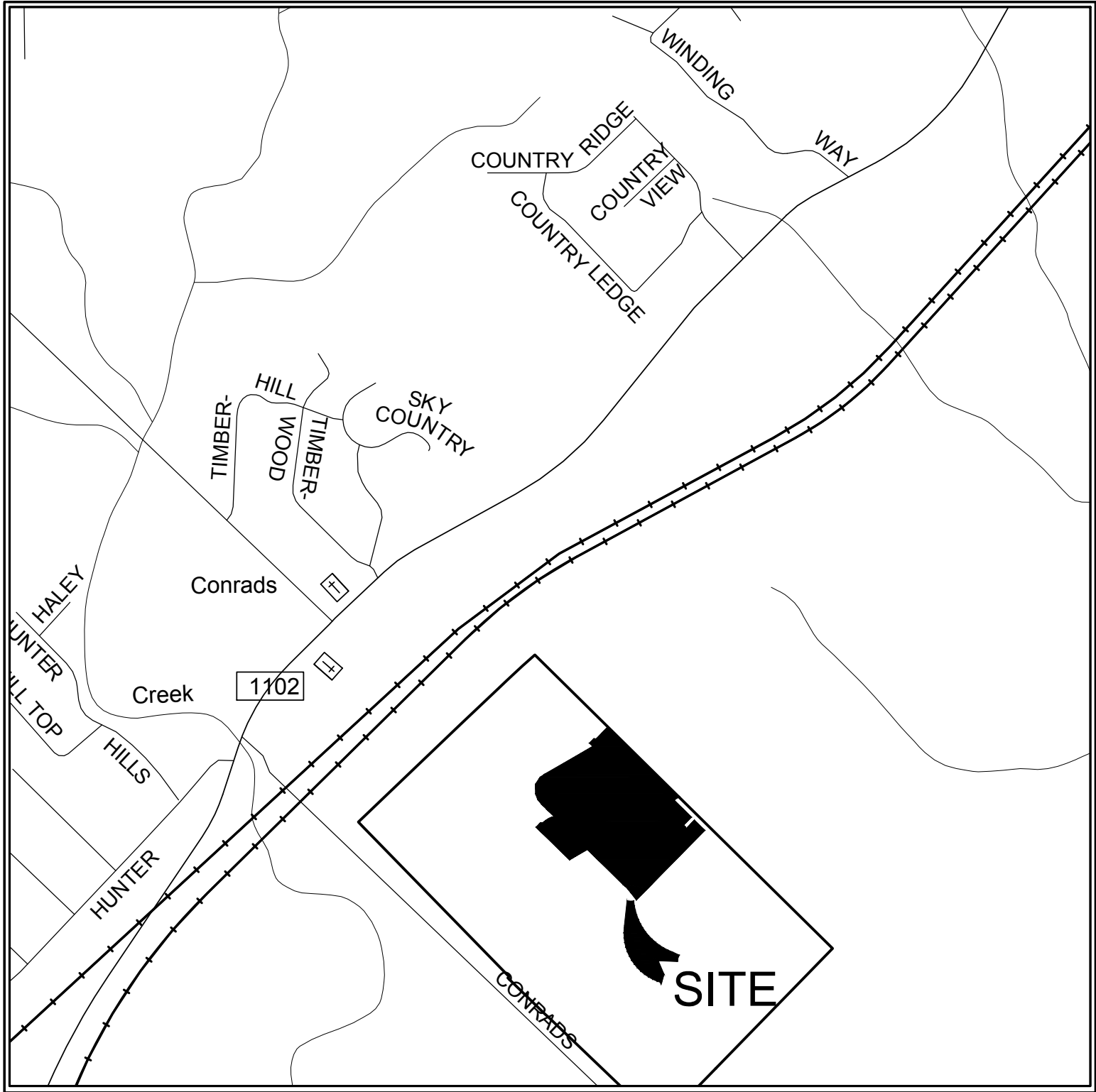


Drawing Name: N:_projects\056 - milestone properties\056.009 - cloud country unit 5\103- construction drawings\056.004\103-C006.dwg User: msaz Jun 19, 2018 - 2:28pm



PROJECT LOCATION MAP
PROJECT BENCHMARK

SCALE: N.T.S.

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- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.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.

Christopher J. Crim
P.E. Registration No. 111347

PREPARED BY:



410 N. SEGUIN AVE.
NEW BRAUNFELS, TX 78130
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 DESGN 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

MILESTONE PROPERTIES
P.O. BOX 6862
SAN ANTONIO, TEXAS 78230

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C0.3	SUBDIVISION PLAT SHT 1
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C1.0	EROSION CONTROL PLAN
C1.1	EROSION CONTROL DETAILS
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C2.1	PROPOSED DRAINAGE AREA MAP
C3.0	GRADING PLAN
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C4.0	TORNADO RIDGE & DEEP CLOUD DR PLAN AND PROFILE
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C7.2	WW LINE A PLAN & PROFILE
C7.3	WW LINE B PLAN & PROFILE
C7.4	WW LINE C PLAN & PROFILE
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CLOUD COUNTRY UNIT 5
CIVIL SITE CONSTRUCTION PLANS

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 REINFORCED 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 CONCRETE 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 LAYING 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 BILLET AND SHALL CONFORM TO TxDOT ITEM 440. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS EXCEPT WHEN REFERRING TO CLEARANCE.

ALL SAWED 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, 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.

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 IS DEFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC. 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 PLATTING 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 GUARANTY 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 CONTROL 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 DETERMINED 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.

ANY EXISTING UTILITIES, ON OR OFF THE SITE, THAT ARE DAMAGED OR UNDERCUT BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AND APPROVED BY THE RESPECTIVE UTILITY COMPANY AT THE CONTRACTOR'S EXPENSE.

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

- THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION.
- A MINIMUM OF 8" WASTEWATER PIPE AND FITTINGS (PVC SDR-26, ASTM D-3034, D-3212, F-477) ARE REQUIRED ON ALL NEW INSTALLATION.
- ON 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.
- PIPE BEDDING OF WASTEWATER LINES SHALL BE MANUFACTURED SAND OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
- 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.
- ALL SEWER PIPES SHALL HAVE COMPRESSION OR MECHANICAL JOINTS AS PER 30 TAC 217.53 (C) (2).
- FOR WASTEWATER LINES LESS THAN 24" IN DIAMETER, SELECT INITIAL BACKFILL MATERIAL SHALL BE PLACED IN TWO LIFTS.
 - 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.
 - 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.
- ALL MANHOLES MUST BE WATER TIGHT. EITHER MONOLITHIC, CAST-IN-PLACE CONCRETE STRUCTURES OR PREFABRICATED MANHOLES SPECIFICALLY APPROVED BY NBU. 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)].
- 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.
- 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.
- WASTEWATER PIPE CONNECTIONS TO PRE-CAST MANHOLES WILL BE COMPRESSION JOINTS OF MECHANICAL "BOOT TYPE" JOINT AS APPROVED BY NBU.
- WASTEWATER LINES SHALL BE TESTED FROM MANHOLE TO MANHOLE.
- IN AREAS WHERE A NEW WASTEWATER MANHOLE IS TO BE CONSTRUCTED OVER AN EXISTING WASTEWATER SYSTEM, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO TEST THE EXISTING MANHOLES BEFORE CONSTRUCTION. A SPECIFIED AND TESTED FOR DENSITY AND MOISTURE, 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 FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
- AFTER CONSTRUCTION TESTING WILL BE DONE BY TV CAMERA BY THE CONTRACTOR AND OBSERVED BY THE 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 THE CONTRACTOR AT HIS EXPENSE. CONTRACTOR TO PROVIDE TV TAPES TO CONSTRUCTION INSPECTION FOR REVIEW PRIOR TO FINAL INSPECTION OF THE PROJECT.
- 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:
 - FULL MANHOLE
 - PERFORM AIR TEST
 - CLEANING OF ANY DEBRIS
 - FLUSHING OF SYSTEM
 - TV INSPECTION (WITHIN 72 HOURS OF FLUSHING)
- 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.
- SANITARY SEWER MAIN CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WILL REQUIRE SUCCESSFUL TESTING OF THE MANHOLE ACCORDANCE WITH NBU CONNECTION & CONSTRUCTION POLICY MANUAL.
- 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 NEW WATER SYSTEMS.
- ALL MANHOLES NOT WITHIN PAVED STREETS SHALL HAVE LOCKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBU DETAIL DRAWING #329. (NO SEPARATE PAY ITEM)
- ALL MANHOLES OVER THE EDWARDS' AQUIFER RECHARGE ZONE SHALL HAVE LOCKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBU DETAIL DRAWING #329. (NO SEPARATE PAY ITEM)

WATER NOTES

- ALL WATER MAINS SHALL BE AWWA C900 (CLASS 150 OR GREATER).
- WATER SERVICES SHALL BE SINGLE 1" COPPER TUBING.
- WATER LINE IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE NBU SYSTEMS CONNECTION & CONSTRUCTION POLICY.
- WATER MAIN SHALL HAVE A MINIMUM OF 42 INCHES OF COVER, OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED.
- 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 FLUSHING DOWNS TO A LOW SEPARATE METERS FOR FUTURE CONSIDERATION.
- CONTRACTOR WILL KEEP THE AREA ON TOP OF AND AROUND THE WATER METER BOX FREE OF ALL OBJECTS AND DEBRIS.
- INITIAL BACKFILL OF WATER LINES SHALL BE MANUFACTURED SAND OR PEA GRAVEL AS PER NBU SYSTEMS CONNECTION & CONSTRUCTION POLICY.
- 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.
- HYDROSTATIC TESTING IS DONE FROM VALVE TO VALVE.
- 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.
- 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.
- ACCEPTABLE METER BOXES ARE D13-BAMR AND D15-BAMR. NEW RESIDENTIAL LOTS ARE REQUIRED TO USE THE D15-BAMR METER BOXES (DOUBLE AMR). COMMERCIAL LOTS SHOULD CHOOSE WHICH BOX APPLIES TO THE DOMESTIC AND/OR IRRIGATION METER LAYOUT.
- 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.
- 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.

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

GROUNDWATER

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

RECORD DRAWINGS

AS PER PLATTING ORDINANCE SECTION 118-38M.: WHEN ALL OF THE IMPROVEMENTS ARE FOUND TO BE CONSTRUCTED AND COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND WITH THE CITY'S STANDARDS, AND UPON RECEIPT OF ONE SET OF "RECORD 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 GUARANTY 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 ONE FOOT ABOVE THE 100-YEAR WATER FLOW ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE.

SOILS TESTING

PROCTORS SHALL BE SAMPLED FROM ON SITE MATERIAL (ON SITE IS DEFINED AS LIMITS OF CONSTRUCTION FOR THIS PLAN SET) AND A COPY OF THE PROCTOR RESULTS SHALL BE DELIVERED TO THE CITY OF NEW BRAUNFELS STREET INSPECTOR PRIOR TO ANY DENSITY TESTS.

ROADWAY

ALL ROADWAY COMPACTION TESTS SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S 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, 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 FILLABLE 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 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.

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

(INDICATE THE 2 OPTIONS ON THE CONSTRUCTION PLANS).

- SAWCUT EXISTING STREET AND MATCH TO NEW CONSTRUCTION.
- SAWCUT EXISTING CURB TO TIE INTO EXISTING CONSTRUCTION.
- SAWCUT EXISTING STREET AND MATCH ELEVATION TO PROPOSED CONSTRUCTION.
- SAWCUT EXISTING CURB TO TIE INTO PROPOSED CURB CONSTRUCTION.

CONSTRUCTION STABILIZED ENTRANCE

SAWCUT CURB FOR CONSTRUCTION STABILIZED ENTRANCE. STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3"x3" 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. MATERIALS AND INSTALLATION SHOULD FOLLOW THE TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) TRAFFIC STANDARDS SMD (GEN) - 08 AND SMD (TWI) - 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.

MATERIALS

SIGN MATERIALS INCLUDING ALUMINUM SIGN BLANKS AND SIGN FACE MATERIALS SHOULD FOLLOW THE TxDOT TRAFFIC STANDARDS TSR (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

- INSTALL EROSION CONTROLS PER APPROVED PLAN.
- TEMPORARY CONTROLS TO BE INSPECTED AND MAINTAINED WEEKLY AND PRIOR TO ANTICIPATED RAINFALL EVENTS, AND AFTER RAINFALL EVENTS, AS NEEDED. CONTRACTOR/OWNER SHALL PROVIDE A CONTACT NAME AND NUMBER FOR EROSION CONTROL ISSUES.
- CONDUCT DEMOLITION ACTIVITIES, IF APPLICABLE.
- CONSTRUCT DRAINAGE IMPROVEMENTS, IF APPLICABLE.
- CONSTRUCT CURB INLET PROTECTION AT THE TIME OF CURB INLET INSTALLATION.
- CONSTRUCT DEVELOPMENT PER APPROVED PLANS.
- INSTALL STREETScape AND/OR LANDSCAPING IMPROVEMENTS.
- CONTRACTOR TO VEGETATE ANY DISTURBED AREAS ONCE FINAL GRADING IS COMPLETE, AND ESTABLISH A MIN OF 70% VEGETATION PRIOR TO COMPLETION
- TPDES REQUIREMENTS - DISTURBED AREAS ON WITCH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARY OR PERMANENTLY) SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY WILL BEGIN AGAIN WITHIN 21 DAYS

GENERAL NBU NOTES

REV. DATE 3/31/11

- 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".
- CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE PLANS FROM THE CONSULTANT OR ENGINEER AND NOTIFY NBU WATER SYSTEMS ENGINEERING AT 830-608-8971 WITH AT LEAST TWO (2) WORKING DAYS (48 NOTICE. WORK ON THE PROJECT SHALL BE STOPPED IMMEDIATELY IF THE CONTRACTOR HAS NOT RECEIVED A NOTICE FROM NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
- THE DEVELOPER DEDICATES THE WATER / WASTEWATER MAINS UPON COMPLETION BY THE CONTRACTOR AND ACCEPTANCE BY THE NEW BRAUNFELS UTILITIES WATER SYSTEM. NBU WILL OWN AND MAINTAIN SAID WATER / WASTEWATER MAINS WHICH ARE LOCATED WITHIN PLATTED UTILITY EASEMENTS OR PUBLIC ROW OF PROPOSED DEVELOPMENTS. (AS APPLICABLE).
- 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, 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.
- 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 NBU IN WRITING.
- 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.
- 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.
- 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.
- 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.
- 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.
- CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE

Drawing Name: N:_projects\056 - milestone properties\056.009 - cloud country unit 5\103- construction drawings\056.009.103-PA1.dwg User: moaz Jun 19, 2018 - 2:28pm

Drawing Name: N:_projects\056 - milestone properties\056.009 - Cloud Country Unit 5\Plotting\Par\056.009-Cloud Country 05.dwg User: kelyk Jul 03, 2017 - 11:55am

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 480910200P, 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 B; AND ALONGSIDE AND ADJACENT TO THE CURB OF WHITE CLOUD DR ALONG LOT 108, BLOCK B 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

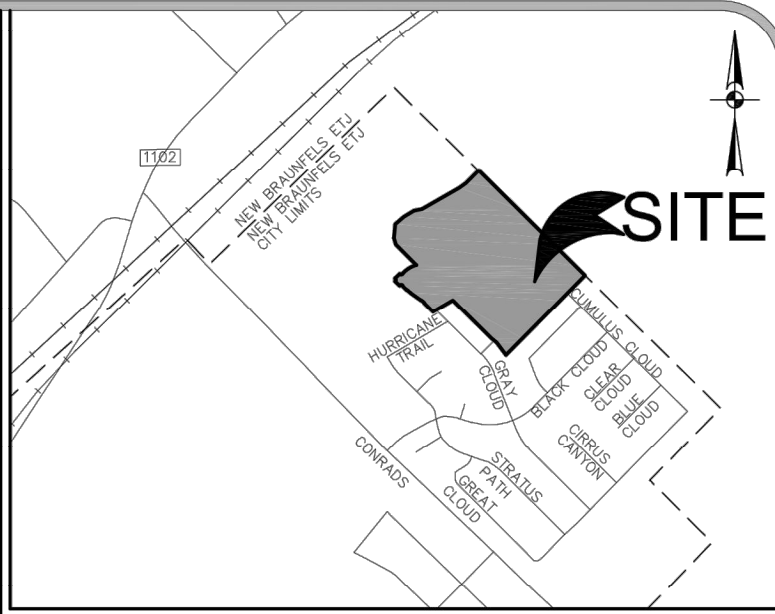
PLAT REVISED JUNE 20, 2017
PLAT PREPARED MAY 24, 2017



410 N. SEGUIN AVE.
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	CHORD BEARING
C1	30.06'	175.00'	009°50'35"	15.07'	30.03'	N50°19'04"W
C2	38.65'	225.00'	009°50'35"	19.37'	38.61'	N50°19'04"W
C3	23.56'	15.00'	090°00'00"	15.00'	21.21'	S89°36'13"W
C4	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°23'47"W
C5	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°36'13"E
C6	117.14'	225.00'	029°49'44"	59.93'	115.82'	N59°31'05"E
C7	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°23'30"E
C8	10.18'	15.00'	038°52'57"	5.29'	9.99'	S64°50'07"E
C9	146.51'	50.00'	167°53'21"	471.34'	99.44'	S00°19'55"E
C10	9.77'	15.00'	037°18'35"	5.06'	9.60'	S64°57'28"W
C11	54.50'	225.00'	013°52'40"	27.38'	54.36'	S53°14'30"W
C12	92.32'	225.00'	023°30'36"	46.82'	91.68'	S71°56'08"W
C13	119.38'	175.00'	039°05'13"	62.12'	117.08'	S64°08'50"W
C14	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°23'47"E
C15	30.06'	175.00'	009°50'35"	15.07'	30.03'	S50°19'04"E
C16	38.65'	225.00'	009°50'35"	19.37'	38.61'	S50°19'04"E
C17	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°23'47"W
C18	223.98'	50.00'	256°39'27"	-63.25'	78.45'	N82°55'57"E
C19	20.07'	15.00'	076°39'27"	11.86'	18.61'	S07°04'03"E
C20	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°36'13"E
C21	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°23'47"W
C22	13.62'	15.00'	052°01'12"	7.32'	13.16'	N71°24'23"W
C23	247.87'	50.00'	284°02'25"	-39.04'	61.54'	N44°36'13"E
C24	13.62'	15.00'	052°01'12"	7.32'	13.16'	S19°23'10"E
C25	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°36'13"E

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C26	10.18'	15.00'	038°52'15"	5.29'	9.98'	N25°10'06"E
C27	146.38'	50.00'	167°44'30"	465.62'	99.43'	N89°36'13"E
C28	10.18'	15.00'	038°52'15"	5.29'	9.98'	S25°57'39"E
C29	23.56'	15.00'	090°00'00"	15.00'	21.21'	S89°36'13"W
C30	36.36'	225.00'	009°15'29"	18.22'	36.32'	N79°03'42"E
C31	26.03'	15.00'	099°26'47"	17.70'	22.89'	N33°58'03"E
C32	90.53'	175.00'	029°38'27"	46.30'	89.53'	N30°34'33"W
C33	37.02'	225.00'	009°25'38"	18.55'	36.98'	N40°40'58"W
C34	9.01'	15.00'	034°26'03"	4.65'	8.88'	N53°11'10"W
C35	148.05'	50.00'	169°39'08"	552.19'	99.59'	N14°25'22"E
C36	10.23'	15.00'	039°04'06"	5.32'	10.03'	N79°42'53"E
C37	47.57'	175.00'	015°34'29"	23.93'	47.42'	N52°23'36"E
C38	23.56'	15.00'	090°00'00"	15.00'	21.21'	N00°23'39"W
C39	23.56'	15.00'	090°00'00"	15.00'	21.21'	N89°36'21"E
C40	23.56'	15.00'	090°00'00"	15.00'	21.21'	S00°23'39"E
C41	47.57'	175.00'	015°34'29"	23.93'	47.42'	S52°23'36"W
C42	5.47'	175.00'	001°47'32"	2.74'	5.47'	S61°04'36"W
C43	26.89'	15.00'	102°42'01"	18.76'	23.43'	N66°40'37"W
C44	118.08'	225.00'	030°04'10"	60.43'	116.73'	N30°21'42"W
C45	33.39'	175.00'	010°55'53"	16.74'	33.34'	N39°55'50"W
C46	24.78'	15.00'	094°38'44"	16.27'	22.06'	N12°51'28"E
C47	61.16'	225.00'	015°34'29"	30.77'	60.97'	N52°23'36"E

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

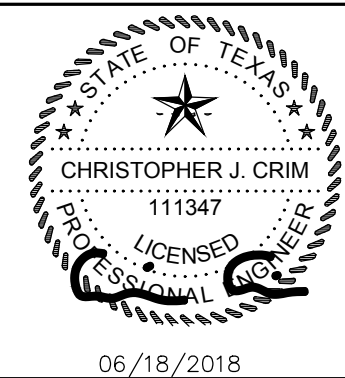
I, _____ DO HEREBY CERTIFY THAT THE FOREGOING
INSTRUMENT WAS FILED FOR RECORD IN THE MAP AND PLAT RECORDS,
DOC# _____ OF COMAL COUNTY ON THE _____ DAY
OF _____, 20____, AT
_____ M.

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

COUNTY CLERK, COMAL COUNTY, TEXAS

DEPUTY _____

410 N. SEGUIN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
P1030625-8555 • F1030625-8556
TBPE FIRM F-10961
TBPLS FIRM 10153600



06/18/2018

SUBDIVISION PLAT
SHT 1

CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JUNE 2018

DRAWN BY: MGM/MZ

DESIGNED BY: MGM/MZ/CC

REVIEWED BY: SWH/SCH

HMT PROJECT NO.:
056.009

SHEET
C0.3

FOR REFERENCE ONLY

Drawing Name: N:_projects\056 - cloud country unit 5\03- construction drawings\056.009.103-PA1.dwg User: masz Jun 19, 2018 - 2:28pm

Drawing Name: N:_projects\056 - Milestone Properties\056.009 - Cloud Country Unit 5\Plotting\Plot\056.009-Cloud Country U5.dwg User: kelly Jun 13, 2018 - 11:04am



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



SCALE: 1"=100'

LEGEND:

- = FIND 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

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.

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

SUBDIVISION PLAT

SHT 2

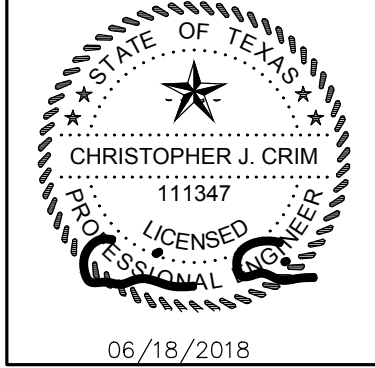
CLOUD COUNTRY UNIT 5

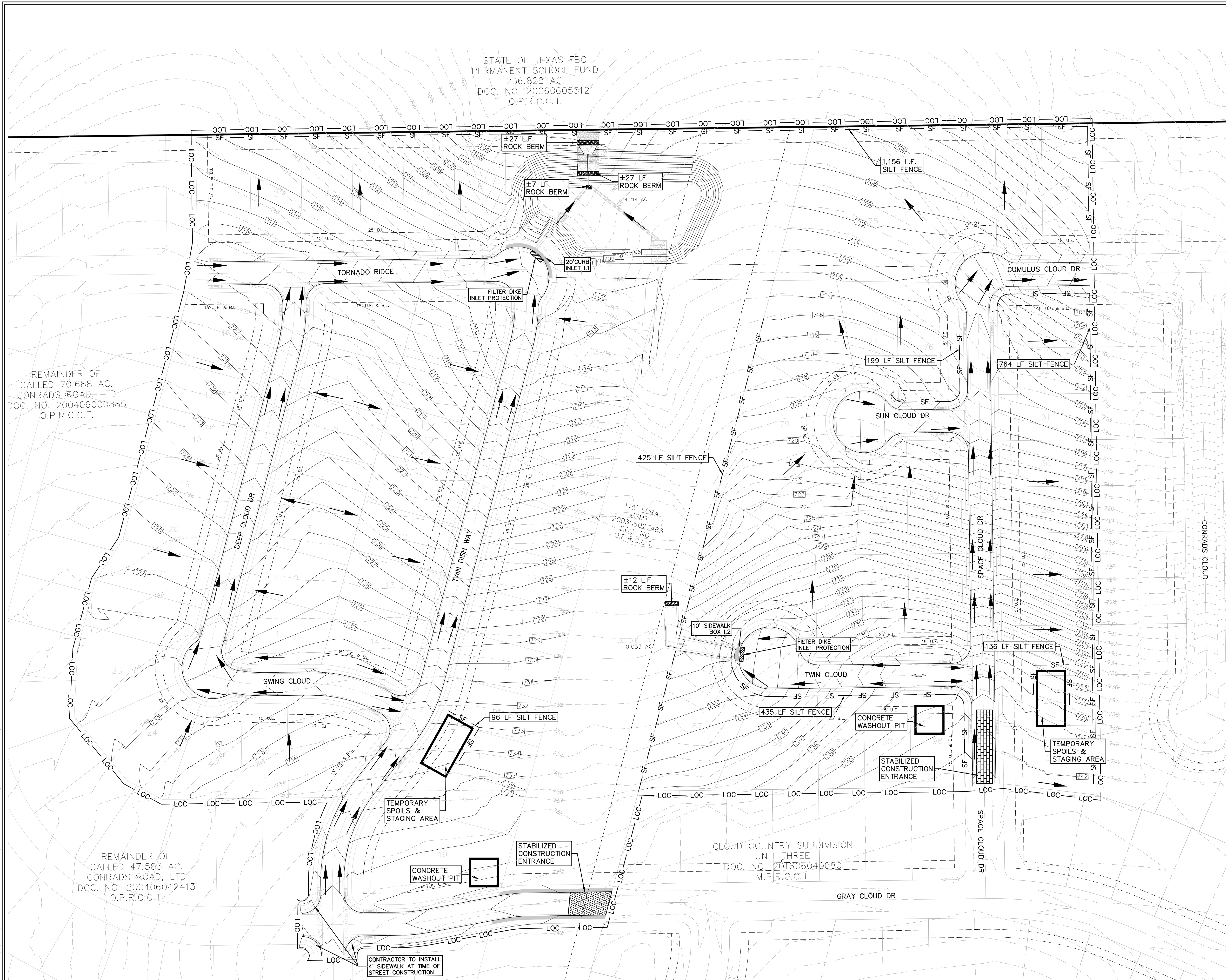
NO.	REVISION	DESCRIPTION	REVISION DATE

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

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410 N. SEGUIN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
PH: (830) 625-8555 • F: (830) 625-8556
TBPE FIRM F-10961
TBPLS FIRM 10153600



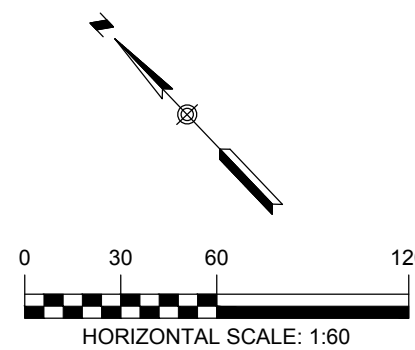


LEGEND

— 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
— 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).

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.

410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
P(830)625-8555 • F(830)625-8556
T(830)625-8557 • F(830)625-8558
T(830)625-8559 • F(830)625-8560



**EROSION CONTROL
PLAN**

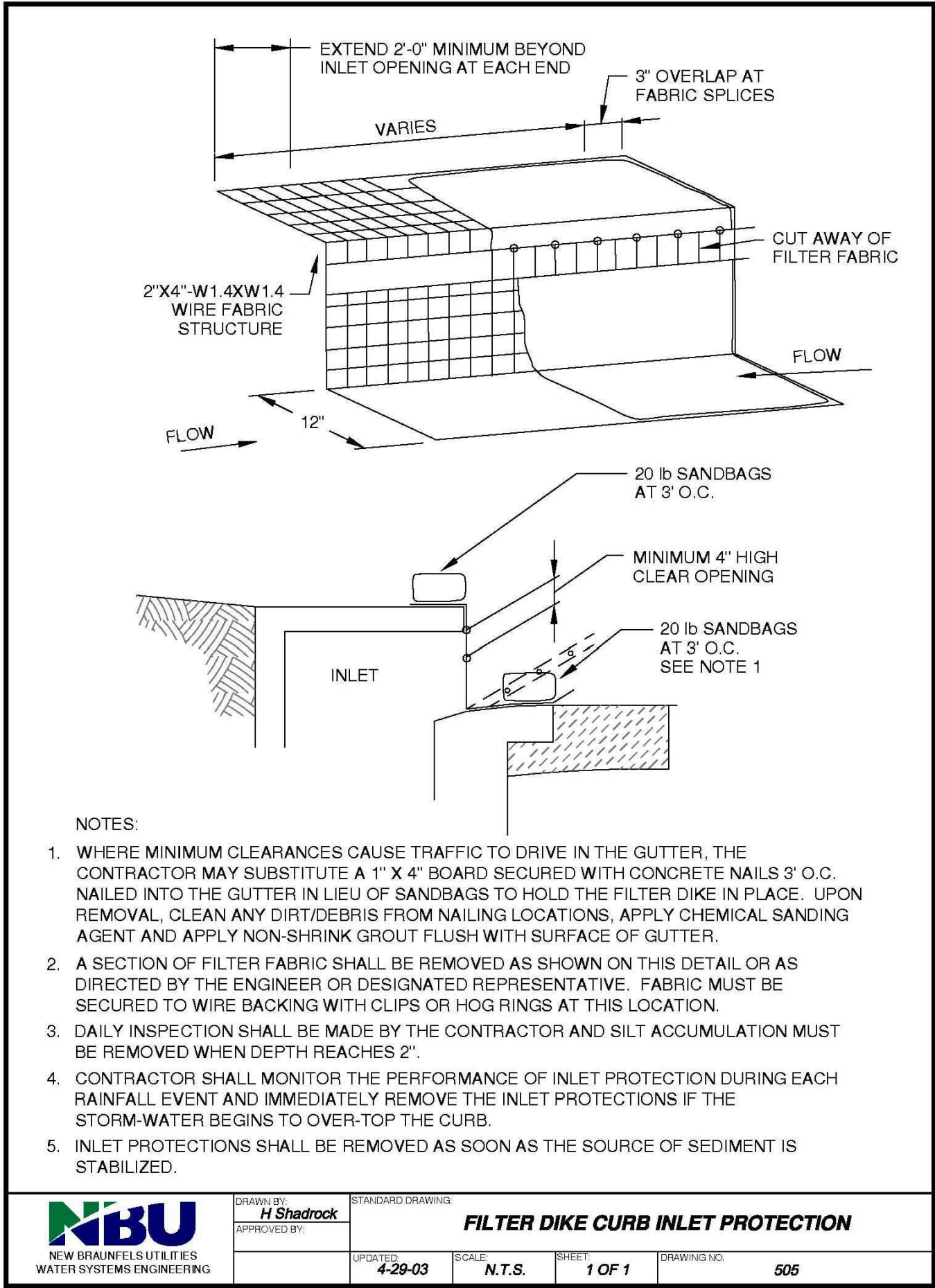
CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION	REVISION DATE

DATE: JUNE 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:

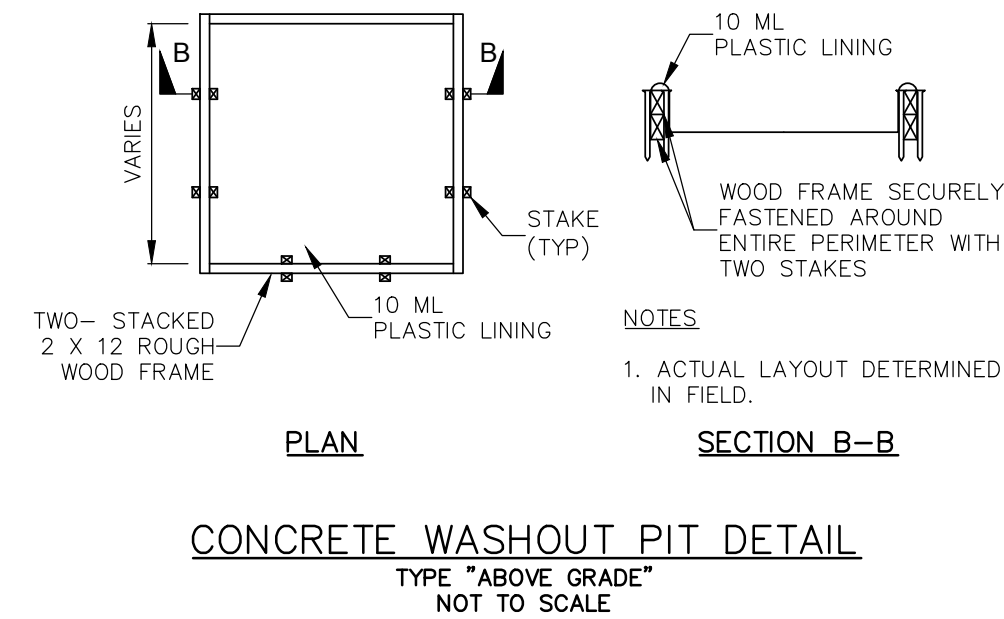
- INCORPORATE REQUIREMENTS FOR CONCRETE WASTE MANAGEMENT INTO MATERIAL SUPPLIER AND SUBCONTRACTOR AGREEMENTS.
- AVOID MIXING EXCESS AMOUNTS OF FRESH CONCRETE.
- PERFORM WASHOUT OF CONCRETE TRUCKS IN DESIGNATED AREAS ONLY.
- DO NOT WASH OUT CONCRETE TRUCKS INTO STORM DRAINS, OPEN DITCHES, STREETS, OR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



SILT FENCE

MATERIALS:

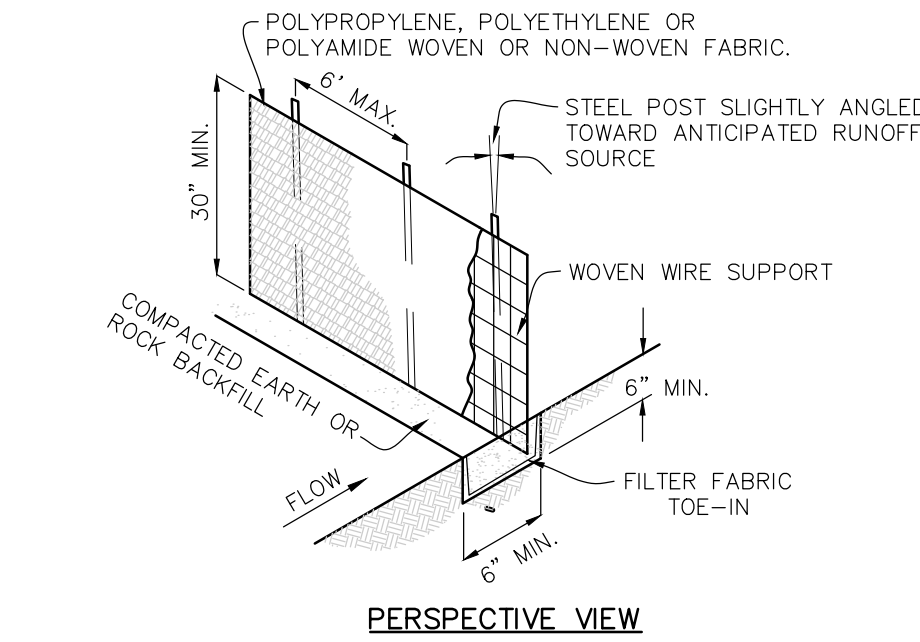
- SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN², ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. 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 BRINDELL 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.



STABILIZED CONSTRUCTION ENTRANCE / EXIT

MATERIALS:

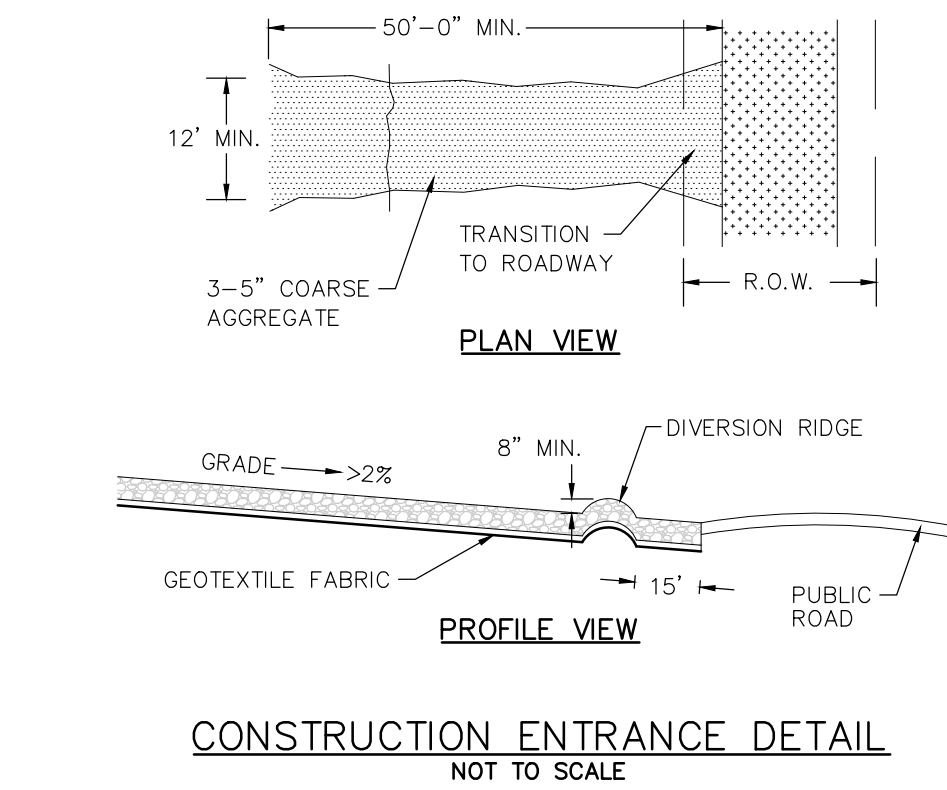
- THE AGGREGATE SHOULD CONSIST OF 3 TO 5 INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
- THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
- THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 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.

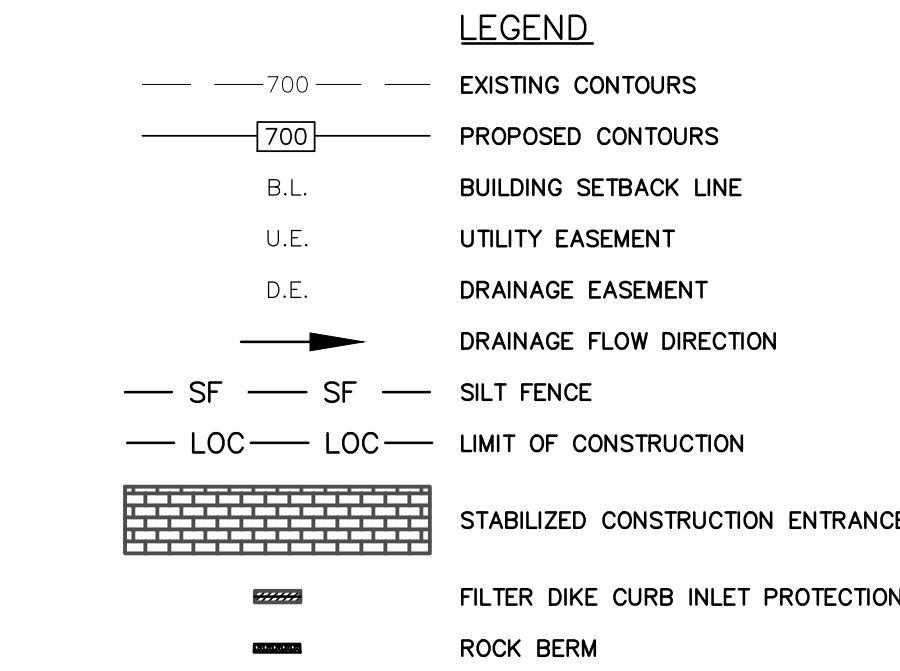
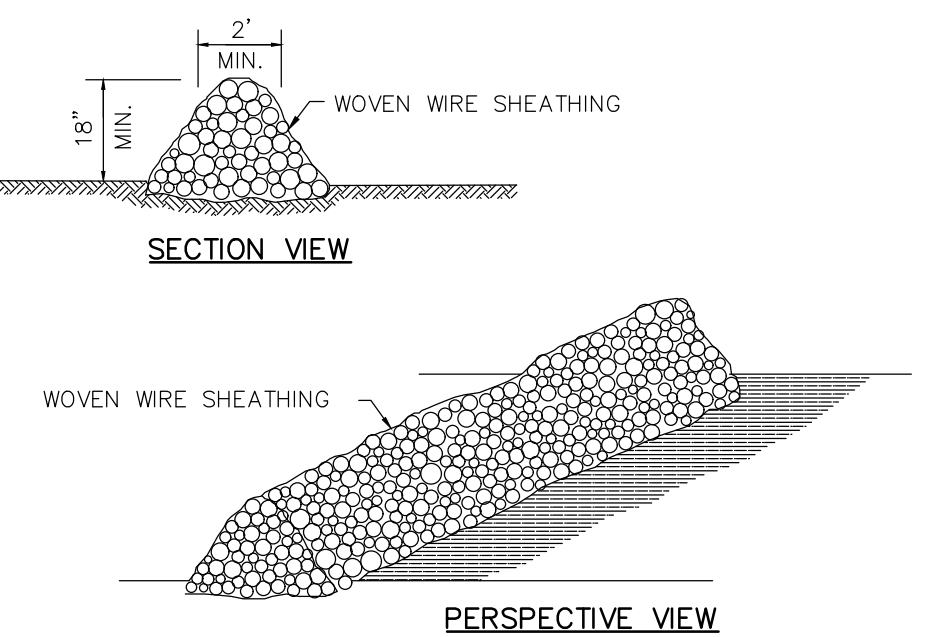
INSPECTION AND MAINTENANCE GUIDELINES:

- THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR LOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
- 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.



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.



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:

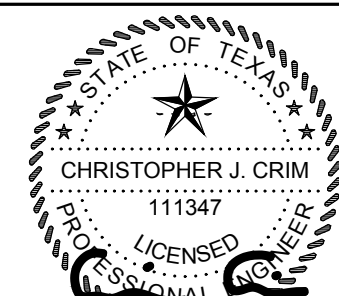
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DISTURBED AREAS ON WHICH CONSTRUCTION ACTIVITIES HAVE CEASED (TEMPORARILY OR PERMANENT) AND SHALL BE STABILIZED WITHIN 14 DAYS UNLESS ACTIVITY RESUMES IN 21 DAYS, PER TPDES REQUIREMENTS.

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).

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.

410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
P(830)625-8855 • F(830)625-8856
T(830)625-8856 • F(830)625-8856
T(830)625-8856 • F(830)625-8856

HMT
ENGINEERING & SURVEYING



06/18/2018

**EROSION CONTROL
DETAILS**

CLOUD COUNTRY UNIT 5

REVISION	DESCRIPTION	DATE
NO.		

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

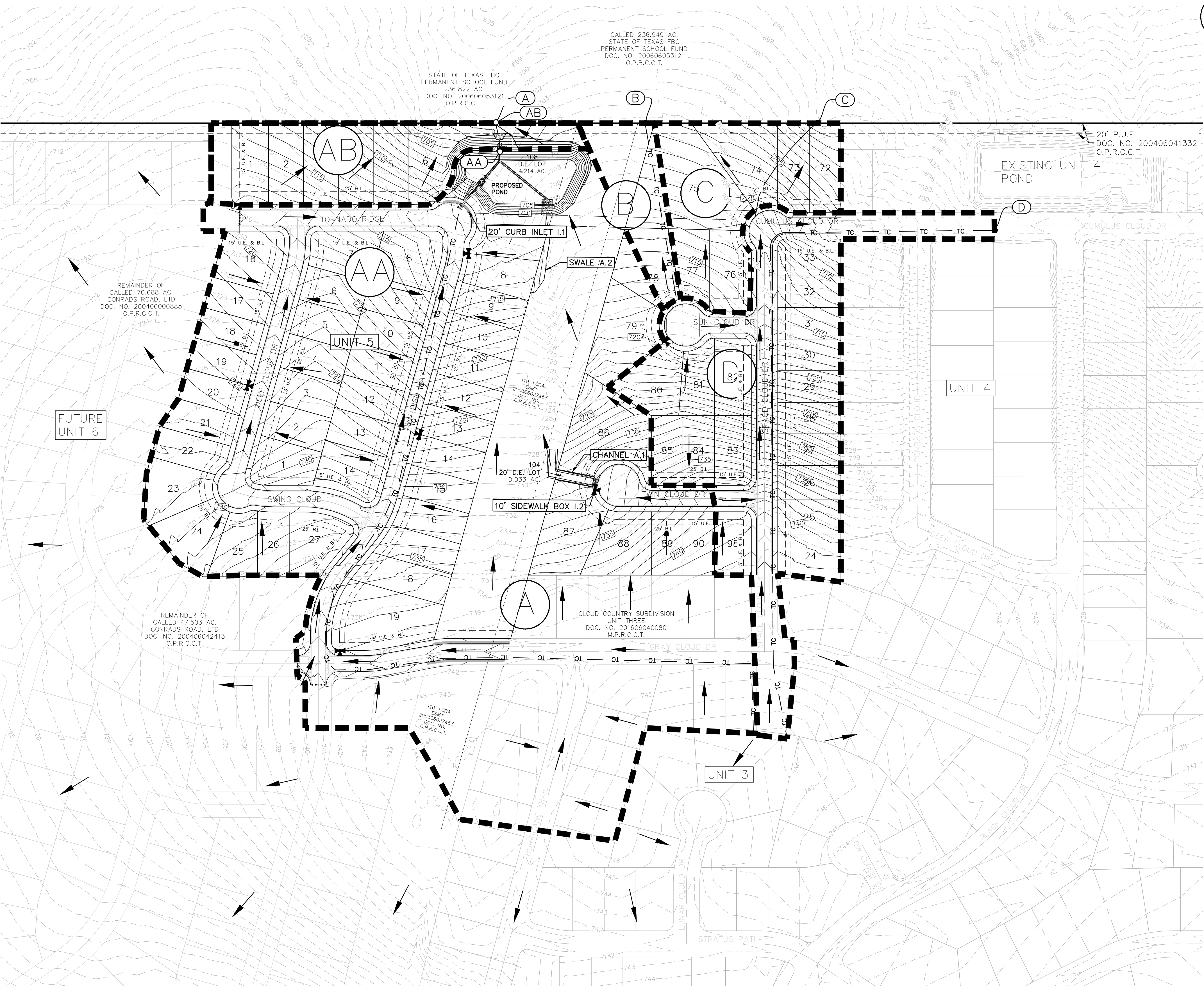
**SHEET
C1.1**

MAINTENANCE SCHEDULE:

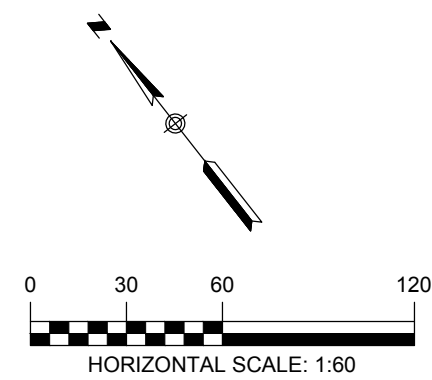
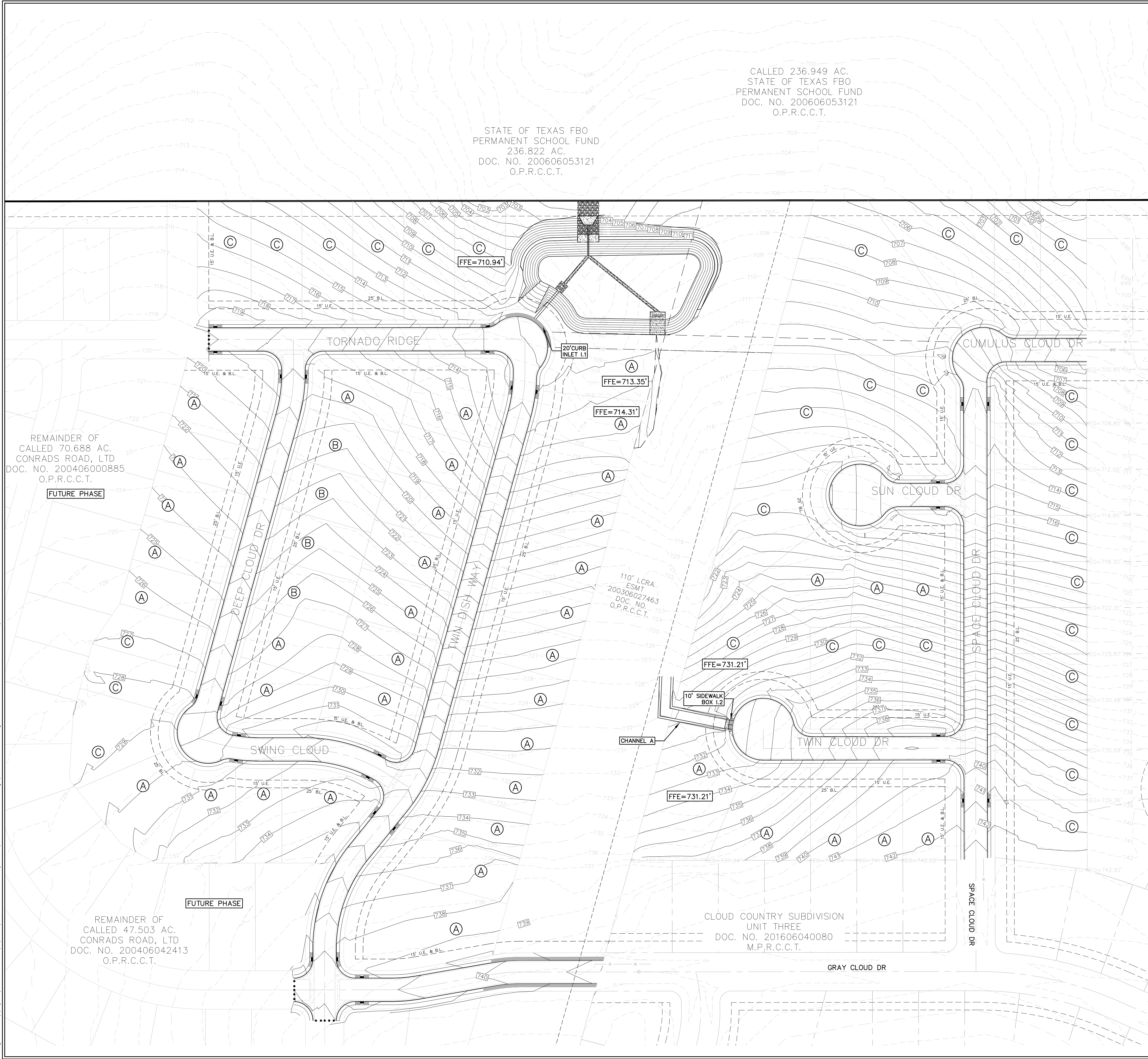
1. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO ENSURE PROPER FUNCTION OF THE CHANNELS AND STORM SEWER SYSTEM.
2. ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM THE CHANNELS AND STORM SEWERS EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.

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



Drawing Name: N:_projects\056 - milestones properties\056.009 - cloud country unit 3\103- construction drawings\056.009.103-GRAD.dwg User: msaz Jun 19, 2018 - 2:30pm



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]

GRADING PLAN

CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE

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

SHEET
C3.0

REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

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.

CALLED 236.949 AC.
STATE OF TEXAS FBO
PERMANENT SCHOOL FUND
DOC. NO. 200606053121
O.P.R.C.C.T.

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

REMAINDER OF
CALLED 70.688 AC.
CONRAD'S ROAD, LTD
DOC. NO. 200406000885
O.P.R.C.C.T.

FUTURE PHASE

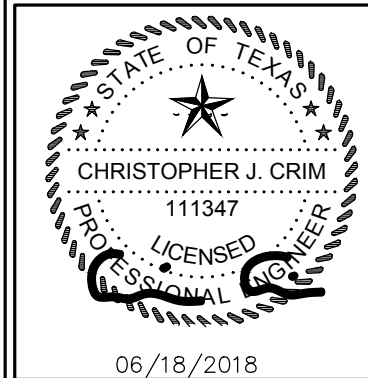
REMAINDER OF
CALLED 47.503 AC.
CONRAD'S ROAD, LTD
DOC. NO. 200406042413
O.P.R.C.C.T.

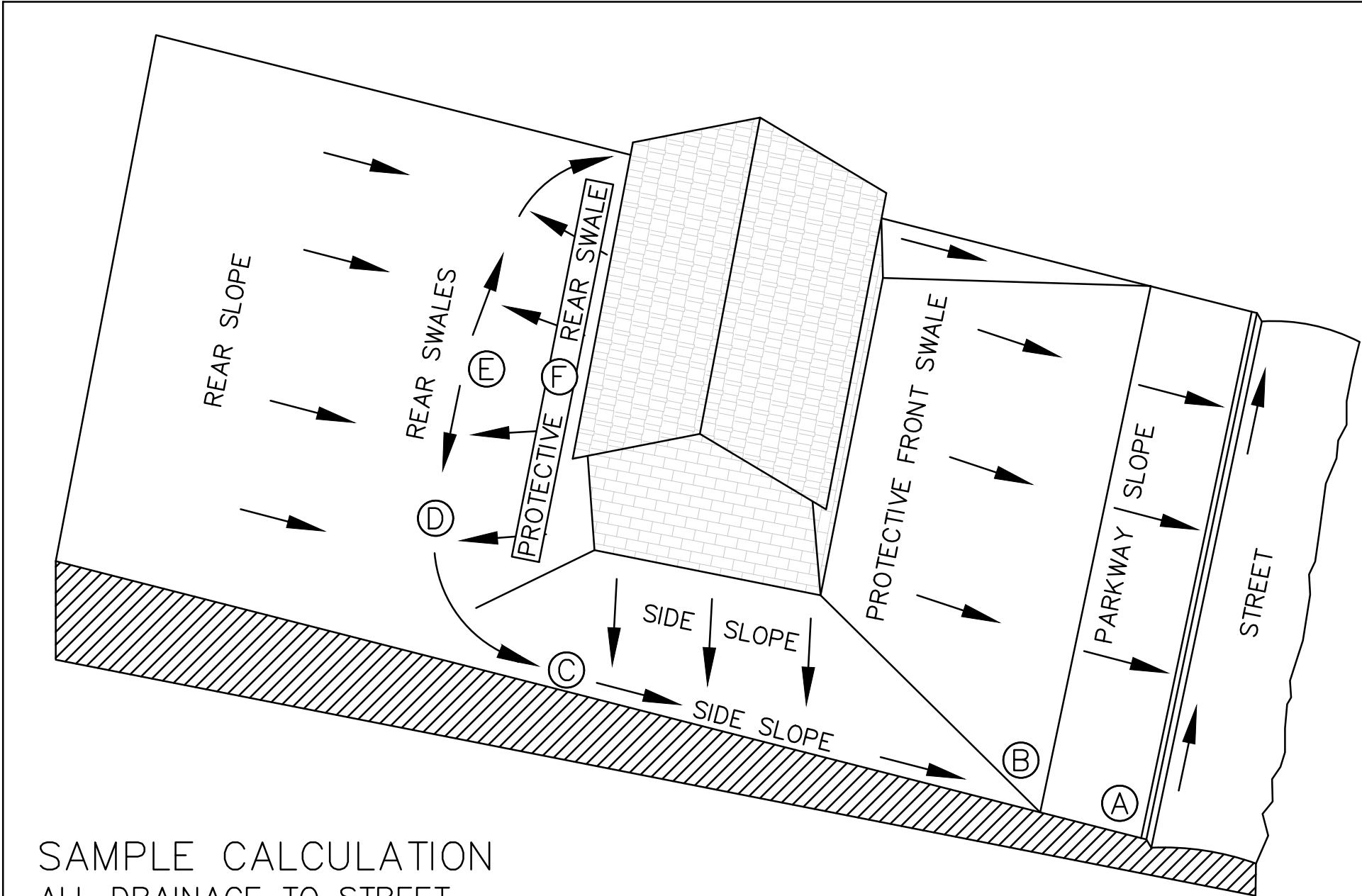
FUTURE PHASE

110' LCRA
ESMT
200306027463
DOC. NO.
O.P.R.C.C.T.

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

410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
P(830)625-8555 • F(830)625-8556
TBPE FIRM F-10961
TBPLS FIRM 10153600

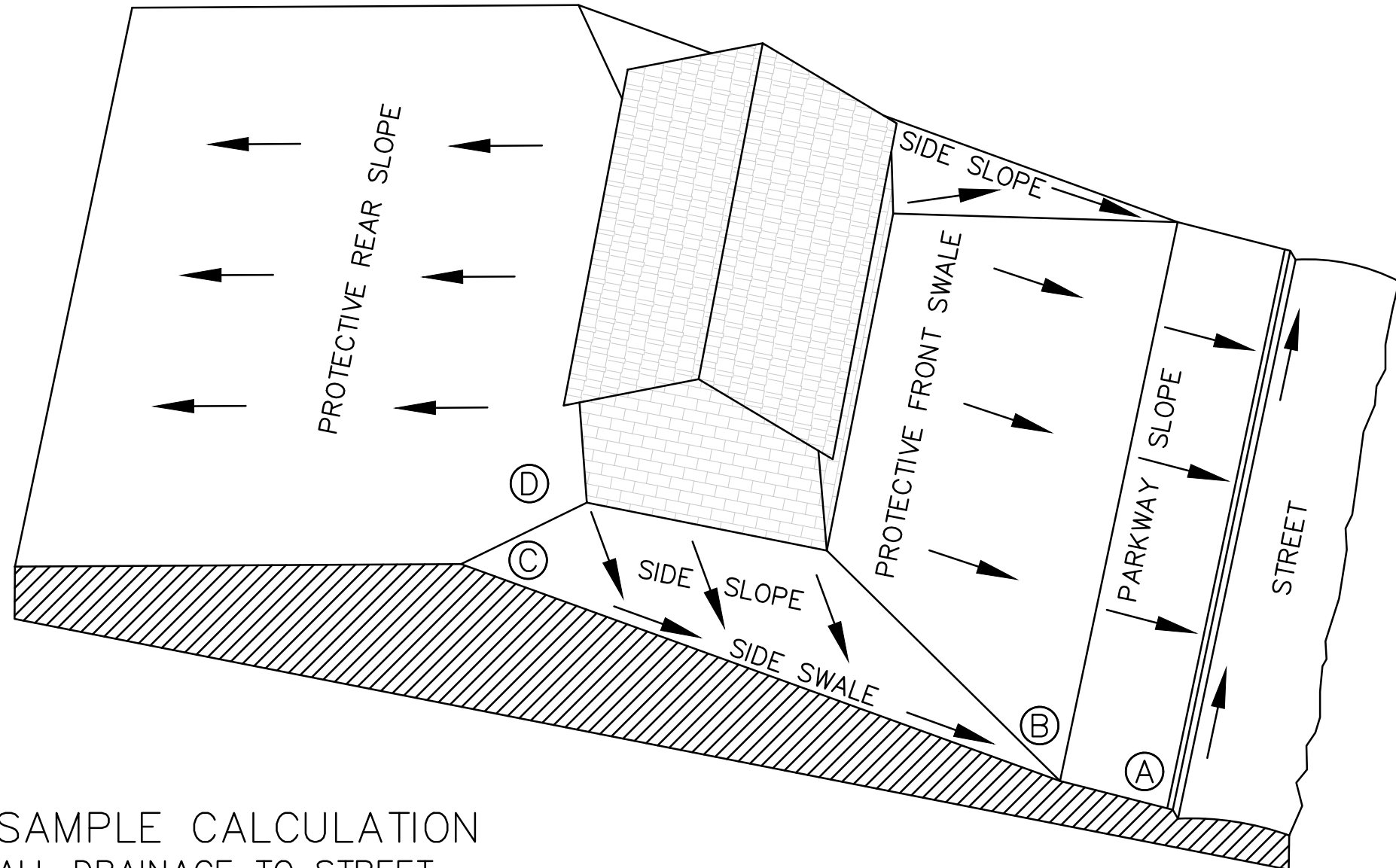




SAMPLE CALCULATION
ALL DRAINAGE TO STREET

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' = 3½" 85 x 0.25' = 21½" 16 x 0.25' = 4" 13 x 0.25' = 3½" 10 x 0.25' = 2½" <hr/> 34½"	
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')	CALCULATIONS USE 0.25" PER FOOT GRADIENT FOR A 2% SWALE.	
SUB—TOTAL AF FROM CURB TOP TO GROUND AT REAL BLDG WALL		35"	(3.0')	20"	(1.7')		
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 35" + 8"		43"	(3.6')	28"	(2.3')		
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		54"	(4.5')	39"	(3.3')		
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.							
** LENGTH DE = [1/2(LOT WIDTH - (2x SWALE TURN RADIUS))] - [LOT WIDTH x (STREET GRADIENT x SWALE GRADIENT)]							

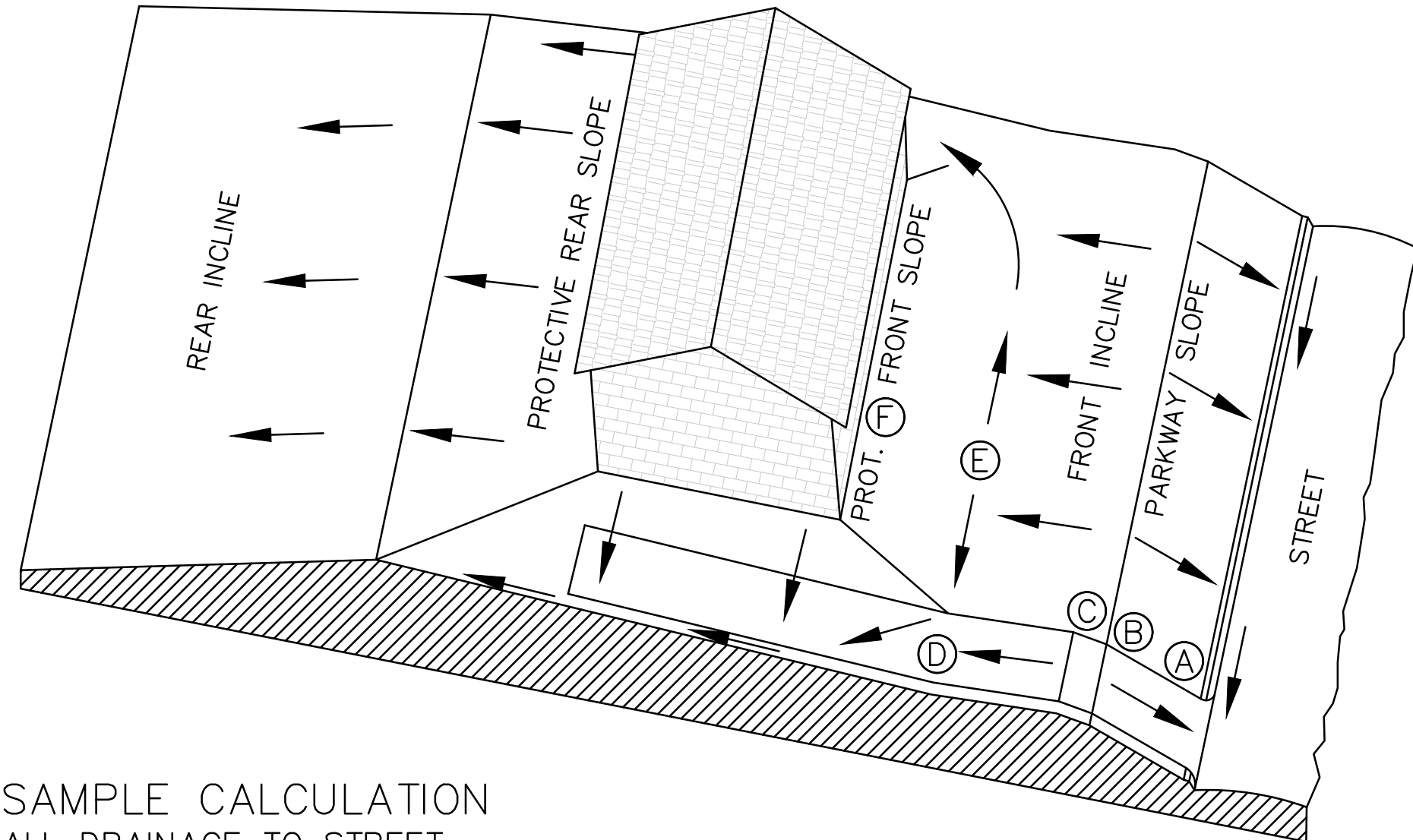
LOT TYPE ①



SAMPLE CALCULATION
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE AF FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 0.5% STREET, WITH 60' BUILDING DEPTH AND 2% SWALES.				RESULTS OF 1% SWALES		<div>CALCULATIONS FOR 2% SWALES</div> <div>15 x 0.25' = 3³/_{4"}</div> <div>85 x 0.25' = 21¹/_{4"}</div> <div>6 x 0.25' = 1¹/_{2"}</div> <div><hr/></div> <div>26¹/_{2"}</div>
A	CURB-TOP ON LOT LINE EXTENSION AT HIGH LOT CORNER					
AB	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4"	(0.3')	2"	(0.2')	
BC	SIDE SWALE: 85' GRASS AT 1/4"/FT. (2%)	21"	(1.8')	11"	(0.9')	
CD*	PROTECTIVE SIDE SLOPE @ REAR BLDG. WALL EXTENSION	3"	(0.3')	3"	(0.3')	
SUB-TOTAL AD FROM CURB TOP TO GROUND AT REAL BLDG WALL		27"	(2.4')	16"	(1.4')	
MINIMUM RISE FROM CURB TOP TO SLAB FLOOR: 27" + 8"		35"	(2.9')	24"	(2.0')	
MINIMUM RISE FOR WOOD FLOOR USING 8" JOISTS: 35" + 9"		46"	(3.8')	35"	(2.9')	
* WHERE THERE IS A HIGH BANK NEARBY OR A LONG SLOPE TOWARD HOUSE, A MINIMUM 6" PROTECTIVE SLOPE IS REQUIRED.						

