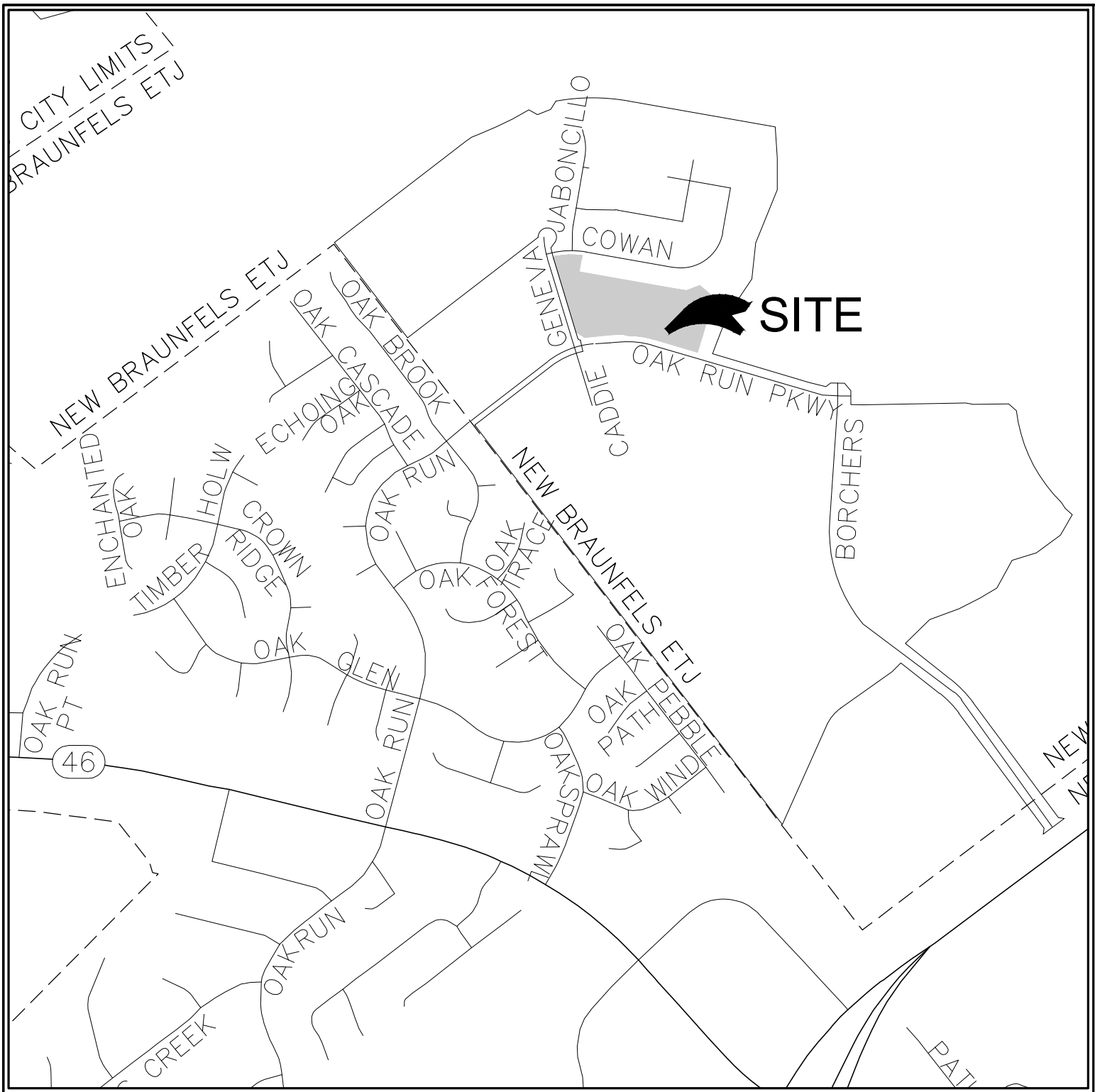


Drawing Name: N:\\_Projects\16 - ASA Properties, LLC\020 - Veramendi Neighborhood Retail\City\ASBUILTS\CITY\ASBUILTS-216.020\_C006.dwg User: Barbara Jul 10, 2020 - 12:34pm



PROJECT LOCATION MAP

SCALE: N.T.S.

PROJECT BENCHMARK

SITE TBM #1  
SET COTTON SPINDLE  
N: 13814157.6157  
E: 2234291.1952  
ELEV: 832.39'

SITE TBM #2  
SET COTTON SPINDLE  
N: 13813672.6760  
E: 2234477.1595  
ELEV: 828.36

LEGAL DESCRIPTION

BEING A 9.70 ACRE TRACT SITUATED IN THE J.M. VERAMENDI SURVEY NO. 1, ABSTRACT NO. 3, COMAL COUNTY TEXAS. BEING A PORTION OUT OF A CALLED 255.715 ACRE TRACT, RECORDED IN DOCUMENT NO. 201706013192, 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- IF CONSTRUCTION HAS NOT COMMENCED WITHIN ONE-YEAR OF CITY APPROVAL FOR CONSTRUCTION INSPECTION, THAT APPROVAL IS NO LONGER VALID.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 BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.
- ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER OF RECORD. IN ACCEPTING THESE PLANS, THE CITY OF NEW BRAUNFELS MUST RELY UPON THE ADEQUACY OF THE WORK OF THE ENGINEER IN RECORD.
- PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL CONTACT THE CITY OF NEW BRAUNFELS TO SET A PRE-CONSTRUCTION MEETING. A 48-HOUR ADVANCED NOTIFICATION IS REQUIRED FOR ALL INSPECTION AND MEETING REQUESTS.
  - ALL INSPECTIONS ARE TO BE CALLED IN AT 830-221-4068 OR,
  - 4.2 FAXED IN AT 830-608-2117 OR,
  - 4.3 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 48091C0435f EFFECTIVE DATE 09, 02, 2009, AS PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
- THIS PROJECT IS LOCATED WITHIN THE EDWARDS AQUIFER RECHARGE ZONE.



JULY 10, 2020

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

Christopher P. Van Heerde  
P.E. Registration No. 93047

PREPARED BY:



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

# VERAMENDI NEIGHBORHOOD RETAIL DEVELOPMENT NEW BRAUNFELS, TEXAS CIVIL SITE CONSTRUCTION PLANS

ASA PROPERTIES  
P.O. BOX 310699  
NEW BRAUNFELS TX 78130



RECORD DRAWING

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

DATE: JULY 2020

BY:

Chris Van Heerde, P.E.

HMT ENGINEERING AND SURVEYING

Sheet List Table

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C1.2	CONSTRUCTION NOTES (2 OF 4)
C1.3	CONSTRUCTION NOTES (3 OF 4)
C1.4	CONSTRUCTION NOTES (4 OF 4)
C1.5	DEMOLITION PLAN
C2.0	PLAT (1 OF 3)
C2.1	PLAT (2 OF 3)
C2.2	PLAT (3 OF 3)
C3.0	EXISTING DRAINAGE AREA MAP
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C5.1	GENEVA STREET IMPROVEMENTS AND DRIVEWAY DETAILS
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C7.0	OVERALL STORM
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C8.1	WATER DETAILS
C9.0	OVERALL WASTEWATER PLAN
C9.1	WASTEWATER LINE A (1 of 2)
C9.2	WASTEWATER LINE A (2 of 2)
C9.3	WASTEWATER LINE B
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C10.0	DRY UTILITY PLAN

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.

CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL CONSTRUCTION IS IN ACCORDANCE WITH VERAMENDI DEVELOPMENT AND DESIGN CONTROL DOCUMENT.

VERAMENDI NEIGHBORHOOD RETAIL DEVELOPMENT  
CIVIL SITE CONSTRUCTION PLANS

HMT # 216.020

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 PLAN DEVELOPMENT PERMIT.

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

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

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

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

ALL "COMPACTED SUBGRADE" SHALL CONSIST OF NATIVE MATERIAL SCARIFIED TO A MINIMUM DEPTH OF SIX INCHES AND COMPACTED TO 95% DENSITY ACCORDING TO DENSITY TEST METHOD TCE-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, OFFICES, DIRECTORS, OR CONSULTANTS, HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.

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

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

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

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

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

AS PER 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 CONTROLS WHEN VEGETATION IS ESTABLISHED AND THE CONSTRUCTION AREA IS STABILIZED {31 TAC 313.5 (C)(12)}. ADDITIONAL PROTECTION MAY BE REQUIRED IF EXCESSIVE SOLIDS ARE BEING DISCHARGED FROM THE SITE.

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

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

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

UTILITIES

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

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

WASTEWATER NOTES

1. THE CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING WASTEWATER SYSTEM AT ALL TIMES DURING CONSTRUCTION.
2. A MINIMUM OF 8" WASTEWATER PIPE AND FITTING (P.V.C. SDR-26, ASTM, D-3034, D-3212, F-477) ARE REQUIRED ON NEW INSTALLATION.
3. 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 FOUR (4) FEET PAST THE UNDERGROUND ELECTRIC CONDUIT IF ELECTRIC IS INSTALLED IN THE FRONT EASEMENT.
4. PIPE BEDDING OF WASTEWATER LINES SHALL BE MANUFACTURED SAND OR PEA GRAVEL AS PER NBU SPECIFICATIONS.
5. SECONDARY BACKFILL OF WASTEWATER LINES SHALL GENERALLY CONSIST OF MATERIALS REMOVED FROM THE TRENCH AND SHALL BE FREE FROM BRUSH, DEBRIS AND TRASH, NO ROCKS OR STONES HAVING ANY DIMENSION LARGER THAN 6 INCHES AT THE LARGEST DIMENSION.
6. ALL WASTEWATER PIPES SHALL HAVE COMPRESSION OR MECHANICAL JOINTS AS PER 30 TAC §217.53 (C) (2).
7. FOR WASTEWATER LINES LESS THAN 24" IN DIAMETER, SELECT INITIAL BACKFILL MATERIAL SHALL BE PLACED IN TWO LIFTS
- a. THE FIRST LIFT SHALL BE SPREAD UNIFORMLY AND SIMULTANEOUSLY ON EACH SIDE AND UNDER THE SHOULDERS OF THE PIPE TO THE MID POINT OR SPRING LINE OF THE PIPE.
- b. THE SECOND LIFT SHALL BE PLACED TO A DEPTH AS SHOWN ON THE PIPE BACKFILL DETAIL. FOR PIPES LARGER THAN 24", 12" MAXIMUM LIFTS SHALL BE USED.
8. ALL MANHOLES MUST BE WATER TIGHT, EITHER MONOLITHIC, CAST-IN-PLACE CONCRETE STRUCTURES OR PREFABRICATED MANHOLES SPECIFICALLY APPROVED BY 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 THIRD MANHOLE IN SEQUENCE SHALL HAVE AN ALTERNATE MEANS OF VENTING. 30 TAC §213.5 (C)(3)(A) AND 30 TAC §217.55 (C).
9. ALL MANHOLES SHALL BE CONSTRUCTED SO THAT THE TOP OF THE RING IS TWO INCHES (2") ABOVE SURROUNDING GROUND EXCEPT WHEN LOCATED IN PAVED AREA. IN PAVED AREAS, THE MANHOLE RING SHALL BE FLUSH WITH PAVEMENT.
10. ALL NEW MANHOLES, UNLESS APPROVED BY NBU ENGINEERING, ARE TO HAVE COVERS WITH 32" OPENINGS.
11. WASTEWATER PIPE CONNECTIONS TO PRE-CAST MANHOLES WILL BE COMPRESSION JOINTS OR MECHANICAL "BOOT TYPE" JOINT AS APPROVED BY NBU.
12. WASTEWATER LINES SHALL BE TESTED TO MANHOLE.
13. IN AREAS WHERE A NEW WASTEWATER MANHOLE IS TO BE CONSTRUCTED OVER AN EXISTING WASTEWATER SYSTEM, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO TEST THE EXISTING MANHOLES BEFORE CONSTRUCTION. AFTER THE PROPOSED MANHOLE(S) HAS BEEN BUILT, THE CONTRACTOR SHALL RE-TEST THE EXISTING SYSTEM TO THE SATISFACTION OF THE CONSTRUCTION INSPECTOR. (NO SEPARATE PAY ITEM).
14. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH TCEQ RECOMMENDATIONS. THE WASTEWATER LINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON OR PVC MEETING THE ASTM SPECIFICATION FOR BOTH PIPES AND JOINTS OF 150 PSI AND SHALL BE IN ACCORDANCE WITH 30 TAC §217.53 (D) (3) (A) (i).
15. NO TESTING WILL BE REQUIRED FOR THE FIRST 30 DAYS FROM COMPLETE INSTALLATION OF THE WASTEWATER LINES. THE FOLLOWING SEQUENCE WILL BE STRICTLY ADHERED TO:
- a. PULL MANHOLE
- b. PERFORM AIR TEST
- c. CLEANING OF ANY DEBRIS
- d. FLUSHING OF SYSTEM
- e. TV INSPECTION (WITHIN 72 HOURS OF FINISHING)
16. A MINIMUM OF 3 FEET OF COVER IS TO BE MAINTAINED OVER THE WASTEWATER MAIN AND LATERALS AT SUBGRADE, OTHERWISE CONCRETE ENCASEMENT WILL BE REQUIRED.
17. WASTEWATER MAIN CONNECTIONS MADE DIRECTLY TO EXISTING MANHOLES WILL REQUIRE SUCCESSFUL TESTING OF THE MANHOLE IN ACCORDANCE WITH NBU CONNECTION & CONSTRUCTION POLICY MANUAL.
18. TCEQ AND EPA REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF WASTEWATER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN AND PROFILE SHEETS. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY NBU WATER SYSTEMS.
19. ALL MANHOLES NOT WITHIN PAVED AREAS SHALL HAVE LOOKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBU DETAIL DRAWING #329.
20. ALL MANHOLES OVER THE EDWARDS AQUIFER RECHARGE ZONE SHALL HAVE LOOKING CONCRETE COLLAR TO SECURE RING AND COVER TO MANHOLE CONE PER NBU DETAIL DRAWING #329.

WATER 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 42 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. 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.
12. ACCEPTABLE METER BOXES ARE D15-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.
13. 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.
14. 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 ID OF COVER.
15. WATER QUALITY SHALL BE PROTECTED WITH APPROPRIATE BACKFLOW PREVENTION ASSEMBLIES INSTALLED ON ALL IRRIGATION SYSTEMS, FIRE SUPPRESSION SYSTEMS AND MULTI-UNIT COMPLEXES ALONG WITH MULTI-LEVEL PROPERTIES ON THE DOMESTIC METER CONTAINMENT. NBU CAN ASSIST WITH THE DECISION ON APPROPRIATE BACKFLOW ASSEMBLIES ON A CASE BY CASE BASIS. CONTACT NBU BACKFLOW PREVENTION SPECIALIST TO CROSSCONNECTION@NBU.TXAS.COM
16. ALL BACKFLOW PREVENTION ASSEMBLIES SHALL BE TESTED UPON INSTALLATION AND REPORT SENT TO NBU VIA THE ONLINE TRACKING SYSTEM, CONTACT NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBU.TXAS.COM
17. ALL RESIDENTIAL AND COMMERCIAL PROPERTIES SHALL HAVE A CUSTOMER SERVICE INSPECTION CERTIFICATE (CSI INSPECTION) COMPLETED UPON COMPLETION OF THE BUILDING OR HOME STRUCTURE. CONTACT NBU BACKFLOW PREVENTION SPECIALIST FOR MORE DETAILS. EMAIL QUESTIONS TO CROSSCONNECTION@NBU.TXAS.COM

SEQUENCE OF CONSTRUCTION

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

GENERAL NBU NOTES

REVISED 3/31/11

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THE PROJECT SHALL BE APPROVED BY NEW BRAUNFELS UTILITIES AND COMPLY WITH THE CURRENT NEW BRAUNFELS UTILITIES WATER SYSTEMS CONNECTION/CONSTRUCTION POLICY.
2. CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE PLANS FROM THE CONSULTANT OR ENGINEER AND NOTIFY NBU WATER SYSTEMS ENGINEERING AT 830-608-8971 WITH AT LEAST TWO (2) WORKING DAYS (48 NOTICE WORK COMPLETED BY THE CONTRACTOR, WHICH HAS NOT RECEIVED A NOTICE TO PROCEED FROM NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.
3. THE DEVELOPER DEDICATES THE WATER / WASTEWATER MAINS UPON COMPLETION BY THE CONTRACTOR AND ACCEPTANCE BY THE NEW BRAUNFELS UTILITIES WATER SYSTEM. NBU WILL OWN AND MAINTAIN SAID WATER / WASTEWATER MAINS WHICH ARE LOCATED WITHIN PLATTED UTILITY EASEMENTS OR PUBLIC ROW OF PROPOSED DEVELOPMENTS. (AS APPLICABLE).
4. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNERS AND THE ENGINEER AND HIS EMPLOYEES, PARTNERS OFFICERS, DIRECTORS, OR CONSULTANTS HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF THE WORK ON THIS PROJECT, EXCEPTING FROM LIABILITY ARISING FROM SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, ENGINEER'S DIRECTORS, OFFICERS, EMPLOYEES, OR CONSULTANTS.
5. CONTRACTOR TO CONTACT THE ENGINEER-OF-RECORD (EOR) FOR ANY FIELD CHANGES. ANY REVISIONS OR CHANGES TO THE APPROVED CONSTRUCTION PLANS WILL REQUIRE ADDITIONAL APPROVAL BY NBU IN WRITING.
6. CONTRACTOR AND / OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION, ANY DAMAGES DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES, AND EXISTING UTILITIES (NOT ADJACENT ON PLANS). COST OF RESTORATIONS, IF ANY, SHALL BE THE CONTRACTOR'S ENTIRE EXPENSE.
8. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN VICINITY OF TREES SHALL PROCEED WITH CAUTION.
9. CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES AND TAXES AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL PROSECUTION OF THE WORK.
10. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.
11. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAN DEVELOPMENT PERMIT.
12. THE CONTRACTOR SHALL NOT PLACE ANY MATERIALS ON THE RECHARGE ZONE OF THE EDWARDS AQUIFER WITHOUT AN APPROVED WATER POLLUTION ABATEMENT PLAN FROM THE TCEQ 31 TAC 313.4 AND 31 TAC 313.9.
13. BARRICADES AND WARNING SIGNS SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND SHALL BE LOCATED TO PROVIDE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT WHILE PROVIDING CONTINUOUS TRAFFIC FLOW AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL DEVICES DURING CONSTRUCTION.
14. CONTRACTOR IS REQUIRED TO VERIFY PROJECT ELEVATIONS. THE TERM "MATCH EXISTING" SHALL BE UNDERSTOOD TO SIGNIFY BOTH HORIZONTAL AND VERTICAL ALIGNMENT.
15. THE LOCATION OF UTILITIES, EITHER UNDERGROUND OR OVERHEAD, SHOWN WITHIN THE RIGHT OF WAY ARE APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION OPERATIONS.
16. OSHA REGULATIONS PROHIBIT OPERATIONS THAT WILL BRING PERSONS OR EQUIPMENT WITHIN 10 FEET OF AN ENERGIZED LINE, WHERE WORKMEN AND/OR EQUIPMENT HAVE TO WORK CLOSE TO AN ENERGIZED ELECTRICAL LINE, THE CONTRACTOR SHALL NOTIFY THE ELECTRICAL POWER COMPANY INVOLVED AND MAKE WHATEVER ADJUSTMENTS NECESSARY TO ENSURE THE SAFETY OF THOSE WORKMEN.
17. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION. CONTRACTORS SHALL CALL THE ONE CALL SYSTEM FOR WATER/WASTEWATER LOCATION.
18. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192 (8), GAS COMPANIES MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.
19. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE TRAFFIC CONTROL AND WILL BE RESPONSIBLE FOR FURNISHING ALL TRAFFIC CONTROL DEVICES AND EQUIPMENT. THE CONTRACTOR SHALL BE CONDUCTED TO PROVIDE THE LEAST POSSIBLE INTERFERENCE TO TRAFFIC SO AS TO PERMIT THE CONTINUOUS MOVEMENT OF THE TRAFFIC IN ONE DIRECTION AT ALL TIMES. THE CONTRACTOR SHALL CLEAN UP AND REMOVE FROM THE WORK AREA ANY LOOSE MATERIAL RESULTING FROM CONTRACT OPERATIONS AT THE END OF EACH WORKDAY.
20. PRIOR TO ORDERING MATERIALS TO BE USED IN CONSTRUCTION, CONTRACTOR SHALL PROVIDE THE ENGINEER WITH FOUR (4) COPIES OF THE SOURCE, TYPE, GRADATION, MATERIAL SPECIFICATION DATA AND / OR SHOP DRAWINGS, AS APPLICABLE, TO SATISFY THE REQUIREMENTS OF THE FOLLOWING ITEMS AND ALL MATERIAL ITEMS REFERRED TO IN THESE LISTED ITEMS:
  - A. WATER MAINS AND SERVICES
  - B. WASTEWATER MAINS AND SERVICES
21. THRUST BLOCKS WILL NOT BE ALLOWED ON THE SYSTEM WITHOUT SPECIAL APPROVAL. JOINTS WILL BE RESTRAINED WITH RESTRAINING SYSTEMS APPROVED BY NBU AND RESTRAINT LENGTH SHALL BE SUBMITTED TO NBU AT THE TIME OF PLAN SUBMITTAL.
22. WATER JETTING THE BACKFILL WITHIN A STREET WILL NOT BE PERMITTED. WASTEWATER TRENCHES SUBJECT TO TRAFFIC SHALL CONFORM TO NBU CONNECTION AND CONSTRUCTION POLICY MANUAL.
23. WHERE THE MINIMUM 9 FOOT SEPARATION DISTANCE BETWEEN WASTEWATER LINES AND WATER LINES / MAINS CANNOT BE MAINTAINED, THE INSTALLATION OF WASTEWATER LINES SHALL BE IN STRICT ACCORDANCE WITH 30 TAC 217.
24. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.
25. UTILITY TRENCH COMPACTION WITH STREET R.O.W.
  - A. ALL UTILITY TRENCH COMPACTION TEST WITHIN THE STREET PAVEMENT SECTION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER'S GEO-TECHNICAL ENGINEER.
  - B. FILL MATERIAL SHALL BE PLACED IN UNIFORM LAYERS NOT TO EXCEED TWELVE INCHES (12") LOOSE.
  - C. EACH LAYER OF MATERIAL SHALL BE COMPACTED AS SPECIFIED AND TESTED FOR DENSITY AND MOISTURE IN ACCORDANCE WITH TEST METHODS TEX-113-E, TEX-114-E, TEX-115-E.
  - D. THE NUMBER AND LOCATION OF REQUIRED TESTS SHALL BE DETERMINED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE CITY OF NEW BRAUNFELS STREET INSPECTOR.
  - E. UPON COMPLETION OF TESTING THE GEO-TECHNICAL ENGINEER SHALL PROVIDE THE CITY OF NEW BRAUNFELS STREET INSPECTION WITH ALL TESTING DOCUMENTATION AND A CERTIFICATION STATING THAT THE PLACEMENT OF FILL MATERIAL HAS BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.

CITY OF NEW BRAUNFELS CONSTRUCTION NOTES

REVISED 01/2019

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

THE MOST CURRENT EDITIONS OF THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS AND THE TEXAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND BRIDGES SHALL BE FOLLOWED FOR ALL CONSTRUCTION EXCEPT AS AMENDED BY THE CITY OF NEW BRAUNFELS STANDARD DETAILS.

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

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

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

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

FOR COMMERCIAL PERMIT (CP) PROJECTS:

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

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

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

GROUNDWATER

IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER, CONTRACTOR, SUBCONTRACTORS, BUILDERS, GEO-TECHNICAL ENGINEER, AND PROJECT ENGINEER TO MAINTAIN THE ADEQUACY 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 WITHIN THE SITE. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MITIGATION 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 (PDF COPY) THE CITY ENGINEER SHALL ACCEPT SUCH IMPROVEMENTS FOR THE CITY OF NEW BRAUNFELS, SUBJECT TO THE GUARANTY OF MATERIAL AND WORKMANSHIP PROVISIONS IN THIS SECTION.

CONSTRUCTION NOTE

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

DRAINAGE NOTE

DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE THE IMPACT OF CONSTRUCTION SHALL BE INSTALLED PRIOR TO ADDING IMPROVISED 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 LAYDOWN OR BOTTOM OF FLOOR JOISTS A MINIMUM OF ONE FOOT ABOVE THE 100-YEAR WATER FLOOR ELEVATION IN THE STRUCTURE. DRIVEWAYS SERVING HOUSES ON THE DOWNHILL SIDE OF THE STREET SHALL HAVE A PROPERLY SIZED CROSS SWALE PREVENTING RUNOFF FROM ENTERING THE GARAGE.

SOILS TESTING

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

ROADWAY

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

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

ITEM 340

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

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

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

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

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



# RECORD DRAWING

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

DATE: JULY 2020

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

HMT ENGINEERING AND SURVEYING

290 S. CASTELL AVE., STE. 100  
NEW BRAUN

Drawing Name: N:\\_Projects\216 - CSA Properties, LLC\020 - Veramend Neighborhood Retail\Cds\_ASBUITS\CITYASBUITS-216.020\_CDW6.dwg User: barboza Jul 10, 2020 - 12:23pm

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

CONSTRUCTION STABILIZED ENTRANCE  
SAWCUT CURB FOR CONSTRUCTION ENTRANCE.

STABILIZED CONSTRUCTION AREA SHALL BE CONSTRUCTED OF 3"X5" ROCK TO BE PLACED A MINIMUM LENGTH OF 25'-FT. AND MAINTAINED SO THAT CONSTRUCTION DEBRIS DOES NOT FALL WITHIN THE CITY RIGHT-OF-WAY. RIGHT- OF-WAY MUST BE CLEARED FROM MUD, ROCKS, ETC. AT ALL TIMES.  
(NOTES TO BE PLACED ON ALL WW PLAN & DETAIL SHEETS)  
ENSURE ALL DRIVEWAY APPROACHES ARE BUILT IN GENERAL ACCORDANCE WITH A.D.A. SPECIFICATIONS. NO VALVES, HYDRANTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.

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

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

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

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

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

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

**Texas Commission on Environmental Quality  
Water Pollution Abatement Plan  
General Construction Notes**

- Written construction notification must be given to the appropriate TCEQ regional office no later than 48 hours prior to commencement of the regulated activity. Information must include the date on which the regulated activity will commence, the name of the approved plan for the regulated activity, and the name of the prime contractor and the name and telephone number of the contact person.
- All contractors conducting regulated activities associated with this project must be provided with complete copies of the approved Water Pollution Abatement Plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors are required to keep on-site copies of the approved plan and approval letter.
- If any sensitive feature is discovered during construction, all regulated activities near the sensitive feature must be suspended immediately. The appropriate TCEQ regional office must be immediately notified of any sensitive features encountered during construction. The regulated activities near the sensitive feature may not proceed until the TCEQ has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality.
- No temporary aboveground hydrocarbon and hazardous substance storage tank system is installed within 150 feet of a domestic, industrial, irrigation, or public water supply well, or other sensitive feature.
- Prior to commencement of construction, all temporary erosion and sedimentation (E&S) control measures must be properly selected, installed, and maintained in accordance with the manufacturers specifications and good engineering practices. Controls specified in the temporary storm water section of the approved Edwards Aquifer Protection Plan are required during construction. If inspections indicate a control has been used inappropriately, or incorrectly, the applicant must replace or modify the control for site situations. The controls must remain in place until disturbed areas are revegetated and the areas have become permanently stabilized.
- If sediment escapes the construction site, off-site accumulations of sediment must be removed at a frequency sufficient to minimize offsite impacts to water quality (e.g., fugitive sediment in street being washed into surface streams or sensitive features by the next rain).
- Sediment must be removed from sediment traps or sedimentation ponds not later than when design capacity has been reduced by 50%. A permanent stake must be provided that can indicate when the sediment occupies 50% of the basin volume.
- Litter, construction debris, and construction chemicals exposed to stormwater shall be prevented from becoming a pollutant source for stormwater discharges (e.g., screening outfalls, picked up daily).
- All spoils (excavated material) generated from the project site must be stored on-site with proper E&S controls. For storage or disposal of spoils at another site on the Edwards Aquifer Recharge Zone, the owner of the site must receive approval of a water pollution abatement plan for the placement of fill material or mass grading prior to the placement of spoils at the other site.
- Stabilization measures shall be initiated as soon as practicable in portions of the site where

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construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Where the initiation of stabilization measures by the 14th day after construction activity temporary or permanently cease is precluded by weather conditions, stabilization measures shall be initiated as soon as practicable. Where construction activity on a portion of the site is temporarily ceased, and earth disturbing activities will be resumed within 21 days, temporary stabilization measures do not have to be initiated on that portion of site. In areas experiencing droughts where the initiation of stabilization measures by the 14th day after construction activity has temporarily or permanently ceased is precluded by seasonal arid conditions, stabilization measures shall be initiated as soon as practicable.

- The following records shall be maintained and made available to the TCEQ upon request: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; and the dates when stabilization measures are initiated.
- The holder of any approved Edward Aquifer protection plan must notify the appropriate regional office in writing and obtain approval from the executive director prior to initiating any of the following:
  - any physical or operational modification of any water pollution abatement structure(s), including but not limited to ponds, dams, berms, sewage treatment plants, and diversionary structures;
  - any change in the nature or character of the regulated activity from that which was originally approved or a change which would significantly impact the ability of the plan to prevent pollution of the Edwards Aquifer;
  - any development of land previously identified as undeveloped in the original water pollution abatement plan.

Austin Regional Office  
2800 S. IH 35, Suite 100  
Austin, Texas 78704-5712  
Phone (512) 339-2929  
Fax (512) 339-3795

San Antonio Regional Office  
14250 Judson Road  
San Antonio, Texas 78233-4480  
Phone (210) 490-3096  
Fax (210) 545-4329

**THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.**

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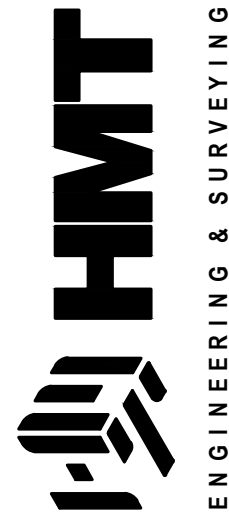
**RECORD DRAWING**

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DATE:   JULY 2020   BY: Chris Van Hous, PE

HMT ENGINEERING AND SURVEYING

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



07/10/2020

**CONSTRUCTION NOTES  
(2 OF 4)  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT**

NO.	REVISION DESCRIPTION	REVISION DATE
1	ASBUITS	07/10/2020

DATE: **FEBRUARY 2020**

DRAWN BY: **JAD**

DESIGNED BY: **JMM**

REVIEWED BY: **CWH**

HMT PROJECT NO.:  
**216.020**

**SHEET**

**C1.2**

NBU SEWAGE COLLECTION SYSTEM OVER THE EDWARDS AQUIFER NOTES

1. THIS SEWAGE COLLECTION SYSTEM (SCS) MUST BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) EDWARDS AQUIFER RULES 30 TEXAS ADMINISTRATIVE CODE (TAC) §213.5(c), THE DESIGN CRITERIA FOR DOMESTIC WATER SYSTEMS: 30 TAC 217 SUBCHAPTER C (§§217.51–217.70), AND NEW BRAUNFELS UTILITIES STANDARD SPECIFICATIONS.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROPOSED REGULATED PROJECT MUST BE PROVIDED WITH COPIES OF THE SEWAGE COLLECTION SYSTEM PLAN AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF THE APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS MUST BE REQUIRED TO KEEP ON-SITE COPIES OF THE PLAN AND THE APPROVAL LETTER.
3. PRIOR TO COMMENCING ANY REGULATED ACTIVITY, THE APPLICANT OR HIS AGENT MUST NOTIFY THE AUSTIN REGIONAL OFFICE, IN WRITING, OF THE DATE ON WHICH THE REGULATED ACTIVITY WILL BEGIN.
4. ANY MODIFICATION TO THE ACTIVITIES DESCRIBED IN THE REFERENCED SCS APPLICATION FOLLOWING THE DATE OF APPROVAL MAY REQUIRE THE SUBMITTAL OF AN SCS APPLICATION TO MODIFY THIS APPROVAL, INCLUDING THE PAYMENT OF APPROPRIATE FEES AND ALL INFORMATION NECESSARY FOR ITS REVIEW AND APPROVAL.
5. THE TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE INSTALLED PRIOR TO INITIATING ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONSTRUCTION AREA IS STABILIZED.
6. THE WASTEWATER LINE TRENCH DETAILS SHOWING THE CROSS SECTION WITH THE DIMENSIONS, PIPE PLACEMENT, AND BACKFILL INSTRUCTIONS ARE INCLUDED ON THE PLAN DETAILS SHEET OF THESE PLANS. ALL WASTEWATER PIPES AND JOINTS MUST MEET THE REQUIREMENTS IN 30 TAC §217.53(c).

GRAVITY LINES MUST BE SDR 26 OR LESS. PRESSURIZED SEWER SYSTEMS MUST HAVE PIPE WITH A MINIMUM WORKING PRESSURE RATING OF 150 PSI.

THE ASTM, ANSI, OR AWWA SPECIFICATION NUMBERS FOR THE PIPE(S) AND JOINT(S) ARE SPECIFIED IN THE STANDARD SPECIFICATIONS.

THE PIPE MATERIAL, THE PRESSURE CLASSES, AND THE SDR AND/OR DR DESIGNATIONS ARE SPECIFIED IN THE STANDARD SPECIFICATIONS.

7. IF ANY SENSITIVE FEATURES ARE DISCOVERED DURING THE WASTEWATER LINE TRENCHING ACTIVITIES, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE OWNER MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE OF THE TCEQ IN WRITING WITHIN TWO WORKING DAYS OF THE FEATURE BEING DISCOVERED. THE APPLICANT MUST SUBMIT A PLAN FOR ENSURING THE STRUCTURAL INTEGRITY OF THE SEWER LINE OR FOR MODIFYING THE PROPOSED COLLECTION SYSTEM ALIGNMENT AROUND THE FEATURE. THE REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MAY NOT PROCEED UNTIL THE EXECUTIVE DIRECTOR HAS REVIEWED AND APPROVED THE METHODS PROPOSED TO PROTECT THE SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM ANY POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY WHILE MAINTAINING THE STRUCTURAL INTEGRITY OF THE LINE.
8. SEWER LINES LOCATED WITHIN OR CROSSING THE 5-YEAR FLOODPLAIN OF A DRAINAGE WAY WILL BE PROTECTED FROM INUNDATION AND STREAM VELOCITIES, WHICH COULD CAUSE EROSION AND SCOURING OF BACKFILL. THE TRENCH MUST BE CAPPED WITH CONCRETE TO PREVENT SCOURING OF BACKFILL, OR THE SEWER LINES MUST BE ENCASED IN CONCRETE. ALL CONCRETE SHALL HAVE A MINIMUM THICKNESS OF SIX (6) INCHES.
9. BLASTING PROCEDURES FOR PROTECTION OF EXISTING SEWER LINES AND OTHER UTILITIES WILL BE IN ACCORDANCE WITH THE NATIONAL FIRE PROTECTION ASSOCIATION CRITERIA. SAND IS NOT ALLOWED AS BEDDING OR BACKFILL IN TRENCHES THAT HAVE BEEN BLASTED. IF ANY EXISTING SEWER LINES ARE DAMAGED, THE LINES MUST BE REPAIRED AND RETESTED.
10. ALL MANHOLES CONSTRUCTED OR REHABILITATED ON THIS PROJECT MUST HAVE WATERTIGHT SIZE ON SIZE RESILIENT CONNECTORS ALLOWING FOR DIFFERENTIAL SETTLEMENT. IF MANHOLES ARE CONSTRUCTED WITHIN THE 100-YEAR FLOODPLAIN, THE COVER MUST HAVE A GASKET AND BE BOLTED TO THE RING. WHERE GASKETED MANHOLE COVERS ARE REQUIRED FOR MORE THAN THREE MANHOLES IN SEQUENCE OR FOR MORE THAN 1500 FEET, ALTERNATE MEANS OF VENTING WILL BE PROVIDED. BRICKS ARE NOT AN ACCEPTABLE CONSTRUCTION MATERIAL FOR ANY PORTION OF THE MANHOLE.

ALL MANHOLES MUST BE WATER TIGHT, WITH WATERTIGHT RINGS AND COVERS, AND MUST BE CONSTRUCTED AND TESTED TO MEET THE REQUIREMENTS OF §217.58 OF THIS TITLE (RELATIVELY TO THE SEWER COLLECTION SYSTEM).

THE DIAMETER OF MANHOLES MUST BE A MINIMUM OF 48 INCHES AND THE MANHOLE COVERS MUST HAVE A MINIMUM NOMINAL DIAMETER OF 32 INCHES. THESE DIMENSIONS AND OTHER DETAILS SHOWING COMPLIANCE WITH THE COMMISSION'S RULES CONCERNING MANHOLES AND PIPE/MANHOLE INVERTS DESCRIBED IN 30 TAC §217.55(1)(2) ARE INCLUDED ON PLAN DETAIL SHEETS.

