

PROJECT LOCATION MAP SCALE: N.T.S.

PROJECT BENCHMARK

SITE TBM #1  
SET 1/2" ROD W/ HMT CAP  
N: 13788527.2038  
E: 2270919.5126  
ELEV: 589.4647

SITE TBM #2  
SET 1/2" ROD W/ HMT CAP  
N: 13792600.1325  
E: 2277056.3673  
ELEV: 633.5279

LEGAL DESCRIPTION

BEING A 51.65 ACRE OF LAND OUT OF THE ANTONIO MARIA ESNAURIZAR UPDATE SURVEY, ABSTRACT 20, LOCATED IN GUADALUPE COUNTY, TEXAS, BEING A PORTION OF A CALLED 127.74 ACRE TRACT, TRACT SEVEN, AND A CALLED 80.48 ACRE TRACT, TRACT FOUR, ALL RECORDED IN VOLUME 4221, PAGE 706, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS.

GENERAL NOTES:

- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.
- THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER IN RECORD.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SET A PRE-CONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED FOR ALL INSPECTION AND MEETING REQUESTS.
  - ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,
  - FAXED IN AT 830-608-2117 OR,
  - E-MAILED AT INSPECTIONS@NBTEXAS.ORG.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL TEMPORARY AND PERMANENT TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE PLANS AND LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES MAY BE ORDERED BY THE ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.
- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
- THIS DEVELOPMENT IS A TYPE 3 DEVELOPMENT.
- NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE GUADALUPE COUNTY, TEXAS, FIRM PANEL NUMBER 48187C0120F EFFECTIVE DATE NOVEMBER 2, 2007 AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- THIS PROJECT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
- GAS UTILITIES ARE NO INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY.

PARKSIDE SUBDIVISION  
PHASE 1  
CITY OF NEW BRAUNFELS  
CIVIL SITE CONSTRUCTION PLANS

SYMMETRY VENTURES  
130 S. SEGUIN, SUITE 100  
NEW BRAUNFELS, TX 78130

REQUIRED PERMITS	NUMBER
1. CITY OF NEW BRAUNFELS	#PI2019-0013
2. GBRA	#
3. SPRINGS HILL	#
4. TXDOT	#

JULY 2020



07/20/2020

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

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P.E. Registration No. 93047

PREPARED BY:



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TBPLS FIRM 1053600

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NOTE TO CONTRACTOR:

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

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

PARKSIDE SUBDIVISION PHASE 1  
CIVIL SITE CONSTRUCTION PLANS

HMT # 031.060



**SHEET**  
**C0.02**



CITY OF NEW BRAUNFELS CONSTRUCTION NOTES

REVISED 01/2019

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

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

FOR PUBLIC INFRASTRUCTURE PERMIT (SC) OR SITE PREP PERMIT (SD) PROJECTS:

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

FOR COMMERCIAL PERMIT (CP) PROJECTS:

- ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,
- FAXED IN AT 830-608-2117 OR,
- E-MAILED AT [INSPECTIONS@NBTEXAS.ORG](mailto:INSPECTIONS@NBTEXAS.ORG).

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

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

GROUNDWATER

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

RECORD DRAWINGS

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

CONSTRUCTION NOTE

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

DRAINAGE NOTE

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

FINISHED FLOOR ELEVATIONS

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

SOILS TESTING

PROCTORS SHALL BE SAMPLED FROM ON-SITE MATERIAL (ON-SITE IS DEFINED AS LIMITS OF CONSTRUCTION FOR THIS

-PLAN SET) AND A COPY OF THE PROCTOR RESULTS SHALL BE DELIVERED TO THE CITY OF NEW BRAUNFELS STREET INSPECTOR PRIOR TO ANY DENSITY TESTS.

ROADWAY

ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FLEXIBLE BASE OR FILL/EMBANKMENT MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED EIGHT INCHES (8") LOOSE. THE REQUIRED DENSITY FOR THE FILL/EMBANKMENT MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 132. THE REQUIRED DENSITY FOR THE FLEXIBLE BASE MATERIAL SHALL MEET THE REQUIREMENTS OF TXDOT'S SPECIFICATION ITEM 247. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E, AND TEX-116-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT. UPON COMPLETION OF TESTING, THE GEOTECHNICAL ENGINEER WILL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FLEXIBLE

BASE, AND FILL MATERIAL, AND SUBGRADE, HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

ITEM 340

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

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

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

UTILITY TRENCH COMPACTION (ADDED TO THE CONSTRUCTION PLANS ON ALL UTILITY PLAN SHEETS).

ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT/SIDEWALK SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEOTECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. DETERMINE THE MAXIMUM LIFT THICKNESS BASED ON THE ABILITY OF THE COMPACTING OPERATION AND EQUIPMENT USED TO MEET THE REQUIRED DENSITY. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E, AND TEX-116-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 200 LF FOR EACH LIFT AND EVERY OTHER SERVICE LINE. UPON COMPLETION OF TESTING THE GEOTECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS. ADDITIONAL DENSITY TESTS MAY BE REQUESTED BY THE CITY OF NEW BRAUNFELS INSPECTOR.

CITY OF NEW BRAUNFELS CONSTRUCTION NOTES

REVISED 01/2019

CURB CUT DUE TO CONSTRUCTION OF NEW RIGHT-OF-WAY CONSTRUCTION

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

CONSTRUCTION STABILIZED ENTRANCE

SAWCUT CURB FOR CONSTRUCTION ENTRANCE.

STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3"x5" ROCK TO BE PLACED A MINIMUM LENGTH OF 25-FT. AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE CITY RIGHT-OF-WAY. RIGHT- OF-WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.

(NOTES TO BE PLACED ON ALL WW PLAN & DETAIL SHEETS)

ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE

WITH A.D.A. SPECIFICATIONS. NO VALVES, HYDRANTS, ETC. SHALL BE

CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.

SIGNING AND PAVEMENT MARKING PLAN NOTES

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

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

SEEDING AND ESTABLISHMENT OF VEGETATION WITHIN EARTHEN CHANNELS, STORMWATER BASINS AND DISTURBED AREAS

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

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

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

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

TXDOT CONSTRUCTION GENERAL NOTES

1. THE DESIGN AND CONSTRUCTION WILL PROVIDE FOR PRESERVING ALL EXISTING FEATURES IN OR NEAR THE STATE RIGHT OF WAY BEING AFFECTED BY THE WIDENING. THIS INCLUDES BUT IS NOT LIMITED TO EXISTING DRIVEWAY GATE SET-BACKS, RELOCATION OF ELECTRONIC PRIVATE PROPERTY GATES, MAILBOX TURNOUTS, MAIL BOXES AND SUPPORTS, CATTLE GUARDS, ROADWAY SIGNING, EXISTING RIP-RAP OR OTHER PERMANENT EROSION CONTROL FEATURES, DIVERSIONARY BERMS, SWALES, DITCHES, AMOUNT AND CONFIGURATION OF DRIVEWAY FLARES AND DRIVEWAY CENTERLINE PROFILE, METAL BEAM GUARD FENCE AND END TREATMENTS, ETC. EXISTING DRIVEWAY CULVERTS AND SAFETY END TREATMENTS IF EFFECTED BY ROADWAY WIDENING WILL BE RECONSTRUCTED TO PRESERVE EXISTING FRONT SLOPE RATES. THE COORDINATION OF ITEMS THAT EFFECT EXISTING PRIVATE PROPERTY ACCESS, MAIL DELIVERY, ETC. IS THE RESPONSIBILITY OF THE DEVELOPER. THE WRITTEN CONCURRENCE OF ANY EFFECTED PROPERTY OWNERS FOR CONSTRUCTION EFFECTING THEIR DRIVEWAYS OR MAILBOX TURNOUTS MUST BE OBTAINED AND PROVIDED TXDOT PRIOR TO TXDOT DRIVEWAY PERMITS BEING ISSUED.

2. FOR WORK IN STATE RIGHT OF WAY, THE DEVELOPER IS RESPONSIBLE FOR COORDINATION OF, OBTAINING PERMITS FOR, AND COMPLYING WITH ANY AND ALL STATE AND FEDERAL REGULATORY AGENCIES AND ALL APPLICABLE LAWS, RULES AND REGULATIONS PERTAINING TO THE REGULATION OF DRAINAGE, PRESERVATION OF CULTURAL RESOURCES, NATURAL RESOURCES AND THE ENVIRONMENT. THE DEVELOPER IS RESPONSIBLE FOR DETERMINING IF THE PROJECT IS IN AN ENVIRONMENTALLY SENSITIVE AREA SUCH AS WITHIN THE RECHARGE OR CONTRIBUTING ZONE OF PROTECTED AQUIFERS, AND ACT IN ACCORDANCE WITH ALL RESOURCE AGENCY REGULATIONS.

IF TXDOT HAS A CZP OR WPAP ON FILE WITH TCEQ, THE DEVELOPER IS RESPONSIBLE FOR AMENDING TXDOT'S PERMIT, OBTAINING TCEQ APPROVAL AND PROVIDING TXDOT WITH THE APPROVED AMENDED PERMIT. THE AMENDED PERMIT WILL ADDRESS THE RELOCATION OF ANY TXDOT PERMANENT BMP'S INCLUDING VEGETATIVE FILTER STRIPS THAT MAY BE IMPACTED BY WORK DONE WITHIN TXDOT ROW. "

IF TXDOT DOES NOT HAVE A CZP OR WPAP ON FILE WITH TCEQ, ANY PERMANENT BMP'S INCLUDING VEGETATIVE FILTER STRIPS, THAT MAY BE REQUIRED IN ORDER TO TREAT ADDITIONAL IMPERVIOUS COVER PLACED IN TXDOT ROW WILL BE LOCATED IN PRIVATE PROPERTY AND THE DEVELOPER WILL PROVIDE TXDOT WITH EVIDENCE OF TCEQ APPROVAL OF THE ADDITIONAL IMPERVIOUS COVER."

THE DEVELOPER MAY NOT OPERATE UNDER RESOURCE AGENCY ENVIRONMENTAL CLEARANCE OF A PREVIOUS OR ONGOING TXDOT PROJECT, BUT WILL BE REQUIRED TO OBTAIN SEPARATE RESOURCE/ENVIRONMENTAL AGENCY CLEARANCE.

3. IF WASTE AREAS OR MATERIAL SOURCE AREAS RESULT FROM THIS PROJECT, THE CONTRACTOR IS REMINDED TO FOLLOW THE REQUIREMENTS OF THE TEXAS AGGREGATE QUARRY AND PIT SAFETY ACT. IN ADDITION, IT IS REQUESTED THAT THESE AREAS NOT BE VISIBLE FROM ANY HIGHWAY ON THE STATE SYSTEM.

3.5. ANY MATERIALS REMOVED AND NOT REUSED AND DETERMINED TO BE SALVAGEABLE SHALL BE STORED WITHIN THE PROJECT LIMITS AT AN APPROVED LOCATION OR DELIVERED UNDAMAGED TO THE STORAGE YARD AS DIRECTED. PROPERLY DISPOSE UNSALVAGEABLE MATERIALS IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REGULATIONS. DEFACE TRAFFIC SIGNS SO THAT THEY WILL NOT REAPPEAR IN PUBLIC AS SIGNS.

4. ANY TREES EXISTING WITHIN STATE RIGHT OF WAY ARE THE NATURAL RESOURCES OF THE STATE AND WILL BE PROTECTED. IN THE EVENT THAT TREES MUST BE REMOVED, TXDOT WRITTEN PERMISSION WILL BE REQUIRED IN ADVANCE. THE IDENTIFICATION OF SPECIES, DIAMETER AND LOCATION TO BE REMOVED. THE DEVELOPER WILL BE FINED FOR ANY UNPERMITTED REMOVAL OF TREES.

4.5. IN THE EVENT THAT THERE ARE AREAS OF PUBLIC ROW DEDICATION RESULTING FROM THE PLATTING PROCESS, THE AREA WITHIN THE PUBLIC ROW DEDICATION DOES NOT PASS INTO TXDOT OWNERSHIP AS A RESULT OF PLATTING. HOWEVER, THE DEVELOPER WILL REMOVE ANY OLD FENCING, GATES AND UNSIGHTLY VEGETATION WITHIN THE AREA OF THE ROW DEDICATION, LEAVING IT IN AN AESTHETICALLY PLEASING CONDITION. THE AREA OF ROW DEDICATION WILL NOT BE MOWED OR OTHERWISE MAINTAINED BY TXDOT. PRIOR TO REMOVAL OF TREES IN THE AREA OF ROW DEDICATION, THE TREES WILL FIRST BE EVALUATED IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL TREE PROTECTION ORDINANCES AND THE WRITTEN CONCURRENCE OF THE LOCAL JURISDICTION WILL BE PROVIDED TO TXDOT.

5. THE DEVELOPER WILL MAINTAIN AT THE PROJECT SITE, AND MAKE AVAILABLE UPON REQUEST, COPIES OF ALL APPROVED ENVIRONMENTAL PLANS AND PERMITS RELATING TO WORK IN STATE RIGHT OF WAY.

6. PRIOR TO BEGINNING GRADING ACTIVITY THE CONTRACTOR WILL SET AND MAINTAIN ROADWAY STATIONING, CONTROL POINTS, MARKS, STAKES TO ESTABLISH LINES, SLOPES, GRADES AND CENTERLINES.

7. ANY SLOPES IN STATE RIGHT OF WAY WHICH BECOME STEEPER THAN 3:1 AS A RESULT OF THE WORK WILL BE TREATED WITH 4" THICK REINFORCED CONCRETE RIPRAP AND BE TREATED WITH METAL BEAM GUARD FENCE. THIS MAY ENTAIL ADDITIONAL RIP-RAP BEYOND THAT SHOWN IN THE PLANS.

7.5. UNLESS OTHERWISE SHOWN ON THE PLANS, WHERE EXISTING CONCRETE RIP-RAP IS REMOVED, MODIFIED OR EXTENDED, THE PORTION TO BE REMOVED WILL BE NEATLY SAW-CUT PRIOR TO REMOVAL AND THE NEW RIP-RAP WILL BE FORMED TO MATCH THE EXISTING LINES AND GRADES OF THE EXISTING RIP-RAP AND WILL BE DOWELED INTO THE EXISTING RIP-RAP WITH #3 BARS ON 12" CENTERS. THE DOWEL BARS WILL BE EMBEDDED IN PLACE WITH EPOXY MEETING TXDOT REQUIREMENTS. THE MINIMUM EMBEDMENT LENGTH IS 9 INCHES. THIS APPLIES TO ANY TYPE OF CONCRETE RIP-RAP INCLUDING METAL BEAM GUARD FENCE OR CABLE BARRIER MOW STRIPS.

8. DUANE HOFFERLICHTER (830) 609-0707 NEW BRAUNFELS, TRAVIS YOUNG (830) 303-0130 SEGUIN, CHAD LUX (830) 816-2430 BOERNE, MARK ANDREWS (830) 393-3144 FLORESVILLE, TXDOT MAINTENANCE OFFICE WILL BE CONTACTED BY THE CONTRACTOR 48 HOURS PRIOR TO WORK OCCURRING IN STATE RIGHT OF WAY.

9. STATE RIGHT OF WAY WILL NOT BE USED AS AN AREA FOR CONTRACTOR PARKING OR FOR STAGING THE RECEIPT OF MATERIALS OR EQUIPMENT.

10. TRAFFIC CONTROL AND CONSTRUCTION BARRICADES WILL MEET THE REQUIREMENTS OF THE TEXAS MUTCD.

11. THE CONTRACTOR WILL PROVIDE ADVANCE NOTIFICATION TO THE ENGINEER OF IMPENDING/UPCOMING LANE CLOSURES FOR ALL TEMPORARY AND/OR PERMANENT LANE, RAMP, CONNECTOR, FRONTAGE, SHOULDER, MEDIAN CROSSOVER, ETC. CLOSURES OR DETOURS.

12. ACCESS TO ADJOINING PROPERTY MUST BE MAINTAINED AT ALL TIMES.

13. UNLESS OTHERWISE NOTED IN THE PLANS AND/OR AS DIRECTED BY THE AREA ENGINEER OR MAINTENANCE SUPERVISOR, DAILY LANE CLOSURES SHALL BE LIMITED ACCORDING TO THE FOLLOWING RESTRICTIONS:

NIGHTTIME: MAINTENANCE SUPERVISOR AND/OR AREA ENGINEER APPROVAL REQUIRED. (WITH UNIFORMED OFF DUTY LAW ENFORCEMENT OFFICERS).

WEEKEND CLOSURES: MAINTENANCE SUPERVISOR AND/OR AREA ENGINEER APPROVAL REQUIRED.

14. NO LANE CLOSURES OR ROADWAY CLOSURES WILL BE PERMITTED FOR THE FOLLOWING KEY DATES AND/OR SPECIAL EVENTS:

BETWEEN DECEMBER 15 AND JANUARY 1.  
WEDNESDAY BEFORE THANKSGIVING THRU THE SUNDAY AFTER THANKSGIVING.  
SATURDAY AND SUNDAY BEFORE MEMORIAL DAY AND LABOR DAY.  
SATURDAY OR SUNDAY WHEN JULY 4 FALLS ON A FRIDAY OR MONDAY.

15. AT NO TIME WILL THE ROADWAY TRAVEL WAY BE BLOCKED

16. LANE CLOSURES WILL ONLY BE PERMITTED WITH 48 HOUR PRIOR APPROVAL OF THE TXDOT MAINTENANCE SUPERVISOR. LANE CLOSURES WILL BE PERMITTED ONLY BETWEEN 9:00 A.M. AND 4:00 P.M. MONDAY THROUGH FRIDAY.

17. A MINIMUM 3:1 (H:V) TEMPORARY SAFETY SLOPE OF STABLE COMPACTED MATERIAL WILL BE REQUIRED ADJACENT TO THE STATE HIGHWAY EDGE OF PAVEMENT AT ALL TIMES DURING NON WORKING HOURS.

18. ONLY ONE SIDE OF THE ROADWAY WILL BE OPEN TO CONSTRUCTION AT A TIME. WORK WILL BE COMPLETED AND PAVEMENT EDGES BACKFILLED ON ONE SIDE OF THE ROAD BEFORE WORK WILL BEGIN ON THE OPPOSITE SIDE OF THE ROADWAY.

19. ALL MILLING, PAVING AND SEAL COAT OPERATIONS SHALL PROCEED IN THE DIRECTION OF TRAFFIC.

20. ANY PAVEMENT EDGE DROP-OFFS BETWEEN 1 AND 2 INCHES IN HEIGHT WILL HAVE CW 8-11 WARNING SIGNS. ANY PAVEMENT EDGE DROP-OFF 2 INCHES OR GREATER WILL HAVE A 3:1 COMPACTED SAFETY SLOPE AND CW 8-11 OR CW 8-11 SIGNS. PAVEMENT EDGES WILL BE SHOULDERED UP WITH COMPACTED EMBANKMENT MATERIAL AND 4 INCHES OF TOPSOIL AS SOON AS POSSIBLE AFTER PAVING IS COMPLETED ON THE SIDE OF THE ROAD BEING WIDENED.

21. PROOF ROLLING OF SUBGRADE IS REQUIRED AND SHALL BE WITNESSED BY TXDOT PRIOR TO PLACEMENT OF PAVEMENT STRUCTURE UNLESS OTHERWISE APPROVED BY THE TXDOT MAINTENANCE SUPERVISOR. THE REQUIREMENT FOR PROOF-ROLLING OF SUBGRADE IS NOT SUPERSEDED BY ANY OTHER REQUIREMENTS INCLUDING THOSE OF ANY GEOTECHNICAL REPORT.

22. ALL FLEXIBLE BASE WILL HAVE A MINIMUM PLASTICITY INDEX OF 4.

23. ALL COURSES OF ASPHALTIC CONCRETE PAVEMENT (REGARDLESS OF TYPE) WILL BE PLACED WITH A ASPHALT PAVING EQUIPMENT MEETING THE REQUIREMENTS OF TXDOT ITEM 320, "EQUIPMENT FOR ASPHALT CONCRETE PAVEMENT", UNLESS OTHERWISE APPROVED BY THE MAINTENANCE SUPERVISOR.

24. ALL SURFACE AGGREGATES WILL MEET THE REQUIREMENTS OF TXDOT FRICTION CLASSIFICATION "B" AND WILL MEET PG BINDER GRADE 70-22.

25. ALL SURFACE ASPHALT CONCRETE PAVEMENT WILL BE UNDER-SEALED WITH A ONE COURSE SURFACE TREATMENT.

26. ALL ASPHALTIC CONCRETE PAVEMENT USED IN BASE COURSES WILL BE TYPE "A" OR "B" AND WILL MEET PG BINDER GRADE 64-22.

27. ALL PAVEMENT WIDENING INCLUDING SHOULDERS WILL MATCH THE EXISTING PAVEMENT CROSS SLOPE.

28. ALL PAVEMENT MARKINGS WILL BE TYPE I THERMOPLASTIC (100 MIL) WITH UNDER-SEAL MEETING THE REQUIREMENTS OF TXDOT ITEM 666, REFLECTORIZED PAVEMENT MARKINGS. THE CONTRACTOR WILL PLACE GUIDE MARKS IN ACCORDANCE WITH ITEM 666 AND WILL MAKE ARRANGEMENTS FOR TXDOT INSPECTION OF THE PAVEMENT MARKING LAYOUT PRIOR TO PLACEMENT OF STRIPING. EQUIPMENT USED FOR THE PLACEMENT OF STRIPING WILL MEET THE PRODUCTION REQUIREMENTS OF ITEM 666 UNLESS OTHERWISE APPROVED IN ADVANCE BY THE TXDOT MAINTENANCE SUPERVISOR.

29. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS WILL BE LIGHTLY GROUND IN A MANNER THAT DOES NOT DAMAGE THE PAVEMENT SURFACE. REMOVE ANY PAVEMENT MARKING ACCUMULATION, AND WILL BE COVERED WITH A STRIP SEAL OF 18" MINIMUM WIDTH, CONSISTING OF PRECASTED GRADE 5, FRICTION CLASS B AGGREGATE.

30. ALL MATERIALS AND CONSTRUCTION METHODS USED IN STATE RIGHT OF WAY WILL MEET TXDOT SPECIFICATIONS. THIS SUPERSEDES ALL OTHER SPECIFICATIONS IN THE PLANS.

31. ALL TURN LANE CONCRETE PAVEMENT IN STATE ROW WILL MEET THE REQUIREMENTS OF TXDOT ITEM 360 CLASS P CONCRETE AND WILL BE BATCHED AT CONCRETE PLANTS HAVING A CURRENT APPROVED MIX DESIGN. CLASS P CONCRETE SHALL HAVE 7 AND 28 DAY COMPRESSIVE STRENGTH OF 3200 PSI AND 4400 PSI RESPECTIVELY.

32. WHEN WIDENING EXISTING CONCRETE PAVEMENTS, JOINTS IN THE NEW PAVEMENT WILL MATCH JOINTS IN EXISTING PAVEMENT AND CURB.

33. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT TXDOT APPROVED MATERIALS, MIX DESIGNS, APPROVED SOURCES AND PRODUCTS ARE USED FOR ALL WORK IN STATE ROW. THE CONTRACTOR WILL ARRANGE FOR THE SERVICES OF A QUALIFIED TESTING LABORATORY FOR ALL ITEMS REQUIRING TESTING AND WILL NOTIFY TXDOT OF ANY DISCREPANCIES BETWEEN TEST RESULTS AND TXDOT SPECS IN A TIMELY MANNER. THE CONTRACTOR WILL PROVIDE TO TXDOT INVOICES AND TESTING RESULTS AS SOON THEY ARE AVAILABLE. FAILURE TO DO THIS WILL RESULT IN REJECTION OF THE WORK.

34. SAWING OF CONTRACTION/CONSTRUCTION JOINTS IN CONCRETE PAVEMENT WILL BE ACCOMPLISHED AS SOON AS PERSONNEL CAN WALK ON THE CONCRETE WITHOUT DAMAGING THE SURFACE REGARDLESS OF TIME OF DAY OR WEATHER CONDITIONS. STAND-BY POWER DRIVEN CONCRETE SAWS WILL BE PROVIDED DURING THE SAWING OPERATION. CURING COMPOUND WILL BE RE-APPLIED TO THE SAWED JOINT IMMEDIATELY UPON SAWING THE JOINT.

35. GUARDRAIL SGT'S WILL BE TYPE 3 UNLESS OTHERWISE APPROVED BY THE TXDOT MAINTENANCE SUPERVISOR. GUARDRAIL MOW STRIP PLACED ADJACENT TO OTHER CONCRETE RIP-RAP WILL BE SEPARATED BY A FORMED CONSTRUCTION JOINT.

36. ANY CONCRETE CURB TO BE REMOVED WILL BE SAW-CUT AT THE LIMITS OF REMOVAL AND BE REMOVED ENTIRELY. SLICING THE TOP PORTION OF THE CURB OFF AND LEAVING REMAINING PORTION OF CURB IN PLACE IS UNACCEPTABLE.

37. ANY DAMAGE TO TXDOT FACILITIES WILL BE REPAIRED AT NO EXPENSE TO THE STATE, TO TXDOT'S SATISFACTION.

38. SIDEWALKS PLACED IN THE HIGHWAY RIGHT-OF-WAY WILL BE A MINIMUM WIDTH OF FIVE FEET OR COMPLY WITH THE MORE STRINGENT WIDTH AS REQUIRED BY CITY ORDINANCE AND WILL MEET ALL OTHER REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT. PEDESTRIAN RAMPS WILL BE PROVIDED AT STREET AND DRIVEWAY INTERSECTIONS AT THE CURRENT STATE STANDARD FOR PEDESTRIAN FACILITIES. COLOR CONTRAST AND TEXTURING OF PEDESTRIAN RAMPS WILL BE PLACED AT STREET INTERSECTION RAMPS ONLY AS SHOWN ON THE CURRENT STATE STANDARD FOR PEDESTRIAN FACILITIES. PEDESTRIAN RAMPS AT DRIVEWAY INTERSECTIONS WILL NOT RECEIVE ANY COLOR CONTRAST OR TEXTURING. METAL PLATING FOR SIDEWALK BRIDGES WILL MATCH THE TYPICAL WIDTH OF THE APPROACH SIDEWALK. HIS MAY RESULT IN A WIDTH THAT IS GREATER THAN SHOWN IN THE STANDARD DETAILS INCLUDED IN THE PLANS.

39. THE CONTRACTOR WILL USE BEST MANAGEMENT PRACTICES (BMP'S) TO MINIMIZE EROSION AND SEDIMENTATION IN THE STATE RIGHT OF WAY RESULTING FROM THE PROPOSED CONSTRUCTION. RE-VEGETATION OF DISTURBED AREAS WILL BE COMPLETED IN ACCORDANCE WITH TXDOT STANDARD SPECIFICATIONS. PERMANENT VEGETATIVE COVER MUST ACHIEVE 70% COVERAGE PRIOR TO PROJECT ACCEPTANCE. SOIL RETENTION BLANKETS MAY BE REQUIRED TO PREVENT EROSION OF TOPSOIL PRIOR TO VEGETATION RE-ESTABLISHMENT.

40. PRIOR TO SEEDING OR RE-VEGETATION THE FRONT SLOPES WILL BE SHOULDERED UP WITH TOPSOIL TO ELIMINATE ANY PAVEMENT EDGE DROP-OFF.

41. MUD TRACKED ONTO THE ROADWAY FROM THE SITE WILL BE IMMEDIATELY REMOVED TO THE SATISFACTION OF TXDOT.

42. IT WILL BE THE DEVELOPER/OWNER'S RESPONSIBILITY TO CLEAN OUT, TO THE STATE'S SATISFACTION, ANY DRAINAGE STRUCTURE OR STORM SEWER SYSTEM THAT BECOMES SILTED AS A RESULT OF THEIR OPERATIONS.

43. THE ADJUSTMENT OF ANY UTILITIES IN STATE RIGHT OF WAY OR ADJACENT PRIVATE EASEMENT WILL BE THE RESPONSIBILITY OF THE DEVELOPER/OWNER'S.

44. THE CONTRACTOR IS RESPONSIBLE FOR PLACING AND MAINTAINING EXISTING SIGNS ON TXDOT APPROVED TEMPORARY MOUNTS UNTIL PERMANENT SIGNS ARE PLACED.

45. THE FINAL PLACEMENT OF PERMANENT SIGNS WILL BE COORDINATED PRIOR TO PLACEMENT WITH THE LOCAL TXDOT MAINTENANCE SUPERVISOR.

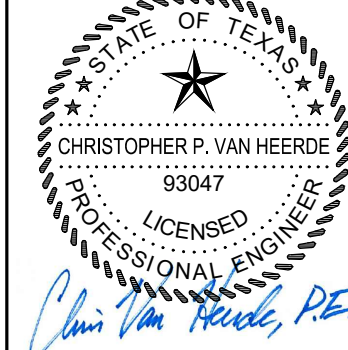
46 FOR WORK WITHIN THE STATE RIGHT OF WAY WHERE REMOVAL OF MATERIALS OR DEBRIS WITHIN THE CONSTRUCTION LIMITS AND NOT INCORPORATED IN THE FINISHED ROADWAY SECTION OF RIGHT OF WAY, WILL BE DISPOSED OF IN A MANNER ACCEPTABLE TO THE MAINTENANCE SUPERVISOR AT NO EXPENSE TO THE STATE. MATERIALS THAT ARE NOT DETERMINED TO BE SALVAGEABLE BY THE MAINTENANCE SUPERVISOR BECOME THE PROPERTY OF THE CONTRACTOR FOR PROPER DISPOSAL AT THEIR EXPENSE. MATERIALS DETERMINED TO BE SALVAGEABLE WILL BE RETURNED TO THE STATE AND DELIVERED TO THE LOCATION AS DETERMINED BY THE MAINTENANCE SUPERVISOR.

47. REGARDLESS OF ERRORS AND OMISSIONS IN INFORMATION PROVIDED IN THE PLANS OR CROSS-SECTIONS THE PERMITTEE IS RESPONSIBLE FOR PROVIDING FOR POSITIVE DRAINAGE OUTFALLS WITHIN AND OFF THE LIMITS OF THE PROJECT.

48. (FOR WORK IN CITY OF NEW BRAUNFELS) ALL TRAFFIC SIGNALS ON THE STATE HIGHWAY SYSTEM WITHIN THE NEW BRAUNFELS CITY LIMITS, WITH THE EXCEPTION OF SIGNALS ON IH 35, ARE THE RESPONSIBILITY OF THE CITY OF NEW BRAUNFELS AND THE CITY OF NEW BRAUNFELS WILL PERFORM CONSTRUCTION INSPECTION. CONTACT GARRY FORD, P.E. AT (830) 221-4645, 48 HOURS PRIOR TO THE NEED FOR ANY INSPECTIONS. ALSO WHEN NON-TRAFFIC SIGNAL WORK IS BEING PERFORMED WITHIN 400 FEET OF AN EXISTING SIGNALIZED INTERSECTION, FLASHING BEACON OR SCHOOL ZONE FLASHER OR OTHER TYPE OF SIGNAL; IF WITHIN THE CITY OF NEW BRAUNFELS AREA OF RESPONSIBILITY CONTACT GARRY FORD, P.E. TO DETERMINE/VERIFY THE LOCATION OF LOOP DETECTORS, CONDUIT, GROUND-BOXES, ETC. FOR ALL OTHER LOCATIONS, CONTACT TXDOT REPRESENTATIVE, MIKE GARZA, AT (210) 615-6028, E-MAIL IS MIKE.GARZA@TXDOT.GOV. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY SIGNAL EQUIPMENT DAMAGED BY CONSTRUCTION OPERATIONS. THE METHOD OF REPAIR OR REPLACEMENT SHALL BE PRE-APPROVED AND INSPECTED. DEPENDING ON THE TYPE AND EXTENT OF THE DAMAGE, THE ENGINEER RESERVES THE RIGHT TO PERFORM THE REPAIR OR REPLACEMENT WORK AND THE CONTRACTOR WILL BE BILLED FOR THIS WORK. WHEN WORKING NEAR AERIAL ELECTRICAL LINES OR UTILITY POLES, COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS.

49. (FOR AREAS OTHER THAN CITY OF NEW BRAUNFELS) WHEN NON-TRAFFIC SIGNAL WORK IS BEING PERFORMED WITHIN 400 FEET OF AN EXISTING SIGNALIZED INTERSECTION, FLASHING BEACON OR SCHOOL ZONE FLASHER OR OTHER TYPE OF SIGNAL, CONTACT TXDOT REPRESENTATIVE, MIKE GARZA, AT (210) 615-6028, E-MAIL IS MIKE.GARZA@TXDOT.GOV. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY SIGNAL EQUIPMENT DAMAGED BY CONSTRUCTION OPERATIONS. THE METHOD OF REPAIR OR REPLACEMENT SHALL BE PRE-APPROVED AND INSPECTED. DEPENDING ON THE TYPE AND EXTENT OF THE DAMAGE, TXDOT RESERVES THE RIGHT TO PERFORM THE REPAIR OR REPLACEMENT WORK AND THE CONTRACTOR WILL BE BILLED FOR THIS WORK. WHEN WORKING NEAR AERIAL ELECTRICAL LINES OR UTILITY POLES, COMPLY WITH FEDERAL, STATE AND LOCAL REGULATIONS.

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



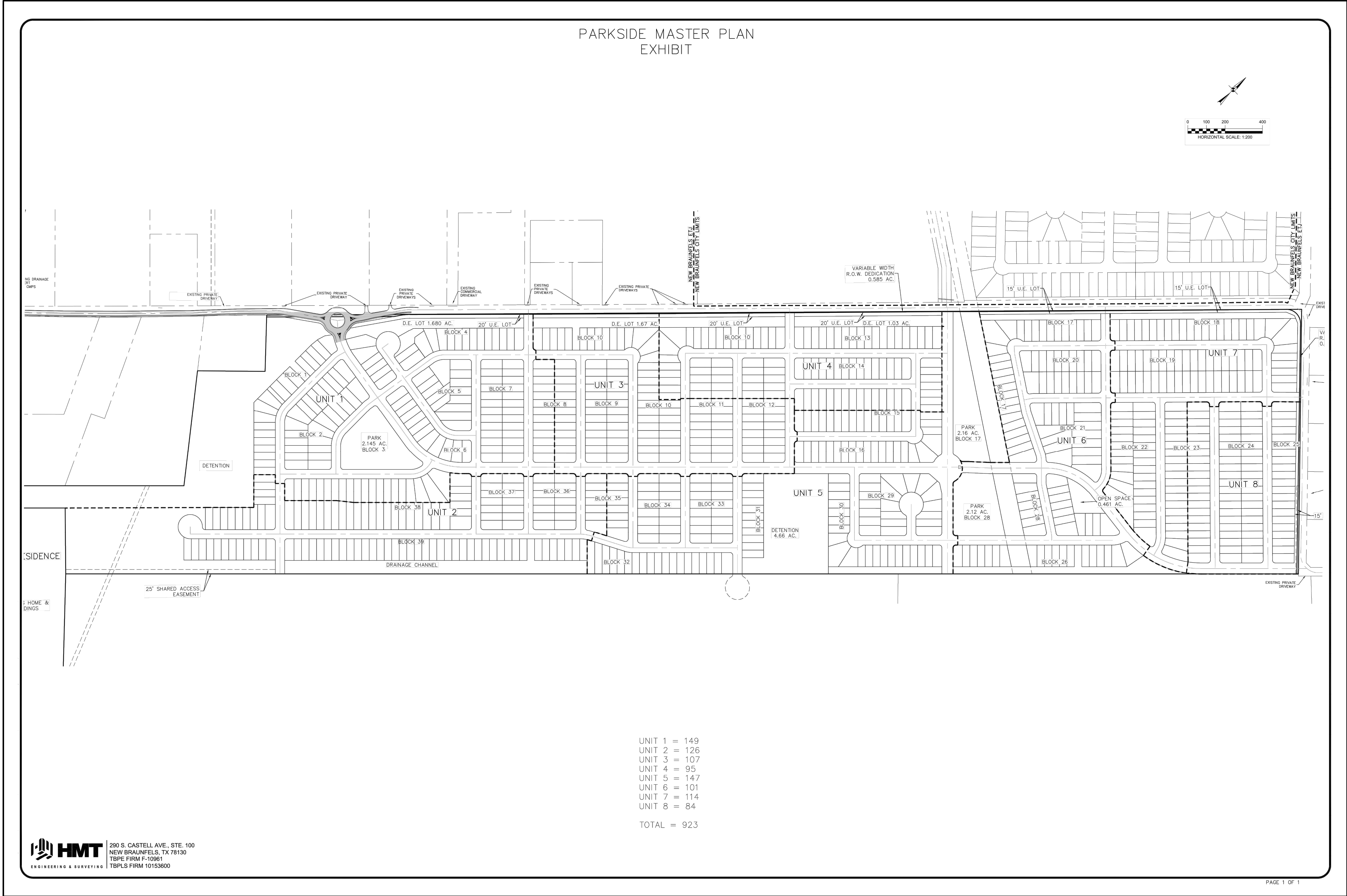
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CONSTRUCTION NOTES

(2 OF 2



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FOR REFERENCE ONLY

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

HMT

ENGINEERING & SURVEYING

STATE OF TEXAS  
CHRISTOPHER P. VAN HEERDE  
93047  
LICENSED  
PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

07/20/2020

SUBDIVISION  
MASTER PLAN  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020

DRAWN BY: CAM

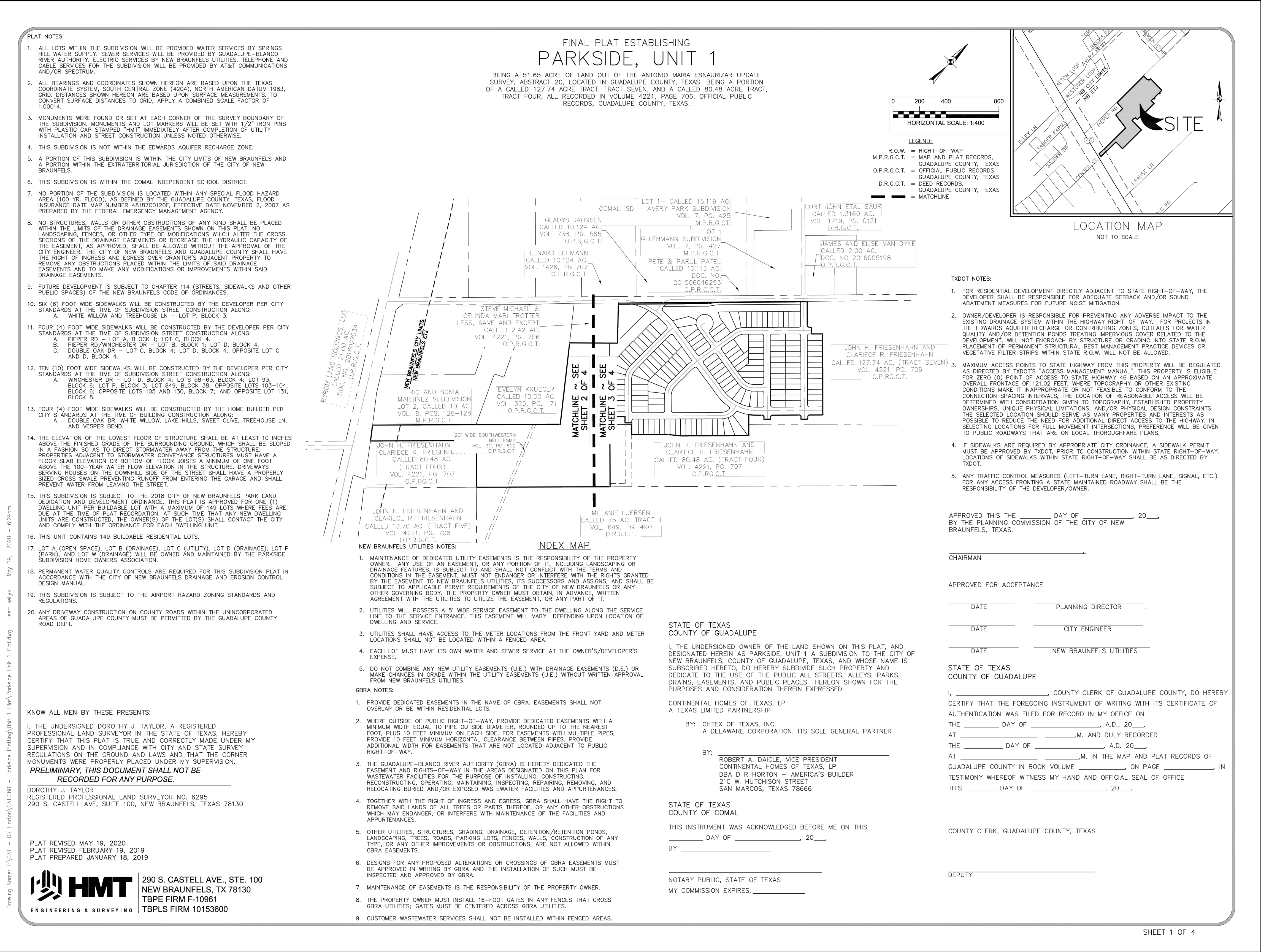
DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

HMT PROJECT NO.: 031.060

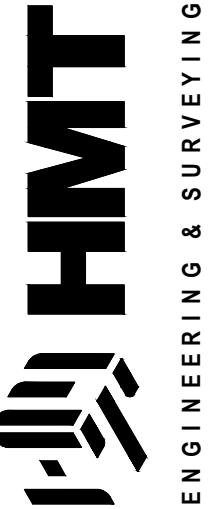
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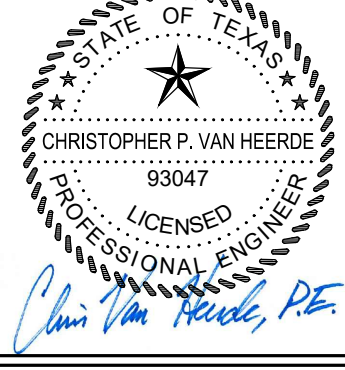




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NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
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**HMT**  
ENGINEERING & SURVEYING

  
CHRISTOPHER P. VAN HERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

07/20/2020

**SUBDIVISION  
PLAT (1 OF 4)  
PARKSIDE SUBDIVISION  
PHASE 1**

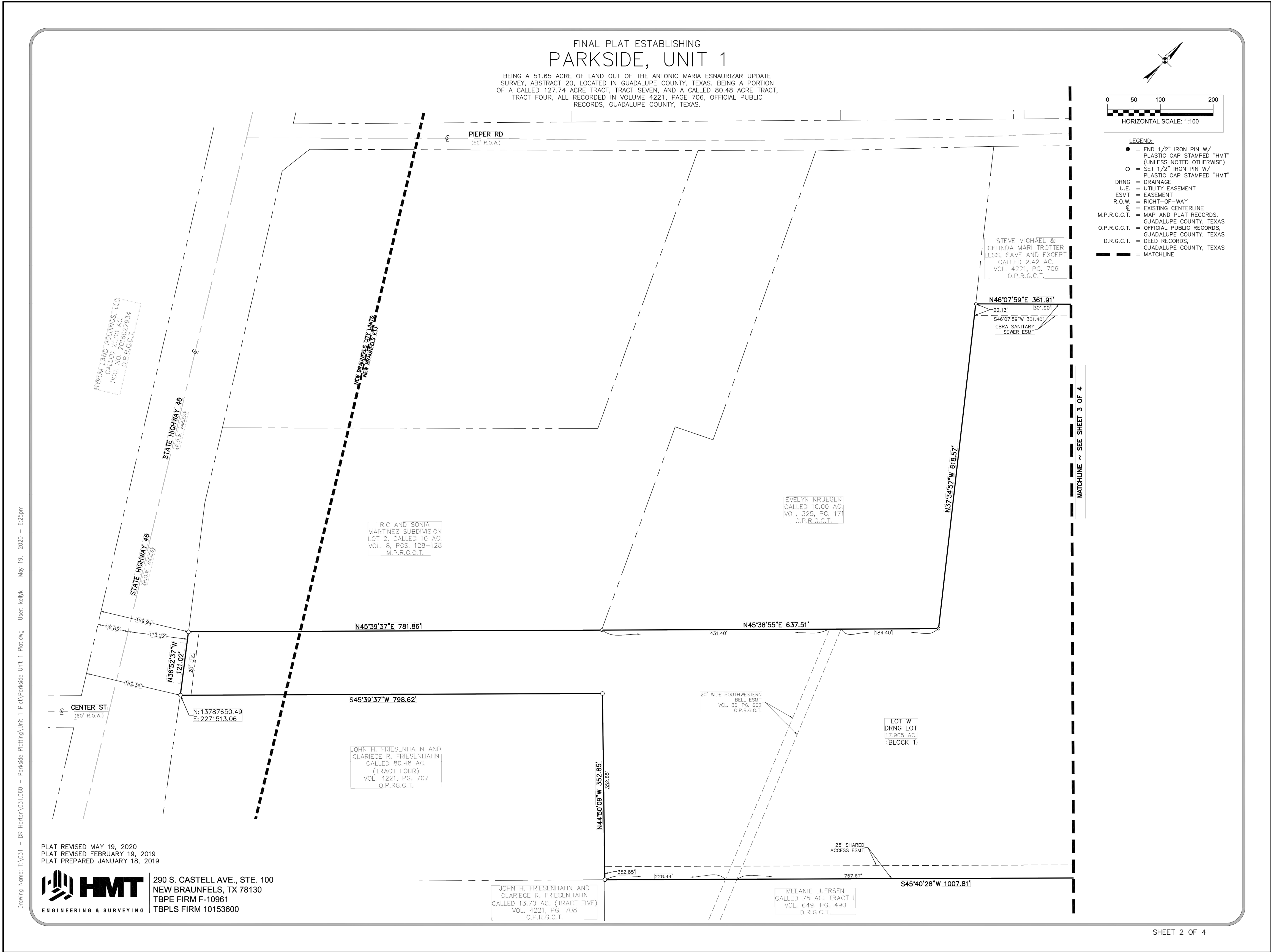
NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

  
CHRISTOPHER P. VAN HERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
Chris Van Heerde, P.E.

07/20/2020

SUBDIVISION  
PLAT (2 OF 4)  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

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Drawing Name: T:\031 - DR Horizon\031.060 - Parkside Platting\Unit 1 Plat\Parkside Unit 1 Plat.dwg User: kellyk May 19, 2020 - 6:25pm

PLAT REVISED MAY 19, 2020  
PLAT REVISED FEBRUARY 19, 2019  
PLAT PREPARED JANUARY 18, 2019



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

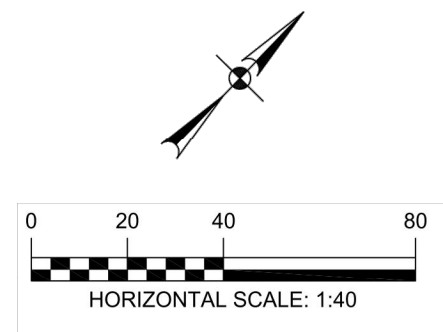
## FINAL PLAT ESTABLISHING PARKSIDE, UNIT 1

BEING A 51.65 ACRE OF LAND OUT OF THE ANTONIO MARIA ESNAURIZAR UPDATE SURVEY, ABSTRACT 20, LOCATED IN GUADALUPE COUNTY, TEXAS, BEING A PORTION OF A CALLED 127.74 ACRE TRACT, TRACT SEVEN, AND A CALLED 80.48 ACRE TRACT, TRACT FOUR, ALL RECORDED IN VOLUME 4221, PAGE 706, OFFICIAL PUBLIC RECORDS, GUADALUPE COUNTY, TEXAS.

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C1	23.56'	15.00'	090°00'00"	15.00'	21.21'	S89°19'32"E
C2	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°40'28"W
C3	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°19'32"W
C4	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°40'28"W
C5	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°19'32"W
C6	319.71'	470.00'	038°58'28"	166.32'	313.58'	S78°09'20"W
C7	59.57'	370.00'	009°13'30"	29.85'	59.51'	N50°17'13"E
C8	21.90'	15.00'	083°39'03"	13.42'	20.01'	N40°31'54"W
C9	1.82'	150.00'	000°41'38"	0.91'	1.82'	S00°56'48"W
C10	131.43'	530.00'	014°12'29"	66.05'	131.09'	N87°20'30"W
C11	39.16'	25.00'	089°44'13"	24.89'	35.27'	S49°34'38"E
C12	41.04'	100.00'	023°30'52"	20.81'	40.75'	S07°02'54"W
C14	117.61'	150.00'	044°55'31"	62.02'	114.62'	S21°51'46"E
C15	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°40'28"W
C16	23.56'	15.00'	090°00'00"	15.00'	21.21'	S89°19'32"E
C17	78.41'	100.00'	044°55'31"	41.34'	76.42'	S21°51'46"E
C18	19.11'	100.00'	010°57'01"	9.59'	19.08'	S06°04'30"W
C19	23.46'	15.00'	089°37'34"	14.90'	21.14'	S56°21'47"W
C20	9.13'	370.00'	001°24'49"	4.56'	9.13'	S79°31'51"E
C21	23.56'	15.00'	090°00'00"	15.00'	21.21'	N35°14'15"W
C22	23.99'	150.00'	009°09'46"	12.02'	23.96'	S05°10'52"W
C23	117.61'	150.00'	044°55'31"	62.02'	114.62'	S21°51'46"E

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C24	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°40'28"E
C25	23.56'	15.00'	090°00'00"	15.00'	21.21'	S89°19'32"E
C26	78.41'	100.00'	044°55'31"	41.34'	76.42'	S21°51'46"E
C27	15.99'	100.00'	009°09'46"	8.01'	15.97'	S05°10'52"W
C28	23.56'	15.00'	090°00'00"	15.00'	21.21'	S54°45'45"W
C29	124.80'	370.00'	019°19'33"	63.00'	124.21'	S89°54'02"E
C30	28.47'	15.00'	108°45'58"	20.94'	24.39'	N45°10'49"W
C31	63.66'	100.00'	036°28'18"	32.95'	62.59'	N27°26'19"E
C32	128.05'	150.00'	048°54'46"	68.22'	124.20'	N21°13'05"E
C33	18.63'	15.00'	071°08'48"	10.73'	17.45'	S32°20'06"W
C34	143.58'	370.00'	022°14'02"	72.70'	142.68'	N54°47'29"E
C35	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°40'28"E
C36	292.64'	310.00'	054°05'16"	158.25'	281.90'	N72°43'06"E
C37	23.56'	15.00'	090°00'00"	15.00'	21.21'	S35°14'15"E
C38	23.56'	15.00'	090°00'00"	15.00'	21.21'	S54°45'45"W
C39	141.60'	150.00'	054°05'16"	76.57'	136.40'	N72°43'06"E
C40	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°19'32"W
C41	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°40'28"E
C42	94.40'	100.00'	054°05'16"	51.05'	90.93'	N72°43'06"E
C43	23.56'	15.00'	090°00'00"	15.00'	21.21'	S35°14'15"E
C44	62.68'	100.00'	035°54'44"	32.41'	61.66'	S27°43'06"W
C45	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°19'32"W

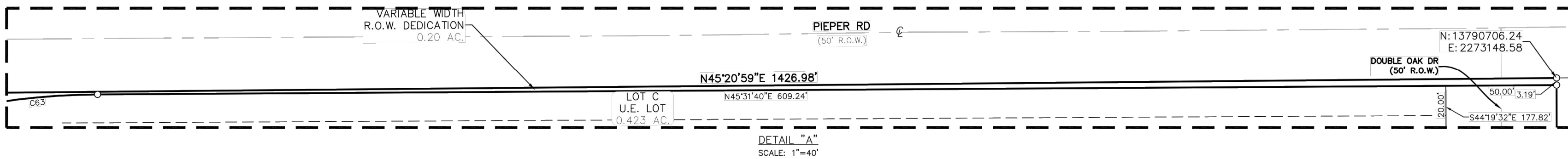
CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C46	23.56'	15.00'	090°00'00"	15.00'	21.21'	S89°19'32"E
C47	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°40'28"W
C48	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°19'32"W
C49	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°40'28"E
C50	23.56'	15.00'	090°00'00"	15.00'	21.21'	S89°19'32"E
C51	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°40'28"W
C52	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°40'28"E
C53	94.02'	150.00'	035°54'44"	48.61'	92.49'	S27°43'06"W
C54	23.56'	15.00'	090°00'00"	15.00'	21.21'	N54°45'45"E
C55	23.56'	15.00'	090°00'00"	15.00'	21.21'	S35°14'15"E
C56	306.31'	65.00'	270°00'03"	-65.00'	91.92'	S54°45'43"W
C57	23.56'	15.00'	090°00'00"	15.00'	21.21'	N35°14'15"W
C58	23.56'	15.00'	090°00'00"	15.00'	21.21'	N54°45'45"E
C63	54.33'	315.00'	009°52'58"	27.23'	54.27'	S40°35'11"W
C64	50.88'	295.00'	009°52'58"	25.51'	50.82'	S40°35'11"W



LEGEND:  
● = FND 1/2" IRON PIN W/  
PLASTIC CAP STAMPED "HMT"  
(UNLESS NOTED OTHERWISE)  
○ = SET 1/2" IRON PIN W/  
PLASTIC CAP STAMPED "HMT"  
U.E. = UTILITY EASEMENT  
R.O.W. = RIGHT-OF-WAY  
℄ = EXISTING CENTERLINE

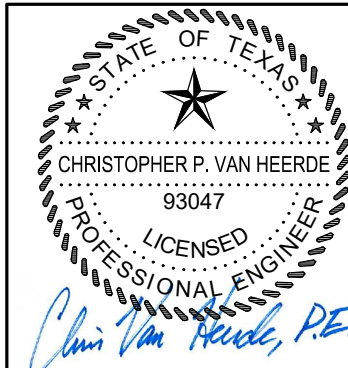
LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	17.50'	N45°40'28"E
L2	50.00'	S44°19'32"E
L3	17.93'	S44°19'32"E
L4	50.00'	S45°40'28"W
L5	17.93'	N44°19'32"W
L6	17.50'	S44°19'32"E
L7	50.00'	S45°40'28"W
L8	17.50'	N44°19'32"W
L9	40.68'	S45°40'28"W
L10	50.00'	S45°40'28"W
L11	50.00'	N44°19'32"W
L13	12.94'	S44°19'32"E
L14	15.84'	N09°45'45"E

LINE TABLE		
LINE #	LENGTH	DIRECTION
L15	15.84'	N09°45'45"E
L16	40.68'	N45°40'28"E
L17	61.10'	S45°40'28"W
L18	61.10'	S45°40'28"W
L19	17.50'	S45°40'28"W
L20	16.31'	S47°18'30"W
L21	35.17'	S35°38'42"W
L22	35.79'	N17°39'02"E
L23	45.45'	N06°24'04"E
L24	33.44'	S35°38'42"W



SHEET 4 OF 4

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

SUBDIVISION  
PLAT (4 OF 4)  
PARKSIDE SUBDIVISION  
PHASE 1

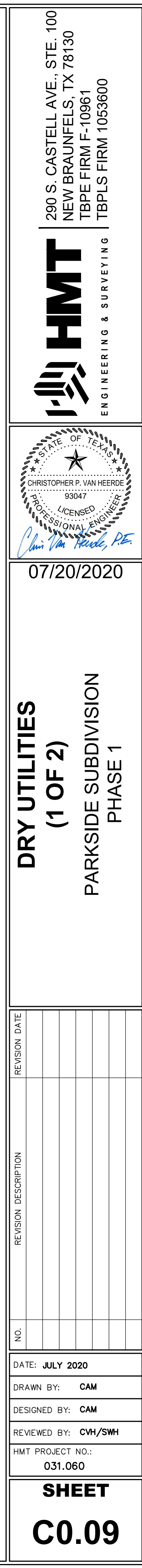
NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.:  
031.060

SHEET  
C0.08

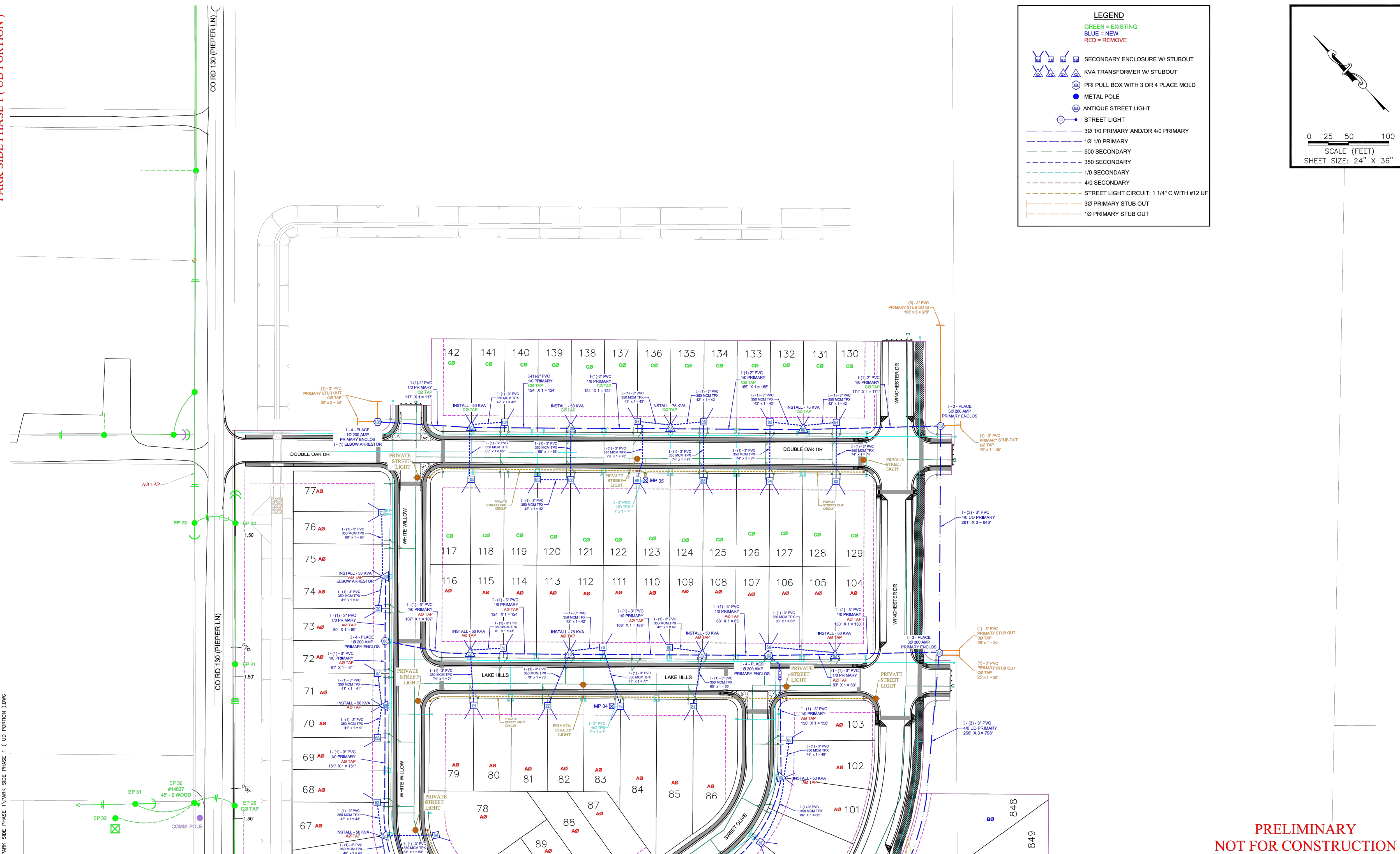
FOR REFERENCE ONLY





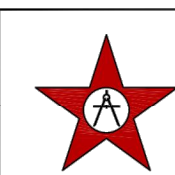


Date: 7/9/2020 8:01 AM User: JUSTIN KRAUSE  
File: S:\NRI\VEY 2020\IID\PARK SIDE PHASE 1\PARK SIDE PHASE 1 ( IID PORTION ) DWG




\*\*\* THE QUANTITIES SHOWN ON THE PLANS AND THE BID DOCUMENTS ARE ESTIMATED QUANTITIES AND BASED ON THE PLAN SET AND TO BE USED FOR BIDDING PURPOSE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ACTUAL QUANTITIES. THE CONTRACTOR SHALL BE RESPONSIBLE TO RESOLVE ANY PERCEIVED DISCREPANCIES IN THE QUANTITIES WITH THE OWNER PRIOR BEGINNING ANY CONSTRUCTION WORK.

MATCHLINE - REFER TO SHEET 1

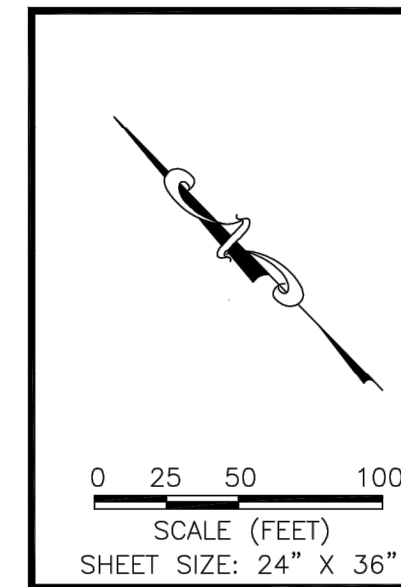


**M&S ENGINEERING**  
CIVIL | ELECTRICAL | STRUCTURAL  
TEXAS REGISTERED ENGINEER  
F-1394

 <b>ELECTRIC ENGINEERING</b> 302 FA 326 P.O. BOX 310289 NEW BRUNSWICK, TEXAS 77831 850-858-8951		DESIG		PROJ. TITLE / LOCATION <b>PARK SIDE PHASE I (UD PORTION)</b>	
		SPEC COMP / ISSUE	DATE REV BY / DATE	PROPOSED	
DES. CL.	EFF. CL.	REVISION NO.	SCALE <b>1" = 50'</b>	REV NO.	REV BY
REVISION NO.	REL.	CITY NO.	UPRATED <b>223</b>	DESIGNED BY <b>J. KRAUSE</b>	
CITY CL.	I. COMMENTS	FIELD	A.O.E.V.	MET. F.	1/26/07

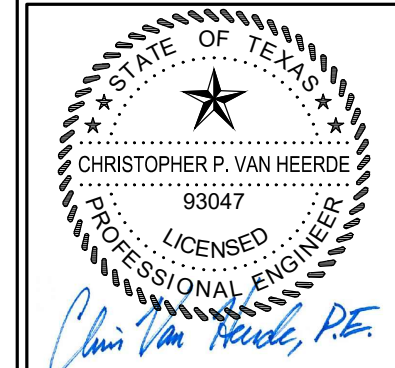
PRELIMINARY  
NOT FOR CONSTRUCTION

**PARK SIDE PHASE 1 ( UD PORTION )**



**DRY UTILITIES  
(2 OF 2)**

**PARKSIDE SUBDIVISION  
PHASE 1**



07/20/2020

[illegible]

DATE: <b>JULY 2020</b>
DRAWN BY: <b>CAM</b>
DESIGNED BY: <b>CAM</b>
REVIEWED BY: <b>CVH/SWH</b>
HMT PROJECT NO.: <b>031.060</b>

**SHEET**  
**C0.10**

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

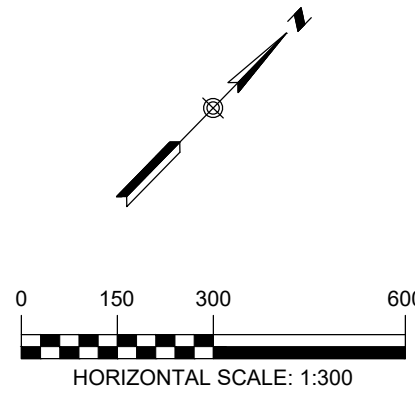
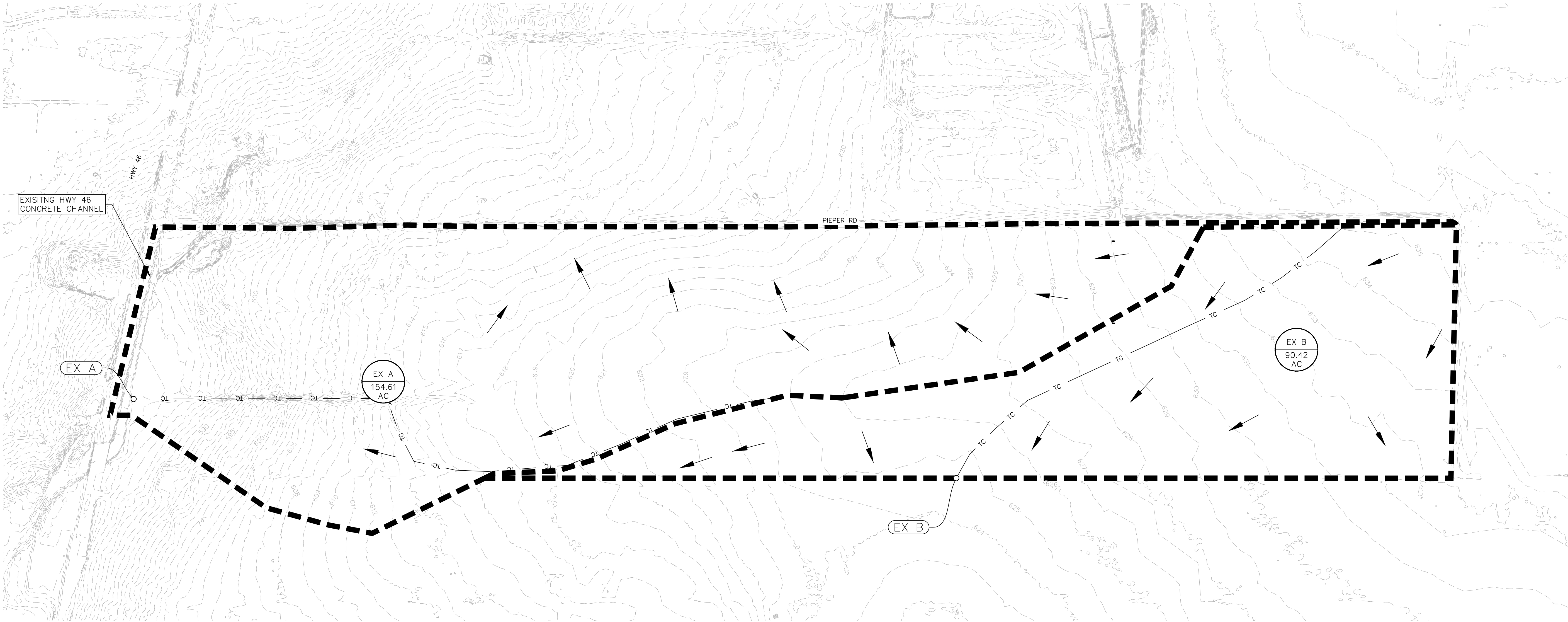


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Table 1 - Existing Conditions Hydrology Calculations - City of New Braunfels									
Point of Concentration	Description	Drainage Area	Area	T <sub>c</sub>	Curve Number	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
EX A	Discharge From Tiered Basin A Comparison	EX A	154.61	83.58	78.00	68.65	188.13	282.29	485.26
EX B	Discharge From Basin B Comparison (To be Analyzed with Future Development)	EX B	90.42	61.40	78.00	39.90	109.32	163.96	281.76

Table 2 - Existing Conditions Hydrology Calculations - City of New Braunfels									
Point of Concentration	Description	Drainage Area	Area	T <sub>c</sub>	Curve Number	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
EX A1	Longest Time of Concentration Analysis	EX A1	25.12	49.73	78.00	35.56	54.39	53.26	91.28
EX A2	Longest Time of Concentration Analysis	EX A2	10.47	35.30	78.00	6.62	17.91	26.76	45.76
EX A3	Drainage Sub-Area A14 Comparison	EX A3	68.84	45.35	78.00	101.56	91.62	151.96	260.33
EX A4	Longest Time of Concentration Analysis	EX A4	50.18	86.98	78.00	48.80	133.80	73.41	126.61

PLEASE REFER TO THE PARKSIDE SUBDIVISION PHASE 1  
DRAINAGE REPORT FOR FUTURE DRAINAGE AREA  
ANALYSIS AND DRAINAGE SUB-AREAS



- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - DRAINAGE AREA
  - TC TIME OF CONCENTRATION
  - POINT OF CONCENTRATION
  - DRAINAGE FLOW DIRECTION
  - DRAINAGE AREA LABEL

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HEERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

07/20/2020

**EXISTING DRAINAGE  
AREA MAP**  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

HMT PROJECT NO.: 031.060

**SHEET**  
**C1.01**



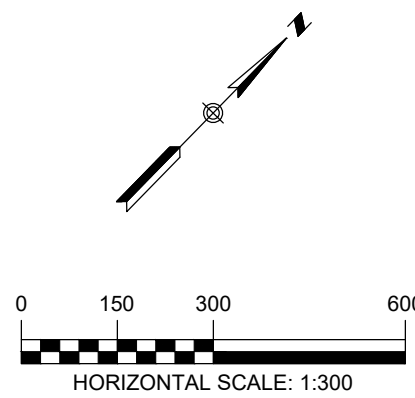
Table 3 - Ultimate Proposed Conditions Hydrology Calculations - City of New Braunfels									
Point of Concentration	Description	Drainage Area	Area	T <sub>c</sub>	Curve Number	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
ULTA	Flow Contributing to Batch Detention Basin A1	ULTA	186.36	42.03	87.00	45.03	119.66	197.09	405.86
ULTB	Flow Contributing to Basin B (To be Analyzed in Future Development)	ULTB	58.58	28.81	87.00	60.56	133.35	187.01	299.48

Table 4 - Ultimate Proposed Drainage Sub-Area Conditions Hydrology Calculations - City of New Braunfels									
Point of Concentration	Description	Drainage Area	Area	T <sub>c</sub>	Curve Number	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
A1	Longest Time of Concentration Analysis	A1	59.15	31.20	87.00	60.20	132.76	186.10	298.18
A2	Longest Time of Concentration Analysis	A2	8.01	21.29	87.00	8.47	18.65	26.14	41.85
A1+A2	SD LN A-5 Sizing					68.32	150.63	211.22	338.20
A3	Inlet A2-3 & A2-4 Sizing	A3	6.58	22.04	87.00	9.47	20.84	29.21	46.77
A4	Longest Time of Concentration Analysis	A4	4.12	21.75	87.00	5.50	12.10	16.96	27.15
A5	Inlet A3-1 Sizing & Street Capacity Analysis	A5	6.02	20.56	87.00	7.40	16.29	22.84	36.56
A1-A5	Channel A2 Sizing					90.08	198.58	278.43	445.78
A6	Inlet A4-3 & Channel A4 Sizing & Street Capacity Analysis	A6	6.30	15.32	87.00	9.21	20.28	28.39	45.44
A7	Inlet A4-1 & A4-2 Sizing & Street Capacity Analysis	A7	5.20	15.69	87.00	7.61	16.74	23.43	37.51
A6+A7	Channel A4 Sizing					16.82	37.01	51.83	82.95
A8	Inlet A2-1 Sizing	A8	3.48	21.39	87.00	4.26	9.36	13.13	21.01
A9	Longest Time of Concentration Analysis	A9	10.40	10.00	87.00	16.46	36.26	50.78	81.18
A1-A9	Inflow into Extended Batch Detention Basin A1		109.26			122.58	270.17	378.79	606.37
A10	Future Development Analysis	A10	1.48	22.24	87.00	1.97	4.35	6.09	9.74
A11	Future Development Analysis	A11	7.82	21.01	87.00	8.95	19.71	27.62	44.19
A12	Future Development Analysis	A12	6.19	22.51	87.00	7.61	16.75	23.48	37.60
A10-A12	Future Development Analysis					18.48	40.69	57.03	91.25
A13	Future Development Analysis	A13	3.57	21.83	87.00	4.39	9.66	13.54	21.68
A10-A13	Future Development Analysis		19.06			22.86	50.35	70.56	112.88
A14	Future Development Analysis	A14	6.28	20.98	87.00	7.72	16.99	23.82	38.14
A15	Longest Time of Concentration Analysis	A15	4.60	10.00	87.00	7.28	16.04	22.46	35.91
A10-A15			29.94			36.97	81.42	114.06	182.53
A16	Longest Time of Concentration Analysis	A16	2.20	10.00	84.00	3.04	7.21	10.29	16.78
A17	Drainage Area EX A2 Comparison	A17	10.47	35.30	78.00	6.62	17.91	26.76	45.76
A18	Drainage Area EX A4 Comparison	A18	34.49	25.60	78.00	26.11	70.35	104.91	179.15

DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.