LOT TYPE ②



SAMPLE CALCULATION
ALL DRAINAGE TO STREET

SAMPLE COMPUTATION OF GRADING CONTROL LINE \overline{AF} FOR A 60' WIDE LOT WITH A 25' BUILDING LINE, 13.5% DRIVEWAY, AND 16' FRONT SWALE \overline{DE} AT 2.0%.				RESULTS OF 1% SWALES		CALCULATIONS FOR SWALES
A	CURB—TOP HIGH SIDE OF DRIVE NEAR LOW LOT CORNER					$15 \times 0.25' = 3\frac{3}{4}"$
\overline{AB}	PARKWAY SLOPE: 15' GRASS AND WALK AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')			$0 \times 0.25' = 0"$
\overline{BC}	DRIVEWAY GRADE CHANGE: 4' VERTICAL CURVE FROM UP—GRADE DRIVE IN STREET TO DOWN—GRADE DRIVE ON LOT	0" (0.0')	0" (0.0')			$-11 \times 1.625' = -17\frac{3}{4}"$
\overline{CD}	DRIVEWAY DOWN—GRADE TO POINT 10 FEET OUT FROM FRONT OF BUILDING: -11' AT 18"/FT (13.5%)	-18" (-1.5')	-18" (-1.5')			$16 \times 0.25' = 4"$
\overline{DE}	FRONT SWALE: 16' GRASS AT 1/4"/FT. (2%)	4" (0.3')	2" (0.2')			$10 \times 0.25' = 2\frac{1}{2}"$
\overline{EF}^*	PROT. FRONT SLOPE UP FROM HIGH POINT OF SWALES	3" (0.3')	3" (0.3')			<hr/> $-7\frac{1}{2}"$
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 ③

GENERAL SPECIFICATIONS FOR SITE PREPARATION

GENERAL DESCRIPTION

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

SCARIFYING THE AREA TO BE FILLED

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

COMPACTING THE AREA TO BE FILLED

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

FILL MATERIALS

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

DEPTH AND MIXING OF FILL LAYERS

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

ROCK

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

COMPACTION OF FILL LAYER

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

COMPACTION OF SLOPES

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

DENSITY TEST

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

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

CUT/FILL LOTS

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

HUD 79-G

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

DRAINAGE NOTE

FINISHED FLOOR ELEVATIONS

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

410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
PI6301625-8555 • F(830)625-8556
TBPE FIRM F-10961
TBPLS FIRM 10153600



06/18/2018

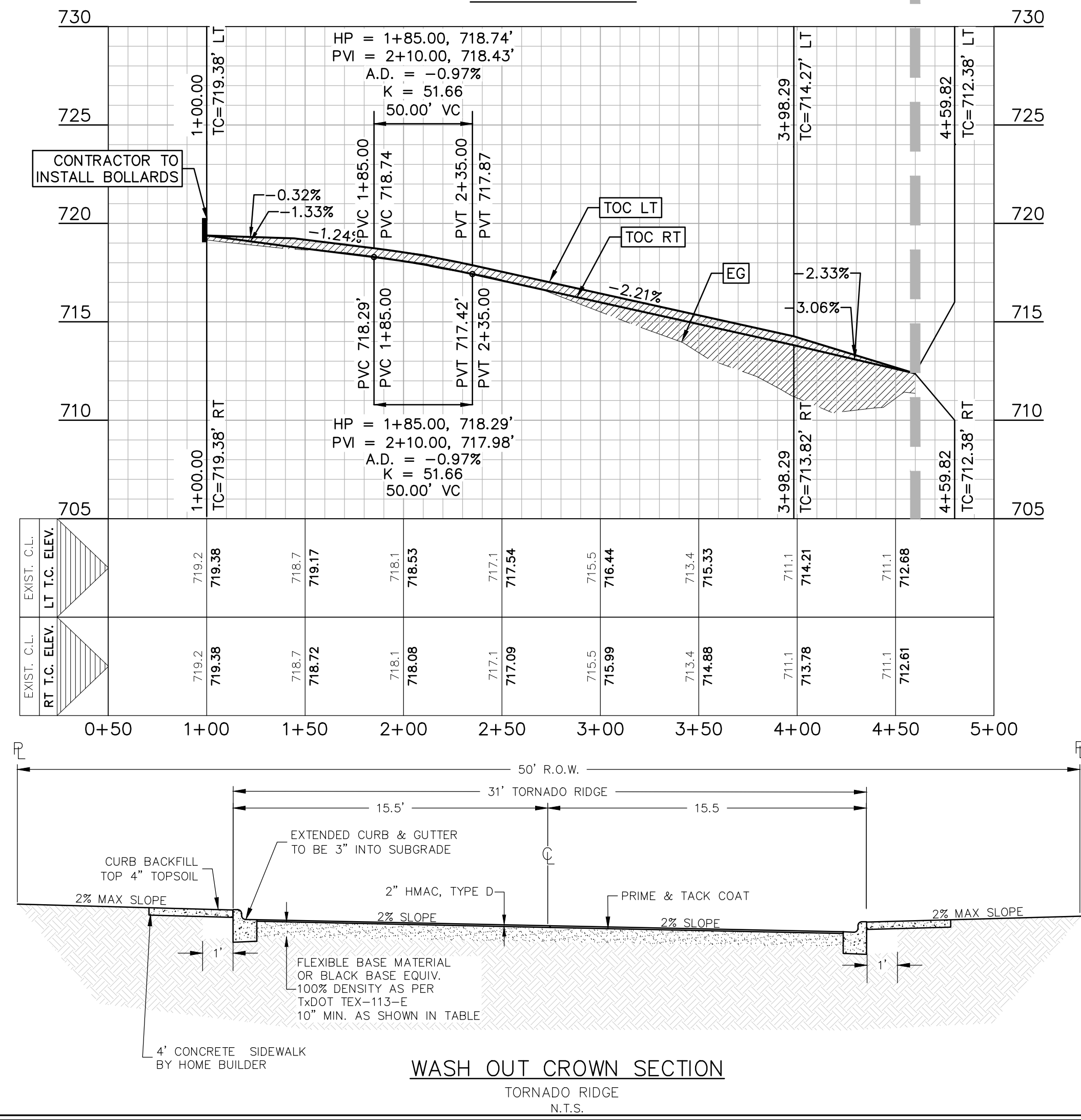
GRADING DETAILS

CLOUD COUNTRY UNIT 5

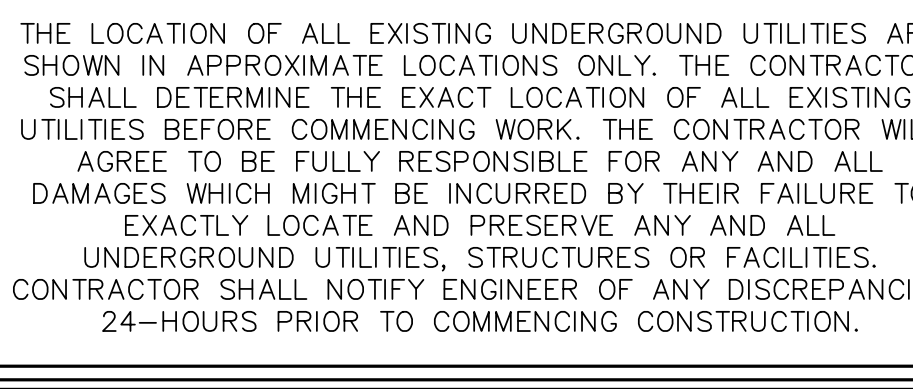
NO.	REVISION	DESCRIPTION	REVISION DATE

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

SHEET
C3.1



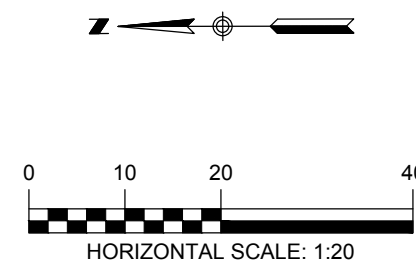
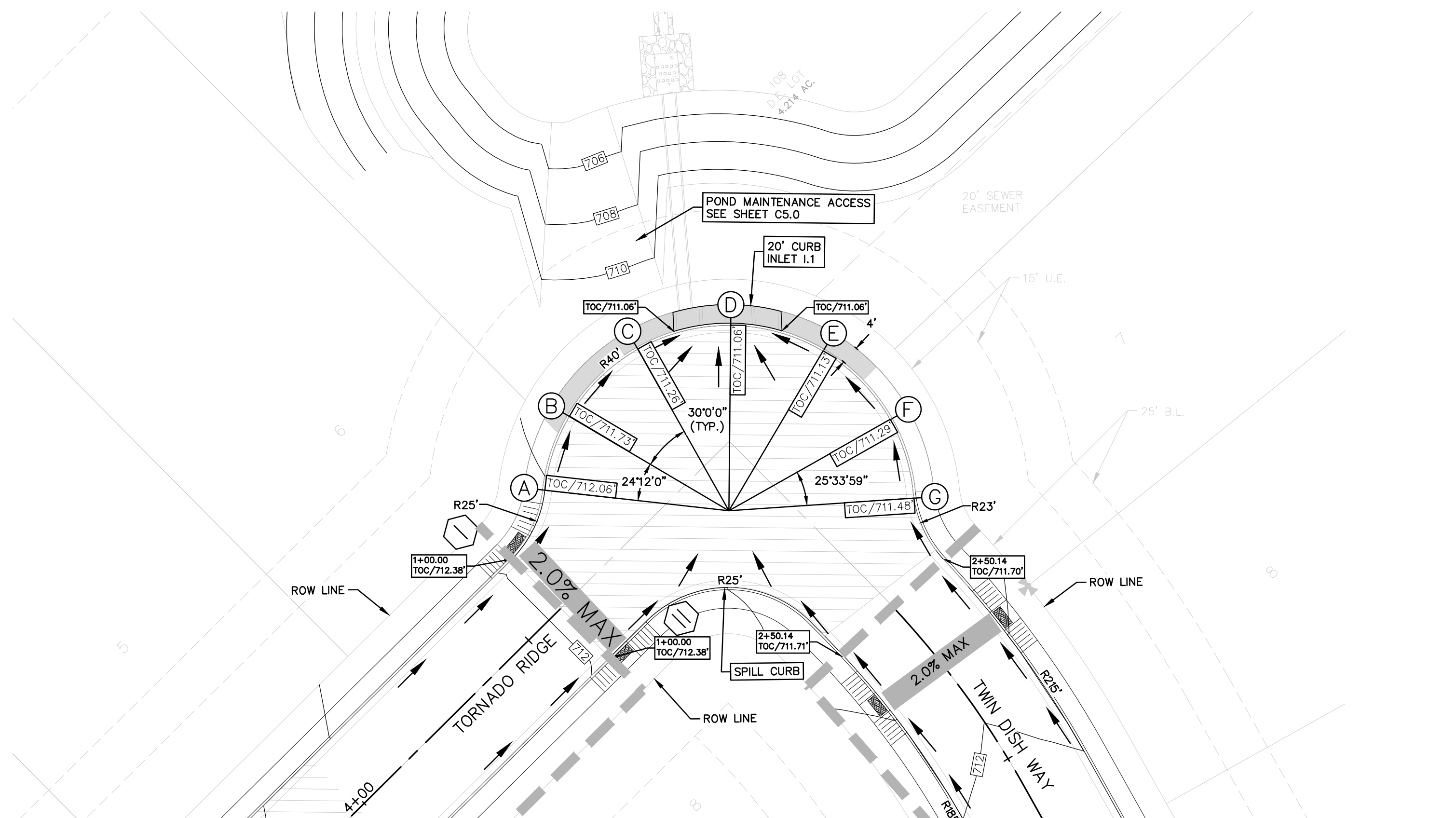
- ## NOTES
1. STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
 2. IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
 3. CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
 4. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET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



STATE OF TEXAS
CHRISTOPHER J. CRIM
111347
LICENSED PROFESSIONAL ENGINEER
06/18/2018

DATE: JUNE 2018		REVISION DATE	
DRAWN BY: MGM/MZ			
DESIGNED BY: MGM/MZ/CO			
REVIEWED BY: SWH/SCH			
HMT PROJECT NO.: 056.009			
<div style="text-align: center;"> SHEET C4.0 </div>			

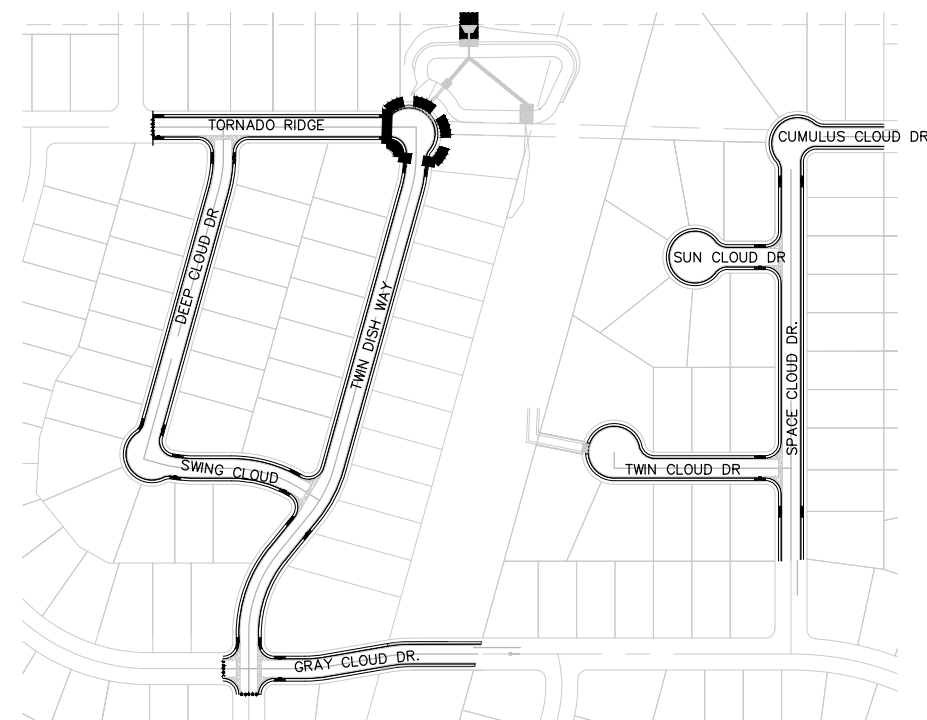
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- LEGEND**
- EXISTING CONTOURS
 - PROPOSED CONTOURS
 - B.L. BUILDING SETBACK LINE
 - U.E. UTILITY EASEMENT
 - D.E. DRAINAGE EASEMENT
 - A.D.A. RAMP
 - FLOW ARROW
 - WASHOUT CROWN AREAS
 - EXISTING GROUND CENTER (EG CTR)
 - PROPOSED GROUND CENTER (PR 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

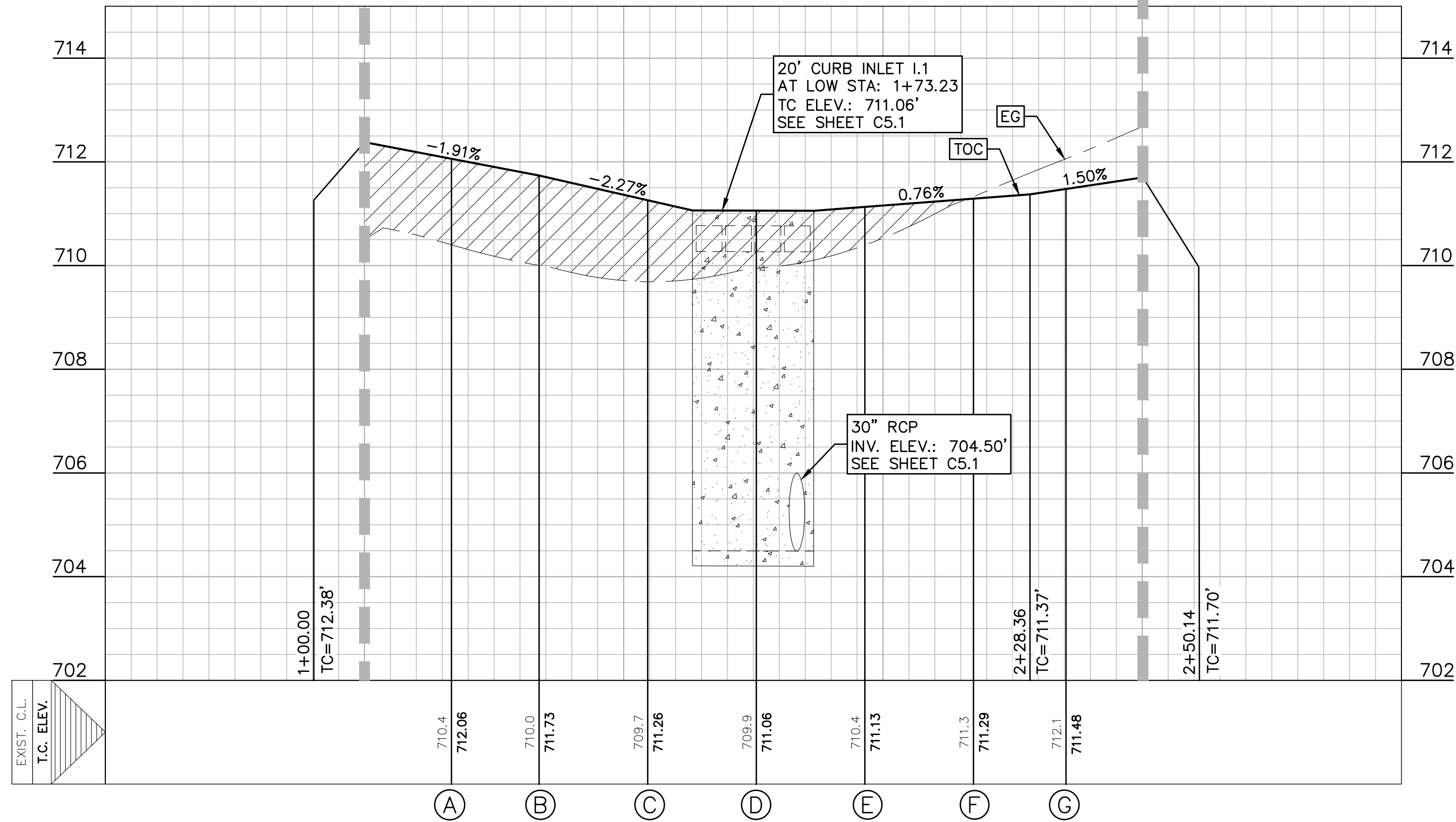
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- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO THAT NO "PONDING" OF WATER OCCURS.



MATCHLINE:
TORNADO RIDGE KNUCKLE STA: 1+00.00
= TORNADO RIDGE STA: 4+59.82
SHEET C4.0

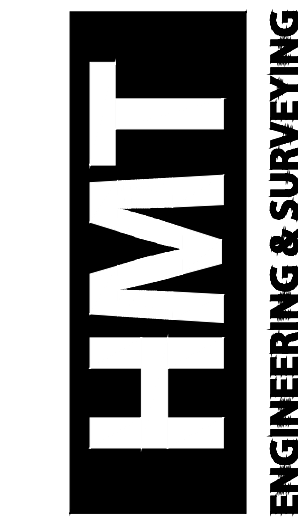
MATCHLINE:
TORNADO RIDGE KNUCKLE OUT
0+50 - 3+00

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



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410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
PI630625-8555-F1830 625-8556
TBPE FRM F-10961
TBPLS FRM 10153600



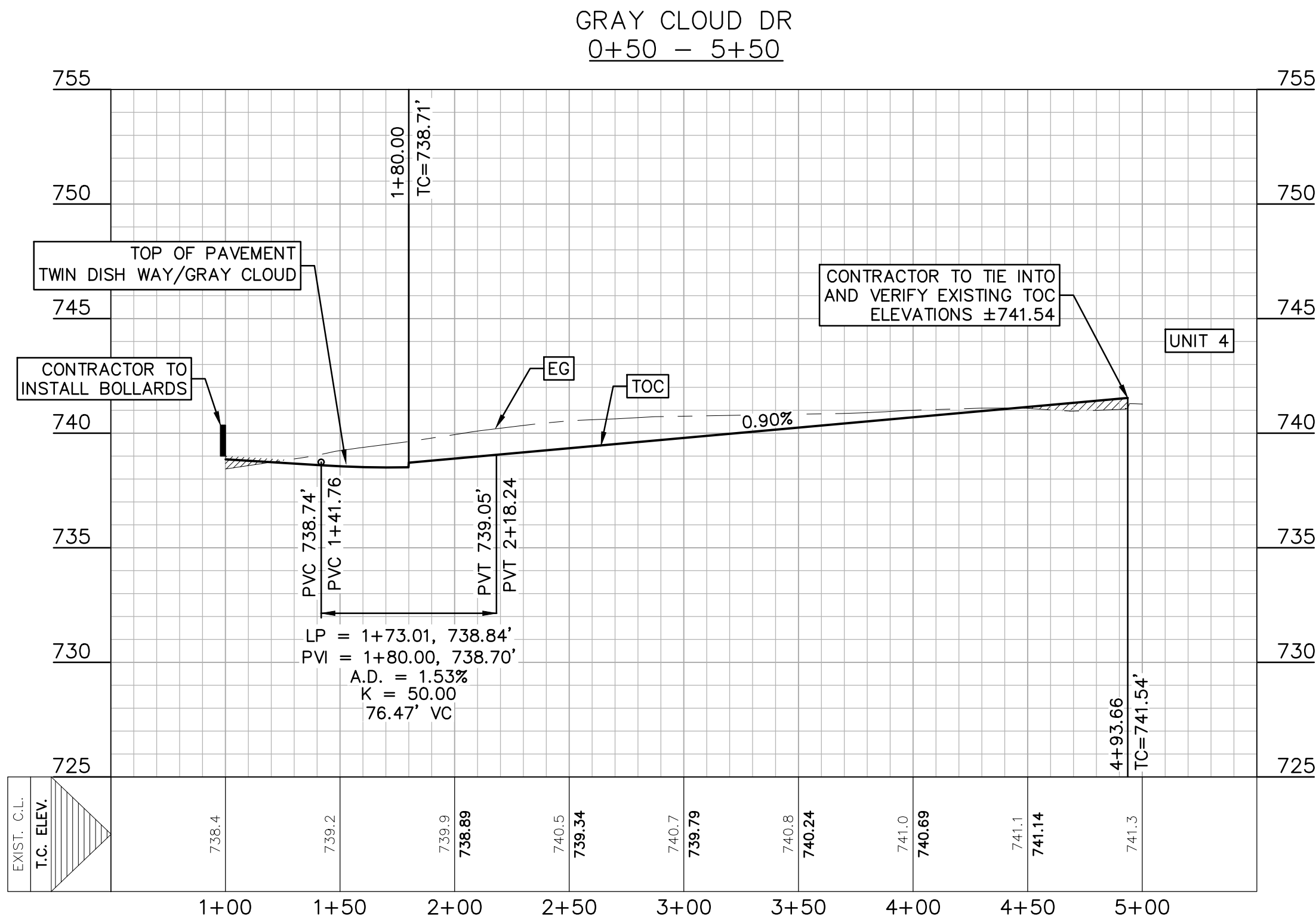
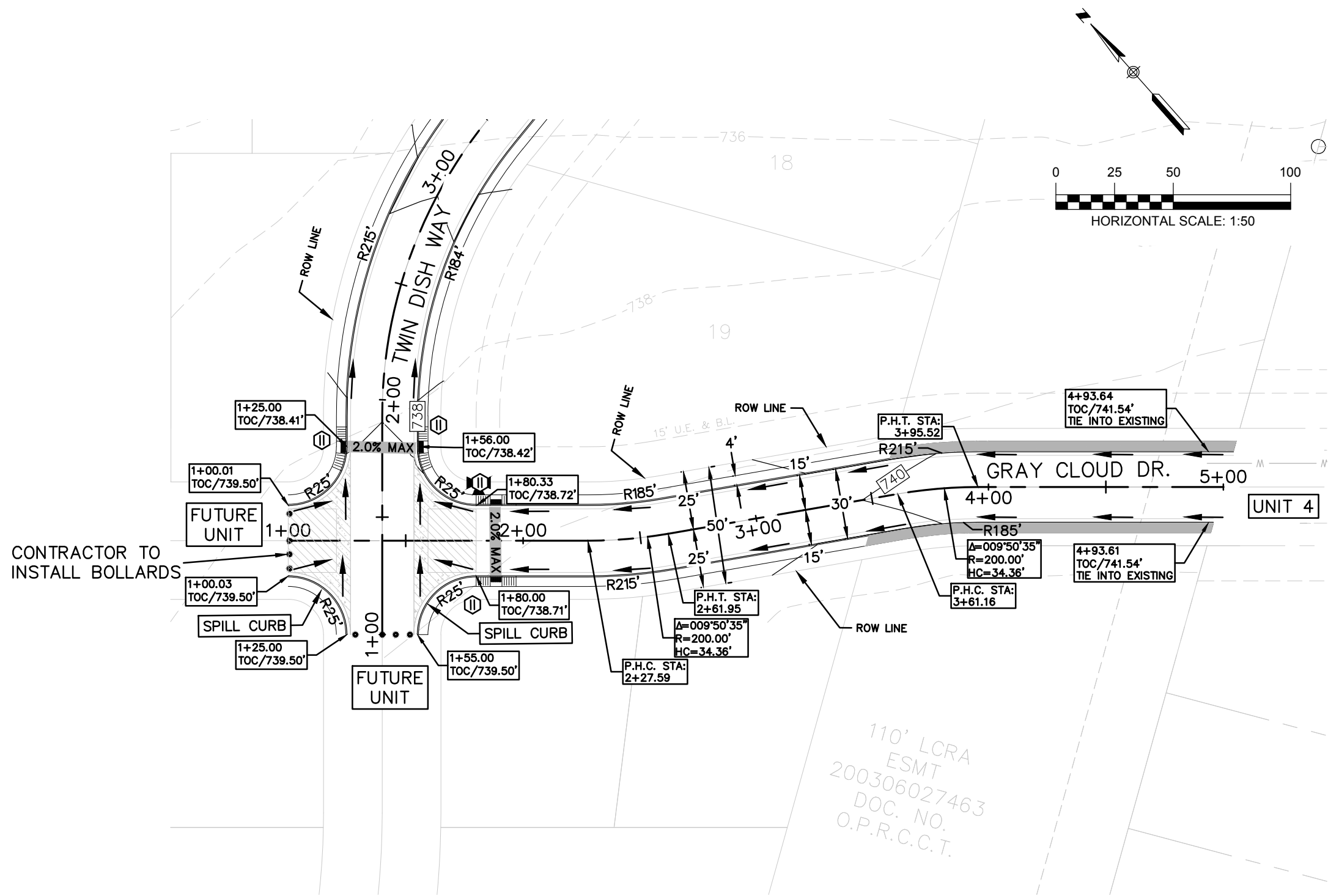
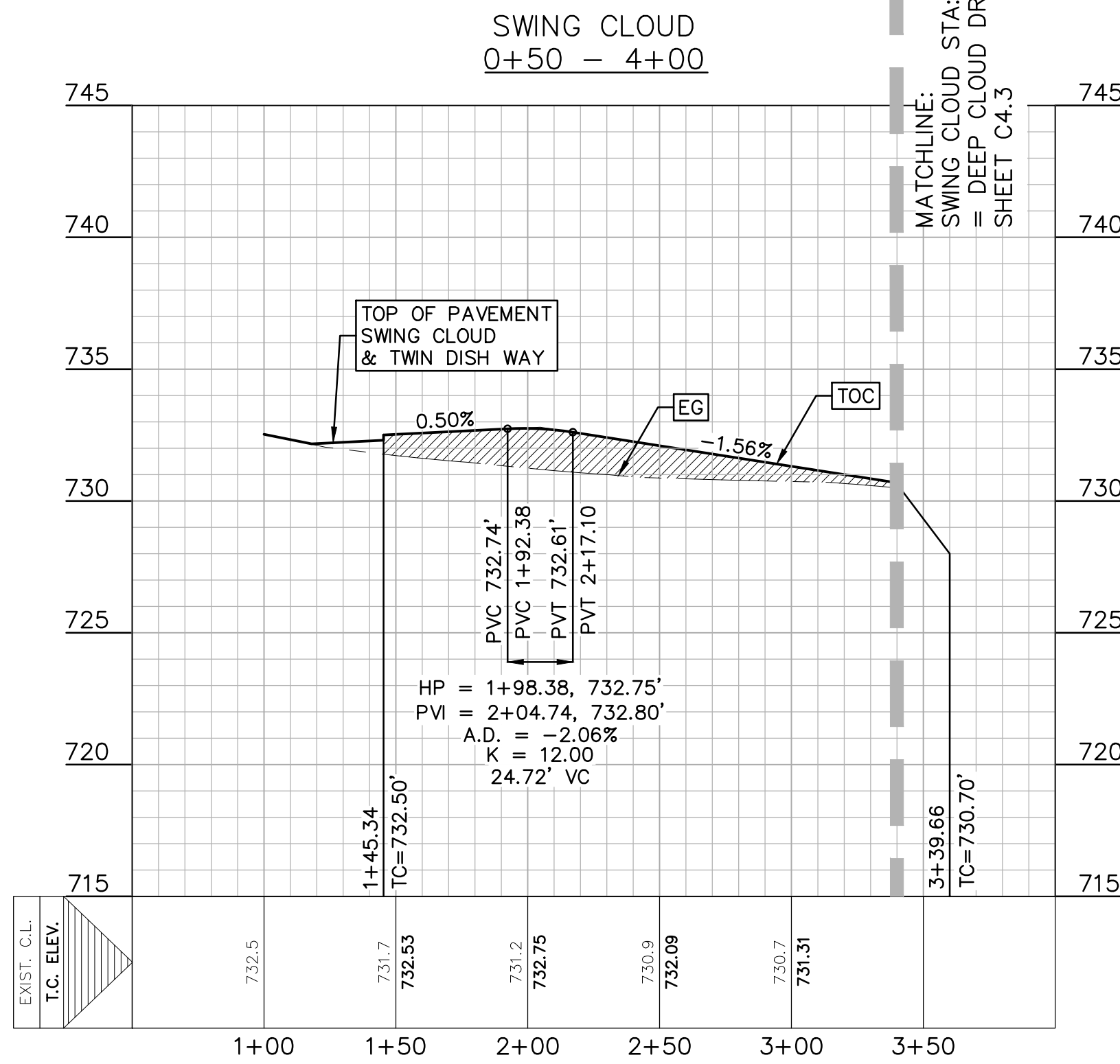
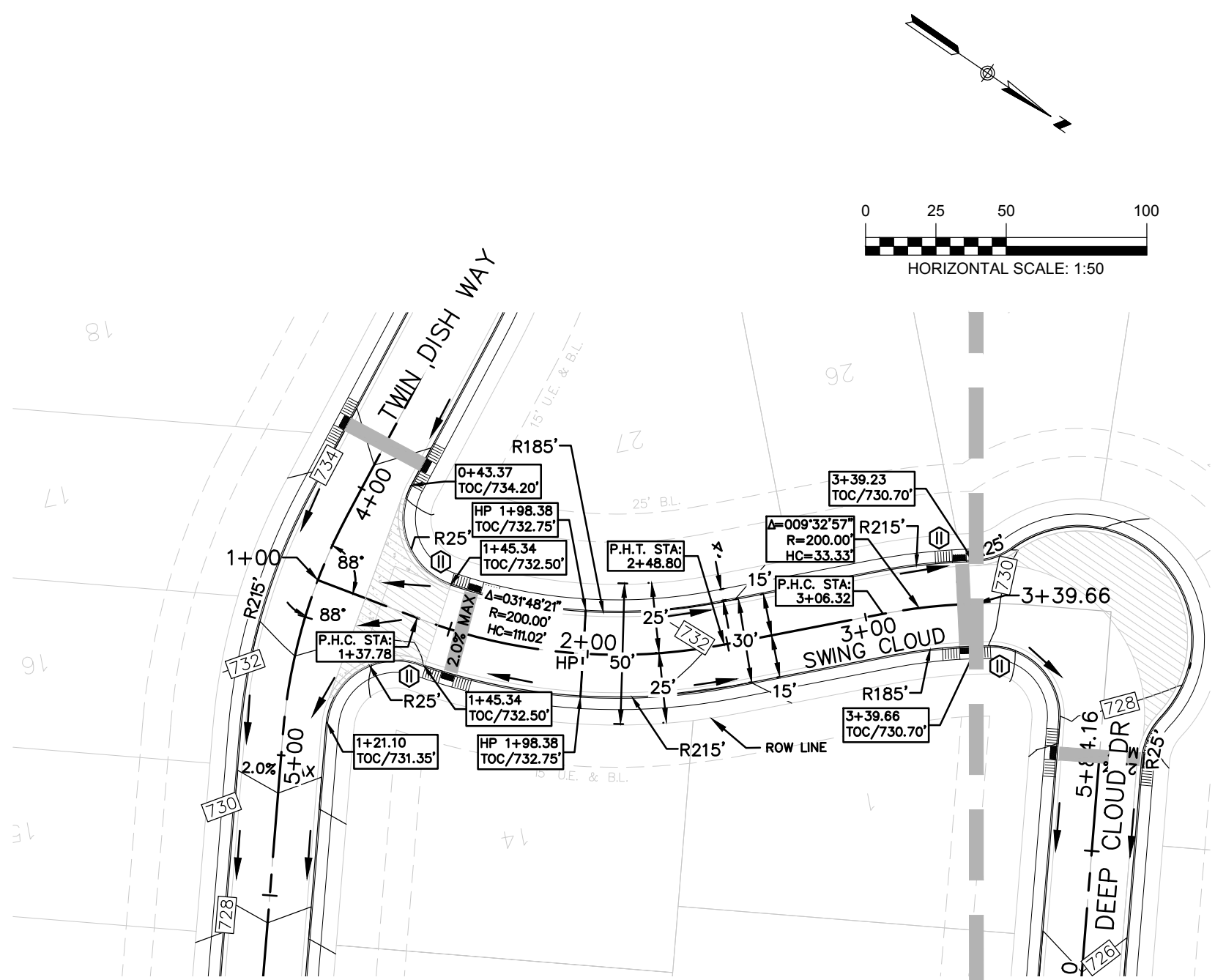
**TORNADO RIDGE KNUCKLE
PLAN AND PROFILE
CLOUD COUNTRY UNIT 5**

NO.	REVISION DESCRIPTION	REVISION DATE

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

**SHEET
C4.1**

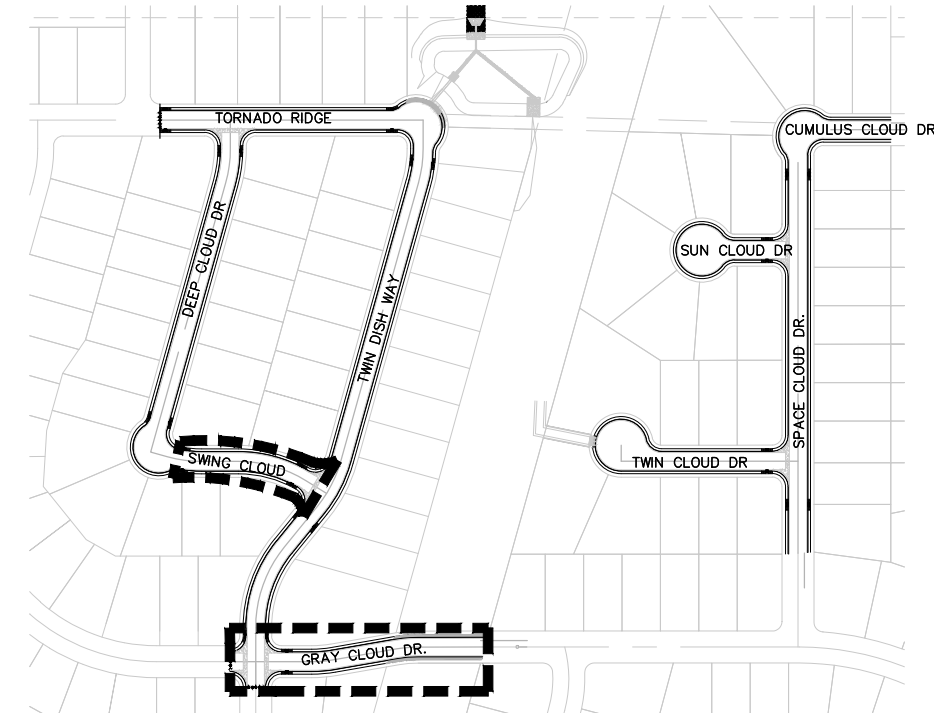
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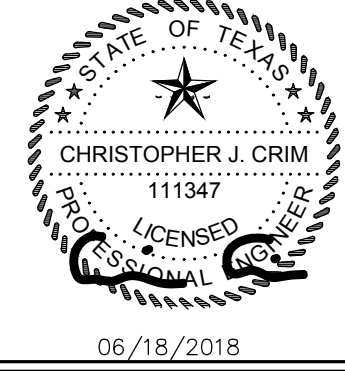
- LEGEND**
- EXISTING CONTOURS
 - PROPOSED CONTOURS
 - B.L. BUILDING SETBACK LINE
 - U.E. UTILITY EASEMENT
 - D.E. DRAINAGE EASEMENT
 - A.D.A. RAMP
 - FLOW ARROW
 - WASHOUT CROWN AREAS
 - EXISTING GROUND CENTER (EG CTR)
 - PROPOSED GROUND CENTER (PR TC)
 - ACCESSIBLE CROSSING AREA
CONTRACTOR TO ENSURE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

NOTES

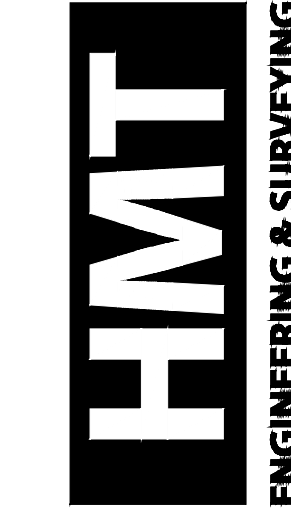
- STREETS WERE DESIGNED TO POSTED SPEED LIMIT OF 25 MPH.
- IN WASHOUT CROWN AREAS, THE CURB ON THE HIGH SIDE OF THE STREET SHOULD BE SPILL CURB AS DESIGNATED ON THE PLANS.
- CONTRACTOR TO CONSTRUCT SIDEWALK RAMPS WITH STREETS.
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE AWAY FROM STREET STUB OUT ENDS SO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



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



410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMT@HMT.COM
PIG30625-8555 • F830 825-8556
TBP6 FRM F-10961
TBPUS FRM 10153600



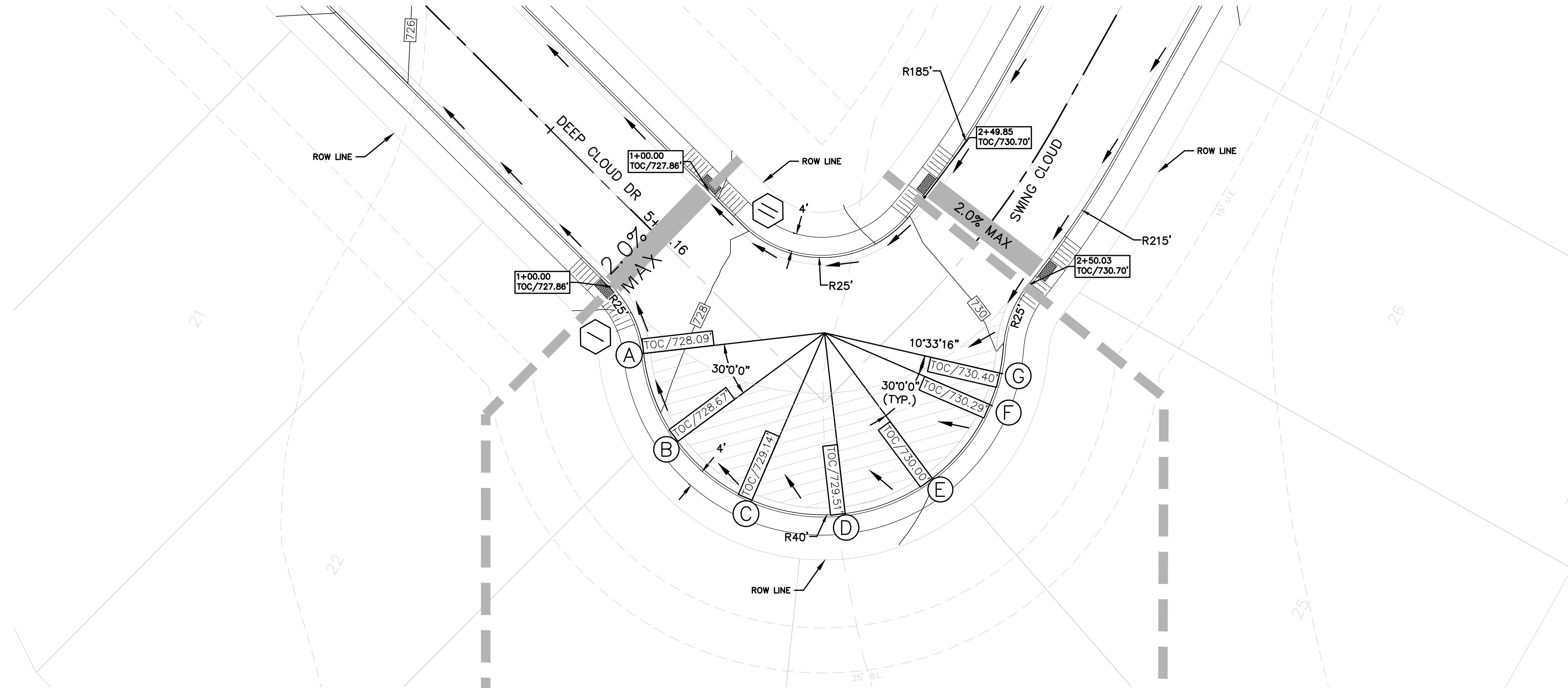
NO.	REVISION DESCRIPTION	REVISION DATE

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

**SHEET
C4.2**

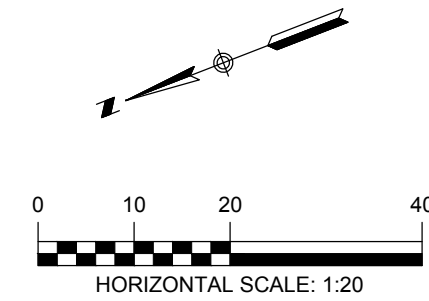
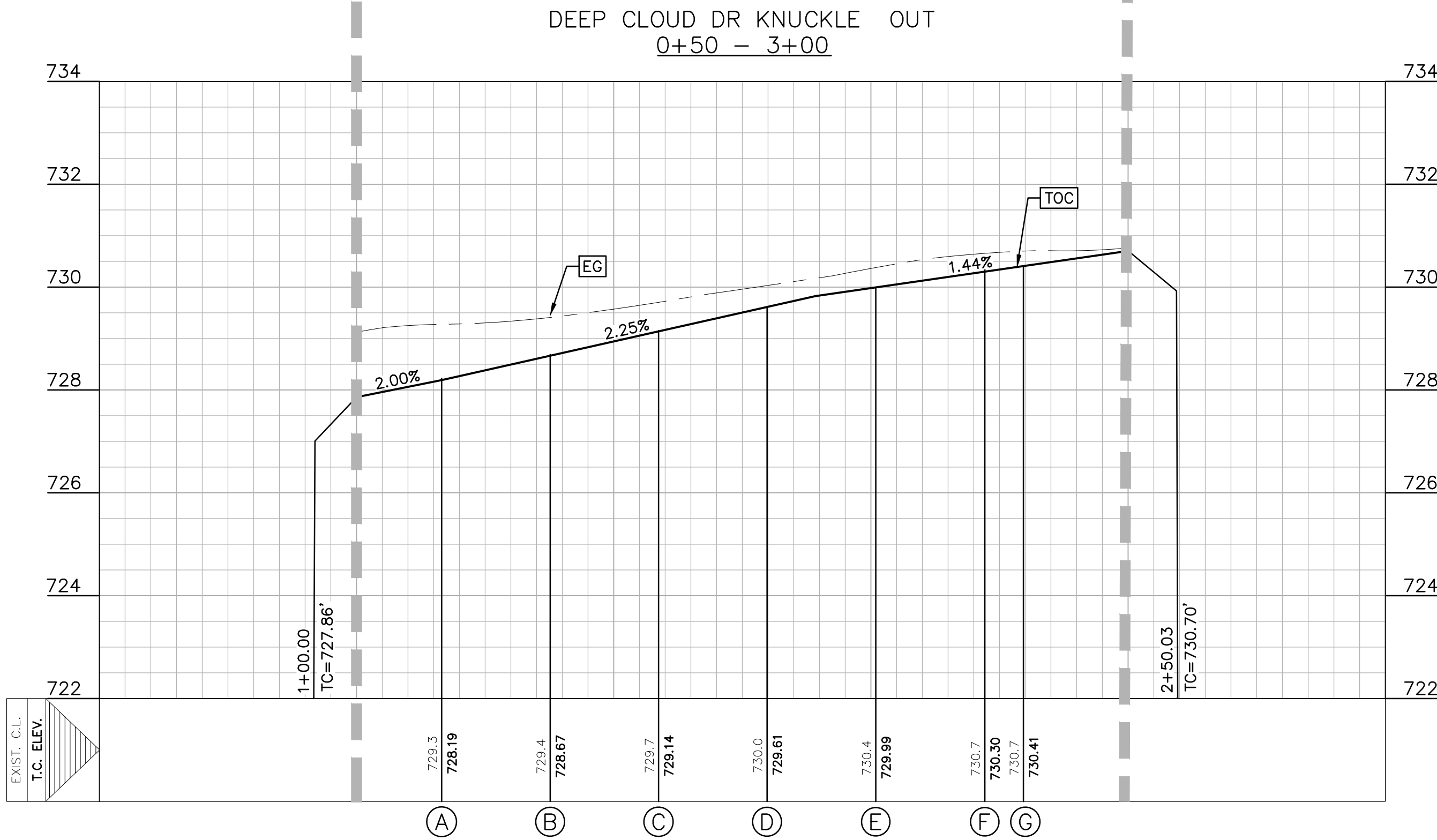
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Drawing Name: N:_projects\056 - milestone properties\056.009 - cloud country unit 5\103- construction drawings\056.009.103-STREET.dwg User: moaz Jun 19, 2018 - 2:31pm



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

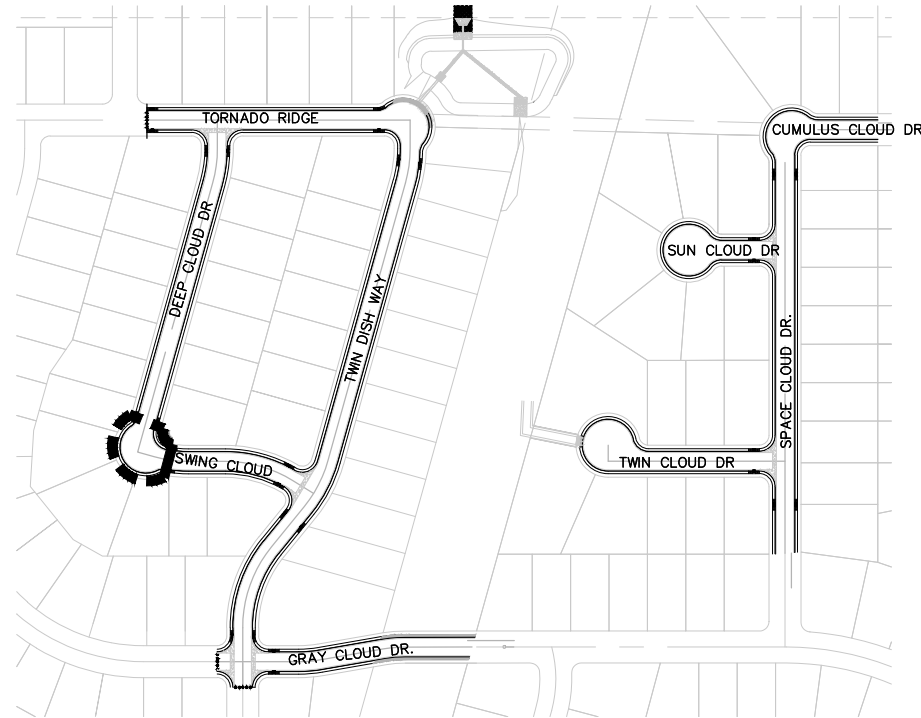
MATCHLINE:
DEEP CLOUD DR KNUCKLE STA: 2+50.15
= SWING CLOUD STA: 3+39.66
SHEET C4.2



- 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
 - SIDEWALK RAMP TYPE (SEE DETAIL SHEET C4.10)
 - SIDEWALK TO BE CONSTRUCTED BY SITE DEVELOPMENT CONTRACTOR

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06/18/2018

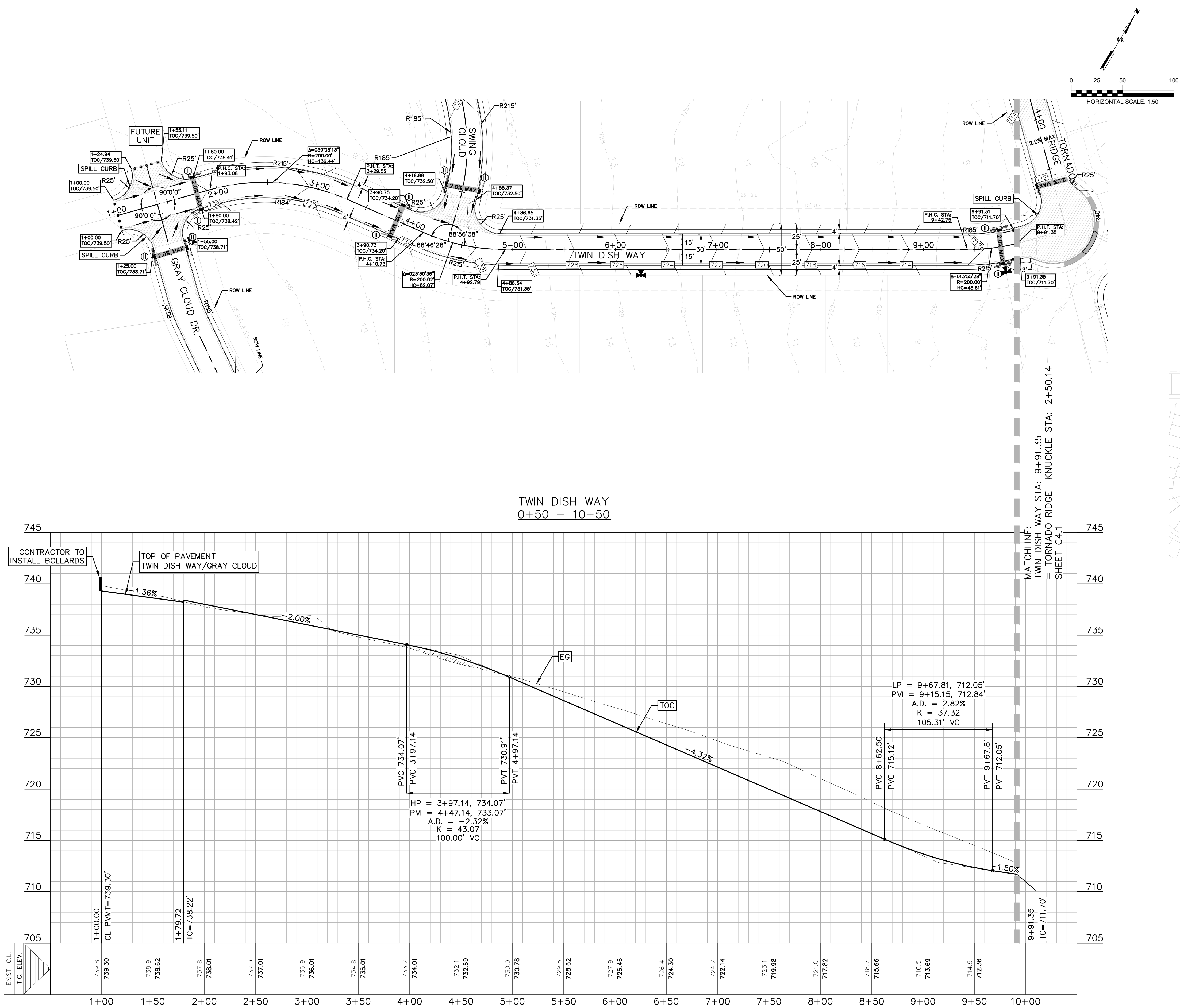
**DEEP CLOUD DR
KNUCKLE PLAN AND
PROFILE
CLOUD COUNTRY UNIT 5**

NO.	REVISION DESCRIPTION	REVISION DATE

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

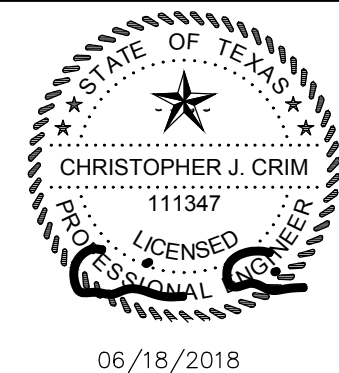
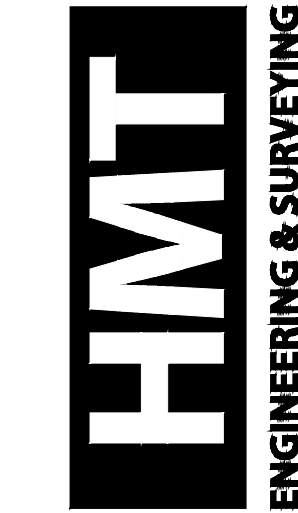
**SHEET
C4.3**

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TWIN DISH WAY PLAN AND PROFILE

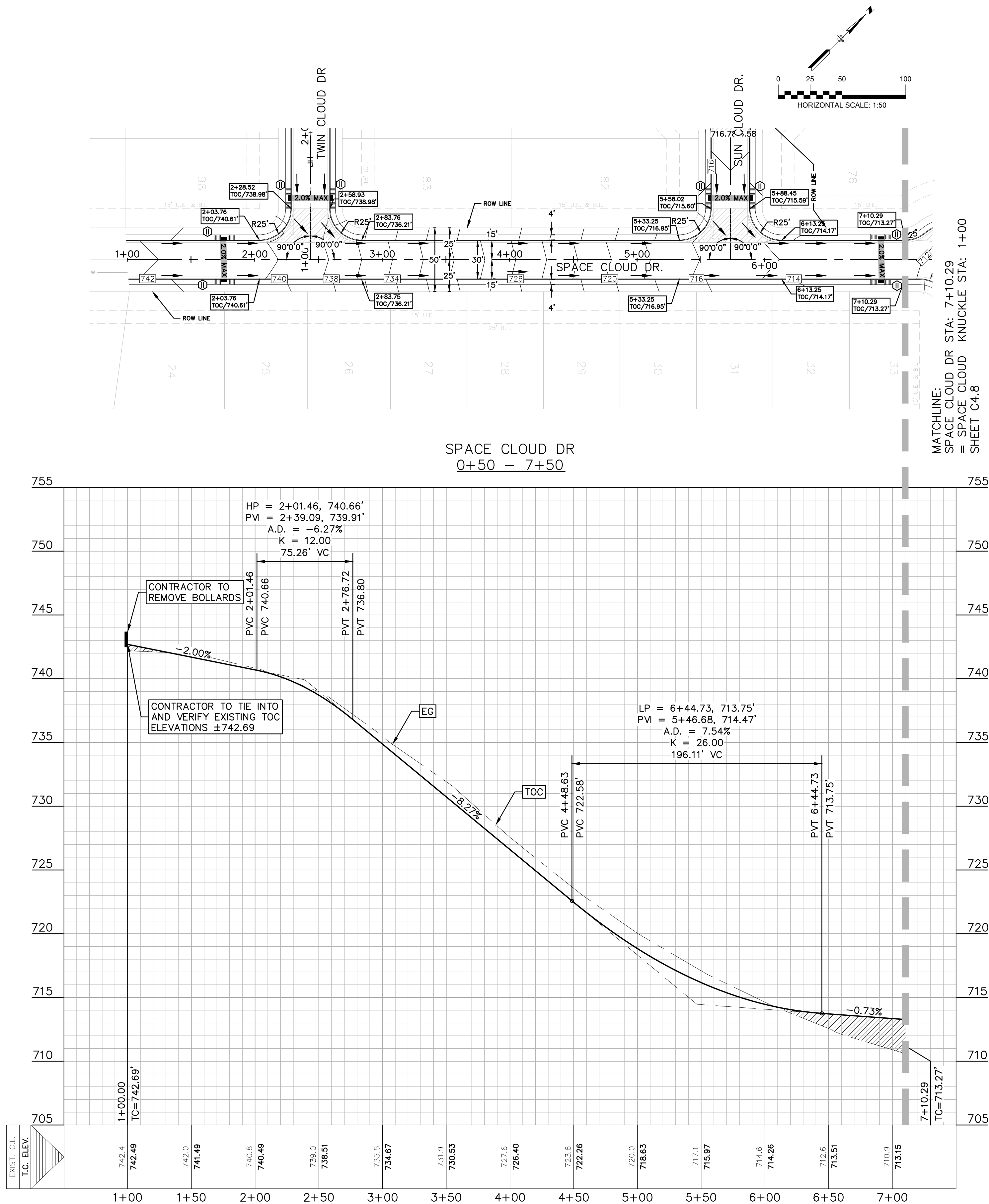
CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE

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

SHEET
C4.4

Drawing Name: N:_projects\056 - milestone properties\056.009 - cloud country unit 5\103- construction drawings\056.009.103-STREET.dwg User: moaz Jun 19, 2018 - 2:31pm

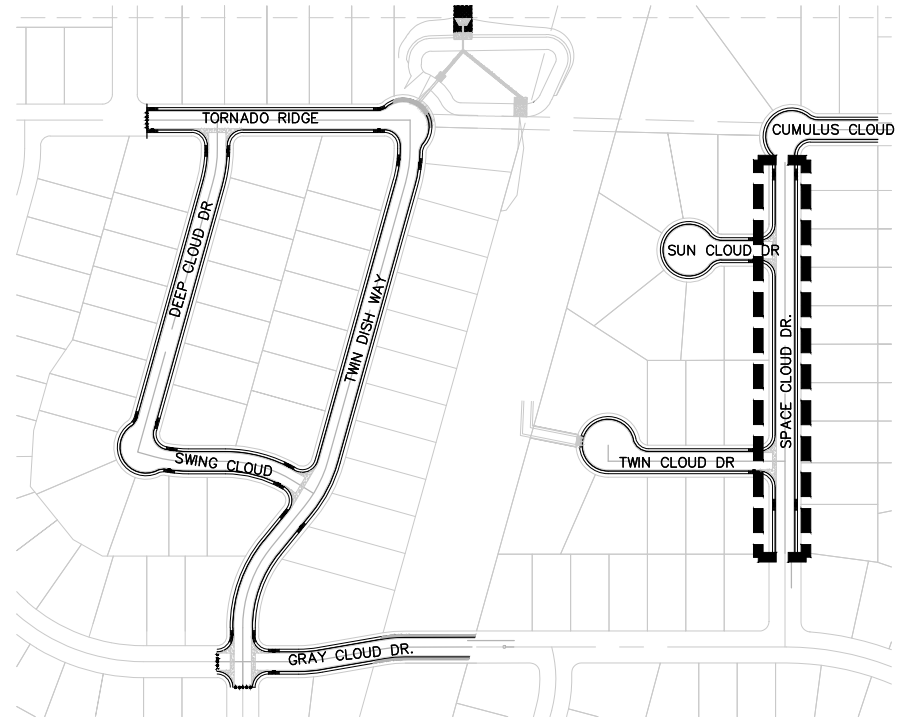


LEGEND

- 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)
- 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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**SPACE CLOUD DR
PLAN AND PROFILE**

CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE

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

**SHEET
C4.5**

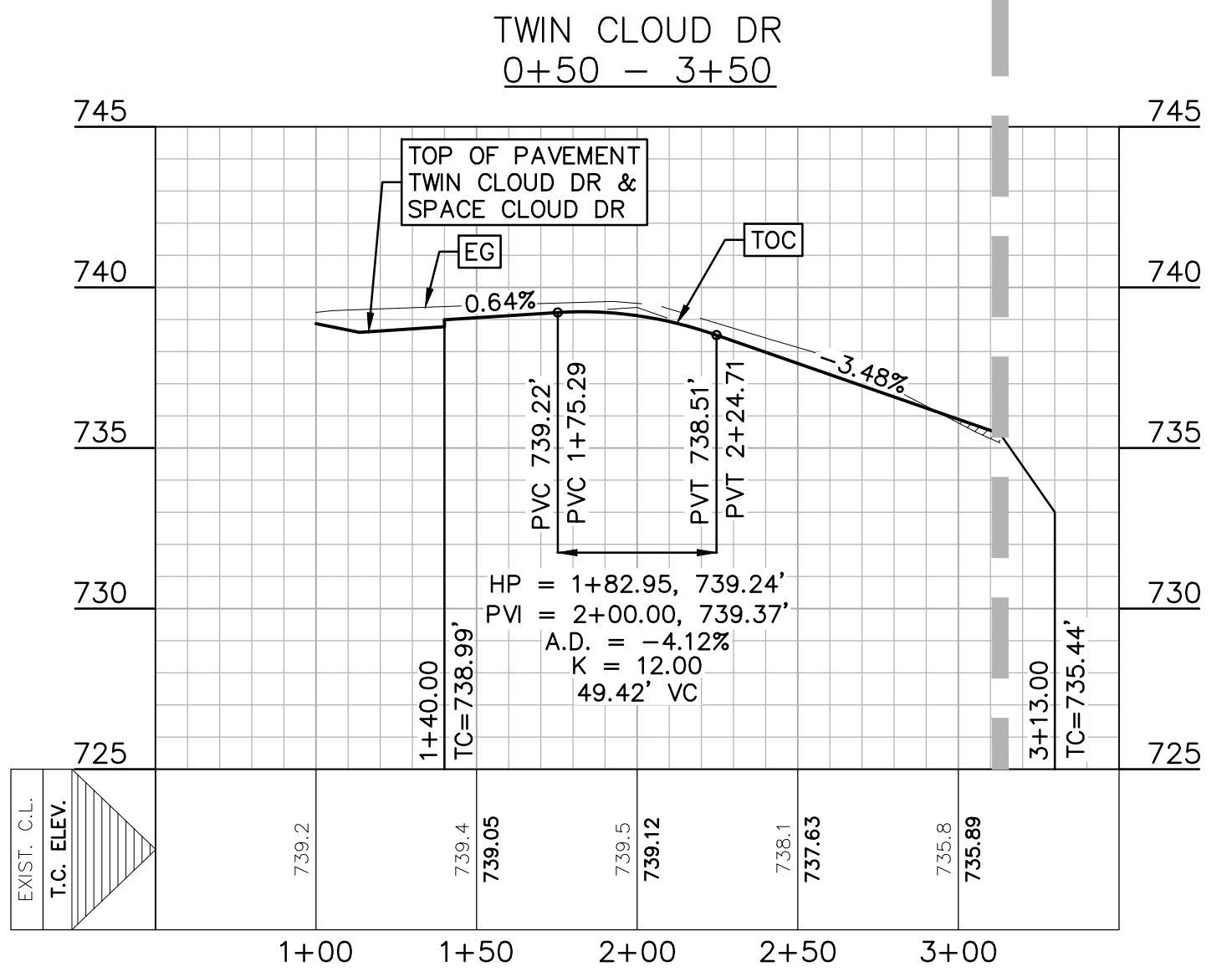
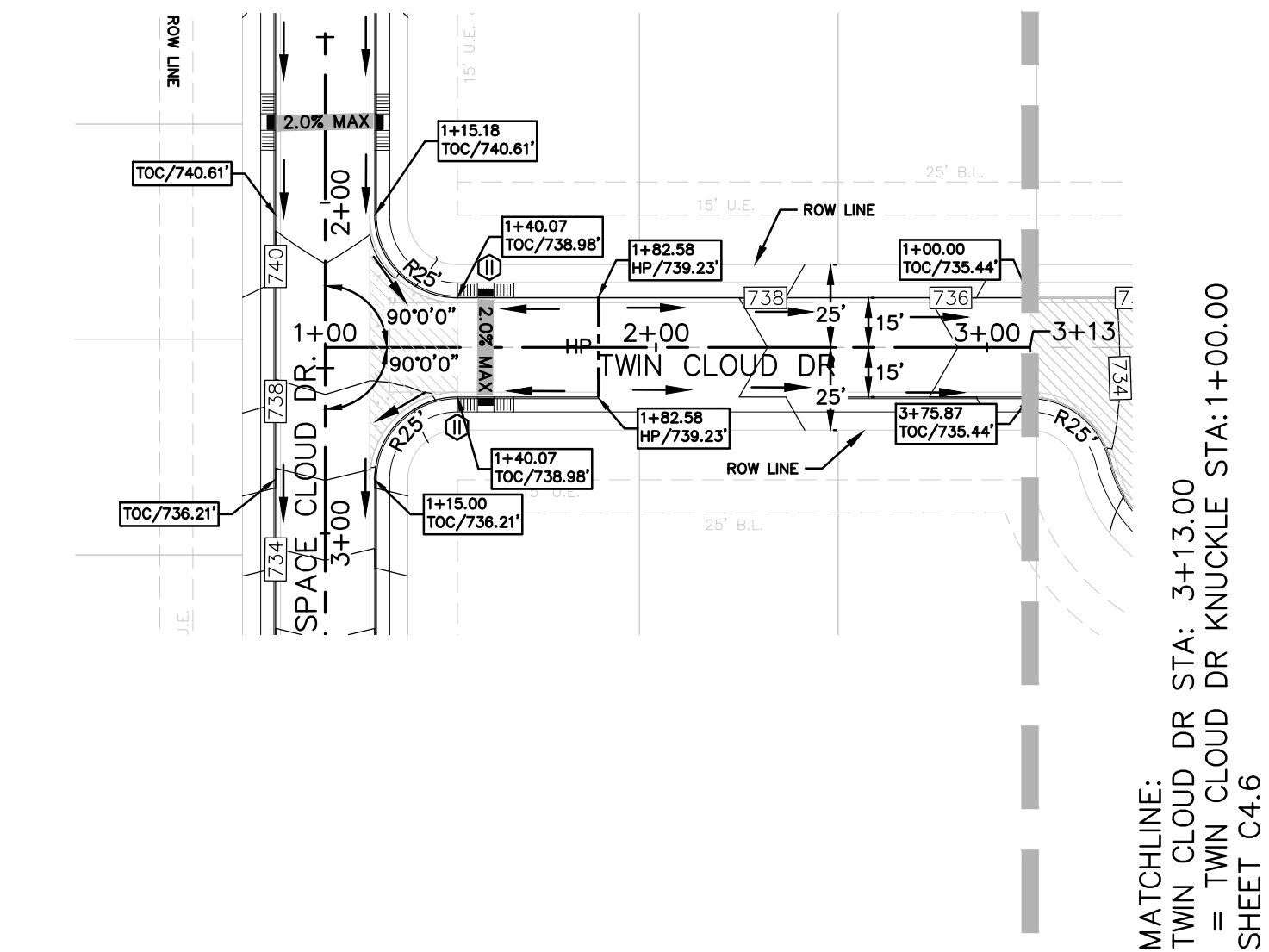
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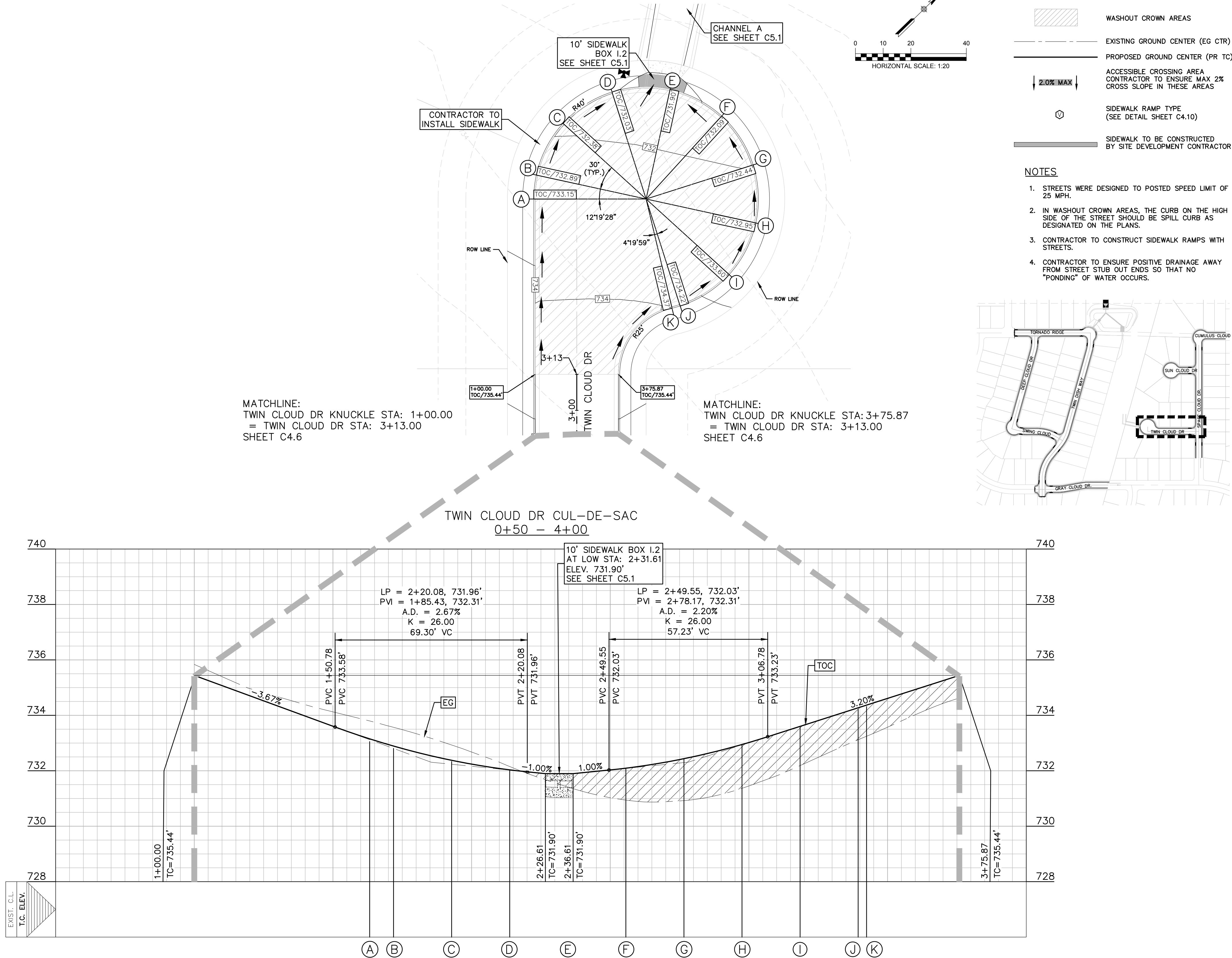
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STATE OF TEXAS
CHRISTOPHER J. CRIM
111347
LICENSED PROFESSIONAL ENGINEER
06/18/2018

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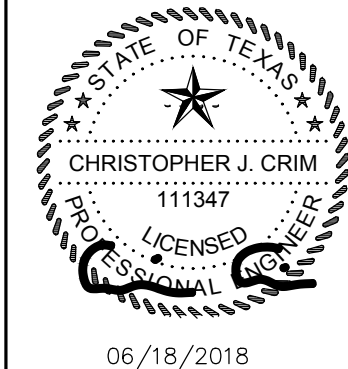
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= TWIN CLOUD DR KNUCKLE STA: 1+00.00
SHEET C4.6



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

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

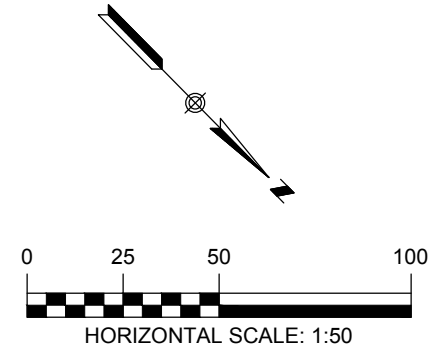
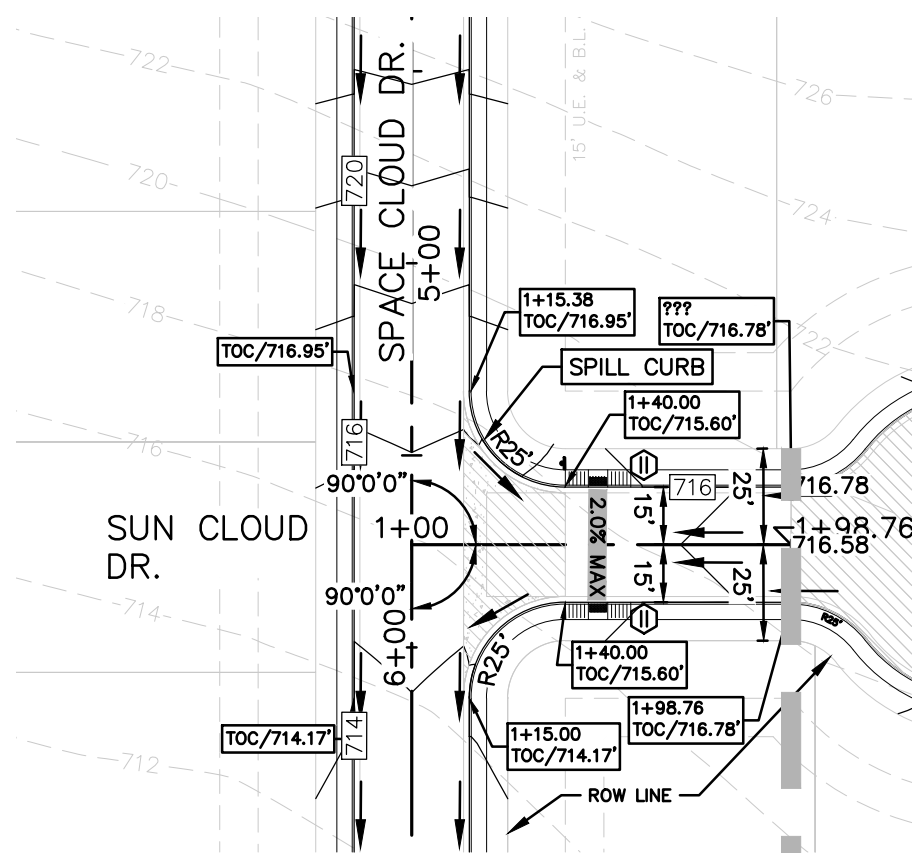
NO.	REVISION DESCRIPTION	REVISION DATE

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

**SHEET
C4.6**

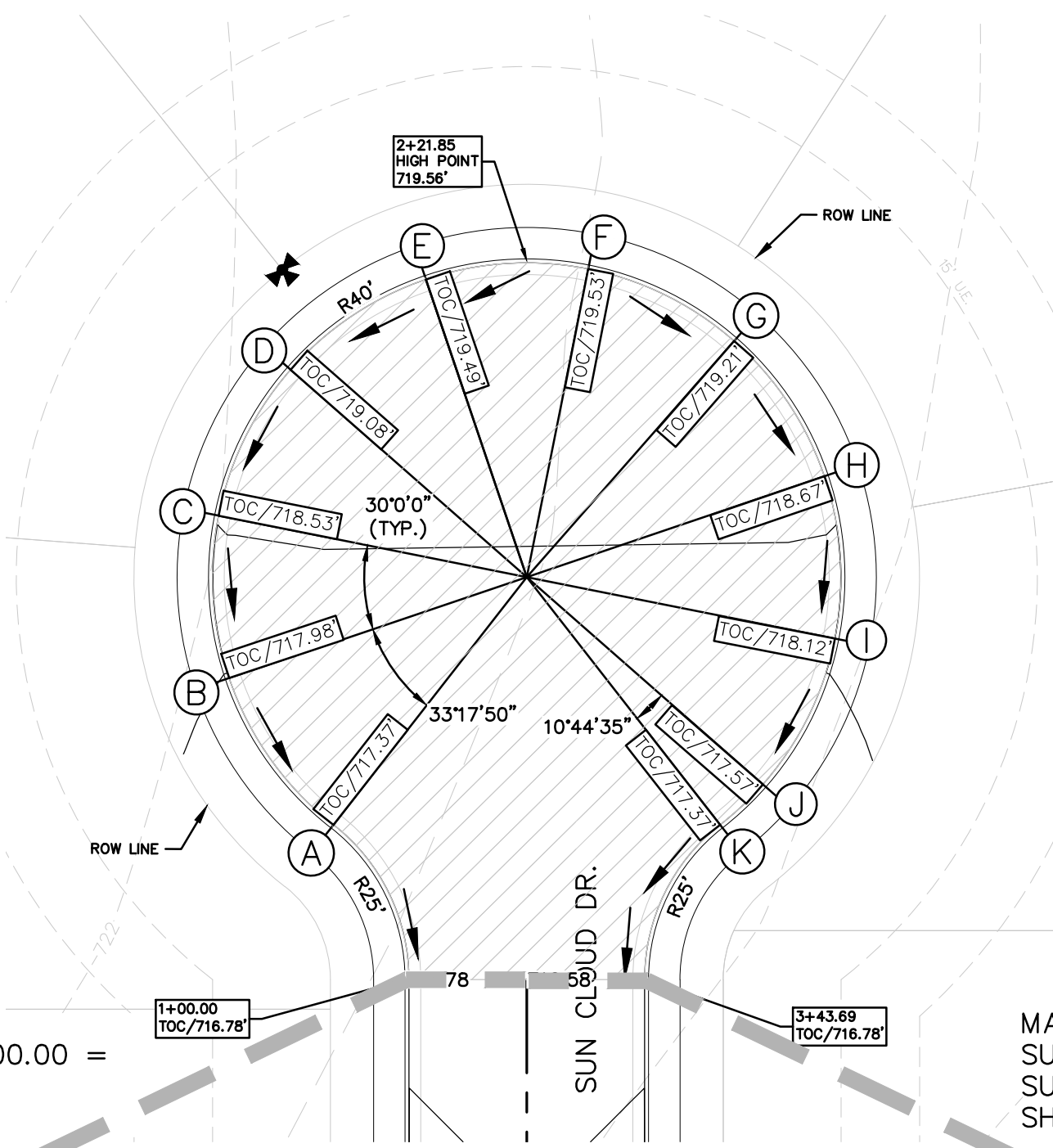
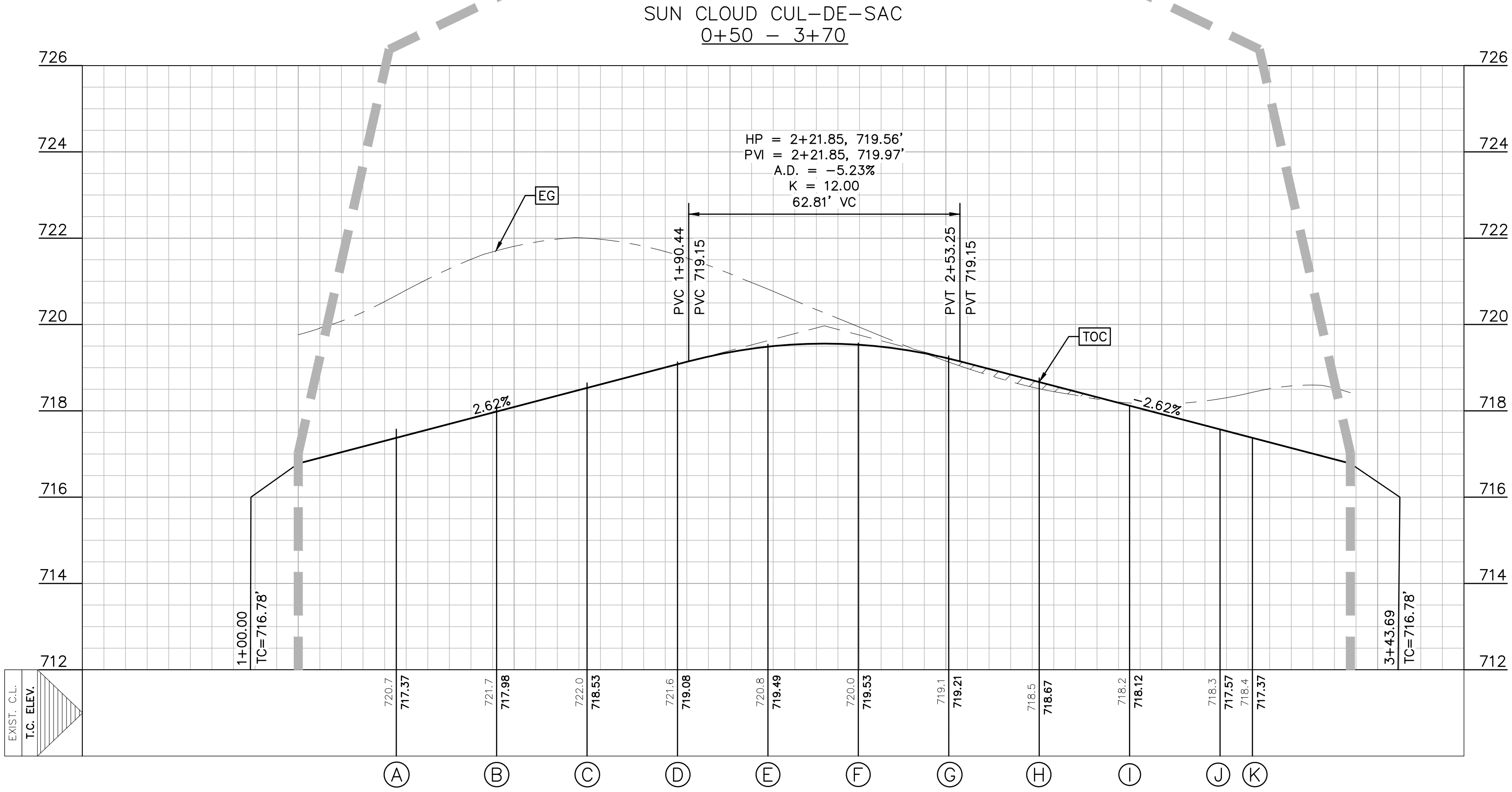
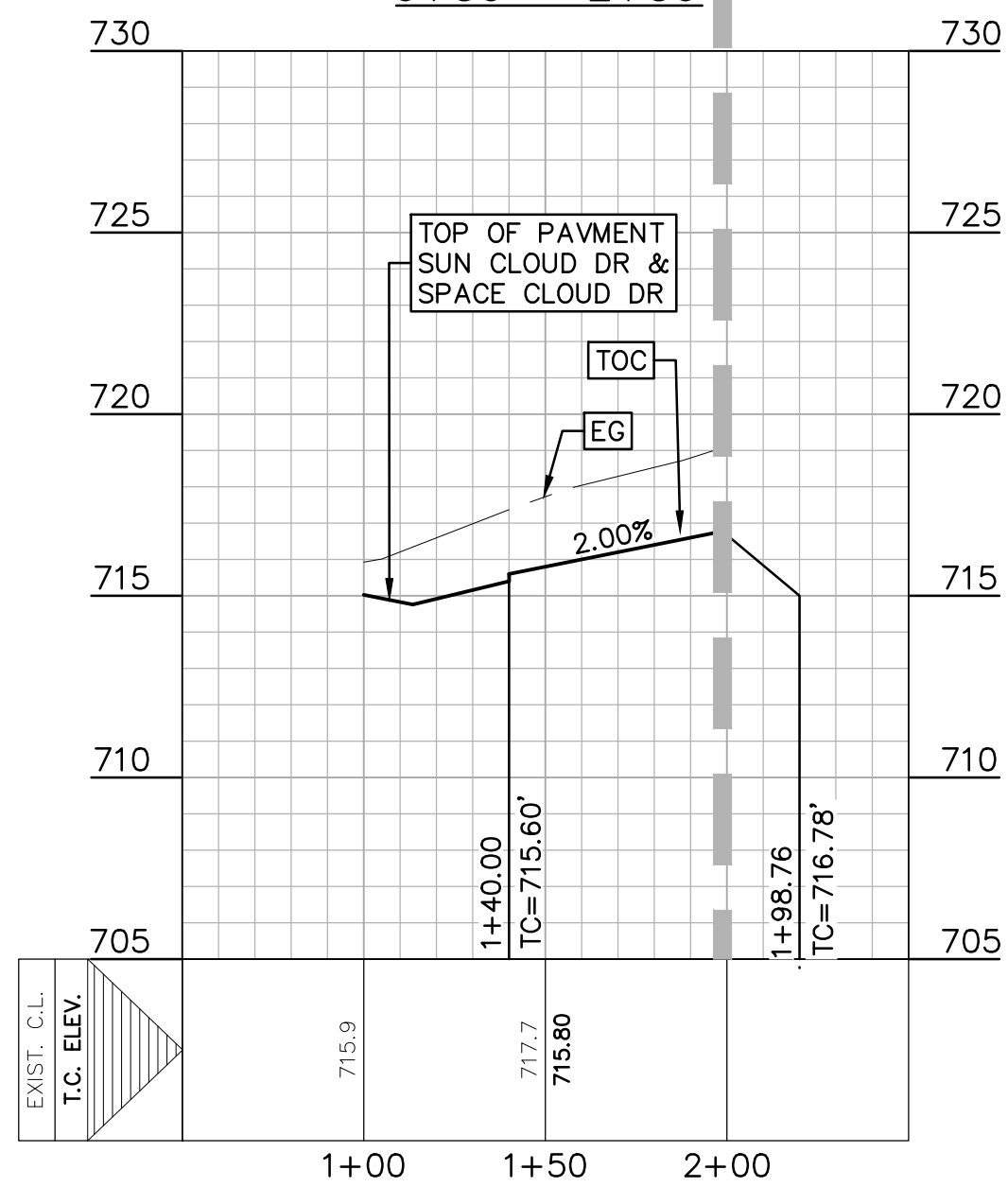
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NEW BRAUNFELS, TX 78130
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T(361)625-8557 • F(361)625-8558
T(361)625-8559 • F(361)625-8560

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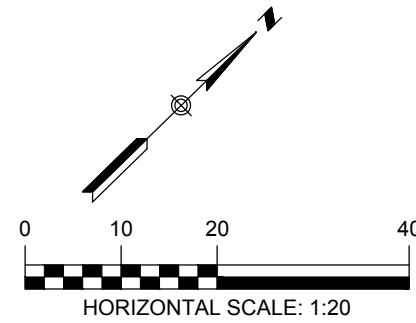
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SUN CLOUD STA: 1+98.76 =
SUN CLOUD KNUCKLE STA: 1+00.00
SHEET C4.7

SUN CLOUD DR
0+50 - 2+50



MATCHLINE:
SUN CLOUD KNUCKLE STA: 1+00.00 =
SUN CLOUD STA: 1+98.76
SHEET C4.7

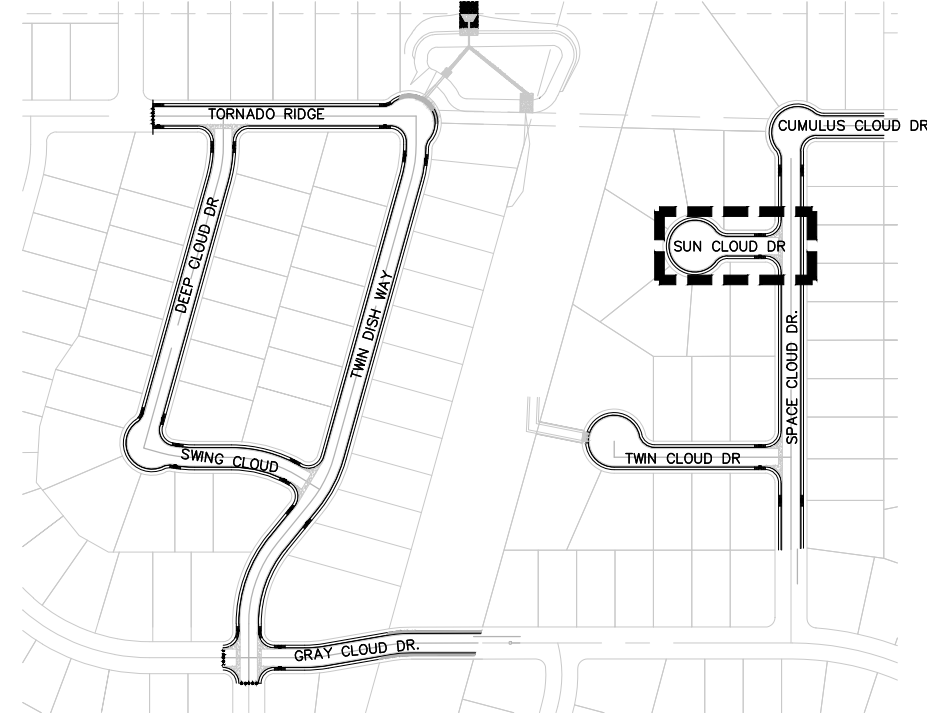
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SUN CLOUD STA: 1+00.00
SHEET C4.7



- LEGEND**
- EXISTING CONTOURS
 - PROPOSED CONTOURS
 - B.L. BUILDING SETBACK LINE
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(SEE DETAIL SHEET C4.10)
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BY SITE DEVELOPMENT CONTRACTOR

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

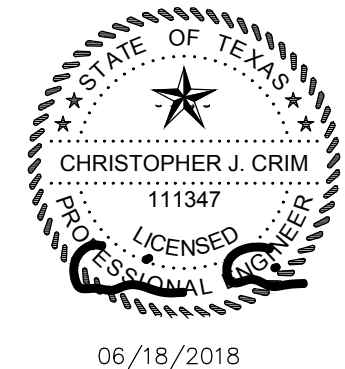
NO.	REVISION DESCRIPTION	REVISION DATE

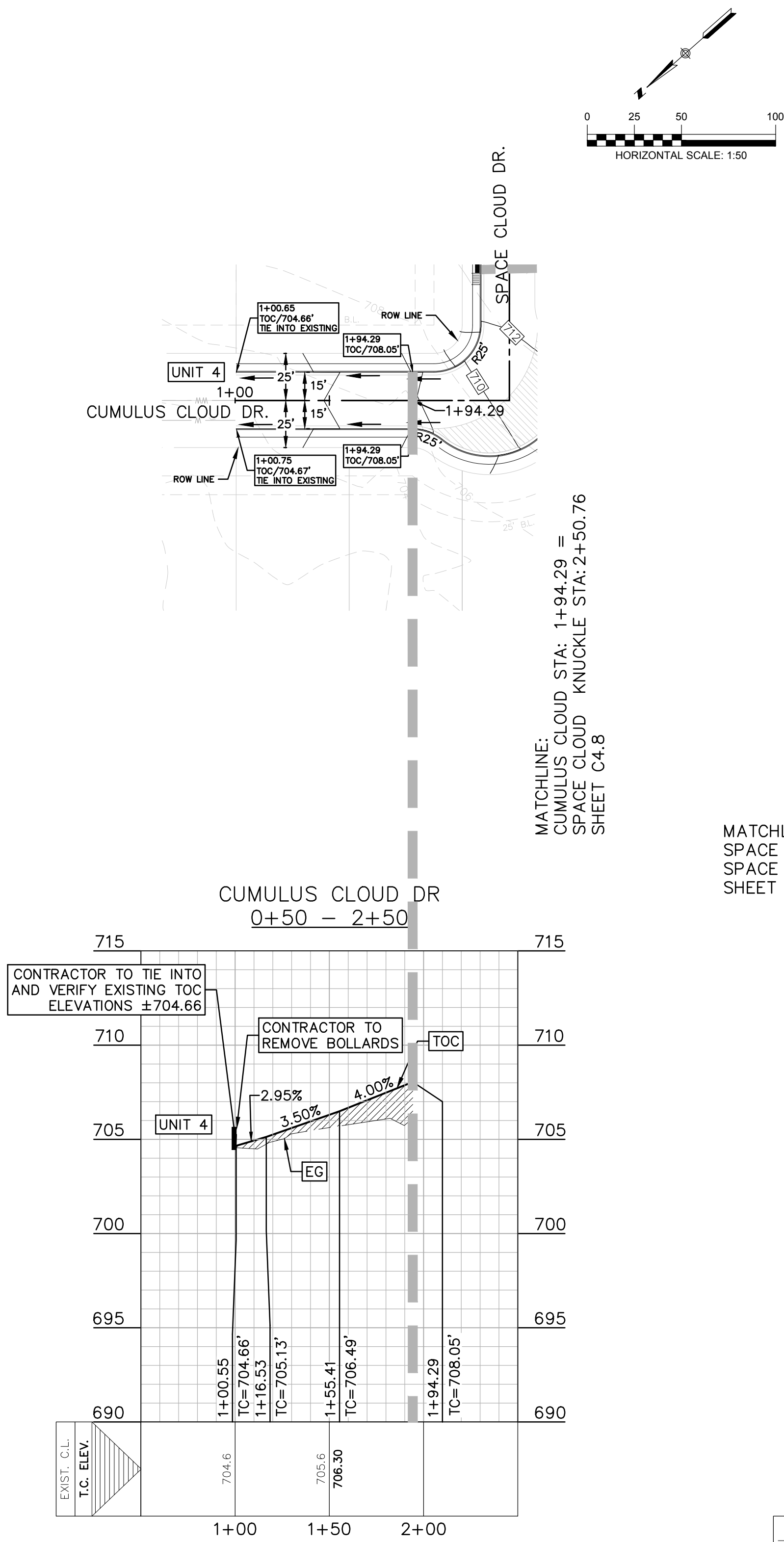
DATE: JUNE 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

**SHEET
C4.7**

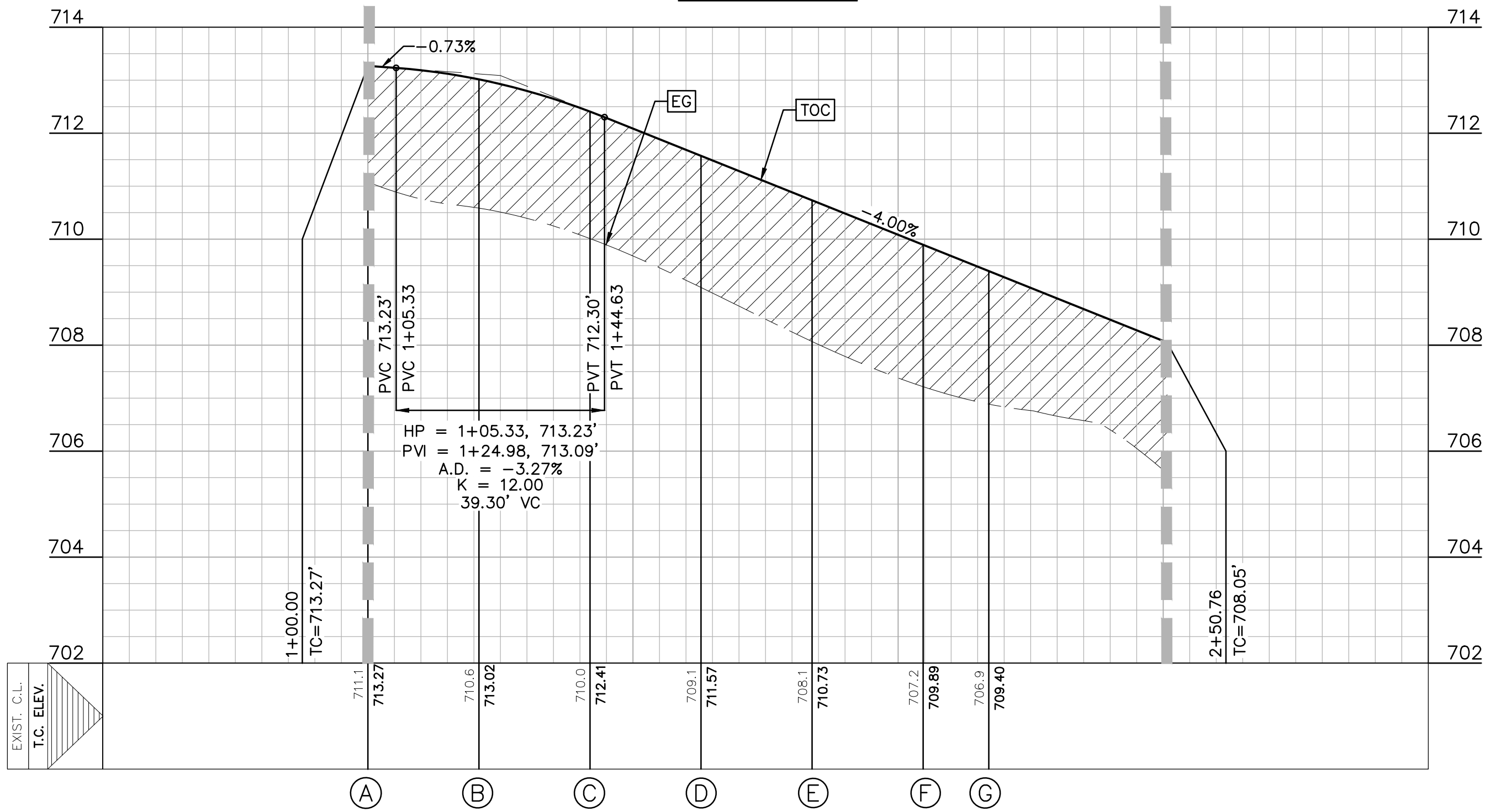
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NEW BRAUNFELS, TX 78130
HMTNB.COM
PIG30625-8555-F830625-8556
TBPE FRM F-10961
TBPLS FRM 10153600





MATCHLINE:
SPACE CLOUD KNUCKLE STA: 1+00.00 =
SPACE CLOUD STA: 7+10.29
SHEET C4.5

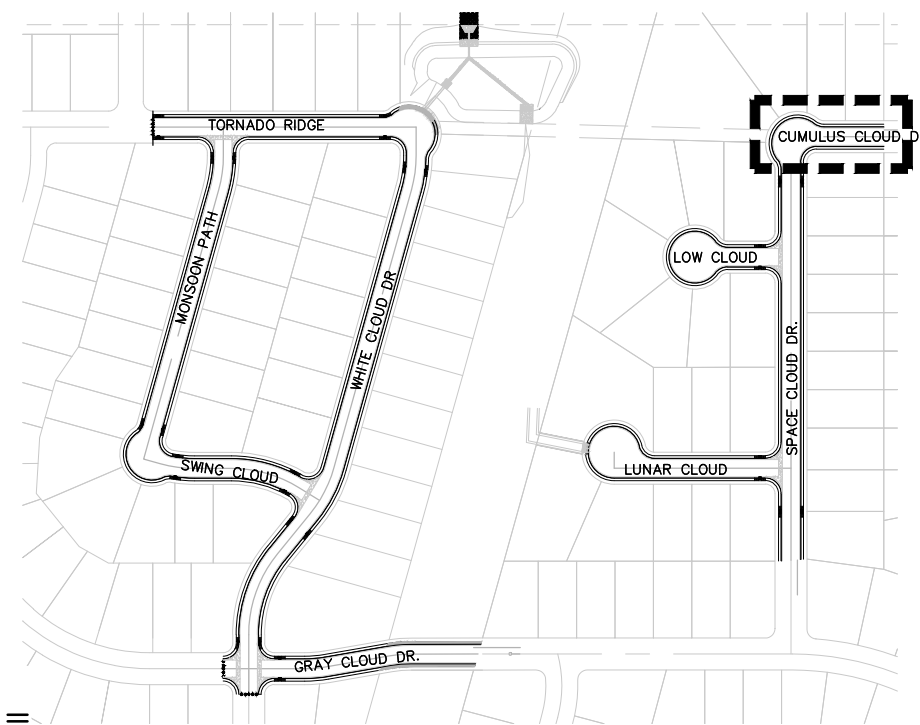


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**SPACE CLOUD KNUCKLE
PLAN AND PROFILE**

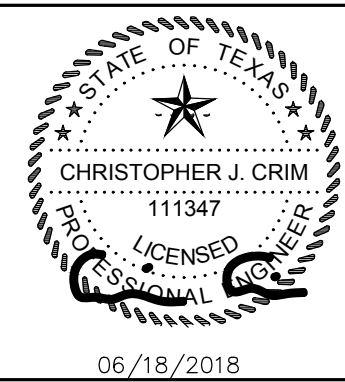
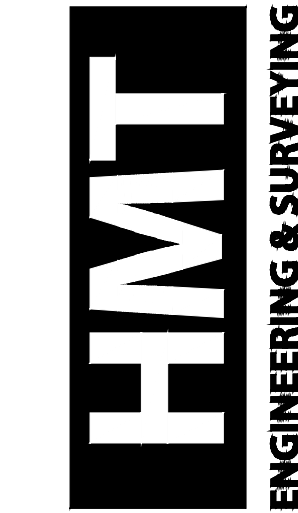
CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE

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

**SHEET
C4.8**

410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
PIG30625-8555 • F(830)825-8556
TBPE FRM F-10961
TBPLS FRM 10153600



Drawing Name: N:\projects\056 - milestone properties\056.009 - cloud country unit 5\103- construction drawings\056.009.103-STREET.dwg User: moaz Jun 19, 2018 - 2:32pm

REMAINDER OF
CALLED 70.688 AC.
NRADS ROAD, LTD
DOC. NO. 200406000885
O.P.R.C.C.T.

REMAINDER OF
CALLED 47.503 AC.
CONRAD'S ROAD, LTD
DOC. NO. 200406042413
O.P.R.C.C.T.

CONRAD'S LANE
(VARIABLE WIDTH R.O.W.)

110' LCRA
ESMT
200306027463
DOC. NO.
O.P.R.C.C.T.

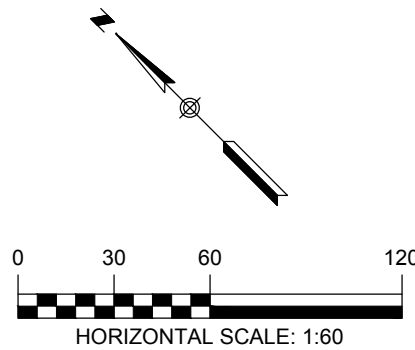
CLOUD COUNTRY SUBDIVISION
UNIT THREE
DOC. NO. 201606040080
M.P.R.C.C.T.

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:

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



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.

SIGNAGE PLAN

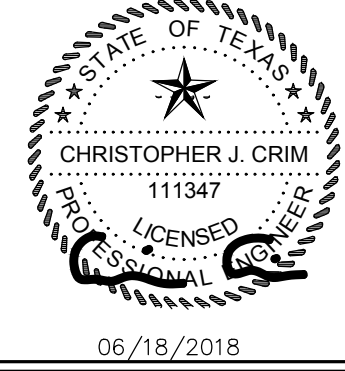
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HMT PROJECT NO.:
056.009

SHEET
C4.9

CLOUD COUNTRY UNIT 5

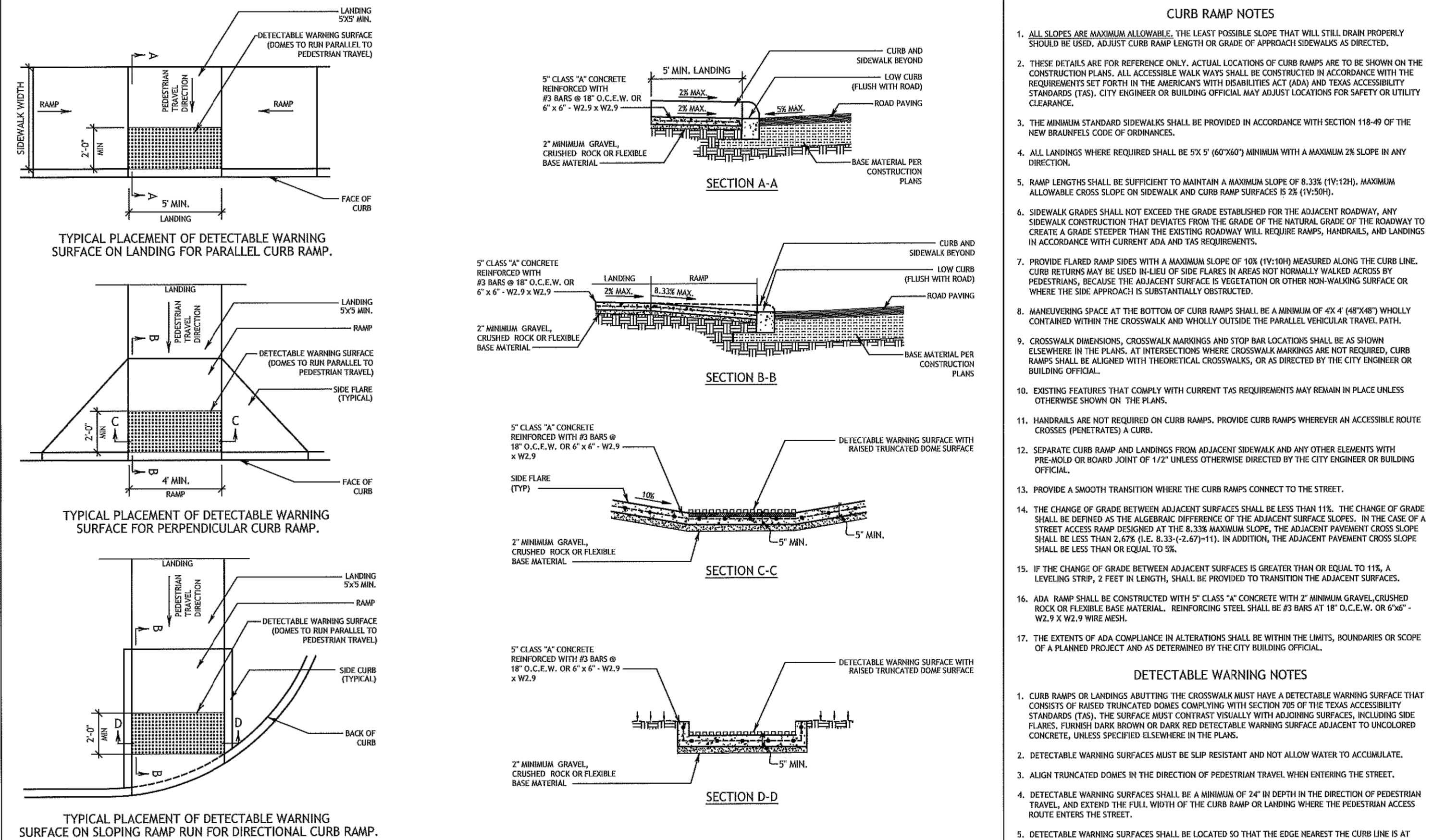
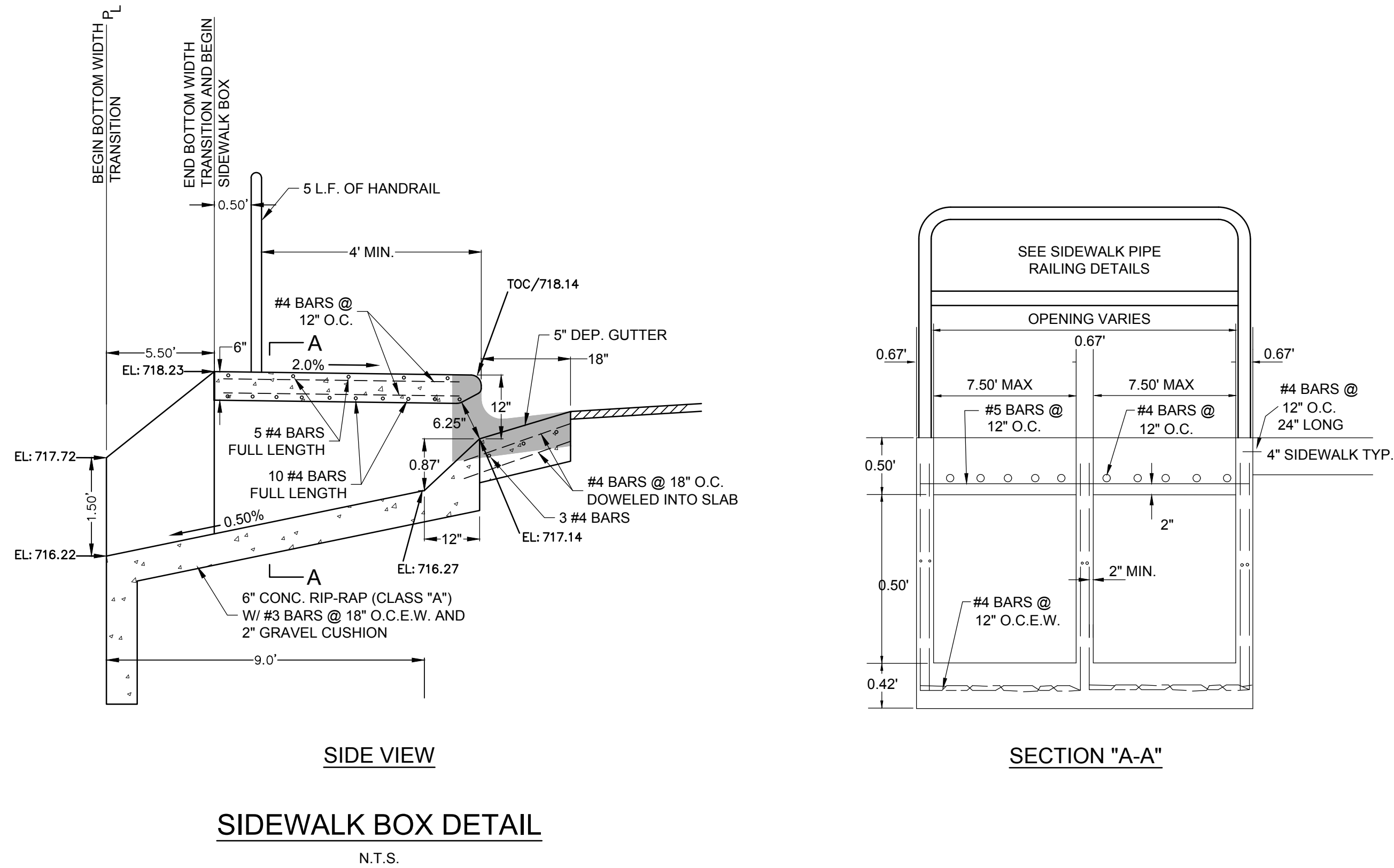


06/18/2018

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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.



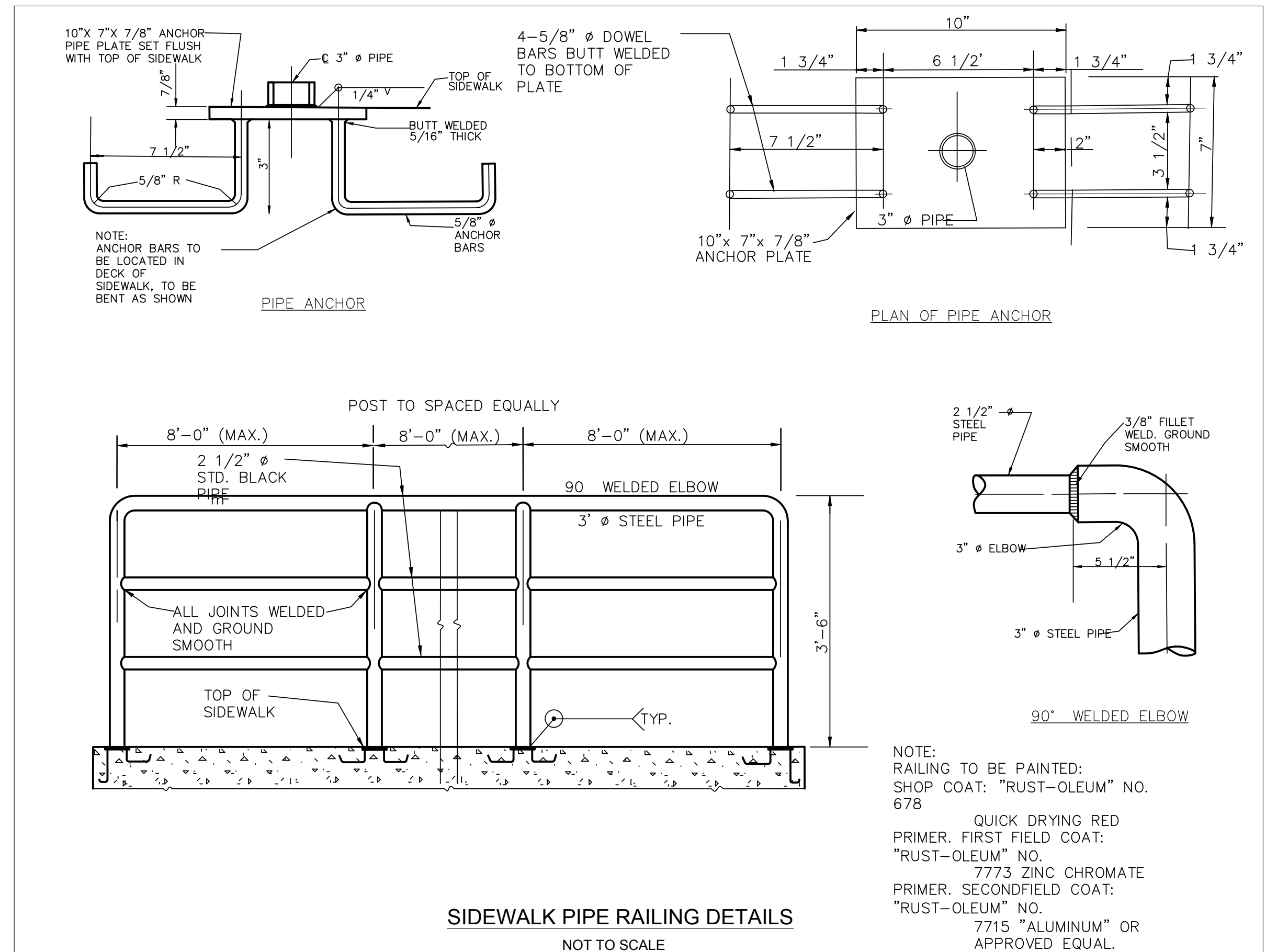
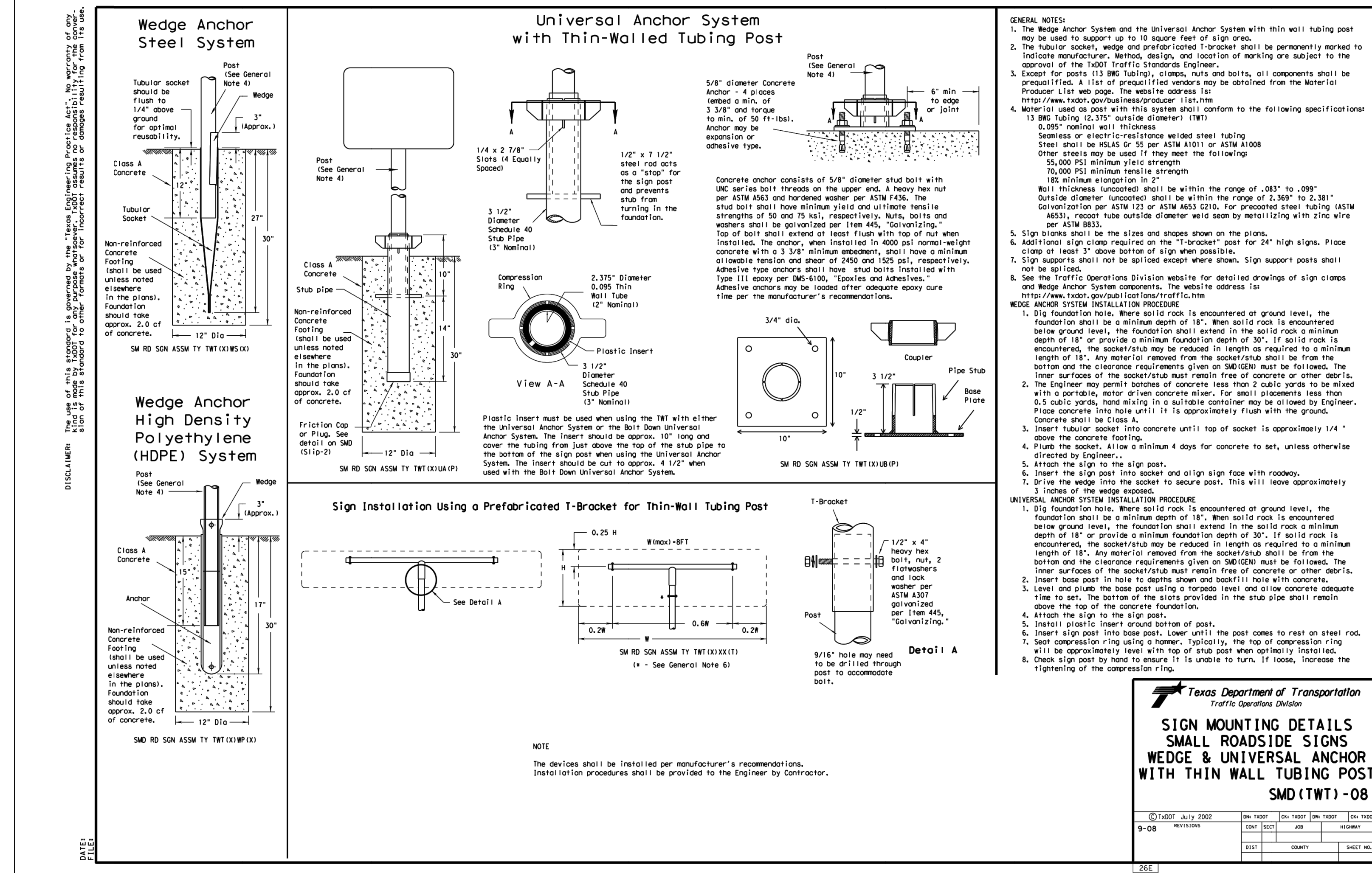
ENGINEERING DIVISION 550 LANDA STREET NEW BRAUNFELS, TEXAS 78130 PHONE: 830 221 4020 FAX: 830 626 3600	CURB RAMP STANDARDS		
	APPROVED DATE: 05/18/2017	DWG. NO.: ST-019	SCALE: AS NOTED
	DRAWN BY: RC	CONTACT: GF	SHEET: 1 OF 1

CURB RAMP NOTES

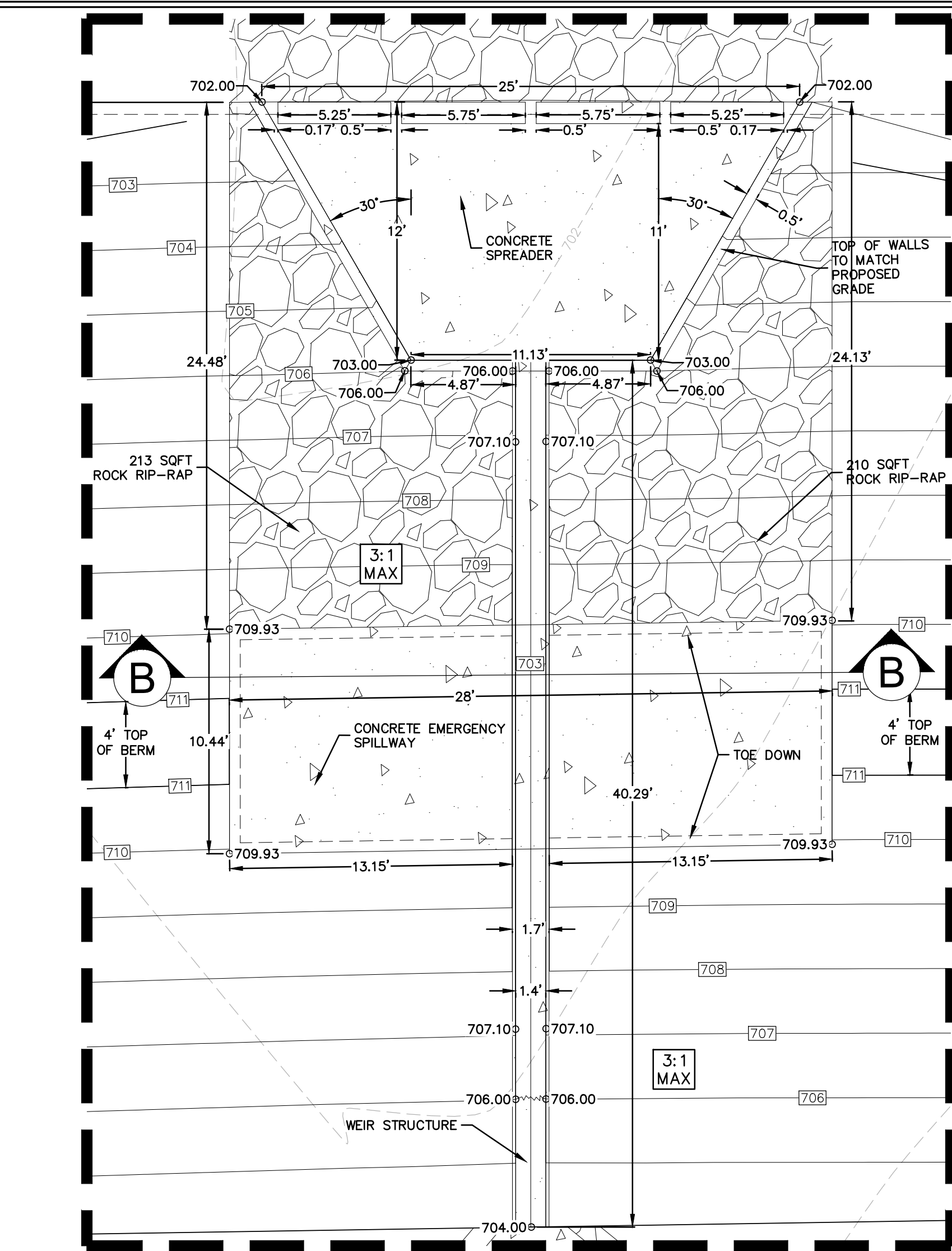
1. ALL SLOPES ARE MAXIMUM ALLOWABLE, THE LEAST POSSIBLE GRADE THAT WILL STILL DRAIN PROPERLY SHOULD BE USED. ADJUST CURB RAMP LENGTH OR GRADE OF APPROACH SIDEWALKS AS DIRECTED.
2. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF CURB RAMPS ARE TO BE SHOWN ON THE PLAN. THE LOCATION OF ALL SIDEWALK RAMPWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT (ADA) AND ACCESSIBILITY STANDARDS (ADAAG). CITY ENGINEER OR BUILDING OFFICIAL MAY ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
3. THE MINIMUM STANDARD SIDEWALK SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 118-09 OF THE NEW BRUNSWICK CODE OF ORDINANCES.
4. ALL LOCATIONS WHERE REQUIRED SHALL BE 5'X 6' (5'60"X6") MINIMUM WITH A MAXIMUM 25 SLOPE IN ANY DIRECTION.
5. RAMP LENGTHS SHALL BE SUFFICIENT TO MAINTAIN A MAXIMUM SLOPE OF 1:25 (3.93% [11'-10"] MAXIMUM ALLOWABLE CROSS SLOPE ON SIDEWALK AND CURB RAMP SURFACES IS 5:1).
6. SIDEWALK RAMPS 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 GRADE SHALL BE CONSIDERED AN EXISTING ROADWAY. IT WILL REQUIRE RAMPWAYS, HANDRAILS, AND LANDINGS IN ACCORDANCE WITH CURRENT ADA AND TASK REQUIREMENTS.
7. PROVIDE FLARED RAMP SIDES WITH A MAXIMUM SLOPE OF 10% (1:10) MEASURED ALONG THE CURB LINE. CURB RETURNS MAY BE USED IN-STEAD OF SIDE FLARES IN AREAS OTHER THAN NORMAL VEHICLE ACCESS BY SIDEWALKS. BECAUSE THE SIDEWALKS ARE NOT TO BE USED FOR OTHER THAN SIDEWALK PURPOSES OR WHERE THE SIDE APPROACH IS SUBSTANTIALLY CONSTRAINED.
8. MANEUVERING SPACE AT THE BOTTOM OF CURB RAMPS SHALL BE A MINIMUM OF 4'X 4' (48"X48") WHOLLY CONTAINED WITHIN THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICLE PARKING PAIIL.
9. CROSSWALK CROSSING, CROSSWALK MARKINGS AND STOP BAR LOCATIONS SHALL BE AS SHOWN ON THE PLAN. CROSSWALK MARKINGS SHALL BE USED WHEN CROSSWALK MARKINGS ARE NOT REQUIRED. CURB RAMPS SHALL BE ALIGNED WITH THEORETICAL CROSSWALKS, OR AS DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
10. EXISTING FEATURES THAT COMPLY WITH CURRENT TASK REQUIREMENTS MAY REMAIN IN PLACE UNLESS OTHERWISE SHOWN ON THE PLAN.
11. HANDRAILS ARE NOT REQUIRED ON CURB RAMPS. PROVIDE CURB RAMPS WHEREVER AN ACCESSIBLE ROUTE CROSSES (PENETRATES) A CURB.
12. SEPARATE CURB RAMP AND LANDINGS FROM ADJACENT SIDEWALK AND ANY OTHER ELEMENTS BY PROVIDING A BOARD WALK 2' OF 1/2" UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER OR BUILDING OFFICIAL.
13. PROVIDE A SMOOTH TRANSITION WHERE THE CURB RAMPS COME TO THE STREET.
14. THE CHANGE OF GRADE BETWEEN ADJACENT SIDEWALKS SHALL BE LESS THAN 1/4". THE CHANGE OF GRADE SHALL BE DEFINED AS THE CHANGE BETWEEN THE GRADES OF THE ADJACENT SIDEWALKS. IN THE CASE OF A SIDEWALK CROSSING, THE CHANGE OF GRADE SHALL BE THE CHANGE BETWEEN THE GRADE OF THE SIDEWALK AND THE GRADE OF THE STREET. THE CHANGE OF GRADE SHALL BE LESS THAN 2.07% (E.G. 8.33-(2.67)=1). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO .5%.
15. IF THE CHANGE OF GRADE BETWEEN ADJACENT SIDEWALKS IS GREATER THAN .5% EQUAL TO 1%. A LEADING STRIP 2' OF 1/2" IS PROVIDED TO TRANSITION THE ADJACENT SIDEWALKS.
16. ADA RAMP SHALL BE CONSTRUCTED WITH 5" CLASS "A" CONCRETE WITH 1" MINIMUM COVER, CRUSHED ROCK FOR FLEXIBLE BASE MATERIAL. REINFORCING STEEL SHALL BE #2 BARS AT 18" O.C. W/ .06% - .07% OF AREA.
17. THE CITY ENGINEER OR CITY COMPLAINES IN ALL SHALL BE THE WORKING LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT AND AS DETERMINED BY THE CITY BUILDING OFFICIAL.

