SUMMARY NOTES

OWNER: CLAYTON PROPERTIES GROUP INC DBA BROHN HOMES
6700 VAUGHT RANCH ROAD
SUITE #200 AUSTIN, TX 78730
(512) 334-6775

DEVELOPER: CLAYTON PROPERTIES GROUP INC DBA BROHN HOMES
6700 VAUGHT RANCH ROAD
SUITE #200 AUSTIN, TX 78730
(512) 334-6775

ENGINEER: BGE, INC., TBPE F-1046
101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TEXAS 78728
(512) 879-0400

CITY OF HUTTO ENGINEER: MATT RECTOR, P.E.
500 W. LIVE OAK ST.
HUTTO, TEXAS 78634
(512)-759-4038

BENCHMARKS :

TBM 4
ELEVATION: 609.45 NVAD 88 (GEOID 12B)
NORTHING: 10163919.98
EASTING: 3177504.03
DESCRIPTION: THE UPPER SOUTHWEST BOLT OF A FIRE HYDRANT, DIRECTLY ABOVE THE LARGE OUTLET, LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF FM 1660 AND McCOY LANE.

TBM 5
ELEVATION: 609.76 NVAD 88 (GEOID 12B)
NORTHING: 10163790.77
EASTING: 3177611.41
DESCRIPTION: BOX CUT ON THE MOST SOUTHERLY CORNER OF THE SIDEWALK SIDEWALK AT THE NORTHWEST CORNER OF THE INTERSECTION OF FM 1660 AND McCOY LANE.

TBM 237
ELEVATION: 604.26 NVAD 88 (GEOID 12B)
NORTHING: 10162659.18
EASTING: 3179157.29
DESCRIPTION: TOP OF A TXDOT TYPE I CONCRETE RIGHT-OF-WAY MONUMENT LOCATED ON THE NORTH RIGHT-OF-WAY OF FM 1660 ABOUT 180 FEET EAST OF 10171 FM 1660.

TBM 28
ELEVATION: 582.70 NVAD 88 (GEOID 12B)
NORTHING: 10159229.79
EASTING: 3181637.19
DESCRIPTION: MAG NAIL WITH WASHER STAMPED "BGE TRAV" SET IN THE NORTHWEST CORNER OF A PRECAST CONCRETE ELECTRIC MANHOLE LID LOCATED 60 FEET NORTH OF THE HEADWORKS AT NORTH SIDE OF THE HUTTO SOUTH WASTEWATER TREATMENT PLANT, LOCATED AT 10710 FM 1660 SOUTH.

GENERAL NOTES:
1. THE CITY OF HUTTO IS RESPONSIBLE FOR WATER & WASTEWATER INFRASTRUCTURE & WILLIAMSON COUNTY IS RESPONSIBLE FOR ROADWAY AND DRAINAGE INFRASTRUCTURE, UNLESS OTHERWISE INDICATED.
2. REVIEWED FOR COMPLIANCE WITH COUNTY REQUIREMENTS (WCSR 2021B)
3. THIS CONSTRUCTION PLAN PROPOSES PROVISIONS OF ON-SITE DETENTION.

THIS SUBDIVISION CONSTRUCTION PLAN WAS APPROVED BY THE CITY OF HUTTO ON THIS _____ DAY OF _____, 20__.

REVIEWED BY:

Reviewed for compliance with County requirements (WCSR 2021B)

Doug Woodall, P.E. 12/03/2024
for WILLIAMSON COUNTY DATE

Chris S. Ulmann 12/11/2024
WILLIAMSON COUNTY MUNICIPAL UTILITY DISTRICT NO. 35 DATE

_____ _____
CITY ENGINEER, CITY OF HUTTO, TEXAS DATE

NOTE:

THE DISTRICT'S REVIEW OF THE PLANS IS LIMITED TO ASPECTS CONCERNING WATER, WASTEWATER, DRAINAGE, AND ROADS. THIS REVIEW DOES NOT ENCOMPASS AN ASSESSMENT OF THE OVERALL ADEQUACY OF THE DESIGN FOR THE FACILITIES. IN APPROVING THESE PLANS, THE DISTRICT RELIES SOLELY ON THE ADEQUACY OF THE WORK PERFORMED BY THE DESIGN ENGINEER.

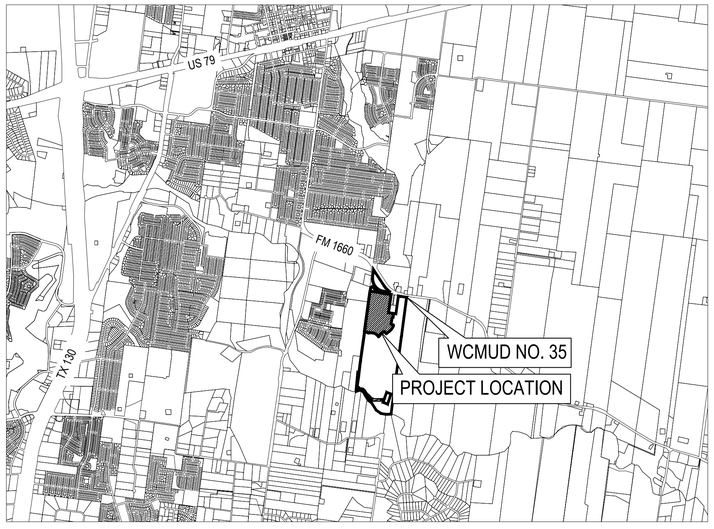
811 Know what's below. Call before you dig.

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE ADN PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

SUBDIVISION CONSTRUCTION PLANS FOR:
HERITAGE MILL NORTH SECTION 1
CITY OF HUTTO E.T.J., WILLIAMSON COUNTY
MUNICIPAL UTILITY DISTRICT NO. 35
STREETS, DRAINAGE, WATER & WASTEWATER IMPROVEMENTS

VICINITY MAP:

1" = 3000'



CITY OF HUTTO RECORD #: CP-24-0012

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REVISIONS/CORRECTIONS

REVISION NUMBER	SHEET LIST	DESCRIPTION	DATE	REVISE (R) ADD (A) VOID (V) SHEET NO.'S	APPROVAL SIGNATURE	APPROVAL DATE
1	51	ADDED SLEEVES	3/24/2025	R		4/14/2025
2	42, 43, 45, 46 ,50, 52, 74	REVISION TO SSL A4, A4 LATERALS, AND A6, REVISED BERM GRADING, REVISED OUTFALL RIP RAP REVISED WWL PP, REVISED WL A, REVISION TO EXIST. 16" W.L.	8/18/2025	R		

SUBMITTED BY:

ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN ACCEPTING THESE PLANS, THE CITY OF HUTTO MUST RELY UPON THE ADEQUACY OF THE WORK HERE IN SEALED BY THE DESIGN ENGINEER.

I, RICHARD PHAM, DO HEREBY CERTIFY THAT THE PUBLIC WORKS AND DRAINAGE IMPROVEMENTS DESCRIBED HEREIN HAVE BEEN DESIGNED IN COMPLIANCE WITH THE SUBDIVISION AND BUILDING REGULATION ORDINANCES AND STORM WATER DRAINAGE POLICY ADOPTED BY THE CITY OF HUTTO, TEXAS.

STATE OF TEXAS · RICHARD PHAM · 142275 · LICENSED PROFESSIONAL ENGINEER

08/25/2025
RICHARD PHAM, P.E. DATE
BGE, INC. TBPE NO. F-1046

For Rev #2
Reviewed for Substantial Conformance by City of Hutto
Matt Rector, P.E. City Engineer Engineering - City of Hutto
09/12/2025

Reviewed for Substantial Conformance by City of Hutto
Matt Rector, P.E. City Engineer Engineering - City of Hutto
01/09/2025

FOR OFFICIAL USE ONLY

BGE

BGE, Inc.
101 W LOUIS HENNA BLVD, SUITE 400
AUSTIN, TX 78728
TEL: 512-879-0400 • www.bgeinc.com
TBPE Registration No. F-1046

HERITAGE MILL SECTION 1

G:\TX\Projects\Brohn_Homes\8943-01-Heritage_Mill_Ph1\LDV01_CAD\SV01_Sht\s\8943-01-C-SP-COVR.dwg Layout: COVER Plotted By: Richard Pham 12/2/2024 4:28:19 PM Last Save By: rpham 12/2/2024 2:47:01 PM

CITY OF HUTTO - GENERAL CONSTRUCTION NOTES
UPDATED MARCH 2019

1. THE CONTRACTOR IS TO CONTACT ONE OF THE FOLLOWING: TEXAS811 811 LONE STAR 1-800-669-8344 FOR LOCATION OF EXISTING FACILITIES AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
2. PRIOR TO ANY CONSTRUCTION, THE DESIGN ENGINEER SHALL CONVENE A PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OF HUTTO, HIMSELF, THE CONTRACTOR, OTHER UTILITY COMPANIES, ANY AFFECTED PARTIES AND ANY OTHER ENTITY THE CITY OR ENGINEER MAY REQUIRE. IF CONSTRUCTION IS NOT STARTED ON THE SITE WITHIN 30 CALENDAR DAYS AFTER THE PRE-CONSTRUCTION CONFERENCE, THE ENGINEER SHALL CONVENE A NEW PRECONSTRUCTION CONFERENCE BETWEEN THE CITY OF HUTTO, HIMSELF, AND ALL THE ABOVE MENTIONED ENTITIES.
3. PRIOR TO ANY CHANGES TO THE CONSTRUCTION SITE, VIDEO OF THE SITE MUST BE TAKEN AND PROVIDED TO THE CITY BEFORE CONSTRUCTION COMMENCES.
4. ALL CONSTRUCTION OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF HUTTO ENGINEERING MANUAL AND STANDARD CONSTRUCTION SPECIFICATIONS AND DETAILS. IF CITY OF HUTTO ENGINEERING MANUAL UNAVAILABLE, OR NOT APPLICABLE, REFER TO TXDOT AND/OR CITY OF GEORGETOWN MANUAL, STANDARDS AND/OR SPECIFICATIONS.
5. ALL STORM SEWER BENDS AND WYES SHALL BE PREFABRICATED.
6. ALL STORM SEWER MAINS TO BE FIELD-TESTED FOR WATER TIGHTNESS NO SOONER THAN 30 DAYS AFTER TOTAL COMPLETION OF THE STORM SEWER LINES.
7. ALL STORM SEWER MAINS TO BE VIDEO TAPED BY CAMERA NO SOONER THAN 30 DAYS AFTER TOTAL COMPLETION OF THE STORM SEWER LINES. TWO DIGITAL COPIES SHALL BE SUPPLIED TO THE CITY BEFORE CLOSEOUT. ALL STORM SEWER CONDUITS WILL BE INSPECTED BY THE CITY BEFORE CITY ACCEPTANCE, VIDEO MUST SHOW DETAILS OF ALL IRREGULARITIES OR OFFSETS (MINIMUM 10 SECONDS OF VIDEO TIME).
8. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION. OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE; INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 E. 6TH STREET, AUSTIN, TEXAS.
9. CONTRACTOR SHALL TAKE ALL DUE PRECAUTIONS TO PROTECT EXISTING FACILITIES FROM DAMAGE. ANY DAMAGE INCURRED TO EXISTING FACILITIES AS A RESULT OF CONSTRUCTION OPERATIONS TO BE REPAIRED IMMEDIATELY BY THE CONTRACTOR, AT NO ADDITIONAL COST TO OWNER.
10. CONTRACTOR TO GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS OR PERSONS IN CHARGE OF PUBLIC AND PRIVATE UTILITIES AFFECTED BY HIS OPERATIONS AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
11. CONTRACTOR TO COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS REGARDING EXCESS AND WASTE MATERIAL, INCLUDING METHODS OF HANDLING AND DISPOSAL.
12. CONTRACTOR TO COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY COMPANY OR AGENCY INVOLVED.
13. WHEN UN-LOCATED OR INCORRECTLY LOCATED, A BREAK IN UTILITY LINES, OR OTHER UTILITIES AND SERVICES ARE ENCOUNTERED DURING SITE WORK OPERATIONS, CONTRACTOR SHALL NOTIFY THE APPLICABLE UTILITY COMPANY IMMEDIATELY TO OBTAIN PROCEDURE DIRECTIONS. CONTRACTOR SHALL COOPERATE WITH THE APPLICABLE UTILITY COMPANY IN MAINTAINING ACTIVE SERVICES IN OPERATION.
14. CONTRACTOR TO LOCATE, PROTECT, AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS AND PROJECT ENGINEERING REFERENCE POINTS. RE-ESTABLISH DISTURBED OR DESTROYED ITEMS BY REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF TEXAS, AT NO ADDITIONAL COST TO OWNER.
15. WHEN CONSTRUCTION IS BEING CARRIED OUT WITHIN EASEMENTS, THE CONTRACTOR SHALL CONFINE HIS WORK TO WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. PRIOR TO FINAL ACCEPTANCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TRASH AND DEBRIS WITHIN THE PERMANENT AND TEMPORARY EASEMENTS. CLEAN-UP SHALL BE TO THE SATISFACTION OF THE ENGINEER.
16. THE CONTRACTOR AND THE ENGINEER SHALL KEEP ACCURATE RECORDS OF ALL CONSTRUCTION THAT DEVIATES FROM THE PLANS. ACCURATE "RECORD" DRAWINGS WILL BE PROVIDED TO THE CITY OF HUTTO, ALONG WITH A LETTER CERTIFICATION FROM A REGISTERED PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS, STATING THAT SAID PROJECT HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THESE PLANS, PRIOR TO THE OWNER BEING ISSUED A CERTIFICATION OF COMPLETION AND FINAL ACCEPTANCE. THESE "RECORD" DRAWINGS SHALL MEET WITH THE SATISFACTION OF THE ENGINEERING AND DEVELOPMENT SERVICES DEPARTMENTS PRIOR TO FINAL ACCEPTANCE.
17. CONTRACTOR SHALL STRIP SIX (6) INCHES OF TOPSOIL FROM ALL AREAS SUBJECT TO GRADE MODIFICATION. REMOVE ALL AREAS OF WEAK SOIL.
18. THE CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. IN THE EVENT THAT A FENCE MUST BE REMOVED, THE CONTRACTOR SHALL REPLACE SAID FENCE OR PORTION THEREOF WITH THE SAME TYPE OF FENCING TO A QUALITY OF EQUAL OR BETTER THAN THE ORIGINAL FENCE.
19. UPON COMPLETION OF THE PROJECT, THE SITE(S) AS DEFINED HEREIN SHALL BE CLEANED OF ALL DEBRIS AND LEFT IN A NEAT AND PRESENTABLE CONDITION.
20. ALL ADJOINING PAVEMENT SECTIONS SHALL BE PROTECTED DURING ALL PHASES OF CONSTRUCTION AND ANY DAMAGES INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTOR'S EXPENSE.
21. CONTRACTOR TO CONTROL DUST CAUSED BY THE WORK AND COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES (NO SEPARATE PAY).
22. TRAFFIC CONTROLS TO BE INSTALLED IN ACCORDANCE WITH THE CURRENT TXDOT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND TXDOT BARRICADE AND CONSTRUCTION STANDARDS.
23. REVEGETATE ALL DISTURBED AREAS UPON COMPLETION OF THE WORK PER CITY OF GEORGETOWN CONSTRUCTION STANDARDS.
24. CONTRACTOR TO EXERCISE CAUTION DURING CONSTRUCTION NEAR AND AROUND GAS LINES AND POWER LINES.
25. NO WORK IS TO BE PERFORMED BETWEEN THE HOURS OF 6:00 P.M. AND 7:00 A.M. ALL WORK REQUIRING CITY INSPECTION SHALL BE PERFORMED MONDAY THRU FRIDAY. THE CITY RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO UNCOVER ALL WORK PERFORMED WITHOUT INSPECTION.
26. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION VERTICALLY AND HORIZONTALLY OF ALL EXISTING UTILITIES PRIOR TO COMMENCING WORK, AND SHALL NOTIFY THE ENGINEER AND THE CITY IF THE EXISTING UTILITY LOCATION AND DEPTHS ARE DIFFERENT FROM WHAT IS SHOWN ON THE PLANS. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
27. ALL FIRE LINES SHALL BE DUCTILE IRON.
28. DETECTABLE TAPE SHALL BE USED FOR ALL UNDERGROUND UTILITIES. TAPE MUST BE 12" WIDE 5 MIL WITH APPLICABLE COLOR AND LABEL.
29. CONTRACTOR WILL BE RESPONSIBLE FOR KEEPING ROADS AND DRIVES ADJACENT TO AND NEAR THE SITE FREE FROM SOIL, SEDIMENT AND DEBRIS. CONTRACTOR WILL NOT REMOVE SOIL, SEDIMENT OR DEBRIS FROM ANY AREA OR VEHICLE BY MEANS OF WATER, ONLY SHOVELING AND SWEEPING WILL BE ALLOWED. CONTRACTOR WILL BE RESPONSIBLE FOR DUST CONTROL FROM THE SITE.
30. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO PRIVATE PROPERTY WHICH OCCURS AS A RESULT OF ANY PORTION OF THIS PROJECT. ANY DAMAGE TO PRIVATE PROPERTY SHALL BE REPAIRED TO EQUAL OR BETTER CONDITION. THE CONTRACTOR SHALL PAY AND/OR SETTLE WITH PRIVATE PROPERTY OWNER(S) FOR ALL COST RELATED TO DAMAGE. THE CITY WILL NOT PROVIDE SEPARATE PAY FOR REPAIR OF DAMAGES, REIMBURSEMENTS OR SETTLEMENTS.

CITY OF HUTTO - EROSION, SEDIMENTATION AND TREE PROTECTION NOTES
UPDATED NOVEMBER 2023

EROSION AND SEDIMENT CONTROLS

1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROLS AND TREE AND NATURAL AREA PROTECTIVE FENCING PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION).
2. IF APPLICABLE, COMPLIANCE WITH THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM (TPDES) CONSTRUCTION GENERAL PERMIT TXR150000 INCLUDING THE DEVELOPMENT AND IMPLEMENTATION OF A STORMWATER POLLUTION PREVENTION PLAN (SWP3) IS REQUIRED.
3. EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN. DEVIATIONS FROM THE APPROVED PLAN MUST BE SUBMITTED TO AND APPROVED BY THE OWNERS'S REPRESENTATIVE.
4. FIELD REVISIONS TO THE EROSION AND SEDIMENT CONTROL PLAN MAY BE REQUIRED BY THE CITY INSPECTOR TO ADDRESS CONTROL INADEQUACIES. THESE REVISIONS SHALL BE DOCUMENTED IN THE SWP3, IF APPLICABLE.
5. COMPLIANCE WITH FEDERAL, STATE, AND LOCAL GOVERNMENT REGULATIONS/REQUIREMENTS IS REQUIRED WHERE APPLICABLE.
6. STORMWATER BEST MANAGEMENT PRACTICES WILL BE REGULATED BY THE SWP3, AS APPROPRIATE.
7. THE CONTRACTOR SHALL INSPECT EROSION AND SEDIMENT CONTROLS AT: (a) WEEKLY INTERVALS **OR** (b) ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF ≥ 0.5 INCHES TO ENSURE THEY ARE FUNCTIONING PROPERLY. ANY ACCUMULATED SEDIMENT AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHED IS SIX INCHES (6").
8. ALL MUD, DIRT, ROCKS, DEBRIS, ETC., SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON EXISTING PAVED STREETS, DRIVES AND AREAS USED BY THE PUBLIC SHALL BE CLEANED UP BY SCRAPING AND/OR SWEEPING BY THE END OF THE DAY. WASHING INTO DITCHES OR STORM SEWERS IS UNACCEPTABLE.
9. THE CONTRACTOR IS REQUIRED TO MAKE ANY REPAIRS OR MODIFICATIONS NECESSARY TO ENSURE CONTINUED EFFECTIVE OPERATION OF THE EROSION AND SEDIMENT CONTROLS.
10. IF EROSION AND SEDIMENT CONTROL SYSTEMS ARE EXISTING FROM PRIOR CONTRACTS, OWNER'S REPRESENTATIVES AND THE CONTRACTOR ARE TOP EXAMINE THE EXISTING EROSION AND SEDIMENT CONTROLS FOR DAMAGE PRIOR TO CONSTRUCTION. ANY DAMAGE TO PREEXISTING EROSIONS AND SEDIMENT CONTROLS NOTED TO BE REPAIRED AT THE OWNER'S EXPENSE.

POLLUTION PREVENTION MEASURES

1. NO ABOVE AND/OR BELOW GROUND TEMPORARY FUEL STORAGE FACILITIES ARE TO BE STORED ON THE PROJECT SITE.
2. INTENTIONAL RELEASE OF VEHICLE OR EQUIPMENT FLUIDS ONTO THE GROUND IS NOT ALLOWED. CONTAMINATED SOIL RESULTING FROM AN ACCIDENTAL SPILL HAS TO BE REMOVED AND DISPOSED OF PROPERLY.
3. ALL CONCRETE TRUCKS MUST USE AN APPROVES WASHOUT STATION.

TREE PROTECTION

1. EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILDUP WITHIN THE TREE DRIP LINE.
2. WHERE A FENCE IS CLOSER THAN FOUR FEET (4') TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF EIGHT FEET (8'), OR THE LIMITS OF LOWER BRANCHING, IN ADDITION TO THE FENCING.
3. TREES SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TRESS TO BE PRESERVED.
4. ANY ROOT EXPOSED BY THE CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREA WITH GOOD QUALITY TOPSOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN TWO DAYS, COVER THEM WITH ORGANIC MATTER IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
5. TO AVOID SOIL COMPACTION, THE CONTRACTOR SHALL NOT ALLOW VEHICULAR TRAFFIC, PARKING, OR STORAGE OF EQUIPMENT OR MATERIALS IN THE TREE DRIP LINE AREA.
6. CONTRACTOR SHALL PRUNE VEGETATION TO PROVIDE CLEARANCE FOR STRUCTURE, VEHICULAR TRAFFIC, AND EQUIPMENT BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.). ALL FINISHED PRUNING TO BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE "NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES").
7. WHERE THERE IS TO BE AB APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT IMMEDIATELY ADJACENT TO A PROTECTED TREE, ERECT THE FENCE APPROXIMATELY TWO TO FOUR (2'-4') BEHIND THE AREA IN QUESTION.

PERMANENT EROSION CONTROLS

1. ALL DISTURBED AREA TO BE RESTORED AS NOTED BELOW.
2. ALL DISTURBED AREAS ARE TO BE PERMANENTLY STABILIZED AS REQUIRED BY THE TCEQ CGP TXR150000 OR BY LOCAL REQUIREMENTS, WHICH EVER IS MOST STRINGENT.
3. THE CONTRACTOR SHALL HYDRO MULCH OR SOD ALL EXPOSED CUTS AND FILLS UPON COMPLETION OF CONSTRUCTION, EXCEPT WHERE CUTS ARE MADE OF SOLID ROCK.
4. SEEDING FOR PERMANENT EROSION CONTROL SHALL BE APPLIED OVER AREAS DISTRUSTED BY CONSTRUCTION AS FOLLOWS:
   A. FROM OCTOBER TO FEBRUARY, SEEDING SHALL BE WITH A COMBINATION OF ONE POUND (1LB.) OF UNHULLED BERMUDA GRASS AND SEVEN POUNDS (7 LBS.) OF WINTER RYE PER 1,000 SQUARE FEET WITH A PURITY OF 95% WITH 90% GERMINATION.
   B. FROM MARCH TO SEPTEMBER, SEEDING SHALL BE DONE WITH THE ADDITION OF WINTER FESCUE (KENTUCKY 31) AT A RATE OF 100 LBS./ACRE. GRASS SHALL BE COMMON BERMUDA GRASS, HULLED, MINIMUM 82% PURE LIVE SEED.
5. ALL GRASS SEED SHALL BE FREE FROM NOXIOUS WEED, GRADE "A" RECENT CROP, CLEANED AND TREATED WITH APPROPRIATE FUNGICIDE AT TIME OF MIXING. SEE SHALL BE FURNISHED IN SEALED, STANDARD CONTAINERS WITH DEALER'S GUARANTEED ANALYSES.
6. THE PLANTED ARE MUST BE IRRIGATED OR SPRINKLED IN A MANNER THAT WILL NOT ERODE THE TOPSOIL, BUT WILL SUFFICIENTLY SOAK THE SOIL TO A DEPTH OF SIX INCHES (6"). IRRIGATION WILL OCCUR AT 10-DAY INTERVALS DURING THE FIRST TWO MONTHS TO INSURE GERMINATION AND ESTABLISHMENT OF THE GRASS. RAINFALL OCCURRENCES OF HALF AN INCH ($\frac{1}{2}$") OR GREATER SHALL POSTPONE WATER SCHEDULE FOR ONE WEEK.
7. MULCH TYPE USED SHALL BE EITHER CELLULOSE FIBER MULCH APPLIED AT A RATE OF 2,000 POUNDS PER ACRE, OR WOOD FIBER MULCH APPLIED AT A RATE OF 2,500 POUNDS PER ACRE.
8. RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST ONE INCH TO ONE AND A HALF INCHES (1" TO 1.5") HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN TEN-SQUARE FEET EXIST.
9. A MINIMUM OF FOUR INCHES (4") OF TOPSOIL SHALL BE PLACED IN ALL AREAS DISTURBED.
10. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS AT THE COMPLETION OF THE PROJECT AND WHEN VEGETATION HAS BEEN RESTORED.

CITY OF HUTTO - WASTEWATER NOTES
UPDATED AUGUST 2018

1. WASTEWATER SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF HUTTO ENGINEERING DESIGN MANUAL, STANDARD SPECIFICATIONS AND STANDARD DETAILS.
2. NO CURVILINEAR WASTEWATER DESIGN/LAYOUT IS PERMITTED.
3. ALL WASTEWATER SERVICE, AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS:
   A. WASTEWATER SERVICE "S" ON TOP OF CURB
   B. VALVE "V" ON TOP OF CURB
4. TOOLS FOR MARKING CURBS SHALL BE PROVIDED BY THE CONTRACTOR. OTHER APPROPRIATE MEANS OF MARKING SERVICE AND VALVE LOCATIONS SHALL BE PROVIDED IN AREAS WITHOUT CURBS. SUCH MEANS OF MARKING SHALL BE SPECIFIED BY THE DESIGN ENGINEER AND APPROVED BY THE CITY OF HUTTO.
5. THRUST BLOCKING AND RESTRAINTS SHALL BE IN ACCORDANCE WITH CITY OF HUTTO STANDARD SPECIFICATIONS.
6. MANDREL TESTING WILL BE REQUIRED ON ALL WASTEWATER PIPE AS PER CITY OF HUTTO CONSTRUCTION SPECIFICATIONS.
7. ALL GRAVITY WASTEWATER MAINS TO BE FIELD-TESTED FOR WATER TIGHTNESS AND VIDEO TAPED BY CAMERA SO SOONER THAN 30-DAYS AFTER TOTAL COMPLETION OF WASTEWATER LINES. TWO DIGITAL COPIES SHALL BE PROVIDED TO THE CITY BEFORE CLOSEOUT. VIDEO INSPECTION OF WATER MAINS SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE CITY OF AUSTIN STANDARD SPECIFICATION.
8. HYDROSTATIC PRESSURE AND LEAKAGE TESTS SHALL BE PERFORMED ON ALL PRESSURE PIPELINES CARRYING WASTEWATER.
9. ALL MANHOLES SHALL BE TESTED FOR LEAKAGE SEPARATELY AND INDEPENDENTLY OF WASTEWATER LINES BY HYDROSTATIC EXFILTRATION TESTING OR OTHER CITY APPROVED METHOD PER CITY OF HUTTO CONSTRUCTION SPECIFICATIONS.
10. EXISTING MANHOLES SHALL BE TESTED FOR LEAKAGE PRIOR TO CORING OR ADJUSTMENT.
11. EXISTING MANHOLES SHALL HAVE ALL CONCRETE SURFACES CLEANED AND COATED PER CITY OF HUTTO WASTEWATER DETAILS AFTER CORING OR ADJUSTMENT.
12. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE / NATIONAL SANITATION FOUNDATION STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.
13. PIPE MATERIAL FOR PRESSURE WASTEWATER MAINS SHALL BE PVC (AWWA C900, MIN. DR 14), OR DUCTILE IRON (AWWA C151, MIN. CLASS 350). DUCTILE IRON FOR PRESSURE WASTEWATER MAINS SHALL HAVE A CORROSION RESISTANT INTERIOR LINING ACCEPTABLE TO OWNER. PIPE MATERIAL FOR GRAVITY WASTEWATER MAINS SHALL BE PVC SDR-26, ASTM D-3034.
14. ALL PVC PIPE (ALL TYPES AND SDR/DR WALL THICKNESS TO BE USED) SHALL HAVE RUBBER GASKET EQUIPPED BELL AND SPIGOT JOINTS CONFORMING TO ASTM D-3212. THE GASKET MATERIAL SHALL CONFORM TO ASTM F-477. SOLVENT WELDED JOINTS WILL NOT BE APPROVED FOR THIS PROJECT.
15. ALL SANITARY SEWER FACILITIES AND POTABLE WATERLINES MUST BE INSTALLED SO AS TO PROVIDE A MINIMUM OF NINE FEET OF CLEARANCE IN ANY DIRECTION BETWEEN THEM. WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, FOLLOW THESE SPECIAL PROCEDURES.
   A. IF A COLLECTION SYSTEM PIPE PARALLELS A PUBLIC WATER SUPPLY PIPE THE FOLLOWINGREQUIREMENTS APPLY:
   I. A COLLECTION SYSTEM PIPE MUST BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC MEETING ASTM SPECIFICATIONS WITH AT LEAST 150 POUNDS PER SQUARE INCH (PSI) PRESSURE RATING FOR BOTH THE PIPE AND JOINTS.
   II. VERTICAL SEPARATION MUST BE AT LEAST TWO FEET BETWEEN THE OUTSIDE DIAMETERS OF THE PIPES.
   III. HORIZONTAL SEPARATION MUST BE AT LEAST FOUR FEET BETWEEN OUTSIDE DIAMETERS OF THE PIPES.
   IV. COLLECTION SYSTEM PIPE MUST BE BELOW WATER SUPPLY PIPE.
   B. IF A COLLECTION SYSTEM PIPE CROSSES A PUBLIC WATER SUPPLY PIPE, THE FOLLOWING REQUIREMENTS APPLY:
   I. IF A COLLECTION SYSTEM IS CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, THE FOLLOWING REQUIREMENTS APPLY:
      a. A MINIMUM DISTANCE OF SIX (6) INCHES BETWEEN OUTSIDE DIAMETERS OF THE PIPES.
      b. A COLLECTION SYSTEM PIPE MUST BE BELOW A PUBLIC WATER SUPPLY PIPE.
      c. COLLECTION SYSTEM PIPE JOINTS MUST BE LOCATED AS FAR AS POSSIBLE FROM AN INTERSECTION WITH A PUBLIC WATER SUPPLY LINE.
   II. IF A COLLECTION SYSTEM CROSSES OVER A PUBLIC WATER SUPPLY PIPE, EACH PORTION OF A COLLECTION SYSTEM PIPE WITHIN NINE FEET OF A PUBLIC WATER SUPPLY PIPE MUST BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS.
16. AN INDEPENDENT QUALIFIED LAB, AT THE CONTRACTOR'S EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAGES), SUPPLIES, AND LABOR NECESSARY TO PERFORM THE TESTS. A CITY OF HUTTO CONSTRUCTION INSPECTOR MUST BE PRESENT FOR ALL TESTING.
17. THE CONTRACTOR SHALL PROVIDE THE DESIGN ENGINEER AND THE CITY NOT LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING, OR PRESSURE TESTING.
18. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF HUTTO.
19. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON PER CITY OF HUTTO STANDARD DETAILS.
20. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. ALL MANHOLES LOCATED OUTSIDE OF PAVEMENT SHALL HAVE BOLTED AND GASKETED COVERS. CONCRETE MANHOLES TO BE COATED PER STANDARD DETAIL AND CONSTRUCTION SPECIFICATIONS. TAPPING OF FIBERGLASS MANHOLES SHALL NOT BE PERMITTED.
21. ALL WASTEWATER PIPING AND FITTINGS SHALL BE VIRGIN STOCK.
22. ALL MECHANICAL RESTRAINTS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

FOR OFFICIAL USE ONLY
Reviewed for Substantial Conformance by City of Hutto
CITY OF HUTTO
Matt Rector, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

CITY OF HUTTO - WATER NOTES
UPDATED MARCH 2019

1. WATER SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF HUTTO ENGINEERING MANUAL, STANDARD SPECIFICATIONS AND STANDARD DETAILS.
2. FIRE HYDRANTS ON MAINS UNDER CONSTRUCTION SHALL BE SECURELY WRAPPED WITH A POLY WRAP BAG AND TAPED INTO PLACE. THE POLY WRAP SHALL BE REMOVED WHEN THE MAINS ARE ACCEPTED AND BROUGHT INTO SERVICE. ALL FIRE LINES SHALL BE DUCTILE. IRON
3. ALL WATER SERVICE, WASTEWATER SERVICE, AND VALVE LOCATIONS SHALL BE APPROPRIATELY MARKED AS FOLLOWS:
   A. WATER SERVICE "W" ON TOP OF CURB
   B. VALVE "V" ON TOP OF CURB OR VALVE SIGN AS INSTRUCTED BY CITY ENGINEER
4. TOOLS FOR MARKING CURBS SHALL BE PROVIDED BY THE CONTRACTOR. OTHER APPROPRIATE MEANS OF MARKING SERVICE AND VALVE LOCATIONS SHALL BE PROVIDED IN AREAS WITHOUT CURBS. SUCH MEANS OF MARKING SHALL BE SPECIFIED BY THE ENGINEER AND APPROVED BY THE CITY OF HUTTO.
5. THRUST BLOCKING AND RESTRAINTS SHALL BE IN ACCORDANCE WITH CITY OF HUTTO STANDARD SPECIFICATIONS.
6. HYDROSTATIC PRESSURE AND LEAKAGE TESTS SHALL BE PERFORMED ON ALL PRESSURE PIPELINES CARRYING WATER.
7. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.
8. PIPE MATERIAL FOR WATER MAINS SHALL BE PVC (AWWA C900/C905, MIN. DR 14), OR DUCTILE IRON (AWWA C151, MIN. CLASS 350). WATER SERVICES (2" OR SMALLER) SHALL BE POLYETHYLENE TUBING (BLACK, 200 PSI, DR 9).
9. ALL DUCTILE IRON PIPE (D.I.P) SHALL BE WRAPPED WITH EIGHT (8) MIL, BLACK VIRGIN POLYETHYLENE WRAP AS SPECIFIED IN ANSI/AWWA C105/A21.5.
10. ALL D.I.P. SHALL BE LINED WITH VIRGIN POLYETHYLENE CONFORMING TO ASTM D-1248; 40 MIL THICKNESS (NOMINAL), 35 MILS (MINIMUM). LINER TO BE POLYBOND OR EQUAL. AT ANY POINT WHERE DIP CANNOT BE WRAPPED IN POLYETHYLENE, COAT THE EXTERIOR WITH POLYBOND OR APPROVED EQUAL.
11. ALL PVC PIPE (ALL TYPES AND SDR/DR WALL THICKNESS TO BE USED) SHALL HAVE RUBBER GASKET EQUIPPED BELL AND SPIGOT JOINTS CONFORMING TO ASTM D-3212. THE GASKET MATERIAL SHALL CONFORM TO ASTM F-477. SOLVENT WELDED JOINTS WILL NOT BE APPROVED FOR THIS PROJECT.
12. ALL POTABLE WATERLINES AND SANITARY SEWER FACILITIES MUST BE INSTALLED SO AS TO PROVIDE A MINIMUM OF NINE FEET OF CLEARANCE IN ANY DIRECTION BETWEEN THEM. WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, FOLLOW THESE SPECIAL PROCEDURES.
   A. IF A COLLECTION SYSTEM PIPE PARALLELS A PUBLIC WATER SUPPLY PIPE THE FOLLOWING REQUIREMENTS APPLY:
   I. A COLLECTION SYSTEM PIPE MUST BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC MEETING ASTM SPECIFICATIONS WITH AT LEAST 150 POUNDS PER SQUARE INCH (PSI) PRESSURE RATING FOR BOTH THE PIPE AND JOINTS.
   II. VERTICAL SEPARATION MUST BE AT LEAST TWO FEET BETWEEN THE OUTSIDE DIAMETERS OF THE PIPES.
   III. HORIZONTAL SEPARATION MUST BE AT LEAST FOUR FEET BETWEEN OUTSIDE DIAMETERS OF THE PIPES.
   IV. COLLECTION SYSTEM PIPE MUST BE BELOW WATER SUPPLY PIPE.
   B. IF A COLLECTION SYSTEM PIPE CROSSES A PUBLIC WATER SUPPLY PIPE, THE FOLLOWING REQUIREMENTS APPLY:
   I. IF A COLLECTION SYSTEM IS CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, THE FOLLOWING REQUIREMENTS APPLY:
      a. A MINIMUM DISTANCE OF SIX (6) INCHES BETWEEN OUTSIDE DIAMETERS OF THE PIPES.
      b. A COLLECTION SYSTEM PIPE MUST BE BELOW A PUBLIC WATER SUPPLY PIPE.
      c. COLLECTION SYSTEM PIPE JOINTS MUST BE LOCATED AS FAR AS POSSIBLE FROM AN INTERSECTION WITH A PUBLIC WATER SUPPLY LINE.
   II. IF A COLLECTION SYSTEM CROSSES OVER A PUBLIC WATER SUPPLY PIPE, EACH PORTION OF A COLLECTION SYSTEM PIPE WITHIN NINE FEET OF A PUBLIC WATER SUPPLY PIPE MUST BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS.
13. THE CONTRACTOR MUST OBTAIN A TEMPORARY WATER METER FROM THE CITY OF HUTTO UTILITY BILLING DEPARTMENT FOR ALL WATER USED DURING CONSTRUCTION.
14. CONTRACTOR TO SCHEDULE WATER VALVE CLOSURE THROUGH CITY OF HUTTO: DEPARTMENT OF PUBLIC WORKS UTILITY DIVISION WITH ADVANCE NOTICE OF 7 DAYS. CONTRACTOR TO CONTACT PUBLIC WORKS AT PHONE 512-759-4016 AND NOTIFY CONSTRUCTION INSPECTOR. WATER VALVE CLOSURE WILL ONLY BE SCHEDULED FOR TUESDAY THROUGH THURSDAY. CONTRACTOR TO NOTIFY ALL BUSINESSES AND RESIDENTS AFFECTED BY VALVE CLOSURES. CLOSURES MUST BE COORDINATED TO MINIMIZE EFFECTS ON EXISTING CUSTOMERS WITH CONSIDERATIONS GIVEN TO BUSINESSES THAT REQUIRE WATER TO MAINTAIN OPERATIONS.
15. LINE FLUSHING OR ANY ACTIVITY USING A LARGE QUANTITY OF WATER MUST BE SCHEDULED WITH THE CITY OF HUTTO. CONTRACTOR WILL BE RESPONSIBLE FOR TRACKING THE AMOUNT OF WATER USED DURING FLUSHING AND BE REQUIRED TO REIMBURSE THE CITY FOR WATER USE, IF NOT ALREADY METERED.
16. THE CONTRACTOR, AT HIS EXPENSE, SHALL PERFORM STERILIZATION OF ALL POTABLE WATER LINES AND SHALL PROVIDE ALL EQUIPMENT NECESSARY (INCLUDING TEST GAGES), SUPPLIES (INCLUDING CONCENTRATED CHLORINE DISINFECTION MATERIAL) AND NECESSARY LABOR REQUIRED FOR THE STERILIZATION PROCEDURE. THE STERILIZATION PROCEDURE SHALL BE MONITORED BY THE ENGINEER AND A CITY OF HUTTO CONSTRUCTION INSPECTOR. WATER SAMPLES WILL BE COLLECTED TO VERIFY EACH TREATED LINE HAS ATTAINED AN INITIAL CHLORINE CONCENTRATION OF 50 PPM.
17. AN INDEPENDENT QUALIFIED LAB, AT THE CONTRACTOR'S EXPENSE, SHALL PERFORM QUALITY TESTING FOR ALL WASTEWATER PIPE INSTALLED AND PRESSURE HYDROSTATIC TESTING OF ALL WATER LINES CONSTRUCTED. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT (INCLUDING PUMPS AND GAGES), SUPPLIES, AND LABOR NECESSARY TO PERFORM THE TESTS. A CITY OF HUTTO CONSTRUCTION INSPECTOR MUST BE PRESENT FOR ALL TESTING.
18. THE CONTRACTOR SHALL PROVIDE THE ENGINEER AND THE CITY NOT LESS THAN 24 HOURS NOTICE PRIOR TO PERFORMING STERILIZATION, QUALITY TESTING, OR PRESSURE TESTING.
19. THE CONTRACTOR SHALL NOT OPEN OR CLOSE ANY VALVES UNLESS AUTHORIZED BY THE CITY OF HUTTO.
20. ALL VALVE BOXES AND COVERS SHALL BE CAST IRON PER CITY OF HUTTO STANDARD DETAILS.
21. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON RING AND COVER. ALL MANHOLES LOCATED OUTSIDE OF PAVEMENT SHALL HAVE BOLTED AND GASKETED COVERS. CONCRETE MANHOLES TO BE COATED PER STANDARD DETAIL AND CONSTRUCTION SPECIFICATIONS. TAPPING OF FIBERGLASS MANHOLES SHALL NOT BE PERMITTED.
22. ALL FIRE LINES SHALL BE DUCTILE IRON PIPE (AWWA C-150, CLASS 200).
23. ALL FIRE HYDRANTS SHALL BE SILVER IN COLOR INCLUDING BONNET AND INSTALLED PER CITY OF HUTTO STANDARD DETAIL.
24. ALL WATER PIPING AND FITTINGS SHALL BE VIRGIN STOCK.
25. ALL MECHANICAL RESTRAINTS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
26. ALONG STATE HIGHWAYS, WATER LINES ARE REQUIRED ON BOTH SIDES OF THE ROADWAY. NEW WATER LINES CROSSING EXISTING STREETS SHALL BE PLACED BY BORING. A STEEL CASING SHALL BE REQUIRED UNDER MAJOR AND MINOR COLLECTOR ROADWAYS, ARTERIAL ROADWAYS AND STATE HIGHWAY. OPEN CUT EXCAVATION WILL NOT BE ALLOWED TO CROSS EXISTING STREETS, UNLESS APPROVED BY THE CITY ENGINEER.
27. ALL NEW WATER PIPES MUST HAVE DETECTABLE TAPE PER CITY OF HUTTO STANDARD DETAIL.
28. ALL AUTOMATIC FLUSH VALVES MUST USE A METER TO MEASURE WATER LOSS.
29. TRACER WIRE WILL BE TESTED AND MUST WORK CORRECTLY BEFORE CITY ACCEPTANCE OF INFRASTRUCTURE. TRACER WIRER MUST BE ENCASED IN PIPE.
30. ALL REDUCED SIZE TAPS SHALL BE MADE USING AN EPOXY COATED FABRICATED STEEL TAPPING SLEEVE WITH STAINLESS STEEL BOLTS, OR A STAINLESS STEEL FULL CIRCLE TAPPING SLEEVE WITH DUCTILE IRON FLANGE.

REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

GENERAL NOTES (SHEET 1 OF 3)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

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MUNICIPAL UTILITY DISTRICT (MUD) NOTES:

1. THE DISTRICT ENGINEER, JONES–HEROY & ASSOCIATES, INC. (KEN HEROY, PH: 512–989–2200) SHALL BE CONTACTED 48 HOURS PRIOR TO:
   A. PRE–CONSTRUCTION MEETINGS;
   B. BEGINNING EACH PHASE OF CONSTRUCTION;
   C. TESTING OF WATER AND/ORR WASTEWATER LINES; AND,
   D. FINAL WALK–THROUGH OF FACILITIES.

2. THE DISTRICT OPERATOR SHALL BE CONTACTED 48 HOURS PRIOR TO:
   A. PRE–CONSTRUCTION MEETINGS;
   B. BEGINNING EACH PHASE OF CONSTRUCTION;
   C. TESTING OF WATER AND/OR WASTEWATER LINES; AND,
   D. FINAL WALK–THROUGH OF FACILITIES.

3. THE DISTRICT'S REVIEW OF THE PLANS IS LIMITED TO ASPECTS CONCERNING WATER, WASTEWATER, DRAINAGE, AND ROADS. THIS REVIEW DOES NOT ENCOMPASS AN ASSESSMENT OF THE OVERALL ADEQUACY OF THE DESIGN FOR THE FACILITIES. IN APPROVING THESE PLANS, THE DISTRICT RELIES SOLELY ON THE ADEQUACY OF THE WORK PERFORMED BY THE DESIGN ENGINEER.

WILLIAMSON COUNTY NOTES:

B4 CONSTRUCTION–GENERAL

B4.1 A PRECONSTRUCTION MEETING SHALL BE SCHEDULED PRIOR TO THE START OF CONSTRUCTION. THE DESIGN ENGINEER, OWNER, CONTRACTOR, SUBCONTRACTORS, AND COUNTY ENGINEER SHALL ATTEND THIS MEETING. ALL ROADS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AS APPROVED BY THE COUNTY ENGINEER AND IN ACCORDANCE WITH THE SPECIFICATIONS FOUND IN THE CURRENT VERSION OF THE "TEXAS DEPARTMENT OF TRANSPORTATION MANUAL STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES" UNLESS OTHERWISE STATED ON THE CONSTRUCTION DOCUMENTS APPROVED BY THE COUNTY ENGINEER.

B4.2 ALL MATERIALS SHALL BE SAMPLED AND TESTED BY AN INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS APPROVED BY THE COUNTY ENGINEER. THE OWNER SHALL PAY FOR ALL TESTING SERVICES AND SHALL FURNISH THE COUNTY ENGINEER WITH CERTIFIED COPIES OF THESE TEST RESULTS. THE COUNTY ENGINEER MUST APPROVE THE TEST RESULTS PRIOR TO CONSTRUCTING THE NEXT COURSE OF THE ROADWAY STRUCTURE. ANY MATERIAL WHICH DOES NOT MEET THE MINIMUM REQUIRED TEST SPECIFICATIONS SHALL BE REMOVED AND RECOMPACTED OR REPLACED UNLESS ALTERNATIVE REMEDIAL ACTION IS APPROVED IN WRITING FROM THE COUNTY ENGINEER.

B4.3 EXCEPT FOR ELECTRICAL LINES, ALL UNDERGROUND NONFERROUS UTILITIES WITHIN A RIGHT–OF–WAY OR EASEMENT MUST BE ACCOMPANIED BY FERROUS METAL LINES TO AID IN TRACING THE LOCATION OF SAID UTILITIES THROUGH THE USE OF A METAL DETECTOR.

B4.4 ALL PROPOSED PAVEMENTS (FLEXIBLE AND RIGID) ARE TO BE SPECIFIED IN THE GEOTECH REPORT. THE GEOTECH REPORT IS TO BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. PAVEMENT DESIGNS SHALL FOLLOW THE BELOW COUNTY REQUIREMENTS BASED UPON SOIL CONDITIONS FROM SAMPLES TAKEN ALONG THE PROPOSED ROADWAYS. TEST BORINGS SHALL BE PLACED AT A MAXIMUM SPACING OF 500 FEET OR OTHER SAMPLING FREQUENCY APPROVED BY THE COUNTY ENGINEER BASED ON RECOMMENDATIONS PROVIDED BY THE GEOTECHNICAL ENGINEER. BORINGS SHALL BE TO A DEPTH OF TEN FT OR, IF SOLID ROCK IS ENCOUNTERED, ONE FT WILLIAMSON COUNTY, TEXAS – SUBDIVISION REGULATIONS PAGE 38 BELOW NON–FRACTURED ROCK OR 3 FT BELOW FRACTURED ROCK. THE PAVEMENT DESIGN MUST MEET AT LEAST THE MINIMUM OF ONE OF THE APPROVED COUNTY DESIGNS AND PROVIDED IN THE GEOTECHNICAL REPORT FOR REVIEW AND APPROVAL PRIOR TO THE REVIEW AND APPROVAL OF THE CONSTRUCTION PLANS. IN ADDITION TO THE BASIS OF THE PAVEMENT DESIGN, THE SOILS REPORT SHALL CONTAIN THE RESULTS OF SAMPLED AND TESTED SUBGRADE FOR PLASTICITY INDEX.

B5 – SUBGRADE

B5.1 THE PREPARATION OF THE SUBGRADE SHALL FOLLOW GOOD ENGINEERING PRACTICES AS DIRECTED BY THE COUNTY ENGINEER IN CONJUNCTION WITH RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT. WHEN THE PLASTICITY INDEX (PI) IS GREATER THAN 20, A SUFFICIENT AMOUNT OF LIME SHALL BE ADDED AS DESCRIBED IN ITEM 260 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION UNTIL THE PI IS LESS THAN 20. IF THE ADDITION OF LIME AS DESCRIBED IN ITEM 260 IS NOT FEASIBLE, AN ALTERNATE STABILIZING DESIGN SHALL BE PROPOSED AND SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL. THE SUBGRADE SHALL BE PREPARED AND COMPACTED TO ACHIEVE A DRY DENSITY PER TXDOT ITEM 132. IN ADDITION, PROOF ROLLING MAY BE REQUIRED BY THE COUNTY ENGINEER.

B5.2 IF LIME IS NECESSARY, THEN A SUFFICIENT AMOUNT OF LIME SHALL BE ADDED, AS DESCRIBED IN ITEM 260 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION TO PROPERLY STABILIZE SUBGRADE. THE USE OF HYDRATED LIME OR LIME SLURRY IS APPROVED; HOWEVER, THE USE OF PELLETIZED LIME IS NOT APPROVED.

B5.3 PRIOR TO LIME STABILIZATION, A SULFATE TEST OF IN SITU SOILS SHALL BE PERFORMED BY DEVELOPER TO CONFIRM THE APPROPRIATE MEANS AND METHODS OF STABILIZATION. PROVIDE SULFATE TEST TO COUNTY ENGINEER PRIOR TO STABILIZATION.

B5.4 ANY VARIATION TO THE COUNTY'S STABILIZATION REQUIREMENTS MUST BE APPROVED BY THE COUNTY ENGINEER.

B5.5 THE SUBGRADE SHALL BE PREPARED AND COMPACTED TO ACHIEVE A DRY DENSITY PER TXDOT ITEM 132. IN ADDITION, PROOF ROLLING MAY BE REQUIRED BY THE COUNTY ENGINEER.

B5.6 THE SUBGRADE SHALL BE INSPECTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY AND A CERTIFIED COPY OF ALL INSPECTION REPORTS FURNISHED TO THE COUNTY ENGINEER. THE COUNTY ENGINEER MUST APPROVE THE REPORT PRIOR TO APPLICATION OF THE BASE MATERIAL. ALL DENSITY TEST REPORTS SHALL INCLUDE A COPY OF THE WORK SHEET SHOWING THE PERCENTAGE OF THE MAXIMUM DRY (PROCTOR) DENSITY. THE NUMBER AND LOCATION OF ALL SUBGRADE TESTS SHALL BE DETERMINED BY THE COUNTY ENGINEER.

B6 – BASE MATERIAL

B6.1 BASE MATERIAL SHALL CONFORM TO ITEM 247 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION, "FLEXIBLE BASE". THE BASE MATERIAL SHALL BE TYPE A GRADE 4, OR AS APPROVED BY THE COUNTY ENGINEER. GRADE 4 MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF TABLE B6.1 BELOW;

TABLE B6.1: GRADATION SPECIFICATION FOR TY A, GRADE 4

Master gradation sieve size	Cumulative % Retained
2 ½"	-
1 ¾"	0
7/8"	10% - 35%
3/8"	30% - 65%
#4	45% - 75%
#40	70% - 90%
#200	87% - 95%

B6.2 EACH LAYER OF BASE COURSE SHALL BE TESTED FOR IN–PLACE DRY DENSITY AND MEASURED FOR COMPACTED THICKNESS. THE NUMBER AND LOCATION OF ALL BASE TEST SAMPLES SHALL BE DETERMINED BY THE COUNTY ENGINEER.

B6.3 THE BASE SHALL BE PREPARED AND COMPACTED TO ACHIEVE A MINIMUM OF 100% OF THE MAXIMUM (PROCTOR) DRY DENSITY OR AS APPROVED BY THE COUNTY ENGINEER UPON RECOMMENDATION BY THE TESTING LABORATORY. THE MAXIMUM LIFT SHALL NOT EXCEED SIX INCHES. THE BASE MUST BE INSPECTED AND APPROVED BY AN INDEPENDENT TESTING LABORATORY AND A CERTIFIED COPY OF THE TEST RESULTS FURNISHED TO THE COUNTY ENGINEER FOR APPROVAL. PRIOR TO THE PLACEMENT OF THE FIRST LIFT OF BASE, THE STOCKPILE SHALL BE TESTED FOR THE SPECIFICATIONS FOUND IN ITEM 247 TABLE 1 AND THE RESULT FURNISHED TO THE COUNTY ENGINEER FOR APPROVAL.

B7–BITUMINOUS PAVEMENT

B7.1 URBAN ROADS REQUIRE A MINIMUM 2 INCH WEARING SURFACE OF HMAC TYPE D. THE MIX SHALL BE FROM A TXDOT CERTIFIED PLANT AND THE MIX DESIGN SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL.

B7.2 IF PROVIDING MIXTURE TYPE C OR D, USE PERFORMANCE GRADE (PG) BINDER 70–22. PROVIDE PG BINDER THAT DOES NOT CONTAIN RECYCLED ENGINE OIL BOTTOMS (REOBS) OR POLY PHOSPHORIC ACID (PPA). RECYCLED ASPHALT PAVEMENT (RAP) IS NOT PERMITTED FOR USE AS A COMPONENT OF THE HMACP. THE CONTRACTOR IS ALSO NOT PERMITTED THE USE RECYCLED ASPHALT SHINGLES (RAS) AS A COMPONENT OF THE HMACP.

B7.3 IF PROVIDING MIXTURE TYPE B, USE PG BINDER 64–22. PROVIDE PG BINDERS THAT DO NOT CONTAIN REOBS OR PPA. FOR SUBSURFACE COURSE TYPE B, THE USE OF TWENTY PERCENT (20%) RAP IS PERMITTED IN THE MIX DESIGN. THE CONTRACTOR IS NOT PERMITTED TO USE RAS AS A COMPONENT OF THE HMACP.

B7.4 TARGET LABORATORY MOLDED DENSITY IS 96.5% FOR ALL MIXTURES WITHOUT RAP AND WHEN USING A TEXAS GYRATORY COMPACTOR (TGC) FOR DESIGNING THE MIXTURE. WHEN USING SUPERPAVE GYRATORY COMPACTOR (SGC) TO DESIGN MIXTURES, SUBMIT THE SGC MIX DESIGN TO THE ENGINEER FOR APPROVAL.

B7.5 ALL MIXTURES MUST MEET THE HAMBURG REQUIREMENT AS STATED IN THE TABLE BELOW

High-Temperature Binder Grade	Test Method	Hamburg Wheel Test Requirements*
		Minimum # of Passes @ 0.5" Rut Depth, Tested @122°F
PG 64 or lower	Tex-242-F	7,000
PG 70	Tex-242-F	15,000
PG 76 or higher	Tex-242-F	20,000

** The County Engineer may accept Hamburg Wheel test results for production and placement if no more than 1of the 5 most recent tests is below the specified number of passes and the failing test is no more than 2,000 passes below the specified number of passes.*

B7.6 SUBMIT ANY PROPOSED ADJUSTMENTS OR CHANGES TO A JOB MIX FORMULA TO THE COUNTY ENGINEER BEFORE PRODUCTION OF THE NEW JOB MIX FORMULA.

B7.7 UNLESS OTHERWISE APPROVED, PROVIDE TYPE B MIXTURES THAT HAVE NO LESS THAN 4.5% ASPHALT BINDER, AND TY C AND D MIXTURES WITH NO LESS THAN 4.7% BINDER.

B7.8 FOR MIXTURE DESIGN VERIFICATION, PROVIDE THE ENGINEER WITH TWO 5–GALLON BUCKETS OF EACH AGGREGATE STOCKPILE TO BE USED ON THE PROJECT AND THREE GALLONS OF EACH PG BINDER TO BE USED ON THE PROJECT. ALSO PROVIDE SUFFICIENT QUANTITIES OF ANY OTHER ADDITIVES THAT WILL BE USED IN THE HMA MIXTURE. THIS MUST BE DONE PRIOR TO APPROVAL OF THE MIX DESIGN, UNLESS ALREADY PERFORMED WITHIN A ONE–YEAR TIME PERIOD.

B7.9 PRIOR TO ALLOWING PRODUCTION OF THE TRIAL BATCH, THE ENGINEER WILL USE THE MATERIALS PROVIDED BY THE CONTRACTOR TO PERFORM THE FOLLOWING TESTS TO VERIFY THE HMA MIXTURE DESIGN.

1. INDIRECT TENSILE TEST IN ACCORDANCE WITH TEX–226–F
2. HAMBURG WHEEL TEST IN ACCORDANCE WITH TEX–242–F
3. OVERLAY TEST IN ACCORDANCE WITH TEX–248–F
4. CANTABRO TEST IN ACCORDANCE WITH TEX–245–F

FOR MIXTURES DESIGNED WITH A TEXAS GYRATORY COMPACTOR (TGC), THE ENGINEER MAY REQUIRE THAT THE TARGET LABORATORY MOLDED DENSITY BE RAISED TO NO MORE THAN 97.5% OR MAY LOWER THE DESIGN NUMBER OF GYRATIONS TO NO LESS THAN 35 FOR MIXTURES DESIGNED WITH AN SGC IF ANY OF THE FOLLOWING CONDITIONS EXIST.

1. THE INDIRECT TENSILE TEST RESULTS IN A VALUE GREATER THAN 200 PSI
2. THE HAMBURG WHEEL TEST RESULTS IN A VALUE LESS THAN 3.0 MM
3. THE OVERLAY TEST RESULTS IN A VALUE LESS THAN 100 CYCLES
4. THE CANTABRO TEST RESULTS IN A VALUE OF MORE THAN 20% LOSS

IN LIEU OF, OR IN ADDITION TO EVALUATING THE MIXTURE DESIGN PRIOR TO ALLOWING A TRIAL BATCH TO BE PRODUCED, THE ENGINEER MAY ALSO EVALUATE THE MIXTURE PRODUCED DURING THE TRIAL BATCH FOR COMPLIANCE WITH THE 4 TESTS LISTED ABOVE.

B7.10 CONTRACTOR'S QUALITY CONTROL (QC) TEST REPORTS SHALL BE SUBMITTED TO THE COUNTY ENGINEER ON A DAILY BASIS. AS A MINIMUM, DAILY QC TESTING ON THE PRODUCED MIX SHALL INCLUDE: SIEVE ANALYSIS TEX–200–F, ASPHALT CONTENT TEX–236–F, HVEEM STABILITY TEX–208–F, LABORATORY COMPACTED DENSITY TEX–207–F, AND MAXIMUM SPECIFIC GRAVITY TEX–227–F. THE NUMBER AND LOCATION OF ALL HMAC TESTS SHALL BE DETERMINED BY THE COUNTY ENGINEER WITH A MINIMUM OF THREE, 6–INCH DIAMETER FIELD CORES SECURED AND TESTED BY THE CONTRACTOR FROM EACH DAY'S PAVING. EACH HMAC COURSE SHALL BE TESTED FOR IN–PLACE DENSITY, BITUMINOUS CONTENT AND AGGREGATE GRADATION, AND SHALL BE MEASURED FOR COMPACTED THICKNESS. THE NUMBER AND LOCATION OF ALL HMAC TEST SAMPLES SHALL BE DETERMINED BY THE COUNTY ENGINEER.

B7.11 RURAL ROADS MAY USE EITHER THE SPECIFICATIONS FOUND IN SECTION B7.1 OR A TWO–COURSE SURFACE IN ACCORDANCE WITH ITEM 316, TREATMENT WEARING SURFACE, OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE TYPE AND RATE OF ASPHALT AND AGGREGATE SHALL BE INDICATED ON THE PLANS AS A BASIS OF ESTIMATE AND SHALL BE DETERMINED AT THE PRECONSTRUCTION CONFERENCE. AGGREGATE USED IN THE MIX SHALL BE ON THE TXDOT QUALITY MONITORING SCHEDULE. AGGREGATE SHALL BE TYPE B GRADE 4. GRADATION TESTS SHALL BE REQUIRED FOR EACH 300 CUBIC YARDS OF MATERIAL PLACED WITH A MINIMUM OF TWO TESTS PER EACH GRADE PER EACH PROJECT. TEST RESULTS SHALL BE REVIEWED BY THE COUNTY ENGINEER PRIOR TO APPLICATION OF THE MATERIAL.

B8 – CONCRETE PAVEMENT

B8.1 IN LIEU OF BITUMINOUS PAVEMENT, PORTLAND CEMENT CONCRETE PAVEMENT MAY BE USED. IN SUCH CASES, THE PAVEMENT THICKNESS SHALL BE A MINIMUM OF 9 INCHES OF CONCRETE, AND SHALL BE JOINTED AND REINFORCED IN ACCORDANCE WITH THE DETAIL INCLUDED IN APPENDIX I. THE MIX SHALL BE FROM A TXDOT CERTIFIED PLANT. THE MIX DESIGN SHALL BE SUBMITTED TO THE COUNTY ENGINEER FOR APPROVAL PRIOR TO PLACEMENT OF THE MATERIAL.

B9 – CONCRETE – GENERAL

B9.1 UNLESS OTHERWISE SPECIFIED, CONCRETE SHALL BE IN ACCORDANCE WITH ITEM 421 OF THE CURRENT EDITION OF THE TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND BE PLACED IN ACCORDANCE WITH THE APPLICABLE ITEM.

B9.2 ALL CONCRETE SHALL BE TESTED FOR COMPRESSIVE STRENGTH. ONE SET OF THREE CONCRETE TEST CYLINDERS SHALL BE MOLDED FOR EVERY 50 CUBIC YARDS OF CONCRETE PLACED FOR EACH CLASS OF CONCRETE PER DAY, OR AT ANY OTHER INTERVAL AS DETERMINED BY THE COUNTY ENGINEER. A SLUMP TEST SHALL BE REQUIRED WITH EACH SET OF TEST CYLINDERS. ONE CYLINDER SHALL BE TESTED FOR COMPRESSIVE STRENGTH AT AN AGE OF SEVEN DAYS AND THE REMAINING TWO CYLINDERS SHALL BE TESTED AT 28 DAYS OF AGE.

FOR OFFICIAL USE ONLY

Reviewed for Substantial Conformance by City of Hutto

HUTTO

Matt Reiche, P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

							APR
							DATE
							DESCRIPTION
							REV

DESIGNED BY: MS,AC

REVIEWED BY: AC

DRAWN BY: BE,BC

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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

GENERAL NOTES (SHEET 2 OF 3)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-COVR.dwg Layout: GENERAL NOTES (SHEET 2 OF 3) Plotted: 12/2/2024 6:11:35 PM

TCEQ WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES

1. 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."

2. 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)].

3. 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)].

4. 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)].

5. ALL WATER LINE CROSSINGS OF WASTEWATER MAINS SHALL BE PERPENDICULAR [§290.44(E)(4)(B)].

6. 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)].

7. THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES IS 0.25 PERCENT [§290.44(B)].

8. 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)].

9. 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)].

10. WHEN WATERLINES ARE LAID UNDER ANY FLOWING OR INTERMITTENT STREAM OR SEMI-PERMANENT BODY OF WATER THE WATERLINE SHALL BE INSTALLED IN A SEPARATE WATERTIGHT PIPE ENCASEMENT. 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(F)(2)].

11. 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. O 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;

$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

WHERE:
Q = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
L = 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).

12. 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).

13. 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)].

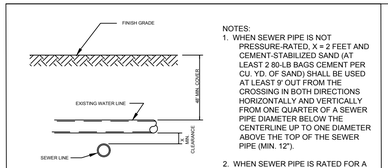
14. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER LINE, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION [§290.44(E)(6)].

15. 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)].

16. WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAINFIELDS [§290.44(E)(8)].

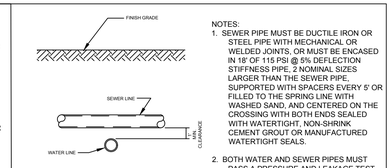
17. THE CONTRACTOR SHALL DISINFECT THE NEW WATERLINES IN ACCORDANCE WITH AWWA STANDARD C-651-14OR MOST RECENT, THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL 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)].

18. DECHLORINATION OF DISINFECTING WATER SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C655-09 OR MOST RECENT.



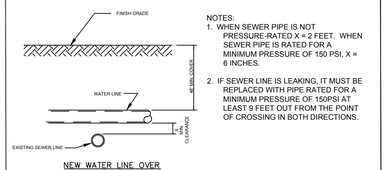
NEW SEWER LINE UNDER EXISTING WATER LINE

NOTES:
1. WHEN SEWER PIPE IS NOT PRESSURE-RATED, X = 2 FEET AND CEMENT-STABILIZED SAND (AT LEAST 2 80-LB BAGS CEMENT PER CU. YD. OF SAND) SHALL BE USED AT LEAST 9' OUT FROM THE CROSSING IN BOTH DIRECTIONS HORIZONTALLY AND VERTICALLY FROM ONE QUARTER OF A SEWER PIPE DIAMETER BELOW THE CENTERLINE UP TO ONE DIAMETER ABOVE THE TOP OF THE SEWER PIPE (MIN. 12").
2. WHEN SEWER PIPE IS RATED FOR A MINIMUM PRESSURE OF 150 PSI, X = 6 INCHES



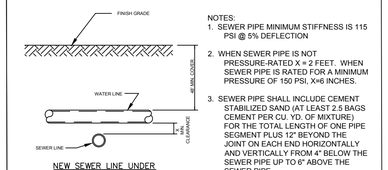
WATER LINE UNDER SEWER LINE

NOTES:
1. SEWER PIPE MUST BE DUCTILE IRON OR STEEL PIPE WITH MECHANICAL OR WELDED JOINTS, OR MUST BE ENCASED IN 18' OF 115 PSI @ 5% DEFLECTION STIFFNESS PIPE, 2 NOMINAL SIZES LARGER THAN THE SEWER PIPE, SUPPORTED WITH SPACERS EVERY 5' OR FILLED TO THE SPRING LINE WITH WASHED SAND, AND CENTERED ON THE CROSSING WITH BOTH ENDS SEALED WITH WATERTIGHT, NON-SHRINK CEMENT GROUT OR MANUFACTURED WATERTIGHT SEALS.
2. BOTH WATER AND SEWER PIPES MUST PASS A PRESSURE AND LEAKAGE TEST AS SPECIFIED IN AWWA C600 STANDARDS



NEW WATER LINE OVER EXISTING SEWER LINE

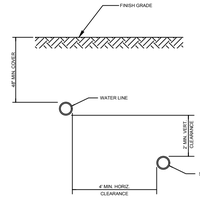
NOTES:
1. WHEN SEWER PIPE IS NOT PRESSURE-RATED X = 2 FEET. WHEN SEWER PIPE IS RATED FOR A MINIMUM PRESSURE OF 150 PSI, X = 6 INCHES.
2. IF SEWER LINE IS LEAKING, IT MUST BE REPLACED WITH PIPE RATED FOR A MINIMUM PRESSURE OF 150PSI AT LEAST 9 FEET OUT FROM THE POINT OF CROSSING IN BOTH DIRECTIONS.



NEW SEWER LINE UNDER NEW WATER LINE

NOTES:
1. SEWER PIPE MINIMUM STIFFNESS IS 115 PSI @ 5% DEFLECTION
2. WHEN SEWER PIPE IS NOT PRESSURE-RATED X = 2 FEET. WHEN SEWER PIPE IS RATED FOR A MINIMUM PRESSURE OF 150 PSI, X=6 INCHES.
3. SEWER PIPE SHALL INCLUDE CEMENT STABILIZED SAND (AT LEAST 2.5 BAGS CEMENT PER CU. YD. OF MIXTURE) FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12" BEYOND THE JOINT ON EACH END HORIZONTALLY AND VERTICALLY FROM 4" BELOW THE SEWER PIPE UP TO 6" ABOVE THE SEWER PIPE.

NOTES:
1. PER TCEQ § 217.53 AND § 290.44, WATER AND SEWER LINES MUST BE SEPARATED BY 9 FEET IN ALL DIRECTIONS, THE PIPES MUST BE INSTALLED IN SEPARATE DITCHES, AND THERE CAN BE NO PHYSICAL CONNECTIONS BETWEEN THEM.
2. ALSO PER TCEQ § 217.53 AND § 290.44, SEPARATION DISTANCES LESS THAN 9' ARE PERMISSIBLE IF PERFORMED PER THE DRAWING BELOW:



* FOR WATER LINE INSTALLATIONS NEAR EXISTING SEWER LINES, A TEXAS-LICENSED PROFESSIONAL ENGINEER MUST VERIFY THAT THE SEWER LINE IS NOT LEAKING, AND EVERY EFFORT SHALL BE EXERTED NOT TO DISTURB THE BEDDING AND BACKFILL OF THE EXISTING SEWER LINE. IF IT IS NOT POSSIBLE TO VERIFY THE LEAKS, THE SEWER LINE MUST BE REPLACED WITH AT LEAST 150 PSI PRESSURE RATED PIPE.

PARALLEL SEWER/WATER LINES

TRENCH SAFETY NOTES:
1. IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, ALL TRENCHES OVER 5 FEET IN DEPTH IN EITHER HARD AND COMPACT OR SOFT AND UNSTABLE SOIL SHALL BE SLOPED, SHORED, SHEETED, BRACED OR OTHERWISE SUPPORTED. FURTHERMORE, ALL TRENCHES LESS THAN 5 FEET IN DEPTH SHALL ALSO BE EFFECTIVELY PROTECTED WHEN HAZARDOUS GROUND MOVEMENT MAY BE EXPECTED. TRENCH SAFETY SYSTEMS TO BE UTILIZED FOR THIS PROJECT WILL BE PROVIDED BY THE CONTRACTOR.
2. IN ACCORDANCE WITH THE U. S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS, WHEN PERSONS ARE IN TRENCHES 4-FEET DEEP OR MORE, ADEQUATE MEANS OF EXIT, SUCH AS A LADDER OR STEPS, MUST BE PROVIDED AND LOCATED SO AS TO REQUIRE NO MORE THAN 25 FEET OF LATERAL TRAVEL.
3. IF TRENCH SAFETY SYSTEM DETAILS WERE NOT PROVIDED IN THE PLANS BECAUSE TRENCHES WERE ANTICIPATED TO BE LESS THAN 5 FEET IN DEPTH AND DURING CONSTRUCTION IT IS FOUND THAT TRENCHES ARE IN FACT 5 FEET OR MORE IN DEPTH OR TRENCHES LESS THAN 5 FEET IN DEPTH ARE IN AN AREA WHERE HAZARDOUS GROUND MOVEMENT IS EXPECTED, ALL CONSTRUCTION SHALL CEASE, THE TRENCHED AREA SHALL BE BARRICADED AND THE ENGINEER NOTIFIED IMMEDIATELY. CONSTRUCTION SHALL NOT RESUME UNTIL APPROPRIATE TRENCH SAFETY SYSTEM DETAILS, AS DESIGNED BY A PROFESSIONAL ENGINEER, ARE RETAINED AND COPIES SUBMITTED TO THE CITY OF HUTTO.

FIRE DEPARTMENT:
1. AN ALL WEATHER DRIVING SURFACE MUST BE INSTALLED IN LOCATIONS SHOWN ON THE SITE PLAN TO BE FIRE LANES, PRIOR TO ANY BUILDING CONSTRUCTION BEYOND THE FOUNDATION PHASE.
2. THE FOUR AND ONE HALF-INCH STEAMER OPENING MUST FACE THE DRIVEWAY OR STREET WITH THREE TO SIX FEET SET BACKS FROM THE CURB LINE(S). NO OBSTRUCTION IS ALLOWED WITHIN THREE (3) FEET OF ANY FIRE HYDRANT, AND THE FOUR AND ONE HALF OPENING MUST BE TOTALLY UNOBSTRUCTED FROM THE STREET/DRIVEWAY.
3. ALL PERVIOUS/DECORATIVE PAVEMENTS SHALL BE ENGINEERED AND INSTALLED FOR 75,000 LB. LIVE-VEHICLE LOADS. THE DISTRICT MUST APPROVE ANY PERVIOUS/DECORATIVE PAVING WITHIN 100 FT. OF ANY BUILDING.
4. COMMERCIAL DUMPSTERS AND CONTAINERS WITH AN INDIVIDUAL CAPACITY OF 1.5 CUBIC YARDS OR GREATER SHALL NOT BE STORED OR PLACED WITHIN TEN- (10) FT. OF OPENINGS, COMBUSTIBLE WALLS, OR COMBUSTIBLE EAVE LINES.
5. VERTICAL CLEARANCE REQUIRED FOR FIRE APPARATUS IS 13 FEET, 6 INCHES, FOR THE FULL 25 FEET WIDTH OF ALL ACCESS DRIVES AND ROUTES FOR INTERNAL CIRCULATION. DEAD-END FIRE APPARATUS ACCESS ROADS IN EXCESS OF 150 FEET IN LENGTH SHALL BE PROVIDED WITH APPROVED PROVISIONS FOR THE TURNING AROUND OF FIRE APPARATUS.
6. FIRE LANES SHALL BE STENCILED "FIRE LANE-TOW AWAY ZONE" IN WHITE LETTERS THREE INCHES TALL, AT INTERVALS NOT TO EXCEEDING 35 FEET. CURBS ALONG THE FIRE LANES SHALL BE PAINTED RED IN AREAS AS INDICATED ON THE SITE PLAN. WHERE NO CURB AND GUTTER EXISTS, FIRE APPARATUS ACCESS ROADS SHALL BE MARKED WITH PERMANENT FIRE LANE- TOW AWAY ZONE SIGNS AT INTERVALS NOT EXCEEDING 50 FEET. SIGNS SHALL HAVE A MINIMUM DIMENSION OF 12 INCHES WIDE AND 18 INCHES HIGH AND HAVE RED LETTERS ON A WHITE REFLECTIVE BACKGROUND. SIGNS SHALL BE POSTED ON ONE SIDE OR BOTH SIDES OF THE FIRE APPARATUS ROAD AS REQUIRED BY LOCAL AMENDMENTS.

STREET NOTES:
1. NO TRENCHING OF COMPACTED BASE WILL BE ALLOWED. A PENALTY AND/OR FINE MAY BE IMPOSED TO THE GENERAL CONTRACTOR IF TRENCHING OF COMPACTED BASE OCCURS WITHOUT CITY APPROVAL, REGARDLESS OF WHO PERFORMED THE TRENCHING.
2. ALL SIDEWALKS SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND TDLR REGULATIONS.
3. AT INTERSECTIONS WHICH HAVE VALLEY DRAINAGE, THE CROWN TO THE INTERSECTING STREET WILL BE CULMINATED AT A DISTANCE OF 40 FT. FROM THE INTERSECTING CURB LINES UNLESS OTHERWISE NOTED.
4. THE FOLLOWING STREET-SECTIONS CONTAIN PI>55 AND WILL FOLLOW THE RECOMMENDED PAVEMENT SECTIONS TABLE TO REMEDIATE EXPANSIVE SOILS BENEATH PROPOSED BASE: CROWN WHEEL PLACE, HERITAGE MILL BOULEVARD STA .1+00 - 14+00, MANIFEST ROAD STA. 1+00 - 3+15, OUTHAUL DRIVE, AND WINDROW RUN STA. 1+00 - 10+45.
5. THE SUBGRADE MATERIAL WAS TESTED BY TERRADYNE ENGINEERING, INC., 1608 ROYSTON LANE, BUILDING 2, ROUND ROCK, TEXAS, 78664, PHONE NUMBER 512-252-1218, REPORT NO. A231101-R3 DATED DECEMBER 1, 2023. THE PAVEMENT SECTIONS ARE TO BE CONSTRUCTED AS FOLLOWS:.

Recommended Flexible Pavement Sections- Local Alleys

Flexible Pavement Section	Thickness in Inches	
	Alt 1	Alt 3
Hot Mix Asphaltic Concrete	2.0	2.0
Aggregate Base	6.0	6.0
Lime Stabilized Subgrade	8.0	--
Geogrid*	--	Yes

* *A layer of geogrid equivalent to Tensar TX-130 or TX-5 should be placed between the subgrade and base course.*

Recommended Flexible Pavement Sections- Local Residential Streets

Flexible Pavement Section	Thickness in Inches	
	PI≤55	PI>55
Hot Mix Asphaltic Concrete	2.0	2.0
Aggregate Base	14.0	16.0
Lime Stabilized Subgrade	8.0	8.0

Recommended Flexible Pavement Sections -Neighborhood Collector Streets

Flexible Pavement Section	Thickness in Inches	
	PI≤ 55	PI>55
Hot Mix Asphaltic Concrete	2.0	2.0
Aggregate Base	16.0	16.0
Lime Stabilized Subgrade	8.0	8.0

STREET DESIGN TABLE

STREET NAME	STATIONING	CLASSIFICATION	DESIGN SPEED	LENGTH	ROW WIDTH	PAVEMENT WIDTH (F-F)	RURAL/URBAN	MAINTENANCE AUTHORITY	DRAINAGE TYPE
CROWN WHEEL PLACE	ALL	LOCAL	25	692.37	55	33	URBAN	PUBLIC	CURB AND GUTTER
BISON PRAIRIE ROAD	ALL	LOCAL	25	484.99	55	33	URBAN	PUBLIC	CURB AND GUTTER
HERITAGE MILL BLVD	156.35 TO 573.55	MINOR COLLECTOR	35	417.20	120	54' *	URBAN	PUBLIC	CURB AND GUTTER
	573.55 TO 2047.47	MINOR COLLECTOR	35	1473.92	70	40	URBAN	PUBLIC	CURB AND GUTTER
MANIFEST ROAD	ALL	LOCAL	25	698.92	55	33	URBAN	PUBLIC	CURB AND GUTTER
OUTHAUL DRIVE	ALL	LOCAL	25	714.75	55	33	URBAN	PUBLIC	CURB AND GUTTER
PULPWOOD DRIVE	ALL	LOCAL	25	292.81	55	33	URBAN	PUBLIC	CURB AND GUTTER
WINDROW RUN	ALL	LOCAL	25	1638.29	55	33	URBAN	PUBLIC	CURB AND GUTTER
WHIPSAW DRIVE	98.40 TO 285.50	MINOR COLLECTOR	35	187.1	60	40	URBAN	PUBLIC	CURB AND GUTTER
	285.50 TO 322.29	LOCAL	25	36.79	55	33	URBAN	PUBLIC	CURB AND GUTTER

* HAS A 14' F-F INTERIOR MEDIAN

NOTE: DESIGNED PER AASHTO STANDARDS

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Matt Mackey P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

							APR
							DATE
							DESCRIPTION
							REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

GENERAL NOTES (SHEET 3 OF 3)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

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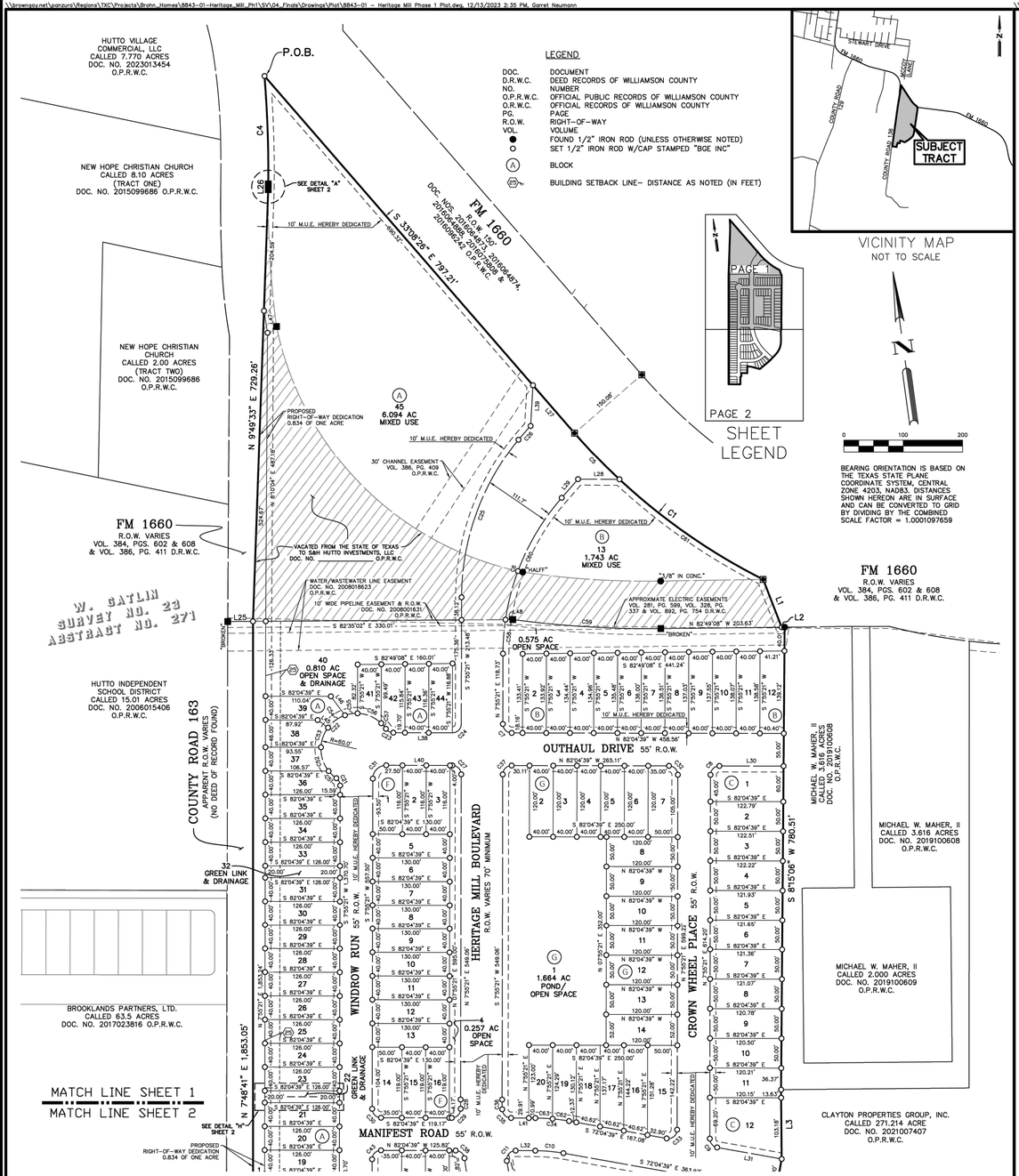

VICINITY MAP
NOT TO SCALE

SHEET LEGEND

0 100 200

BEARING ORIENTATION IS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE 4203, NAD83. DISTANCES SHOWN HEREON ARE IN SURFACE AND CAN BE CONVERTED TO GRID BY DIVIDING BY THE COMBINED SCALE FACTOR = 1.0001097659

FM 1660
R.O.W. VARIES
VOL. 384, PGS. 602 & 608
& VOL. 386, PG. 411 D.R.W.C.

LAND USE SCHEDULE		
DESCRIPTION	NO.	ACREAGE
RESIDENTIAL	130	16.149 AC.
OPEN SPACE	5	1.244 AC.
GREEN LINK & DRAINAGE	2	0.116 AC.
OPEN SPACE & DRAINAGE	1	0.810 AC.
MIXED USE	2	7.837 AC.
AMENITY	1	3.441 AC.
POND/OPEN SPACE	1	1.664 AC.
RIGHT-OF-WAY	–	9.025 AC.
RIGHT-OF-WAY DEDICATION	–	0.998 AC.
TOTAL	142	41.284 AC.

OWNER:
CLAYTON PROPERTIES GROUP INC DBA BROHN HOMES
6700 VAUGHT RANCH ROAD
SUITE #200 AUSTIN, TEXAS 78730
(512)334-6775

DEVELOPER:
CLAYTON PROPERTIES GROUP INC DBA BROHN HOMES
6700 VAUGHT RANCH ROAD
SUITE #200 AUSTIN, TEXAS 78730
(512)334-6775

ENGINEER:
BGE, INC.,
TBPE F-1046
7330 SAN PEDRO AVE., SUITE 202
SAN ANTONIO, TEXAS 78216
(210)581-3600

PROJECT LAYOUT

HERITAGE MILL NORTH SECTION 1

A SUBDIVISION OF 41.284 ACRES OF LAND LOCATED IN THE WILLIAM GATLIN, SURVEY NO. 23, ABSTRACT 271, WILLIAMSON COUNTY, TEXAS

BGE, Inc.
7330 San Pedro Ave., Suite 202
San Antonio, TX 78216
Tel: 210-581-3600 • www.bgeinc.com
TBPELS Registration No. F-1046
TBPELS Licensed Surveying Firm No. 10194490

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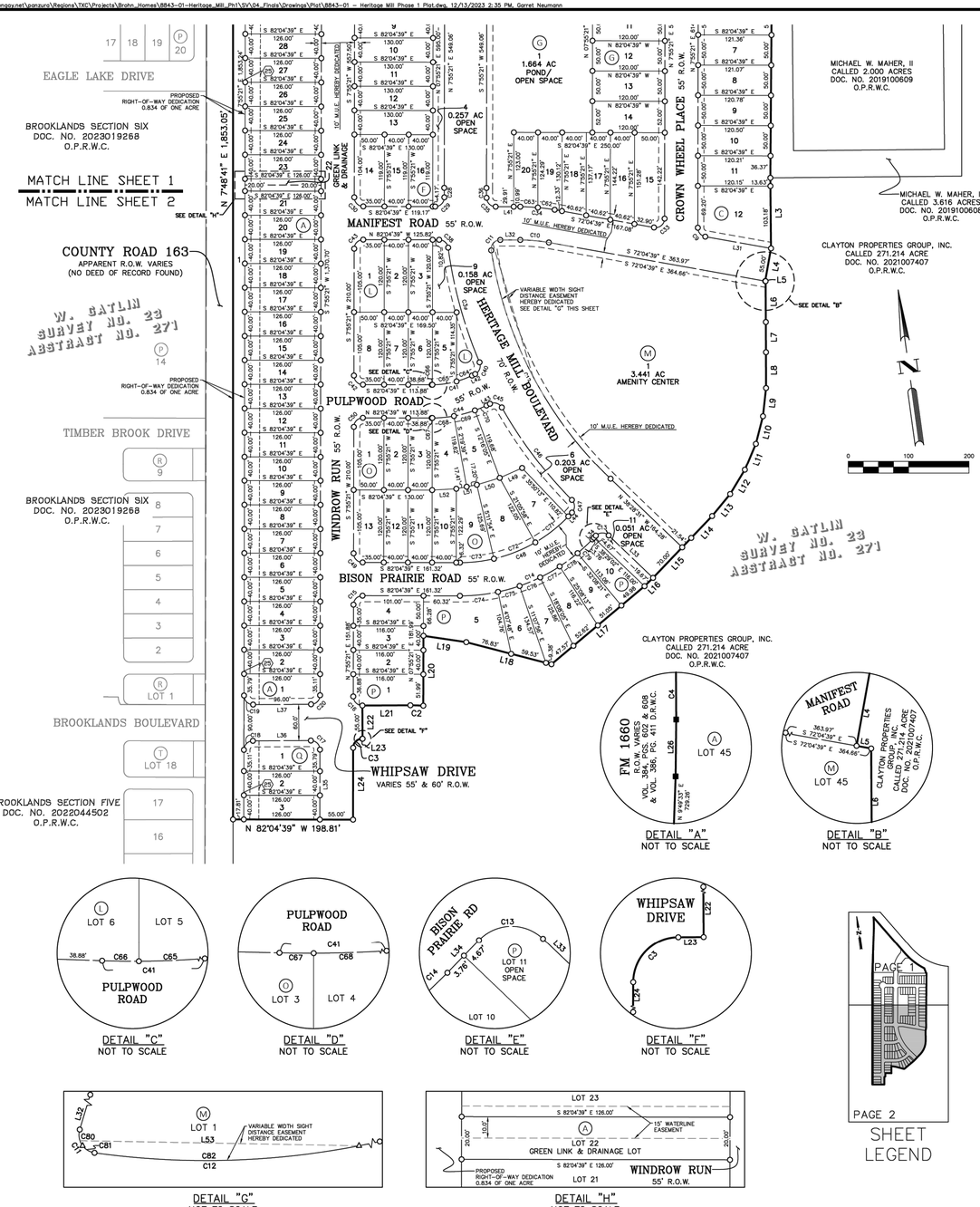

DETAIL "A"
NOT TO SCALE

DETAIL "B"
NOT TO SCALE

DETAIL "C"
NOT TO SCALE

DETAIL "D"
NOT TO SCALE

DETAIL "E"
NOT TO SCALE

DETAIL "F"
NOT TO SCALE

DETAIL "G"
NOT TO SCALE

DETAIL "H"
NOT TO SCALE

SHEET LEGEND

PROJECT LAYOUT

HERITAGE MILL NORTH SECTION 1

A SUBDIVISION OF 41.284 ACRES OF LAND LOCATED IN THE WILLIAM GATLIN, SURVEY NO. 23, ABSTRACT 271, WILLIAMSON COUNTY, TEXAS

Reviewed for Substantial Conformance by City of Hutto
Matt Rector, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
FOR OFFICIAL USE ONLY

LEGEND

DOC.	DOCUMENT
D.R.W.C.	DEED RECORDS OF WILLIAMSON COUNTY
NO.	NUMBER
O.P.R.W.C.	OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY
O.R.W.C.	OFFICIAL RECORDS OF WILLIAMSON COUNTY
PG.	PAGE
R.O.W.	RIGHT-OF-WAY
VOL.	VOLUME
●	FOUND 1/2" IRON ROD (UNLESS OTHERWISE NOTED)
○	SET 1/2" IRON ROD W/CAP STAMPED "BGE INC"
(A)	BLOCK
25'	BUILDING SETBACK LINE– DISTANCE AS NOTED (IN FEET)

BGE, Inc.
7330 San Pedro Ave., Suite 202
San Antonio, TX 78216
Tel: 210-581-3600 • www.bgeinc.com
TBPELS Registration No. F-1046
TBPELS Licensed Surveying Firm No. 10194490

REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
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TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

PROJECT LAYOUT (SHEET 1 OF 3)

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CURVE TABLE					
NUMBER	ARC LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C1	405.39'	1,040.00'	22°20'02"	S 44°18'16" E	402.83'
C2	21.41'	277.50'	4°25'15"	N 80°16'34" W	21.41'
C3	23.45'	15.00'	89°35'27"	S 52°43'05" W	21.14'
C4	182.11'	2,011.25'	5°11'17"	N 05°48'27" E	182.05'
C5	109.31'	1,040.66'	6°01'07"	S 36°09'00" E	109.26'
C6	286.78'	400.00'	41°04'43"	S 28°27'43" W	280.68'
C7	23.56'	15.00'	90°00'00"	S 37°04'39" E	21.21'
C8	23.56'	15.00'	90°00'00"	S 52°55'21" W	21.21'
C9	20.94'	15.00'	80°00'00"	S 32°04'39" E	19.28'
C10	47.56'	272.50'	10°00'00"	N 77°04'39" W	47.50'
C11	25.90'	15.00'	98°56'03"	S 48°27'20" W	22.80'
C12	434.82'	665.00'	37°27'49"	S 19°44'37" E	427.11'
C13	23.56'	15.00'	90°00'31"	N 83°28'46" W	21.21'
C14	245.01'	302.50'	46°24'23"	N 74°43'10" E	238.37'
C15	23.56'	15.00'	90°00'00"	S 52°55'21" W	21.21'
C16	23.67'	15.00'	90°24'33"	S 37°16'55" E	21.29'
C17	23.67'	15.00'	90°24'33"	N 37°16'55" W	21.29'
C18	23.45'	15.00'	89°35'27"	S 52°43'05" W	21.14'
C19	23.67'	15.00'	90°24'33"	S 37°16'55" E	21.29'
C20	23.45'	15.00'	89°35'27"	N 52°43'05" E	21.14'
C21	14.53'	15.00'	55°28'55"	N 19°49'06" W	13.96'
C22	210.45'	60.00'	200°57'50"	S 52°55'21" W	118.00'
C23	14.53'	15.00'	55°28'55"	S 54°20'12" E	13.96'
C24	23.56'	15.00'	90°00'00"	N 52°55'21" E	21.21'
C25	288.82'	420.00'	39°24'02"	S 27°37'22" W	283.16'
C26	30.94'	530.00'	3°20'43"	S 48°59'44" W	30.94'
C27	23.56'	15.00'	90°00'00"	N 37°04'39" W	21.21'
C28	15.63'	735.00'	1°13'06"	S 07°18'48" W	15.63'
C29	23.88'	15.00'	91°13'06"	N 52°18'48" E	21.44'
C30	23.56'	15.00'	90°00'00"	S 37°04'39" E	21.21'
C31	35.34'	22.50'	90°00'00"	S 52°55'21" W	31.82'
C32	23.56'	15.00'	90°00'00"	N 37°04'39" W	21.21'
C33	26.18'	15.00'	100°00'00"	N 57°55'21" E	22.98'
C34	57.16'	327.50'	10°00'00"	N 77°04'39" W	57.09'
C35	23.19'	15.00'	88°35'40"	S 37°46'49" E	20.95'
C36	16.31'	665.00'	1°24'20"	S 07°13'11" W	16.31'
C37	23.56'	15.00'	90°00'00"	S 52°55'21" W	21.21'
C38	21.54'	15.00'	82°15'54"	N 40°56'42" W	19.73'
C39	197.42'	735.00'	15°23'22"	S 07°30'26" E	196.82'
C40	22.83'	15.00'	87°11'46"	N 28°23'46" E	20.69'

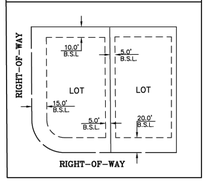
CURVE TABLE					
NUMBER	ARC LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C41	69.01'	152.50'	25°55'42"	N 84°57'30" E	68.42'
C42	23.56'	15.00'	90°00'00"	S 37°04'39" E	21.21'
C43	23.56'	15.00'	90°00'00"	S 52°55'21" W	21.21'
C44	93.90'	207.50'	25°55'42"	N 84°57'30" E	93.10'
C45	22.60'	15.00'	86°18'24"	N 64°51'09" W	20.52'
C46	193.23'	735.00'	15°03'48"	S 29°13'51" E	192.68'
C47	23.11'	15.00'	88°16'43"	N 07°22'37" E	20.89'
C48	200.46'	247.50'	46°24'23"	N 74°43'10" E	195.03'
C49	23.56'	15.00'	90°00'00"	S 37°04'39" E	21.21'
C50	23.56'	15.00'	90°00'00"	S 52°55'21" W	21.21'
C51	17.74'	60.00'	16°56'30"	S 39°05'19" E	17.68'
C52	42.98'	60.00'	41°02'21"	S 10°05'53" E	42.06'
C53	35.66'	60.00'	34°03'12"	S 27°26'54" W	35.14'
C54	35.98'	60.00'	34°21'26"	S 61°39'13" W	35.44'
C55	21.49'	60.00'	20°31'22"	S 89°05'37" W	21.38'
C56	44.33'	60.00'	42°19'47"	N 59°28'48" W	43.33'
C57	12.27'	60.00'	11°43'11"	N 32°27'20" W	12.25'
C58	57.49'	400.00'	8°14'04"	S 12°02'23" W	57.44'
C59	250.12'	1,741.28'	8°13'48"	S 78°42'14" E	249.91'
C60	229.30'	400.00'	32°50'40"	S 32°34'45" W	226.17'
C61	296.08'	1,040.00'	16°18'42"	S 47°18'56" E	295.08'
C62	28.11'	327.50'	4°55'03"	N 74°32'10" W	28.10'
C63	29.05'	327.50'	5°04'57"	N 79°32'10" W	29.04'
C64	27.38'	152.50'	10°17'07"	N 77°08'12" E	27.34'
C65	40.52'	152.50'	15°13'19"	N 89°53'25" E	40.40'
C66	1.12'	152.50'	0°25'17"	S 82°17'17" E	1.12'
C67	1.12'	207.50'	0°18'35"	S 82°13'56" E	1.12'
C68	36.00'	207.50'	9°56'26"	S 87°21'26" E	35.95'
C69	36.00'	207.50'	9°56'26"	N 82°42'08" E	35.95'
C70	20.78'	207.50'	5°44'16"	N 74°51'47" E	20.77'
C71	69.78'	247.50'	16°09'16"	N 59°35'36" E	69.55'
C72	74.00'	247.50'	17°07'51"	N 76°14'10" E	73.72'
C73	56.68'	247.50'	13°07'15"	S 88°38'17" E	56.55'
C74	63.63'	302.50'	12°03'09"	S 88°06'13" E	63.52'
C75	36.97'	302.50'	7°00'08"	N 82°22'08" E	36.95'
C76	36.97'	302.50'	7°00'08"	N 75°22'00" E	36.95'
C77	36.97'	302.50'	7°00'08"	N 68°21'51" E	36.95'
C78	36.97'	302.50'	7°00'08"	N 61°21'43" E	36.95'
C79	33.50'	302.50'	6°20'41"	N 54°41'18" E	33.48'

LINE TABLE		
NUMBER	BEARING	DISTANCE
L1	S 13°18'28" E	86.48'
L2	S 82°49'08" E	5.00'
L3	S 07°17'18" W	116.81'
L4	S 17°55'21" W	55.00'
L5	S 72°04'39" E	0.69'
L6	S 07°26'57" W	67.63'
L7	S 07°29'37" W	50.00'
L8	S 07°47'41" W	59.20'
L9	S 13°56'32" W	47.10'
L10	S 22°15'55" W	47.10'
L11	S 30°35'18" W	47.10'
L12	S 38°54'41" W	47.10'
L13	S 47°14'32" W	47.19'
L14	S 51°31'30" W	50.00'
L15	S 51°31'29" W	91.54'
L16	S 53°34'16" W	19.67'
L17	S 57°49'13" W	201.22'
L18	N 67°38'19" W	145.75'
L19	N 73°47'09" W	71.70'
L20	S 07°55'21" W	115.71'
L21	N 82°29'12" W	79.50'
L22	S 07°30'48" W	55.00'
L23	N 82°29'12" W	0.61'
L24	S 07°55'21" W	118.90'
L25	N 82°35'02" W	42.60'
L26	N 08°24'06" E	9.46'

LINE TABLE		
NUMBER	BEARING	DISTANCE
L27	N 33°08'26" W	106.89'
L28	S 81°57'09" E	69.92'
L29	N 49°00'04" E	41.79'
L30	S 82°04'39" E	108.14'
L31	N 72°04'39" W	110.58'
L32	S 82°04'39" E	33.21'
L33	S 38°28'31" E	101.70'
L34	N 51°30'58" E	8.43'
L35	S 07°55'21" W	115.79'
L36	S 82°29'12" E	96.00'
L37	N 82°29'12" W	96.00'
L38	N 82°04'39" W	99.70'
L39	S 11°08'44" W	68.72'
L40	N 82°04'39" W	111.50'
L41	S 82°04'39" E	40.90'
L42	N 71°59'39" E	5.85'
L43	S 71°59'39" W	6.51'
L44	N 51°30'58" E	8.78'
L45	S 45°31'30" E	21.63'
L46	S 28°49'37" E	39.83'
L47	N 01°22'53" W	37.50'
L48	N 82°35'02" W	12.38'
L49	N 74°00'55" E	40.61'
L50	N 80°56'09" E	39.55'
L51	N 86°57'35" E	34.61'
L52	S 85°21'07" E	40.07'

STREET NAMES				
STREET	R.O.W. WIDTH	CENTERLINE LENGTH	DESIGN SPEED	TYPE
BISON PRAIRIE ROAD	55 FT.	485 FT.	25 MPH	PUBLIC
CROWN WHEEL PLACE	55 FT.	692 FT.	25 MPH	PUBLIC
HERITAGE MILL BOULEVARD	VARIES ~70 FT MIN.	1,901 FT.	25 MPH	PUBLIC
MANIFEST ROAD	55 FT.	719 FT.	25 MPH	PUBLIC
OUTHAUL DRIVE	55 FT.	720 FT.	25 MPH	PUBLIC
PULPWOOD ROAD	55 FT.	293 FT.	25 MPH	PUBLIC
WHIPSAW DRIVE	VARIES 55 & 60 FT.	196 FT.	25–35 MPH	PUBLIC
WINDROW RUN	55 FT.	1,638 FT.	25 MPH	PUBLIC
TOTAL LINEAR FEET		6,644 FT.		

BUILDING SETBACK LINE
TYPICAL DETAIL



PROJECT LAYOUT

HERITAGE MILL NORTH SECTION 1

A SUBDIVISION OF 41.284 ACRES OF LAND LOCATED IN THE WILLIAM GATLIN, SURVEY NO. 23, ABSTRACT 271, WILLIAMSON COUNTY, TEXAS

BGE, Inc.
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LOT AREA TABLE			
LOT	BLOCK	SQUARE FEET	TYPE
1	A	6,260	R
2	A	5,040	R
3	A	5,040	R
4	A	5,040	R
5	A	5,040	R
6	A	5,040	R
7	A	5,040	R
8	A	5,040	R
9	A	5,040	R
10	A	5,040	R
11	A	5,040	R
12	A	5,040	R
13	A	5,040	R
14	A	5,040	R
15	A	5,040	R
16	A	5,040	R
17	A	5,040	R
18	A	5,040	R
19	A	5,040	R
20	A	5,040	R
21	A	5,040	R
22	A	2,520	GL/D
23	A	5,040	R
24	A	5,040	R
25	A	5,040	R
26	A	5,040	R
27	A	5,040	R
28	A	5,040	R
29	A	5,040	R
30	A	5,040	R
31	A	5,040	R
32	A	2,520	GL/D
33	A	5,040	R
34	A	5,040	R
35	A	5,040	R
36	A	4,852	R
37	A	3,895	R
38	A	4,475	R
39	A	5,092	R
40	A	35,289	OS/D
41	A	3,519	R
42	A	4,508	R
43	A	4,644	R
44	A	4,665	R
45	A	265,442	M.U.

LOT AREA TABLE			
LOT	BLOCK	SQUARE FEET	TYPE
1	B	25,056	OS
2	B	5,347	R
3	B	5,367	R
4	B	5,388	R
5	B	5,409	R
6	B	5,429	R
7	B	5,450	R
8	B	5,471	R
9	B	5,492	R
10	B	5,512	R
11	B	5,533	R
12	B	5,666	R
13	B	75,925	M.U.

LOT AREA TABLE			
LOT	BLOCK	SQUARE FEET	TYPE
1	C	7,330	R
2	C	6,133	R
3	C	6,118	R
4	C	6,104	R
5	C	6,089	R
6	C	6,075	R
7	C	6,061	R
8	C	6,046	R
9	C	6,032	R
10	C	6,018	R
11	C	6,005	R
12	C	11,127	R

LOT AREA TABLE			
LOT	BLOCK	SQUARE FEET	TYPE
1	F	5,691	R
2	F	4,640	R
3	F	4,640	R
4	F	11,212	OS
5	F	5,200	R
6	F	5,200	R
7	F	5,200	R
8	F	5,200	R
9	F	5,200	R
10	F	5,200	R
11	F	5,200	R
12	F	5,200	R
13	F	5,200	R
14	F	5,902	R
15	F	4,760	R
16	F	4,760	R

LOT AREA TABLE			
LOT	BLOCK	SQUARE FEET	TYPE
1	G	72,498	P/OS
2	G	4,800	R
3	G	4,800	R
4	G	4,800	R
5	G	4,800	R
6	G	4,800	R
7	G	5,952	R
8	G	6,000	R
9	G	6,000	R
10	G	6,000	R
11	G	6,000	R
12	G	6,000	R
13	G	6,000	R
14	G	6,240	R
15	G	7,712	R
16	G	5,910	R
17	G	5,628	R
18	G	5,346	R
19	G	5,075	R
20	G	4,932	R

LOT AREA TABLE			
LOT	BLOCK	SQUARE FEET	TYPE
1	L	5,952	R
2	L	4,800	R
3	L	4,800	R
4	L	4,723	R
5	L	4,800	R
6	L	4,800	R
7	L	4,800	R
8	L	5,952	R
9	L	6,884	OS

LOT AREA TABLE			
LOT	BLOCK	SQUARE FEET	TYPE
1	M	149,877	AMEN

LOT AREA TABLE			
LOT	BLOCK	SQUARE FEET	TYPE
1	O	5,952	R
2	O	4,800	R
3	O	4,800	R
4	O	5,596	R
5	O	5,539	R
6	O	8,838	OS
7	O	6,419	R
8	O	7,078	R
9	O	6,077	R
10	O	4,846	R
11	O	4,800	R
12	O	4,800	R
13	O	5,952	R

LOT AREA TABLE			
LOT	BLOCK	SQUARE FEET	TYPE
1	P	5,940	R
2	P	4,640	R
3	P	4,640	R
4	P	5,752	R
5	P	10,649	R
6	P	5,258	R
7	P	6,002	R
8	P	5,341	R
9	P	5,014	R
10	P	4,969	R
11	P	2,240	OS

LOT AREA TABLE			
LOT	BLOCK	SQUARE FEET	TYPE
1	Q	6,260	R
2	Q	5,040	R
3	Q	5,040	R

LEGEND	
AMEN	AMENITY
R	RESIDENTIAL
GL/D	GREENLINK/ DRAINAGE LOT
OS/D	OPEN SPACE/ DRAINAGE LOT
MU	MIXED USE
L/D	LANDSCAPE/ DRAINAGE
P/OS	POND/OPEN SPACE

PROJECT LAYOUT

HERITAGE MILL NORTH SECTION 1

A SUBDIVISION OF 41.284 ACRES OF LAND LOCATED IN THE WILLIAM GATLIN, SURVEY NO. 23, ABSTRACT 271, WILLIAMSON COUNTY, TEXAS

Reviewed for Substantial Conformance by City of Hutto
Matt Bechtol, PE
City Engineer
Engineering - City of Hutto
01/09/2025
FOR SURFACE USE ONLY

BGE, Inc.
7330 San Pedro Ave., Suite 202
San Antonio, TX 78216
Tel: 210-581-3600 • www.bgeinc.com
TBPELS Registration No. F-1046
TBPELS Licensed Surveying Firm No. 10194490

							APR
							DATE
							DESCRIPTION
							REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

PROJECT LAYOUT (SHEET 2 OF 3)

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDI01_CADD\01_Shts\8843-01-C-SP-COVR.dwg Layout: PROJECT LAYOUT (SHEET 2 of 3) Plotted: 12/2/2024 6:11:41 PM

DESCRIPTION OF A 41.284 ACRE TRACT OF LAND

FIELD NOTES FOR A 41.284 ACRE TRACT OF LAND IN THE WILLIAM GATLIN SURVEY NUMBER 23, ABSTRACT 271, WILLIAMSON COUNTY, TEXAS; BEING ALL OF A CALLED 5.794 ACRE TRACT OF LAND (TRACT 2) AS CONVEYED UNTO S&H HUTTO INVESTMENTS, LLC IN DOCUMENT NUMBER 2021009582 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; A PORTION OF A CALLED 269.153 ACRE TRACT OF LAND AS CONVEYED UNTO CLAYTON PROPERTIES GROUP, INC., IN DOCUMENT NUMBER 2021007407 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; AND ALL OF A CALLED 3.121 ACRE TRACT OF LAND TO BE VACATED BY THE STATE OF TEXAS UNTO S&H HUTTO INVESTMENTS, LLC IN DOCUMENT NUMBER ____________ OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS; SAID 41.284 ACRE TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED BY METES AND BOUNDS AS FOLLOWS:

BEGINNING AT A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC" SET ON THE SOUTH RIGHT-OF-WAY LINE OF FM 1660 (150 FOOT RIGHT-OF-WAY) AS RECORDED IN DOCUMENT NUMBERS 2016064873, 2016064874, 2016064888, 2016075808 & 2016096242 ALL OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AT THE NORTH CORNER OF THE SAID 5.794 ACRE TRACT THE FOR NORTHERNMOST CORNER AND POINT OF BEGINNING OF THE HEREIN DESCRIBED TRACT;

THENCE, S 33°08'26" E, COINCIDENT WITH THE SOUTH LINE OF SAID FM 1660 AND THE NORTHEAST LINE OF SAID 5.794 ACRE TRACT, A DISTANCE OF 797.21 FEET TO A TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TYPE II RIGHT-OF-WAY MONUMENT FOUND FOR THE BEGINNING OF A NON-TANGENT CURVE;

THENCE, CONTINUING COINCIDENT WITH SAID COMMON LINE, CURVING TO THE LEFT, WITH A RADIUS OF 1,040.00 FEET, AN ARC LENGTH OF 405.39 FEET, A CENTRAL ANGLE OF 22°20'02", A CHORD BEARING OF S 44°18'16" E, AND A CHORD DISTANCE OF 402.83 FEET TO A TXDOT TYPE II RIGHT-OF-WAY MONUMENT FOUND AT THE END OF THIS CURVE FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;

THENCE, S 13°18'28" E, OVER AND ACROSS THE RIGHT-OF-WAY OF FM 1660, A DISTANCE OF 86.48 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET ON THE SOUTH RIGHT-OF-WAY LINE OF FM 1660 AND THE NORTH LINE OF THE AFOREMENTIONED 269.153 ACRE TRACT FOR AN INTERIOR CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, S 82°49'08" E, COINCIDENT WITH THE SOUTH RIGHT-OF-WAY LINE OF FM 1660 AND THE NORTH LINE OF SAID 269.153 ACRE TRACT, A DISTANCE OF 5.00 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET AT AN EXTERIOR CORNER OF THE 269.153 ACRE TRACT AND THE NORTHWEST CORNER OF A CALLED 3.616 ACRE TRACT OF LAND AS CONVEYED UNTO MICHAEL W. MAHER, II IN DOCUMENT NUMBER 2019100608 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, FOR AN EXTERIOR CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, S 08°15'06" W, DEPARTING THE SOUTH RIGHT-OF-WAY LINE OF FM 1660, COINCIDENT WITH THE COMMON LINE OF 269.153 ACRE TRACT AND SAID 3.616 ACRE TRACT, A DISTANCE OF 780.51 FEET TO A 1/2-INCH IRON ROD FOUND AT THE SOUTHWEST CORNER OF SAID 3.616 ACRE TRACT, FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;

THENCE, DEPARTING SAID COMMON LINE, OVER AND ACROSS THE 269.153 ACRE TRACT THE FOLLOWING TWENTY-FIVE (25) COURSES:

1) S 07°17'18" W, A DISTANCE OF 116.81 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
2) S 17°55'21" W, A DISTANCE OF 55.00 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN INTERIOR CORNER OF THE HEREIN DESCRIBED TRACT;
3) S 72°04'39" E, A DISTANCE OF 0.69 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN EXTERIOR CORNER OF THE HEREIN DESCRIBED TRACT;
4) S 07°26'57" W, A DISTANCE OF 67.63 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
5) S 07°29'37" W, A DISTANCE OF 50.00 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
6) S 07°47'41" W, A DISTANCE OF 59.20 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
7) S 13°56'32" W, A DISTANCE OF 47.10 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
8) S 22°15'55" W, A DISTANCE OF 47.10 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
9) S 30°35'18" W, A DISTANCE OF 47.10 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
10) S 38°54'41" W, A DISTANCE OF 47.10 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
11) S 47°14'32" W, A DISTANCE OF 47.19 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
12) S 51°31'30" W, A DISTANCE OF 50.00 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
13) S 51°31'29" W, A DISTANCE OF 91.54 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
14) S 53°34'16" W, A DISTANCE OF 19.67 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
15) S 57°49'13" W, A DISTANCE OF 201.22 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN EXTERIOR CORNER OF THE HEREIN DESCRIBED TRACT;
16) N 67°38'19" W, A DISTANCE OF 145.75 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;
17) N 73°47'09" W, A DISTANCE OF 71.70 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN INTERIOR CORNER OF THE HEREIN DESCRIBED TRACT;
18) S 07°55'21" W, A DISTANCE OF 115.71 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED 'BGE INC"SET AT THE BEGINNING OF A NON-TANGENT CURVE FOR AN EXTERIOR CORNER OF THE HEREIN DESCRIBED TRACT;
19) CURVING TO THE LEFT, WITH A RADIUS OF 277.50 FEET, AN ARC LENGTH OF 21.41 FEET, A CENTRAL ANGLE OF 04°25'15", A CHORD BEARING OF N 80°16'34" W, AND A CHORD DISTANCE OF 21.41 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR A POINT OF TANGENCY;
20) N 82°29'12" W, A DISTANCE OF 79.50 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN INTERIOR CORNER OF THE HEREIN DESCRIBED TRACT;
21) S 07°30'48" W, A DISTANCE OF 55.00 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR AN EXTERIOR CORNER OF THE HEREIN DESCRIBED TRACT;
22) N 82°29'12" W, A DISTANCE OF 0.61 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR A POINT OF CURVATURE OF THE HEREIN DESCRIBED TRACT;
23) CURVING TO THE LEFT, WITH A RADIUS OF 15.00 FEET, AN ARC LENGTH OF 23.45 FEET, A CENTRAL ANGLE OF 89°35'27", A CHORD BEARING OF S 52°43'05" W, AND A CHORD DISTANCE OF 21.14 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR A POINT OF TANGENCY;
24) S 07°55'21" W, A DISTANCE OF 118.90 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET FOR THE SOUTHEAST CORNER OF THE HEREIN DESCRIBED TRACT; AND
25) N 82°04'39" W, A DISTANCE OF 198.81 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET ON THE APPARENT RIGHT-OF-WAY LINE OF COUNTY ROAD 163 (APPARENT R.O.W. ~ VARIES), NO DEED OF RECORD FOUND, AND THE WEST LINE OF THE 269.153 ACRE TRACT FOR THE SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, N 07°48'41" E, COINCIDENT WITH THE COMMON LINE OF THE 269.153 ACRE TRACT AND THE EAST APPARENT RIGHT-OF-WAY LINE OF SAID COUNTY ROAD 163, A DISTANCE OF 1,853.05 FEET TO A 1/2-INCH IRON ROD WITH CAP STAMPED "BGE INC"SET AT THE NORTHEAST CORNER OF THE APPARENT RIGHT-OF-WAY OF SAID COUNTY ROAD 163, AT THE COMMON CORNER OF THE 269.153 ACRE TRACT, THE AFOREMENTIONED 3.121 ACRE TRACT, AND THE REMAINDER OF THE ORIGINAL RIGHT OF-WAY OF F.M. 1660 AS DESCRIBED IN VOLUME 384, PAGE 608 AND VOLUME 386, PAGE 411 BOTH RECORDED IN THE DEED RECORDS OF WILLIAMSON COUNTY, TEXAS, FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT, FROM WHICH A BROKEN TXDOT TYPE I CONCRETE RIGHT-OF-WAY MONUMENT FOUND ON THE EAST LINE OF A CALLED 15.01 ACRE TRACT OF LAND CONVEYED UNTO THE HUTTO INDEPENDENT SCHOOL DISTRICT IN DOCUMENT NUMBER 2006015406 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, AT THE NORTHWEST CORNER OF THE NORTH TERMINUS OF SAID COUNTY ROAD 163, BEARS N 82°35'02" W A DISTANCE OF 42.60 FEET;

THENCE, N 09°49'33" E, COINCIDENT WITH THE WEST LINE OF SAID 3.121 ACRE TRACT, A DISTANCE OF 729.26 FEET TO A TXDOT TYPE I CONCRETE RIGHT-OF-WAY MONUMENT FOUND ON THE EAST RIGHT-OF-WAY LINE OF SAID F.M. 1660 AT THE CORNER COMMON TO THE 3.121 ARE TRACT AND THE AFOREMENTIONED 5.794 ACRE TRACT, FOR AN ANGLE POINT OF THE HEREIN DESCRIBED TRACT;

THENCE, COINCIDENT WITH THE ORIGINAL EAST RIGHT-OF-WAY LINE OF SAID F.M. 1660 AND THE WEST LINE OF SAID 5.794 ACRE TRACT THE FOLLOWING TWO (2) COURSES:

1) N 08°24'06" E, A DISTANCE OF 9.46 FEET TO A TXDOT TYPE I RIGHT-OF-WAY MONUMENT FOUND FOR A POINT OF TANGENCY OF A CURVE TO THE LEFT, OF THE HEREIN DESCRIBED TRACT; AND
2) CURVING TO THE LEFT, WITH A RADIUS OF 2,011.25 FEET, AN ARC DISTANCE OF 182.11 FEET, A CENTRAL ANGLE OF 05°11'17", A CHORD BEARING OF N 05°48'27" E, AND A CHORD DISTANCE OF 182.05 FEET TO THE POINT OF BEGINNING AND CONTAINING 41.284 ACRES OF LAND, MORE OR LESS.