THE INCLUSION OF STEPS IN A MANHOLE IS PROHIBITED.

11. WHERE WATER LINES AND NEW WASTEWATER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E. WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES), THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(d) (PIPE DESIGN) OR 30 TAC §290.44(e) (WATER DISTRIBUTION).
12. WHERE WASTEWATER LINES DEVIATE FROM STRAIGHT ALIGNMENT AND UNIFORM GRADE, ALL CURVATURE OF WASTEWATER PIPE MUST BE ACHIEVED BY THE FOLLOWING PROCEDURE WHICH IS RECOMMENDED BY THE PIPE MANUFACTURER (NOT APPLICABLE):  
  
IF PIPE FLEXURE IS PROPOSED, THE FOLLOWING METHOD OF PREVENTING DEFLECTION OF THE JOINT MUST BE USED (NOT APPLICABLE):

13. NEW WASTEWATER COLLECTION SYSTEM LINES MUST BE CONSTRUCTED WITH "STUB OUTS" FOR THE CONNECTION OF ANTICIPATED EXTENSIONS. THE LOCATION OF SUCH "STUB OUTS" MUST BE MARKED ON THE GROUND SUCH THAT THE LOCATION OF SUCH "STUB OUTS" CAN BE EASILY DETERMINED AT THE TIME OF CONNECTION OF THE EXTENSIONS. SUCH "STUB OUTS" MUST BE MANUFACTURED WYES OR TEES THAT ARE COMPATIBLE IN SIZE AND MATERIAL WITH BOTH THE SEWER LINE AND THE EXTENSION. AT THE TIME OF ORIGINAL CONSTRUCTION, NEW "STUB OUTS" MUST BE CONSTRUCTED SUFFICIENTLY TO EXTEND BEYOND THE EDGE(S) OF ANY STREET PAVEMENT UNDER WHICH THEY WILL PASS TO THE PROPERTY LINE. ALL "STUB OUTS" MUST BE SEALED WITH A MANUFACTURED CAP TO PREVENT LEAKAGE. EXTENSIONS THAT WERE NOT ANTICIPATED AT THE TIME OF ORIGINAL CONSTRUCTION OR THAT ARE TO BE CONNECTED TO AN EXISTING WASTEWATER LINE NOT FURNISHED WITH "STUB OUTS" MUST BE CONNECTED USING A MANUFACTURED SADDLE AND IN ACCORDANCE WITH ACCEPTED PLUMBING TECHNIQUES.

IF NO "STUB OUT" IS PRESENT, AN ALTERNATE METHOD OF JOINING LATERALS IS SHOWN IN THE PLAN DETAIL SHEETS (FOR POTENTIAL FUTURE LATERALS).

THE PRIVATE SERVICE LATERAL "STUB OUTS" MUST BE INSTALLED AS SHOWN ON THE PLAN AND PROFILE SHEETS AND MARKED AFTER BACKFILLING AS SHOWN IN THE PLAN DETAIL ON PLAN SHEETS.

14. TRENCHING, BEDDING, AND BACKFILL MUST CONFORM TO 30 TAC §217.54. THE BEDDING AND BACKFILL FOR FLEXIBLE PIPE MUST COMPLY WITH THE STANDARDS OF ASTM D-2321, CLASSES 1A, 1B, II, AND III. RIGID PIPE BEDDING MUST COMPLY WITH THE REQUIREMENTS OF ASTM C 12 (ANSI A 106.2) CLASSES A, B, OR C.
15. WASTEWATER LINES MUST BE TESTED FROM MANHOLE TO MANHOLE. WHEN A NEW WASTEWATER LINE IS CONNECTED TO AN EXISTING STUB OR CLEAN OUT, IT MUST BE TESTED FROM EXISTING MANHOLE TO NEW MANHOLE. IF A STUB OR CLEAN OUT IS USED AT THE END OF THE PROPOSED SEWER LINE, NO PRIVATE SERVICE ATTACHMENTS MAY BE CONNECTED BETWEEN THE LAST MANHOLE AND THE CLEAN OUT UNLESS IT CAN BE

- CERTIFIED AS CONFORMING WITH THE PROVISIONS OF 30 TAC §213.5(c)(3)(E).
16. ALL WASTEWATER LINES MUST BE TESTED IN ACCORDANCE WITH 30 TAC §217.57. THE ENGINEER MUST RETAIN COPIES OF ALL TEST RESULTS, WHICH MUST BE MADE AVAILABLE TO THE EXECUTIVE DIRECTOR UPON REQUEST. THE ENGINEER MUST CERTIFY IN WRITING THAT ALL WASTEWATER LINES HAVE PASSED ALL REQUIRED TESTING TO THE APPROPRIATE REGIONAL OFFICE WITHIN 30 DAYS OF TEST COMPLETION AND PRIOR TO USE OF THE NEW COLLECTION SYSTEM. THE TESTING METHOD WILL BE:

- a. INFILTRATION OR EXFILTRATION TESTS. THE TOTAL EXFILTRATION AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF PIPE AT THE UPSTREAM MANHOLE. WHEN PIPES ARE INSTALLED BELOW THE GROUNDWATER LEVEL AN INFILTRATION TEST MUST BE USED IN LIEU OF THE EXFILTRATION TEST. THE TOTAL INFILTRATION, AS DETERMINED BY A HYDROSTATIC HEAD TEST, MUST NOT EXCEED 50 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT A MINIMUM TEST HEAD OF TWO FEET ABOVE THE CROWN OF PIPE AT THE UPSTREAM MANHOLE, OR TWO FEET ABOVE THE EXISTING GROUNDWATER LEVEL, WHICHEVER IS GREATER. FOR CONSTRUCTION WITHIN THE 25 YEAR FLOODPLAIN, THE INFILTRATION OR EXFILTRATION MUST NOT EXCEED 10 GALLONS PER INCH DIAMETER PER MILE OF PIPE PER 24 HOURS AT THE SAME MINIMUM TEST HEAD. IF THE QUANTITY OF INFILTRATION OR EXFILTRATION EXCEEDS THE MAXIMUM QUANTITY SPECIFIED, REMEDIAL ACTION MUST BE UNDERTAKEN IN ORDER TO REDUCE THE INFILTRATION OR EXFILTRATION TO AN AMOUNT WITHIN THE LIMITS SPECIFIED.

- b. LOW PRESSURE AIR TEST. THE PROCEDURE FOR THE LOW-PRESSURE AIR TEST MUST CONFORM TO THE PROCEDURES DESCRIBED IN ASTM C-828, ASTM C-924, ASTM F-1417 OR OTHER APPROPRIATE PROCEDURES, EXCEPT FOR TESTING TIMES. THE TEST TIMES MUST BE AS OUTLINED IN THIS SECTION. FOR SECTIONS OF PIPE LESS THAN 36-INCH AVERAGE INSIDE DIAMETER, THE FOLLOWING PROCEDURE MUST APPLY UNLESS THE PIPE IS TO BE JOINT TESTED. THE PIPE MUST BE PRESSURIZED TO 3.5 PSI GREATER THAN THE PRESSURE EXERTED BY GROUNDWATER ABOVE THE PIPE. ONCE THE PRESSURE IS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 POUNDS PER SQUARE INCH GAUGE TO 2.5 POUNDS PER SQUARE INCH GAUGE MUST BE COMPUTED FROM THE FOLLOWING EQUATION:  
  
WHERE:

$$T = \frac{0.085 \times D \times K}{Q}$$

T=TIME FOR PRESSURE TO DROP 1.0 POUND PER SQUARE INCH GAUGE, IN SECONDS

K=0.000419xDxL, BUT NOT LESS THAN 1.0

D=AVERAGE INSIDE PIPE DIAMETER, IN INCHES

L=LENGTH OF LINE OF SAME SIZE BEING TESTED, IN FEET

Q=RATE OF LOSS, 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE WILL BE USED

PIPE DIAMETER (INCHES)	MINIMUM TIME (SECONDS)	LENGTH FOR MINIMUM (FEET)	TIME FOR LONGER LENGTH (SECONDS)
6	340	398	0.855
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
24	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

THE TEST MAY BE STOPPED IF NO PRESSURE LOSS HAS OCCURRED DURING THE FIRST 25% OF THE CALCULATED TESTING TIME. IF ANY PRESSURE LOSS OR LEAKAGE HAS OCCURRED DURING THE FIRST 25% OF THE TESTING PERIOD, THE TEST MUST CONTINUE FOR THE ENTIRE TEST DURATION AS OUTLINED ABOVE OR UNTIL FAILURE. LINES WITH A 27-INCH AVERAGE INSIDE DIAMETER AND LARGER MAY BE AIR TESTED AT EACH JOINT. PIPE GREATER THAN 36-INCH DIAMETER MUST BE TESTED FOR LEAKAGE AT EACH JOINT. IF THE JOINT TEST IS USED, A VISUAL INSPECTION OF THE JOINT MUST BE PERFORMED IMMEDIATELY AFTER TESTING. THE PIPE IS TO BE PRESSURIZED TO 3.5 PSI GREATER THAN THE PRESSURE EXERTED BY THE GROUNDWATER ABOVE THE PIPE. ONCE THE PRESSURE HAS STABILIZED, THE MINIMUM TIME ALLOWABLE FOR THE PRESSURE TO DROP FROM 3.5 POUNDS PER SQUARE INCH GAUGE TO 2.5 POUNDS PER SQUARE INCH GAUGE MUST BE 10 SECONDS.

- c. DEFLECTION TESTING. DEFLECTION TESTS MUST BE PERFORMED ON ALL FLEXIBLE PIPES. FOR PIPELINES WITH INSIDE DIAMETERS LESS THAN 27 INCHES, A RIGID MANDREL MUST BE USED TO MEASURE DEFLECTION.

FOR PIPELINES WITH AN INSIDE DIAMETER OF 27 INCHES AND GREATER, A METHOD APPROVED BY THE EXECUTIVE DIRECTOR MUST BE USED TO TEST FOR VERTICAL DEFLECTIONS. OTHER METHODS MUST PROVIDE A PRECISION OF +/- TWO TENTHS OF ONE PERCENT (0.2%) DEFLECTION. THE TEST MUST BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE FOR AT LEAST 30 DAYS. NO PIPE WILL EXCEED A DEFLECTION OF FIVE PERCENT. IF A PIPE SHOULD FAIL TO PASS THE DEFLECTION TEST, THE PROBLEM MUST BE CORRECTED AND A SECOND TEST MUST BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AN ADDITIONAL 30 DAYS. THE TESTS MUST BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES. THE DESIGN ENGINEER SHOULD RECOGNIZE THAT THIS IS A MAXIMUM DEFLECTION CRITERION FOR ALL PIPES AND A DEFLECTION TEST LESS THAN FIVE PERCENT MAY BE MORE APPROPRIATE FOR SPECIFIC TYPES AND SIZES OF PIPE. UPON COMPLETION OF CONSTRUCTION, THE DESIGN ENGINEER OR OTHER TEXAS LICENSED PROFESSIONAL ENGINEER MUST CERTIFY, TO THE EXECUTIVE DIRECTOR, THAT THE ENTIRE INSTALLATION HAS PASSED THE DEFLECTION TEST. THIS CERTIFICATION MAY BE MADE IN CONJUNCTION WITH THE NOTICE OF COMPLETION REQUIRED IN §217.14 OF THIS TITLE (RELATING TO COMPLETION NOTICE). THIS CERTIFICATION MUST BE PROVIDED FOR THE COMMISSION TO CONSIDER THE REQUIREMENTS OF THE APPROVAL TO HAVE BEEN MET.



RECORD DRAWING

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DATE: JULY 2020 BY: *Chris Van Heerde, PE.*

HMT ENGINEERING AND SURVEYING

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



07/10/2020

CONSTRUCTION NOTES  
(3 OF 4)  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION DESCRIPTION	REVISION DATE	
		DATE	ASBUILTS
1		07/10/2020	

DATE: FEBRUARY 2020

DRAWN BY: JAD

DESIGNED BY: JMM

REVIEWED BY: CVH

HMT PROJECT NO.:  
216.020

SHEET

C1.3

Drawing Name: N:\\_Projects\216 - ASA Properties, LLC\020 - Veramendi Neighborhood Retail\CDS\_ASBUILD\3\CITY\ASBUILTS-216.020\_C006.dwg Jul 10, 2020 - 12:23pm User: barboza

Texas Commission on Environmental Quality  
Organized Sewage Collection System  
General Construction Notes

Edwards Aquifer Protection Program Construction Notes – Legal Disclaimer

The following listed "construction notes" are intended to be advisory in nature only and do not constitute an approval or conditional approval by the Executive Director, nor do they constitute a comprehensive listing of rules or conditions to be followed during construction. Further actions may be required to achieve compliance with TCEQ regulations found in Title 30, Texas Administrative Code, Chapters 213 and 217, as well as local ordinances and regulations providing for the protection of water quality. Additionally, nothing contained in the following listed "construction notes" restricts the powers of the Executive Director, the commission or any other governmental entity to prevent, correct, or curtail activities that result or may result in pollution of the Edwards Aquifer or hydrologically connected surface waters. The holder of any Edwards Aquifer Protection Plan containing "construction notes" is still responsible for compliance with Title 30, Texas Administrative Code, Chapters 213 or any other applicable TCEQ regulation, as well as all conditions of an Edwards Aquifer Protection Plan through all phases of plan implementation. Failure to comply with any condition of the Executive Director's approval, whether or not in contradiction of any "construction notes" is a violation of TCEQ regulations and any violation is subject to administrative rules, orders, and penalties as provided under Title 30, Texas Administrative Code § 213.10 (relating to Enforcement). Such violations may also be subject to civil penalties and injunction. The following listed "construction notes" in no way represent an approved exception by the Executive Director to any part of Title 30 Texas Administrative Code, Chapters 213 and 217, or any other TCEQ applicable regulation.

- This Organized Sewage Collection System (SCS) must be constructed in accordance with 30 Texas Administrative Code (TAC) §213.5(c), the Texas Commission on Environmental Quality's (TCEQ) Edwards Aquifer Rules and any local government standard specifications.
- All contractors conducting regulated activities associated with this proposed regulated project must be provided with copies of the SCS plan and the TCEQ letter indicating the specific conditions of its approval. During the course of these regulated activities, the contractors must be required to keep on-site copies of the plan and the approval letter.
- A written notice of construction must be submitted to the presiding TCEQ regional office at least 48 hours prior to the start of any regulated activities. This notice must include:
  - the name of the approved project;
  - the activity start date; and
  - the contact information of the prime contractor.
- Any modification to the activities described in the referenced SCS application following the date of approval may require the submittal of an SCS application to modify this approval, including the payment of appropriate fees and all information necessary for its review and approval.
- Prior to beginning any construction activity, all temporary erosion and sedimentation (E&S) control measures must be properly installed and maintained in accordance with the manufacturers specifications. These controls must remain in place until the disturbed areas have been permanently stabilized.
- If any sensitive features are discovered during the wastewater line trenching activities, all regulated activities near the sensitive feature must be suspended immediately. The applicant must immediately notify the appropriate regional office of the TCEQ of the feature discovered. A geologist's assessment of the location and extent of the feature discovered must be reported to that regional office in writing and the applicant must submit a plan for ensuring the structural integrity of the sewer line or for modifying the proposed collection system alignment around the feature. The regulated activities near the sensitive feature may not proceed until the

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- L = length of line of same size being tested, in feet  
Q = rate of loss, 0.0015 cubic feet per minute per square foot internal surface
- (C) Since a K value of less than 1.0 may not be used, the minimum testing time for each pipe diameter is shown in the following Table C.3:

Pipe Diameter (inches)	Minimum Time (seconds)	Maximum Length for Minimum Time (feet)	Time for Longer Length (seconds/foot)
6	340	398	0.855
8	454	298	1.520
10	567	239	2.374
12	680	199	3.419
15	850	159	5.342
18	1020	133	7.693
21	1190	114	10.471
24	1360	100	13.676
27	1530	88	17.309
30	1700	80	21.369
33	1870	72	25.856

- (D) An owner may stop a test if no pressure loss has occurred during the first 25% of the calculated testing time.
- (E) If any pressure loss or leakage has occurred during the first 25% of a testing period, then the test must continue for the entire test duration as outlined above or until failure.
- (F) Wastewater collection system pipes with a 27 inch or larger average inside diameter may be air tested at each joint instead of following the procedure outlined in this section.
- (G) A testing procedure for pipe with an inside diameter greater than 33 inches must be approved by the executive director.
- (2) **Infiltration/Exfiltration Test.**
- (A) The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch of diameter per mile of pipe per 24 hours at a minimum test head of 2.0 feet above the crown of a pipe at an upstream manhole.
- (B) An owner shall use an infiltration test in lieu of an exfiltration test when pipes are installed below the groundwater level.
- (C) The total exfiltration, as determined by a hydrostatic head test, must not exceed 50 gallons per inch diameter per mile of pipe per 24 hours at a minimum test head of two feet above the crown of a pipe at an upstream manhole, or at least two feet above existing groundwater level, whichever is greater.
- (D) For construction within a 25-year flood plain, the infiltration or exfiltration must not exceed 10 gallons per inch diameter per mile of pipe per 24 hours at the same minimum test head as in subparagraph (C) of this paragraph.
- (E) If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, an owner shall undertake remedial action in order to reduce

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Page 4 of 6

executive director has reviewed and approved the methods proposed to protect the sensitive feature and the Edwards Aquifer from any potentially adverse impacts to water quality while maintaining the structural integrity of the line.

- Sewer lines located within or crossing the 5-year floodplain of a drainage way will be protected from inundation and stream velocities which could cause erosion and scouring of backfill. The trench must be capped with concrete to prevent scouring of backfill, or the sewer lines must be encased in concrete. All concrete shall have a minimum thickness of 6 inches.
  - Blasting procedures for protection of existing sewer lines and other utilities will be in accordance with the National Fire Protection Association criteria. Sand is not allowed as bedding or backfill in trenches that have been blasted. If any existing sewer lines are damaged, the lines must be repaired and retested.
  - All manholes constructed or rehabilitated on this project must have watertight size on size resilient connectors allowing for differential settlement. If manholes are constructed within the 100-year floodplain, the cover must have a gasket and be bolted to the ring. Where gasketed manhole covers are required for more than three manholes in sequence or for more than 1500 feet, alternate means of venting will be provided. Bricks are not an acceptable construction material for any portion of the manhole.
- The diameter of the manholes must be a minimum of four feet and the manhole for entry must have a minimum clear opening diameter of 30 inches. These dimensions and other details showing compliance with the commission's rules concerning manholes and sewer line/manhole inverts described in 30 TAC §217.55 are included on Plan Sheet \_\_ of \_\_.
- It is suggested that entrance into manholes in excess of four feet deep be accomplished by means of a portable ladder. The inclusion of steps in a manhole is prohibited.
- Where water lines and new sewer line are installed with a separation distance closer than nine feet (i.e., water lines crossing wastewater lines, water lines paralleling wastewater lines, or water lines next to manholes) the installation must meet the requirements of 30 TAC §217.53(d) (Pipe Design) and 30 TAC §290.44(e) (Water Distribution).
  - Where sewers lines deviate from straight alignment and uniform grade all curvature of sewer pipe must be achieved by the following procedure which is recommended by the pipe manufacturer: \_\_\_\_\_.
- If pipe flexure is proposed, the following method of preventing deflection of the joint must be used: \_\_\_\_\_.
- Specific care must be taken to ensure that the joint is placed in the center of the trench and properly bedded in accordance with 30 TAC §217.54.
- New sewage collection system lines must be constructed with stub outs for the connection of anticipated extensions. The location of such stub outs must be marked on the ground such that their location can be easily determined at the time of connection of the extensions. Such stub outs must be manufactured wyes or tees that are compatible in size and material with both the sewer line and the extension. At the time of original construction, new stub-outs must be constructed sufficiently to extend beyond the end of the street pavement. All stub-outs must be sealed with a manufactured cap to prevent leakage. Extensions that were not anticipated at the time of original construction or that are to be connected to an existing sewer line not furnished with stub outs must be connected using a manufactured saddle and in accordance with accepted plumbing techniques.

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Page 2 of 6

- the infiltration or exfiltration to an amount within the limits specified. An owner shall retest a pipe following a remediation action.
- (b) If a gravity collection pipe is composed of flexible pipe, deflection testing is also required. The following procedures must be followed:
- (1) For a collection pipe with inside diameter less than 27 inches, deflection measurement requires a rigid mandrel.
- (A) **Mandrel Sizing.**
- (i) A rigid mandrel must have an outside diameter (OD) not less than 95% of the base inside diameter (ID) or average ID of a pipe, as specified in the appropriate standard by the ASTMs, American Water Works Association, UNI-BELL, or American National Standards Institute, or any related appendix.
- (ii) If a mandrel sizing diameter is not specified in the appropriate standard, the mandrel must have an OD equal to 95% of the ID of a pipe. In this case, the ID of the pipe, for the purpose of determining the OD of the mandrel, must equal be the average outside diameter minus two minimum wall thicknesses for OD controlled pipe and the average inside diameter for ID controlled pipe.
- (iii) All dimensions must meet the appropriate standard.
- (B) **Mandrel Design.**
- (i) A rigid mandrel must be constructed of a metal or a rigid plastic material that can withstand 200 psi without being deformed.
- (ii) A mandrel must have nine or more odd number of runners or legs.
- (iii) A barrel section length must equal at least 75% of the inside diameter of a pipe.
- (iv) Each size mandrel must use a separate proving ring.
- (C) **Method Options.**
- (i) An adjustable or flexible mandrel is prohibited.
- (ii) A test may not use television inspection as a substitute for a deflection test.
- (iii) If requested, the executive director may approve the use of a deflectometer or a mandrel with removable legs or runners on a case-by-case basis.
- (2) For a gravity collection system pipe with an inside diameter 27 inches and greater, other test methods may be used to determine vertical deflection.
- (3) A deflection test method must be accurate to within plus or minus 0.2% deflection.
- (4) An owner shall not conduct a deflection test until at least 30 days after the final backfill.
- (5) Gravity collection system pipe deflection must not exceed five percent (5%).
- (6) If a pipe section fails a deflection test, an owner shall correct the problem and conduct a second test after the final backfill has been in place at least 30 days.
- All manholes must be tested to meet or exceed the requirements of 30 TAC §217.58.
    - All manholes must pass a leakage test.
    - An owner shall test each manhole (after assembly and backfilling) for leakage, separate and independent of the collection system pipes, by hydrostatic exfiltration testing, vacuum testing, or other method approved by the executive director.
- (1) Hydrostatic Testing.

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Page 5 of 6

If no stub-out is present an alternate method of joining laterals is shown in the detail on Plan Sheet \_\_ of \_\_. (For potential future laterals).

The private service lateral stub-outs must be installed as shown on the plan and profile sheets on Plan Sheet \_\_ of \_\_ and marked after backfilling as shown in the detail on Plan Sheet \_\_ of \_\_.

- Trenching, bedding and backfill must conform with 30 TAC §217.54. The bedding and backfill for flexible pipe must comply with the standards of ASTM D-2321, Classes IA, IB, II or III. Rigid pipe bedding must comply with the requirements of ASTM C 12 (ANSI A 106.2) classes A, B or C.
- Sewer lines must be tested from manhole to manhole. When a new sewer line is connected to an existing stub or clean-out, it must be tested from existing manhole to new manhole. If a stub or clean-out is used at the end of the proposed sewer line, no private service attachments may be connected between the last manhole and the cleanout unless it can be certified as conforming with the provisions of 30 TAC §213.5(c)(3)(E).
- All sewer lines must be tested in accordance with 30 TAC §217.57. The engineer must retain copies of all test results which must be made available to the executive director upon request. The engineer must certify in writing that all wastewater lines have passed all required testing to the appropriate regional office within 30 days of test completion and prior to use of the new collection system. Testing method will be:
  - For a collection system pipe that will transport wastewater by gravity flow, the design must specify an infiltration and exfiltration test or a low-pressure air test. A test must conform to the following requirements:
    - Low Pressure Air Test.**
      - A low pressure air test must follow the procedures described in American Society For Testing And Materials (ASTM) C-828, ASTM C-924, or ASTM F-1417 or other procedure approved by the executive director, except as to testing times as required in Table C.3 in subparagraph (C) of this paragraph or Equation C.3 in subparagraph (B)(ii) of this paragraph.
      - For sections of collection system pipe less than 36 inch average inside diameter, the following procedure must apply, unless a pipe is to be tested as required by paragraph (2) of this subsection.
        - A pipe must be pressurized to 3.5 pounds per square inch (psi) greater than the pressure exerted by groundwater above the pipe.
        - Once the pressure is stabilized, the minimum time allowable for the pressure to drop from 3.5 psi gauge to 2.5 psi gauge is computed from the following equation:

$$\text{Equation C.3} \quad T = \frac{0.085 \times D \times K}{Q}$$

Where:

- T = time for pressure to drop 1.0 pound per square inch gauge in seconds  
K = 0.000419 X D X L, but not less than 1.0  
D = average inside pipe diameter in inches

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Page 3 of 6

- The maximum leakage for hydrostatic testing or any alternative test methods is 0.025 gallons per foot diameter per foot of manhole depth per hour.
  - To perform a hydrostatic exfiltration test, an owner shall seal all wastewater pipes coming into a manhole with an internal pipe plug, fill the manhole with water, and maintain the test for at least one hour.
  - A test for concrete manholes may use a 24-hour wetting period before testing to allow saturation of the concrete.
- (2) Vacuum Testing.
- To perform a vacuum test, an owner shall plug all lift holes and exterior joints with a non-shrink grout and plug all pipes entering a manhole.
  - No grout must be placed in horizontal joints before testing.
  - Stub-outs, manhole boots, and pipe plugs must be secured to prevent movement while a vacuum is drawn.
  - An owner shall use a minimum 60 inch/lb torque wrench to tighten the external clamps that secure a test cover to the top of a manhole.
  - A test head must be placed at the inside of the top of a cone section, and the seal inflated in accordance with the manufacturer's recommendations.
  - There must be a vacuum of 10 inches of mercury inside a manhole to perform a valid test.
  - A test does not begin until after the vacuum pump is off.
  - A manhole passes the test if after 2.0 minutes and with all valves closed, the vacuum is at least 9.0 inches of mercury.
- All private service laterals must be inspected and certified in accordance with 30 TAC §213.5(c)(3)(I). After installation of and, prior to covering and connecting a private service lateral to an existing organized sewage collection system, a Texas Licensed Professional Engineer, Texas Registered Sanitarian, or appropriate city inspector must visually inspect the private service lateral and the connection to the sewage collection system, and certify that it is constructed in conformity with the applicable provisions of this section. The owner of the collection system must maintain such certifications for five years and forward copies to the appropriate regional office upon request. Connections may only be made to an approved sewage collection system.

Austin Regional Office  
12100 Park 35 Circle, Building A  
Austin, Texas 78753-1808  
Phone (512) 339-2929  
Fax (512) 339-3795

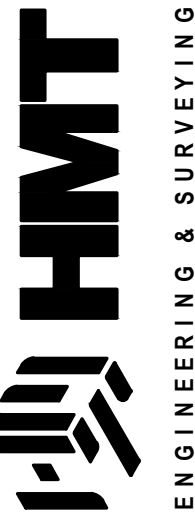
San Antonio Regional Office  
14250 Judson Road  
San Antonio, Texas 78233-4480  
Phone (210) 490-3096  
Fax (210) 545-4329

THESE GENERAL CONSTRUCTION NOTES MUST BE INCLUDED ON THE CONSTRUCTION PLANS PROVIDED TO THE CONTRACTOR AND ALL SUBCONTRACTORS.

TCEQ-0596 (Rev. July 15, 2015)

Page 6 of 6

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



07/10/2020

CONSTRUCTION NOTES  
(4 OF 4)  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION DESCRIPTION	REVISION DATE	
		DATE	ASBUILTS
1		07/10/2020	
2			
3			
4			
5			
6			
7			
8			
9			
10			

DATE: FEBRUARY 2020

DRAWN BY: JAD

DESIGNED BY: JMM

REVIEWED BY: CVH

HMT PROJECT NO.:

216.020

SHEET

C1.4



RECORD DRAWING

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

DATE: JULY 2020

BY:

Chris Van Heerde, P.E.

HMT ENGINEERING AND SURVEYING

EXISTING TREE PRESERVATION AND REMOVAL NOTES:

1. UNLESS OTHERWISE SPECIFICALLY INDICATED, THIS DOCUMENT SHOWS ONLY EXISTING PROTECTED-SIZE TREES AS DEFINED BY THE CITY OF NEW BRAUNFELS CODE OF ORDINANCES AND DEVELOPMENT DESIGN AND CONTROL DOCUMENT IN EFFECT ON THE DATE HEREOF.
2. CONTRACTOR IS SOLELY RESPONSIBLE FOR INSPECTING THE PROJECT SITE AND DETERMINING FOR HIMSELF IF OTHER EXISTING TREES, SHRUBS, OR VEGETATION ARE PRESENT WHICH MUST BE REMOVED IN ORDER TO CONSTRUCT THE IMPROVEMENTS PROPOSED HEREBY.
3. BY ACT OF SUBMITTING A BID TO REMOVE THE EXISTING TREES SHOWN ON THIS PLAN, CONTRACTOR WARRANTS THAT HE (A) HAS PERSONALLY VISITED THE PROJECT SITE, (B) HAS INVESTIGATED THE EXISTING CONDITIONS SUFFICIENTLY TO DETERMINE WHAT, IF ANY, ADDITIONAL EXISTING TREES, SHRUBS, AND VEGETATION MUST BE REMOVED IN ORDER TO CONSTRUCT THE IMPROVEMENTS PROPOSED HEREBY, AND (C) HAS A CLEAR UNDERSTANDING OF THE TERMS PROTECTED TREE, SIGNIFICANT TREE, HERITAGE TREE, AND FLOOD PLAIN, AND OF ANY OTHER CITY GUIDELINES, STANDARDS, AND REQUIREMENTS WHICH MAY IMPACT REMOVAL OF THE EXISTING TREES DEPICTED ON THIS PLAN.
4. IN THE EVENT CONTRACTOR ENCOUNTERS ADDITIONAL EXISTING TREES, SHRUBS, AND VEGETATION NOT SHOWN ON THIS PLAN, BUT WHICH MUST REASONABLY BE REMOVED IN ORDER TO CONSTRUCT THE IMPROVEMENTS PROPOSED HEREBY, CONTRACTOR SHALL REMOVE THE ADDITIONAL EXISTING TREES, SHRUBS, AND VEGETATION AT NO ADDITIONAL COST TO THE OWNER, SUBJECT TO ANY APPLICABLE REQUIREMENTS, GUIDELINES, STIPULATIONS, OR APPROVALS ENFORCED BY THE CITY OF NEW BRAUNFELS.

NOTES:

1. LANDSCAPE SUBCONTRACTOR TO PROVIDE PRUNING AND FERTILIZATION FOR ALL EXISTING TREES TO BE PRESERVED BY A CITY OF SAN ANTONIO TREE MAINTENANCE LICENSED AND ISA CERTIFIED ARBORIST.
2. APPLY APPROVED BLOW-RELEASE FERTILIZER INJECTED INTO SOIL BEFORE CONSTRUCTION COMMENCES AND AGAIN AFTER CONSTRUCTION IS COMPLETE.
3. ALL PRUNING OF EXISTING TREES MUST COMPLY WITH THE CITY OF SAN ANTONIO'S APPROVED PRUNING DETAIL AND IS TO BE DONE UNDER THE FIELD DIRECTION OF THE OWNER AND/OR LANDSCAPE ARCHITECT.
4. PROTECTIVE FENCING MUST BE IN PLACE BEFORE ANY CONSTRUCTION ACTIVITIES MAY COMMENCE.
5. PROTECTIVE FENCING TO BE A MIN. 4' H.T. EXTENDING FROM TRUNK 12" PER CALIPER INCH OF TREE (MINIMUM 142" ON ONE SIDE ONLY). THE OPTIMUM DISTANCE IS TO INSTALL FENCE DIRECTLY BENEATH DROPLINE OF TREE AS SHOWN.
6. PROTECTIVE FENCING TO BE STAKED IN FIELD BY CONTRACTOR AND APPROVED BY OWNER AND/OR LANDSCAPE ARCHITECT.
7. DURING CONSTRUCTION, NO EXCESS SOIL, FILL MATERIAL, EQUIPMENT, LIQUIDS, OR CONSTRUCTION DEBRIS SHALL BE PLACED WITHIN THE PROTECTIVE FENCING. NOR SHALL ANY SOIL BE REMOVED FROM WITHIN THE FENCING.
8. APPLY COARSE GROUND OR SHREDDED ORGANIC BARK MULCH TO TOP OF DROPLINE OF ALL EXISTING TREES TO BE PRESERVED.
9. THE PROPOSED FINISH GRADE WITHIN THE ROOT PROTECTION ZONE (RPZ) OF ANY TREE TO BE PRESERVED SHALL NOT BE RAISED OR LOWERED MORE THAN THREE (3) INCHES.

PRUNING NOTES:

1. ALL PRUNING IS TO BE DONE BY A LICENSED ARBORIST UNDER THE FIELD DIRECTION OF THE OWNER AND/OR LANDSCAPE ARCHITECT.
2. WHERE FEASIBLE, PRUNE TREES BEFORE COMMENCEMENT OF CONSTRUCTION.
3. PRUNE ALL WOUNDS ON OAK TREES WITHIN 24 HOURS OF PRUNING.

- A = FIRST CUT. TO PREVENT BARK FROM PEELING WHEN THE BRANCH FALLS.
- B = SECOND CUT. TO REDUCE THE WEIGHT OF THE BRANCH.
- C = FINAL CUT. ALLOW FOR A HEALING COLLAR BUT DO NOT LEAVE A STUB.