DETECTABLE WARNING NOTES

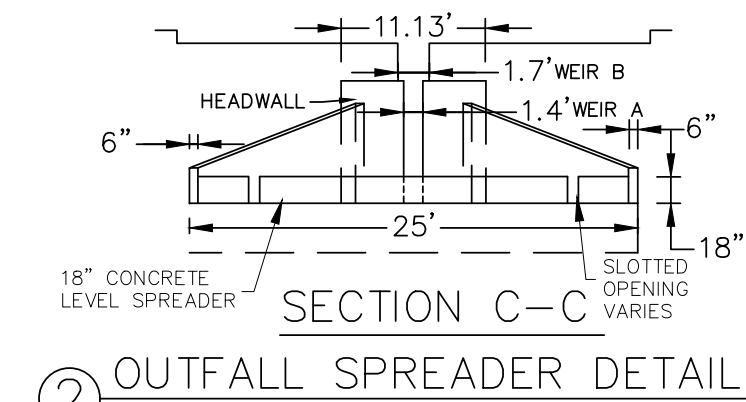
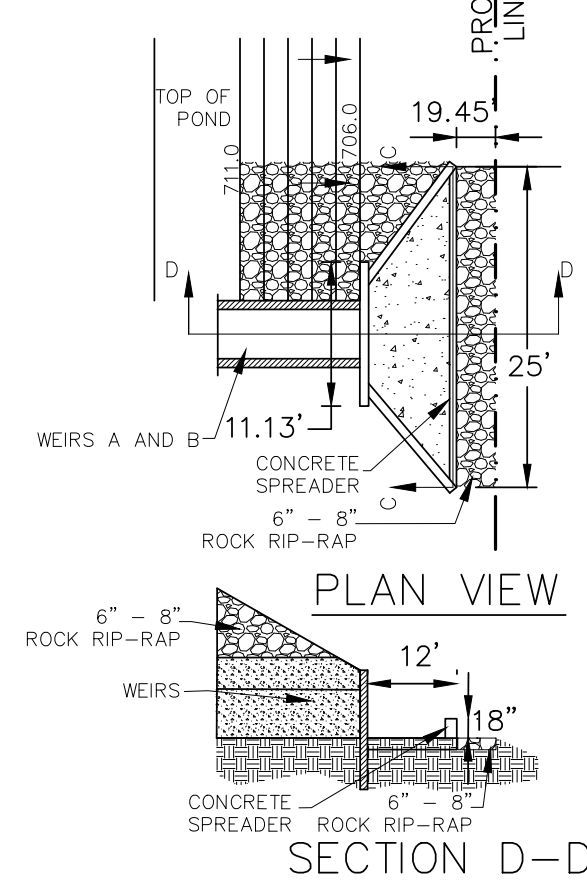
3. CURB RIPS OR LANDINGS ABUTTING THE CROSSWALK MAY HAVE A DETECTABLE WARNING SURFACE THAT CONSISTS OF RASD THICKENED CONCRETE COMPLYING WITH SECTION 703 OF THE TEXAS ACCESSIBILITY GUIDELINES (TAG) OR AN EQUIVALENT CONTRACT SPECIFICATION WITH ADJOINING SURFACES, INCLUDING SIDEWALKS, FURBISH DARK BROWN OR DARK RED DETECTABLE WARNING SURFACE ADJACENT TO UNCLOAKED CURB. DETECTABLE WARNING SURFACES SHALL BE SLIP RESISTANT AND NOT ALLOW WATER TO ACCUMULATE.
3. ALIGN THICKENED CONCRETE IN THE DIRECTION OF PEDESTRIAN TRAVEL WHEN ENTERING THE STREET.
4. DETECTABLE WARNING SURFACES SHALL BE A MINIMUM OF 24" IN DEPTH IN THE DIRECTION OF PEDESTRIAN TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB OR LANDING WHERE THE PEDESTRIAN ROUTE ENTERS THE ROUTE ENTERS THE STREET.
5. DETECTABLE WARNING SURFACES SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS AT THE CURB LINE AND THE EDGE FURTHEST FROM THE CURB LINE IS AT THE EDGE OF THE RAMP RUN AND THE STREET. DETECTABLE WARNING SURFACES MAY BE CURVED ALONG THE CORNER BOUNDARY OF THE STREET.
6. DETECTABLE WARNING MATERIALS MUST MEET 2003F INTERNATIONAL MATERIALS SPECIFICATION DMS-450 AND BE LISTED ON THE MATERIAL PRODUCER LIST. INSTALL PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
7. DETECTABLE WARNING PAVEMENTS SHALL NOT BE PERMITTED WITHOUT THE APPROVAL BY THE PUBLIC WORKS DEPARTMENT.



Drawing Name: N:\projects\056 - milestone properties\056.009 - cloud country unit 5\103 - construction drawings\056.009.103-STORM.dwg User: maz Jul 09, 2018 - 5:27pm

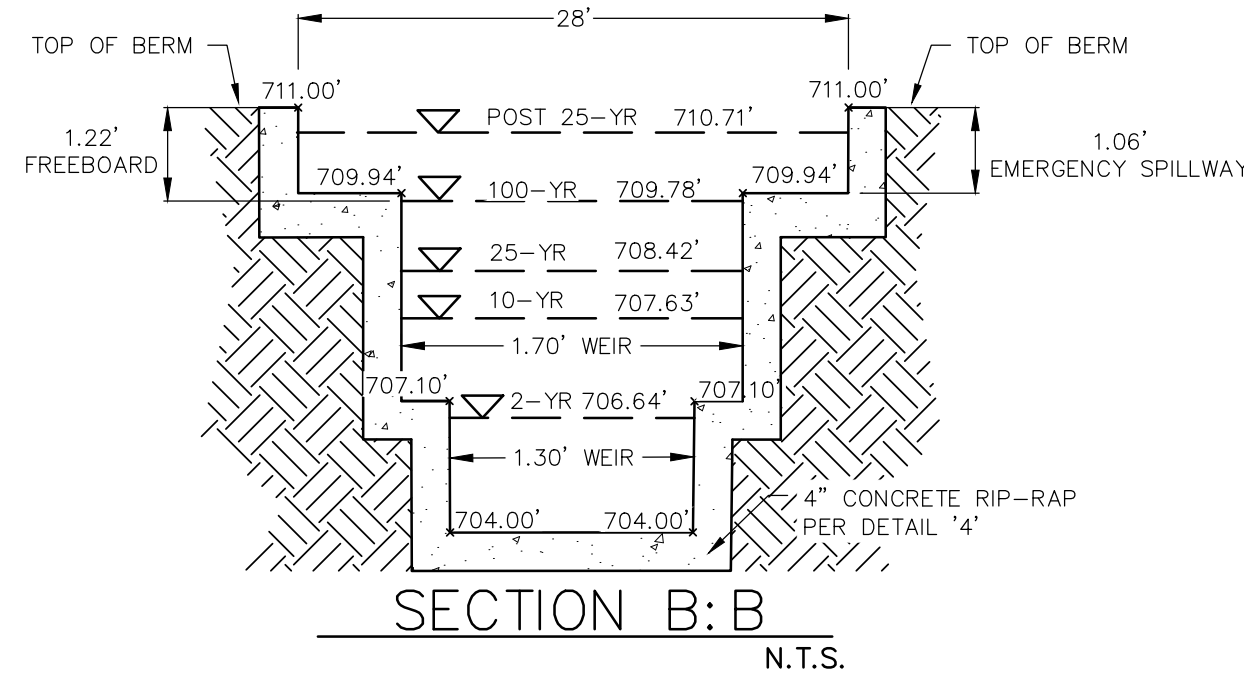


1 INSET "A" WEIR STRUCTURE
SCALE = 1:5



2 OUTFALL SPREADER DETAIL

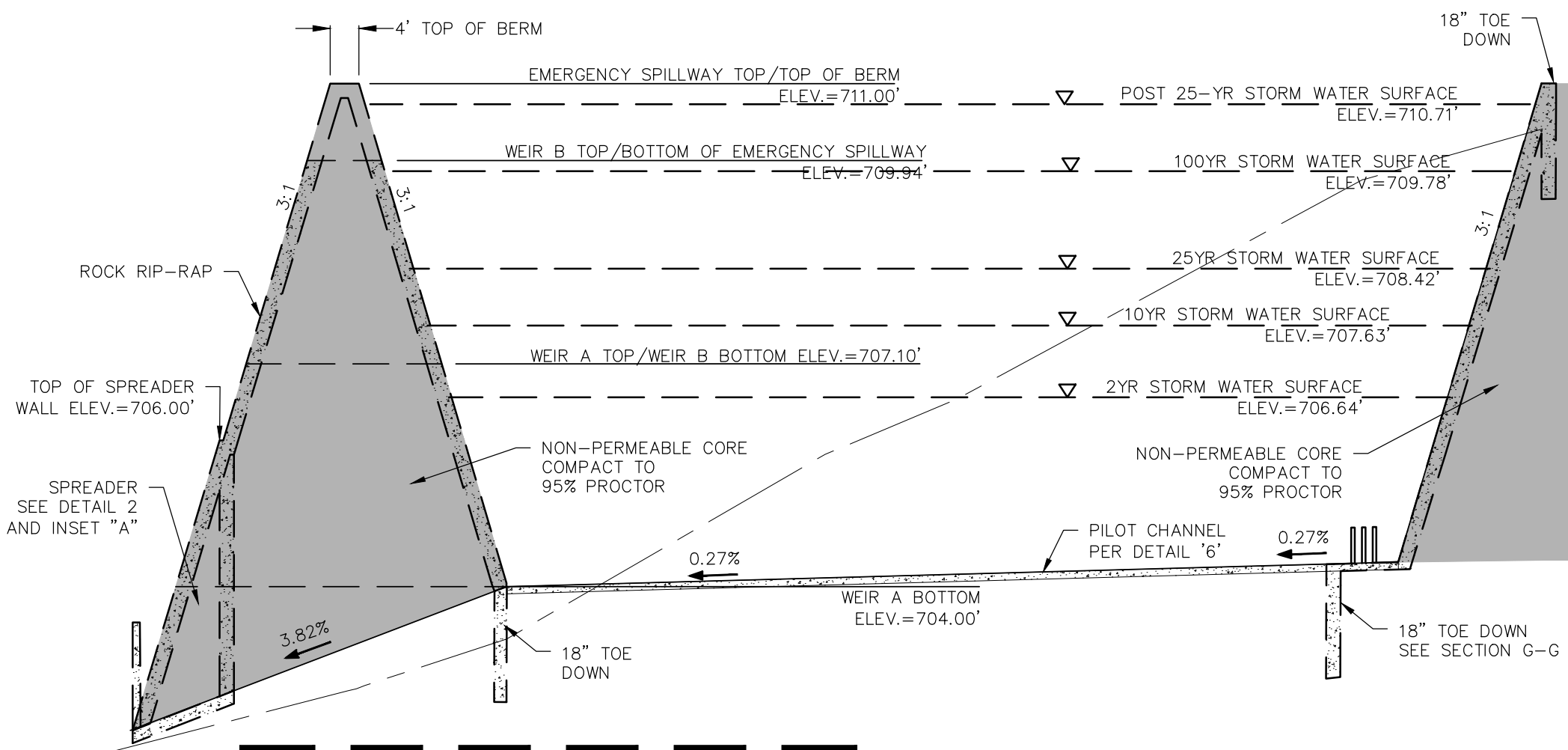
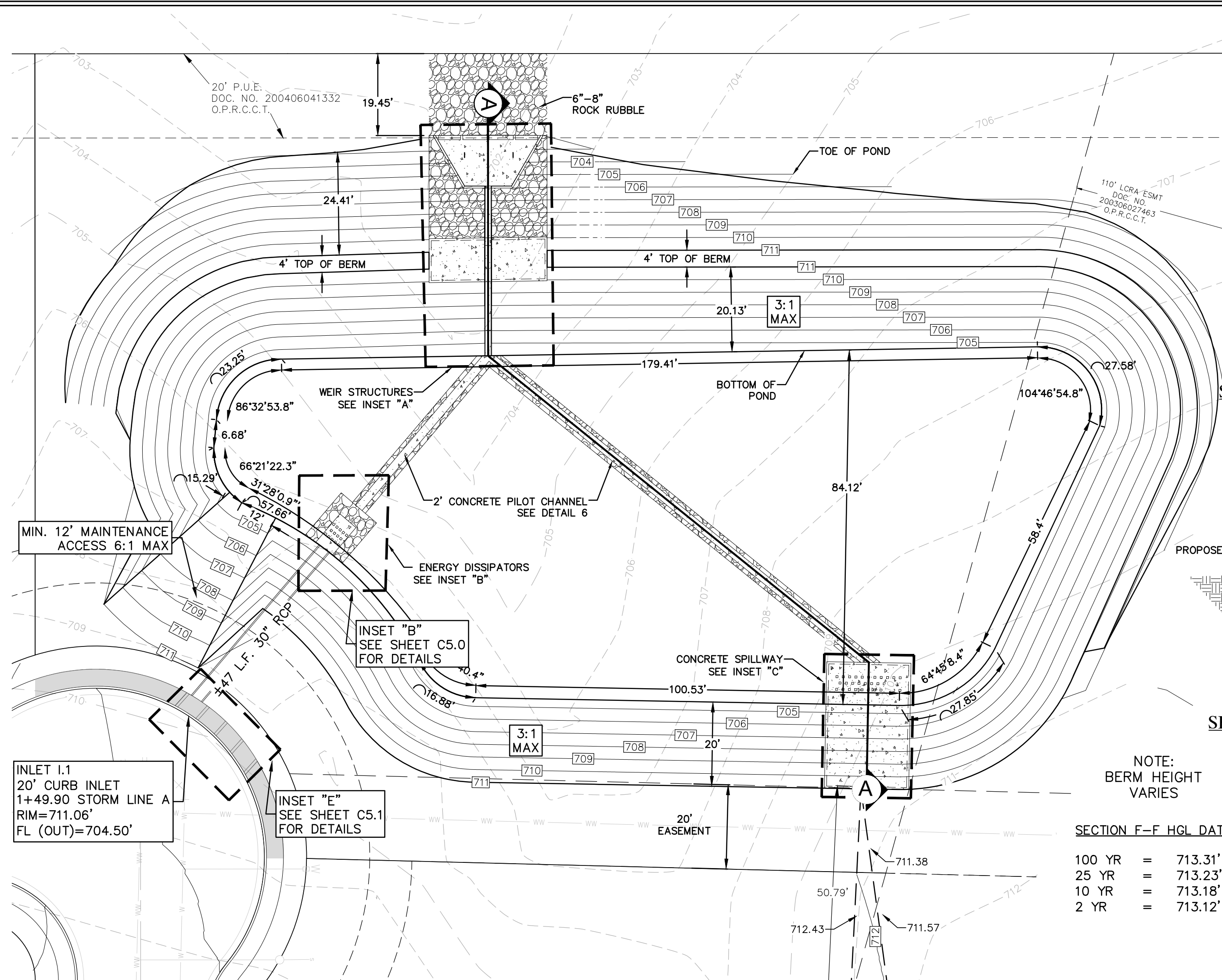
* RELEVANT NOTES CAN BE FOUND
ON SHEET C5.1 *



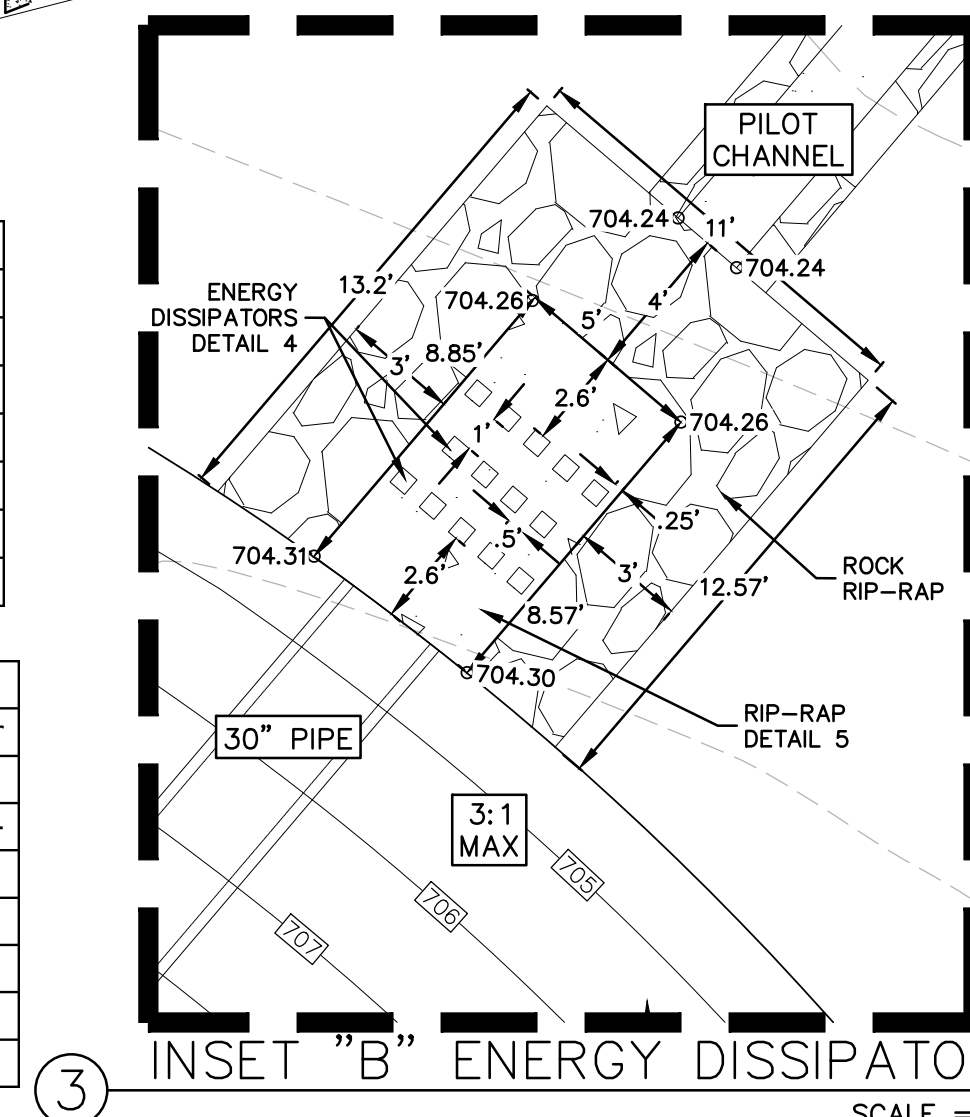
SECTION B:B
N.T.S.

Weir Structure Dimensions				
Weir A Crest Elevation (ft)	704.00			
Weir A Width (ft)	1.40			
Weir B Crest Elevation (ft)	707.10			
Weir B Width (ft)	1.70			
Emergency Spillway Crest Elevation	709.94			
Emergency Spillway Width (ft)	28.00			
Post 25-year Water Surface Elevation (ft)	710.71			

Detention Summary				
	2-year	10-year	25-year	100-year
Proposed Condition Flowrates Post-Detention (cfs)	18.39	30.04	41.84	64.69
Peak Storage Volume (cuft)	32,264	55,311	71,346	101,644
Time to Drain Pond (hrs)	2.43	2.78	3	3.133
Water Surface Elevation (ft)	706.64	707.63	708.42	709.78
Maximum Water Depth (ft)	2.64	3.63	4.42	5.78
Freeboard (ft)	4.36	3.37	2.58	1.22
Discharge Velocity (fps)	2.04	2.40	2.67	3.06

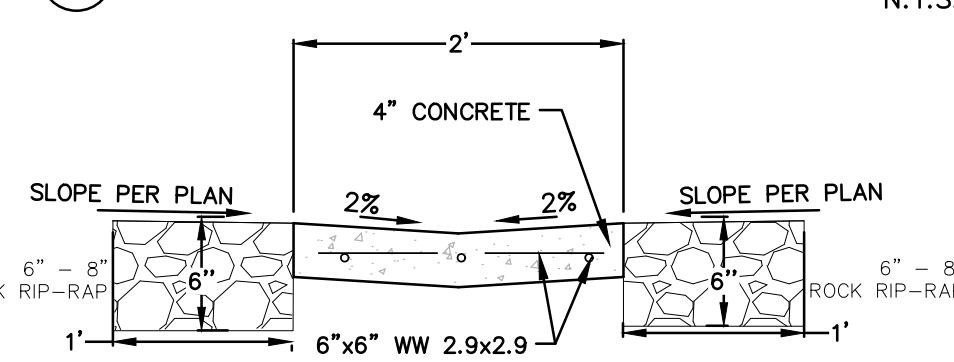


SECTION A:A
N.T.S.



3 INSET "B" ENERGY DISSIPATORS
SCALE = 1:5

4 TYPICAL ENERGY DISSIPATOR
N.T.S.



6 PILOT CHANNEL
N.T.S.

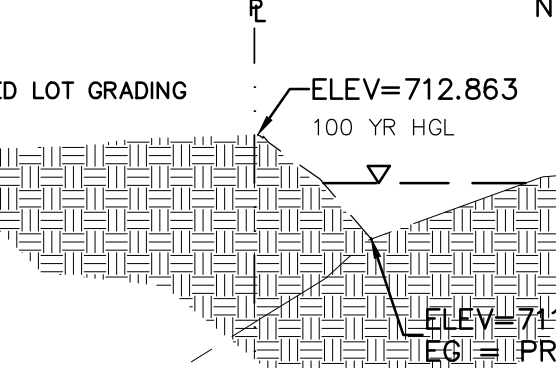
- UTILITY NOTES:
- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.
 - NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS OR DRIVEWAYS.

SECTION E-E HGL DATA	
100 YR	= 712.35'
25 YR	= 712.27'
10 YR	= 712.22'
2 YR	= 712.16'

SECTION E-E BERM CALCULATIONS

H= 0.66FT	H= 0.66FT	H= 0.66FT
Q _s = 9.93CFS	Q _w = 19.46CFS	Q _w = 28.91CFS
n= 0.03	n= 0.03	n= 0.03
S= 4.9%	S= 4.9%	S= 4.9%
Dn= 0.39FT	Dn= 0.50FT	Dn= 0.58FT
Vn= 3.65FPS	Vn= 4.33FPS	Vn= 4.77FPS

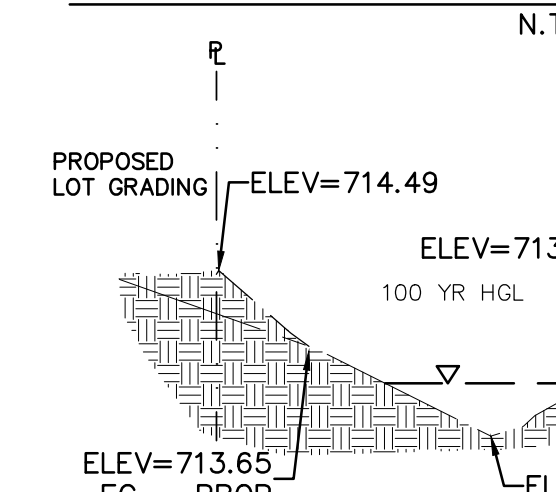
SECTION E-E



SECTION F-F BERM CALCULATIONS

H= 0.91FT	H= 0.91FT	H= 0.91FT
Q _s = 9.93CFS	Q _w = 19.46CFS	Q _w = 28.91CFS
n= 0.03	n= 0.03	n= 0.03
S= 4.9%	S= 4.9%	S= 4.9%
Dn= 0.36FT	Dn= 0.47FT	Dn= 0.55FT
Vn= 3.65FPS	Vn= 4.33FPS	Vn= 4.76FPS

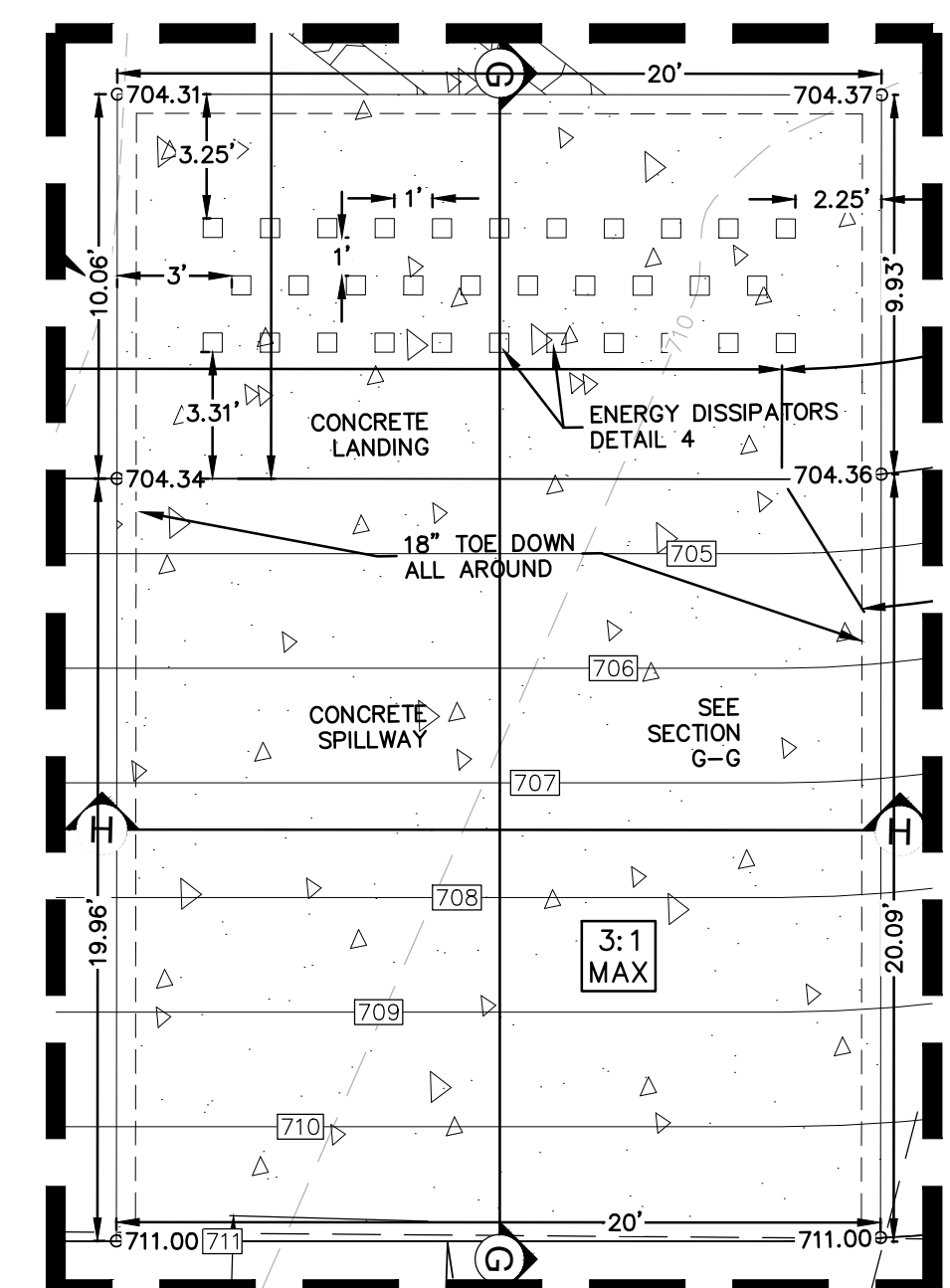
SECTION F-F



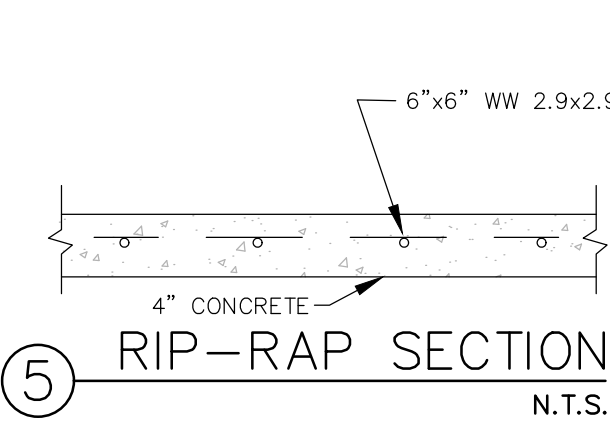
NOTE:
BERM HEIGHT
VARIES

SECTION F-F HGL DATA

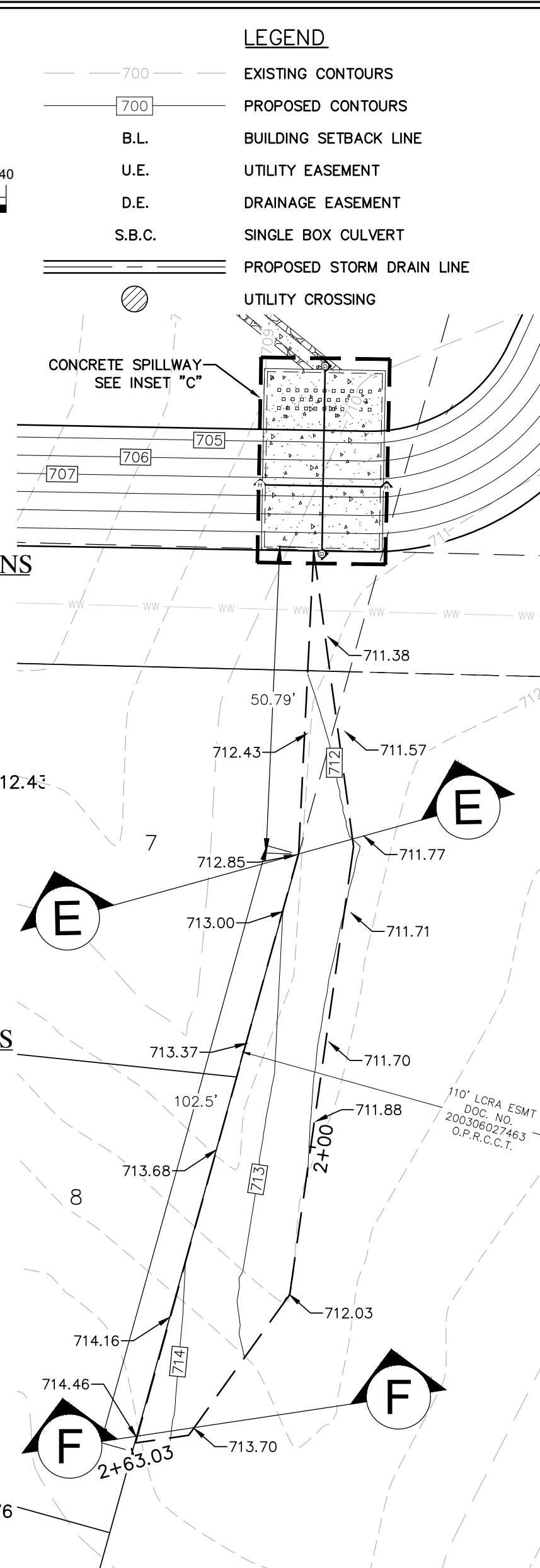
100 YR	= 713.31'
25 YR	= 713.23'
10 YR	= 713.18'
2 YR	= 713.12'



7 INSET "C" SPILLWAY AND LANDING
SCALE = 1:5



5 RIP-RAP SECTION
N.T.S.



LEGEND

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

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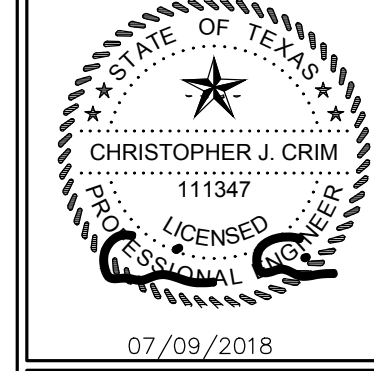
OVERALL STORM

CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION

DATE: JULY 2018
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REVIEWED BY: SWH/SCH
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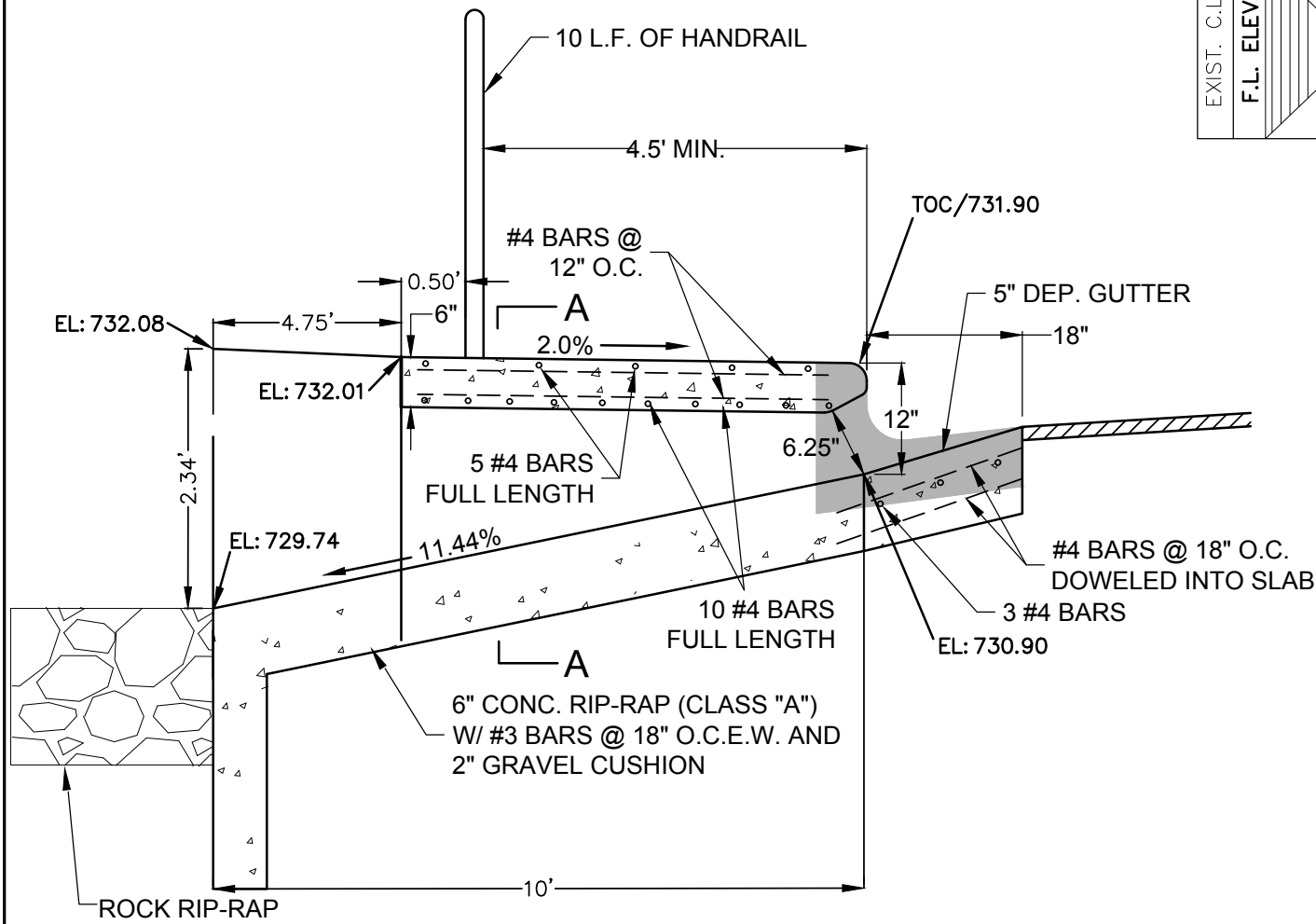
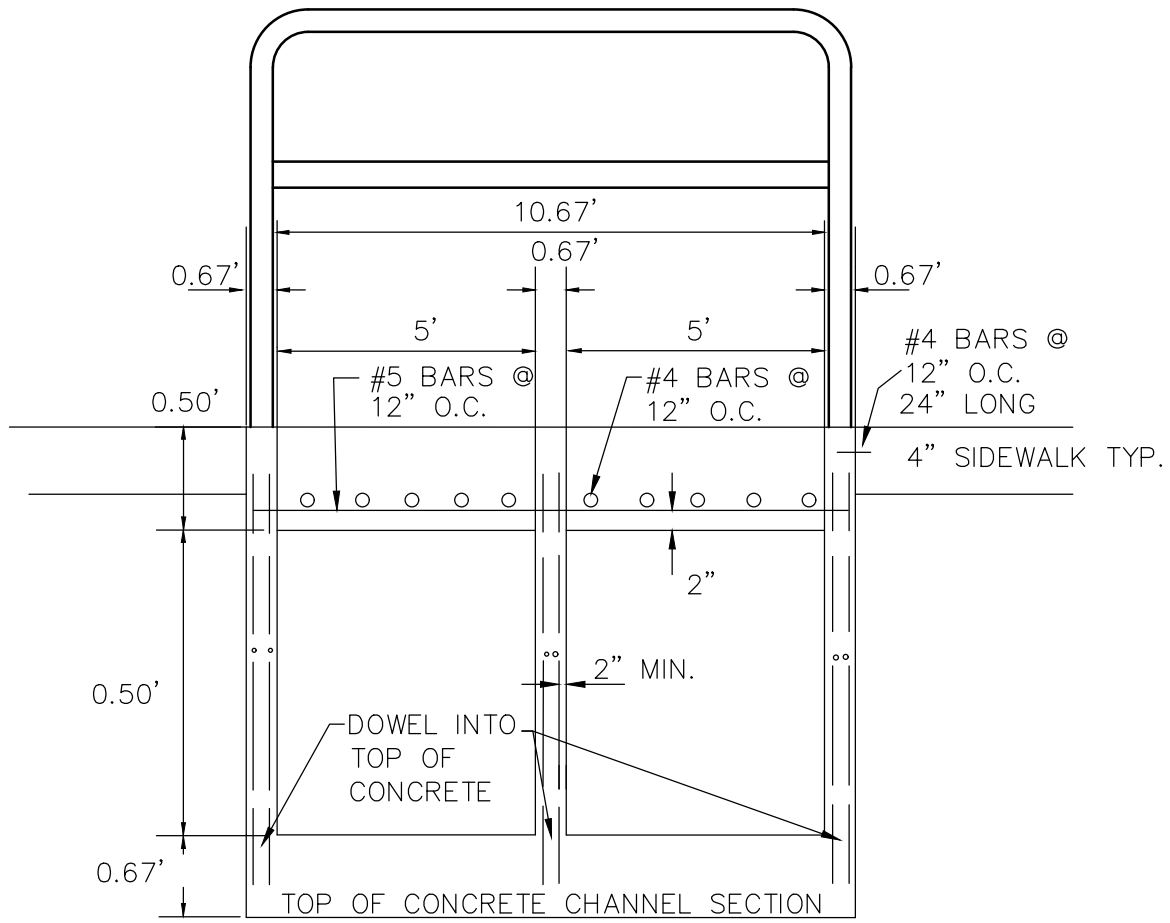
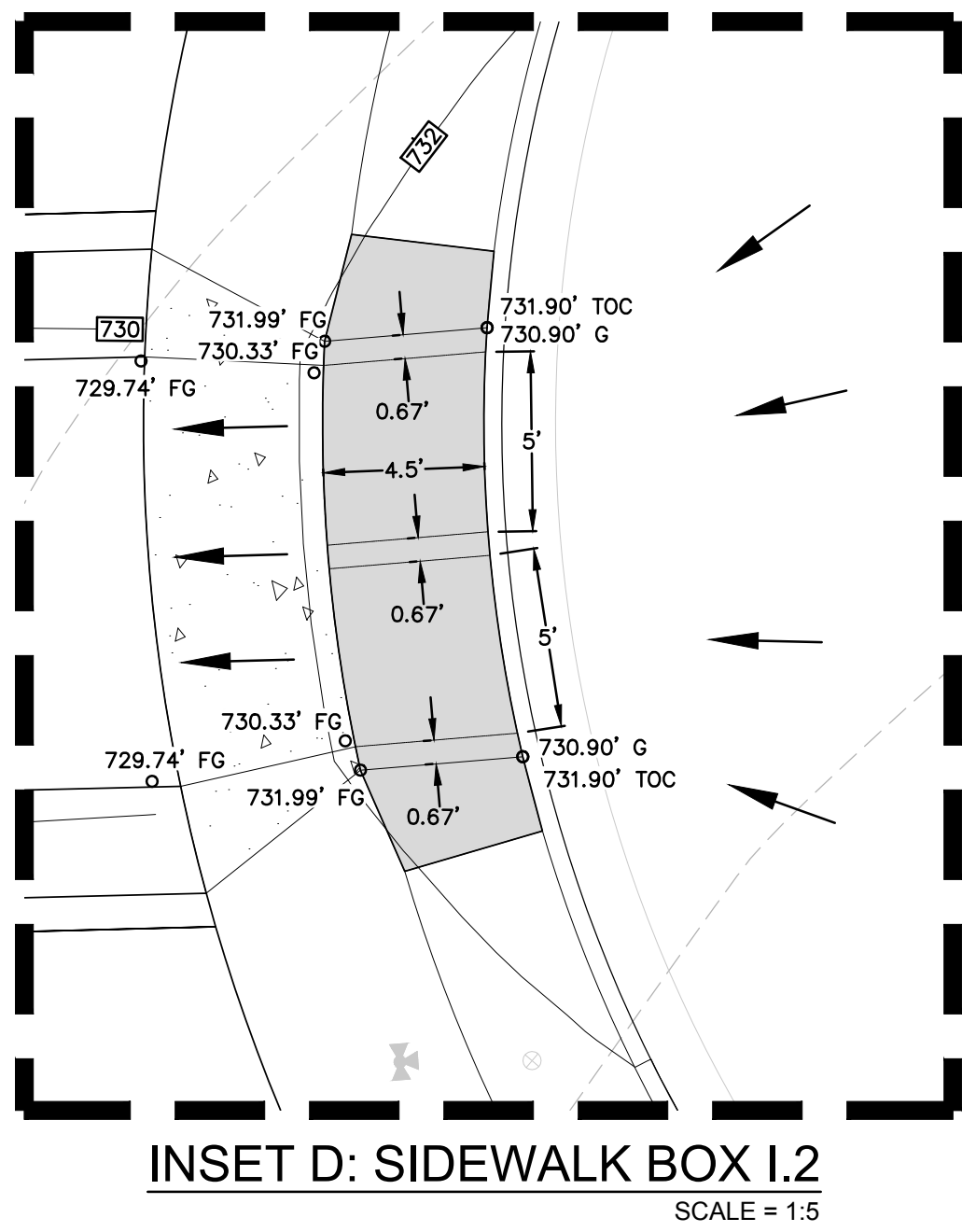
SHEET
C5.0



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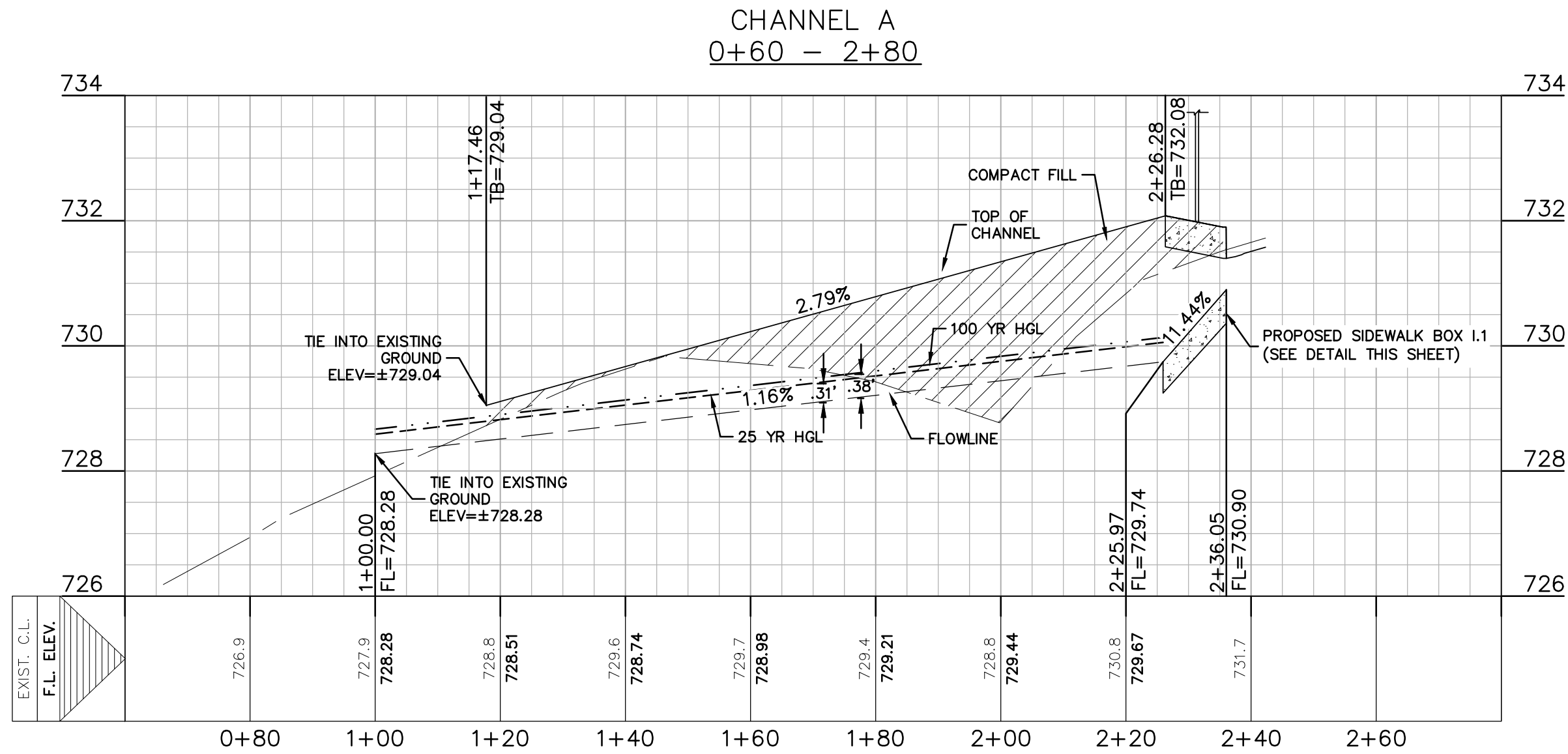
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SIDE VIEW
SIDEWALK BOX I2 DETAIL
N.T.S.

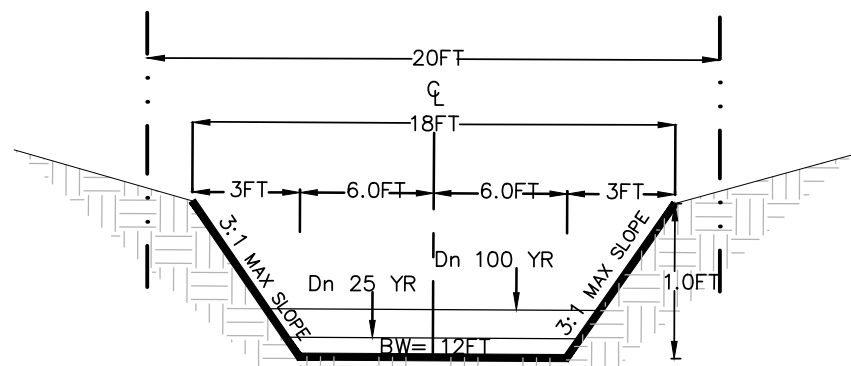
NOTES:

- 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 GEOTECHNICAL INVESTIGATION OF SITE, AND SHALL BE COMPACTED TO 95% STANDARD PROCTOR.