NOTES:

1. NO LOT IN THIS SUBDIVISION SHALL BE OCCUPIED UNTIL CONNECTED TO THE APPROVED WATER AND WASTEWATER SYSTEMS.
2. IT IS THE RESPONSIBILITY OF THE MUNICIPAL UTILITY DISTRICT NO. 35, NOT THE COUNTY, TO ASSURE COMPLIANCE WITH THE PROVISIONS OF ALL APPLICABLE STATE, FEDERAL AND LOCAL LAWS AND REGULATIONS RELATING TO THE PLATTING AND DEVELOPMENT OF THIS PROPERTY.
3. THIS SUBDIVISION IS SUBJECT TO STORM-WATER MANAGEMENT CONTROLS AS REQUIRED BY WILLIAMSON COUNTY SUBDIVISION REGULATIONS, SECTION B11.1, ON NEW DEVELOPMENT THAT WOULD EVOKE SUCH CONTROLS BEYOND EXISTING CONDITIONS.
4. SIDEWALKS SHALL BE CONSTRUCTED ON BOTH SIDES OF ALL STREETS WITHIN AND BOUNDING THIS SUBDIVISION, IN CONFORMANCE WITH THE UDC, AS AMENDED. ALL SIDEWALKS SHALL BE MAINTAINED BY MUNICIPAL UTILITY DISTRICT NO. 35
5. NO LOT IN THIS SUBDIVISION IS ENCROACHED BY A SPECIAL FLOOD HAZARD AREA(S) INUNDATED BY THE 100-YEAR (1% CHANCE) FLOOD AS IDENTIFIED BY THE U.S. FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NO. 48491C0520F, DATED DECEMBER 20, 2019 FOR WILLIAMSON COUNTY, TEXAS.
6. THIS TRACT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
7. NO PORTION OF THIS SUBDIVISION LIES WITHIN THE DESIGNATED 100 YEAR FLOOD PLAIN AS DEFINED BY F.E.M.A. MAP NO. 48491C0520F, DATED DECEMBER 20, 2019.
8. DRIVEWAYS SHALL ONLY CONNECT TO AN INTERNAL PLATTED ROADS
9. DRIVEWAY ACCESS TO LOTS WITHIN THIS SUBDIVISION FROM SIDE STREETS IS PROHIBITED.
10. NO BUILDING, FENCING, LANDSCAPING, OR STRUCTURES ARE ALLOWED WITHIN ANY DRAINAGE EASEMENT UNLESS EXPRESSLY PERMITTED BY THE CITY OF HUTTO.
11. MAINTENANCE RESPONSIBILITY FOR DRAINAGE WILL NOT BE ACCEPTED BY THE COUNTY OTHER THAN THAT ACCEPTED IN CONNECTION WITH DRAINING OR PROTECTING THE ROAD SYSTEM. MAINTENANCE RESPONSIBILITY FOR STORM WATER MANAGEMENT CONTROLS WILL REMAIN WITH THE OWNER.
12. WATER SERVICE IS PROVIDED BY: CITY OF HUTTO
13. WASTEWATER SERVICE IS PROVIDED BY: CITY OF HUTTO
14. THE LANDOWNER ASSUMES ALL RISKS ASSOCIATED WITH IMPROVEMENTS LOCATED IN THE RIGHT-OF-WAY OR ROAD WIDENING EASEMENTS. BY PLACING ANYTHING IN THE RIGHT-OF-WAY OR ROAD WIDENING EASEMENTS, THE LANDOWNER INDEMNIFIES AND HOLDS THE COUNTY, IT'S OFFICERS AND EMPLOYEES HARMLESS FROM ANY LIABILITY OWING TO PROPERTY DEFECTS OR NEGLIGENCE NOT ATTRIBUTABLE TO THEM AND ACKNOWLEDGES THAT THE IMPROVEMENTS MAY BE REMOVED BY THE COUNTY AND THAT THE OWNER OF THE IMPROVEMENTS MAY BE REMOVED BY THE COUNTY AND THAT THE OWNER OF THE IMPROVEMENT SHALL BE RESPONSIBLE FOR THE RELOCATION AND/OR REPLACEMENT OF THE IMPROVEMENT.
15. HERITAGE MILL NORTH SECTION 1 IS SUBJECT TO TRAFFIC IMPACT FEES IN ACCORDANCE WITH THE CONSENT AGREEMENT DOCUMENT NUMBER 2021043665.
16. A CERTIFICATE OF COMPLIANCE IS HEREBY ISSUED FOR ALL LOTS WITHIN THIS SUBDIVISION. THIS CERTIFICATE OF COMPLIANCE IS VALID UNTIL SUCH TIME AS FEMA OR THE COUNTY REVISES OR NEWLY ADOPTS FLOODPLAIN BOUNDARIES IN THIS VICINITY.
17. A 20 FOOT FRONT YARD SETBACK FOR ALL LOTS IS REQUIRED PER WILLIAMSON COUNTY SUBDIVISION REGULATIONS, DATED DECEMBER 7, 2021, PER APPENDIX F2.5 FOR CITY OF HUTTO ETJ.
18. A TEN FOOT WIDE MUNICIPAL UTILITY EASEMENT IS HEREBY DEDICATED ADJACENT TO ALL STREET RIGHT-OF-WAY.
19. DRIVEWAY MAINTENANCE WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. IF OBSTRUCTIONS OCCUR WITHIN THE DRIVEWAY CULVERT, THE COUNTY RESERVES THE RIGHT TO CLEAR OBSTRUCTIONS THAT ARE CAUSING ADVERSE IMPACTS TO THE ROADWAY.
20. LOT 1, BLOCK G, IS DESIGNATED AS DETENTION POND, DRAINAGE, AND OPEN SPACE LOT AND SHALL BE DEEDED TO AND MAINTAINED BY WILLIAMSON COUNTY MUD 35.
21. LOTS 22, 32, 40, BLOCK A, ARE DESIGNATED AS GREEN LINK, DRAINAGE, AND OPEN SPACE LOTS AND SHALL BE DEEDED TO AND MAINTAINED BY WILLIAMSON COUNTY MUD 35.
22. LOT 1, BLOCK B, LOT 4, BLOCK F, LOT 4, BLOCK L, LOT 6, BLOCK O, AND LOT 11, BLOCK P ARE DESIGNATED AS OPEN SPACE LOTS AND SHALL TO BE DEDICATED TO THE HOA.
23. LOT 1, BLOCK M IS DESIGNATED AS AN AMENITY CENTER LOT AND SHALL TO BE DEDICATED TO THE HOA.
24. BUILDING SETBACK LINES SHALL CONFORM TO UDC REQUIREMENTS, AS AMENDED.
25. STREET LIGHTING SHALL BE PROVIDED BY THE DEVELOPER IN CONFORMANCE WITH THE UDC REQUIREMENTS, AS AMENDED.
26. TREES SHALL BE INSTALLED ON BOTH SIDES OF ALL STREETS WITHIN AND BOUNDING THIS SUBDIVISION, IN CONFORMANCE WITH THE UDC, AS AMENDED.
27. WATER AND WASTEWATER SERVICE FOR THIS SUBDIVISION WILL BE AVAILABLE THROUGH THE CITY OF HUTTO AFTER THE APPROPRIATE WATER AND WASTEWATER SYSTEM IMPROVEMENTS ARE INSTALLED TO THIS SITE. THE CITY OF HUTTO ASSUMES NO OBLIGATIONS FOR INSTALLING ANY WATER AND WASTEWATER IMPROVEMENTS REQUIRED TO SERVE THIS SITE OUTSIDE OF THE CONSENT AGREEMENT (WILLIAMSON COUNTY MUD NO. 35).
28. IN ORDER TO PROMOTE DRAINAGE AWAY FROM A STRUCTURE, THE SLAB ELEVATION SHOULD BE BUILT AT LEAST ONE-FOOT ABOVE THE SURROUNDING GROUND, AND THE GROUND SHOULD BE GRADED AWAY FROM THE STRUCTURE AT A SLOPE OF 1/2" PER FOOT FOR A DISTANCE OF AT LEAST 10 FEET.
29. ELECTRIC SERVICE IS PROVIDED BY: ONCOR.
30. GAS SERVICE IS PROVIDED BY: TEXAS GAS SERVICE.
31. ALL SUBDIVISION CONSTRUCTION SHALL CONFORM TO THE CONSENT AGREEMENT (WILLIAMSON COUNTY MUD NO. 35), CITY OF HUTTO UNIFIED DEVELOPMENT CODE, CONSTRUCTION STANDARDS, AND GENERALLY ACCEPTED ENGINEERING PRACTICES.
32. ON-SITE STORMWATER DETENTION FACILITIES WILL BE PROVIDED TO REDUCE POST-DEVELOPMENT PEAK RATES OF DISCHARGE OF THE 2-, 10-, 25-, AND 100-YEAR STORM EVENTS.
33. ALL EASEMENTS ON PRIVATE PROPERTY SHALL BE MAINTAINED BY THE PROPERTY OWNER OR HIS OR HER ASSIGNS.
34. GREENLINK LOTS SHALL BE DEVELOPED IN CONFORMANCE WITH THE UDC, AS AMENDED.
35. MAXIMUM IMPERVIOUS COVER PER RESIDENTIAL AND NON-RESIDENTIAL LOTS SHALL BE BASED ON THE DRAINAGE REPORT.

PROJECT LAYOUT

HERITAGE MILL NORTH SECTION 1

A SUBDIVISION OF 41.284 ACRES OF LAND LOCATED IN THE WILLIAM GATLIN, SURVEY NO. 23, ABSTRACT 271, WILLIAMSON COUNTY, TEXAS

BGE, Inc.
7330 San Pedro Ave., Suite 202
San Antonio, TX 78216
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TBPELS Registration No. F-1046
TBPELS Licensed Surveying Firm No. 10194490

\\browngay.net\panzura\Regions\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\SV\04_Finals\Drawings\Plat\8843-01 - Heritage Mill Phase 1 Plat.dwg, 12/13/2023 2:35 PM, Garret Neumann

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF TRAVIS §

THAT CLAYTON PROPERTIES GROUP, INC., D.B.A. BROHN HOMES, ACTING HEREBY AND THROUGH, ADAM BOENIG, VICE PRESIDENT, THE OWNER OF A CALLED 269.153 ACRE TRACT OF LAND AS CONVEYED BY SPECIAL WARRANTY DEED RECORDED IN DOCUMENT NUMBER 2021007407 OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON, COUNTY, TEXAS, AND THAT S&H HUTTO INVESTMENTS, LLC, ACTING HEREBY AND THROUGH JOE STRAUB, MANAGER, THE OWNER OF A CALLED 5.794 ACRE TRACT OF LAND (TRACT 2) AS CONVEYED BY SPECIAL WARRANTY DEED RECORDED IN DOCUMENT NUMBER 2021009582 OF THE OFFICIAL PUBLIC RECORDS WILLIAMSON COUNTY, TEXAS, AND OWNER OF A CALLED 3.121 ACRE TRACT OF LAND AS VACATED BY THE STATE OF TEXAS AS RECORDED IN DOCUMENT NUMBER ___________, OF THE OFFICIAL PUBLIC RECORDS OF WILLIAMSON COUNTY, TEXAS, BEING IN THE WILLIAM GATLIN SURVEY NUMBER 23, ABSTRACT 271 LOCATED IN WILLIAMSON COUNTY, TEXAS, DOES HEREBY SUBDIVIDE 41.284 ACRES OF LAND AND DO HEREBY STATE THAT THERE ARE NO LIEN HOLDERS OF THOSE CERTAIN TRACTS OF LAND, AND THAT WE OWNERS OF 41.284 ACRES OF LAND AS SHOWN HEREON, DO HEREBY SUBDIVIDE AND CONSENT TO ALL PLAT NOTE REQUIREMENTS SHOWN HEREON, AND DO HEREBY FOREVER DEDICATE TO THE PUBLIC FOR SUCH PURPOSES AS WILLIAMSON COUNTY, TEXAS MAY DEEM APPROPRIATE AND DO HEREBY STATE THAT ALL PUBLIC ROADWAYS AND EASEMENTS AS SHOWN ON THIS PLAT ARE FREE OF LIENS.

THIS SUBDIVISION IS TO BE KNOWN AS:

HERITAGE MILL NORTH SECTION 1

WITNESS MY HAND, THIS THE ____DAY OF ____________, 20__, A.D.

CLAYTON PROPERTIES GROUP, INC.
D.B.A. "BROHN HOMES"
6720 VAUGHT RANCH ROAD, SUITE 200
AUSTIN, TEXAS 78730

BY: ADAM BOENIG,
VICE PRESIDENT

____
ADAM BOENIG, VICE PRESIDENT

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF TRAVIS §

BEFORE ME, THE UNDERSIGNED AUTHORITY, PERSONALLY APPEARED ADAM BOENIG, VICE PRESIDENT, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED.

______________________ ____________
NOTARY PUBLIC, STATE OF TEXAS DATE

____
PRINT NOTARY'S NAME
MY COMMISSION EXPIRES ____________________

WITNESS MY HAND, THIS THE ____DAY OF ____________, 20__, A.D.

S&H HUTTO INVESTMENTS, LLC., A TEXAS LIMITED LIABILITY COMPANY
4408 SPICEWOOD SPRINGS
AUSTIN, TEXAS 78759

BY: JOE STRAUB,
MANAGER

____
JOE STRAUB, MANAGER

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF TRAVIS §

BEFORE ME, THE UNDERSIGNED AUTHORITY, PERSONALLY APPEARED JOE STRAUB, MANAGER, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATION THEREIN EXPRESSED AND IN THE CAPACITY THEREIN STATED.

______________________ ____________
NOTARY PUBLIC, STATE OF TEXAS DATE

____
PRINT NOTARY'S NAME
MY COMMISSION EXPIRES ____________________

I, J. ADAM BERRY, P.E., AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS, TO PRACTICE THE PROFESSION OF ENGINEERING, AND DO HEREBY CERTIFY THAT THIS PLAT IS FEASIBLE FROM AN ENGINEERING STANDPOINT, AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

PRELIMINARY PENDING FINAL REVIEW

______________________ ____________
J. ADAM BERRY, P.E. DATE
LICENSED PROFESSIONAL ENGINEER NO. 120743
BGE, INC.
101 WEST LOUIS HENNA BLVD., SUITE 400
AUSTIN, TEXAS 78728

I, DION P. ALBERTSON, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS, TO PRACTICE THE PROFESSION OF LAND SURVEYING, AND DO HEREBY CERTIFY THAT THIS PLAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND WAS PREPARED FROM AN ACTUAL ON THE GROUND SURVEY, UNDER MY SUPERVISION.

PRELIMINARY PENDING FINAL REVIEW

______________________ ____________
DION P. ALBERTSON, R.P.L.S. DATE
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 4963
BGE, INC.
7330 SAN PEDRO AVE., SUITE 202
SAN ANTONIO, TEXAS 78216

ROAD NAME AND ADDRESS ASSIGNMENT VERIFIED THIS THE ____ DAY OF ______________, 20__ A.D.

____
WILLIAMSON COUNTY ADDRESS COORDINATOR

THIS PLAT WAS APPROVED FOR RECORDING BY THE PLANNING AND ZONING COMMISSION CHAIR ON THE ____ DAY OF ___________, 20___.

______________________ ____________
SUSANNA BOYER DATE
PLANNING AND ZONING COMMISSION CHAIR

______________________ ____________
ASHLEY BAILEY, AICP DATE
DEVELOPMENT SERVICES DIRECTOR

THIS PLAT WAS APPROVED FOR RECORDING BY THE HUTTO CITY COUNCIL ON THE ____ DAY OF ___________, 20___.

______________________ ______________________
MIKE SNYDER, MAYOR DATE ANGELA LEWIS, CITY SECRETARY DATE

IN APPROVING THIS PLAT BY THE COMMISSIONERS' COURT OF WILLIAMSON COUNTY, TEXAS, IT IS UNDERSTOOD THAT THE BUILDING OF ALL STREETS, ROADS, AND OTHER PUBLIC THOROUGHFARES AND ANY BRIDGES OR CULVERTS NECESSARY TO BE CONSTRUCTED OR PLACED IS THE RESPONSIBILITY OF THE OWNERS OF THE TRACT OF LAND COVERED BY THIS PLAT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PRESCRIBED BY THE COMMISSIONERS' COURT OF WILLIAMSON COUNTY, TEXAS. SAID COMMISSIONERS' COURT ASSUMES NO OBLIGATION TO BUILD ANY OF THE STREETS, ROADS, OR OTHER PUBLIC THOROUGHFARES SHOWN ON THIS PLAT OR OF CONSTRUCTING ANY OF THE BRIDGES OR DRAINAGE IMPROVEMENTS IN CONNECTION THEREWITH. THE COUNTY WILL ASSUME NO RESPONSIBILITY FOR DRAINAGE WAYS OR EASEMENTS IN THE SUBDIVISION, OTHER THAN THOSE DRAINING OR PROTECTING THE ROAD SYSTEM AND STREETS.

THE COUNTY ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF REPRESENTATIONS BY OTHER PARTIES IN THIS PLAT. FLOOD PLAIN DATA, IN PARTICULAR, MAY CHANGE DEPENDING ON SUBSEQUENT DEVELOPMENT. IT IS FURTHER UNDERSTOOD THAT THE OWNERS OF THE TRACT OF LAND COVERED BY THIS PLAT MUST INSTALL AT THEIR OWN EXPENSE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE THAT MAY BE REQUIRED BEFORE THE STREETS IN THE SUBDIVISION HAVE FINALLY BEEN ACCEPTED FOR MAINTENANCE BY THE COUNTY.

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF WILLIAMSON §

I, BILL GRAVELL, JR., COUNTY JUDGE OF WILLIAMSON COUNTY, TEXAS, DO HEREBY CERTIFY THAT THIS MAP OR PLAT, WITH FIELD NOTES HEREON, FOR A SUBDIVISION HAVING BEEN FULLY PRESENTED TO THE COMMISSIONERS' COURT OF WILLIAMSON COUNTY, TEXAS, AND BY THE SAID COURT DULY CONSIDERED, WERE ON THIS DAY APPROVED AND THAT THIS PLAT IS AUTHORIZED TO BE REGISTERED AND RECORDED IN THE PROPER RECORDS OF THE COUNTY CLERK OF WILLIAMSON COUNTY, TEXAS.

______________________ ______________________
BILL GRAVELL, JR., COUNTY JUDGE DATE
WILLIAMSON COUNTY, TEXAS

STATE OF TEXAS §
§ KNOW ALL MEN BY THESE PRESENTS:
COUNTY OF WILLIAMSON §

THAT I, NANCY RISTER, CLERK OF THE COUNTY COURT OF SAID COUNTY, DO HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IN WRITING, WITH ITS CERTIFICATION OF AUTHENTICATION, WAS FILED FOR RECORD IN MY OFFICE ON THE ___DAY OF___________, A.D., 20___, AT _____ O'CLOCK ___M., AND DULY RECORDED THIS THE ___DAY OF ___________, A.D., 20___, AT _____O'CLOCK, ___.M. IN THE OFFICIAL PUBLIC RECORDS OF SAID COUNTY IN INSTRUMENT NO.______________.

TO CERTIFY WHICH, WITNESS MY HAND AND SEAL AT THE COUNTY COURT OF SAID COUNTY, AT MY OFFICE IN GEORGETOWN, TEXAS, THE DATE LAST SHOWN ABOVE WRITTEN.

NANCY RISTER, CLERK COUNTY COURT
WILLIAMSON COUNTY, TEXAS

BY: ______________________
DEPUTY

PROJECT LAYOUT

HERITAGE MILL NORTH SECTION 1

A SUBDIVISION OF 41.284 ACRES OF LAND LOCATED IN THE WILLIAM GATLIN, SURVEY NO. 23, ABSTRACT 271, WILLIAMSON COUNTY, TEXAS

FOR OFFICIAL USE ONLY
Reviewed for Substantial Conformance by City of Hutto
Matt Rector, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

BGE, Inc.
7330 San Pedro Ave., Suite 202
San Antonio, TX 78216
Tel: 210-581-3600 ● www.bgeinc.com
TBPELS Registration No. F-1046
TBPELS Licensed Surveying Firm No. 10194490

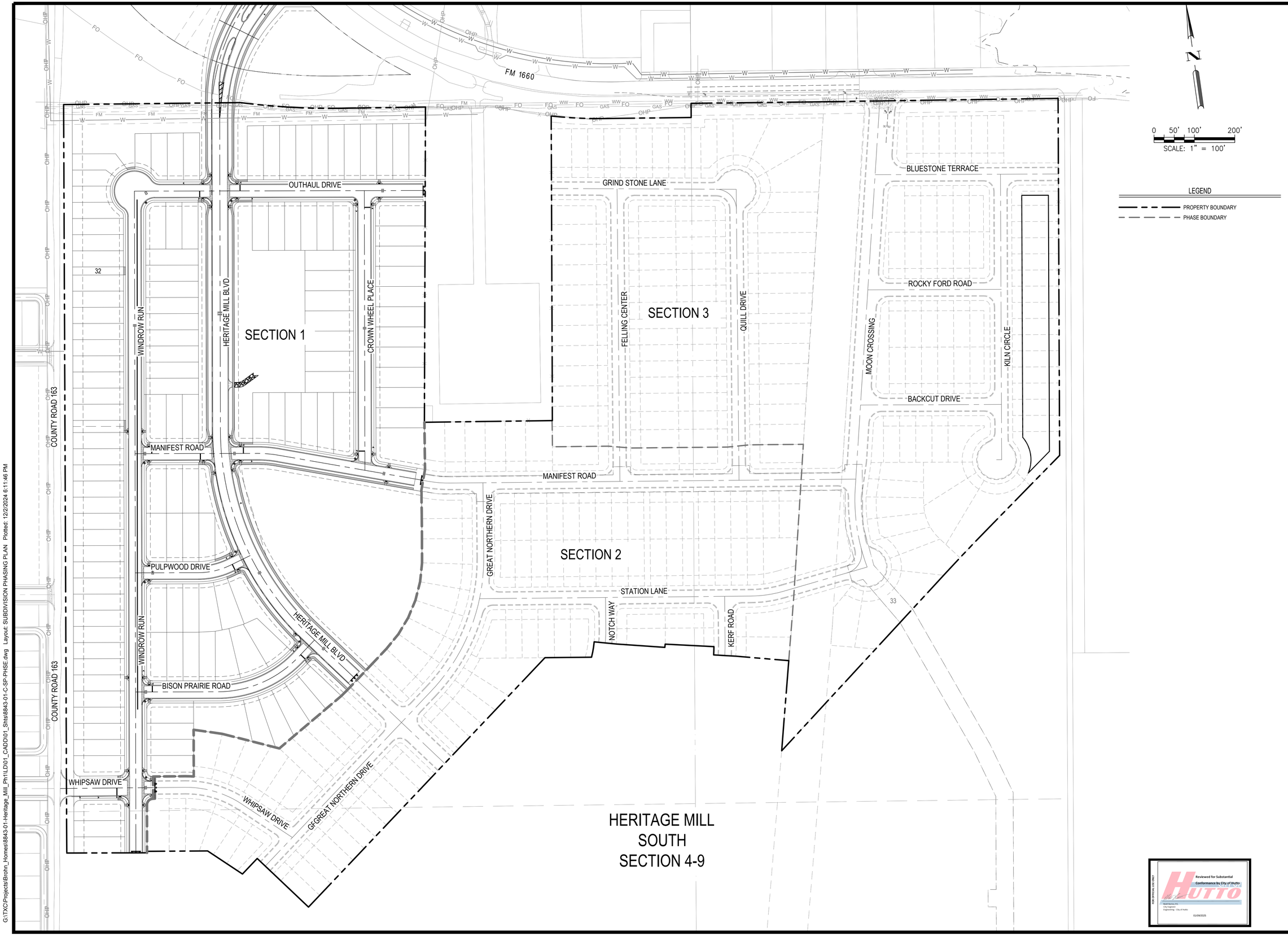
REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

PROJECT LAYOUT (SHEET 3 OF 3)



G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-PHSE.dwg Layout: SUBDIVISION PHASING PLAN Plotted: 12/2/2024 6:11:46 PM

REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE

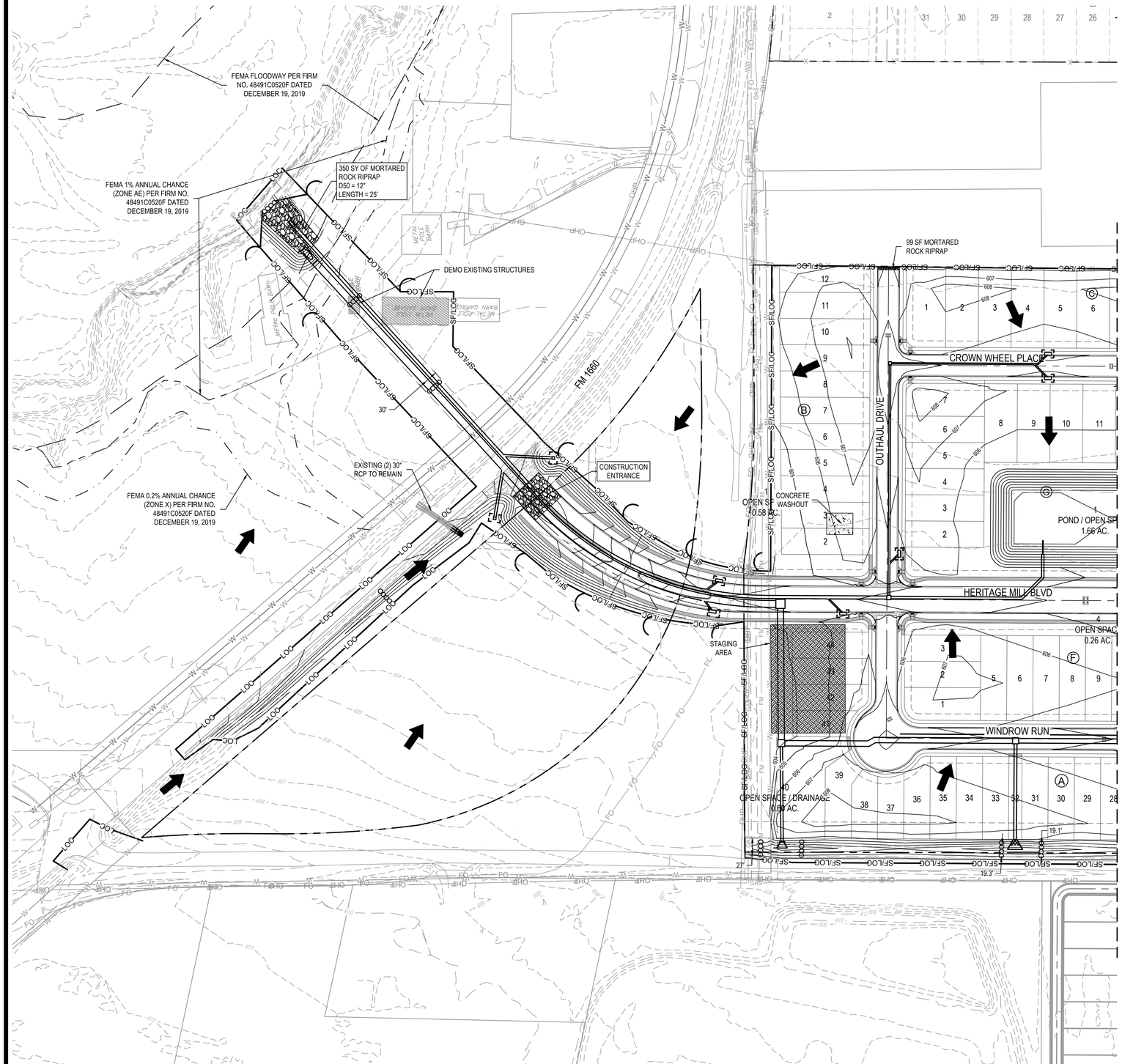
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.beginc.com

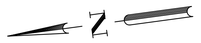
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

SUBDIVISION PHASING PLAN

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Mark Reyes, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025





0 40' 80' 160'

SCALE: 1" = 80'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- 100 YEAR FEMA FLOODPLAIN
- LOC — LIMITS OF CONSTRUCTION
- LOC/SF — LIMITS OF CONSTRUCTION/ SILT FENCE
- SILT FENCE
- SILT FENCE J-HOOK
- INLET PROTECTION
- TEMPORARY ROCK BERM
- DIRECTION OF FLOW
- RIPRAP / CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- STAGING AREA
- TURF REINFORCEMENT MAT (GEO-SYNTHETICS LANDLOK TRM-450 OR ENGINEER APPROVED EQUAL)
- DEMOLITION BOUNDARY

NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING.
2. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER ECM OR AS DIRECTED BY THE CITY INSPECTOR.
3. THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATES ONTO THE ROADS A MINIMUM OF ONCE DAILY.
4. INITIATE FINAL STABILIZATION WITHIN 7 DAYS OF ACHIEVING FINAL GRADE.
5. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED IMMEDIATELY BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE.
6. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO AREAS WITHIN THE R.O.W., LIMITS OF CONSTRUCTION, EASEMENTS, SPOILS DISPOSAL AND STAGING AREAS ONLY.
7. DEBRIS REMOVAL FROM SITE SHALL, AT A MINIMUM, INCLUDE OLD STRUCTURES, CONCRETE FOUNDATIONS, PROPANE TANKS, SCRAP METAL, EXPOSED WIRE/PLUMBING FIXTURES; SEPTIC TANK(S) REMOVAL; WATER WELL PROPER TCEQ ABANDONMENT (CAPPING & DOCUMENTATION); OLD TIRES, FARM EQUIPMENT, FENCING, AND ANY VISIBLE TRASH.
8. ROCK BERMS ARE TEMPORARY AND SHALL BE REMOVED UPON FINAL STABILIZATION.

SPOILS AREA NOTES:

A. THE FILL MATERIAL SHALL BE STORED AT THE LOCATION SHOWN ON THE APPROVED CONSTRUCTION PLANS.
B. THE FILL MATERIAL SHALL CONSIST OF EARTHEN MATERIAL, SHALL REMAIN FREE FROM DEBRIS, AND SHALL BE SUITABLE FOR USE AS FILL MATERIAL ON THE FUTURE SECTIONS OF THE SUBDIVISION. MAXIMUM ROCK SIZE SHALL BE 24 INCHES.
C. STORAGE OF THE FILL MATERIAL SHALL COMPLY WITH THE STORM WATER POLLUTION PREVENTION PLAN INCLUDING REVEGETATION OF DISTURBED AREAS AND OTHER SEDIMENTATION AND EROSION CONTROLS ADOPTED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY.
D. THE FILL MATERIAL WILL BE PLACED IN SUCH MANNER SO THAT IT IS STABLE, WITH THE SIDE SLOPES NO STEEPER THAN 1:1 (H:V) SLOPE.
E. THE HEIGHT OF THE FILL MATERIAL SHALL NOT EXCEED SEVEN FEET.

Reviewed for Substantial Conformance by City of Hutto
Matt Reiches P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

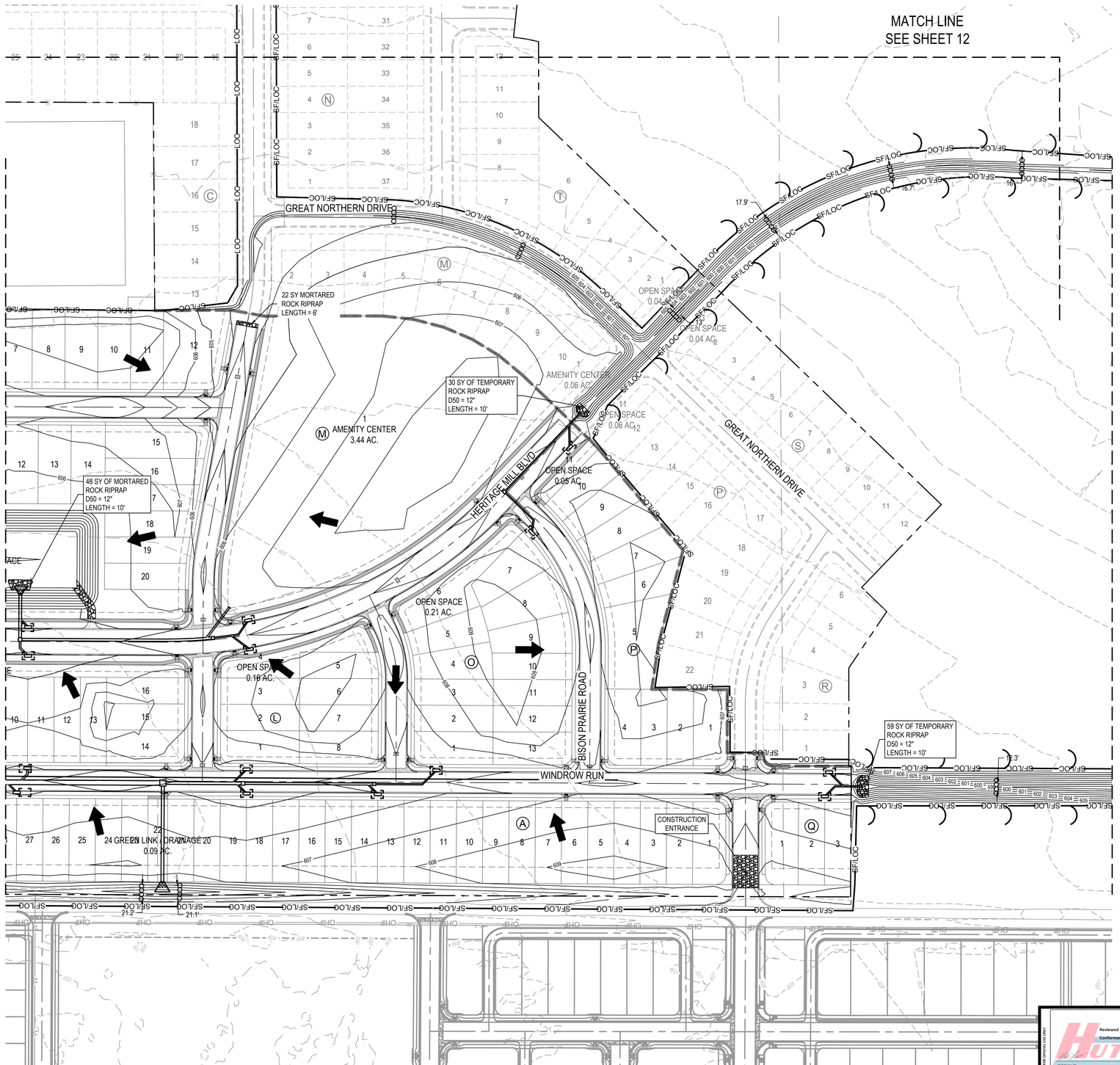
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

EROSION AND SEDIMENTATION CONTROL PLAN (SHEET 1 OF 4)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-ESC.dwg Layout: EROSION AND SEDIMENTATION CONTROL PLAN (SHEET 1 OF 4) Plotted: 12/2/2024 6:11:49 PM



0 40' 80' 160'
SCALE: 1" = 80'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- 100 YEAR FEMA FLOODPLAIN
- LOC — LIMITS OF CONSTRUCTION
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- SILT FENCE
- SILT FENCE J-HOOK
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- TEMPORARY ROCK BERM
- DIRECTION OF FLOW
- RIPRAP / CONSTRUCTION ENTRANCE
- CONCRETE WASHOUT
- STAGING AREA
- TURF REINFORCEMENT MAT (GEO-SYNTHETICS LANDLOK TRM-450 OR ENGINEER APPROVED EQUAL)
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FOR OFFICIAL USE ONLY
Reviewed for Substantial Conformance by City of Hutto
Matt Nevins P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
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AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

EROSION AND SEDIMENTATION CONTROL PLAN (SHEET 2 OF 4)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

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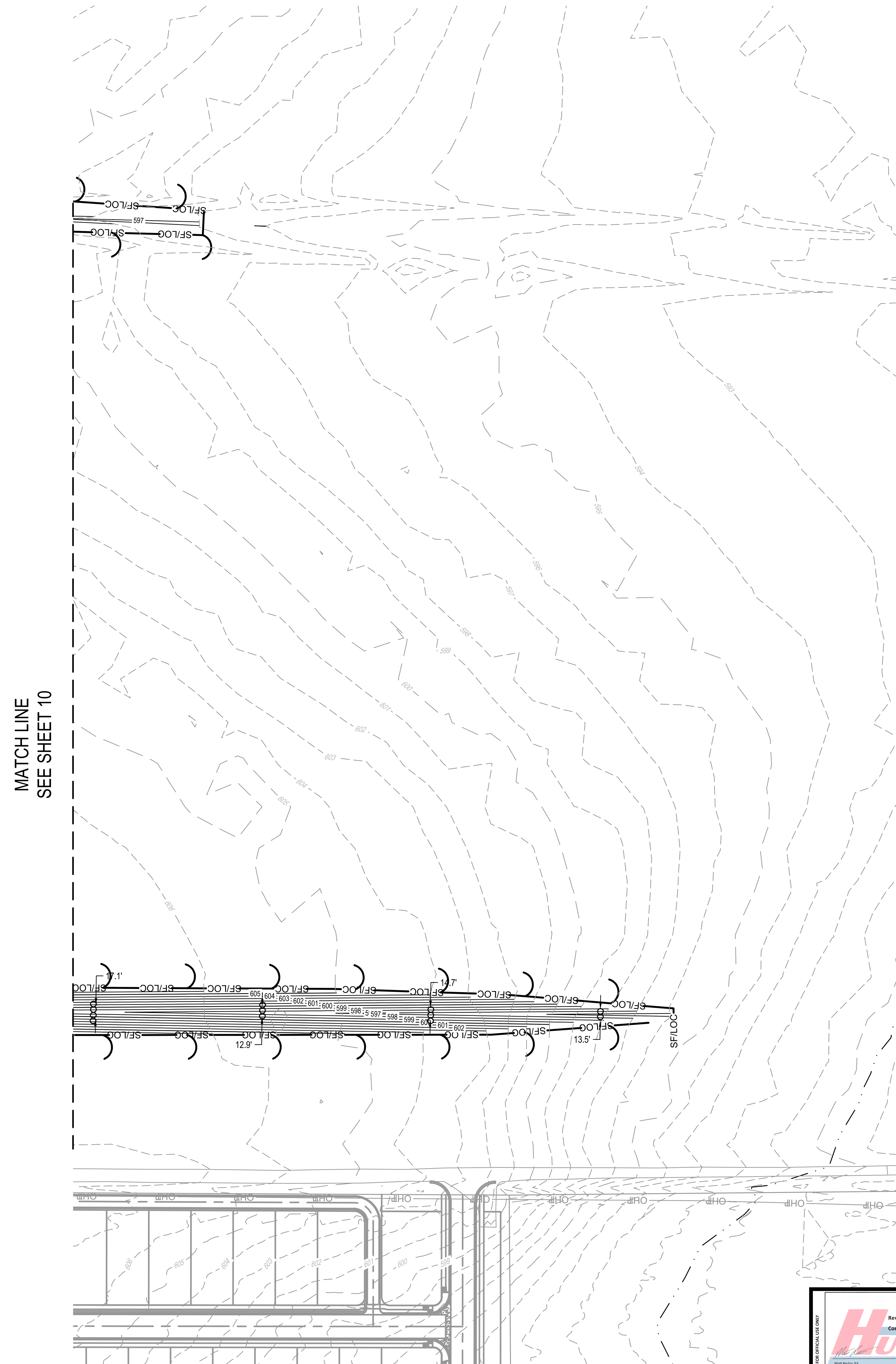

0 40' 80' 160'
SCALE: 1" = 80'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- 100 YEAR FEMA FLOODPLAIN
- LOC — LIMITS OF CONSTRUCTION
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FOR OFFICIAL USE ONLY
Reviewed for Substantial Conformance by City of Hutto
CITY OF HUTTO
Matt Rector, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

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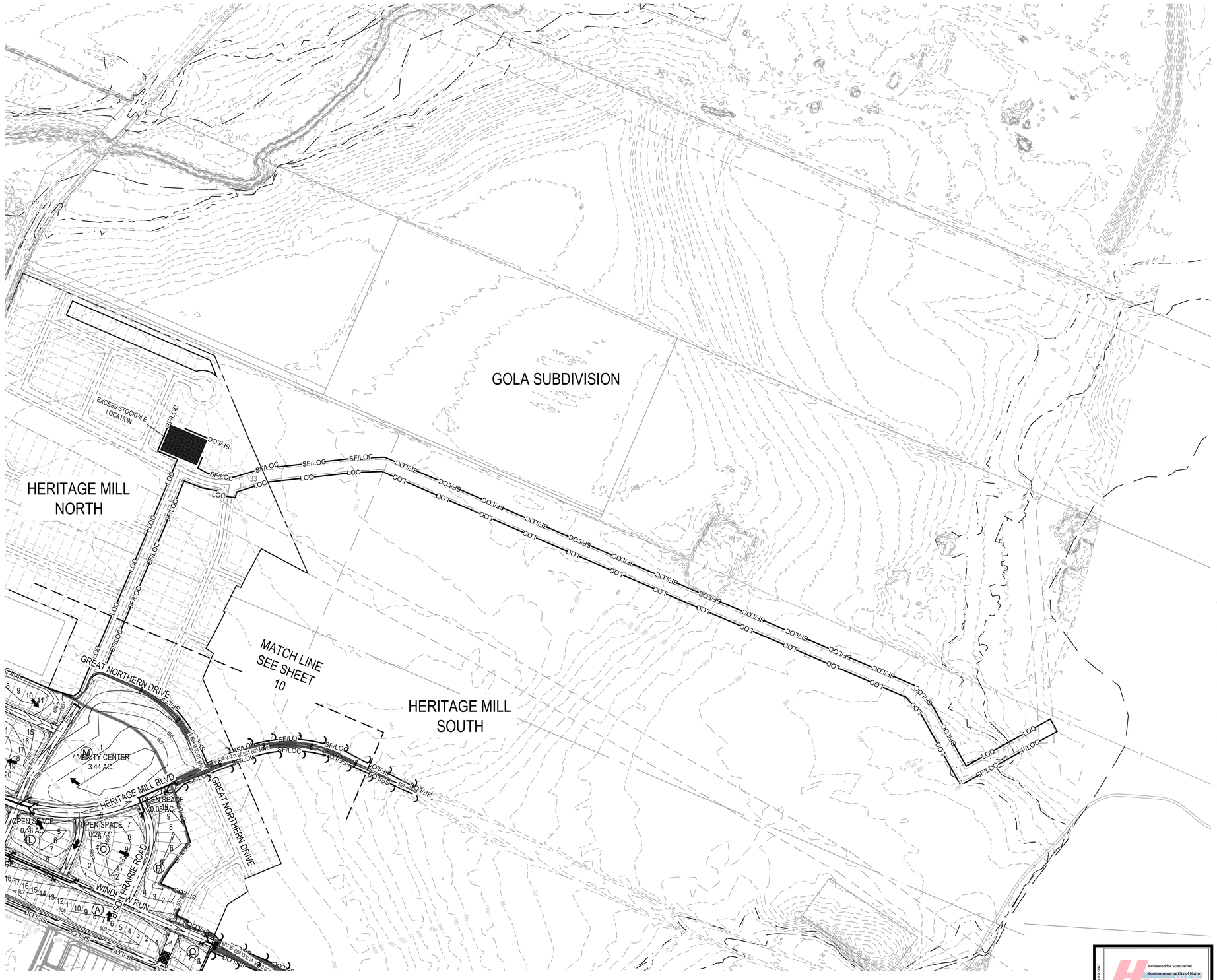
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

EROSION AND SEDIMENTATION CONTROL PLAN (SHEET 3 OF 4)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024



0 100' 200' 400'
SCALE: 1" = 200'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
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E. THE HEIGHT OF THE FILL MATERIAL SHALL NOT EXCEED SEVEN FEET.

FOR OFFICIAL USE ONLY

Reviewed for Substantial Conformance by City of Hutto

Matt Reiter, P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

								APR
								DATE
								DESCRIPTION
								REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
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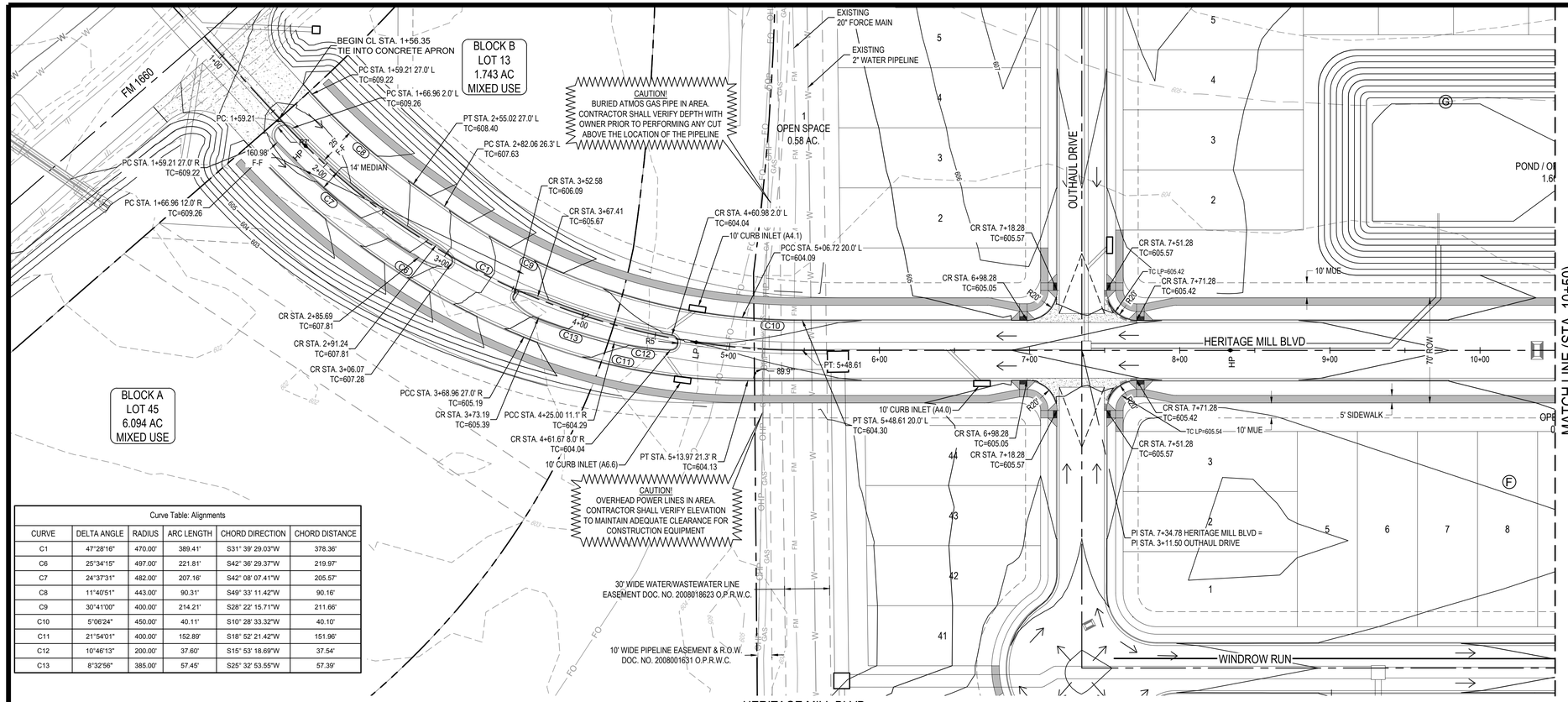
HERITAGE MILL NORTH SECTION 1 HUTTO, TEXAS

EROSION AND SEDIMENTATION CONTROL PLAN (SHEET 4 OF 4)

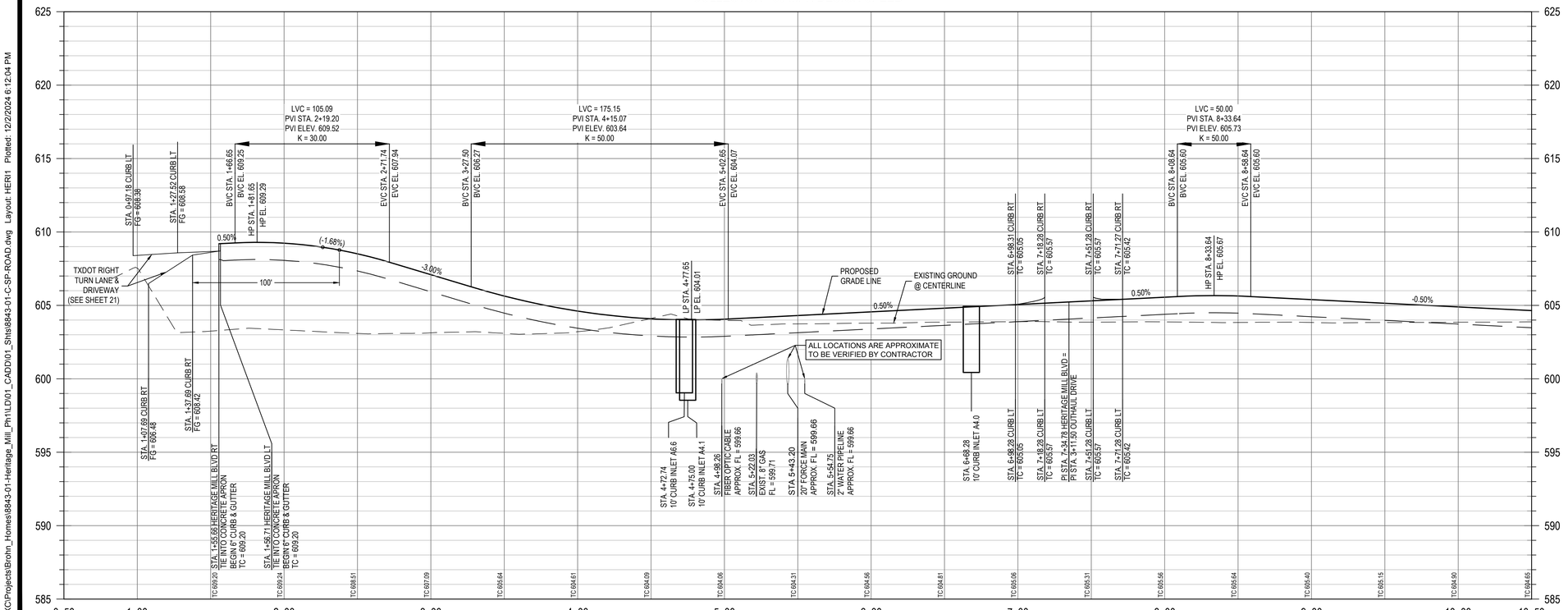
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-ESC.dwg Layout: EROSION AND SEDIMENTATION CONTROL PLAN (SHEET 4 OF 4) Plotted: 12/2/2024 6:11:57 PM



Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C1	47°28'16"	470.00'	389.41'	S31° 39' 29.03"W	378.36'
C6	25°34'15"	497.00'	221.81'	S42° 36' 29.37"W	219.97'
C7	24°37'31"	482.00'	207.16'	S42° 08' 07.41"W	205.57'
C8	11°40'51"	443.00'	90.31'	S49° 33' 11.42"W	90.16'
C9	30°41'00"	400.00'	214.21'	S28° 22' 15.71"W	211.66'
C10	5°06'24"	450.00'	40.11'	S10° 28' 33.32"W	40.10'
C11	21°54'01"	400.00'	152.89'	S18° 52' 21.42"W	151.96'
C12	10°46'13"	200.00'	37.60'	S15° 53' 18.69"W	37.54'
C13	8°32'56"	385.00'	57.45'	S25° 32' 53.55"W	57.39'

HERITAGE MILL BLVD
COLLECTOR - 35 MPH DESIGN SPEED



LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
- CURB & GUTTER (CATCH CURB)
- CURB & GUTTER (SPILL CURB)
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
- SIDEWALK TO BE CONSTRUCTED BY BUILDER
- PERPENDICULAR CURB RAMP
- DIRECTIONAL CURB RAMP (OFFSET FROM CURB)
- CONCRETE VALLEY GUTTER

NOTES:
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PROFILE LEGEND

- PROPOSED TOP OF CURB
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Matt Bechtol, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

	APR	
	DATE	
	DESCRIPTION	
	REV	

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

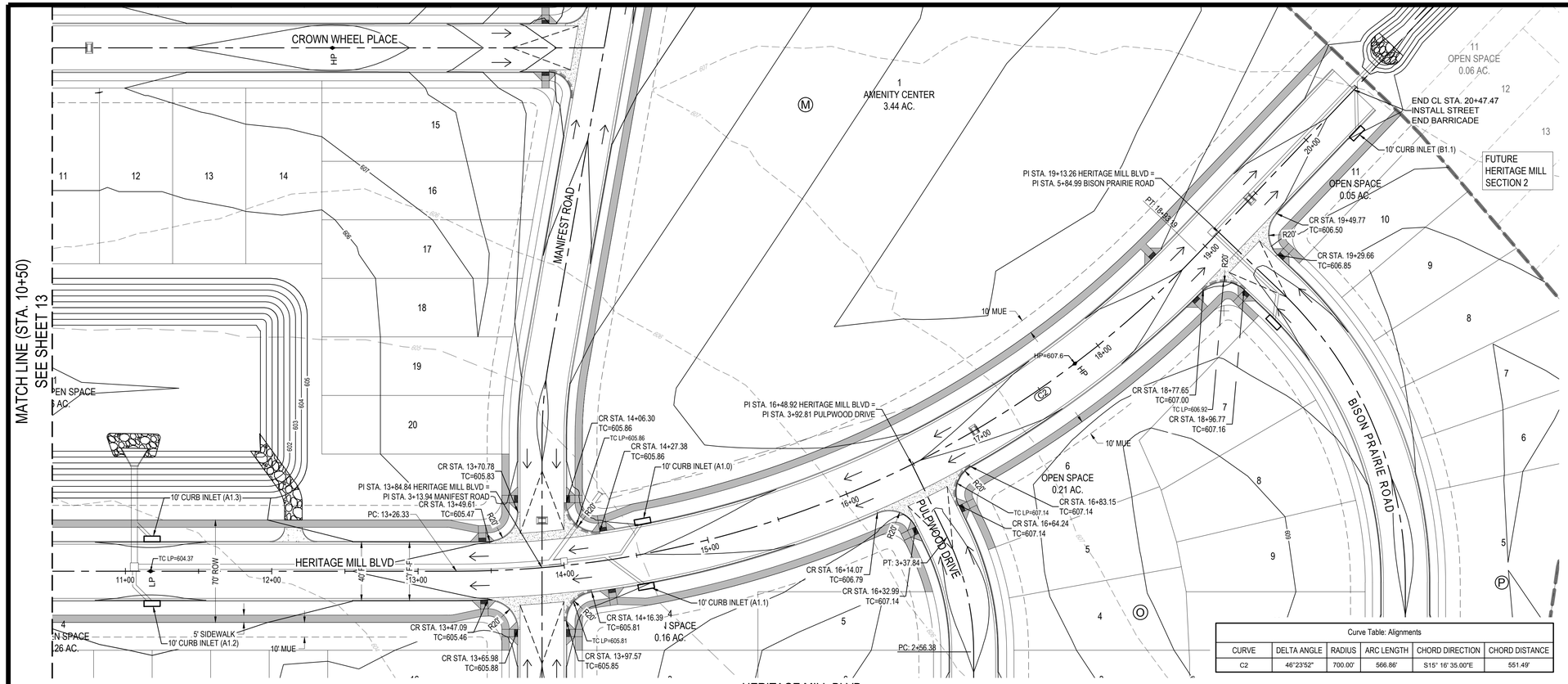
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

HERITAGE MILL BOULEVARD (STA. 1+00 TO 10+50)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXCD\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-ROAD.dwg Layout: HER1 Plotted: 12/2/2024 6:12:04 PM



Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C2	46°23'52"	700.00'	566.86'	S15° 16' 35.00"E	551.49'

NOTES:
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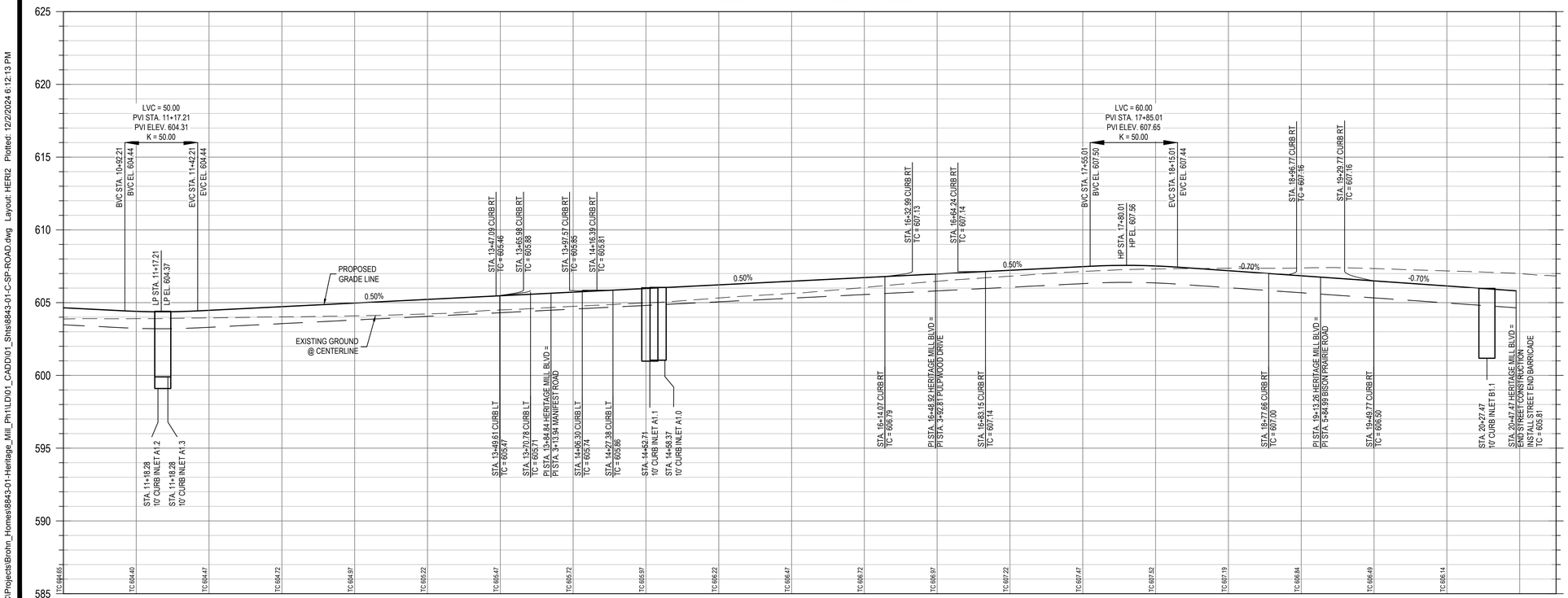
HERITAGE MILL BLVD
COLLECTOR - 35 MPH DESIGN SPEED



PROFILE LEGEND
- PROPOSED TOP OF CURB
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

0 2' 4' 8'
SCALE: 1" = 4'
(FULL SIZE)

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Matt Bechtol, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

APR | DATE | DESCRIPTION | REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

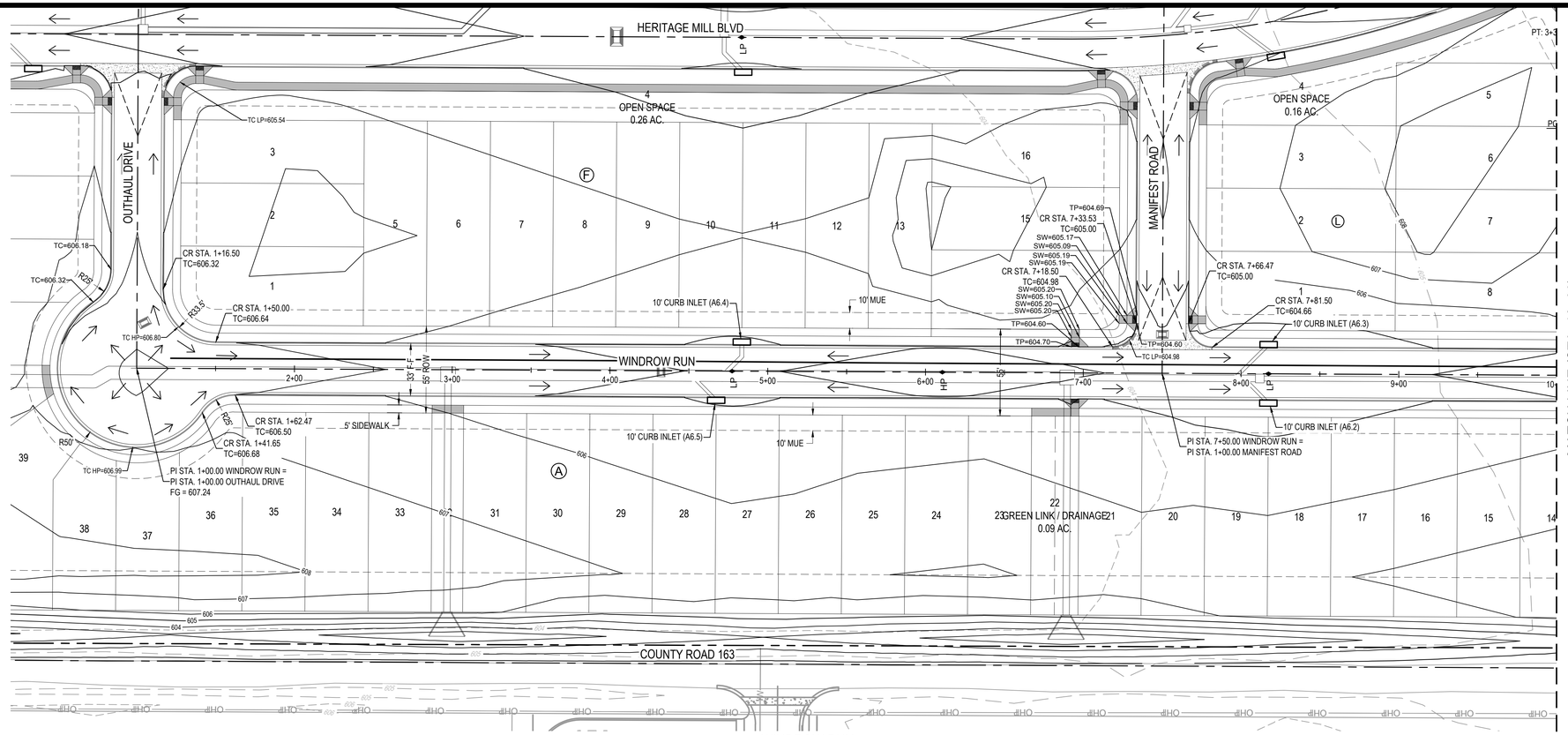
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

HERITAGE MILL BOULEVARD (STA. 10+50 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXCI\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDI01_CADD\01_Shts\8843-01-C-SP-ROAD.dwg Layout: HERI2 Plotted: 12/2/2024 6:12:13 PM



0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
- CURB & GUTTER (CATCH CURB)
- CURB & GUTTER (SPILL CURB)
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
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- DIRECTIONAL CURB RAMP (OFFSET FROM CURB)
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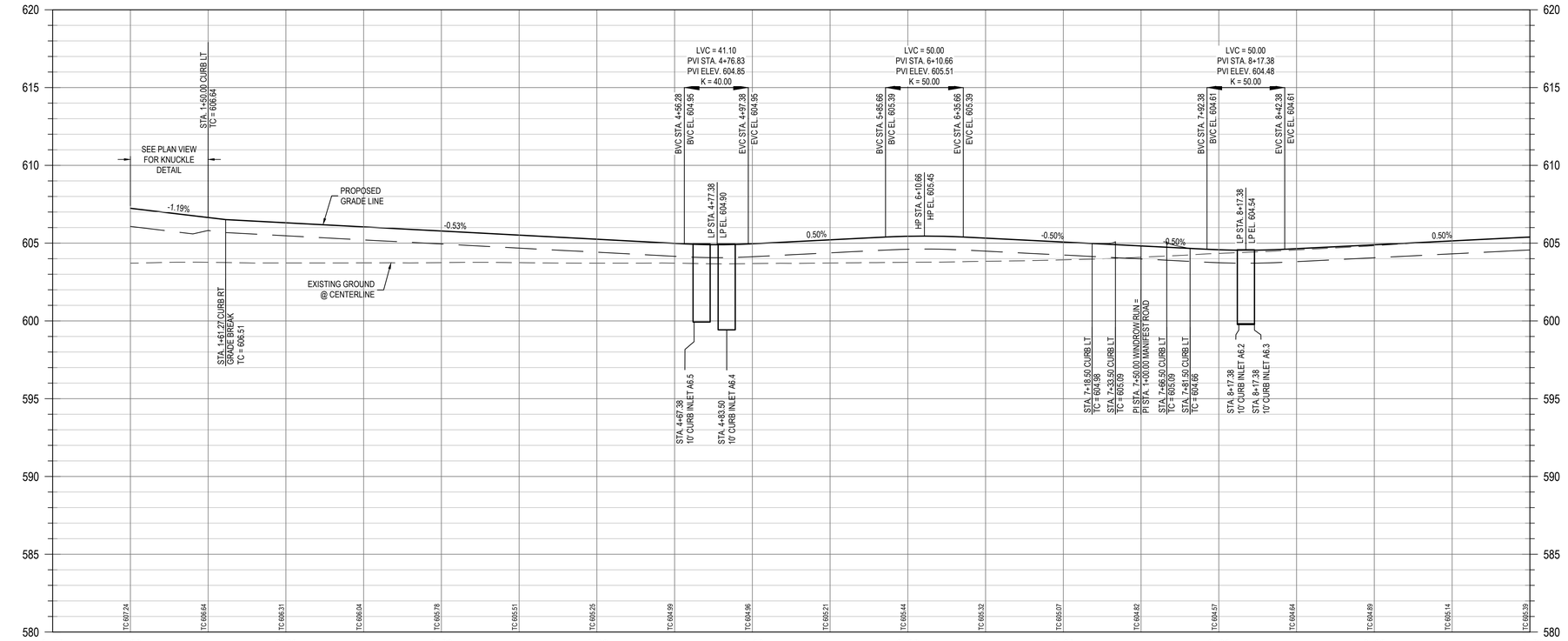


PROFILE LEGEND

- PROPOSED TOP OF CURB
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

0 2' 4' 8'

SCALE: 1" = 4' (FULL SIZE)

Reviewed for Substantial Conformance by City of Hutto

FOR OFFICIAL USE ONLY

Matt Bechtol, P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

	DATE	APR
	DESCRIPTION	
		REV

DESIGNED BY: MS,AC

REVIEWED BY: AC

DRAWN BY: BE,BC

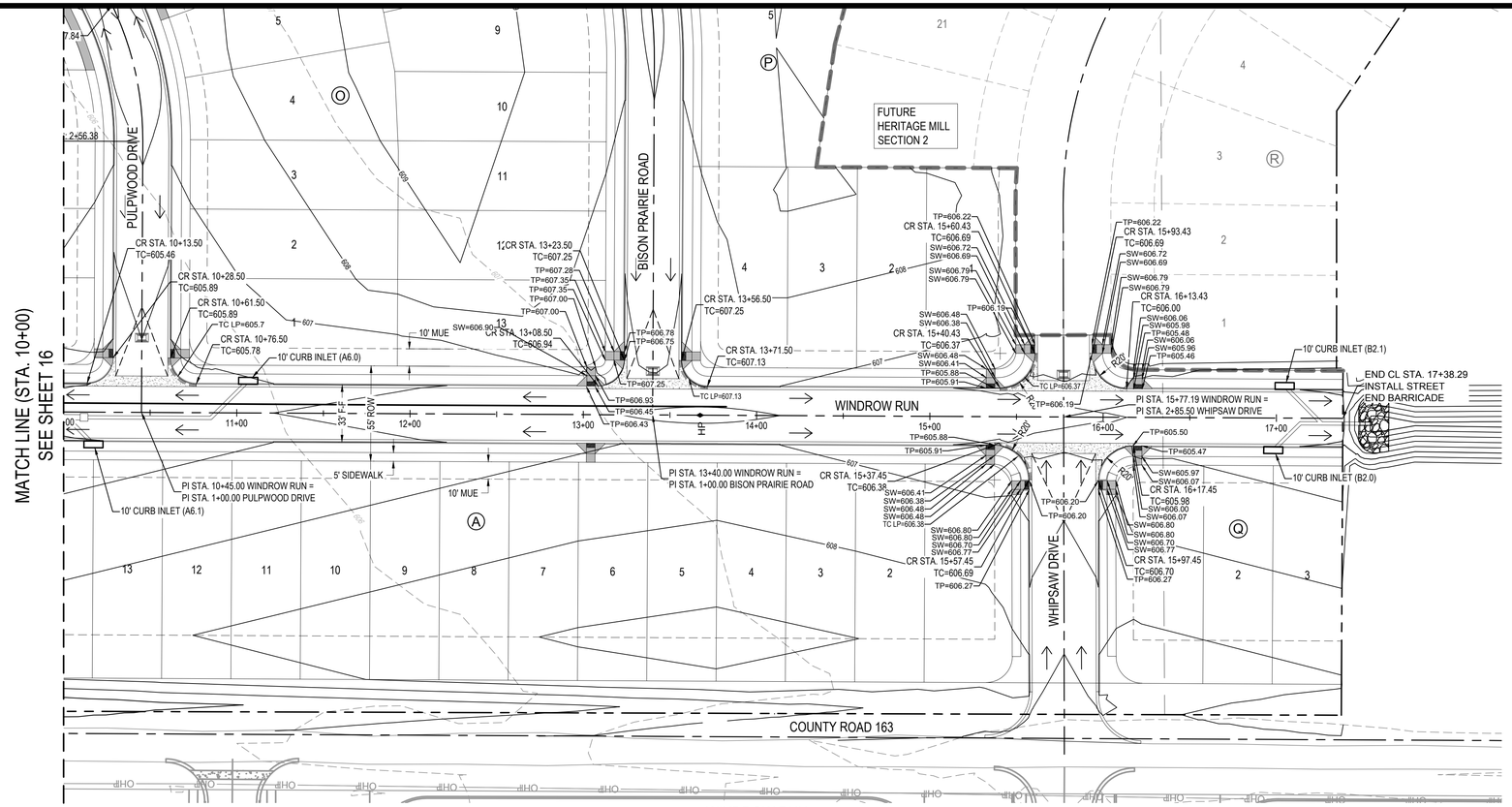
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

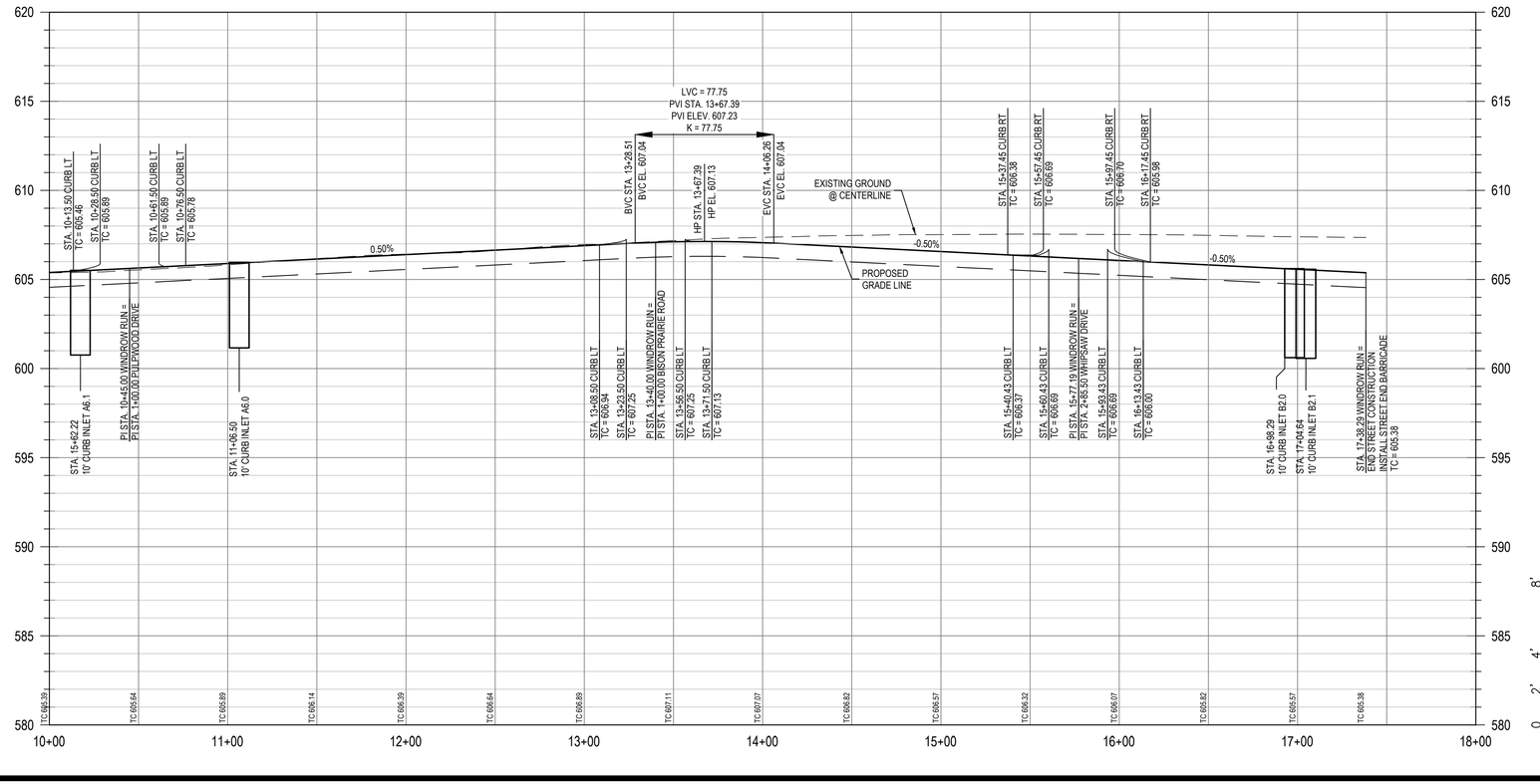
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WINDROW RUN (STA. 1+00 TO 10+00)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/27/2024

G:\TXCD\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-ROAD.dwg Layout: WIND1 Plotted: 12/2/2024 6:12:22 PM





0 20' 40' 80'
SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
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- PROPOSED TOP OF CURB
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

0 2' 4' 8'
SCALE: 1" = 4'
(FULL SIZE)

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Matt Bechtol, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WINDROW RUN (STA. 10+00 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/27/2024

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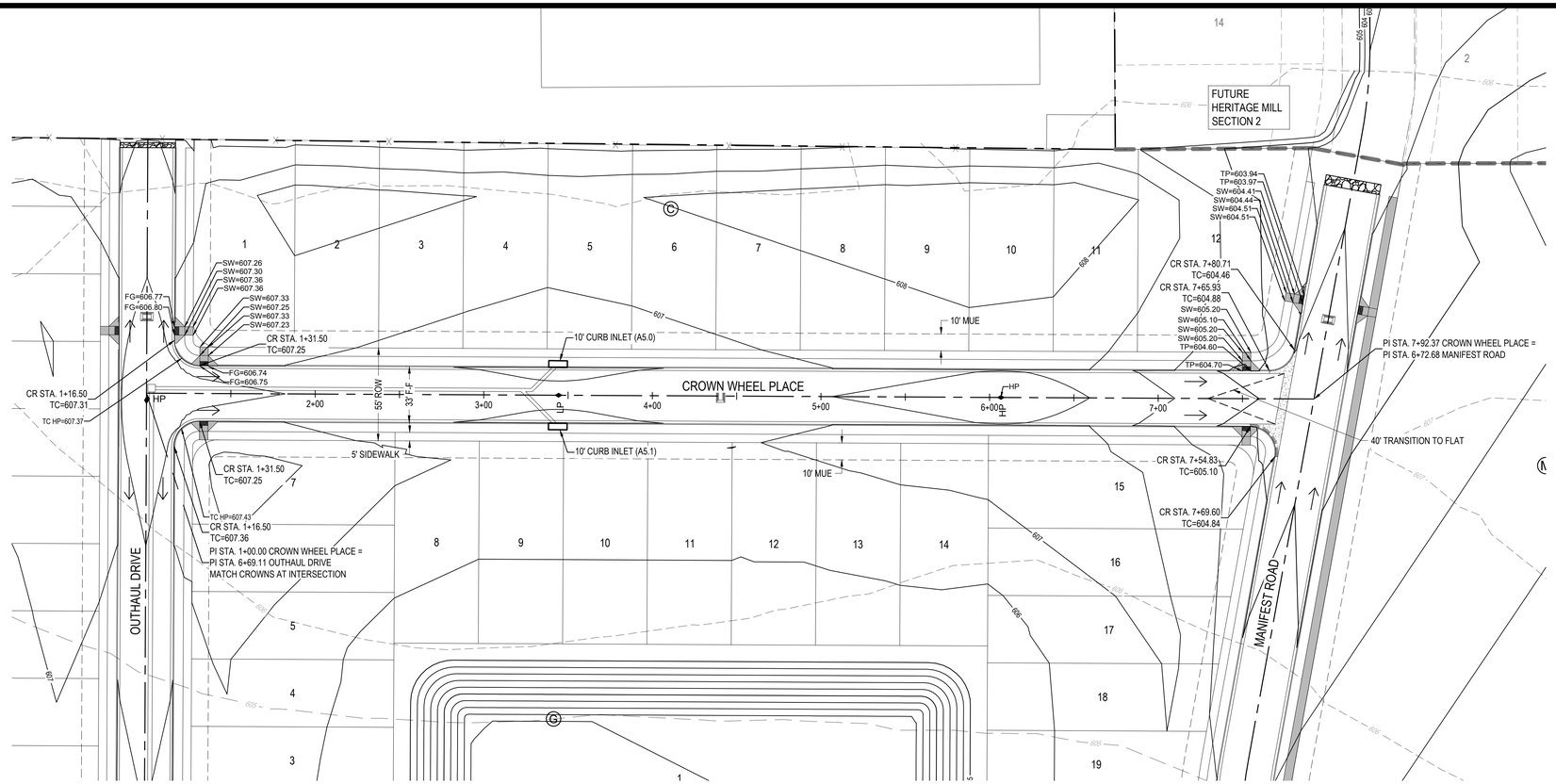

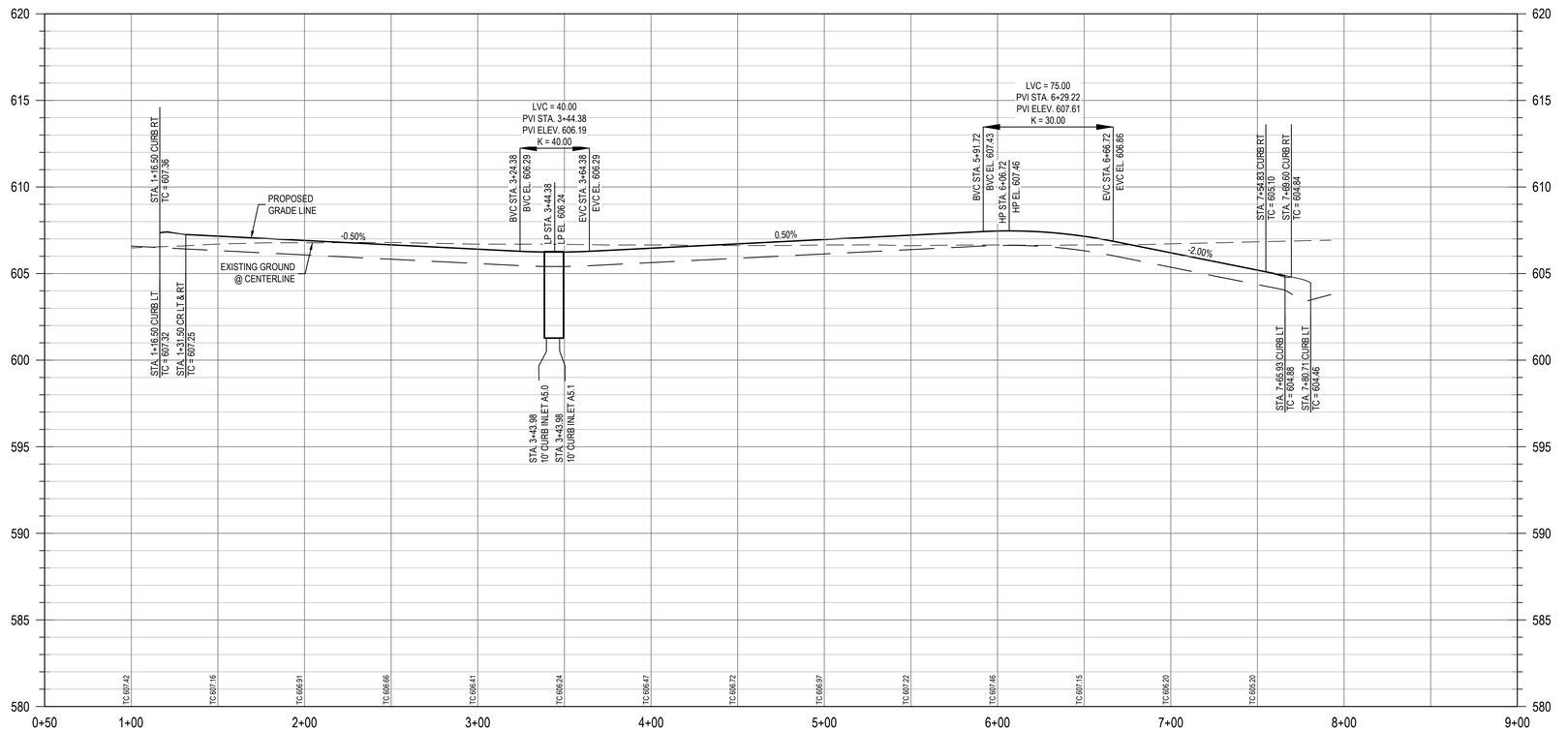

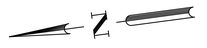

LEGEND

- PROPERTY BOUNDARY
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- EXISTING MAJOR CONTOUR
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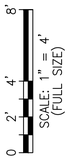
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW



							APR
							DATE
							DESCRIPTION
							REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

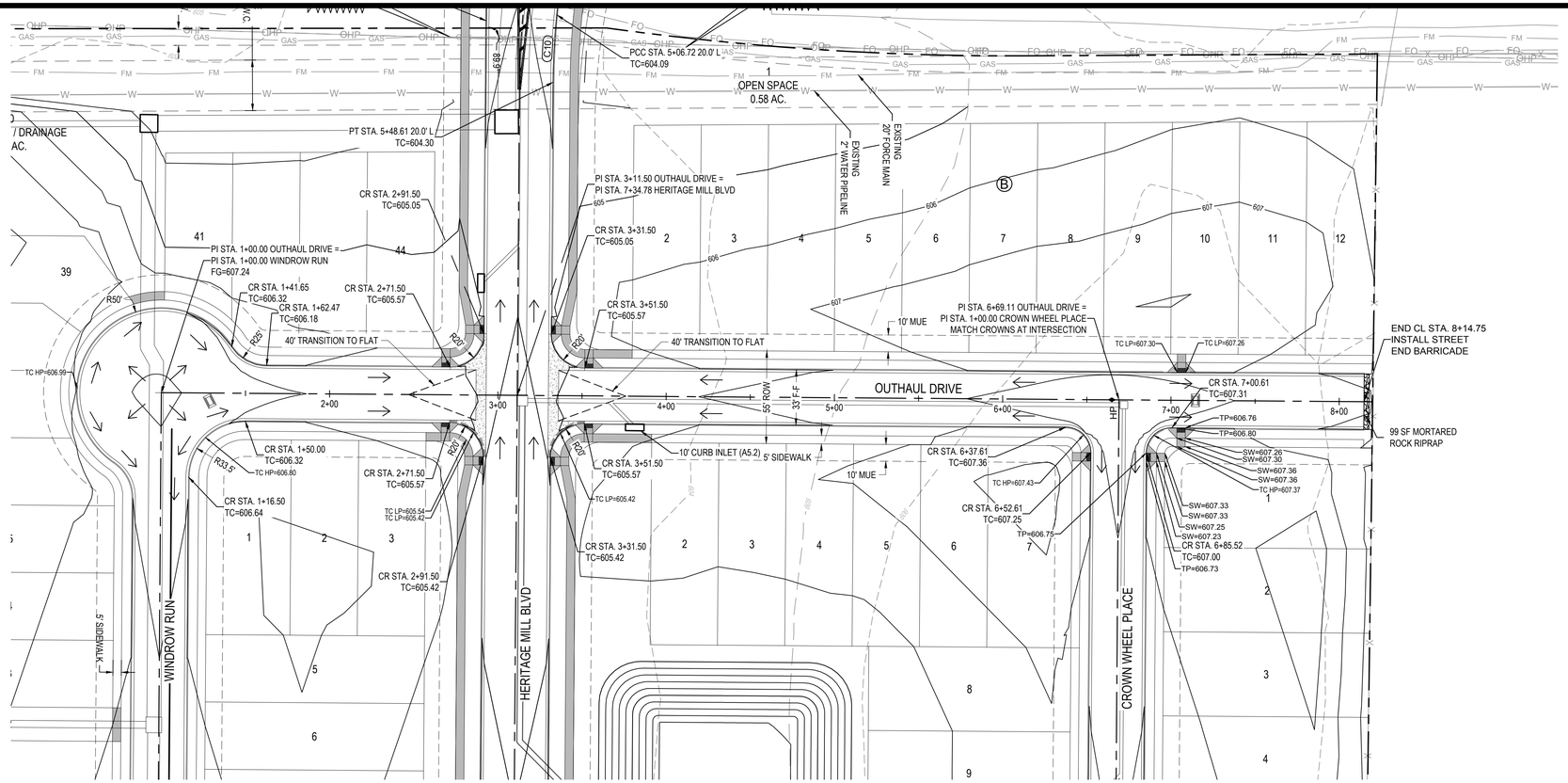
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

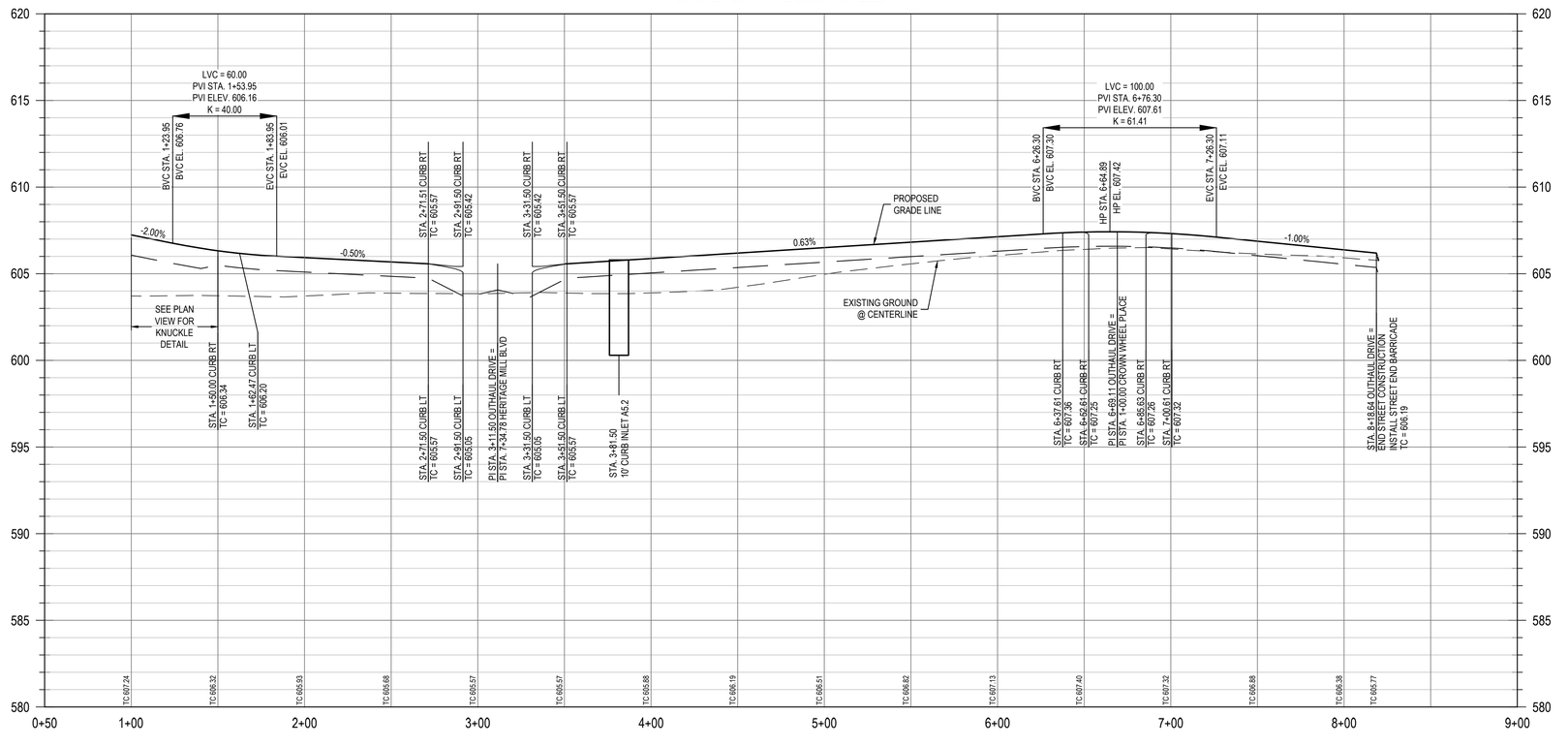
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

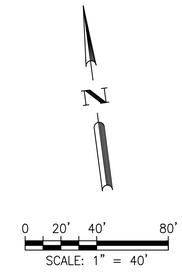
CROWN WHEEL PLACE (STA. 1+00 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-ROAD.dwg Layout: CROWN Plotted: 12/2/2024 6:12:37 PM







LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
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PROFILE LEGEND

- PROPOSED TOP OF CURB
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

SCALE: 1" = 4' (FULL SIZE)

Reviewed for Substantial Conformance by City of Hutto
Walt Reiter, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
FOR APPROVAL LOG ONLY

	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

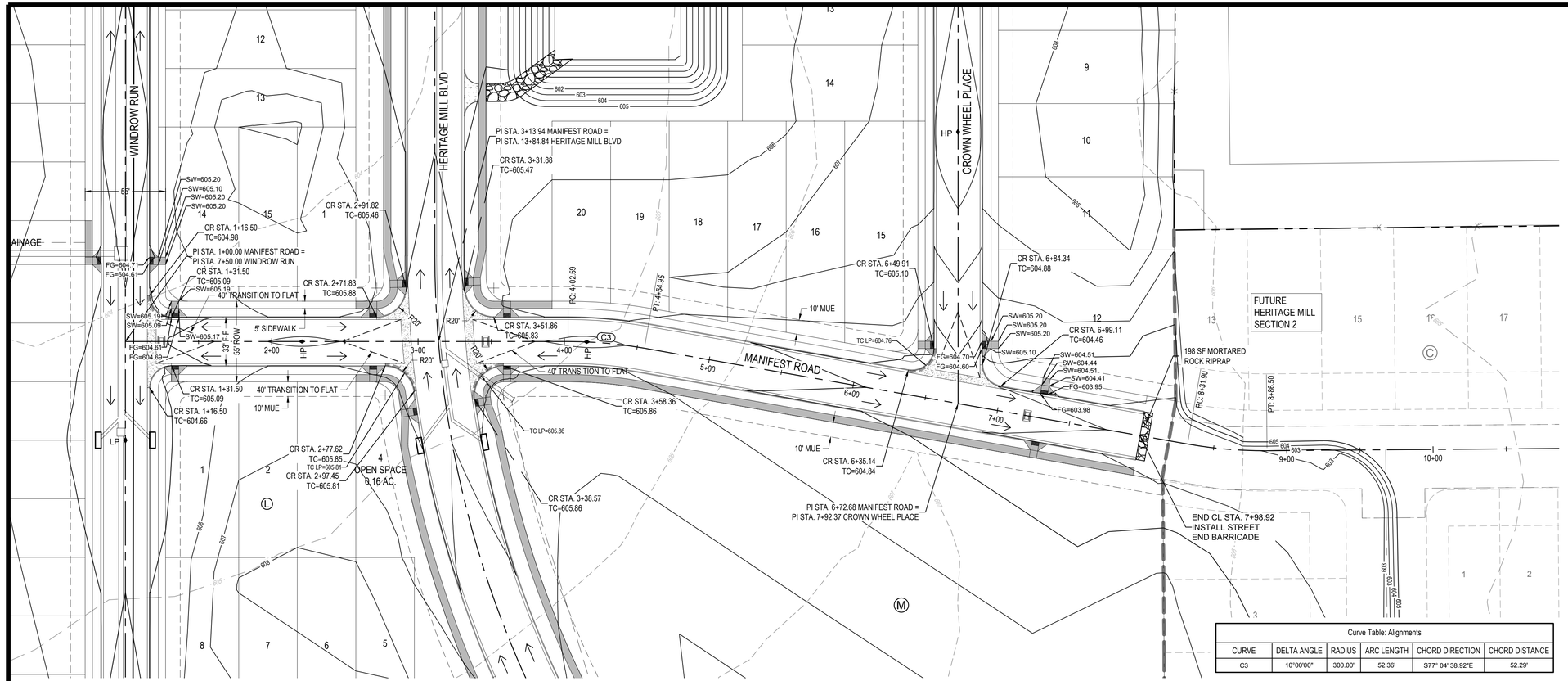
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

OUTHAUL DRIVE (STA. 1+00 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-ROAD.dwg Layout: OUT Plotted: 12/2/2024 6:12:46 PM



Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C3	10°00'00"	300.00'	52.36'	S77° 04' 38.92"E	52.29'

0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
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- EASEMENTS
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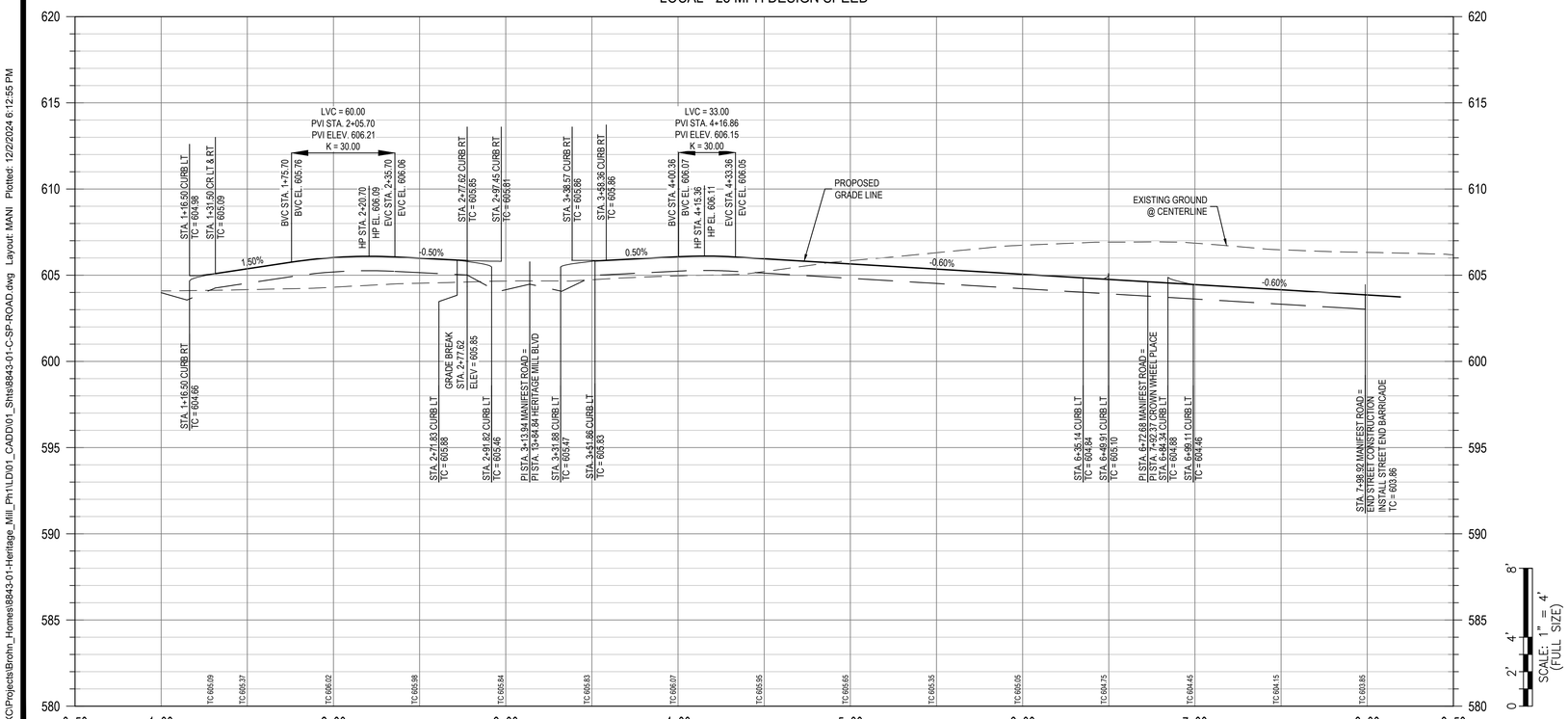
MANIFEST ROAD
LOCAL - 25 MPH DESIGN SPEED



0 2' 4' 8'

SCALE: 1" = 4'
(FULL SIZE)

PROFILE LEGEND

- PROPOSED TOP OF CURB
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

Reviewed for Substantial Conformance by City of Hutto
FOR APPROVAL LOG ONLY
Matt Reiter, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

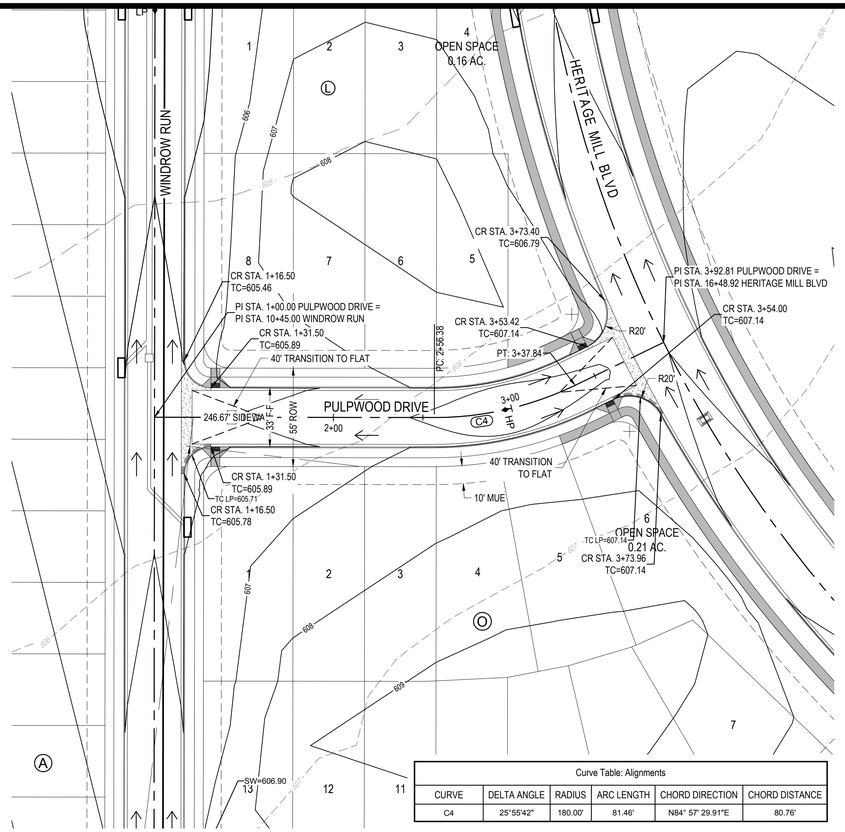
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

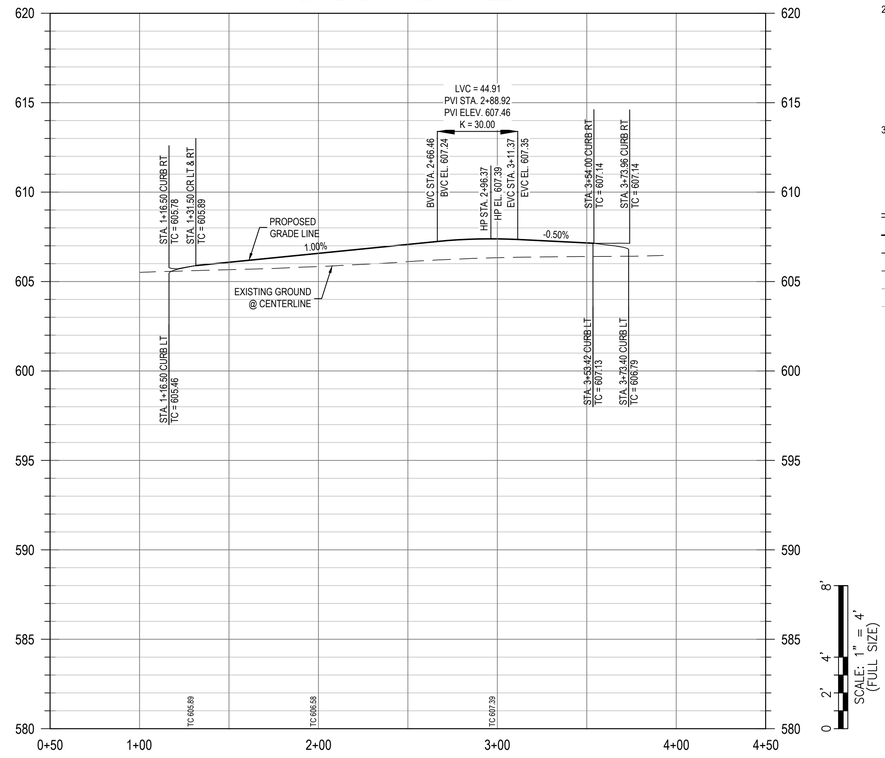
MANIFEST ROAD (STA. 1+00 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

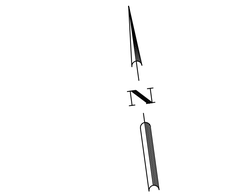
G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-ROAD.dwg Layout: MAIN Plotted: 12/2/2024 6:12:55 PM



PULPWOOD DRIVE
LOCAL - 25 MPH DESIGN SPEED



SCALE: 1" = 4'
(FULL SIZE)



LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
- CURB & GUTTER (CATCH CURB)
- CURB & GUTTER (SPILL CURB)
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
- SIDEWALK TO BE CONSTRUCTED BY BUILDER
- PERPENDICULAR CURB RAMP
- DIRECTIONAL CURB RAMP (OFFSET FROM CURB)
- CONCRETE VALLEY GUTTER

NOTES:

1. ALL CURB RETURN RADII TO BE 15' UNLESS OTHERWISE NOTED.
2. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED WITH THE CONTRACTORS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. ALL PAVEMENT MARKINGS SHALL BE PER THE CURRENT "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.): PART III MARKINGS". ALL STRIPING TO BE THERMOPLASTIC.

PROFILE LEGEND

- PROPOSED TOP OF CURB
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

	APR
	DATE
DESCRIPTION	
	REV

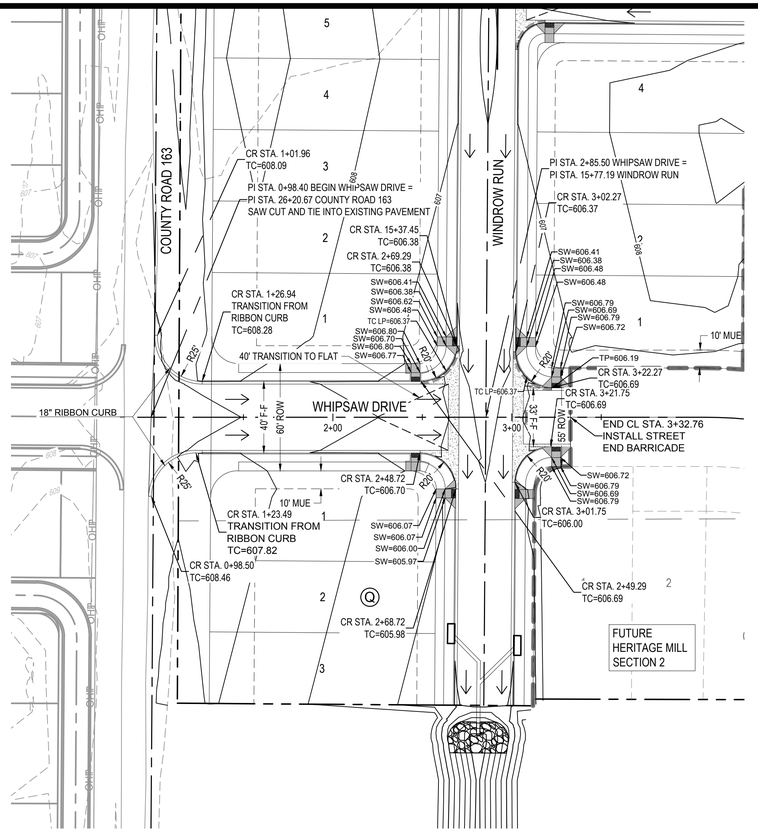
DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

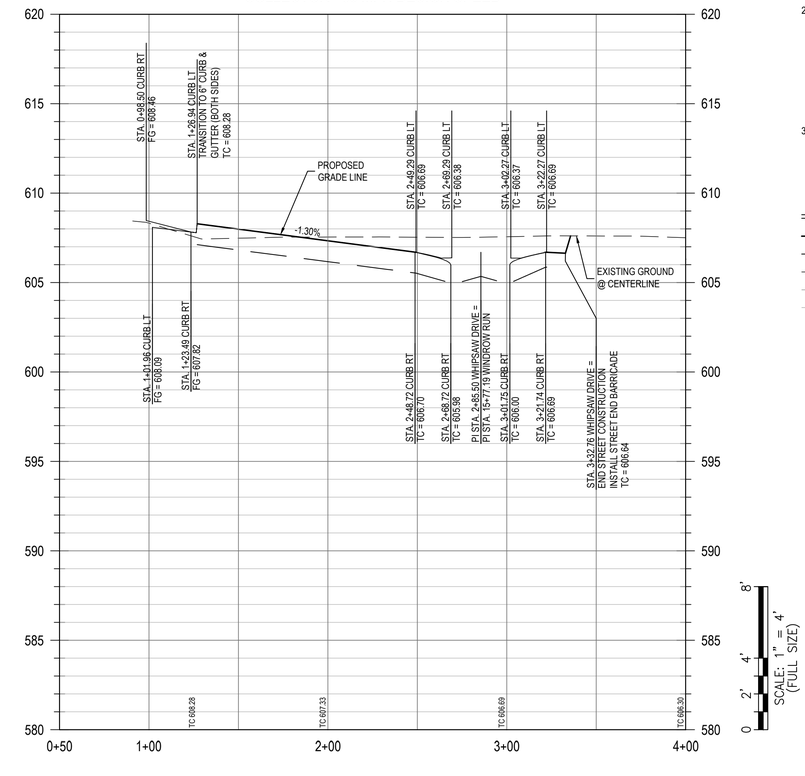
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

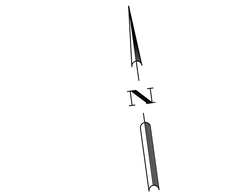
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

PULPWOOD DRIVE (STA. 1+00 TO END)

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-ROAD.dwg Layout: PULP Plotted: 12/2/2024 6:13:08 PM







LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
- CURB & GUTTER (CATCH CURB)
- CURB & GUTTER (SPILL CURB)
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
- SIDEWALK TO BE CONSTRUCTED BY BUILDER
- PERPENDICULAR CURB RAMP
- DIRECTIONAL CURB RAMP (OFFSET FROM CURB)
- CONCRETE VALLEY GUTTER

NOTES:

1. ALL CURB RETURN RADII TO BE 15' UNLESS OTHERWISE NOTED.
2. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED WITH THE CONTRACTORS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
3. ALL PAVEMENT MARKINGS SHALL BE PER THE CURRENT "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.): PART III MARKINGS". ALL STRIPING TO BE THERMOPLASTIC.

PROFILE LEGEND

- PROPOSED TOP OF CURB
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

Reviewed for Substantial Conformance by City of Hutto
FOR APPROVAL LOG ONLY
Matt Reiter, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

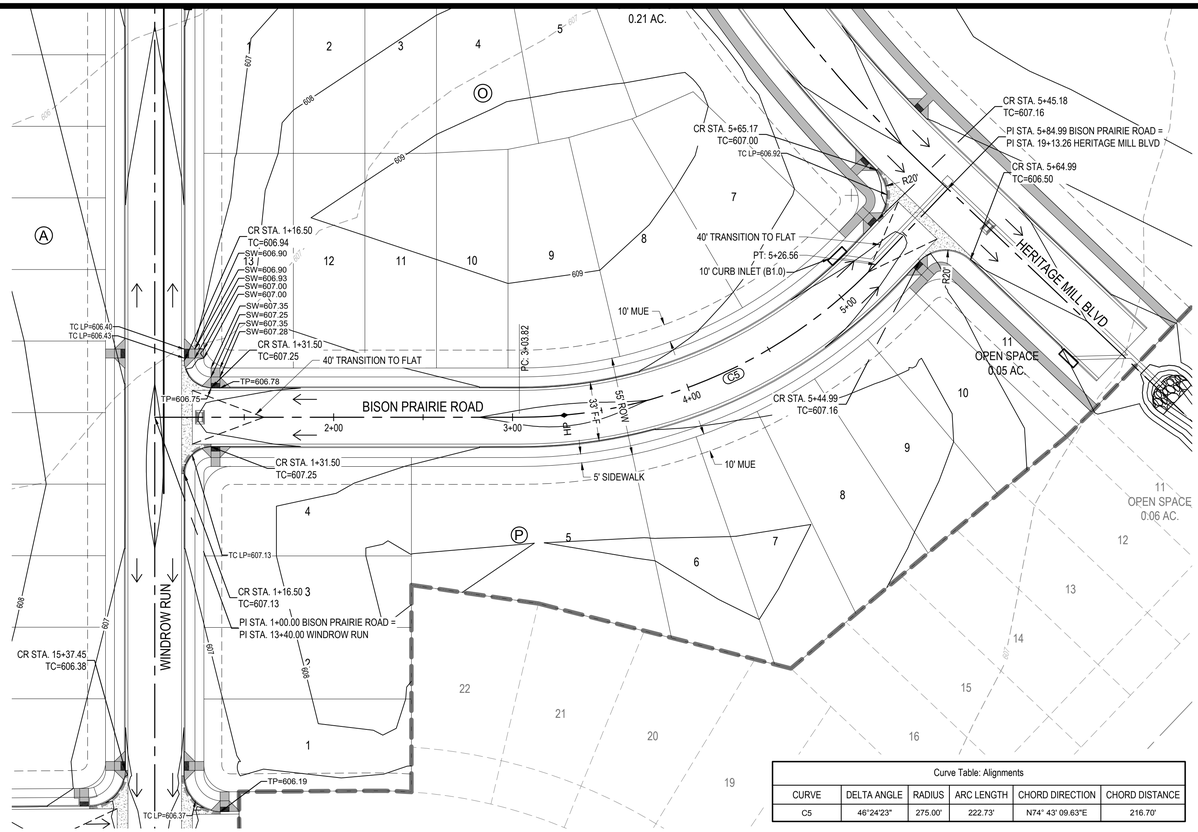
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

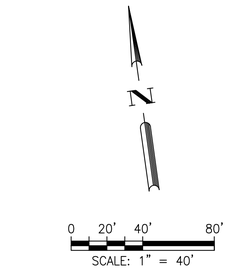
WHIPSAW DRIVE (STA. 1+00 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-ROAD.dwg Layout: WHIP Plotted: 12/2/2024 6:13:17 PM



Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C5	46°24'23"	275.00'	222.73'	N74° 43' 09.63"E	216.70'



LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
- CURB & GUTTER (CATCH CURB)
- CURB & GUTTER (SPILL CURB)
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
- SIDEWALK TO BE CONSTRUCTED BY BUILDER
- PERPENDICULAR CURB RAMP
- DIRECTIONAL CURB RAMP (OFFSET FROM CURB)
- CONCRETE VALLEY GUTTER

NOTES:

1. ALL CURB RETURN RADII TO BE 15' UNLESS OTHERWISE NOTED.
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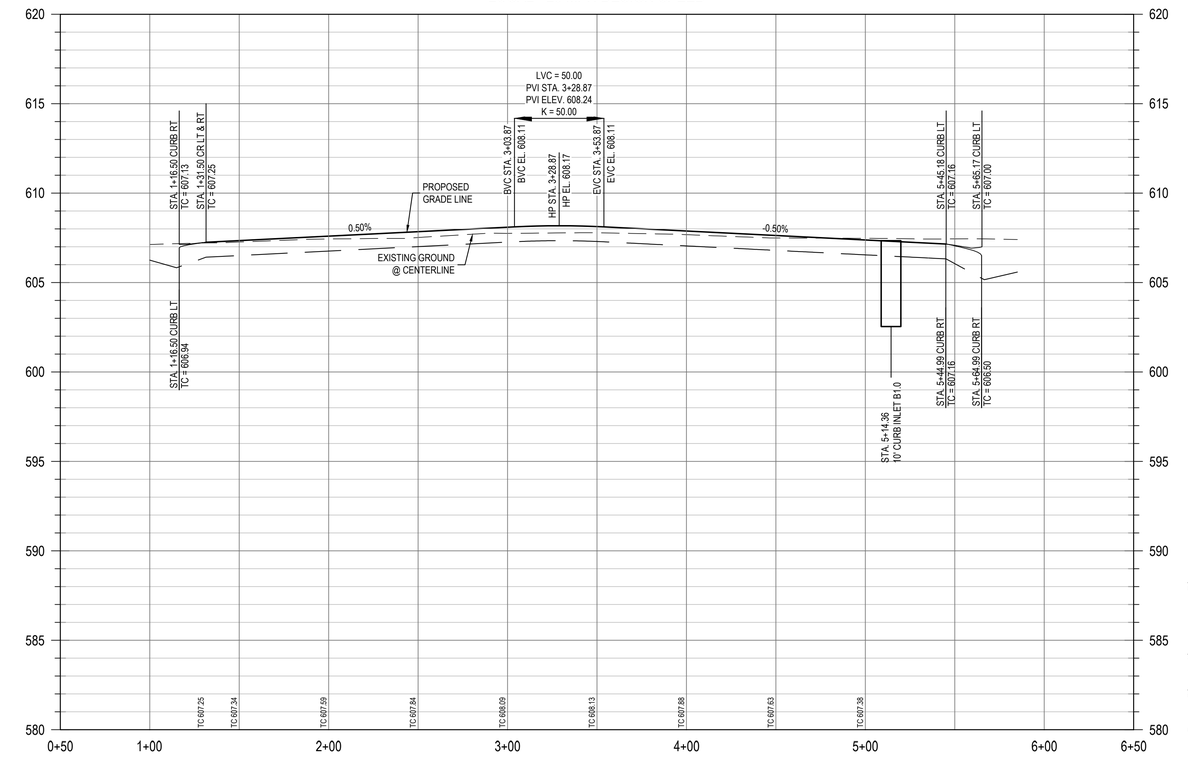
3. ALL PAVEMENT MARKINGS SHALL BE PER THE CURRENT "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.): PART III MARKINGS". ALL STRIPING TO BE THERMOPLASTIC.

BISON PRAIRIE ROAD
LOCAL - 25 MPH DESIGN SPEED



PROFILE LEGEND

- PROPOSED TOP OF CURB
- PROPOSED SUBGRADE
- EXISTING GROUND @ CENTERLINE
- EXISTING GROUND @ LEFT ROW
- EXISTING GRADE @ RIGHT ROW

SCALE: 1" = 4'
(FULL SIZE)
8'
4'
2'
0

							APR
							DATE
							DESCRIPTION
							REV

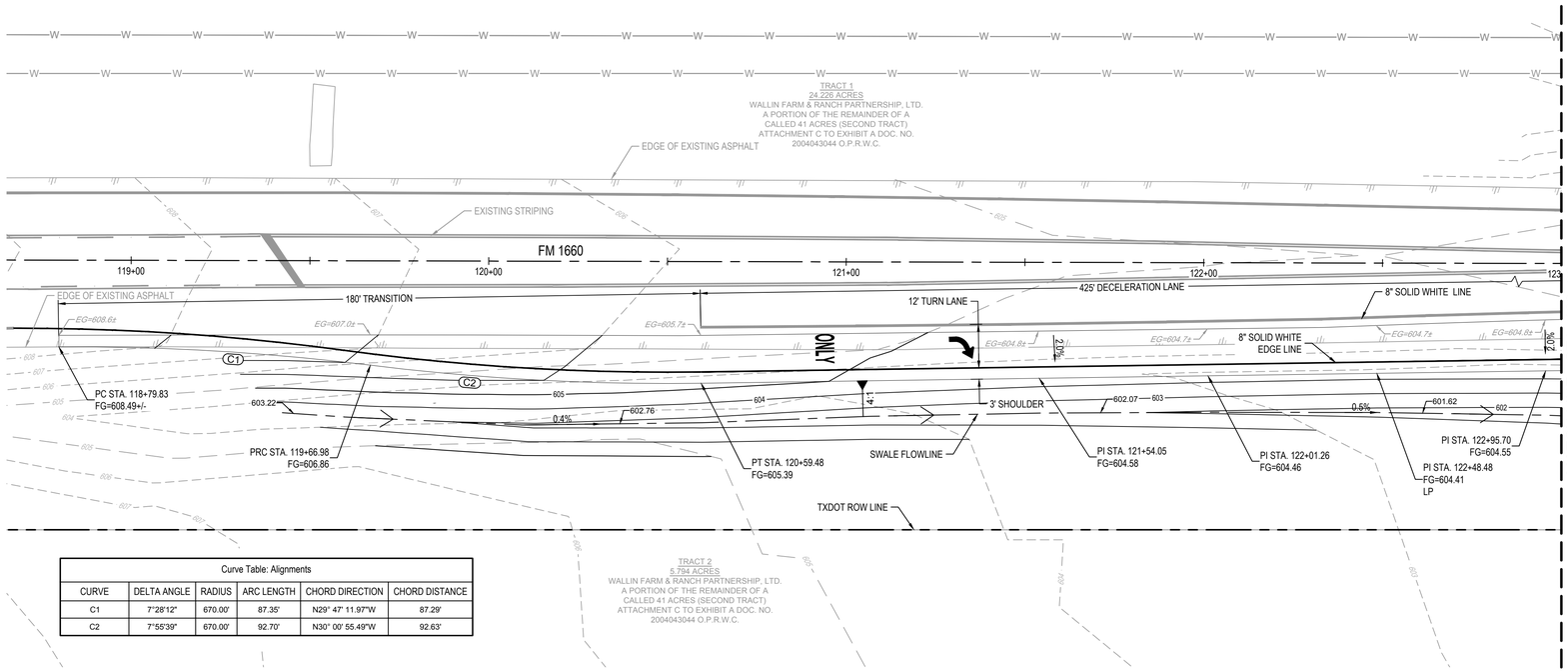
DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

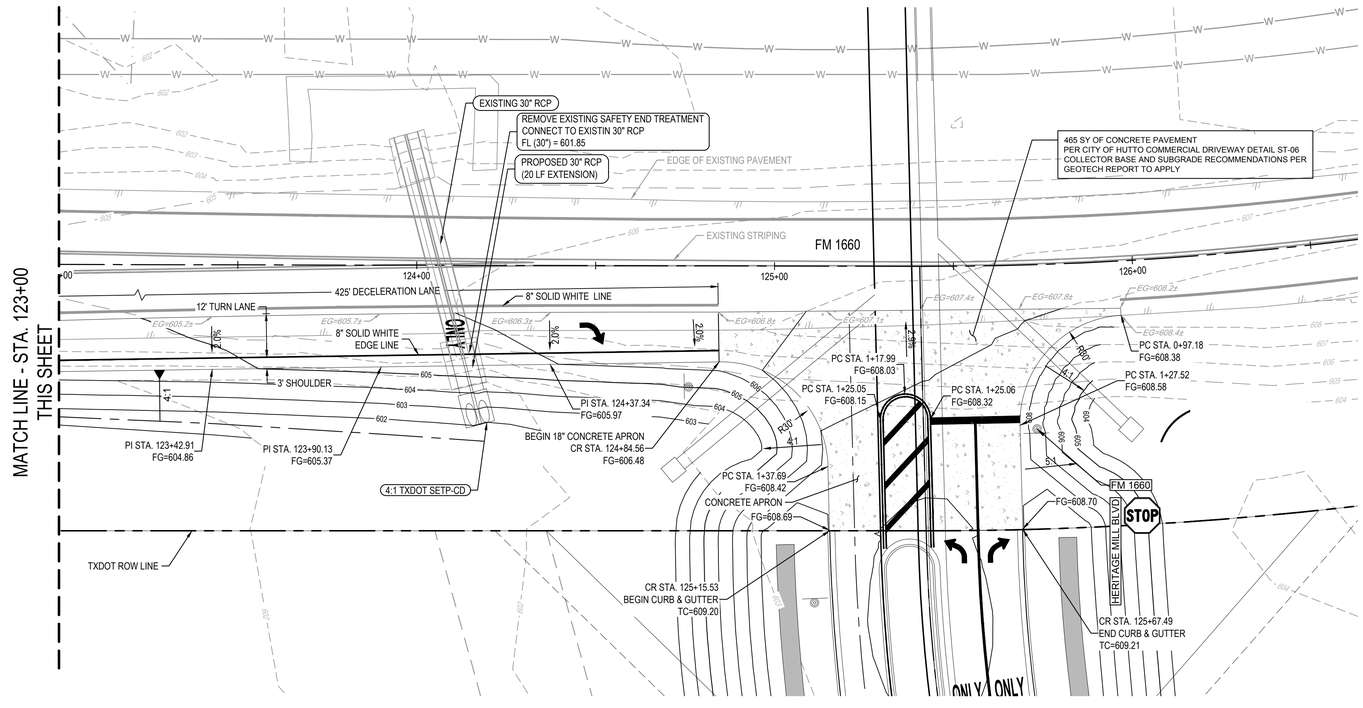
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

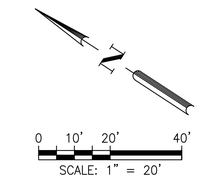
BISON PRAIRIE ROAD (STA. 1+00 TO END)

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-ROAD.dwg Layout: BISON Plotted: 12/2/2024 6:13:30 PM



Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C1	7°28'12"	670.00'	87.35'	N29° 47' 11.97"W	87.29'
C2	7°55'39"	670.00'	92.70'	N30° 00' 55.49"W	92.63'





LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EASEMENTS
- 28 LOT NUMBER
- ROAD CENTERLINE
- CURB & GUTTER (CATCH CURB)
- CURB & GUTTER (SPILL CURB)
- DIRECTION OF FLOW
- CURB INLET
- SIDEWALK TO BE CONSTRUCTED WITH SUBDIVISION IMPROVEMENTS
- SIDEWALK TO BE CONSTRUCTED BY BUILDER
- PERPENDICULAR CURB RAMP
- DIRECTIONAL CURB RAMP (OFFSET FROM CURB)
- ASPHALT VALLEY GUTTER
- CONCRETE VALLEY GUTTER

NOTES:
1. ALL CURB RETURN RADII TO BE 15' UNLESS OTHERWISE NOTED.
2. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED WITH THE CONTRACTORS FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
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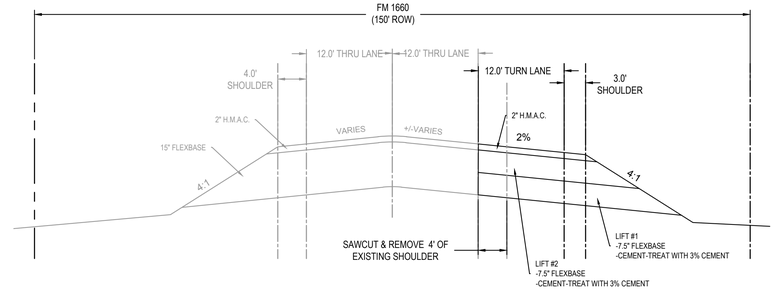
Reviewed for Substantial Conformance by City of Hutto
Matt Reiche, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
FOR OFFICIAL USE ONLY



FM 1660
RIGHT TURN/DECEL LANE
TYP. SECTION
N.T.S.

