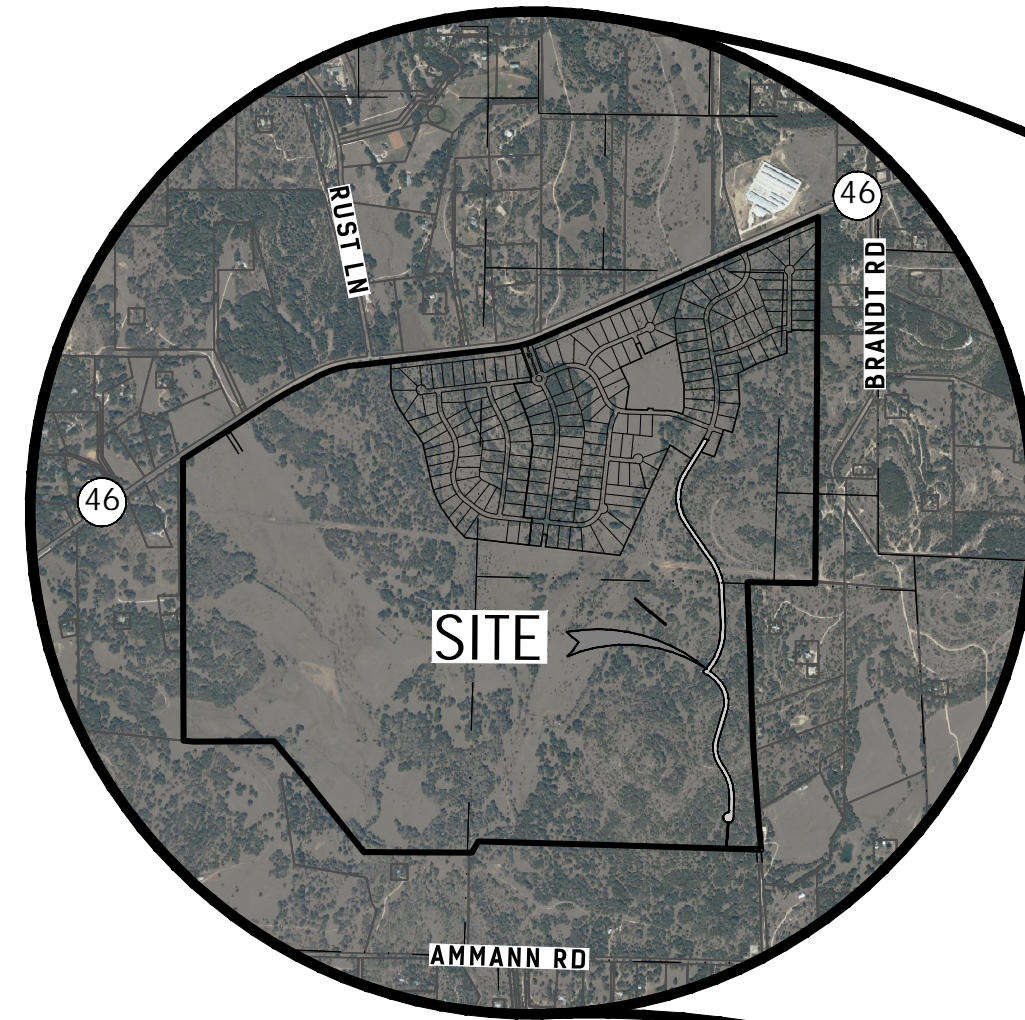


WATER DISTRIBUTION

- C1 - OVERALL WATER PLAN
- C2 - WATER DISTRIBUTION PLAN
- C3 - WATER DISTRIBUTION PLAN
- C4 - WATER DISTRIBUTION PLAN
- C5 - WATER DISTRIBUTION PLAN
- C6 - WATER DISTRIBUTION PLAN
- C7 - WATER DISTRIBUTION PLAN
- C8 - CITY OF BOERNE - WATER DISTRIBUTION PLAN DETAILS
- C9 - STORM WATER POLLUTION PREVENTION PLAN

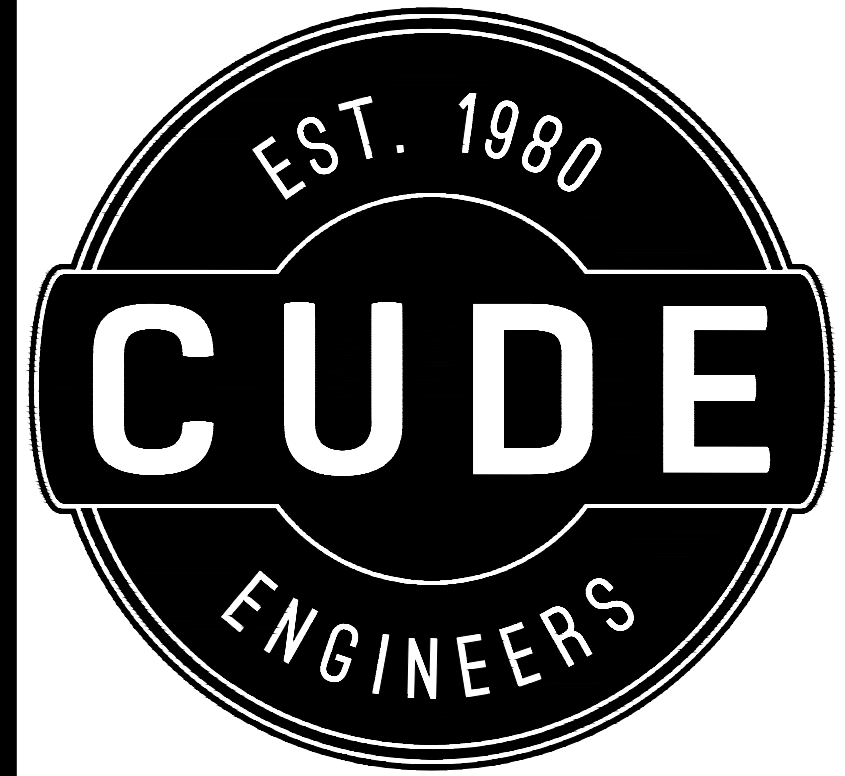


LOCATION MAP



VICINITY MAP

CONSTRUCTION OF ALL FACILITIES TO BE DEDICATED TO THE PUBLIC SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.



GEORGE'S RANCH
16" ON-SITE WATER LINE
 WATER DISTRIBUTION
 CONSTRUCTION PLANS

DEVELOPER:

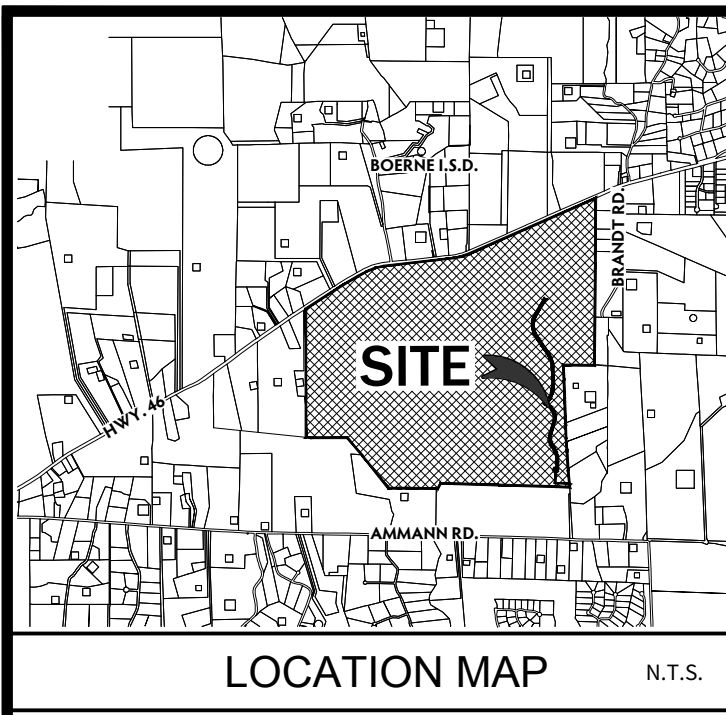

THE LOOKOUT GROUP
 MIKE SIEFERT, P.E.
 PRESIDENT
 1001 CRYSTAL FALLS PARKWAY
 LEANDER, TEXAS 78641
 TEL: (512) 690-4322

4122 Pond Hill Road, Suite 101
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DRAWN BY MGM	DATE 10/15/2025
CHECKED BY W. PATRICK MURPHY, P.E.	PROJECT NO. 03546.011



10/16/2025
CUDE ENGINEERS
 TBPE No. 455
 TBPELS No. 10048500



CITY OF BOERNE GENERAL CONSTRUCTION NOTES

GENERAL NOTES

- CONSTRUCTION OF ALL FACILITIES TO BE DEDICATED TO THE PUBLIC SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AND ANY OTHER GOVERNING AGENCY SUCH AS THE TCEQ, TADOT, ETC., AS APPLICABLE.
- IF ANY CONFLICT ARISES BETWEEN THESE GENERAL NOTES AND ANY OTHER NOTES FOUND IN THE PLANS, THE CITY OF BOERNE'S GENERAL NOTES SHALL TAKE PRECEDENCE. HOWEVER, THE CITY ENGINEER HAS THE AUTHORITY TO REVERSE AND APPROVE LEGITIMATE PROJECT SPECIFIC NOTES, IF NEEDED.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE INFRASTRUCTURE DRAWINGS REMAINS WITH THE ENGINEER OF RECORD. IN APPROVING THESE DRAWINGS, THE CITY OF BOERNE MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AT (830) 248-1538.
- THE CONTRACTOR IS REQUIRED TO SCHEDULE ALL NECESSARY INSPECTIONS AT LEAST 24 HOURS IN ADVANCE. FEES WILL BE ASSESSED FOR WORK THAT IS NOT READY AT THE TIME OF INSPECTION OR NO SHOWS FOR SCHEDULED INSPECTIONS.
- THE CONTRACTOR SHALL HAVE THE FOLLOWING AVAILABLE AT THE JOB SITE AT ALL TIMES: THE APPROVED INFRASTRUCTURE DRAWINGS, INCLUDING ALL APPROVED REVISIONS; THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION; ALL NECESSARY APPROVED PERMITS; NOTICE OF INTENT; EROSION CONTROL PLANS; AND SWPPP. IT IS ENCOURAGED TO KEEP AN EXTRA COPY OF APPROVED SUBMITTALS ON SITE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC UTILITIES DURING CONSTRUCTION OF THE PROJECT.
- THE CONTRACTOR SHALL DETERMINE THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATING, TRENCHING, OR DRILLING AND SHALL BE REQUIRED TO TAKE ANY PRECAUTIONARY MEASURES TO PROTECT ALL LINES SHOWN AND/OR ANY OTHER UNDERGROUND UTILITIES NOT OF RECORD OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PUBLIC AGENCIES AND FRANCHISE UTILITIES 48 HOURS PRIOR TO CONSTRUCTION (E.G. 817, 1-800-364-8177). THE CONTRACTOR MAY BE REQUIRED TO EXPOSE THESE FACILITIES AT THEIR OWN COST.
- THE CONTRACTOR MUST CONTACT CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT IMMEDIATELY IF ANY DAMAGE TO EXISTING UTILITIES OCCURS. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT THEIR EXPENSE. IF DAMAGE TO A GAS MAIN OCCURS, CALL 913 IMMEDIATELY PRIOR TO CALLING CITY OF BOERNE UTILITIES DEPARTMENT.
- THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY PHYSICAL DAMAGE TO PUBLIC AND PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO FENCES, WALLS, PAVEMENT, GRASS, LANDSCAPE, TREES, AND LAWN SPRINKLER AND IRRIGATION SYSTEM AT THEIR OWN COST. ANY PERMITTED WORK LOCATED WITHIN EASEMENTS ON PRIVATE PROPERTY WILL REQUIRE A LETTER OF APPROVAL FROM EACH AFFECTED LANDOWNER PRIOR TO FINAL ACCEPTANCE OF CONSTRUCTION.
- ANY CONSTRUCTION ON THE INFRASTRUCTURE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER AND CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM THE INFRASTRUCTURE DRAWINGS ARE PERMITTED WITHOUT WRITTEN APPROVAL FROM THE CITY.

DEVELOPER:
THE LOOKOUT DEVELOPMENT GROUP, LP
CONTACT PERSON: MIKE SIEFERT
1001 CRYSTAL FALLS PARKWAY
LEANDER, TX 78641
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KEYNOTES:

1. PROPOSED 15" UTILITY EASEMENT (2.514 AC.) TO BE DEDICATED BY SEPARATE INSTRUMENT AND SHALL BE RECORDED PRIOR TO ACCEPTANCE OF INFRASTRUCTURE.

- THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY. ALL WORK REQUIRED SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THIS PROJECT.
- THE CONTRACTOR SHALL PROVIDE THE CITY ACCESS TO CITY PROPERTY, EASEMENTS, UTILITIES, AND FACILITIES AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR REQUIRED CONSTRUCTION SURVEYING AND STAKING AND SHALL NOTIFY THE CITY OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH ANY WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL SURVEY MARKERS INCLUDING BOUND RODS, PROPERTY CORNERS, OR SURVEY MONUMENTS WITHIN THE LIMITS OF THE CONSTRUCTION SITE AND OUTSIDE THE RIGHT-OF-WAY DURING CONSTRUCTION. ANY SURVEY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT THEIR OWN COST.
- ALL GENERAL USE CONCRETE SHALL BE PLANT MIXED MEETING CITY SPECIFICATIONS WITH A MINIMUM OF 4000 PSI AT 28 DAYS COMPRESSIVE STRENGTH UNLESS OTHERWISE SPECIFIED. ANY CONCRETE INSTALLED WITHOUT AN APPROVED MIX DESIGN SUBMITTAL WILL BE REMOVED AT CONTRACTOR'S EXPENSE.
- 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 SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED BY THESE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH LOCATIONS.
- CONTRACTOR SHALL FURNISH A SET OF "AS-BUILT" DRAWINGS TO THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT THE TIME OF FINAL INSPECTION. CONTRACTOR SHALL GIVE CITY AT LEAST TWO WORKING DAYS NOTICE PRIOR TO FINAL INSPECTION.

EROSION CONTROL NOTES

- ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND PAVING IS COMPLETE AND VEGETATION IS ESTABLISHED WITH 80% COVERAGE ACHIEVED.
- CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROLS SHALL BE REPAIRED OR REPLACED AS INSTRUCTION ON THESE DEVICES CORRECTED BY THE OWNER'S REPRESENTATIVE. ACCUMULATED SOIL IN ANY EROSION CONTROL DEVICE SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON SITE IN A MANNER NOT CAUSING OBSTRUCTION TO OTHERS.
- THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL IS SUFFICIENT TO MITIGATE OFF-SITE IMPACTS AND ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.
- THE CITY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE DEVELOPER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF THE MODIFICATIONS.
- CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH TOPSOIL AND VEGETATION.
- CONTRACTOR TO REMOVE GRASS AND STRIP TOPSOIL TO DEPTHS ENCOUNTERED AND STOCKPILE TOPSOIL TO BE DISTRIBUTED DURING FINAL GRADING OF THE DISTURBED AREAS.
- CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION TRAFFIC UTILIZES THE STABILIZED CONSTRUCTION ENTRANCES AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.
- CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND DRIVEWAYS ADJACENT TO THE PROJECT FREE FROM ROCK, MUD, TRASH AND DEBRIS AT ALL TIMES. CONTRACTOR SHALL CLEAN AND REMOVE ALL MATERIAL RESULTING FROM CONSTRUCTION OPERATIONS.
- THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST.
- THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSONS RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SOIL ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES 2.0 INCHES.
- DISTURBED PORTIONS OF THE SITE MUST BE STABILIZED. STABILIZATION PRACTICES MUST BE INITIATED WITHIN 14 DAYS OF PORTIONS OF THE SITE WHERE CONSTRUCTION HAS BEEN EITHER TEMPORARILY OR PERMANENTLY CEASED. UNLESS EXCEPTED WITHIN THE TPOES PERMIT.
- CONTRACTOR SHALL INSPECT DISTURBED AREAS, MATERIAL STORAGE AREAS EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND VEHICLE ENTRY AND EXIT AREAS AT LEAST EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT OF 0.5 INCHES OR GREATER.
- ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE CITY OF BOERNE.

GRADING NOTES

- CONTRACTOR IS REQUIRED TO OBTAIN AN APPROVED GRADING PERMIT FROM THE CITY, IF APPLICABLE.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES WHICH ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.
- GRADING WORK SHALL BE COMPLETED TO WITHIN 10 FEET OF THE FINAL GRADE PRIOR TO INSTALLATION OF UTILITIES INCLUDING ANY UTILITY TYPE INSTALLATION OUTSIDE OF THE ROW TO ENSURE DEPTHS ARE APPROPRIATE FROM FINAL GRADE.
- CONTRACTOR SHALL NOT PLACE ANY FILL OR WASTE MATERIAL IN THE LOCAL OR 100-YEAR FLOODPLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT.

UTILITIES

TRENCH

- TRENCH CONSTRUCTION, TESTING, CLEANING, AND DISINFECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
- CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVES. THE CITY MUST BE PRESENT DURING ANY WORK COMPLETED ON EXISTING CITY UTILITIES. THE CONTRACTOR IS NOT PERMITTED TO COMPLETE GAS WORK ON EXISTING CITY GAS MAINS AT ANY TIME.
- THE CONTRACTOR MUST COORDINATE AND SCHEDULE ALL UTILITY TIE-INS WITH THE CITY. NO TIE-INS SHALL BE MADE TO THE EXISTING UTILITY SYSTEM UNTIL ALL TEST RESULTS HAVE BEEN PROVIDED TO THE CITY AND ARE VERIFIED.
- UNLESS THE DEVELOPER HAS RECEIVED PRIOR WRITTEN PERMISSION BY THE CITY OF BOERNE, ALL UTILITIES, INCLUDING BUT NOT LIMITED TO WATER, RECLAIMED WATER, SEWER, GAS, AND ELECTRIC UTILITIES MUST BE INSTALLED AND TESTED PRIOR TO THE PAVING OF A STREET OR ALLEY OR PORTION THEREOF.
- PRIOR TO RECEIVING BLUE WATER, THE CONTRACTOR MUST SUBMIT APPLICATION TO THE UTILITIES DEPARTMENT FOR A BULK WATER METER. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING A CITY APPROVED BACKFLOW DEVICE OR GAS CAP ON ALL JUMPERS PRIOR TO LEADING WATER IN UNAPPROVED MAINS.
- ALL MANHOLES, END OF MAIN CLEANOUTS, VALVES, AND BLOW-OFFS SHALL HAVE CONCRETE ENCASEMENTS INSTALLED. ANY ENCASEMENTS IN PAVEMENT WILL BE DIAGONAL FROM THE DIRECTION OF TRAFFIC.
- ONE DENSITY TEST PER 8-INCH LIFT IS REQUIRED EVERY 500 FEET FOR TRENCHES UP TO 12 FEET IN DEPTH AND EVERY 200 FEET FOR TRENCHES 12 FEET AND DEEPER. DENSITY TESTING MUST BE COMPLETED FOR EACH LIFT PRIOR TO COMMENCING INSTALLATION OF THE NEXT LIFT. POT-HOLING AND STAKE STEPPING IS NOT PERMITTED.
- ALL VALVE BODIES, METEER BODIES, FIRE HYDRANTS, MANHOLES, ETC. ARE REQUIRED TO BE ADJUSTED AS REQUIRED TO MATCH FINAL GRADES.
- THE CONTRACTOR IS RESPONSIBLE FOR STAKING UTILITIES AND INSTALLING PERMANENT PROPERTY PINS PRIOR TO THE FINAL INSPECTION TO VERIFY LOCATION, FINISH GRADE, AND DEPTHS.
- TRACER WIRE LOCATE BOX SHALL BE INSTALLED PER CITY REQUIREMENTS AT ALL VALVES INCLUDING, GAS, RECLAIMED WATER, FIRE WATERS VALVES AND BLOWERS, FOR GROUPING OF VALVES AT ONE GENERAL LOCATION. ONE LOCATE BOX MAY BE USED.

WATER

- WHERE THE MINIMUM MAIN 30 FEET SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER LINES CANNOT BE MAINTAINED, THE CONTRACTOR MUST MEET THE REQUIREMENTS OF 30 TAC 212.03(D) AND 30 TAC 200.44(E).
- ALL WATER LINES SHALL BE INSTALLED AT A DEPTH BETWEEN FOUR (4) AND SIX (6) FEET OR AS SHOWN ON THE APPROVED INFRASTRUCTURE DRAWINGS. DEVIATIONS FROM THESE DEPTHS REQUIRES PRIOR APPROVAL.
- ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR PER CITY REQUIREMENTS.
- THE USE OF TEMPORARY JUNCTIONS IS REQUIRED FOR NEW WATER MAIN INSTALLATION.
- SAMPLE TEST PORTS FOR BACTERIOLOGICAL TESTING SHALL BE PROVIDED ALONG THE WATER MAIN AT THE FREQUENCY AND LOCATION REQUIRED BY THE CITY OF BOERNE AT A MINIMUM PER THE TCEQ REQUIREMENTS.
- FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, COLONIZED, AND BACTERIOLOGICAL TESTING AND THE CITY OF BOERNE RELEASED THE MAIN FOR TIE-IN AND USE.

BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED WITHIN 40 FEET OF THE WATER MAIN.

NO VALVES, OR APPURTENANCES SHALL BE CONSTRUCTED WITHIN CURBS, CURB RAMPS OR LANDINGS. ADDITIONALLY, HYDRANTS AND BLOWOFFS SHALL NOT BE INSTALLED WITHIN VALVES OR DRIVEWAYS WITHOUT PRIOR AUTHORIZATION.

FIRE HYDRANTS SHALL BE INSTALLED WITH THE MAIN PUMPER NOZZLE A MINIMUM OF 18", AND A MAXIMUM OF 4" FROM FINISH GRADE. HYDRANTS IN THE RIGHT OF WAY SHALL BE INSTALLED FROM 1" MINIMUM TO 7" MAXIMUM FROM THE FACE OF THE CURB.

TREES

- THE CONTRACTOR SHALL PRESERVE ALL TREES OUTSIDE OF THE LIMITS OF CONSTRUCTION. ANY TREES REMOVED FROM THE OUTSIDE OF THE LIMITS OF CONSTRUCTION SHALL BE MITIGATED BY PLANTING OR TRANSPORTING AN EQUIVALENT NUMBER OF DIAMETER INCHES OF THE TREE(S) THAT WERE REMOVED.