CHANNEL "A" CALCULATIONS

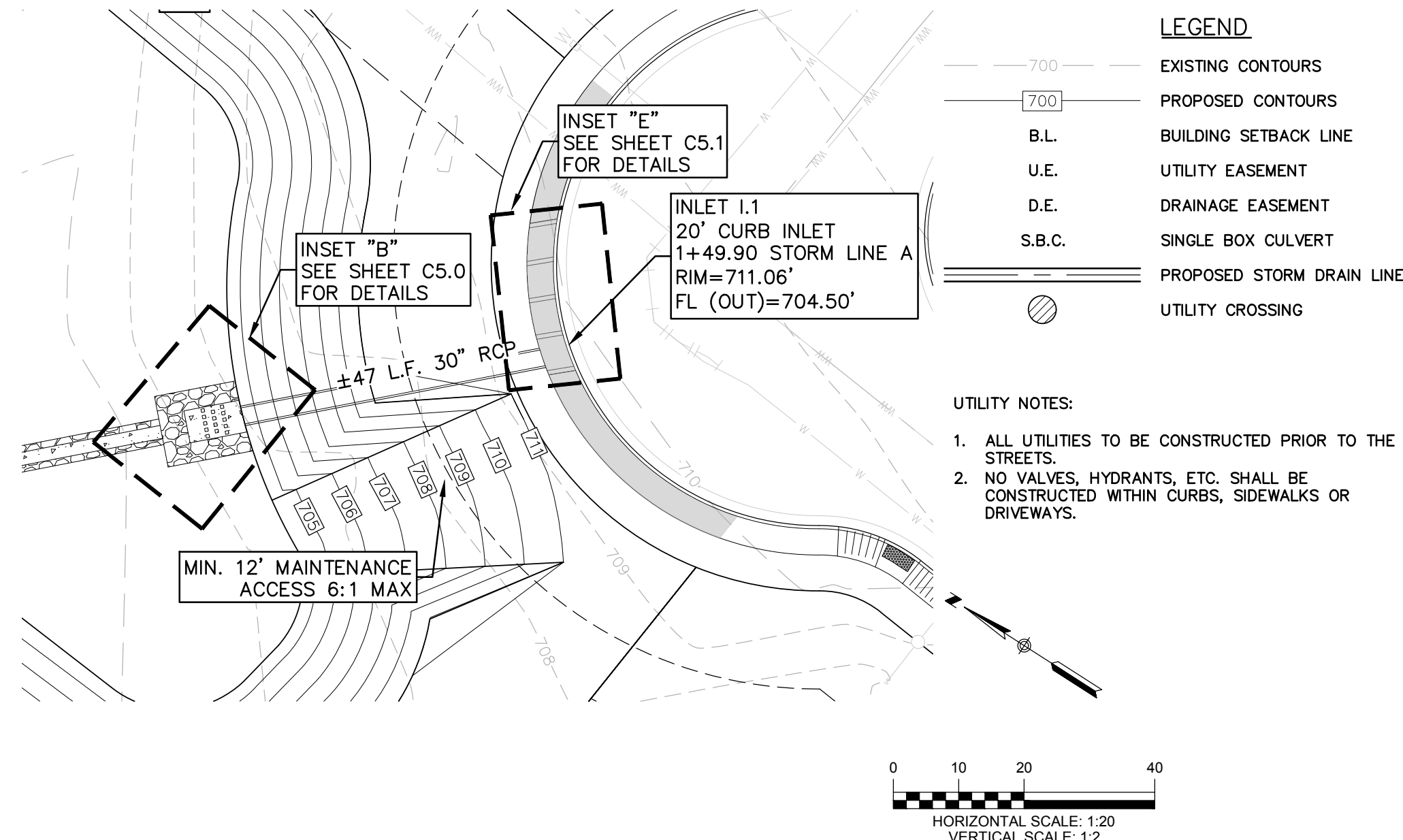
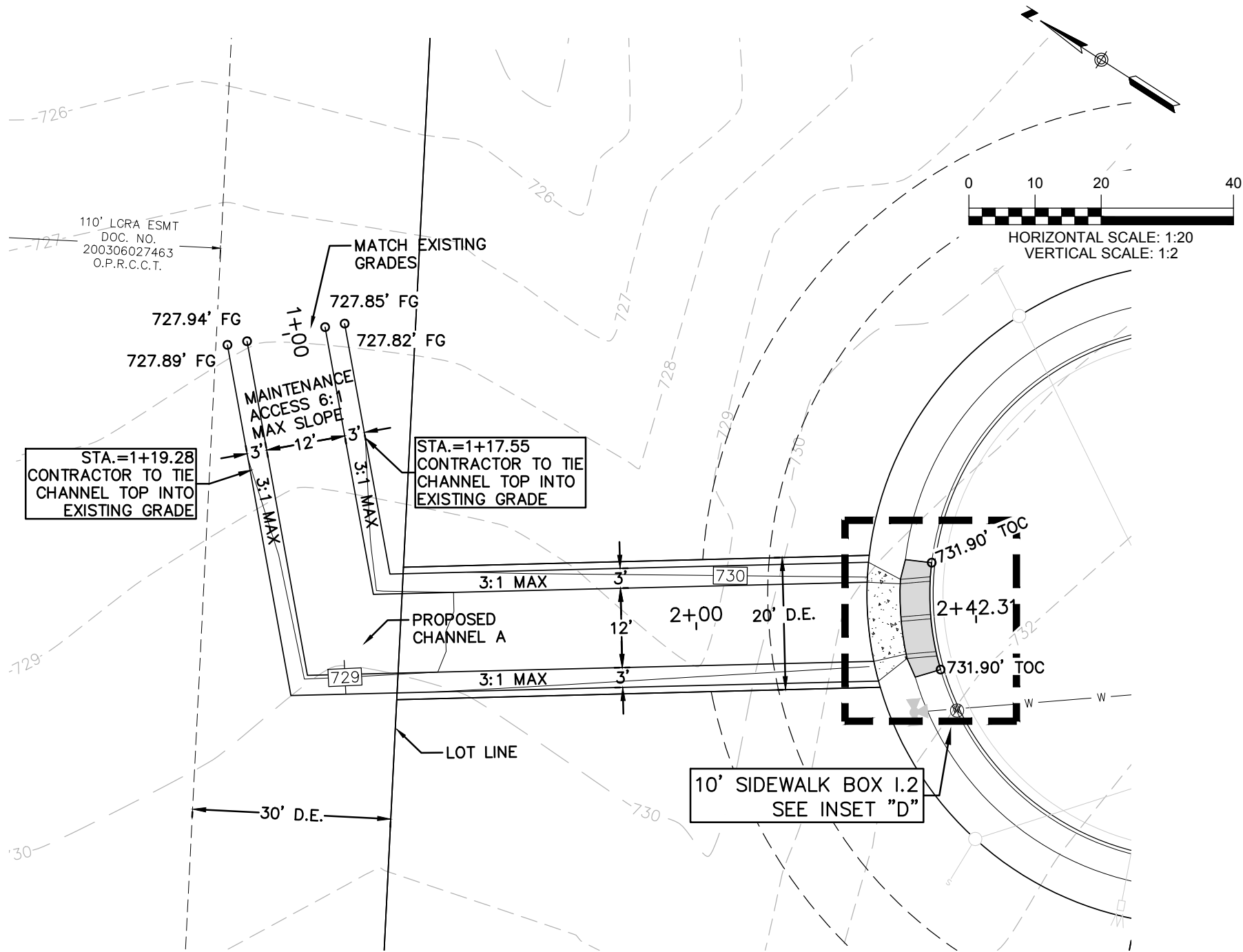
H= 1.0FT	H= 1.0FT
Q _u = 10.43 cfs	Q _u = 15.36 cfs
BW= 12FT	BW= 12FT
n= 0.03	n= 0.03
S= 1.16%	S= 1.16%
Dn= 0.31FT	Dn= 0.39FT
Vn= 2.59 ft/s	Vn= 2.98 ft/s



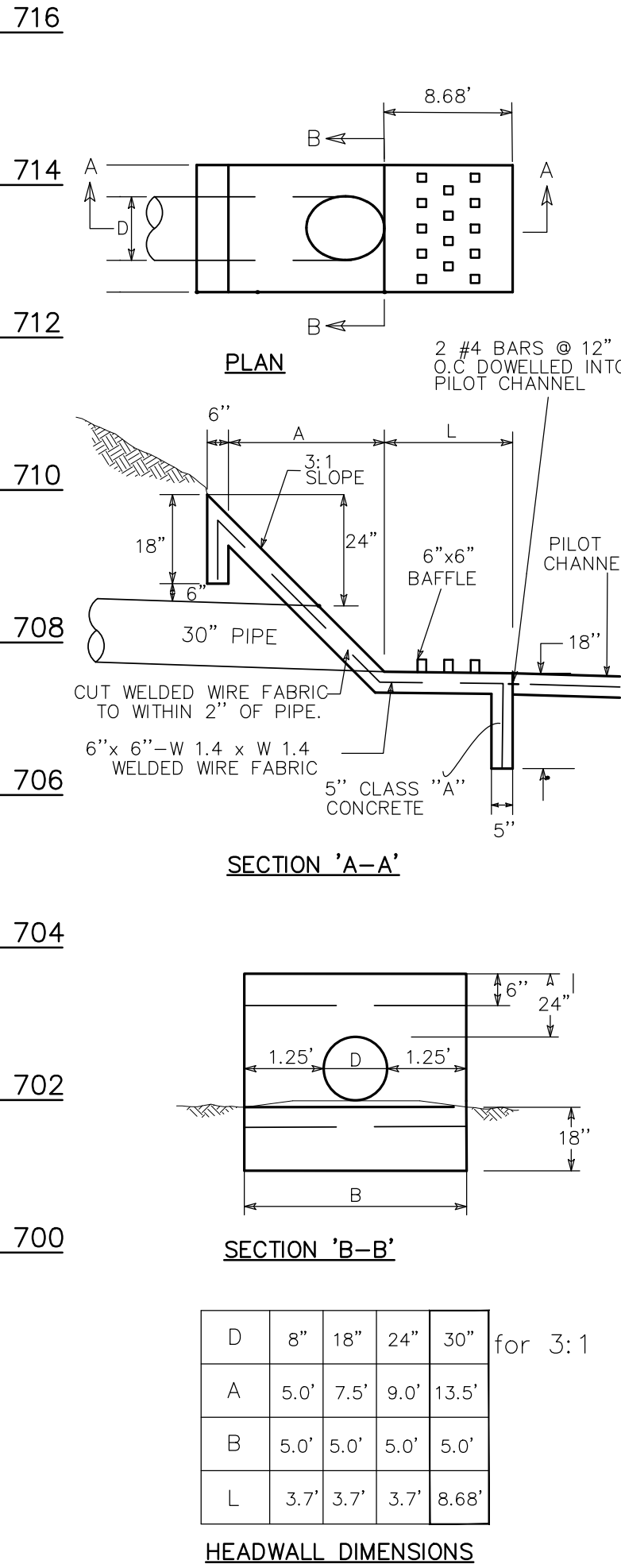
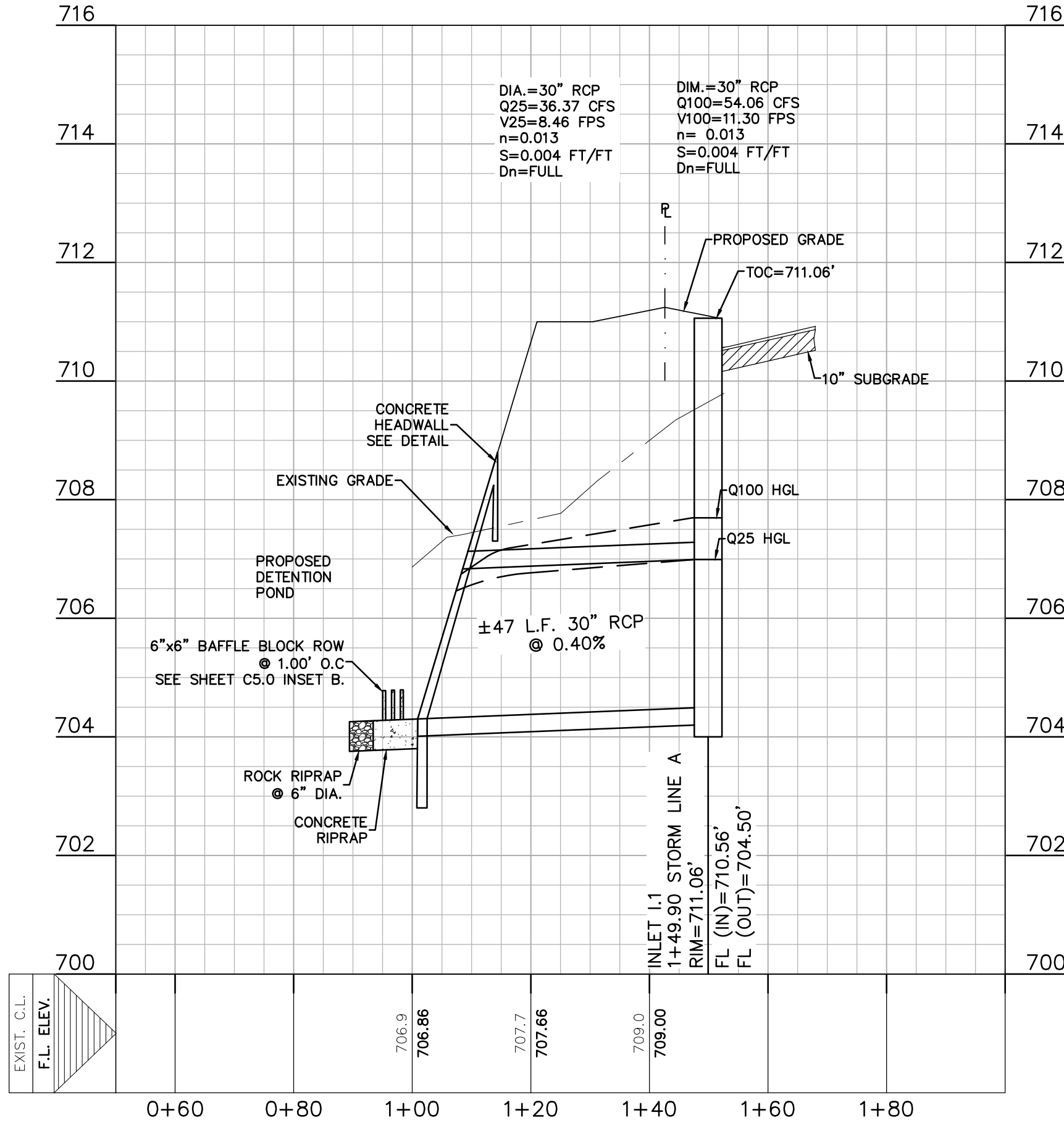
TYPICAL CHANNEL SECTION
N.T.S.

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.



STORM LINE A
0+50 - 2+00



SLOPING CONCRETE HEADWALL

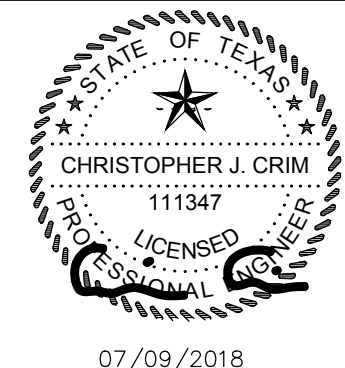
MAINTENANCE SCHEDULE:

- 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.

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PI630/625-8555 • F830/625-8556
TBP6 FIRM F-10961
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ENGINEERING & SURVEYING



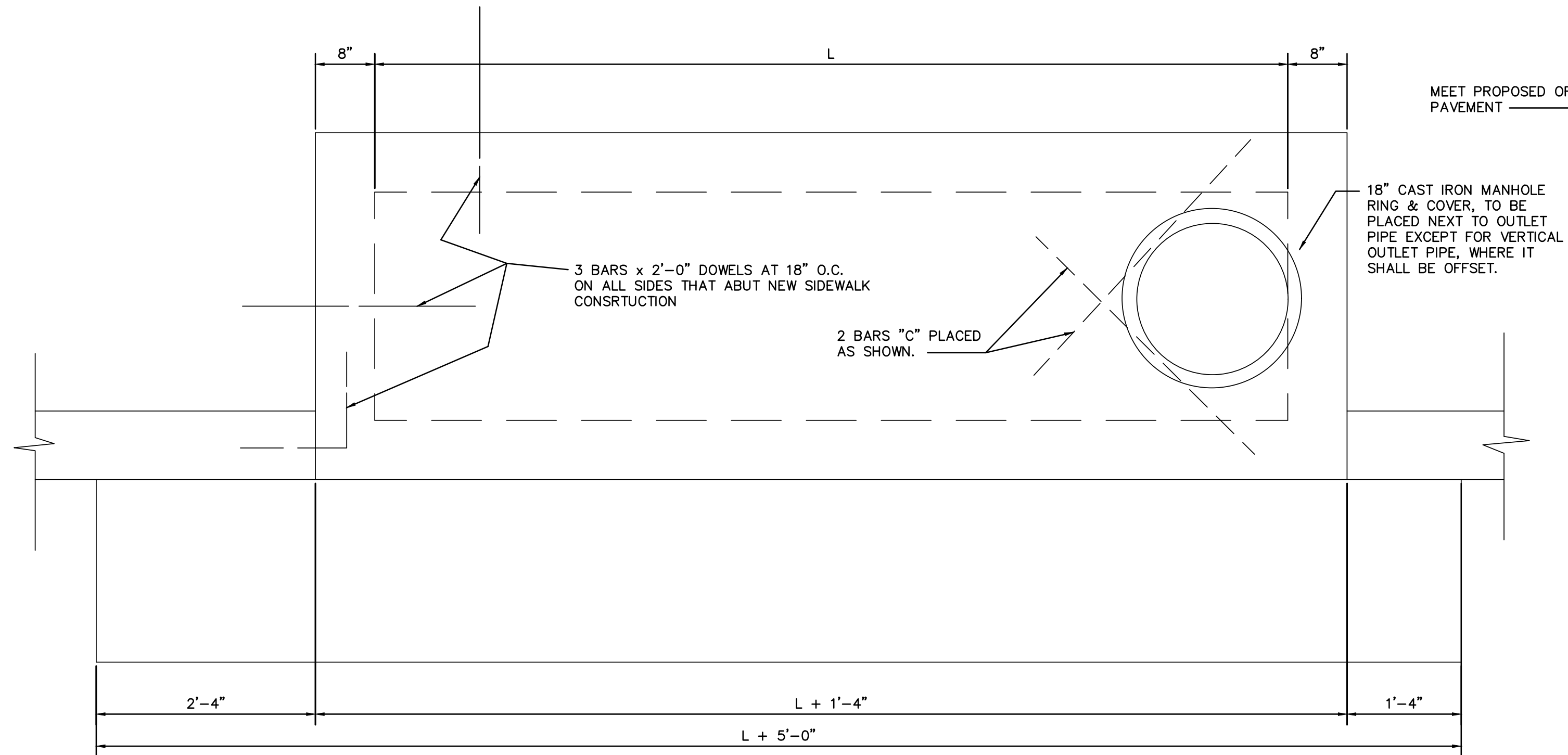
CHANNEL A AND STORM LINE A
PLAN & PROFILE
CLOUD COUNTRY UNIT 5

REVISION	DATE	DESCRIPTION
NO.		

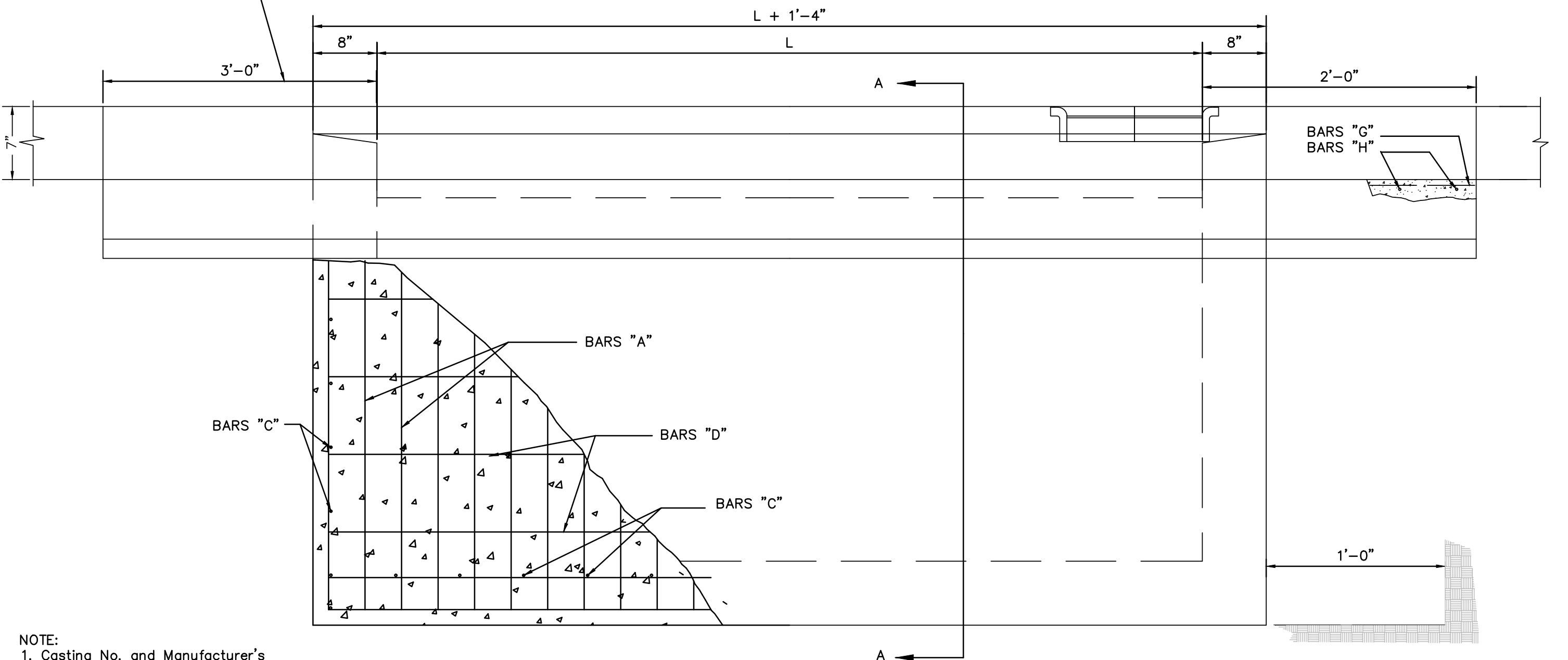
DATE: JULY 2018
DRAWN BY: MGM/MZ
DESIGNED BY: MGM/MZ/CC
REVIEWED BY: SWH/SCH
HMT PROJECT NO.: 056.009

SHEET
C5.1

Drawing Name: N:_projects\056 - milestone properties\056.009 - cloud country unit 5\103- construction drawings\056.009.103-DETAILS.dwg User: moaz Jun 19, 2018 - 2:33pm

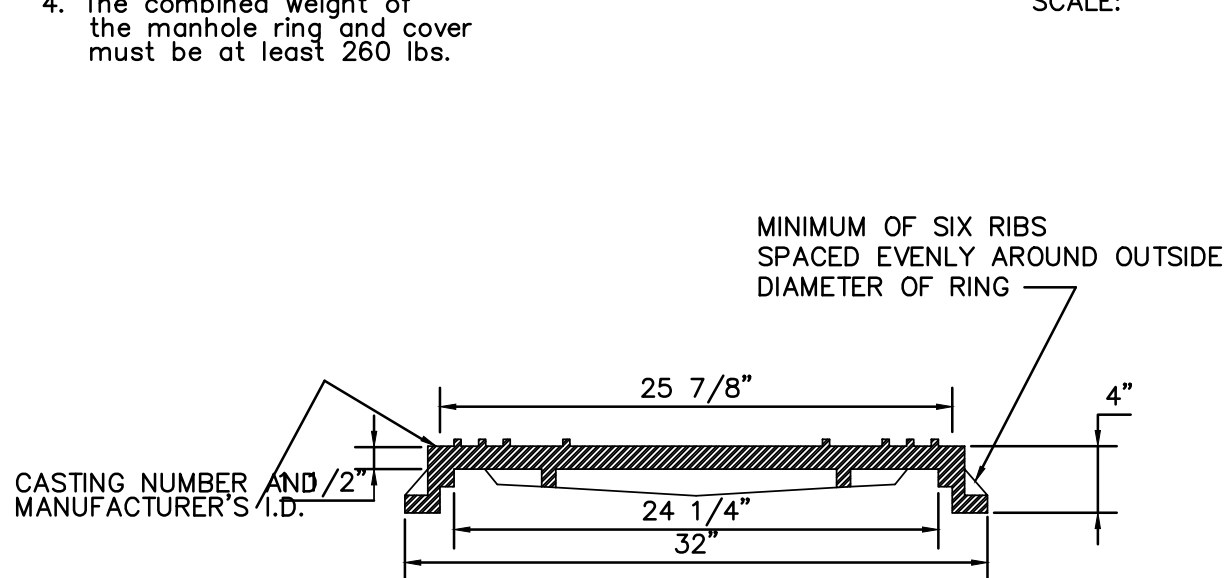


3'-0" SHALL BE FOR UPSTREAM END OF ON-GRADE INLET. FOR INLETS IN SUMP CONDUITION, THIS DIMENSION SHALL BE 2'-0"

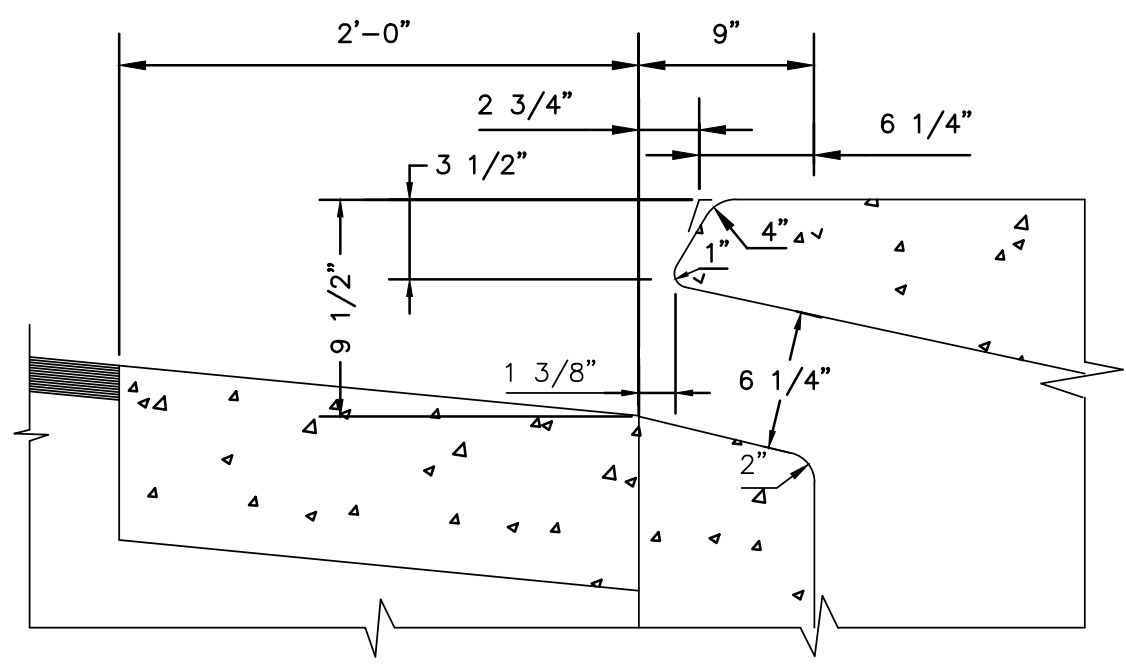
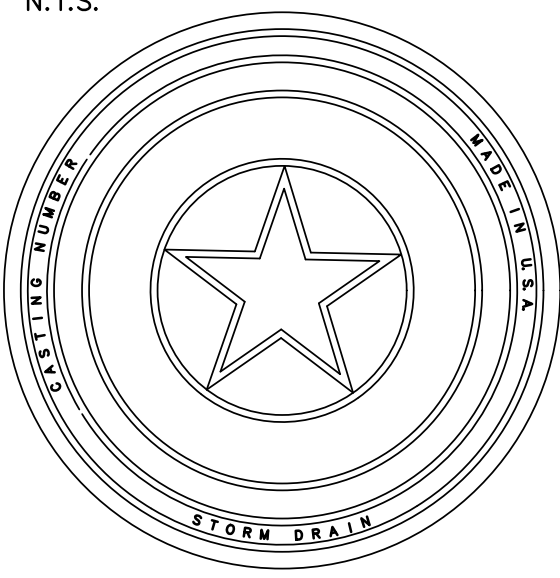


- NOTE:
1. Casting No. and Manufacturer's I.D. on lid and ring.
 2. Load bearing capability of N=20 minimum.
 3. The load bearing surface shall be machine ground.
 4. The combined weight of the manhole ring and cover must be at least 260 lbs.

FRONT VIEW
SCALE: N.T.S.

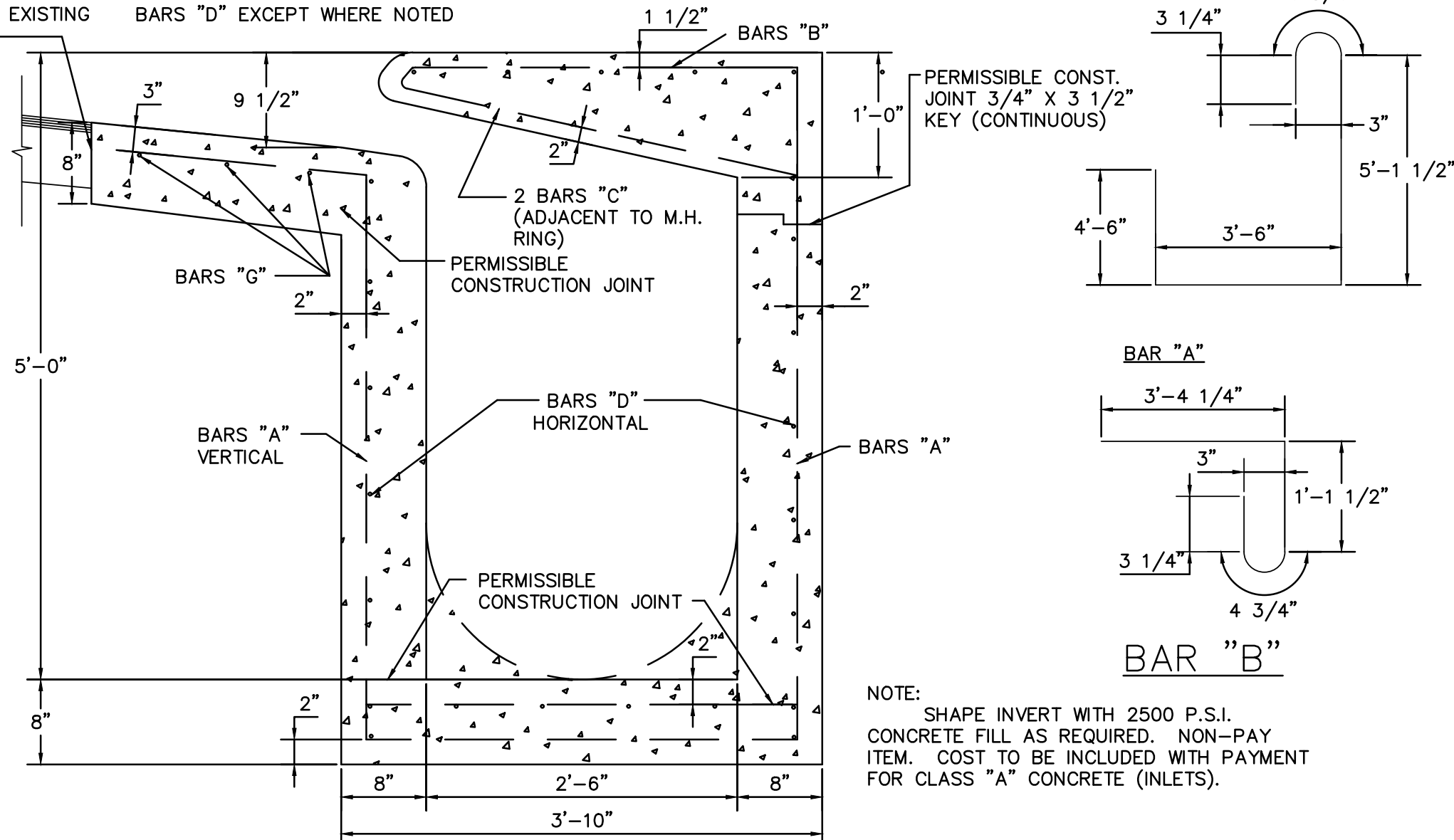


MANHOLE RING & COVER DETAILS

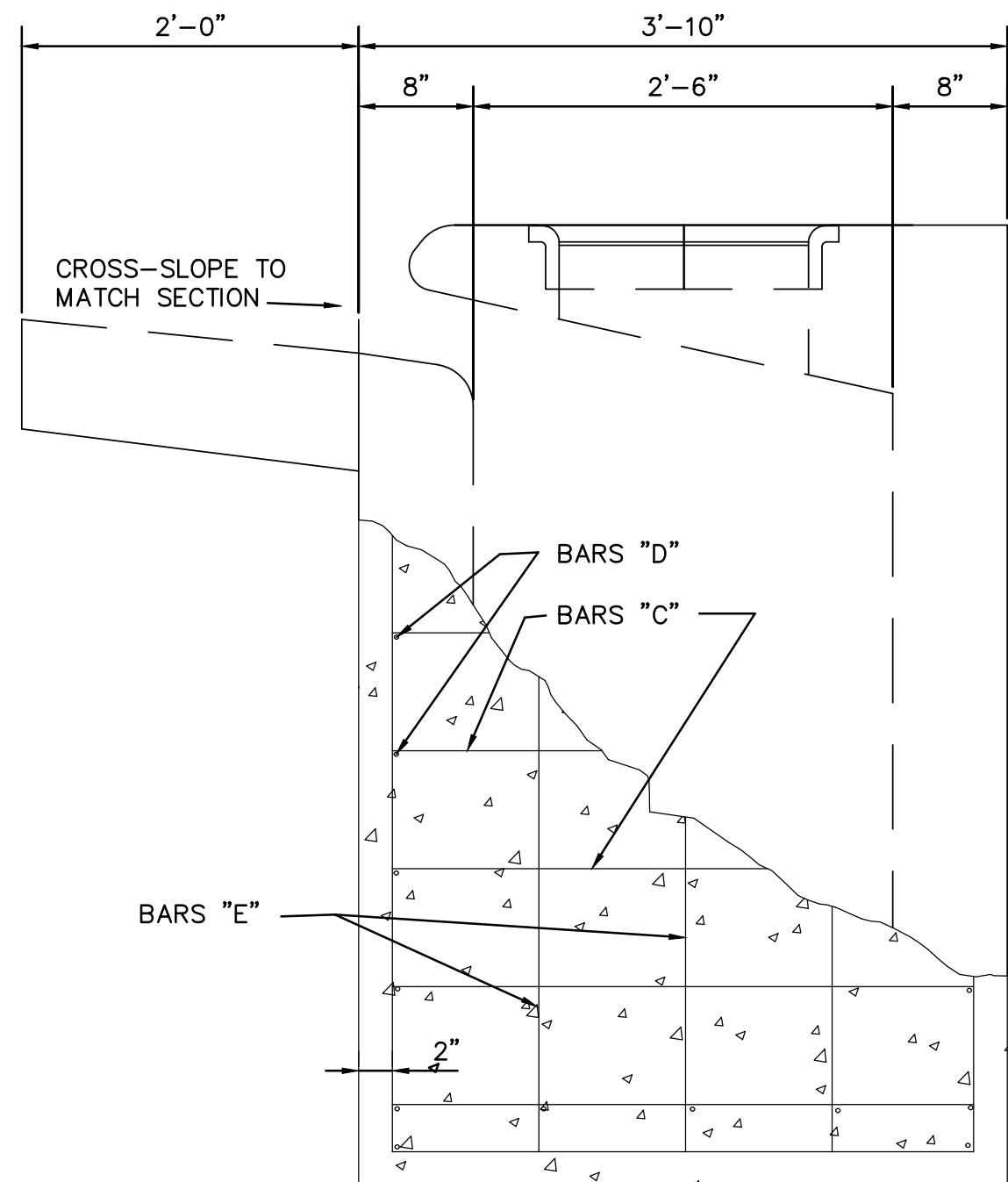


OPENING DETAIL FOR CURB SECTION

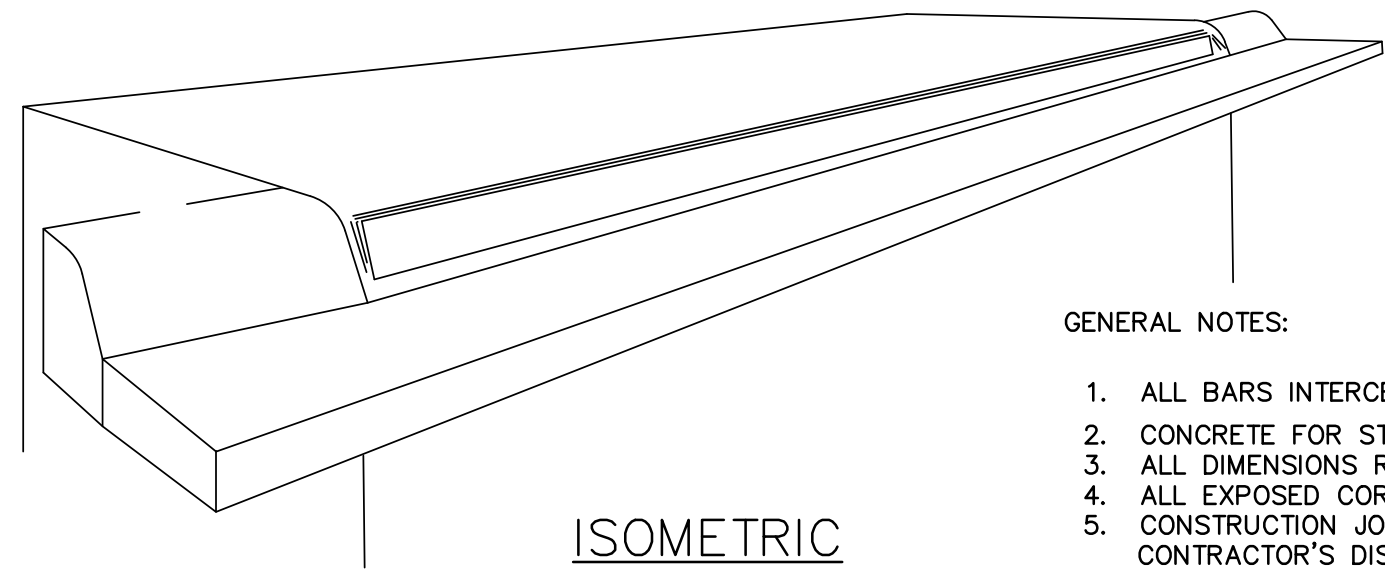
NOTE: ALL LONGITUDINAL BARS TO BE BARS "D" EXCEPT WHERE NOTED



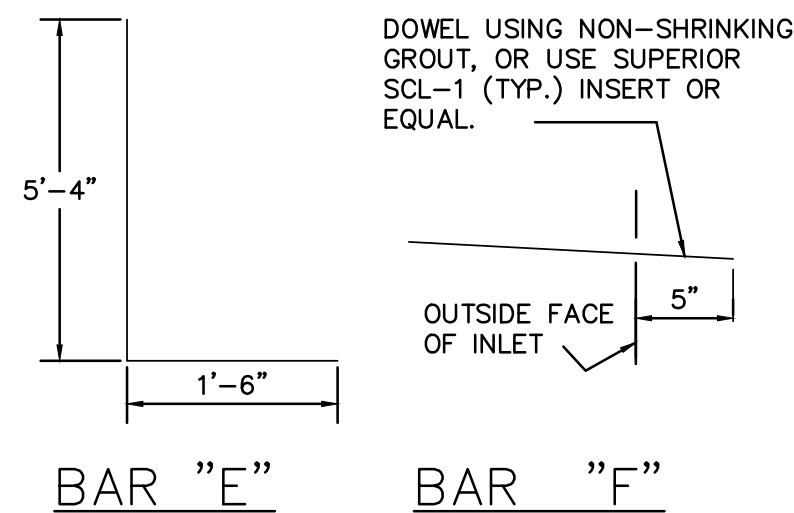
SECTION A-A
SCALE: N.T.S.



SIDE VIEW
SCALE: N.T.S.



ISOMETRIC



BAR "E"

BAR "F"

NOTE: SHAPE INVERT WITH 2500 P.S.I. CONCRETE FILL AS REQUIRED. NON-PAY ITEM. COST TO BE INCLUDED WITH PAYMENT FOR CLASS "A" CONCRETE (INLETS).

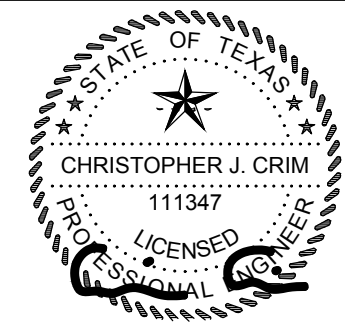
Reinforcing Steel Schedule						
	BAR	NO.	SIZE	SPA.	LENGTH	WEIGHT
L=5'-00"	A	15	4	5"OC	13'-9 1/2"	138
	B	15	4	5"	5'-1"	52
	C	23	4	9"	3'-6"	54
	D	22	4	10"	6'-1"	89
	E	10	4	10 1/2"	6'-10"	46
	F	6	5	12"	2'-3"	14
	G	3	4	12"	9'-8"	20
	H	5	5	12"	1'-8"	9
*CONCRETE TOTAL=353 CY. MANHOLE CASTING=100 LBS. STEEL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

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

GENERAL NOTES:

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

410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
P(830)625-8855 • F(830)625-8856
T(830)625-8857 • F(830)625-8858
T(830)625-8859 • F(830)625-8860



06/18/2018

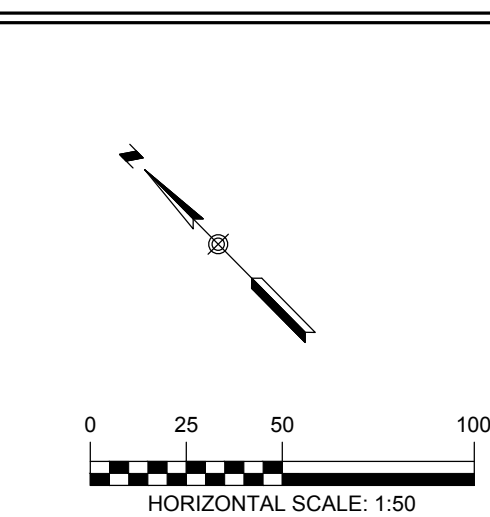
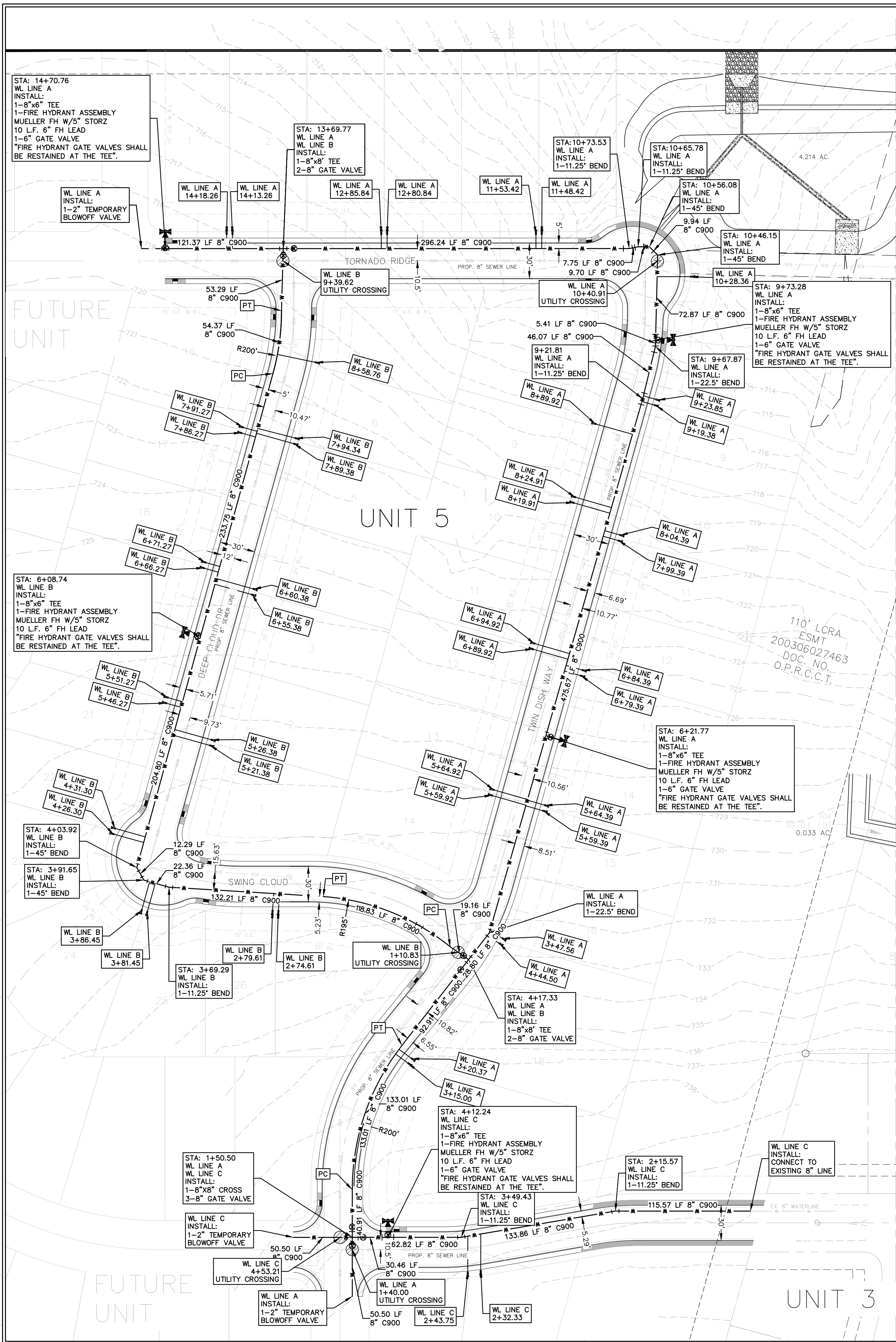
OVERALL STORM

CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION	DATE

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

SHEET
C5.2



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 Sanders	830-643-6903
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

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. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, CONSTRUCTION, MAINTENANCE AND 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 STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT SHALL BE RESPONSIBLE FOR THE 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 THE METHOD OF TESTS FOR DENSITY AND MOISTURE OF SOILS, AASHTO T-99. THE DENSITY 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 A WRITTEN REPORT. THE WRITTEN REPORT SHALL STATE 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					DEAD END/ INCLINE VALVES	
						UPPER			LOWER			
		90°	45°	22.5°	11.25°	45°	22.5°	11.25°	45°	22.5°		11.25°
8"	PVC	29	13	6	3	34	16	8	8	4	2	80
8"	DUCTILE IRON	25	10	5	3	22	11	6	8	4	2	52
12"	PVC	41	17	9	4	47	23	12	13	6	3	114

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

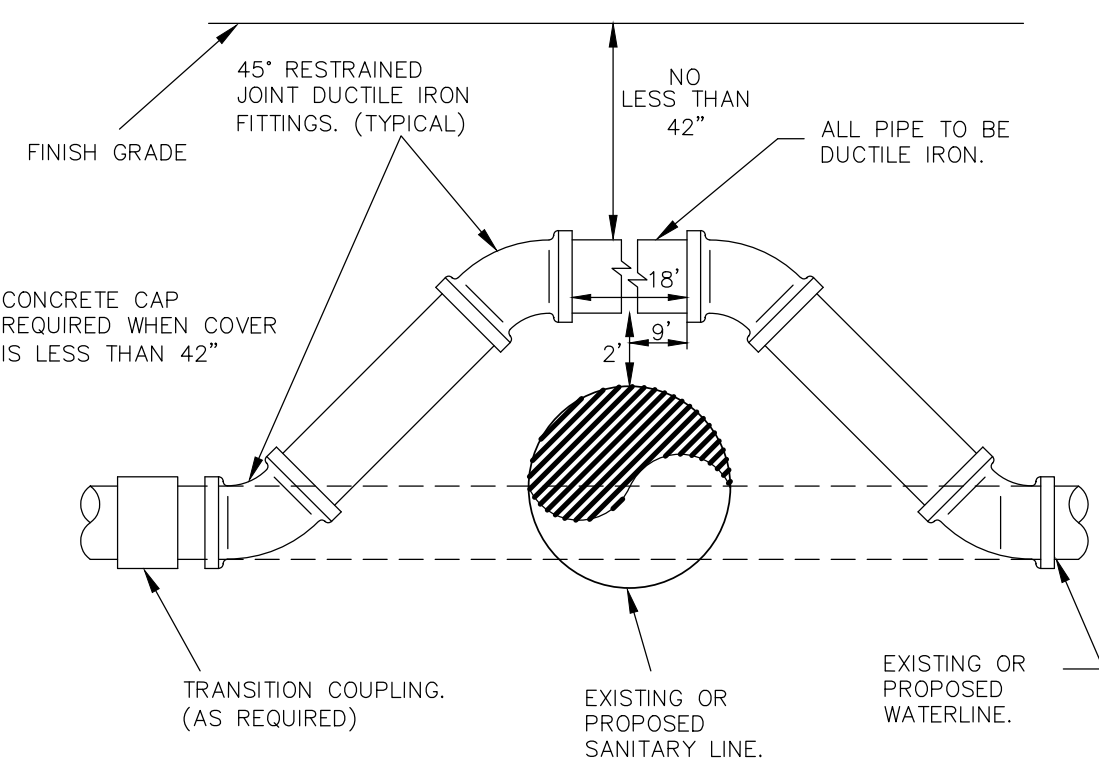
WATER STRUCTURE TOTALS					
PIPE SIZE	PIPE LENGTH	DOMESTIC METER SIZE	DOMESTIC METERS	FIRE HYDRANTS	FIRE LINES
8"	5016.26'	5/8"	47	5	0

RESTRAINED LENGTH NOTES:

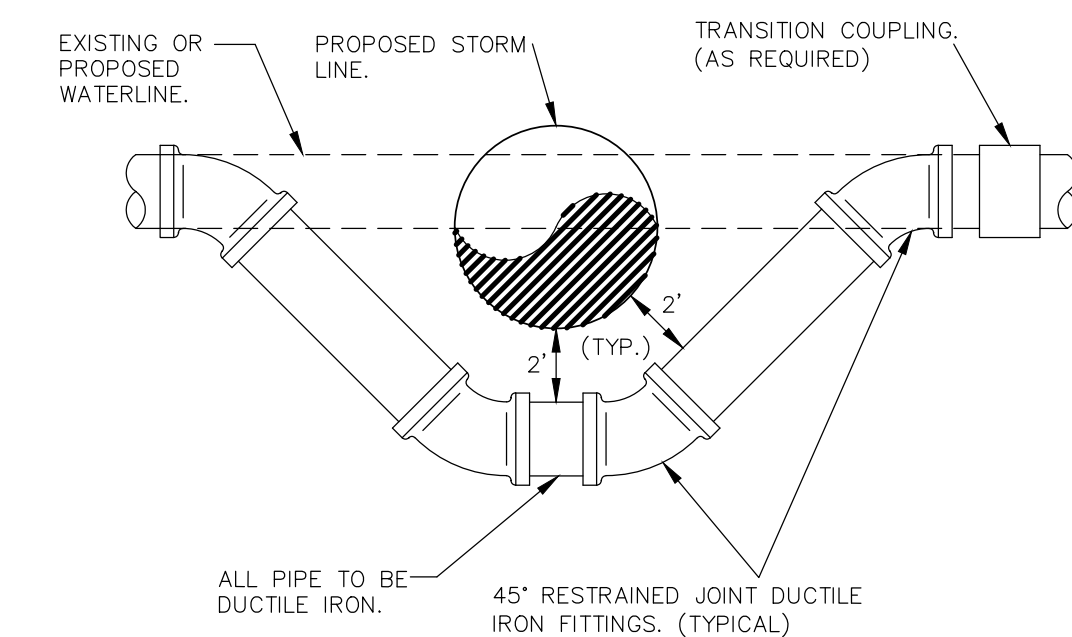
1. CONTRACTOR TO COORDINATE WITH NEW BRAUNFELS UTILITIES (N.B.U.) FOR WATER, SEWER, AND ELECTRIC SERVICE TO THE SITE.
2. ALL IN-LINE VALVES, BENDS & PLUGS SHALL BE RESTRAINED, RESTRAINT TO BE PROVIDED ON EACH SIDE OF THE VALVE, FITTING OR ANY REQUIRED JOINT.
3. RL=RESTRAINT LENGTH
4. CONTRACTOR SHALL 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 (CLASS 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 MAINS 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 ADJACENT TO ALLOW FOR 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 GREATER 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 SHALL BE ADJACENT TO THE PROJECT SIDEWALK. 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 AMR). COMMERCIAL LOTS SHOULD CHOOSE WHICH BOX APPLIES TO THE DOMESTIC AND/OR IRRIGATION METER LAYOUT.
14. SUBMITTAL BOXES SHALL BE ALLOWED TO BE USED FOR 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 THE VALVE TO THE TRACER WIRE. 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 ID OF COVER.
16. ALL HYDRANTS, AND METERS ARE TO BE SHOWN SCHEMATICALLY AND SHALL BE INSTALLED ACCORDING TO THE DETAILS.



WATERLINE ADJUSTMENT DETAIL



WATERLINE ADJUSTMENT DETAIL
N.T.S.

REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

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.

410 N. SEGUN AVENUE
NEW BRAUNFELS, TX 78130
HMTNB.COM
PI(830)625-8555 • F(830)625-8556
TBPE FIRM F-10961
TBPLS FIRM 10153600

HMT
ENGINEERING & SURVEYING



06/18/2018

OVERALL WATER PLAN (SHT 1)

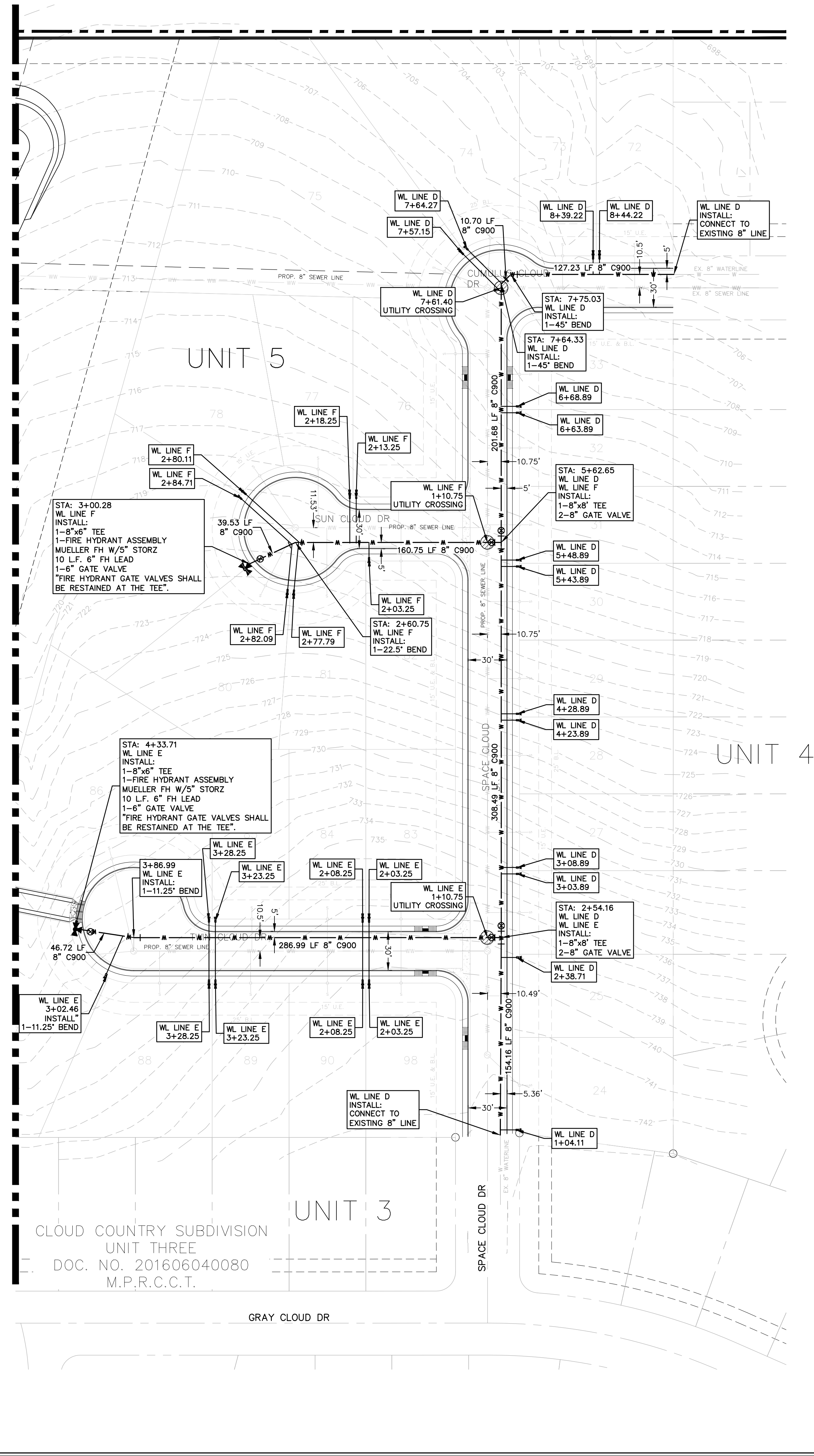
CLOUD COUNTRY UNIT 5

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

SHEET
C6.0

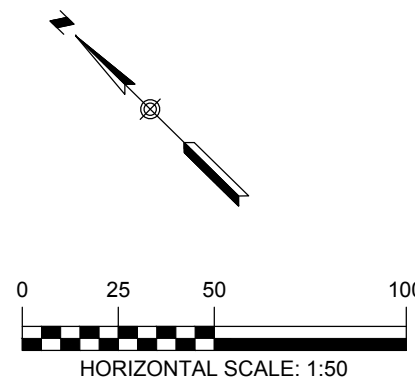
MATCHLINE
SHEET C6.0



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

GRAY CLOUD DR

SPACE CLOUD DR



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 Sanders	830-643-6903
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

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

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TRENCH EXCAVATION SAFETY PROTECTION

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

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 T29-113-E, T29-114-E, T29-115-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				
						UPPER		LOWER		
		90°	45°	22.5°	11.25°	45°	22.5°	45°	22.5°	11.25°
8"	PVC	29	13	6	3	34	16	8	4	2
8"	DUCTILE IRON	25	10	5	3	22	11	6	4	2
12"	PVC	41	17	9	4	47	23	12	6	3

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

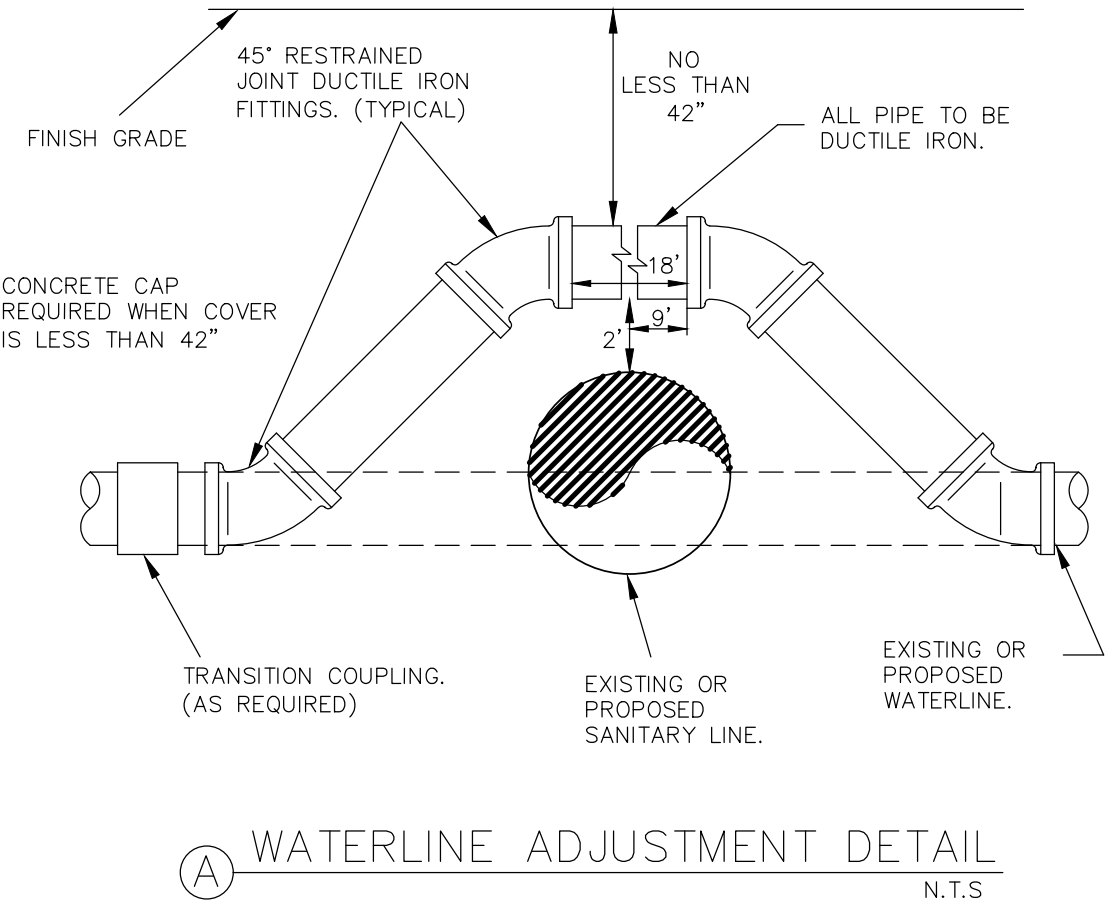
WATER STRUCTURE TOTALS					
PIPE SIZE	PIPE LENGTH	DOMESTIC METER SIZE	DOMESTIC METERS	FIRE HYDRANTS	FIRE LINES
8"	1325.55'	5/8"	30	2	0

RESTRAINED LENGTH NOTES:

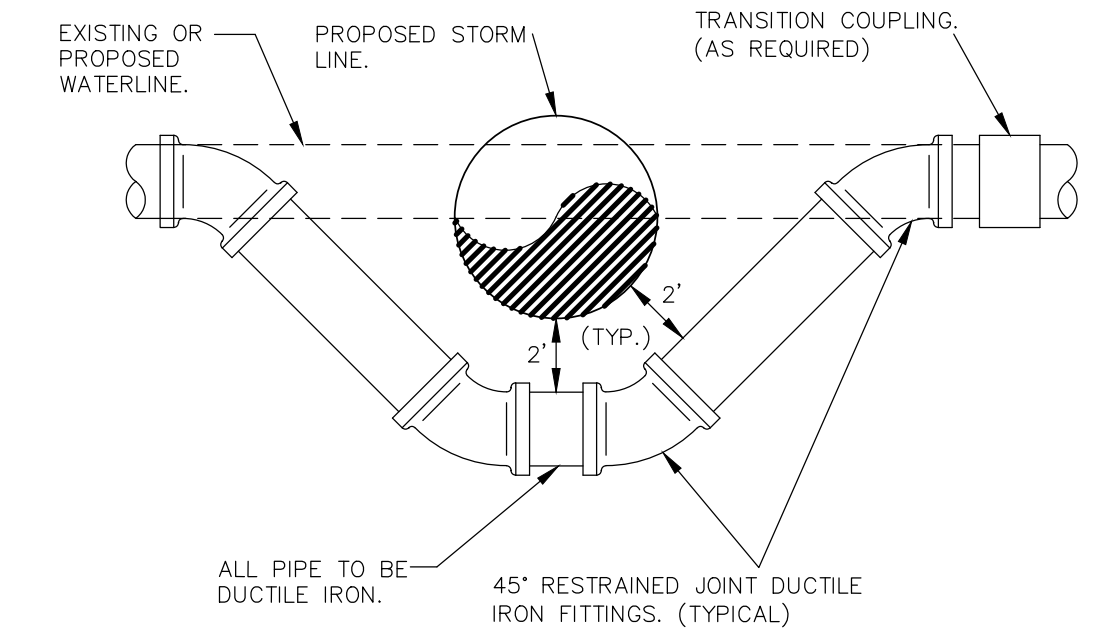
1. CONTRACTOR TO COORDINATE WITH NEW BRAUNFELS UTILITIES (N.B.U.) FOR WATER, SEWER, AND ELECTRIC SERVICE TO THE SITE.
2. ALL IN-LINE VALVES, BENDS & PLUGS SHALL BE RESTRAINED, RESTRAINT TO BE PROVIDED ON EACH SIDE OF THE VALVE, FITTING OR ANY REQUIRED JOINT.
3. RL=RESTRAINT LENGTH
4. CONTRACTOR SHALL 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 (CLASS 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 D15-BAMR AND D15-BAMR. NEW RESIDENTIAL LOTS ARE REQUIRED TO USE THE D15-BAMR METER BOXES (DOUBLE END). 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 10' OF COVER.
16. ALL VALVES, HYDRANTS, AND METERS ARE SHOWN SCHEMATICALLY AND SHALL BE INSTALLED ACCORDING TO THE DETAILS.



(A) WATERLINE ADJUSTMENT DETAIL
N.T.S.



(B) WATERLINE ADJUSTMENT DETAIL
N.T.S.

REFER TO THE COVER SHEET
FOR BENCHMARK INFORMATION.