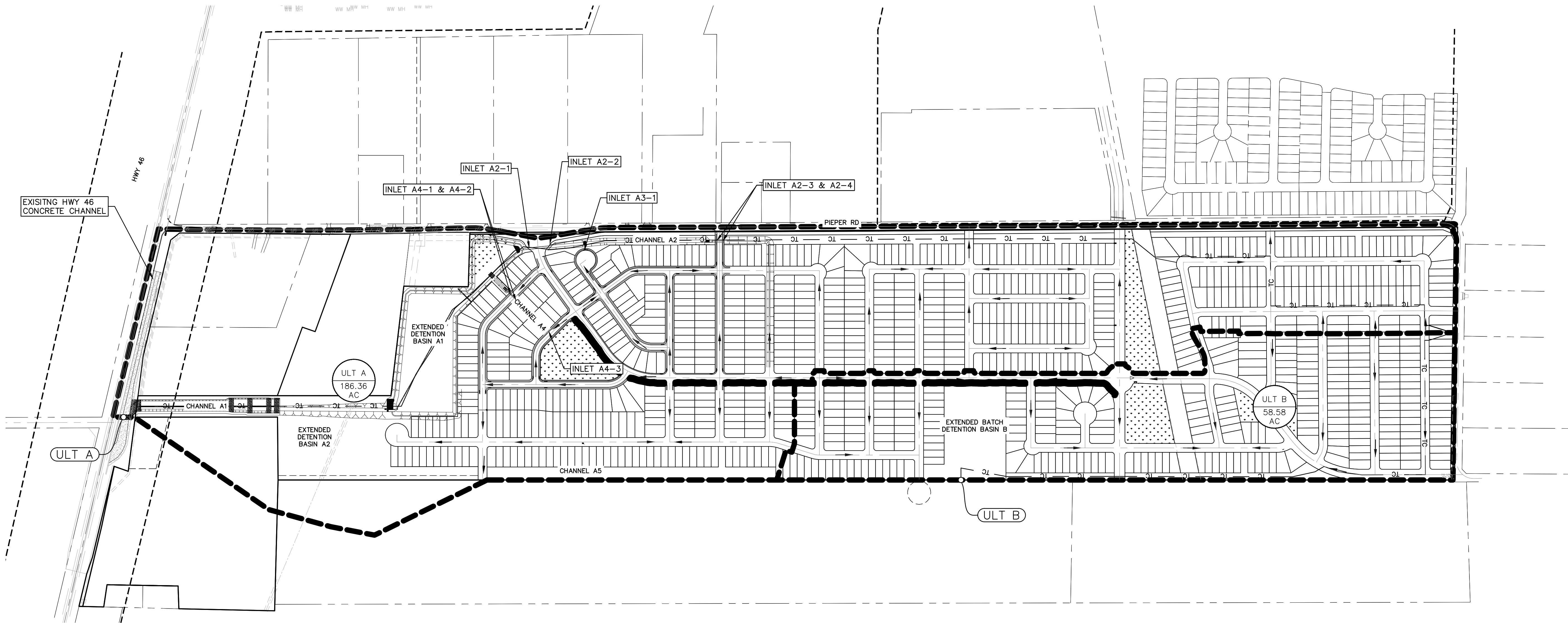
- A. TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- B. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- C. BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
- D. CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
- E. STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.
- F. MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.



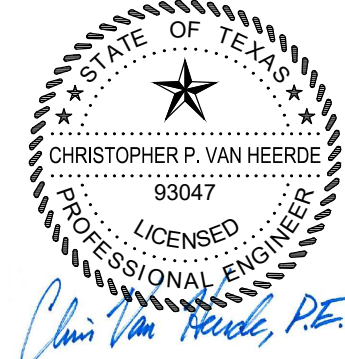
LEGEND	
— 700 —	EXISTING CONTOURS
— 700 —	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
— — —	DRAINAGE AREA
— TC — TC —	TIME OF CONCENTRATION
○ A-1	POINT OF CONCENTRATION
←	DRAINAGE FLOW DIRECTION
DA ACRES	DRAINAGE AREA LABEL

Table 5 - Basin A1 Summary				
	2YR	10YR	25YR	100YR
Discharge (cfs)	34.49	123.26	189.09	327.41
Time to Drain (hrs)	16.73	19.07	20.07	23.03
Volume (cft)	420,643	758,401	972,007	1,368,535
Water Surface Elevation	603.48	604.82	605.58	606.94

PLEASE REFER TO THE PARKSIDE SUBDIVISION PHASE 1 DRAINAGE REPORT FOR FUTURE DRAINAGE AREA ANALYSIS AND DRAINAGE SUB-AREAS



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

ULTIMATE PROPOSED  
DRAINAGE AREA MAP  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION DESCRIPTION	REVISION DATE

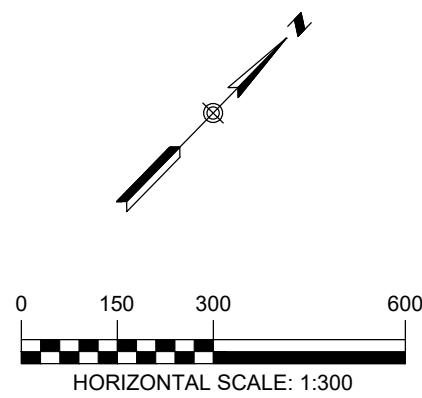
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DESIGNED BY: CAM  
REVIEWED BY: CVH/SMH  
HMT PROJECT NO.: 031.060

SHEET  
C1.02



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Table 8 - Phase 1 Proposed Conditions Hydrology Calculations - City of New Braunfels									
Point of Concentration	Description	Drainage Area	Area	T <sub>c</sub>	Curve Number	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
P1 A	Flow Rate Comparison of Ultimate Conditions vs Intermediate Phase 1 Conditions to ensure most Conservative Calculations is Analyzed	P1 A	154.65	38.77	86.40	158.35	351.70	494.38	793.69
P1 A1	Flow Rate Comparison of Ultimate Conditions vs Intermediate Phase 1 Conditions to ensure most Conservative Calculations is Analyzed	P1 A1	7.32	29.28	78.00	5.23	14.13	21.09	35.99
P1 A2		P1 A2	102.30	30.35	87.00	104.12	229.61	321.86	515.70
P1 A3		P1 A3	10.47	35.30	87.00	10.06	22.20	31.13	49.88
P1 A4		P1 A4	34.56	25.60	87.00	39.56	87.11	122.07	195.31
P1 B		P1 B	90.39	61.40	78.00	39.88	109.28	163.90	281.67



LEGEND

700

EXISTING CONTOURS

700

PROPOSED CONTOURS

B.L.

BUILDING SETBACK LINE

U.E.

UTILITY EASEMENT

D.E.

DRAINAGE EASEMENT

DRAINAGE AREA

TC

TC

TIME OF CONCENTRATION

A-1

POINT OF CONCENTRATION

DRAINAGE FLOW DIRECTION

DA

ACRES

DRAINAGE AREA LABEL

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

07/20/2020

**INTERMEDIATE PHASE 1  
PROPOSED DRAINAGE AREA MAP**  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

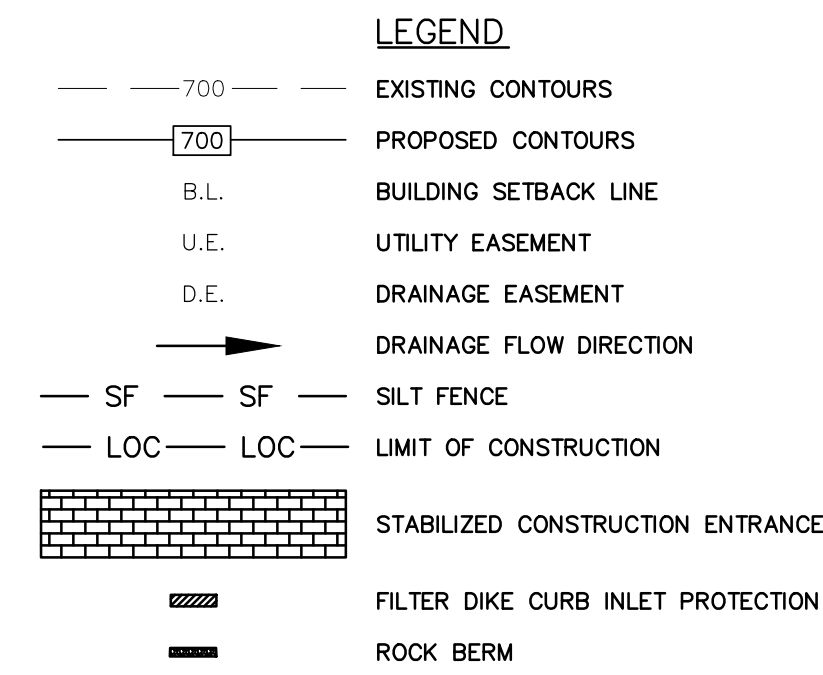
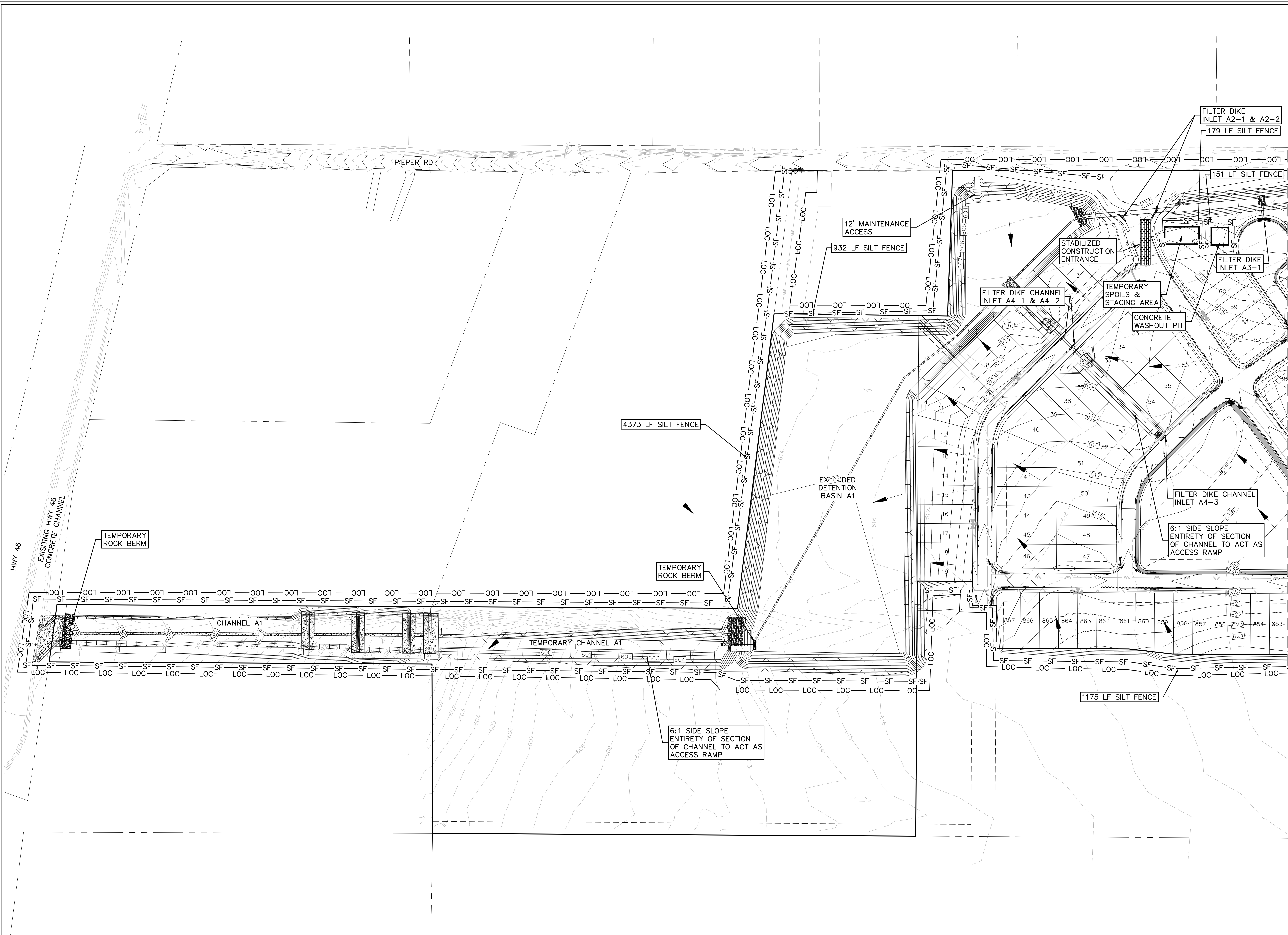
REVIEWED BY: CVH/SWH

HMT PROJECT NO.: 031.060

**SHEET**  
**C1.03**



Drawing Name: N:\\_Projects\031 - DR Heron\031.060 - 175 Ac Friesenhain Cda\Phase 1\City Approval Cda\031.060.EROS Pt.dwg User: callym-m Jul 20, 2020 - 2:18pm



- NOTE:**
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENT) AND SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES IN 21 DAYS, PER TPDES REQUIREMENTS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
  - CONTRACTOR SHALL ENSURE THAT ALL EROSION CONTROLS INSTALLED AND SHOWN ON THE PARKSIDE OFFSITE CONSTRUCTION DOCUMENTS SHALL REMAIN IN PLACE DURING THE PARKSIDE PHASE 1 CONSTRUCTION.

**SEQUENCE OF CONSTRUCTION**

- INSTALL EROSION CONTROLS PER APPROVED PLAN.
- TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED, CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
- CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
- CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
- CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
- CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
- INSTALL STREETSCAPE AND/OR LANDSCAPING IMPROVEMENTS.
- CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 70% VEGETATION PRIOR TO COMPLETION. PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
- REMOVE ALL TEMPORARY EROSION CONTROL MEASURES
- TPDES REQUIREMENTS - DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY WILL BEGIN AGAIN WITHIN 21 DAYS

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

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

07/20/2020

**EROSION CONTROL  
PLAN (1 OF 2)**

**PARKSIDE SUBDIVISION  
PHASE 1**

NO.	REVISION	DESCRIPTION	DATE

DATE: **JULY 2020**

DRAWN BY: **CAM**

DESIGNED BY: **CAM**

REVIEWED BY: **CWH/SWH**

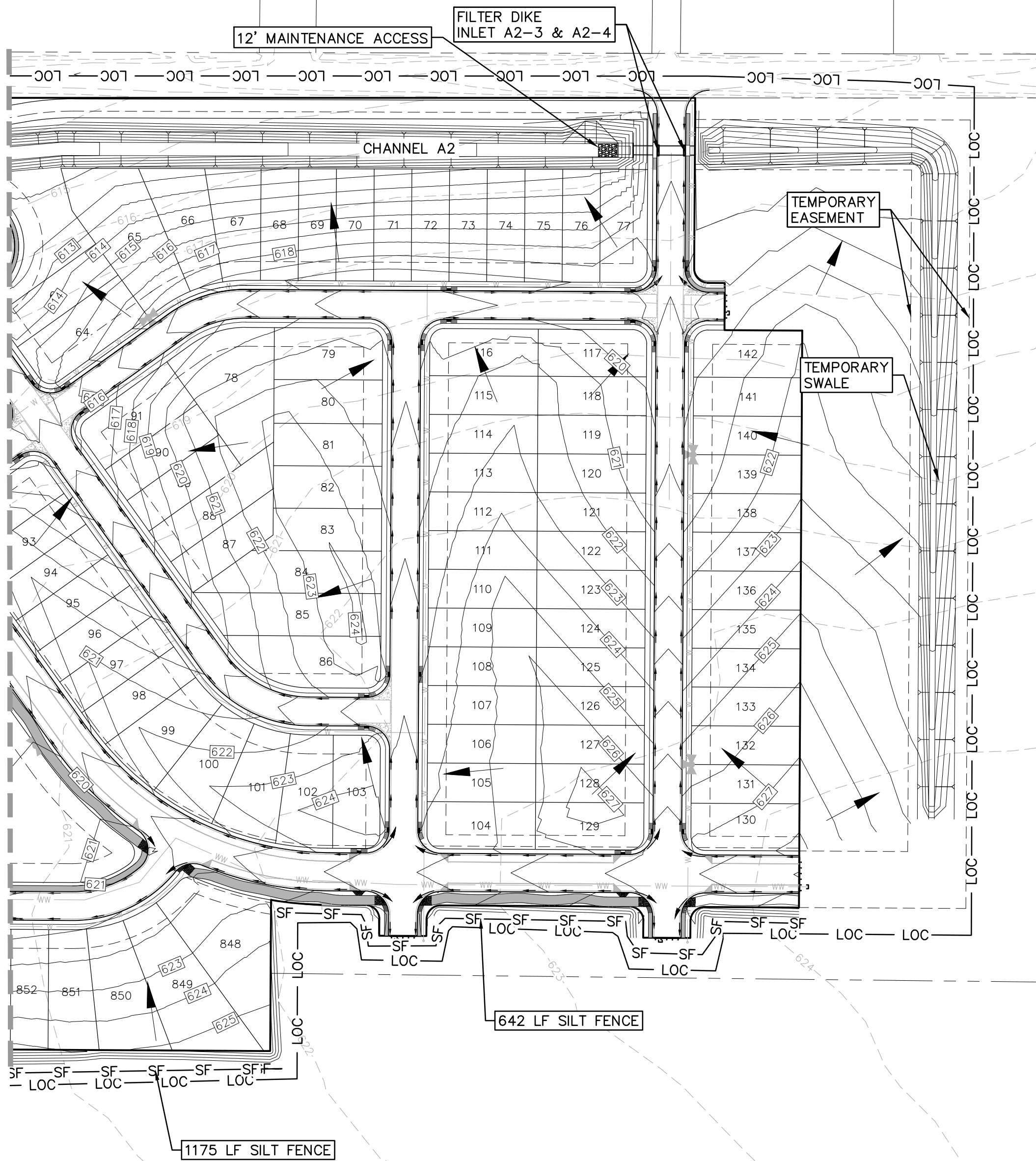
HMT PROJECT NO.:  
**031.060**

**SHEET**  
**C2.01**



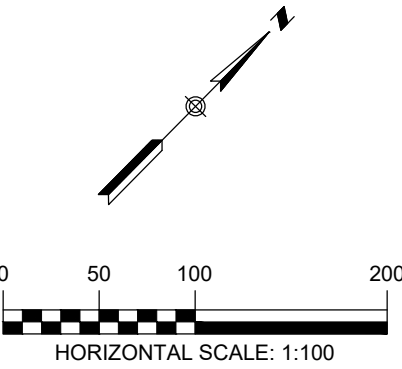
Drawing Name: N:\\_Projects\031 - DR Horton\031.060 - 175 Ac Friesenhahn Cda\Phase 1\City Approval Cda\031.60\_EROS Pt.dwg User: callym-m Jul 20, 2020 - 2:18pm

MATCH LINE REFER TO SHEET C2.01



**LEGEND**

- 700 — EXISTING CONTOURS
- 700 — PROPOSED CONTOURS
- B.L. — BUILDING SETBACK LINE
- U.E. — UTILITY EASEMENT
- D.E. — DRAINAGE EASEMENT
- > — DRAINAGE FLOW DIRECTION
- SF — SF — SILT FENCE
- LOC — LOC — LIMIT OF CONSTRUCTION
- [Brick Pattern] — STABILIZED CONSTRUCTION ENTRANCE
- [Hatched Box] — FILTER DIKE CURB INLET PROTECTION
- [Solid Line] — ROCK BERM



**NOTE:**

1. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENT) AND SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES IN 21 DAYS, PER TPDES REQUIREMENTS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
2. CONTRACTOR SHALL ENSURE THAT ALL EROSION CONTROLS INSTALLED AND SHOWN ON THE PARKSIDE OFFSITE CONSTRUCTION DOCUMENTS SHALL REMAIN IN PLACE DURING THE PARKSIDE PHASE 1 CONSTRUCTION.

**SEQUENCE OF CONSTRUCTION**

1. INSTALL EROSION CONTROLS PER APPROVED PLAN.
2. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
3. CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
4. CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
5. CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
6. CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
7. INSTALL STREETSCAPE AND/OR LANDSCAPING IMPROVEMENTS.
8. CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 70% VEGETATION PRIOR TO COMPLETION. PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
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07/20/2020

**EROSION CONTROL  
PLAN (2 OF 2)  
PARKSIDE SUBDIVISION  
PHASE 1**

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

**SHEET  
C2.02**



CONCRETE WASHOUT AREAS

THE PURPOSE OF CONCRETE WASHOUT AREAS IS TO PREVENT OR REDUCE THE DISCHARGE OF POLLUTANTS TO STORMWATER FROM CONCRETE WASTE BY CONDUCTING WASHOUT OFFSITE, PERFORMING ONSITE WASHOUT IN A DESIGNATED AREA, AND TRAINING EMPLOYEES AND SUBCONTRACTORS.

THE FOLLOWING STEPS WILL HELP REDUCE STORMWATER POLLUTION FROM CONCRETE WASTES:

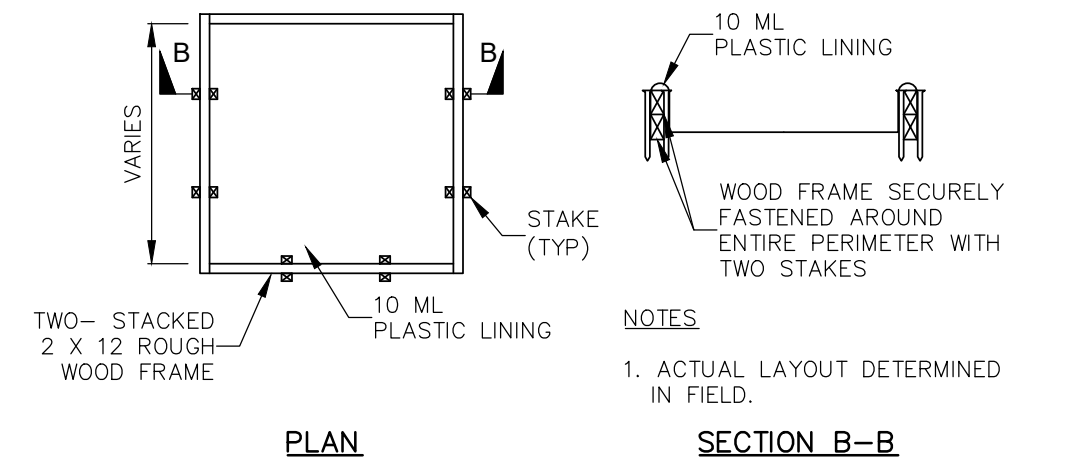
- INCORPORATE REQUIREMENTS FOR CONCRETE WASTE MANAGEMENT INTO MATERIAL SUPPLIER AND SUBCONTRACTOR AGREEMENTS.
- AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE.
- PERFORM WASHOUT OF CONCRETE TRUCKS IN DESIGNATED AREAS ONLY.
- DO NOT WASH OUT CONCRETE TRUCKS INTO STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.
- DO NOT ALLOW EXCESS CONCRETE TO BE DUMPED ONSITE, EXCEPT IN DESIGNATED AREAS.

FOR ONSITE WASHOUT:

- LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES, OR WATER BODIES. DO NOT ALLOW RUNOFF FROM THIS AREA BY CONSTRUCTING A TEMPORARY PIT OR BERMED AREA LARGE ENOUGH FOR LIQUID AND SOLID WASTE.
- WASH OUT WASTES INTO THE TEMPORARY PIT WHERE THE CONCRETE CAN SET, BE BROKEN UP, AND THEN DISPOSED PROPERLY.

BELOW GRADE CONCRETE WASHOUT FACILITIES ARE TYPICAL. THESE CONSIST OF A LINED EXCAVATION SUFFICIENTLY LARGE TO HOLD EXPECTED VOLUME OF WASHOUT MATERIAL. ABOVE GRADE FACILITIES ARE USED IF EXCAVATION IS NOT PRACTICAL. TEMPORARY CONCRETE WASHOUT FACILITY (TYPE ABOVE GRADE) SHOULD BE CONSTRUCTED AS SHOWN ON THE DETAILS AT THE END OF THIS SECTION, WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS. PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.



CONCRETE WASHOUT PIT DETAIL  
TYPE "ABOVE GRADE"  
NOT TO SCALE

SILT FENCE

MATERIALS:

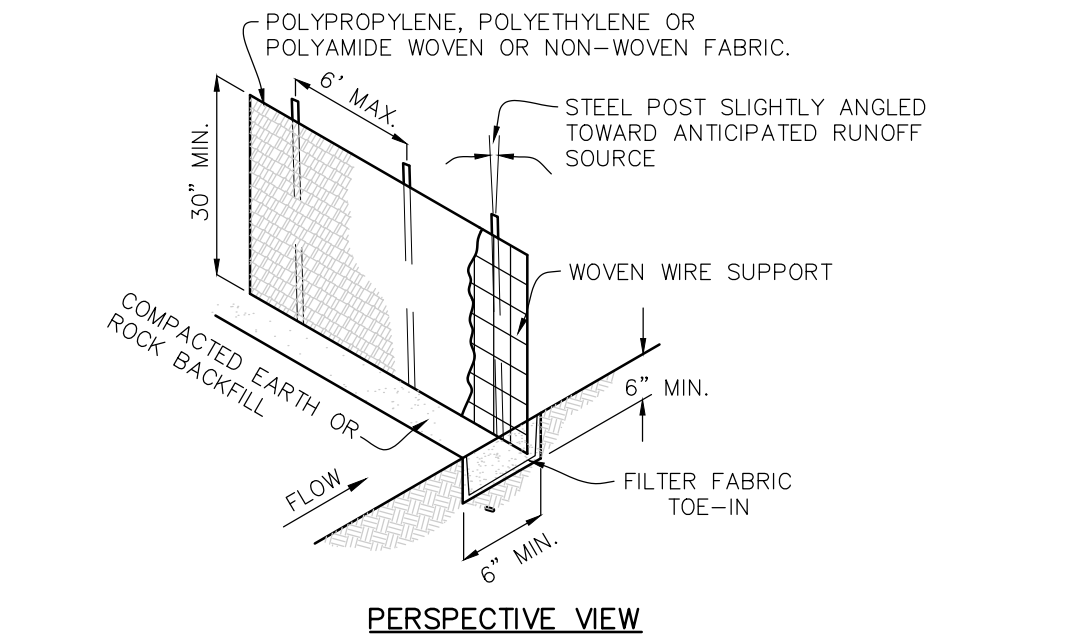
1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN<sup>2</sup>, ULTRAVIOLET STABILITY EXCEEDING 70% AND MINIMUM APPARENT OPENING SIZE OF U.S. Sieve # 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR YBAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM NOMINAL WEIGHT 1.25 LB/FT<sup>2</sup>, AND BRINDELL HARDNESS EXCEEDING 140.
3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION:

1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1- FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.
2. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ ACRE/100 FEET OF FENCE.
3. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN-SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
4. 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.
5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3-FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
6. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES:

1. INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
3. REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
4. REPLACE OR REPAIR ANY SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.
5. WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.



SILT FENCE DETAIL  
NOT TO SCALE

STABILIZED CONSTRUCTION ENTRANCE / EXIT

MATERIALS:

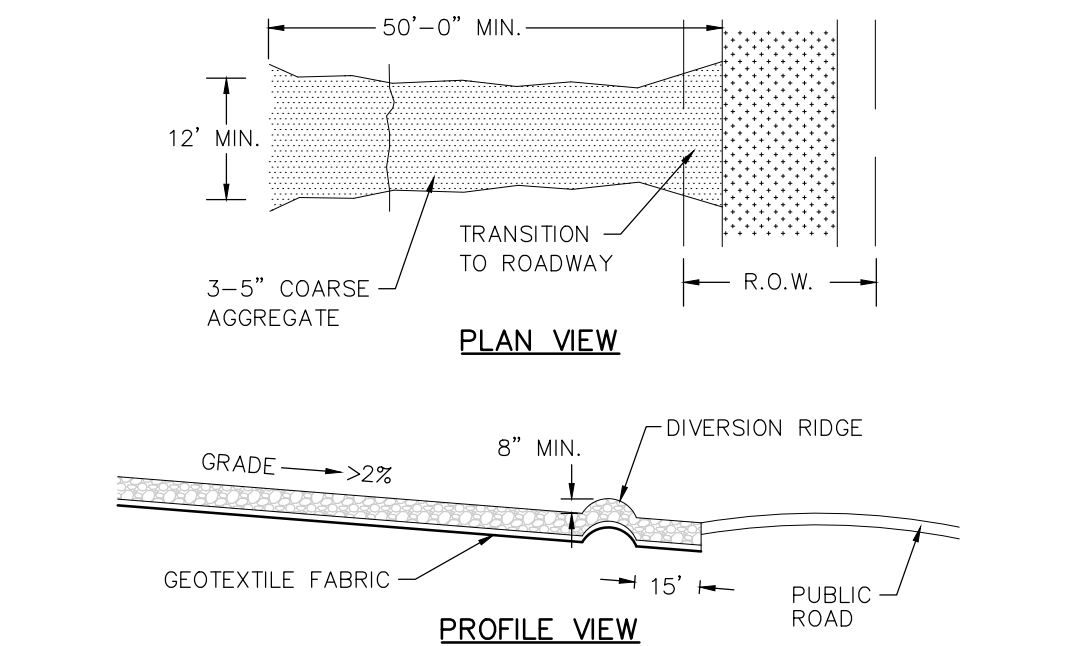
1. THE AGGREGATE SHOULD CONSIST OF 3 TO 5 INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD<sup>2</sup>, A MULLEN BURST RATING OF 140 LB/IN<sup>2</sup>, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4 INCH DIAMETER WASHED STONE OR COMMERCIAL RACK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

INSTALLATION:

1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6 TO 8 INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES:

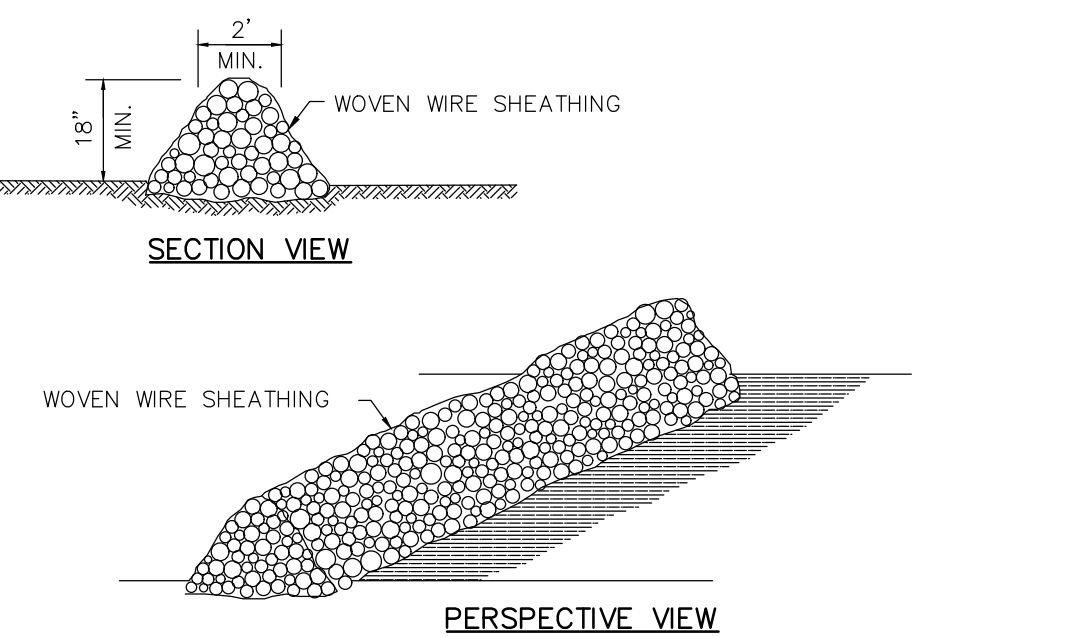
1. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR LOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.



CONSTRUCTION ENTRANCE DETAIL  
NOT TO SCALE

ROCK BERM

1. USE ONLY OPEN GRADED ROCK 3-5" DIAMETER.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENINGS AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. THE ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO 6", THE SILT WILL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS WHEN THE SITE IS COMPLETELY STABILIZED. THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.



ROCK BERM DETAIL  
NOT TO SCALE

SEQUENCE OF CONSTRUCTION

1. INSTALL EROSION CONTROLS PER APPROVED PLAN.
2. TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
3. CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
4. CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
5. CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
6. CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
7. INSTALL STREETScape AND/OR LANDSCAPING IMPROVEMENTS.
8. CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 70% VEGETATION PRIOR TO COMPLETION. PER TPDES REQUIREMENTS, DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES WITHIN 21 DAYS. SEEDING DOES NOT CONSTITUTE AS STABILIZATION.
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EROSION DETAILS

PARKSIDE SUBDIVISION  
PHASE 1

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

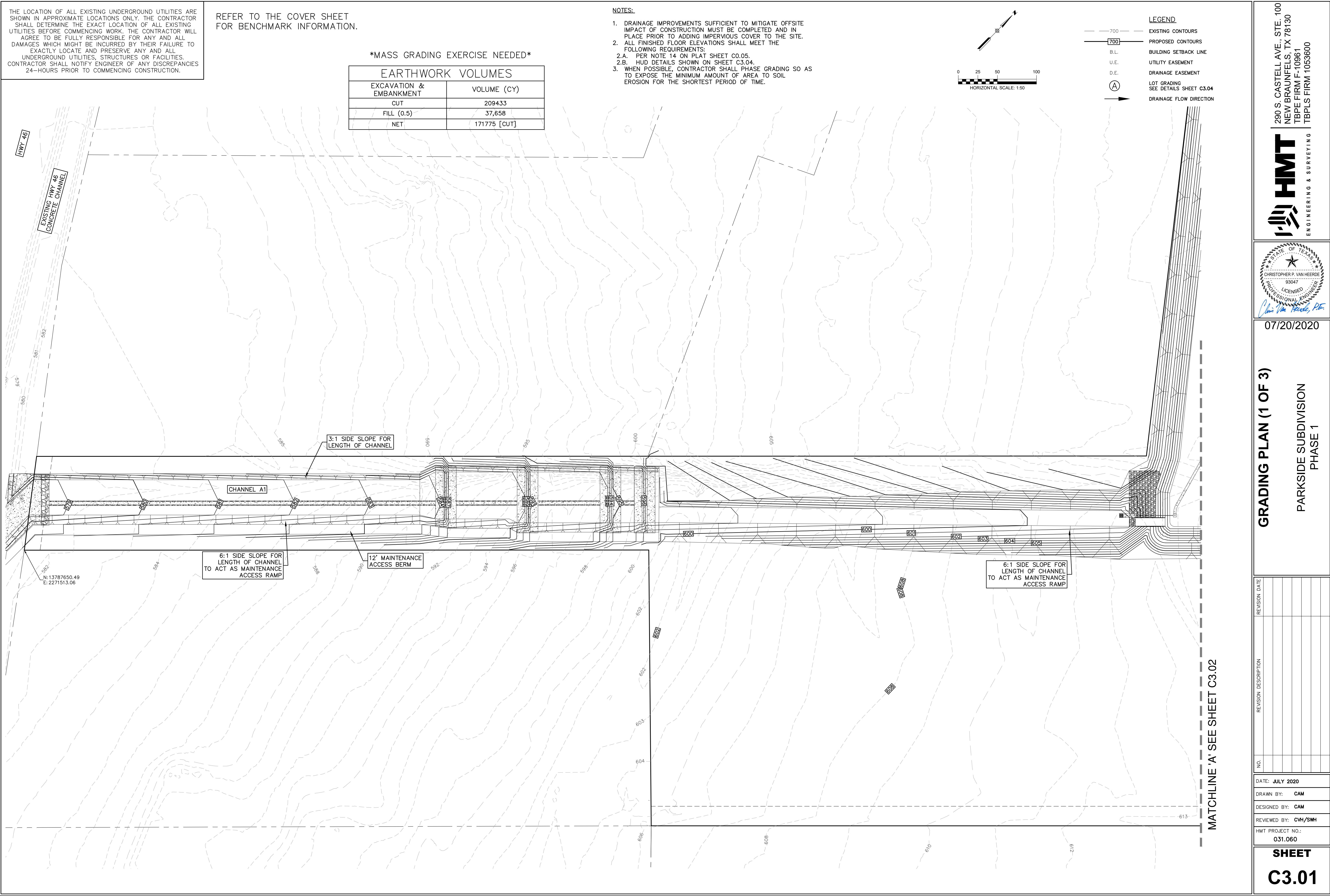
REVISION	DESCRIPTION	DATE
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DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SMH  
HMT PROJECT NO.: 031.060

SHEET  
C2.03

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





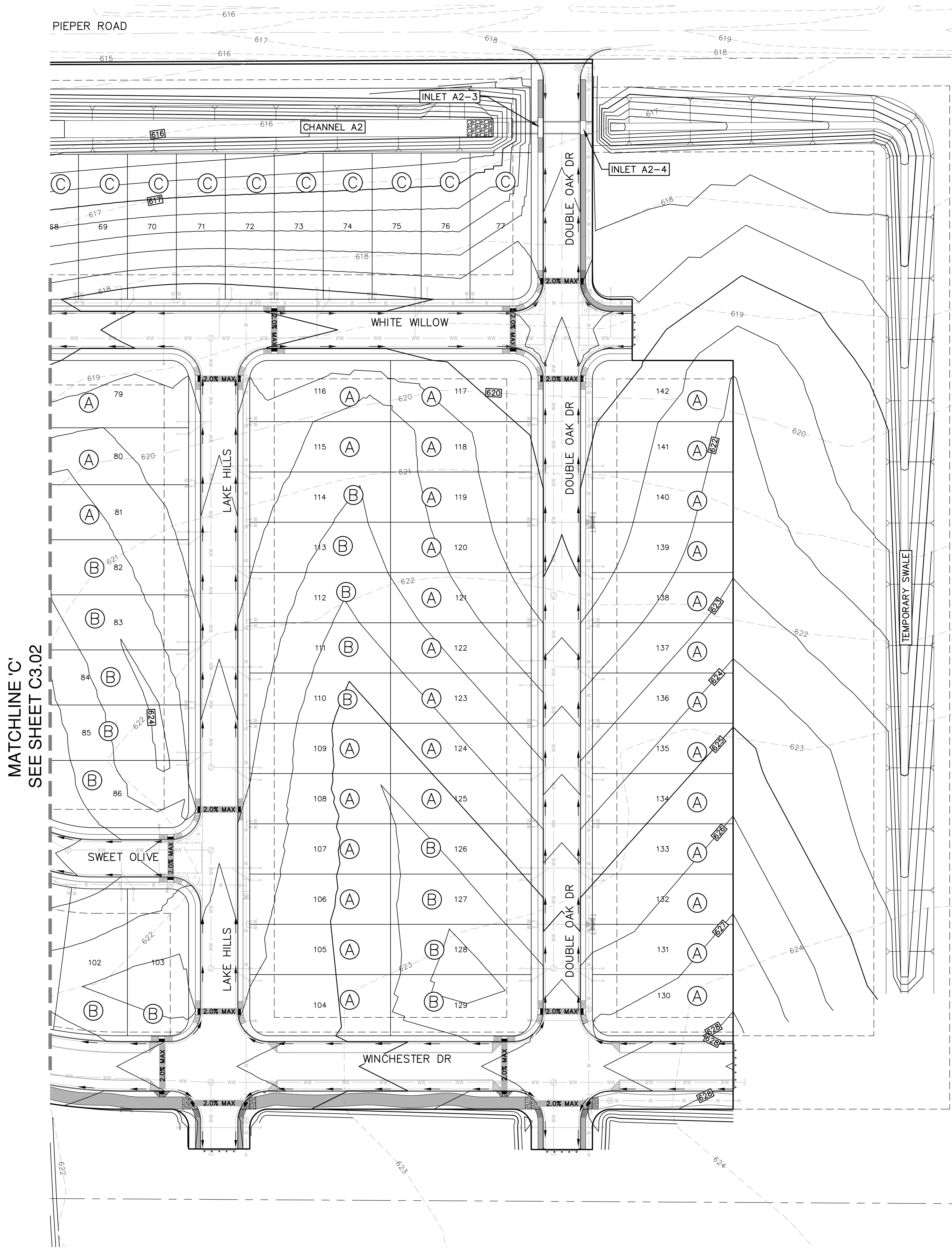
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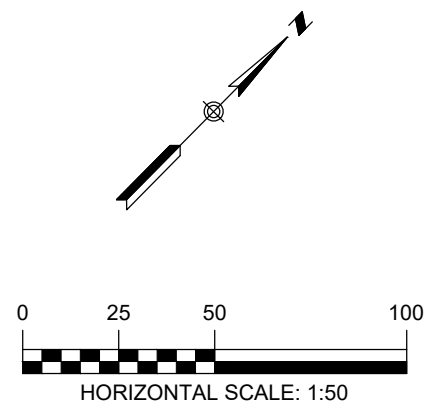




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- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - (A) LOT GRADING SEE DETAILS SHEET C3.04
  - DRAINAGE FLOW DIRECTION



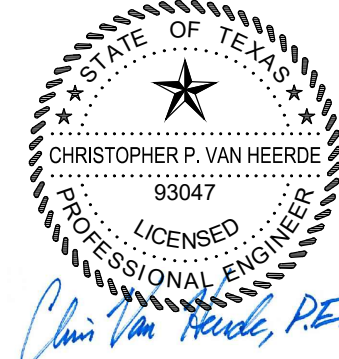
- NOTES:**
- DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
  - ALL FINISHED FLOOR ELEVATIONS SHALL MEET THE FOLLOWING REQUIREMENTS:
    - PER NOTE 14 ON PLAT SHEET C0.05.
    - HUD DETAILS SHOWN ON SHEET C0.04.
  - WHEN POSSIBLE, CONTRACTOR SHALL PHASE GRADING SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST PERIOD OF TIME.

EARTHWORK VOLUMES	
EXCAVATION & EMBANKMENT	VOLUME (CY)
CUT	209433
FILL (0.5)	37,658
NET	171775 [CUT]

REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

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07/20/2020

GRADING PLAN (3 OF 3)

PARKSIDE SUBDIVISION  
PHASE 1

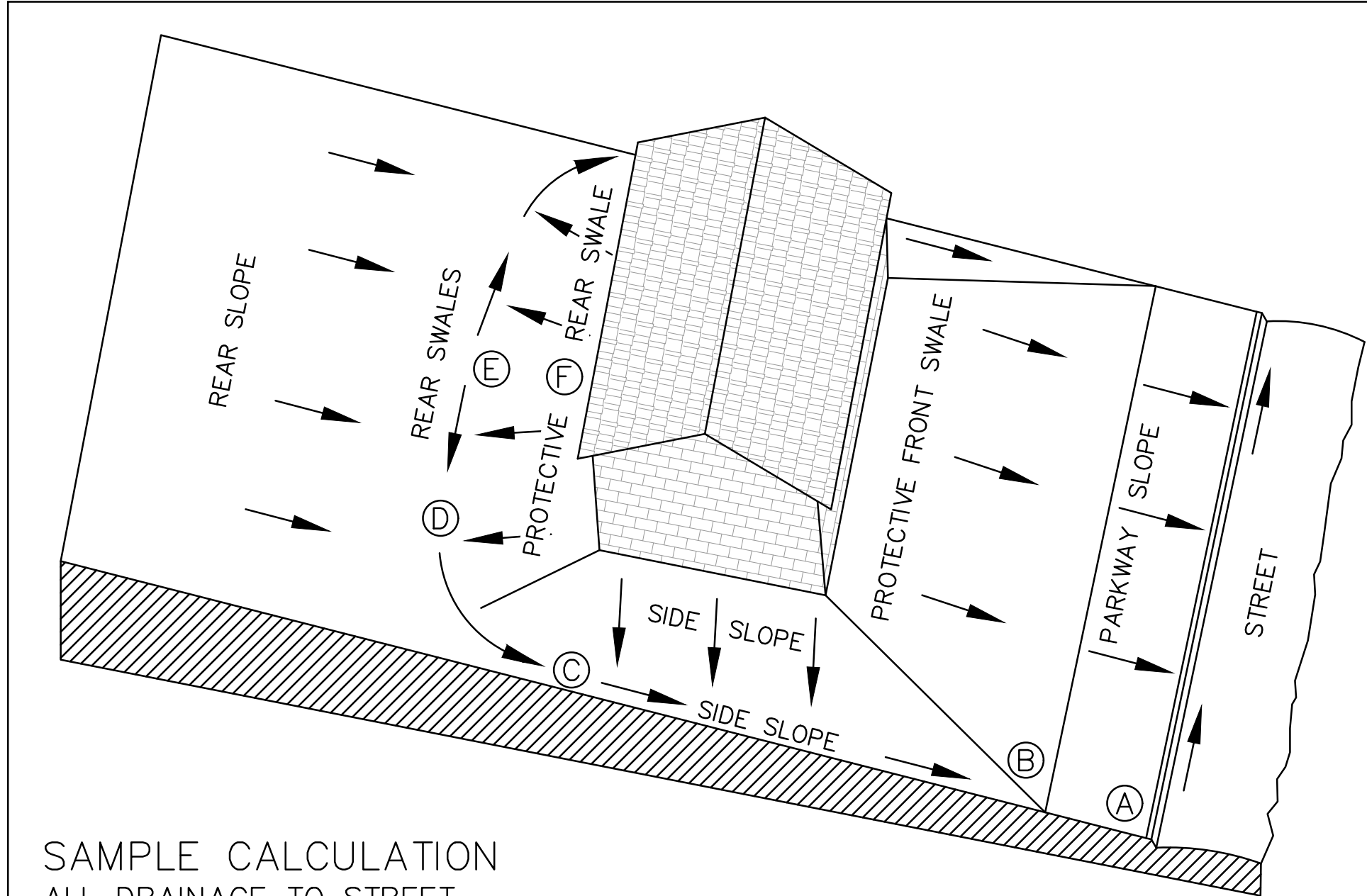
NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JUNE 2020
DRAWN BY: CAM
DESIGNED BY: CAM
REVIEWED BY: CVH/SWH
HMT PROJECT NO.: 031.060

**SHEET**  
**C3.03**



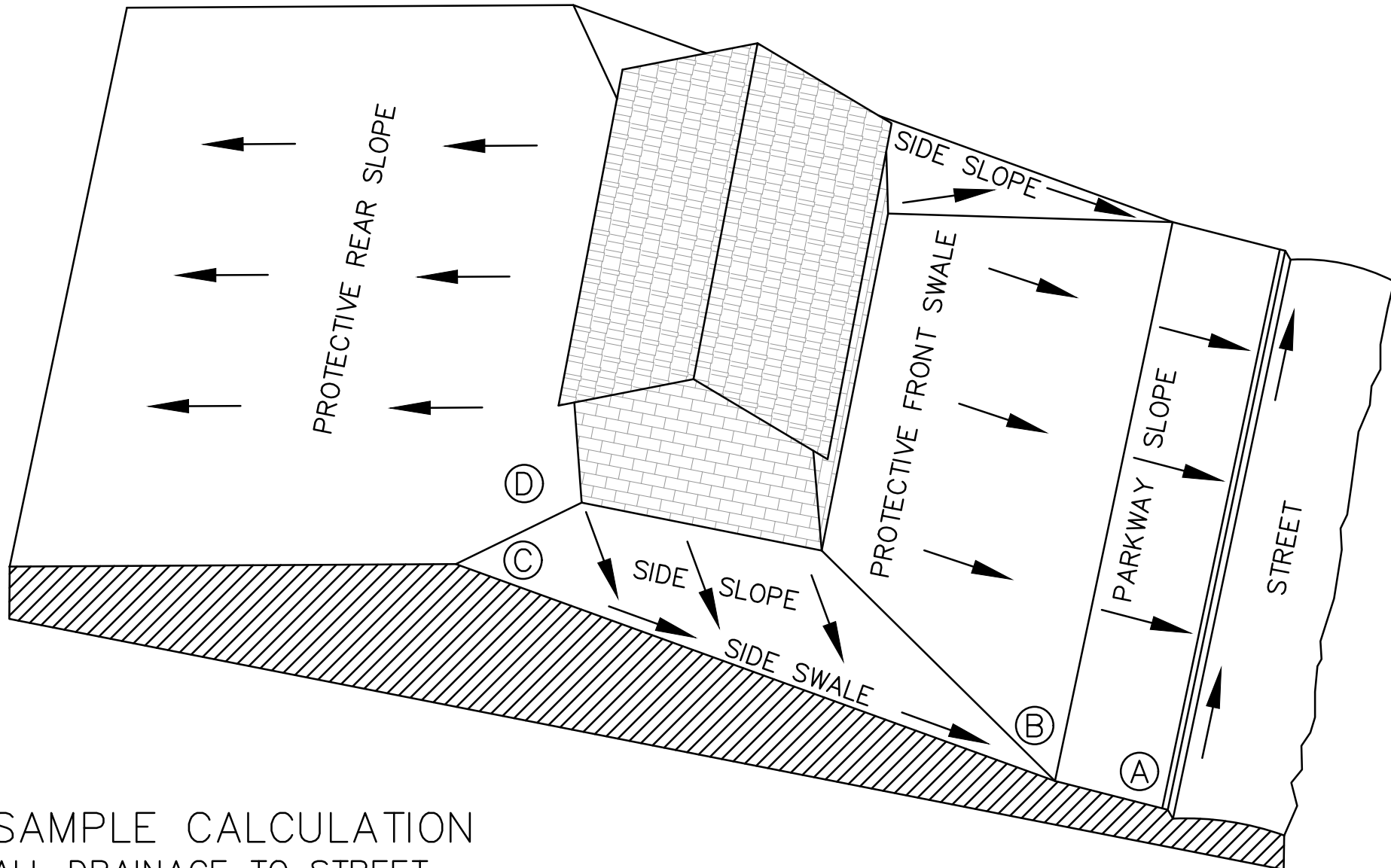
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SAMPLE CALCULATION  
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 0.5% STREET, WITH 60' BUILDING DEPTH AND 2% SWALES.				RESULTS OF 1% SWALES		
A	CURB-TOP ON LOT LINE EXTENSION AT HIGH LOT CORNER					<u>CALCULATIONS FOR 2% SWALES</u>  15 x 0.25' = 3½" 85 x 0.25' = 21½" 16 x 0.25' = 4" 13 x 0.25' = 3½" 10 x 0.25' = 2½" <hr/> 34½"  CALCULATIONS USE 0.25" PER FOOT GRADIENT FOR A 2% SWALE.
AB	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')	
BC	SIDE SWALE: 85' GRASS AT 1/4"/FT. (2%)	21"	(1.8')	11"	(0.9')	
CD	SWALE TURN WITH 10' RADIUS:16' GRASS AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')	
DE**	REAR SWALE: 13' GRASS AT 1/4"/FT. (2%)	3"	(0.3')	2"	(0.2')	
EF*	PROTECTIVE REAR SLOPE UP FROM HIGH POINT OF SWALES	3"	(0.3')	3"	(0.3')	
SUB-TOTAL AF FROM CURB TOP TO GROUND AT REAL BLDG WALL		35"	(3.0')	20"	(1.7')	
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 35" + 8"		43"	(3.6')	28"	(2.3')	
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		54"	(4.5')	39"	(3.3')	
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.						
** LENGTH DE = [1/2(LOT WIDTH - (2x SWALE TURN RADIUS))] - [LOT WIDTH x (STREET GRADIENT x SWALE GRADIENT)]						

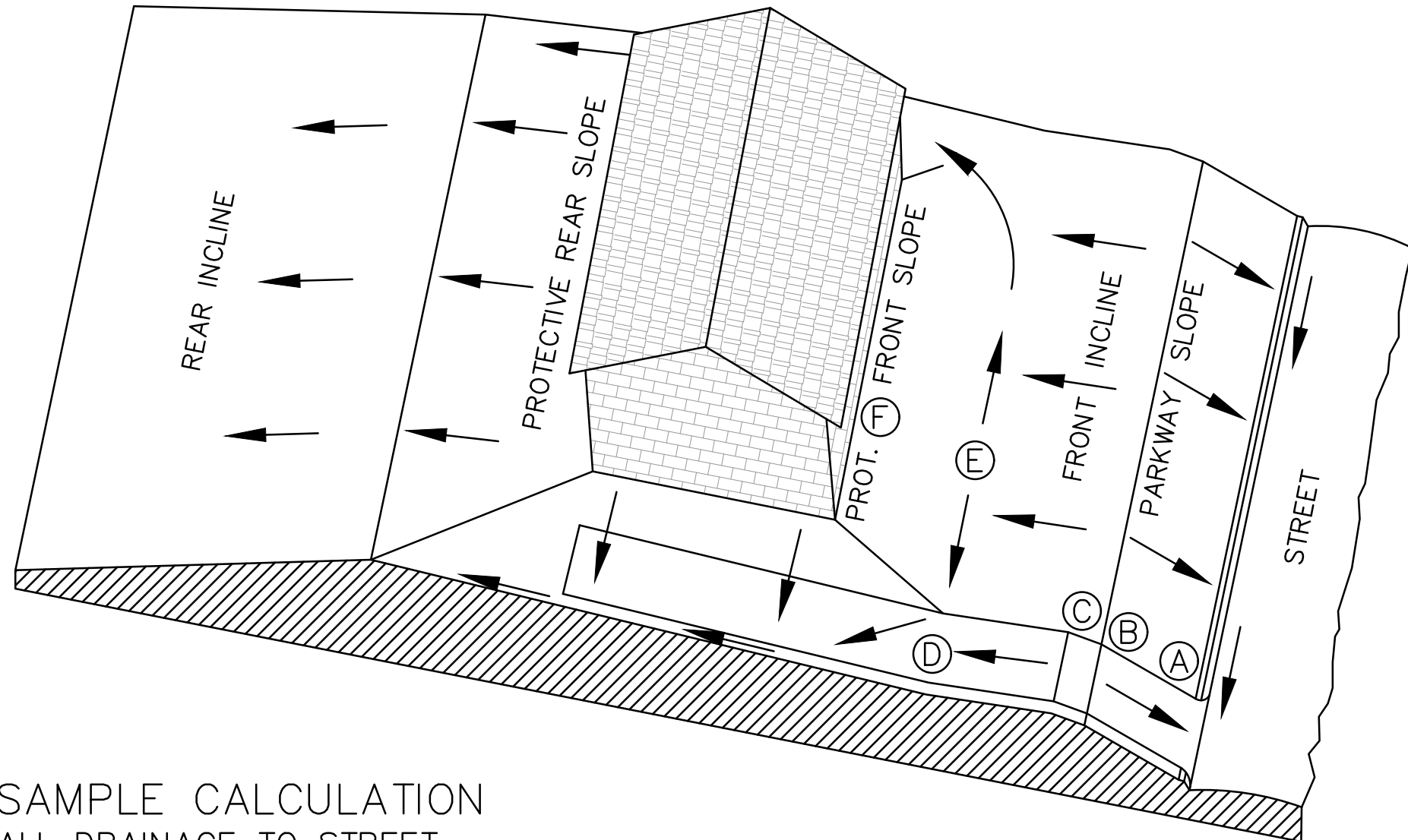
LOT TYPE ①



SAMPLE CALCULATION  
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 0.5% STREET, WITH 60' BUILDING DEPTH AND 2% SWALES.				RESULTS OF 1% SWALES		<div>CALCULATIONS FOR 2% SWALES</div> <div><math>15 \times 0.25' = 3\frac{3}{4}"</math> <math>85 \times 0.25' = 21\frac{1}{4}"</math> <math>6 \times 0.25' = 1\frac{1}{2}"</math><hr/><math>26\frac{1}{2}"</math></div>
A	CURB-TOP ON LOT LINE EXTENSION AT HIGH LOT CORNER					
AB	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')	
BC	SIDE SWALE: 85' GRASS AT 1/4"/FT. (2%)	21"	(1.8')	11"	(0.9')	
CD*	PROTECTIVE SIDE SLOPE @ REAR BLDG. WALL EXTENSION	3"	(0.3')	3"	(0.3')	
SUB-TOTAL AD FROM CURB TOP TO GROUND AT REAL BLDG WALL		27"	(2.4')	16"	(1.4')	
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 27" + 8"		35"	(2.9')	24"	(2.0')	<div>CALCULATIONS USE 0.25" PER FOOT GRADIENT FOR A 2% SWALE.</div>
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		46"	(3.8')	35"	(2.9')	
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.						

LOT TYPE ②



SAMPLE CALCULATION  
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE $\overline{AF}$ FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 13.5% DRIVEWAY, AND 16' FRONT SWALE $\overline{DE}$ AT 2.0%.				RESULTS OF 1% SWALES		CALCULATIONS FOR SWALES
A	CURB-TOP HIGH SIDE OF DRIVE NEAR LOW LOT CORNER					$15 \times 0.25' = 3\frac{3}{4}"$
$\overline{AB}$	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')			$0 \times 0.25' = 0"$
$\overline{BC}$	DRIVEWAY GRADE CHANGE: 4' VERTICAL CURVE FROM UP-GRADE DRIVE IN STREET TO DOWN-GRADE DRIVE ON LOT	0" (0.0')	0" (0.0')			$-11 \times 1.625' = -17\frac{3}{4}"$
$\overline{CD}$	DRIVEWAY DOWN-GRADE TO POINT 10 FEET OUT FROM FRONT OF BUILDING: -11' AT 18"/FT (13.5%)	-18" (-1.5')	-18" (-1.5')			$16 \times 0.25' = 4"$
$\overline{DE}$	FRONT SWALE: 16' GRASS AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')			$10 \times 0.25' = 2\frac{1}{2}"$
$\overline{EF}^*$	PROT. FRONT SLOPE UP FROM HIGH POINT OF SWALES	3" (0.3')	3" (0.3')			
SUB-TOTAL $\overline{AF}$ FROM CURB TOP TO GROUND AT FRONT BLDG WALL		-7" (-1.0')	-11" (1.3')			
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: -7" + 8"		1" (-0.3')	-3" (0.7')			
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: -7" + 19"		12" (-0.6')	8" (0.3')			
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.						

LOT TYPE ③

GENERAL SPECIFICATIONS FOR SITE PREPARATION

GENERAL DESCRIPTION

THIS ITEM SHALL CONSIST OF ALL CLEARING AND PREPARATION OF LAND TO BE FILLED, FILLING OF THE LAND, SPREADING, COMPACTION TESTING AND INSPECTION OF THE FILL, AND ALL SUBSIDIARY WORK NECESSARY TO COMPLETE THE GRADING OF THE CUT AND FILL AREAS TO CONFORM WITH THE LINES, GRADES AND SLOPES AS SHOWN ON THE APPROVED PLANS.

SCARIFYING THE AREA TO BE FILLED

ALL ORGANIC MATTER SHALL BE REMOVED FROM THE SURFACE UPON WHICH THE FILL IS TO BE PLACED, AND SURFACE SHALL BE DISKED OR SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES (6"), ALL SURFACE RUTS OR OTHER UNEVEN FEATURES WILL BE LEVELED PRIOR TO FIELD DENSITY TESTING.

COMPACTING THE AREA TO BE FILLED

FOLLOWING THE CLEARING AND DISKING OR SCARIFYING OF THE FILL AREA, IT SHALL BE BLADED UNTIL IT IS UNIFORM AND FREE FROM LARGE CLODS. THE AREA SHALL BE BROUGHT TO ADEQUATE MOISTURE CONTENT AND COMPACTED (TYPICALLY) TO NOT LESS THAN NINETY PERCENT (90%) OF MAXIMUM DENSITY IN ACCORDANCE WITH THE CURRENT ASTM D 1557 COMPACTION PROCEDURE, OR 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH THE THD-TEX-113-E COMPACTION PROCEDURE. ALL AREAS EXCEEDING (6") SIX INCHES IN DEPTH, MUST MEET WITH FHWA/HUD HANDBOOK 4140.30 SPECIFICATIONS FOR LAND DEVELOPMENTS ON CONTROLLED EARTHWORK, DATASHEET 79G.

FILL MATERIALS

THE MATERIALS USED SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES, SUCH AS TREES, BRUSH AND RUBBISH.

DEPTH AND MIXING OF FILL LAYERS

THE SELECTED FILL MATERIAL SHALL BE PLACED IN LEVEL, UNIFORM LAYERS WHICH, WHEN COMPACTED, SHALL HAVE A DENSITY CONFORMING TO THE STIPULATED ABOVE. EACH LAYER SHALL BE THOROUGHLY MIXED DURING THE SPREADING TO ENSURE UNIFORMITY OF MATERIAL IN EACH LAYER. COMPACTED LAYER THICKNESS MAY VARY DEPENDING ON THE COMPACTION EQUIPMENT OF THE DEMONSTRATED CAPABILITY.

ROCK

WHEN FILL MATERIAL INCLUDES ROCK, THE MAXIMUM ROCK SIZE SHALL BE AS APPROVED BY THE GEOTECHNICAL ENGINEER. NO LARGE ROCKS SHALL BE ALLOWED TO NEST AND ALL VOIDS MUST BE FILLED WITH SMALL STONES OR SOIL AND ADEQUATELY COMPACTED.

COMPACTION OF FILL LAYER

COMPACTION EQUIPMENT SHALL BE CAPABLE OF COMPACTING THE FILL TO THE SPECIFIED DENSITY. COMPACTION SHALL BE ACCOMPLISHED WHILE THE FILL MATERIAL IS AT OR NEAR THE APPROPRIATE MOISTURE CONTENT. COMPACTION OF EACH LAYER SHALL BE CONTINUOUS OVER THE ENTIRE STRUCTURAL AREA (BENEATH PROPOSED STRUCTURES).

COMPACTION OF SLOPES

THE FACES OF FILL SLOPES SHALL BE COMPACTED. COMPACTION OPERATIONS SHALL BE CONTINUED UNTIL THE SLOPE FACES ARE STABLE BUT NOT TO DENSE FOR PLANTING ON THE SLOPES. COMPACTION OF THE SLOPE FACE MAY BE DONE PROGRESSIVELY IN INCREMENTS OF THREE TO FIVE FEET (3' TO 5') IN FILL HEIGHT AS THIS FILL PROGRESSES OR AFTER THE FILL HAS BEEN BROUGHT TO ITS TOTAL HEIGHT.

DENSITY TEST

FIELD DENSITY TESTS SHALL BE PERFORMED ON ALL LAYERS OF FILL WHEN THE FILL IS BEING PLACED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE MAXIMUM FILL HEIGHT BETWEEN DENSITY TESTING SHALL BE TWELVE INCHES (12"). ALL TESTING SHALL BE REQUESTED BY THE CONTRACTOR TO MEET THE CONTRACTOR'S CONSTRUCTION SCHEDULE. NOTIFICATION BY THE CONTRACTOR TO CONDUCT TESTS SHALL BE AT LEAST THE DAY BEFORE. THIS NOTIFICATION SHALL INCLUDE THE FILL AREA LOCATION (LOT AND BLOCK), THE LIFT OR HEIGHT OF FILL AND APPROXIMATED DESIRED TIME OF TESTING. WHEN THESE TEST INDICATE THAT THE DENSITY OF ANY LAYER OF FILL OR PORTION THEREOF IS BELOW THE REQUIRED DENSITY, THE PARTICULAR LAYER OR PORTION SHALL BE REWORKED AND RETESTED AT THE EXPENSE OF THE CONTRACTOR UNLESS THE CONTRACTOR CAN SHOW EVIDENCE THAT CIRCUMSTANCES BEYOND HIS CONTROL REQUIRED THE RETESTING. GENERALLY, THE SPECIFIC TESTING WILL BE AS FOLLOWS AND CONDUCTED BY A GEO-TECHNICAL ENGINEER OR STAFF.

- THE LAND TO BE FILLED (PREPARED SUBGRADE) SHALL BE PREPARED AND TESTED AT A FREQUENCY AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
- THE FIRST LIFT OF COMPACTED FILL (GENERALLY 8-12 IN.) SHALL BE TESTED AS DETERMINED BY THE GEOTECHNICAL ENGINEER. ANY AREAS SUPPORTING THE PROPOSED STRUCTURES REQUIRING FILL SHALL BE TESTED FOR DENSITY COMPLIANCE.
- FILLS SHALL BE TESTED AT A MAXIMUM OF EACH TWELVE INCHES (12") OF FILL.
- TEST RESULTS WILL BE PROVIDED BY THE FIELD TECHNICIAN TO THE CONTRACTOR WHEN POSSIBLE; HOWEVER, ALL TEST RESULTS ARE TO BE REVIEWED BY THE GEOTECHNICAL ENGINEER FOR COMPLIANCE. THE ENGINEER WILL NOTIFY THE CONTRACTOR OF ALL TEST RESULTS.

CUT/FILL LOTS

AREAS INVOLVING CUT ON THE PORTION AND FILL ON ANOTHER PORTION OF A SPECIFIC LOT SHALL BE PREPARED TO A MINIMUM DEPTH OF 6 IN., AND WILL BE THE SAME MATERIAL CLASSIFICATION AT THE SAME COMPACTION AND MOISTURE CONTENT. FIELD DENSITY TESTS SHALL BE REQUIRED ON EACH CUT/FILL LOT FOR THE PURPOSE OF DETERMINING UNIFORMITY OF THE AREA SUPPORTING THE PROPOSED STRUCTURES.

HUD 79-G

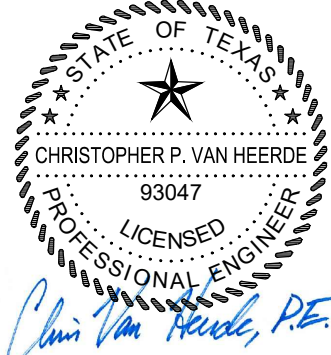
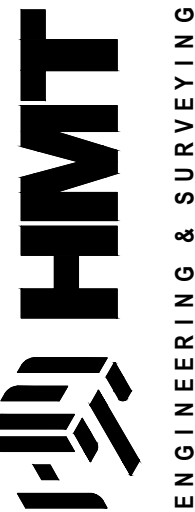
HUD 79-G REQUIREMENT FOR FILL MATERIAL OF 6 INCHES AND MORE WILL BE CONDUCTED. ALL CUT AREAS WILL ALSO MEET THE REQUIREMENTS FOR HUD 79-G COMPACTION TESTING. IN ADDITION, ENGINEERS MUST PROVIDE VERIFICATION OF ALL AREAS WHICH DO NOT REQUIRE HUD 79-G. AFTER SITE GRADING IS COMPLETED, GEO-TECHNICAL ENGINEER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

DRAINAGE NOTE

FINISHED FLOOR ELEVATIONS

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

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

GRADING DETAILS

PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

REVIEWED BY: CVH/SMH

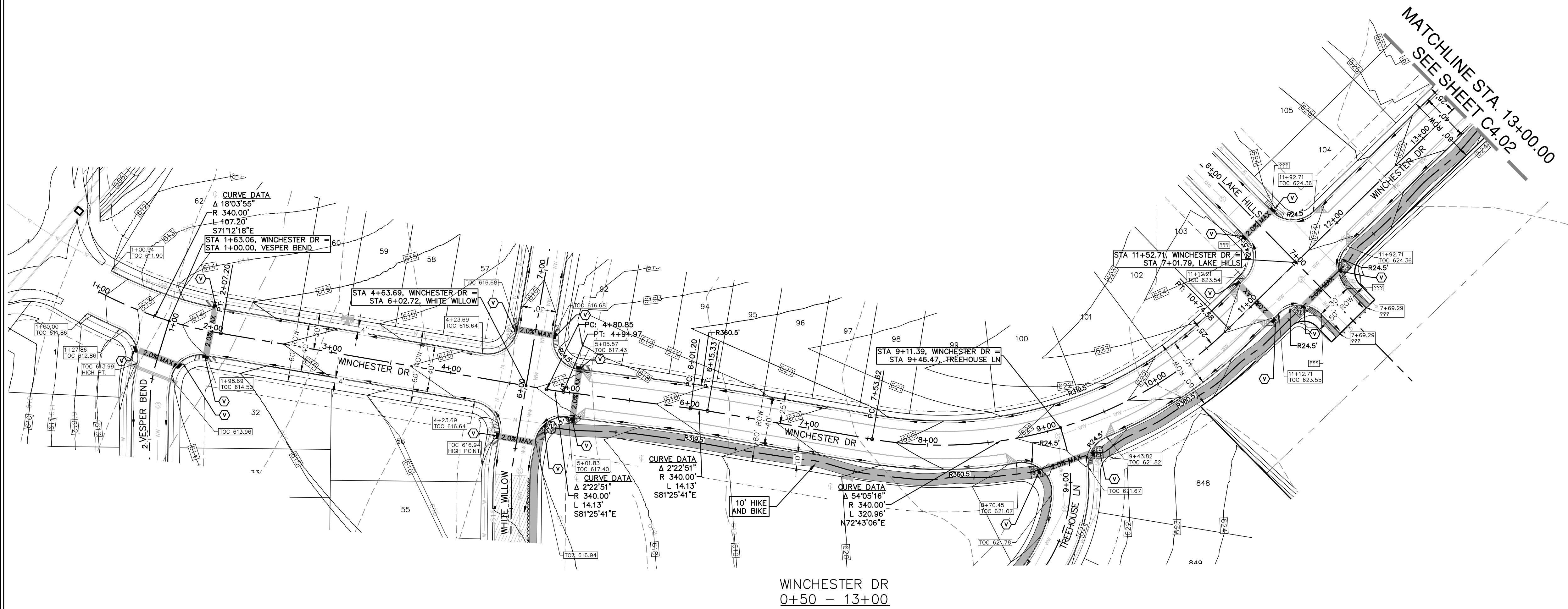
HMT PROJECT NO.:  
031.060

SHEET

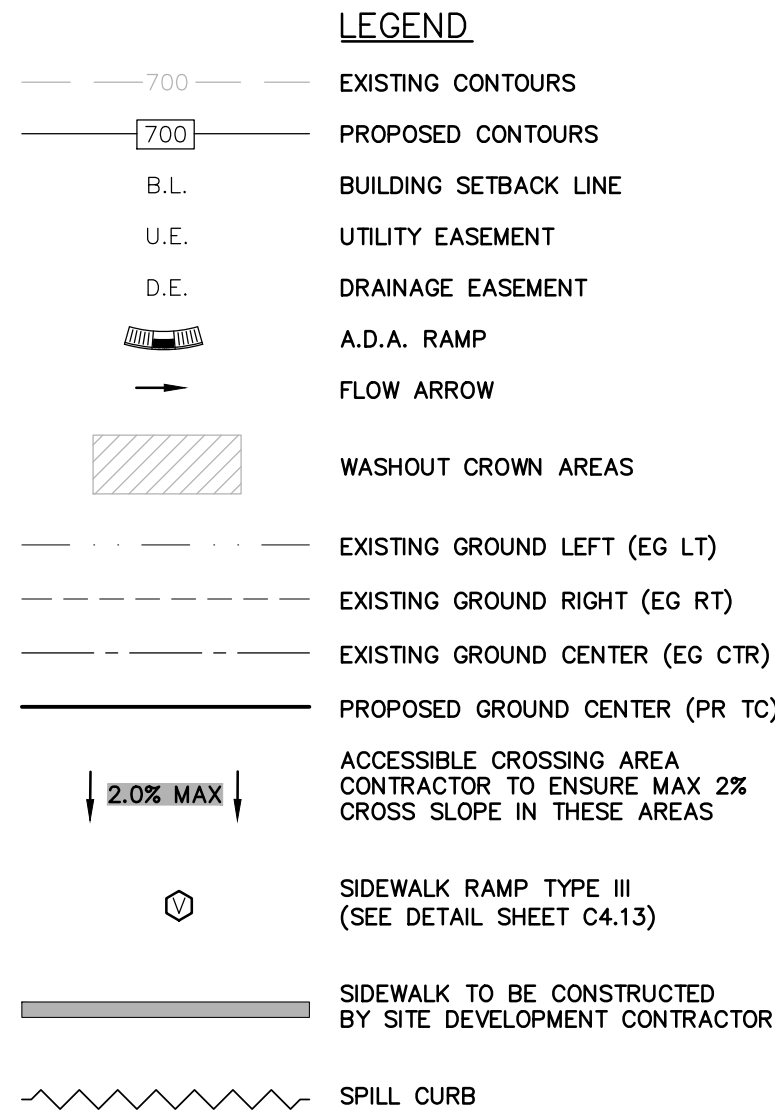
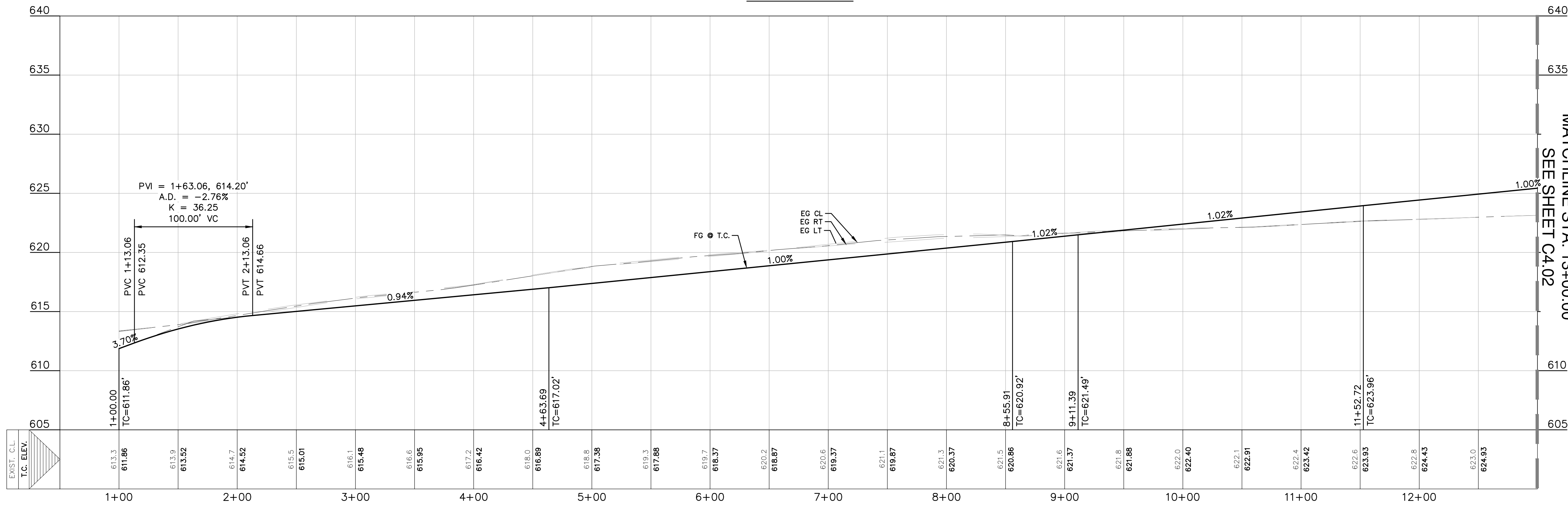
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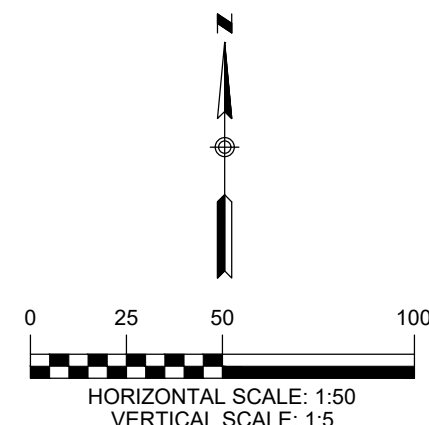


WINCHESTER DR  
0+50 - 13+00



**NOTES**

- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
- A.D.A. RAMPS SHALL BE TYPE III UNLESS OTHERWISE CALLED OUT.