TREE PRUNING DETAIL

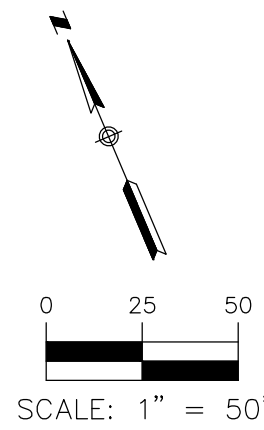
NOT TO SCALE

RECORD DRAWING

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

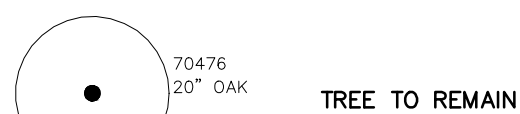
DATE: JULY 2020 BY: *Chris Van Heerde, P.E.*

HMT ENGINEERING AND SURVEYING

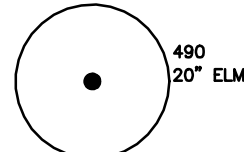


LEGEND

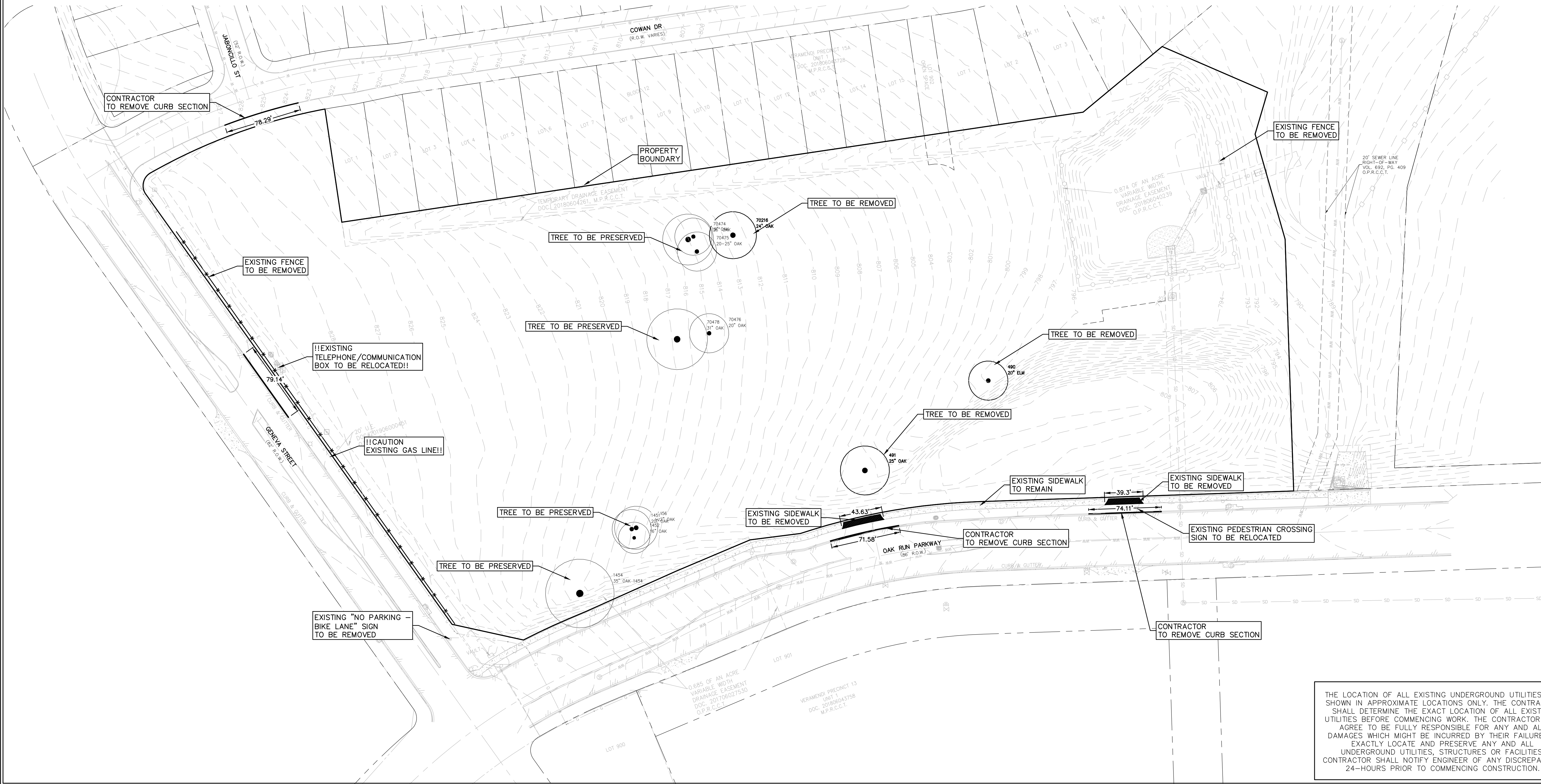
— 700 — EXISTING CONTOURS



TREE TO REMAIN



TREE TO BE REMOVED



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

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



07/10/2020

**DEMOLITION PLAN**  
**VERAMENDI NEIGHBORHOOD**  
**RETAIL DEVELOPMENT**

NO.	REVISION	DESCRIPTION	DATE
1	ASBULTS		07/10/2020

DATE: FEBRUARY 2020

DRAWN BY: JAD

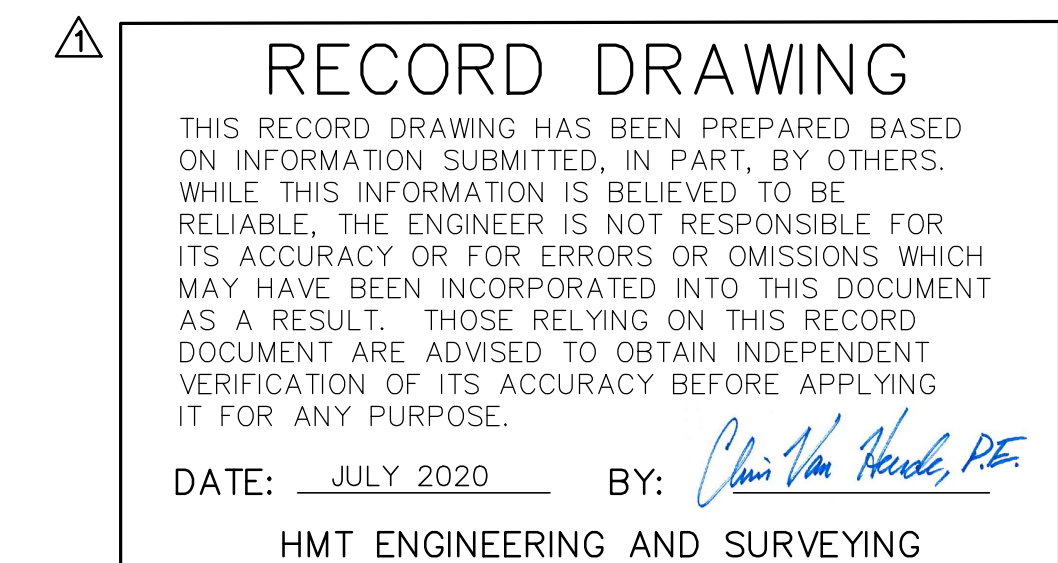
DESIGNED BY: JMM

REVIEWED BY: CVH

HMT PROJECT NO.:  
216.020

**SHEET**  
**C1.5**





FOR REFERENCE ONLY

**PLAT (2 OF 3)**

[illegible]

DATE: <b>JANUARY 2020</b>
DRAWN BY: <b>JAD</b>
DESIGNED BY: <b>JMM</b>
REVIEWED BY: <b>CVH</b>
HMT PROJECT NO.: <b>216.020</b>

**SHEET**  
**C2.1**



Drawing Name: N:\\_Projects\216 - ASA Properties, LLC\020 - Veramendi Neighborhood Retail\City\ASBUILTS\CITY\ASBUILTS-216.020\_PLA.dwg User: barboza Jul 10, 2020 - 11:56am

Drawing Name: T:\216 - ASA Properties\020 - Veramendi Neighborhood Retail\Development\Veramendi Neighborhood Retail\_Plat.dwg User: willyk Nov 04, 2019 - 3:42pm

PLAT REVISED NOVEMBER 4, 2019  
PLAT REVISED SEPTEMBER 10, 2019  
PLAT REVISED MAY 21, 2019  
PLAT PREPARED MARCH 25, 2019



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

## FINAL PLAT ESTABLISHING VERAMENDI PRECINCT 15A, NEIGHBORHOOD CENTER

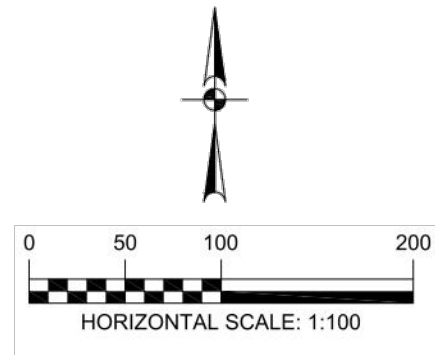
BEING A 9.70 ACRE TRACT OF LAND SITUATED IN THE J.M. VERAMENDI SURVEY  
NO. 2, ABSTRACT NO. 3, COMAL COUNTY, TEXAS, BEING A PORTION OUT OF A  
CALLED 255.715 ACRE TRACT, RECORDED IN DOCUMENT NO. 201706013192,  
OFFICIAL PUBLIC RECORDS, COMAL COUNTY, TEXAS.

LINE TABLE		
LINE #	LENGTH	DIRECTION
L1	44.70'	S34°52'35"W
L2	51.64'	N78°43'05"W
L3	81.66'	S85°30'00"W
L4	100.02'	S84°21'15"W
L5	19.88'	S85°30'00"W
L6	74.50'	N59°08'34"W
L41	159.62'	S17°23'10"E
L42	66.98'	S25°00'00"W
L43	43.63'	N17°06'17"W
L44	20.00'	S72°53'43"W
L45	139.78'	S17°04'11"E
L46	68.82'	N30°13'17"W
L47	35.84'	N31°46'27"W
L48	49.43'	S10°00'00"W
L49	65.58'	S30°13'17"E
L50	89.23'	S10°00'00"W
L51	10.01'	N80°00'00"W
L52	11.34'	N10°00'00"E
L53	21.33'	S80°00'00"E
L56	45.27'	S50°00'00"E

LINE TABLE		
LINE #	LENGTH	DIRECTION
L57	22.18'	S50°00'00"E
L59	33.61'	S06°39'55"W
L61	18.66'	S24°54'36"W
L63	25.00'	S10°00'00"W
L66	23.46'	S50°48'07"E
L69	80.58'	S81°41'34"E
L70	49.41'	S16°59'22"E
L71	15.09'	S80°00'00"E
L73	4.02'	N73°03'38"E
L74	24.33'	N73°03'38"E
L79	28.51'	S10°00'00"W
L80	32.50'	N53°16'03"W
L81	23.59'	N16°59'23"W
L82	20.56'	N09°57'34"E
L83	38.74'	N25°00'00"E
L84	32.96'	S80°00'00"E
L85	39.69'	N80°00'00"W
L86	20.34'	N20°28'24"E
L87	38.27'	S80°00'00"E
L88	161.27'	N17°23'10"W

LINE TABLE		
LINE #	LENGTH	DIRECTION
L89	128.17'	N16°59'21"W
L90	69.00'	S16°59'21"E
L91	109.18'	N17°06'17"W
L92	81.49'	N25°00'00"E
L93	589.80'	N80°07'49"W
L94	53.01'	S17°06'17"E
L95	110.92'	S07°42'02"W
L96	176.09'	S80°00'00"E
L97	187.18'	N80°00'00"W
L98	20.00'	N82°17'58"W
L99	9.90'	S27°53'43"W
L100	172.52'	S80°00'00"E
L101	174.94'	S80°00'00"E
L102	314.55'	N80°00'01"W
L103	94.14'	N06°16'59"E
L105	103.49'	S10°00'00"W
L106	143.00'	S10°00'00"W
L107	123.00'	S10°00'00"W
L108	575.25'	S80°00'01"E
L109	580.59'	S80°00'01"E

LINE TABLE		
LINE #	LENGTH	DIRECTION
L110	210.56'	S16°30'00"W
L111	211.89'	N16°30'00"E
L112	7.32'	N16°29'58"E
L113	21.40'	S73°30'00"E
L114	7.71'	S31°46'27"E
L115	109.22'	S73°30'00"E
L116	17.74'	N10°00'00"E
L117	65.11'	S80°00'00"E
L118	66.80'	N82°17'58"W
L119	33.62'	N07°42'02"E
L120	77.27'	N07°42'02"E
L121	20.00'	N80°00'00"W
L123	104.32'	N25°00'00"E
L124	10.06'	N16°30'00"E
L125	45.35'	S16°02'39"E
L126	4.48'	S16°59'21"E
L127	30.00'	S10°00'00"W
L128	20.13'	N16°30'00"E
L129	3.48'	S80°00'01"E



LEGEND:  
● = FIND 1/2" IRON PIN W/  
PLASTIC CAP STAMPED "HMT"  
(UNLESS NOTED OTHERWISE)  
○ = SET 1/2" IRON PIN W/  
PLASTIC CAP STAMPED "HMT"  
U.E. = UTILITY EASEMENT  
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

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C1	25.08'	15.00'	095°46'46"	16.59'	22.26'	N30°54'02"E
C2	190.13'	571.00'	019°04'42"	95.95'	189.25'	N88°19'46"E
C3	184.39'	643.00'	016°25'50"	92.83'	183.76'	N81°42'55"W
C4	51.04'	653.00'	004°28'43"	25.53'	51.03'	S83°15'38"W
C44	22.65'	25.00'	051°54'04"	12.17'	21.88'	S08°57'41"W
C54	39.27'	25.00'	090°00'00"	25.00'	35.36'	S35°00'00"E
C55	47.12'	30.00'	090°00'00"	30.00'	42.43'	S35°00'00"E
C56	39.27'	25.00'	090°00'00"	25.00'	35.36'	S35°00'00"E
C57	26.18'	50.00'	030°00'00"	13.40'	25.88'	S65°00'00"E
C59	10.47'	10.00'	060°00'00"	5.77'	10.00'	S20°00'00"E
C60	26.18'	25.01'	059°58'23"	14.43'	25.00'	S20°00'27"E
C61	13.09'	25.00'	030°00'00"	6.70'	12.94'	S65°00'00"E
C62	40.89'	25.00'	093°43'01"	26.68'	36.48'	N53°08'29"E
C63	16.48'	50.43'	018°43'01"	8.31'	16.40'	S15°33'34"W
C64	5.33'	25.00'	012°13'33"	2.68'	5.32'	S16°06'47"W

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C65	39.27'	25.00'	090°00'00"	25.00'	35.36'	S35°00'00"E
C66	23.33'	50.00'	026°43'57"	11.88'	23.12'	S66°38'02"E
C67	12.74'	25.00'	029°11'53"	6.51'	12.60'	S65°24'03"E
C68	53.76'	50.09'	061°29'42"	29.80'	51.22'	S49°12'03"E
C69	39.25'	25.00'	089°57'00"	24.98'	35.34'	S61°57'52"E
C70	11.38'	24.99'	026°04'43"	5.79'	11.28'	S59°38'53"W
C71	11.57'	24.93'	026°34'46"	5.89'	11.46'	S86°12'39"W
C72	20.95'	25.00'	048°00'39"	11.13'	20.34'	N49°00'20"E
C73	18.32'	25.00'	041°59'21"	9.59'	17.91'	N04°00'19"E
C74	27.91'	25.00'	063°57'21"	15.61'	26.48'	S48°01'20"E
C75	39.27'	25.00'	090°00'00"	25.00'	35.36'	S55°00'00"W
C76	11.66'	25.00'	026°43'57"	5.94'	11.56'	N66°38'02"W
C77	11.66'	25.00'	026°43'57"	5.94'	11.56'	N66°38'02"W
C80	26.65'	25.09'	060°52'09"	14.74'	25.42'	N49°29'32"W
C82	11.76'	25.00'	026°56'57"	5.99'	11.65'	N03°30'54"W

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD LENGTH	CHORD BEARING
C84	25.44'	20.00'	072°53'39"	14.77'	23.76'	N26°26'49"W
C86	15.34'	10.00'	087°53'41"	9.64'	13.88'	N18°56'48"W
C88	32.72'	25.00'	075°00'00"	19.18'	30.44'	N62°30'00"E
C90	24.00'	30.00'	045°49'44"	12.68'	23.36'	N57°05'09"W

SHEET 3 OF 3



### RECORD DRAWING

THIS RECORD DRAWING HAS BEEN PREPARED BASED  
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VERIFICATION OF ITS ACCURACY BEFORE APPLYING  
IT FOR ANY PURPOSE.

DATE: JULY 2020

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

HMT ENGINEERING AND SURVEYING

REVISION DATE	
NO.	ASBUILTS
1	07/10/2020

DATE:	JANUARY 2020
DRAWN BY:	JAD
DESIGNED BY:	JMM
REVIEWED BY:	CWH
HMT PROJECT NO.:	216.020

**SHEET**  
**C2.2**

PLAT (3 OF 3)

VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

07/10/2020



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



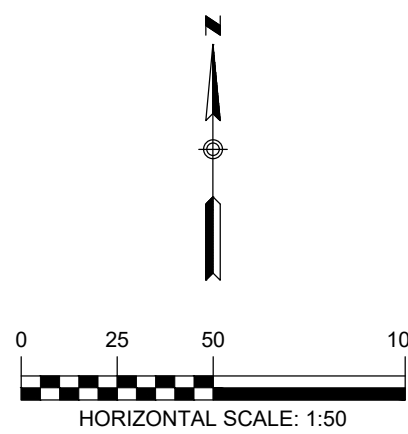
Drawing Name: N:\\_Projects\216 - Veramendi Neighborhood Retail\ASBUILT\CITY\ASBUILT-216.020.DWG User: Barbara Jul 10, 2020 - 12:00pm

Table 2 - Ultimate Conditions Hydrology Calculations - City of New Braunfels																
Point of Concentration	Description	Drainage Area	Area	T <sub>c</sub>	C (2yr)	C (10yr)	C (25yr)	C (100yr)	I (2yr)	I (10yr)	I (25yr)	I (100yr)	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
A1	Inlet & SD LNA1	A1	3.09	16.39	0.65	0.72	0.77	0.86	3.96	6.05	7.28	9.55	7.95	13.54	17.37	25.32
A2	Inlet & SD LN A2	A2	5.35	11.23	0.65	0.72	0.77	0.86	4.70	7.20	8.65	11.37	16.34	27.89	35.69	52.19
A3	Water Quality Pond	A3	0.96	10.00	0.34	0.39	0.43	0.51	4.92	7.56	9.07	11.94	1.62	2.86	3.78	5.79
A	Drainage Area EX A Comparison	A1+A2+A3	9.40	17.05	0.62	0.69	0.74	0.82	3.88	5.94	7.15	9.37	22.56	38.51	49.51	72.36
B	Drainage Area EX B Comparison	B	0.30	16.10	0.65	0.72	0.77	0.86	3.99	6.10	7.35	9.63	0.78	1.33	1.70	2.48

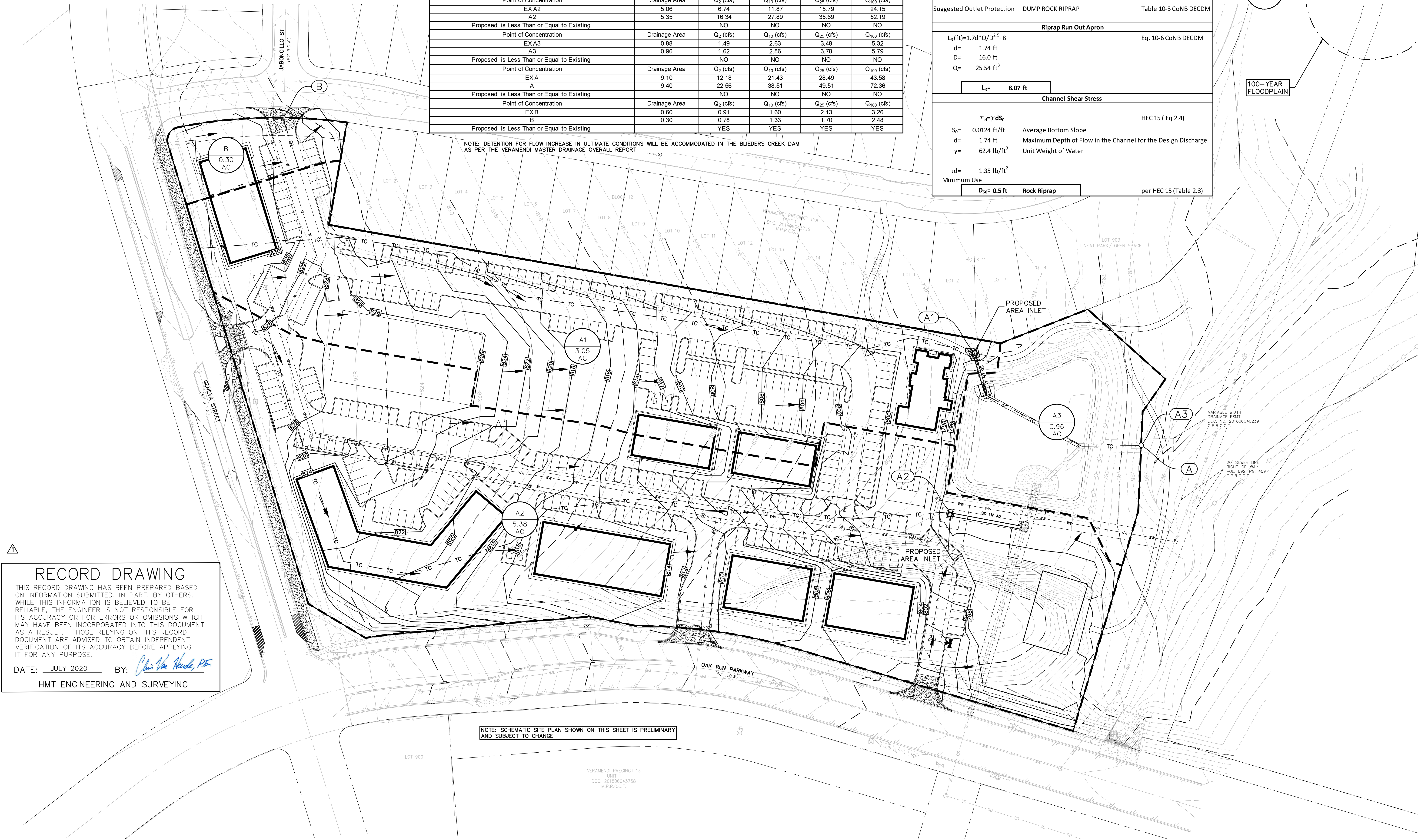
Table 3 - Existing to Ultimate Proposed Comparison					
Point of Concentration	Drainage Area	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
EXA1	3.16	4.27	7.53	10.01	15.31
A1	3.09	7.95	13.54	17.37	25.32
Proposed is Less Than or Equal to Existing	NO	NO	NO	NO	NO
Point of Concentration	Drainage Area	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
EXA2	5.06	6.74	11.87	15.79	24.15
A2	5.35	16.34	27.89	35.69	52.19
Proposed is Less Than or Equal to Existing	NO	NO	NO	NO	NO
Point of Concentration	Drainage Area	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
EXA3	0.88	1.49	2.63	3.48	5.32
A3	0.96	1.62	2.86	3.78	5.79
Proposed is Less Than or Equal to Existing	NO	NO	NO	NO	NO
Point of Concentration	Drainage Area	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
EXA	9.10	12.18	21.43	28.49	43.58
A	9.40	22.56	38.51	49.51	72.36
Proposed is Less Than or Equal to Existing	NO	NO	NO	NO	NO
Point of Concentration	Drainage Area	Q <sub>2</sub> (cfs)	Q <sub>10</sub> (cfs)	Q <sub>25</sub> (cfs)	Q <sub>100</sub> (cfs)
EXB	0.60	0.91	1.60	2.13	3.26
B	0.30	0.78	1.33	1.70	2.48
Proposed is Less Than or Equal to Existing	YES	YES	YES	YES	YES

NOTE: DETENTION FOR FLOW INCREASE IN ULTIMATE CONDITIONS WILL BE ACCOMMODATED IN THE BLUDERS CREEK DAM AS PER THE VERAMENDI MASTER DRAINAGE OVERALL REPORT

Energy Dissipation - Channel A1 Outfall	
Velocity out of Pipe	7.09
Suggested Outlet Protection	DUMP ROCK RIPRAP Table 10-3 CoNB DECDM
Riprap Run Out Apron	
Eq. 10-6 CoNB DECDM	
$L_r(ft) = 1.7d * Q_2 / D^{2.5} + 8$	
d=	1.74 ft
D=	16.0 ft
Q=	25.54 ft <sup>3</sup>
L <sub>r</sub> = 8.07 ft	
Channel Shear Stress	
HEC 15 (Eq 2.4)	
$\tau_d = \gamma d S_0$	
S <sub>0</sub> =	0.0124 ft/ft Average Bottom Slope
d=	1.74 ft Maximum Depth of Flow in the Channel for the Design Discharge
γ=	62.4 lb/ft <sup>3</sup> Unit Weight of Water
τ <sub>d</sub> = 1.35 lb/ft <sup>2</sup>	
Minimum Use	
D <sub>50</sub> = 0.5 ft	Rock Riprap per HEC 15 (Table 2.3)



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



## RECORD DRAWING

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

NOTE: SCHEMATIC SITE PLAN SHOWN ON THIS SHEET IS PRELIMINARY AND SUBJECT TO CHANGE

VERAMENDI PRECINCT 13  
UNIT 1  
DOC. 201806043758  
M.P.R.C.C.T.

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



07/10/2020

ULTIMATE CONDITIONS  
DRAINAGE AREA MAP  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION DESCRIPTION	DATE
1	ASBUILT	07/10/2020

DATE: AUGUST 2019

DRAWN BY: AMC

DESIGNED BY: JMM

REVIEWED BY: CVH

HMT PROJECT NO.:  
216.020

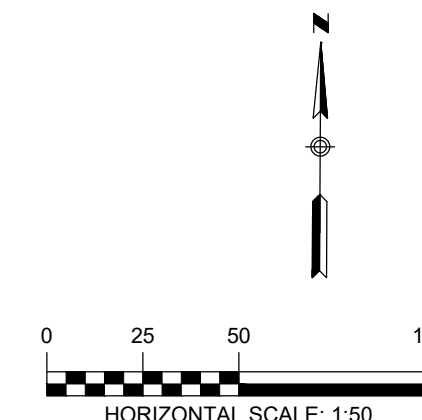
SHEET  
C3.1

1

DATE: JULY 2020

BY: Chris Van Heerde, P.E.

HMT ENGINEERING AND SURVEYING



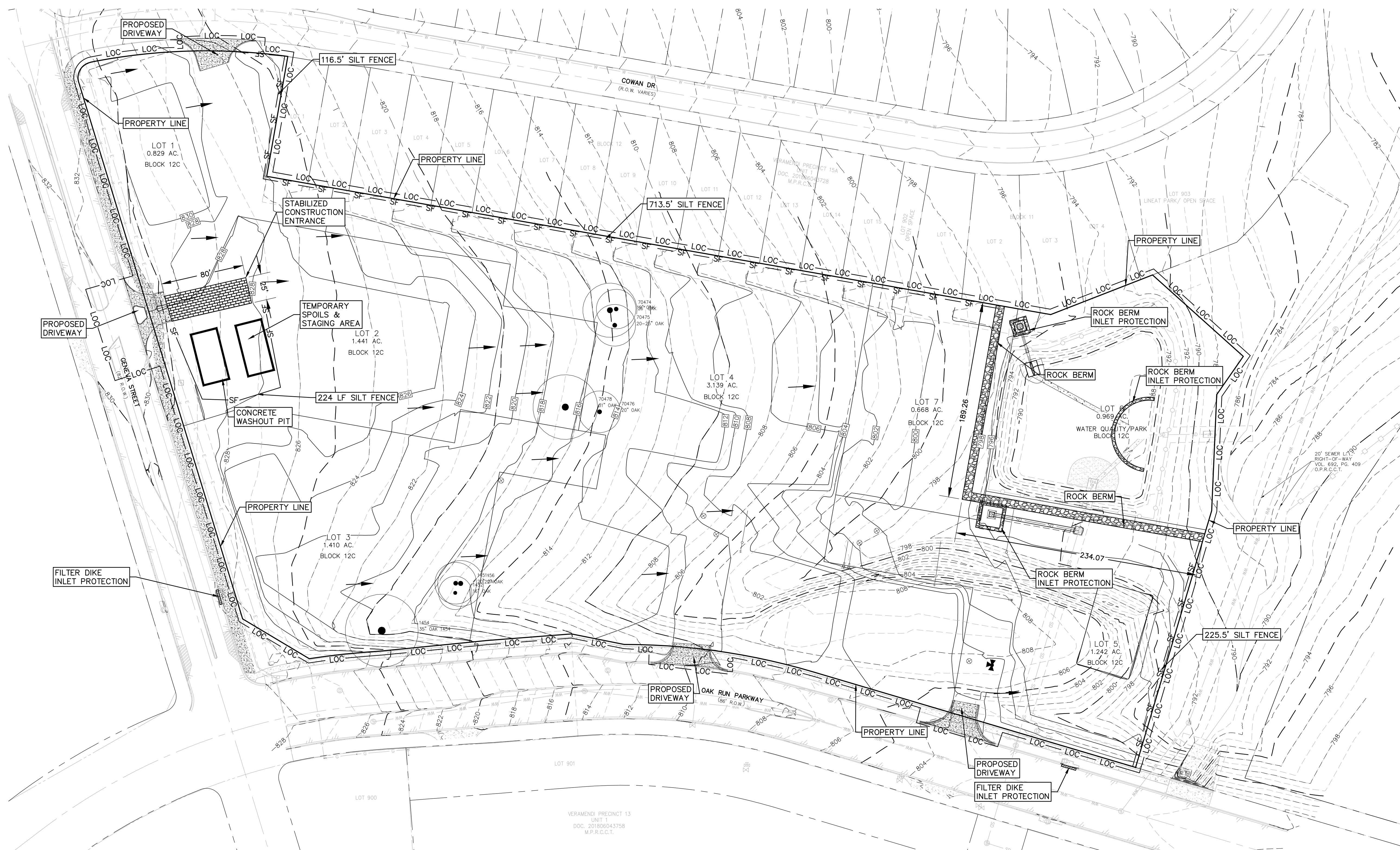
NOTE:

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

	EXISTING CONTOURS
	PROPOSED CONTOURS
	B.L. BUILDING SETBACK LINE
	U.E. UTILITY EASEMENT
	D.E. DRAINAGE EASEMENT
	DRAINAGE FLOW DIRECTION
	SILT FENCE
	LOC LIMIT OF CONSTRUCTION
	STABILIZED CONSTRUCTION ENTRANCE
	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 TPOZ 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 STABILIZATION.
9. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.



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.

07/10/2020

## EROSION CONTROL PLAN

## VERAMENDI NEIGHBORHOOD RETAIL DEVELOPMENT

NO.	REVISION DESCRIPTION	REVISION DATE
△	ASBUILTS	07/10/2020

DATE: OCTOBER 2019

DRAWN BY: **AMC**

DESIGNED BY: JMM

REVIEWED BY: CVH

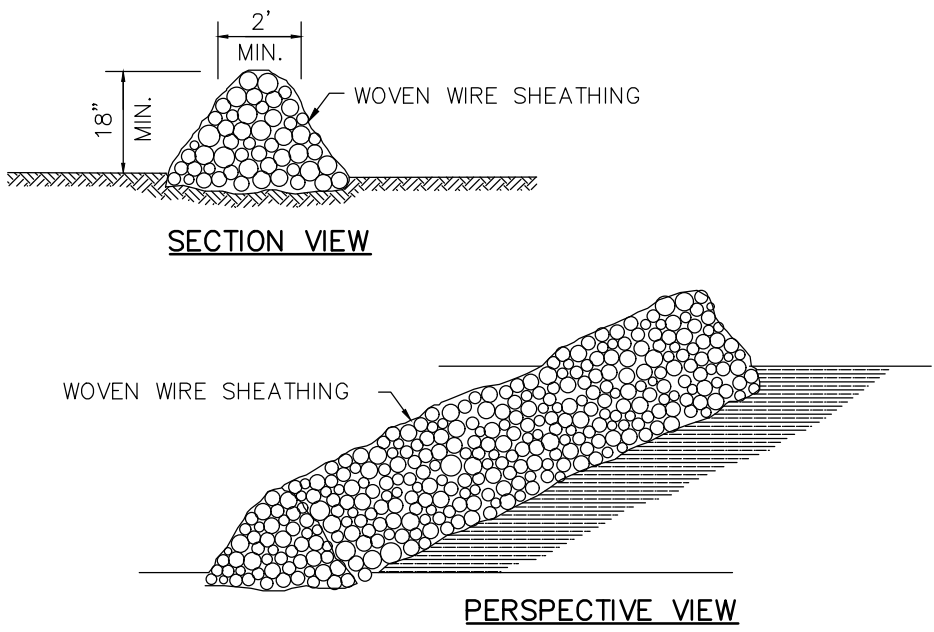
HMT PROJECT NO.:

**SHEET**

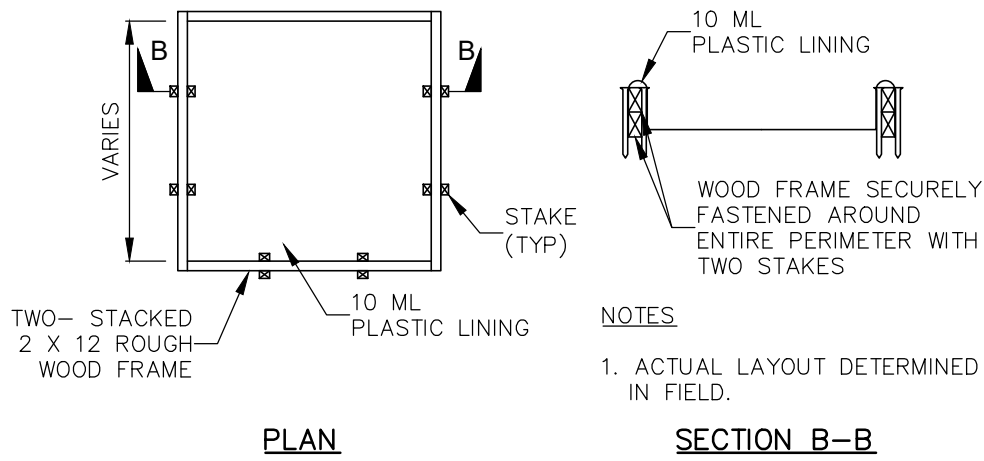
## C4.0

ROCK BERM

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



ROCK BERM DETAIL  
NOT TO SCALE



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

CONCRETE WASHOUT AREAS

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

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

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

FOR ONSITE WASHOUT:

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

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

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

SILT FENCE

MATERIALS:

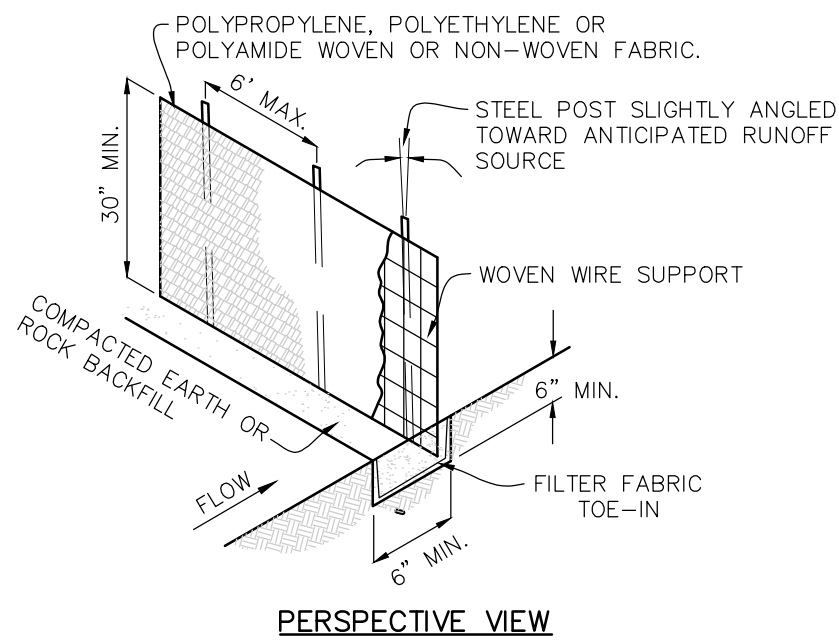
- SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC WIDTH SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN2, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S.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



SILT FENCE DETAIL  
NOT TO SCALE

STABILIZED CONSTRUCTION ENTRANCE / EXIT

MATERIALS:

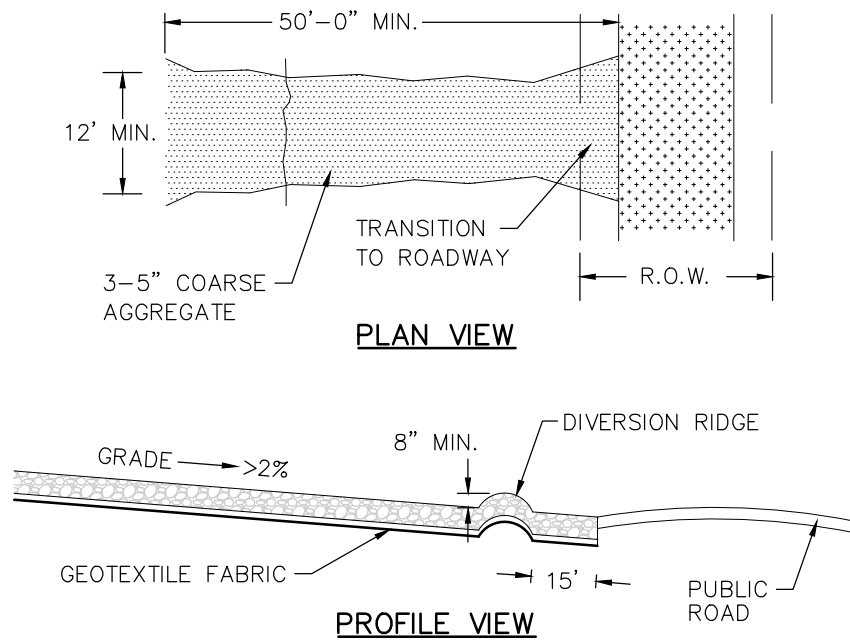
- THE AGGREGATE SHOULD CONSIST OF 3 TO 5 INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
- THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8 INCHES.
- THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD2, A MULLEN BURST RATING OF 140 LB/IN2, AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
- IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4 INCH DIAMETER WASHED STONE OR COMMERCIAL RACK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

INSTALLATION:

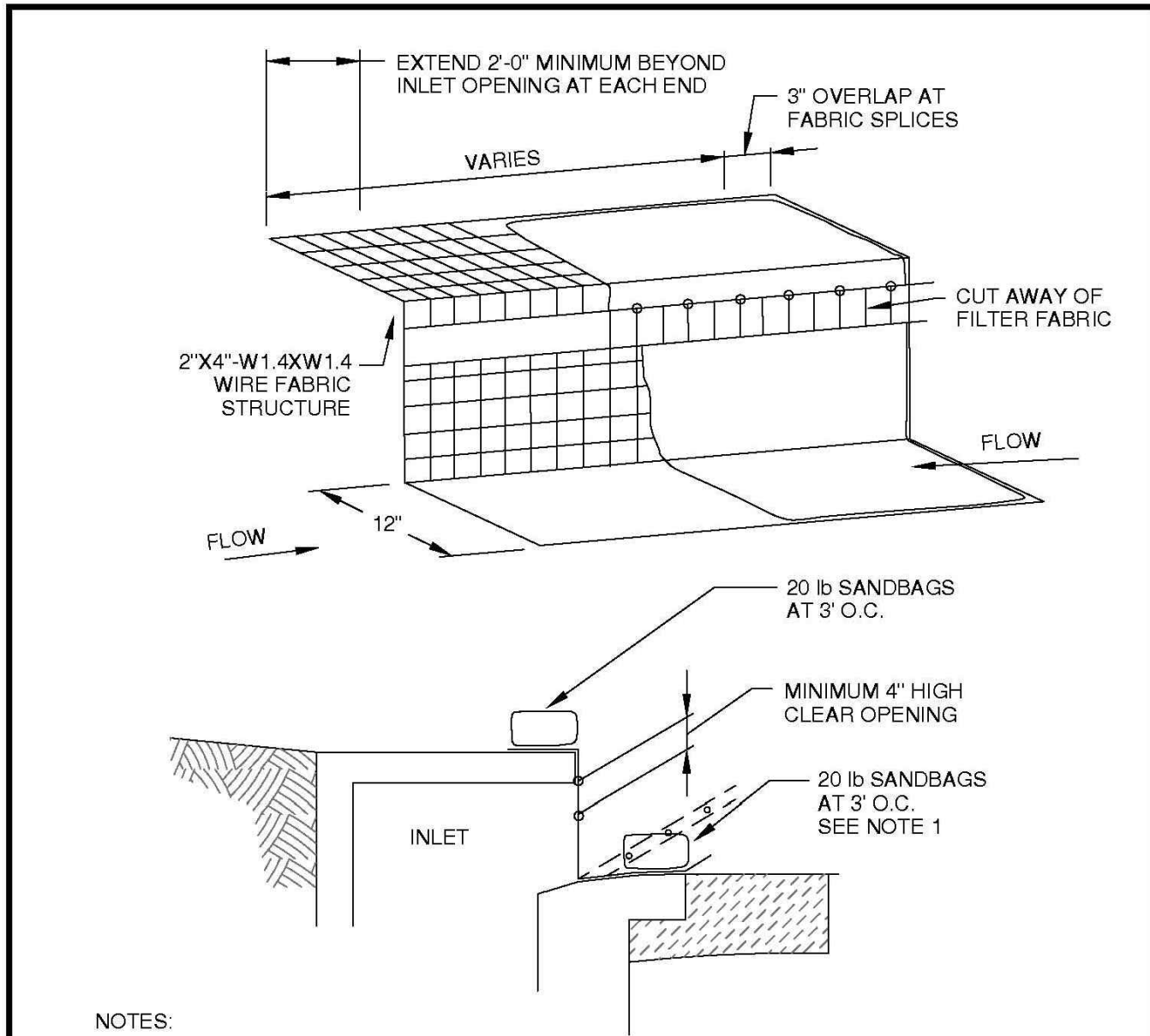
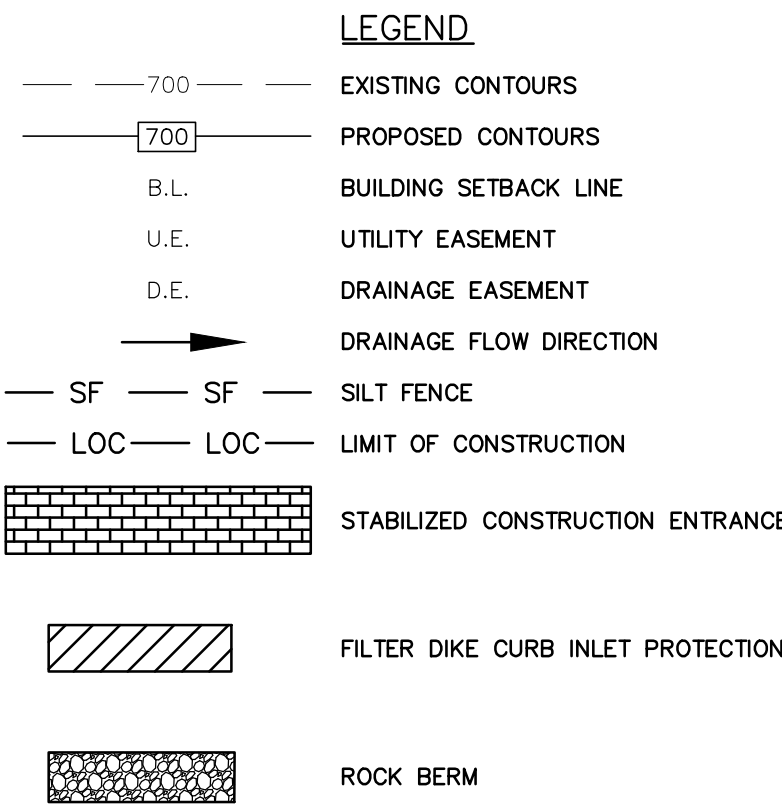
- AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
- THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
- THE CONSTRUCTION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

INSPECTION AND MAINTENANCE GUIDELINES:

- THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR 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.



