S MIX WITH ADDITIVES
3. SOURCE AND DEPTH OF HARDWOOD MULCH

Date issued/revised

31 JULY 2024 - REVIEW
28 AUG. 2024 - 90% SUBMITTAL
19 NOVEMBER 2024 - FOR PERMIT
14 MARCH 2025 - FOR CONSTRUCTION
9 JULY 2025 - FOR PRICING

OSBORN & VANE ARCHITECTS, inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT
CHARLES M. BRANNEN
2247
STATE OF TEXAS

7-9-25

OUTPARCEL 25-B

CREEKSIDE TOWN CENTER

323 CREEKSIDE CROSSING
NEW BRAUNFELS, TEXAS 78130

Project No. 24051
Drawn ER
Checked BS

Landscape Specifications

Sheet No. L1.3

NOTES:

1. PRESSURE TEST TO DETERMINE STATIC PRESSURE AT NEW METER SHALL BE PERFORMED PRIOR TO INSTALLATION OF IRRIGATION SYSTEM AND SHALL BE REPORTED TO LANDSCAPE ARCHITECT.

2. QTY'S PROVIDED ARE BASED ON DIAGRAMMATIC DRAWING AND WILL DIFFER IN FIELD. CONTRACTOR SHALL PROVIDE THEIR OWN TAKEOFFS FOR BIDDING AND CONSTRUCTION.

3. Irrigation system shall be installed by a Licensed Irrigator. Irrigator shall provide an as–built drawing locating mainline and valves with installed calculations after construction. This plan is to be used as a reference and for bidding purposes only.

4. Except as otherwise noted, the contractor shall procure permits and licenses, pay charges and fees and give notices necessary and incidental to the due lawful prosecution of the work. The contractor shall make arrangements and pay costs for installation of irrigation water meters at the approximate locations. Verify with Owner's Representative for the addresses for each.

5. The contractor shall follow the applicable City/County Department of Public Works specifications for installation of water meter and hot tapping.

6. The contractor shall notify pertinent utility companies 48 hours prior to construction for current utility locations. Extreme care shall be exercised in excavating and working near existing utilities. Contractor shall verify the location and condition of utilities and be responsible for damage to utilities.

7. The contractor shall at all times protect his work from damage and theft, and replace all damaged or stolen parts until the work is accepted in writing by owner.

8. The contractor shall not willfully install the sprinkler system as shown on the drawings when it is obvious in the field that obstructions, grade differences or differences in the area's dimensions exist that might not have been in the design. Such obstructions or differences shall be brought to the attention of the Landscape Architect. In the event this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions necessary.

9. The contractor shall clearly mark exposed excavations and materials and equipment. Cover or barricade trenches when contractor is not on site.

10. For purposed of clarity, some irrigation lines and valves may be shown outside of property, easements, or in paved areas. Locate all lines and valves in planting area unless otherwise noted.

11. Adjust arc of irrigation heads for even coverage. Head layout should be as per plans.

12. Avoid existing or future location of tree balls when laying pipe.

13. The contractor shall stake controller and PVB locations for approval by Landscape Architect or owner's representative prior to their installation.

14. Patch and repair any and all damage done to existing plant material and grading during installation of this work.

15. Contractor shall provide original and 2 copies of Pressure Vacuum Breaker certification to the Owner at completion of project along with as–built drawings.

16. Irrigation cycles shall be set to take place prior to sunrise and not to interfere with business unless otherwise instructed by the Owner, except during visits of grounds maintenance personnel during such visits the irrigation system may be operated as desired by those personnel.

17. Do not program controllers operating on the same water meter to water during the same time period so as to prevent over–draft of water meters. Do not switch controller to "off" at any time, except as required for testing and for maintenance operations.

18. Complete sprinkler system servicing shall be performed as required to maintain sprinklers in correct operating condition including all required labor. Check shall include visual "inspection" of all accessible components of the irrigation system including but not limited to controllers, remote control valves, quick couplers, and heads.

19. Adjust the sprinklers to avoid damage to windows, building and sign walls also adjust heads to keep water off the street. Make repairs and alterations to the sprinkling system and water lines. All sprinkler repairs such as cleaning of heads or breaks caused by the Contractor shall be the Contractor's responsibility.

20. The contractor, in the end, shall install a fully functional irrigation system with full coverage. The purpose of this plan is for bidding reference and a guide. However, any changes shall be brought to the attention of the Landscape Architect. In the event this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions necessary.