MATCHLINE STA. 13+00.00  
SEE SHEET C4.02

SEE SHEET C4.02

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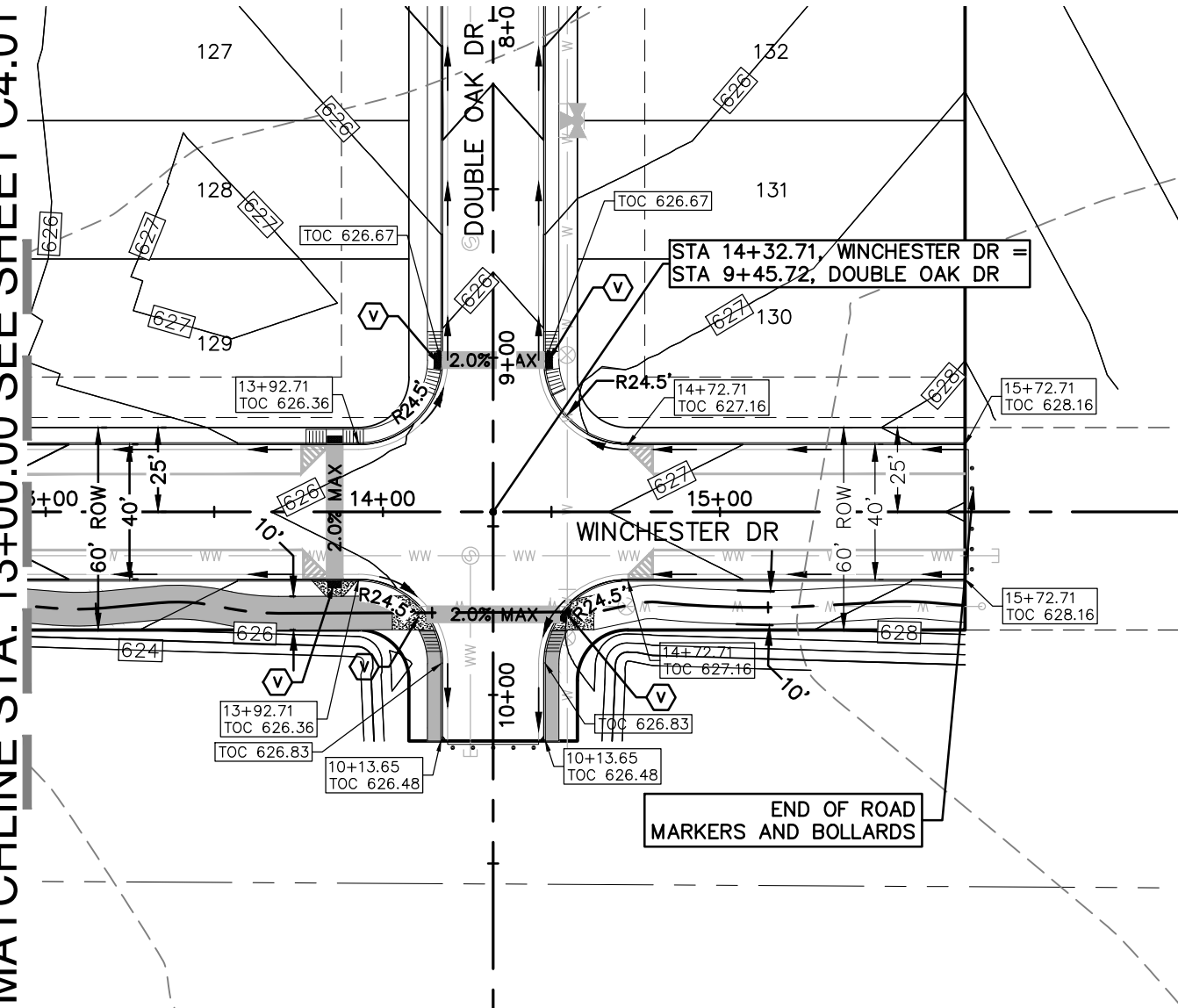
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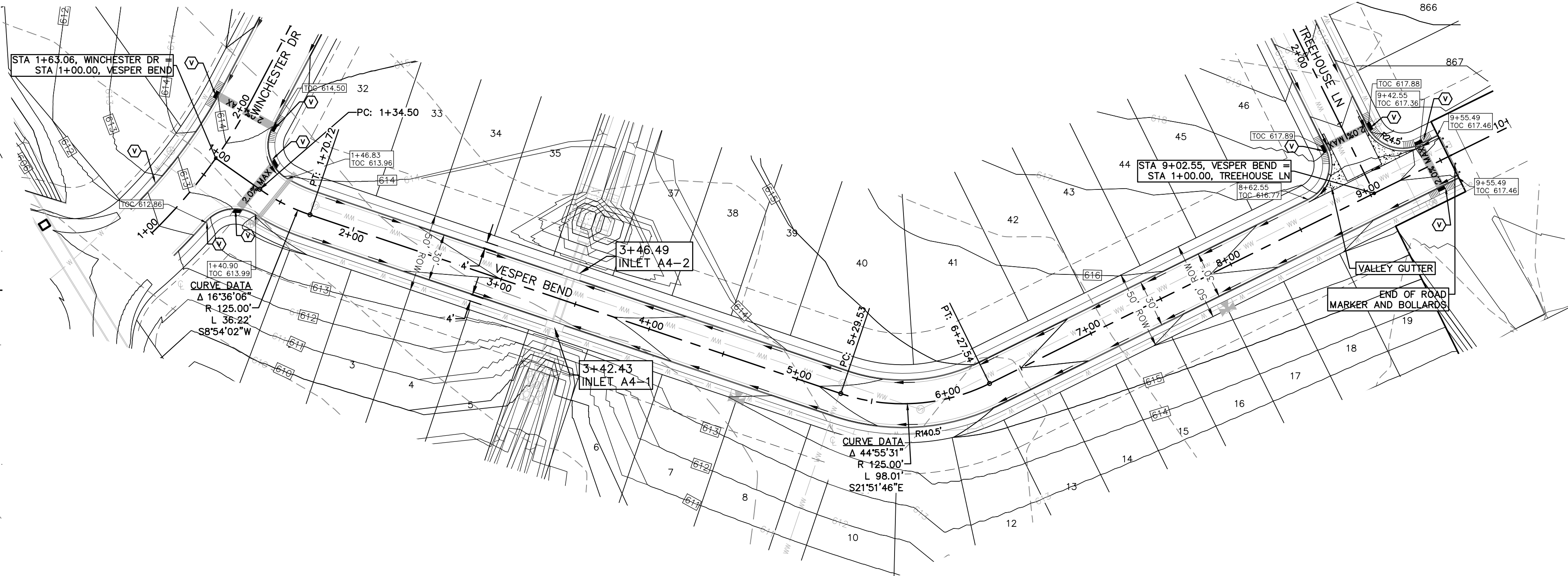
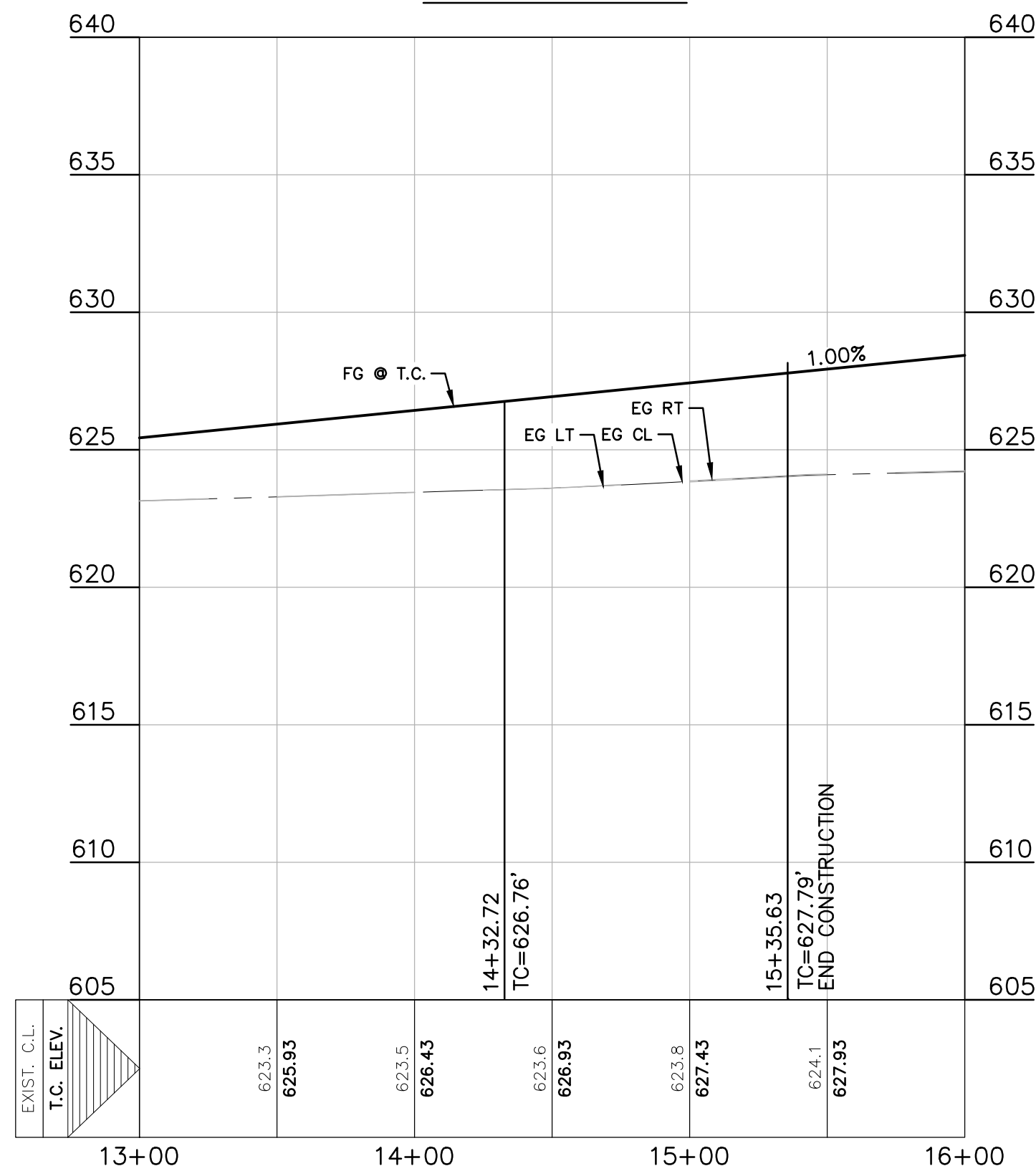
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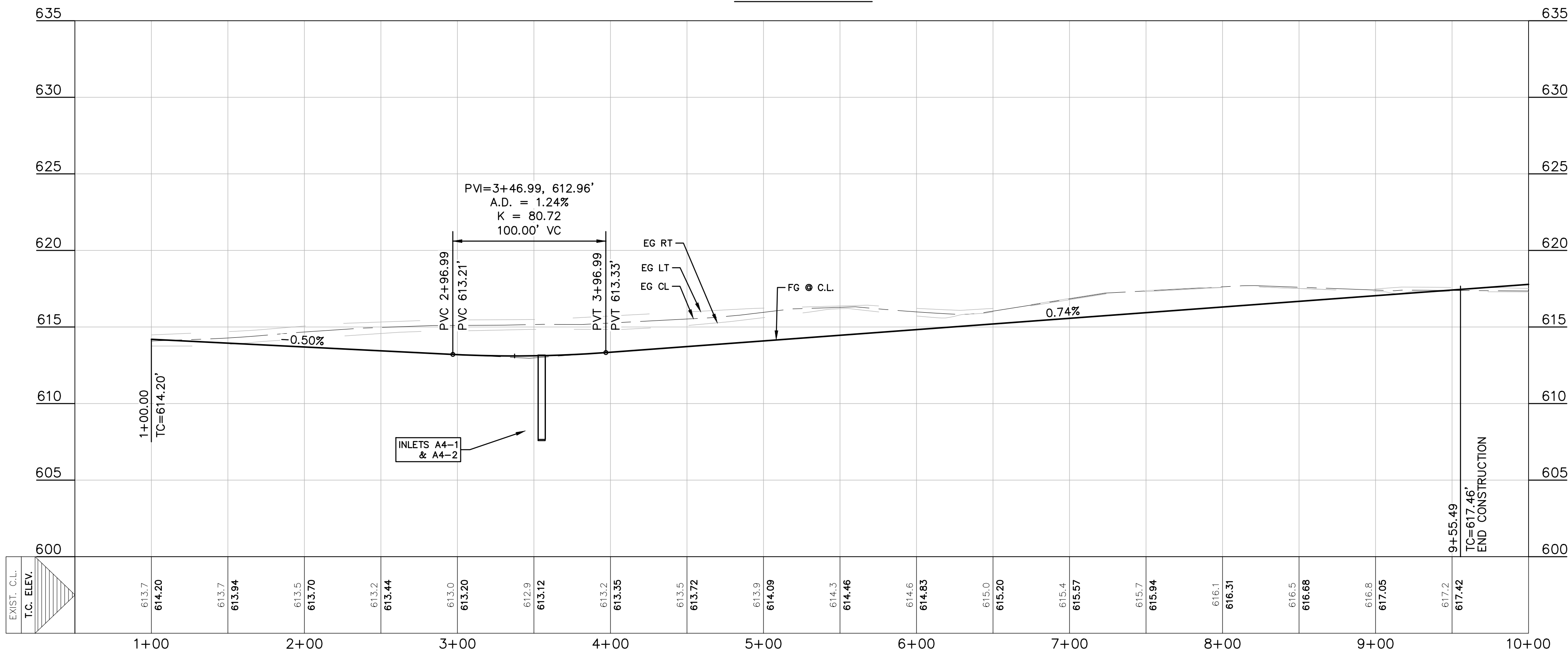
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WINCHESTER DR  
13+00 - 16+00

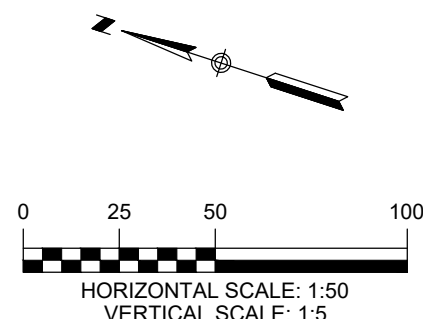


VESPER BEND  
0+50 - 10+00



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

- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - A.D.A. RAMP
  - FLOW ARROW
  - WASHOUT CROWN AREAS
  - EXISTING GROUND LEFT (EG LT)
  - EXISTING GROUND RIGHT (EG RT)
  - EXISTING GROUND CENTER (EG CTR)
  - PROPOSED GROUND CENTER (PR TC)
  - ACCESSIBLE CROSSING AREA  
CONTRACTOR TO ENSURE MAX 2%  
CROSS SLOPE IN THESE AREAS
  - 2.0% MAX
  - SIDEWALK RAMP TYPE III  
(SEE DETAIL SHEET C4.13)
  - SIDEWALK TO BE CONSTRUCTED  
BY SITE DEVELOPMENT CONTRACTOR
  - SPILL CURB
- NOTES**
- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
  - IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
  - CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
  - CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
  - A.D.A. RAMPS SHALL BE TYPE III UNLESS OTHERWISE CALLED OUT.



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

WINCHESTER DRIVE & VESPER  
BEND PLAN & PROFILE  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

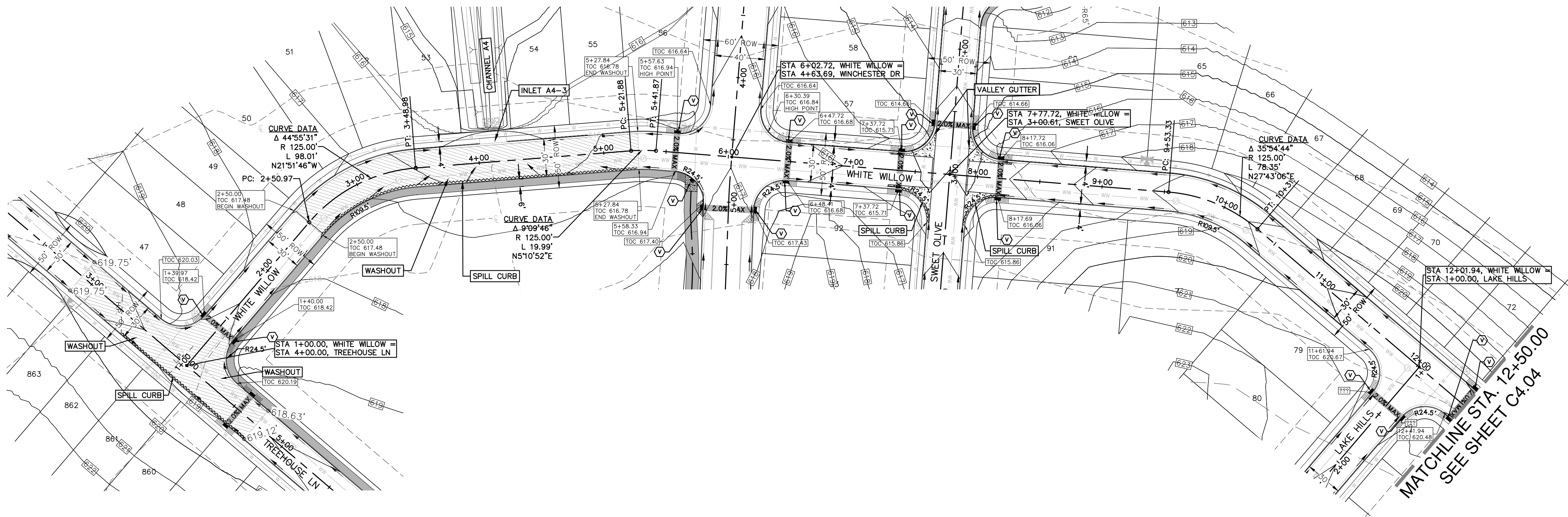
REVIEWED BY: CVH/SWH

HMT PROJECT NO.:  
031.060

**SHEET**  
**C4.02**



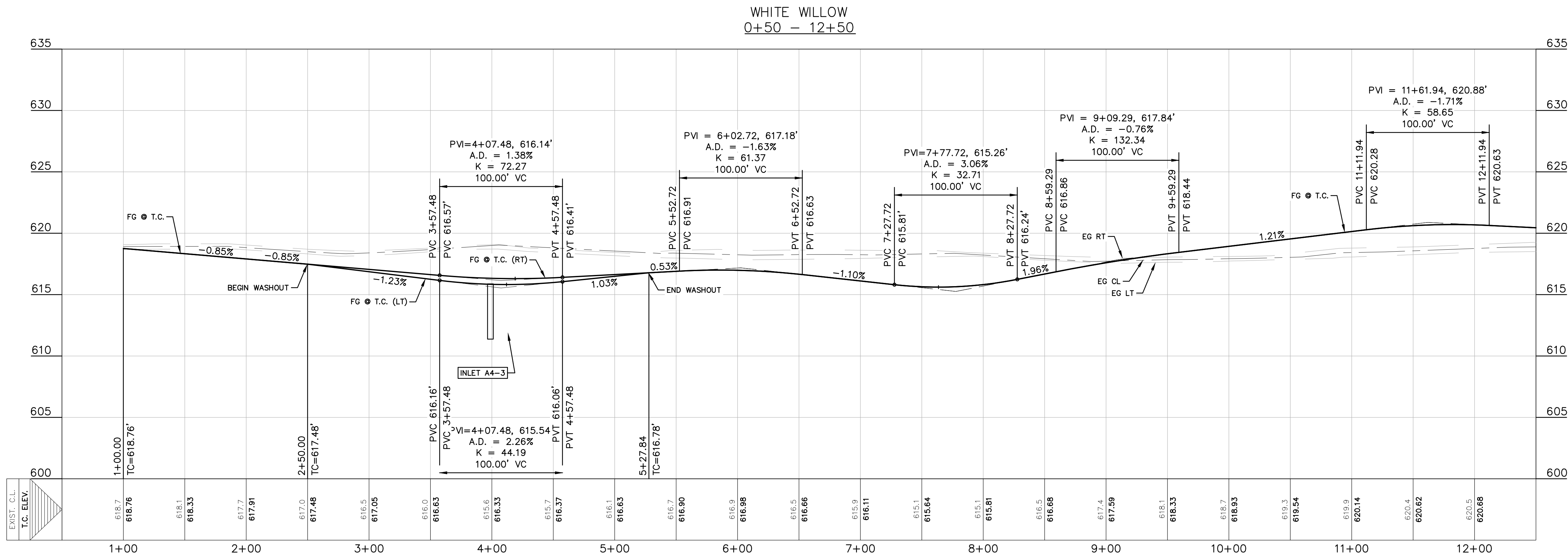
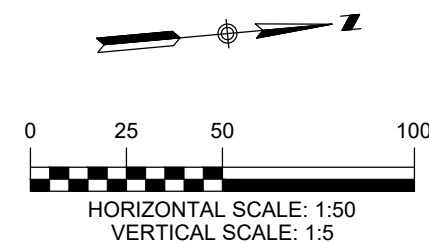
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- LEGEND**
- EXISTING CONTOURS
  - PROPOSED CONTOURS
  - B.L. BUILDING SETBACK LINE
  - U.E. UTILITY EASEMENT
  - D.E. DRAINAGE EASEMENT
  - A.D.A. RAMP
  - FLOW ARROW
  - WASHOUT CROWN AREAS
  - EXISTING GROUND LEFT (EG LT)
  - EXISTING GROUND RIGHT (EG RT)
  - EXISTING GROUND CENTER (EG CTR)
  - PROPOSED GROUND CENTER (PR TC)
  - ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
  - SIDEWALK RAMP TYPE III (SEE DETAIL SHEET C4.13)
  - SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR
  - SPILL CURB

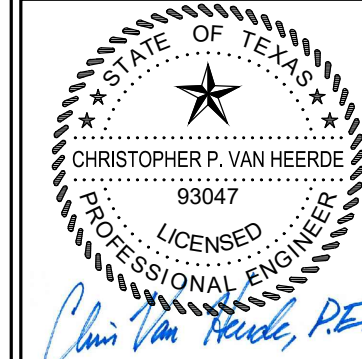
**NOTES**

- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
- A.D.A. RAMPS SHALL BE TYPE III UNLESS OTHERWISE CALLED OUT.



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

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

**WHITE WILLOW PLAN & PROFILE**  
**PARKSIDE SUBDIVISION**  
**PHASE 1**

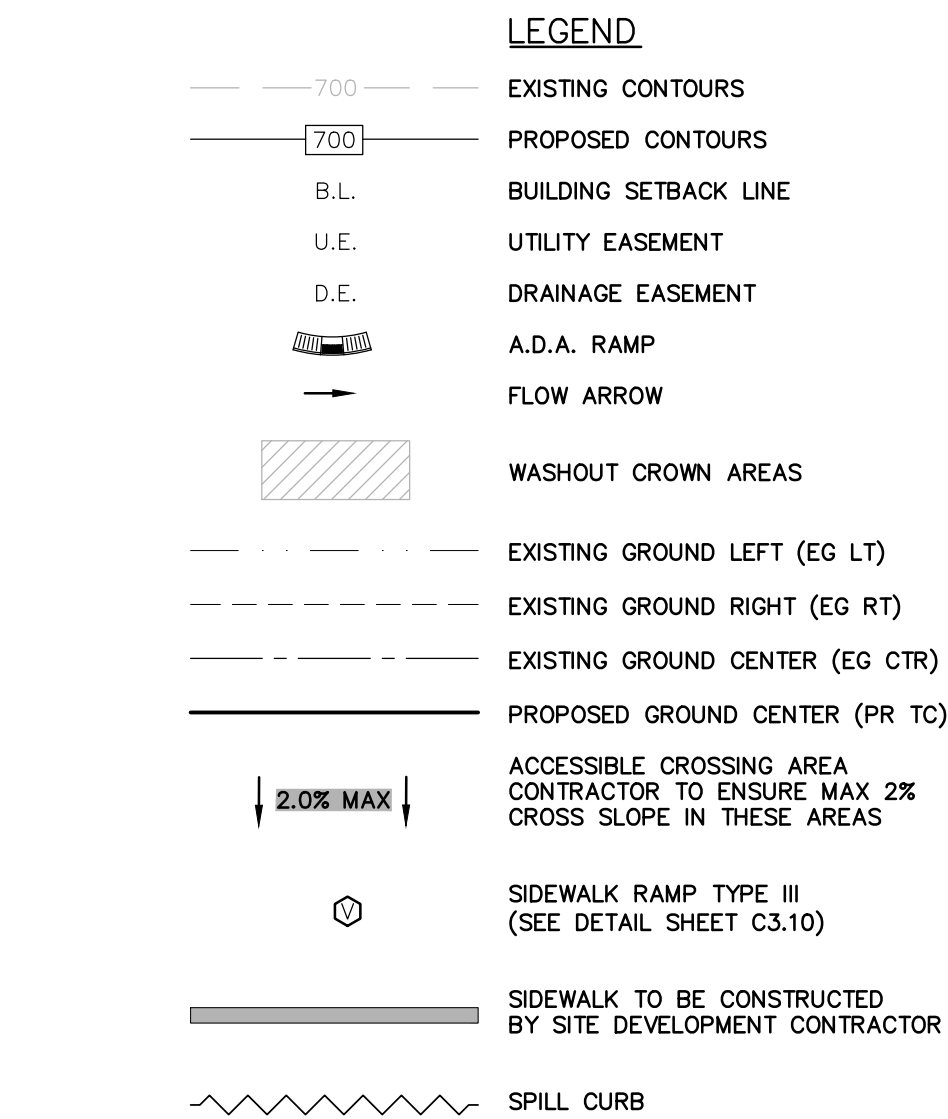
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DATE: JULY 2020  
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DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH

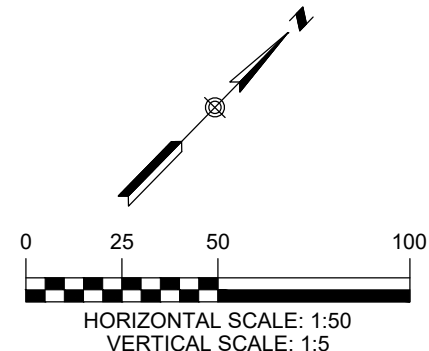
HMT PROJECT NO.:  
031.060

**SHEET**  
**C4.03**

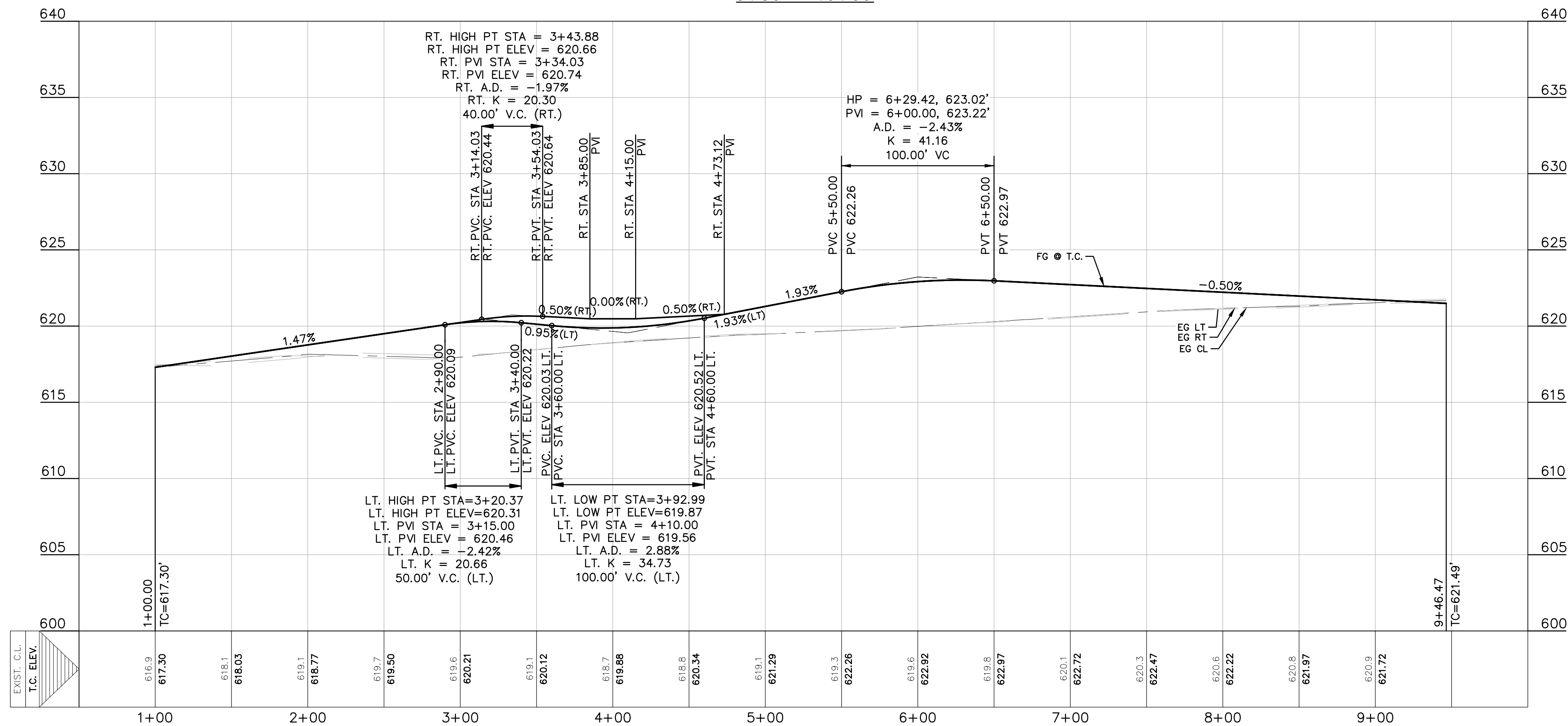
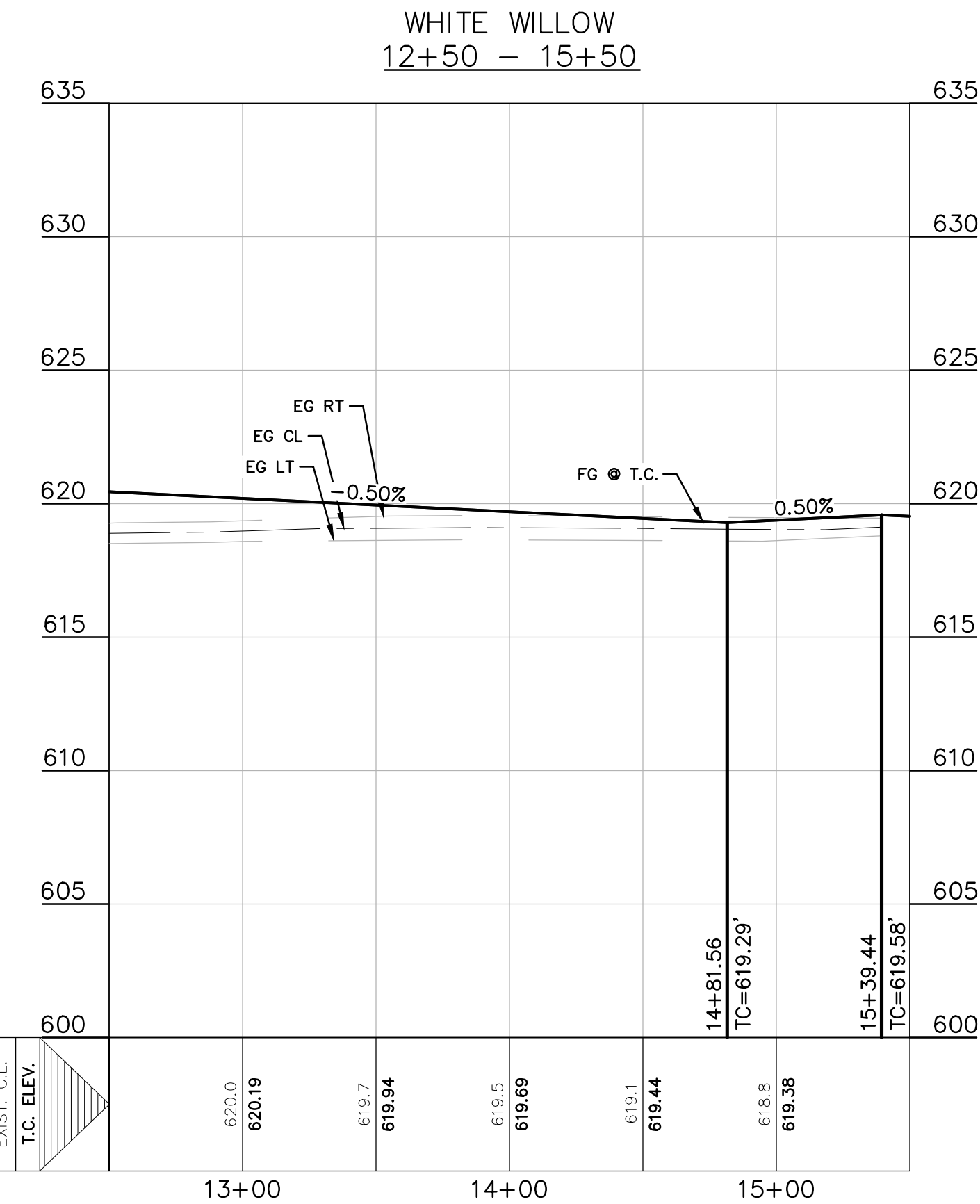
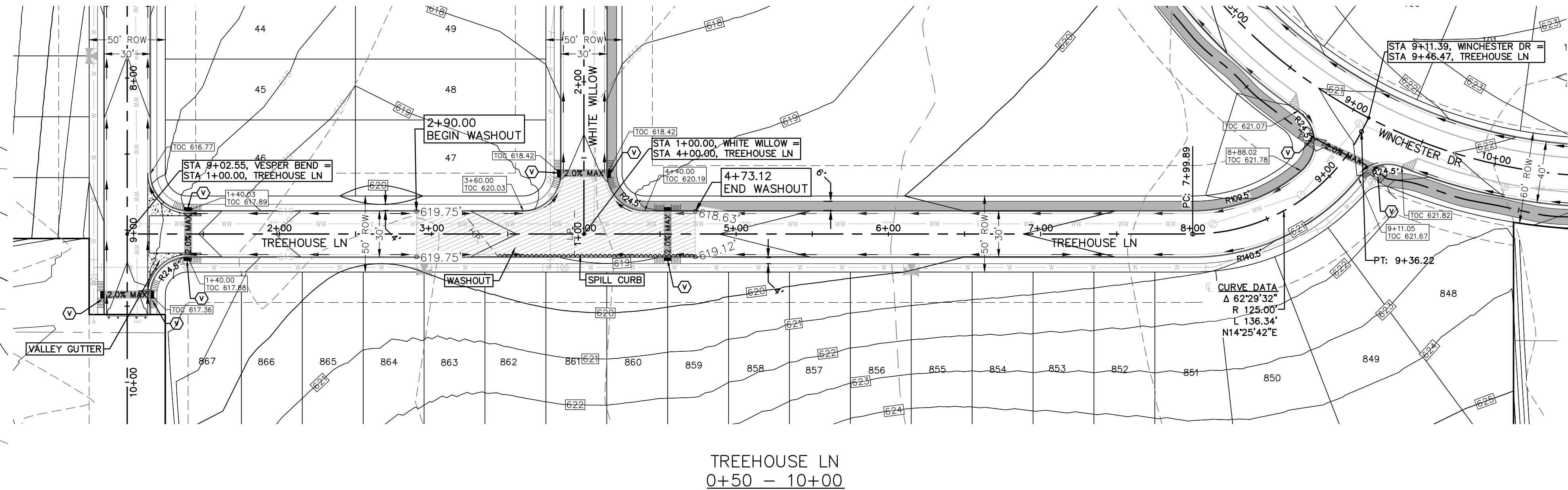
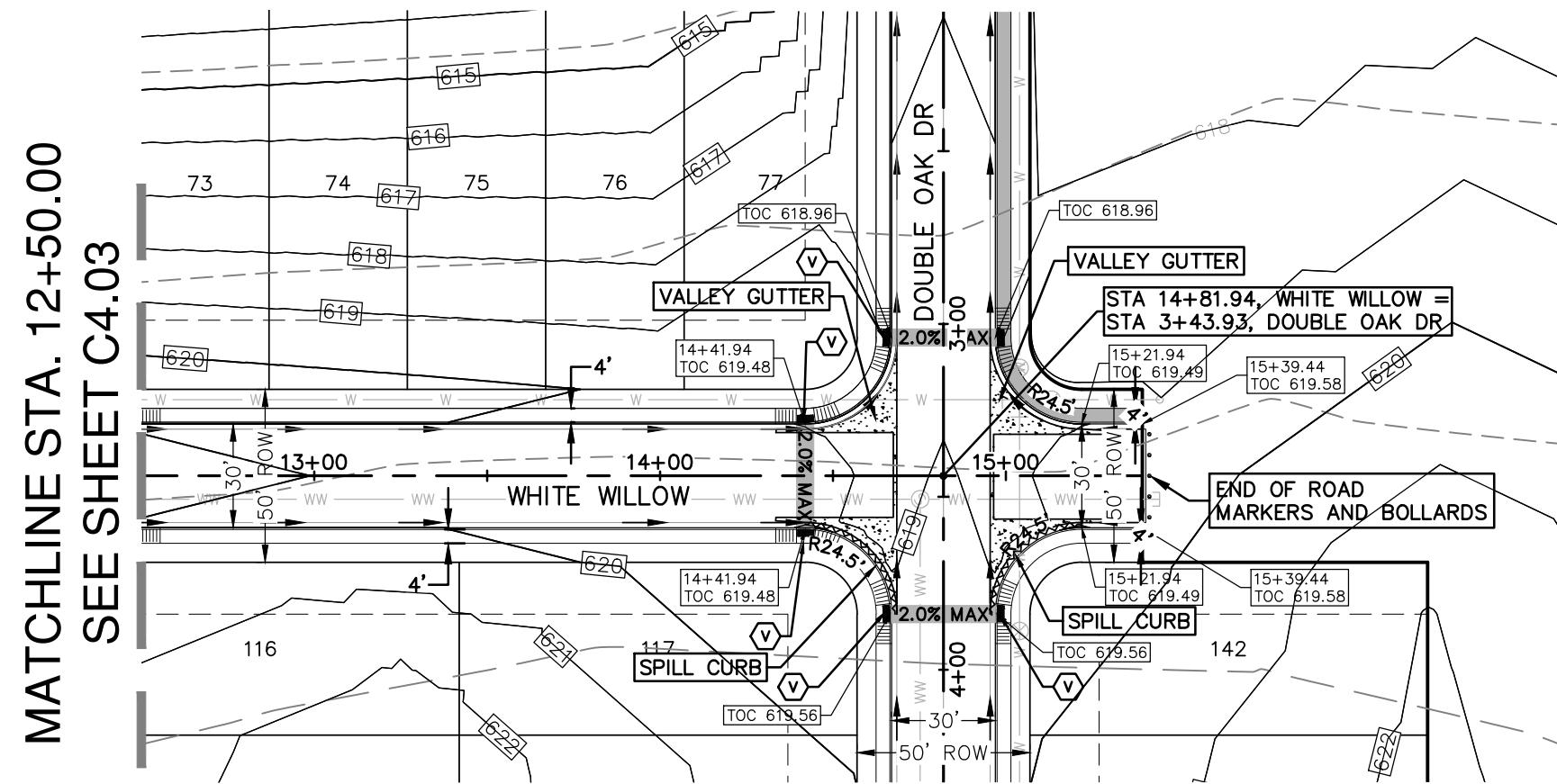




- NOTES**
- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
  - IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
  - CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
  - CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.
  - A.D.A. RAMPS SHALL BE TYPE III UNLESS OTHERWISE CALLED OUT.



MATCHLINE STA. 12+50.00  
SEE SHEET C4.03



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

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBP FIRM F-10961  
TBP FIRM 1053600



07/20/2020  
**WHITE WILLOW & TREEHOUSE  
LANE PLAN & PROFILE**  
PARKSIDE SUBDIVISION  
PHASE 1

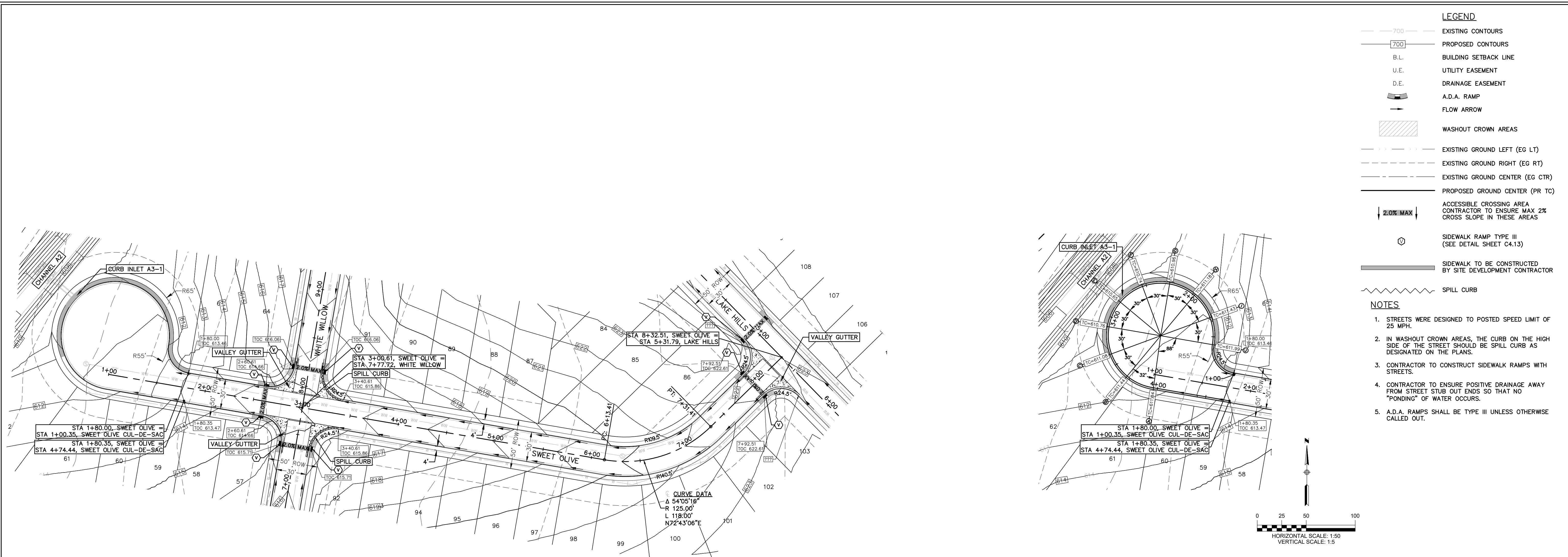
NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SMH  
HMT PROJECT NO.: 031.060

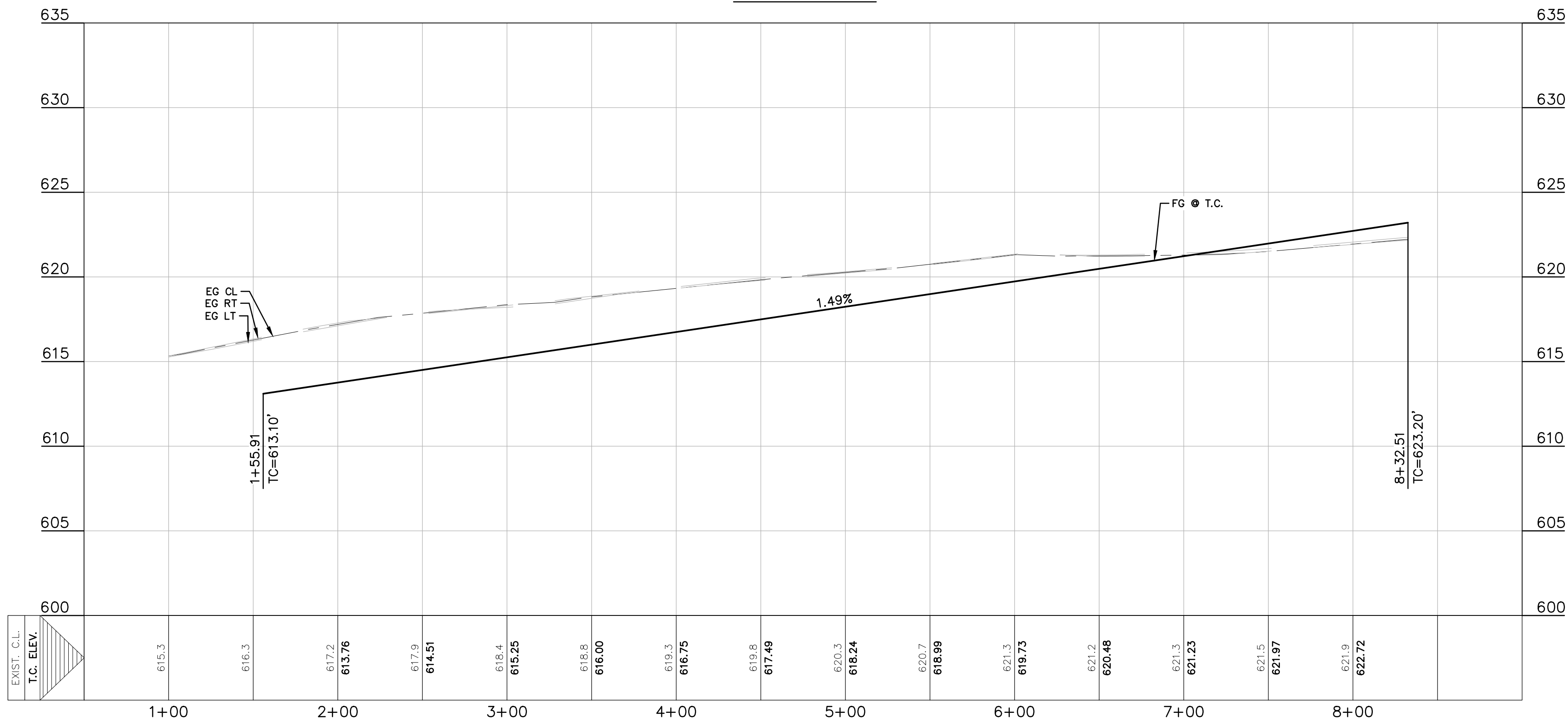
**SHEET  
C4.04**



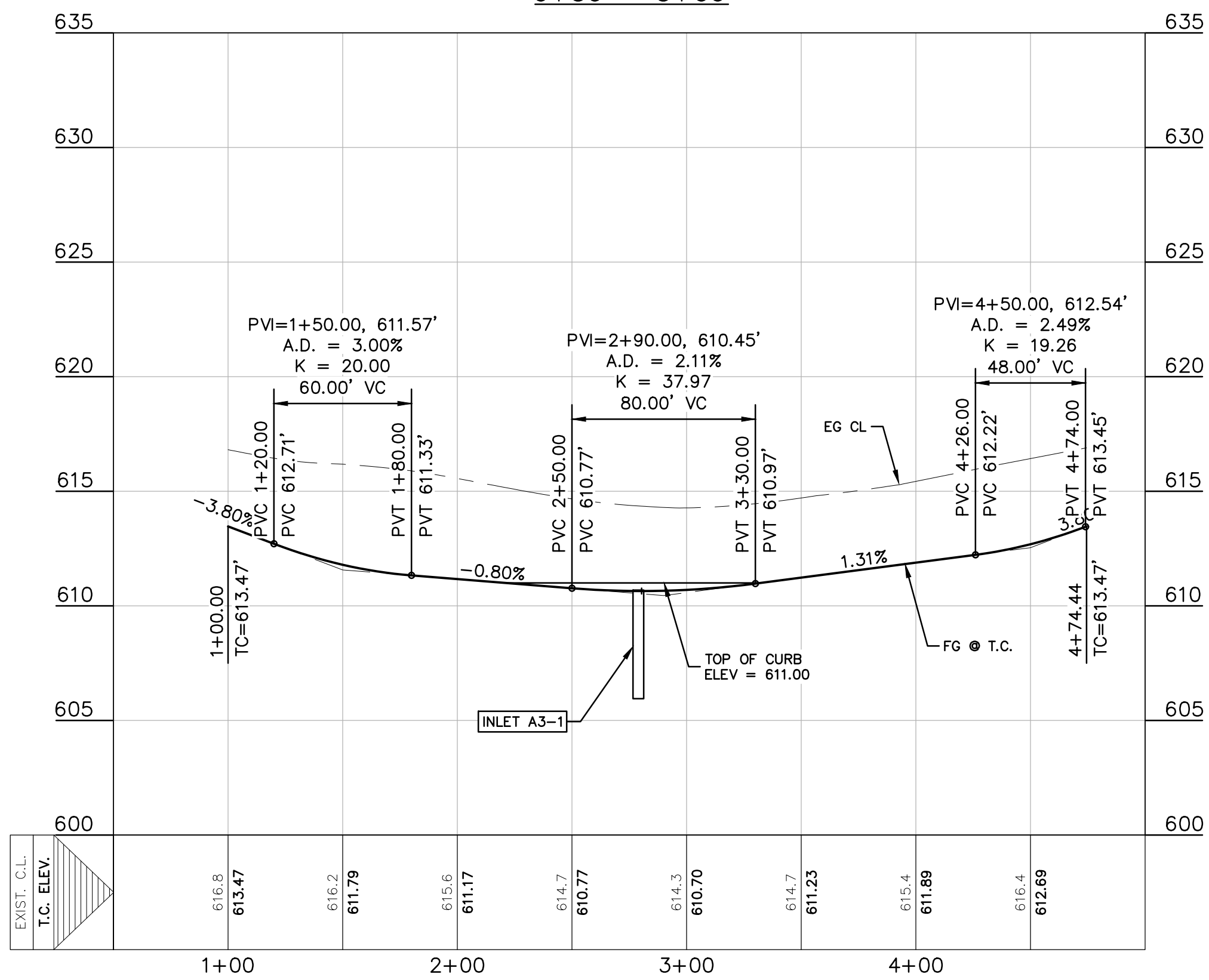
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SWEET OLIVE  
0+50 - 9+00



SWEET OLIVE CUL-DE-SAC  
0+50 - 5+00



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

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HEERDE  
93047  
LICENSED PROFESSIONAL ENGINEER

07/20/2020

SWEET OLIVE PLAN &  
PROFILE

PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	DATE

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

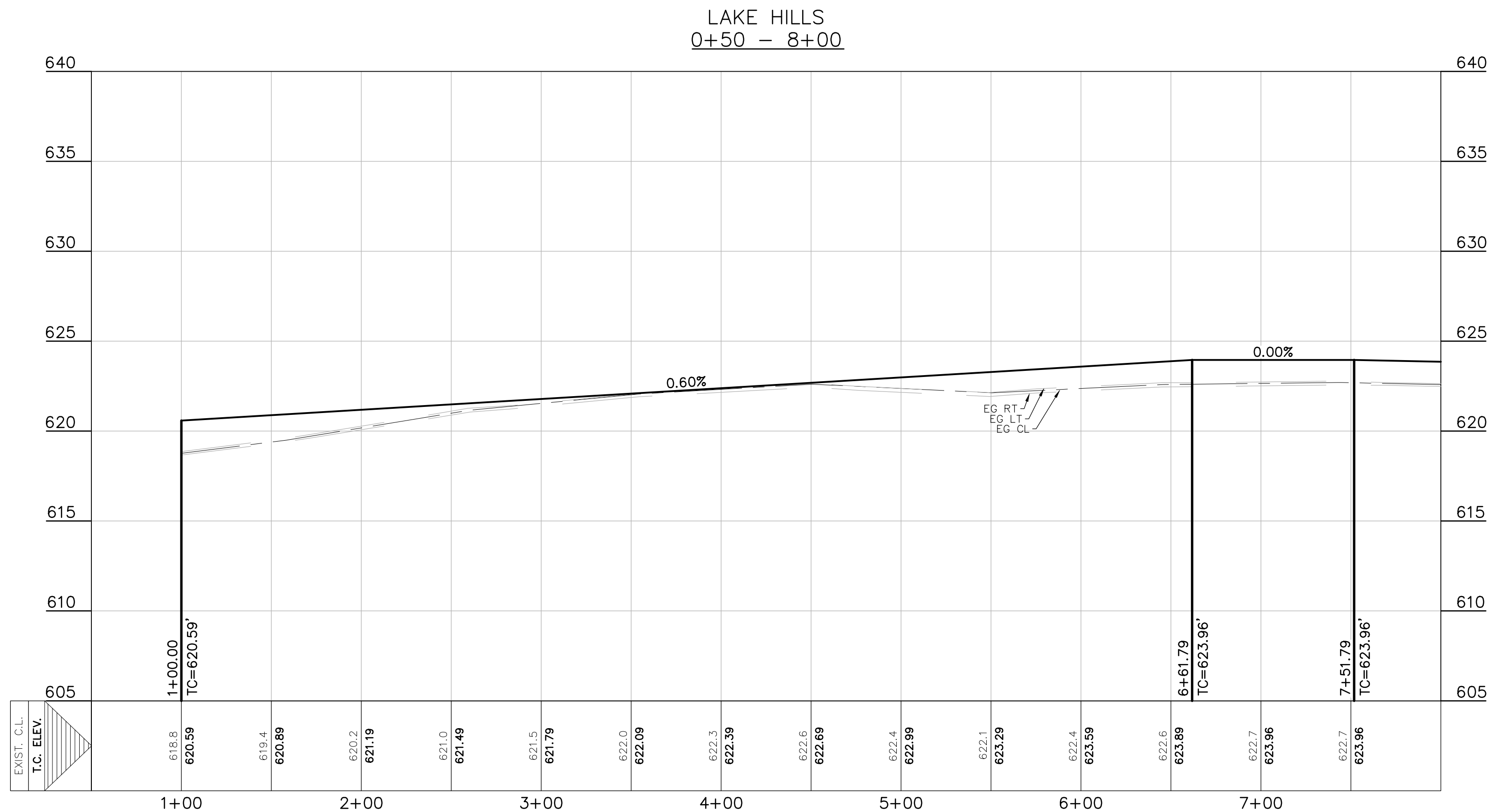
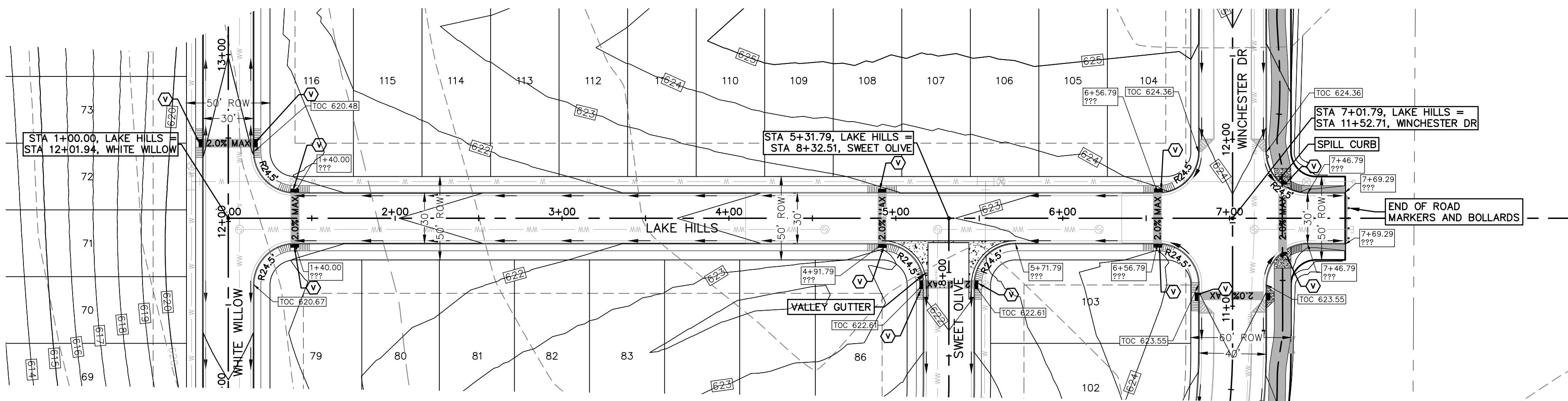
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SHEET

C4.05



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

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HEERDE  
93047  
LICENSED PROFESSIONAL ENGINEER

07/20/2020

LAKE HILLS PLAN &  
PROFILE  
PARKSIDE SUBDIVISION  
PHASE 1

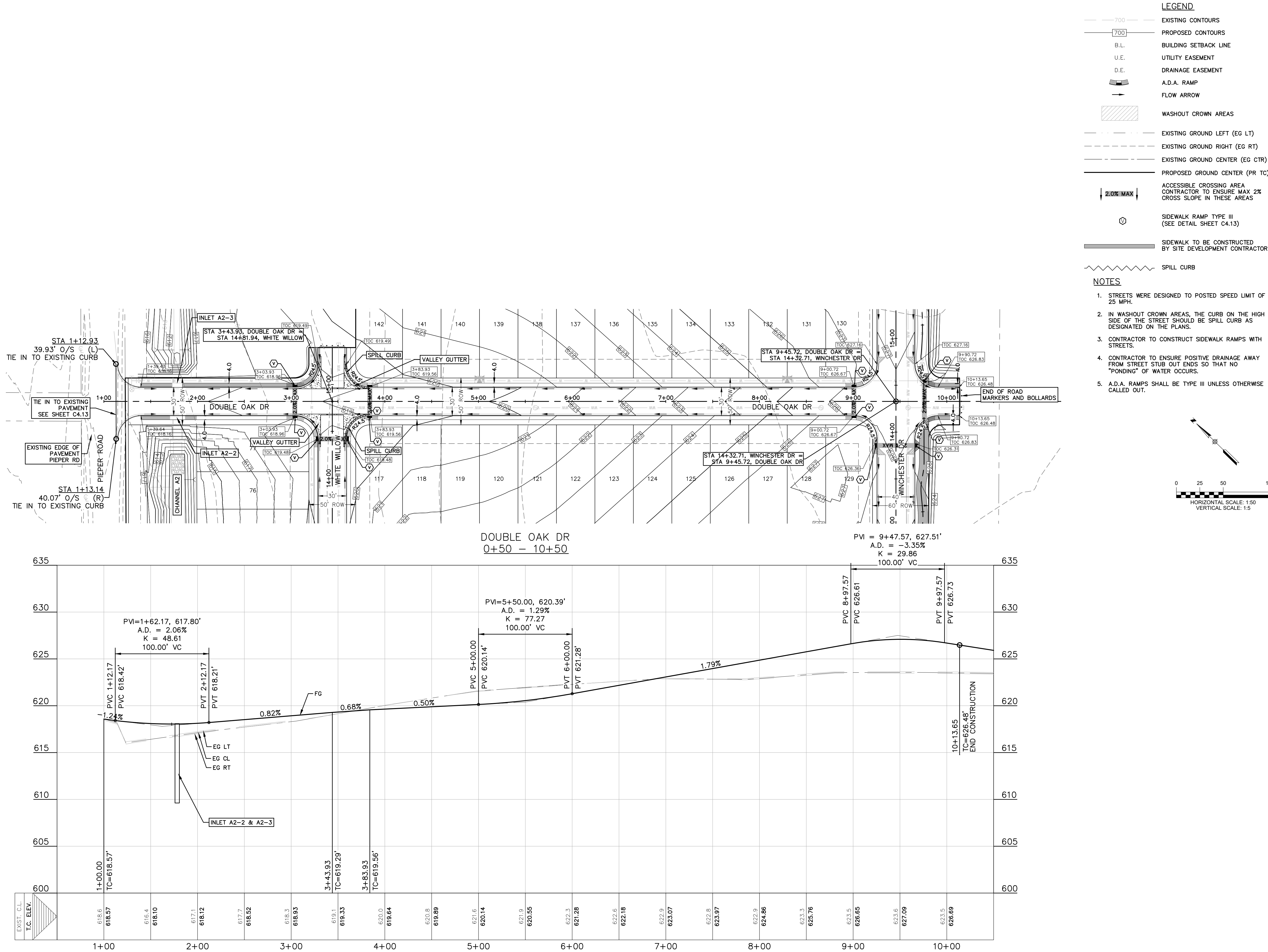
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DATE: JULY 2020  
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REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

**SHEET**  
**C4.06**

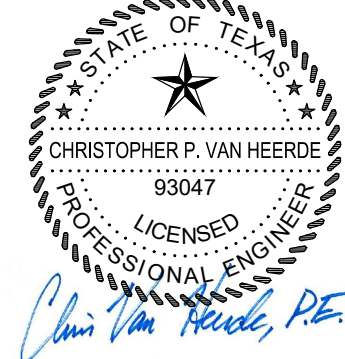


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THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY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

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

**DOUBLE OAK DRIVE**  
**PLAN & PROFILE**  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

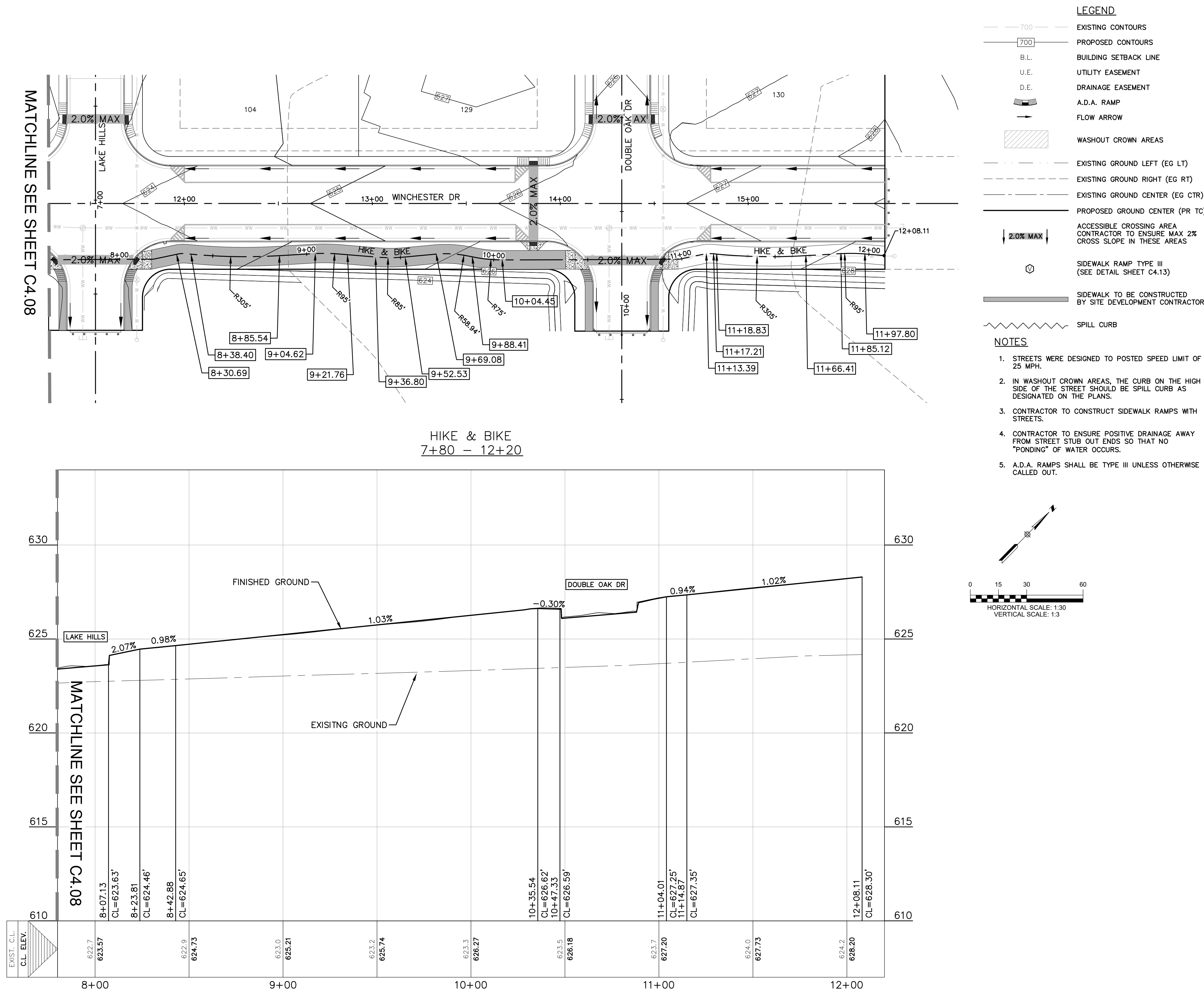
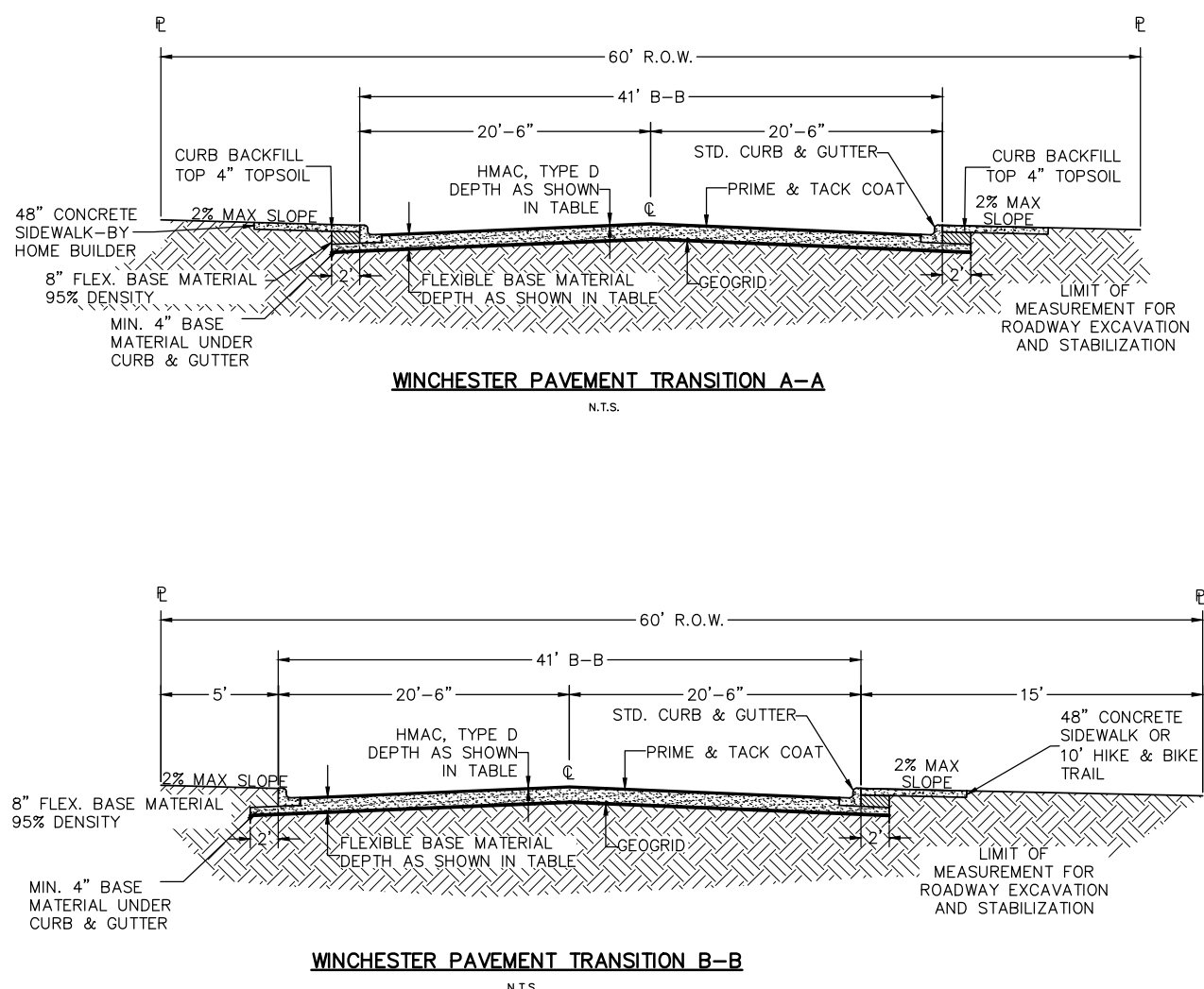
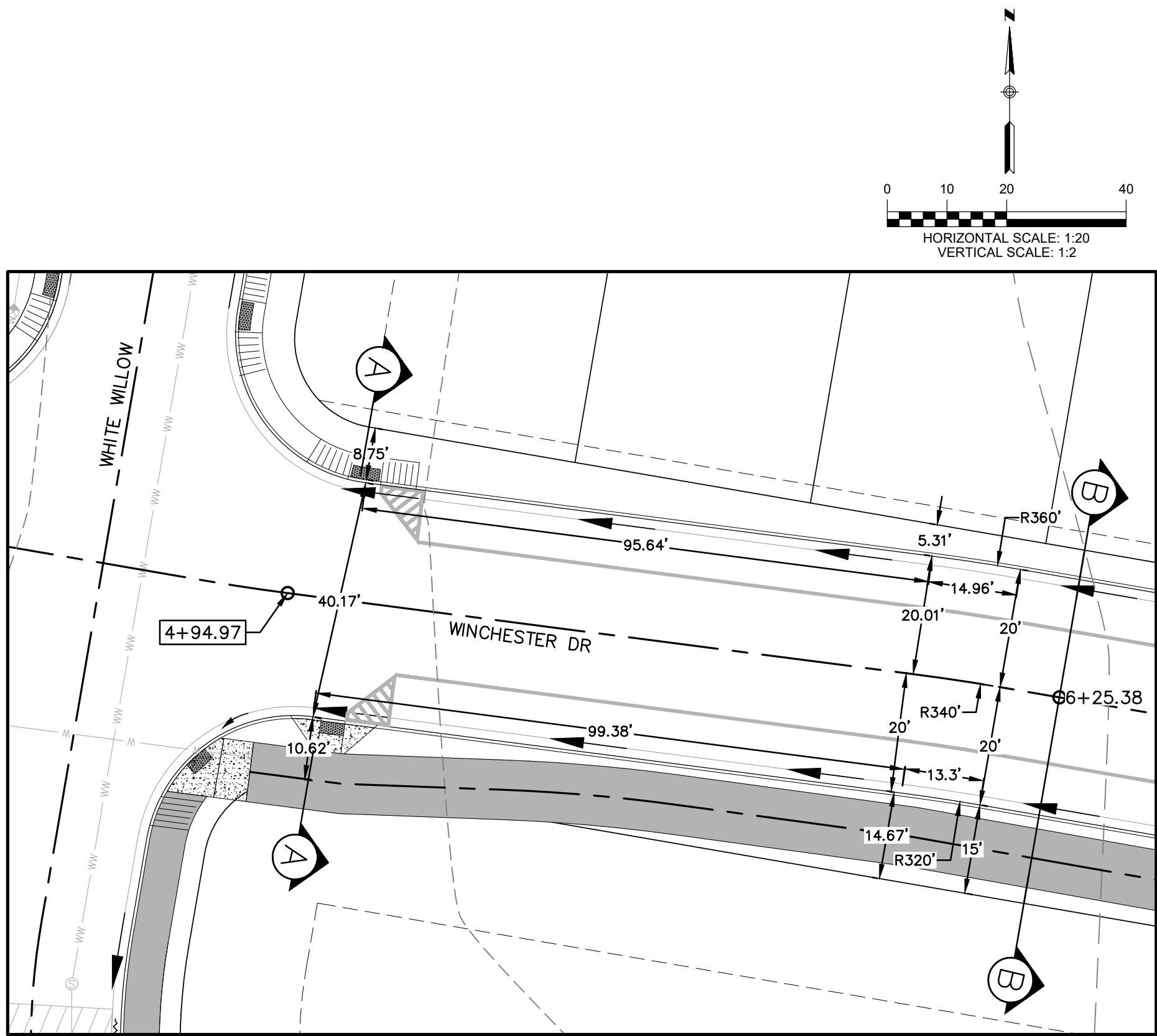
HMT PROJECT NO.:  
031.060

**SHEET**  
**C4.07**









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

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HEERDE  
93047  
LICENSED PROFESSIONAL ENGINEER

07/20/2020

**HIKE & BIKE PLAN & PROFILE**  
(2 OF 2)  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SMH

HMT PROJECT NO.:  
031.060

**SHEET**  
**C4.09**



Drawing Name: N:\\_Projects\031 - DR Heron\031.060 - 175 Ac. Friesenhain Cda\Phase 1\City Approval Cda\031.60\_STREET\_SIGN.dwg User: callym-m Jul 20, 2020 - 2:22pm

SIGNAGE NOTES

INSTALLATION

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

MOUNTING

THE WEDGE ANCHOR STEEL SYSTEM AND THIN-WALLED TUBING POST SHALL BE USED FOR SIGNS WITH UP TO 10 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (TWT) - 08.