CONSTRUCTION ENTRANCE DETAIL  
NOT TO SCALE



NOTES:

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

<b>NBU</b> NEW BRAUNFELS UTILITIES WATER SYSTEMS ENGINEERING	DRAWN BY <b>headrock</b>	STANDARD DRAWING	<b>FILTER DIKE CURB INLET PROTECTION</b>			
	APPROVED BY	UPDATED <b>4-29-03</b>	SCALE <b>N.T.S.</b>	SHEET <b>1 OF 1</b>	DRAWING NO. <b>505</b>	



RECORD DRAWING

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DATE: JULY 2020 BY: Chris Van Houten, P.E.  
HMT ENGINEERING AND SURVEYING

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

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



07/10/2020

EROSION CONTROL  
DETAILS  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION DESCRIPTION	REVISION DATE
1	AS-BUILT	07/10/2020

DATE: **OCTOBER 2019**

DRAWN BY: **AMC**

DESIGNED BY: **JMM**

REVIEWED BY: **CWH**

HMT PROJECT NO.:  
**216.020**

**SHEET**  
**C4.1**

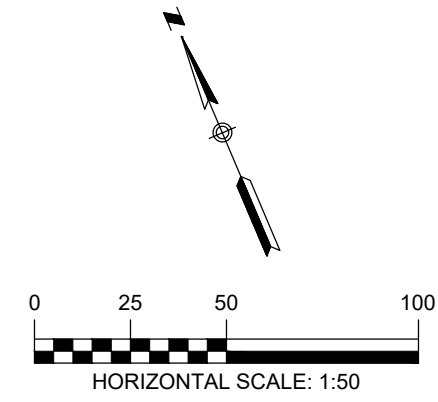
Drawing Name: N:\Projects\216 - ASA Properties, LLC\200 - Veramendi Neighborhood Retail\City Asbuilt\216.020\_GRA0.dwg User: Barbara Jul 10, 2020 - 11:57am

RECORD DRAWING

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

HMT ENGINEERING AND SURVEYING



LEGEND

700

EXISTING CONTOURS

700

PROPOSED CONTOURS

B.L.

BUILDING SETBACK LINE

U.E.

UTILITY EASEMENT

D.E.

DRAINAGE EASEMENT

A

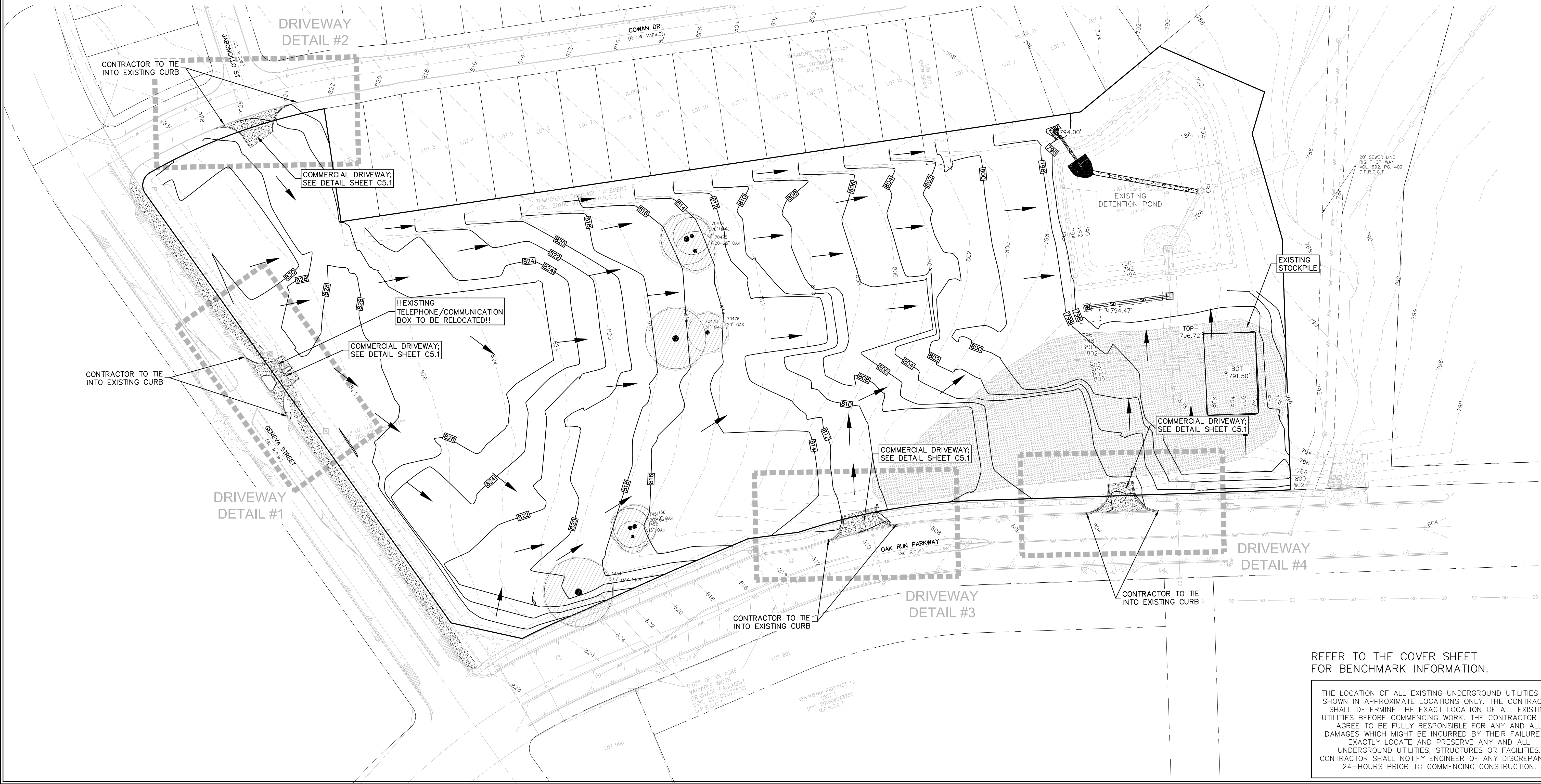
DRAINAGE FLOW DIRECTION

NO GRADING THIS AREA  
CONTRACTOR SHALL MAINTAIN  
EXISTING GRADE

NOTES:

1. DRAINAGE IMPROVEMENTS SUFFICIENT TO MITIGATE OFFSITE IMPACT OF CONSTRUCTION MUST BE COMPLETED AND IN PLACE PRIOR TO ADDING IMPERVIOUS COVER TO THE SITE.
2. WHEN POSSIBLE, CONTRACTOR SHALL PHASE GRADING SO AS TO EXPOSE THE MINIMUM AMOUNT OF AREA TO SOIL EROSION FOR THE SHORTEST PERIOD OF TIME.
3. LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE ONLY. CONTRACTOR TO VERIFY LOCATION WITH PROVIDER BEFORE GRADING. NO GRADING TO OCCUR WITHIN 5 FEET OF ELECTRIC LINE PER NBU REGULATIONS.

EARTHWORK VOLUMES	
EXCAVATION & EMBANKMENT	VOLUME (CY)
CUT	13,069
FILL	10,970
NET	2,099 [CUT]



REFER TO THE COVER SHEET FOR BENCHMARK INFORMATION.

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

HMT

ENGINEERING & SURVEYING

STATE OF TEXAS  
CHRISTOPHER P. VAN HEERDE  
93047  
LICENSED PROFESSIONAL ENGINEER

07/10/2020

MASS GRADING PLAN

VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION	DATE
1	ADDITIONAL DRIVE CONSTRUCTION DETAILS	10/24/19
2	ASBUILTS	07/10/2020

DATE: FEBRUARY 2020

DRAWN BY: JAD

DESIGNED BY: JMM

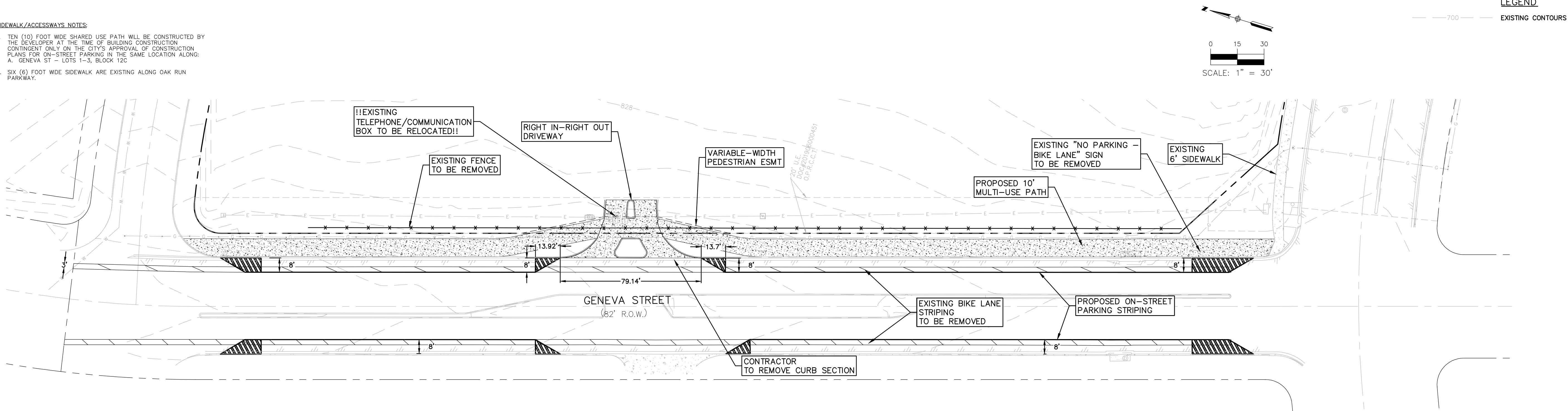
REVIEWED BY: CWH

HMT PROJECT NO.: 216.020

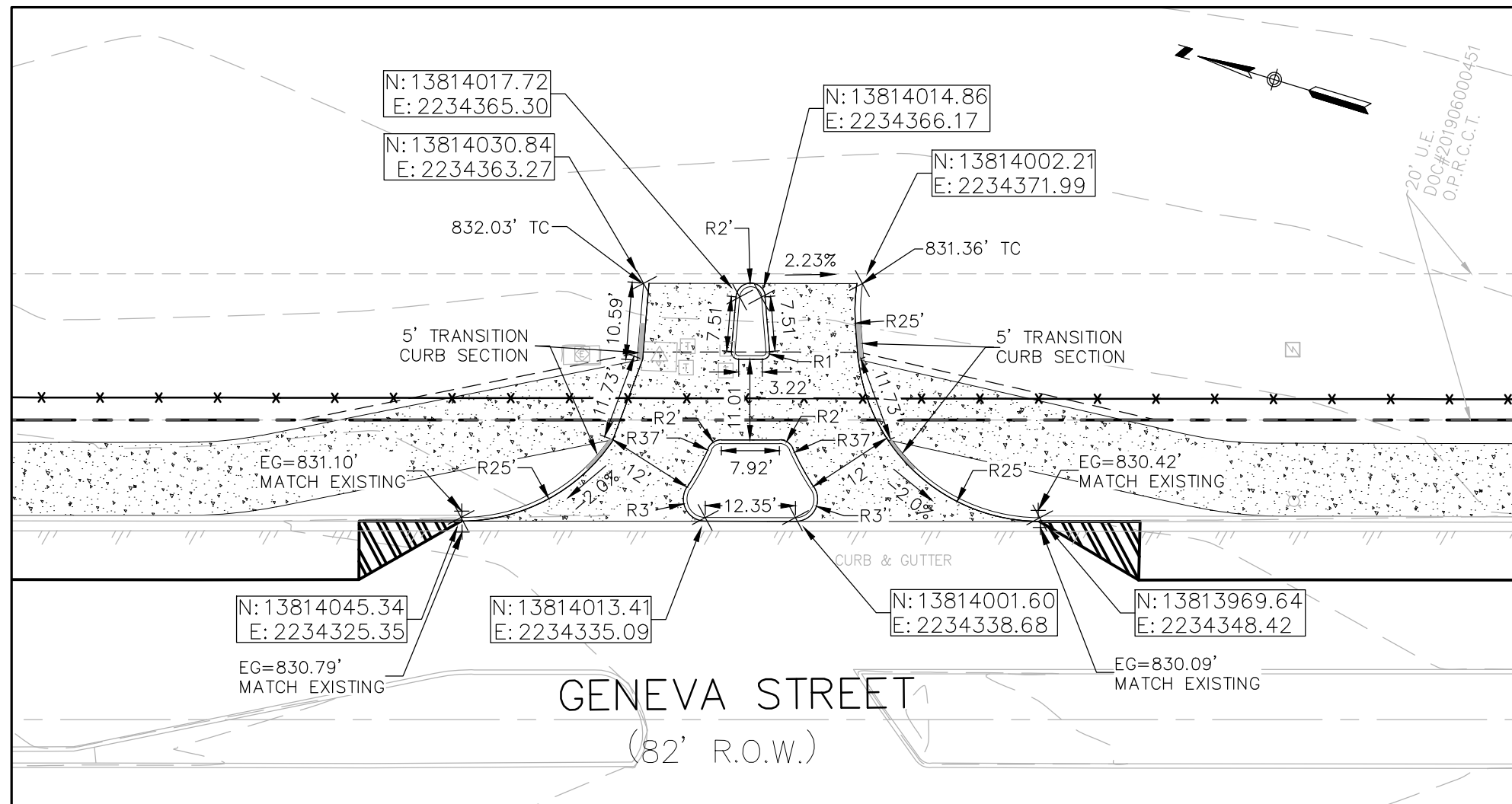
SHEET C5.0

Drawing Name: N:\\_Projects\316 - Veramend Neighborhood Retail\C55\_ASBUILD\3\CITY\ASBUILTS-216.020-STREET.dwg User: lbarboza Jul 10, 2020 - 11:55am

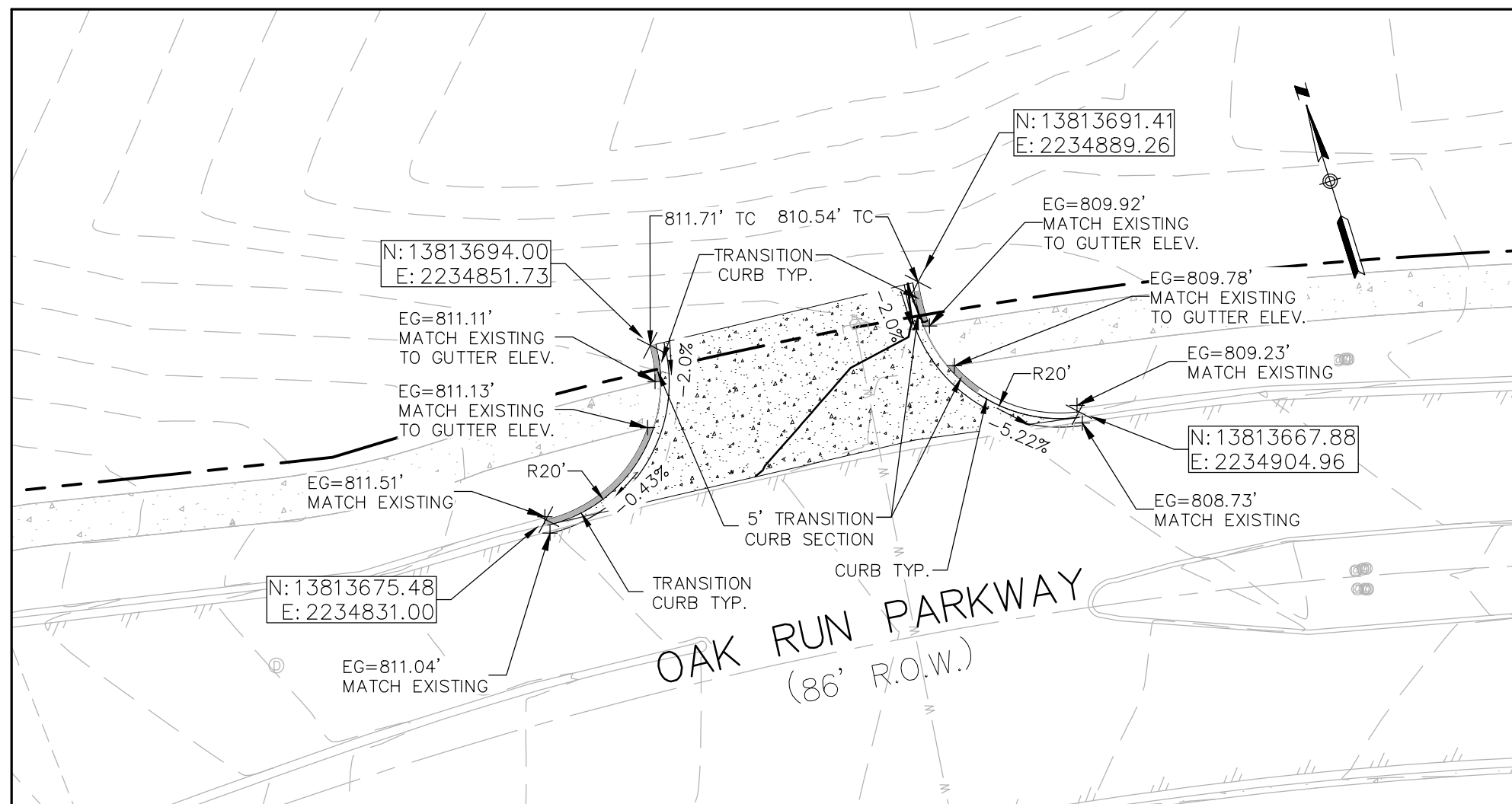
- SIDEWALK/ACCESSWAYS NOTES:**
- TEN (10) FOOT WIDE SHARED USE PATH WILL BE CONSTRUCTED BY THE DEVELOPER AT THE TIME OF BUILDING CONSTRUCTION CONTINGENT ONLY ON THE CITY'S APPROVAL OF CONSTRUCTION PLANS FOR ON-STREET PARKING IN THE SAME LOCATION ALONG:  
A. GENEVA ST - LOTS 1-3, BLOCK 12C
  - SIX (6) FOOT WIDE SIDEWALK ARE EXISTING ALONG OAK RUN PARKWAY.



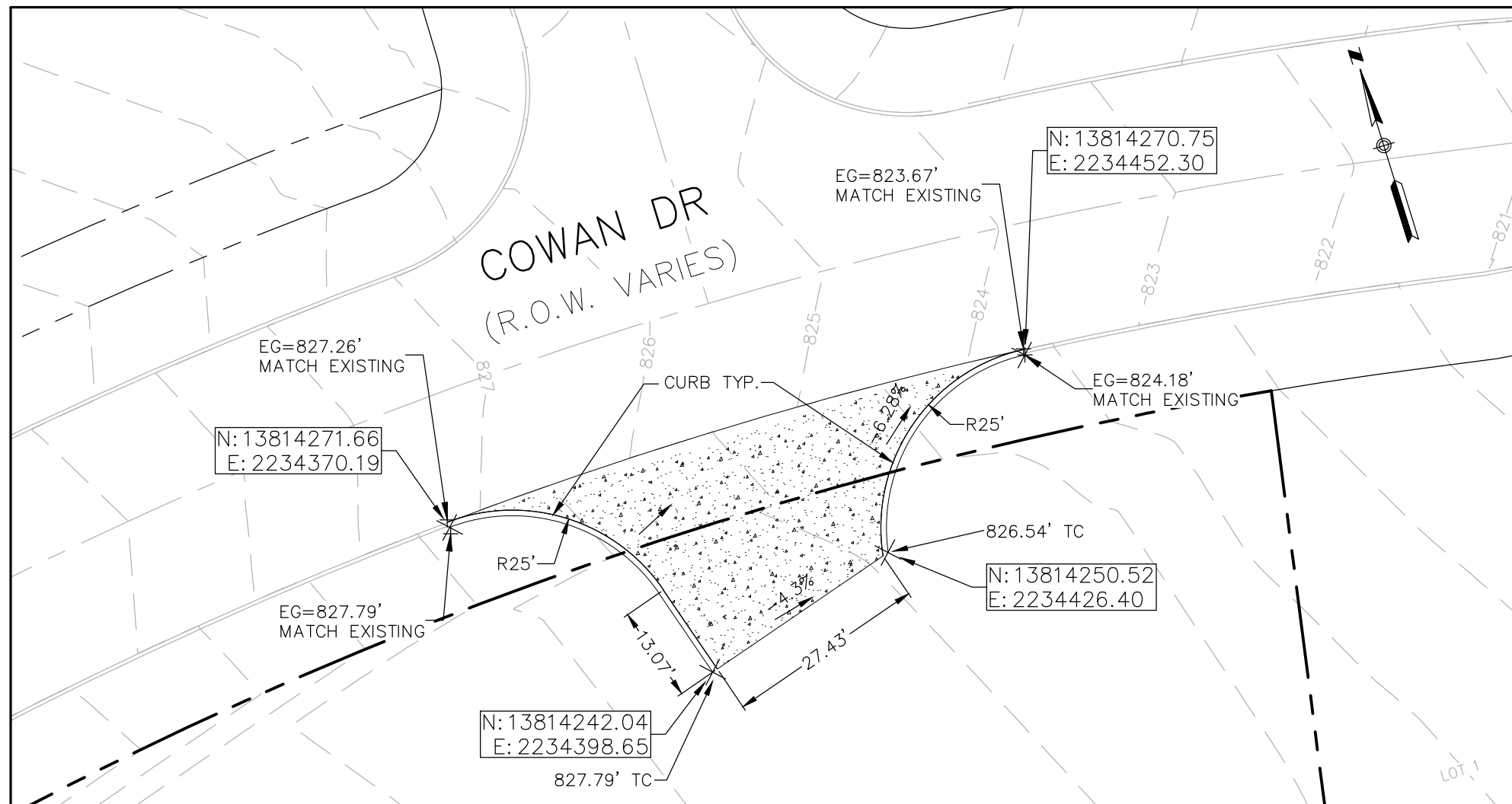
DRIVEWAY DETAIL #1



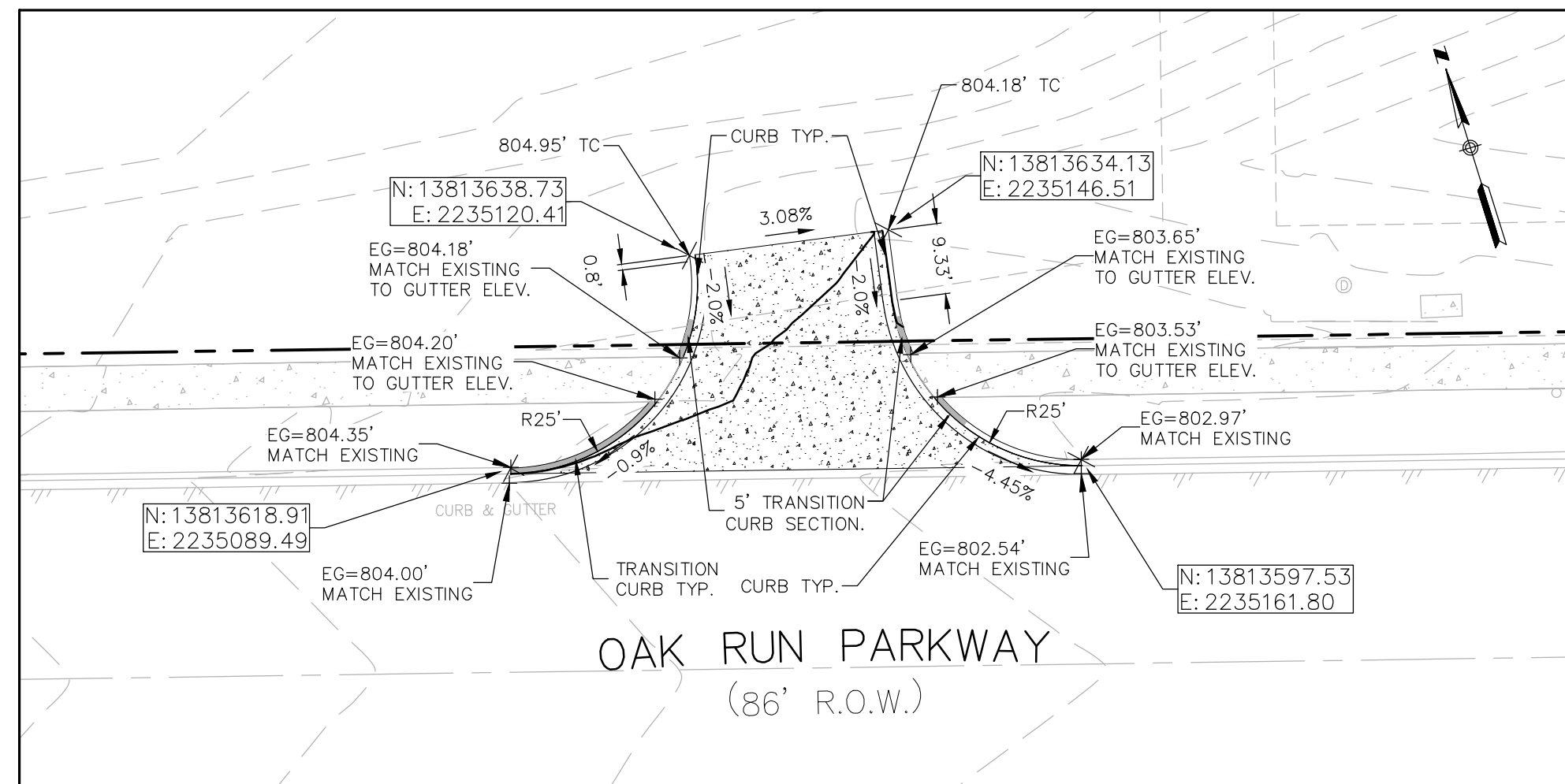
DRIVEWAY DETAIL #3



DRIVEWAY DETAIL #2



DRIVEWAY DETAIL #4



0 10 20  
SCALE: 1" = 20'



## RECORD DRAWING

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DATE: JULY 2020

BY: Chris Van Heerde, PE

HMT ENGINEERING AND SURVEYING

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

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TPBE-FIRM F-10961  
TBPLS FIRM 1053600



07/10/2020  
**GENEVA STREET IMPROVEMENTS  
AND DRIVEWAY DETAILS**  
VERAMEND NEIGHBORHOOD  
RETAIL DEVELOPMENT

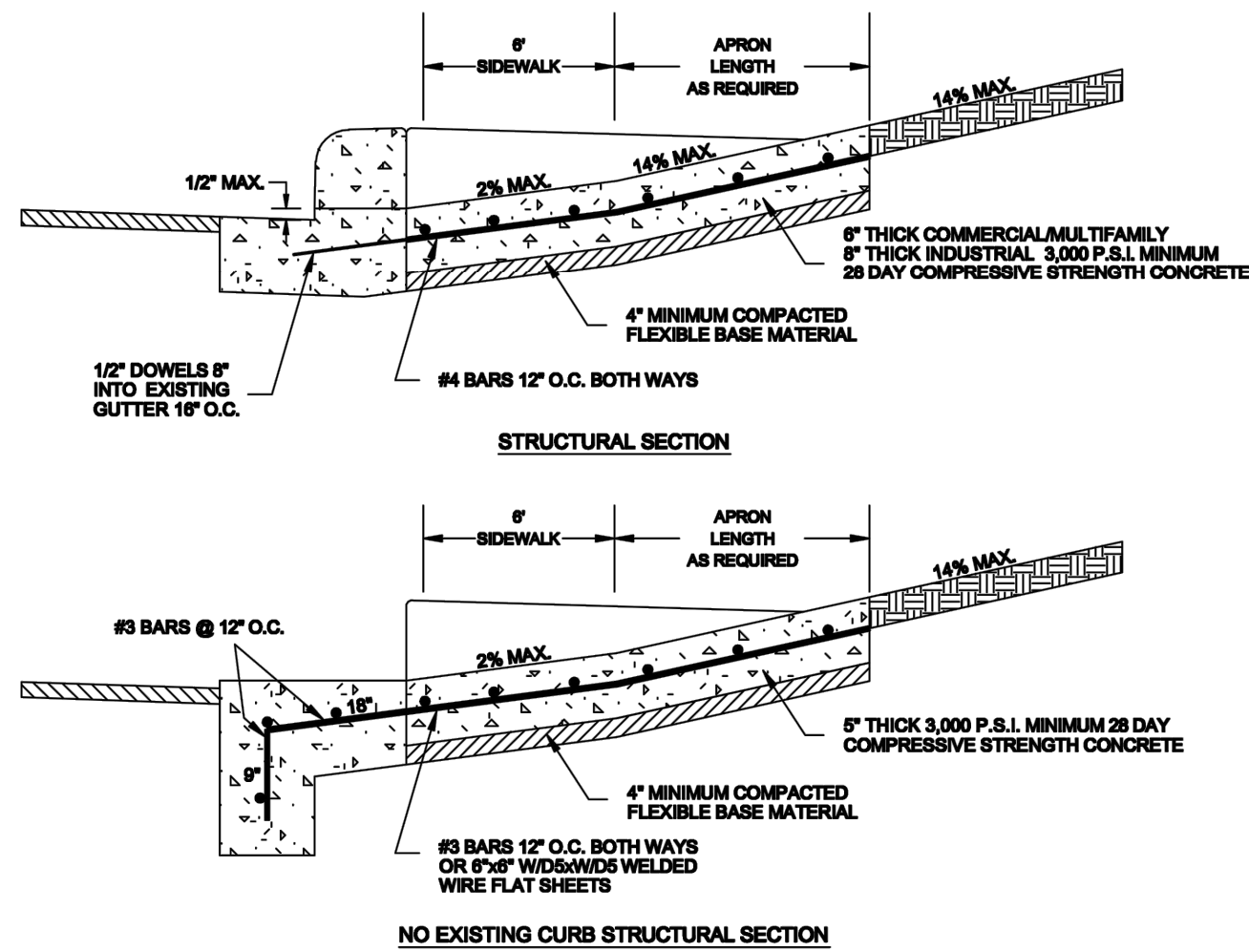
REVISION DATE	REVISION DESCRIPTION
10/24/19	ADDITIONAL DRIVEWAY CONSTRUCTION DETAILS
07/10/2020	ASBUILTS

DATE: FEBRUARY 2020  
DRAWN BY: JAD  
DESIGNED BY: JMM  
REVIEWED BY: CVH  
HMT PROJECT NO.: 216.020

**SHEET**  
**C5.1**


Drawing Name: N:\\_Projects\216 - Veramendi Neighborhood Retail\CDS\_ASBUILTS\CITYASBUILTS-216.020\_GRA0.dwg User: Barbara Jul 10, 2020 - 11:57am

### DRIVEWAY APRON (COMMERCIAL - MULTIFAMILY - INDUSTRIAL)

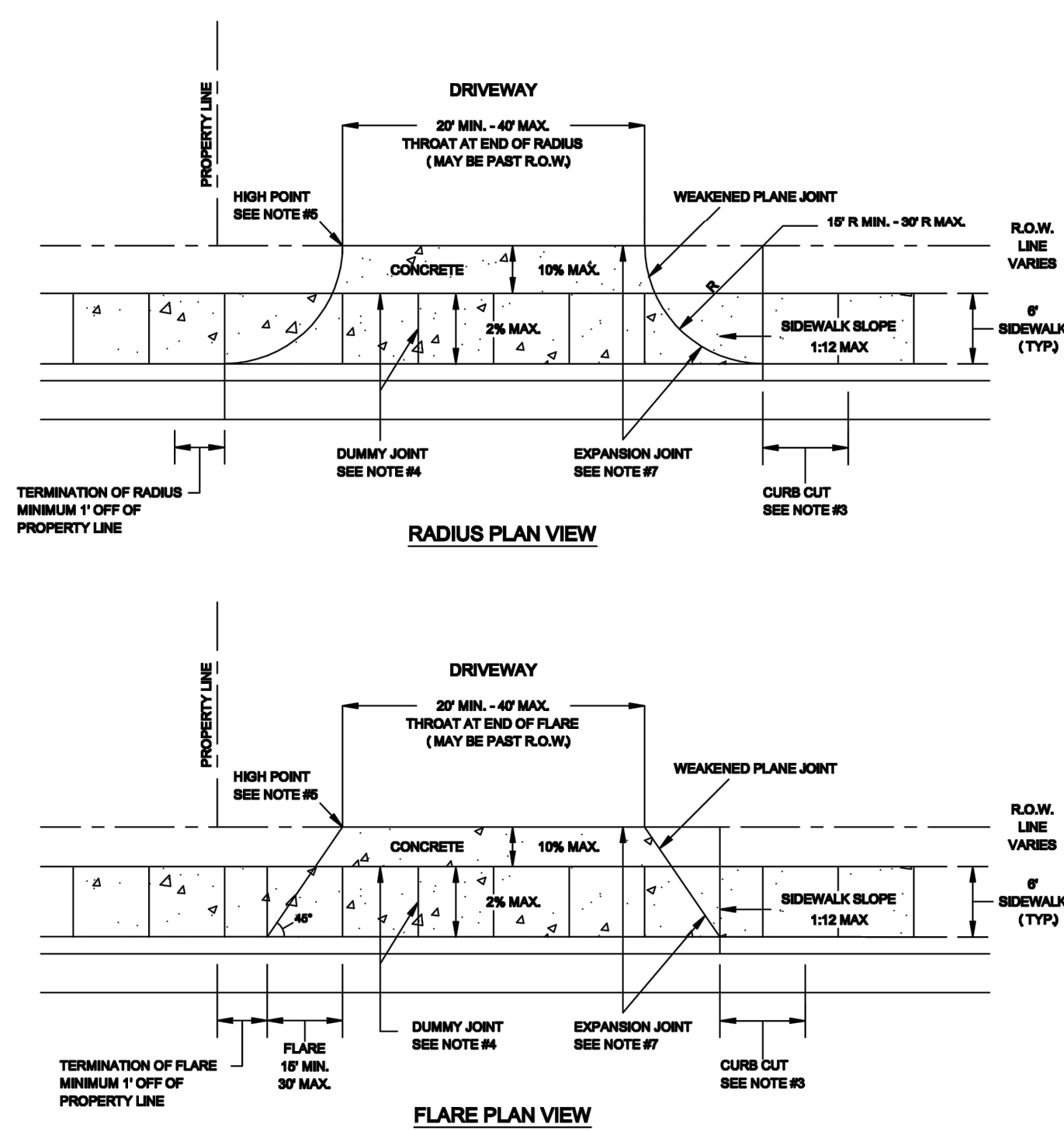



#### NOTES:

1. WHERE GUTTER DOES NOT EXIST DRIVEWAY APRON SHALL EXTEND TO EDGE OF ASPHALT AND SHALL HAVE A MINIMUM 6" WIDE 1" DEEP GRADE BEAM MONOLITHIC AND REINFORCED SIMILAR TO APRON.
2. PLACEMENT OF SIDEWALK SHOWN IS TYPICAL; HOWEVER, ALTERNATIVE SIDEWALK PLACEMENT COMMON TO DRIVEWAY APRON WILL BE CONSIDERED PROVIDED CROSS SLOPE OF SIDEWALK IS NO GREATER THAN 2%.
3. CURB CUT LENGTH NO GREATER THAN AS REQUIRED TO MATCH SLOPE OF ADJACENT SIDEWALK.
4. DUMMY JOINTS TO BE PROVIDED AT MINIMUM 4-FT. INTERVALS PERPENDICULAR TO THE CURB LINE WITHIN THE SIDEWALK AREA AND PARALLEL TO THE SIDEWALK AREA.
5. PROVIDE A MINIMUM 7" HIGH POINT. HIGH POINT HEIGHT SHALL BE MEASURED FROM THE GUTTER FLOW LINE TO THE DRIVEWAY APRON. NOTE HIGH POINT MAY OCCUR OUTSIDE OF ROW.
6. DRIVEWAY THROAT TRANSITION MAY OCCUR OUTSIDE OF ROW.
7. PROVIDE EXPANSION JOINTS AT ALL SIDEWALK AND DRIVEWAY THROAT JOINTS. EXPANSION JOINTS SHALL BE PLACED USING 1/2" ASPHALTIC MATERIAL WITH 1/2" DOWELS 18" O.C.
8. ALL SIDEWALK AND DRIVEWAY CONSTRUCTION SHALL MEET A.D.A. SPECIFICATIONS.

