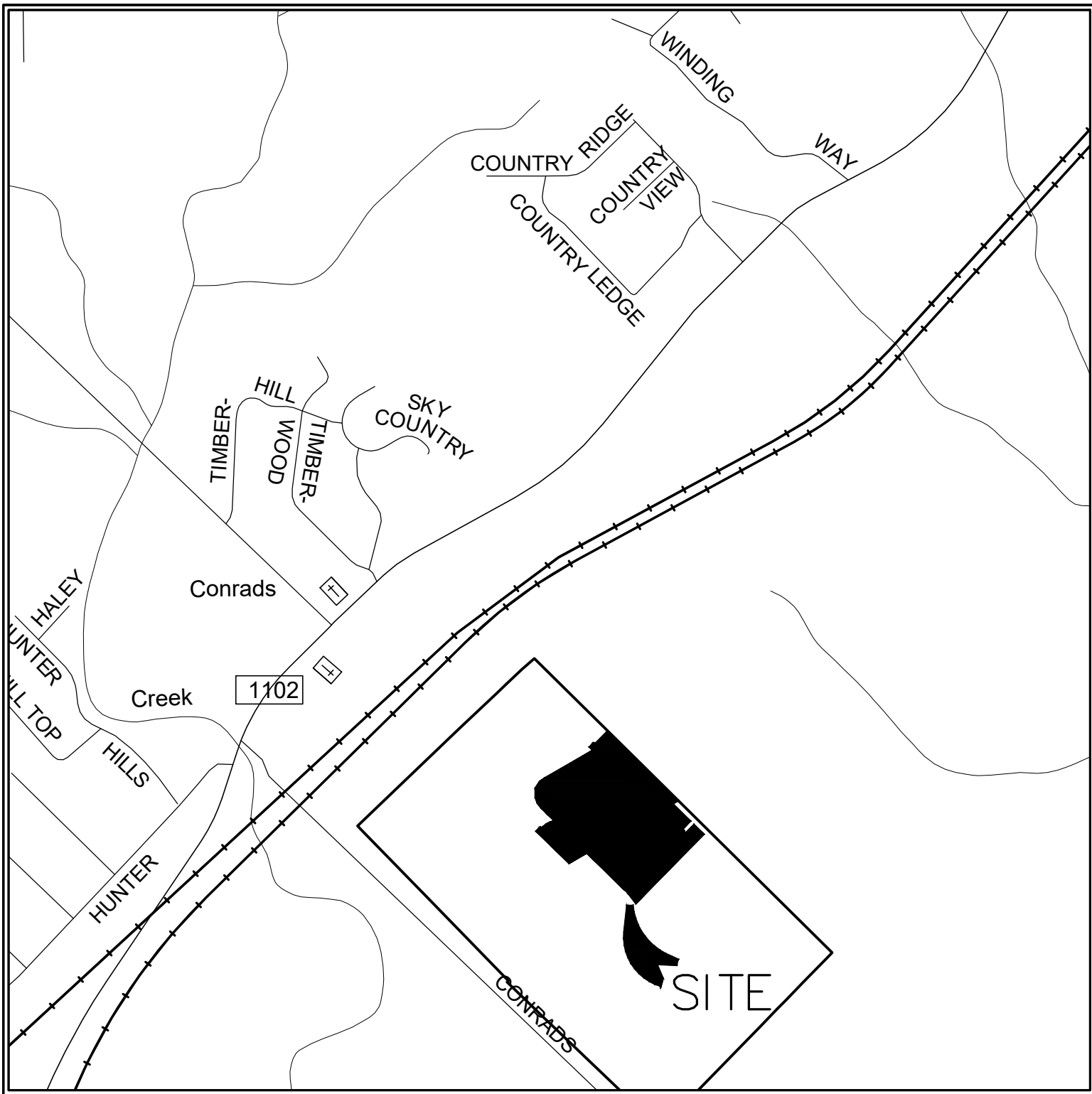


Drawing Name: N:_Projects\056 - Milestone Properties\056.009 - Cloud Country Unit 5\103- Construction Drawings\ASBUILDS\CITY\ASBUILDS-C006.dwg User: barboza Apr 28, 2020 - 1:35pm



PROJECT LOCATION MAP

PROJECT BENCHMARK

SITE TBM #1
SET MAG NAIL IN CL OF STRATUS PATH AND BLACK CLOUD DR
N: 13826027.36
E: 2264053.63
ELEV: 743.13

SITE TBM #2
SET MAG NAIL IN CL OF BLACK CLOUD DR IN UNIT 2
N: 13825576.38
E: 2264563.91
ELEV: 736.28

LEGAL DESCRIPTION

BEING A 16.15 ACRE TRACT OF LAND OUT OF THE ORILLA RUSSELL SURVEY NO. 2, ABSTRACT NO. 485, COMAL COUNTY, TEXAS AND BEING OUT OF A CALLED 70.7 ACRES, DESCRIBED IN DOCUMENT NO. 200406000885, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS, ALSO BEING OUT OF A CALLED 47.534 ACRE TRACT OF LAND DESCRIBED IN DOCUMENT NO. 200406042413, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS, AND BEING OUT OF THE REMAINDER OF A CALLED 29.049 ACRE TRACT OF LAND DESCRIBED IN DOCUMENT NO. 200206041209, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS.

PLEASE NOTE: NBU REQUIRES GPS POINTS FOR CERTAIN ELECTRIC, WATER AND WASTEWATER ATTRIBUTES, SOME OF WHICH MUST BE TAKEN PRIOR TO BACKFILL DURING CONSTRUCTION.

GPS POINTS SHALL BE REQUIRED FROM THE DEVELOPER'S CONTRACTOR OR ENGINEER. A MINIMUM OF THREE COORDINATE POINTS FOR GEOREFERENCING SHALL BE REQUIRED. THE WATER AND WASTEWATER GPS POINTS SHALL BE TO SURVEY GRADE. THE ELECTRIC GPS POINTS SHALL BE TO MAP GRADE.

WATER
VERTICAL BENDS AND EDGE OF STEEL CASING (IF APPLICABLE) PRIOR TO BACKFILL
HORIZONTAL BENDS PRIOR TO BACKFILL
TEES PRIOR TO BACKFILL
FITTINGS (REDUCERS AND COUPLINGS) PRIOR TO BACKFILL
FIRE HYDRANTS (TOP OF FLANGE)
VALVES
METERS (TOP CENTER OF BOX)
BLOW OFF ASSEMBLY
CORNER SLAB OF WATER TANK & GATE VALVE ON WATER TANK

WASTEWATER
MANHOLES
CLEANOUTS
CORNER SLAB OF LIFT STATION

ELECTRIC
POLES
TRANSFORMERS, BOTH ABOVE AND UNDERGROUND (FRONT LOCK)
PULL BOXES
STREET LIGHTS

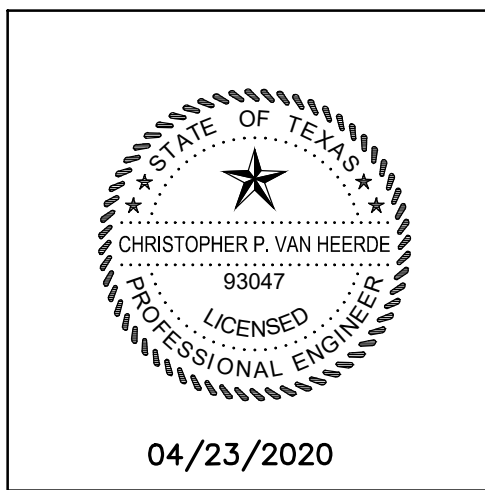
COORDINATE GPS REQUIREMENTS WITH NBU INSPECTOR

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 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 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 COMAL COUNTY, TEXAS, FIRM PANEL NUMBER 48091C0290F EFFECTIVE DATE **SEPTEMBER, 2, 2009**, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- THIS PROJECT IS NOT LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.



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.

Chris Van Heerde, P.E.
rde
P.E. Registration No. 93047

PREPARED BY:



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HMTNB.COM
830.625.8555 – FAX: 830.625.8556
TBPE FIRM F-10961

GAS NOTE:

"GAS UTILITIES ARE NOT INCLUDED IN THE CIVIL CONSTRUCTION PLANS. FINAL GAS UTILITY DESIGN SHALL BE APPROVED BY THE CITY FOR ANY WORK WITHIN PUBLIC RIGHT-OF-WAY."

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.

CLOUD COUNTRY UNIT 5 SUBDIVISION NEW BRAUNFELS, TEXAS CIVIL SITE CONSTRUCTION PLANS



RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: APRIL 2020

BY: *Chris Van Heerde, P.E.*

HMT ENGINEERING AND SURVEYING

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CLOUD COUNTRY UNIT 5
CIVIL SITE CONSTRUCTION PLANS

056.009

CITY OF NEW BRAUNFELS GENERAL NOTES

ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL COMPLY WITH:

A. CURRENT CITY OF NEW BRAUNFELS CONSTRUCTION SPECIFICATIONS AND STANDARDS AS OF THE DATE OF THIS CONTRACT

B. THE MOST CURRENT EDITION OF TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES".

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST CURRENT TEXAS DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS, AND BRIDGES", ALONG WITH CURRENT CITY OF **NEW BRAUNFELS** and **COMAL** COUNTY SPECIFICATIONS, ANY DISCREPANCIES BETWEEN SPECIFICATIONS SHALL BE RESOLVED BY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES, AND TAXES AREA AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.

ANY EXISTING OFF-SITE IMPROVEMENTS THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE OWNER OF THE EXISTING IMPROVEMENT AT THE CONTRACTOR'S EXPENSE. (NO SEPARATE PAY ITEM)

WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR CONSENT OF THE OWNER OR ENGINEER WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100YR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.

CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.

WHEN MATCHING EXISTING PAVEMENTS, CURBS, DRIVES, AND WALKS, THEY SHALL BE SAW CUT FULL DEPTH AND REMOVED TO ALLOW FOR PROPOSED CONSTRUCTION. IF ANY EXISTING JOINT IS ENCOUNTERED, PRECAUTION SHALL BE TAKEN DURING REMOVAL OF CONCRETE SO AS NOT TO DAMAGE EXISTING DOWELS. ALL EXISTING DOWELS SHALL BE EXPOSED AND CLEANED.

ITEM OF WORK DESIGNATED "BY OTHERS" SHALL NOT BE CONSIDERED PART OF THIS CONTRACT.

ALL "COMPACTED SUBGRADE" SHALL CONSIST OF NATIVE MATERIAL SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES AND COMPACTED TO 95% DENSITY ACCORDING TO DENSITY TEST METHOD TEX-115E OR ACCORDING TO ASTM D-698 AND TESTED BY ASTM D-2922.

ALL "FLEXIBLE BASE" SHALL BE TYPE "A", GRADE 4, ACCORDING TO TxDOT ITEM 247, COMPACTED TO 95% MODIFIED DENSITY AT A MOISTURE CONTENT BETWEEN -2 AND +3 OF OPTIMUM PERCENT MOISTURE ACCORDING TO ASTM D-1557 (MODIFIED PROCTOR) AND TESTED BY ASTM D-2922.

ASPHALT PAVEMENT SHALL BE THE TYPE SPECIFIED ON THE PLANS AND ACCORDING TO TxDOT ITEM 340 "HOT MIX ASPHALT CONCRAE PAVEMENT".

PRIME COAT USING MC-30 AT A RATE OF 0.2 GALLONS PER SQUARE YARD SHALL BE PLACED OVER PREPARED BASE AT LEAST ONE DAY PRIOR TO APPLYING ASPHALTIC CONCRETE PAVEMENT. ANY NECESSARY TACK COAT SHALL BE MC-30 AT 0.05 GALLONS PER SQUARE YARD. IT IS REQUIRED THAT BOTH THE PRIME COAT AND THE TACK COAT BE APPLIED AT THE TEMPERATURE SPECIFIED UNDER TxDOT ITEM 300.3.

CONCRETE SHALL BE CLASS "A" ACCORDING TO TxDOT ITEM 421 UNLESS OTHERWISE ON PLANS.

REINFORCING STEEL SHALL BE FROM NEW BULLET AND SHALL CONFORM TO TxDOT ITEM 440. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS EXCEPT WHEN REFERRING TO CLEARANCE.

ALL SAVED JOINTS SHALL BE SAWED WITHIN 24 HOURS OF POURING, ABSOLUTELY NO WELDING OF REINFORCING BARS OR TORCHING TO BEND REINFORCING BARS SHALL BE ALLOWED WITHOUT THE SPECIFIC APPROVAL OF THE ENGINEER. ORDINARY COMPACTION CONTROL IS REQUIRED ON THIS PROJECT. ALL ROLLING FOR COMPACTION OF ASPHALTIC CONCRETE PAVEMENT SHALL BE COMPLETED BEFORE THE MIXTURE TEMPERATURE DROPS BELOW 175 DEG. (F). ALL FILL MATERIAL SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL.

CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO THE NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS, OFFICES, DIRECTORS, OR CONSULTANTS, HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.

ALL CMP (CORRUGATED METAL PIPE) USED ON THIS PROJECT SHALL HAVE A MANNING'S "N" VALUE OF 0.024, UNLESS OTHERWISE SHOWN ON PLANS.

CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION TESTING PER CURRENT CITY OF NEW BRAUNFELS REQUIREMENTS. ALL TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL. ENGINEER AND OWNER RESERVE THE RIGHT TO HAVE THE CONTRACTOR REMOVE AND REPLACE ANY MATERIAL THAT WAS NOT TESTED OR FAILED TESTING. ALL COST ASSOCIATED WITH THE REMOVAL, REPLACEMENT AND TESTING SHALL BE PAID BY THE CONTRACTOR.

ALL PVC SLEEVES SHALL BE INSTALLED 3 FEET BELOW FINISHED GRADE AND ENDS SHALL BE MARKED SO THAT LOCATIONS OF SLEEVES CAN BE EASILY IDENTIFIED.

PRE-CONSTRUCTION CONFERENCE IS REQUIRED. ENGINEER WILL ARRANGE SUCH CONFERENCE IN COORDINATION WITH CITY OF NEW BRAUNFELS STREET INSPECTOR & NEW BRAUNFELS UTILITIES INSPECTOR. NO CONSTRUCTION MAY BEGIN PRIOR TO THE PRE-CONSTRUCTION CONFERENCE.

CONTRACTOR SHALL COORDINATE WITH DRY UTILITY INSTALLERS AND SHARED TRENCHING SHALL BE UTILIZED. CUTTING THE STREETS AFTER COMPLETION BY DRY UTILITIES SHALL NOT BE ACCEPTABLE.

AS PER PLATING ORDINANCE SECTION 118-38M.: WHEN ALL 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 (AUTOCAD 2000 MINIMUM) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARNTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.

EROSION / SEDIMENTATION CONTROL

AT A MINIMUM, THESE CONTROLS SHALL CONSIST OF ROCK BERMS AND/OR SILT FENCES CONSTRUCTED PARALLEL TO AND DOWN GRADIENT FROM THE TRENCHES. THE ROCK BERM OR SILT FENCES SHALL BE INSTALLED IN A MANNER SUCH THAT ANY RAINFALL RUNOFF SHALL BE FILTERED. HAY BALES SHALL NOT BE USED FOR TEMPORARY EROSION AND SEDIMENTATION CONTROLS.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL BE MAINTAINED DURING CONSTRUCTION BY THE CONTRACTOR. THE CONTRACTOR SHALL REMOVE THE CONTROLS WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED [31 TAC 313.5 (C)(12)]. ADDITIONAL PROTECTION MAY BE REQUIRED IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.

ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER/ENGINEER.

PLACEMENT OF TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION PLANS. ACTUAL LOCATIONS MAY VARY SLIGHTLY FROM THE PLANS, BUT WILL BE VERIFIED BY THE ENGINEER/INSPECTOR IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE CONTROLS AT WEEKLY INTERVALS AND AFTER EVERY SIGNIFICANT RAINFALL TO INSURE DISTURBANCE OF THE STRUCTURES HAS NOT OCCURRED. SEDIMENT DEPOSITED AFTER A RAINFALL SHALL BE REMOVED FROM THE SITE OR PLACED IN AN ENGINEER APPROVED DESIGNATED DISPOSAL AREA.

CONTRACTOR SHALL BE RESPONSIBLE TO INSURE THAT NO EROSION CONTROL MEASURES BLOCK THE DRAINAGE SYSTEM FROM WORKING AS DESIGNED.

UTILITIES

LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION, INCLUDING THOSE NOT SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL NOT 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

CONTRACTOR SHALL NOTIFY APPROPRIATE UTILITY COMPANIES AND GOVERNMENTAL AGENCIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION AT:

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

NEW BRAUNFELS UTILITIES (WATER AND SEWER) (830) 608-8971

NEW BRAUNFELS UTILITIES (ELECTRIC) (830) 608-8951

TIME WARNER CABLE (830) 625-3408

CENTERPOINT ENERGY (GAS) (830) 643-6434

AT&T (830) 303-1333

TEXAS ONE CALL SYSTEM (800) 245-4545

ENERGY TRANSFER (PETROLEUM PIPELINE) (210) 262-2486

CONTRACTOR SHALL REFERENCE NEW BRAUNFELS UTILITIES PLANS FOR FINAL ELECTRICAL LINE DESIGNS AND LAYOUT.

SEWER NOTES

1. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION.
2. A MINIMUM OF 3 FEET OF COVER IS TO BE MAINTAINED OVER THE SANITARY SEWER MAIN AND LATERALS AT SUBGRADE, OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED.
3. ALL RESIDENTIAL WASTEWATER SERVICE LATERALS SHALL BE EXTENDED TO THE PROPERTY LINE AND A CLEANOUT SHALL BE INSTALLED AT THE PROPERTY LINE. SERVICES TO LOTS WILL EXTEND SEVEN (7) FEET PAST THE UNDERGROUND ELECTRIC CONDUIT IF ELECTRIC IS INSTALLED IN THE FRONT EASEMENT.
4. PIPE BEDDING OF WASTEWATER LINES SHALL BE MANUFACTURED SAND OR PEA GRAVEL AS PER NBV SPECIFICATIONS.
5. SECONDARY BACKFILL OF SEWER LINES SHALL GENERALLY CONSIST OF MATERIALS REMOVED FROM THE TRENCH AND SHALL BE FREE FROM BRUSH, DEBRIS, AND TRASH, NO ROCKS OR STONES HAVING ANY DIMENSION LARGER THAN 6" INCHES AT THE LARGEST DIMENSION.
6. ALL SEWER PIPES SHALL HAVE COMPRESSION OR MECHANICAL JOINTS AS PER 30 TAC 217.53 (C) (2).
7. FOR WASTEWATER LINES LESS THAN 24" IN DIAMETER, SELECT INITIAL BACKFILL MATERIAL SHALL BE PLACED IN TWO LIFTS.
 - A. THE FIRST LIFT SHALL BE SPREAD UNIFORMLY AND SIMULTANEOUSLY ON EACH SIDE AND UNDER THE SHOULDERS OF THE PIPE TO THE MID POINT OF SPRING LINE OF THE PIPE.
 - B. THE SECOND LIFT SHALL BE PLACED TO A DEPTH AS SHOWN ON THE PIPE BACKFILL DETAIL. FOR PIPES LARGER THAN 24", 12" MAXIMUM LIFTS SHALL BE USED.
8. ALL MANHOLES MUST BE WATER TIGHT. EITHER MONOLITHIC, CAST-IN-PLACE CONCRETE STRUCTURES OR PREFABRICATED MANHOLES SPECIFICALLY APPROVED BY NBV. THE MANHOLES SHALL HAVE WATER TIGHT RINGS AND COVERS. WHEREVER THEY ARE WITHIN THE 100 YEAR FLOODPLAIN, THE MANHOLE COVERS SHALL BE BOLTED. EVERY FOURTH MANHOLE IN SEQUENCE SHALL HAVE AN ALTERNATIVE MEANS OF VENTING [30 TAC 213.5(C)(3)(A) AND 30 TAC 217.55(C)].
9. ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS 2" ABOVE THE SURROUNDING GROUND EXCEPT WHEN LOCATED IN PAVED AREAS. IN PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH PAVEMENT.
10. ALL NEW MANHOLES ARE TO HAVE COVERS WITH 32" OPENINGS. MANHOLES SHALL BE CONSTRUCTED OF OR LINED WITH A CORROSION MATERIAL RESISTANT MATERIAL, WHERE NEW CONSTRUCTION TIES INTO AN EXISTING MANHOLE, THE EXISTING MANHOLE MUST BE LINED, COATED, OR REPLACED WITH A CORROSION RESISTANT MATERIAL.
11. WASTEWATER PIPE CONNECTIONS TO PRE-CAST MANHOLES WILL BE COMPRESSION JOINTS OF MECHANICAL "BOOT" TYPE, AS APPROVED BY NBV.
12. WASTEWATER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE.
13. IN AREAS WHERE A NEW WASTEWATER MANHOLE IS TO BE CONSTRUCTED OVER AN EXISTING WASTEWATER MANHOLE, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE THE EXISTING MANHOLE BEFORE CONSTRUCTION. AFTER PROPOSED MANHOLE HAS BEEN BUILT, THE CONTRACTOR SHALL RE-TEST THE EXISTING SYSTEM TO THE SATISFACTION OF THE CONSTRUCTION INSPECTOR. (NO SEPARATE PAY ITEM).
14. PRIOR TO CONSTRUCTION TESTING WILL BE DONE BY TV CAMERA BY THE CONTRACTOR. THE CONTRACTOR SHALL HAVE AN INSPECTOR OR WATER SYSTEMS ENGINEERING PERSONNEL, AS THE CAMERA IS RUN THROUGH THE LINES (NSPI), ANY ABNORMALITIES FOUND IN THE LINE, SUCH AS BROKEN PIPE OR MISALIGNED JOINTS, MUST BE REPLACED BY BOTH THE PRIME CONTRACTOR AND THE CONTRACTOR TO PROVIDE TV TAPES TO CONSTRUCTION INSPECTOR FOR REVIEW PRIOR TO FINAL INSPECTION OF THE PROJECT.
15. NO TESTING WILL BE PERFORMED PRIOR TO 30 DAYS FROM COMPLETE INSTALLATION OF THE SANITARY SEWER LINES. THE FOLLOWING SEQUENCE WILL BE STRICTLY ADHERED TO:
 - A. PULL MANDREL
 - B. PERFORM AIR TEST
 - C. CLEANING OF ANY DEBRIS
 - D. FLUSHING OF SYSTEM
 - E. TV INSPECTION (WITHIN 72 HOURS OF FLUSHING)
16. A MINIMUM OF 3 FEET OF COVER IS TO BE MAINTAINED OVER THE SANITARY SEWER MAIN AND LATERALS AT SUBGRADE, OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED.
17. SANITARY SEWER MAIN CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WILL REQUIRE SUCCESSFUL TESTING OF THE MANHOLE IN ACCORDANCE WITH NBV CONNECTION & CONSTRUCTION POLICY MANUAL.
18. TCEQ AND EPA REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF SEWER COLLECTION SYSTEMS. CONTRACTOR SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL PER THE PROJECT PLANS. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY NBV WATER SYSTEMS.
19. ALL MANHOLES NOT WITHIN PAVED STREETS SHALL HAVE LOCKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBV DETAIL DRAWING #329. (NO SEPARATE PAY ITEM)
20. ALL MANHOLES OVER THE EDWARDS' AQUIFER RECHARGE ZONE SHALL HAVE LOCKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBV DETAIL DRAWING #329. (NO SEPARATE PAY ITEM)

CITY OF NEW BRAUNFELS CONSTRUCTION NOTES

REVISED 11/2016

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 FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.

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

PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SET A PRECONSTRUCTION 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, 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

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. A TxDOT TYPE II B-E 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 THE THE MITIGA WATER 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 PLATING ORDINANCE SECTION 118-38M.: WHEN ALL OF THE IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD DRAWING" PLANS, AND A DIGITAL COPY OF ALL PLANS (AUTOCAD 2000 MINIMUM AND PDF) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARNTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.

CONSTRUCTION NOTE

ENGINEER OF RECORD IS RESPONSIBLE TO INSURE 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 100" ABOVE THE FINISHED GRADE. THE FINISHED 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 GEO-TECHNICAL ENGINEER. FLEXIBLE BASE OR FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED SIX-INCHES (6") COMPACTED. EACH LAYER OF MATERIAL, INCLUSIVE OF SUBGRADE, SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEO-TECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR. AT A MINIMUM, TESTS SHALL BE TAKEN EVERY 100LF FOR EACH LIFT. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER 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.

ITEM 340

ASPHALTIC CONCRETE PAVEMENT SHALL BE TYPE "D" HOT MIX ASPHALT AS DEFINED IN TxDOT'S STANDARD SPECIFICATIONS FOR 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 SURFACE COURSE SHALL BE PLANT MIXED, HOT LAID TYPE "D" MEETING THE SPECIFICATION REQUIREMENTS OF TxDOT ITEM 340. THE MIX SHALL BE DESIGNED FOR A STABILITY OF AT LEAST 35 AND SHALL BE COMPACTED TO BETWEEN 91 AND 95 PERCENT OF THE MAXIMUM THEORETICAL DENSITY AS DETERMINED BY TxDOT TEST METHOD TEX-227-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 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 WILL 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.

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.
3. SAWCUT EXISTING STREET AND MATCH ELEVATION TO PROPOSED CONSTRUCTION.
4. SAWCUT EXISTING CURB TO TIE INTO PROPOSED CURB 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.

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. MATERIAL 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 (SLP-1-3) - 08. OBJECT MARKERS MATERIALS AND INSTALLATION SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS D & OM (1 - 5) - 10.

MATERIALS

SIGN MATERIALS INCLUDING ALUMINUM SIGN BLANKS AND SIGN FACE MATERIALS SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS 1SR (1 - 5) - 08 AND DEPARTMENTAL MATERIAL SPECIFICATIONS DMS-7110 AND DMS-8300.

THE CITY OF NEW BRAUNFELS WILL INSPECT ALL SIGNS AT FINAL INSPECTION.

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
9. REPLACE ALL TEMPORARY EROSION CONTROL MEASURES.
10. TPDES REQUIREMENTS - DISTURBED AREAS ON WITH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY WILL BEGIN AGAIN WITHIN 21 DAYS

GENERAL NBV NOTES

REV. DATE 3/31/11

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL BE APPROVED BY NEW BRAUNFELS UTILITIES AND COMPLY WITH THE CURRENT NEW BRAUNFELS UTILITIES WATER SYSTEMS CONNECTION/CONSTRUCTION POLICY".
2. CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE PLANS FROM THE CONSULTANT OR ENGINEER AND NOTIFY NBV WATER SYSTEMS ENGINEERING AT 830-608-8971 WITH AT LEAST TWO (2) WORKING DAYS (48 NOTICE. WORK COMPLETED BY THE CONTRACTOR, WHICH HAS NOT RECEIVED A NOTICE TO PROCEED FROM NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
3. THE DEVELOPER DEDICATES THE WATER / WASTEWATER MAINS UPON COMPLETION BY THE CONTRACTOR AND ACCEPTANCE BY THE NEW BRAUNFELS UTILITIES WATER SYSTEM. NBV WILL OWN AND MAINTAIN SAID WATER / WASTEWATER MAINS WHICH ARE LOCATED WITHIN PLATTED UTILITY EASEMENTS OR PUBLIC ROW OF PROPOSED DEVELOPMENTS. (AS APPLICABLE).
4. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS OFFICERS, DIRECTORS, OR CONSULTANTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.
5. CONTRACTOR TO CONTACT THE ENGINEER-OF-RECORD (EOR) FOR ANY FIELD CHANGES. ANY REVISIONS OR CHANGES TO THE APPROVED CONSTRUCTION PLANS WILL REQUIRE ADDITIONAL APPROVAL BY NBV IN WRITING.
6. CONTRACTOR AND / OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGES DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES, AND EXISTING UTILITIES (NOT ADJUSTED ON PLANS). COST OF RESTORATIONS, IF ANY, SHALL BE THE CONTRACTOR'S ENTIRE EXPENSE.
8. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION.
9. CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES AND TAXES AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
10. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.
11. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.
12. THE CONTRACTOR SHALL NOT PLACE ANY MATERIALS ON THE RECHARGE ZONE OF THE EDWARDS AQUIFER WITHOUT AN APPROVED WATER POLLUTION ABATEMENT PLAN FROM THE TCEQ 31 TAC 313.4 AND 31 TAC 313.9.
13. BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC, AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.
14. CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.
15. THE LOCATION OF UTILITIES, EITHER UNDERGROUND OR OVERHEAD, SHOWN WITHIN THE RIGHT OF WAY ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION OPERATIONS.
16. OSHA REGULATIONS PROHIBIT OPERATIONS THAT WILL BRING PERSONS OR EQUIPMENT WITHIN 10 FEET OF AN ENERGIZED LINE. WHERE WORKMEN AND/OR EQUIPMENT HAVE TO WORK CLOSE TO AN ENERGIZED ELECTRICAL LINE, THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL POWER COMPANY INVOLVED AND MAKE WHATEVER ADJUSTMENTS NECESSARY TO ENSURE THE SAFETY OF THOSE WORKMEN.
17. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION. CONTRACTORS SHALL CALL THE ONE CALL SYSTEM FOR WATER/WASTEWATER LOCATION.
18. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192 (8), GAS COMPANIES MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
19. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES, AND FLAGGERS. THE CONSTRUCTION METHOD SHALL BE CONDUCTED TO PROVIDE THE LEAST POSSIBLE INTERFERENCE TO TRAFFIC SO AS TO PERMIT THE CONTINUOUS MOVEMENT OF THE TRAFFIC IN ONE DIRECTION AT ALL TIMES. THE CONTRACTOR SHALL CLEAN UP AND REMOVE FROM THE WORK AREA ANY LOOSE MATERIAL RESULTING FROM CONTRACT OPERATIONS AT THE END OF EACH WORKDAY.
20. PRIOR TO ORDERING MATERIALS TO BE USED IN CONSTRUCTION, CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FOUR (4) COPIES OF THE SOURCE, TYPE, GRADATION, MATERIAL SPECIFICATION DATA AND / OR SHOP DRAWINGS, AS APPLICABLE, TO SATISFY THE REQUIREMENTS OF THE FOLLOWING ITEMS AND ALL MATERIAL ITEMS REFERRED TO IN THESE LISTED ITEMS:
 - A. WATER MAINS AND SERVICES
 - B. WASTEWATER MAINS AND SERVICES
21. THRUST BLOCKS WILL NOT BE ALLOWED ON THE SYSTEM WITHOUT SPECIAL APPROVAL. JOINTS WILL BE RESTRAINED WITH RESTRAINING SYSTEMS APPROVED BY NBV AND RESTRAINT LENGTH SHALL BE SUBMITTED TO NBV AT THE TIME OF PLAN SUBMITTAL.
22. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. WASTEWATER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO NBV CONNECTION AND CONSTRUCTION POLICY MANUAL.
23. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH 30 TAC 217.
24. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.
25. UTILITY TRENCH COMPACTION WITH STREET R.O.W.

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



RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: APRIL 2020

BY: *Chris Van Hecke, P.E.*

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PLAT NOTES:

- ALL LOTS WITHIN THE SUBDIVISION WILL BE PROVIDED WATER, SEWER AND ELECTRIC SERVICE BY NEW BRAUNFELS UTILITIES, TELEPHONE AND CABLE SERVICES FOR THE SUBDIVISION WILL BE PROVIDED BY AT&T COMMUNICATIONS AND/OR SPECTRUM.
- ALL BEARINGS AND COORDINATES SHOWN HEREON ARE BASED UPON THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE (4204), NORTH AMERICAN DATUM 1983, GRID. DISTANCES SHOWN HEREON ARE BASED UPON SURFACE MEASUREMENTS, TO CONVERT SURFACE DISTANCES TO GRID, APPLY A COMBINED SCALE FACTOR OF 1.00015.
- MONUMENTS WERE FOUND OR SET AT EACH CORNER OF THE SURVEY BOUNDARY OF THE SUBDIVISION, MONUMENTS AND LOT MARKERS WILL BE SET WITH 1/2" IRON PINS WITH PLASTIC CAP STAMPED "HMT" IMMEDIATELY AFTER COMPLETION OF UTILITY INSTALLATION AND STREET CONSTRUCTION UNLESS NOTED OTHERWISE.
- THIS SUBDIVISION IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.
- THIS SUBDIVISION IS WITHIN THE CITY LIMITS OF NEW BRAUNFELS, TEXAS.
- THIS SUBDIVISION IS WITHIN THE COMAL INDEPENDENT SCHOOL DISTRICT.
- NO PORTION OF THE SUBDIVISION IS LOCATED WITHIN ANY SPECIAL FLOOD HAZARD AREA (100 YR. FLOOD), AS DEFINED BY THE COMAL COUNTY, TEXAS, FLOOD INSURANCE RATE MAP NUMBER 48091C0290F, EFFECTIVE DATE SEPTEMBER 2, 2009 AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- NO STRUCTURES, WALLS OR OTHER OBSTRUCTIONS OF ANY KIND SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THIS PLAT, NO LANDSCAPING, FENCES, OR OTHER TYPE OF MODIFICATIONS WHICH ALTER THE CROSS SECTIONS OF THE DRAINAGE EASEMENTS OR DECREASE THE HYDRAULIC CAPACITY OF THE EASEMENT, AS APPROVED SHALL BE ALLOWED WITHOUT THE APPROVAL OF THE CITY ENGINEER. THE CITY OF NEW BRAUNFELS SHALL HAVE THE RIGHT OF INGRESS AND EGRESS OVER GRANTORS ADJACENT PROPERTY TO REMOVE ANY OBSTRUCTIONS PLACED WITHIN THE LIMITS OF SAID DRAINAGE EASEMENTS AND TO MAKE ANY MODIFICATIONS OR IMPROVEMENTS WITHIN SAID DRAINAGE EASEMENTS.
- FUTURE DEVELOPMENT IS SUBJECT TO CHAPTER 114 (STREETS, SIDEWALKS AND OTHER PUBLIC SPACES) OF THE NEW BRAUNFELS CODE OF ORDINANCES.
- 4' SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS ALONGSIDE AND ADJACENT TO THE CURB BY THE HOME BUILDER AT THE TIME OF HOME CONSTRUCTION ALONG SPACE CLOUD DR, CUMULUS CLOUD DR, LOW CLOUD DR, LUNAR CLOUD, GRAY CLOUD DR, WHITE CLOUD DR, SWING CLOUD, MONSOON PATH, AND TORNADO RIDGE. 4' SIDEWALKS WILL BE CONSTRUCTED PER CITY STANDARDS ALONGSIDE AND ADJACENT TO THE CURB OF LUNAR CLOUD ALONG LOT 104, BLOCK 1; ALONGSIDE AND ADJACENT TO THE CURB OF BOTH SIDES OF GRAY CLOUD DR ALONG LOT 108, BLOCK 8; AND ALONGSIDE AND ADJACENT TO THE CURB OF WHITE CLOUD DR ALONG LOT 108, BLOCK 8 BY THE DEVELOPER AT THE TIME OF STREET CONSTRUCTION.
- THE ELEVATION OF THE LOWEST FLOOR OF A STRUCTURE 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 A 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 SLOPE PREVENTING RUNOFF FROM ENTERING THE GARAGE AND SHALL PREVENT WATER FROM LEAVING THE STREET.
- THIS SUBDIVISION IS SUBJECT TO THE CITY OF NEW BRAUNFELS PARK LAND DEDICATION AND DEVELOPMENT ORDINANCE. AT SUCH TIME THAT ANY NEW DWELLING UNITS ARE CONSTRUCTED, THE OWNER OF THE LOT(S) SHALL CONTACT THE CITY AND COMPLY WITH THE ORDINANCE FOR EACH DWELLING UNIT.
- THIS UNIT CONTAINS 76 BUILDABLE RESIDENTIAL LOTS. ALL LOTS MEET THE MINIMUM SQUARE FOOTAGE REQUIREMENT ACCORDING TO THE ZONING ORDINANCE.
- LOT 104 (DRAINAGE) AND LOT 108 (OPEN SPACE) WILL BE OWNED AND MAINTAINED BY THE CLOUD COUNTRY HOMEOWNERS ASSOCIATION AND THEIR SUCCESSORS AND/OR ASSIGNS.
- SIDE ENTRY GARAGES CONSTRUCTED ON CORNER LOTS MUST BE SETBACK A MINIMUM OF 20' FROM THE CORNER SIDE LOT LINE.

NEW BRAUNFELS UTILITIES NOTES:

- MAINTENANCE OF DEDICATED UTILITY EASEMENTS IS THE RESPONSIBILITY OF THE PROPERTY OWNER. ANY USE OF AN EASEMENT, OR ANY PORTION OF IT, INCLUDING LANDSCAPING OR DRAINAGE FEATURES, IS SUBJECT TO AND SHALL NOT CONFLICT WITH THE TERMS AND CONDITIONS IN THE EASEMENT, MUST NOT ENDANGER OR INTERFERE WITH THE RIGHTS GRANTED BY THE EASEMENT TO NEW BRAUNFELS UTILITIES, ITS SUCCESSORS AND ASSIGNS, AND SHALL BE SUBJECT TO APPLICABLE PERMIT REQUIREMENTS OF THE CITY OF NEW BRAUNFELS OR ANY OTHER GOVERNING BODY. THE PROPERTY OWNER MUST OBTAIN, IN ADVANCE, WRITTEN AGREEMENT WITH THE UTILITIES TO UTILIZE THE EASEMENT, OR ANY PART OF IT.
- UTILITIES WILL POSSESS A 5' WIDE SERVICE EASEMENT TO THE DWELLING ALONG THE SERVICE LINE TO THE SERVICE ENTRANCE. THIS EASEMENT WILL VARY DEPENDING UPON LOCATION OF DWELLING AND SERVICE.
- UTILITIES SHALL HAVE ACCESS TO THE METER LOCATIONS FROM THE FRONT YARD AND METER LOCATIONS SHALL NOT BE LOCATED WITHIN A FENCED AREA.
- EACH LOT MUST HAVE ITS OWN WATER AND SEWER SERVICE AT THE OWNER'S/DEVELOPER'S EXPENSE.
- DO NOT COMBINE ANY NEW UTILITY EASEMENTS (U.E.) WITH DRAINAGE EASEMENTS (D.E.) OR MAKE CHANGES IN GRADE WITHIN THE UTILITY EASEMENTS (U.E.) WITHOUT WRITTEN APPROVAL FROM NEW BRAUNFELS UTILITIES.

KNOW ALL MEN BY THESE PRESENTS:

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

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE.

MARK F. CONLAN
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 6342
410 N. SEGUIN AVE., NEW BRAUNFELS, TEXAS 78130

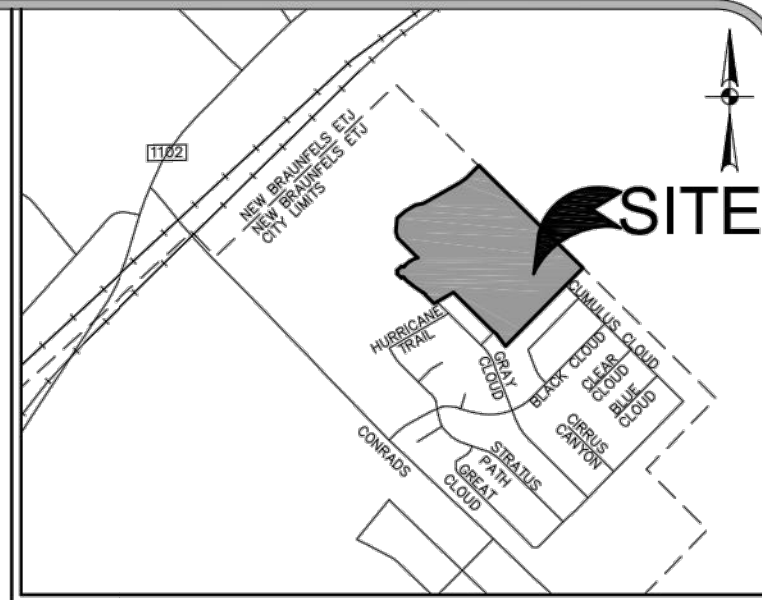
PLAT REVISED JUNE 20, 2017
PLAT PREPARED MAY 24, 2017



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NEW BRAUNFELS,
TEXAS 78130
WWW.HMTNB.COM
PH: (830)625-8555
TBPE FIRM F-10961
TBPLS FIRM 10153600

SUBDIVISION PLAT ESTABLISHING CLOUD COUNTRY SUBDIVISION, UNIT FIVE

BEING A 25.99 ACRE TRACT OF LAND OUT OF THE NANCY KENNER LEAGUE SURVEY NO. 3, ABSTRACT NO. 306, AND OUT OF THE ORILLA RUSSELL SURVEY NO. 2, ABSTRACT NO. 485, COMAL COUNTY, TEXAS AND BEING A PORTION OUT OF THE REMAINDER OF A CALLED 70.688 ACRES, DESCRIBED IN DOCUMENT NO. 200406000885, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS, ALSO BEING A PORTION OUT OF THE REMAINDER OF A CALLED 47.503 ACRE TRACT OF LAND DESCRIBED IN DOCUMENT NO. 200406042413, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS.



LOCATION MAP
NOT TO SCALE

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH
C1	30.06'	175.00'	009°50'35"	15.07'	30.03'
C2	38.65'	225.00'	009°50'35"	19.37'	38.61'
C3	23.56'	15.00'	090°00'00"	15.00'	21.21'
C4	23.56'	15.00'	090°00'00"	15.00'	21.21'
C5	23.56'	15.00'	090°00'00"	15.00'	21.21'
C6	117.14'	225.00'	029°49'44"	59.93'	115.82'
C7	23.56'	15.00'	090°00'00"	15.00'	21.21'
C8	10.18'	15.00'	038°52'57"	5.29'	9.99'
C9	146.51'	50.00'	167°53'21"	471.34'	99.44'
C10	9.77'	15.00'	037°18'35"	5.06'	9.60'
C11	54.50'	225.00'	013°52'40"	27.38'	54.36'
C12	92.32'	225.00'	023°30'36"	46.82'	91.68'
C13	119.38'	175.00'	039°05'13"	62.12'	117.08'
C14	23.56'	15.00'	090°00'00"	15.00'	21.21'
C15	30.06'	175.00'	009°50'35"	15.07'	30.03'
C16	38.65'	225.00'	009°50'35"	19.37'	38.61'
C17	23.56'	15.00'	090°00'00"	15.00'	21.21'
C18	223.98'	50.00'	256°39'27"	-63.25'	78.45'
C19	20.07'	15.00'	076°39'27"	11.86'	18.61'
C20	23.56'	15.00'	090°00'00"	15.00'	21.21'
C21	23.56'	15.00'	090°00'00"	15.00'	21.21'
C22	13.62'	15.00'	052°01'12"	7.32'	13.16'
C23	247.87'	50.00'	284°02'25"	-39.04'	61.54'
C24	13.62'	15.00'	052°01'12"	7.32'	13.16'
C25	23.56'	15.00'	090°00'00"	15.00'	21.21'

CURVE TABLE					
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH
C26	10.18'	15.00'	038°52'15"	5.29'	9.98'
C27	146.38'	50.00'	167°44'30"	465.62'	99.43'
C28	10.18'	15.00'	038°52'15"	5.29'	9.98'
C29	23.56'	15.00'	090°00'00"	15.00'	21.21'
C30	36.36'	225.00'	009°15'29"	18.22'	36.32'
C31	26.03'	15.00'	099°26'47"	17.70'	22.89'
C32	90.53'	175.00'	029°38'27"	46.30'	89.53'
C33	37.02'	225.00'	009°25'38"	18.55'	36.98'
C34	9.01'	15.00'	034°26'03"	4.65'	8.88'
C35	148.05'	50.00'	169°39'08"	552.19'	99.59'
C36	10.23'	15.00'	039°04'06"	5.32'	10.03'
C37	47.57'	175.00'	015°34'29"	23.93'	47.42'
C38	23.56'	15.00'	090°00'00"	15.00'	21.21'
C39	23.56'	15.00'	090°00'00"	15.00'	21.21'
C40	23.56'	15.00'	090°00'00"	15.00'	21.21'
C41	47.57'	175.00'	015°34'29"	23.93'	47.42'
C42	5.47'	175.00'	001°47'32"	2.74'	5.47'
C43	26.89'	15.00'	102°42'01"	18.76'	23.43'
C44	118.08'	225.00'	030°04'10"	60.43'	116.73'
C45	33.39'	175.00'	010°55'53"	16.74'	33.34'
C46	24.78'	15.00'	094°38'44"	16.27'	22.06'
C47	61.16'	225.00'	015°34'29"	30.77'	60.97'

LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	81.21'	S83°41'27"W
L2	13.08'	S44°36'13"W
L3	47.59'	S45°23'47"E
L4	58.77'	N45°23'47"W
L5	58.77'	S45°23'47"E
L6	93.60'	S45°23'47"E
L7	105.00'	N45°23'47"W
L8	61.21'	N83°41'27"E
L9	57.52'	N45°23'47"W
L10	4.40'	N44°36'21"E
L11	4.40'	N44°36'21"E
L12	4.40'	S44°36'21"W
L13	57.52'	N45°23'47"W

APPROVED THIS THE _____ DAY OF _____, 20____,
BY THE PLANNING COMMISSION OF THE CITY OF NEW
BRAUNFELS, TEXAS.

CHAIRMAN _____

APPROVED FOR ACCEPTANCE

DATE PLANNING DIRECTOR

DATE CITY ENGINEER

DATE NEW BRAUNFELS UTILITIES

STATE OF TEXAS
COUNTY OF COMAL

I, _____, DO HEREBY CERTIFY THAT THE FOREGOING
INSTRUMENT WAS FILED FOR RECORD IN THE MAP AND PLAT RECORDS,
DOC# _____ OF COMAL COUNTY ON THE _____ DAY
OF _____, 20____, AT
_____ M.

WITNESS MY HAND AND OFFICIAL SEAL, THIS THE _____ DAY OF
_____, 20____.

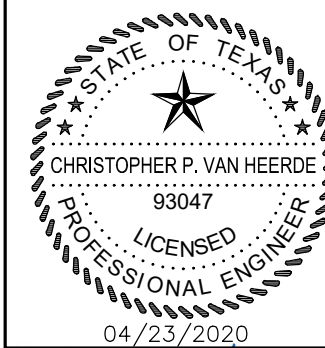
COUNTY CLERK, COMAL COUNTY, TEXAS

DEPUTY _____

PAGE 1 OF 2

FOR REFERENCE ONLY

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TBPLS FIRM 10153600



Chris Van Heerde, P.E.

SUBDIVISION PLAT SHT 1 CLOUD COUNTRY UNIT 5

REVISION DATE		REVISION DESCRIPTION	
NO.	ASBUILTS		
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DATE: JULY 2018

DRAWN BY: MGM/MZ

DESIGNED BY: MGM/MZ/CC

REVIEWED BY: SWH/SCH

HMT PROJECT NO.:
056.009

SHEET C0.3

RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED ON INFORMATION SUBMITTED, IN PART, BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, THE ENGINEER IS NOT RESPONSIBLE FOR ITS ACCURACY OR FOR ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE APPLYING IT FOR ANY PURPOSE.

DATE: APRIL 2020 BY: *Chris Van Heerde, P.E.*
HMT ENGINEERING AND SURVEYING



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

SUBDIVISION PLAT ESTABLISHING CLOUD COUNTRY SUBDIVISION UNIT FIVE

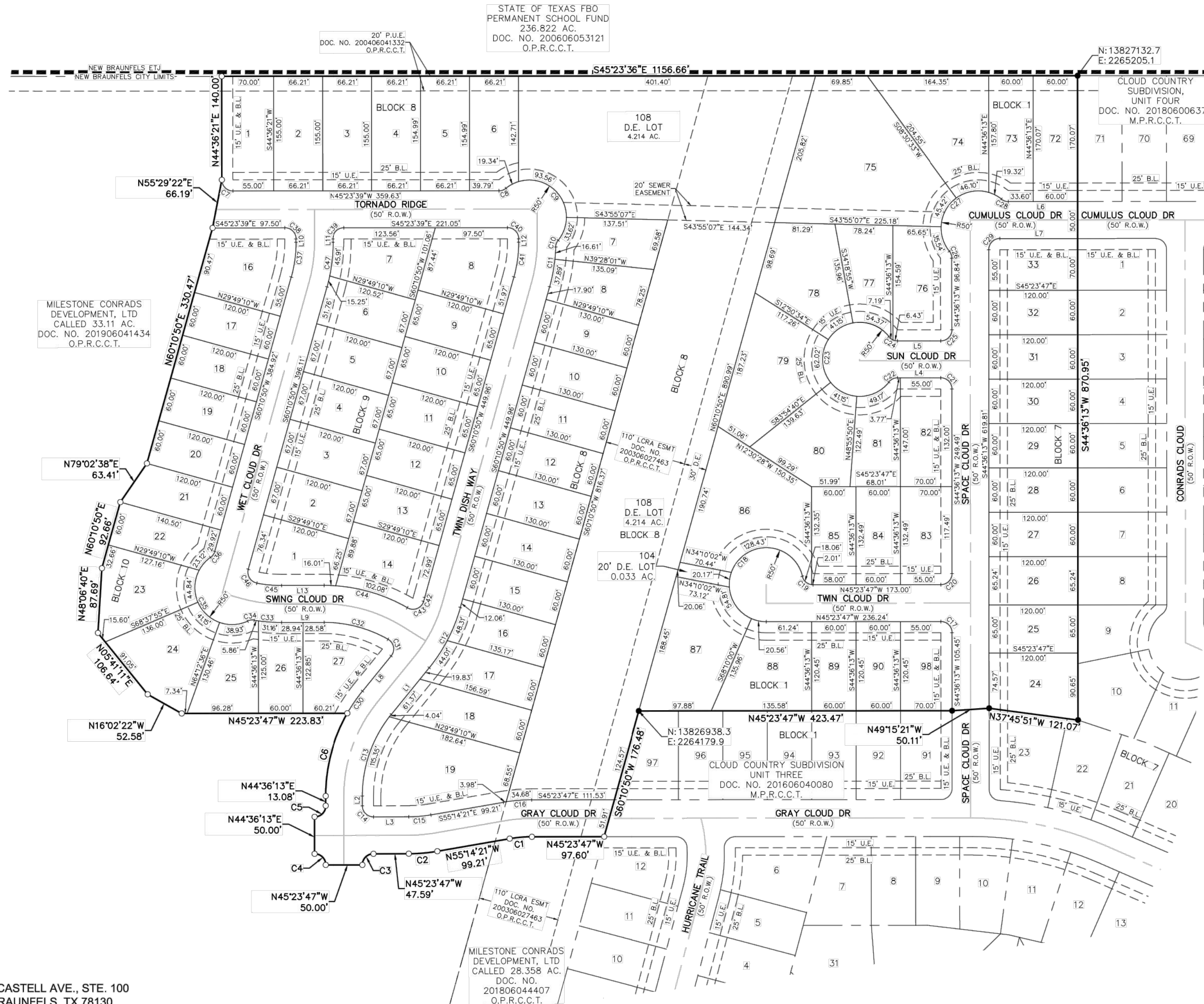
BEING A 25.99 ACRE TRACT OF LAND OUT OF THE NANCY KENNER LEAGUE SURVEY NO. 3, ABSTRACT NO. 306, AND OUT OF THE ORILLA RUSSELL SURVEY NO. 2, ABSTRACT NO. 485, COMAL COUNTY, TEXAS AND BEING A PORTION OUT OF A CALLED 28.358 ACRES, DESCRIBED IN DOCUMENT NO. 201806044407, OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS.

STATE OF TEXAS FBO
PERMANENT SCHOOL FUND
236.822 AC.
DOC. NO. 200606053121
O.P.R.C.C.T.

SCALE: 1"=100'

LEGEND:

- = FND 1/2" IRON PIN W/ PLASTIC CAP STAMPED "HMT" (UNLESS NOTED OTHERWISE)
- = SET 1/2" IRON PIN W/ PLASTIC CAP STAMPED "HMT"
- B.L. = BUILDING SETBACK LINE
- U.E. = UTILITY EASEMENT
- D.E. = DRAINAGE EASEMENT
- R.O.W. = RIGHT-OF-WAY
- M.P.R.C.C.T. = MAP AND PLAT RECORDS, COMAL COUNTY, TEXAS
- O.P.R.C.C.T. = OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS



SHEET 2 OF 2

FOR REFERENCE ONLY



RECORD DRAWING

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DATE: APRIL 2020 BY: *Chris Van Hecke, P.E.*
HMT ENGINEERING AND SURVEYING

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TBPLS FIRM 10153600



Chris Van Hecke, P.E.

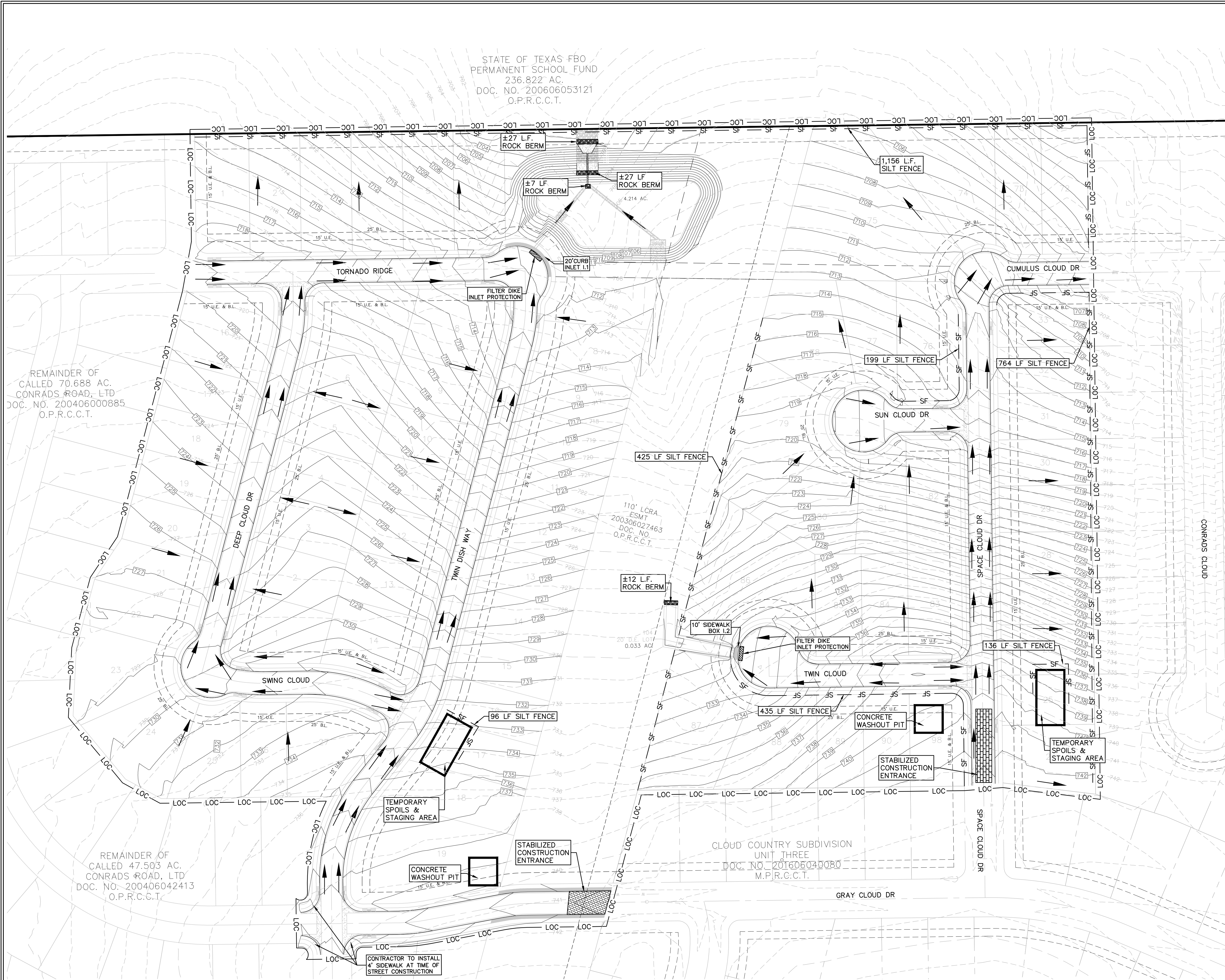
SUBDIVISION PLAT SHT 2 CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE
1	ASBUILDS	04/2020

DATE:	JULY 2018
DRAWN BY:	MGW/MZ
DESIGNED BY:	MGW/MZ/CC
REVIEWED BY:	SWH/SCH
HMT PROJECT NO.:	056.009

**SHEET
C0.4**

Drawing Name: N:_Projects\056 - Milestone Properties\056.009 - Cloud Country Unit 3\103- Construction Drawings\ASBULL'S CITY\ASBULL'S-EROS.dwg User: barbosa Apr 28, 2020 - 2:02pm

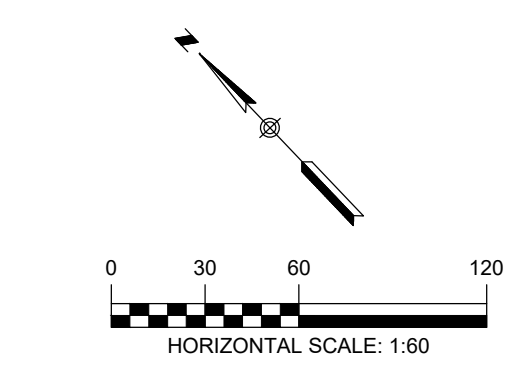


LEGEND

- 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
- [Pattern] STABILIZED CONSTRUCTION ENTRANCE
- [Pattern] FILTER DIKE CURB INLET PROTECTION
- [Pattern] ROCK BERM

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.
9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.



