

GENERAL CONSTRUCTION NOTES

- C0.00 - KENDALL COUNTY - GENERAL CONSTRUCTION NOTES

STORM WATER POLLUTION PREVENTION PLAN

- C1.00 - STORMWATER POLLUTION PREVENTION PLAN

GRADING PLAN

- C2.00 - NOT USED

UTILITY PLAN

- C3.00 - UTILITY LAYOUT PLAN

SEWER PLAN

- C4.00 - NOT USED

WATER DISTRIBUTION PLANS

- C5.00 - WATER DISTRIBUTION PLAN
- C5.D1 - WATER DISTRIBUTION STANDARD DETAILS*

DRAINAGE PLANS

- C6.00 - OVERALL MASTER DRAINAGE AREA MAP
- C6.01 - MASTER DRAINAGE CALCULATIONS
- C6.02 - DRAIN INDEX SHEET
- C6.03 - DRAINAGE PLAN AND PROFILE - DRAIN H
- C6.04 - DRAINAGE PLAN AND PROFILE - DRAIN H
- C6.05 - DRAINAGE PLAN AND PROFILE - DRAIN O & Q
- C6.06 - DRAINAGE PLAN AND PROFILE - DRAIN P
- C6.07 - DRAINAGE PLAN AND PROFILE - DRAIN P
- C6.08 - DRAINAGE PLAN AND PROFILE - DRAIN P
- C6.09 - DRAINAGE PLAN AND PROFILE - DRAIN P
- C6.D1 - DRAINAGE DETAILS*
- C6.D2 - DRAINAGE DETAILS*
- C6.D3 - DRAINAGE DETAILS*
- C6.D4 - DRAINAGE DETAILS*
- C6.D5 - DRAINAGE DETAILS*

STREET PLANS

- C7.00 - STREET INDEX SHEET
- C7.01 - STREET PLAN & PROFILE - STANDING TALL
- C7.02 - STREET PLAN & PROFILE - STANDING TALL
- C7.03 - STREET PLAN & PROFILE - PAW PRINT
- C7.04 - STREET PLAN & PROFILE - BRAVE COMPANY
- C7.D1 - STANDARD STREET DETAILS*

TRAFFIC PLANS

- C8.00 - TRAFFIC SIGNAGE PLAN
- C8.D1 - TXDOT - TYPICAL STANDARDS PAVEMENT MARKINGS
- C8.D2 - TXDOT - SIGN MOUNTING DETAILS*

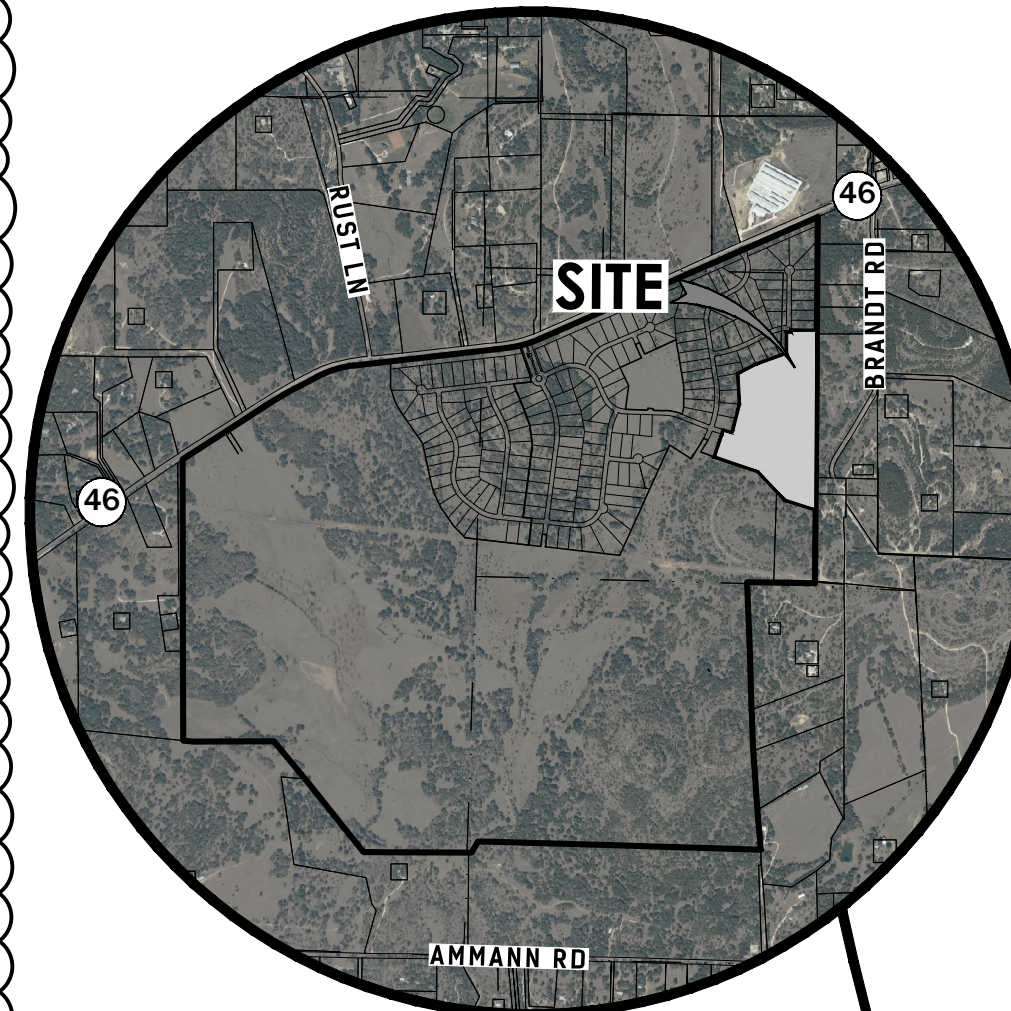
UNDERGROUND ELECTRICAL PLANS

- E0 - PROJECT COVER SHEET AND DRAWING LIST
- E1 - MASTER PLAN
- E2 - DRAWING MAP KEY
- E3 - UNDERGROUND ELECTRICAL LAYOUT (SHEET 1 OF 2)
- E4 - UNDERGROUND ELECTRICAL LAYOUT (SHEET 2 OF 2)

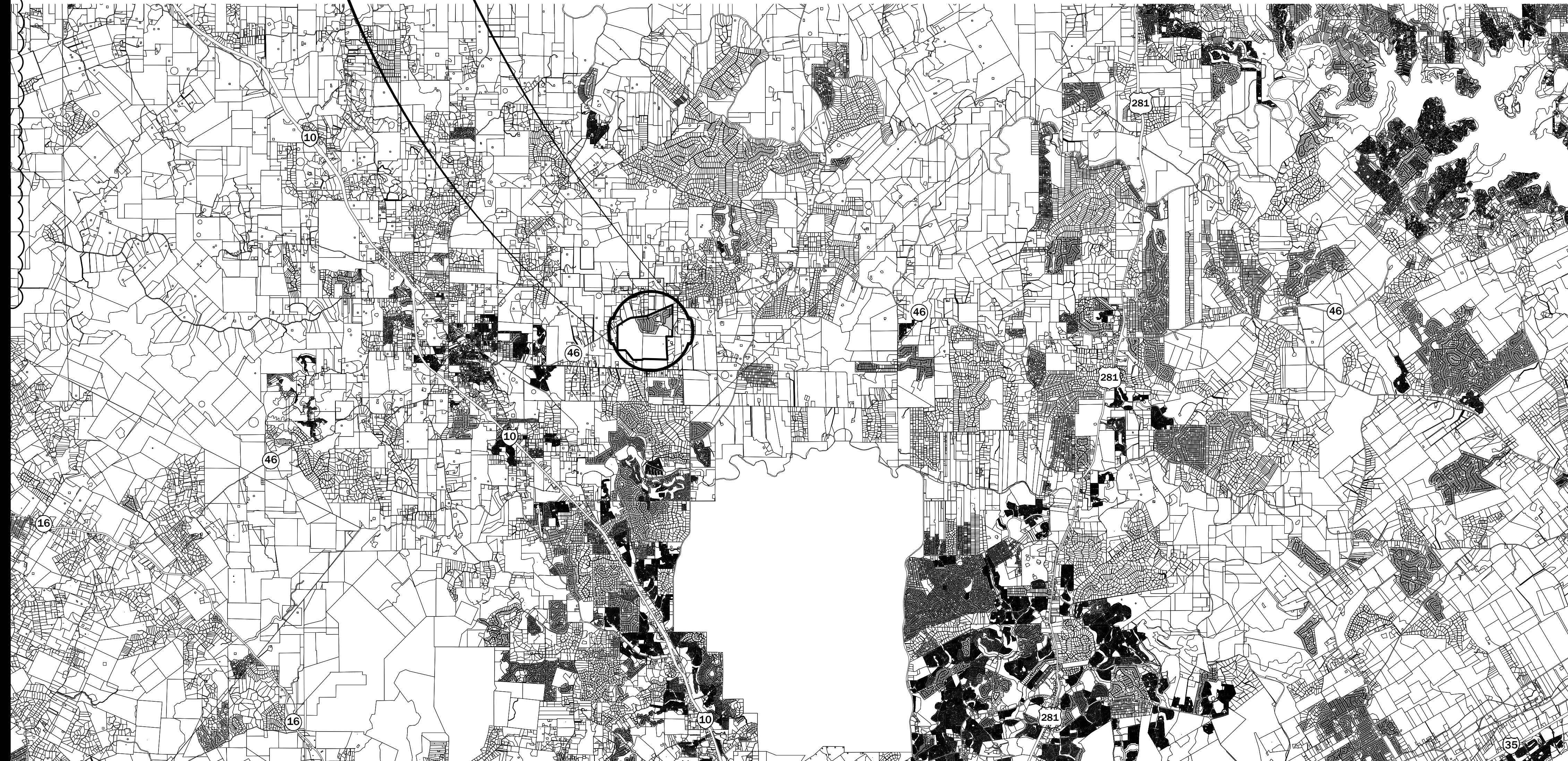


SUBMITTED BY:

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LOCATION MAP



VICINITY MAP

TCEQ WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES:

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

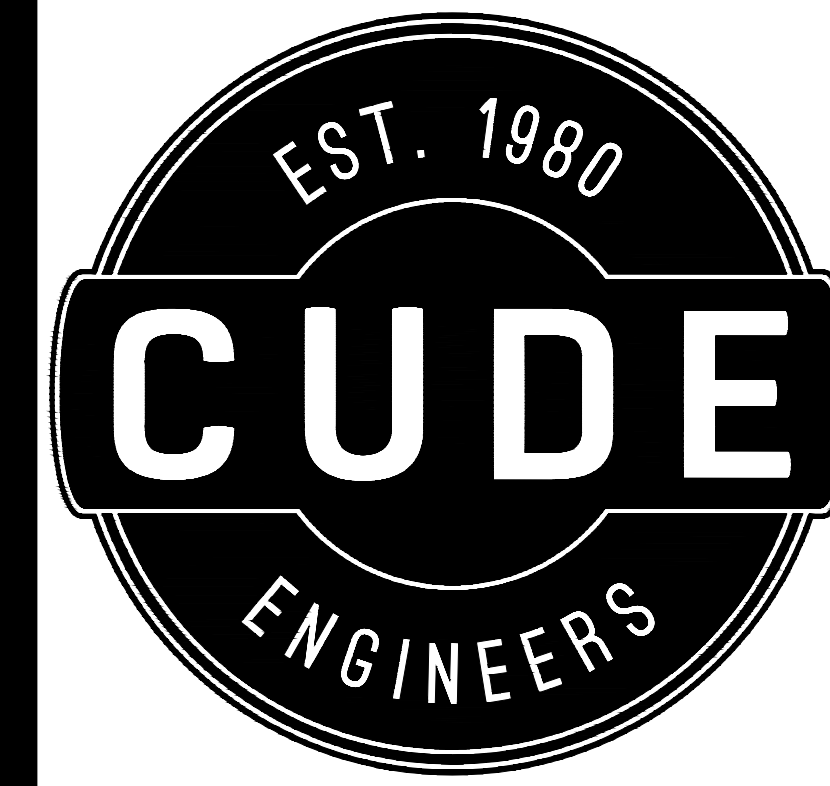
$$L = \frac{SD\sqrt{P}}{148,000}$$
 WHERE:
 - L = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
 - S = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
 - D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
 - P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).
 - THE HYDROSTATIC LEAKAGE RATE FOR DUCTILE IRON (DI) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-600 AS REQUIRED IN 30 TAC §290.44(a)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

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

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

GENERAL CONSTRUCTION NOTES

- ALL CONSTRUCTION MATERIALS AND METHODS FOR ROADWAY & DRAINAGE IMPROVEMENTS SHALL CONFORM TO THE KENDALL COUNTY, TEXAS REGULATIONS, RULES AND SPECIFICATIONS FOR PLATS, ROADS, SUBDIVISIONS AND MANUFACTURED HOME PARKS' EFFECTIVE NOVEMBER 8, 2010.
- ALL ROADWAYS ARE DESIGNED FOR A 30 MPH SPEED LIMIT.



GEORGE'S RANCH
 UNIT 2B
 OVERALL
 CONSTRUCTION PLANS

NO.	DESCRIPTION	REVISIONS		
		SHEET NO.	DATE	BY:
1	REVISE SHEET INDEX TABLE	COVER	06/23/2025	KMH

DEVELOPER:

 THE LOOKOUT GROUP
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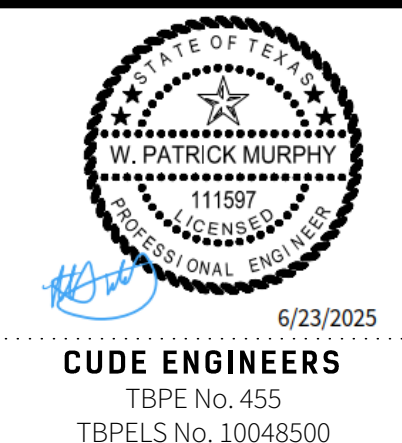
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DRAWN BY
 MAS/MGM

CHECKED BY
 W. PATRICK MURPHY, P.E.

DATE
 6/20/2025

PROJECT NO.
 03546.009



6/23/2025
 CUDE ENGINEERS
 TBPE No. 455
 TBPELS No. 10048500

KENDALL COUNTY GENERAL CONSTRUCTION NOTES

KENDALL COUNTY NOTES

1. NO ACTIVITY MAY BEGIN UNTIL PLAT IS FILED AND DEVELOPMENT PERMIT IS ISSUED. ANY REQUIRED DRAINAGE PLAN AND ROADWAY PLAN AND PROFILE SHALL HAVE BEEN APPROVED PRIOR TO THE START OF ANY CONSTRUCTION CONCERNING THE SAME. CLEARING, GRUBBING, AND MINOR GRADING WILL BE ALLOWED PRIOR TO FINAL PLAT APPROVAL, DRAINAGE PLAN APPROVAL, AND ROADWAY PLAN AND PROFILES. NO CONSTRUCTION SHALL BEGIN UNTIL PRE-CONSTRUCTION CONFERENCE HAS BEEN COMPLETED.
2. RIGHT OF WAY: ALL PUBLIC RIGHT OF WAYS SHALL BE CLEARED OF ALL IMPEDIMENTS INCLUDING BOULDERS, STUMPS, TREES, OR ANY OTHER DEBRIS.
3. REFLECTIVE ROAD NAME SIGNS SHALL BE FURNISHED AND INSTALLED BY THE DEVELOPER AT ALL INTERSECTIONS WITHIN OR ABUTTING THE SUBDIVISION. ROAD NAME SIGNS SHALL BE PLACED IN A UNIFORM MANNER THROUGHOUT THE SUBDIVISION. ROAD NAME SIGNS SHALL BE 7 FEET ABOVE THE FINAL GRADE TO THE BOTTOM OF THE SIGN ON AN APPROVED METAL POST.
4. PRIVATE ROAD NAME SIGNS SHALL BE GREEN WITH A 1 INCH RED TAPE ACROSS THE TOP OF THE SIGN WITH 4 INCHES WHITE REFLECTIVE LETTERS.
5. ALL TRAFFIC SIGNS SHALL BE FURNISHED AND INSTALLED BY THE DEVELOPER IN ACCORDANCE WITH THE LATEST ISSUE OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) ISSUED BY THE TEXAS DEPARTMENT OF TRANSPORTATION.
6. ALL PRIVATELY MAINTAINED ROADS SHALL BE SIGNED TO INFORM THE PUBLIC OF THEIR STATUS. THE SIGN SHALL READ "PRIVATELY MAINTAINED ROAD," AND SIGNS MUST BE PLACED AT EACH ENTRANCE TO THE SUBDIVISION. THE SIGN MUST BE A RECTANGULAR SHAPED MINIMUM SIZE OF 24 INCHES, WHITE BACKING WITH BLACK LETTERS AND INSTALLED IN ACCORDANCE WITH THE TMUTCD.
7. ALL SUB-GRADE AND ROAD CONSTRUCTION SHALL BE INSPECTED AND TESTED DURING CONSTRUCTION TO INSURE INSTALLATION AND CONSTRUCTION IS IN ACCORDANCE WITH THE APPROVED PLANS AND DESIGN. INSPECTIONS AND TESTING SHALL INCLUDE VERIFICATION OF MATERIALS USED, COMPACTION TESTS, GRADE CALCULATIONS, AND OTHER TESTING REQUIREMENTS AS MAY BE REQUIRED TO VERIFY CONSTRUCTION.
8. THE KENDALL COUNTY ENGINEER SHALL BE NOTIFIED IN WRITING 48 HOURS PRIOR TO ANY CONSTRUCTION, INSPECTIONS, OR TESTING.
9. THE SUB-GRADE SHALL BE INSPECTED AND APPROVED, IN WRITING, BY THE KENDALL COUNTY ENGINEER, OR HIS DESIGNATED REPRESENTATIVE, PRIOR TO THE PLACEMENT OF ANY BASE ON SUB-GRADE.
10. ROAD CONSTRUCTION TESTING SHALL BE ONE TEST FOR EACH 500 FEET AND ALTERNATE LANE PATTERN WITH A MINIMUM OF THREE TESTS PER ROAD. TEST SHALL BE FROM A CERTIFIED TESTING LABORATORY. SEE COUNTY DEVELOPMENT RULES AND REGULATIONS FOR ADDITIONAL TESTING REQUIREMENTS.
11. CLEARING AND GRUBBING: THE ENTIRE AREA OF THE SUB-GRADE SHALL BE CLEARED AND GRUBBED TO A DEPTH OF NOT LESS THAN 6 INCHES BELOW NATURAL GROUND IN FILL AREAS AND ONE FOOT BELOW SUB-GRADE ELEVATION IN EXCAVATED AREAS. BRUSH AND OTHER DEBRIS SHALL BE REMOVED FROM THE ROW AND DISPOSED OF AS ELECTED BY THE DEVELOPER.
12. DENSITY: SUBGRADE SHALL BE CONSTRUCTED AND FINISHED WITH A MINIMUM DENSITY OF 95% OF STANDARD PROCTOR FOR IN PLACE MATERIALS OR AS SPECIFIED IN THE PAVEMENT REPORT PREPARED BY A SOILS LAB OR PROOF ROLLED BY EQUIPMENT AS APPROVED BY THE KENDALL COUNTY ENGINEER.
13. HIGH PLASTICITY SOILS: HIGH PLASTICITY INDEX SOILS SHALL BE STABILIZED WITH LIME OR CEMENT BY DIRECTION OF THE KENDALL COUNTY ENGINEER.
14. EMBANKMENTS: EMBANKMENTS SHALL BE PLACED IN LIFTS OF NOT MORE THAN EIGHT (8) INCHES LOOSE DEPTH AND EACH LIFT SHALL BE THOROUGHLY COMPACTED BY SPRINKLING AND ROLLING BEFORE PLACEMENT OF SUCCEEDING LIFTS. ROCK EMBANKMENTS SHALL CONFORM TO TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) STANDARD SPECIFICATION (2014), ITEM 132.
15. UNSTABLE MATERIAL: UNSTABLE MATERIAL ENCOUNTERED IN EITHER EXCAVATED SECTIONS OR BENEATH EMBANKMENTS SHALL BE REMOVED TO A DEPTH OF NOT LESS THAN ONE FOOT BELOW NATURAL GROUND OR FINISHED SUB-GRADE AND REPLACED BY SATISFACTORY MATERIAL. MATERIAL SO REMOVED SHALL BE REMOVED FROM THE ROW.
16. CONSTRUCTION METHODS: BASE ON ALL STREETS AND ROADS SHALL HAVE A COMPACTED BASE DEPTH OF NOT LESS THAN EIGHT (8) INCHES AND SHALL BE CONSTRUCTED IN TWO (2), FOUR (4)-INCH LIFTS, UNLESS A DIFFERENT THICKNESS IS SUPPORTED BY A TOTAL ROAD SECTION DESIGN BY A LICENSED GEOTECHNICAL ENGINEER AND APPROVED BY THE KENDALL COUNTY ENGINEER. ANY CHANGES MUST BE APPROVED BY THE COUNTY ENGINEER PRIOR TO CONSTRUCTION. THE MATERIAL SHALL BE DUMPED, SPREAD, MIXED, WIND ROWED, WATERED, AND OTHER OPERATIONS NECESSARY TO PRODUCE A UNIFORMLY BLENDED MIXTURE OF THE DESIRED COURSE THICKNESS, MOISTURE CONDITION, AND GRADATION. SHAPING OF THE BLENDED MIXTURE TO THE REQUIRED GRADE AND LINE SHALL FOLLOW THE MIXING PROCEDURE AND PRECEDE THE COMPACTION. COMPACTION OF EACH COURSE OF MATERIAL SHALL BE ACCOMPLISHED BY SUITABLE EQUIPMENT TO OBTAIN A MINIMUM DENSITY OF 95% DRY DENSITY AS DETERMINED BY TEX-113-E PER TXDOT AND MOISTURE CONTENT BY TEX-115-E OR TEX-103-E PER TXDOT SPECIFICATIONS.
17. TESTING MATERIAL: PRIOR TO DELIVERY OF BASE MATERIAL FOR THE ROAD OR STREET, THE RESULTS OF PHYSICAL TESTS OF THE MATERIAL PROPOSED FOR USE SHALL BE SUBMITTED TO THE KENDALL COUNTY ENGINEER FOR APPROVAL. THESE TEST RESULTS SHALL BE CERTIFIED AS CONFORMING TO THE REQUIREMENTS BY AN APPROVED COMMERCIAL LABORATORY. THE CERTIFICATION SHALL DEFINE THE AREA AND COLUMN REPRESENTED BY THE TABULATED RESULTS.
18. PRIME COAT: AFTER FINAL FINISHING, CURING AND CORRECTION OF ANY IRREGULARITIES DEVELOPED DURING THE CURING PERIOD HAVE BEEN CORRECTED, THE AREA OF THE BASE WHICH IS TO RECEIVE SURFACING MAY BE PRIMED WITH AN APPLICATION OF APPROXIMATELY TWO-TENTHS (0.2) GALLONS OF AEP OR SSI ASPHALT, OR EQUIVALENT, PER SQUARE YARD OF SURFACE COVERED. GENERALLY TRAFFIC SHALL BE DIVERTED FROM THE PRIMED AREA UNTIL PLACEMENT OF THE SURFACE. SHOULD DIVERSION OF TRAFFIC NOT BE FEASIBLE, THE PRIME COAT SHALL BE BLANKET ROLLED WITH A PNEUMATIC ROLLER IMMEDIATELY FOLLOWING APPLICATION. PRIME COAT SHALL BE PERMITTED TO CURE FOLLOWING APPLICATION AND BEFORE APPLICATION OF SURFACE COURSE OF PAVEMENT.
19. PAVEMENT: ALL STREETS AND ROADS IN SUBDIVISIONS, AND PROVIDING ACCESS THERETO, WHICH ARE PROVIDED WITH A WEARING SURFACE SHALL MEET THE FOLLOWING STANDARDS:
 - a. (A) COMPACTED HMACP SHALL CONFORM TO TXDOT'S CURRENT SPECIFICATIONS FOR HOT MIX, TYPE D (FINE SURFACE). REFERENCE KENDALL COUNTY'S DEVELOPMENT RULES AND REGULATIONS FOR ADDITIONAL REQUIREMENTS.
 - b. (B) HMACP SHALL NOT BE PLACED AT ANY TIME WHEN:
 1. THE AIR TEMPERATURE IS BELOW 60° F AND FALLING;
 2. THE AIR TEMPERATURE IS BELOW 50° F, AND
 3. THE ROADWAY SURFACE TEMPERATURE IS BELOW 60° F.
20. INSPECTIONS: THE KENDALL COUNTY ENGINEER, AS AUTHORIZED BY THE COMMISSIONERS' COURT, OR HIS DESIGNATED AGENT, MAY INSPECT ALL PROPERTY SITE WORK AT ANY TIME AND ANY STAGE. DEVELOPER WILL PROVIDE A WRITTEN CONSTRUCTION SCHEDULE FOR DRAINAGE, UTILITY AND ROAD CONSTRUCTION. DEVELOPER WILL PROVIDE WRITTEN AMENDED SCHEDULES IF THE ACTUAL CONSTRUCTION VARIES MORE THAN FIVE (5) DAYS FROM THE DATE SET FORTH IN THE ORIGINAL CONSTRUCTION SCHEDULE. SHOULD THE DEVELOPER FAIL TO COMPLY WITH THIS PROVISION OR BEGIN ANY DRAINAGE, UTILITY, OR ROAD CONSTRUCTION PRIOR TO PROVIDING SUCH SCHEDULE THE DEVELOPER MAY BE REQUIRED TO PERFORM TESTING DEEMED NECESSARY BY THE COUNTY ENGINEER AT THE SOLE COST AND EXPENSE OF THE DEVELOPER.
21. ALL MATERIALS USED FOR PRIME OIL, TACK OIL, AND HMACP MUST BE SUBMITTED TO KENDALL COUNTY FOR APPROVAL BEFORE USE.
22. CONTRACTOR SHALL HAVE AN ENGLISH SPEAKING SUPERVISOR PRESENT DURING ALL INSPECTIONS.

GENERAL NOTES

1. ALL MATERIALS, CONSTRUCTION, TESTING AND WORKMANSHIP SHALL COMPLY WITH THE KENDALL COUNTY'S DEVELOPMENT RULES AND REGULATIONS, UNLESS SPECIFIED OTHERWISE IN THESE PLANS OR APPROVED BY THE OWNER IN WRITING.
2. DURING THE CONSTRUCTION OF THIS PROJECT, ANY INTERPRETATION OF THE STANDARD SPECIFICATIONS OR ANY MATTER WHICH REQUIRES THE APPROVAL OF THE OWNER, MUST BE APPROVED BY THE KENDALL COUNTY ENGINEER BEFORE ANY CONSTRUCTION INVOLVING THAT DECISION COMMENCES. ASSUMPTIONS ABOUT WHAT THOSE DECISIONS MIGHT BE, WHICH ARE MADE DURING THE BIDDING PHASE, WILL HAVE NO BEARING ON THE DECISION. CHANGES TO THE CONSTRUCTION DRAWINGS OR ENGINEERING MUST BE APPROVED BY KENDALL COUNTY ENGINEER.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS BEFORE AND DURING CONSTRUCTION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND NOTIFYING ALL AUTHORIZED INSPECTORS AND PERSONS IN CHARGE OF PRIVATE OR PUBLIC UTILITIES AFFECTED BY THIS PROJECT PRIOR TO CONSTRUCTION COMMENCEMENT.
5. THE SIZE AND LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IDENTIFIED IN THESE CONSTRUCTION PLANS (INCLUDING SERVICE LATERALS) ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE EXACT LOCATION (BOTH HORIZONTALLY & VERTICALLY) PRIOR TO CONSTRUCTION COMMENCEMENT AND PROTECT THE SAME DURING CONSTRUCTION. IT SHALL BE THE DUTY OF THE CONTRACTOR TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT. THE ENGINEER DOES NOT ASSUME RESPONSIBILITY FOR UTILITIES NOT SHOWN OR NOT IN THE LOCATION SHOWN.
6. THE CONTRACTOR SHALL PROVIDE TRENCH SAFETY IN ACCORDANCE WITH OSHA SPECIFICATIONS AND PROVIDE A TRENCH SAFETY PLAN SIGNED & SEALED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS AND PROVIDE DAILY INSPECTIONS TO ENSURE THAT THOSE REQUIREMENTS ARE BEING MET. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE SAFETY OF THOSE PERSONS WORKING IN AND AROUND THE TRENCH.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL UTILITIES DURING THE CONSTRUCTION OF THIS PROJECT. ALL MANHOLES, CLEANOUTS, VALVE BOXES, FIRE HYDRANTS, ETC. MUST BE ADJUSTED TO PROPER LINE AND GRADE BY THE CONTRACTOR PRIOR TO AND AFTER THE PLACEMENT OF FINAL GRADE AND/OR PAVEMENT. ANY REMOVAL OR DAMAGE TO EXISTING IMPROVEMENTS SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE AND

- SHALL BE APPROVED BY THE OWNER OF THE SUBJECT IMPROVEMENT. SAID EXISTING IMPROVEMENTS SHALL ALSO INCLUDE, BUT NOT BE LIMITED TO, BERMS, DITCHES, FENCES, VEGETATION, ETC.
8. CONTRACTOR SHALL IMMEDIATELY REPORT ANY DIFFERENCES BETWEEN THE INFORMATION IDENTIFIED IN THESE PLANS AND THE CONDITIONS IN THE FIELD TO THE ENGINEER.
9. TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN SIX FEET OF ENERGIZED OVERHEAD POWER LINES, AND FEDERAL REGULATION, TITLE 29, PART 1910.180(1) AND PART 1 926.550(A)(15) REQUIRE A MINIMUM CLEARANCE OF TEN FEET FROM THESE FACILITIES. THE ABOVE LAWS CARRY BOTH CRIMINAL AND CIVIL LIABILITIES, WITH CONTRACTORS AND OWNERS BEING LEGALLY RESPONSIBLE FOR THE SAFETY OF WORKERS UNDER THESE LAWS. CONTRACTOR SHALL COORDINATE WITH APPROPRIATE ELECTRIC COMPANY WHEN WORKING NEAR OVERHEAD POWER LINES TO BE DE-ENERGIZED AND/OR MOVED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL ALSO SHORE EXISTING POWER POLES WHEN PERFORMING EARTHWORK OPERATIONS OR TRENCHING WITHIN CLOSE PROXIMITY OF EXISTING POWER POLES (NO SEPARATE PAY ITEM).
10. WHERE TRENCHING IS UTILIZED DURING CONSTRUCTION, NO MORE THAN 100 FEET OF TRENCH SHALL BE OPEN AT ANY GIVEN TIME. NO EXCAVATIONS SHALL BE LEFT OPEN OVERNIGHT UNLESS PRIOR APPROVAL IS GRANTED BY OWNER. WHERE A TRENCH IS LEFT OPEN DURING NON-WORKING HOURS, ORANGE SAFETY FENCING SHALL BE INSTALLED AT LEAST 5 FEET AROUND THE TRENCH PERIMETER. ALL EXCAVATIONS IN PAVED AREAS WHICH CANNOT BE COMPLETELY BACKFILLED PRIOR TO BEING SUBJECT TO TRAFFIC SHALL BE COVERED WITH STEEL SHEETING AND ANCHORED TO PAVEMENT.
11. PAVEMENT PRESERVATION TECHNIQUES SHALL BE UTILIZED BY THE CONTRACTOR AT ALL TIMES DURING CONSTRUCTION. NO TRACK EQUIPMENT IS ALLOWED ON ANY COUNTY STREET, CURB, OR PRIVATE PAVING UNLESS PRIOR APPROVAL IS GIVEN BY COUNTY.
12. CONTRACTOR SHALL NOT CLOSE A STREET TO TRAFFIC OR INTERFERE WITH TRAFFIC MOVEMENT ON A STREET WITHOUT NOTIFYING THE COUNTY ENGINEER AND SECURING PERMISSION TO DO SO. WHEN ANY STREET, SECTION OF A STREET, OR STREET SHOULDER IS CLOSED, OR TRAFFIC FLOW IS RESTRICTED, THE CONTRACTOR SHALL FURNISH A TRAFFIC CONTROL PLAN IN ACCORDANCE WITH THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) FOR REVIEW AND APPROVAL BY THE TXDOT AND COUNTY ENGINEER OR HIS DESIGNEE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING BARRICADES, WARNING AND DIRECTING SIGNS, LIGHTS, TRAFFIC CONTROL DEVICES, FLAGS AND PROVIDE FLAGMEN ALONG THE ENTIRE STREET WITHIN THE LIMITS OF THE PROJECT IN ACCORDANCE WITH THE APPROVED TRAFFIC CONTROL PLAN AND TMUTCD STANDARDS. ALL BARRICADES SHALL BE EQUIPPED WITH FLASHERS AND BE KEPT BURNING BETWEEN THE HOURS OF SUNSET AND SUNRISE.
13. THE CONTRACTOR SHALL AT ALL TIMES KEEP THEIR CONSTRUCTION SITE FREE FROM ACCUMULATION OF WASTE MATERIAL, DEBRIS, OR RUBBISH GENERATED DURING CONSTRUCTION. AT THE COMPLETION OF CONSTRUCTION AND PRIOR TO THE COUNTY SCHEDULED WALK-THRU, THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL TOOLS, SURPLUS MATERIALS AND DEBRIS AND SHALL LEAVE THE SITE IN A "BROOM CLEAN" CONDITION, UNLESS SPECIAL PERMISSION HAS BEEN GRANTED BY THE COUNTY IN WRITING.
14. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SANITARY CONVENIENCE FACILITIES AT THE PROJECT SITE FOR USE BY ALL LABORERS. THEY SHALL BE WELL VENTILATED, BUT PROVIDE CONCEALMENT, AND SHALL BE KEPT CLEAN AT ALL TIMES BY THE CONTRACTOR. THE FACILITIES SHALL BE REMOVED AND THE SITE RESTORED TO ITS ORIGINAL CONDITION OR BETTER UPON COMPLETION OF THE PROJECT. ALL SUCH FACILITIES SHALL CONFORM TO THE REQUIREMENTS OF THE STATE AND LOCAL HEALTH AUTHORITIES.
15. CONTRACTOR SHALL PROTECT ALL EXISTING TREES AT THE PROJECT SITE. NO EXISTING TREE SHALL BE TRIMMED OR REMOVED WITHOUT AUTHORIZATION FROM THE OWNER UNLESS NOTED OTHERWISE IN THE PLANS.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING, TO THE ORIGINAL CONDITION OR BETTER, ANY DAMAGES TO EXISTING VEGETATION, PAVEMENTS, SIDEWALKS, DRIVEWAYS, FENCES, OR OTHER STRUCTURES AT THEIR EXPENSE, EXCEPT AS NOTED IN THE PLANS.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR SAFEGUARDING AND PROTECTING ALL MATERIAL AND EQUIPMENT STORED ON THE JOBSITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STORAGE OF MATERIALS IN A SAFE AND WORKMANLIKE MANNER TO PREVENT INJURIES DURING AND AFTER WORK HOURS.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING MATERIALS TESTING FOR THE SCOPE OF THIS PROJECT IN ACCORDANCE WITH THE KENDALL COUNTY SPECIFICATIONS. ALL MATERIALS TESTING SHALL BE PERFORMED BY AN INDEPENDENT MATERIALS TESTING LAB APPROVED BY KENDALL COUNTY. SAID LAB SHALL BE CONTRACTED AND PAID BY THE CONTRACTOR AND HAVE A REGISTER PROFESSIONAL ENGINEER ON STAFF.
19. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES (RESIDENTIAL, INDUSTRIAL, COMMERCIAL, ETC.) ADJACENT TO WORK AREAS AT ALL TIMES.
20. NO SEPARATE PAY FOR ITEMS COVERED IN THE PLANS, SPECIFICATIONS, OR NOTES UNLESS SPECIFICALLY ESTABLISHED IN THE UNIT COST BREAKDOWN OR BID FORM IF PROVIDED. ALL ITEMS NOT SPECIFICALLY CALLED FOR ON THE PLANS, OR IN THE SPECIFICATIONS, BUT NECESSARY TO REASONABLY CONSTRUCT THE FACILITIES OR IMPROVEMENTS, SHALL BE CONSIDERED INCIDENTAL TO THE OVERALL PROJECT AND NO SEPARATE PAYMENTS WILL BE MADE FOR THESE ITEMS, INCLUDE COST OF SAME IN THE CONTRACT UNIT PRICE BID FOR ITEMS FOR WHICH WORK IS A COMPONENT PART OR AS INCIDENTAL TO WORK.
21. 3" DIAMETER WEEP HOLES 10' O.C. ON BOTH SIDES OF CHANNEL TO BE PLACED 1' ABOVE FLOW LINE ON ALL CONC. RIP-RAP.
22. IF ONE OR MORE GRAVES ARE DISCOVERED DURING CONSTRUCTION OF IMPROVEMENTS ON THE PROPERTY, CONTRACTOR SHALL NOTIFY KENDALL COUNTY, ENGINEER OF RECORD, AND OWNER IMMEDIATELY UPON DISCOVERY. CONTRACTOR SHALL PERFORM PROCEDURE AS OUTLINED IN TEXAS ADMINISTRATIVE CODE TITLE 13, PART 2, CHAPTER 22, RULE §22.4.

SEPARATION DISTANCES BETWEEN WATER AND SEWER

1. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND FOR INFORMATION PURPOSES ONLY.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT SEPARATION DISTANCE PROVISIONS ARE MAINTAINED PER TCEQ REQUIREMENTS

CONFLICT WITH OTHER UTILITIES

1. THE PIPELINE ALIGNMENTS MAY CROSS EXISTING WATER, WASTEWATER, GAS, ELECTRIC, TELEPHONE UTILITIES, FIBER OPTIC CABLES, DR OTHER.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION AND DEPTH OF THESE FACILITIES PRIOR TO CONSTRUCTION.
3. THERE WILL BE NO SEPARATE PAYMENT FOR POTHOLING OR OTHER FIELD RECONNAISSANCE TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES.

PAVEMENT NOTES

1. ALL PAVEMENT TO BE REMOVED, INCLUDING CURB & GUTTERS, DRIVEWAYS AND SIDEWALKS SHALL BE SAWCUT, REMOVED AND REPLACED, UNLESS SPECIFIED OTHERWISE IN PLANS.
2. CONTRACTOR SHALL BE REQUIRED TO ADJUST SEWER MANHOLES, SEWER CLEANOUTS, WATER METERS, FIRE HYDRANTS, VALVES, ETC. AS REQUIRED TO MATCH THE FINISHED GRADE.
3. CONTRACTOR SHALL STAGE THE CONSTRUCTION WORK OUT OF STREET. ALL NECESSARY BARRICADES, TEMPORARY BYPASSES AND DIVERSIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBSIDIARY TO THE TRAFFIC CONTROL.

TXDOT NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION COMMENCEMENT.

WATER AND SEWER NOTES

1. ALL MATERIALS, CONSTRUCTION, TESTING, AND WORKMANSHIP SHALL CONFORM TO THE WATER PURVEYOR'S STANDARD SPECIFICATIONS, EXCEPT AS NOTED HEREIN OR APPROVED BY THE PROJECT ARCHITECT IN WRITING.
2. ALL TIE-INS TO EXISTING SANITARY SEWER AND WATER MAINS SHALL BE PERFORMED BY THE UTILITY PROVIDER AT CONTRACTOR'S EXPENSE UNLESS OTHERWISE APPROVED BY THE COUNTY OR UTILITY PROVIDER.
3. CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY PROVIDER AT LEAST 48 HOURS PRIOR TO CONNECTING PROPOSED WATER LINE TO EXISTING WATER SYSTEM AND PRIOR TO ANY DISRUPTION OF WATER SERVICE. NEW WATER MAINS TO BE TIED INTO EXISTING WATER SYSTEMS MUST HAVE PASSED ALL TESTING AND BE APPROVED BY THE PURVEYOR PRIOR TO MAKING SUCH CONNECTION.
4. FOR THE PURPOSE OF RECORD DRAWINGS / AS-BUILTS, THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FINAL MEASUREMENTS UPON COMPLETION OF THE PROJECT AND PRIOR TO FINAL ACCEPTANCE.
5. CONTRACTOR MAY DEFLECT WATER LINES SLIGHTLY TO AVOID CONFLICTS WITH OBSTRUCTIONS. THE WATER PURVEYOR MUST BE CONTACTED FOR APPROVAL IN ADVANCE OF ANY DECISION TO DEFLECT WATER LINES. CONTRACTOR SHALL KEEP ACCURATE RECORDS OF LOCATIONS WHERE WATER LINES ARE DEFLECTED FOR REQUIRED AS-BUILT RECORD DRAWINGS. SUCH DEFLECTIONS SHALL BE WITHIN THE LIMITS ALLOWED AND RECOMMENDED BY THE MANUFACTURER OF THE PIPE.
6. WET CONNECTIONS ARE TO BE COORDINATED WITH THE OWNER IN SUCH A MANNER AND AT SUCH HOURS AS TO CAUSE THE LEAST INCONVENIENCE TO THE PUBLIC. WHEN EXISTING MAINS HAVE BEEN CUT OR A PLUG REMOVED FOR A CONNECTION, THEN THE WORK OF MAKING THE CONNECTION SHALL PROGRESS WITHOUT INTERRUPTION UNTIL COMPLETE. NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR MAKING CONNECTIONS AT NIGHT OR FOR HAVING TO COMPLETE CONNECTION UNDER UNFAVORABLE WORKING CONDITIONS. COMPENSATION FOR WET CONNECTION NOT SHOWN ON THE PLANS WILL BE INCIDENTAL TO THE WATER MAIN ONLY WHEN REQUESTED BY THE CONTRACTOR AND ACCEPTED BY THE PURVEYOR.
7. ALL FITTINGS, VALVES, OR OTHER APPURTENANCES NECESSARY FOR TESTING OR DISINFECTION OF UTILITY LINES SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST. TEMPORARY BLOW-OFF VALVES SHALL BE REMOVED BY THE

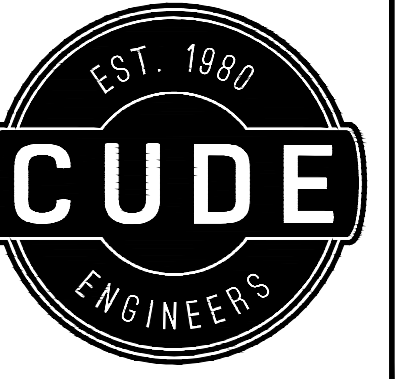
- CONTRACTOR PROMPTLY UPON SUCCESSFUL COMPLETION OF ALL TESTING (NO SEPARATE PAY).
8. ALL PIPE USED FOR WATER MAINS SHALL BE C-900 DR-14, OR AS OTHERWISE APPROVED BY THE WATER PURVEYOR.
9. ALL PIPE USED FOR SANITARY SEWER MAINS SHALL BE AS SPECIFIED BY THE OSS DESIGNER.
10. ALL WATER & SANITARY SEWER SERVICE LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE COUNTY'S PLUMBING CODE.

CONSTRUCTION STAKING AND BENCH MARKS

1. BASELINES, STATIONS, AND ELEVATIONS ON THESE PLANS HAVE BEEN ESTABLISHED BASED ON INFORMATION PROVIDED TO THE ENGINEER. CONTRACTOR SHALL ESTABLISH BASELINES PRIOR TO COMMENCING WITH CONSTRUCTION ACTIVITIES AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES OR PROBLEMS ASSOCIATED WITH DOING SO.
2. CONSTRUCTION STAKING SHALL BE PROVIDED BY CONTRACTOR.
3. STATION VALUES SHOWN ON THE PLANS ARE CENTERLINE OF PROPOSED UTILITY LINE OR STREET WHERE REFERENCED

EROSION CONTROL STANDARD NOTES

1. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBING ACTIVITIES AT THE PROJECT SITE. THE BMPs SHALL BE INSTALLED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP).
2. CONTRACTOR SHALL INSPECT ALL EROSION CONTROL DEVICES WEEKLY AND AFTER MAJOR RAIN EVENTS TO ENSURE THAT THEY ARE FUNCTIONING PROPERLY.
3. SEDIMENT SHALL BE REMOVED FROM EROSION CONTROL DEVICES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY ONE-THIRD. EROSION CONTROL DEVICES THAT UTILIZE STONE SHALL HAVE THE STONE REPLACED WHEN THE VOIDS SPACES IN THE ROCK BECOME CLOGGED WITH SEDIMENT.
4. IF AN EROSION CONTROL DEVICE HAS BEEN DAMAGED OR IF IT IS NOT FUNCTIONING PROPERLY TO ELIMINATE EROSION OR OFF-SITE SEDIMENTATION, THEN THE DEVICE MUST BE REPAIRED, REPLACED OR MODIFIED. IN ADDITION, THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE REVISED TO INDICATE THE CHANGE.
5. OFF-SITE MATERIAL STORAGE AREAS USED SOLELY BY THE PERMITTED PROJECT (I.E., OFF-SITE SOIL BORROW OR SPOIL SITES) ARE CONSIDERED A PART OF THE PROJECT AND SHALL BE ADDRESSED IN THE STORM WATER POLLUTION PREVENTION PLAN. THESE AREAS SHALL BE STABILIZED WITH PERMANENT GROUND COVER PRIOR TO FINAL APPROVAL OF THE PROJECT.
6. LITTER, CONSTRUCTION DEBRIS, WASH PIT AREA AND CONSTRUCTION CHEMICALS EXPOSED TO STORM WATER SHALL BE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORM WATER DISCHARGES OR A SAFETY HAZARD.
7. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
8. THE PROJECT SITE SHALL BE PERMANENTLY STABILIZED AND ALL TEMPORARY EROSION CONTROL DEVICES REMOVED PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.
9. ALL EROSION CONTROL MEASURES MUST BE PLANNED FOR, INSTALLED, MAINTAINED AND REMOVED IN ACCORDANCE WITH COUNTY, STATE, AND FEDERAL STORM WATER AND POLLUTION PREVENTION REQUIREMENTS.
10. CONSTRUCTION SITE NOTICE AND/OR NOIS MUST BE POSTED AT THE PROJECT SITE.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL AND SWPPP PREPARATION AND INCLUDE EROSION CONTROL AND SWPPP PREPARATION IN BID. ALL EROSION CONTROL AND SWPPP SHALL BE PROVIDED BY CONTRACTOR AND SHALL BE IN COMPLIANCE WITH NPDES, TPDES, AND TCEQ REQUIREMENTS.