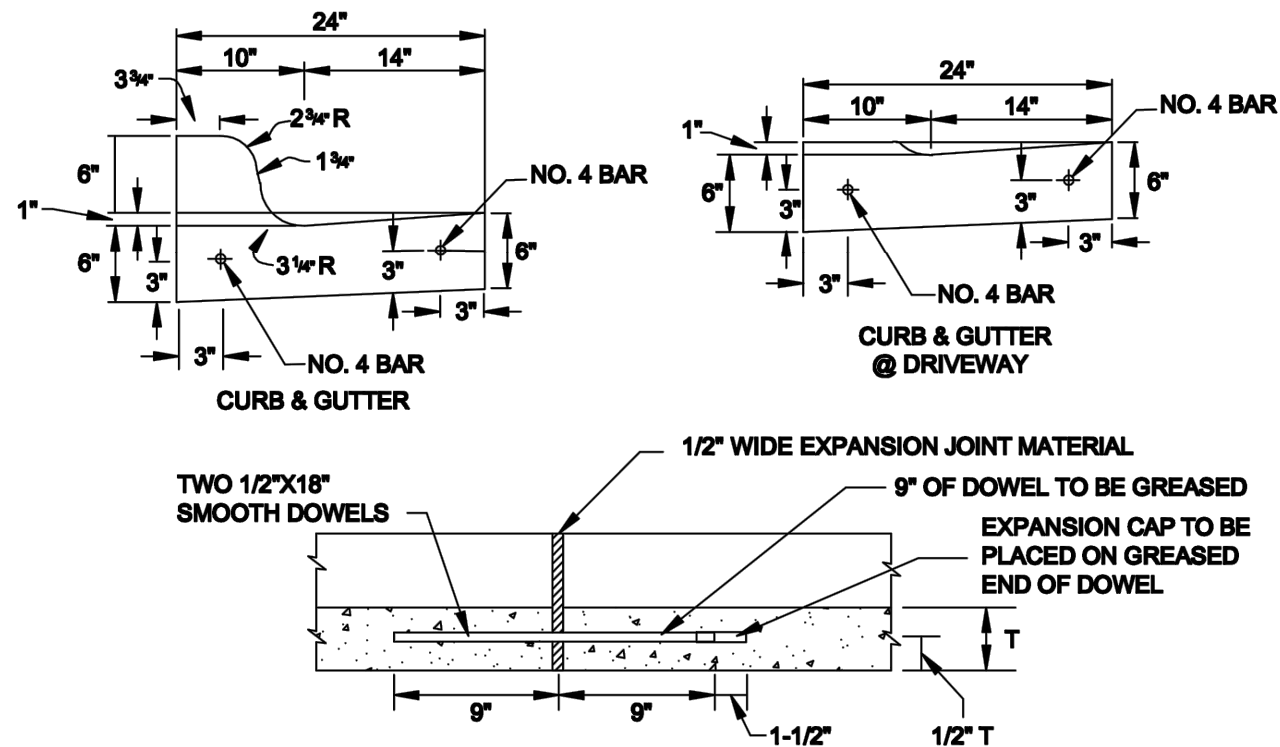
DATE APPROVED: 7/08	DWG. NO: ST-015.2	SCALE: N.T.S.		ENGINEERING DEPARTMENT
DRAWN BY: RAS	SHEET: 2 OF 2			
FILENAME: DRIVEWAY (Commercial - Multifamily - Industrial)				
P:\CURRENT NEW BRAUNFELS DETAILS\2008				

### DRIVEWAY APRON (COMMERCIAL - MULTIFAMILY - INDUSTRIAL) (RADIAL/FLARED)



DATE APPROVED: 7/08	DWG. NO: ST-015.1	SCALE: N.T.S.		ENGINEERING DEPARTMENT
DRAWN BY: RAS	SHEET: 1 OF 2			
FILENAME: DRIVEWAY (Commercial - Multifamily - Industrial - Radial/Flared)				
P:\CURRENT NEW BRAUNFELS DETAILS\2008				


### CURB AND GUTTER



LONGITUDINAL SECTION THRU CURB AND GUTTER  
SHOWING TYPICAL EXPANSION JOINT DETAILS.  
REINFORCING STEEL SHALL NOT CROSS EXPANSION JOINTS.  
STEEL SHALL BE TERMINATED 3" (+ OR -) 1" FROM FACE OF THE JOINT.

#### NOTES:

1. REINFORCING BARS SHALL BE LAPPED A MINIMUM OF 18".
2. CURB AND GUTTER SHALL HAVE FORMED TOOLED OR SAWED CONTRACTION JOINTS AT  $\pm 10'$ . THE DEPTH OF THESE JOINTS SHALL BE SUFFICIENT TO ENSURE CRACKING AT THE JOINTS.
3. CURB OR CURB AND GUTTER SHALL HAVE EXPANSION JOINTS AT POINTS OF CURVATURE, AT INTERVALS NO GREATER THAN 100' AND AT ALL ADJACENT STRUCTURES.
4. UNLESS OTHERWISE SHOWN, TRANSITIONS BETWEEN CURBS OR CURBS AND GUTTER OF DIFFERING CROSS SECTION SHALL BE ACCOMPLISHED OVER A 10' LENGTH OR AS APPROVED BY THE CITY ENGINEER.
5. ALL CONCRETE TO BE CLASS "A" 3000 PSI CONCRETE.
6. ALL EXPOSED CONCRETE SURFACES TO BE BRUSHED SMOOTH AND UNIFORM.

DATE APPROVED: 7/08	DWG. NO: ST-013	SCALE: N.T.S.		ENGINEERING DEPARTMENT
DRAWN BY: RAS	SHEET: 1 OF 1			
FILENAME: Curb & Gutter				
P:\CURRENT NEW BRAUNFELS DETAILS\2008				

290 S. CASTELL AVE. STE. 100  
NEW BRAUNFELS, TX. 78130  
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TBPLS FIRM 1053600



07/10/2020

DRIVEWAY DETAILS  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION	DESCRIPTION	DATE
1	ASBUILTS		07/10/2020

DATE: FEBRUARY 2020

DRAWN BY: JAD

DESIGNED BY: JMM

REVIEWED BY: CWH

HMT PROJECT NO.:  
216.020

SHEET

C5.2



### RECORD DRAWING

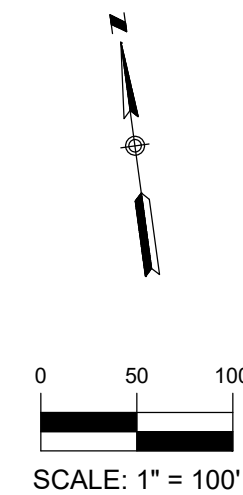
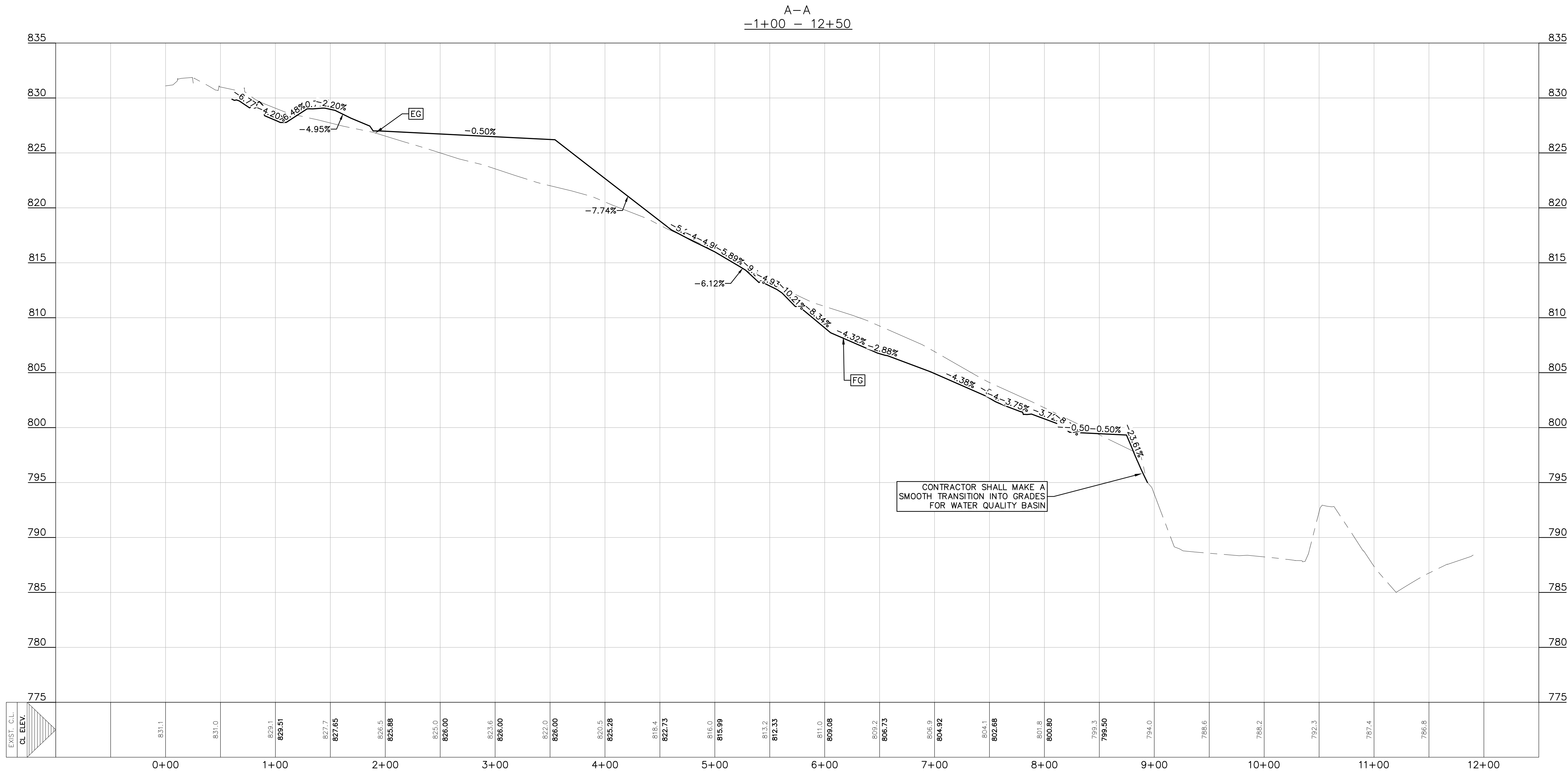
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DATE: JULY 2020

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

HMT ENGINEERING AND SURVEYING

Drawing Name: N:\\_Projects\216 - Veramendi Neighborhood Retail\City\ASBUILTS\CITY\ASBUILTS-SITE CROSS SECTIONS.dwg User: Barbara Jul 10, 2020 - 12:11pm

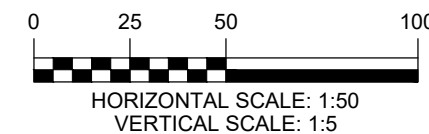


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DATE: JULY 2020 BY: *Chris Van Heerde, P.E.*

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NEW BRAUNFELS, TX. 78130  
TPBE-FIRM F-10961  
TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
CHRISTOPHER P. VAN HEERDE  
93047  
LICENSED PROFESSIONAL ENGINEER

07/10/2020

**SECTION A-A**

VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION DESCRIPTION	REVISION DATE
1	ASBUILTS	07/10/2020

DATE: JANUARY 2020

DRAWN BY: JAD

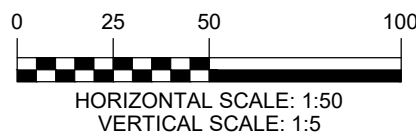
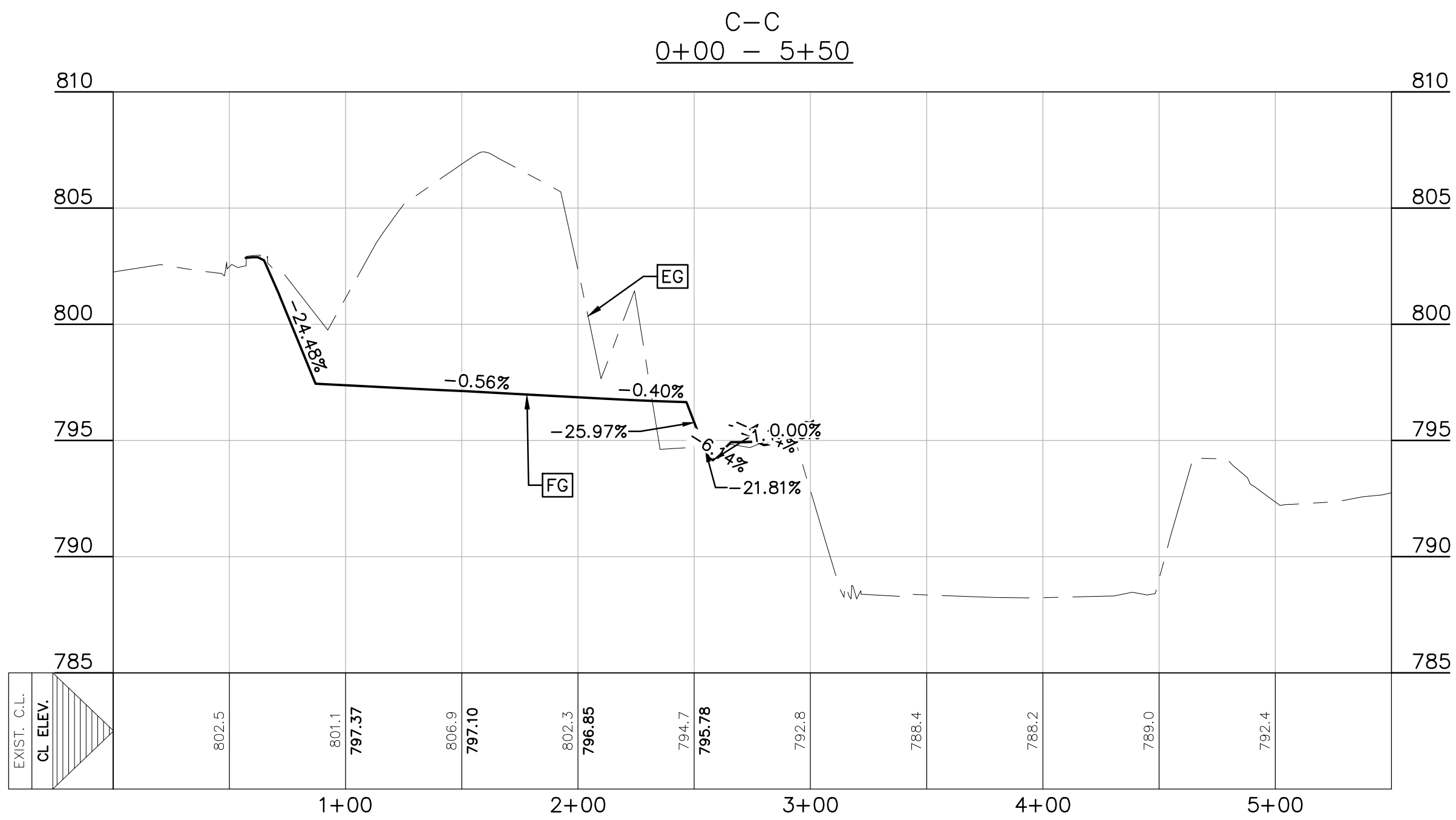
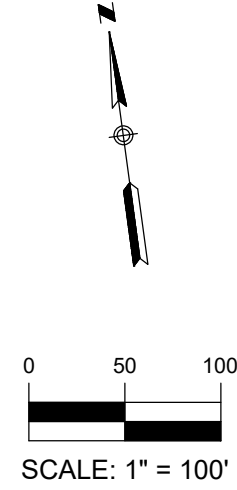
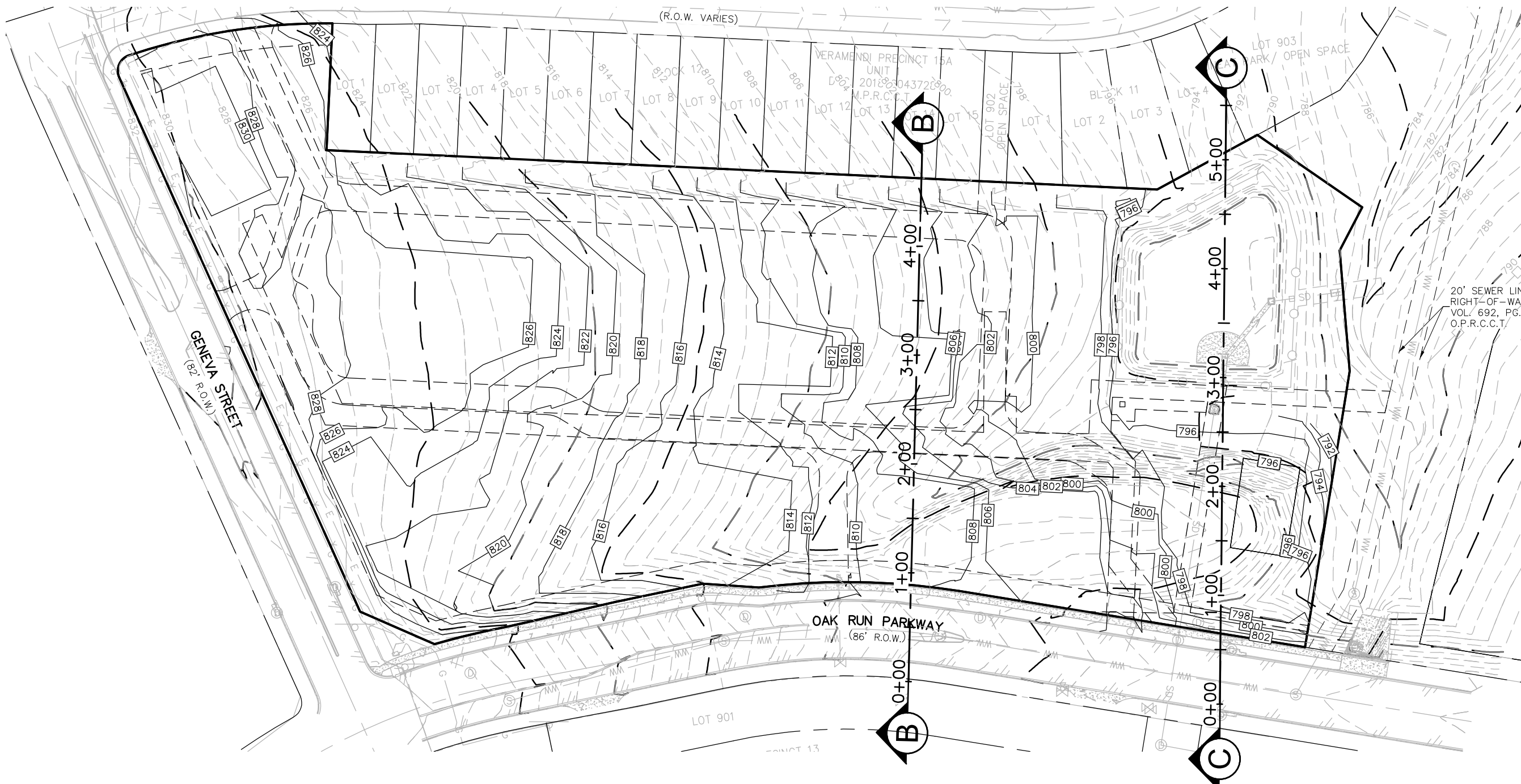
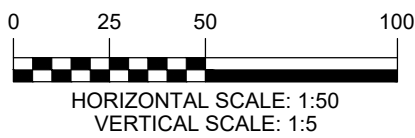
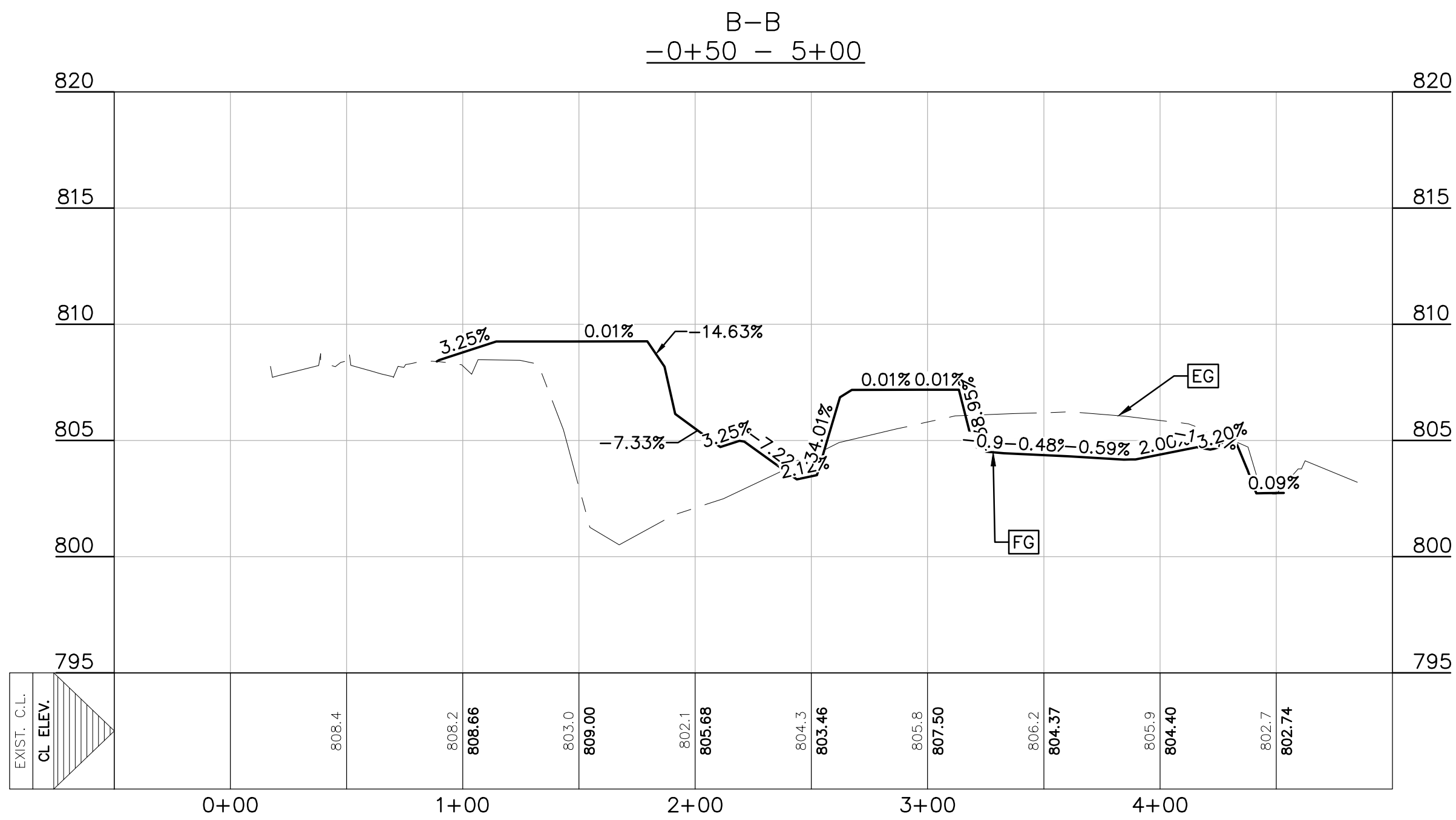
DESIGNED BY: JMM

REVIEWED BY: CWH

HMT PROJECT NO.: 216.020

**SHEET**

**C6.0**



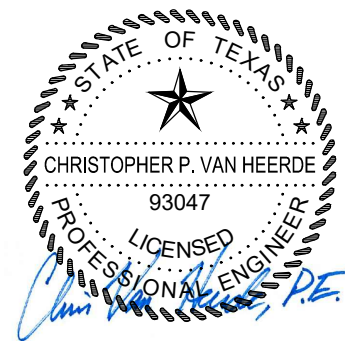
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DATE: JULY 2020 BY: *Chris Van Heerde, P.E.*

HMT ENGINEERING AND SURVEYING

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



07/10/2020

**SECTIONS B-B AND C-C**  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	ASBUILTS	REVISION DESCRIPTION	REVISION DATE
1			07/10/2020
2			
3			
4			
5			

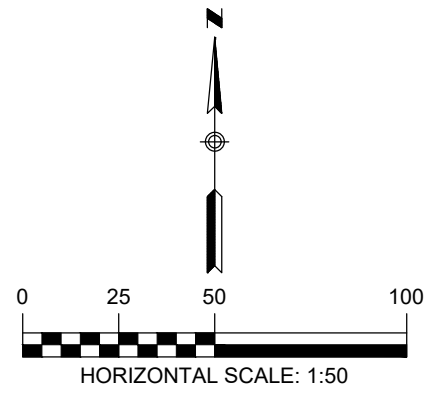
DATE: JANUARY 2020  
DRAWN BY: JAD  
DESIGNED BY: JMM  
REVIEWED BY: CWH  
HMT PROJECT NO.: 216.020

**SHEET**  
**C6.1**



**LEGEND**

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



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

- TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM DRAINAGE BASINS EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM STORM INLETS AND CHANNELS EVERY 12 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- STORM SEWER LINES SHALL BE INSPECTED EVERY 24 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
- CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
- STRUCTURAL INTEGRITY OF BASINS AND CHANNELS SHALL BE MAINTAINED AT ALL TIMES.
- MAINTENANCE VEHICLE FOR POND AND CHANNEL ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.
- SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.

**RECORD DRAWING**

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

HMT ENGINEERING AND SURVEYING

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NEW BRAUNFELS, TX. 78130  
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TBPLS FIRM 1053600

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
CHRISTOPHER P. VAN HEERDE  
93047  
LICENSED PROFESSIONAL ENGINEER

07/10/2020

**OVERALL STORM**

VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION DESCRIPTION	REVISION DATE
1	UPDATED SD LN A2 ALIGNMENT, INLET A2 DIMENSIONS	07/09/2020
2	ASBUILTS	07/10/2020