							APR
							DATE
							DESCRIPTION
							REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

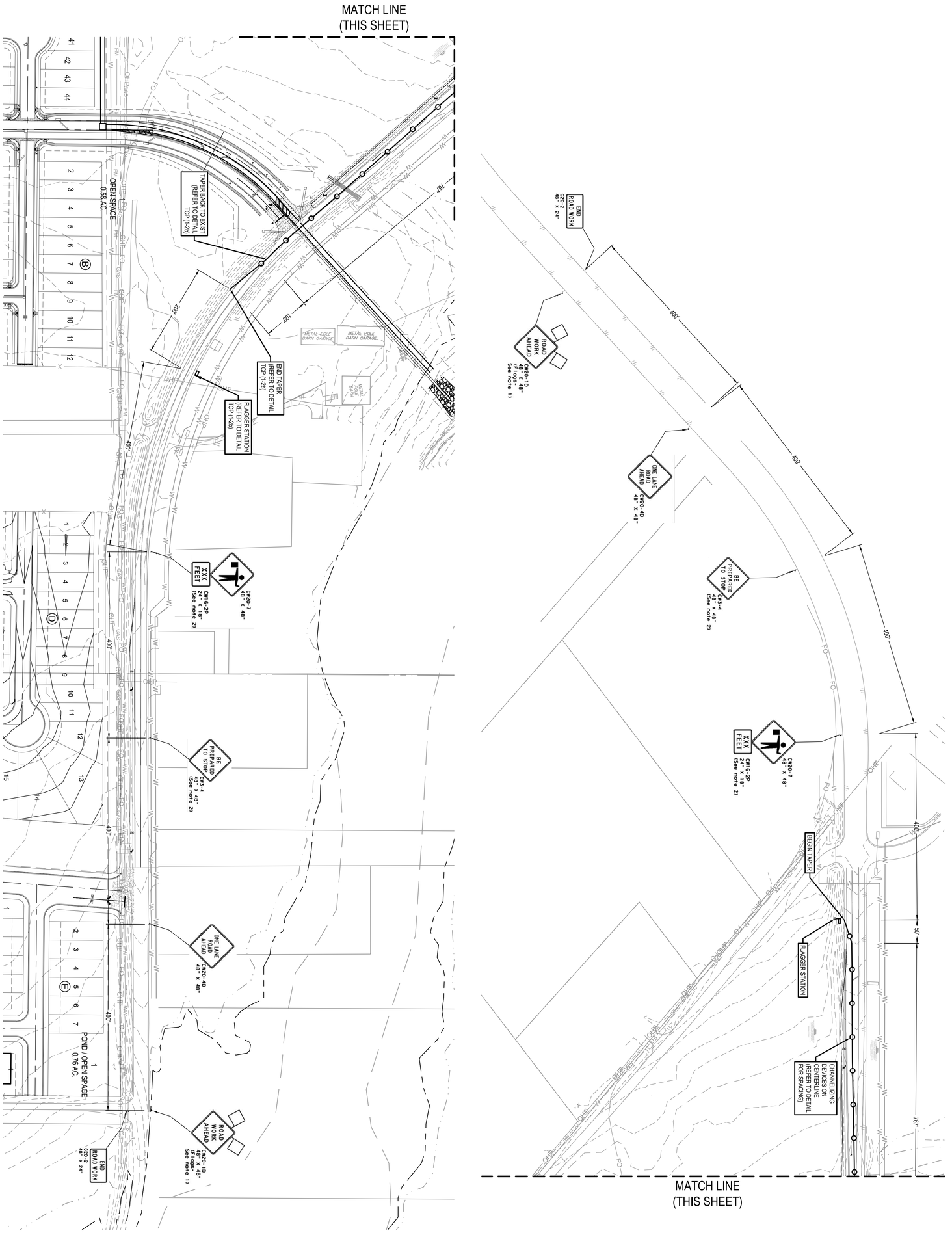
TXDOT DECELERATION LANE - WEST

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

23 OF 94

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDV01_CADD\01_Shts\8843-01-C-SP-TURN.dwg Layout: PHASE 1 TURN Plotted: 12/2/2024 6:13:33 PM

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-TCP.dwg Layout: 24 TCP - DECELERATION LANE Plotted: 12/2/2024 6:13:34 PM



NOTES:
1. REFER TO TX DOT CONSTRUCTION STANDARD TCP (1-2) - 18, TRAFFIC CONTROL PLAN, ONE-LANE TWO-WAY, TRAFFIC CONTROL DETAIL TCP (1-2B).

LEGEND

ROADWAY SIGN

FLAGGER

SCALE: 1" = 100'

0 50' 100' 200'

N

FOR OFFICIAL USE ONLY

Reviewed for Substantial Conformance to City of Hutto

HUTTO

12/2/2024

24 OF 94

STATE OF TEXAS
RICHARD PHAM
142275
PROFESSIONAL ENGINEER
12/2/2024

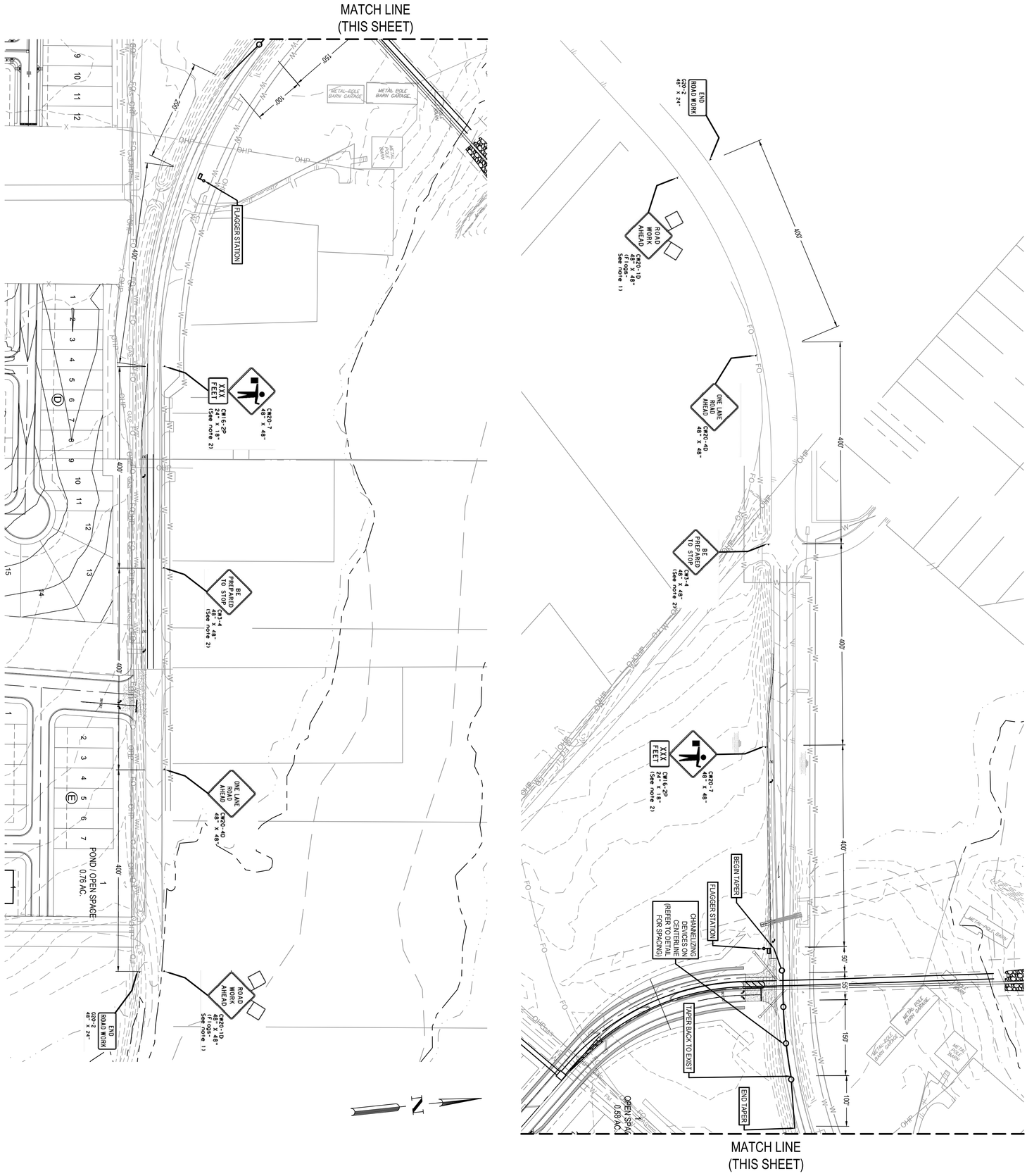
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

TCP - DECELERATION LANE

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.beginc.com

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

REV	DESCRIPTION	DATE	APR



NOTES:
1. REFER TO TXDOT CONSTRUCTION STANDARD TCP (1-2)-18, TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL DETAIL TCP (1-2B).

LEGEND

- ROADWAY SIGN
- FLAGGER

0 50' 100' 200'
SCALE: 1" = 100'

FOR OFFICIAL USE ONLY
Released for Submittal
Date Released
Released By: Ryan Pham
12/2/2024
Hutto
Approved for Submittal
(Not All Comments Are Part of Permit)

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

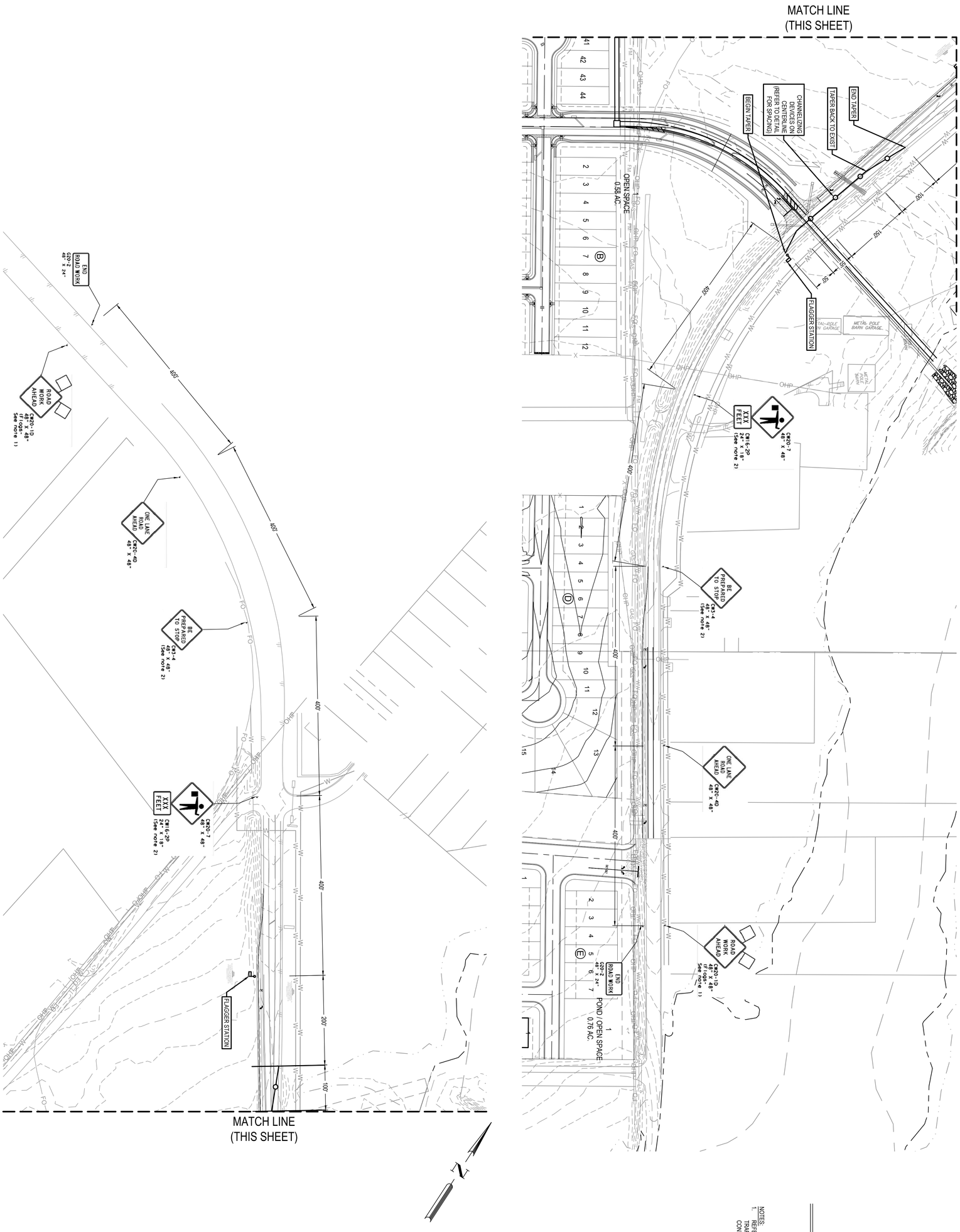
TCP - STORM WEST

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.beginc.com

RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
12/2/2024

REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS/AC
REVIEWED BY: AC
DRAWN BY: BE,BC



LEGEND

P ROADWAY SIGN

FLAGGER

SCALE: 1" = 100'

0 50' 100' 200'

NOTES:

1. REFER TO TX DOT CONSTRUCTION STANDARD TCP (1-2)-18, TEMPORARY LANE CLOSURE ON TWO-LANE TWO-WAY TRAFFIC CONTROL DETAIL TCP (1-2B).

FOR OFFICIAL USE ONLY

Reviewed for Substantial Code Compliance by City of Hutto

12/20/2024

RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
12/20/2024

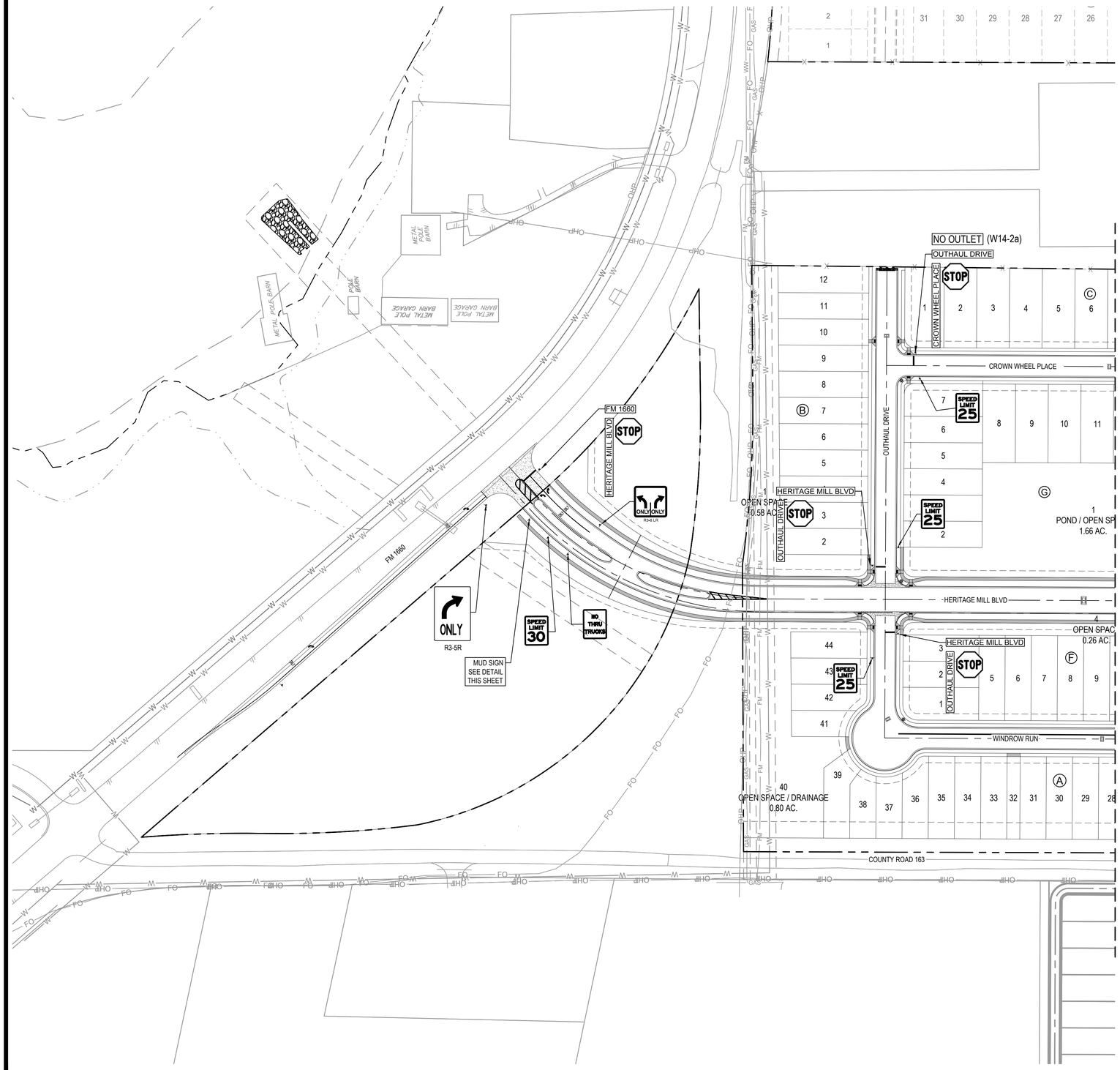
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

TCP - STORM EAST

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.beginc.com

REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS/AC
REVIEWED BY: AC
DRAWN BY: BE,BC



0 40' 80' 160'

SCALE: 1" = 80'

LEGEND

STREET NAME D3-1

STREET NAME STOP STREET NAME — PROPOSED STOP SIGN W/ STREET NAME SIGNS

STREET END BARRICADE

PROPOSED SIGN

EXISTING SIGN

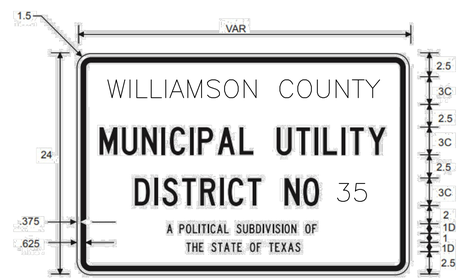
PROPOSED BLUE FIRE HYDRANT DELINEATOR

STREET LIGHT (BY OTHERS)

STOP SIGN BAR STREET MARKING

NOTES:

1. STREET NAMES SHALL BE DISPLAYED ON STANDARD D3-1 GUIDE SIGNS ERECTED AT EACH STREET INTERSECTION AND HAVE WHITE LETTERS ON A GREEN BACKGROUND IN ACCORDANCE WITH CITY OF HUTTO STANDARDS.
2. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC DEVICES (TxMUTCD).
3. PER TxMUTCD REQUIREMENTS, THERE MUST BE A 2' MINIMUM OFFSET BETWEEN THE FACE OF CURB AND THE OUTSIDE EDGE OF SIGNS.
4. BLUE FIRE HYDRANT DELINEATORS TO BE PLACED IN OUTSIDE TRAVEL LANE, 3' FROM LIP OF GUTTER.
5. ALL CHANGES TO THE TRAFFIC CONTROL PLAN MUSH BE APPROVED AND DOCUMENTED BY THE SEALING ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY PROPOSED CHANGES TO THE TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL.
6. THE LETTERING FOR NAMES OF STREETS ON STREET NAME SIGNS SHALL BE COMPOSED OF A COMBINATION OF LOWER-CASE LETTERS WITH INITIAL UPPER-CASE LETTERS.
7. STOP SIGNS TO BE INSTALLED PER CITY OF HUTTO DETAIL SD-03
8. ALL STOP SIGNS TO BE ACCOMPANIED WITH ADJACENT 24 INCH WHITE STOP BAR.
9. ALL SIGNS AND STRIPING TO BE INSTALLED PER TxMUTCD.
10. ALL STREET LIGHTS ALONG PROPOSED PUBLIC STREETS MUST CONFORM TO LIGHTING REGULATIONS IN HUTTO UDC SECTION 10.409 AND 10.605.9.



MUD SIGN DETAIL

Reviewed for Substantial Conformance by City of Hutto
Matt Reiter, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
FOR APPROVAL USE ONLY

								APR
								DATE
								DESCRIPTION
								REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

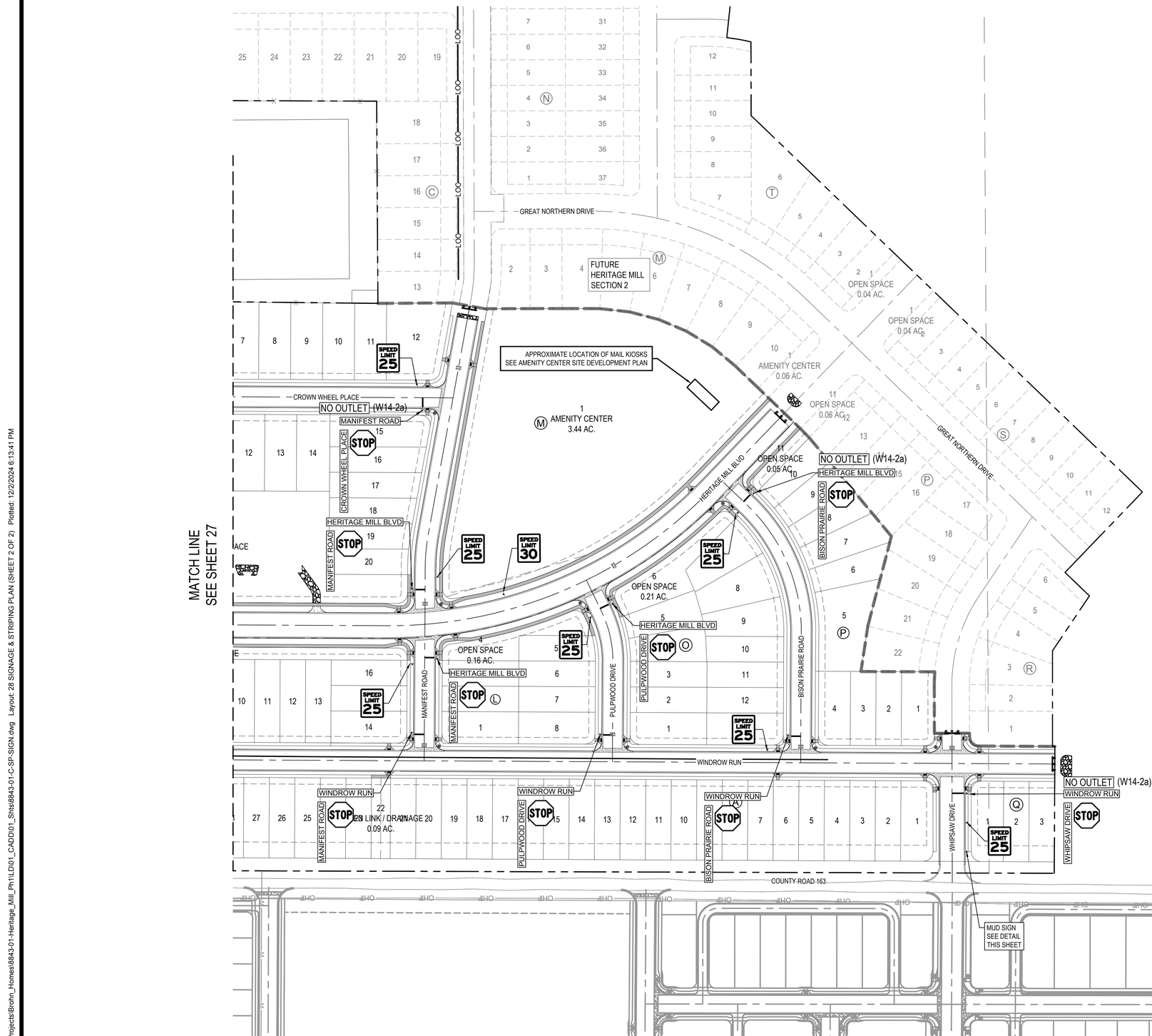
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

SIGNAGE & STRIPING PLAN (SHEET 1 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-SIGN.dwg Layout: 27 SIGNAGE & STRIPING PLAN (SHEET 1 OF 2) Plotted: 12/2/2024 6:13:39 PM



0 40' 80' 160'

SCALE: 1" = 80'

LEGEND

STREET NAME D3-1

STREET NAME / STOP — PROPOSED STOP SIGN W/ STREET NAME SIGNS

STREET END BARRICADE

PROPOSED SIGN

EXISTING SIGN

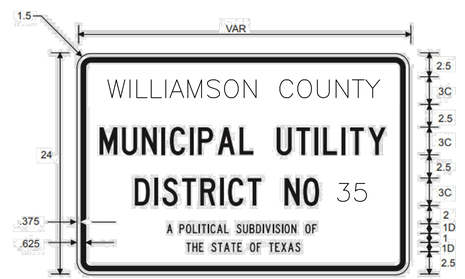
PROPOSED BLUE FIRE HYDRANT DELINEATOR

STREET LIGHT (BY OTHERS)

STOP SIGN BAR STREET MARKING

NOTES:

1. STREET NAMES SHALL BE DISPLAYED ON STANDARD D3-1 GUIDE SIGNS ERECTED AT EACH STREET INTERSECTION AND HAVE WHITE LETTERS ON A GREEN BACKGROUND IN ACCORDANCE WITH CITY OF HUTTO STANDARDS.
2. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC DEVICES (TxMUTCD).
3. PER TxMUTCD REQUIREMENTS, THERE MUST BE A 2' MINIMUM OFFSET BETWEEN THE FACE OF CURB AND THE OUTSIDE EDGE OF SIGNS.
4. BLUE FIRE HYDRANT DELINEATORS TO BE PLACED IN OUTSIDE TRAVEL LANE, 3' FROM LIP OF GUTTER.
5. ALL CHANGES TO THE TRAFFIC CONTROL PLAN MUSH BE APPROVED AND DOCUMENTED BY THE SEALING ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY PROPOSED CHANGES TO THE TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL.
6. THE LETTERING FOR NAMES OF STREETS ON STREET NAME SIGNS SHALL BE COMPOSED OF A COMBINATION OF LOWER-CASE LETTERS WITH INITIAL UPPER-CASE LETTERS.
7. STOP SIGNS TO BE INSTALLED PER CITY OF HUTTO DETAIL SD-03
8. ALL STOP SIGNS TO BE ACCOMPANIED WITH ADJACENT 24 INCH WHITE STOP BAR.
9. ALL SIGNS AND STRIPING TO BE INSTALLED PER TxMUTCD.
10. ALL STREET LIGHTS ALONG PROPOSED PUBLIC STREETS MUST CONFORM TO LIGHTING REGULATIONS IN HUTTO UDC SECTION 10.409 AND 10.605.9.



MUD SIGN DETAIL

Reviewed for Substantial Conformance by City of Hutto

FOR OFFICIAL USE ONLY

Matt Bechis, P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

								APR
								DATE
								DESCRIPTION
								REV

DESIGNED BY: MS,AC

REVIEWED BY: AC

DRAWN BY: BE,BC

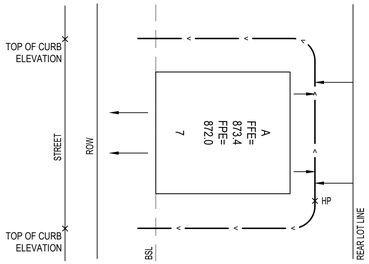
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

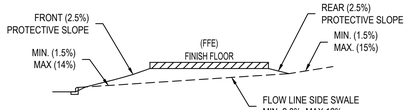
SIGNAGE & STRIPING PLAN (SHEET 2 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

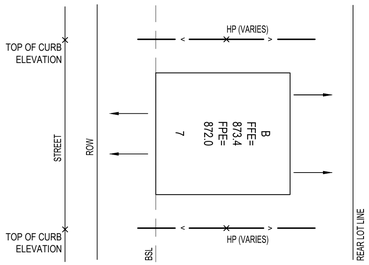
G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDI01_CADD\01_Shts\8843-01-C-SP-SIGN.dwg Layout: 28 SIGNAGE & STRIPING PLAN (SHEET 2 OF 2) Plotted: 12/2/2024 6:13:41 PM



PLAN



TYPE "A"
ALL DRAINAGE TO STREET



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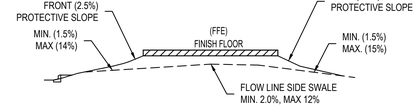
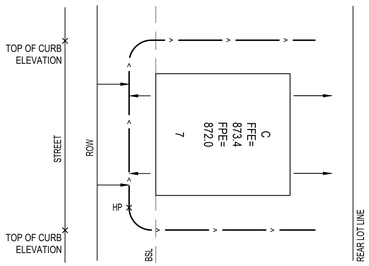
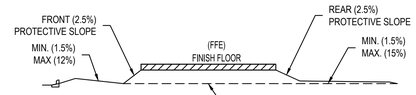


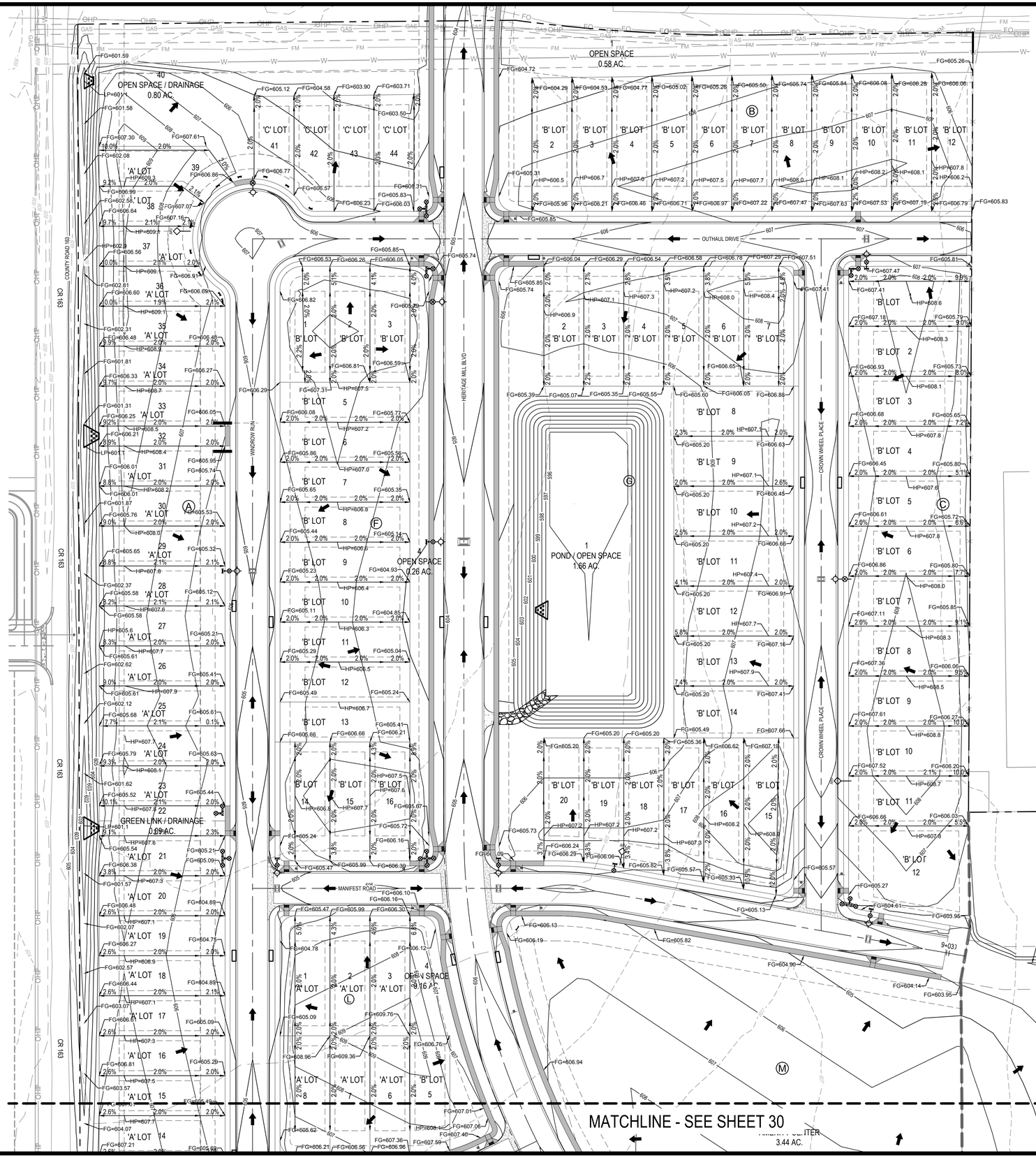
TYPE "B"
DRAINAGE TO BOTH STREET
AND REAR LOT LINE

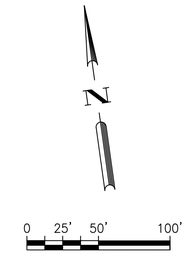


PLAN



TYPE "C"
DRAINAGE TO REAR LOT LINE



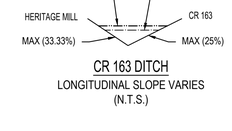


LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- BUILDING SETBACK LINE
- PROPERTY UTILITY EASEMENT
- FLOW ARROW

GRADING NOTES:

1. FINISHED TOP SOIL AT EDGE OF SLAB SHALL BE A MINIMUM OF 8" BELOW FINISHED FLOOR LEVEL.
2. ALL PARKWAY AREAS SHALL BE UNIFORMLY GRADED TO 2% GRADE.
3. DRIVE GRADE NOT TO EXCEED 14% WITH 8% MAXIMUM GRADE BREAK DIFFERENCE.
4. ALL SLAB ELEVATIONS SHOWN ARE MINIMUM ELEVATIONS BASED ON SLABS SET AT BUILDING LINES AND THE SLOPES OF TYPICAL LOT GRADING TYPES. IF SLABS ARE SET FURTHER BACK ON THE LOT THAN AT THE BUILDING LINE, THEN SLAB ELEVATIONS WILL VARY ACCORDINGLY WITH SLOPES SHOWN ON THE TYPICAL LOT GRADING TYPE.
5. FRONT AND REAR PROTECTIVE SLOPES TO BE MINIMUM 6" (5% GRADE) WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARDS THE HOUSE.
6. FINISHED PAD ELEVATION (FPE) = FINISH FLOOR ELEVATION (FFE) - 16.5" (FFE=FPE+16.5")



CR 163 DITCH
LONGITUDINAL SLOPE VARIES
(N.T.S.)

REV	DATE	APR

DESCRIPTION

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
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AUSTIN, TX 78728
TBPE Registration No. F-1046
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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

OVERALL GRADING PLAN (1 OF 3)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/09/2025

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-GRAD.dwg Layout: 29 OVERALL GRADING PLAN (1 OF 3) Plotted: 4/9/2025 2:12:19 PM

MATCHLINE - SEE SHEET 29

MATCHLINE - SEE SHEET 31

1 AMENITY CENTER 3.44 AC.

OPEN SPACE 0.21 AC

OPEN SPACE 0.063 AC.

PULPWOOD DRIVE

BISON PRAIRIE ROAD

HERITAGE MILL BLVD

WHIPSAW DRIVE

WINDROW RUN

COUNTY ROAD 163

CR 163

GREAT NORTHERN DRIVE

FG=601.29 STA. 12+76.12

FG=600.12 STA. 11+43.62

FG=599.77 STA. 13+17.46

N

0 25' 50' 100'

SCALE: 1" = 50'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- BUILDING SETBACK LINE
- PROPERTY UTILITY EASEMENT
- FLOW ARROW

100-YR HGL
Q = 19.80 CFS
V = 3.55 FPS
D = 1.27 FT

25-YR HGL
Q = 15.10 CFS
V = 3.32 FPS
D = 1.14 FT

HERITAGE MILL — CR 163

MAX (33.33%) — MAX (25%)

CR 163 DITCH
LONGITUDINAL SLOPE VARIES
(N.T.S.)

100 YEAR FLOW
Q = 97.14 CFS
V = 3.87 FT/S
D = 2.9 FT

25-YR HGL
Q = 67.3 CFS
V = 3.84 FPS
D = 2.4 FT

MAX (33.33%) — MAX (33.33%)

EAST TEMPORARY DRAINAGE CHANNEL
(N.T.S.)

100 YEAR FLOW
Q = 54.84 CFS
V = 3.35 FT/S
D = 2.3 FT

25-YR HGL
Q = 32.2 CFS
V = 3.19 FPS
D = 1.8 FT

MAX (33.33%) — MAX (33.33%)

WEST TEMPORARY DRAINAGE CHANNEL
(N.T.S.)

	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

OVERALL GRADING PLAN (2 OF 3)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
04/09/2025

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MATCHLINE - SEE SHEET 29

MATCHLINE - SEE SHEET 31

CR 163

1 AMENITY CENTER 3.44 AC.

OPEN SPACE 0.21 AC.

OPEN SPACE 0.05 AC.

'A' LOT 1 | 'A' LOT 2 | 'A' LOT 3 | 'A' LOT 4 | 'A' LOT 5 | 'A' LOT 6 | 'A' LOT 7 | 'A' LOT 8 | 'A' LOT 9 | 'A' LOT 10 | 'A' LOT 11 | 'A' LOT 12 | 'A' LOT 13

'B' LOT 1 | 'B' LOT 2 | 'B' LOT 3 | 'B' LOT 4 | 'B' LOT 5 | 'B' LOT 6 | 'B' LOT 7 | 'B' LOT 8 | 'B' LOT 9 | 'B' LOT 10 | 'B' LOT 11 | 'B' LOT 12 | 'B' LOT 13 | 'B' LOT 14 | 'B' LOT 15 | 'B' LOT 16

FG=601.29 STA. 12+76.12

FG=600.12 STA. 11+43.62

FG=599.77 STA. 13+17.46

0 25' 50' 100'

SCALE: 1" = 50'

N

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- FLOW ARROW

100-YR HGL
Q = 19.80 CFS
V = 3.55 FPS
D = 1.27 FT

25-YR HGL
Q = 15.10 CFS
V = 3.32 FPS
D = 1.14 FT

HERITAGE MILL — CR 163

MAX (33.33%) — MAX (25%)

CR 163 DITCH
LONGITUDINAL SLOPE VARIES
(N.T.S.)

100 YEAR FLOW
Q = 97.14 CFS
V = 3.87 FPS
D = 2.9 FT

25-YR HGL
Q = 67.3 CFS
V = 3.84 FPS
D = 2.4 FT

MAX (33.33%) — MAX (33.33%)

EAST TEMPORARY DRAINAGE CHANNEL
(N.T.S.)

100 YEAR FLOW
Q = 54.84 CFS
V = 3.35 FPS
D = 2.3 FT

25-YR HGL
Q = 32.2 CFS
V = 3.19 FPS
D = 1.8 FT

MAX (33.33%) — MAX (33.33%)

WEST TEMPORARY DRAINAGE CHANNEL
(N.T.S.)

Reviewed for Substantial Conformance by City of Hutto

Matt Bechtol, P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

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	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

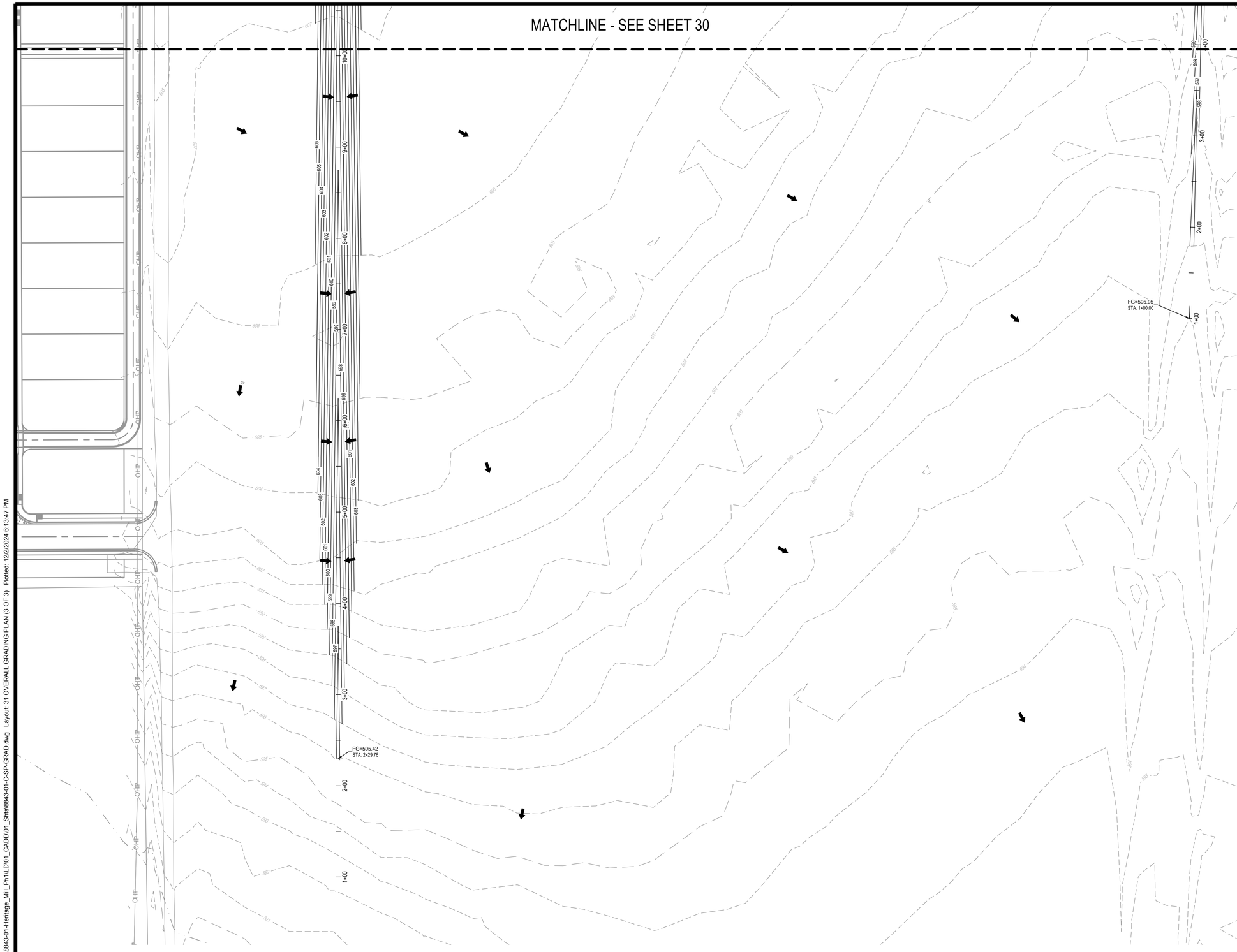
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

OVERALL GRADING PLAN (2 OF 3)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-GRAD.dwg Layout: 30 OVERALL GRADING PLAN (2 OF 3) Plotted: 12/31/2024 4:45:35 PM



N

0 25' 50' 100'
SCALE: 1" = 50'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- FLOW ARROW

REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.beginc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

OVERALL GRADING PLAN (3 OF 3)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

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Reviewed for Substantial Conformance by City of Hutto
HUTTO
Mark Hurlock, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-GRAD.dwg Layout: 31 OVERALL GRADING PLAN (3 OF 3) Plotted: 12/2/2024 6:13:47 PM

TABLE 2.1 - WORKSHEET FOR SCS HYDROLOGIC PARAMETERS

	X	Existing	**Project:**	Heritage Mill North
Site Conditions:		Proposed	**Subarea Number:**	EDA 1.A
		Existing	**By:**	ALU
Off-Site Land Use:		Proposed	**Date:**	10/10/2023

RUNOFF CURVE NUMBER

Soil Group	Land Use or Zoning	Area (acres)	RCN	
B	Straight Row Crops (Poor Condition)	4.95	81	401.031
C	Straight Row Crops (Poor Condition)	5.36	88	471.592
D	Straight Row Crops (Poor Condition)	0.00	91	0
		10.31		

Total Area 10.31 ac 0.0161 sq. mi **Weighted RCN =** 84.6

TIME OF CONCENTRATION

EDA 1.A								
ID	Type of Flow	n	Length (ft)	Slope (ft/ft)	Area (sf)	Wet P (ft)	Velocity (fps)	Tt (min)
	Sheet Flow (P_2= 3.97 in.)							
A	Cultivated Soil (Residue Cover<20%)	0.06	100	0.005				7.36
						T_m 0.42 $(nL)^{0.8}$		
						$(P_2)^{0.5}$ $S^{0.4}$		
Shallow Concentrated Flow								
B	Unpaved		764	0.005		T_{sc} L	(unpaved)	11.16
						60*16.1345*S$^{0.5}$		
						T_{sc} L	(paved)	
						60*20.3282*S$^{0.5}$		
	Channel Flow							Tt=Σ(L/60V)
C	Rough Earth		0	0.010		6	0.00	
						Total T_c	18.52	
						Total T_c	11.11	

TABLE 2.2 - WORKSHEET FOR SCS HYDROLOGIC PARAMETERS

	X	Existing	**Project:**	Heritage Mill North
Site Conditions:		Proposed	**Subarea Number:**	EDA 1.B
		Existing	**By:**	ALU
Off-Site Land Use:		Proposed	**Date:**	10/10/2023

RUNOFF CURVE NUMBER

Soil Group	Land Use or Zoning	Area (acres)	RCN	
B	Straight Row Crops (Poor Condition)	3.50	81	283.338
C	Straight Row Crops (Poor Condition)	19.39	88	1706.056
D	Straight Row Crops (Poor Condition)	5.35	91	486.395
		28.23		

Total Area 28.23 ac 0.0441 sq. mi **Weighted RCN =** 87.7

TIME OF CONCENTRATION

EDA 1.B								
ID	Type of Flow	n	Length (ft)	Slope (ft/ft)	Area (sf)	Wet P (ft)	Velocity (fps)	Tt (min)
	Sheet Flow (P_2= 3.97 in.)							
A	Cultivated Soil (Residue Cover<20%)	0.06	100	0.005				7.36
						T_m 0.42 $(nL)^{0.8}$		
						$(P_2)^{0.5}$ $S^{0.4}$		
Shallow Concentrated Flow								
B	Unpaved		2040	0.005		T_{sc} L	(unpaved)	29.80
						60*16.1345*S$^{0.5}$		
						T_{sc} L	(paved)	
						60*20.3282*S$^{0.5}$		
	Channel Flow							Tt=Σ(L/60V)
C	Rough Earth		0	0.010		6	0.00	
						Total T_c	37.16	
						Total T_c	22.30	

TABLE 2.3 - WORKSHEET FOR SCS HYDROLOGIC PARAMETERS

	X	Existing	**Project:**	Heritage Mill North
Site Conditions:		Proposed	**Subarea Number:**	EDA 2
		Existing	**By:**	ALU
Off-Site Land Use:		Proposed	**Date:**	10/10/2023

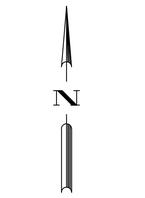
RUNOFF CURVE NUMBER

Soil Group	Land Use or Zoning	Area (acres)	RCN	
B	Straight Row Crops (Poor Condition)	3.89	81	315.09
C	Straight Row Crops (Poor Condition)	21.92	88	1928.96
D	Straight Row Crops (Poor Condition)	0.00	91	0

Total Area 25.81 ac 0.0403 sq. mi **Weighted RCN =** 86.9

TIME OF CONCENTRATION

EDA 2								
ID	Type of Flow	n	Length (ft)	Slope (ft/ft)	Area (sf)	Wet P (ft)	Velocity (fps)	Tt (min)
	Sheet Flow (P_2= 3.97 in.)							
A	Cultivated Soil (Residue Cover<20%)	0.06	100	0.01				5.58
						T_m 0.42 $(nL)^{0.8}$		
						$(P_2)^{0.5}$ $S^{0.4}$		
Shallow Concentrated Flow								
B	Unpaved		1130	0.005		T_{sc} L	(unpaved)	16.51
						60*16.1345*S$^{0.5}$		
						T_{sc} L	(paved)	
						60*20.3282*S$^{0.5}$		
	Channel Flow							Tt=Σ(L/60V)
C	Rough Earth		585	0.013		6	1.63	
						Total T_c	23.71	
						Total T_c	14.23	



LEGEND

- PROPERTY BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- TIME OF CONCENTRATION
- FEMA 100-YR FLOODPLAIN
- FEMA 500-YR FLOODPLAIN
- DRAINAGE DIVIDE
- FLOW ARROW
- XXXX / XX AC. — AREA NAME / DRAINAGE AREA
- TIME OF CONCENTRATION FLOW PATH

NOTES:

1. THE ENGINEER OF RECORD UTILIZED ATLAS-14 DATA TO COMPLETE DRAINAGE CALCULATIONS FOR THIS CONSTRUCTION PLAN.

								APR
								DATE
								DESCRIPTION
								REV

DESIGNED BY: MS,AC

REVIEWED BY: AC

DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
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TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

PRE-DEVELOPED HYDROLOGY MAP

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SE-HYDRO.dwg Layout: 32 PRE-DEVELOPED HYDROLOGY MAP Plotted: 12/2/2024 6:13:48 PM By: MPATEL
G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SE-HYDRO.dwg Layout: 32 PRE-DEVELOPED HYDROLOGY MAP Plotted: 12/2/2024 6:13:48 PM

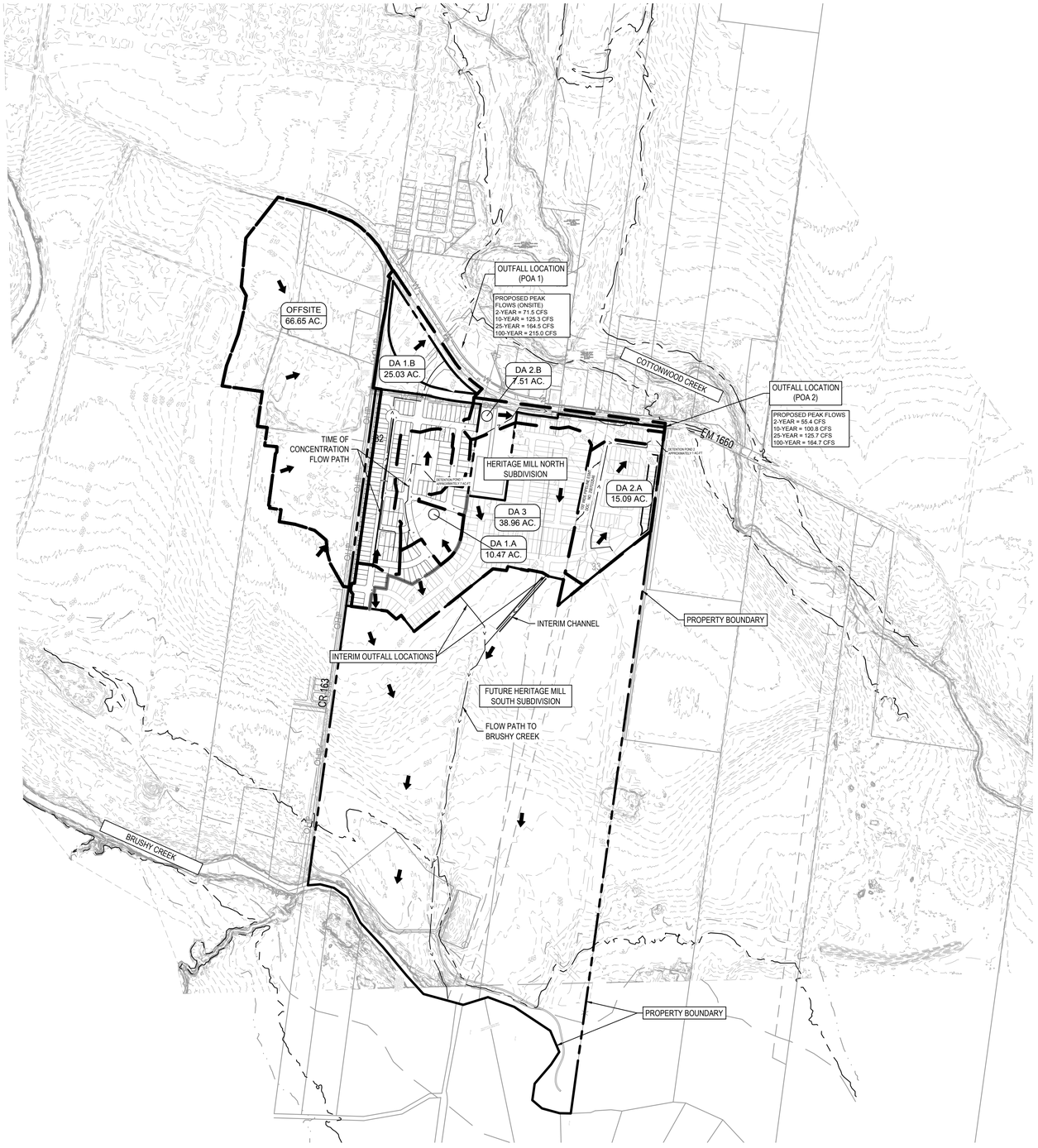


TABLE 2.7 - WORKSHEET FOR SCS HYDROLOGIC PARAMETERS

		Existing	**Project:** Heritage Mill North
Site Conditions:	X	Proposed	**Subarea Number:** PDA 2.A
		Existing	**By:** ALU
Off-Site Land Use:		Proposed	**Date:** 10/18/2023

RUNOFF CURVE NUMBER

Soil Group	Land Use or Zoning	Area (acres)	RCN	
	Impervious Cover (assumed 50%)	7.55	98	
B + C	Straight Row Crops (Poor Condition)	7.55	86.9	

Total Area 15.09 ac 0.0236 sq. mi **Weighted RCN =** 86.9

TIME OF CONCENTRATION

PDA 2.A

ID	Type of Flow	n	Length (ft)	Slope (ft/ft)	Area (sf)	Wet P (ft)	Velocity (fps)	Tt (min)
	Sheet Flow (P_{2}= 3.97 in.)							
A	Dense Grass	0.24	100	0.02				12.81
							T_{t}= 0.42 $(nL)^{0.8}$ / $(P_{2})^{0.5}$ $S^{0.4}$	
Shallow Concentrated Flow								
B	Unpaved		100	0.02			T_{t}= L / 60*16.1345*$S^{0.5}$ (unpaved)	0.73
							T_{t}= L / 60*20.3282*$S^{0.5}$ (paved)	
	Pipe Flow							Tt=Σ(L/60V)
C	Gutter *(1)		200	0.005			2.7	1.23
	RCP *(2)		1163	0.002			4	4.85
							Total T_{c}	19.62
							Total T_{t}	11.77

TABLE 2.5 - WORKSHEET FOR SCS HYDROLOGIC PARAMETERS

		Existing	**Project:** Heritage Mill North
Site Conditions:	X	Proposed	**Subarea Number:** PDA 1.A
		Existing	**By:** ALU
Off-Site Land Use:		Proposed	**Date:** 10/18/2023

RUNOFF CURVE NUMBER

Soil Group	Land Use or Zoning	Area (acres)	RCN	
	Impervious Cover - 57.17%	5.99	98	
B + C	Straight Row Crops (Poor Condition)	84.6	84.6	

Total Area 10.47 ac 0.0164 sq. mi **Weighted RCN =** 84.6

TIME OF CONCENTRATION

PDA 1.A

ID	Type of Flow	n	Length (ft)	Slope (ft/ft)	Area (sf)	Wet P (ft)	Velocity (fps)	Tt (min)
	Sheet Flow (P_{2}= 3.97 in.)							
A	Dense Grass	0.24	100	0.017				13.67
							T_{t}= 0.42 $(nL)^{0.8}$ / $(P_{2})^{0.5}$ $S^{0.4}$	
Shallow Concentrated Flow								
B	Unpaved		40	0.017			T_{t}= L / 60*16.1345*$S^{0.5}$ (unpaved)	0.32
							T_{t}= L / 60*20.3282*$S^{0.5}$ (paved)	
	Pipe Flow							Tt=Σ(L/60V)
C	GUTTER *(1)		246	0.005			2.7	1.52
	RCP* (2)		423	0.002			5	1.41
							Total T_{c}	16.92
							Total T_{t}	10.15

TABLE 2.6 - WORKSHEET FOR SCS HYDROLOGIC PARAMETERS

		Existing	**Project:** Heritage Mill North
Site Conditions:	X	Proposed	**Subarea Number:** PDA 1.B
		Existing	**By:** ALU
Off-Site Land Use:		Proposed	**Date:** 10/18/2023

RUNOFF CURVE NUMBER

Soil Group	Land Use or Zoning	Area (acres)	RCN	
	Impervious Cover - 52.17%	13.06	98	
B + C + D	Straight Row Crops (Poor Condition)	11.97	87.7	

Total Area 25.03 ac 0.0391 sq. mi **Weighted RCN =** 87.7

TIME OF CONCENTRATION

PDA 1.B

ID	Type of Flow	n	Length (ft)	Slope (ft/ft)	Area (sf)	Wet P (ft)	Velocity (fps)	Tt (min)
	Sheet Flow (P_{2}= 3.97 in.)							
A	Dense Grass	0.24	100	0.014				14.78
							T_{t}= 0.42 $(nL)^{0.8}$ / $(P_{2})^{0.5}$ $S^{0.4}$	
Shallow Concentrated Flow								
B	Unpaved		62	0.016			T_{t}= L / 60*16.1345*$S^{0.5}$ (unpaved)	0.50
							T_{t}= L / 60*20.3282*$S^{0.5}$ (paved)	
	Pipe Flow							Tt=Σ(L/60V)
C	Gutter *(1)		379	0.007			2.7	2.34
	RCP *(2)		1524	0.008			7	3.63
							Total T_{c}	21.25
							Total T_{t}	12.75

TABLE 2.8 - WORKSHEET FOR SCS HYDROLOGIC PARAMETERS

		Existing	**Project:** Heritage Mill North
Site Conditions:	X	Proposed	**Subarea Number:** PDA 2.B
		Existing	**By:** ALU
Off-Site Land Use:		Proposed	**Date:** 10/18/2023

RUNOFF CURVE NUMBER

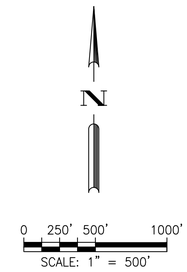
Soil Group	Land Use or Zoning	Area (acres)	RCN	
	Impervious Cover (assumed 50%)	3.76	98	
B + C	Straight Row Crops (Poor Condition)	3.76	86.9	

Total Area 7.51 ac 0.0117 sq. mi **Weighted RCN =** 86.9

TIME OF CONCENTRATION

PDA 2.B

ID	Type of Flow	n	Length (ft)	Slope (ft/ft)	Area (sf)	Wet P (ft)	Velocity (fps)	Tt (min)
	Sheet Flow (P_{2}= 3.97 in.)							
A	Dense Grass	0.24	100	0.005				22.31
							T_{t}= 0.42 $(nL)^{0.8}$ / $(P_{2})^{0.5}$ $S^{0.4}$	
Shallow Concentrated Flow								
B	Unpaved		510	0.005			T_{t}= L / 60*16.1345*$S^{0.5}$ (unpaved)	7.45
							T_{t}= L / 60*20.3282*$S^{0.5}$ (paved)	
	Channel Flow							Tt=Σ(L/60V)
C	Rough Earth		1264	0.010			6	3.51
							Total T_{c}	33.27
							Total T_{t}	19.96



LEGEND

- PROPERTY BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- TIME OF CONCENTRATION
- FEMA 100-YR FLOODPLAIN
- FEMA 500-YR FLOODPLAIN
- DRAINAGE DIVIDE
- FLOW ARROW
- XXXX / XX AC. — AREA NAME / DRAINAGE AREA
- PROPOSED STORM LINE
- EXISTING STORM LINE
- PROPOSED CURB INLET
- PROPOSED HEADWALL
- PROPOSED MANHOLE
- TIME OF CONCENTRATION FLOW PATH

NOTES:

1. THE ENGINEER OF RECORD UTILIZED ATLAS-14 DATA TO COMPLETE DRAINAGE CALCULATIONS FOR THIS CONSTRUCTION PLAN.

Reviewed for Substantial Conformance by City of Hutto
Mark Narlesky P.E.
Director of Engineering - City of Hutto
01/09/2025
NOT OFFICIAL UNTIL SIGNED

									APR
									DATE
									DESCRIPTION
									REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

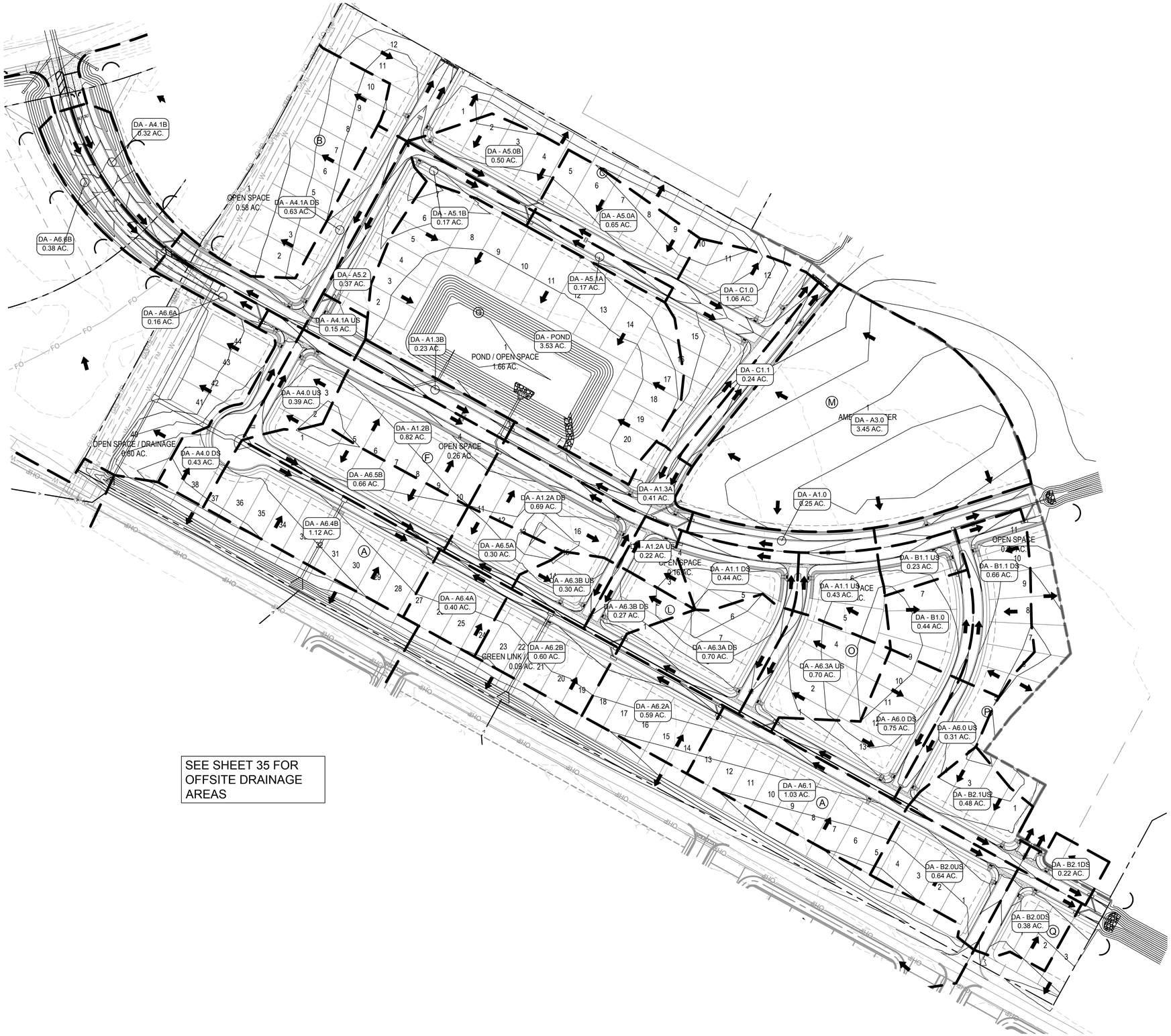
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

POST-DEVELOPED HYDROLOGY MAP

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-HYDRO.dwg Layout: 33 POST-DEVELOPED HYDROLOGY MAP Plotted: 12/2/2024 6:13:51 PM By: DHUCKLEBRIDGE
G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-HYDRO.dwg Layout: 33 POST-DEVELOPED HYDROLOGY MAP Plotted: 12/2/2024 6:13:51 PM



SEE SHEET 35 FOR OFFSITE DRAINAGE AREAS

0 50' 100' 200'
SCALE: 1" = 100'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- BOX MANHOLE
- MANHOLE
- 10' CURB INLET
- RUNOFF FLOW DIRECTION
- DA - XX / XX AC. — INLET ID / DRAINAGE AREA
- DRAINAGE AREA BOUNDARY

REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.beginc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

DRAINAGE AREA MAP (SHEET 1 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Hutto
Mark Reeves, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-INLET DAM.dwg Layout: 34 DRAINAGE AREA MAP (SHEET 1 OF 2) Plotted: 12/2/2024 6:13:54 PM

0 100' 200' 400'

SCALE: 1" = 200'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- BOX MANHOLE
- MANHOLE
- 10' CURB INLET
- RUNOFF FLOW DIRECTION
- DA - XX / XX AC. — INLET ID / DRAINAGE AREA
- DRAINAGE AREA BOUNDARY

	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC

REVIEWED BY: AC

DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

Reviewed for Substantial Conformance by City of Hutto

FOR OFFICIAL USE ONLY

Noah Reiche, P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

DRAINAGE AREA MAP (SHEET 2 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER

12/2/2024

G:\TXCI\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-INLET DAM.dwg Layout: 35 DRAINAGE AREA MAP (SHEET 2 OF 2) Plotted: 12/2/2024 6:13:56 PM

PHASE 1 IMPERVIOUS COVER CALCULATIONS

D.A.	AREA (SF)	AREA (acre)	# 35 homes	# 40 homes	# 50 homes	Sidewalk (FT)	1/2 Street 41' (LF)	1/2 Street 34' (LF)	Impervious Cover (Acres)	Pervious Cover Onsite (Acres)	%IC	25 year						100 year				
												Pervious C		Imp C		weighted C		Pervious C		Imp C		weighted C
												C Value	C x A	C Value	C x A			C Value	C x A	C Value	C x A	
A1.0	10890	0.25				320.00	320.00	0.00	0.180	0.070	71.99%	0.29	0.02	0.86	0.15	0.70		0.36	0.03	0.95	0.17	0.78
A1.1US	18731	0.43		1.00		227.00	130.00	97.00	0.177	0.253	41.07%	0.29	0.07	0.86	0.15	0.52		0.36	0.09	0.95	0.17	0.60
A1.1DS	19166	0.44		0.50		297.00	200.00	97.00	0.188	0.252	42.64%	0.29	0.07	0.86	0.16	0.53		0.36	0.09	0.95	0.18	0.61
A1.1	37897	0.87	0.00	1.50	0.00	524.00	330.00	194.00	0.364	0.506	41.86%	0.29	0.15	0.86	0.31	0.53		0.36	0.18	0.95	0.35	0.61
A1.2AUS	9583	0.22		1.00		160.00	65.00	95.00	0.139	0.081	63.21%	0.29	0.02	0.86	0.12	0.65		0.36	0.03	0.95	0.13	0.73
A1.2ADS	30056	0.69		2.50		360.00	265.00	95.00	0.337	0.353	48.78%	0.29	0.10	0.86	0.29	0.57		0.36	0.13	0.95	0.32	0.65
A1.2A	39640	0.91	0.00	3.50	0.00	520.00	330.00	190.00	0.476	0.434	52.27%	0.29	0.13	0.86	0.41	0.59		0.36	0.16	0.95	0.45	0.67
A1.2B	35719	0.82		3.50		285.00	285.00	0.00	0.359	0.461	43.75%	0.29	0.13	0.86	0.31	0.54		0.36	0.17	0.95	0.34	0.62
A1.2	75359	1.73	0.00	7.00	0.00	805.00	615.00	190.00	0.834	0.896	48.23%	0.29	0.26	0.86	0.72	0.56		0.36	0.32	0.95	0.79	0.64
A1.3A	17860	0.41				449.00	340.00	112.00	0.245	0.165	59.74%	0.29	0.05	0.86	0.21	0.63		0.36	0.06	0.95	0.23	0.71
A1.3B	10019	0.23				285.00	285.00		0.160	0.070	69.69%	0.29	0.02	0.86	0.14	0.69		0.36	0.03	0.95	0.15	0.77
A1.3	27878	0.64	0.00	0.00	0.00	734.00	625.00	112.00	0.405	0.235	63.32%	0.29	0.07	0.86	0.35	0.65		0.36	0.08	0.95	0.38	0.73
C1.0	46174	1.06		2.25	2.00	234.00		560.00	0.495	0.565	46.72%	0.29	0.16	0.86	0.43	0.56		0.36	0.20	0.95	0.47	0.64
C1.1	10454	0.24			0.00	643.00		374.00	0.205	0.035	85.42%	0.29	0.01	0.86	0.18	0.78		0.36	0.01	0.95	0.19	0.86
A3.0	150282	3.45	0.00	0.00	0.00	0.00	0.00	0.00	1.725	1.725	50.00%	0.29	0.50	0.86	1.48	0.58		0.36	0.62	0.95	1.64	0.66
A4.0US	16988	0.39		1.50		228.00	97.00	212.00	0.234	0.156	60.10%	0.29	0.05	0.86	0.20	0.63		0.36	0.06	0.95	0.22	0.71
A4.0DS	18731	0.43		1.50		321.00	67.00	212.00	0.229	0.201	53.21%	0.29	0.06	0.86	0.20	0.59		0.36	0.07	0.95	0.22	0.67
A4.0	35719	0.82	0.00	3.00	0.00	549.00	164.00	424.00	0.463	0.357	56.49%	0.29	0.10	0.86	0.40	0.61		0.36	0.13	0.95	0.44	0.69
A4.1AUS	6534	0.15				167.00	99.00	68.00	0.088	0.062	58.98%	0.29	0.02	0.86	0.08	0.63		0.36	0.02	0.95	0.08	0.71
A4.1ADS	27443	0.63		2.50		619.00	262.00	357.00	0.461	0.169	73.21%	0.29	0.05	0.86	0.40	0.71		0.36	0.06	0.95	0.44	0.79
A4.1A	33977	0.78	0	3	0	786	361	425	0.550	0.230	70.47%	0.29	0.07	0.86	0.47	0.69		0.36	0.08	0.95	0.52	0.78
A4.1B	13939	0.32				290.00	290.00		0.163	0.157	50.97%	0.29	0.05	0.86	0.14	0.58		0.36	0.06	0.95	0.15	0.66
A4.1	47916	1.10	0.00	2.50	0.00	1076.00	651.00	425.00	0.713	0.387	64.80%	0.29	0.11	0.86	0.61	0.66		0.36	0.14	0.95	0.68	0.74
A4.2	154202	3.54							2.832	0.708	80.00%	0.29	0.21	0.86	2.44	0.75		0.36	0.25	0.95	2.69	0.83
A5.0A	28314	0.65			2.50	263.00		263.00	0.286	0.364	44.05%	0.29	0.11	0.86	0.25	0.54		0.36	0.13	0.95	0.27	0.62
A5.0B	21780	0.50			2.00	243.00		243.00	0.245	0.255	48.96%	0.29	0.07	0.86	0.21	0.57		0.36	0.09	0.95	0.23	0.65
A5.0	50094	1.15	0.00	0.00	4.50	506.00	0.00	506.00	0.531	0.619	46.19%	0.29	0.18	0.86	0.46	0.55		0.36	0.22	0.95	0.50	0.63
A5.1A	7405	0.17			0.00	263.00		263.00	0.127	0.043	74.58%	0.29	0.01	0.86	0.11	0.72		0.36	0.02	0.95	0.12	0.80
A5.1B	7405	0.17			0.00	243.00		243.00	0.117	0.053	68.91%	0.29	0.02	0.86	0.10	0.68		0.36	0.02	0.95	0.11	0.77
A5.1	14810	0.34	0.00	0.00	0.00	506.00	0.00	506.00	0.244	0.096	71.75%	0.29	0.03	0.86	0.21	0.70		0.36	0.03	0.95	0.23	0.78
A5.2	16117	0.37		1.00		288.00		288.00	0.196	0.174	52.85%	0.29	0.05	0.86	0.17	0.59		0.36	0.06	0.95	0.19	0.67
A6.0US	13504	0.31		0.50	0.50	260.00		260.00	0.186	0.124	59.87%	0.29	0.04	0.86	0.16	0.63		0.36	0.04	0.95	0.18	0.71
A6.0DS	32670	0.75		3.50		460.00		460.00	0.420	0.330	56.03%	0.29	0.10	0.86	0.36	0.61		0.36	0.12	0.95	0.40	0.69
A6.0	46174	1.06	0.00	4.00	0.50	720.00	0.00	720.00	0.606	0.454	57.15%	0.29	0.13	0.86	0.52	0.62		0.36	0.16	0.95	0.58	0.70
A6.1	44867	1.03		7.00		348.00		348.00	0.565	0.465	54.82%	0.29	0.13	0.86	0.49	0.60		0.36	0.17	0.95	0.54	0.68
A6.2A	25700	0.59		4.00		200.00		200.00	0.323	0.267	54.79%	0.29	0.08	0.86	0.28	0.60		0.36	0.10	0.95	0.31	0.68
A6.2B	26136	0.60		3.50		204.00		204.00	0.297	0.303	49.47%	0.29	0.09	0.86	0.26	0.57		0.36	0.11	0.95	0.28	0.65
A6.2	51836	1.19	0.00	7.50	0.00	404.00	0.00	404.00	0.620	0.570	52.10%	0.29	0.17	0.86	0.53	0.59		0.36	0.21	0.95	0.59	0.67
A6.3AUS	30492	0.70		4.00		256.00		256.00	0.350	0.350	50.03%	0.29	0.10	0.86	0.30	0.58		0.36	0.13	0.95	0.33	0.66
A6.3ADS	30492	0.70		4.00		422.00		422.00	0.430	0.270	61.47%	0.29	0.08	0.86	0.37	0.64		0.36	0.10	0.95	0.41	0.72
A6.3A	60984	1.40	0.00	8.00	0.00	678.00	0.00	678.00	0.780	0.620	55.75%	0.29	0.18	0.86	0.67	0.61		0.36	0.22	0.95	0.74	0.69
A6.3BUS	13068	0.30		1.50		257.00		257.00	0.209	0.091	69.65%	0.29	0.03	0.86	0.18	0.69		0.36	0.03	0.95	0.20	0.77
A6.3BDS	11761	0.27		1.50		187.00		187.00	0.175	0.095	64.89%	0.29	0.03	0.86	0.15	0.66		0.36	0.03	0.95	0.17	0.74
A6.3B	24829	0.57	0.00	3.00	0.00	444.00	0.00	444.00	0.384	0.186	67.40%	0.29	0.05	0.86	0.33	0.67		0.36	0.07	0.95	0.36	0.76
A6.3	85813	1.97	0.00	11.00	0.00	1122.00	0.00	1122.00	1.165	0.805	59.12%	0.29	0.23	0.86	1.00	0.63		0.36	0.29	0.95	1.11	0.71
A6.4A	17424	0.40		3.00		132.00		132.00	0.234	0.166	58.44%	0.29	0.05	0.86	0.20	0.62		0.36	0.06	0.95	0.22	0.70
A6.4B	48787	1.12		7.00		394.00		380.00	0.581	0.539	51.91%	0.29	0.16	0.86	0.50	0.59		0.36	0.19	0.95	0.55	0.67
A6.4	66211	1.52	0.00	10.00	0.00	526.00	0.00	512.00	0.815	0.705	53.63%	0.29	0.20	0.86	0.70	0.60		0.36	0.25	0.95	0.77	0.68
A6.5A	13068	0.30		2.00		132.00		132.00	0.177	0.123	59.01%	0.29	0.04	0.86	0.15	0.63		0.36	0.04	0.95	0.17	0.71
A6.5B	28750	0.66		3.50		352.00		380.00	0.379	0.281	57.44%	0.29	0.08	0.86	0.33	0.62		0.36	0.10	0.95	0.36	0.70
A6.5	41818	0.96	0.00	5.50	0.00	484.00	0.00	512.00	0.556	0.404	57.93%	0.29	0.12	0.86	0.48	0.62		0.36	0.15	0.95	0.53	0.70
A6.6A	6970	0.16	0.00	0.00	0.00	194.00	194.00	0.00	0.109	0.051	68.20%	0.29	0.01	0.86	0.09	0.68		0.36	0.02	0.95	0.10	0.76
A6.6B	16553	0.38		0.00		290.00	290.00		0.163	0.217	42.92%	0.29	0.06	0.86	0.14	0.53		0.36	0.08	0.95	0.15	0.61
A6.6	23522	0.54	0.00	0.00	0.00	484.00	484.00	0.00	0.272	0.268	50.41%	0.29	0.08	0.86	0.23	0.58		0.36	0.10	0.95	0.26	0.66
A6.7	458251	10.52	0.00	0.00	0.00	0.00	0.00	0.00	6.000	4.520	57.03%	0.29	1.31	0.86	5.16	0.62		0.36	1.63	0.95	5.70	0.70
B1.0	19166	0.44			2.00	187.00		187.00	0.218	0.222	49.50%	0.29	0.06	0.86	0.19	0.57		0.36	0.08	0.95	0.21	0.65
B1.1US	10019	0.23			0.00	134.00	134.00		0.075	0.155	32.77%	0.29	0.04	0.86	0.06	0.48		0.36	0.06	0.95	0.07	0.55
B1.1DS	28750	0.66		3.00		400.00	144.00	256.00	0.375	0.285	56.75%	0.29	0.08	0.86	0.32	0.61		0.36	0.10	0.95	0.36	0.69
B1.1	38768	0.89	0.00	3.00	0.00	534.00	278.00	256.00	0.450	0.440	50.55%	0.29	0.13	0.86	0.39	0.58		0.36	0.16	0.95	0.43	0.66
B2.0US	27878	0.64		4.00		295.00	211.00	120.00	0.400	0.240	62.51%	0.29	0.07	0.86	0.34	0.65		0.36	0.09	0.95	0.38	0.73
B2.0DS	16553	0.38		2.00		342.00	175.00	167.00	0.292	0.088	76.93%	0.29	0.03	0.86	0.25	0.73		0.36	0.03	0.95	0.28	0.81
B2.0	44431	1.02	0.00	6.00	0.00	637.00	386.00	287.00	0.692	0.328	67.88%	0.29	0.10	0.86	0.60	0.68		0.36	0.12	0.95	0.66	0.76
B2.1US	20909	0.48		3.50		225.00		225.00	0.307	0.173	63.94%	0.29	0.05	0.86	0.26	0.65		0.36	0.06	0.95	0.29	0.74
B2.1DS	9583	0.22		0.75				249.00	0.140	0.080	63.50%	0.29	0.02	0.86	0.12	0.65		0.36	0.03	0.95	0.13	0.73
B2.1	30492	0.70	0.00	4.25	0.00	225.00	0.00	474.00	0.447	0.253	63.81%	0.29	0.07	0.86	0.38	0.65		0.36	0.09	0.95	0.42	0.74
N1	1670962	38.36							3.836	34.524	10.00%	0.40	13.81	0.86	3.30	0.45		0.43	14.85	0.95	3.64	0.48200
N2	485694	11.15							1.115	10.035	10.00%	0.40	4.01	0.86	0.96	0.45		0.43	4.32	0.95	1.06	0.48200
S1	685199	15.73		58.00		9180.00		4590.00	6.852		43.56%	0.29	0.00	0.86	5.89	0.37		0.36	0.00	0.95	6.51	0.41384

NOTE: STREET CAPACITIES ARE CALCULATED BASED ON A STRAIGHT CROWN APPROXIMATION PER CITY OF GEORGETOWN DRAINAGE CRITERIA MANUAL RECOMMENDATIONS FOR PARABOLIC CROWNS.

FOR OFFICIAL USE ONLY

Reviewed for Substantial Conformance by City of Hutto

Mark Nemec P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

APR | DATE | DESCRIPTION | REV

DESIGNED BY: MS,AC

REVIEWED BY: AC

DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

STORM INLET CAPACITY CALCULATIONS (SHEET 1 OF 4)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDV01_CADD\01_Shts\8843-01-C-SP-INLET CALCS.dwg Layout: 36 STORM INLET CAPACITY CALCULATIONS (SHEET 1 OF 4) Plotted: 12/2/2024 6:13:58 PM

PHASE 1 TIME OF CONCENTRATION CALCULATIONS

DRAINAGE AREA	AREA (acres)	COMPOSITE C		A·C25	A·C100	SHEET FLOW				SHALLOW CONCENTRATED FLOW				STREET GUTTER FLOW					Cumulative Tc (min)	INTENSITY		DISCHARGE	
		C25	C100			Length (ft)	Manning's (n)	Slope ft/ft	Tc (min)	Length (ft)	Paved? (YES/NO)	Slope ft/ft	Tc (min)	Length (ft)	Manning's (n)	Slope ft/ft	Velocity ft/s	Tc (min)		I 25yr (in/hr)	I 100yr (in/hr)	Q 25 (cfs)	Q 100 (cfs)
ULTIMATE CONDITION DRAINAGE AREAS																							
A1.0	0.25	0.70	0.78	0.18	0.20	15	0.24	0.015	3.16		no	0.015	0.000	311	0.015	0.005	2.7	1.9	5.06	11.6	15.3	2.0	3.0
A1.1US	0.43	0.52	0.60	0.23	0.26	100	0.24	0.015	14.39	59	no	0.015	0.498	100	0.015	0.005	2.7	0.6	15.50	7.6	10.1	1.7	2.6
A1.1DS	0.44	0.53	0.61	0.23	0.27	100	0.24	0.015	14.39	10	no	0.015	0.084	80	0.015	0.005	2.7	0.5	14.97	7.8	10.2	1.8	2.8
A1.1	0.87	0.53	0.61	0.46	0.53	100	0.24	0.015	14.39	59	no	0.015	0.498	310	0.015	0.005	2.7	1.9	16.79	7.4	9.7	3.4	5.1
A1.2AUS	0.22	0.65	0.73	0.14	0.16	100	0.24	0.015	14.39	31	no	0.015	0.261	95	0.015	0.005	2.7	0.6	15.24	7.7	10.2	1.1	1.6
A1.2ADS	0.69	0.57	0.65	0.39	0.45	100	0.24	0.015	14.39	40	no	0.015	0.337	120	0.015	0.005	2.7	0.7	15.47	7.7	10.1	3.0	4.5
A1.2A	0.91	0.59	0.67	0.54	0.61	100	0.24	0.015	14.39	40	no	0.015	0.337	120	0.015	0.005	2.7	0.7	15.47	7.7	10.1	4.1	6.1
A1.2B	0.82	0.54	0.62	0.44	0.51	100	0.24	0.015	14.39	16	no	0.015	0.135	238	0.015	0.005	2.7	1.5	15.99	7.5	9.9	3.3	5.0
A1.2	1.73	0.56	0.64	0.98	1.12	100	0.24	0.015	14.39	16	no	0.015	0.135	238	0.015	0.005	2.7	1.5	15.99	7.5	9.9	7.4	11.1
A1.3A	0.41	0.63	0.71	0.26	0.29	30	0.24	0.015	5.49		no	0.015	0.000	339	0.015	0.005	2.7	2.1	7.57	10.2	13.5	2.6	3.9
A1.3B	0.23	0.69	0.77	0.16	0.18	15	0.24	0.015	3.16		no	0.015	0.000	284	0.015	0.005	2.7	1.7	5.00	11.6	15.3	1.8	2.7
A1.3	0.64	0.65	0.73	0.42	0.47	30	0.24	0.015	5.49		no	0.015	0.000	339	0.015	0.005	2.7	2.1	7.57	10.2	13.5	4.3	6.3
C1.0	1.06	0.56	0.64	0.59	0.67	100	0.24	0.015	14.39	20	no	0.015	0.169	250	0.015	0.005	2.7	1.5	16.09	7.5	9.9	4.4	6.7
C1.1	0.24	0.78	0.86	0.19	0.21	6	0.24	0.015	1.52		no	1.015	0.000	372	0.015	0.005	2.7	2.3	5.00	11.6	15.3	2.2	3.2
A3.0	3.45	0.58	0.66	1.98	2.26	100	0.24	0.015	14.39	50	no	0.015	0.422	0	0.015	0.005	2.7	0.0	14.81	7.8	10.3	15.5	23.2
A4.0US	0.39	0.63	0.71	0.25	0.28	100	0.24	0.015	14.39	14	no	0.015	0.118	159	0.015	0.005	2.7	1.0	15.48	7.7	10.1	1.9	2.8
A4.0DS	0.43	0.59	0.67	0.26	0.29	95	0.24	0.015	13.81		no	0.015	0.000	290	0.015	0.005	2.7	1.8	15.59	7.6	10.0	1.9	2.9
A4.0	0.82	0.61	0.69	0.50	0.57	95	0.24	0.015	13.81		no	0.015	0.000	290	0.015	0.005	2.7	1.8	15.59	7.6	10.0	3.8	5.7
A4.1AUS	0.15	0.63	0.71	0.09	0.11	68	0.24	0.015	10.57		no	0.015	0.000	64	0.015	0.005	2.7	0.4	10.96	8.9	11.7	0.8	1.2
A4.1ADS	0.63	0.71	0.79	0.45	0.50	41	0.24	0.015	7.05		no	0.015	0.000	582	0.015	0.005	2.7	3.6	10.62	9.0	11.9	4.0	5.9
A4.1A	0.78	0.69	0.78	0.54	0.61	68	0.24	0.015	10.57		no	0.015	0.000	355	0.015	0.005	2.7	2.2	12.75	8.3	11.0	4.5	6.6
A4.1B	0.32	0.58	0.66	0.19	0.21	15	0.24	0.015	3.16		no	0.015	0.000	278	0.015	0.005	2.7	1.7	5.00	11.6	15.3	2.2	3.2
A4.1	1.10	0.66	0.74	0.73	0.82	68	0.24	0.015	10.57		no	0.015	0.000	355	0.015	0.005	2.7	2.2	12.75	8.3	11.0	6.1	9.0
A4.2	3.54	0.75	0.83	2.64	2.95	100	0.24	0.015	14.39	0	no	0.015	0.000	50	0.015	0.005	2.7	0.3	14.70	7.8	10.3	20.7	30.4
A5.0A	0.65	0.54	0.62	0.35	0.40	100	0.24	0.015	14.39	3	no	0.015	0.025	45	0.015	0.005	2.7	0.3	14.69	7.8	10.3	2.8	4.2
A5.0B	0.50	0.57	0.65	0.28	0.32	100	0.24	0.015	14.39		no	0.015	0.000	107	0.015	0.005	2.7	0.7	15.05	7.8	10.2	2.2	3.3
A5.0	1.15	0.55	0.63	0.64	0.73	100	0.24	0.015	14.39		no	0.015	0.000	107	0.015	0.005	2.7	0.7	15.05	7.8	10.2	4.9	7.4
A5.1A	0.17	0.72	0.80	0.12	0.14	15	0.24	0.015	3.16		no	0.015	0.000	260	0.015	0.005	2.7	1.6	5.00	11.6	15.3	1.4	2.1
A5.1B	0.17	0.68	0.77	0.12	0.13	28	0.24	0.015	5.20		no	0.015	0.000	182	0.015	0.005	2.7	1.1	6.31	10.9	14.3	1.3	1.9
A5.1	0.34	0.70	0.78	0.24	0.27	28	0.24	0.015	5.20		no	0.015	0.000	182	0.015	0.005	2.7	1.1	6.31	10.9	14.3	2.6	3.8
A5.2	0.37	0.59	0.67	0.22	0.25	43	0.24	0.015	7.33		no	0.015	0.000	252	0.015	0.006	3.1	1.4	8.70	9.7	12.8	2.1	3.2
A6.0US	0.31	0.63	0.71	0.20	0.22	56	0.24	0.015	9.05		no	0.015	0.000	231	0.015	0.005	2.7	1.4	10.47	9.1	11.9	1.8	2.6
A6.0DS	0.75	0.61	0.69	0.46	0.52	100	0.24	0.015	14.39	8	no	0.015	0.067	404	0.015	0.005	2.7	2.5	16.94	7.3	9.7	3.4	5.0
A6.0	1.06	0.62	0.70	0.65	0.74	100	0.24	0.015	14.39	8	no	0.015	0.067	404	0.015	0.005	2.7	2.5	16.94	7.3	9.7	4.8	7.1
A6.1	1.03	0.60	0.68	0.62	0.70	100	0.24	0.015	14.39	18	no	0.015	0.152	349	0.015	0.005	2.7	2.1	16.68	7.4	9.7	4.6	6.9
A6.2A	0.59	0.60	0.68	0.36	0.40	100	0.24	0.015	14.39	18	no	0.015	0.152	204	0.015	0.005	2.7	1.2	15.79	7.6	10.0	2.7	4.0
A6.2B	0.60	0.57	0.65	0.34	0.39	100	0.24	0.015	14.39	18	no	0.015	0.152	204	0.015	0.005	2.7	1.2	15.79	7.6	10.0	2.6	3.9
A6.2	1.19	0.59	0.67	0.70	0.79	100	0.24	0.015	14.39	18	no	0.015	0.152	204	0.015	0.005	2.7	1.2	15.79	7.6	10.0	5.3	7.9
A6.3AUS	0.70	0.58	0.66	0.40	0.46	100	0.24	0.015	14.39	63	no	0.015	0.531	201	0.015	0.005	2.7	1.2	16.16	7.5	9.9	3.0	4.5
A6.3ADS	0.70	0.64	0.72	0.45	0.51	100	0.24	0.015	14.39	32	no	0.015	0.270	316	0.015	0.005	2.7	1.9	16.60	7.4	9.8	3.3	4.9
A6.3A	1.40	0.61	0.69	0.85	0.96	100	0.24	0.015	14.39	32	no	0.015	0.270	316	0.015	0.005	2.7	1.9	16.60	7.4	9.8	6.3	9.4
A6.3BUS	0.30	0.69	0.77	0.21	0.23	100	0.24	0.015	14.39	8	no	0.015	0.067	43	0.015	0.005	2.7	0.3	14.72	7.8	10.3	1.6	2.4
A6.3BDS	0.27	0.66	0.74	0.18	0.20	100	0.24	0.015	14.39	31	no	0.015	0.261	158	0.015	0.005	2.7	1.0	15.62	7.6	10.0	1.4	2.0
A6.3B	0.57	0.67	0.76	0.38	0.43	100	0.24	0.015	14.39	31	no	0.015	0.261	158	0.015	0.005	2.7	1.0	15.62	7.6	10.0	2.9	4.3
A6.3	1.97	0.63	0.71	1.24	1.40	100	0.24	0.015	14.39	32	no	0.015	0.270	316	0.015	0.005	2.7	1.9	16.60	7.4	9.8	9.2	13.6
A6.4A	0.40	0.62	0.70	0.25	0.28	100	0.24	0.015	14.39	12	no	0.015	0.101	117	0.015	0.005	2.7	0.7	15.21	7.7	10.2	1.9	2.9
A6.4B	1.12	0.59	0.67	0.66	0.75	100	0.24	0.015	14.39	12	no	0.015	0.101	303	0.015	0.005	2.7	1.9	16.35	7.5	9.8	4.9	7.3
A6.4	1.52	0.60	0.68	0.91	1.03	100	0.24	0.015	14.39	12	no	0.015	0.101	303	0.015	0.005	2.7	1.9	16.35	7.5	9.8	6.8	10.1
A6.5A	0.30	0.63	0.71	0.19	0.21	100	0.24	0.015	14.39	28	no	0.015	0.236	123	0.015	0.005	2.7	0.8	15.38	7.7	10.1	1.4	2.1
A6.5B	0.66	0.62	0.70	0.41	0.46	100	0.24	0.015	14.39	12	no	0.015	0.101	237	0.015	0.005	2.7	1.5	15.95	7.5	9.9	3.1	4.6
A6.5	0.96	0.62	0.70	0.60	0.67	100	0.24	0.015	14.39	12	no	0.015	0.101	237	0.015	0.005	2.7	1.5	15.95	7.5	9.9	4.5	6.7
A6.6A	0.16	0.68	0.76	0.11	0.12	15	0.24	0.015	3.16		no	0.015	0.000	195	0.015	0.005	2.7	1.2	5.00	11.6	15.3	1.3	1.9
A6.6B	0.38	0.53	0.61	0.20	0.23	33	0.24	0.015	5.93		no	0.015	0.000	295	0.015	0.005	2.7	1.8	7.74	10.1	13.4	2.1	3.1
A6.6	0.54	0.58	0.66	0.31	0.36	33	0.24	0.015	5.93		no	0.015	0.000	295	0.015	0.005	2.7	1.8	7.74	10.1	13.4	3.2	4.7
A6.7	10.52	0.62	0.70	6.47	7.33	100	0.17	0.015	10.92	100	no	0.015	0.843	1188	0.015	0.005	2.7	7.3	19.05	6.9	9.1	44.9	67.0
B1.0	0.44	0.57	0.65	0.25	0.29	100	0.24	0.015	14.39	18	no	0.015	0.152	140	0.015	0.005	2.7	0.9	15.40	7.7	10.1	1.9	2.9
B1.1US	0.23	0.48	0.55	0.11	0.13	100	0.24	0.015	14.39	24	no	0.015	0.202	55	0.015	0.0069	3.2	0.3	14.88	7.8	10.3	0.9	1.3
B1.1DS	0.66	0.61	0.69	0.40	0.46	91	0.24	0.015	13.35		no	0.015	0.000	266	0.015	0.0069	3.2	1.4	14.73	7.8	10.3	3.2	4.7
B1.1	0.89	0.58	0.66	0.51	0.59	100	0.24	0.015	14.39	24	no	0.015	0.202	169	0.015	0.0069	3.2	0.9	15.48	7.7	10.1	3.9	5.9
B2.0US	0.64	0.65	0.73	0.41	0.47	100	0.24	0.015	14.39	18	no	0.015	0.152	332	0.015	0.005	2.7	2.0	16.58	7.4	9.8	3.1	4.6
B2.0DS	0.38	0.73	0.81	0.28	0.31	100	0.24	0.015	14.39	18	no	0.015	0.152	85	0.015	0.005	2.7	0.5	15.07	7.7	10.2	2.1	3.2
B2.0	1.02	0.68	0.76	0.69	0.78	100	0.24	0.015	14.39	18	no	0.015	0.152	332	0.015	0.005	2.7	2.0	16.58	7.4	9.8	5.1	7.6
B2.1US	0.48	0.65	0.74	0.31	0.35	100	0.24	0.015	14.39	12	no	0.015	0.101	265	0.015	0.005	2.7	1.6	16.12	7.5	9.9	2.4	3.5
B2.1DS	0.22	0.65	0.73	0.14	0.16	61	0.24	0.015	9.69		no	0.015	0.000	127	0.015	0.005	2.7	0.8	10.47	9.1	11.9	1.3	1.9
B2.1	0.70	0.65	0.74	0.46	0.52	100	0.24	0.015	14.39	12	no	0.015	0.101	265	0.015	0.005	2.7	1.6	16.12	7.5	9.9	3.4	5.1
N1	38.36	0.45	0.48	17.11	18.49	100	0.17	0.005	18.19	2350	no	0.010	24.275	0	0.17	0.005	0.2	0.0	42.46	4.5	6.0	77.0	110.7
N2	11.15	0.45	0.48	4.97	5.37	100	0.17	0.005	18.19	1533	no	0.010	15.836	0	0.17	0.005	0.2	0.0	34.02	5.1	6.8	25.4	36.4
S1	15.73	0.37	0.41	5.89	6.51	100	0.24	0.015	15.44	8	no	0.015	0.067	235	0.015	0.005	2.7	1.4	24.17	6.1	8.1	36.2	52.8

NOTE: STREET CAPACITIES ARE CALCULATED BASED ON A STRAIGHT CROWN APPROXIMATION PER CITY OF GEORGETOWN DRAINAGE CRITERIA MANUAL RECOMMENDATIONS FOR PARABOLIC CROWNS.

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Kyle Reeves, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

APR | DATE | DESCRIPTION | REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

STORM INLET CAPACITY CALCULATIONS (SHEET 2 OF 4)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
12/2/2024

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-INLET CALCS.dwg Layout: 37 STORM INLET CAPACITY CALCULATIONS (SHEET 2 OF 4) Plotted: 12/2/2024 6:13:59 PM

STREET FLOW AND INLET CALCULATIONS
25 YEAR STORM

Inlet No.	Inlet Type	Drainage Area	Q 25 (cfs)	Q pass (cfs)	Q total (cfs)	Width face of curb to face of curb (ft)	Type*	Slope (%)	a (ft)	Z	Yo (ft)	Ponded Width (ft)	Factor (%)	Qa/La	La (ft)	Length (ft)	L/La	a/Yo	Q/Qa	Qa (this is the (cfs)	Q pass (cfs)	Inlet #	Factor (%)	Q total (cfs)	Length (ft)	W (ft)	Opening Height (ft)	Cw	Co	h (ft)
ULTIMATE CONDITION DRAINAGE AREAS																														
A1.0	GRADE	0.25	2.03		2.03	40	P	0.50%	0.42	40	0.23	9.31	0%	0.69	2.93	10	3.41	1.80	0.29	6.9	0.00									
A1.1US	VG	0.43	1.72		1.72	40	P	0.50%	0.42	40	0.22	8.76																		
A1.1DS	VG	0.44	1.82		1.82	40	P	0.50%	0.42	40	0.22	8.94																		
A1.1	GRADE	0.87	3.39		3.39	40	P	0.50%	0.42	40	0.28	11.28	0%	0.74	4.57	10	2.19	1.49	0.46	7.4	0.00									
A1.2AUS	VG	0.22	1.10		1.10	40	P	0.50%	0.42	40	0.19	7.41																		
A1.2ADS	VG	0.69	3.00		3.00	40	P	0.50%	0.42	40	0.27	10.78																		
A1.2A	SUMP	0.91	4.10		4.10	40	P	0.50%	0.42	40	0.30	12.12																		
A1.2B	SUMP	0.82	3.34		3.34	40	P	0.50%	0.42	40	0.28	11.22																		
A1.2	SUMP	1.73	7.37		7.37	40	P	0.50%	0.42	40	0.38	15.10											10%	7.4	10	1.5	0.479	2.3	0.67	0.43
A1.3A	SUMP	0.41	2.64		2.64	40	P	0.50%	0.42	40	0.26	10.28																		
A1.3B	SUMP	0.23	1.84		1.84	40	P	0.50%	0.42	40	0.22	8.97																		
A1.3	SUMP	0.64	4.26		4.26	40	P	0.50%	0.42	40	0.31	12.29											10%	4.3	10	1.5	0.479	2.3	0.67	0.30
C1.0	GRADE	1.06	4.43		4.43	33	P	0.50%	0.42	33	0.34	11.07	0%	0.80	5.57	10	1.80	1.25	0.56	8.0	0.00									
C1.1	GRADE	0.24	2.17		2.17	33	P	0.50%	0.42	33	0.26	8.46	0%	0.72	3.03	10	3.30	1.64	0.30	7.2	0.00									
A3.0	N/A	3.45	15.49		15.49																									
A4.0US	VG	0.39	1.89		1.89	40	P	0.50%	0.42	40	0.23	9.06																		
A4.0DS	VG	0.43	1.95		1.95	40	P	0.50%	0.42	40	0.23	9.17																		
A4.0	GRADE	0.82	3.83		3.83	40	P	0.50%	0.42	40	0.30	11.81	0%	0.75	5.07	10	1.97	1.42	0.51	7.5	0.00									
A4.1AUS	VG	0.15	0.84		0.84	40	P	0.50%	0.42	40	0.17	6.67																		
A4.1ADS	VG	0.63	4.01		4.01	40	P	0.50%	0.42	40	0.30	12.02																		
A4.1A	GRADE	0.78	4.50		4.50	40	P	0.50%	0.42	40	0.31	12.55	0%	0.77	5.82	10	1.72	1.34	0.58	7.7	0.00									
A4.1B	SUMP	0.32	2.16		2.16	40	P	0.50%	0.42	40	0.24	9.53																		
A4.1	SUMP	1.10	6.05		6.05	40	P	0.50%	0.42	40	0.35	14.03											10%	6.1	10	1.5	0.479	2.3	0.67	0.38
A4.2	AREA	3.54	20.70		20.70																		50%	20.7	16	2	0.583	2.3	0.67	0.97
A5.0A	SUMP	0.65	2.76		2.76	33	P	0.50%	0.42	33	0.28	9.26																		
A5.0B	SUMP	0.50	2.21		2.21	33	P	0.50%	0.42	33	0.26	8.52																		
A5.0	SUMP	1.15	4.93		4.93	33	P	0.50%	0.42	33	0.35	11.52											10%	4.9	10	1.5	0.479	2.3	0.67	0.33
A5.1A	SUMP	0.17	1.41		1.41	33	P	0.50%	0.42	33	0.22	7.21																		
A5.1B	SUMP	0.17	1.26		1.26	33	P	0.50%	0.42	33	0.21	6.90																		
A5.1	SUMP	0.34	2.58		2.58	33	P	0.50%	0.42	33	0.27	9.03											10%	2.6	10	1.5	0.479	2.3	0.67	0.21
A5.2	GRADE	0.37	2.13		2.13	33	P	0.63%	0.42	33	0.24	8.05	0%	0.70	3.03	10	3.30	1.72	0.30	7.0	0.00									
A6.0US	VG	0.31	1.77		1.77	33	P	0.50%	0.42	33	0.24	7.85																		
A6.0DS	VG	0.75	3.35		3.35	33	P	0.50%	0.42	33	0.30	9.97																		
A6.0	GRADE	1.06	4.79		4.79	33	P	0.50%	0.42	33	0.35	11.39	0%	0.81	5.94	10	1.68	1.22	0.59	8.1	0.00									
A6.1	GRADE	1.03	4.59		4.59	33	P	0.50%	0.42	33	0.34	11.21	0%	0.80	5.73	10	1.75	1.24	0.57	8.0	0.00									
A6.2A	SUMP	0.59	2.69		2.69	33	P	0.50%	0.42	33	0.28	9.18																		
A6.2B	SUMP	0.60	2.60		2.60	33	P	0.50%	0.42	33	0.27	9.06																		
A6.2	SUMP	1.19	5.30		5.30	33	P	0.50%	0.42	33	0.36	11.83											10%	5.3	10	1.5	0.479	2.3	0.67	0.34
A6.3AUS	VG	0.70	3.02		3.02	33	P	0.50%	0.42	33	0.29	9.58																		
A6.3ADS	VG	0.70	3.32		3.32	33	P	0.50%	0.42	33	0.30	9.93																		
A6.3A	SUMP	1.40	6.30		6.30	33	P	0.50%	0.42	33	0.38	12.63																		
A6.3BUS	VG	0.30	1.61		1.61	33	P	0.50%	0.42	33	0.23	7.58																		
A6.3BDS	VG	0.27	1.36		1.36	33	P	0.50%	0.42	33	0.22	7.10																		
A6.3B	SUMP	0.57	2.93		2.93	33	P	0.50%	0.42	33	0.29	9.47																		
A6.3	SUMP	1.97	9.15		9.15	33	P	0.50%	0.42	33	0.44	14.52											10%	9.2	10	1.5	0.479	2.3	0.67	0.40
A6.4A	SUMP	0.40	1.92		1.92	33	P	0.50%	0.42	33	0.25	8.09																		
A6.4B	SUMP	1.12	4.90		4.90	33	P	0.50%	0.42	33	0.35	11.49																		
A6.4	SUMP	1.52	6.76		6.76	33	P	0.50%	0.42	33	0.39	12.96											10%	6.8	10	1.5	0.479	2.3	0.67	0.40
A6.5A	SUMP	0.30	1.44		1.44	33	P	0.50%	0.42	33	0.22	7.26																		
A6.5B	SUMP	0.66	3.08		3.08	33	P	0.50%	0.42	33	0.29	9.65																		
A6.5	SUMP	0.96	4.49		4.49	33	P	0.50%	0.42	33	0.34	11.12											10%	4.5	10	1.5	0.479	2.3	0.67	0.31
A6.6A	SUMP	0.16	1.26		1.26	40	P	0.50%	0.42	40	0.19	7.79																		
A6.6B	SUMP	0.38	2.06		2.06	40	P	0.50%	0.42	40	0.23	9.36																		
A6.6	SUMP	0.54	3.16		3.16	40	P	0.50%	0.42	40	0.27	11.00											10%	3.2	10	1.5	0.479	2.3	0.67	0.24
A6.7	AREA	10.52	44.87		44.87																		50%	44.9	25	2	0.583	2.3	0.67	1.60
B1.0	GRADE	0.44	1.93		1.93	33	P	0.50%	0.42	33	0.25	8.10	0%	0.70	2.74	10	3.65	1.71	0.27	7.0	0.00									
B1.1US	VG	0.23	0.85		0.85	40	P	0.69%	0.42	40	0.16	6.34																		
B1.1DS	VG	0.66	3.17		3.17	40	P	0.69%	0.42	40	0.26	10.36																		
B1.1	GRADE	0.89	3.94		3.94	40	P	0.69%	0.42	40	0.28	11.24	0%	0.74	5.32	10	1.88	1.49	0.53	7.4	0.00									
B2.0US	VG	0.64	3.07		3.07	33	P	0.50%	0.42	33	0.29	9.64																		
B2.0DS	VG	0.38	2.15		2.15	33	P	0.50%	0.42	33	0.26	8.43																		
B2.0	GRADE	1.02	5.12		5.12	33	P	0.50%	0.42	33	0.35	11.68	0%	0.82	6.27	10	1.59	1.19	0.63	8.2	0.00									
B2.1US	VG	0.48	2.36		2.36	33	P	0.50%	0.42	33	0.26	8.74																		
B2.1DS	VG	0.22	1.30		1.30	33	P	0.50%	0.42	33	0.21	6.98																		
B2.1	GRADE	0.70	3.44		3.44	33	P	0.50%	0.42	33	0.30	10.06	0%	0.76	4.50	10	2.22	1.38	0.45	7.6	0.00									

NOTE: STREET CAPACITIES ARE CALCULATED BASED ON A STRAIGHT CROWN APPROXIMATION PER CITY OF GEORGETOWN DRAINAGE CRITERIA MANUAL RECOMMENDATIONS FOR PARABOLIC CROWNS.

APR
DATE
DESCRIPTION
REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE
BGE, INC.
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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

STORM INLET CAPACITY CALCULATIONS (SHEET 3 OF 4)

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDD\01_CADD\01_Shts\8843-01-C-SP-INLET CALCS.dwg Layout: 38 STORM INLET CAPACITY CALCULATIONS (SHEET 3 OF 4) Plotted: 12/2/2024 6:14:01 PM

STREET FLOW AND INLET CALCULATIONS
100 YEAR STORM

						STREET CAPACITY								INLET ON GRADE CAPACITY									SUMP INLET CAPACITY							
Inlet No.	Inlet Type	Drainage Area	Q 100 (cfs)	Q pass (cfs)	Q total (cfs)	Street Width face of curb to face of curb (ft)	Crown Type*	Gutter Slope (%)	a (ft)	Z	Yo (ft)	Ponded Width (ft)	Reduction Factor (%)	Qa/La	La (ft)	Length (ft)	L/La	a/Yo	Q/Qa	Qa (this is the (cfs)	Q pass (cfs)	Pass to Inlet #	Clogging Factor (%)	Q total (cfs)	Length (ft)	W (ft)	Opening Height (ft)	Cw	Co	h (ft)
A1.0	GRADE	0.25	3.00		3.00	40	P	0.50%	0.42	40	0.27	10.77	0%	0.73	4.11	10	2.43	1.56	0.41	7.3	0.00								
A1.1US	VG	0.43	2.61		2.61	40	P	0.50%	0.42	40	0.26	10.23																	
A1.1DS	VG	0.44	2.75		2.75	40	P	0.50%	0.42	40	0.26	10.44																	
A1.1	GRADE	0.87	5.13		5.13	40	P	0.50%	0.42	40	0.33	13.18	0%	0.79	6.49	10	1.54	1.27	0.65	7.9	0.00								
A1.2AUS	VG	0.22	1.64		1.64	40	P	0.50%	0.42	40	0.21	8.59																	
A1.2ADS	VG	0.69	4.51		4.51	40	P	0.50%	0.42	40	0.31	12.56																	
A1.2A	SUMP	0.91	6.13		6.13	40	P	0.50%	0.42	40	0.35	14.10																	
A1.2B	SUMP	0.82	5.03		5.03	40	P	0.50%	0.42	40	0.33	13.09																	
A1.2	SUMP	1.73	11.08		11.08	40	P	0.50%	0.42	40	0.44	17.59											10%	11.1	10	1.5	0.479	2.3	0.67	0.47
A1.3A	SUMP	0.41	3.93		3.93	40	P	0.50%	0.42	40	0.30	11.93																	
A1.3B	SUMP	0.23	2.72		2.72	40	P	0.50%	0.42	40	0.26	10.39																	
A1.3	SUMP	0.64	6.32		6.32	40	P	0.50%	0.42	40	0.36	14.25											10%	6.3	10	1.5	0.479	2.3	0.67	0.39
C1.0	GRADE	1.06	6.67		6.67	33	P	0.50%	0.42	33	0.39	12.90	0%	0.86	7.80	10	1.28	1.07	0.78	8.6	0.00								
C1.1	GRADE	0.24	3.18		3.18	33	P	0.50%	0.42	33	0.30	9.77	0%	0.76	4.20	10	2.38	1.42	0.42	7.6	0.00								
A3.0	N/A	3.45	23.24		23.24																								
A4.1AUS	VG	0.15	1.24		1.24	40	P	0.50%	0.42	40	0.19	7.75																	
A4.1ADS	VG	0.63	5.91		5.91	40	P	0.50%	0.42	40	0.35	13.90																	
A4.1A	GRADE	0.78	6.65		6.65	40	P	0.50%	0.42	40	0.36	14.53	0%	0.83	8.05	10	1.24	1.16	0.80	8.3	0.00								
A4.0US	VG	0.39	2.81		2.81	40	P	0.50%	0.42	40	0.26	10.52																	
A4.0DS	VG	0.43	2.91		2.91	40	P	0.50%	0.42	40	0.27	10.66																	
A4.0	GRADE	0.82	5.71		5.71	40	P	0.50%	0.42	40	0.34	13.72	0%	0.80	7.10	10	1.41	1.22	0.71	8.0	0.00								
A4.1	SUMP	1.10	8.97		8.97	40	P	0.50%	0.42	40	0.41	16.26											10%	9.0	10	1.5	0.479	2.3	0.67	0.39
A4.2	AREA	3.54	30.39		30.39																		50%	30.4	16	2	0.583	2.3	0.67	1.76
A5.0A	SUMP	0.65	4.16		4.16	33	P	0.50%	0.42	33	0.33	10.80																	
A5.0B	SUMP	0.50	3.31		3.31	33	P	0.50%	0.42	33	0.30	9.92																	
A5.0	SUMP	1.15	7.43		7.43	33	P	0.50%	0.42	33	0.41	13.43											10%	7.4	10	1.5	0.479	2.3	0.67	0.43
A5.1A	SUMP	0.17	2.08		2.08	33	P	0.50%	0.42	33	0.25	8.34																	
A5.1B	SUMP	0.17	1.86		1.86	33	P	0.50%	0.42	33	0.24	7.99																	
A5.1	SUMP	0.34	3.81		3.81	33	P	0.50%	0.42	33	0.32	10.45											10%	3.8	10	1.5	0.479	2.3	0.67	0.28
A5.2	GRADE	0.37	3.18		3.18	33	P	0.63%	0.42	33	0.28	9.36	0%	0.74	4.28	10	2.33	1.48	0.43	7.4	0.00								
A6.0US	VG	0.31	2.64		2.64	33	P	0.50%	0.42	33	0.28	9.11																	
A6.0DS	VG	0.75	5.01		5.01	33	P	0.50%	0.42	33	0.35	11.58																	
A6.0	GRADE	1.06	7.15		7.15	33	P	0.50%	0.42	33	0.40	13.24	0%	0.87	8.25	10	1.21	1.05	0.82	8.7	0.00								
A6.1	GRADE	1.03	6.85		6.85	33	P	0.50%	0.42	33	0.39	13.03	0%	0.86	7.97	10	1.25	1.06	0.80	8.6	0.00								
A6.2A	SUMP	0.59	4.03		4.03	33	P	0.50%	0.42	33	0.32	10.67																	
A6.2B	SUMP	0.60	3.91		3.91	33	P	0.50%	0.42	33	0.32	10.55																	
A6.2	SUMP	1.19	7.93		7.93	33	P	0.50%	0.42	33	0.42	13.76											10%	7.9	10	1.5	0.479	2.3	0.67	0.45
A6.3AUS	VG	0.70	4.53		4.53	33	P	0.50%	0.42	33	0.34	11.16																	
A6.3ADS	VG	0.70	4.94		4.94	33	P	0.50%	0.42	33	0.35	11.52																	
A6.3A	SUMP	1.40	9.41		9.41	33	P	0.50%	0.42	33	0.44	14.68																	
A6.3BUS	VG	0.30	2.38		2.38	33	P	0.50%	0.42	33	0.27	8.77																	
A6.3BDS	VG	0.27	2.01		2.01	33	P	0.50%	0.42	33	0.25	8.23																	
A6.3B	SUMP	0.57	4.33		4.33	33	P	0.50%	0.42	33	0.33	10.97																	
A6.3	SUMP	1.97	13.63		13.63	33	P	0.50%	0.42	33	0.51	16.86											10%	13.6	10	1.5	0.479	2.3	0.67	0.59
A6.4A	SUMP	0.40	2.86		2.86	33	P	0.50%	0.42	33	0.28	9.39																	
A6.4B	SUMP	1.12	7.33		7.33	33	P	0.50%	0.42	33	0.41	13.37																	
A6.4	SUMP	1.52	10.11		10.11	33	P	0.50%	0.42	33	0.46	15.07											10%	10.1	10	1.5	0.479	2.3	0.67	0.43
A6.5A	SUMP	0.30	2.15		2.15	33	P	0.50%	0.42	33	0.26	8.43																	
A6.5B	SUMP	0.66	4.59		4.59	33	P	0.50%	0.42	33	0.34	11.21																	
A6.5	SUMP	0.96	6.70		6.70	33	P	0.50%	0.42	33	0.39	12.92											10%	6.7	10	1.5	0.479	2.3	0.67	0.40
A6.6A	SUMP	0.16	1.87		1.87	40	P	0.50%	0.42	40	0.23	9.03																	
A6.6B	SUMP	0.38	3.11		3.11	40	P	0.50%	0.42	40	0.27	10.93																	
A6.6	SUMP	0.54	4.74		4.74	40	P	0.50%	0.42	40	0.32	12.80											10%	4.7	10	1.5	0.479	2.3	0.67	0.32
A6.7	AREA	10.52	66.99		66.99																		50%	67.0	25	2	0.583	2.3	0.67	3.21
B1.0	GRADE	0.44	2.90		2.90	33	P	0.50%	0.42	33	0.29	9.44	0%	0.75	3.89	10	2.57	1.47	0.39	7.5	0.00								
B1.1US	VG	0.23	1.31		1.31	40	P	0.69%	0.42	40	0.19	7.43																	
B1.1DS	VG	0.66	4.73		4.73	40	P	0.69%	0.42	40	0.30	12.03																	
B1.1	GRADE	0.89	5.91		5.91	40	P	0.69%	0.42	40	0.33	13.08	0%	0.79	7.50	10	1.33	1.28	0.75	7.9	0.00								
B2.0US	VG	0.64	4.55		4.55	33	P	0.50%	0.42	33	0.34	11.18																	
B2.0DS	VG	0.38	3.16		3.16	33	P	0.50%	0.42	33	0.30	9.74																	
B2.0	GRADE	1.02	7.58		7.58	33	P	0.50%	0.42	33	0.41	13.53	0%	0.88	8.64	10	1.16	1.02	0.86	8.8	0.00								
B2.1US	VG	0.48	3.50		3.50	33	P	0.50%	0.42	33	0.31	10.13																	
B2.1DS	VG	0.22	1.93		1.93	33	P	0.50%	0.42	33	0.25	8.10																	
B2.1	GRADE	0.70	5.10		5.10	33	P	0.50%	0.42	33	0.35	11.66	0%	0.82	6.25	10	1.60	1.19	0.63	8.2	0.00								

NOTE: STREET CAPACITIES ARE CALCULATED BASED ON A STRAIGHT CROWN APPROXIMATION PER CITY OF GEORGETOWN DRAINAGE CRITERIA MANUAL RECOMMENDATIONS FOR PARABOLIC CROWNS.