REVEGETATION

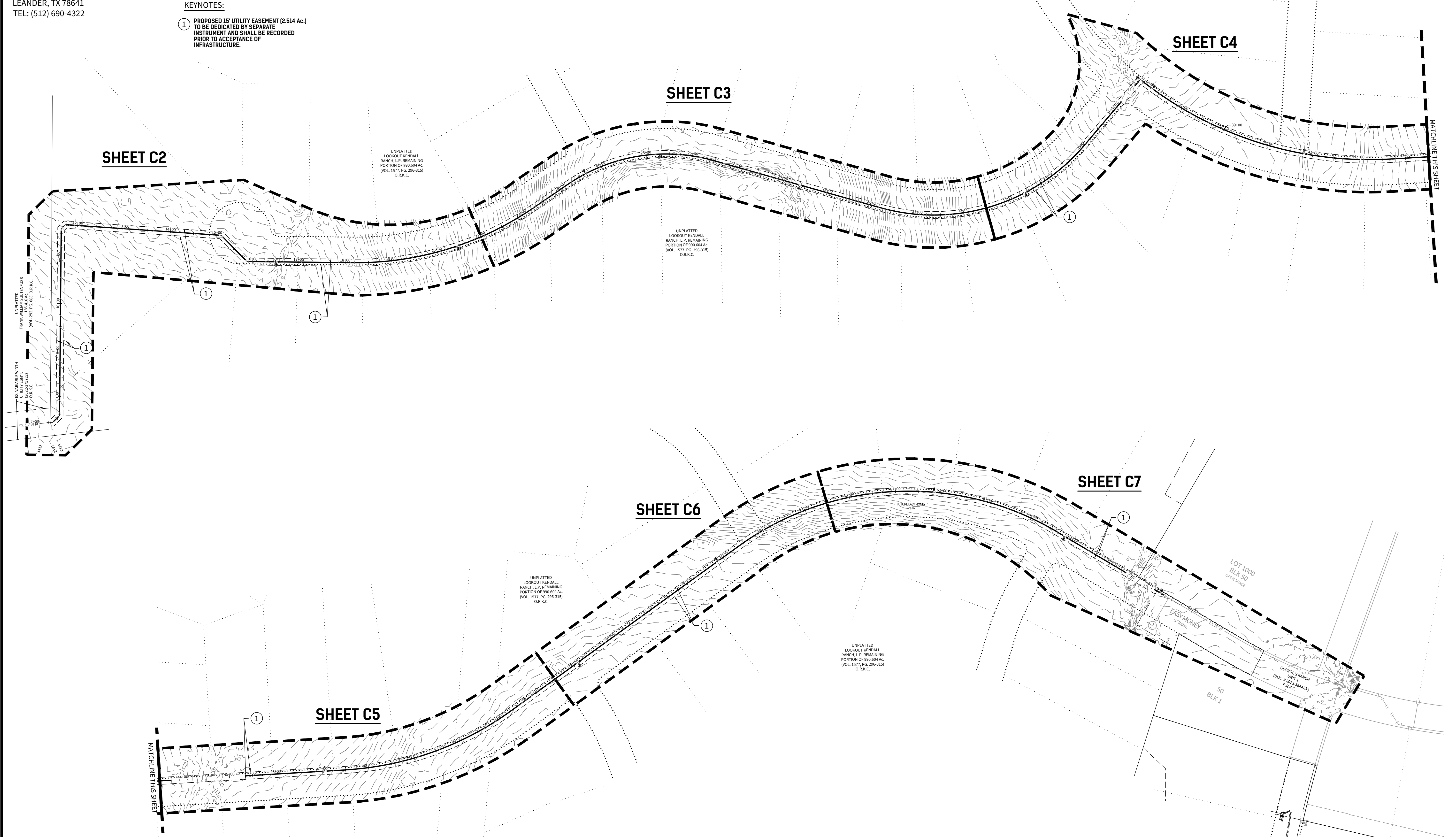
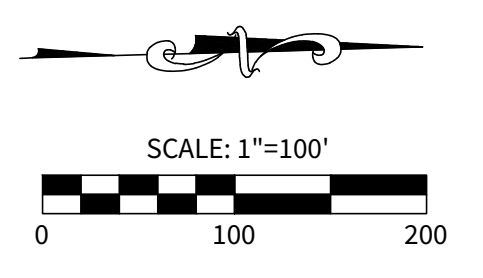
- ALL SCOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH. THE CONTRACTOR MUST LOOSEN THE SURFACE OF THE SOIL TO A DEPTH OF 2 INCHES AND REMOVE ALL STONES AND DEBRIS OVER 2 INCHES IN ANY DIMENSION. ALL AREAS FOR REVEGETATION REQUIRE A MINIMUM OF 4 INCHES OF SOIL, OVERCUTTING OF ROCK SUBGRADE MAY BE REQUIRED. ADDITIONAL TOPSOIL FROM THE STOCKPILED TOPSOIL MAY BE NECESSARY TO BRING TO REQUIRED GRADES AND FOR RE-ESTABLISHING VEGETATION. THE AREA SHALL THEN BE REVEGETATED AND MAINTAINED UNTIL SOIL IS STABILIZED IN ALL AREAS. ANY AREA DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR.
- THE CONTRACTOR MUST CONSTRUCT AND MAINTAIN A PERMANENT STABLE PROTECTIVE COVER (GRASS) FOR EROSION AND SEDIMENT CONTROL ON ALL LAND SURFACES EXPOSED OR DISTURBED BY CONSTRUCTION OF THE PERMITTED PROJECT. THE PROTECTIVE COVER MUST BE INSTALLED WITHIN 14 DAYS AFTER FINAL GRADING OF THE AFFECTED LAND SURFACE. A PERMANENT STABLE COVER MUST BE ESTABLISHED WITHIN 90 DAYS OF ITS INSTALLATION.
- AT LEAST 80% OF ALL DISTURBED AREAS MUST HAVE VEGETATION ESTABLISHED PRIOR TO ACCEPTANCE BY THE CITY OF BOERNE.
- DISTURBED AREAS THAT ARE SEEDED OR SOILED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RE-SEEDED OR SOILED IF NECESSARY.

RECORD DRAWINGS

- UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER A COPY OF AS-BUILT PLANS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM THE ORIGINAL PLANS.
- THE DESIGN ENGINEER SHALL PROVIDE TO THE CITY OF BOERNE THE "PLAN OF RECORD", SIGNED AND SEALED BY THE DESIGN ENGINEER.
- THE "PLAN OF RECORD" MUST INCLUDE PRINT LINE DATA AND PIPE TESTING INFORMATION FOR ALL GAS MAINS AND SERVICE LINES.

NOTE:
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE CITY OF BOERNE INSPECTOR/TEST ADMINISTRATOR, PER EACH 8-INCH LOOSE LIFT PER 500 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY CITY OF BOERNE WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

JOINT RESTRAINT NOTE:
 CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND FIELD LOCK GASKETS.



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GEORGE'S RANCH
16" ON-SITE WATER MAIN
 OVERALL WATER PLAN

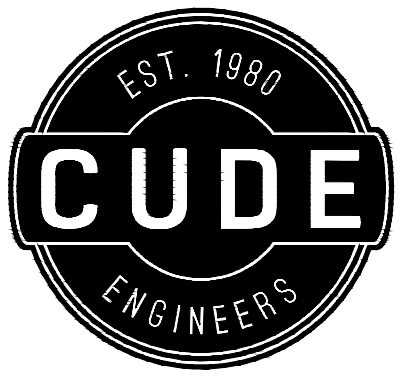
DATE	12/2/2025
PROJECT NO.	03546.011
DRAWN BY	HC/SG
CHECKED BY	KMH/WPM

REVISIONS
1. 10/15/25 - ADDING GATE VALVES AT TEES.
2. 11/26/25 - ADDED KEYNOTE #1
3.
4.
5.
6.
7.
8.
9.

12/3/2025
CUDE ENGINEERS
 TBPE No. 455
 TBPLS No. 10048500

C1

1 OF 9

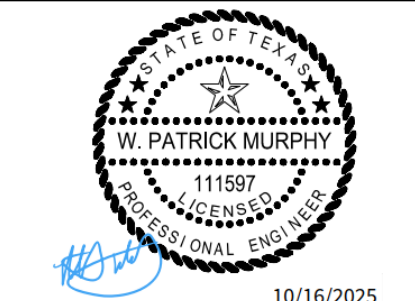


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GEORGE'S RANCH
16" ON-SITE WATER MAIN
WATER DISTRIBUTION PLAN

DATE
10/16/2025
PROJECT NO.
03546.011
DRAWN BY
HC/SG
CHECKED BY
KMH/WPM

REVISIONS
1. 10/14/25 - ADDING GATE VALVES AT TEES AND SHOWING WATER LINES IN THE PROFILE
2.
3.
4.
5.
6.
7.
8.
9.



CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 90% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE CITY OF BOERNE. INSPECTOR TEST ADMINISTERED PER EACH 8-INCH LIFT PER 300 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY CITY OF BOERNE WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

JOINT RESTRAINT NOTE:
CONTRACTOR SHALL INSTALL RETAINER BLOCKS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING, JOINT RESTRAINTS AND FIELD LOCK GASKETS.

LOCATION, ONE LOCATE BOX MAY BE USED.
WATER:
11. WHERE THE MINIMUM NINE (9) FEET SEPARATION BETWEEN WATER AND SANITARY SEWER LINES CANNOT BE MAINTAINED, THE CONTRACTOR MUST MEET THE REQUIREMENTS OF 30" TWC, 21" S301 AND 30" TWC 290-463.
12. ALL WATER LINES SHALL BE INSTALLED AT A DEPTH BETWEEN FOUR (4) AND SIX (6) FEET OR AS SHOWN ON THE APPROVED INFRASTRUCTURE DRAWINGS. DEVIATIONS FROM THESE DEPTHS REQUIRE PRIOR APPROVAL.
13. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR PER CITY REQUIREMENTS.
14. THE USE OF TEMPORARY SUPPORTS IS REQUIRED FOR WATER MAIN INSTALLATION.
15. SAMPLE TEST PORTS FOR BACTERIOLOGICAL TESTING SHALL BE PROVIDED ALONG THE WATER MAIN AT THE FREQUENCY AND LOCATION REQUIRED BY THE CITY OF BOERNE OR AT A MINIMUM PER THE FOLLOWING REQUIREMENTS:
16. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, PASSED BACTERIOLOGICAL TESTING AND THE CITY OF BOERNE RELEASED THE MAIN FOR THE AND USE.
17. BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED WITHIN 40 FEET OF THE WATER MAIN.
18. NO VALVES OR APPURTENANCES SHALL BE CONSTRUCTED WITHIN CURBS, CURB BARRIERS OR LANDINGS. ADDITIONALLY, HYDRANTS AND BLOWOFFS SHALL NOT BE INSTALLED WITHIN SIDEWALKS OR DRIVEWAYS WITHOUT PRIOR APPROVAL.
19. ALL FREE HYDRANTS SHALL BE INSTALLED WITH THE MAIN PUMPER NOZZLE A MINIMUM OF 18" AND A MAXIMUM OF 24" FROM FINISH GRADE. HYDRANTS IN THE RIGHT OF WAY SHALL BE INSTALLED FROM 1" MINIMUM TO 7" MAXIMUM FROM THE FACE OF THE CURB.

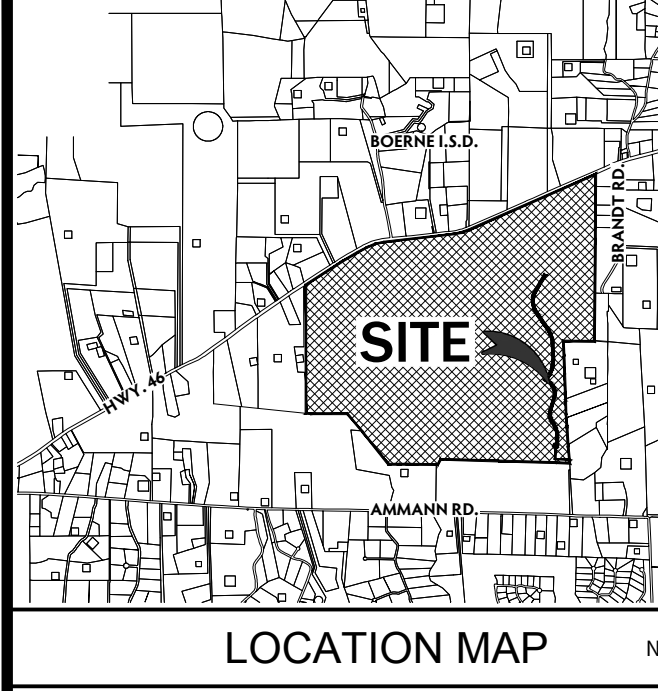
GRADING NOTES
1. CONTRACTOR IS REQUIRED TO OBTAIN AN APPROVED GRADING PERMIT FROM THE CITY, IF APPLICABLE.
2. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
3. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES WHICH ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.
4. GRADING WORK SHALL BE COMPLETED TO WITHIN 0.10 FEET OF THE FINAL GRADE PRIOR TO INSTALLATION OF UTILITIES INCLUDING ANY UTILITY TYPE INSTALLATION OUTSIDE OF THE ROW TO ENSURE DEPTHS ARE APPROPRIATE FROM FINAL GRADE.
5. CONTRACTOR SHALL NOT PLACE ANY FILL OR WASTE MATERIAL IN THE LOCAL OR 200-YEAR FLOODPLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT.

UTILITIES GENERAL
1. CONSTRUCTION, TESTING, CLEANING, AND DISINFECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
2. CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVES. THE CITY MUST BE PRESENT DURING ANY WORK COMPLETED ON EXISTING CITY UTILITIES. THE CONTRACTOR IS NOT PERMITTED TO COMPLETE GAS WORK ON EXISTING CITY GAS MAINS AT ANY TIME.
3. THE CONTRACTOR MUST COORDINATE AND SCHEDULE ALL UTILITIES TRENCHES WITH THE CITY. NO TRENCHES SHALL BE MADE TO THE EXISTING UTILITY SYSTEM UNTIL ALL TEST RESULTS HAVE BEEN PROVIDED TO THE CITY AND ARE VERIFIED.
4. UNLESS THE DEVELOPER HAS RECEIVED PRIOR WRITTEN PERMISSION BY THE CITY OF BOERNE, ALL UTILITIES INCLUDING BUT NOT LIMITED TO WATER, RECLAIMED WATER, SEWER, GAS, AND ELECTRIC UTILITIES MUST BE INSTALLED AND TESTED PRIOR TO THE DRAWING OF A STREET OR ALLY OR ALLEY TRENCH.
5. PRIOR TO RECEIVING BULK WATER, THE CONTRACTOR MUST SUBMIT APPLICATION TO THE UTILITIES DEPARTMENT FOR A BULK WATER TIE. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING A CITY APPROVED BACKFLOW DEVICE OR AIR GAP ON ALL JUNCTIONS PRIOR TO CONDUING WATER IN UNAPPROVED MAINS.
6. ALL MANHOLES, ENDS OF MAIN CLEANOUTS, VALVES, AND BLOW-OFFS SHALL HAVE CONCRETE ENCASEMENTS INSTALLED. ANY ENCASEMENTS FOR TRENCHES SHALL BE CONCRETE FROM THE DIRECTION OF TRAFFIC.
7. ONE DENSITY TEST PER 8-INCH LIFT IS REQUIRED EVERY 500 FEET FOR TRENCHES UP TO 12 FEET IN DEPTH AND EVERY 300 FEET FOR TRENCHES 12 FEET AND DEEPER. DENSITY TESTING MUST BE COMPLETED FOR EACH LIFT PRIOR TO COMMENCING INSTALLATION OF THE NEXT LIFT. POT HOLES AND STAR STEPPING IS NOT PERMITTED.
8. ALL VALVE BOXES, METER BOXES, FIRE HYDRANTS, MANHOLES, ETC. ARE REQUIRED TO BE ADJUSTED AS REQUIRED TO MATCH FINAL GRADE.
9. THE CONTRACTOR IS RESPONSIBLE FOR STAKING UTILITIES AND INSTALLING PERMANENT PROPERTY PINS PRIOR TO THE FINAL INSPECTION TO VERIFY LOCATION, FINISH GRADE, AND DEPTHS.
10. TRACER WIRE LOCATE BOX SHALL BE INSTALLED PER CITY REQUIREMENTS AT ALL VALVES INCLUDING GAS, RECLAIMED WATER, FIRE HYDRANT VALVES AND BLOWOFFS, OR GROUPING OF VALVES AT ONE GENERAL.

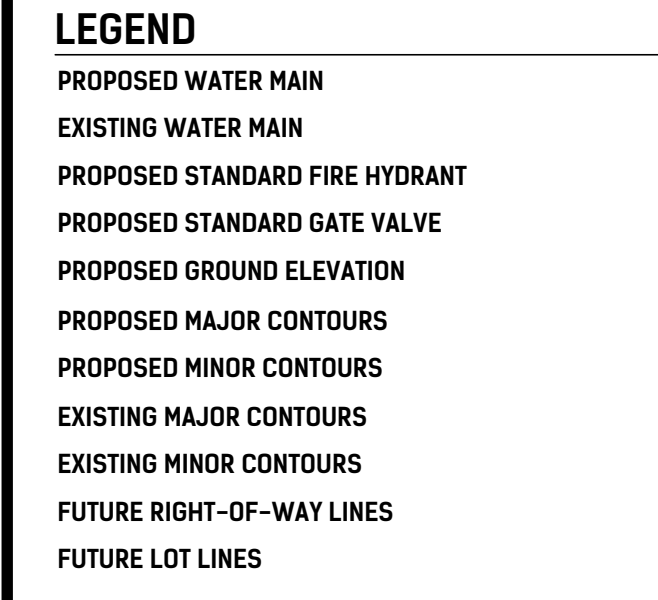
EROSION CONTROL NOTES
1. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND PAVING IS COMPLETE AND VEGETATION IS ESTABLISHED WITH 80% COVERAGE ACHIEVED.
2. CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROLS SHALL BE REPAIRED OR REPLACED AS INSPECTION DEMONSTRATES NECESSARY. DEBRIS DIRECTED BY THE OWNER'S REPRESENTATIVE ACCUMULATED IN ANY EROSION CONTROL DEVICES SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON-SITE IN A MANNER NOT CONTRIBUTING TO ADDITIONAL SILTATION.
3. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL IS SUFFICIENT TO MITIGATE OFF-SITE IMPACTS AND ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.
4. THE CITY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE DEVELOPER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF THE MODIFICATIONS.
5. CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH TOPSOIL AND VEGETATION.
6. CONTRACTOR TO REMOVE GRASS AND STRIP TOPSOIL TO DEPTHS ENCOUNTERED AND STOCKPILE TOPSOIL TO BE DISTRIBUTED DURING FINAL GRADING.
7. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF CONSTRUCTION ENTRANCES AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.
8. THE CITY INSPECTOR SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF THE MODIFICATIONS.
9. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST.
10. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSONS RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WITHIN THE DEPTHS REACHED (24 INCHES).
11. DISTURBED PORTIONS OF THE SITE MUST BE STABILIZED. STABILIZATION PRACTICES MUST BE INITIATED WITHIN 14 DAYS OF PORTIONS OF THE SITE WHERE CONSTRUCTION HAS BEEN EITHER TEMPORARILY OR PERMANENTLY CEASED. UNLESS EXCEPT WITHIN THE TRENCH ENTRY.
12. CONTRACTOR SHALL INSPECT DISTURBED AREAS, MATERIAL STORAGE AREAS EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND VEHICLE ENTRY AND EXIT AREAS AT LEAST EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT OF 0.5 INCHES OR GREATER.
13. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE CITY OF BOERNE.

13. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY. ALL WORK REQUIRED SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THIS PROJECT.
14. THE CONTRACTOR SHALL PROVIDE THE CITY ACCESS TO CITY PROPERTY, EASEMENTS, UTILITIES, AND FACILITIES AT ALL TIMES DURING CONSTRUCTION.
15. THE CONTRACTOR IS RESPONSIBLE FOR REQUIRED CONSTRUCTION SURVEYING AND STAKING AND SHALL NOTIFY THE CITY OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH ANY WORK.
16. THE CONTRACTOR SHALL VERIFY TRENCH MARKINGS AND STAKING PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL SURVEY MARKERS INCLUDING ROW MARKS, PROPERTY CORNERS, OR SURVEY MONUMENTS WITHIN THE LIMITS OF THE CONSTRUCTION SITE AND OUTSIDE THE RIGHT-OF-WAY DURING CONSTRUCTION. ANY SURVEY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT THEIR OWN COST.
18. ALL GENERAL USE CONCRETE SHALL BE PLANT READY MEETING CITY SPECIFICATIONS WITH A MINIMUM OF 4000 PSI AT 28 DAYS COMPRESSIVE STRENGTH UNLESS OTHERWISE SPECIFIED. ANY CONCRETE INSTALLED WITHOUT AN APPROVED MIX DESIGN SUBMITTAL WILL BE REMOVED AT CONTRACTOR'S EXPENSE.
19. 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 RESULTS THEREOF WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THESE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION CONFORM 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 MOBILITY DEPARTMENT AT THE TIME OF FINAL INSPECTION. CONTRACTOR SHALL GIVE CITY AT LEAST TWO WORKING DAYS NOTICE PRIOR TO FINAL INSPECTION.

CITY OF BOERNE GENERAL CONSTRUCTION NOTES
GENERAL NOTES
1. THE REQUIREMENT OF ALL FACILITIES TO BE DEDICATED TO THE PUBLIC SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AND ANY OTHER GOVERNING AGENCY SUCH AS THE TCEQ, TDDOT, ETC., AS APPLICABLE.
2. IF ANY CONFLICT ARISES BETWEEN THESE GENERAL NOTES AND ANY OTHER NOTES FOUND IN THE PLANS, THE CITY OF BOERNE GENERAL NOTES SHALL TAKE PRECEDENCE. HOWEVER, THE CITY ENGINEER HAS THE AUTHORITY TO REVIEW AND APPROVE LEGITIMATE CONFLICTING PROJECT SPECIFIC NOTES, IF NEEDED.
3. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE INFRASTRUCTURE DRAWINGS REMAINS WITH THE ENGINEER OF RECORD. IN APPROVING THESE INFRASTRUCTURE DRAWINGS, THE CITY OF BOERNE DOES NOT RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL NOTIFY CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AT (830) 248-1538.
6. THE CONTRACTOR IS REQUIRED TO SCHEDULE ALL NECESSARY INSPECTIONS AT LEAST 24 HOURS IN ADVANCE. FEES MAY BE ASSESSED FOR WORK THAT IS NOT READY AT THE TIME OF INSPECTION.
7. THE CONTRACTOR SHALL HAVE THE FOLLOWING AVAILABLE AT THE JOB SITE AT ALL TIMES: THE APPROVED INFRASTRUCTURE DRAWINGS, INCLUDING ALL APPROVED REVISIONS; THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION; ALL NECESSARY APPROVED PERMITS; NOTICE OF INTENT; EROSION CONTROL PLANS; AND SWPPP. IT IS ENCOURAGED TO KEEP AN EXTRA COPY OF APPROVED SUBMITTALS ON-SITE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC UTILITIES DURING CONSTRUCTION OF THE PROJECT.
9. THE CONTRACTOR SHALL DETERMINE THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATING, TRENCHING, OR DRILLING AND SHALL BE REQUIRED TO TAKE ANY PRECAUTIONARY MEASURES TO PROTECT ALL LINES SHOWN AND/OR ANY OTHER UNDERGROUND UTILITIES NOT OF RECORD OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PUBLIC AGENCIES AND FRANCHISE UTILITIES 48 HOURS PRIOR TO CONSTRUCTION (FEASIBLE) 1-800-364-8177).
10. THE CONTRACTOR MUST CONTACT CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT IMMEDIATELY IF ANY DAMAGE TO EXISTING UTILITIES OCCURS. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT THEIR EXPENSE. IF DAMAGE TO A GAS MAIN OCCURS, CALL 913 IMMEDIATELY PRIOR TO CALLING CITY OF BOERNE UTILITIES DEPARTMENT.
11. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PUBLIC AND PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO FENCES, WALLS, FENCIBLES, GRASS, LANDSCAPE, TREES, AND LAWN SPRINKLER AND IRRIGATION SYSTEMS AT THEIR OWN COST. ANY PERMITTED WORK LOCATED WITHIN ADJACENT'S ON PRIVATE PROPERTY WILL REQUIRE A LETTER OF APPROVAL FROM EACH AFFECTED LANDOWNER PRIOR TO FINAL ACCEPTANCE OF CONSTRUCTION.
12. ANY DISCREPANCIES ON THE INFRASTRUCTURE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER AND CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM THE INFRASTRUCTURE DRAWINGS ARE PERMITTED WITHOUT WRITTEN APPROVAL FROM THE CITY.