THE TRIANGULAR SLIP BASE SYSTEM AND 10 BWG TUBING POST SHALL BE USED FOR SIGNS THAT HAVE 10 TO 16 SQUARE FEET OF SIGN AREA. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (SLIP-1-3) - 08.

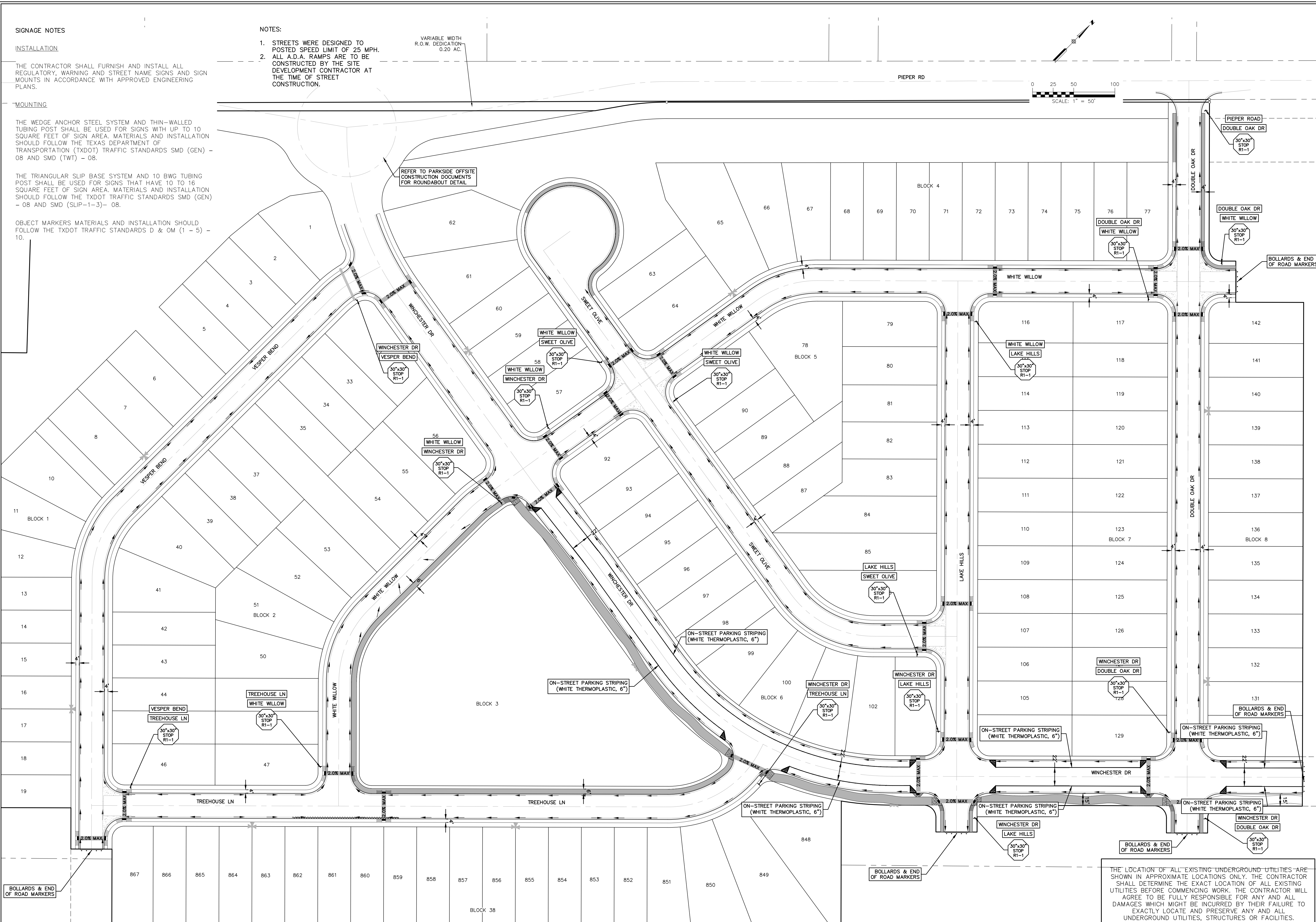
OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D & OM (1 - 5) - 10.

NOTES:

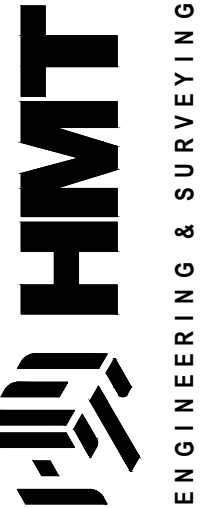
- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
- ALL A.D.A. RAMPS ARE TO BE CONSTRUCTED BY THE SITE DEVELOPMENT CONTRACTOR AT THE TIME OF STREET CONSTRUCTION.

VARIABLE WIDTH  
R.O.W. DEDICATION  
0.20 AC.

REFER TO PARKSIDE OFFSITE  
CONSTRUCTION DOCUMENTS  
FOR ROUNDABOUT DETAIL



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

SIGNAGE PLAN

PARKSIDE SUBDIVISION  
PHASE 1

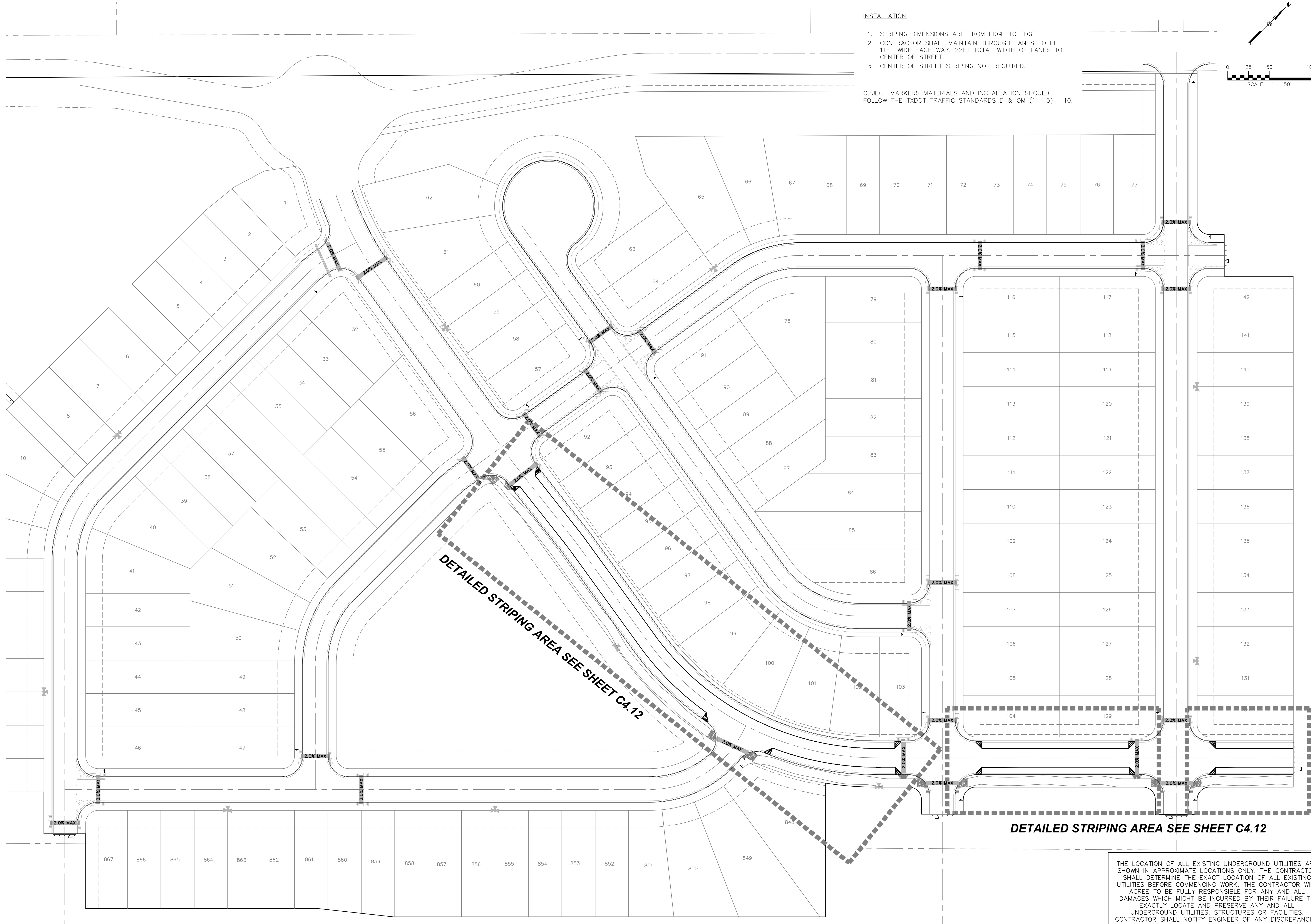
NO.	REVISION	DESCRIPTION	DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

SHEET  
C4.10



Drawing Name: N:\\_Projects\031 - DR Horton\031.060 - 175 Ac Friesenham Cda\Phase 1\City Approval Cda\031.60\_STREET STRIPES.dwg User: cobbym-m Jul 20, 2020 - 2:22pm

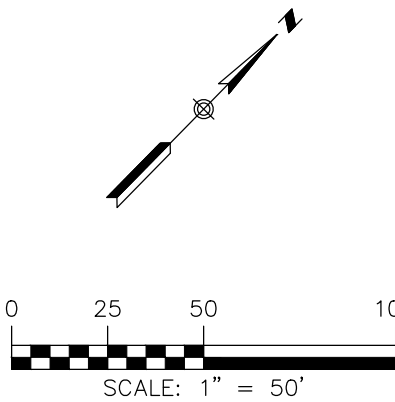


STRIPING NOTES

INSTALLATION

1. STRIPING DIMENSIONS ARE FROM EDGE TO EDGE.
2. CONTRACTOR SHALL MAINTAIN THROUGH LANES TO BE 11FT WIDE EACH WAY, 22FT TOTAL WIDTH OF LANES TO CENTER OF STREET.
3. CENTER OF STREET STRIPING NOT REQUIRED.

OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D & OM (1 - 5) - 10.



07/20/2020

OVERALL STRIPING PLAN  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH

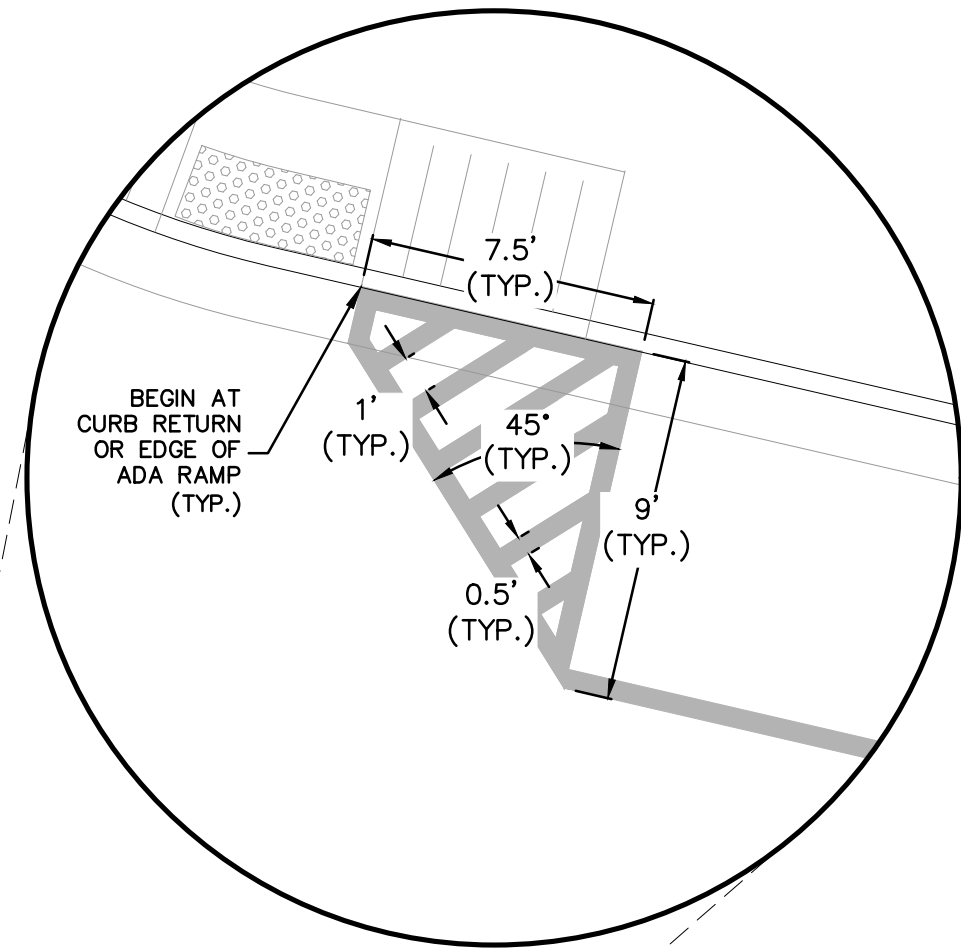
HMT PROJECT NO.:  
031.060

SHEET  
C4.11

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



Drawing Name: N:\\_Projects\031 - DR Horton\031.060 - 175 Ac Friesenham Cda\Cda\Phase 1\City Approval Cda\031.60\_STREET STRIPES.dwg User: callynn-m Jul 20, 2020 - 2:22pm

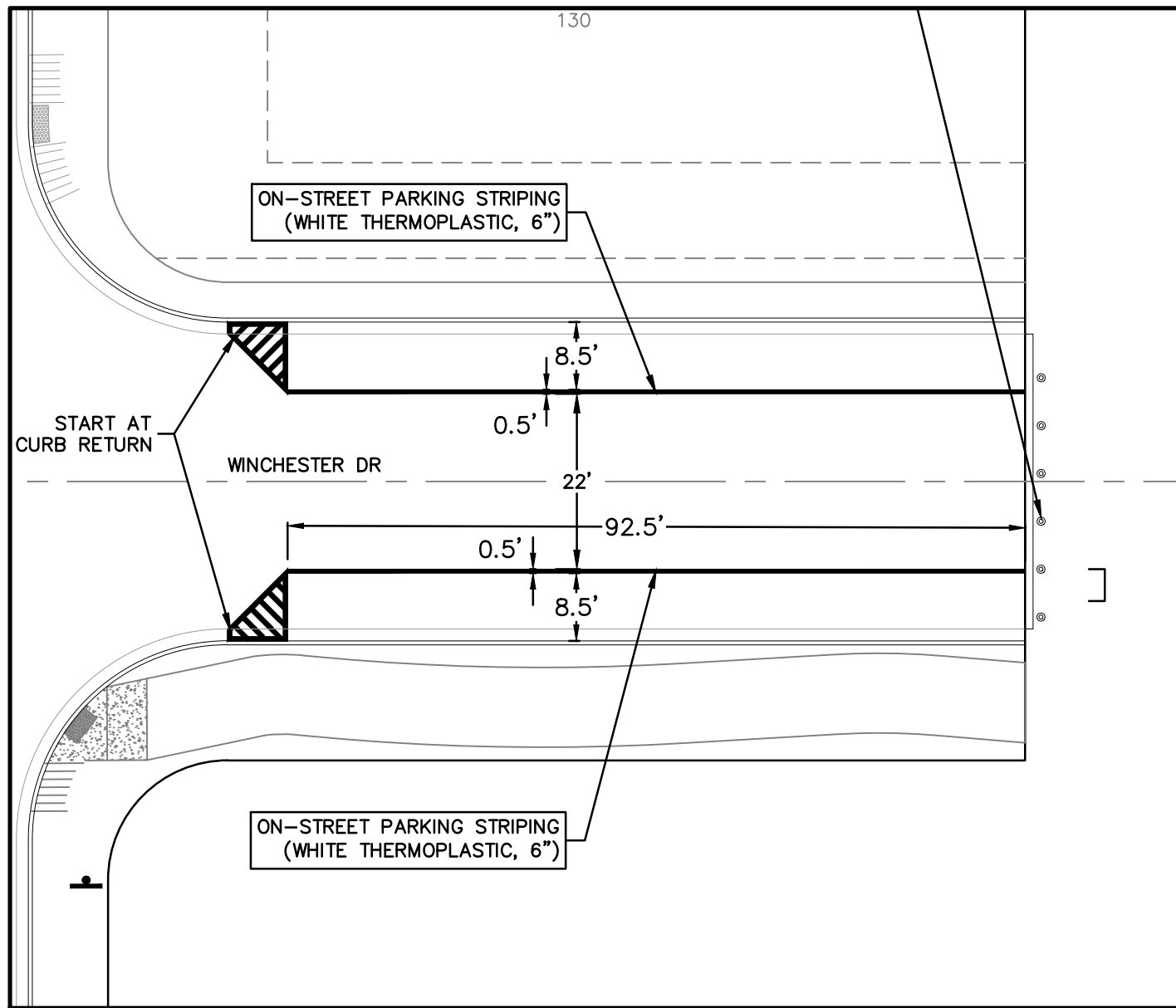
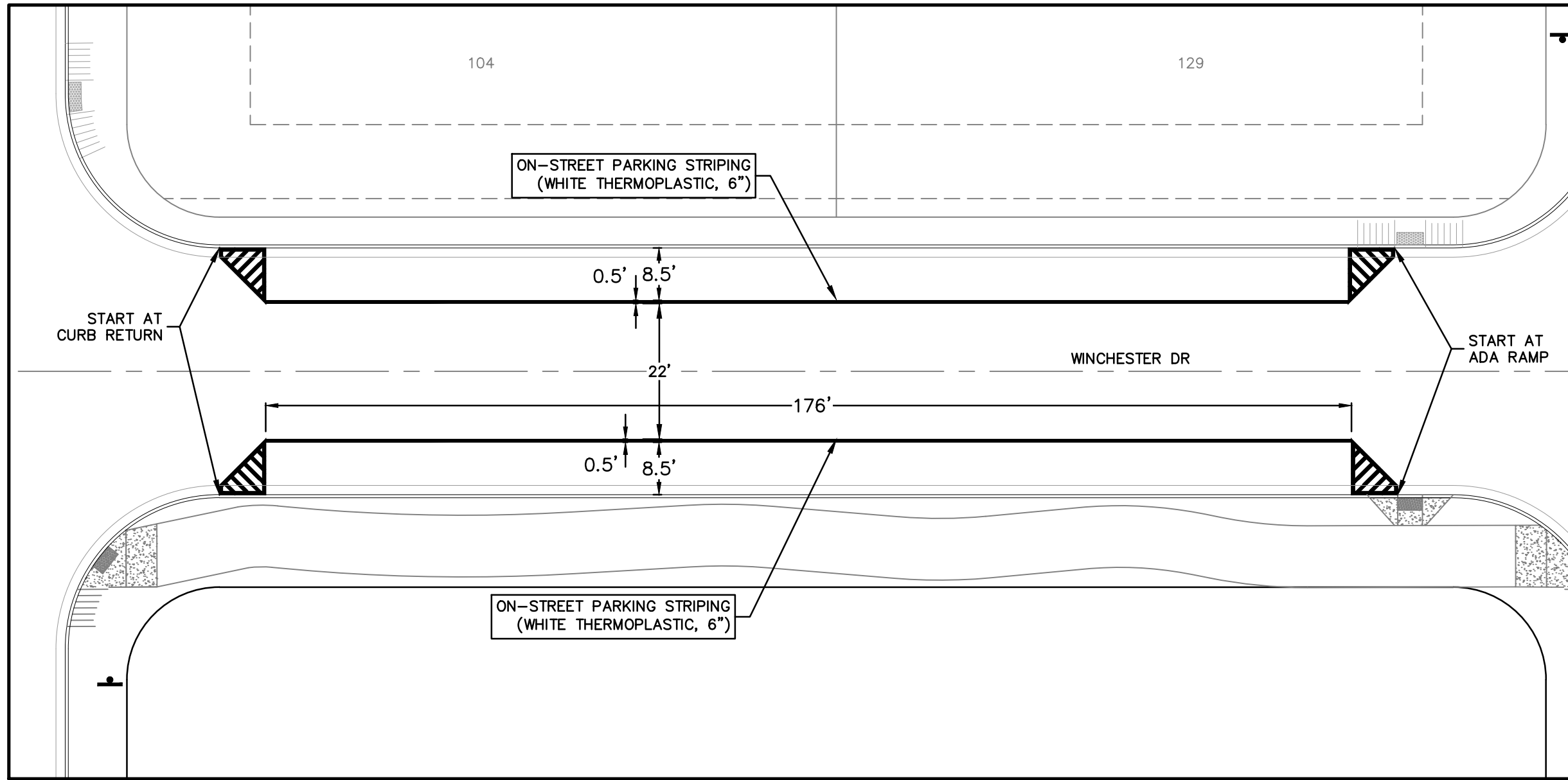
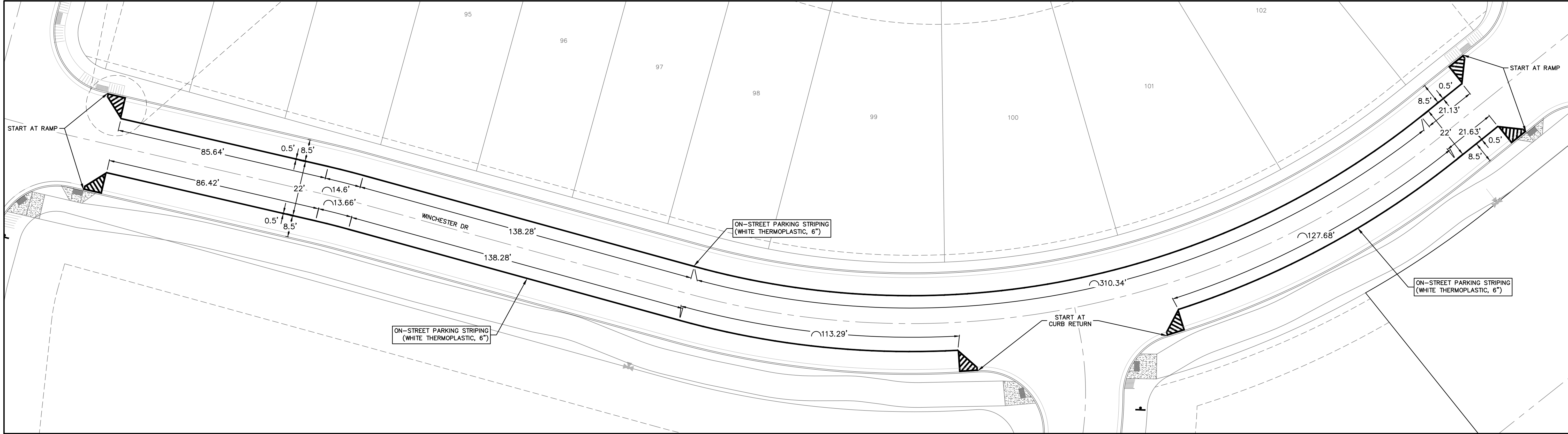
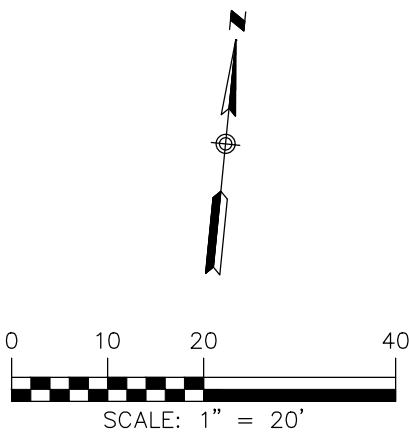


STRIPING NOTES

INSTALLATION

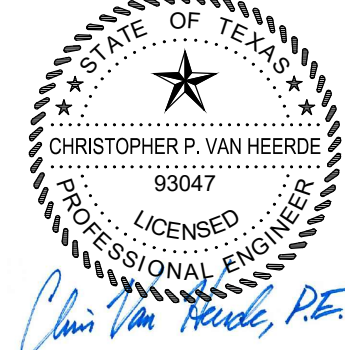
1. STRIPING DIMENSIONS ARE FROM EDGE TO EDGE.
2. CONTRACTOR SHALL MAINTAIN THROUGH LANES TO BE 11FT WIDE EACH WAY, 22FT TOTAL WIDTH OF LANES TO CENTER OF STREET.
3. CENTER OF STREET STRIPING NOT REQUIRED.

OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TXDOT TRAFFIC STANDARDS D & OM (1 - 5) - 10.



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

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

DETAILED STRIPING PLAN  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

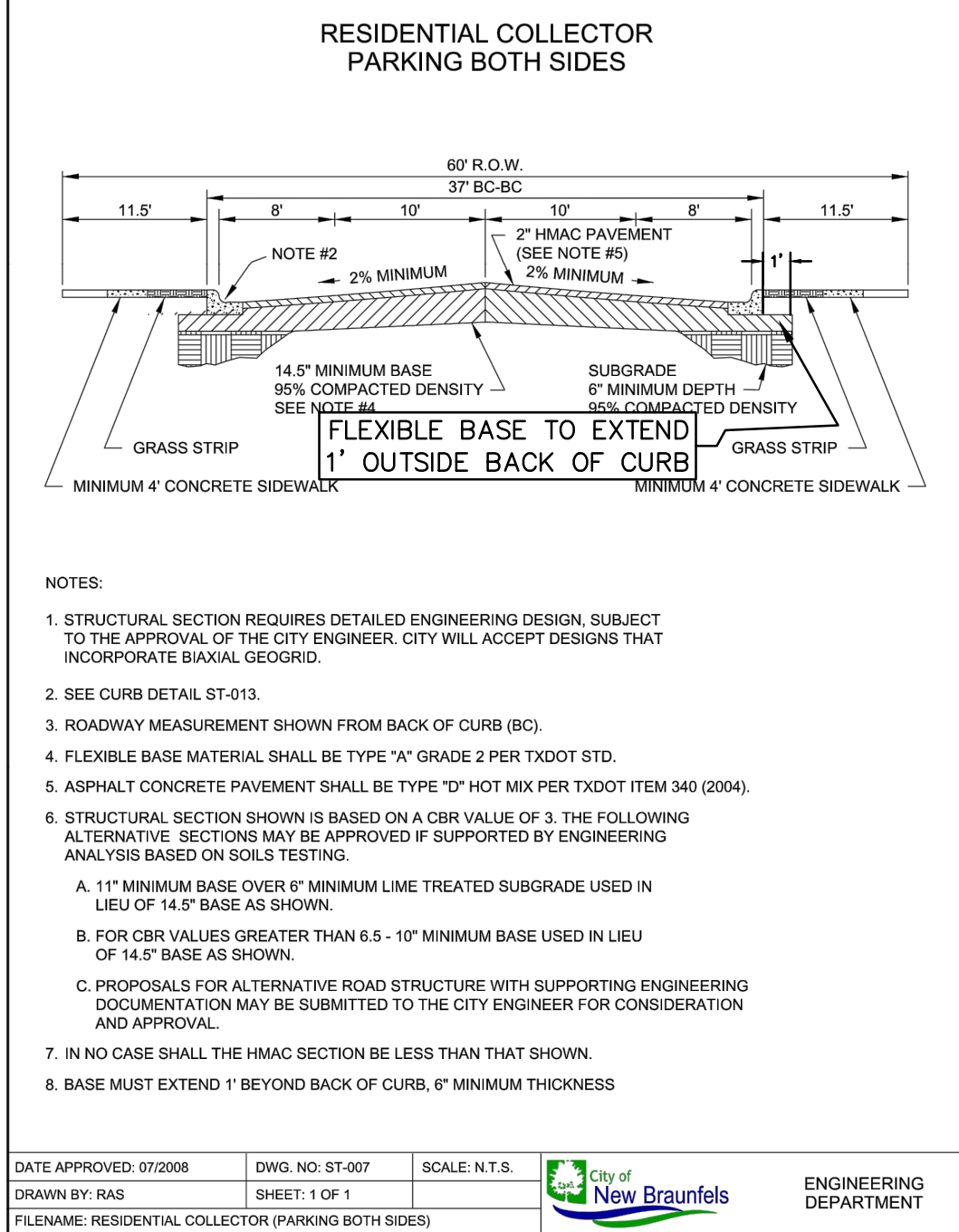
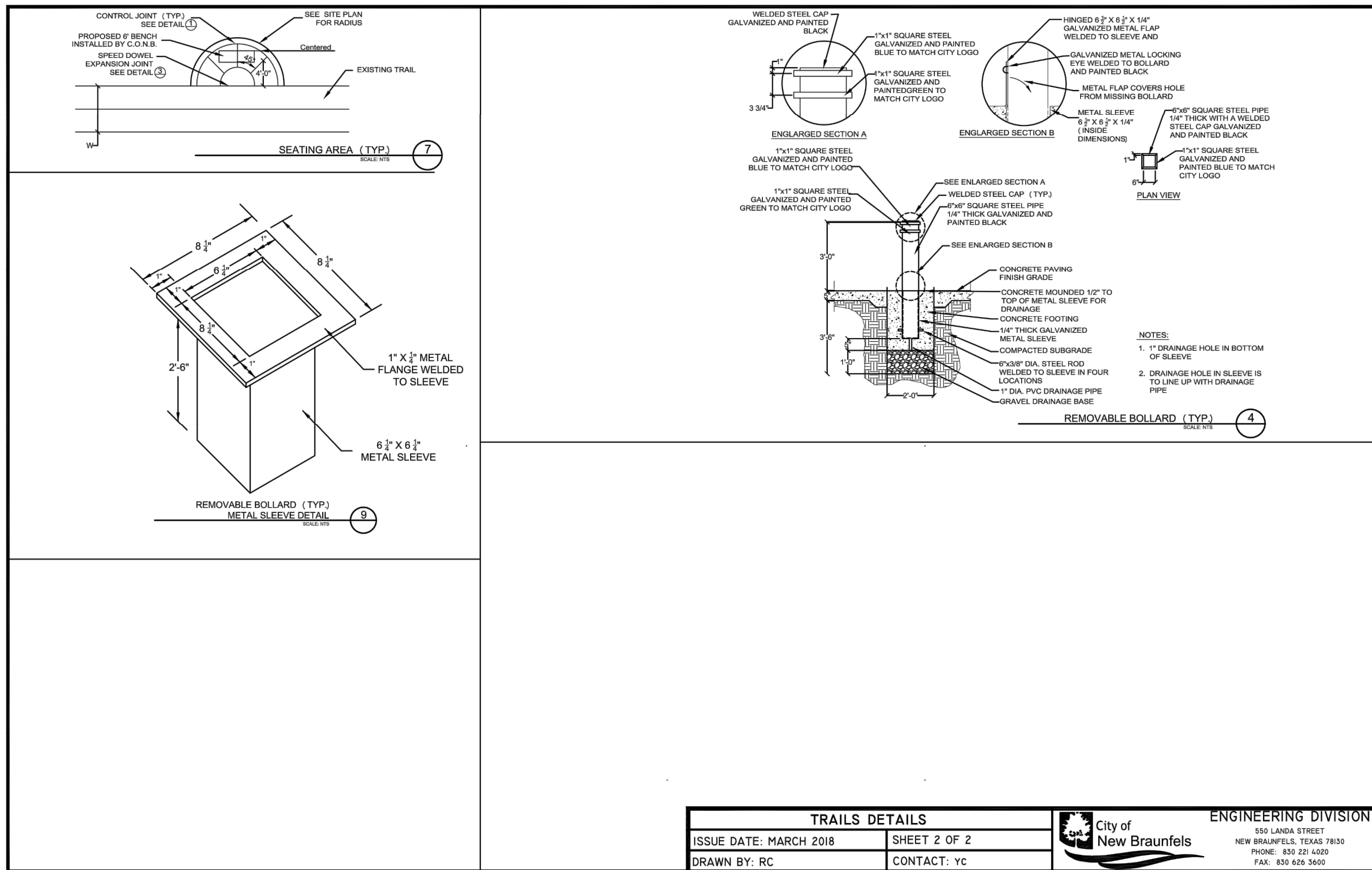
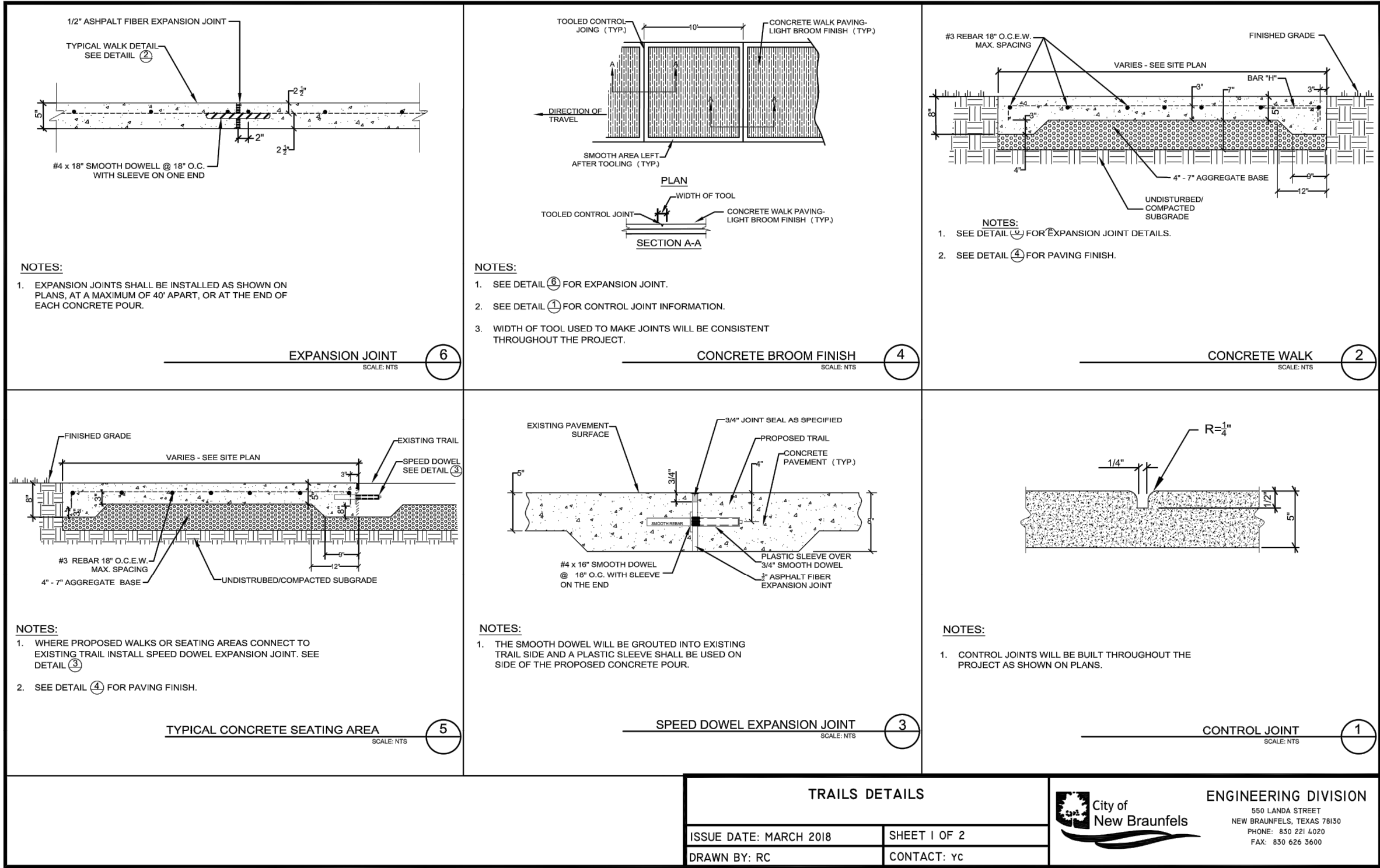
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C4.12



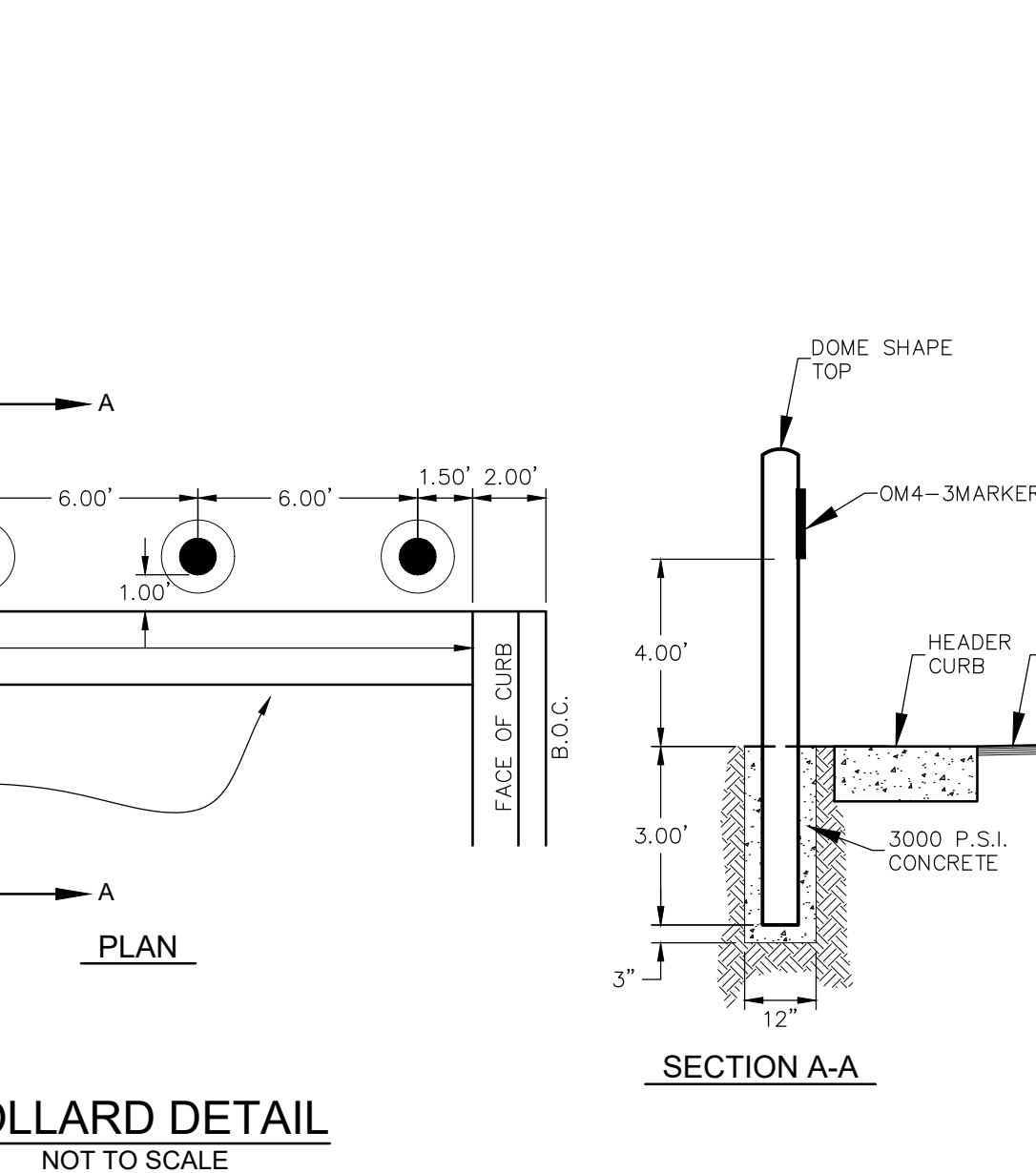
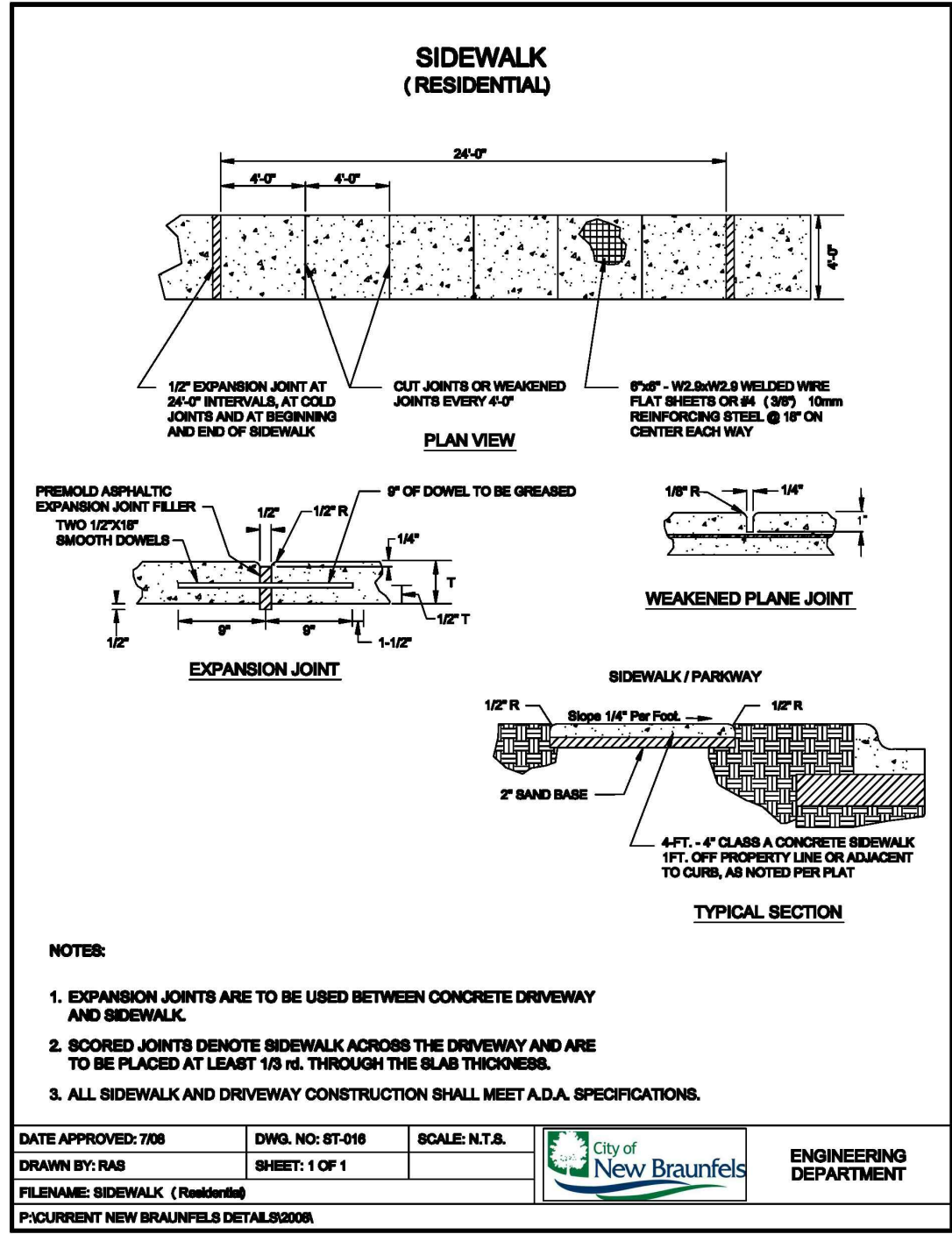
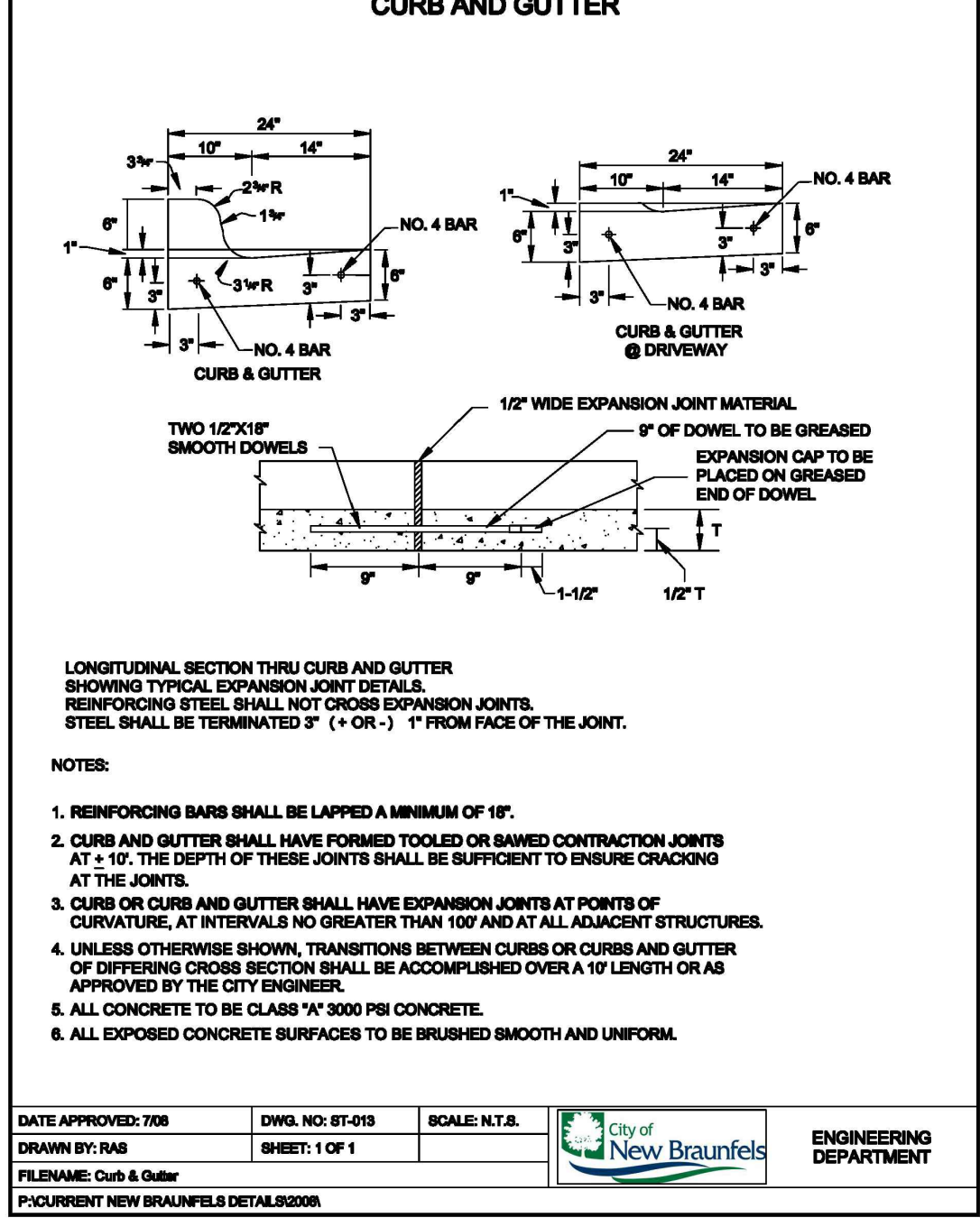
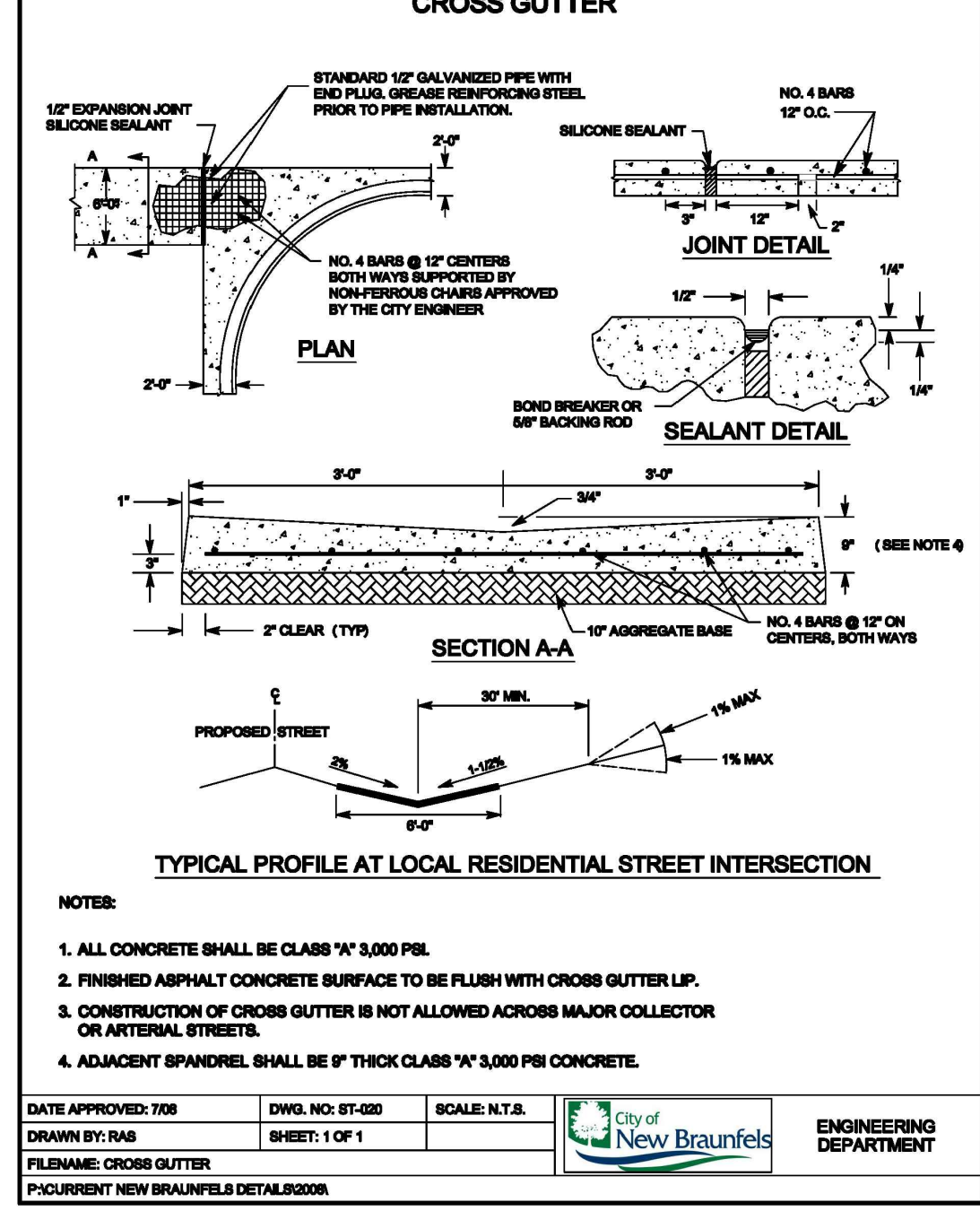
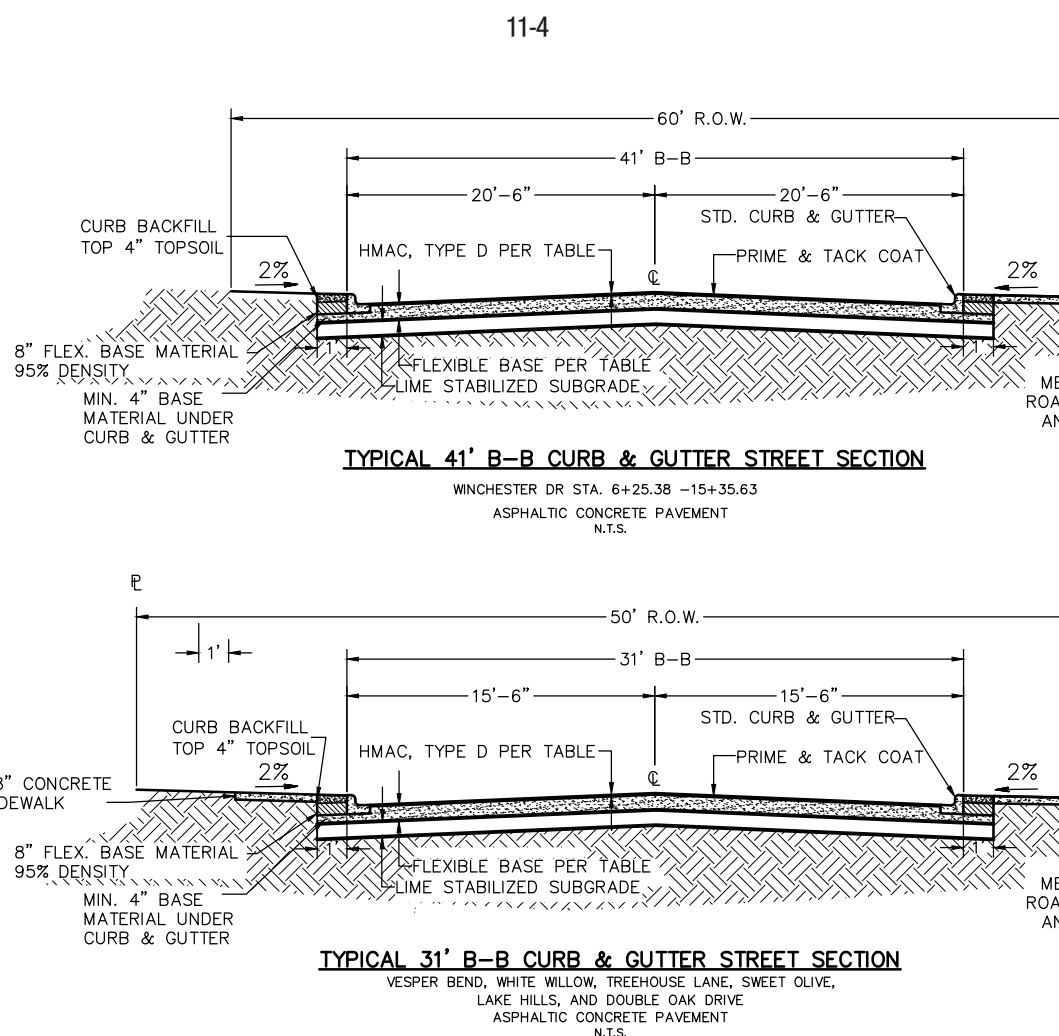
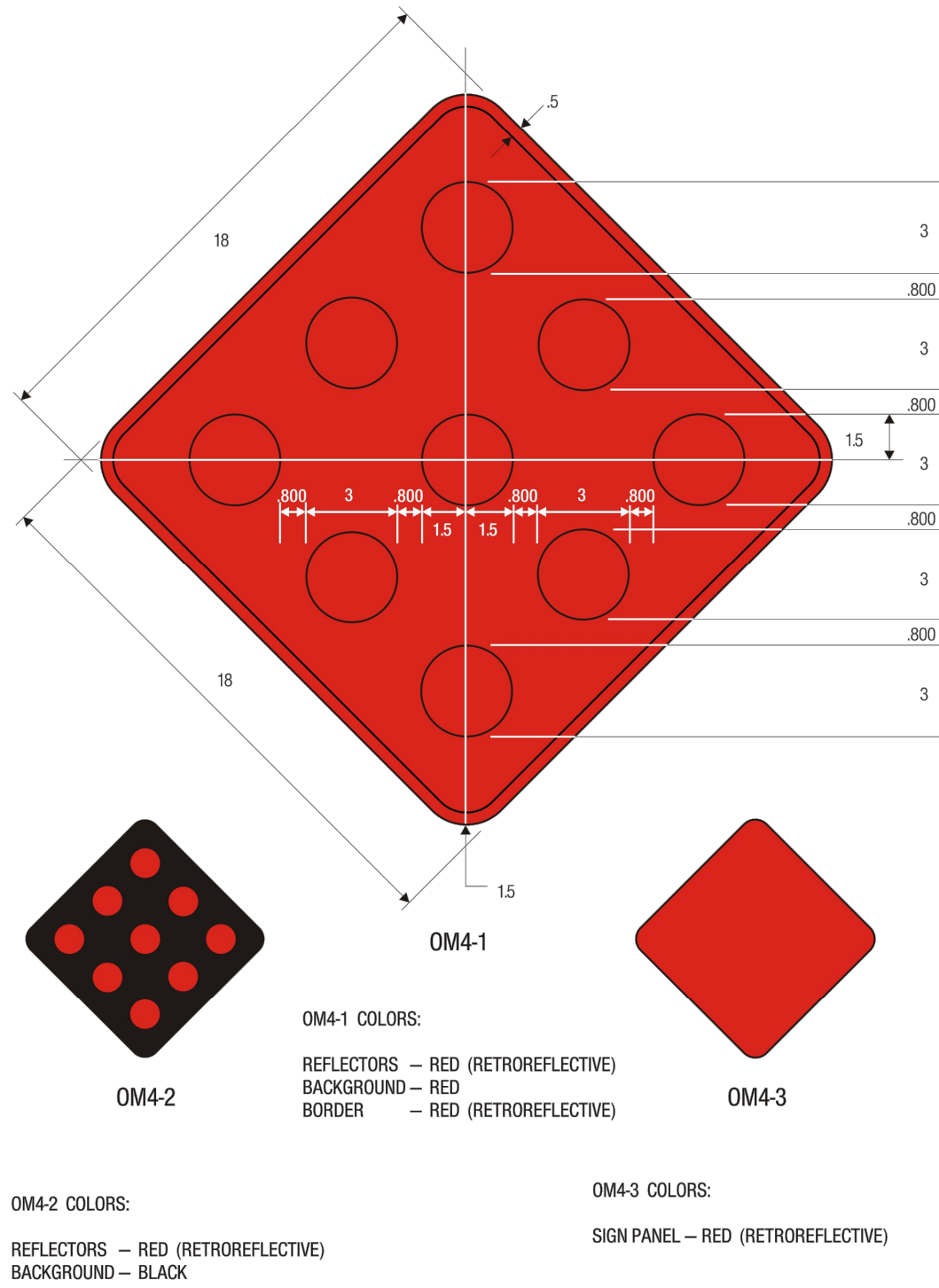


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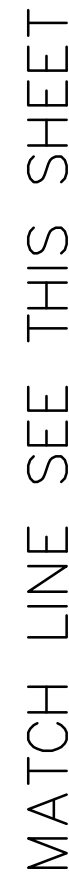
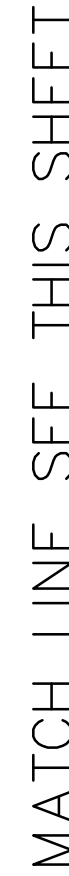




ALL PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE TO THE SUBSURFACE EXPLORATION AND PAVEMENT ANALYSIS, PROPOSED NEW STREETS, PARKSIDE SUBDIVISION UNIT '1', BY INTEC OF SAN ANTONIO, LP, DATED AUGUST 6, 2018.



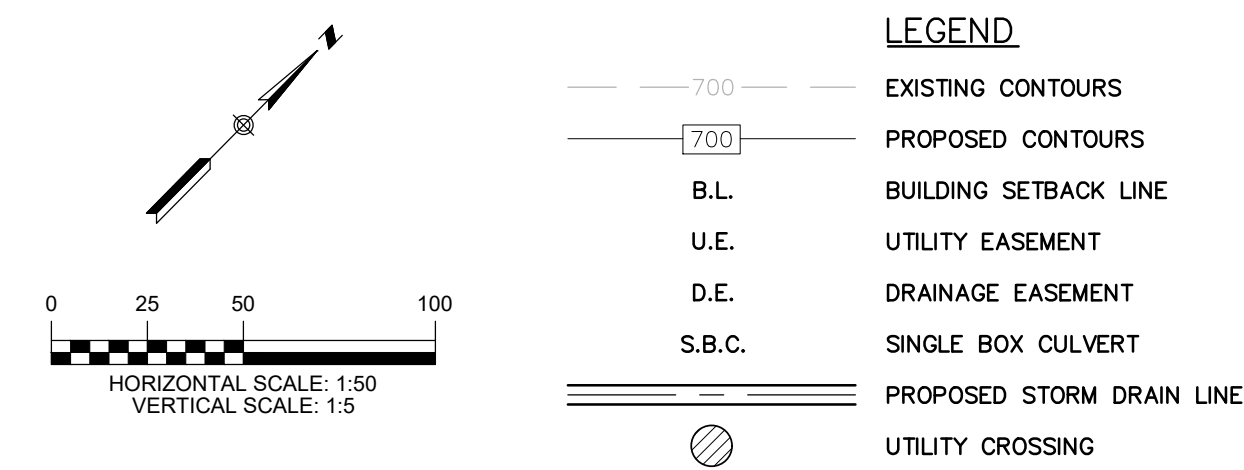
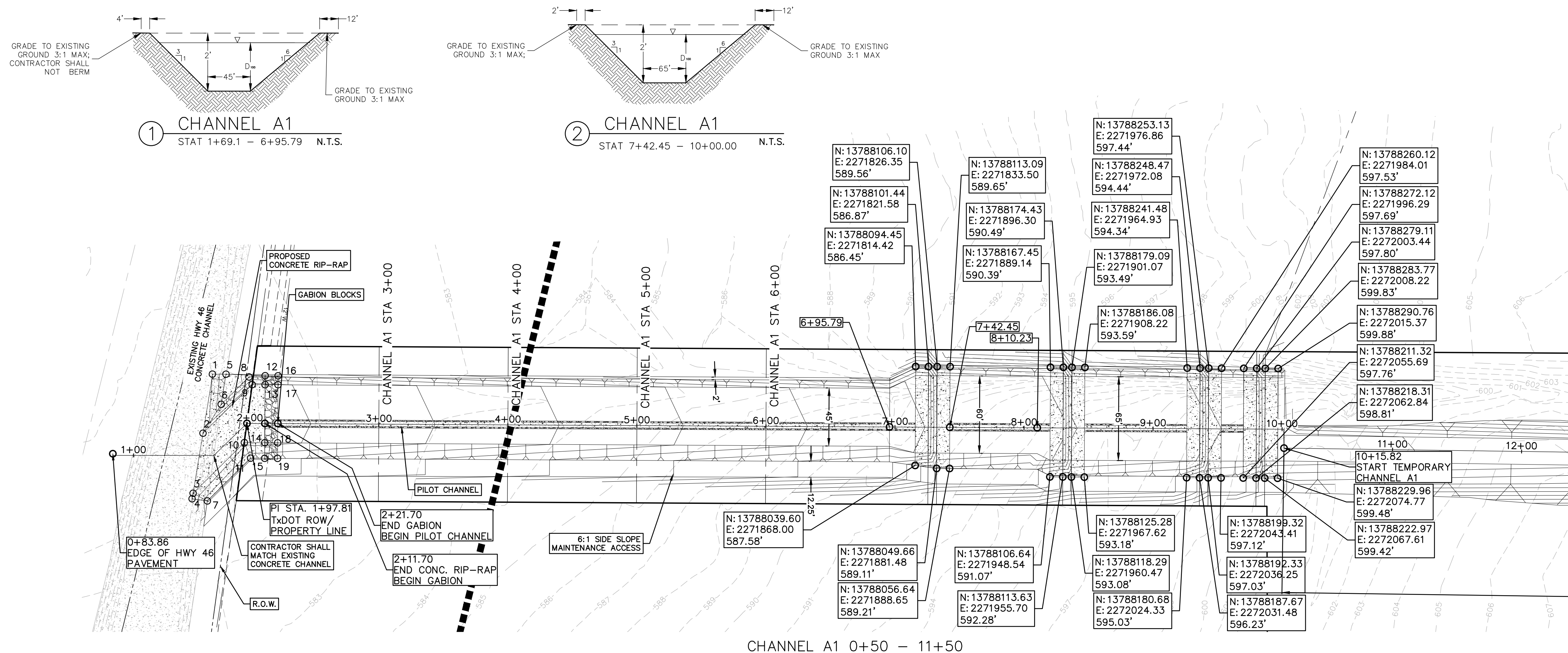




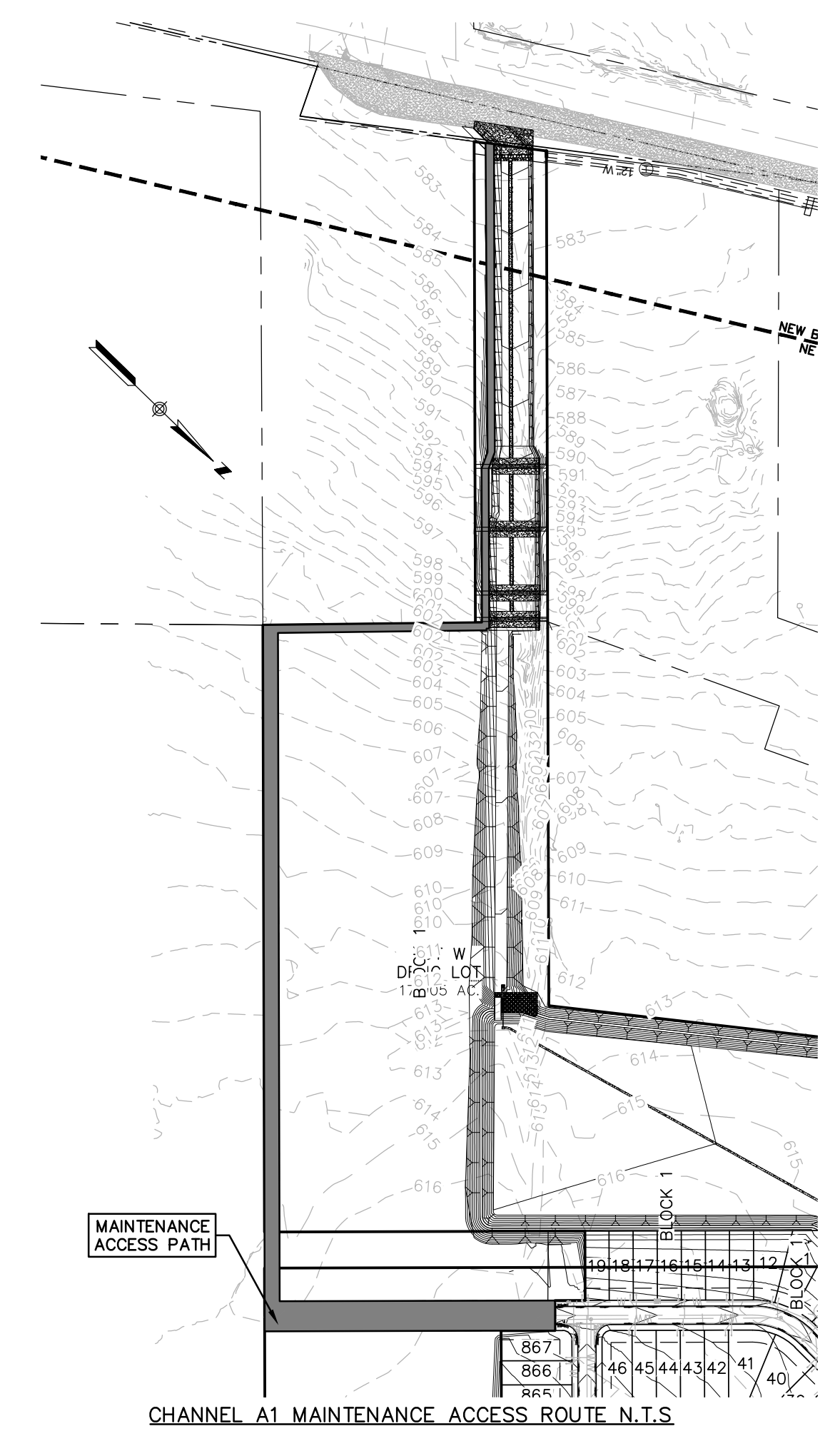
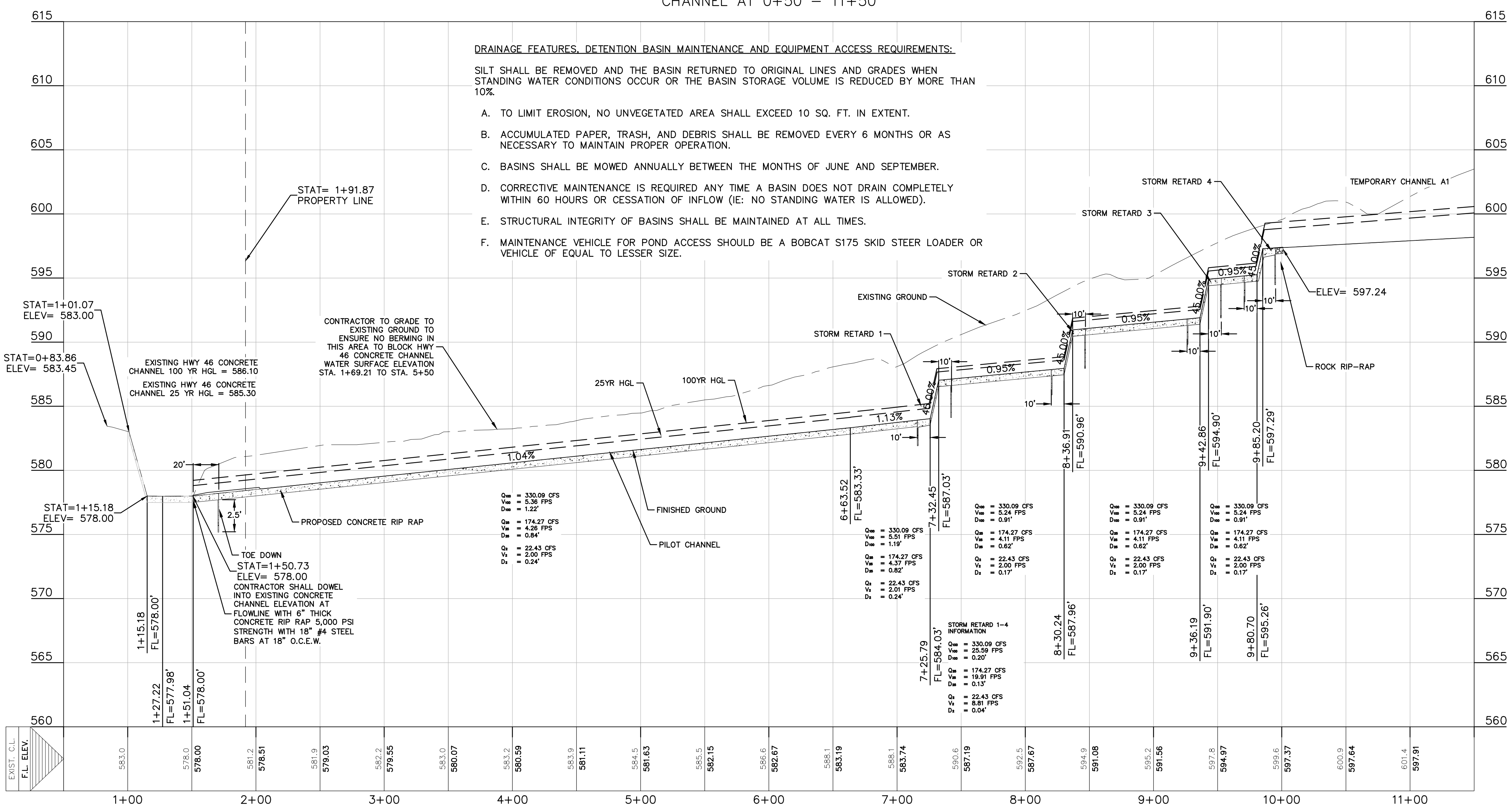
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Drawing Name: N:\Projects\031 - DR Horton\031.060 - 175 Ac Friesenham Cda\Phase 1\City Approval Cda\031.060\_STIM\_P1.dwg User: callym-m Jul 20, 2020 - 2:22pm



Point Table				
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2	TOE OF CONC. RIP-RAP	13787669.49	2271457.91	578.10
3	TOE OF CONC. RIP-RAP	13787630.99	2271485.15	578.00
4	TOE OF CONC. RIP-RAP	13787627.40	2271487.61	0.00
5	TOP OF CONC. RIP-RAP	13787714.57	2271438.45	580.80
6	TOP OF CONC. RIP-RAP	13787695.32	2271452.21	580.65
7	TOP OF CONC. RIP-RAP	13787634.50	2271497.19	580.58
8	TOP OF CONC. RIP-RAP	13787725.56	2271452.57	581.10
9	TOE OF CONC. RIP-RAP	13787723.09	2271458.54	578.85
10	TOE OF CONC. RIP-RAP	13787686.82	2271485.80	578.67
Point Table				
Point #	Row Description	Northing	Easting	Elevation
11	TOP OF CONC. RIP-RAP	13787681.62	2271497.74	580.75
12	EDGE OF CONC. RIP-RAP	13787735.04	2271460.84	581.11
13	TOE OF CONC. RIP-RAP	13787730.08	2271465.69	578.80
14	TOE OF CONC. RIP-RAP	13787697.88	2271497.14	578.71
15	TOP OF CONC. RIP-RAP	13787689.26	2271505.56	580.71
16	TOP OF GABION	13787742.03	2271467.99	581.22
17	TOE OF GABION	13787737.06	2271472.85	578.90
18	TOE OF GABION	13787704.87	2271504.29	578.81
19	TOP OF GABION	13787696.25	2271512.71	580.81



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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