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.

STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 12.2(N).

RECORD DRAWING

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DATE: APRIL 2020 BY: *Chin Van Huu, P.E.*

HMT ENGINEERING AND SURVEYING



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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HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER
04/23/2020

Chin Van Huu, P.E.

EROSION CONTROL PLAN

CLOUD COUNTRY UNIT 5

NO.	REVISION DATE	REVISION DESCRIPTION
1	04/2020	ASBULL'S

DATE: JULY 2018

DRAWN BY: MGM/MZ

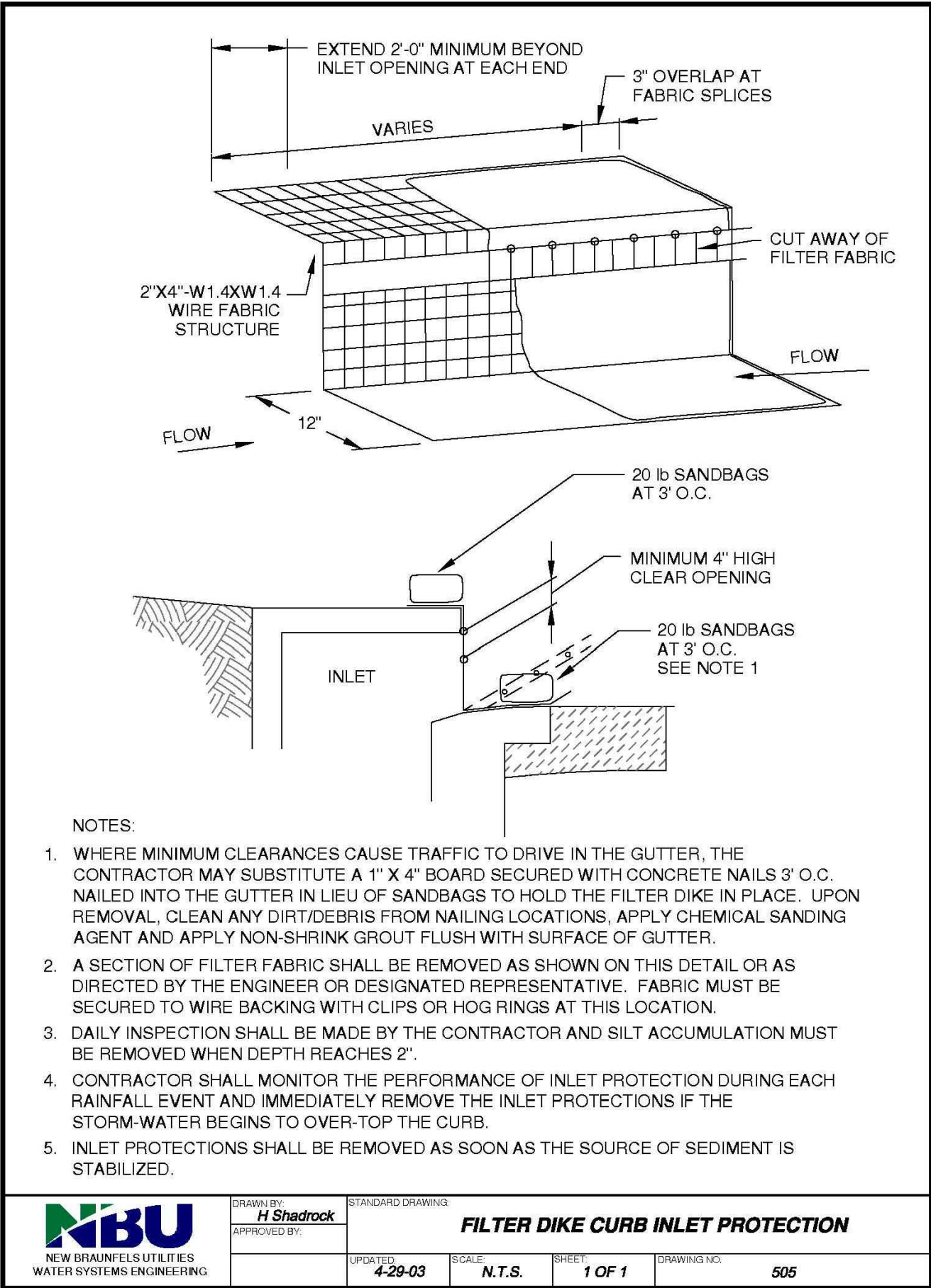
DESIGNED BY: MGM/MZ/CC

REVIEWED BY: SWH/SCH

HMT PROJECT NO.: 056.009

SHEET

C1.0



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:

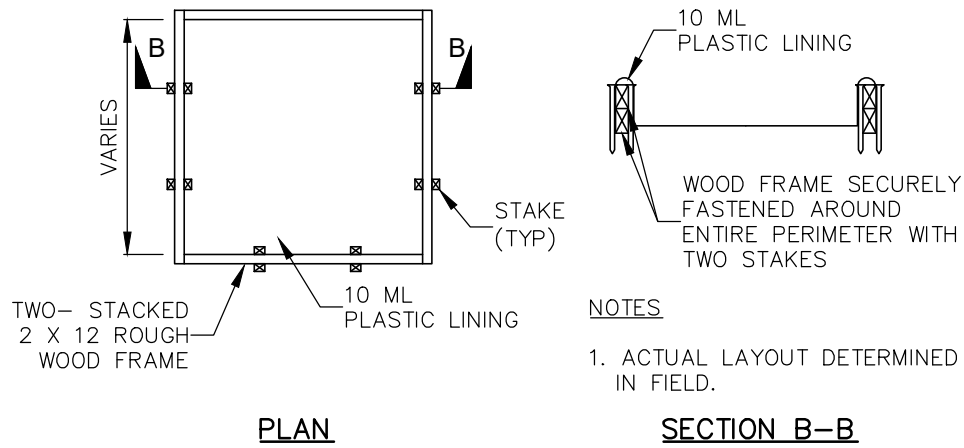
- INCORPORATE REQUIREMENTS FOR CONCRETE WASTE MANAGEMENT INTO MATERIAL SUPPLIER AND SUBCONTRACTOR AGREEMENTS.
- AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE.
- PERFORM WASHOUT OF CONCRETE TRUCKS IN DESIGNATED AREAS ONLY.
- DO NOT WASH OUT CONCRETE TRUCKS INTO STORM DRAINS, OPEN DITCHES, STREETS, OR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

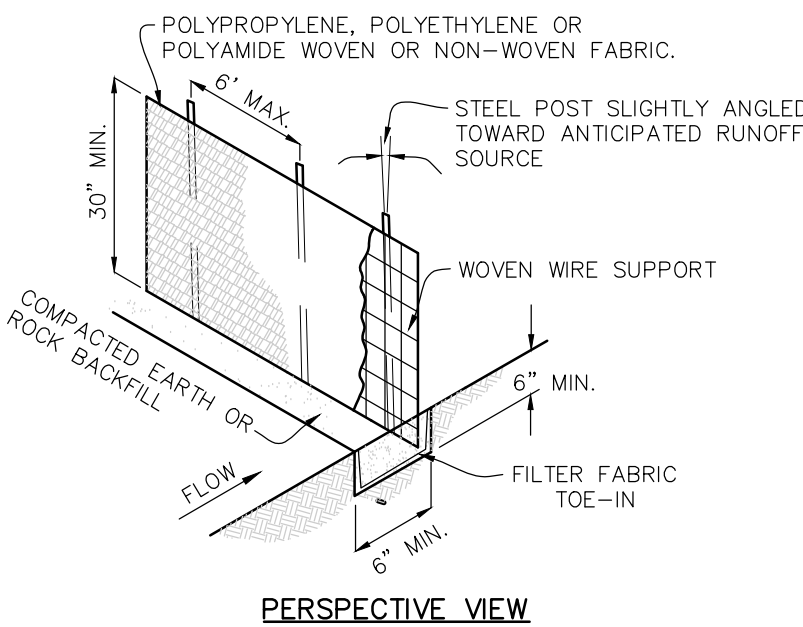
- SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN², ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NO. 30.
- 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/FT², AND BRINELL HARDNESS EXCEEDING 140.
- WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION:

- 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.
- 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.
- 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.
- 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.
- 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.
- 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:

- INSPECT ALL FENCING WEEKLY, AND AFTER ANY RAINFALL.
- REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.
- REPLACE ANY TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.
- 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.
- 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:

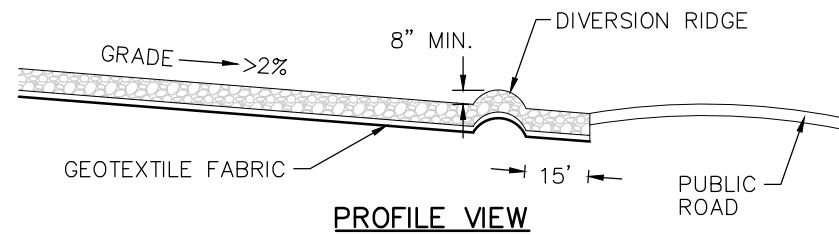
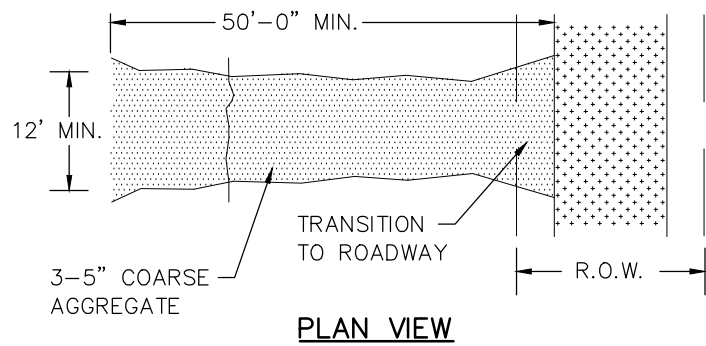
- THE AGGREGATE SHOULD CONSIST OF 3 TO 5 INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
- THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
- THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD², A MULLEN BURST RATING OF 140 LB/IN², AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
- 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:

- AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
- THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
- THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
- 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.
- PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
- PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
- DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
- INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES:

- THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR LOADING 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.
- ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
- WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
- 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.
- ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

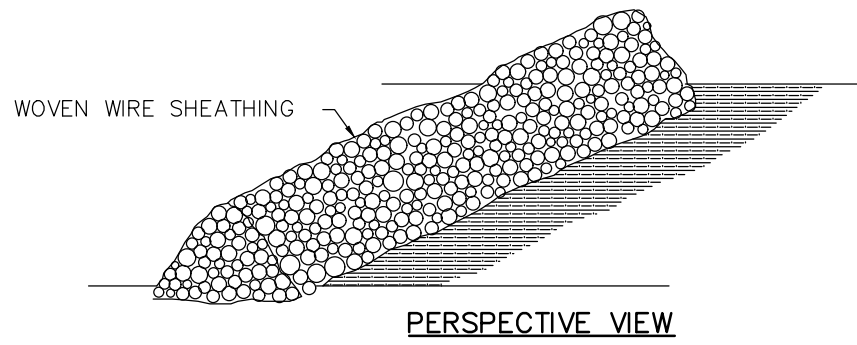
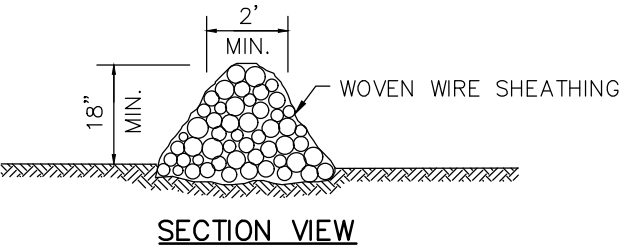


CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

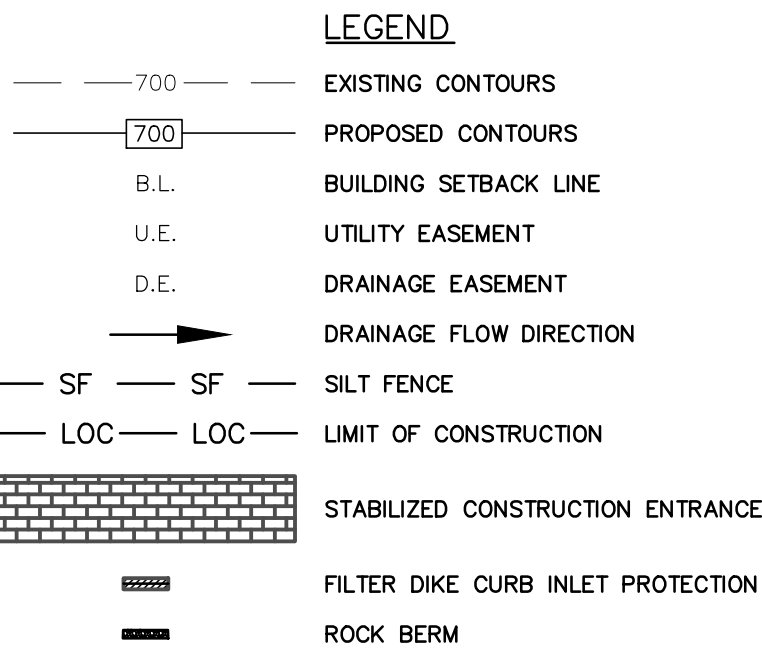
ROCK BERM

- USE ONLY OPEN GRADED ROCK 3-5" DIAMETER.
- THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1" OPENINGS AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
- 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.
- 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.
- 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

- 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 65% VEGETATION PRIOR TO COMPLETION
- REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

NOTE:

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENTLY) AND SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES IN 21 DAYS, PER TDES REQUIREMENTS.

STRIPPING OF VEGETATION FROM PROJECT SITES SHALL BE PHASED SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST POSSIBLE PERIOD OF TIME PER THE NEW BRAUNFELS DRAINAGE AND EROSION CONTROL DESIGN MANUAL SEC. 12.2(N).



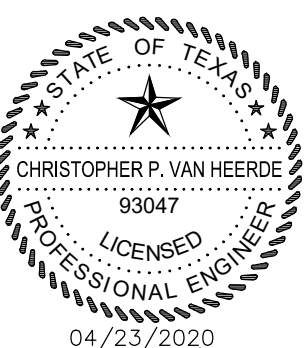
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THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR WILL AGREE TO BE FULLY RESPONSIBLE FOR ANY 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.

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Chris Van Heerde, P.E.

EROSION CONTROL DETAILS

CLOUD COUNTRY UNIT 5

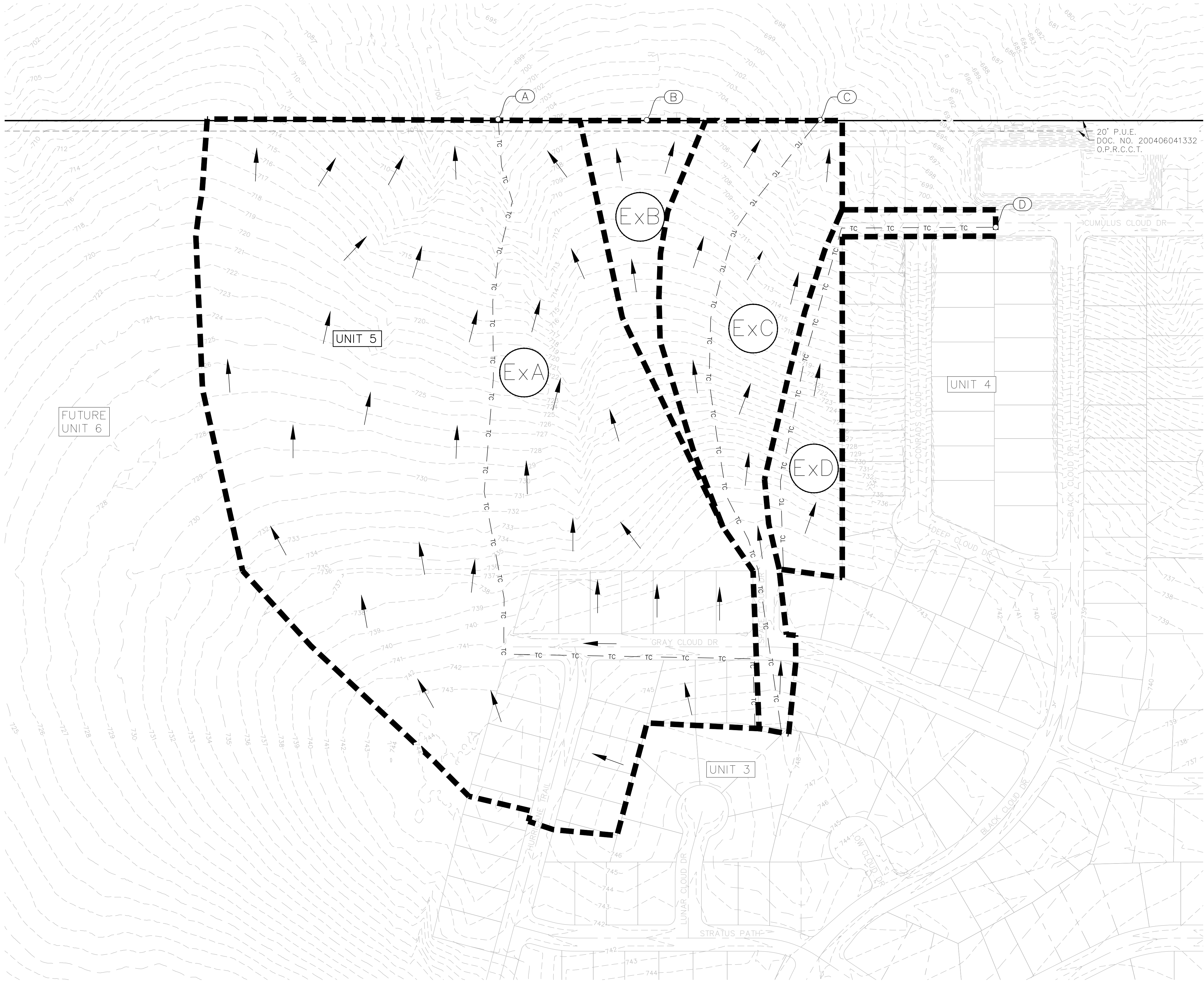
NO.	REVISION DESCRIPTION	REVISION DATE
1	ASBUILT'S	04/2020

DATE:	JULY 2018
DRAWN BY:	MGM/MZ
DESIGNED BY:	MGM/MZ/CC
REVIEWED BY:	SWH/SCH
HMT PROJECT NO.:	056.009

SHEET C1.1

Drawing Name: N:_Projects\056 - Meadow Properties\056.009 - Cloud Country Unit 5\103- Construction Drawings\ASBUILTS\CITY\ASBUILTS-DRNC.dwg User: borbozo Apr 28, 2020 - 2:01pm

Cloud Country Unit 5 - EXISTING Onsite Hydrology Calculations Summary																
Point of Concentration	Area ID	Area (ac)	"C" Value	T _c (min)	I ₂ (in/hr)	I ₁₀ (in/hr)	I ₂₅ (in/hr)	I ₁₀₀ (in/hr)	K ₂	K ₁₀	K ₂₅	K ₁₀₀	Q ₂ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₁₀₀ (cfs)
A	Ex A	23.59	0.39	35.79	2.53	3.96	4.81	6.31	1.00	1.00	1.10	1.25	23.40	36.52	48.84	72.83
B	Ex B	1.42	0.36	29.54	2.86	4.42	5.36	7.03	1.00	1.00	1.10	1.25	1.46	2.26	3.01	4.49
C	Ex C	4.79	0.38	33.25	2.66	4.13	5.02	6.58	1.00	1.00	1.10	1.25	4.78	7.44	9.94	14.81
D	Ex D	1.88	0.36	38.86	2.40	3.77	4.58	6.02	1.00	1.00	1.10	1.25	1.63	2.55	3.41	5.09



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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)

POINT OF CONCENTRATION

DRAINAGE FLOW DIRECTION

DA

DRAINAGE AREA LABEL

EXISTING DRAINAGE
AREA MAP

CLOUD COUNTRY UNIT 5

NO.	ASBUILTS	REVISION DESCRIPTION	REVISION DATE
1			04/2020
2			
3			
4			
5			
6			
7			
8			
9			
10			

DATE:	JULY 2018
DRAWN BY:	MGM/MZ
DESIGNED BY:	MGM/MZ/CC
REVIEWED BY:	SWH/SCH
HMT PROJECT NO.:	056.009

SHEET

C2.0

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HMT

ENGINEERING & SURVEYING

STATE OF TEXAS

CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER
04/23/2020

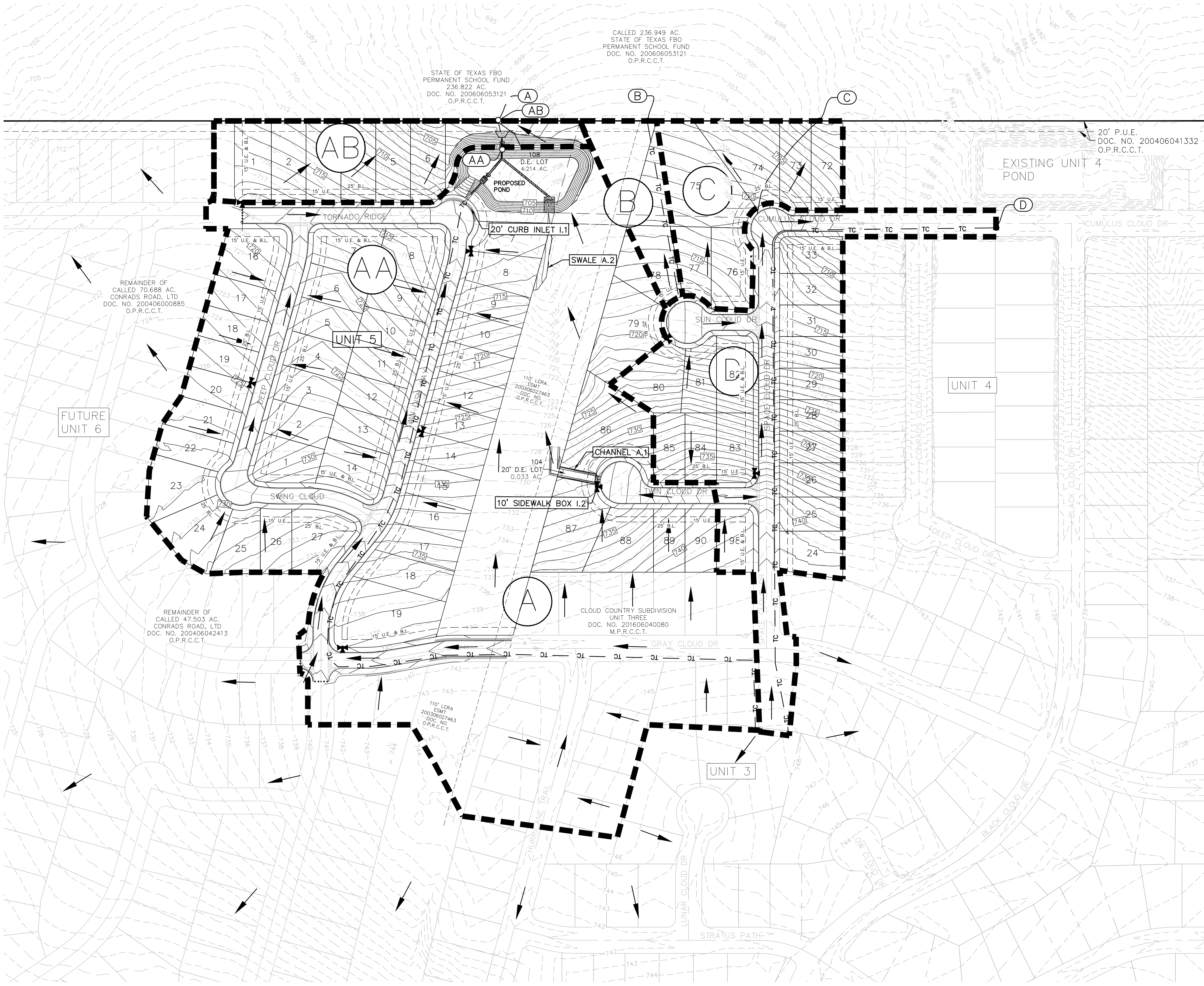
Chris Van Heerde, P.E.

MAINTENANCE SCHEDULE:

- IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO ENSURE PROPER FUNCTION OF THE CHANNELS AND STORM SEWER SYSTEM.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM THE CHANNELS AND STORM SEWERS EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.

Cloud Country Unit 5 - PROPOSED Onsite Hydrology Calculations Summary																
Point of Concentration	Area ID	Area (ac)	"C" Value	T _c (min)	I ₂ (in/hr)	I ₁₀ (in/hr)	I ₂₅ (in/hr)	I ₁₀₀ (in/hr)	K ₂	K ₁₀	K ₂₅	K ₁₀₀	Q ₂ (cfs)	Q ₁₀ (cfs)	Q ₂₅ (cfs)	Q ₁₀₀ (cfs)
AA	AA (PRE-POND)	22.67	0.53	18.00	3.78	5.78	6.96	9.12	1.00	1.00	1.10	1.25	30.83	41.28	55.43	81.89
AA	AA POST-POND	22.67	0.53	18.00	3.78	5.78	6.96	9.12	1.00	1.00	1.10	1.25	18.39	30.04	41.84	64.69
AB	AB BYPASS	1.90	0.53	10.00	4.92	7.56	9.07	11.94	1.00	1.00	1.10	1.25	4.96	7.61	10.05	15.03
A	AA (POST POND)+AB (BYPASS)	24.57	-	-	-	-	-	-	-	-	-	-	20.69	33.66	46.69	71.94
B	B	0.74	0.46	19.96	3.58	5.48	6.61	8.66	1.00	1.00	1.10	1.25	1.21	1.85	2.45	3.65
C	C	1.90	0.53	15.00	4.13	6.32	7.60	9.97	1.00	1.00	1.10	1.25	4.15	6.34	8.40	12.51
D	D	5.35	0.53	15.00	4.13	6.32	7.60	9.97	1.00	1.00	1.10	1.25	11.73	17.93	23.72	35.35

*NOTE THAT THE INCREASE IN DA-D IS MITIGATED BY THE EXISTING DETENTION BASIN CONSTRUCTED WITH UNIT 4



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DATE: APRIL 2020 BY: *Chris Van Heerde, P.E.*

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STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER
04/23/2020
Chris Van Heerde, P.E.

PROPOSED DRAINAGE AREA MAP

CLOUD COUNTRY UNIT 5

NO.	ASBUILTS	REVISION DESCRIPTION	REVISION DATE
1			04/2020

DATE: JULY 2018

DRAWN BY: MGM/MZ

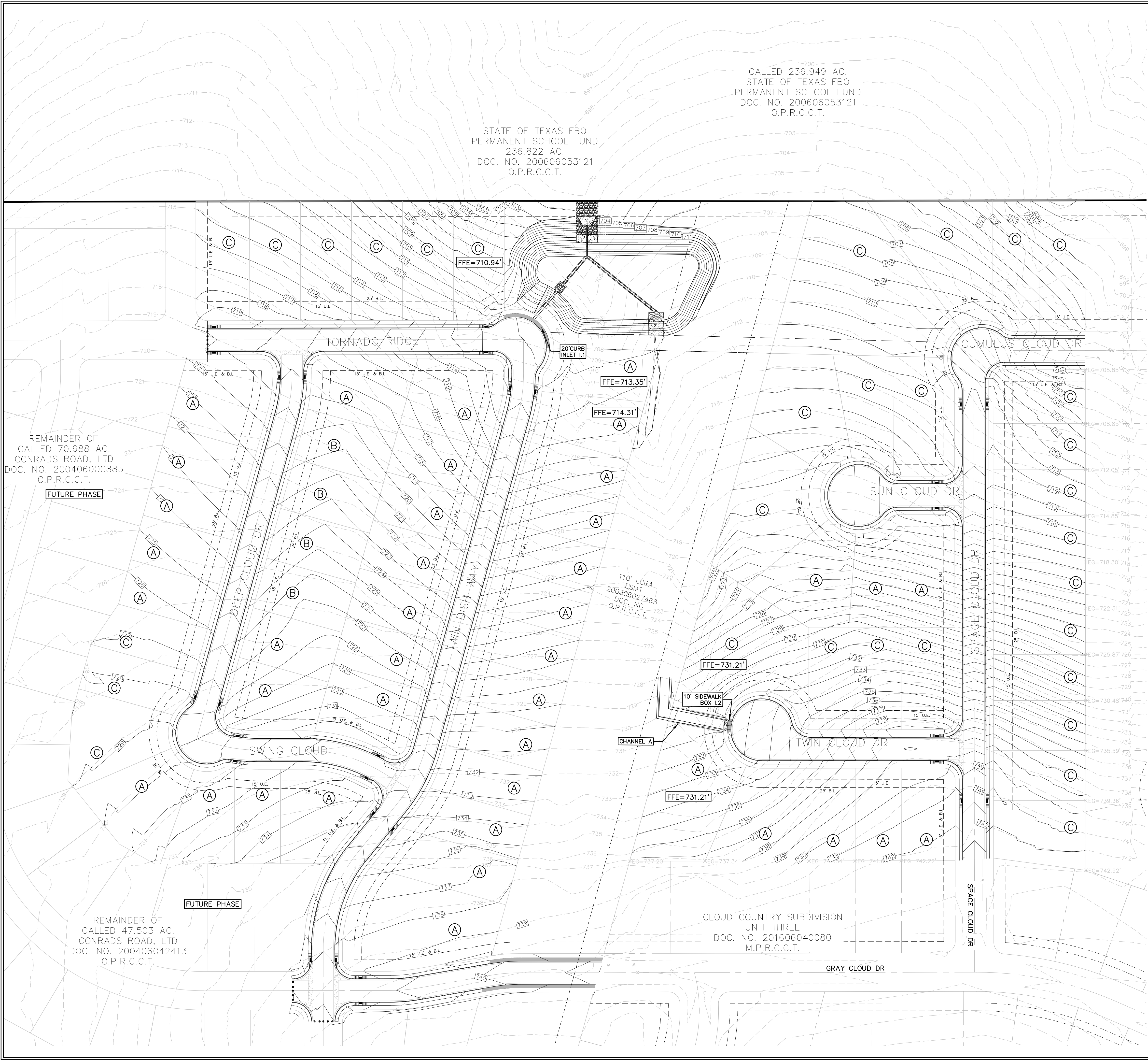
DESIGNED BY: MGM/MZ/CC

REVIEWED BY: SWH/SCH

HMT PROJECT NO.: 056.009

SHEET C2.1

Drawing Name: K:_Projects\056 - Milestone Properties\056.009 - Cloud Country Unit 5\103- Construction Drawings\ASBUILTS\CITY\ASBUILTS-GR60.dwg User: barbara Apr 28, 2020 - 2:04am



LEGEND

- 700 — EXISTING CONTOURS
- 700** PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- (A) LOT GRADING
SEE DETAILS SHEET C3.1
- ➔ 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 10 ON PLAT SHEET **C0.3**.
 - HUD DETAILS SHOWN ON SHEET **C3.1**.
 - 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	25,846
FILL	14,177
NET	11670 [CUT]

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GRADING PLAN

CLOUD COUNTRY UNIT 5

Chris Van Heerde, P.E.

REVISION DATE	04/2020
REVISION DESCRIPTION	ASBUILTS
NO.	1

DATE: JULY 2018

DRAWN BY: MGM/MZ

DESIGNED BY: MGM/MZ/CC

REVIEWED BY: SWH/SCH

HMT PROJECT NO.: 056.009

SHEET

C3.0

RECORD DRAWING

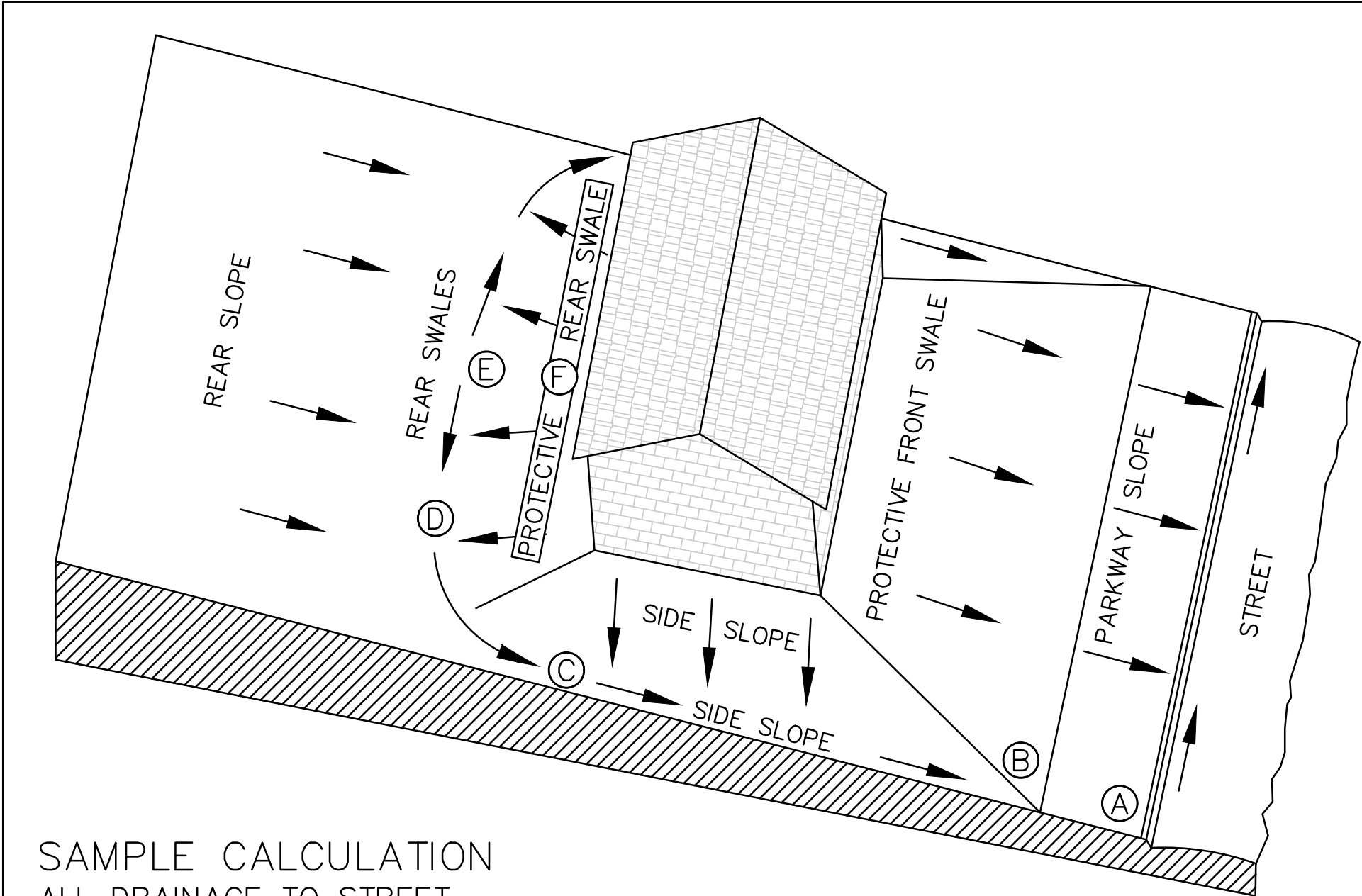
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REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

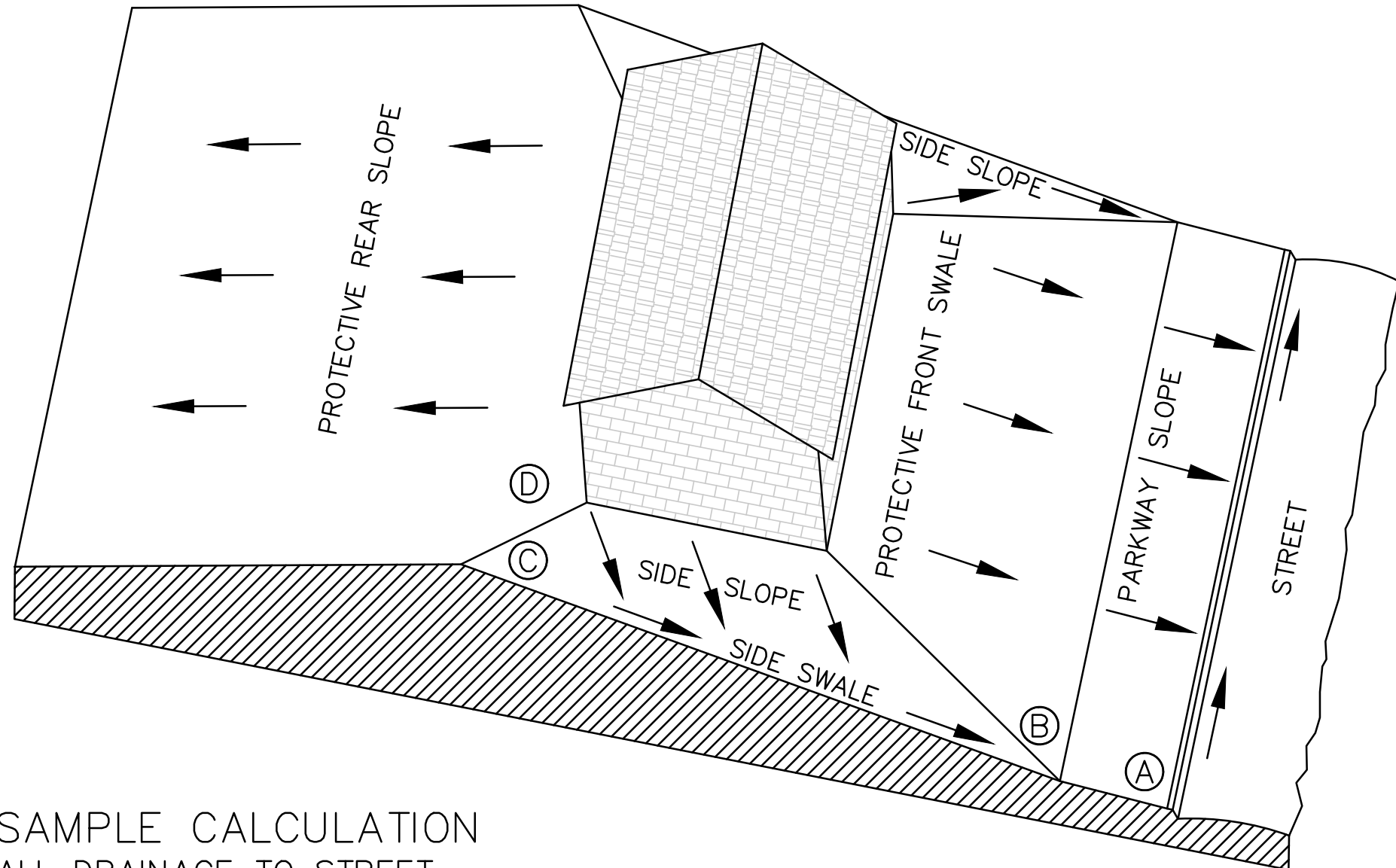
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SAMPLE CALCULATION
ALL DRAINAGE TO STREET

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		CALCULATIONS FOR 2% SWALES
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')	<div>CALCULATIONS FOR 2% SWALES</div> <div>15 x 0.25' = 3 3/4"</div> <div>85 x 0.25' = 21 3/4"</div> <div>16 x 0.25' = 4"</div> <div>13 x 0.25' = 3 3/4"</div> <div>10 x 0.25' = 2 1/2"</div> <div>34 3/4"</div>
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')	10 x 0.25' = 2 1/2"
SUB-TOTAL AF FROM CURB TOP TO GROUND AT REAL BLDG WALL		35"	(3.0')	20"	(1.7')	34 3/4"
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 35" + 8"		43"	(3.6')	28"	(2.3')	CALCULATIONS USE 0.25" PER FOOT GRADIENT FOR A 2% SWALE.
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)]						

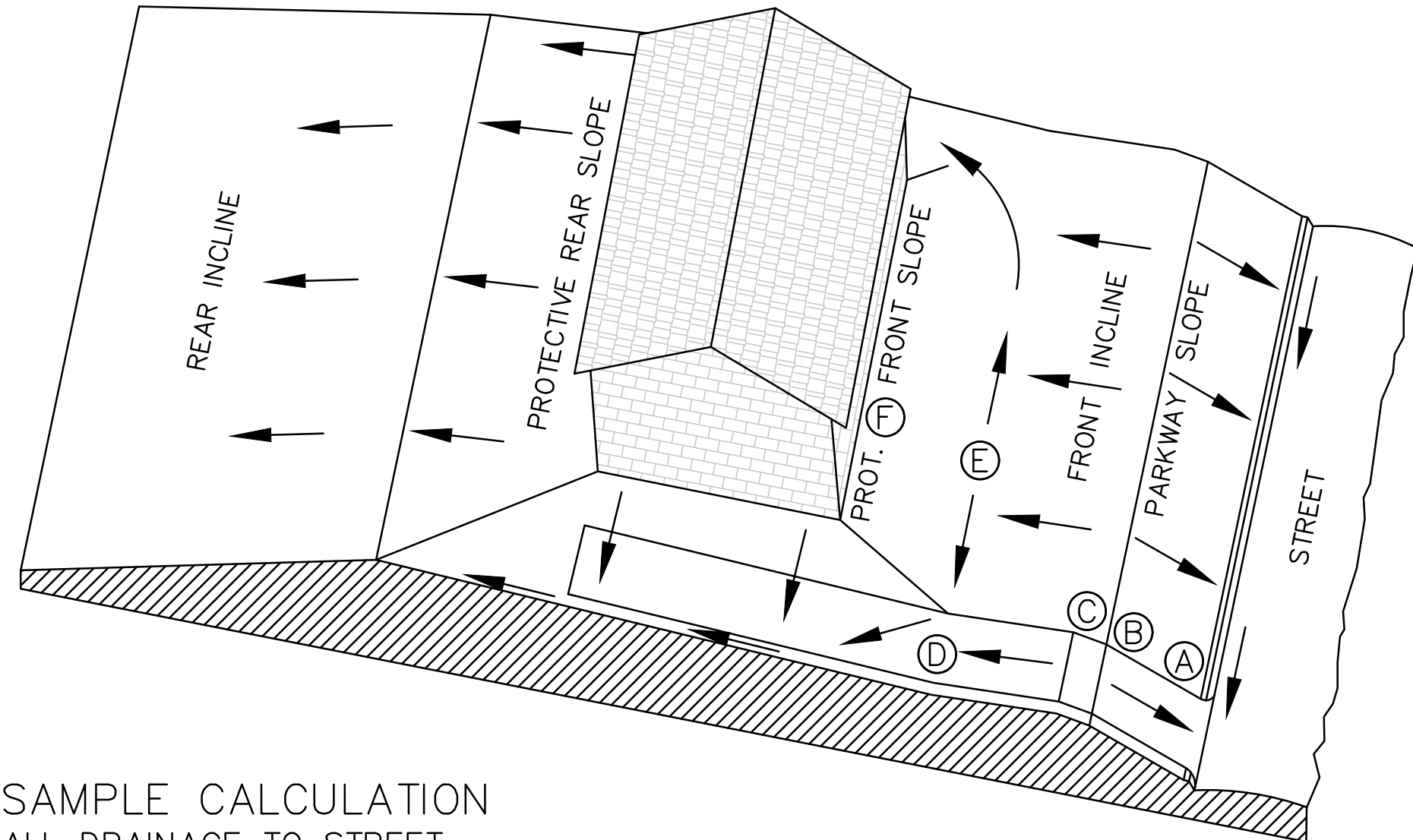
LOT TYPE A



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		CALCULATIONS FOR 2% SWALES
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')	15 x 0.25' = 3¾" 85 x 0.25' = 21¾" 6 x 0.25' = 1½" <hr/> 26½"
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')	CALCULATIONS USE 0.25" PER FOOT GRADIENT FOR A 2% SWALE.
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"				46"	(3.8')	
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.						

LOT TYPE B



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 1 1/8"/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')			$\underline{-7\frac{1}{2}"}$
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 C

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.



RECORD DRAWING

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DATE: APRIL 2020

BY:

Chris Van Hecke, P.E.

HMT ENGINEERING AND SURVEYING

GRADING DETAILS



Chris Van Hecke, P.E.

CLOUD COUNTRY UNIT 5

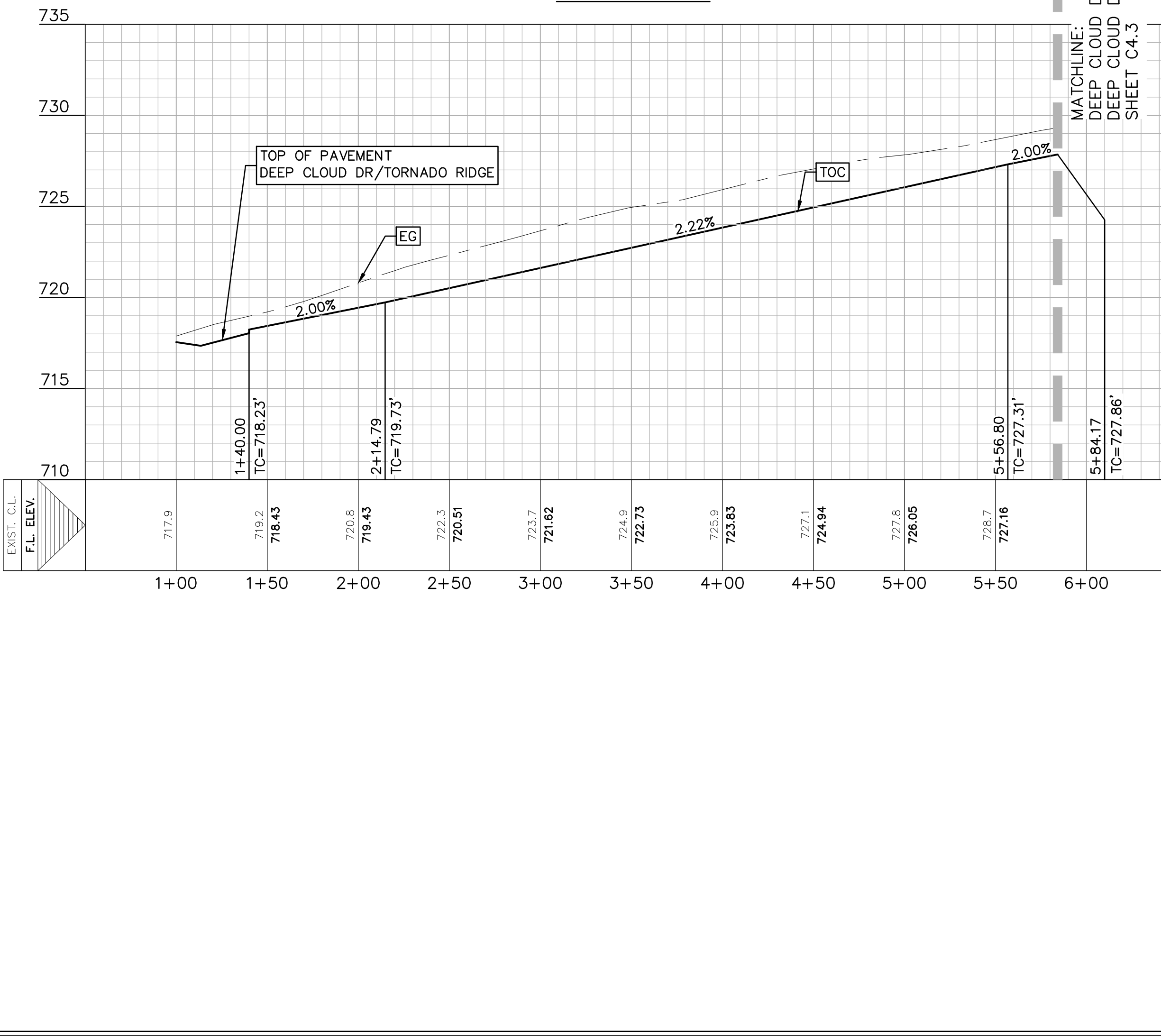
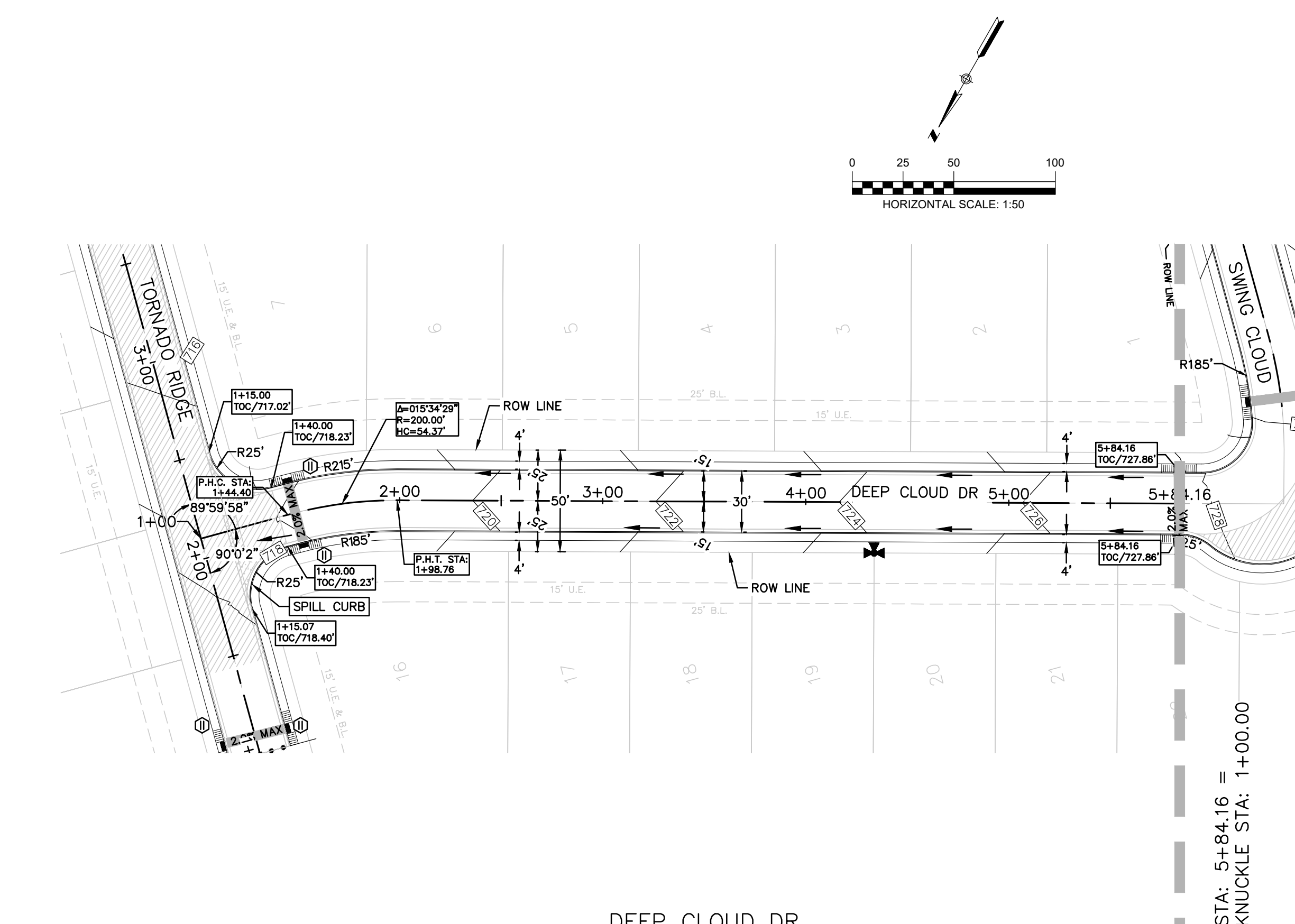
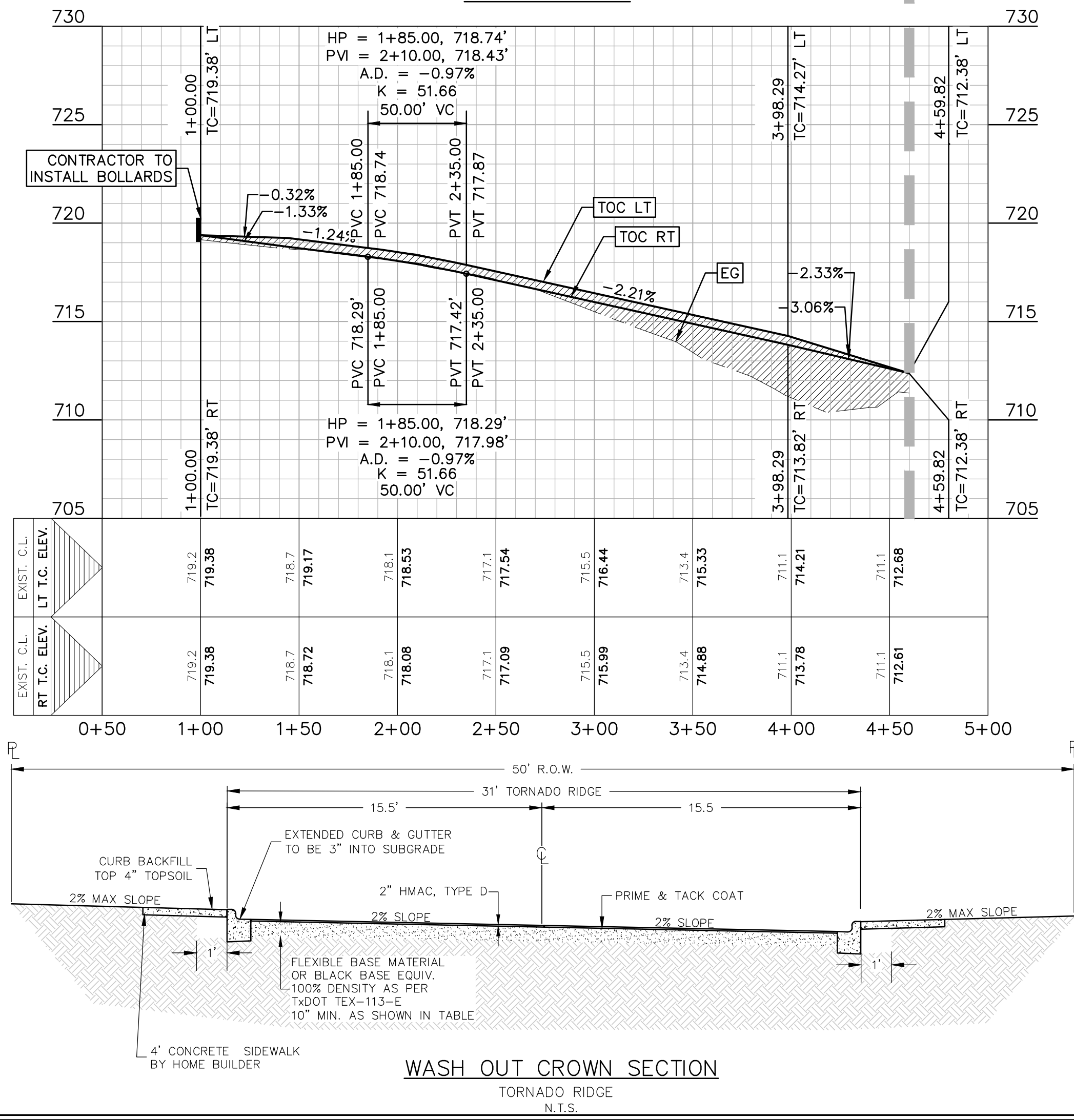
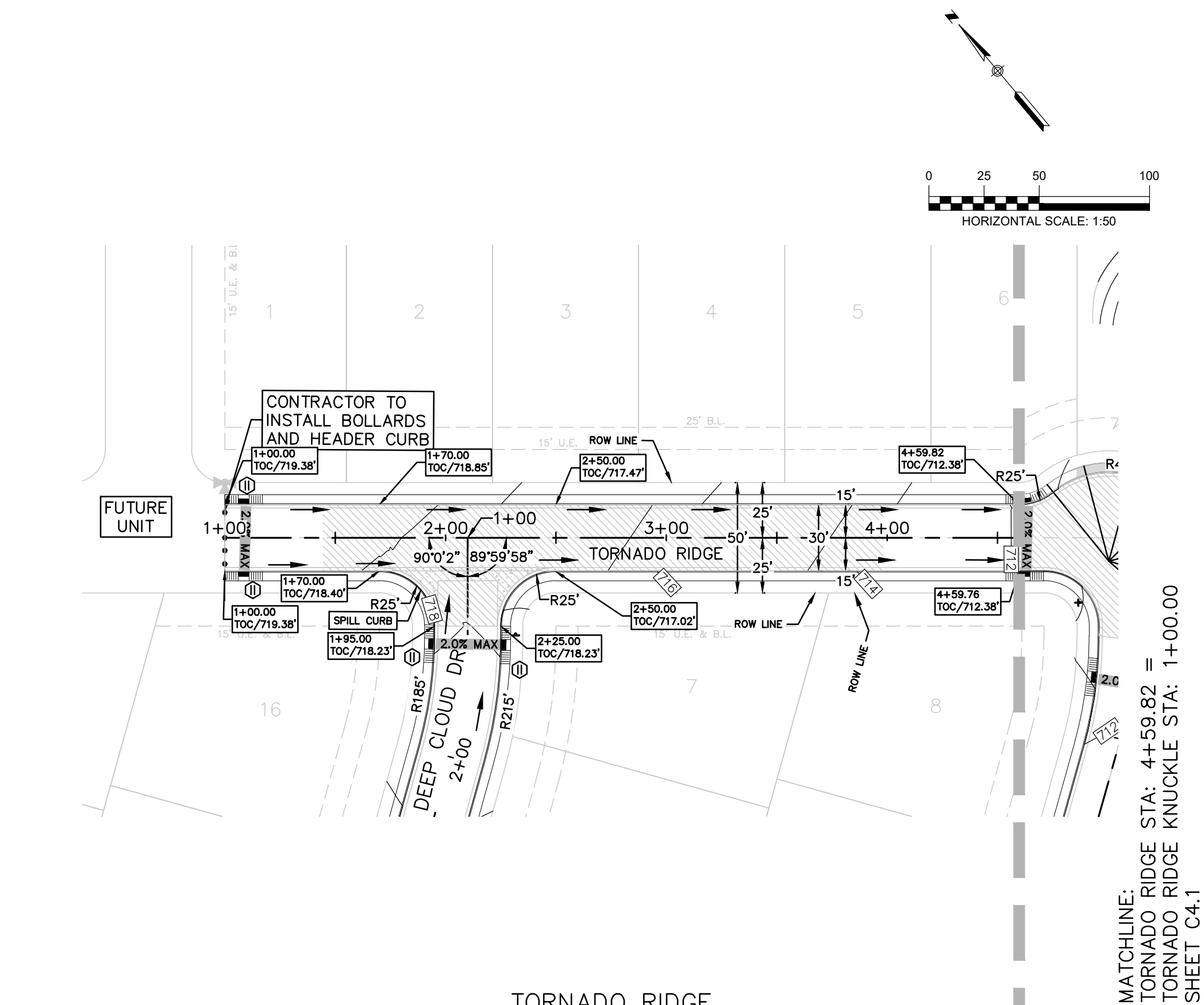
NO.	REVISION	DESCRIPTION	DATE
1	ASBUILTS		04/2020
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DATE:	JULY 2018
DRAWN BY:	MGM/MZ
DESIGNED BY:	MGM/MZ/CC
REVIEWED BY:	SWH/SCH
HMT PROJECT NO.:	056.009

SHEET
C3.1

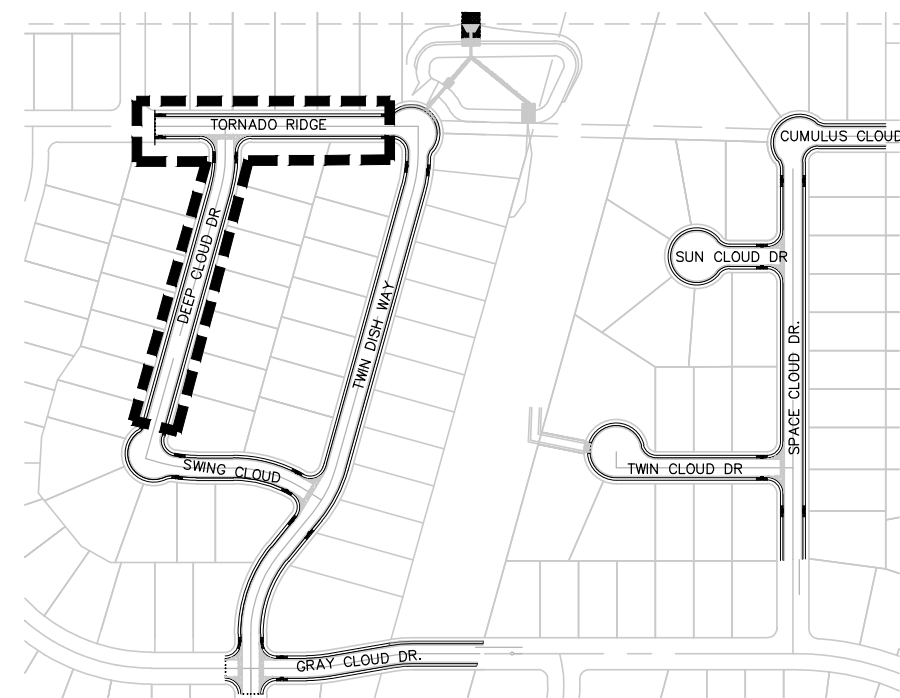
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- LEGEND**
- 700 EXISTING CONTOURS
 - 700 PROPOSED CONTOURS
 - B.L. BUILDING SETBACK LINE
 - U.E. UTILITY EASEMENT
 - D.E. DRAINAGE EASEMENT
 - A.D.A. RAMP
 - FLOW ARROW
 - WASHOUT CROWN AREAS
 - EXISTING GROUND CENTER (EG CTR)
 - PROPOSED GROUND CENTER (PR CTR)
 - 2.0% MAX ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
 - SIDEWALK RAMP TYPE (SEE DETAIL SHEET C4.10)
 - SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR

- 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 RAMP WITH STREETS.
 - CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.