Reviewed for Substantial Conformance by City of Hutto
HUTTO
FOR OFFICIAL USE ONLY
Matt Reiches P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

APR
DATE
DESCRIPTION
REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

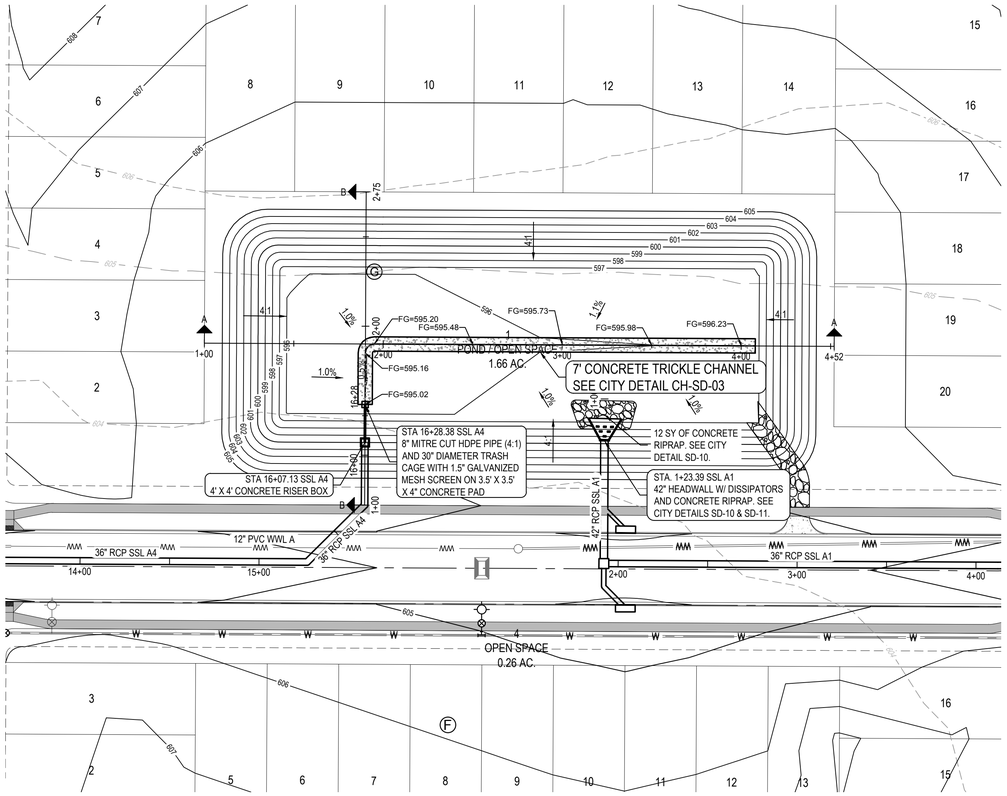
BGE
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

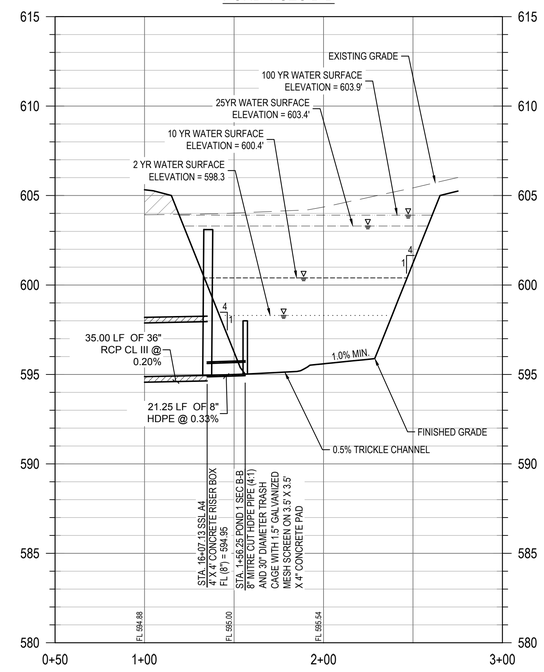
STORM INLET CAPACITY CALCULATIONS (SHEET 4 OF 4)

STATE OF TEXAS
RICHARD PHAM
142276
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

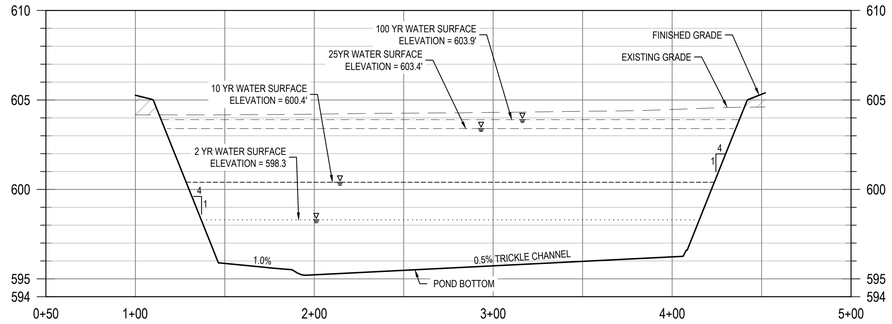
G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-INLET CALCS.dwg Layout: 39 STORM INLET CAPACITY CALCULATIONS (SHEET 4 OF 4) Plotted: 12/2/2024 6:14:03 PM



POND 1 SEC B-B

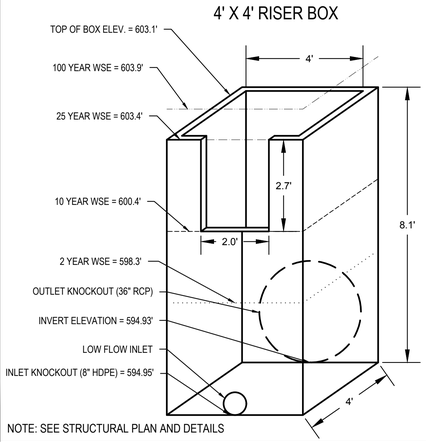


POND 1 SEC A-A



POA 1 (Peak Flows - CFS)				
STORM EVENT (YR)	PRE-DEV	POST-DEV	WSE	Tailwater
2	72.5	71.5	598.3	
10	144.6	125.3	600.4	
25	185.1	164.5	603.4	599.7
100	248.0	215	603.9	601

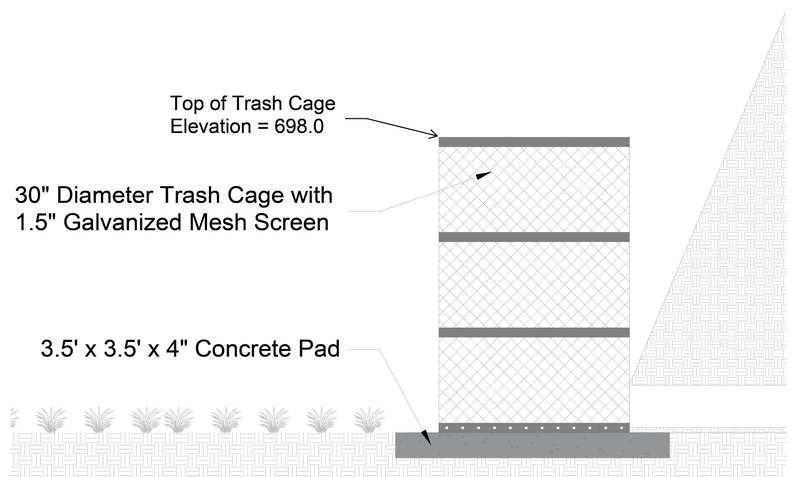
4' X 4' RISER BOX

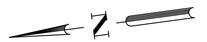


NOTE: SEE STRUCTURAL PLAN AND DETAILS

Stage	Area (ac)	Storage	Cumulative Storage (ac-ft)
595	0.000	0.0000	0.0000
596	0.240	0.1201	0.1201
597	0.529	0.3848	0.5049
598	0.596	0.5626	1.0675
599	0.664	0.6301	1.6976
600	0.736	0.7001	2.3977
601	0.810	0.7727	3.1704
602	0.886	0.8480	4.0184
603	0.965	0.9258	4.9442
604	1.047	1.0062	5.9504
605	1.132	1.0895	7.0399

TRASH CAGE AND CONCRETE PAD DETAIL





0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- BOX MANHOLE
- MANHOLE
- 10' CURB INLET
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE

NOTES:

1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.
2. ALL STORM LATERALS TO BE 18" CL III RCP UNLESS OTHERWISE NOTED.
3. ALL CURB INLETS TO BE 10' UNLESS OTHERWISE NOTED.
4. TYPICAL STORM ASSIGNMENT 3 FT. FROM STREET CENTERLINE, UNLESS NOTED OTHERWISE.
5. UTILITY CROSSING INFORMATION SHOWN HERE IN PROFILE IS FOR GENERAL REFERENCE. REFER TO THE APPROPRIATE UTILITY DESIGN SHEETS AND STANDARD DETAILS FOR ADDITIONAL AND FINAL GRADE INFORMATION.
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7. ALL CONNECTIONS TO PRE-CAST STRUCTURES MUST ENTER THROUGH THE KNOCK-OUT WITHOUT DAMAGE TO STRUCTURE OR BE REPLACED AT CONTRACTORS EXPENSE.

PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- 25 YEAR HGL
- 100 YEAR HGL
- PROPOSED FILL

Reviewed for Substantial Conformance by City of Hutto
FOR CRITICAL USE ONLY
Matt Reches, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

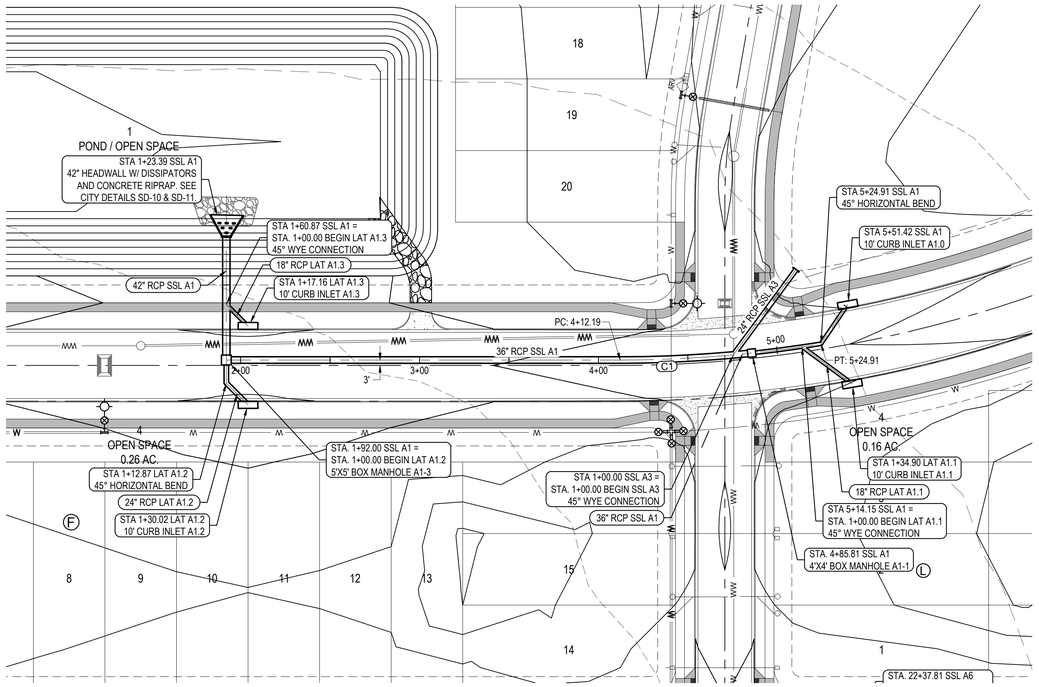
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

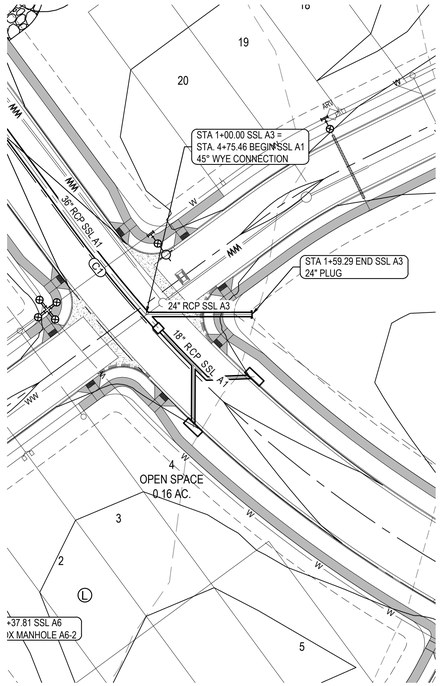
DETENTION POND

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-POND.dwg Layout: 40 DETENTION POND Plotted: 12/2/2024 6:14:09 PM



Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C1	9°15'59"	697.00'	112.73'	S03° 17' 21.59"W	112.60'



LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- BOX MANHOLE
- MANHOLE
- 10' CURB INLET
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE

NOTES:

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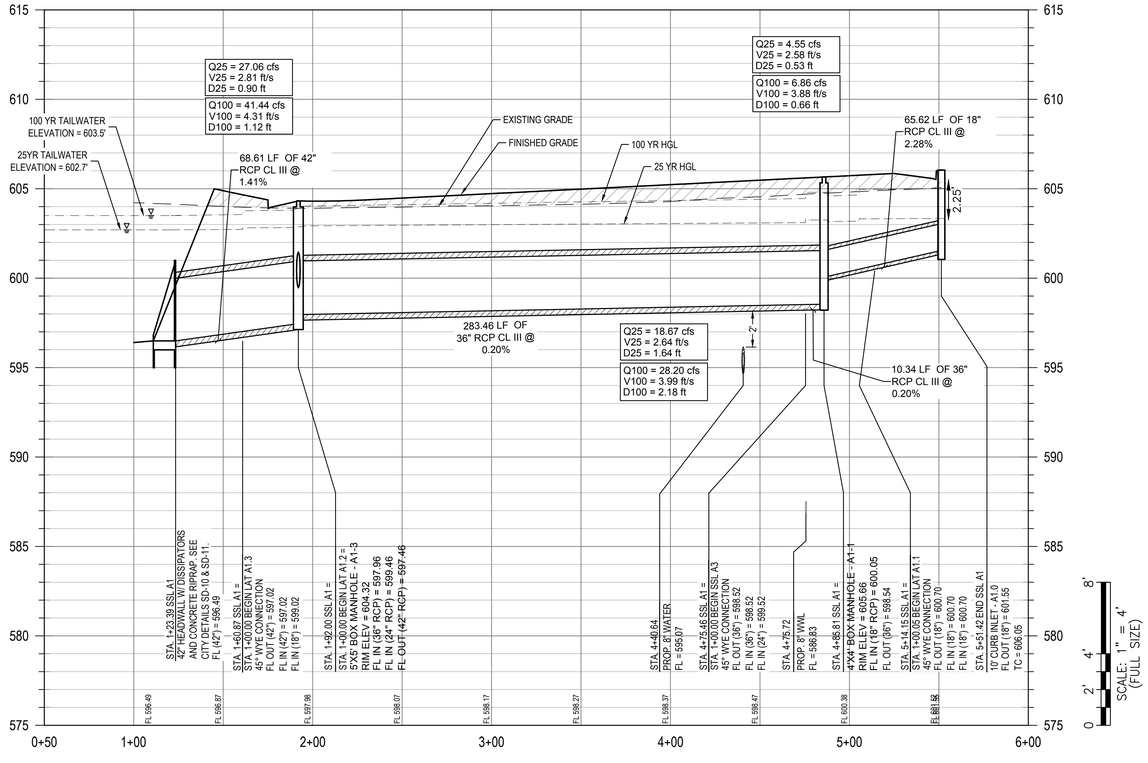
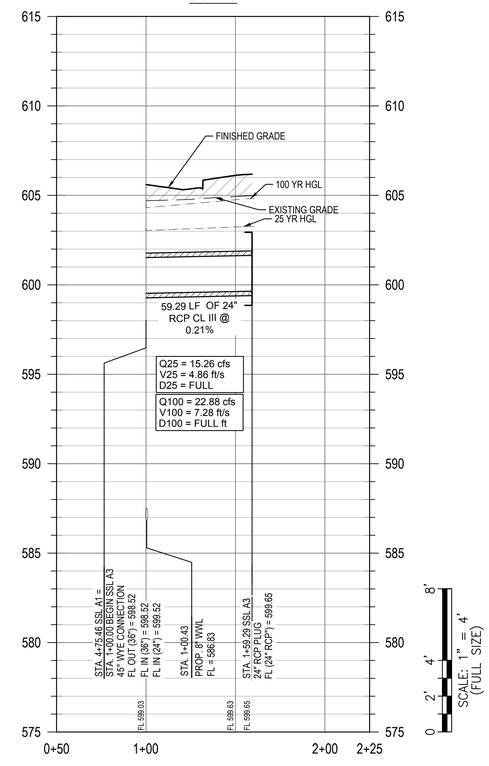
SSL A1



SSL A3



Reviewed for Substantial Conformance by City of Hutto

FOR CERTIFICATE USE ONLY

Mark Nacha, P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

									APR
									DATE
									DESCRIPTION
									REV

DESIGNED BY: MS,AC

REVIEWED BY: AC

DRAWN BY: BE,BC

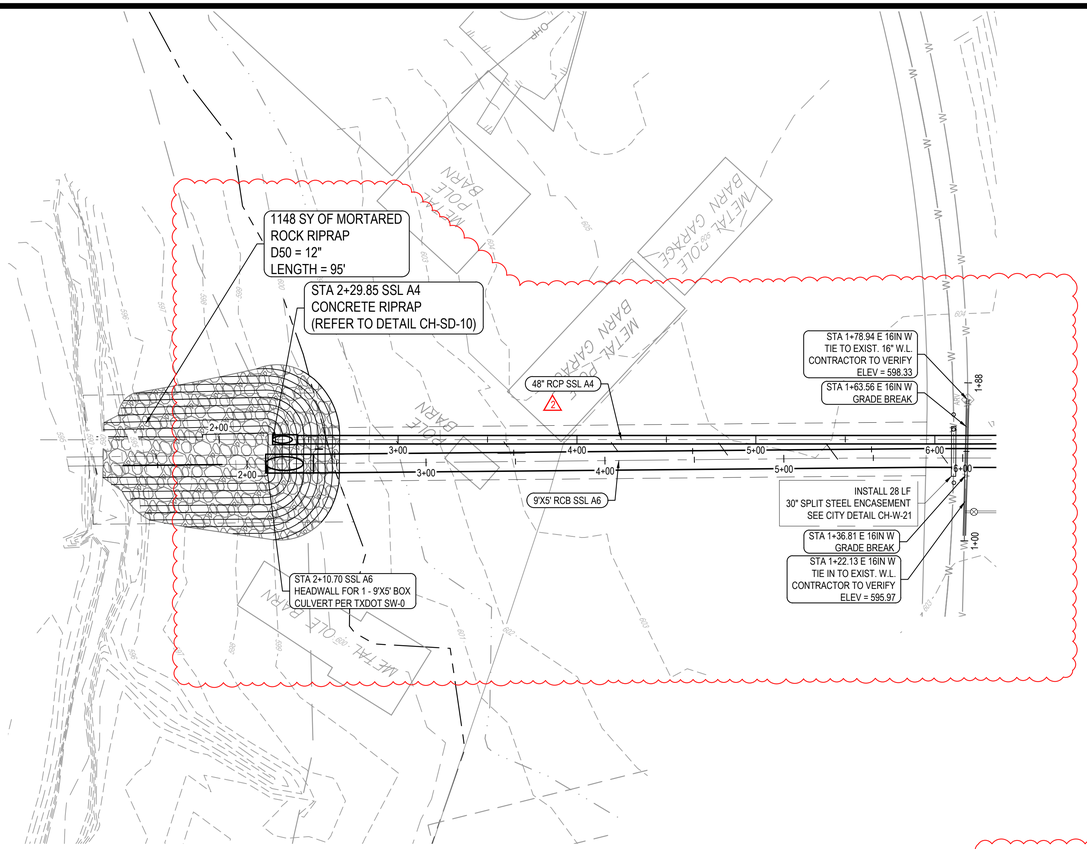
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

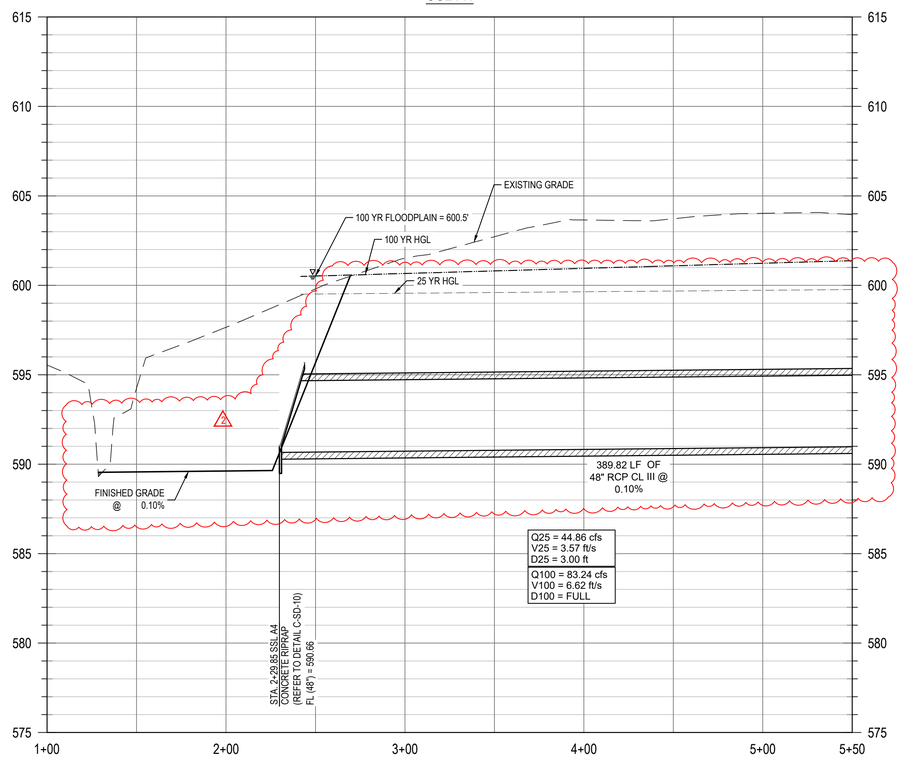
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

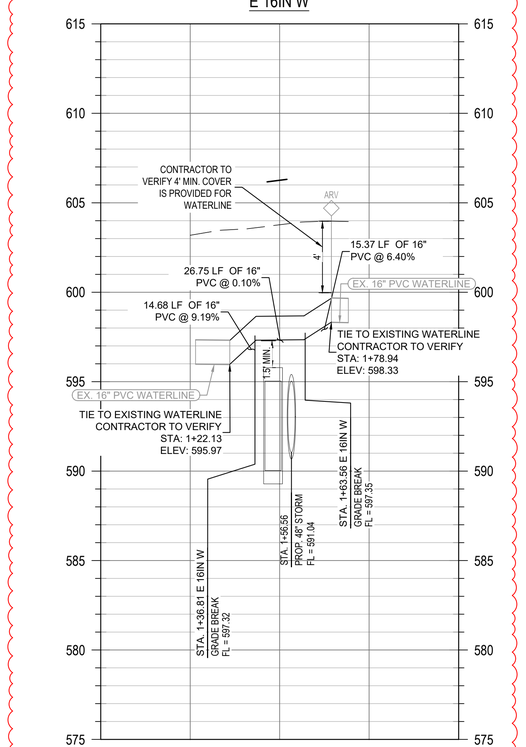
SSL A1 & SSL A3 (STA. 1+00 TO END)

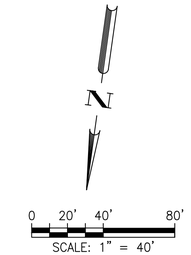
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-STRM.dwg Layout: 41 SSL A1 & SSL A3 (STA. 1+00 TO END) Plotted: 12/2/2024 6:14:17 PM









LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- BOX MANHOLE
- MANHOLE
- 10' CURB INLET
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
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- SINGLE WATER SERVICE

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PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- 25 YEAR HGL
- 100 YEAR HGL
- PROPOSED FILL

SCALE: 1" = 4' (FULL SIZE)

For Rev #2
Reviewed for Substantial Conformance by City of Hutto
09/12/2025

REV	DESCRIPTION	DATE	APR
2	REVISION TO SSL-A4 LOCATION AND ELEVATION, GRADING REVISION TO BERM AREA, ADDED RIPRAP, 18" W.L. REVISIONS		

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

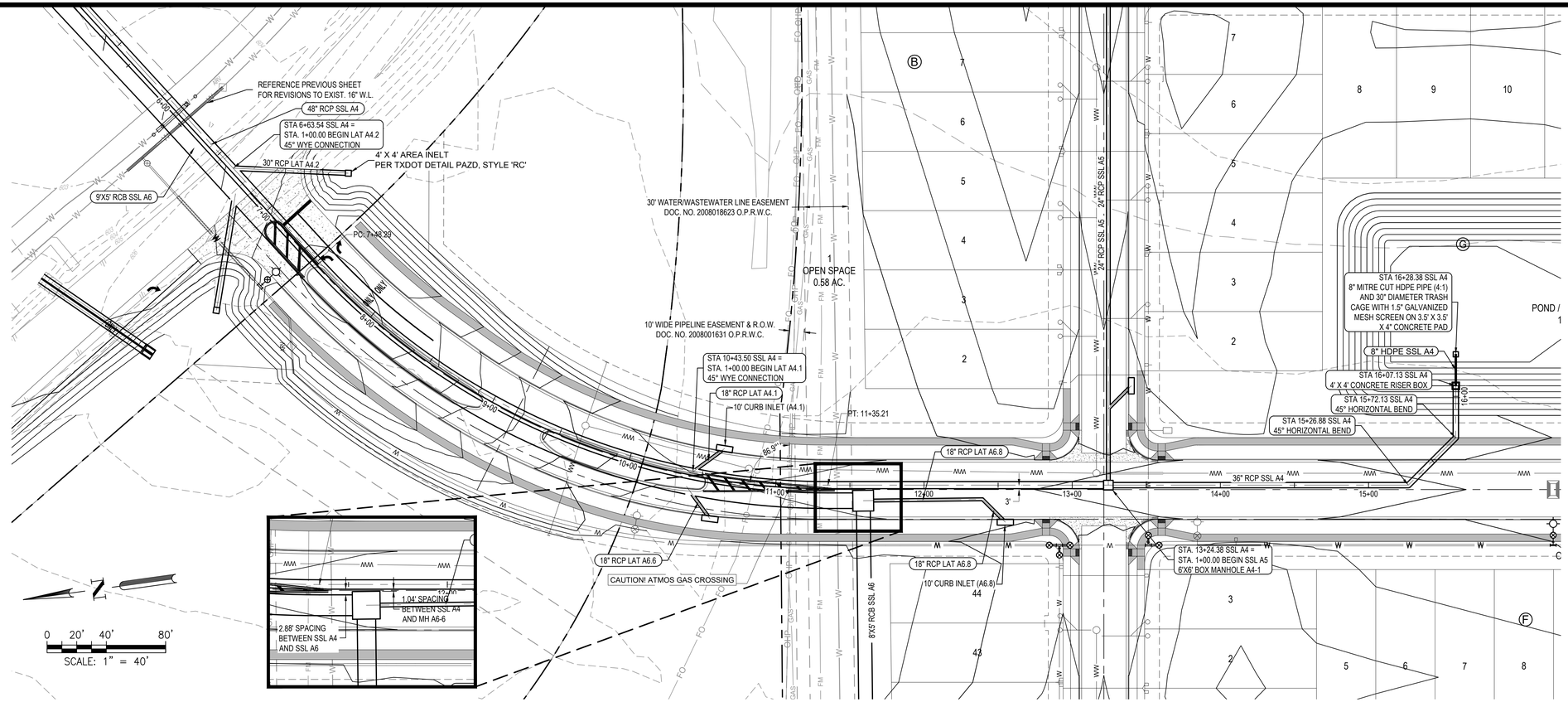
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

SSL A4 (STA. 1+00 TO 5+00)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
08/25/2025

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-STRM.dwg Layout: 42 SSL A4 (STA. 1+00 TO 5+00) Plotted: 8/25/2025 10:02:17 AM



LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
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PROFILE LEGEND

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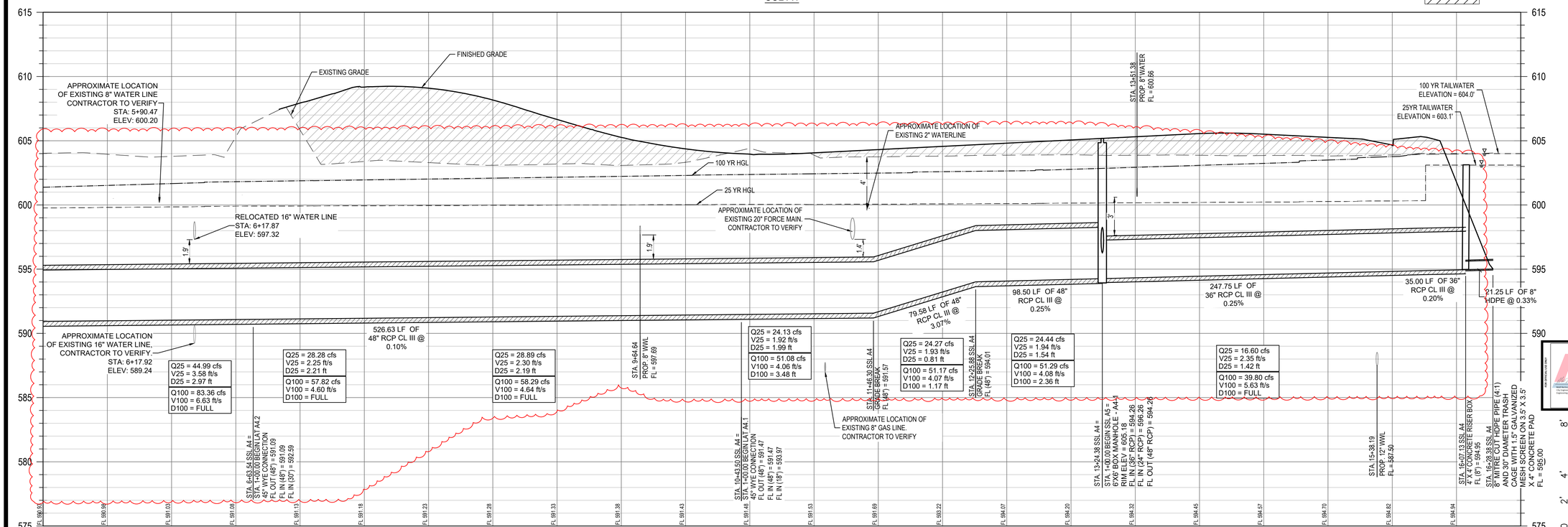
- SUBGRADE
- EXISTING GRADE
- 25 YEAR HGL
- 100 YEAR HGL
- PROPOSED FILL

SSL A4



0 2' 4' 8'
SCALE: 1" = 4' (FULL SIZE)

For Rev #2
Reviewed for Substantial Conformance to City of Hutto
Engineering - City of Hutto
09/12/2025

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
08/18/2025

REV	DESCRIPTION	DATE	APR
1	REVISION TO SSL A4 LOCATION AND ELEVATION, GRADING REVISION TO BERM AREA		

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

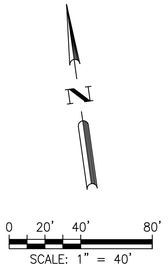
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

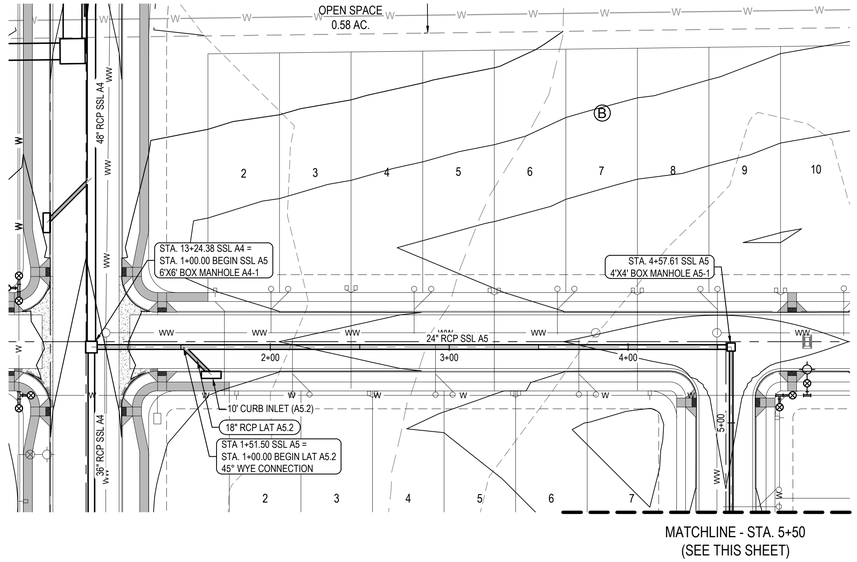
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

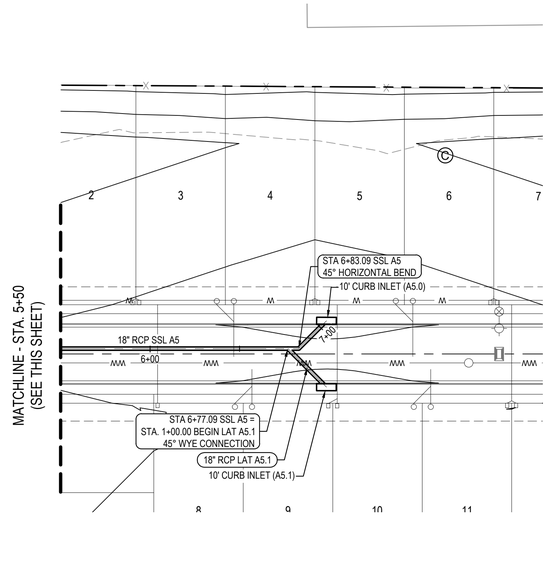
SSL A4 (STA. 5+00 TO END)

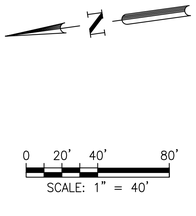
43 OF 94

G:\TX\Projects\Bohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-STRM.dwg Layout: 43 SSL A4 (STA. 5+00 TO END) Plotted: 7/16/2025 10:32:26 AM









LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
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- PROPOSED MAJOR CONTOUR
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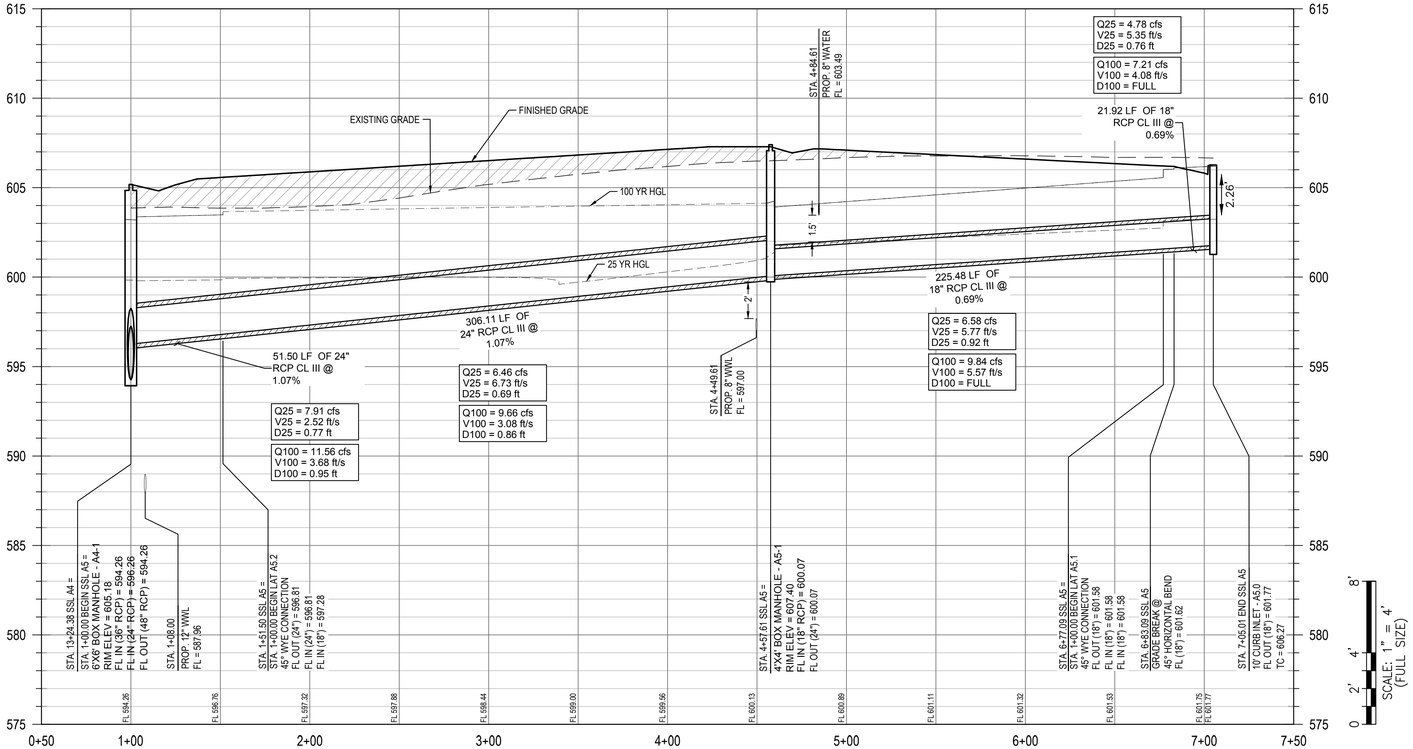
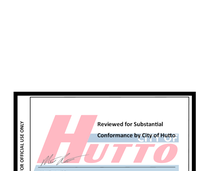
7. ALL CONNECTIONS TO PRE-CAST STRUCTURES MUST ENTER THROUGH THE KNOCK-OUT WITHOUT DAMAGE TO STRUCTURE OR BE REPLACED AT CONTRACTORS EXPENSE.

PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- 25 YEAR HGL
- 100 YEAR HGL
- PROPOSED FILL

SSL A5





Reviewed for Substantial Conformance by City of Hutto

FOR DISPOSAL USE ONLY

Mark Nemec P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

								APR
								DATE
								DESCRIPTION
								REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

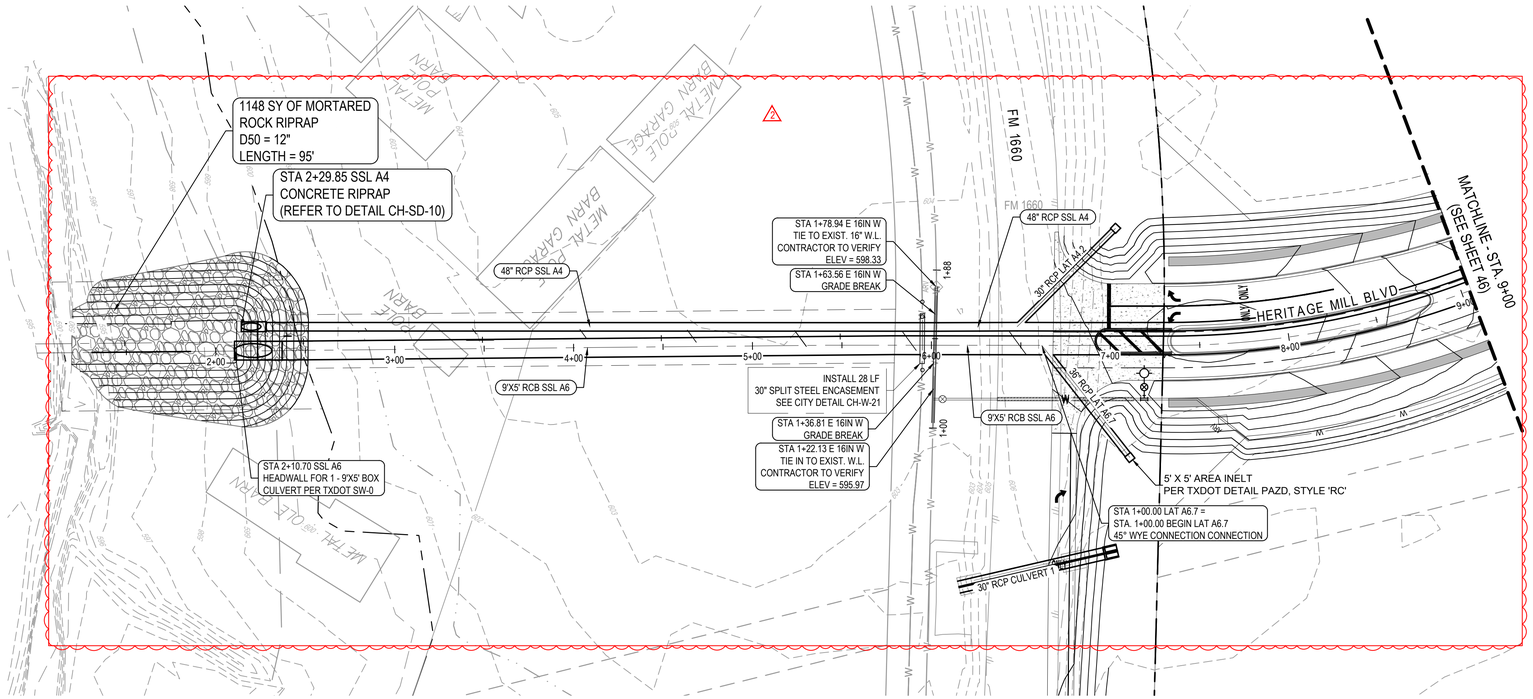
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

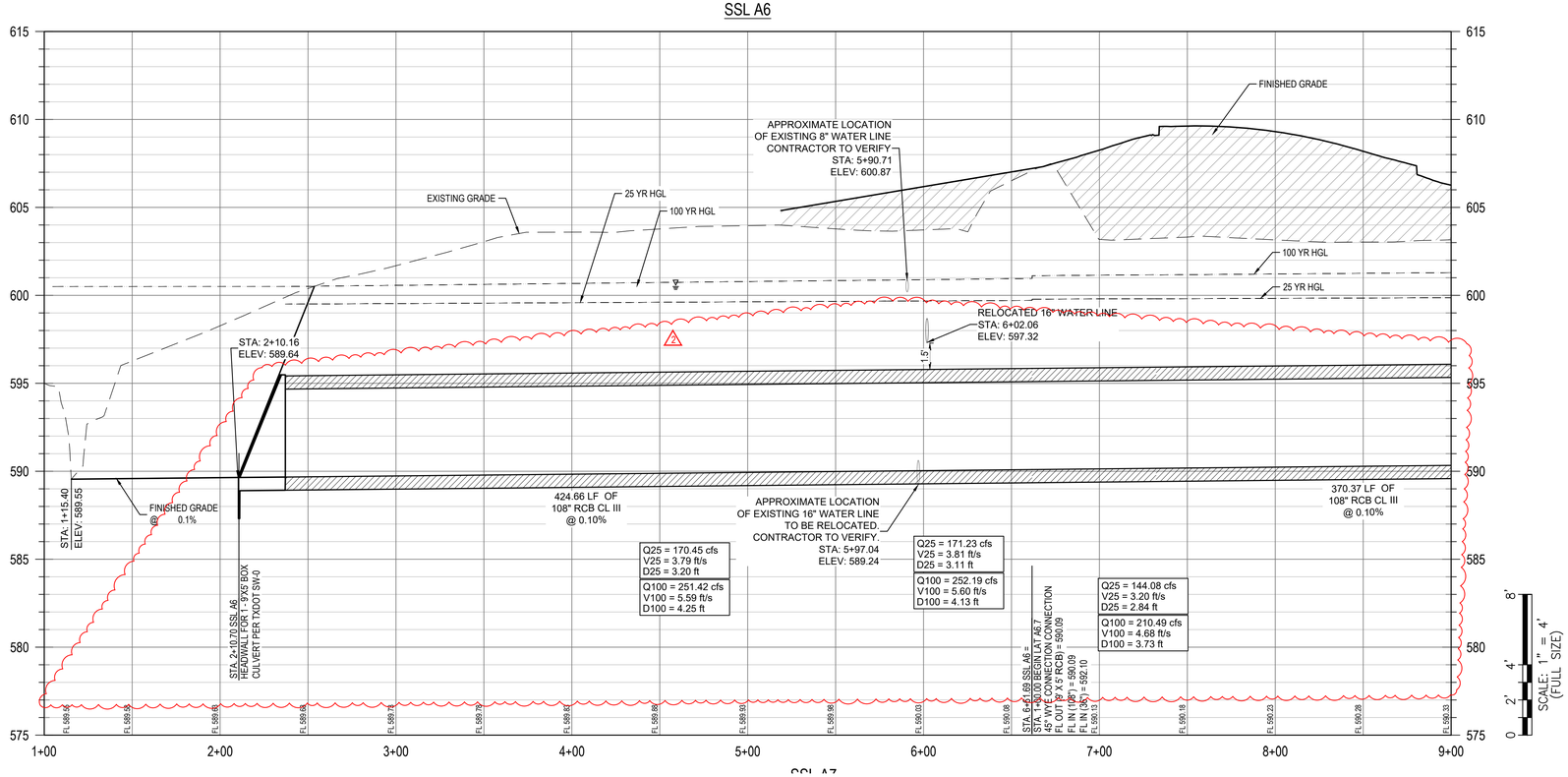
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

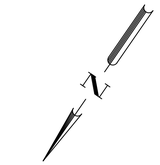
SSL A5 (STA. 1+00 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDV01_CADD\01_Shts\8843-01-C-SP-STRM.dwg Layout: 44 SSL A5 (STA. 1+00 TO END) Plotted: 12/2/2024 6:14:39 PM







LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- BOX MANHOLE
- MANHOLE
- 10' CURB INLET
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE

NOTES:

1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.
2. ALL STORM LATERALS TO BE 18" CL III RCP UNLESS OTHERWISE NOTED.
3. ALL CURB INLETS TO BE 10' UNLESS OTHERWISE NOTED.
4. TYPICAL STORM ASSIGNMENT 3 FT. FROM STREET CENTERLINE, UNLESS NOTED OTHERWISE.
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PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- 25 YEAR HGL
- 100 YEAR HGL
- PROPOSED FILL

REV	DESCRIPTION	DATE	APR
2	REVISION TO SSL-A6 ELEVATION, GRADING REVISION TO BERM AREA, ADDED RIPRAP, RELOCATED EX 16" WL		

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

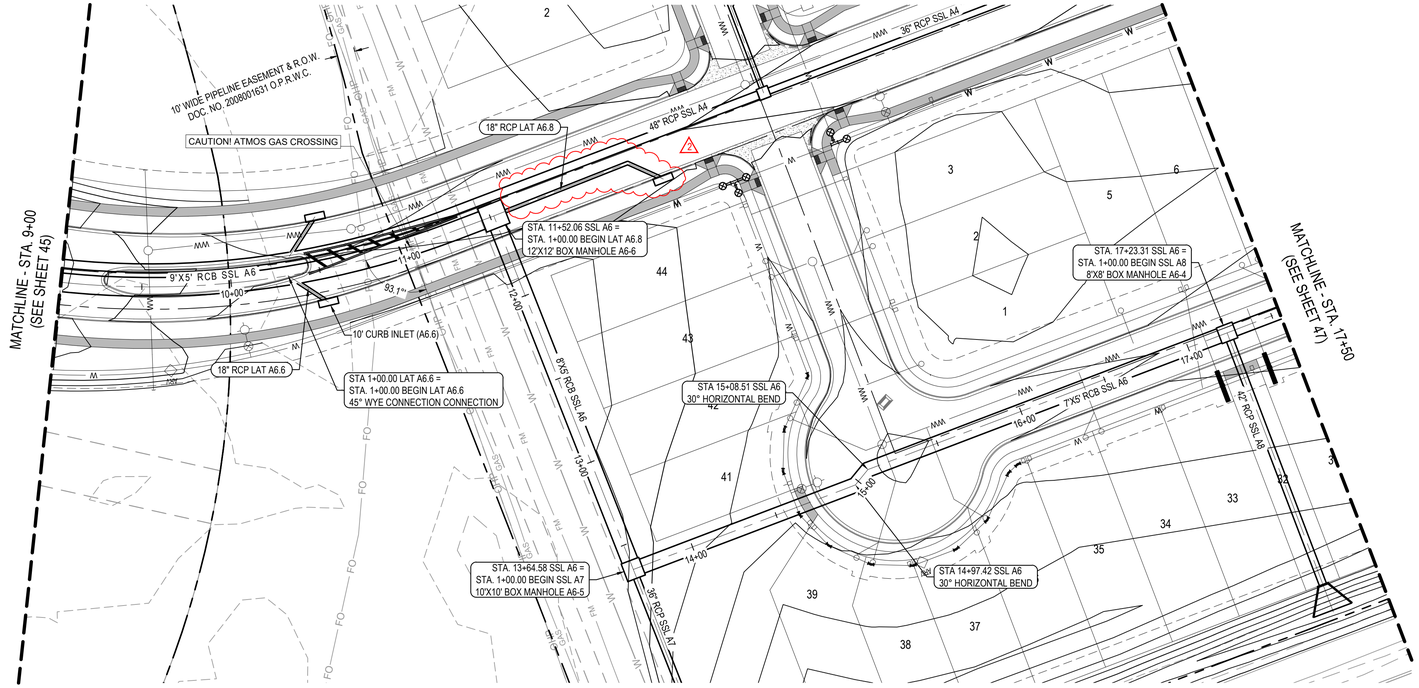
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

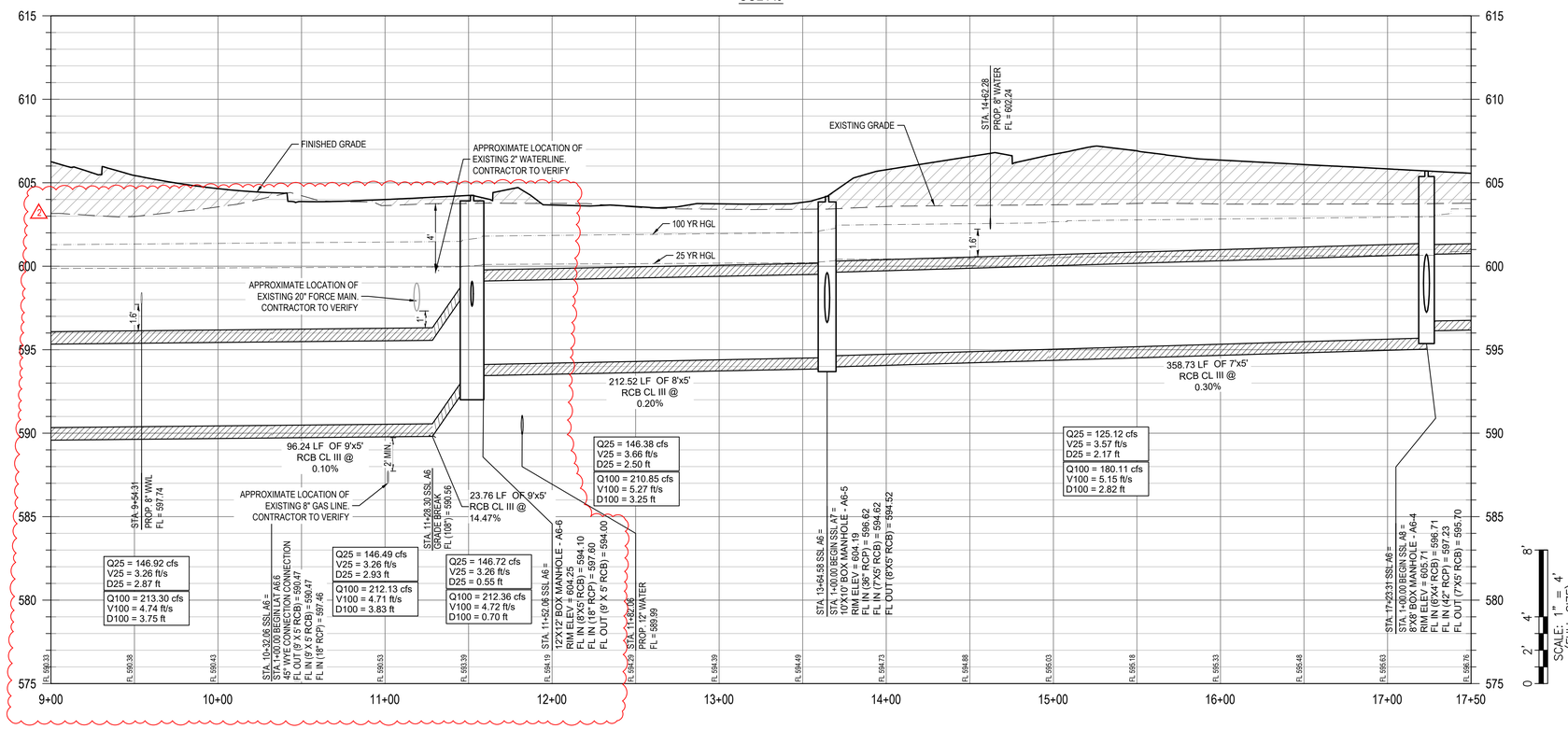
SSL A6 (STA. 1+00 TO 9+00)

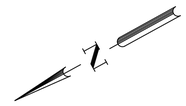
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
08/18/2025

For Rev #2
Reviewed for Substantial Conformance by City of Hutto
HUTTO
Staff Verification
City Engineer
Engineering - City of Hutto
09/12/2025

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDV01_CADD\01_Shts\8843-01-C-SP-STRM.dwg Layout: 45 SSL A6 (STA. 1+00 TO 9+00) Plotted: 8/14/2025 10:42:15 AM







0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- BOX MANHOLE
- MANHOLE
- 10' CURB INLET
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- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE

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PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- 25 YEAR HGL
- 100 YEAR HGL
- PROPOSED FILL

For Rev #2

Reviewed for Substantial Conformance by City of Hutto

Mark Hanna, PE
City Engineer
Engineering - City of Hutto

09/12/2025

REV	DESCRIPTION	DATE	APR
2	REVISION TO SSL-A6 ELEVATION, ADDED VERTICAL BEND, REVISED 8" WWL LOCATION, REMOVED EXISTING UTILITY RELOCATIONS		

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

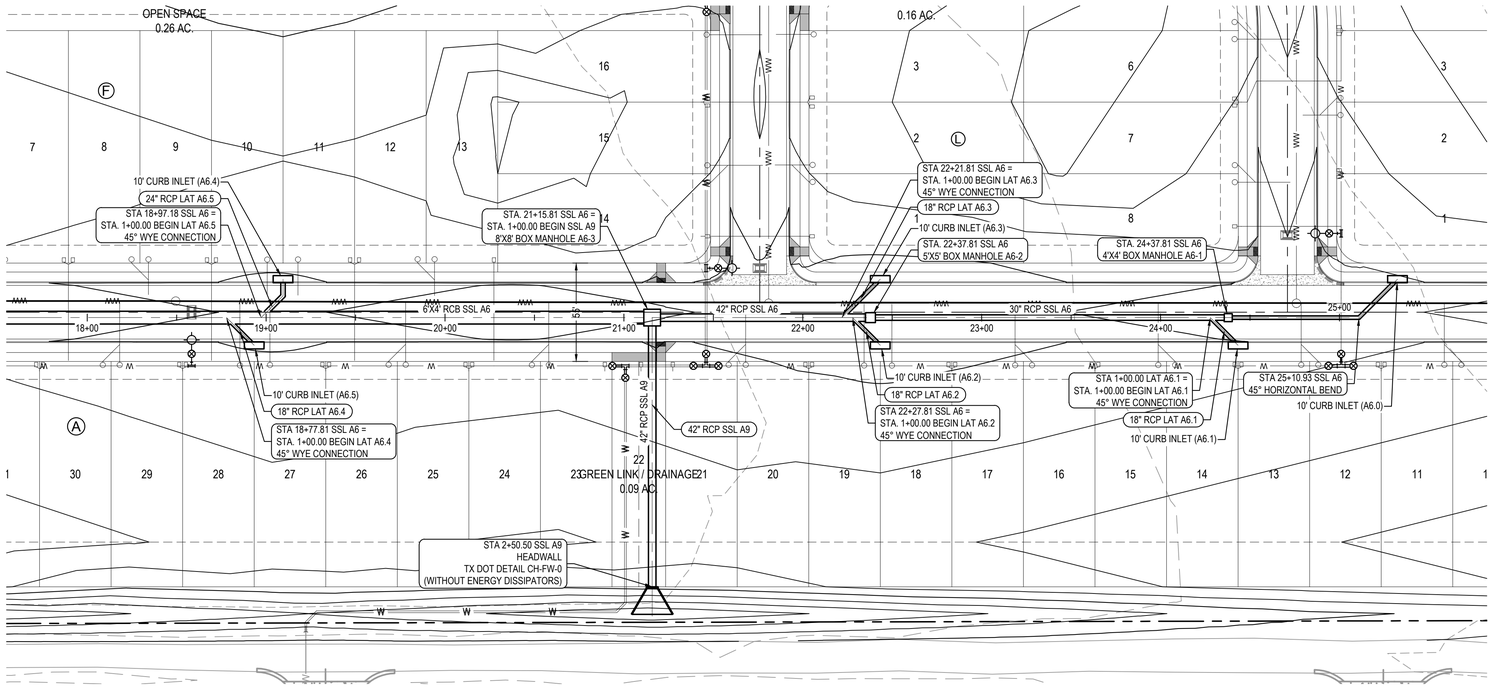
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

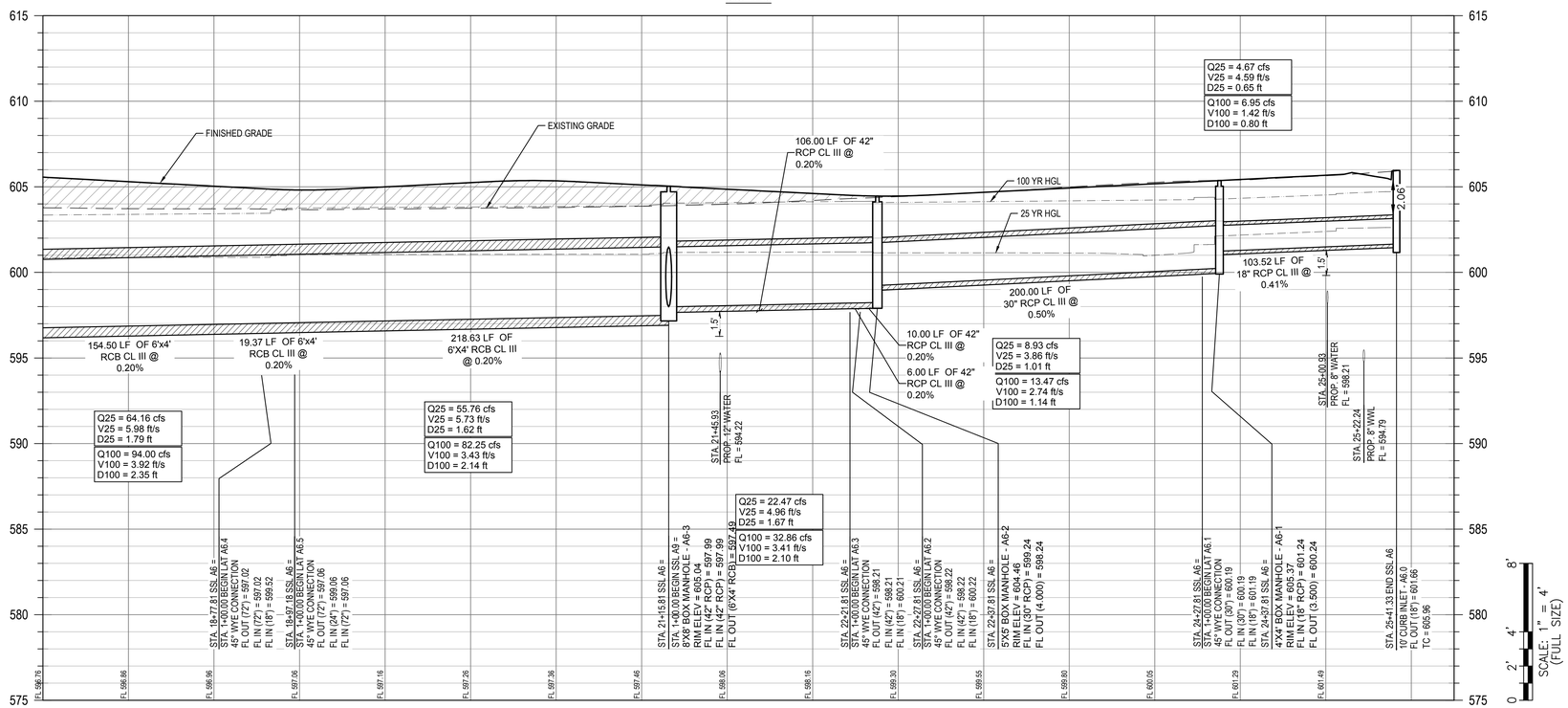
SSL A6 (STA. 9+00 TO 17+50)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
08/18/2025

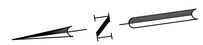
\\bgeincldata\TX\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-STRM.dwg Layout: 46 SSL A6 (STA. 9+00 TO 17+50) Plotted: 8/18/2025 10:31:27 AM



SSL A6



SCALE: 1" = 4'



0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
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PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- 25 YEAR HGL
- 100 YEAR HGL
- PROPOSED FILL

SCALE: 1" = 4'
(FULL SIZE)

0 2' 4' 8'

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Matt Bechtol, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

	APR	DATE	DESCRIPTION	REV

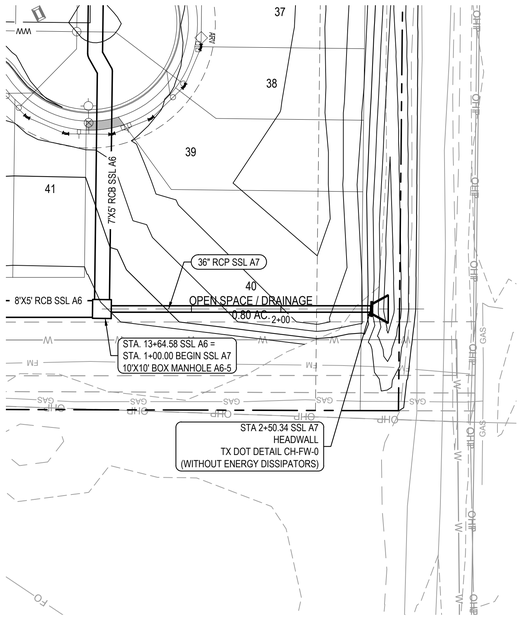
DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

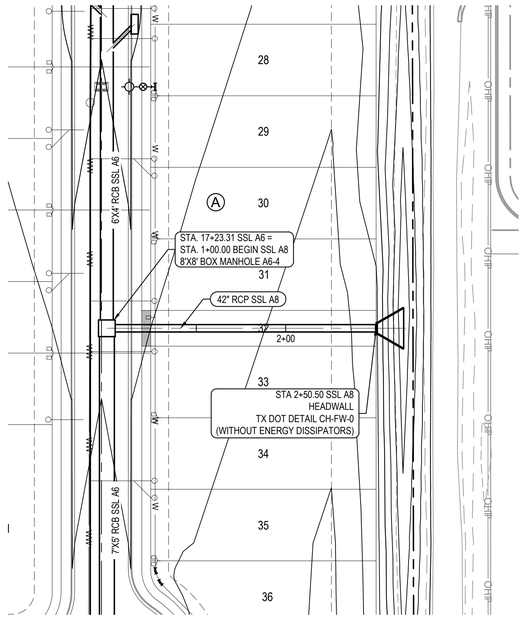
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

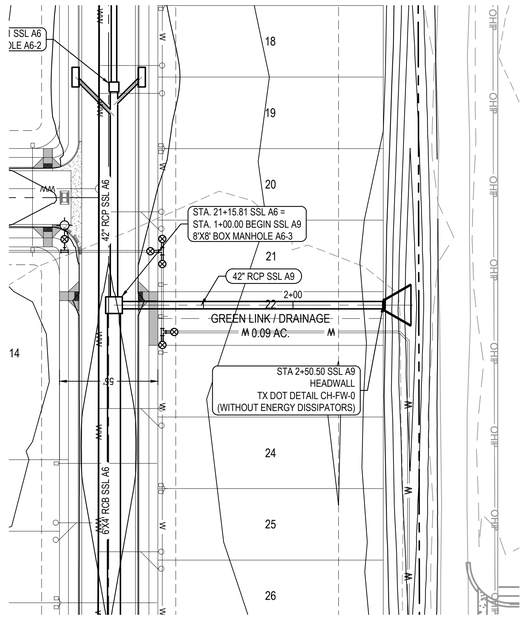
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

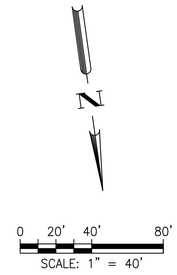
SSL A6 (STA. 17+50 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024









LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
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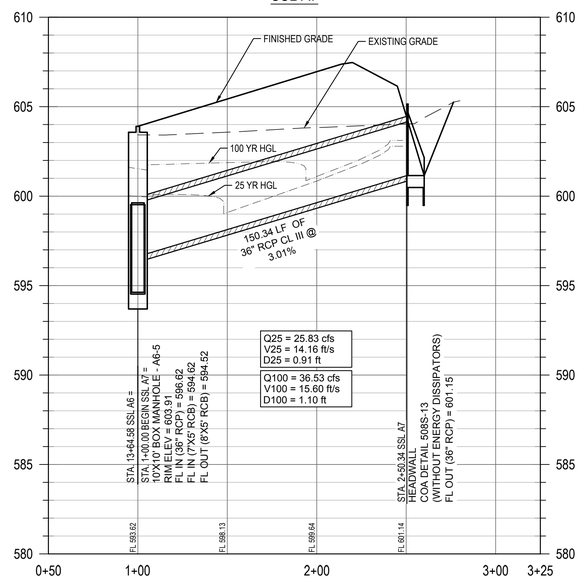
PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- 25 YEAR HGL
- 100 YEAR HGL
- PROPOSED FILL

SSL A7



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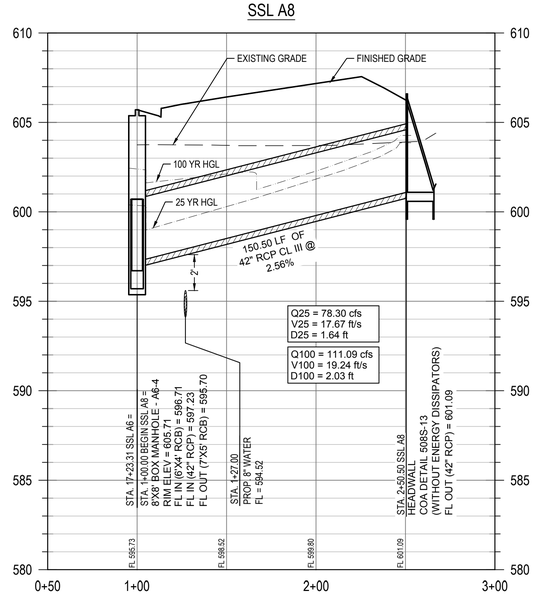
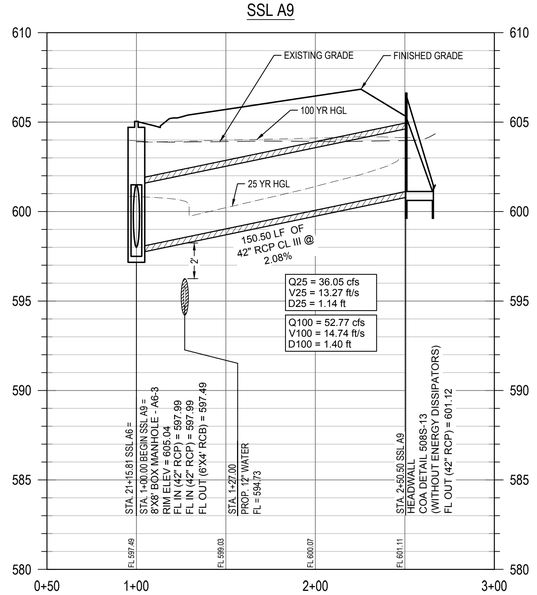
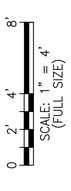
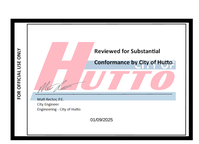


SSL A9







								APR
								DATE
								DESCRIPTION
								REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

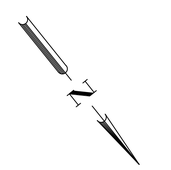
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

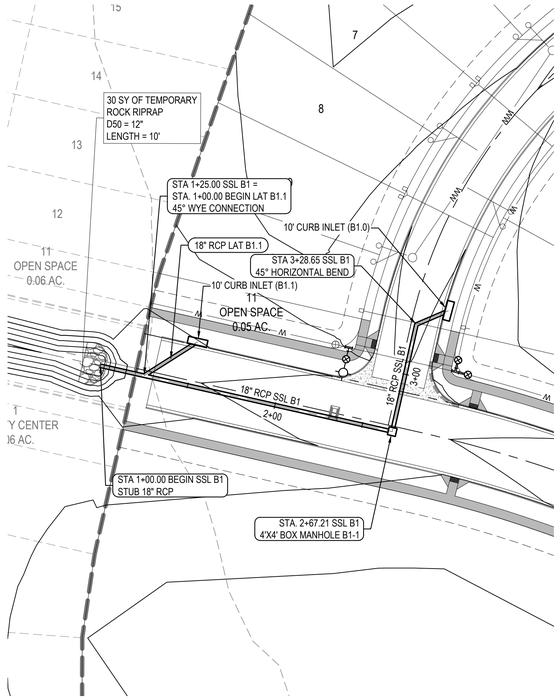
SSL A7 - A8 - A9 - (STA. 1+00 TO END)

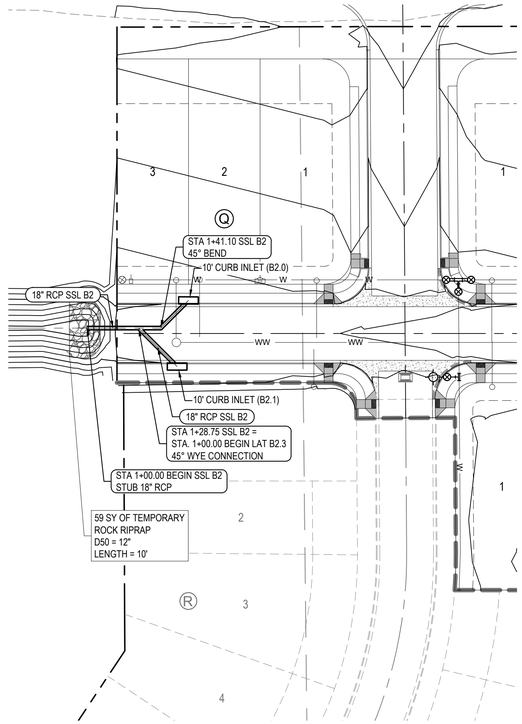
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

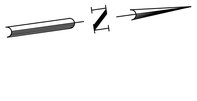
G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDI01_CADD\01_Shts\8843-01-C-SP-STRM.dwg Layout: 48 SSL A7 - A8 - A9 - (STA. 1+00 TO END) Plotted: 12/2/2024 6:15:05 PM



0 20' 40' 80'
SCALE: 1" = 40'







0 20' 40' 80'
SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- EXISTING MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- STORM SEWER FLOW DIRECTION
- BOX MANHOLE
- MANHOLE
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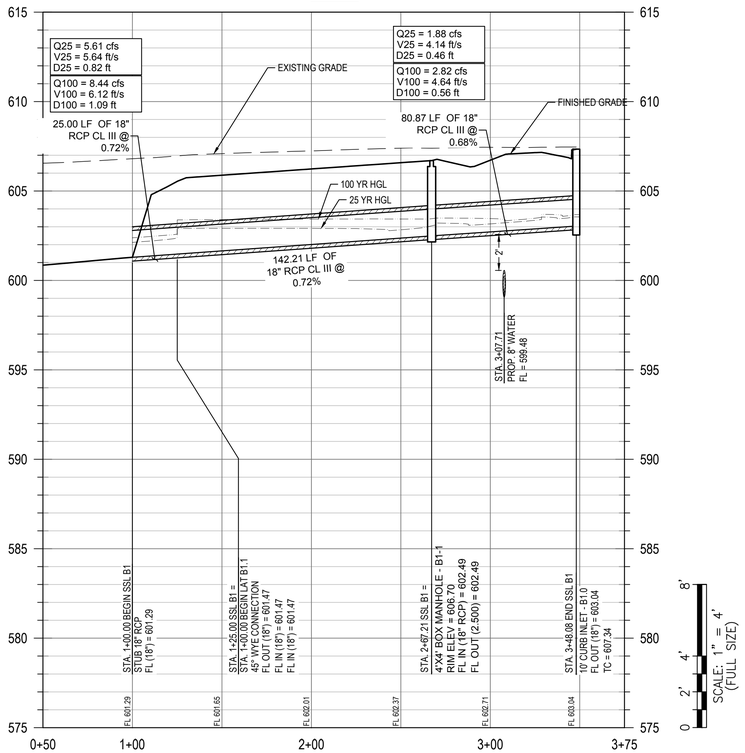
PROFILE LEGEND

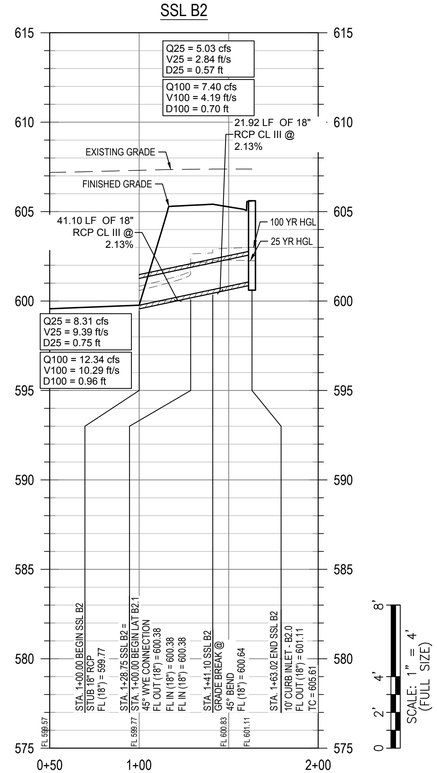
- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- 25 YEAR HGL
- 100 YEAR HGL
- PROPOSED FILL

SSL B1



0 2' 4' 8'
SCALE: 1" = 4'
(FULL SIZE)

SSL B2



0 2' 4' 8'
SCALE: 1" = 4'
(FULL SIZE)

FOR OFFICIAL USE ONLY

Reviewed for Substantial Conformance by City of Hutto

Matt Bardo, PE
Director of Engineering - City of Hutto

01/09/2025

							APR
							DATE
							DESCRIPTION
							REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

SSL B1 & SSL B2 (STA. 1+00 TO END)

STATE OF TEXAS
RICHARD PHAM
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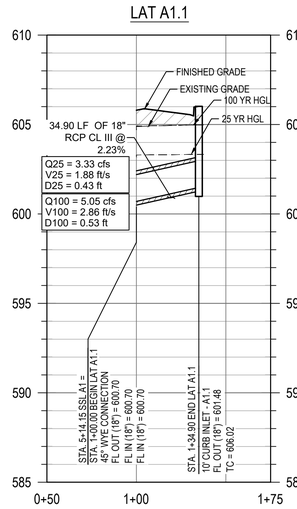
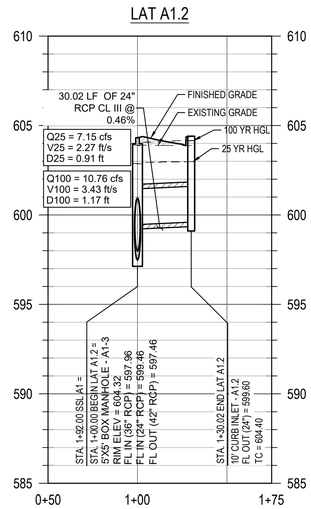
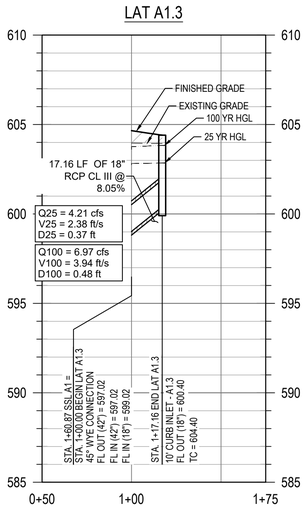
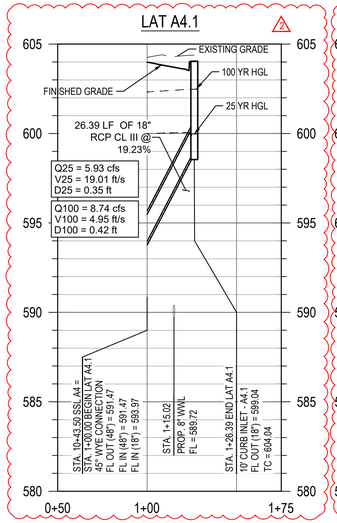
PROFESSIONAL ENGINEER
12/2/2024

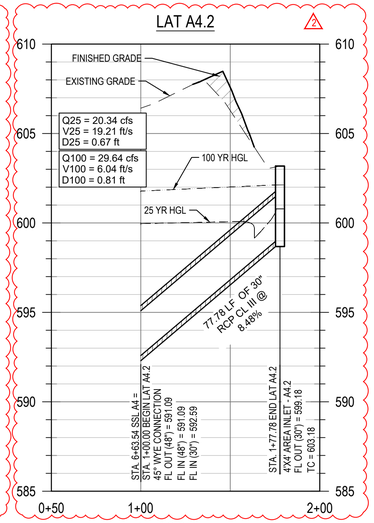
G:\TXCO\Projects\Bohn_Homes\8843-01-Heritage_Mill_Ph1\LDI01_CADD\01_Shts\8843-01-C-SP-STRM.dwg Layout: 49 SSL B1 & SSL B2 (STA. 1+00 TO END) Plotted: 12/2/2024 6:15:16 PM

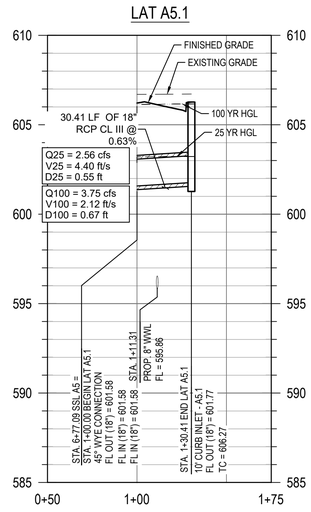


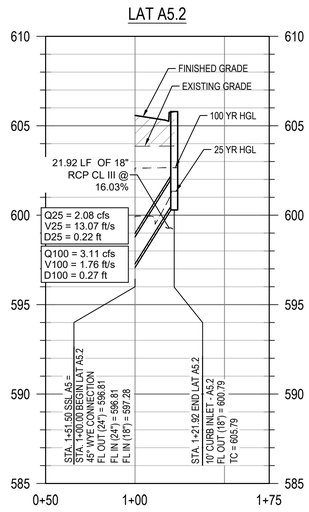


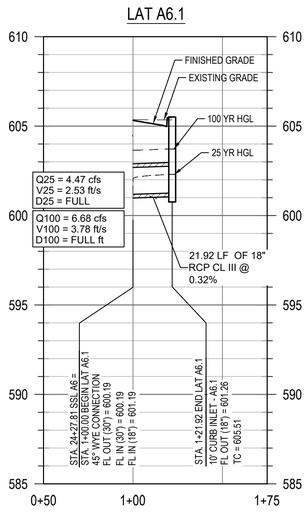


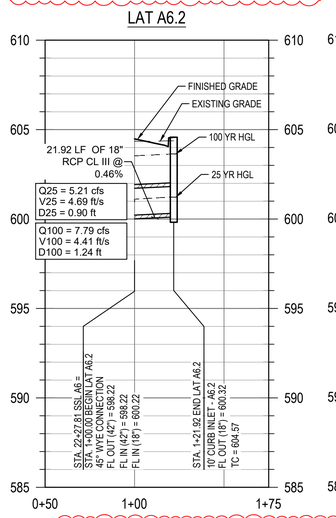


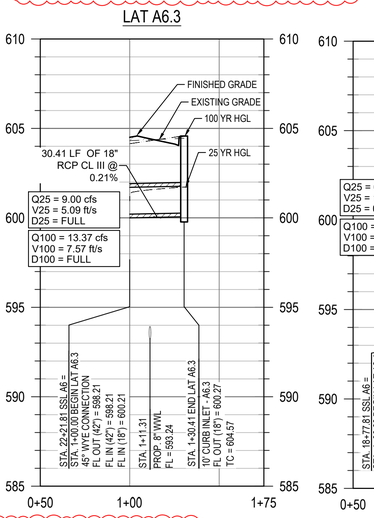


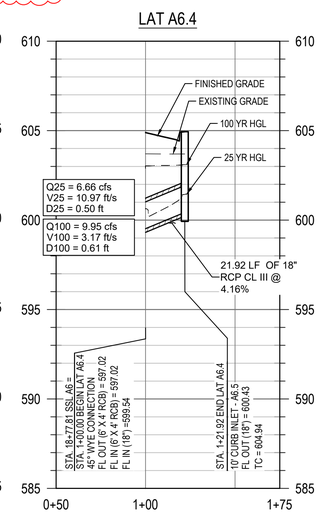


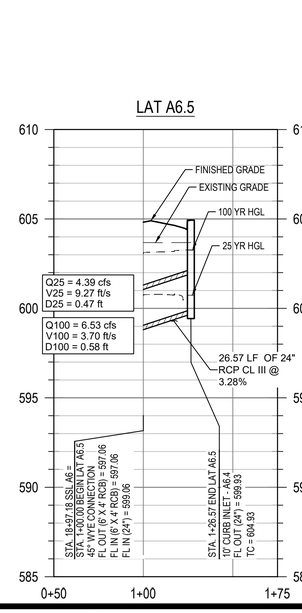


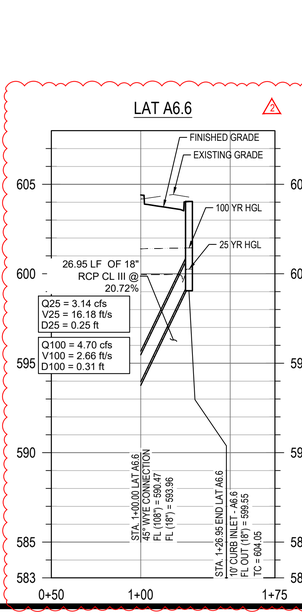


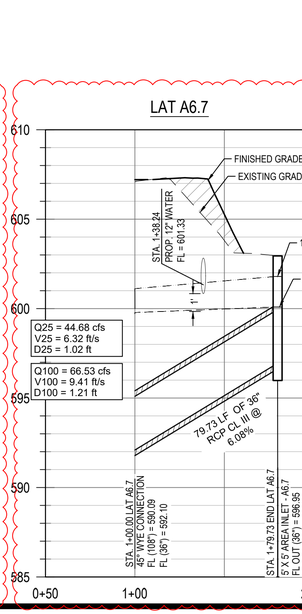


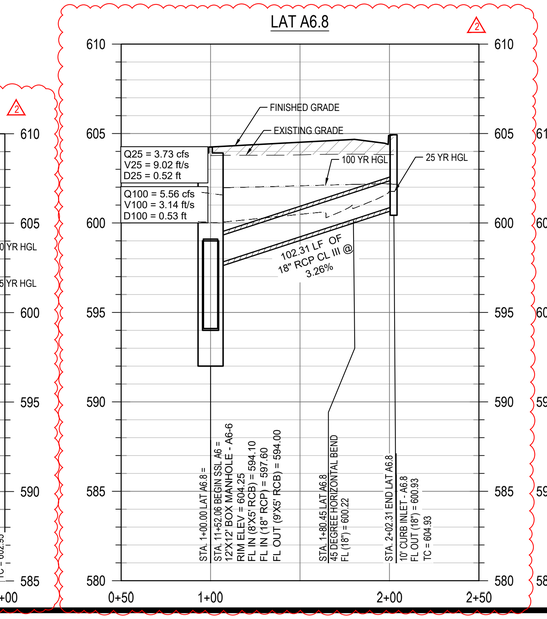


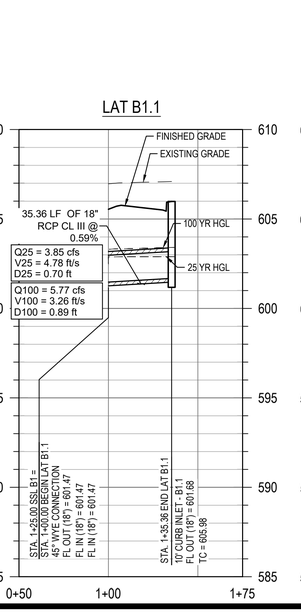


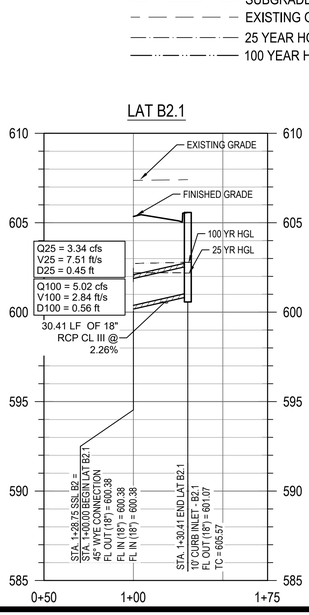


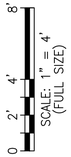












NOTES:

1. ALL INLET WYE CONNECTIONS TO BE 45 DEGREES UNLESS OTHERWISE NOTED.
2. ALL STORM LATERALS TO BE 18" CL III RCP UNLESS OTHERWISE NOTED.
3. ALL CURB INLETS TO BE 10' UNLESS OTHERWISE NOTED.
4. TYPICAL STORM ASSIGNMENT 3 FT. FROM STREET CENTERLINE, UNLESS NOTED OTHERWISE.
5. UTILITY CROSSING INFORMATION SHOWN HERE IN PROFILE IS FOR GENERAL REFERENCE. REFER TO THE APPROPRIATE UTILITY DESIGN SHEETS AND STANDARD DETAILS FOR ADDITIONAL AND FINAL GRADE INFORMATION.
6. TOP OF MANHOLE, INLETS, AND PAVEMENT GRADES SHOWN FOR GENERAL REFERENCE. THE STREET DESIGN SHEETS (PLAN/PROFILE) TAKE PRECEDENCE FOR FINISHED GRADES.
7. ALL CONNECTIONS TO PRE-CAST STRUCTURES MUST ENTER THROUGH THE KNOCK-OUT WITHOUT DAMAGE TO STRUCTURE OR BE REPLACED AT CONTRACTORS EXPENSE.

PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- 25 YEAR HGL
- 100 YEAR HGL

REV	DESCRIPTION	DATE	APR
2	REVISION TO SSL LAT A4.1, A4.2, A6.6, A6.7, & A6.8		

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

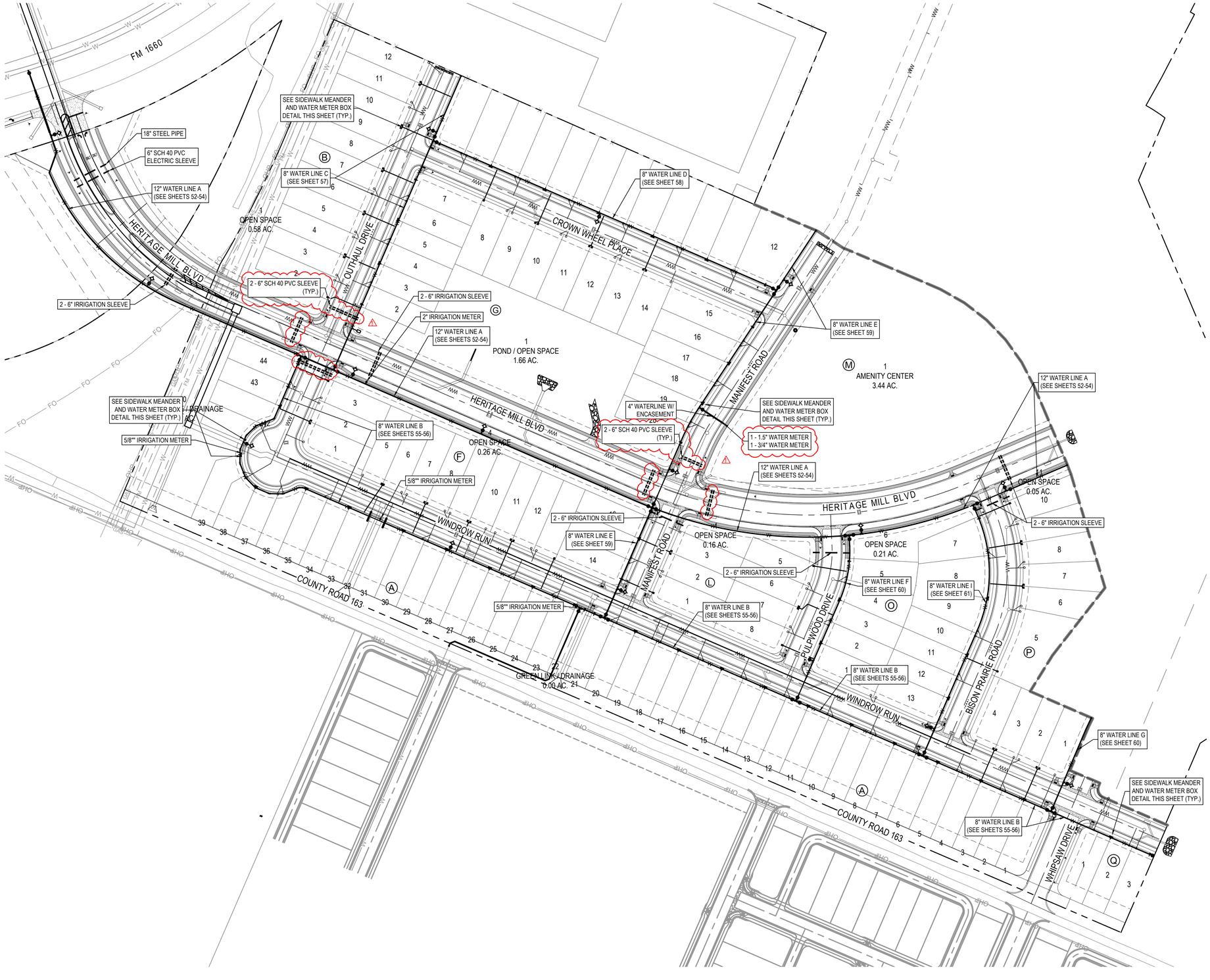
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

STORM LATERAL PROFILES

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
08/18/2025

For Rev #2
Reviewed for Substantial Conformance by City of Hutto

G:\TXCO\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDI\01_CADD\01_Shts\8843-01-C-SP-STRM.dwg Layout: 50 STORM LATERAL PROFILES Plotted: 7/16/2025 10:33:24 AM



0 40' 80' 160'

SCALE: 1" = 80'

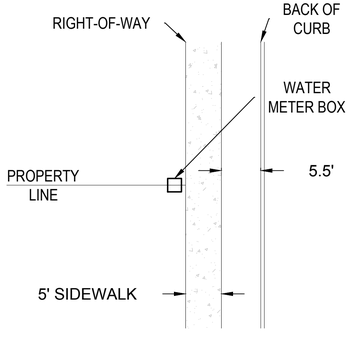
LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- SECTION BOUNDARY
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- CAP/PLUG
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- 6" SCH 40 PVC IRRIGATION SLEEVES

NOTES:

1. ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.
2. ALL VALVES, MANHOLES, & FIRE HYDRANTS TO BE OUTSIDE OF VALLEY GUTTERS, CURBS, & SIDEWALKS.
3. ALL IRRIGATION LINES WILL BE BY OTHERS.

WATER METER BOX DETAIL
SCALE: 1" = 10'



REV	DESCRIPTION	DATE	APR
1	ADDED SLEEVES AND WATER METER		

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

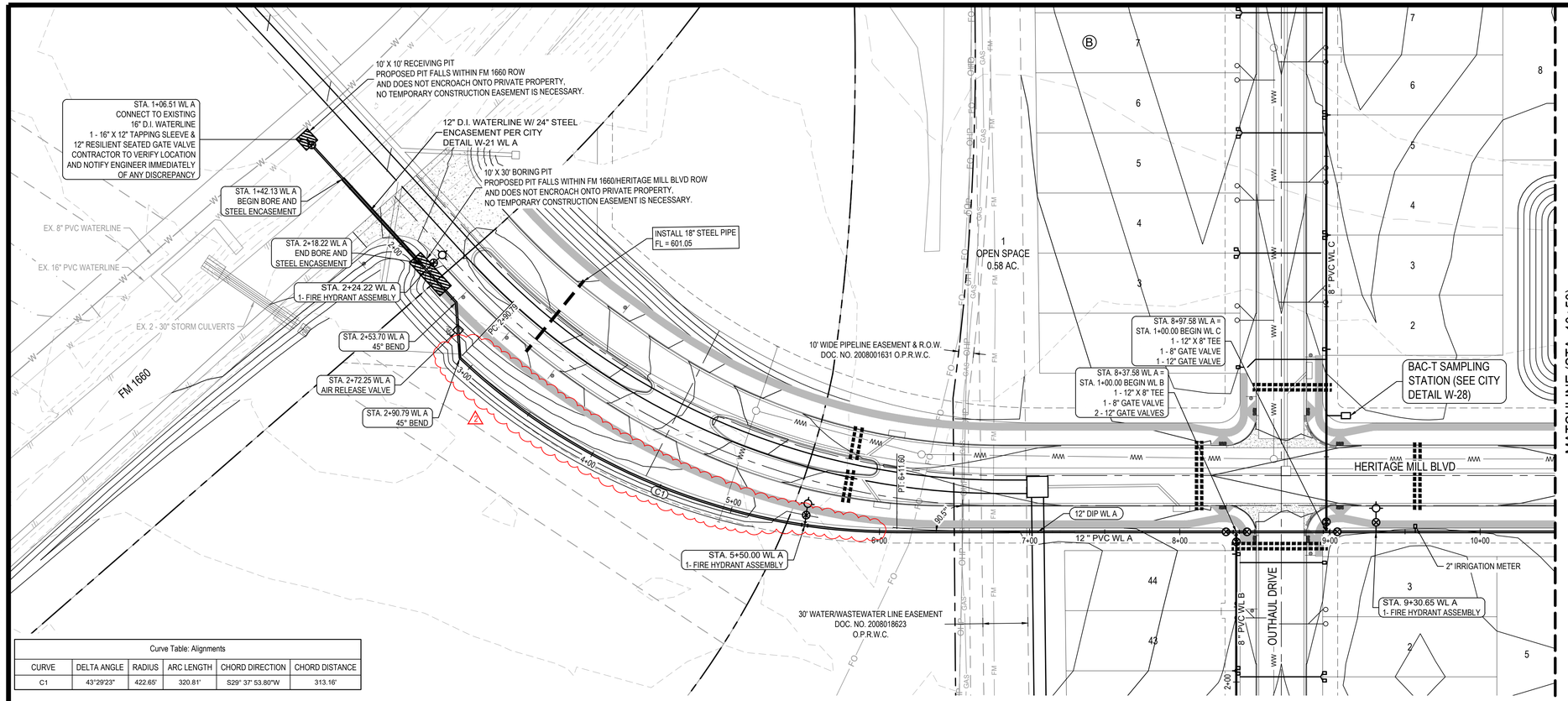
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

OVERALL WATER DISTRIBUTION PLAN

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
03/24/2025

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WATR-OVAL.dwg Layout: 51 OVERALL WATER DISTRIBUTION PLAN Plotted: 3/24/2025 5:58:42 PM

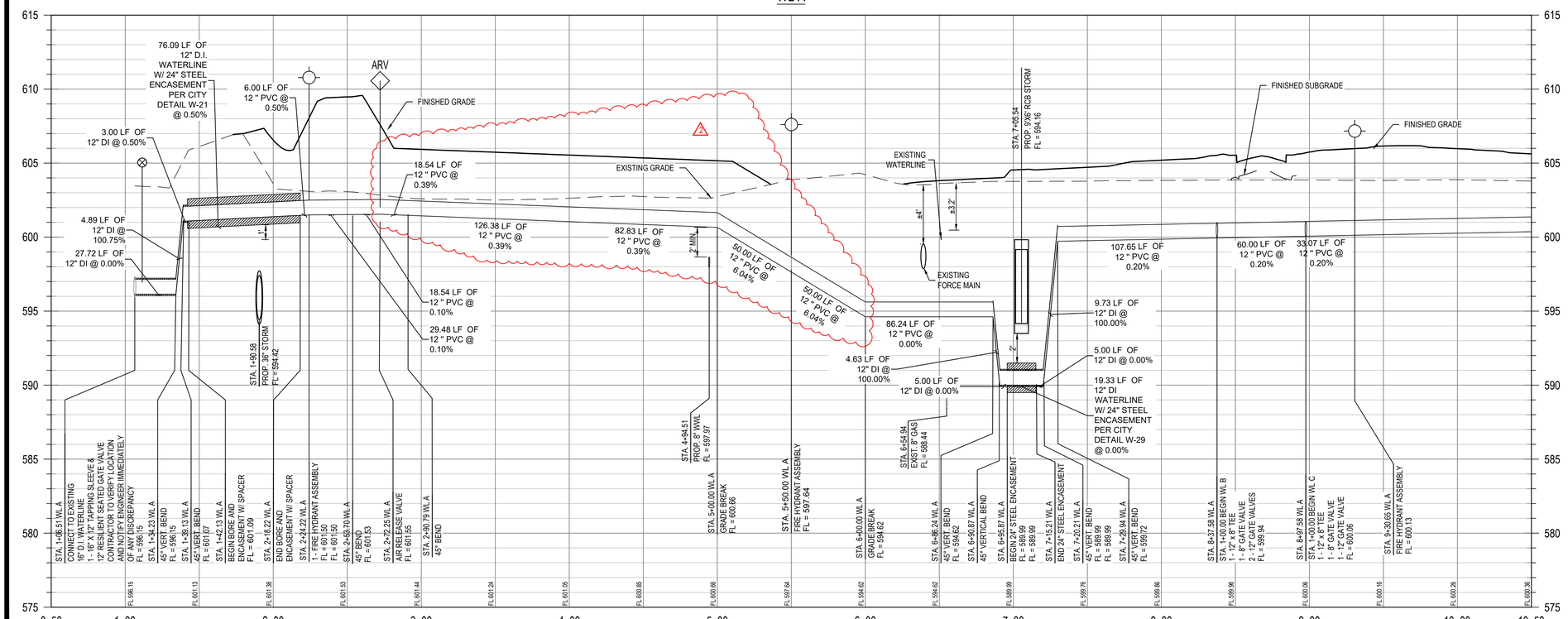


NOTES:

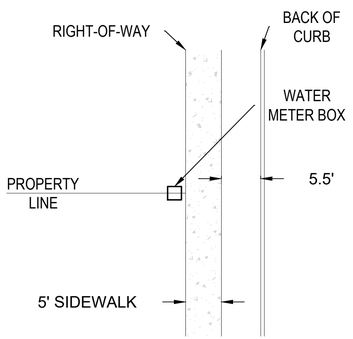
1. ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.
2. ALL VALVES, MANHOLES, & FIRE HYDRANTS TO BE OUTSIDE OF VALLEY GUTTERS, CURBS, & SIDEWALKS.

Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C1	43°29'23"	422.65'	320.81'	S29° 37' 53.80"W	313.16'

WL A



WATER METER BOX DETAIL
SCALE: 1" = 10'



For Rev #2
Reviewed for Substantial Conformance by City of Hutto
Mark Narvy, PE
City Engineer
Engineering - City of Hutto
09/12/2025

									APR
									DATE
									DESCRIPTION
									REVISION TO WL-A ELEVATIONS, ADDED ARV, RAISED WWL CROSSING
									REV

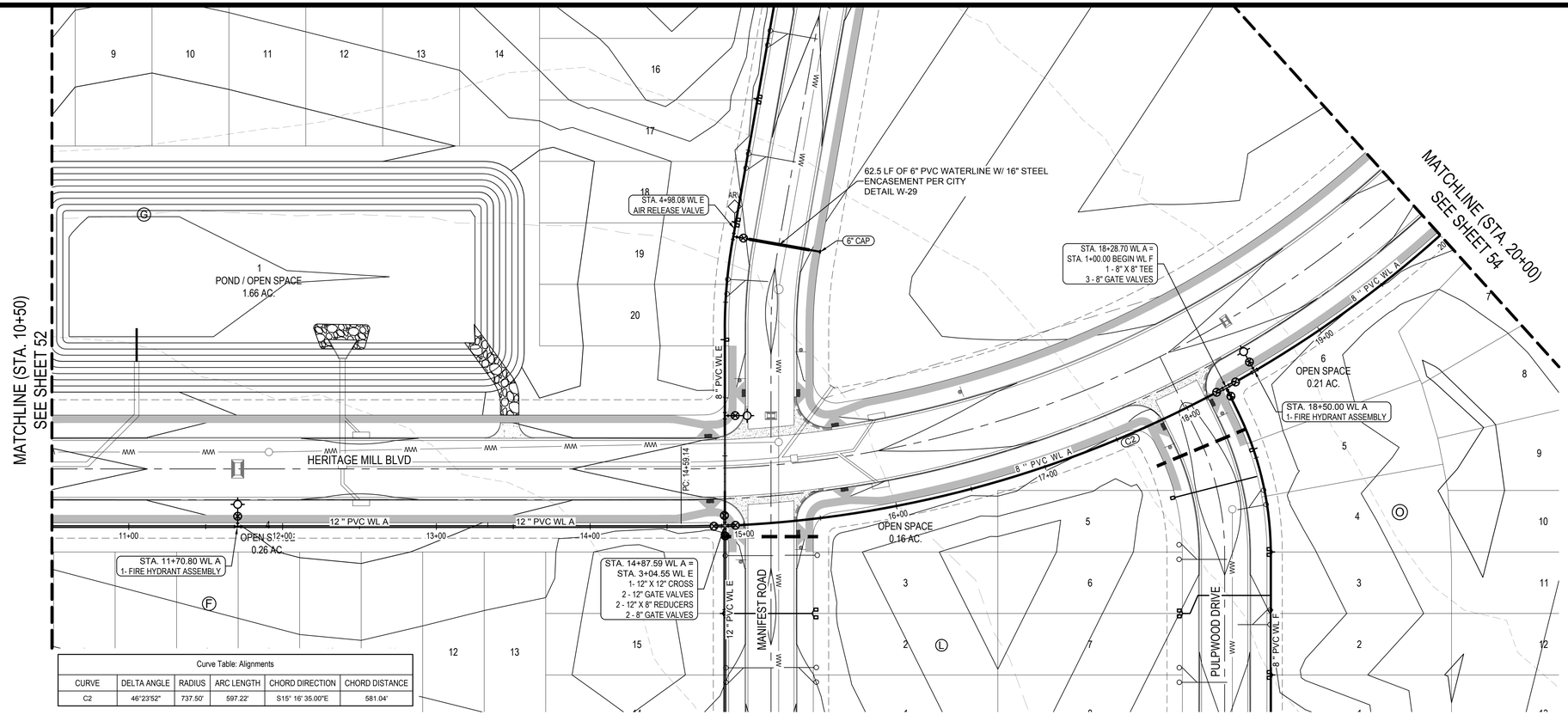
DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS
12" WATER LINE A
(STA. 1+00 TO 10+50)

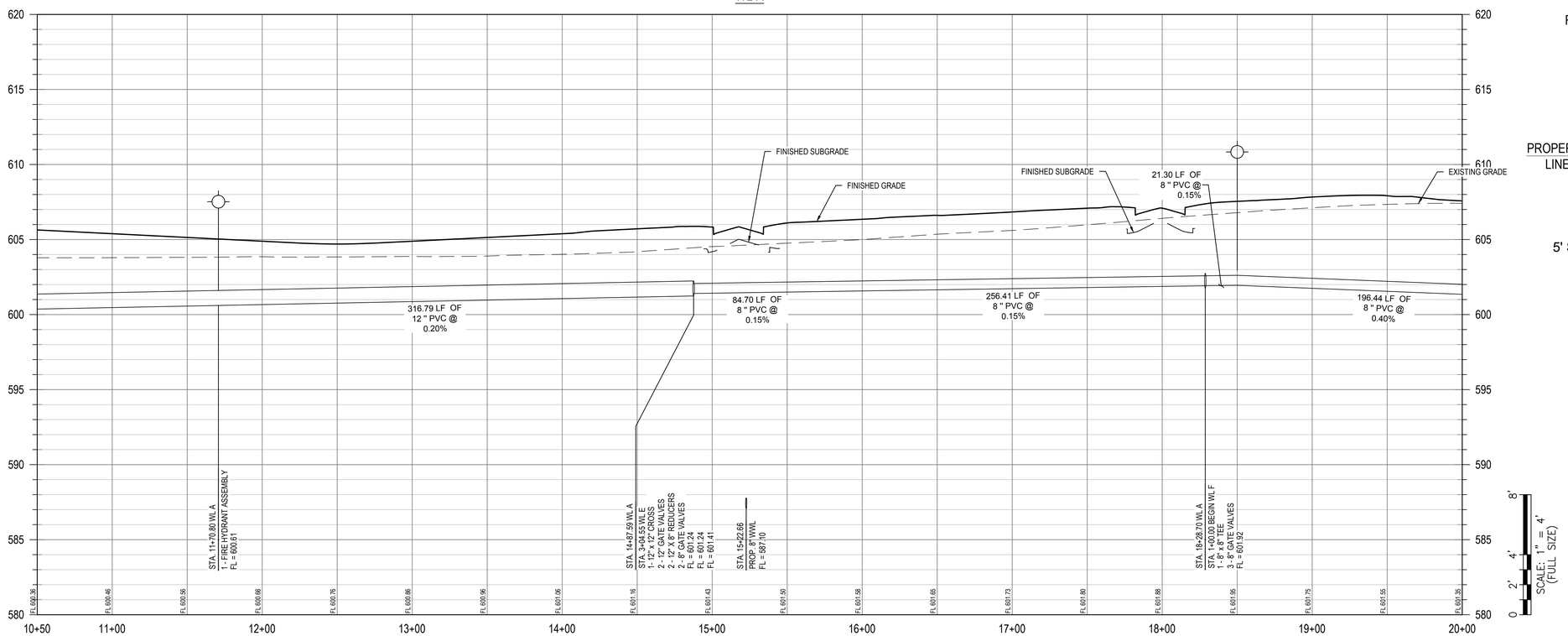
STATE OF TEXAS
RICHARD PHAM
142775
LICENSED
PROFESSIONAL ENGINEER
08/18/2025

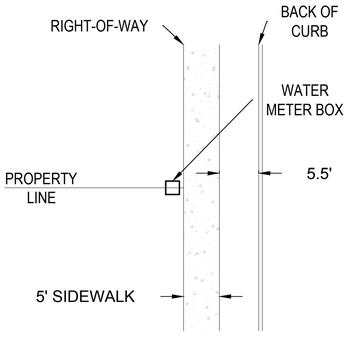
\\bgeincdata\TXC\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WATR.dwg Layout: 52 12" WATER LINE A (STA. 1+00 TO 10+50) Plotted: 8/18/2025 10:35:57 AM



Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C2	46°23'52"	737.50'	597.22'	S15° 16' 35.00"E	581.04'

WL A





WATER METER BOX DETAIL
SCALE: 1" = 10'

0 20' 40' 80'
SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- CAP/PLUG
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- 6" SCH 40 PVC IRRIGATION SLEEVES

NOTES:

1. ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.
2. ALL VALVES, MANHOLES, & FIRE HYDRANTS TO BE OUTSIDE OF VALLEY GUTTERS, CURBS, & SIDEWALKS.

REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

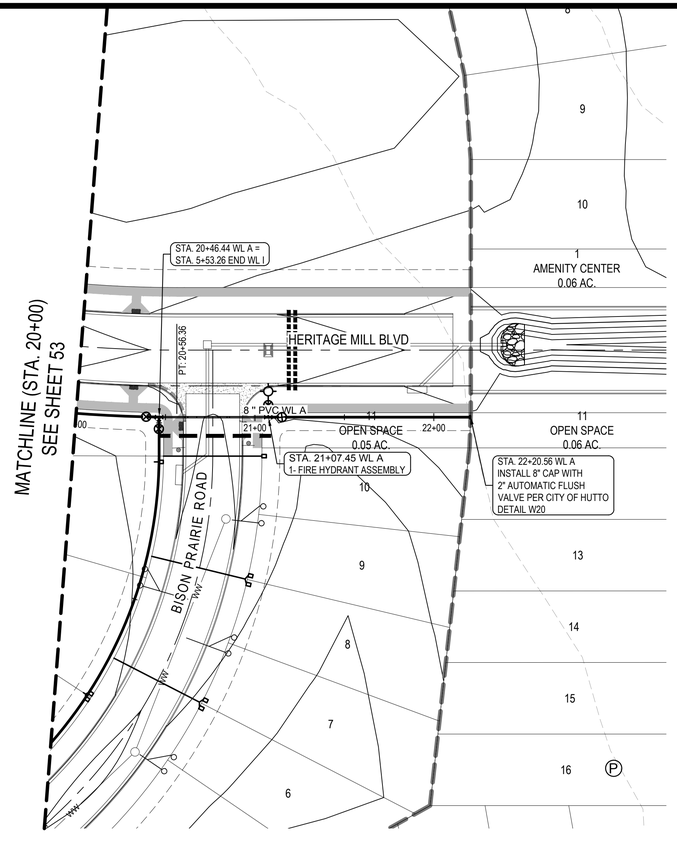
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.beginc.com

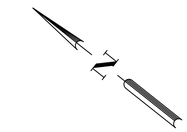
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS
12" WATER LINE A
(STA. 10+50 TO 22+00)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Hutto
Mark Reeves, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WATR.dwg Layout: 53 12" WATER LINE A (STA. 10+50 TO 22+00) Plotted: 1/8/2025 9:46:57 AM





0 20' 40' 80'

SCALE: 1" = 40'

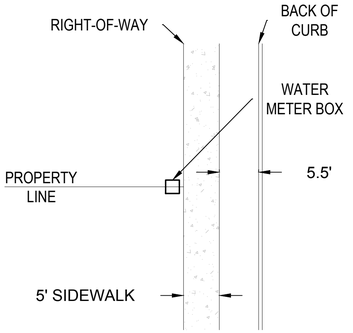
LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- PROPOSED WATER LINE
- W — EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- CAP/PLUG
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- 6" SCH 40 PVC IRRIGATION SLEEVES

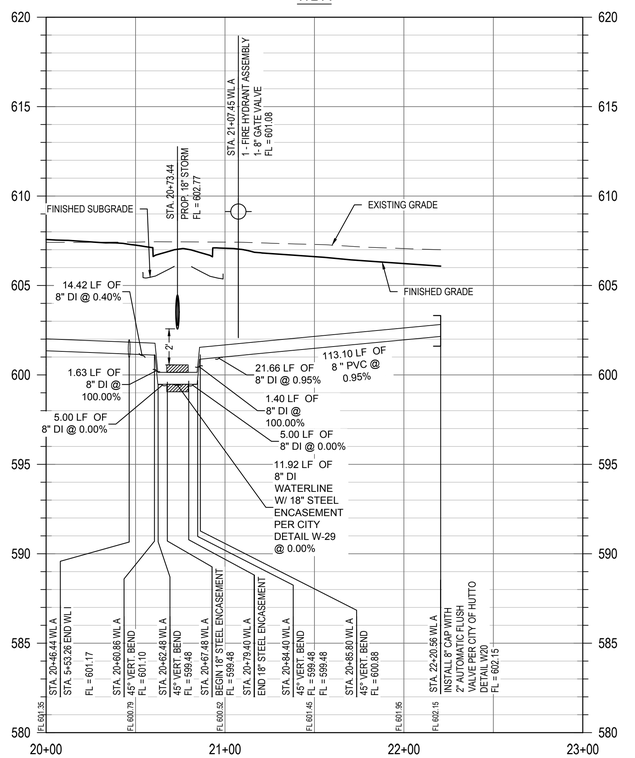
NOTES:

1. ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.
2. ALL VALVES, MANHOLES, & FIRE HYDRANTS TO BE OUTSIDE OF VALLEY GUTTERS, CURBS, & SIDEWALKS.

WATER METER BOX DETAIL
SCALE: 1" = 10'



WL A



Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Matt Bechis, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

								APR
								DATE
								DESCRIPTION
								REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

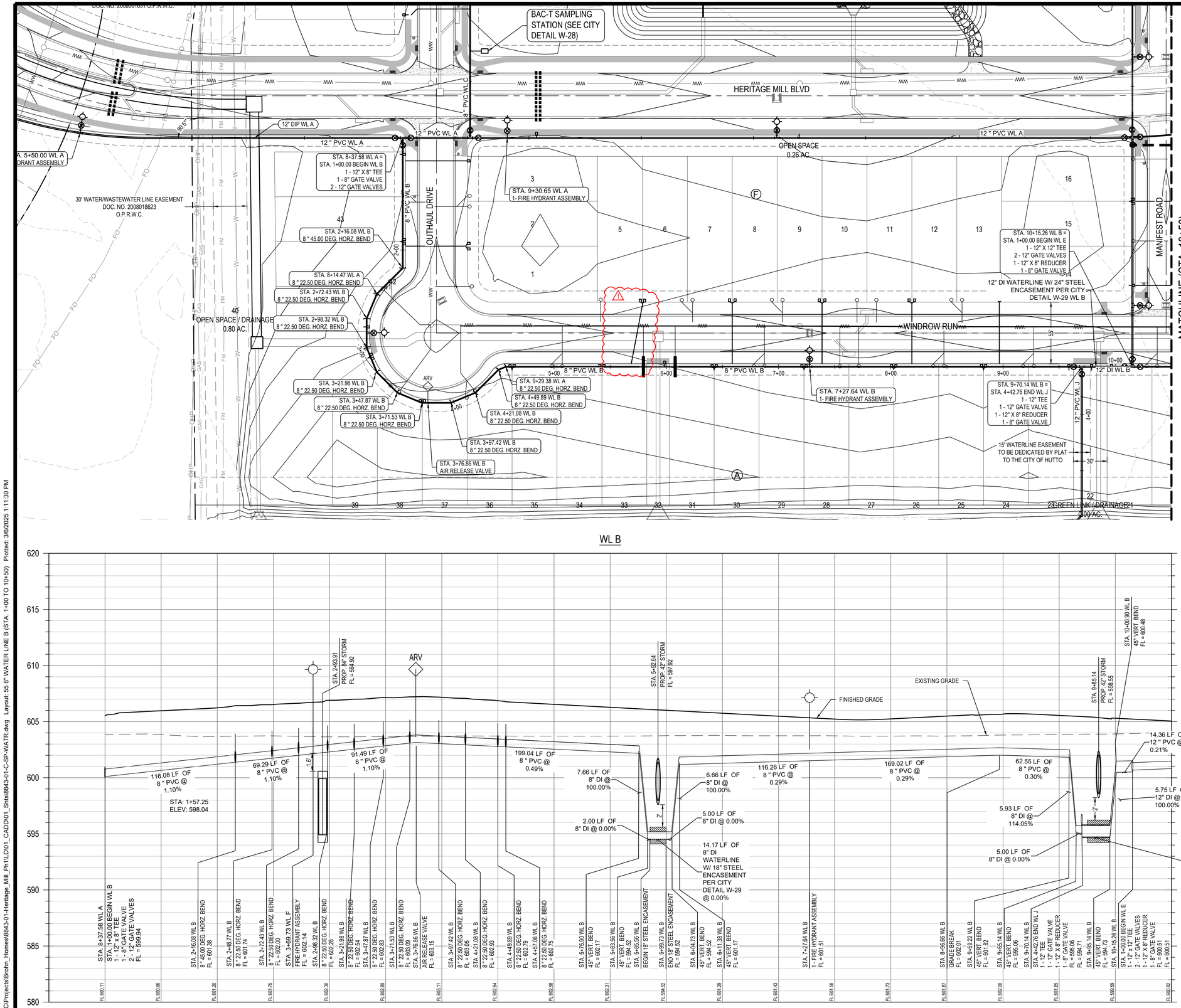
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

8" WATER LINE A
(STA. 22+00 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WATR.dwg Layout: 54 8" WATER LINE A (STA. 22+00 TO END) Plotted: 1/8/2025 9:47:03 AM



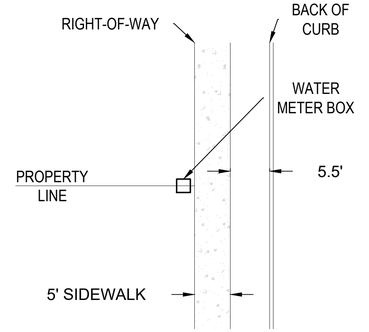
LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- CAP/PLUG
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- 6" SCH 40 PVC IRRIGATION SLEEVES

NOTES:

1. ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.
2. ALL VALVES, MANHOLES, & FIRE HYDRANTS TO BE OUTSIDE OF VALLEY GUTTERS, CURBS, & SIDEWALKS.