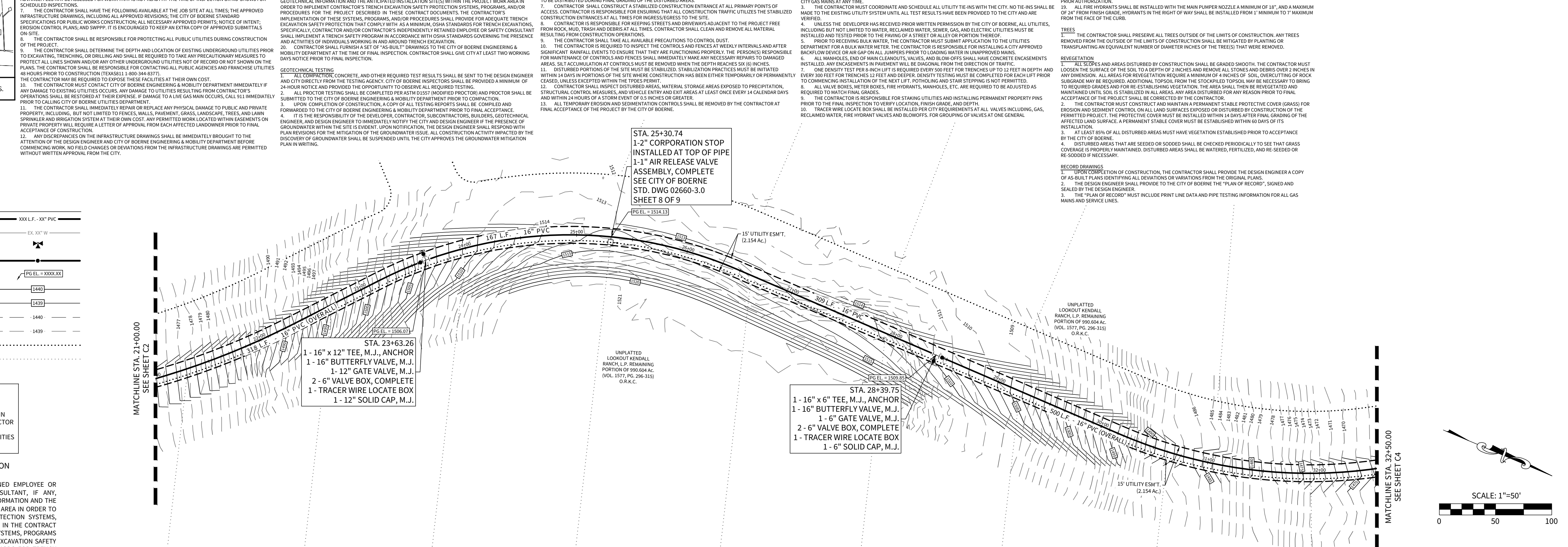


DEVELOPER:
THE LOOKOUT DEVELOPMENT GROUP, LP
CONTACT PERSON: MIKE SIEFFERT
1001 CRYSTAL FALLS PARKWAY
LEANDER, TX 78641
TEL: (512) 690-4322



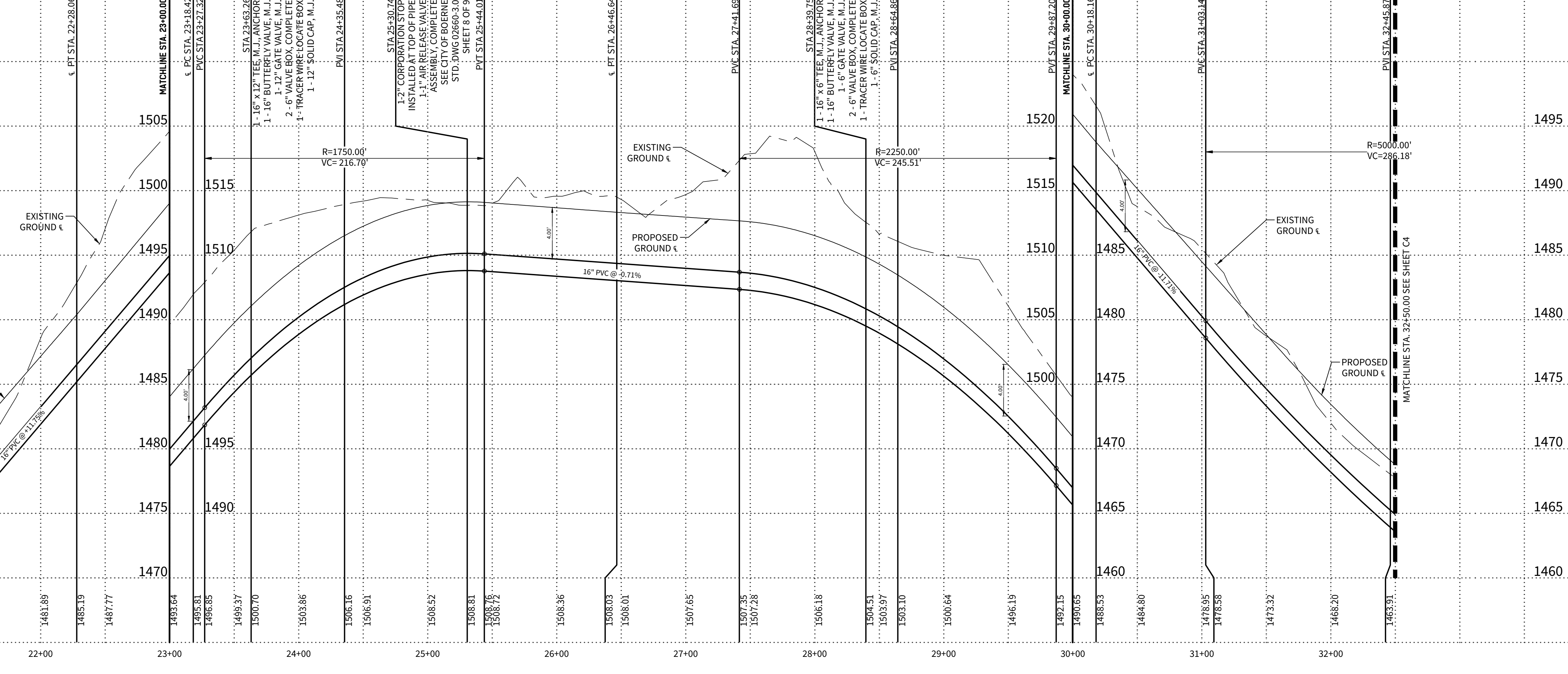
CAUTION!!
EXISTING UTILITIES ARE LOCATED WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH FOR PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTIFY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.

TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

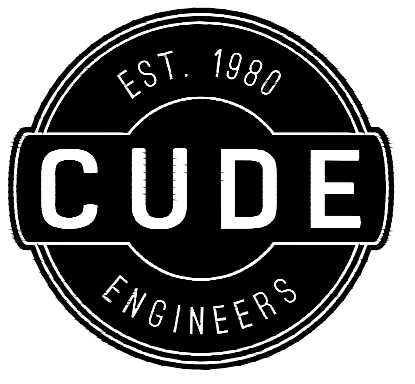


JOINT RESTRAINT DIMENSION TABLE

TYPE	MAIN SIZE(S)	RESTRAINT LENGTH
DEAD END/IN-LINE VALVE	16"	169"
TEE	16" x 16"	93" ALONG BRANCH OF TEE
TEE	16" x 12"	32" ALONG BRANCH OF TEE
TEE	16" x 10"	41" ALONG BRANCH OF TEE
TEE	16" x 6"	1' ALONG BRANCH OF TEE
HORIZONTAL OFFSET	16" x 1/8 BEND	25" ON BOTH SIDES OF BEND
HORIZONTAL OFFSET	16" x 1/32 BEND	6" ON BOTH SIDES OF BEND



NOTE - JOINT RESTRAINT LENGTHS BASED ON ASSUMED IN-SITU CONDITIONS OF INORGANIC CLAYS WITH HIGH PLASTICITY, TEST PRESSURE OF 200 PSI. PVC PIPE BEDDED IN COMPACTED GRANULAR MATERIAL. DEPTH OF BURY OF FOUR (4) FEET AND A SAFETY FACTOR OF 1.5. THESE RESTRAINT LENGTHS ARE PROVIDED FOR REFERENCE ONLY. ACTUAL RESTRAINT LENGTH TO BE BASED ON ACTUAL CONDITIONS ENCOUNTERED DURING INSTALLATION.



4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

GEORGE'S RANCH
16" ON-SITE WATER MAIN
WATER DISTRIBUTION PLAN

DATE
1/5/2026
PROJECT NO.
03546.011
DRAWN BY
HC/SG
CHECKED BY
KMH/WPM

REVISIONS
1. 10/14/25 - ADDING GATE VALVES AT TEES AND SHOWING WATER LINES IN PROFILE
2. 11/26/25 - SHOWING TRENCH DIMENSIONS AND LABELING 30" STEEL CASED PVC IN PROFILE
3. 1/26/26 - REDUCE PIPE VERTICAL SEPARATION TO 1'
4.
5.
6.
7.
8.
9.



CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

C4

LEGEND

PROPOSED WATER MAIN
XXX L.F. - XX" PVC

EXISTING WATER MAIN
EX XX" W

PROPOSED STANDARD FIRE HYDRANT
[Symbol]

PROPOSED STANDARD GATE VALVE
[Symbol]

PROPOSED GROUND ELEVATION
[Symbol]

PROPOSED MAJOR CONTOURS
[Symbol]

PROPOSED MINOR CONTOURS
[Symbol]

EXISTING MAJOR CONTOURS
[Symbol]

EXISTING MINOR CONTOURS
[Symbol]

FUTURE RIGHT-OF-WAY LINES
[Symbol]

FUTURE LOT LINES
[Symbol]

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINTS WITHIN RESTRAINING AND FIELD LOCK GASKETS.

TREES:

CONTRACTOR SHALL PRESERVE ALL TREES OUTSIDE OF THE LIMITS OF CONSTRUCTION. ANY TREES REMOVED FROM THE EQUIVALENT OF THE LIMITS OF CONSTRUCTION SHALL BE MITIGATED BY PLANTING OR TRANSPLANTING AN EQUIVALENT NUMBER OF DIAMETER (INCHES) OF THE TREES) THAT WERE REMOVED.

REVEGETATION:

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH. THE CONTRACTOR MUST LOOSEN THE SURFACE OF THE SOIL TO A DEPTH OF 2 INCHES AND REMOVE ALL STONES AND DEBRIS OVER 2 INCHES IN ANY DIMENSION. ALL AREAS FOR REVEGETATION REQUIRE A MINIMUM OF 4 INCHES OF SOIL. OVER CUTTING OF ROCK SUBGRADE MAY BE REQUIRED. ADDITIONAL TOPSOIL FROM THE STOCKPILED TOPSOIL MAY BE NECESSARY TO BRING TO REQUIRED GRADES AND FOR REVEGETATION. THE AREA SHALL THEN BE REVEGETATED AND MAINTAINED UNTIL SOIL IS STABILIZED IN ALL AREAS. ANY AREA DISTURBED FOR ANY REASON PRIOR TO FINAL INSTALLATION.

AT LEAST 80% OF ALL DISTURBED AREAS MUST HAVE VEGETATION ESTABLISHED PRIOR TO ACCEPTANCE BY THE CITY OF BOERNE.

DISTURBED AREAS THAT ARE SEEDED OR SOILED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RE-SEEDED OR RE-SOILED IF NECESSARY.

RECORD DRAWINGS:

CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER A COPY OF AS-BUILT PLANS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM THE ORIGINAL PLANS.

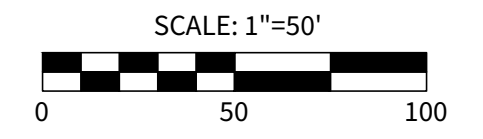
THE DESIGN ENGINEER SHALL PROVIDE TO THE CITY OF BOERNE THE "PLAN OF RECORD", SIGNED AND SEALED BY THE DESIGN ENGINEER.

THE "PLAN OF RECORD" MUST INCLUDE PRINT LINE DATA AND PIPE TRENCH INFORMATION FOR ALL GAS MAINS AND SERVICE LINES.

DETAIL "A" WATER / DRAIN CROSSING
SIDE VIEW (THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL)



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



WATER:

WHERE THE MINIMUM NINE (9) FEET SEPARATION BETWEEN WATER AND SANITARY SEWER LINES CANNOT BE MAINTAINED, THE CONTRACTOR MUST MEET THE REQUIREMENTS OF 30" TWC 21.5.30 AND 30" TWC 290.403.

ALL WATER LINES SHALL BE INSTALLED AT A DEPTH BETWEEN FOUR (4) AND SIX (6) FEET OR AS SHOWN ON THE APPROVED INFRASTRUCTURE DRAWINGS. DEVIATIONS FROM THESE DEPTHS REQUIRE PRIOR APPROVAL.

ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR PER CITY REQUIREMENTS.

USE OF TEMPORARY WATER MAINS IS REQUIRED FOR NEW WATER MAIN INSTALLATION.

SAMPLE TEST PORTS FOR BACTERIOLOGICAL TESTING SHALL BE PROVIDED ALONG THE WATER MAIN AT THE FREQUENCY AND LOCATION REQUIRED BY THE CITY OF BOERNE OR AT A MINIMUM PER THE TREC REQUIREMENTS.

FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, PASSED BACTERIOLOGICAL TESTING AND THE CITY OF BOERNE RELASES THE MAIN TO THE IN-CHARGE.

BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED WITHIN 40 FEET OF THE WATER MAIN.

NO VALVES OR APPURTENANCES SHALL BE CONSTRUCTED WITHIN CURBS, CURB BARRIERS OR LANES. ADDITIONALLY, HYDRANTS AND BLOWOFFS SHALL NOT BE INSTALLED WITHIN SIDEWALKS OR DRIVEWAYS WITHOUT PRIOR APPROVAL.

ALL FIRE HYDRANTS SHALL BE INSTALLED WITH THE MAIN PUMPER NOZZLE A MINIMUM OF 18" AND A MAXIMUM OF 34" FROM FINISH GRADE. HYDRANTS IN THE RIGHT-OF-WAY SHALL BE INSTALLED FROM 1" MINIMUM TO 7" MAXIMUM FROM THE FACE OF THE CURB.

GRADING NOTES:

CONTRACTOR IS REQUIRED TO OBTAIN AN APPROVED GRADING PERMIT FROM THE CITY, IF APPLICABLE.

CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES WHICH ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.

GRADING WORK SHALL BE COMPLETED TO WITHIN 0.10 FEET OF THE FINAL GRADE PRIOR TO INSTALLATION OF UTILITIES INCLUDING ANY UTILITY TYPE INSTALLATION OUTSIDE OF THE ROW TO ENSURE DEPTHS ARE APPROPRIATE FROM FINAL GRADE.

CONTRACTOR SHALL NOT PLACE ANY FILL OR WASTE MATERIAL IN THE LOCAL OR 200-YEAR FLOODPLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT.

UTILITIES GENERAL:

CONSTRUCTION, TESTING, CLEANING, AND DISINFECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.

CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVES. THE CITY MUST BE PRESENT DURING ANY WORK COMPLETED ON EXISTING CITY UTILITIES. THE CONTRACTOR IS NOT PERMITTED TO COMPLETE GAS WORK ON EXISTING CITY GAS MAINS AT ANY TIME.

THE CONTRACTOR MUST COORDINATE AND SCHEDULE ALL UTILITY TIE-INS WITH THE CITY. NO TIE-INS SHALL BE MADE TO THE EXISTING UTILITY SYSTEM UNTIL ALL TEST RESULTS HAVE BEEN PROVIDED TO THE CITY AND ARE VERIFIED.

UNLESS THE DEVELOPER HAS RECEIVED PRIOR WRITTEN PERMISSION BY THE CITY OF BOERNE, ALL UTILITIES INCLUDING BUT NOT LIMITED TO WATER, RECLAIMED WATER, SEWER, GAS, AND ELECTRIC UTILITIES MUST BE INSTALLED AND TESTED PRIOR TO THE DRIVING OF A STREET OR ALLEY TOP PORTION THEREOF.

PROTECT EXISTING BULK WATER. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING CITY APPROVED BACKFLOW DEVICES OR AIR GAPS ON ALL LAMBERS PRIOR TO LANDING WATER IN UNPROTECTED MAINS.

ALL MANHOLES, END OF MAIN CLEANOUTS, VALVES, AND BLOW-OFFS SHALL HAVE CONCRETE ENGASMENTS INSTALLED. ANY ENGASMENTS IN PAVEMENT SHALL BE ORIGINAL FROM THE DATE OF CONSTRUCTION.

ONE DENSITY TEST PER 8 INCH LIFT IS REQUIRED EVERY 500 FEET FOR TRENCHES UP TO 12 FEET IN DEPTH AND EVERY 300 FEET FOR TRENCHES 12 FEET AND DEEPER. TEST RESULTS SHALL BE PROVIDED TO THE CITY AND ARE REQUIRED TO MATCH FINAL GRADES.

ALL VALVE BOXES, METER BOXES, FIRE HYDRANTS, MANHOLES, ETC. ARE REQUIRED TO BE ADJUSTED AS REQUIRED TO MATCH FINAL GRADES.

NOTE:

CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 80% COMPACTION ON ALL TRENCH BACKFILL AND PAVING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE CITY OF BOERNE INSPECTOR TEST ADMINISTER. PER EACH 8-INCH LIFT PER 500 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINIALIZED BY THE CITY OF BOERNE WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

EROSION CONTROL NOTES:

ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND PAVING IS COMPLETE AND EROSION IS ESTABLISHED WITH 80% COVERAGE ACHIEVED.

CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROL DEVICES SHALL BE REPAIRED OR REPLACED AS NECESSARY. AS DIRECTED BY THE OWNER'S REPRESENTATIVE, ACCUMULATED SILT IN ANY EROSION CONTROL DEVICE SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON-SITE IN A MANNER NOT TO BE CONSIDERED AS HAZARDOUS.

CONTRACTOR IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL IS SUFFICIENT TO MITIGATE OFF-SITE IMPACTS AND ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.

THE CITY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE DEVELOPER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF THE MODIFICATIONS.

CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH TOPSOIL AND VEGETATION.

CONTRACTOR TO REMOVE GRASS AND STRIP TOPSOIL TO DEPTHS ENCOUNTERED AND STOCKPILE TOPSOIL TO BE DISTRIBUTED DURING FINAL GRADING OF THE DISTURBED AREAS.

CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION TRAFFIC UTILIZES THE STABILIZED CONSTRUCTION ENTRANCES AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.

CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST.

CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSONS RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION IN PAVEMENT SHALL BE REMOVED WITHIN THE DEPTHS SPECIFIED IN THESE SPECIFICATIONS.

DISTURBED PORTIONS OF THE SITE MUST BE STABILIZED. STABILIZATION PRACTICES MUST BE INITIATED WITHIN 14 DAYS OF PORTIONS OF THE SITE WHERE CONSTRUCTION HAS BEEN EITHER TEMPORARILY OR PERMANENTLY CEASED, UNLESS EXCEPTED WITHIN THE PROXY ENTRY.

CONTRACTOR SHALL INSPECT DISTURBED AREAS, MATERIAL STORAGE AREAS EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND WINDICE ENTRY AND EXIT AREAS AT LEAST EVERY 14 CALENDAR DAYS AND WITHIN 30 DAYS OF A STORM EVENT OF 0.5 INCHES OR GREATER.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE CITY OF BOERNE.

RECORD DRAWINGS:

CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER A COPY OF AS-BUILT PLANS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM THE ORIGINAL PLANS.

THE DESIGN ENGINEER SHALL PROVIDE TO THE CITY OF BOERNE THE "PLAN OF RECORD", SIGNED AND SEALED BY THE DESIGN ENGINEER.

THE "PLAN OF RECORD" MUST INCLUDE PRINT LINE DATA AND PIPE TRENCH INFORMATION FOR ALL GAS MAINS AND SERVICE LINES.

TREES:

CONTRACTOR SHALL PRESERVE ALL TREES OUTSIDE OF THE LIMITS OF CONSTRUCTION. ANY TREES REMOVED FROM THE EQUIVALENT OF THE LIMITS OF CONSTRUCTION SHALL BE MITIGATED BY PLANTING OR TRANSPLANTING AN EQUIVALENT NUMBER OF DIAMETER (INCHES) OF THE TREES) THAT WERE REMOVED.

REVEGETATION:

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH. THE CONTRACTOR MUST LOOSEN THE SURFACE OF THE SOIL TO A DEPTH OF 2 INCHES AND REMOVE ALL STONES AND DEBRIS OVER 2 INCHES IN ANY DIMENSION. ALL AREAS FOR REVEGETATION REQUIRE A MINIMUM OF 4 INCHES OF SOIL. OVER CUTTING OF ROCK SUBGRADE MAY BE REQUIRED. ADDITIONAL TOPSOIL FROM THE STOCKPILED TOPSOIL MAY BE NECESSARY TO BRING TO REQUIRED GRADES AND FOR REVEGETATION. THE AREA SHALL THEN BE REVEGETATED AND MAINTAINED UNTIL SOIL IS STABILIZED IN ALL AREAS. ANY AREA DISTURBED FOR ANY REASON PRIOR TO FINAL INSTALLATION.

AT LEAST 80% OF ALL DISTURBED AREAS MUST HAVE VEGETATION ESTABLISHED PRIOR TO ACCEPTANCE BY THE CITY OF BOERNE.

DISTURBED AREAS THAT ARE SEEDED OR SOILED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RE-SEEDED OR RE-SOILED IF NECESSARY.

RECORD DRAWINGS:

CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER A COPY OF AS-BUILT PLANS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM THE ORIGINAL PLANS.

THE DESIGN ENGINEER SHALL PROVIDE TO THE CITY OF BOERNE THE "PLAN OF RECORD", SIGNED AND SEALED BY THE DESIGN ENGINEER.

THE "PLAN OF RECORD" MUST INCLUDE PRINT LINE DATA AND PIPE TRENCH INFORMATION FOR ALL GAS MAINS AND SERVICE LINES.

EROSION CONTROL NOTES:

ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND PAVING IS COMPLETE AND EROSION IS ESTABLISHED WITH 80% COVERAGE ACHIEVED.

CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROL DEVICES SHALL BE REPAIRED OR REPLACED AS NECESSARY. AS DIRECTED BY THE OWNER'S REPRESENTATIVE, ACCUMULATED SILT IN ANY EROSION CONTROL DEVICE SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON-SITE IN A MANNER NOT TO BE CONSIDERED AS HAZARDOUS.

CONTRACTOR IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL IS SUFFICIENT TO MITIGATE OFF-SITE IMPACTS AND ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.

THE CITY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE DEVELOPER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF THE MODIFICATIONS.

CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH TOPSOIL AND VEGETATION.

CONTRACTOR TO REMOVE GRASS AND STRIP TOPSOIL TO DEPTHS ENCOUNTERED AND STOCKPILE TOPSOIL TO BE DISTRIBUTED DURING FINAL GRADING OF THE DISTURBED AREAS.

CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION TRAFFIC UTILIZES THE STABILIZED CONSTRUCTION ENTRANCES AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.

CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST.

CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSONS RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION IN PAVEMENT SHALL BE REMOVED WITHIN THE DEPTHS SPECIFIED IN THESE SPECIFICATIONS.