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
EST LCS RCS CST SST	Rain Bird 1804 15 Strip Series Turf Spray 4.0\" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2\" NPT Female Threaded Inlet.	1	30
Q H F	Rain Bird 1804 5 Series MPR Turf Spray 4.0\" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2\" NPT Female Threaded Inlet.	9	30
Q T H F	Rain Bird 1804 8 Series MPR Turf Spray 4.0\" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2\" NPT Female Threaded Inlet.	4	30
Q T H F	Rain Bird 1804 10 Series MPR Turf Spray 4.0\" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2\" NPT Female Threaded Inlet.	19	30
Q T H TQ F	Rain Bird 1804 12 Series MPR Turf Spray 4.0\" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2\" NPT Female Threaded Inlet.	3	30
Q T H TQ F	Rain Bird 1804 15 Series MPR Turf Spray 4.0\" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2\" NPT Female Threaded Inlet.	2	30
A B C D E 12 15 18	Rain Bird 1804 ADJ Turf Spray 4.0\" Pop-Up Sprinkler with Co-Molded Wiper Seal. 1/2\" NPT Female Threaded Inlet.	1	30
EST LCS RCS CST SST	Rain Bird 1812 15 Strip Series Shrub Spray 12" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	34	30
Q H F	Rain Bird 1812 5 Series MPR Shrub Spray 12" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	19	30
Q T H F	Rain Bird 1812 8 Series MPR Shrub Spray 12" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	11	30
4 6 8 10 12 15 18	Rain Bird 1812 ADJ Shrub Spray 12" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	1	30
25 50 10 20	Hunter AFB 10 Adjustable Flow Bubbler, 1/2" FIPT, stainless steel screw adjustment.	14	30

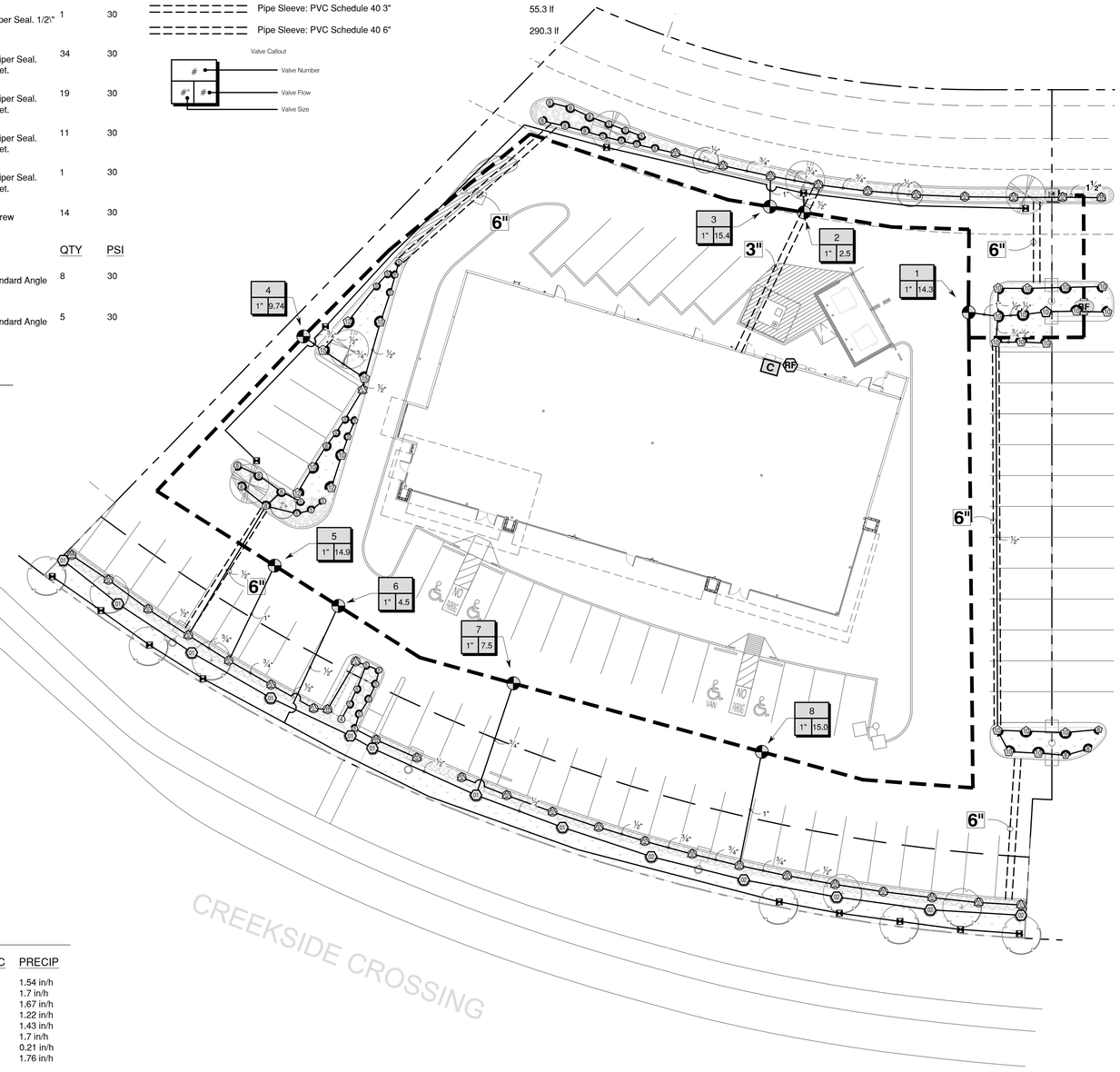
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
10	Hunter PGP-ADJ 01 Turf Rotor, 4" Pop-Up. Adjustable and Full Circle. Standard Angle Red Nozzle. Lower Precipitation Rate.	8	30
02	Hunter PGP-ADJ 02 Turf Rotor, 4" Pop-Up. Adjustable and Full Circle. Standard Angle Red Nozzle. Lower Precipitation Rate.	5	30