WATER METER BOX DETAIL
SCALE: 1" = 10'



REV	DESCRIPTION	DATE
	REVISION TO WATER SERVICE LOCATION	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

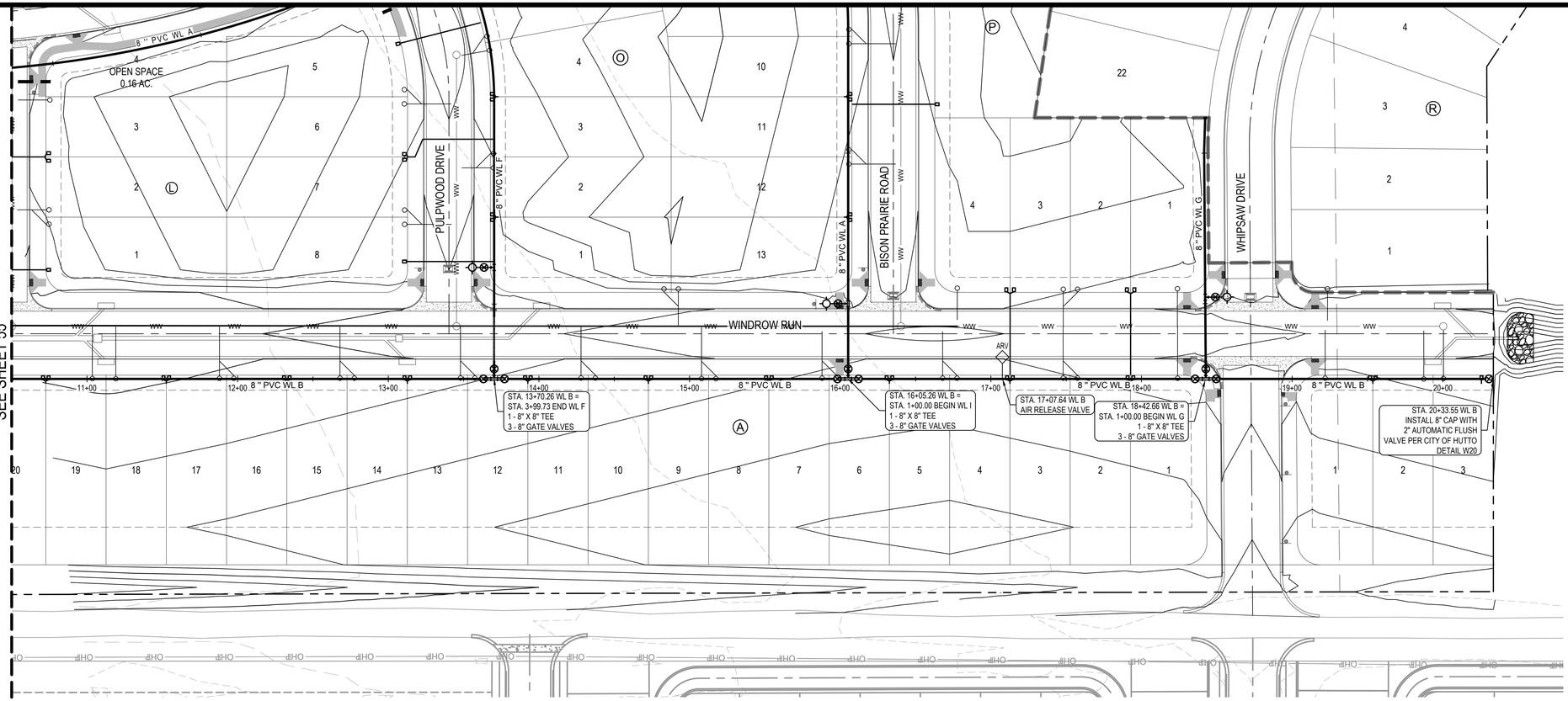
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS
8" WATER LINE B
(STA. 1+00 TO 10+50)

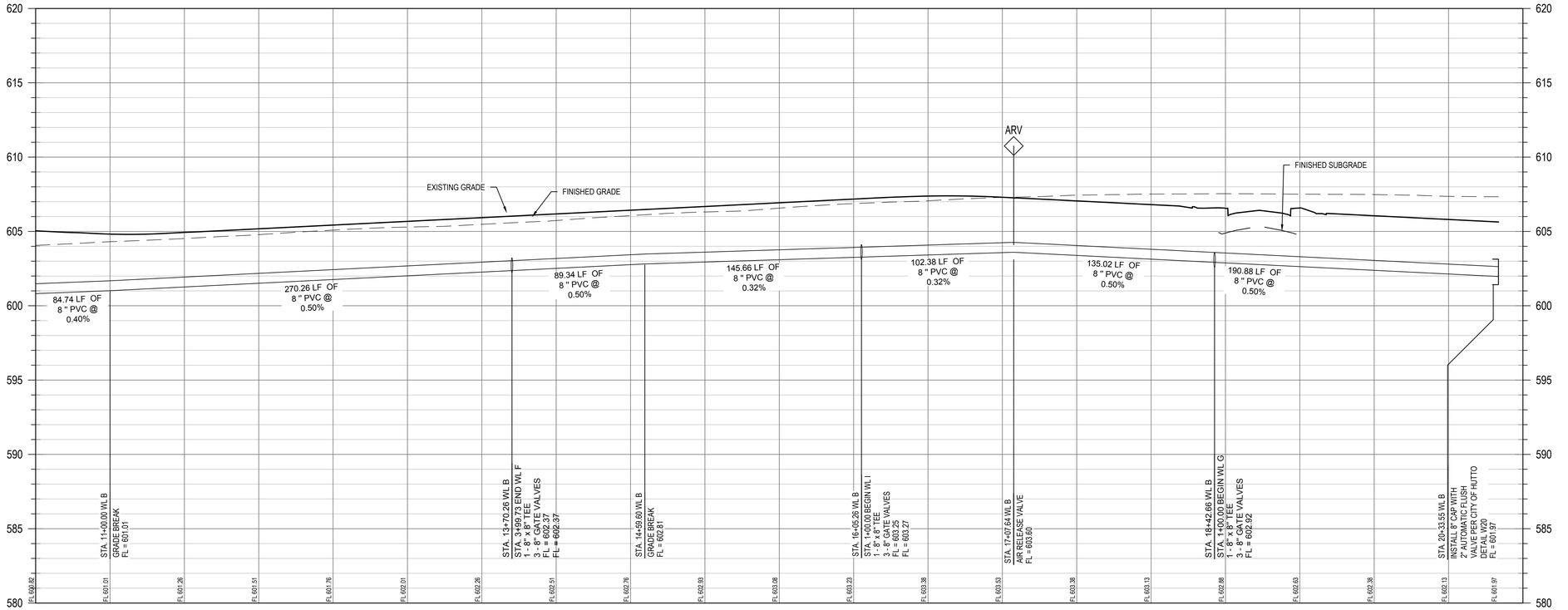
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
03/25/2025

55 OF 94

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WATR.dwg Layout: 55 8" WATER LINE B (STA. 1+00 TO 10+50) Plotted: 3/6/2025 1:11:30 PM



WL B



0 20' 40' 80'
SCALE: 1" = 40'

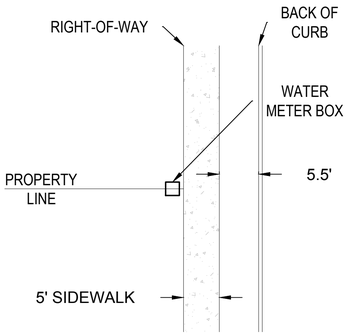
LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- CAP/PLUG
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- 6" SCH 40 PVC IRRIGATION SLEEVES

NOTES:

1. ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.
2. ALL VALVES, MANHOLES, & FIRE HYDRANTS TO BE OUTSIDE OF VALLEY GUTTERS, CURBS, & SIDEWALKS.

WATER METER BOX DETAIL
SCALE: 1" = 10'



REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.beginc.com

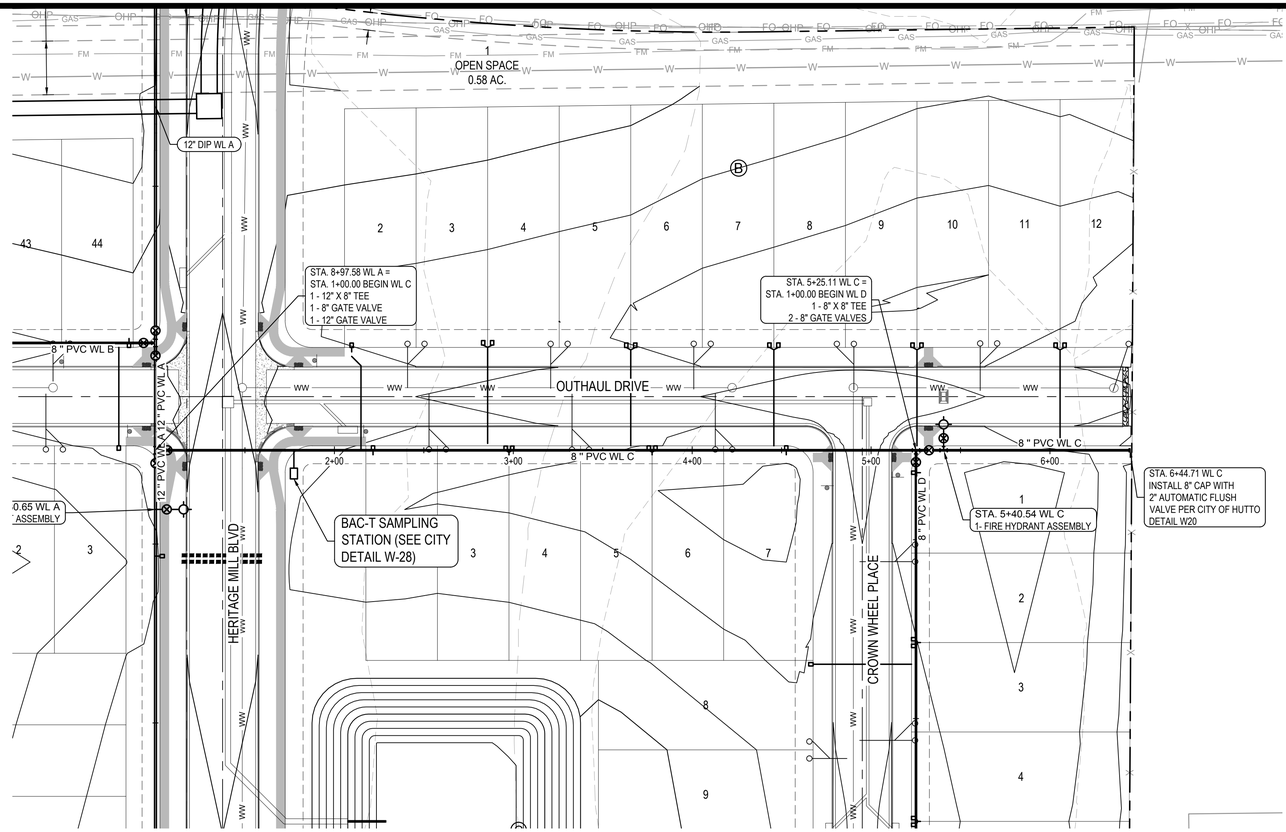
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

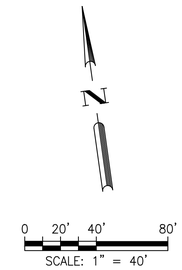
8" WATER LINE B
(STA. 10+50 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Matt Bechtel, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WATR.dwg Layout: 56 8" WATER LINE B (STA. 10+50 TO END) Plotted: 1/8/2025 9:47:14 AM





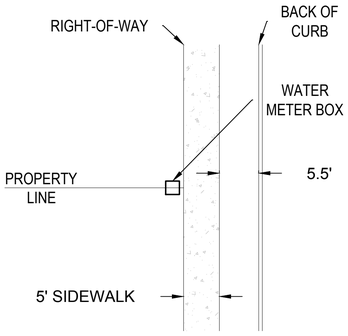
LEGEND

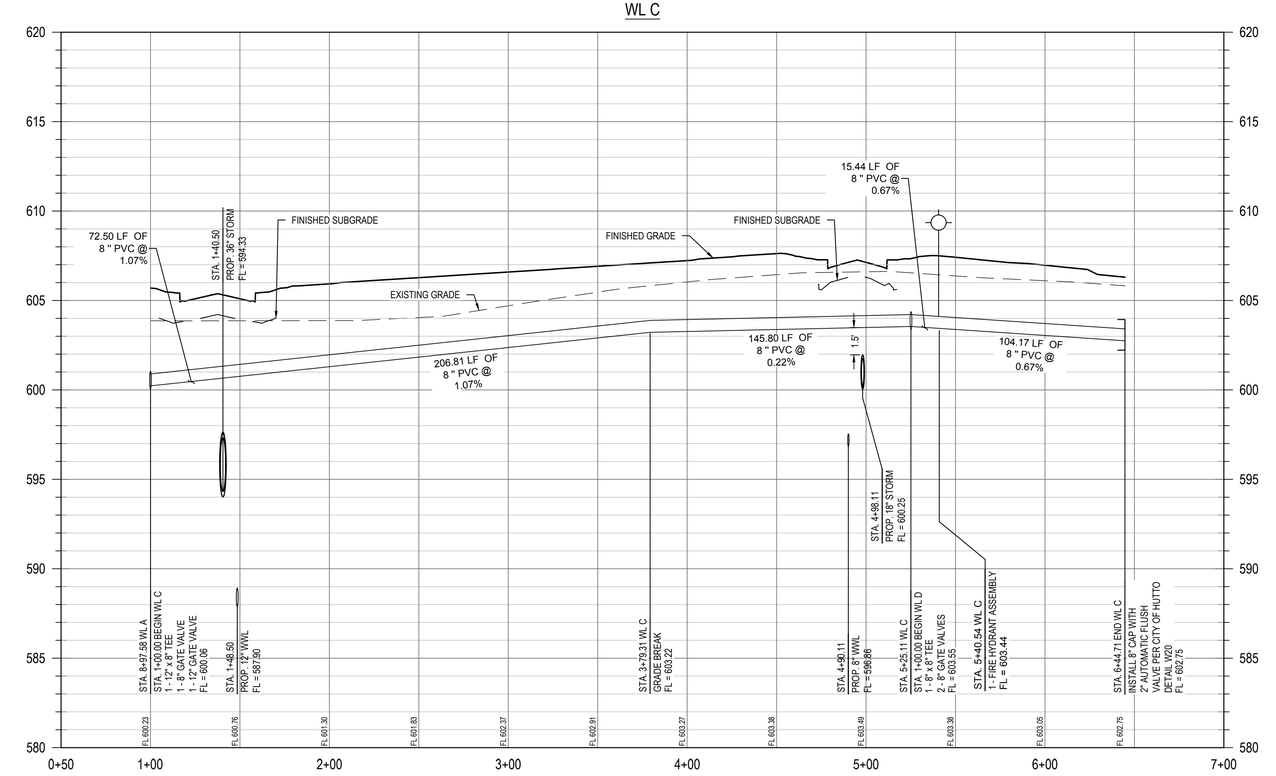
- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- CAP/PLUG
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- 6" SCH 40 PVC IRRIGATION SLEEVES

NOTES:

1. ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.
2. ALL VALVES, MANHOLES, & FIRE HYDRANTS TO BE OUTSIDE OF VALLEY GUTTERS, CURBS, & SIDEWALKS.

WATER METER BOX DETAIL
SCALE: 1" = 10'





REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

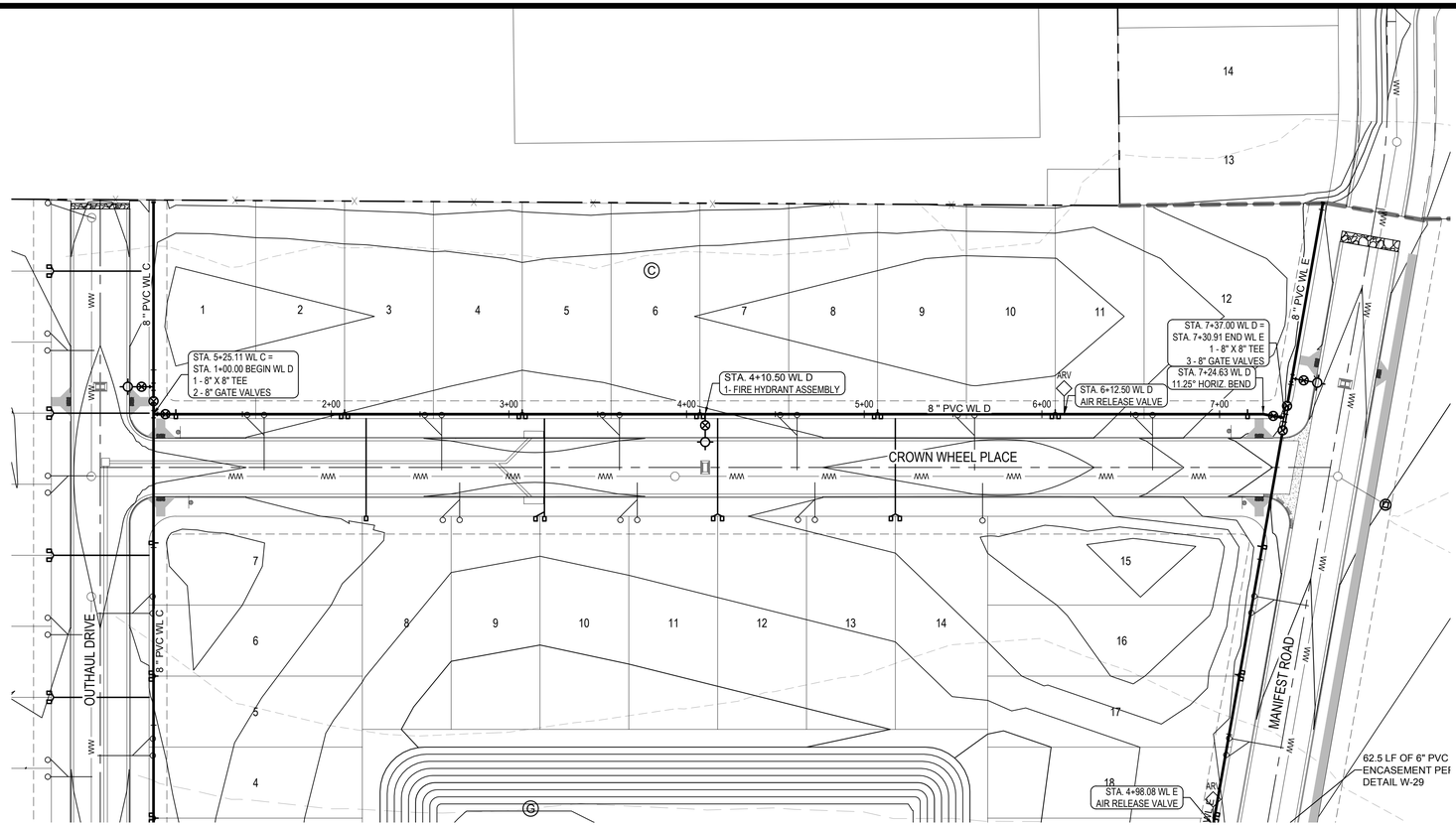
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.beginc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS
8" WATER LINE C
(STA. 1+00 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

Reviewed for Substantial Conformance by City of Hutto
HUTTO
FOR OFFICIAL USE ONLY
Mark Reeves, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WATR.dwg Layout: 57 8" WATER LINE C (STA. 1+00 TO END) Plotted: 1/8/2025 9:47:20 AM



0 20' 40' 80'
SCALE: 1" = 40'

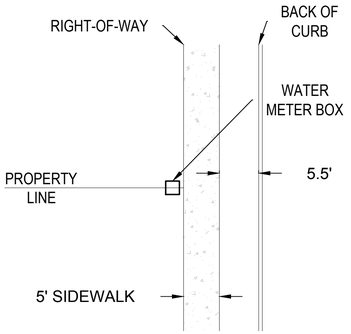
LEGEND

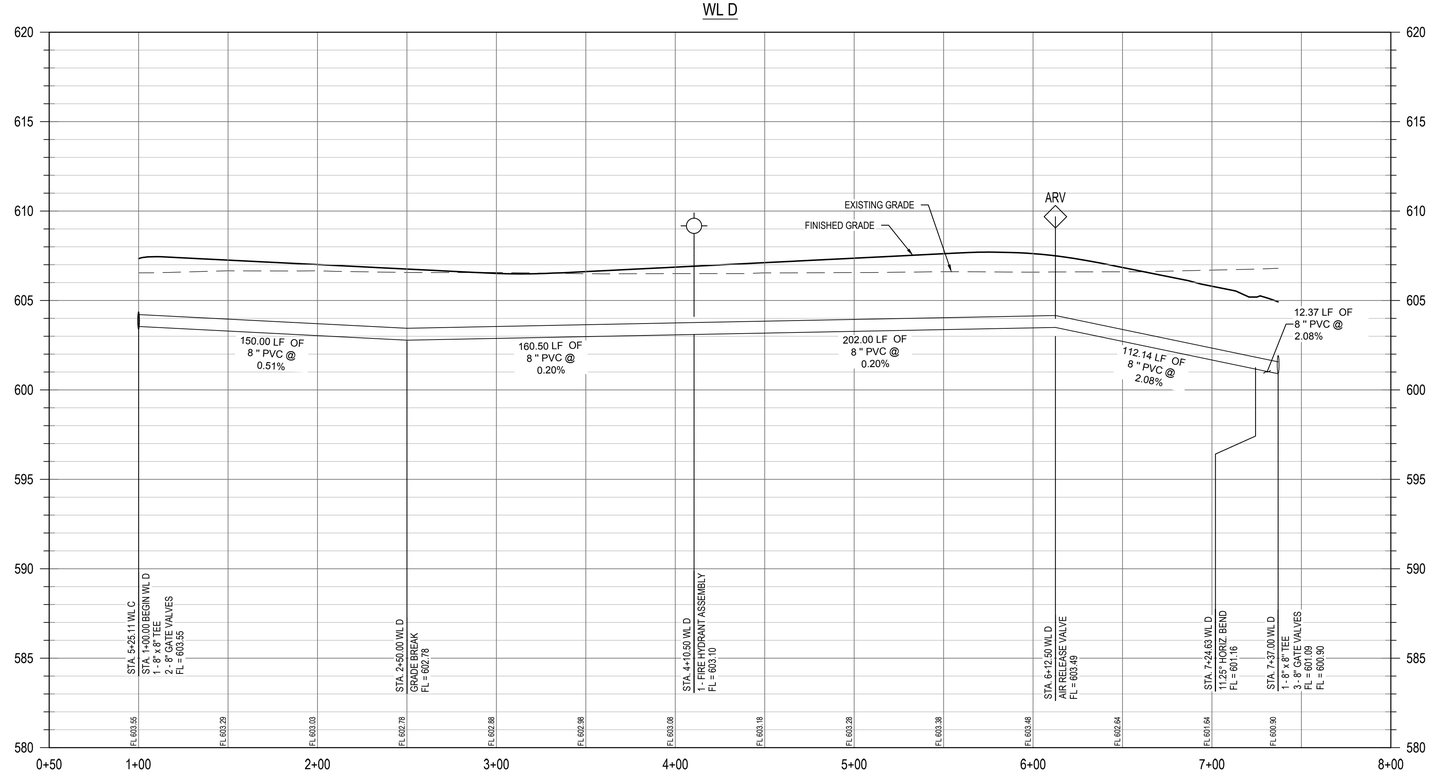
- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- CAP/PLUG
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- 6" SCH 40 PVC IRRIGATION SLEEVES

NOTES:

1. ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.
2. ALL VALVES, MANHOLES, & FIRE HYDRANTS TO BE OUTSIDE OF VALLEY GUTTERS, CURBS, & SIDEWALKS.

WATER METER BOX DETAIL
SCALE: 1" = 10'





REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

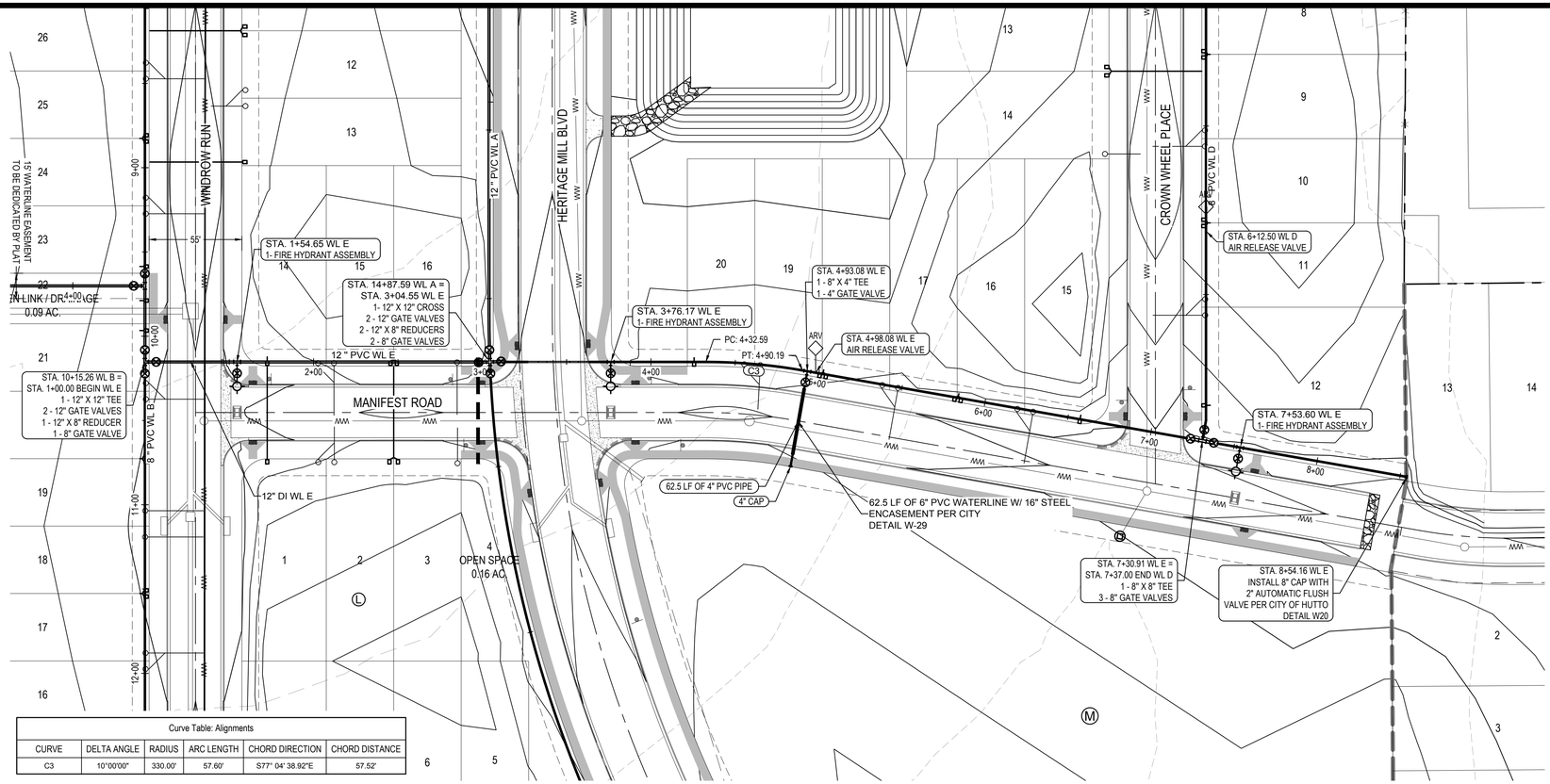
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

8" WATER LINE D
(STA. 1+00 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
HUTTO
Hutto Section 1 P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

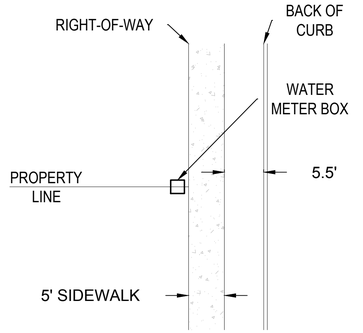
G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WATR.dwg Layout: 58 8" WATER LINE D (STA. 1+00 TO END) Plotted: 1/8/2025 9:47:25 AM



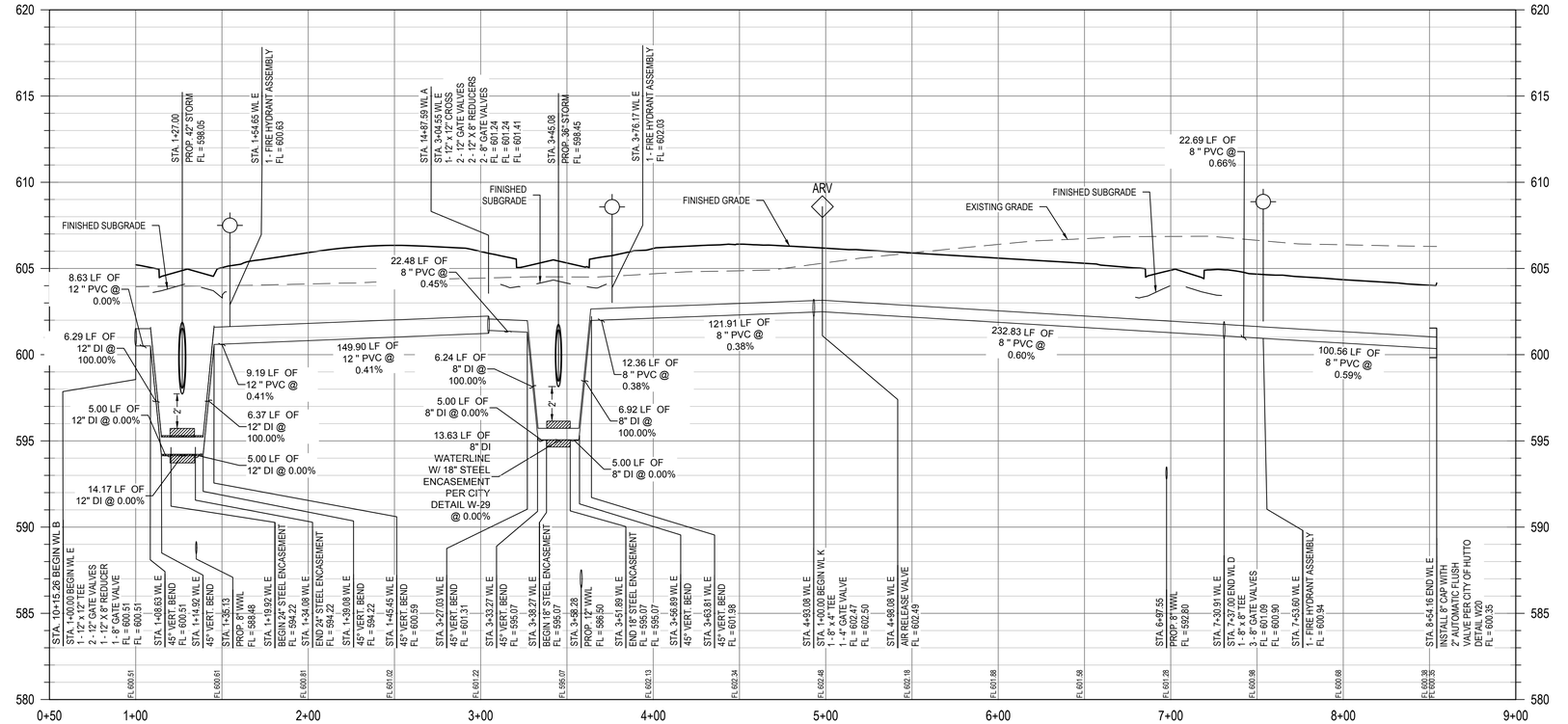
NOTES:

1. ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.
2. ALL VALVES, MANHOLES, & FIRE HYDRANTS TO BE OUTSIDE OF VALLEY GUTTERS, CURBS, & SIDEWALKS.

WATER METER BOX DETAIL
SCALE: 1" = 10'



WL E



Reviewed for Substantial Conformance by City of Hutto
Matt Bechis, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
FOR OFFICIAL USE ONLY

								APR
								DATE
								DESCRIPTION
								REV

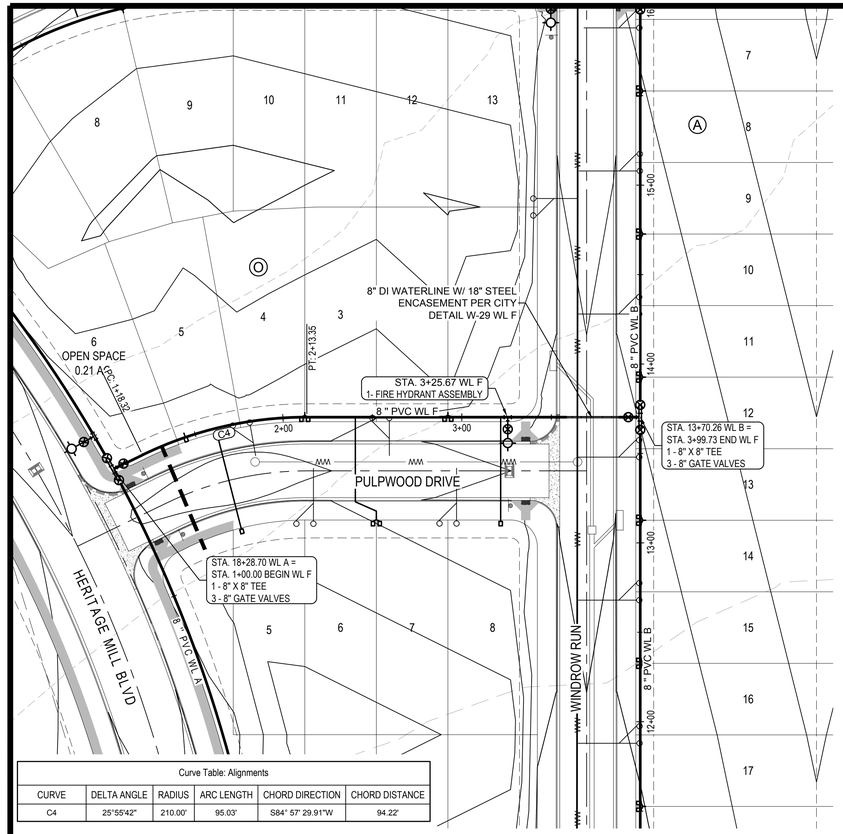
DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

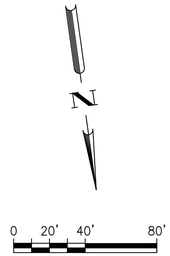
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

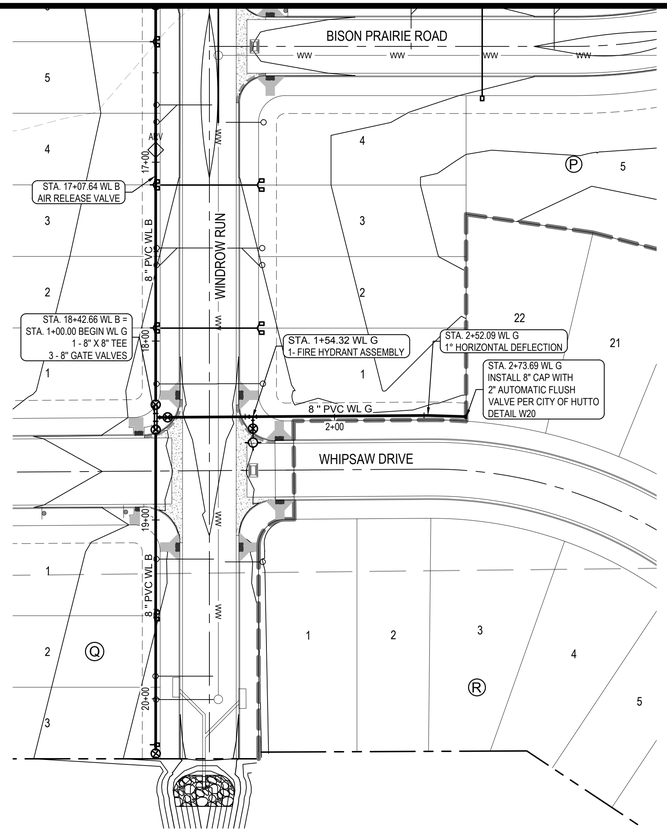
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS
8" WATER LINE E
(STA. 1+00 TO END)

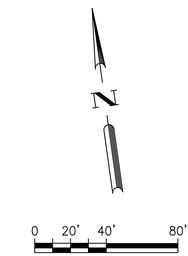
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WATR.dwg Layout: 59 8" WATER LINE E (STA. 1+00 TO END) Plotted: 1/8/2025 9:47:31 AM









LEGEND

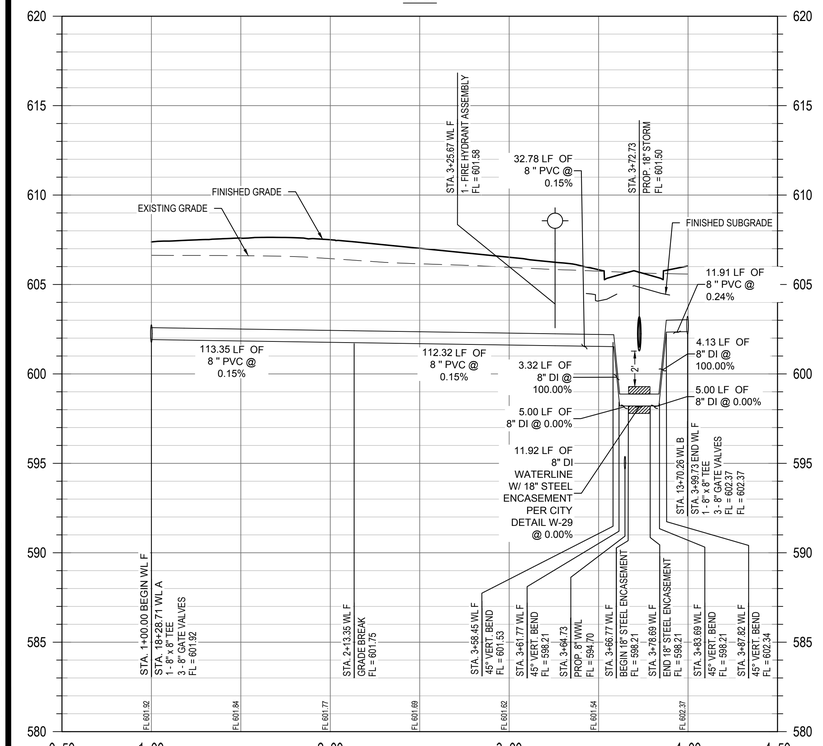
- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- CAP/PLUG
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- 6" SCH 40 PVC IRRIGATION SLEEVES

NOTES:

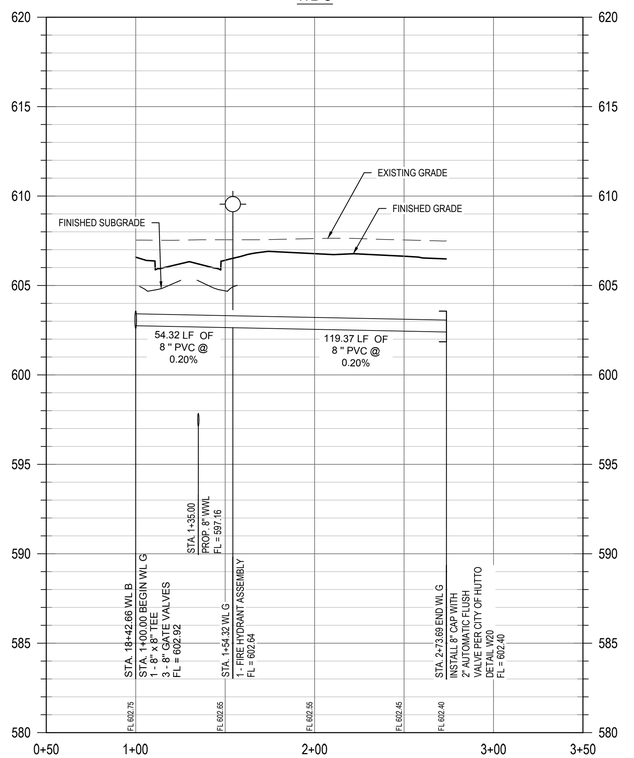
1. ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.
2. ALL VALVES, MANHOLES, & FIRE HYDRANTS TO BE OUTSIDE OF VALLEY GUTTERS, CURBS, & SIDEWALKS.

Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C4	25°55'42"	210.00'	95.03'	S84° 57' 29.91"W	94.22'

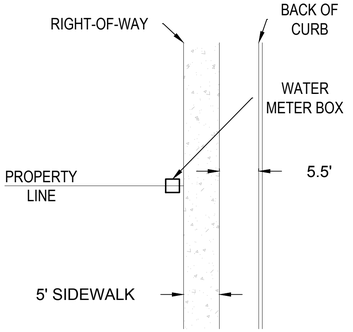
WL F



WL G



WATER METER BOX DETAIL
SCALE: 1" = 10'



Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Matt Bechtol, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

									APR
									DATE
									DESCRIPTION
									REV

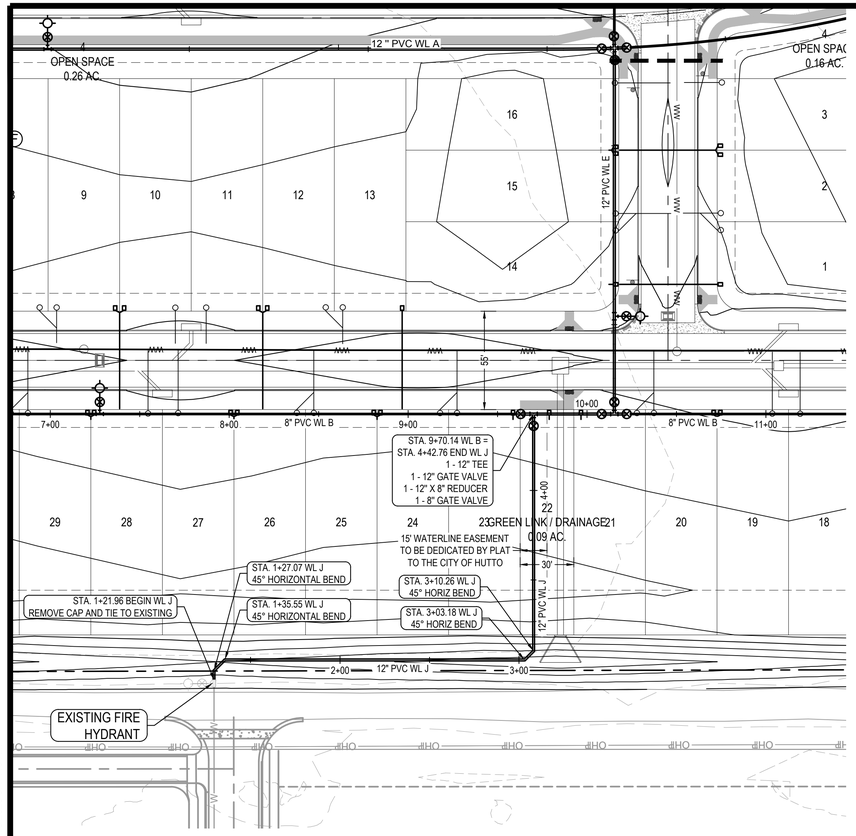
DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

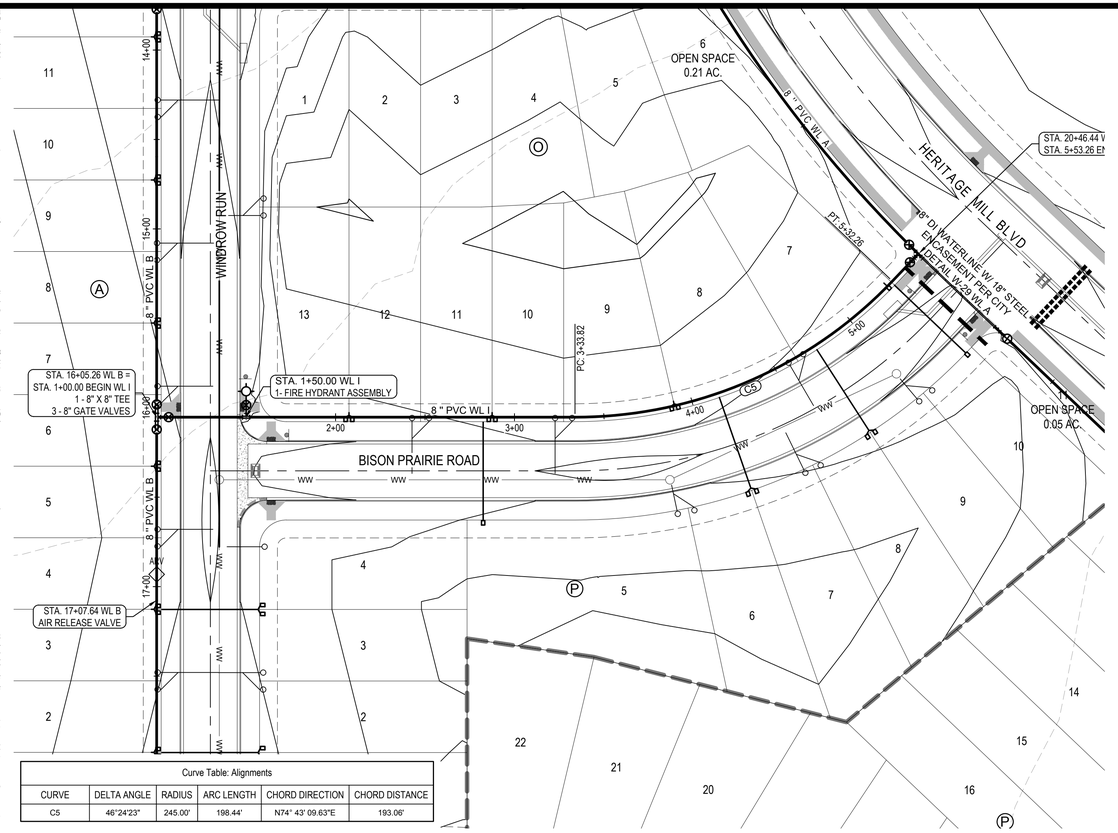
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS
8" WATER LINES F AND G
(STA. 1+00 TO END)

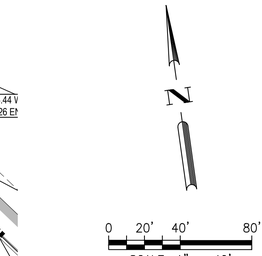
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDI01_CADD\01_Shts\8843-01-C-SP-WATR.dwg Layout: 60 8" WATER LINES F AND G (STA. 1+00 TO END) Plotted: 1/8/2025 9:47:39 AM





Curve Table: Alignments					
CURVE	DELTA ANGLE	RADIUS	ARC LENGTH	CHORD DIRECTION	CHORD DISTANCE
C5	46°24'23"	245.00'	198.44'	N74° 43' 09.63"E	193.06'



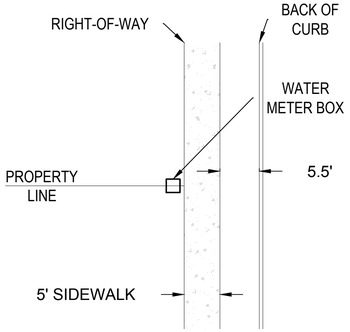
LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- SECTION BOUNDARY
- PROPOSED WATER LINE
- EXISTING WATER LINE
- FIRE HYDRANT ASSEMBLY
- GATE VALVE
- CAP/PLUG
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE
- 6" SCH 40 PVC IRRIGATION SLEEVES

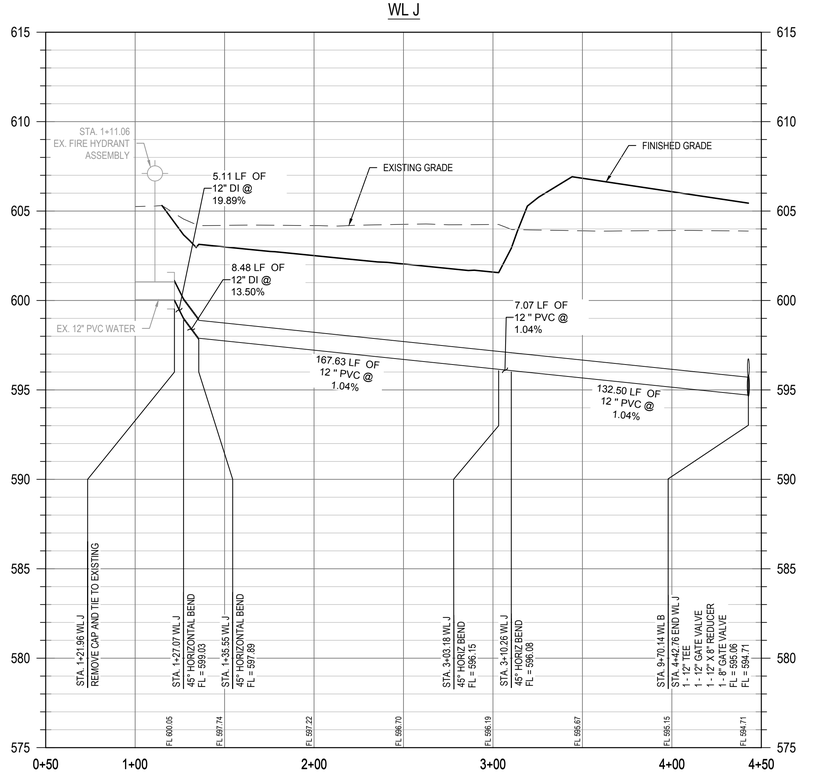
NOTES:

1. ALL WATER SYMBOLS ARE NOT TO SCALE AND ARE ONLY SHOWN FOR ILLUSTRATION PURPOSES.
2. ALL VALVES, MANHOLES, & FIRE HYDRANTS TO BE OUTSIDE OF VALLEY GUTTERS, CURBS, & SIDEWALKS.

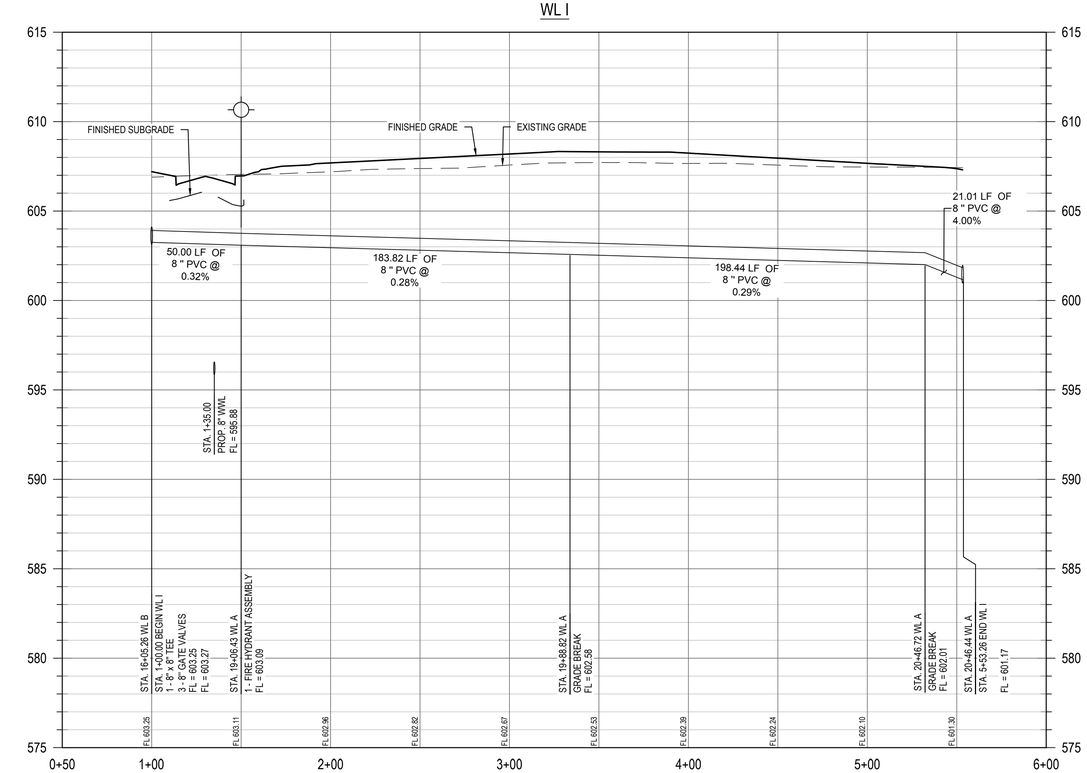
WATER METER BOX DETAIL
SCALE: 1" = 10'



WL J



WL I



Reviewed for Substantial Conformance by City of Hutto
Walt Bedsi, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

			APR
			DATE
			DESCRIPTION
			REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

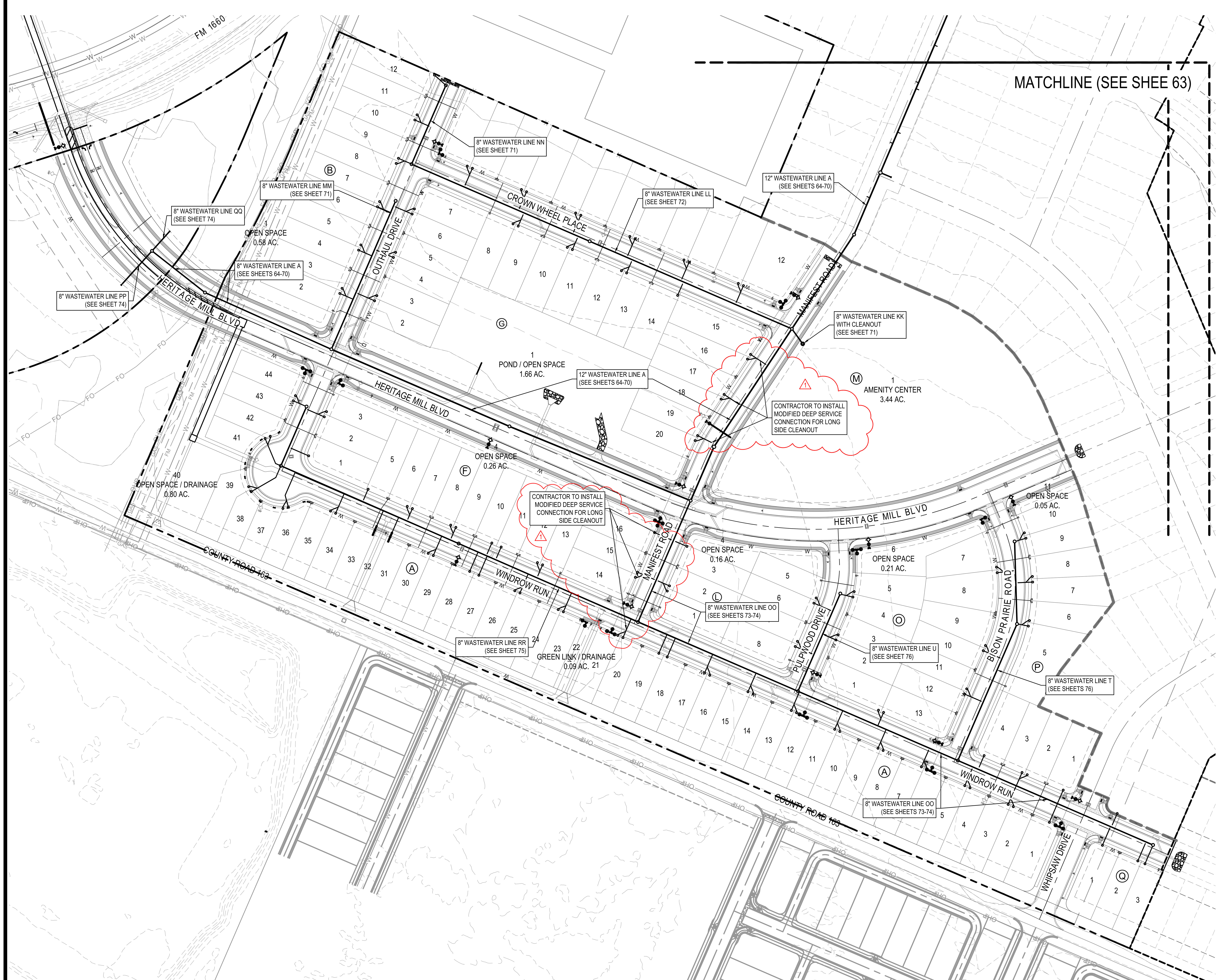
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS
8" WATER LINE I AND J
(STA. 1+00 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

61 OF 94

G:\TXC\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WATR.dwg Layout: 61 8" WATER LINE I AND J (STA. 1+00 TO END) Plotted: 1/8/2025 9:47:49 AM

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WWTR-OVAL.dwg Layout: 62 OVERALL WASTEWATER COLLECTION PLAN (SHEET 1 OF 2) Plotted: 3/6/2025 1:00:55 PM



SCALE: 1" = 80'

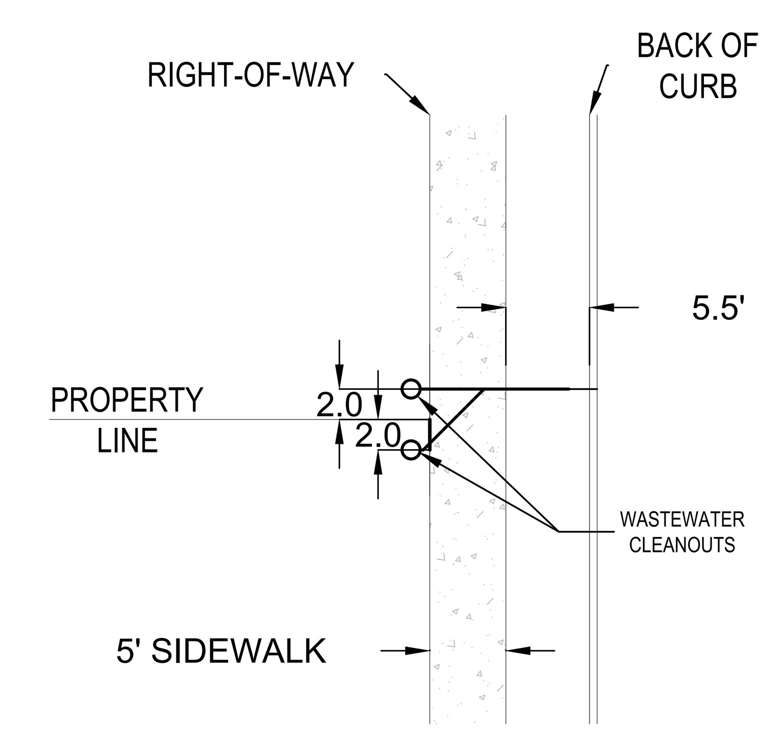
LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- PROPOSED WATER LINE
- PROPOSED STORM SEWER LINE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE

NOTE:

1. ALL MANHOLES SHALL BE VACUUM TESTED.
2. CONTRACTOR TO VERIFY ACTUAL DEPTH OF ALL EXISTING UTILITIES TO BE EXTENDED OR TIED INTO PRIOR TO EXCAVATING/TRENCHING OF NEW LINES.
3. ALL MANHOLE LIDS OUTSIDE R.O.W. TO BE BOLTED AND GASKETED.
4. ALL WASTEWATER LINE SHALL BE PVC SDR-26 CONFORMING TO ASTM D3034 WITH MINIMUM PIPE STIFFNESS OF 115 PSI AS DETERMINED BY ASTM D2412.
5. SERVICES SHOWN CONCEPTUALLY AND TO BE LOCATED PER DETAIL SHEET.
6. ALL MANHOLE CONE SECTIONS OUTSIDE OF PAVED AREAS THIS CONTRACT TO ALLOW FOR FINISHED TOP OF RIM (FUTURE CONDITION) TO BE SET AT APPROXIMATED 6 INCHES ABOVE NATURAL GRADE. THIS MAY REQUIRE ALTERNATE 1-FOOT TALL (W' DIAMETER) FINAL MANHOLE SECTIONS IN ORDER TO ALLOW FOR CONE AND RIM LEVELING IN THE FUTURE TO ACHIEVE DESIRED FINISHED RIM ELEVATIONS. CONTRACTOR TO PROVIDE SUBMITTAL DRAWING TO THE DESIGN ENGINEER FOR REVIEW AND CONSIDERATION FOR APPROVAL.
7. ALL MANHOLES SHALL BE COATED TO CITY OF HUTTO CURRENT STANDARD SPECIFICATIONS AFTER TESTING, UNLESS MANHOLES ARE FACTORY COATED WITH AN EQUAL OR BETTER MATERIAL.
8. WATER LINES AND OTHER UTILITY INFORMATION SHOWN ON THE WASTEWATER PLAN/PROFILE SHEETS ARE FOR REFERENCE ONLY. ALL WATER LINES, FIRE HYDRANTS, VALVES, AND RELATED UTILITY INFRASTRUCTURE SHALL BE INSTALLED AT LOCATIONS INDICATED ON THE WATER DISTRIBUTION PLANS.
9. SEE DETAIL SHEET 90 FOR WASTEWATER SERVICE/LATERAL INFORMATION.
10. REFER TO DETAIL ON SHEET 92 FOR ALL WATER LINE / WASTEWATER LINE CROSSINGS.
11. MEANDER SIDEWALK AROUND ALL WASTEWATER CLEANOUTS, REFER TO CITY OF HUTTO CONSTRUCTION STANDARDS TYPICAL RESIDENTIAL STREET LAYOUT AND ROAD SECTIONS WITH TYPICAL UTILITY ASSIGNMENT DETAILS.

WASTEWATER CLEANOUT DETAIL
SCALE: 1" = 10'



REV	DESCRIPTION	DATE	APR
1	REVISION TO LONG SIDE WASTEWATER CLEANOUTS		

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

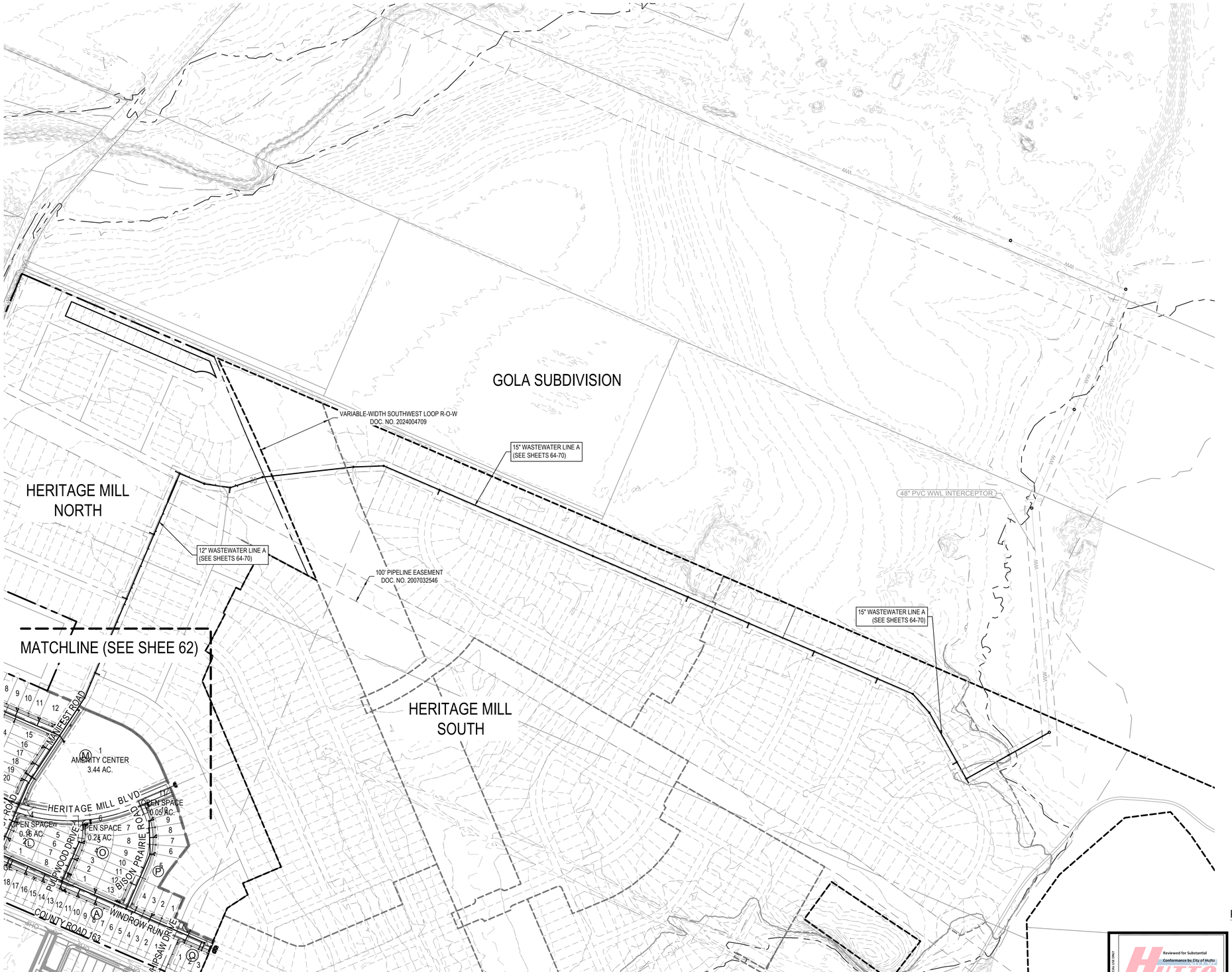
BGE

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

OVERALL WASTEWATER COLLECTION PLAN (SHEET 1 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
03/25/2025



0 40' 80' 160'

SCALE: 1" = 80'

LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- W — PROPOSED WATER LINE
- SSL — PROPOSED STORM SEWER LINE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE

NOTE:

1. ALL MANHOLES SHALL BE VACUUM TESTED.
2. CONTRACTOR TO VERIFY ACTUAL DEPTH OF ALL EXISTING UTILITIES TO BE EXTENDED OR TIED INTO PRIOR TO EXCAVATING/TRENCHING OF NEW LINES.
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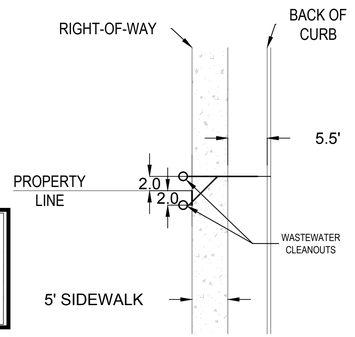
WASTEWATER CLEANOUT DETAIL
SCALE: 1" = 10'



Reviewed for Substantial Conformance by City of Hutto
Matt Barker, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
FOR OFFICIAL USE ONLY

	APR	DATE	DESCRIPTION	REV

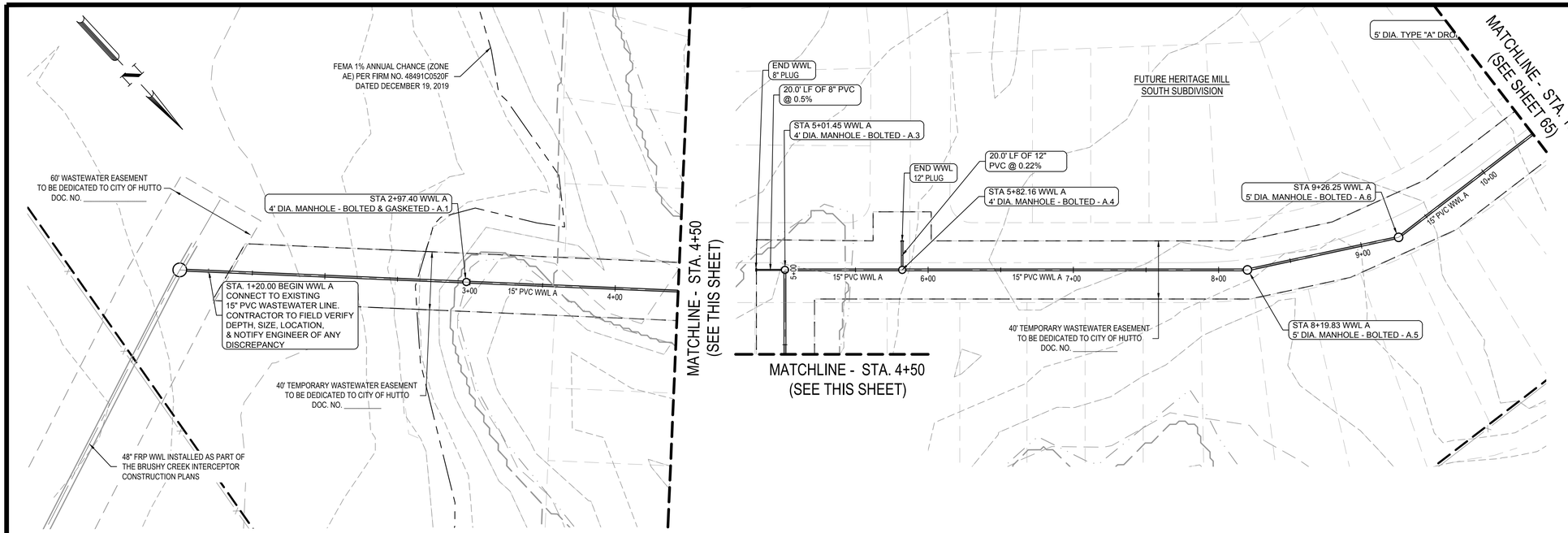
DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

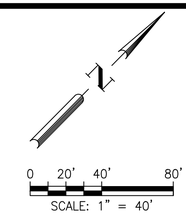
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS
OVERALL WASTEWATER COLLECTION PLAN
(SHEET 2 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WWTR-OVAL.dwg Layout: 63 OVERALL WASTEWATER COLLECTION PLAN (SHEET 2 OF 2) Plotted: 12/2/2024 6:18:02 PM





LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EXISTING MAJOR CONTOUR
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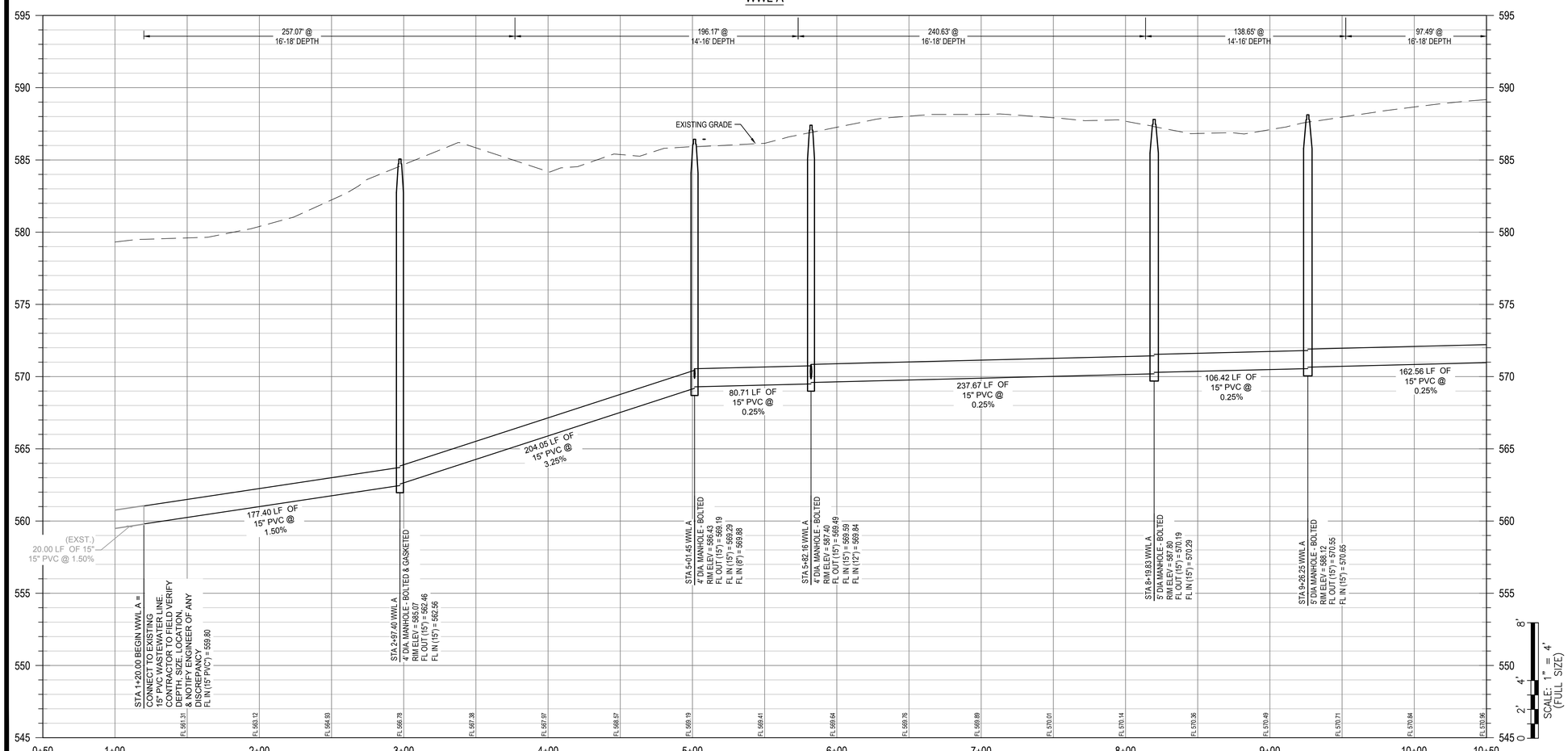
WWL A



PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

SCALE: 1" = 4' (FULL SIZE)

0 2' 4' 8'

Reviewed for Substantial Conformance by City of Hutto
FOR OFFICIAL USE ONLY
Matt Bechtol, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

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REVIEWED BY: AC
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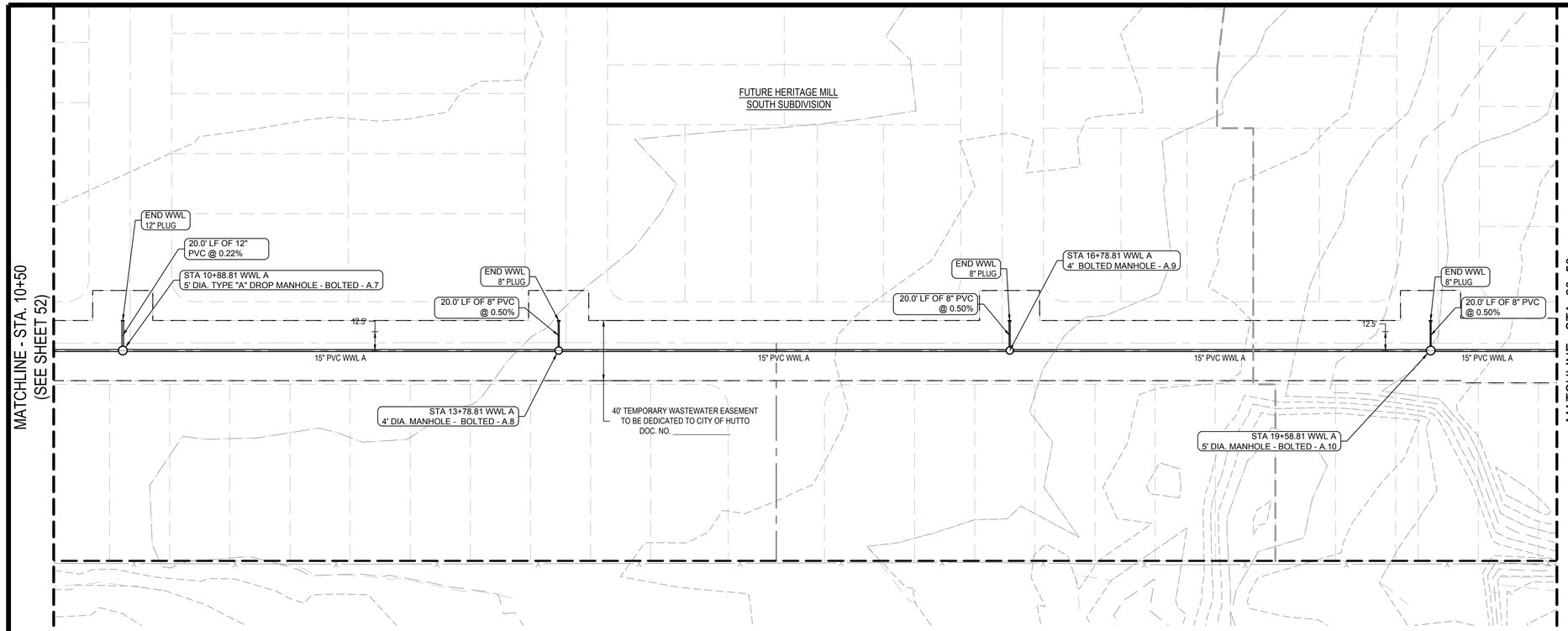
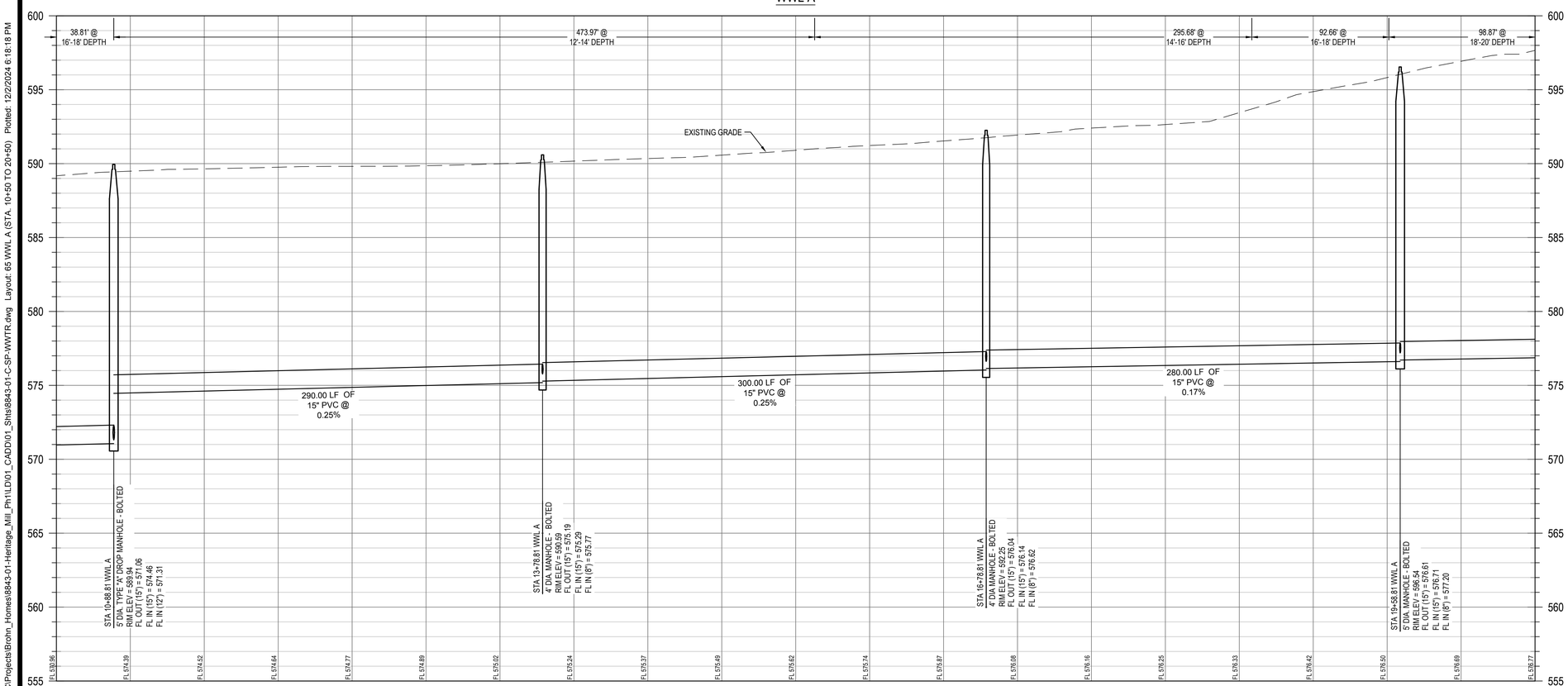
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

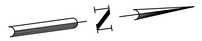
WWL A (STA. 1+00 TO 10+50)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WWTR.dwg Layout: 64 WWL A (STA. 1+00 TO 10+50) Plotted: 12/2/2024 6:18:08 PM







0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

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- PHASE BOUNDARY
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- EXISTING MINOR CONTOUR
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PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

FOR CAPACITY, USE ONLY

Reviewed for Substantial Conformance by City of Hutto

Matt Bechtol, P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

								APR
								DATE
								DESCRIPTION
								REV

DESIGNED BY: MS,AC

REVIEWED BY: AC

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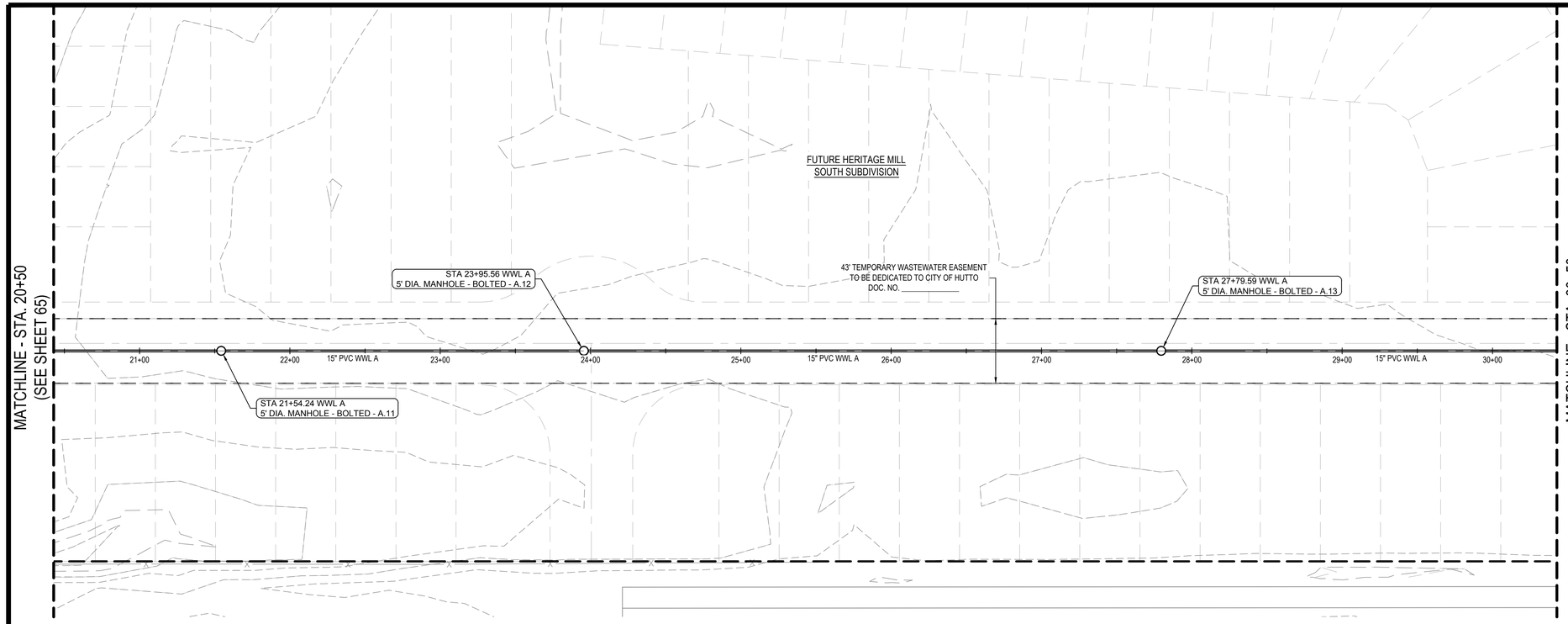
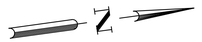
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WWL A (STA. 10+50 TO 20+50)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WWTR.dwg Layout: 65 WWL A (STA. 10+50 TO 20+50) Plotted: 12/2/2024 6:18:18 PM





0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EXISTING MAJOR CONTOUR
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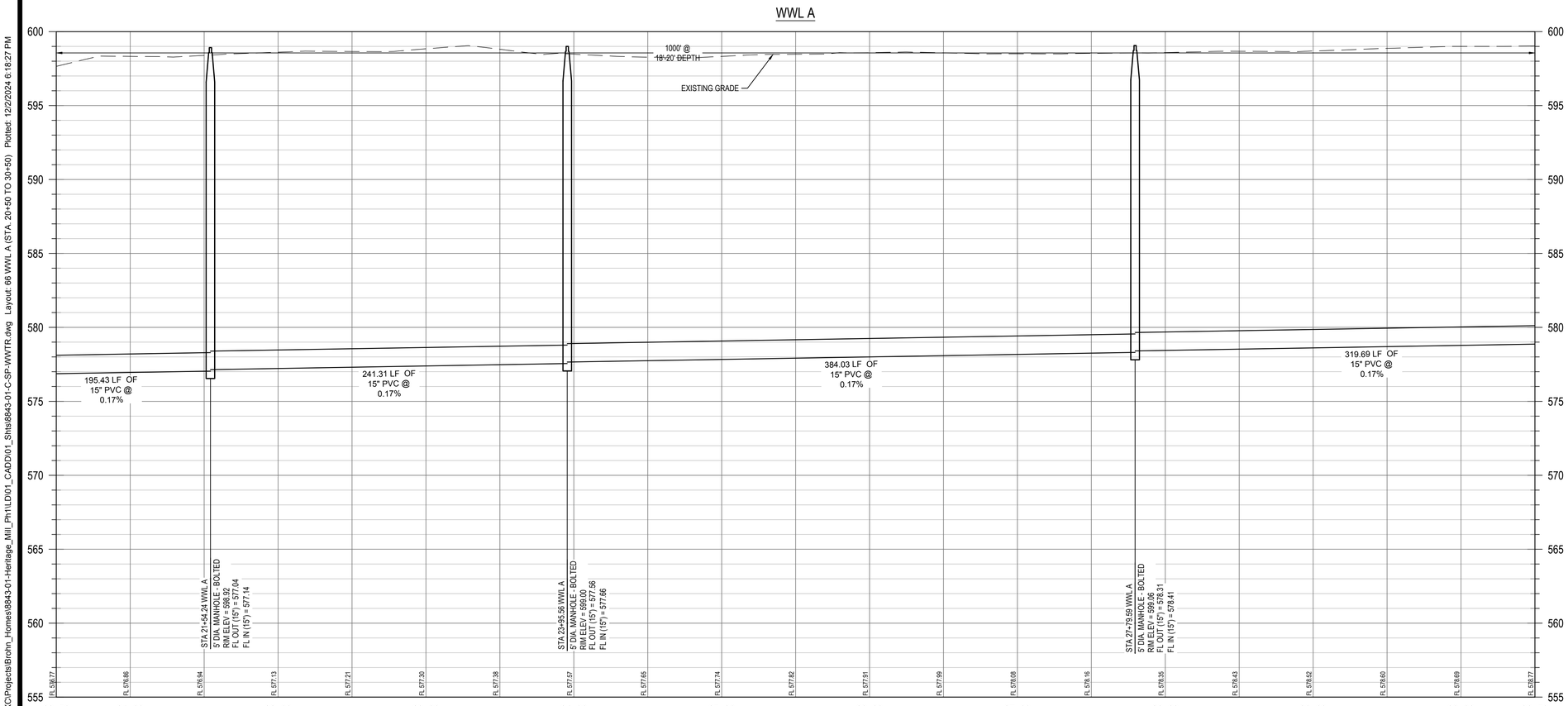

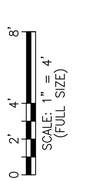

PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
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- PROPOSED WASTEWATER MANHOLE

	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC

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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WWL A (STA. 20+50 TO 30+50)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
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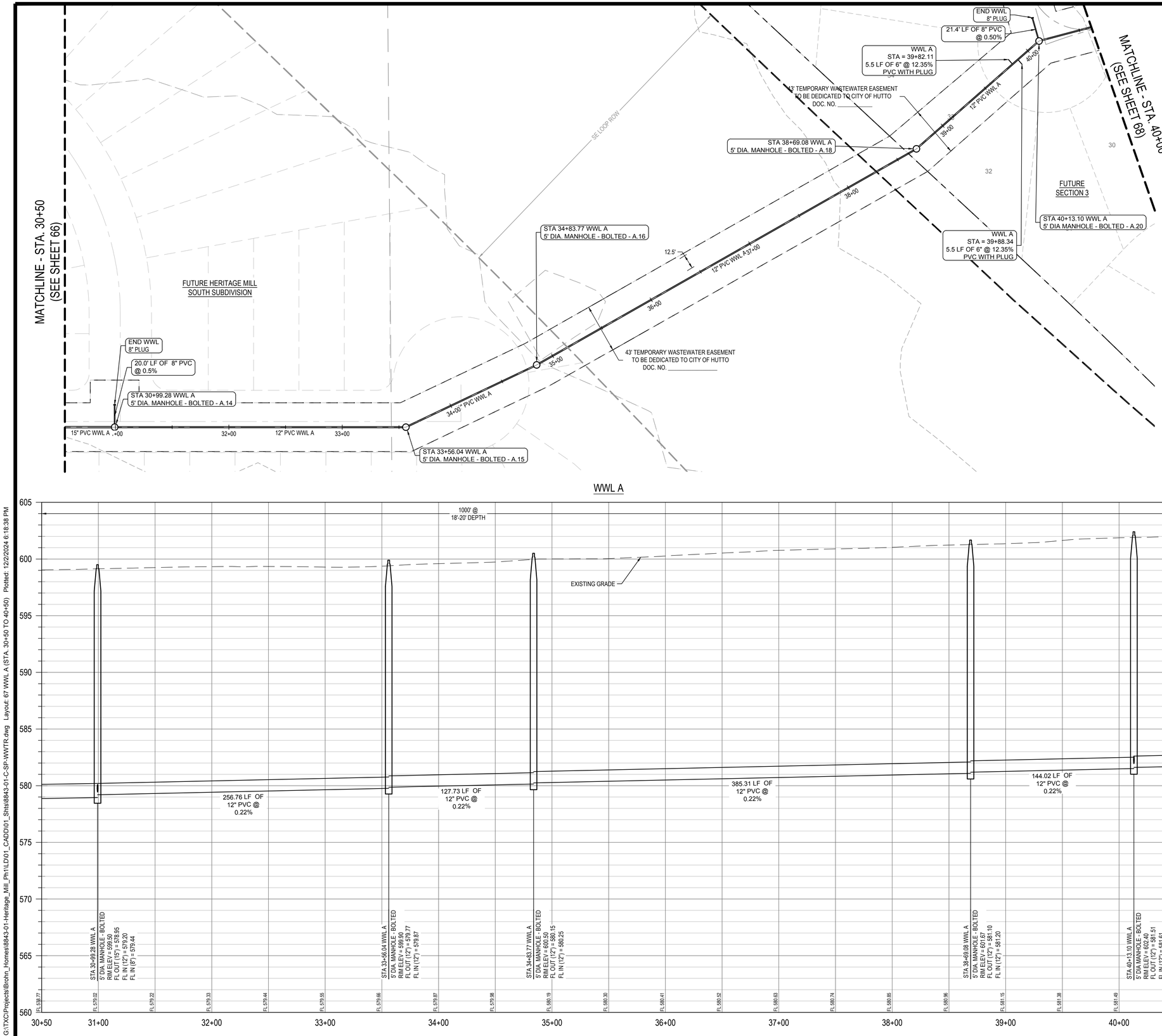
12/2/2024

G:\TX\CP\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WWTR.dwg Layout: 66 WWL A (STA. 20+50 TO 30+50) Plotted: 12/2/2024 6:18:27 PM



WWL A

0 20' 40' 80'
SCALE: 1" = 40'

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- PROPOSED WASTEWATER MANHOLE

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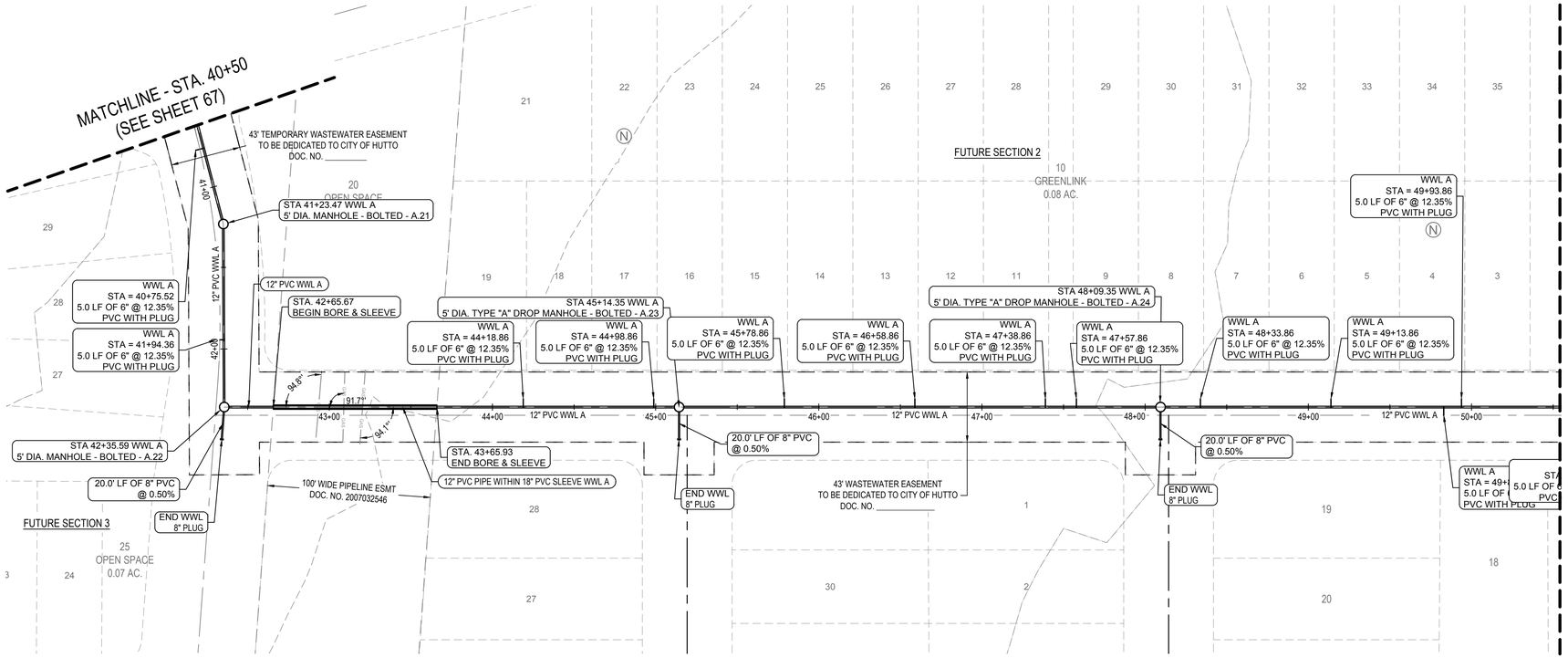

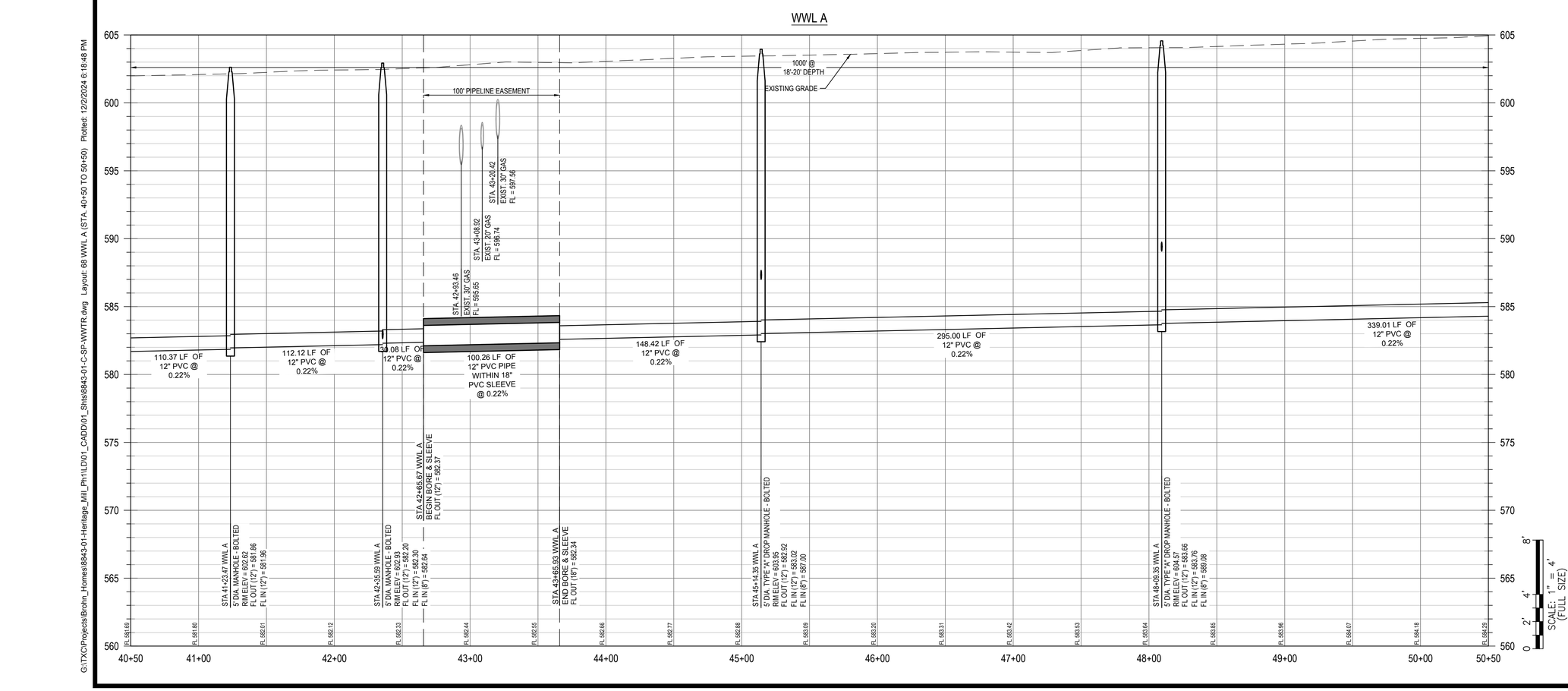

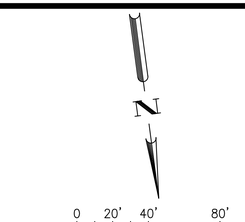

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9. SEE DETAIL SHEET 90 FOR WASTEWATER SERVICE/LATERAL INFORMATION.
10. REFER TO DETAIL ON SHEET 92 FOR ALL WATER LINE / WASTEWATER LINE CROSSINGS.
11. MEANDER SIDEWALK AROUND ALL WASTEWATER CLEANOUTS. REFER TO CITY OF HUTTO CONSTRUCTION STANDARDS TYPICAL RESIDENTIAL STREET LAYOUT AND ROAD SECTIONS WITH TYPICAL UTILITY ASSIGNMENT DETAILS.

PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

Reviewed for Substantial Conformance by City of Hutto
Mark Reckos, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
FOR CAPACITY, USE ONLY

	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

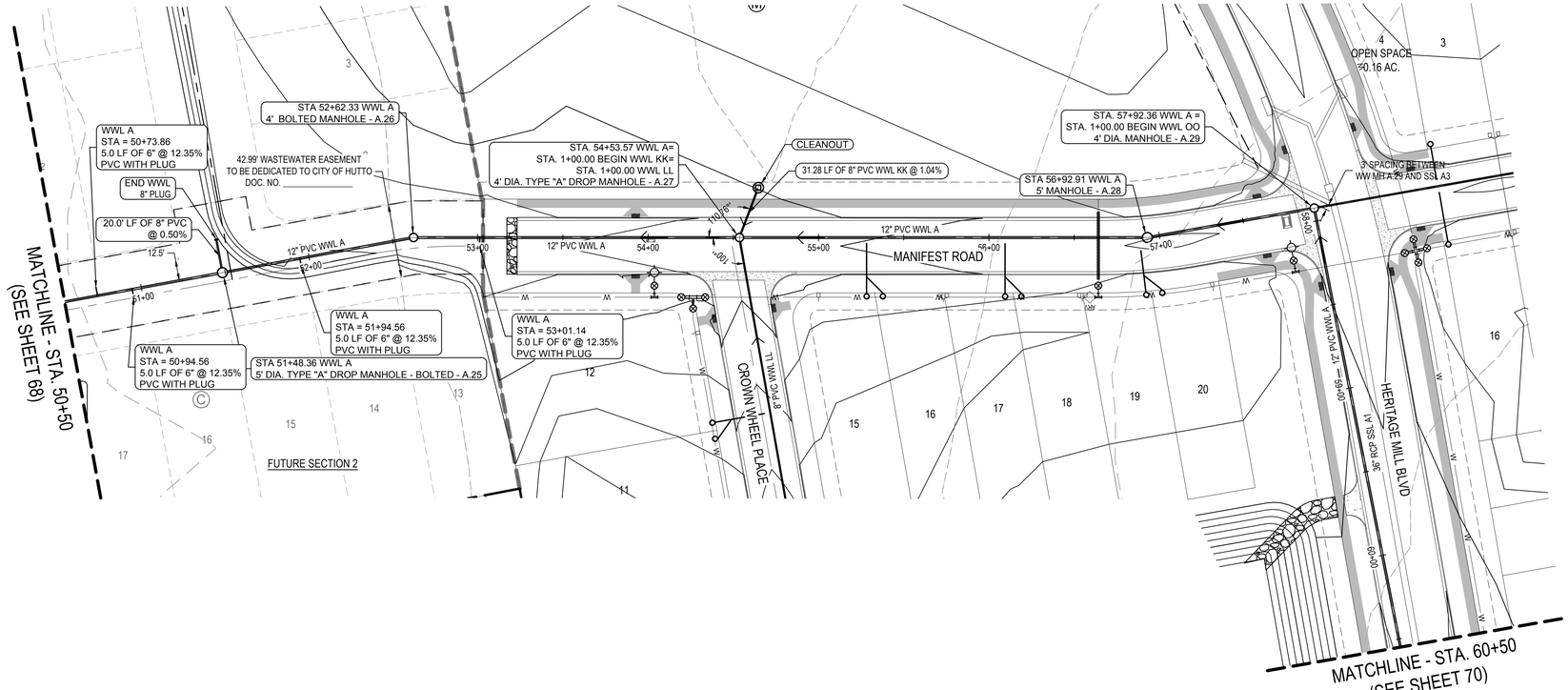
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

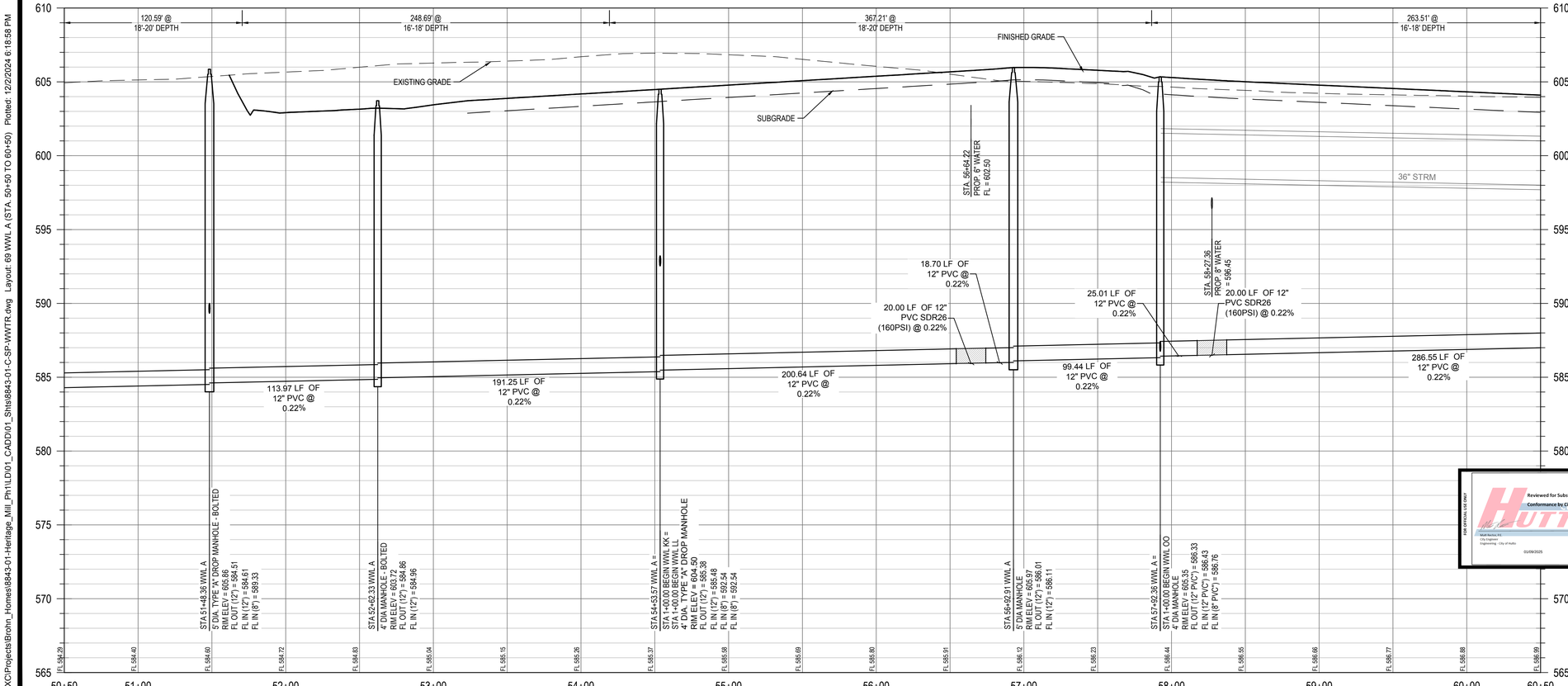
WWL A (STA. 40+50 TO 50+50)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDI\01_CADD\01_Shts\8843-01-C-SP-WWTR.dwg Layout: 68 WWL A (STA. 40+50 TO 50+50) Plotted: 12/2/2024 6:18:48 PM



WWL A



LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- PROPOSED WATER LINE
- PROPOSED STORM SEWER LINE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE

NOTE:

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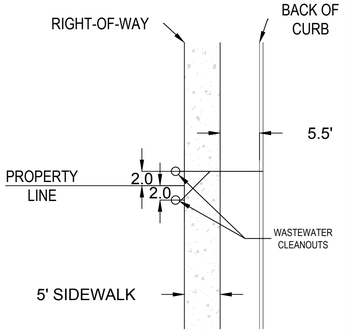
PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

0 2' 4' 8'
SCALE: 1" = 4'
(FULL SIZE)

WASTEWATER CLEANOUT DETAIL
SCALE: 1" = 10'



Reviewed for Substantial Conformance by City of Hutto
Matt Bevins P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
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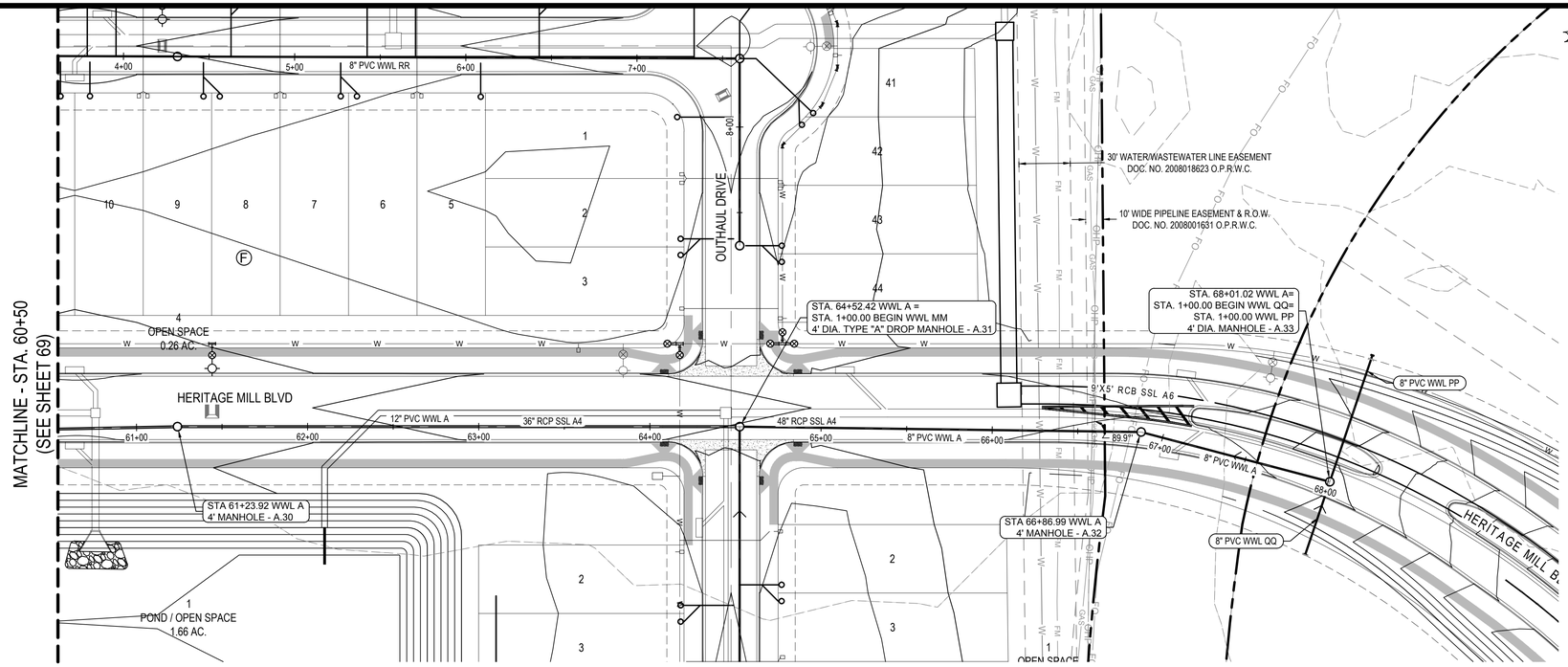
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WWL A (STA. 50+50 TO 60+50)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WWTR.dwg Layout: 69 WWL A (STA. 50+50 TO 60+50) Plotted: 12/2/2024 6:18:58 PM



0 20' 40' 80'

SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- W — PROPOSED WATER LINE
- SSL — PROPOSED STORM SEWER LINE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE

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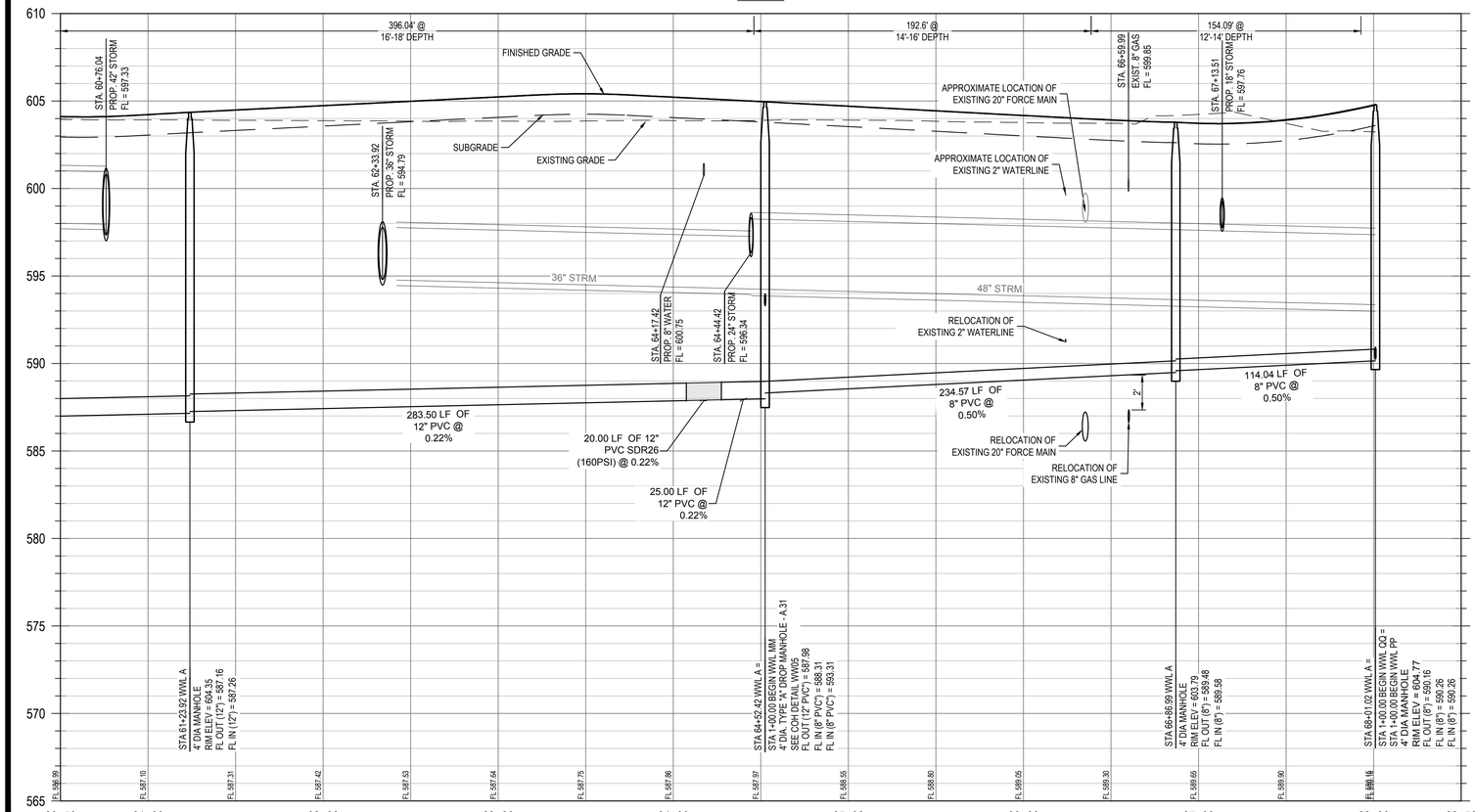
WWL A



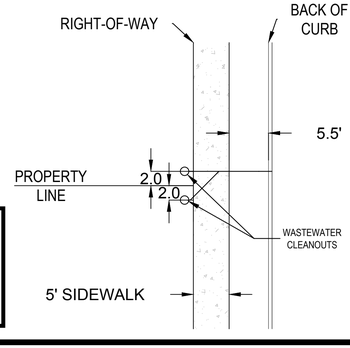
SCALE: 1" = 4'
(FULL SIZE)

0 2' 4' 8'

PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

WASTEWATER CLEANOUT DETAIL
SCALE: 1" = 10'



Reviewed for Substantial Conformance by City of Hutto
Matt Bucha, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
FOR CERTIFICATE USE ONLY

	APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

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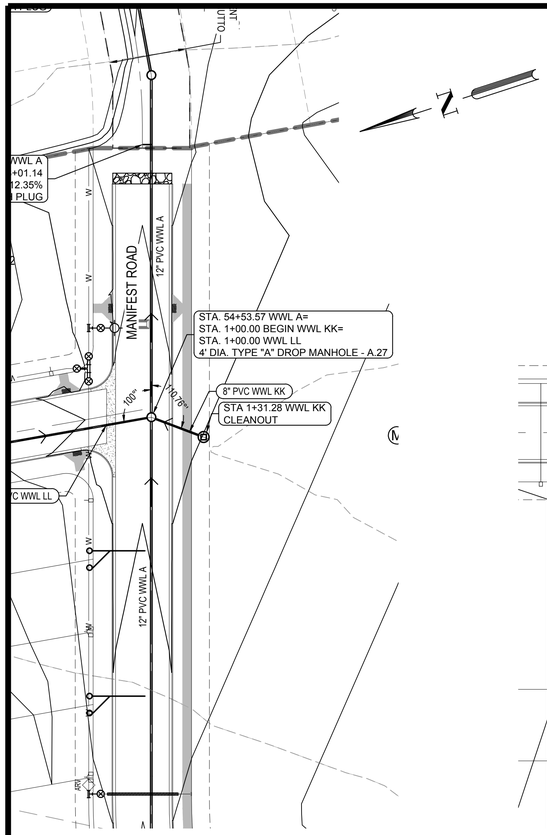
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

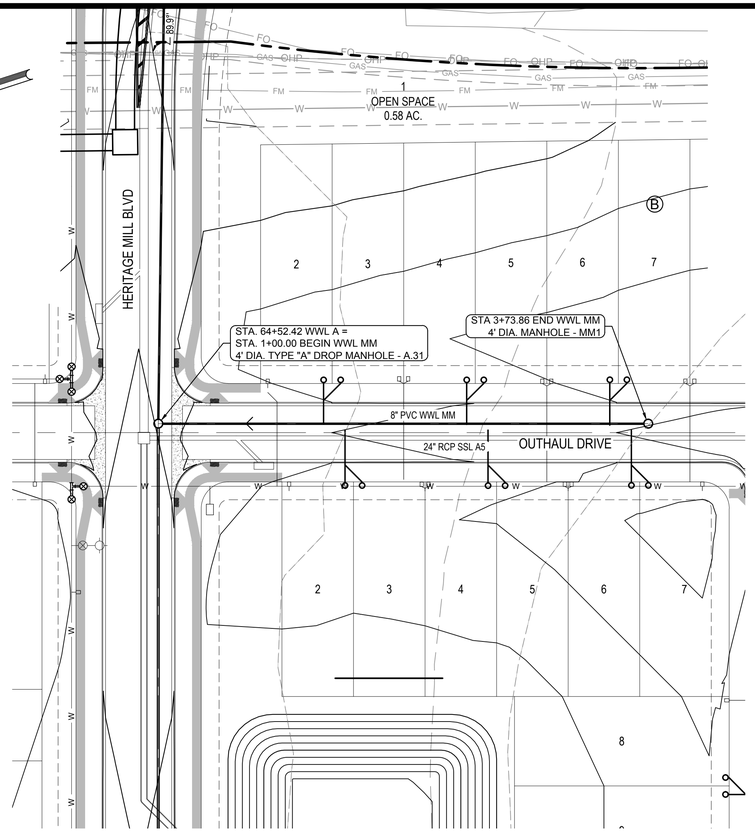
WWL A (STA. 60+50 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXCD\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WWTR.dwg Layout: 70 WWL A (STA. 60+50 TO END) Plotted: 12/2/2024 6:19:09 PM