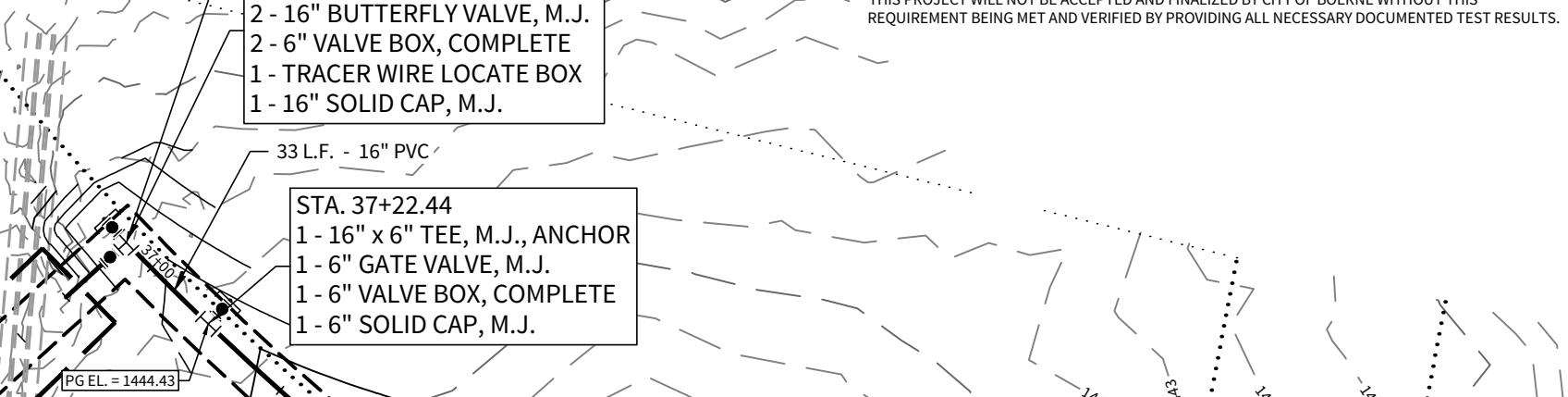
DISTURBED PORTIONS OF THE SITE MUST BE STABILIZED. STABILIZATION PRACTICES MUST BE INITIATED WITHIN 14 DAYS OF PORTIONS OF THE SITE WHERE CONSTRUCTION HAS BEEN EITHER TEMPORARILY OR PERMANENTLY CEASED, UNLESS EXCEPTED WITHIN THE PROXY ENTRY.

CONTRACTOR SHALL INSPECT DISTURBED AREAS, MATERIAL STORAGE AREAS EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND WINDICE ENTRY AND EXIT AREAS AT LEAST EVERY 14 CALENDAR DAYS AND WITHIN 30 DAYS OF A STORM EVENT OF 0.5 INCHES OR GREATER.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE CITY OF BOERNE.

NOTE:

CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 80% COMPACTION ON ALL TRENCH BACKFILL AND PAVING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE CITY OF BOERNE INSPECTOR TEST ADMINISTER. PER EACH 8-INCH LIFT PER 500 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINIALIZED BY THE CITY OF BOERNE WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.



EROSION CONTROL NOTES:

ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND PAVING IS COMPLETE AND EROSION IS ESTABLISHED WITH 80% COVERAGE ACHIEVED.

CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROL DEVICES SHALL BE REPAIRED OR REPLACED AS NECESSARY. AS DIRECTED BY THE OWNER'S REPRESENTATIVE, ACCUMULATED SILT IN ANY EROSION CONTROL DEVICE SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON-SITE IN A MANNER NOT TO BE CONSIDERED AS HAZARDOUS.

CONTRACTOR IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL IS SUFFICIENT TO MITIGATE OFF-SITE IMPACTS AND ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.

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CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH TOPSOIL AND VEGETATION.

CONTRACTOR TO REMOVE GRASS AND STRIP TOPSOIL TO DEPTHS ENCOUNTERED AND STOCKPILE TOPSOIL TO BE DISTRIBUTED DURING FINAL GRADING OF THE DISTURBED AREAS.

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RECORD DRAWINGS:

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THE "PLAN OF RECORD" MUST INCLUDE PRINT LINE DATA AND PIPE TRENCH INFORMATION FOR ALL GAS MAINS AND SERVICE LINES.

TREES:

CONTRACTOR SHALL PRESERVE ALL TREES OUTSIDE OF THE LIMITS OF CONSTRUCTION. ANY TREES REMOVED FROM THE EQUIVALENT OF THE LIMITS OF CONSTRUCTION SHALL BE MITIGATED BY PLANTING OR TRANSPLANTING AN EQUIVALENT NUMBER OF DIAMETER (INCHES) OF THE TREES) THAT WERE REMOVED.

REVEGETATION:

ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH. THE CONTRACTOR MUST LOOSEN THE SURFACE OF THE SOIL TO A DEPTH OF 2 INCHES AND REMOVE ALL STONES AND DEBRIS OVER 2 INCHES IN ANY DIMENSION. ALL AREAS FOR REVEGETATION REQUIRE A MINIMUM OF 4 INCHES OF SOIL. OVER CUTTING OF ROCK SUBGRADE MAY BE REQUIRED. ADDITIONAL TOPSOIL FROM THE STOCKPILED TOPSOIL MAY BE NECESSARY TO BRING TO REQUIRED GRADES AND FOR REVEGETATION. THE AREA SHALL THEN BE REVEGETATED AND MAINTAINED UNTIL SOIL IS STABILIZED IN ALL AREAS. ANY AREA DISTURBED FOR ANY REASON PRIOR TO FINAL INSTALLATION.

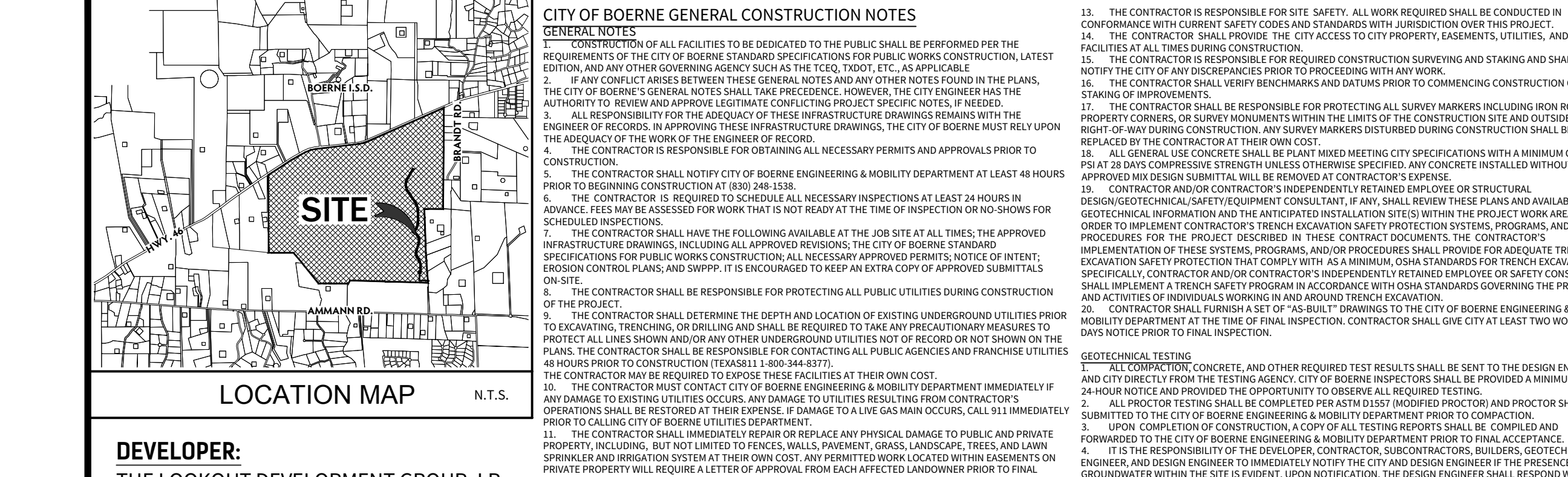
AT LEAST 80% OF ALL DISTURBED AREAS MUST HAVE VEGETATION ESTABLISHED PRIOR TO ACCEPTANCE BY THE CITY OF BOERNE.

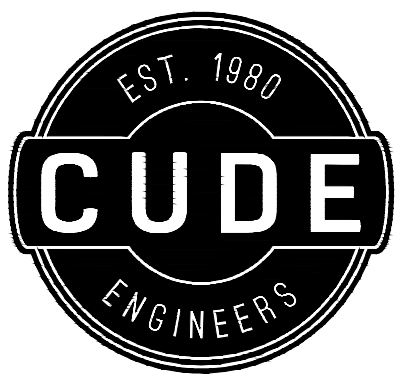
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THE "PLAN OF RECORD" MUST INCLUDE PRINT LINE DATA AND PIPE TRENCH INFORMATION FOR ALL GAS MAINS AND SERVICE LINES.





4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P:(210) 681.2951 F:(210) 523.7112

GEORGE'S RANCH
16" ON-SITE WATER MAIN
WATER DISTRIBUTION PLAN

DATE	1/5/2026
PROJECT NO.	03546.011
DRAWN BY	HC/SG
CHECKED BY	KMH/WPM

REVISIONS
1. 10/14/25 - ADDING GATE VALVES AT TEES AND SHOWING WATER LINES IN PROFILE
2. 11/20/25 - REVISED WATER LINE AND STEEL CASING LENGTHS, SHOWING STORMSEWER PIPES IN PROFILE
3. 1/26/26 - REDUCE PIPE VERTICAL SEPARATION TO 1'
4.
5.
6.
7.
8.
9.



1/7/2026
CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500

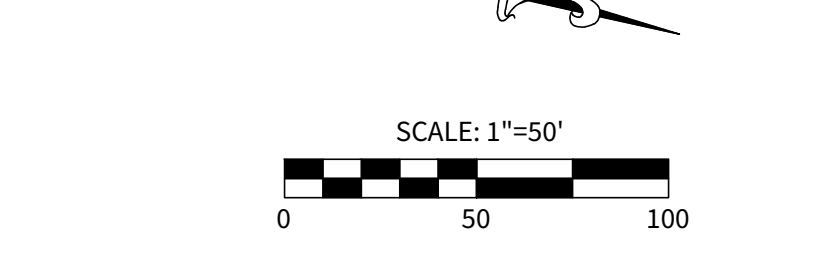
NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND FINISHING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE CITY OF BOERNE. INSPECTOR TEST ADMINISTER, PER EACH 8-INCH LOOSE LIFT PER 500 LINEAL FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINISHED BY THE CITY OF BOERNE WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

JOINT RESTRAINT NOTE:
CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HUBBERS OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING, JOINT RESTRAINTS AND FIELD LOCK GASKETS.

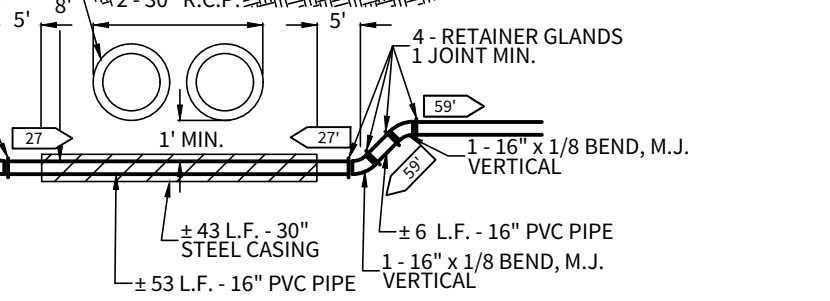
RECORD DRAWINGS:
1. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER A COPY OF ALL FINAL PLANS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM THE ORIGINAL PLANS.
2. THE DESIGN ENGINEER SHALL PROVIDE TO THE CITY OF BOERNE THE "PLAN OF RECORD", SIGNED AND SEALED BY THE DESIGN ENGINEER.
3. THE "PLAN OF RECORD" MUST INCLUDE POINT LINE DATA AND PIPE TESTING INFORMATION FOR ALL GAS MAINS AND SERVICE LINES.

REVEGETATION:
1. ALL SCOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH. THE CONTRACTOR MUST LOOSEN THE SURFACE OF THE SOIL TO A DEPTH OF 4 INCHES AND REMOVE ALL STONES AND DEBRIS OVER 2 INCHES IN ANY DIMENSION. ALL AREAS FOR REVEGETATION REQUIRE A MINIMUM OF 4 INCHES OF SOIL, OVERCUTTING OF ROCK SUBGRADE MAY BE REQUIRED. ADDITIONAL TOPSOIL FROM THE STOCKPILED TOPSOIL MAY BE NECESSARY TO BRING TO REQUIRED GRADES AND FOR RE-ESTABLISHING VEGETATION. THE AREA SHALL THEN BE REVEGETATED AND MAINTAINED WITH SOIL STABILIZATION MULCH AREAS. ANY AREA FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR.
2. THE CONTRACTOR MUST CONSTRUCT AND MAINTAIN A PERMANENT STABLE PROTECTIVE COVER (GRASS) FOR EROSION AND SEDIMENT CONTROL ON ALL LAND SURFACES EXPOSED OR DISTURBED BY CONSTRUCTION OF THE PERMITTED PROJECT. THE PROTECTIVE COVER MUST BE INSTALLED WITHIN 14 DAYS AFTER FINAL GRADING OF THE AFFECTED LAND SURFACE. PERMANENT STABLE COVER MUST BE ESTABLISHED WITHIN 90 DAYS OF ITS INSTALLATION.
3. AT LEAST 80% OF ALL DISTURBED AREAS MUST HAVE VEGETATION ESTABLISHED PRIOR TO ACCEPTANCE BY THE CITY OF BOERNE.
4. EVERY PORTION OF THE PROJECT THAT IS SEEDED OR SOILED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RE-SEED OR RE-SOILED AS NECESSARY.

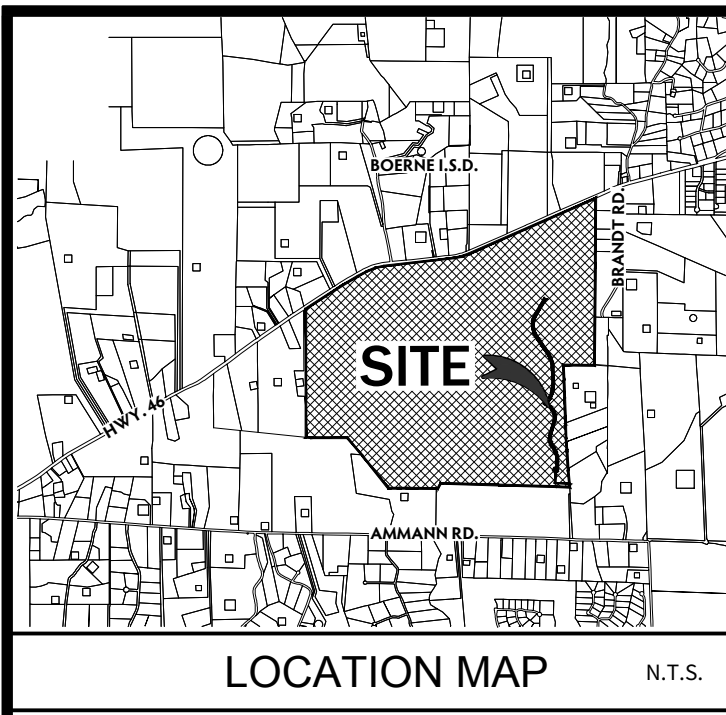
TREES:
1. THE CONTRACTOR SHALL PRESERVE ALL TREES OUTSIDE OF THE LIMITS OF CONSTRUCTION. ANY TREES REMOVED FROM THE OUTSIDE OF THE LIMITS OF CONSTRUCTION SHALL BE MITIGATED BY PLANTING OR TRANSPORTING AN EQUIVALENT NUMBER OF DIAMETER INCHES OF THE TREES THAT WERE REMOVED.



DETAIL "B" WATER / DRAIN CROSSING
SIDE VIEW (THIS DETAIL IS VERTICAL ONLY, NOT HORIZONTAL)



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



CITY OF BOERNE GENERAL CONSTRUCTION NOTES
GENERAL NOTES
1. THE CONSTRUCTION OF ALL FACILITIES TO BE DEDICATED TO THE PUBLIC SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AND ANY OTHER GOVERNING AGENCY SUCH AS THE TCEQ, TDDOT, ETC., AS APPLICABLE.
2. ANY CONTACT ARISING BETWEEN THESE GENERAL NOTES AND THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, OR THE CITY OF BOERNE GENERAL NOTES SHALL TAKE PRECEDENCE. HOWEVER, THE CITY ENGINEER HAS THE AUTHORITY TO REVERSE AND APPROVE LEGITIMATE CONFLICTING PROJECT SPECIFICATIONS, IF NEEDED.
3. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE INFRASTRUCTURE DRAWINGS REMAINS WITH THE ENGINEER OF RECORD. IN APPROVING THESE INFRASTRUCTURE DRAWINGS, THE CITY OF BOERNE MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL NOTIFY CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AT (830) 248-1538.
6. THE CONTRACTOR IS REQUIRED TO SCHEDULE ALL NECESSARY INSPECTIONS AT LEAST 24 HOURS IN ADVANCE. FEES MAY BE ASSESSED FOR WORK THAT IS NOT READY AT THE TIME OF INSPECTION OR NO SHOWS FOR SCHEDULED INSPECTIONS.
7. THE CONTRACTOR SHALL HAVE THE FOLLOWING AVAILABLE AT THE JOB SITE AT ALL TIMES: THE APPROVED INFRASTRUCTURE DRAWINGS, INCLUDING ALL APPROVED REVISIONS; THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION; ALL NECESSARY APPROVED PERMITS; NOTICE OF INTENT; EROSION CONTROL PLANS; AND SWPPP. IT IS ENCOURAGED TO KEEP AN EXTRA COPY OF APPROVED SUBMITTALS ON SITE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC UTILITIES DURING CONSTRUCTION OF THE PROJECT.
9. THE CONTRACTOR SHALL DETERMINE THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATING, TRENCHING, OR DRILLING AND SHALL BE REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT ALL LINES SHOWN AND/OR ANY OTHER UNDERGROUND UTILITIES NOT OF RECORD OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PUBLIC AGENCIES AND FRANCHISE UTILITIES 48 HOURS PRIOR TO CONSTRUCTION (FEASIBLE). (800-364-8177). THE CONTRACTOR MAY BE REQUIRED TO EXPOSE THESE FACILITIES AT THEIR OWN COST.
10. THE CONTRACTOR MUST CONTACT CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT IMMEDIATELY IF ANY DAMAGE TO EXISTING UTILITIES OCCURS. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT THEIR EXPENSE. IF DAMAGE TO A GAS MAIN OCCURS, CALL 911 IMMEDIATELY PRIOR TO CALLING CITY OF BOERNE UTILITIES DEPARTMENT.
11. THE CONTRACTOR SHALL IMMEDIATELY REPLACE ANY PHYSICAL DAMAGE TO PUBLIC AND PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO FENCES, WALLS, PAVEMENT, GRASS, LANDSCAPE, TREES, AND LAWN AND IRRIGATION SYSTEMS AT THEIR OWN COST. ANY PERMITTED WORK SHALL BE COMPLETED WITHIN 48 HOURS OF PRIVATE PROPERTY WILL REQUIRE A LETTER OF APPROVAL FROM EACH AFFECTED LANDOWNER PRIOR TO FINAL ACCEPTANCE OF CONSTRUCTION.
12. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY AND CITY ENGINEER IF THE PRESENCE OF DISCONTINUOUS OR UNUSUAL UTILITIES WHICH ARE NOT SHOWN ON THE PLANS OR UNUSUAL UTILITIES WHICH ARE NOT SHOWN ON THE PLANS REVISIONS FOR THE MITIGATION OF THE GROUNDWATER TABLE. ALL CONSTRUCTION ACTIVITY IMPACTED BY THE DISCONTINUOUS OR UNUSUAL UTILITIES SHALL BE SUSPENDED UNTIL THE CITY APPROVES THE GROUNDWATER MITIGATION PLAN IN WRITING.

13. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY. ALL WORK REQUIRED SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THIS PROJECT.
14. THE CONTRACTOR SHALL PROVIDE THE CITY ACCESS TO PROPERTY, EASEMENTS, UTILITIES, AND FACILITIES AT ALL TIMES DURING CONSTRUCTION.
15. THE CONTRACTOR IS RESPONSIBLE FOR REQUIRED CONSTRUCTION SURVEYING AND STAKING AND SHALL NOTIFY THE CITY OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH ANY WORK.
16. THE CONTRACTOR SHALL VERIFY DIMENSIONS AND DISTANCES PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL SURVEY MARKERS INCLUDING ROAD MARKS, PROPERTY CORNERS, OR SURVEY MONUMENTS WITHIN THE LIMITS OF THE CONSTRUCTION SITE AND OUTSIDE THE RIGHT-OF-WAY DURING CONSTRUCTION. ANY SURVEY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT THEIR OWN COST.
18. ALL GENERAL USE CONCRETE SHALL BE PLANT MIXED MEETING CITY SPECIFICATIONS WITH A MINIMUM OF 4000 PSI AT 28 DAYS COMPRESSIVE STRENGTH UNLESS OTHERWISE SPECIFIED. ANY CONCRETE INSTALLED WITHOUT AN APPROVED MIX DESIGN SUBMITTAL WILL BE REMOVED AT CONTRACTOR'S EXPENSE.
19. 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 LOCATIONS WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THESE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH LOCATIONS.
20. CONTRACTOR SHALL FURNISH A SET OF "AS-BUILT" DRAWINGS TO THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT THE TIME OF FINAL INSPECTION. CONTRACTOR SHALL GIVE CITY AT LEAST TWO WORKING DAYS NOTICE PRIOR TO FINAL INSPECTION.

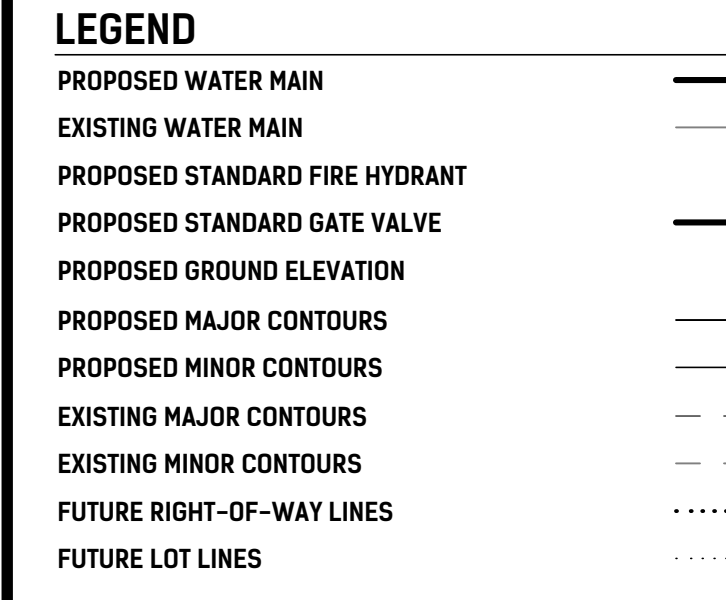
EROSION CONTROL NOTES
1. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND PAVING IS COMPLETE AND VEGETATION IS ESTABLISHED WITH 80% COVERAGE ACHIEVED.
2. CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROL DEVICES SHALL BE REPAIRED OR REPLACED AS INSTRUCTION IS NECESSARY, OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ACCUMULATED SOIL IN ANY EROSION CONTROL DEVICE SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON SITE IN A MANNER NOT CONTRIBUTING TO ADDITIONAL EROSION.
3. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL IS SUFFICIENT TO MITIGATE OFF-SITE IMPACTS AND ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.
4. THE CITY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE BIDDEN'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF THE MODIFICATIONS.
5. CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH TOPSOIL AND VEGETATION.
6. CONTRACTOR TO REMOVE GRASS AND STRIP TOPSOIL TO DEPTHS ENCOUNTERED AND STOCKPILE TOPSOIL TO BE REINSTALLED AFTER FINAL GRADING OF THE DISTURBED AREAS.
7. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION TRAFFIC UTILIZES THE STABILIZED CONSTRUCTION ENTRANCES AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.
8. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION TRAFFIC UTILIZES THE STABILIZED CONSTRUCTION ENTRANCES AT ALL TIMES. CONTRACTOR SHALL CLEAN AND REMOVE ALL MATERIAL FROM ROCK, MUD, TRASH AND DEBRIS FROM THE STABILIZED CONSTRUCTION ENTRANCES.
9. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST.
10. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSONS RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SOIL ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN DEPTHS EXCEED 24 INCHES.
11. DISTURBED PORTIONS OF THE SITE MUST BE STABILIZED. STABILIZATION PRACTICES MUST BE INITIATED WITHIN 14 DAYS OF PORTIONS OF THE SITE WHERE CONSTRUCTION HAS BEEN EITHER TEMPORARILY OR PERMANENTLY CEASED, UNLESS EXCEPTED WITHIN THE TRODS PERMIT.
12. CONTRACTOR SHALL INSPECT DISTURBED AREAS, MATERIAL STORAGE AREAS EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND VEHICLE ENTRY AND EXIT AREAS AT LEAST EVERY 34 CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT OF 0.25 INCHES OR GREATER.
13. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE CITY OF BOERNE.