CRITICAL ANALYSIS

Generated:	2025-07-08 13:10
P.O.C. NUMBER: 01	
Water Source Information:	
FLOW AVAILABLE	
Water Meter Size:	1"
Flow Available	37.5 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	60 PSI
Elevation Change:	5.00 ft
Service Line Size:	3"
Length of Service Line:	20 ft
Pressure Available:	58 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	15.38 GPM
Flow Available at POC:	37.5 GPM
Residual Flow Available:	22.12 GPM
Critical Station:	1
Design Pressure:	30 PSI
Friction Loss:	5.51 PSI
Fittings Loss:	2.2 PSI
Elevation Loss:	0 PSI
Loss through Valve:	2.28 PSI
Pressure Req. at Critical Station:	40.0 PSI
Loss for Fittings:	0.06 PSI
Loss for Main Line:	0.61 PSI
Loss for POC to Valve Elevation:	0 PSI
Loss for Backflow:	11.4 PSI
Loss for Water Meter:	1.13 PSI
Critical Station Pressure at POC:	53.2 PSI
Pressure Available:	58 PSI
Residual Pressure Available:	4.81 PSI

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	Rain Bird PEB 1" 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration.	8
BF	Febco 860 1-1/2" Reduced Pressure Backflow Preventer	1
C	Hunter IC-1200-PL Modular Controller, 12 stations, Outdoor Model, Plastic Cabinet. Commercial Use. With one ICM-600 module included.	1
RF	Hunter RFC Rain and freeze sensor, with conduit installation, mount as noted. Normally closed switch.	1
M	Water Meter 1"	1
	Irrigation Lateral Line: PVC Class 200 SDR 21 1/2"	1,974 lf
	Irrigation Lateral Line: PVC Class 200 SDR 21 3/4"	187.7 lf
	Irrigation Lateral Line: PVC Class 200 SDR 21 1"	80.9 lf
	Irrigation Mainline: PVC Schedule 40 1 1/2"	830.1 lf
	Pipe Sleeve: PVC Schedule 40 3"	55.3 lf
	Pipe Sleeve: PVC Schedule 40 6"	290.3 lf

Valve Callout



VALVE SCHEDULE

NUMBER	MODEL	SIZE	TYPE	GPM	WIRE	DESIGN PSI	FRICTION LOSS	VALVE LOSS	PSI	PSI @ POC	PRECIP
1	Rain Bird PEB	1"	Turf Spray	14.33	136.1	30	7.71	2.28	40.0	53.2	1.54 in/h
2	Rain Bird PEB	1"	Bubbler	2.5	59.3	30	1.02	1.45	32.5	43.7	1.7 in/h
3	Rain Bird PEB	1"	Shrub Spray	15.38	59.3	30	3.87	2.39	36.3	50.2	1.67 in/h
4	Rain Bird PEB	1"	Turf Spray	9.74	230.2	30	2.03	1.79	33.8	46.1	1.22 in/h
5	Rain Bird PEB	1"	Shrub Spray	14.88	338.7	30	4.84	2.34	37.2	51.2	1.43 in/h
6	Rain Bird PEB	1"	Bubbler	4.5	361.9	30	5.77	1.65	37.4	48.8	1.7 in/h
7	Rain Bird PEB	1"	Turf Rotor	7.5	421.4	30	4.97	1.75	36.7	48.6	0.21 in/h
8	Rain Bird PEB	1"	Shrub Spray	15.01	348.6	30	4.28	2.35	36.6	50.7	1.76 in/h
	Common Wire				830.1						

Date issued/revised

31 JULY 2024 - REVIEW
28 AUG. 2024 - 90% SUBMITTAL
19 NOVEMBER 2024 - FOR PERMIT
14 MARCH 2025 - FOR CONSTRUCTION
9 JULY 2025 - FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT
CHARLES M. BRANHAM III
2247
STATE OF TEXAS
7-9-25