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STATE OF TEXAS
CHRISTOPHER P. VAN HECKE
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LICENSED PROFESSIONAL ENGINEER
04/23/2020

Chris Van Hecke, P.E.

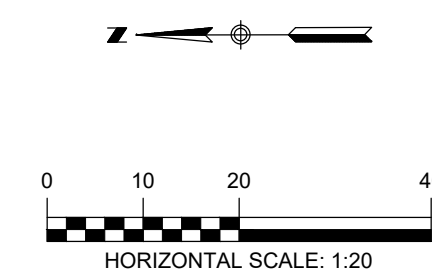
**TORNADO RIDGE &
DEEP CLOUD DR
PLAN AND PROFILE**

CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE
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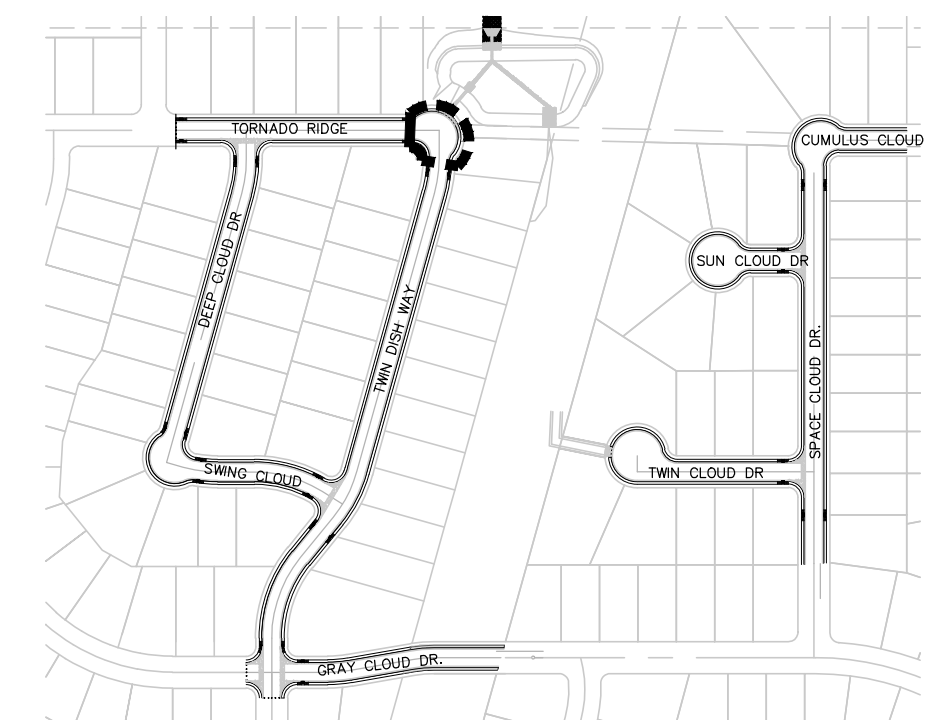
DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/JC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

**SHEET
C4.0**

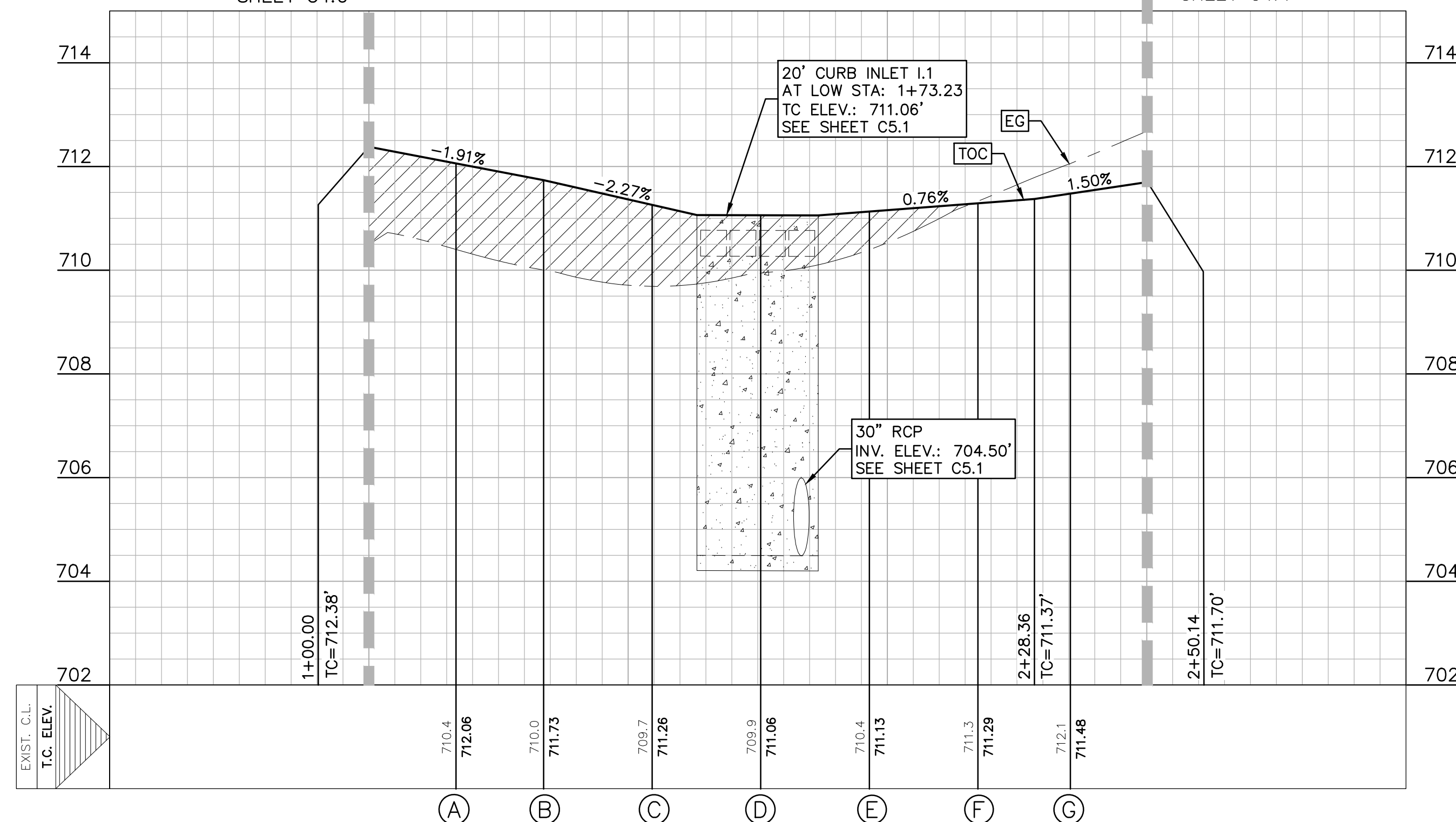


- NOTES

1. STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
3. CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET SUBUT END S0 THAT NO "PONDING" OF WATER OCCURS.



MATCHLINE:
TORNADO RIDGE KNUCKLE STA: 2+50.14
= TWIN DISH WAY STA: 9+91.75
SHEET C4.4



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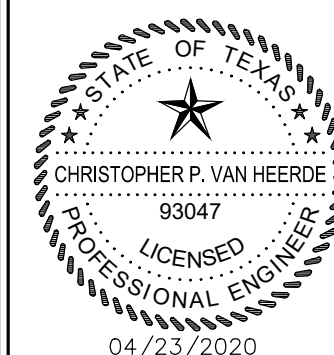
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HMT ENGINEERING AND SURVEYING

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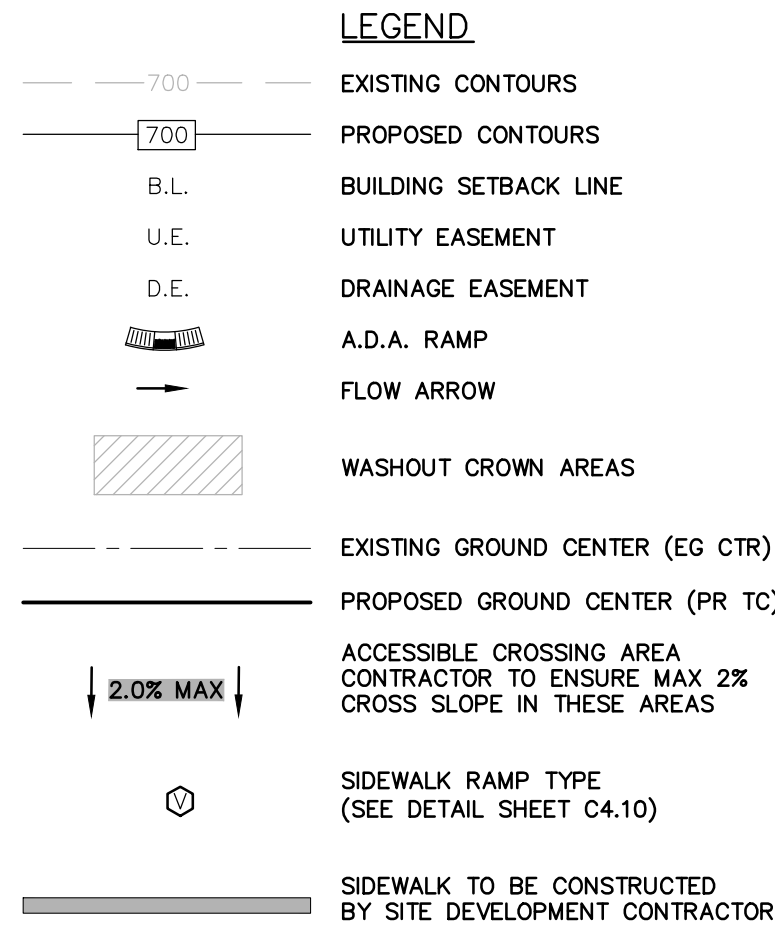
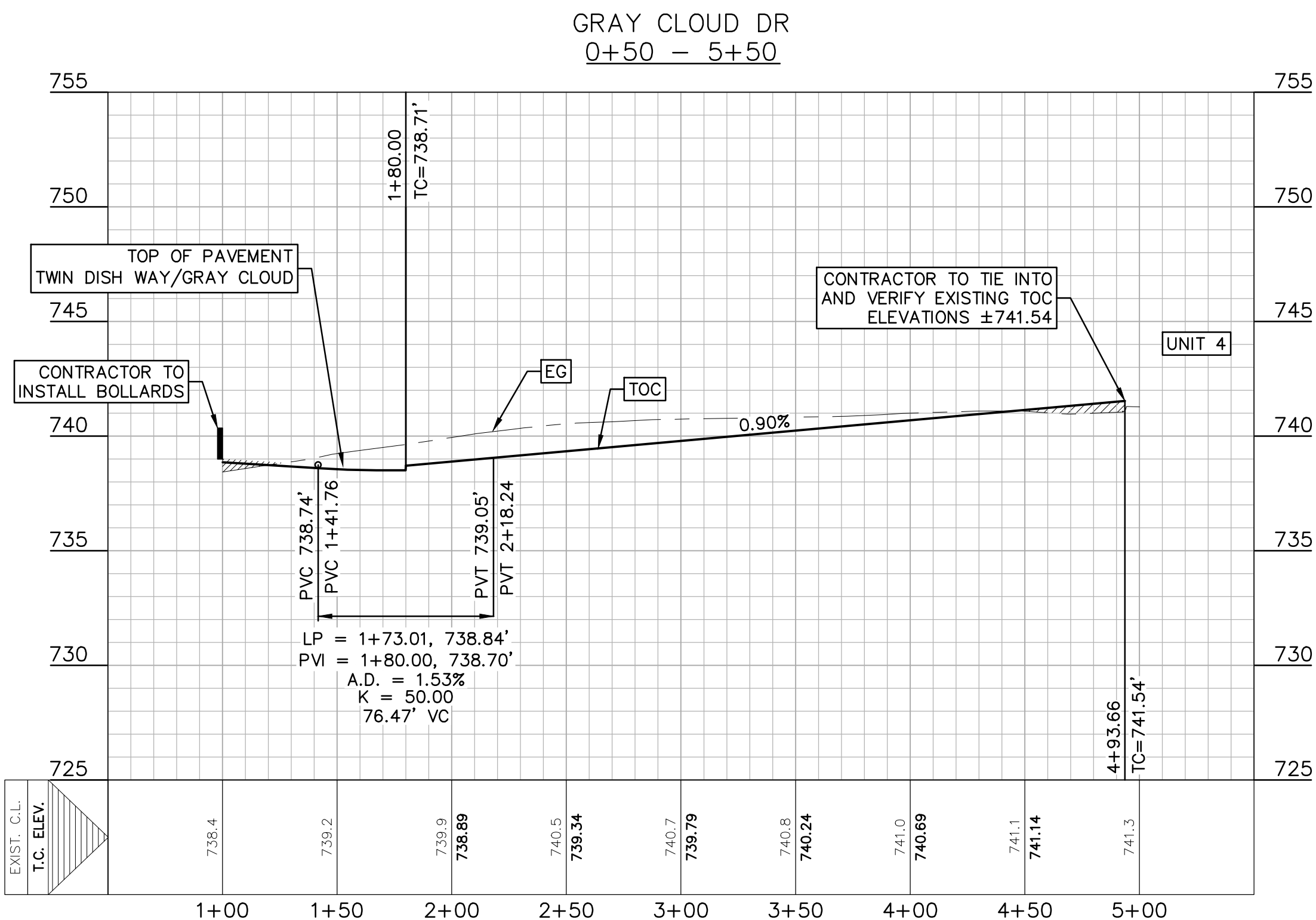
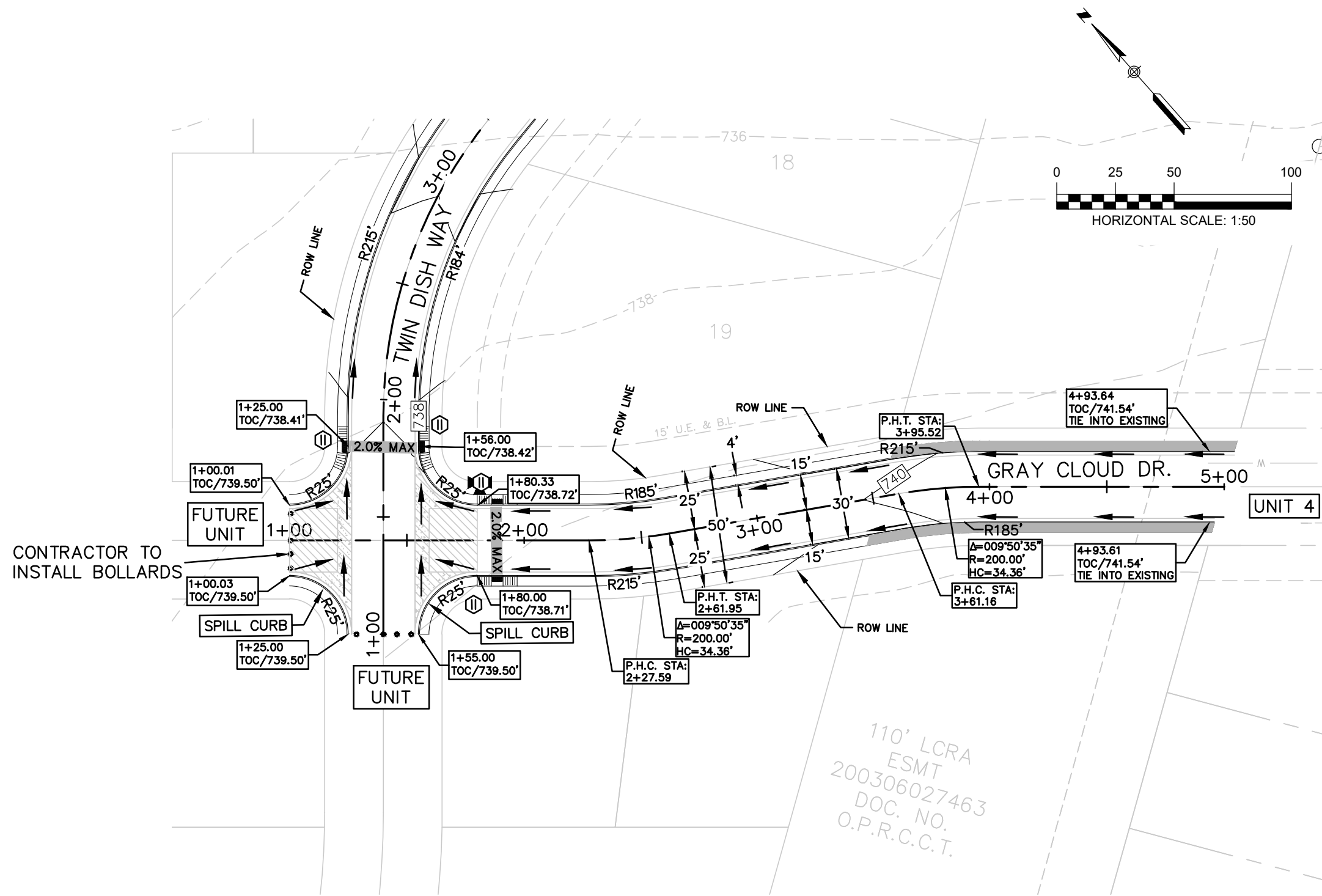
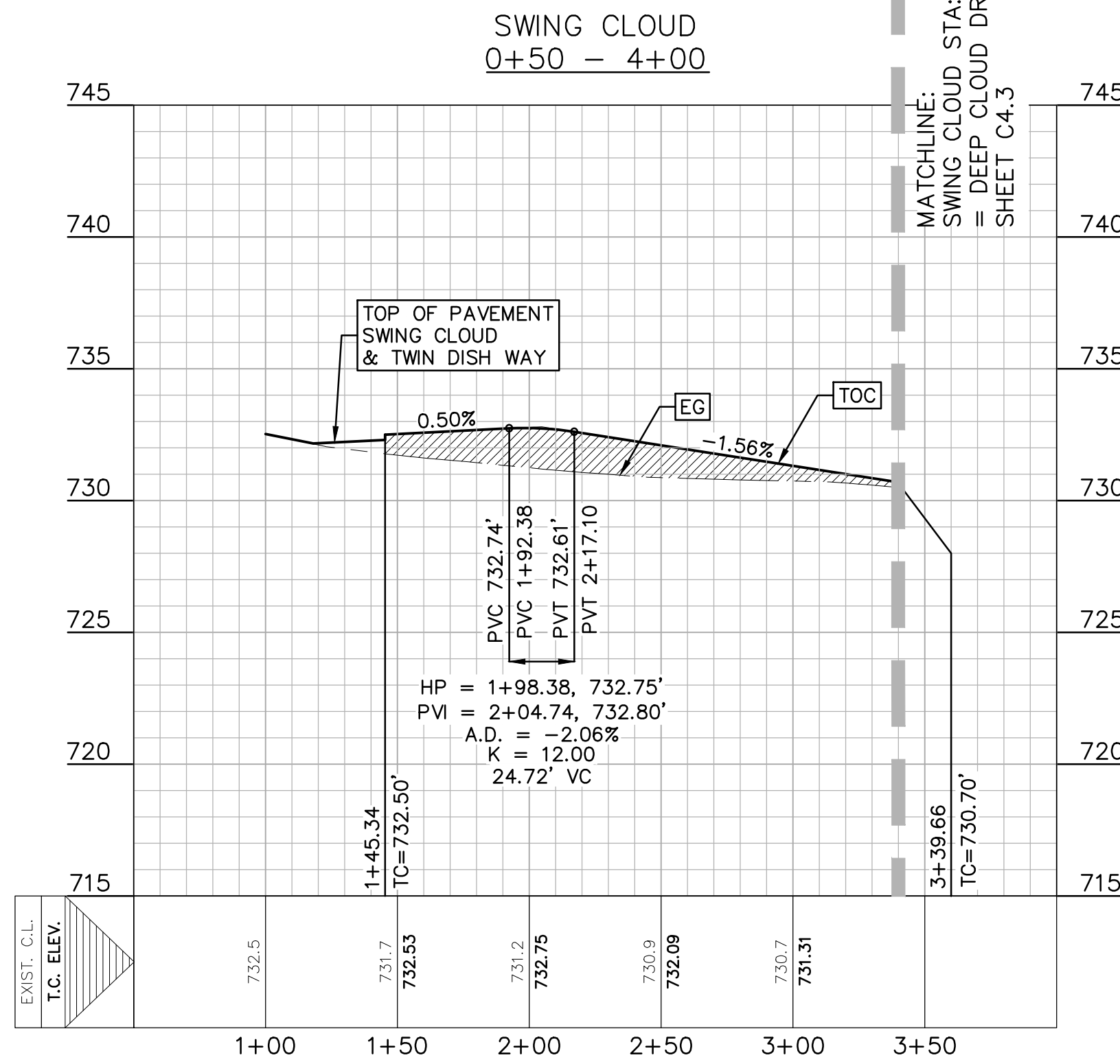
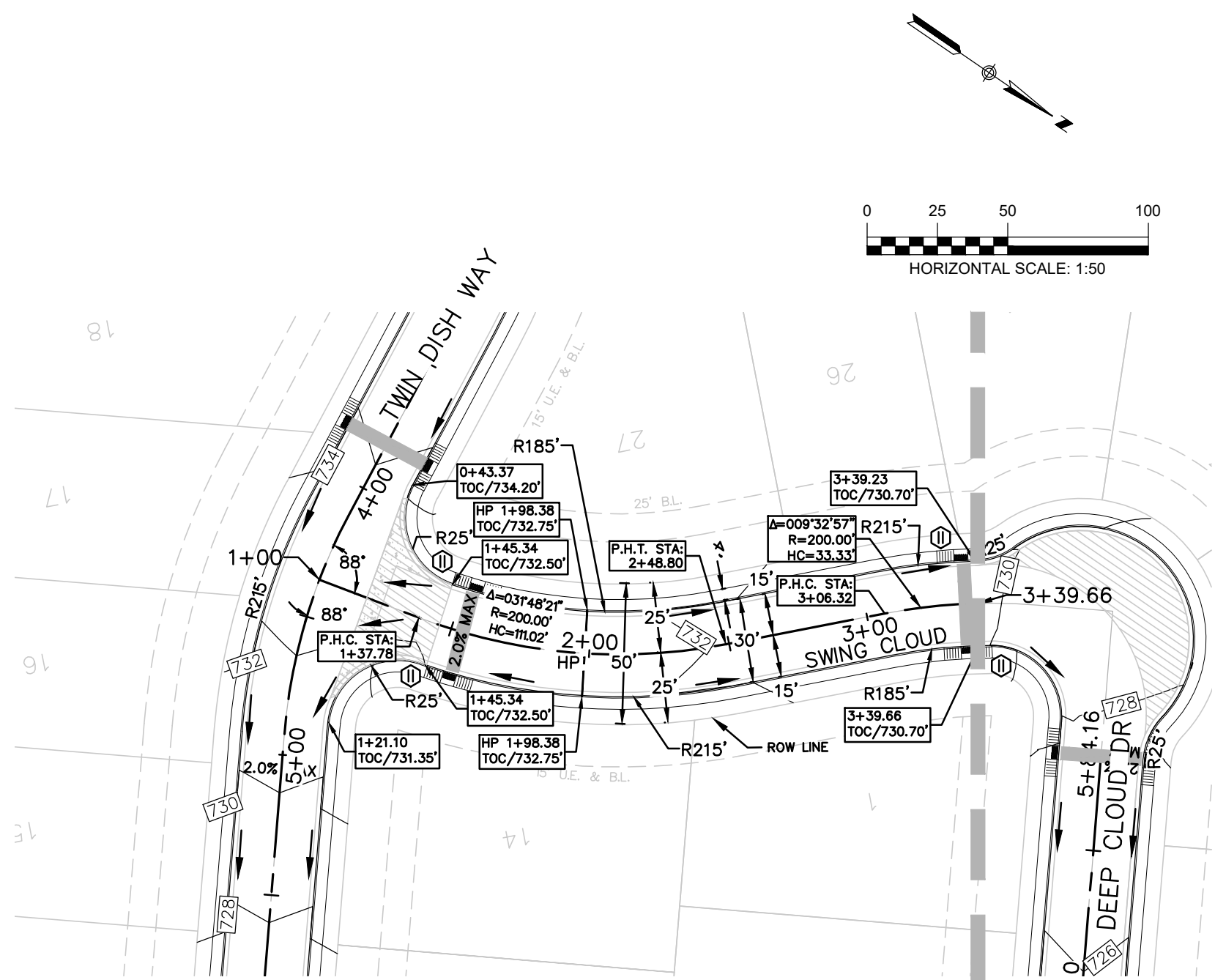
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**TORNADO RIDGE KNUCKLE
PLAN AND PROFILE**

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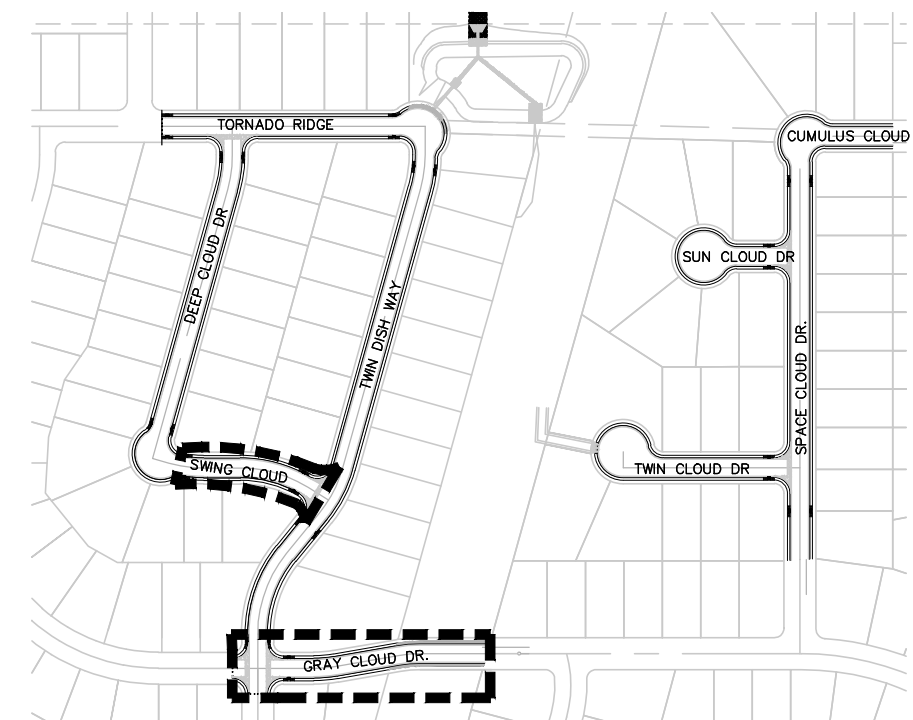
DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

SHEET
C4.1



NOTES

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RECORD DRAWING

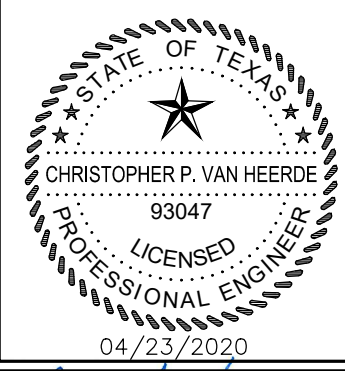
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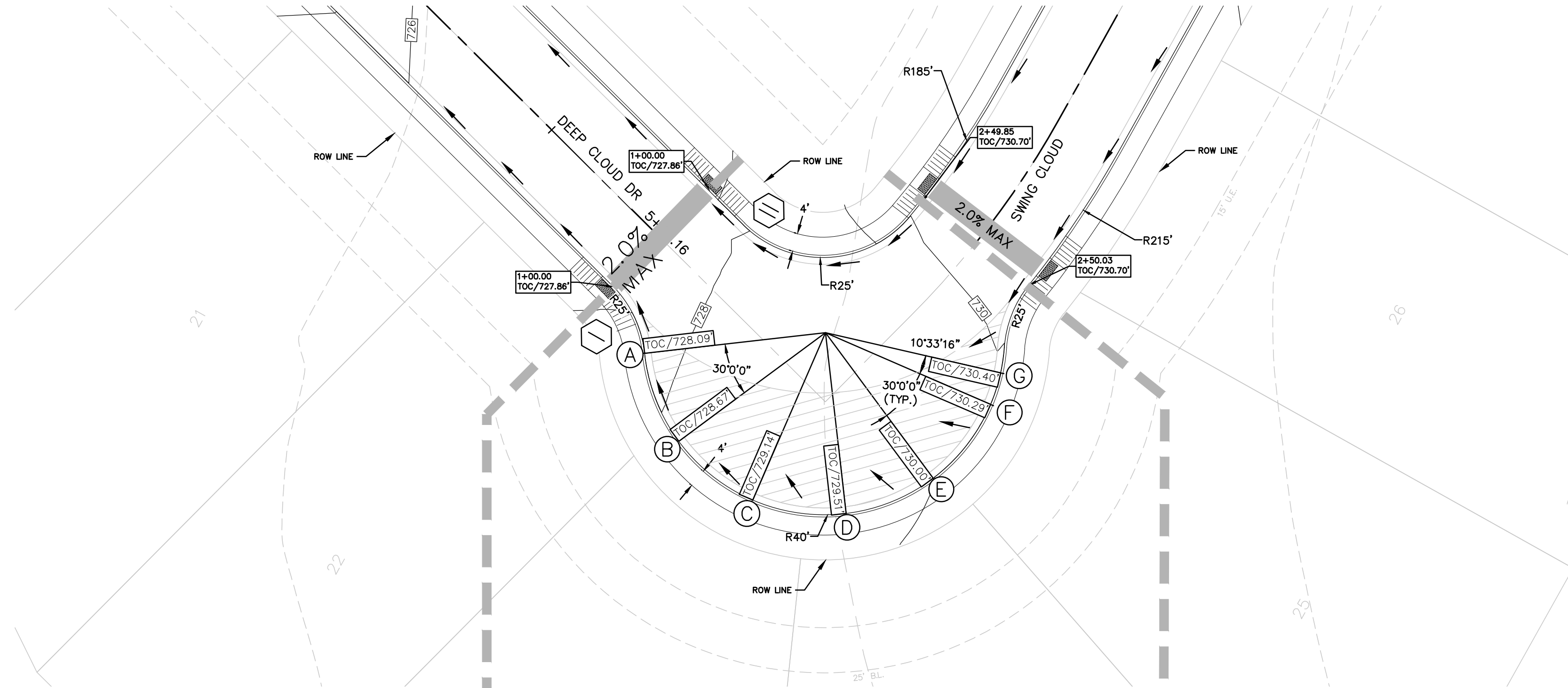
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**SWING CLOUD &
GRAY CLOUD DR.
PLAN AND PROFILE
CLOUD COUNTRY UNIT 5**

NO.	REVISION DESCRIPTION	DATE
1	ASBUILTS	04/2020

DATE: JULY 2018
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DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
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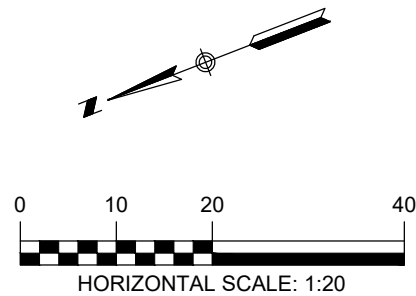
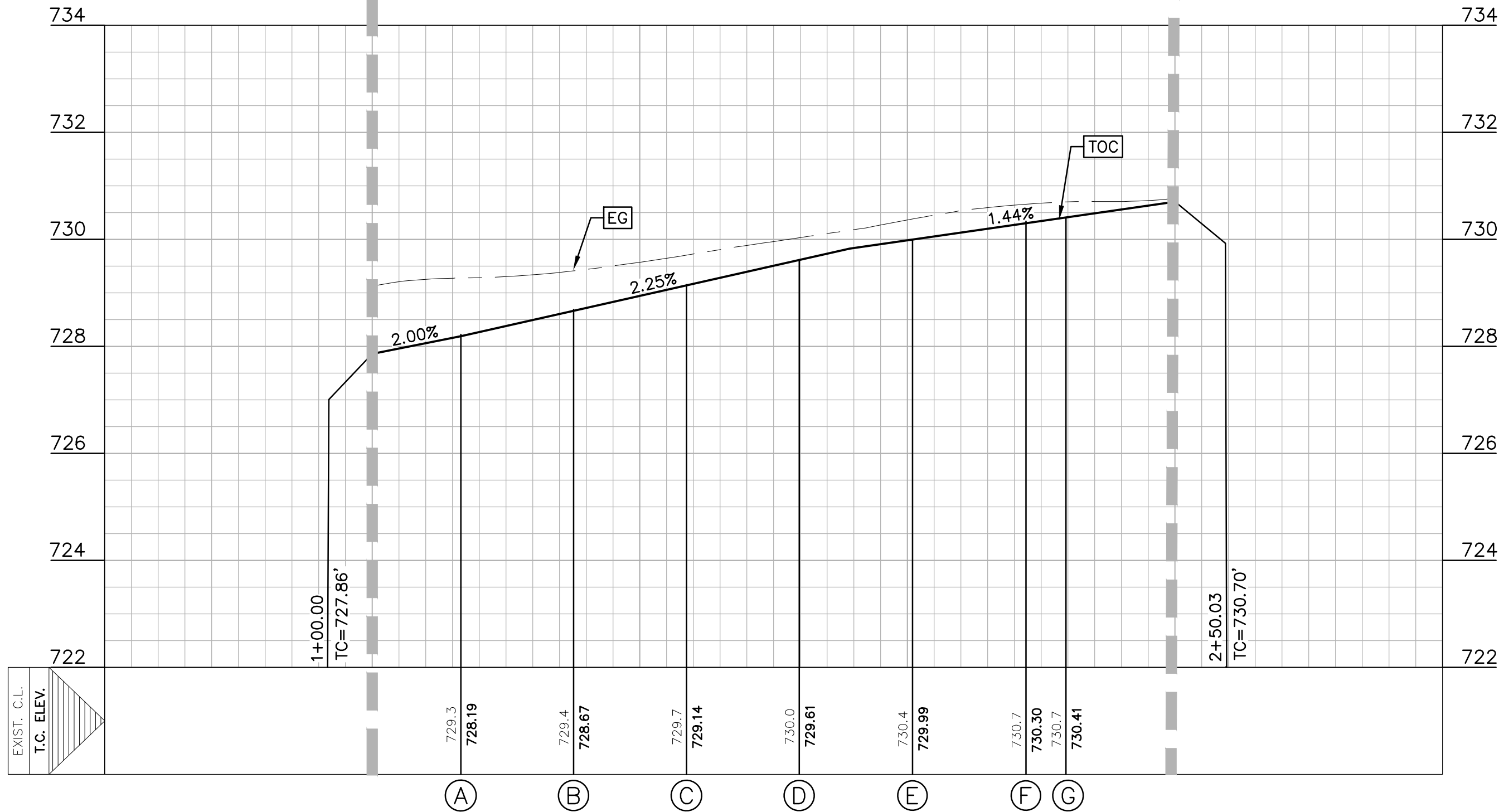
**SHEET
C4.2**



MATCHLINE:
DEEP CLOUD DR KNUCKLE STA: 1+00.00
= DEEP CLOUD DR STA: 5+84.16
SHEET C4.0

DEEP CLOUD DR KNUCKLE OUT
0+50 - 3+00

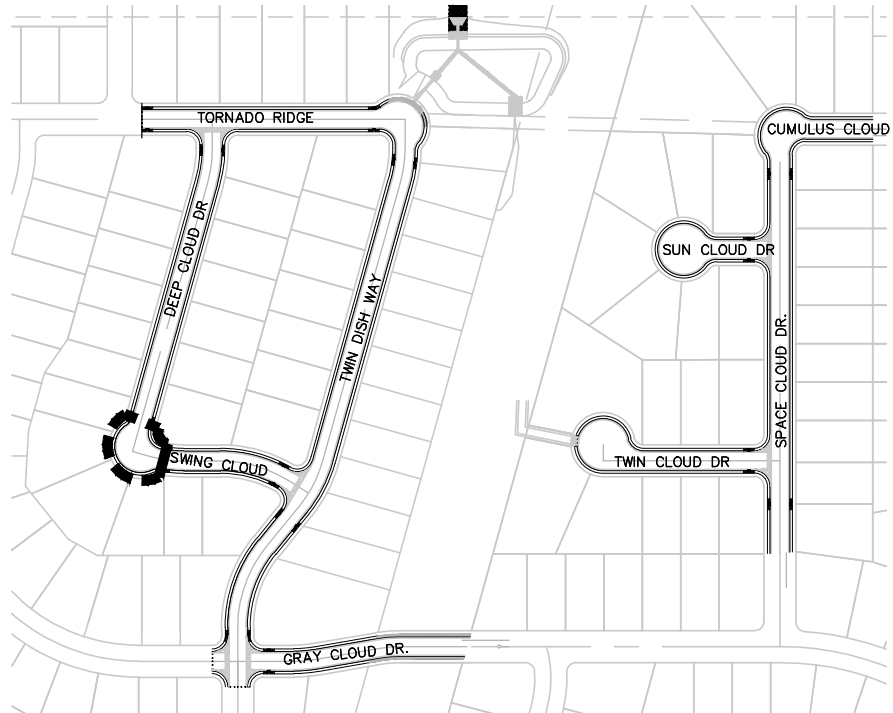
MATCHLINE:
DEEP CLOUD DR KNUCKLE STA: 2+50.15
= SWING CLOUD STA: 3+39.66
SHEET C4.2



- 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 CENTER (EG CTR)
 - PROPOSED GROUND CENTER (PR TC)
 - 2.0% MAX
 - ACCESSIBLE CROSSING AREA
CONTRACTOR TO ENSURE MAX 2%
CROSS SLOPE IN THESE AREAS
 - SIDEWALK RAMP TYPE
(SEE DETAIL SHEET C4.10)
 - SIDEWALK TO BE CONSTRUCTED
BY SITE DEVELOPMENT CONTRACTOR

NOTES

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**DEEP CLOUD DR
KNUCKLE PLAN AND
PROFILE
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REVIEWED BY:	SWH/SCH
HMT PROJECT NO.:	056.009

**SHEET
C4.3**

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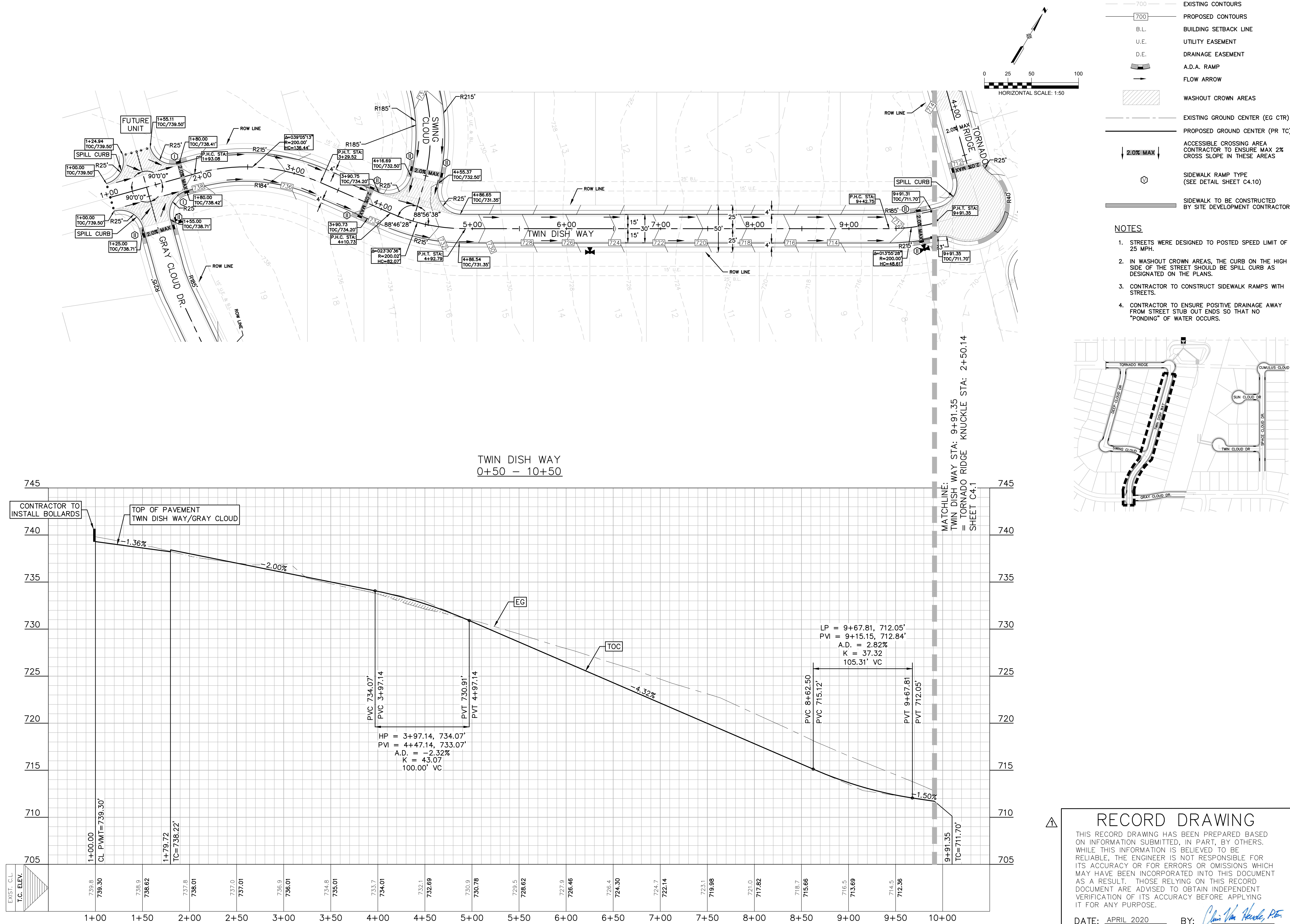
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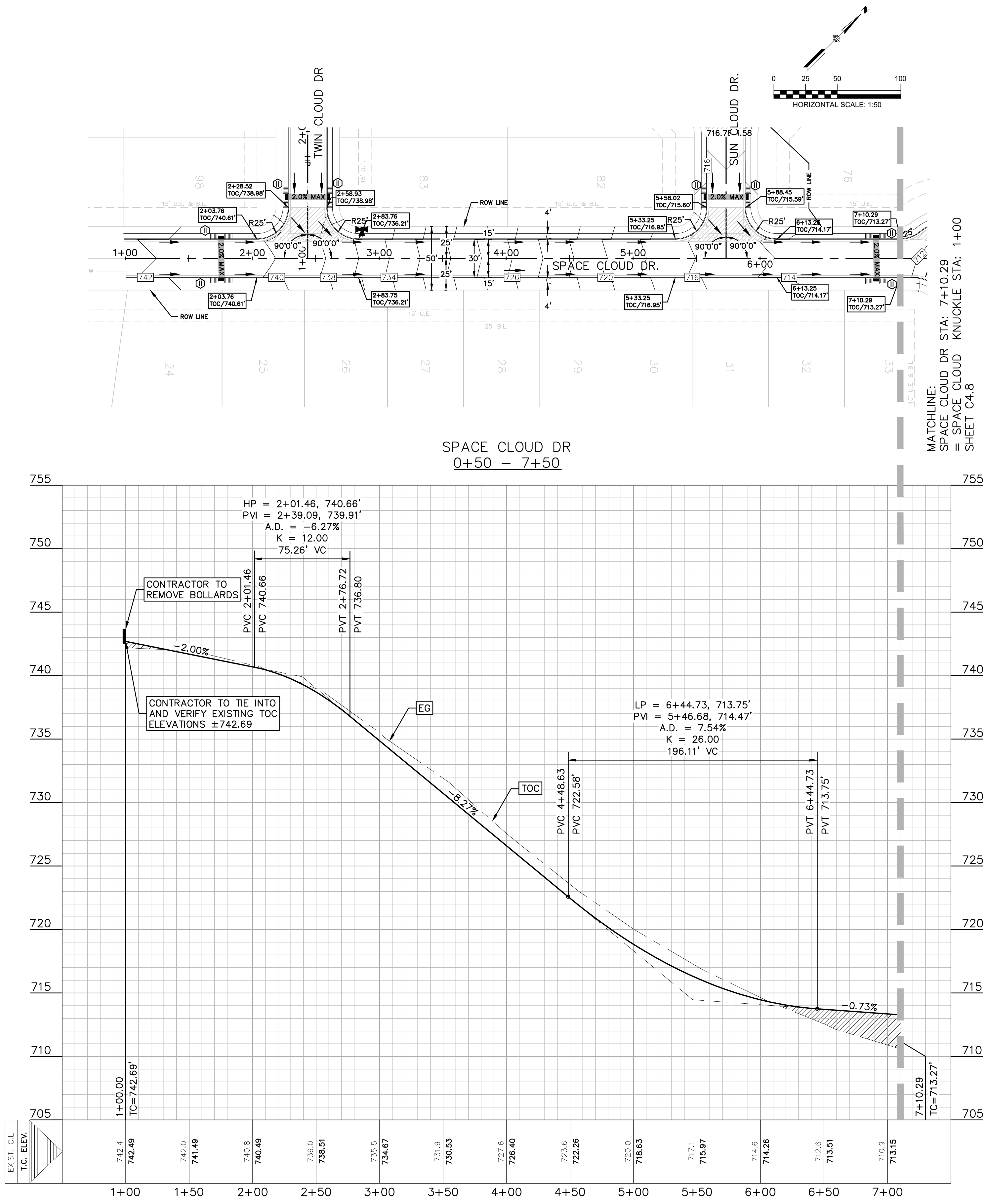
STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER
04/23/2020
Chris Van Heerde, P.E.

TWIN DISH WAY
PLAN AND PROFILE
CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE
1	ASBULTS	04/2020

DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

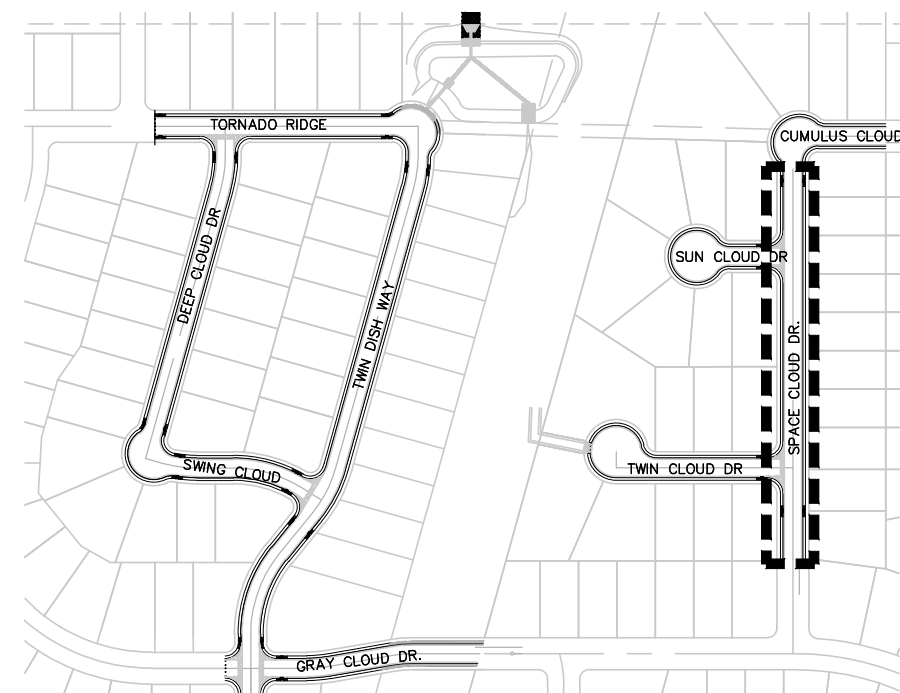
SHEET
C4.4



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 CENTER (EG CTR)
- PROPOSED GROUND CENTER (PR TO)
- 2.0% MAX
- ACCESSIBLE CROSSING AREA
CONTRACTOR TO ENSURE MAX 2%
CROSS SLOPE IN THESE AREAS
- SIDEWALK RAMP TYPE
(SEE DETAIL SHEET C4.10)
- SIDEWALK TO BE CONSTRUCTED
BY SITE DEVELOPMENT CONTRACTOR

- 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.



RECORD DRAWING

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DATE: APRIL 2020 BY: *Chris Van Hecke, P.E.*

HMT ENGINEERING AND SURVEYING

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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TBPE FIRM F-10961
TBPLS FIRM 10153600

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HECKE
93047
LICENSED PROFESSIONAL ENGINEER
04/23/2020
Chris Van Hecke, P.E.