GRADING NOTES
1. CONTRACTOR IS REQUIRED TO OBTAIN AN APPROVED GRADING PERMIT FROM THE CITY, IF APPLICABLE.
2. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
3. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES WHICH ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.
4. GRADING WORK SHALL BE COMPLETED TO WITHIN 0.10 FEET OF THE FINAL GRADE PRIOR TO INSTALLATION OF UTILITIES INCLUDING AN UTILITY TYPE INSTALLATION OUTSIDE OF THE ROW TO ENSURE DEPTHS ARE APPROPRIATE FROM FINAL GRADE.
5. CONTRACTOR SHALL NOT PLACE ANY FILL OR WASTE MATERIAL IN THE LOCAL OR 100-YEAR FLOODPLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOODPLAIN DEVELOPMENT PERMIT.

UTILITIES
TRENCH:
1. CONSTRUCTION, TESTING, CLEANING, AND DISINFECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
2. CONTRACTOR SHALL NOT OPERATE ANY EXISTING VALVES. THE CITY MUST BE PRESENT DURING ANY WORK COMPLETED ON EXISTING CITY UTILITIES. THE CONTRACTOR IS NOT PERMITTED TO COMPLETE GAS WORK ON EXISTING CITY GAS MAINS AT ANY TIME.
3. THE CONTRACTOR MUST COORDINATE AND SCHEDULE ALL UTILITY TIE-INS WITH THE CITY. NO TIE-INS SHALL BE MADE TO THE EXISTING UTILITY SYSTEM UNTIL ALL TEST RESULTS HAVE BEEN PROVIDED TO THE CITY AND ARE REVIEWED.
4. UNLESS THE DEVELOPER HAS RECEIVED PRIOR WRITTEN PERMISSION BY THE CITY OF BOERNE, ALL UTILITIES, INCLUDING BUT NOT LIMITED TO WATER, RECLAIMED WATER, SEWER, GAS, AND ELECTRIC UTILITIES MUST BE IDENTIFIED AND TESTED PRIOR TO THE PAVING OF A STREET OR ALLEY OR PORTION THEREOF.
5. PRIOR TO TRENCHING, THE CONTRACTOR MUST SUBMIT APPLICATIONS TO THE UTILITIES DEPARTMENT FOR A PUBLIC WATER MAIN. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING A CITY APPROVED BACKFLOW DEVICE OR GAP ON ALL 1/2" AND 3/4" WATER MAINS AND 1/2" AND 3/4" GAS MAINS.
6. ALL MANHOLES, END OF MAIN CLEANOUTS, VALVES, AND BLOW-OFFS SHALL HAVE CONCRETE ENCASEMENTS INSTALLED ANY ENCASEMENTS IN PAVEMENT SHALL BE CASUAL FROM THE DIRECTION OF TRAFFIC.
7. ONE DENSITY TEST PER 8-INCH LIFT IS REQUIRED EVERY 500 FEET FOR TRENCHES UP TO 12 FEET IN DEPTH AND EVERY 200 FEET FOR TRENCHES 12 FEET AND DEEPER. DENSITY TESTING MUST BE REQUIRED FOR EACH LIFT PRIOR TO COMMENCING INSTALLATION OF THE NEXT LIFT. POTHOLES AND STAKE STEPPING IS NOT PERMITTED.
8. ALL VALVE BOXES, METER BOXES, FIRE HYDRANTS, MANHOLES, ETC. ARE REQUIRED TO BE ADJUSTED AS NECESSARY TO MATCH FINISH GRADES.
9. THE CONTRACTOR IS RESPONSIBLE FOR STAKING UTILITIES AND INSTALLING PERMANENT PROPERTY PINS PRIOR TO THE FINAL INSPECTION TO VERIFY LOCATION, FINISH GRADE, AND DEPTH.
10. TRACER WIRE LOCATE BOX SHALL BE INSTALLED PER CITY REQUIREMENTS AT ALL VALVES INCLUDING, GAS, RECLAIMED WATER, FIRE HYDRANT VALVES AND BLOW-OFFS, FOR GROUPING OF VALVES AT ONE GENERAL LOCATION, ONE LOCATE BOX MAY BE USED.

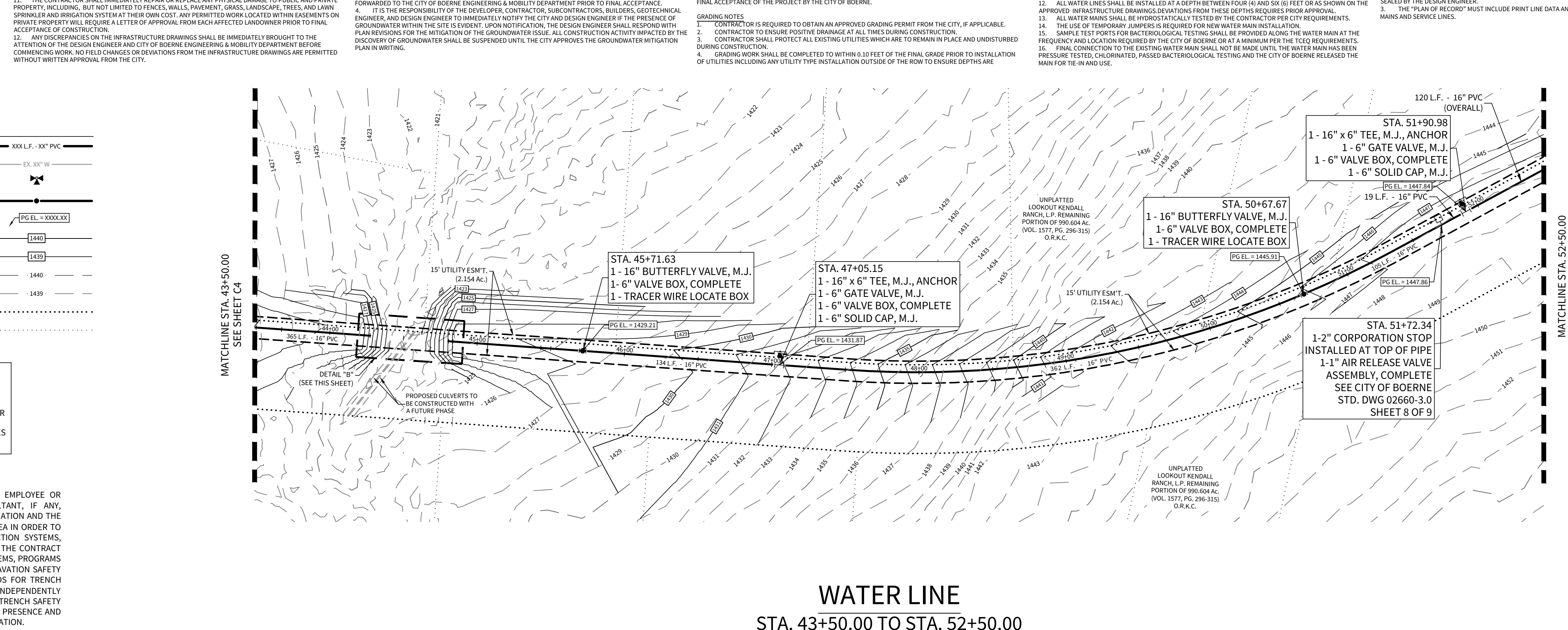
WATER
1. THERE IS THE MINIMUM 30" FEET SEPARATION BETWEEN WATER AND SANITARY SEWER LINES CANNOT BE MAINTAINED, THE CONTRACTOR MUST MEET THE REQUIREMENTS OF 30 TAC 212.53(D) AND 30 TAC 200.44(E).
2. ALL WATER LINES SHALL BE INSTALLED AT A DEPTH BETWEEN FOUR (4) INCHES AND SIX (6) FEET OR AS SHOWN ON THE DRAWINGS.
3. THE USE OF TEMPORARY JOINTS IS REQUIRED FOR NEW WATER MAIN INSTALLATION.
4. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR PER CITY REQUIREMENTS.
5. SAMPLE TEST PORTS FOR BACTERIOLOGICAL TESTING SHALL BE PROVIDED ALONG THE WATER MAIN AT THE FREQUENCY AND LOCATION REQUIRED BY THE CITY OF BOERNE AT A MINIMUM PER THE TCEQ REQUIREMENTS.
6. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, PASSED BACTERIOLOGICAL TESTING AND THE CITY OF BOERNE RELEASED THE MAIN FOR TIE-IN AND USE.

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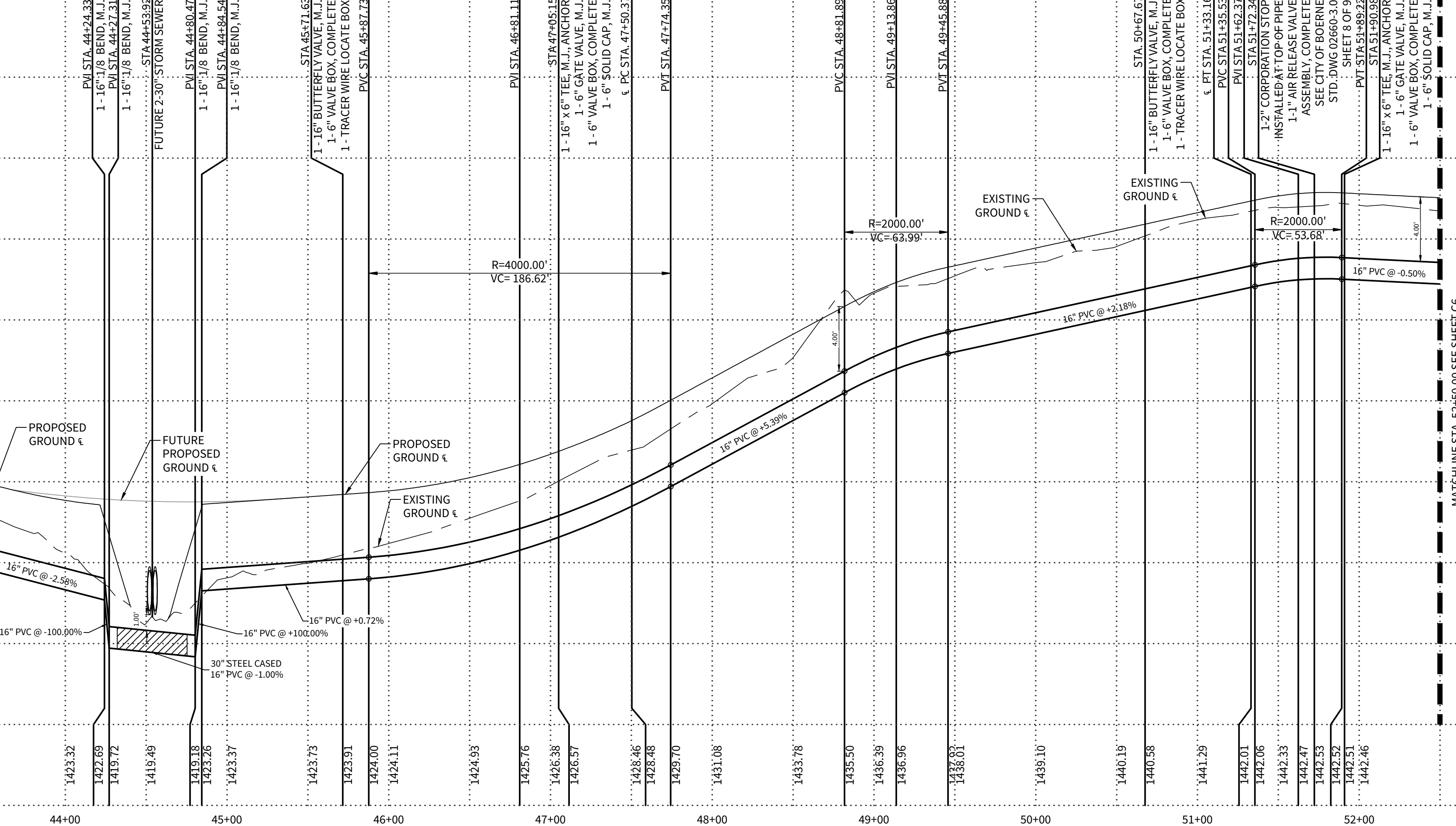
CAUTION!!
EXISTING UTILITIES ARE LOCATED WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH FOR PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTIFY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.

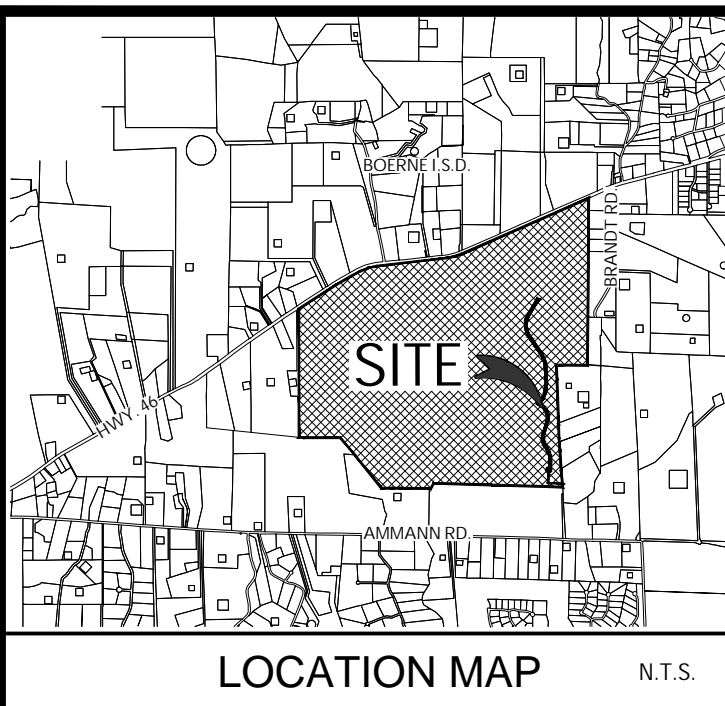
TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



TYPE	MAIN SIZE(S)	RESTRAINT LENGTH
DEAD END/IN-LINE VALVE	16"	169"
TEE	16" x 16"	93' ALONG BRANCH OF TEE
TEE	16" x 12"	32' ALONG BRANCH OF TEE
TEE	16" x 10"	41' ALONG BRANCH OF TEE
TEE	16" x 6"	1' ALONG BRANCH OF TEE
HORIZONTAL OFFSET	16" x 1/8 BEND	25' ON BOTH SIDES OF BEND
HORIZONTAL OFFSET	16" x 1/32 BEND	6' ON BOTH SIDES OF BEND

* NOTE - JOINT RESTRAINT LENGTHS BASED ON ASSUMED IN-SITU CONDITIONS OF INORGANIC CLAYS WITH HIGH PLASTICITY, TEST PRESSURE OF 200 PSI. PVC PIPE BEDDED IN COMPACTED GRANULAR MATERIAL, DEPTH OF BURY OF FOUR (4) FEET AND A SAFETY FACTOR OF 1.5. THESE RESTRAINT LENGTHS ARE PROVIDED FOR REFERENCE ONLY. ACTUAL RESTRAINT LENGTHS TO BE BASED ON ACTUAL CONDITIONS ENCOUNTERED DURING INSTALLATION.





CITY OF BOERNE GENERAL CONSTRUCTION NOTES

- GENERAL NOTES**
1. THE CONSTRUCTION OF ALL FACILITIES TO BE DEDICATED TO THE PUBLIC SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AND ANY OTHER GOVERNING AGENCY SUCH AS THE TCEQ, TDDOT, ETC., AS APPLICABLE.
 2. IF ANY CONFLICT EXISTS BETWEEN THESE GENERAL NOTES AND ANY OTHER NOTES FOUND IN THE PLANS, THE CITY OF BOERNE'S GENERAL NOTES SHALL TAKE PRECEDENCE. HOWEVER, THE CITY ENGINEER HAS THE AUTHORITY TO REVISION AND APPROVE LEGITIMATE CONFLICTING PROJECT SPECIFIC NOTES, IF NEEDED.
 3. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE INFRASTRUCTURE DRAWINGS REMAINS WITH THE ENGINEER OF RECORD. IN APPROVING THESE INFRASTRUCTURE DRAWINGS, THE CITY OF BOERNE WILL BE RELYING UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
 4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.
 5. THE CONTRACTOR SHALL NOTIFY CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AT 8:00 AM-15:30.
 6. THE CONTRACTOR IS REQUIRED TO SCHEDULE ALL NECESSARY INSPECTIONS AT LEAST 24 HOURS IN ADVANCE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE PRESENT AT ALL INSPECTIONS AND SHOWS FOR SCHEDULED INSPECTIONS.
 7. THE CONTRACTOR SHALL HAVE THE FOLLOWING AVAILABLE AT THE JOB SITE AT ALL TIMES: THE APPROVED INFRASTRUCTURE DRAWINGS, INCLUDING ALL APPROVED REVISIONS; THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION; ALL NECESSARY APPROVED TRENCH EXCAVATION SAFETY PROTECTION CONTROL PLANS; AND SWPPP. IT IS ENCOURAGED TO KEEP AN EXTRA COPY OF APPROVED SUBMITTALS ON SITE.
 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC UTILITIES DURING CONSTRUCTION OF THE PROJECT.
 9. THE CONTRACTOR SHALL DETERMINE THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATING, TRENCHING, OR DRILLING AND SHALL BE REQUIRED TO TAKE ANY PRECAUTIONARY MEASURES TO PROTECT ALL LINES SHOWN AND/OR ANY OTHER UNDERGROUND UTILITIES NOT OF RECORD OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PUBLIC UTILITIES AND FRANCHISE UTILITIES 48 HOURS PRIOR TO CONSTRUCTION (PER ASST 1-800-344-8377). THE CONTRACTOR MAY BE REQUIRED TO EXPOSE THESE FACILITIES AT THEIR OWN COST.
 10. THE CONTRACTOR MUST CONTACT CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT IMMEDIATELY IF ANY DAMAGE TO EXISTING UTILITIES OCCURS. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTOR OPERATIONS SHALL BE RESTORED AT THEIR EXPENSE. IF DAMAGE TO A GAS MAIN OCCURS, CALL 911 IMMEDIATELY PRIOR TO CALLING CITY OF BOERNE UTILITIES DEPARTMENT.
 11. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PUBLIC AND PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO, FENCES, WALLS, PAVEMENT, GRASS, LANDSCAPE, TREES, AND LAWN SPRINKLER AND IRRIGATION SYSTEMS AT THEIR OWN COST. ANY PERMITTED WORK LOCATED WITHIN RIGHTS-OF-WAY PROPERTY WILL REQUIRE A LETTER OF APPROVAL FROM EACH AFFECTED LANDOWNER PRIOR TO FINAL ACCEPTANCE OF CONSTRUCTION.
 12. ANY DISCREPANCIES ON THE INFRASTRUCTURE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER AND CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT BEFORE COMMENCING WORK. NO FIELD CHANGES OR VARIATIONS FROM THE INFRASTRUCTURE DRAWINGS ARE PERMITTED WITHOUT WRITTEN APPROVAL FROM THE CITY.

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- LEGEND**
- PROPOSED WATER MAIN: XXXL.F. - XX" PVC
 - EXISTING WATER MAIN: EX. XX" W
 - PROPOSED STANDARD FIRE HYDRANT: [Symbol]
 - PROPOSED STANDARD GATE VALVE: [Symbol]
 - PROPOSED GROUND ELEVATION: PG. EL. - XXXX.XY
 - PROPOSED MAJOR CONTOURS: [Symbol]
 - PROPOSED MINOR CONTOURS: [Symbol]
 - EXISTING MAJOR CONTOURS: [Symbol]
 - EXISTING MINOR CONTOURS: [Symbol]
 - FUTURE RIGHT-OF-WAY LINES: [Symbol]
 - FUTURE LOT LINES: [Symbol]

CAUTION!!
 EXISTING UTILITIES ARE LOCATED WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH FOR PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTITY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

13. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY. ALL WORK REQUIRED SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THIS PROJECT.
14. THE CONTRACTOR SHALL PROVIDE THE CITY ACCESS TO CITY PROPERTY, EASEMENTS, UTILITIES, AND FACILITIES AT ALL TIMES DURING CONSTRUCTION.
15. THE CONTRACTOR SHALL VERIFY REQUIRED CONSTRUCTION SURVEYING AND STAKING AND SHALL NOTIFY THE CITY OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH ANY WORK.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL SURVEY MARKERS INCLUDING IRON RODS, PROPERTY CORNERS, OR SURVEY MONUMENTS WITHIN THE LIMITS OF THE CONSTRUCTION SITE AND OUTSIDE THE RIGHT-OF-WAY DURING CONSTRUCTION. ANY SURVEY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT THEIR OWN COST.
17. ALL GENERAL USE CONCRETE SHALL BE PLANT MIXED MEETING CITY SPECIFICATIONS WITH A MINIMUM OF 4000 PSI AT 28 DAYS COMPRESSIVE STRENGTH UNLESS OTHERWISE SPECIFIED. ANY CONCRETE INSTALLED WITHOUT AN APPROVED MIX DESIGN SUBMITTAL WILL BE REMOVED AT CONTRACTOR'S EXPENSE.
18. 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 SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THESE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
19. CONTRACTOR SHALL FURNISH A SET OF "AS-BUILT" DRAWINGS TO THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT THE TIME OF FINAL INSPECTION. CONTRACTOR SHALL HAVE CITY AT LEAST TWO WORKING DAYS NOTICE PRIOR TO FINAL INSPECTION.

- GEOTECHNICAL TESTING**
1. ALL TESTS, INCLUDING BUT NOT LIMITED TO, COMPREHENSIVE, UNCONSOLIDATED, AND OTHER REQUIRED TEST RESULTS SHALL BE SENT TO THE DESIGN ENGINEER AND CITY DIRECTLY FROM THE TESTING AGENCY. CITY OF BOERNE INSPECTORS SHALL BE PROVIDED A MINIMUM OF 24 HOURS NOTICE AND THE OPPORTUNITY TO OBSERVE ALL REQUIRED TESTING.
 2. ALL PROCTOR TESTING SHALL BE COMPLETED PER ASTM D1557 (MODIFIED PROCTOR) AND PROCTOR SHALL BE SUBMITTED TO THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT PRIOR TO CONSTRUCTION.
 3. UPON COMPLETION OF CONSTRUCTION, A COPY OF ALL TESTING REPORTS SHALL BE COMPLETED AND FORWARDED TO THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PRESENCE OF THE DESIGN ENGINEER, STRUCTURAL ENGINEER, AND DESIGN ENGINEER TO IMMEDIATELY NOTIFY THE CITY AND DESIGN ENGINEER OF THE PRESENCE OF GROUNDWATER WITHIN THE SITE SERVICENT. UPON NOTIFICATION, THE DESIGN ENGINEER SHALL RESPOND WITH PLAN REVISIONS FOR THE MITIGATION OF THE GROUNDWATER ISSUE. ALL CONSTRUCTION ACTIVITY IMPACTED BY THE DISCOVERED GROUNDWATER SHALL BE SUSPENDED UNTIL THE CITY APPROVES THE GROUNDWATER MITIGATION PLAN IN WRITING.