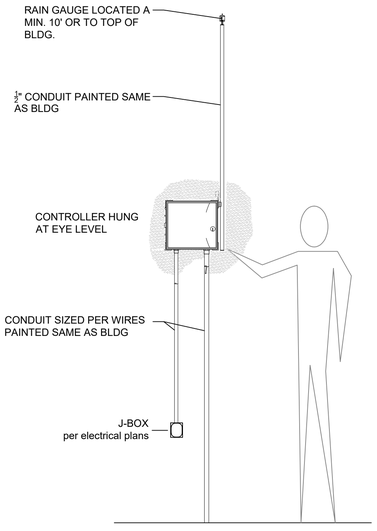
OUTPARCEL 25-B
CREEKSIDE TOWN CENTER

323 CREEKSIDE CROSSING
NEW BRAUNFELS, TEXAS 78130

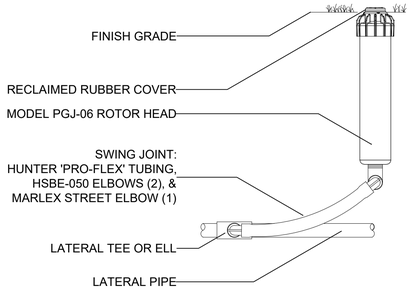
Project No. 24051
Drawn ER
Checked BS

Irrigation Plan

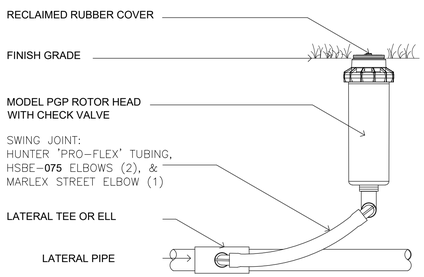
Sheet No. L2.1



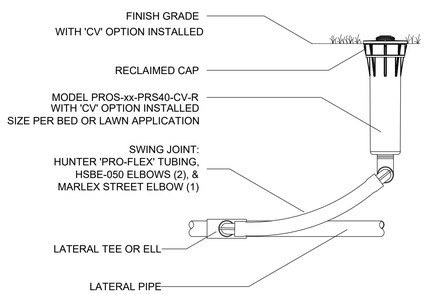
F – CONTROLLER MOUNTING
NTS



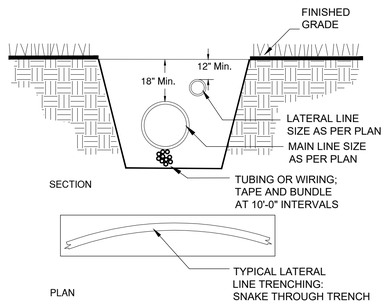
K – POP-UP ROTOR / HUNTER PGJ
NTS



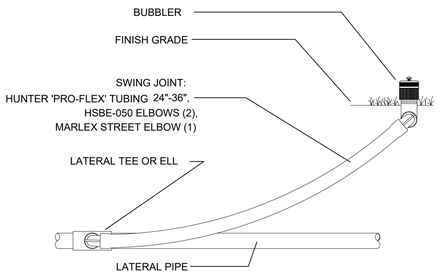
J – POP-UP ROTOR / HUNTER PGP
NTS



I – HUNTER POP-UP SPRAY /W MP ROTATOR
NTS



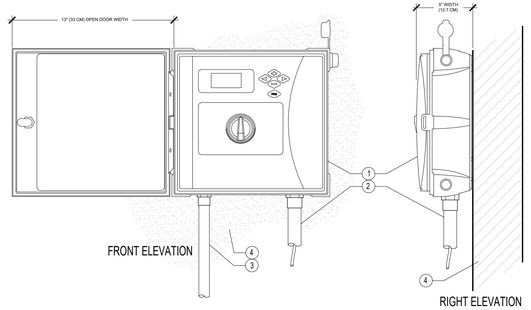
L – TRENCH DETAIL
NTS



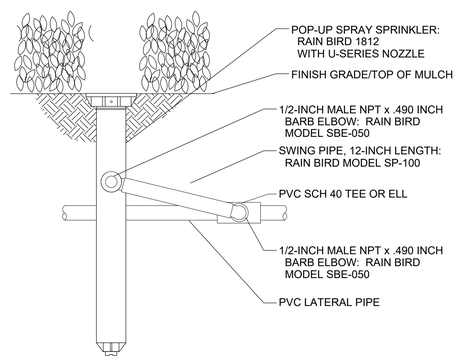
H – HUNTER AFB TREE BUBBLER
NTS

1. IRRIGATION CONTROLLER HUNTER ICC2-PL (SIZE PER ZONES)
2. IRRIGATION CONTROL WIRE IN CONDUIT SIZE AND TYPE PER LOCAL CODES
3. ELECTRICAL SUPPLY CONDUIT CONNECT TO POWER SOURCE, J-BOX INSIDE CONTROLLER
4. ADJACENT SURFACE TO MOUNT CONTROLLER PER PLAN

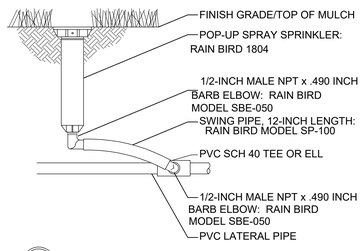
NOTE
MOUNT CONTROLLER LCD SCREEN AT EYE LEVEL, CONTROLLER SHALL BE HARD-WIRED TO GROUNDED
110 VAC POWER SOURCE



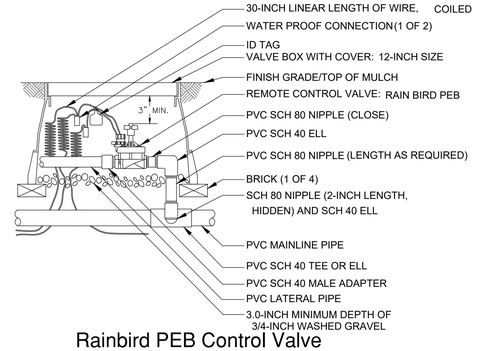
G – IRRIGATION CONTROLLER - HUNTER ICC2-PL
NTS