DATE: FEBRUARY 2020

DRAWN BY: JAD

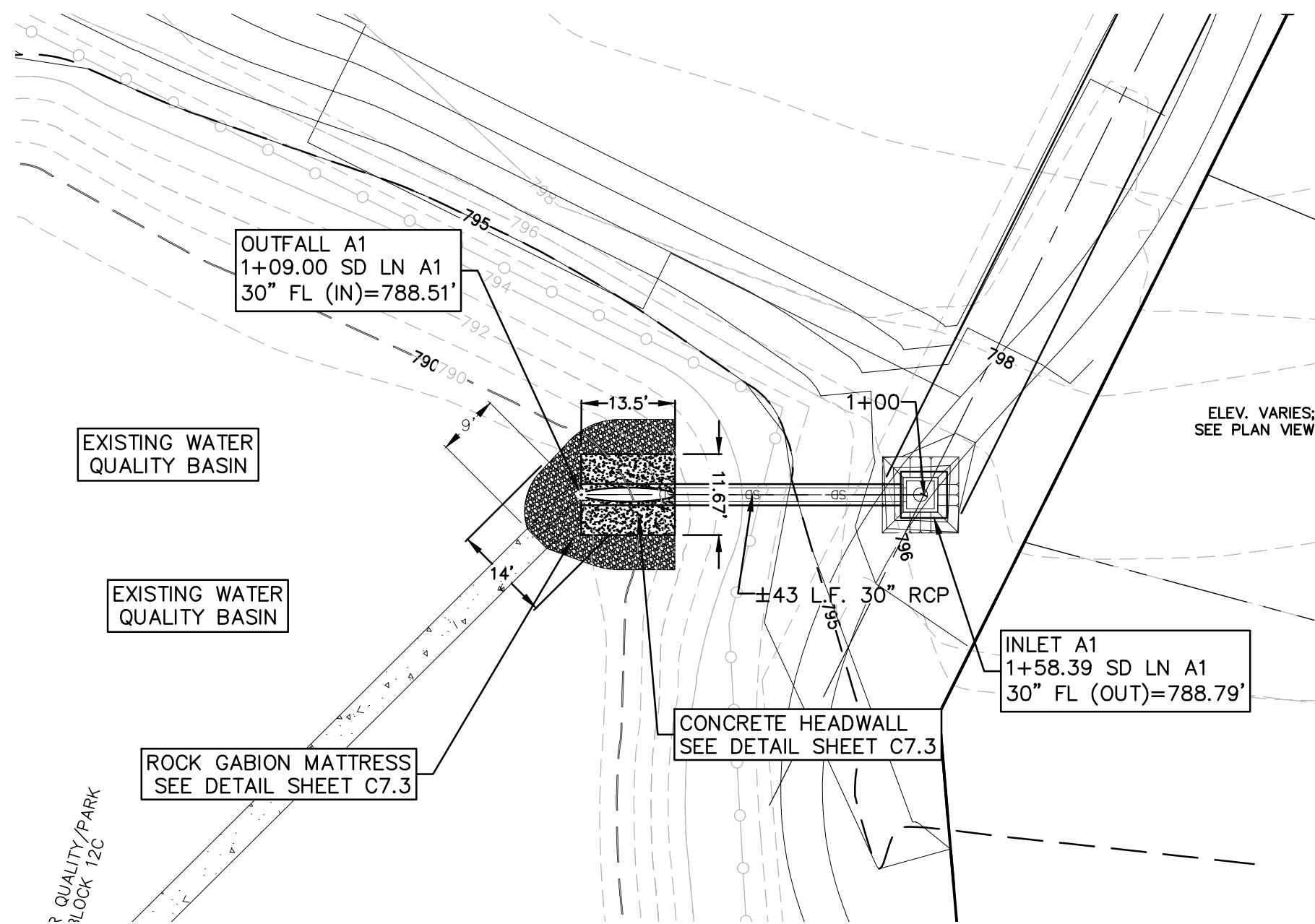
DESIGNED BY: JMM

REVIEWED BY: CVH

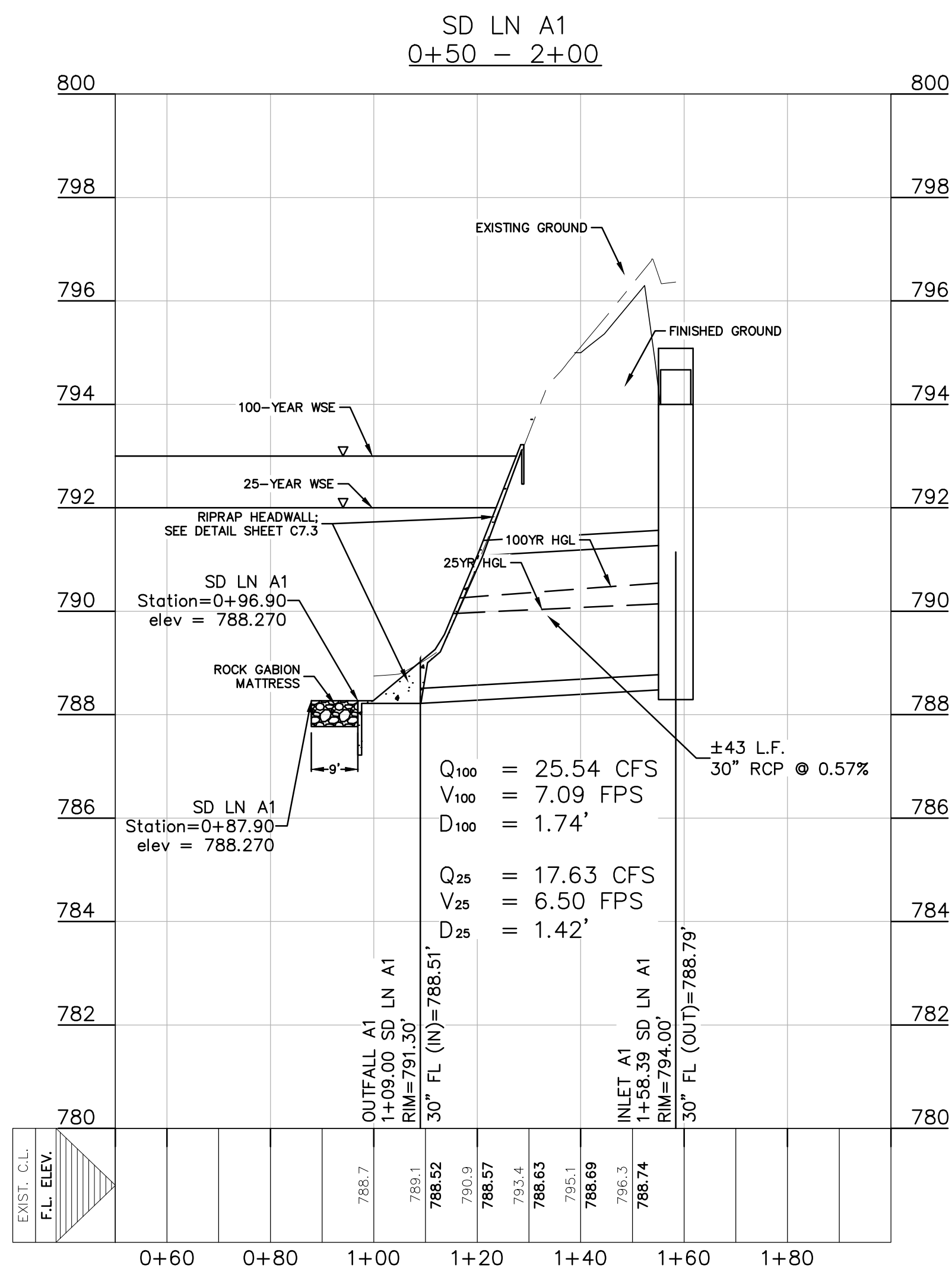
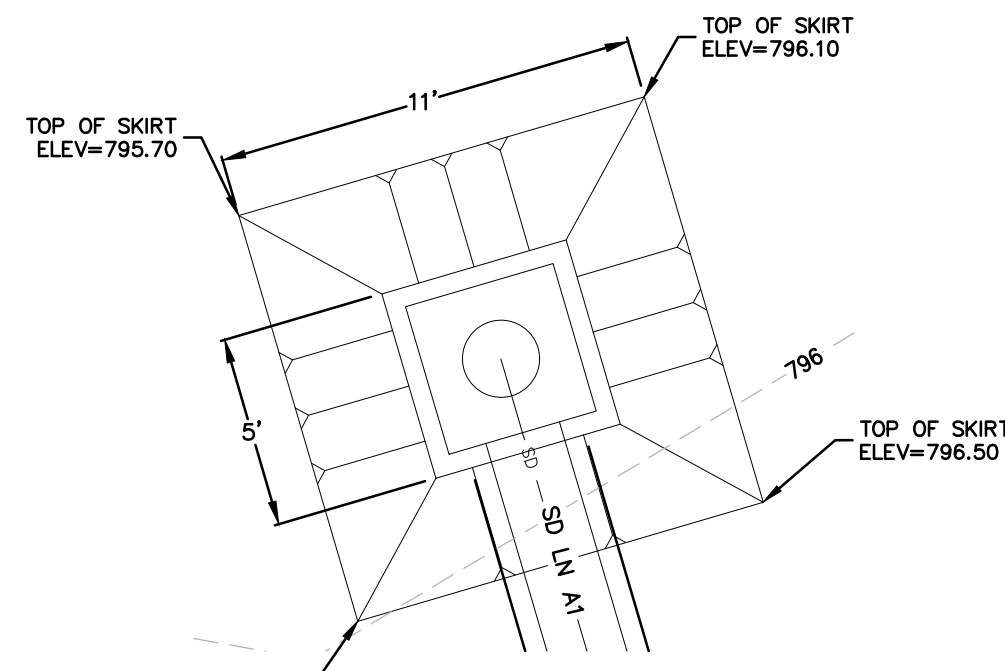
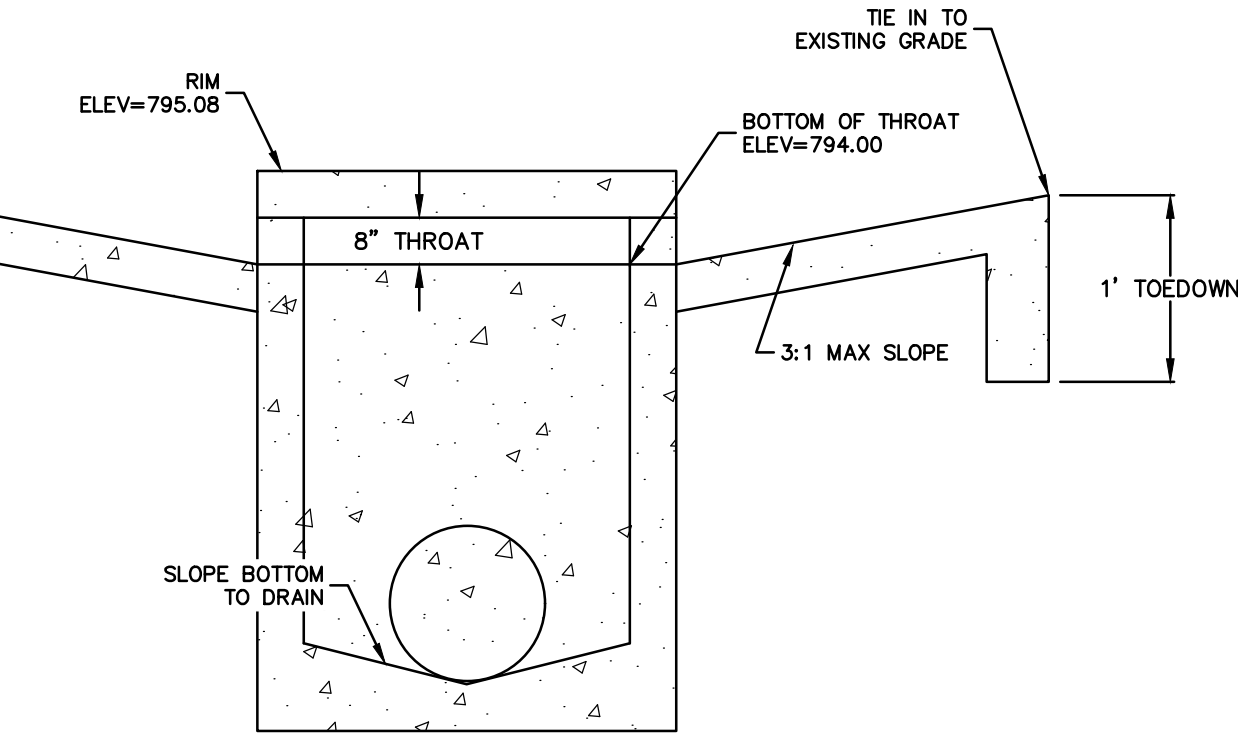
HMT PROJECT NO.: 216.020

**SHEET**

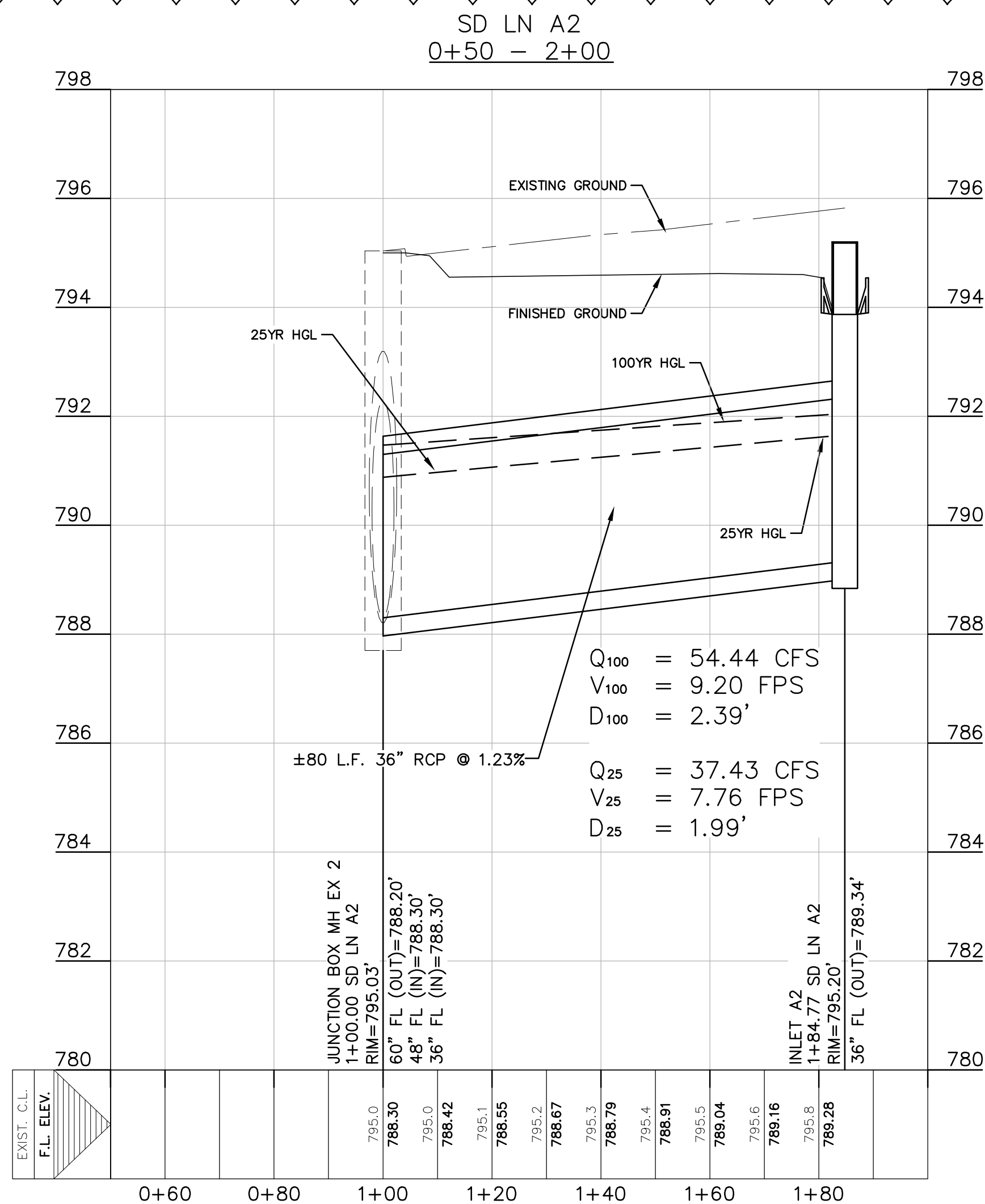
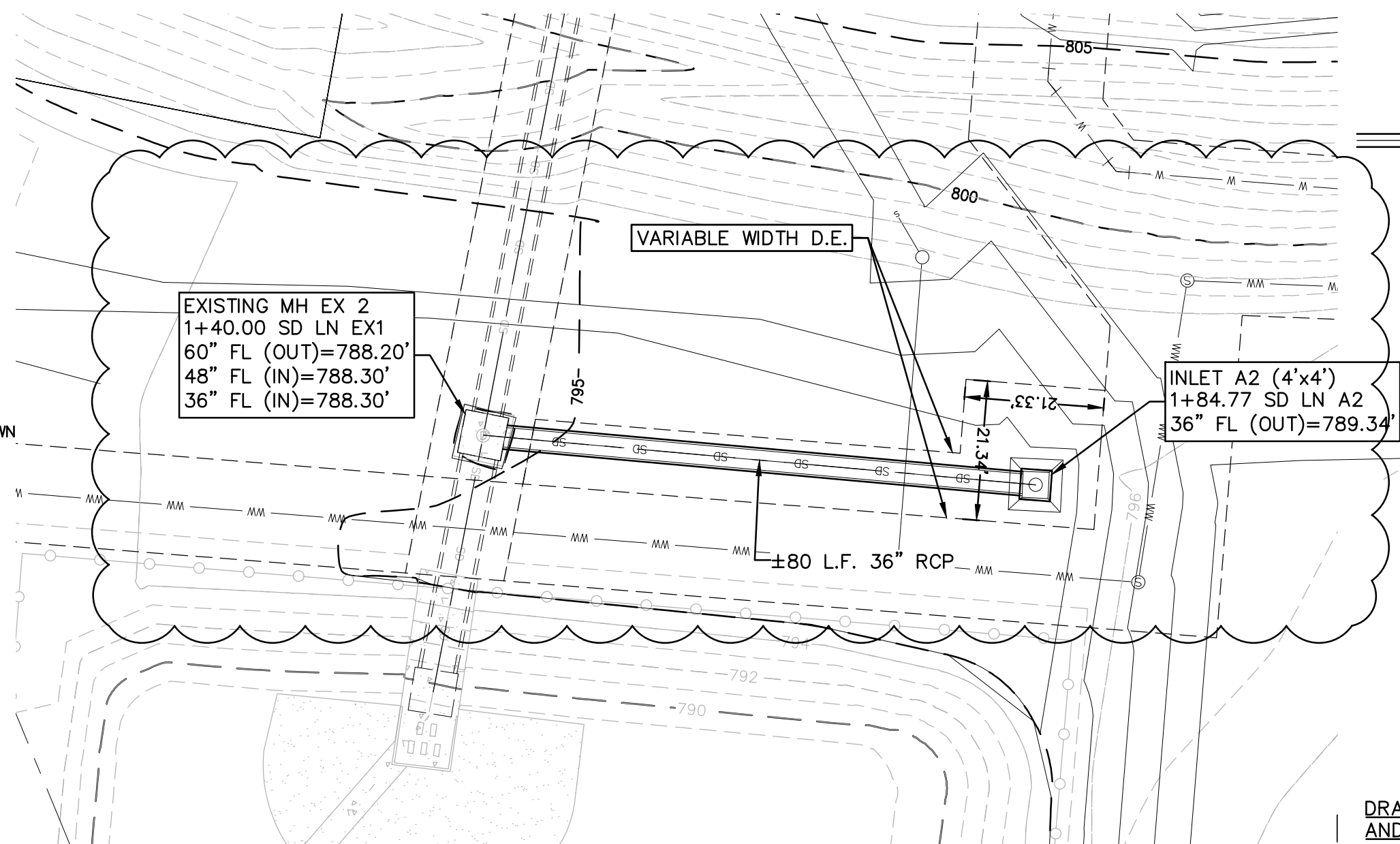
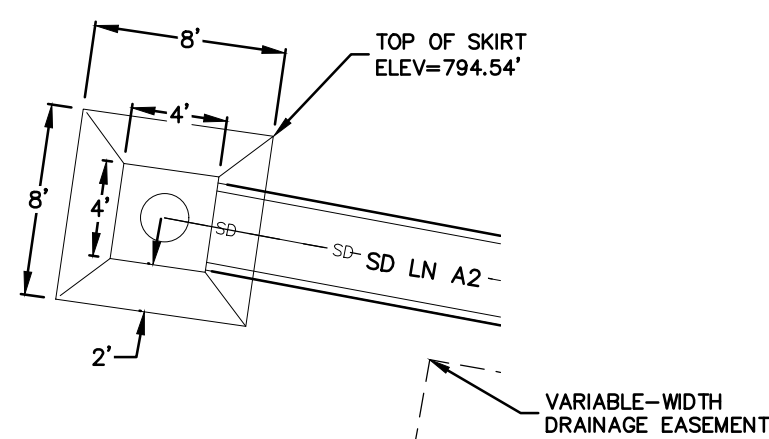
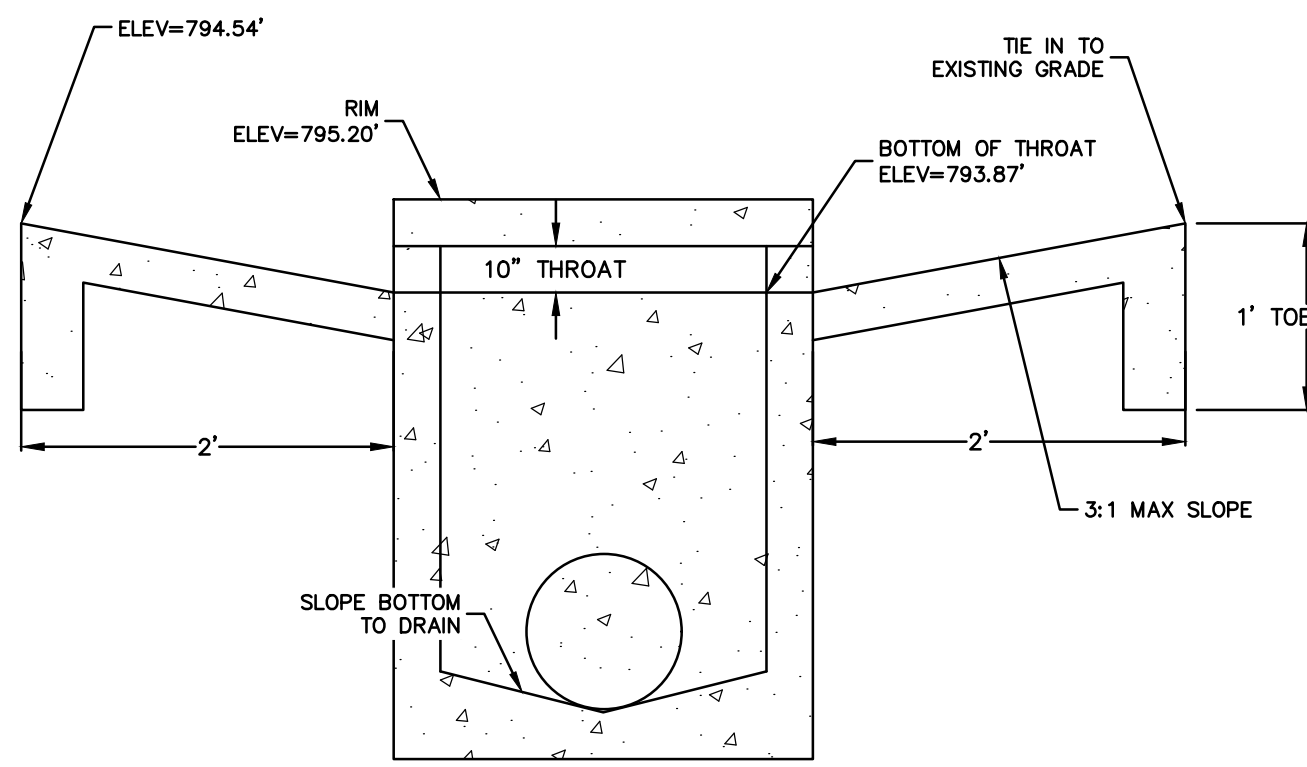
**C7.0**



① INLET A1 DETAIL



② INLET A2 DETAIL



## RECORD DRAWING

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DATE: JULY 2020 BY: *Chris Van Hous, P.E.*

HMT ENGINEERING AND SURVEYING

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

## LEGEND

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

DRAINAGE FEATURES, DETENTION BASIN MAINTENANCE AND EQUIPMENT ACCESS REQUIREMENTS:

- TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM DRAINAGE BASINS EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM STORM INLETS AND CHANNELS EVERY 12 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- STORM SEWER LINES SHALL BE INSPECTED EVERY 24 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
- BASINS SHALL BE MOWED ANNUALLY BETWEEN THE MONTHS OF JUNE AND SEPTEMBER.
- CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME A BASIN DOES NOT DRAIN COMPLETELY WITHIN 60 HOURS OR CESSATION OF INFLOW (IE: NO STANDING WATER IS ALLOWED).
- STRUCTURAL INTEGRITY OF BASINS AND CHANNELS SHALL BE MAINTAINED AT ALL TIMES.
- MAINTENANCE VEHICLE FOR POND AND CHANNEL ACCESS SHOULD BE A BOBCAT S175 SKID STEER LOADER OR VEHICLE OF EQUAL TO LESSER SIZE.
- SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.

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



07/10/2020

SD LN A1 & A2  
PLAN & PROFILE  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION DESCRIPTION	REVISION DATE
1	UPDATED SD LN A2 ALIGNMENT, INLET A2 DIMENSIONS	07/09/2020
2	ASUB\15	07/10/2020

DATE: FEBRUARY 2020

DRAWN BY: JAD

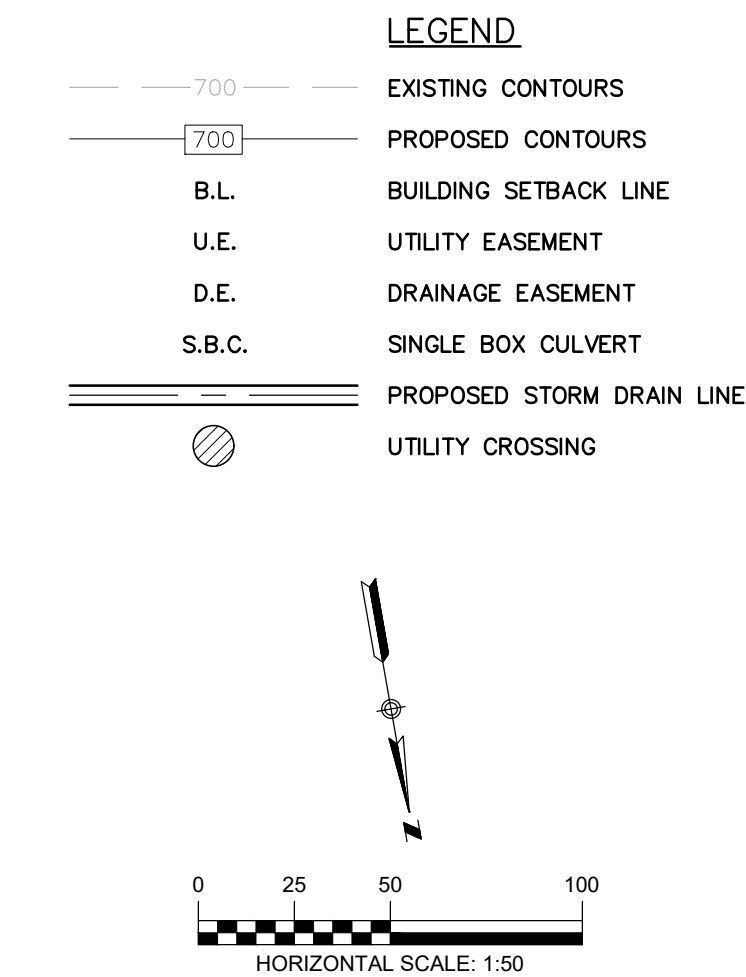
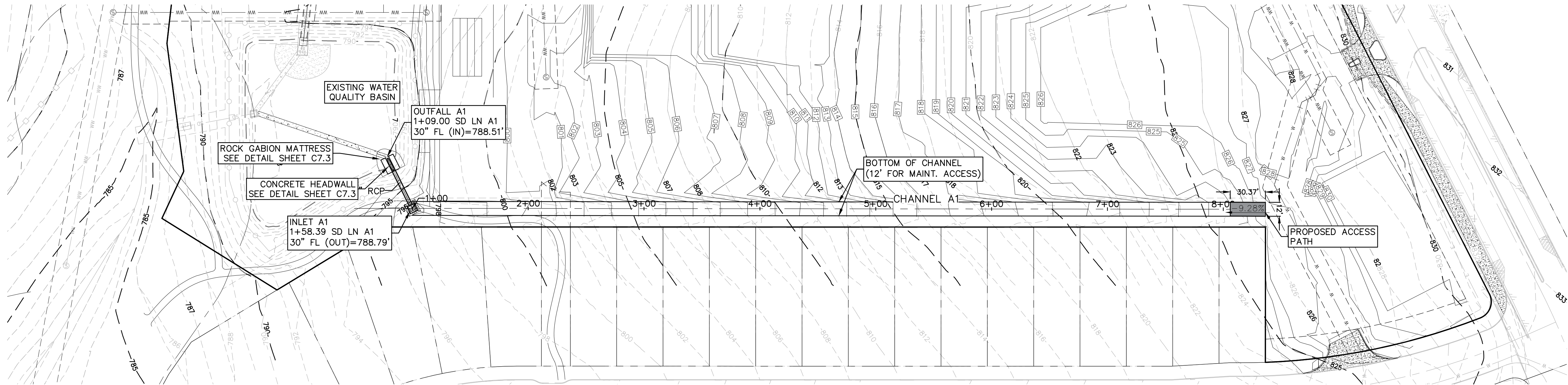
DESIGNED BY: JMM

REVIEWED BY: CVH

HMT PROJECT NO.:  
216.020

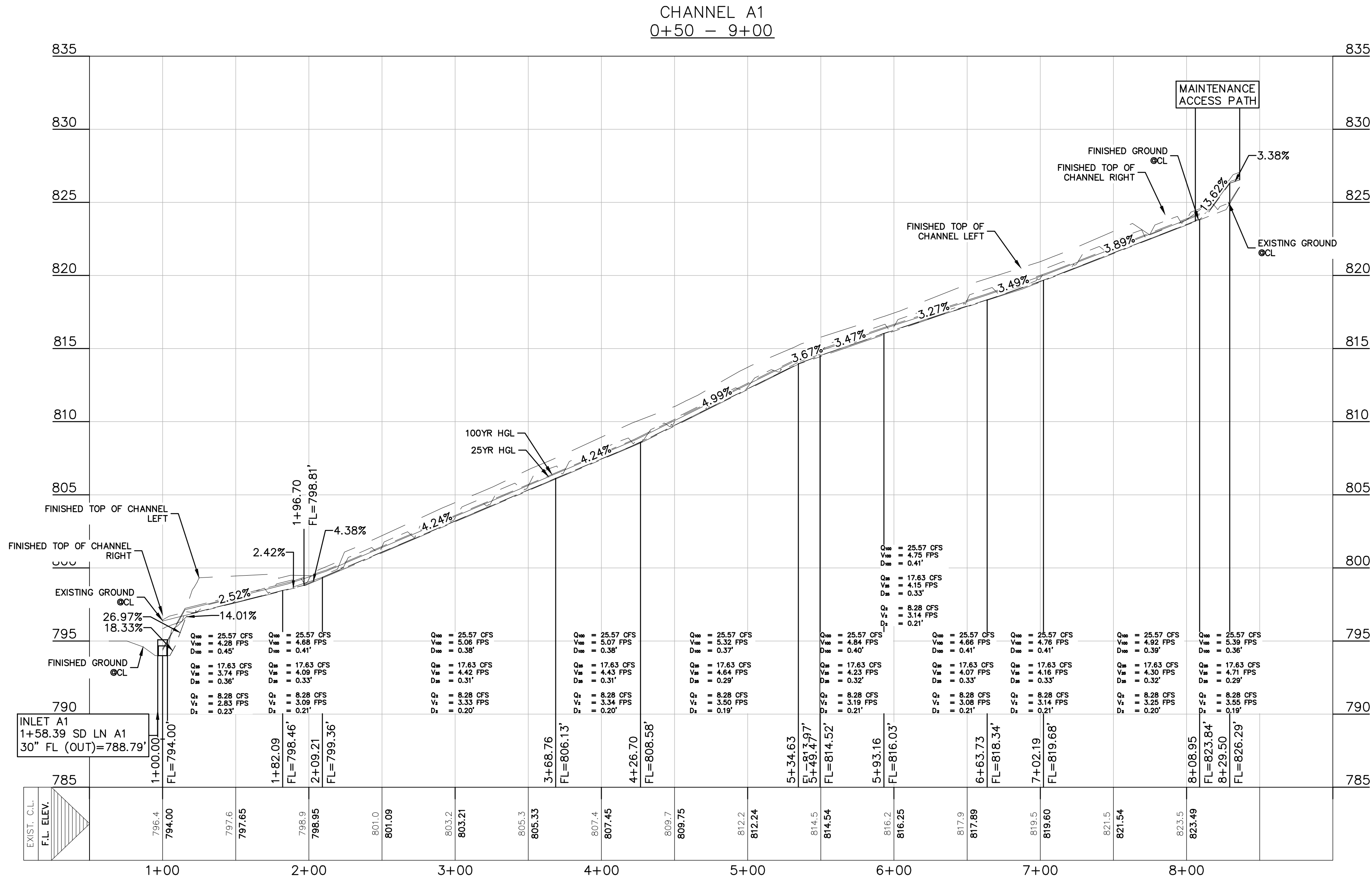
SHEET

C7.1



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

- TO LIMIT EROSION, NO UNVEGETATED AREA SHALL EXCEED 10 SQ. FT. IN EXTENT.
- ACCUMULATED PAPER, TRASH, AND DEBRIS SHALL BE REMOVED FROM DRAINAGE BASINS EVERY 6 MONTHS OR AS NECESSARY TO MAINTAIN PROPER OPERATION.
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- SILT SHALL BE REMOVED AND THE BASIN RETURNED TO ORIGINAL LINES AND GRADES WHEN STANDING WATER CONDITIONS OCCUR OR THE BASIN STORAGE VOLUME IS REDUCED BY MORE THAN 10%.

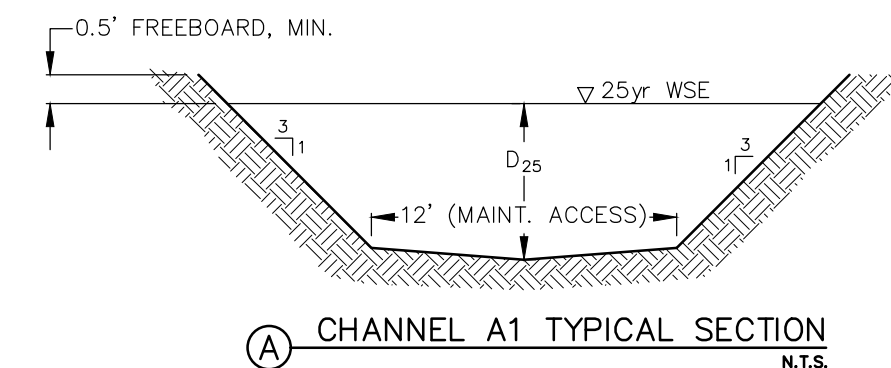


**RECORD DRAWING**

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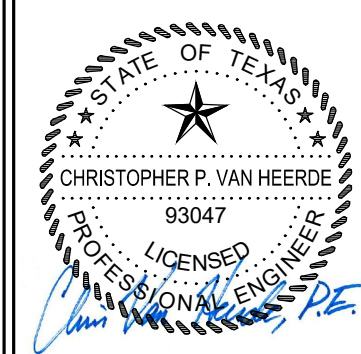
DATE: JULY 2020 BY: *Chris Van Heerde, P.E.*

HMT ENGINEERING AND SURVEYING



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

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



07/10/2020

**CHANNEL A1 PLAN  
& PROFILE**  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION DESCRIPTION	REVISION DATE
1	UPDATED SD LN A2 ALIGNMENT, INLET A2 DIMENSIONS	01/09/2020
2	ASBUILTS	07/10/2020

DATE: FEBRUARY 2020

DRAWN BY: JAD

DESIGNED BY: JMM

REVIEWED BY: CVH

HMT PROJECT NO.:  
216.020

**SHEET**  
**C7.2**

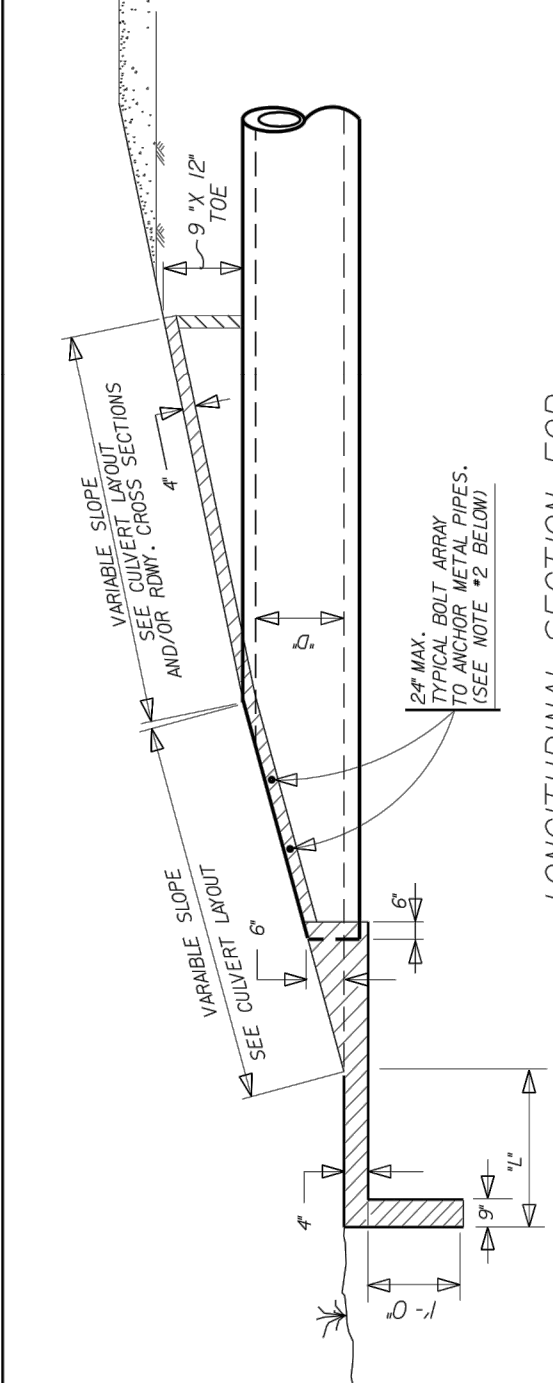
RECORD DRAWING

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DATE: JULY 2020 BY: *Chris Van Houdt, P.E.*

HMT ENGINEERING AND SURVEYING

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



LONGITUDINAL SECTION FOR CIRCULAR & ARCH PIPES

DIMENSIONS FOR CIRCULAR (CMP) and RCP PIPE CULVERTS

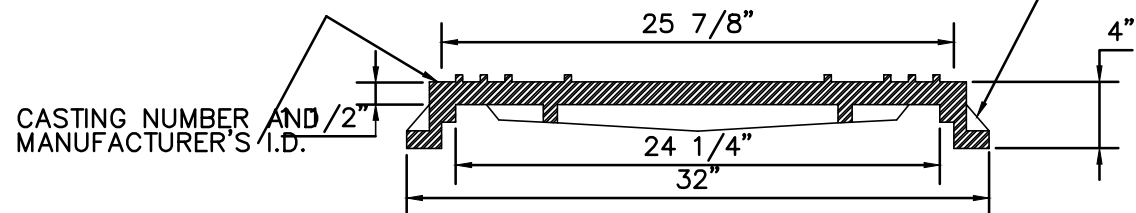
10' INSIDE PIPE	SINGLE		DOUBLE		TRIPLE		QUADRIUPLE	
	1"	2"	3"	4"	5"	6"	7"	8"
18"	2'-0"	1'-2"	0'-9"	4'-6"	7'-2"	9'-0"	12'-6"	15'-4"
24"	2'-6"	1'-3"	0'-10"	5'-3"	8'-4"	11'-4"	15'-4"	19'-4"
30"	3'-0"	1'-5"	0'-11"	6'-0"	9'-5"	12'-10"	16'-3"	20'-9"
36"	3'-6"	1'-7"	1'-3"	6'-9"	10'-4"	13'-9"	18'-0"	23'-9"
42"	4'-0"	2'-2"	1'-5"	8'-0"	12'-6"	16'-2"	21'-0"	27'-6"
48"	4'-6"	2'-5"	1'-7"	9'-0"	14'-0"	18'-0"	24'-0"	31'-3"
54"	5'-0"	2'-8"	1'-10"	10'-0"	15'-6"	20'-0"	27'-0"	35'-0"
60"	5'-6"	3'-2"	1'-12"	11'-0"	17'-0"	22'-0"	30'-0"	39'-0"

\*G IS MEASURED BETWEEN THE OUTER SURFACES OF THE PIPES.