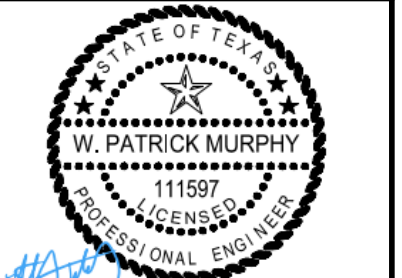


4122 Pond Hill Road, Suite 101
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GEORGE'S RANCH
UNIT 2B
KENDALL COUNTY - GENERAL CONSTRUCTION NOTES

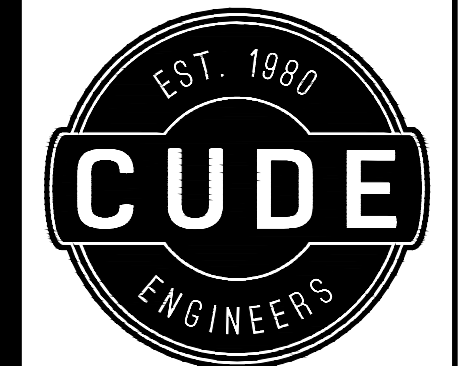
DATE	3/31/2025
PROJECT NO.	03546.009
DRAWN BY	MAS/MGM
CHECKED BY	KMH/WPM

REVISIONS	
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6/23/2025
CUDE ENGINEERS
TBPEL No. 455

CO.00



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San Antonio, Texas 78231
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GEORGE'S RANCH
UNIT 2B
STORMWATER POLLUTION PREVENTION PLAN

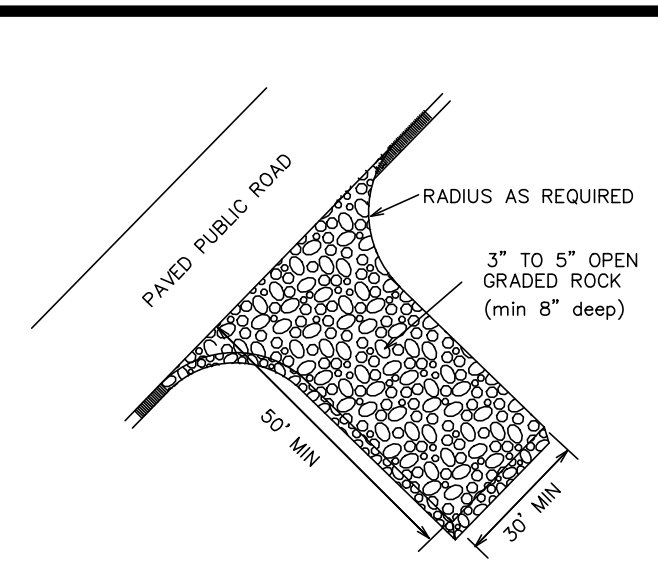
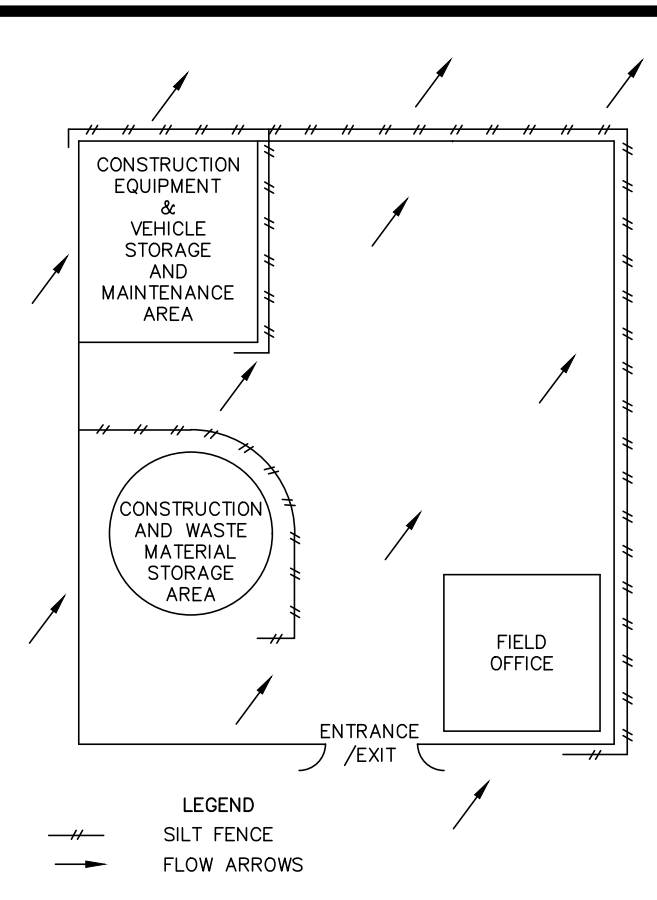
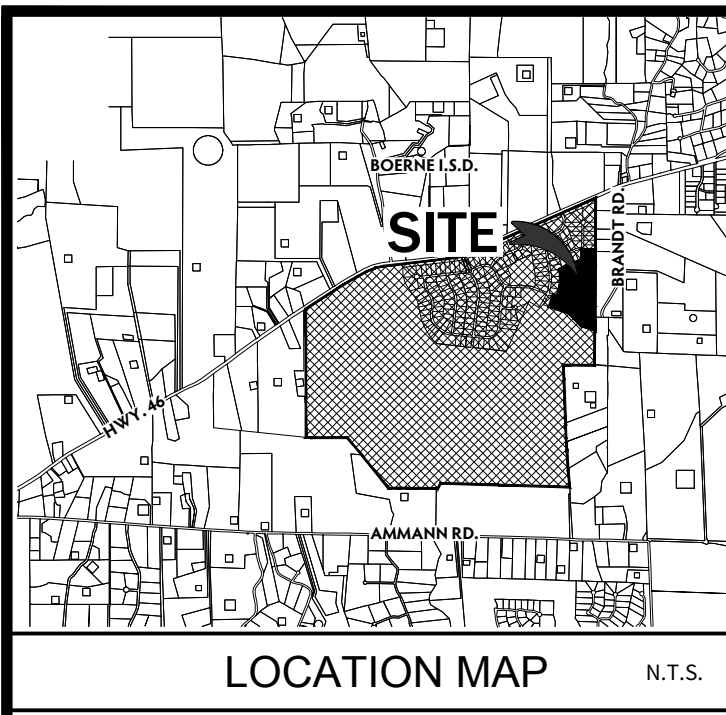
DATE
6/20/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

REVISIONS
1. 2025-06-20 REMOVED ET LINE FROM MAP, THE REMAINING PORTION OF THE EXISTING DRAIN HAS BEEN SHOWN.
2.
3.
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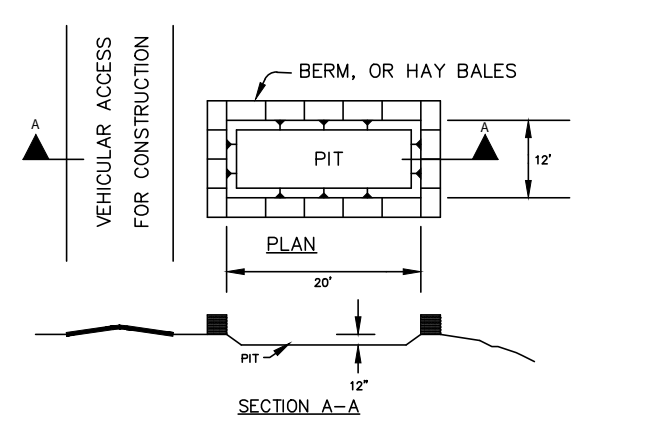
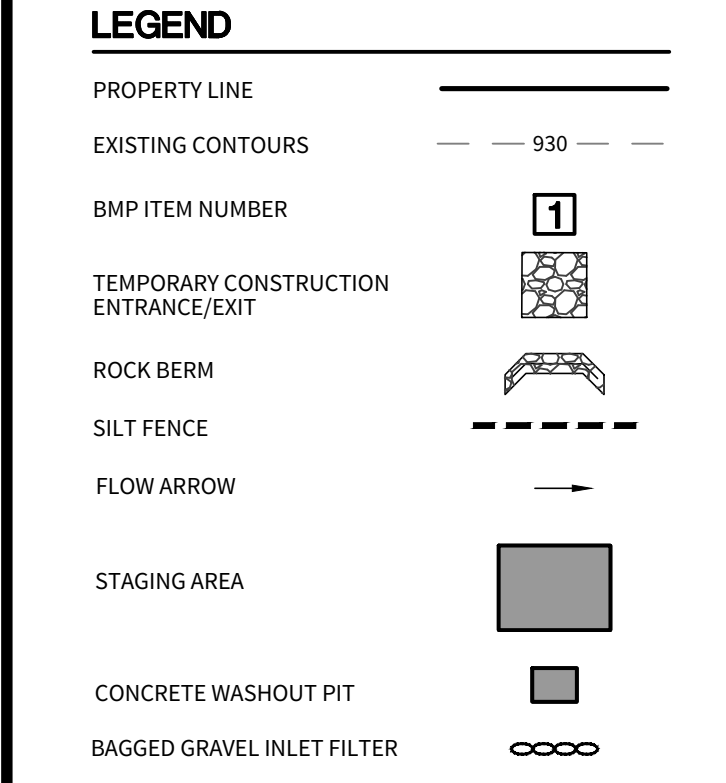
6/23/2025
CUDE ENGINEERS
TBPEL No. 435

C1.00



- 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.

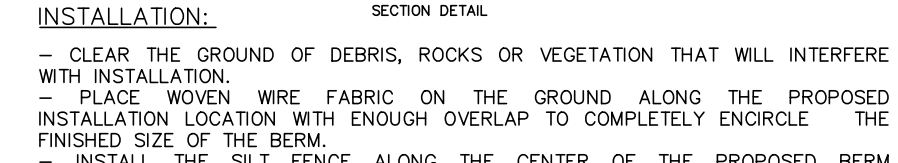
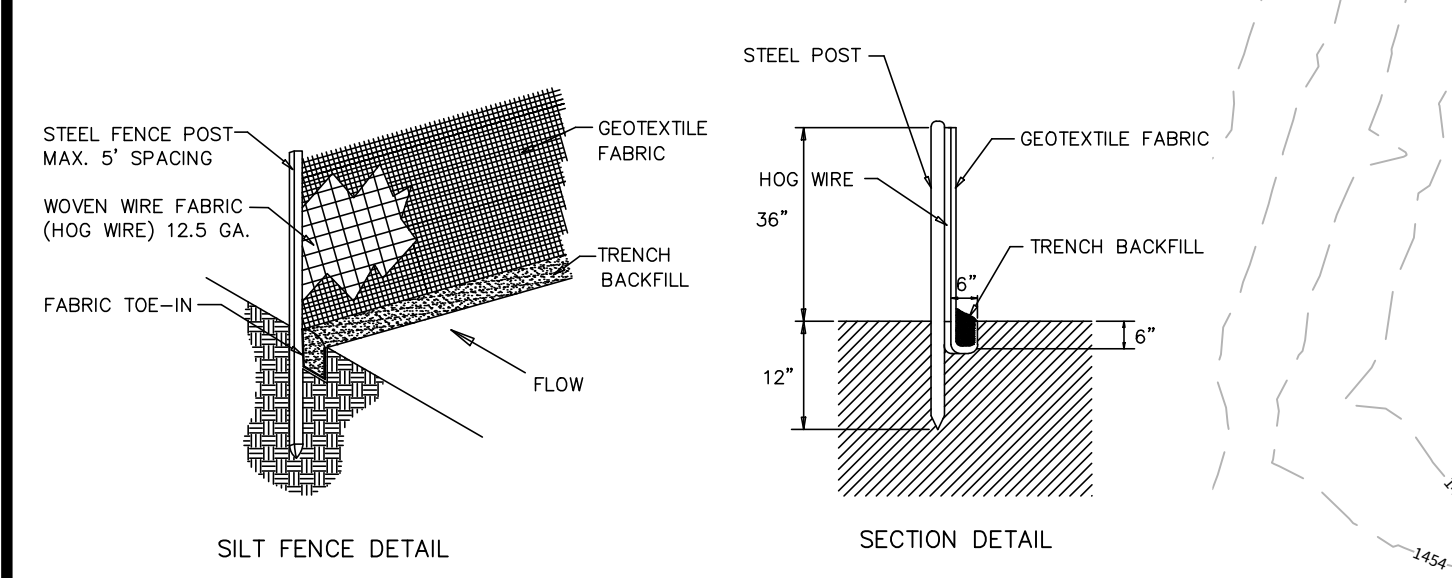
DEVELOPER:
THE LOOKOUT DEVELOPMENT GROUP, LP
CONTACT PERSON: MIKE SIEFERT
1001 CRYSTAL FALLS PARKWAY
LEANDER, TX 78641
TEL: (512) 690-4322



- 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.

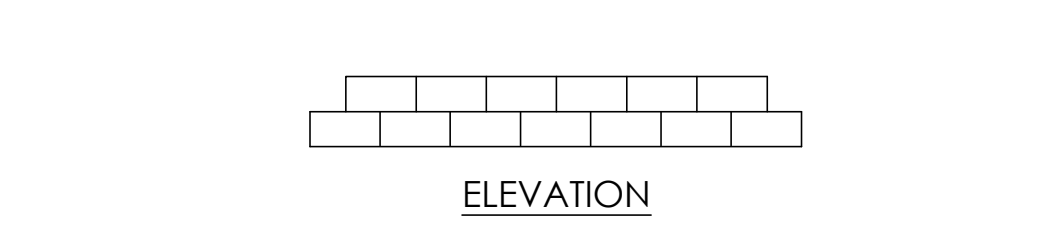
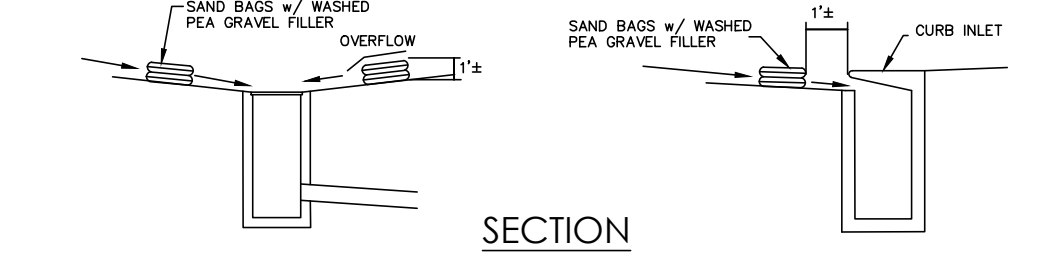
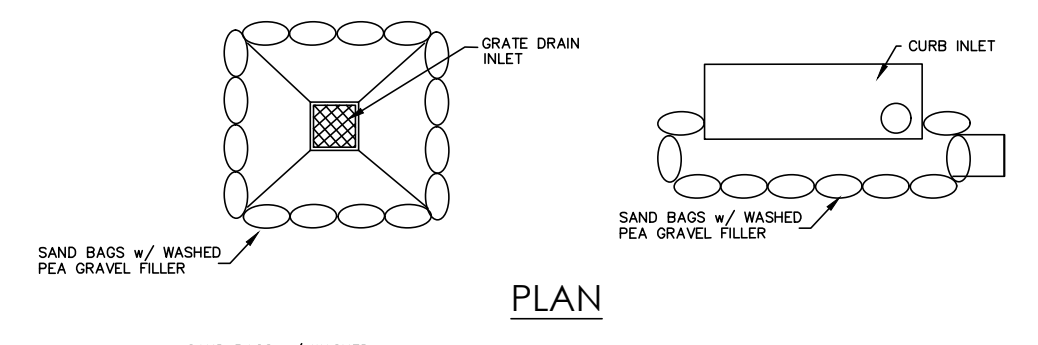


- NOTE:**
1. ALL SILT FENCES AND/OR ROCK BERMS AND TEMPORARY CONSTRUCTION ENTRANCES/EXITS SHALL BE PLACED AT THE MOST DOWN-GRADIENT POINT OF CONSTRUCTION AS SHOWN ON THIS SITE PLAN. CONTRACTOR SHALL TAKE INTO CONSIDERATION ANY PROPOSED CONSTRUCTION THAT MAY TAKE PLACE AT THESE LOCATIONS. ANY RELOCATION 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.
 7. SITE DETENTION POND SHALL SERVE AS A TEMPORARY SEDIMENTATION BASIN UNTIL ENTIRE DRAINAGE BASIN'S SOIL HAS BEEN STABILIZED.
 8. STORMWATER MANAGEMENT & DETENTION FACILITIES SHALL BE PROVIDED PRIOR TO SITE CONSTRUCTION.

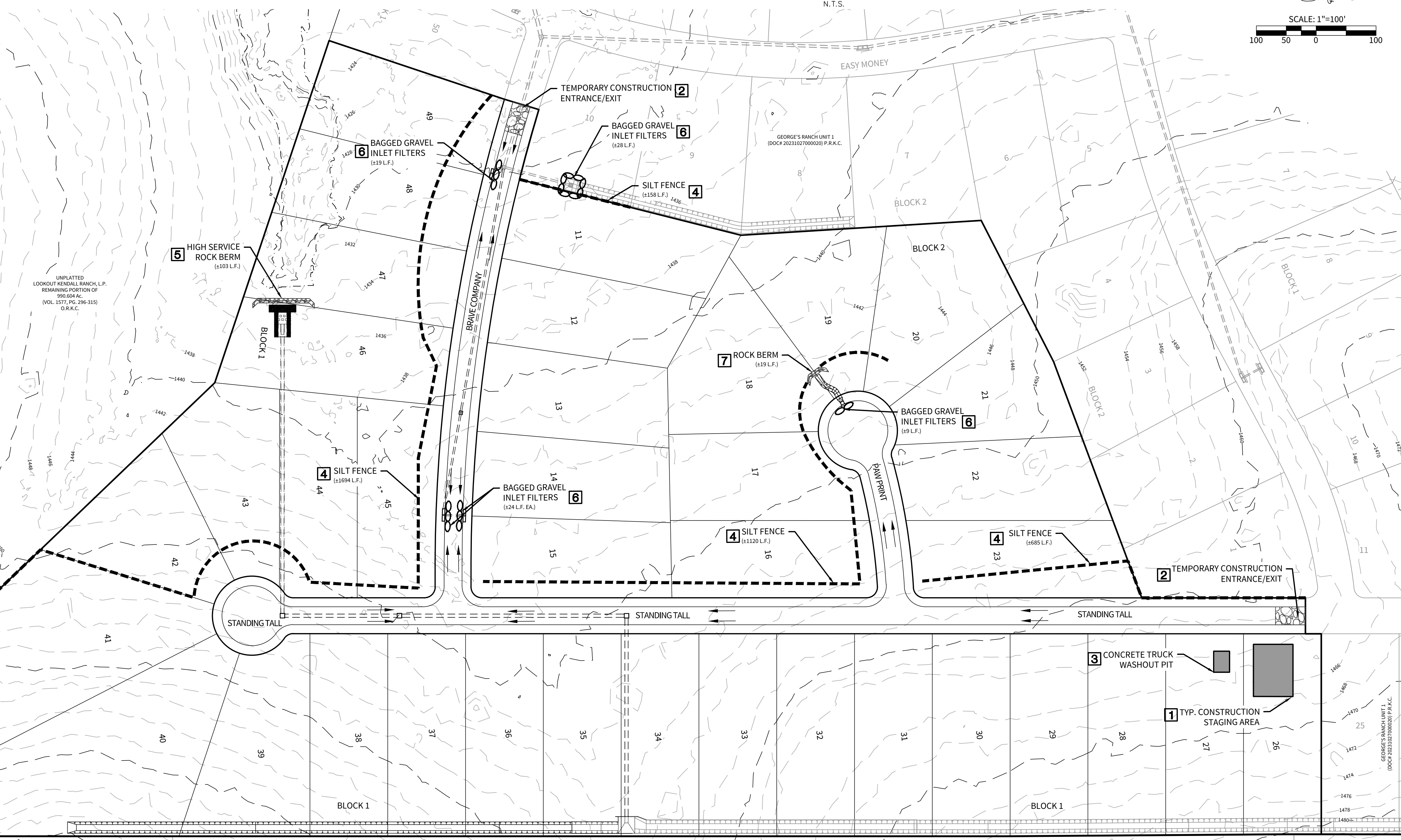
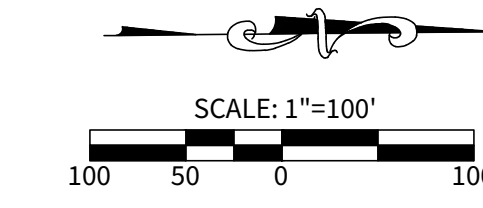
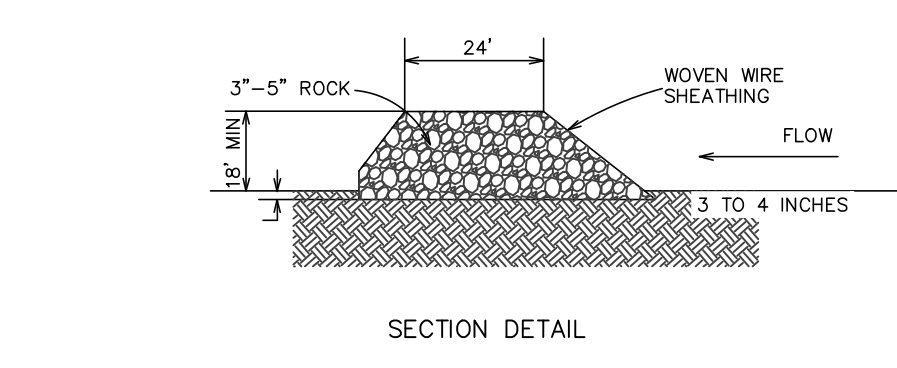
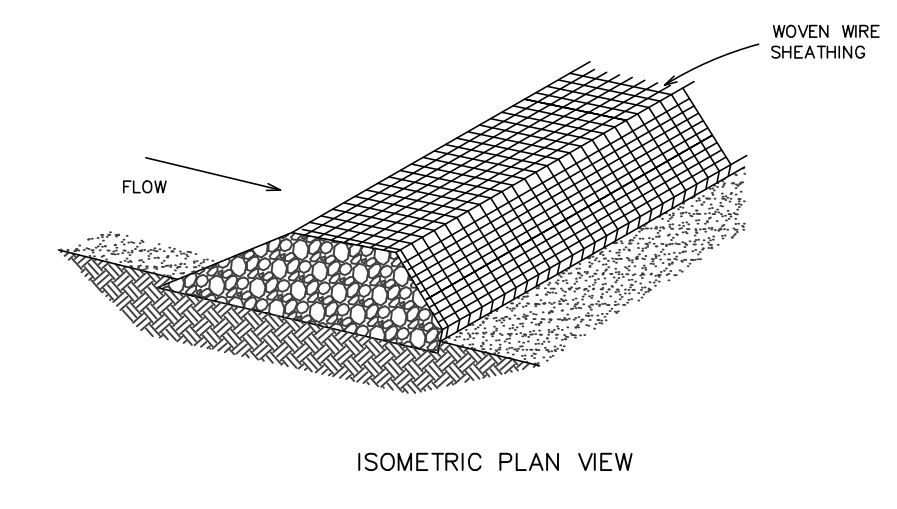
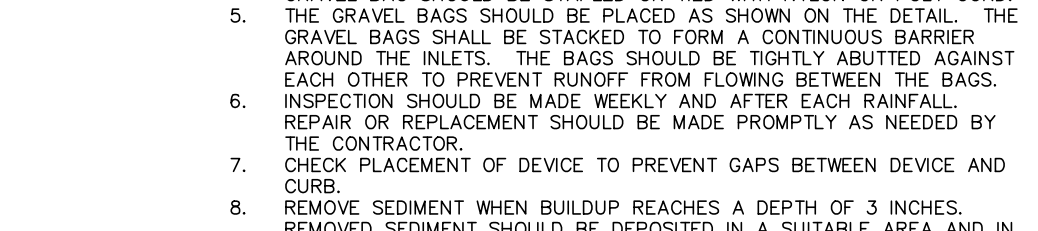
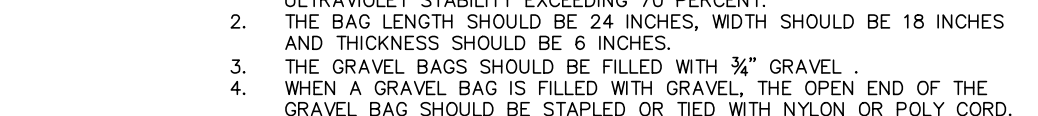


- INSTALLATION:**
- CLEAR THE GROUND OF DEBRIS, ROCKS OR VEGETATION THAT WILL INTERFERE WITH INSTALLATION.
 - PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION LOCATION WITH ENOUGH OVERLAP TO COMPLETELY ENCLOSE THE FINISHED SIZE OF THE BERM.
 - INSTALL THE SILT FENCE ALONG THE CENTER 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.



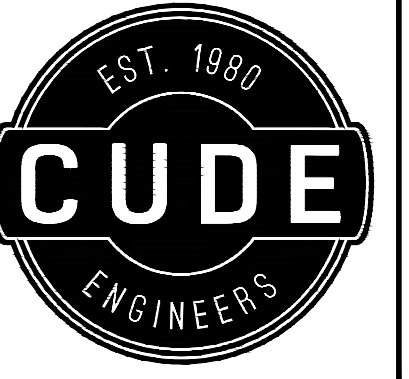
- GENERAL NOTES:**
1. THE GRAVEL BAG MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, POLYAMIDE OR COTTON BURLAP WOVEN FABRIC, MINIMUM UNIT WEIGHT 4 OZ/SD 2' - MILLER BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70 PERCENT.
 2. THE BAG LENGTH SHOULD BE 24 INCHES, WIDTH SHOULD BE 18 INCHES AND THICKNESS SHOULD BE 6 INCHES.
 3. THE GRAVEL BAGS SHOULD BE FILLED WITH 3/4" GRAVEL.
 4. WHEN A GRAVEL BAG IS FILLED WITH GRAVEL, THE OPEN END OF THE GRAVEL BAG SHOULD BE STACKED OR TIED WITH NYLON OR POLY CORD.
 5. THE GRAVEL BAGS SHOULD BE PLACED AS SHOWN ON THE DETAIL. THE GRAVEL BAGS SHALL BE STACKED TO FORM A CONTINUOUS BARRIER AROUND THE INLETS. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
 6. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
 7. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
 8. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT INTERFERE WITH THE DEVICE.
 9. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



UNPLATTED MERLE LLOYD BRANT 97.358 ACRES VOL. 241, PGS. 221 D.R.K.C.

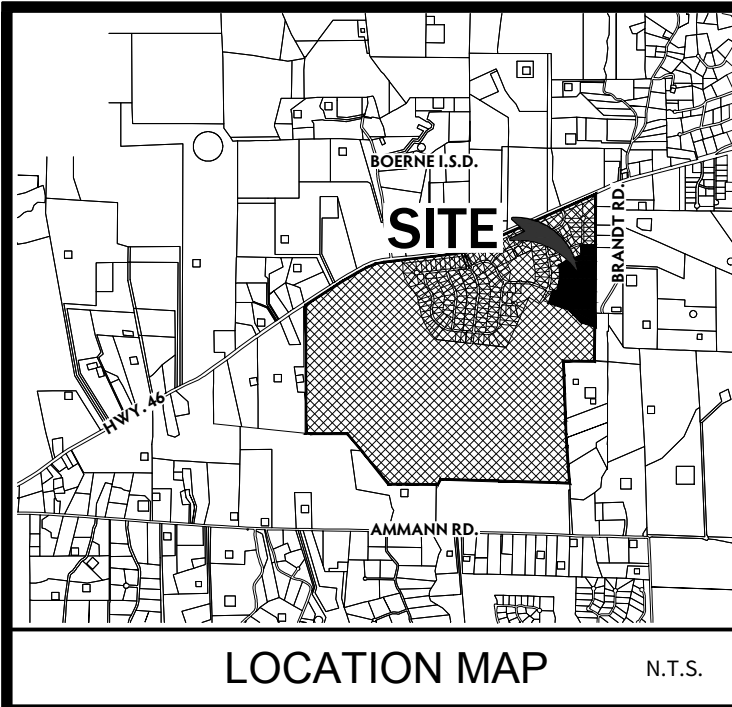
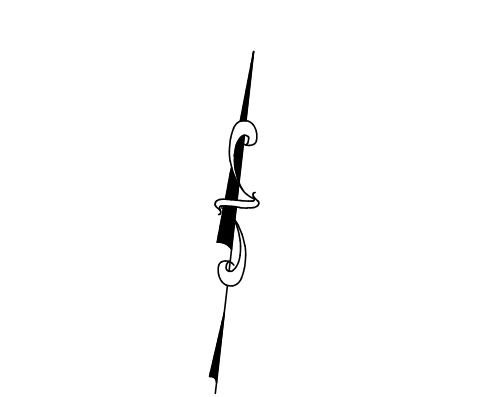
UNPLATTED MERLE LLOYD BRANT 97.358 ACRES VOL. 241, PGS. 221 D.R.K.C.

UNPLATTED ROLAND BERT J. JANET ELAINE SHEPPARD 6.000 AC. VOL. 446, PGS. 211-212 D.R.K.C.



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

SCALE: 1"=200'



NOTE

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

KENDALL COUNTY ENGINEER & DEVELOPMENT OFFICE (1-830-249-9343)
BOERNE MAINT. OFFICE, TxDOT (1-830-916-2430)
TEXAS STATE WIDE ONE CALL LOCATOR (1-800-545-6095)
CIVIC SPECTRUM COMMUNICATIONS

OVTC AND SPECTRUM COMMUNICATIONS CABLE LINES TO GO IN JOINT TRENCH WITH PEDEPREALES ELECTRIC CO-OP. LOTS WITH CONFLICTING TRANSFORMER / SECONDARY ENCLOSURE ELECTRIC SERVICE AND WATER METER LOCATION SHALL HAVE WATER METER PLACED 5' FROM PROPERTY LINE WHERE THE CONFLICT OCCURS.

TYPICAL UTILITY CROSSINGS WILL HAVE 2'-6" SCH 80 PVC CONDUIT WITH SWEEPS, 2'-4" SCH 40 PVC CONDUIT WITH SWEEPS. THE TOTAL AMOUNT OF CONDUIT TO BE USED WILL BE DETERMINED DURING CONSTRUCTION.

TYPICAL IRRIGATION CROSSING WILL HAVE 3'-4" SCH 40 PVC CONDUIT WITH SWEEPS.

CONDUIT CROSSING MUST MAINTAIN MINIMUM 1' VERTICAL AND 2' HORIZONTAL CLEARANCE FROM OTHER UTILITIES.

*** CONDUIT ONLY TO BE INSTALLED IF:**

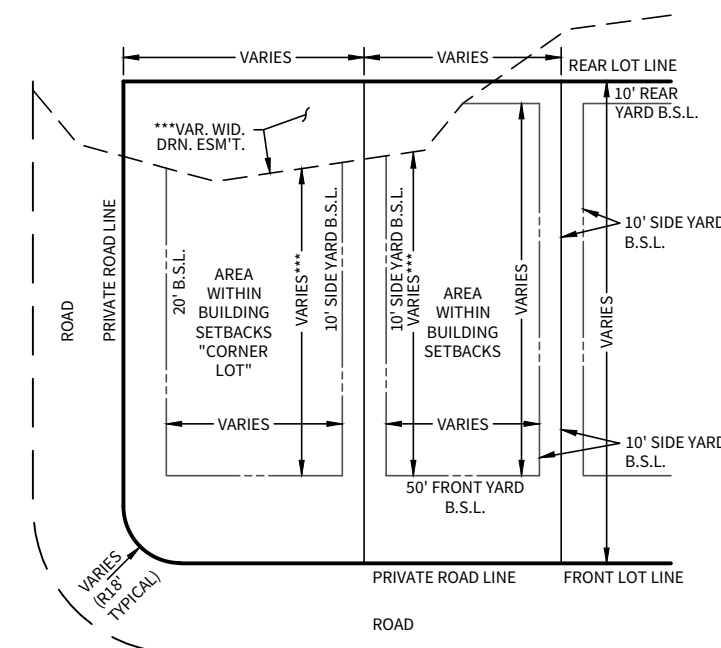
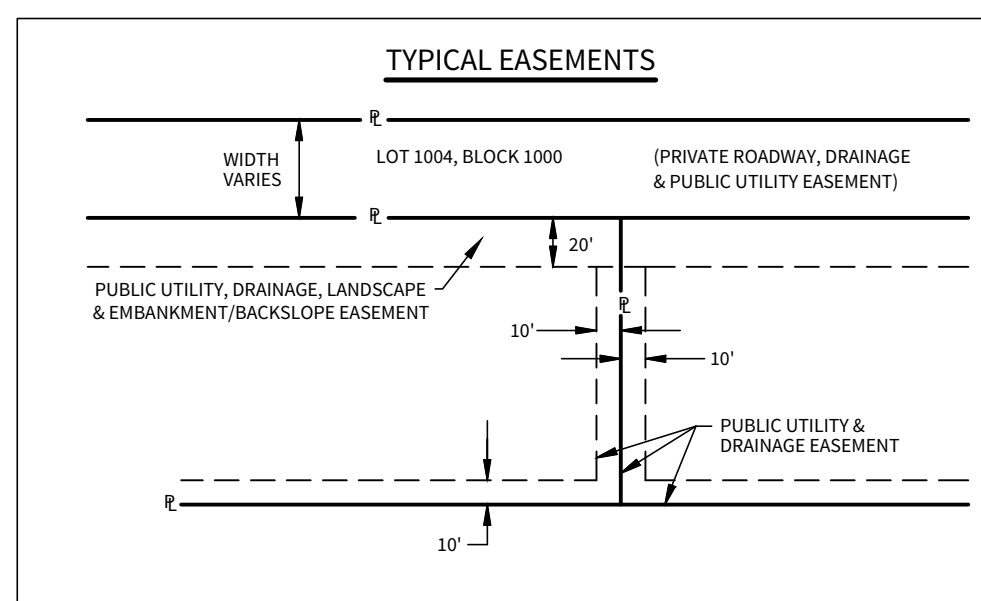
- 1) STREET BASE AND DRAINAGE COMPLETION PRECEDES PEDEPREALES ELECTRIC CO-OP UTILITY LINE INSTALLATION.
- 2) INSTALLATION IS AUTHORIZED BY THE DEVELOPER.

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.

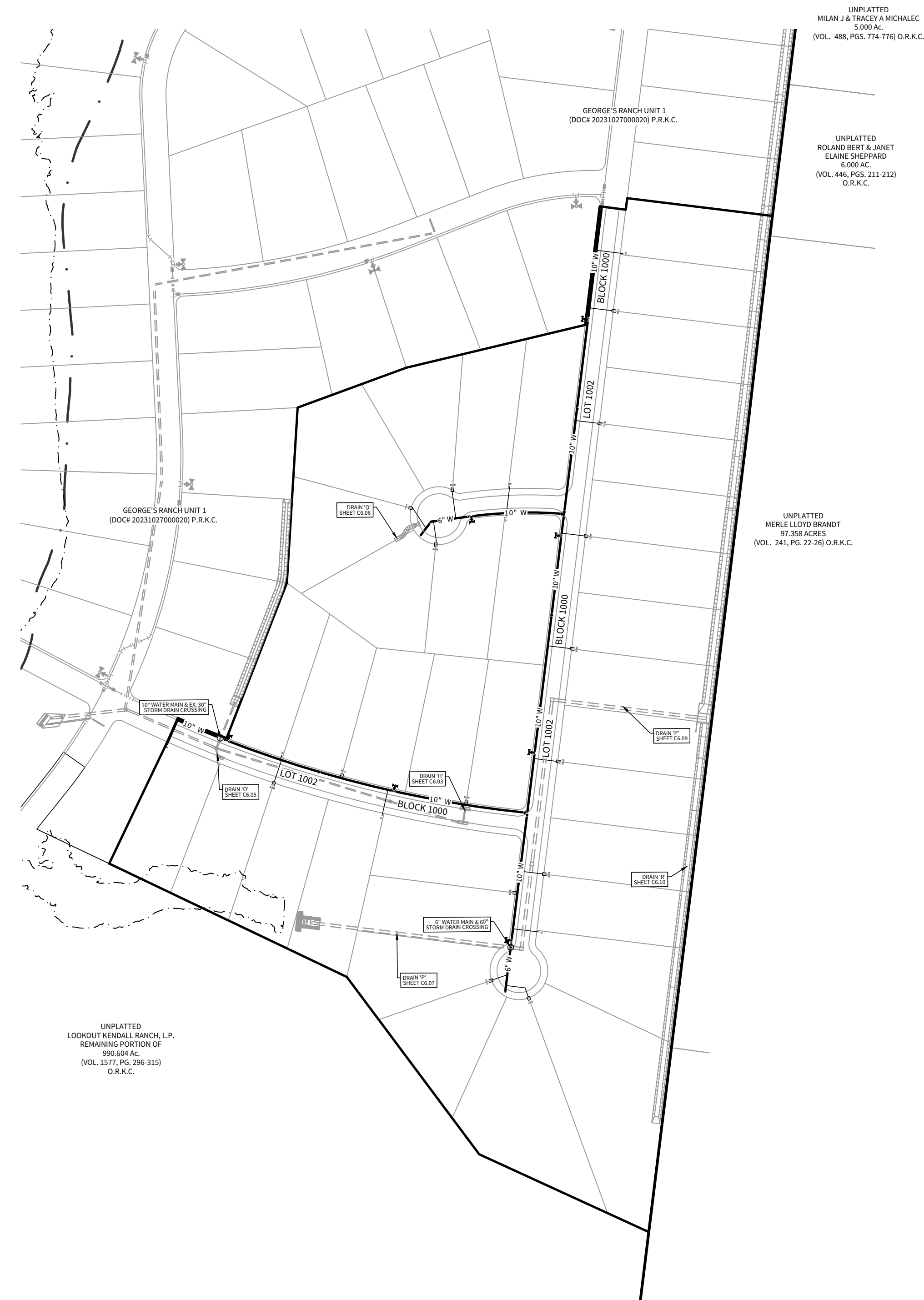
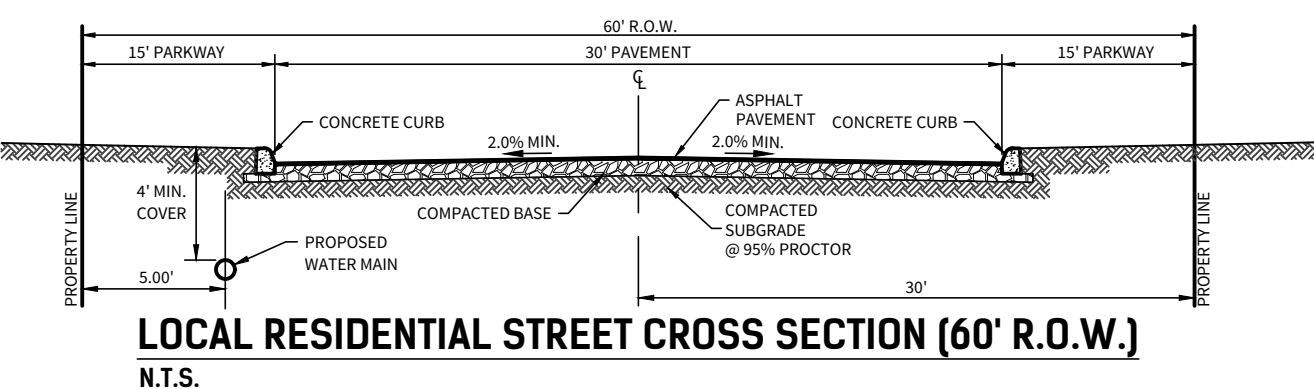
DEVELOPER:
THE LOOKOUT DEVELOPMENT GROUP, LP
CONTACT PERSON: MIKE SIEFERT
1001 CRYSTAL FALLS PARKWAY
LEANDER, TX 78641
TEL: (512) 690-4322

LEGEND

- EXISTING WATER MAIN ——— EX-10"W ———
- PROPOSED WATER MAIN ——— 10"W ———
- EXISTING STANDARD FIRE HYDRANT (Symbol)
- PROPOSED STANDARD FIRE HYDRANT (Symbol)
- EXISTING STANDARD GATE VALVE (Symbol)
- PROPOSED STANDARD GATE VALVE (Symbol)
- EXISTING PERMANENT BLOWOFF (Symbol)
- PROPOSED PERMANENT BLOWOFF (Symbol)
- 1% ANNUAL CHANCE PROPOSED FLOODPLAIN PER CLOMR CONDUCTED BY M.W. CUDE ENGENNERS, L.L.C. (Dashed line)
- 1% ANNUAL CHANCE FLOODPLAIN PER FEMA FIRM NO. 48259C0420F EFFECTIVE DATE DECEMBER 17, 2010 (Dashed line)



TYPICAL RESIDENTIAL LOT SETBACKS LAYOUT
(ESTABLISHED ON ALL LOTS)
N.T.S.



**GEORGE'S RANCH
UNIT 2B
UTILITY LAYOUT PLAN**

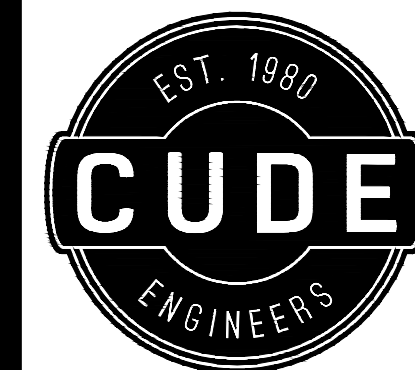
DATE
5/27/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

- REVISIONS**
1. 2025-05-27 REMOVED ETJ LINE FROM VICINITY MAP.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
 - 7.
 - 8.
 - 9.



CUDE ENGINEERS
TBPEL No. 455

C3.00



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

**GEORGE'S RANCH
UNIT 2B**
WATER DISTRIBUTION PLAN

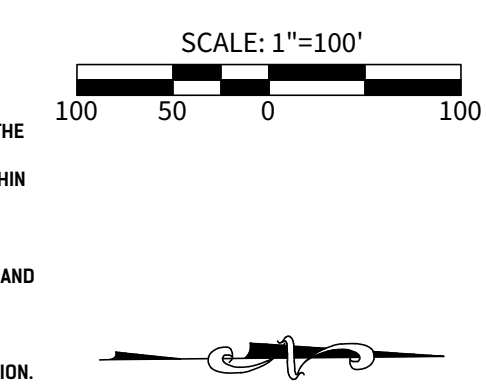
DATE
6/16/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

REVISIONS
1. 2025-04-01 UPDATED WATER CROSSING DETAILS, BLOWOFF CALLOUTS & UPDATED GENERAL NOTES TO MOST RECENT.
2. 2025-05-27 FIX NOTE B RESTRAINT SYMBOL.
3.
4.
5.
6.
7.
8.
9.