**SPACE CLOUD DR
PLAN AND PROFILE**

CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE
1	ASBUILTS	04/2020

DATE: JULY 2018

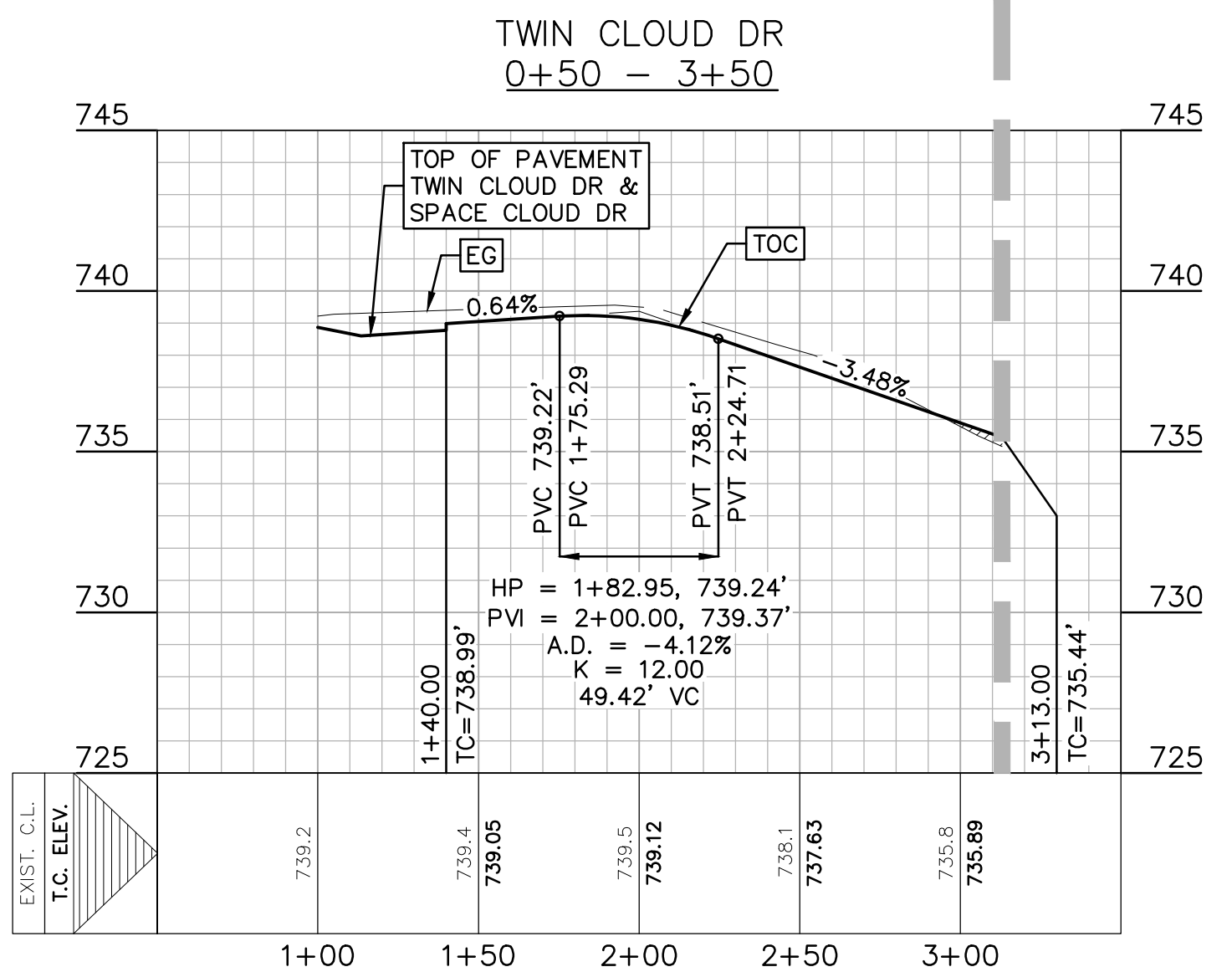
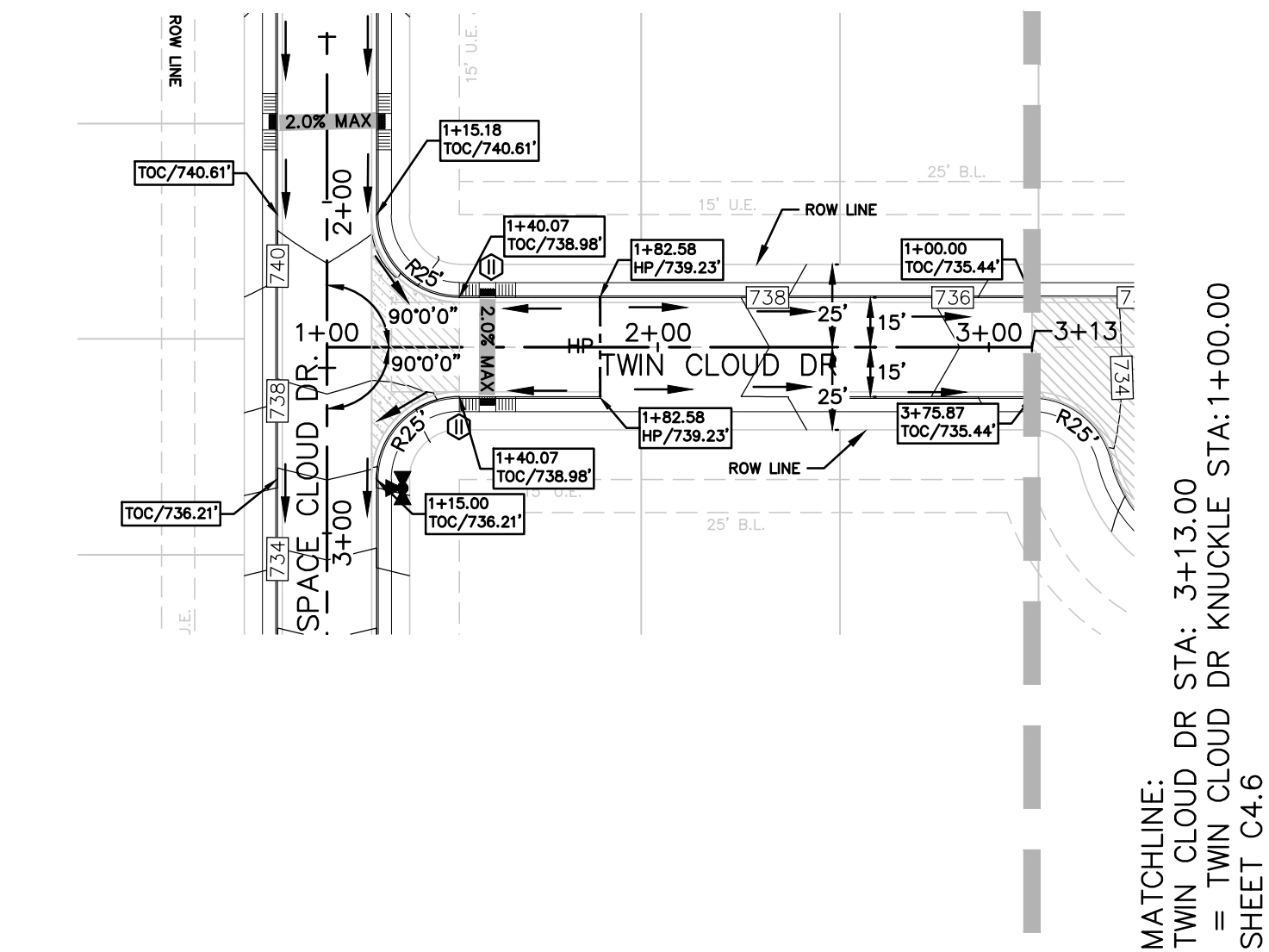
DRAWN BY: MGM/MZ

DESIGNED BY: MGM/MZ/CC

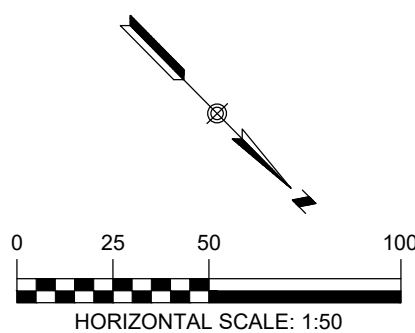
REVIEWED BY: SWH/SCH

HMT PROJECT NO.: 056.009

SHEET
C4.5



MATCHLINE:
TWIN CLOUD DR STA: 3+13.00
= TWIN CLOUD DR KNUCKLE STA: 1+00.00
SHEET C4.6

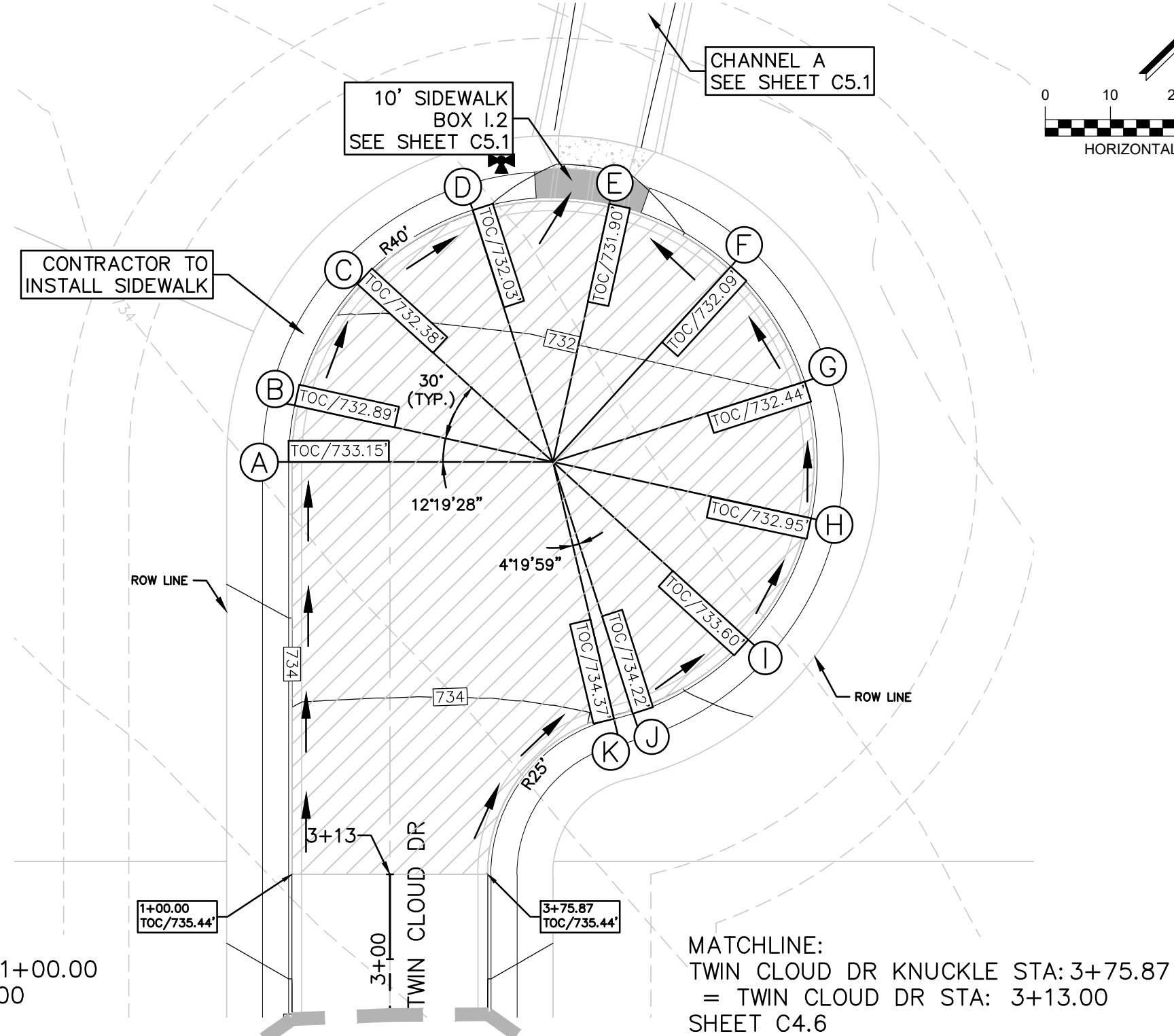


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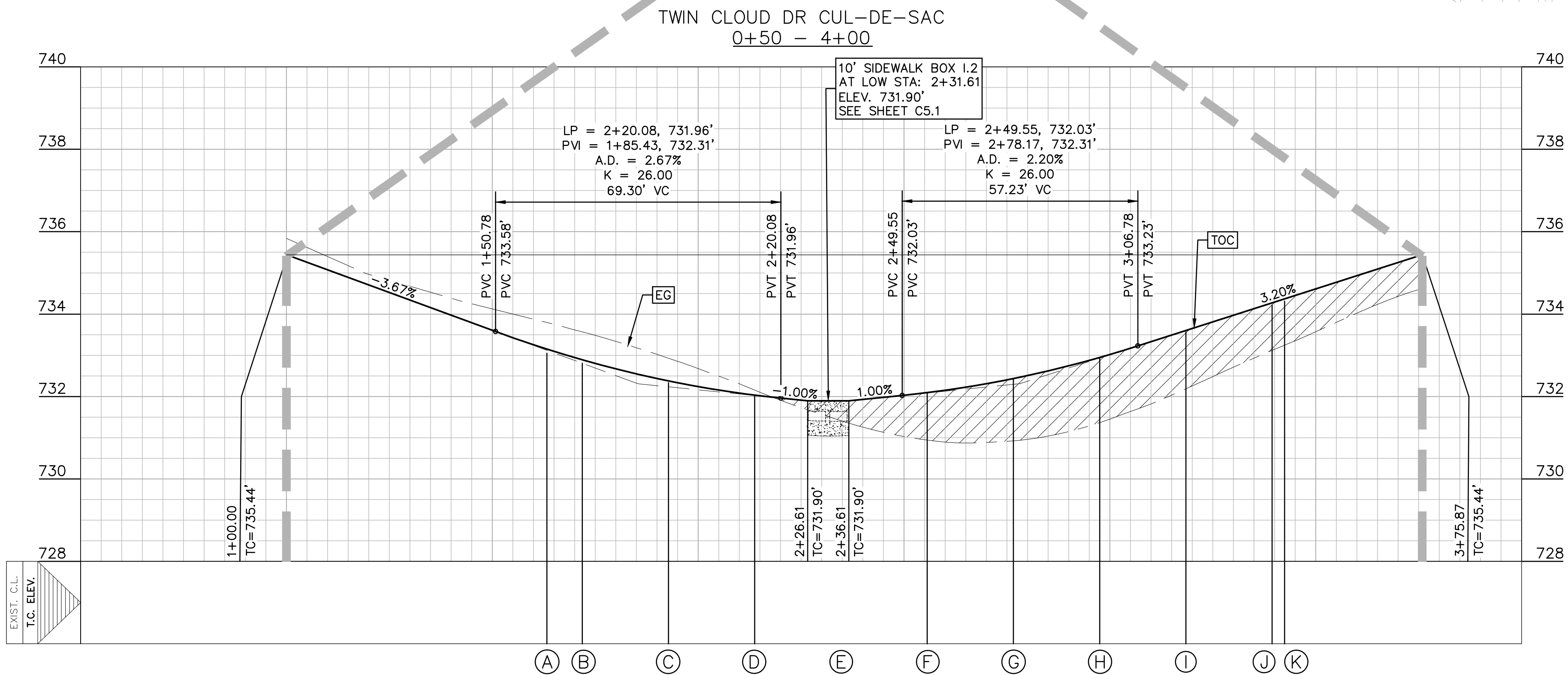
DATE: APRIL 2020 BY: Chris Van Heerde, P.E.

HMT ENGINEERING AND SURVEYING



MATCHLINE:
TWIN CLOUD DR KNUCKLE STA: 1+00.00
= TWIN CLOUD DR STA: 3+13.00
SHEET C4.6

MATCHLINE:
TWIN CLOUD DR KNUCKLE STA: 3+75.87
= TWIN CLOUD DR STA: 3+13.00
SHEET C4.6



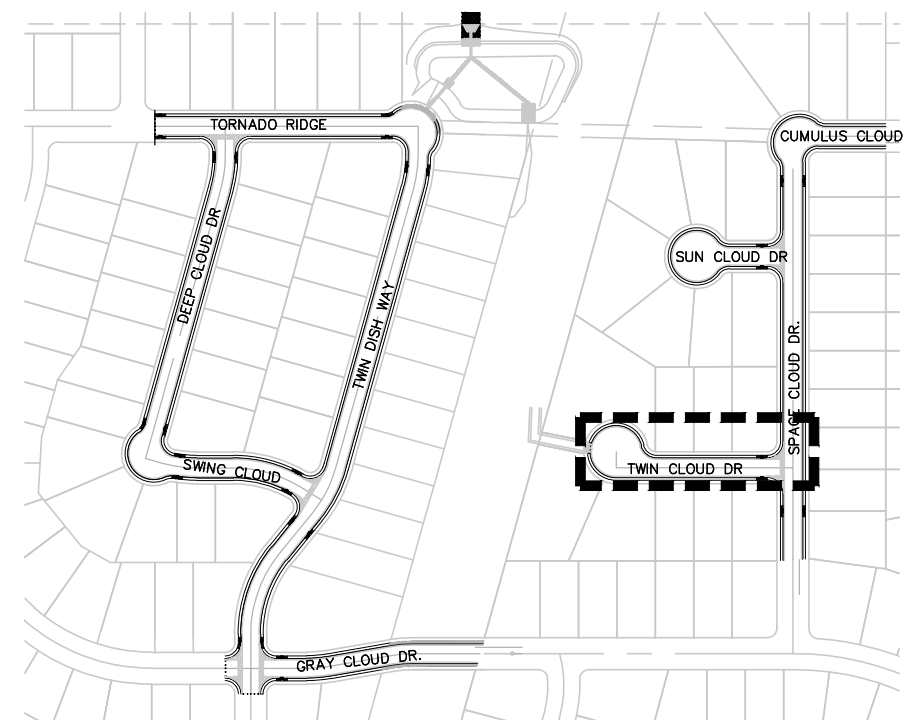
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LEGEND

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- PROPOSED CONTOURS
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- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
- A.D.A. RAMP
- FLOW ARROW
- WASHOUT CROWN AREAS
- EXISTING GROUND CENTER (EG CTR)
- PROPOSED GROUND CENTER (PR CTR)
- ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
- SIDEWALK RAMP TYPE (SEE DETAIL SHEET C4.10)
- SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR

NOTES

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ENGINEERING & SURVEYING

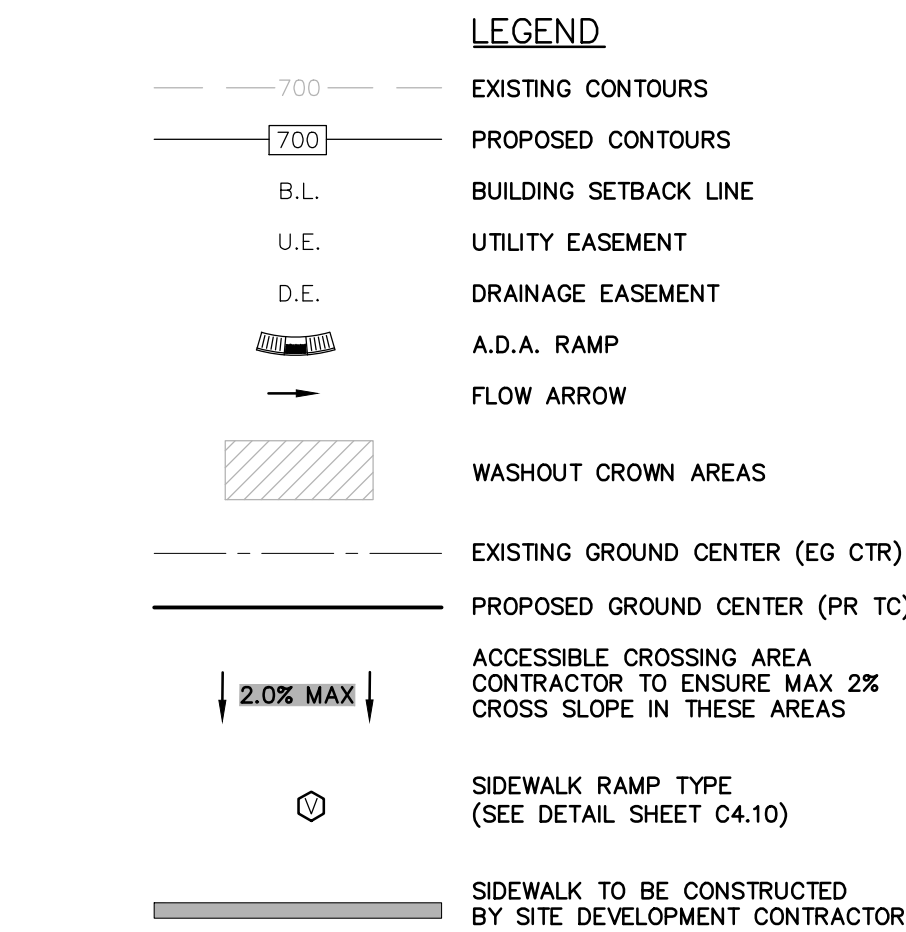
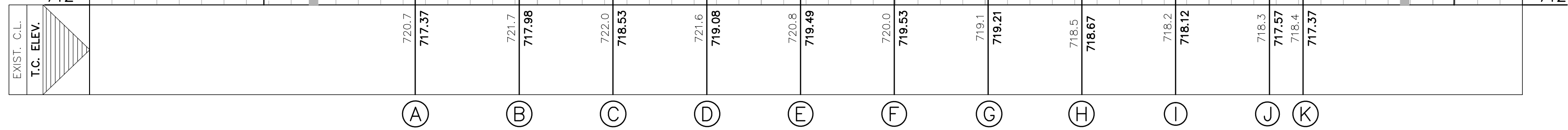
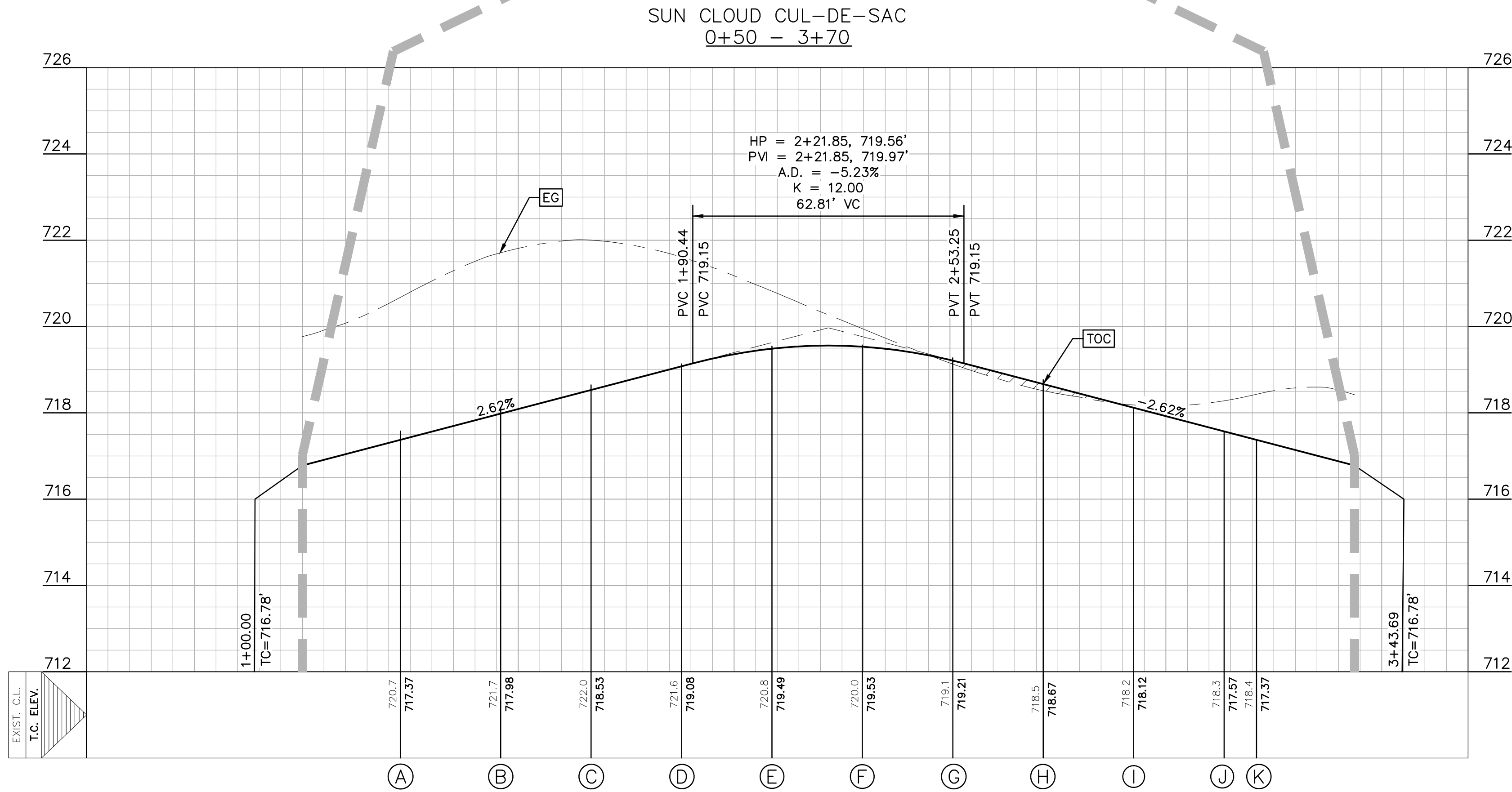
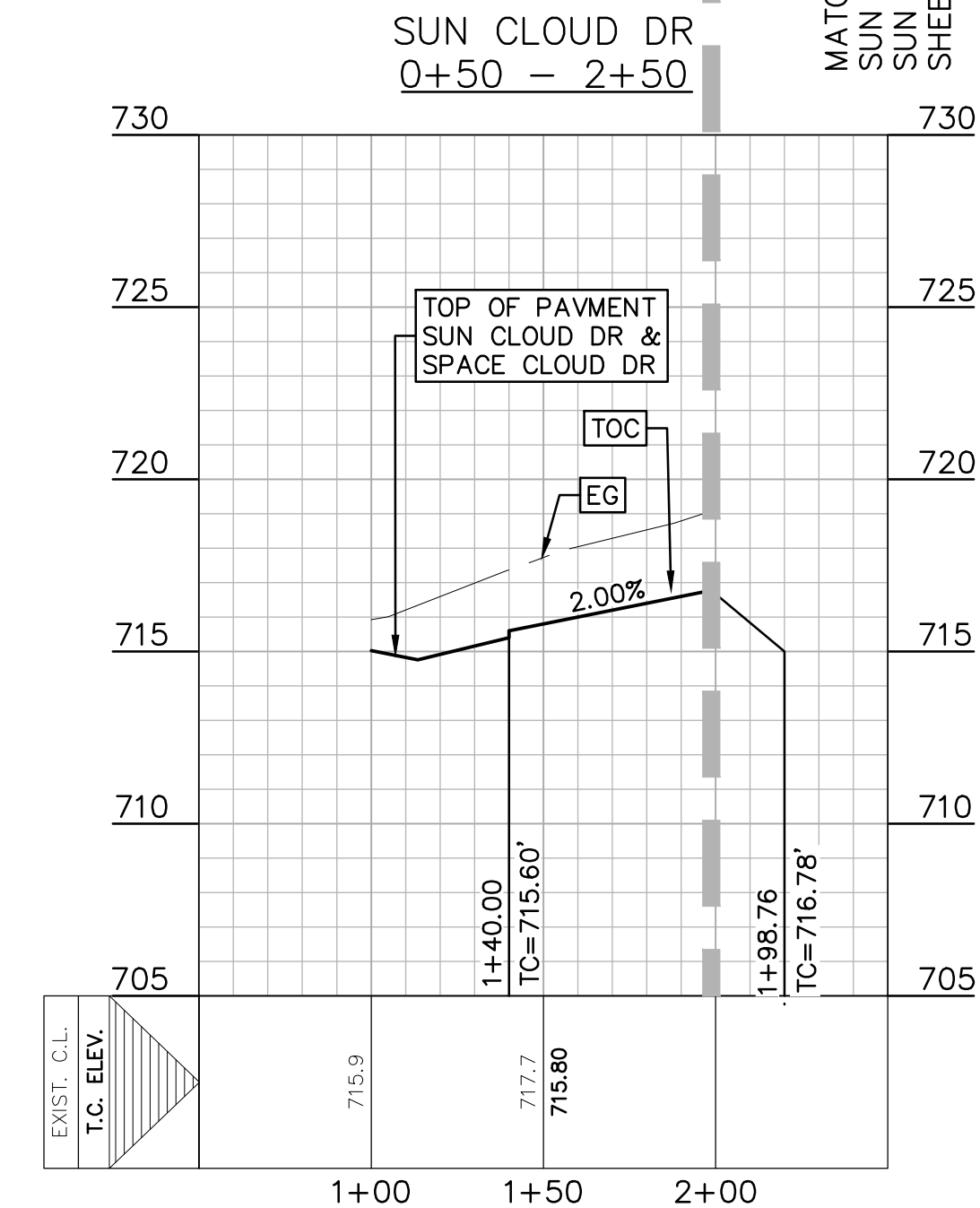
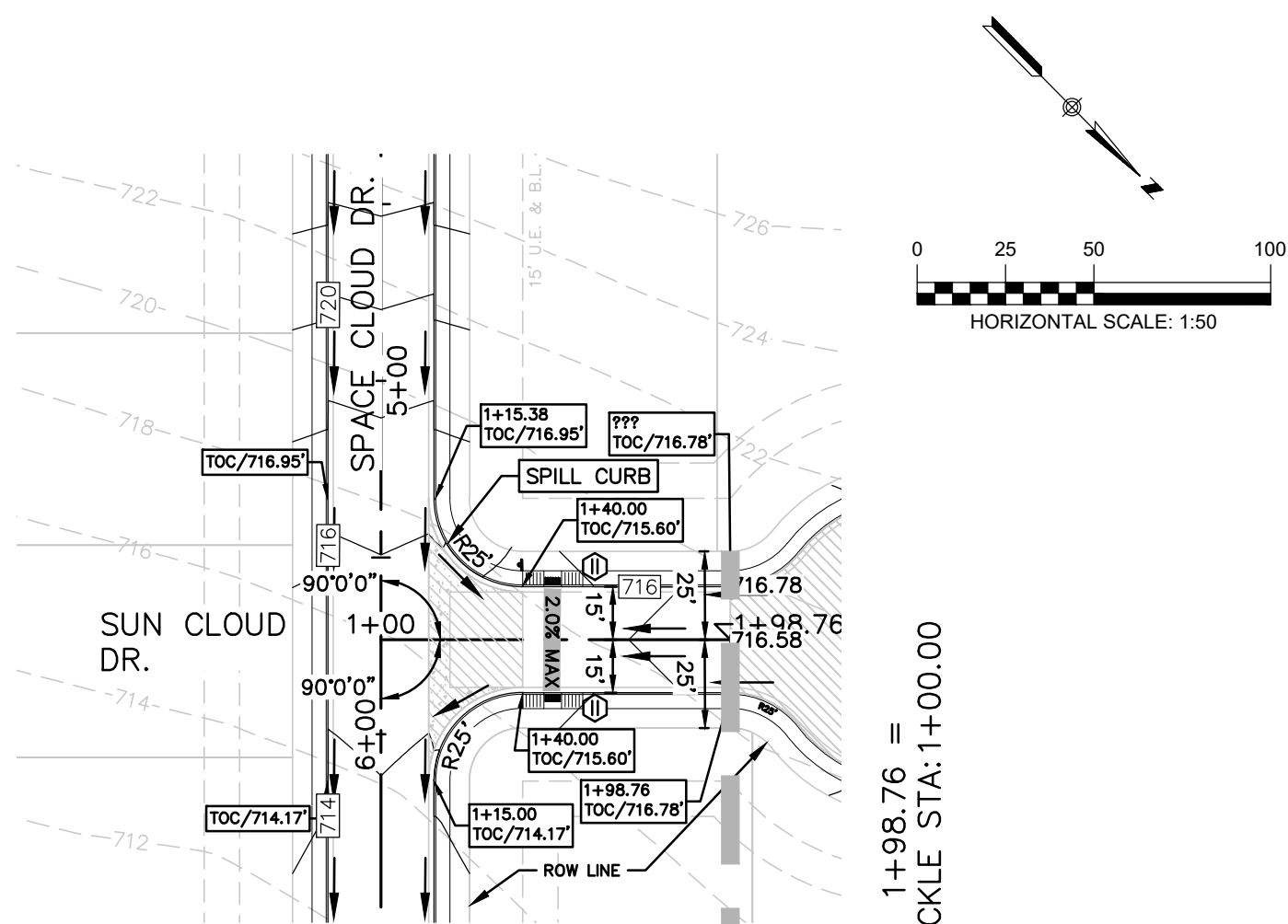
STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER
04/23/2020
Chris Van Heerde, P.E.

**TWIN CLOUD DR & CUL-DE-SAC
PLAN AND PROFILE
CLOUD COUNTRY UNIT 5**

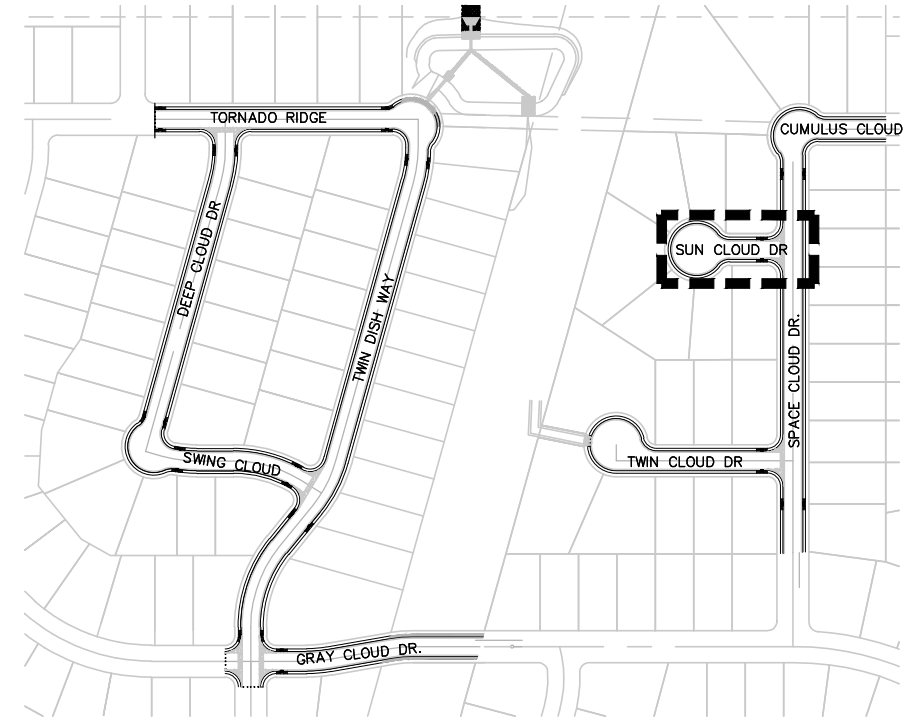
NO.	REVISION DESCRIPTION	DATE
1	ASBUILTS	04/2020

DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

**SHEET
C4.6**



- NOTES**
- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
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RECORD DRAWING

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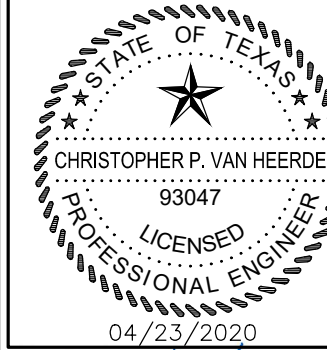
DATE: APRIL 2020 BY: *Chris Van Heerde, P.E.*

HMT ENGINEERING AND SURVEYING

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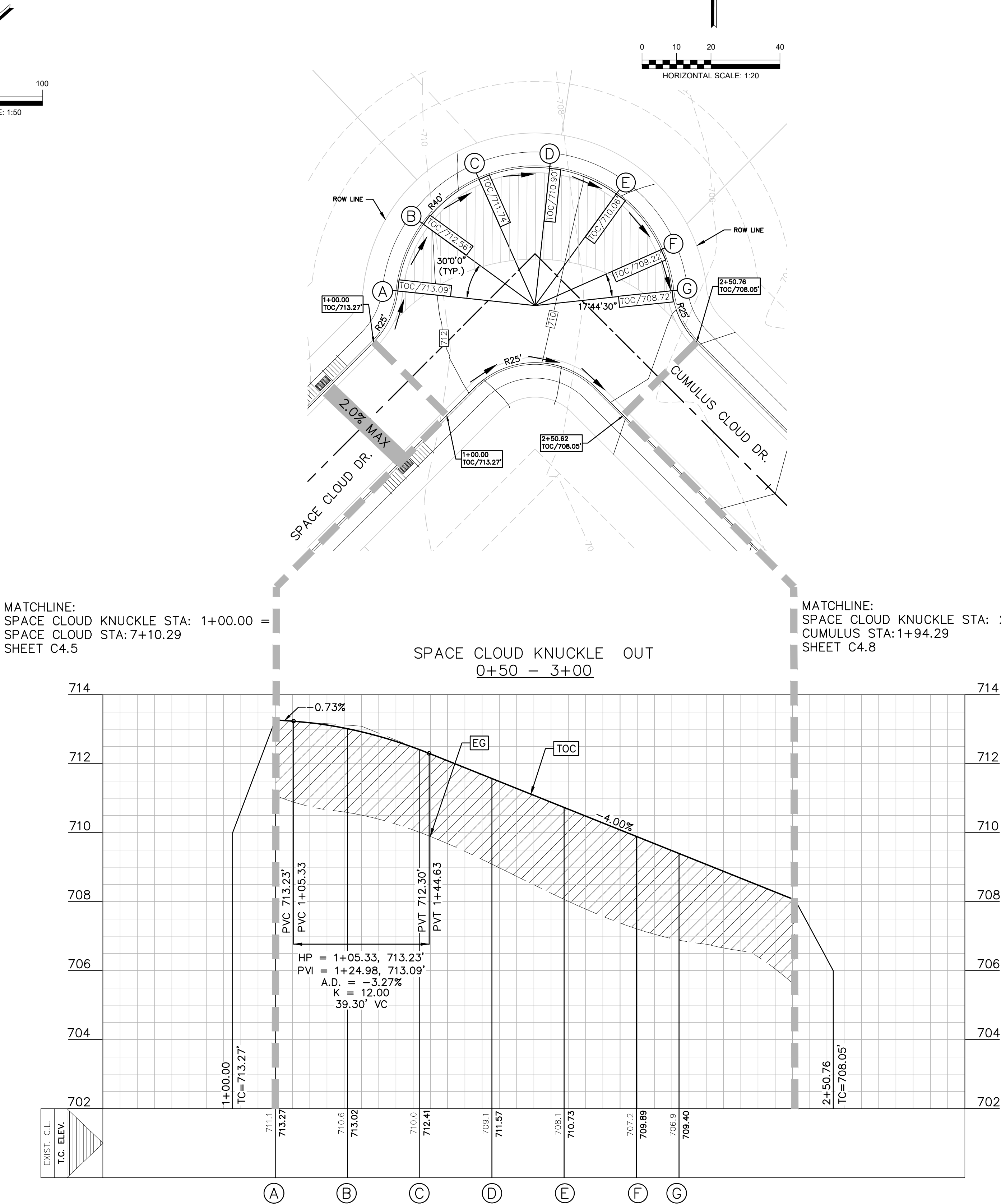
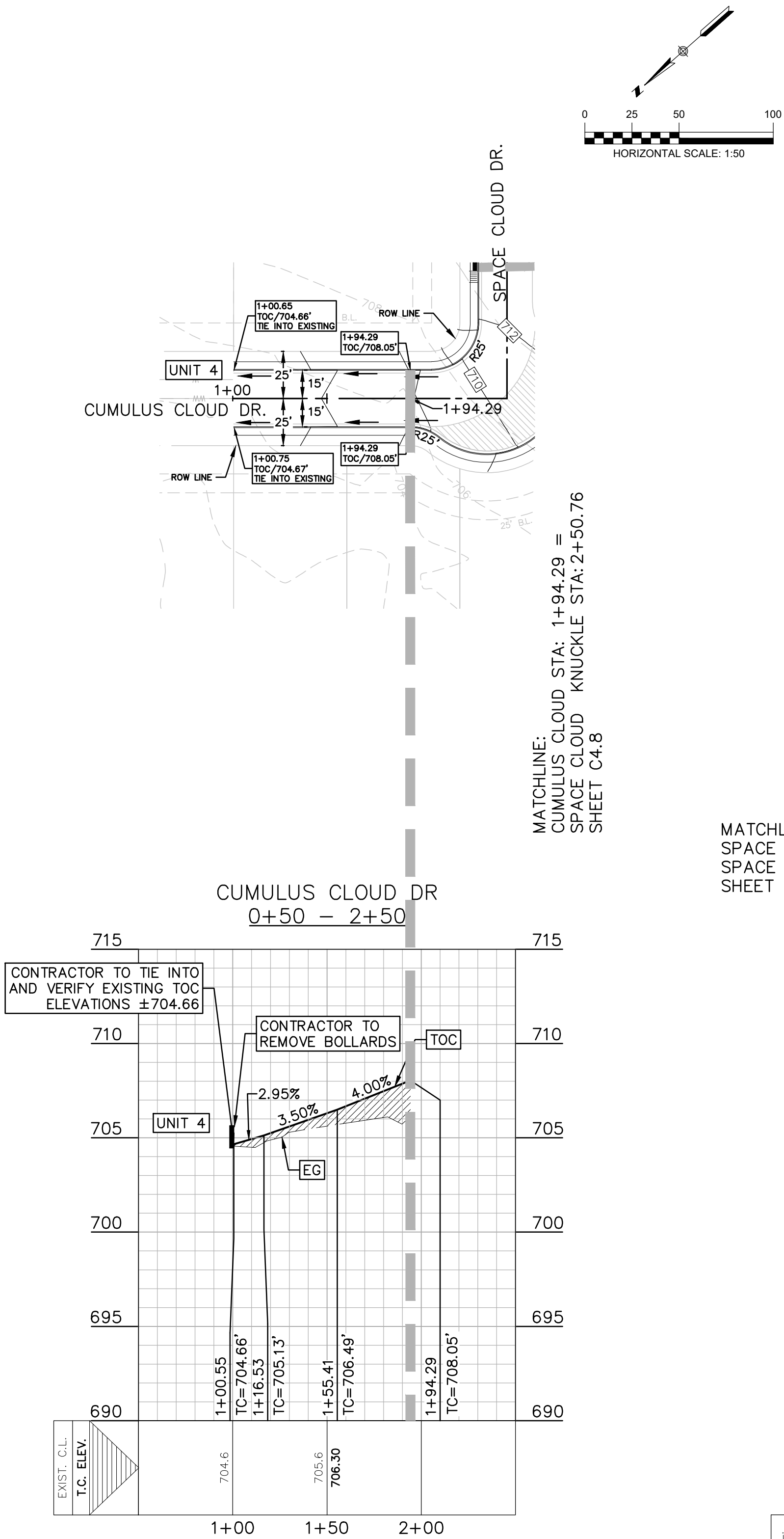
Chris Van Heerde, P.E.

**SUN CLOUD DR &
SUN CLOUD CUL DE SAC
PLAN AND PROFILE
CLOUD COUNTRY UNIT 5**

NO.	REVISION DESCRIPTION	REVISION DATE
1	ASBUILTS	04/2020

DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

**SHEET
C4.7**



RECORD DRAWING

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DATE: APRIL 2020 BY: *Chris Van Heerde, P.E.*

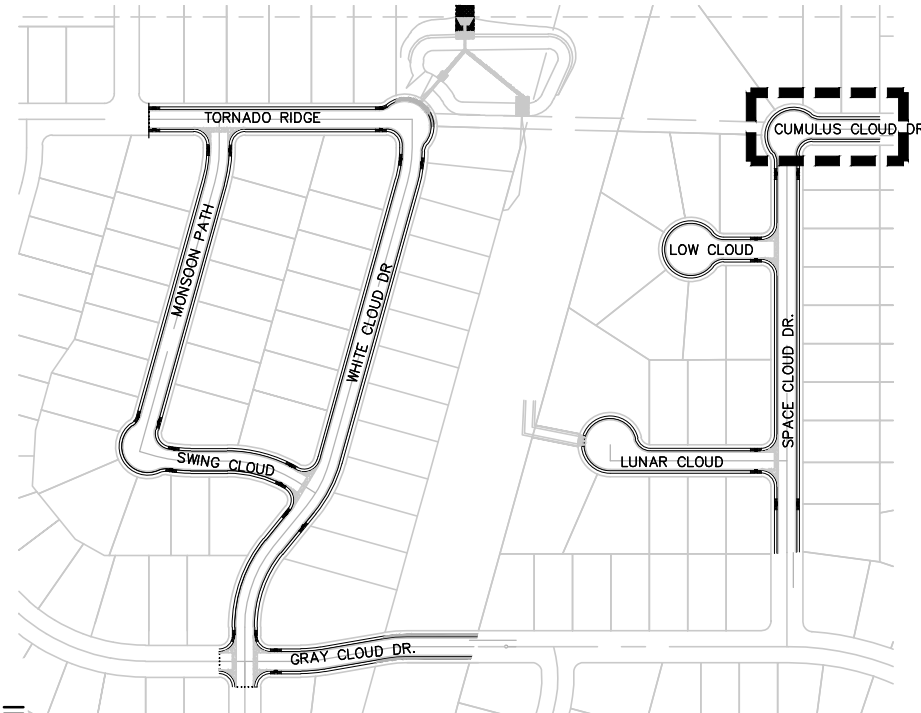
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 - D.E. DRAINAGE EASEMENT
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 - FLOW ARROW
 - WASHOUT CROWN AREAS
 - EXISTING GROUND CENTER (EG CTR)
 - PROPOSED GROUND CENTER (PR TC)
 - ACCESSIBLE CROSSING AREA CONTRACTOR TO ENSURE MAX 2% CROSS SLOPE IN THESE AREAS
 - SIDEWALK RAMP TYPE (SEE DETAIL SHEET C4.10)
 - SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR

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.
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HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER
04/23/2020
Chris Van Heerde, P.E.

**SPACE CLOUD KNUCKLE
PLAN AND PROFILE**

CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION	DATE
1	ASBUILTS		04/2020

DATE: JULY 2018

DRAWN BY: MGM/MZ

DESIGNED BY: MGM/MZ/CC

REVIEWED BY: SWH/SCH

HMT PROJECT NO.: 056.009

**SHEET
C4.8**

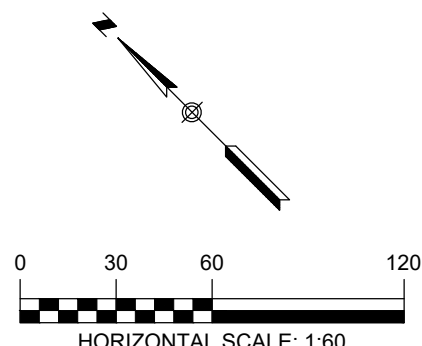
CONRADS LANE
(VARIABLE WIDTH R.O.W.)

LEGEND

-
- 700 ——— EXISTING CONTOURS
 ——— 700 ——— PROPOSED CONTOURS
 B.L. BUILDING SETBACK LINE
 U.E. UTILITY EASEMENT
 D.E. DRAINAGE EASEMENT
 ——— FLOW ARROW
 ——— EXISTING GROUND LEFT (EG LT)
 ——— EXISTING GROUND RIGHT (EG RT)
 ——— EXISTING GROUND CENTER (EG CTR)
 ——— PROPOSED TOP OF CURB (PR TC)

NOTES:

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



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.

RECORD DRAWING

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DATE: APRIL 2020 BY: Chini Van Heerde, P.
HMT ENGINEERING AND SURVEYING

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HMT
ENGINEERING & SURVEYING



Chris Van Heerde, P.E.

SIGNAGE PLAN

CLOUD COUNTRY UNIT 5

NO.	ASBULTS	REVISION DESCRIPTION	REVISION DATE
1			04/2020

DATE: JULY 2018

DRAWN BY: MGM/MZ

DESIGNED BY: MGM/MZ/C

REVIEWED BY: SWH/SCH

HMT PROJECT NO.:
056.009

SHEET
C4.9

STREET SIGN DETAIL - GROUND MOUNT

WHITE LEGEND & CLEARVIEW 1-W FONT STYLE

1"MIN 1.5"

GREEN BACKGROUND

1.5"

1"MIN

Castell Ave

24"-48" VARIES BY 6"

R0.75"

Height	9"
Length	24" min 48" max 6" increments in length
Thickness	0.080"
Substrate	Flat aluminum sheeting with 3/4" radius circular fillets at corners conforming to the requirements of ASTM B 229, Alloy 6061-T6, or 5052-H36.
Sign Face Materials	Green film over High Intensity Prismatic sheeting
Legend	Legends shall be Clearview 1-W font style, Reduced spacing between the letters or words should not be used as a means of reducing the overall size of a street name sign unless approved by the City Traffic Engineer.
Color	White legend on green background

Notes:

- Street name signs shall be double sided when center mounted on top of sign post. Only one street name sign should be installed on top of sign post with STOP or YIELD sign.
- When two sets of street name signs are required (e.g. at "T" intersections), one double-sided street name sign shall be mounted on sign post. The sign assembly shall meet minimum height requirements as required in the Texas Manual on Uniform Traffic Control Devices (TMUTCD). When required, ROAD END (W14-1a) or NO OUTLET (W14-2a) signs shall also be mounted on the sign post.
- Street name signs greater than 36" long and center mounted on top of sign post shall be mounted on post top bracket with 12" slot. All other street name signs center mounted on top of sign post shall be mounted on post top bracket with 5 1/2" slot.
- Street name signs mounted on sign post shall be mounted with double-sided round pole brackets. Two holes should be punched in the center of the 9" street name sign blank 1" from edge of the blank with 7" spacing between holes.
- The lettering for names of streets shall be composed of a combination of lower-case letters with initial upper-case letters. Acceptable abbreviations per TMUTCD may be used except for the street name itself.
- Red background (red film over High Intensity Prismatic) should be used for private street name signs.

Street Sign Detail - Ground Mount

ENGINEERING DIVISION

ISSUE DATE: February 2013 DWG. NO: ST-024 SCALE: N.T.S. SHEET: 1 OF 1

DRAWN BY: RAB CONTACT: GF

NEW BRAUNFELS, TX 78130 PHONE: 800.221.8000 FAX: 800.626.3000

P02019 ENGINEERING-AUTOCAD/DETAILS-PUBLIC WORKS DETAILS-818 UNAPPROVED DETAILS-201517-031 STREET SIGN DETAIL - GROUND MOUNT DWG

BOLLARD DETAIL
NOT TO SCALE

HEADER CURB
N.T.S.

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DATE: APRIL 2020 BY: *Chris Van Housen, P.E.*

HMT ENGINEERING AND SURVEYING

A	B	C	D	E	F
10	200	4	6.0	3	1.00
24	400	4	6.0	4	1.0
30	25	10	10	3	10.0
36	40	10	10	3	10.0
48	120	10	10	3	25

1:1
COLORS: LEGEND - WHITE (RETROREFLECTIVE)
BACKGROUND - RED (RETROREFLECTIVE)

NEW PAVEMENT TO EXISTING
N.T.S.

SPILL CURB DETAIL
NOT TO SCALE

FLEXIBLE PAVEMENTS	
PAVEMENT MATERIAL	
TYPE "D" HMAC	2"
CRUSHED LIMESTONE FLEXIBLE BASE, IN.	10"
COMPACTED SUBGRADE	-
LIME SUBGRADE	6"
ACTUAL STRUCTURAL NUMBER	2.56

NOTE:

- ALL PAVEMENT CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE TO THE THE GEOTECHNICAL ENGINEERING STUDY-CLOUD COUNTRY SUBDIVISION, PROJECT NO.: FGS-G06134, BY FROST GEOSCIENCES, DATED JUNE 19, 2008 AND FGS-G06134A, DATED 03/19/2013.
- ALL PAVEMENT SECTIONS SHOWN ON THE ABOVE TABLE SHALL SUPERCEDE ANY STANDARD DETAILS WITH RESPECT TO DEPTH OF MATERIALS ASSOCIATED WITH THIS PROJECT.
- THE OPTIMUM LIME CONTENT SHOULD RESULT IN A SOIL-LIME MIXTURE WITH A pH OF AT LEAST 12.4 WHEN TESTED IN ACCORDANCE WITH ASTM C977, APPENDIX XI AND SHOULD REDUCE THE PLASTICITY INDEX TO 20 OR LESS.
 - LIME CONTENT FOR 6 INCH STABILIZATION - 27 LBS PER SQ YARD
- THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF THE LIME OR CEMENT.

TYPICAL PAVEMENT SECTION

CROSS GUTTER

PLAN

SECTION A-A

JOINT DETAIL

SEALANT DETAIL

NOTES:

1. ALL CONCRETE SHALL BE CLASS "A" 3,000 PSI.

2. FINISHED ASPHALT CONCRETE SURFACE TO BE FLUSH WITH CROSS GUTTER LIP.

3. CONSTRUCTION OF CROSS GUTTER IS NOT ALLOWED ACROSS MAJOR COLLECTOR OR ARTERIAL STREETS.

4. ADJACENT SPANDREL SHALL BE 6" THICK CLASS "A" 3,000 PSI CONCRETE.

DATE APPROVED: 708

DWG. NO: ST-020

SCALE: N.T.S.

CITY OF NEW BRAUNFELS

ENGINEERING DEPARTMENT

FILENAME: CROSS GUTTER

FILENAME: CROSS GUTTER

FILENAME: CROSS GUTTER

CURB AND GUTTER

PLAN

SECTION A-A

JOINT DETAIL

SEALANT DETAIL

NOTES:

1. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 12".

2. CURB AND GUTTER SHALL HAVE FORMED TOOLS OR BAWED CONTRACTION JOINTS AT $\pm 10'$. THE DEPTH OF THESE JOINTS SHALL BE SUFFICIENT TO ENSURE CROOKING AT THE JOINTS.

3. CURB OR CURB AND GUTTER SHALL HAVE EXPANSION JOINTS AT POINTS OF CURVATURE, AT INTERVALS NO GREATER THAN 100' AND AT ALL ADJACENT STRUCTURES.

4. UNLESS OTHERWISE SHOWN, TRANSITIONS BETWEEN CURBS OR CURBS AND GUTTER OF DIFFERING CROSS SECTION SHALL BE ACCOMPLISHED OVER A 10' LENGTH OR AS APPROVED BY THE CITY ENGINEER.

5. ALL CONCRETE TO BE CLASS "A" 3,000 PSI CONCRETE.

6. ALL EXPOSED CONCRETE SURFACES TO BE BRUSHED SMOOTH AND UNIFORM.

DATE APPROVED: 708

DWG. NO: ST-013

SCALE: N.T.S.

CITY OF NEW BRAUNFELS

ENGINEERING DEPARTMENT

FILENAME: CURB & GUTTER

FILENAME: CURB & GUTTER

FILENAME: CURB & GUTTER

ONE & TWO FAMILY RESIDENTIAL
LOCAL
PARKING BOTH SIDES

PLAN

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

NOTES:

1. STRUCTURAL SECTION (REQUIRED DETAIL) ENGINEERING DESIGN, SUBJECT TO THE APPROVAL OF THE CITY ENGINEER, CITY WILL ACCEPT DESIGNS THAT INCORPORATE MANUAL GEODIG.

2. SEE CURB DETAIL ST-013.

3. ROADWAY MEASUREMENT SHOWN FROM BACK OF CURB (B.O.C.).

4. FLEXIBLE BASE MATERIAL SHALL BE TYPE "A" GRADE 2 PER TxDOT STD.

5. ASPHALT CONCRETE PAVEMENT SHALL BE TYPE "D" HOT MIX PER TxDOT ITEM 340 (2004).

6. STRUCTURAL SECTION SHOWN IS BASED ON A CBR VALUE OF 5. THE FOLLOWING ALTERNATIVE SECTIONS MAY BE APPROVED IF SUPPORTED BY ENGINEERING ANALYSIS BASED ON SOILS TESTING.

- A. IF MINIMUM BASE OVER 8" MINIMUM LIME TREATED SUBGRADE USED IN LIEU OF 10" BASE AS SHOWN.
- B. FOR CBR VALUES GREATER THAN 6.5 - 8" MINIMUM BASE USED IN LIEU OF 10" BASE AS SHOWN.
- C. PROPOSALS FOR ALTERNATIVE ROAD STRUCTURE WITH SUPPORTING ENGINEERING DOCUMENTATION MAY BE SUBMITTED TO THE CITY ENGINEER FOR CONSIDERATION AND APPROVAL.

FOR SECTIONS PROVIDING ACCESS TO LESS THAN 40 FEET - 10" OF 8" BASE PAVEMENT MAY BE USED IN LIEU OF 2" BASE PAVEMENT AS SHOWN.

8. IN NO CASE SHALL THE HMAC SECTION BE LESS THAN THAT SHOWN, OR AS PROVIDED IN NOTE 7.

9. BASE MUST EXIST 1" BEYOND BACK OF CURB, 6" MINIMUM THICKNESS

DATE APPROVED: 708

DWG. NO: ST-011

SCALE: N.T.S.

CITY OF NEW BRAUNFELS

ENGINEERING DEPARTMENT

FILENAME: ONE & TWO FAMILY Residential (Parking)

FILENAME: ONE & TWO FAMILY Residential (Parking)

FILENAME: ONE & TWO FAMILY Residential (Parking)

SIDEWALK (RESIDENTIAL)

PLAN

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

NOTES:

1. EXPANSION JOINTS ARE TO BE USED BETWEEN CONCRETE DRIVEWAY AND SIDEWALK.

2. SLOPED JOINTS DENOTE SIDEWALK ACROSS THE DRIVEWAY AND ARE TO BE PLACED AT LEAST 10' FROM THE DRIVEWAY.

3. ALL SIDEWALK AND DRIVEWAY CONSTRUCTION SHALL MEET A.D.A. SPECIFICATIONS.

DATE APPROVED: 708

DWG. NO: ST-016

SCALE: N.T.S.