WWL KK



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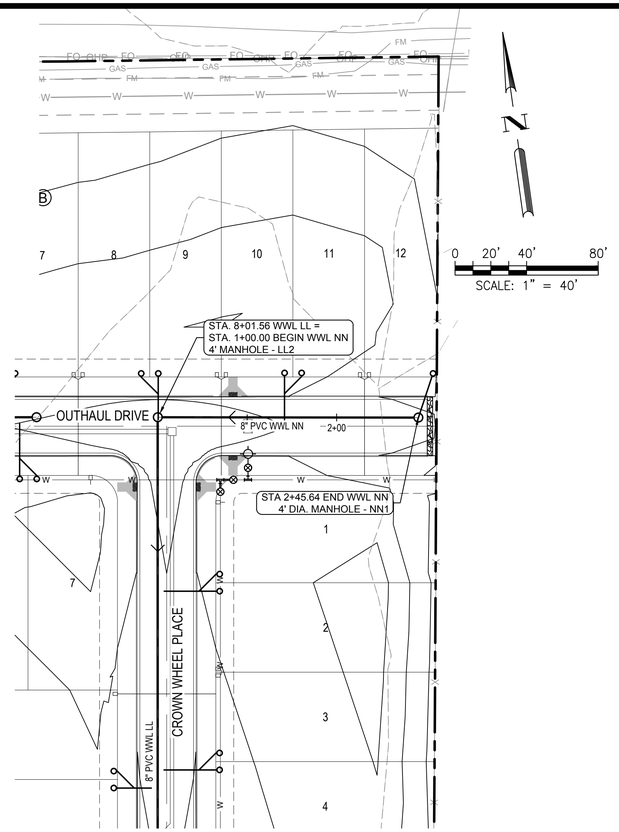

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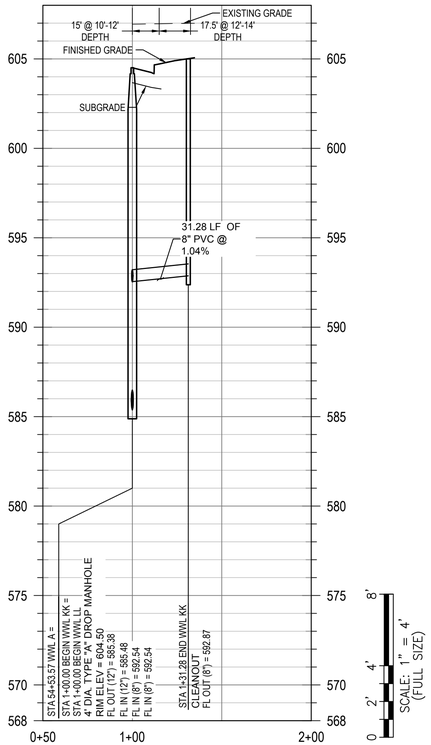

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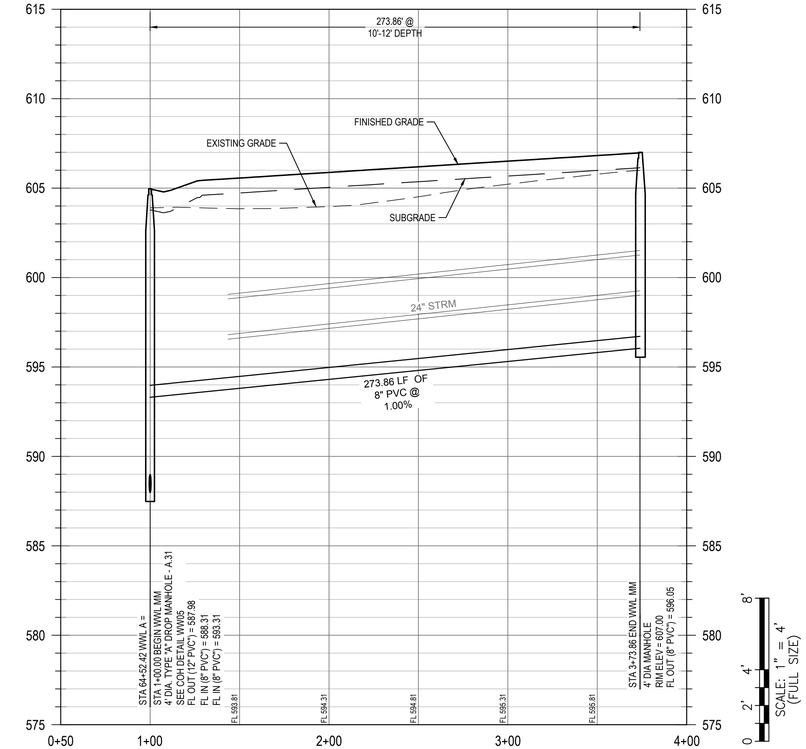
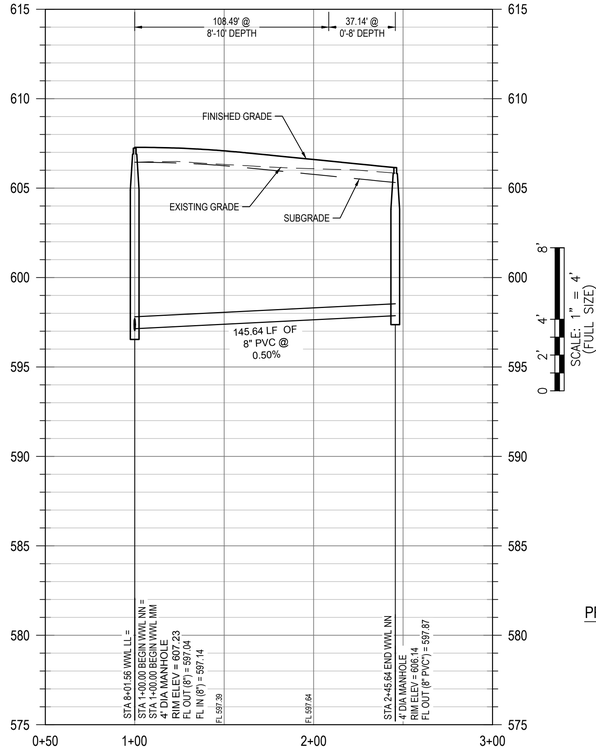


WWL MM



WWL NN

LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- W — PROPOSED WATER LINE
- SSL — PROPOSED STORM SEWER LINE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
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NOTE:

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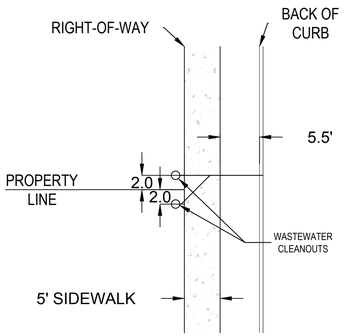
PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

WASTEWATER CLEANOUT DETAIL
SCALE: 1" = 10'



								APR
								DATE
								DESCRIPTION
								REV

DESIGNED BY: MS,AC

REVIEWED BY: AC

DRAWN BY: BE,BC

BGE, INC.
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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WWL KK & MM & NN (STA. 1+00 TO END)

STATE OF TEXAS
RICHARD PHAM
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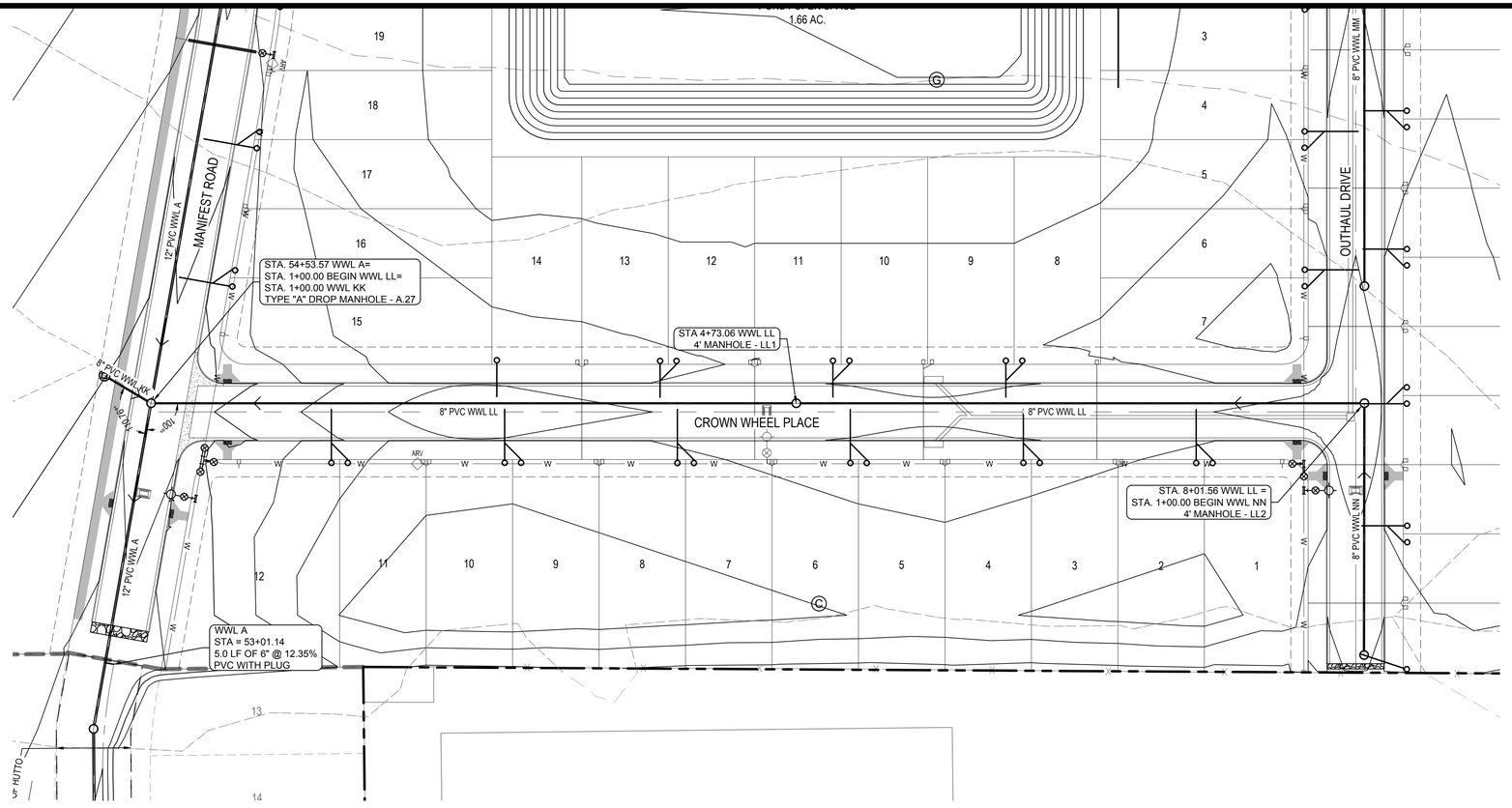
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WWTR.dwg Layout: 71 WWL KK & MM & NN (STA. 1+00 TO END) Plotted: 12/2/2024 6:19:23 PM



LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EXISTING MAJOR CONTOUR
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- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
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- W — PROPOSED WATER LINE
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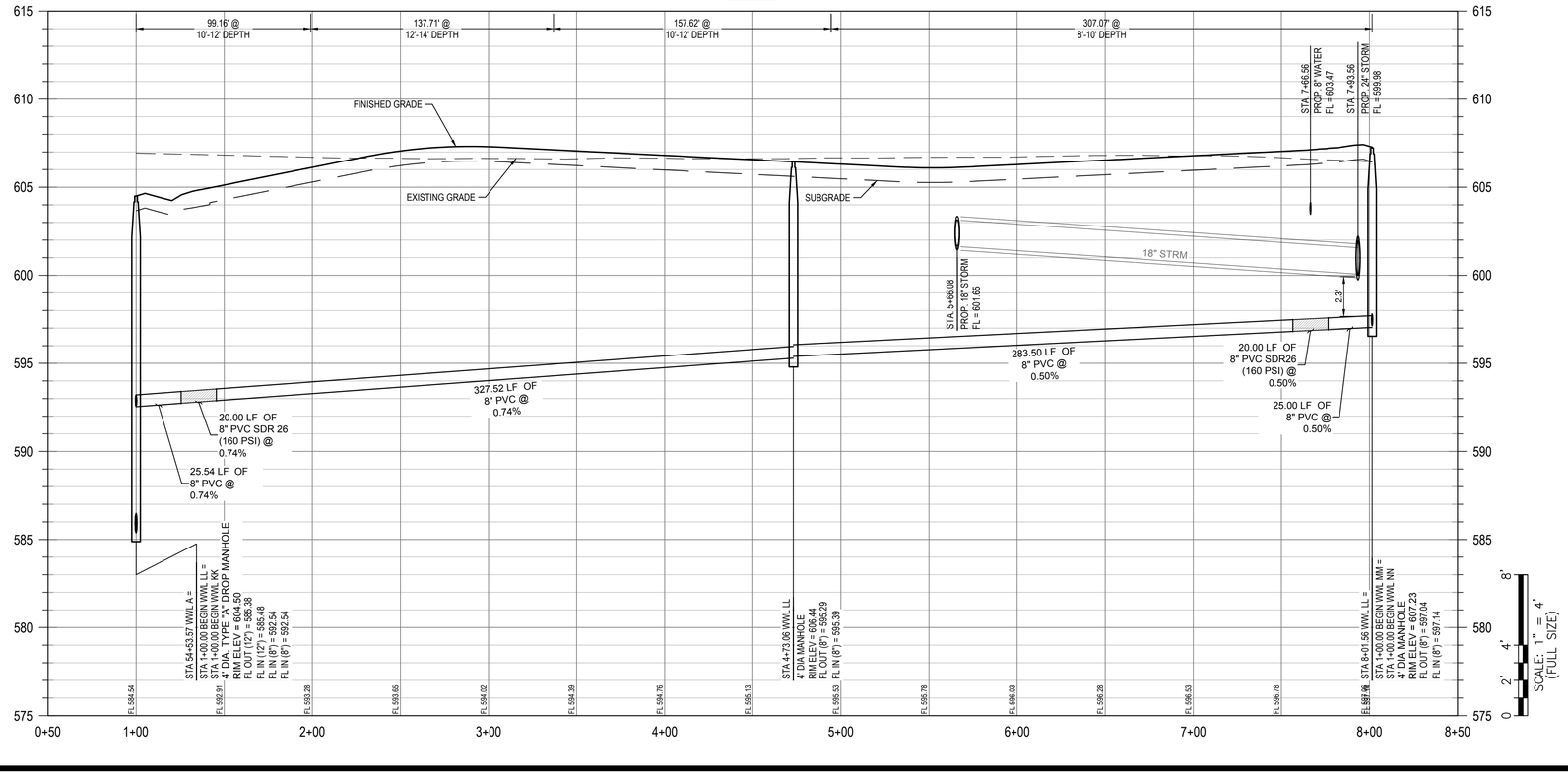
WWL LL

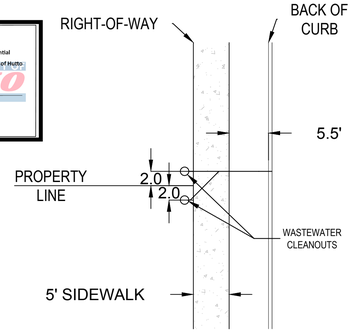


PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

WASTEWATER CLEANOUT DETAIL

SCALE: 1" = 10'



Reviewed for Substantial Conformance by City of Hutto
Mark Reinke, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

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DESIGNED BY: MS,AC
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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WWL LL (STA. 1+00 TO END)

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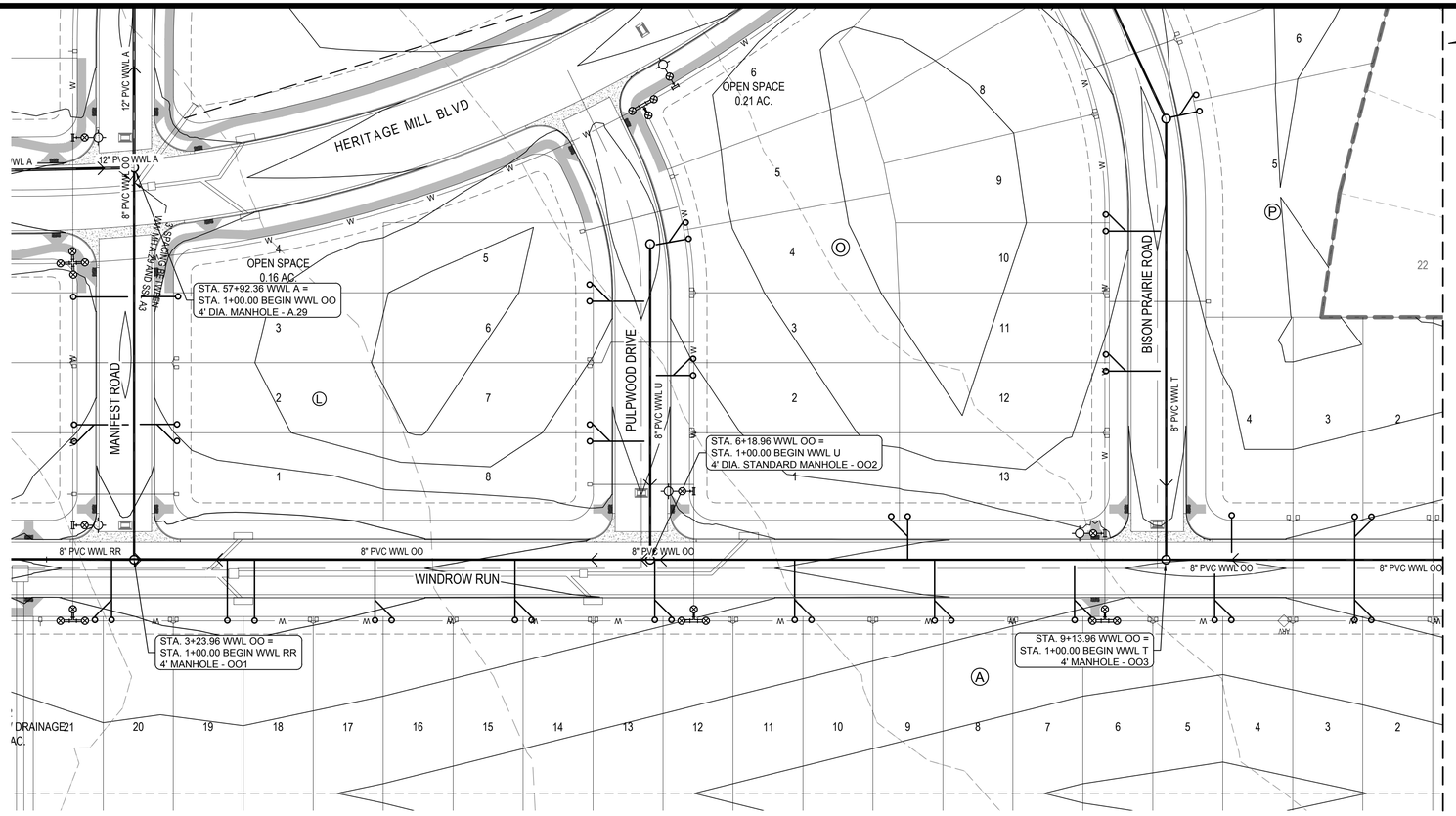
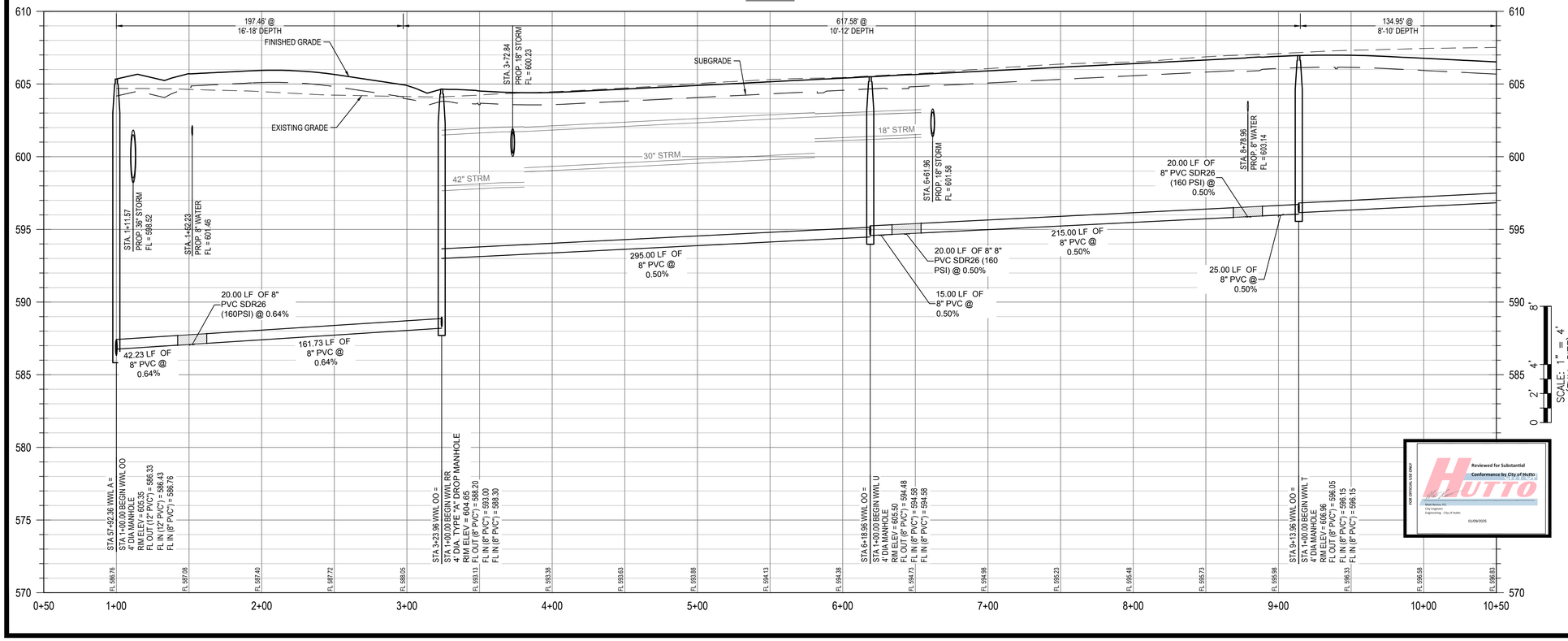
G:\TXCO\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDI01_CADD\01_Shts\8843-01-C-SP-WWTR.dwg Layout: 72 WWL LL (STA. 1+00 TO END) Plotted: 12/2/2024 6:19:35 PM





MATCHLINE (STA. 10+50)
SEE SHEET 74

0 20' 40' 80'
SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- PROPOSED WATER LINE
- PROPOSED STORM SEWER LINE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
- DOUBLE WATER SERVICE
- SINGLE WATER SERVICE

NOTE:

1. ALL MANHOLES SHALL BE VACUUM TESTED.
2. CONTRACTOR TO VERIFY ACTUAL DEPTH OF ALL EXISTING UTILITIES TO BE EXTENDED OR TIED INTO PRIOR TO EXCAVATING/TRENCHING OF NEW LINES.
3. ALL MANHOLE LIDS OUTSIDE R.O.W. TO BE BOLTED AND GASKETED.
4. ALL WASTEWATER LINE SHALL BE PVC SDR-26 CONFORMING TO ASTM D3034 WITH MINIMUM PIPE STIFFNESS OF 115 PSI AS DETERMINED BY ASTM D2412.
5. SERVICES SHOWN CONCEPTUALLY AND TO BE LOCATED PER DETAIL SHEET.
6. ALL MANHOLE CONE SECTIONS OUTSIDE OF PAVED AREAS THIS CONTRACT TO ALLOW FOR FINISHED TOP OF RIM (FUTURE CONDITION) TO BE SET AT APPROXIMATED 6 INCHES ABOVE NATURAL GRADE. THIS MAY REQUIRE ALTERNATE 1-FOOT TALL (W' DIAMETER) FINAL MANHOLE SECTIONS IN ORDER TO ALLOW FOR CONE AND RIM LEVELING IN THE FUTURE TO ACHIEVE DESIRED FINISHED RIM ELEVATIONS. CONTRACTOR TO PROVIDE SUBMITTAL DRAWING TO THE DESIGN ENGINEER FOR REVIEW AND CONSIDERATION FOR APPROVAL.
7. ALL MANHOLES SHALL BE COATED TO CITY OF HUTTO CURRENT STANDARD SPECIFICATIONS AFTER TESTING, UNLESS MANHOLES ARE FACTORY COATED WITH AN EQUAL OR BETTER MATERIAL.
8. WATER LINES AND OTHER UTILITY INFORMATION SHOWN ON THE WASTEWATER PLAN/PROFILE SHEETS ARE FOR REFERENCE ONLY. ALL WATER LINES, FIRE HYDRANTS, VALVES, AND RELATED UTILITY INFRASTRUCTURE SHALL BE INSTALLED AT LOCATIONS INDICATED ON THE WATER DISTRIBUTION PLANS.
9. SEE DETAIL SHEET 90 FOR WASTEWATER SERVICE/LATERAL INFORMATION.
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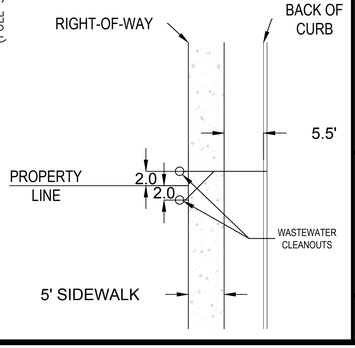
11. MEANDER SIDEWALK AROUND ALL WASTEWATER CLEANOUTS. REFER TO CITY OF HUTTO CONSTRUCTION STANDARDS TYPICAL RESIDENTIAL STREET LAYOUT AND ROAD SECTIONS WITH TYPICAL UTILITY ASSIGNMENT DETAILS.

PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

WASTEWATER CLEANOUT DETAIL
SCALE: 1" = 10'



0 2' 4' 8'
SCALE: 1" = 4' (FULL SIZE)

FOR OFFICIAL USE ONLY
Reviewed for Substantial Conformance by City of Hutto
Mark Remmert, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

	APR	DATE	DESCRIPTION	REV

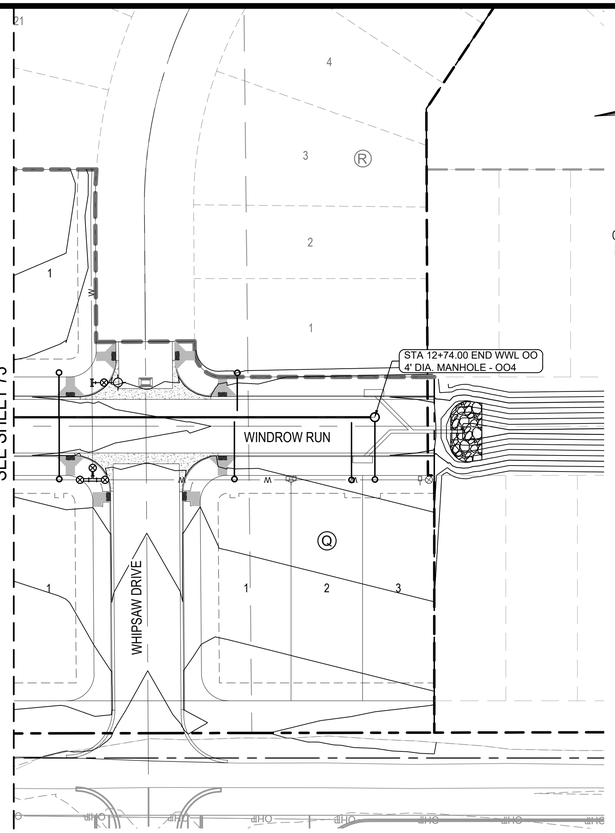
DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS
WWL OO (STA. 1+00 TO 10+50)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXCD\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDI01_CADD\01_Shts\8843-01-C-SP-WWTR.dwg Layout: 7.3 WWL OO (STA. 1+00 TO 10+50) Plotted: 12/2/2024 6:19:48 PM



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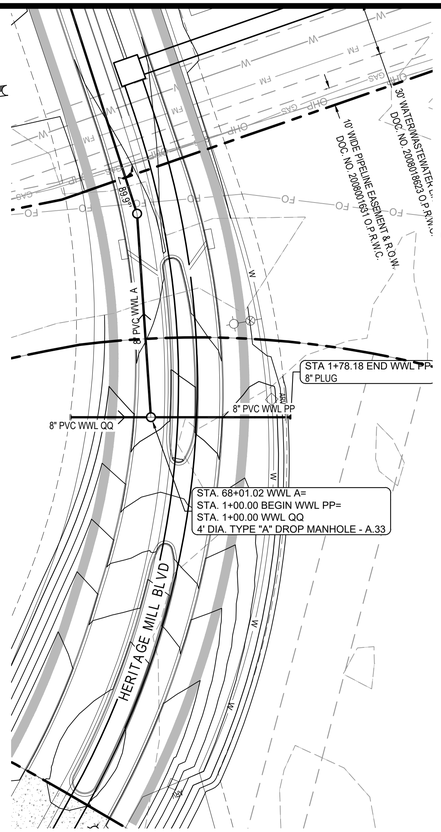

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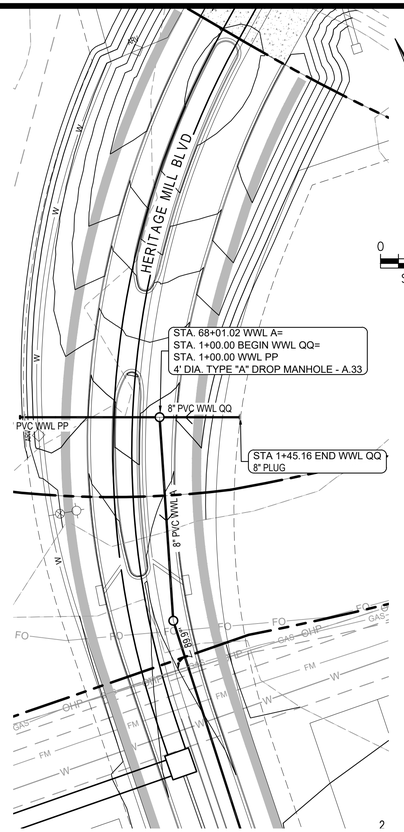

WWL QQ

0 20' 40' 80'
SCALE: 1" = 40'

LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- PROPOSED WATER LINE
- PROPOSED STORM SEWER LINE
- DOUBLE WASTEWATER SERVICE
- SINGLE WASTEWATER SERVICE
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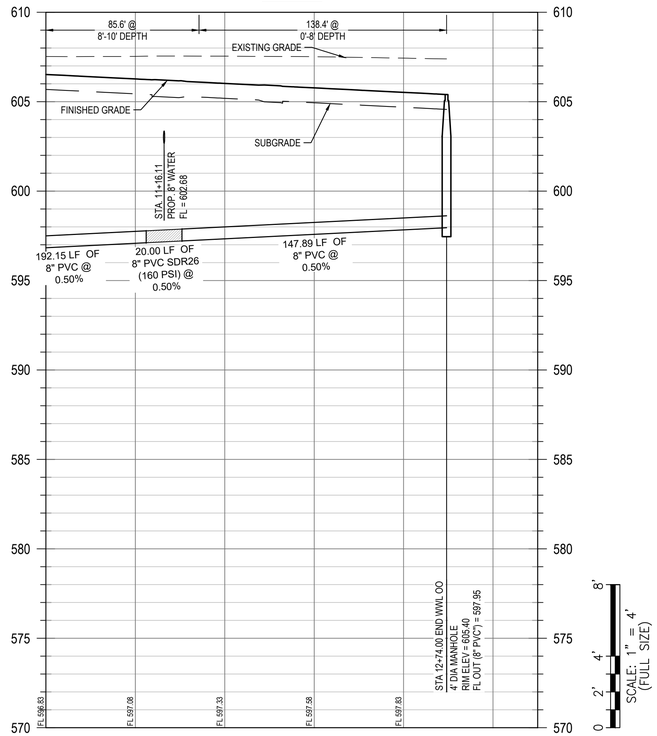
PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE



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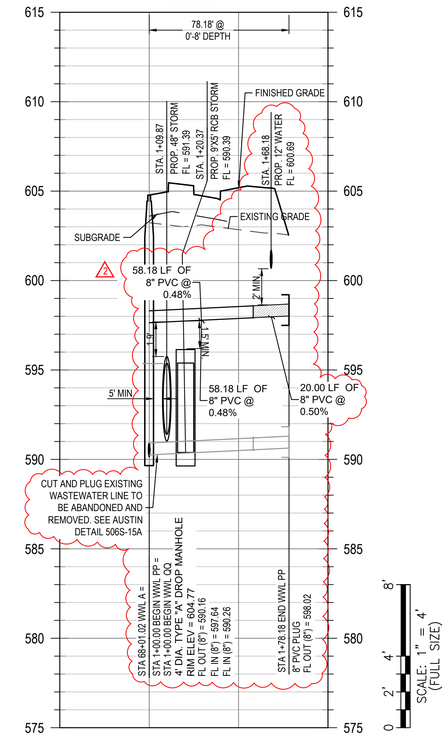
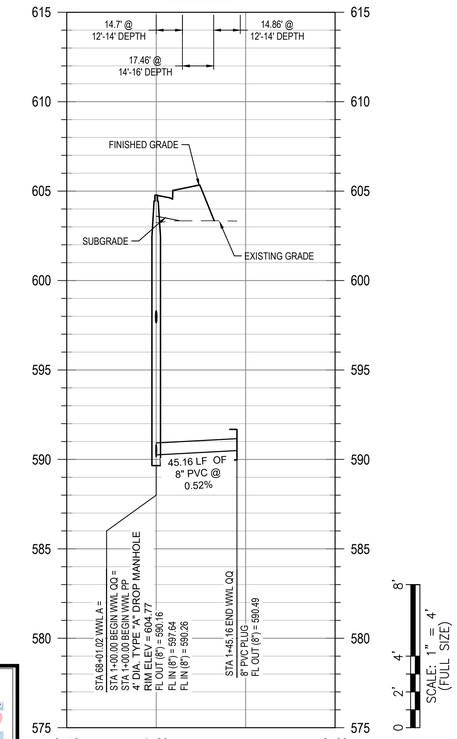


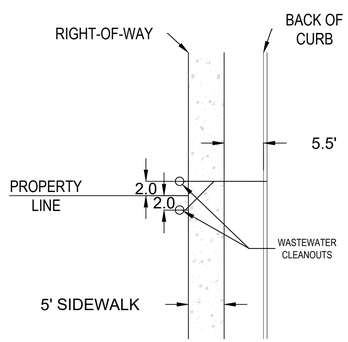
WWL PP



WWL QQ

SCALE: 1" = 4' (FULL SIZE)

WASTEWATER CLEANOUT DETAIL
SCALE: 1" = 10'



For Rev #2
Reviewed for Substantial Conformance by City of Hutto
Matt Nortes, P.E.
City Engineer
Engineering - City of Hutto
09/12/2025

							DATE	APR
							DESCRIPTION	
ADDED WWL-PP AT ITS NEW ELEVATION. REVISED STORM SEWER ELEVATION. REVISED WATER CROSSING ELEVATION.								
							REV	

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

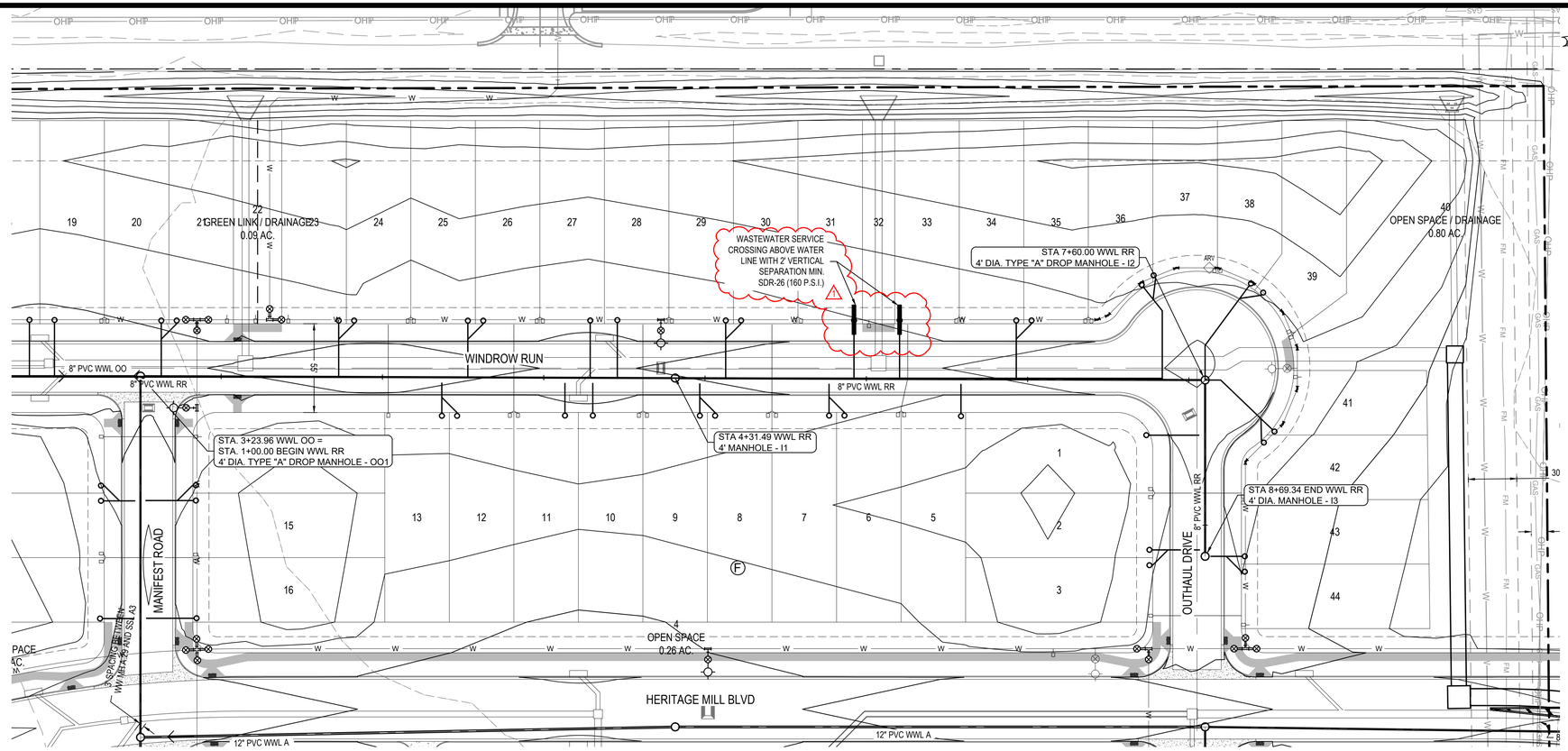
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WWL OO (STA. 10+50 TO END) & WWL PP & WWL QQ

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
08/18/2025

G:\TXCO\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WWTR.dwg Layout: 74 WWL OO (STA. 10+50 TO END) & WWL PP & WWL QQ Plotted: 8/14/2025 11:41:37 AM



0 20' 40' 80'

SCALE: 1" = 40'

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- PHASE BOUNDARY
- EXISTING MAJOR CONTOUR
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- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- WASTEWATER LINE
- WASTEWATER MANHOLE
- DIRECTION OF FLOW
- W — PROPOSED WATER LINE
- SSL — PROPOSED STORM SEWER LINE
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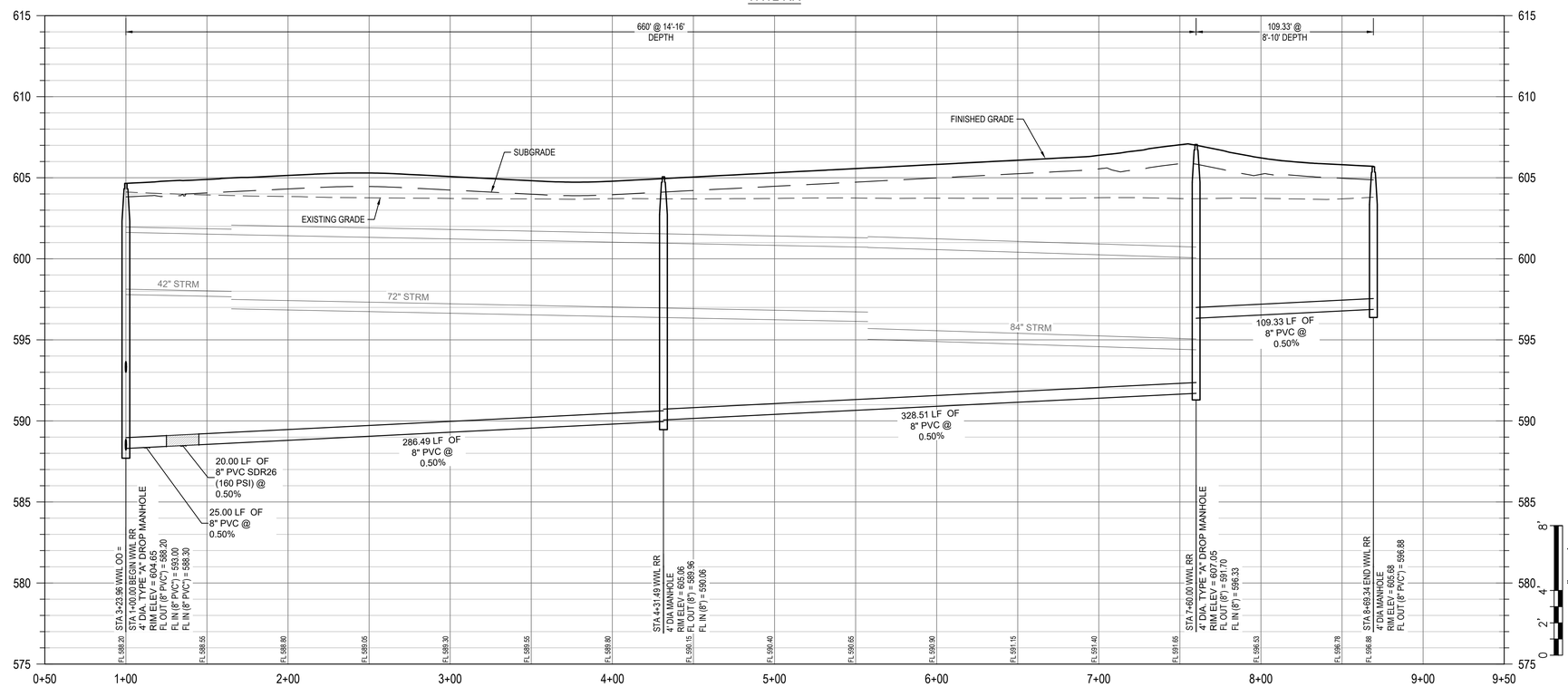
WWL RR

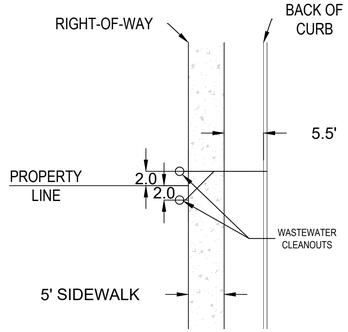


PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

WASTEWATER CLEANOUT DETAIL

SCALE: 1" = 10'



REV	DESCRIPTION	DATE	APR
1	ADDED CROSSING PROTECTION TO SANITARY SERVICES CROSSING OVER WATER LINE		

DESIGNED BY: MS,AC

REVIEWED BY: AC

DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS
WWL RR (STA. 1+00 TO END)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
03/25/2025

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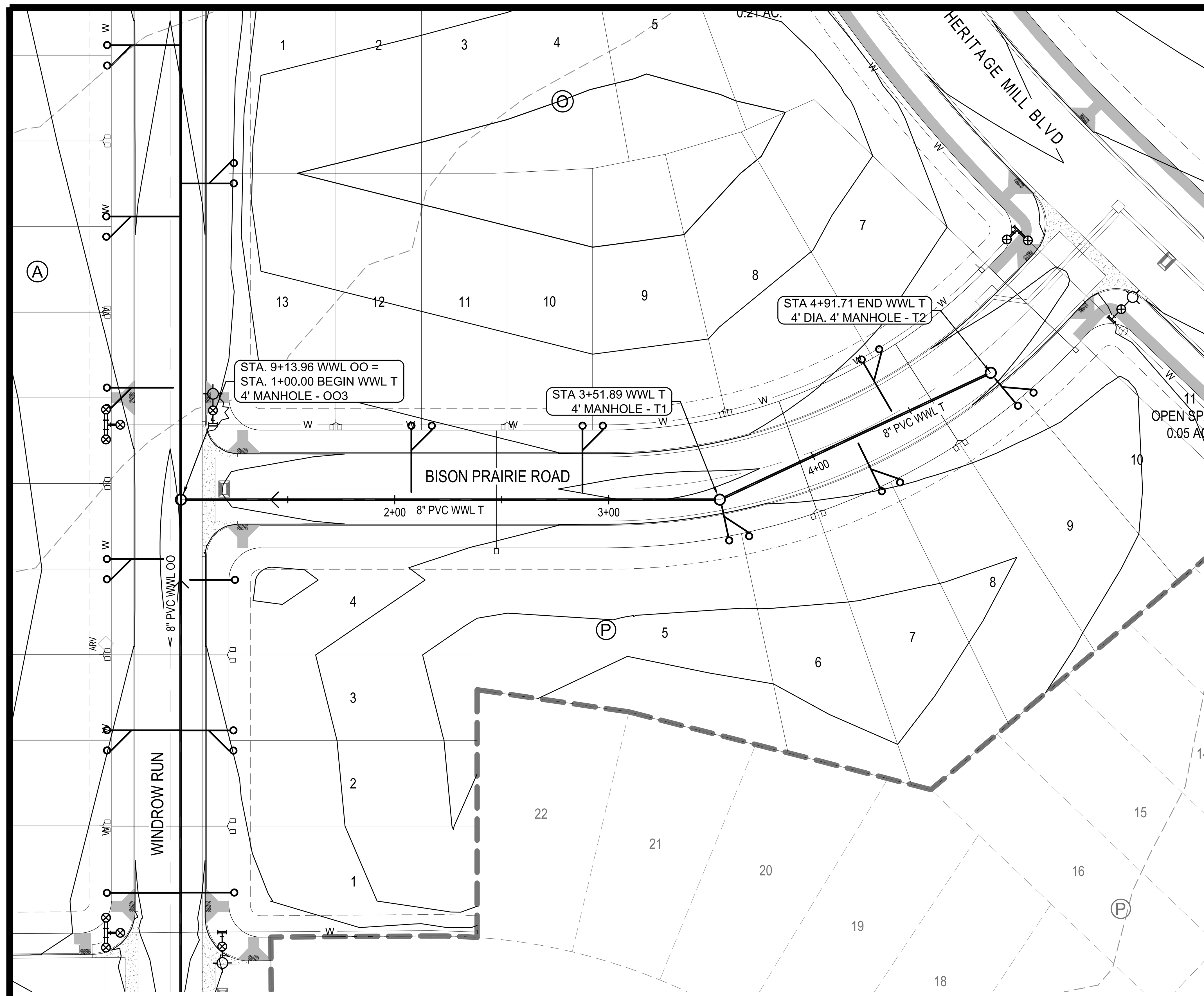

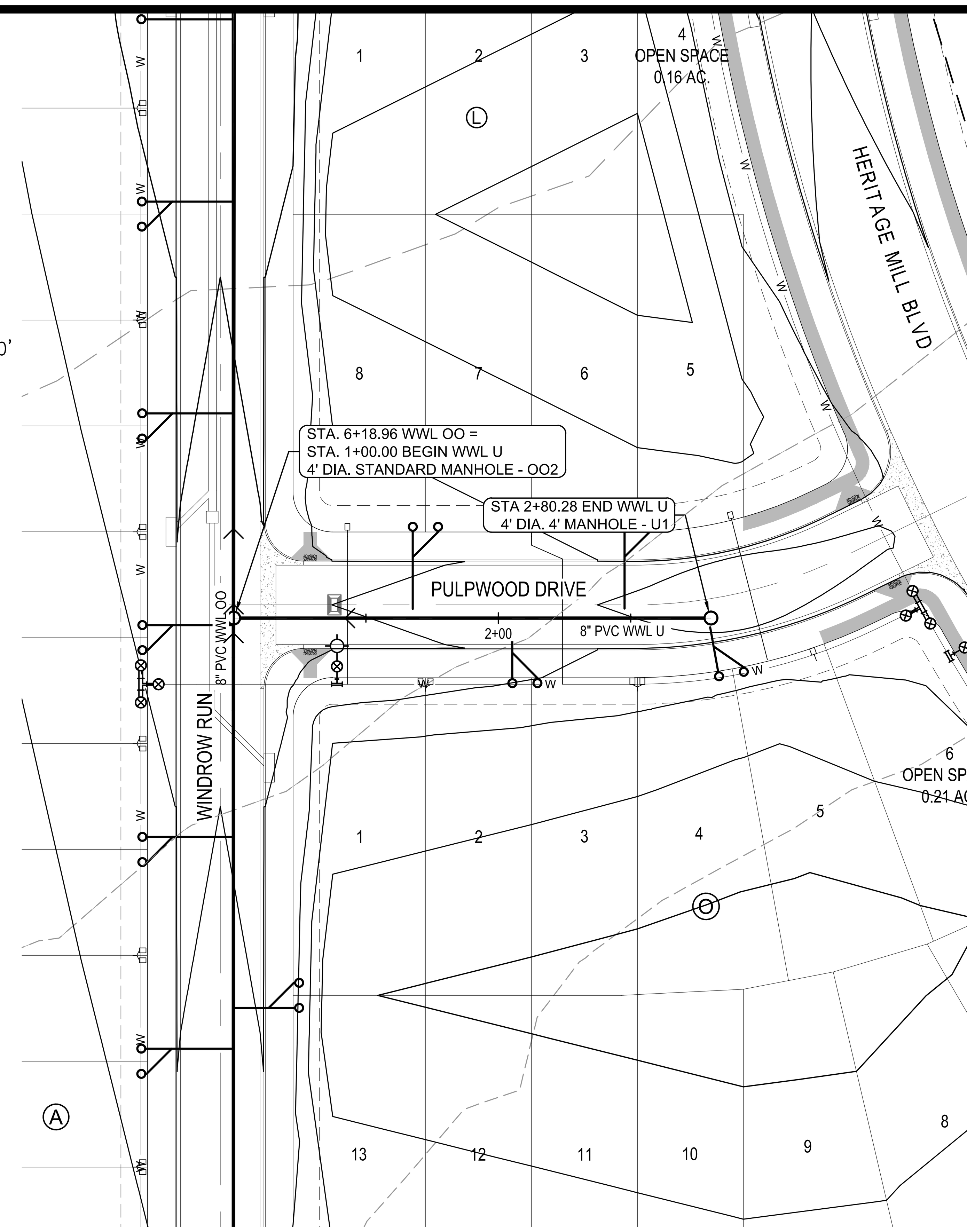

LEGEND

- PROPERTY BOUNDARY
- PHASE BOUNDARY
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- WASTEWATER LINE
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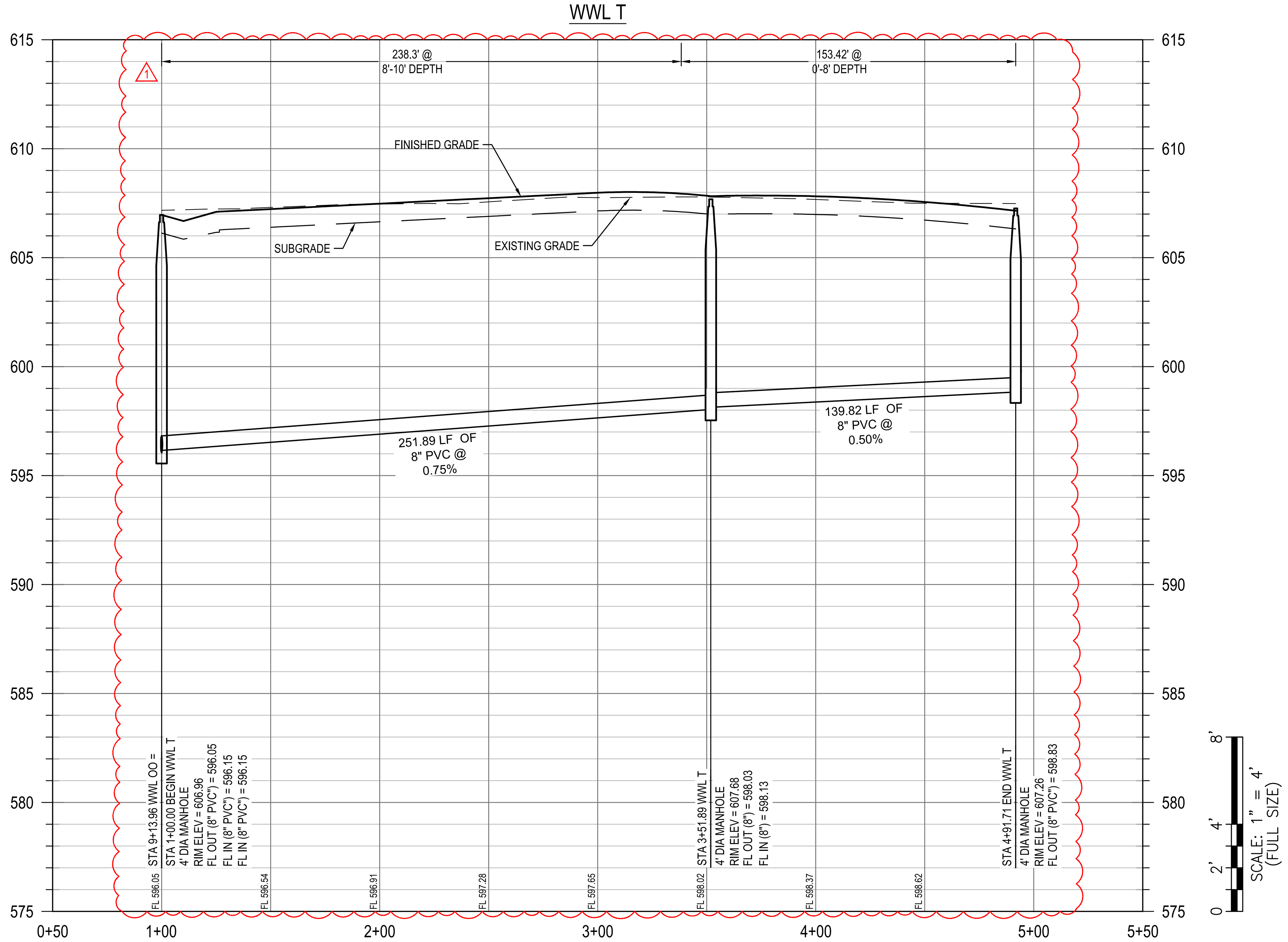
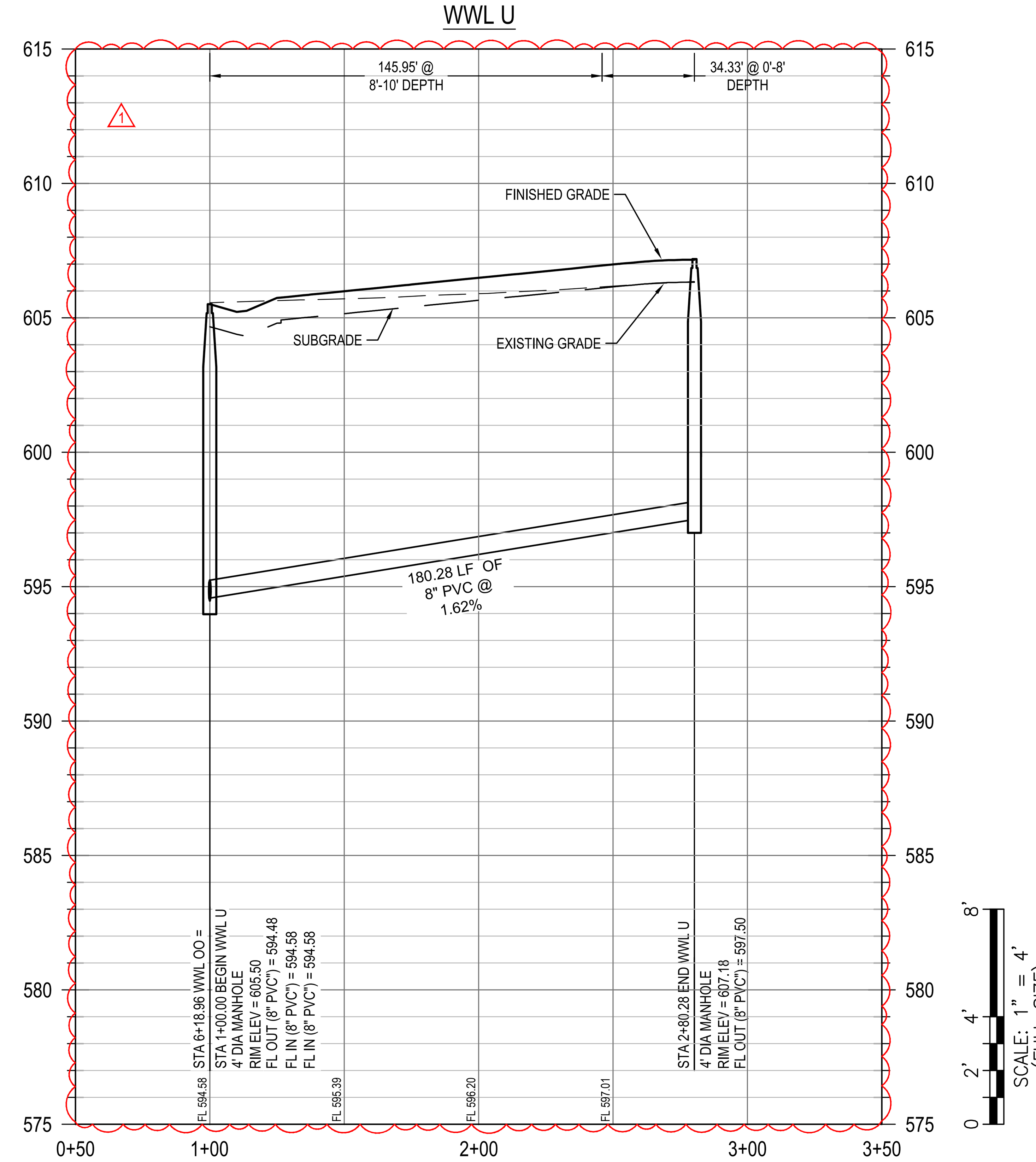
WWL T



WWL U

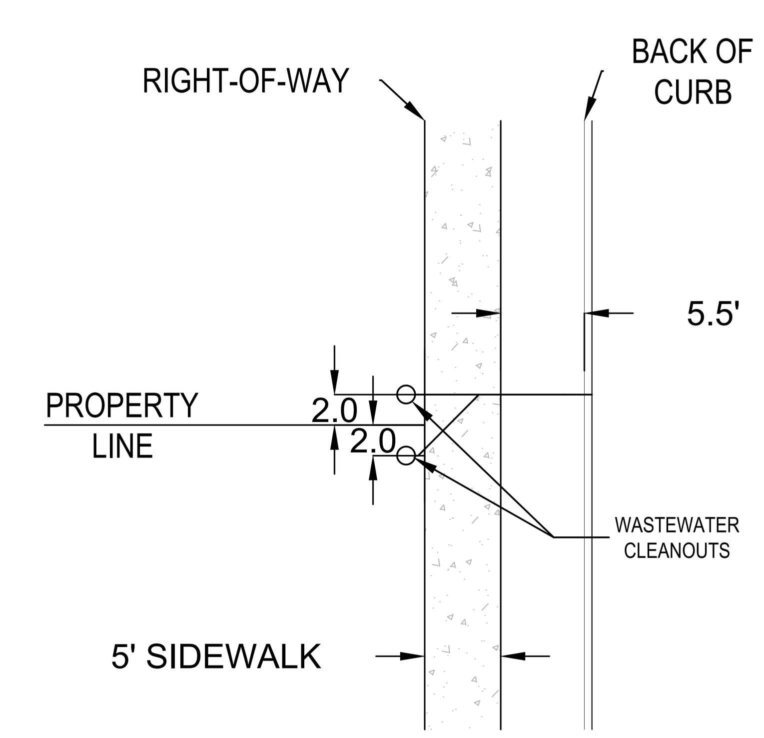


PROFILE LEGEND

- FINISHED GRADE
- SUBGRADE
- EXISTING GRADE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER MANHOLE

WASTEWATER CLEANOUT DETAIL

SCALE: 1" = 10'



REV	DESCRIPTION	DATE	APR
1	REVISION TO SANITARY MAIN FLOWLINES		

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

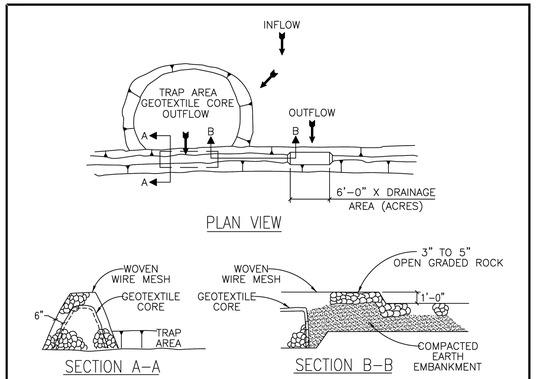
BGE
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WWL T (STA. 1+00 TO END) & WWL U (STA. 1+00 TO END)

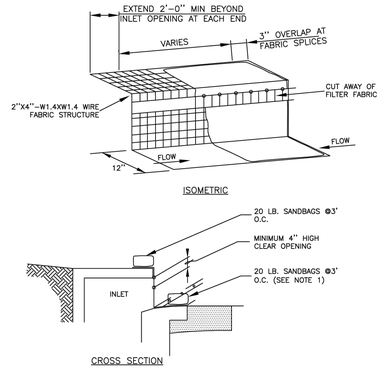
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
03/25/2025

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-WWTR.dwg Layout: 76 WWL T (STA. 1+00 TO END) & WWL U (STA. 1+00 TO END) Plotted: 3/6/2025 12:48:43 PM



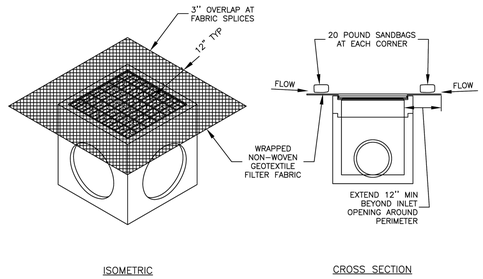
NOTES:
1. LOCATE THE SEDIMENT TRAP SO AS TO DISTURB AS FEW TREES AS POSSIBLE.
2. CLEAR AND GRUB THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MATS.
3. LAYOUT THE WIRE MESH AND THEN THE GEOTEXTILE FABRIC.
4. CONSTRUCT THE GEOTEXTILE CORE AND CORRESPONDING ROCK EMBANKMENT TO THE DESIGNATED HEIGHT AND CONFIGURATION.
5. WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT WHEN WALKED ACROSS, THE STRUCTURE RETAINS IT'S SHAPE. SECURE WITH THE WIRE.
6. PLACE THE EMBANKMENT MATERIAL IN 8 TO 12 INCH (8" – 12") LIFTS AND MACHINE COMPACT.
7. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. REPAIR SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
8. TRASH AND OTHER DEBRIS SHOULD BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO HALF OF THE DESIGN DEPTH OF THE TRAP.
9. SEDIMENT REMOVED FROM THE TRAP SHOULD BE DEPOSITED IN AN APPROVED SPOILS AREA AND IN SUCH A MANNER THAT IT WILL NOT CAUSE ADDITIONAL SILTATION.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	SEDIMENT TRAP
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-14



NOTES:
1. WHERE MINIMUM CLEARANCES CAUSE TRAFFIC TO DRIVE IN THE GUTTER, THE CONTRACTOR MAY SUBSTITUTE A 1" X 4" BOARD SECURED WITH CONCRETE NAILS 3' O.C. NAILED INTO THE GUTTER IN LIEU OF SANDBAGS TO HOLD THE FILTER DIKE IN PLACE. UPON REMOVAL, CLEAN ANY DIRT/DEBRIS FROM NAILING LOCATIONS, APPLY CHEMICAL SANDING AGENT AND APPLY NON-SHRINK GROUT FLUSH WITH SURFACE OF GUTTER.
2. A SECTION OF FILTER FABRIC SHALL BE REMOVED AS SHOWN ON THIS DETAIL OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR HOG RINGS AT THIS LOCATION.
3. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
4. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM-WATER BEGINS TO OVERTOP THE CURB.
5. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	CURB INLET PROTECTION
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-07



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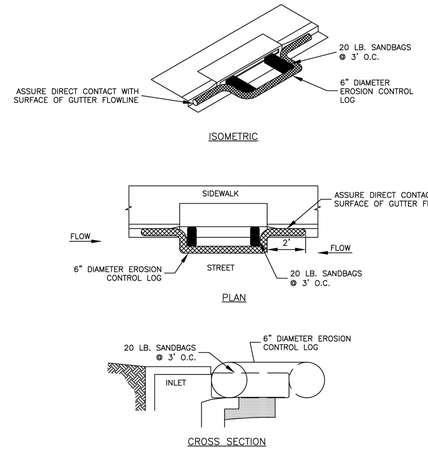
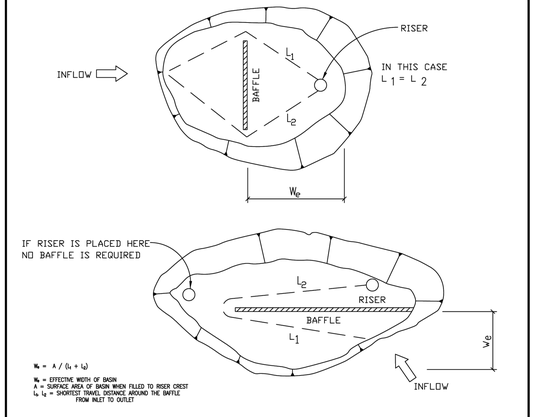
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	AREA INLET PROTECTION
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-10



NOTES:
1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE, AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM WATER BEGINS TO OVERTOP THE CURB.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	CURB INLET PROTECTION WITH EROSION CONTROL LOG
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-08

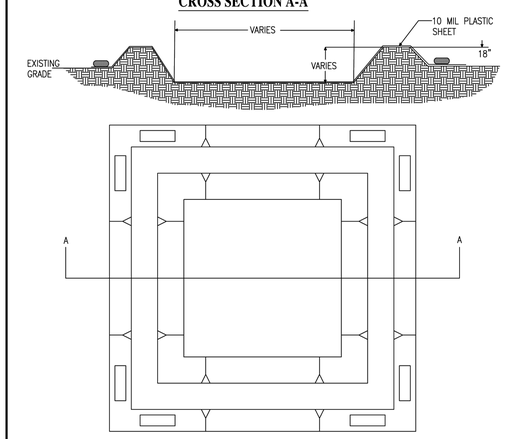


W_e = A / (L_1 + L_2)

W_e = EFFECTIVE WIDTH OF BASIN
A = SURFACE AREA OF BASIN WHEN FILLED TO RISER CREST
L_1 L_2 = SHORTEST TRAVEL DISTANCE AROUND THE BAFFLE FROM INLET TO OUTLET

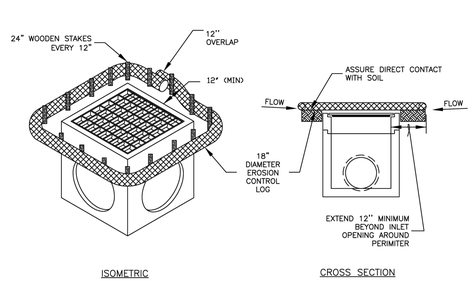
NOTES:
1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. REPAIRS SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
2. TRASH AND OTHER DEBRIS SHOULD BE REMOVED AFTER EACH RAINFALL TO PREVENT CLOGGING OF THE OUTLET STRUCTURE.
3. ACCUMULATED SILT SHOULD BE REMOVED AND THE BASIN SHOULD BE RE-GRADED TO ITS ORIGINAL DIMENSIONS AT SUCH POINT THAT THE CAPACITY OF THE IMPOUNDMENT HAS BEEN REDUCED TO 1/2 OF ITS ORIGINAL STORAGE CAPACITY.
4. THE REMOVED SEDIMENT SHOULD BE STOCKPILED OR REDISTRIBUTED IN AREAS THAT ARE PROTECTED FROM EROSION.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	SEDIMENT BASIN BAFFLE
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-15



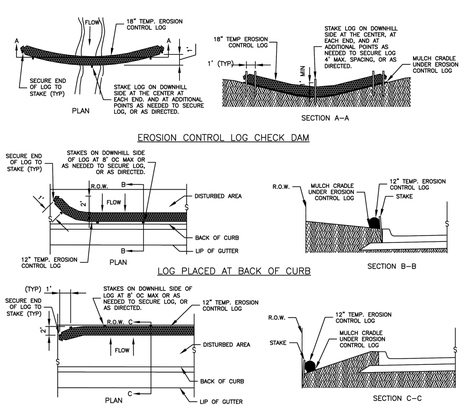
NOTES:
1. SET LENGTH AND WIDTH AS NECESSARY TO PROVIDE ADEQUATE SPACE FOR WASHOUT ACTIVITIES.
2. IF RESTRICTED BY DEPTH DUE TO BELOW GRADE APPURTENANCES, PLACE EARTHEN BERMS AT GRADE.
3. USE EXCAVATED MATERIAL TO CREATE EARTHEN BERMS SURROUNDING THE AREA TO BE DESIGNATED AS A CONCRETE WASHOUT.
4. USE 3" – 5" ROCK TO CREATE A STABLE ENTRANCE THAT IS GRADED AWAY FROM THE WASHOUT BASIN.
5. INSTALL A SIGN IDENTIFYING THE RESPONSIBLE PARTY FOR INSTALLATION AND MAINTENANCE OF THE WASHOUT.
6. PLACE 10MIL OR GREATER PLASTIC SHEETING.
7. SECURE SHEETING ON OUTSIDE OF BERM AREA USING SAND BAGS OR ROCK EQUIVALENT.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	CONCRETE WASHOUT
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-06



NOTES:
1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 6".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY CLEAN THE INLET PROTECTION IF EXCESSIVE PONDING OCCURS.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	AREA INLET PROTECTION WITH EROSION CONTROL LOG
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-11



NOTES:
1. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 6".
2. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF LOGS DURING RAINFALL EVENT FOR PROPER PERFORMANCE.
3. LOGS SHALL CONSIST OF 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE CONTAINMENT MESH STUFFED WITH FILTER MATERIAL.
4. STUFF LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE DENSITY THAT WILL HOLD SHAPE WITHOUT EXCESSIVE DEFORMATION. FILTER MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR WOOD FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL, EXCLUDING STRAW AND HAY.
5. STAKES SHALL BE 2" X 2" WOOD, 4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	EROSION CONTROL LOG
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-09

								APR
								DATE
								DESCRIPTION
								REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

EROSION & SEDIMENTATION CONTROL
DETAILS (SHEET 1 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

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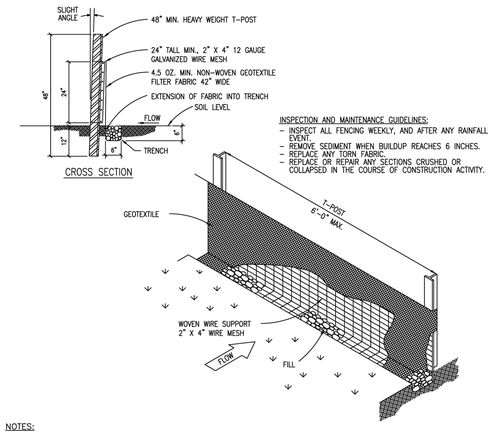
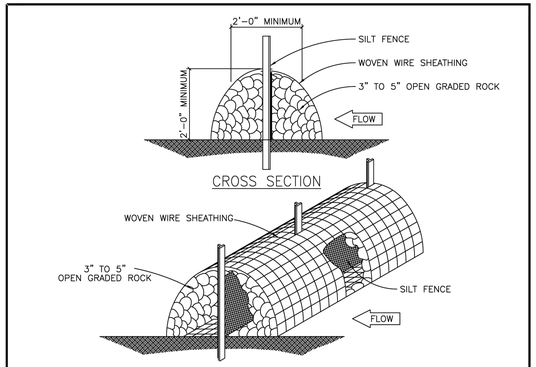


NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MIN. OF ONE (1') FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G. PAVEMENT) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS SECURELY FASTENED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.
8. SILT FENCE SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED
9. J-HOOKS SHALL BE USED WHEN THE SILT FENCE IS INSTALLED AT AN ANGLE OF 30 DEGREES OR GREATER FROM PARALLEL TO THE CONTOURS.

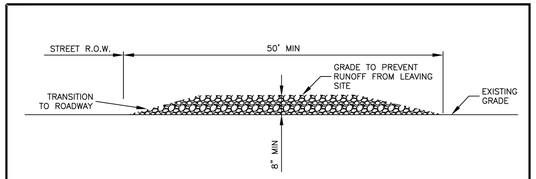
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	SILT FENCE
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-03



NOTES

1. LAYOUT THE ROCK BERM FOLLOWING AS CLOSELY AS POSSIBLE TO THE CONTOURS.
2. CLEAR THE GROUND OF DEBRIS, ROCKS AND/OR PLANTS THAT WILL INTERFERE WITH INSTALLATION.
3. PLACE WOVEN WIRE FABRIC ON THE GROUND ALONG THE PROPOSED INSTALLATION WITH ENOUGH OVERLAP TO COMPLETELY ENCIRCLE THE FINISHED SIZE OF THE BERM.
4. INSTALL THE SILT FENCE ALONG THE CENTER OF THE PROPOSED BERM PLACEMENT. INSTALLATION SHOULD BE AS DESCRIBED IN DRAWING NO. ESC 03 "SILT FENCE DETAIL".
5. PLACE THE ROCK ALONG WITH THE CENTER OF THE WIRE, BOTH SIDES OF THE SILT FENCE, TO DESIGNATED HEIGHT.
6. WRAP THE STRUCTURE WITH THE PREVIOUSLY PLACED WIRE MESH SECURE ENOUGH SO THAT, WHEN WALKED ACROSS, THE STRUCTURE RETAINS ITS SHAPE.
7. SECURE THE WIRE.
8. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.
9. INSPECTIONS SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT BY THE CONTRACTOR. FOR THE INSTALLATION IN STREAM BEDS, ADDITIONAL DAILY INSPECTION SHOULD BE MADE ON ROCK BERM.
10. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES (6") AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER.
11. REPAIR ANY LOOSE WIRE SHEATHING.
12. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
13. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

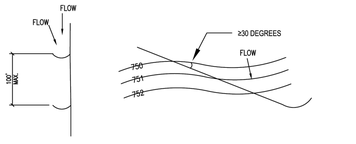
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	HIGH SERVICE ROCK BERM
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-13

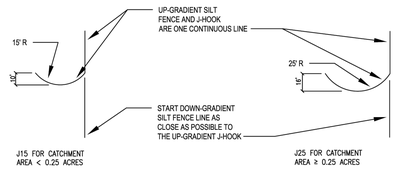


NOTES:

1. STONE SIZE SHALL BE 3" – 6" OPEN GRADED ROCK.
2. THICKNESS OF CRUSHED STONE PAD TO BE NOT LESS THAN 8".
3. LENGTH SHALL BE A MINIMUM OF 50' FROM ACTUAL ROADWAY, AND WIDTH NOT LESS THAN FULL WIDTH OF INGRESS/EGRESS.
4. ENTRANCE SHALL BE PROPERLY GRADED TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.
5. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY BY CONTRACTOR.
6. AS NECESSARY, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STABILIZED CONSTRUCTION ENTRANCE
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-02





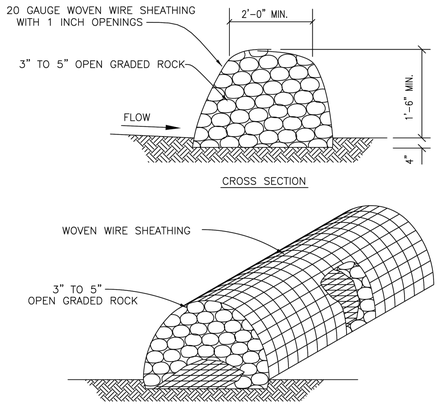
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	J-HOOKS
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-04

GUIDELINES FOR DESIGN AND INSTALLATION OF TEMPORARY EROSION AND SEDIMENT CONTROLS

TYPE OF STRUCTURE	REACH LENGTH	MAXIMUM DRAINAGE AREA	SLOPE
SILT FENCE	N/A 200 FEET 100 FEET 50 FEET	2 ACRES 2 ACRES 1 ACRE 1/2 ACRE	0 – 10% 10% – 20% 20% – 30% > 30%
TRIANGLE FILTER DIKE	100 FEET 50 FEET	1/2 ACRE 1/4 ACRE	< 30% > 30%
ROCK BERM [1,2]	500 FEET	< 5 ACRES	0 – 10%

1. FOR ROCK BERM DESIGN, WHERE PARAMETERS ARE OTHER THAN STATED, DRAINAGE AREA CALCULATION AND ROCK BERM DESIGN MUST BE SUBMITTED FOR REVIEW.
2. HIGH SERVICE ROCK BERMS MAY BE REQUIRED IN AREAS OF ENVIRONMENTAL SIGNIFICANCE AS DETERMINED BY THE CITY OF HUTTO.

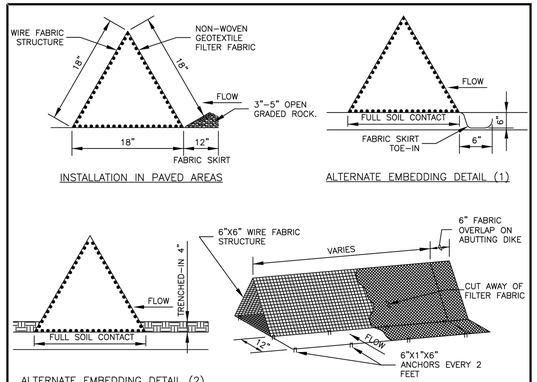
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	TEMPORARY EROSION & SEDIMENT CONTROL GUIDELINES
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-01



NOTES:

1. USE ONLY OPEN GRADED ROCK (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/ OR FABRIC CORE–WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH OF 6", THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTATION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	ROCK BERM
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-05



NOTES:

1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING.
2. FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE UPSTREAM FACE FABRIC.
3. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE WITH WIRE STAPLES AT 2' INTERVALS ON BOTH EDGES AND SKIRT OR WITH 3/8" DIAMETER REBAR WITH TEE ENDS.
4. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 6" TO COVER DIKE–TO–DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS REQUIRED.
6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 4" AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
7. AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN NOTE #6 ABOVE.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	TRIANGULAR FILTER DIKE
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ESC-12

APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

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AUSTIN, TX 78728
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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

EROSION & SEDIMENTATION CONTROL DETAILS (SHEET 2 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
12/2/2024

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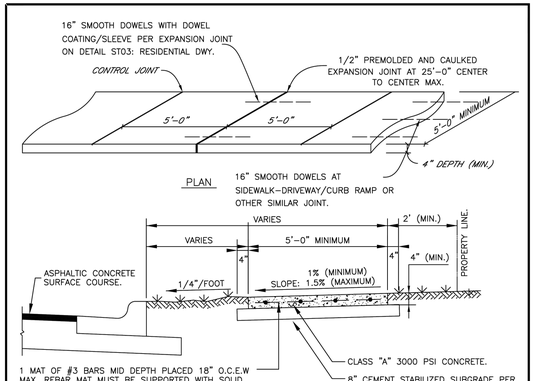
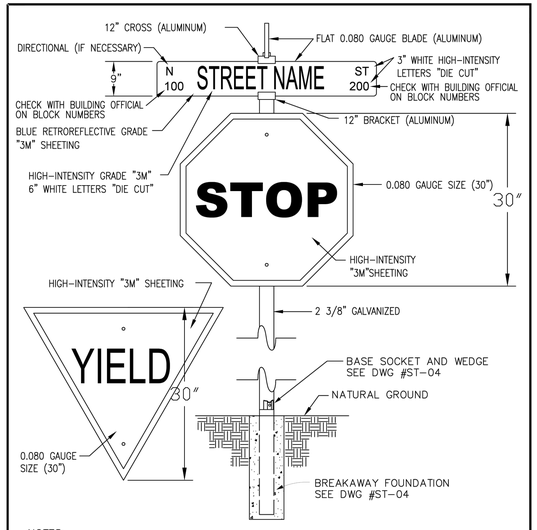


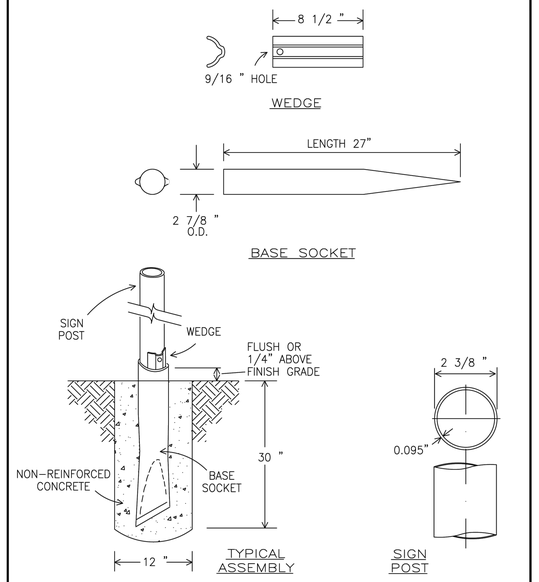
NOTES:
1. FOR ROLLER STAMPED SIDEWALK: MATCH TO SPECIFICATIONS.
2. STANDARD LOCATION OF SIDEWALK IS OFF BACK OF CURB. SPECIAL DESIGNS MAY BE APPROVED BY THE CITY ENGINEER, PRIOR TO FINAL DESIGN.
3. SIDEWALK SHALL CONFORM TO CURRENT AMERICANS WITH DISABILITIES ACT STANDARDS.
4. IF REQUIRED ALL SIDEWALKS SHALL BE SUBMITTED AND APPROVED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION BY THE ENGINEER OF RECORD.
5. ANY VARIANCE IN TEXTURE, GRADE OR ALIGNMENT MUST BE APPROVED BY THE TEXAS DEPARTMENT OF LICENSING AND REGULATION.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	TYPICAL SIDEWALK DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-01

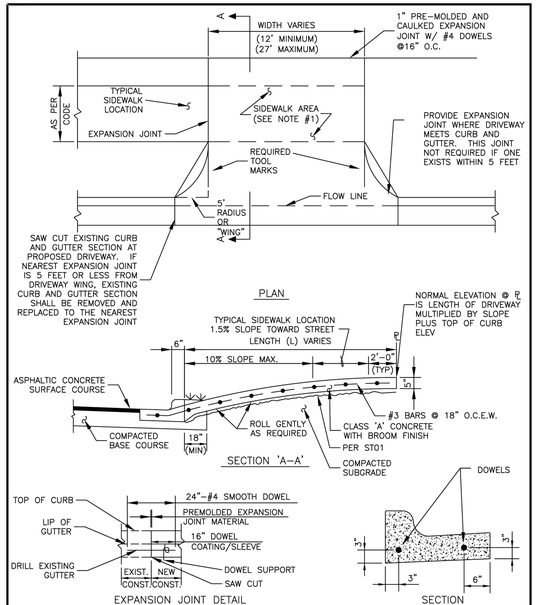


NOTES:
1. 7'-FOOT MIN. HEIGHT FROM GROUND TO BOTTOM OF SIGN.
2. ALL SIGNS TO BE IN CONFORMANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD).
3. ALL SIGNAGE SHEETINGS SHALL BE HIGH-INTENSITY "3M" SHEETING.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STANDARD STREET SIGN DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-03

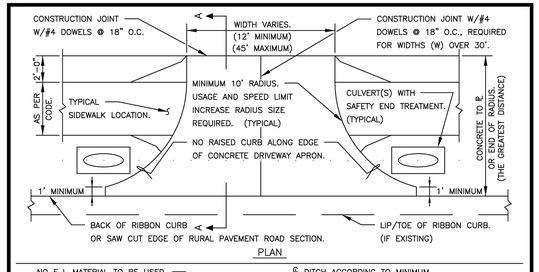


The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	BREAKAWAY FOUNDATION DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-04



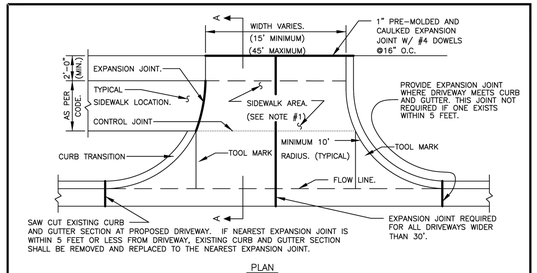
NOTE:
1. CONTROL JOIN DIMENSIONS PER DETAIL ST-01.
2. NO MANUFACTURED SAND.
3. DOWEL SLEEVE TO FIT DOWEL, BE SECURED TO STRUCTURE AND CAPPED AT END.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	RESIDENTIAL DRIVEWAY DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-05



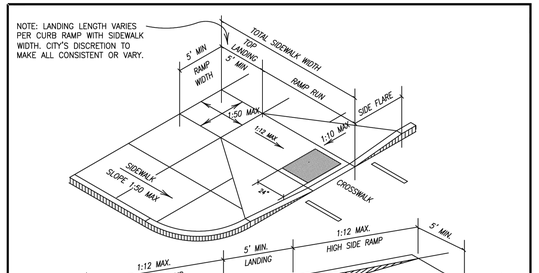
NOTES:
① NEW DRIVEWAY MUST ACCEPT STORM WATER RUNOFF FROM ROADWAY PAVEMENT, GRADING AWAY FROM PAVEMENT AT MINIMUM -2%, MAXIMUM -12%.
② GRADE BACK DISTANCES MUST BE AT A MINIMUM OF 12' OR ℄ OF BAR DITCH IF GREATER THAN 12' OR TO THE DISTANCE REQUIRED IN THE PERMIT. (SHORTER OR LONGER)
③ GRADE OF DRIVEWAY PAST THE 12' POINT MAY CHANGE MULTIPLE TIMES AND BE POSITIVE OR NEGATIVE TO THE BACK SIDE OF THE APRON, BUT CAN BE NO GREATER THAN 2% IN THE AREA WHERE THE SIDEWALK IS TO CROSS.

CITY OF HUTTO CONSTRUCTION STANDARDS AND DETAILS	DRAWING NO. ST15
CONCRETE DRIVEWAY RIBBON CURB OR RURAL ENGINEERING & PUBLIC WORKS	UPDATED: 02/01/2019
	DRAWN BY: BB
	SCALE: N.T.S
	FILE NAME: ST15.DWG



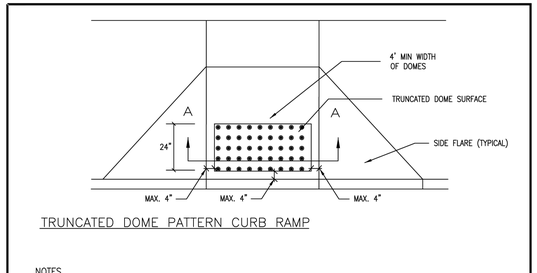
NOTE:
1. CONTROL JOINT DIMENSIONS PER DETAIL ST01.
2. NO MANUFACTURED SAND.
3. DOWEL SLEEVE TO FIT DOWEL, BE SECURED TO STRUCTURE AND CAPPED AT END.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	COMMERCIAL DRIVEWAY DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-06



NOTE:
1. REINFORCEMENT AND SIDEWALK REQUIREMENTS PER DETAIL ST01.
2. CURB RAMP TEXTURE PER DETAIL ST08.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	CURB RAMP DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-07



NOTES
1. CURB RAMP AND DETECTABLE WARNING MATERIALS MUST BE COMPLIANT WITH CURRENT ADA STANDARDS FOR ACCESSIBILITY DESIGN AND TEXAS ACCESSIBILITY STANDARDS (TAS).
2. DETECTABLE WARNING PANELS SHALL BE CAST-IN-PLACE CAST IRON DETECTABLE WARNING PLATES MANUFACTURED BY EAST JORDAN IRON WORKS OR NEENAH FOUNDRY.
3. DETECTABLE WARNING PANEL TO BE CONTRASTING COLOR TO THE ADJACENT SURFACES AND NOTED ON PLANS. (ADJACENT SURFACES INCLUDE THE FLARES)
4. REINFORCEMENT AND JOINTS TO BE INSTALLED PER CITY OF HUTTO DETAIL ST01.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	CURB RAMP TEXTURE DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-08

							APR
							DATE
							DESCRIPTION
							REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

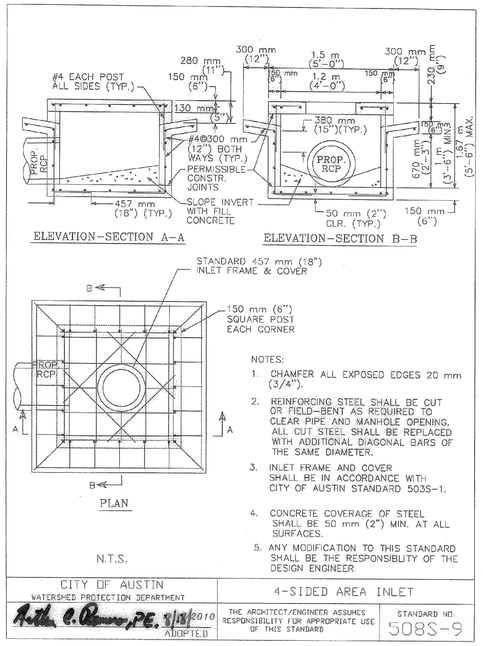
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

STREET & DRAINAGE DETAILS (SHEET 1 OF 6)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-DTLS.dwg Layout: 79 STREET & DRAINAGE DETAILS (SHEET 1 OF 5) Plotted: 12/2/2024 6:20:41 PM

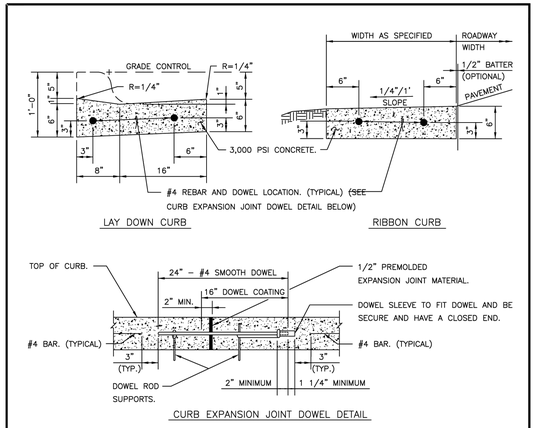


NOTES:

1. CHAMFER ALL EXPOSED EDGES 20 mm (3/4").
2. REINFORCING STEEL SHALL BE CUT OR FIELD-BENT AS REQUIRED TO CLEAR PIPE AND MANHOLE OPENING. ALL CUT STEEL SHALL BE REPLACED WITH ADDITIONAL DIAGONAL BARS OF THE SAME DIAMETER.
3. INLET FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 503S-1.
4. CONCRETE COVERAGE OF STEEL SHALL BE 50 mm (2") MIN. AT ALL SURFACES.
5. ANY MODIFICATION TO THIS STANDARD SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER.

N.T.S.

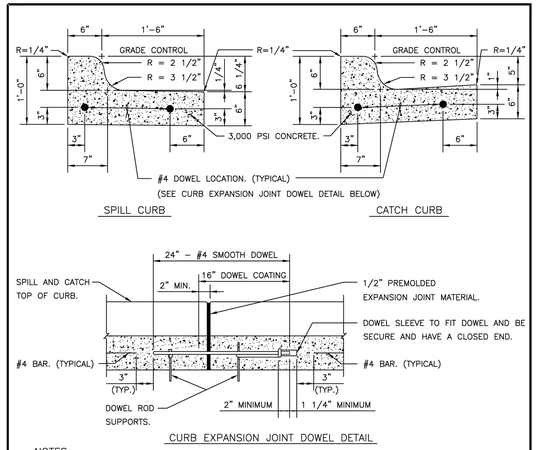
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	4-SIDED AREA INLET
Keith C. Rowe, P.E. 3/18/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 508S-9



NOTES:

1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309 AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTROL JOINT SPACING SHALL NOT EXCEED 10'-0'.
3. EXPANSION JOINTS AS PER STANDARD ASTM D-1752.
4. EXPANSION JOINT INTERVALS NOT TO EXCEED 25'-0" FOR ALL CURBS AND CONSTRUCTION METHODS.
5. ALL CURBS SHALL HAVE A MINIMUM OF 4" OF COMPACTED FLEXIBLE BASE BETWEEN BOTTOM OF CURB AND TOP SUBGRADE THAT SHALL EXTEND A MINIMUM OF 18" BEHIND BACK OF CURB. TOTAL DEPTH OF FLEXIBLE BASE UNDER AND BEHIND CURB SHALL BE: (TOTAL DEPTH OF FLEXIBLE BASE) LESS (6-INCHES).
6. ALL CURBS SHALL CONFORM TO THESE DETAILS INDEPENDENT OF THE CONSTRUCTION METHODS USED.

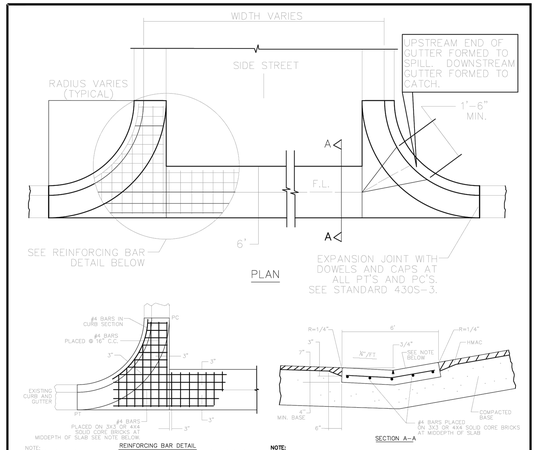
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	LAYDOWN OR RIBBON CURB DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-09



NOTES:

1. ALL WORK AND MATERIAL SHALL CONFORM TO ASTM A615, A615M, C309 AND D1752. BROOM FINISH EXPOSED SURFACE.
2. CONTROL JOINT SPACING SHALL NOT EXCEED 10'-0'.
3. EXPANSION JOINTS AS PER STANDARD ASTM D-1752.
4. EXPANSION JOINT INTERVALS NOT TO EXCEED 25'-0" FOR ALL CURBS/METHODS.
5. ALL CURBS SHALL HAVE A MINIMUM OF 4" OF COMPACTED FLEXIBLE BASE BETWEEN BOTTOM OF CURB AND TOP SUBGRADE THAT SHALL EXTEND A MIN OF 18" BEHIND BACK OF CURB.
6. ALL CURBS SHALL CONFORM TO THESE DETAILS INDEPENDENT OF THE CONSTRUCTION METHODS USED.

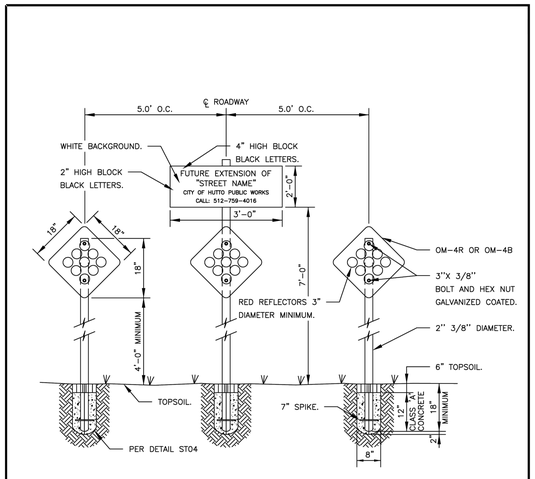
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	SPILL AND CATCH CURB DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-10



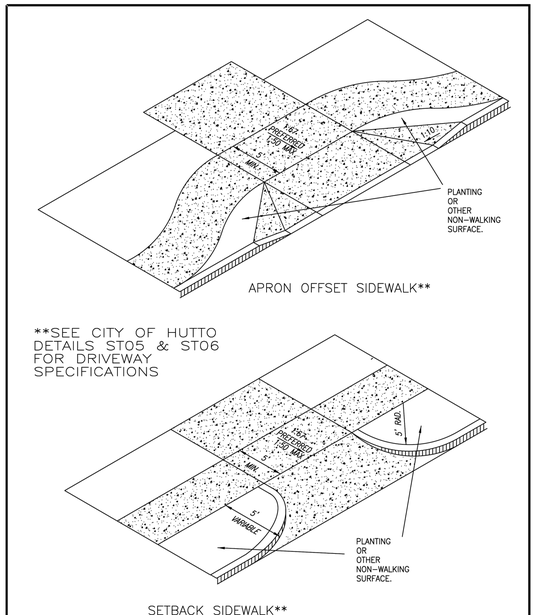
NOTES:

1. MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CITY OF HUTTO STANDARD SPECIFICATIONS.
2. CONCRETE FOR THE VALLEY GUTTER SHALL BE CLASS A.
3. MONOLITHIC CURB AND GUTTER SHALL BE MEASURED BY PLAN QUANTITY PER SQUARE FEET AND PAID AS VALLEY GUTTER.
4. THE UPSTREAM CURB MID POINT MUST BE AT OR LOWER THAN THE BEGINNING P.C. AND 0.5% MINIMUM HIGHER THAN THE OPPOSING MID POINT.
5. ALLOWABLE CONSTRUCTION JOINT AT THE CENTER LINE WHEN TRAFFIC FLOW MUST BE MAINTAINED, CONSTRUCTED AS A CONTROL JOINT.
6. NO VALVES OR MANHOLES ALLOWED IN CURB OR GUTTER.

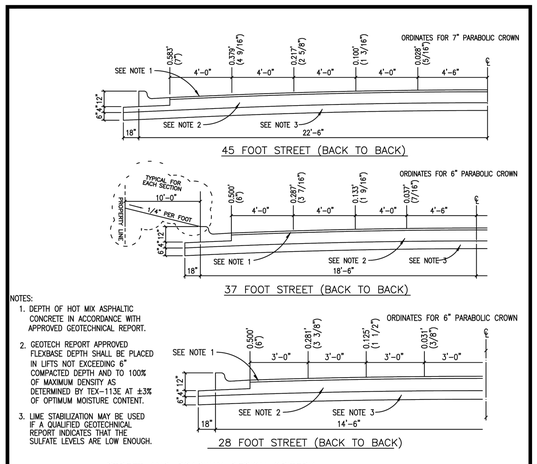
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	VALLEY GUTTER DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-11



The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STREET END MARKER DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-12



The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	DRIVEWAY APRONS DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-ST-15



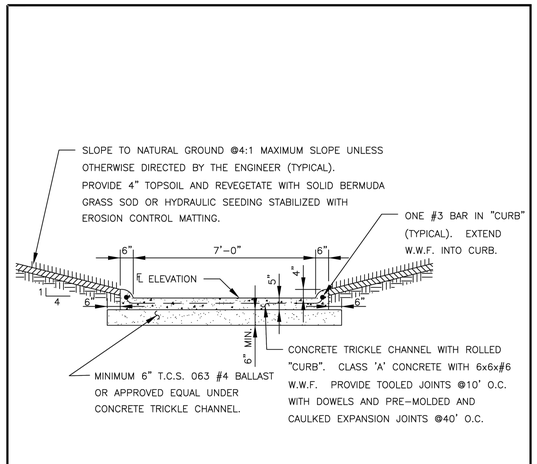
NOTES:

1. DEPTH OF HOT MIX ASPHALTIC CONCRETE IN ACCORDANCE WITH APPROVED GEOTECHNICAL REPORT.
2. GEOTECH REPORT APPROVED FLEXIBASE DEPTH SHALL BE PLACED IN LIFTS NOT EXCEEDING 6" COMPACTED DEPTH AND TO 100% OF MAXIMUM DENSITY AS DETERMINED BY TEX-113E AT ±3% OF OPTIMUM MOISTURE CONTENT.
3. LIME STABILIZATION MAY BE USED IF A QUALIFIED GEOTECHNICAL REPORT INDICATES THAT THE SULFATE LEVELS ARE LOW ENOUGH.

STREET AND ROADWAY DESIGN CRITERIA

STREET CLASSIFICATION	TOTAL EQUIVALENT 18K AXLE LOAD APPLICATIONS (20 YEAR FLEXIBLE DESIGN)
LOCAL	
ALLEY	20,000
RESIDENTIAL LANE	20,000
LOCAL STREET	20,000
COLLECTORS	
RESIDENTIAL	80,000
MAJOR NEIGHBOORHOOD	290,000
ARTERIALS	
MINOR ARTERIAL	1,020,000
MAJOR ARTERIAL	5,200,000

CITY OF HUTTO CONSTRUCTION STANDARDS AND DETAILS	DRAWING NO. ST11
TYPICAL HALF CROSS SECTION HMAC SURFACED STREETS	UPDATED: 02/01/2019
ENGINEERING & PUBLIC WORKS	DRAWN BY: BB
	SCALE: N.T.S.
	FILE NAME: ST11.DWG



Reviewed for Substantial Conformance by City of Hutto
Mark Hanna P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
FOR CERTIFICATE USE ONLY

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	CONCRETE TRICKLE CHANNEL DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-SD-03

				APR
				DATE
				DESCRIPTION
				REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

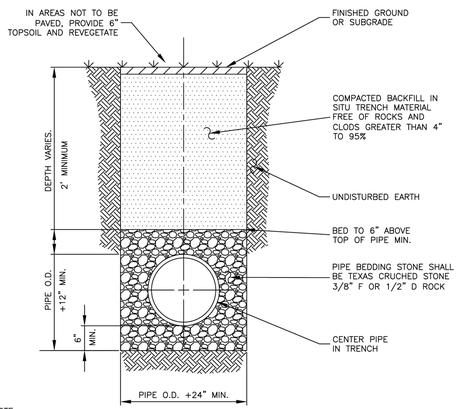
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

STREET & DRAINAGE DETAILS (SHEET 2 OF 6)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

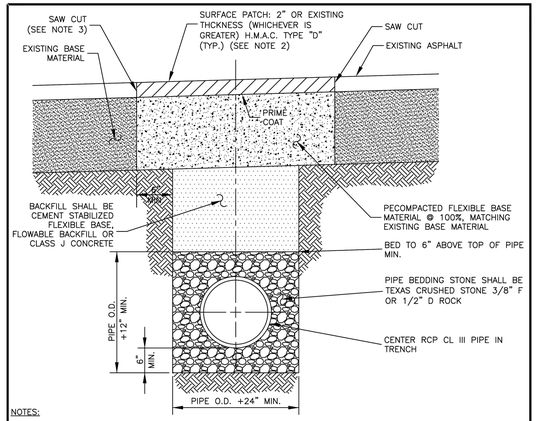
G:\TX\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-DTLS.dwg Layout: 80 STREET & DRAINAGE DETAILS (SHEET 2 OF 5) Plotted: 12/2/2024 6:20:46 PM



NOTE:

1. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
2. A MINIMUM OF ONE DENSITY TEST SHALL BE TAKEN EVERY TWO HUNDRED (200) FEET FOR EACH 8" LIFT OF BASE. PROCTORS FOR MATERIALS USED IN BACKFILLING SHALL BE OBTAINED BY A CERTIFIED LABORATORY. DENSITY TESTS SHALL BE CONDUCTED BY A CERTIFIED LABORATORY OR THE PERMITTEE'S CONSULTANTS. THE PERCENTAGE OF MAXIMUM DENSITY REQUIRED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "THE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AT THE TIME THE PERMIT WAS ISSUED. ALL DENSITY TESTS SHALL BE COMPLETED AND ACCEPTED ON EACH LAYER PRIOR TO ADDITIONAL BACKFILLING. A COPY OF ALL COMPLETED AND ACCEPTED DENSITY TESTS SHALL BE FURNISHED TO CITY OF HUTTO. BACKFILL SHALL BE A MINIMUM OF 95% MAXIMUM DENSITY PER TXDOT 113E SPECIFICATIONS.
3. STORM SEWER SHALL BE REINFORCED CONCRETE CLASS III UNLESS DEPTH OF PIPE REQUIRES STRONGER PIPE.
4. ALL JOINTS SHALL BE WRAPPED IN GEOTEXTILE FABRIC PER DETAIL SD04.
5. IF GROUND WATER IS PRESENT IN THE TRENCH, THE BEDDING MATERIAL SHALL BE SURROUNDED BY GEOTEXTILE FABRIC (MIRAFI 140N OR EQUAL) ON ALL SIDES.

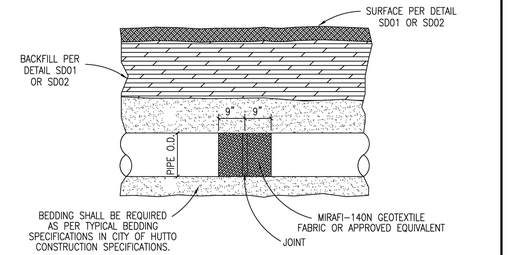
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STORM SEWER LINE BEDDING DETAIL (NON-PAVED SURFACE)	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-SD-01

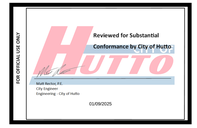


NOTES:

1. A MINIMUM OF ONE DENSITY TEST SHALL BE TAKEN EVERY TWO HUNDRED FEET (200') FOR EACH EIGHT INCH (8") LIFT OF BASE. PROCTORS FOR MATERIALS USED IN BACKFILLING SHALL BE OBTAINED BY A CERTIFIED LABORATORY. DENSITY TESTS SHALL BE CONDUCTED BY A CERTIFIED LABORATORY OR THE PERMITTEE'S CONSULTANTS. THE PERCENTAGE OF MAXIMUM DENSITY REQUIRED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "THE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AT THE TIME THE PERMIT WAS ISSUED. ALL DENSITY TESTS SHALL BE COMPLETED AND ACCEPTED ON EACH LAYER PRIOR TO ADDITIONAL BACKFILLING. A COPY OF ALL COMPLETED AND ACCEPTED DENSITY TESTS SHALL BE FURNISHED TO CITY OF HUTTO. BACKFILL COMPACTION SHALL BE A MINIMUM OF 95% MAXIMUM DENSITY PER TXDOT 113E SPECIFICATIONS.
2. THICKNESS FOR HMAC, ROADWAY FLEXIBLE BASE COURSE, AND SELECT STREET SUBBASE PER GEOTECHNICAL ENGINEER RECOMMENDATIONS. H.M.A.C. SHOWN IN THIS DETAIL IS SEPARATE FROM ANY ADDITIONAL THICKNESS CREATED BY ANY OVERLAY ITEM IN CONTRACT.
3. THE CONTRACTOR SHALL SAW CUT, REMOVE AND REPLACE EXISTING PAVEMENT AND FLEXIBLE BASE A MINIMUM OF 6" BEYOND EITHER THE EDGE OF THE STORM SEWER TRENCH OR THE POINT WHERE EXISTING PAVEMENT IS DAMAGED DUE TO TRENCHING OPERATIONS, WHICHEVER IS GREATER.
4. CONTRACTOR OR ENGINEER MAY USE FLOWABLE BACKFILL AS AN ALTERNATE FOR BACKFILL MATERIAL.
5. THE CONTRACTOR SHALL PROVIDE STEEL PLATES TO SPAN THE TRENCH AS NECESSARY OR TO ALLOW BACKFILL TO CURE. SUCH PLATES SHALL BE SUITABLE FOR VEHICLE PASSAGE OVER THE TRENCH AND SHALL BE SATISFACTORILY ANCHORED IN PLACE. COSTS FOR THIS ITEM SHALL BE INCLUDED IN UNIT PRICE BIDS FOR STORM SEWER PIPE.
6. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
7. IF GROUND WATER IS PRESENT IN THE TRENCH, THE BEDDING MATERIAL SHALL BE SURROUNDED BY GEOTEXTILE FABRIC (MIRAFI 140N OR EQUAL) ON ALL SIDES.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STORM SEWER LINE BEDDING DETAIL (PAVED SURFACE)	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-SD-02

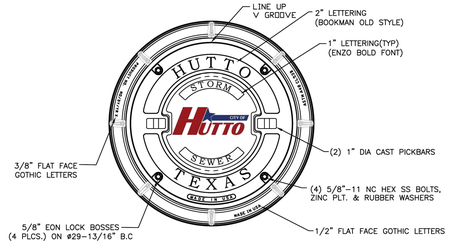


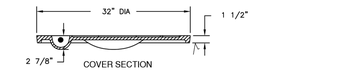


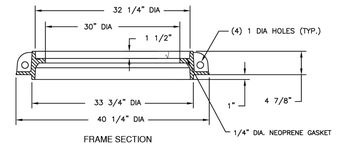
NOTES

1. PIPE SHALL BE REINFORCED CONCRETE PIPE CLASS III UNLESS THE DEPTH OF PIPE REQUIRES A STRONGER CLASS.
2. ALL FITTINGS AND WYES SHALL BE MANUFACTURED AND NOT CONSTRUCTED ON THE PROJECT WITHOUT PRIOR APPROVAL FROM THE CITY ENGINEER.
3. ALL JOINTS SHALL BE WRAPPED WITH MIRAFI-140N GEOTEXTILE FABRIC OR APPROVED EQUIVALENT. EACH JOINT SHALL BE WRAPPED WITH 18" WIDE FABRIC CENTERED ON THE JOINT.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STORM SEWER JOINT	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-SD-04



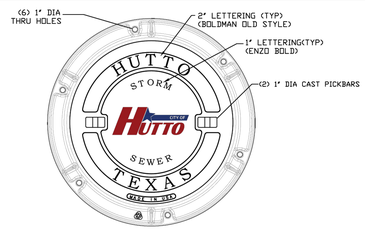


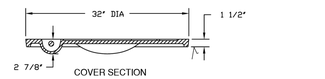


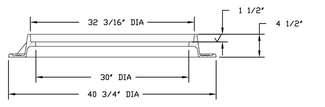
NOTES :

1. BOLTED STORM WATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO V2432. OR APPROVED EQUAL, COVER TO BE STAMPED "STORM SEWER."
2. STANDARD STORMWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS, REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 42432114WO1
4. FOR STANDARD STORMWATER MANHOLE SET REFER TO DETAIL SD01.
5. MANHOLE COVER TO BE DUCTILE IRON PER ASTM A536 (70-50-05). SEE EAST JORDAN IRON WORKS, INC CATALOG NO. V2432-3, PRODUCT DRAWING 42432114.
6. MANHOLE FRAME TO BE GRAY IRON PER ASTM A48 CL35B.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	BOLTED STORM SEWER MANHOLE SET	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-SD-05



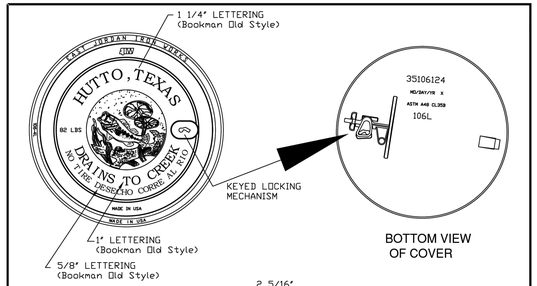


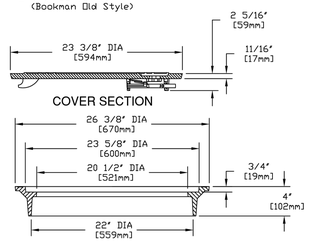


NOTES:

1. STANDARD STORMSEWER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. V1420RG/V1432-3DL OR APPROVED EQUAL. COVER TO BE STAMPED "STORM SEWER."
2. STANDARD STORMSEWER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS, REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWINGS 41432105A01 AND 41432105.
4. MANHOLE COVER TO BE DUCTILE IRON PER ASTM A536 (70-50-05). SEE EAST JORDAN IRON WORKS, INC. CATALOG NO. V1432-3.
5. MANHOLE FRAME TO BE GRAY IRON PER ASTM A48 CL35B.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STANDARD STORM SEWER MANHOLE SET	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-SD-06

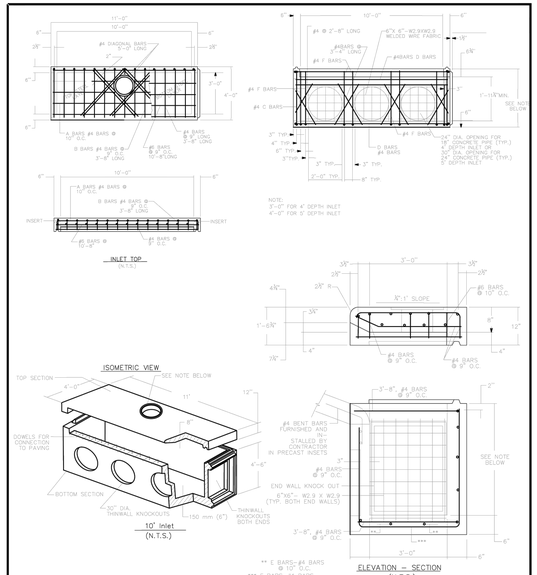




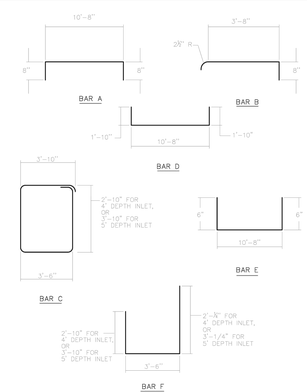
NOTES:

1. STANDARD CURB INLET LID SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. 106-4L OR APPROVED EQUAL.
2. FOR MORE DETAILED SPECIFICATIONS, REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 35506124.
3. CURB INLET LID AND FRAME TO BE GRAY IRON PER ASTM A48 CL35B.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STANDARD CURB INLET LID	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-SD-07



The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STANDARD CURB INLET (1 OF 2)	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-SD-08



NOTES:

1. ALL CONCRETE SHALL BE CLASS "A".
2. ALL REINFORCING STEEL SHALL BE GRADE 60
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES, AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
5. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
6. INVERT OF INLET SHALL BE SLOPED 1:20 WITH FILL CONCRETE BY CONTRACTOR, SHAPED AS "V" SECTION
7. WHEN PLACING PRECAST INLETS IN SERIES TO CREATE A 15'-0" OR 20'-0" CURB INLET, THE CONNECTION BETWEEN INLET BOXES SHALL BE SOIL TIGHT AND FULLY CONVEY THE PEAK DESIGN FLOW FROM THE UPSTREAM INLET(S). THE 1:20 INVERT SLOPE DESCRIBED IN NOTE 6 OF THIS DETAIL SHALL EXTEND FROM THE MOST DOWNSTREAM POINT TO THE MOST UPSTREAM OF THE CONNECTED INLET BOXES. AT NO TIME CAN MORE THAN 20-LF OF CURB OPENING BE CONNECTED TO A MAIN STORM DRAIN LINE WITH ONE LATERAL STORM DRAIN CONNECTION.
8. REINFORCED CONCRETE PIPE (RCP) CLASS III OR OTHER APPROVED CLASS SHALL ONLY ENTER THE INLET IN THE KNOCKOUT LOCATIONS. OTHER MODIFICATIONS OR ENTRY POINTS ARE NOT APPROVED AND MAY RESULT IN REQUIRED REPLACEMENT OF ENTIRE INLET.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STANDARD CURB INLET (2 OF 2)	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-SD-08

APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC

REVIEWED BY: AC

DRAWN BY: BE,BC

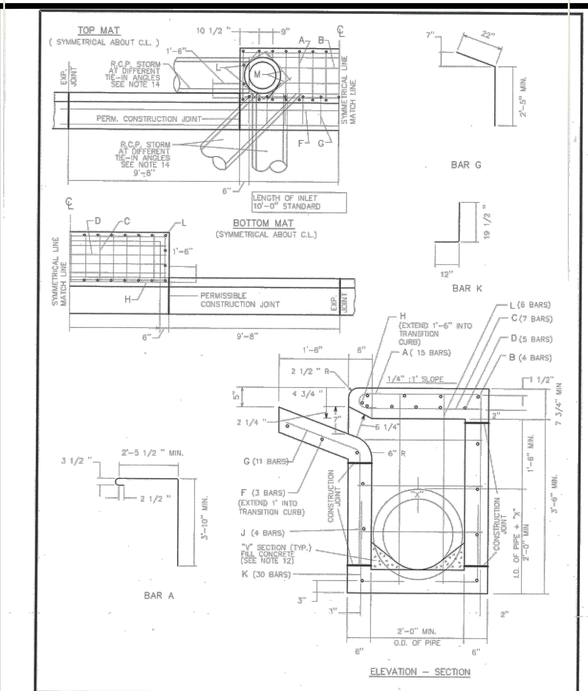
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

STREET & DRAINAGE DETAILS (SHEET 3 OF 6)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TX\C\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LDD\01_CADD\01_Shts\8843-01-C-SP-DTLS.dwg Layout: 81 STREET & DRAINAGE DETAILS (SHEET 3 OF 5) Plotted: 12/2/2024 6:20:52 PM



The City of Hutto — Construction Standards and Details | CURRENT AS OF 10/01/2023 | STANDARD CURB INLET (1 OF 2) | STANDARD NO. CH-SD-09

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

TABLE OF QUANTITIES FOR 18" OUTLET PIPE REINFORCING STEEL QUANTITIES

BARS	SIZE	SPACING	NUMBER	LENGTH	WEIGHT
A	4	9"*	15	7'-0"	73
B	4	10"	4	10'-8"	28
C	4	18"	7	2'-6"	12
D	6	6"	5	10'-8"	80
E	4	12"	6	2'-6"	10
F	4	10"	3	13'-0"	35
G	4	12"	11	4'-3"	31
H	6	—	1	14'-0"	20
J	4	12"	7	10'-8"	50
K	4	9"*	30	2'-7 1/2"	52
L	4	12"*	6	4'-4"	17
M	4	—	4	1'-8" AVG	4
TOTAL STEEL, LB.					413
TOTAL CONCRETE, C.Y.					4.06

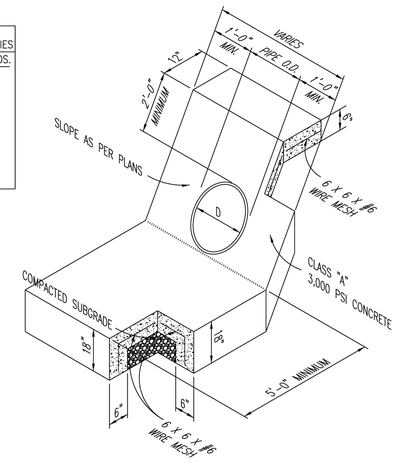
* EXCEPT AS SHOWN ON PLAN

NOTES:
1. ALL CONCRETE SHALL BE CLASS "A".
2. ALL REINFORCING STEEL SHALL BE GRADE 60
3. DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTERS OF BARS.
4. VERTICAL STEEL MAY BE SPLICED (15" MIN. LAP) IN THE LOWER ONE-HALF OF ALL INLET WALLS.
5. IN AREAS OF CONFLICT BETWEEN REINFORCING STEEL, PIPES AND MANHOLE FRAME, THE REINFORCEMENT SHALL BE BENT OR ADJUSTED TO CLEAR AS DIRECTED BY THE ENGINEER.
6. QUANTITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S INFORMATION ONLY. PAYMENT WILL BE MADE FOR EACH INLET OF THE TYPE SPECIFIED, COMPLETE IN PLACE INCLUDING MANHOLE FRAME AND OVER.
7. CHAMFER ALL EXPOSED EDGES 3/4 ".
8. MANHOLE FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF HUTTO STANDARD SD-07.
9. THE CONTRACTOR MAY PROPOSE ALTERNATE PROCEDURES FOR THE CONSTRUCTION OF INLETS, INCLUDING PRECAST UNITS. PLANS FOR SUCH PROPOSED ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE CONSTRUCTION.
10. ALL INLET WALLS SHALL BE FORMED EXCEPT WHERE THE NATURE OF THE SURROUNDING MATERIAL IS SUCH THAT IT CAN BE TRIMMED TO A SMOOTH VERTICAL FACE. WHEN INLET WALLS ARE PLACED TO NEAT EXCAVATION LINES THE WALL THICKNESS SHALL NOT EXCEED 10 INCHES.
11. PAYMENT FOR INLET AT THE CONTRACT PRICE SHALL INCLUDE THE TRANSITION CURB.
12. INVERT OF INLET SHALL BE SLOPED 1:20 WITH FILL CONCRETE, SHAPED AS "V" SECTION
13. NO SPLICING OF REINFORCING STEEL SHALL BE PERMITTED UNLESS OTHERWISE NOTED ON THE PLANS OR PERMITTED IN WRITING BY THE ENGINEER.
14. RCP STORM SHALL ONLY ENTER INLET AT DEFINED KNOCKOUT LOCATIONS. OBSCURE ANGLES OR ENTRIES THAT REQUIRE MODIFICATION OF THE STRUCTURE MUST BE APPROVED IN WRITING PRIOR TO WORK OTHERWISE THE STRUCTURE MAY BE REJECTED AND REPLACED.