CUDE ENGINEERS
TBPEL No. 495

C5.00



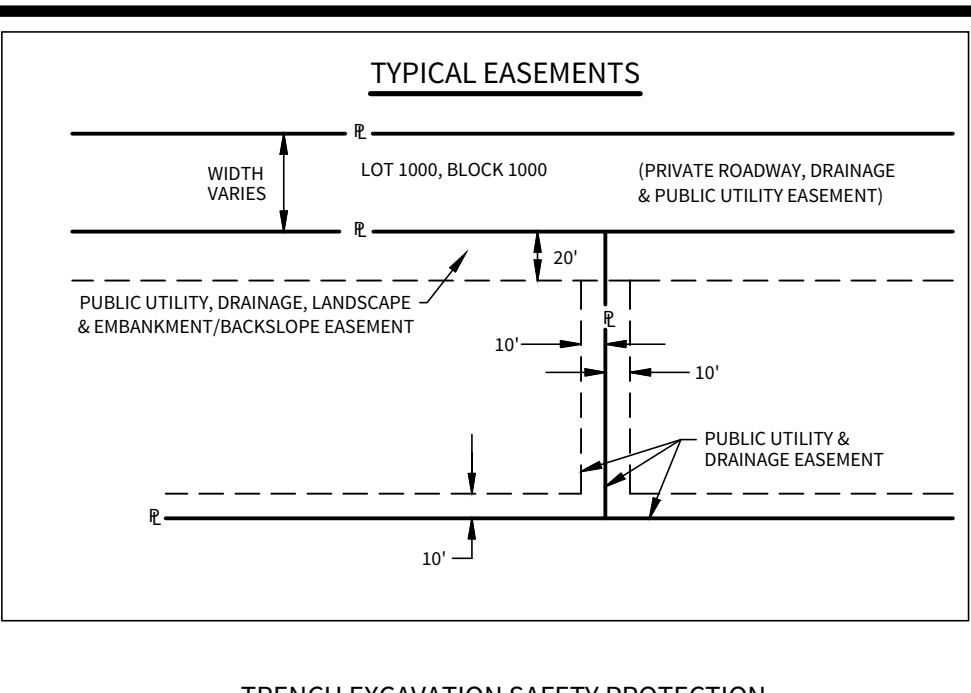
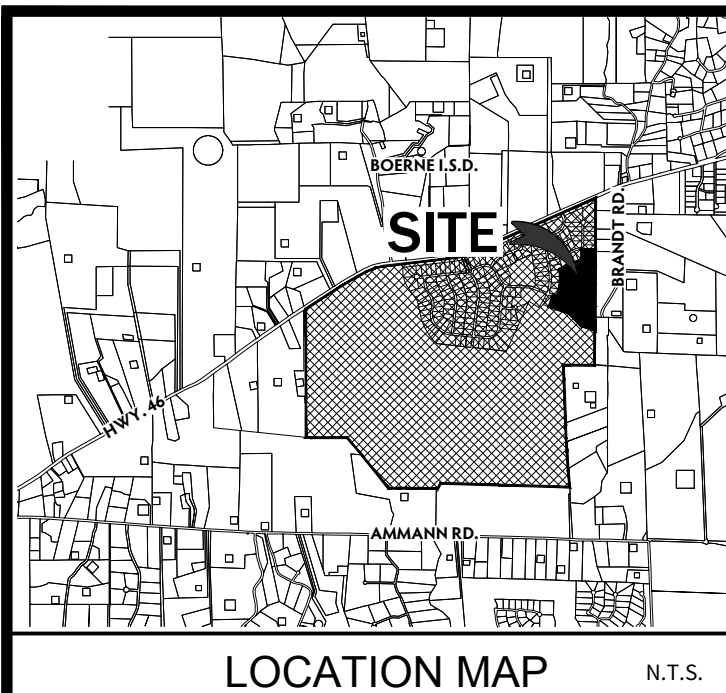
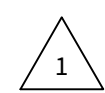
MISCELLANEOUS NOTES

- NO METER BOXES TO BE SET IN DRIVEWAYS. ANY METER BOXES SET IN DRIVEWAYS WILL BE RELOCATED AT THE CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES.
- THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY OF BOERNE PUBLIC WORKS AT 1-800-249-9511 FOR GUIDANCE.
- NO EXTRA-PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.

- THE DEVELOPER DEDICATES THE WATER MAIN UPON COMPLETION BY THE DEVELOPER AND ACCEPTANCE BY THE CITY OF BOERNE. THE CITY OF BOERNE WILL OWN AND MAINTAIN SAID WATER MAINS WHICH ARE LOCATED WITHIN THIS PARTICULAR SUBDIVISION (AS APPLICABLE).
- THE CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
- CONTRACTOR SHALL FURNISH A SET OF "AS-BUILT" DRAWINGS TO THE ENGINEER AT TIME OF FINAL INSPECTION. CONTRACTOR SHALL GIVE ENGINEER AT LEAST TWO WORKING DAYS NOTICE OF FINAL INSPECTION.
- ✂ - DENOTES JOINT RESTRAINT LENGTH AND DIRECTION
- HYDRANTS AND WATER LINES MUST BE INSPECTED BY THE FIRE MARSHAL'S OFFICE PRIOR TO COVERING. CONTACT THE FIRE MARSHAL'S OFFICE TO SCHEDULE INSPECTION.
- CONTRACTOR TO COORDINATE WITH ENGINEER FOR GUARD SHACK DOMESTIC WATER SERVICE.

BOERNE GENERAL CONSTRUCTION NOTES

- UTILITIES**
- GENERAL**
- ALL 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 BULK 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 AIR GAP ON ALL JUMPERS PRIOR TO LOADING WATER IN UNAPPROVED MAINS.
 - ALL MANHOLES, END OF MAIN CLEANOUTS, VALVES AND BLOW-OFFS SHALL HAVE CONCRETE ENCASUREMENTS INSTALLED. ANY ENCASUREMENTS 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 300 FEET FOR TRENCHES 12 FEET AND DEEPER. DENSITY TESTING MUST BE COMPLETED FOR EACH LIFT PRIOR TO COMMENCING INSTALLATION OF THE NEXT LIFT. POTHOLING AND STAIR STEPPING IS NOT PERMITTED.
 - ALL VALVE BOXES, METER BOXES, 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 DEPTH.
 - TRACER WIRE LOCATE BOX SHALL BE INSTALLED PER CITY REQUIREMENTS AT ALL VALVES INCLUDING GAS RECLAIMED WATER, FIRE HYDRANT VALVES AND BLOWOFFS. FOR GROUPING OF VALVES AT ONE GENERAL LOCATION, ONE LOCATE BOX MAY BE USED.



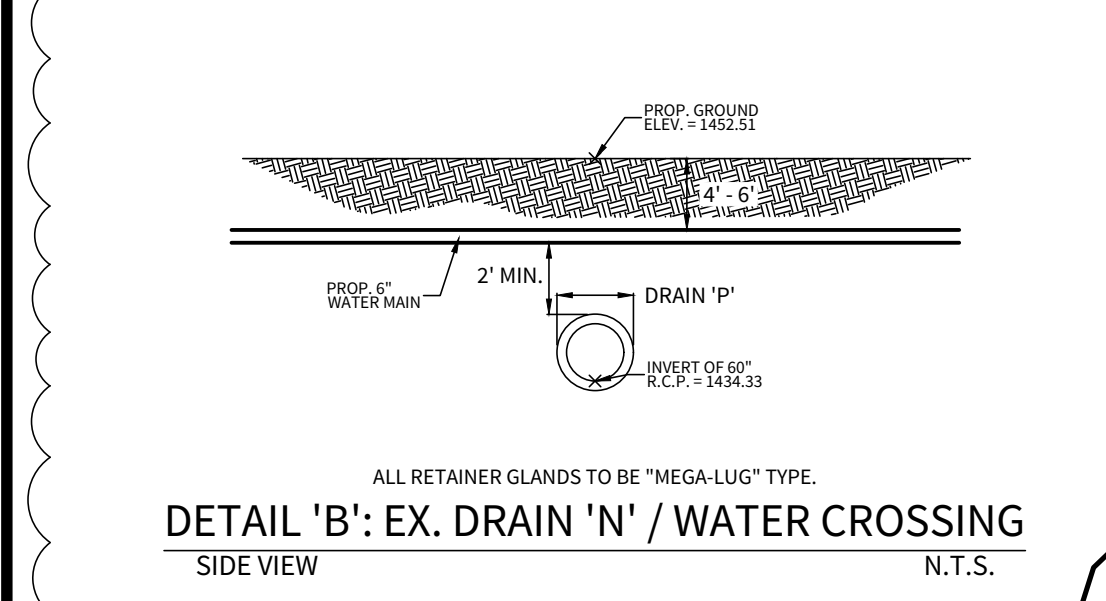
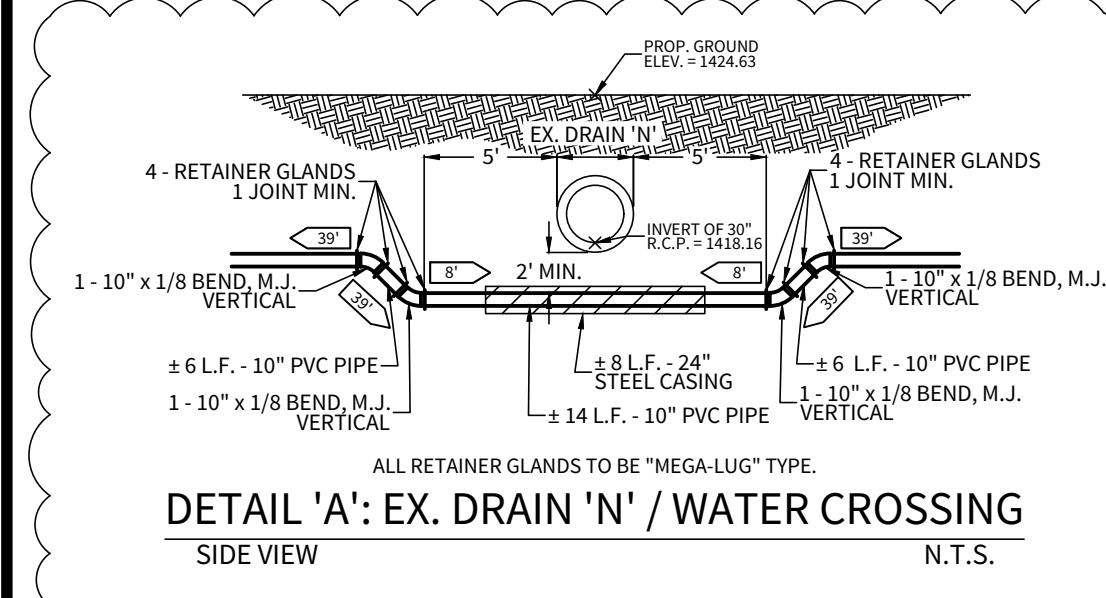
DEVELOPER:
THE LOOKOUT DEVELOPMENT GROUP, LP
CONTACT PERSON: MIKE SIEFERT
1001 CRYSTAL FALLS PARKWAY
LEANDER, TX 78641
TEL: (512) 690-4322

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.

FENCE NOTE:
GATES ACROSS EASEMENT: DOUBLE SWING GATES WITH A MINIMUM CLEAR OPENING OF 12 FEET WIDE SHALL BE INSTALLED WHEREVER FENCES CROSS UTILITY EASEMENTS.

BOERNE WATER GENERAL NOTES

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL CONFORM TO APPLICABLE CITY OF BOERNE CONSTRUCTION SPECIFICATIONS.
- WHERE THE MINIMUM NINE (9) FEET SEPARATION BETWEEN WATER AND SANITARY SEWER LINES CANNOT BE MAINTAINED, THE CONTRACTOR MUST MEET THE REQUIREMENTS OF 30 TAC 217.53(D) AND 30 TAC 290.4(4E).
- 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 JUMPERS 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 TCEQ 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 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 SIDEWALKS OR DRIVEWAYS WITHOUT PRIOR AUTHORIZATION.
- ALL FIRE 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.

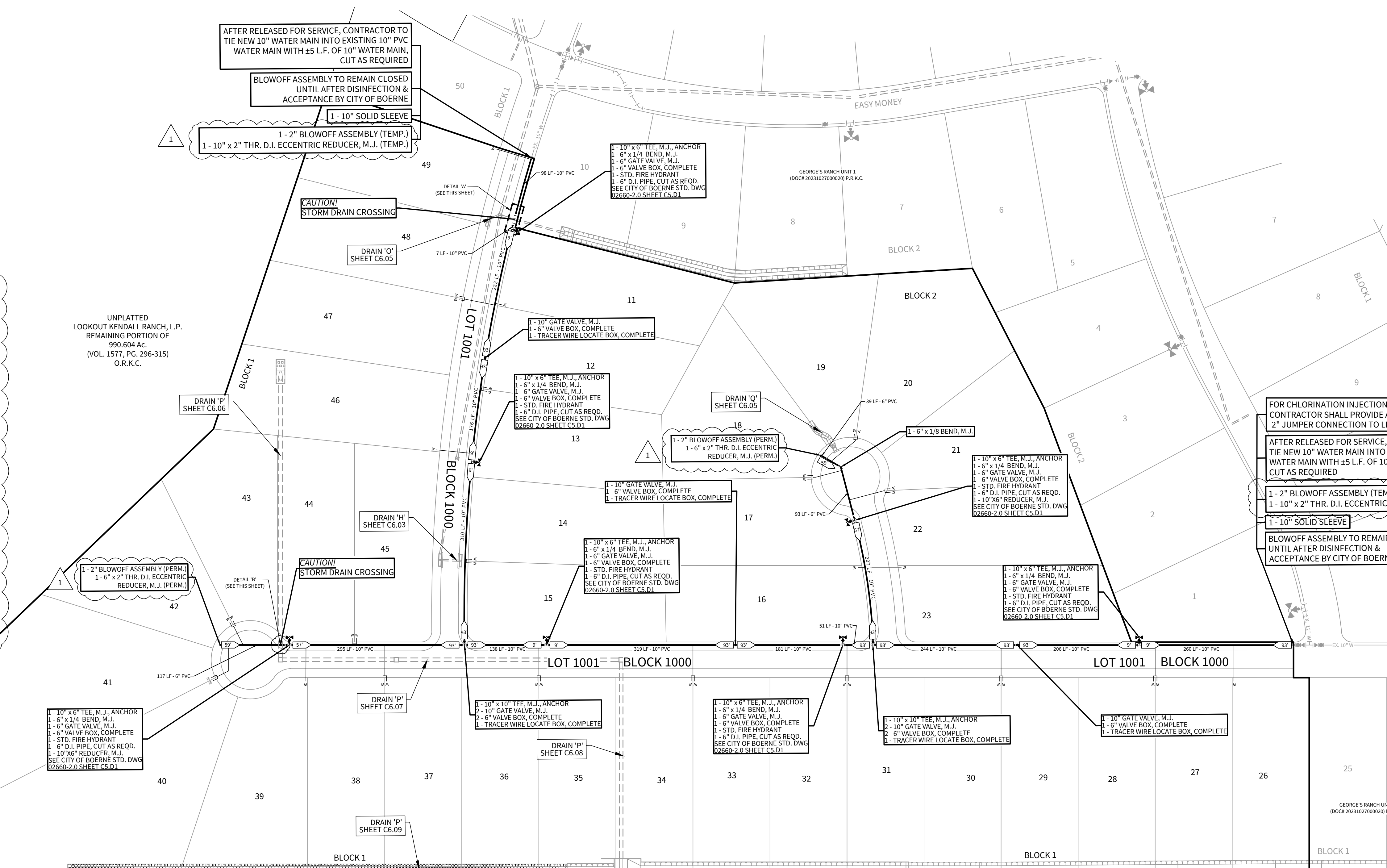


NOTE:
FOR PAVEMENT DESIGN SECTION SEE GEOTECHNICAL ENGINEERING REPORT

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.

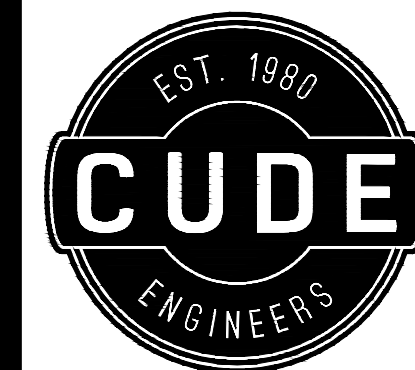
JOINT RESTRAINT NOTE:
CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF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

NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% 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 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.



UNPLATTED
MERLE LLOYD BRANDT
97.258 ACRES
(VOL. 241, PG. 22-26) O.R.K.C.

UNPLATTED
ROLAND BERT & JANET
ELAINE SHEPPARD
6.000 AC.
(VOL. 446, PGS. 211-212)
O.R.K.C.



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

GEORGE'S RANCH
UNIT 2B

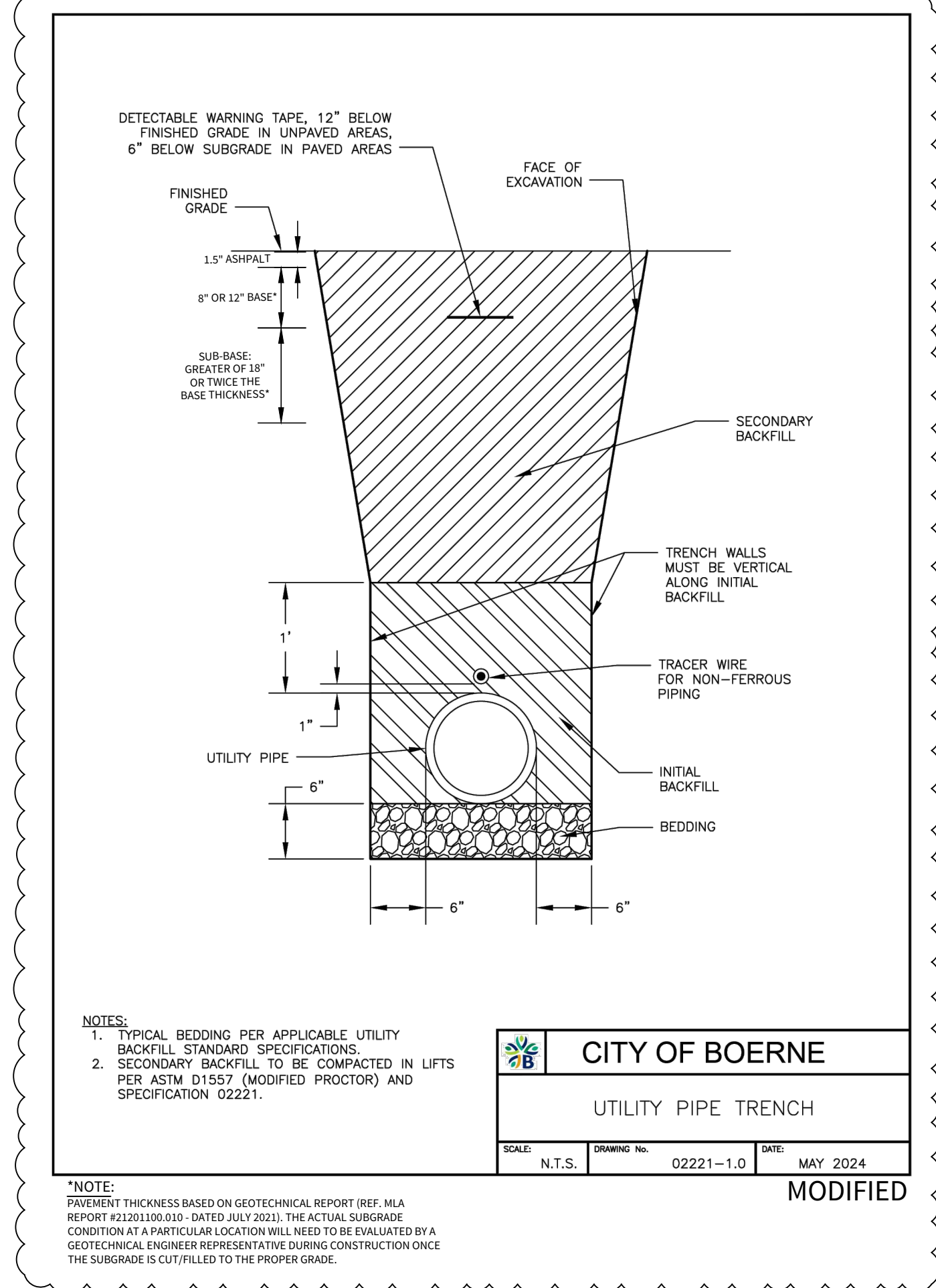
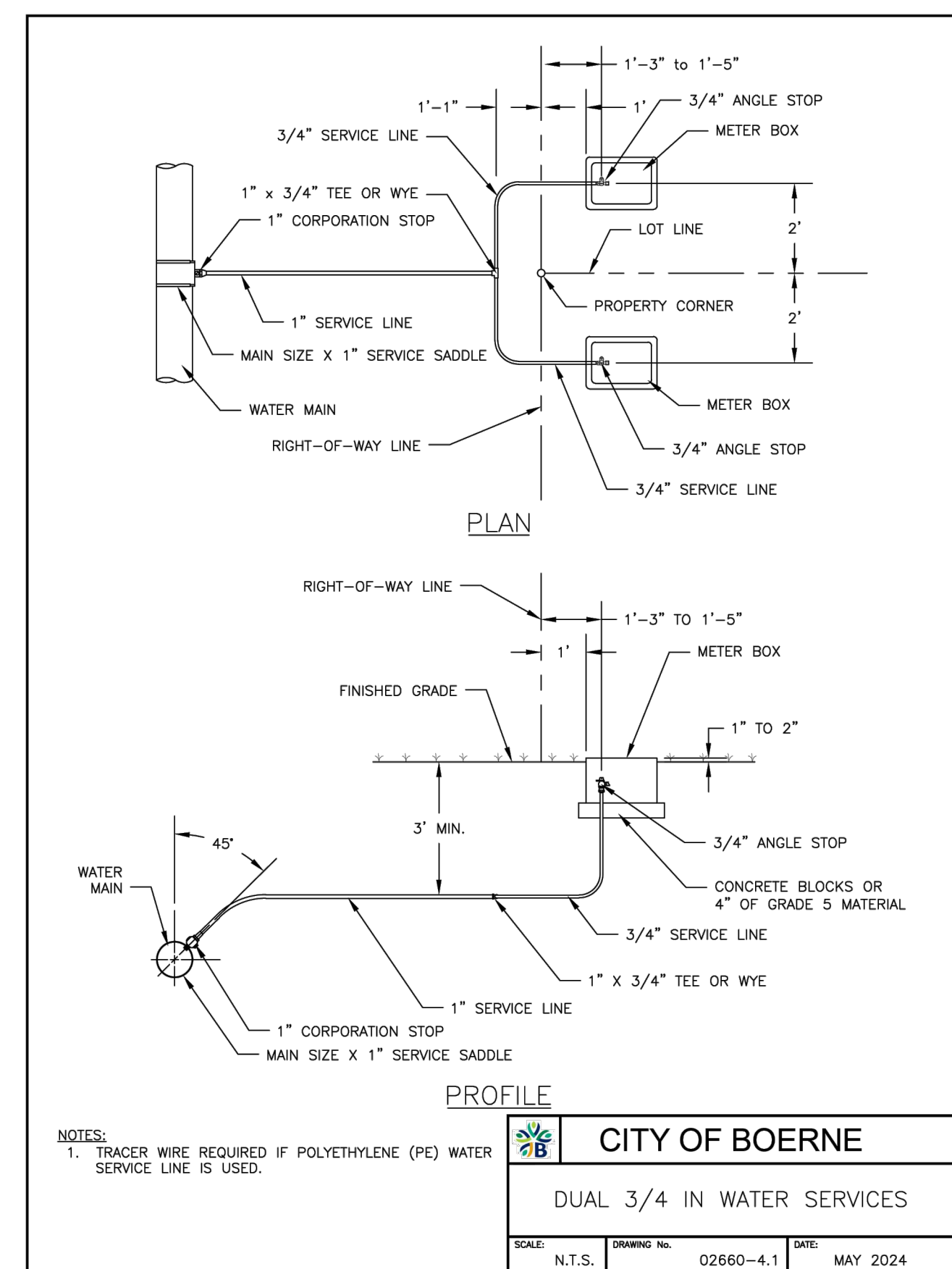
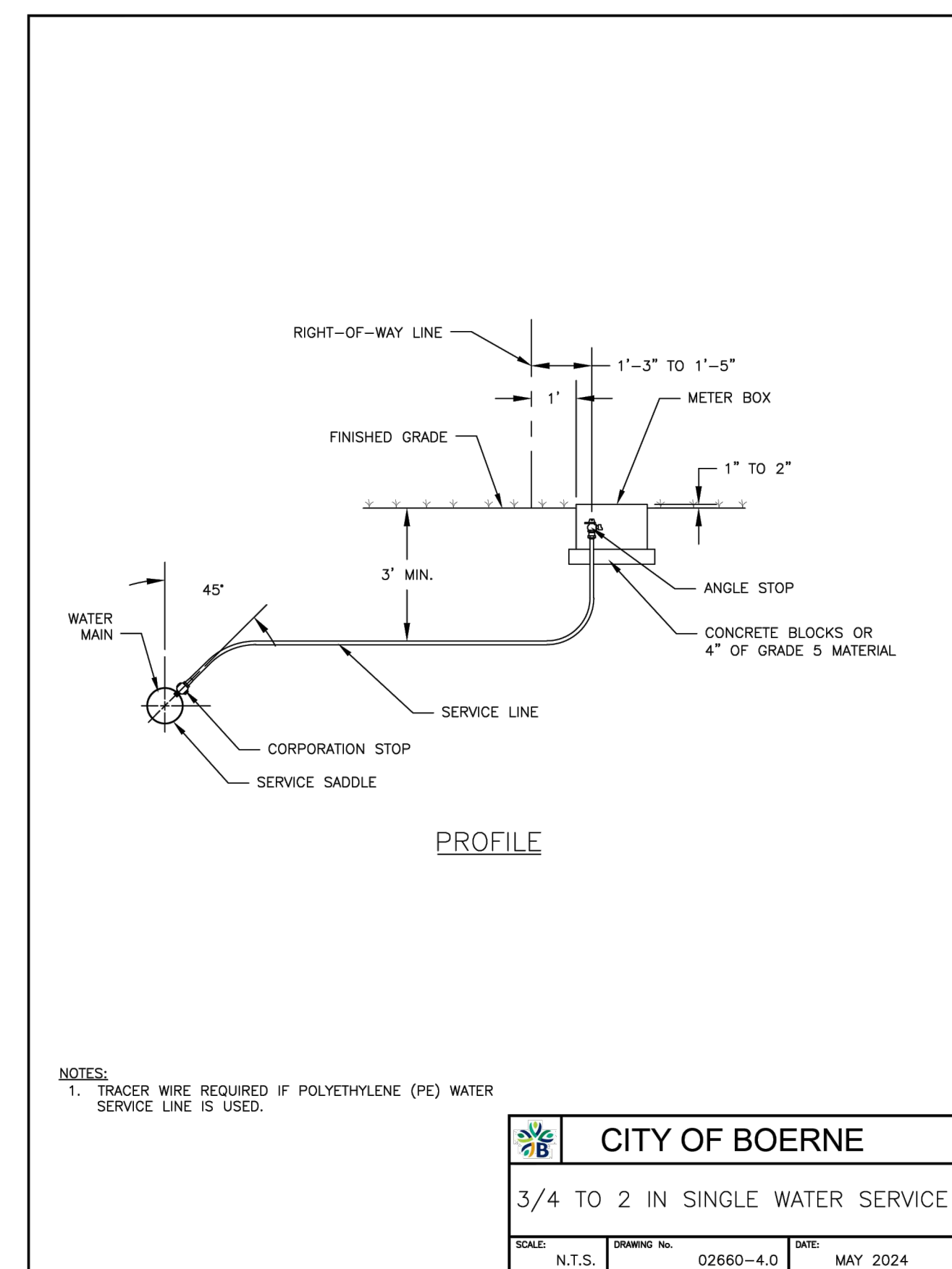
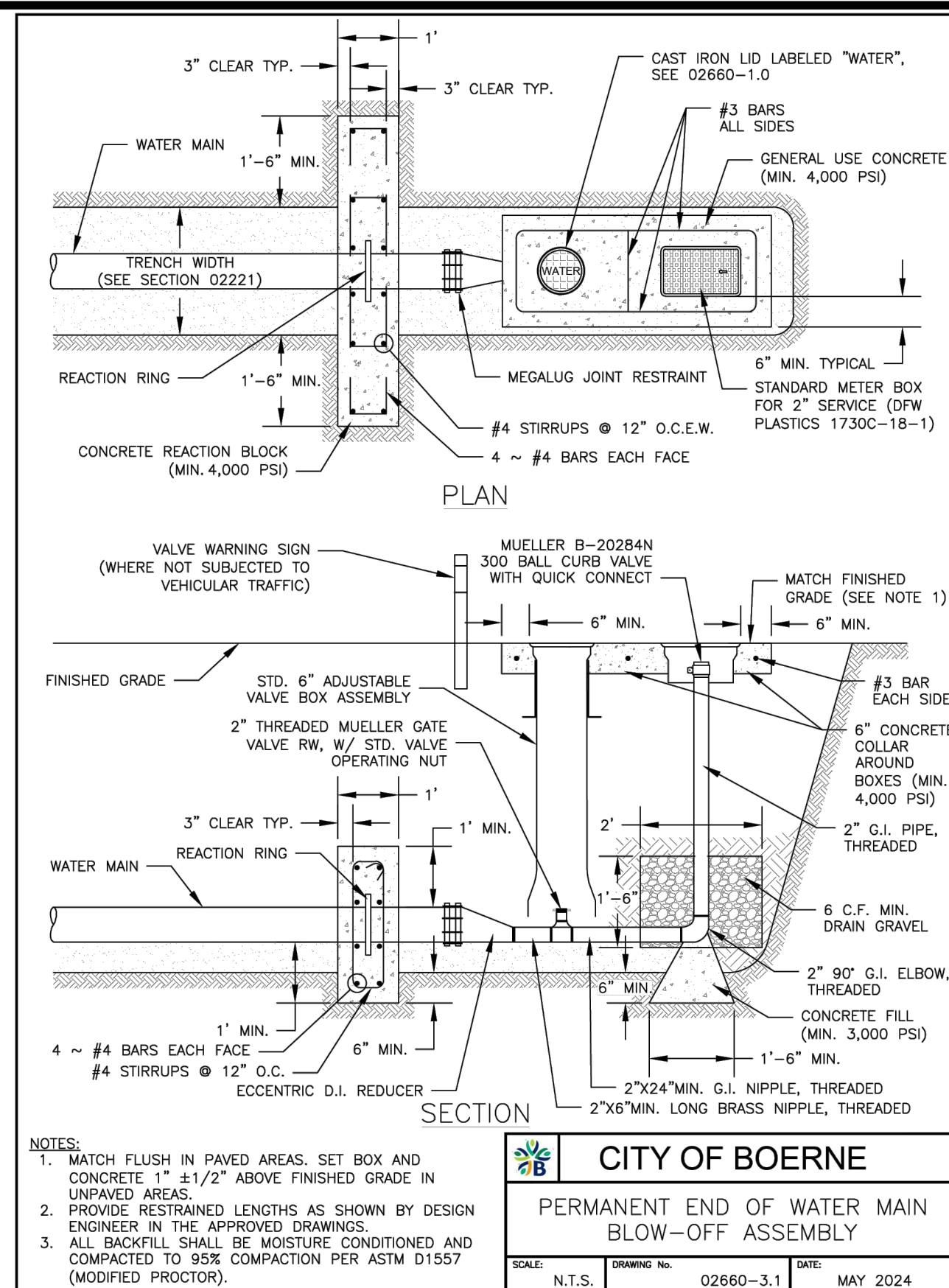
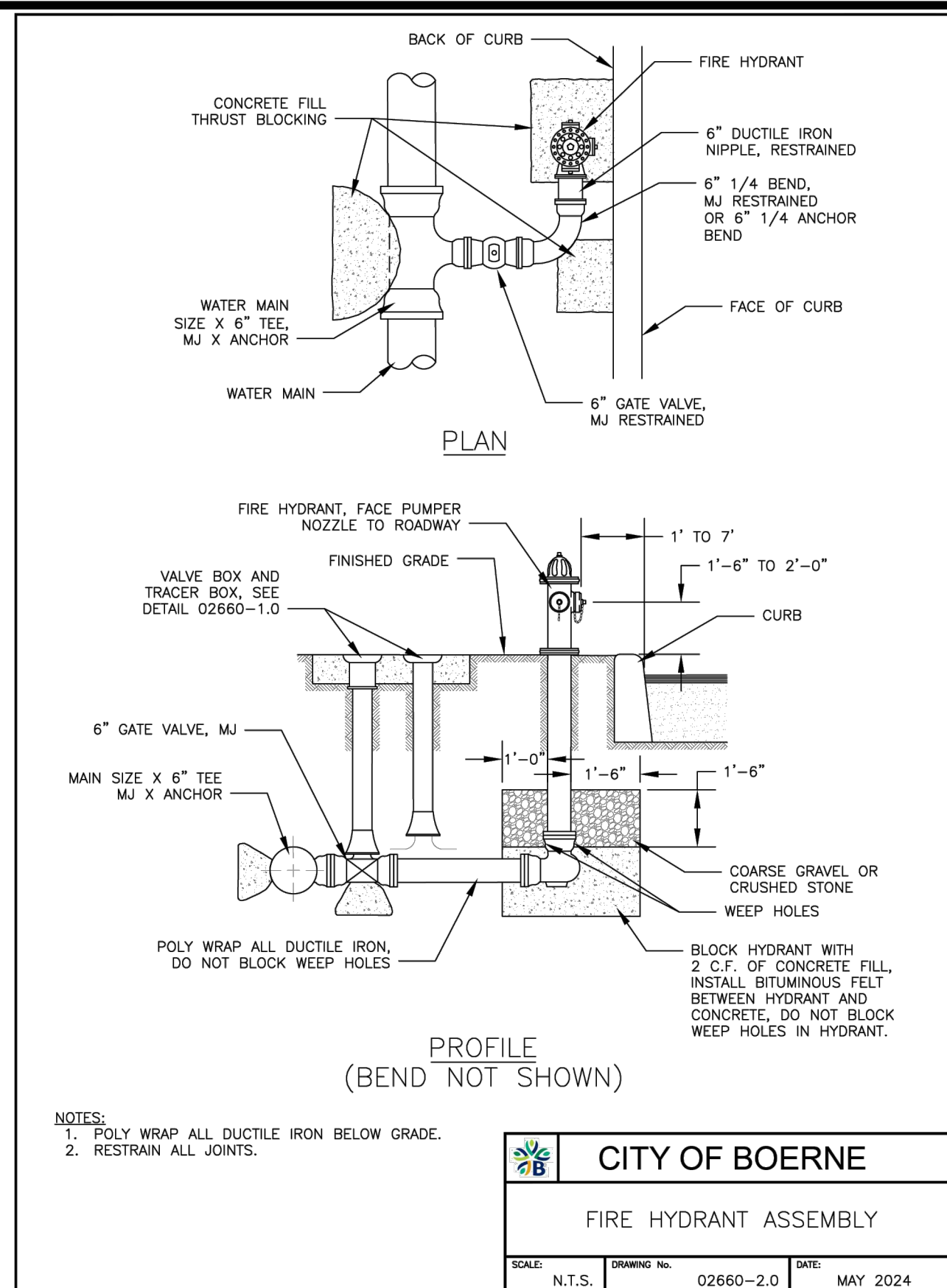
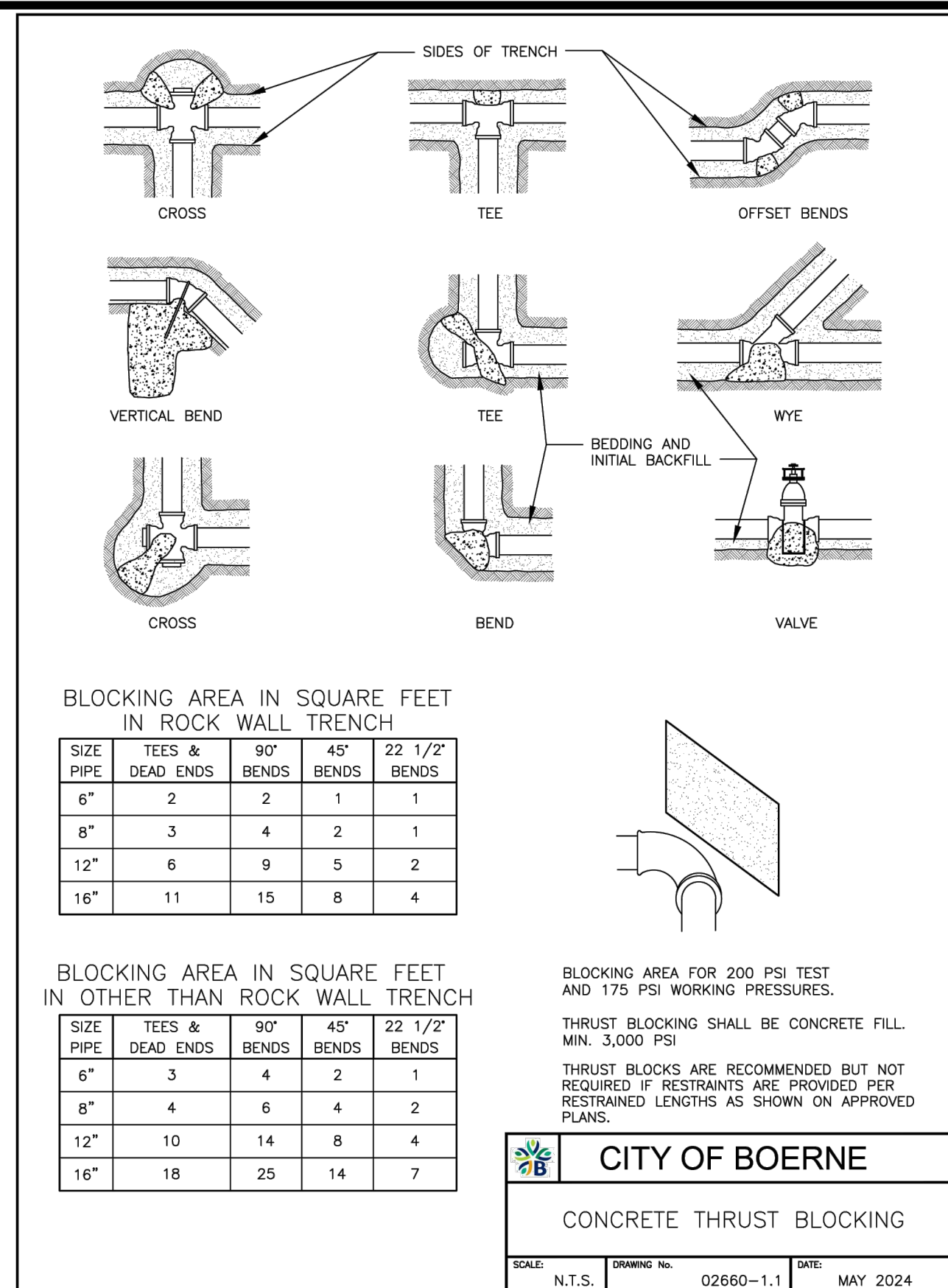
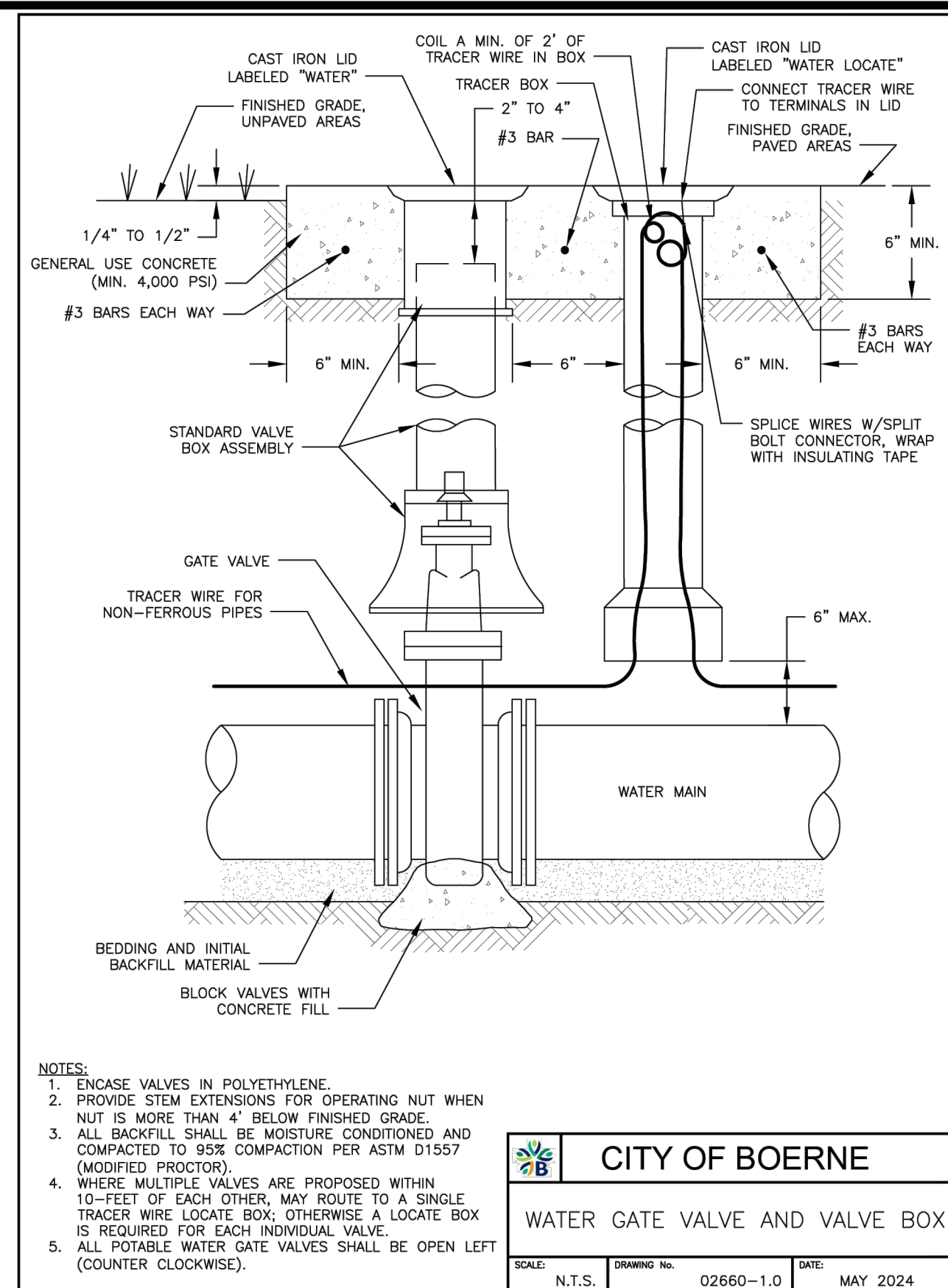
WATER DISTRIBUTION STANDARD DETAILS

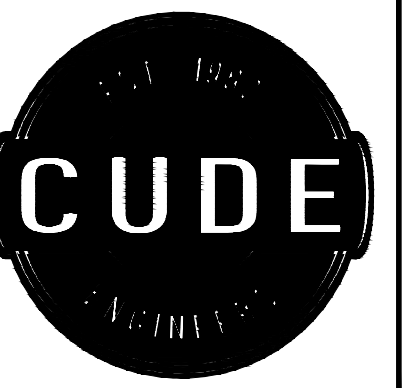
DATE	5/27/2025
PROJECT NO.	03546.009
DRAWN BY	MAS/MGM
CHECKED BY	KMH/WPM
REVISIONS	
1.	2025-04-01 - UPDATED DETAIL
2.	2025-05-27 - UPDATED DETAIL
3.	
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6/23/2025
CUDE ENGINEERS
TBPEL No. 455

C5.D1





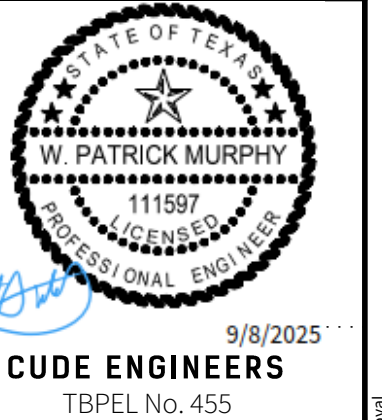
4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2951 F: (210) 523.7112

GEORGE'S RANCH
UNIT 2B
OVERALL MASTER DRAINAGE AREA MAP

DATE
9/5/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

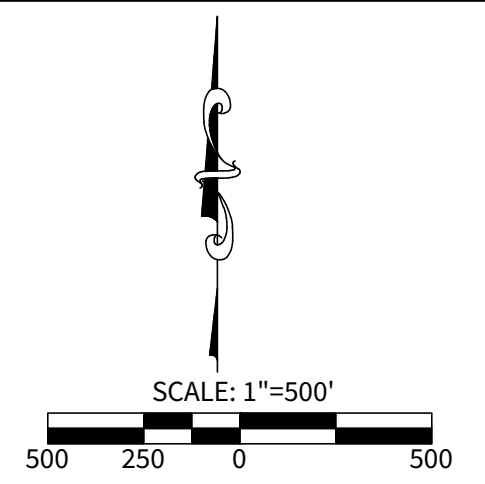
REVISIONS

1.	2025-05-27 REMOVED ETJ LINE FROM VICINITY MAP.
2.	
3.	
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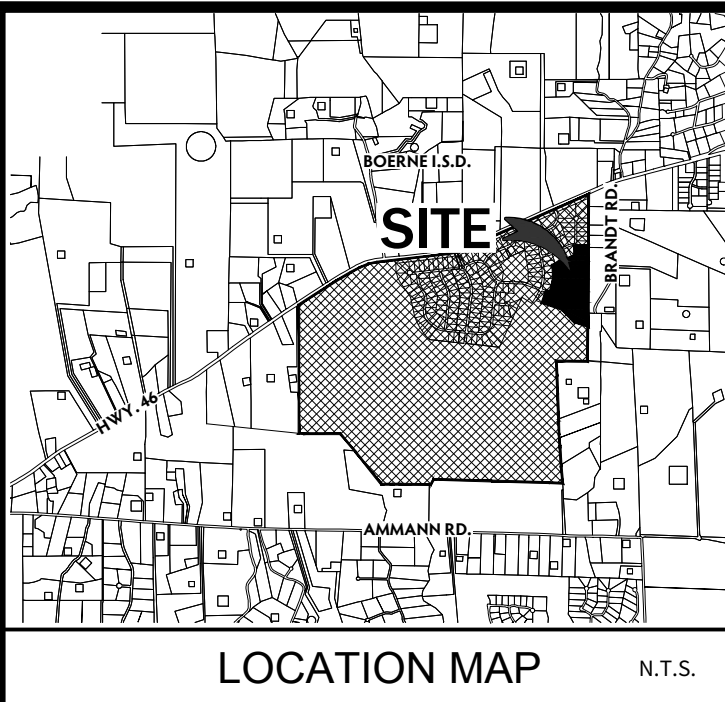
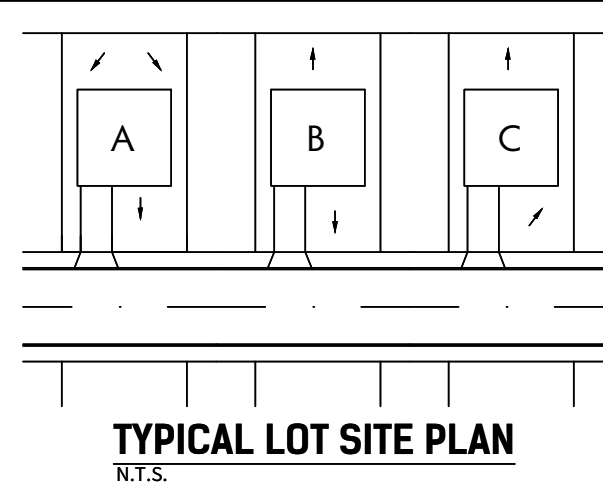