07/20/2020

**CHANNEL A1  
PLAN & PROFILE**  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

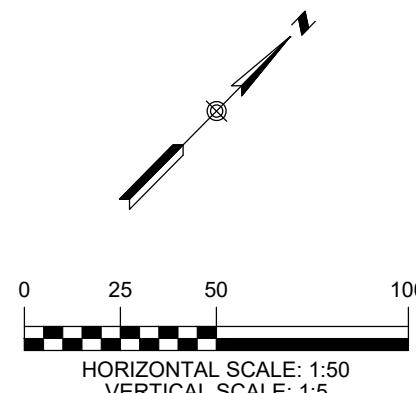
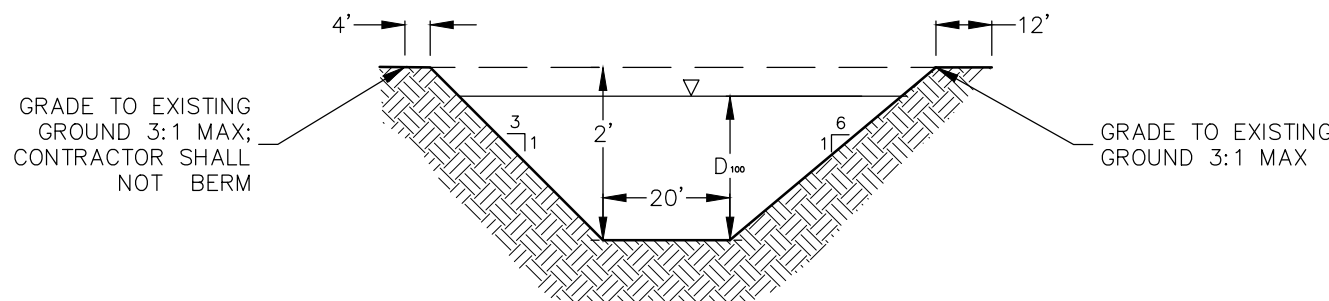
**SHEET  
C5.02**



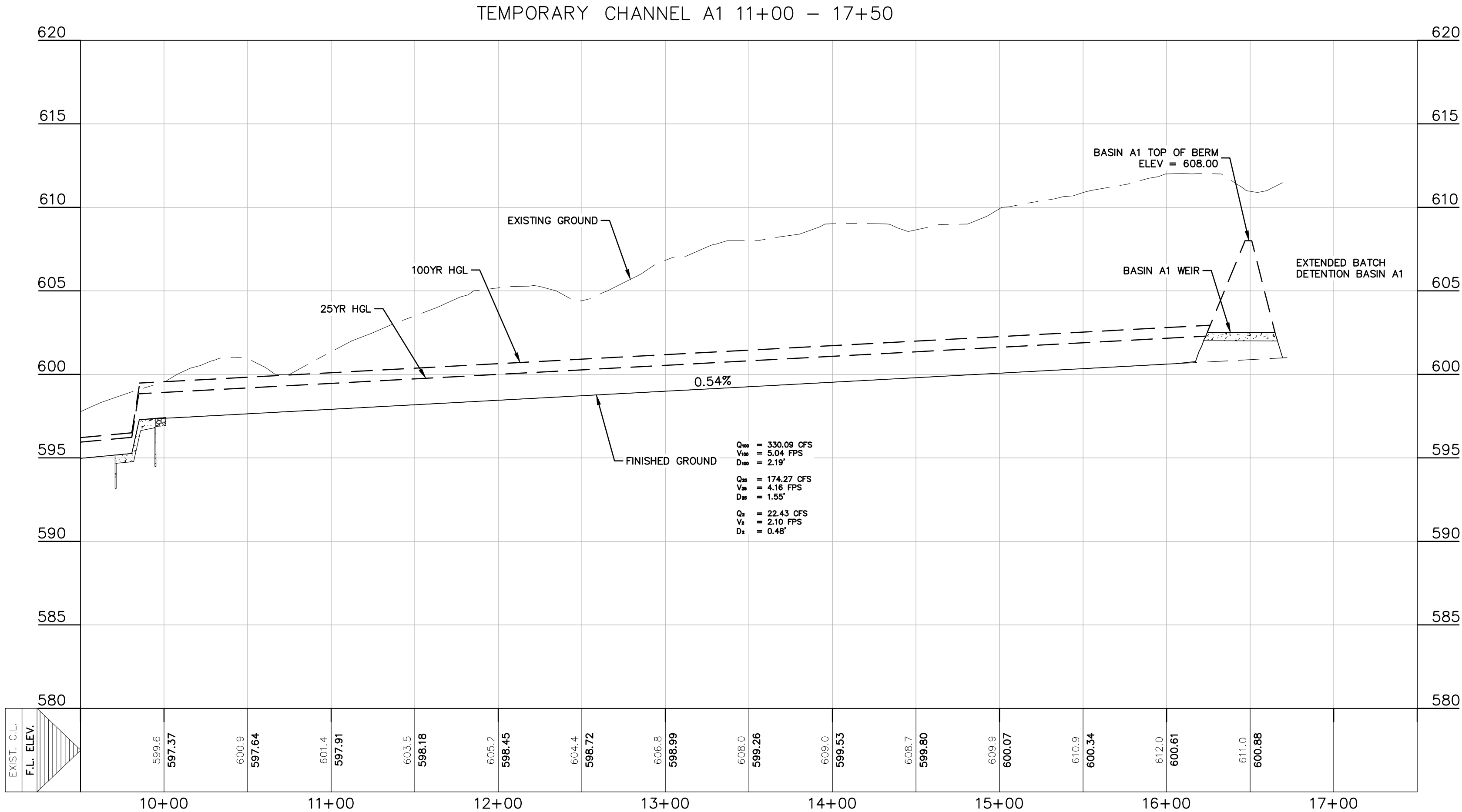
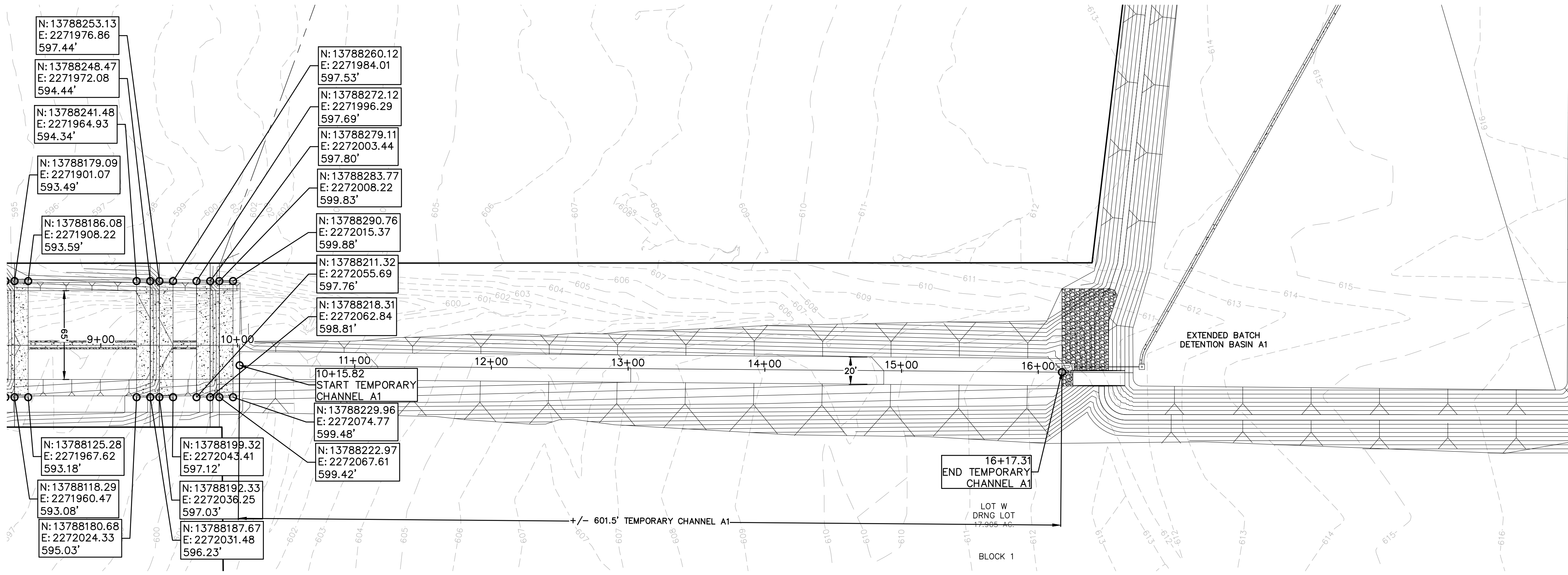
DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

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LEGEND	
	EXISTING CONTOURS
	PROPOSED CONTOURS
	B.L. BUILDING SETBACK LINE
	U.E. UTILITY EASEMENT
	D.E. DRAINAGE EASEMENT
	S.B.C. SINGLE BOX CULVERT
	PROPOSED STORM DRAIN LINE
	UTILITY CROSSING



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07/20/2020

TEMPORARY CHANNEL A1  
PLAN & PROFILE  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION DESCRIPTION	REVISION DATE

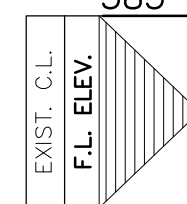
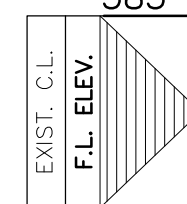
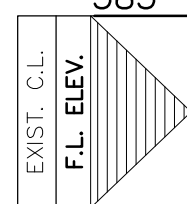
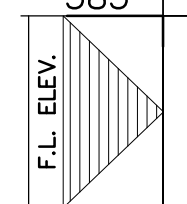
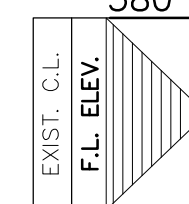
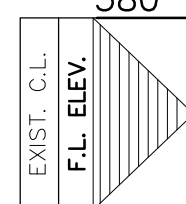
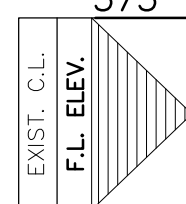
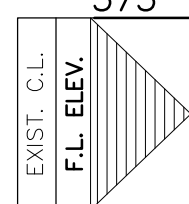
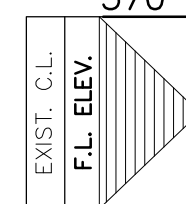
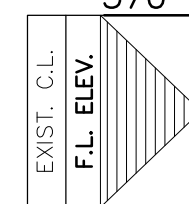
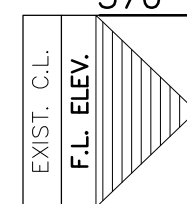
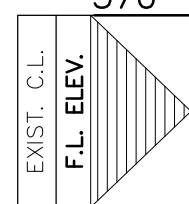
DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH

HMT PROJECT NO.:  
031.060

SHEET  
C5.03



F. MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.



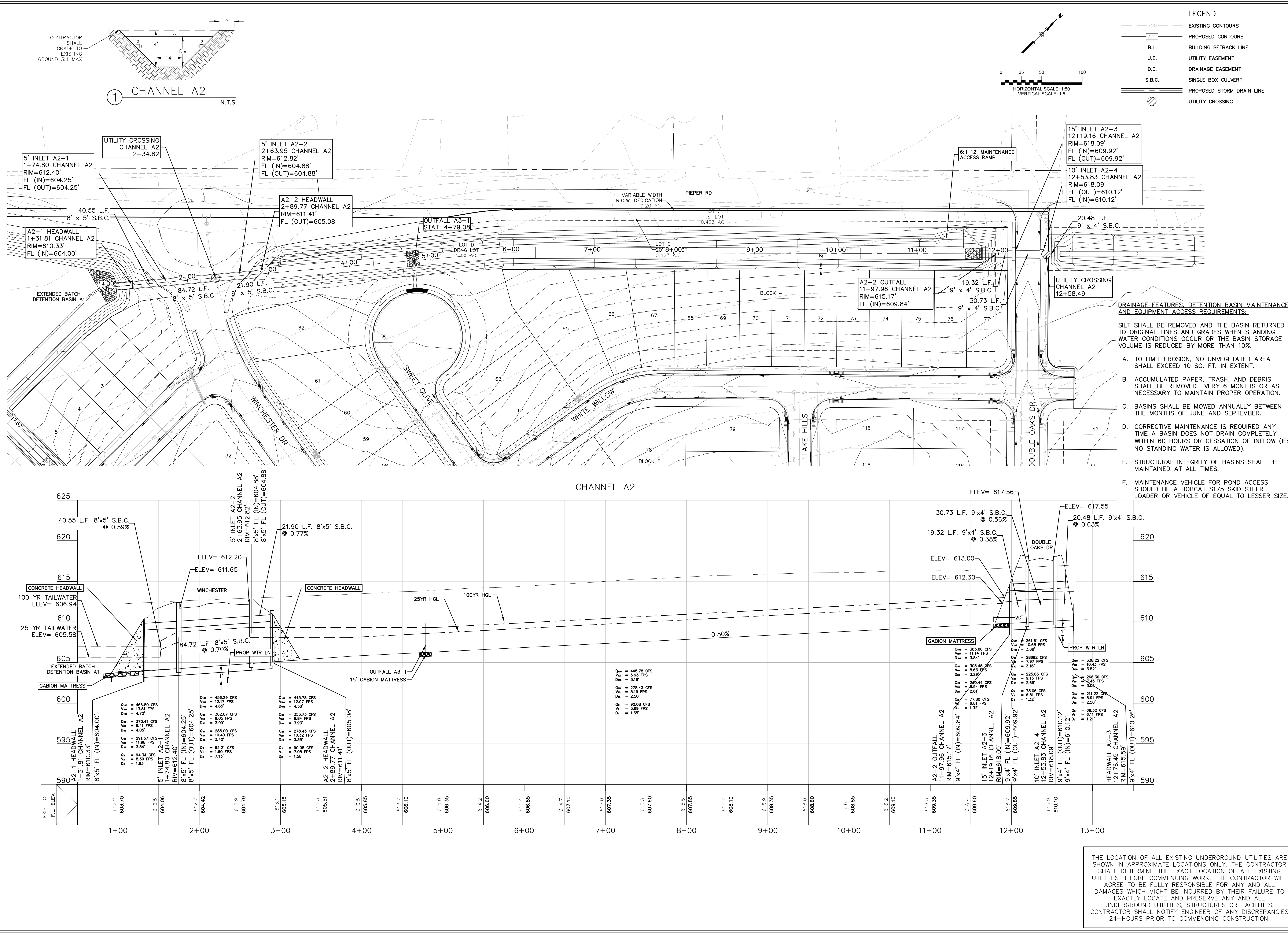
# CHANNEL A1 SECTIONS

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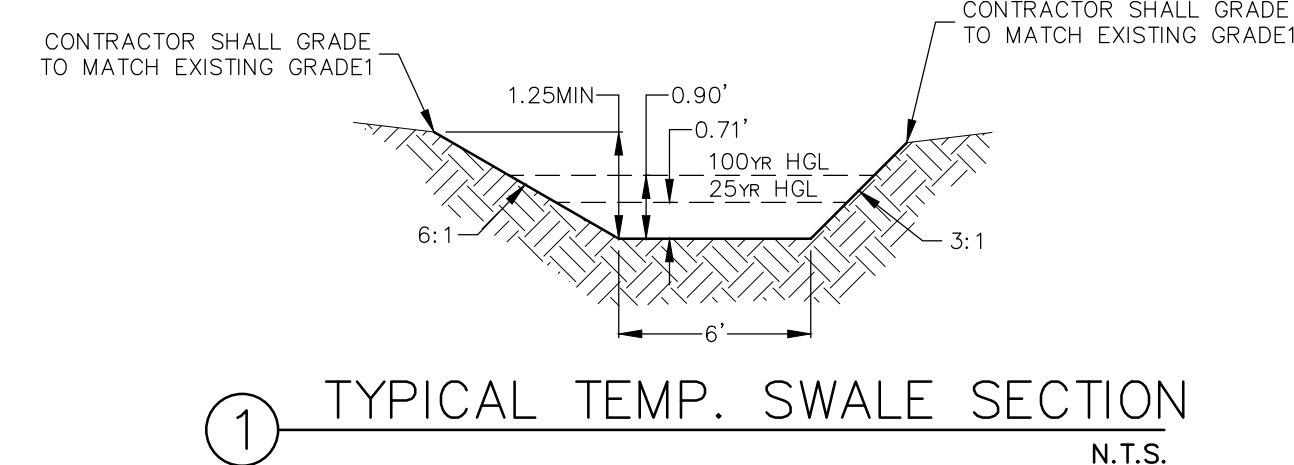
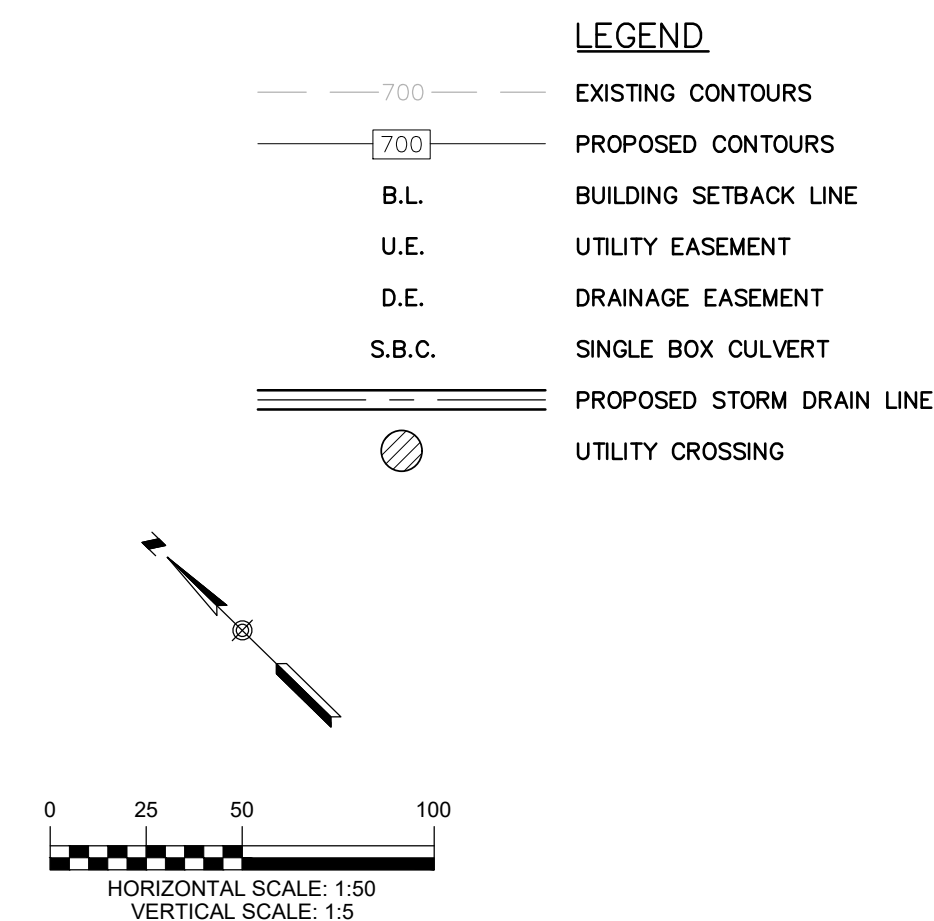
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Drawing Name: N:\\_Projects\031 - DR Horton\031.060 - 175 Ac. Friesheim Cda\Phase 1\City Approval Cda\031.060\_STIM.dwg User: callym-m Jul 20, 2020 - 2:23pm





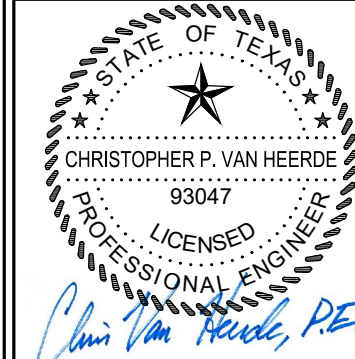


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**HMT**  
ENGINEERING & SURVEYING



# TEMPORARY SWALE PLAN & PROFILE

## PARKSIDE SUBDIVISION PHASE 1

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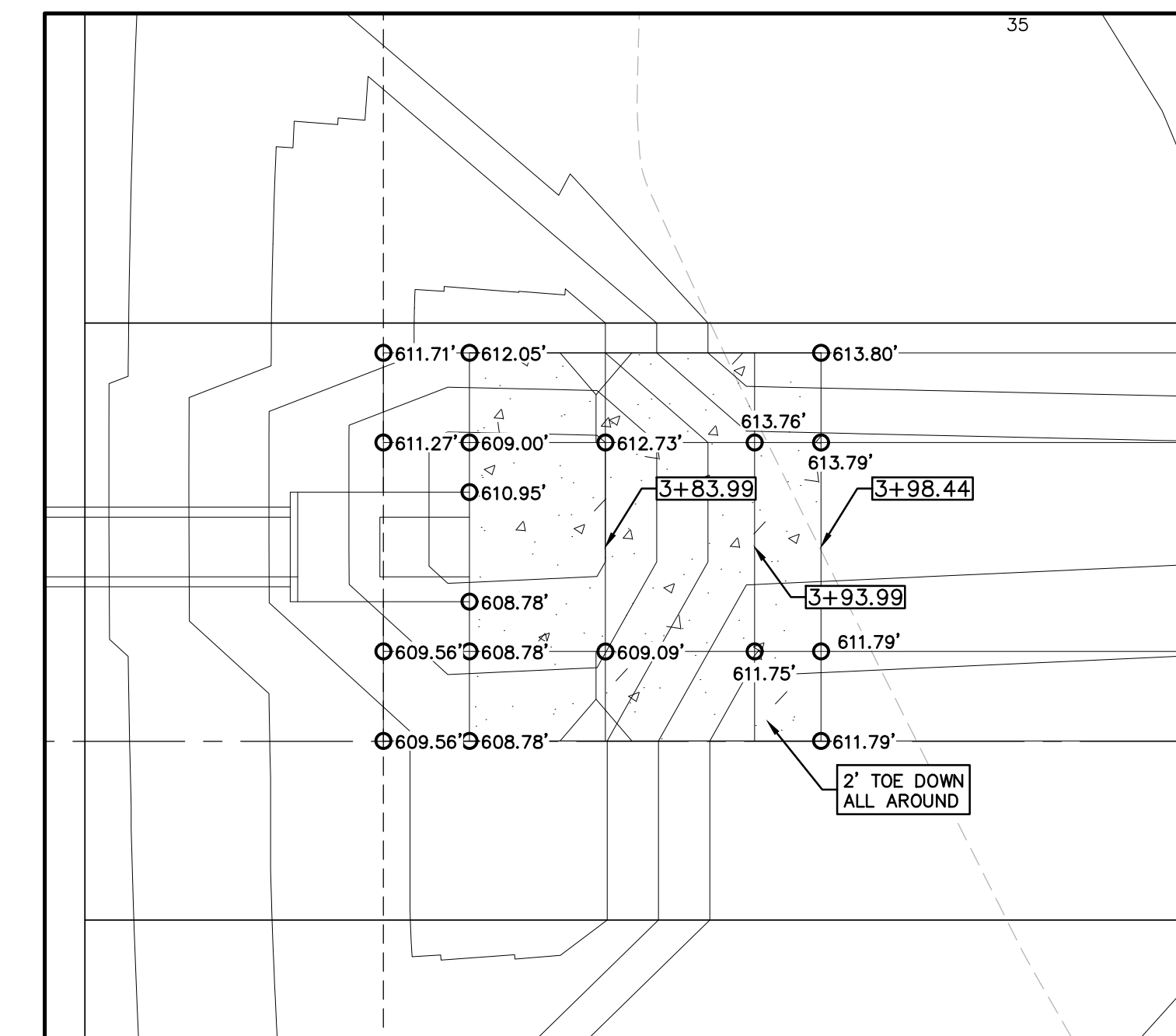
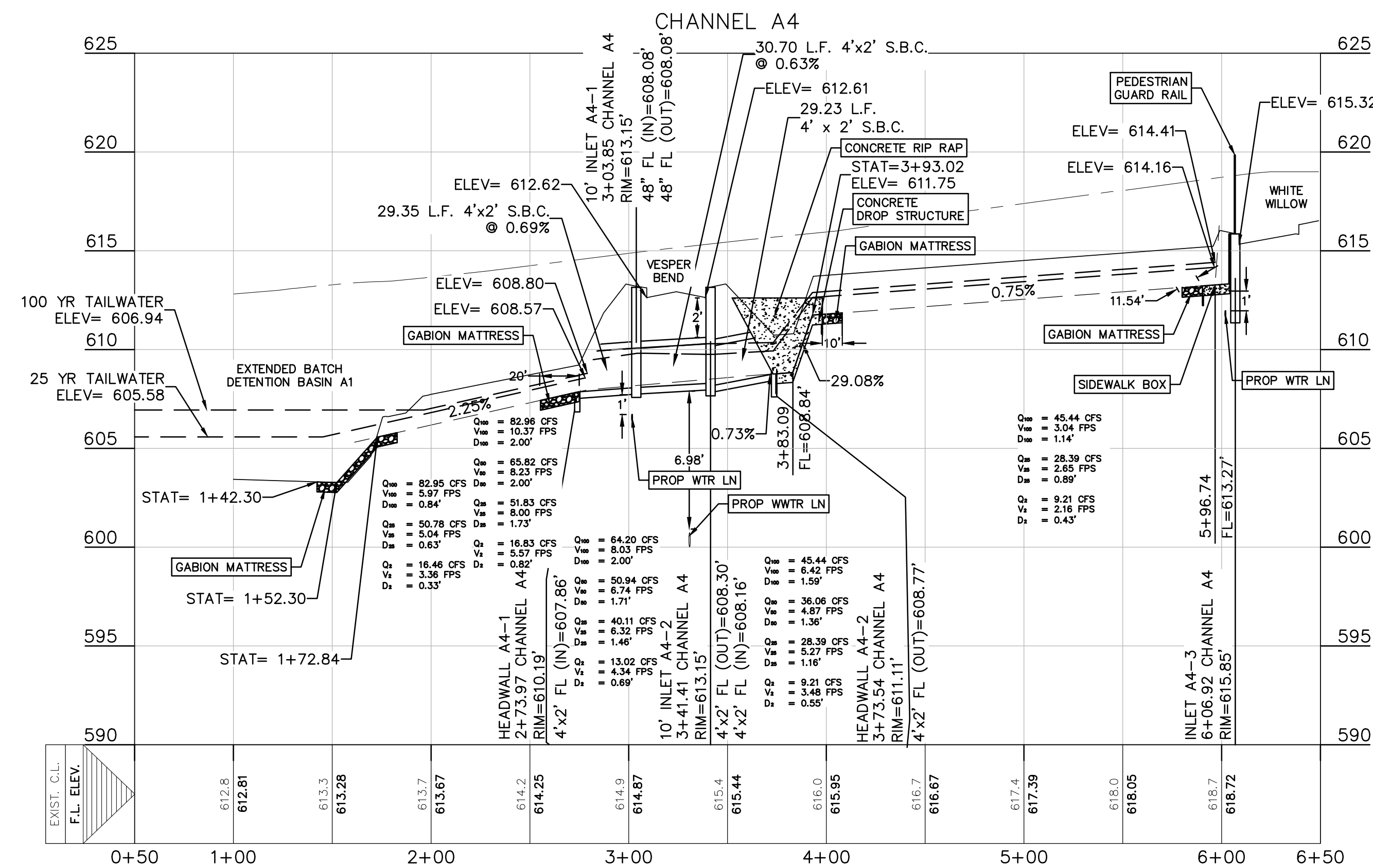
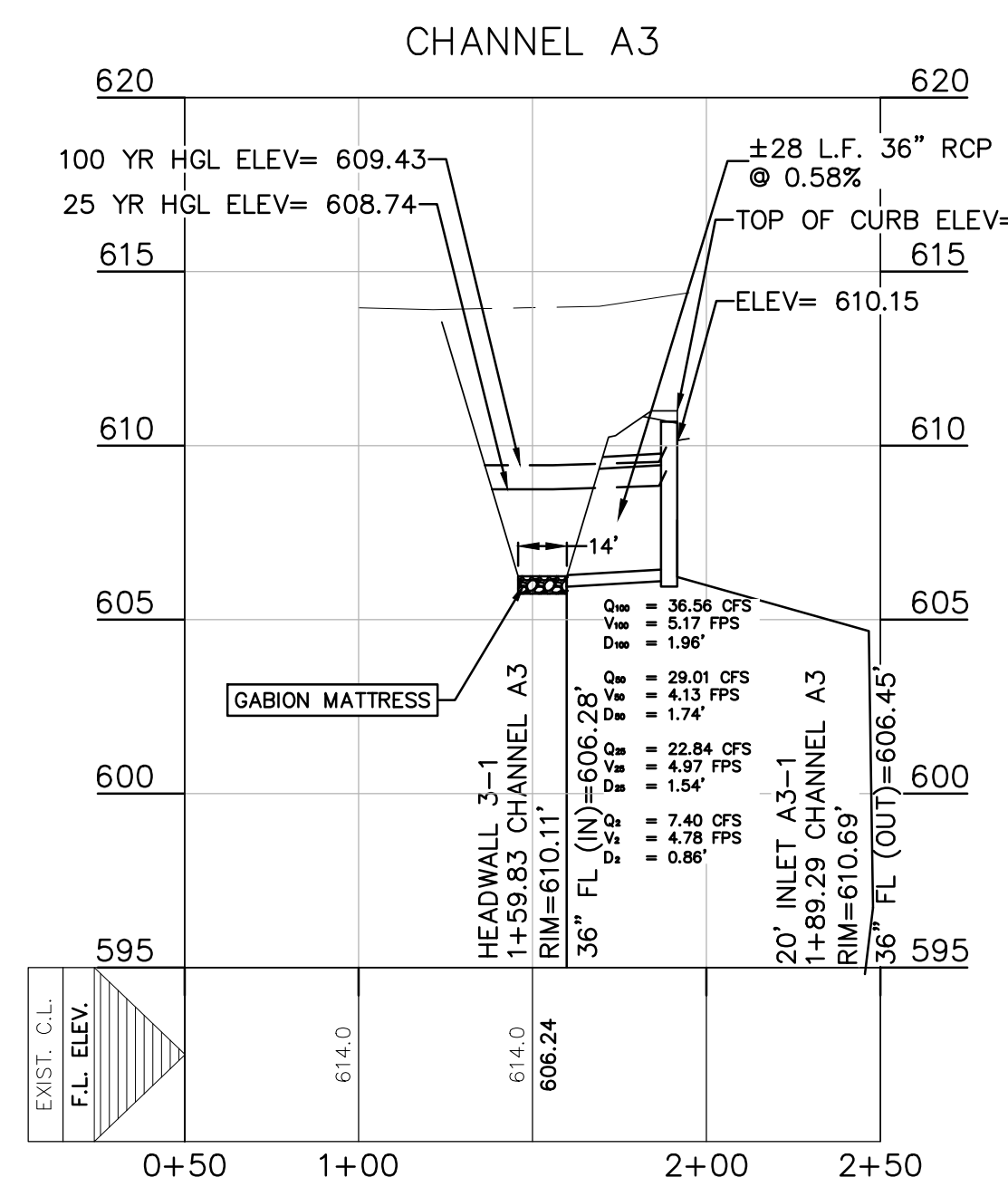
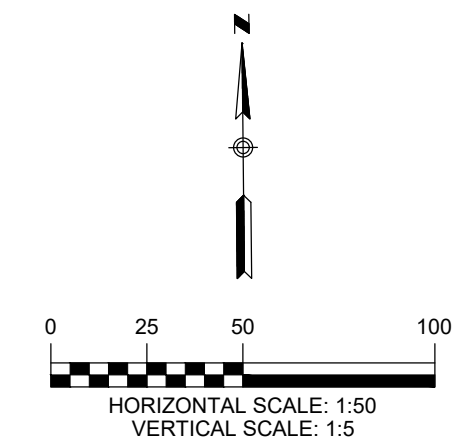
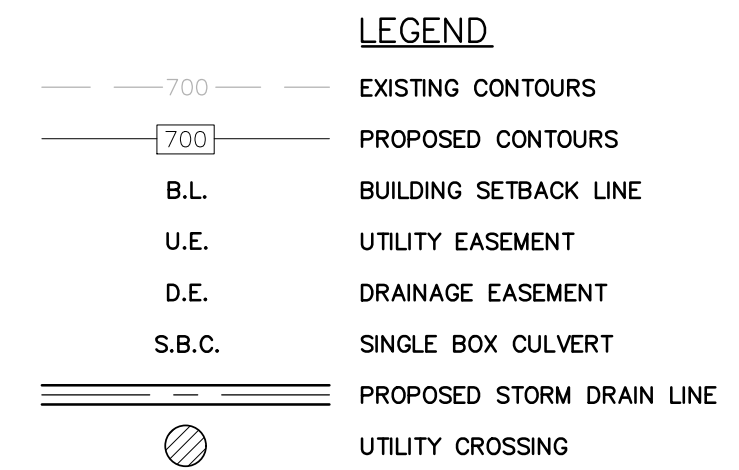
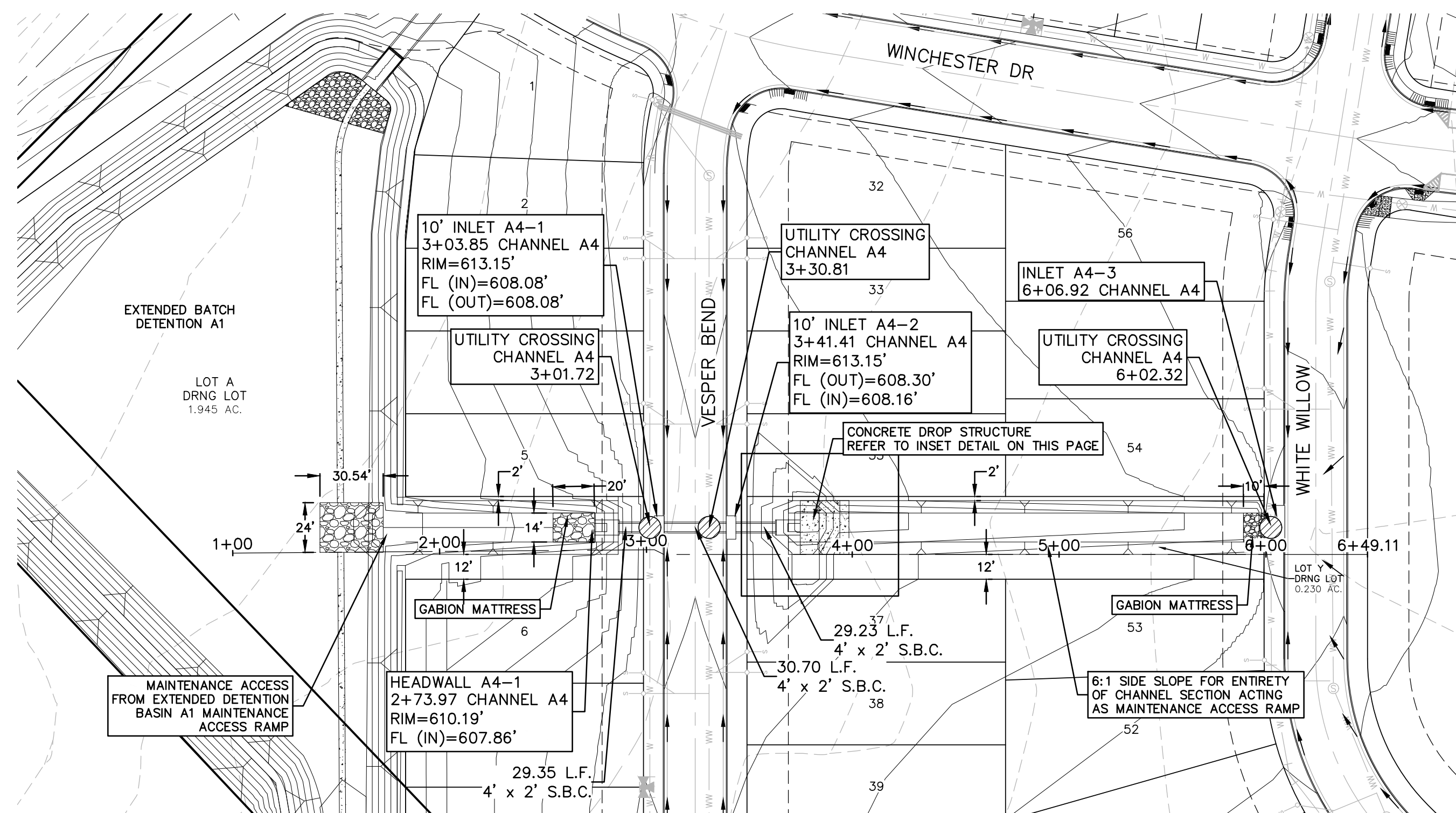
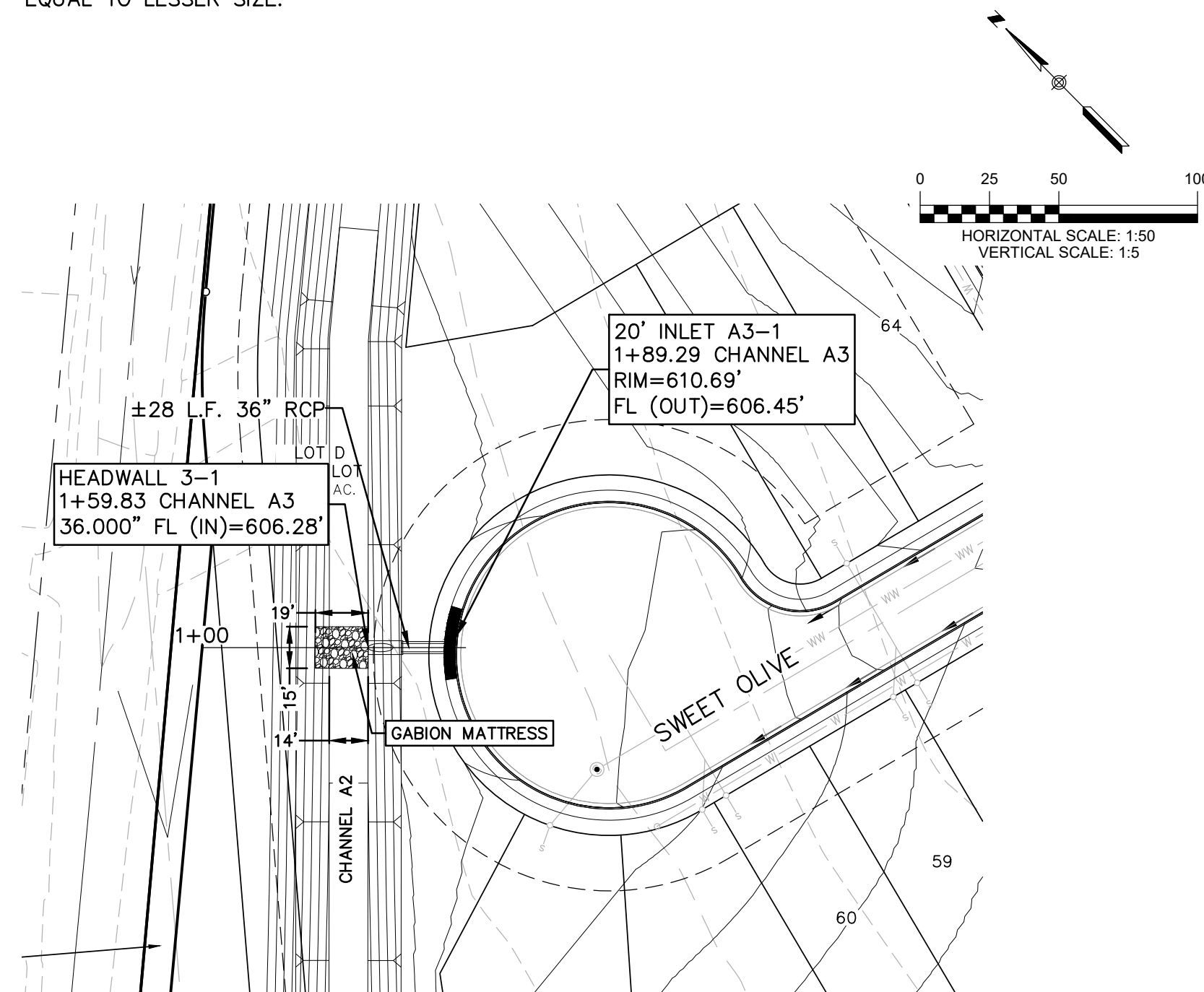
HMT PROJECT NO.:

**C5.06**

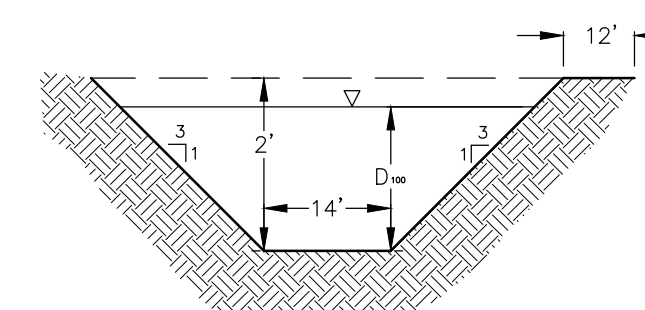


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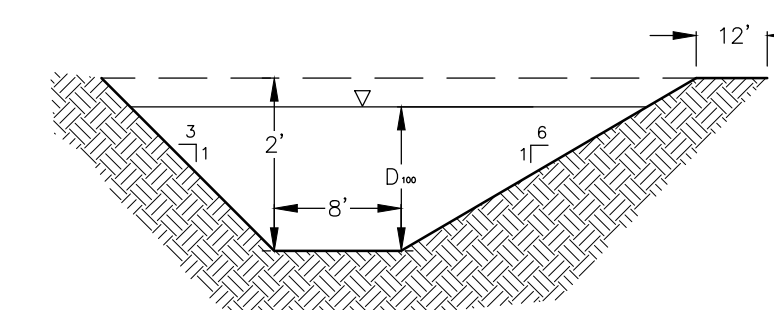
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CHANNEL A4 CONCRETE DROP STRUCTURE DETAIL  
SCALE 1:10



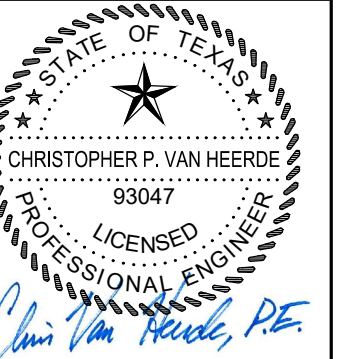
② CHANNEL A4  
1+61.33 TO 2+74.00 N.T.S.



③ CHANNEL A4  
3+68.70 TO END N.T.S.

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TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

SD LN A3 &amp; SD LN A4

PARKSIDE SUBDIVISION  
PHASE 1

[illegible]

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

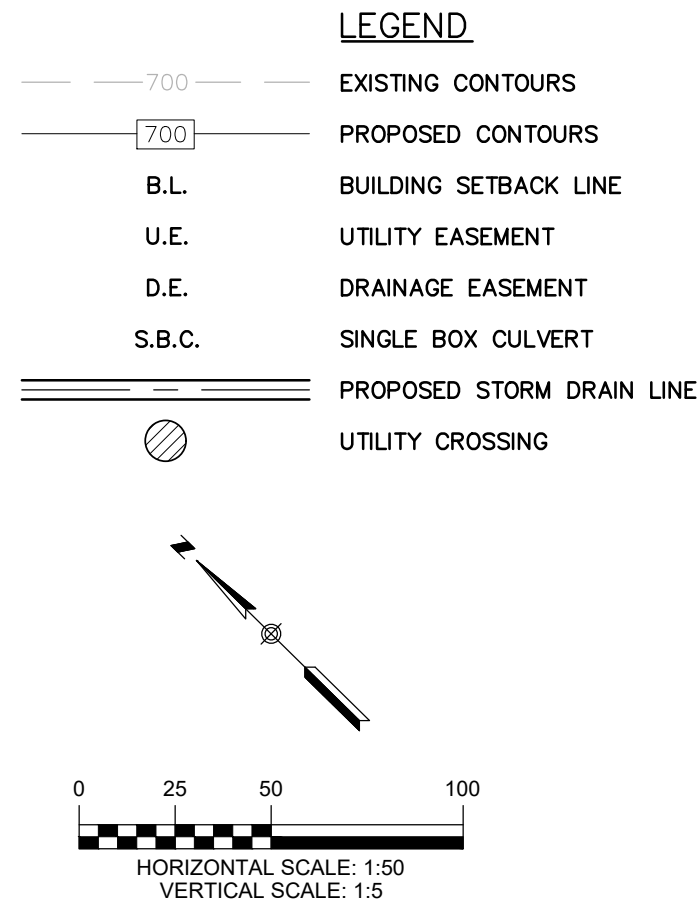
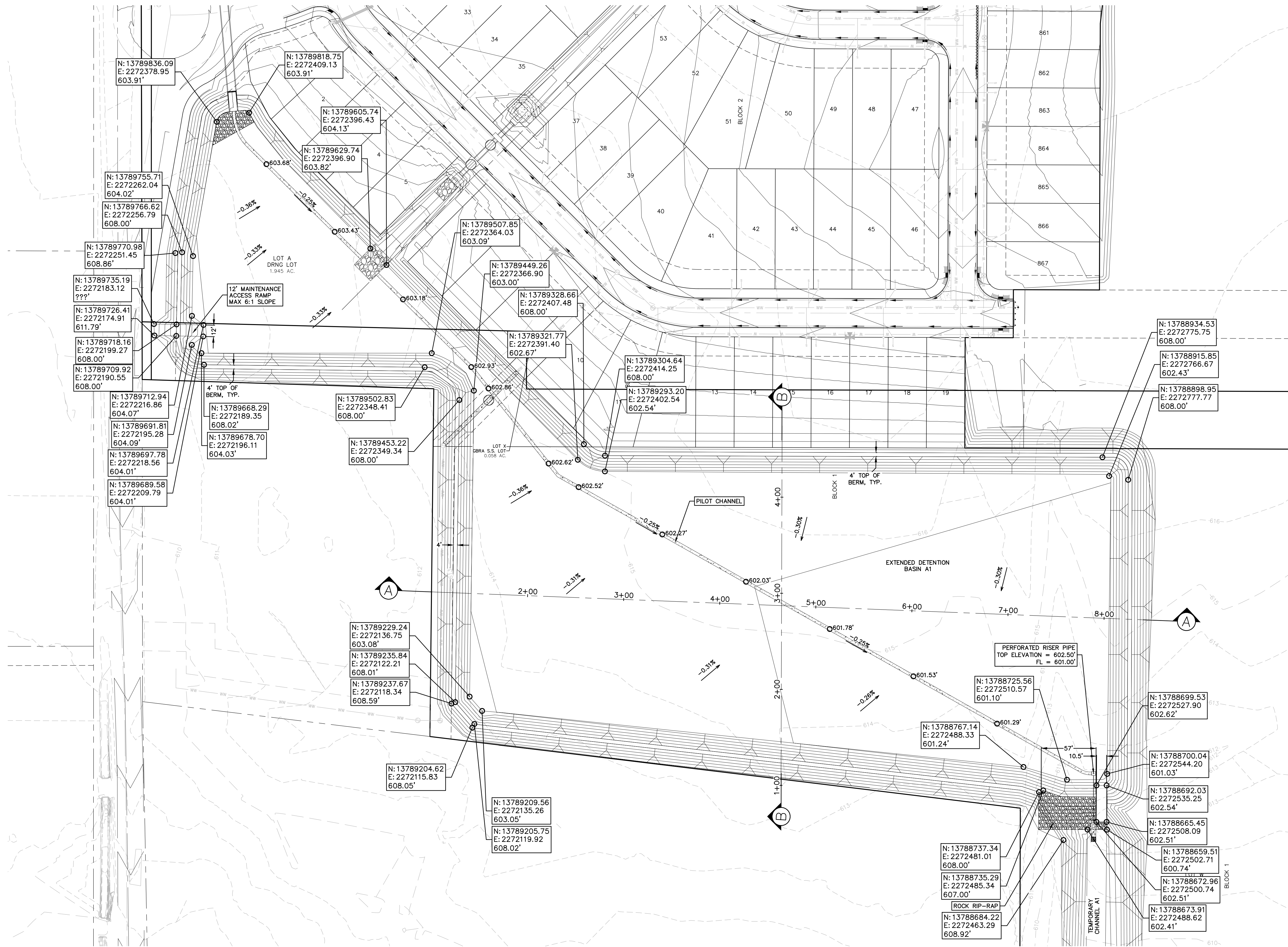
REVIEWED BY: CVH/SWH

MT PROJECT NO.:  
031.060

# SHEET

## C5.07

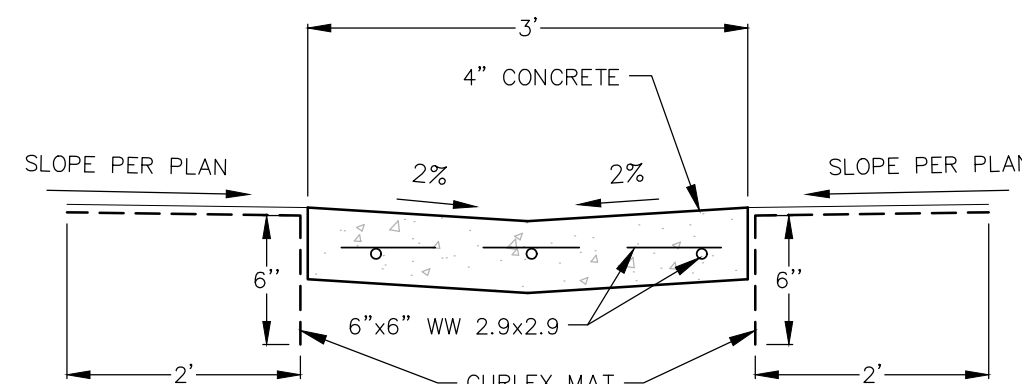




**DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:**

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07/20/2020

**EXTENDED DETENTION BASIN A1  
DETAILS (1 OF 3)  
PARKSIDE SUBDIVISION  
PHASE 1**

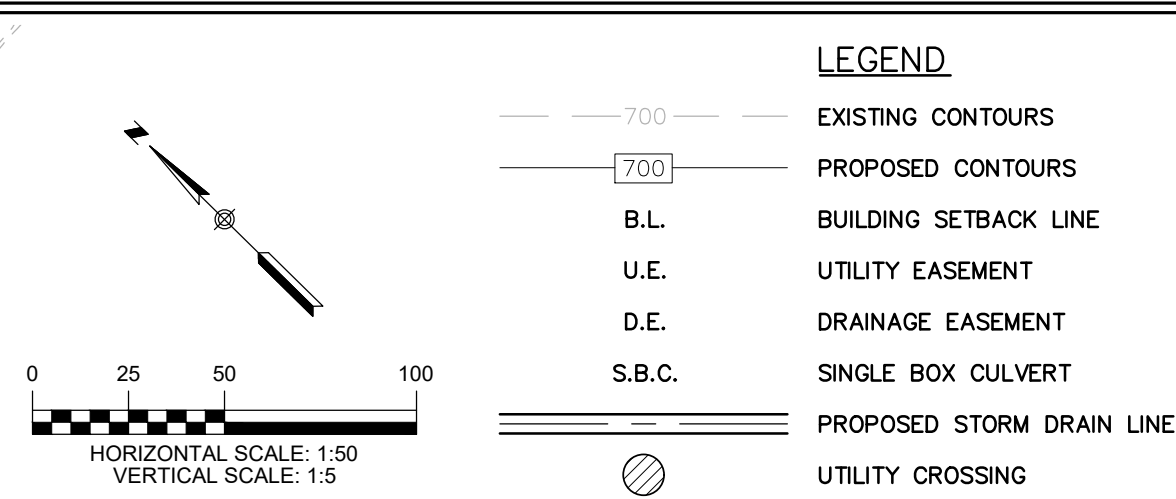
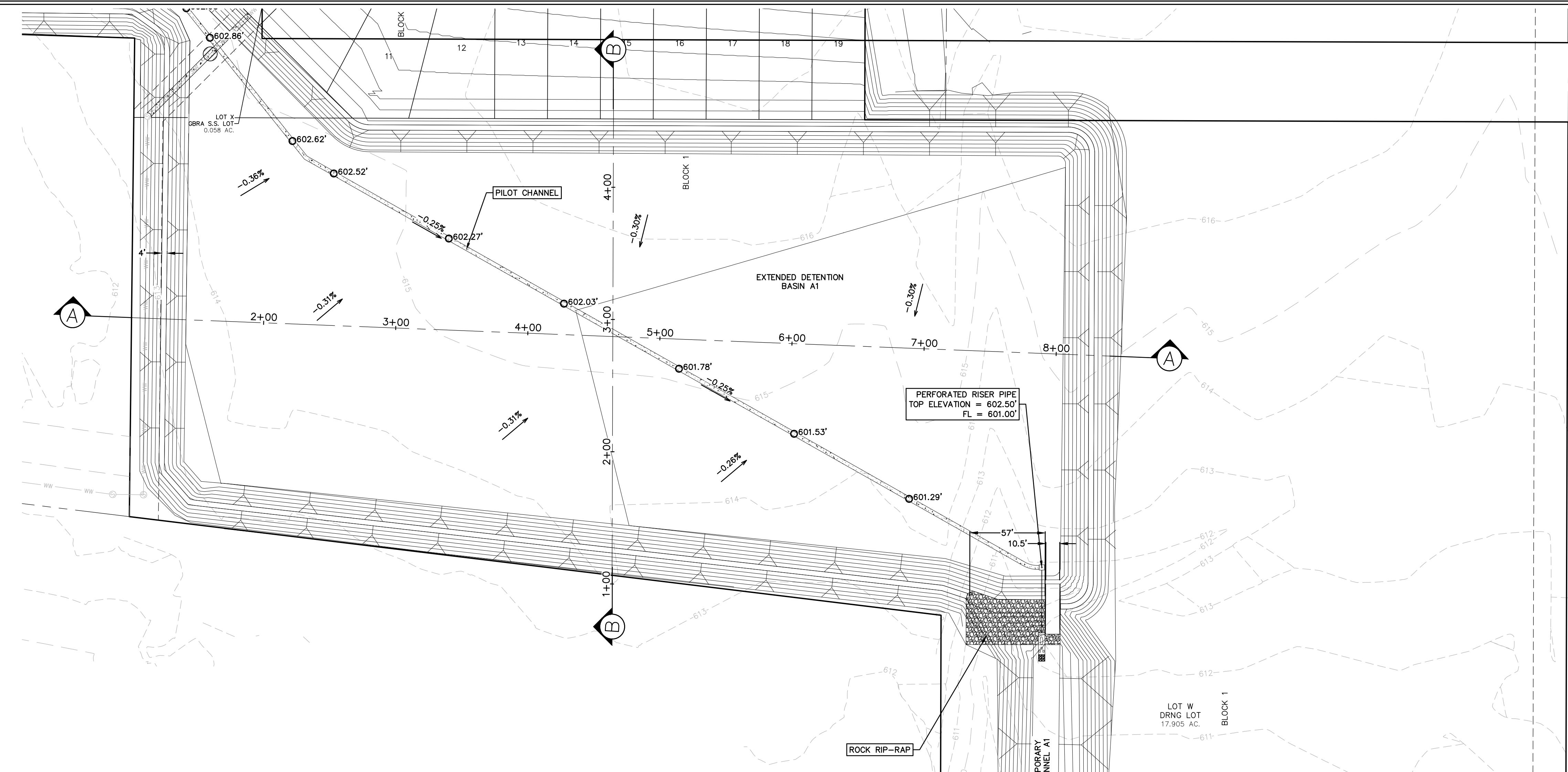
NO.	REVISION	DESCRIPTION	DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SMH  
HMT PROJECT NO.: 031.060

**SHEET  
C5.08**



Drawing Name: N:\\_Projects\031 - DR Horton\031.060 - 175 Ac Friesenham Cda\Phase 1\City Approval Cda\031.60\_STDM\_P1.dwg User: callym-m Jul 20, 2020 - 2:23pm

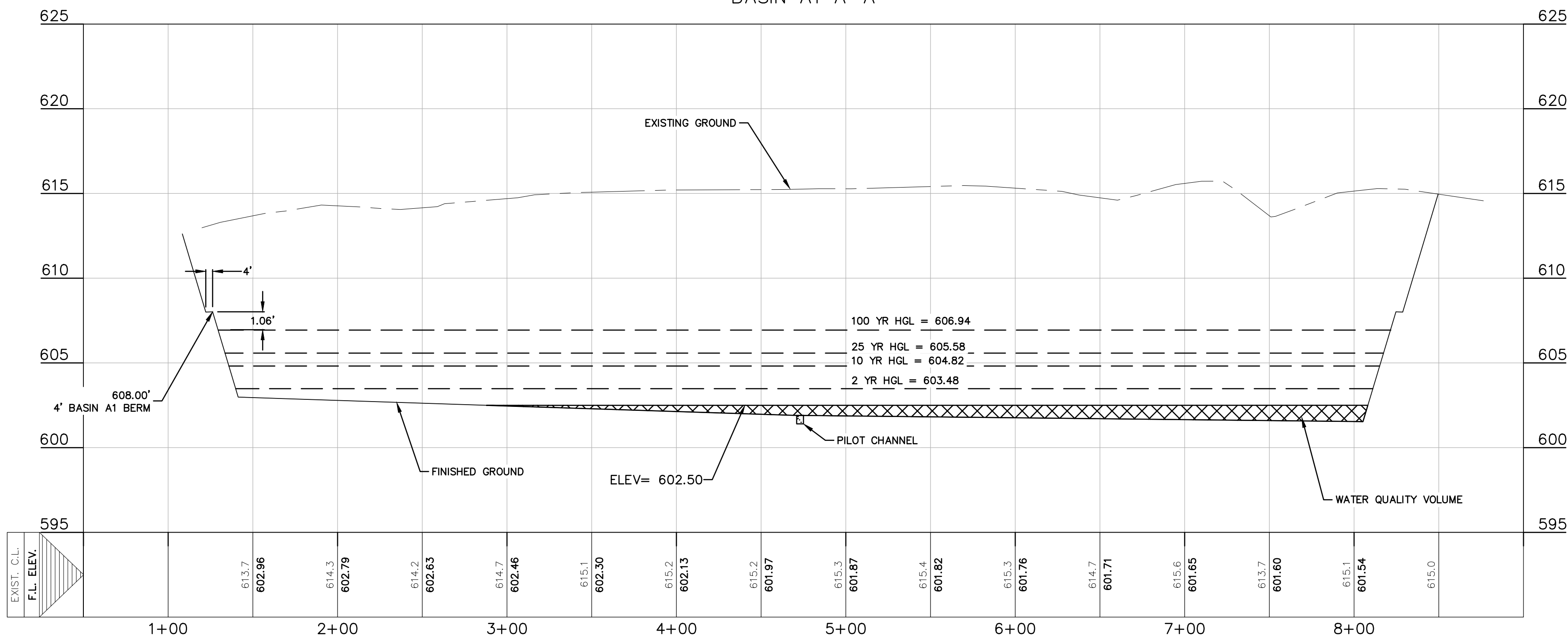


**DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:**

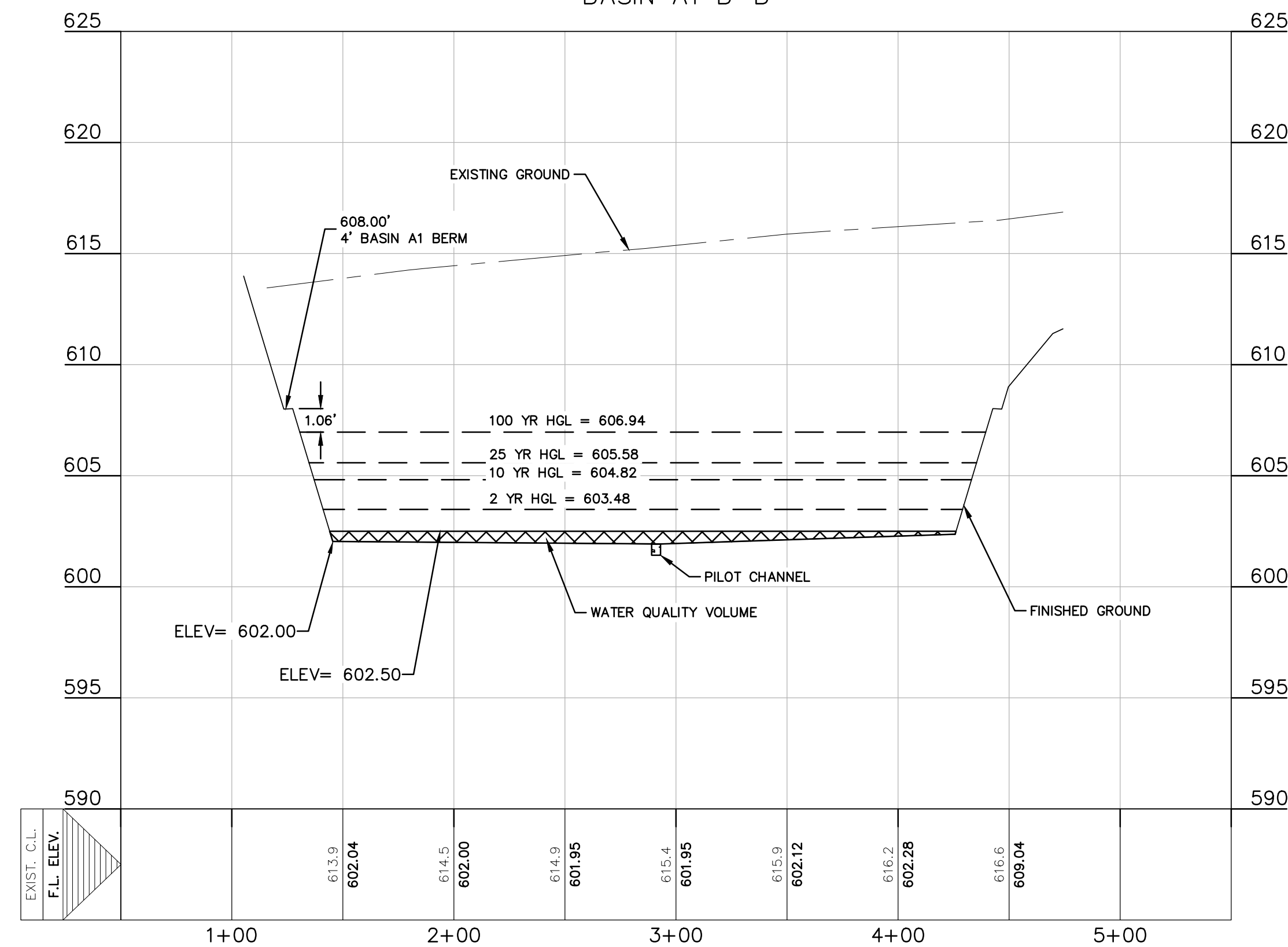
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BASIN A1 A-A



BASIN A1 B-B



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**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HERDE  
93047  
LICENSED PROFESSIONAL ENGINEER  
*Chris Van Heerde, P.E.*

07/20/2020

**EXTENDED DETENTION BASIN A1  
DETAILS (2 OF 3)**  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

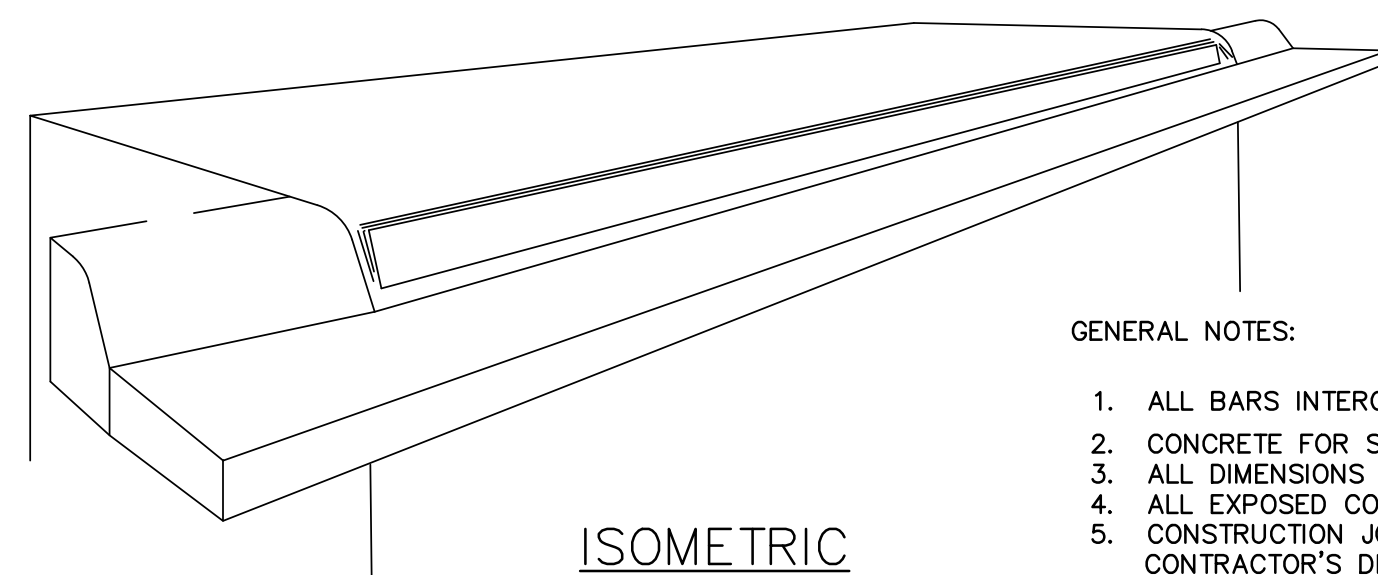
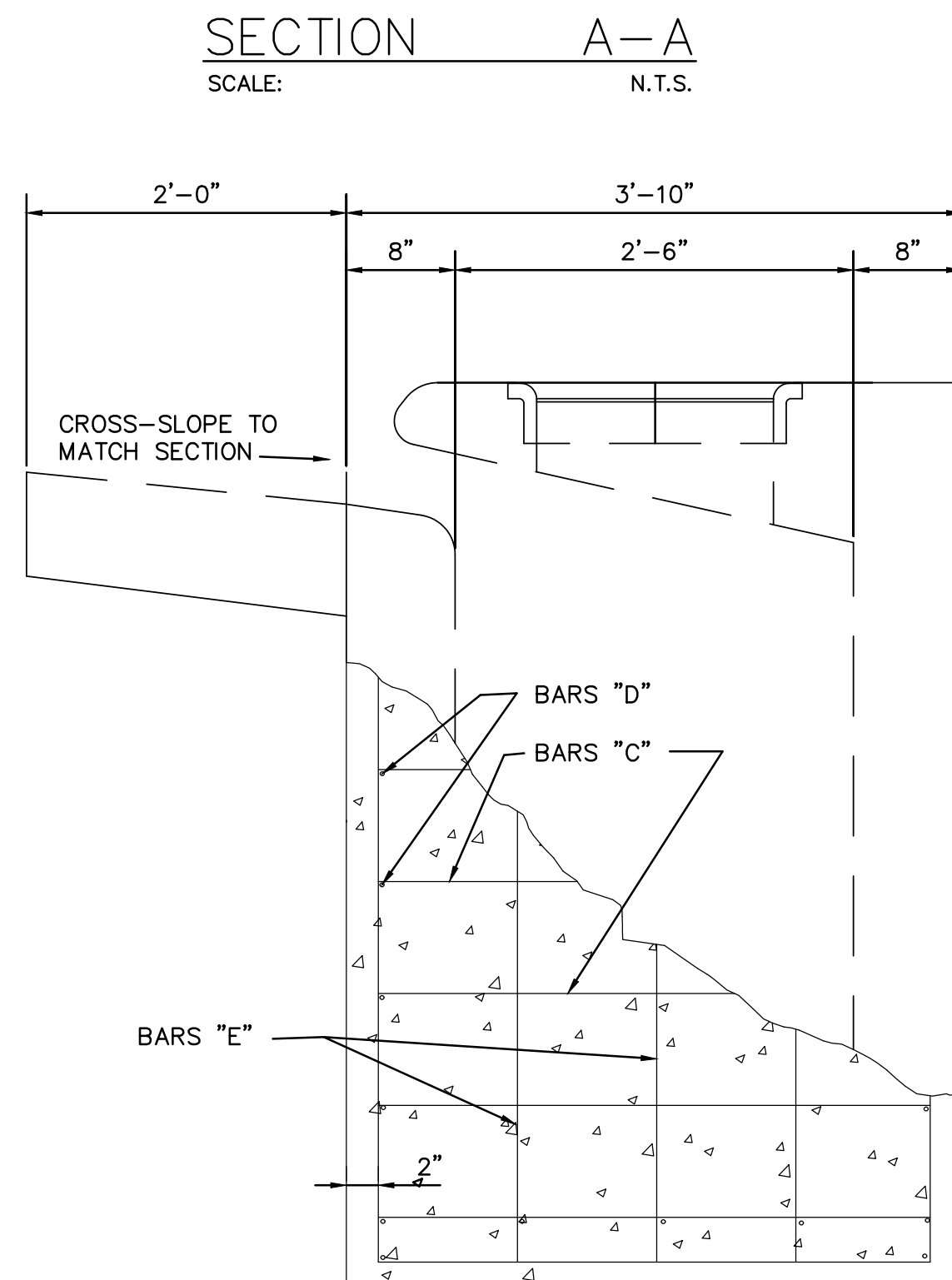
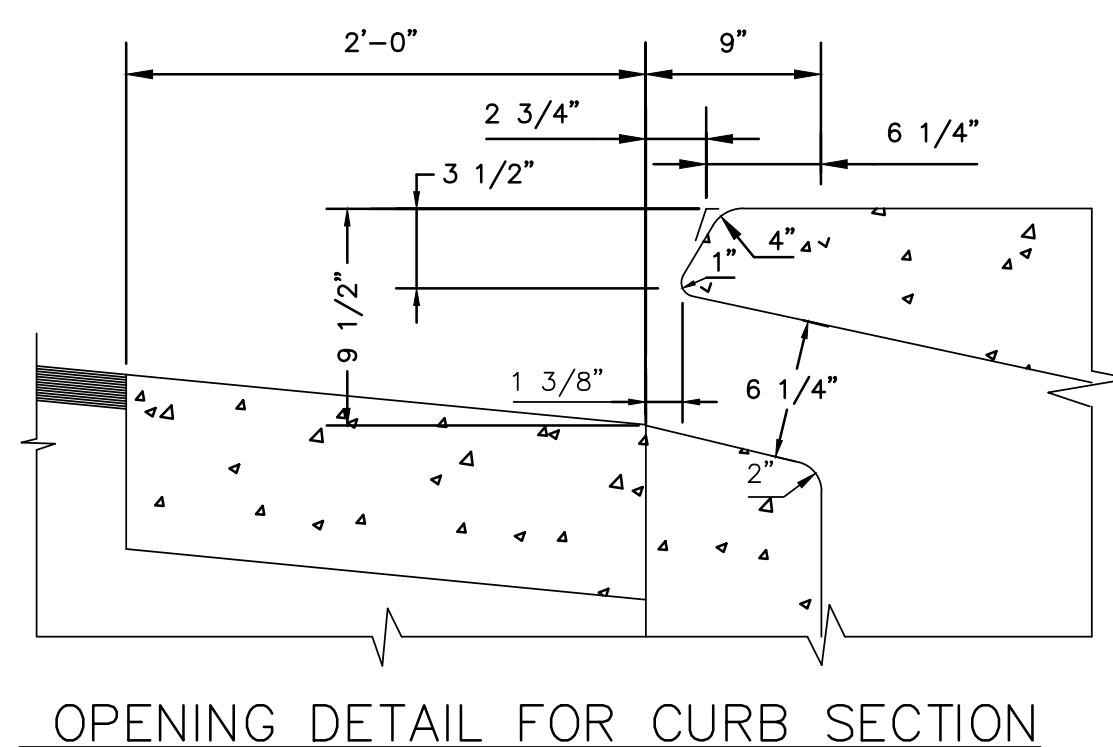
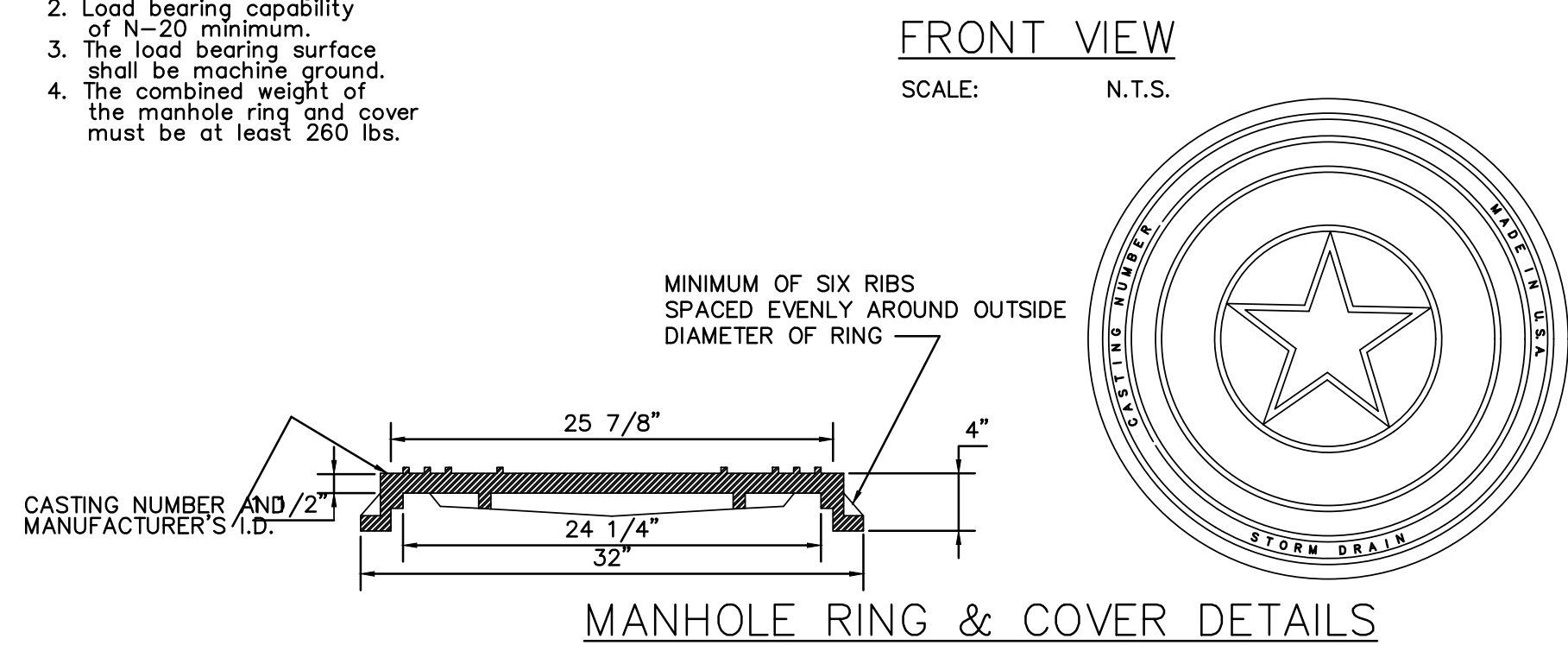
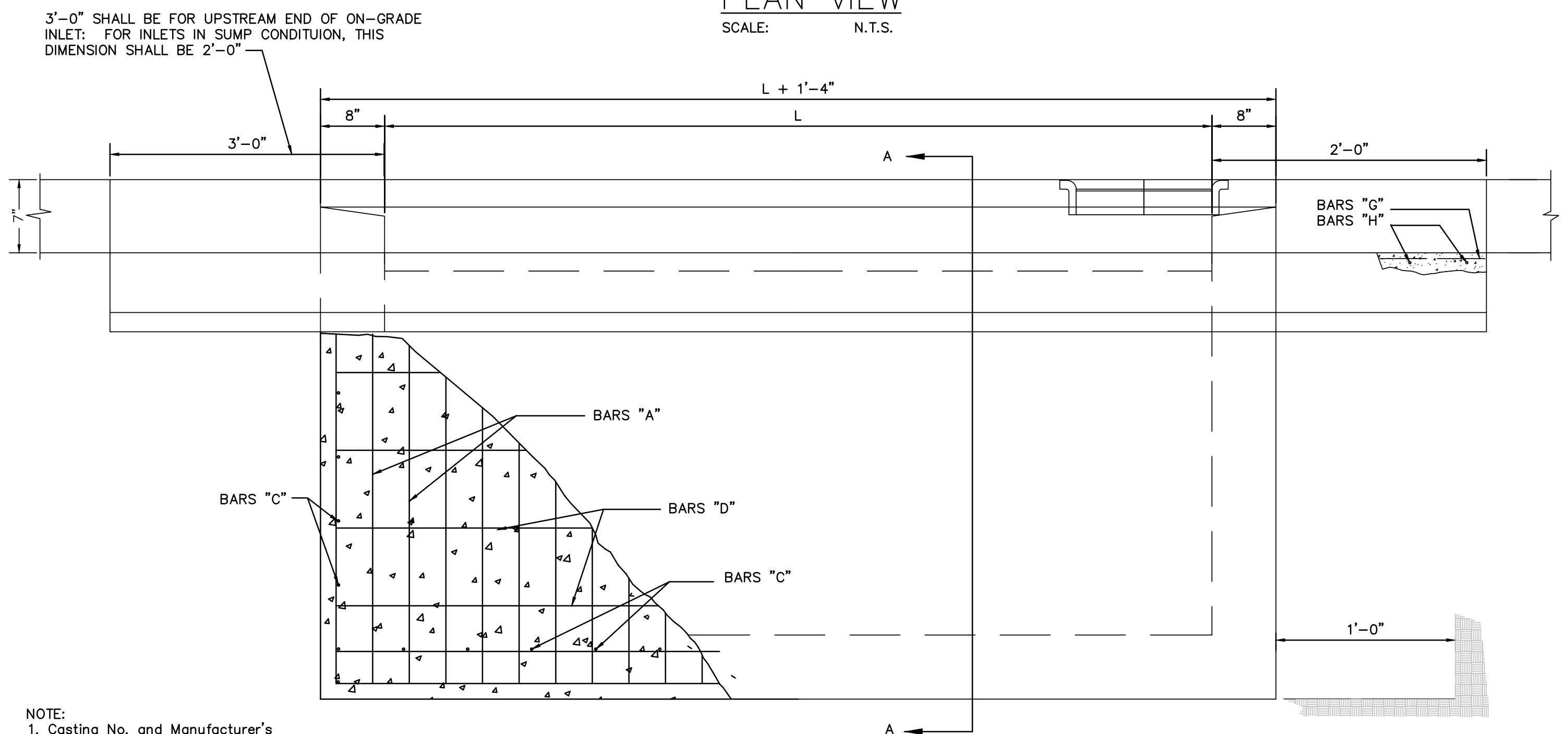
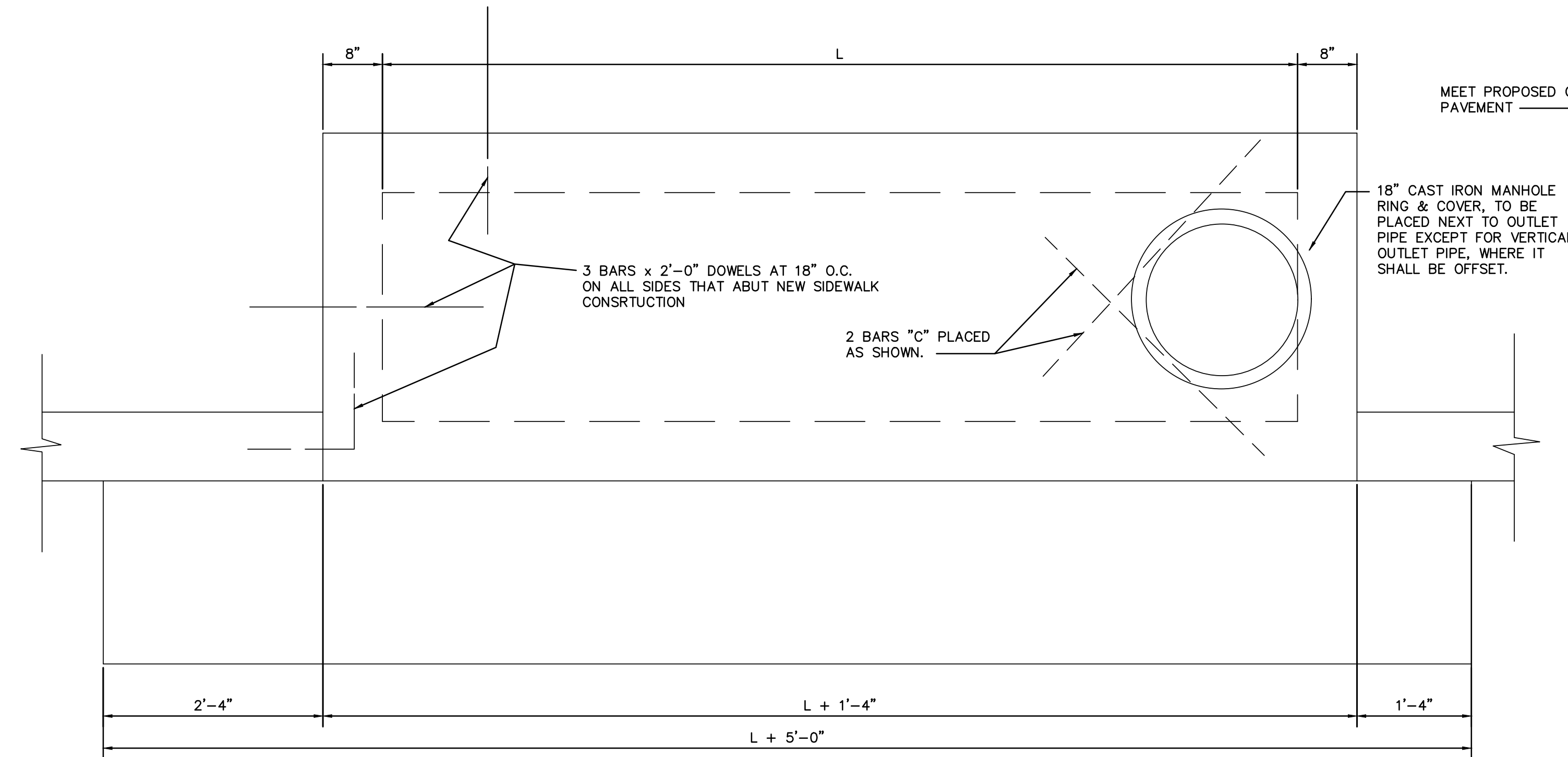
**SHEET**  
**C5.09**







Drawing Name: N:\\_Projects\031 - DR Horton\031\060 - 175 Ac. Friesenhain Cda\Phase 1\City Approval Cda\031\_060\_DET\_PL.dwg User: callm-m Jul 20, 2020 - 2:24pm



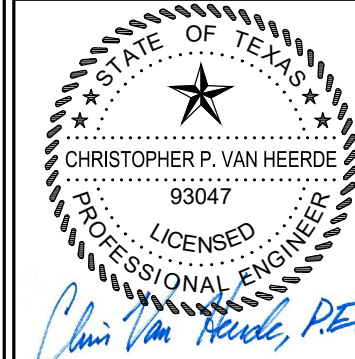
GENERAL NOTES:

1. ALL BARS INTERCEPTING MANHOLE RING & REINFORCING CONCRETE PIPE SHALL BE FIELD CUT.
2. CONCRETE FOR STRUCTURES SHALL BE CLASS "A", 3000 P.S.I. IN 28 DAYS.
3. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED TO 3/4"
5. CONSTRUCTION JOINT SHOWN AT FLOWLINE MAY BE RAISED A MAXIMUM OF 6" AT THE CONTRACTOR'S DISCREION. ADJUST LENGTH OF VERTICAL STEEL AS REQUIRED.
6. ALL REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. A-615, GRADE 60.