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LEGEND

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

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410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
PIG30625-8555-F830 625-8556
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TBP6 FIRM 10153600

HMT
ENGINEERING & SURVEYING



06/18/2018

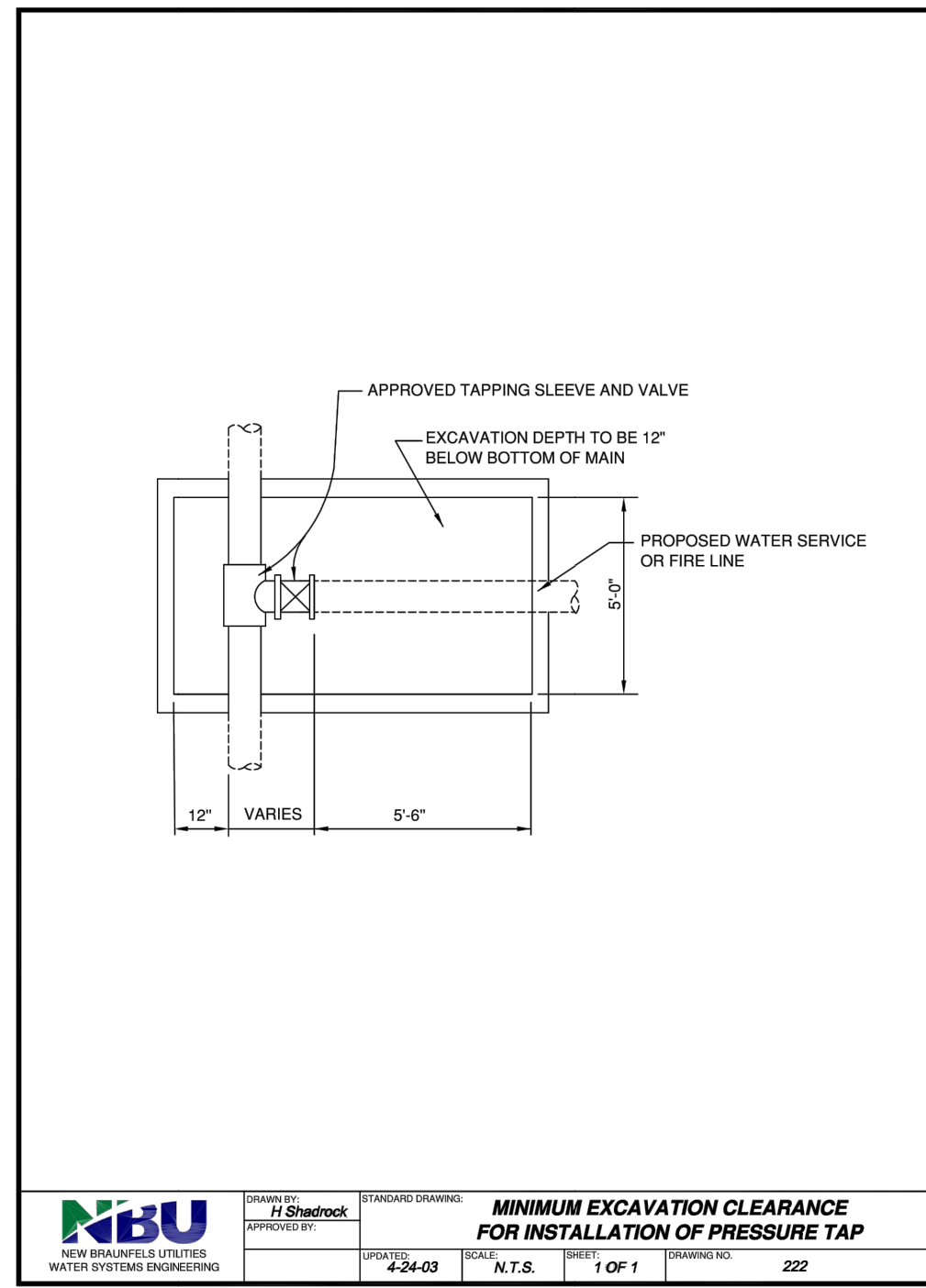
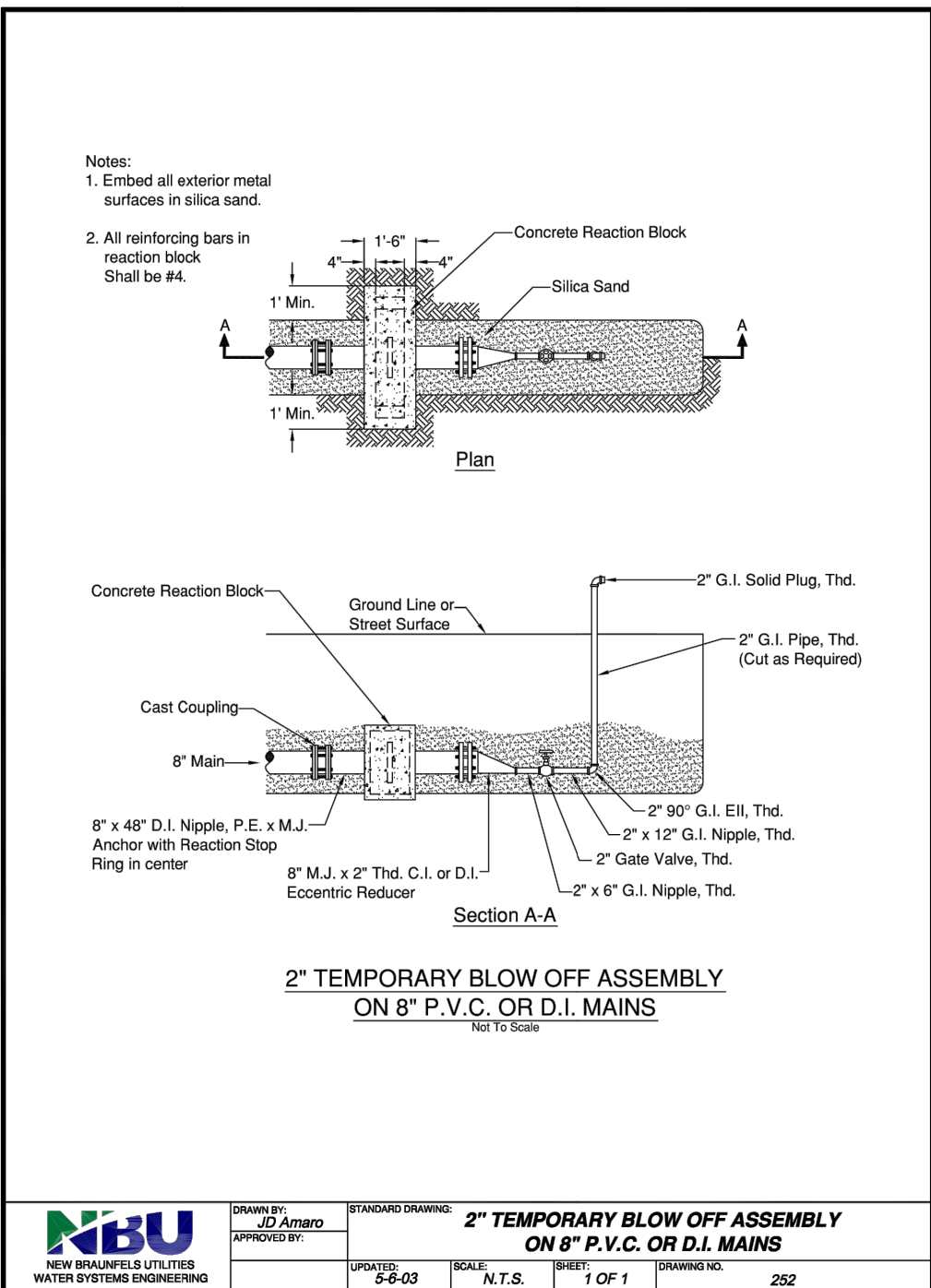
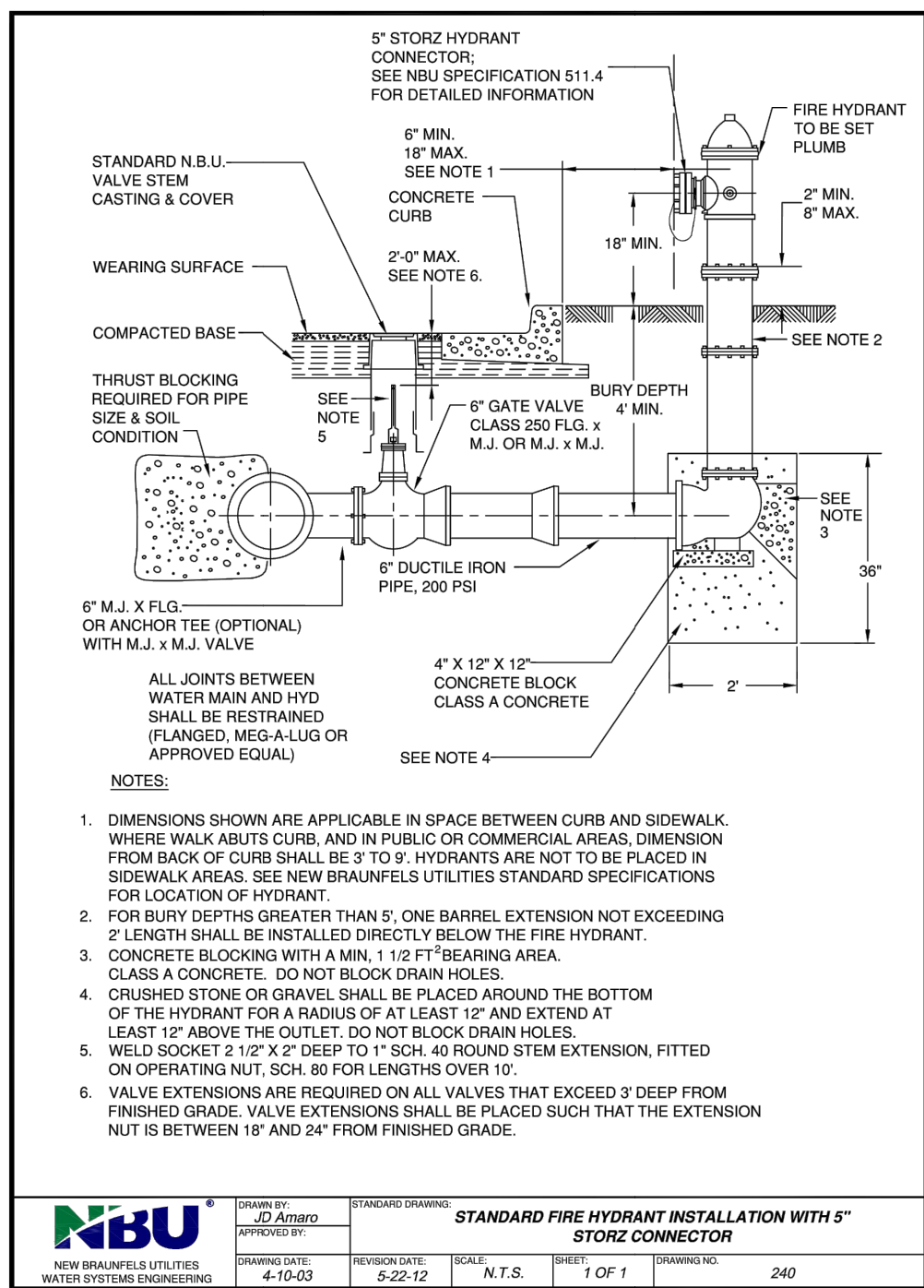
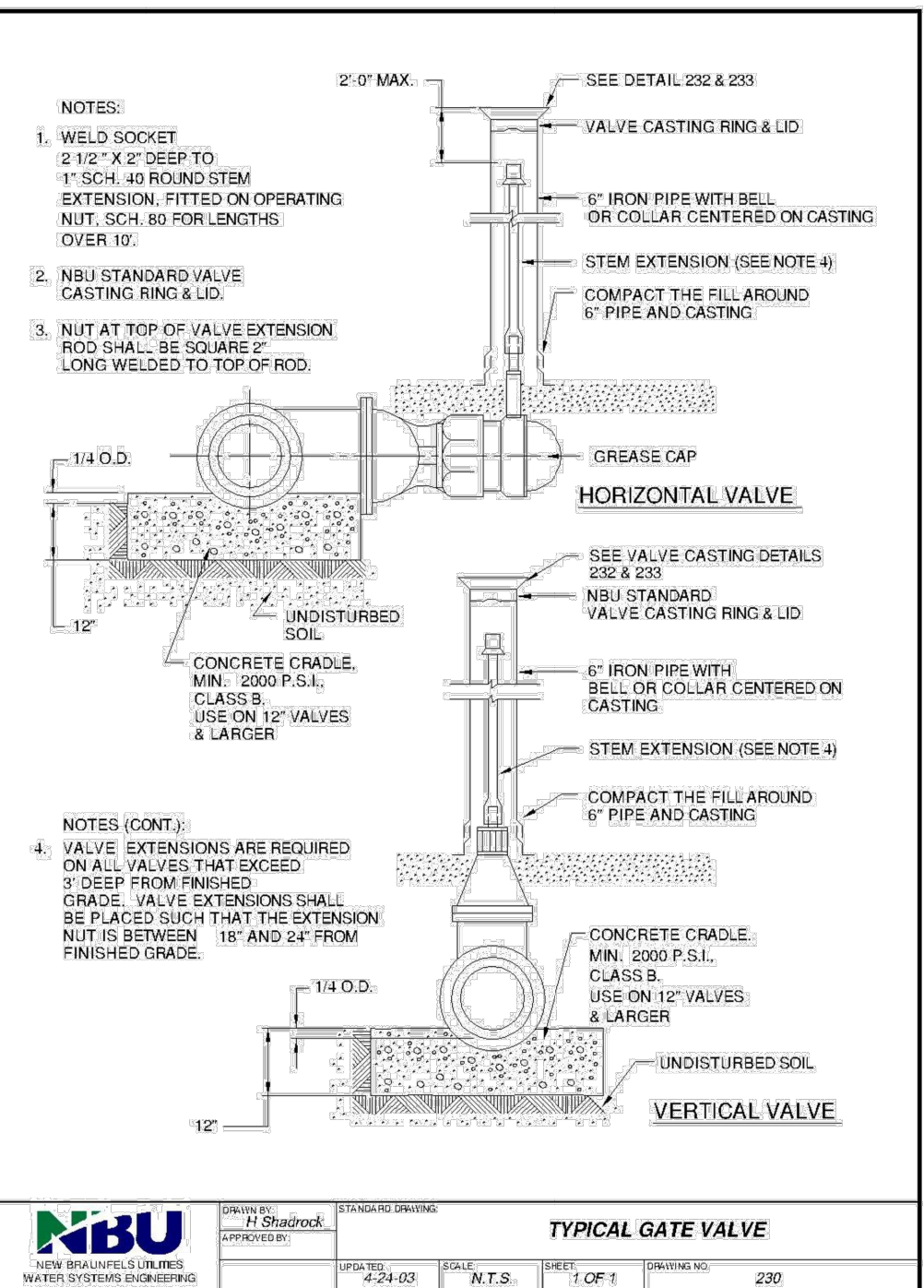
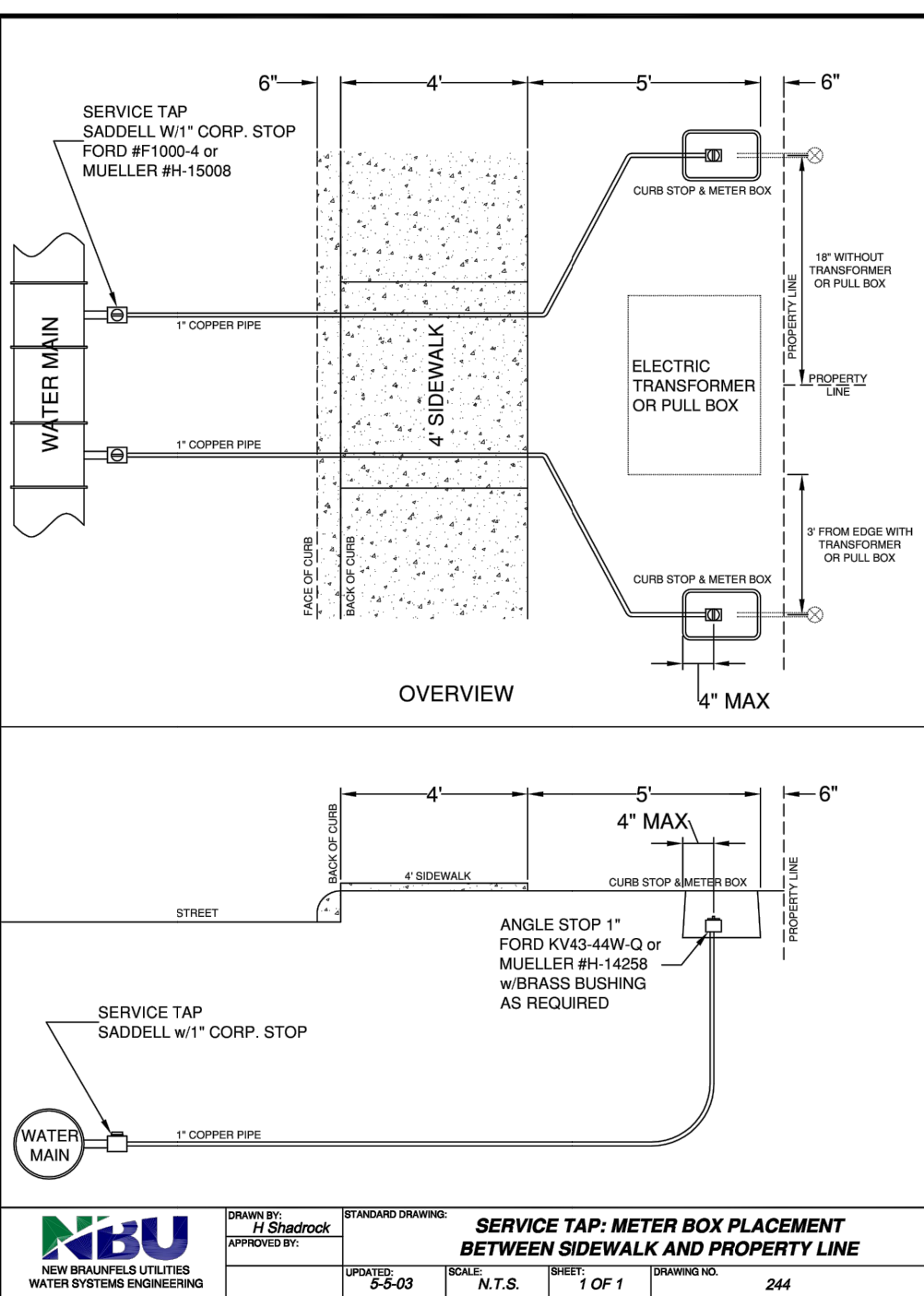
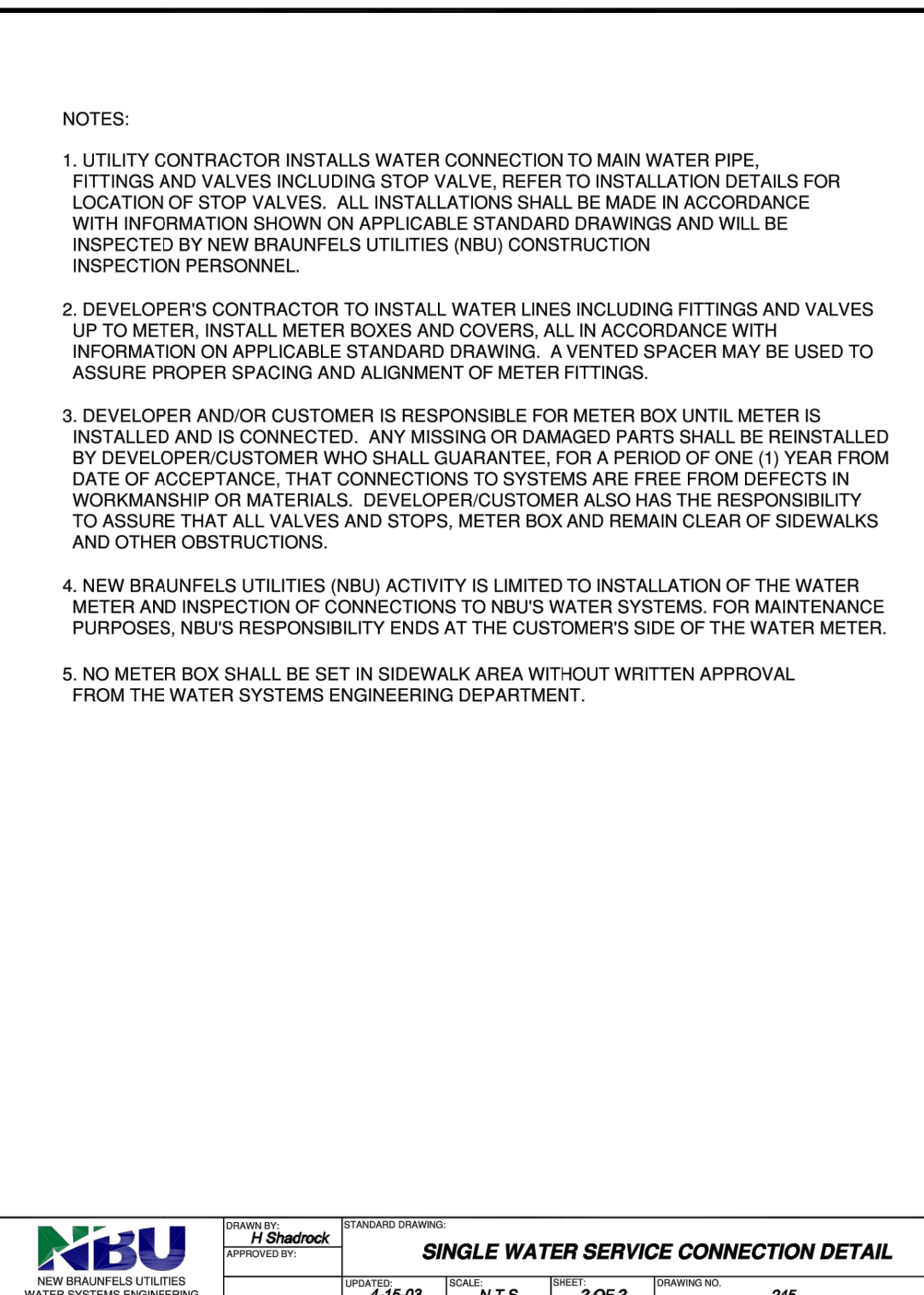
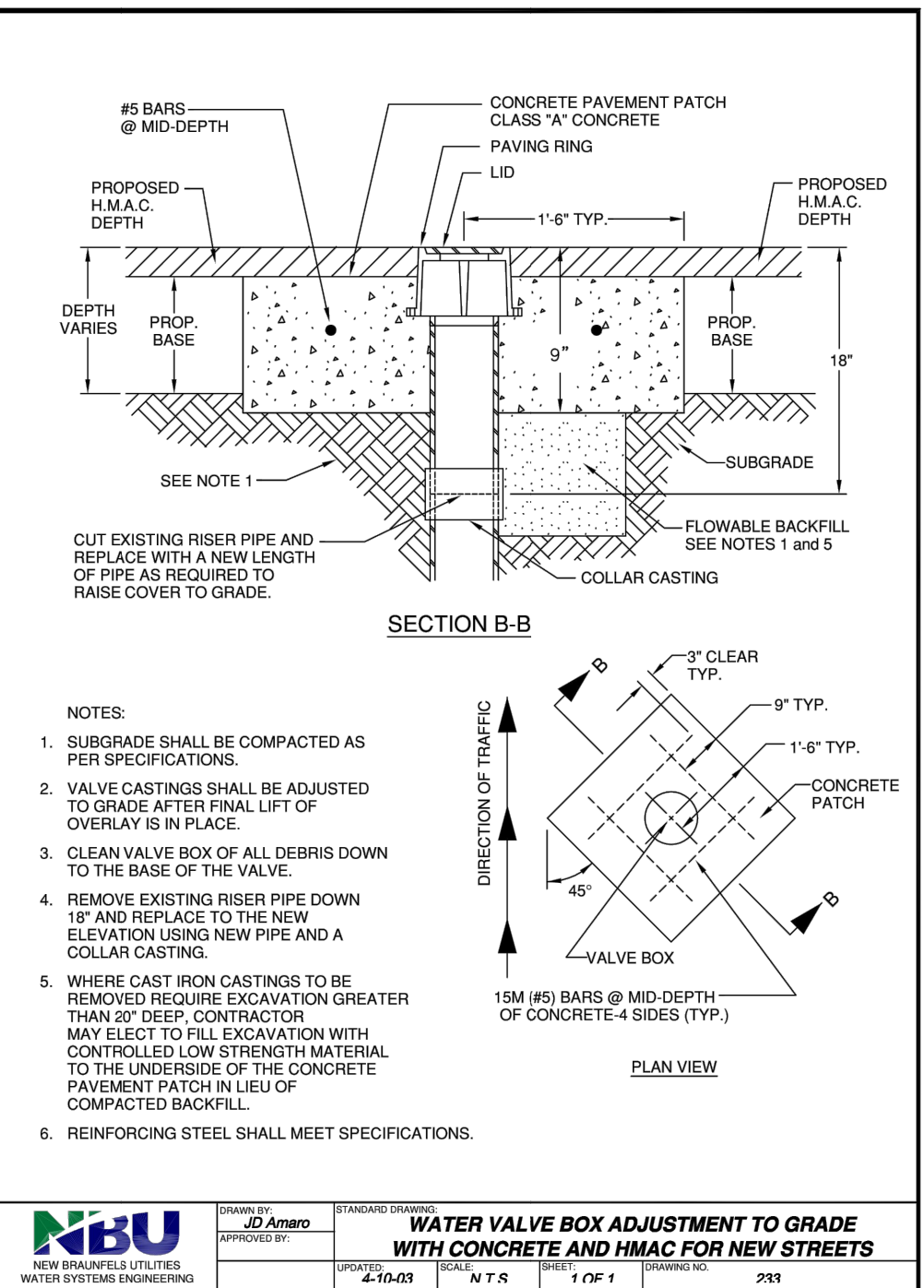
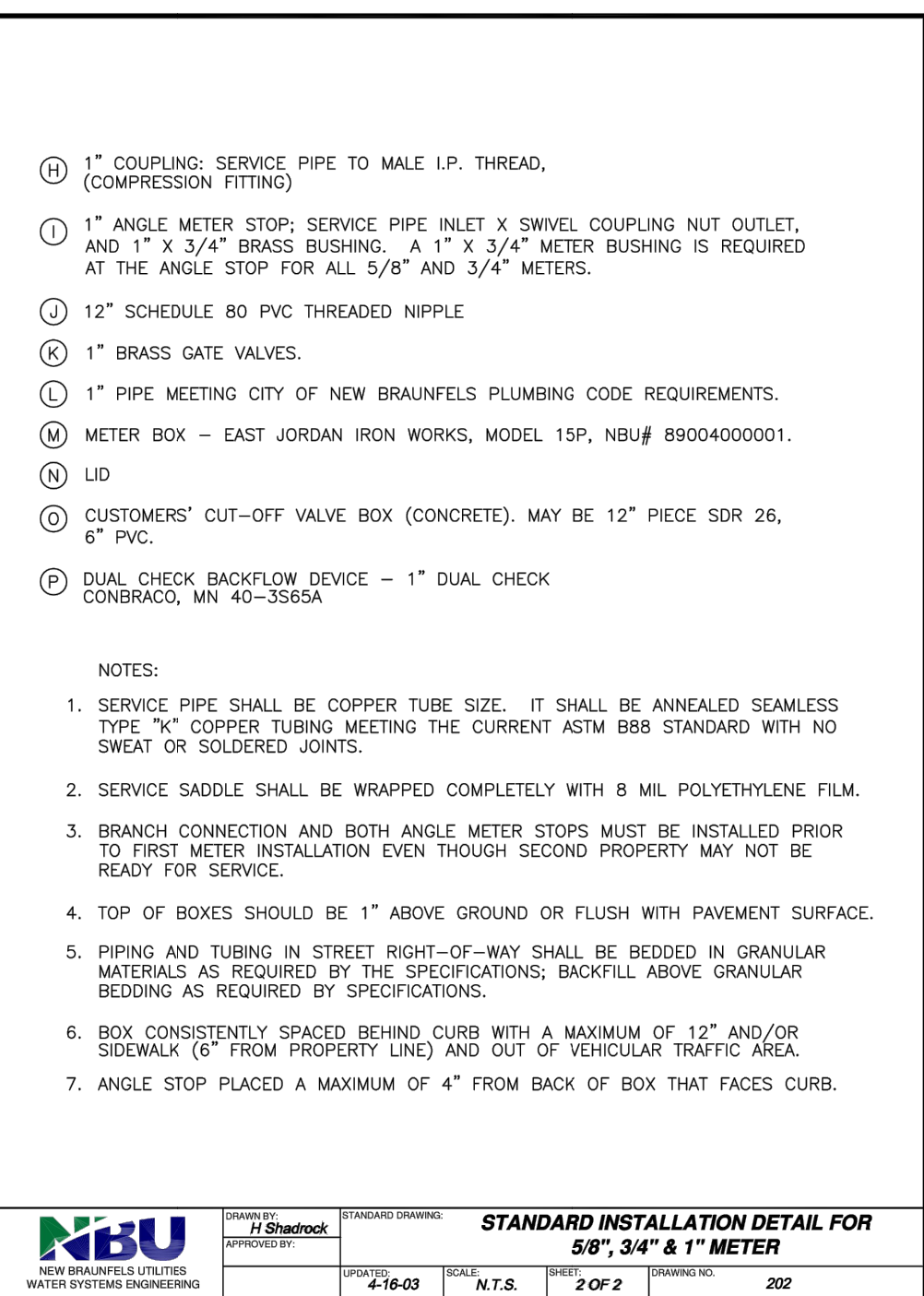
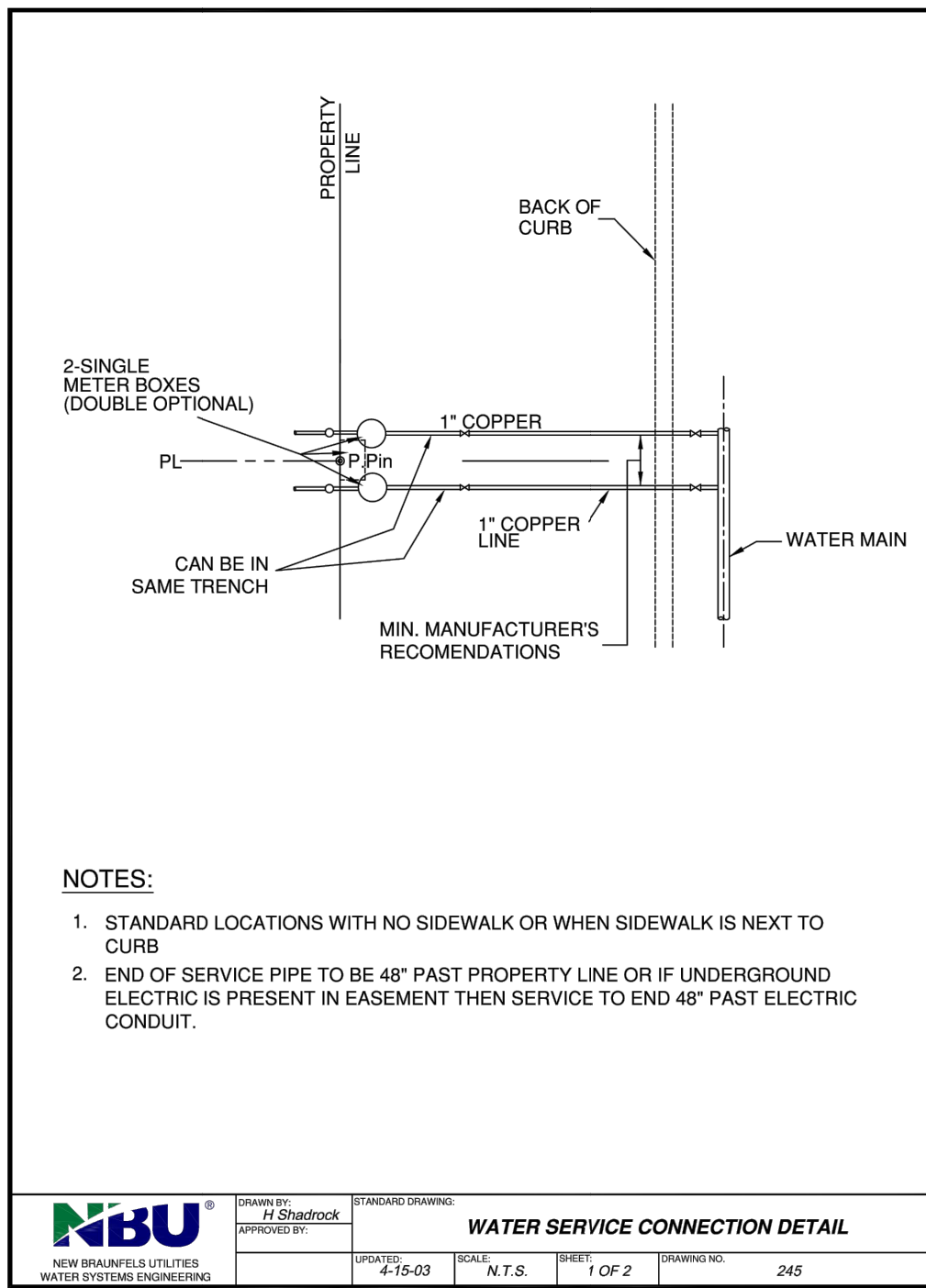
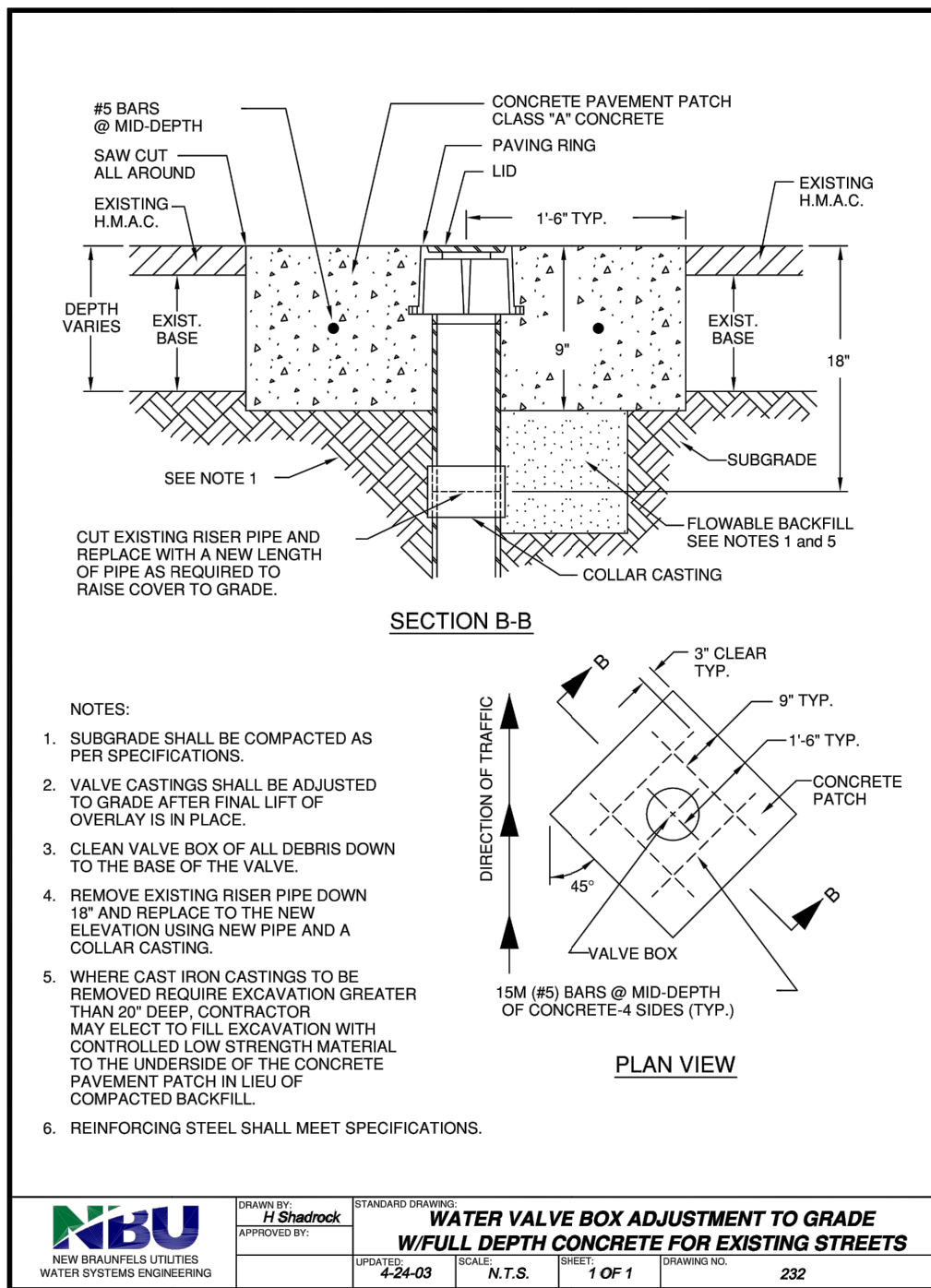
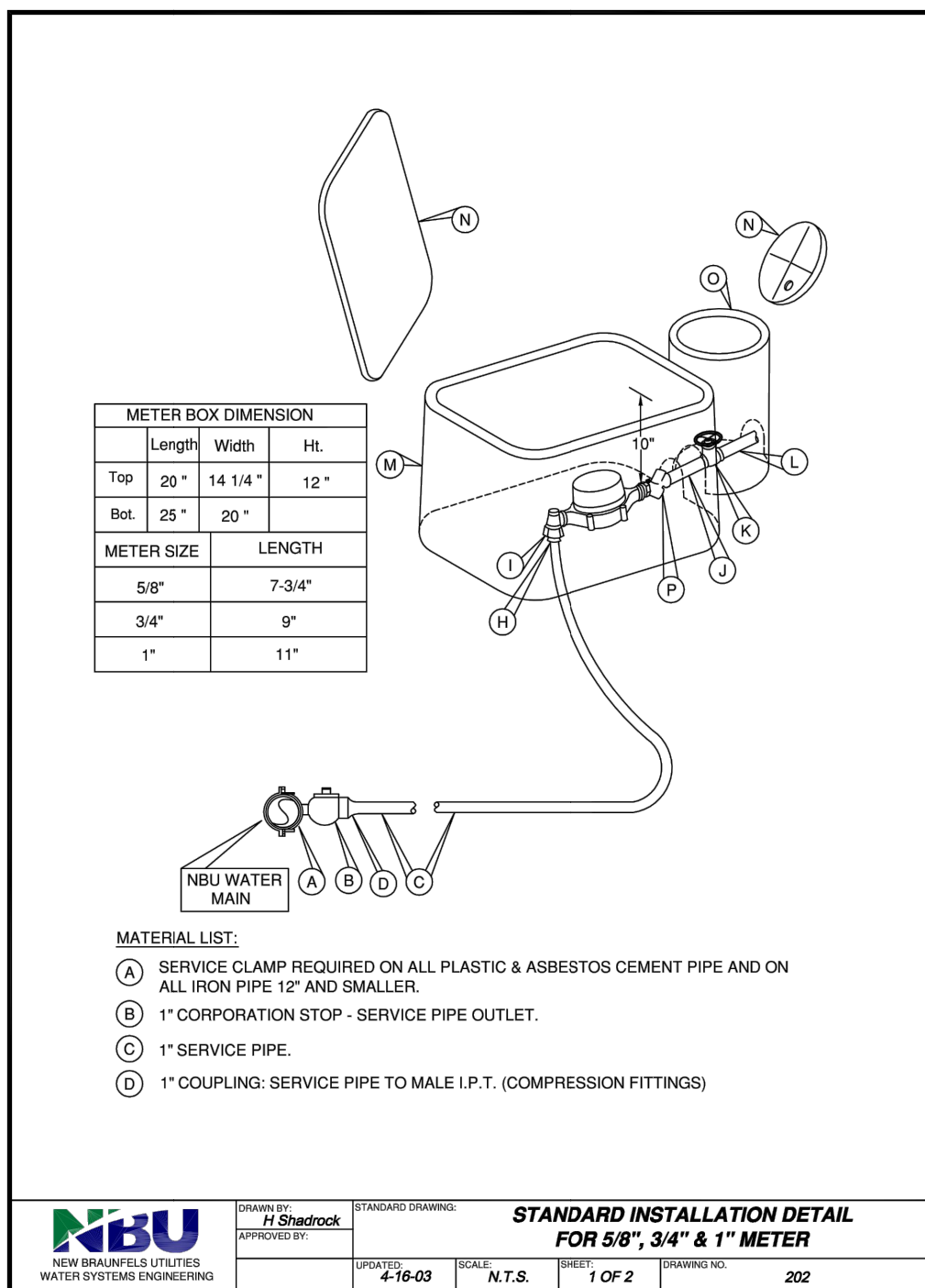
OVERALL WATER
PLAN (SHT 2)

CLOUD COUNTRY UNIT 5

REVISION	DESCRIPTION	DATE
NO.		

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

SHEET
C6.1



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410 N. SEGUN AV.
NEW BRAUNFELS, TX 78130
HMTNB.COM
PI(830)625-8555-F(830)625-8556
TBPE FIRM F-10961
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ENGINEERING & SURVEYING



06/18/2018

WATER DETAILS

CLOUD COUNTRY UNIT 5

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DATE: JUNE 2018

DRAWN BY: MGM/MZ

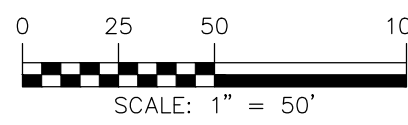
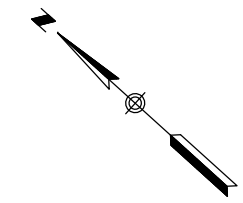
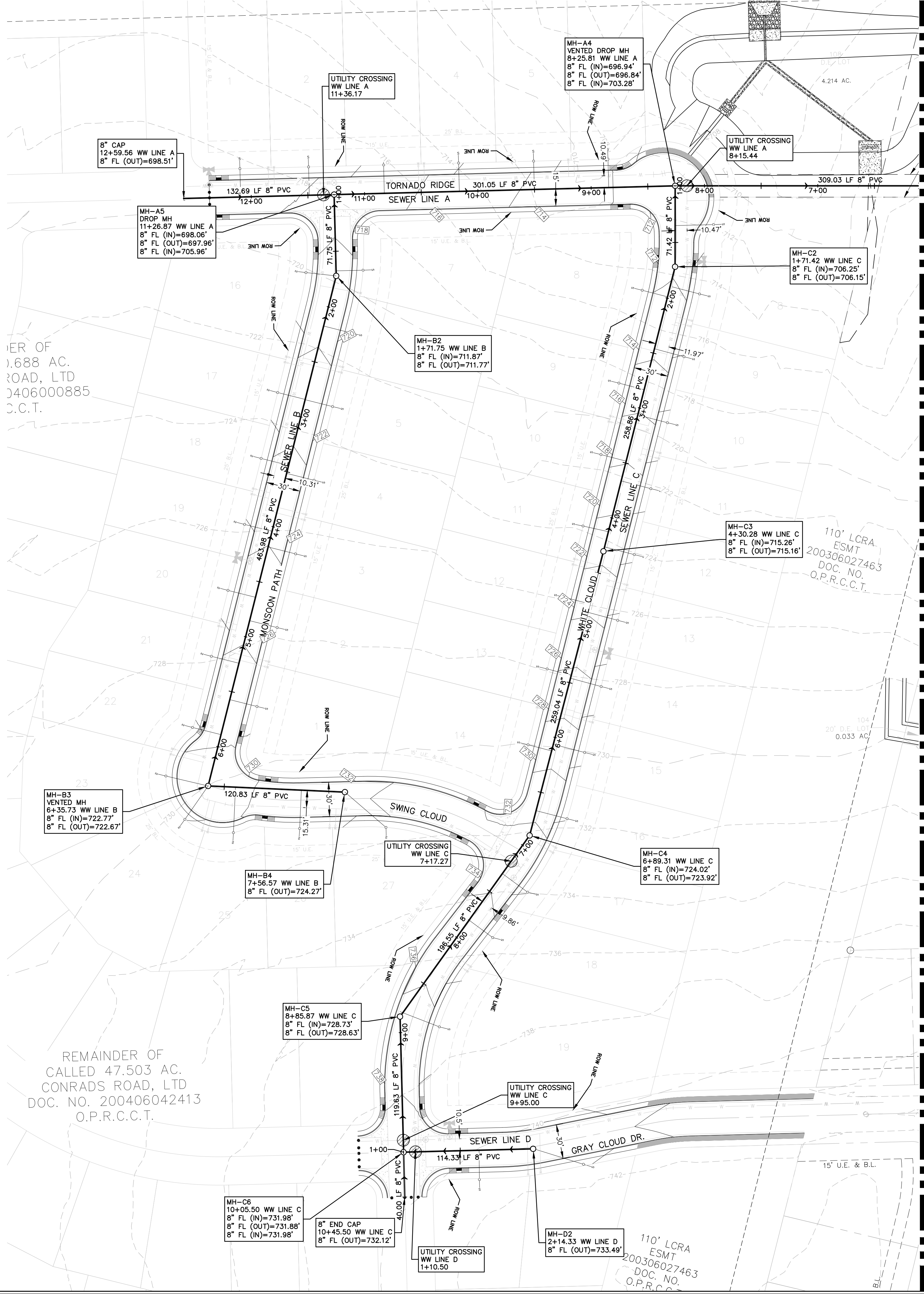
DESIGNED BY: MGM/MZ/CC

REVIEWED BY: SWH/SCH

HMT PROJECT NO.:
056.009

SHEET
C6.2

Drawing Name: N:_projects\056 - milestone properties\056.009 - cloud country unit 5\103- construction drawings\056.009.103-MSTWATER.dwg User: masz Jun 19, 2018 - 2:34pm



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
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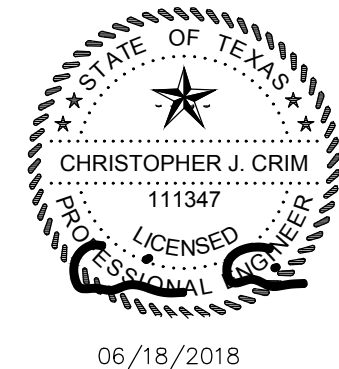
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WASTEWATER STRUCTURE TOTALS				
PIPE SIZE	TOTAL PIPE LENGTH	LATERAL SIZE	NUMBER OF LATERALS	MANHOLES
8"	2459.16'	6"	47	11

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410 N. SEGUN AVE.
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OVERALL
WASTEWATER PLAN
(SHT 1)
CLOUD COUNTRY UNIT 5

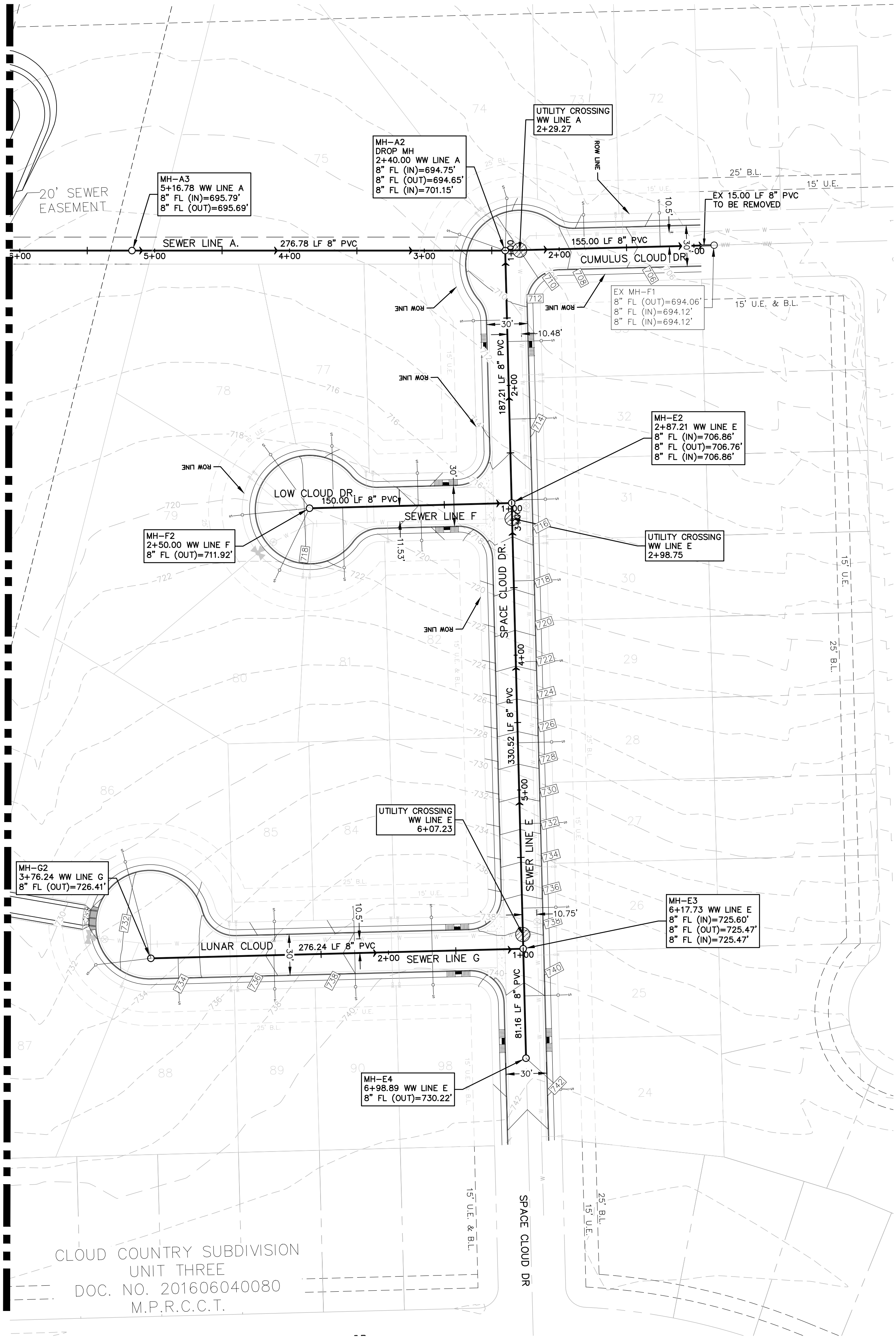
NO.	REVISION DESCRIPTION	REVISION DATE

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

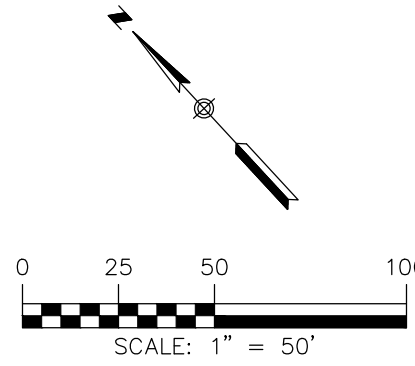
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MATCHLINE
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CLOUD COUNTRY SUBDIVISION
UNIT THREE
DOC. NO. 201606040080
M.P.R.C.C.T.



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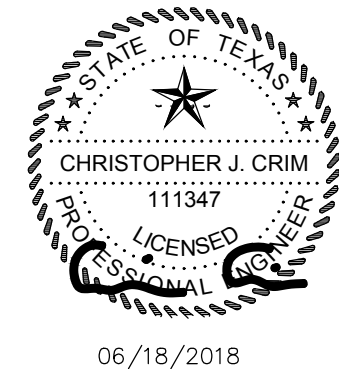
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WASTEWATER STRUCTURE TOTALS				
PIPE SIZE	TOTAL PIPE LENGTH	LATERAL SIZE	NUMBER OF LATERALS	MANHOLES
8"	1456'	6"	30	7

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410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
PIG30625-8555-F(830)825-8556
TBPE FRM F-10961
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OVERALL
WASTEWATER PLAN
(SHT 2)
CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE

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

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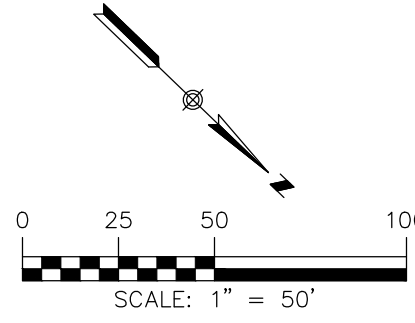
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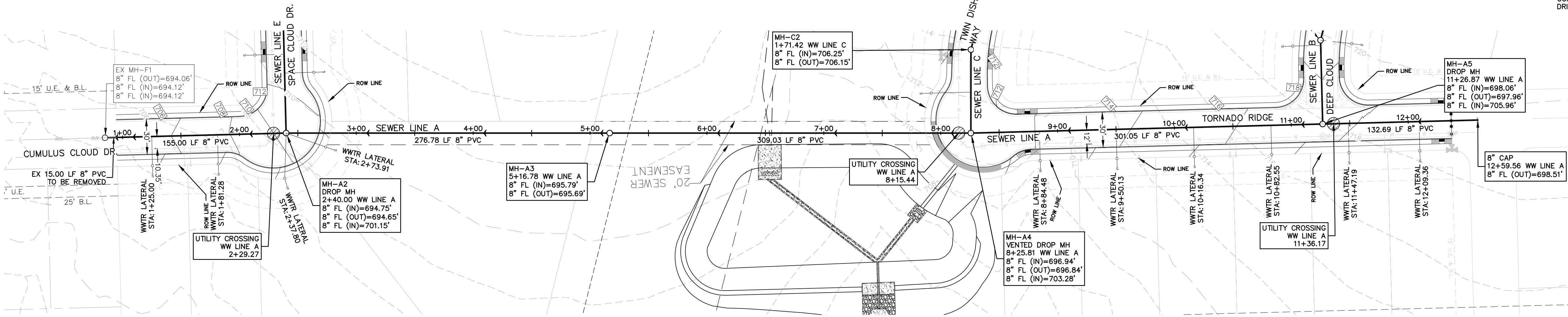


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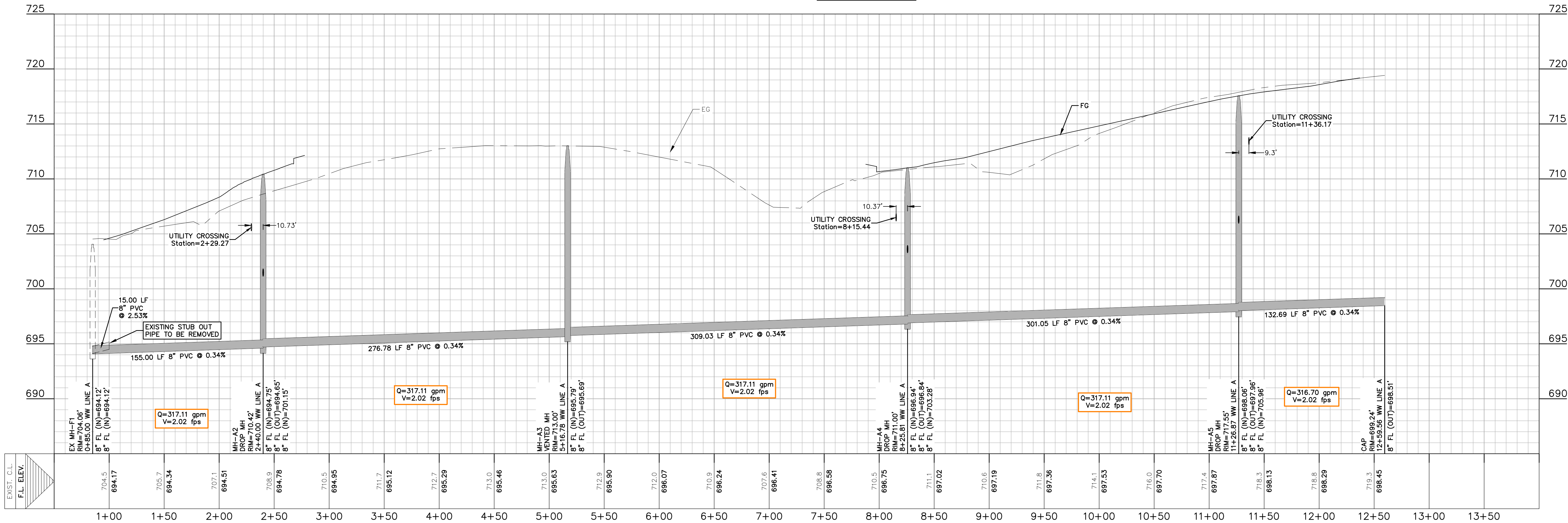
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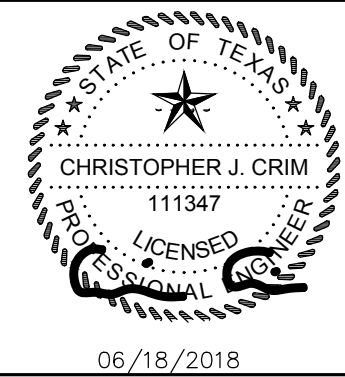
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WW LINE A
PLAN & PROFILE
CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE

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

SHEET
C7.2

UTILITY TRENCH COMPACTION

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DEEP TRENCH COMPACTION TESTING

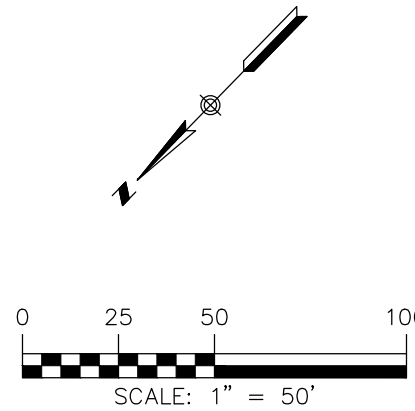
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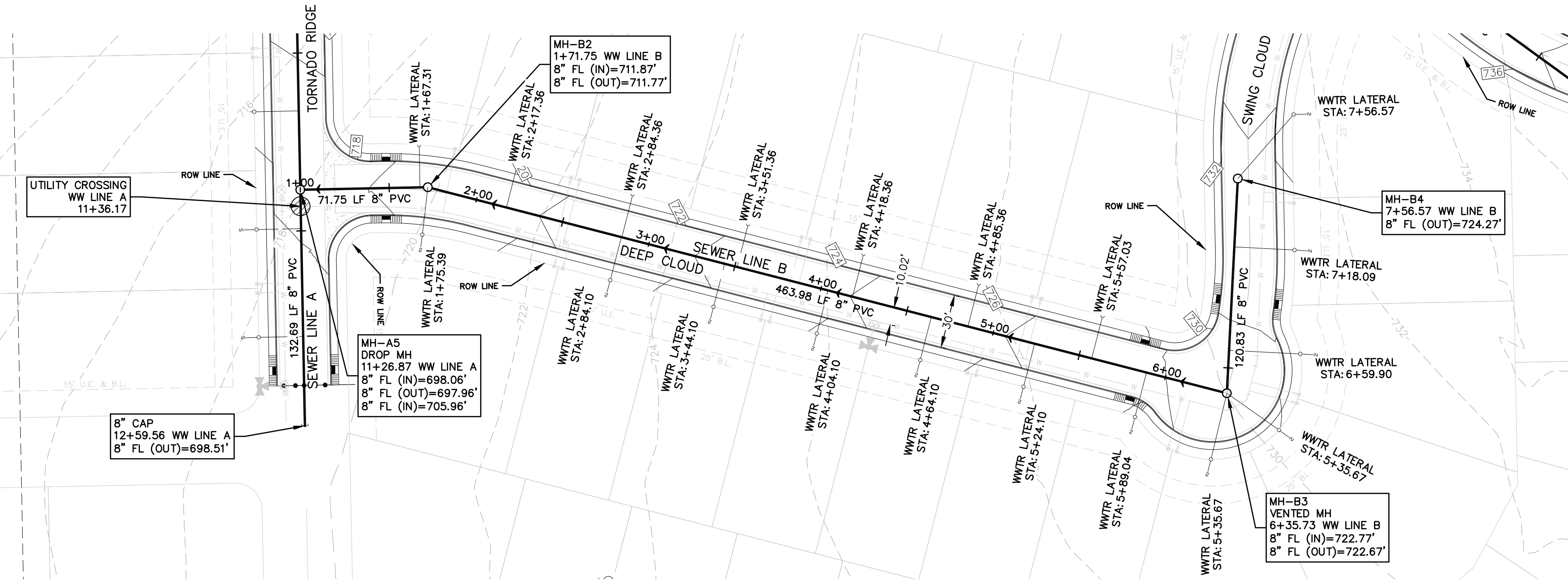


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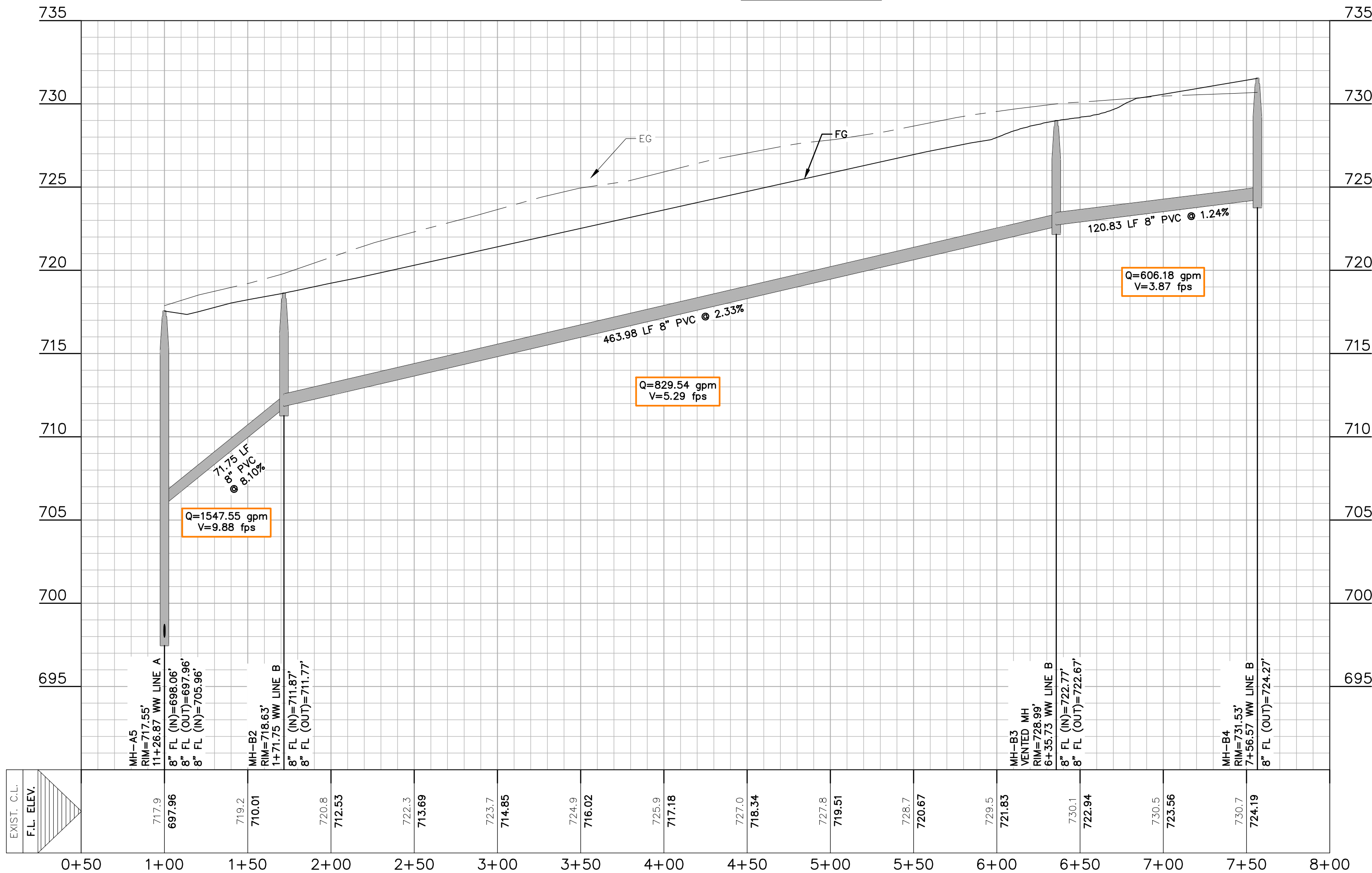
- 700 EXISTING CONTOURS
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- B.L. BUILDING SETBACK LINE
- U.E. UTILITY EASEMENT
- D.E. DRAINAGE EASEMENT
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- PROPOSED WASTEWATER SERVICE
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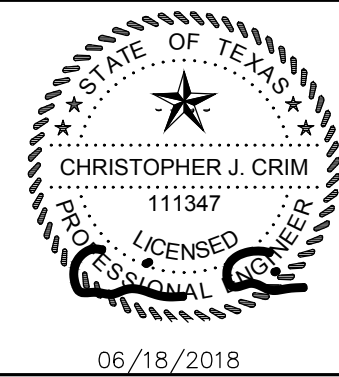
WW LINE B
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410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
PI630625-8555-F1830 825-8556
TBPE FIRM F-10961
TBPLS FIRM 10153600