CITY OF NEW BRAUNFELS

ENGINEERING DEPARTMENT

FILENAME: SIDEWALK (Residential)

FILENAME: SIDEWALK (Residential)

FILENAME: SIDEWALK (Residential)

TYPICAL SIDEWALK RAMP - TYPE I
SCALE: 1"=10"

TYPICAL SIDEWALK RAMP - TYPE II
SCALE: 1"=10"

TYPICAL SIDEWALK RAMP - TYPE III
SCALE: 1"=10"

TYPICAL SIDEWALK RAMP - TYPE IV
SCALE: 1"=10"

SIDEWALK PASSING SPACE
SCALE: 1"=10"

TABLE 1 (SEE NOTE 6)	
GUTTER	SIDEWALK RAMP LENGTH (SLO)
LOW SIDE	7'-4"
2%	5'-0"
3%	4'-0"
4%	4'-0"
5%	3'-0"

MAY 2009

CITY OF SAN ANTONIO

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

WHEELCHAIR RAMP STANDARDS

DATE: 04/28/2020

DRAWN BY: V. VASSALLO

CHECKED BY: B. L. HOSSEN

SHEET NO. 01

Chris Van Heerde, P.E.

STREET DETAILS (SHT 1)

CLOUD COUNTRY UNIT 5

REVISION DATE	04/2020
REVISION DESCRIPTION	
NO.	
ASBUILTS	

DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

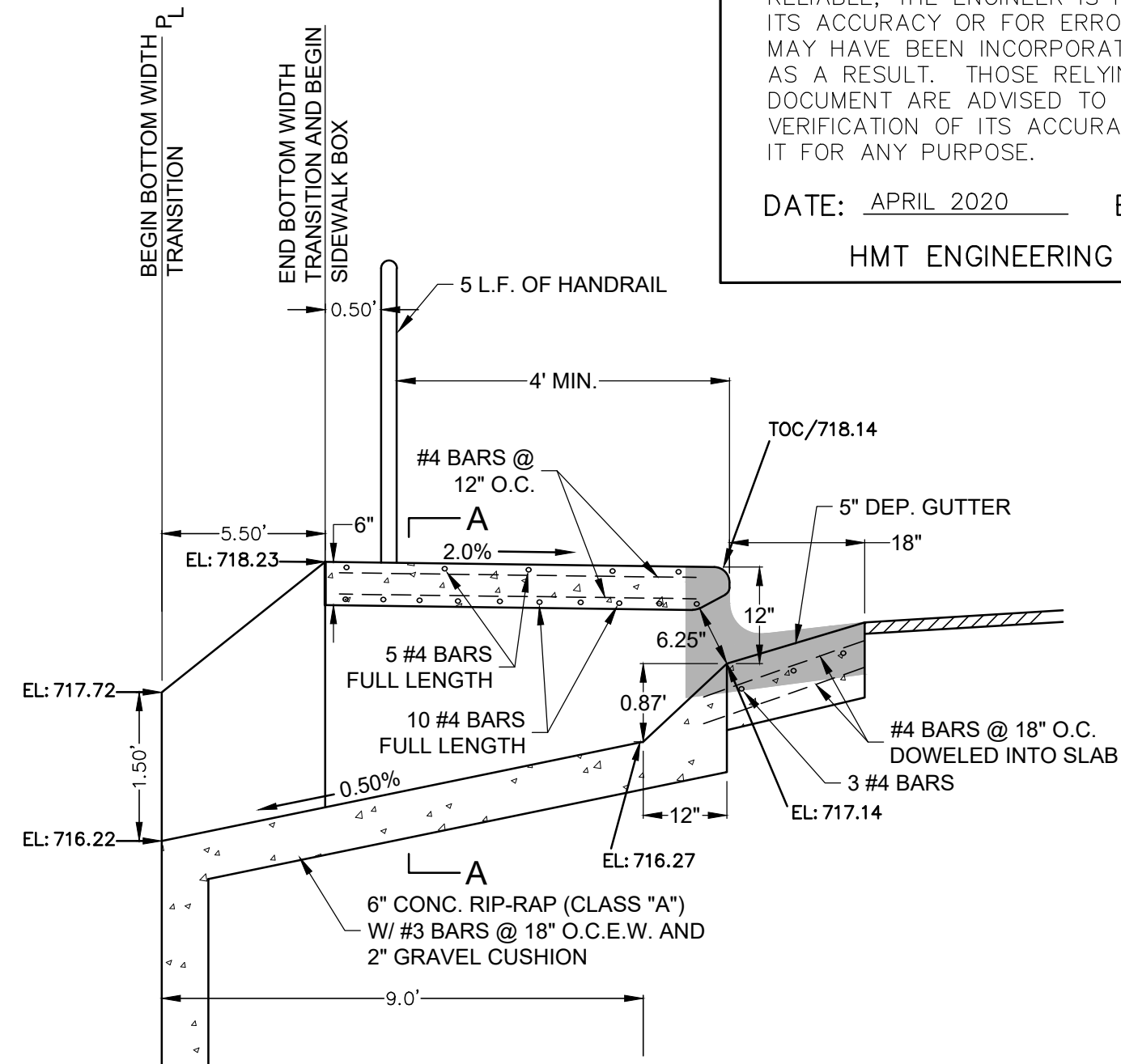
SHEET
C4.10

RECORD DRAWING

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DATE: APRIL 2020 BY: Chin Van Hende, P.E.

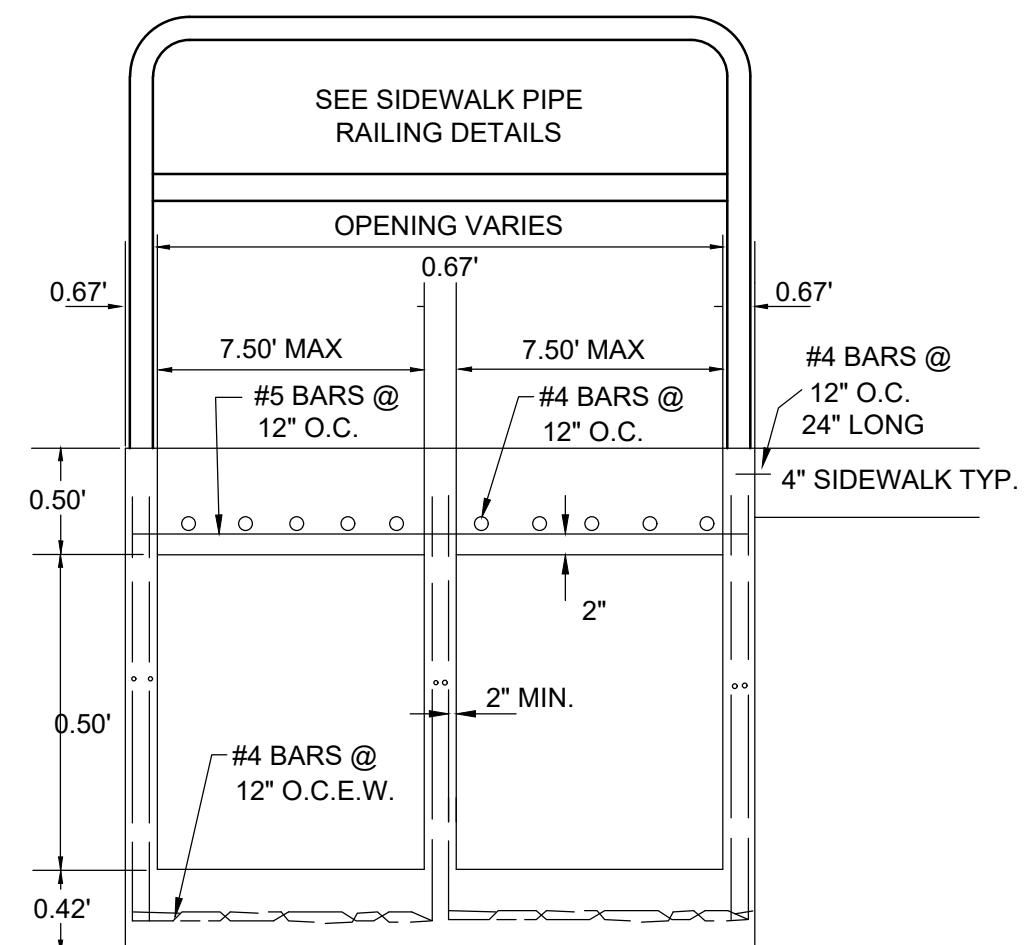
HMT ENGINEERING AND SURVEYING



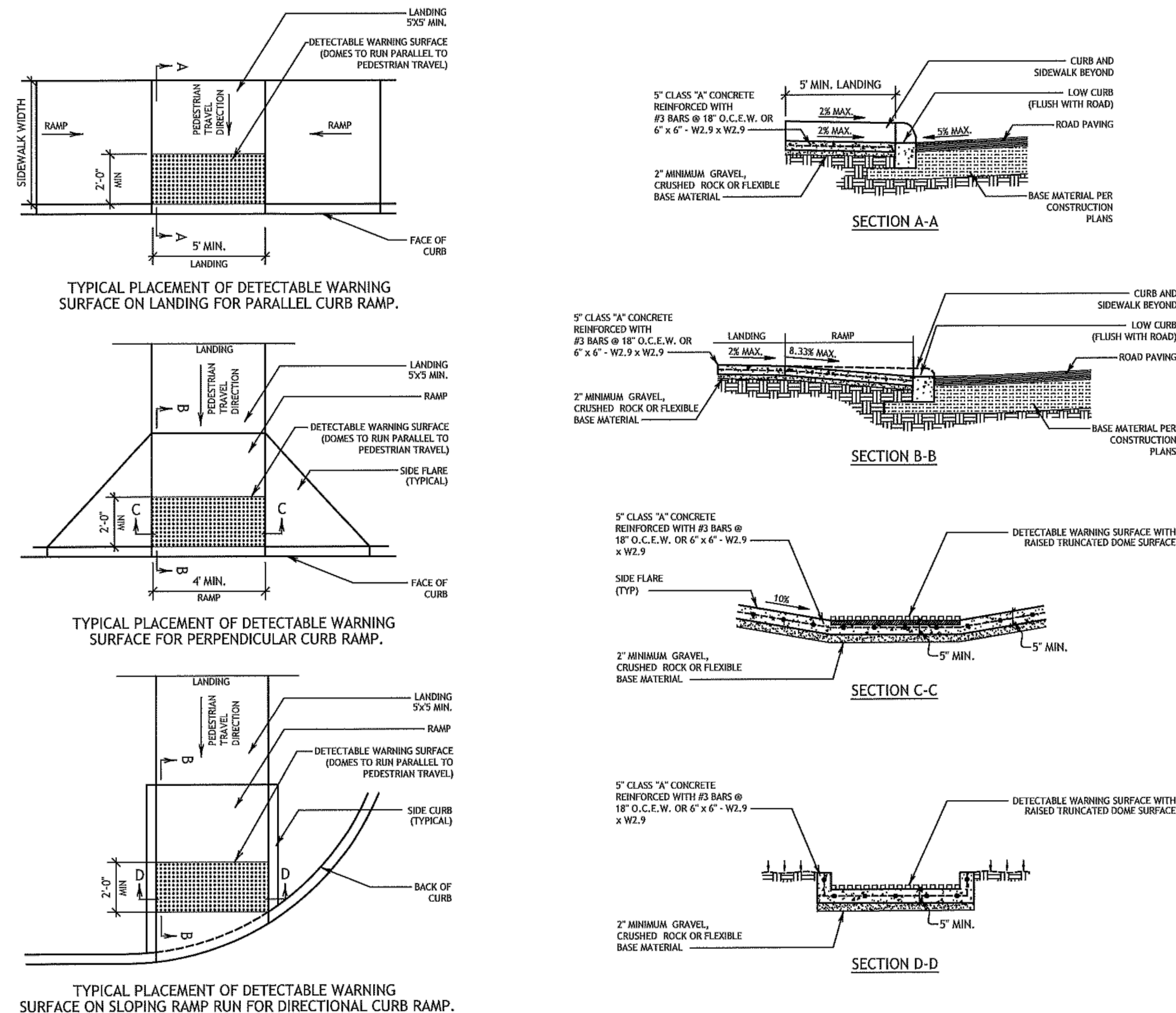
SIDE VIEW

SIDEWALK BOX DETAIL

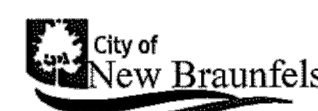
N.T.S.



SECTION "A-A"



TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN FOR DIRECTIONAL CURB RAMP



ENGINEERING DIVISION
550 LANDA STREET
NEW BRAUNFELS, TEXAS 78130
PHONE: 830 221 4020
FAX: 830 626 3600

CURB RAMP STANDARDS		
APPROVED DATE: 05/18/2017	DWG. NO.: ST-019	SCALE: AS NOTED
DRAWN BY: RC	CONTACT: GF	SHEET: 1 OF 1

CURB RAMP NOTES

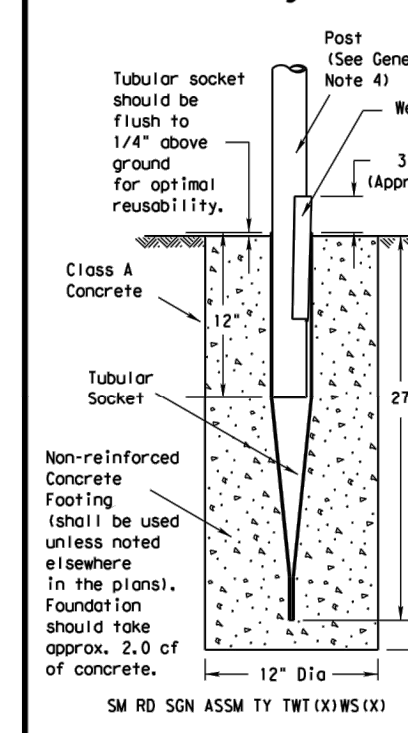
- ALL SLOPES ARE MAXIMUM ALLOWABLE, THE LEAST POSSIBLE SLOPE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. ADJACENT CURB LENGTH OR GRADE OF APPROACH SIDEWALKS AS DIRECTED.
- THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF CURBS ARE TO BE SHOWN ON THE PROJECT PLAN. ALL ACCESSIBLE WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE AMERICAN WITH DISABILITIES ACT (ADA) AND TEXAS ACCESSIBILITY STANDARDS (TAS). CITY ENGINEER OR BUILDING OFFICIAL MAY ALLOW LOCATIONS FOR SLOPE OR UTILITY CLEARANCES.
- THE MINIMUM STANDARD SIDEWALKS SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 118-49 OF THE NEW BRAUNFELS CODE OF ORDINANCES.
- ALL LANDINGS WHERE REQUIRED SHALL BE 3'x5' (6'x20') MINIMUM WITH A MAXIMUM 2% SLOPE IN ANY DIRECTION.
- RAMP LENGTHS SHALL BE SUFFICIENT TO MAINTAIN A MAXIMUM SLOPE OF 1:12 (11%)-12%, MAXIMUM ALLOWABLE CROSS SLOPE OF SIDEWALK AND CURB RAMP SURFACES IS 2% (19/200).
- SIDEWALK GRADIENTS SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY. ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE GRADE OF THE NATURAL GRADE OF THE ROADWAY TO MAINTAIN THE PROPOSED SIDEWALK SHALL BE CONSIDERED ROADWAY. ALL CURBS, HANDRAILS, AND LANDINGS IN ACCORDANCE WITH CURRENT ADA AND TAS REQUIREMENTS.
- PROVIDE FLARED RAMP SIDES WITH A MAXIMUM SLOPE OF 1:10 (10%) MEASURED ALONG THE CURB LINE. CURB RETURNING MAY BE USED INSTEAD OF SIDE FLARES IN AREAS NOT NORMALLY WALKED ACROSS BY PEDESTRIANS. RESIDE THE SIDEWALK SURFACE TO VEGETATION OR OTHER NON-WALKED AREAS OR WHERE THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
- MANEUVERING SPACE AT THE BOTTOM OF CURB RAMP SHALL BE A MINIMUM OF 4'x4' (4'x4') WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICULAR TRAVEL PAVEMENT.
- CROSSWALK DIMENSIONS, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ON ELECTRIFIED PLANS. CROSSWALK SURFACES TO BE CONSTRUCTED IN ACCORDANCE WITH CURRENT ADA AND TAS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
- EXISTING FEATURES THAT COMPLY WITH CURRENT TAS REQUIREMENTS MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLANS.
- HANDRAILS ARE NOT REQUIRED ON CURB RAMP. PROVIDE CURB RAMPS WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
- SEPARATE CURB RAMP AND LANDINGS FROM ADJACENT SIDEWALK AND ANY OTHER ELEMENTS WITH CURB OR BOARD JOINT 1/2" UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
- PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS CONNECT TO THE STREET.
- THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 1". THE CHANGE OF GRADE SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE GRADES. IN THE CASE OF A SLOPE, THE CHANGE OF GRADE SHALL BE THE DIFFERENCE BETWEEN THE GRADES OF THE TWO ADJACENT SURFACES. THE CHANGE OF GRADE SHALL BE LESS THAN 2.07% (1/48.3) (2.67/101). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO .5%.
- IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 1/4", A 6" HIGH STRIP SHALL BE PROVIDED TO BE 1/4" THICKER THAN THE ADJACENT PAVEMENT.
- ADA RAMP SHALL BE CONSTRUCTED WITH 5" CLASS "S" CONCRETE WITH 2" MINIMUM GRAVEL CAPPED ROCK OR FLEXIBLE BASE MATERIAL. REINFORCING STEEL SHALL BE #3 AT 18" O.C., OR #3@ 12" O.C. @ 2' WIDE S. WIRE MESH.
- THE EXTENTS OF ADA COMPLIANCE IN ALTERATIONS SHALL BE WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF THE PROJECT.

DETECTABLE WARNING NOTES

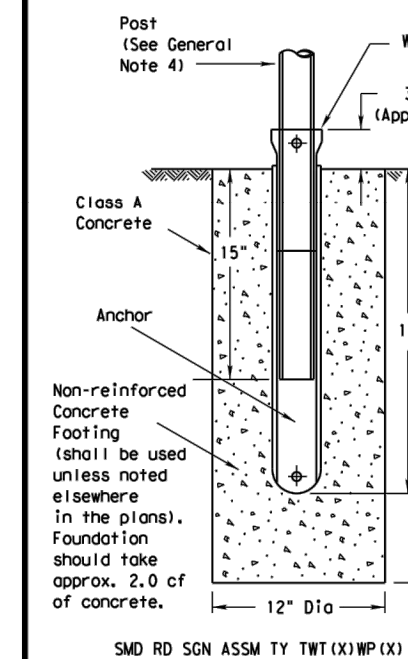
1. CURB RAMPS OF LANDS ADJACENT TO THE CROSSWALK MUST HAVE A DETECTABLE WARNING SURFACE THAT CONSISTS OF RAISED TRUNCATED DOMES COMPLYING WITH SECTION 7.05 OF THE TEXAS ACCESSIBILITY STANDARDS (TAS). THE SURFACE MUST CONTRAST VISUALLY WITH ADJACING SURFACES, INCLUDING SIDE WALKS, DRIVEWAYS, PARKING LOTS OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNCONTROLLED CONDITIONS, UNLESS SPECIFIED ELSEWHERE IN THE PLANS.
2. DETECTABLE WARNING SURFACES SHALL BE SLIP RESISTANT AND NOT ALLOW WATER TO ACCUMULATE.
3. ALTERN TRUNCATED DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
4. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 8" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL, AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR LANDSCAPE WHERE THE PEDESTRIAN ACCESS ROUTE ENTERS THE STREET.
5. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS AT THE BACK OF CURB. ALTERN THE ROWS OF DOMES TO BE PERPENDICULAR TO THE GRADE BREAK BETWEEN THE CURB RAMP AND THE STREET. DETECTABLE WARNING SURFACES MAY BE LOCATED ALONG THE CORNER RADIUS.
6. DETECTABLE WARNING MATERIALS SHALL MEET TxDOT DEPARTMENTAL MATERIALS SPECIFICATION MS-450 AND BE LISTED ON THE MATERIAL PRODUCER LIST. INSTALL PRODUCTS IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDATION.
7. DETECTABLE WARNING PAVING SHALL NOT BE PERMITTED WITHOUT THE APPROVAL BY THE PUBLIC WORKS DEPARTMENT.

STREET DETAILS (SHT 2)

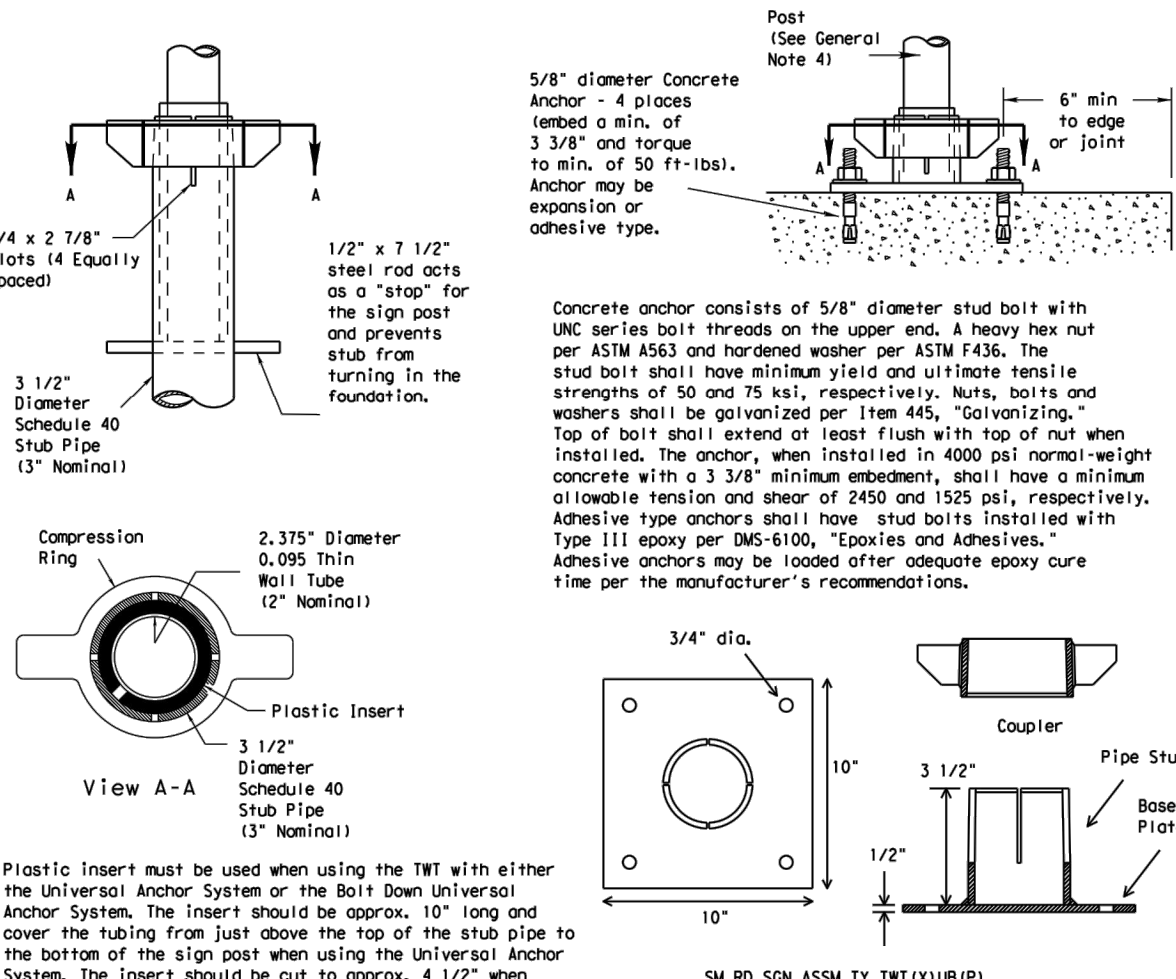
Cloud Country Unit 5



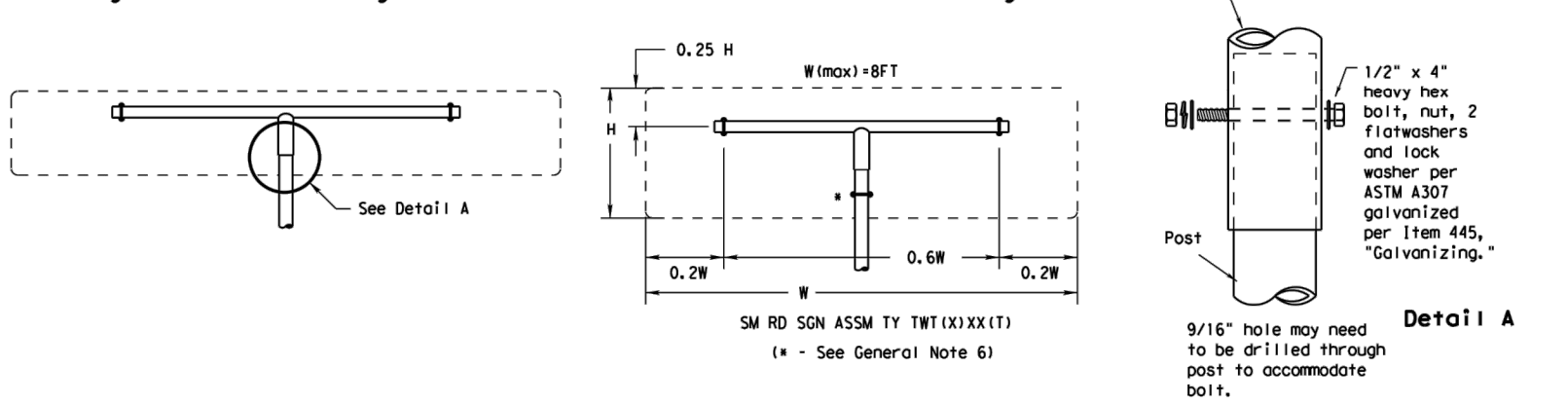
Wedge Anchor High Density Polyethylene (HDPE) System



Universal Anchor System with Thin-Walled Tubing Post



Sign Installation Using a Prefabricated T-Bracket for Thin-Wall Tubing Post



NOTE

The devices shall be installed per manufacturer's recommendations.
Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

1. The Neuge System and the Universal Inserter System with thin ruling post and 1/8" thick ruling post.
2. The rubber anchor, wedge and pre-formed 1-bracket shall be permanently marked to indicate the correct placement of the anchor and the placement of marking and subject to the approval of the IADOT Traffic Standards Engineer.
3. Except for posts (13 BMG tubing), clamps, nuts and bolts, all components shall be made of 6061-T6 aluminum. The material may be obtained from the Material Producer List web page. The website address is: <http://www.mtpd.com/Products/Products.asp>
4. Material used as post with this system shall conform to the following specifications:
 - 13 BMG 1/8" x 3/8" outside diameter (198)
 - 0.957 nominal wall thickness
 - Series 9 or electric-resistance welded steel tubing
 - Steel shall be 1045 or 50,000 psi tensile strength ASTM A36
 - Other steels may be used if they meet the following:
 - 50,000 PSI minimum yield strength
 - 70,000 PSI minimum tensile strength
 - 186 mils elongation in 1"
5. Thin Insoles launched shall be within the range of .083" to .289" or 1/16" to 1/4" outside diameter. Uncoated shall be within the range of .289" to .391" or 1/4" to 1 1/16" outside diameter. Coated shall be within the range of .391" to .463" or 1/4" to 15/32" outside diameter. Welds may be made by metalizing with zinc wire.
6. Sign bolts shall be the sizes and shapes shown on the plans.
7. Additional sign clamps required on the "1-bracket" post for 24" high signs. Place clamps on the 1/8" diameter post and the 1/4" diameter post.
8. Sign supports shall not be applied except where shown. Sign support posts shall be 1/2" diameter.
9. See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is: <http://www.mtpd.com/Products/Products.asp>

1. Dig foundation hole. Where solid rock is

- foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18". The concrete shall be placed in the hole in a single lift. If it is encountered, the socket/sub may be reduced in length as required to a minimum depth of 18". The concrete shall be placed from the top of the hole to the bottom and the clearance requirements shown on SM/GCM shall be followed. The inner surface of the socket/sub must remain free of concrete or other debris. The concrete shall be placed in the hole in a single lift. The concrete shall be placed with a portable, motor driven concrete mixer. For small placements or other lifts less than 4 cubic yards, the concrete shall be placed in the hole in a single lift. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class II.
3. The concrete shall be placed in concrete until top of socket is approximately 1/4" above the concrete footing.
4. The concrete shall be allowed a minimum 4 days for concrete to set, unless otherwise directed by Engineer.
5. Attach the sign to the sign post.
6. Insert the sign post into the anchor and sign place with roadway.
7. Drive the wedge into the socket to secure post. This will leave approximately 1/4" of the sign post above the concrete.

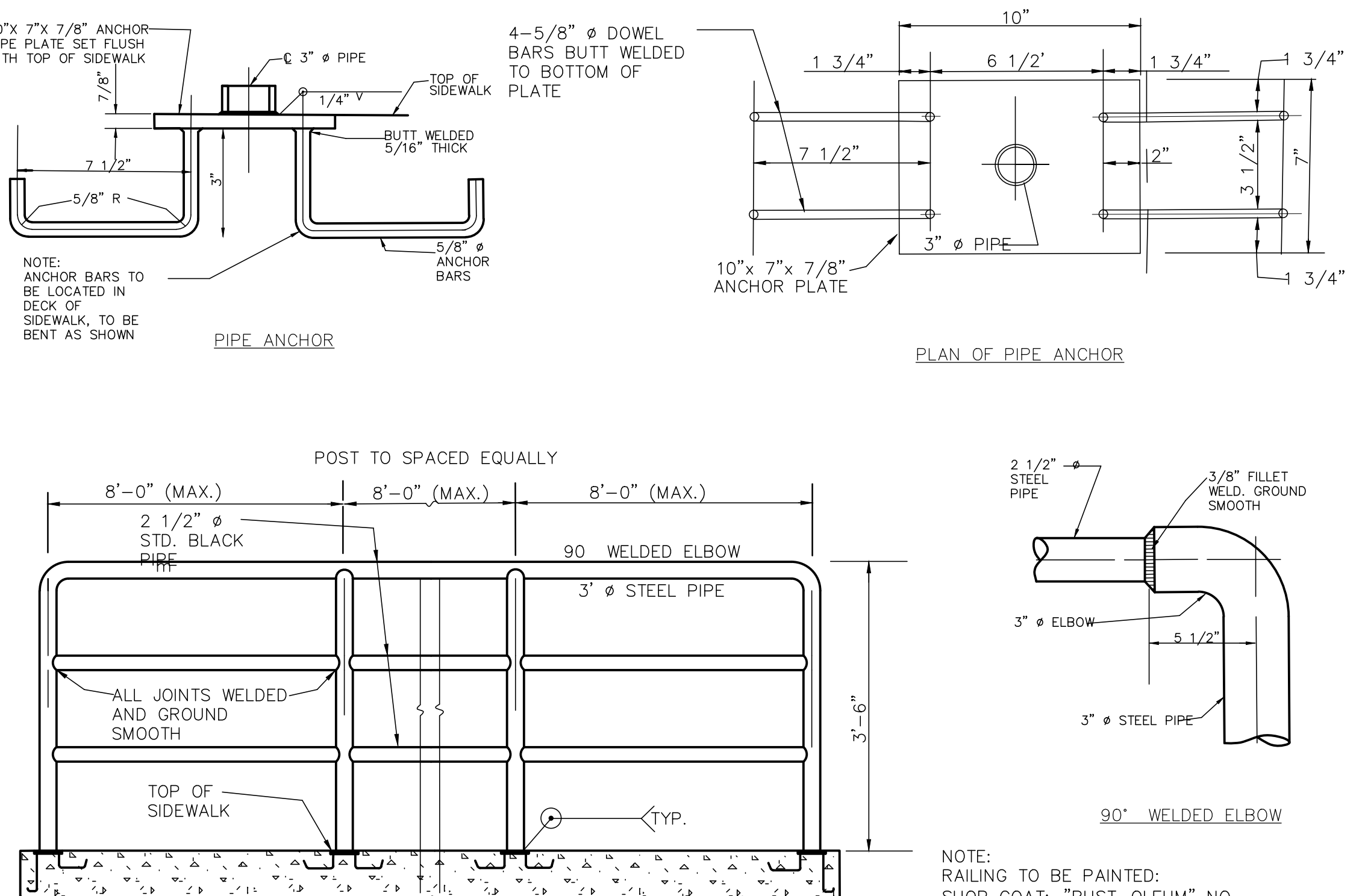
UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE

3. If a transition hole, where a slot is encountered on ground level, the board is not to be cut. If a transition hole is encountered below ground level, the foundation shall extend in the solid rock a minimum of 100 mm below the bottom of the hole. If a transition hole is encountered, the socket/sub may be reduced in length as required to a minimum of 100 mm below the bottom of the hole. The hole must be cleaned out to the bottom and the clearance requirements given on SME/GEM shall be followed. The inner surface of the socket/sub must remain free of oil and concrete or other debris.
4. The hole must be cleaned out to the bottom and socket/sub shall have a minimum level and plane the hole surface with a torqued level and allow concrete adequate time to cure. The hole must be cleaned out to the bottom in the stub pipe shall remain above the top of the concrete foundation.
5. Attach the pipe to the sign post.
6. Install sign post, insert sign post into post.
7. Insert sign post into base post, lower until the post comes to rest on steel rod.
8. The sign post must be lowered until the sign post is in contact with the steel rod. The sign post will be approximately level with top of stub post when optimally installed.
9. Check sign post to hand to ensure it is unable to turn. If loose, increase the tightness of the compression ring.



SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
WEDGE & UNIVERSAL ANCHOR
WITH THIN WALL TUBING POST
SMD(TWT)-08

©TxDOT July 2002		DN: TXDOT	CR: TXDOT	DM: TXDOT	CK: TXDOT
9-08	REVISIONS	CON: SECT	JOB		HIGHWAY
		DIST	COUNTY		SHEET NO.



SIDEWALK PIPE RAILING DETAILS

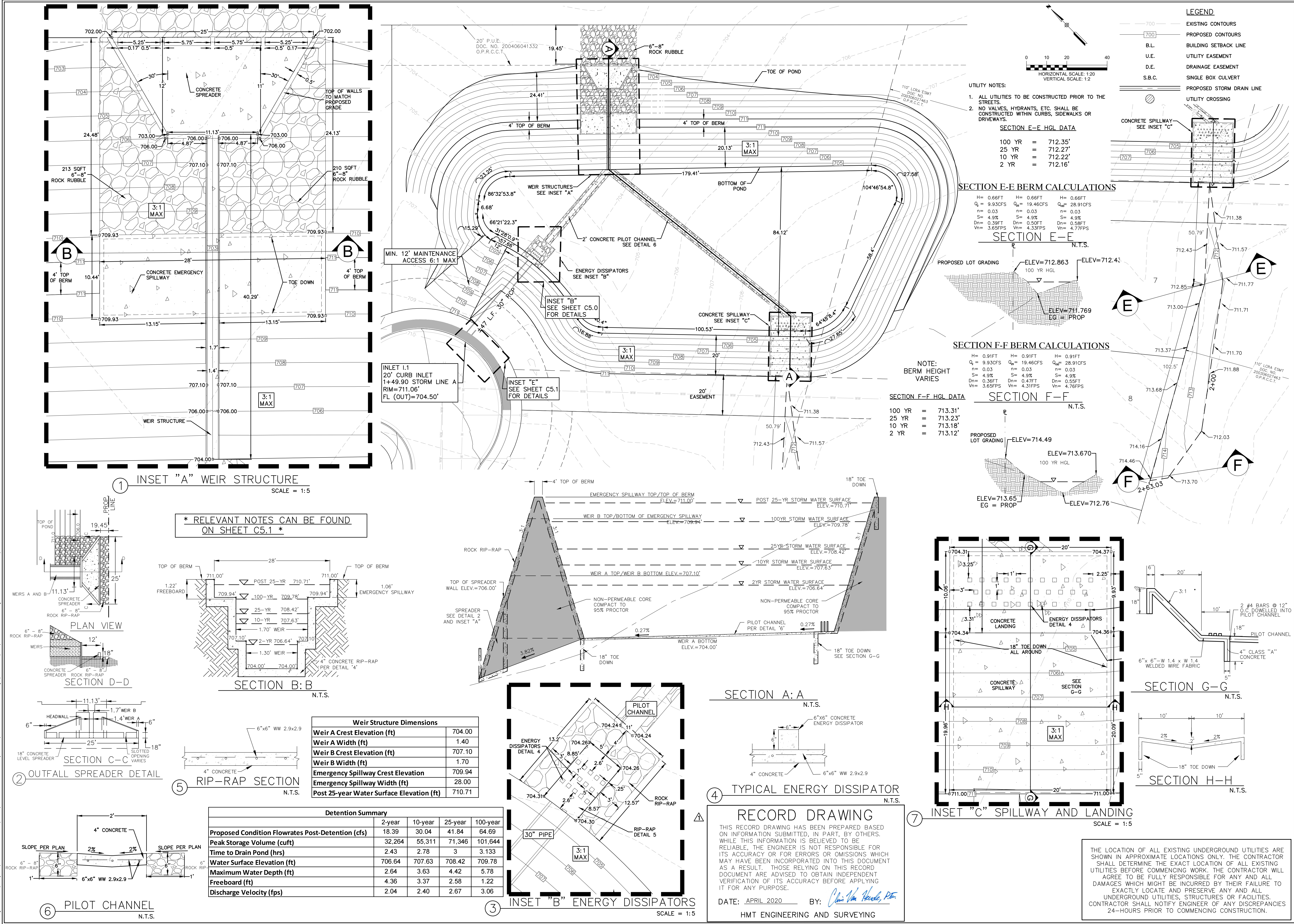
NOT TO SCALE

NOTE:
RAILING TO BE PAINTED:
SHOP COAT: "RUST-OLEUM" NO.
678

QUICK DRYING RED
PRIMER. FIRST FIELD COAT:
"RUST-OLEUM" NO.
7773 ZINC CHROMATE
PRIMER. SECOND FIELD COAT:
"RUST-OLEUM" NO.
7715 "ALUMINUM" OR
APPROVED EQUAL.



Chris Van Heerde, P.E.



410 N. SEGUIN AVE.
NEW BRAUNFELS, TX 78130
HMTB.COM
P(830)625-8555-F(830)625-8556
TBPB FIRM F-10961
TBPB FIRM 10153600

HMT
ENGINEERING & SURVEYING

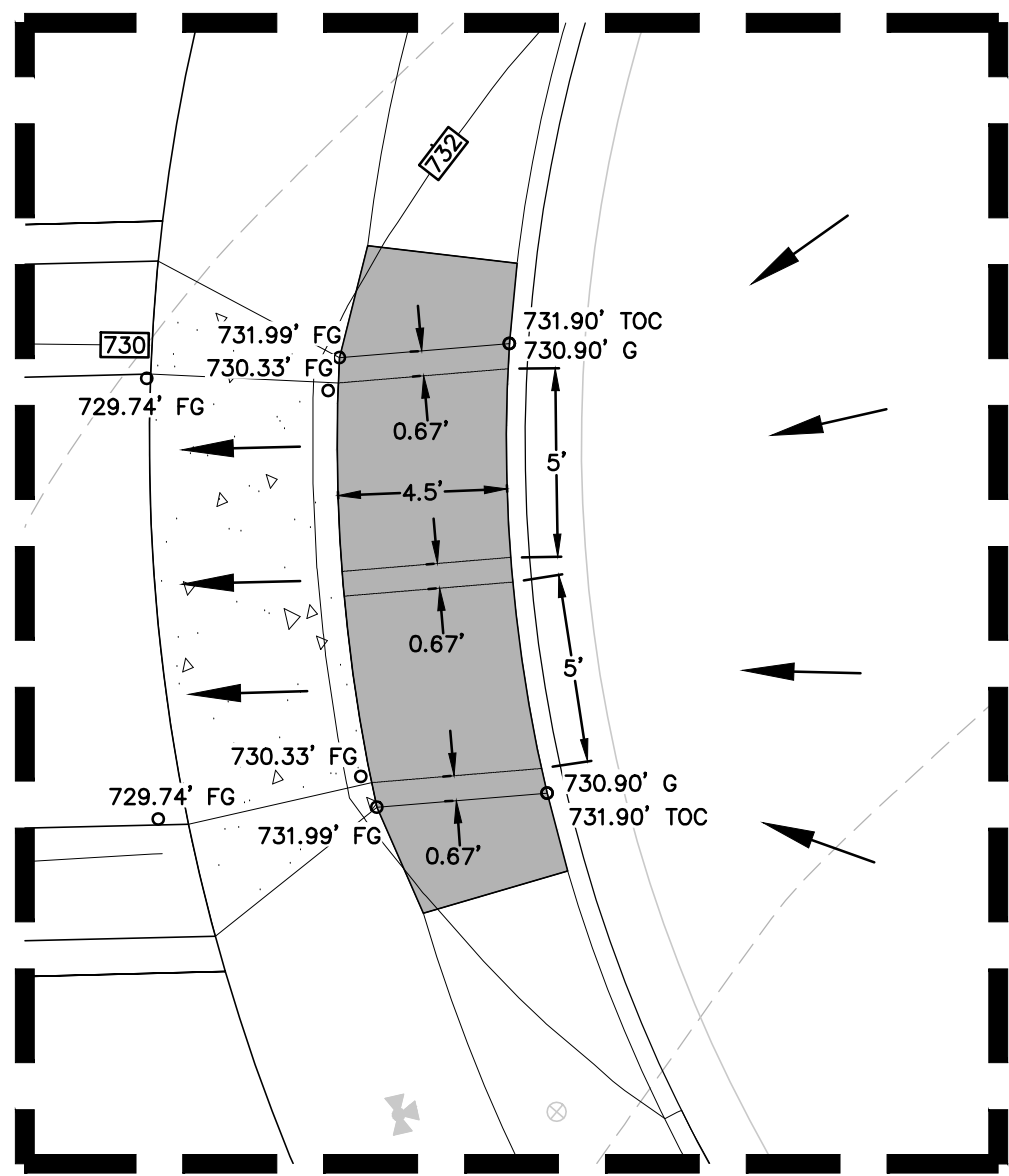
STATE OF TEXAS
CHRISTOPHER P. VAN HEERDE
93047
LICENSED PROFESSIONAL ENGINEER
04/23/2020
Chris Van Hous, P.E.

OVERALL STORM

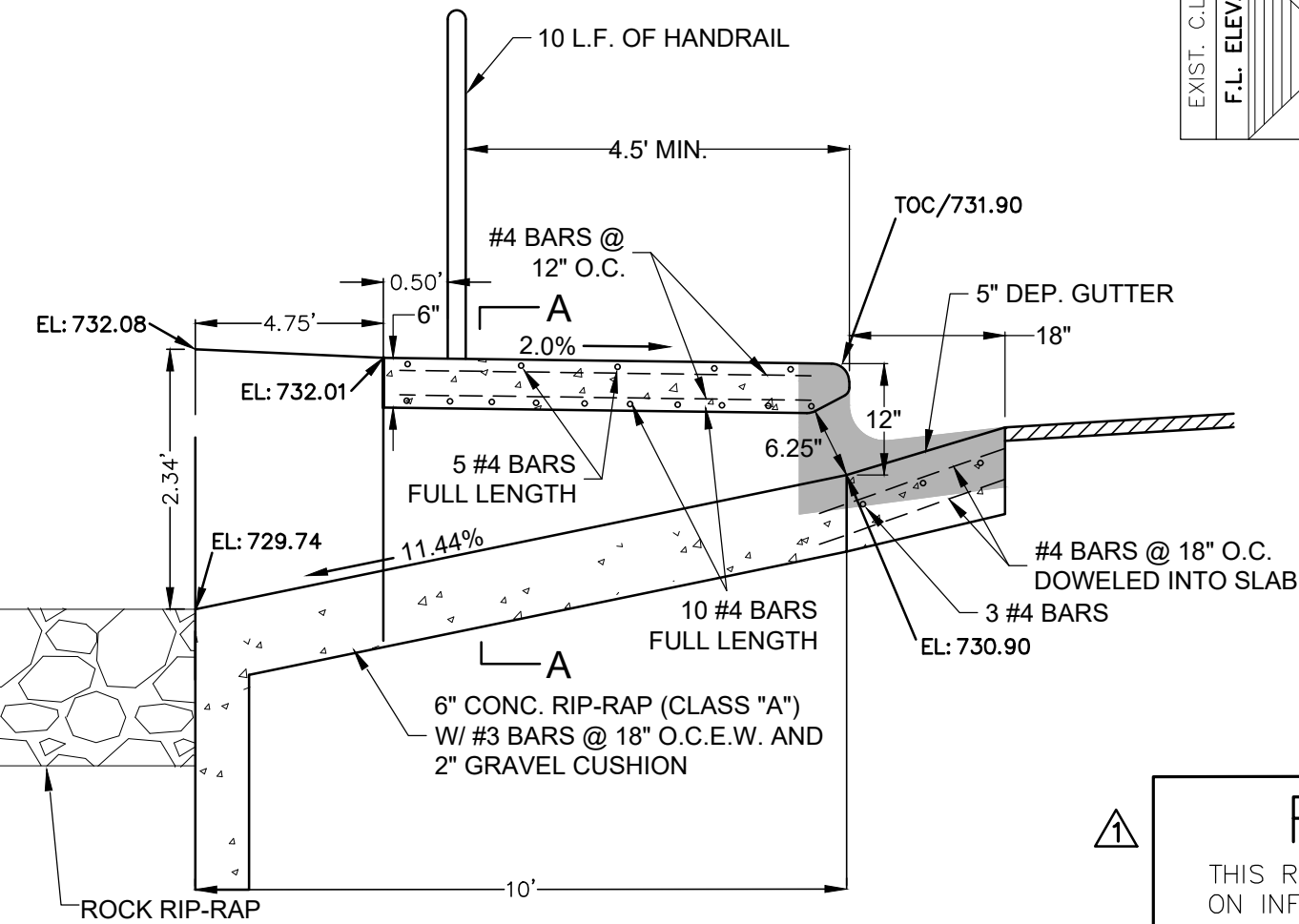
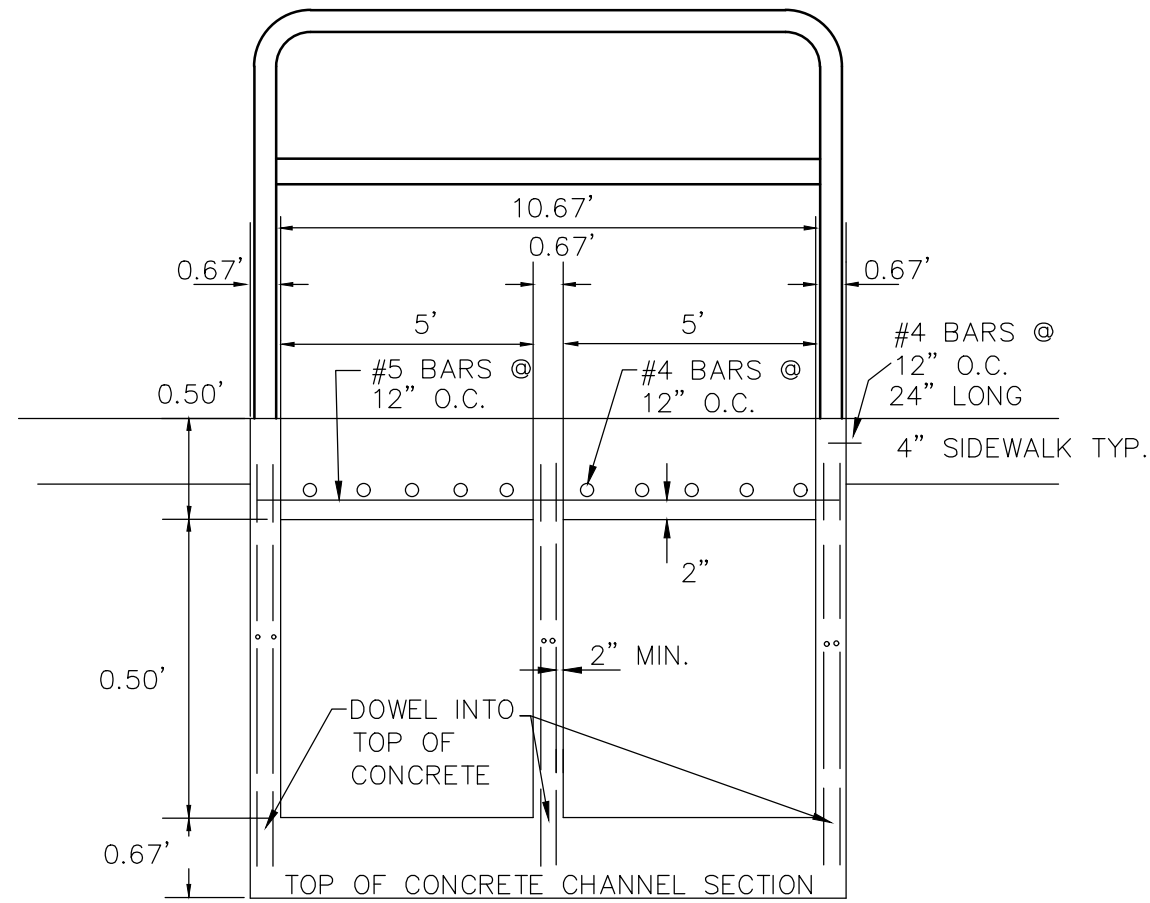
CLOUD COUNTRY UNIT 5

SHEET C5.0

DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009



INSET D: SIDEWALK BOX I.2
SCALE = 1:5



SIDE VIEW
SIDEWALK BOX I2 DETAIL
N.T.S.

NOTES:

- CONTRACTOR TO VEGETATE POND ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 80% VEGETATION PRIOR TO COMPLETION.
- COMPACTION OF ALL EARTHEN EMBANKMENTS SHALL HAVE A NON-PERMEABLE CORE, SHALL BE BASED ON GETOECHNICAL INVESTIGATION OF SITE, AND SHALL BE COMPACTED TO 95% STANDARD PROCTOR.

RECORD DRAWING

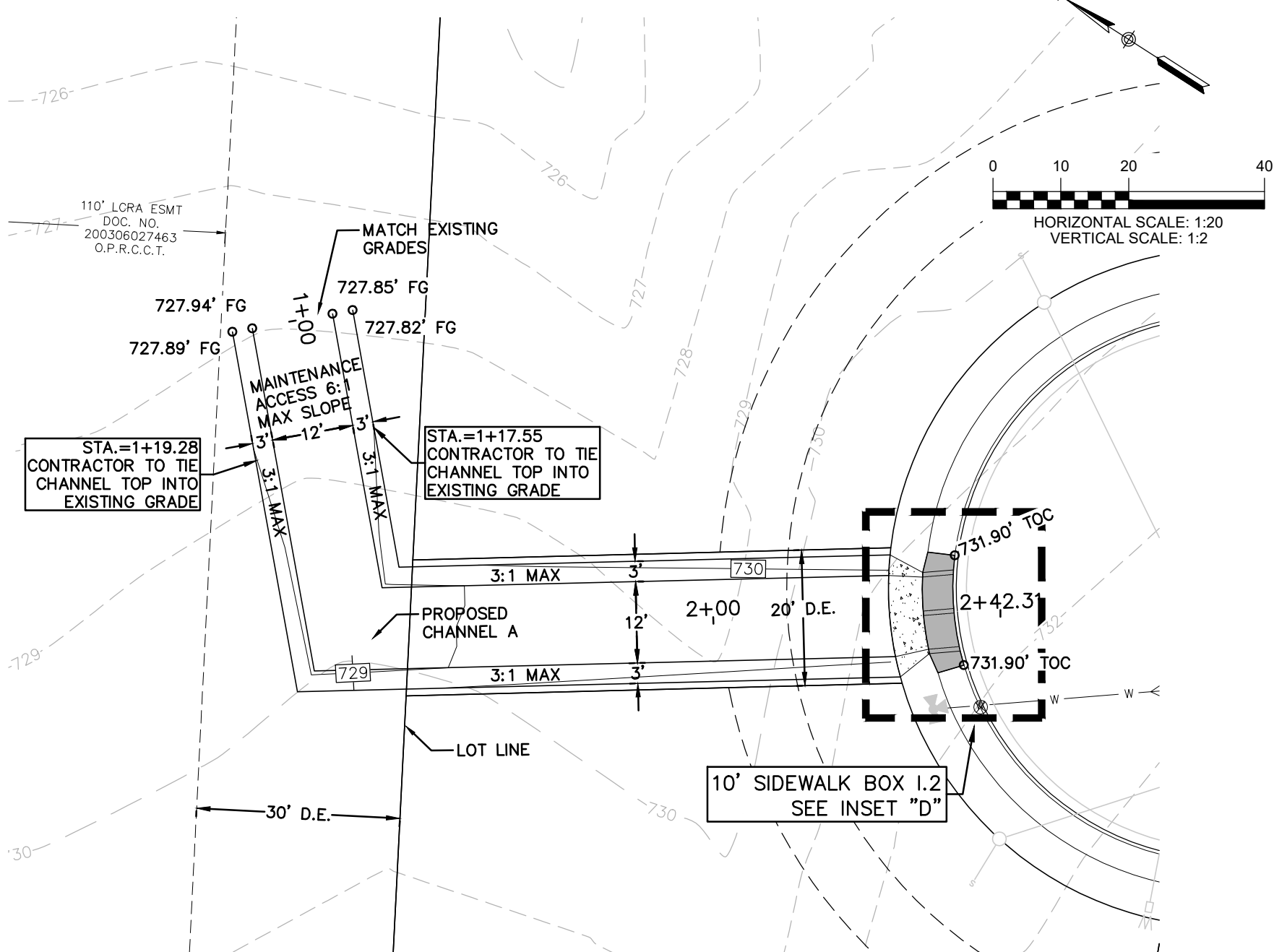
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DATE: APRIL 2020 BY: Chris Van Hecke, P.E.

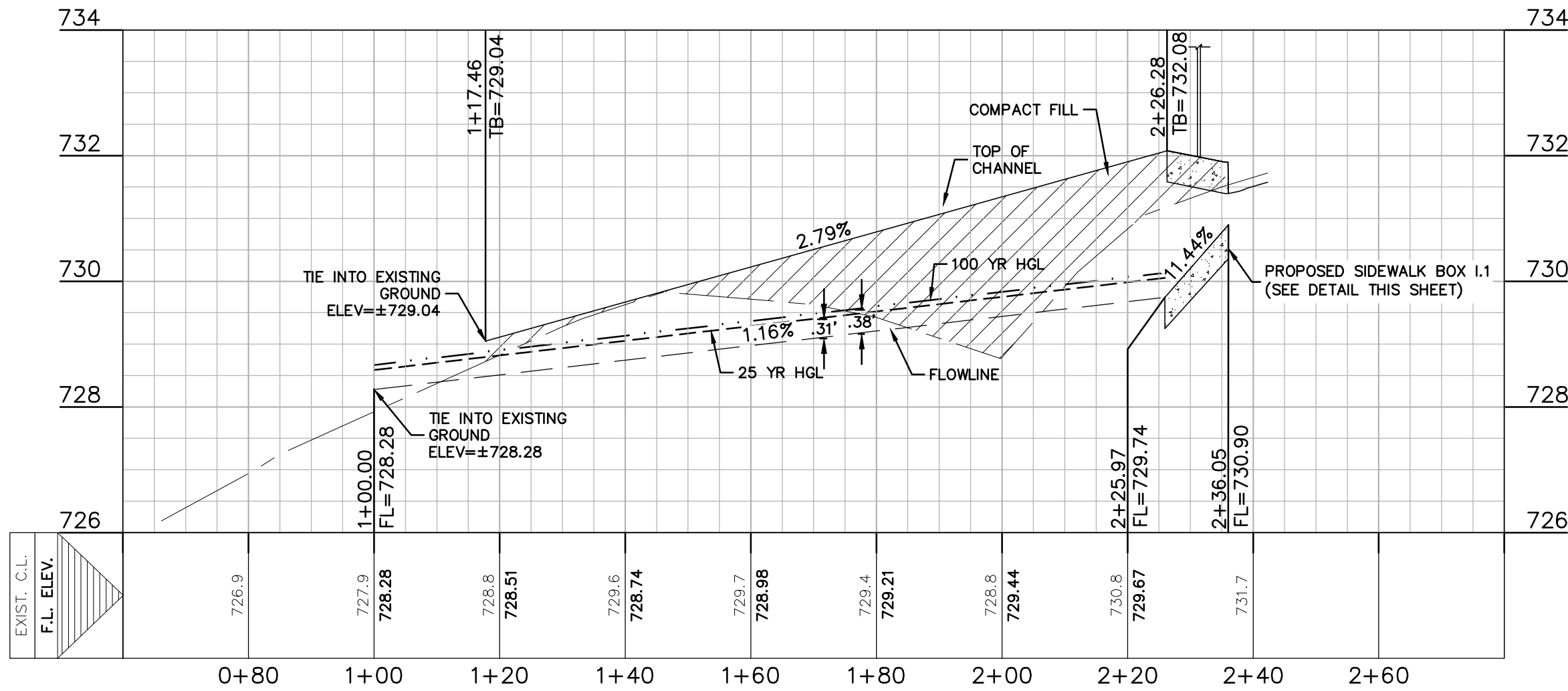
HMT ENGINEERING AND SURVEYING

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.