9/8/2025
CUDE ENGINEERS
TBPEL No. 435

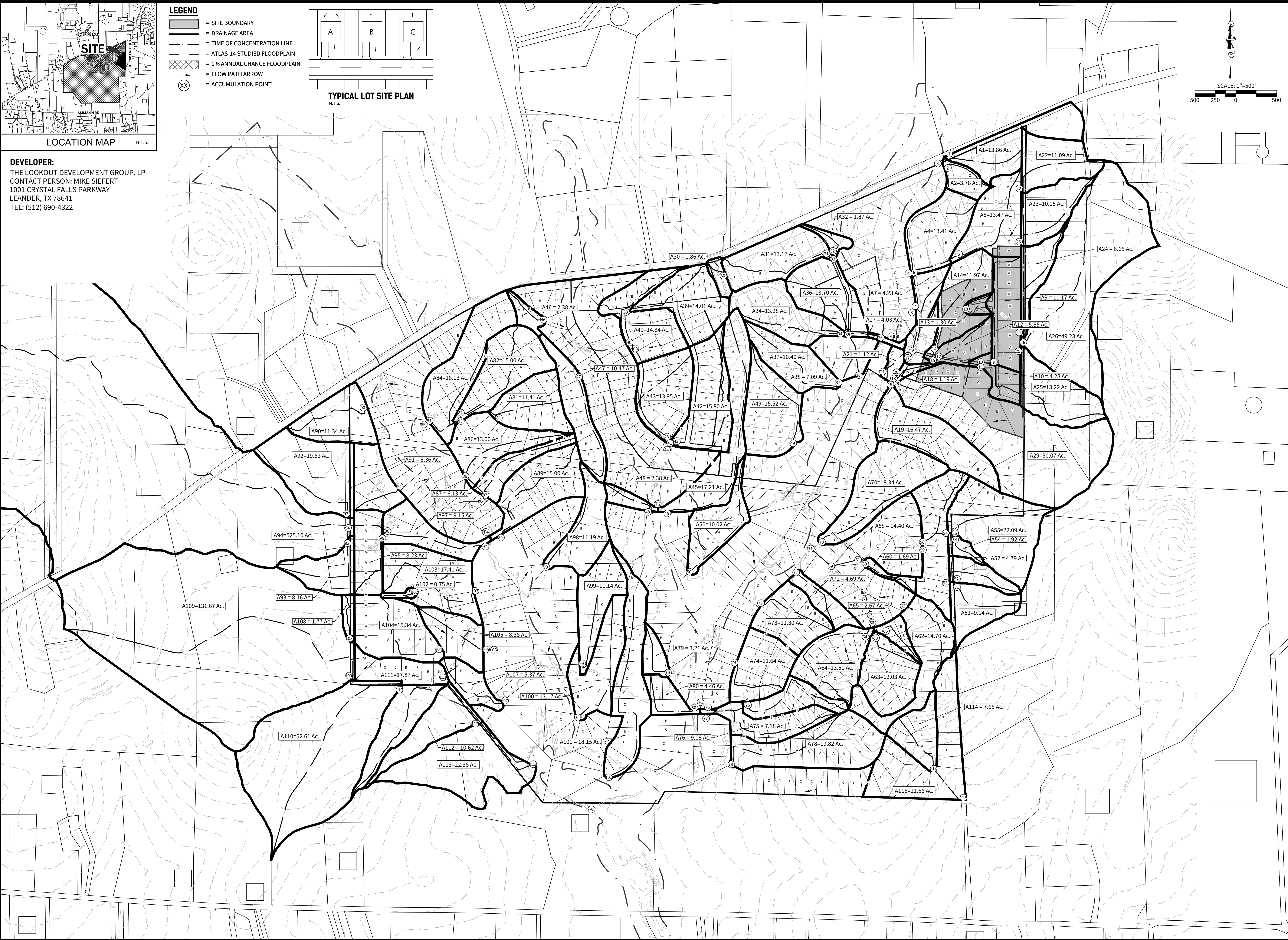
C6.00

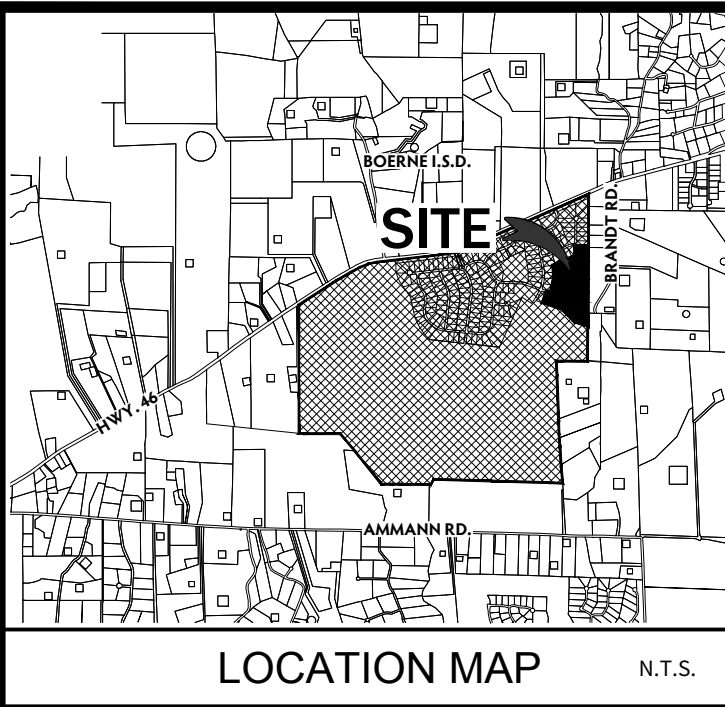


- LEGEND**
- [Symbol] = SITE BOUNDARY
 - [Symbol] = DRAINAGE AREA
 - [Symbol] = TIME OF CONCENTRATION LINE
 - [Symbol] = ATLAS-14 STUDIED FLOODPLAIN
 - [Symbol] = 1% ANNUAL CHANCE FLOODPLAIN
 - [Symbol] = FLOW PATH ARROW
 - [Symbol] = ACCUMULATION POINT



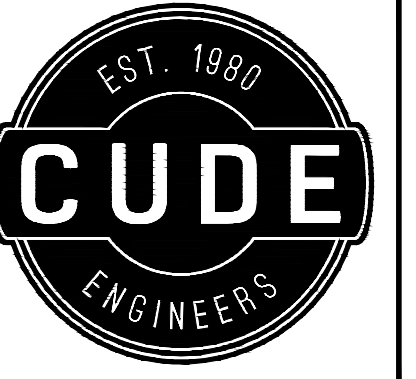
DEVELOPER:
THE LOOKOUT DEVELOPMENT GROUP, LP
CONTACT PERSON: MIKE SIEFERT
1001 CRYSTAL FALLS PARKWAY
LEANDER, TX 78641
TEL: (512) 690-4322





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

PT. #	AREA (Ac.)	AREA OF ACCUMULATION (Ac.)	TOTAL ACRES	C	Tc	I5	I10	I25	I100	Q5	Q10	Q25	Q100
1	13.86	=A1	13.86	0.64	18.71	4.74	5.52	6.61	8.36	42.05	48.96	58.63	74.16
2	3.78	=A2	3.78	0.64	18.25	4.80	5.59	6.70	8.47	11.61	13.52	16.21	20.49
3	0	=A1-A3	17.64	0.64	19.22	4.68	5.44	6.52	8.24	52.84	61.42	73.61	93.03
4	13.41	=A4	13.41	0.64	22.14	4.36	5.06	6.07	7.65	37.42	43.43	52.10	65.66
5	13.47	=A5	13.47	0.64	23.17	4.26	4.95	5.93	7.47	36.72	42.67	51.12	64.40
6	0	=A4-A6	26.88	0.64	24.86	4.11	4.77	5.72	7.21	70.71	82.06	98.40	124.04
7	4.23	=A7	4.23	0.64	20.56	4.52	5.26	6.30	7.95	12.24	14.24	17.06	21.52
8	0	=A4-A8	31.11	0.64	26.07	4.01	4.66	5.58	7.03	79.84	92.78	111.10	139.97
9	11.17	=A9	11.17	0.64	21.61	4.41	5.12	6.14	7.75	31.53	36.60	43.89	55.40
10	4.28	=A10	4.28	0.64	17.40	4.92	5.73	6.87	8.69	13.48	15.70	18.82	23.80
11	0.00	=A9-A11	15.45	0.64	21.94	4.38	5.08	6.09	7.69	43.31	50.23	60.22	76.04
12	5.85	=A12	5.85	0.64	22.40	4.33	5.03	6.03	7.60	16.21	18.83	22.58	28.45
13	1.30	=A13	1.30	0.64	18.39	4.79	5.57	6.67	8.44	3.99	4.63	5.55	7.02
14	11.97	=A13-A14	13.27	0.64	23.63	4.22	4.90	5.87	7.40	35.84	41.61	49.85	62.85
15	0	=A9-A15	34.57	0.64	23.94	4.19	4.86	5.83	7.35	92.70	107.53	128.99	162.62
16	0	=A4-A16	65.68	0.64	27.61	3.90	4.53	5.42	6.83	163.94	190.42	227.83	287.10
17	4.03	=A17	4.03	0.64	20.87	4.49	5.21	6.25	7.89	11.58	13.44	16.12	20.35
18	1.19	=A18	1.19	0.64	19.60	4.63	5.39	6.46	8.16	3.53	4.11	4.92	6.21
19	16.47	=A19	16.47	0.64	22.26	4.35	5.05	6.05	7.63	45.85	53.23	63.77	80.43
20	0	=A18-A20	17.66	0.64	22.48	4.32	5.02	6.02	7.59	48.43	56.74	68.04	85.79
21	1.12	=A4-A21	88.49	0.64	28.62	3.83	4.45	5.33	6.71	216.91	252.02	301.86	380.01
22	11.09	=A22	11.09	0.63	20.63	4.51	5.25	6.29	7.94	31.51	36.68	43.95	55.47
23	10.15	=A22-A23	21.24	0.64	22.10	4.36	5.06	6.07	7.66	59.27	68.78	82.51	104.13
24	6.65	=A22-A24	27.89	0.62	23.91	4.19	4.87	5.83	7.35	72.45	84.21	100.51	127.09
25	13.22	=A25	13.22	0.58	20.47	4.53	5.27	6.31	7.97	34.73	40.41	48.38	61.11
26	49.23	=A22-A26	90.34	0.58	25.70	4.04	4.69	5.62	7.09	211.68	245.74	294.57	371.50
29	50.07	=A22-A29	140.41	0.59	24.06	3.69	4.24	5.14	6.55	308.72	348.76	417.52	526.66
30	1.86	=A30	1.86	0.62	15.33	5.26	6.13	7.36	9.32	6.07	7.07	8.49	10.75
31	13.17	=A30-A31	15.03	0.62	21.76	4.40	5.11	6.12	7.72	41.00	47.62	57.03	71.94
32	1.87	=A32	1.87	0.62	21.01	4.47	5.20	6.23	7.86	5.18	6.03	7.22	9.11
33	0	=A30-A33	16.9	0.62	21.76	4.40	5.11	6.12	7.72	46.10	53.54	64.13	80.89
34	13.28	=A34	13.28	0.64	21.76	4.39	5.11	6.12	7.72	37.31	43.43	52.02	65.61
35	0	=A30-A35	30.18	0.64	24.43	4.15	4.82	5.77	7.27	80.16	93.10	111.45	140.42
36	13.7	=A36	13.7	0.62	23.43	4.24	4.92	5.89	7.43	36.01	41.79	50.03	63.11
37	10.4	=A37	10.4	0.62	21.30	4.44	5.16	6.19	7.81	28.63	33.27	39.91	50.36
38	7.09	=A30-A38	61.37	0.62	25.88	4.03	4.68	5.60	7.06	153.74	178.07	213.08	268.63
39	11.81	=A39	11.81	0.62	21.19	4.45	5.17	6.20	7.83	32.58	37.86	45.40	57.33
40	16.05	=A40	16.05	0.62	21.87	4.38	5.09	6.10	7.70	43.59	50.65	60.70	76.62
41	0	=A39-A41	27.86	0.62	21.87	4.38	5.09	6.10	7.70	75.66	87.92	105.37	133.00
42	15.57	=A42	15.57	0.62	25.37	4.07	4.72	5.66	7.13	39.29	45.56	54.64	68.83
43	14.67	=A43	14.67	0.62	20.77	4.50	5.23	6.27	7.91	40.93	47.57	57.03	71.94
44	0	=A42-A44	30.24	0.62	25.37	4.07	4.72	5.66	7.13	76.31	88.49	106.12	133.68
45	17.21	=A45	17.21	0.62	26.19	4.01	4.65	5.57	7.02	42.79	49.62	59.43	74.90
46	2.38	=A46	2.38	0.62	22.10	4.36	5.07	6.07	7.66	6.43	7.48	8.96	11.30
47	10.47	=A47	10.47	0.62	23.84	4.20	4.87	5.84	7.36	27.26	31.61	37.91	47.78
48	2.38	=A48	2.38	0.62	18.59	4.76	5.53	6.64	8.39	7.02	8.16	9.80	12.38
49	15.52	=A49	15.52	0.62	20.51	4.53	5.26	6.31	7.96	43.59	50.61	60.72	76.59
50	10.02	=A50	10.02	0.62	22.34	4.34	5.04	6.04	7.61	26.96	31.31	37.52	47.28
51	9.14	=A51	9.14	0.55	21.64	4.41	5.12	6.14	7.74	22.17	25.74	30.87	38.91
52	4.79	=A52	4.79	0.58	21.89	4.38	5.09	6.10	7.70	12.17	14.14	16.95	21.39
53	0	=A51-A53	13.93	0.56	22.12	4.36	5.06	6.07	7.65	34.01	39.47	47.35	59.68
54	1.92	=A54	1.92	0.59	18.23	4.81	5.59	6.71	8.48	5.45	6.33	7.60	9.61
55	22.09	=A55	22.09	0.57	21.37	4.43	5.15	6.18	7.79	55.78	64.85	77.81	98.09
56	0	=A54-A56	24.01	0.57	21.58	4.41	5.13	6.15	7.75	60.35	70.21	84.17	106.06
57	0	=A51-A57	37.94	0.57	23.56	4.22	4.90	5.88	7.41	91.26	105.97	127.16	160.25
58	14.4	=A58	14.4	0.64	19.96	4.59	5.33	6.39	8.08	42.30	49.12	58.89	74.47
59	0	=A51-A59	52.34	0.59	25.18	4.09	4.74	5.68	7.16	126.30	146.37	175.40	221.11
60	1.69	=A60	1.69	0.64	16.75	5.02	5.84	7.01	8.87	5.43	6.32	7.58	9.59
61	0	=A51-A61	54.03	0.59	28.69	3.83	4.44	5.32	6.70	122.09	141.54	169.59	213.58
62	14.7	=A62	14.7	0.64	18.66	4.75	5.52	6.62	8.31	44.69	51.93	62.28	78.74
63	12.03	=A63	12.03	0.64	15.13	5.30	6.17	7.41	9.39	40.81	47.47	57.05	72.30
64	13.51	=A64	13.51	0.64	18.86	4.72	5.49	6.59	8.32	40.81	47.47	57.05	72.30
65	2.67	=A65	2.67	0.64	15.20	5.28	6.16	7.39	9.37	9.02	10.53	12.63	16.01
66	0	=A64-A66	16.18	0.64	19.08	4.70	5.46	6.55	8.27	48.67	56.54	67.83	85.64
67	0	=A63-A67	48.21	0.64	19.18	4.68	5.45	6.53	8.25	84.49	98.40	117.90	148.95
68	0	=A62-A68	28.21	0.64	19.50	4.64	5.40	6.47	8.18	127.43	148.30	177.68	224.64
69	0	=A51-A69	96.94	0.61	29.62	3.76	4.37	5.23	6.59	222.34	258.41	309.27	389.69
70	18.34	=A70	18.34	0.64	19.23	4.68	5.44	6.52	8.24	54.93	63.85	76.53	96.72
71	0	=A51-A71	115.28	0.62	28.51	3.78	4.36	5.25	6.59	265.17	307.31	368.69	460.86
72	4.69	=A72	4.69	0.64	18.06	4.83	5.62	6.74	8.52	14.50	16.87	20.23	25.57
73	11.3	=A73	11.3	0.64	18.63	4.75	5.53	6.63	8.38	34.35	39.99	47.95	60.60
74	11.64	=A74	11.64	0.64	16.42	5.07	5.91	7.09	8.97	37.77	44.03	52.82	66.82
75	7.18	=A75	7.18	0.64	17.11	4.97	5.78	6.93	8.77	22.84	26.56	31.84	40.30
76	9.08	=A76	9.08	0.64	15.51	5.23	6.09	7.31	9.26	30.39	35.39	42.48	53.81
77	0	=A75-A77	16.26	0.64	17.47	4.91	5.72	6.86	8.68	51.10	59.52	71.39	90.33
78	19.82	=A78	19.82	0.64	16.35	5.09	5.92	7.10	9.00	64.57	75.09	90.06	114.16
79	3.21	=A79	3.21	0.62	23.92	4.19	4.87	5.83	7.35	8.34	9.69	11.60	14.63
80	4.46	=A80	4.46	0.62	22.02	4.37	5.07	6.08	7.67	12.08	14.02	16.81	21.21
81	11.41	=A81	11.41	0.62	21.86	4.38	5.09	6.10	7.70	30.98	36.01	43.15	54.47
82	15	=A82	15	0.62	23.74	4.21	4.89	5.85	7.38	39.15	45.48	54.41	68.63
83	0	=A81-A83	26.41	0.62	23.79	4.20	4.88	5.85	7.37	68.77	79.91	95.79	120.68
84	18.13	=A84	18.13	0.62	23.42	4.24	4.92	5.89	7.43	47.66	55.30	66.21	83.52
85	0	=A81-A85	44.54	0.62	24.02	4.18	4.86	5.82	7.33	115.43	134.21	160.72	202.42
86	13	=A86	13	0.62	23.23	4.25	4.94	5.92	7.46	34.26	39.82	47.72	60.13
87	6.13	=A87	6.13	0.62	23.09	4.27	4.95	5.94	7.49	16.23	18.81	22.58	28.47
88	0	=A86-A88	19.13	0.62	23.38	4.24	4.92	5.90	7.44	50.29	58.35	69.98	88.24
89	15	=A89	15	0.62	23.13	4.26	4.95	5.93	7.48	39.62	46.04	55.15	69.56
90	11.34	=A90	11.34	0.57	23.16	4.26	4.95	5.93	7.47	27.54	32.00	38.33	48.28
91	8.36	=A91	8.36	0.62	22.64	4.31	5.00	6.00	7.56	22.34	25.92	31.10	39.18
92	19.62	=A92	19.62	0.54	23.68	4.21	4.8						



4122 Pond Hill Road, Suite 101
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GEORGE'S RANCH
UNIT 2B
DRAIN INDEX SHEET

DATE
5/28/2025

PROJECT NO.
03546.009

DRAWN BY
MAS/MGM

CHECKED BY
KMH/WPM

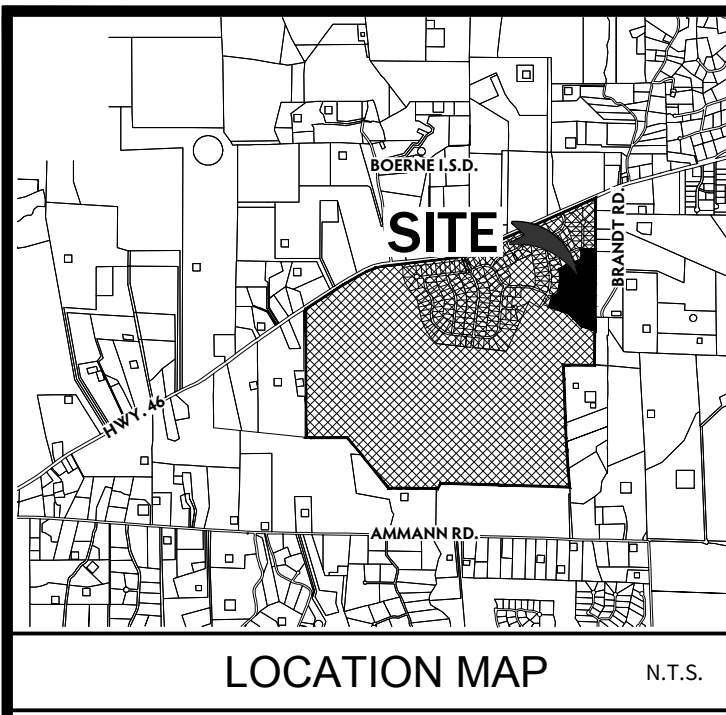
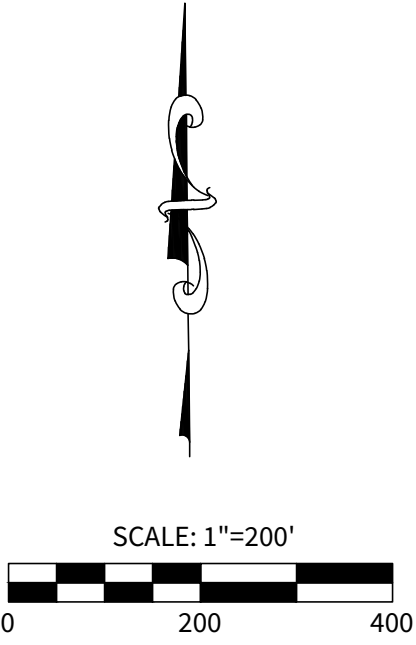
REVISIONS

- 2025-05-28 REMOVED ETJ LINE FROM VICINITY MAP.
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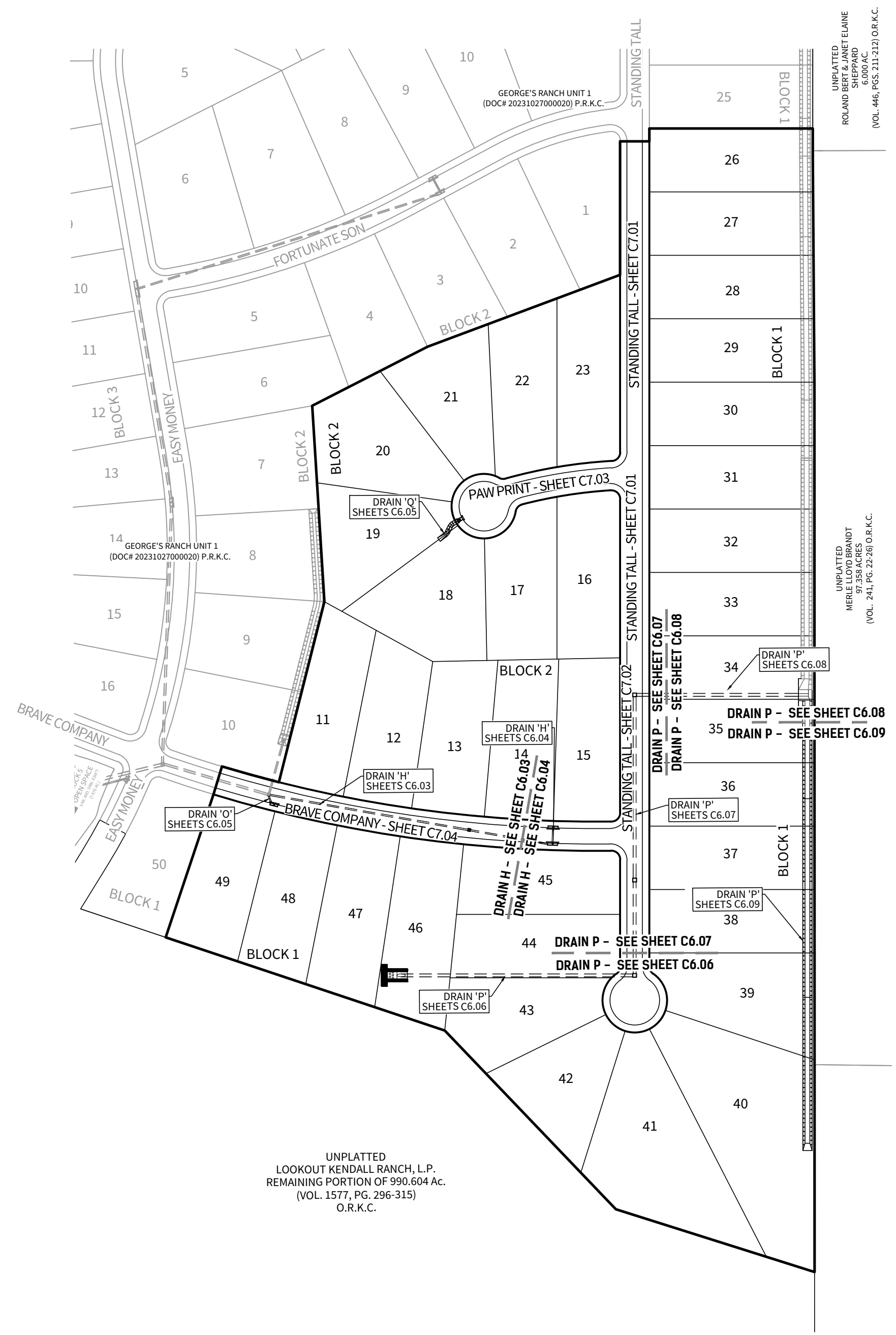


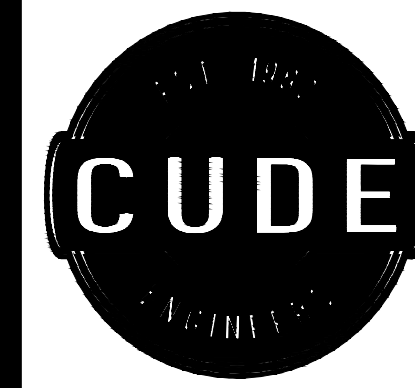
6/23/2025
CUDE ENGINEERS
TBPEL No. 455

C6.02

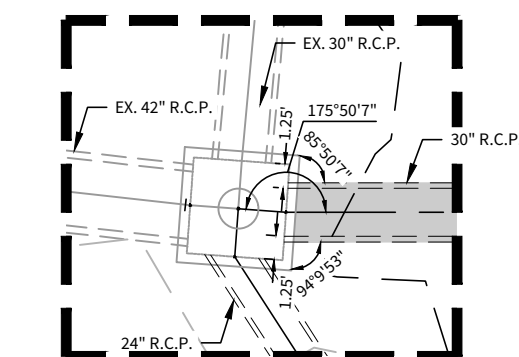


DEVELOPER:
THE LOOKOUT DEVELOPMENT GROUP, LP
CONTACT PERSON: MIKE SIEFERT
1001 CRYSTAL FALLS PARKWAY
LEANDER, TX 78641
TEL: (512) 690-4322

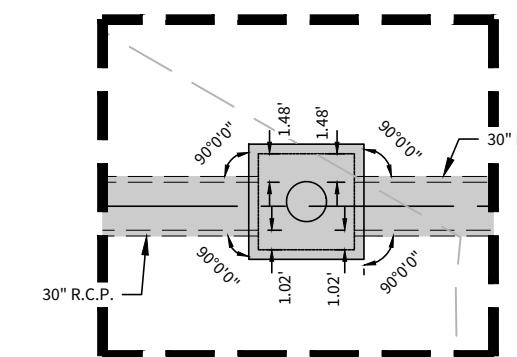




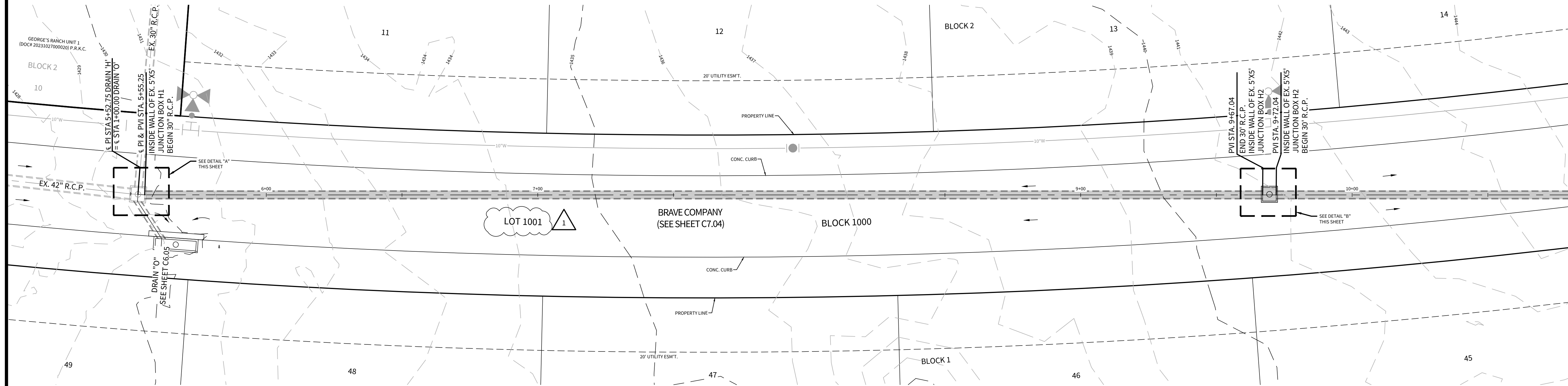
SCALE: 1"=20'



DETAIL "A"
EX. 5'X5' JUNCTION BOX "H1"
(1"=10')



DETAIL "B"
5'X5' JUNCTION BOX "H2"
(1"=10')

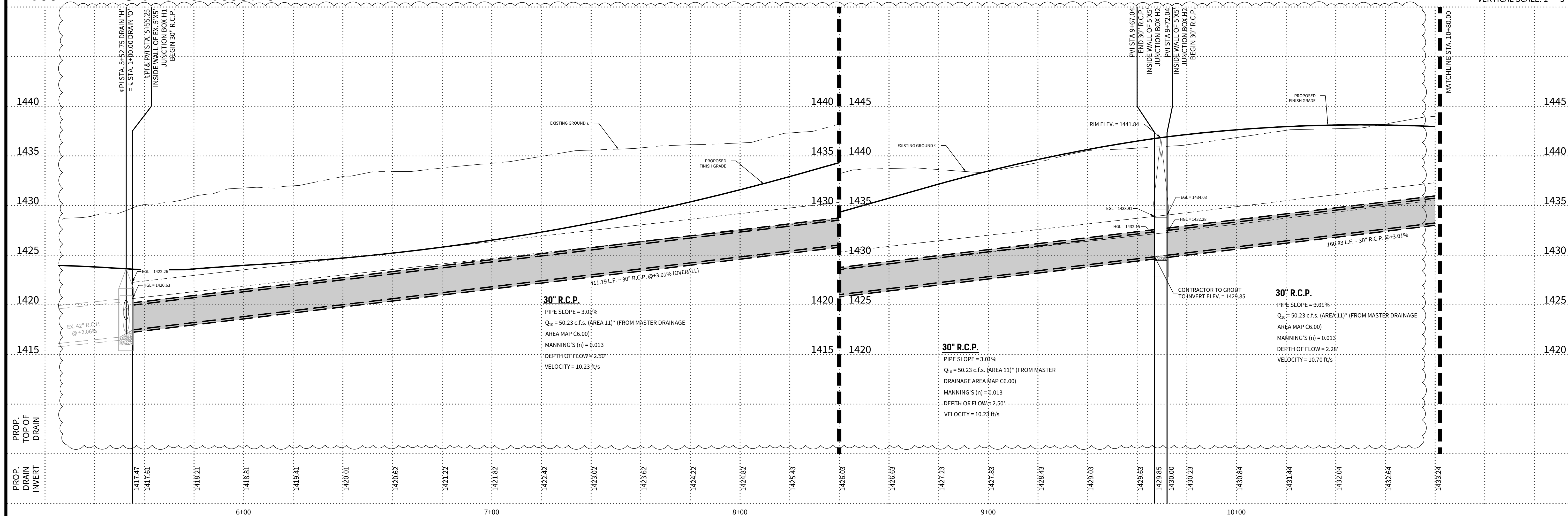


DRAIN H

STA. 5+52.75 TO STA. 10+80.00

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

- NOTES:**
- ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 PSI IN 28 DAYS.
 - ALL REINFORCING TO STEEL TO BE GRADE 60.
 - REFER TO THE STORMWATER MANAGEMENT PLAN FOR DETAILED HYDRAULIC CALCULATIONS.



DATE
9/5/2025

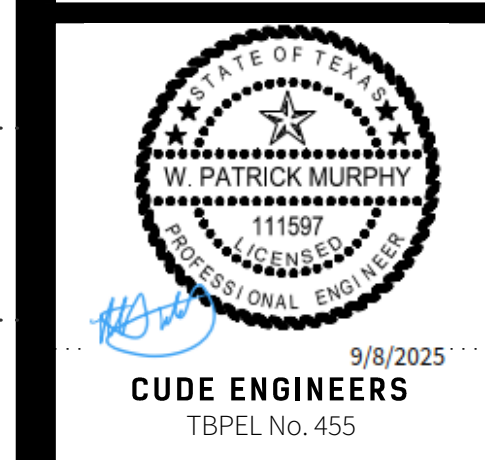
PROJECT NO.
03546.009

DRAWN BY
MAS/MGM

CHECKED BY
KMH/WPM

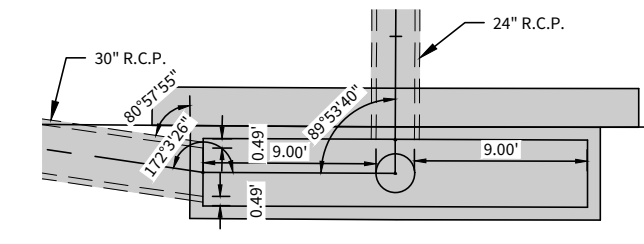
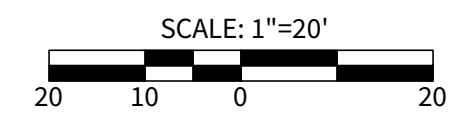
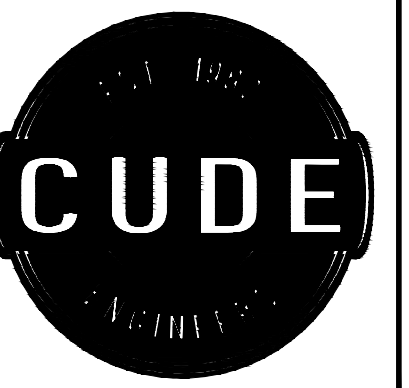
REVISIONS

- 2025-05-28 UPDATE STREET LOT NUMBER.
- 2025-09-04 UPDATE CULVERT CALCULATIONS, HGL & EGL CALLOUTS, AND ADDED NOTE TO REFER TO SWMP FOR HYDRAULIC CALCS.
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-
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-
-

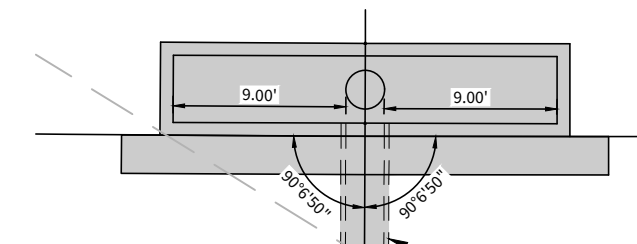


9/8/2025
CUDE ENGINEERS
TBPEL No. 435

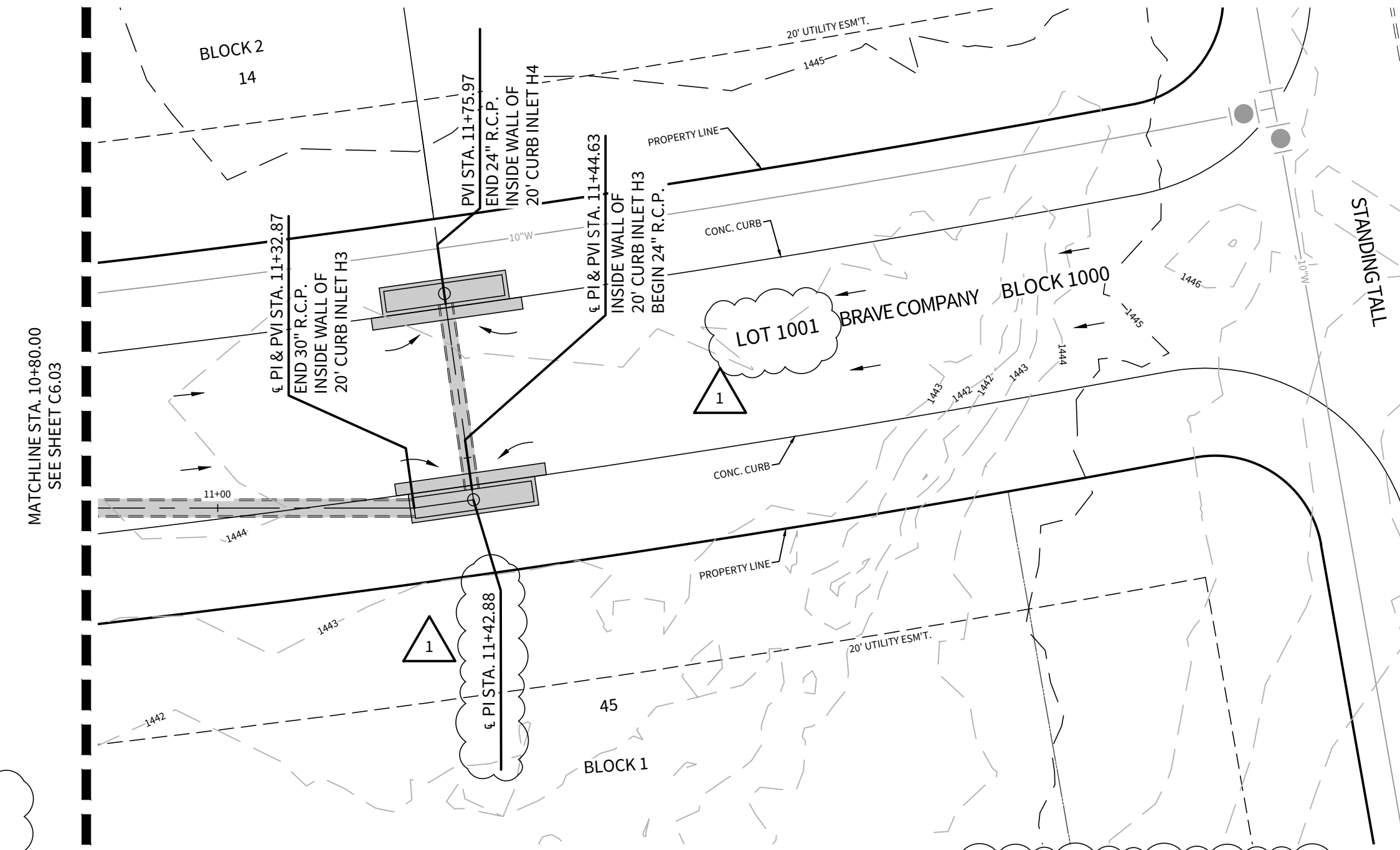
C6.03



DETAIL "B"
20' CURB INLET "H2"
(1"=10')



DETAIL "C"
20' CURB INLET "H3"
(1"=10')



DRAIN H

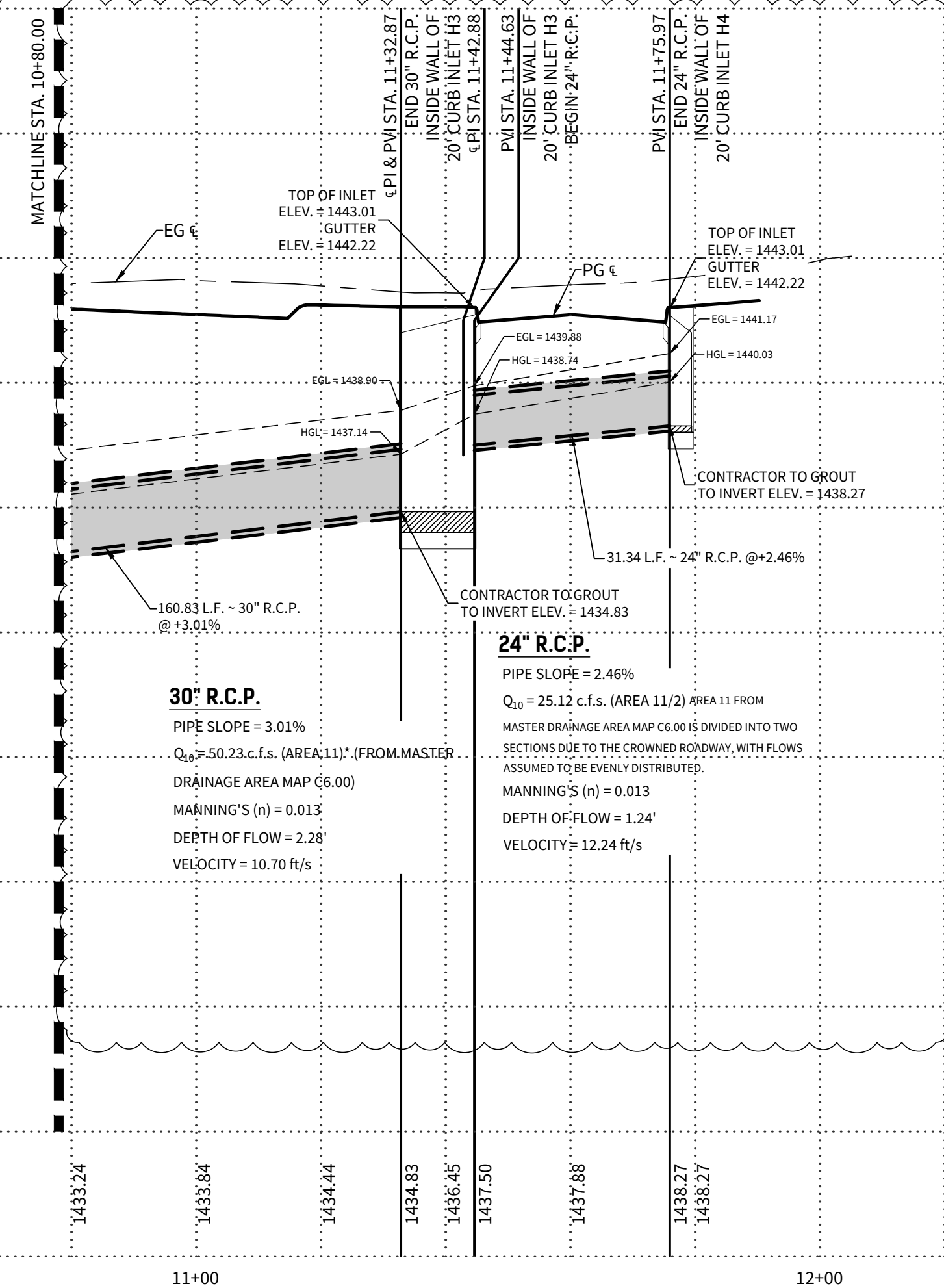
STA. 10+80.00 TO STA. 11+75.97

CURB INLET OPENING - "H3"
 $Q_{10} = 50.23/2 = 25.115 \text{ c.f.s.} / 2.06$
 $= 12.19' \text{ REQ. (AREA 11/2) AREA 11 FROM MASTER}$
DRAINAGE AREA MAP C6.00 IS DIVIDED INTO TWO SECTIONS DUE TO THE CROWNED ROADWAY, WITH FLOWS ASSUMED TO BE EVENLY DISTRIBUTED.
USED - 20" INLET OPENING
GUTTER = 1422.22

CURB INLET OPENING - "H4"
 $Q_{10} = 50.23/2 = 25.115 \text{ c.f.s.} / 2.06$
 $= 12.19' \text{ REQ. (AREA 11/2) AREA 11 FROM MASTER}$
DRAINAGE AREA MAP C6.00 IS DIVIDED INTO TWO SECTIONS DUE TO THE CROWNED ROADWAY, WITH FLOWS ASSUMED TO BE EVENLY DISTRIBUTED.
USED - 20" INLET OPENING
GUTTER = 1422.22

- NOTES:
1. ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 PSI IN 28 DAYS.
 2. ALL REINFORCING TO STEEL TO BE GRADE 60.
 3. REFER TO THE STORMWATER MANAGEMENT PLAN FOR DETAILED HYDRAULIC CALCULATIONS.