- EROSION CONTROL NOTES**
1. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE. ALL SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND PAVING IS COMPLETE AND VEGETATION IS ESTABLISHED WITH 85% COVERAGE ACHIEVED.
 2. CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROLS SHALL BE REPAIRED OR REPLACED AS INSPECTED AND NECESSARY. GRASS COVERED BY THE OWNER'S REPRESENTATIVE, ACCUMULATED SLIT IN ANY EROSION CONTROL DEVICE SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON-SITE IN A MANNER NOT CONTRIBUTING TO ADDITIONAL EROSION.
 3. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL IS SUFFICIENT TO MITIGATE OFF-SITE IMPACTS AND MAKE IMPACTS AT ALL STAGES OF CONSTRUCTION.
 4. THE CITY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE OWNER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF THE MODIFICATIONS.
 5. CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH TOPSOIL AND VEGETATION.
 6. CONTRACTOR TO REMOVE GRASS AND STRIP TOPSOIL TO DEPTHS ENCOUNTERED AND STOCKPILE TOPSOIL TO BE DISTRIBUTED UPON FINAL GRADING OF THE DISTURBED AREAS.
 7. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION TRAFFIC UTILIZES THE STABILIZED CONSTRUCTION ENTRANCES AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.
 8. CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION TRAFFIC TRAILS TO THE PROJECT FROM ROAD, ROAD TRAIL, AND TRAILS AND DRIVES AT ALL TIMES. CONTRACTOR SHALL CLEAN AND REMOVE ALL MATERIAL FROM TRAILS AND DRIVES AT ALL TIMES.
 9. THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL SLOTT.
 10. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS AND AFTER SIGNIFICANT RAINFALL EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSONS RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SOIL ACCUMULATION AT CONTROL POINTS MUST BE REMOVED WITHIN THE DEPTHS SPECIFIED IN THESE NOTES.
 11. DISTURBED PORTIONS OF THE SITE MUST BE STABILIZED. STABILIZATION PRACTICES MUST BE INSTALLED WITHIN 14 DAYS OF PORTIONS OF THE SITE WHERE CONSTRUCTION HAS BEEN EITHER TEMPORARILY OR PERMANENTLY CEASED. UNLESS KEPT WITHIN THE PROPS PERMIT.
 12. CONTRACTOR SHALL PROTECT DISTURBED AREAS, MATERIAL STORAGE AREAS EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND VEHICLE ENTRY AND EXIT AREAS AT LEAST EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS OF A STORM EVENT OF 0.5 INCHES OR GREATER.
 13. ALL PUBLIC AND EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE CITY OF BOERNE.

- GRADING NOTES**
1. CONTRACTOR IS REQUIRED TO OBTAIN AN APPROVED GRADING PERMIT FROM THE CITY, IF APPLICABLE.
 2. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
 3. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES WHICH ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION.
 4. GRADING WORK SHALL BE COMPLETED TO WITHIN 10 FEET OF THE FINAL GRADE PRIOR TO INSTALLATION OF UTILITIES INCLUDING AN UTILITY TYPE INSTALLATION WITHIN 10 FEET OF THE FINAL GRADE TO ENSURE PROPER DRAINAGE.

- UTILITIES**
- TRENCHING**
1. CONSTRUCTION, TESTING, CLEANING, AND DISINFECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
 2. CONTRACTOR SHALL NOT OPERATE ANY EXISTING UTILITIES. THE CITY MUST BE PRESENT DURING ANY WORK COMPLETED ON EXISTING CITY UTILITIES. THE CONTRACTOR IS NOT PERMITTED TO COMPLETE GAS WORK ON EXISTING CITY GAS MAINS AT ANY TIME.
 3. THE CONTRACTOR MUST COORDINATE AND SCHEDULE ALL UTILITY TIE-IN WITH THE CITY. NO TIE-INS SHALL BE MADE TO THE EXISTING UTILITY SYSTEM UNTIL ALL TEST RESULTS HAVE BEEN PROVIDED TO THE CITY AND ARE VERIFIED.
 4. UNLESS THE DEVELOPER HAS RECEIVED PRIOR WRITTEN PERMISSION BY THE CITY OF BOERNE, ALL UTILITIES, INCLUDING BUT NOT LIMITED TO WATER, RECLAIMED WATER, SEWER, GAS, AND ELECTRIC UTILITIES MUST BE INSTALLED AND TESTED PRIOR TO THE PAVING OF A STREET OR ALLEY OR PORTION THEREOF.
 5. PRIOR TO CONNECTING TO WATER, THE CONTRACTOR MUST SUBMIT APPLICATION TO THE UTILITIES DEPARTMENT FOR A PUBLIC WATER TIE-IN. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING A CITY APPROVED BACKFLOW PREVENTER OR AIR GAP ON ALL TIE-INS TO PUBLIC WATER MAINS.
 6. ALL MANHOLES, END OF MAIN CLEANOUTS, VALVES, AND BLOW OFF'S SHALL HAVE CONCRETE ENCASEMENTS INSTALLED AND TYPED TO MATCH THE PLAN.
 7. ONE DENSITY TEST PER 100 LINEAL FEET IS REQUIRED FOR TRENCHES UP TO 12 FEET IN DEPTH AND 20 FEET FOR TRENCHES 12 FEET AND DEEPER. DENSITY TESTING MUST BE COMPLETED FOR EACH LEFT TO COMMENCEMENT INSTALLATION OF THE NEW LIFT, POT-HOLING AND STAR STEPPING IS NOT PERMITTED.
 8. ALL VALVE BOXES, TEE BOXES, FIRE MANHOLES, ETC. ARE REQUIRED TO BE ADJUSTED AS REQUIRED TO MATCH THE PLAN.
 9. THE CONTRACTOR IS RESPONSIBLE FOR STAKING UTILITIES AND INSTALLING PERMANENT PROPERTY PINS PRIOR TO THE FINAL INSPECTION TO VERIFY LOCATION, FINISH GRADE, AND DEPTH.
 10. TRACER WIRE LOCATE BOX SHALL BE INSTALLED PER CITY REQUIREMENTS AT ALL VALUES INCLUDING GAS, RECLAIMED WATER, FIRE HYDRANT VALVES AND BLOWOFFS. FOR GROUPING OF VALVES AT ONE GENERAL LOCATION, ONE LOCATE BOX MAY BE USED.

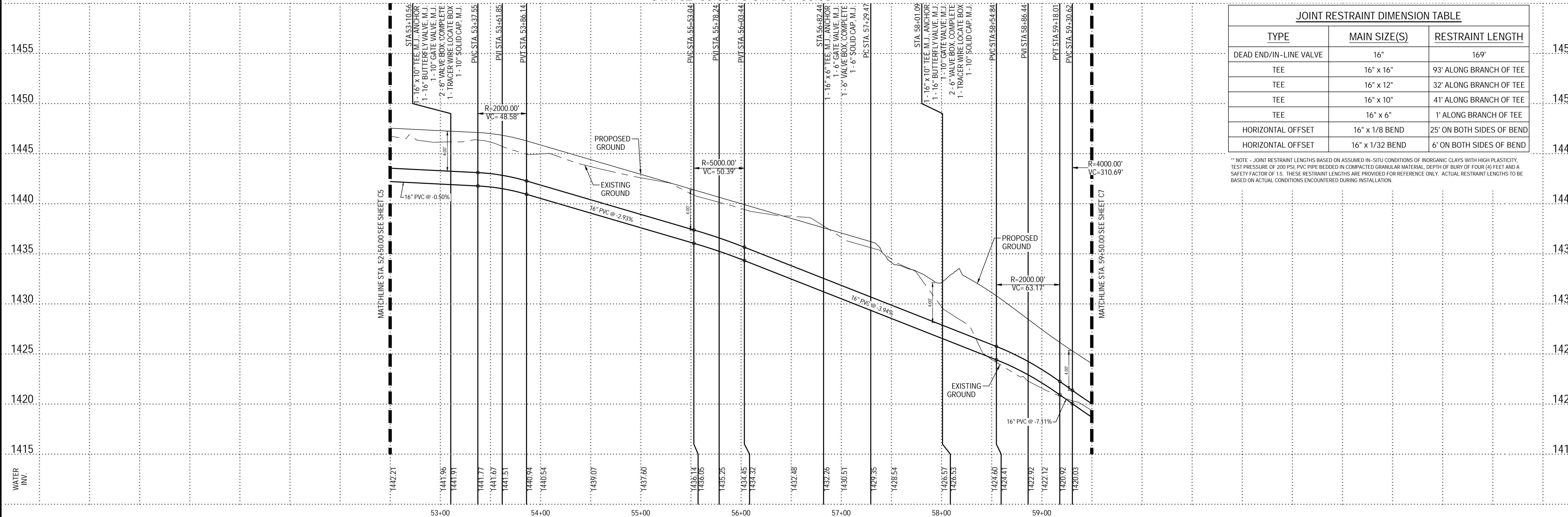
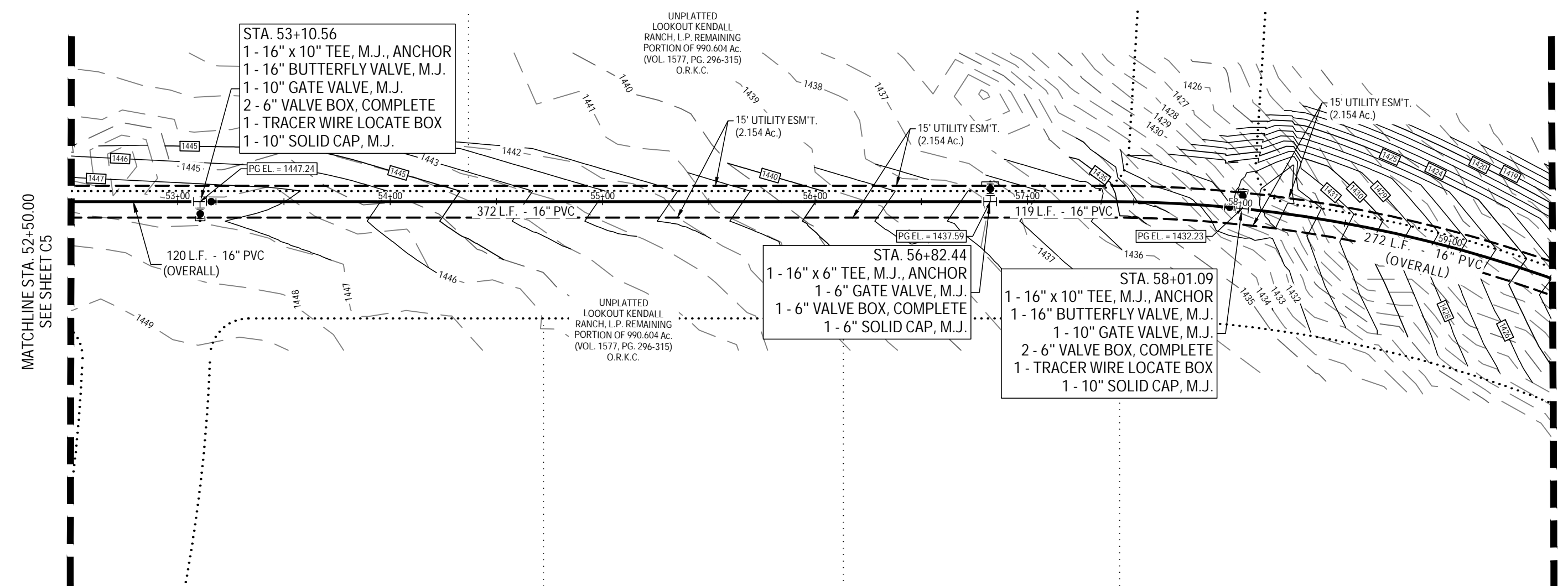
- WATER**
1. THERE IS THE MINIMUM NINE (9) FEET SEPARATION BETWEEN WATER AND SANITARY SEWER LINES CANNOT BE MAINTAINED. THE CONTRACTOR MUST MEET THE REQUIREMENTS OF 30 TAC 217.03(D) AND 30 TAC 200.44(E).
 2. ALL WATER LINES SHALL BE INSTALLED AT A DEPTH BETWEEN FOUR (4) AND 50 (50) FEET OR AS SHOWN ON THE APPROVED INFRASTRUCTURE DRAWINGS EXCEPT WHERE THESE DEPTHS REQUIRE PRIOR APPROVAL.
 3. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR PER CITY REQUIREMENTS.
 4. THE USE OF TEMPORARY JUMPS IS REQUIRED FOR NEW WATER MAIN INSTALLATION.
 5. SAMPLE TEST PORTS FOR BACKFLOW TESTING SHALL BE PROVIDED ALONG THE WATER MAIN AT THE FREQUENCY AND LOCATION REQUIRED BY THE CITY OF BOERNE AT A MINIMUM PER THE TRENCH REQUIREMENTS.
 6. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, PASSED BACTERIOLOGICAL TESTING AND THE CITY OF BOERNE RELEASED THE MAIN FOR IN-AND-USE.

17. BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED WITHIN 40 FEET OF THE WATER MAIN.
 18. NO VALVES, OR APPURTENANCES SHALL BE CONSTRUCTED WITHIN CURBS, CURB RAMP OR LANDINGS. ADDITIONALLY, HYDRANTS AND BLOWOFFS SHALL NOT BE INSTALLED WITHIN 10 FEET OF DRIVEWAYS WITHOUT PRIOR AUTHORIZATION.
 19. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH THE MAIN PUMPER NOZZLE A MINIMUM OF 12" AND A MAXIMUM OF 24" FROM FINISH GRADE. HYDRANTS IN THE RIGHT OF WAY SHALL BE INSTALLED FROM A MINIMUM 7' MAXIMUM FROM THE FACE OF THE CURB.
- TREES**
1. THE CONTRACTOR SHALL PRESERVE ALL TREES OUTSIDE OF THE LIMITS OF CONSTRUCTION. ANY TREES REMOVED FROM THE OUTSIDE OF THE LIMITS OF CONSTRUCTION SHALL BE MITIGATED BY PLANTING OR TRANSPORTING AN EQUIVALENT NUMBER OF DIAMETER INCHES OF THE TREES THAT WERE REMOVED.
- REVEGETATION**
1. AREAS AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH. THE CONTRACTOR MUST LOOSEN THE SURFACE OF THE SOIL TO A DEPTH OF 2 INCHES AND REMOVE ALL STONES AND RUBBES OVER 2 INCHES IN ANY DIMENSION. ALL AREAS FOR REVEGETATION REQUIRE A MINIMUM OF 4 INCHES OF SOIL OVERCUTTING OF ROCK SURFACE MAY BE REQUIRED. ADDITIONAL TOPSOIL FROM THE STOCKPILE MAY BE NECESSARY TO BRING TO REQUIRED GRADES AND FOR RE-ESTABLISHING VEGETATION. THE AREA SHALL THEN BE REVEGETATED AND MAINTAINED UNTIL SOIL IS STABILIZED. ALL AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR.
 2. THE CONTRACTOR MUST CONSTRUCT AND MAINTAIN A PERMANENT STABLE PROTECTIVE COVER (GRASS) FOR EROSION AND SEDIMENT CONTROL ON ALL LAND SURFACES EXPOSED OR DISTURBED BY CONSTRUCTION OF THE PERMITTED PROJECT. THE PROTECTIVE COVER MUST BE INSTALLED WITHIN 14 DAYS AFTER FINAL GRADING OF THE AFFECTED LAND SURFACE. A PERMANENT STABLE COVER MUST BE ESTABLISHED WITHIN 90 DAYS OF ITS INSTALLATION.
 3. AT LEAST 85% OF ALL DISTURBED AREAS MUST HAVE VEGETATION ESTABLISHED PRIOR TO ACCEPTANCE BY THE CITY OF BOERNE.
 4. DISTURBED AREAS THAT ARE SEEDED OR SOILED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RE-SEED OR RE-SOILED IF NECESSARY.

- RECORD DRAWINGS**
1. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER A COPY OF AS-BUILT PLANS IDENTIFYING ALL DEVIATIONS OR VARIATIONS FROM THE ORIGINAL PLANS.
 2. THE DESIGN ENGINEER SHALL PROVIDE TO THE CITY OF BOERNE THE "PLAN OF RECORD," SIGNED AND SEALED BY THE DESIGN ENGINEER.
 3. THE "PLAN OF RECORD" MUST INCLUDE POINT LINE DATA AND PIPE TESTING INFORMATION FOR ALL GAS MAINS AND SERVICE LINES.

NOTE:
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 80% COMPACTION ON ALL TRENCH BACKFILL AND PAVING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE CITY OF BOERNE. INSPECTOR TESTS ADMINISTER PER EACH 8-INCH LAYER UP TO 500 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINISHED BY CITY OF BOERNE WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

JOINT RESTRAINT NOTE:
 CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND FIELD LOCK GASKETS.



JOINT RESTRAINT DIMENSION TABLE		
TYPE	MAIN SIZE(S)	RESTRAINT LENGTH
DEAD END/IN-LINE VALVE	16"	169'
TEE	16" x 16"	93' ALONG BRANCH OF TEE
TEE	16" x 12"	32' ALONG BRANCH OF TEE
TEE	16" x 10"	41' ALONG BRANCH OF TEE
TEE	16" x 6"	1' ALONG BRANCH OF TEE
HORIZONTAL OFFSET	16" x 1/8 BEND	25' ON BOTH SIDES OF BEND
HORIZONTAL OFFSET	16" x 1/32 BEND	6' ON BOTH SIDES OF BEND

** NOTE - JOINT RESTRAINT LENGTHS BASED ON ASSUMED IN-SITU CONDITIONS OF INORGANIC CLAYS WITH HIGH PLASTICITY, TEST PRESSURE OF 200 PSI, PVC PIPE BODED IN COMPACTED GRANULAR MATERIAL, DEPTH OF BURY OF FOUR (4) FEET AND A SAFETY FACTOR OF 1.5. THESE RESTRAINT LENGTHS ARE PROVIDED FOR REFERENCE ONLY. ACTUAL RESTRAINT LENGTHS TO BE BASED ON ACTUAL CONDITIONS ENCOUNTERED DURING INSTALLATION.

CUDEENGINEERS.COM

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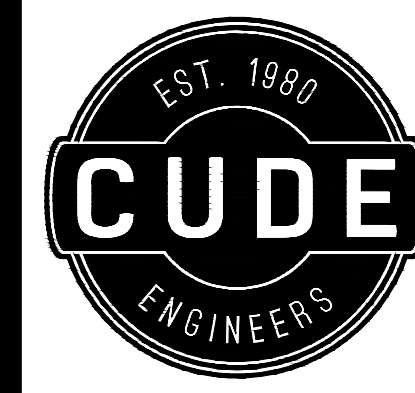
GEORGE'S RANCH
16" ON-SITE WATER MAIN
WATER DISTRIBUTION PLAN

DATE	10/15/2025
PROJECT NO.	03546.011
DRAWN BY	HC/SG
CHECKED BY	KMH/WPM

REVISIONS
1. 10/14/25 - ADDING GATE VALVES AT TEES AND SHOWING WATER LINES IN THE PROFILE
2.
3.
4.
5.
6.
7.
8.
9.

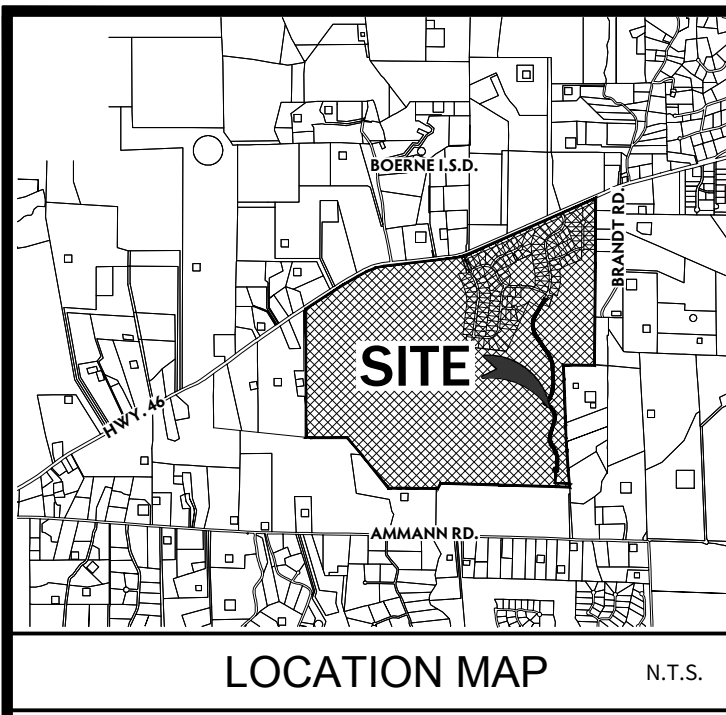
10/16/2025

CUDE ENGINEERS
 TBPE No. 455
 TBPLS No. 10048500



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GEORGE'S RANCH
16" ON-SITE WATER MAIN
WATER DISTRIBUTION PLAN



CITY OF BOERNE GENERAL CONSTRUCTION NOTES
GENERAL NOTES
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION, AND ANY OTHER GOVERNING AGENCY SUCH AS THE TCEQ, TDDOT, ETC., AS APPLICABLE.
2. ANY CONTACT ARISING BETWEEN THESE GENERAL NOTES AND ANY OTHER NOTES FOUND IN THE PLANS, THE CITY OF BOERNE'S GENERAL NOTES SHALL TAKE PRECEDENCE. HOWEVER, THE CITY ENGINEER HAS THE RIGHT TO REVERSE AND APPROVE LEGITIMATE CONTACTING AND/OR CORRECTING NOTES, IF NEEDED.
3. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE INFRASTRUCTURE DRAWINGS REMAINS WITH THE ENGINEER OF RECORD. IN APPROVING THESE INFRASTRUCTURE DRAWINGS, THE CITY OF BOERNE DOES NOT RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER OF RECORD.
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL NOTIFY THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION AT 8:00 AM-12:00 PM.
6. THE CONTRACTOR IS REQUIRED TO SCHEDULE ALL NECESSARY INSPECTIONS AT LEAST 24 HOURS IN ADVANCE. FEES MAY BE ASSESSED FOR WORK THAT IS NOT READY AT THE TIME OF INSPECTION OR NO SHOWS FOR SCHEDULED INSPECTIONS.
7. THE CONTRACTOR SHALL HAVE THE FOLLOWING AVAILABLE AT THE JOB SITE AT ALL TIMES: THE APPROVED INFRASTRUCTURE DRAWINGS, INCLUDING ALL APPROVED REVISIONS; THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION; ALL NECESSARY APPROVED PERMITS; NOTICE OF INTENT; EROSION CONTROL PLANS; AND SWPPP. IT IS ENCOURAGED TO KEEP AN EXTRA COPY OF APPROVED SUBMITTALS ON-SITE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC UTILITIES DURING CONSTRUCTION OF THE PROJECT.
9. THE CONTRACTOR SHALL DETERMINE THE DEPTH AND LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATING, TRENCHING, OR DRILLING AND SHALL BE REQUIRED TO TAKE ANY PRECAUTIONARY MEASURES TO PROTECT ALL LINES SHOWN AND/OR ANY OTHER UNDERGROUND UTILITIES NOT OF RECORD OR NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL PUBLIC AGENCIES AND FRANCHISE UTILITIES 48 HOURS PRIOR TO CONSTRUCTION (FEASIBLE). 1-800-364-8177.
10. THE CONTRACTOR MAY BE REQUIRED TO EXPOSE THESE FACILITIES AT THEIR OWN COST.
11. THE CONTRACTOR MUST CONTACT THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT IMMEDIATELY IF ANY DAMAGE TO EXISTING UTILITIES OCCURS. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTOR'S OPERATIONS SHALL BE RESTORED AT THEIR EXPENSE. IF DAMAGE TO A GAS MAIN OCCURS, CALL 913 IMMEDIATELY PRIOR TO CALLING THE CITY OF BOERNE UTILITIES DEPARTMENT.
12. THE CONTRACTOR SHALL IMMEDIATELY REPLACE ANY PHYSICAL DAMAGE TO PUBLIC AND PRIVATE PROPERTY, INCLUDING, BUT NOT LIMITED TO, FENCES, WALLS, PAVEMENT, GRASS, LANDSCAPE, TREES, AND LAWN SPRINKLER AND IRRIGATION SYSTEMS AT THEIR OWN COST. ANY PERMITTED WORK LOCATED WITHIN RESIDENTS OR PRIVATE PROPERTY WILL REQUIRE A LETTER OF APPROVAL FROM EACH AFFECTED LANDOWNER PRIOR TO FINAL ACCEPTANCE OF CONSTRUCTION.
13. ANY DISCREPANCIES ON THE INFRASTRUCTURE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER AND CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT BEFORE COMMENCING WORK. NO FIELD CHANGES OR VARIATIONS FROM THE INFRASTRUCTURE DRAWINGS ARE PERMITTED WITHOUT WRITTEN APPROVAL FROM THE CITY.