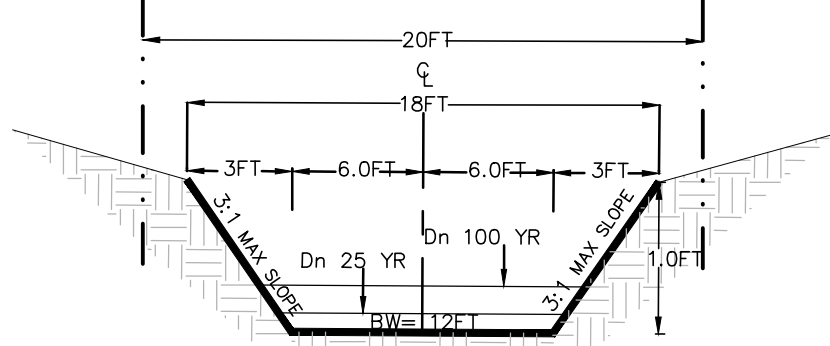


CHANNEL A
Q+60 - 2+80



CHANNEL "A" CALCULATIONS

H= 1.0FT	H= 1.0FT
Q _u = 10.43 cfs	Q _u = 15.36 cfs
BW= 12FT	BW= 12FT
n= 0.03	n= 0.03
S= 1.16%	S= 1.16%
Dn= 0.31FT	Dn= 0.39FT
Vn= 2.59 ft/s	Vn= 2.98 ft/s

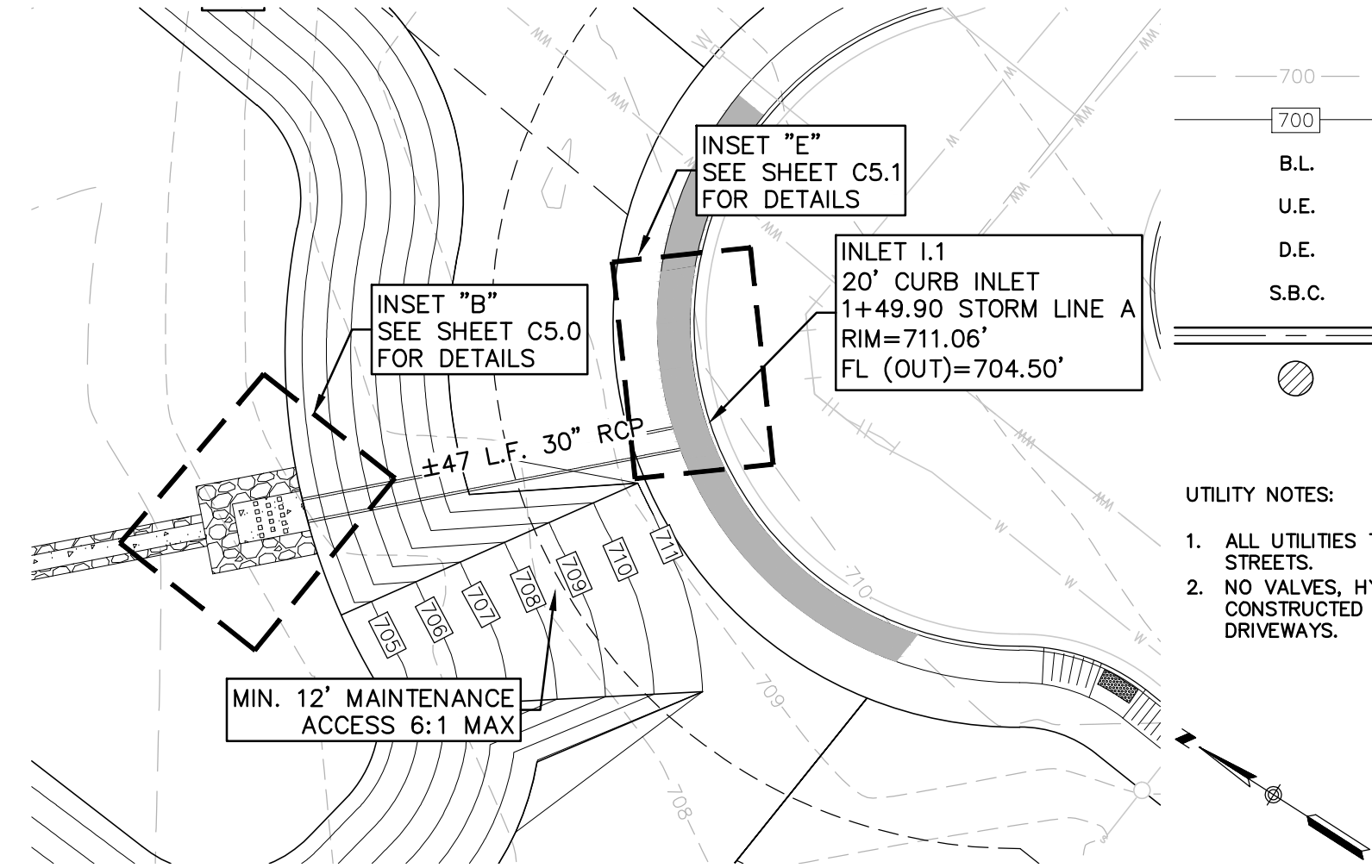


TYPICAL CHANNEL SECTION
N.T.S.

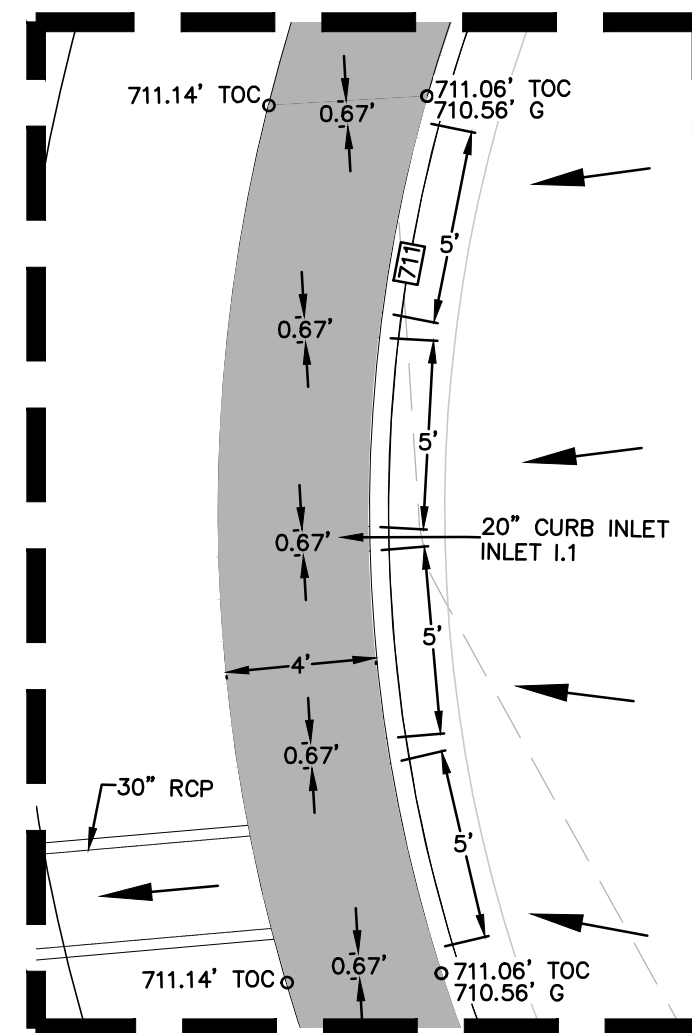
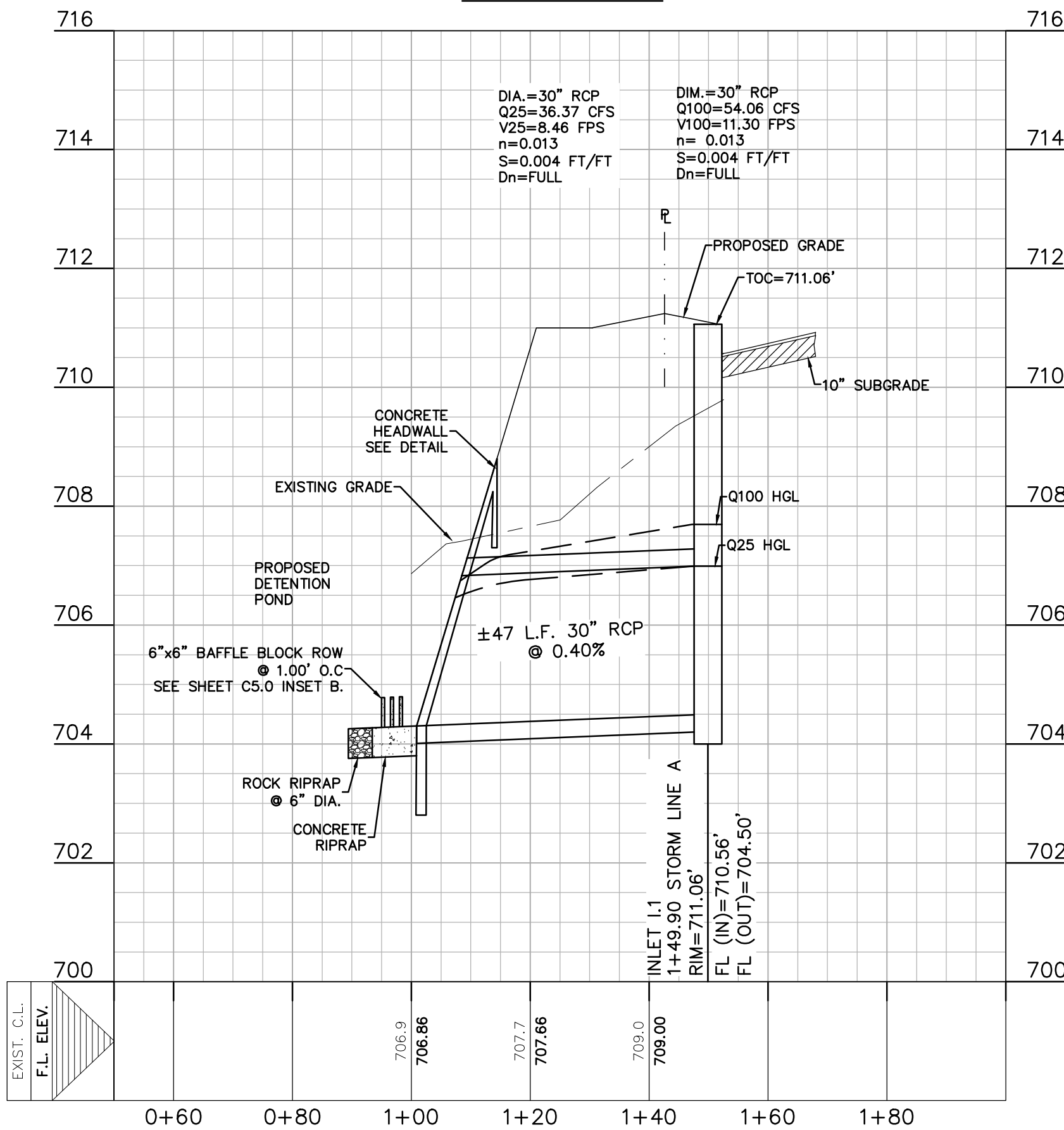
DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

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%.

- TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
- 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).
- STRUCTURAL INTEGRITY OF BASINS SHALL BE MAINTAINED AT ALL TIMES.
- MAINTENANCE VEHICLE FOR POND ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.



STORM LINE A
Q+50 - 2+00



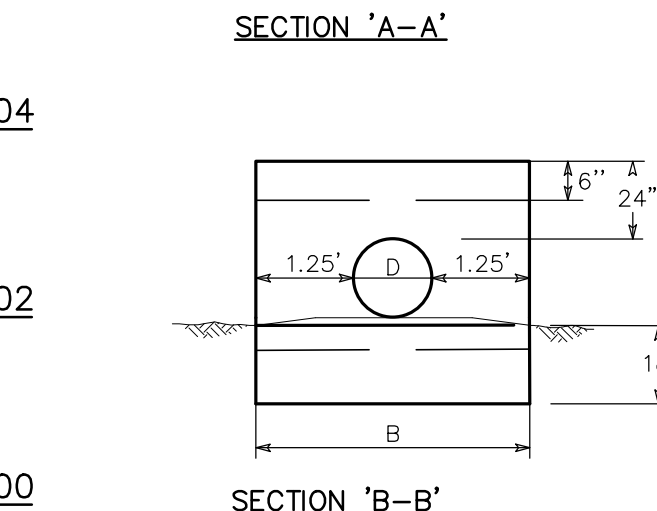
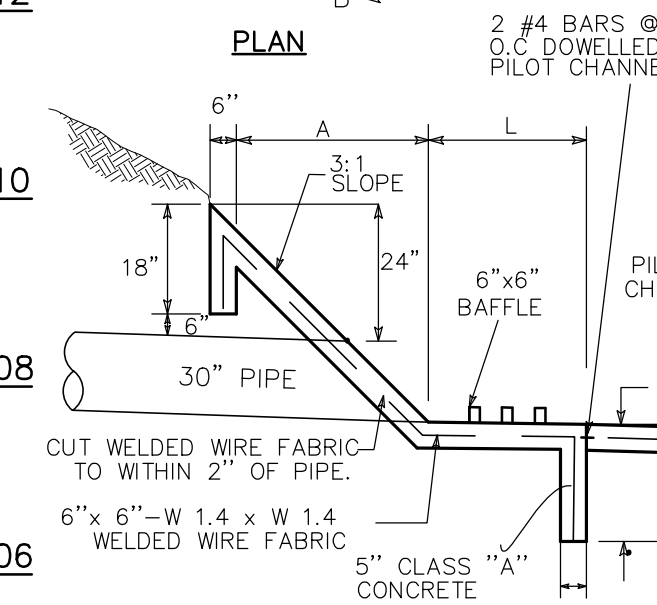
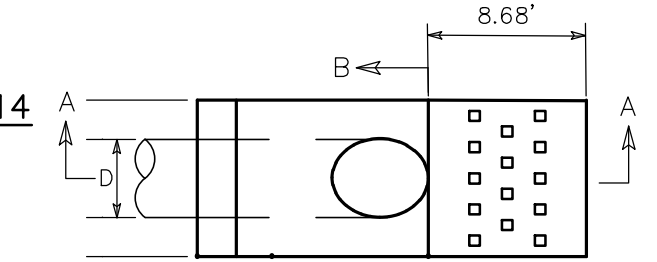
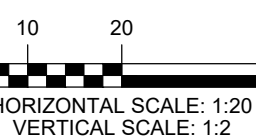
INSET E: CURB INLET I.1
SCALE = 1:5

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

UTILITY NOTES:

- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
- NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.



D	8"	18"	24"	30"
A	5.0'	7.5'	9.0'	13.5'
B	5.0'	5.0'	5.0'	5.0'
L	3.7'	3.7'	3.7'	8.68'

HEADWALL DIMENSIONS

SLOPING CONCRETE HEADWALL

MAINTENANCE SCHEDULE:

- IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO ENSURE PROPER FUNCTION OF THE CHANNELS AND STORM SEWER SYSTEM.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM THE CHANNELS AND STORM SEWERS EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.

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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TBPLS FIRM 10153600

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HECKE
93047
LICENSED PROFESSIONAL ENGINEER
04/23/2020

Chris Van Hecke, P.E.

**CHANNEL A AND STORM LINE A
PLAN & PROFILE**

CLOUD COUNTRY UNIT 5

REVISION DATE	04/2020
REVISION DESCRIPTION	ASBUILTS
NO.	1

DATE: JULY 2018

DRAWN BY: MGM/MZ

DESIGNED BY: MGM/MZ/CC

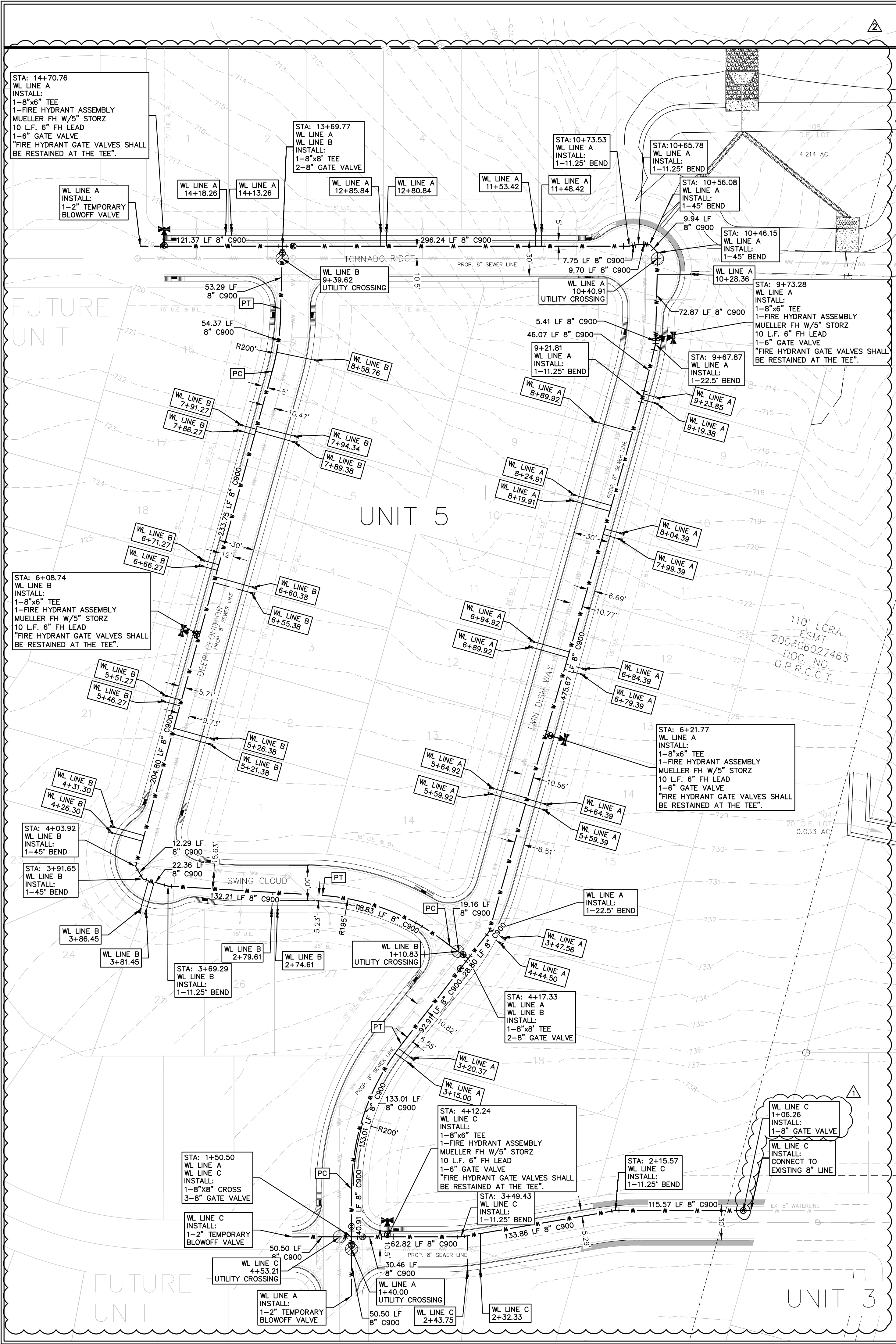
REVIEWED BY: SWH/SCH

HMT PROJECT NO.: 056.009

SHEET
C5.1



Drawing Name: N:_Projects\056 - Mesquite Properties\056.009 - Cloud Country Unit 5\103- Construction Drawings\ASBUILS\NBUSBUILS-WATER.dwg User: Barbora Apr 28, 2020 - 1:17am



MATCHLINE SHEET C6.1

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

New Braunfels Utilities
Time Warner Cable
Centerpoint Gas
Robert Sanders
Damaged Lines
AT&T Telephone
Eric White PM
Scott McCreary (Construction)
Texas One Call

830-629-8400
830-625-3408
830-643-6434
830-643-6903
888-678-5786
830-303-1333
210-283-1708
210-658-4886
830-545-6005

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.

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.

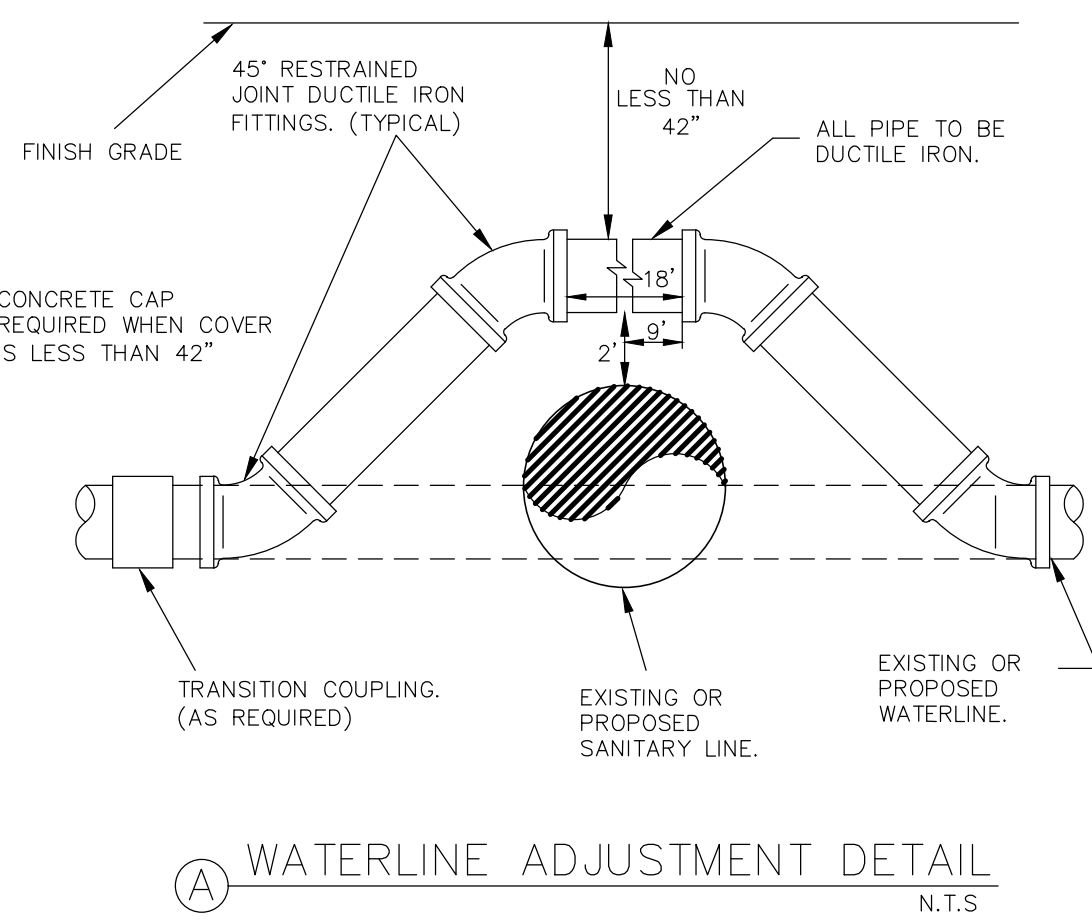
RESTRAINED LENGTH FOR PIPE									
PIPE INSIDE DIAMETER	MATERIAL	HORIZONTAL BENDS				VERTICAL BENDS			
		90°	45°	22.5°	11.25°	UPPER	LOWER	22.5°	11.25°
8"	PVC	29	13	6	3	34	16	8	4
8"	DUCTILE IRON	25	10	5	3	22	11	6	4
12"	PVC	41	17	9	4	47	23	12	6

TEE			
PIPE INSIDE DIAMETER OF RUN	PIPE INSIDE DIAMETER OF BRANCH	MATERIAL	FT.
8"	8"	PVC	70
8"	8"	DUCTILE IRON	45
12"	8"	PVC	64

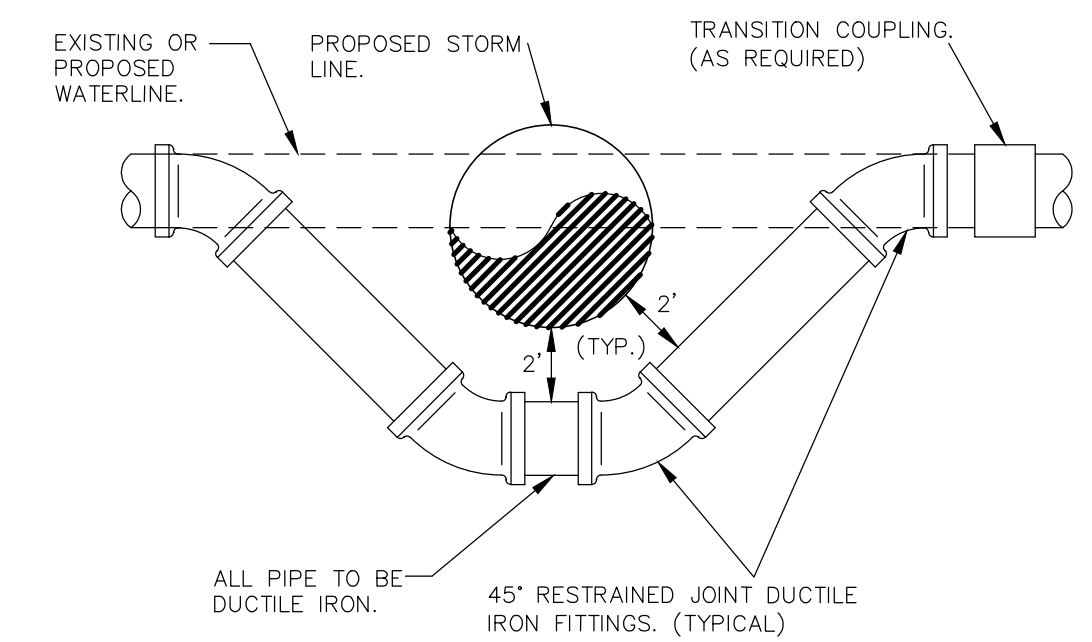
NOTES:

LENGTHS SHOWN ABOVE WERE COMPUTED BASED ON THE FOLLOWING VALUES:

- 1) SAFETY FACTOR = 1.5 TO 1
- 2) TEST PRESSURE = 200psi
- 3) SOIL DESIGNATION = MANUFACTURED SAND
- 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



A WATERLINE ADJUSTMENT DETAIL
N.T.S.



B WATERLINE ADJUSTMENT DETAIL
N.T.S.

LEGEND	
700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
W	EXISTING WATER LINE
W	PROPOSED WATER LINE
W	PROPOSED WATER SERVICE
W	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.

RECORD DRAWING

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DATE: APRIL 2020 BY: Chris Van Heerde, P.E.

HMT ENGINEERING AND SURVEYING

WATER STRUCTURE TOTALS					
PIPE SIZE	PIPE LENGTH	DOMESTIC METER SIZE	DOMESTIC METERS	FIRE HYDRANTS	FIRE LINES
8"	5016.26'	5/8"	47	5	0

RESTRAINED LENGTH NOTES:

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

CONSTRUCTION NOTES:

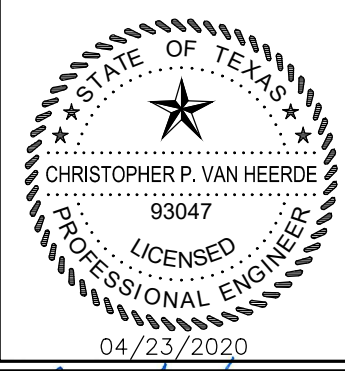
1. ALL WATER MAINS SHALL BE AWWA C900 (GLASS 150 OR GREATER).
2. WATER SERVICES SHALL BE SINGLE 1" COPPER TUBING.
3. WATER LINE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE NBU SYSTEMS CONNECTION & CONSTRUCTION POLICY.
4. WATER MAIN SHALL HAVE A MINIMUM OF 48 INCHES OF COVER, OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED.
5. EACH UNIT IN A DUPLEX, TRIPLEX, FOURPLEX, OR CONDOMINIUM SHALL BE PROVIDED WITH AN INDIVIDUAL WATER METER. A MASTER METER CAN BE CONSIDERED FOR SEPARATE BUILDINGS, HOWEVER, THOSE BUILDINGS MUST BE PLUMBED TO ALLOW SEPARATE METERS FOR FUTURE CONSIDERATION.
6. CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
7. INITIAL BACKFILL OF WATER LINES SHALL BE MANUFACTURED SAND OR PEA GRAVEL AS PER NBU SYSTEMS CONNECTION & CONSTRUCTION POLICY.
8. SECONDARY BACKFILL OF WATER LINES SHALL GENERALLY CONSIST OF MATERIAL REMOVED FROM THE TRENCH AND SHALL BE FREE FROM BRUSH, DEBRIS AND TRASH OR STONES HAVING ANY DIMENSION LARGER THAN 6" INCHES AT THE LARGEST DIMENSION.
9. HYDROSTATIC TESTING IS DONE FROM VALVE TO VALVE.
10. NO METER BOXES TO BE SET IN DRIVEWAYS OR SIDEWALKS. ANY METER BOXES SET IN DRIVEWAYS OR SIDEWALKS WILL BE RELOCATED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
11. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
12. METER BOXES MUST BE SET AT THE PROPOSED GRADE. ANY METER BOXES THAT ARE NOT SET AT THE FINAL GRADE WILL BE ADJUSTED AT CONTRACTOR'S AND/OR DEVELOPER'S EXPENSE.
13. ACCEPTABLE METER BOXES ARE D13-BAMR AND D15-BAMR. NEW RESIDENTIAL LOTS ARE REQUIRED TO USE THE D15-BAMR METER BOXES (DOUBLE AIR). COMMERCIAL LOTS SHOULD CHOOSE WHICH BOX APPLIES TO THE DOMESTIC AND/OR IRRIGATION METER LAYOUT.
14. THRUST BLOCKS WILL NOT BE ALLOWED ON THE SYSTEM WITHOUT SPECIAL APPROVAL. JOINTS WILL BE RESTRAINED WITH RESTRAINING SYSTEMS APPROVED BY NBU AND RESTRAINT LENGTH SHALL BE SUBMITTED TO NBU AT THE TIME OF PLAN SUBMITTAL.
15. CONTRACTOR SHALL PLACE TRACER WIRE ON TOP OF THE WATER MAINS. TRACER WIRE SHOULD RUN FROM VALVE TO VALVE AND EXIT AT THE VALVE BOX. THE TRACER WIRE SHOULD BE ATTACHED TO THE TOP OF THE PIPE USING TAPE. EXCESS WIRE SHOULD BE LEFT WITHIN VALVE BOXES TO BE PLACED WITHIN LID OF COVER.
16. ALL VALVES, HYDRANTS, AND METERS ARE SHOWN SCHEMATICALLY AND SHALL BE INSTALLED ACCORDING TO THE DETAILS.

REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

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HMTNB.COM
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T(830)625-10961
T(830)625-101360

HMT
ENGINEERING & SURVEYING



Chris Van Heerde, P.E.

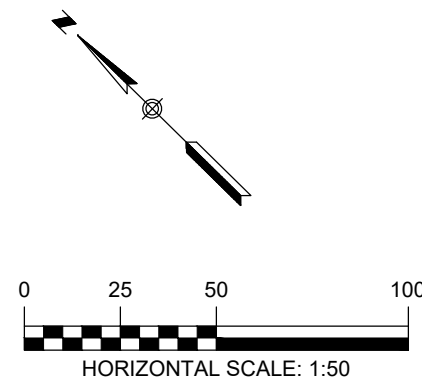
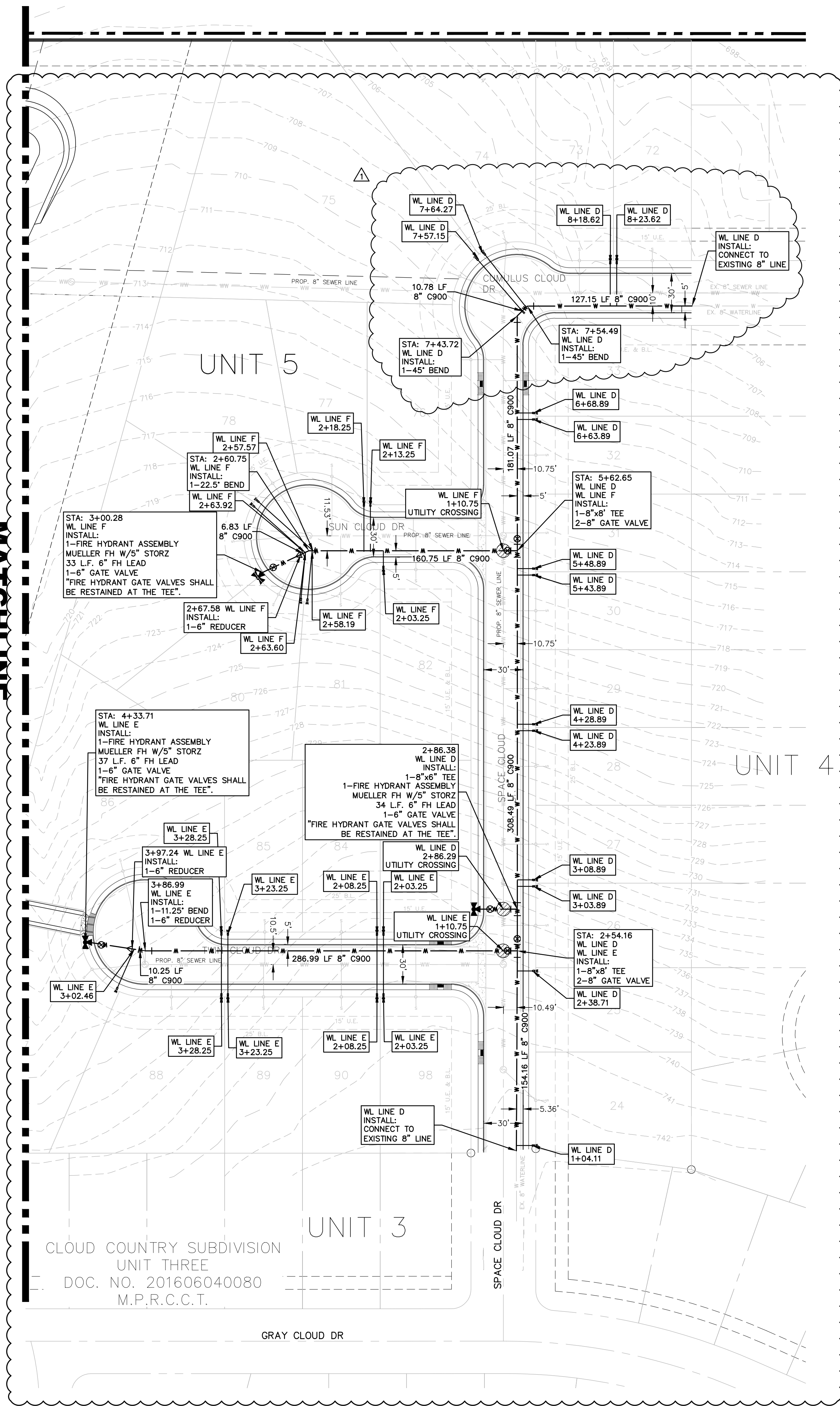
OVERALL WATER PLAN (SHT 1)

CLOUD COUNTRY UNIT 5

REVISION		DATE	
NO.	DESCRIPTION	DATE	BY
1	8" GATE VALVE ADDITION	09/18/2019	ASBUILS
2	ASBUILS	04/2020	
DATE: JULY 2018			
DRAWN BY: MGM/MZ			
DESIGNED BY: MGM/MZ/CC			
REVIEWED BY: SWH/SCH			
HMT PROJECT NO.: 056.009			

**SHEET
C6.0**

MATCHLINE
SHEET C6.0



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

New Braunfels Utilities	830-629-8400
Time Warner Cable	830-625-3408
Centerpoint Gas	830-643-6434
Robert Sonders	830-643-8903
Damaged Lines	888-876-5786
AT&T Telephone	830-303-1333
Eric White PM	210-283-1706
Scott McBrearty (Construction)	210-658-4886
Texas One Call	830-545-6005

C.P.E. LOCATOR

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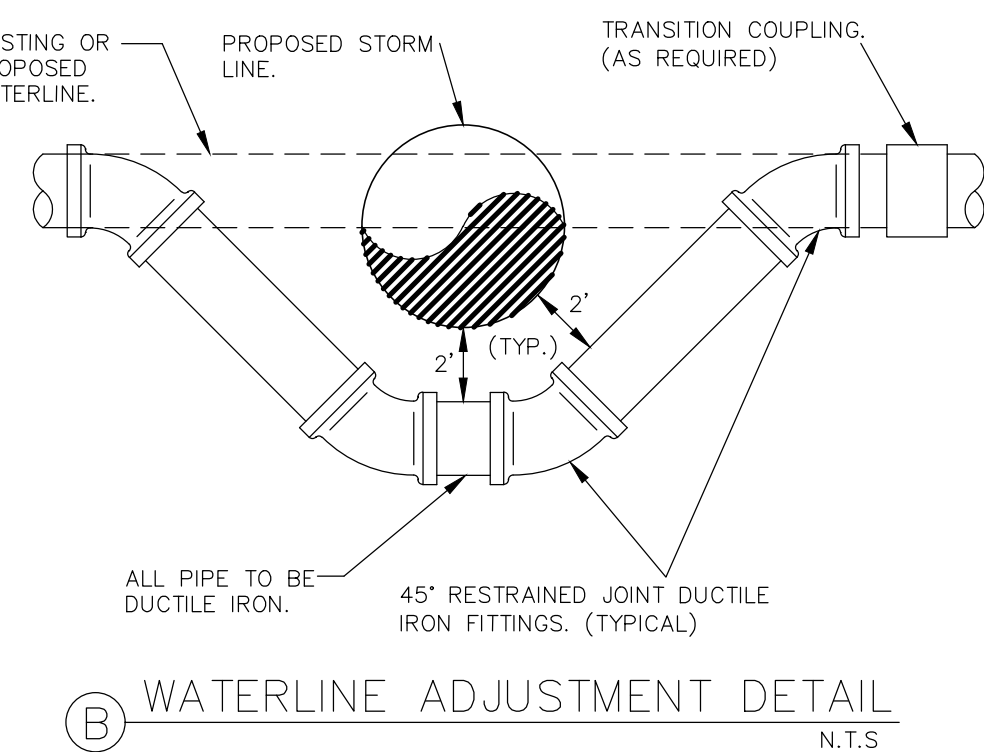
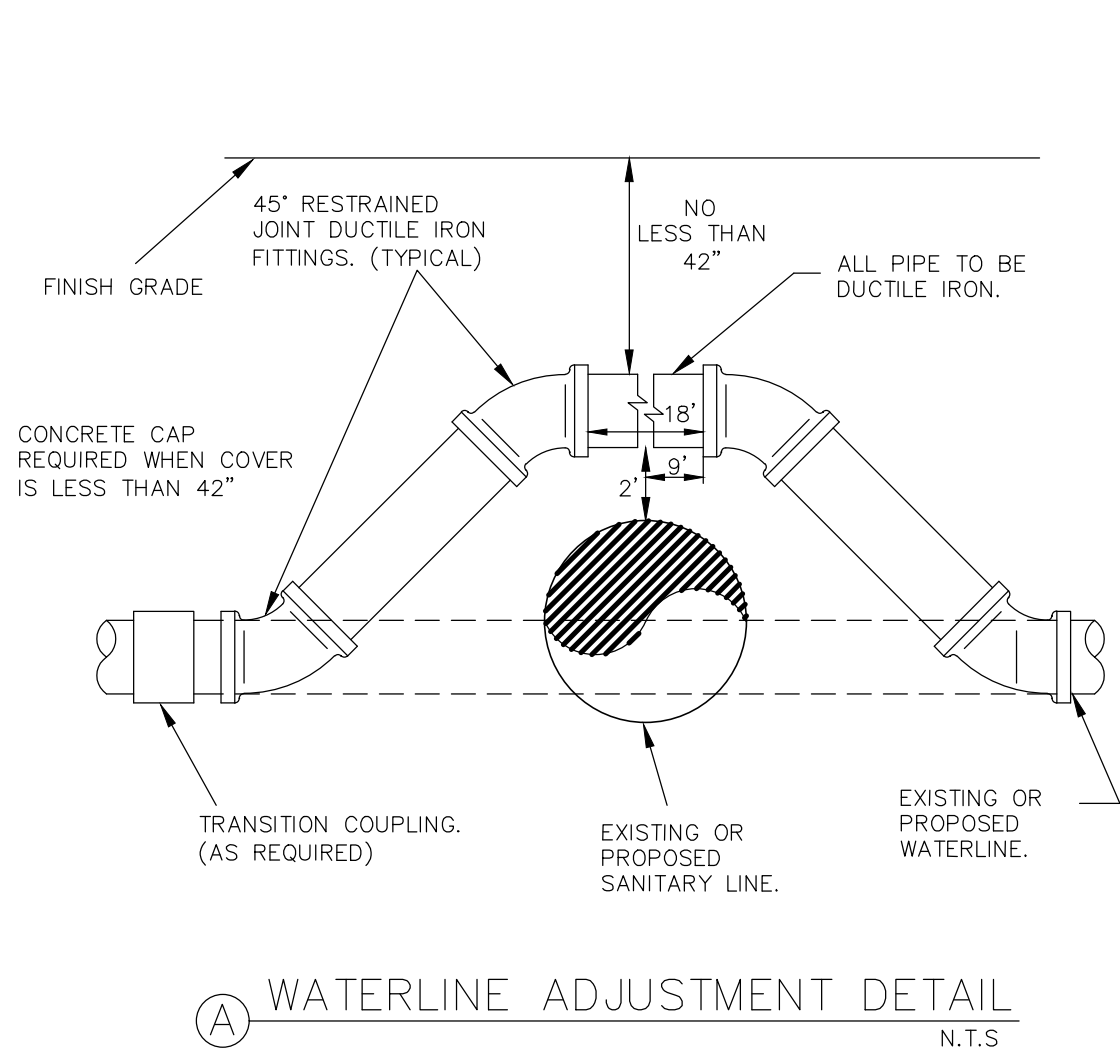
RESTRAINED LENGTH FOR PIPE									
PIPE INSIDE DIAMETER	MATERIAL	HORIZONTAL BENDS				VERTICAL BENDS			
		90°	45°	22.5°	11.25°	UPPER	22.5°	45°	LOWER
8"	PVC	29	13	6	3	34	16	8	4
8"	DUCTILE IRON	25	10	5	3	22	11	6	4
12"	PVC	41	17	9	4	47	23	12	6

TEE			
PIPE INSIDE DIAMETER OF RUN	PIPE INSIDE DIAMETER OF BRANCH	MATERIAL	FT.
8"	8"	PVC	70
8"	8"	DUCTILE IRON	45
12"	8"	PVC	64

NOTES:

LENGTHS SHOWN ABOVE WERE COMPUTED BASED ON THE FOLLOWING VALUES:

- SAFETY FACTOR = 1.5 TO 1
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- SOIL DESIGNATION = MANUFACTURED SAND
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LEGEND	
700	EXISTING CONTOURS
700	PROPOSED CONTOURS
B.L.	BUILDING SETBACK LINE
U.E.	UTILITY EASEMENT
D.E.	DRAINAGE EASEMENT
W	EXISTING WATER LINE
W	PROPOSED WATER LINE
W	PROPOSED WATER SERVICE
	UTILITY CROSSING

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DATE: APRIL 2020 BY: Chris Van Heerde, P.E.

HMT ENGINEERING AND SURVEYING

WATER STRUCTURE TOTALS					
PIPE SIZE	PIPE LENGTH	DOMESTIC METER SIZE	DOMESTIC METERS	FIRE HYDRANTS	FIRE LINES
8"	1325.55'	5/8"	30	2	0

RESTRAINED LENGTH NOTES:

- CONTRACTOR TO COORDINATE WITH NEW BRAUNFELS UTILITIES (N.B.U.) FOR WATER, SEWER, AND ELECTRIC SERVICE TO THE SITE.
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- RL=RESTRAINT LENGTH
- CONTRACTOR SHALL DETERMINE RESTRAINT LENGTH REQUIRED FOR HORIZONTAL VERTICAL FITTINGS BASED ON RESTRAINT LENGTH TABLE SHOWN BELOW.

CONSTRUCTION NOTES:

- ALL WATER MAINS SHALL BE AWWA C900 (GLASS 150 OR GREATER).
- WATER SERVICES SHALL BE SINGLE 1" COPPER TUBING.
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Chris Van Heerde, P.E.

OVERALL WATER
PLAN (SHT 2)