DIMENSIONS FOR C.M.P. ARCH PIPE CULVERTS

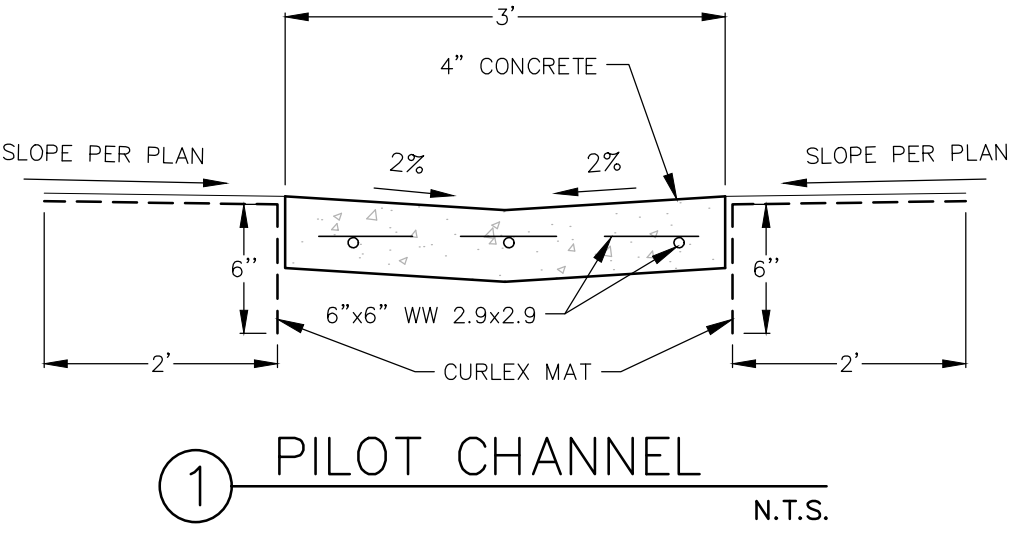
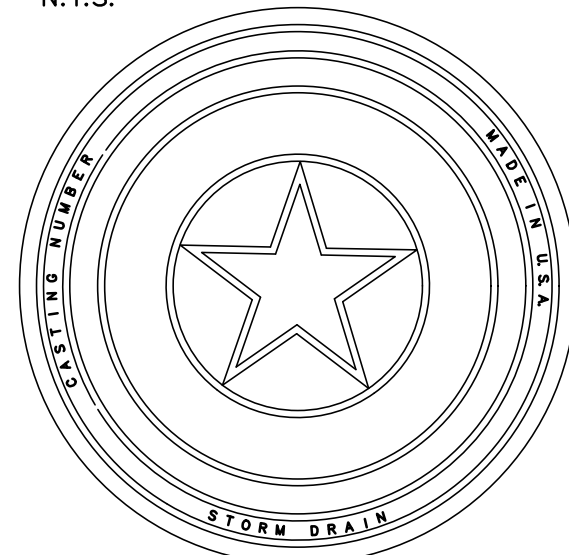
DESIGN SIZE	SPAN	RISE	SINGLE		DOUBLE		TRIPLE	
			1"	2"	3"	4"	5"	6"
2	20'	10'	2'-0"	1'-2"	0'-9"	4'-6"	7'-2"	9'-0"
3	28'	14'	3'-0"	1'-5"	0'-11"	6'-0"	9'-5"	12'-10"
4	36'	24'	4'-0"	1'-8"	1'-6"	8'-0"	11'-4"	15'-4"
5	42'	30'	5'-0"	2'-0"	1'-9"	9'-0"	12'-10"	16'-3"
6	48'	36'	6'-0"	2'-3"	2'-0"	10'-0"	13'-9"	18'-0"
7	54'	42'	7'-0"	2'-6"	2'-3"	11'-0"	15'-6"	20'-9"
8	60'	48'	8'-0"	2'-9"	2'-6"	12'-0"	17'-0"	23'-9"
9	66'	54'	9'-0"	3'-2"	2'-9"	13'-0"	19'-0"	26'-9"
10	72'	60'	10'-0"	3'-5"	3'-2"	14'-0"	21'-0"	29'-9"

\*G IS MEASURED BETWEEN THE OUTER SURFACES OF THE PIPES.



MANHOLE RING & COVER DETAILS

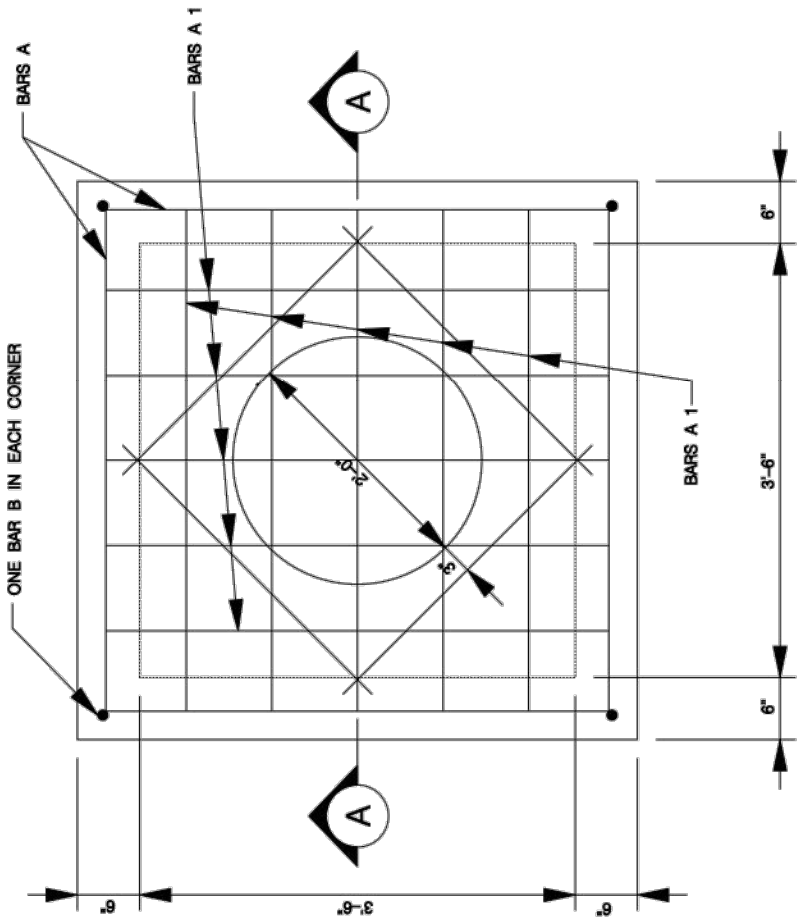
FRONT VIEW SCALE: N.T.S.



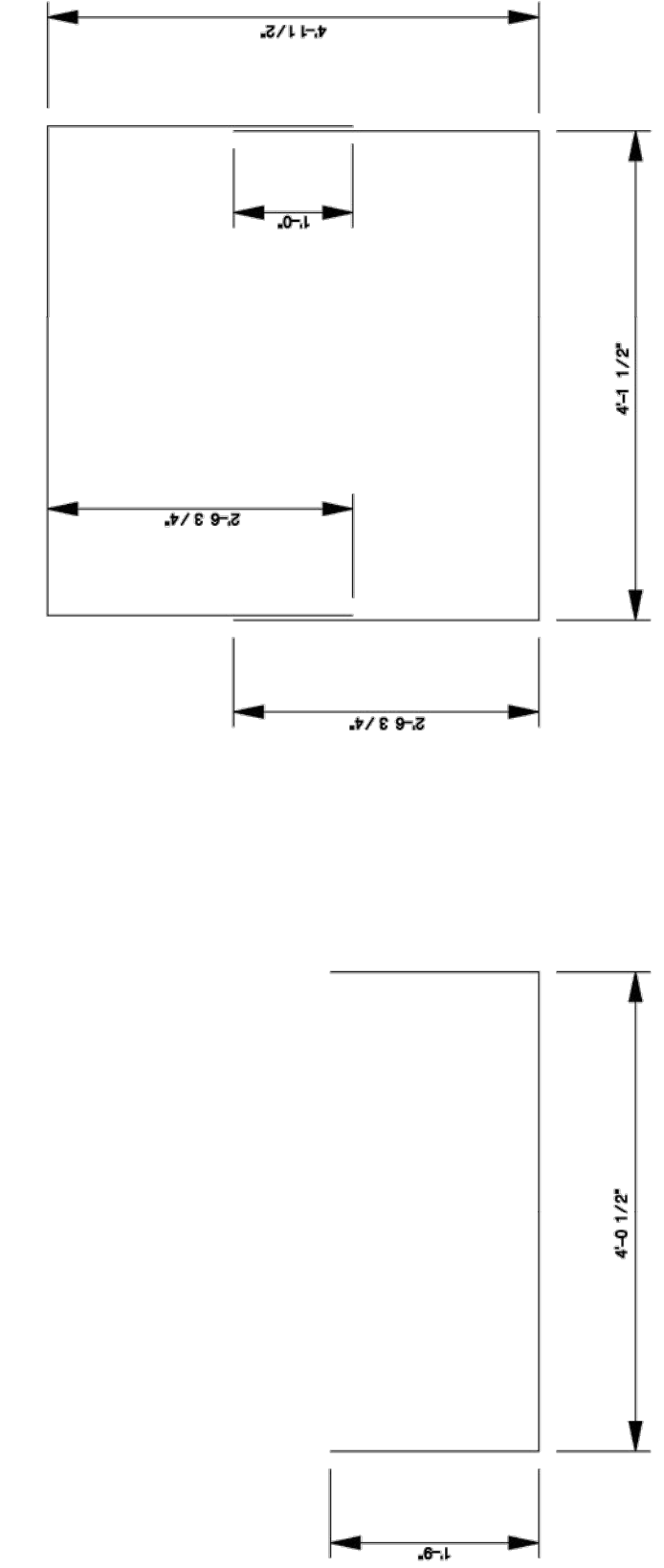
PILOT CHANNEL N.T.S.

- STONE**  
STONE FILL MATERIAL SHALL CONSIST OF HARD, DURABLE, CLEAN STONE OF THE SIZE INDICATED, 5 TO 8 INCHES IN SIZE OR AS APPROVED BY THE ENGINEER AND RESISTANT TO THE ACTION OF AIR AND WATER AND SUITABLE IN ALL RESPECTS FOR THE PURPOSE INTENDED.
- WIRE CONTAINERS**  
WIRE MESH SHALL CONSIST OF PLASTIC COATED (P.V.C.) GALVANIZED WIRE 0.120 INCH IN DIAMETER MINIMUM AND SHALL EQUAL OR EXCEED FEDERAL SPECIFICATION QQ-W-461G, CLASS 3 UNLESS OTHERWISE INDICATED. OPENING OF THE MESH SHALL NOT EXCEED APPROXIMATELY 4 INCHES IN THE LONGEST DIMENSION. THE WIRE MESH IS TO BE FABRICATED IN SUCH MANNER AS TO BE NONRAVELING. TIE AND CONNECTING WIRE SHALL BE OF THE SAME TYPE AND SIZE AS THE BASKETS AND SHALL BE SUPPLIED IN SUFFICIENT QUANTITY FOR SECURELY FASTENING ALL EDGES OF THE GABION AND DIAPHRAGMS.
- FILTER FABRIC**  
FILTER FABRIC SHALL BE NON-BIODEGRADABLE ULTRAVIOLET STABILIZED, INERT TO MOST SOIL CHEMICALS, UNAFFECTED BY MOISTURE WHICH ALLOWS WATER TO PASS THROUGH WHILE RETAINING SOIL PARTICLES AND SHALL CONFORM TO ITEM NO. 620, "FILTER FABRIC".

GABION MATTRESS DETAIL N.T.S.

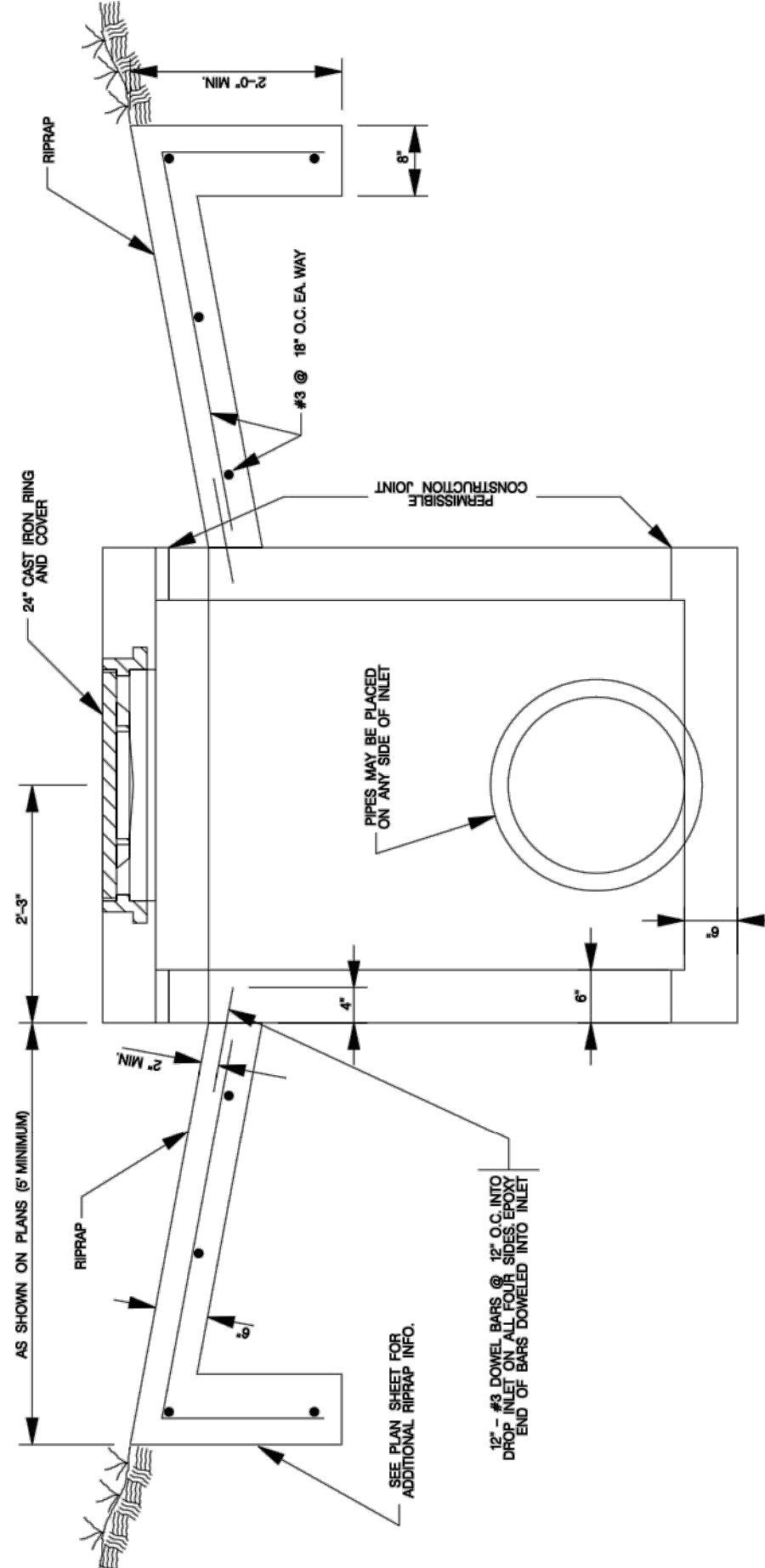


TOP SLAB PLAN VIEW SCALE: 1" = 2'-0"



BARS C SCALE: 1" = 2'-0"

BARS A SCALE: 1" = 2'-0"



SECTION A-A SCALE: 1" = 2'-0"

ESTIMATED QUANTITIES FOR "H" = 4'-6"				
REINFORCING STEEL				
BAR	NO.	SIZE	SPACE	WEIGHT
A	18	4	8" +/-	79
A 1	10	4	8" +/-	27
B	4	4	AS SHOWN	15
B 1	20	4	8" +/-	61
C	12	4	8" +/-	148
J	4	4	AS SHOWN	2'-8"
TOTAL REINFORCING STEEL				388 Lbs. *
CLASS A CONCRETE				2.10 CY *

\* FOR CONTRACTORS INFORMATION ONLY. QUANTITIES VARY WITH DIMENSIONS. SEE INLET & MANHOLE SUMMARY SHEETS FOR "H".

- GENERAL NOTES:
- ALL BARS INTERCEPTING THE RING AND COVER OPENING AND PIPE OPENINGS, SHALL BE FIELD CUT
  - CONCRETE SHALL BE CLASS "A", 3000 P.S.I. IN 28 DAYS.
  - ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
  - ALL EXPOSED CORNERS SHALL HAVE 3/4" CHAMFER
  - PAYMENT FOR ALL EXCAVATION BACKFILLING, CONCRETE, REINFORCING STEEL, RING, AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 "STORM SEWER JUNCTION BOXES AND INLETS".

JANUARY 2005

CITY OF SAN ANTONIO  
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

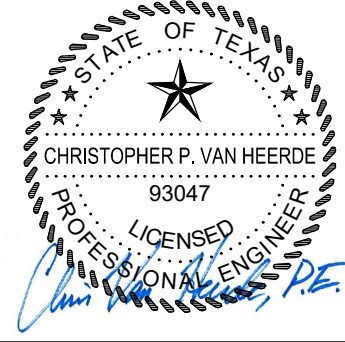
4-WAY INLET STANDARDS

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

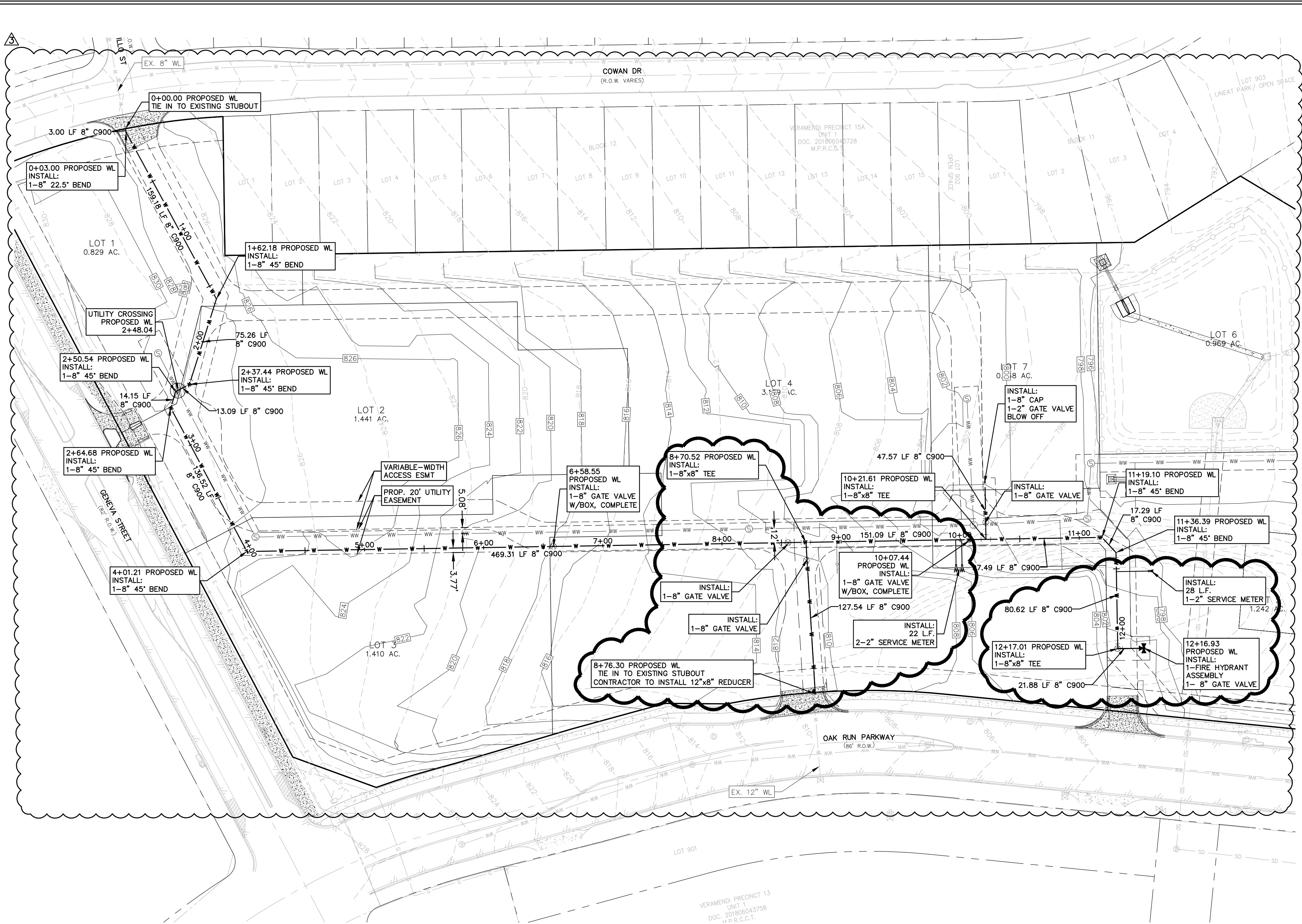
SHEET  
C7.3

STORM DETAILS  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

07/10/2020

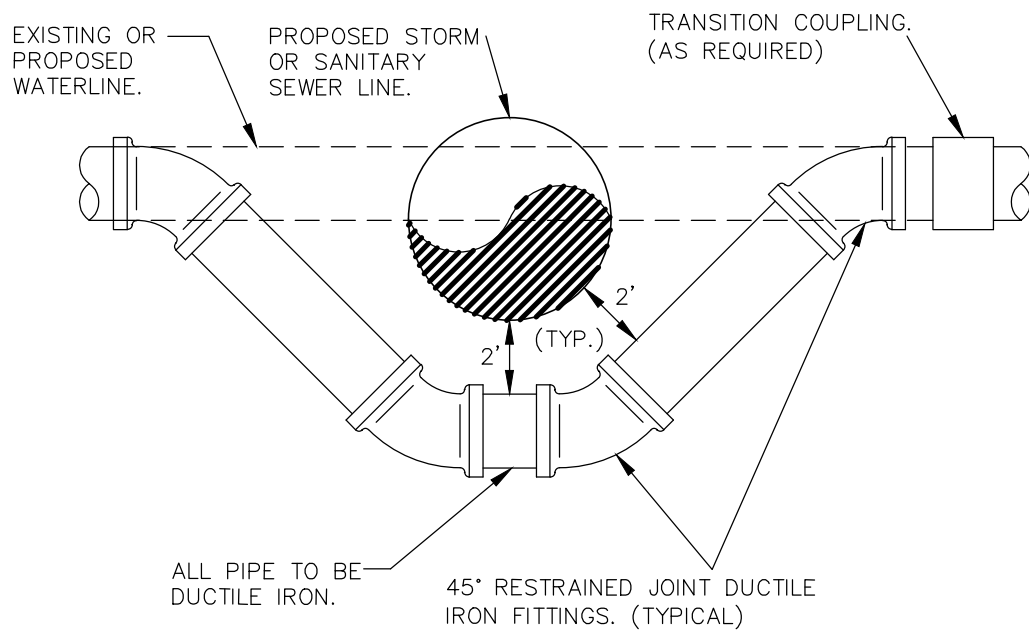


290 S. CASTELL AVE. STE. 100  
NEW BRAUNFELS, TX. 78130  
TPBE-FIRM F-10961  
TBPLS FIRM 1053600

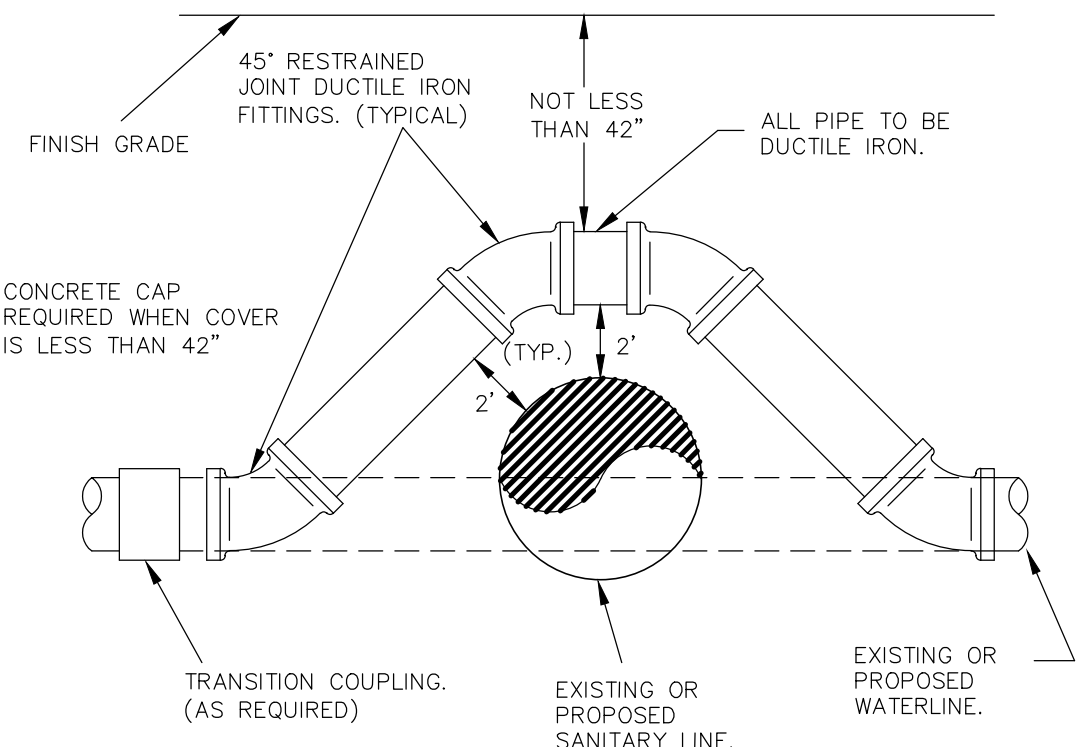


WATER NOTES:

- 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 plumbed to allow 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 D15-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.
- Water quality shall be protected with appropriate backflow prevention assemblies installed on all irrigation systems, fire suppression systems and multi-unit complexes along with multi-level properties on the domestic water containment. NBU can assist with the decision on appropriate backflow assemblies on a case by case basis. Contact NBU backflow prevention specialist for more details. Email questions to crossconnection@buteexas.com
- All backflow prevention assemblies shall be tested upon installation and report sent to NBU via the online tracking system, contact NBU backflow prevention specialist for more details. Email questions to crossconnection@buteexas.com
- All residential and commercial properties shall have a Customer Service Inspection certificate (CSI inspection) completed upon completion of the building or home structure. Contact NBU backflow prevention specialist for more details. Email questions to crossconnection@buteexas.com



WATERLINE ADJUSTMENT DETAIL  
N.T.S.

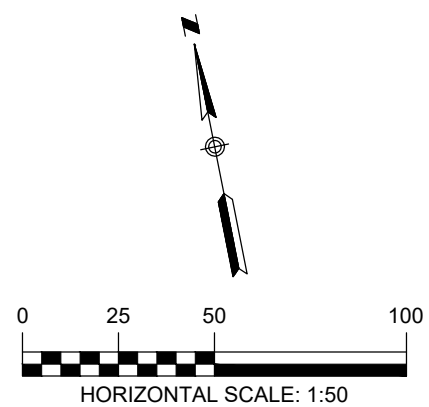


WATERLINE ADJUSTMENT DETAIL  
N.T.S.

WATER QUANTITIES	
1,410 LF 8" PVC PIPE	
7- 45° 8" BENDS	
1- 22.5° 8" BEND	
5- 8" GATE VALVES	
1- 12"x8" REDUCER	
1- 8" CUT-IN TEE	
2- 8"x8" TEES	
1- 90° BEND	
3-2" WATER LATERALS	
3-2" METER ASSEMBLIES	
1-HYDRANT ASSEMBLY	
30 LUEs	

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

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



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

UTILITY NOTES:

- CONTRACTOR TO VERIFY EXISTING LATERAL HAS A MINIMUM LONGITUDINAL SLOPE OF 2%.
- POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH NBU WATER AND WASTEWATER DESIGN CRITERIA MANUAL, SECTION 2.3.0.
- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.

RECORD DRAWING

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

HMT ENGINEERING AND SURVEYING

WATER FLOW PRESSURES

SCENARIO	MAX PRESSURE (PSI)	MIN PRESSURE (PSI)
STATIC (PEAK HR)	72.6	59.0
FIRE FLOW @MIN	49.2	33.7
FIRE FLOW @MAX	48.6	34.1

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

New Braunfels Utilities	830-629-8400
Spectrum 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 ANTIATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTORS IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

RESTRAINED LENGTH NOTES:

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

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	32	14	7	4	37	18	9	10	5	3	88
8"	DUCTILE IRON	27	11	6	3	33	16	8	12	6	3	56
12"	PVC	45	19	9	5	52	25	13	14	7	4	124

NOTES:

LENGTHS SHOWN ABOVE WERE COMPUTED BASED ON THE FOLLOWING VALUES:

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

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

REFER TO THE COVER SHEET  
FOR BENCHMARK INFORMATION.

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



07/10/2020

OVERALL WATER PLAN

VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION	DESCRIPTION	DATE
1	REVISION	REVISION	2/13/20
2	REVISION	REVISION	3/5/20
3	REVISION	REVISION	7/7/20