F – 12" POP-UP SPRAY
NTS

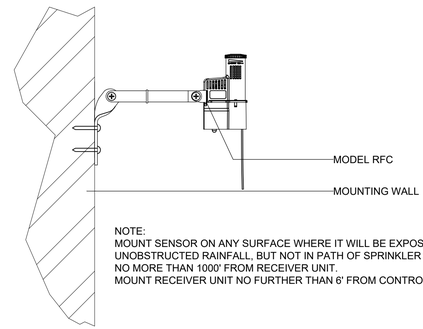


E – 4" POP-UP SPRAY
NTS



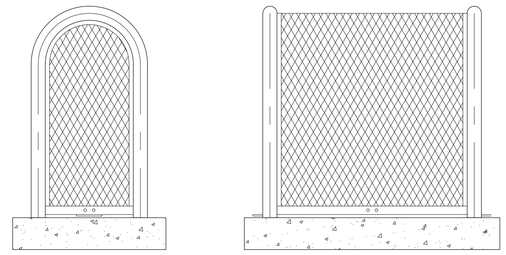
Rainbird PEB Control Valve

D – IRRIGATION CONTROL VALVE
NTS



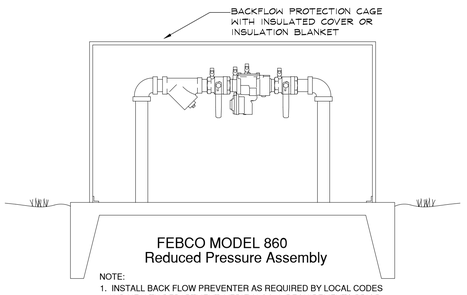
NOTE:
MOUNT SENSOR ON ANY SURFACE WHERE IT WILL BE EXPOSED TO UNOBSTRUCTED RAINFALL, BUT NOT IN PATH OF SPRINKLER SPRAY, NO MORE THAN 1000' FROM RECEIVER UNIT.
MOUNT RECEIVER UNIT NO FURTHER THAN 6' FROM CONTROLLER.

C – HUNTER RAIN/FREEZE-CLIK
NTS



STANDARD GUARDSHACK™ ENCLOSURES
INSTALL PER GUARDSHACK GUIDELINES AND SPECIFICATIONS

B – BACKFLOW ENCLOSURE
NTS



NOTE:
1. INSTALL BACK FLOW PREVENTER AS REQUIRED BY LOCAL CODES AND HEALTH DEPARTMENT. VERIFY LOCAL REQUIREMENTS PRIOR TO INSTALLATION.

A – FEBCO #860
NTS

Date issued/revised

31 JULY 2024 - REVIEW
28 AUG. 2024 - 90% SUBMITTAL
19 NOVEMBER 2024 - FOR PERMIT
14 MARCH 2025 - FOR CONSTRUCTION
9 JULY 2025 - FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT
BRENT ELLIS M. BARNETT
2247
STATE OF TEXAS
7-9-25

OUTPARCEL 25-B
CREEKSIDE TOWN CENTER

323 CREEKSIDE CROSSING
NEW BRAUNFELS, TEXAS 78130

Project No. 24051
Drawn ER
Checked BS

Irrigation Details

Sheet No. L2.2

IRRIGATION SYSTEM

PART I GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and all applicable specification sections, apply to this section.

1.02 DESCRIPTION

A. This Section specifies the requirements for providing the irrigation system as indicated on the Drawings.

B. Contractor shall provide irrigation system as a complete system including but not limited to: heads, valves, valve boxes, control wire splice boxes, control wiring, electric controller, piping circuits, vacuum breaker, water meters and all accessories, including electric power source coordination and installation.

1.03 QUALITY ASSURANCE

A. Available Manufacturers: Subject to compliance with specified requirements, manufactures offering products which may be incorporated in the Work are included in the specifications or denoted on the Drawings.

B. Installer: Installation of Irrigation System shall be performed under the direction of a State of Texas licensed irrigator with not less than 5 years experience in this type of work.

C. Reference Standards Applicable to this Section:

1. ANSI: American National Standards Institute
   a. Z55.1: Gray Finishes for Industrial Apparatus and Equipment
2. ASTM: American Society for Testing and Materials
   a. B88: Specifications or Seamless Copper water tube.
   b. D 1785: Specifications for Poly Vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80 and 120.
   c. D 2241: Specification for Poly Vinyl Chloride (PVC) Pressure Rated Pipe (SDR Series)
   d. D 2466: Specification for Poly Vinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 80.
   e. D 2564: Specification for Solvent Cements for Poly Vinyl Chloride (PVC) Plastic Pipe and Fittings.
   f. F 690: Practice for Underground Installation of Thermoplastic Pressure Piping Irrigation Systems.
3. AWWA: American Water Works Association
   a. C 500: Gate Valves, 3 inches through 48 inches NPS, for Water
   b. C 506: Backflow Prevention Devices, Reduced Pressure Principle and Double Check Valve Types.
4. IAMPO: International Association of Plumbing Mechanical Officials
5. NEMA: National Electrical Manufacturer's Association
   a. 250: Enclosures for Electrical Equipment (1000 Volts Maximum)
6. NFPA: National Fire Protection Association
   a. NFPA 70 (NEC): National Electrical Code
7. NSF: National Sanitation Foundation
   a. No. 14 Plastic Piping System Components and Related Materials

1.04 SUBMITTALS

A. Product Data

1. Submit manufacturer's technical data, specifications, shop drawings, and installation instructions for sprinkler heads, automatic valves, controllers, backflow preventers, connections, details, and related items.
2. Submit manufacturer's operating instructions and a schedule indicating length of time each valve is to be open to produce a given amount of precipitation.
3. Submit maintenance instructions on all items requiring manufacturer's standard detail submittal.