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'

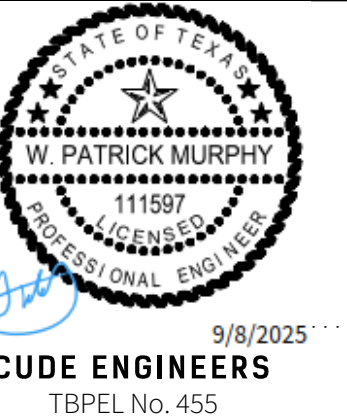


PROP. TOP OF DRAIN
PROP. DRAIN INVERT

GEORGE'S RANCH
UNIT 2B
DRAINAGE PLAN AND PROFILE - DRAIN H

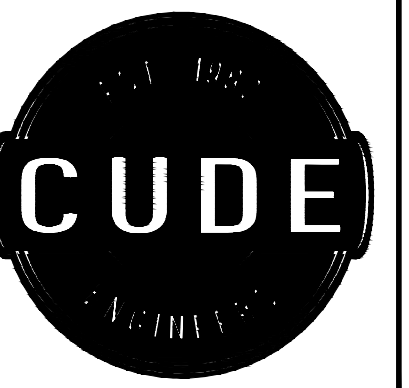
DATE
9/5/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

- REVISIONS
1. 2025-05-28 ADDED CENTERLINE PI STATION LABEL TO PLAN VIEW AND UPDATE STREET LOT NUMBER.
 2. 2025-09-04 UPDATE CULVERT CALCULATIONS, HGL & EGL CALLOUTS, AND ADDED NOTE TO REFER TO SWMP FOR HYDRAULIC CALC.
 - 3.
 - 4.
 - 5.
 - 6.
 - 7.
 - 8.
 - 9.



9/8/2025
CUDE ENGINEERS
TBPEL No. 435

C6.04

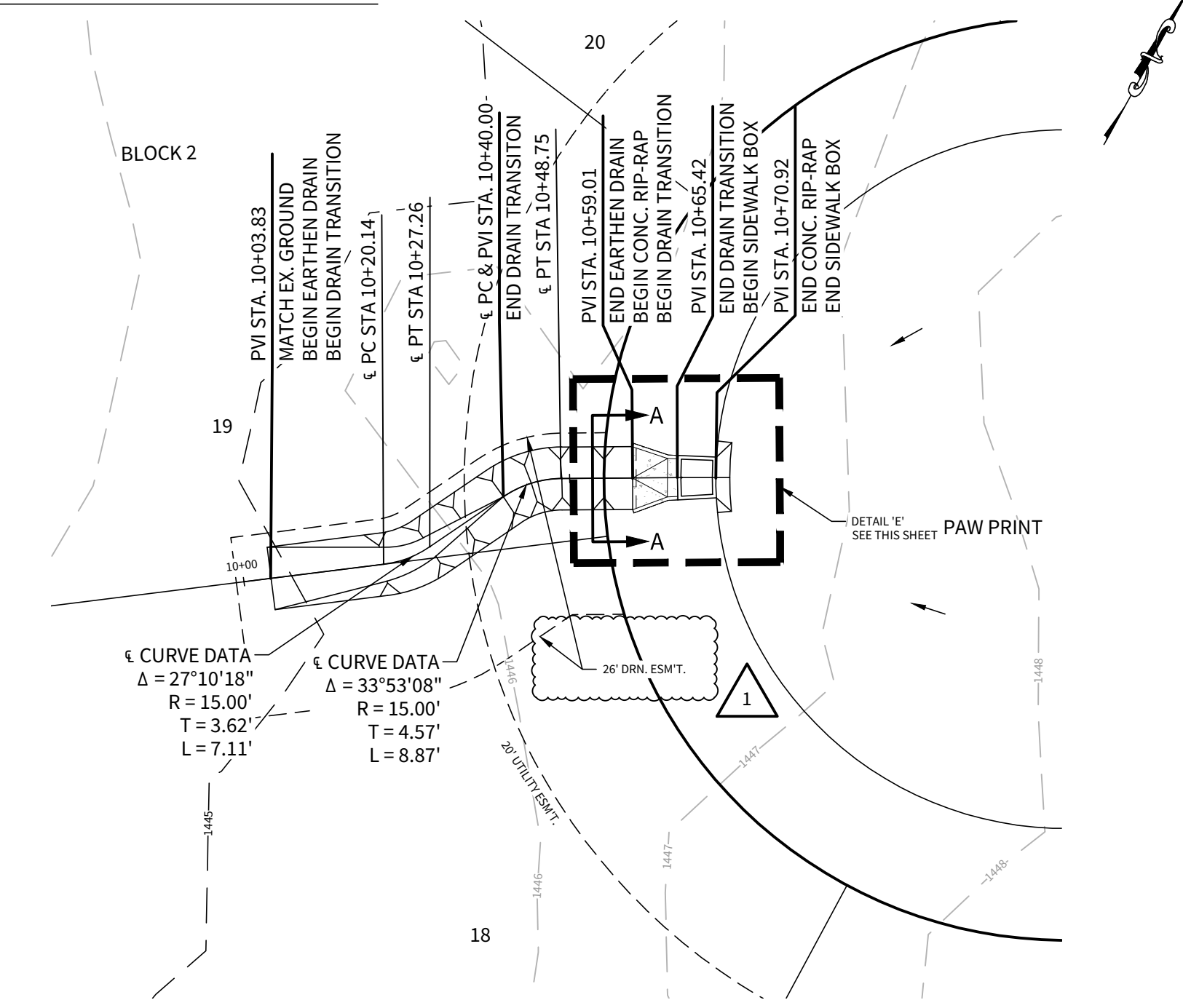
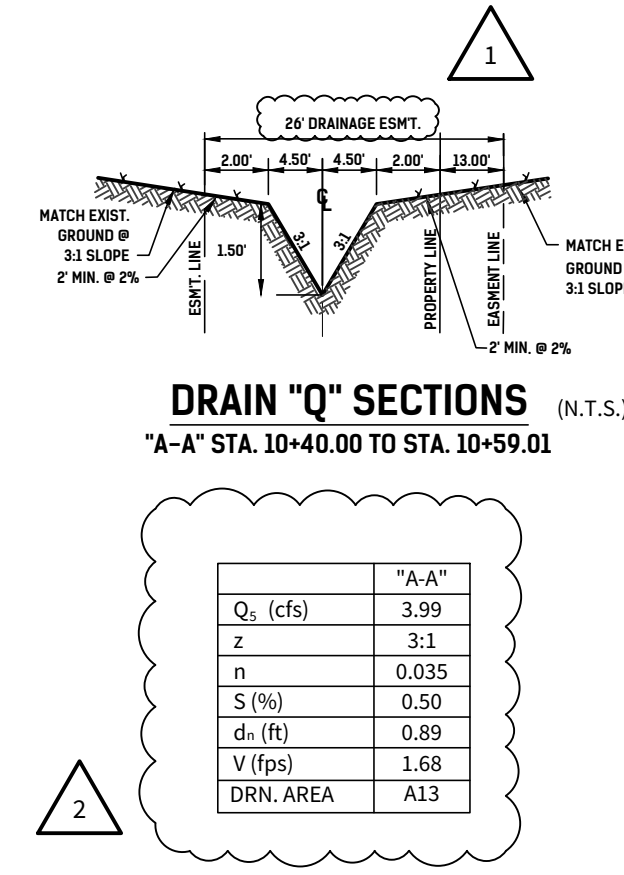
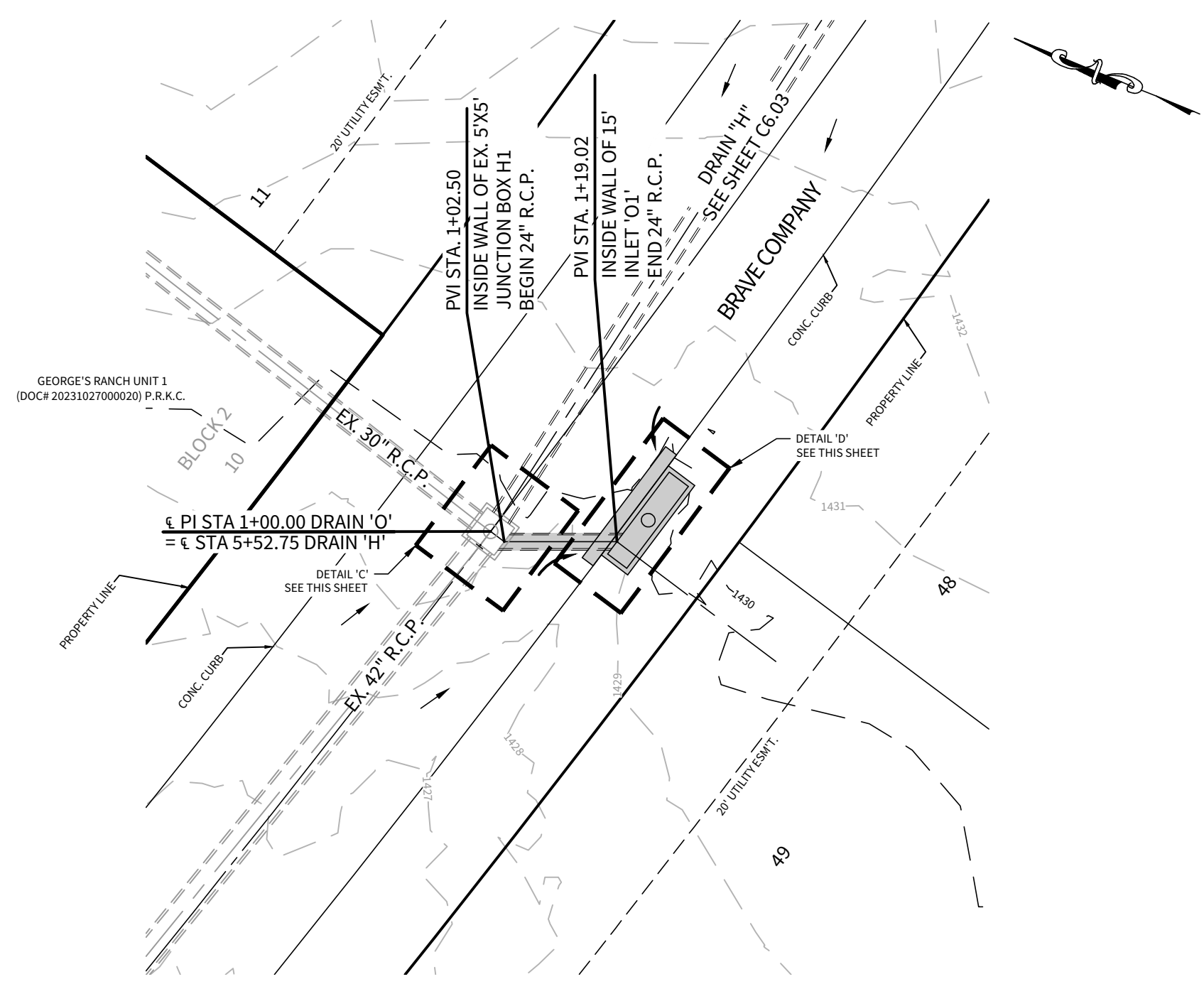
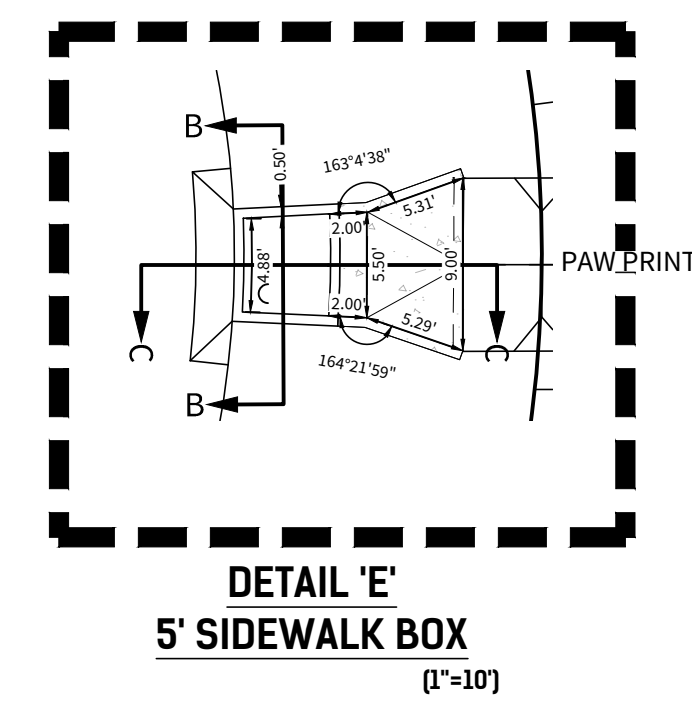
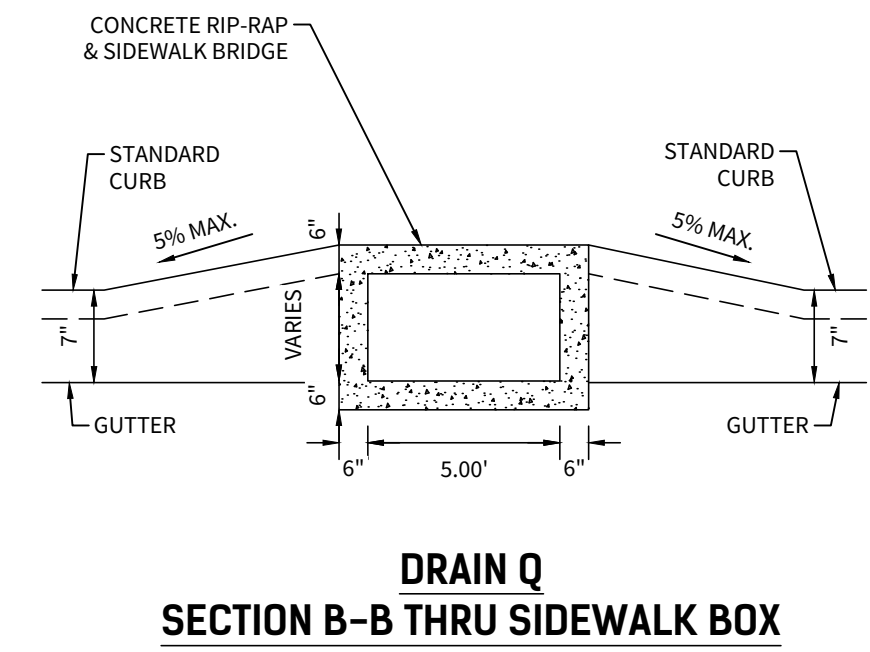
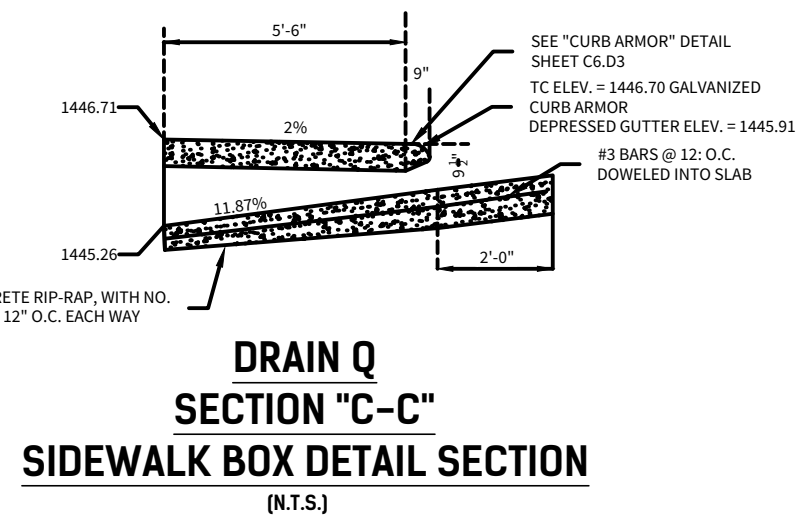
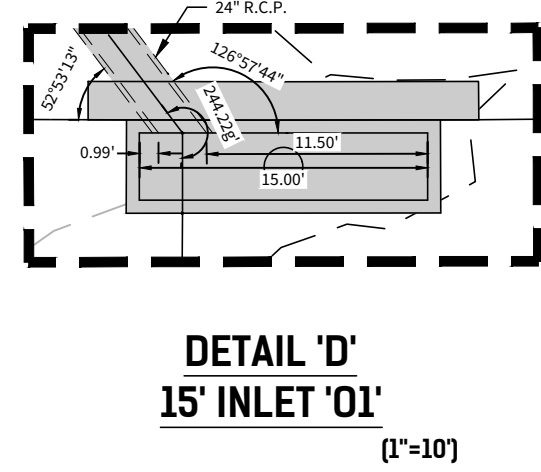
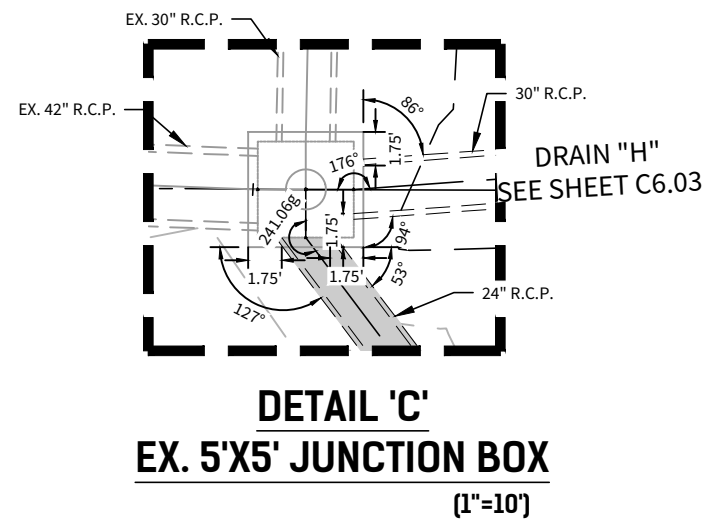


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San Antonio, Texas 78231
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GEORGE'S RANCH
UNIT 2B

DRAINAGE PLAN AND PROFILE - DRAIN O & Q

SCALE: 1"=20'
20 10 0 20



- NOTES:
- ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 PSI IN 28 DAYS.
 - ALL REINFORCING TO STEEL TO BE GRADE 60.
 - REFER TO THE STORMWATER MANAGEMENT PLAN FOR DETAILED HYDRAULIC CALCULATIONS.

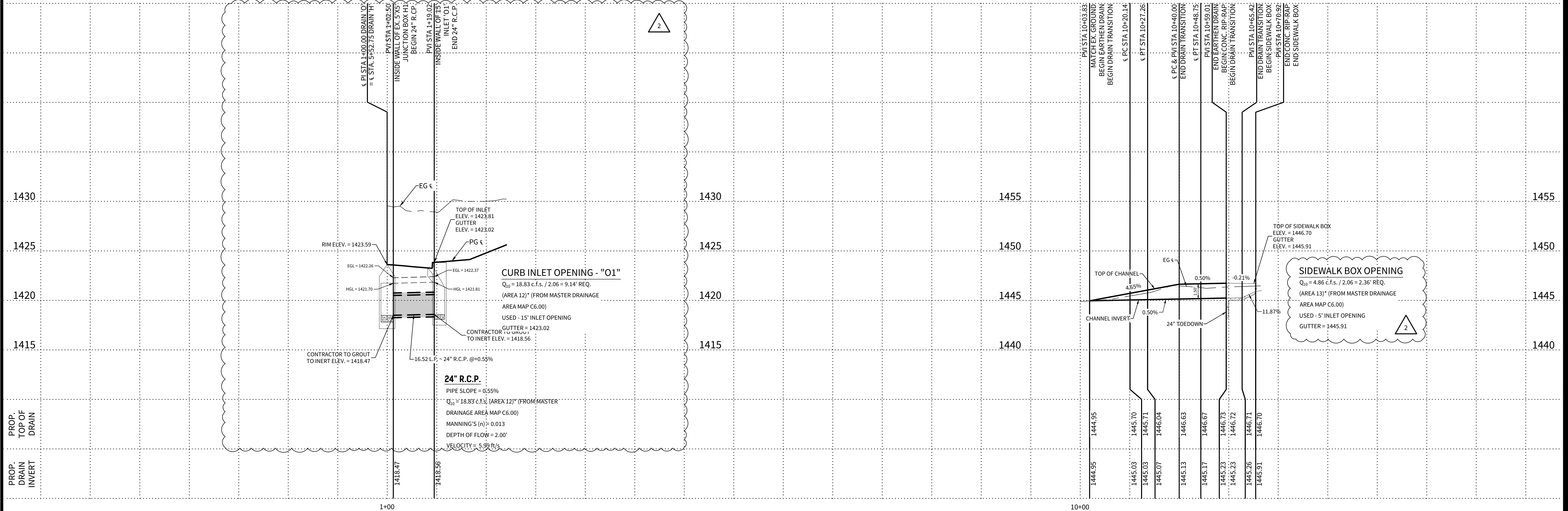
DRAIN O

STA. 1+00.00 TO STA. 1+19.02

DRAIN Q

STA. 10+03.83 TO STA. 10+70.92

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 5'



DATE
9/5/2025

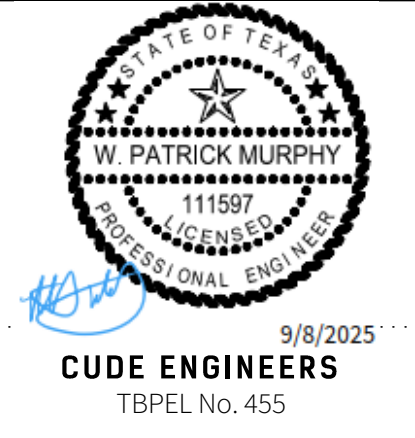
PROJECT NO.
03546.009

DRAWN BY
MAS/MGM

CHECKED BY
KMH/WPM

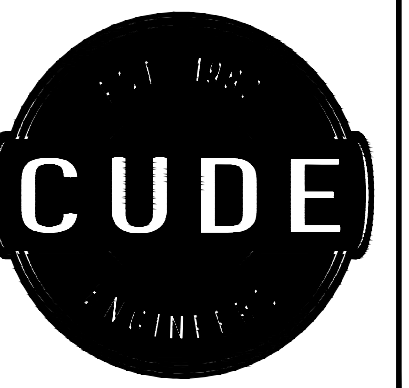
REVISIONS

- 2025-06-20 ADDED AND ADJUSTED DRAIN 'Q' BASEMENT
- 2025-09-04 - UPDATE CULVERT & CHANNEL CALCULATIONS, HGL & EGL CALLOUTS, AND ADDED NOTE TO REFER TO SWMP FOR HYDRAULIC CALCS.
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9/8/2025
CUDE ENGINEERS
TBPEL No. 455

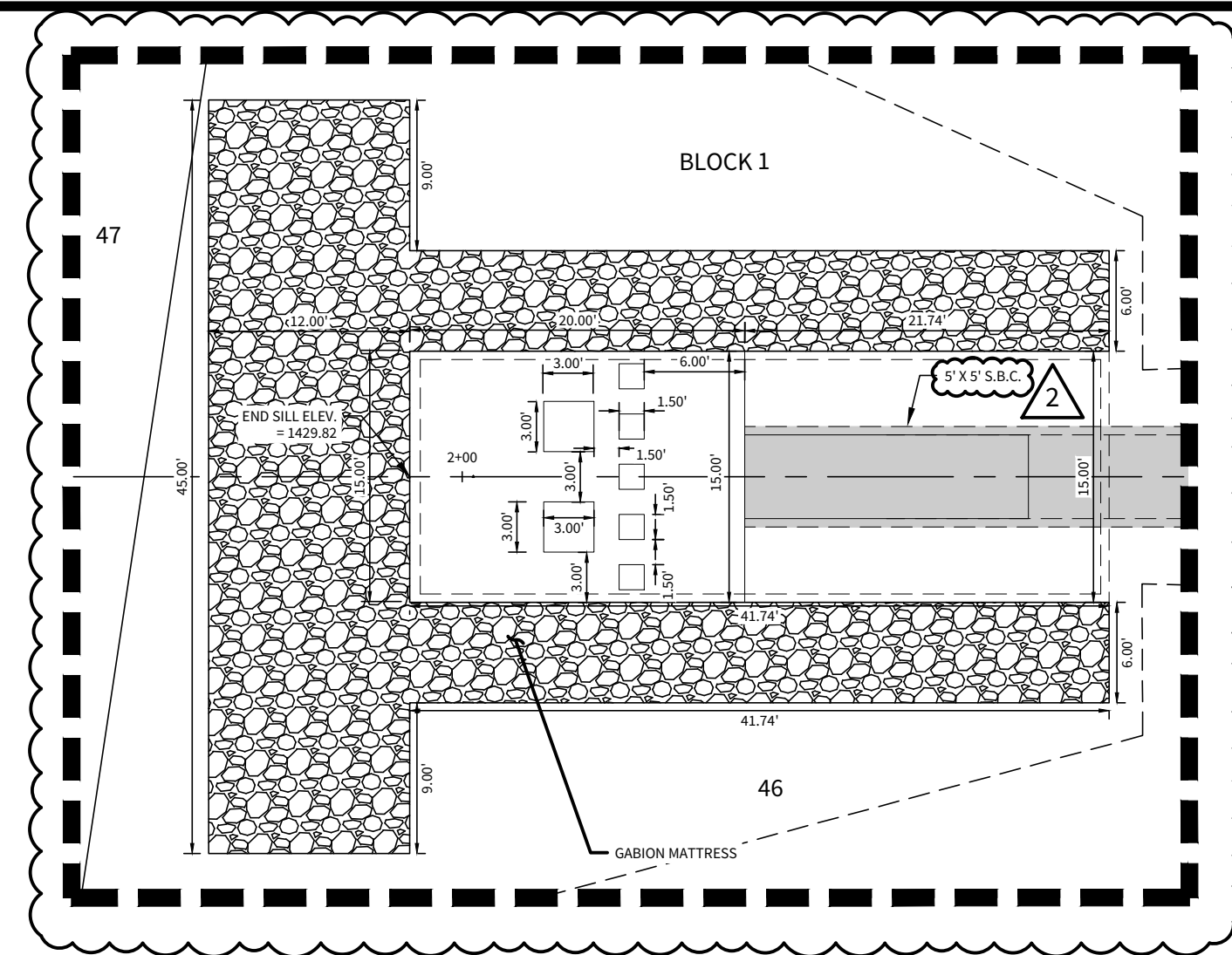
C6.05



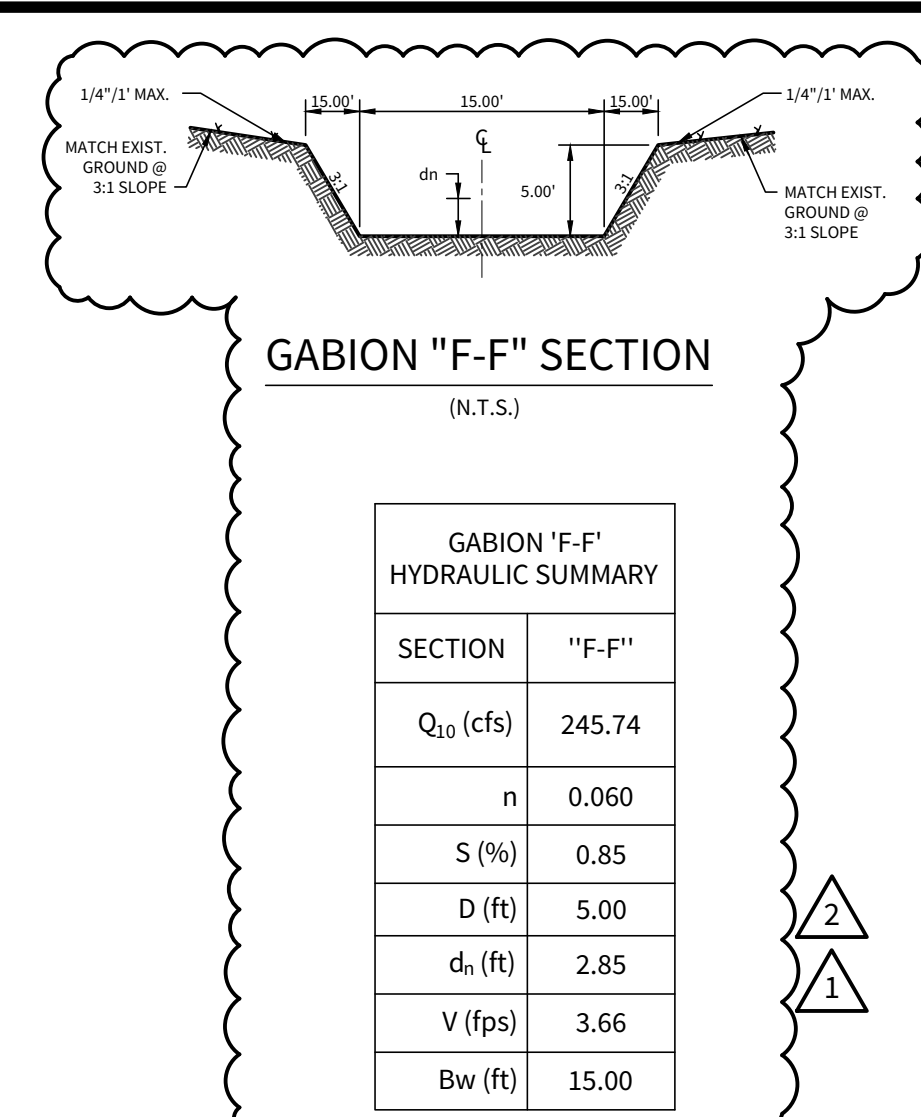
4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2951 F: (210) 523.7112

GEORGE'S RANCH
UNIT 2B

DRAINAGE PLAN AND PROFILE - DRAIN P

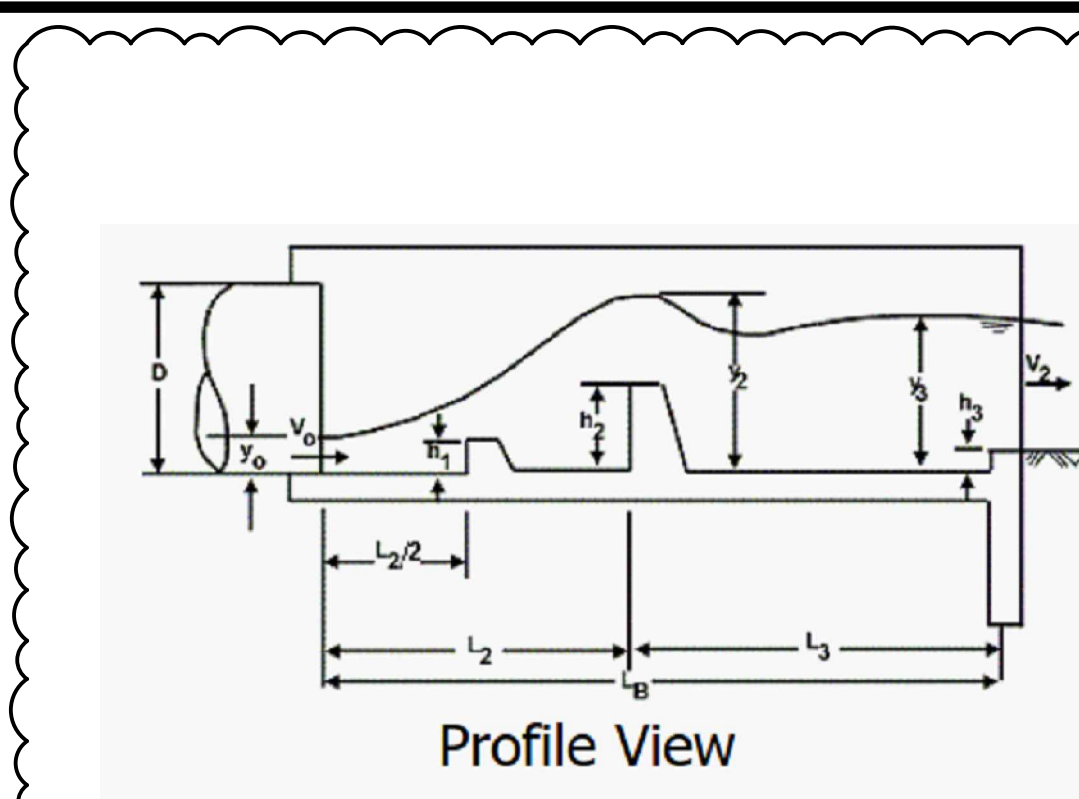


DETAIL "F"
(1"=10')



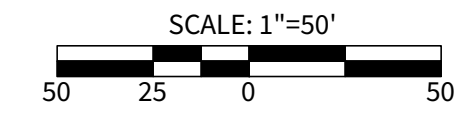
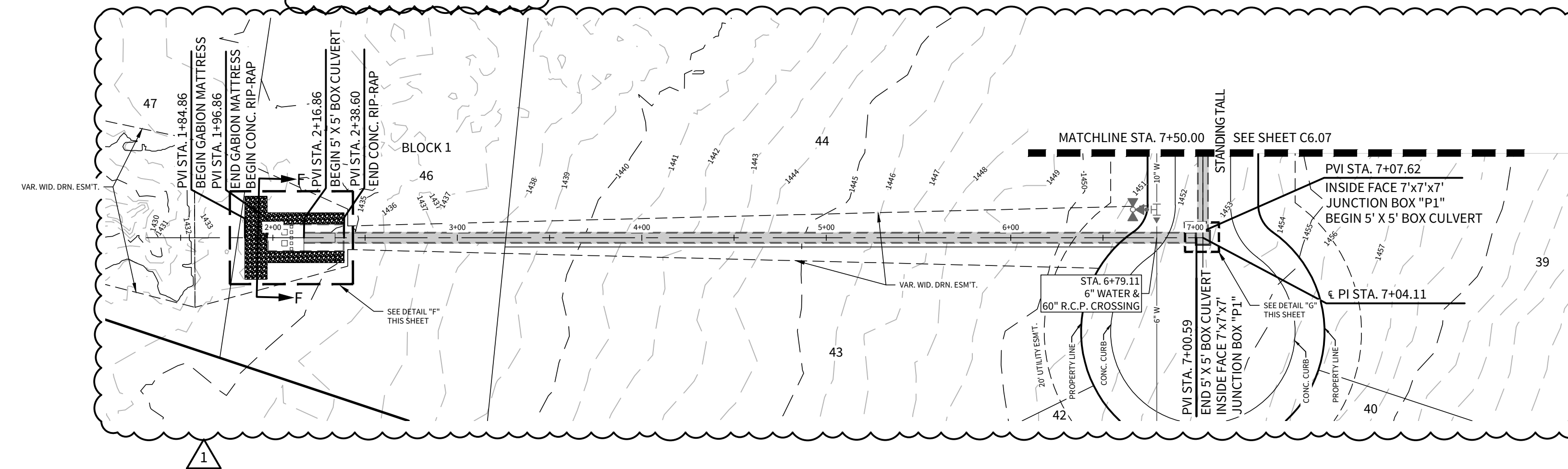
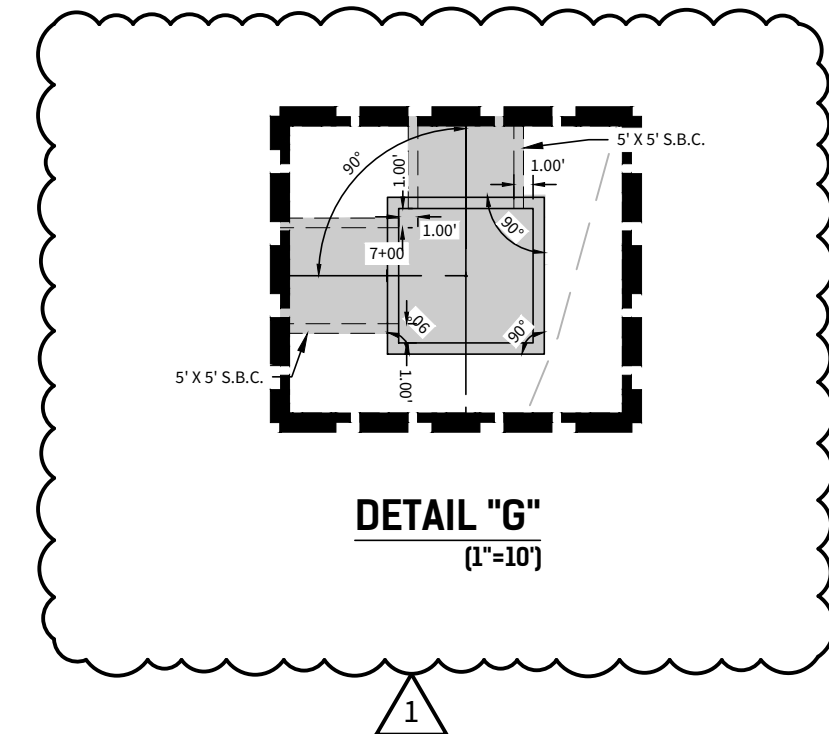
GABION 'F-F' HYDRAULIC SUMMARY

SECTION	"F-F"
Q ₁₀ (cfs)	245.74
n	0.060
S (%)	0.85
D (ft)	5.00
d _h (ft)	2.85
V (fps)	3.66
Bw (ft)	15.00



BAFFLE BLOCK
CALCULATIONS - DRAIN P

V₀ = 3.70'
V₀ = 13.74 fps
FLOW RATE (Q) = 245.74 cfs
 $\phi = \arcsin\left(1 - \frac{2V_0}{D}\right) = \arcsin\left(1 - \frac{2(3.70)}{5.00}\right) = 118.69$
 $A = \frac{\phi}{180} \left(\frac{3.14D^2}{4} \right) - \left(\frac{D}{2} \sin\phi \right) \left(\frac{D}{2} - Y_0 \right) = \frac{118.69}{180} \left(\frac{3.14 \cdot 5^2}{4} \right) - \left(\frac{5}{2} \sin 118.69 \right) \left(\frac{5}{2} - 3.70 \right) = 15.58 \text{ ft}^2$
 $V_0 = (A/2)^{1/2} = (15.58/2)^{1/2} = 2.79'$
 $Fr = (V_0/g^{1/2}D)^{1/2} = (13.74/(32.2 \cdot 2.79))^{1/2} = 1.45$
 $h_2/Y_0 = ((1.35Fr^2)/(L_2/h_2))^{0.546} = ((1.35(1.45)^2)/(2.67)^{0.546}) = 1.03$
 $h_2 = Y_0(h_2/Y_0) = 2.79(1.03) = 2.89'$ h₂USED = 3.00'
 $L_1 = 3.5h_2 = 3.5(2.89) = 8.72'$ L₁USED = 9.00'
 $h_1 = 0.5h_2 = 0.5(2.89) = 1.25'$ h₁USED = 1.50'
 $L_2 = 0.5L_1 = 0.5(8.72) = 4.36'$ L₂USED = 6.00'
 $L_3/L_2 = 3.75(h_2/L_2)^{0.68} = 3.75(2.89/8.72)^{0.68} = 1.60'$
 $L_3 = L_2(L_3/L_2) = 8.72(1.6) = 13.94'$ L₃USED = 15.00'
 $Y_2/h_2 = 1.3(L_2/h_2)^{0.38} = 1.3(2.67)^{0.38} = 1.85'$
 $Y_2 = h_2(Y_2/h_2) = 2.89(1.85) = 4.61'$
 $h_3 = 0.1(Y_2) = 0.1(4.61) = 0.46'$ h₃USED = 0.50'
 $V_0 = Q/A = 254.13(53.57) = 4.74 \text{ ft/s}$

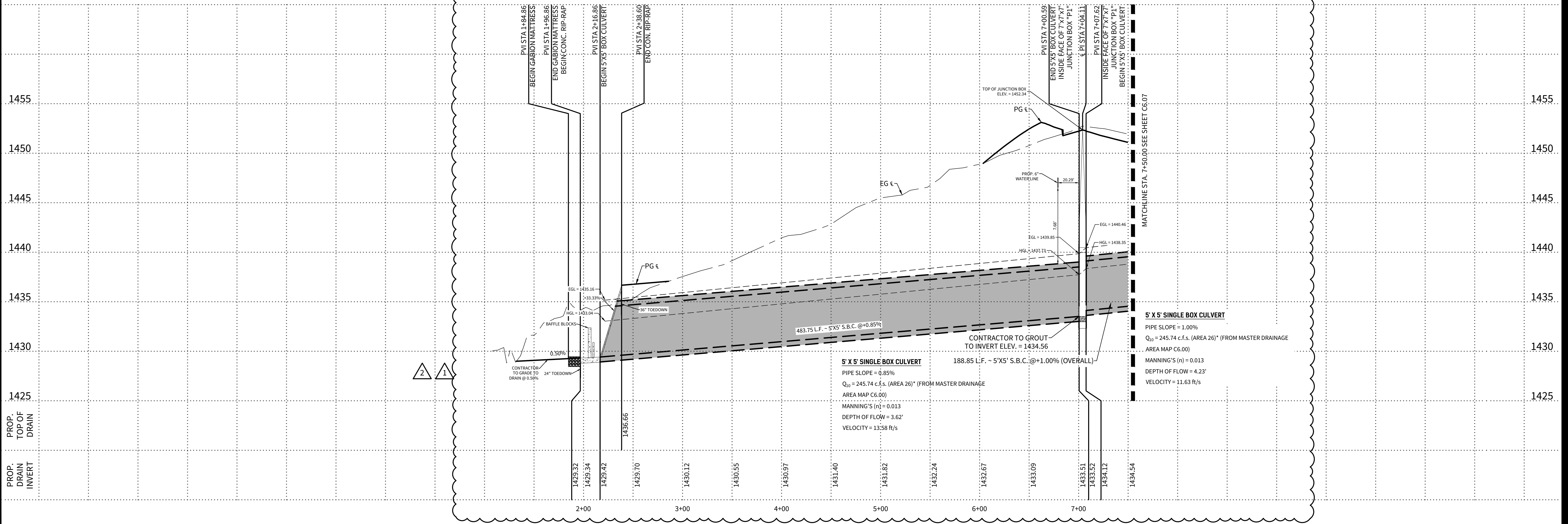


HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

DRAIN P

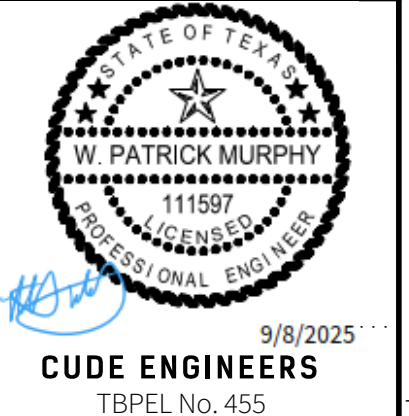
STA. 1+84.86 TO STA. 7+50.00

- NOTES:
- ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 PSI IN 28 DAYS.
 - ALL REINFORCING TO STEEL TO BE GRADE 60.
 - REFER TO THE STORMWATER MANAGEMENT PLAN FOR DETAILED HYDRAULIC CALCULATIONS.