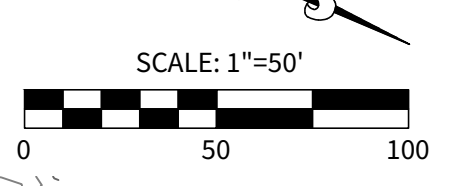
13. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY. ALL WORK REQUIRED SHALL BE CONDUCTED IN CONFORMANCE WITH CURRENT SAFETY CODES AND STANDARDS WITH JURISDICTION OVER THIS PROJECT.
14. THE CONTRACTOR SHALL PROVIDE THE CITY ACCESS TO CITY PROPERTY, ELEMENTS, UTILITIES, AND FACILITIES AT ALL TIMES DURING CONSTRUCTION.
15. THE CONTRACTOR IS RESPONSIBLE FOR REQUIRED CONSTRUCTION SURVEYING AND STAKING AND SHALL NOTIFY THE CITY OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH ANY WORK.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL SURVEY MARKERS INCLUDING ROAD MARKS, PROPERTY CORNERS, OR SURVEY MONUMENTS WITHIN THE LIMITS OF THE CONSTRUCTION SITE AND OUTSIDE THE RIGHT-OF-WAY DURING CONSTRUCTION. ANY SURVEY MARKERS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT THEIR OWN COST.
17. ALL GENERAL USE CONCRETE SHALL BE PLANT MIXED MEETING CITY SPECIFICATIONS WITH A MINIMUM OF 4000 PSI AT 28 DAYS COMPRESSIVE STRENGTH UNLESS OTHERWISE SPECIFIED. ANY CONCRETE INSTALLED WITHOUT AN APPROVED MIX DESIGN SUBMITTAL SHALL BE REMOVED AT CONTRACTOR'S EXPENSE.
18. 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 SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THESE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH LOCATIONS.
19. CONTRACTOR SHALL FURNISH A SET OF "AS-BUILT" DRAWINGS TO THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT THE TIME OF FINAL INSPECTION. CONTRACTOR SHALL GIVE CITY AT LEAST TWO WORKING DAYS NOTICE PRIOR TO FINAL INSPECTION.

EROSION CONTROL NOTES
1. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO SITE DISTURBANCE AND SHALL REMAIN IN PLACE UNTIL FINAL GRADING AND PAVING IS COMPLETE AND VEGETATION IS ESTABLISHED WITH 80% COVERAGE ACHIEVED.
2. CONTRACTOR IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE REQUIRED EROSION CONTROL DEVICES THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS. EROSION CONTROL DEVICES SHALL BE REPAIRED OR REPLACED AS INSPECTED NECESSARY. OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. ACCUMULATED SILT IN ANY EROSION CONTROL DEVICE SHALL BE REMOVED AND SHALL BE DISTRIBUTED ON-SITE IN A MANNER NOT CONTRIBUTING TO ADDITIONAL EROSION.
3. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT EROSION CONTROL MEASURES AND STORMWATER CONTROL IS SUFFICIENT TO MITIGATE OFF-SITE IMPACTS AND ARE IN PLACE AT ALL STAGES OF CONSTRUCTION.
4. THE CITY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE DEVELOPER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF THE MODIFICATIONS.
5. CONSTRUCTION OPERATIONS SHALL BE MANAGED SO THAT AS MUCH OF THE SITE AS POSSIBLE IS LEFT COVERED WITH TOPSOIL AND VEGETATION.
6. CONTRACTOR TO REMOVE GRASS AND STRIP TOPSOIL TO DEPTHS ENCOUNTERED AND STOCKPILE TOPSOIL IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS, AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THESE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS, AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH LOCATIONS.
7. CONTRACTOR SHALL FURNISH A SET OF "AS-BUILT" DRAWINGS TO THE CITY OF BOERNE ENGINEERING & MOBILITY DEPARTMENT AT THE TIME OF FINAL INSPECTION. CONTRACTOR SHALL GIVE CITY AT LEAST TWO WORKING DAYS NOTICE PRIOR TO FINAL INSPECTION.

UTILITIES
1. ALL CONSTRUCTION, TESTING, CLEANING, AND DISINFECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF BOERNE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, LATEST EDITION.
2. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING UTILITIES. THE CITY WILL BE PRESENT DURING ANY WORK COMPLETED ON EXISTING CITY UTILITIES. THE CONTRACTOR IS NOT PERMITTED TO COMPLETE GAS WORK ON EXISTING CITY GAS MAINS AT ANY TIME.
3. THE CONTRACTOR MUST COORDINATE AND SCHEDULE ALL UTILITY TIE-INS WITHIN THE CITY. NO TIE-INS SHALL BE MADE TO THE EXISTING UTILITY SYSTEM UNTIL ALL TEST RESULTS HAVE BEEN PROVIDED TO THE CITY AND ARE VERIFIED.
4. UNLESS THE DEVELOPER HAS RECEIVED PRIOR WRITTEN PERMISSION BY THE CITY OF BOERNE, ALL UTILITIES, INCLUDING BUT NOT LIMITED TO WATER, RECLAIMED WATER, SEWER, GAS, AND ELECTRIC UTILITIES MUST BE IDENTIFIED AND TESTED PRIOR TO THE PAVING OF A STREET OR ALLEY OR PORTION THEREOF.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING AND TIE-INS TO ALL UTILITIES TO BE INSTALLED BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING CITY APPROVED MACHINERY DEVICES OR GAS CAPS ON ALL TAPERS AND BLOWERS FOR ANY REASON PRIOR TO FINAL CONSTRUCTION ENTRANCES AT ALL TIMES FOR INGRESS/EGRESS TO THE SITE.
6. ALL MANHOLES, ENDS OF MAIN CLEANOUTS, VALVES, AND BLOW-OFFS SHALL HAVE CONCRETE ENCASUREMENTS INSTALLED ANY ENCASUREMENT SHALL BE INSTALLED IN UNPAVED AREAS.
7. ONE DIAMETER TEST PER 8-INCH LIFT IS REQUIRED EVERY 500 FEET FOR TRENCHES UP TO 12 FEET IN DEPTH AND EVERY 200 FEET FOR TRENCHES 12 FEET AND DEEPER. IDENTIFYING TESTING MUST BE COMPLETED FOR EACH LIFT PRIOR TO COMMENCING INSTALLATION OF THE NEXT LIFT. POT-HOLING AND STA. SETTING IS NOT PERMITTED.
8. ALL VALVE BODIES, WELTER BODIES, FIRE HYDRANTS, MANHOLES, ETC. ARE REQUIRED TO BE ADJUSTED AS REQUIRED TO MATCH FINISH GRADES.
9. THE CONTRACTOR IS RESPONSIBLE FOR STAKING UTILITIES AND INSTALLING PERMANENT PROPERTY PINS PRIOR TO THE FINAL INSPECTION TO VERIFY LOCATION, FINISH GRADE, AND STA. SETTING IS NOT PERMITTED.
10. TRACER WIRE LOCATE BOX SHALL BE INSTALLED PER CITY REQUIREMENTS AT ALL VALVES INCLUDING, GAS, RECLAIMED WATER, FIRE HYDRANT VALVES AND BLOWERS, FOR GROUPING OF VALVES AT ONE GENERAL LOCATION, ONE LOCATE BOX MAY BE USED.
11. WATER
12. THERE IS THE MINIMUM (30) FEET SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER LINES CANNOT BE MAINTAINED, THE CONTRACTOR MUST MEET THE REQUIREMENTS OF 30" TAC 212.03(D) AND 30" TAC 204.44(E).
13. ALL WATER MAINS SHALL BE INSTALLED AT A DEPTH BETWEEN FOUR (4) AND SIX (6) FEET OR AS SHOWN ON THE APPROVED INFRASTRUCTURE DRAWINGS EXCEPT FROM THESE OTHER SPECIFICATIONS.
14. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR PER CITY REQUIREMENTS.
15. SAMPLE TEST PORTS FOR BACTERIOLOGICAL TESTING SHALL BE PROVIDED ALONG THE WATER MAIN AT THE FREQUENCY AND LOCATION REQUIRED BY THE CITY OF BOERNE AT A MINIMUM PER THE TEST REQUIREMENTS.
16. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, PASSED BACTERIOLOGICAL TESTING AND THE CITY OF BOERNE RELEASES THE MAIN FOR TIE-IN AND USE.

17. BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED WITHIN 40 FEET OF THE WATER MAIN.
18. NO VALVES, OR APPURTENANCES SHALL BE CONSTRUCTED WITHIN CURBS, CURB RAMPS OR LANDINGS. ACCEPTED TIE-INS, HYDRANTS AND BLOWERS SHALL NOT BE INSTALLED WITHIN CURBS OR DRIVEWAYS WITHOUT PRIOR AUTHORIZATION.
19. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH THE MAIN PUMPER NOZZLE A MINIMUM OF 3", AND A MAXIMUM OF 4" FROM FINISH GRADE. HYDRANTS IN THE RIGHT OF WAY SHALL BE INSTALLED FROM 1" MINIMUM TO 7" MAXIMUM FROM THE FACE OF THE CURB.
TREES
1. THE CONTRACTOR SHALL PRESERVE ALL TREES OUTSIDE OF THE LIMITS OF CONSTRUCTION. ANY TREES REMOVED FROM THE OUTSIDE OF THE LIMITS OF CONSTRUCTION SHALL BE MITIGATED BY PLANTING OR TRANSPORTING AN EQUIVALENT NUMBER OF DIAMETER INCHES OF THE TREES) THAT WERE REMOVED.
REVEGETATION
1. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH. THE CONTRACTOR MUST LOOSEN THE SURFACE OF THE SOIL TO A DEPTH OF 3 INCHES AND REMOVE ALL STONES AND RUBBISH OVER 2 INCHES IN DIMENSION. ALL AREAS FOR REVEGETATION REQUIRE A MINIMUM OF 4 INCHES OF SOIL, OVERCUTTING OF ROCK SURFACE MAY BE REQUIRED. ADDITIONAL TOPSOIL FROM THE STOCKPILE TOPSOIL MAY BE NECESSARY TO BRING TO REQUIRED GRADES AND FOR RE-ESTABLISHING VEGETATION. THE AREA SHALL THEN BE REVEGETATED AND MAINTAINED UNTIL SOIL IS STABILIZED FOR AN ADDITIONAL PERIOD OF 90 DAYS.
2. ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR.
3. THE CONTRACTOR MUST CONSTRUCT AND MAINTAIN A PERMANENT STABLE PROTECTIVE COVER (GRASS) FOR EROSION AND SEDIMENT CONTROL ON ALL LAND SURFACES EXPOSED OR DISTURBED BY CONSTRUCTION OF THE AFFECTED LAND SURFACE. A PERMANENT STABLE COVER MUST BE ESTABLISHED WITHIN 90 DAYS OF ITS INSTALLATION.
4. AT LEAST 80% OF ALL DISTURBED AREAS MUST HAVE VEGETATION ESTABLISHED PRIOR TO ACCEPTANCE BY THE CITY OF BOERNE.
5. DISTURBED AREAS THAT ARE SEDED OR SOILED SHALL BE CHECKED PERIODICALLY TO SEE THAT GRASS COVERAGE IS PROPERLY MAINTAINED. DISTURBED AREAS SHALL BE WATERED, FERTILIZED, AND RE-SEDED OR RE-SOILED IF NECESSARY.

NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 80% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TEST WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE CITY OF BOERNE INSPECTOR TEST ADMINISTRATOR. PER EACH 8-INCH LIFT PER 300 LINEAL FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINANCED BY THE CITY OF BOERNE WITHOUT THIS REQUIREMENT BE MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
JOINT RESTRAINT NOTE:
CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 1 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING, JOINT RESTRAINTS AND FIELD LOCK GASKETS.

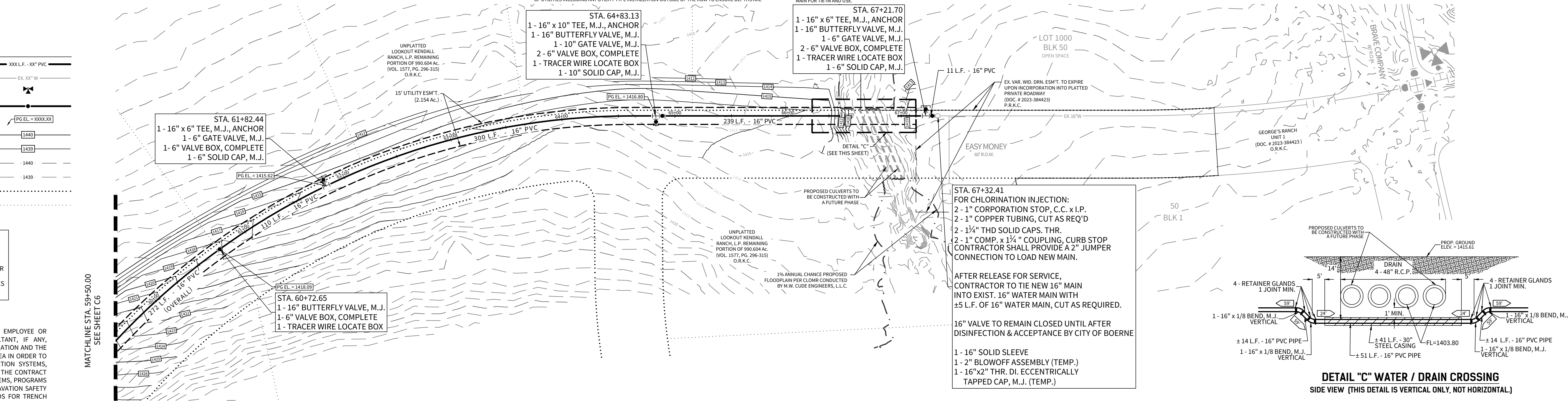


DEVELOPER:
THE LOOKOUT DEVELOPMENT GROUP, LP
CONTACT PERSON: MIKE SIEFFERT
1001 CRYSTAL FALLS PARKWAY
LEANDER, TX 78641
TEL: (512) 690-4322

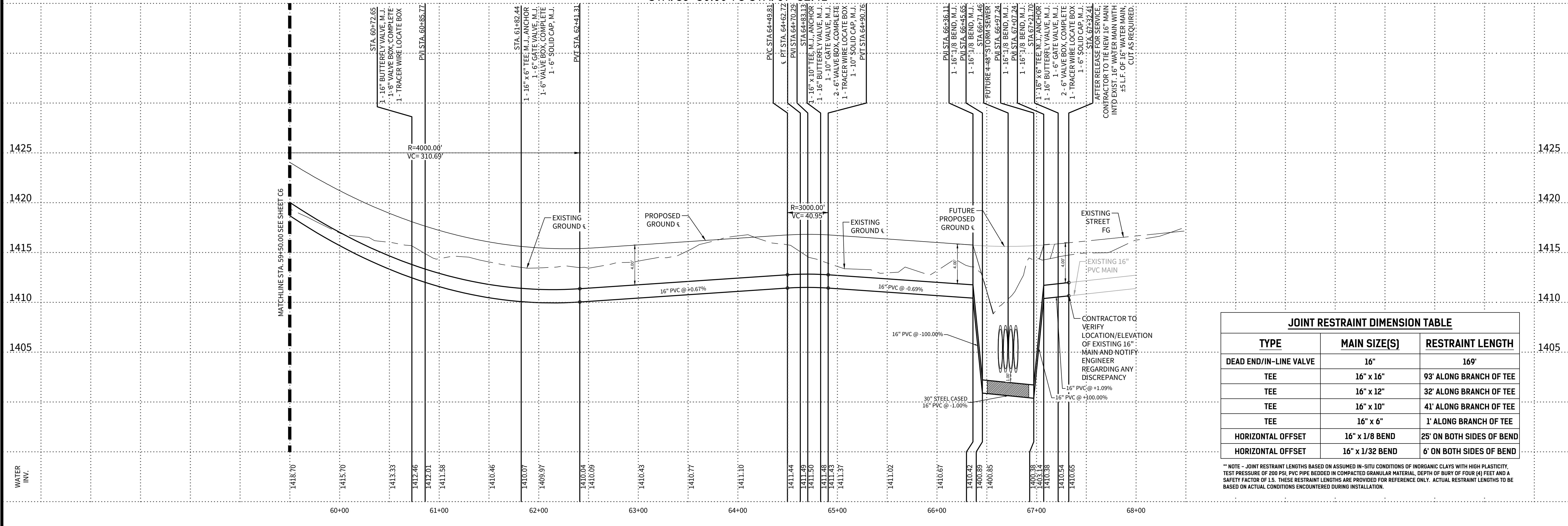
- LEGEND**
- PROPOSED WATER MAIN: XXXL.F. - XX" PVC
 - EXISTING WATER MAIN: EX. XX" W
 - PROPOSED STANDARD FIRE HYDRANT: [Symbol]
 - PROPOSED STANDARD GATE VALVE: [Symbol]
 - PROPOSED GROUND ELEVATION: PG. EL. = XXXX.XX
 - PROPOSED MAJOR CONTOURS: 1440, 1439
 - PROPOSED MINOR CONTOURS: 1440
 - EXISTING MAJOR CONTOURS: 1440
 - EXISTING MINOR CONTOURS: 1439
 - FUTURE RIGHT-OF-WAY LINES: [Symbol]
 - FUTURE LOT LINES: [Symbol]

CAUTION!!
EXISTING UTILITIES ARE LOCATED WITHIN THE LIMITS OF CONSTRUCTION. CONTRACTORS SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH FOR PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE, VERIFY THE EXACT LOCATION & IDENTIFY AREA OF CONFLICTS WITH EXISTING UTILITIES AND SHALL NOTIFY THE ENGINEER IF CONFLICT IS FOUND.

TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS, SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



WATER LINE
STA. 59+50.00 TO STA. 67+32.41



JOINT RESTRAINT DIMENSION TABLE

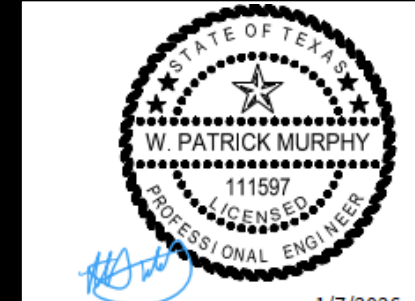
TYPE	MAIN SIZE(S)	RESTRAINT LENGTH
DEAD END/IN-LINE VALVE	16"	169'
TEE	16" x 16"	93' ALONG BRANCH OF TEE
TEE	16" x 12"	32' ALONG BRANCH OF TEE
TEE	16" x 10"	41' ALONG BRANCH OF TEE
TEE	16" x 6"	1' ALONG BRANCH OF TEE
HORIZONTAL OFFSET	16" x 1/8 BEND	25' ON BOTH SIDES OF BEND
HORIZONTAL OFFSET	16" x 1/32 BEND	6' ON BOTH SIDES OF BEND

*NOTE - JOINT RESTRAINT LENGTHS BASED ON ASSUMED IN-SITU CONDITIONS OF INORGANIC CLAYS WITH HIGH PLASTICITY. TEST PRESSURE OF 200 PSI. PVC PIPE BEDDED IN COMPACTED GRANULAR MATERIAL. DEPTH OF BURY OF FOUR (4) FEET AND A SAFETY FACTOR OF 1.5. THESE RESTRAINT LENGTHS ARE PROVIDED FOR REFERENCE ONLY. ACTUAL RESTRAINT LENGTHS TO BE BASED ON ACTUAL CONDITIONS ENCOUNTERED DURING INSTALLATION.

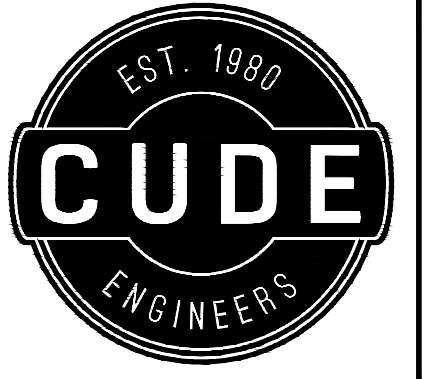
DATE: 1/5/2026
PROJECT NO.: 03546.011
DRAWN BY: HC/SG
CHECKED BY: KMH/WPM

REVISIONS

1.	10/14/25 - ADDING GATE VALVES AT TEES AND SHOWING WATER LINES IN THE PROFILE
2.	11/26/25 - REVISED WATER LINE AND STEEL CASING LENGTHS, SHOWING STORMSEWER PIPES IN PROFILE
3.	1/26/26 - REDUCE PIPE VERTICAL SEPARATION TO 1'
4.	
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CUDE ENGINEERS
TBPE No. 455
TBPLS No. 10048500



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GEORGE'S RANCH
 16" ON-SITE WATER MAIN
 CITY OF BOERNE - WATER DISTRIBUTION PLAN DETAILS

WATER GATE VALVE AND VALVE BOX

SCALE: N.T.S. DRAWING No. 02660-1.0 DATE: MAY 2024

CITY OF BOERNE

NOTES:
 1. ENCASE VALVES IN POLYETHYLENE.
 2. PROVIDE STEM EXTENSIONS FOR OPERATING NUT WHEN NUT IS MORE THAN 4' BELOW FINISHED GRADE.
 3. ALL BACKFILL SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).
 4. WHERE MULTIPLE VALVES ARE PROPOSED WITHIN 10'-FEET OF EACH OTHER, MAY ROUTE TO A SINGLE TRACER WIRE LOCATE BOX; OTHERWISE A LOCATE BOX IS REQUIRED FOR EACH INDIVIDUAL VALVE.
 5. ALL POTABLE WATER GATE VALVES SHALL BE OPEN LEFT (COUNTER CLOCKWISE).

CONCRETE THRUST BLOCKING

SCALE: N.T.S. DRAWING No. 02660-1.1 DATE: MAY 2024

CITY OF BOERNE

BLOCKING AREA IN SQUARE FEET IN ROCK WALL TRENCH

SIZE PIPE	TEES & DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS
6"	2	2	1	1
8"	3	4	2	1
12"	6	9	5	2
16"	11	15	8	4

BLOCKING AREA IN SQUARE FEET IN OTHER THAN ROCK WALL TRENCH

SIZE PIPE	TEES & DEAD ENDS	90° BENDS	45° BENDS	22 1/2° BENDS
6"	3	4	2	1
8"	4	6	4	2
12"	10	14	8	4
16"	18	25	14	7

BLOCKING AREA FOR 200 PSI TEST AND 175 PSI WORKING PRESSURES.
 THRUST BLOCKING SHALL BE CONCRETE FILL. MIN. 3,000 PSI.
 THRUST BLOCKS ARE RECOMMENDED BUT NOT REQUIRED IF RESTRAINTS ARE PROVIDED PER RESTRAINED LENGTHS AS SHOWN ON APPROVED PLANS.