B. Spares and Special Tools: Provide Owner with four (4) spare sprinkler heads of each size and type, two (2) wrenches for each type of head cover and two (2) wrenches for removal and installation of each type of head. In addition, see Section 2.17E

C. Water: potable water to be supplied by Owner. Contractor shall make provisions for all connections required.

1.05 PRODUCT DELIVERY AND HANDLING

A. Materials shall be delivered in manufacturer's unopened packaging labeled to indicate manufacturer's name and product identification. Insure that packaging and labeling remain intact until installation. Materials shall be stored protected form the elements, including direct sunlight.

B. Pipes shall be handled so as to prevent being damaged and to maintain their straightness. Pipe ends shall be wrapped. Pipes shall be stored on beds the full length of the pipes. Damaged or dented pipes or fittings shall not be used.

1.06 DEFINITIONS

A. Irrigation Main: Irrigation main is the piping from the water source to control valves. Irrigation main is that pipe which is on the pressure side of irrigation control valves.

B. Irrigation Lateral Lines: Irrigation lateral line is the piping from the control valves to the irrigation heads. Lateral line is that pipe which is on the non-pressure side of irrigation control valves.

PART 2 PRODUCTS

2.01 PIPES

A. Markings: Thermoplastic pipes should be marked in accordance with ASTM D 1785 and ASTM D 2241 as applicable and shall bear the NSF mark in accordance with NSF 14.

B. Irrigation Main Pipe: ASTM D 2231, PVC, 1120 or 1220, Schedule 40.

C. Irrigation Lateral Line Pipe
   1. Pipes ¼ inch diameter and larger: ASTM D 2231, PVC, 1120 or 1220, Schedule 40.
   2. Pipes ½ inch diameter: ASTM D 2231, PVC, 1120 or 1220, Schedule 40.

2.02 SETTINGS FOR THREADED JOINTS

A. ASTM D 2466, PVC, Schedule 80.

2.03 SEALANT FOR THREADED JOINTS

A. Rector Seal Liquid Teflon by Rector Seal Corp., 2830 Produce Row, Houston, Texas 77023, (713) 928-6423, or approved equal.

2.04 SLEEVES UNDER PAVING FOR CONTROL WIRE AND IRRIGATION LINES

A. ASTM D 2466, PVC, Schedule 40, sized as shown on drawings.

2.05 IRRIGATION SPRINKLERS

A. Pop-Up Spray Sprinklers as specified on drawings.
1. Shall be heavy-duty plastic pop-up to specified height with appropriate nozzle as indicated on Drawings.
2. Irrigation head body, stem, nozzle, and screen shall be constructed of heavy duty plastic.
3. Head shall have wiper seal for cleaning debris as it retracts into case.
4. Plastic nozzles shall have matched precipitation rate with an adjusting screw capable of regulating the radius and flow.
5. Head shall have stainless steel retroactive spring.
6. Head shall have filter screen under nozzle.
7. Head shall have side and bottom inlet on racketing system for easy alignment of pattern on 6 inch and 12 inch pop-ups.
8. The nozzles on pop-up spray head body shall be as shown on Drawings and shall be capable of covering the radius as designated on Drawings. Nozzles in same series shall have matched precipitation rates.
9. Heads shall be connected to irrigation lateral lines by swing joints as indicated. Flexible PVC cant be accepted as a swing joint with permission from Landscape Architect.

B. Gear Driven Sprinklers as specified on drawings.
1. The pop-up sprinklers shall be a gear driven sprinkler. The part circle sprinklers shall have an infinitely adjustable arc of coverage from 40 to 360.
2. The sprinkler case and internal assembly, except for the arm spring, bearing spring, wiper seal and bearing washers, shall be constructed of durable plastic.
3. The sprinkler shall have an adjustable nozzle-retainer/range adjustment screw for distance and distribution control and shall be capable of full or part circle operation as noted on Drawings.
4. The sprinkler shall have a 4" pop-up stroke, turbine bypass valve, fine mesh filter screen, and the gear drive shall be sealed in oil.
5. Plastic nozzles shall be as per irrigation legend.

2.06 ELECTRIC REMOTE CONTROL VALVES

A. Electric remote control valves shall be as specified on Drawings.
1. Remote control valves shall be normally closed, 24 volt AC 60 Cycle, solenoid actuated globe pattern diaphragm. Valve pressure rating shall be 200 psi minimum.
2. Valve body and bonnet shall be constructed o heavy-duty glass-filled nylon. Diaphragm shall be nylon reinforced rubber. Solenoid coil shall be encapsulated in molded epoxy.
3. Valve shall be actuated by a low power, 2.0 watt 24 volt AC Solenoid.
4. Valve shall have a flow control stem with wheel handle for regulating or shutting off flow of water and a bleed plug for manual operation.
5. All valve integral parts shall be removable from top of valve without disturbing the valve installation.

2.07 REMOTE CONTROL VALVE TIES

A. Remote control valve ties shall be plastic tags with wire to attach numbered tag to valve.

2.08 VALVE BOXES

A. Valve boxes shall be heavy duty plastic, black with green cover. Valve box shall be, non-hinged, non-bolt cover, by Carson Industries, Inc., 1925 Street, La Verne, CA 91750. (213) 732-6265, or approved equal. Size as needed with round or rectangle valve box.