CLOUD COUNTRY UNIT 5

NO.	REVISION	DATE
1	WATER LINE CHANGES	08/19/2019
2	ASBUILTS	04/2020

DATE: JULY 2018

DRAWN BY: MGM/MZ

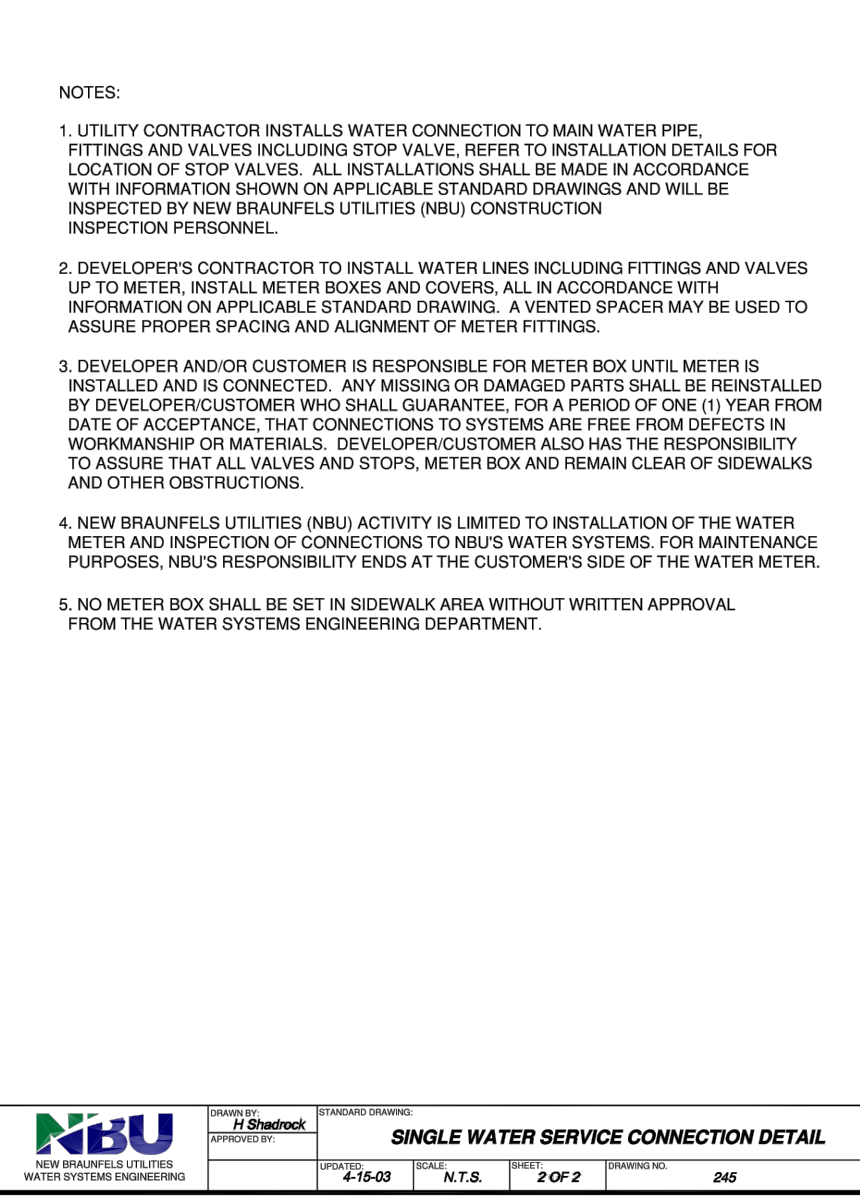
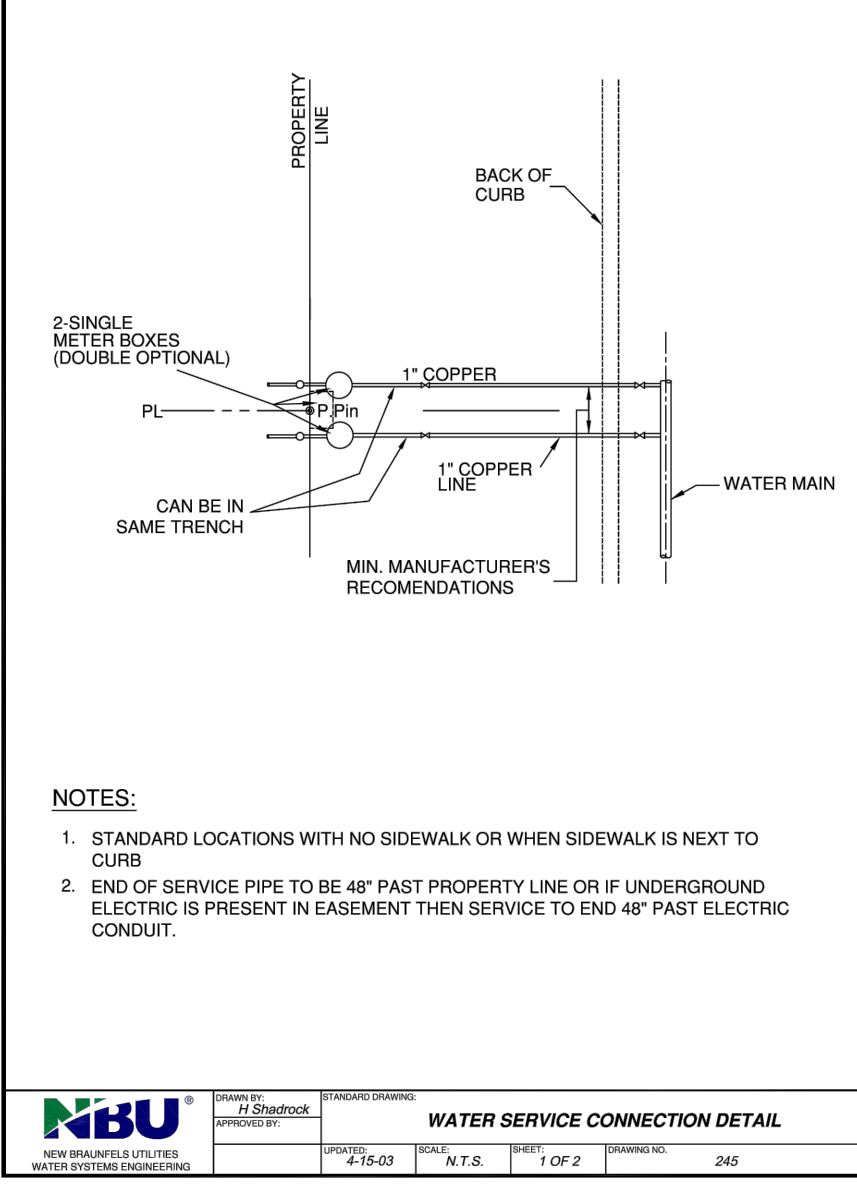
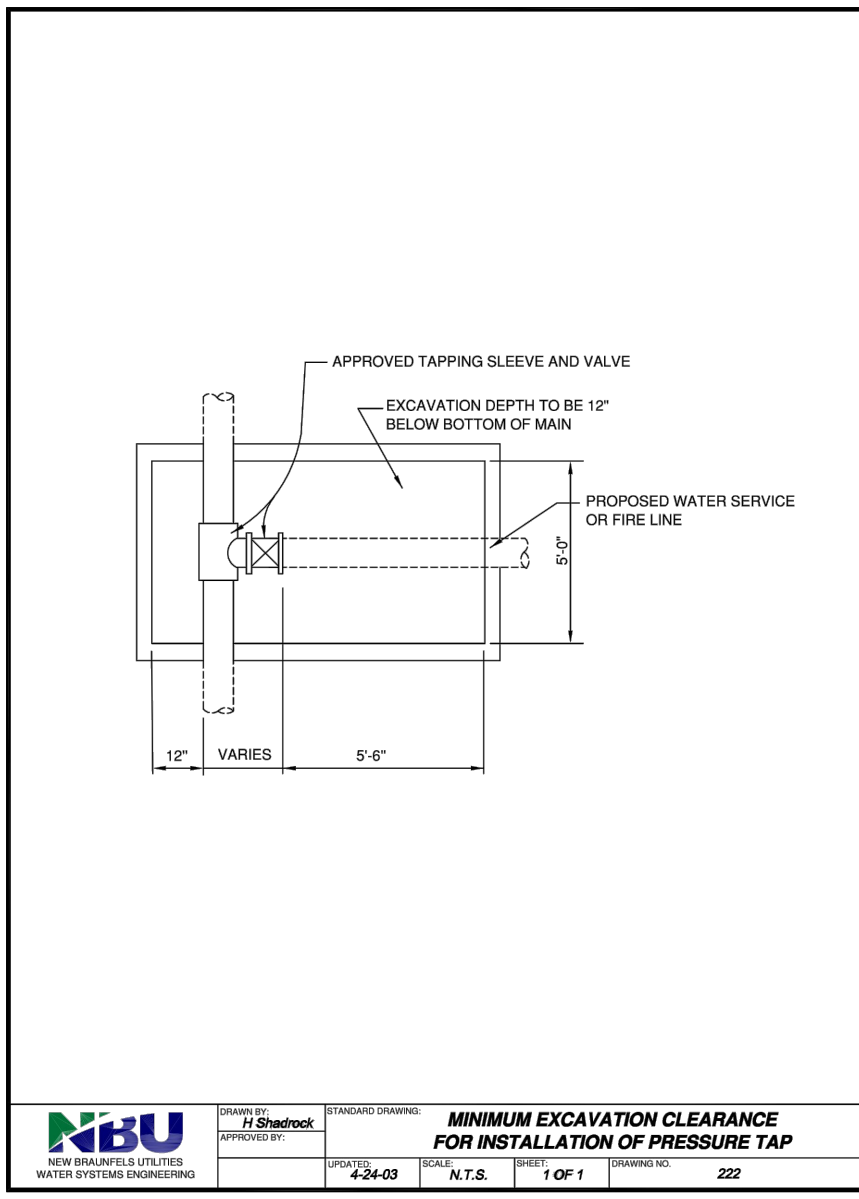
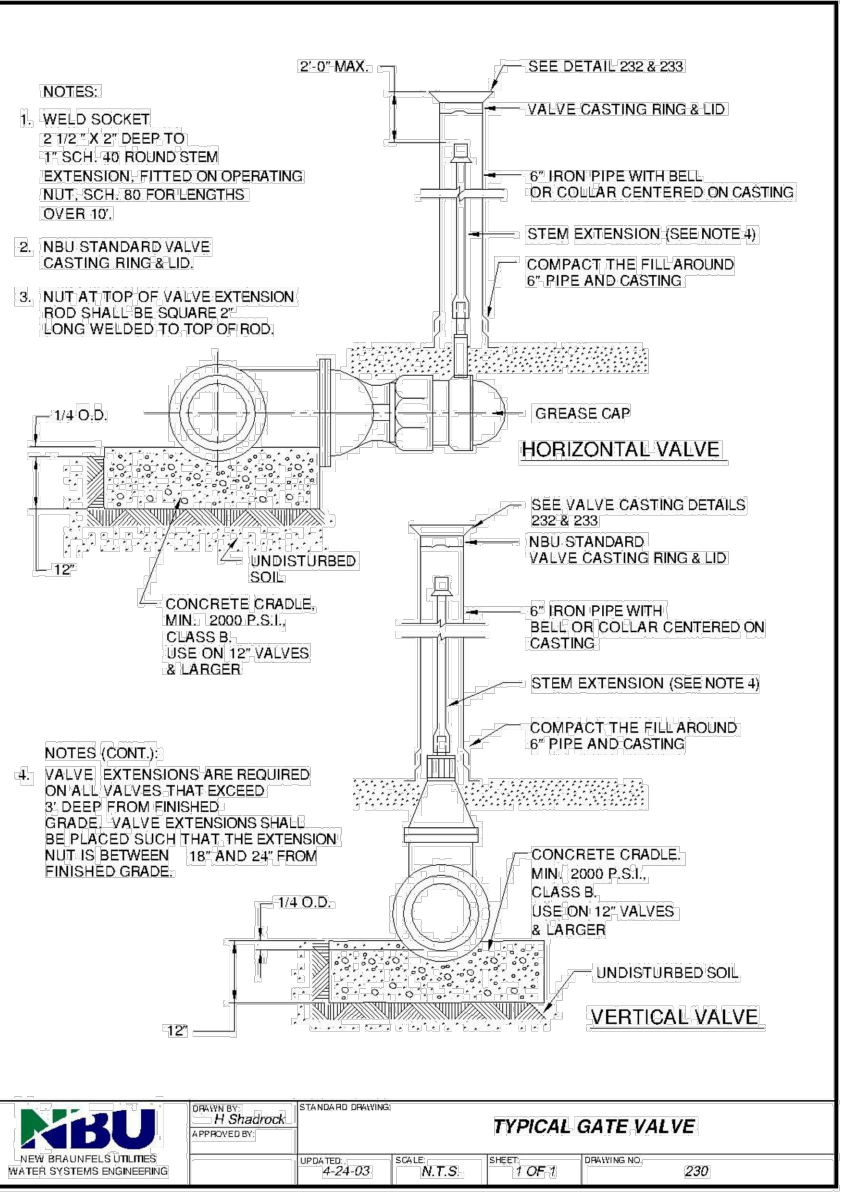
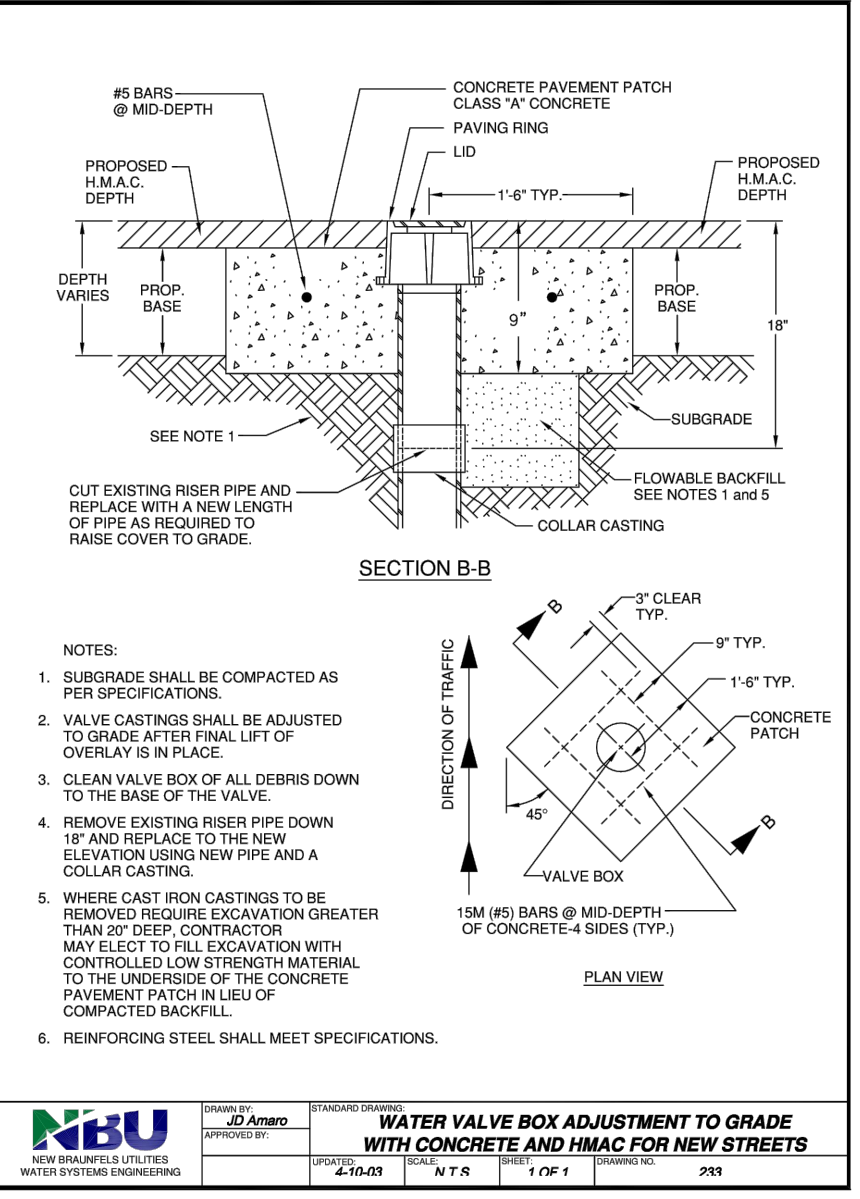
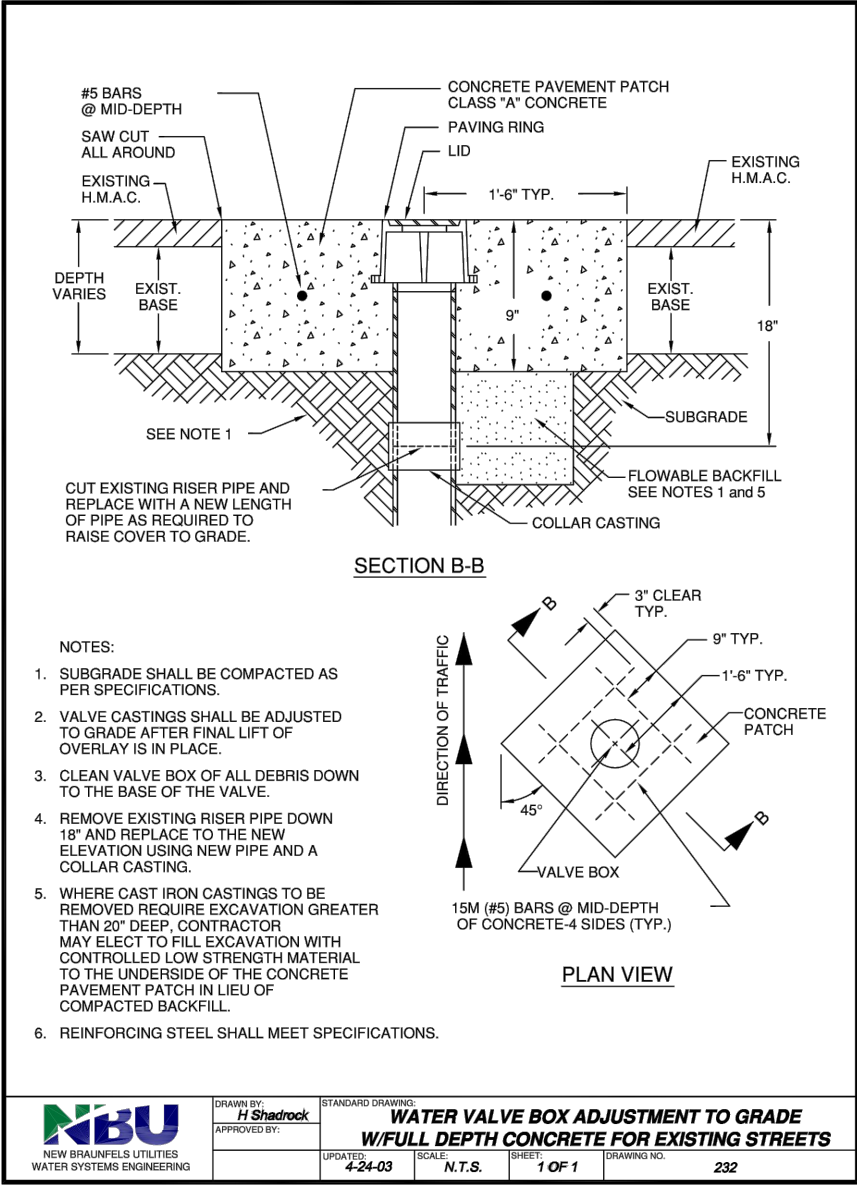
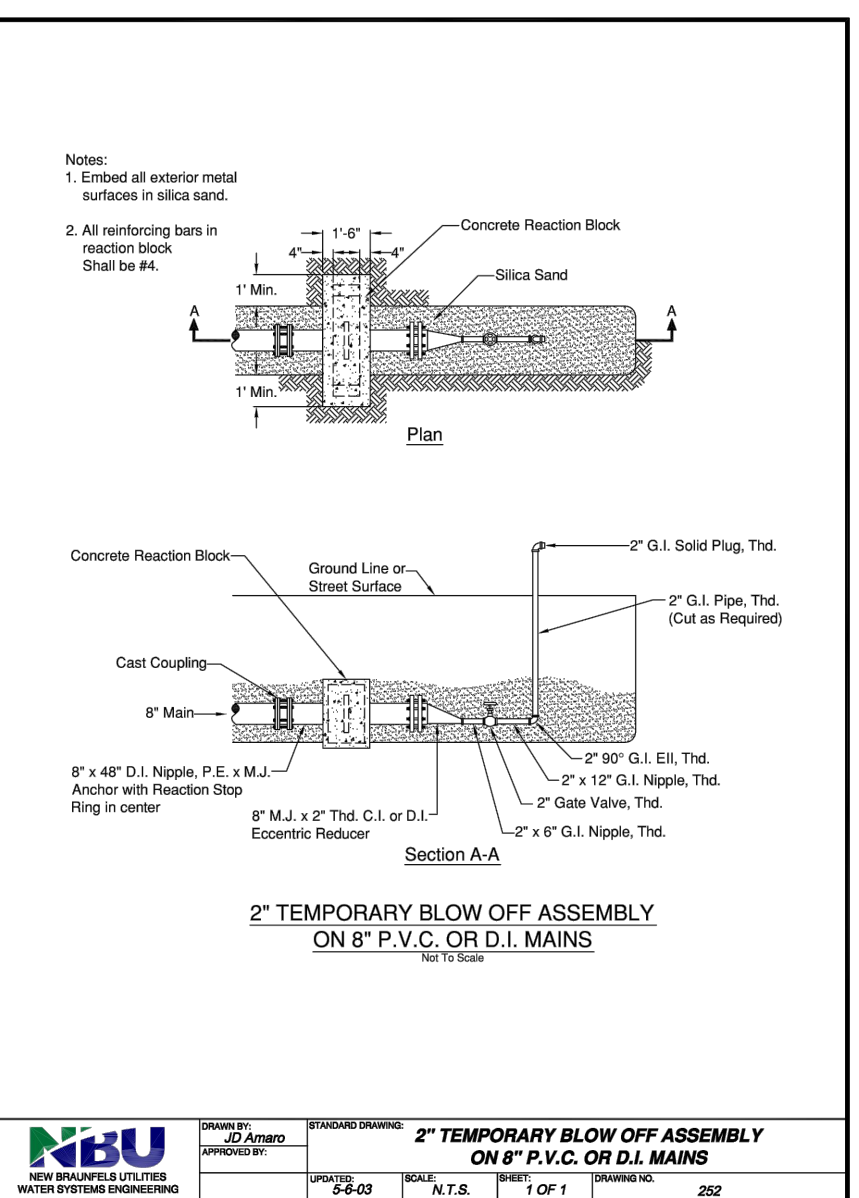
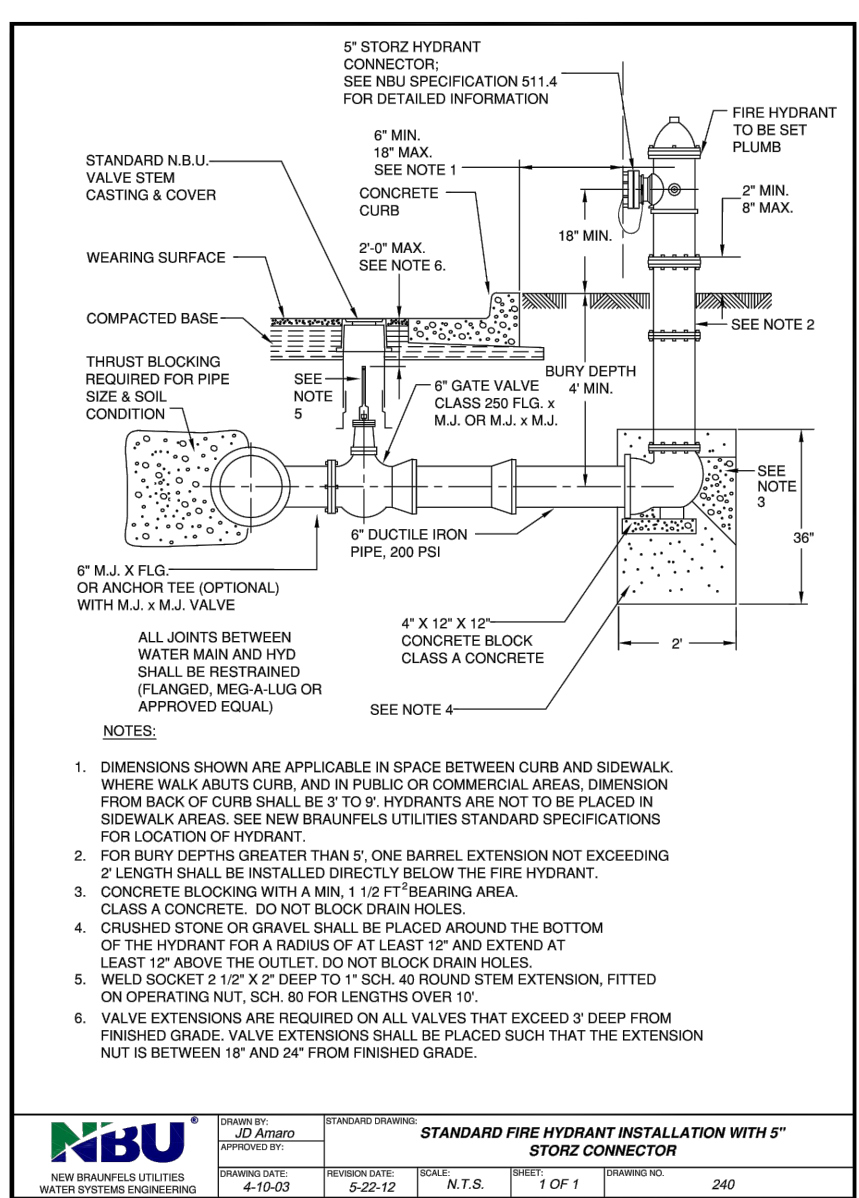
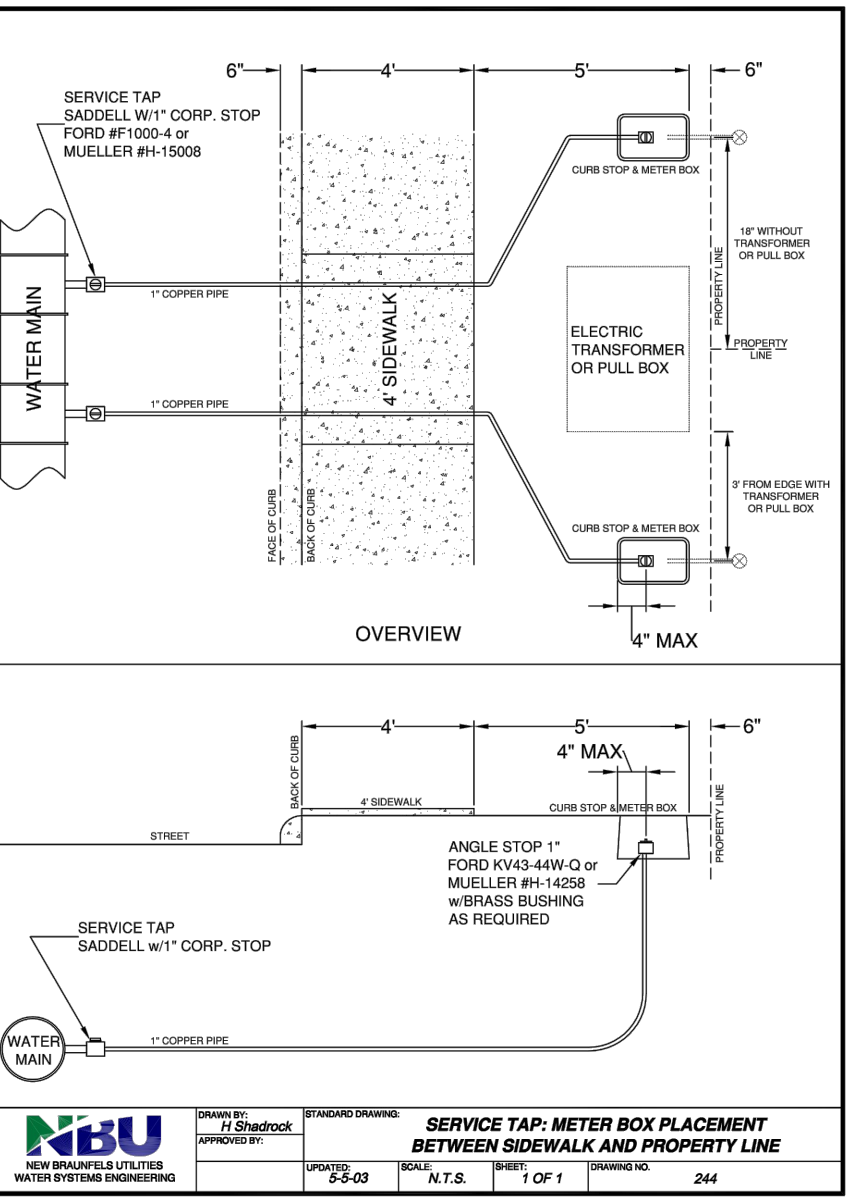
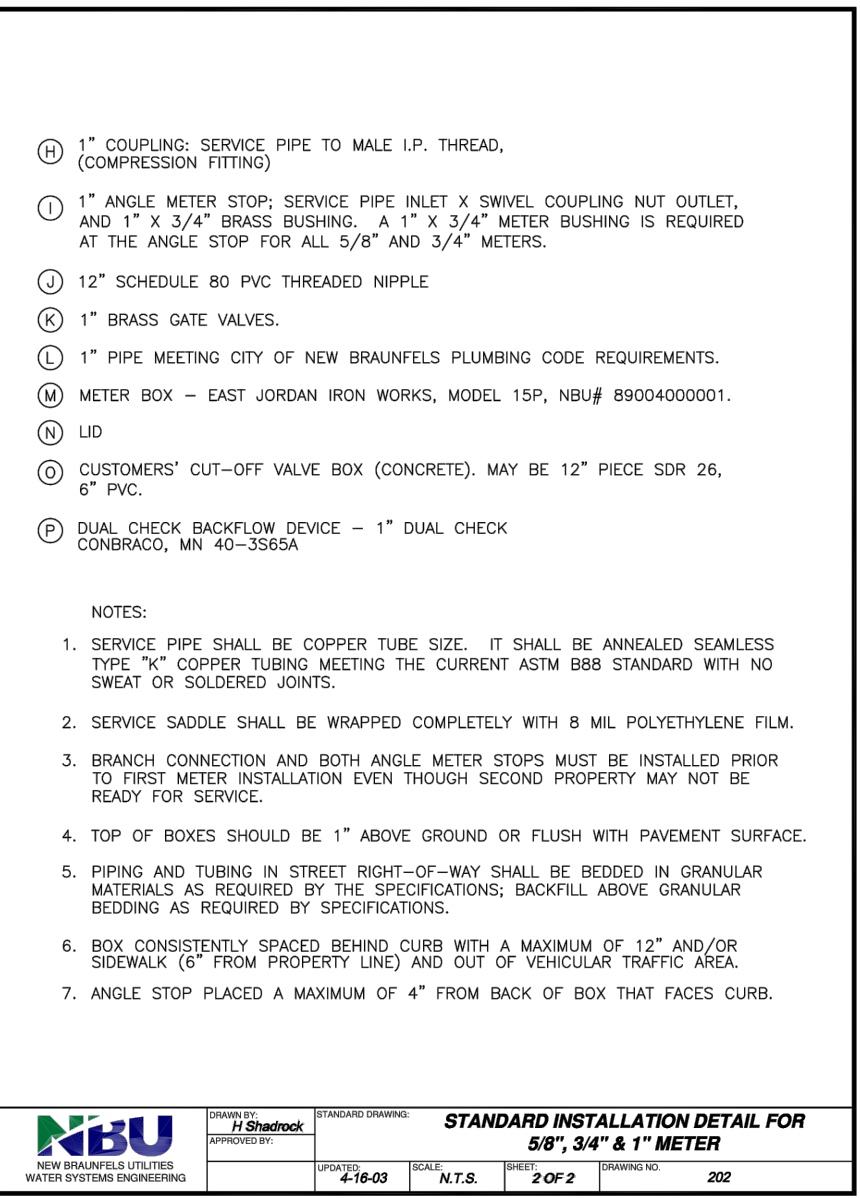
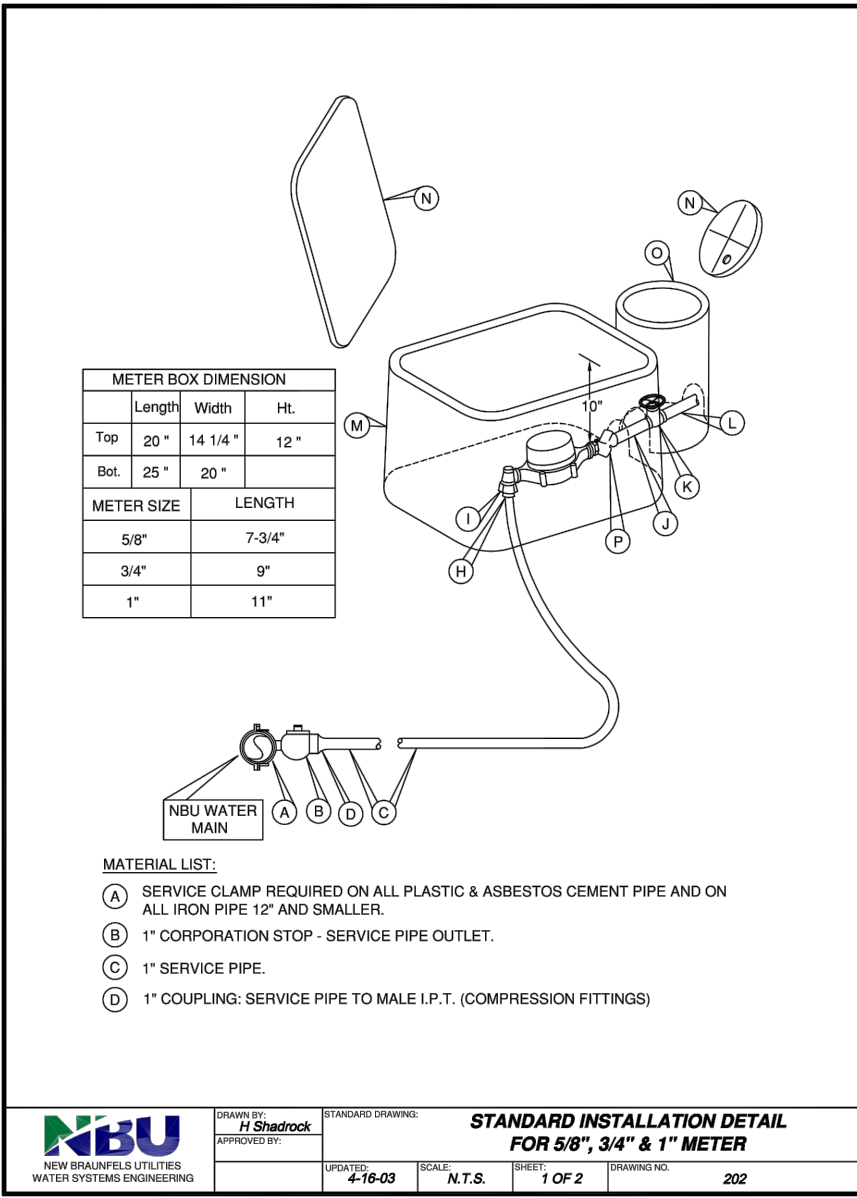
DESIGNED BY: MGM/MZ/JC

REVIEWED BY: SWH/SCB

HMT PROJECT NO.:

056.009

SHEET
C6.1



- UTILITY NOTES:
- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
 - NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.

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Chris Van Heerde, P.E.

WATER DETAILS

CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION	DATE
1	ASBUILTS		04/2020

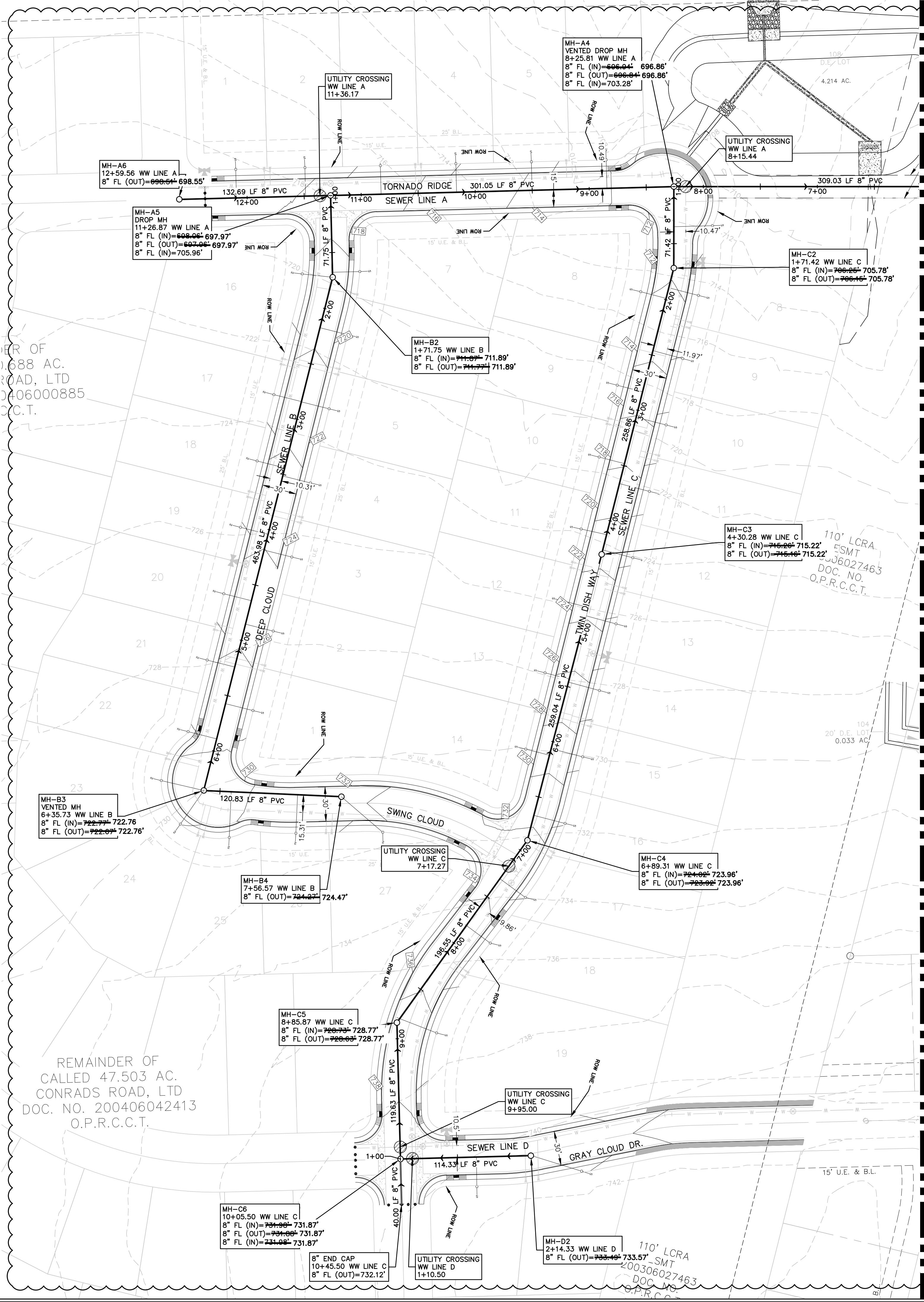
DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

SHEET
C6.2

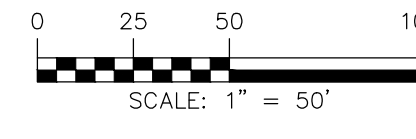
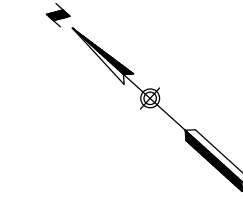
RECORD DRAWING

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DATE: APRIL 2020 BY: Chris Van Heerde, P.E.
HMT ENGINEERING AND SURVEYING



MATCHLINE
SHEET C7.1



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L.
- UTILITY EASEMENT
- DRAINAGE EASEMENT
- EXISTING WASTEWATER LINE
- PROPOSED WASTEWATER LINE
- PROPOSED WASTEWATER SERVICE
- UTILITY CROSSING

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TRENCH EXCAVATION SAFETY PROTECTION

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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.

DEEP TRENCH COMPACTION TESTING

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- ALL MANHOLES SHALL BE 48" DIAMETER.
- ALL RING AND COVER SHALL BE 32" DIAMETER.
- EXISTING MANHOLES, RIM AND FLOWLINE ELEVATIONS SURVEYED BY HMT ENGINEERING & SURVEYING DATED DECEMBER 01, 2017.
- AN INSPECTOR MUST BE ONSITE FOR CONSTRUCTION ACTIVITIES ON ALL SEWER LINES INSTALLED WITH A DEPTH GREATER THAN 15FT. IF AN INSPECTOR IS NOT ONSITE, ALL LINE INSTALLED MUST BE UNCOVERED FOR INSPECTION AT THE CONTRACTORS SOLE EXPENSE.

WASTEWATER STRUCTURE TOTALS				
PIPE SIZE	TOTAL PIPE LENGTH	LATERAL SIZE	NUMBER OF LATERALS	MANHOLES
8"	2459.16'	6"	47	12



RECORD DRAWING

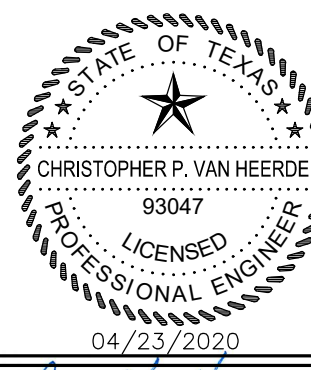
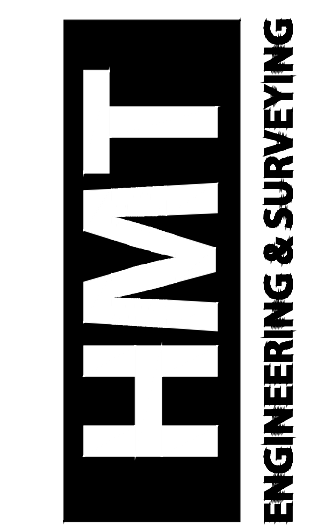
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DATE: APRIL 2020 BY: *Chris Van Hecke, P.E.*

HMT ENGINEERING AND SURVEYING

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Chris Van Hecke, P.E.

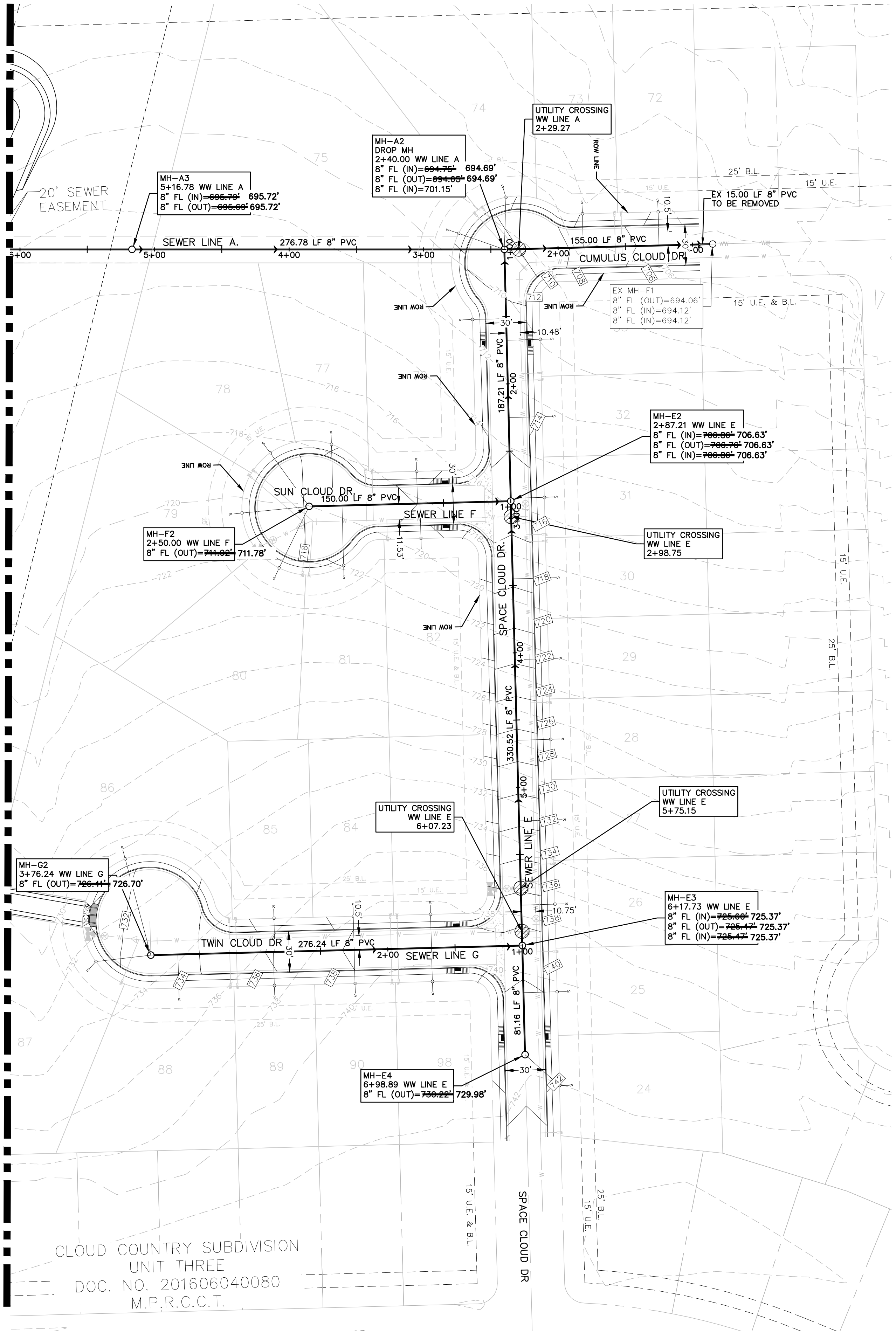
OVERALL
WASTEWATER PLAN
(SHT 1)
CLOUD COUNTRY UNIT 5

REVISION DATE	04/2020
REVISION DESCRIPTION	ASBUILTS
NO.	1

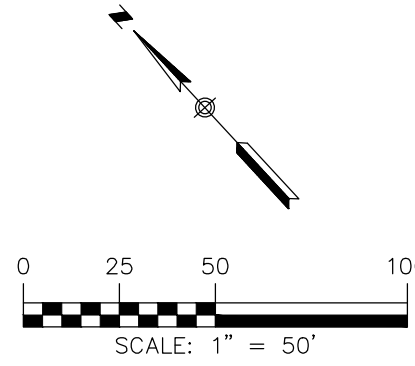
DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

SHEET
C7.0

MATCHLINE
SHEET C7.0



CLOUD COUNTRY SUBDIVISION
UNIT THREE
DOC. NO. 201606040080
M.P.R.C.C.T.



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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WASTEWATER STRUCTURE TOTALS				
PIPE SIZE	TOTAL PIPE LENGTH	LATERAL SIZE	NUMBER OF LATERALS	MANHOLES
8"	1456'	6"	30	7



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DATE: APRIL 2020 BY: *Chris Van Hecke, P.E.*
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Chris Van Hecke, P.E.

OVERALL
WASTEWATER PLAN
(SHT 2)
CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE
1	ASBUILTS	04/2020

DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

SHEET
C7.1

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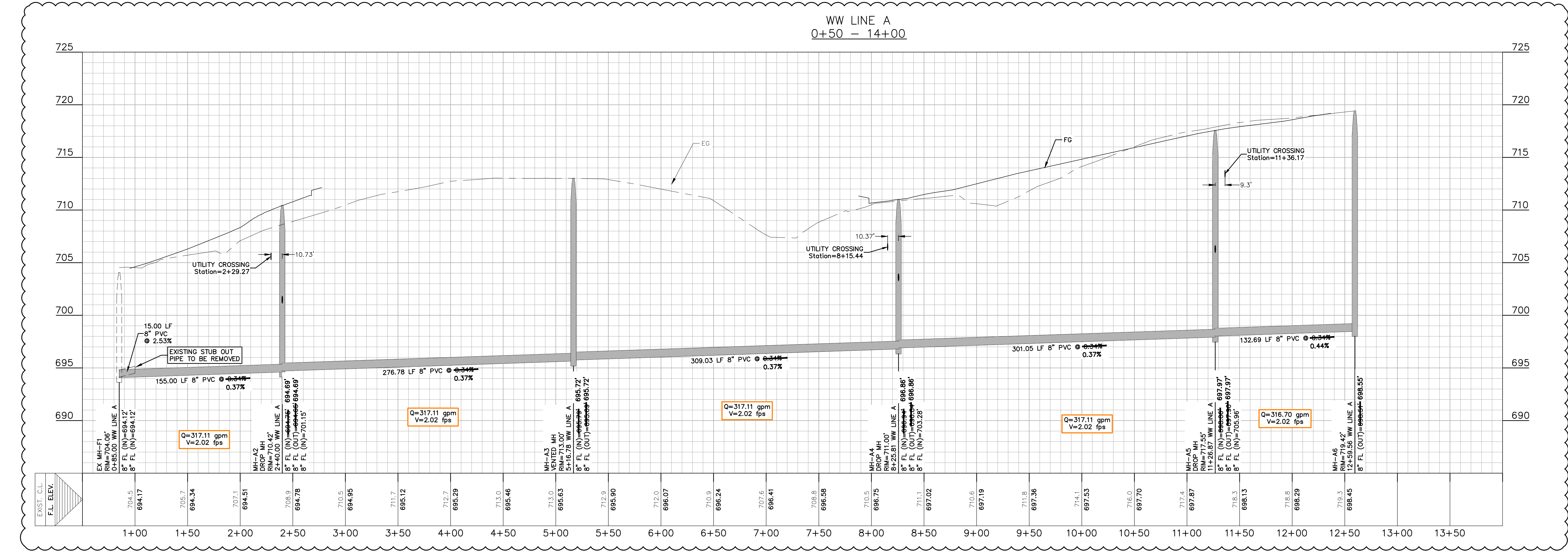
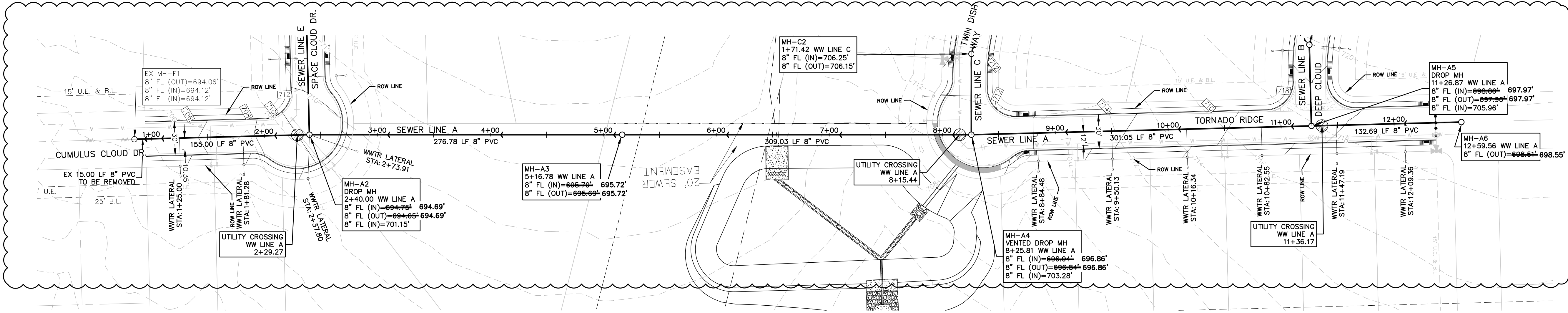
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LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L.
- UTILITY EASEMENT
- DRAINAGE EASEMENT
- EXISTING WASTEWATER LINE
- PROPOSED WASTEWATER LINE
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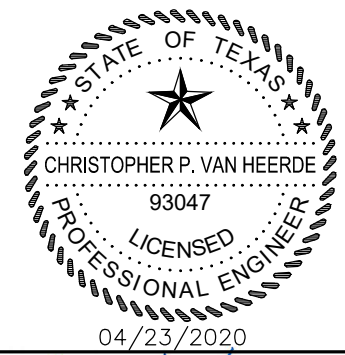
HMT ENGINEERING AND SURVEYING

REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

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HMT
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Chris Van Hecke, P.E.

WW LINE A
PLAN & PROFILE
CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION	REVISION DATE
1	ASBUILT		04/2020

DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH

HMT PROJECT NO.: 056.009

SHEET
C7.2

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DEEP TRENCH COMPACTION TESTING

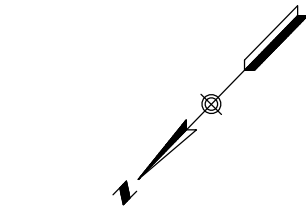
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CONSTRUCTION NOTES:

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3. ALL MANHOLES SHALL BE 48" DIAMETER.
4. ALL RING AND COVER SHALL BE 32" DIAMETER.
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6. AN INSPECTOR MUST BE ONSITE FOR CONSTRUCTION ACTIVITIES ON ALL SEWER LINES INSTALLED WITH A DEPTH GREATER THAN 15FT. IF AN INSPECTOR IS NOT ONSITE, ALL LINE INSTALLED MUST BE UNCOVERED FOR INSPECTION AT THE CONTRACTORS SOLE EXPENSE.

TRENCH EXCAVATION SAFETY PROTECTION

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LEGEND

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

UTILITY NOTES:

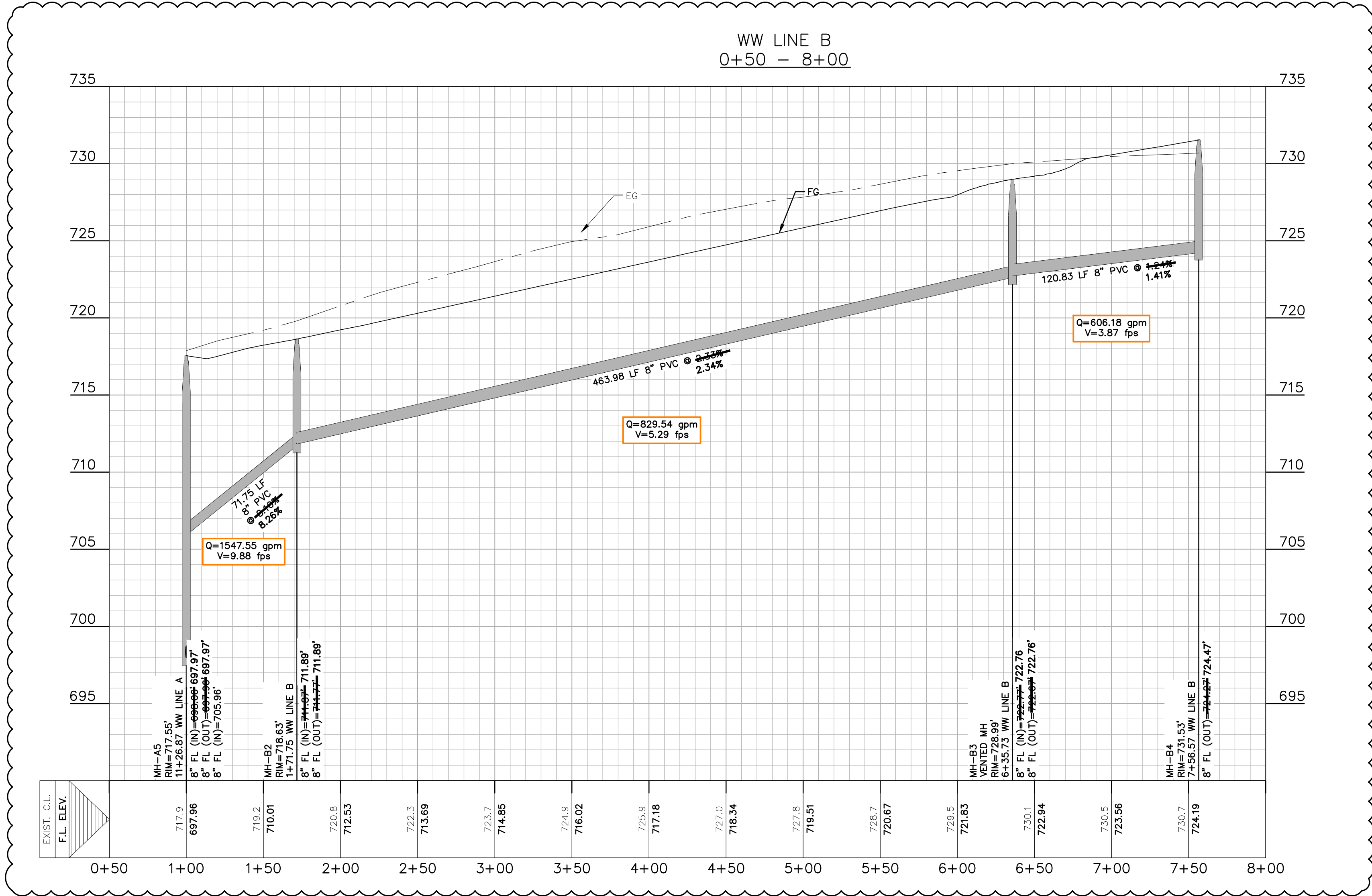
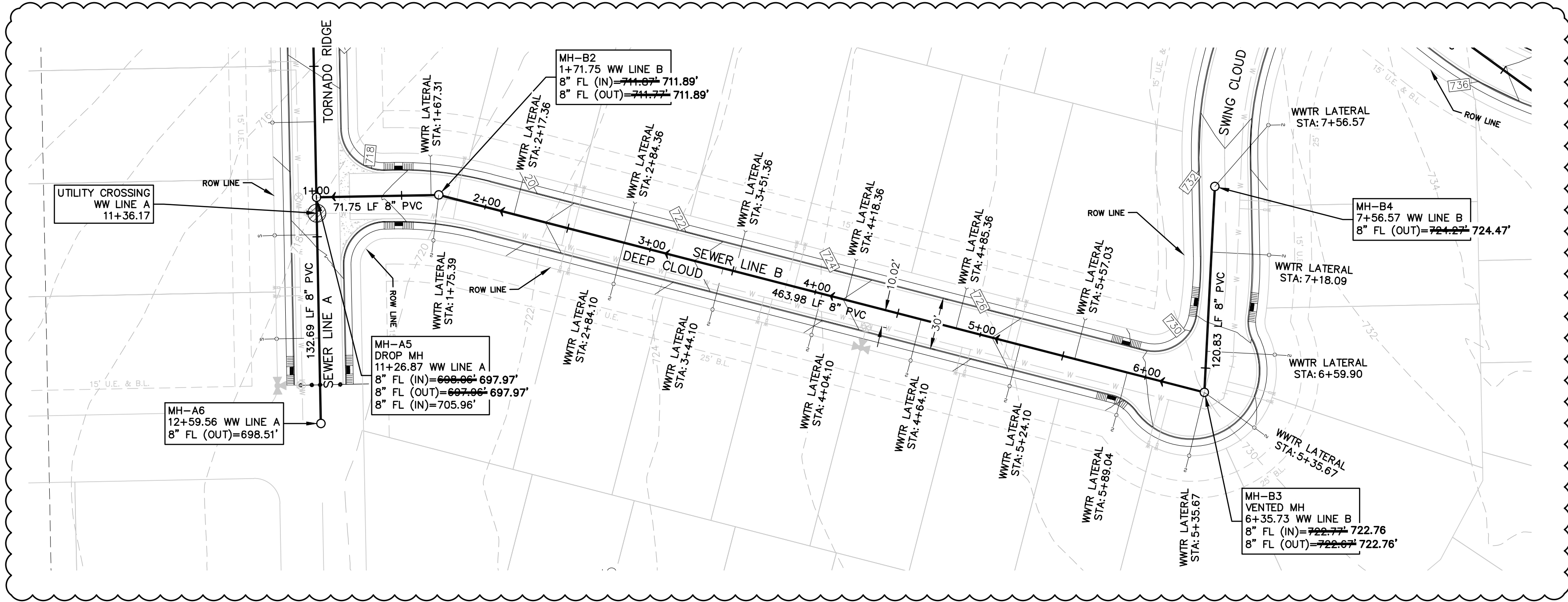
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DATE: APRIL 2020 BY: *Chris Van Heerde, P.E.*

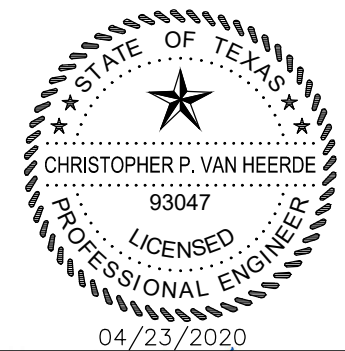
HMT ENGINEERING AND SURVEYING



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410 N. SEGUN AVE.
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HMTNB.COM
PI630625-8655-F183025-8656
TBE FIRM F-10961
TBE FIRM 1015360



Chris Van Heerde, P.E.

WW LINE B
PLAN & PROFILE

CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION	REVISION DATE
1	ASBUILDS		04/2020

DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

SHEET
C7.3

UTILITY TRENCH COMPACTION

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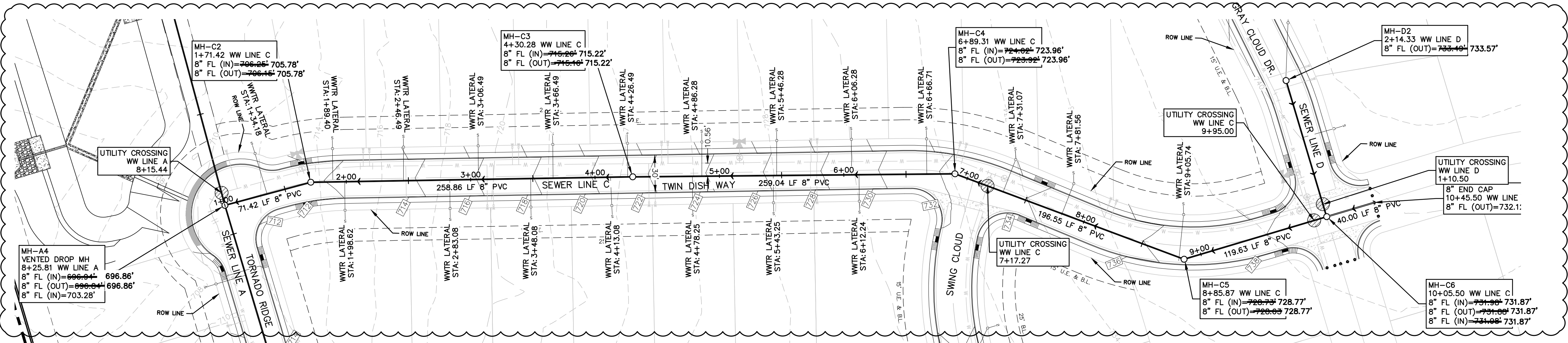
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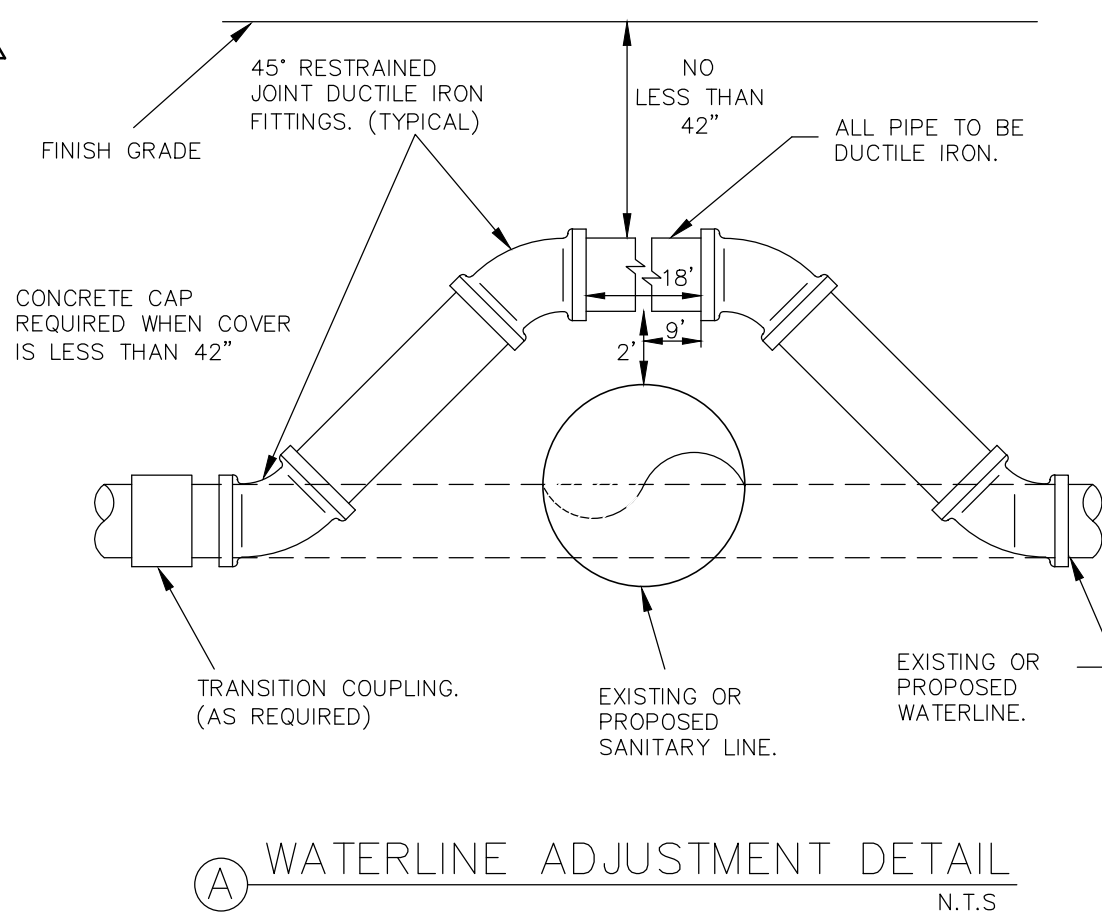
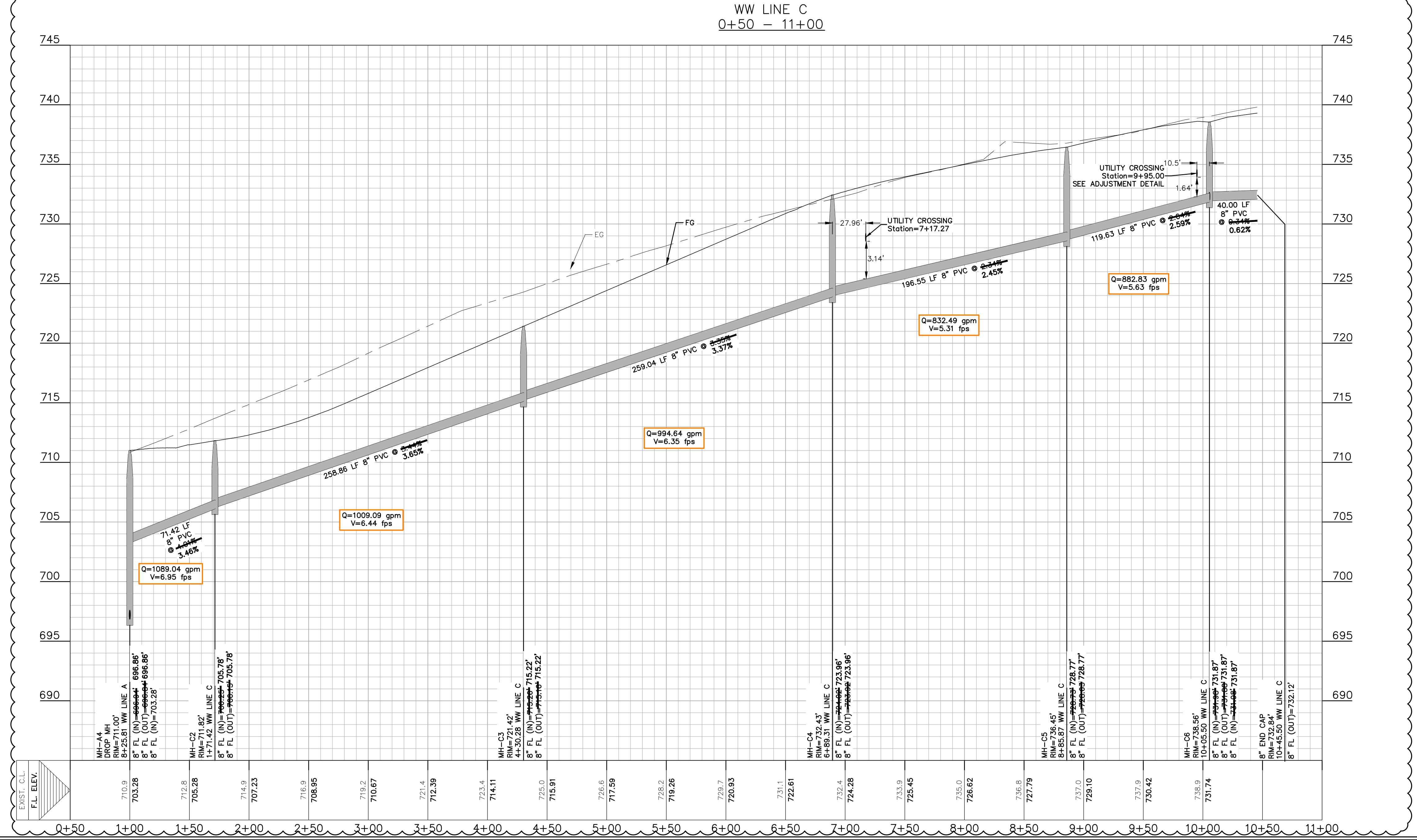
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WW LINE C
0+50 - 11+00



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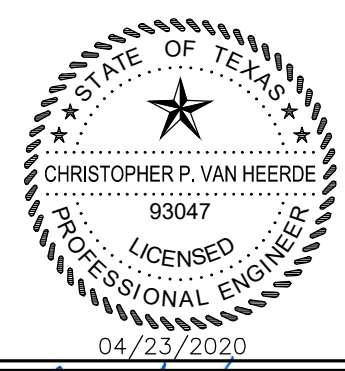
DATE: APRIL 2020 BY: *Chin Van Huu, P.E.*

HMT ENGINEERING AND SURVEYING

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T(361)625-8557 • F(361)625-8558



Chin Van Huu, P.E.