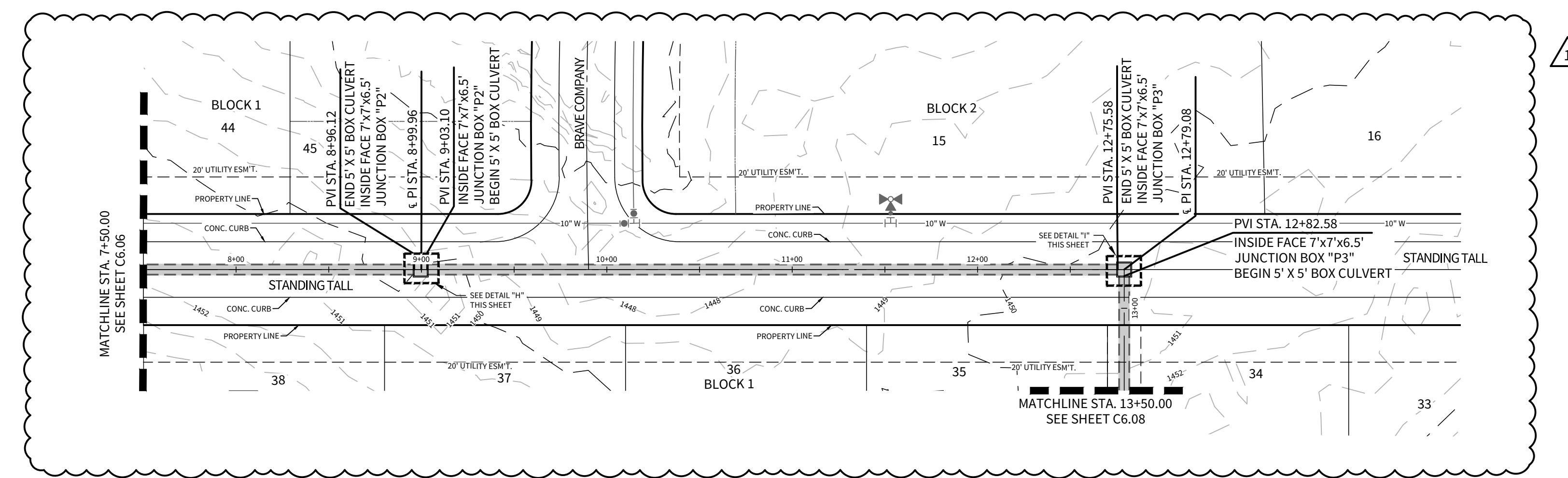
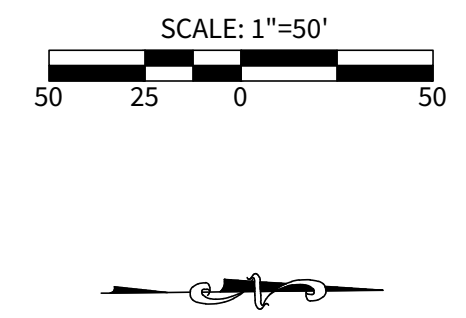
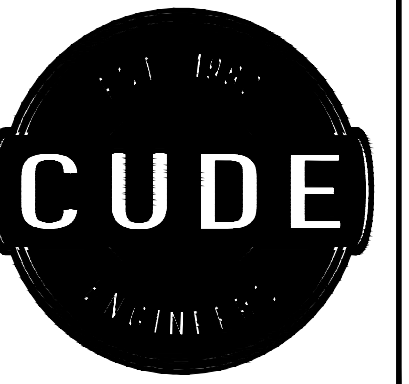
DATE
9/5/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

- REVISIONS
- 2025-06-20 - DRAIN P PROFILE ANALYZED AT GABION AND EARTHEN SECTION AFTER GABION. ADDED BAFFLE BLOCK CALCULATIONS. UPDATED DRAIN P TO 5'X5' SINGLE BOX CULVERT.
 - 2025-09-04 - UPDATE CULVERT & BAFFLE BLOCK CALCULATIONS, HGL & EGL CALLOUTS, AND ADDED NOTE TO REFER TO SWMP FOR HYDRAULIC CALCS.
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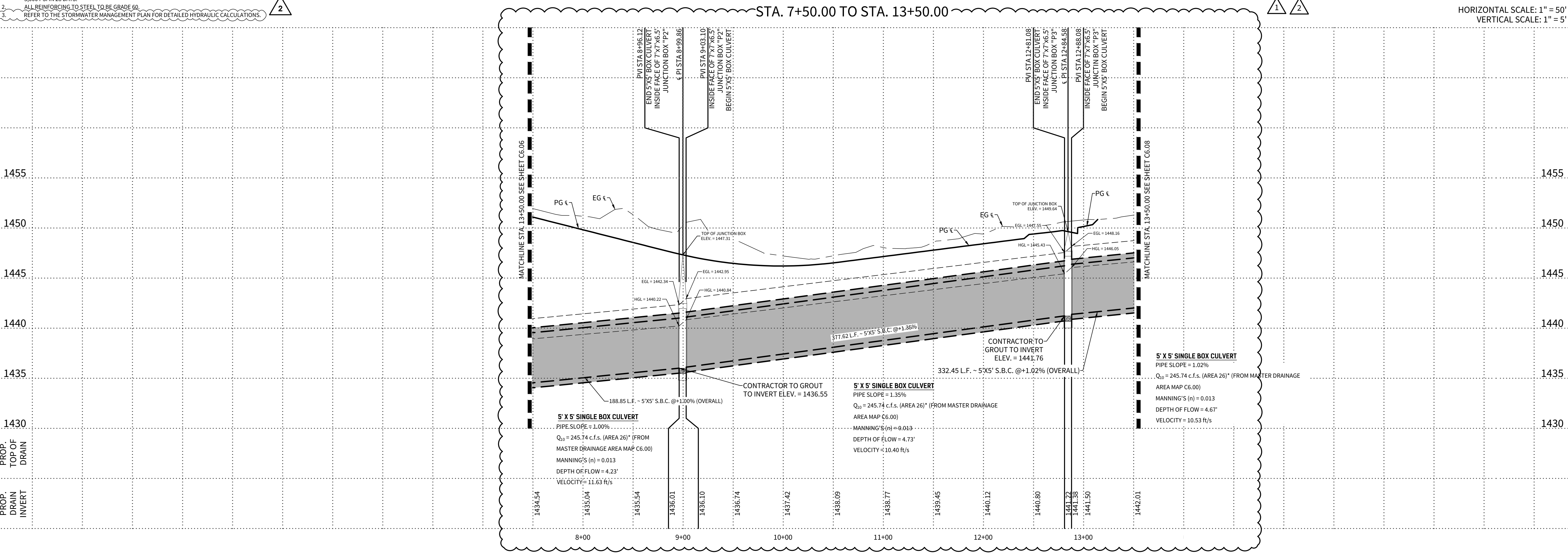
9/8/2025
CUDE ENGINEERS
TBPEL No. 435

C6.06



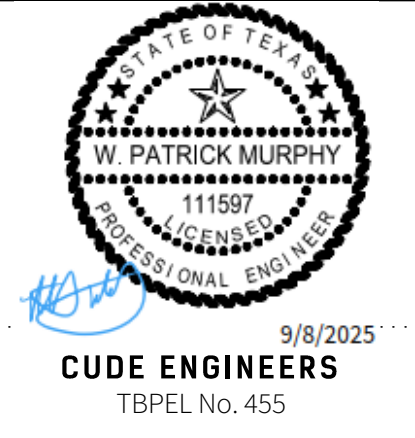
DRAIN P

- NOTES:**
- ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 PSI IN 28 DAYS.
 - ALL REINFORCING TO STEEL TO BE GRADE 60.
 - REFER TO THE STORMWATER MANAGEMENT PLAN FOR DETAILED HYDRAULIC CALCULATIONS.



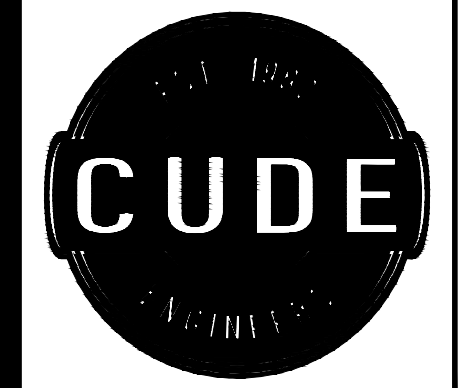
DATE	9/5/2025
PROJECT NO.	03546.009
DRAWN BY	MAS/MGM
CHECKED BY	KMH/WPM

REVISIONS
1. 2025-06-20 UPDATE DRAIN 'P' TO 5' X 5' SINGLE BOX CULVERT AND THE DEPTH OF JUNCTION BOX.
2. 2025-09-04 - UPDATE CULVERT & CHANNEL CALCULATIONS, HGL & EGL CALCULATIONS, AND ADD NOTE TO REFER TO SWMP FOR HYDRAULIC CALCS.
3.
4.
5.
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9/8/2025
CUDE ENGINEERS
 TBPEL No. 435

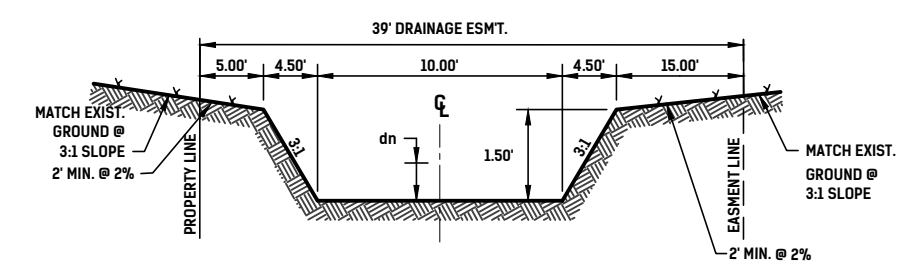
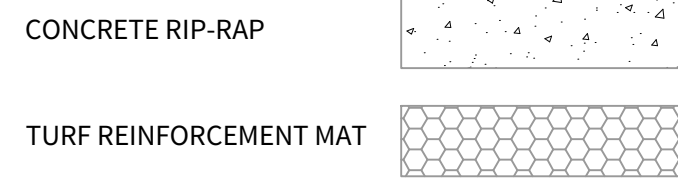
C6.07



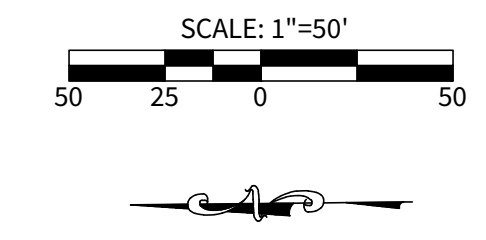
4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2951 F: (210) 523.7112

GEORGE'S RANCH
UNIT 2B
DRAINAGE PLAN AND PROFILE - DRAIN P

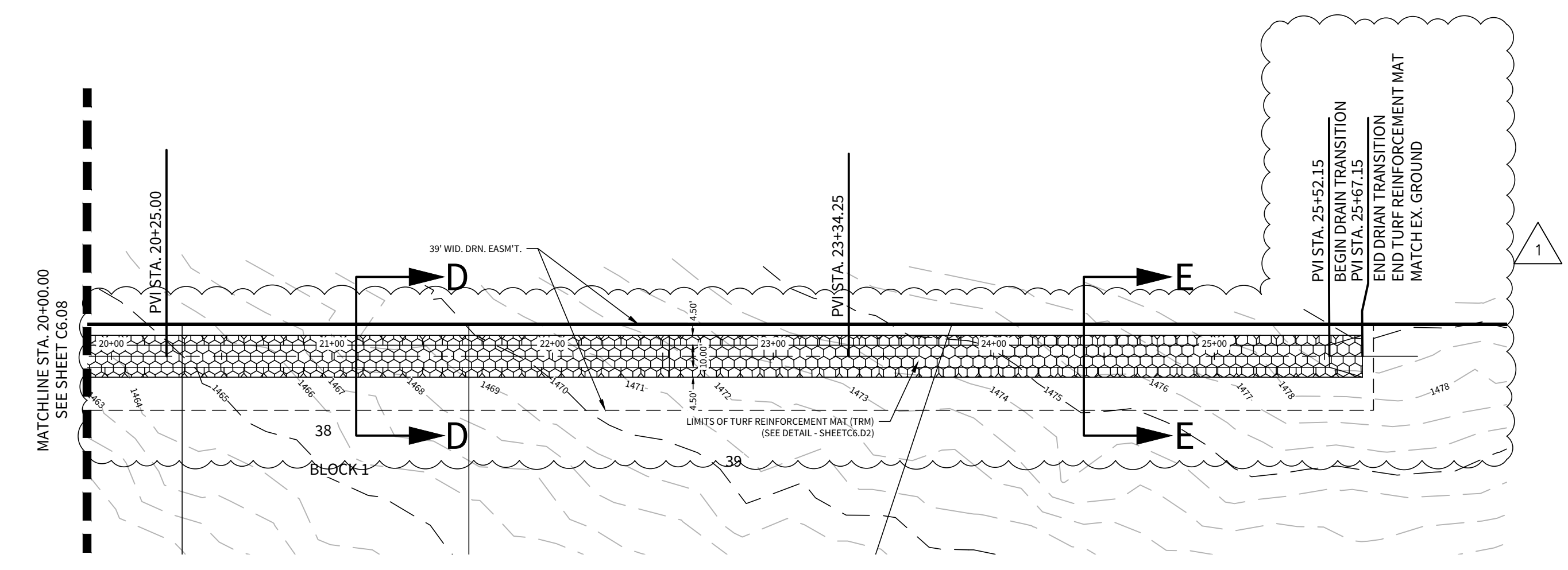
LEGEND



	"D-D"	"E-E"
Q _s (cfs)	34.73	34.73
Bw (ft)	10.00	10.00
z	3:1	3:1
n	0.035	0.035
S (%)	2.95	2.44
d _r (ft)	0.62	0.66
V (fps)	4.72	4.39
DRN. AREA	A25	A25



DRAIN "P" SECTIONS (N.T.S.)
"D-D" STA. 20+25.00 TO STA. 23+34.25
"E-E" STA. 23+34.25 TO STA. 25+52.15

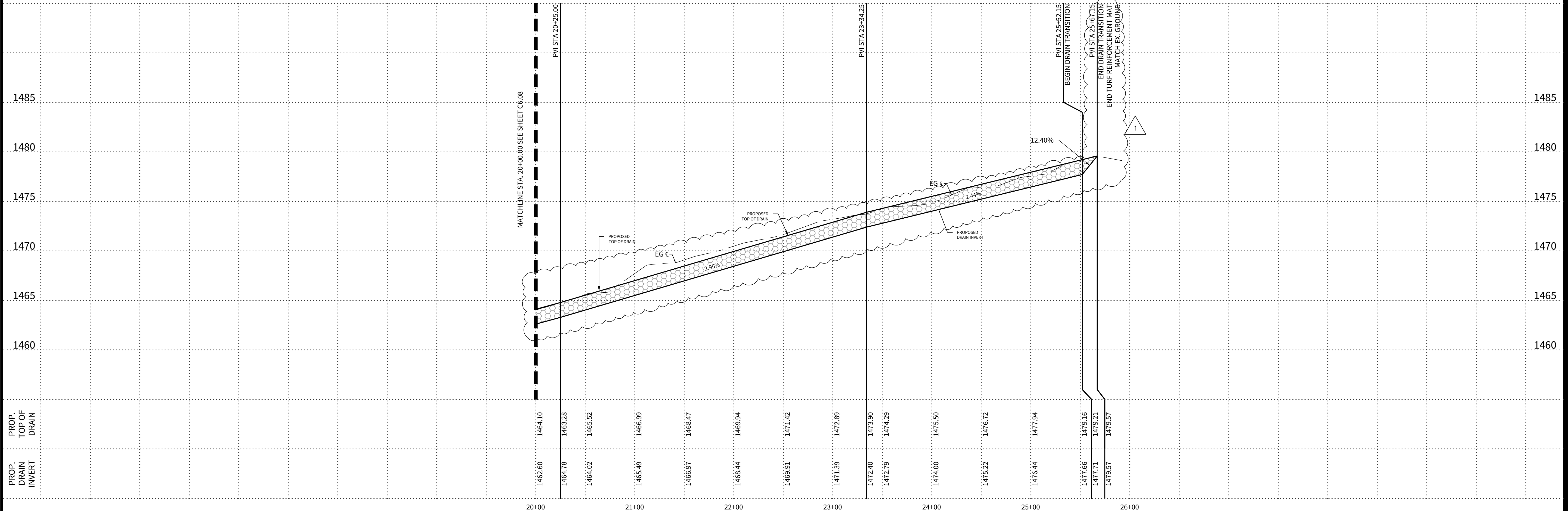


DRAIN P

STA. 20+00.00 TO STA. 25+67.15

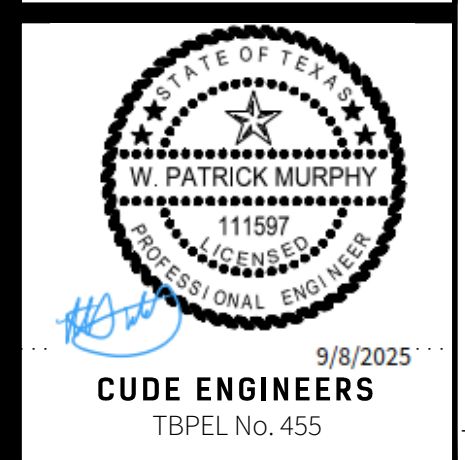
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

- NOTES:
- ALL CONCRETE LINING SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3,000 PSI IN 28 DAYS.
 - ALL REINFORCING TO STEEL TO BE GRADE 60.
 - REFER TO THE STORMWATER MANAGEMENT PLAN FOR DETAILED HYDRAULIC CALCULATIONS.



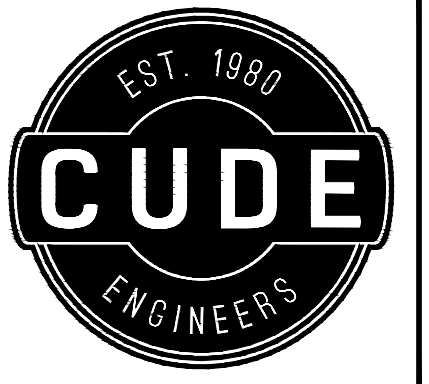
DATE	9/4/2025
PROJECT NO.	03546.009
DRAWN BY	MAS/MGM
CHECKED BY	KMH/WPM

REVISIONS
1. 2025-06-20 ADD TURF REINFORCEMENT MAT.
2. 2025-09-04 - UPDATE CHANNEL CALCULATIONS AND ADDED NOTE TO REFER TO SWMP FOR HYDRAULIC CALC.
3.
4.
5.
6.
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9/8/2025
CUDE ENGINEERS
TBPEL No. 455

C6.09



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

GEORGE'S RANCH
UNIT 2B
DRAINAGE DETAILS

REINFORCING STEEL

LOWER UNIT 10' X 3'-0" (TYPE I)					LOWER UNIT 10' X 3'-0" (TYPE II)				
BAR NO.	SIZE	SPAC.	LENGTH	WEIGHT	BAR NO.	SIZE	SPAC.	LENGTH	WEIGHT
A	#4	12"	10'-0"	40	B	#4	12"	8'-0"	30
B	#4	12"	8'-0"	30	C	#4	12"	8'-0"	30
C	#4	12"	8'-0"	30	D	#4	12"	8'-0"	30
D	#4	12"	8'-0"	30	E	#4	12"	8'-0"	30
E	#4	12"	8'-0"	30	F	#4	12"	8'-0"	30
F	#4	12"	8'-0"	30	G	#4	12"	8'-0"	30
G	#4	12"	8'-0"	30	H	#4	12"	8'-0"	30
H	#4	12"	8'-0"	30	I	#4	12"	8'-0"	30
I	#4	12"	8'-0"	30	J	#4	12"	8'-0"	30
J	#4	12"	8'-0"	30	K	#4	12"	8'-0"	30
K	#4	12"	8'-0"	30	L	#4	12"	8'-0"	30
L	#4	12"	8'-0"	30	M	#4	12"	8'-0"	30
M	#4	12"	8'-0"	30	N	#4	12"	8'-0"	30
N	#4	12"	8'-0"	30	O	#4	12"	8'-0"	30
O	#4	12"	8'-0"	30	P	#4	12"	8'-0"	30
P	#4	12"	8'-0"	30	Q	#4	12"	8'-0"	30
Q	#4	12"	8'-0"	30	R	#4	12"	8'-0"	30
R	#4	12"	8'-0"	30	S	#4	12"	8'-0"	30
S	#4	12"	8'-0"	30	T	#4	12"	8'-0"	30
T	#4	12"	8'-0"	30	U	#4	12"	8'-0"	30
U	#4	12"	8'-0"	30	V	#4	12"	8'-0"	30
V	#4	12"	8'-0"	30	W	#4	12"	8'-0"	30
W	#4	12"	8'-0"	30	X	#4	12"	8'-0"	30
X	#4	12"	8'-0"	30	Y	#4	12"	8'-0"	30
Y	#4	12"	8'-0"	30	Z	#4	12"	8'-0"	30
Z	#4	12"	8'-0"	30					

GENERAL NOTES

- IF INLETS AND EXTENSIONS MUST BE IN ACCORDANCE WITH THE LATEST "ROAD CURE INLET TYPE 'C' AND EXTENSION TYPE 'E' (S-C)".
- THIS CURB INLET TO BE USED ONLY WHEN EXISTING ROADWAY WITH CURB INLET AND APPROVED BY THE ENGINEER.
- QUANTITIES SHOWN ARE FOR CONSTRUCTION INFORMATION ONLY.
- CONCRETE FOR STRUCTURES SHALL BE CLASS "A" 3000 PSI IN SLABS.
- ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
- ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 1 1/2".
- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-618 GRADE 60 REBAR/STEEL.
- ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
- DEPRESSION BARS SHALL BE CLASS "A" 3000 PSI IN SLABS.
- FACE OF INLET TO CONFORM TO FACE OF CURB LINE.
- ALL BARS INTERSECTING MANHOLE RING AND COVER SHALL BE CUT OR BENT.
- REINFORCEMENT FOR ALL EXTENSIONS INCLUDING CONCRETE REINFORCING STEEL AND COVER CURB ANCHOR AND STEPS SHALL BE INCLUDED IN THE UNIT COST OF EACH "TYPICAL" SECTION AND SHALL BE SHOWN ON THE DRAWING.
- CURTAIN WALLS, PARTS, WASHERS, PLATES AND GASKETS ARE SUBSIDIARY TO INLETS.
- THE CONTRACTOR SHALL PROVIDE AN ADEQUATE MEANS TO LIFT AND PLACE THE INLETS WHEN PRECAST UNITS.
- ALL BARS AT PIPE BLOCKOUT LOCATIONS SHALL BE CUT OR BENT.
- ALL LOWER UNITS SHALL RESIST INVERT MOTION SHAPING.
- IF PIPE BLOCKOUT IN INLET WALLS SHOULD NOT EXCEED 8" BEYOND THE OUTER SHELL OF THE PIPE INTO ACCOUNT THE SLOPE OF THE PIPE AS NECESSARY. CONSTRUCTION JOINT MAY BE USED A MAXIMUM OF 12".

PHASE CONSTRUCTION

NOTES FOR PHASE CONSTRUCTION (WHEN DIRECTED BY THE ENGINEER):

- THE CURB INLET AND EXTENSION SHALL BE CONSTRUCTED TO A DEPTH "X" BELOW THE INLET AND EXTENSION OUTLET OR SECTION.
- CAP THE CURB INLET AND EXTENSION WITH A STEEL PLATE APPROVED BY THE ENGINEER AND CONSTRUCT THE ROADWAY OVER THE PLATE.
- AFTER THE ROADWAY IS COMPLETED, LIFT FROM TO THE FINAL FINISH CONCRETE GRADE. CUT THE PRECAST CURB INLET AND EXTENSION. THE PLATE AND CURB INLET AND EXTENSION SHALL BE REMOVED AND FOR EXTENSION.

CONCRETE INLET BOX CONFIGURATIONS (LOWER UNITS)

MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
TYPE "C" INLET (TYPE I & II) & INLET EXTENSION STANDARDS
SHEET 1 OF 3

REINFORCING STEEL (FOR Hu=11")

UPPER UNIT 10' X 3'-0" (TYPE I)					UPPER UNIT 10' X 3'-0" (TYPE II)				
BAR NO.	SIZE	SPAC.	LENGTH	WEIGHT	BAR NO.	SIZE	SPAC.	LENGTH	WEIGHT
A	#4	12"	10'-0"	40	B	#4	12"	8'-0"	30
B	#4	12"	8'-0"	30	C	#4	12"	8'-0"	30
C	#4	12"	8'-0"	30	D	#4	12"	8'-0"	30
D	#4	12"	8'-0"	30	E	#4	12"	8'-0"	30
E	#4	12"	8'-0"	30	F	#4	12"	8'-0"	30
F	#4	12"	8'-0"	30	G	#4	12"	8'-0"	30
G	#4	12"	8'-0"	30	H	#4	12"	8'-0"	30
H	#4	12"	8'-0"	30	I	#4	12"	8'-0"	30
I	#4	12"	8'-0"	30	J	#4	12"	8'-0"	30
J	#4	12"	8'-0"	30	K	#4	12"	8'-0"	30
K	#4	12"	8'-0"	30	L	#4	12"	8'-0"	30
L	#4	12"	8'-0"	30	M	#4	12"	8'-0"	30
M	#4	12"	8'-0"	30	N	#4	12"	8'-0"	30
N	#4	12"	8'-0"	30	O	#4	12"	8'-0"	30
O	#4	12"	8'-0"	30	P	#4	12"	8'-0"	30
P	#4	12"	8'-0"	30	Q	#4	12"	8'-0"	30
Q	#4	12"	8'-0"	30	R	#4	12"	8'-0"	30
R	#4	12"	8'-0"	30	S	#4	12"	8'-0"	30
S	#4	12"	8'-0"	30	T	#4	12"	8'-0"	30
T	#4	12"	8'-0"	30	U	#4	12"	8'-0"	30
U	#4	12"	8'-0"	30	V	#4	12"	8'-0"	30
V	#4	12"	8'-0"	30	W	#4	12"	8'-0"	30
W	#4	12"	8'-0"	30	X	#4	12"	8'-0"	30
X	#4	12"	8'-0"	30	Y	#4	12"	8'-0"	30
Y	#4	12"	8'-0"	30	Z	#4	12"	8'-0"	30
Z	#4	12"	8'-0"	30					

CLASS "A" CONCRETE QUANTITIES (FOR Hu = 11")

DEPRESSION SLAB	C.Y.	UPPER UNIT (ONLY)	C.Y.
10' INLET	0.7	10' X 3'-0" CURB INLET	1.9
10' EXTENSION	0.7	10' X 3'-0" CURB INLET	2.7
		10' EXTENSION	1.0

MANHOLE LID & RING DETAIL (ITEM 409)

NOTES FOR MANHOLE LID AND RING:

- FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, CHECK SAN ANTONIO PUBLIC WORKS DEPT.
- DESIGN, MANUFACTURE AND MANUFACTURER'S LID AND RING RING.
- LOAD BEARING CAPACITY OF 10-00 MACHIN.
- THE LOAD BEARING SURFACES SHALL BE MACHINE GRIND.
- THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 90 LBS.

CONCRETE INLET LID CONFIGURATIONS (UPPER UNITS)

MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
TYPE "C" INLET (TYPE I & II) & INLET EXTENSION STANDARDS
SHEET 2 OF 3

UPPER UNIT INLET BOLTING DETAILS

PLAN VIEW, ELEVATION, SECTION A-A CURB INLET EXTENSION TYPE E

LOWER UNIT INLET BOLTING DETAILS

PLAN VIEW, ELEVATION, SECTION A-A CURB INLET EXTENSION TYPE E

INLET BOLTING DETAILS SHOWING CURB INLET TO EXTENSION

TYPE "CI" INLET WITH INLET EXTENSION BOXES

MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
TYPE "C" INLET (TYPE I & II) & INLET EXTENSION STANDARDS
SHEET 3 OF 3

PIPE BEDDING & BACKFILL DETAILS

TYPICAL DETAIL, OPTIONAL DETAIL

STRUCTURAL EXCAVATION AT JUNCTION BOXES

NO SCALE

CAST-IN-PLACE BOX CULVERT

PRECAST BOX CULVERT

CONCRETE BOX CULVERT

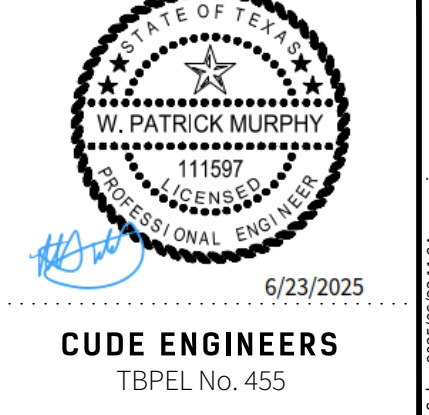
STRUCTURAL EXCAVATIONS AT DRAINAGE INLETS

NO SCALE

MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
PIPE BEDDING & MISCELLANEOUS DRAINAGE DETAILS

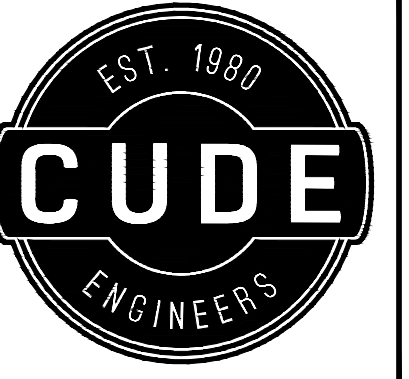
DATE
6/23/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

REVISIONS
1. 2025-05-28 - UPDATED DETAIL
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6/23/2025
CUDE ENGINEERS
TBPEL No. 455

C6.D1



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GEORGE'S RANCH
UNIT 2B
DRAINAGE DETAILS

SCHEDULE FOR REINFORCING STEEL

SHAPE	BAR NO.	NO.	SIZE	SPACING	LENGTH	WEIGHT
STRAIGHT	A	24	4	9" O.C.	8'-1"	130
STRAIGHT	B	48	5	8" O.C.	9'-6"	476
STRAIGHT	C	48	5	8" O.C.	4'-3"	273
STRAIGHT	D	24	4	9" O.C.	8'-1"	130
STRAIGHT	E	28	3	12" O.C.	6'-11"	73
STRAIGHT	G ₁	28	4	12" O.C.	8'-6"	103
STRAIGHT	G ₂	4	AS SHOWN	8'-1"	43	
STRAIGHT	H	32	3	12" O.C.	7'-3"	89
STRAIGHT	J	8	8	2 1/2" O.C.	4'-11"	59
TOTAL:						1,364 LBS.

CLASS "A" CONCRETE - 8.00 C.U. YDS. (DOES NOT INCLUDE MANHOLE OPENINGS OR PIPE OPENINGS)

NOTE: BAR SIZE AND SPACING BASED ON SPANS AS SHOWN - ANY REVISIONS TO THESE SPANS SHALL INCLUDE A REVISION ON STEEL REED.

1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A" 3,000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE ASTM A-618 THE DEFORMATION SHALL CONFORM TO ASTM A-305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (2,500 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).
8. PAYMENT FOR ALL EXCAVATION BACKFILLING, CONCRETE REINFORCING STEEL, VERTICAL STACK RING AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 - "STORM SEWER JUNCTION BOXES AND INLETS".

JUNCTION BOX TOP SLAB SHOWING STEEL

VARIATION OF VERTICAL STACK

COVER SECTION MANHOLE LID & RING DETAIL

CURVED DEFLECTOR DETAIL

7x7x7 JUNCTION BOX STANDARDS

JANUARY 2005
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

TABLE OF REINFORCEMENT

REINFORCING BARS: #4 @ 9" O.C., #5 @ 8" O.C., #6 @ 12" O.C. (IF APPLICABLE)

CONCRETE: CLASS "A" 3,000 P.S.I. AT 28 DAYS

TYPICAL CHANNEL SECTION LOOKING DOWNSTREAM

CONVERSE CONTRACTION OR CONSTRUCTION JOINT

"SAW CUT" CONTRACTION JOINT

TRANSVERSE EXPANSION JOINT

REINFORCEMENT DETAIL TOE-DOWN

EXPANSION AND CONTRACTION JOINTS FOR CONCRETE CHANNEL LINING

WEEP HOLES DETAILS FOR SIDE SLOPES

GENERAL NOTES

1. CONCRETE FOR CHANNEL RIP-RAP SHALL BE CLASS "A" 3,000 P.S.I.
2. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER UNLESS OTHERWISE SHOWN.
3. ALL REINFORCEMENT SHALL MEET ASTM SPECIFICATIONS AS CALLED FOR IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
4. NEW RIP-RAP SHOULD BE ATTACHED TO EXISTING RIP-RAP BY NO. 4 BARS DOWNWARD 8" AND EXISTING RIP-RAP THESE BARS ARE TO BE SPACED 12" O.C. AND HAVE A LENGTH OF 8".

MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

TYPICAL CONCRETE CHANNEL RIP-RAP STANDARDS

PLAN VIEW

SECTION "A-A"

FRONT VIEW

OPENING DETAIL FOR CURB SECTION

MANHOLE LID & RING DETAIL (ITEM 403)

ISOMETRIC VIEW

REINFORCING STEEL SCHEDULE

INLET SIZE	Bar No.	Size	Spa.	Length	Weight (lbs.)
L = 15'-0" D = 6'-0" INLET(S): O-1	A	39	4	5' 0" x 12"	437.46
	B	39	4	7' 1 3/4"	185.16
	C	45	4	9"	135.27
	D	26	4	10"	279.34
	E	12	4	10 1/2"	62.79
	F	17	5	12"	39.89
L = 20'-0" D = 5'-0" INLET(S): H-3	A	39	4	5' 0" x 12"	385.55
	B	39	4	7' 1 3/4"	160.11
	C	43	4	9"	129.26
	D	24	4	10"	257.85
	E	12	4	10 1/2"	54.78
	F	17	5	12"	39.89
L = 20'-0" D = 9'-0" INLET(S): H-2	A	39	4	5' 0" x 12"	385.55
	B	39	4	10' 1 3/4"	264.32
	C	63	4	9"	159.32
	D	30	4	10"	322.31
	E	12	4	10 1/2"	66.94
	F	17	5	12"	39.89

GENERAL NOTES

1. ALL BARS INTERCEPTING MANHOLE RING & REINFORCED CONCRETE PIPE SHALL BE FIELD CUT.
2. CONCRETE FOR STRUCTURES SHALL BE CLASS "A" 3,000 P.S.I. AT 28 DAYS.
3. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER UNLESS OTHERWISE SHOWN.
4. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
5. REINFORCING STEEL SHALL MEET ASTM SPECIFICATIONS AS CALLED FOR IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
6. CONSTRUCTION JOINTS SHALL BE SHOWN AT SPACES MAY BE MADE AT MAXIMUM 40' IF THE JOINTS ARE TO BE SHOWN WITH CONCRETE FILL TO EFFECT DRAINAGE TO OUTLET PIPE.
7. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-618 GRADE 60 REQUIREMENTS.
8. BARS OF JOINT PART TO BE SHOWN WITH CONCRETE FILL TO EFFECT DRAINAGE TO OUTLET PIPE.
9. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER UNLESS OTHERWISE SHOWN.
10. PAYMENT FOR ALL EXCAVATION BACKFILLING, CONCRETE REINFORCING STEEL, VERTICAL STACK RING AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 - "STORM SEWER JUNCTION BOXES AND INLETS".

JANUARY 2005
STANDARD PLANS
CITY OF SAN ANTONIO, TEXAS
DEPARTMENT OF PUBLIC WORKS

TYPE "C" INLET DETAILS

CONCRETE COLLAR DETAIL (N.T.S.)

GABION STYLE ROCK EROSION CONTROL MATRESS DETAIL (N.T.S.)

WEATHERED CONCRETE RIP-RAP FINISH

REINFORCING STEEL SCHEDULE

INLET SIZE	Bar No.	Size	Spa.	Length	Weight (lbs.)
L = 15'-0" D = 6'-0" INLET(S): O-1	A	39	4	5' 0" x 12"	437.46
	B	39	4	7' 1 3/4"	185.16
	C	45	4	9"	135.27
	D	26	4	10"	279.34
	E	12	4	10 1/2"	62.79
	F	17	5	12"	39.89
L = 20'-0" D = 5'-0" INLET(S): H-3	A	39	4	5' 0" x 12"	385.55
	B	39	4	7' 1 3/4"	160.11
	C	43	4	9"	129.26
	D	24	4	10"	257.85
	E	12	4	10 1/2"	54.78
	F	17	5	12"	39.89
L = 20'-0" D = 9'-0" INLET(S): H-2	A	39	4	5' 0" x 12"	385.55
	B	39	4	10' 1 3/4"	264.32
	C	63	4	9"	159.32
	D	30	4	10"	322.31
	E	12	4	10 1/2"	66.94
	F	17	5	12"	39.89

GENERAL NOTES

1. ALL BARS INTERCEPTING MANHOLE RING & REINFORCED CONCRETE PIPE SHALL BE FIELD CUT.
2. CONCRETE FOR STRUCTURES SHALL BE CLASS "A" 3,000 P.S.I. AT 28 DAYS.
3. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER UNLESS OTHERWISE SHOWN.
4. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
5. REINFORCING STEEL SHALL MEET ASTM SPECIFICATIONS AS CALLED FOR IN THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
6. CONSTRUCTION JOINTS SHALL BE SHOWN AT SPACES MAY BE MADE AT MAXIMUM 40' IF THE JOINTS ARE TO BE SHOWN WITH CONCRETE FILL TO EFFECT DRAINAGE TO OUTLET PIPE.
7. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A-618 GRADE 60 REQUIREMENTS.
8. BARS OF JOINT PART TO BE SHOWN WITH CONCRETE FILL TO EFFECT DRAINAGE TO OUTLET PIPE.
9. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER UNLESS OTHERWISE SHOWN.
10. PAYMENT FOR ALL EXCAVATION BACKFILLING, CONCRETE REINFORCING STEEL, VERTICAL STACK RING AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 - "STORM SEWER JUNCTION BOXES AND INLETS".

DATE
6/23/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

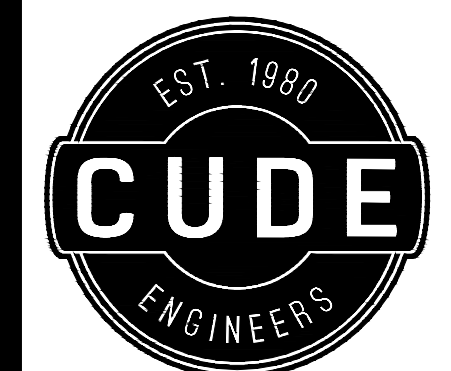
REVISIONS

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6/23/2025
CUDE ENGINEERS
TBPEL No. 455

C6.D2



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

GEORGE'S RANCH
UNIT 2B
DRAINAGE DETAILS

DATE
6/23/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

REVISIONS

- 2025-06-20 - ADDED TYPED BOX CULVERT HEADWALL AND TRM DETAILS.
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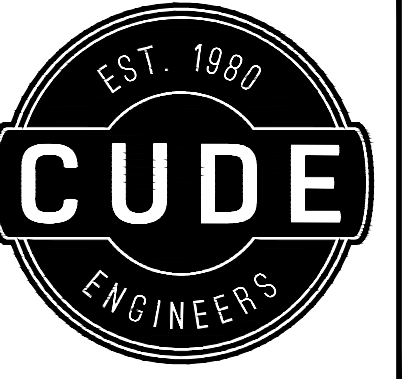


6/23/2025
CUDE ENGINEERS
TBP# NO. 455

C6.D3

TABLE OF DIMENSIONS AND REINFORCING STEEL
(Wings for one structure only)

Dimensions	Variable Reinforcing	Estimated Quantities per ft. of wing (2-wings)	Estimated Quantities per ft. of wing (1-wing)								
W	X	Y	Z								
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	48.64	2,408	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	49.31	2,424	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	49.98	2,440	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	50.65	2,456	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	51.32	2,472	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	51.99	2,488	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	52.66	2,504	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	53.33	2,520	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	54.00	2,536	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	54.67	2,552	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	55.34	2,568	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	56.01	2,584	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	56.68	2,600	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	57.35	2,616	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	58.02	2,632	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	58.69	2,648	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	59.36	2,664	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	60.03	2,680	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	60.70	2,696	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	61.37	2,712	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	62.04	2,728	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	62.71	2,744	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	63.38	2,760	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	64.05	2,776	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	64.72	2,792	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	65.39	2,808	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	66.06	2,824	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	66.73	2,840	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	67.40	2,856	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	68.07	2,872	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	68.74	2,888	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	69.41	2,904	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	70.08	2,920	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	70.75	2,936	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	71.42	2,952	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	72.09	2,968	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	72.76	2,984	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	73.43	3,000	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	74.10	3,016	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	74.77	3,032	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	75.44	3,048	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	76.11	3,064	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	76.78	3,080	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	77.45	3,096	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	78.12	3,112	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	78.79	3,128	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	79.46	3,144	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	80.13	3,160	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	80.80	3,176	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	81.47	3,192	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	82.14	3,208	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	82.81	3,224	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	83.48	3,240	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	84.15	3,256	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	84.82	3,272	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	85.49	3,288	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	86.16	3,304	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	86.83	3,320	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	87.50	3,336	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	88.17	3,352	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	88.84	3,368	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	89.51	3,384	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	90.18	3,400	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	90.85	3,416	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	91.52	3,432	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	92.19	3,448	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	92.86	3,464	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	93.53	3,480	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	94.20	3,496	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	94.87	3,512	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	95.54	3,528	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	96.21	3,544	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	96.88	3,560	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	97.55	3,576	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	98.22	3,592	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	98.89	3,608	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	99.56	3,624	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	100.23	3,640	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	100.90	3,656	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	101.57	3,672	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	102.24	3,688	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	102.91	3,704	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	103.58	3,720	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	104.25	3,736	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	104.92	3,752	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	105.59	3,768	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	106.26	3,784	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	106.93	3,800	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	107.60	3,816	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	108.27	3,832	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	108.94	3,848	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	109.61	3,864	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	110.28	3,880	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	110.95	3,896	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	111.62	3,912	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	112.29	3,928	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	112.96	3,944	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	113.63	3,960	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	114.30	3,976	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	114.97	3,992	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	115.64	4,008	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	116.31	4,024	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	116.98	4,040	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	117.65	4,056	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	118.32	4,072	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	118.99	4,088	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	119.66	4,104	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	120.33	4,120	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	121.00	4,136	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	121.67	4,152	6.85	0.071
2'-0"	2'-10"	10'-0"	1'-0"	#4	#4	#4	1'-0"	122.34	4,168	6.85	0.071



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GEORGE'S RANCH
UNIT 2B
DRAINAGE DETAILS

DATE

6/23/2025

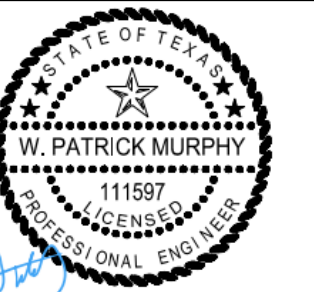
PROJECT NO.
03546.009

DRAWN BY
MAS/MGM

CHECKED BY
KMH/WPM

REVISIONS

1. _____
2. _____
3. _____
4. _____
5. _____
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8. _____
9. _____

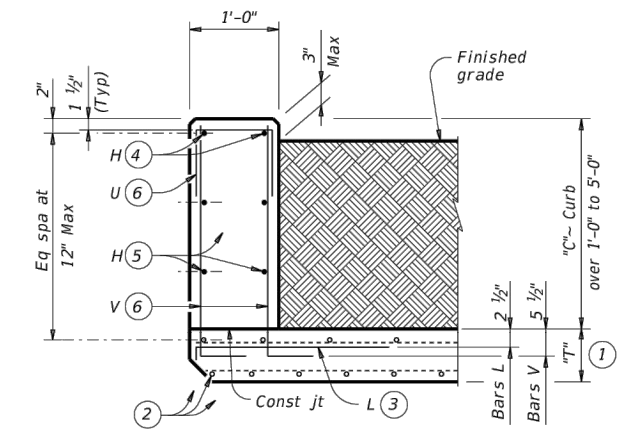


6/23/2025

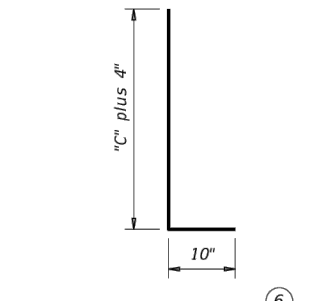
CUDE ENGINEERS
TBPEL No. 455

C6.D5

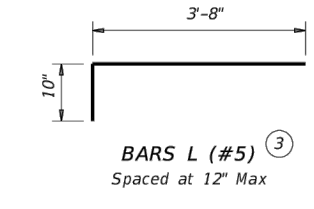
THIS SHEET IS GOVERNED BY THE "TYPICAL ENGINEERING PRACTICE ACT". NO PART OF THIS SHEET IS TO BE USED FOR ANY PURPOSE UNLESS SPECIFICALLY AUTHORIZED BY THE ENGINEER OF RECORD. THE USER OF THIS SHEET IS RESPONSIBLE FOR THE CORRECTNESS OF THE INFORMATION PROVIDED HEREON. THE USER OF THIS SHEET IS RESPONSIBLE FOR THE CORRECTNESS OF THE INFORMATION PROVIDED HEREON. THE USER OF THIS SHEET IS RESPONSIBLE FOR THE CORRECTNESS OF THE INFORMATION PROVIDED HEREON.



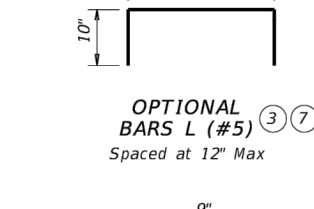
TYPICAL SECTION
Used for curbs over 1'-0" to 3'-0"



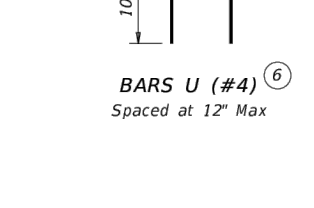
BARS V (#5)
Spaced at 12" Max



BARS L (#5)
Spaced at 12" Max



OPTIONAL BARS L (#5)
Spaced at 12" Max



BARS U (#4)
Spaced at 12" Max

1. "T" is equal to the culvert top slab thickness. For precast boxes with slabs less than 8" thick, see SCP-400 standard for additional details.
2. Adjust normal culvert slab bars as necessary to clear obstructions.
3. Place bars L as shown. Tilt hook as necessary to maintain cover.
4. Place normal culvert curb bars #4 as shown. Adjust as necessary to clear obstructions.
5. Additional bars #4 as required to maintain 12" Max spacing.
6. Replace normal culvert curb bars K with one bar U and two bars V as shown spaced at 12" Max. Adjust length of bars V as necessary to maintain clear cover.
7. Optional bars L are to be used only for precast box culverts with 3'-0" closure door.
8. Quantities shown are for Contractor's information only. Quantities are per linear foot of curb length. The value in table can be interpolated for intermediate values of curb height. "C" quantity includes bars K (when applicable).

TABLE OF ESTIMATED CURB QUANTITIES		
Curb Height (ft)	Cont. (CY/LF)	Reinf. Steel (LBS/LF)
1'-0"	0.037	10.4
1'-6"	0.056	14.5
2'-0"	0.074	18.6
2'-6"	0.093	22.7
3'-0"	0.111	26.8
3'-6"	0.130	30.9
4'-0"	0.148	35.0
4'-6"	0.167	39.1
5'-0"	0.185	43.2

CONSTRUCTION NOTES:
Adjust reinforcing steel as necessary to provide 1 1/2" cover. For vehicle safety, top of the curb must not project more than 3" above the finished grade.

MATERIAL NOTES:
Provide grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
Provide Class "C" concrete (f'c = 3,600 psi) minimum for curbs.
Provide bar laps, where required, as follows:
• Uncoated or galvanized - #4 - 1'-8" Min

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
These extended curb details have sufficient strength to allow for future retrofit of Type T631 or T631S railing. These details are suitable for use with PR1, PR2 and PR3 type rails. These details are not suitable for the mounting of other rail types. For new construction using T631 or T631S railing, use the T631-CM standard.
This Curb is considered as part of the Box Culvert for payment.