Reinforcing Steel Schedule					
BAR	NO.	SIZE	SPA.	LENGTH	WEIGHT
L=5'-00"					
A	15	4	5"OC	13'-9 1/2"	138
B	15	4	5"	5'-1"	52
C	23	4	9"	3'-6"	54
D	22	4	10"	6'-1"	89
E	10	4	10 1/2"	6'-10"	46
F	6	5	12"	2'-3"	14
G	3	4	12"	9'-8"	20
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=353 CY. MANHOLE CASTING=100 LBS. STEEL TOTAL=422 LBS.					
10'					
A	27	4	5"OC	13'-9 1/2"	249
B	27	4	5"	5'-1"	93
C	30	4	9"	3'-6"	70
D	22	4	10"	11'-1"	163
E	10	4	10 1/2"	6'-10"	46
F	12	5	12"	2'-3"	27
G	3	4	12"	14'-8"	30
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=5.75CY. MANHOLE CASTING=100LBS. STEEL TOTAL=687LBS					
15'					
A	39	4	5"OC	13'-9 1/2"	359
B	39	4	5"	5'-1"	134
C	36	4	9"	3'-6"	84
D	22	4	10"	16'-1"	236
E	10	4	10 1/2"	6'-10"	46
F	17	5	12"	2'-3"	38
G	3	4	12"	19'-8"	40
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=7.97CY. MANHOLE CASTING=100LBS. STEEL TOTAL=946LBS					
20'					
A	51	4	5"OC	13'-9 1/2"	470
B	51	4	5"	5'-1"	175
C	43	4	9"	3'-6"	101
D	22	4	10"	6'-1"	310
E	10	4	10 1/2"	6'-10"	46
F	22	5	12"	2'-3"	50
G	3	4	12"	9'-8"	50
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=10.19CY. MANHOLE CASTING=100LBS. STEEL TOTAL=1211LBS					
25'					
A	63	4	5"OC	13'-9 1/2"	580
B	63	4	5"	5'-1"	217
C	50	4	9"	3'-6"	117
D	22	4	10"	6'-1"	383
E	10	4	10 1/2"	6'-10"	46
F	27	5	12"	2'-3"	61
G	3	4	12"	9'-8"	60
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=12.41CY. MANHOLE CASTING=100LBS. STEEL TOTAL=1473LB					
30'					
A	75	4	5"OC	13'-9 1/2"	691
B	75	4	5"	5'-1"	258
C	56	4	9"	3'-6"	131
D	22	4	10"	6'-1"	457
E	10	4	10 1/2"	6'-10"	46
F	32	5	12"	2'-3"	72
G	3	4	12"	9'-8"	70
H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=14.63CY. MANHOLE CASTING=100LBS. STEEL TOTAL=1734LB					

\*These figures do not include concrete and steel intercepted by Manhole and Reinforced Concrete Pipe.  
\*Includes concrete gutter for on-grade inlet. Reduce by .05 cy for inlets in sump.

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

STORM DETAILS (1 OF 3)

PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	DATE

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

HMT PROJECT NO.:  
031.060

SHEET  
C5.11









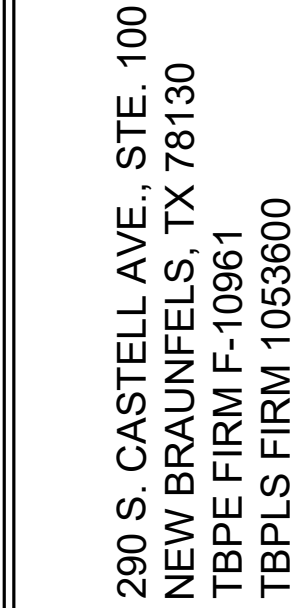


REFER TO THE COVER SHEET  
FOR BENCHMARK INFORMATION.


ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH THE STANDARD TEST METHOD T-99, AASHTO T-99, 15.5. MEMBERED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRUNSWICK STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRUNSWICK STREET INSPECTOR WITH A COMPLETION CERTIFICATE AND CERTIFICATION STATING THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

- 

— 700 —  
 700  
 B.L.  
 U.E.  
 D.E.  
 — W — W —  
 W — W —  
 W —  
 (shaded circle)



**HMT**  
ENGINEERING & SURVEYING



06/22/2020

## OVERALL WATER

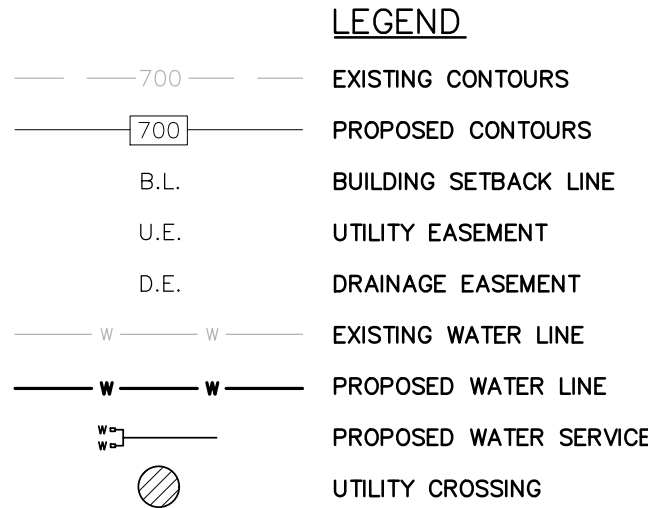
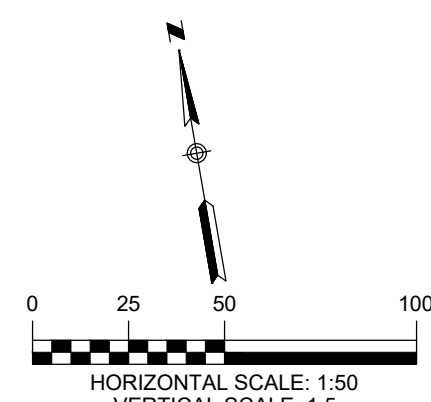
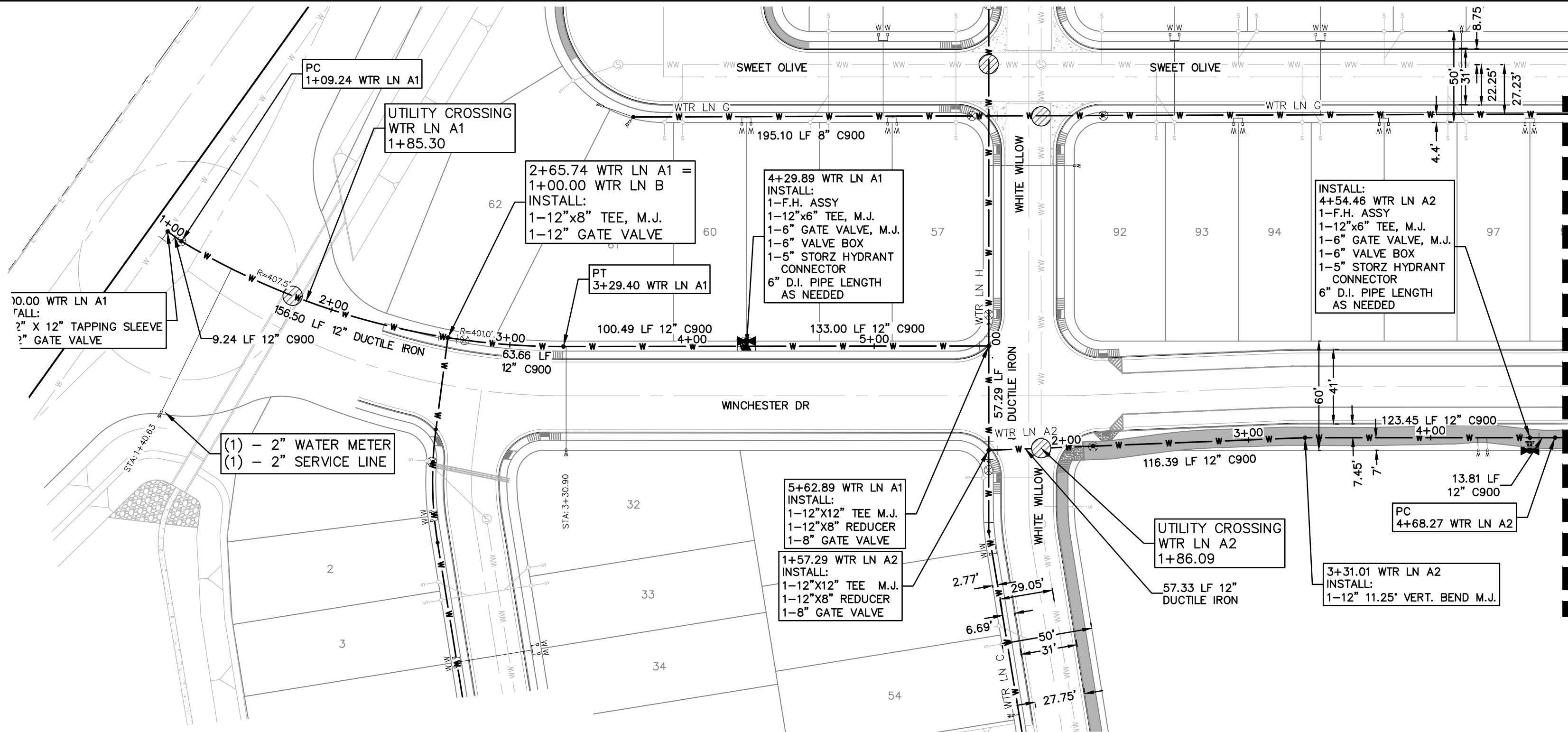
PARKSIDE SUBDIVISION  
PHASE 1[illegible]

DATE: JULY 2020
DRAWN BY: CAM
DESIGNED BY: CAM
REVIEWED BY: CVH/SWH
HMT PROJECT NO.: 031.060

**SHEET**  
**C6.01**



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



### UTILITY TRENCH COMPACTION

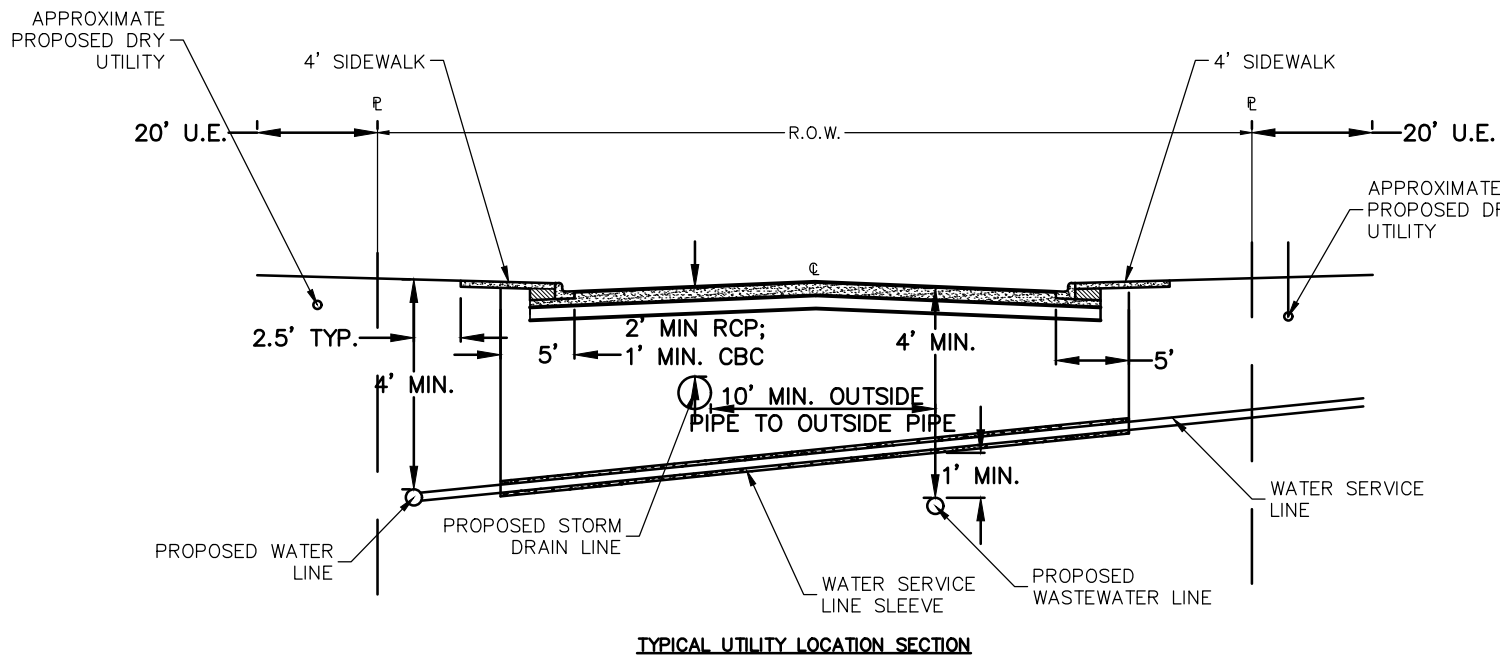
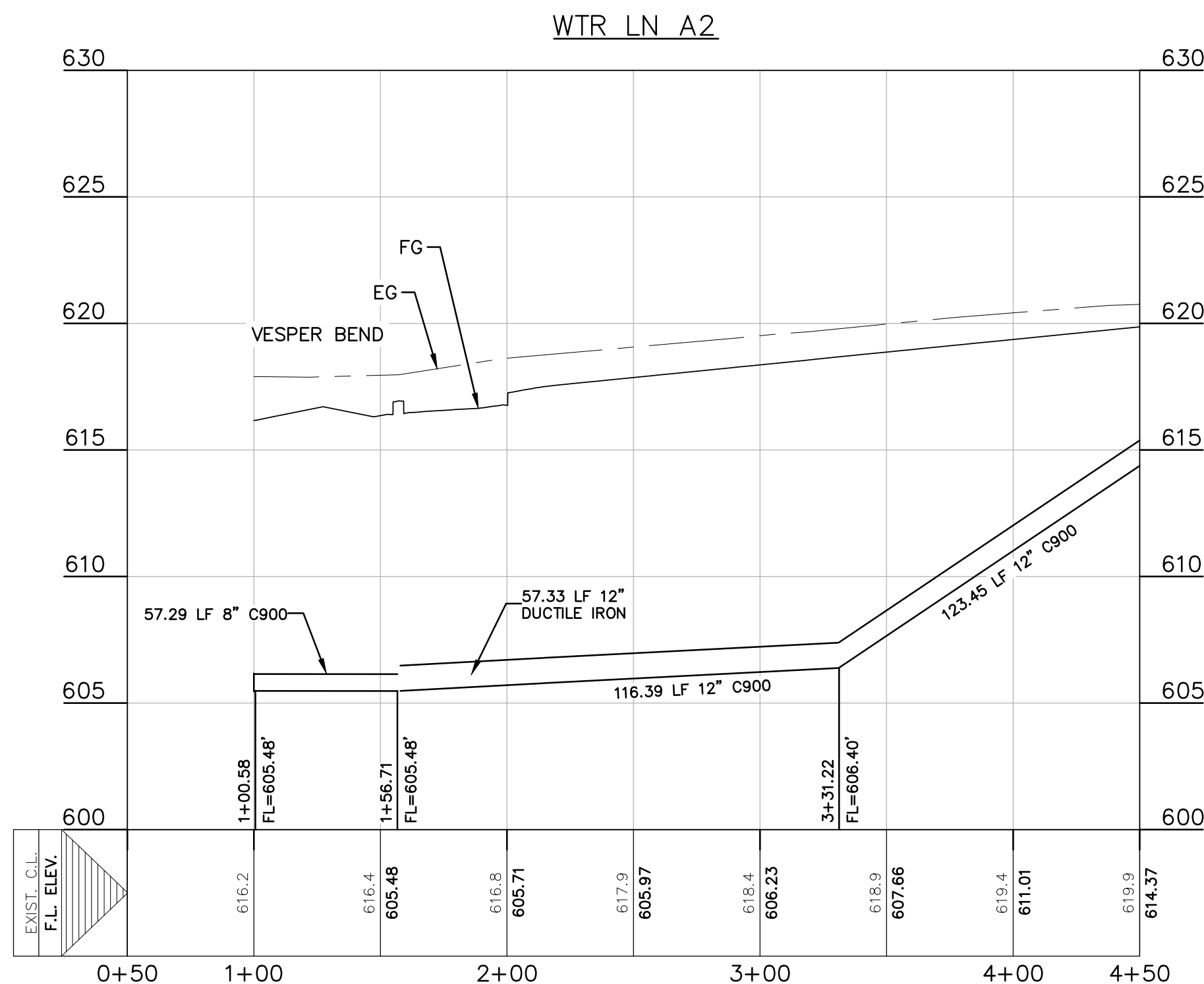
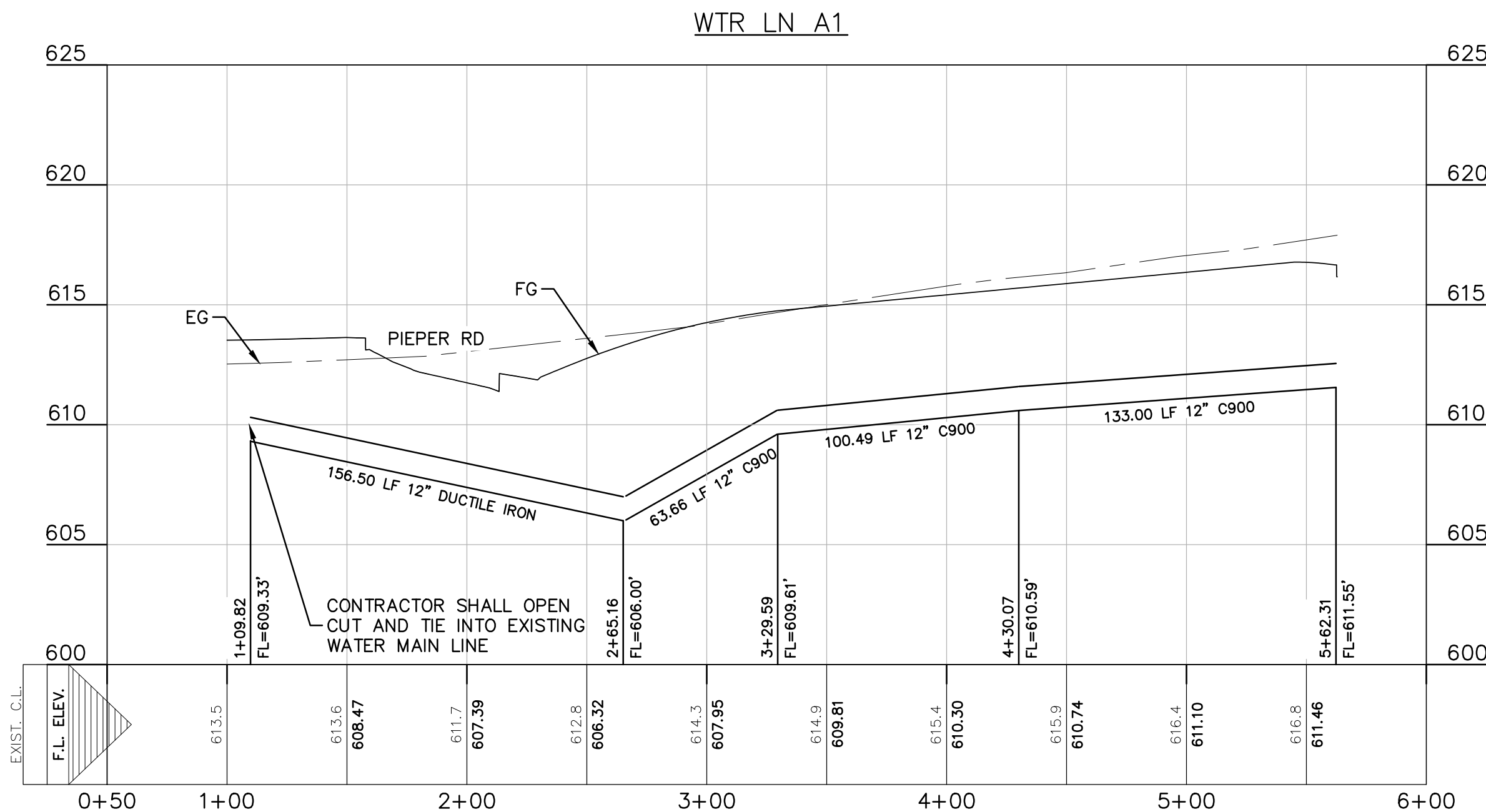
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

#### RESTRAINED LENGTH NOTES:

- CONTRACTOR TO COORDINATE WITH NEW BRAUNFELS UTILITIES (N.B.U.) FOR WATER, SEWER, AND ELECTRIC SERVICE TO THE SITE.
- ALL IN-LINE VALVES, BENDS & PLUGS SHALL BE RESTRAINED, RESTRAINT TO BE PROVIDED ON EACH SIDE OF THE VALVE, FITTING OR ANY REQUIRED JOINT.
- RL=RESTRAINT LENGTH
- CONTRACTOR SHALL DETERMINE RESTRAINT LENGTH REQUIRED FOR HORIZONTAL VERTICAL FITTINGS BASED ON RESTRAINT LENGTH TABLE SHOWN BELOW.

#### UTILITY NOTES:

- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
- NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
- THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5-FOOT DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP UTILITY TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
- ANY WATER SERVICE LINES CROSSING ANY PUBLIC OR PRIVATE ROADWAYS SHALL BE SLEEVED. A 2-INCH SLEEVE SHALL BE USED FOR A 1-INCH WATER SERVICE. SERVICES MUST BE SLEEVED A MINIMUM OF 5-FOOT PAST THE EDGE OF THE FACE OF CURB.



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

CHRISTOPHER P. VAN HEERDE  
93047  
LICENSED PROFESSIONAL ENGINEER

06/22/2020

**WTR LN A PLAN & PROFILE**  
(1 OF 2)  
PARKSIDE SUBDIVISION  
PHASE 1

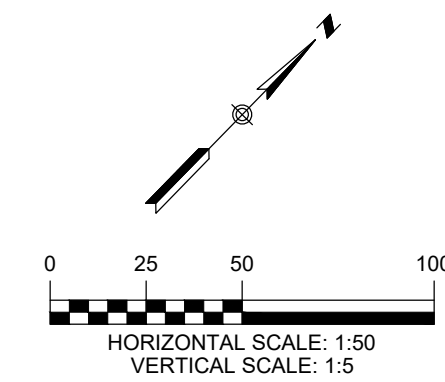
NO.	REVISION	DESCRIPTION	DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

**SHEET**  
**C6.02**



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



- LEGEND**

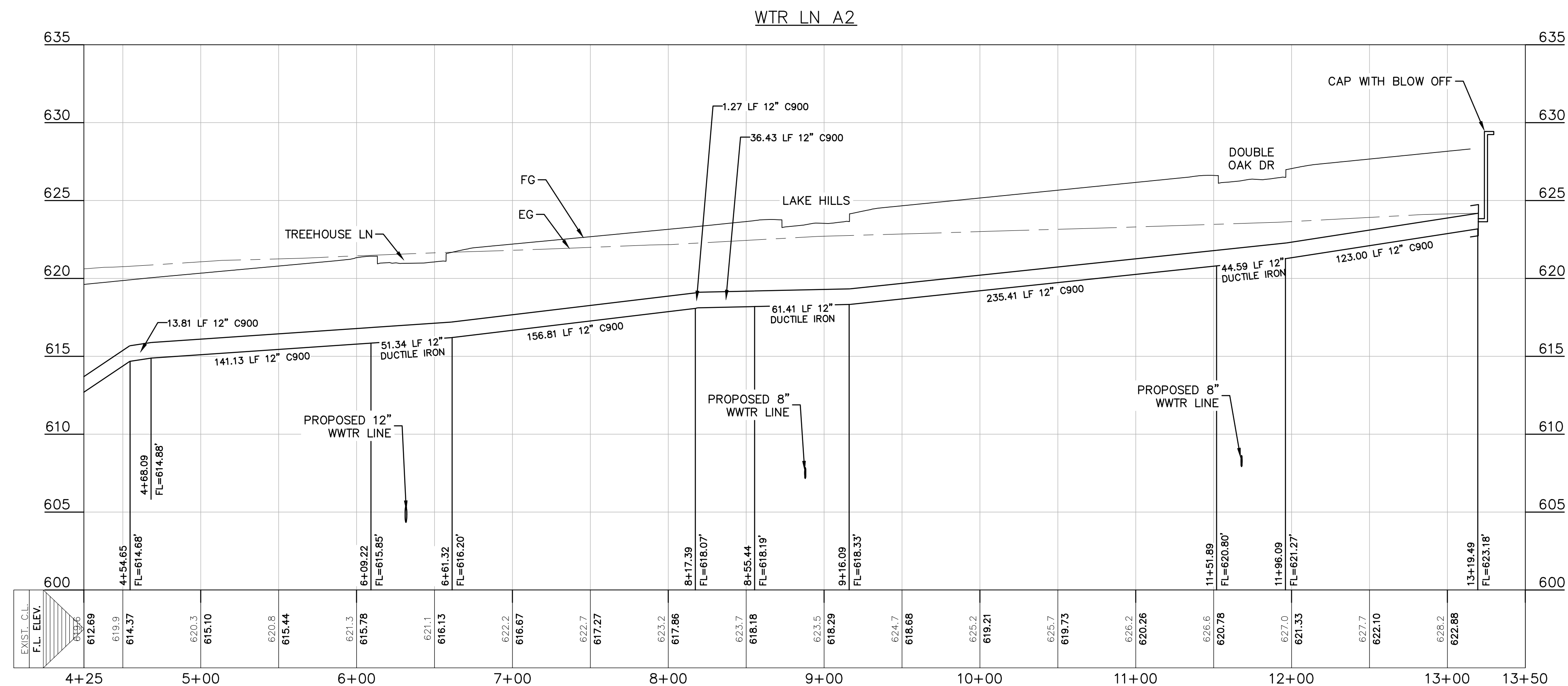
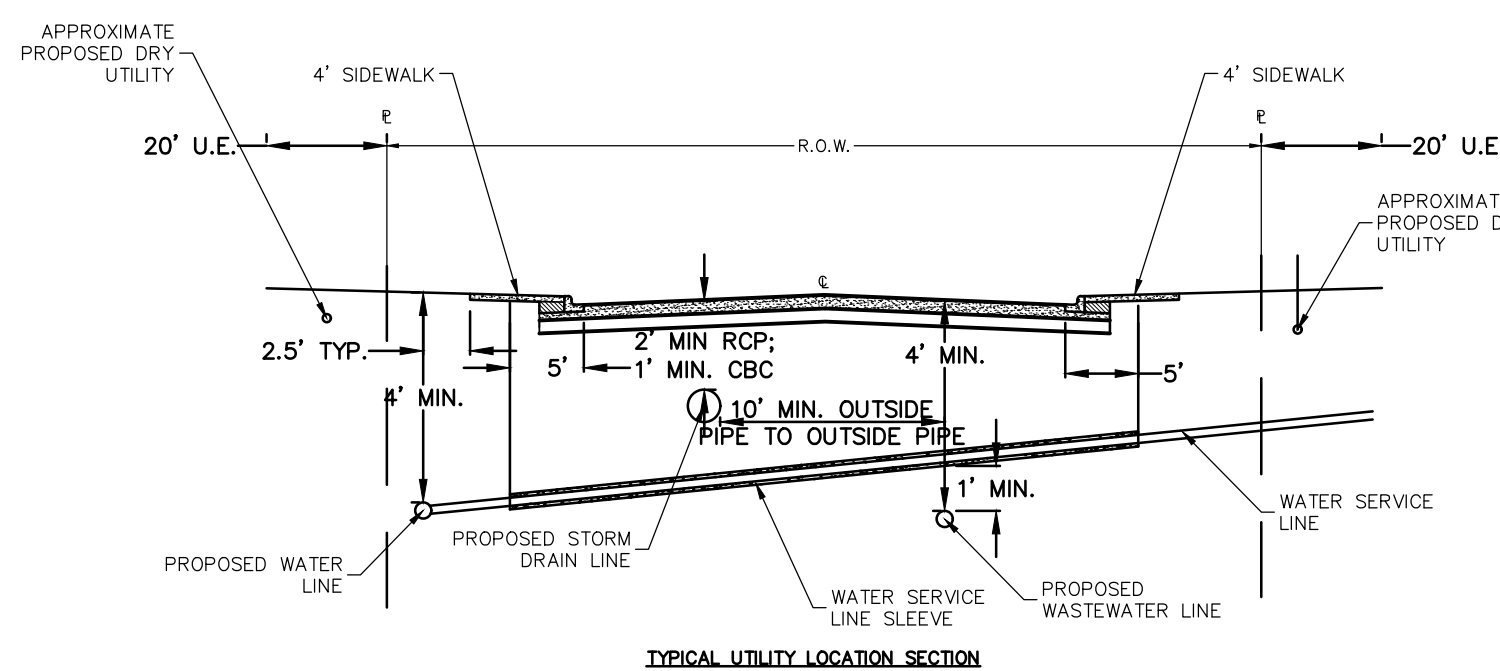
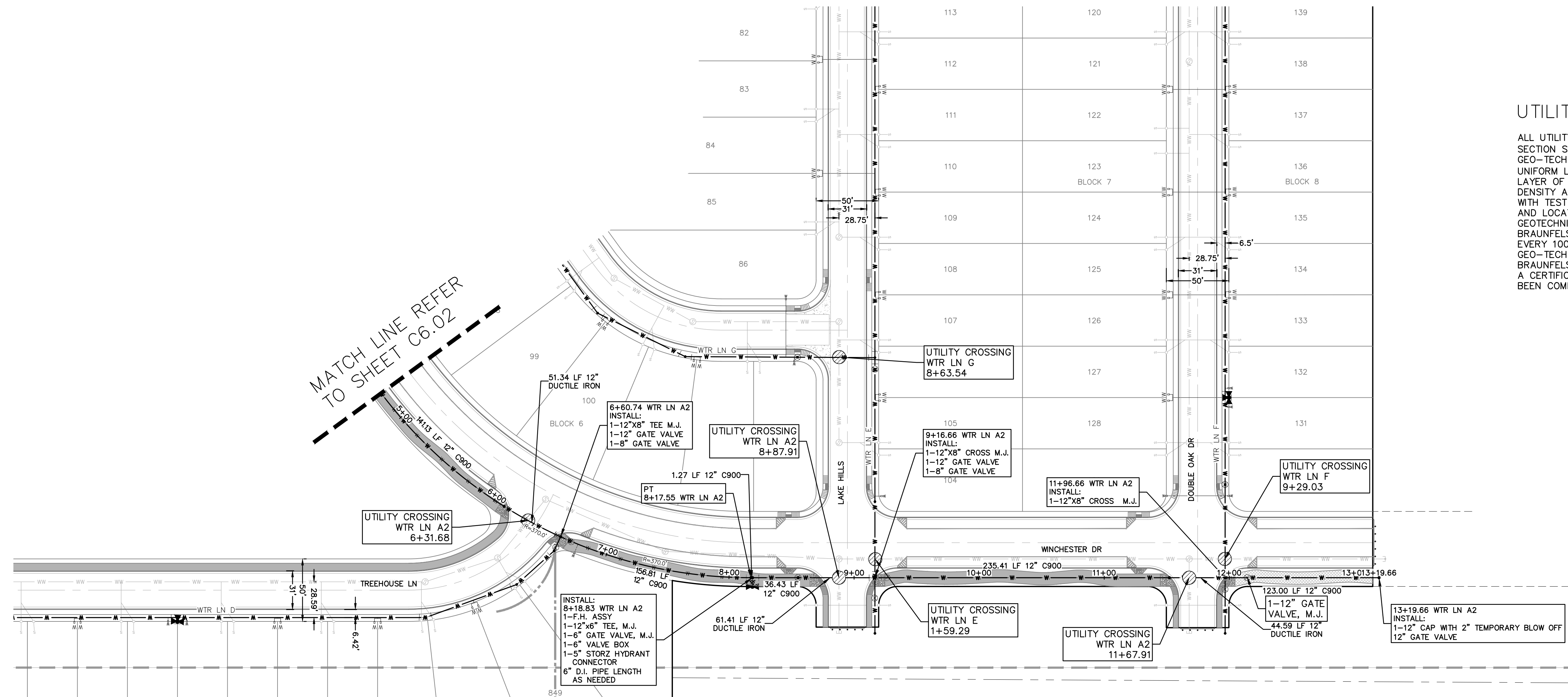
  - EXISTING CONTOURS
  - PROPOSED CONTOURS
  - BUILDING SETBACK LINE
  - UTILITY EASEMENT
  - DRAINAGE EASEMENT
  - EXISTING WATER LINE
  - PROPOSED WATER LINE
  - PROPOSED WATER SERVICE
  - UTILITY CROSSING

UTILITY TRENCH COMPACTION

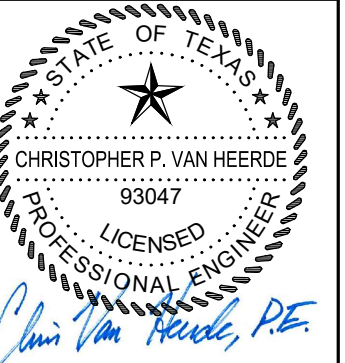
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UTILITY NOTES:

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
2. NO VALVES, HYDRANTS, ETC, SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
3. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5- FEET DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP TRENCHING, TRENCH SHIELDING, TRAFFIC AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY BE REQUIRED. A CHEVIEVE POSITIONING AND LOCATION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.
4. ALL WATER SERVICE LINES CROSSING ANY PUBLIC OR PRIVATE ROADWAYS SHALL BE SLEEVED, A 2-INCH SLEEVE SHALL BE USED FOR A 1-INCH WATER SERVICE. SERVICES MUST BE SLEEVED A MINIMUM OF 5-FOOT PAST THE EDGE OF THE FACE OF CURB.



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



06/22/2020

## WIRLN A PLAN & PROFILE

(2 OF 2)

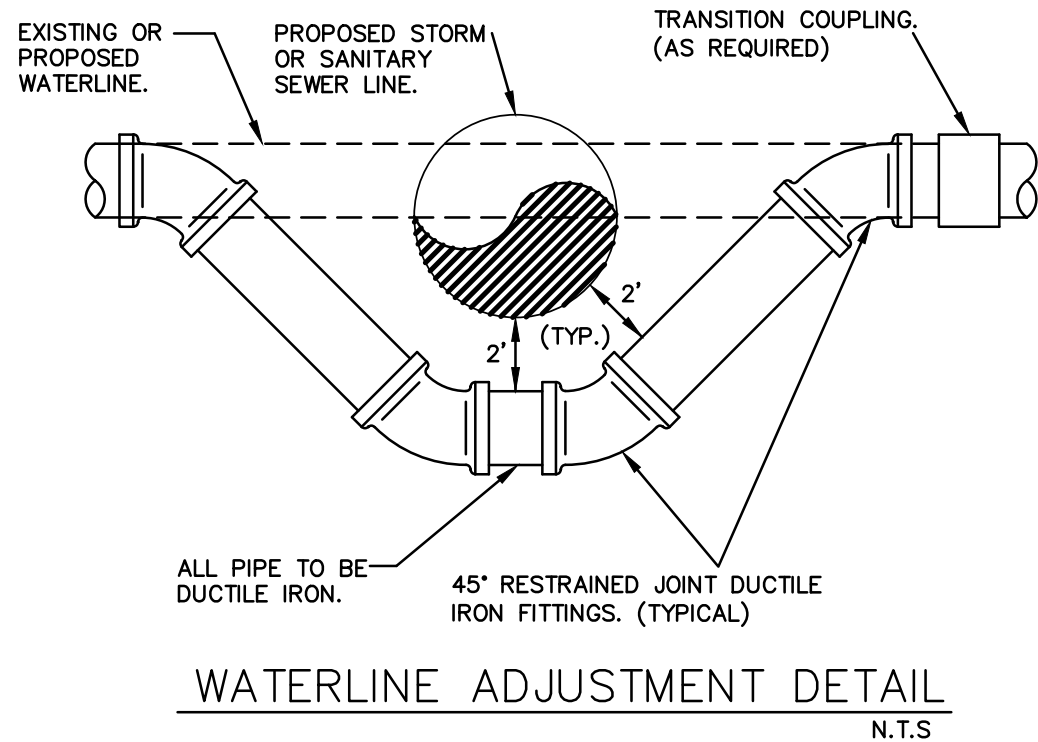
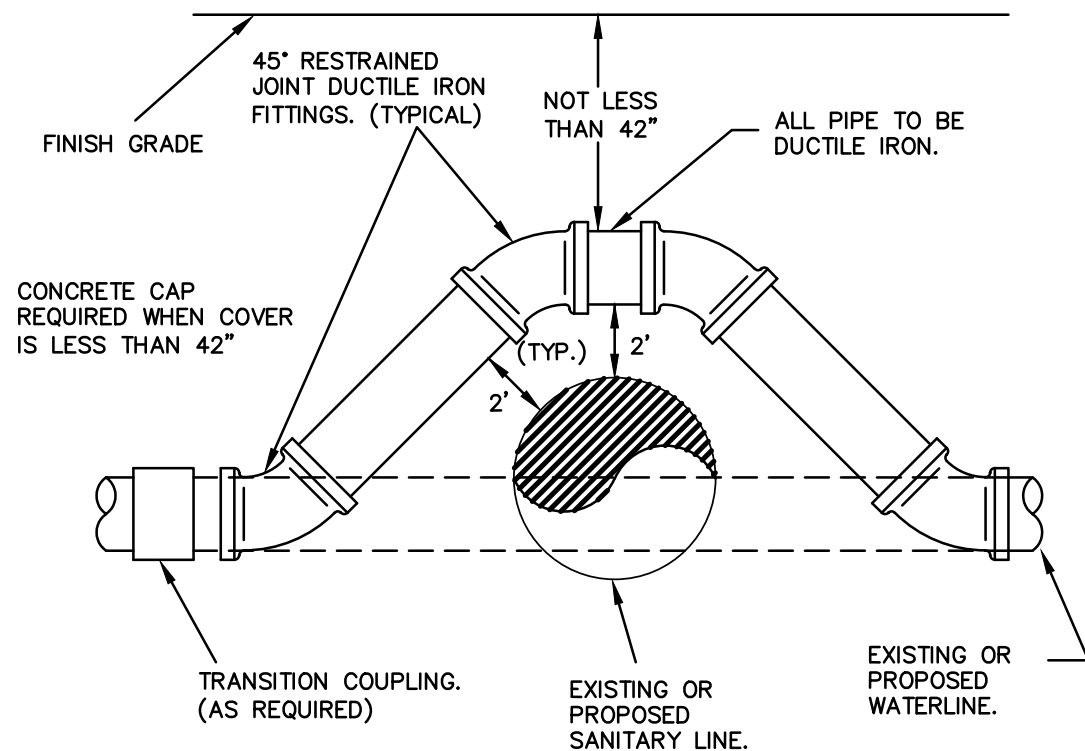
PARKSIDE SUBDIVISION  
PHASE 1

[illegible]

DATE: JULY 2020
DRAWN BY: CAM
DESIGNED BY: CAM
VIEWED BY: CVH/SWH
MT PROJECT NO.: 031.060

**SHEET**  
**C6.03**



WATERLINE ADJUSTMENT DETAIL  
N.T.S.WATERLINE ADJUSTMENT DETAIL  
N.T.S.

TEE			
PIPE INSIDE DIAMETER OF RUN	PIPE INSIDE DIAMETER OF BRANCH	MATERIAL	FT.
8"	8"	PVC	77
8"	8"	DUCTILE IRON	50
12"	8"	PVC	72

## UTILITY NOTES:

- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
- NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
- THIS SITE IS IN THE \_\_\_\_\_ PRESSURE ZONE ACCORDING TO CITY OF SEGUIN UTILITIES PRESSURE RECORDER LOCATIONS.
- CONTRACTOR TO VERIFY EXISTING LATERAL HAS A MINIMUM LONGITUDINAL SLOPE OF 2%.
- POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH SPRING HILLS WATER SUPPLY WATER AND WASTEWATER DESIGN CRITERIA MANUAL.

REFER TO CONSTRUCTION NOTES SHEET C0.2

## NOTES:

LENGTHS SHOWN ABOVE WERE COMPUTED BASED ON THE FOLLOWING VALUES:

- |                     |   |                                    |
|---------------------|---|------------------------------------|
| 1) SAFETY FACTOR    | = | 1.5 TO 1                           |
| 2) TEST PRESSURE    | = | 200psi.                            |
| 3) SOIL DESIGNATION | = | IN ORGANIC CLAY OF HIGH PLASTICITY |
| 4) DEPTH OF COVER   | = | 3.5 FEET (TYPICAL AND UPPER BEND)  |
| 5) DEPTH OF COVER   | = | 5 FEET (LOWER BEND)                |
| 6) LENGTH ALONG RUN | = | 2 FEET                             |

## UTILITY TRENCH COMPACTION

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

Spring Hills Water Supply	830-379-7683
Time Warner Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sanders	830-643-6903
Damaged Lines	888-876-5768
AT&T Telephone	830-303-1333
Eric White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4866
Texas One Call	630-545-6005

## C.P.E. LOCATOR

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

## TELEPHONE LOCATOR

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

## TRENCH EXCAVATION SAFETY PROTECTION

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

RESTRAINED LENGTH FOR PIPE										
PIPE INSIDE DIAMETER	MATERIAL	HORIZONTAL BENDS				VERTICAL BENDS				DEAD END/ INCLINE VALVES
		90°	45°	22.5°	11.25°	UPPER	LOWER	45°	22.5°	11.25°
8"	PVC	32	14	7	4	37	18	9	5	3
8"	DUCTILE IRON	27	11	6	3	33	16	8	12	6
12"	PVC	45	19	9	5	52	25	13	14	7

## MINIMUM LINE SIZE

THE MINIMUM PIPE SIZE FOR DISTRIBUTION MAINS SHALL BE 2 INCHES, WITH THE EXCEPTION THAT THE MINIMUM SIZE FOR DISTRIBUTION MAINS SERVING FIRE HYDRANTS AND FIRE HYDRANT BRANCHES SHALL BE A MINIMUM OF 8 IN DIAMETER

## WATER LINE ROUTING

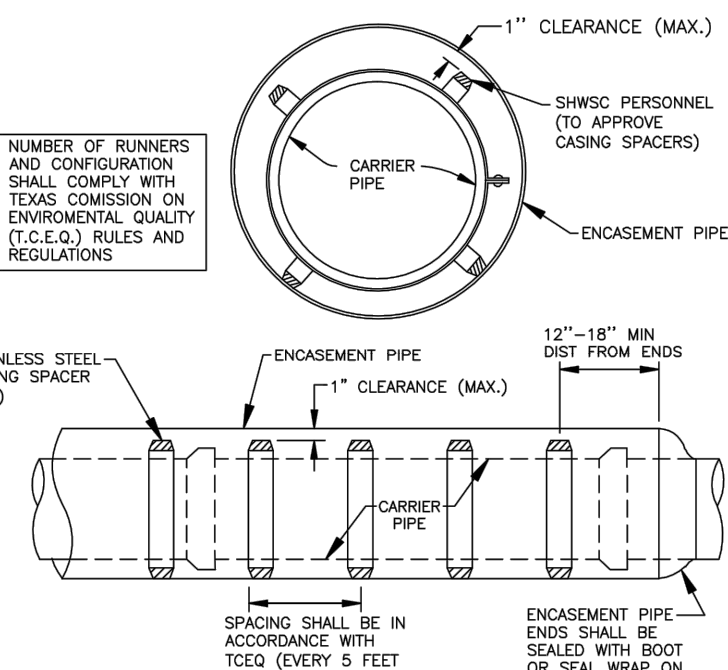
WATER LINES FOR THE WATER DISTRIBUTION SYSTEM FOR A RESIDENTIAL OR COMMERCIAL SUBDIVISION SHALL BE ROUTED OUTSIDE ROAD RIGHT OF WAY. WITHIN A 15' UTILITY EASEMENT THAT IS DEDICATED TO SHWS (EXCLUSIVE OR NON-EXCLUSIVE) UNLESS OTHERWISE APPROVED, WITH SHWS APPROVAL, WATER LINES MAY BE ROUTED 3'-0" WITHIN A PUBLIC RIGHT-OF-WAY. MULTIPLE POINTS OF CONNECTION MAY BE REQUIRED IN ORDER TO MINIMIZE SERVICE OUTAGE DURING EMERGENCIES, REPAIRS, ETC., AND TO IMPROVE FIRE PROTECTION AND WATER QUALITY. MAINS SHALL BE LOOPED WHENEVER POSSIBLE, WHEN LOOPING IS NOT FEASIBLE AUTO FLUSH VALVE MUST BE INSTALLED AT DEAD ENDS

## DEPTH OF COVER

COVER AS MEASURED FROM FINISHED GRADE TO TOP OF THE PIPELINE SHALL BE A MINIMUM OF 30 INCHES FOR PIPE DIAMETERS UP TO AND INCLUDING 12 INCHES. DEPTH OF COVER FOR PIPES 14 INCHES OR GREATER IN DIAMETER SHALL BE A MINIMUM OF 36 INCHES. EXCEPTIONS MUST BE APPROVED NY SHWS.

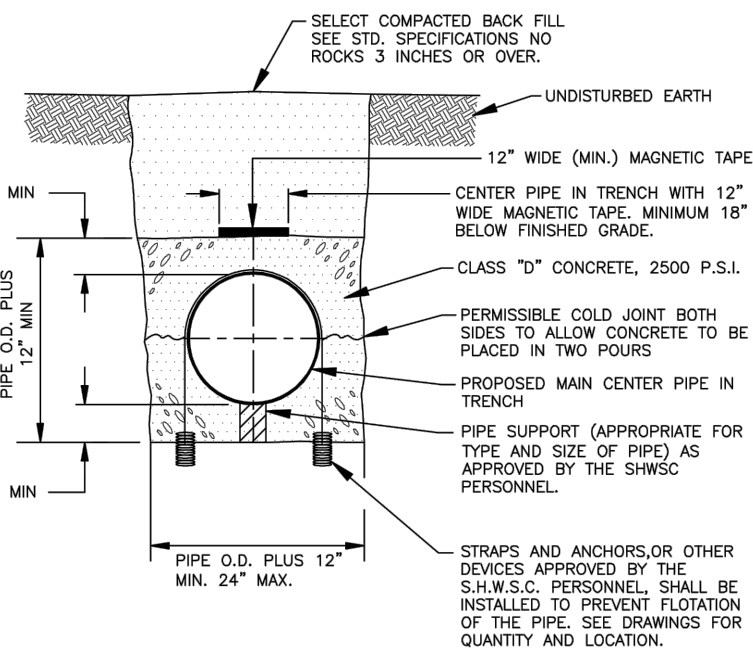
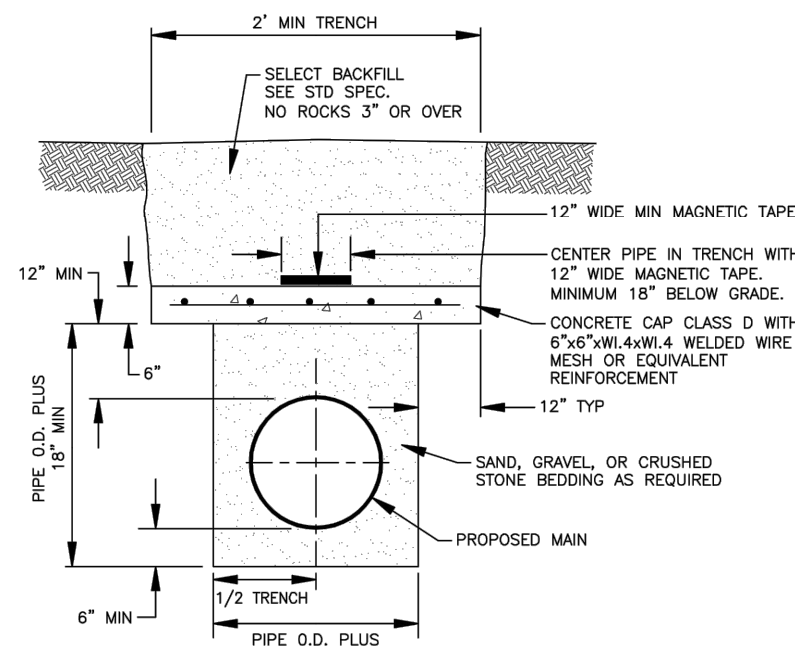
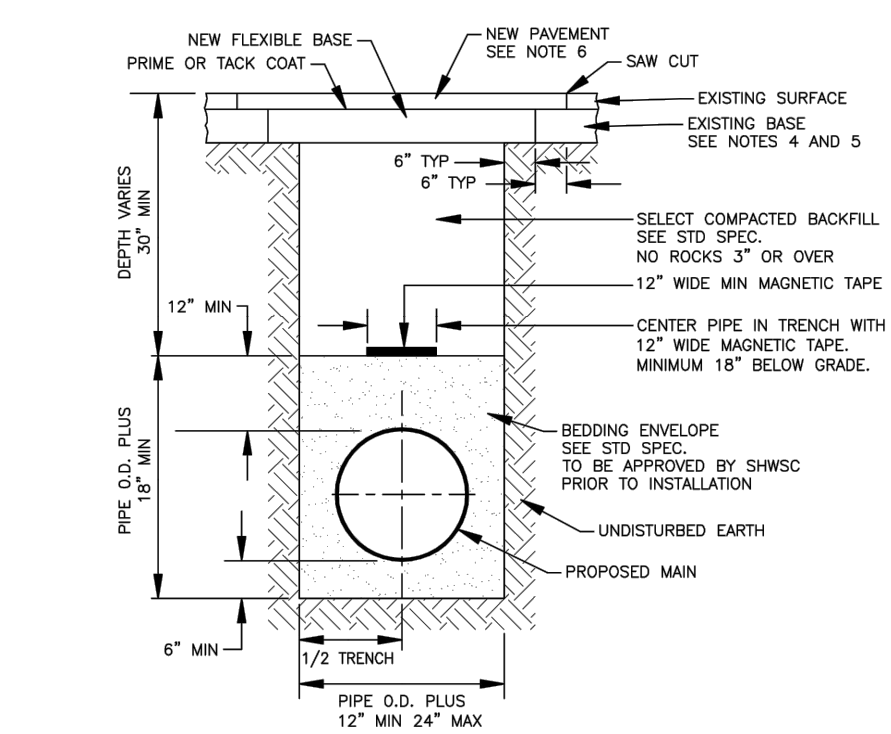
## FIRE HYDRANT LOCATION

HYDRANTS SHALL TYPICALLY BE LOCATED WITHIN ONE FOOT OF THE SIDE LOT LINES, BETWEEN ADJACENT PROPERTIES IN RESIDENTIAL AREAS, OR IN FRONT OF COMMERCIAL AND INDUSTRIAL PROPERTIES AS REQUIRED. HYDRANTS SHALL BE A MINIMUM OF 2 FEET FROM THE EDGE OF RIGHT OF WAY OR CURB IN AREAS WITHOUT SIDEWALKS AND SHALL NOT OBSTRUCT SIDEWALKS.



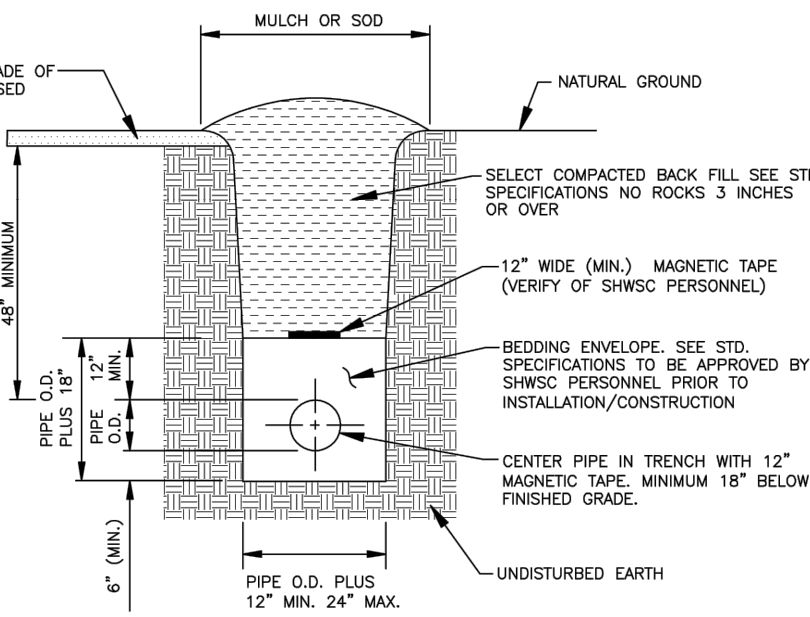
## NOTES:

- T.C.E.D. RULES AND REGULATIONS ON SANITARY SEWER, STORM SEWER AND WATER MAIN CROSSING AND SEPARATIONS WILL BE STRICTLY ENFORCED TO TAC, CHAPTER 290, SUBCHAPTER D
- ALL PIPE IN ENCASEMENT PIPE SHALL BE RESTRAINT JOINT AT EVERY JOINT FOR ENTIRE LENGTH OF THE ENCASEMENT PIPE PLUS 10 FEET ON EACH SIDE.
- FOR A PIPE 20' IN LENGTH, A MINIMUM OF 5 SPACERS ARE REQUIRED. FOR A PIPE 13' IN LENGTH, A MINIMUM OF 3 SPACERS ARE REQUIRED.

SPRING HILL WATER SUPPLY CORPORATION  
DATE: 03/03/2010  
REVISIONS:  
STANDARD NO. WA-1SPRING HILL WATER SUPPLY CORPORATION  
DATE: 03/03/2010  
REVISIONS:  
STANDARD NO. WA-2SPRING HILL WATER SUPPLY CORPORATION  
DATE: 07/23/2010  
REVISIONS:  
STANDARD NO. WA-3

## NOTES:

- THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12 INCHES WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMMETRICAL ABOUT THE CENTERLINE OF THE EXCAVATION.
- ANY CONCRETE PAVING SHALL BE CUT 6 INCHES WIDER THAN THE UNDISTURBED SIDES OF THE EXCAVATION.
- IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX OR TEMPORARY HOT MIX ASPHALTIC CONCRETE.
- ROAD BASE AND SURFACE MATERIALS IN THE TRENCH CUT SHALL BE REPLACED IN KIND, OF EQUAL THICKNESS, OR WITH MINIMUM BASE THICKNESS OF 10 INCHES WHICHEVER IS GREATER.
- ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT AREA SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 8 INCHES OF BASE OR MATCH EXISTING, WHICHEVER IS GREATER.
- SURFACE PAVEMENT SHALL BE OF THE KIND AND THICKNESS AS EXISTING, OR MINIMUM 2 INCHES, WHICHEVER IS GREATER.
- ALL WATER LINES SHALL HAVE A MINIMUM PRESSURE CLASS OF 200 PSI.

SPRING HILL WATER SUPPLY CORPORATION  
DATE: 07/28/2010  
REVISIONS:  
STANDARD NO. WA-4

## NOTES:

- ALL WATER LINES SHALL HAVE A MINIMUM PRESSURE CLASS OF 200 P.S.I.
- BEDDING AND BACKFILL SHALL BE COMPACTED TO 80% STANDARD PROCTOR

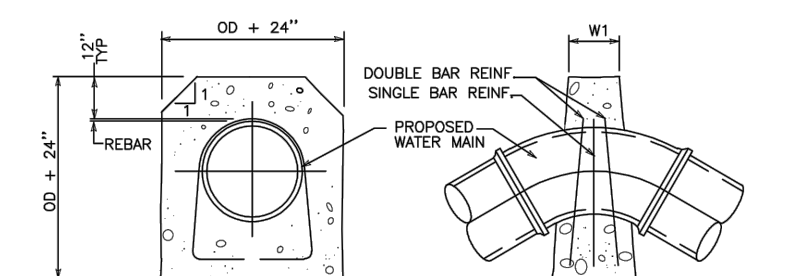
SPRING HILL WATER SUPPLY CORPORATION  
DATE: 03/03/2010  
REVISIONS:  
STANDARD NO. WA-5REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS:  
6" - 12" PIPE - (NUMBER 5)  
14" - 30" PIPE - (NUMBER 5'S)  
36" - 48" PIPE - (3) NUMBER 7'S

TABLE A			
PIPE DIA.	MIN. TOP WIDTH W1	ANGLE (DEGREES)	REINFORCING
6"	6"	0-5	NOTE 2
		5-15	24
		15-25	48
8"	6"	0-5	NOTE 2
		5-15	30
		15-25	48
12"	6"	0-5	NOTE 2
		5-15	48
		15-25	60
16"	12"	0-5	NOTE 2
		5-15	60
		15-25	96

## NOTES:

- THE EARTH BEARING SURFACE SHALL BE UNDISTURBED MATERIAL, IF NOT POSSIBLE, THE FILL BETWEEN THE BEARING SURFACE AND THE UNDISTURBED SOIL MUST BE COMPACTED TO 10 TO A MINIMUM OF 80% STANDARD PROCTOR DENSITY.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL ADEQUATE THRUST BLOCKING. THE CONTRACTOR SHALL MAKE THE DETERMINATION IN THE FIELD AS TO TYPE OF SOIL AND USE THE "THRUST BLOCKING DESIGN" TO ADJUST THE AMOUNTS OF THRUST BLOCKING REQUIRED AT EACH PLACE OF USE.
- ALL FITTINGS SHALL BE BLOCKED REGARDLESS OF THE ANGLE OF DIRECTION.
- ALL JOINTS WITHIN 30' OF BEND MUST BE RESTRAINED.

SPRING HILL WATER SUPPLY CORPORATION  
DATE: 03/03/2010  
REVISIONS:  
STANDARD NO. WA-6290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600

07/20/2020

WATER DETAILS (1 OF 3)

PARKSIDE SUBDIVISION  
PHASE 1

REVISION	DESCRIPTION	REVISION DATE
NO.		