The City of Hutto — Construction Standards and Details | CURRENT AS OF 10/01/2023 | STANDARD CURB INLET (2 OF 2) | STANDARD NO. CH-SD-09

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

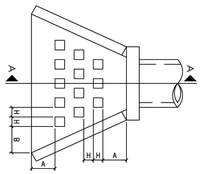
MINIMUM RIP-RAP QUANTITIES	
PIPE	SQ. YDS.
18"	6.2
24"	6.9
27"	7.8
30"	9.5
36"	10.4
42"	12.0
48"	14.3
54"	16.4

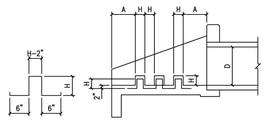


NOTES:
1. WHEN HEADWALLS AND WINGWALLS ARE REQUIRED, THEY SHALL CONFORM TO THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARDS, OR AS DIRECTED BY THE CITY.
2. ENERGY DISSIPATERS SHALL BE REQUIRED IF PIPE VELOCITY IS GREATER THAN 5.0 F.P.S. OR AS DIRECTED BY THE CITY OF HUTTO.
3. SUPPORT REINFORCING WIRE MESH REQUIRED AS SUPPORT FOR APPROACH SLAB AND SHALL BE SUPPORTED BY REBAR CHAIRS OR OTHER APPROVED METHODS.

The City of Hutto — Construction Standards and Details | CURRENT AS OF 10/01/2023 | TYPICAL CONCRETE RIPRAP AT PIPE | STANDARD NO. CH-SD-10

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.





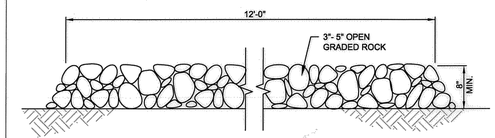
NOTES:
1. USE CLASS "A" CONCRETE, 3,000 PSI AT 28 DAYS, UNLESS NOTED.
2. REINFORCING STEEL – ASTM A615, GRADE 40, UNLESS NOTED.
3. LAP REINFORCING 30 BAR DIAMETERS MIN. AT SPLICES, UNLESS NOTED.
4. CHAMFER EXPOSED EDGES OF CONCRETE 3/4", UNLESS NOTED.
5. PLACE REINFORCING WITH THE CENTER OF THE OUTSIDE BARS 2 INCHES FROM THE SURFACE OF THE CONCRETE.

TABLE OF DIMENSIONS FOR ENERGY DISSIPATOR DETAIL

D PIPE DIAMETER (INCHES)	NUMBER OF ROWS OF DISSIPATORS	NUMBER OF DISSIPATORS IN FRONT ROW	H (INCHES)	A (INCHES)	B (INCHES)
12	1	3	4	4	9.1875
18	2	4	4 1/2	9 1/2	15.5625
24	2	5	6	14 3/4	16 1/2
30	3	6	7 1/2	12 1/2	14 3/8
36	3	6	9	16 1/4	18 5/16
42	3	6	10 1/2	20	22 1/4
48	3	6	12	23 3/4	26 1/4
54	3	6	13 1/2	27 1/2	27 3/4
60	3	6	15	31 1/4	31 5/8

The City of Hutto — Construction Standards and Details | CURRENT AS OF 10/01/2023 | ENERGY DISSIPATOR | STANDARD NO. CH-SD-11

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.



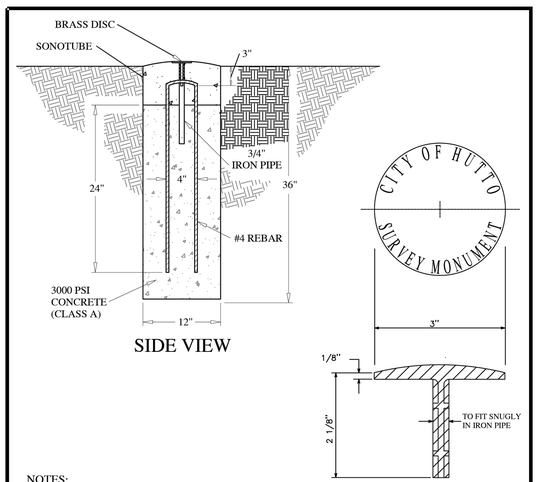
NOTES:
1. STONE SIZE: 75–125 mm (3–5") OPEN GRADED ROCK.
2. THICKNESS: NOT LESS THAN 200 mm (8").
3. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.

CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS

E. D. L., P.E. 1/9/2016 ADOPTED

POND MAINTENANCE ROAD CROSS SECTION | STANDARD NO. 662S-2

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.



CROSS SECTION MONUMENT
MATERIAL: ONE PIECE CAST BRASS

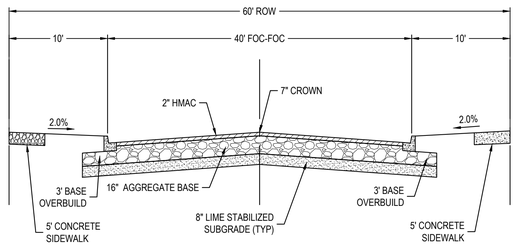
NOTES:
1. MONUMENT SHALL NOT BE PLACED WHERE TRAFFIC WILL ENCOUNTER THE MONUMENT.
2. DO NOT PLACE MONUMENT NEAR 3-PHASE POWER LINES.
3. DO NOT PLACE MONUMENT NEAR TALL TREES OR OTHER OBJECTS.

CITY OF HUTTO — CONSTRUCTION STANDARDS AND DETAILS

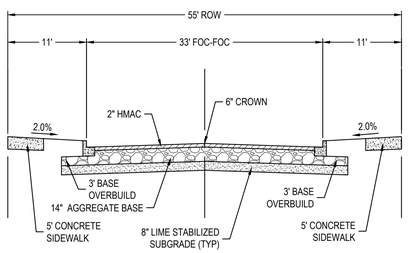
BENCHMARK / SURVEY MONUMENT — HUTTO ENGINEERING & PUBLIC WORK

DRAWING NO. MISC–01 | UPDATED: 04/06/18 | DRAWN BY: BB | SCALE: N.T.S. | FILE NAME: MISC01.DWG

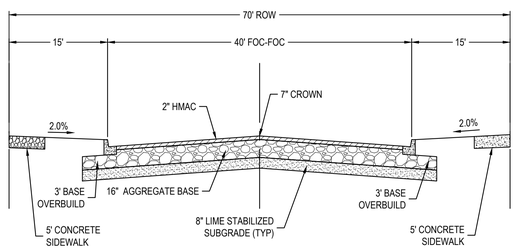
NOTE: SEE GENERAL NOTES SHEET FOR STREET-SECTIONS WITH PI>55 TO FOLLOW OTHER RECOMMENDED PAVEMENT SECTIONS TO REMEDIATE EXPANSIVE SOILS BENEATH PROPOSED BASE.



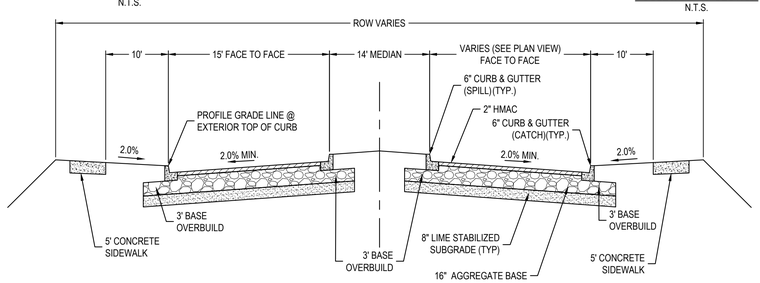
WHIPSAW DRIVE 40' SECTION
N.T.S.



LOCAL STREET TYPICAL SECTION
N.T.S.



BOULEVARD 40' SECTION
N.T.S.



BOULEVARD DIVIDED SECTION
N.T.S.

Reviewed for Substantial Conformance by City of Hutto
Matt Watkins P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
DO NOT REMOVE THIS STAMP

APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
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TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

STREET & DRAINAGE DETAILS (SHEET 4 OF 6)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

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G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-DTLS.dwg Layout: 83 STREET & DRAINAGE DETAILS (SHEET 5 OF 5) Plotted: 12/2/2024 6:21:09 PM

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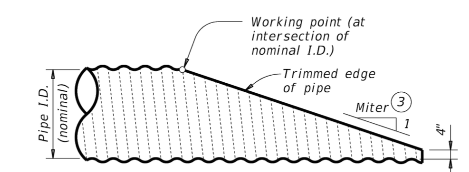
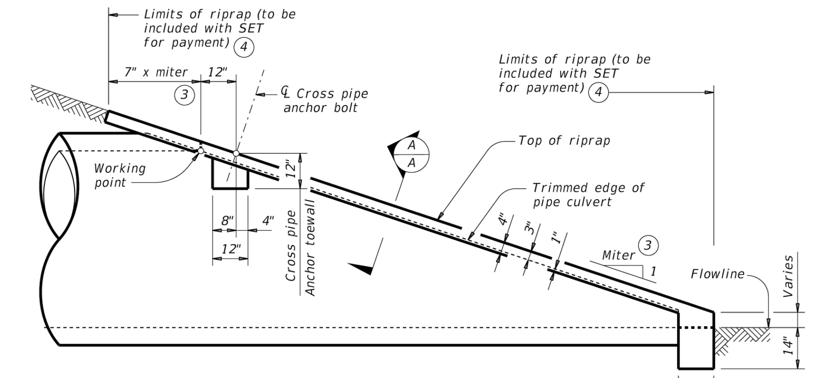


NOTE: All pipe runners, calculations, and dimensions are based on the pipe culverts mitered as shown in this detail. Alternate styles of mitered ends will require that appropriate adjustments be made to the values presented on this standard.

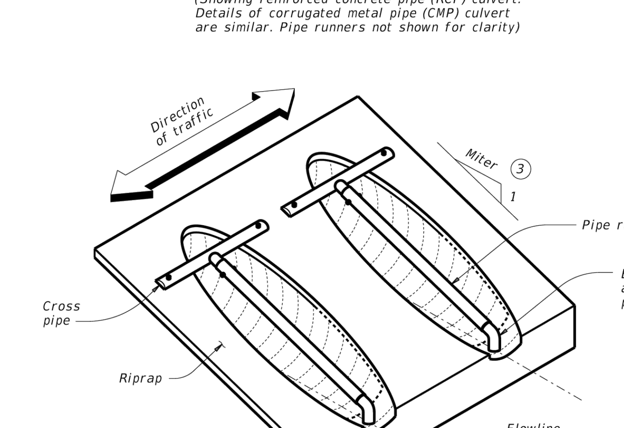
SIDE ELEVATION OF TYPICAL PIPE CULVERT MITER

(Showing corrugated metal pipe (CMP) culvert. Details of reinforced concrete pipe (RCP) culvert are similar.)



SIDE ELEVATION OF CAST-IN-PLACE CONCRETE

(Showing reinforced concrete pipe (RCP) culvert. Details of corrugated metal pipe (CMP) culvert are similar. Pipe runners not shown for clarity)



ISOMETRIC VIEW OF TYPICAL INSTALLATION

(Showing installation with no skew.)

CROSS PIPE LENGTHS AND PIPE RUNNER LENGTHS ① ②

Nominal Culvert I.D.	Pipe Culvert Spa ~ G	Cross Pipe Length	Pipe Runner Length: 3:1 Side Slope 0° Skew	3:1 15° Skew	3:1 30° Skew	3:1 45° Skew	4:1 Side Slope 0° Skew	4:1 15° Skew	4:1 30° Skew	4:1 45° Skew	6:1 Side Slope 0° Skew	6:1 15° Skew	6:1 30° Skew	6:1 45° Skew
24"	1' - 7"	3' - 5"	N/A	N/A	N/A	5' - 10"	N/A	N/A	N/A	8' - 1"	N/A	N/A	N/A	12' - 9"
27"	1' - 8"	3' - 8"	N/A	N/A	5' - 5"	6' - 11"	N/A	N/A	7' - 7"	9' - 7"	N/A	N/A	11' - 11"	14' - 11"
30"	1' - 10"	3' - 11"	N/A	N/A	6' - 4"	8' - 0"	N/A	N/A	8' - 9"	11' - 0"	N/A	N/A	13' - 8"	17' - 0"
33"	1' - 11"	4' - 2"	6' - 2"	6' - 5"	7' - 3"	9' - 1"	8' - 6"	8' - 10"	10' - 0"	12' - 5"	13' - 3"	13' - 9"	15' - 5"	19' - 2"
36"	2' - 1"	4' - 5"	6' - 11"	7' - 3"	8' - 2"	10' - 2"	9' - 6"	9' - 11"	11' - 2"	13' - 10"	14' - 9"	15' - 3"	17' - 2"	21' - 3"
42"	2' - 4"	4' - 11"	8' - 6"	8' - 10"	9' - 11"	12' - 4"	11' - 7"	12' - 0"	13' - 6"	16' - 8"	17' - 9"	18' - 5"	20' - 8"	25' - 7"
48"	2' - 7"	5' - 5"	10' - 1"	10' - 5"	11' - 9"	N/A	13' - 7"	14' - 2"	15' - 10"	N/A	20' - 9"	21' - 6"	24' - 2"	N/A
54"	3' - 0"	5' - 11"	11' - 8"	12' - 1"	N/A	N/A	15' - 8"	16' - 3"	N/A	N/A	23' - 10"	24' - 8"	N/A	N/A
60"	3' - 3"	6' - 5"	13' - 3"	N/A	N/A	N/A	17' - 9"	N/A	N/A	N/A	26' - 10"	N/A	N/A	N/A

TYPICAL PIPE CULVERT MITERS ③

Side Slope	0° Skew	15° Skew	30° Skew	45° Skew
3:1	3:1	3.106:1	3.464:1	4.243:1
4:1	4:1	4.141:1	4.619:1	5.657:1
6:1	6:1	6.212:1	6.928:1	8.485:1

CONDITIONS WHERE PIPE RUNNERS ARE NOT REQUIRED ②

Nominal Culvert I.D.	Single Pipe Culvert	Multiple Pipe Culverts
12" thru 21"	Skews thru 45°	Skews thru 45°
24"	Skews thru 45°	Skews thru 30°
27"	Skews thru 30°	Skews thru 15°
30"	Skews thru 15°	Skews thru 15°
33"	Skews thru 15°	Always required
36"	Normal (no skew)	Always required
42" thru 60"	Always required	Always required

STANDARD PIPE SIZES AND MAX PIPE RUNNER LENGTHS ①

Pipe Size	Pipe O.D.	Pipe I.D.	Max Pipe Runner Length
2" STD	2.375"	2.067"	N/A
3" STD	3.500"	3.068"	10' - 0"
4" STD	4.500"	4.026"	19' - 8"
5" STD	5.563"	5.047"	34' - 2"

ESTIMATED CONCRETE RIPRAP QUANTITIES (CY) ⑤

Nominal Culvert I.D.	3:1 Side Slope 0° Skew	3:1 15° Skew	3:1 30° Skew	3:1 45° Skew	4:1 Side Slope 0° Skew	4:1 15° Skew	4:1 30° Skew	4:1 45° Skew	6:1 Side Slope 0° Skew	6:1 15° Skew	6:1 30° Skew	6:1 45° Skew
12"	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.8
15"	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9
18"	0.5	0.5	0.6	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9	1.0
21"	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.9	0.9	0.9	1.0	1.2
24"	0.6	0.7	0.7	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.1	1.3
27"	0.7	0.7	0.8	0.9	0.8	0.9	0.9	1.1	1.1	1.1	1.2	1.4
30"	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.2	1.2	1.2	1.3	1.6
33"	0.8	0.8	0.9	1.0	1.0	1.0	1.1	1.3	1.3	1.4	1.5	1.7
36"	0.9	0.9	0.9	1.1	1.1	1.1	1.2	1.4	1.4	1.5	1.6	1.8
42"	1.0	1.0	1.1	1.3	1.2	1.3	1.3	1.6	1.6	1.7	1.8	2.1
48"	1.1	1.1	1.2	N/A	1.4	1.4	1.5	N/A	1.9	1.9	2.1	N/A
54"	1.3	1.3	N/A	N/A	1.6	1.6	N/A	N/A	2.1	2.1	N/A	N/A
60"	1.4	N/A	N/A	N/A	1.7	N/A	N/A	N/A	2.3	N/A	N/A	N/A

① Provide pipe runner of the size shown in the tables. Provide cross pipe of the same size as the pipe runner. Provide cross pipe stub out and bottom anchor pipe of the next smaller size pipe as shown in the Standard Pipe Sizes and Max Pipe Runner Lengths table.

② This standard allows for the placement of only one pipe runner across each culvert pipe opening. In order to limit the clear opening to be traversed by an errant vehicle, the following conditions must be met:

For 60" culvert pipes, the skew must not exceed 0°.
For 54" culvert pipes, the skew must not exceed 15°.
For 48" culvert pipes, the skew must not exceed 30°.
For all culvert pipe sizes 42" and less, the skew must not exceed 45°.

If the above conditions cannot be met, the designer should consider using a safety end treatment with flared wings. For further information, refer to the TxDOT Roadway Design Manual.

③ Miter = slope of mitered end of pipe culvert.

④ Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap."

⑤ Quantities shown are for one end of one reinforced concrete pipe (RCP) culvert. For multiple pipe culverts or for corrugated metal pipe (CMP) culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only.

SHEET 1 OF 2

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT FOR 12" DIA TO 60" DIA PIPE CULVERTS TYPE II ~ CROSS DRAINAGE

SETP-CD

FILE: CD-SETP-CD-20.dgn | DN: GAF | CK: CAT | DW: JRP | CK: GAF
ⒸTxDOT February 2020 | CONT | SECT | JOB | HIGHWAY
REVISIONS | DIST | COUNTY | SHEET NO.

DATE:
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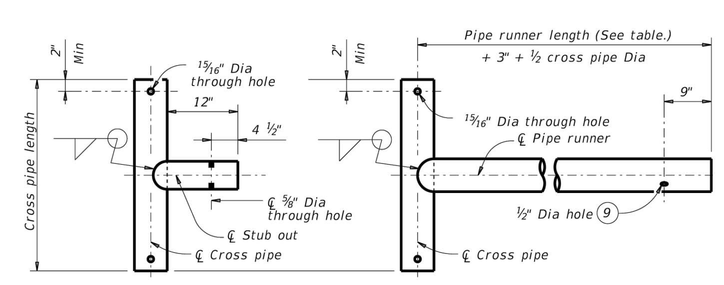
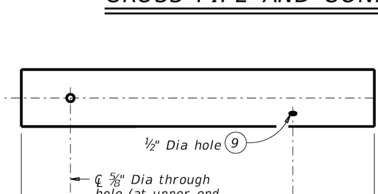
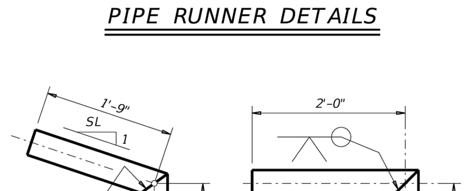


CROSS PIPE AND CONNECTIONS DETAILS

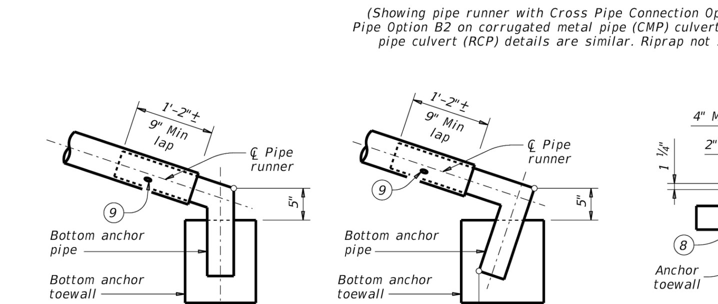


NOTE: The separate pipe runner shown is required when Cross Pipe Connection Option A1 is used.

PIPE RUNNER DETAILS



BOTTOM ANCHOR PIPE DETAILS ⑩



BOTTOM ANCHOR TOEWALL DETAILS

(Culvert and riprap not shown for clarity.)

④ Riprap placed beyond the limits shown will be paid for as concrete riprap in accordance with Item 432, "Riprap."

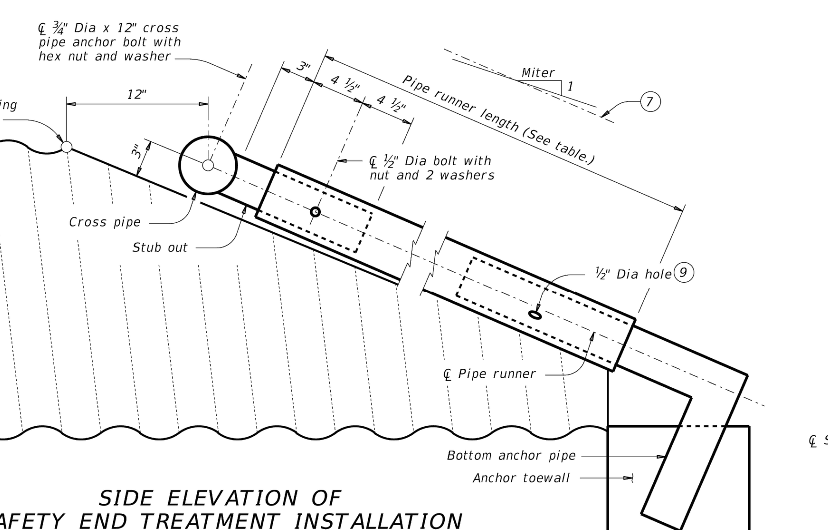
⑥ Recommended values of side slope are 3:1, 4:1, and 6:1. All quantities, calculations, and dimensions shown herein are based on these recommended values. Slope of 3:1 or flatter is required for vehicle safety.

⑦ Note that actual slope of pipe runner may vary slightly from side slope of riprap and trimmed culvert pipe edge.

⑧ Ensure that riprap concrete does not flow into the cross pipe so as to permit disassembly of the bolted connection to allow cleanout access.

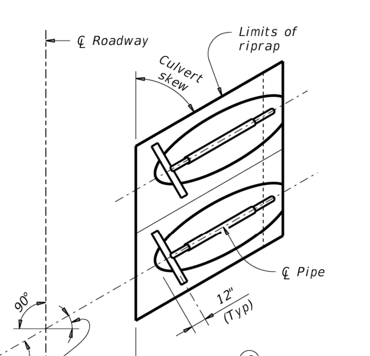
⑨ After installation, inspect the ½" hole to ensure that the lap of the pipe runner with the bottom anchor pipe is adequate.

⑩ At fabricator's option, a heat bend to a smooth 5" radius or a manufactured elbow (of the same material as the runner) may be substituted for the mitered and welded joint in the bottom anchor pipe.

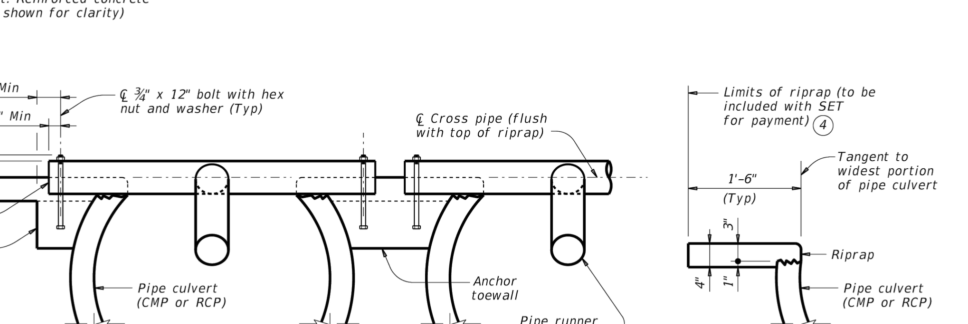


SIDE ELEVATION OF SAFETY END TREATMENT INSTALLATION

(Showing pipe runner with Cross Pipe Connection Option A1 and Anchor Pipe Option B2 on corrugated metal pipe (CMP) culvert. Reinforced concrete pipe culvert (RCP) details are similar. Riprap not shown for clarity)



PLAN OF SKEWED INSTALLATION



SECTION A-A

MATERIAL NOTES:
Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.
Provide pipe runners, cross pipes, and anchor pipes conforming to the requirements of ASTM A53 (Type E or S, Gr B), ASTM A500 Gr B, or API 5LX52.
Provide ASTM A307 bolts and nuts.
Galvanize all steel components, except concrete reinforcing, after fabrication.
Repair galvanizing damaged during transport or construction in accordance with the specifications.

GENERAL NOTES:
Pipe runners are designed for a traversing load of 1,800 pounds at yield as recommended by Research Report 280-1, "Safety Treatment of Roadside Cross-Drainage Structures", Texas Transportation Institute, March 1981.
Safety end treatments (SET) shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the pipe runners.
Payment for riprap and toewall is included in the price bid for each safety end treatment.
Construct concrete riprap and all necessary inverts in accordance with the requirements of Item 432, "Riprap."

FOR OFFICIAL USE ONLY
Reviewed for Substantial Conformance by City of Hutto
CITY OF HUTTO
Matt Rector, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025

SHEET 2 OF 2

Texas Department of Transportation — Bridge Division Standard

SAFETY END TREATMENT FOR 12" DIA TO 60" DIA PIPE CULVERTS TYPE II ~ CROSS DRAINAGE

SETP-CD

FILE: CD-SETP-CD-20.dgn | DN: GAF | CK: CAT | DW: JRP | CK: GAF
ⒸTxDOT February 2020 | CONT | SECT | JOB | HIGHWAY
REVISIONS | DIST | COUNTY | SHEET NO.

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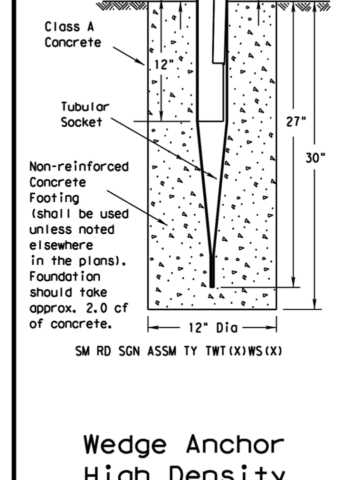
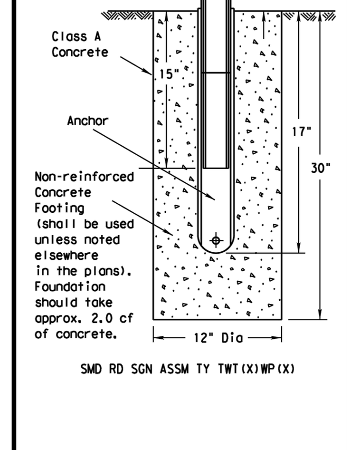
Wedge Anchor Steel System



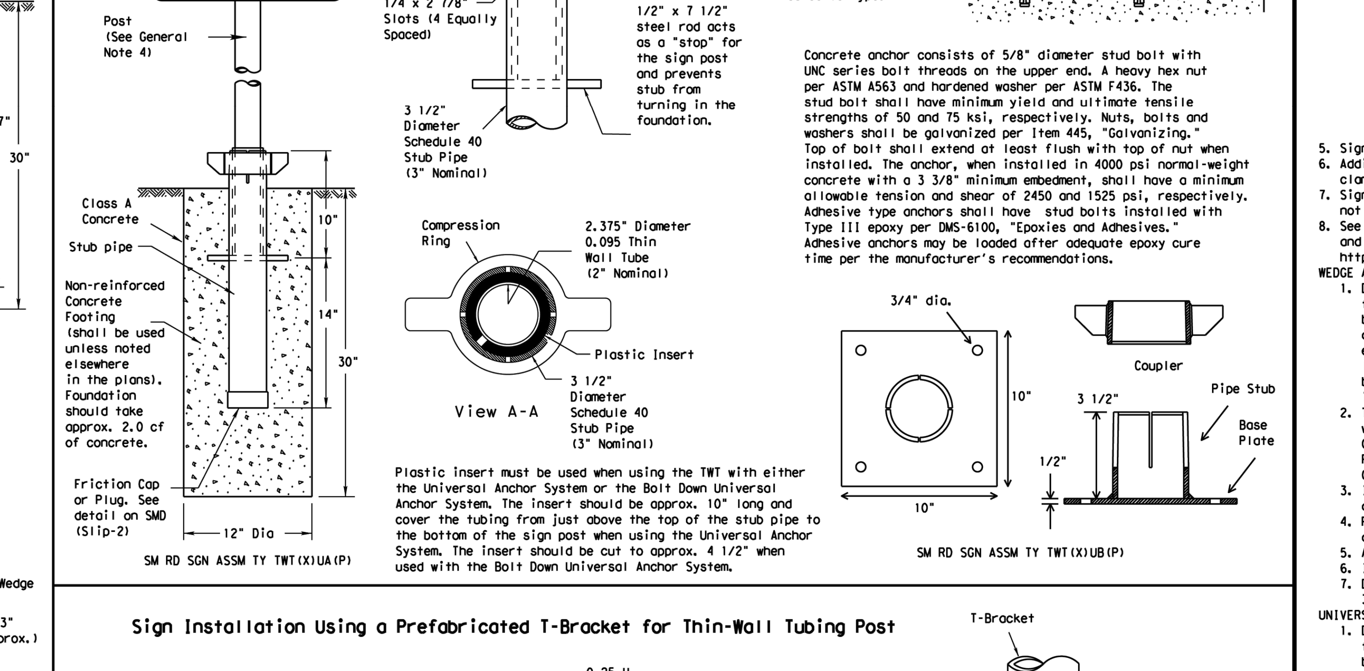
SM RD SGN ASSM TY TWT(X)WS(X)

Wedge Anchor High Density Polyethylene (HDPE) System



SMD RD SGN ASSM TY TWT(X)WP(X)

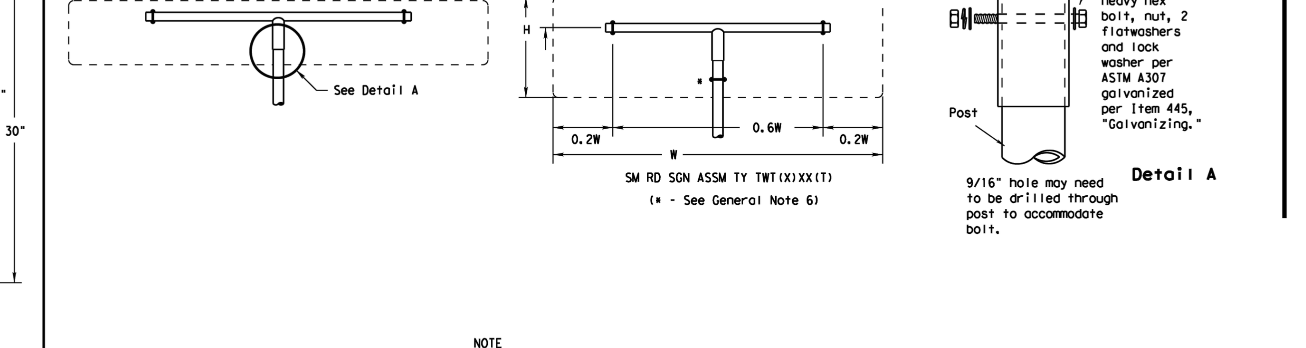
Universal Anchor System with Thin-Walled Tubing Post



Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. A heavy hex nut per ASTM A563 and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 3 3/8" minimum embedment, shall have a minimum allowable tension and shear of 2450 and 1525 psi, respectively. Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations.

Plastic insert must be used when using the TWT with either the Universal Anchor System or the Bolt Down Universal Anchor System. The insert should be approx. 10" long and cover the tubing from just above the top of the stub pipe to the bottom of the sign post when using the Universal Anchor System. The insert should be cut to approx. 4 1/2" when used with the Bolt Down Universal Anchor System.

Sign Installation Using a Prefabricated T-Bracket for Thin-Wall Tubing Post



NOTE

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

GENERAL NOTES:
1. The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 10 square feet of sign area.
2. The tubular socket, wedge and prefabricated T-bracket shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to the approval of the TxDOT Traffic Standards Engineer.
3. Except for posts (13 BWG Tubing), clamps, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the Material Producer List web page. The website address is: http://www.txdot.gov/business/producer_list.htm
4. Material used as post with this system shall conform to the following specifications: 13 BWG Tubing (2.375" outside diameter) (TWT)
   0.095" nominal wall thickness
   Seamless or electric-resistance welded steel tubing
   Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
   Other steels may be used if they meet the following:
   55,000 PSI minimum yield strength
   70,000 PSI minimum tensile strength
   18% minimum elongation in 2"
   Wall thickness (uncoated) shall be within the range of .083" to .099"
   Outside diameter (uncoated) shall be within the range of 2.369" to 2.381"
   Galvanization per ASTM 123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
5. Sign blanks shall be the sizes and shapes shown on the plans.
6. Additional sign clamp required on the "T-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
7. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
8. See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is: http://www.txdot.gov/publications/traffic.htm

WEDGE ANCHOR SYSTEM INSTALLATION PROCEDURE
1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
3. Insert tubular socket into concrete until top of socket is approximaely 1/4 " above the concrete footing.
4. Plumb the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer..
5. Attach the sign to the sign post.
6. Insert the sign post into socket and align sign face with roadway.
7. Drive the wedge into the socket to secure post. This will leave approximately 3 inches of the wedge exposed.

UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE
1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. Insert base post in hole to depths shown and backfill hole with concrete.
3. Level and plumb the base post using a torpedo level and allow concrete adequate time to set. The bottom of the slots provided in the stub pipe shall remain above the top of the concrete foundation.
4. Attach the sign to the sign post.
5. Install plastic insert around bottom of post.
6. Insert sign post into base post. Lower until the post comes to rest on steel rod.
7. Seat compression ring using a hammer. Typically, the top of compression ring will be approximately level with top of stub post when optimally installed.
8. Check sign post by hand to ensure it is unable to turn. If loose, increase the tightening of the compression ring.

Texas Department of Transportation — Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS WEDGE & UNIVERSAL ANCHOR WITH THIN WALL TUBING POST

SMD(TWT)-08

ⒸTxDOT July 2002 | DN: TXDOT | CK: TXDOT | DW: TXDOT | CK: TXDOT
9-08 REVISIONS | CONT | SECT | JOB | HIGHWAY
DIST | COUNTY | SHEET NO.

26E

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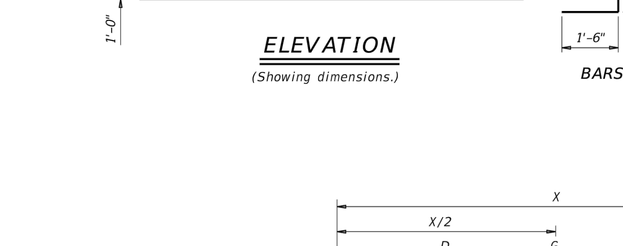
TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL ⑤

Slope	Dia of Pipe (D)	Values for One Pipe: W	X	Y	L	Reinf (Lbs)	Conc (CY) ①	Values to be Added for Each Addt'l Pipe: X and W	Reinf (Lbs)	Conc (CY) ①
2:1	12"	4' - 7 ½"	2' - 6"	2' - 10"	3' - 3 ¼"	88	0.6	1' - 9"	20	0.2
	15"	5' - 5 ¾"	2' - 9 ½"	3' - 4"	3' - 10 ¼"	103	0.7	2' - 2"	24	0.3
	18"	6' - 4 ¼"	3' - 1"	3' - 10"	4' - 5"	124	0.9	2' - 8"	32	0.3
	21"	7' - 2 ¾"	3' - 4 ½"	4' - 4"	5' - 0"	143	1.1	3' - 1"	43	0.4
	24"	8' - 2 ½"	3' - 9 ½"	4' - 10"	5' - 7"	164	1.3	3' - 7"	50	0.5
	27"	9' - 1"	4' - 1"	5' - 4"	6' - 2"	179	1.5	3' - 11"	56	0.6
	30"	9' - 11 ½"	4' - 4 ½"	5' - 10"	6' - 8 ¾"	203	1.7	4' - 4"	65	0.8
	33"	10' - 10"	4' - 8"	6' - 4"	7' - 3 ¾"	224	2.0	4' - 8"	71	0.9
	36"	11' - 8 ¼"	4' - 11 ½"	6' - 10"	7' - 10 ¾"	249	2.2	5' - 1"	81	1.0
	42"	13' - 5 ¼"	5' - 6 ½"	7' - 10"	9' - 0 ½"	298	2.8	5' - 10"	97	1.3
	48"	15' - 9"	6' - 1 ½"	9' - 4"	10' - 9 ¼"	360	3.8	6' - 7"	117	1.7
	54"	17' - 5 ¾"	6' - 8 ½"	10' - 4"	11' - 11 ¼"	427	4.5	7' - 6"	151	2.1
	60"	19' - 2 ¾"	7' - 3 ½"	11' - 4"	13' - 1"	481	5.3	8' - 3"	174	2.5
	66"	20' - 11 ½"	7' - 10 ½"	12' - 4"	14' - 3"	544	6.2	8' - 9"	194	2.9
	72"	22' - 8 ½"	8' - 5 ½"	13' - 4"	15' - 4 ¾"	601	7.1	9' - 4"	213	3.3
3:1	12"	6' - 3"	2' - 6"	4' - 3"	4' - 11"	118	0.8	1' - 9"	22	0.2
	15"	7' - 5"	2' - 9 ½"	5' - 0"	5' - 9 ¼"	137	1.1	2' - 2"	28	0.3
	18"	8' - 6 ¾"	3' - 1"	5' - 9"	6' - 7 ¾"	170	1.3	2' - 8"	37	0.5
	21"	9' - 8 ¾"	3' - 4 ½"	6' - 6"	7' - 6"	195	1.6	3' - 1"	48	0.6
	24"	11' - 0"	3' - 9 ½"	7' - 3"	8' - 4 ½"	227	2.0	3' - 7"	58	0.7
	27"	12' - 2"	4' - 1"	8' - 0"	9' - 2 ¾"	251	2.3	3' - 11"	67	0.8
	30"	13' - 4"	4' - 4 ½"	8' - 9"	10' - 1 ¼"	293	2.7	4' - 4"	77	1.0
	33"	14' - 5 ¾"	4' - 8"	9' - 6"	10' - 11 ¾"	318	3.1	4' - 8"	84	1.2
	36"	15' - 7 ¾"	4' - 11 ½"	10' - 3"	11' - 10"	351	3.5	5' - 1"	96	1.4
	42"	17' - 11 ½"	5' - 6 ½"	11' - 9"	13' - 6 ¾"	432	4.5	5' - 10"	119	1.7
	48"	21' - 1 ¾"	6' - 1 ½"	14' - 0"	16' - 2"	537	6.1	6' - 7"	146	2.3
	54"	23' - 5 ½"	6' - 8 ½"	15' - 6"	17' - 10 ¾"	630	7.3	7' - 6"	186	2.9
	60"	25' - 9 ¼"	7' - 3 ½"	17' - 0"	19' - 7 ½"	719	8.7	8' - 3"	219	3.4
	66"	28' - 1"	7' - 10 ½"	18' - 6"	21' - 4 ¼"	811	10.1	8' - 9"	242	3.9
	72"	30' - 4 ¾"	8' - 5 ½"	20' - 0"	23' - 1 ¼"	924	11.7	9' - 4"	272	4.4
4:1	12"	7' - 10 ¾"	2' - 6"	5' - 8"	6' - 6 ½"	148	1.1	1' - 9"	24	0.3
	15"	9' - 4"	2' - 9 ½"	6' - 8"	7' - 8 ½"	181	1.5	2' - 2"	32	0.4
	18"	10' - 9 ½"	3' - 1"	7' - 8"	8' - 10 ¼"	221	1.9	2' - 8"	42	0.5
	21"	12' - 2 ¾"	3' - 4 ½"	8' - 8"	10' - 0"	260	2.3	3' - 1"	57	0.7
	24"	13' - 9 ½"	3' - 9 ½"	9' - 8"	11' - 2"	301	2.8	3' - 7"	67	0.9
	27"	15' - 3"	4' - 1"	10' - 8"	12' - 3 ¾"	334	3.3	3' - 11"	77	1.0
	30"	16' - 8 ¼"	4' - 4 ½"	11' - 8"	13' - 5 ¾"	385	3.8	4' - 4"	89	1.3
	33"	18' - 1 ¾"	4' - 8"	12' - 8"	14' - 7 ½"	425	4.5	4' - 8"	101	1.4
	36"	19' - 7"	4' - 11 ½"	13' - 8"	15' - 9 ¼"	472	5.1	5' - 1"	115	1.7
	42"	22' - 5 ¾"	5' - 6 ½"	15' - 8"	18' - 1"	583	6.5	5' - 10"	141	2.1
	48"	26' - 6 ¼"	6' - 1 ½"	18' - 8"	21' - 6 ¾"	730	8.9	6' - 7"	175	2.8
	54"	29' - 5"	6' - 8 ½"	20' - 8"	23' - 10 ¼"	875	10.7	7' - 6"	226	3.6
	60"	32' - 3 ¾"	7' - 3 ½"	22' - 8"	26' - 2"	996	12.7	8' - 3"	264	4.3
	66"	35' - 2 ½"	7' - 10 ½"	24' - 8"	28' - 5 ¾"	1,140	14.9	8' - 9"	300	4.9
	72"	38' - 1 ¼"	8' - 5 ½"	26' - 8"	30' - 9 ½"	1,297	17.3	9' - 4"	334	5.6
6:1	12"	11' - 2"	2' - 6"	8' - 6"	9' - 9 ¾"	224	1.9	1' - 9"	28	0.4
	15"	13' - 2 ¼"	2' - 9 ½"	10' - 0"	11' - 6 ½"	268	2.5	2' - 2"	37	0.5
	18"	15' - 2 ½"	3' - 1"	11' - 6"	13' - 3 ¼"	330	3.2	2' - 8"	50	0.7
	21"	17' - 2 ¾"	3' - 4 ½"	13' - 0"	15' - 0 ¼"	387	3.9	3' - 1"	69	0.9
	24"	19' - 4 ½"	3' - 9 ½"	14' - 6"	16' - 9"	453	4.8	3' - 7"	80	1.2
	27"	21' - 4 ¾"	4' - 1"	16' - 0"	18' - 5 ¾"	512	5.7	3' - 11"	96	1.4
	30"	23' - 5 ¼"	4' - 4 ½"	17' - 6"	20' - 2 ½"	593	6.7	4' - 4"	110	1.7
	33"	25' - 5 ½"	4' - 8"	19' - 0"	21' - 11 ¼"	675	7.8	4' - 8"	127	2.0
	36"	27' - 5 ¾"	4' - 11 ½"	20' - 6"	23' - 8"	735	9.0	5' - 1"	144	2.3
	42"	31' - 6 ¼"	5' - 6 ½"	23' - 6"	27' - 1 ½"	922	11.5	5' - 10"	179	3.0
	48"	37' - 3 ½"	6' - 1 ½"	28' - 0"	32' - 4"	1,191	15.9	6' - 7"	231	4.0
	54"	41' - 4 ¼"	6' - 8 ½"	31' - 0"	35' - 9 ½"	1,424	19.2	7' - 6"	300	5.0
	60"	45' - 4 ¾"	7' - 3 ½"	34' - 0"	39' - 3"	1,631	22.9	8' - 3"	353	6.0



ELEVATION

(Showing dimensions.)

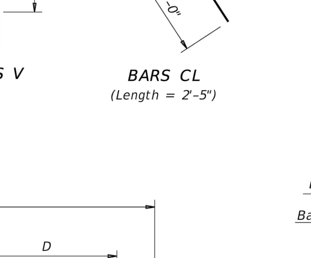
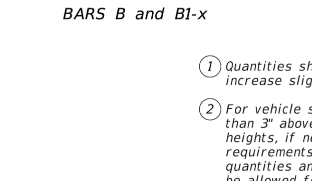


TABLE OF REINFORCING STEEL ⑤

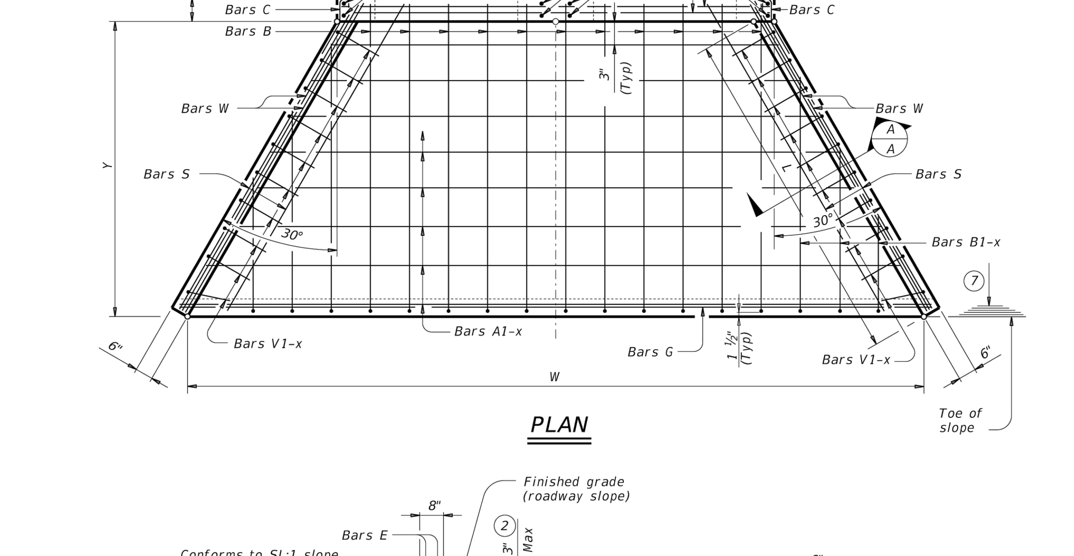
Bar	Size	Spa	No.
A	#4	1' - 0"	~
B	#3	1' - 6"	~
C	#4	1' - 0"	~
D	#3	1' - 0"	~
E	#5	~	4
F	#5	~	~
G	#3	~	2
S	#4	~	6
V	#4	1' - 0"	~
W	#5	~	4

TABLE OF CONSTANT DIMENSIONS

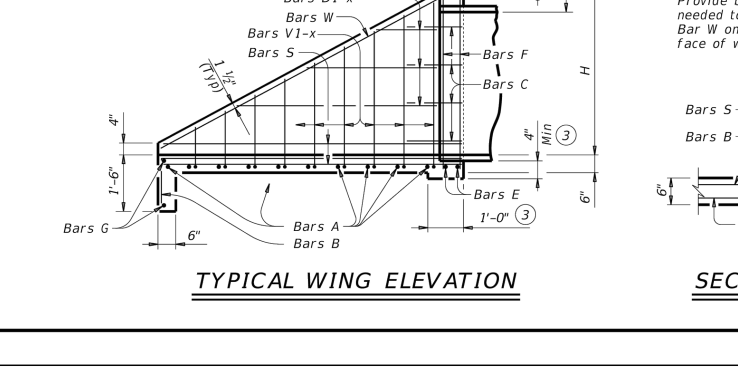
Dia of Pipe (D)	G	K ④	H
12"	0' - 9"	1' - 0"	2' - 0"
15"	0' - 11"	1' - 0"	2' - 3"
18"	1' - 2"	1' - 0"	2' - 6"
21"	1' - 4"	1' - 0"	2' - 9"
24"	1' - 7"	1' - 0"	3' - 0"
27"	1' - 8"	1' - 0"	3' - 3"
30"	1' - 10"	1' - 0"	3' - 6"
33"	1' - 11"	1' - 0"	3' - 9"
36"	2' - 1"	1' - 0"	4' - 0"
42"	2' - 4"	1' - 0"	4' - 6"
48"	2' - 7"	1' - 3"	5' - 3"
54"	3' - 0"	1' - 3"	5' - 9"
60"	3' - 3"	1' - 3"	6' - 3"
66"	3' - 3"	1' - 3"	6' - 9"
72"	3' - 4"	1' - 3"	7' - 3"



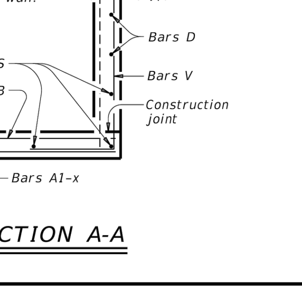
BARS B and B1-x



PLAN



TYPICAL WING ELEVATION



SECTION A-A

① Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.

② For vehicle safety, construct curbs no more than 3" above finished grade. Reduce curb heights, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

③ Provide a 1'-0" footing as shown where required to maintain 4" minimum cover for pipes.

④ Dimensions shown are usual and maximum.

⑤ Quantities shown are for one structure end only (one headwall).

⑥ Min Length = $6" + 3" \times \left(\frac{12 \times H - 7}{12 \times L}\right)$

Max Length = $12 \times H - 3" \times \left(\frac{12 \times H - 7}{12 \times L}\right) - 1"$

⑦ Lengths of wings based on SL:1 slope along this line.

MATERIAL NOTES:
Provide Grade 60 reinforcing steel.
Provide Class C concrete (f'c = 3,600 psi).

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
Do not mount bridge rails of any type directly to these culvert headwalls.
This standard may not be used for wall heights, H, exceeding the values shown.

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

Texas Department of Transportation — Bridge Division Standard

CONCRETE HEADWALLS WITH FLARED WINGS FOR 0° SKEW PIPE CULVERTS

CH-FW-0

FILE: CD-CH-FW0-20.dgn | DN: TxDOT | CK: TxDOT | DW: TxDOT | CK: TxDOT
ⒸTxDOT February 2020 | CONT | SECT | JOB | HIGHWAY
REVISIONS | DIST | COUNTY | SHEET NO.

DATE:
FILE:

REV	DATE	DESCRIPTION	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

STREET & DRAINAGE DETAILS (SHEET 5 OF 6)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the completeness of this standard or for changes made to it by others. In no event shall TxDOT be liable for any damages, including but not limited to direct, indirect, special or consequential damages resulting from its use. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:

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

Dimensions					Variable Reinforcing				Estimated Quantities per ft of wing length (2–wings) ③	
Maximum Wingwall Height Hw	W	X	Y	Z	Bars J1 Size	Bars J1 Spa	Bars J2 Size	Bars J2 Spa	Reinf Lb/Ft)	Conc (CY/Ft)
2'-6"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	33.73	0.248
3'-0"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	37.07	0.261
3'-6"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	37.74	0.273
4'-0"	2'-5"	1'-0"	9"	7"	#4	1'-0"	#4	1'-0"	38.41	0.285
4'-6"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	41.75	0.330
5'-0"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	45.09	0.343
5'-6"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	45.75	0.355
6'-0"	3'-2"	1'-6"	1'-0"	7"	#4	1'-0"	#4	1'-0"	46.42	0.367
7'-0"	3'-8"	1'-9"	1'-3"	7"	#4	1'-0"	#4	1'-0"	52.77	0.414
8'-0"	4'-2"	2'-0"	1'-6"	8"	#5	1'-0"	#4	1'-0"	60.19	0.486
9'-0"	4'-8"	2'-3"	1'-9"	8"	#4	6"	#4	6"	81.49	0.535
10'-0"	5'-2"	2'-6"	2'-0"	8"	#5	6"	#4	6"	97.25	0.584
11'-0"	5'-8"	2'-9"	2'-3"	8"	#6	6"	#5	6"	133.65	0.634
12'-0"	6'-2"	3'-0"	2'-6"	9"	#7	6"	#5	6"	162.29	0.721
13'-0"	6'-8"	3'-3"	2'-9"	11"	#7	6"	#5	6"	178.80	0.856
14'-0"	7'-2"	3'-6"	3'-0"	1'-0"	#8	6"	#5	6"	216.78	0.959
15'-0"	7'-8"	4'-0"	3'-0"	1'-1"	#7	6"	#6	6"	283.06	1.068
16'-0"	8'-2"	4'-6"	3'-0"	1'-3"	#9	6"	#6	6"	297.02	1.234

TABLE OF WINGWALL REINFORCING
(2–wings)

Bar	Size	No.	Spa
D	#5	~	1'-0"
E	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	4	~
M	#4	4	~
P	#4	~	1'-0"
R	#5	6	~
V	#4	~	1'-0"

TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES

Bar	Size	No.	Spa
L	#4	~	1'-0"
Q	#4	1	~
Reinf (Lb/Ft)			2.45
Conc (CY/Ft)			0.037

WING DIMENSION FORMULAS:

(All values are in feet.)

Hw = H + T + C – 0.250'
Lw = (Hw – 0.333') (SL)

For cast–in–place culverts:
Ltw = (N) (S) + (N + 1) (U)

For precast culverts:
Ltw = (N) (2U + S) + (N – 1) (0.5')

Total Wingwall Area (two wings ~ SF) = (Hw + 0.333') (Lw)

Hw = Height of wingwall
SL:1 = Side slope ratio (horizontal:1 vertical)
Lw = Length of wingwall
Ltw = Culvert toewall length
N = Number of culvert spans

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

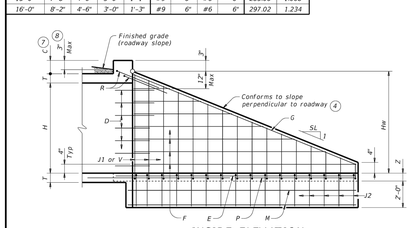
1. Extend Bars P 3'-0" minimum into bottom slab of box culvert.
2. Adjust as necessary to maintain 1 1#2" clear cover and 4" minimum between bars.
3. Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings, multiply the tabulated values by Lw.
4. Recommended values of side slope are: 2:1, 3:1, 4:1, and 6:1.
5. When shown elsewhere on the plans, construct 5" deep concrete riprap. Payment for riprap is as required by Item 432, "Riprap." Unless otherwise shown on the plans or directed by the Engineer, provide a 6" wide by 1'-6" deep reinforced concrete toewall along all edges of the riprap adjacent to natural ground; reinforce the toewall by extending typical riprap reinforcing into the toewall; and extend construction joints or grooved joints oriented in the direction of flow across the full distance of the riprap at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B–B will not be required.
6. At Contractor's option, culvert toewall may be ended flush with wingwall toewall. Adjust reinforcing as needed.
7. 0" Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail or curbs taller than 1'-0, refer to the Extended Curb Details (ECD) standard sheet. For structures with T631 or T631LS bridge rail, refer to the Mounting Details for T631 & T631LS Rails (T631-CM) standard sheet. Refer to the Box Culvert Rail Mounting Details (RAC) standard sheet for structures with bridge rail other than T631 or T631LS.
8. For vehicle safety, the following requirements must be met:
   - For structures without bridge rail, construct curbs no more than 3" above Finished grade.
   - For structures with bridge rail, construct curbs flush with finished grade.

   Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

MATERIAL NOTES:
Provide Class C concrete (f'c=3,600 psi).
Provide Grade 60 reinforcing steel.
Provide galvanized reinforcing steel if required elsewhere in the plans.
In riprap concrete, synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing unless noted otherwise.

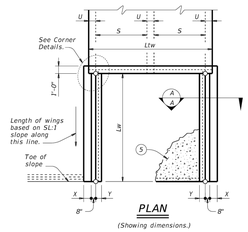
GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.
See Box Culvert Supplement (BCS) standard sheet for additional dimensions and information.
The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.

Cover dimensions are clear dimensions, unless noted otherwise.
Reinforcing dimensions are out–to–out of bars.



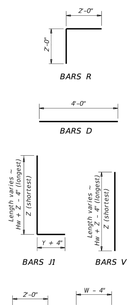
INSIDE ELEVATION

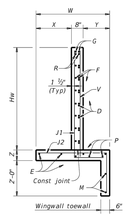
(Showing reinforcing. Culvert and culvert toewall reinforcing not shown for clarity.)



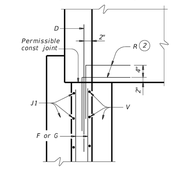
PLAN

(Showing dimensions.)

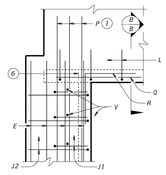




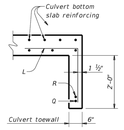
SECTION A–A



WINGWALL



FOOTING AND TOEWALL



SECTION B–B ⑤

CORNER DETAILS

Texas Department of Transportation — Bridge Division Standard

CONCRETE WINGWALLS WITH STRAIGHT WINGS FOR 0° SKEW BOX CULVERTS

SW-0

FILE: CD-SW0-20.dgn	DN: GAF	CK: CAT	DW: TxDOT	CK: TxDOT
©TxDOT February 2020	CONT	SECT	JOB	HIGHWAY
REVISIONS	DIST	COUNTY		SHEET NO.

APR							
DATE							
DESCRIPTION							
REV							

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F–1046
TEL: 512-879-0400 www.bgeinc.com

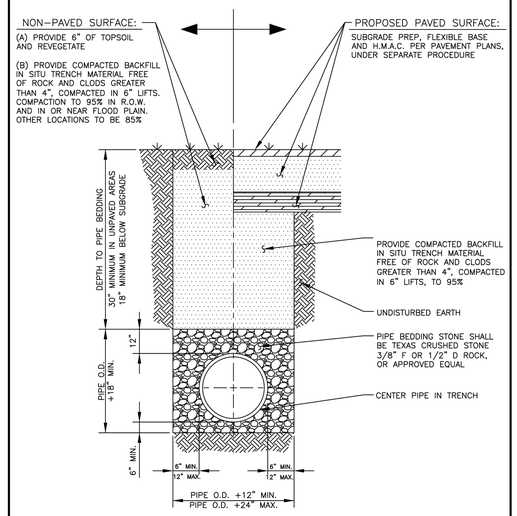
Reviewed for Substantial Conformance by City of Hutto
Matt Reiley, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
FOR OFFICIAL USE ONLY

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

STREET & DRAINAGE DETAILS (SHEET 6 OF 6)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

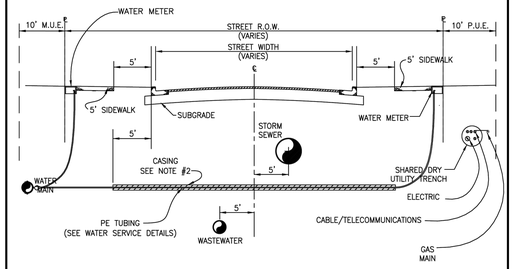
G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-DTLS.dwg Layout: 84 STREET & DRAINAGE DETAILS (SHEET 6 OF 6) Plotted: 12/2/2024 6:21:11 PM



NOTE:

1. ALL TRENCHING AND TRENCH SAFETY SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	WATERLINE BEDDING DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-02



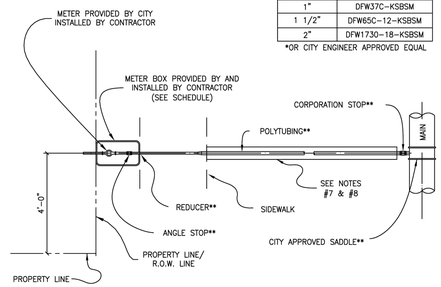
NOTES:

1. REFER TO 'STANDARD INSTALLATION DETAIL FOR ONE OR TWO METERS' FOR SERVICE SPECIFICS.
2. DRY UTILITY MAINS/LINES AND CASINGS FOR DU LINES SHALL BE, AT MINIMUM, TWO FEET (2') BELOW FINISHED GRADE.
3. FOR SERVICE LINES GREATER THAN 1.5" DIAMETER, USE 4" SDR–35 FOR CASING. FOR LINES 1.5" IN DIAMETER OR BELOW, USE 2" SCHEDULE 40 PVC. GALVANIZED CASING PIPE REQUIRED FOR JACK AND BORE. ALL SERVICE LINES TO BE ENCASED PER THIS DETAIL.
4. STORM SEWER SHALL BE A MINIMUM OF ONE FOOT (1') ABOVE WASTEWATER MAINS AND LATERALS.
5. MINIMUM VERTICAL SEPARATION DISTANCE BETWEEN WATER AND WASTE WATER AT CROSSINGS IS TWO FOOT (2').

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	WATER SERVICE DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-03

METER BOX SCHEDULE	
METER SIZE	METER BOX*
5/8"	DFW36C–KSBSM
3/4"	DFW36C–KSBSM
1"	DFW37C–KSBSM
1 1/2"	DFW65C–12–KSBSM
2"	DFW1730–18–KSBSM

*OR CITY ENGINEER APPROVED EQUAL

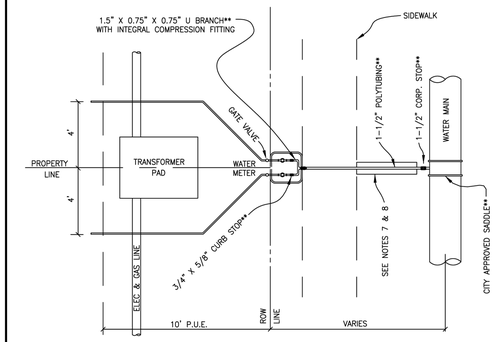


**SEE DETAIL W06 FOR PARTS LISTINGS

NOTES:

1. STANDARD PARTS LIST FOUND ON CITY OF HUTTO DETAIL W06.
2. SERVICE LINE TO REDUCE SHALL BE THREE FOOT (3') BELOW SURFACE.
3. ANGLE STOPS SHALL BE SIZED TO MATCH SERVICE AND METER SIZE.
4. 1" ANGLE STOPS WITH ¾" VALVES SHALL NOT BE PERMITTED.
5. MULTIPLE SERVICE/METER INSTALLATIONS OF MORE THAN FOUR (4) METERS PER SERVICE AND SERVICE LINES LARGER THAN TWO INCH (2") IN DIAMETER SHALL BE HANDLED ON AN INDIVIDUAL BASIS.
6. ANGLE STOPS 1–1/2" AND 2" IN SIZE SHALL BE PROVIDED WITH BOTH A LOCKING CAP AND A METER FLANGE.
7. BEDDING MATERIAL PER CONSTRUCTION SPECIFICATIONS.
8. FOR CASING REQUIREMENTS FOR SERVICE LINES CROSSING ROADWAYS, SEE CITY OF HUTTO DETAIL W03.
9. ALL SERVICE LINES SHALL BE PLACE PERPENDICULAR TO THE ROADWAY.
10. ANY VARIATIONS ON FITTINGS MUST BE APPROVED BY THE CITY ENGINEER.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	SINGLE WATER SERVICE DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-04

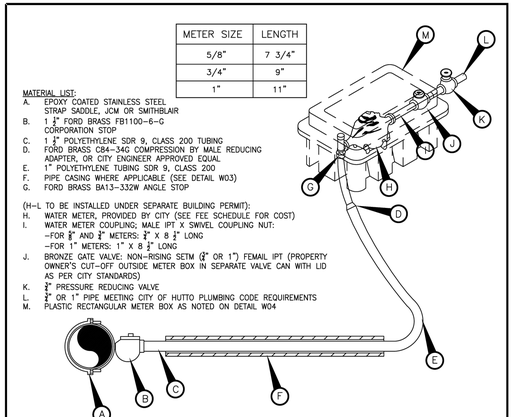


** = SEE DETAIL W07 FOR PARTS LIST

NOTES:

1. AUTHORIZED SERVICE LINE MATERIAL: 1.5" POLYETHYLENE TUBING SDR 9. CLASS 200
2. ANGLE STOP SIZE SHALL MATCH U–BRANCH AND METER.
3. 1" ANGLE STOPS WITH 0.75" VALVES SHALL BE PERMITTED.
4. MULTIPLE SERVICE/METER INSTALLATION OF MORE THAN FOUR METER PER SERVICE AND SERVICE LINES LARGER THAN 2" IN DIAMETER SHALL BE HANDLED ON AN INDIVIDUAL BASIS.
5. ANGLE STOPS 1.5" AND 2" IN SIZE SHALL BE PROVIDED WITH BOTH LOCKING CAP AND METER FLANGE.
6. ANGLE STOPS SHALL BE INSTALLED 8" BELOW FINISHED GRADE AND MARKED WITH A 2" X 2" X 48" TREATED WOOD STAKE, PAINTED BLUE.
7. BEDDING ENVELOPE AND MATERIAL PER CONSTRUCTION SPECIFICATIONS.
8 CASING REQUIREMENTS FOR SERVICE LINES CROSSING ROADWAYS, SEE CITY OF HUTTO DETAIL #W03.
9 ANY VARIATIONS ON FITTINGS MUST HAVE PRIOR WRITTEN APPROVAL FROM THE CITY ENGINEER.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	DOUBLE WATER SERVICE DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-05



MATERIAL LIST:

A. EPOXY COATED STAINLESS STEEL STRAP SADDLE, JCM OR SMITHBLAIR
B. 1 ¼" FORD BRASS FB1100–6–G CORPORATION STOP
C. 1 ¼" POLYETHYLENE SDR 9, CLASS 200 TUBING
D. FORD BRASS C84–34Q COMPRESSION BY MALE REDUCING ADAPTER, OR CITY ENGINEER APPROVED EQUAL
E. 1" POLYETHYLENE TUBING SDR 9, CLASS 200
F. PIPE CASING WHERE APPLICABLE (SEE DETAIL W03)
G. FORD BRASS BA13–332W ANGLE STOP

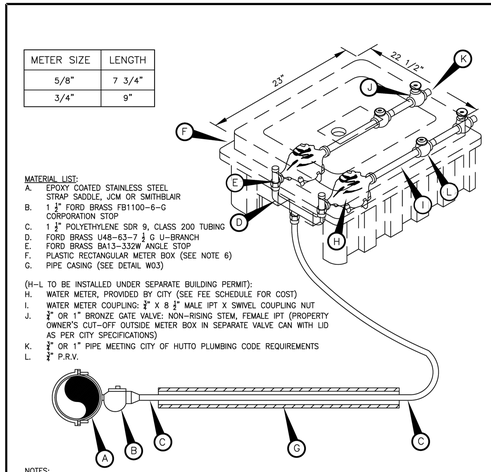
(H–L TO BE INSTALLED UNDER SEPARATE BUILDING PERMIT):

H. WATER METER, PROVIDED BY CITY (SEE FEE SCHEDULE FOR COST)
I. WATER METER COUPLING; MALE IPT X SWIVEL COUPLING NUT:
–FOR ¾" AND 1" METERS: 1" X 8 ¼" LONG
–FOR 1" METERS: 1" X 8 ¾" LONG
J. BRONZE GATE VALVE: NON–RISING SETM (¾" OR 1") FEMAIL IPT (PROPERTY OWNER'S CUT–OFF OUTSIDE METER BOX IN SEPARATE VALVE CAN WITH LID AS PER CITY STANDARDS)
K. ¾" PRESSURE REDUCING VALVE
L. ¾" OR 1" PIPE MEETING CITY OF HUTTO PLUMBING CODE REQUIREMENTS
M. PLASTIC RECTANGULAR METER BOX AS NOTED ON DETAIL W04

NOTES:

1. SERVICE PIPE SHALL BE 200 PSI BLACK COLORED POLYETHYLENE HAVING A DIMENSION RATION OF (DR9).
2. SERVICE SADDLES SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
3. TOP OF BOXES SHALL BE 1" ABOVE FINISHED GRADE.
4. PIPING AND TUBING SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF HUTTO ENGINEERING MANUAL AND CITY OF HUTTO APPROVED SPECIFICATIONS.
5. METER BOX TO BE MODEL DFW38C–KSBSM BY DFW PLASTICS, INC. OR CITY ENGINEER APPROVED EQUAL. PROVIDE BLACK–PAINTED METAL LID WITH METER READER.
6. AXIS OF METER ASSEMBLY (METER STOP, METER, PIPING AND OWNER'S CUTOFF) SHALL BE TEN INCHES (10") BELOW TOP OF BOX.
7. SLOTS PROVIDED IN METER BOX TO ACCOMMODATE PIPING INTO AND OUT OF BOX SHALL NOT BE MODIFIED.
8. INSERT STIFFENERS AT COMPRESSION FITTINGS SHOULD BE CTS–STAINLESS STEEL 6133–T FITTINGS OR CITY ENGINEER APPROVED EQUAL.
9. ALL PARTS TO BE AS NOTED OR CITY ENGINEER APPROVED EQUAL.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	1", 3/4", OR 5/8" SINGLE METER DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-06



MATERIAL LIST:

A. EPOXY COATED STAINLESS STEEL STRAP SADDLE, JCM OR SMITHBLAIR
B. 1 ¼" FORD BRASS FB1100–6–G CORPORATION STOP
C. 1 ¼" POLYETHYLENE SDR 9, CLASS 200 TUBING
D. FORD BRASS UA8–63–7 ¼ G U–BRANCH
E. FORD BRASS BA13–332W ANGLE STOP
F. PLASTIC RECTANGULAR METER BOX (SEE NOTE 6)
G. PIPE CASING (SEE DETAIL W03)

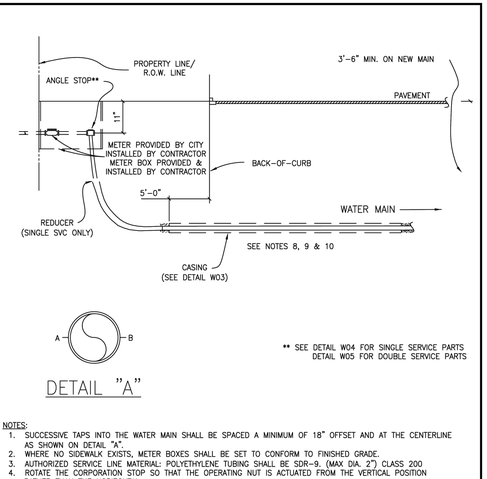
(H–L TO BE INSTALLED UNDER SEPARATE BUILDING PERMIT):

H. WATER METER, PROVIDED BY CITY (SEE FEE SCHEDULE FOR COST)
I. WATER METER COUPLING: ¾" X 8 ¼" MALE IPT X SWIVEL COUPLING NUT
J. ¾" OR 1" BRONZE GATE VALVE: NON–RISING STEM, FEMALE IPT (PROPERTY OWNER'S CUT–OFF OUTSIDE METER BOX IN SEPARATE VALVE CAN WITH LID AS PER CITY SPECIFICATIONS)
K. ¾" OR 1" PIPE MEETING CITY OF HUTTO PLUMBING CODE REQUIREMENTS
L. ¾" P.R.V.

NOTES:

1. SERVICE PIPE SHALL BE 200 PSI BLACK COLORED POLYETHYLENE HAVING A DIMENSION RATION OF (DR9).
2. SERVICE SADDLES SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM.
3. TOP OF BOXES SHALL BE 1" ABOVE FINISHED GRADE.
4. BRANCH CONNECTION AND BOTH ANGLE METER STOPS MUST BE INSTALLED PRIOR TO FIRST METER INSTALLATION EVEN THOUGH SECOND PROPERTY MAY NOT BE READY FOR SERVICE.
5. PIPING AND TUBING SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF HUTTO ENGINEERING MANUAL AND CITY OF HUTTO APPROVED SPECIFICATIONS.
6. METER BOX TO BE MODEL DFW38C–14–KSBSM BY DFW PLASTICS, INC. OR CITY ENGINEER APPROVED EQUAL.
7. AXIS OF METER ASSEMBLY (METER STOP, METER, PIPING AND OWNER'S CUTOFF) SHALL BE TEN INCHES (10") BELOW TOP OF BOX.
8. SLOTS PROVIDED IN METER BOX TO ACCOMMODATE PIPING INTO AND OUT OF BOX SHALL NOT BE MODIFIED.
9. INSERT STIFFENERS AT COMPRESSION FITTINGS SHOULD BE CTS–STAINLESS STEEL 6133–T FITTINGS OR CITY ENGINEER APPROVED EQUAL.
10. ALL PARTS TO BE AS NOTED OR CITY ENGINEER APPROVED EQUAL.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	3/4" OR 5/8" DOUBLE METER DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-07

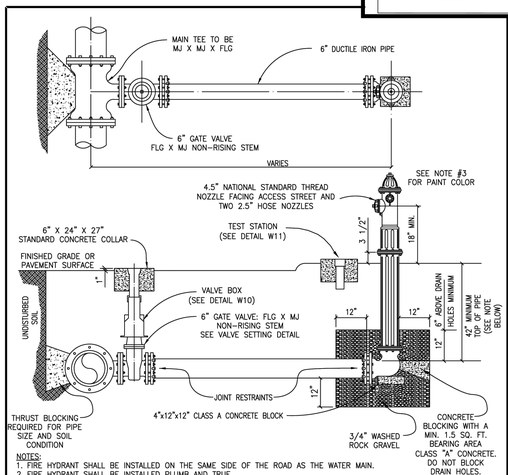


** SEE DETAIL W04 FOR SINGLE SERVICE PARTS
DETAIL W05 FOR DOUBLE SERVICE PARTS

NOTES:

1. SUCCESSIVE TAPS INTO THE WATER MAIN SHALL BE SPACED A MINIMUM OF 18" OFFSET AND AT THE CENTERLINE AS SHOWN ON DETAIL "A".
2. WHERE NO SIDEWALK EXISTS, METER BOXES SHALL BE SET TO CONFORM TO FINISHED GRADE.
3. AUTHORIZED SERVICE LINE MATERIAL: POLYETHYLENE TUBING SHALL BE SDR–9. (MAX DIA. 2") CLASS 200
4. ROTATE THE CORPORATION STOP SO THAT THE OPERATING NUT IS ACTUATED FROM THE VERTICAL POSITION RATHER THAN THE HORIZONTAL.
5. SERVICE LINES SHALL BE CONTINUOUS FROM CORPORATION STOP TO ANGLE STOP WITH NO FITTINGS IN BETWEEN.
6. SERVICE CASING SHALL NOT BE INSTALLED BY WATER JETTING UNDER ROADWAY.
7. CASING REQUIRED FOR ALL PAVEMENT CROSSINGS. SEE CITY OF HUTTO DETAIL #W03 FOR CASING DETAILS.
8. INSERT STIFFENERS REQUIRED AT ALL COMPRESSION FITTINGS.
9. BEDDING PER CONSTRUCTION SPECIFICATIONS.
10. ANY VARIATIONS OF FITTINGS MUST HAVE PRIOR APPROVAL FROM THE CITY ENGINEER.
11. CORPORATION STOP SHOULD BE CONNECTED TO THE MAIN AT 45° ANGLE FROM THE TOP OF THE PIPE.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	TYPICAL WATER SURFACE ELEVATION DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-08



NOTES:

1. FIRE HYDRANT SHALL BE INSTALLED ON THE SAME SIDE OF THE ROAD AS THE WATER MAIN.
2. FIRE HYDRANT SHALL BE INSTALLED PLUMB AND TRUE.
3. ALL FIRE HYDRANT EXTERIORS SHALL BE FACTORY PRIMED AND PAINTED SILVER USING A CITY ENGINEER APPROVED HIGH GRADE PAINT, INCLUDING BONNET.
4. HEEL AND THRUST BLOCKS TO REST IN UNDISTURBED SOIL.
5. THE ONLY FIRE HYDRANTS ACCEPTABLE ARE:
   A. KENNEDY – K81D
   B. AMERICAN DARLING – B84B
   C. CLOW – MEDALLION
   D. EAST JORDAN – #5900
6. DOUBLE BLUE REFLECTOR "HYE–LITES" BRAND, MANUFACTURED BY PAVEMENT MARKERS, INC. TO BE INSTALLED AT CENTERLINE OF STREET PERPENDICULAR TO HYDRANT.
7. ALL BOLTS SHALL BE STAINLESS STEEL.
8. ONLY ORIGINAL EQUIPMENT MANUFACTURE PARTS SHALL BE USED.
9. FACE OF 4.5" NOZZLE SHALL BE 36" FROM BACK OF CURB.
10.A MAXIMUM OF ONE 3' RISER CAN BE USED FOR DEPTHS GREATER THAN 4'. ANYTHING BEYOND A SINGLE RISER WILL REQUIRE THE ENGINEER TO DESIGN A DETAIL SPECIFIC FOR THE PROJECT PRIOR TO CONSTRUCTION STARTING.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	FIRE HYDRANT ASSEMBLY DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-09

Reviewed for Substantial Conformance by City of Hutto
Matt Nortos P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
FOR OFFICIAL USE ONLY

APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WATER DETAILS (SHEET 1 OF 4)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
12/2/2024

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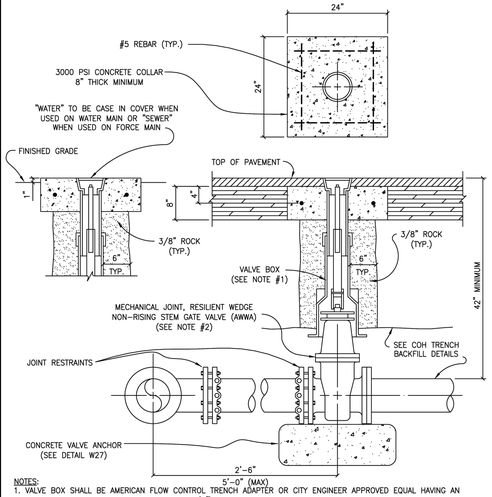
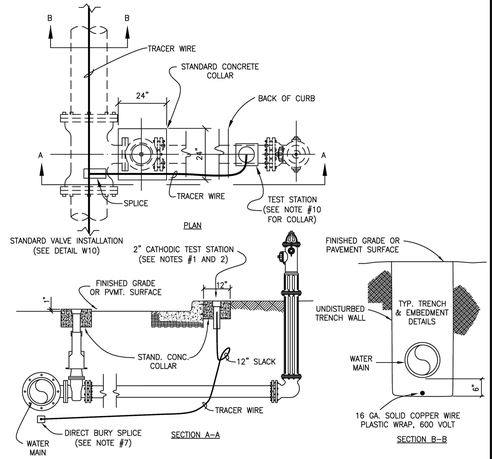


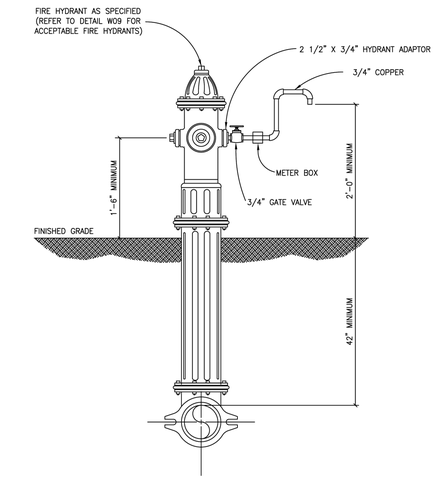
NOTES:
1. VALVE BOX SHALL BE AMERICAN FLOW CONTROL TRENCH ADAPTER OR CITY ENGINEER APPROVED EQUAL HAVING AN ADJUSTABLE RANGE OF + OR – SIX INCHES (6") FROM INSTALLED FINISH GRADE.
2. VALVE STEM SHALL NOT EXCEED 36" IN DEPTH FROM TOP OF GRADE.
3. ACCEPTABLE GATE VALVES ARE:
   A. AMERICAN FLOW CONTROL – SERIES 2500
   B. CLOW
   C. KENNEDY
   D. EAST JORDAN
3. MARK VALVE SIZE AND DIRECTION OF FLOW ON CONCRETE VALVE COVER.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	VALVE INSTALLATION DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-10

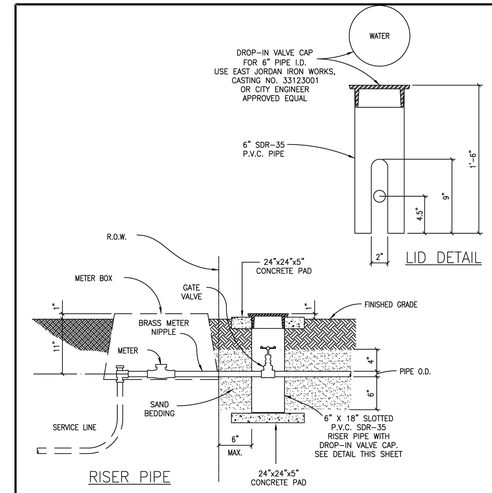


NOTES:
1. TEST STATION SHALL BE HANDLEY INDUSTRIES INC. – TWO INCH (2") CATHODIC TEST STATION OR CITY APPROVED EQUAL.
2. TEST STATION SHALL BE DOWELED TO BACK OF CURB.
3. THE 15" ABS PLASTIC BOX SHALL BE A FLANGED TOP FOR INSTALLATION AT GROUND LEVEL.
4. ALL TERMINALS ARE TO BE MADE OF SOLID BRASS.
5. PLASTIC LIDS SHALL BE COLOR BLUE AND MARKED "WATER".
6. TEST TERMINALS ARE TO BE INCORPORATED WITH HANDLEY VALVE BOXES.
7. BURY SPLICE SHALL BE 3M DIRECT BURY SPLICE (DBR) OR CITY ENGINEER APPROVED EQUAL.
8. TEST STATIONS SHALL BE INSTALLED AT EACH FIRE HYDRANT LOCATION.
9. 4.5" VALVE OF HYDRANT SHALL BE THIRTY-SIX INCHES (36") OFF OF BACK OF CURB.
10. TEST STATION SHALL BE SET IN 12" X 12" CONCRETE COLLAR.
11. CITY WILL NOT ACCEPT INFRASTRUCTURE UNTIL TRACER WIRE IS TESTED AND WORKS CORRECTLY.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	TRACER WIRE AND TEST STATION DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-11

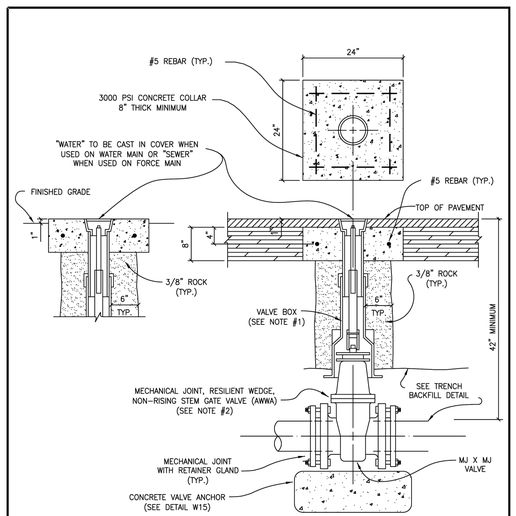


The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	FIRE HYDRANT SAMPLING POINT DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-12



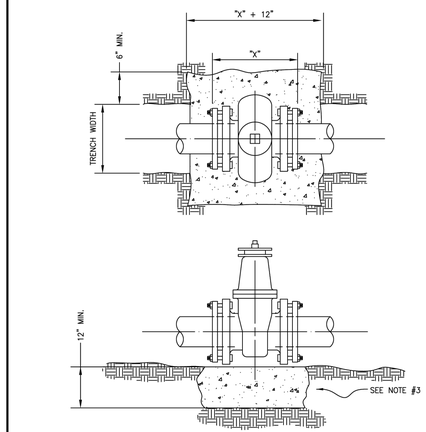
NOTES:
1. GATE VALVE SHALL BE A HAMMOND IB645, CLASS 125, BRONZE GATE, SCREWED BONNET, NON-RISING STEM, SOLID WEDGE DISC WITH THREADED ENDS OR APPROVED EQUAL.
2. DROP-IN VALVE CAP SHALL BE CAST WITH THE WORD "WATER" ON TOP.
3. USE SCHEDULE 80, M.I.P. ADAPTER AS REQUIRED.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	CUSTOMER CUTOFF DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-13



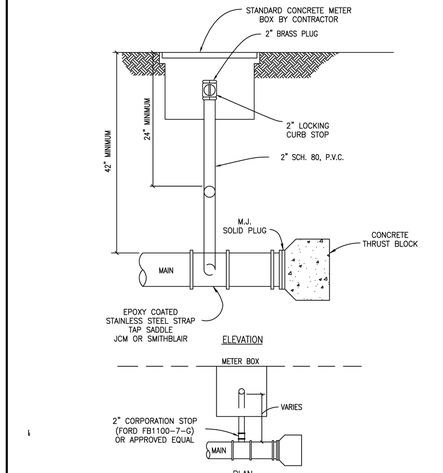
NOTES:
1. VALVE BOX SHALL BE AMERICAN FLOW CONTROL TRENCH ADAPTER OR CITY ENGINEER APPROVED EQUAL HAVING AN ADJUSTABLE RANGE OF + OR – SIX INCHES (6") FROM INSTALLED FINISH GRADE. (SEE VALVE SETTING CITY OF HUTTO DETAIL #W10)
2. ACCEPTABLE GATE VALVES ARE:
   A. AMERICAN FLOW CONTROL – SERIES 2500
   B. CLOW
   C. KENNEDY
3. MARK CONCRETE COLLAR WITH VALVE SIZE AND DIRECTION OF FLOW.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	INLINE VALVE INSTALLATION DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-14



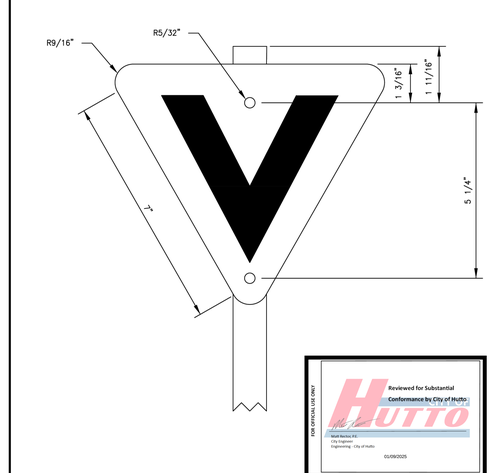
NOTES:
1. THE ENGINEER SHALL PROVIDE DESIGN ON ALL VALVES 12" AND LARGER. VALVES SHALL BE CLOW, KENNEDY, OR AMERICAN FLOW CONTROL.
2. COMPLY WITH REQUIREMENTS OF AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES.
3. CONCRETE VALVE SUPPORT, 2500 PSI CONCRETE.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	CONCRETE VALVE ANCHOR DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-15



NOTES:
1. TRAFFIC BEARING METER BOXES WILL BE REQUIRED IN ALL PAVED AREAS AND AREAS IN WHICH MAY BE PAVED IN THE FUTURE.
2. TUBING SHALL BE CONTINUOUS FROM CORPORATION STOP TO CURB STOP, NO FITTINGS SHALL BE PERMITTED.
3. AUTOMATIC FLUSH VALVES SHALL BE USED (SEE CITY OF HUTTO DETAIL #W13). ALL AUTOMATIC FLUSH VALVES MUST BE METERED.
4. ANY VARIATIONS MUST HAVE PRIOR WRITTEN APPROVAL FROM THE CITY ENGINEER.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STANDARD BLOW-OFF DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-16



NOTES:
1. SIGN MATERIAL TO BE ALUMINUM.
2. SIGN TO BE ATTACHED TO 48" GALVANIZED STEEL ANGLE POST WITH DIMENSIONS 1" X 1" X 1/8".
3. COLORS:
   BACKGROUND – ORANGE
   V – BLACK
4. VALVE MARKING SIGNAGE TO BE INSTALLED IN AREAS DEEMED NECESSARY BY CITY STAFF.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	WATER VALVE SIGN DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-17

APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

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101 W. LOUIS HENNA BLVD., SUITE 400
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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WATER DETAILS (SHEET 2 OF 4)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

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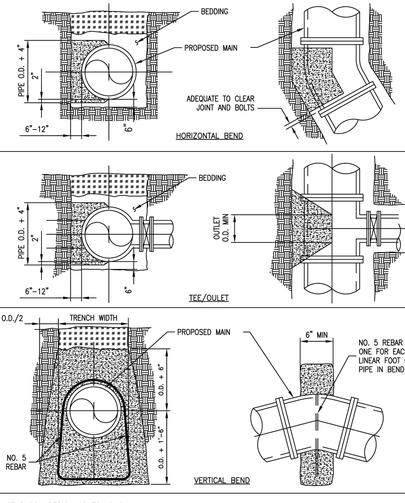


THRUST BLOCK DESIGN AS FOLLOWS:

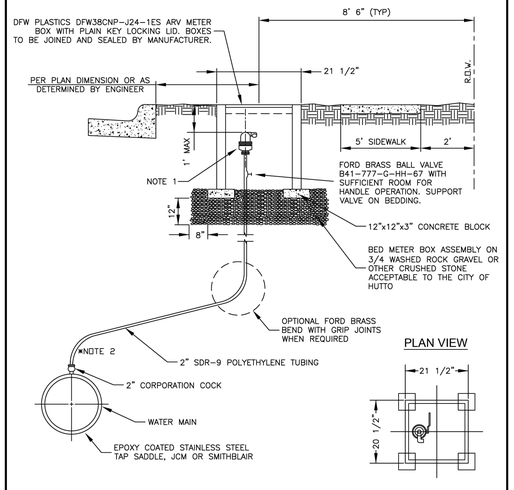
A. PRESSURE OF 150 P.S.I. (ACTUAL IF HIGHER +50% SURGE ALLOWANCE

B. MAXIMUM SOIL BEARING:

SOIL TYPE	PRESSURE
LIMESTONE	4000 LBS/SQ. FT.
UNDISTURBED SOIL CALICHE	2000 LBS/SQ. FT.
LOOSE OR SPONGY SOIL	1500 LBS/SQ. FT.

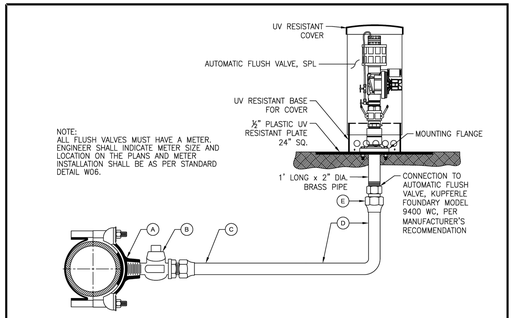
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	TYPICAL THRUST BLOCK DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-18

SECTION VIEW



NOTES:
1. ARI D-040 P 2" AIR RELEASE VALVE. HIGHER CAPACITY VALVES TO BE DESIGNATED BY DESIGN ENGINEER AND APPROVED BY CITY ENGINEER.
2. THREAD TO COMPRESSION BRASS ELBOW ALLOWED IF NECESSARY DUE TO DEPTH LIMITATIONS.
3. ANY VARIATIONS MUST HAVE PRIOR APPROVAL FROM THE CITY ENGINEER.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	AIR RELEASE VALVE DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-19

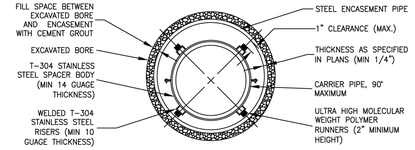


NOTE:
ALL FLUSH VALVES MUST HAVE A METER. ENGINEER SHALL INDICATE METER SIZE AND LOCATION ON THE PLANS AND METER INSTALLATION SHALL BE AS PER STANDARD DETAIL W06.

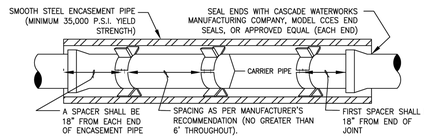
A. 2" EPOXY COATED STAINLESS BAND TAP SADDLE, JCM OR SMITHBLAIR
B. 2" POLY TUBING WATER SERVICE EXTENDED BEYOND PAVEMENT
C. 2" POLY TUBING
D. 2" BRASS COUPLING, COMPRESSION x FIP

NOTES:
1. ALL AUTOMATIC FLUSH VALVES SHALL HAVE A METER.
2. AUTOMATIC FLUSH VALVE MAY ALSO BE USED ON TAPPED PLUGS AND CAPS.
3. THE CONTRACTOR SHALL PROVIDE THE FLUSH VALVE ACCESS KEY TO CITY OF HUTTO WATER UPON FLUSH VALVE ACCEPTANCE.
4. METER BOX AND FLUSH VALVE SHALL NOT BE LOCATED IN A SIDEWALK, DRIVEWAY, PEDESTRIAN WAY OR TRAFFIC WAY.
5. A DRAINAGE WAY, CONTAINED WITHIN THE R.O.W. OR AN EASEMENT, SHALL BE PROVIDED FROM FLUSH VALVE TO STORM SEWER SYSTEM OR PUBLIC DRAINAGE WAY. THIS DRAINAGE WAY SHALL BE CONSTRUCTED OF CONCRETE OR OTHER CITY ENGINEER APPROVED MATERIAL TO PREVENT EROSION.
6. DESIGN ENGINEER SHALL PROVIDE CALCULATIONS WITH PLANS AT THE TIME OF REVIEW INCLUDING FREQUENCY AND FLUSH RATE REQUIRED TO CIRCULATE WATER IN DEAD END MAIN EVERY 72 HOURS.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	AUTOMATIC FLUSH VALVE DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-20

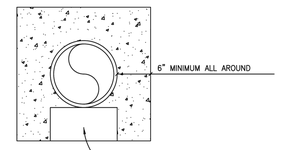


PIPE SIZE-CARRIER (DIAMETER, INCHES)	PIPE SIZE-CASING (MINIMUM DIAMETER, INCHES)	MINIMUM PIPE THICKNESS (INCHES)	
6	16	1 / 4	0.2500
8	18	1 / 4	0.2500
10	20	5 / 16	0.3125
12 ~ 14	24	3 / 8	0.3750
16 ~ 18	30	7 / 16	0.4375
20	36	1 / 2	0.5000
24	42	1 / 2	0.5000
30	48	1 / 2	0.5000



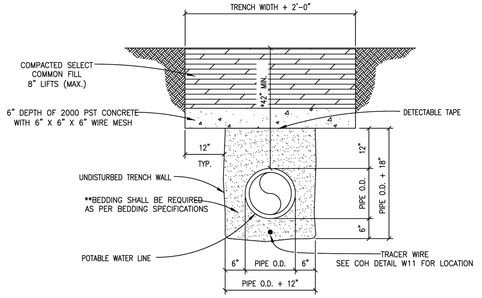
NOTES:
1. CASING SPACER CONFIGURATION AND SPACING SHALL BE AS SHOWN ON MANUFACTURER'S DRAWINGS FOR SPECIFIC WORK; THESE MUST BE ACCEPTABLE TO CITY ENGINEER.
2. CASING SPACER SHALL BE AS MANUFACTURED BY CASCADE WATERWORKS MANUFACTURING COMPANY, MODEL CCS, OR APPROVED EQUAL.
3. CASING SPACERS SHALL NOT BE PAID DIRECTLY BUT SHALL BE CONSIDERED SUBSIDIARY TO THE APPROPRIATE BID ITEM.
4. DO NOT USE WEDGES BETWEEN CARRIER PIPE AND CASING.
5. PRIOR TO INSERTING CARRIER PIPE, ANY WATER SHOULD BE PUMPED OUT OF CASING SO THAT NO MORE THAN A FEW INCHES OF WATER REMAINS.
6. ALL JOINTS IN ENCASEMENT SHALL BE RESTRAINED FOR WATER LINES ONLY UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	PIPE ENCASEMENT DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-21



NOTES:
1. ENCASEMENT TO BE CONSTRUCTED WHERE SEWER LINES PASS UNDER A WATER MAIN WITH LESS THAN NINE FEET (9') CLEAR DISTANCE.
2. ENCASEMENT TO BE CONSTRUCTED WHERE SEWER LINES PASS OVER A WATER LINE.
3. AT CROSSINGS, ENCASEMENT SHALL EXTEND 10 FEET (10') ON EITHER SIDE OF CROSSING.
4. BEGINNING AND ENDING OF ENCASEMENTS SHALL NOT BE MORE THAN SIX INCHES (6") FORM A PIPE JOINT.
5. WHERE WATER AND SEWER LINES PARALLEL WITH LESS THAN TEN FEE (10') HORIZONTAL CLEAR DISTANCE, NO ENCASEMENT IS REQUIRED IF BOTH LINES ARE 150 PRESSURE PIPE.
6. RAW WATER MAINS SHALL BE 150 PSI PRESSURE RATED WHEN PARALLELING POTABLE WATER MAINS WITH LESS THAN TEN FEET (10') HORIZONTAL CLEARANCE.
7. WHERE MINIMUM COVER, FORTY-TWO INCHES (42") IS NOT AVAILABLE, ENCASEMENT WILL BE REQUIRED.
8. ALL CONCRETE ENCASEMENT MUST BE FORMED AND INSPECTED BY THE CITY OF HUTTO INSPECTOR PRIOR TO PLACING CONCRETE AND BACK FILLING.
9. DETECTABLE/MARKING TAPE IS REQUIRED ON ALL WATER AND WASTEWATER PIPES. TAPE SHALL BE TWELVE (12") WIDE AND PLACED AT TOP OF BEDDING.

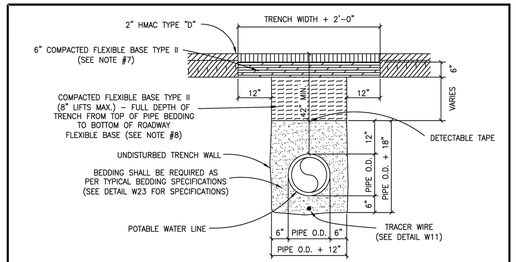
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	CONCRETE ENCASEMENT DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-22



*WHERE 42" MINIMUM COVER CANNOT BE OBTAINED OR DUE TO POTENTIAL SURFACE LOADING THE CITY MAY REQUIRE A CAP TO BE INSTALLED.

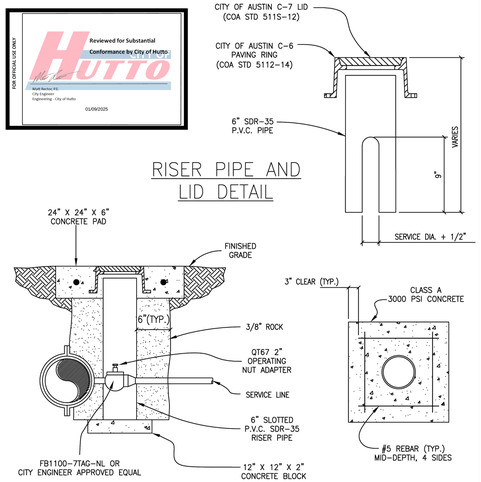
% RETAINED **TYPICAL BEDDING SPECIFICATIONS		
SIEVE SIZE	3 / 8" F	1 / 2" D
1 / 2"	0	0
3 / 8"	0 – 2	5 – 25
4m	40 – 85	80 – 100
10m	95 – 100	95 – 100

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	CONCRETE TRENCH CAP DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-23



NOTES:
1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE.
2. BASE MATERIAL SHALL BE PLACED IN TWO OR THREE LAYERS AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO SPECIFIED MAXIMUM DENSITY
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED
4. SURFACE MATERIAL WILL BE CONSISTENT WITH THE EXISTING SURFACE.
5. A MINIMUM OF ONE DENSITY TEST SHALL BE TAKEN EVERY TWO HUNDRED (200) FEET FOR EACH EIGHT (8") INCH LIFT OF SUBGRADE AND EACH OPEN CUT CROSSING. PROCTORS FOR MATERIALS USED IN BACKFILLING SHALL BE OBTAINED BY A CERTIFIED LABORATORY DENSITY TESTS SHALL BE CONDUCTED BY A CERTIFIED LABORATORY OR THE PERMITTEE'S CONSULTANTS. THE PERCENTAGE OF MAXIMUM DENSITY REQUIRED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AT THE TIME THE PERMIT WAS ISSUED. ALL DENSITY TESTS SHALL BE COMPLETED AND ACCEPTED ON EACH LAYER PRIOR TO ADDITIONAL BACKFILLING. A COPY OF ALL COMPLETED AND ACCEPTED DENSITY TESTS SHALL BE FURNISHED TO CITY OF HUTTO
6. GEOTECHNICAL REPORT MUST BE PROVIDED WITH THE ROAD/STREET DESIGN. THESE SPECIFICATIONS MAY BE SUPERSEDED BY THE CITY ENGINEER.
7. FLEXIBLE BASE TYPE II: (ROADWAY BASE) TxDOT TYPE A – GRADE 2 OR BETTER CRUSHED LIMESTONE BASE COMPACTED TO 98% OF TxDOT 113E AT OPTIMUM MOISTURE. PROCTOR TO BE PROVIDED BY THE CONTRACTOR TO THE CITY INSPECTOR
8. FLEXIBLE BASE TYPE II: (TRENCH BACKFILL) TxDOT TYPE A – GRADE 2 OR BETTER CRUSHED LIMESTONE BASE COMPACTED O 95% OF TxDOT 113E AT OPTIMUM MOISTURE. PROCTOR TO BE PROVIDED BY THE CONTRACTOR TO THE CITY INSPECTOR.
9. DETECTABLE MARKING TAPE SHALL BE USED FOR ALL WATER LINES. THE TAPE SHALL BE BLUE, 12" WIDE, 5 MIL. THE TAPE SHALL BE PLACED AT TOP OF BEDDING.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	TRENCH AND EMBEDMENT UNDER EXISTING ROAD DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-24



NOTES:
1. 1-1/2" AND 2" CORPORATION STOP.
2. PAVING RING AND LID MATERIALS SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
3. FINISH PAVING RING AND LID BY REMOVING FINS AND FLASHING; PAINT WITH BLACK ASPHALT COATING.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	1.5" AND 2" CORPORATION STOP DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-26

APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

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AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WATER DETAILS (SHEET 3 OF 4)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED PROFESSIONAL ENGINEER
12/2/2024

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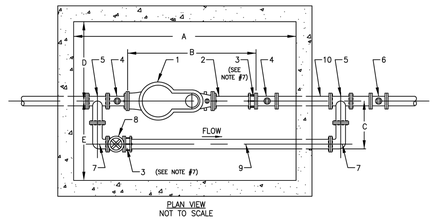
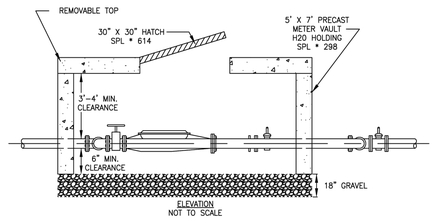


PLAN VIEW
NOT TO SCALE



ELEVATION
NOT TO SCALE

NO.	DESCRIPTION	LENGTH
1.	6" METER	24"
2.	6" FLANGED X PLAIN END	12"
3.	FLANGED COUPLING ADAPTER	5"
4.	6" GATE VALVE SQUARE NUT	10 1/2"
5.	6" X 6" X 6" FLANGED TEE	5"
6.	PROPERTY OWNERS' 6" GATE VALVE SQUARE NUT	10 1/2"
7.	6" FLANGED ELBOW 90	
8.	6" BYPASS GATE VALVE WITH HANDWHEEL	10 1/2"
9.	6" BYPASS DUCTILE IRON PIPE	
10.	6" FLANGED SPOOL	

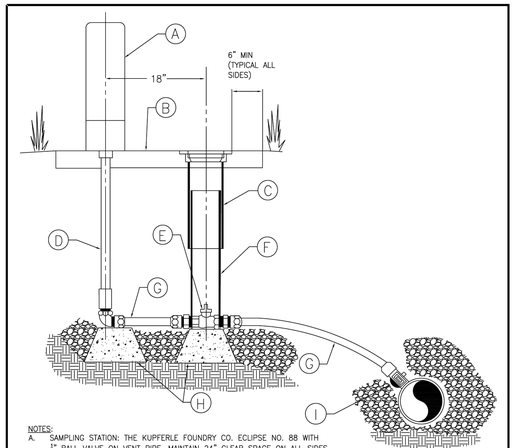
** SIZES AND DIMENSIONS SUBJECT TO CHANGE, CHECK WITH INSPECTOR

NO.	DESCRIPTION	LENGTH
A	OVERALL LENGTH (INSIDE OF VAULT)	84"
B	METER + NIPPLE + FCA	37 1/2"
C	CENTER OF MAINLINE TO OUTSIDE OF BYPASS	17 1/2"
D	CENTERLINE OF MAINLINE TO INSIDE OF VAULT	30"
E	CENTERLINE OF MAINLINE TO INSIDE OF VAULT	30"

NOTES:
1. PIPE AND METER SIZE SHALL BE AS DETERMINED BY THE OWNER: APPROVAL BY CITY OF HUTTO ENGINEERING DEPARTMENT. PLANS MUST BE PREPARED BY LICENSED ENGINEER IF INSTALLATION IN RIGHT-OF-WAY IS BY OTHER THAN CITY FORCES.
2. METER VAULT MUST BE BEHIND CURB AND/OR WALK AND OUT OF VEHICULAR TRAFFIC.
3. MAIN LINE AND BYPASS VALVES WILL BE RESILIENT SEAT TYPE WITH CORROSION RESISTANT FUSION BANDED EPOXY COATING INSIDE AND OUTSIDE. NON-RISING STEM. MAIN LINE VALVES SHALL HAVE SQUARE OPERATING NUTS. BYPASS VALVE WILL HAVE A HANDWHEEL. PROPERTY OWNER'S VALVE MUST BE LOCATED OUTSIDE OF THE CITY OF HUTTO METER VAULT.
4. APPROVAL WILL BE NEEDED IF HEIGHT OF VALVE EXCEEDS 72". METER MUST BE MODIFIED TO READ FROM TOP OF VAULT.
5. HATCH OPENING WILL BE 30" X 30".
6. IRON PIPE TAPPING SLEEVE IN STREET RIGHT-OF-WAY SHALL BE EMBEDDED IN GRANULAR MATERIALS AS REQUIRED BY THE CITY OF HUTTO STANDARD SPECIFICATIONS FOR BACKFILL AND GRANULAR BEDDING AS REQUIRED.
7. DOUBLE HARNESS MJ WITH TIE RODS. ALL OTHER FITTING INSIDE VAULT WILL BE FLANGED.
8. NOTCHES WHERE PIPING GOES THROUGH VAULT SHALL BE FILLED WITH MORTAR.
9. THE TOP OF THE METER VAULT SHALL BE SET AT AN ELEVATION SUCH THAT THE SURROUNDING GROUND SLOPES AWAY FROM THE VAULT.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	METER VAULT DETAIL (1 OF 2)
CITY OF HUTTO	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-27

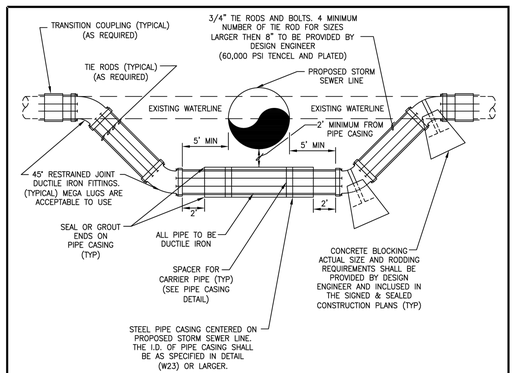
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	METER VAULT DETAIL (2 OF 2)
CITY OF HUTTO	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-27



NOTES:
A. SAMPLING STATION: THE KUPFERLE FOUNDRY CO. ECLIPSE NO. 88 WITH ¾" BALL VALVE ON VENT PIPE. MAINTAIN 24" CLEAR SPACE ON ALL SIDES.
B. PROVIDE 4" THICK CONCRETE PAD AND SAMPLING STATION IF OUTSIDE OF PAVED AREA. PAD SHALL EXTEND A MINIMUM OF 6" BEYOND ALL SIDES OF VALVE BOX AND SAMPLING STATION.
C. VALVE BOX ASSEMBLY PER CITY OF HUTTO DETAIL. VALVE BOX ASSEMBLY SHALL BE CENTERED AND PLUMB ON AXIS OF CURBSTOP NUT. VALVE BOX SHALL NOT REST ON CURBSTOP ASSEMBLY.
D. ¾" BRASS STANDPIPE.
E. BALL VALVE CURBSTOP.
F. 24" BOTTOM SHALL BE "DOGHOUSED" OVER CURB STOP.
G. ¾" POLY SDR-9.
H. 8"x8" CONCRETE PIER BLOCK ON UNDISTURBED NATIVE SOIL.
I. 600 STYLE CORPORATION STOP.

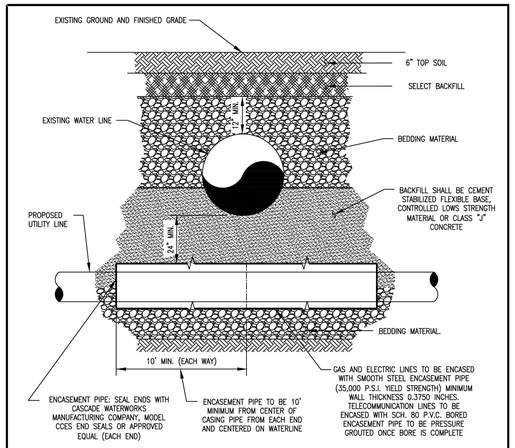
** SAMPLING STATIONS SHOULD BE PROVIDED IN ROW NEAR OPEN SPACES/GREEN LINKS ON A LOOP. AT LEAST ONE FOR EVERY 500 HOMES.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	BAC-T SAMPLING STATION DETAIL
CITY OF HUTTO	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-28



NOTES:
1. DESIGN ENGINEER MAY SPEC. A COMBINATION RESTRAINT SYSTEM OF RESTRAINED JOINTS AND CONCRETE BLOCKING OR TIE RODS AND CONCRETE BLOCKING.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	WATER AND STORM SEWER CROSSING DETAIL
CITY OF HUTTO	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-29



NOTES:
1. A CITY OF HUTTO REPRESENTATIVE SHALL BE PRESENT DURING ANY EXCAVATION NEAR THE CITY'S WATER LINE. (48 HOUR NOTICE IS REQUIRED)
2. A CITY OF HUTTO INSPECTOR SHALL INSPECT AND APPROVE CROSSING BEFORE AND AS IT IS BEING BACKFILLED PER THIS DETAIL.
3. TOP 6" OF TRENCH BACKFILL SHALL BE TOP SOIL, UNLESS PROPERTY OWNER REQUIRES SOMETHING DIFFERENT.
4. DRY UTILITIES TO BE ENCASED UNDER EXISTING WATERLINES WITH A MINIMUM SEPARATION OF 24" BETWEEN ENCASEMENT PIPE AND THE WATERLINE.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	WATER AND DRY UTILITY CROSSING DETAIL
CITY OF HUTTO	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-W-30

APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
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DRAWN BY: BE,BC

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HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WATER DETAILS (SHEET 4 OF 4)

STATE OF TEXAS
RICHARD PHAM
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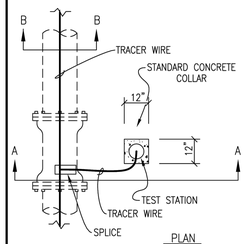
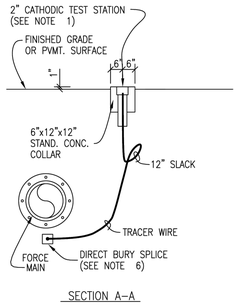
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-DTLS.dwg Layout: 88 WATER DETAILS (SHEET 4 OF 4) Plotted: 12/2/2024 6:21:30 PM

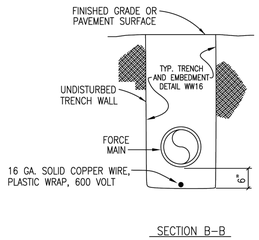


PLAN

NOTES:
1. TEST STATION SHALL BE HANDLEY INDUSTRIES INC. – 2 INCH CATHODIC TEST STATIONS OR APPROVED EQUAL.
2. THE 15" ABS PLASTIC BOX SHALL BE A FLANGED TOP FOR INSTALLATION AT GROUND LEVEL.
3. ALL TERMINALS ARE TO BE MADE OF SOLID BRASS.
4. AN ABOVE GROUND GREEN MARKER SHALL BE PLACED IN BETWEEN EVERY TEST STATION.
5. TEST TERMINALS ARE TO BE INCORPORATED WITH HANDLEY VALVE BOXES.
6. BURY SPLICE SHALL BE 3M DIRECT BURY SPLICE (DBR) OR APPROVED EQUAL.
7. TEST STATIONS SHALL BE INSTALLED EVERY 300FT.

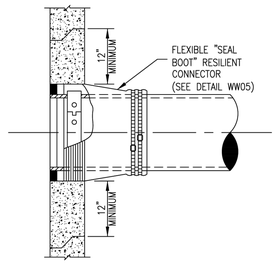


SECTION A–A



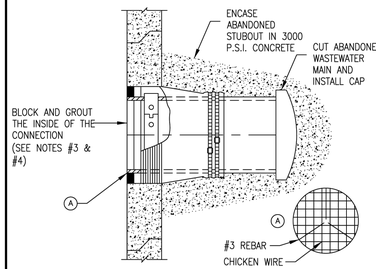
SECTION B–B

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	TRACER WIRE INSTALLATION DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-25



NEW CONNECTIONS TO EXISTING WASTEWATER MANHOLES

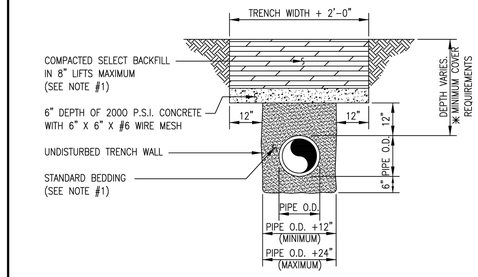
NOTES:
1. EXISTING MANHOLES TO BE VACUUM TESTED PRIOR TO ANY CONNECTIONS.
2. NEW CONNECTIONS TO HAVE MINIMUM VERTICAL AND HORIZONTAL SEPARATION OF 12" ON THE OUTSIDE FACE OF THE MANHOLE FROM ANY EXISTING PENETRATIONS AND/OR MANHOLE JOINTS.
3. CONNECTIONS MADE INTO EXISTING MANHOLES ARE TO BE CORED AND NOT DRILLED/CHISELED.
4. CUT, SHAPE AND SLOPE NEW INVERT CHANNEL IN THE EXISTING CONCRETE BENCH FOR SMOOTH FLOW FROM THE NEW WASTEWATER CONNECTION.
5. EXISTING MANHOLES TO BE RECOATED AFTER ANY NEW WASTEWATER CONNECTION IS ADDED.