2.09 CONTROL WIRE SPLICE BOXES

A. Control wire splice boxes shall be heavy duty plastic 10 inch diameter by 10 ¼ inch deep, black with black cover, No. 910-12B, by Carson Industries, Inc. or approved equal.

2.10 GRAVEL BACKFILL

A. Gravel backfill for valve boxes and control wire splice boxes shall be 3/8-inch diameter pea gravel.

2.11 IRRIGATION CONTROL WIRE

A. Wire: Solid copper wire, NEC type UF, UL listed for direct burial in ground. Minimum size: No. 14 AWG.

B. Splicing Material: Scotchlok connector with No. 3570/Scochlok Connector Sealing Packs by Electro-Products Division/3M, Minneapolis, Minnesota, Rain Bird Snap-Tites by Rain Bird Sprinkler Manufacturing Corporation, or approved equal. Use separate packs for each splice.

2.12 GATE VALVES

A. Gate Valves shall be PVC Ball Valves, size as noted on drawings.

2.13 QUICK COUPLING VALVES

A. Quick coupling valves shall have heavy-duty brass construction, durable thermoplastic rubber cover, stainless steel internal valve springs, one-piece body design, as or if indicated on drawings.

B. Provide four valve keys with ¾ inch swivel hose ells.

2.14 BACKFLOW PREVENTER

A. Backflow Preventers shall be bronze and copper, Febco No. 765 PVB, Febco 850 Double Check, or Febco 860 RPZ by Watts, 815 Chestnut Street, North Andover, MA 01845-6098 USA. Size and specify model as per drawings and installed per detail and manufacturer specfications.

2.15 CONTROLLER

A. Controller shall be the model and brand indicated on drawings. Controller shall be hung at eye level and hardwired near an electrical source. Contractor shall verify per electrical drawings. Wires to be run through conduit and painted the same as mounting structure.

PART 3 EXECUTION

3.01 SYSTEM DESIGN

A. Design Pressures: Pressure shall be as indicated on Drawings, and as measured at last head in circuit. Contractor shall perform a pressure test before installation. Field measurements may differ from design. Field adjustments may be necessary.

B. Location of Heads: Design location is represented as accurately as possible. Make minor adjustments on site with approval of Landscape Architect as necessary to ensure consistent and even spacing where applicable. Set all heads minimum 6" from back of curb and 4" from edge of concrete walls.

3.02 TRENCHING AND BACKFILLING

A. General: Contractor shall comply with Section 02221 Trenching & Trench Backfill and Section 02200 Earthwork of these Specifications. Excavate straight and true with bottom uniformly sloped to low points. Protect existing lawns and plantings. Remove and replant as necessary to complete installation. Replace damaged lawn areas and plants with new products to restore to existing installation's original condition.

B. Minimum Cover: Provide 18-inch minimum cover over top of installed irrigation main piping. Provide 12-inch minimum cover over top of installed irrigation later line piping. Provide 2 inches of earth between parallels and wire. Parallels shall be laid side-by-side, not stacked.

C. Backfill: Backfill with clean material from excavation after obtaining landscape Architect's approval. Remove organic material, as well as rocks and debris larger than 1 inch in diameter. Place acceptable backfill in 6 inch lifts, compacting each lift.

D. Existing Lawns: Where trenching is required across existing lawns, (or in event of changes or repairs after new lawn has been established), uniformly cut strips o sod 6 inches wider than trench. Remove sod in rolls of suitable size for handling and keep moistened until replanted.
1. Backfill trench to with 6 inches of finished grade and compact. Continue fill with acceptable topsoil; and compact to bring sod even with existing lawn.
2. Replant sod within 2 days after removal, roll and water generously.
3. Resod and restore to original condition all sod areas not in healthy condition equal to adjoining lawns 30 days after replanting.

3.03 INSTALLATION

A. General: Unless otherwise indicated, Contractor shall comply with requirements of local municipal regulations and ASTM F 690.

B. Pipes
1. Piping Mains and Laterals: Lay out sprinkler mainlines and perform line adjustments and site modifications to laterals prior to excavation. Lay pipe on solid subbase, uniformly sloped without humps or depressions.
2. PVC Pipe Assembly
   a. Cut PVC pipe square and de-burr. Clean pipe and fittings using primer and cleaner as recommended by the PVC pipe manufacturer. Use tinted primer to aid in visual inspection.
   b. Apply a thin even flow coat of PVC solvent cement to inside of the fitting and pipe mating surface. Cure joints as recommended by the manufacturer and keep pipe and fitting out of service during curing period. Construct watertight joints equal or greater in strength than the pipe. Do not tap pipe at fittings.
3. Install plastic pipe in dry weather, when temperature is above 40 degrees F. and in accordance with manufacturer's written instructions. Allow joint to cure at least 24 hours at temperature above 40 degrees F. before testing.
4. Plastic pipe shall be snaked in the trenches in a manner to provide for expansion and contraction as recommended by pipe manufacturer.

C. Sleeves Under Paving: The majority of sleeves under paving are existing as shown on drawings. Where boring is required for new sleeves (refer to drawings), it shall be a " wet bore." Install sleeves 12" beyond edge of pavement. Perform trench and backfill in accordance with these specifications.