WW LINE C
PLAN & PROFILE
CLOUD COUNTRY UNIT 5

NO.	ASBUILDS	REVISION	DESCRIPTION	DATE
1				04/2020

DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

**SHEET
C7.4**

UTILITY TRENCH COMPACTION

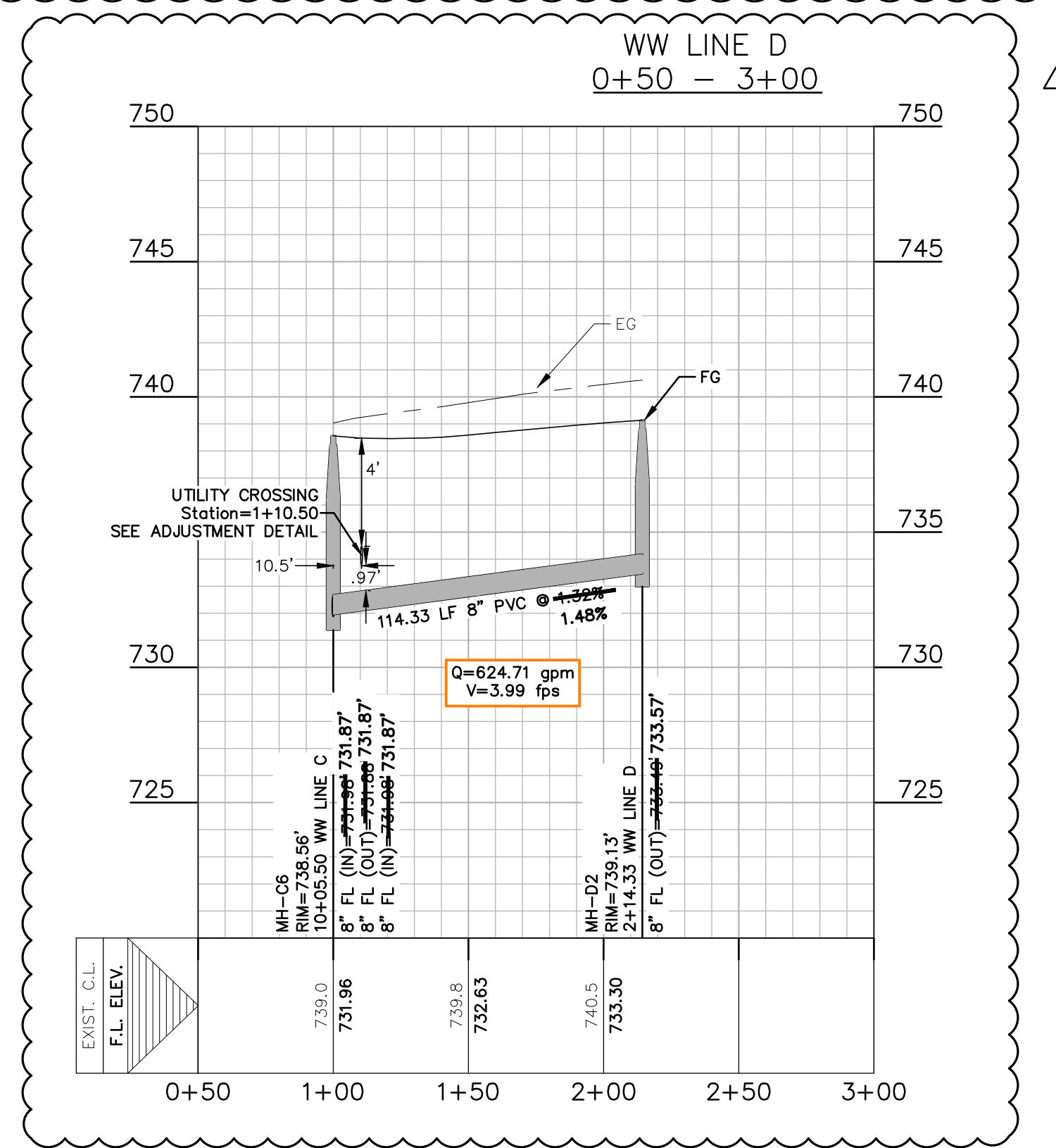
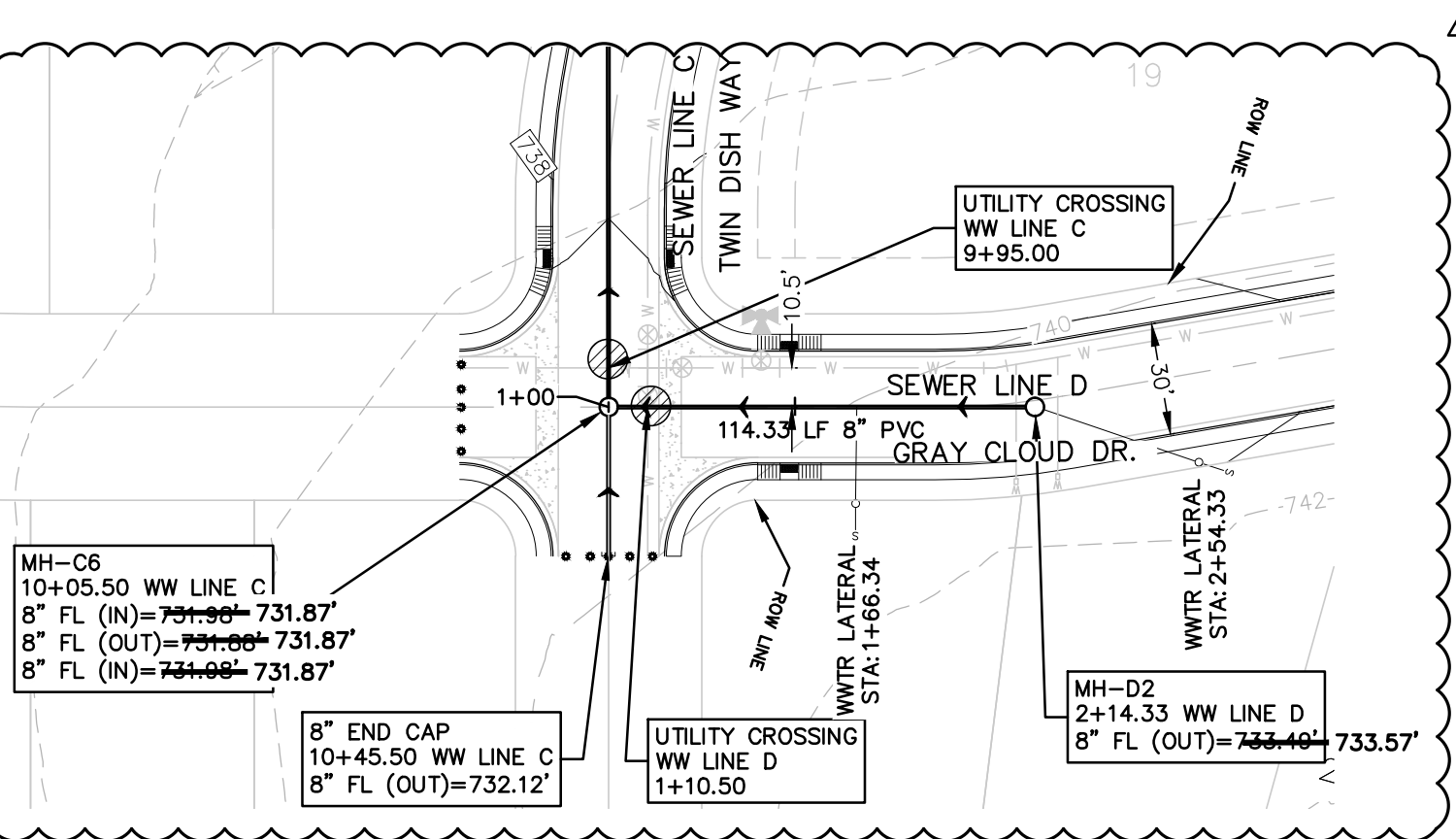
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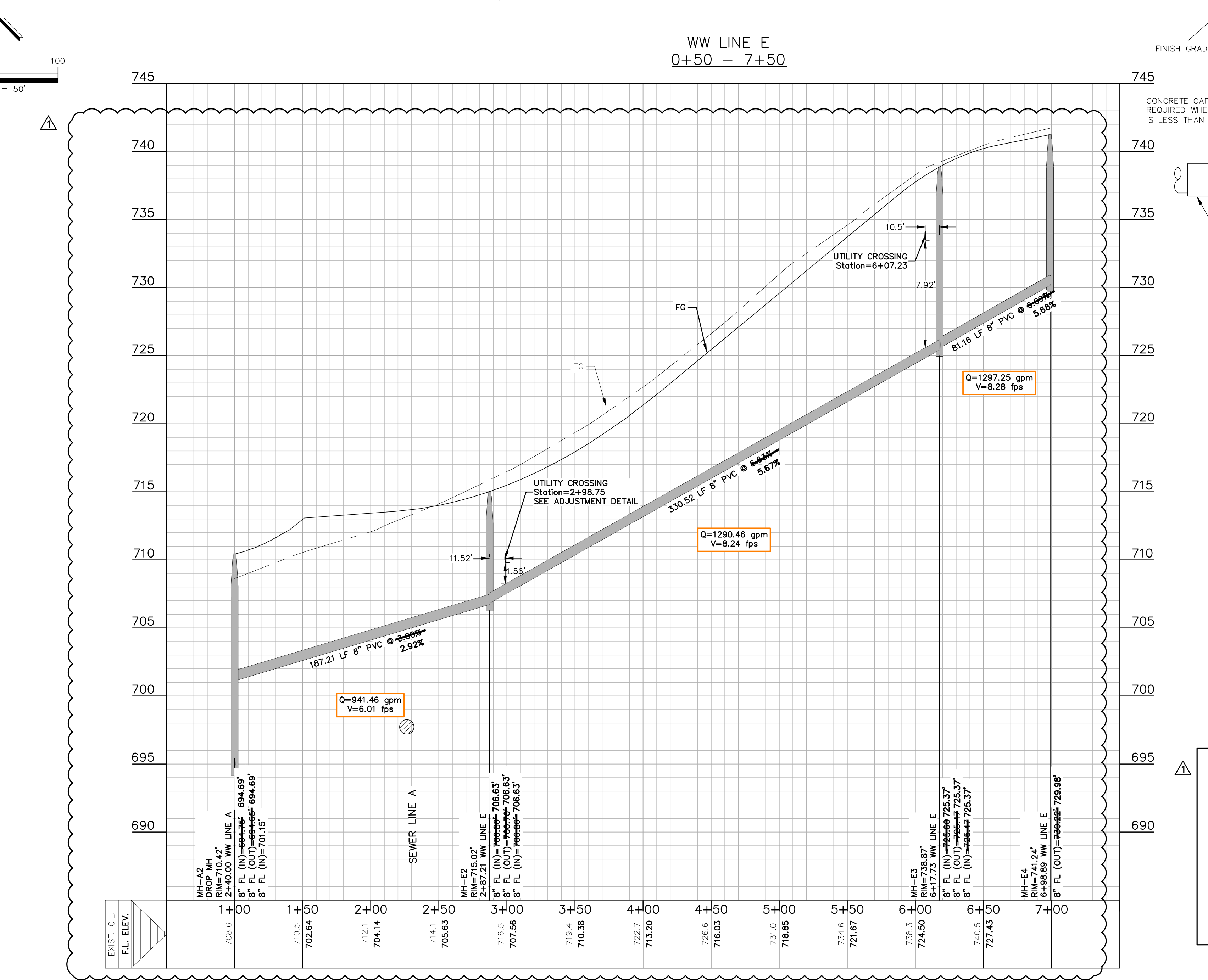
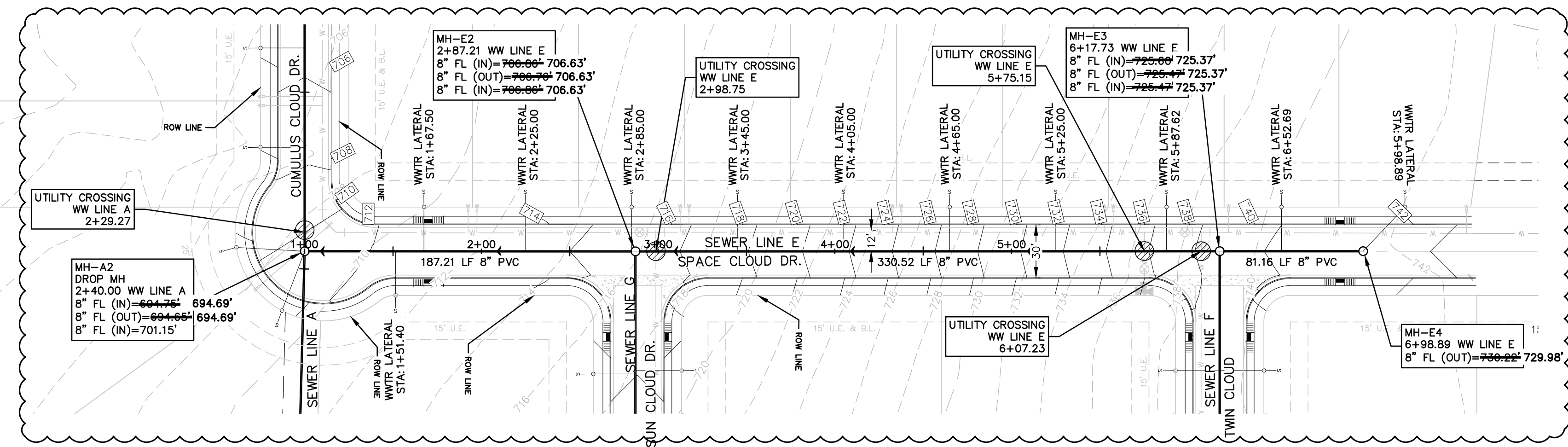


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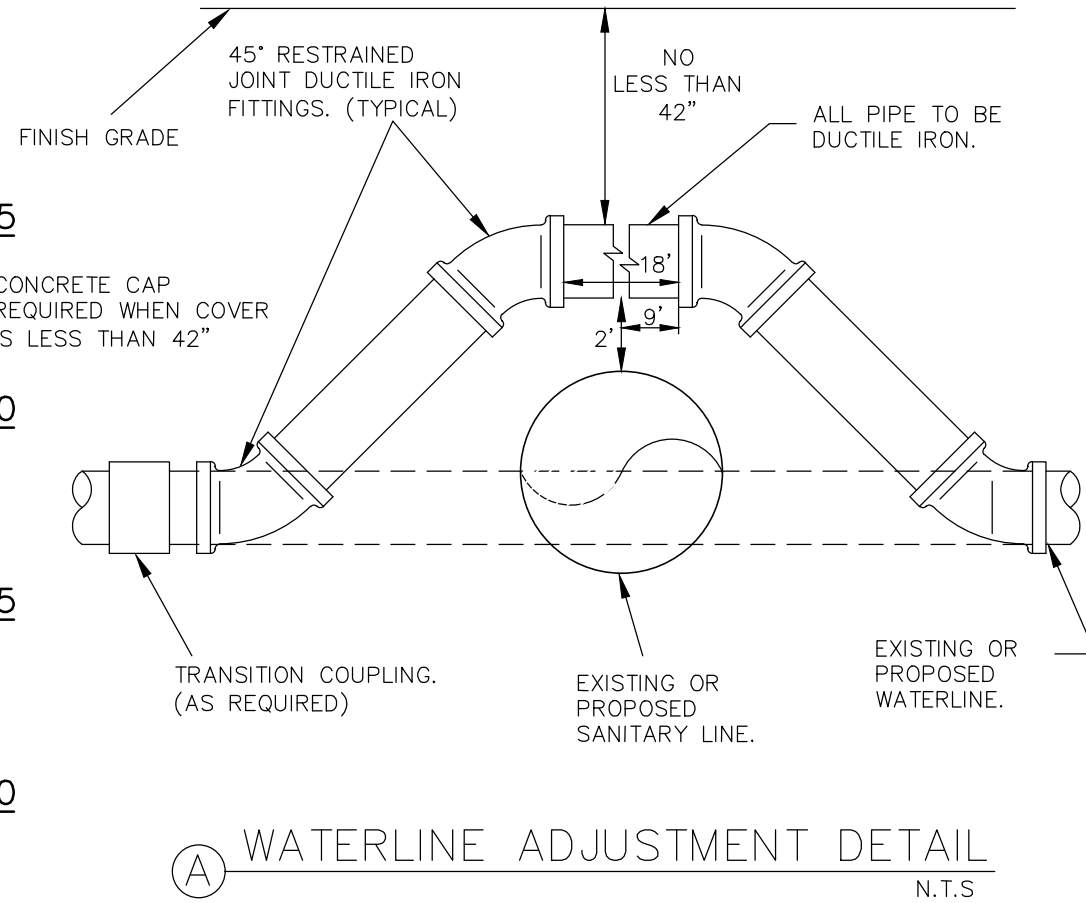
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HMT ENGINEERING AND SURVEYING



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HMT ENGINEERING AND SURVEYING

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HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER P. VAN HUURD
93047
LICENSED PROFESSIONAL ENGINEER
04/23/2020

Chin Van Huu, P.E.

WW LINE D-E
PLAN & PROFILE

CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION	DATE
1	ASBUILDS		04/2020

DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

SHEET
C7.5

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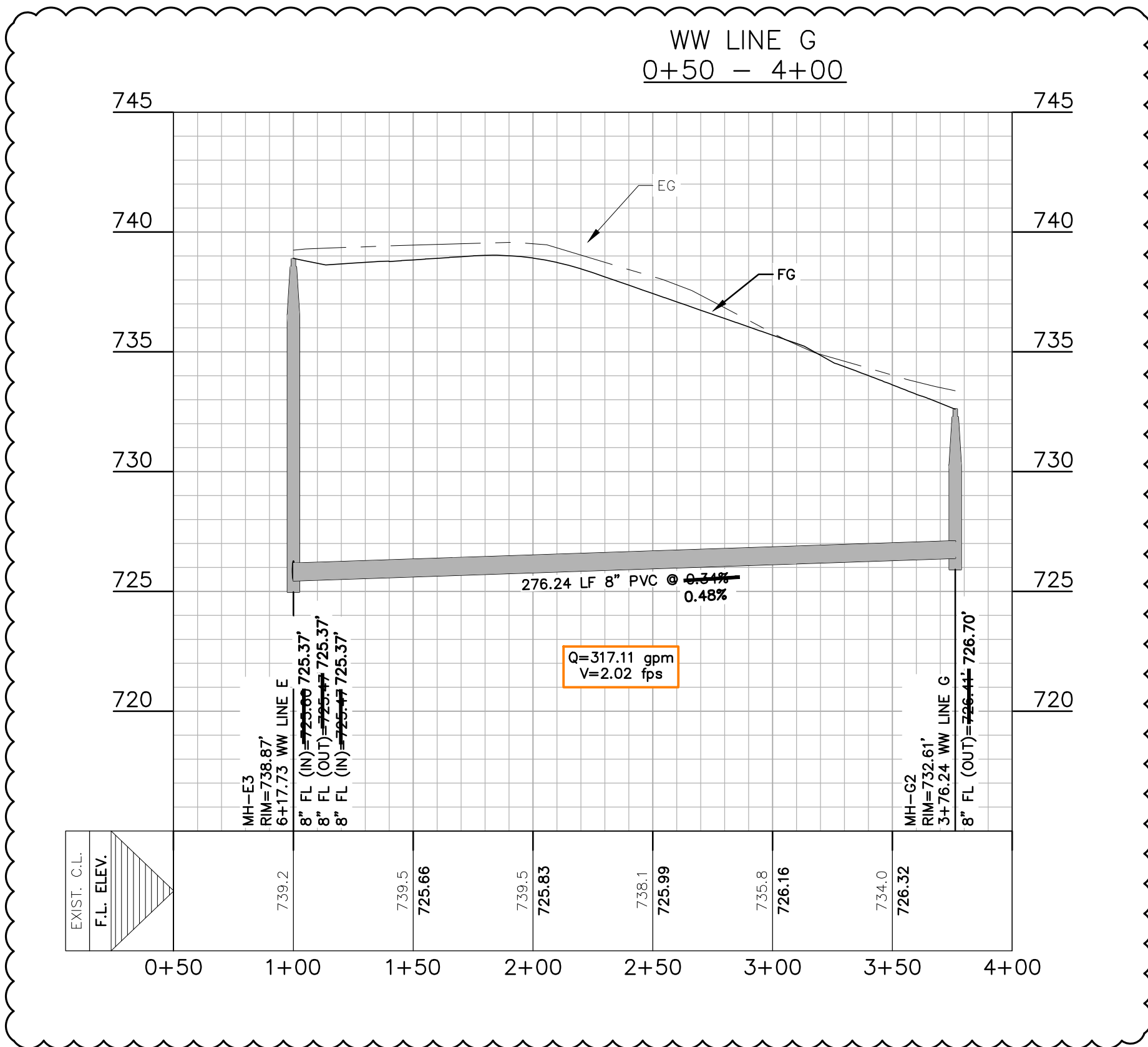
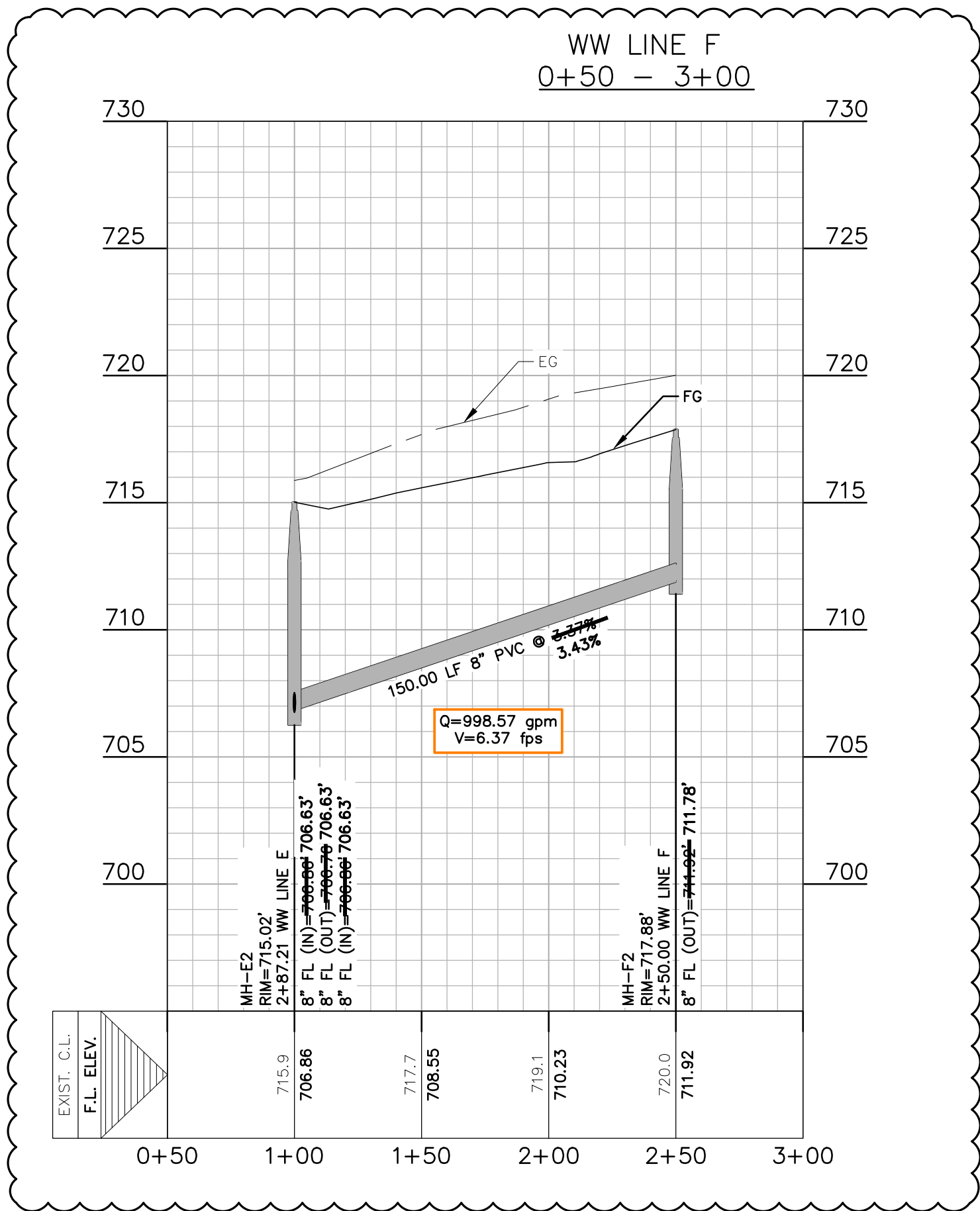
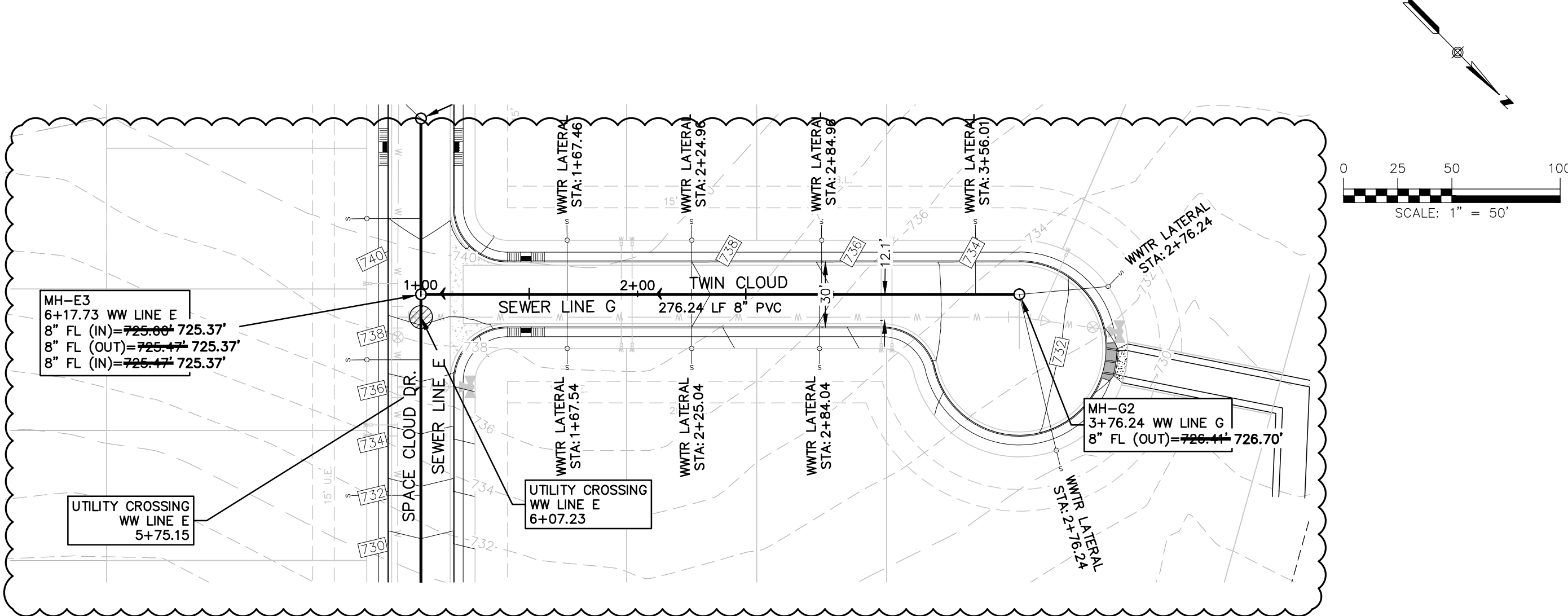
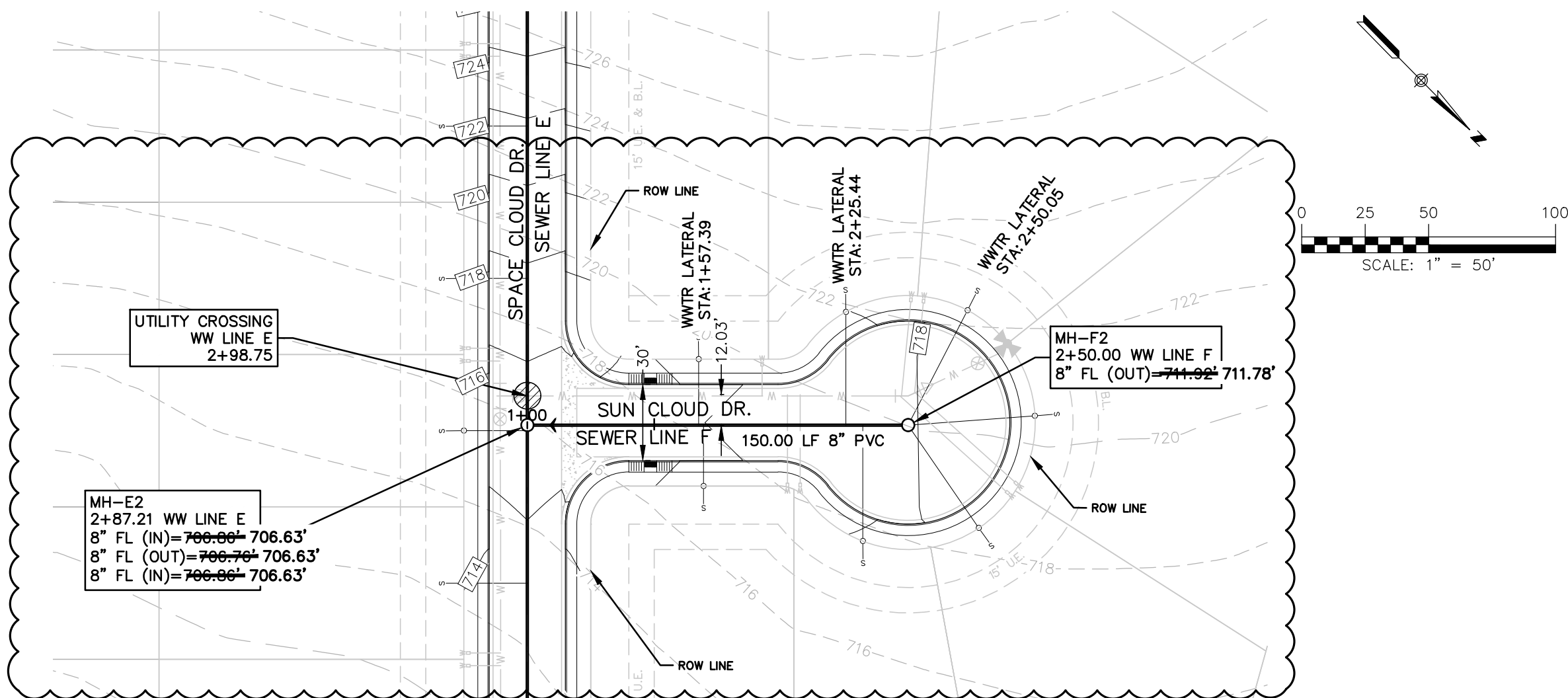
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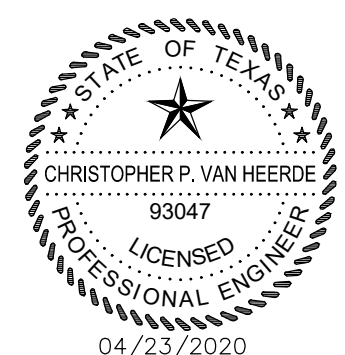
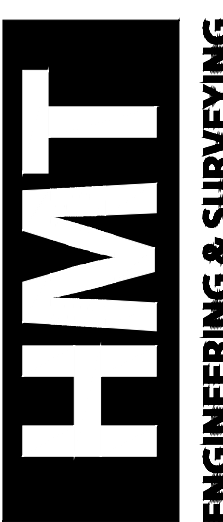
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TBEPL FIRM F-10961
TBEPL FIRM 10153600



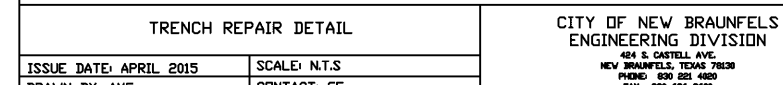
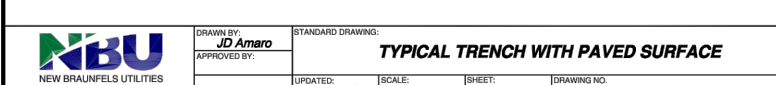
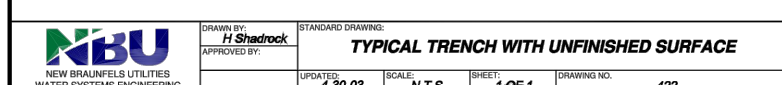
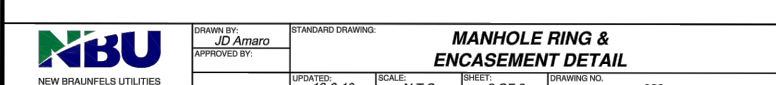
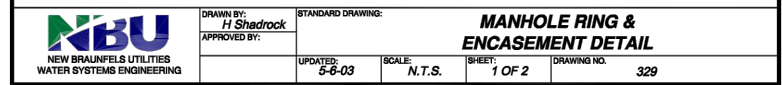
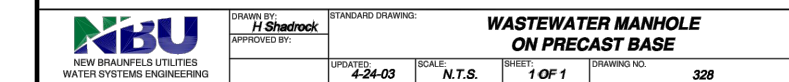
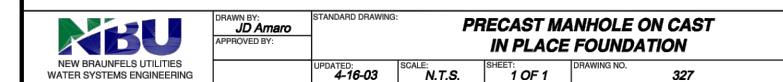
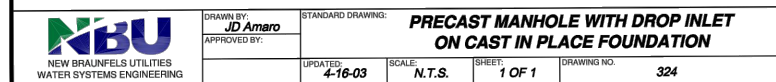
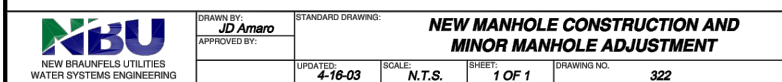
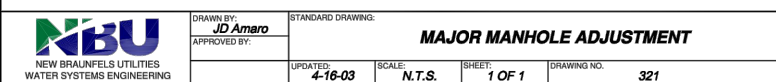
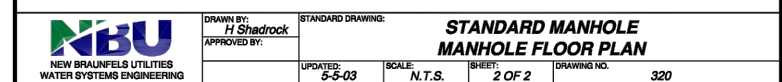
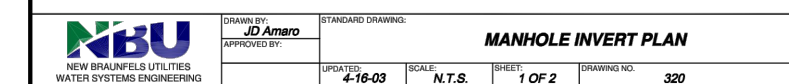
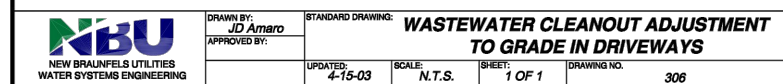
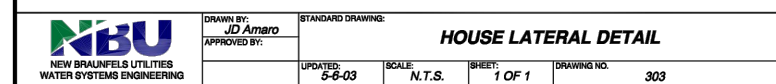
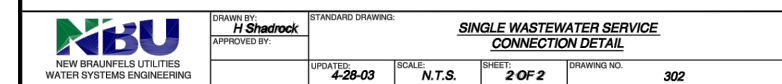
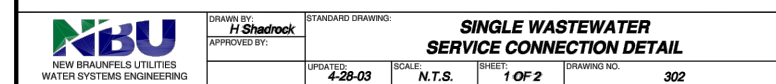
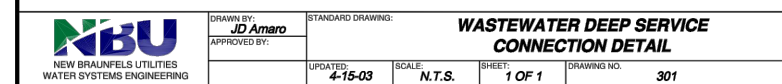
Chin Van Huu, P.E.

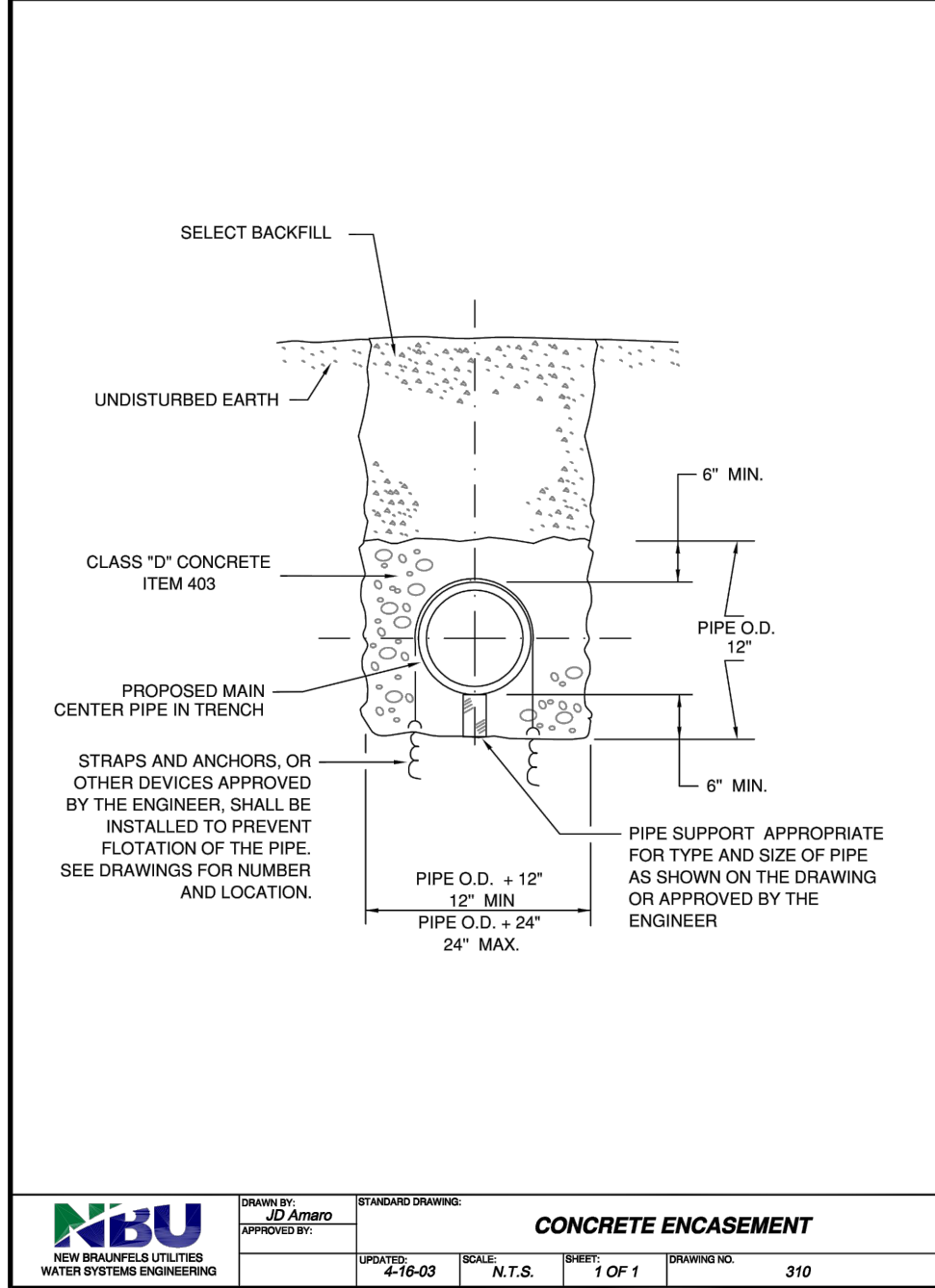
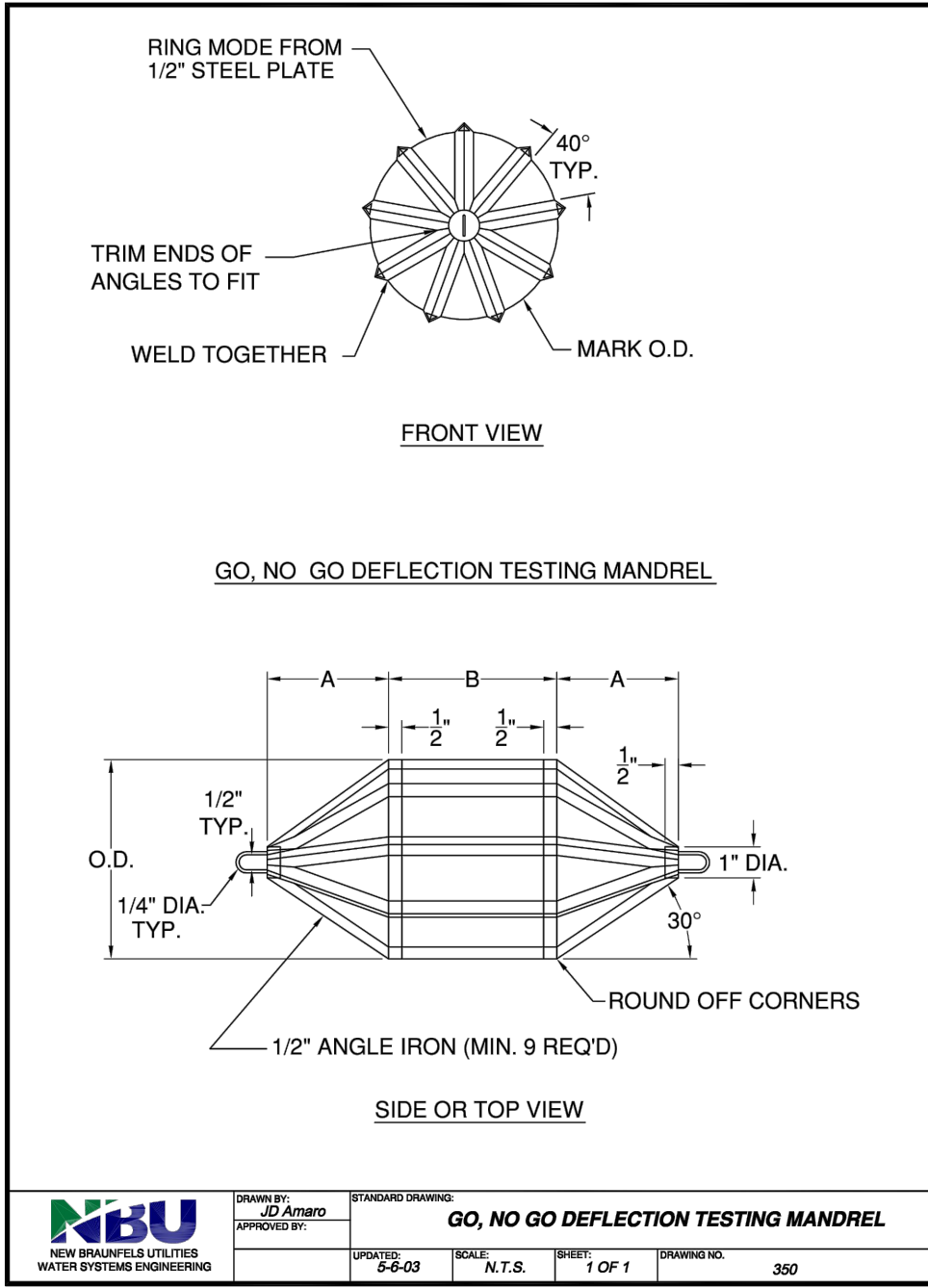
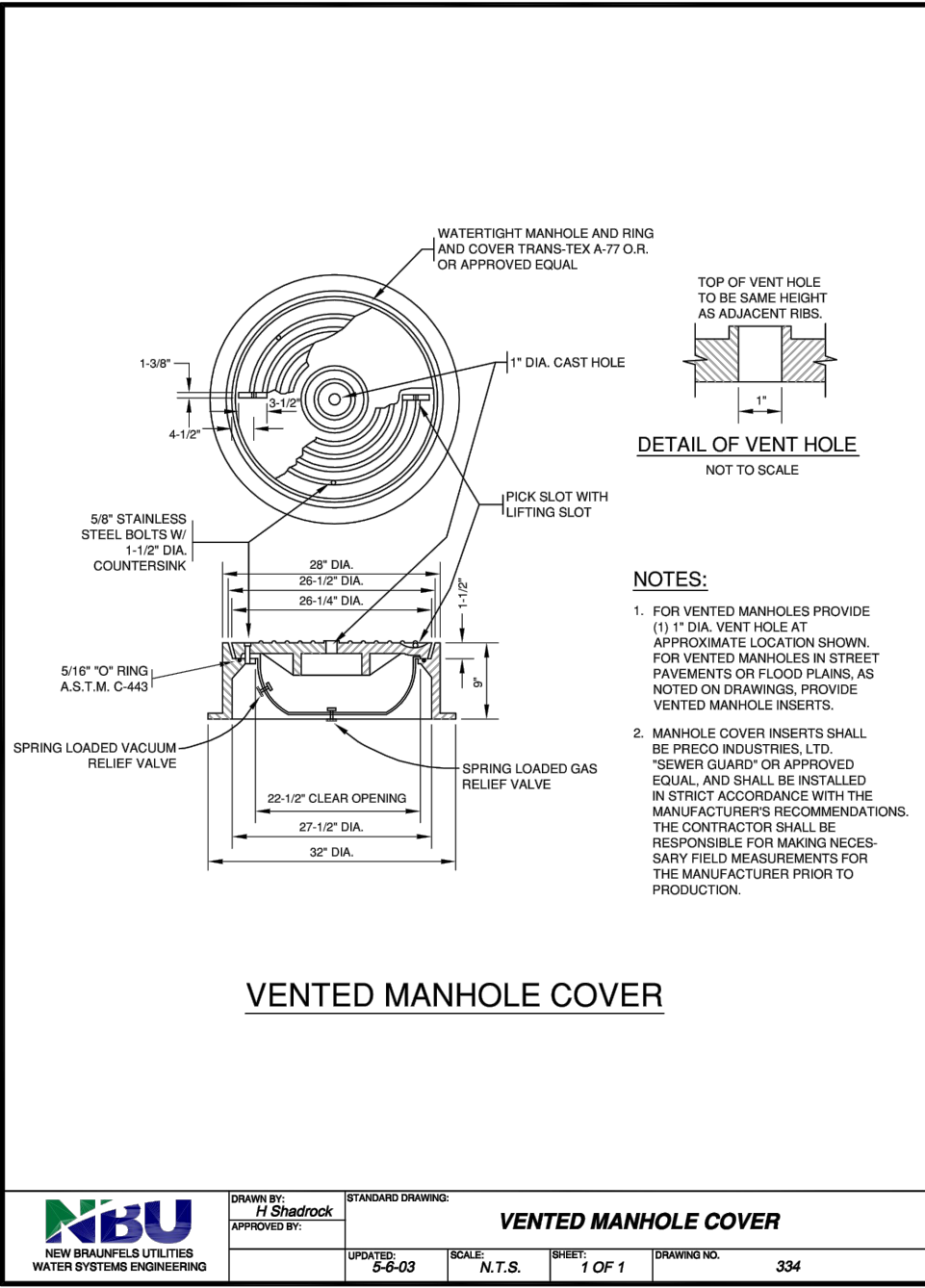
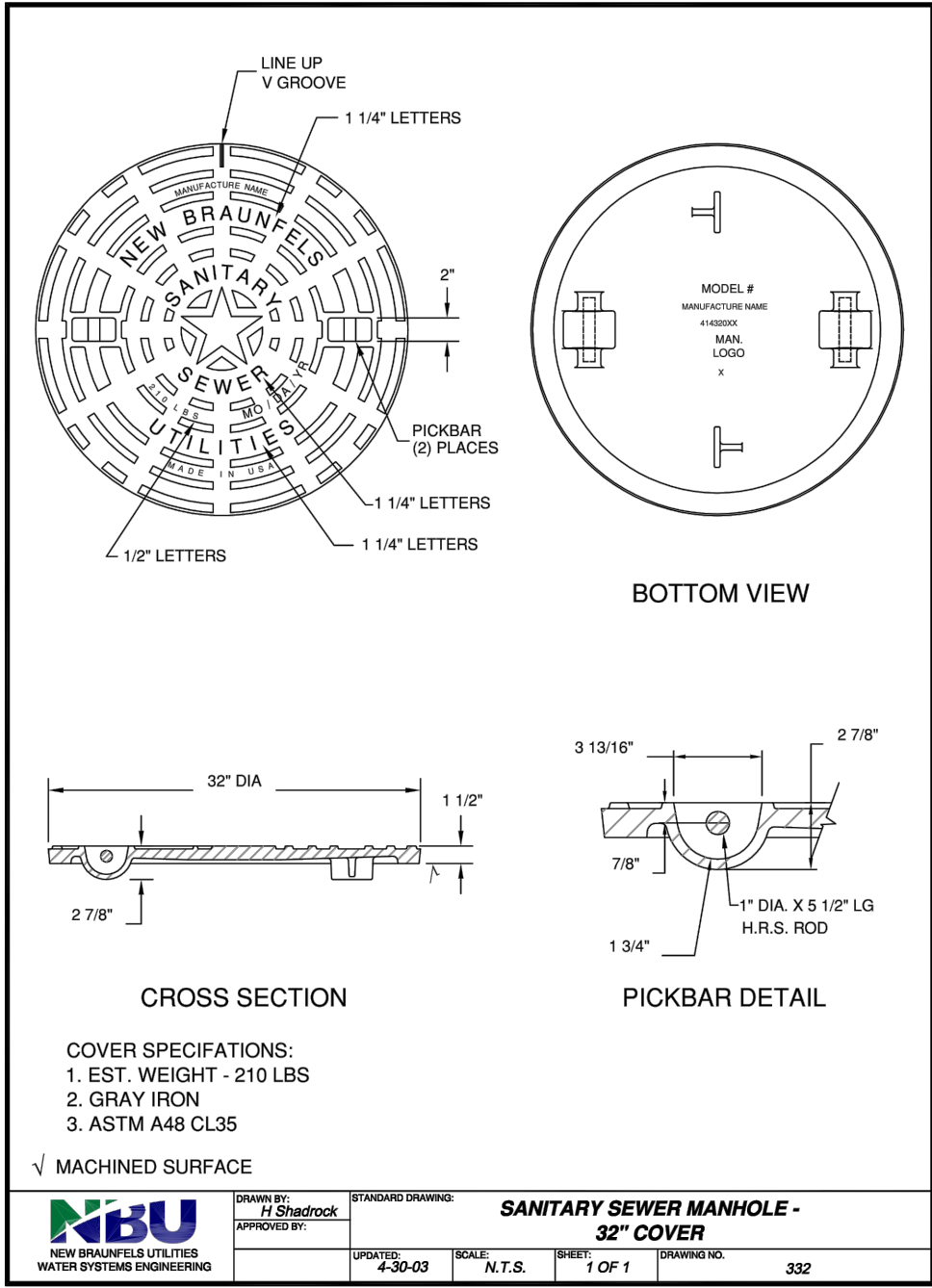
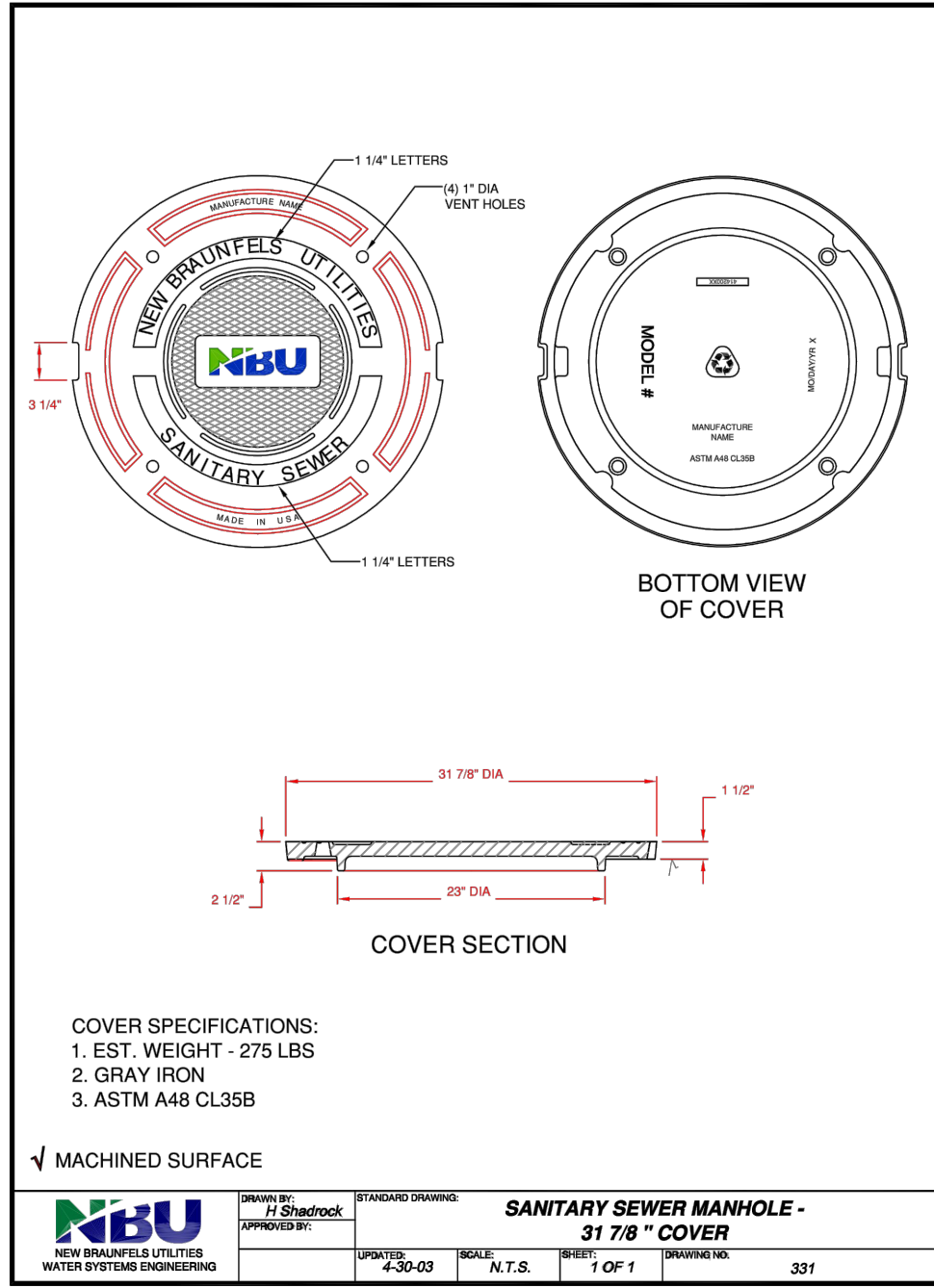
WW LINE F-G
PLAN & PROFILE
CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION	DATE
1	AS-BUILT		04/2020

DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

SHEET
C7.6





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DATE: APRIL 2020

BY: *Chris Van Heerde, P.E.*

HMT ENGINEERING AND SURVEYING

WASTEWATER DETAILS (SHT 2) CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION	DATE
A	ASBUILTS		04/2020

DATE:	JULY 2018
DRAWN BY:	MGM/MZ
DESIGNED BY:	MGM/MZ/CC
REVIEWED BY:	SWH/SCH
HMT PROJECT NO.:	056.009

SHEET
C7.8

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