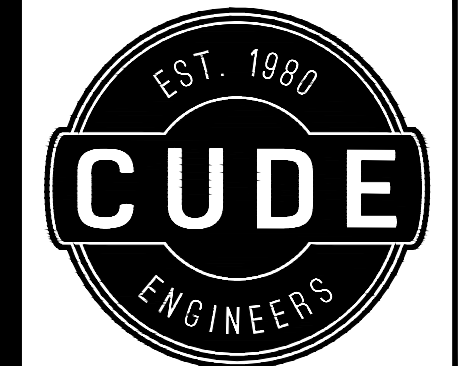
Curb dimensions are clear dimensions, unless noted otherwise.
Reinforcing bar dimensions shown are out-to-out of bar.

Texas Department of Transportation Bridge Division Standard

EXTENDED CURB DETAILS FOR BOX CULVERTS WITH CURBS OVER 1'-0" TO 5'-0" TALL

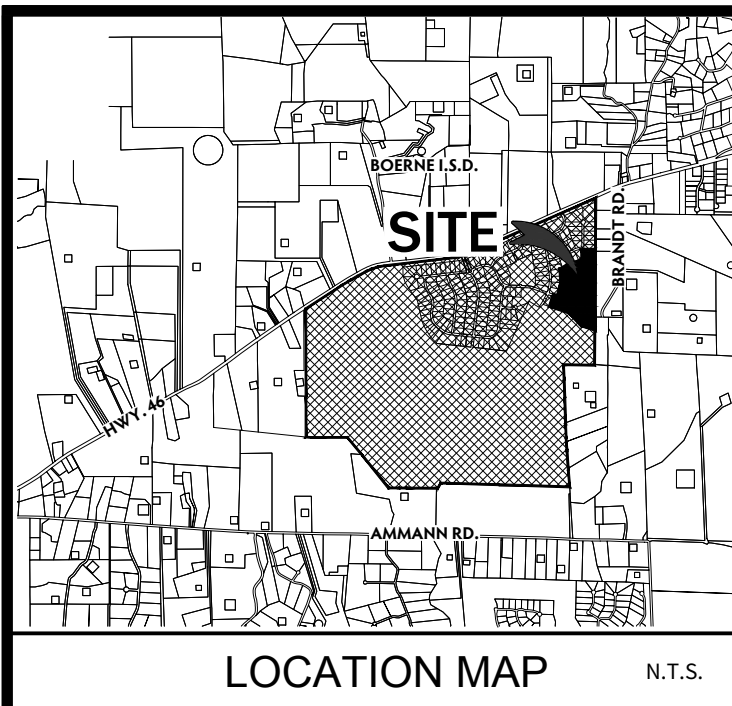
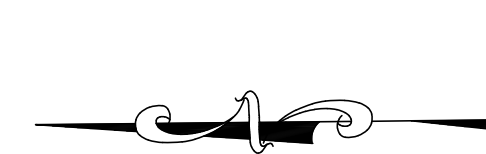
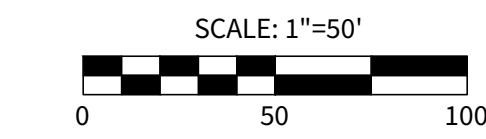
ECD

FILE CD-ECD-20.0pgs	DATE	BY	CHKD	IN	DATE	IN	DATE	IN	DATE
07/07	February 2020	WPM							

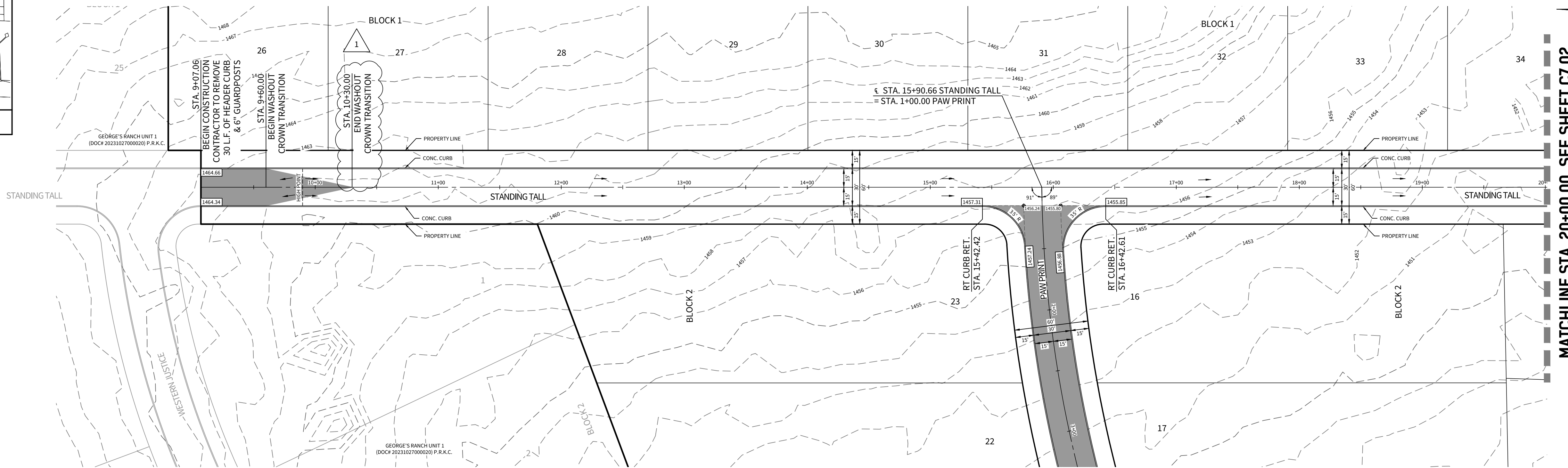


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**GEORGE'S RANCH
UNIT 2B**
STREET PLAN & PROFILE - STANDING TALL



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

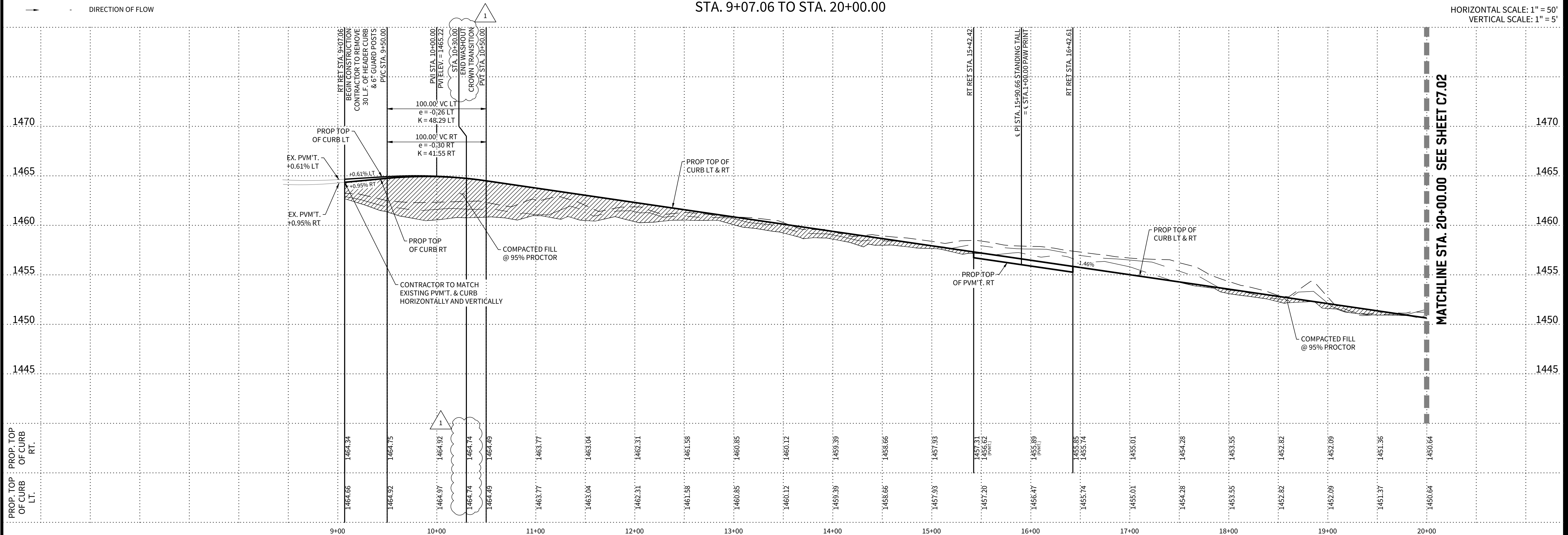


STANDING TALL

STA. 9+07.06 TO STA. 20+00.00

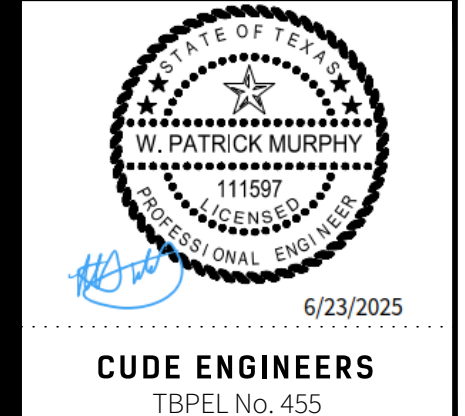
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VERTICAL SCALE: 1" = 5'

STREET WASHOUT (SEE DETAIL SHEET C7.D1)
DIRECTION OF FLOW



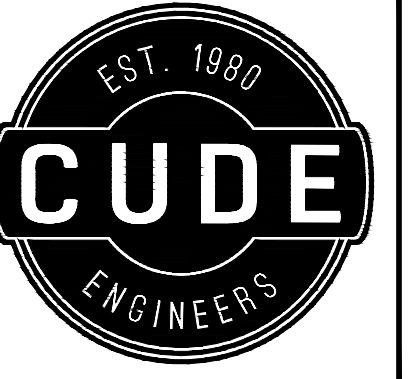
DATE
6/20/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

REVISIONS
1. 2025-06-20 UPDATE WASHOUT CROWN TRANSITION LENGTH
2.
3.
4.
5.
6.
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8.
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6/23/2025
CUDE ENGINEERS
TBPEL No. 455

C7.01



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GEORGE'S RANCH
UNIT 2B

STREET PLAN & PROFILE - STANDING TALL

DATE
6/20/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
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KMH/WPM

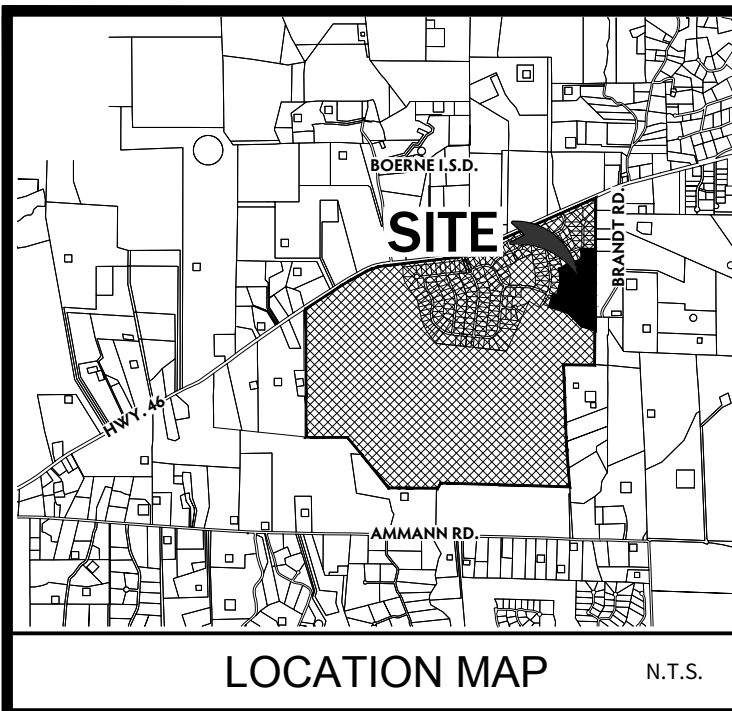
REVISIONS

- 2025-06-20 UPDATE WASHOUT CROWN TRANSITION LENGTH AND ALIGN VIEW PORTS.
-
-
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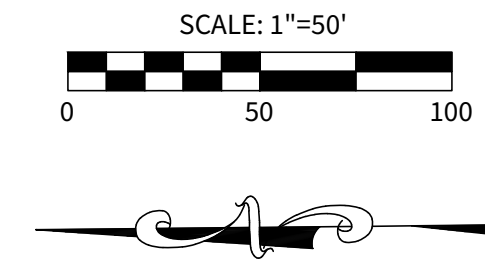


6/23/2025
CUDE ENGINEERS
TBPEL No. 455

C7.02

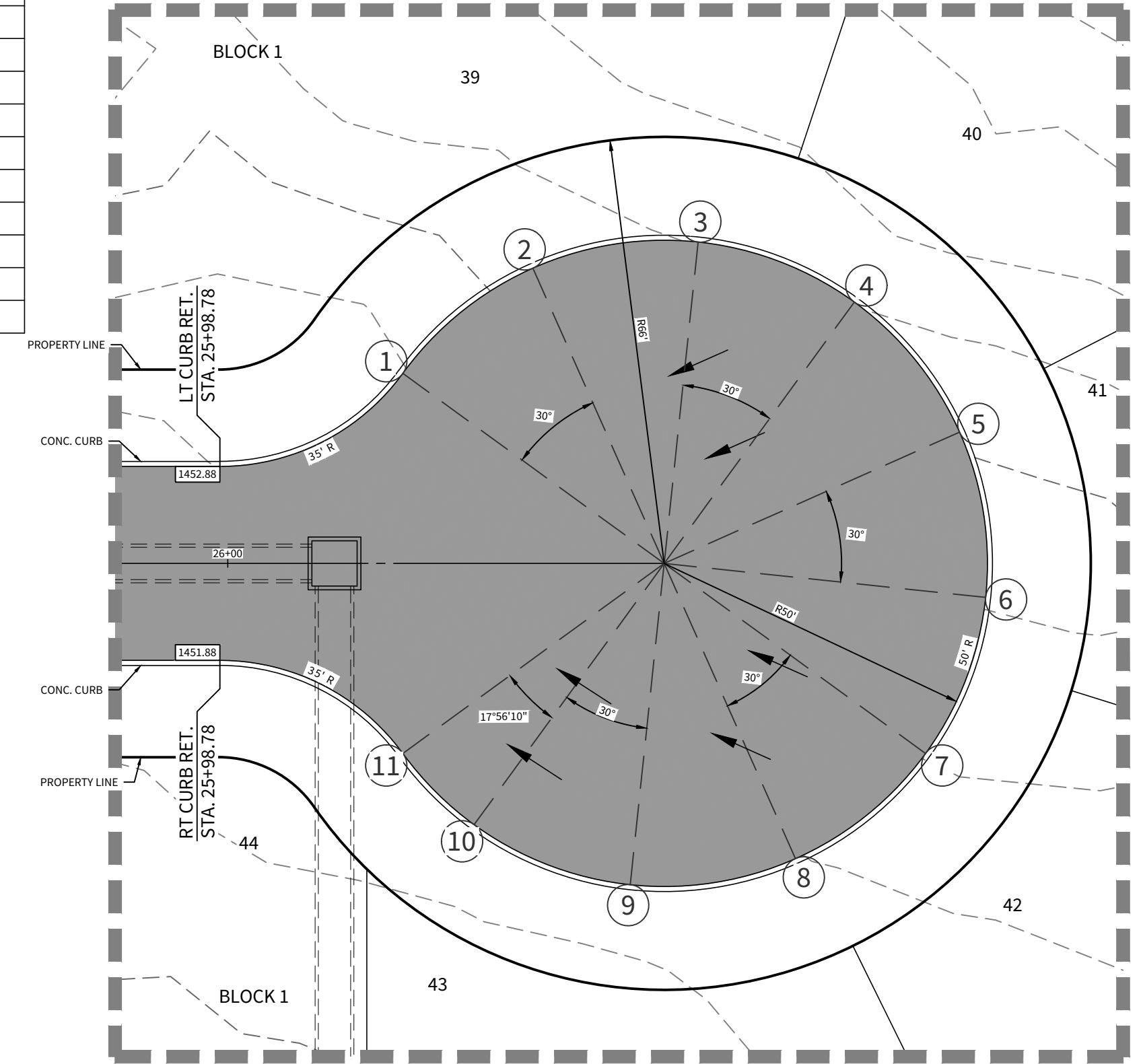
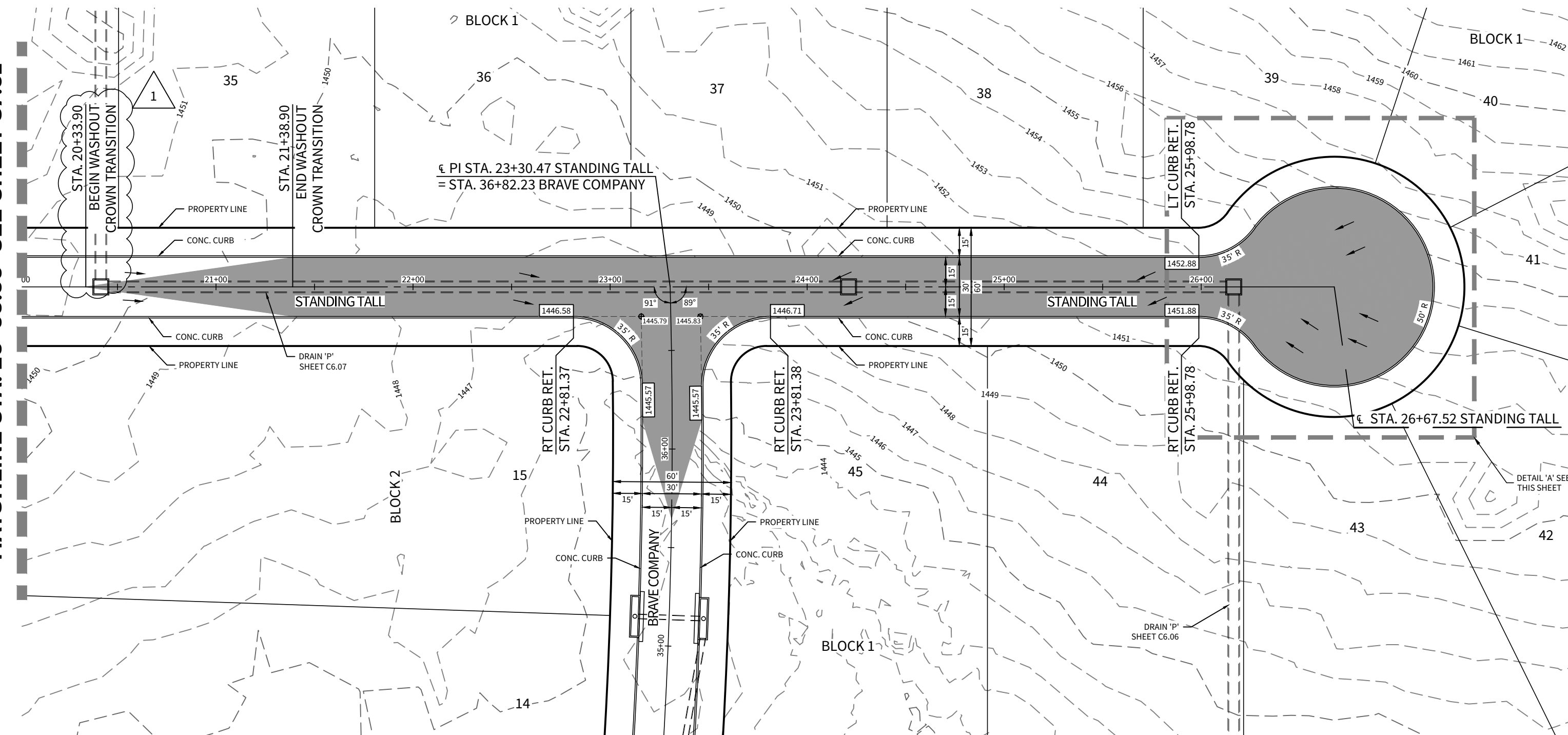


DEVELOPER:
THE LOOKOUT DEVELOPMENT GROUP, LP
CONTACT PERSON: MIKE SIEFERT
1001 CRYSTAL FALLS PARKWAY
LEANDER, TX 78641
TEL: (512) 690-4322



STANDING TALL CDS	
POINT	TOP OF CURB ELEVATION
1	1454.05
2	1454.79
3	1455.56
4	1456.00
5	1456.08
6	1455.82
7	1455.24
8	1454.57
9	1453.91
10	1453.25
11	1452.72

MATCHLINE STA. 20+00.00 SEE SHEET C7.01

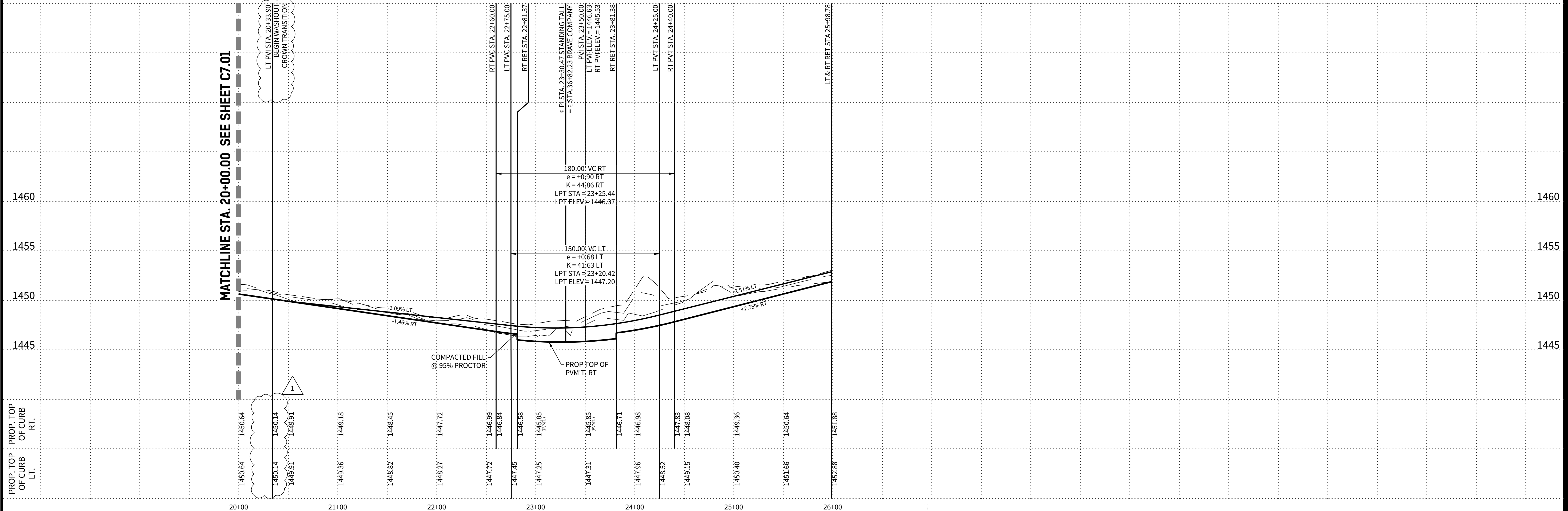


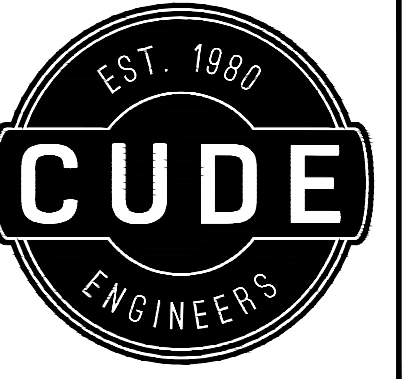
DETAIL 'A'
SCALE : 1" = 20'

STANDING TALL
STA. 20+00.00 TO STA. 25+98.78

STREET WASHOUT (SEE DETAIL SHEET C7.D1)
DIRECTION OF FLOW

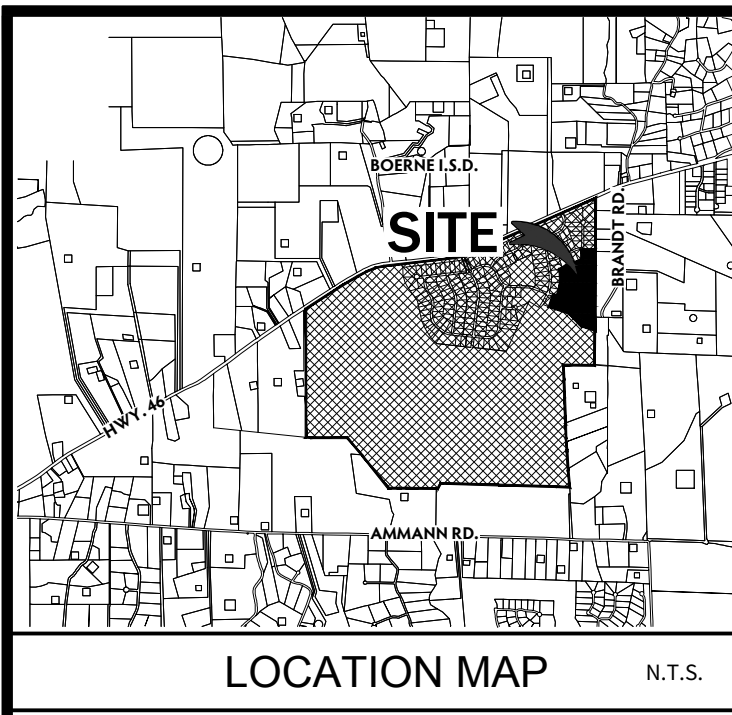
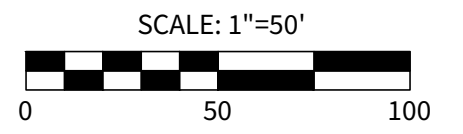
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



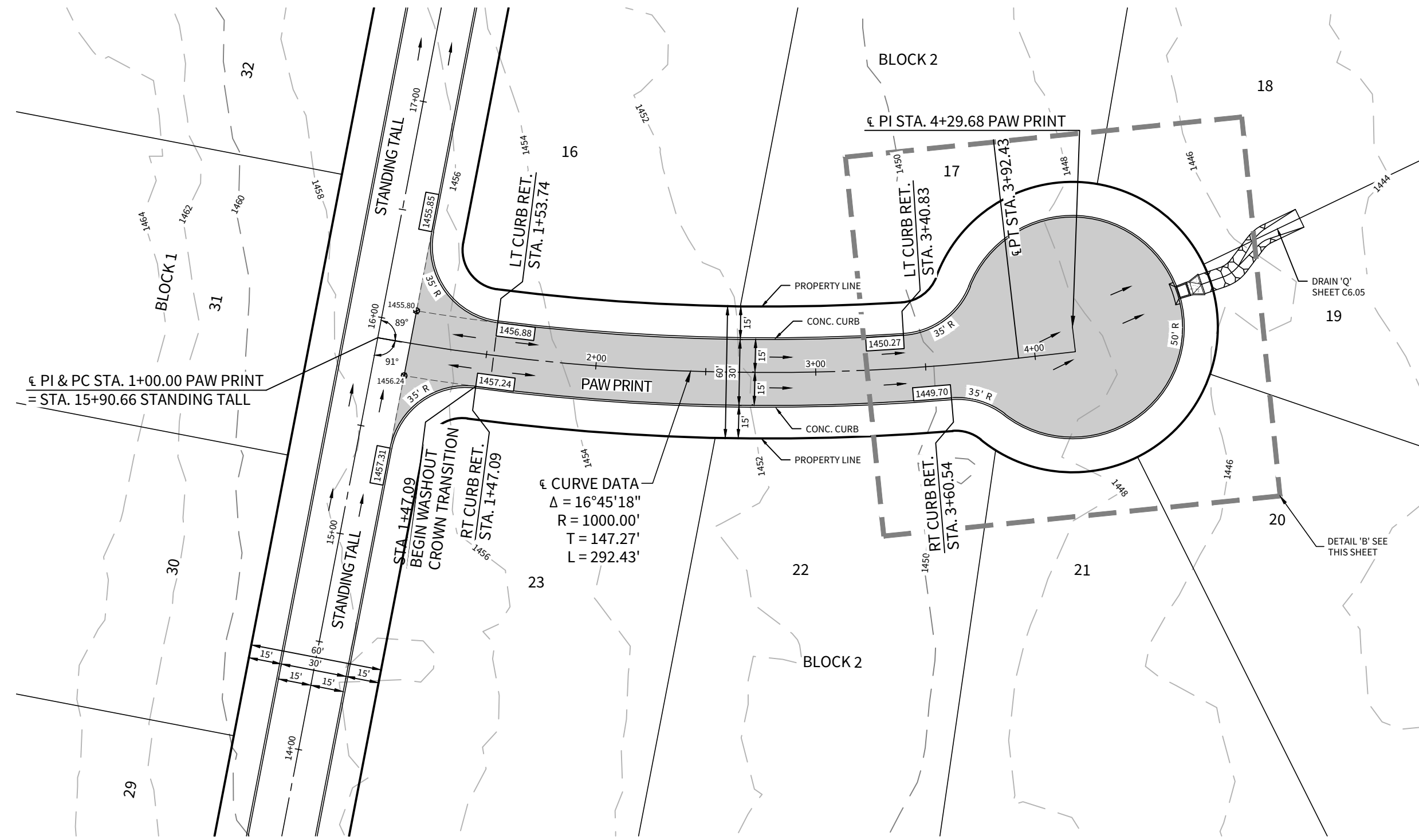


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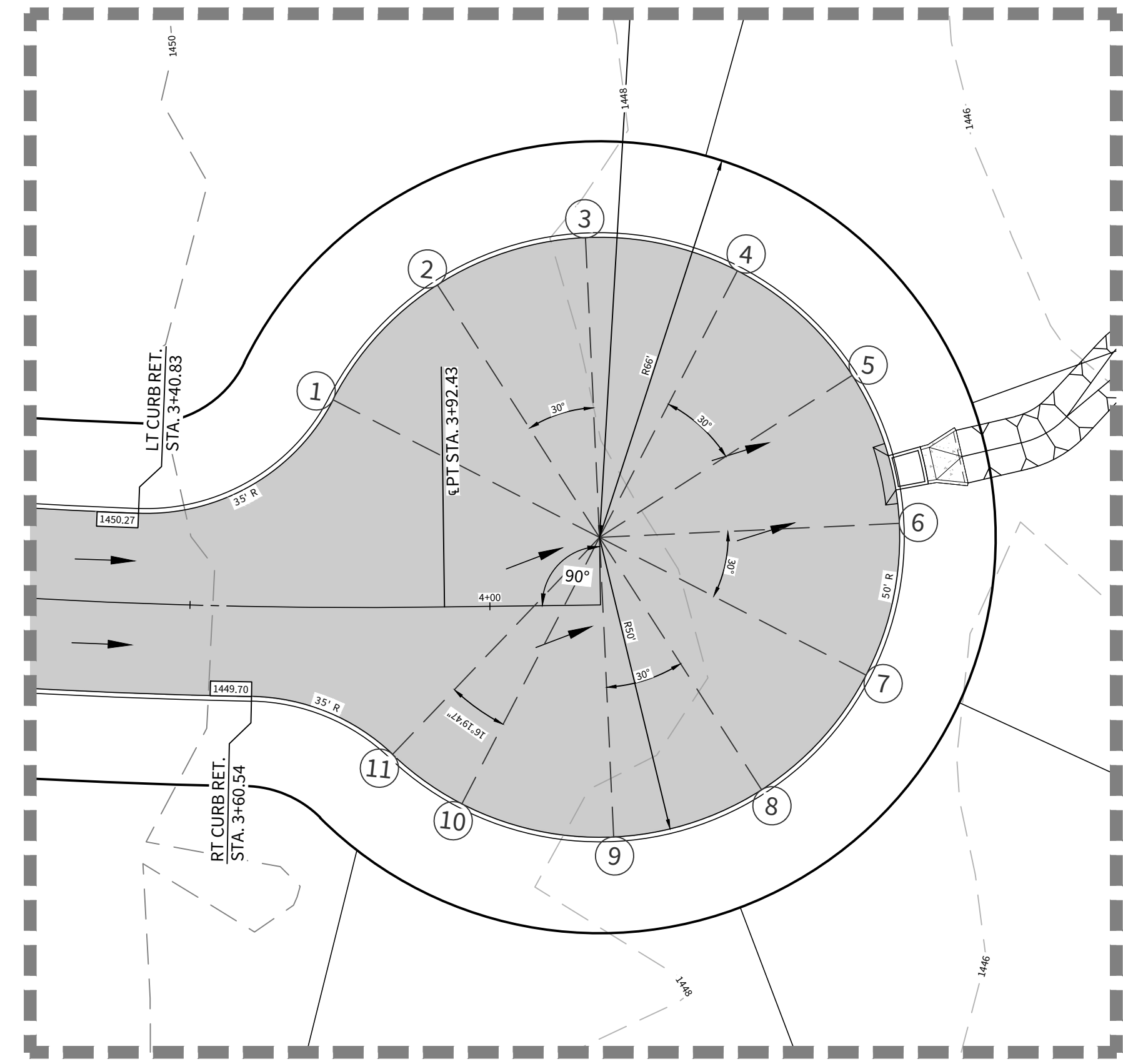
**GEORGE'S RANCH
UNIT 2B**
STREET PLAN & PROFILE - PAW PRINT



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



PAW PRINT CDS	
POINT	TOP OF CURB ELEVATION
1	1448.82
2	1448.04
3	1447.44
4	1447.02
5	1446.79
6	1446.74
7	1446.87
8	1447.19
9	1447.68
10	1448.36
11	1448.81



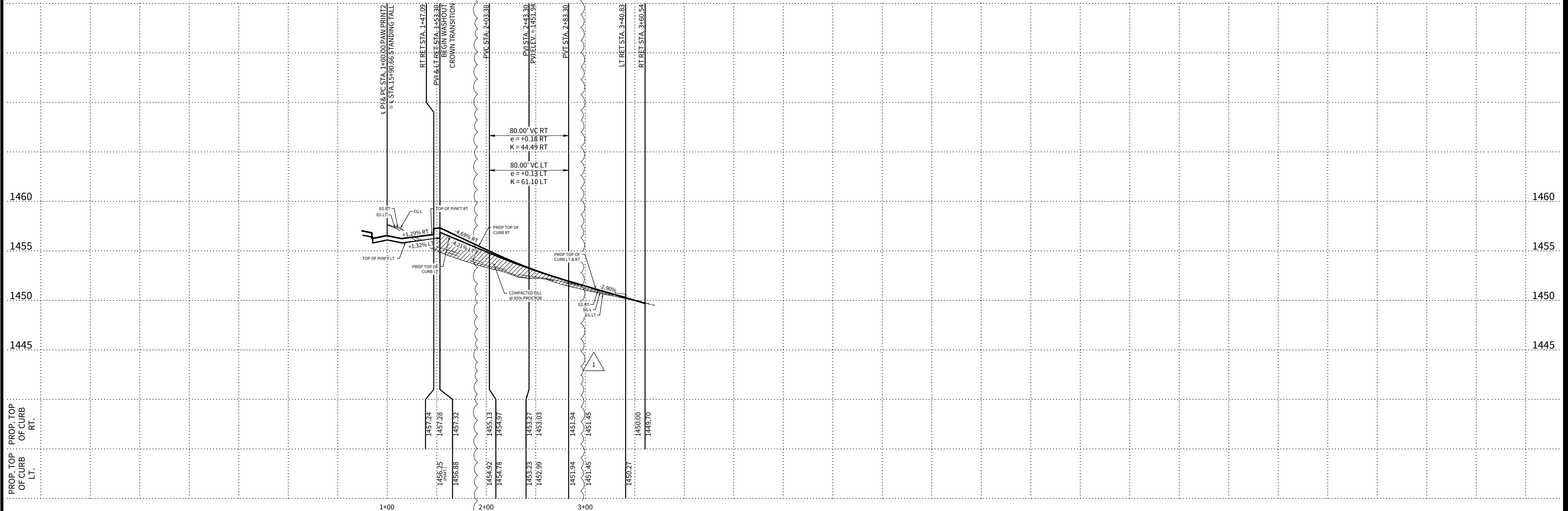
DETAIL 'B'
SCALE : 1" = 20'

- STREET WASHOUT (SEE DETAIL SHEET C7.D1)
 - DIRECTION OF FLOW

PAW PRINT

STA. 1+00.00 TO STA. 4+29.68

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

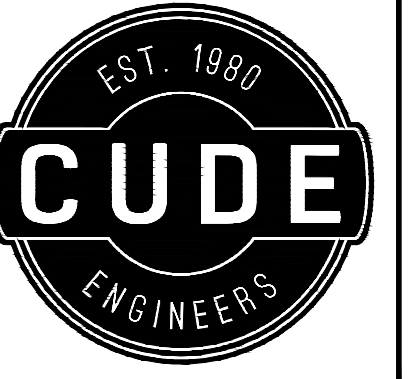


DATE
6/20/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

REVISIONS
 1. 2025-06-20 UPDATE WASHOUT CROWN TRANSITION LENGTH AND ADD VERTICAL CURVES TO PROFILE
 2.
 3.
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 5.
 6.
 7.
 8.
 9.

6/23/2025
CUDE ENGINEERS
 TBPEL No. 455

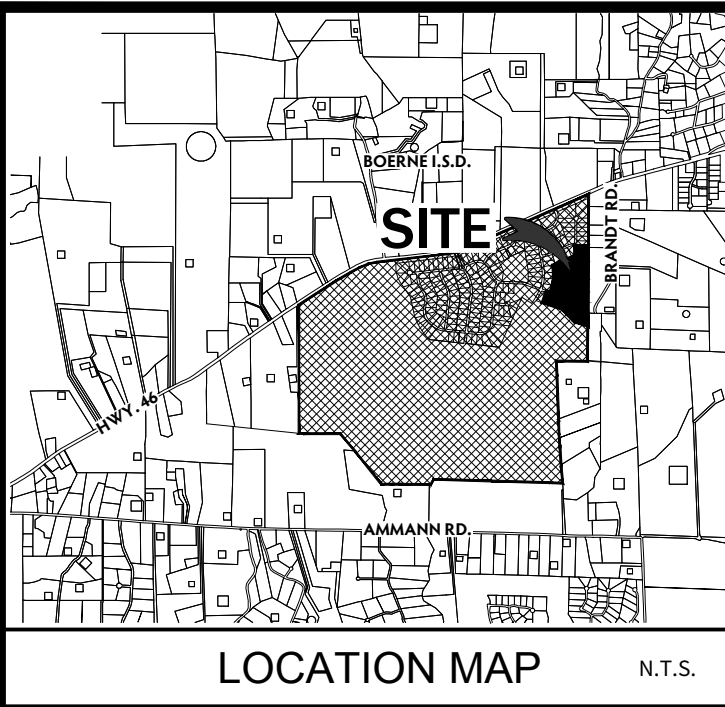
C7.03



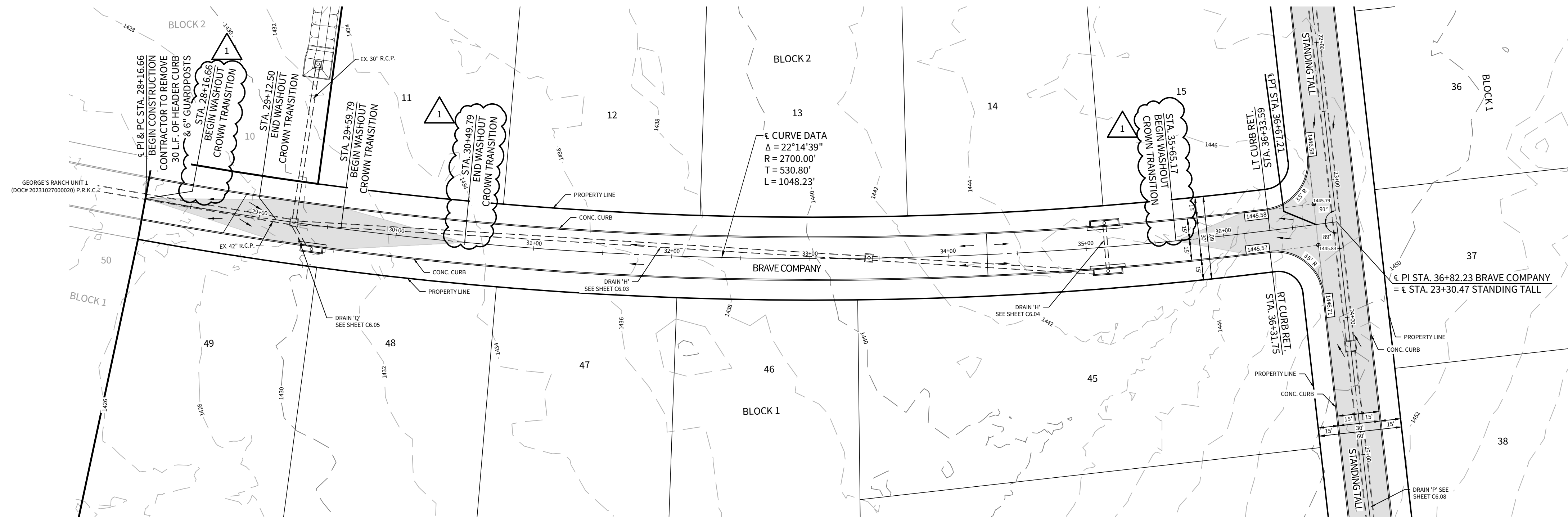
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San Antonio, Texas 78231
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GEORGE'S RANCH
UNIT 2B
STREET PLAN & PROFILE - BRAVE COMPANY