ABANDONMENT OF CONNECTIONS TO EXISTING WASTEWATER MANHOLES

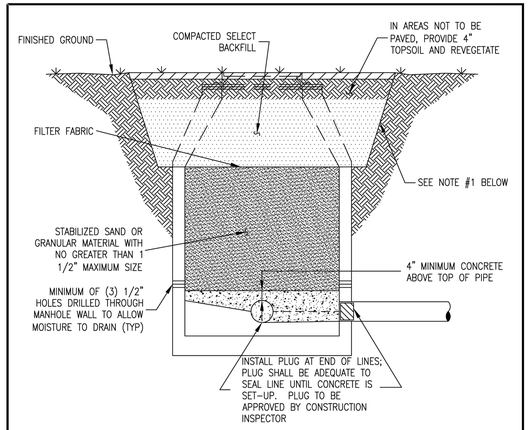
NOTES:
1. THIS DETAIL IS INTENDED FOR WASTEWATER MANHOLES THAT WILL REMAIN IN SERVICE. FOR WASTEWATER MANHOLES THAT ARE TO BE ABANDONED, REFERENCE DETAIL WW22.
2. WASTEWATER MANHOLE TO BE RECOATED AFTER GROUT IS INSTALLED.
3. BLOCK THE INLET OF THE MANHOLE WITH CHICKEN WIRE AND 3–#3 REBAR. GROUT THE INSIDE OF THE MANHOLE FLUSH WITH THE MANHOLE WALL.
4. CONNECTIONS 24" AND LARGER REQUIRE BRICK BLOCKING TO BE INSTALLED PRIOR TO GROUTING.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	EXISTING WASTEWATER MANHOLE CONNECTIONS DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-23



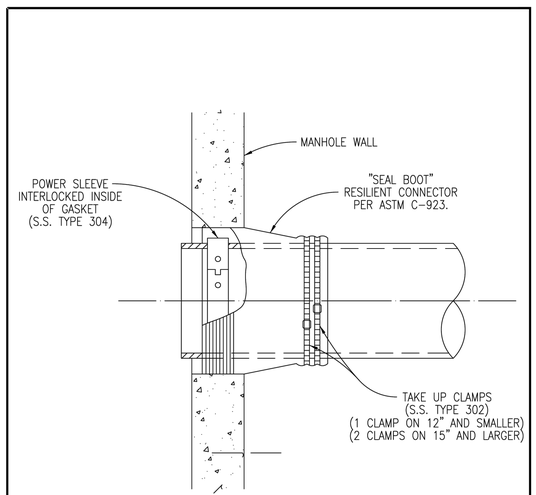
NOTE:
1. WASTEWATER LINE AND SURFACE REPAIR DETAIL WW15 FOR PIPE BEDDING/BACKFILL REQUIREMENTS AND MINIMUM COVER REQUIREMENTS.
2. REQUIREMENTS FOR CONCRETE TRENCH CAPS IN WATERWAYS AND DRAINAGE AREAS NEED TO BE REVIEWED ON A CASE BY CASE BASIS AND APPROVED BY THE CITY ENGINEER AND INSPECTOR.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	WASTEWATER CONCRETE TRENCH CAP DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-24

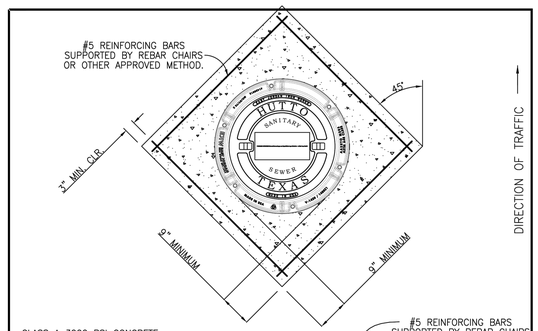


NOTES:
1. REMOVE ENTIRE CONE SECTION AND DEMOLISH STRUCTURE TWO FEET (2'–0") MINIMUM BELOW GROUND LEVEL.
2. IF LINE WHICH IS TO ABANDONED IN PLACE, EXTENDS UNDER EXISTING OR PROPOSED STRUCTURE, THEN THE ENTIRE LINE TO THE NEXT MANHOLE SHALL BE GROUTED OR SLURRY FILLED.
3. IF LINE IS NOT LOCATED UNDER A STRUCTURE, ABANDON EXISTING LINE IN PLACE BY PLUGGING BOTH ENDS OF LINE AND GROUTING AROUND PLUGS.
4. THE CONTRACTOR IS TO RECORD AND CERTIFY QUANTITIES OF GROUT OR SLURRY PUMPED. QUANTITIES MUST BE A MINIMUM OF 90% OF CALCULATED EXISTING VOID CAPACITY.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	WASTEWATER MANHOLE ABANDONMENT DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-22



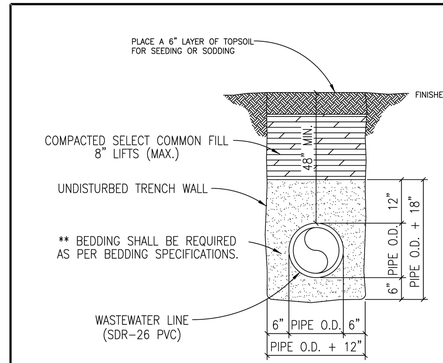
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	FLEXIBLE SEAL BOOT DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-05



PLAN

SECTION

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	MANHOLE COVER CONCRETE APRON DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-20

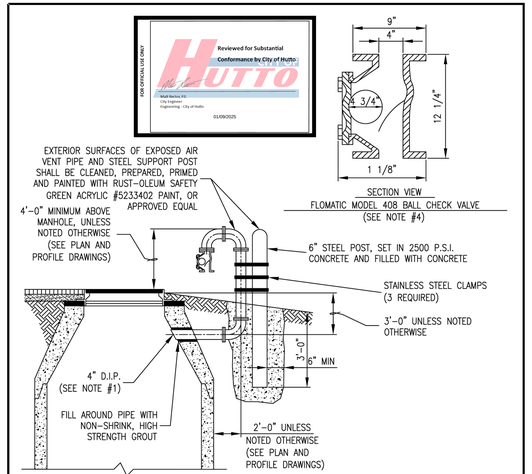


** TYPICAL BEDDING SPECIFICATIONS:

SIEVE SIZE	3/8" F % RETAINED	1/2" D % RETAINED
1/2"	0	0
3/8"	0–2	5–25
#4	40–85	80–100
#10	95–100	96–100

NOTES:
1. IF GROUND WATER IS PRESENT IN THE TRENCH, THE BEDDING MATERIAL SHALL BE SURROUNDED BY FILTER FABRIC (MIRAFI 140N OR EQUIVALENT) ON ALL SIDES TO PREVENT SOIL INFILTRATION INTO THE BEDDING MATERIAL.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	TRENCH AND EMBEDMENT NON-PAVED DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-15



NOTES:
1. AIR VENT PIPE TO BE 4" D.I.P., CLASS 53 WITH FLANGED CONNECTIONS.
2. ALL FITTINGS TO BE 150 PSIG RATED & ANSI/AWWA C110/A21.10.
3. AIR VENT PIPE RISER SHALL BE INSTALLED TO A MINIMUM DEPTH FROM GROUND SURFACE AS POSSIBLE, PREFERABLY LOCATED IN THE CONCENTRIC CONCRETE CONE.
4. MINIMUM ELEVATION AT THE VENT OPENING SHALL BE 1 FOOT (1'–0") ABOVE THE ULTIMATE 100 YEAR FLOOD PLAIN ELEVATION. IF ELEVATION OF VENT OPENING IS LESS THAN 1 FOOT (1'–0") ABOVE THE ULTIMATE 100 YEAR FLOOD PLAIN ELEVATION, A FLOMATIC MODEL 408, PART #2145 BALL CHECK VALVE, OR APPROVED EQUAL, WITH FLOATING TYPE BALL, SHALL BE INSTALLED AT DOWN TURNED OPENING OF VENT. A 16 MESH 304 STAINLESS STEEL INSECT SCREEN SHALL BE PLACED IN THE OPENING.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	MANHOLE VENT ABOVE GROUND DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-19

							APR
							DATE
							DESCRIPTION
							REV

DESIGNED BY: MS,AC

REVIEWED BY: AC

DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
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TBPE Registration No. F-1046
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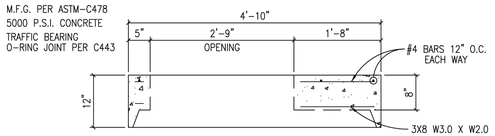
HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WASTEWATER DETAILS (SHEET 1 OF 4)

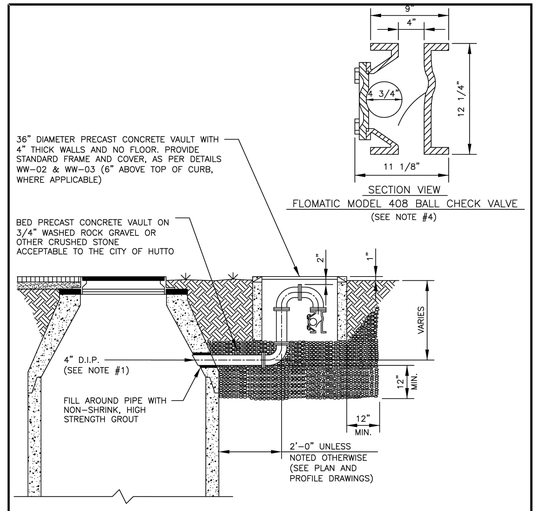
STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXC\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LDI01_CADD\01_Shts\8843-01-C-SP-DTLS.dwg Layout: 89 WASTEWATER DETAILS (SHEET 1 OF 4) Plotted: 12/2/2024 6:21:33 PM



NOTES:
1. AVAILABLE WITH CAST IRON RING AND COVER CAST IN PLACE.
2. PERMITTED ONLY WITH WRITTEN APPROVAL.

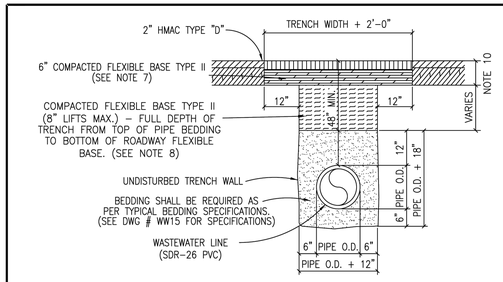
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	48" FLAT MANHOLE LID DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-21



NOTES:

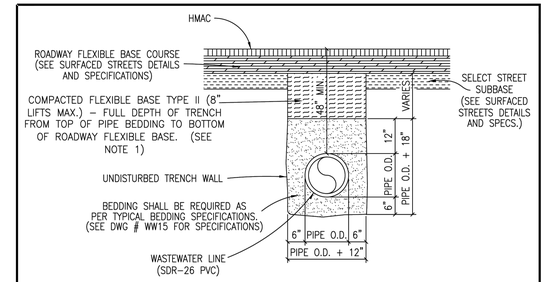
1. AIR VENT PIPE TO BE 4" D.I.P., CLASS 53 WITH FLANGED CONNECTIONS.
2. ALL FITTINGS TO BE 150 PSIG RATED & ANSI/AWWA C110/A21.10.
3. AIR VENT PIPE RISER SHALL BE INSTALLED TO A MINIMUM DEPTH FROM GROUND SURFACE AS POSSIBLE, PREFERABLY LOCATED IN THE CONCENTRIC CONCRETE CONE.
4. MINIMUM ELEVATION AT THE VENT OPENING SHALL BE 1 FOOT (1'-0") ABOVE THE ULTIMATE 100 YEAR FLOOD PLAIN ELEVATION. IF ELEVATION OF VENT OPENING IS LESS THAN 1 FOOT (1'-0") ABOVE THE ULTIMATE 100 YEAR FLOOD PLAIN ELEVATION, A FLOMATIC MODEL 408, PART #2145 BALL CHECK VALVE, OR APPROVED EQUAL, WITH FLOATING TYPE BALL, SHALL BE INSTALLED AT DOWN TURNED OPENING OF VENT. A 16 MESH 304 STAINLESS STEEL INSECT SCREEN SHALL BE PLACED IN THE OPENING.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	MANHOLE VENT BELOW GROUND DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-18



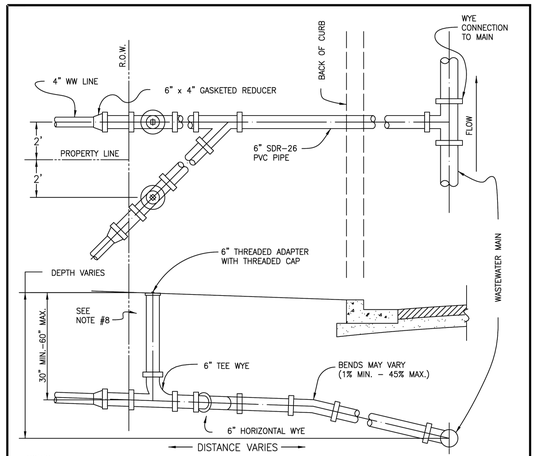
NOTES:
1. REPLACED BASE MATERIAL OVER DITCH SHALL BE TWICE THE THICKNESS OF THE ORIGINAL BASE.
2. BASE MATERIAL SHALL BE PLACED IN TWO OR THREE LAYERS AND EACH LAYER THOROUGHLY ROLLED OR TAMPED TO SPECIFIED MAXIMUM DENSITY.
3. ASPHALT CONCRETE PAVEMENT JOINTS SHALL BE MECHANICALLY SAWED.
4. SURFACE MATERIAL WILL BE CONSISTENT WITH THE EXISTING SURFACE.
5. A MINIMUM OF ONE DENSITY TEST SHALL BE TAKEN EVERY TWO HUNDRED (200) FEET FOR EACH SIX (6) INCH LIFT OF SUBGRADE AND EACH OPEN CUT CROSSING. PROCTORS FOR MATERIALS USED IN BACKFILLING SHALL BE OBTAINED BY A CERTIFIED LABORATORY. DENSITY TESTS SHALL BE CONDUCTED BY A CERTIFIED LABORATORY OR THE PERMITTEE'S CONSULTANTS. THE PERCENTAGE OF MAXIMUM DENSITY REQUIRED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "THE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AT THE TIME THE PERMIT WAS ISSUED. ALL DENSITY TESTS SHALL BE COMPLETED AND ACCEPTED ON EACH LAYER PRIOR TO ADDITIONAL BACKFILLING. A COPY OF ALL COMPLETED AND ACCEPTED DENSITY TESTS SHALL BE FURNISHED TO CITY OF HUTTO.
6. THESE SPECIFICATIONS MAY BE SUPERSEDED BY THE GOVERNING AGENCY. FLEXIBLE BASE TYPE II: (ROADWAY BASE)
7. TxDOT TYPE A – GRADE 2 OR BETTER CRUSHED LIMESTONE BASE COMPACTED TO 100% OF TxDOT 113E AT OPTIMUM MOISTURE. PROCTOR TO BE PROVIDED BY THE CONTRACTOR TO THE CITY INSPECTOR. FLEXIBLE BASE TYPE II: (TRENCH BACKFILL)
8. TxDOT TYPE A – GRADE 2 OR BETTER CRUSHED LIMESTONE BASE COMPACTED TO 95% OF TxDOT 113E AT OPTIMUM MOISTURE. PROCTOR TO BE PROVIDED BY THE CONTRACTOR TO THE CITY INSPECTOR.
9. IF GROUND WATER IS PRESENT IN THE TRENCH, THE BEDDING MATERIAL SHALL BE SURROUNDED BY FILTER FABRIC (MIRAFI 140N OR EQUIVALENT) ON ALL SIDES TO PREVENT SOIL INFILTRATION INTO THE BEDDING MATERIAL.
10. CROSS SECTION SHALL MATCH EXISTING ROAD OR 8" WHICHEVER IS GREATER.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	TRENCH AND EMBEDMENT UNDER EXISTING ROAD DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-16



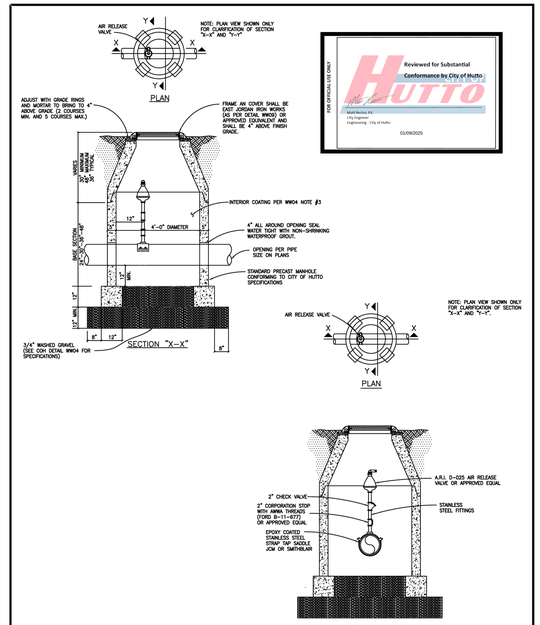
NOTES:
1. TXDOT TYPE A–GRADE 2 OR BETTER CRUSHED LIMESTONE BASE COMPACTED TO 95% OF THE TXDOT 113E AT OPTIMUM MOISTURE. PROCTOR TO BE PROVIDED BY THE CONTRACTOR TO THE CITY INSPECTOR.
2. A MINIMUM OF ONE DENSITY TEST SHALL BE TAKEN EVERY TWO HUNDRED (200) FEET FOR EACH EIGHT (8) INCH LIFT OF BASE. PROCTORS FOR MATERIALS USED IN BACKFILLING SHALL BE OBTAINED BY A CERTIFIED LABORATORY. DENSITY TESTS SHALL BE CONDUCTED BY A CERTIFIED LABORATORY OR THE PERMITTEE'S CONSULTANTS. THE PERCENTAGE OF MAXIMUM DENSITY REQUIRED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "THE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AT THE TIME THE PERMIT WAS ISSUED. ALL DENSITY TESTS SHALL BE COMPLETED AND ACCEPTED ON EACH LAYER PRIOR TO ADDITIONAL BACKFILLING. A COPY OF ALL COMPLETED AND ACCEPTED DENSITY TESTS SHALL BE FURNISHED TO CITY OF HUTTO.
3. THESE SPECIFICATIONS MAY BE SUPERSEDED BY THE GOVERNING AGENCY.
4. IF GROUND WATER IS PRESENT IN THE TRENCH, THE BEDDING MATERIAL SHALL BE SURROUNDED BY FILTER FABRIC (MIRAFI 140N OR EQUIVALENT) ON ALL SIDES TO PREVENT SOIL INFILTRATION INTO THE BEDDING MATERIAL.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	TRENCH AND EMBEDMENT UNDER PROPOSED PAVEMENT DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-17

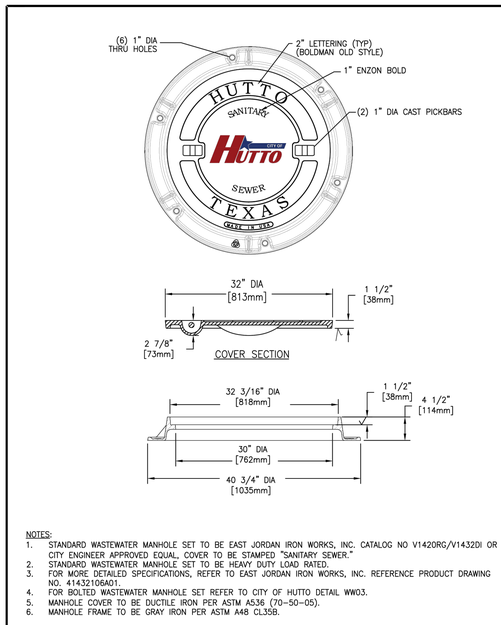


NOTES:
1. SUBDIVISION IMPROVEMENTS WILL END AT R.O.W. WITH PLUGGED WATER-TIGHT CLEAN-OUT.
2. DURING LOT CONSTRUCTION, PLUG WILL BE REMOVED AND 6"X4" ELASTOMERIC GASKETED BELL REDUCER INSTALLED. BUSHINGS ARE NOT ALLOWED.
3. SOLIDLY TAMP BACKFILL AT LEAST ONE FOOT (1') ABOVE TOP OF PIPE. SERVICES UNDER PAVED AREAS SHALL BE BACKFILLED TO THE SAME SPECIFICATIONS AS SHOWN ON PAVEMENT REPLACEMENT DETAIL.
4. CONTRACTOR SHALL MARK ON A CLEAN SET OF PLANS THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE TO EACH SERVICE LATERAL AND GIVE TO ENGINEER FOR RECORD DRAWING PURPOSES.
5. SERVICE LINE MATERIAL SHALL BE P.V.C., SDR-26.
6. CITY OF HUTTO RESPONSIBILITY ENDS AT CLEAN OUT.
7. NO CLEAN-OUT SHALL BE SET IN SIDEWALK OR DRIVEWAY WITHOUT PRIOR WRITTEN APPROVAL FROM CITY ENGINEER.
8. SEE CITY OF HUTTO DETAIL WW11 FOR INSTALLATIONS IN CONCRETE SURFACES, CITY OF HUTTO DETAIL WW10 FOR ALL OTHERS.
9. CLEAN OUTS MUST BE 9' FROM WATERLINES.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	SEWER SERVICE CONNECTION DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-12

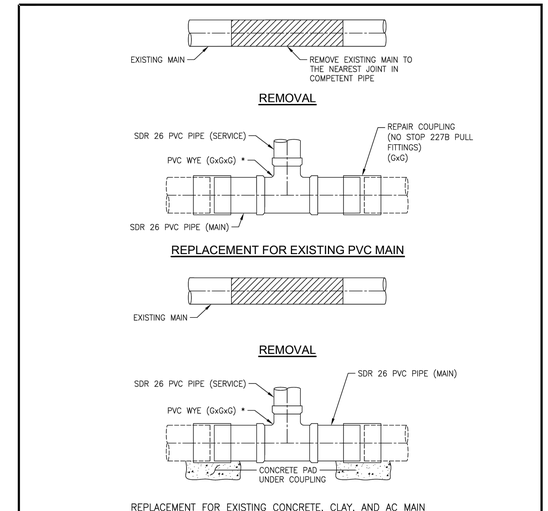


The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STANDARD AIR RELEASE VALVES FOR FORCE MAINS DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-14



NOTES:
1. STANDARD WASTEWATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO V1420RG/V1432DI OR CITY ENGINEER APPROVED EQUAL, COVER TO BE STAMPED "SANITARY SEWER."
2. STANDARD WASTEWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
3. FOR MORE DETAILED SPECIFICATIONS, REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING NO. 41432106A01.
4. FOR BOLTED WASTEWATER MANHOLE SET REFER TO CITY OF HUTTO DETAIL WW03.
5. MANHOLE COVER TO BE DUCTILE IRON PER ASTM A536 (70-50-05).
6. MANHOLE FRAME TO BE GRAY IRON PER ASTM A48 CL35B.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STANDARD MANHOLE DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-02



NOTES
1. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN ONE PERCENT (1%) MINIMUM TO FORTY-FIVE PERCENT (45%) MAXIMUM.
2. DEPTH OF SERVICE AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN FOUR FEET (4'), OTHERWISE THE INSTALLED DEPTH WILL BE FOUR FOOT (4') MINIMUM AND SIX FEET (6') MAXIMUM AT PROPERTY LINE.
3. REPLACE THE BEDDING AND BACKFILL IN ACCORDANCE WITH THE TRENCH EMBEDMENT DETAIL.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	GASKETED FITTING FOR SEWER SERVICE DETAIL
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-13

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							DATE
							DESCRIPTION
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DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WASTEWATER DETAILS (SHEET 2 OF 4)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

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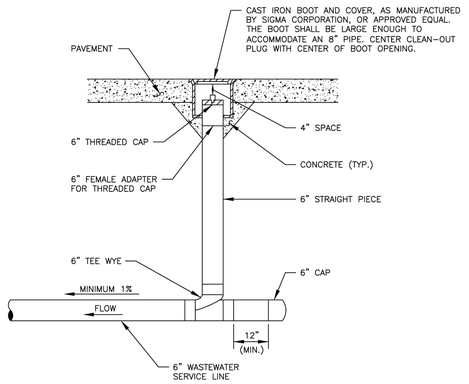
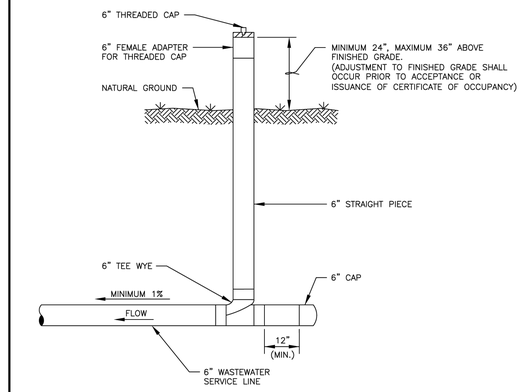


NOTES:

1. ALL PIPE TO BE SDR 26.
2. ALL FITTINGS TO BE SDR 26 GASKET FITTINGS.
3. ALL CLEANOUTS IN PAVED AREAS REQUIRE SPECIFIC ENGINEER APPROVAL.

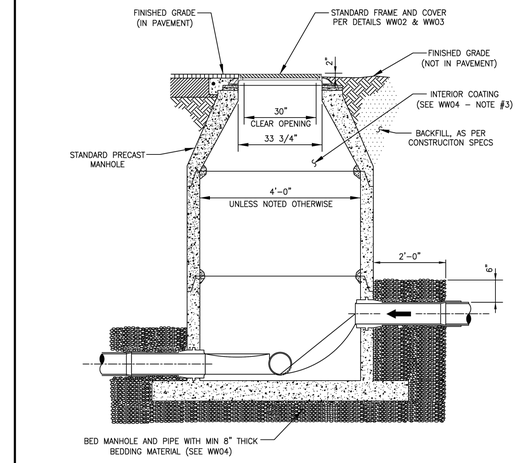
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	WW CLEANOUT PAVED AREA DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-11



NOTES:

1. ALL PIPE TO BE SDR 26.
2. ALL FITTINGS TO BE SDR 26 GASKET FITTINGS.

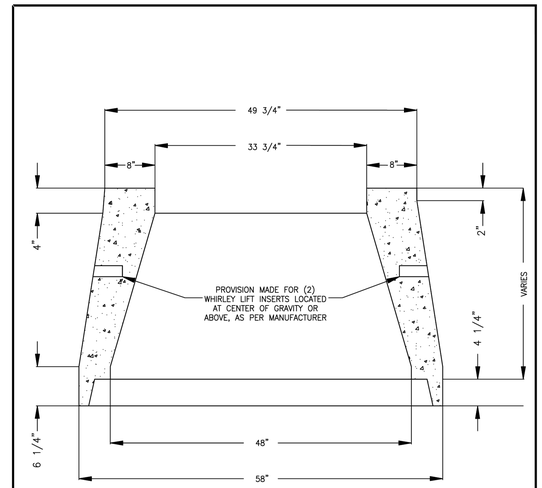
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	WW CLEANOUT NON-PAVED AREA DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-10



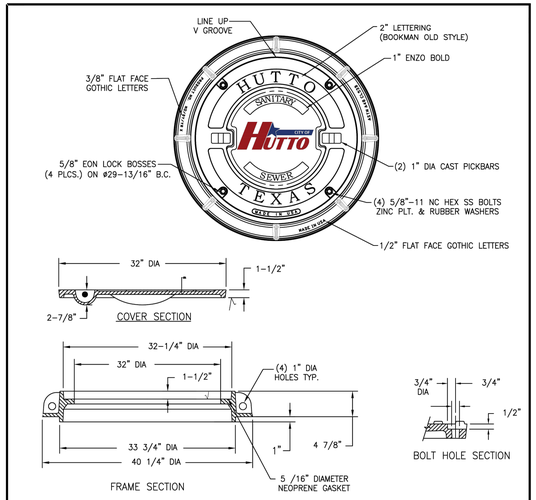
NOTES:

1. TO BE USED WHERE DROP IS SIX INCHES (6") TO TWO FEET (2'). DROPS GREATER THAN 2' USE TYPE "A".
2. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
3. CONSTRUCTION OF DROP SHALL PROVIDE AN OVERSIZED SLAB TO EXTEND UNDER THE DROP CONNECTION.
4. MINIMUM PIPE SIZE FOR DROP IS EIGHT INCHES (8").
5. SEE STANDARD MANHOLE DETAIL (WW04) FOR ADDITIONAL REQUIREMENTS.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	DROP MANHOLE TYPE "B" DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-06



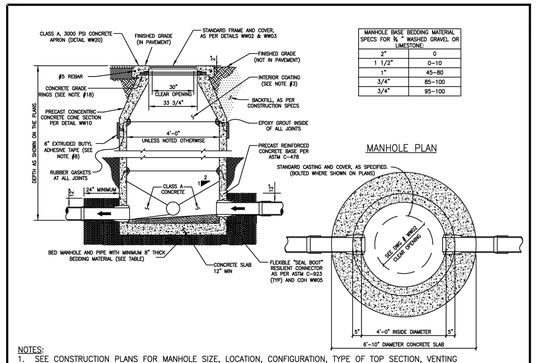
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	48" PRECAST CONCENTRIC CONE DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-09



NOTES:

1. BOLTED WASTEWATER MANHOLE SET TO BE EAST JORDAN IRON WORKS, INC. CATALOG NO. B2432, OR CITY ENGINEER APPROVED EQUAL.
2. COVER TO BE STAMPED "SANITARY SEWER".
3. STANDARD WASTEWATER MANHOLE SET TO BE HEAVY DUTY LOAD RATED.
4. FOR MORE DETAILED SPECIFICATIONS, REFER TO EAST JORDAN IRON WORKS, INC. REFERENCE PRODUCT DRAWING 42432115W01.
5. FOR STANDARD WASTEWATER MANHOLE SET REFER TO COH DETAIL WW02.
6. MANHOLE COVER TO BE DUCTILE IRON PER ASTM A536 (70-50-05).
7. MANHOLE FRAME TO BE GRAY IRON PER ASTM A48 CL35B.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	BOLTED MANHOLE DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-03

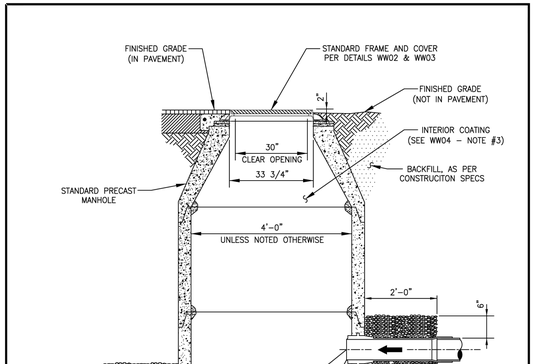


MANHOLE BASE BEDDING MATERIAL SPECS FOR ¾" WASHED GRAVEL OR LIMESTONE	
2"	0
1 1/2"	0-10
1"	45-80
3/4"	85-100
3/4"	95-100

NOTES:

1. SEE CONSTRUCTION PLANS FOR MANHOLE SIZE, LOCATION, CONFIGURATION, TYPE OF TOP SECTION, VENTING REQUIREMENTS, PIPE SIZES AND TYPES.
2. SEE SPECIFICATIONS ON MATERIALS AND CONSTRUCTION.
3. ENTIRE INTERIOR OF WASTEWATER MANHOLES TO BE COATED WITH RAVEN 405, OR APPROVED EQUAL, WITH A UNIFORM THICKNESS OF 124 MILS AND A MINIMUM THICKNESS OF 100 MILS, APPLIED AFTER MANHOLE HAS PASSED THE VACUUM TEST.
4. ALL MANHOLE COVERS SHALL BE BOLTED AND GASKETED, WHEN MANHOLES ARE LOCATED OUTSIDE OF PAVEMENT.
5. MANHOLES TO BE VENTED ARE IDENTIFIED ON MANHOLE SCHEDULE, REFERENCE MANHOLE VENT DETAIL.
6. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO THE FLOW STREAM. ALL P.V.C. PIPE SHALL BE REMOVED FROM INVERT.
7. FRAME ADJUSTMENT HEIGHT SHALL BE FIVE INCHES (5") MINIMUM AND EIGHTEEN INCHES (18") MAXIMUM.
8. EXTERIOR OF EACH JOINT TO BE WRAPPED IN 6" EXTRUDED BUTYL ADHESIVE TAPE WHEN MANHOLE IS LOCATED INT EH 100-YR FLOODPLAIN.
9. MANHOLES TO BE DESIGNED TO RESIST LATERAL AND VERTICAL SOIL FORCES RESULTING FROM MANHOLE DEPTH. ADDITIONALLY, MANHOLES LOCATED IN PAVEMENT TO BE DESIGNED FOR H20 TRAFFIC LOADING.
10. BASE SECTION SHALL BE DESIGNED FOR H20 LOADING, PLUS EARTH LOAD AT 130 PCF.
11. ALL MANHOLES SHALL BE 48" I.D. PRECAST R.C.P., CLASS III, ASTM C578 BELL AND SPIGOT WITH RUBBER O-RING GASKET JOINTS CONFORMING TO ASTM C478, C433 AND C76.
12. ALL MANHOLES SHALL HAVE WATER-TIGHT FRAME AND COVER, WITH A MINIMUM OF 30" CLEAR OPENING, AS MANUFACTURED BY EAST JORDAN IRON WORKS (AS PER DETAIL WW02 AND WW03) OR CITY ENGINEER APPROVED EQUAL.
13. ALL MANHOLES SHALL BE CONCRETE WITH CAST IRON FRAME AND COVER.
14. ALL MANHOLES SHALL HAVE A CONCENTRIC CONE.
15. MANHOLES MAY HAVE A FLAT LID, IF APPROVED BY CITY OF HUTTO, BEING 12" THICK WITH A MINIMUM 30" OPENING, AS MANUFACTURE BY CALVERT CONCRETE OR CITY ENGINEER APPROVED EQUAL M.F.G. CONFORMING TO ASTM C478, 5000 P.S.I. CONCRETE, TRAFFIC BEARING, AND O-RING JOINT CONFORMING TO ASTM C443.
16. INVERTS AND FLEXIBLE SEAL BOOTS, PER ASTM C-923, SHALL BE CAST INTO BASE SECTION.
17. MINIMUM DROP BETWEEN INVERTS SHALL BE ONE-TENTH OF A FOOT (0.1').
18. TWO INCH (2") GRADE RINGS WITH AN I.D. TO MATCH FRAMES CLEAR OPENING, MINIMUM OF TWO (2), MAXIMUM OF FIVE (5) GRADE RINGS REQUIRED.

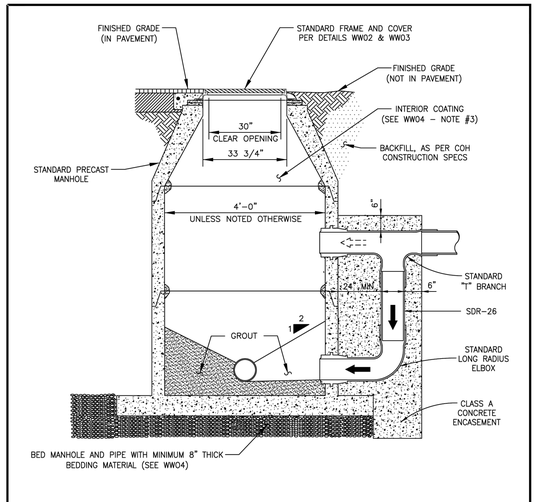
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	STANDARD MANHOLE DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-04



NOTES:

1. TO BE USED WHERE DROP IS SIX INCHES (6") TO TWO FEET (2'). DROPS GREATER THAN 2' USE TYPE "A".
2. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
3. CONSTRUCTION OF DROP SHALL PROVIDE AN OVERSIZED SLAB TO EXTEND UNDER THE DROP CONNECTION.
4. MINIMUM PIPE SIZE FOR DROP IS EIGHT INCHES (8").
5. SEE STANDARD MANHOLE DETAIL (WW04) FOR ADDITIONAL REQUIREMENTS.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	DROP MANHOLE TYPE "B" DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-06



NOTES:

1. CONCRETE ENCASEMENT FOR DROP CONNECTION TO BE POURED INTEGRALLY WITH BOTH MANHOLE SLAB AND WALL.
2. DROP CONNECTIONS SHALL BE REQUIRED WHENEVER AN INFLUENT SEWER IS LOCATED TWO FEET (2') OR MORE ABOVE THE MAIN INVERT CHANNEL. DROPS SHALL NOT EXCEED EIGHT FEET (8').
3. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
4. MINIMUM PIPE SIZE FOR DROP IS EIGHT INCHES (8").
5. SEE STANDARD MANHOLE DETAIL (WW04) FOR ADDITIONAL REQUIREMENTS.

The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	DROP MANHOLE TYPE "A" DETAIL	
		THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-07

APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
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AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WASTEWATER DETAILS (SHEET 3 OF 4)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

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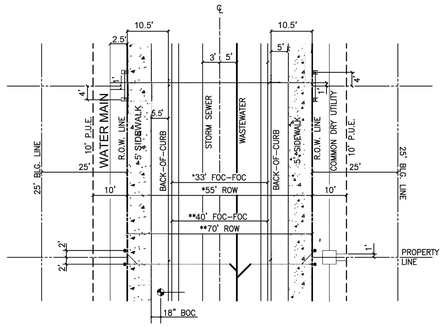


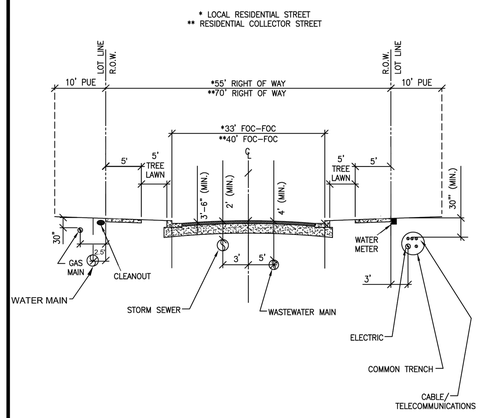
MINIMUM COVER BELOW FINISH-GRADE	
ELECTRIC PRIMARY	36"
ELECTRIC SECONDARY	24"
WATER	42"
WASTEWATER	48"
STORM SEWER	24"
GAS	24"
TELECOMMUNICATIONS	24"

*LOCAL RESIDENTIAL STREET
NOT TO SCALE
**RESIDENTIAL COLLECTOR STREET
NOT TO SCALE

NOTES:
1. REFER TO STANDARD CITY OF HUTTO DETAIL WW02 FOR SECTION VIEW FOR MAIN UTILITY AND COMMUNICATION LINE LOCATIONS.
2. DETECTABLE/MARKING TAPE IS REQUIRED ON ALL WATER AND WASTEWATER PIPES.

CITY OF HUTTO	CITY OF HUTTO CONSTRUCTION STANDARDS AND DETAILS	DRAWING NO. WW01
	* TYPICAL RESIDENTIAL STREET LAYOUT	UPDATED: 04/01/2019
	ENGINEERING & PUBLIC WORKS	DRAWN BY: BB
		SCALE: N.T.S.
		FILE NAME:WW01.DWG

*MODIFIED



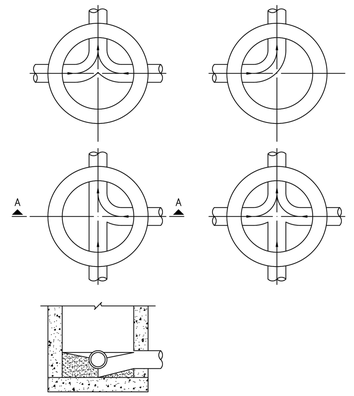
*LOCAL RESIDENTIAL STREET
NOT TO SCALE
**RESIDENTIAL COLLECTOR STREET
NOT TO SCALE

NOTE: REFER TO REVISED ROAD SECTIONS (THIS SHEET) PER APPROVED HERITAGE MILL NORTH PRELIMINARY PLAN

CITY OF HUTTO	CITY OF HUTTO CONSTRUCTION STANDARDS AND DETAILS	DRAWING NO. WW02
	* ROAD SECTION WITH TYPICAL UTILITY ASSIGNMENTS	UPDATED: 04/01/2019
	ENGINEERING & PUBLIC WORKS	DRAWN BY: BB
		SCALE: N.T.S.
		FILE NAME:WW02.DWG

*MODIFIED

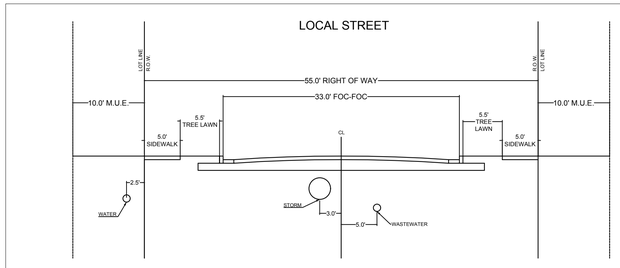
FLOW PATTERNS FOR INVERT CHANNELS

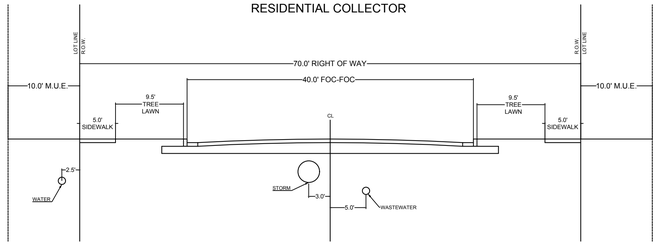


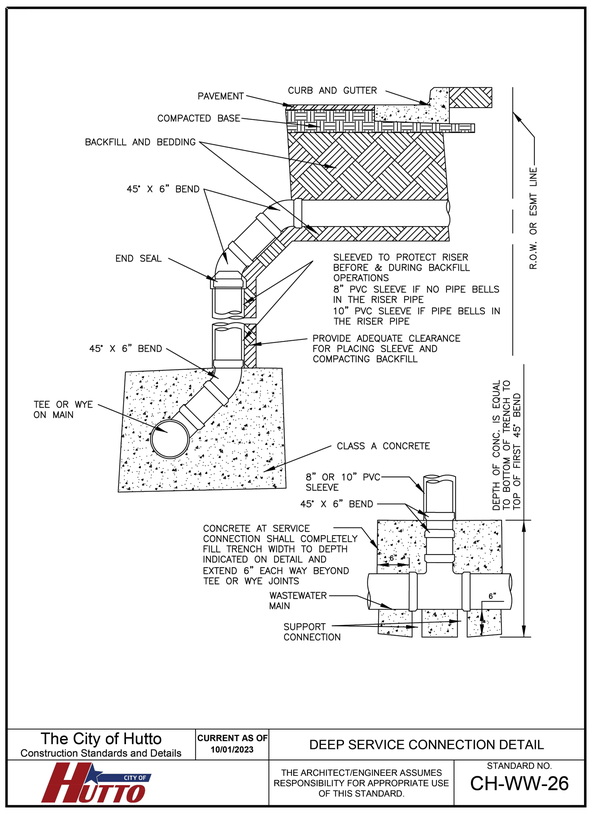
SECTION "A-A"

NOTES:
1. INVERT CHANNELS TO BE CONSTRUCTED FOR SMOOTH FLOW WITH NO OBSTRUCTIONS.
2. SPILLWAYS SHALL BE CONSTRUCTED BETWEEN PIPES WITH DIFFERENT INVERT ELEVATIONS PROVIDING FOR SMOOTH FLOW.
3. CHANNELS FOR FUTURE CONSTRUCTIONS (STUBS) SHALL BE CONSTRUCTED, FILLED WITH SAND, AND COVERED WITH 1" OF MORTAR.
4. SLOPE MANHOLE ITSELF WITH A 1:2 SLOPE FROM MANHOLE WALL TO CHANNEL.
5. INVERT SHALL BE A MINIMUM OF 1/2 THE DIAMETER OF THE LARGEST PIPE OR 4" DEEP.
6. MANHOLE BASE SHALL BE 12" THICK MINIMUM.

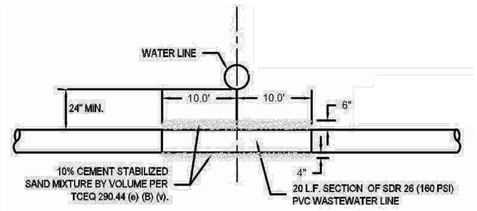
The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	FLOW PATTERNS FOR INVERTS DETAIL
CITY OF HUTTO	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-08







The City of Hutto Construction Standards and Details	CURRENT AS OF 10/01/2023	DEEP SERVICE CONNECTION DETAIL
CITY OF HUTTO	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. CH-WW-26



WATER LINE/ WASTEWATER LINE CROSSING DETAIL
N.T.S.

APR	DATE	DESCRIPTION	REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

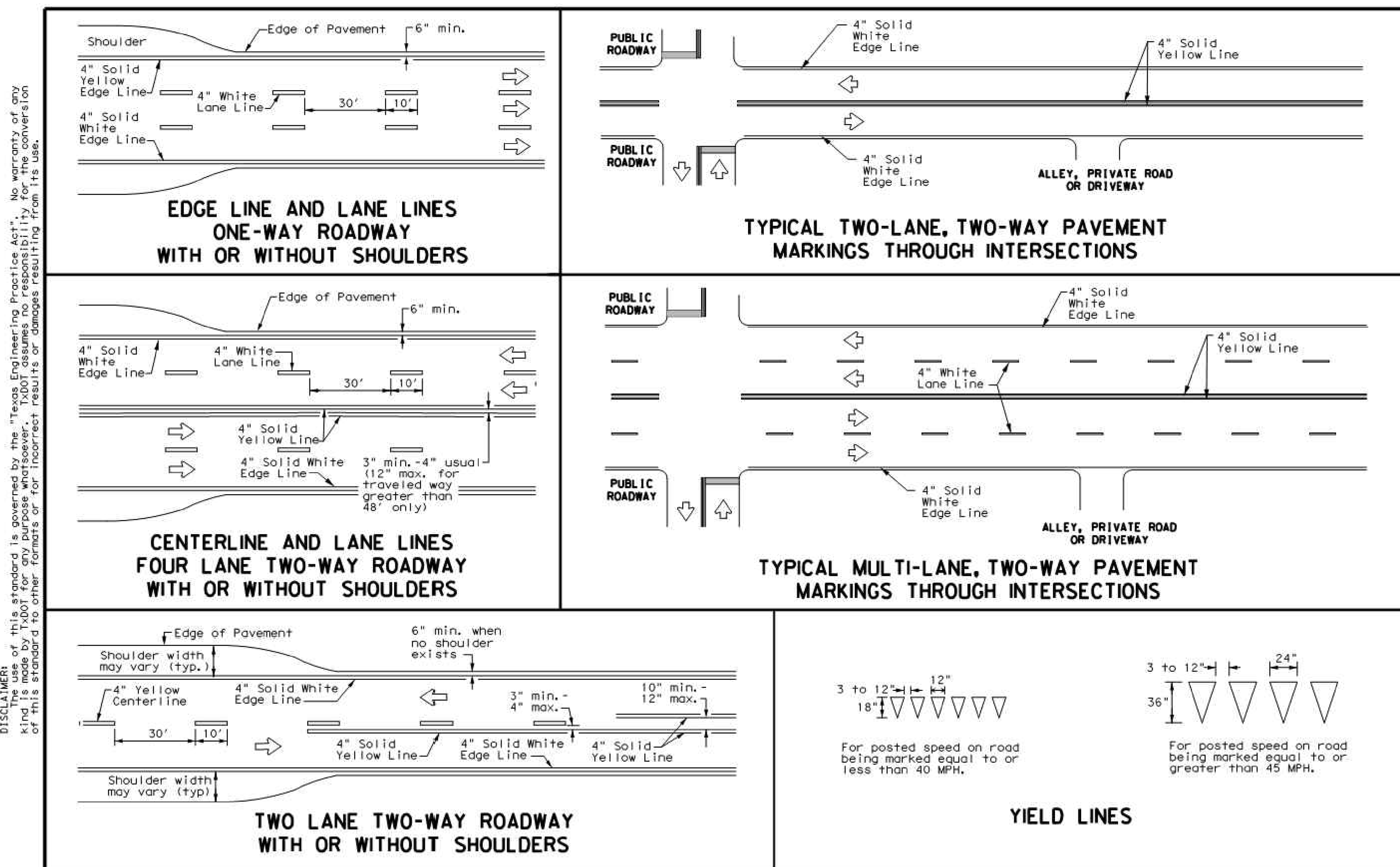
BGE

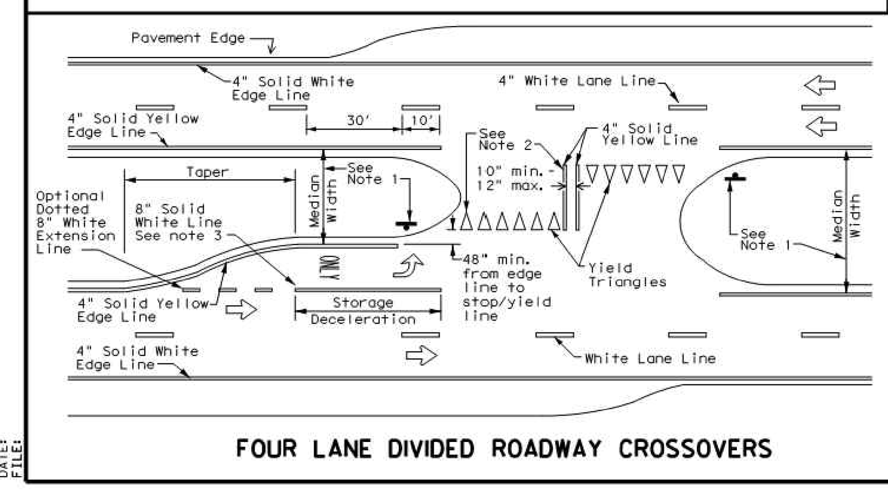
BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

WASTEWATER DETAILS (SHEET 4 OF 4)

G:\TX\CP\Projects\Brohn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-DTLS.dwg Layout: 02 WASTEWATER DETAILS (SHEET 4 OF 4) Plotted: 12/2/2024 6:21:53 PM





NOTES

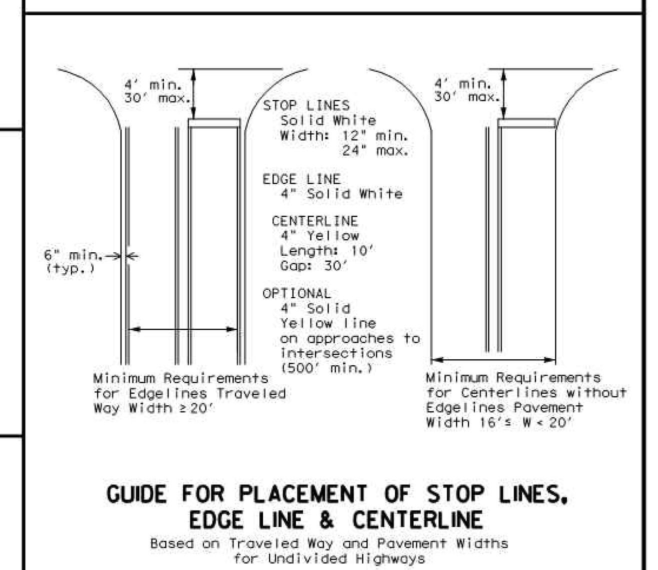
1. Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections. Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs are optional as determined by the Engineer.
2. Install median striping (double yellow centerlines and stop bars/yield triangles) when a 50' or greater median centerline can be placed. Stop bars shall only be used with stop signs. Yield traingles shall only be used with yield signs.
3. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

GENERAL NOTES

1. Edgeline striping shall be as shown in the plans or as directed by the Engineer. The edgeline should not be placed less less than 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edgelines are not required in curb and gutter sections of roadways.
2. The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the inside of edgeline to the inside of edgeline of a two lane roadway.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

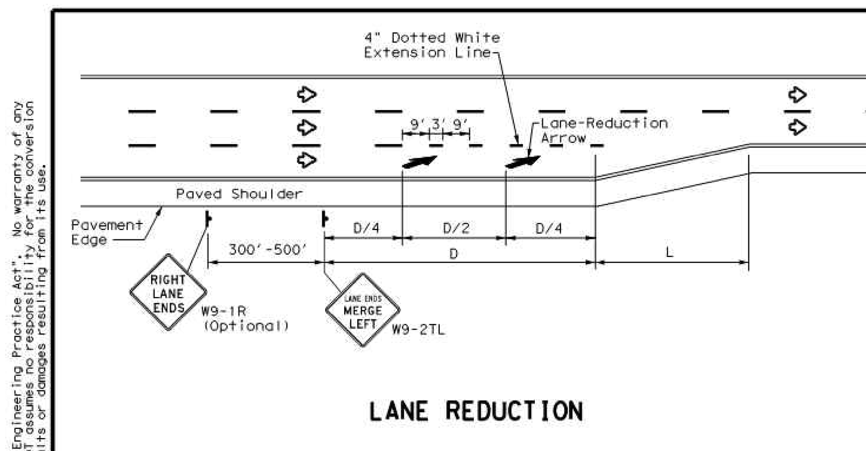


Texas Department of Transportation — Traffic Safety Division Standard

TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-20

FILE: pm1-20.dgn | ©TxDOT November 1978 | REVISIONS 8-95 3-03 5-00 2-12 8-00 6-20



Posted Speed	D (ft)	L (ft)
30 MPH	460	$L=\frac{WS^2}{60}$
35 MPH	565	
40 MPH	670	
45 MPH	775	L=WS
50 MPH	885	
55 MPH	990	
60 MPH	1,100	
65 MPH	1,200	
70 MPH	1,250	
75 MPH	1,350	

NOTES

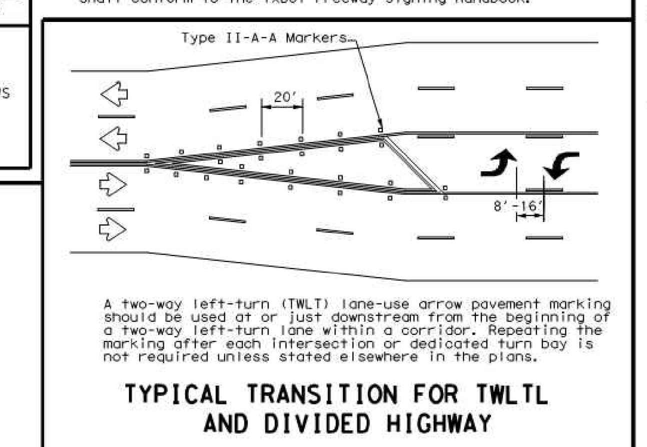
1. Lane reduction pavement markings are used where the number of through lanes is reduced because of narrowing of the roadway or because of a section of on-street parking in what would otherwise be a through lane. For Texas Super 2 Passing Lanes, see TS2(PL) standard sheets.
2. On divided highways, an additional W9-1R "RIGHT LANE ENDS" sign may be installed in the median aligned with the W9-1R sign on the right side of the highway.
3. Lane reduction arrows are required for speeds of 45 mph or greater. An optional third lane reduction arrow may be added based on engineering judgement. If used, the optional third lane reduction arrow should be centered between the first and last lane reduction arrows.
4. For lane reductions on Freeways and Expressways, signing shall conform to the TxDOT Freeway Signing Handbook.

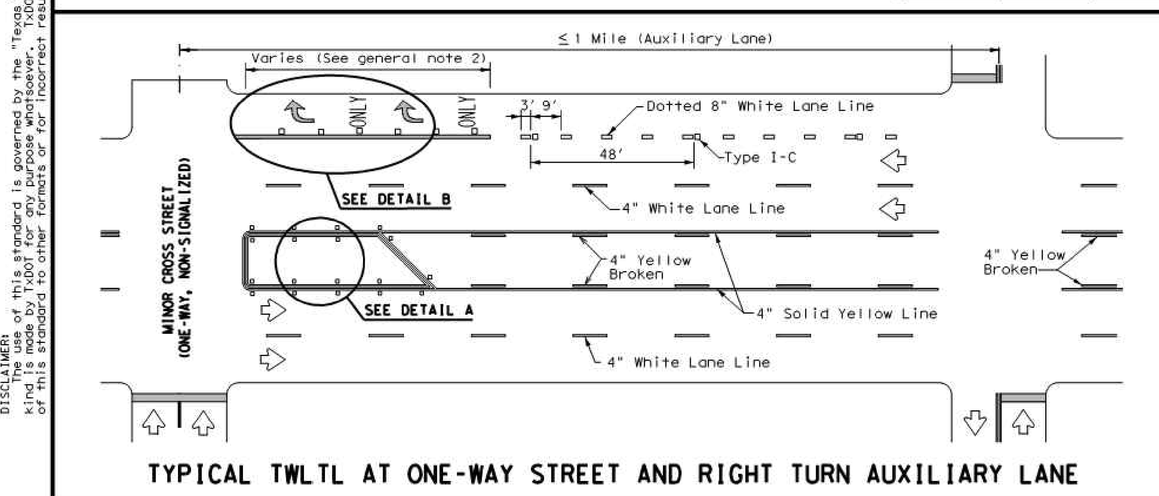
GENERAL NOTES

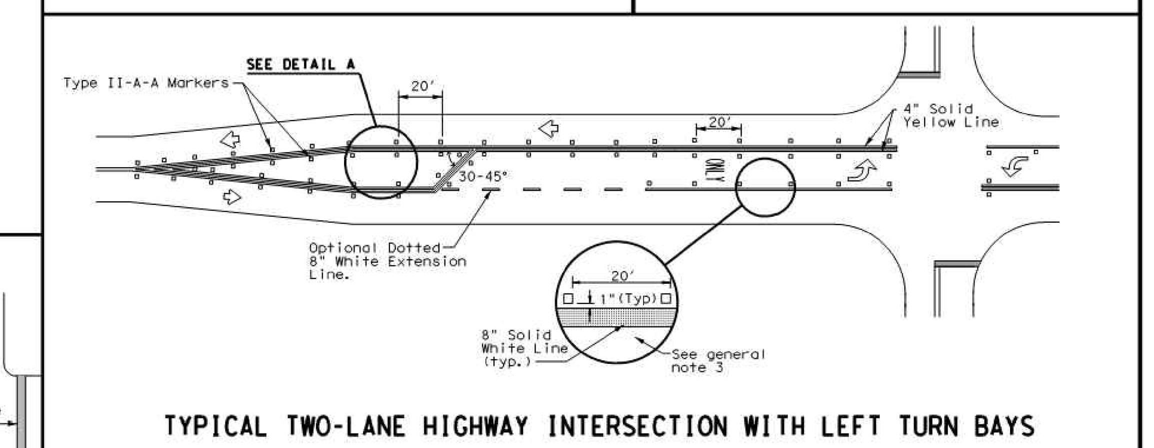
1. Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn bays for emphasis. Details for words and arrows are as shown in the Standard Highway Sign Designs for Texas.
2. When lane-use words and arrow markings are used, two sets of arrows should be used if the length of the bay is greater than 180 feet. When a single lane use arrow or word and arrow marking is used for a short turn lane, it should be located at or near the upstream end of the full-width turn lane.
3. Use raised pavement marker Type I-C with undivided highways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.
4. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

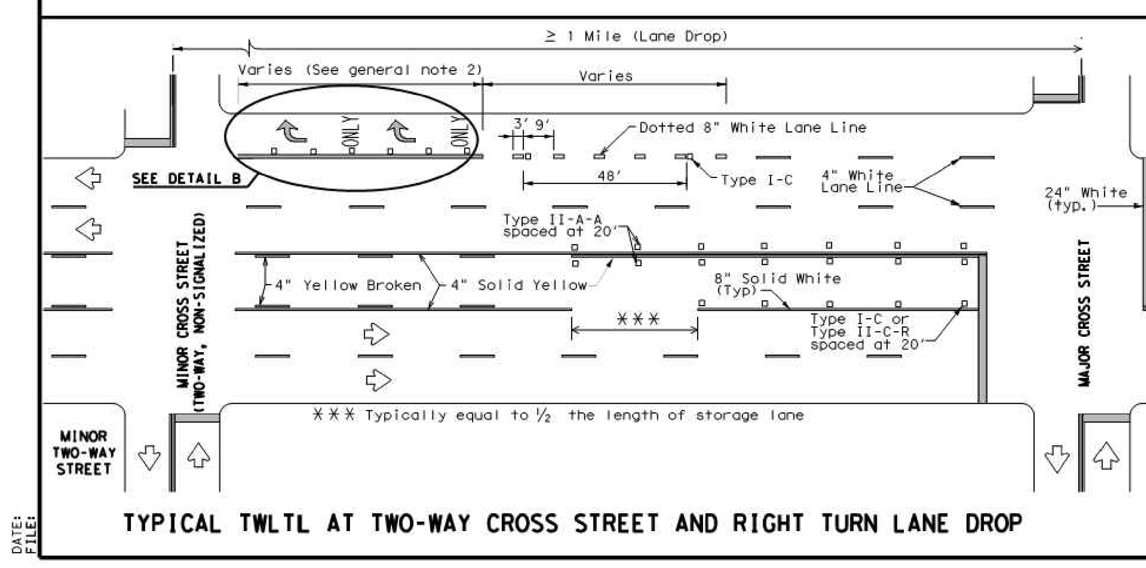
MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

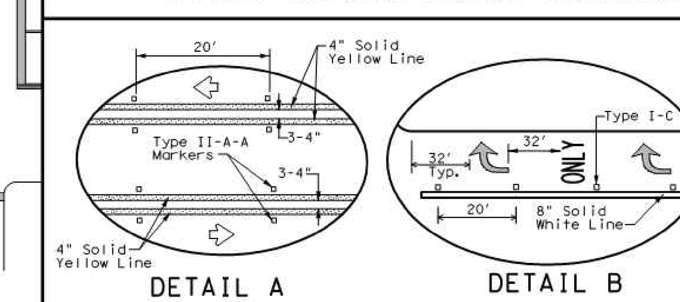
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.









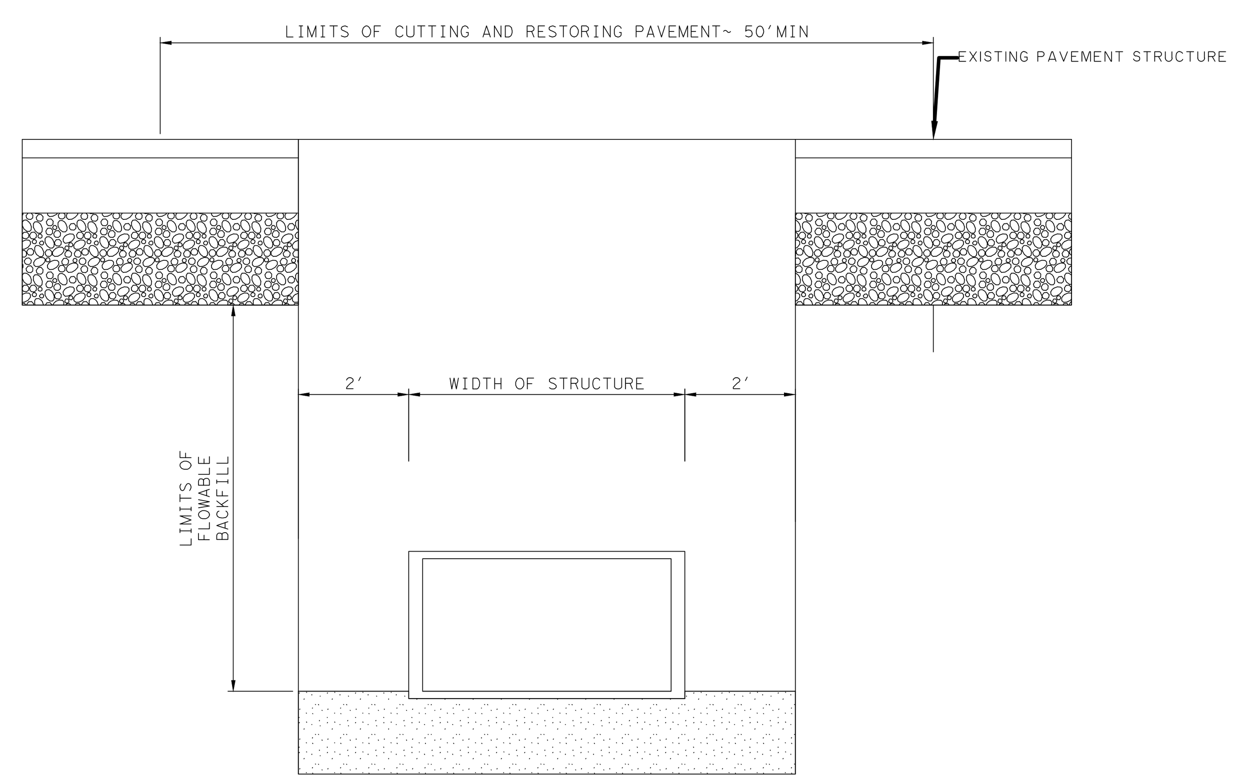


Texas Department of Transportation — Traffic Safety Division Standard

TWO-WAY LEFT TURN LANES, RURAL LEFT TURN BAYS, AND LANE REDUCTION PAVEMENT MARKINGS

PM(3)-20

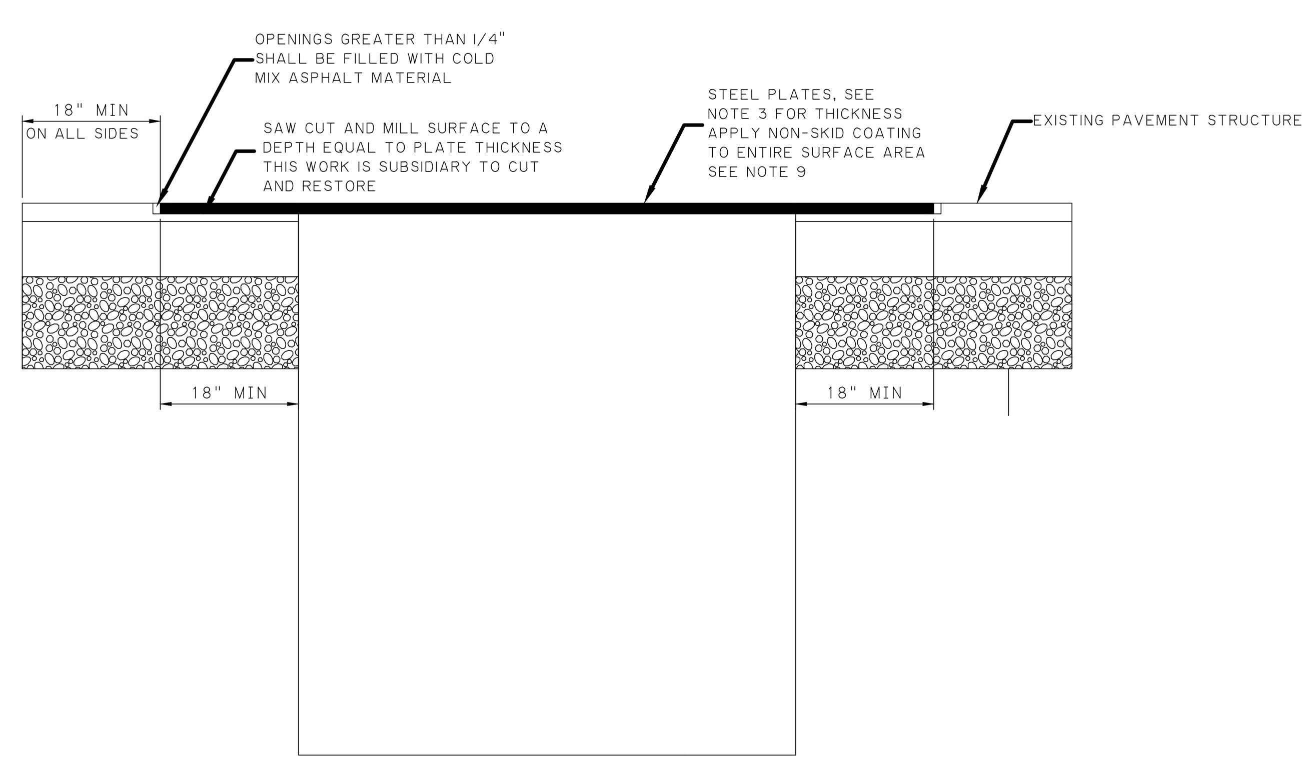
FILE: pm3-20.dgn | ©TxDOT April 1998 | REVISIONS 5-00 2-10 8-00 2-12 3-03 6-20



CUT AND RESTORE PAVEMENT DETAIL

CUT AND RESTORE NOTES

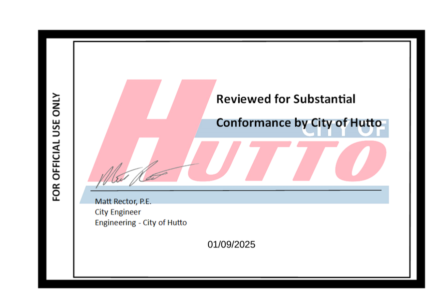
1. CONSIDER ANY WORK PERFORMED TO REPAIR DAMAGE TO THE EXISTING PAVEMENT OUTSIDE THE LIMITS SHOWN SUBSIDIARY TO THE PERTINENT ITEMS.
2. REPLACEMENT MATERIAL WILL BE AN ASPHALT STABILIZED PAVING MATERIAL OR FLOWABLE BACKFILL. ENSURE THAT THE THICKNESS OF THE REPLACEMENT MATERIAL IS EQUIVALENT TO THE THICKNESS OF THE EXISTING PAVEMENT STRUCTURE. USE TXDOT ITEM 247, TYPE A, GRADE 5 FLEXIBLE BASE MATERIAL.



PLATING DETAIL

PLATING NOTES

1. WHERE TRAFFIC MUST CROSS TRENCHES, THE CONTRACTOR SHALL PROVIDE SUITABLE BRIDGES. THIS WORK IS SUBSIDIARY TO CUT AND RESTORE.
2. CONTRACTOR TO BACKFILL EVERY NIGHT PRIOR TO PLACING STEEL PLATE.
3. THE THICKNESS OF THE PLATE SHALL BE ESTABLISHED IN AN ANALYSIS COMPLETED BY A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF TEXAS. THE ANALYSIS SHALL BE BASED ON HL-93 TRAFFIC LOADING WITH A MAXIMUM PLATE DEFLECTION OF 1/2" WHEN EXPERIENCING SAID LOADING. IF MULIPLE LAYERS OF PLATES ARE NEEDED, THE UPPER LAYER SHALL BE PLACED PERPENDICULAR TO THE SEAMS OF THE UNDERLYING PLATES.
4. THE TOPSIDE OF THE STEEL PLATE SHALL BE FLAT AND FREE OF ANY CLIPS, CHAINS, ATTACHMENTS, WELDMENTS OR SURFACE IRREGULARITIES.
5. PLATES WITH A PERMANENT DISPLACEMENT (I.E. DISPLACEMENT ANYWHERE ON THE SURFACE OF THE PLATE WITH RESPECT TO A PLANE) THAT EXCEEDS 1/2" SHALL NOT BE USED FOR PLATING PURPOSES. PLATES THAT DEVELOP A PERMANENT DISPLACEMENT EXCEEDING 1/2" DURING SERVICE SHALL BE REMOVED AND REPLACED.
6. THE PLATES SHALL BE PROVIDED WITH APPROPRIATED NUMBER OF KEYHOLE SLOTS OR CIRCULAR HOLES FOR HANDLING, LIFTING, INSTALLATION, AND REMOVAL PURPOSES.
7. THE CONTRACTOR SHOULD AVOID USING A LONG SERIES OF PLATES THAT RUN PARALLEL TO VEHICULAR TRAFFIC WHEEL PATHS.
8. ADDITIONAL METHODS OF SECURING PLATES MAY BE REQUIRED DEPENDING ON FIELD CONDITIONS.
9. NON-SKID COATING SHOULD BE APPLIED TO THE ENTIRE SURFACE AREA OF ALL PLATES, AS WELL AS ADJACENT AREAS. THE NON-SKID COATING SHALL BE TCA (TEXTURED COATED OF AMERICA, INC.), STRATA-DRIP DECK COATING SYSTEM, SLIPFLX INC., SPS (SLIP PROTECTION SURFACE) OR AN EQUIVALENT PRODUCT APPROVED BY THE ENGINEER.



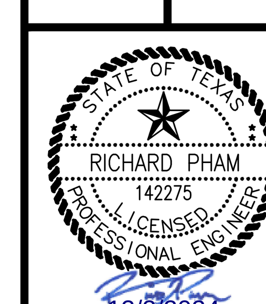
REV	DESCRIPTION	DATE	APR

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

TRAFFIC CONTROL PLAN DETAILS
(SHEET 1 OF 2)



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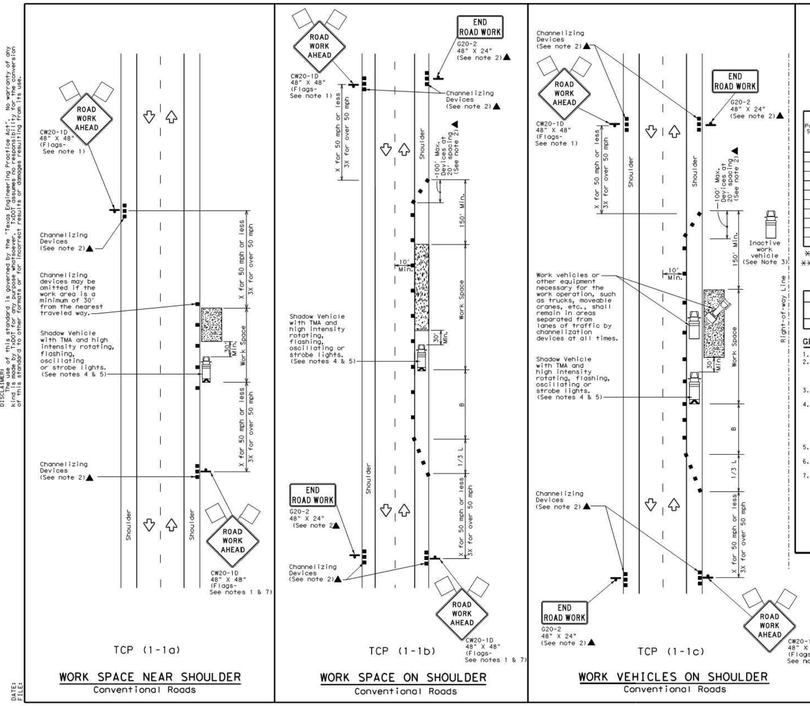
DISCLAIMER
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE:
FILE:



TCP (1-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads

TCP (1-1b)

WORK SPACE ON SHOULDER
Conventional Roads

TCP (1-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

LEGEND			
	Type 3 Barricade	■ ■	Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	L = WS²/60	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45		450'	495'	540'	45'	90'	320'	195'
50	L = WS	500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

Texas Department of Transportation — Traffic Operations Division Standard

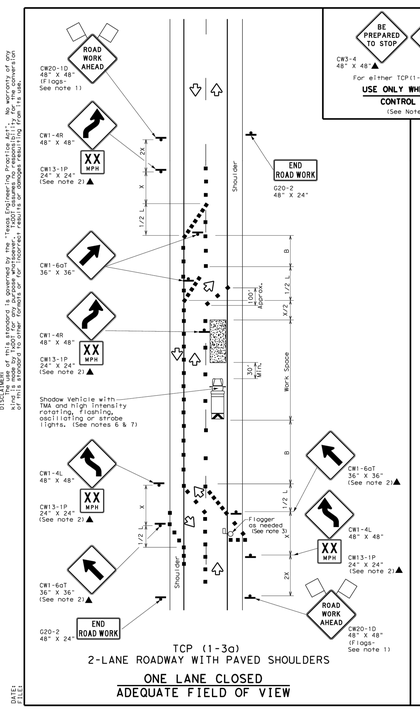
TRAFFIC CONTROL PLAN
CONVENTIONAL ROAD SHOULDER WORK

TCP(1-1)-18

FILE:	tcp1-1-18.dgn	DN:	CK:	DW:	CK:
©TxDOT	December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS					
2-94 4-98		DIST	COUNTY		SHEET NO.
4-95 2-12					
1-97 2-18					

1b1.1

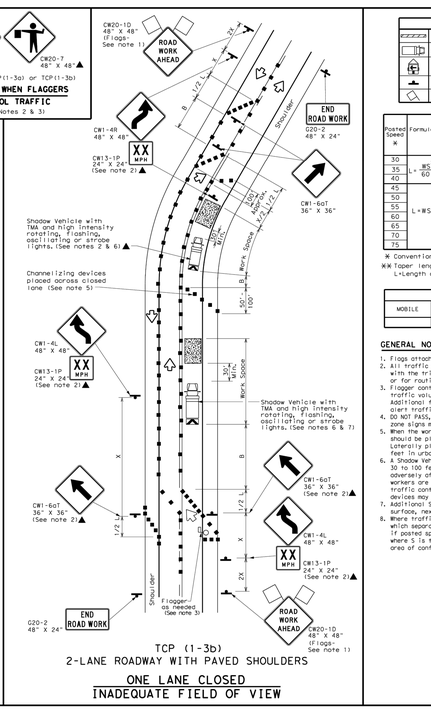
DATE:
FILE:



TCP (1-3a)

2-LANE ROADWAY WITH PAVED SHOULDERS

ONE LANE CLOSED
ADEQUATE FIELD OF VIEW



TCP (1-3b)

2-LANE ROADWAY WITH PAVED SHOULDERS

ONE LANE CLOSED
INADEQUATE FIELD OF VIEW

LEGEND			
	Type 3 Barricade	■ ■	Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	L = WS²/60	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45		450'	495'	540'	45'	90'	320'	195'
50	L = WS	500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Flagger control should NOT be used unless roadway conditions or heavy traffic volume require additional emphasis to safety control traffic. Additional flaggers may be positioned in advance of traffic queues to alert traffic to reduce speed.
4. DO NOT PASS, PASS WITH CARE and construction regulatory speed zone signs may be installed downstream of the ROAD WORK AHEAD signs.
5. When the work zone is made up of several work spaces, channelizing devices should be placed laterally across the closed lane to re-emphasize closure. Laterally placed channelizing devices should be repeated every 500 to 1000 feet in urban areas and every 1/4 to 1/2 mile in rural areas.
6. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
7. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
8. Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speed are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the area of conflicting markings not the entire work zone.

Texas Department of Transportation — Traffic Operations Division Standard

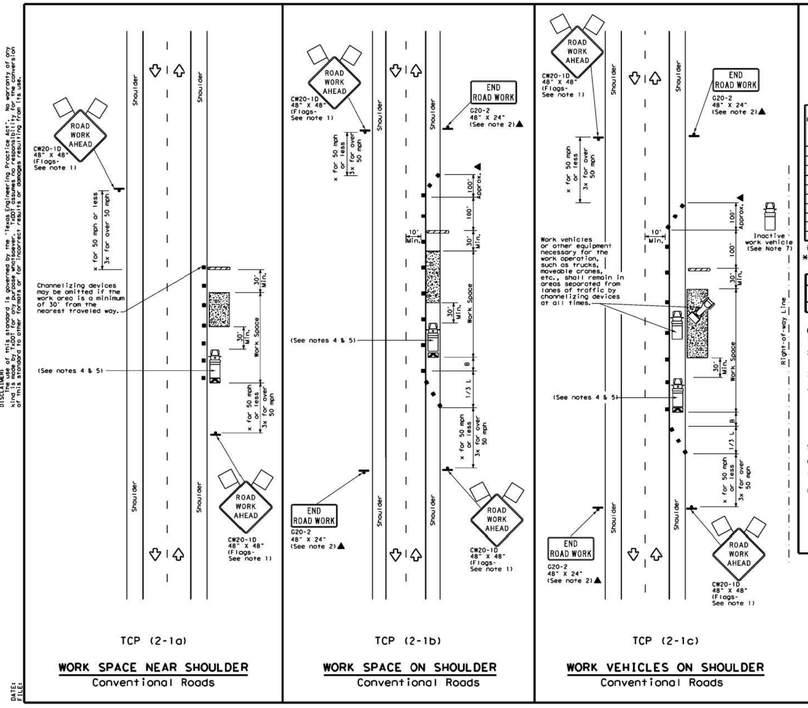
TRAFFIC CONTROL PLAN
TRAFFIC SHIFTS ON TWO LANE ROADS

TCP(1-3)-18

FILE:	tcp1-3-18.dgn	DN:	CK:	DW:	CK:
©TxDOT	December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS					
2-98 4-98		DIST	COUNTY		SHEET NO.
1-97 2-18					

1b3.1

DATE:
FILE:



TCP (2-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads

TCP (2-1b)

WORK SPACE ON SHOULDER
Conventional Roads

TCP (2-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

LEGEND			
	Type 3 Barricade	■ ■	Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
30	L = WS²/60	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45		450'	495'	540'	45'	90'	320'	195'
50	L = WS	500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		✓

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Stockpiled material should be placed a minimum of 30 feet from nearest traveled way.
4. Shadow Vehicle with TMA and high intensity rotating, flashing, oscillating or strobe lights. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
7. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
8. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

Texas Department of Transportation — Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
CONVENTIONAL ROAD SHOULDER WORK

TCP(2-1)-18

FILE:	tcp2-1-18.dgn	DN:	CK:	DW:	CK:
©TxDOT	December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS					
2-94 4-98		DIST	COUNTY		SHEET NO.
4-95 2-12					
1-97 2-18					

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DATE:
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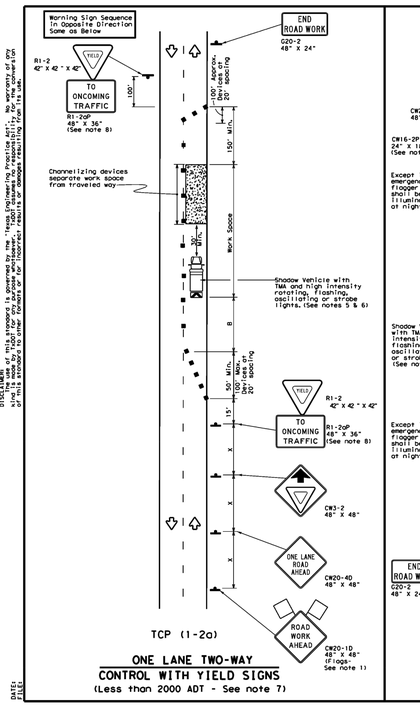
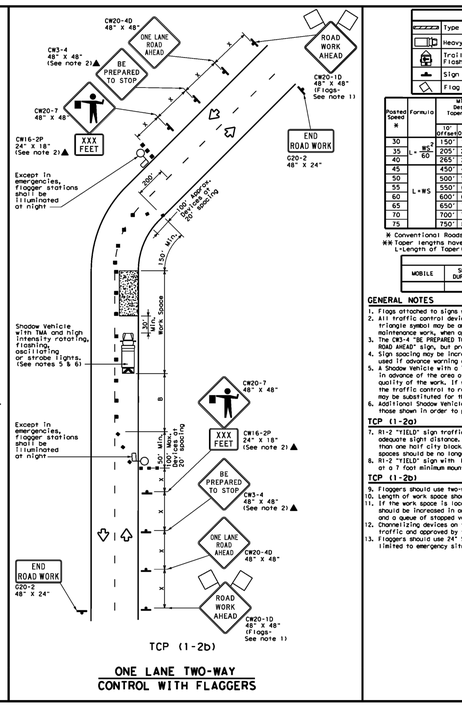


TCP (2-1a)

ONE LANE TWO-WAY
CONTROL WITH YIELD SIGNS
(Less than 2000 ADT - See note 7)



TCP (2-1b)

ONE LANE TWO-WAY
CONTROL WITH FLAGGERS

LEGEND			
	Type 3 Barricade	■ ■	Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Stopping Sight Distance "D"	Suggested Longitudinal Buffer Space "B"
30	L = WS²/60	150'	165'	180'	30'	60'	120'	200'	90'
35		205'	225'	245'	35'	70'	160'	250'	120'
40		265'	295'	320'	40'	80'	240'	305'	155'
45		450'	495'	540'	45'	90'	320'	360'	195'
50	L = WS	500'	550'	600'	50'	100'	400'	425'	240'
55		550'	605'	660'	55'	110'	500'	495'	295'
60		600'	660'	720'	60'	120'	600'	570'	350'
65		650'	715'	780'	65'	130'	700'	645'	410'
70		700'	770'	840'	70'	140'	800'	730'	475'
75		750'	825'	900'	75'	150'	900'	820'	540'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
		✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
4. Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or R1-2 "YIELD" sign is less than 1500 feet.
5. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
6. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-2a)

7. R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
8. R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.

TCP (1-2b)

9. Flaggers should use two-way radios or other methods of communication to control traffic.
10. Length of work space should be based on the ability of flaggers to communicate.
11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
12. Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
13. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

Texas Department of Transportation — Traffic Operations Division Standard

TRAFFIC CONTROL PLAN
ONE-LANE TWO-WAY TRAFFIC CONTROL

TCP(1-2)-18

FILE:	tcp1-2-18.dgn	DN:	CK:	DW:	CK:
©TxDOT	December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS					
4-98 4-98		DIST	COUNTY		SHEET NO.
2-94 2-12					
1-97 2-18					

1b2.1

Reviewed for Substantial Conformance by City of Hutto

Walt Bellas, P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

FOR OFFICIAL USE ONLY

							APR
							DATE
							DESCRIPTION
							REV

DESIGNED BY: MS,AC
REVIEWED BY: AC
DRAWN BY: BE,BC

BGE, INC.
101 W. LOUIS HENNA BLVD., SUITE 400
AUSTIN, TX 78728
TBPE Registration No. F-1046
TEL: 512-879-0400 www.bgeinc.com

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS
TRAFFIC CONTROL PLAN DETAILS
(SHEET 2 OF 2)

STATE OF TEXAS
RICHARD PHAM
142275
LICENSED
PROFESSIONAL ENGINEER
12/2/2024

G:\TXC\Projects\Bronn_Homes\8843-01-Heritage_Mill_Ph1\LD\01_CADD\01_Shts\8843-01-C-SP-DTLS.dwg Layout: 94 TRAFFIC CONTROL PLAN DETAILS (SHEET 2 OF 2) Plotted: 12/2/2024 6:21:57 PM

STRUCTURAL GENERAL NOTES AND SPECIFICATIONS

GENERAL REQUIREMENTS

1 APPLICABLE CODES AND STANDARDS – ALL CODES AND STANDARDS REFERENCED SHALL BE THE LATEST EDITION.

2 ANY REQUIRED CHANGES TO THE STRUCTURAL DRAWINGS DUE TO THE ACCEPTANCE OR INCLUSION OF ALTERNATES OR SUBSTITUTIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

3 THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS WITH THE CIVIL DRAWINGS AND REPORT ANY DISCREPANCY TO THE ENGINEER PRIOR TO FABRICATION OR INSTALLATION OF STRUCTURAL MEMBERS.

4 JOB SITE SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL, AS A MINIMUM, ADHERE TO OCCUPATIONAL SAFETY AND HEALTH (OSHA) REGULATIONS TO PROTECT PERSONNEL.

FOUNDATION NOTES

1 DESIGN LOADS

LATERAL WATER PRESSURE – WALLS ARE DESIGNED FOR WATER TO TOP OF WALL AT UPSTREAM SIDE.

ACTIVE LATERAL EARTH PRESSURE – EQUIVALENT FLUID PRESSURE OF 65 PCF ON OUTSIDE OF RISER BOX STRUCTURE BACKFILLED WITH COMPACTED EMBANKMENT MATERIAL.

2 DESIGN ALLOWABLE SOIL BEARING PRESSURE IS 2,000 PSF ON PROOF-ROLLED NATURAL SUBGRADE.

3 THE GEOTECHNICAL INVESTIGATION FOR THIS PROJECT WAS PREPARED BY TERRADYNE, 1608 ROYSTON LANE, BUILDING 2, ROUND ROCK, TEXAS, 78664, TEL. 512-252-1218, REPORT NO. A231101-R3, DATED DECEMBER 1, 2023. THE CONTRACTOR SHALL OBTAIN A COPY OF THIS REPORT AND REVIEW ITS CONTENTS TO BECOME FAMILIAR WITH THE GEOTECHNICAL CONDITIONS THAT EXIST AT THIS SITE AND THE RECOMMENDATIONS PRESENTED IN THE GEOTECHNICAL INVESTIGATION.

4 PRIOR TO COMMENCEMENT OF EXCAVATION OPERATIONS, FIELD LOCATE AND ADEQUATELY PROTECT ANY EXISTING STRUCTURES, TREES, UTILITIES AND/OR OTHER PERMANENT ELEMENTS TO REMAIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY DAMAGE RESULTING FROM CONSTRUCTION OPERATIONS.

5 THE CONTRACTOR SHALL PROVIDE AND ENSURE PROPER DRAINAGE OF THE SITE PRIOR TO BEGINNING CONSTRUCTION OF THE RISER BOX STRUCTURE. DRAINAGE SHALL BE SUCH THAT SURFACE RUNOFF IS ROUTED AROUND OR AWAY FROM THE CONSTRUCTION AREA. MEASURES SHALL BE TAKEN TO PREVENT THE PONDING OF WATER WITHIN THE FOUNDATION AREA.

6 THE CONSTRUCTION AREA FOR THE RISER BOX STRUCTURE SHALL BE STRIPPED OF ALL VEGETATION, LOOSE TOP SOIL, DEBRIS, ORGANICS AND OTHER DELETERIOUS MATERIAL. ROOTS AND STUMPS OF TREES WITHIN THE CONSTRUCTION AREA SHALL BE REMOVED FOR THEIR FULL DEPTH, INCLUDING THE DRY SOILS AROUND THE ROOT BULB. EXCAVATIONS IN CUT AREAS SHALL BE BENCHED.

7 FOOTINGS SHALL BE FOUNDED ON PROOF-ROLLED NATURAL SUBGRADE. EXCAVATIONS SHALL BE NEAT AND FREE OF ALL LOOSE MATERIALS AND DEBRIS PRIOR TO PLACEMENT OF CONCRETE. CONTRACTOR SHALL USE CARE TO PROTECT EXCAVATIONS FROM CAVING AND SLOUGHING DUE TO TRAFFIC FROM EQUIPMENT OR WORKMEN.

8 ONCE FINAL SUBGRADE ELEVATIONS HAVE BEEN ACHIEVED, THE EXPOSED SUBGRADE SHALL BE CAREFULLY PROOFROLLED WITH A 20-TON PNEUMATIC ROLLER OR EQUIVALENT EQUIPMENT TO DETECT WEAK ZONES IN THE SUBGRADE. WEAK AREAS DETECTED DURING PROOFROLLING SHALL BE REMOVED AND REPLACED WITH SOILS EXHIBITING SIMILAR CLASSIFICATION, MOISTURE CONTENT AND DENSITY AS THE ADJACENT IN-SITU SOILS. PRIOR TO FOOTING CONSTRUCTION, THE SUBGRADE PREPARATION SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER.

9 IN THE EVENT THAT EXCAVATIONS ARE COMPLETED TO A DEPTH GREATER THAN THAT REQUIRED BY THE DRAWINGS, THE CONTRACTOR SHALL FILL THE OVEREXCAVATION WITH CONCRETE. CONCRETE REQUIRED TO COMPENSATE THE OVEREXCAVATION SHALL BE AT THE CONTRACTOR'S EXPENSE.

10 ANY WATER ACCUMULATIONS IN EXCESS OF 1 INCH SHALL BE PUMPED OUT PRIOR TO PLACEMENT OF CONCRETE. REBAR AND CONCRETE FOR FOOTINGS SHALL BE PLACED AS SOON AS PRACTICAL FOLLOWING COMPLETION OF EXCAVATIONS TO PREVENT EXCESSIVE DRYING OR WETTING OF THE SUBGRADE.

11 ALL BACKFILL BEHIND THE RISER BOX STRUCTURE WALLS SHALL CONSIST OF EMBANKMENT MATERIAL AS SPECIFIED BY THE CIVIL OR GEOTECHNICAL ENGINEER.

12 BACKFILLING OPERATIONS SHALL NOT BEGIN UNTIL CONCRETE WALLS HAVE CURED A MINIMUM OF 7 DAYS. FORMS SHALL REMAIN IN PLACE FOR A MINIMUM OF 7 DAYS. IF DESIRED, FORMS MAY BE REMOVED UPON SATISFACTORY EVIDENCE THAT CONCRETE HAS ACHIEVED 75% OF ITS SPECIFIED 28 DAY STRENGTH AND PROVIDED THAT CONCRETE IS CURED A SPRAY-ON CURING COMPOUND OR USING WET COTTON MATS FOR THE REMAINDER OF THE 7 DAY CURING PERIOD. UNDER NO CIRCUMSTANCES SHALL BACKFILLING COMMENCE IN LESS THAN 7 DAYS. THE BACKFILL PLACEMENT AND COMPACTION OPERATIONS SHALL BE CAREFULLY CONTROLLED TO PREVENT OVERCOMPACTION OR DAMAGE TO THE STRUCTURES.

REINFORCED CONCRETE NOTES

1 ALL CONCRETE SHALL BE CLASS C (3600 PSI) NORMAL WEIGHT CONCRETE WITH A WATER/CEMENT RATIO OF NOT MORE THAN 0.45 AND A SLUMP IN THE RANGE OF 5 TO 8 INCHES. WATER CONTENT SHALL BE CLOSELY MONITORED DURING BATCHING. UNDER NO CIRCUMSTANCES SHALL THE WATER/CEMENT RATIO BE PERMITTED TO EXCEED THE SPECIFIED MAXIMUM. THE USE OF A MID RANGE WATER REDUCING ADMIXTURE IS RECOMMENDED TO IMPROVE WORKABILITY DURING PLACING OPERATIONS.

2 THE USE OF FLY ASH IS REQUIRED. CONCRETE SHALL BE PROPORTIONED WITH A MINIMUM FLY ASH CONTENT EQUAL TO 25 PERCENT OF THE TOTAL WEIGHT OF THE FLY ASH PLUS CEMENT. FLY ASH MAY BE CLASS F OR C, BUT CONCRETE MIXED WITH CLASS C FLY ASH SHALL BE SUBJECT TO THE FOLLOWING RESTRICTIONS:

A COARSE AGGREGATE SHALL CONSIST OF CRUSHED LIMESTONE. THE USE OF RIVER GRAVEL AGGREGATE WILL NOT BE PERMITTED.

B CEMENT SHALL BE TYPE II LA (LOW ALKALI) OR TYPE I/II LA. ALKALI CONTENT OF THE CEMENT SHALL BE LESS THAN 0.60%. CONTRACTOR SHALL SUBMIT EVIDENCE OF THE ALKALI CONTENT CERTIFIED BY AN INDEPENDENT TESTING LABORATORY.

3 REINFORCING STEEL SHALL BE ASTM/ANSI A615, GRADE 60. DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI 315.

4 CONCRETE CONSTRUCTION, INCLUDING MINIMUM REINFORCING STEEL COVERAGE BY CONCRETE, SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318, UNLESS OTHERWISE NOTED.

5 PROVIDE SUPPORTS OR CHAIRS TO SUPPORT REBAR AT THE POSITIONS REQUIRED BY THE DRAWINGS. REINFORCEMENT FOR FOOTINGS SHALL BE SUPPORTED ON PRECAST CONCRETE BLOCKS OF A THICKNESS TO PROPERLY POSITION THE REBAR. BLOCKS SHALL BE PROVIDED AT 3'-0" MAXIMUM ON CENTERS.

6 UNLESS OTHERWISE NOTED ON THE DRAWINGS, PROVIDE 2 #5 X 3'-0" BARS AT EACH RE-ENTRANT CORNER (1 EA. FACE) WITH 1 1/2 INCH CLEARANCE FROM CORNER. THIS INCLUDES ANY RECTILINEAR OPENINGS MADE DUE TO STANDARD CONSTRUCTION PRACTICES.

7 LAP CONTINUOUS UNSCHEDULED REINFORCING BARS 36 BAR DIAMETERS UNLESS OTHERWISE NOTED.

8 THERE SHALL BE NO HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SPECIFICALLY NOTED ON THESE DRAWINGS.

9 UNLESS OTHERWISE NOTED, PROVIDE #4 CORNER BARS WITH 2'-0" LEGS TO MATCH HORIZONTAL REINFORCING AT ALL WALL INTERSECTIONS.

10 THE CONTRACTOR SHALL ENSURE THAT ALL EMBEDDED ITEMS ARE DELIVERED TO THE SITE IN A TIMELY FASHION AND INSTALLED IN THE FORMWORK PRIOR TO PLACEMENT OF CONCRETE.

11 FIELD CUTTING OF REINFORCEMENT SHALL BE BY SHEARING OR SAWING. FIELD CUTTING OF REINFORCEMENT BY TORCH WILL BE PERMITTED ONLY WITH THE APPROVAL OF THE ENGINEER.

12 UNLESS OTHERWISE NOTED, ALL 90, 135 AND 180 DEGREE REINFORCING STEEL HOOKS SHALL BE STANDARD ACI HOOKS.

13 THE CONTRACTOR SHALL USE A TREMIE TO PLACE CONCRETE IN ALL AREAS WHERE THE FALL OF THE CONCRETE WILL EXCEED 5 FEET.

14 THE CONTRACTOR SHALL USE CARE TO PROPERLY VIBRATE CONCRETE DURING PLACING OPERATIONS TO ENSURE GOOD DENSITY OF CONCRETE AND TO MINIMIZE SURFACE DEFECTS.

15 CHAMFER ALL EXPOSED EDGES 3/4 INCH.

16 FORMWORK FOR SURFACES TO BE EXPOSED TO VIEW IN THE FINISHED CONSTRUCTION SHALL BE SMOOTH, EITHER WOOD OR METAL. SMOOTH FORMS SHALL BE FREE OF RAISED GRAIN, TORN SURFACES, WORN EDGES, PATCHES, DENTS OR OTHER DEFECTS. STRENGTH OF FORMS SHALL BE SUCH THAT NO WARPING, BULGING OR BOWING OCCUR UNDER THE WEIGHT OF THE WET CONCRETE. JOINTS SHALL BE SMOOTH AND MORTAR TIGHT. FORMS WHICH DO NOT PRESENT A SMOOTH SURFACE OR LINE UP PROPERLY SHALL NOT BE USED. FORMS SHALL BE FREE OF RUST, GREASE OR OTHER FOREIGN SURFACES THAT MAY DISCOLOR THE FINISHED CONCRETE.

17 WALL TIES AT RETAINING WALLS SHALL BE FABRICATED SO THAT ENDS OR END FASTENERS CAN BE REMOVED WITHOUT CAUSING SPALLING OF FACE OF CONCRETE. TIES SHALL BE PROVIDED WITH A WATER SEAL FEATURE. REMOVE ENDS OF FORM TIES SUCH THAT THE EMBEDDED PORTION OF TIE IS AT LEAST 3/4 INCH FROM THE FORMED CONCRETE FACE. PATCH TIE HOLES IMMEDIATELY AFTER REMOVAL OF FORMS.

CONCRETE FINISHING

1 REPAIR OF SURFACE DEFECTS – DEFECTIVE AREAS SHALL BE REPAIRED IMMEDIATELY AFTER REMOVAL OF FORMS. HONEYCOMBED AND OTHER DEFECTIVE AREAS SHALL BE REMOVED DOWN TO SOUND CONCRETE. THE DEFECTIVE AND SURROUNDING AREA SHALL BE DAMPENED AND A BONDING GROUT APPLIED TO THE AREA. BONDING GROUT SHALL CONSIST OF APPROXIMATELY ONE PART CEMENT TO ONE PART FINE SAND PASSING A NO. 30 SIEVE. MIX GROUT TO THE CONSISTENCY OF A THICK CREAM AND BRUSH THOROUGHLY INTO THE SURFACE.

PATCHING MORTAR SHALL BE OF THE SAME MATERIALS AND APPROXIMATELY THE SAME PROPORTIONS AS CONCRETE EXCEPT THAT COARSE AGGREGATE SHALL BE OMITTED. PREPARE MORTAR WITH NO MORE THAN ONE PART CEMENT TO 2 1/2 PARTS SAND. USE WHITE PORTLAND CEMENT FOR PART OF THE GRAY CEMENT TO MIX A MORTAR OF A COLOR TO MATCH THE SURROUNDING CONCRETE. USE NO MORE WATER THAN NECESSARY AND MIX MORTAR TO THE STIFFEST CONSISTENCY THAT WILL PERMIT PLACING.

AFTER SURFACE WATER FROM THE BONDING GROUT HAS DISSAPATED, THOROUGHLY BRUSH PATCHING MORTAR INTO THE BONDING GROUT.

IN LIEU OF USE OF BONDING GROUT, A LATEX BONDING AGENT MAY BE USED.

2 ALL VERTICAL CONCRETE SURFACES EXPOSED TO VIEW SHALL RECEIVE A RUBBED FINISH. ALL EXPOSED HORIZONTAL CONCRETE SURFACES SHALL RECEIVE A SMOOTH TROWELED FINISH.

WATERSTOPS

1 ALL WATERSTOPS SHALL BE PREFORMED PLASTIC SEALING TYPE WATERSTOP SUCH AS SYNKO-FLEX. PLASTIC SEALING TYPE WATERSTOP SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

STRUCTURAL STEEL

1 ALL MISCELLANEOUS STEEL CHANNELS, ANGLES, PLATES, ETC., SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE.

2 DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL COMPLY WITH THE AISC "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS," AISC "CODE OF STANDARD PRACTICE," AND ALL UPDATING PUBLICATIONS.

3 FLAT AND BEVELED WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F436 STANDARD SPECIFICATION FOR HARDENED STEEL WASHERS. BEVELED WASHERS SHALL BE PROVIDED WITH A 1 TO 6 RATIO SURFACE FOR USE WITH AMERICAN STANDARD BEAMS AND CHANNELS.

4 WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY SPECIFICATIONS. ELECTRODES SHALL CONFORM TO AWS A5.5, E70XX.

5 ALL MISCELLANEOUS WELDS (FIELD OR SHOP) SHALL BE MINIMUM SIZE FILLET ALL AROUND IN ACCORDANCE WITH AISC. WELDING OF CONTINUOUS MEMBERS SHALL BE A MINIMUM OF 2 INCHES OF 3/16 INCH FILLET STITCH WELDS AT 12 INCHES ON CENTER, STAGGERED EACH SIDE, UNLESS OTHERWISE NOTED. COLUMN BASE PLATES, CAP PLATES AND STIFFENER PLATES SHALL BE WELDED ALL AROUND.

6 SPLICING OF STRUCTURAL STEEL MEMBERS IS PROHIBITED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER AS TO LOCATION AND TYPE. ANY MEMBER HAVING A SPLICE NOT SHOWN AND DETAILED ON THE SHOP DRAWINGS WILL BE REJECTED.

7 BURNING OF HOLES IN STRUCTURAL STEEL IS PROHIBITED. ANY MEMBER WITH BURNED HOLES SHALL BE REPLACED.

8 ALL STRUCTURAL STEEL ITEMS SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION. FIELD WELDS OR DAMAGE TO GALVANIZING SHALL BE PAINTED WITH A ZINC RICH COATING, SUCH AS ZRC GALVANIZING COMPOUND OR GALVALITE.

SUBMITTALS

THE FOLLOWING ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. WORK ASSOCIATED WITH THESE ITEMS SHALL NOT COMMENCE UNTIL THE SUBMITTALS HAVE BEEN REVIEWED AND RETURNED BY THE ENGINEER. THE CONTRACTOR SHALL SUBMIT THE FOLLOWING:

1 TEST DATA AND MIX DESIGNS FOR EACH TYPE AND STRENGTH OF CONCRETE SPECIFIED.

2 REINFORCING STEEL SHOP DRAWINGS DETAILING REINFORCEMENT FABRICATION AND BAR PLACEMENT. SHOP DRAWINGS SHALL CLEARLY INDICATE THE LOCATION, SIZE, SPACING, SPLICES AND PIECEMARK FOR ALL REINFORCING STEEL. THE SHOP DRAWINGS SHALL PROVIDE SUFFICIENT DETAIL TO PERMIT PLACEMENT OF REINFORCEMENT WITHOUT THE USE OF THE DESIGN DRAWINGS. THE SHOP DRAWINGS SHALL INCLUDE A COMPLETE BILL OF MATERIALS FOR ALL REINFORCING STEEL. FABRICATION OF REINFORCING STEEL SHALL NOT COMMENCE UNTIL THE ENGINEER HAS COMPLETED THE REVIEW OF THE SHOP DRAWINGS.

3 STRUCTURAL STEEL SHOP DRAWINGS DETAILING ALL STRUCTURAL STEEL MEMBERS, CONNECTIONS AND RELATED STRUCTURAL STEEL ITEMS. SHOP DRAWINGS SHALL INDICATE MATERIAL TYPE, SIZES, LOCATIONS, BOLT HOLES, COPED EDGES, WELDS AND ALL OTHER DETAILS NECESSARY TO FABRICATE AND ERECT EACH PIECE. IN ADDITION, THE CONTRACTOR SHALL SUBMIT COORDINATED ERECTION DRAWINGS, CLEARLY INDICATING THE INSTALLED LOCATION, SIZE, ORIENTATION AND PIECEMARK FOR ALL STRUCTURAL STEEL MEMBERS. THE SHOP DRAWINGS AND ERECTION DRAWINGS SHALL PROVIDE SUFFICIENT DETAIL TO PERMIT STEEL FABRICATION AND ERECTION WITHOUT THE USE OF THE DESIGN DRAWINGS.

4 PROPOSED METHOD OF CONCRETE CURING AND PRODUCT DATA FOR ANY CURING COMPOUNDS PROPOSED FOR USE ON THE PROJECT.

5 LABORATORY TEST RESULTS FOR CONCRETE CYLINDER COMPRESSION TESTS AND SUBGRADE AND FILL COMPACTION TESTS.

TESTING LABORATORY REQUIREMENTS

THE CONTRACTOR SHALL SECURE THE SERVICES OF A COMMERCIAL TESTING LABORATORY TO PERFORM ALL REQUIRED MATERIALS TESTS AND INSPECTIONS.

1 ONE SET OF CONCRETE TEST CYLINDERS SHALL BE OBTAINED FOR EVERY 50 CUBIC YARDS OF CONCRETE PLACED, OR ANY PORTION THEREOF PLACED IN A SINGLE DAY, AS FOLLOWS:

A FIVE (5) CONCRETE TEST CYLINDERS SHALL BE MOLDED FROM EACH SAMPLE AND CURED ACCORDING TO ASTM C 31. COMPRESSIVE TESTS SHALL BE PERFORMED ON ONE CYLINDER AT 7 DAYS AND THREE CYLINDERS AT 28 DAYS. THE FIFTH CYLINDER SHALL BE RETAINED FOR 56 DAYS AND TESTED ONLY IF THE AVERAGE STRENGTH OF THE 28 DAYS TESTS DO NOT MEET THE MINIMUM REQUIRED COMPRESSIVE STRENGTH.

B A SLUMP TEST AND TEMPERATURE MEASUREMENT SHALL BE PERFORMED FOR EACH SAMPLE.

C COMPUTATION OF WATER/CEMENT RATIO, AS REQUIRED OR DIRECTED BY THE ENGINEER.

2 ADDITIONAL CYLINDERS MAY BE MADE AND TESTED, AS NECESSARY, FOR ACCELERATED REMOVAL OF FORMS OR ERECTION OF MEMBERS TO VERIFY THAT NECESSARY STRENGTHS HAVE BEEN OBTAINED. SUCH CYLINDERS SHALL BE MADE AT THE CONTRACTOR'S EXPENSE.

3 FIELD DENSITY TESTS SHALL BE PERFORMED ON THE SUBGRADE AND EACH LIFT OF FILL MATERIAL. ONE DENSITY TEST WILL BE REQUIRED FOR EACH 5,000 SQUARE FEET, BUT NOT LESS THAN THREE (3) TESTS PER LIFT.

4 REINFORCED CONCRETE CONSTRUCTION – PERFORM THE FOLLOWING INSPECTIONS:

A INSPECT EXCAVATIONS AND SUBGRADE PREPARATIONS FOR THE WALL FOOTINGS.

B INSPECT REINFORCING STEEL PLACEMENT PRIOR TO CONCRETE POURS.

5 STEEL CONSTRUCTION – SERVICES ARE TO BE PROVIDED AS FOLLOWS:

A INSPECT CONNECTIONS OF STEEL MEMBERS.

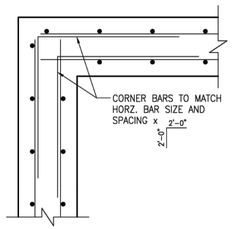
B ALL FULL PENETRATION WELDS SHALL BE INSPECTED USING ULTRASONIC METHODS.

C INSPECT WELDS AND BOLTED CONNECTIONS.

6 THE CONTRACTOR SHALL COOPERATE AND COORDINATE FULLY WITH THE TESTING LABORATORY.

7 IN THE EVENT THAT CONCRETE ELEMENTS OR MEMBERS DO NOT ACHIEVE THE SPECIFIED MINIMUM COMPRESSIVE STRENGTHS, THE ENGINEER MAY REQUIRE ADDITIONAL ANALYSIS, TESTING OR REMOVAL AND REPLACEMENT OF MEMBERS. ANY AND ALL SUCH ADDITIONAL ANALYSIS OR TESTING SHALL BE AT THE CONTRACTOR'S EXPENSE, WHETHER SUCH ANALYSIS OR TESTING DEMONSTRATES ADEQUATE STRENGTH OR NOT. REPLACEMENT OF ANY MEMBERS DEEMED QUESTIONABLE OR INADEQUATE BY THE ENGINEER SHALL BE AT THE CONTRACTOR'S EXPENSE.

8 THE CONTRACTOR SHALL ARRANGE FOR COPIES OF THE INSPECTION AND TESTING REPORTS TO BE SENT TO THE ENGINEER. COPIES OF TEST AND INSPECTION REPORTS SHALL BE FORWARDED TO THE ENGINEER AS QUICKLY AS POSSIBLE FOLLOWING COMPLETION OF THE TESTS AND INSPECTIONS.



PLAN

1 WALL CORNER
TYPICAL DETAIL
N.T.S.

Reviewed for Substantial Conformance by City of Hutto
Mark Hanna, P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
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NO.	REVISION	BY	DATE

TEXAS LUIS G. CARO 116830 LICENSED PROFESSIONAL ENGINEER 3/27/2024

PROJECT NO. 031-6092
DESIGNED BY: JNA
DRAWN BY: JNA
CHECKED BY: LGC
APPROVED BY: LGC
DATE: 3/27/2024

PKS Pickett, Kelm & Associates, Inc.
Consulting Structural Engineers
Texas Registration No. F-1491
4100 Duval Road, Bldg. 4, Suite 103
Austin, Texas 78759 • Phone 512-345-5538

RISER BOX

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

STRUCTURAL GENERAL NOTES AND TYPICAL DETAILS

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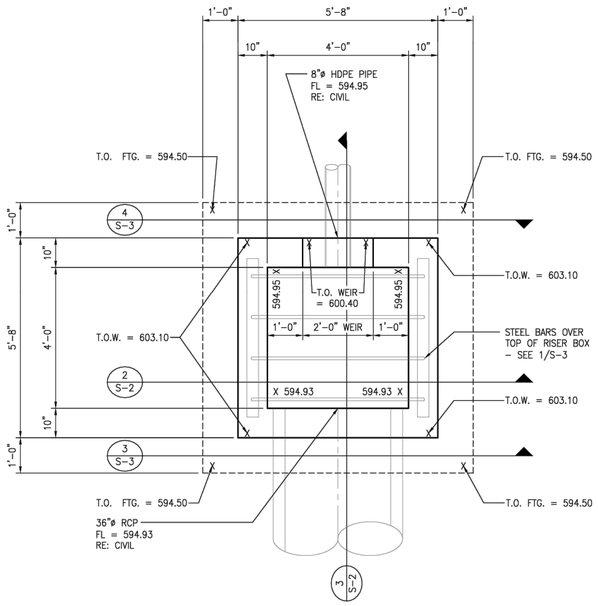
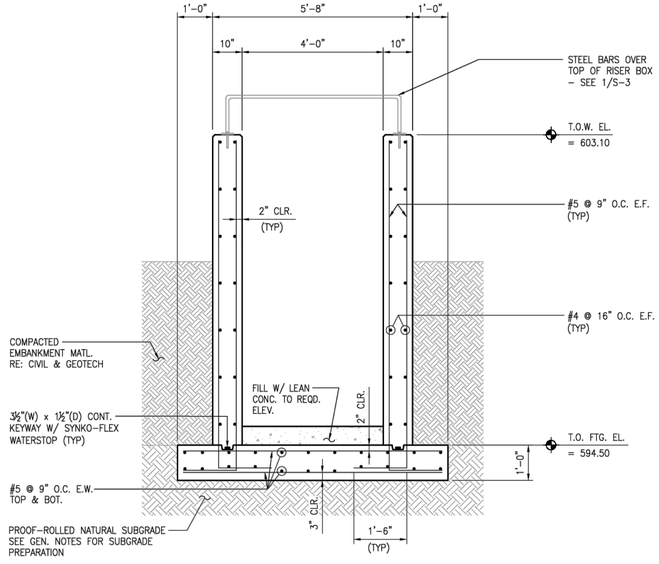
SHEET NO.
S-1

G:\TXC\Projects\Bronx_Homes\8943-01-Heritage_Mill_PH1\LDVD1_CAD\SV01_Shts\8943-01-C-SP-DTLS.dwg Layout: S-1 STRUCTURAL GENERAL NOTES & DETAILS Plotted By: Meet Patel 12/2/2024 6:22:01 PM Last Save By: rpham 12/2/2024 4:46:26 PM



1 DETENTION POND RISER BOX
PLAN
SCALE: 1/2" = 1'-0"

NOTE:
1. SEE SHEET S-1 FOR TYPICAL CONCRETE CONSTRUCTION DETAILS.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS VERSUS CIVIL DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO CONSTRUCTION.



2 SECTION
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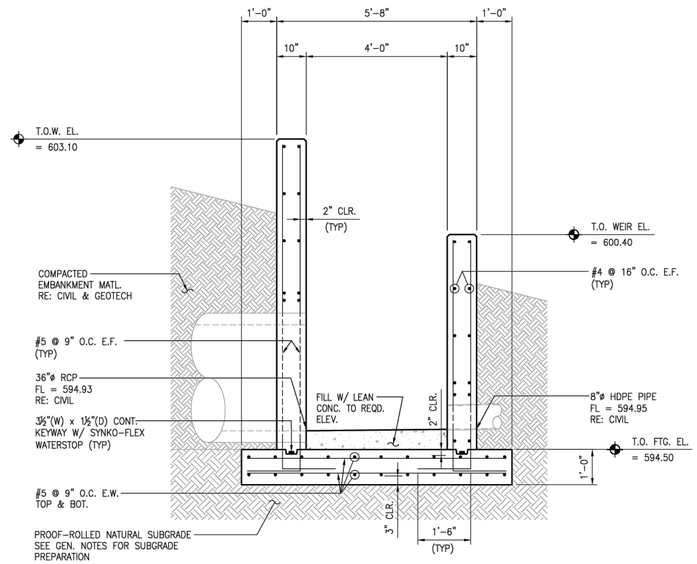

3 SECTION
SCALE: 1/2" = 1'-0"

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Reviewed for Substantial Conformance by City of Hutto

Matt Kerkes P.E.
City Engineer
Engineering - City of Hutto

01/09/2025

NO.	REVISION	BY	DATE

TEXAS LUIS G. CARO 116830 LICENSED PROFESSIONAL ENGINEER 3/27/2024

PROJECT NO.: 031-6092
DESIGNED BY: JNA
DRAWN BY: JNA
CHECKED BY: LGC
APPROVED BY: LGC
DATE: 3/27/2024

Pickett, Kalm & Associates, Inc.
Consulting Structural Engineers
Texas Registration No. F-1491
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Austin, Texas 78759 • Phone 512-345-5538

RISER BOX

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

PLAN AND SECTIONS

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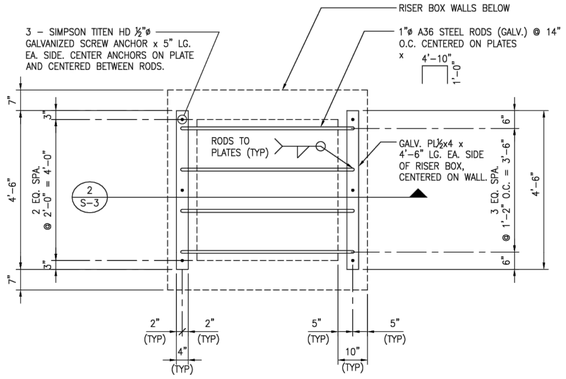
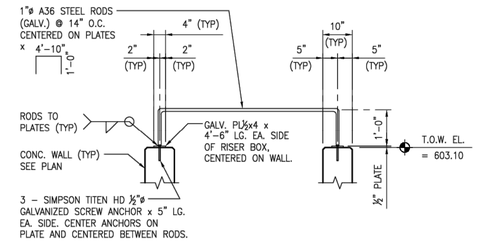
SHEET NO.
S-2

G:\TXCI\Projects\Brohn_Homes\6843-01-Heritage_Mill_Ph1\LD\01_CAD\SO1_Shts\6843-01-C-SP-DTLS.dwg Layout: S-2 STRUCTURAL PLAN & SECTIONS Plotted By: Meet Patel 12/2/2024 6:22:03 PM Last Save By: rpham 12/2/2024 4:46:26 PM



1 SAFETY BARS ON RISER BOX
PLAN
SCALE: 1/2" = 1'–0"



2 SECTION
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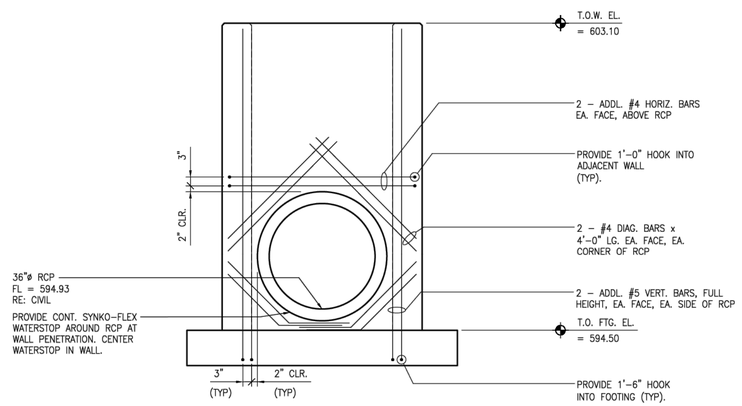
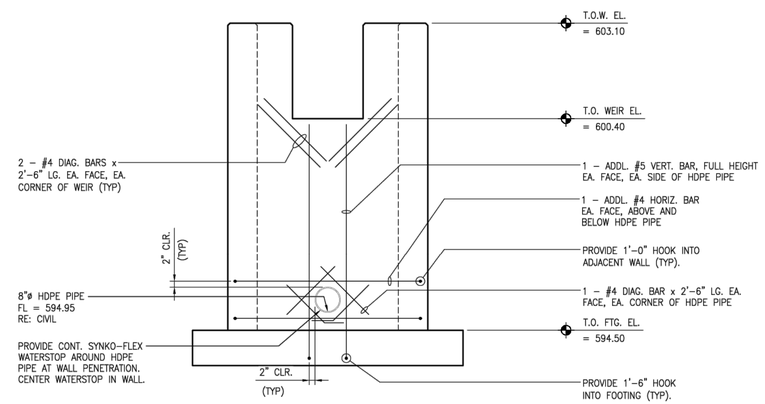


3 ADDL. REINF. AT 36"ø RCP
DETAIL
SCALE: 1/2" = 1'–0"



4 ADDL. REINF. AT WEIR AND HDPE PIPE
DETAIL
SCALE: 1/2" = 1'–0"

Reviewed for Substantial Conformance by City of Hutto
Matt Reiles P.E.
City Engineer
Engineering - City of Hutto
01/09/2025
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NO.	REVISION	BY	DATE

STATE OF TEXAS
LUIS G. CARO
116830
LICENSED PROFESSIONAL ENGINEER
3/27/2024

PROJECT NO. 031-6092
DESIGNED BY: JNA
DRAWN BY: JNA
CHECKED BY: LGC
APPROVED BY: LGC
DATE: 3/27/2024

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RISER BOX

HERITAGE MILL NORTH SECTION 1
HUTTO, TEXAS

SECTIONS AND DETAILS

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SHEET NO.
S–3

G:\TXC\Projects\Bronn_Homes\6943-01-Heritage_Mill_Ph1\LD\01_CAD\001_Shts\6943-01-C-SP-DTLS.dwg Layout: STRUC 3 Plotted By: Meet Patel 12/2/2024 6:22:05 PM Last Save By: jpham 12/2/2024 4:46:26 PM