WW LINE B
PLAN & PROFILE
CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE

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

SHEET
C7.3

Drawing Name: N:\projects\056 - milestone properties\056.009 - cloud country unit 5\103- construction drawings\056.009.103-MSTEWATER.dwg User: mazz Jun 19, 2018 - 2:35pm

UTILITY TRENCH COMPACTION

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LEGEND

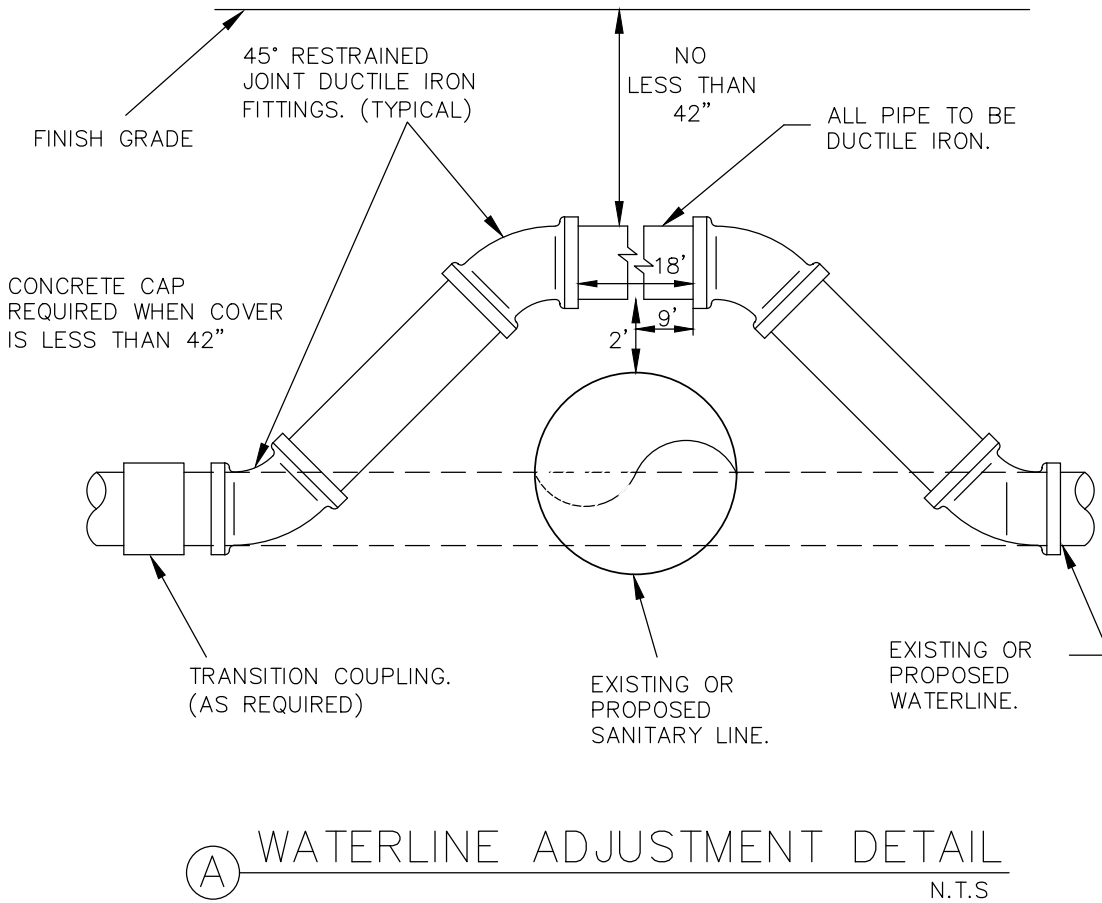
- EXISTING CONTOURS
- PROPOSED CONTOURS
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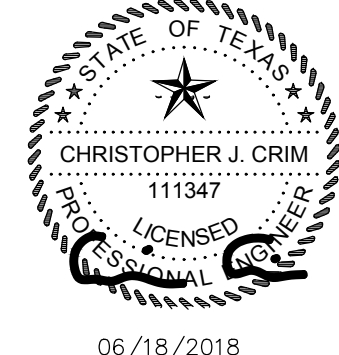


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410 N. SEGUN AVENUE
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P(361)625-8555 • F(361)625-8556
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HMT
ENGINEERING & SURVEYING



WW LINE C
PLAN & PROFILE
CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE

DATE: JUNE 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

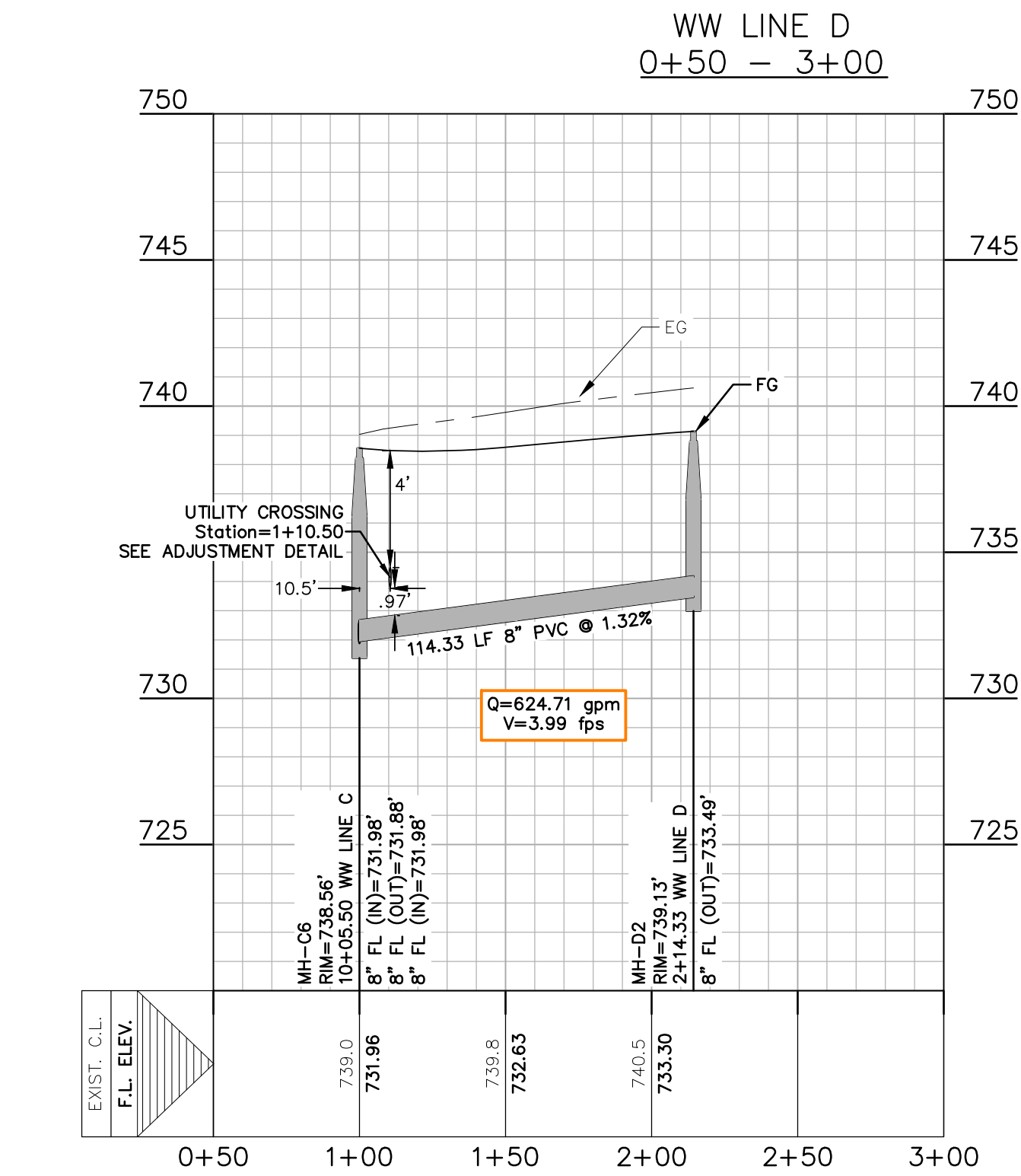
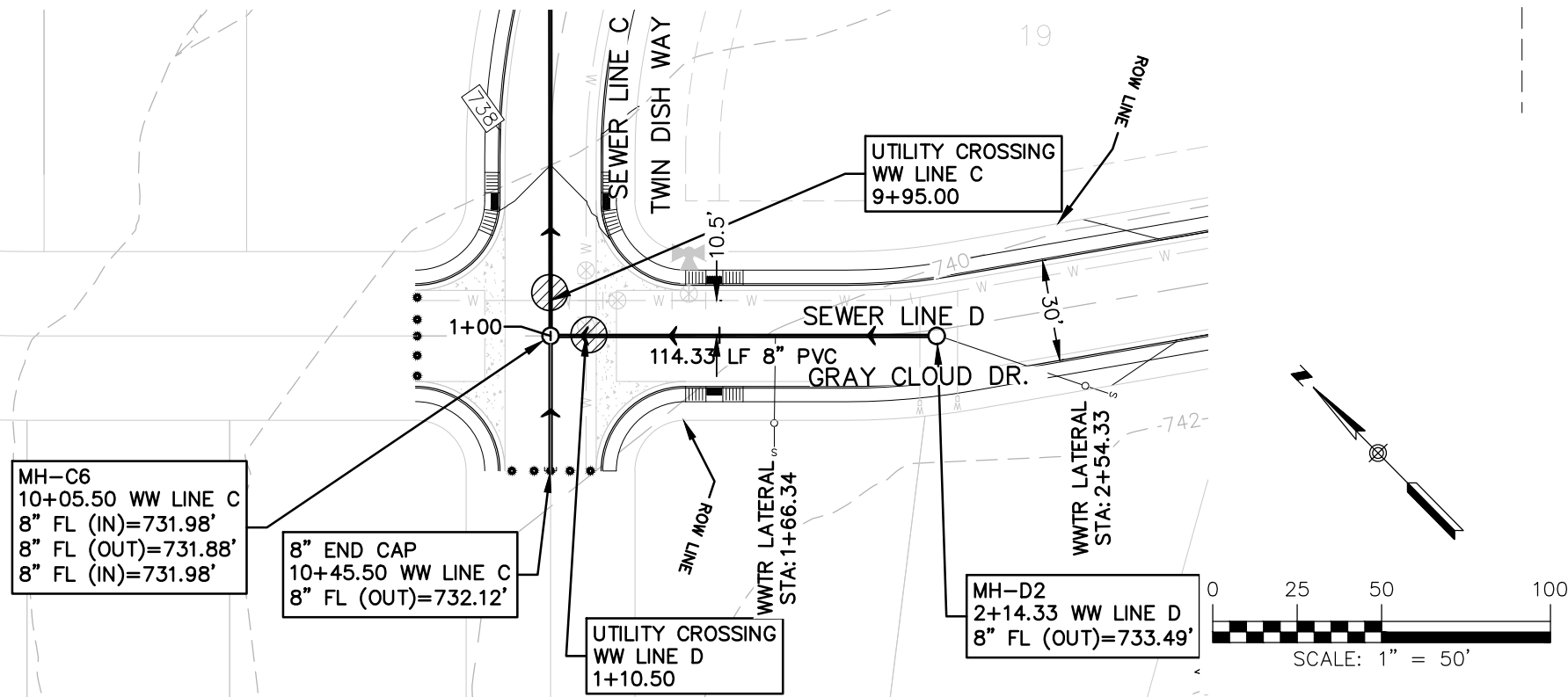
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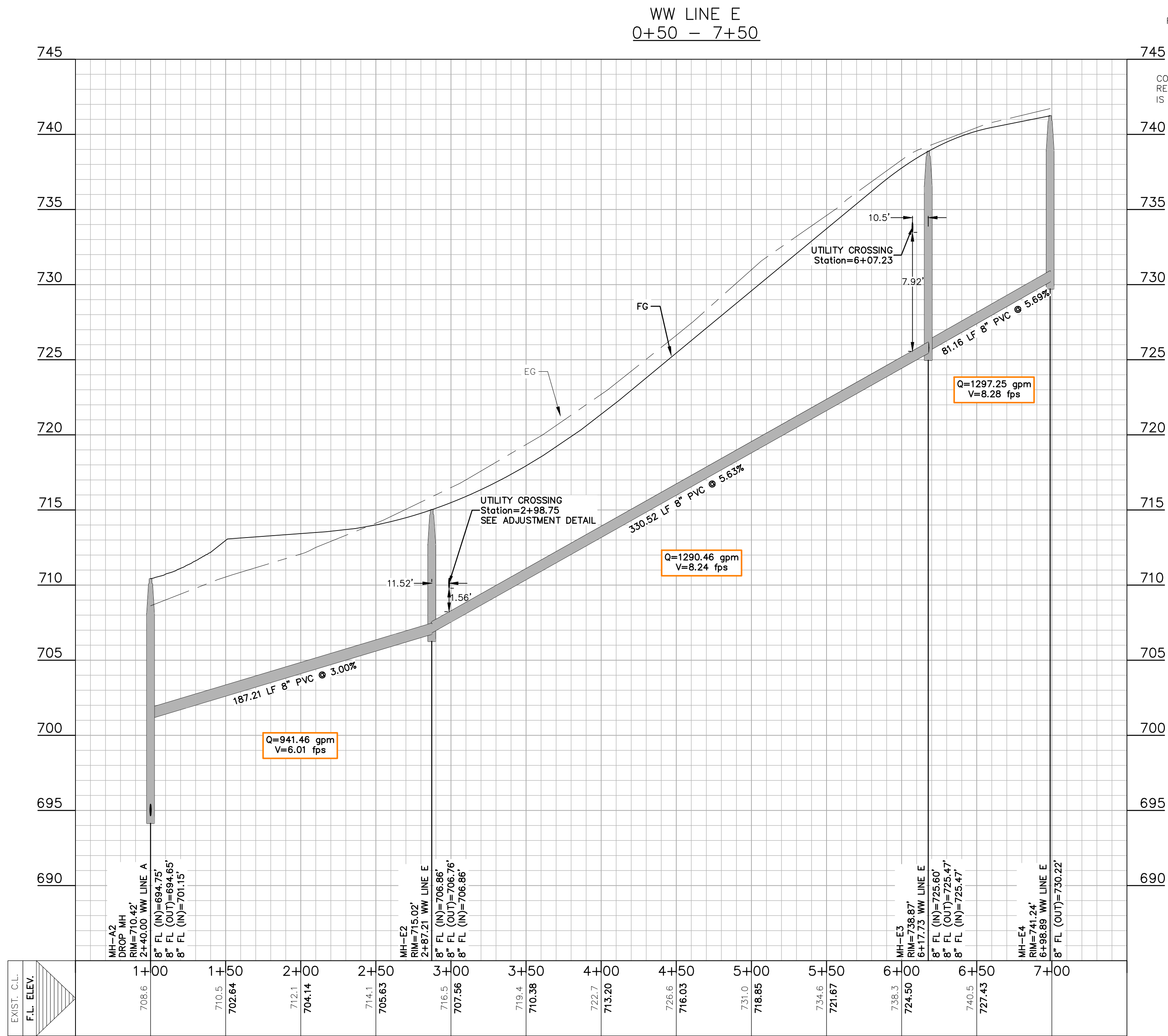
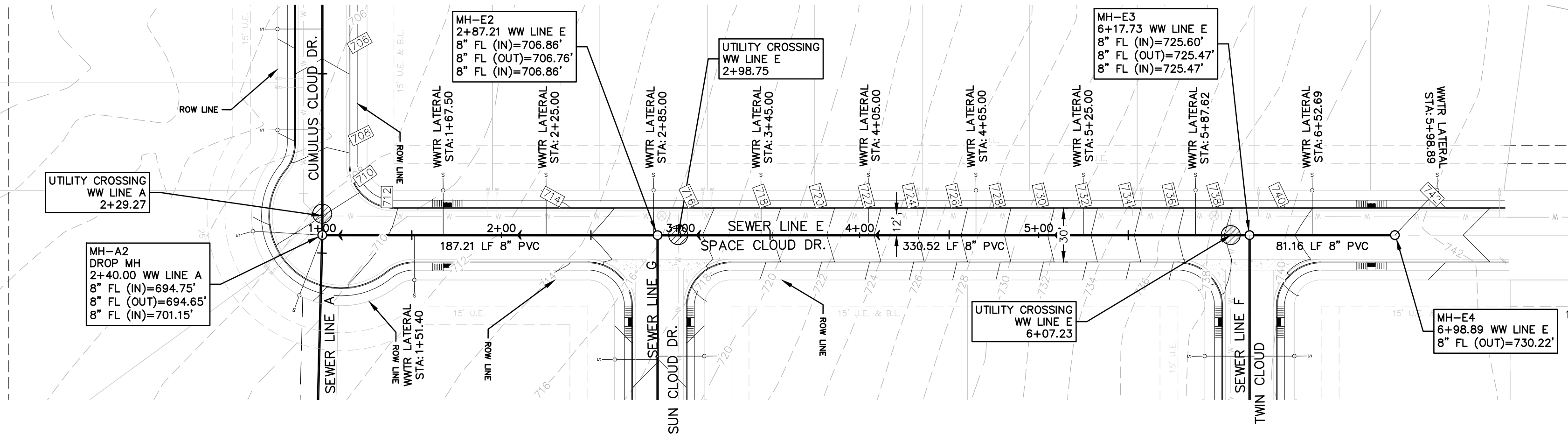
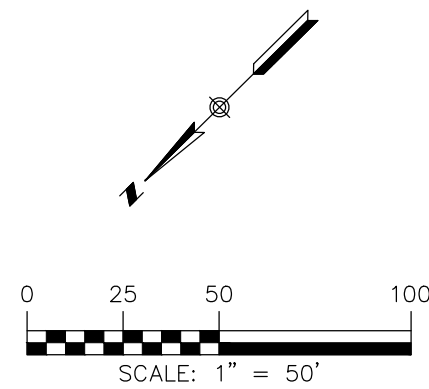


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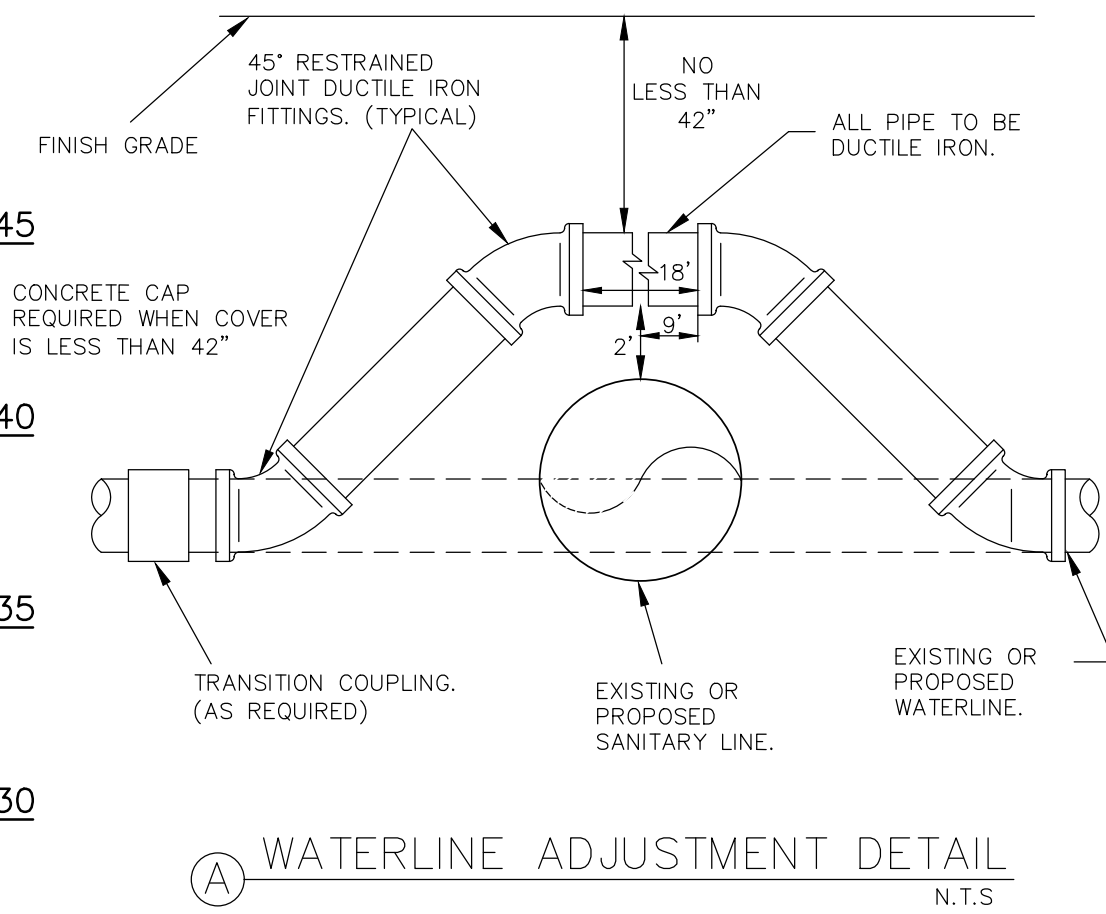


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WW LINE D-E
PLAN & PROFILE

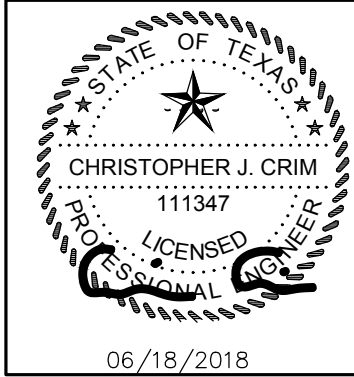
CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE

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

SHEET
C7.5

410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMT@NB.COM
P(361)625-8555 F(361)625-8556
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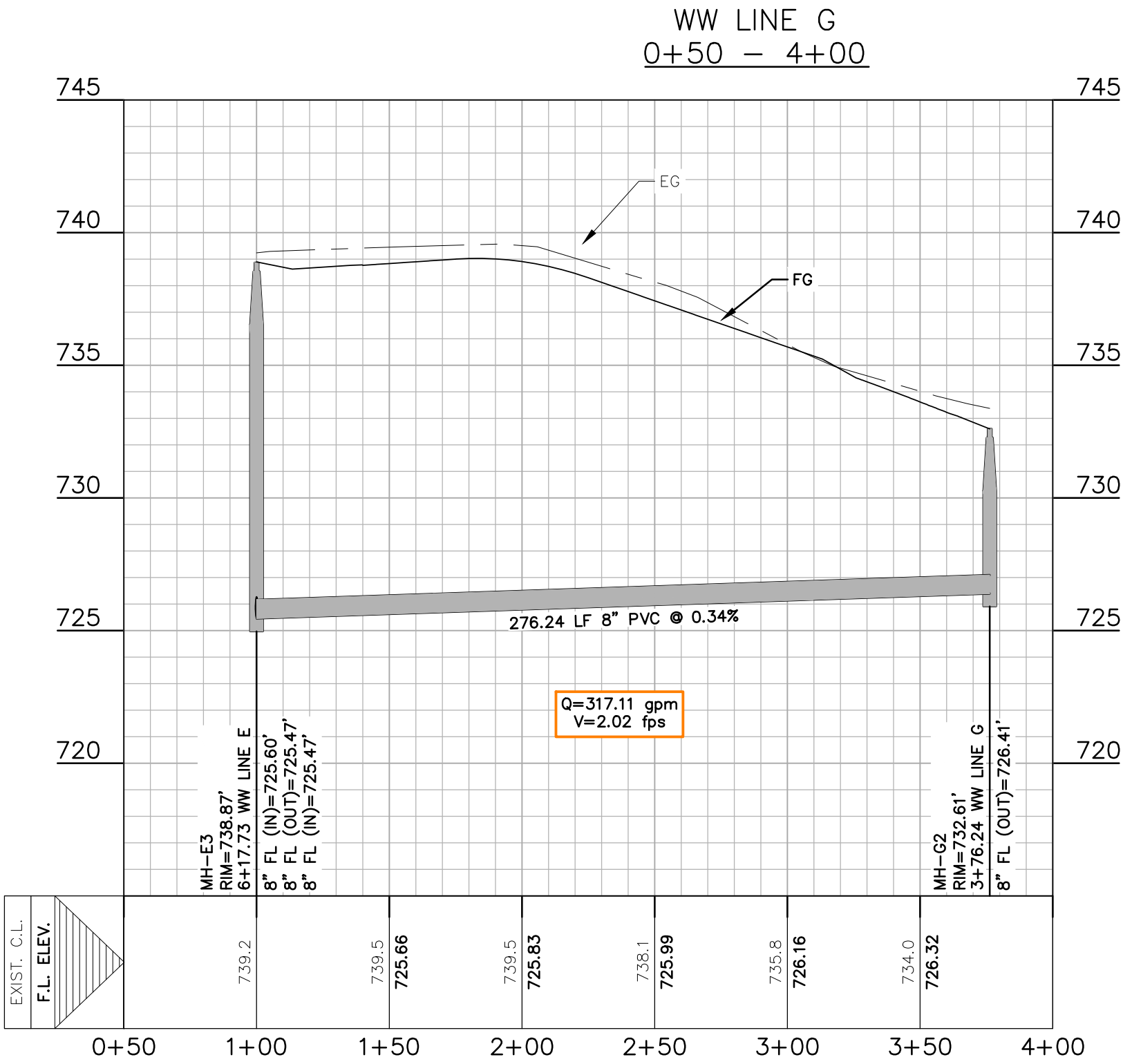
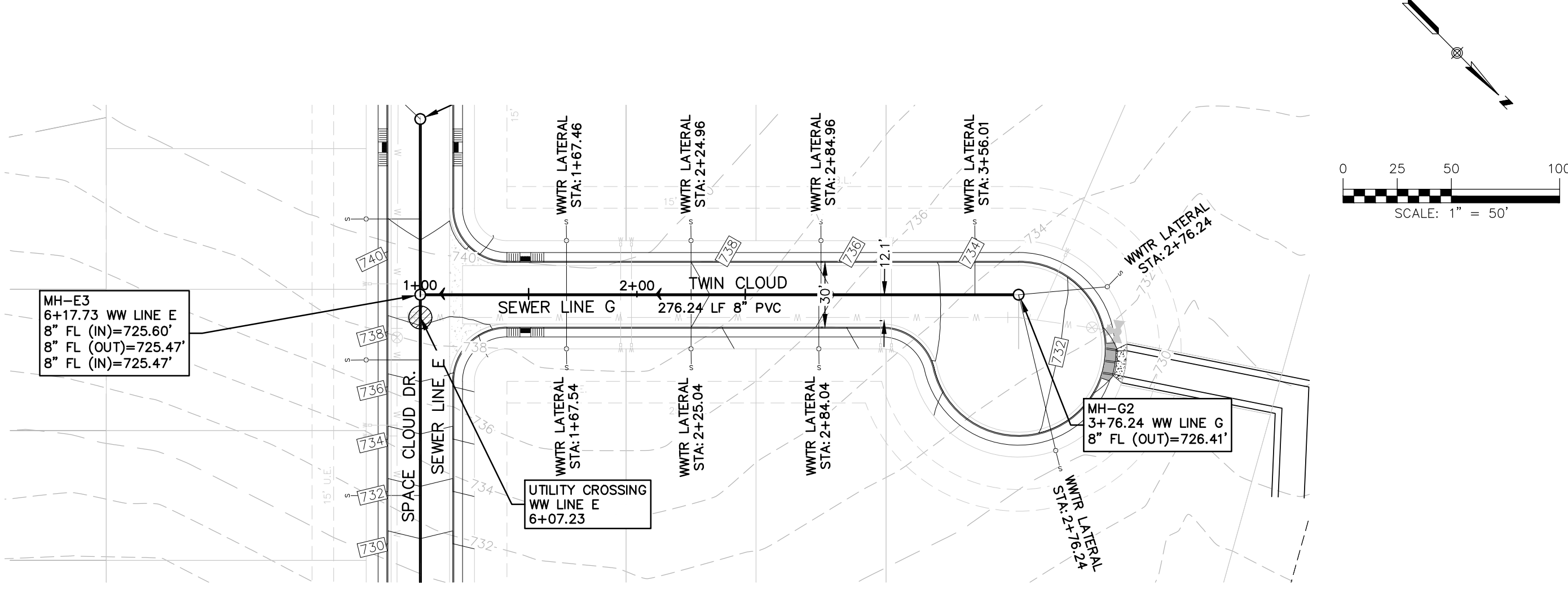
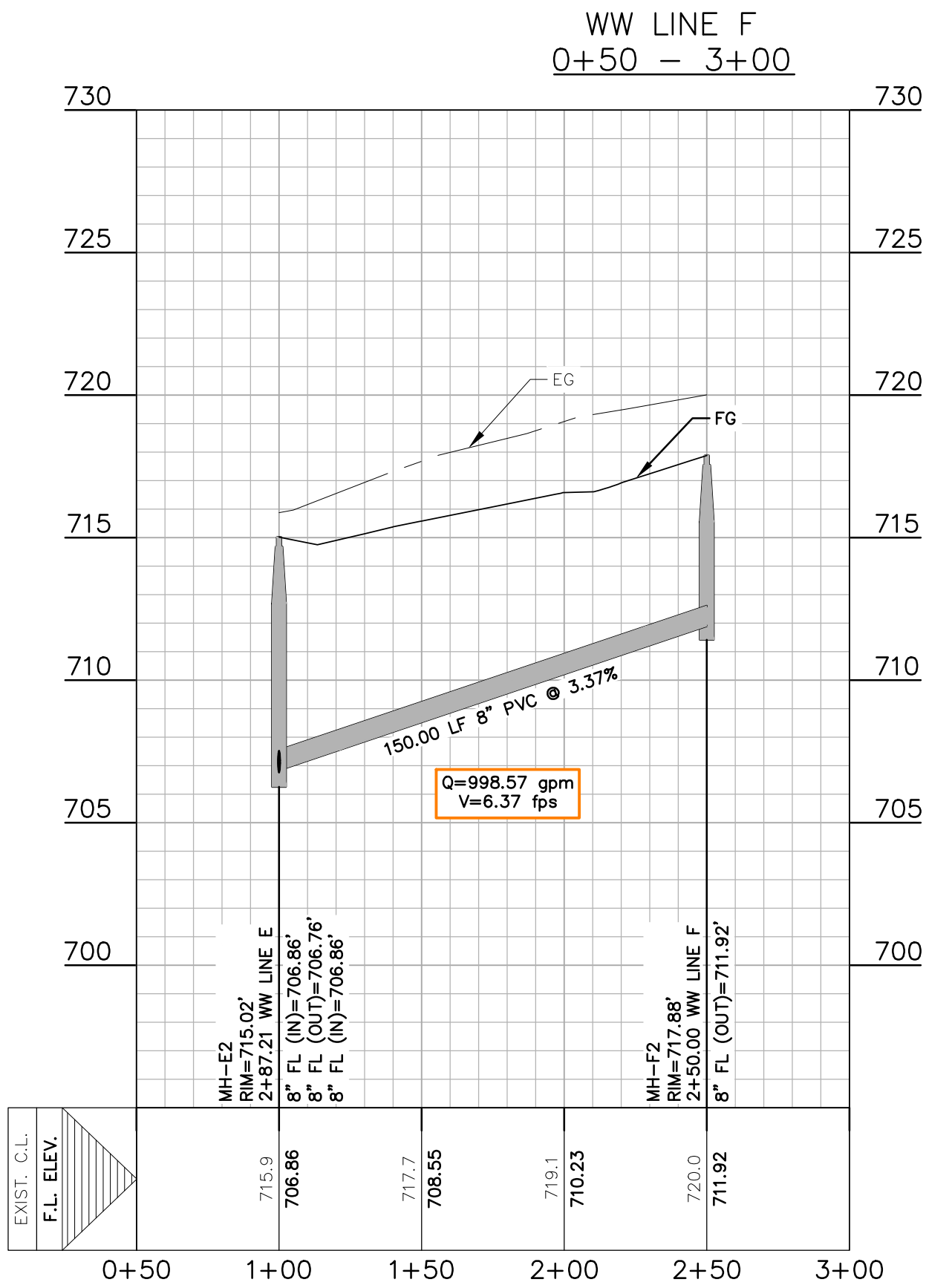
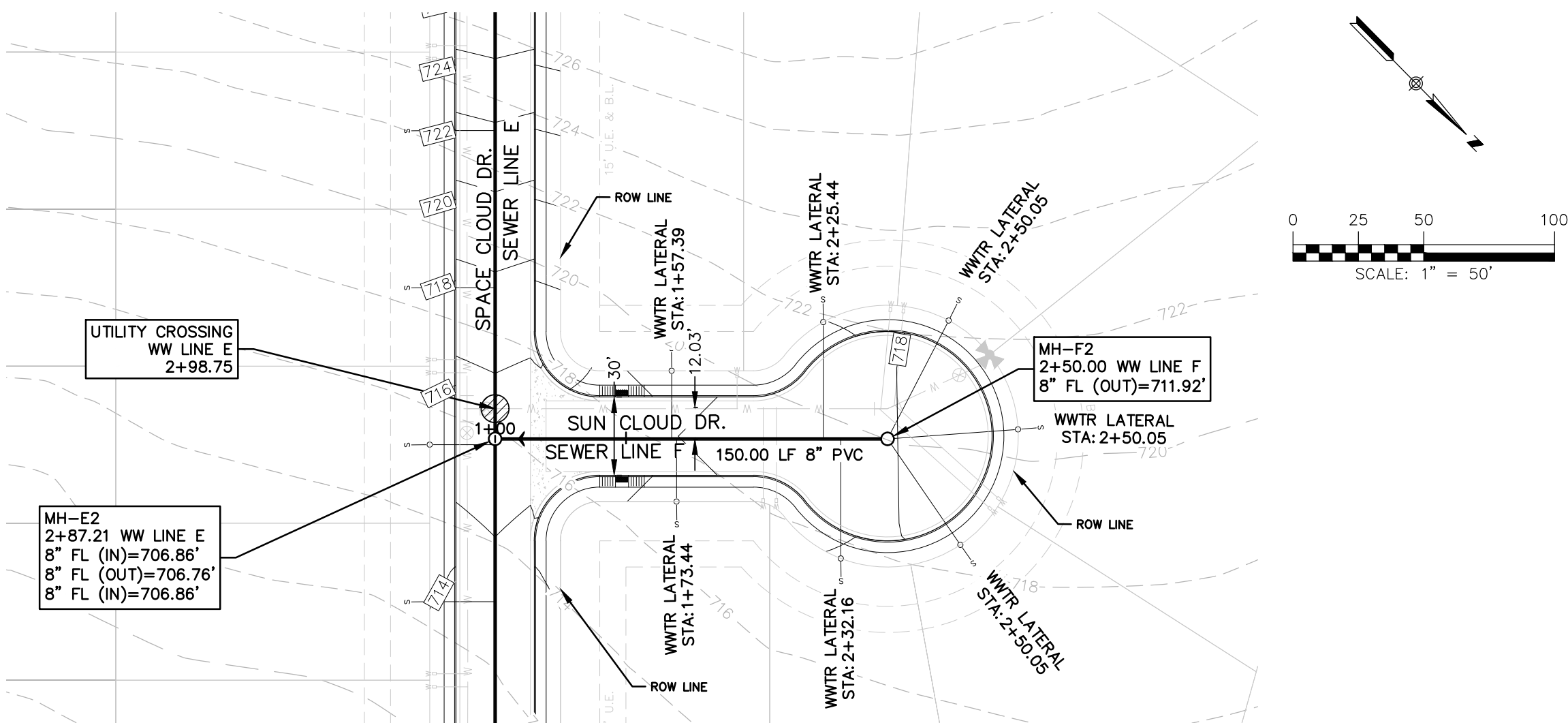
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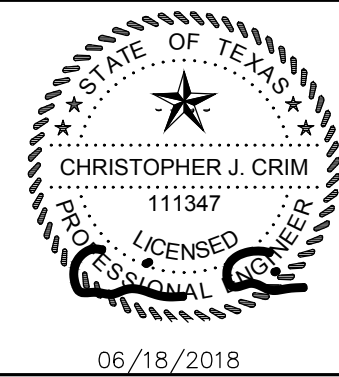
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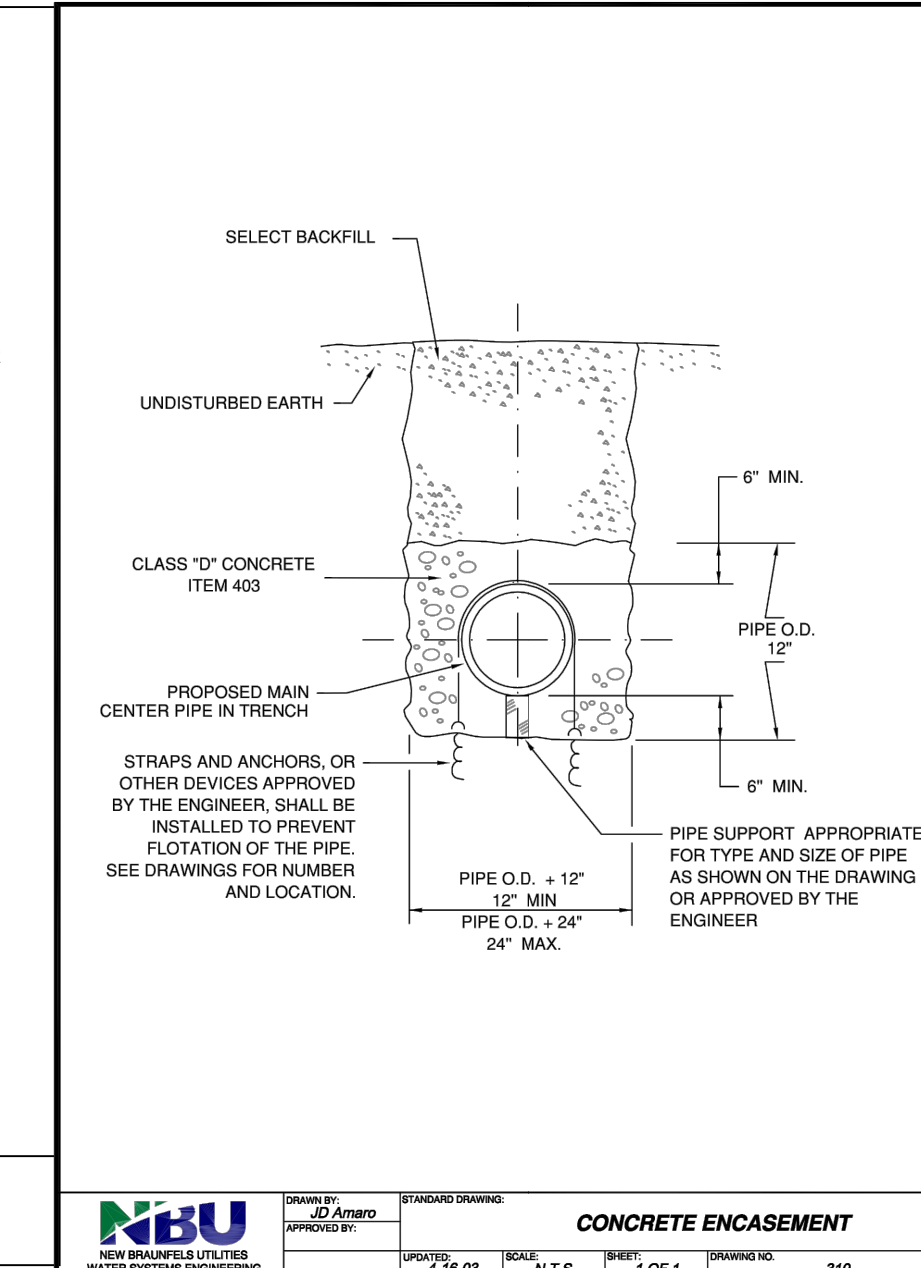
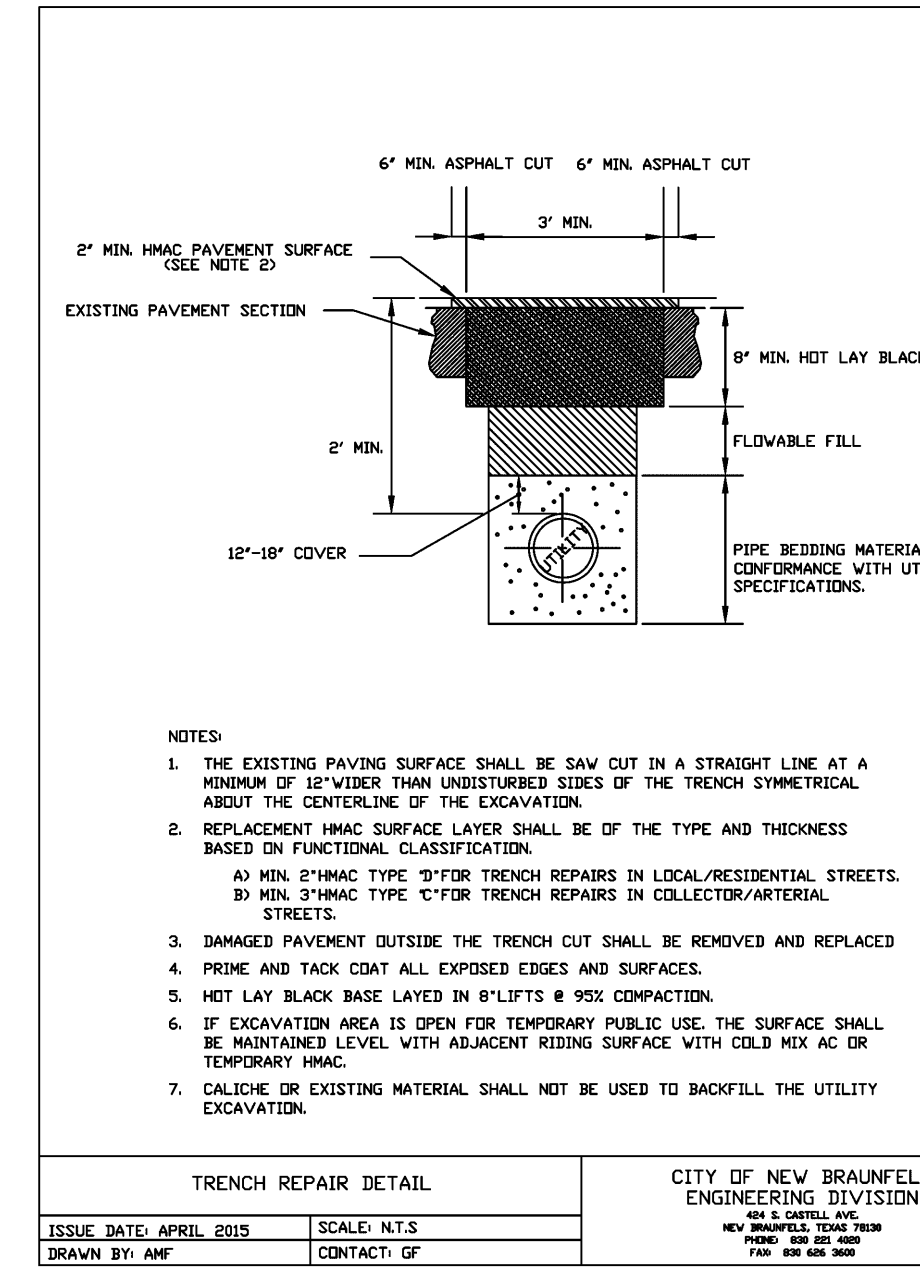
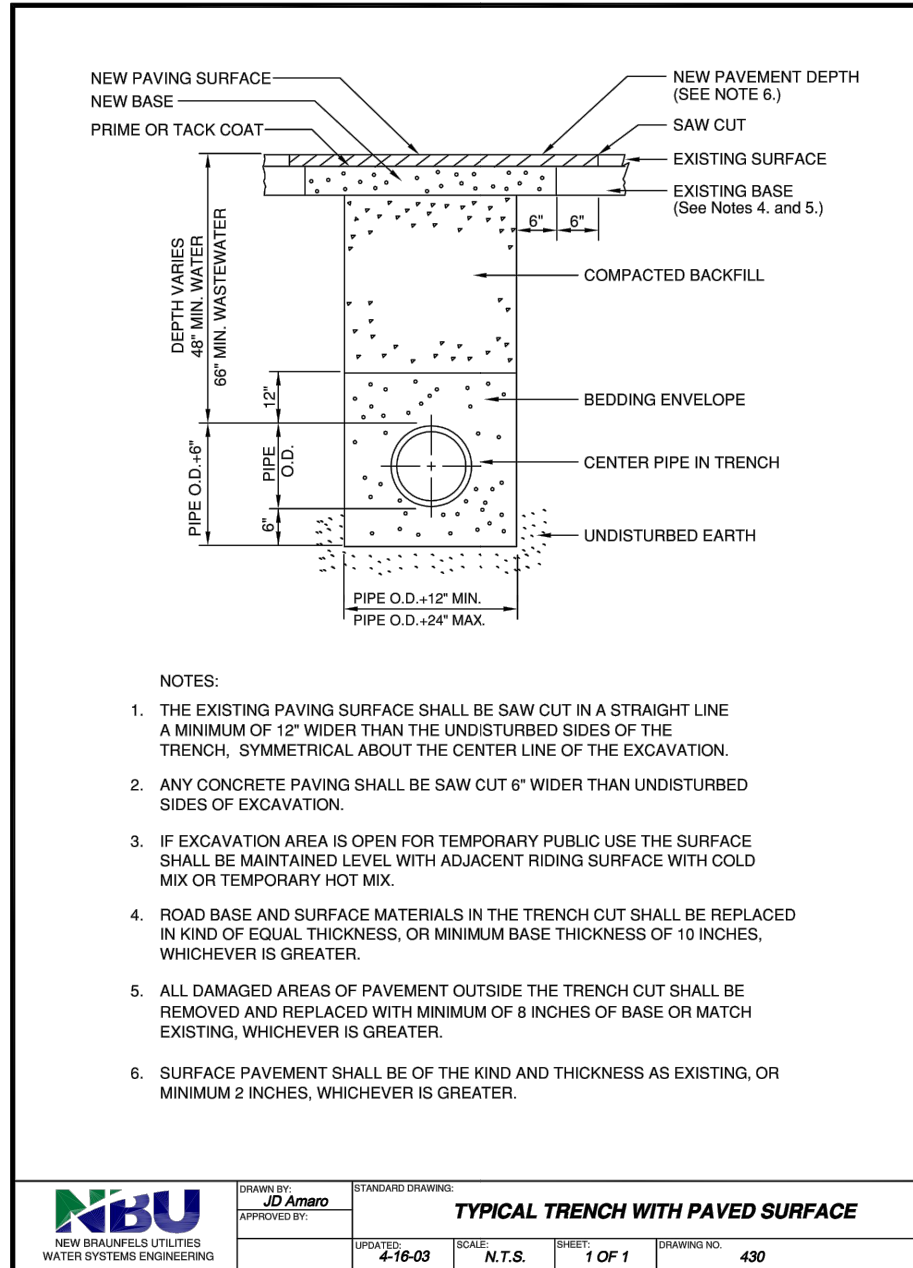
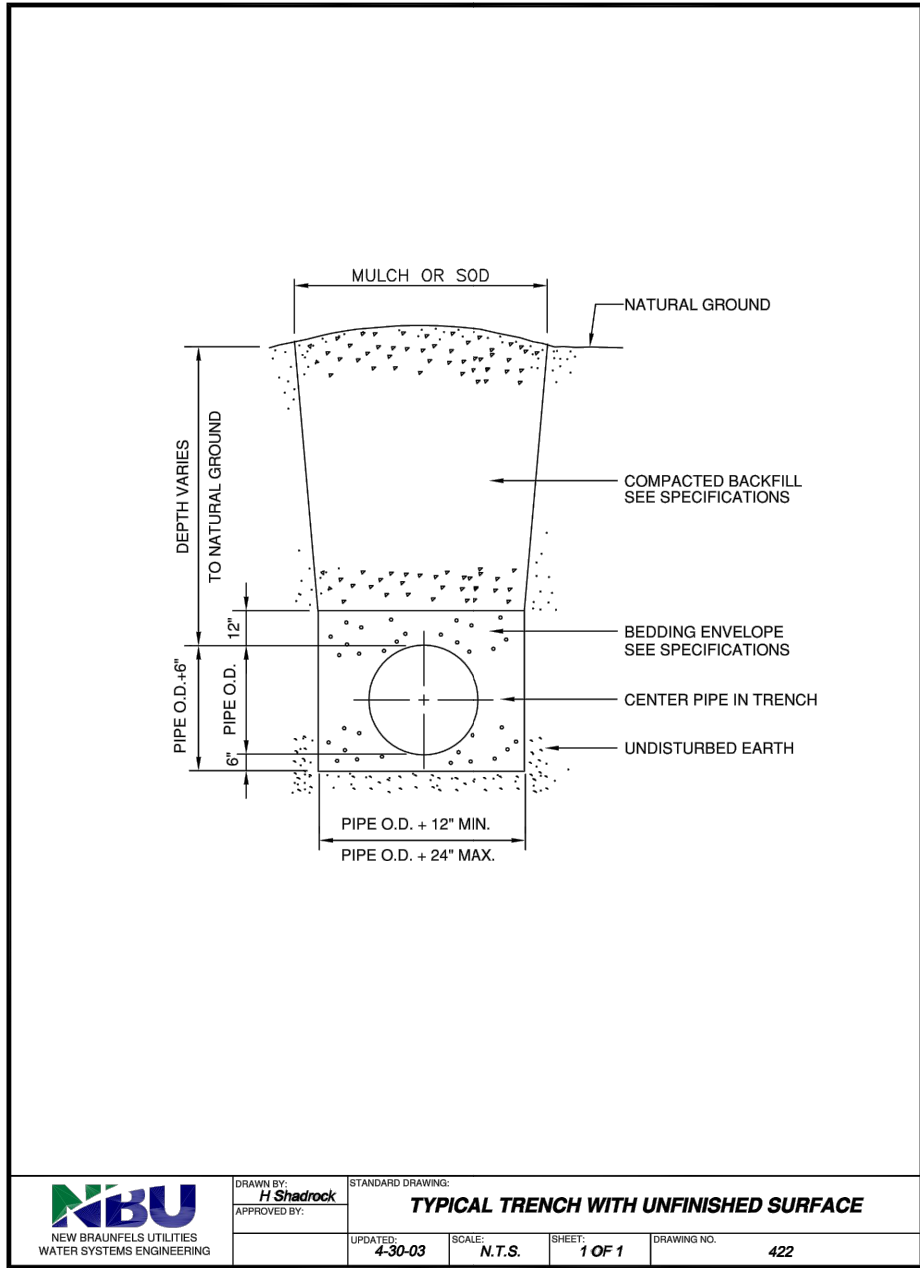
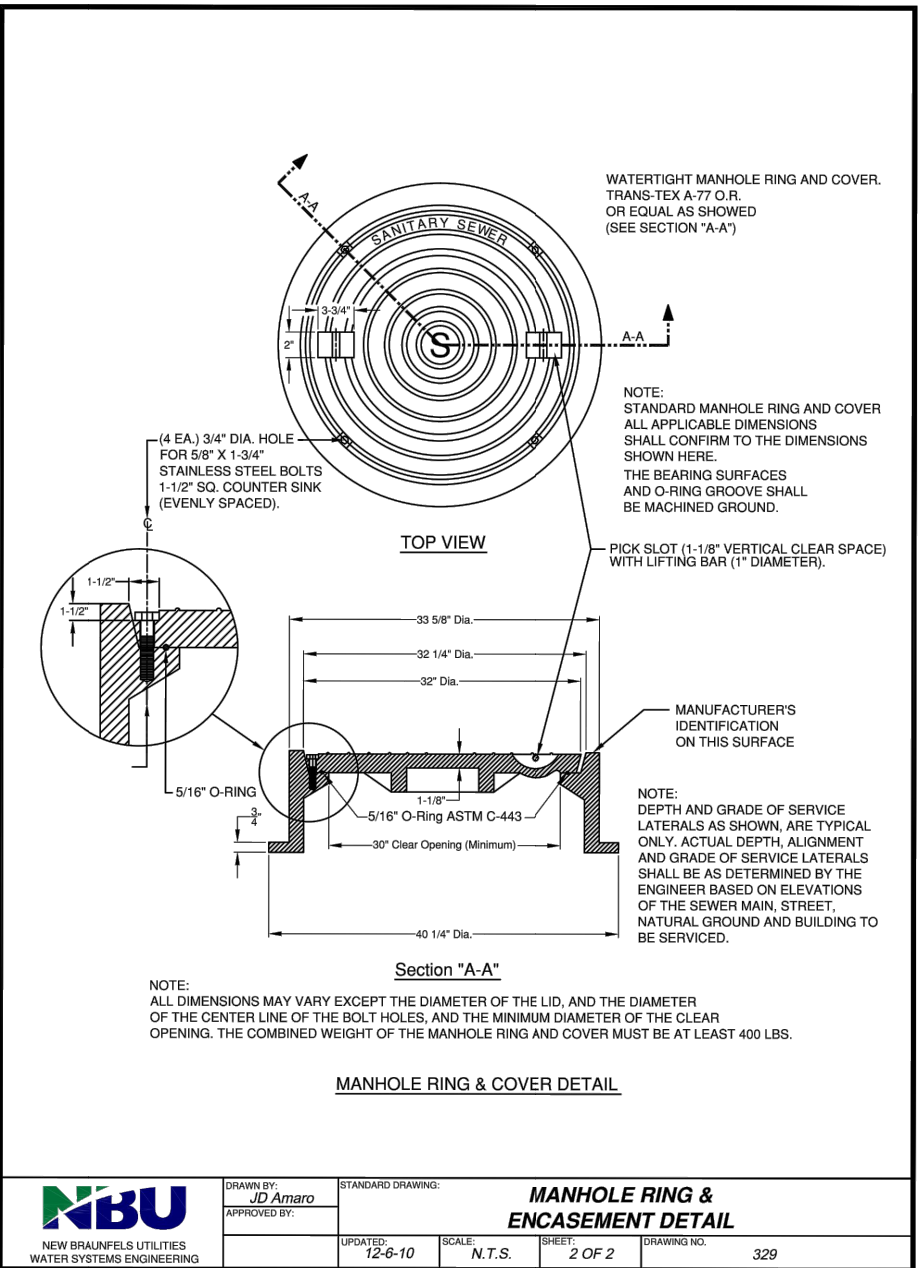
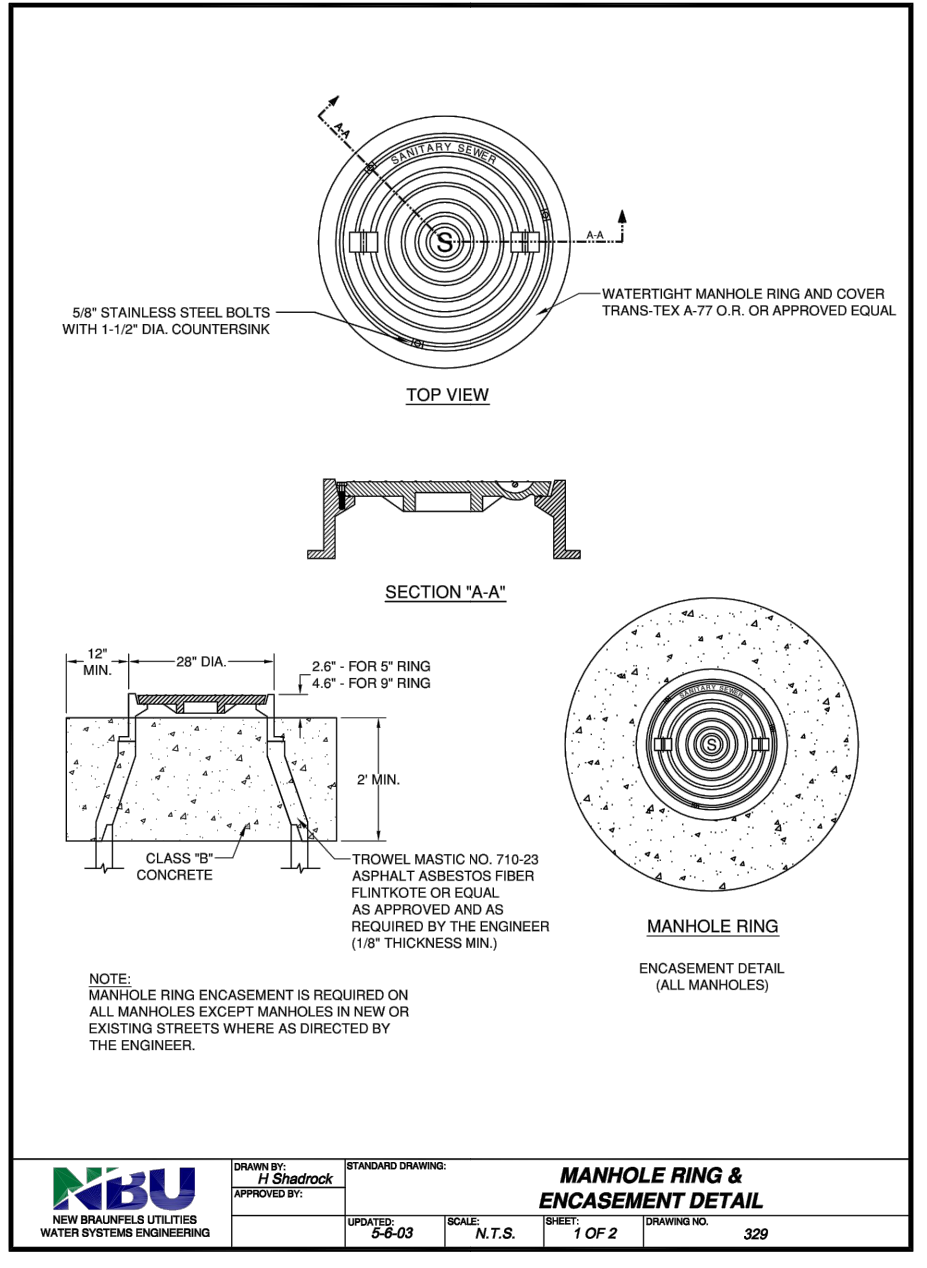
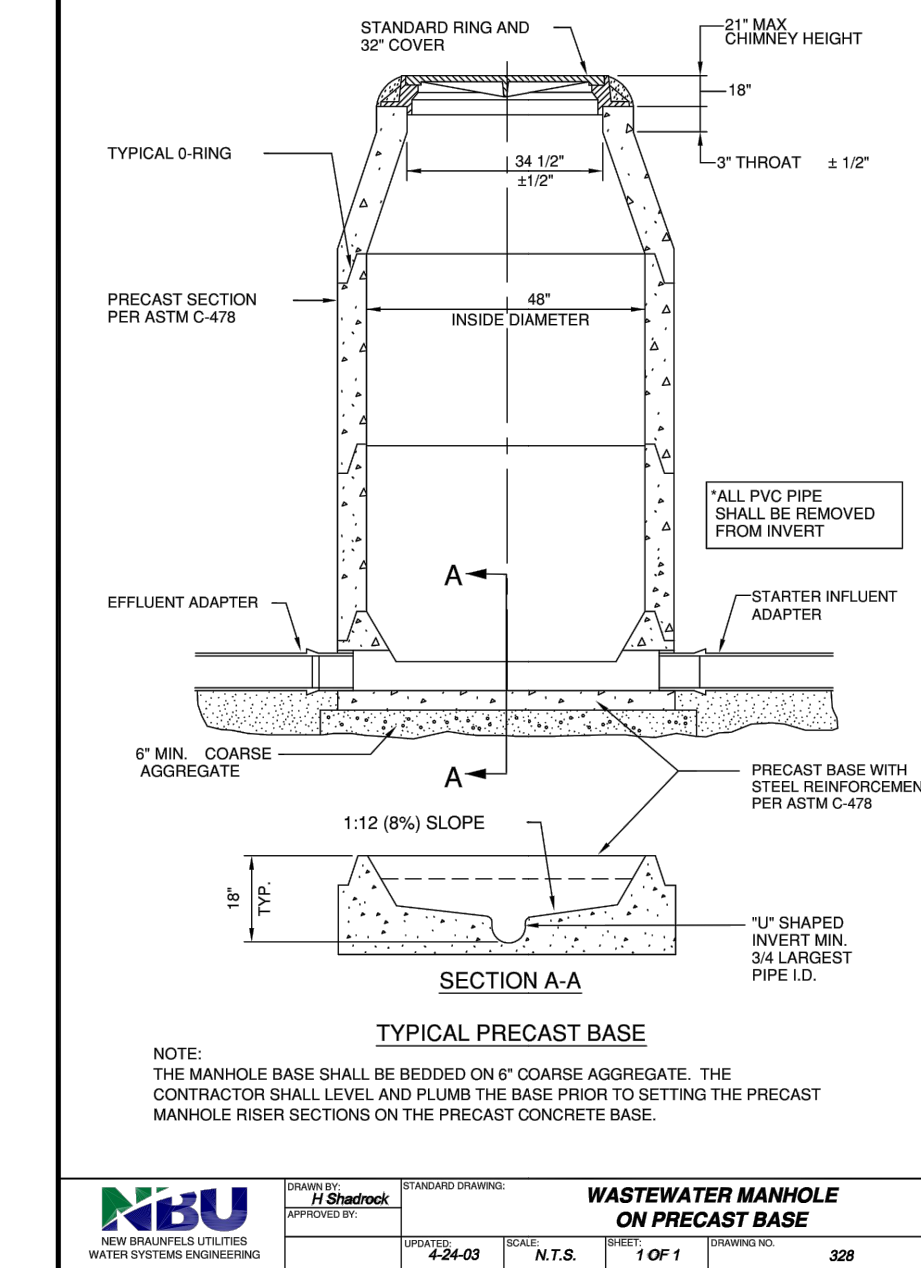
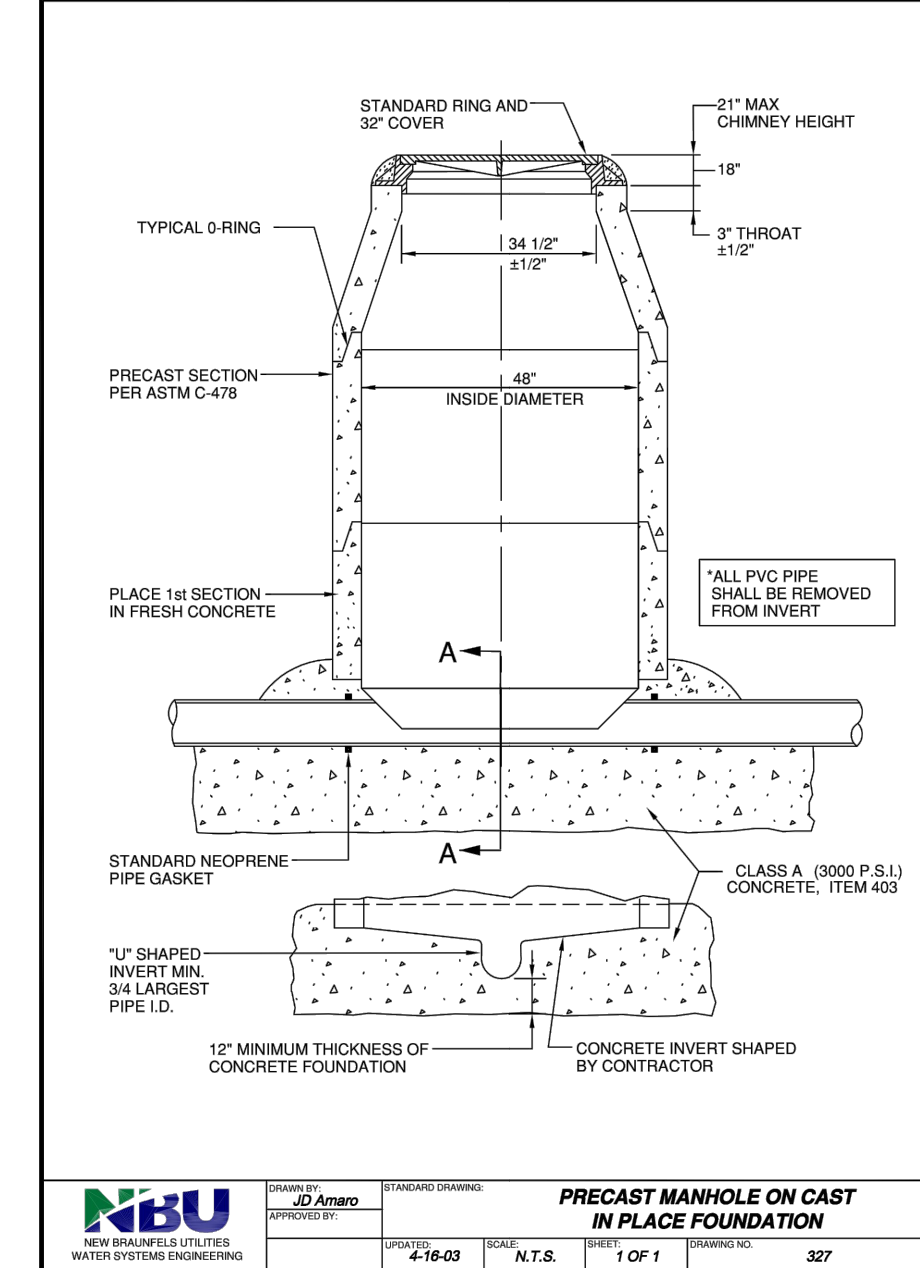
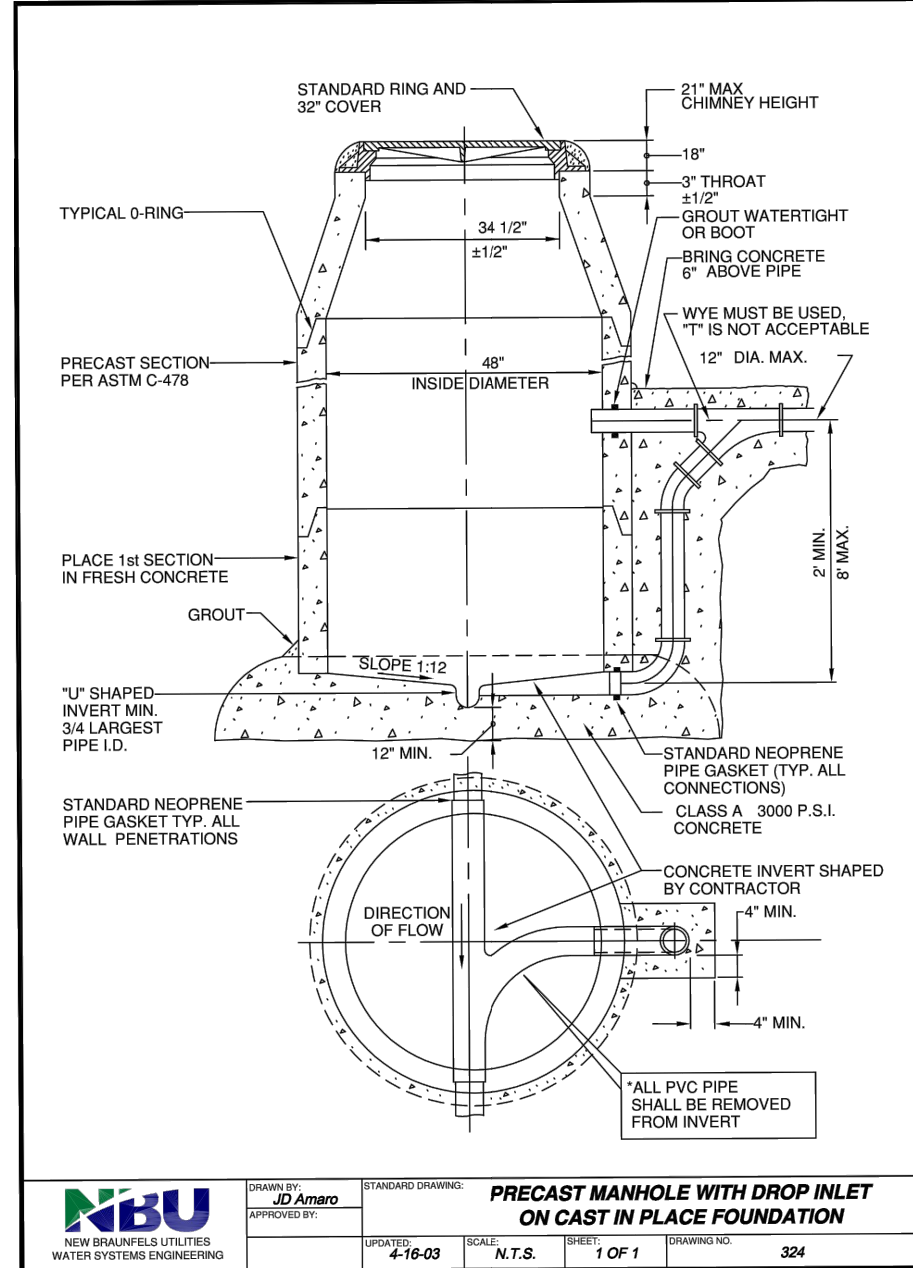
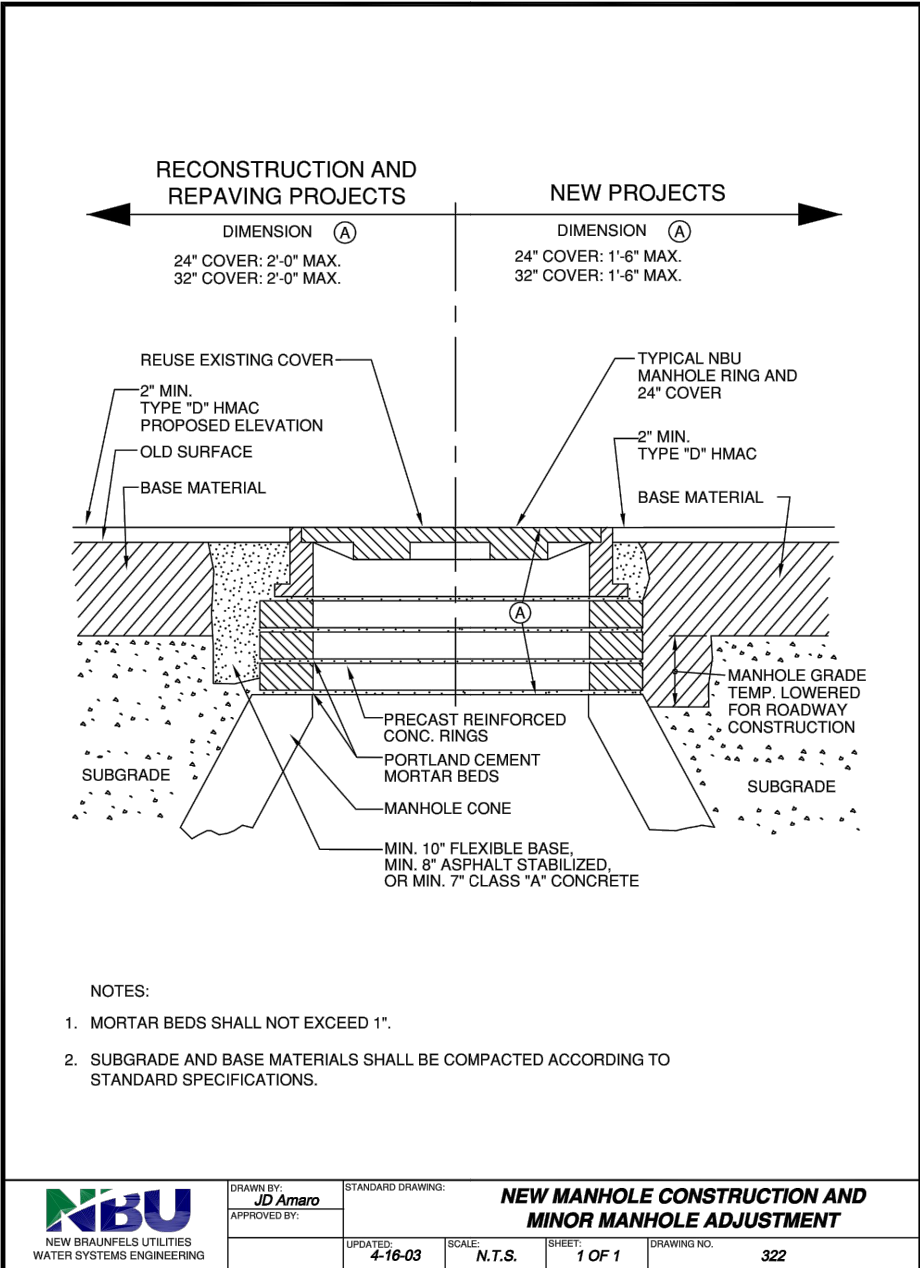
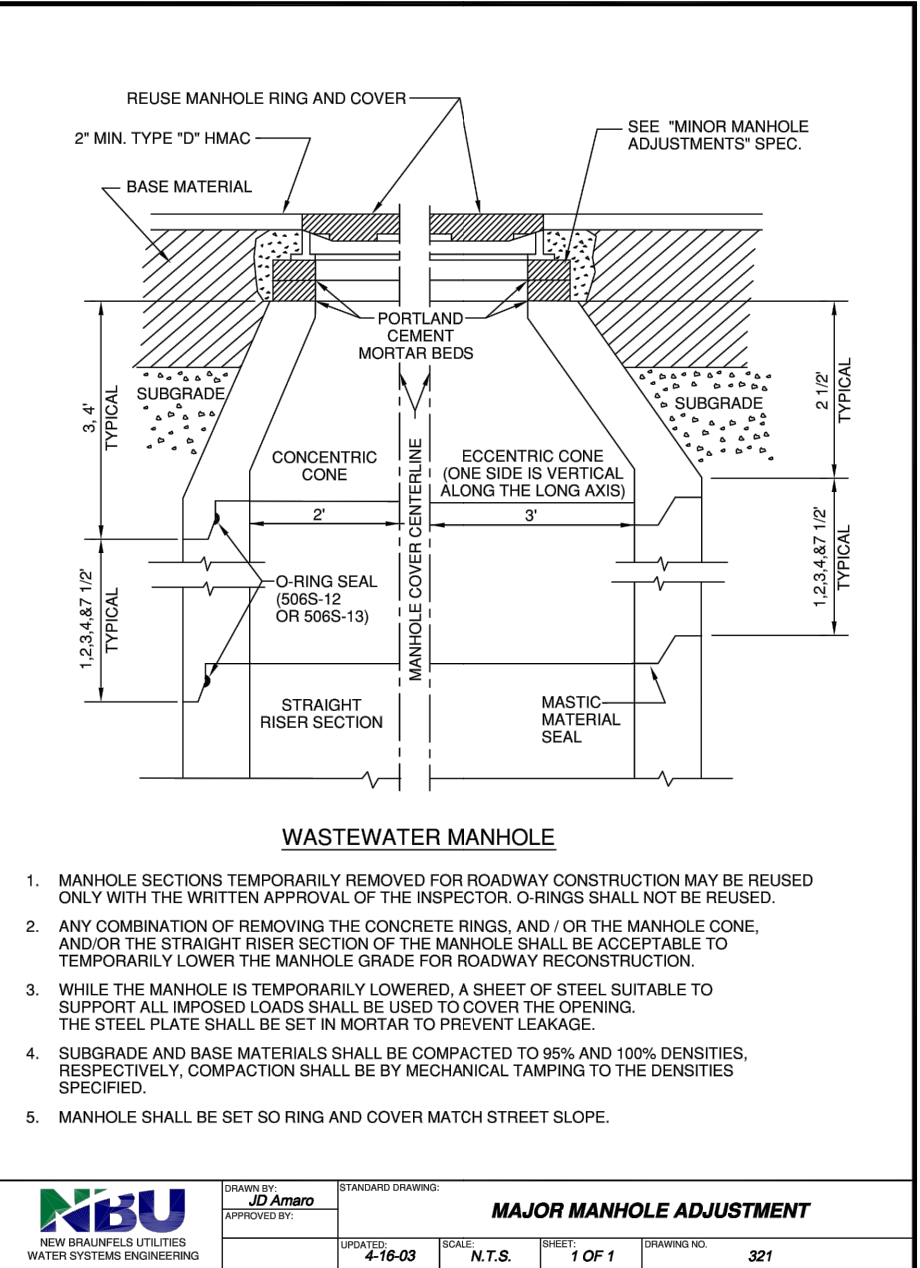
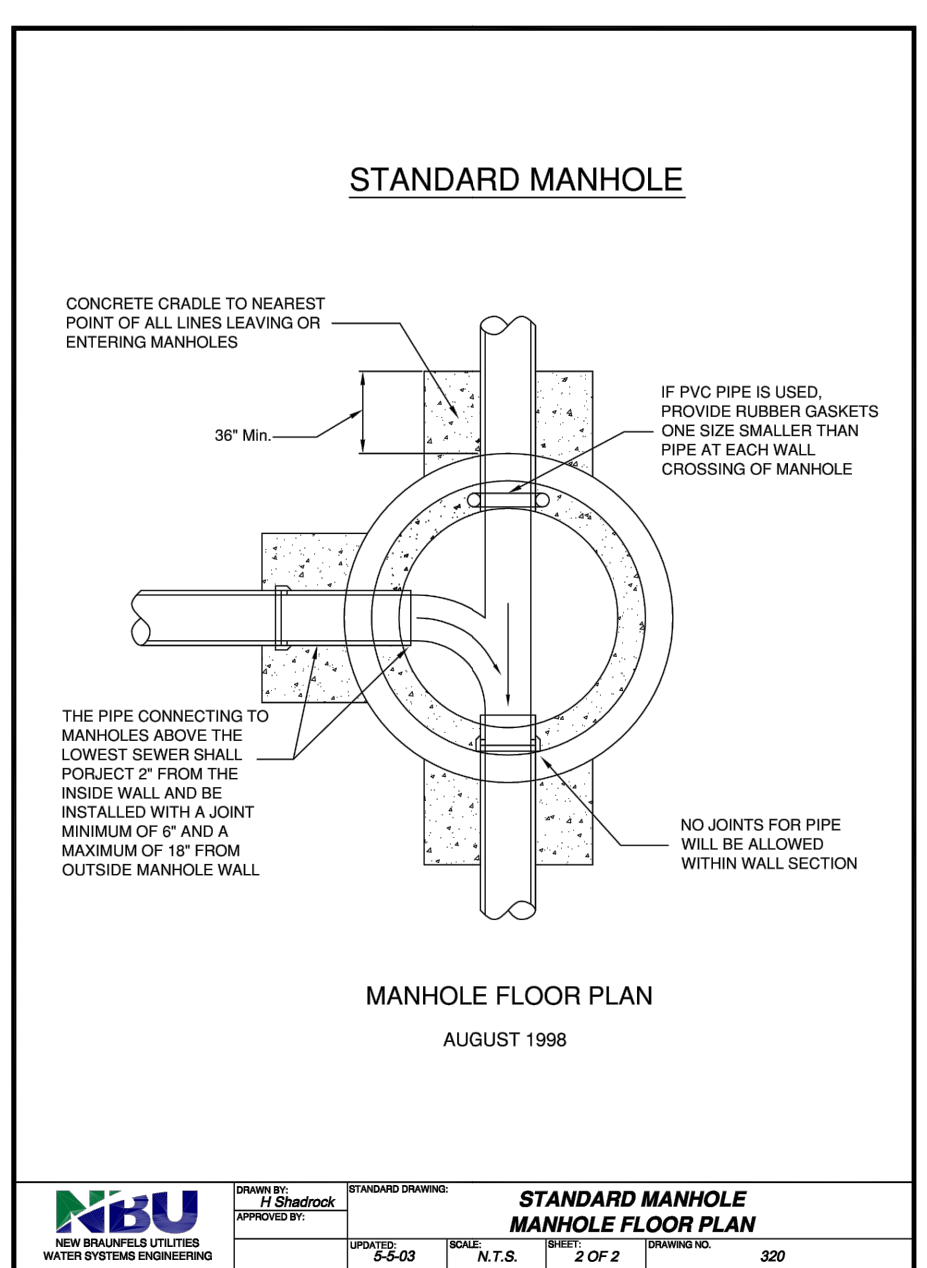
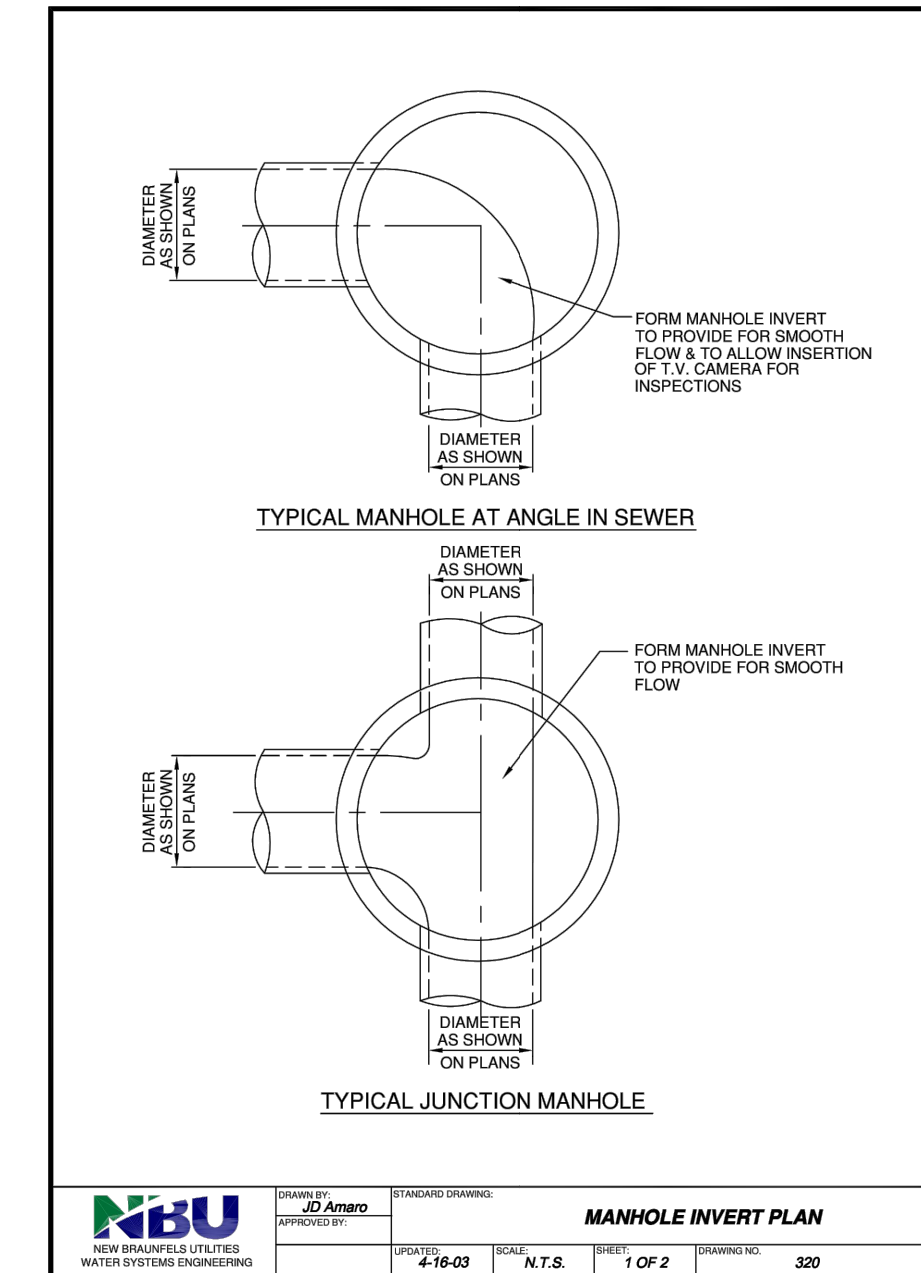
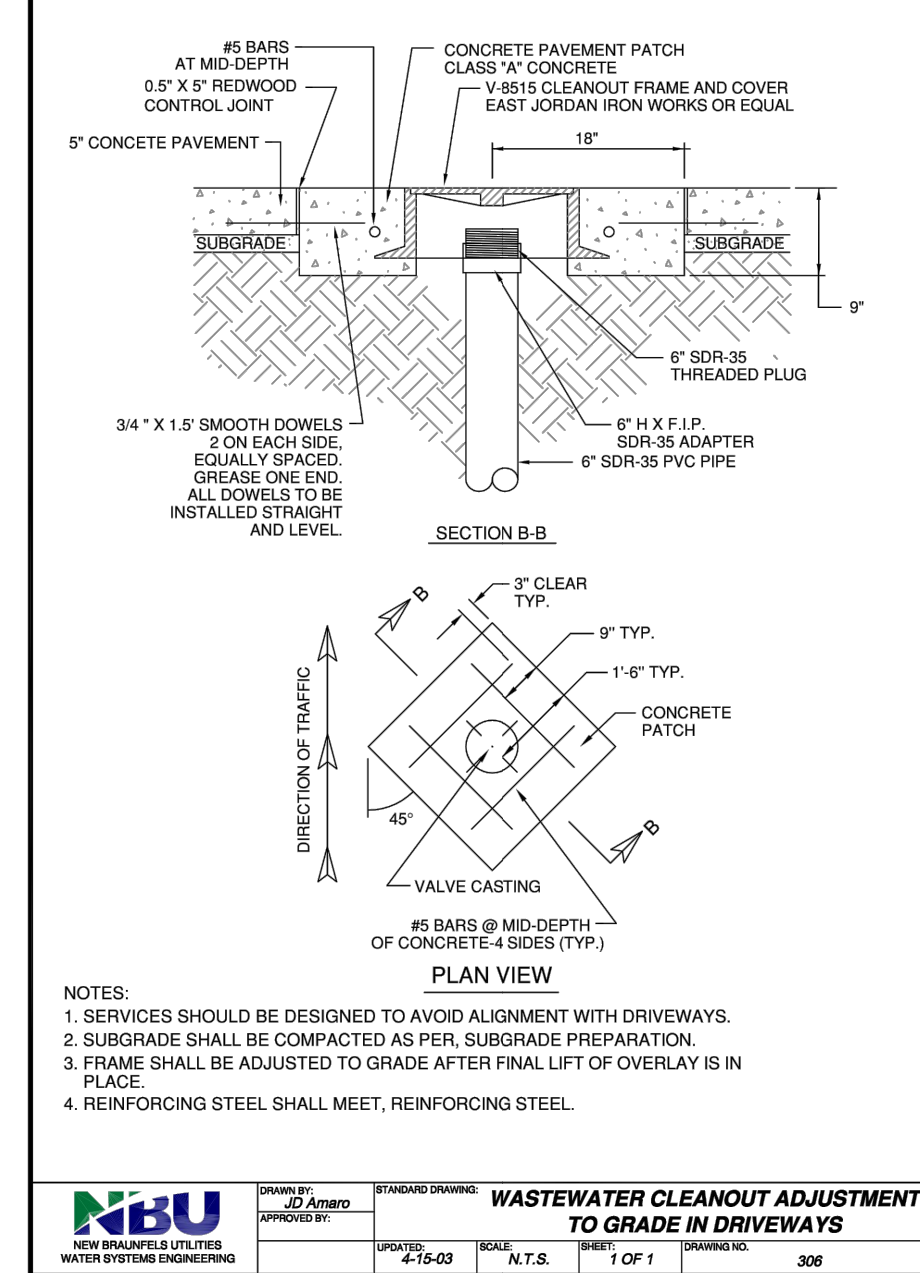
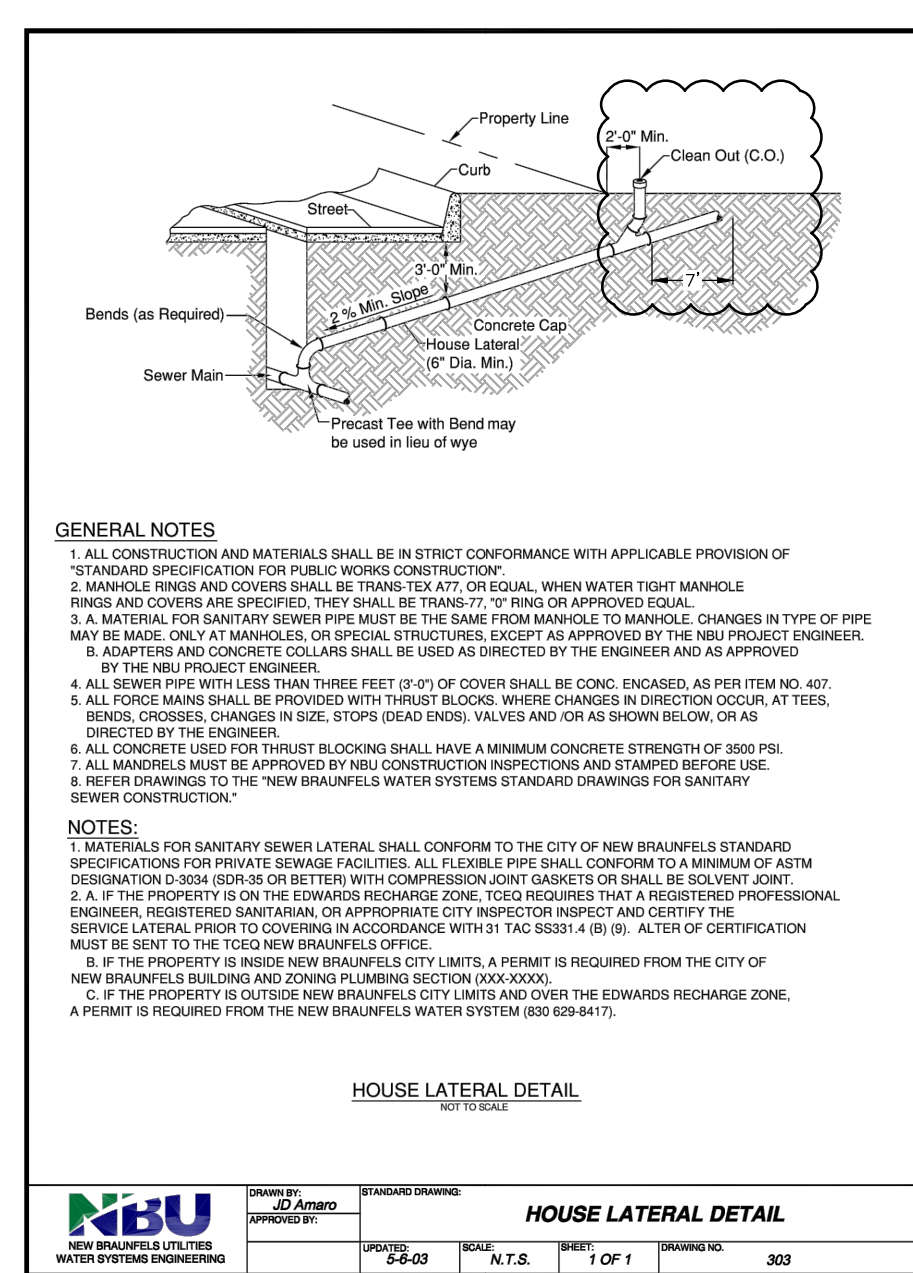
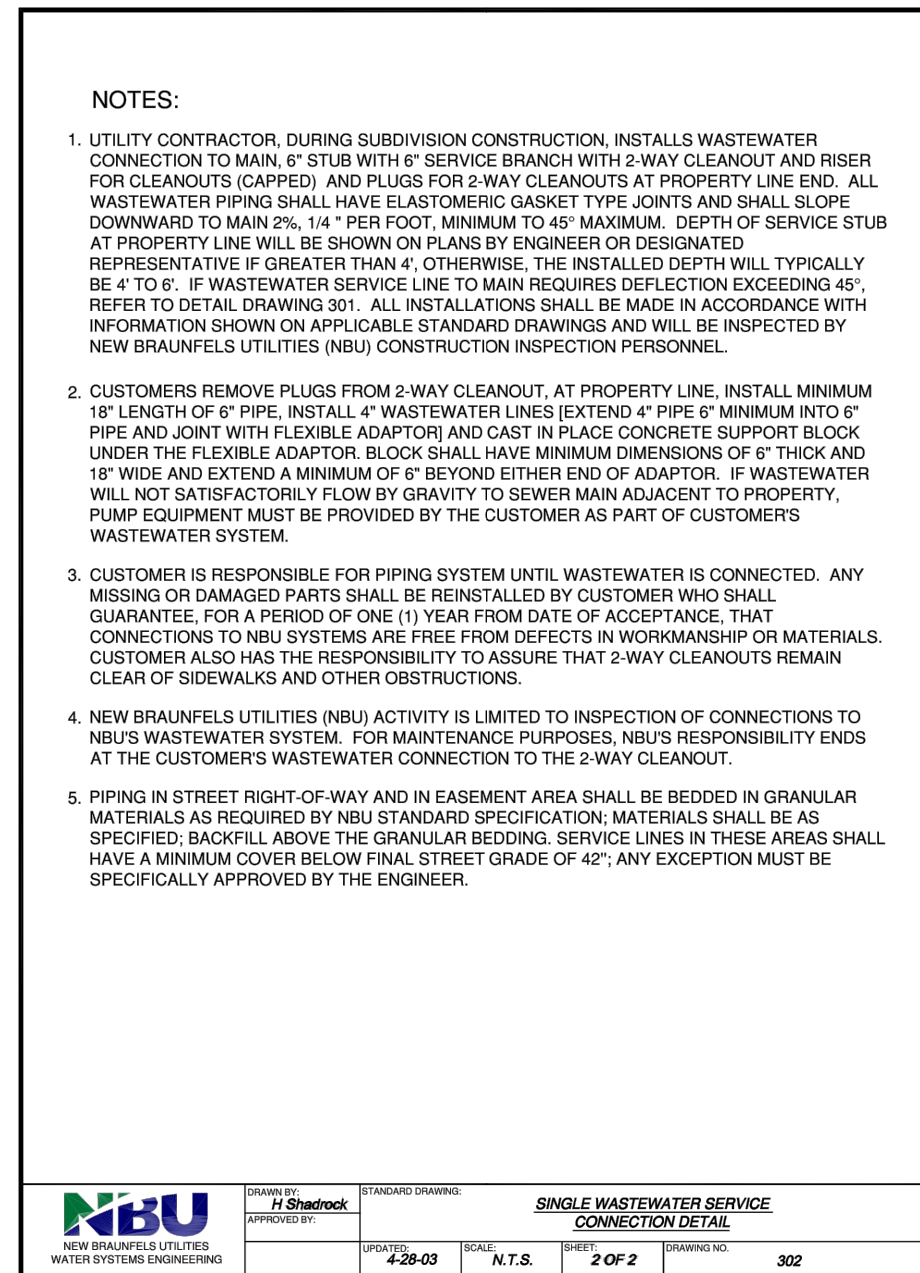
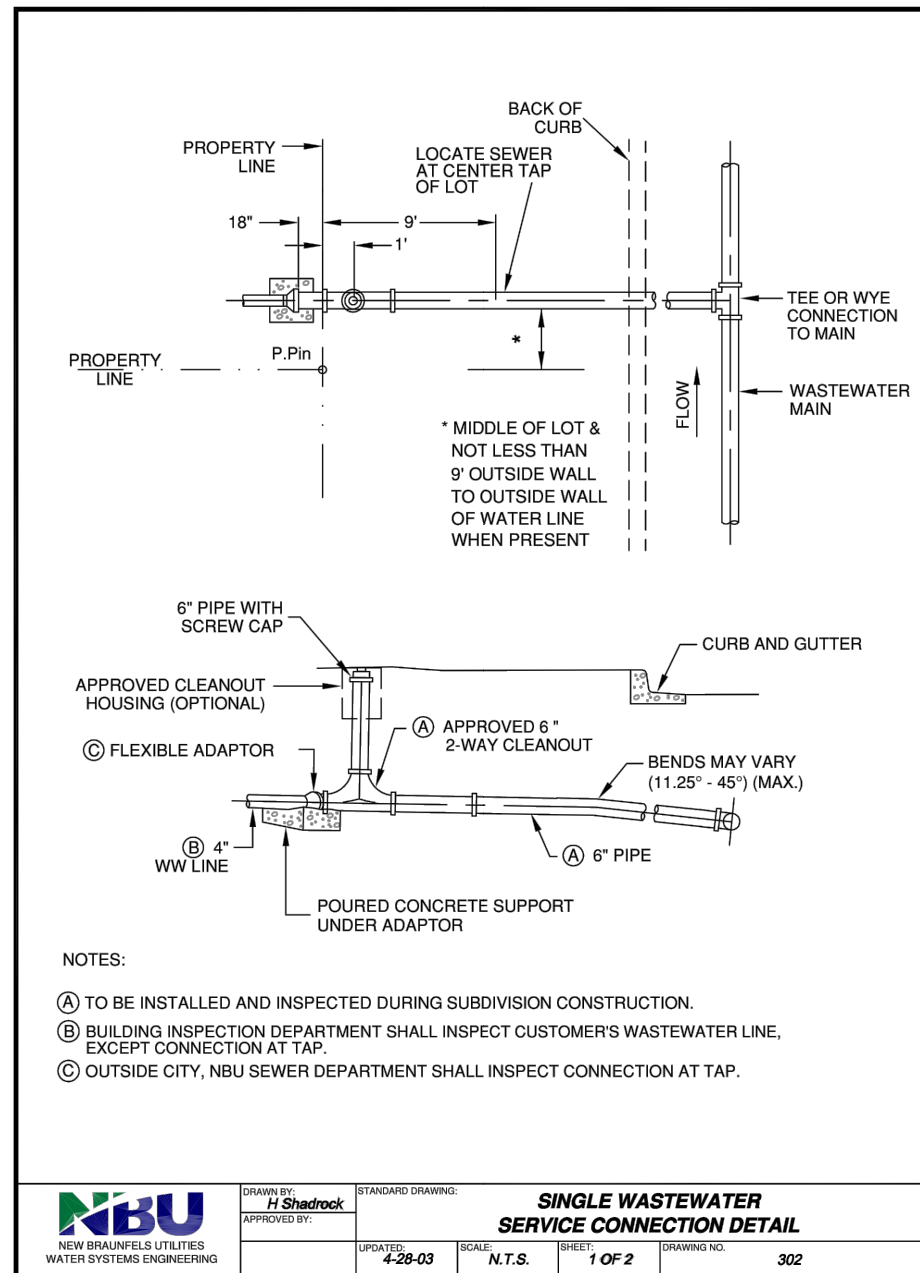
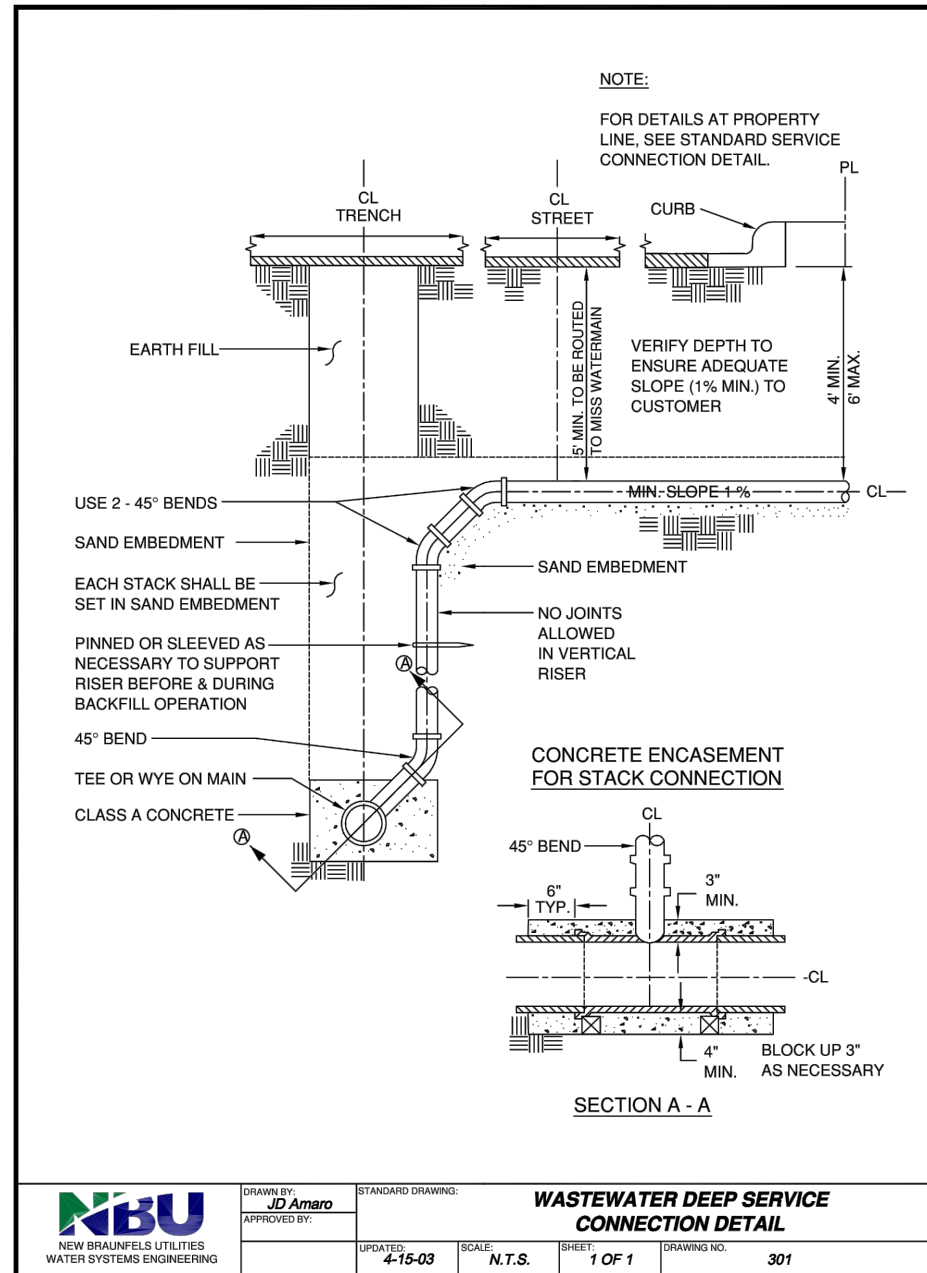


WW LINE F-G
PLAN & PROFILE
CLOUD COUNTRY UNIT 5

NO.	REVISION DESCRIPTION	REVISION DATE

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

SHEET
C7.6



410 N. SEGUIN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
P(361)925-8555 F(361)925-8556
T(361)925-8557
T(361)925-8558
T(361)925-8559
T(361)925-8560

HMT
ENGINEERING & SURVEYING

STATE OF TEXAS
CHRISTOPHER J. CRIM
111347
LICENSED PROFESSIONAL ENGINEER
06/18/2018

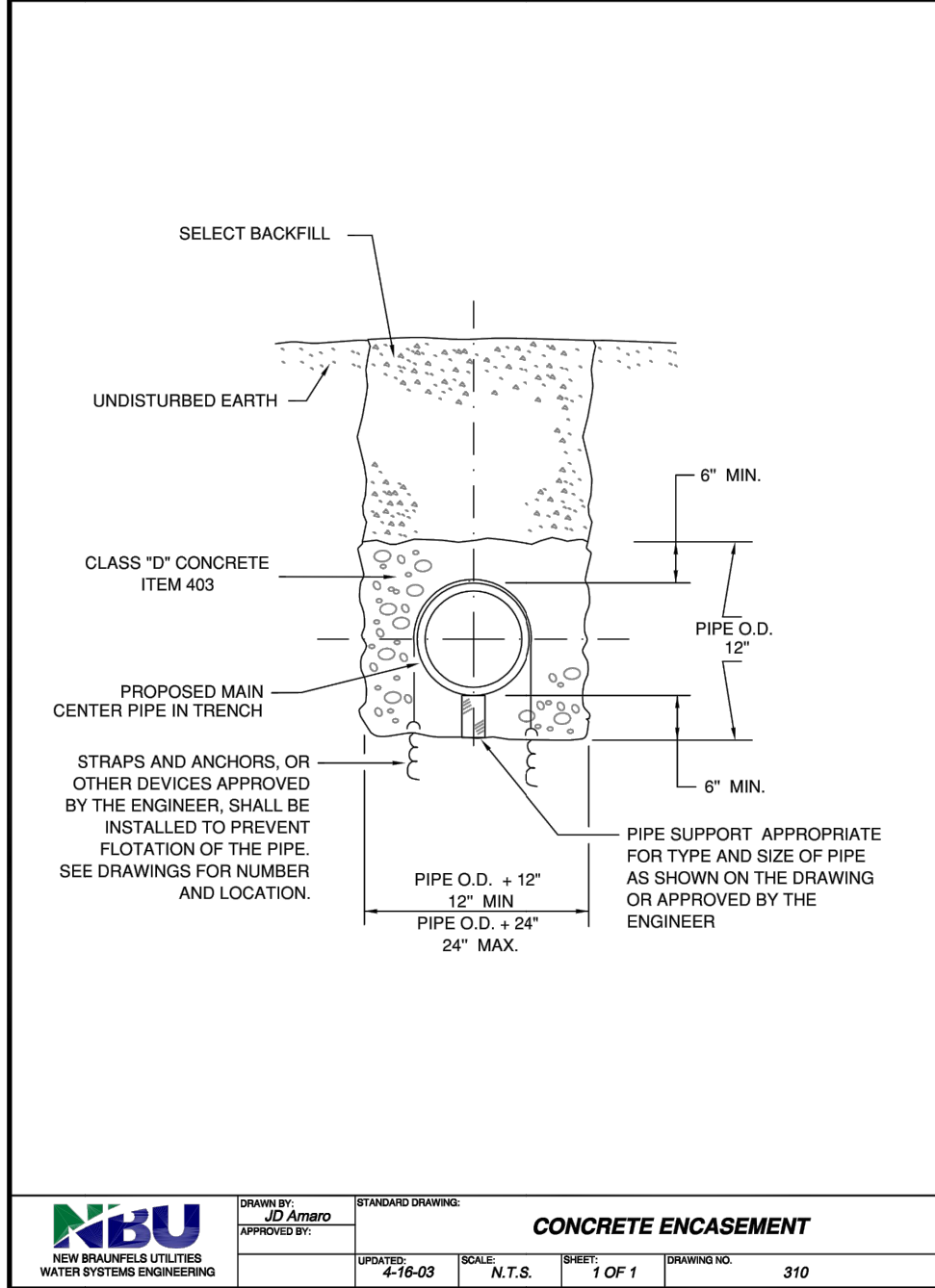
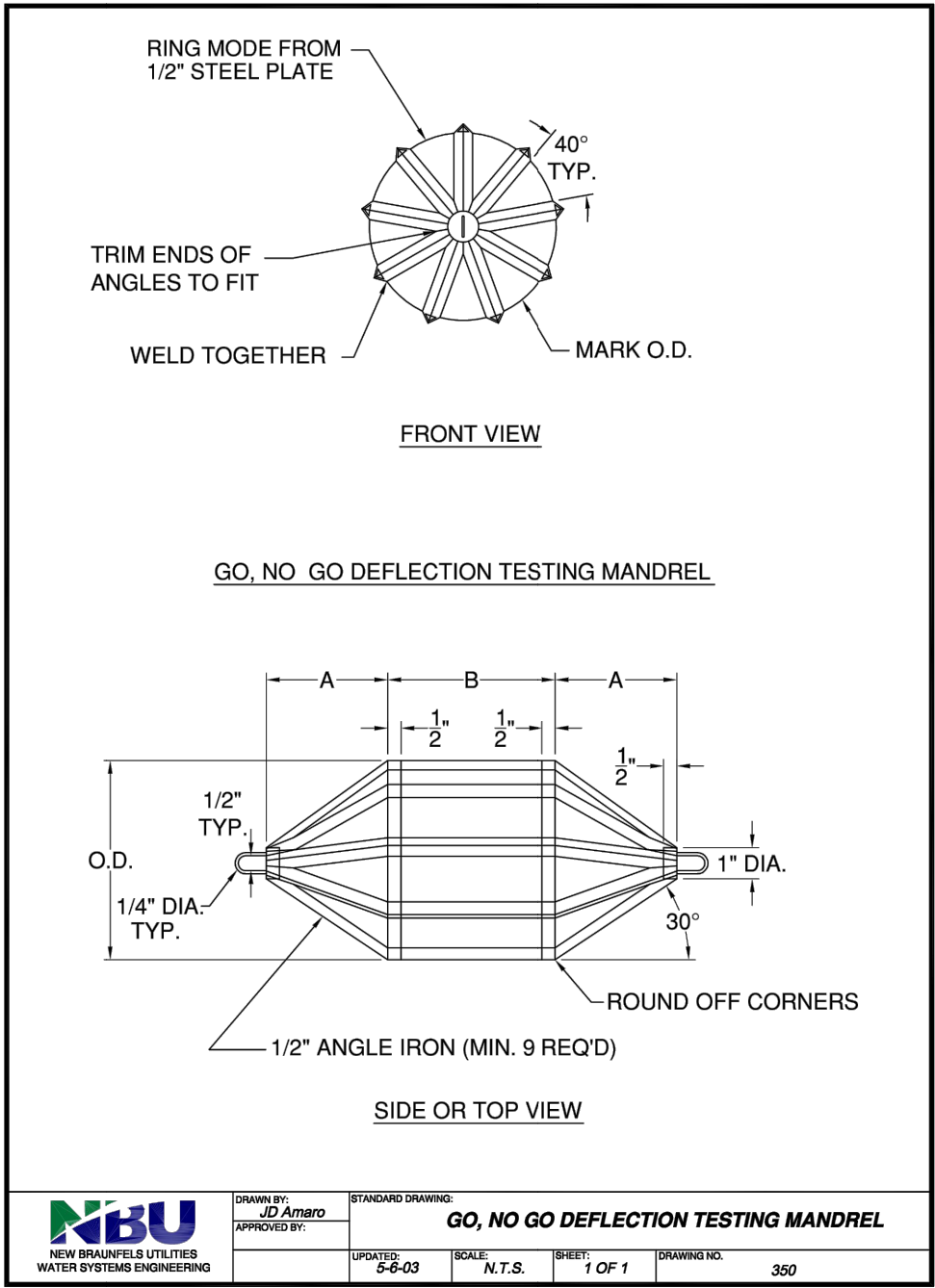
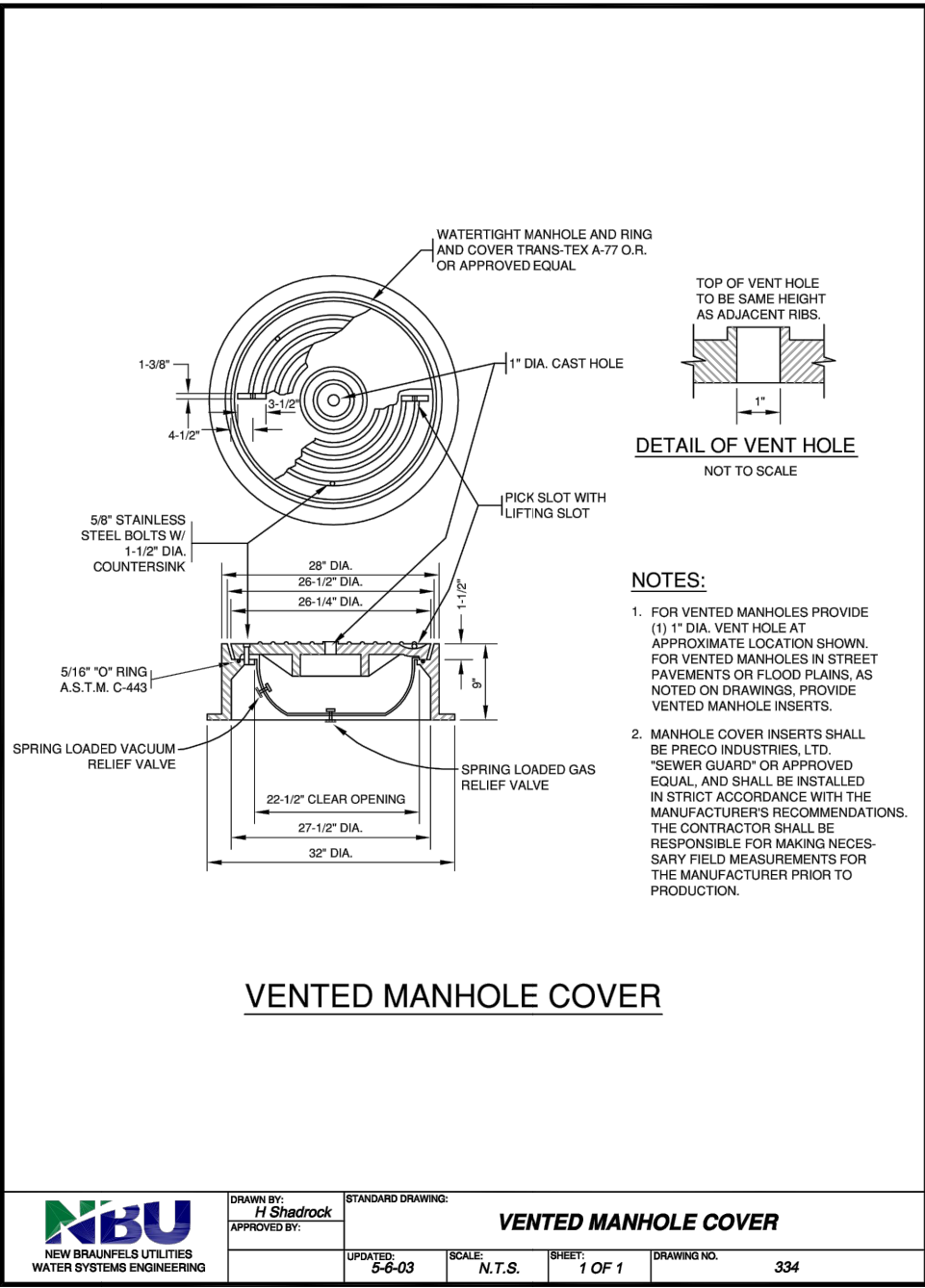
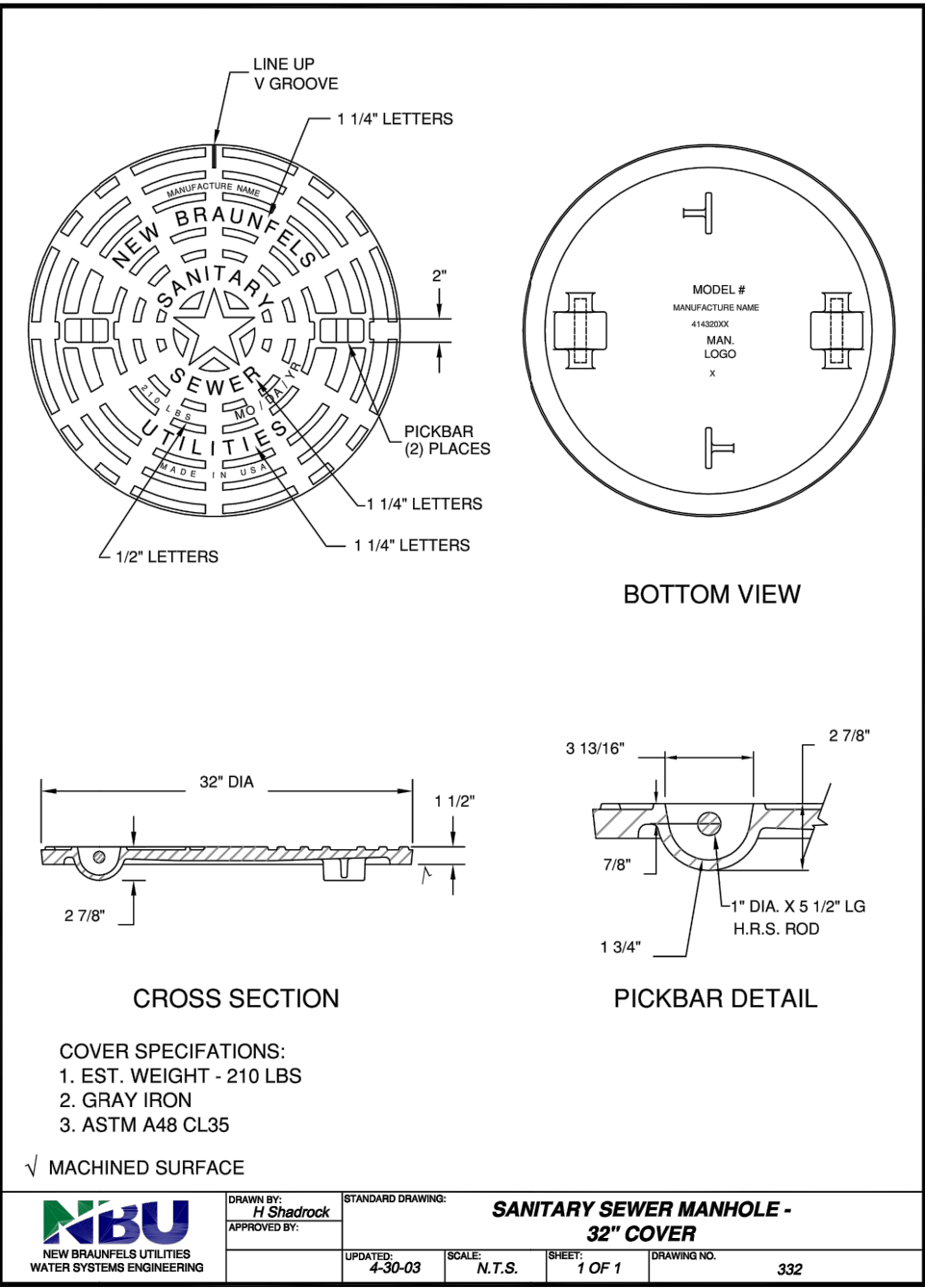
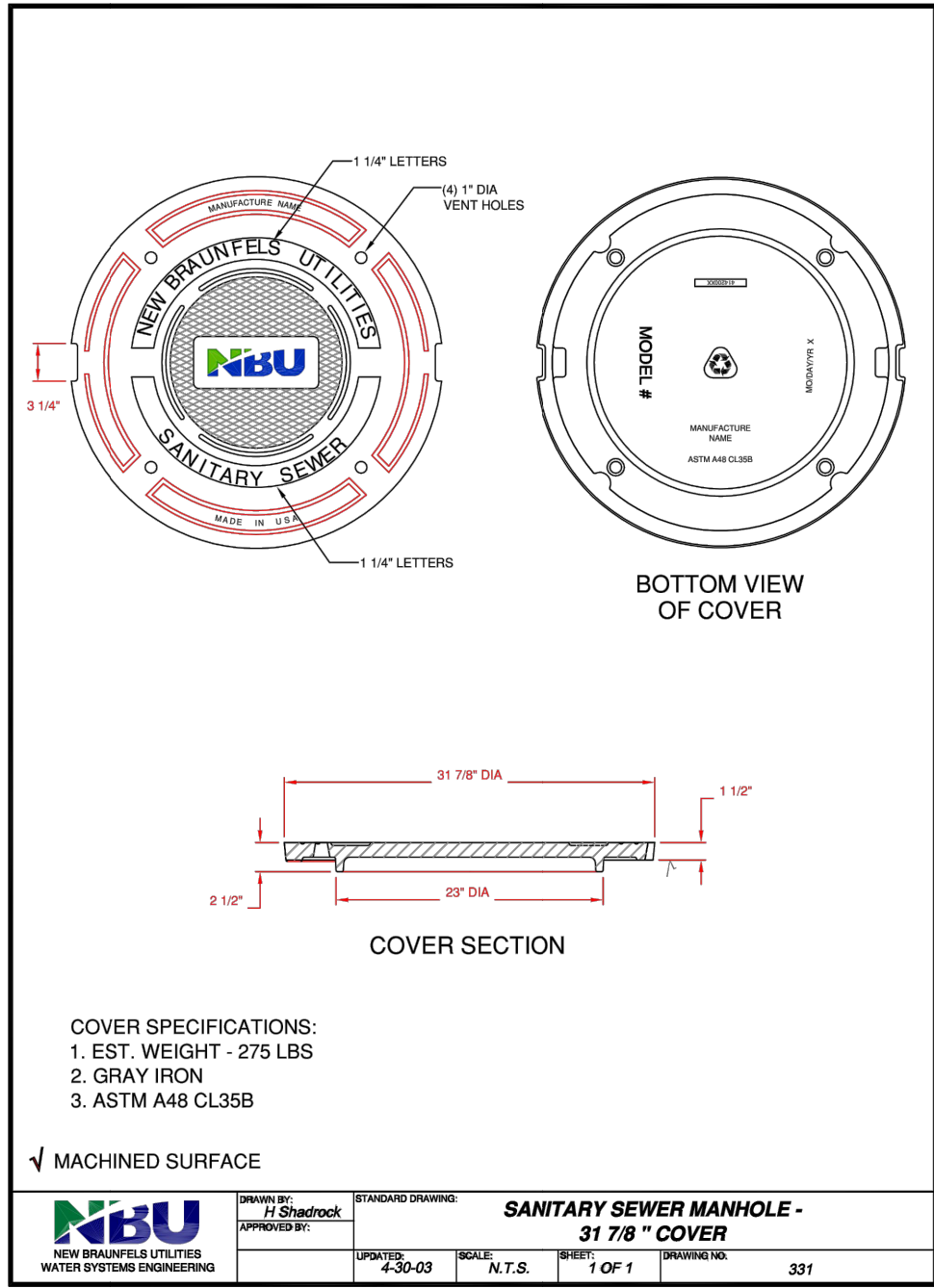
WASTEWATER DETAILS (SHT 1)

CLOUD COUNTRY UNIT 5

NO.	REVISION	DESCRIPTION	DATE

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DESIGNED BY: MGM/MZ/CC
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WASTEWATER
DETAILS (SHT 2)

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410 N. SEGUN AVE.
NEW BRAUNFELS, TX 78130
HMTNB.COM
PI630625-8555 • F(830)825-8556
TBPE FRM F-10961
TBPLS FRM 10153600