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

REVIEWED BY: CWH/SMH

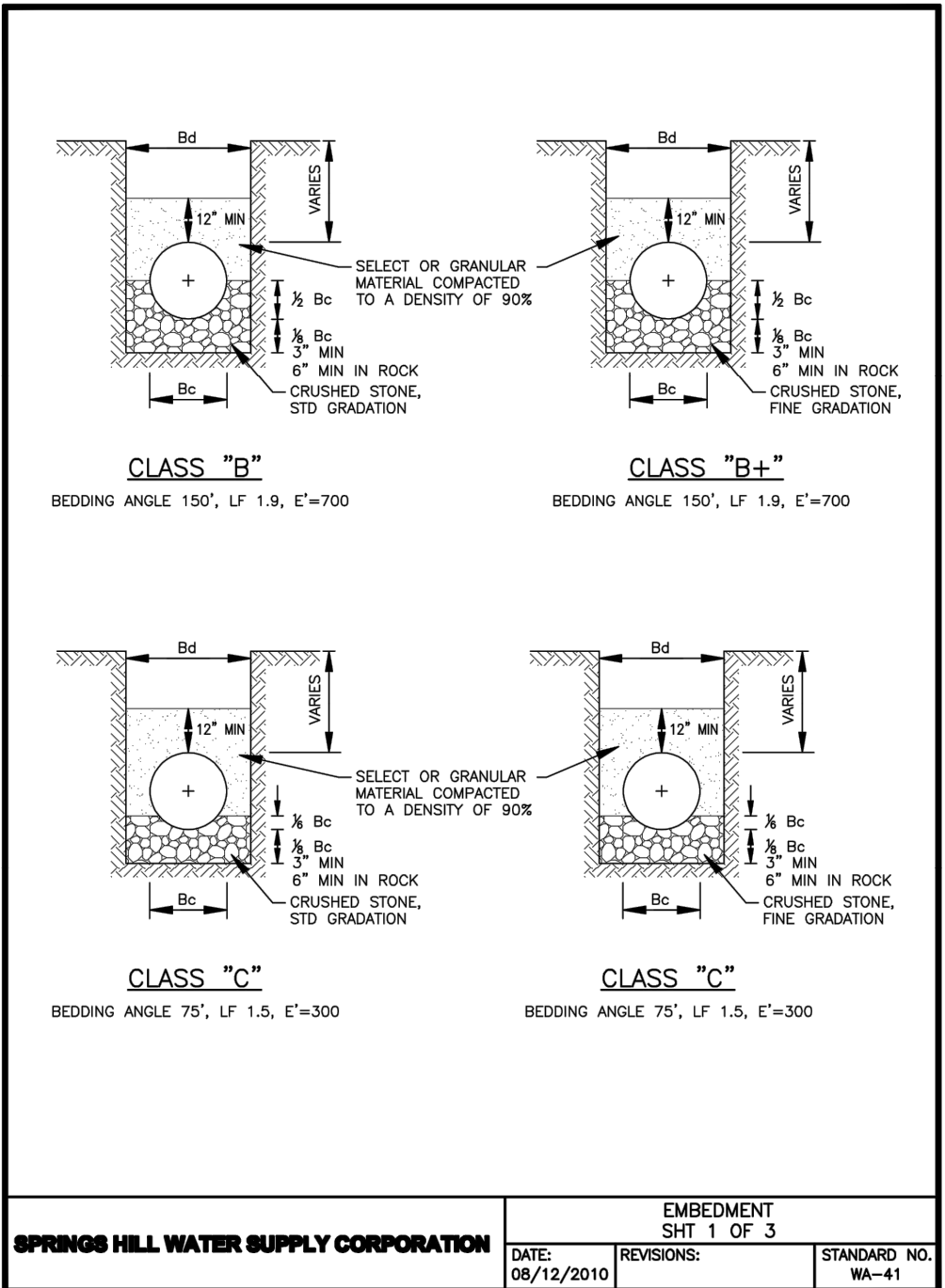
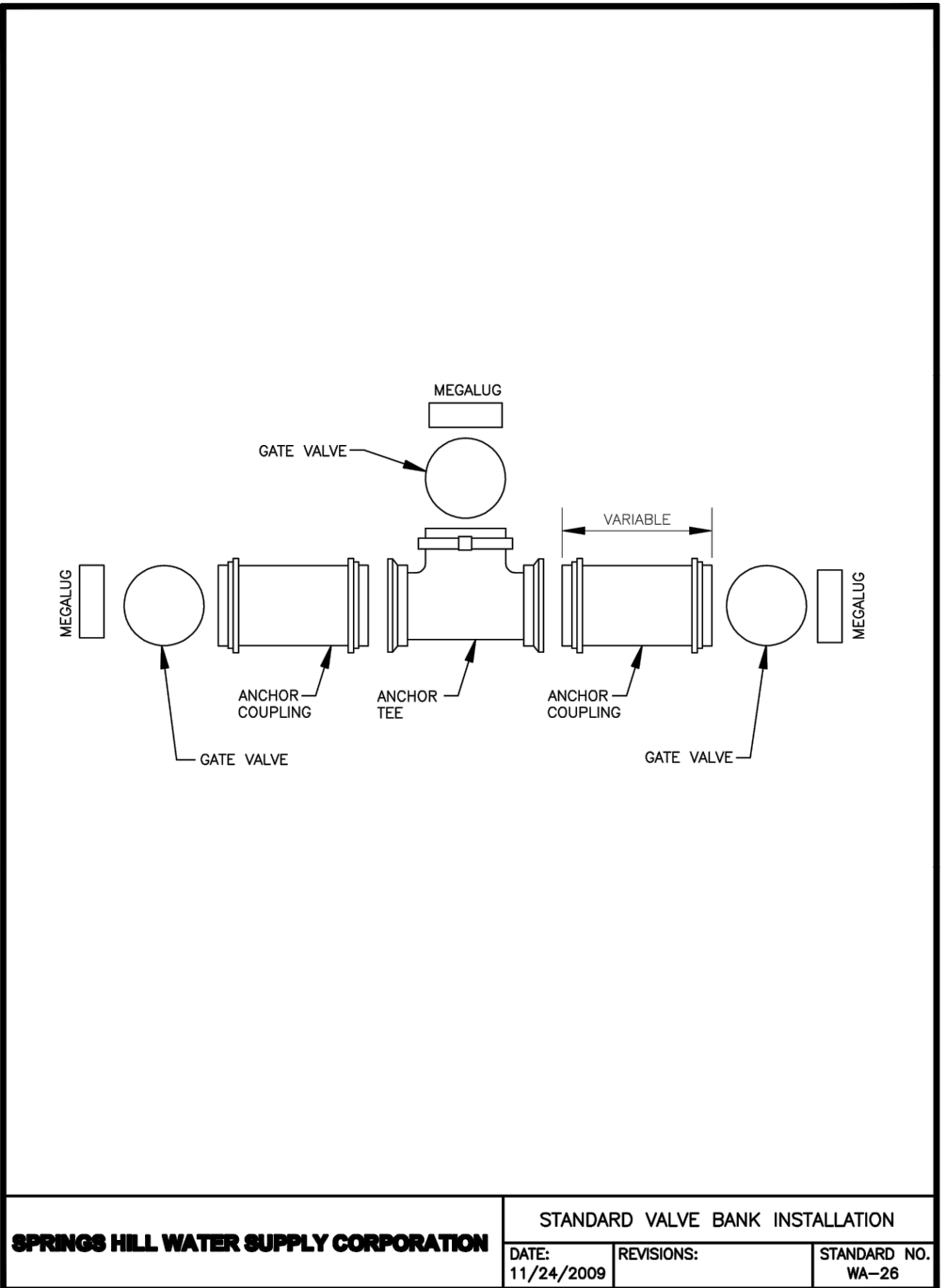
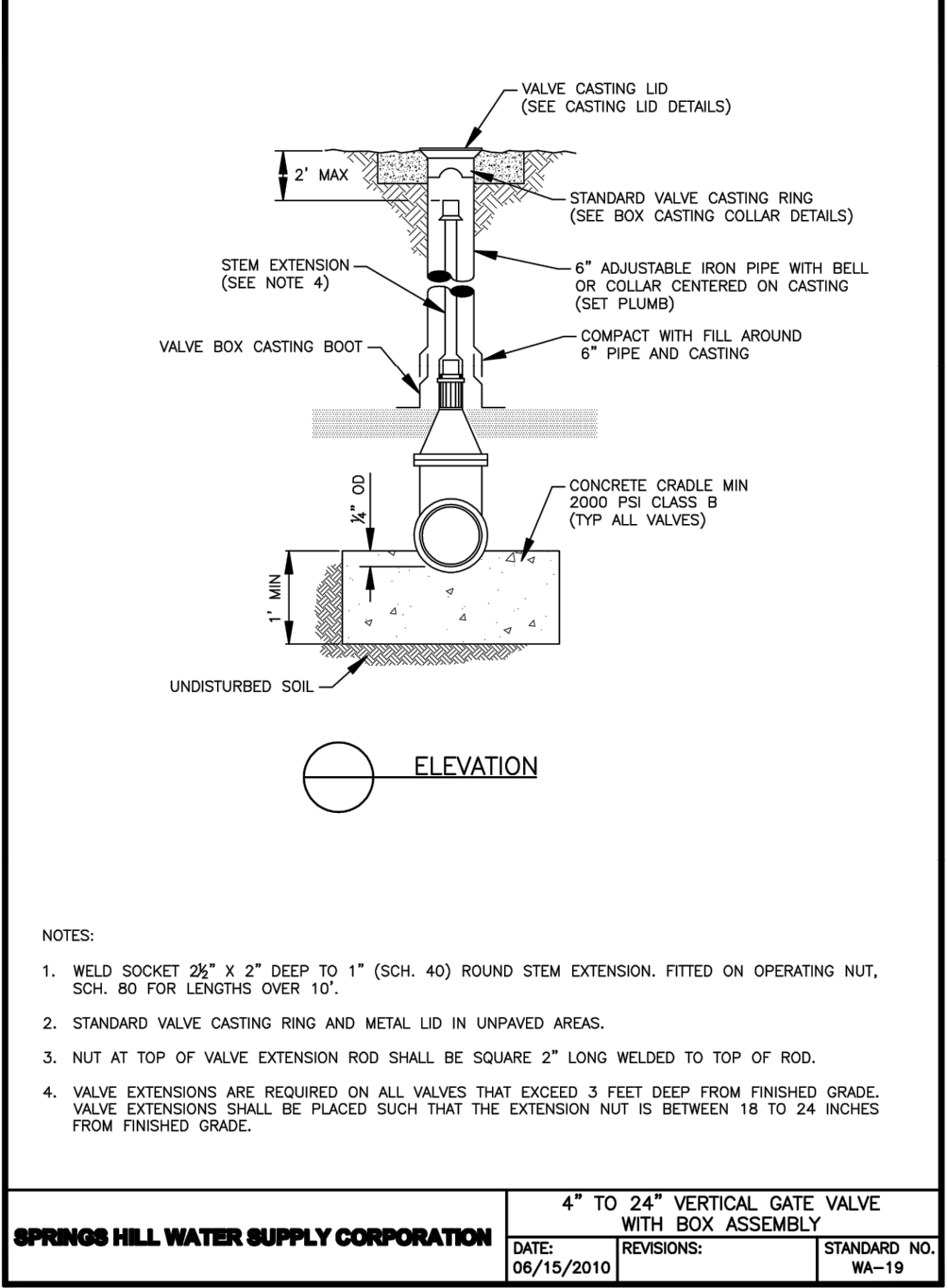
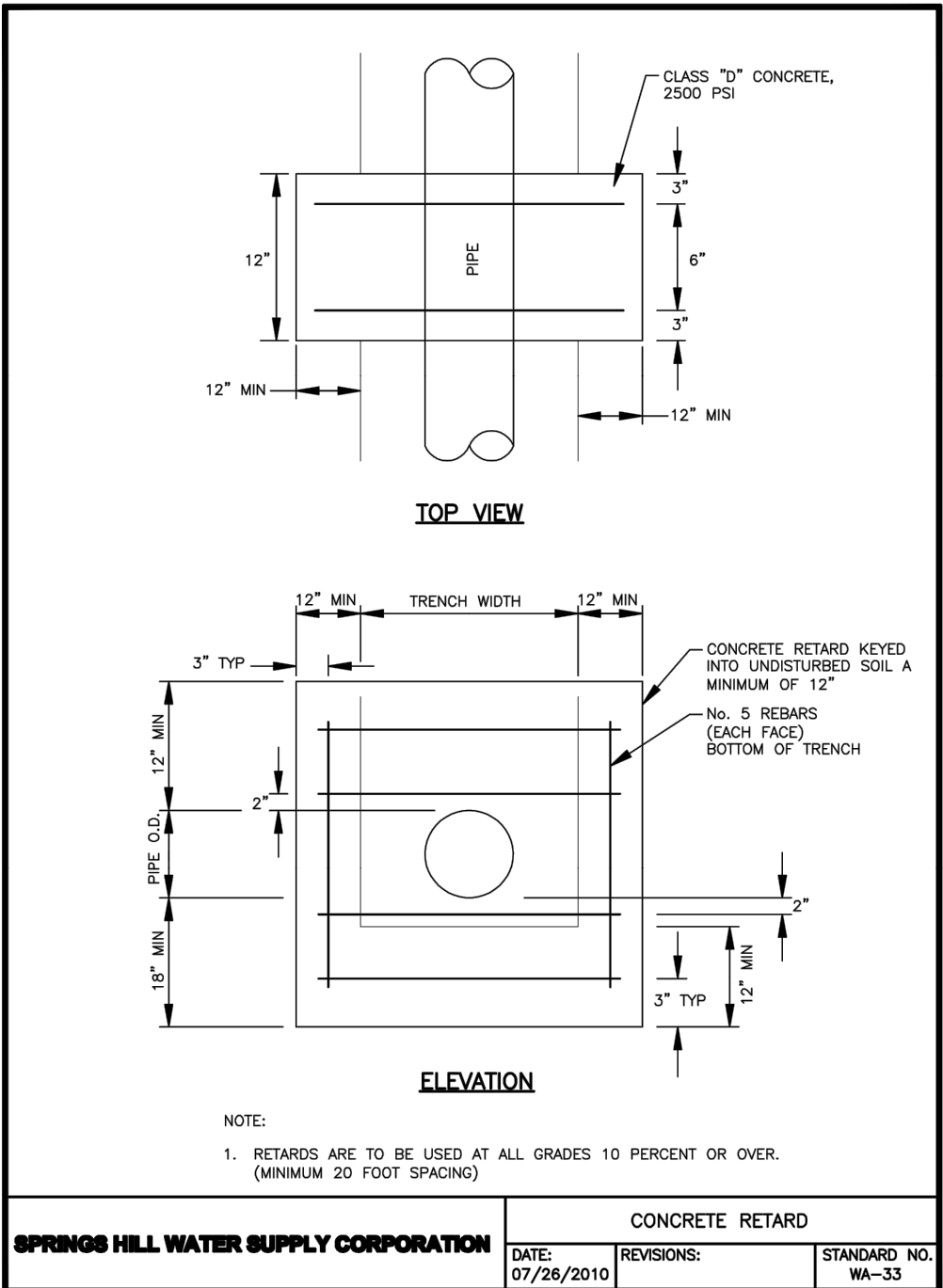
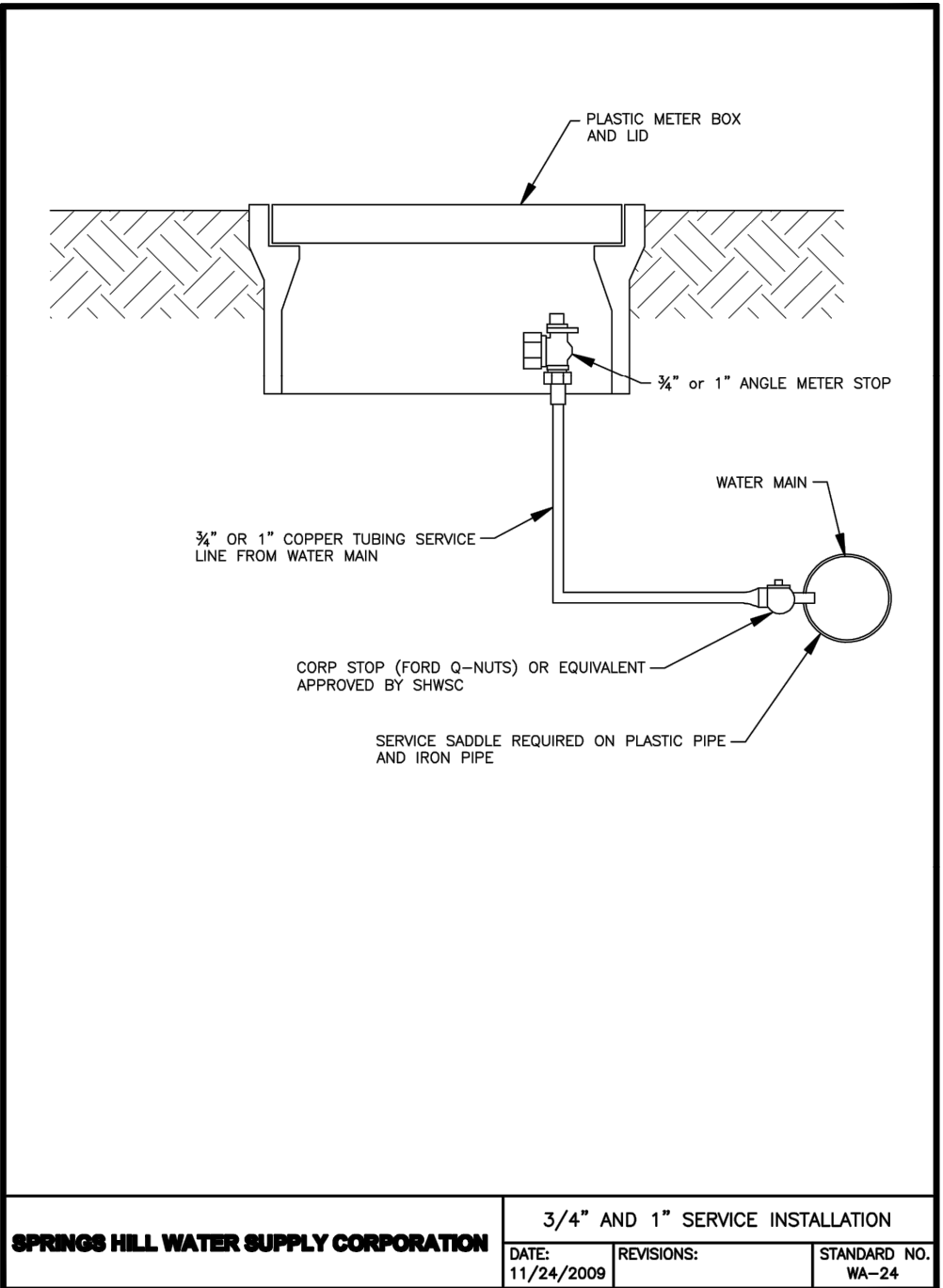
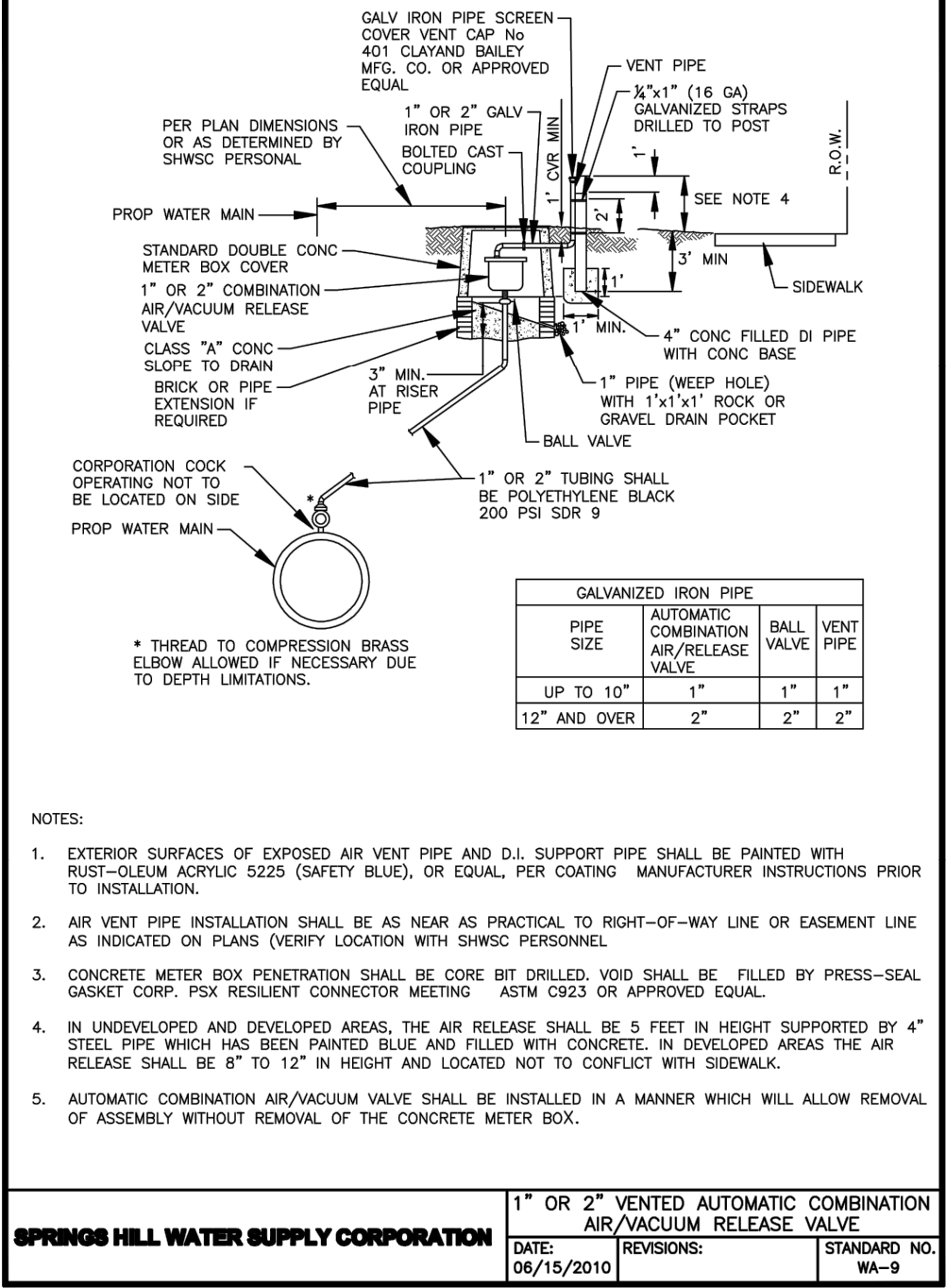
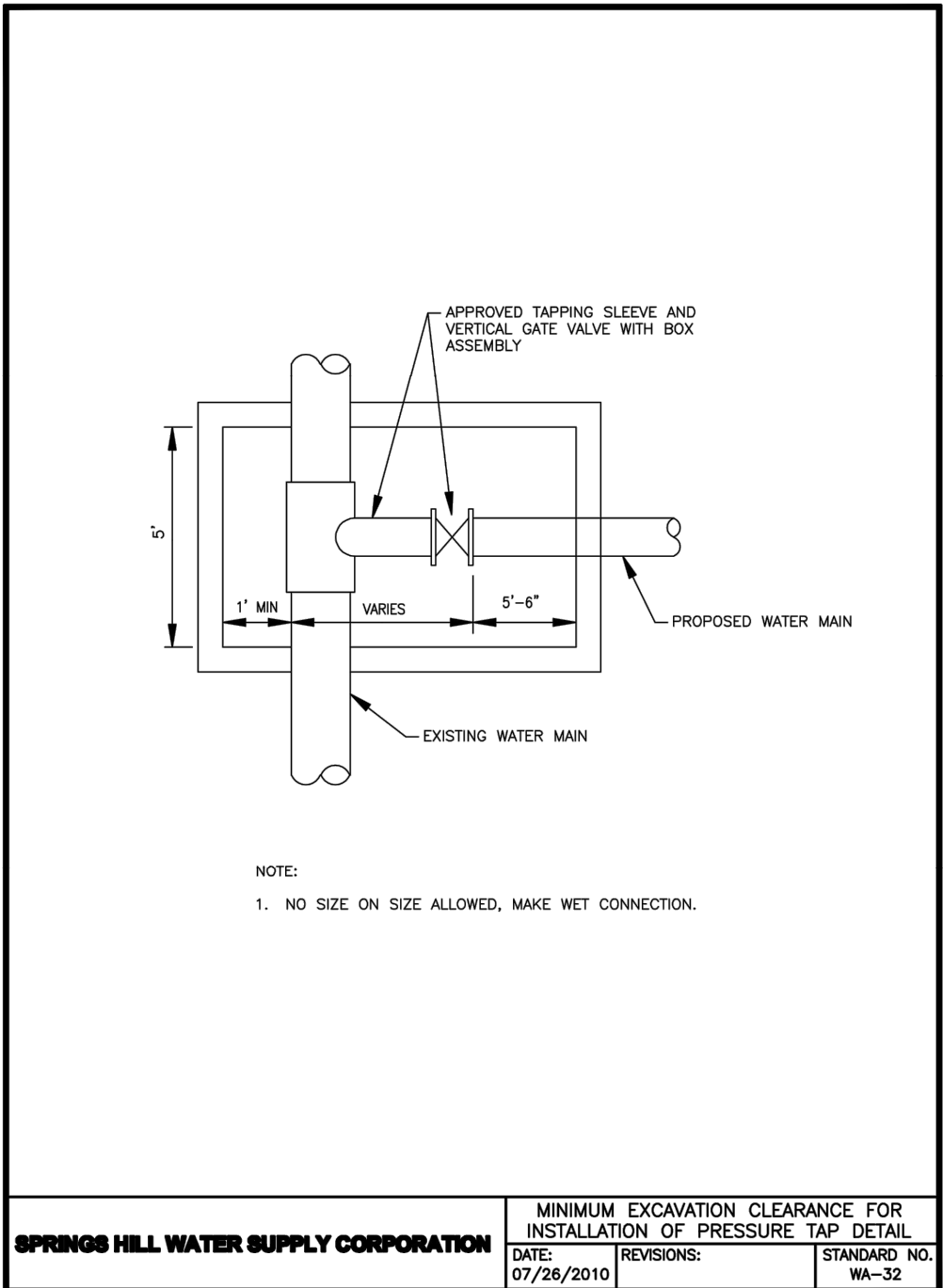
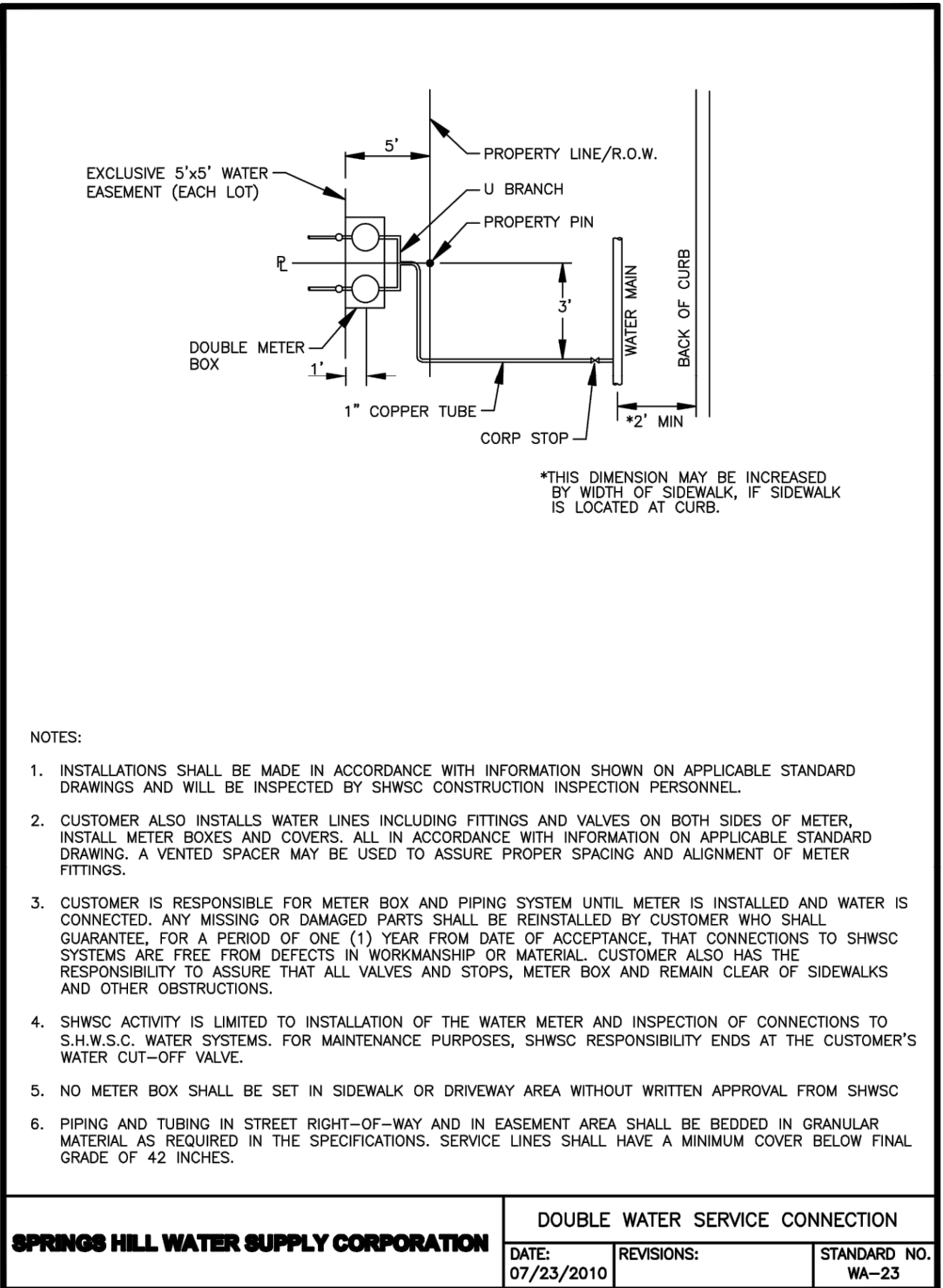
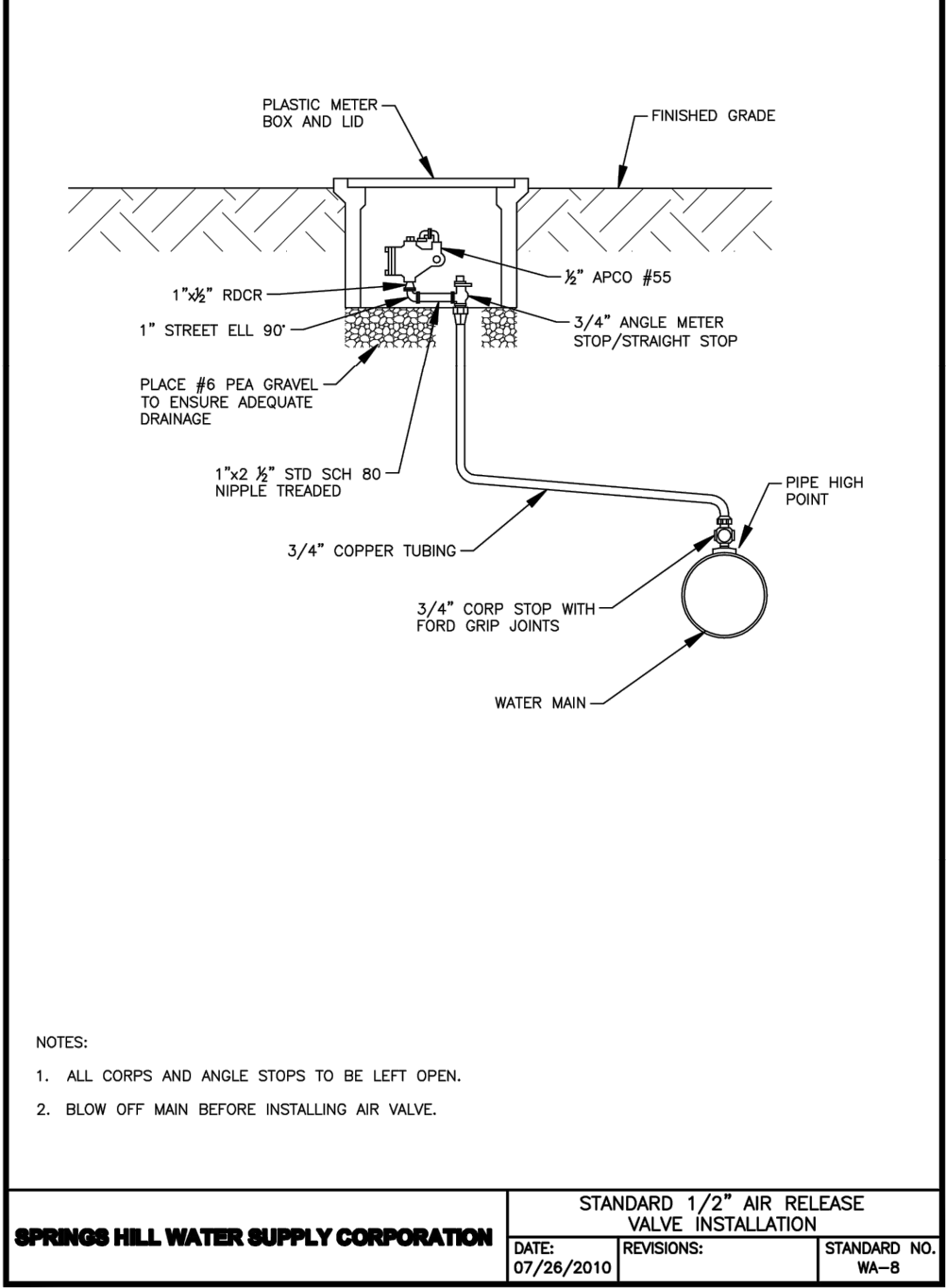
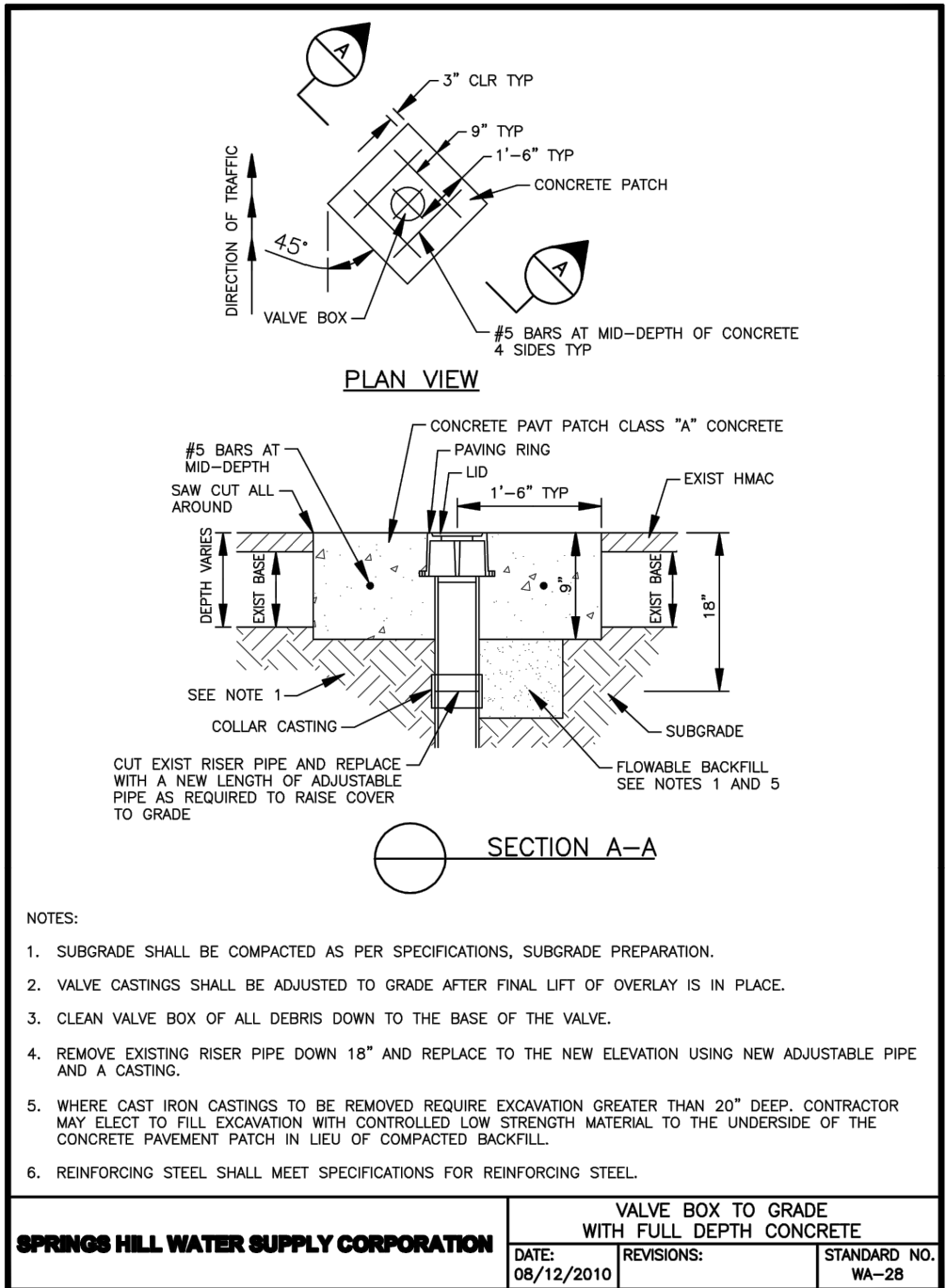
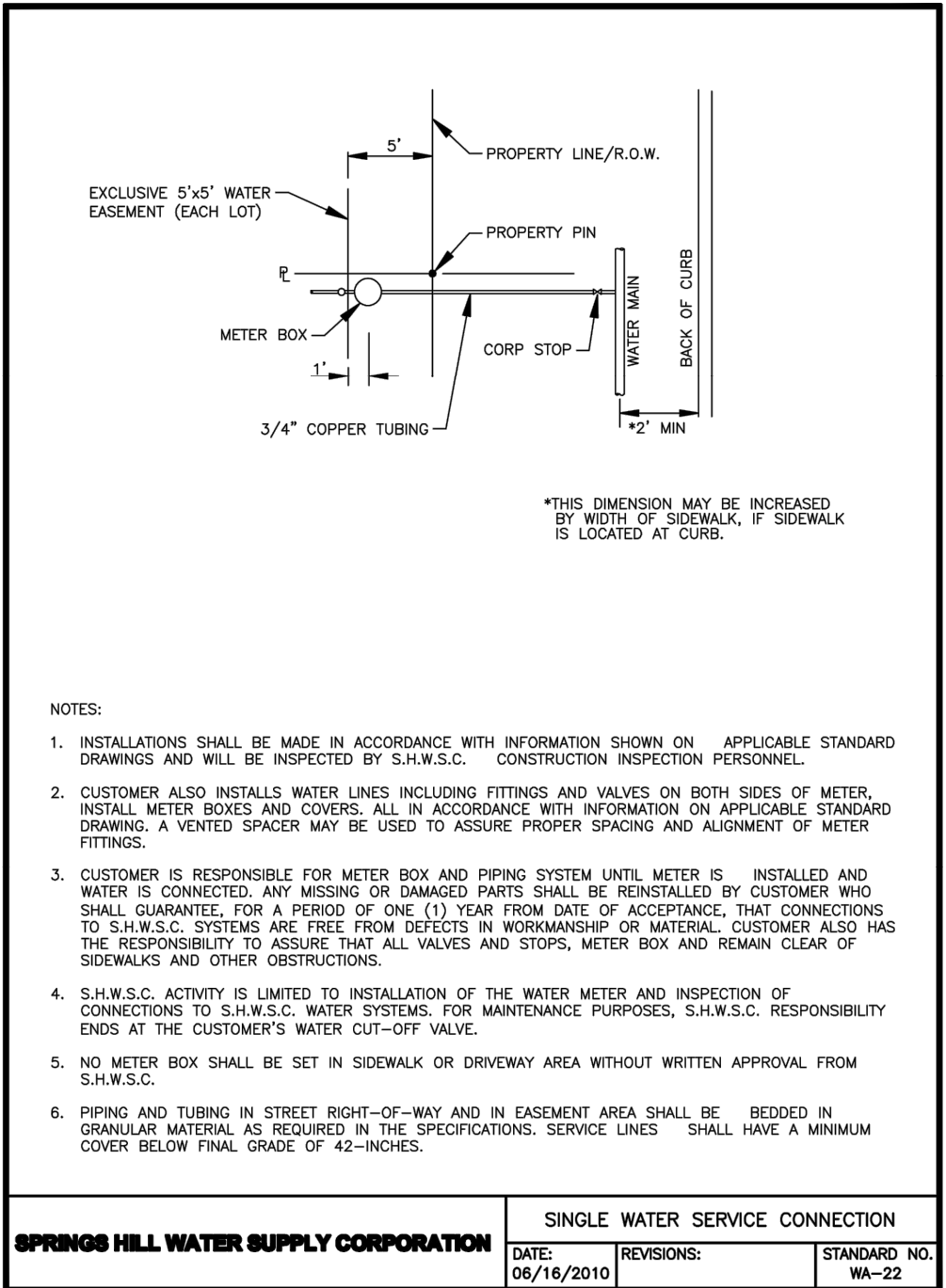
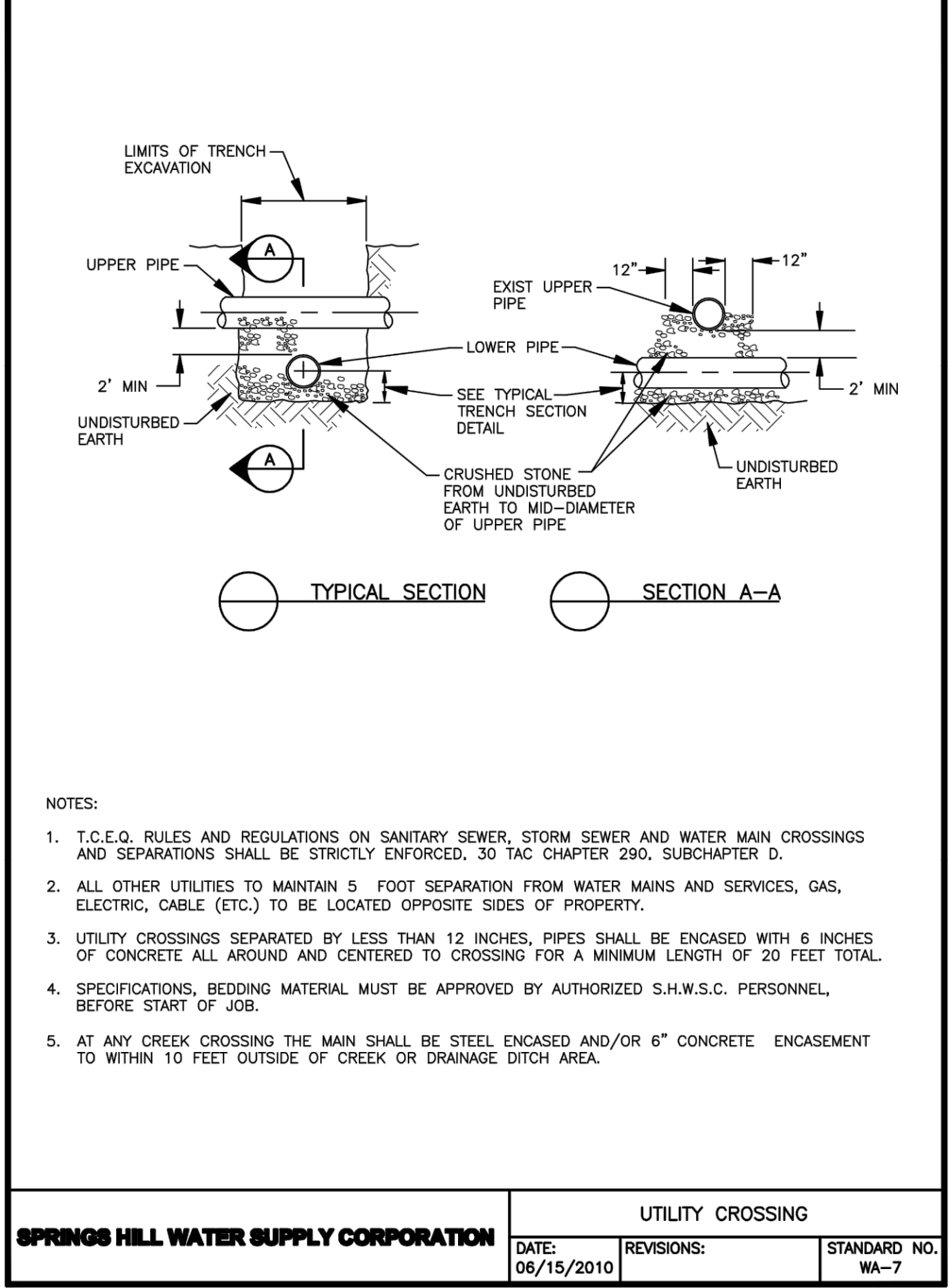
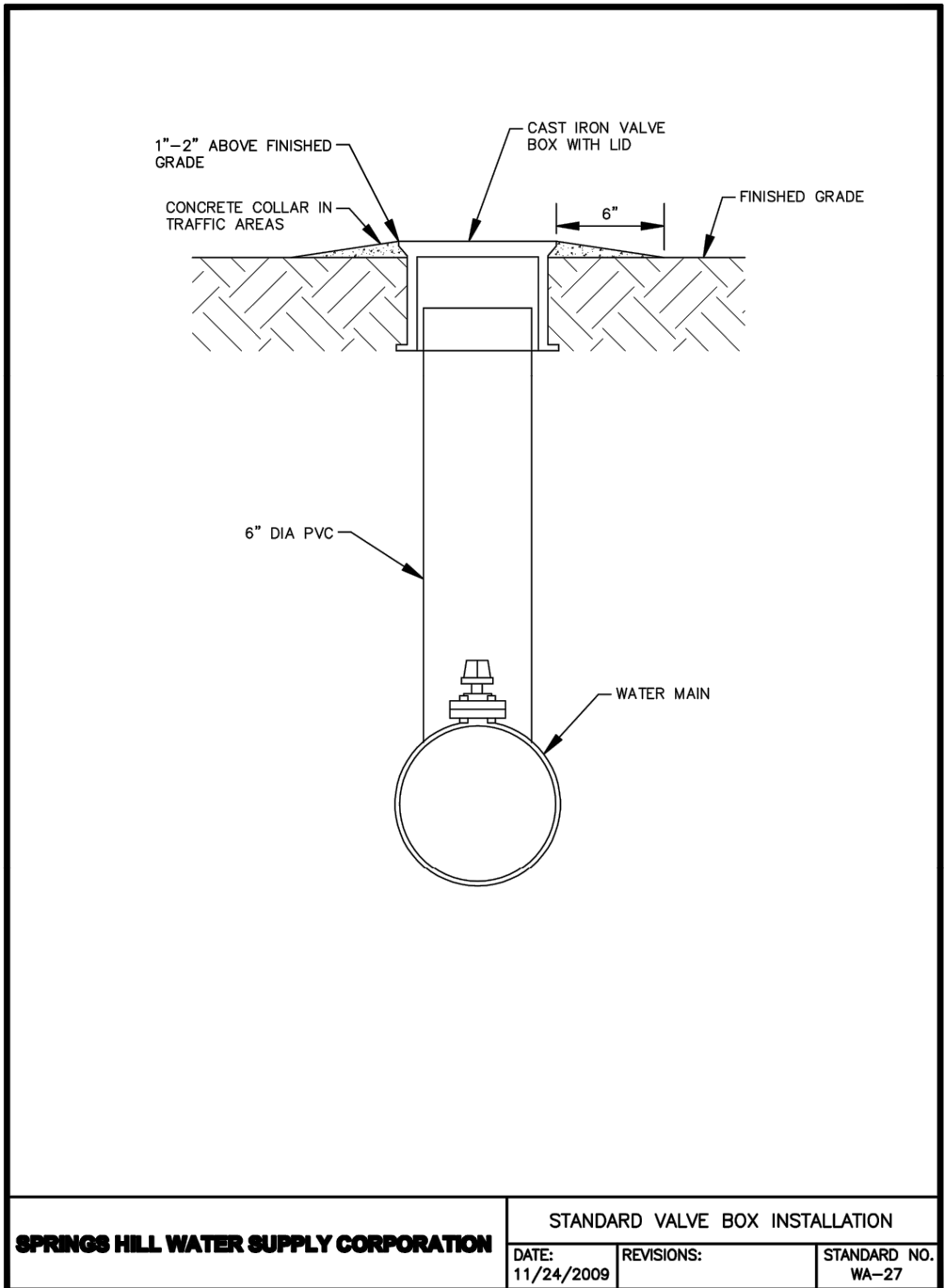
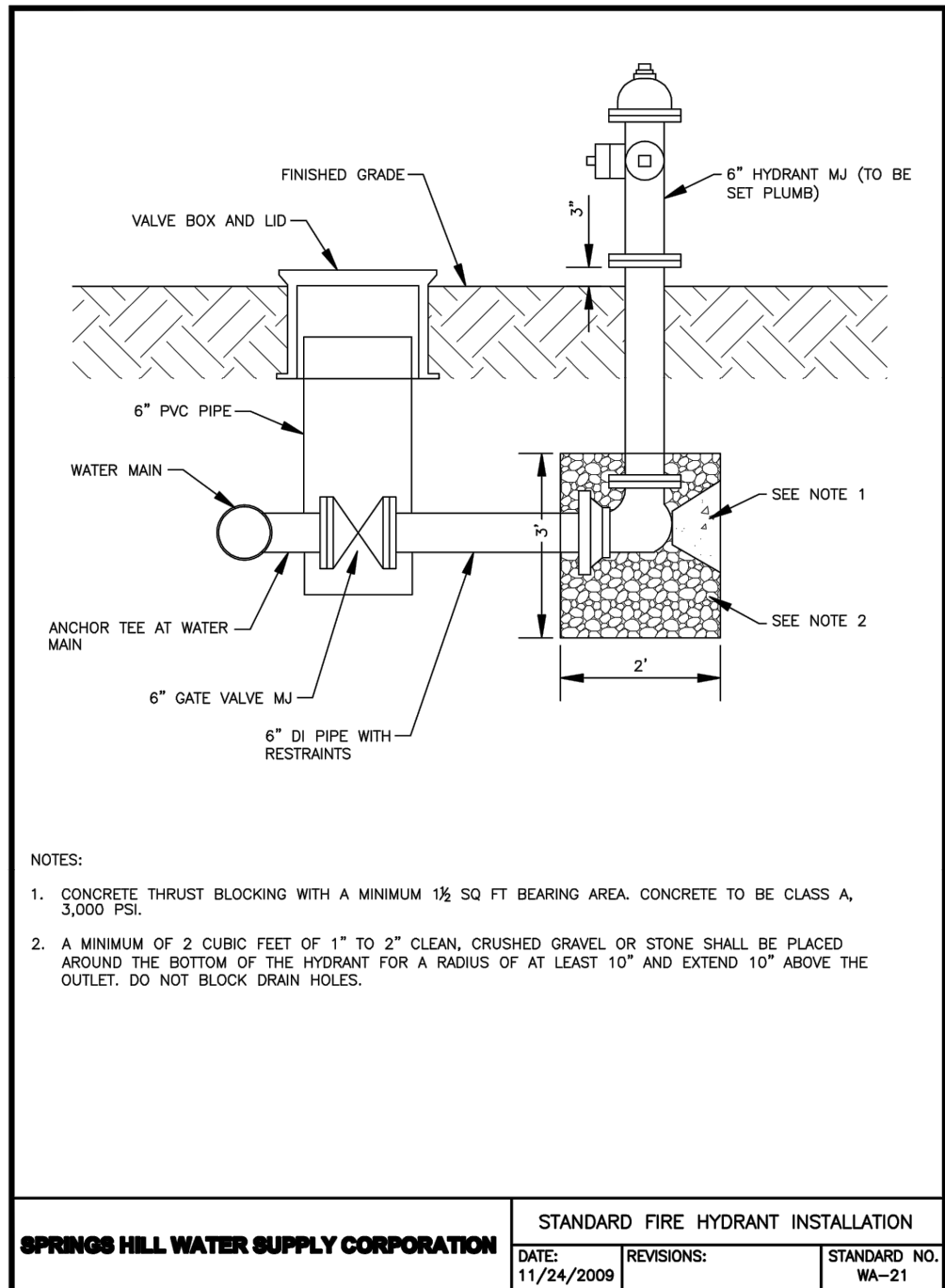
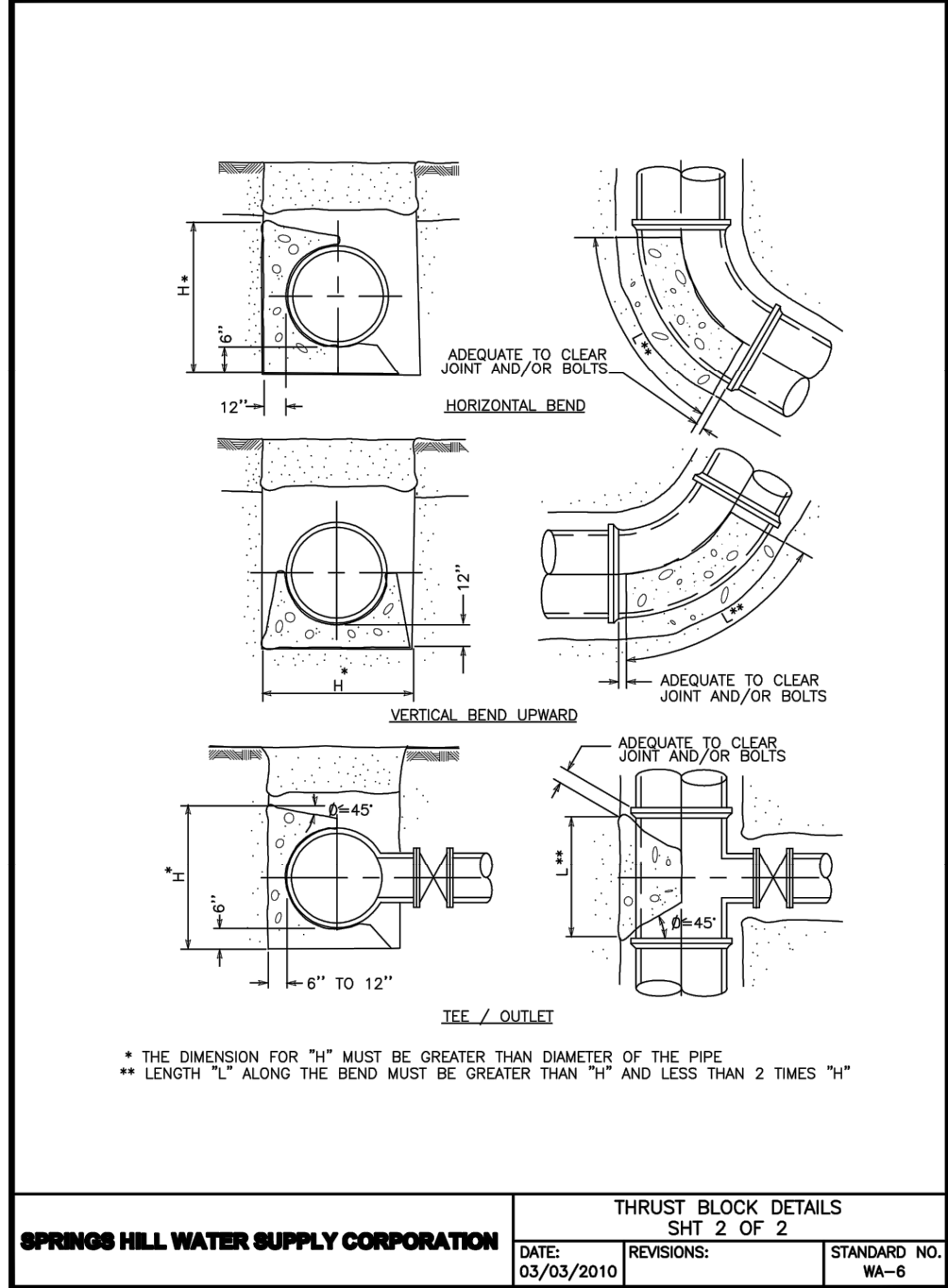
HMT PROJECT NO.:

031.060

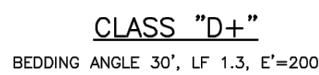
SHEET

C6.04









NOTES:

1. PIPE EMBEDEDMENT SHALL CONFORM TO DETAILS SHOWN HEREIN.
2. SECONDARY BACKFILL SHALL EXTEND FROM ABOVE THE EMBEDEDMENT TO BELOW THE PAVEMENT REPAIR SECTION WITHIN PAVEMENT AREA AND TO BELOW THE TOPSOIL SECTION OUTSIDE PAVEMENT AREAS.
3. SECONDARY BACKFILL SHALL CONSIST OF SELECT MATERIAL INCLUDING GRAVEL, FINE ROCK, SAND, SANDY LOAM, OR LOAM FREE FROM EXCESSIVE CLAY. ROCK CUTTINGS SHALL HAVE NO DIMENSION GREATER THAN TWO INCHES. TRENCH CUTTINGS MAY BE UTILIZED AS SELECT MATERIAL PROVIDED THE CONDITIONS OF THIS PARAGRAPH ARE MET.
4. SECONDARY BACKFILL SHALL BE MECHANICALLY COMPACTED TO 95% STANDARD PROCTOR DENSITY WITHIN PAVEMENT AREAS AND TO 90% STANDARD PROCTOR DENSITY OUTSIDE PAVEMENT AREAS.

<b>SPRINGS HILL WATER SUPPLY CORPORATION</b>	EMBEDMENT SHT 2 OF 3		
	DATE: 08/12/2010	REVISIONS:	STANDARD NO. WA-41

NOTES:

1. RCCP = REINFORCED CONCRETE CYLINDER PIPE.
2. EMBEDMENT DIMENSION FOR HDPE PIPE SHALL BE IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS.

<b>SPRINGS HILL WATER SUPPLY CORPORATION</b>	EMBEDMENT SHT 3 OF 3		
	DATE: 08/12/2010	REVISIONS:	STANDARD NO. WA-41

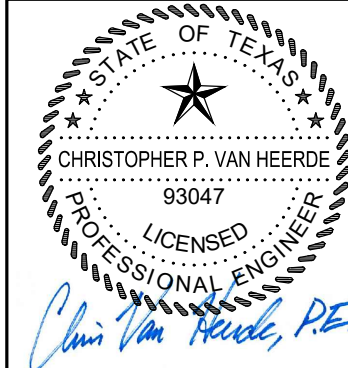
DATE: <b>JULY 2020</b>
DRAWN BY: <b>CAM</b>
DESIGNED BY: <b>CAM</b>
REVIEWED BY: <b>CVH/SWH</b>
HMT PROJECT NO.: <b>031.060</b>

**SHEET**  
**C6.06**

**WATER DETAILS (3 OF 3)**

PARKSIDE SUBDIVISION  
PHASE 1

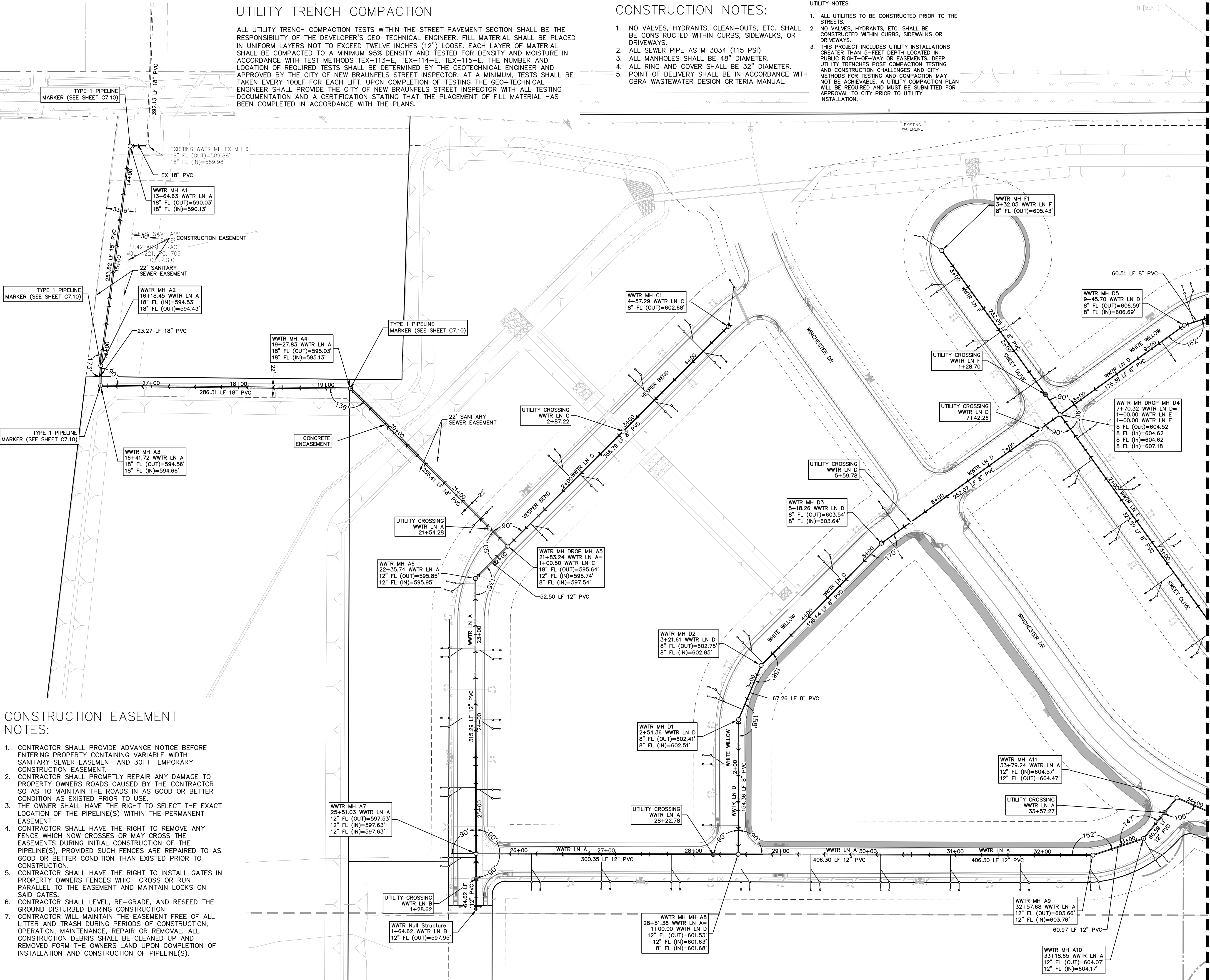
07/20/2020



290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600







UTILITY TRENCH COMPACTION

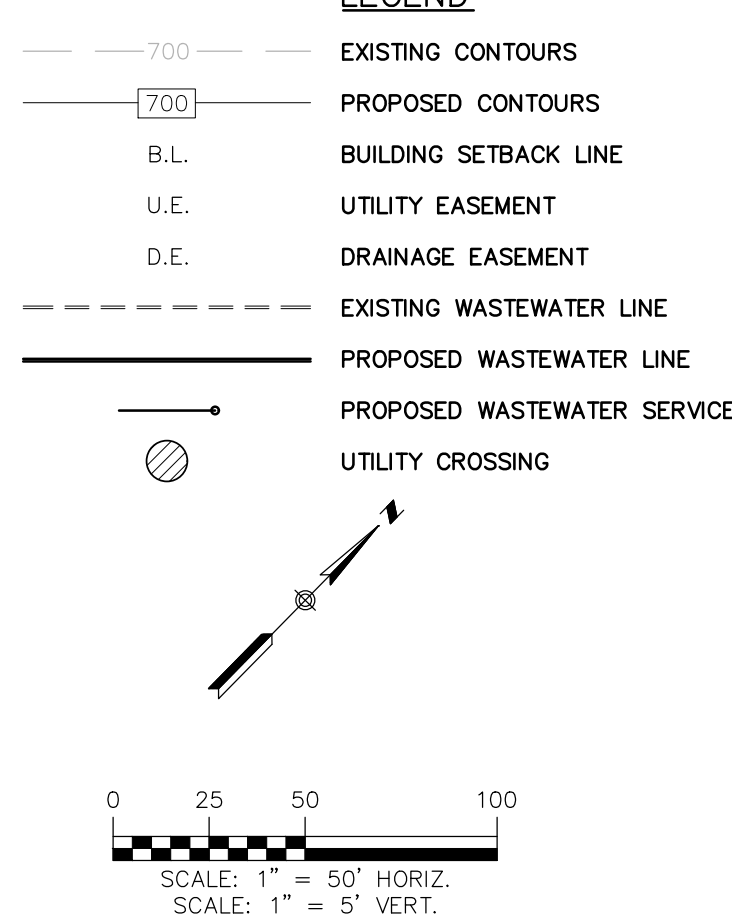
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

CONSTRUCTION NOTES:

1. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
2. ALL SEWER PIPE ASTM 3034 (115 PSI)
3. ALL MANHOLES SHALL BE 48" DIAMETER.
4. ALL RING AND COVER SHALL BE 32" DIAMETER.
5. POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH GBRA WASTEWATER DESIGN CRITERIA MANUAL.

UTILITY NOTES:

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
2. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
3. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5-FEET DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP UTILITY TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES. AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.



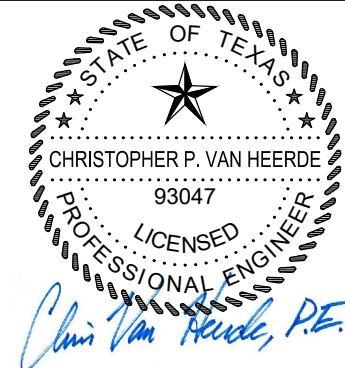
TRENCH EXCAVATION SAFETY PROTECTION

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

CONSTRUCTION EASEMENT NOTES:

1. CONTRACTOR SHALL PROVIDE ADVANCE NOTICE BEFORE ENTERING PROPERTY CONTAINING VARIABLE WIDTH SANITARY SEWER EASEMENT AND 30FT TEMPORARY CONSTRUCTION EASEMENT.
2. CONTRACTOR SHALL PROMPTLY REPAIR ANY DAMAGE TO PROPERTY OWNERS ROADS CAUSED BY THE CONTRACTOR SO AS TO MAINTAIN THE ROADS IN AS GOOD OR BETTER CONDITION AS EXISTED PRIOR TO USE.
3. THE OWNER SHALL HAVE THE RIGHT TO SELECT THE EXACT LOCATION OF THE PIPELINE(S) WITHIN THE PERMANENT EASEMENT
4. CONTRACTOR SHALL HAVE THE RIGHT TO REMOVE ANY FENCE WHICH NOW CROSSES OR MAY CROSS THE EASEMENTS DURING INITIAL CONSTRUCTION OF THE PIPELINE(S), PROVIDED SUCH FENCES ARE REPAIRED TO AS GOOD OR BETTER CONDITION THAN EXISTED PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL HAVE THE RIGHT TO INSTALL GATES IN PROPERTY OWNERS FENCES WHICH CROSS OR RUN PARALLEL TO THE EASEMENT AND MAINTAIN LOCKS ON SAID GATES.
6. CONTRACTOR SHALL LEVEL, RE-GRADE, AND RESEED THE GROUND DISTURBED DURING CONSTRUCTION
7. CONTRACTOR WILL MAINTAIN THE EASEMENT FREE OF ALL LITTER AND TRASH DURING PERIODS OF CONSTRUCTION, OPERATION, MAINTENANCE, REPAIR OR REMOVAL. ALL CONSTRUCTION DEBRIS SHALL BE CLEANED UP AND REMOVED FROM THE OWNERS LAND UPON COMPLETION OF INSTALLATION AND CONSTRUCTION OF PIPELINE(S).

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020  
**OVERALL WASTEWATER  
PLAN (1 OF 2)**  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SMH  
HMT PROJECT NO.: 031.060

**SHEET  
C7.01**

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

MATCH LINE REFER TO SHEET C7.02



Drawing Name: N:\\_Projects\031 - DR Barton\031.060 - 175 Ac Friesenhahn Cda\Phase 1\City Approval Cda\031.060\_WWTR P1.dwg User: callym-m Jul 20, 2020 - 2:25pm

UTILITY TRENCH COMPACTION

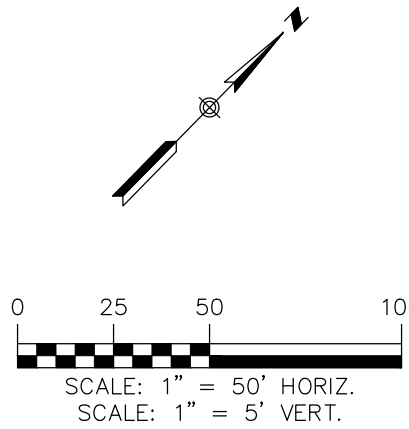
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

CONSTRUCTION NOTES:

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TRENCH EXCAVATION SAFETY PROTECTION

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

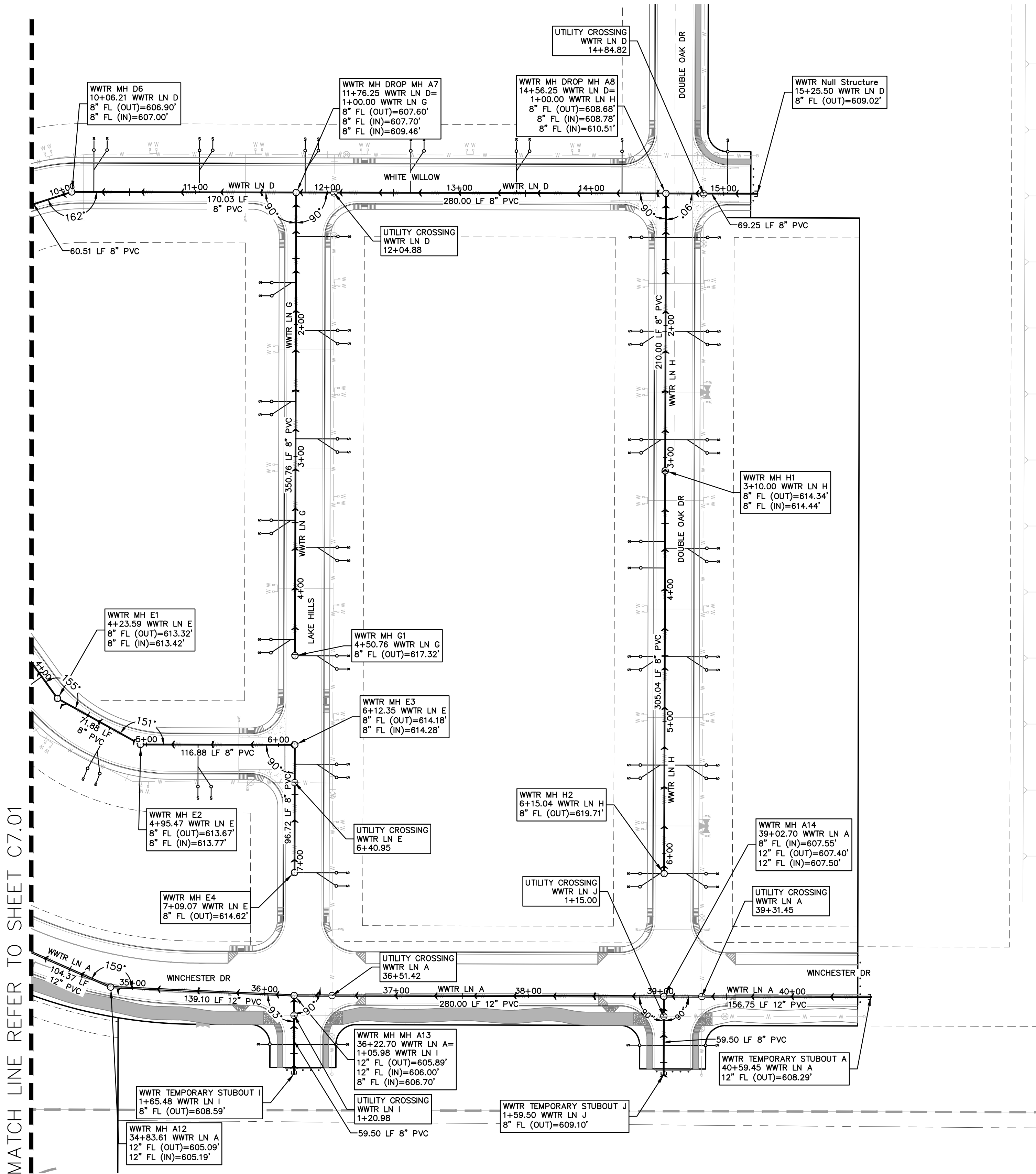


LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- EXISTING WASTEWATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER SERVICE
- UTILITY CROSSING

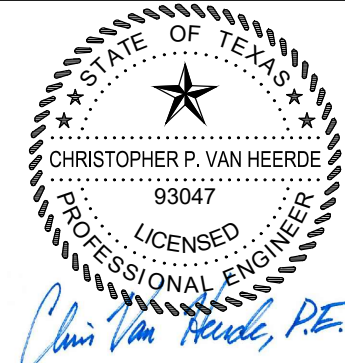
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- 3. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5- FEET DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP UTILITY TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE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



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

290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



07/20/2020

OVERALL WASTEWATER  
PLAN (2 OF 2)  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

SHEET  
C7.02



UTILITY TRENCH COMPACTION

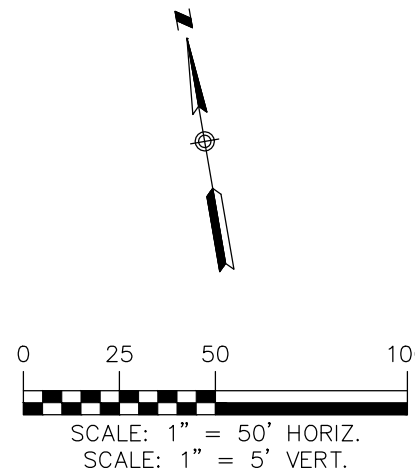
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CONSTRUCTION NOTES:

1. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
2. ALL SEWER PIPE ASTM 3034 (115 PSI)
3. ALL MANHOLES SHALL BE 48" DIAMETER.
4. ALL RING AND COVER SHALL BE 32" DIAMETER.
5. POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH GBRA STANDARDS AND DESIGN GUIDELINES FOR DEVELOPER UTILITIES.
6. ALL PIPES SHALL HAVE A MINIMUM OF 48 INCHES OF COVER FROM THE TOP OF PIPE TO FINISHED GRADE.
7. ALL SERVICE LATERALS SHALL BE AT A DEPTH BETWEEN 4 AND 6 FEET AT THE PROPERTY LINE.