UTILITY PIPE TRENCH

SCALE: N.T.S. DRAWING No. 02221-1.0 DATE: MAY 2024

CITY OF BOERNE

NOTES:
 1. TYPICAL BEDDING PER APPLICABLE UTILITY BACKFILL STANDARD SPECIFICATIONS.
 2. SECONDARY BACKFILL TO BE COMPACTED IN LIFTS PER ASTM D1557 (MODIFIED PROCTOR) AND SPECIFICATION 02221.

PERMANENT END OF WATER MAIN BLOW-OFF ASSEMBLY

SCALE: N.T.S. DRAWING No. 02660-3.1 DATE: MAY 2024

CITY OF BOERNE

NOTES:
 1. MATCH FLUSH IN PAVED AREAS. SET BOX AND CONCRETE 1" ± 1/2" ABOVE FINISHED GRADE IN UNPAVED AREAS.
 2. PROVIDE RESTRAINED LENGTHS AS SHOWN BY DESIGN ENGINEER IN THE APPROVED DRAWINGS.
 3. ALL BACKFILL SHALL BE MOISTURE CONDITIONED AND COMPACTED TO 95% COMPACTION PER ASTM D1557 (MODIFIED PROCTOR).

1 IN AIR RELEASE VALVE FOR WATER MAINS

SCALE: N.T.S. DRAWING No. 02660-3.0 DATE: MAY 2024

CITY OF BOERNE

BUTTERFLY VALVE ASSEMBLY

SCALE: N.T.S.

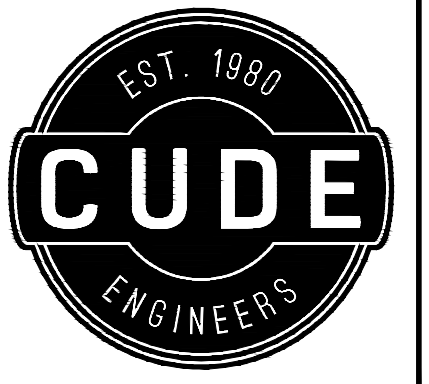
NOTES:
 1. PROVIDE STEM EXTENSIONS PER CITY OF BOERNE SPECIFICATION 02660.
 2. BUTTERFLY VALVE ASSEMBLY SHALL INCLUDE TRACER WIRE ASSEMBLY AS SHOWN IN DRAWING 02660-1.0.

DATE: 10/2/2025
 PROJECT NO.: 03546.011
 DRAWN BY: HC/SG
 CHECKED BY: KMH/WPM

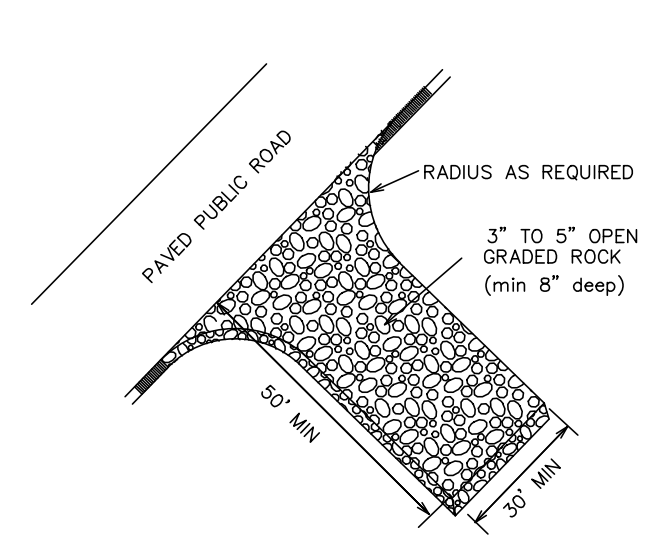
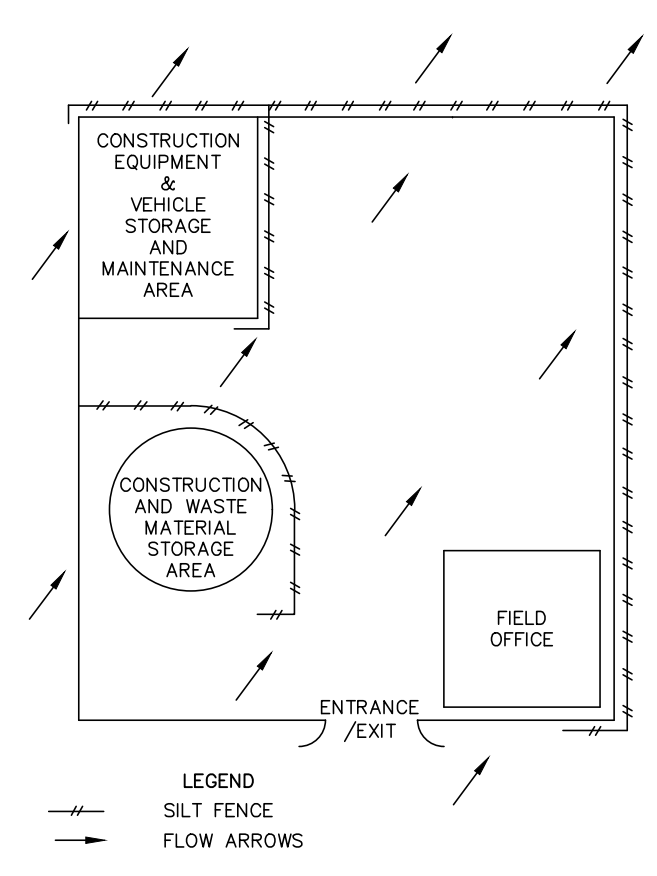
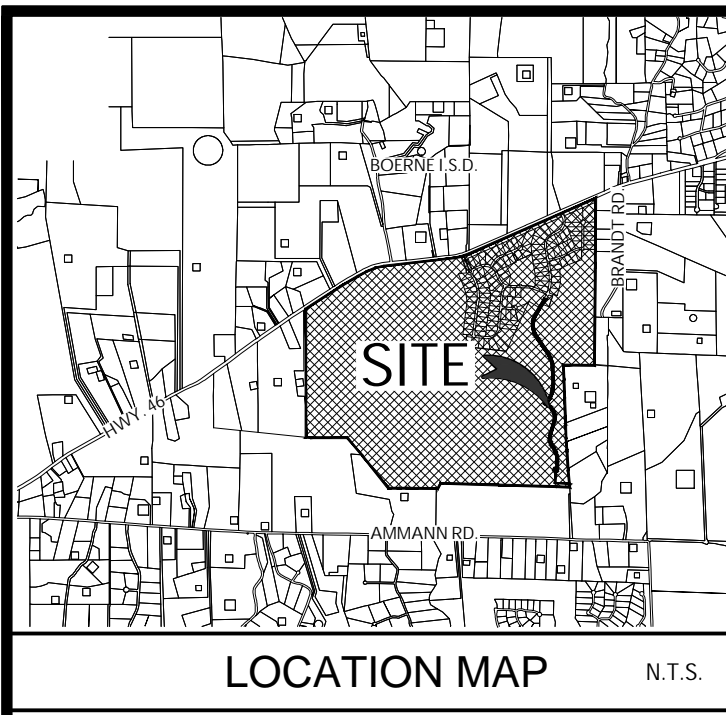
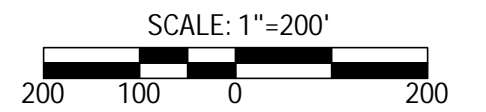
REVISIONS

1.	10/14/25 - ADD BUTTERFLY VALVE DETAIL
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10/16/2025
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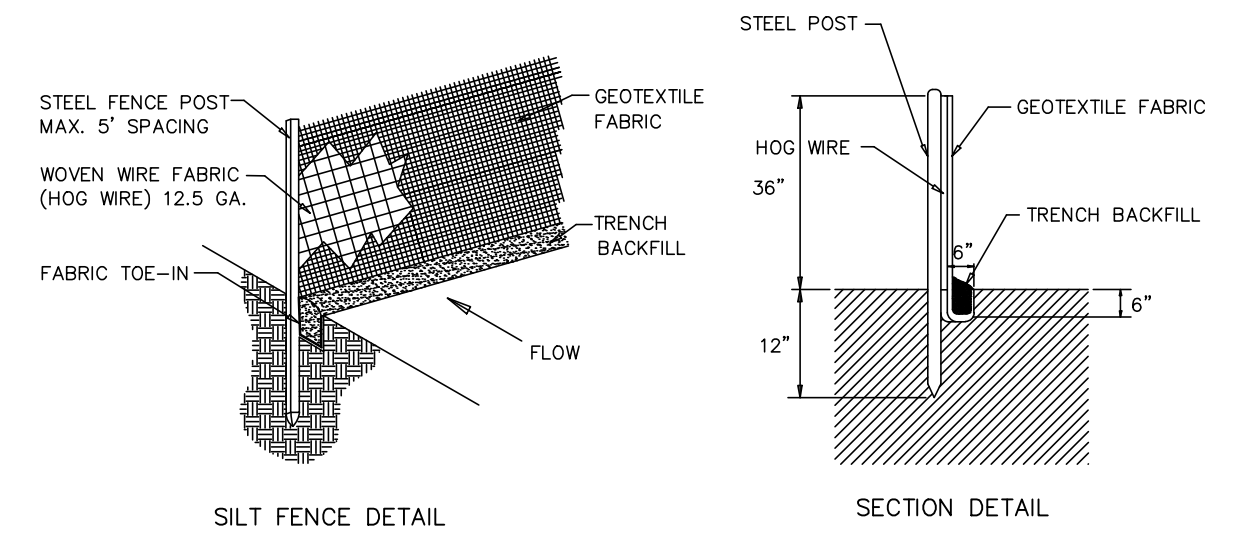
- STABILIZED CONSTRUCTION EXIT NOTES:**
1. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ON PUBLIC ROADWAY.
 2. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS MUST BE REMOVED IMMEDIATELY.

DEVELOPER:
THE LOOKOUT DEVELOPMENT GROUP, LP
CONTACT PERSON: MIKE SIEFERT
1001 CRYSTAL FALLS PARKWAY
LEANDER, TX 78641
TEL: (512) 690-4322

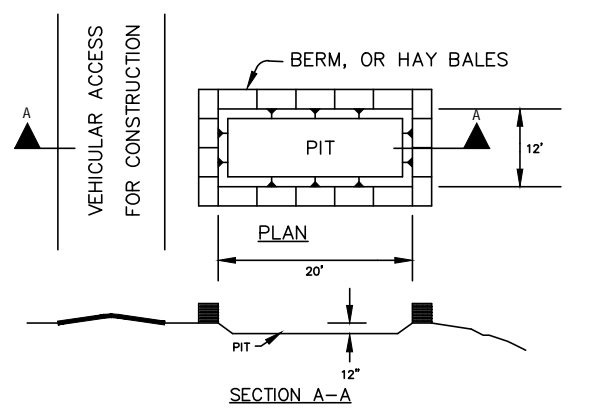
1 TYP. CONSTRUCTION STAGING AREA
N.T.S.

2 TEMPORARY CONSTRUCTION ENTRANCE/EXIT
N.T.S.

- LEGEND**
- PROPERTY LINE
 - EXISTING CONTOURS
 - BMP ITEM NUMBER
 - TEMPORARY CONSTRUCTION ENTRANCE/EXIT
 - SILT FENCE
 - FLOW ARROW
 - STAGING AREA
 - ROCK BERM
 - CONCRETE WASHOUT PIT
 - FUTURE RIGHT-OF-WAY LINES
 - FUTURE LOT LINES



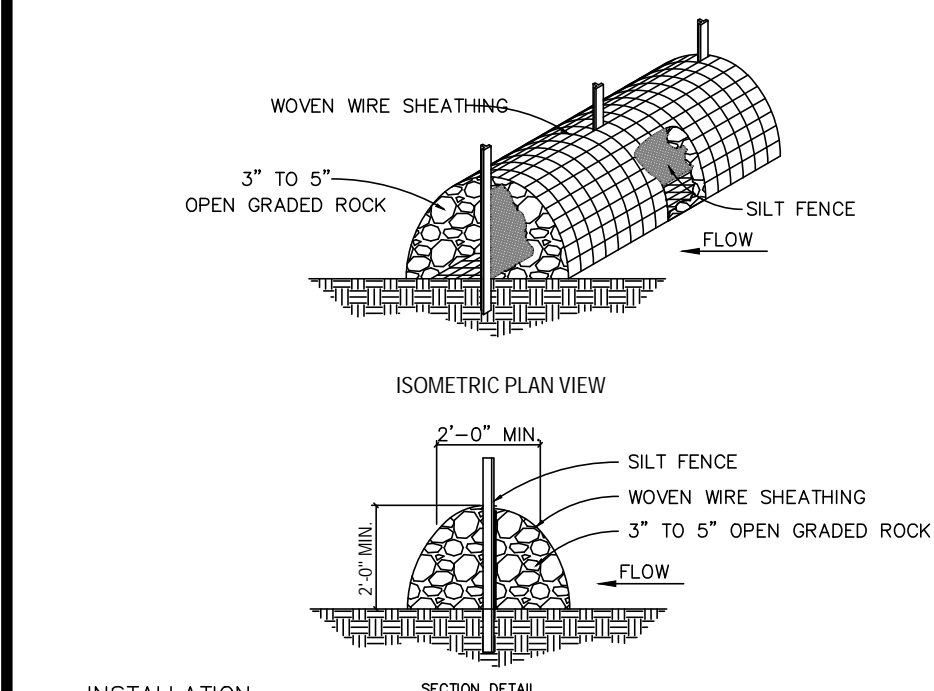
3 STANDARD SILT FENCE
N.T.S.



4 CONCRETE TRUCK WASHOUT PIT
N.T.S.

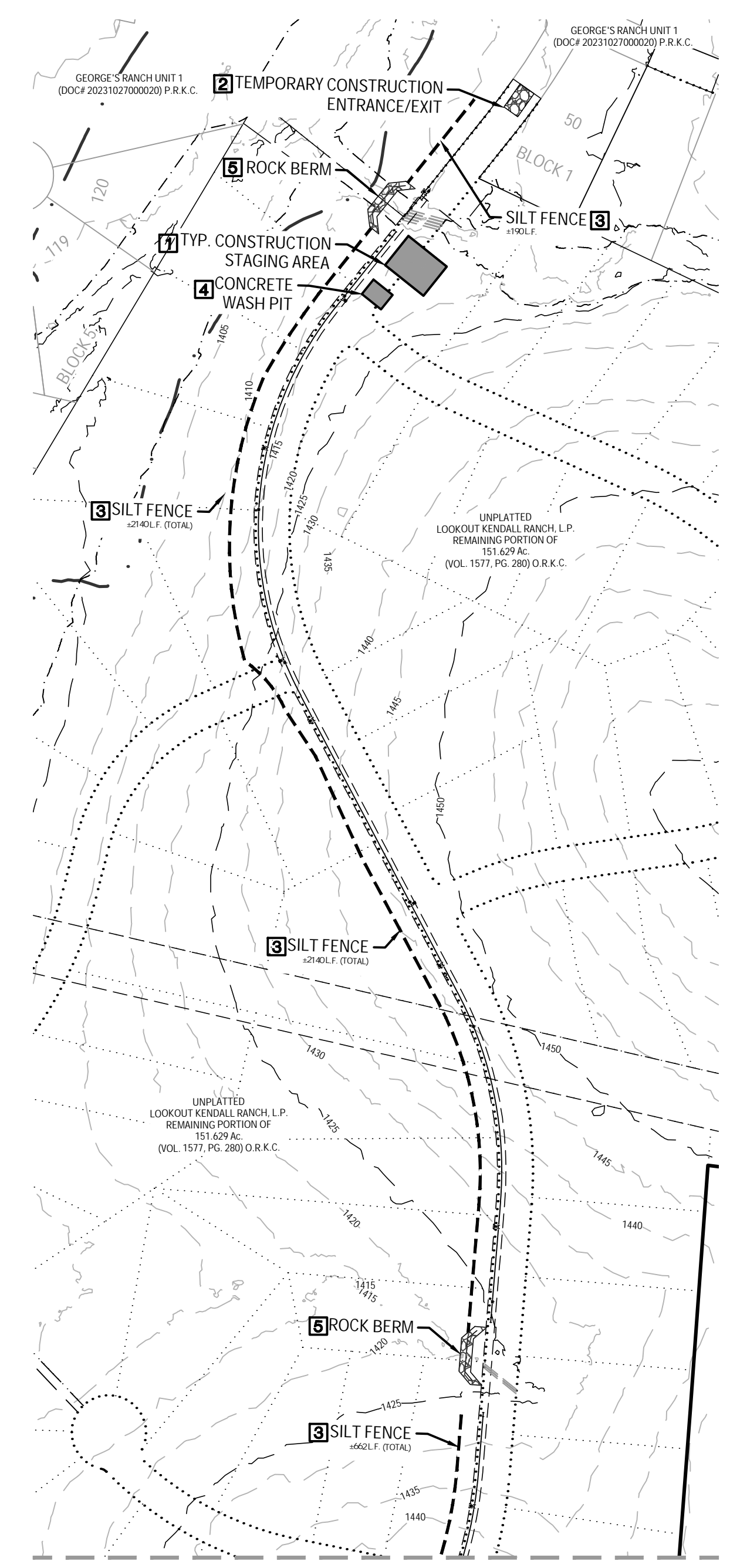
- NOTE:**
1. ALL SILT FENCES AND/OR ROCK BERMS AND TEMPORARY CONSTRUCTION ENTRANCES/EXITS SHALL BE PLACED AT THE MOST DOWN-GRADE POINT OF CONSTRUCTION AS SHOWN ON THIS SITE PLAN. CONTRACTOR SHALL TAKE INTO CONSIDERATION ANY PROPOSED CONSTRUCTION THAT MAY TAKE PLACE AT THESE LOCATIONS. ANY RELOCATION OF THE SILT FENCE, ROCK BERMS AND/OR TEMPORARY CONSTRUCTION ENTRANCES/EXITS SHALL BE AT THE CONTRACTOR'S EXPENSE.
 2. THE PROPOSED CONTOURS WILL BE APPROXIMATELY EQUAL TO THE EXISTING CONTOURS.
 3. AREA OF SOIL DISTURBANCES INCLUDE STREET RIGHT-OF-WAYS, UTILITY EASEMENTS & LOTS.
 4. THERE WILL BE STORMWATER DISCHARGES INTO THE FEMA FLOOD PLAIN.
 5. THE CONTRACTOR IS REQUIRED TO MAINTAIN EROSION CONTROLS THROUGHOUT THE DURATION OF THE PROJECT.
 6. THE COUNTY INSPECTOR HAS THE AUTHORITY TO HAVE THE CONTRACTOR MODIFY THE EROSION CONTROLS AT THE DEVELOPER'S EXPENSE. THE DEVELOPER SHALL BE NOTIFIED OF THESE MODIFICATIONS PRIOR TO COMMENCEMENT OF MODIFICATIONS.

- GENERAL NOTES:**
- Detail above illustrates minimum dimensions. Pit can be increased in size depending on expected frequency of use.
 - If hay bales are used, they shall be placed in accordance with details shown on Exhibit for hay bales.
 - Washout pit shall be located in an area easily accessible to construction traffic.
 - Washout pit shall not be located in areas subject to inundation from storm water runoff.

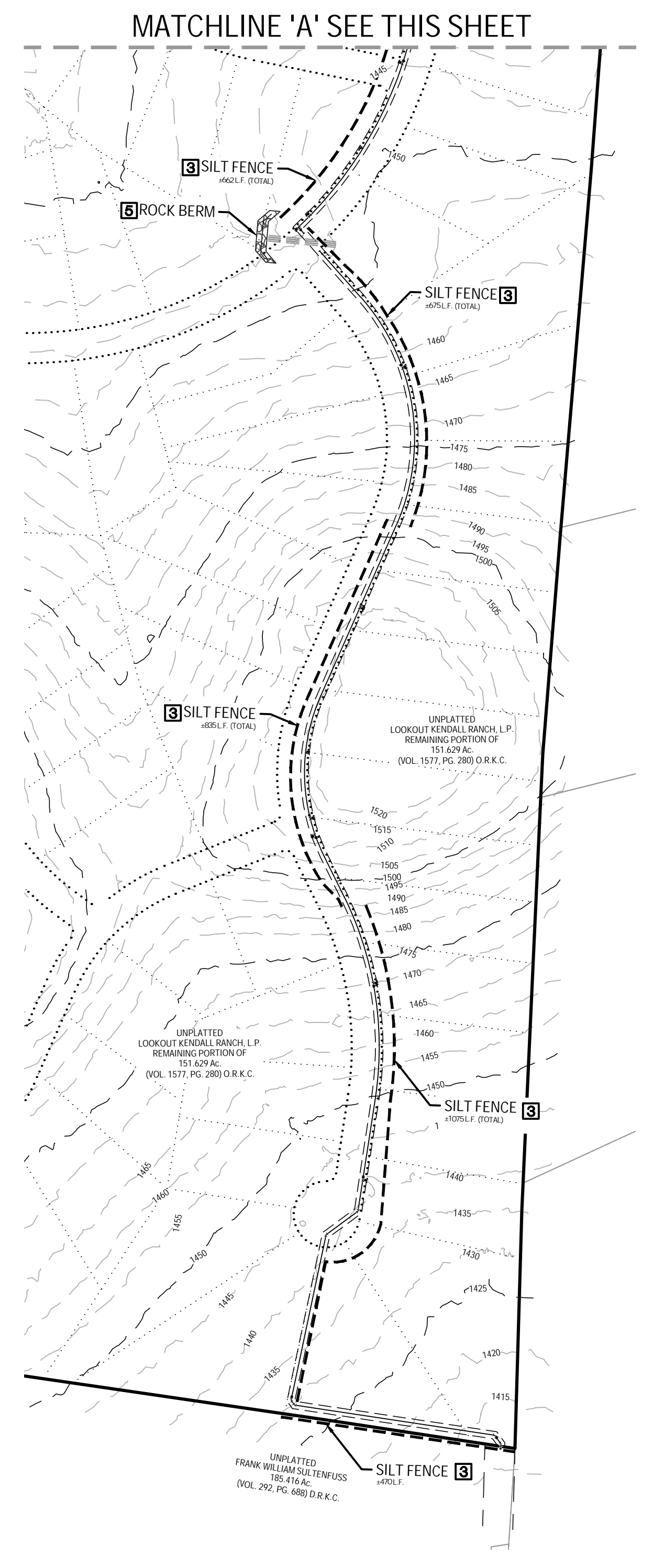


- INSTALLATION:**
- CLEAR THE GROUND OF DEBRIS, ROCKS OR VEGETATION THAT WILL INTERFERE WITH INSTALLATION.
 - PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION LOCATION WITH ENOUGH OVERLAP TO COMPLETELY ENCLOSE THE FINISHED SIZE OF THE BERM.
 - INSTALL THE SILT FENCE ALONG THE CENTER OF THE PROPOSED BERM PLACEMENT.
 - PLACE THE ROCK ALONG THE CENTER OF THE WIRE AND BOTH SIDES OF THE SILT FENCE TO THE DESIGNATED HEIGHT.
 - WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURELY SO THE STRUCTURE RETAINS ITS SHAPE.
 - SECURE WITH THE WIRE.
 - THE ROCK BERM SHALL BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.
- INSPECTION AND MAINTENANCE GUIDELINES:**
- INSPECTION SHALL BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE CONTRACTOR. FOR THE INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHALL BE MADE ON ROCK BERM.
 - REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER. REPAIR ANY LOOSE WIRE SHEATHING.
 - THE BERM SHALL BE RESHAPED AS NEEDED DURING INSPECTION.
 - THE BERM SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

5 HIGH-SERVICE ROCK BERM
N.T.S.



MATCHLINE 'A' SEE THIS SHEET



GEORGE'S RANCH
16" ON-SITE WATER MAIN
STORM WATER POLLUTION PREVENTION PLAN

DATE
7/23/2025

PROJECT NO.
03546.011

DRAWN BY
HC/SG

CHECKED BY
KMH/WPM

REVISIONS

1.	10/14/25 - SHOW UPDATED VERTICAL BENS
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