D. Irrigation Heads
1. Flush irrigation lines with full head of water and install heads after hydrostatic test is completed.
2. Install heads at manufacturer's recommended heights.
3. Locate part-circle heads to maintain a minimum distance of 4 inches from walls and 2 inches from other boundaries, unless otherwise indicated.
4. Check for uniformity of coverage and pattern correctness. Adjust for 100% coverage where required.

E. Electric Remote Control Valves
1. Adjust automatic control valves to provide flow rate at rated operating pressure required for each irrigation section.
2. Install valves in valve boxes, arranged for easy adjustment and removal. Locate valves to ensure ease of access for maintenance such that no physical interference with other elements of the project exist.

F. Remote Control Valve Tags: One Remote Control Valve Tag shall be attached to stem of each electric remote control valve. Tags shall be numbered sequentially. Numbers shall correspond to station numbers in electric controller. Provide tags and corresponding numbers for wires pulled for future valves.

G. Valve Boxes: Install valve boxes to cover electric remote control valves. Install two valves maximum in valve box where possible. Top of Valve box shall be flush with finished grade. Bury minimum 2 bricks under base of each box as support.

H. Control Wire Splice Boxes: Install control wire splice box to cover any splice in control wire. Top of valve box shall be flush with finished grade. Bury minimum 2 bricks under base of each box as support. Install control wire splice box to cover wires pulled for future valves.

I. Gravel Backfill: Backfill valve boxes and control wire splice boxes with gravel, minimum 6-inch depth.

J. Irrigation Control Wires
   1. Provide 24-volt system for control of automatic circuit-section valves of underground irrigation system. Provide unit capacity to suit number of circuits indicated.
   2. Install control wires with irrigation mains and laterals in common trench where possible. Lay control wire to side of pipe. Provide looped slack at valves and snake wire in trench to allow for contraction. Tie wires in bundles at 10-foot intervals. Line Splices will be allowed on runs of 500 Ft. or more. Splices shall be made and placed in control wire splice boxes.
3. Common ground wire shall be white. No other wires shall be white.
4. Supply one extra wire, for each direction of run, to valve, which is located the greatest distance from the controller. Extra wire shall be green. Leave two loops of wire at each valve location.
5. Color of wire from controller to control valve shall be consistent to each valve.
6. Solder splices and protect with splicing material specified. Provide 12 inch long expansion loop within 3 feet of each wire connection and splice on runs of wire 100 feet or longer.

K. Quick Coupling Valves
1. Connect quick coupling valves to irrigation mains by installing a Schedule 40 galvanized joint as per drawing.
2. Swing joints at quick couplers shall have threaded fittings with liquid Teflon sealant.

L. Backflow Preventers
1. Make required connection to water supply according to local codes and manufacturer's written instructions.
2. Install pressure type backflow devices at required grade in accordance with the local code. Exposed mainline and mainline risers above PVC pipe main elevation shall be copper. Install one brass union in riser downstream of device.

M. Irrigation Controller
1. Install controllers within lockable enclosure, Re: drawings. Wire complete and operable.

3.04 TESTING

A. General: Notify Landscape Architect 48 hours in advance when testing will be conducted. Conduct tests in presence of Landscape Architect.

B. Hydrostatic Test: Test irrigation main line, before backfilling trenches, to a hydrostatic pressure of not less than 100 psi for 1 hour. Piping may be tested in sections to expedite work, remove and repair or replace piping and connections which do not pass hydrostatic testing. System shall not lose more than 1 ½ gallons of water in 1 hour.

C. Operational Testing: Perform operational testing after hydrostatic testing is completed, backfill is in place and Irrigation heads are adjusted to final position.
1. Demonstrate to Landscape Architect that system meets coverage requirements, is a specified and indicated, and that automatic controls function properly.
2. Coverage requirements are based on operation of one circuit at a time. After completion of grading, sodding and rolling of grass areas, carefully adjust lawn sprinkler heads so they will be flush with or not more than ½ inch above finished grade. Set shrub sprinkler heads no more than ½ inch above top of mulch.

3.05 MAINTENANCE

A. Contractor shall correctly maintain the irrigation system during the installation process and throughout the landscaping maintenance service period. Contractor shall provide " As Built" Drawings showing dimensioned location of valves, meters, vacuum breakers, controllers, and mainline. Contractor shall request reproducible mylars form the Landscape Architect in preparation of " As Built:Drawings.

Date issued/revised

31 JULY 2024 - REVIEW
28 AUG. 2024 - 90% SUBMITTAL
19 NOVEMBER 2024 - FOR PERMIT
14 MARCH 2025 - FOR CONSTRUCTION
9 JULY 2025 - FOR PRICING

OSBORN & VANE ARCHITECTS inc

2000 Bering Drive, Suite 410
Houston, Texas 77057
713 781 5262
Fax 713 781 5347
Members American Institute of Architects

REGISTERED LANDSCAPE ARCHITECT
CHARLES M. BROWN
2247
STATE OF TEXAS

7-9-25

OUTPARCEL 25-B
CREEKSIDE
TOWN CENTER

323 CREEKSIDE CROSSING
NEW BRAUNFELS, TEXAS 78130

Project No. 24051
Drawn ER
Checked BS

Irrigation Specifications

Sheet No. L2.3