SCALE: 1"=50'
0 50 100



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

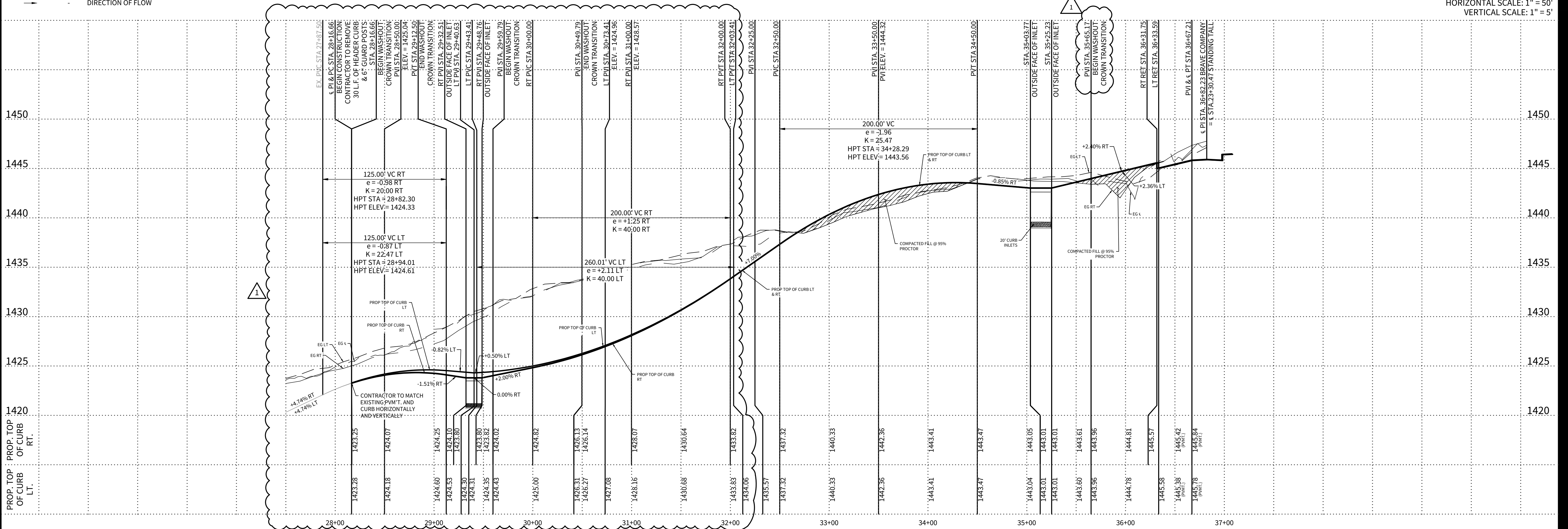


BRAVE COMPANY

STA. 28+16.66 TO STA. 36+82.23

STREET WASHOUT (SEE DETAIL SHEET C7.D1)
DIRECTION OF FLOW

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



DATE
6/23/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

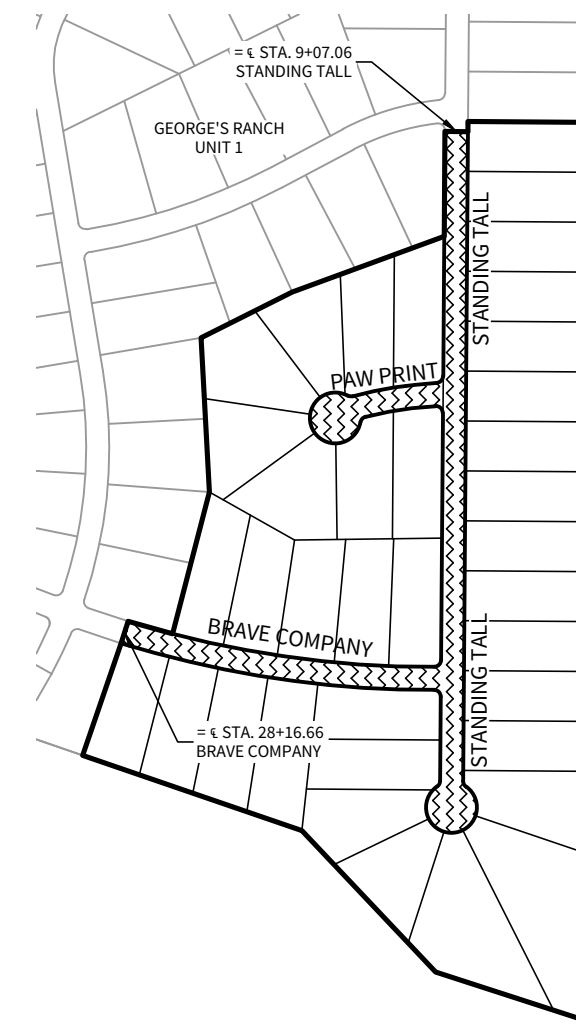
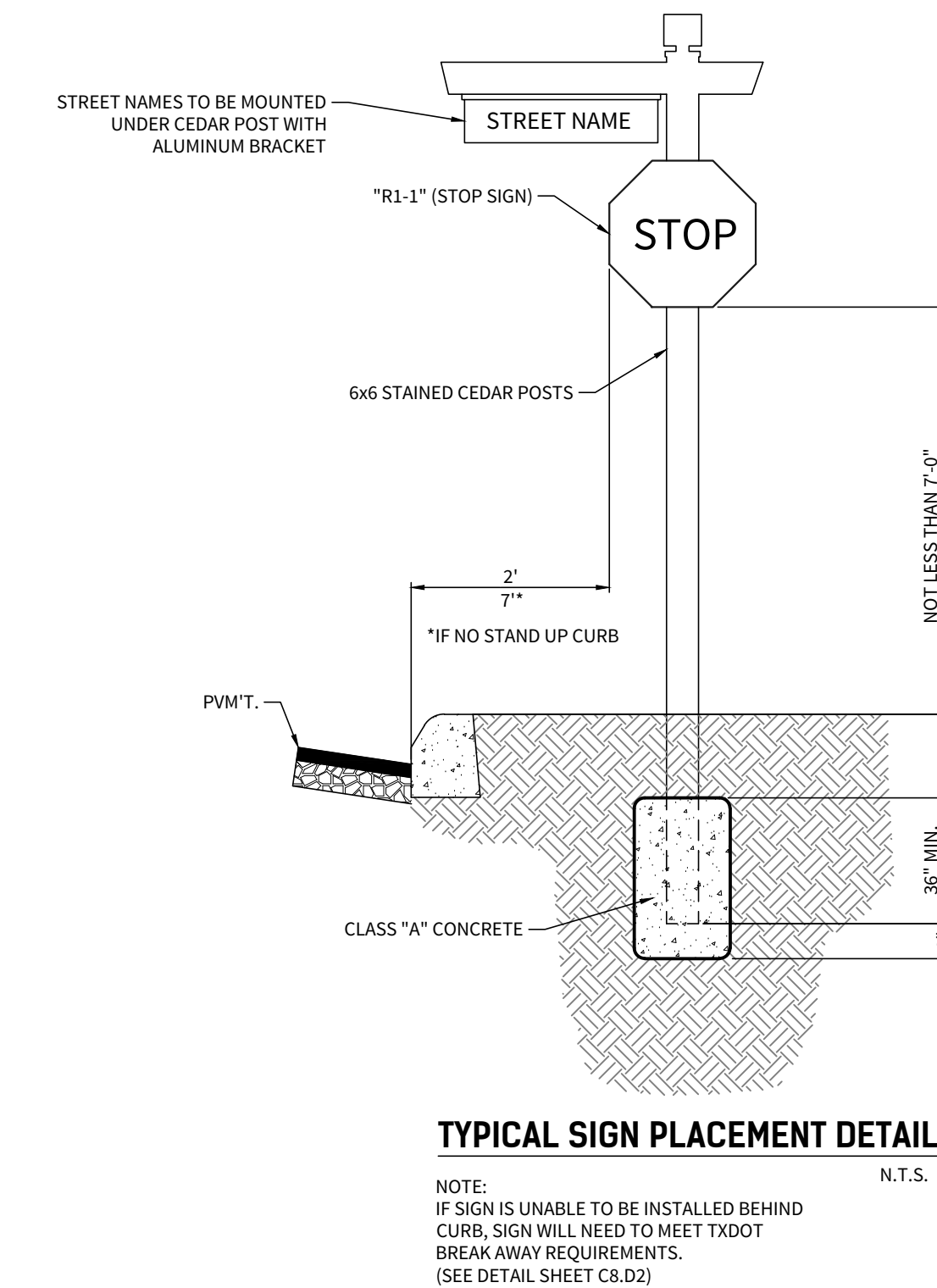
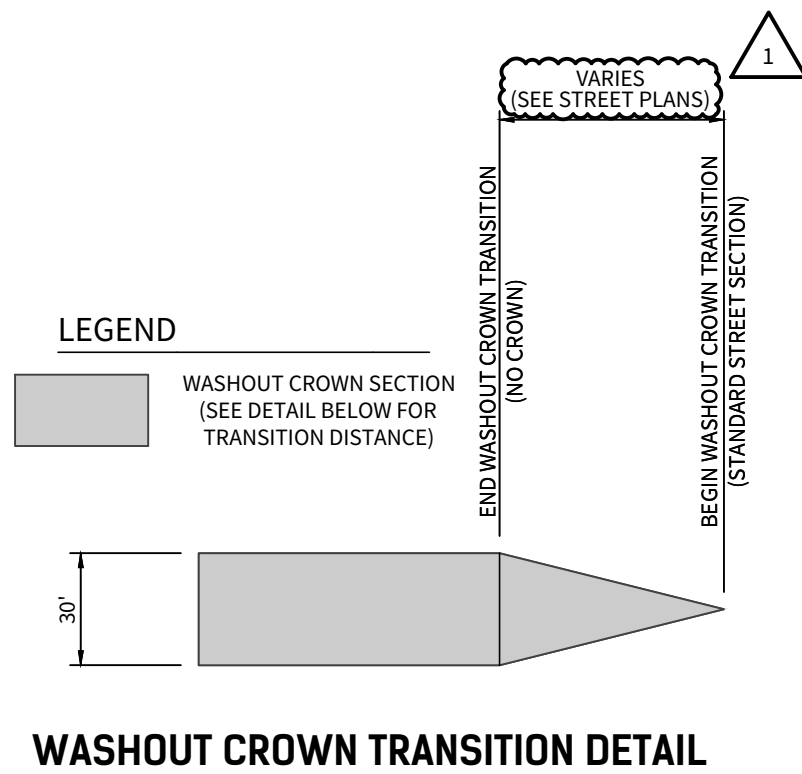
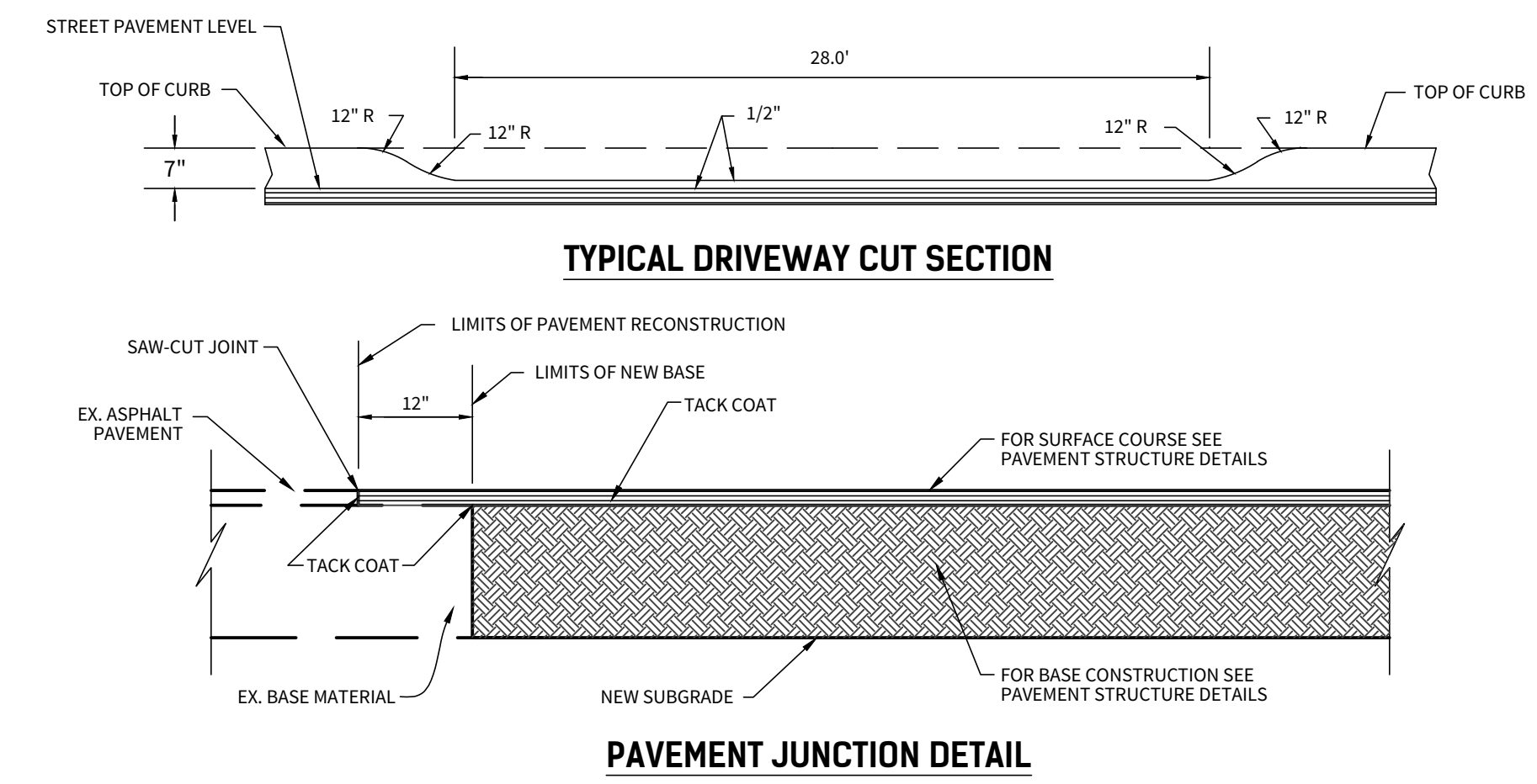
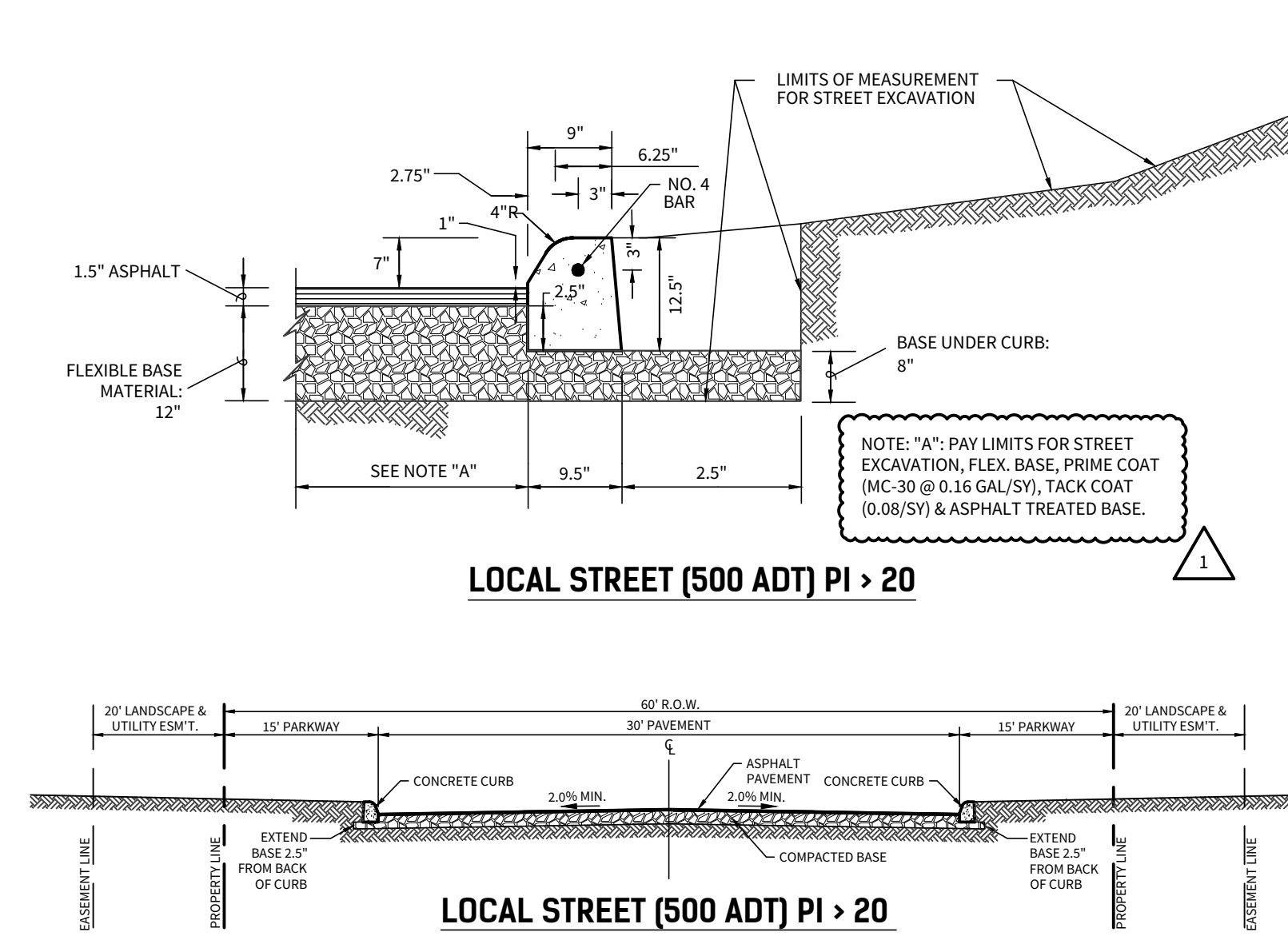
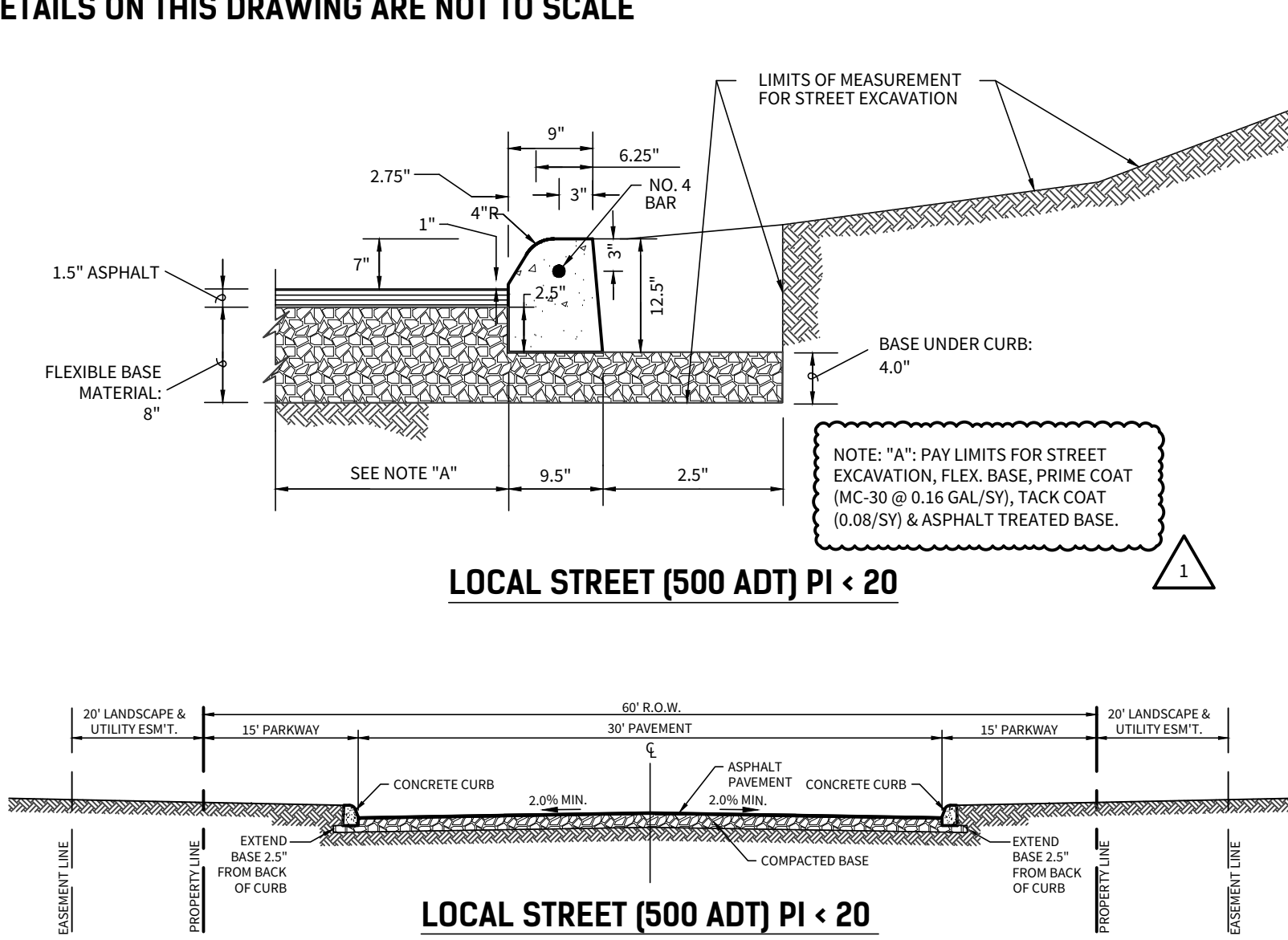
- REVISIONS
- 1. 2025-06-20 ADJUST PROFILE GRADES AND UPDATE WASHOUT CROWN TRANSITION LENGTH.
 - 2.
 - 3.
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 - 6.
 - 7.
 - 8.
 - 9.



CUDE ENGINEERS
TBPEL No. 455

C7.04

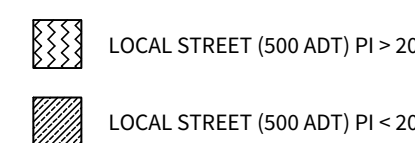
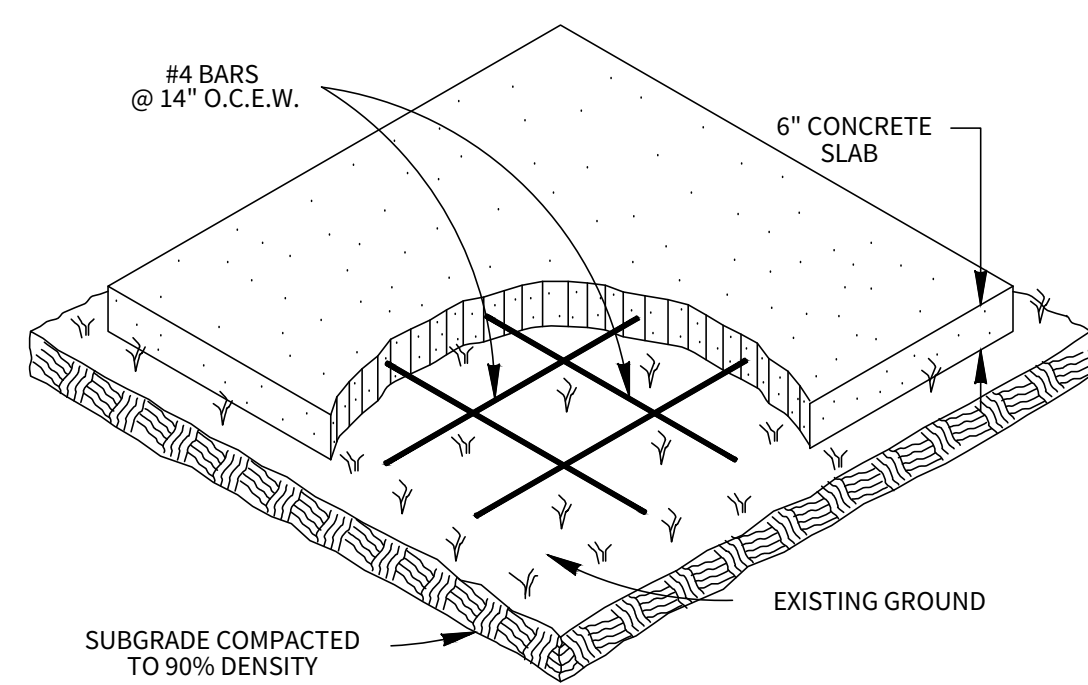
DETAILS ON THIS DRAWING ARE NOT TO SCALE



MAIL BOX PAD NOTE:

1. THE CONTRACTOR WILL CONSTRUCT SLABS FOR "TEMPORARY MAIL BOX COLLECTION PAD" FOR THE UNITED STATES POSTAL SERVICE WITH LOCATIONS AND SIZES SPECIFIED BY THE CITY ENGINEER DURING CONSTRUCTION.
2. THE CONSTRUCTION OF SLABS SHALL CONFORM TO ITEM 513 "REMOVING AND RELOCATING MAILBOXES".
3. PAYMENT WILL BE MADE UNDER ITEM 513.2 "COMMUNITY MAILBOX SLAB - PER SQUARE YARD".
4. UNIT PRICE WILL INCLUDE REMOVAL OF "TEMPORARY MAIL BOX COLLECTION PAD" SLABS AT THE END OF THE PROJECT. NO SEPARATE PAY ITEM.

COMMUNITY MAIL BOX SLAB
ITEM 513.2



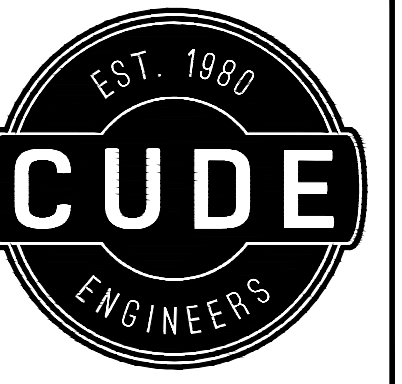
STREET PAVEMENT DESIGN OPTIONS

1. SUBGRADE - GEOTECH ENGINEER WILL BE PRESENT TO DETERMINE IF NATIVE LIMESTONE/ROCK SUBGRADE IS SUFFICIENT TO REPLACE LIME TREATMENT. IF LIME TREATMENT IS REPLACED BY NATIVE MARL/ROCK, KENDALL COUNTY PUBLIC WORKS WILL BE INFORMED OF ALL CHANGES. REVISIONS WILL BE SUBMITTED INDICATING WHERE LIME TREATMENT WAS USED, ALONG WITH STATIONING. CONTRACTOR TO REVIEW GEOTECH RECOMMENDATIONS PRIOR TO FINAL SUBGRADE PREPARATION. (REF. MLA GEOTECHNICAL REPORT #21201100.010)

NOTES:
1. ALL CURB SHALL BE CLASS C CONCRETE.

STREET TYPE	HMAC TYPE "D"	FLEX BASE (TY A GR 2)	LIME TREATED SUBGRADE (27 LB/SY)	BASE UNDER CURB	SUBGRADE PI
LOCAL STREET [500 ADT] PI < 20	1.5"	8"	----	4"	< 20
LOCAL STREET [500 ADT] PI > 20	1.5"	12"	----	8"	> 20

1. PAVEMENT DESIGN THICKNESS BASED ON GEOTECHNICAL REPORT (REF. MLA GEOTECHNICAL REPORT #21201100.010 - DATED JULY 2021). REFERENCE PROJECT GEOTECHNICAL REPORT AND PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND ALTERNATE PAVEMENT SECTIONS.
2. A GEOTECHNICAL ENGINEERING REPRESENTATIVE SHALL BE RETAINED TO: (1) OBSERVE THE SITE PREPARATION AND SUBGRADE OPERATIONS. (2) EVALUATE THE ACTUAL SUBGRADE MATERIAL CLASSIFICATION; AND (3) VERIFY THAT RECOMMENDATIONS ARE FOLLOWED. THE ACTUAL SUBGRADE CONDITION AT A PARTICULAR LOCATION WILL NEED TO BE EVALUATED DURING CONSTRUCTION ONCE THE SUBGRADE IS CUT/FILLED TO THE PROPER GRADE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIAL TESTING. TESTING TO BE PAID BY OWNER.
4. CONTRACTOR MAY LEAVE VERTICAL CUT BANKS AT R.O.W. LINE AND MEDIANS PROVIDED PROJECT GEOTECHNICAL ENGINEER DETERMINES ROCK IS COMPETENT TO STAND ON ITS OWN.
5. IF ALTERNATE PAVEMENT SECTION CHOSEN, KENDALL COUNTY SHALL BE PROVIDED WITH REVISED CONSTRUCTION PLANS INDICATING SELECTED PAVEMENT DESIGN PRIOR TO CONSTRUCTION.
6. PAVEMENT SECTIONS ARE SUBJECT TO CHANGE DUE TO RETESTING OF SOIL AFTER STREET EXCAVATION HAS BEEN DONE TO TOP OF CURB.
7. CONTRACTOR SHALL CONTACT ENGINEER 48 HRS IN ADVANCE FOR FIELD OBSERVATION DURING STREET CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO CONTACT ENGINEER FOR INSPECTION OF THE SUBGRADE, BASE, ASPHALT, AND CURB.
8. GENERAL FILL MATERIALS SHOULD CONSIST OF ONSITE SOILS OR CLEAN IMPORTED FILL SOILS WITH EQUAL OR BETTER CBR CHARACTERISTICS TO THE ONSITE SOILS. GENERAL FILL MATERIAL SHOULD BE CLEAN AND FREE OF ANY VEGETATION ROOTS, ORGANIC MATERIALS, TRASH OR GARBAGE, CONSTRUCTION DEBRIS, OR OTHER DELETERIOUS MATERIALS AND SHOULD CONTAIN NO LARGER THAN THREE (3) INCHES IN MAXIMUM DIMENSION.



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

GEORGE'S RANCH
UNIT 2B
STANDARD STREET DETAILS

DATE

6/2/2025

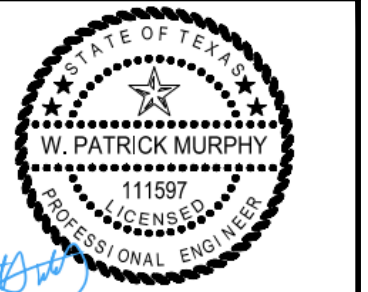
PROJECT NO.
03546.009

DRAWN BY
MAS/MGM

CHECKED BY
KMH/WPM

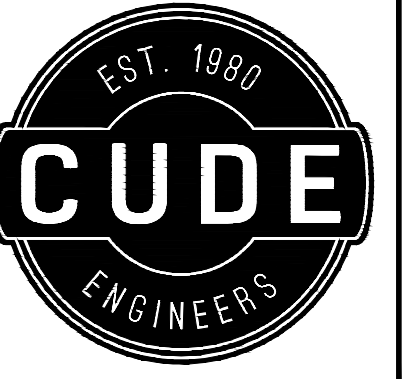
REVISIONS

1. 2025-06-02 UPDATED DETAILS.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.



CUDE ENGINEERS
TBPEL No. 455

C7.D1



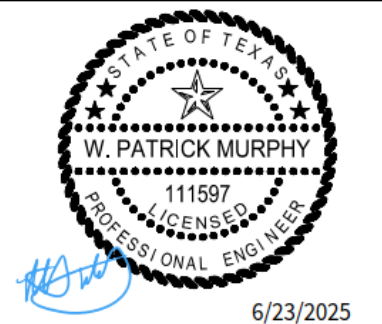
4122 Pond Hill Road, Suite 101
San Antonio, Texas 78231
P: (210) 681.2951 F: (210) 523.7112

**GEORGE'S RANCH
UNIT 2B**
TRAFFIC SIGNAGE PLAN

DATE
4/14/2025
PROJECT NO.
03546.009
DRAWN BY
MAS/MGM
CHECKED BY
KMH/WPM

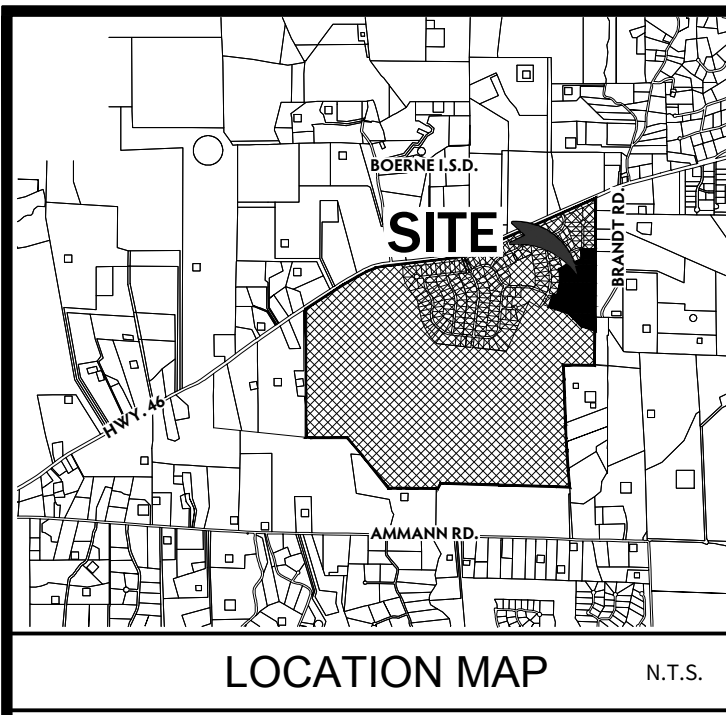
REVISIONS

1.	
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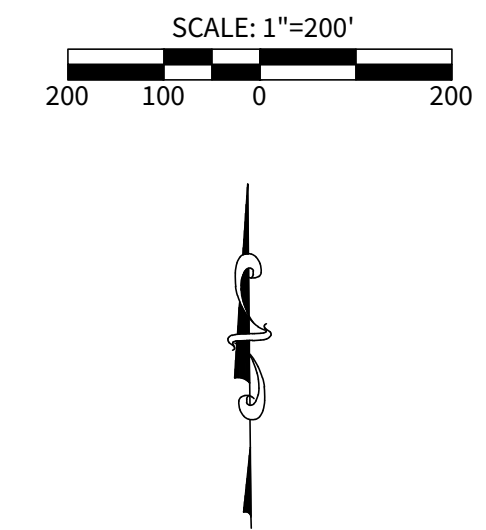
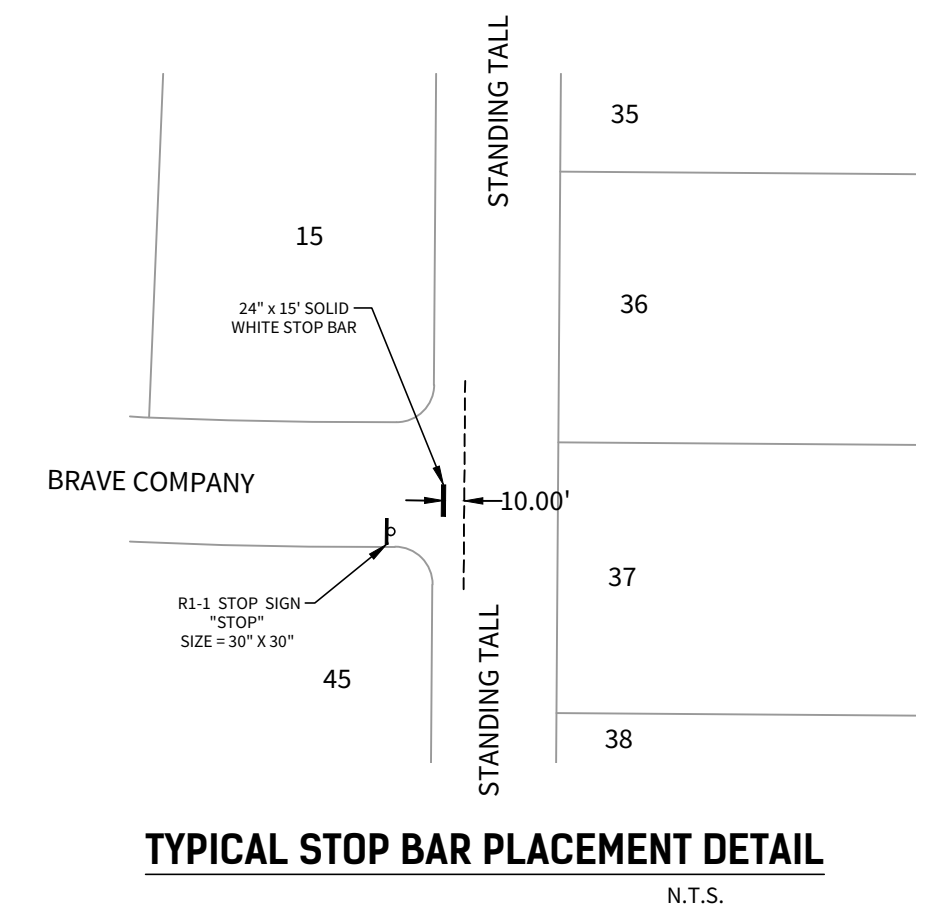


CUDE ENGINEERS
TBPEL No. 455

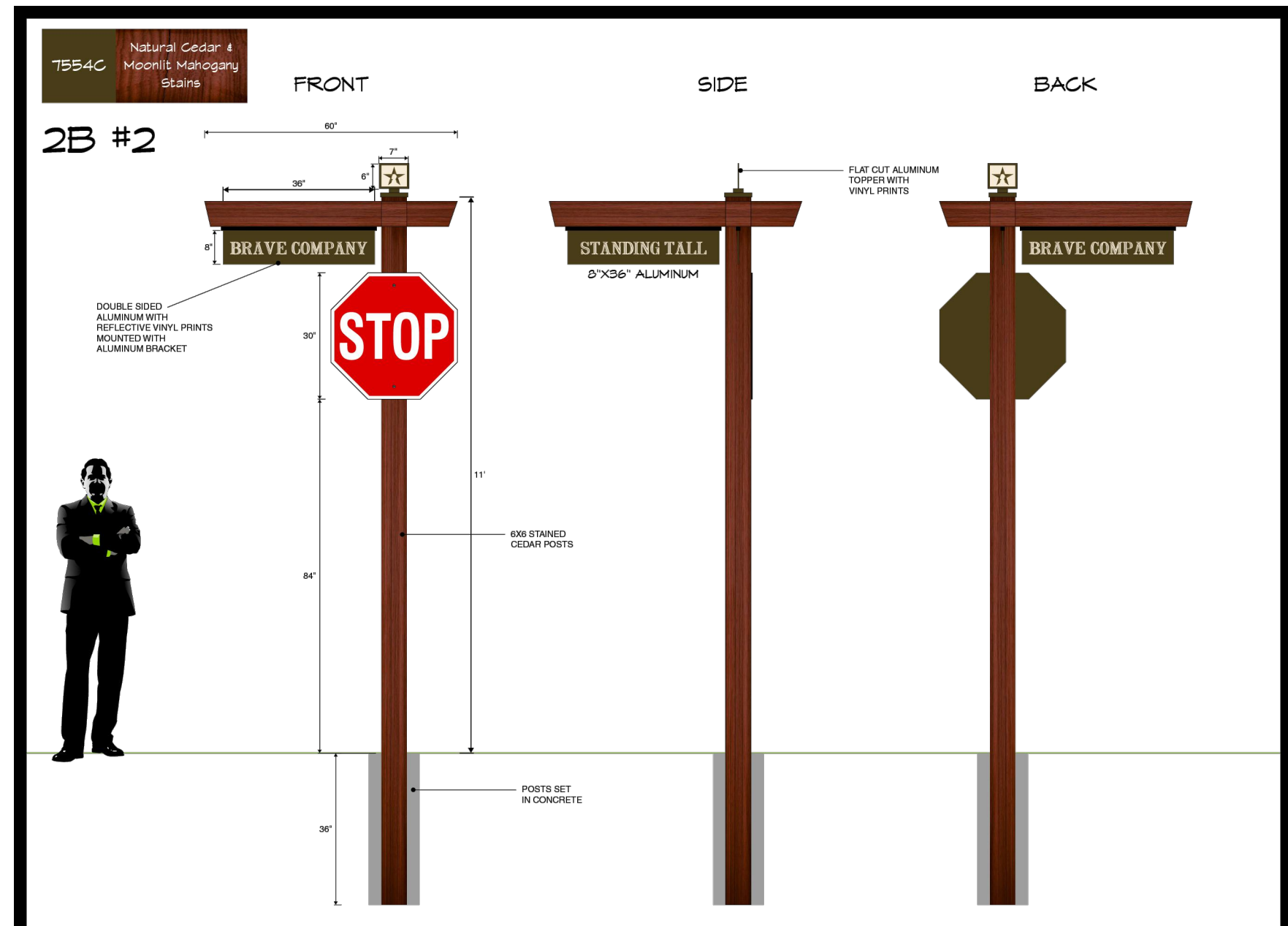
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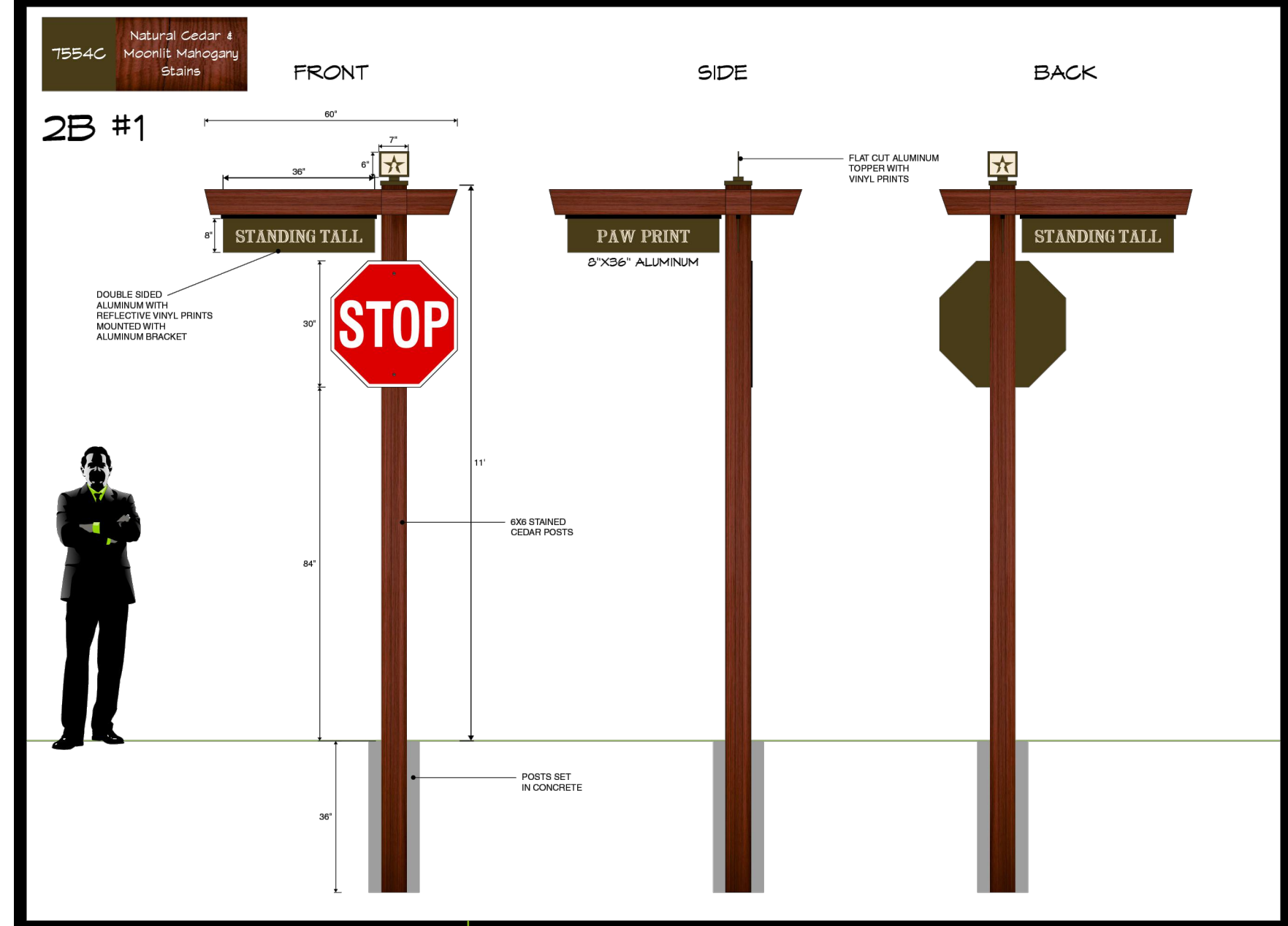
DEVELOPER:
THE LOOKOUT DEVELOPMENT GROUP, LP
CONTACT PERSON: MIKE SIEFERT
1001 CRYSTAL FALLS PARKWAY
LEANDER, TX 78641
TEL: (512) 690-4322



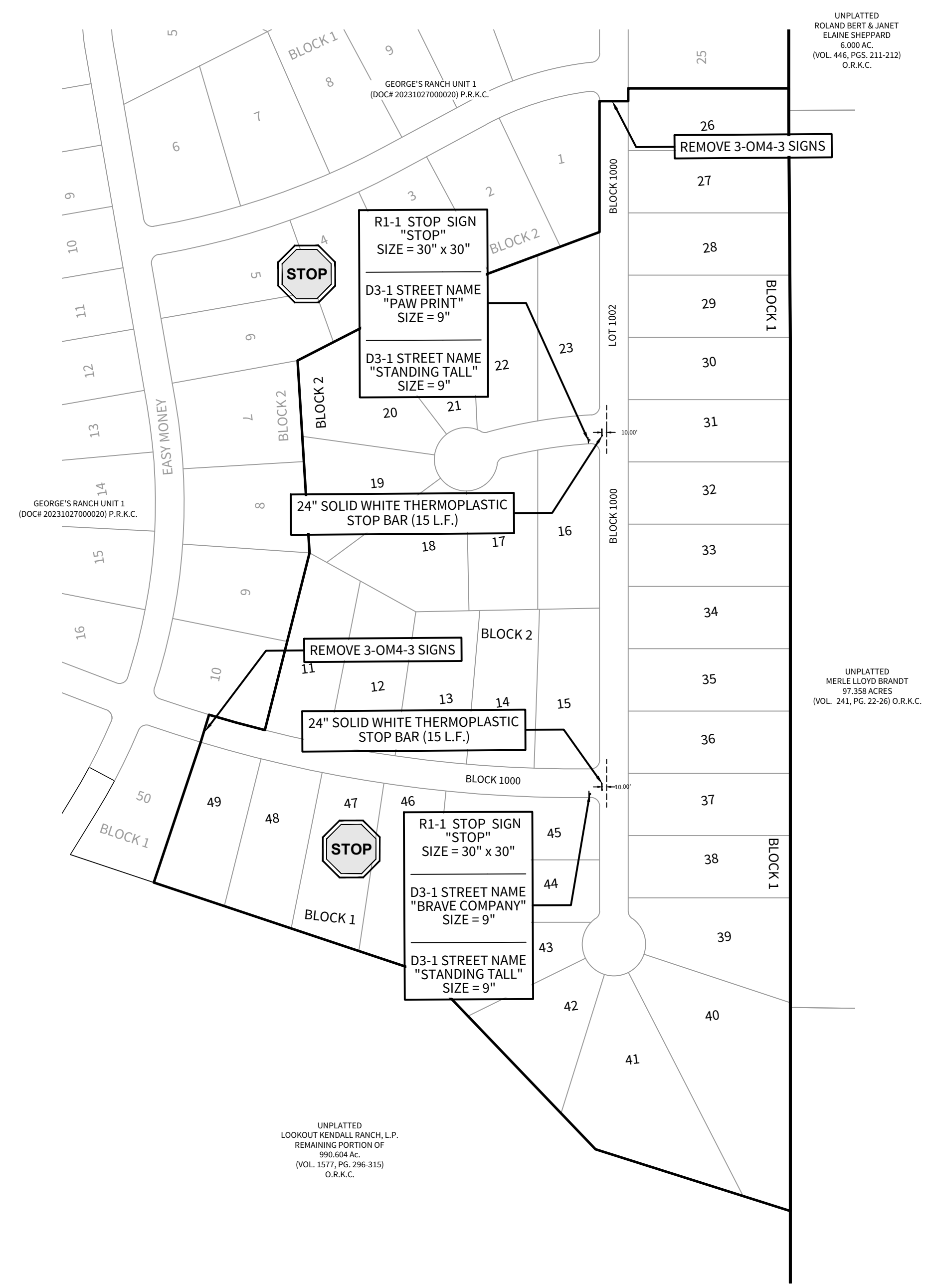
- NOTES**
- CONTRACTOR TO COORDINATE SIGN PLACEMENT WITH STREET CONSTRUCTION TO AVOID ANY POSSIBLE CONFLICTS.
 - ALL PAVEMENT MARKINGS SHALL BE HOT-APPLIED THERMOPLASTIC PAVEMENT MARKINGS PER TXDOT ITEM NO. 666.
 - ALL STREET NAME SIGNS SHALL BE BROWN IN COLOR WITH WHITE LETTERING. CONTRACTOR TO SUBMIT SIGN MATERIAL SUBMITTAL TO OWNER PRIOR TO ORDERING/INSTALLATION.



DR SIGNS, LLC
8"X36" aluminum street signs mounted to 6x6 stained cedar posts with custom aluminum topper.
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UNPLATTED
LOOKOUT RANCH, L.P.
REMAINING PORTION OF
892.694 AC.
(VOL. 1577, PGS. 296-315)
O.R.K.C.