TRENCH EXCAVATION SAFETY PROTECTION

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



LEGEND

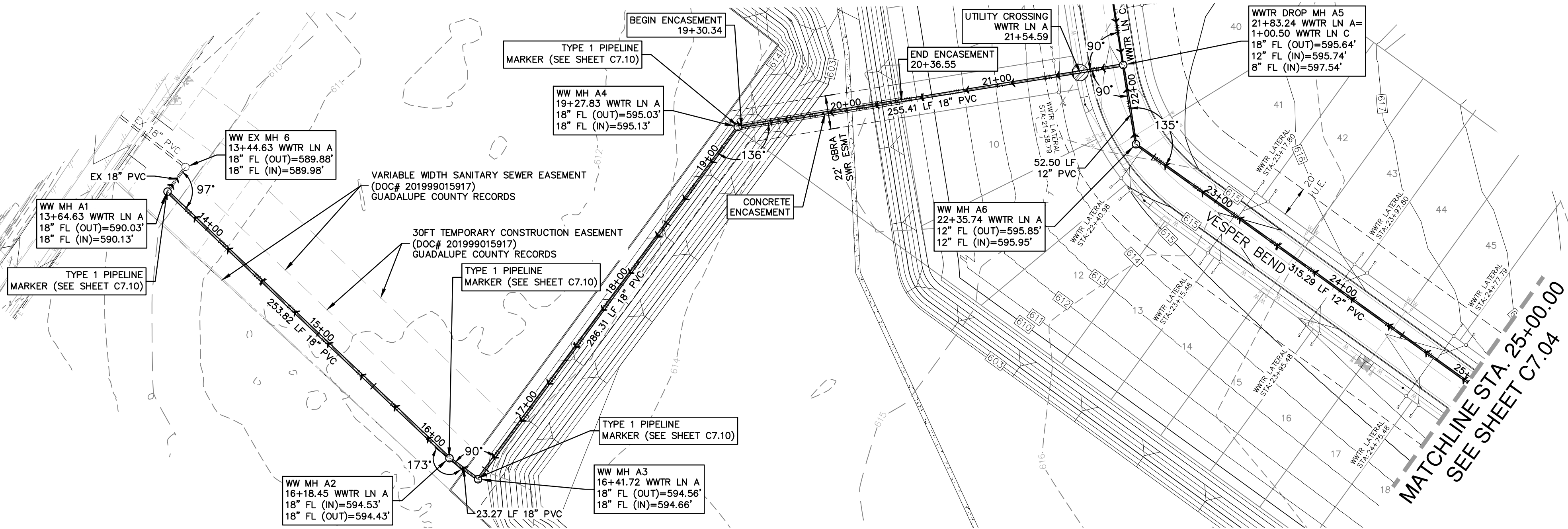
- EXISTING CONTOURS
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UTILITY NOTES:

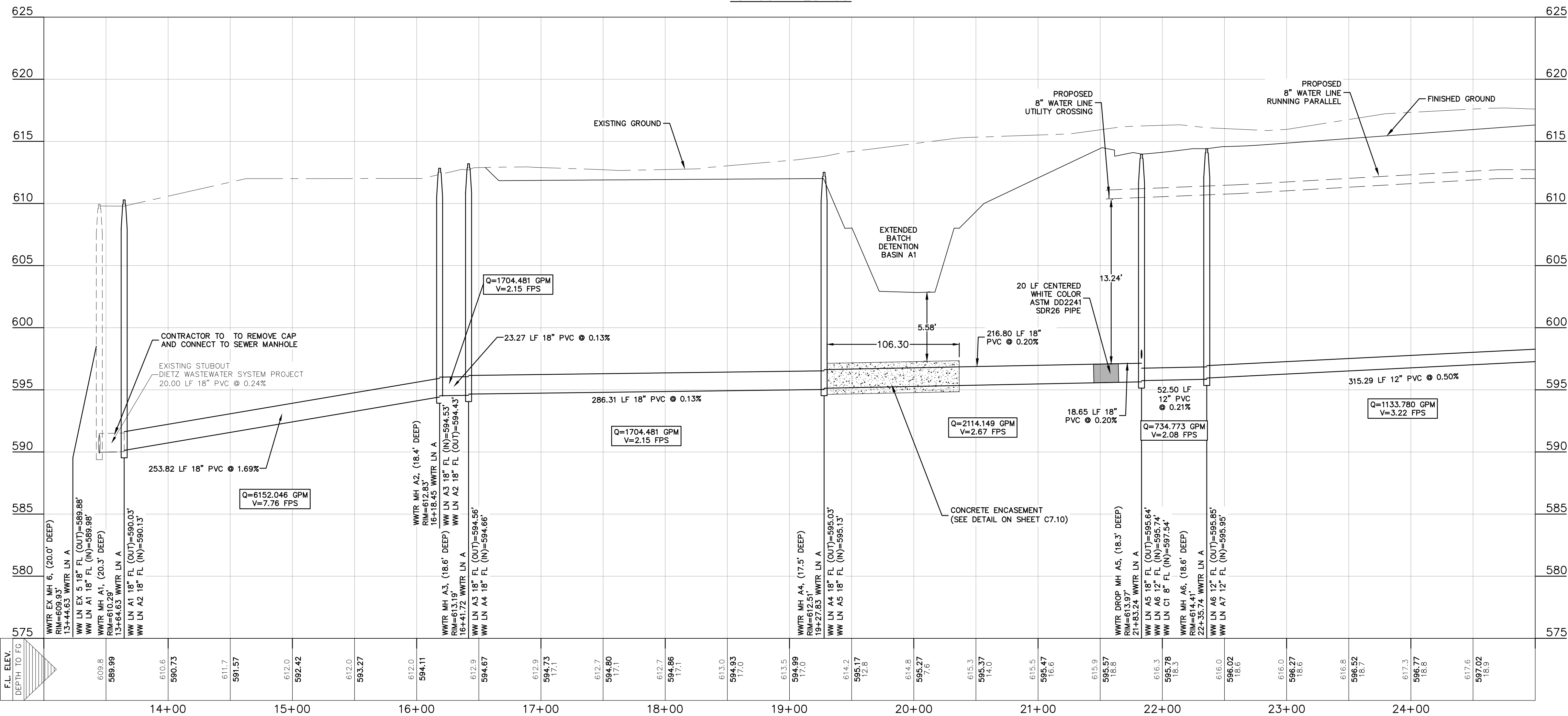
1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS
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CONSTRUCTION EASEMENT NOTES:

1. CONTRACTOR SHALL PROVIDE ADVANCE NOTICE BEFORE ENTERING PROPERTY CONTAINING VARIABLE WIDTH SANITARY SEWER EASEMENT AND 30FT TEMPORARY CONSTRUCTION EASEMENT.
2. CONTRACTOR SHALL PROMPTLY REPAIR ANY DAMAGE TO PROPERTY OWNERS ROADS CAUSED BY THE CONTRACTOR SO AS TO MAINTAIN THE ROADS IN AS GOOD OR BETTER CONDITION AS EXISTED PRIOR TO USE.
3. THE OWNER SHALL HAVE THE RIGHT TO SELECT THE EXACT LOCATION OF THE PIPELINE(S) WITHIN THE PERMANENT EASEMENT
4. CONTRACTOR SHALL HAVE THE RIGHT TO REMOVE ANY FENCE WHICH NOW CROSSES OR MAY CROSS THE EASEMENTS DURING INITIAL CONSTRUCTION OF THE PIPELINE(S), PROVIDED SUCH FENCES ARE REPAIRED TO AS GOOD OR BETTER CONDITION THAN EXISTED PRIOR TO CONSTRUCTION.
5. CONTRACTOR SHALL HAVE THE RIGHT TO INSTALL GATES IN PROPERTY OWNERS FENCES WHICH CROSS OR RUN PARALLEL TO THE EASEMENT AND MAINTAIN LOCKS ON SAID GATES.
6. CONTRACTOR SHALL LEVEL, RE-GRADE, AND RESEED THE GROUND DISTURBED DURING CONSTRUCTION
7. CONTRACTOR WILL MAINTAIN THE EASEMENT FREE OF ALL LITTER AND TRASH DURING PERIODS OF CONSTRUCTION, OPERATION, MAINTENANCE, REPAIR OR REMOVAL. ALL CONSTRUCTION DEBRIS SHALL BE CLEANED UP AND REMOVED FROM THE OWNERS LAND UPON COMPLETION OF INSTALLATION AND CONSTRUCTION OF PIPELINE(S).



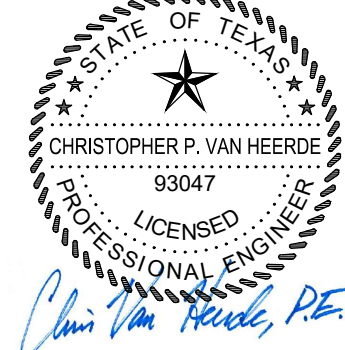
WWTR LN A  
13+00 - 25+00.00



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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBP FIRM F-10961  
TBPLS FIRM 1053600



06/22/2020

WASTEWATER LINE A  
PLAN & PROFILE (1 OF 2)  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

SHEET  
C7.03



UTILITY TRENCH COMPACTION

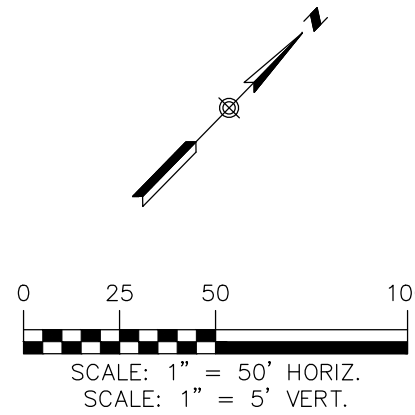
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TRENCH EXCAVATION SAFETY PROTECTION

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

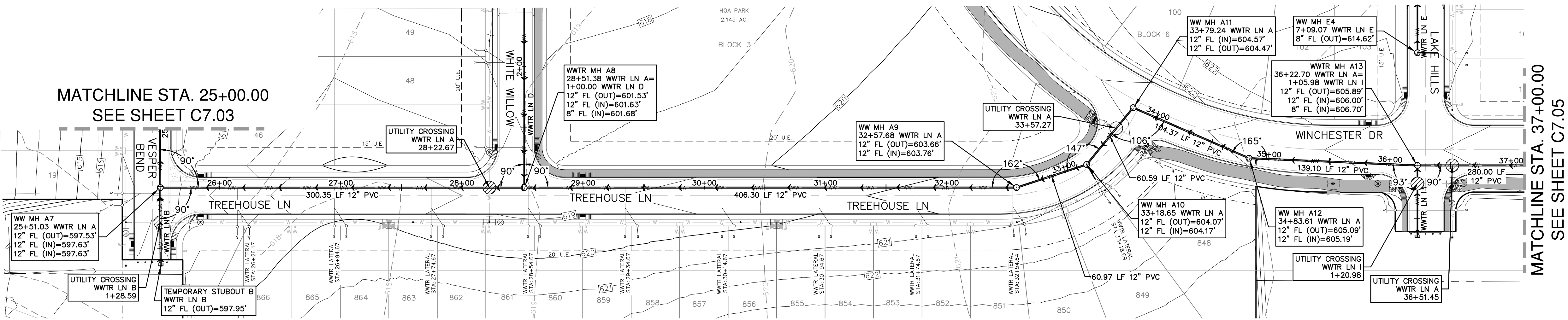


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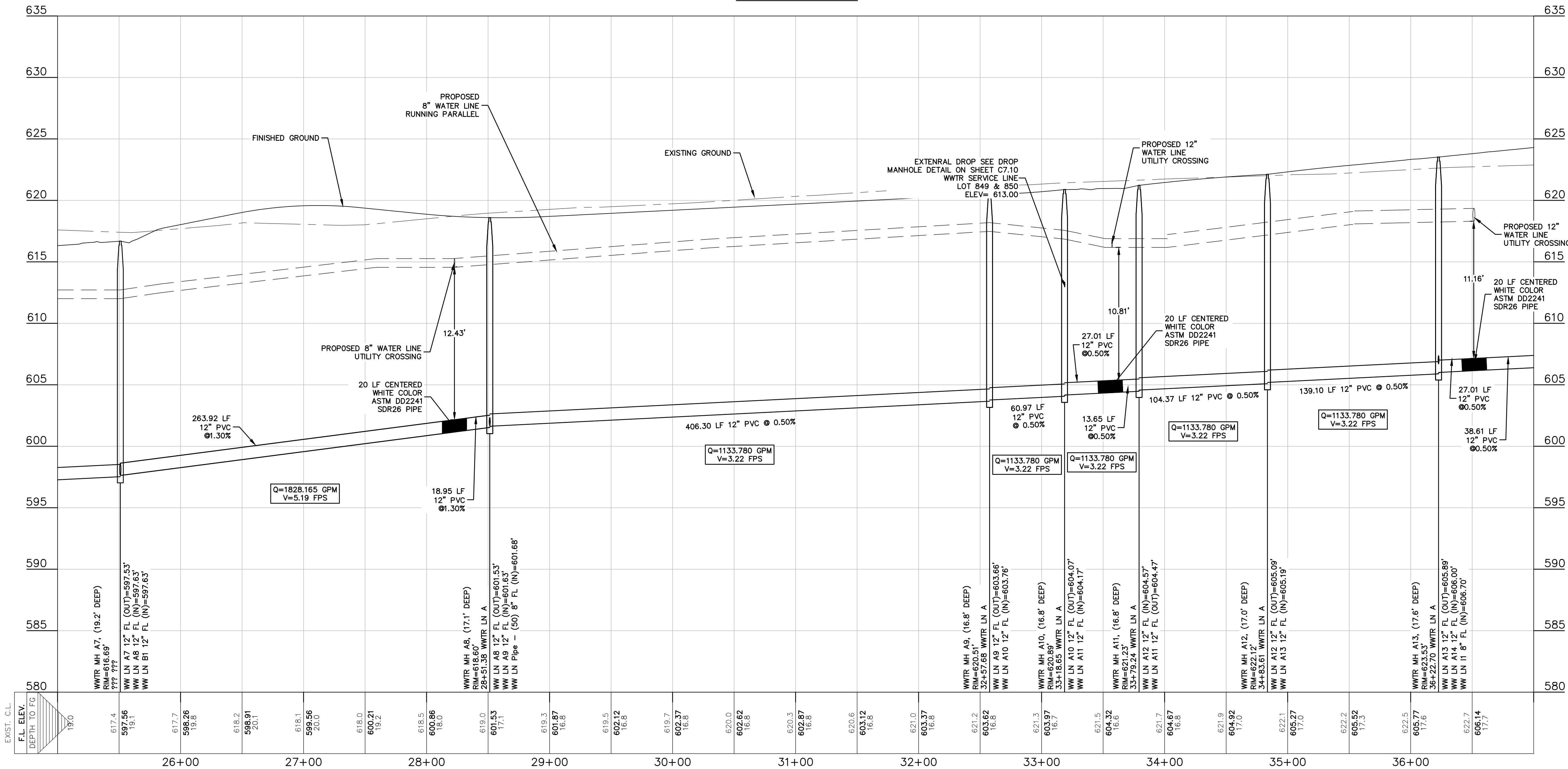
- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- UTILITY EASEMENT
- DRAINAGE EASEMENT
- EXISTING WASTEWATER LINE
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WWTR LN A  
25+00 - 37+00



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TBPE FIRM F-10961  
TBPLS FIRM 1053600



06/22/2020

WASTEWATER LINE A  
PLAN & PROFILE (2 OF 2)  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	DATE

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

HMT PROJECT NO.:  
031.060

SHEET  
C7.04



UTILITY TRENCH COMPACTION

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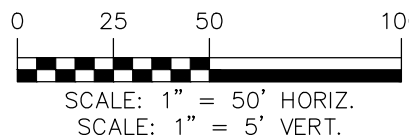
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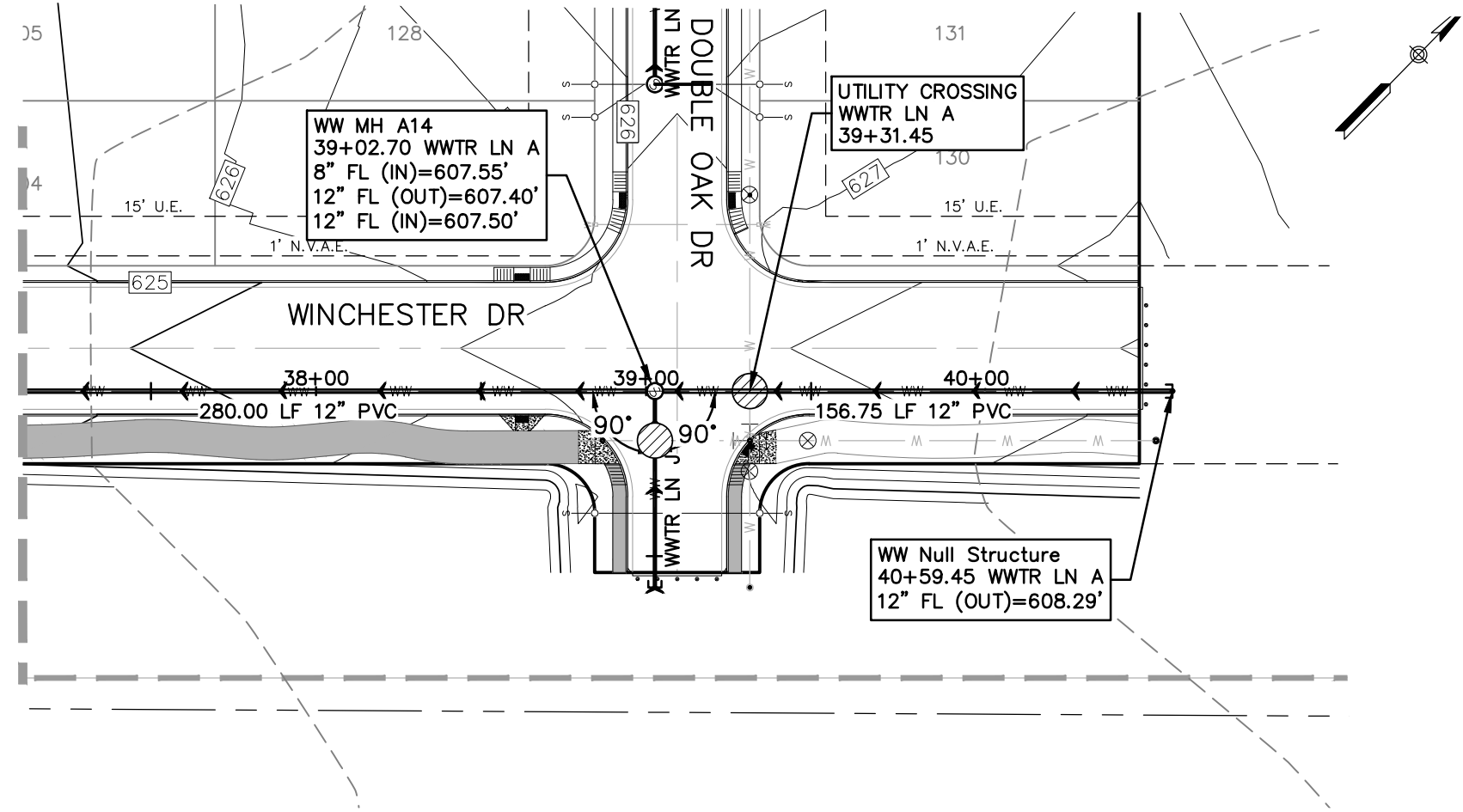
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LEGEND

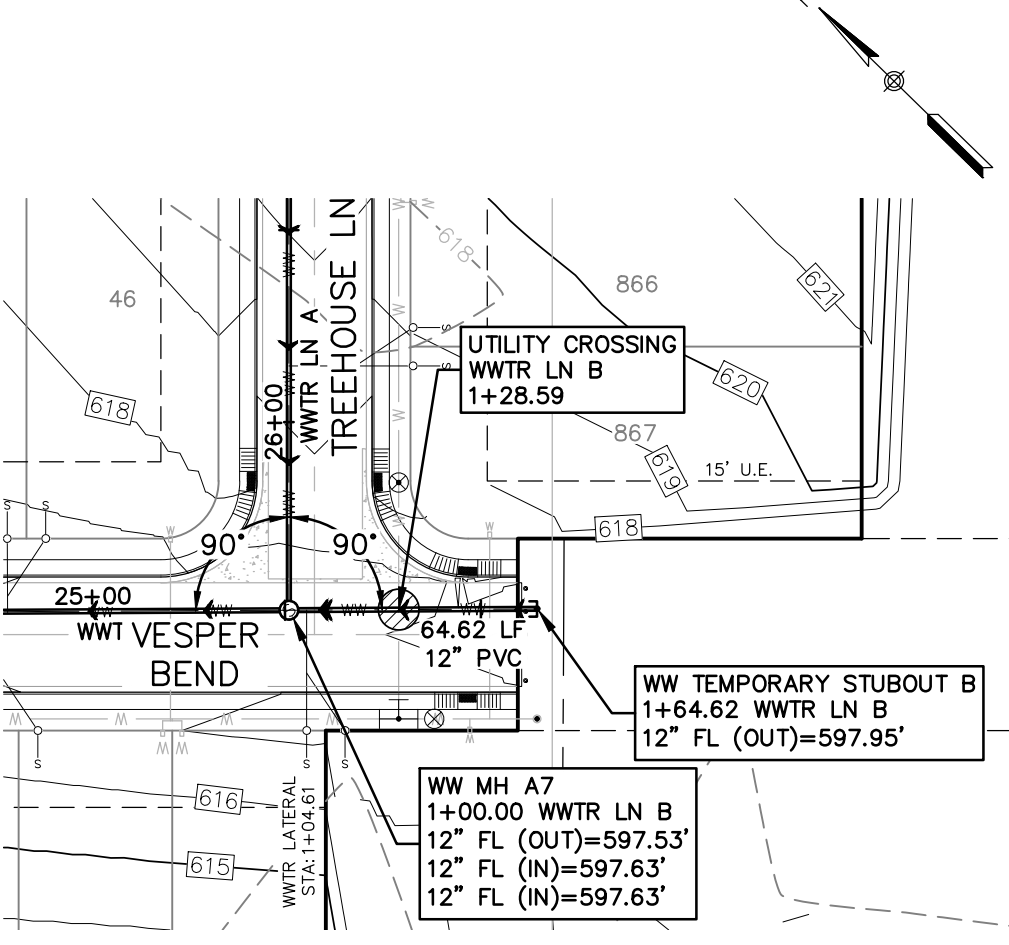
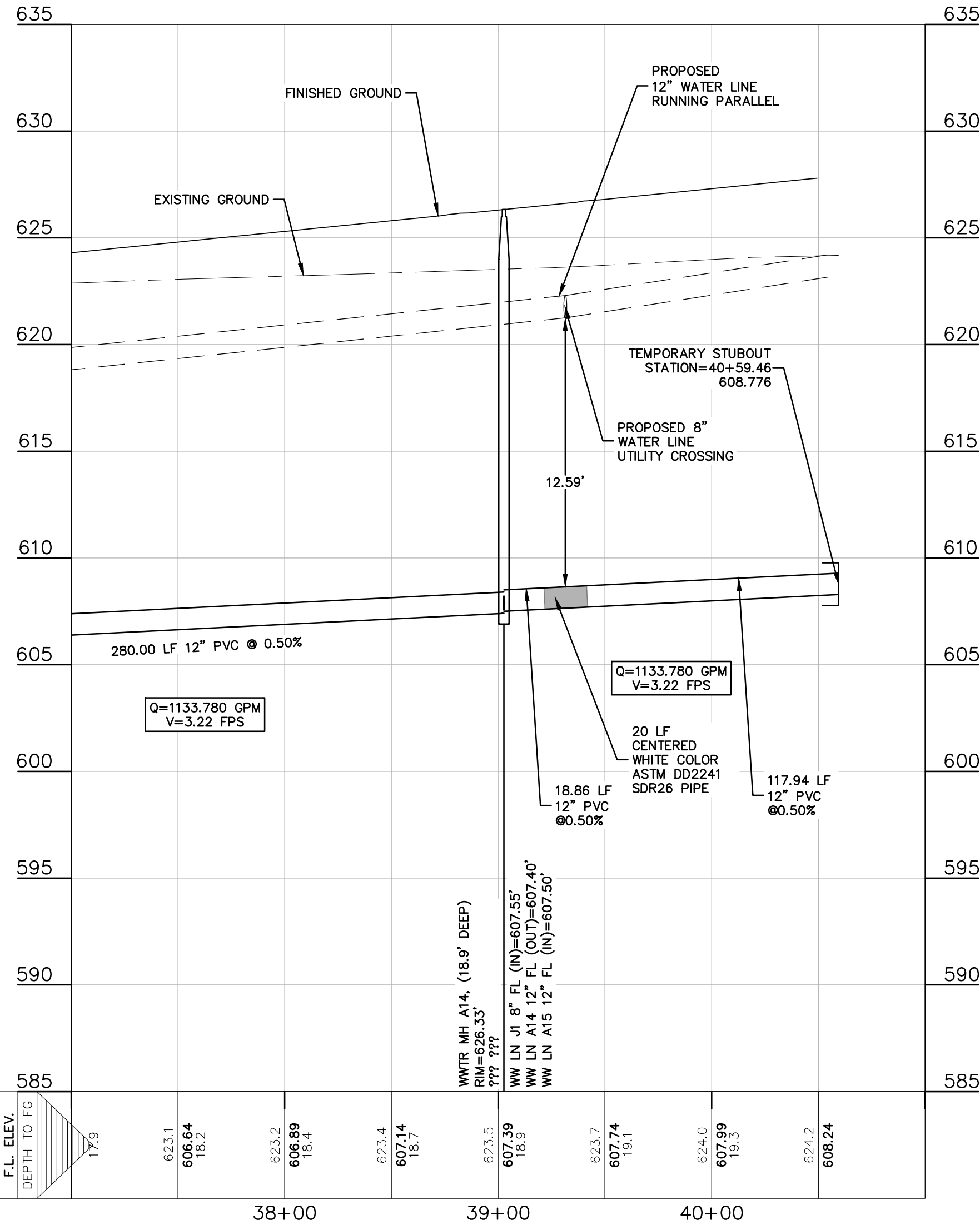
- EXISTING CONTOURS
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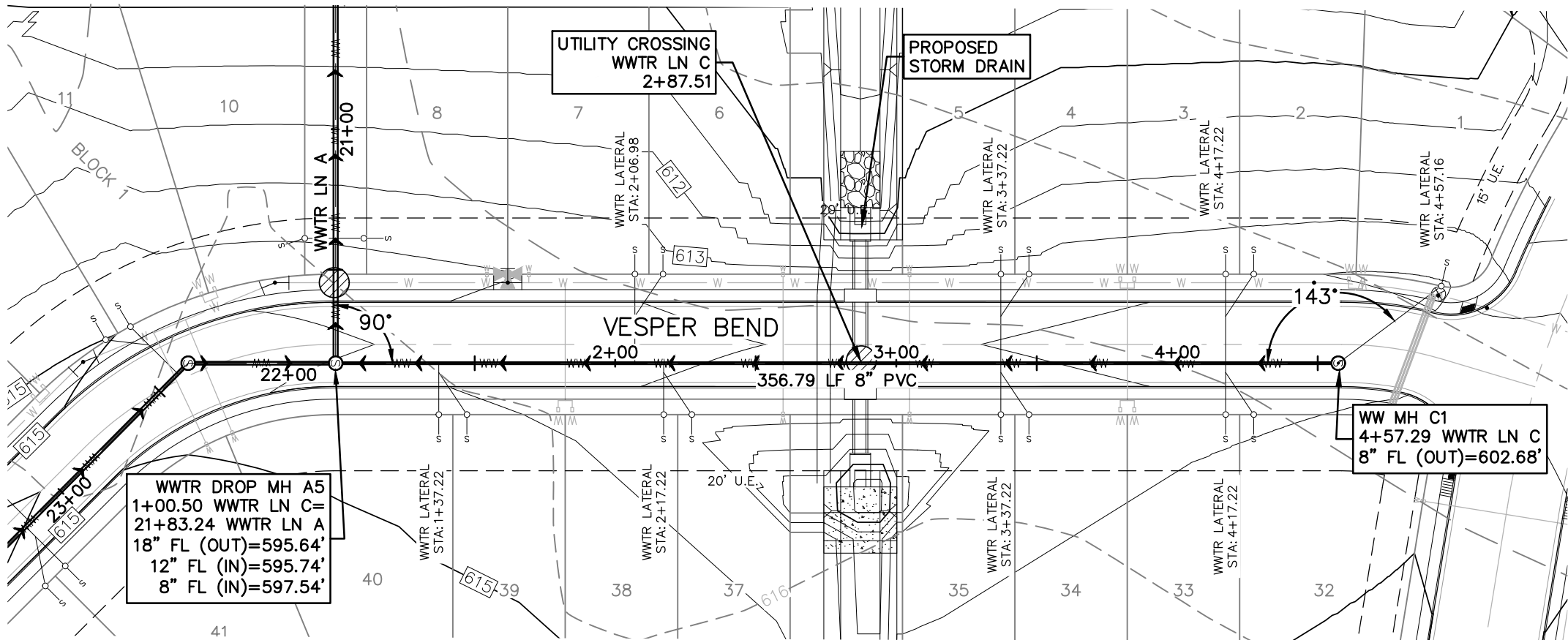
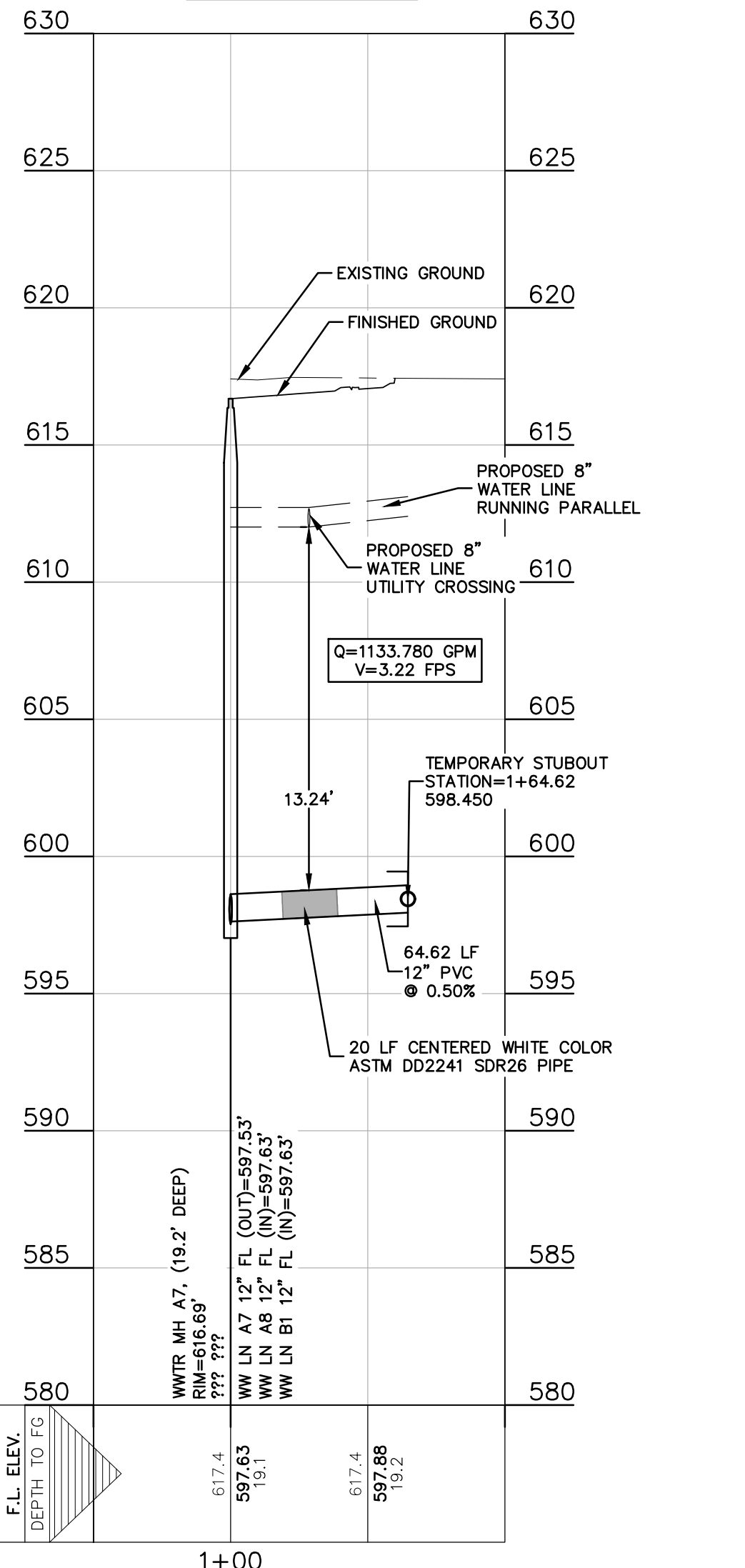
MATCHLINE STA. 37+00.00  
SEE SHEET C7.04



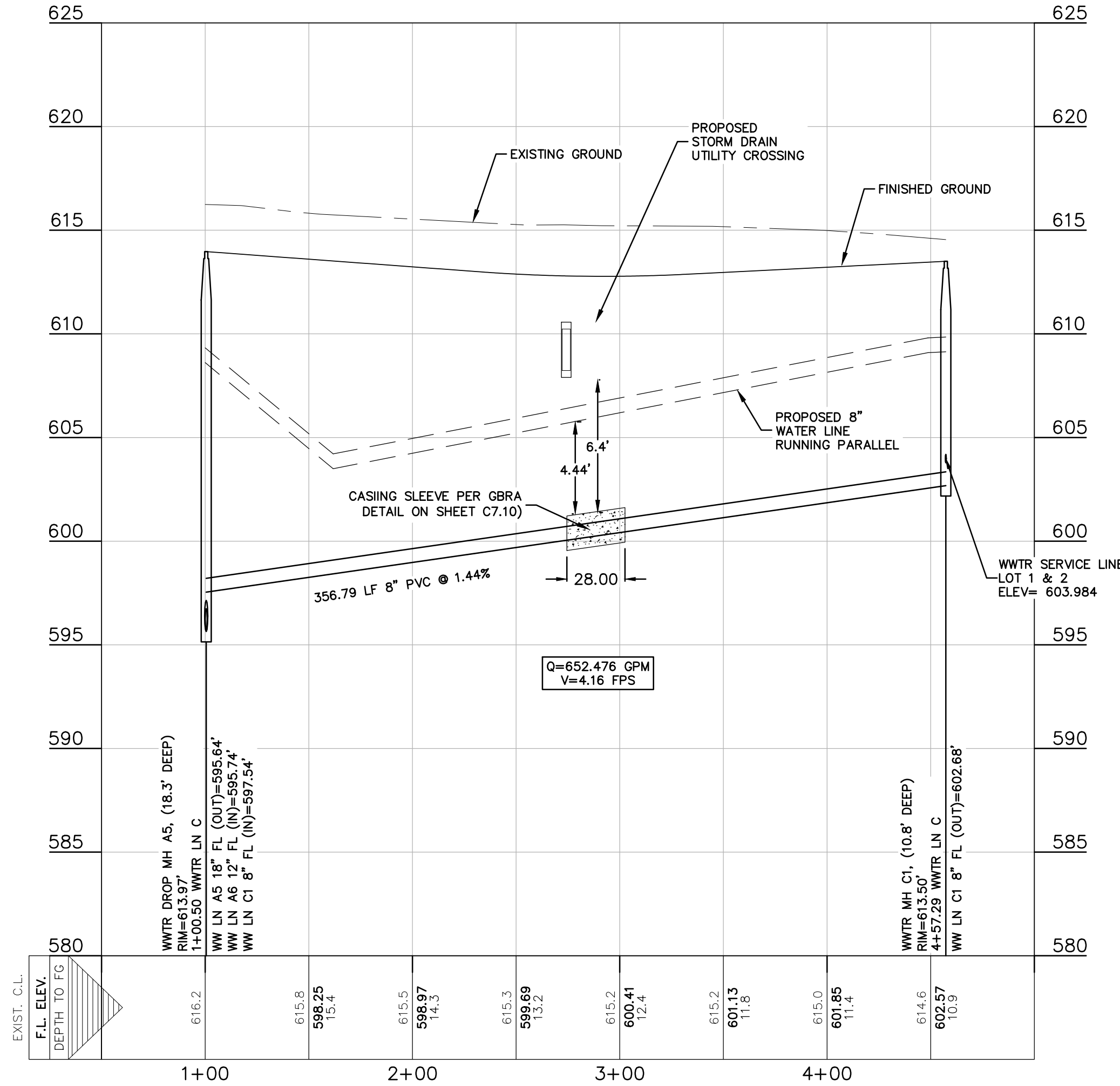
WWTR LN A  
37+00 - 41+00



WWTR LN B  
0+50 - 2+00



WWTR LN C  
0+50 - 5+00



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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



06/22/2020

WASTEWATER LINE A, B & C  
PLAN & PROFILE  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	DATE

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

REVIEWED BY: CVH/SMH

HMT PROJECT NO.:  
031.060

SHEET  
C7.05



UTILITY TRENCH COMPACTION

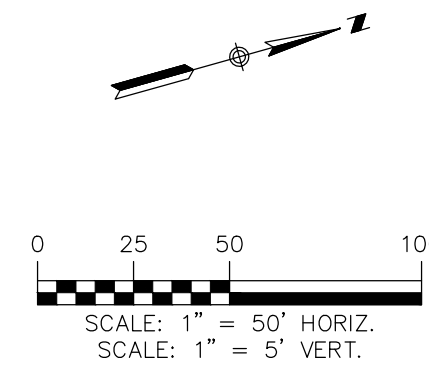
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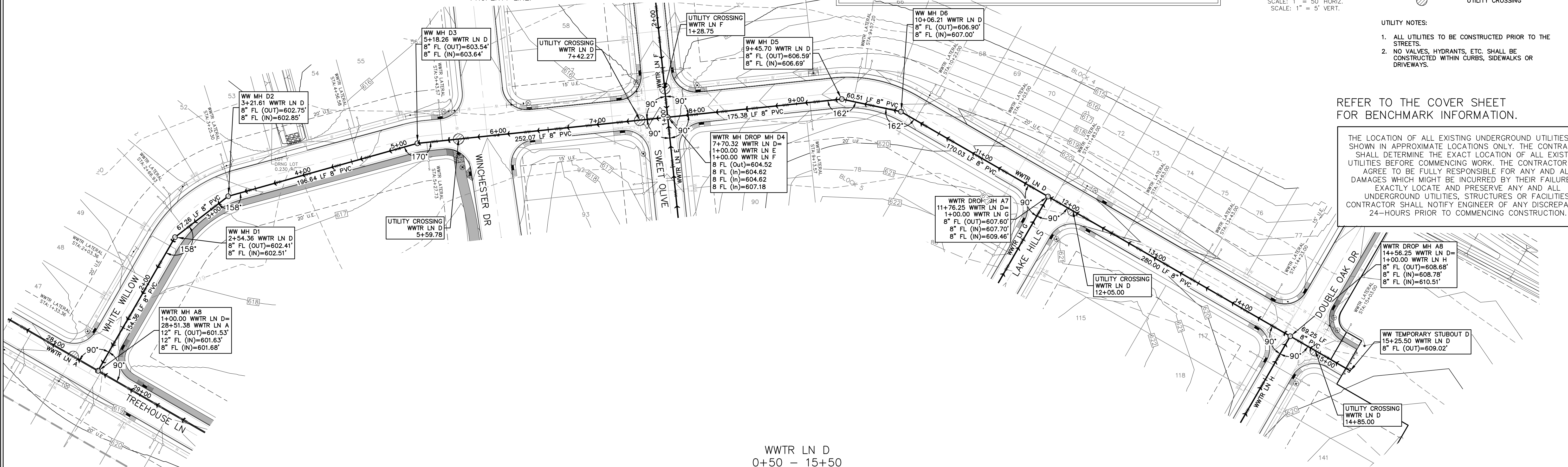
- EXISTING CONTOURS
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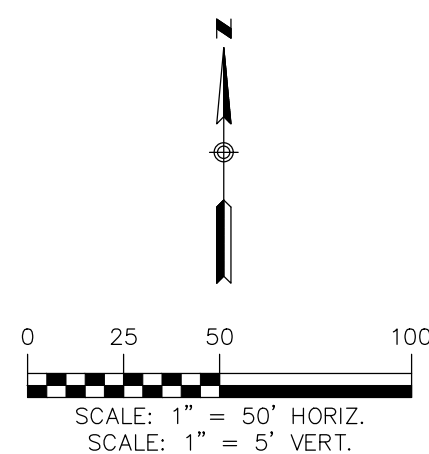




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**Sanitary Sewer Profile Diagram**

**Vertical Scale (Left):** F.L. ELEV. DEPTH TO FG (590 to 630)  
**Horizontal Scale (Bottom):** Stationing (1+00 to 7+00)

**Key Features:**

- EXISTING GROUND** (Dashed line)
- FINISHED GROUND** (Solid line)
- PROPOSED 8" WATER LINE RUNNING PARALLEL**
- PROPOSED 8" WATER LINE UTILITY CROSSING**
- EXTERNAL DRAINAGE MANHOLE DATA** (LOT 105 & 106 ELEV= 617.21)

**Manhole and Pipe Data:**

Station	Manhole	Depth (ft)	Flow (GPM)	Velocity (FPS)	Notes
1+00	WW LN D4 8" FL (OUT)=604.52'	7.8	748.721	4.78	1+00.00 WTR LN E
1+00	WW LN D5 8" FL (N)=604.62'	7.8			
1+00	WW LN E1 8" FL (N)=604.62'	7.8			
1+00	WW LN E1 8" FL (N)=607.16	7.8			
2+00	WW LN E1 8" FL (OUT)=613.32'	7.0	321.737	2.05	4+23.59 WTR LN E
2+00	WW LN E2 8" FL (N)=613.42'	7.0			
3+00	WW LN E2 8" FL (OUT)=613.87'	7.3	321.737	2.05	4+95.47 WTR LN E
3+00	WW LN E3 8" FL (N)=613.77	7.3			
4+00	WW LN E3 8" FL (OUT)=614.18'	8.4	321.737	2.05	7+09.07 WTR LN E
4+00	WW LN E4 8" FL (N)=614.28'	8.4			
5+00	WW LN E4 8" FL (OUT)=614.62'	8.6	321.737	2.05	
6+00	WW LN E4 8" FL (OUT)=614.62'	8.6			

**Flow and Velocity Data:**

- Flow 1:** 748.721 GPM, 4.78 FPS (323.59 LF 8" PVC @ 1.90%)
- Flow 2:** 321.737 GPM, 2.05 FPS (71.88 LF 8" PVC @ 0.35%)
- Flow 3:** 321.737 GPM, 2.05 FPS (116.88 LF 8" PVC @ 0.35%)
- Flow 4:** 321.737 GPM, 2.05 FPS (18.36 LF 8" PVC @ 0.35%)
- Flow 5:** 321.737 GPM, 2.05 FPS (58.42 LF 8" PVC @ 0.35%)

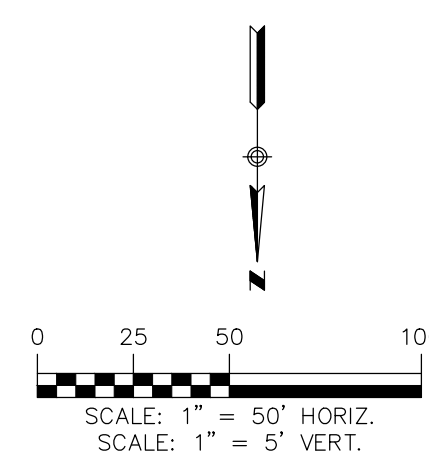
**Other Notes:**

- 20 LF CENTERED WHITE COLOR ASTM DD2241 SDR26 PIPE
- 2.81' (Vertical offset)
- 1.9' (Vertical offset)

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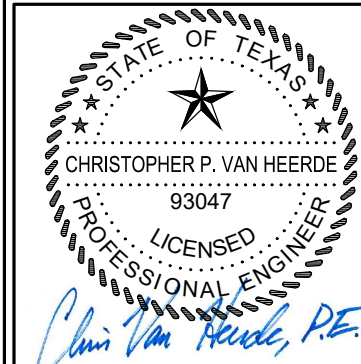
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5. POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH GBRA STANDARDS AND DESIGN GUIDELINES FOR DEVELOPER UTILITIES.
6. ALL LATERALS SHALL BE A MINIMUM OF 48 INCHES OF COVER FROM THE TOP OF PIPE TO FINISHED GRADE.
7. ALL SERVICE LATERALS SHALL BE AT A DEPTH BETWEEN 4 AND 6 FEET AT THE PROPERTY LINE.

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

[illegible]

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

- 700' ——— EXISTING CONTOURS
- 700' PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- EXISTING WASTEWATER LINE
- ===== PROPOSED WASTEWATER LINE
- ===== PROPOSED WASTEWATER SERVICE
- UTILITY CROSSING



**WASTEWATER LINE E & F  
PLAN & PROFILE**  
PARKSIDE SUBDIVISION  
PHASE 1

[illegible]

HMT PROJECT NO.:

## C7.07



UTILITY TRENCH COMPACTION

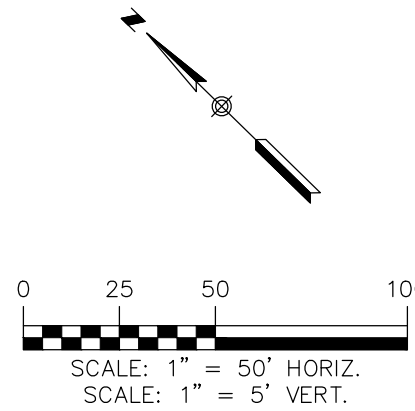
ALL UTILITY TRENCH COMPACTION TESTS WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE. EACH LAYER OF MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% DENSITY AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTOR WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

CONSTRUCTION NOTES:

1. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
2. ALL SEWER PIPE ASTM 3034 (115 PSI)
3. ALL MANHOLES SHALL BE 48" DIAMETER.
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5. POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH GBRA STANDARDS AND DESIGN GUIDELINES FOR DEVELOPER UTILITIES.
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TRENCH EXCAVATION SAFETY PROTECTION

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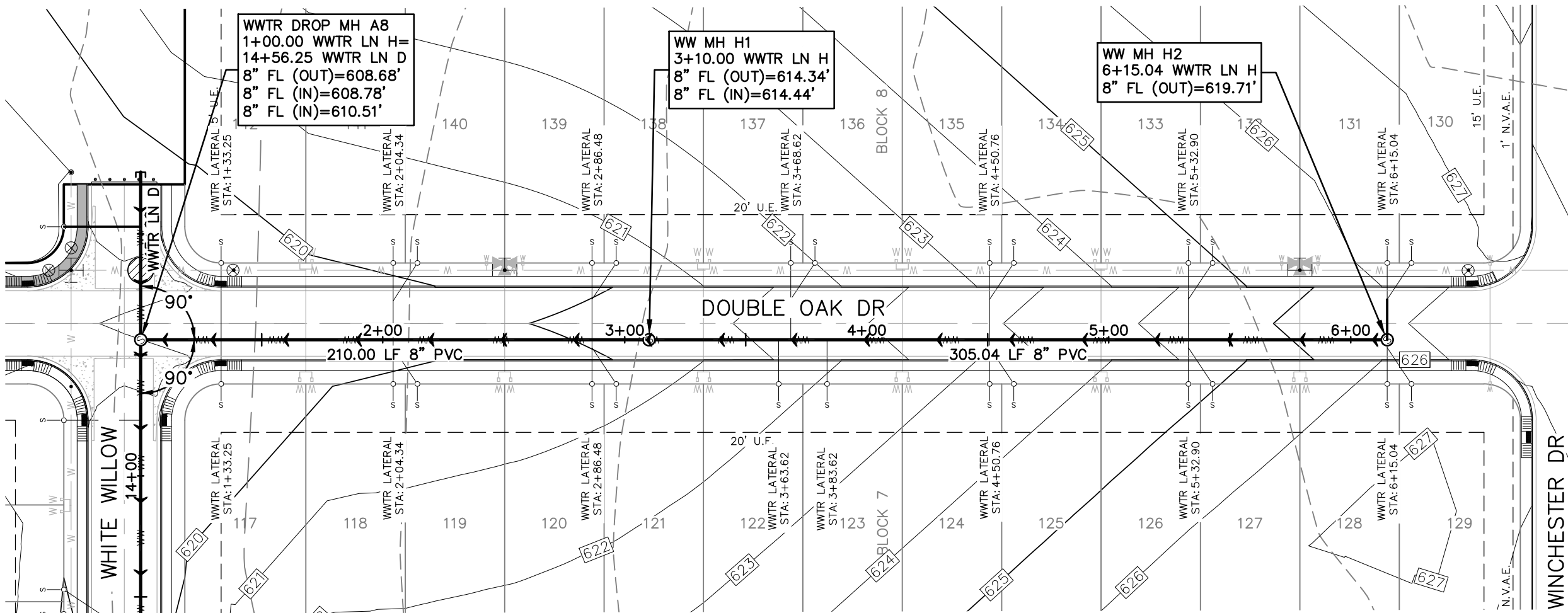
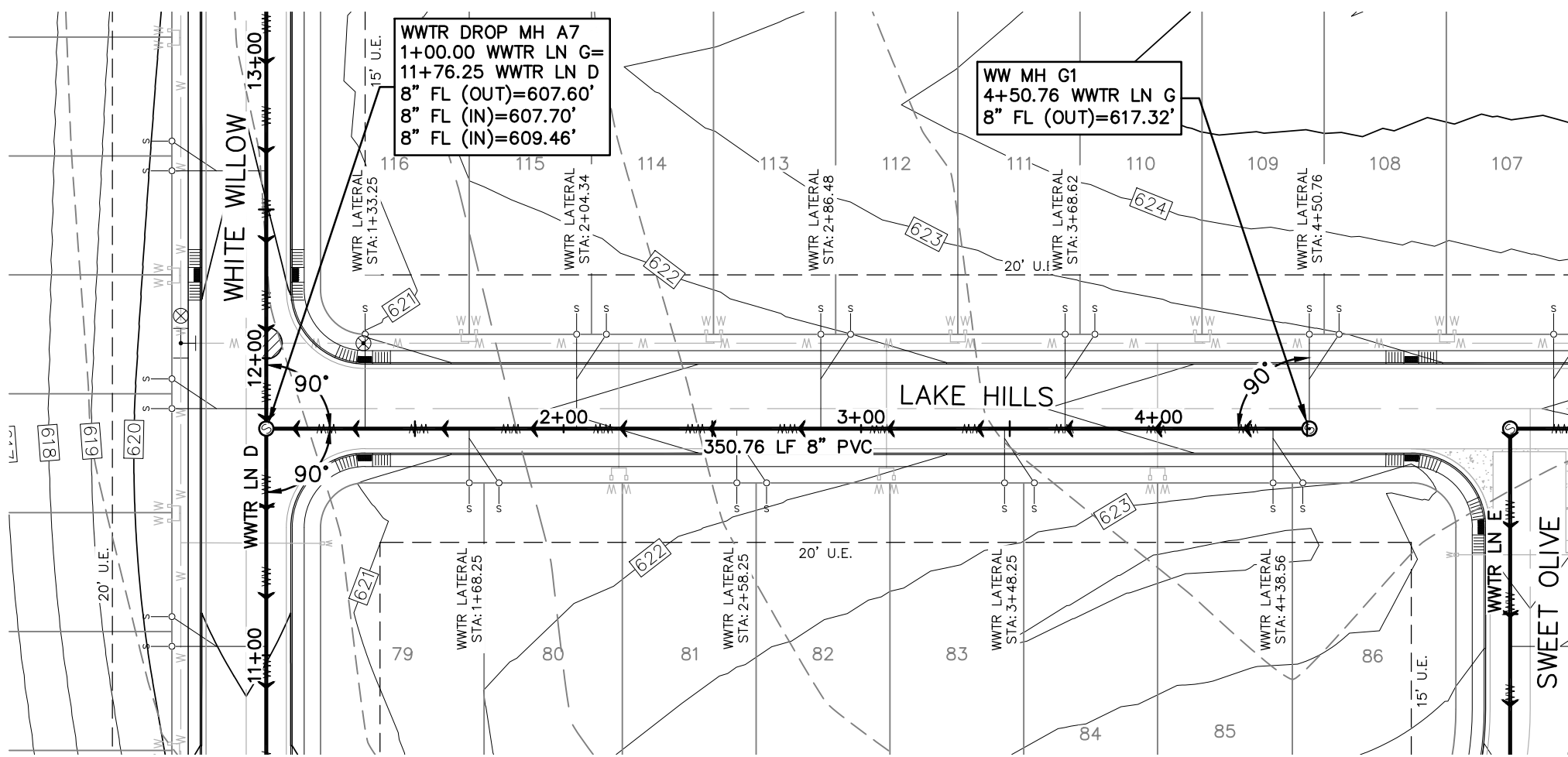


LEGEND

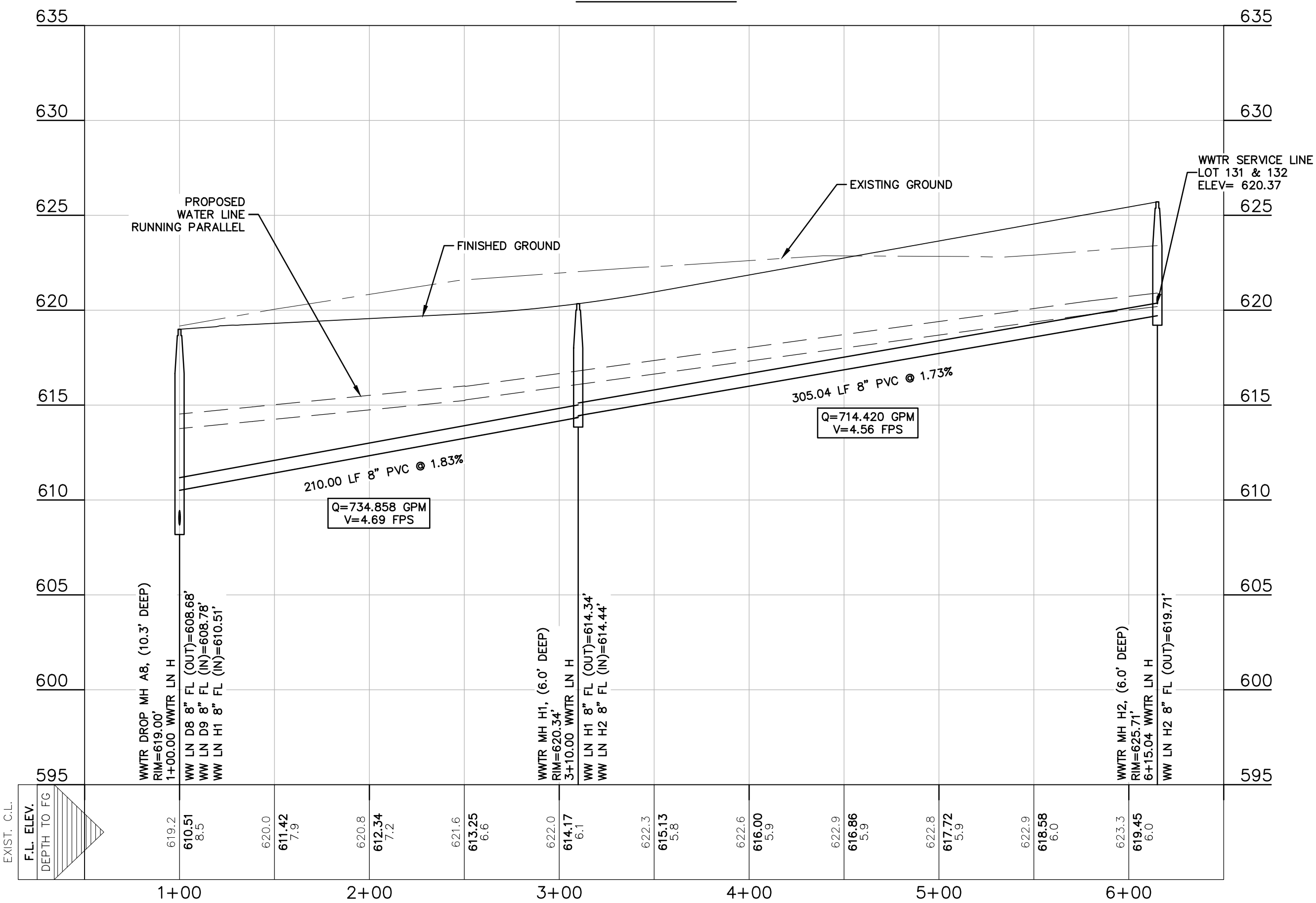
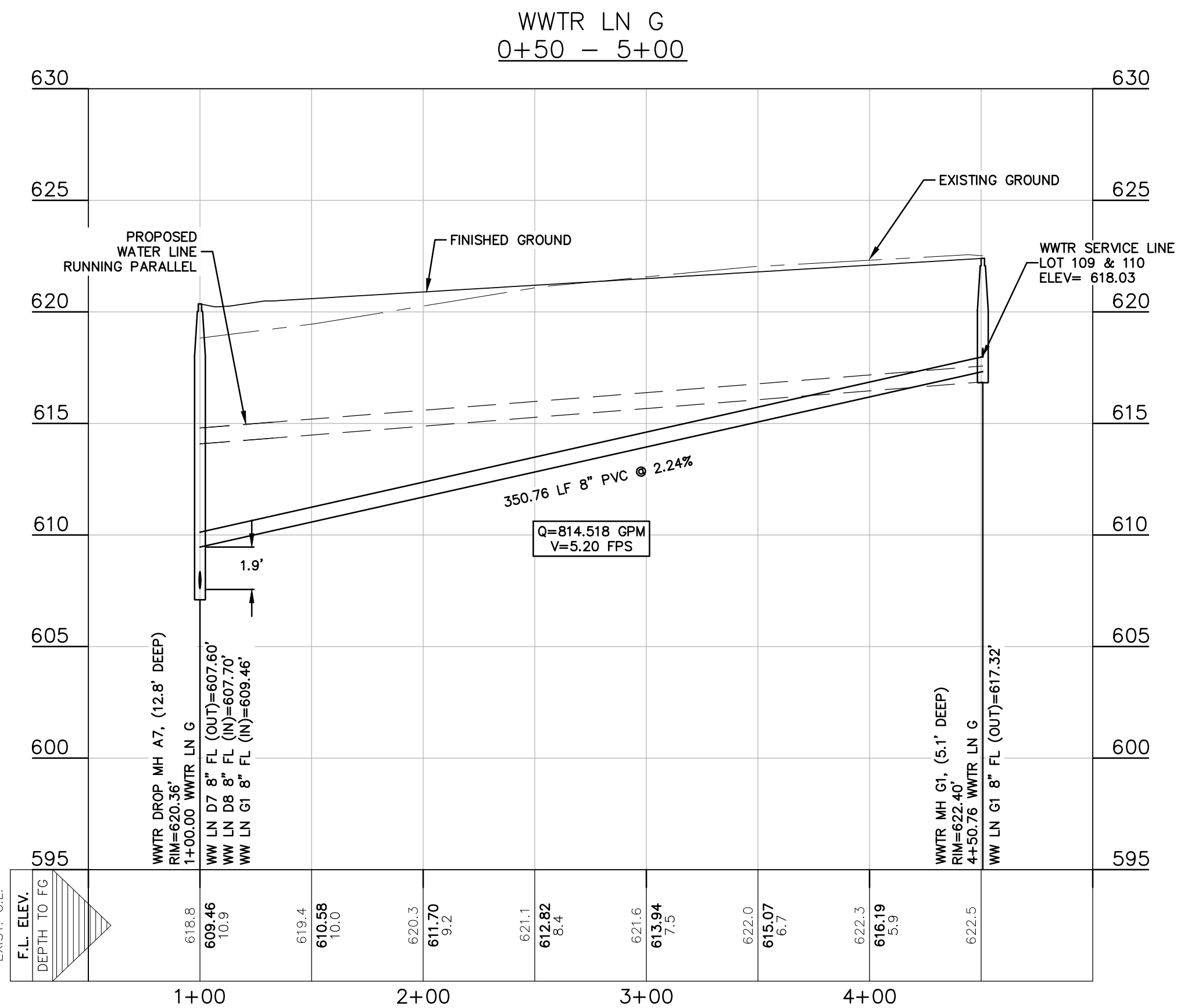
- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- EXISTING WASTEWATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER SERVICE
- UTILITY CROSSING

UTILITY NOTES:

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
2. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.
3. THIS PROJECT INCLUDES UTILITY INSTALLATIONS GREATER THAN 5- FEET DEPTH LOCATED IN PUBLIC RIGHT-OF-WAY OR EASEMENTS. DEEP UTILITY TRENCHES POSE COMPACTION TESTING AND CONSTRUCTION CHALLENGES AND CITY METHODS FOR TESTING AND COMPACTION MAY NOT BE ACHIEVABLE. A UTILITY COMPACTION PLAN WILL BE REQUIRED AND MUST BE SUBMITTED FOR APPROVAL TO CITY PRIOR TO UTILITY INSTALLATION.



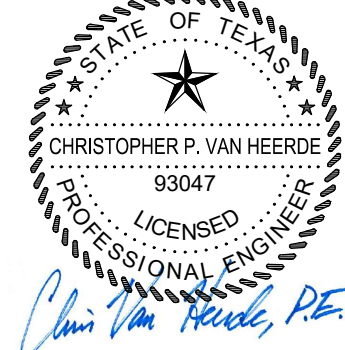
WWR LN H  
0+50 - 6+50



REFER TO THE COVER SHEET  
FOR BENCHMARK INFORMATION.

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290 S. CASTELL AVE., STE. 100  
NEW BRAUNFELS, TX 78130  
TBPE FIRM F-10961  
TBPLS FIRM 1053600



06/22/2020

WASTEWATER LINE G & H  
PLAN & PROFILE  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JULY 2020

DRAWN BY: CAM

DESIGNED BY: CAM

REVIEWED BY: CVH/SWH

HMT PROJECT NO.:  
031.060

SHEET  
C7.08



UTILITY TRENCH COMPACTION

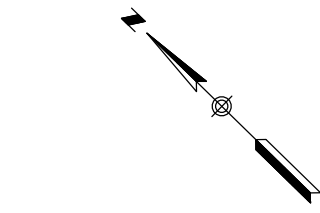
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LEGEND

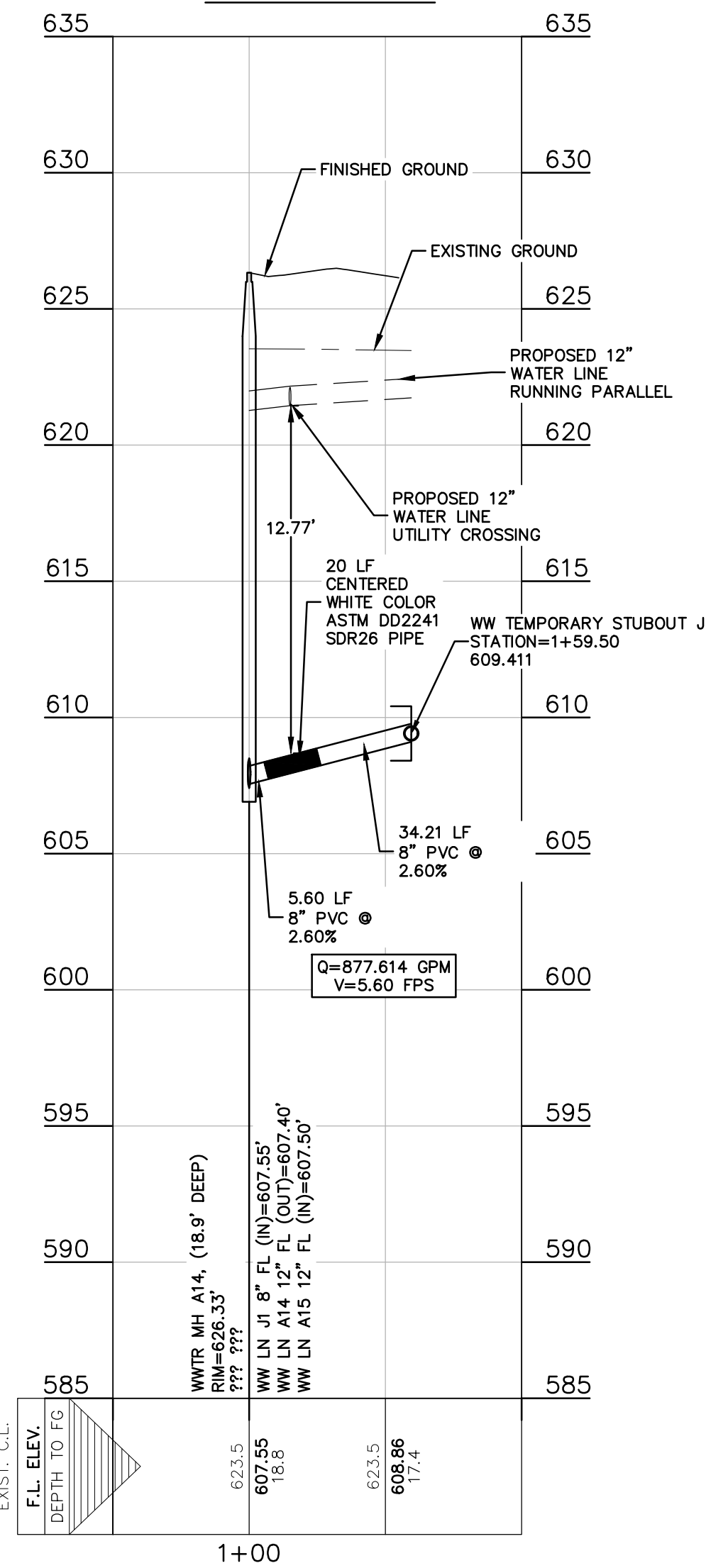
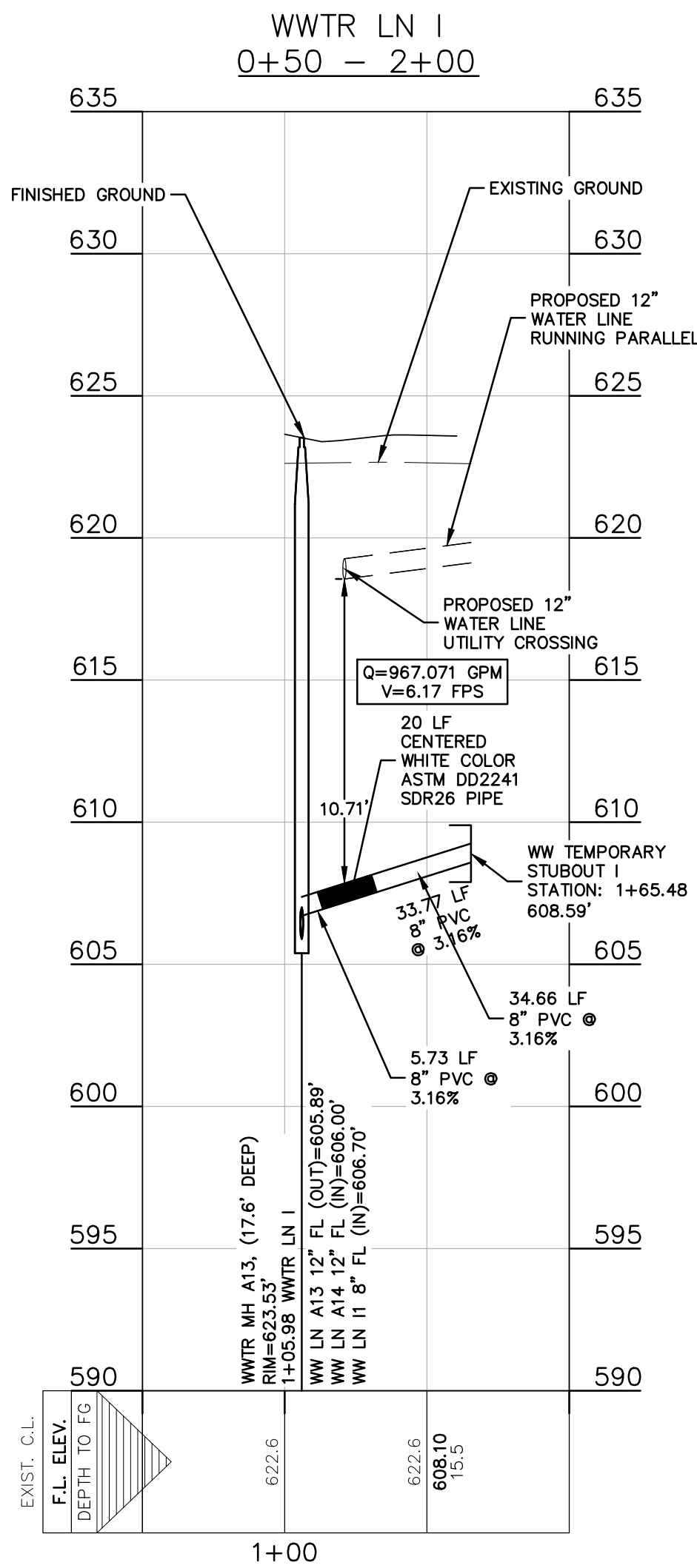
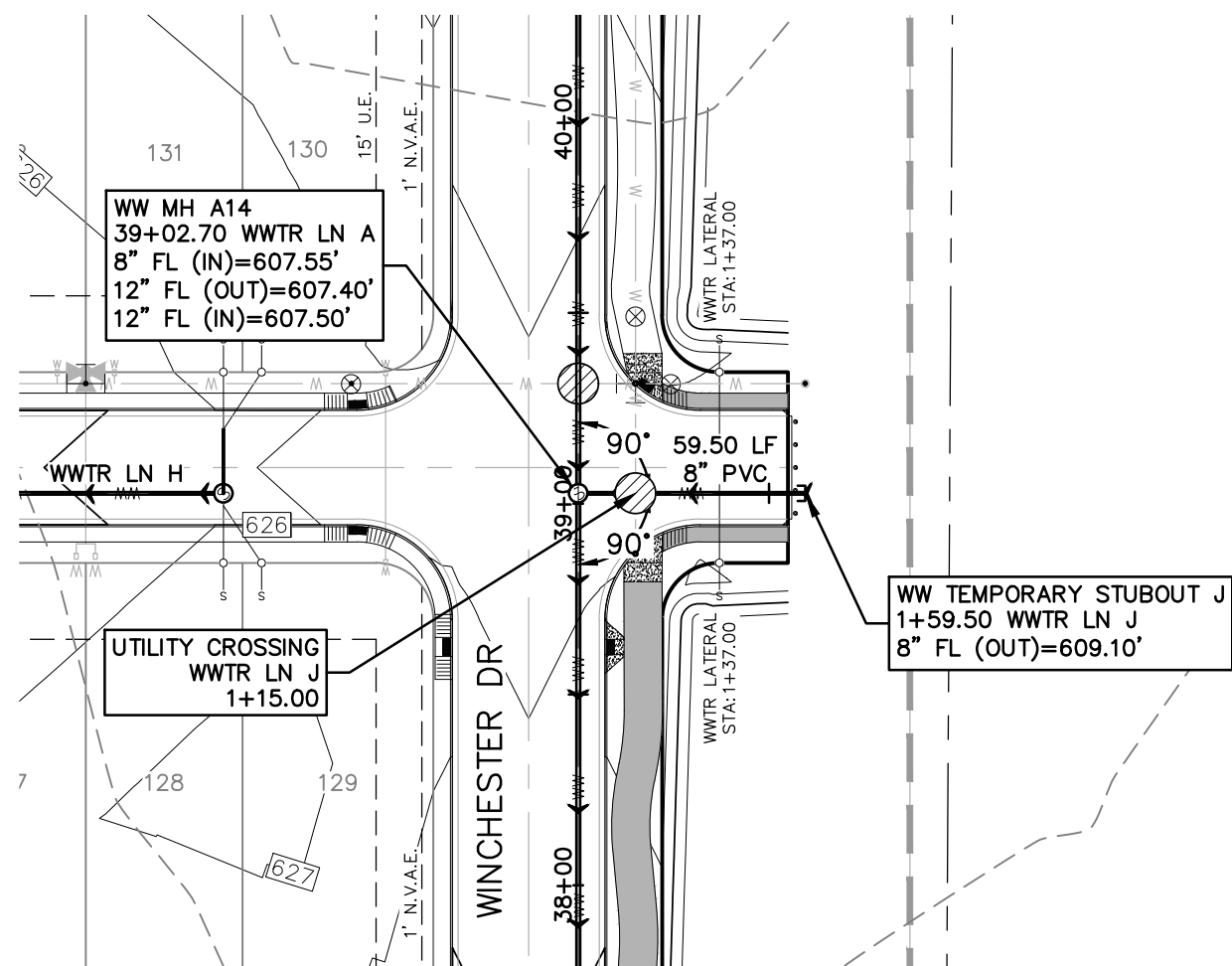
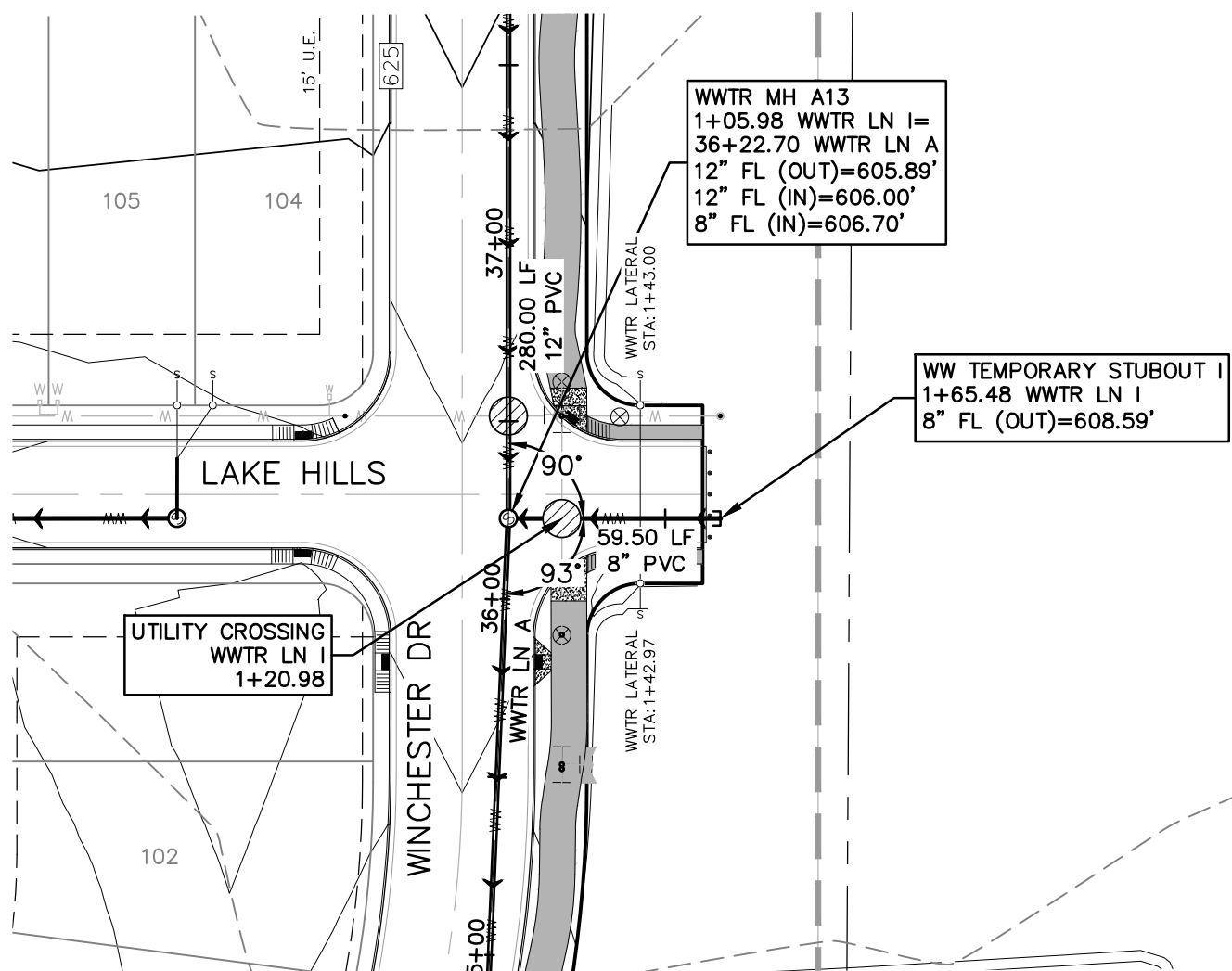
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06/22/2020

WASTEWATER LINE I & J  
PLAN & PROFILE  
PARKSIDE SUBDIVISION  
PHASE 1

NO.	REVISION	DESCRIPTION	DATE

DATE: JULY 2020  
DRAWN BY: CAM  
DESIGNED BY: CAM  
REVIEWED BY: CVH/SWH  
HMT PROJECT NO.: 031.060

SHEET  
C7.09