DATE: FEBRUARY 2020

DRAWN BY: JAD

DESIGNED BY: JMM

REVIEWED BY: CVH

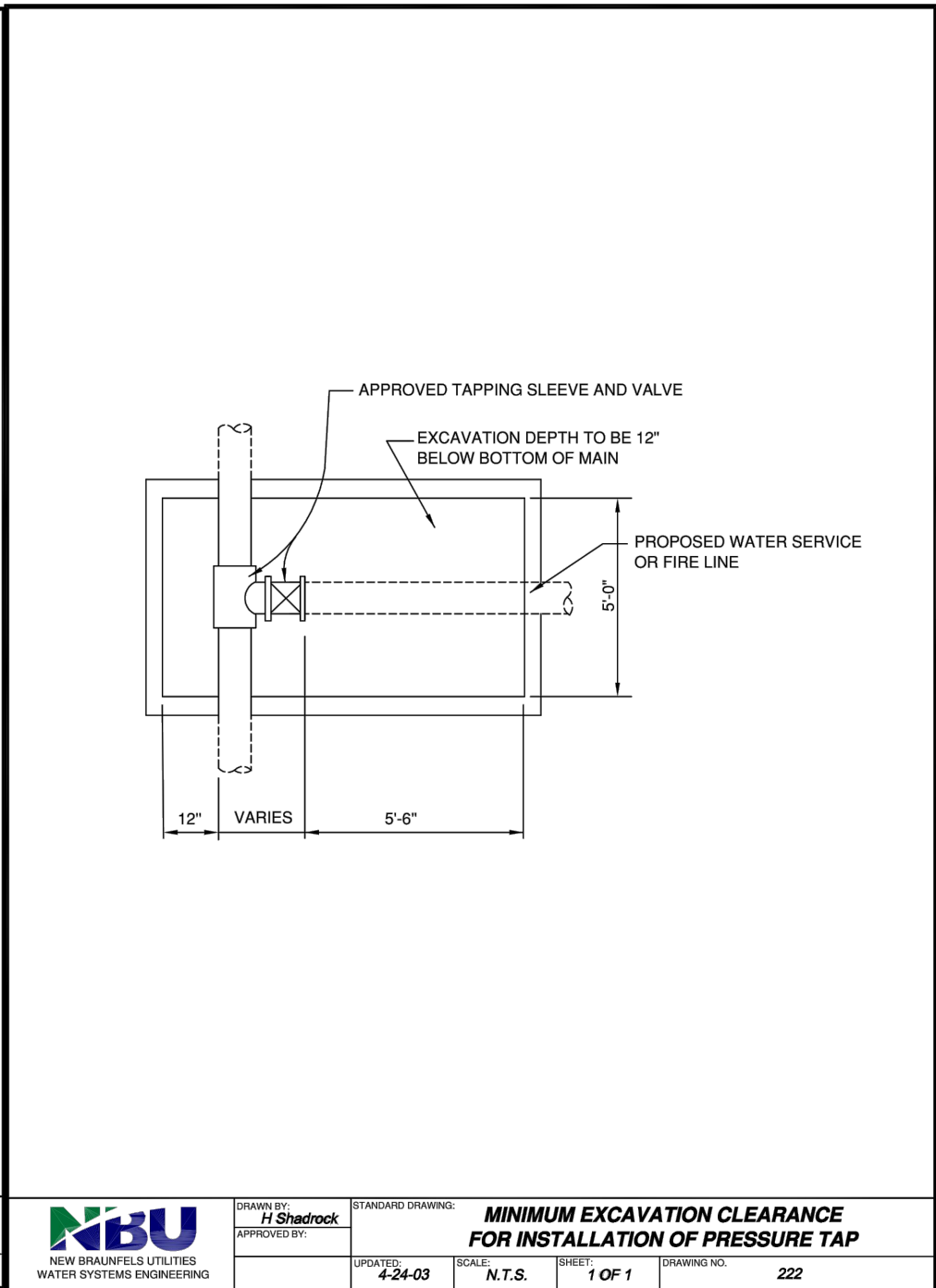
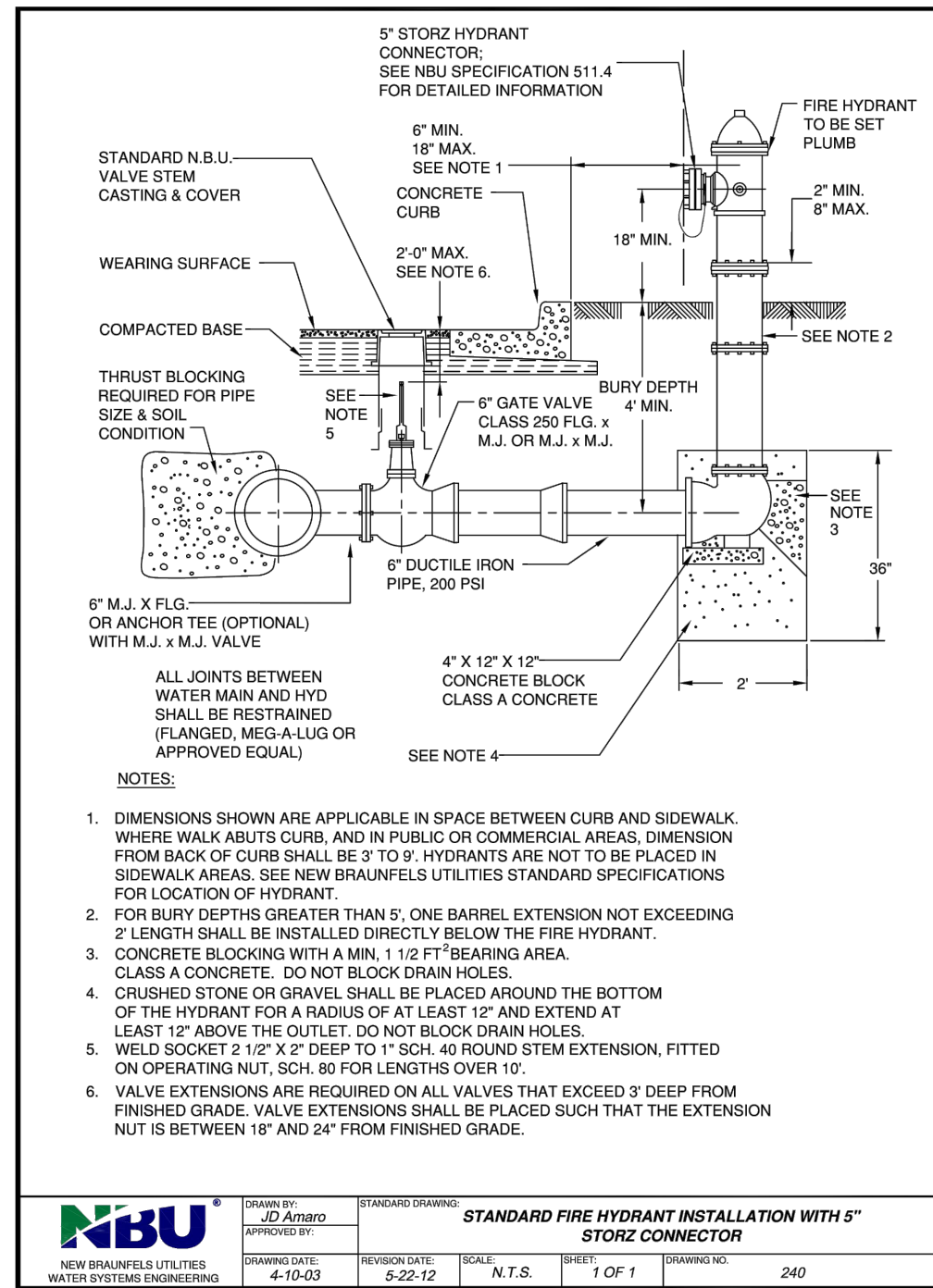
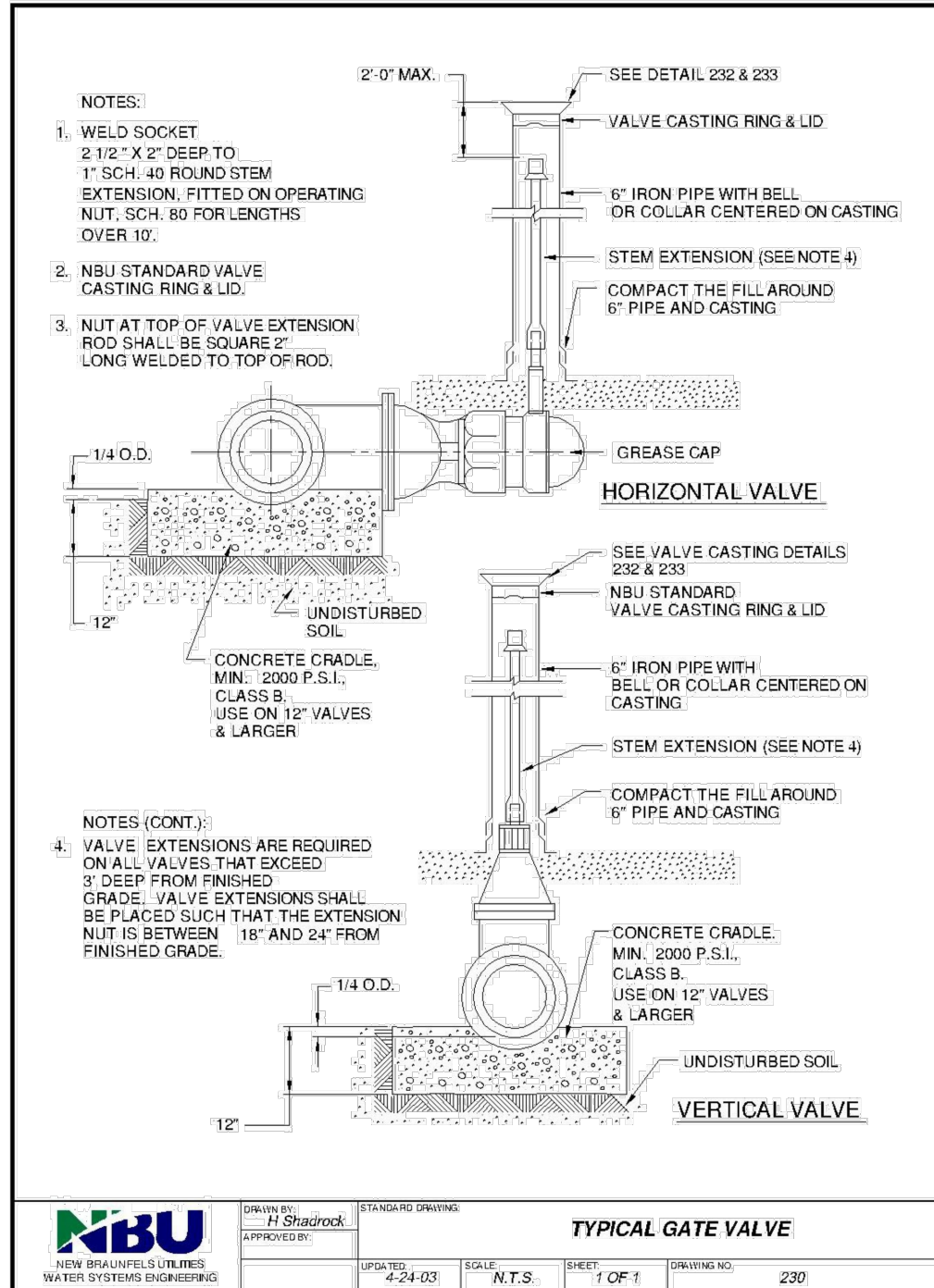
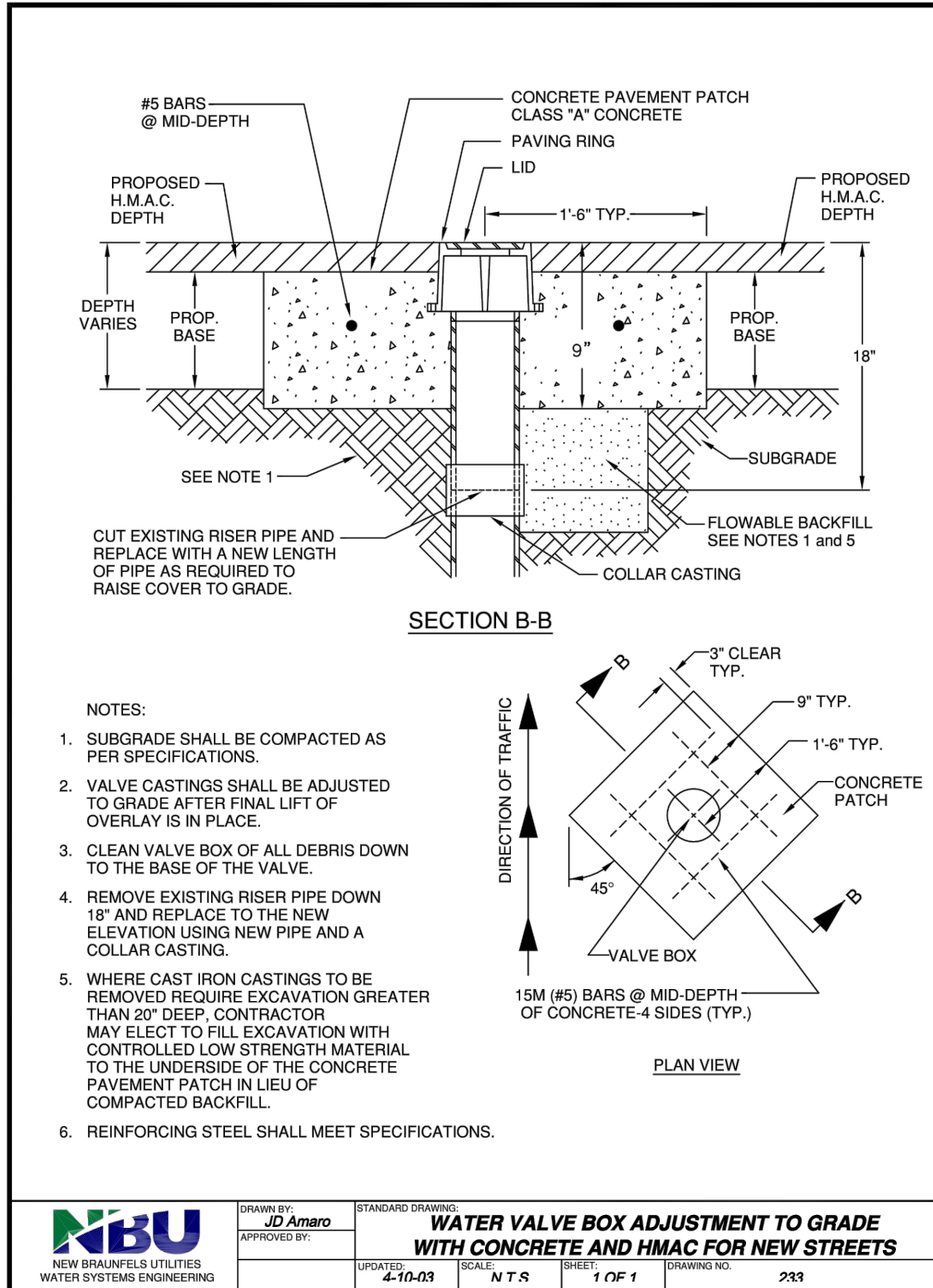
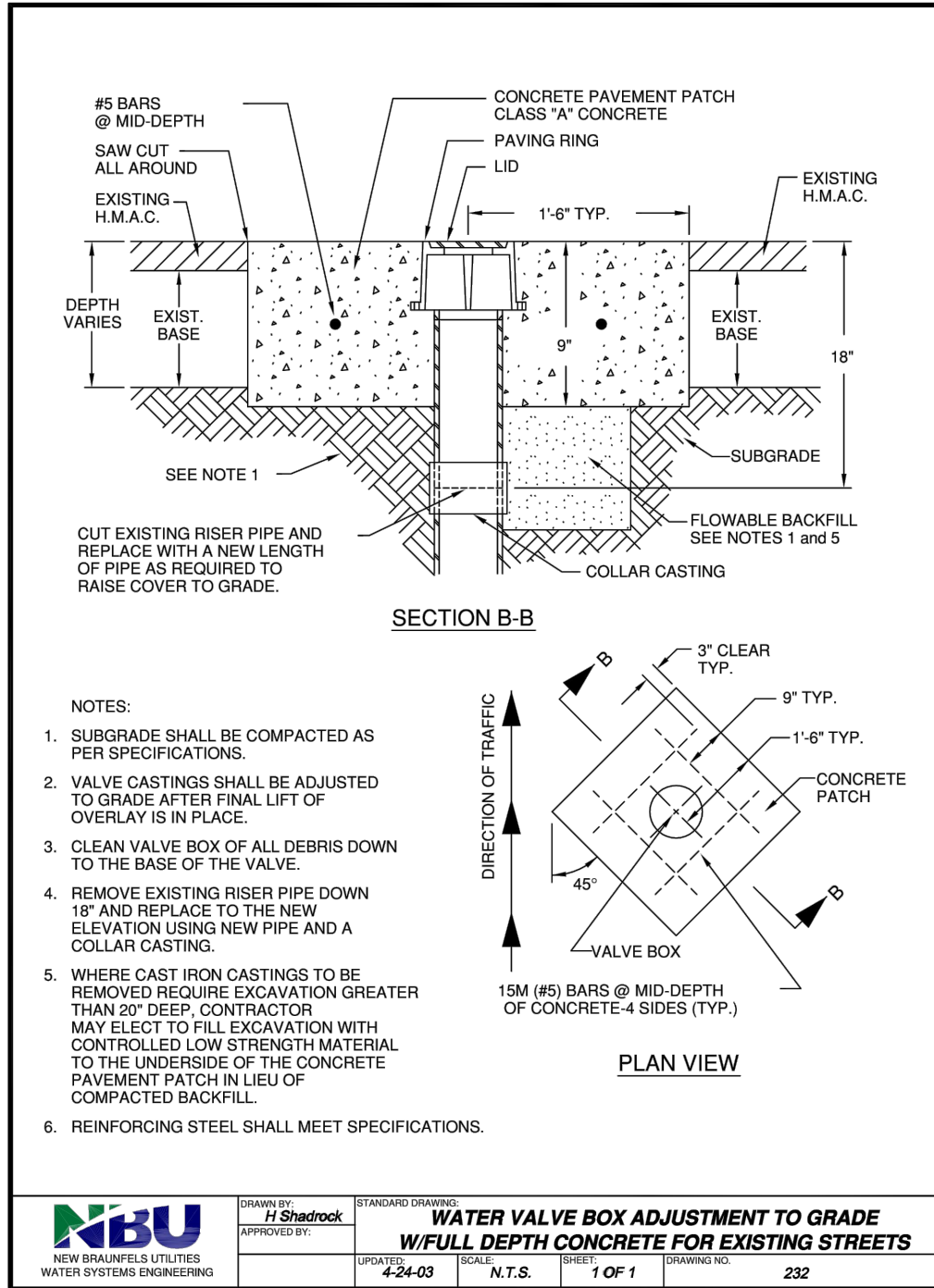
HMT PROJECT NO.:

216.020

SHEET

C8.0

Drawing Name: N:\\_Projects\216 - ASA Properties, LLC\020 - Veramendi Neighborhood Retail\City Assets\UTILS-CITY\ASBUILTS-216.020\_DETAILS.dwg User: barboza Jul 10, 2020 - 12:01pm



RECORD DRAWING

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

HMT ENGINEERING AND SURVEYING

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

**HMT**  
ENGINEERING & SURVEYING

STATE OF TEXAS  
CHRISTOPHER P. VAN HECKE  
93047  
LICENSED PROFESSIONAL ENGINEER

07/10/2020

**WATER DETAILS**  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION DESCRIPTION	REVISION DATE
1	ASBUILTS	07/10/2020

DATE: FEBRUARY 2020

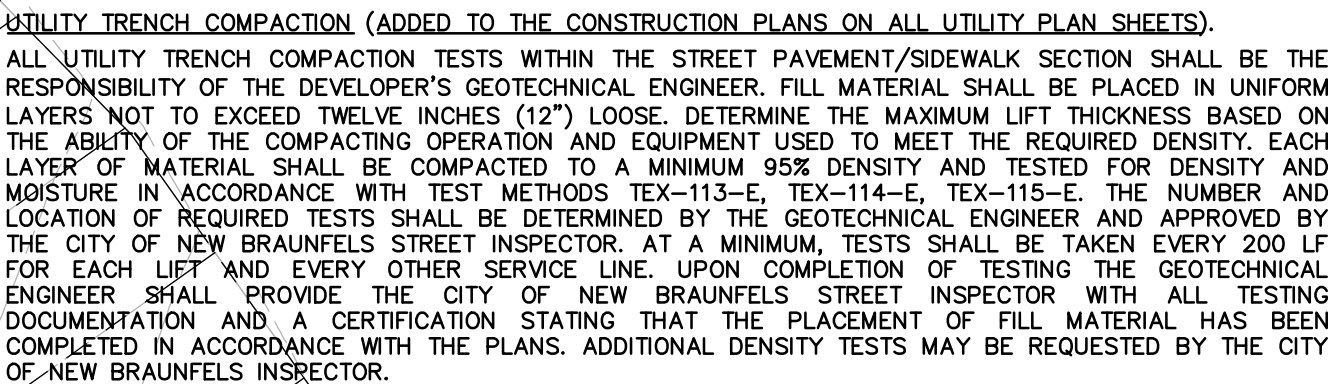
DRAWN BY: JAD

DESIGNED BY: JMM

REVIEWED BY: CVH

HMT PROJECT NO.: 216.020

**SHEET**  
**C8.1**



1. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
2. ALL SEWER PIPE ASTM 3034 (115 PSI)
3. ALL MANHOLES SHALL BE 48" DIAMETER.
4. ALL RING AND COVER SHALL BE 32" DIAMETER.
5. EXISTING MANHOLES, RIM AND FLOWLINE ELEVATIONS SURVEYED BY HMT ENGINEERING & SURVEYING DATED FEBRUARY 22, 2019.
6. POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH NBU WATER AND WASTEWATER DESIGN CRITERIA MANUAL, SECTION 2.3.
7. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS, SPECIFICATIONS 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 PROGRAMS AND PROCEDURES FOR ALL TRENCHES OF 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 TRENCH SAFETY PROGRAMS IN ACCORDANCE WITH THE WORKING IN AND AROUND TRENCHES SAFETY ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.










SEWER QUANTITIES
1,190 LF 8" PVC PIPE
7 48" MANHOLES
30 LUEs
3 6" SEWER LATERALS

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DATE: JULY 2020 BY: Ami Van Rende, P.E.  
HMT ENGINEERING AND SURVEYING

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- LEGEND**

	EXISTING CONTOURS
	PROPOSED CONTOURS
	BUILDING SETBACK LINE
	UTILITY EASEMENT
	DRAINAGE EASEMENT
	EXISTING WASTEWATER LINE
	PROPOSED WASTEWATER LINE
	PROPOSED WASTEWATER SERVICE
	UTILITY CROSSING

UTILITY NOTES:

1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE  
STREETS.



07/10/2020

## OVERALL WASTEWATER

# VERAMENDI NEIGHBORHOOD RETAIL DEVELOPMENT PLAN

NO.	REVISION DESCRIPTION	REVISION DATE
<u>A</u>	UPDATED PROFILE BANDS	2/3/2020
<u>A</u>	SERVICE LATERALS ADDED	2/13/2020
<u>A</u>	SERVICE LATERALS ADDED	3/5/2020
<u>A</u>	ASBULTS	7/10/2020

DATE: FEBRUARY 2020

DRAWN BY: JAI

DESIGNED BY: JMI

REVIEWED BY: CV

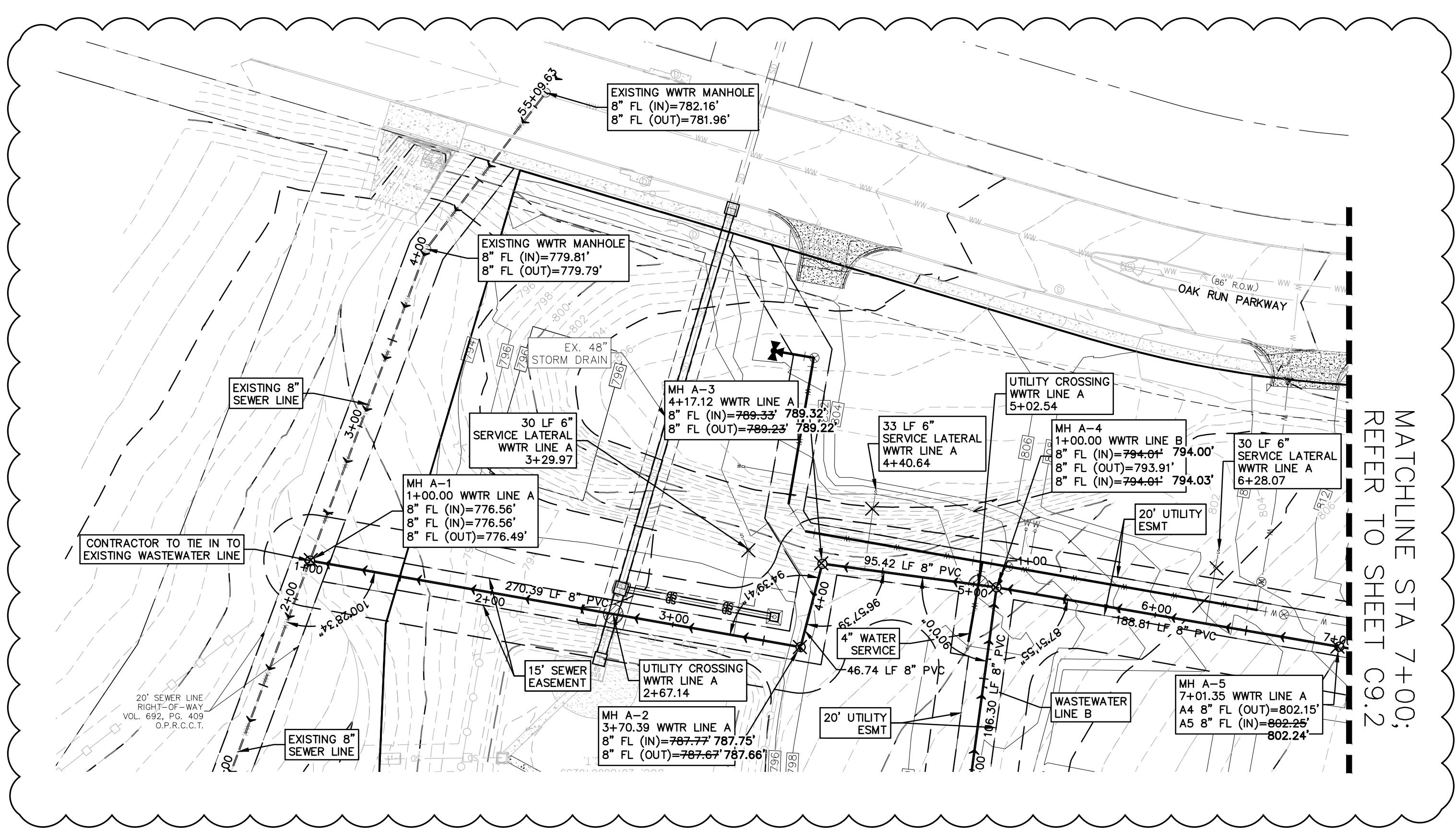
HMT PROJECT NO.:

216.020

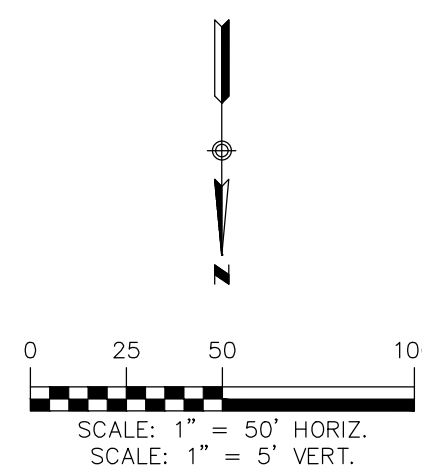
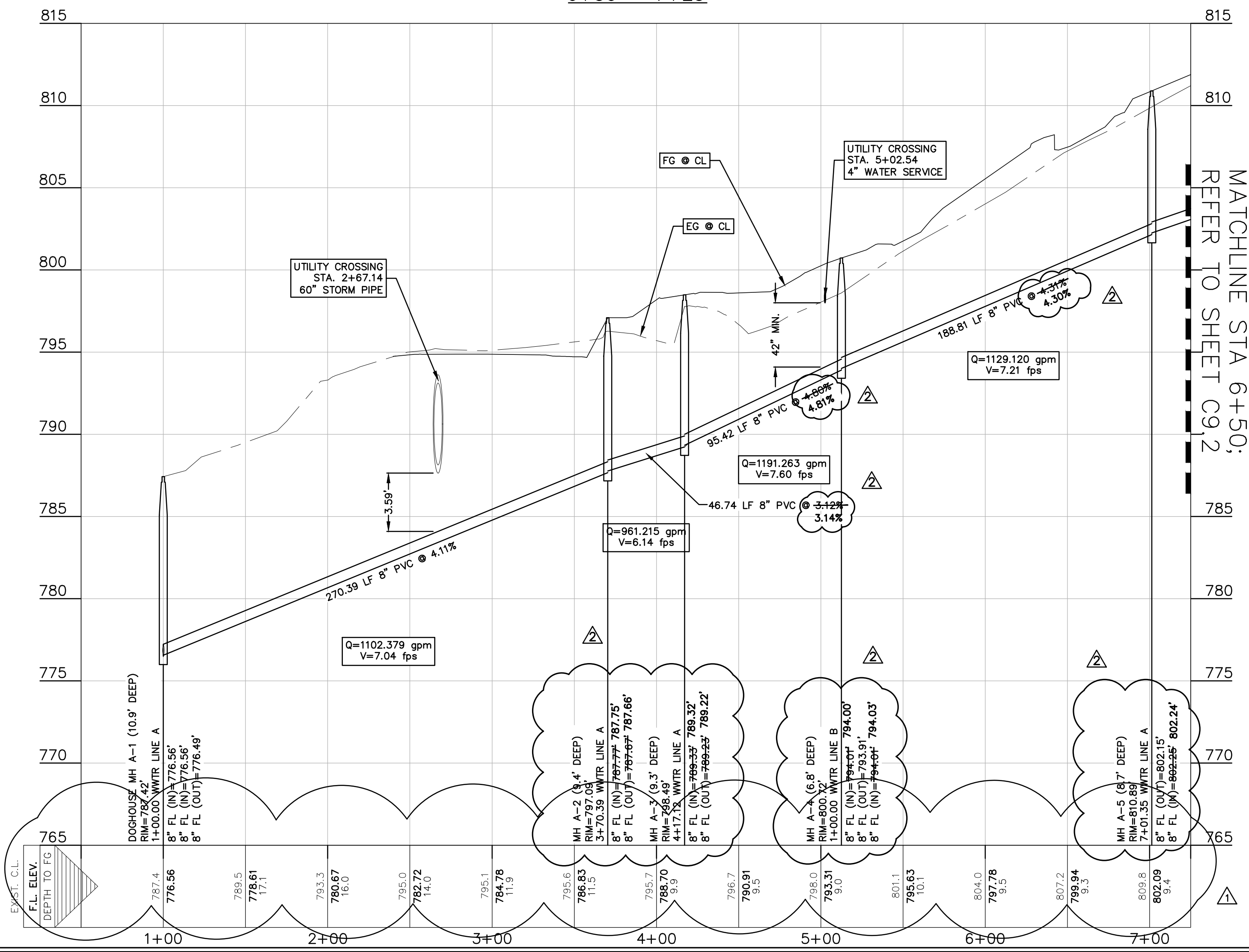
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**QUESTIONS**

**C9.0**



WWTR LINE A  
0+50 - 7+25



LEGEND

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

CONSTRUCTION NOTES:

- NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
- ALL SEWER PIPE ASTM 3034 (115 PSI)
- ALL MANHOLES SHALL BE 48" DIAMETER.
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- POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH NBU WATER AND WASTEWATER DESIGN CRITERIA MANUAL, SECTION 2.3.0.
- ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.

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

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

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.

CALCULATED FLOWS		
SCENARIO	FLOW (GPM)	VELOCITY (FPS)
AVERAGE FLOW	7.58	1.01
PEAK DRY FLOW	31.72	1.44
PEAK WET FLOW	36.77	1.49
MINIMUM FLOW	0.98	0.83

RECORD DRAWING

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

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



07/10/2020

WASTEWATER  
LINE A (1 of 2)  
VERAMEND NEIGHBORHOOD  
RETAIL DEVELOPMENT

REVISION DATE	
2/3/2020	7/10/2020
REVISION DESCRIPTION	
UPDATED PROFILE BANDS	ASBUILTS
NO.	
1	2

DATE: FEBRUARY 2020

DRAWN BY: JAD

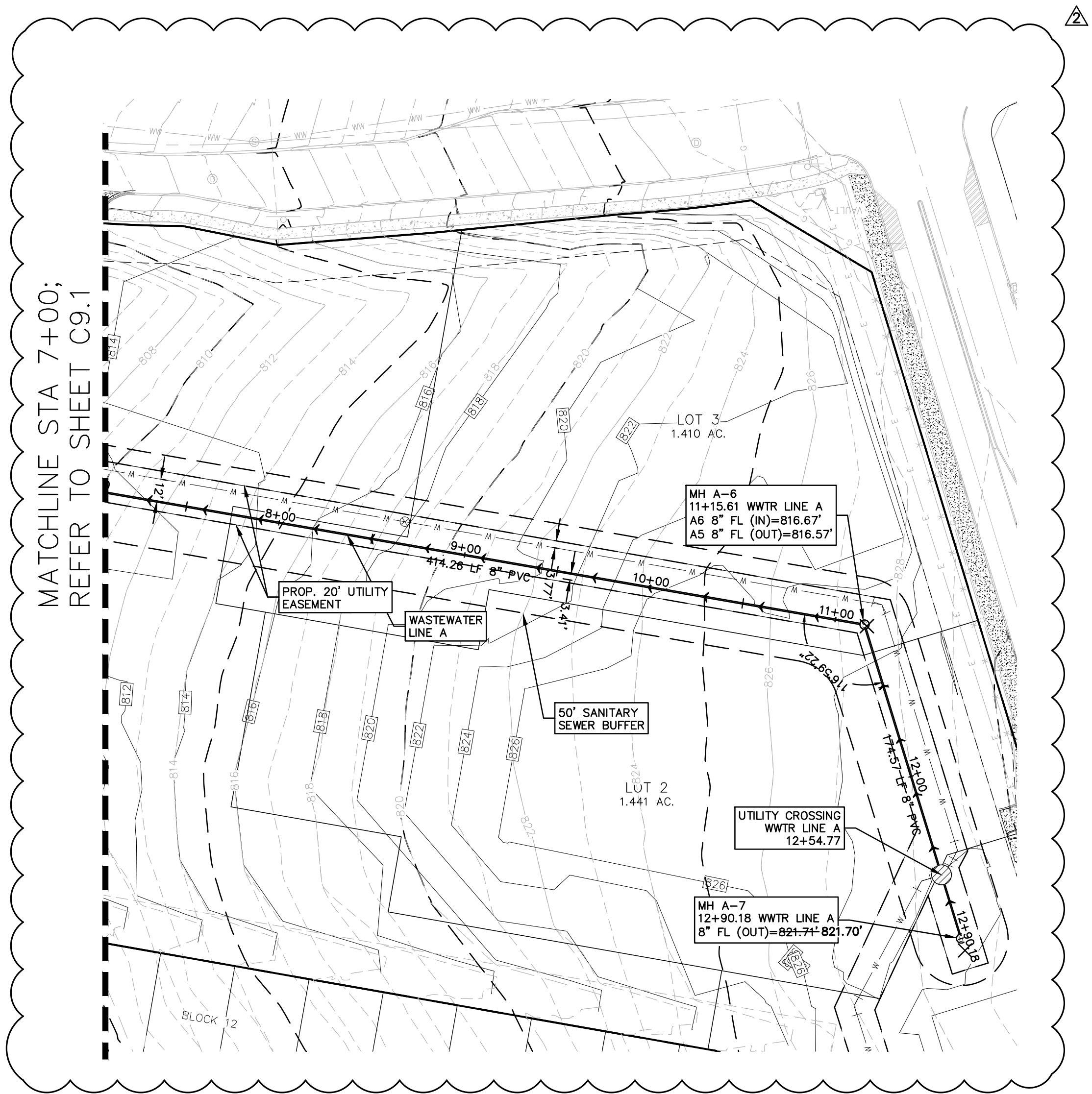
DESIGNED BY: JMM

REVIEWED BY: CVH

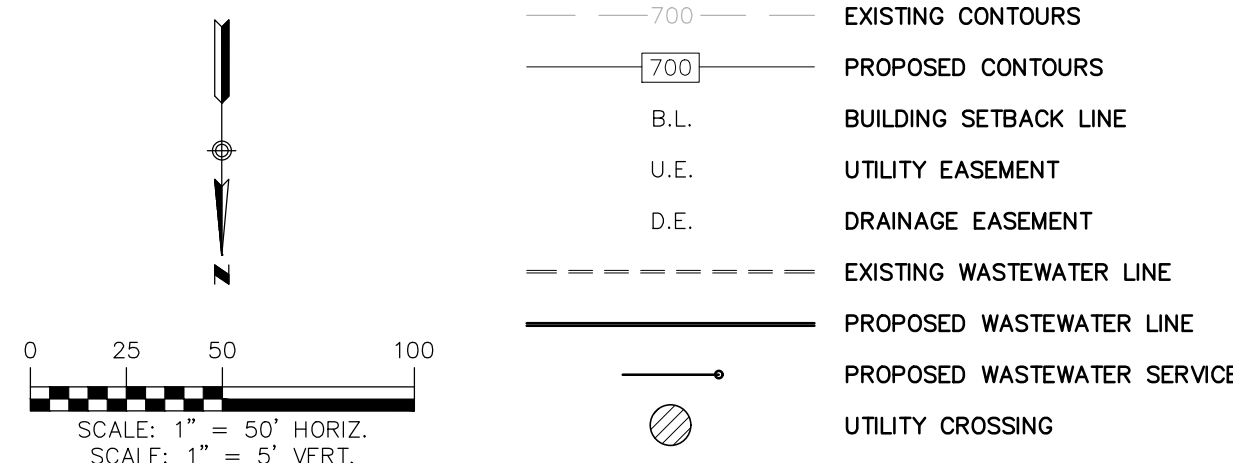
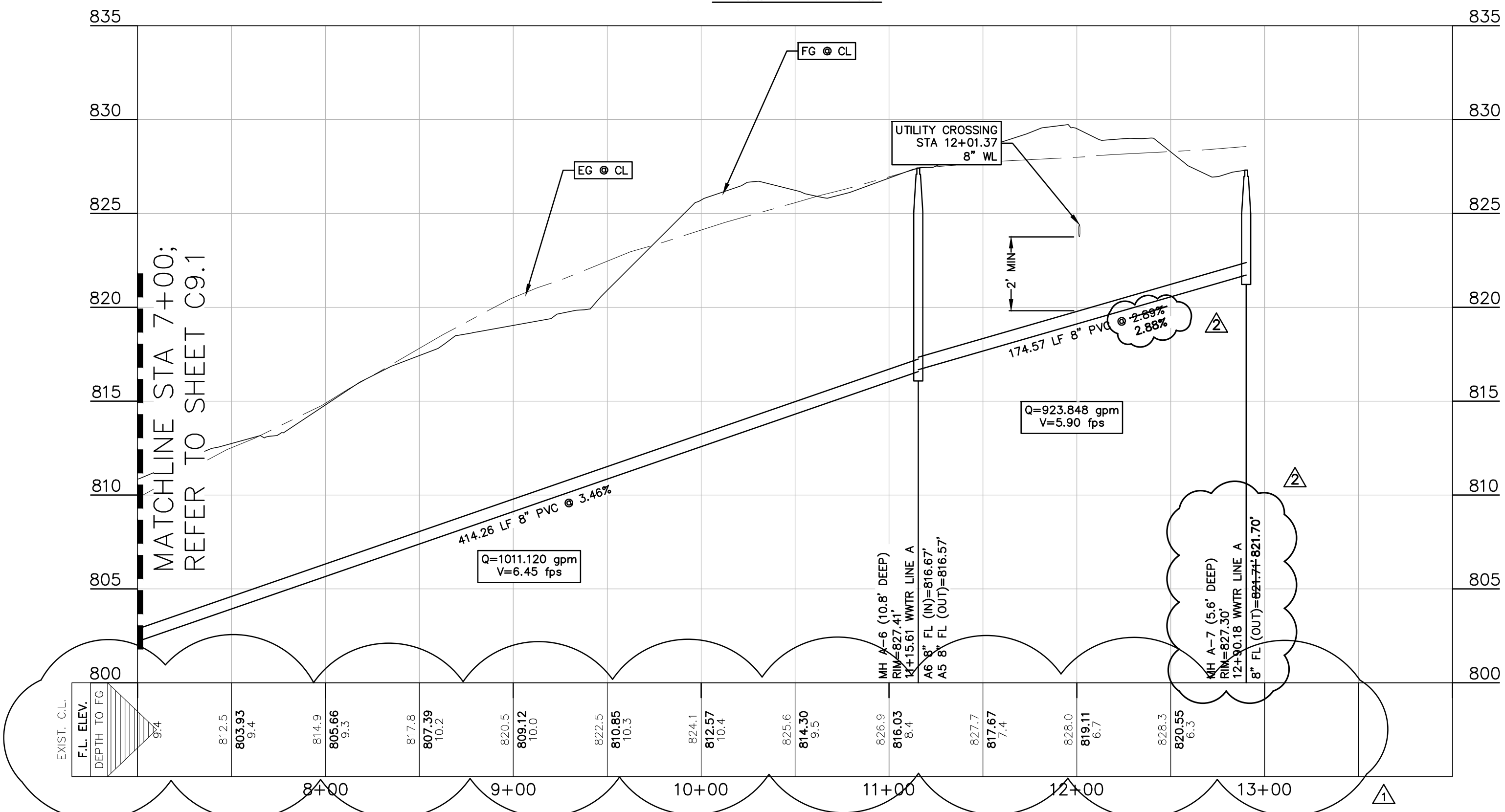
HMT PROJECT NO.:

216.020

SHEET  
C9.1



WWTR LINE A  
7+00 - 14+00



CONSTRUCTION NOTES:

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DATE: JULY 2020 BY: *Chin Van Huynh, P.E.*  
HMT ENGINEERING AND SURVEYING

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



07/10/2020

WASTEWATER  
LINE A (2 of 2)  
VERAMEND NEIGHBORHOOD  
RETAIL DEVELOPMENT

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

DATE: FEBRUARY 2020

DRAWN BY: JAD

DESIGNED BY: JMM

REVIEWED BY: CVH

HMT PROJECT NO.:  
216.020

SHEET  
C9.2

CONSTRUCTION NOTES:

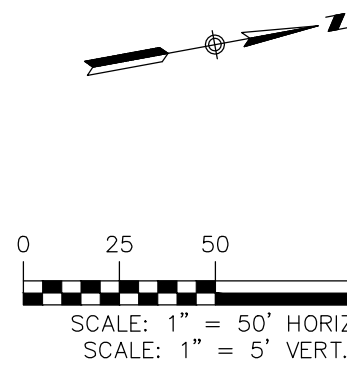
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UTILITY TRENCH COMPACTION (ADDED TO THE CONSTRUCTION PLANS ON ALL UTILITY PLAN SHEETS).

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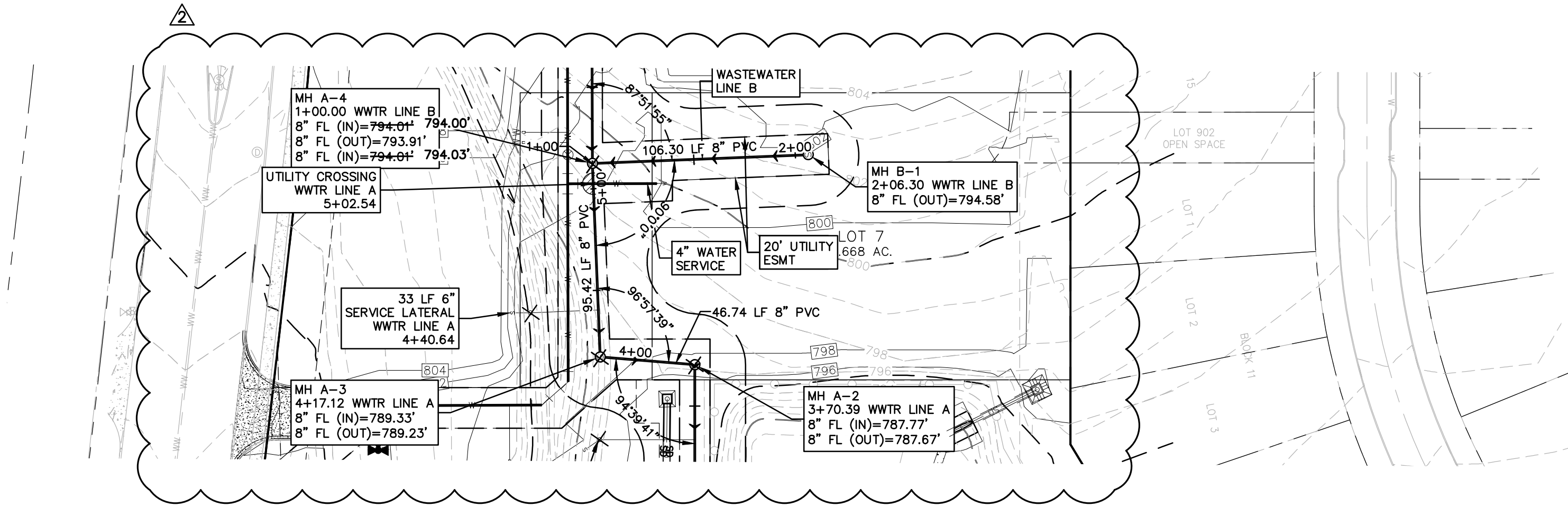
TRENCH EXCAVATION SAFETY PROTECTION

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

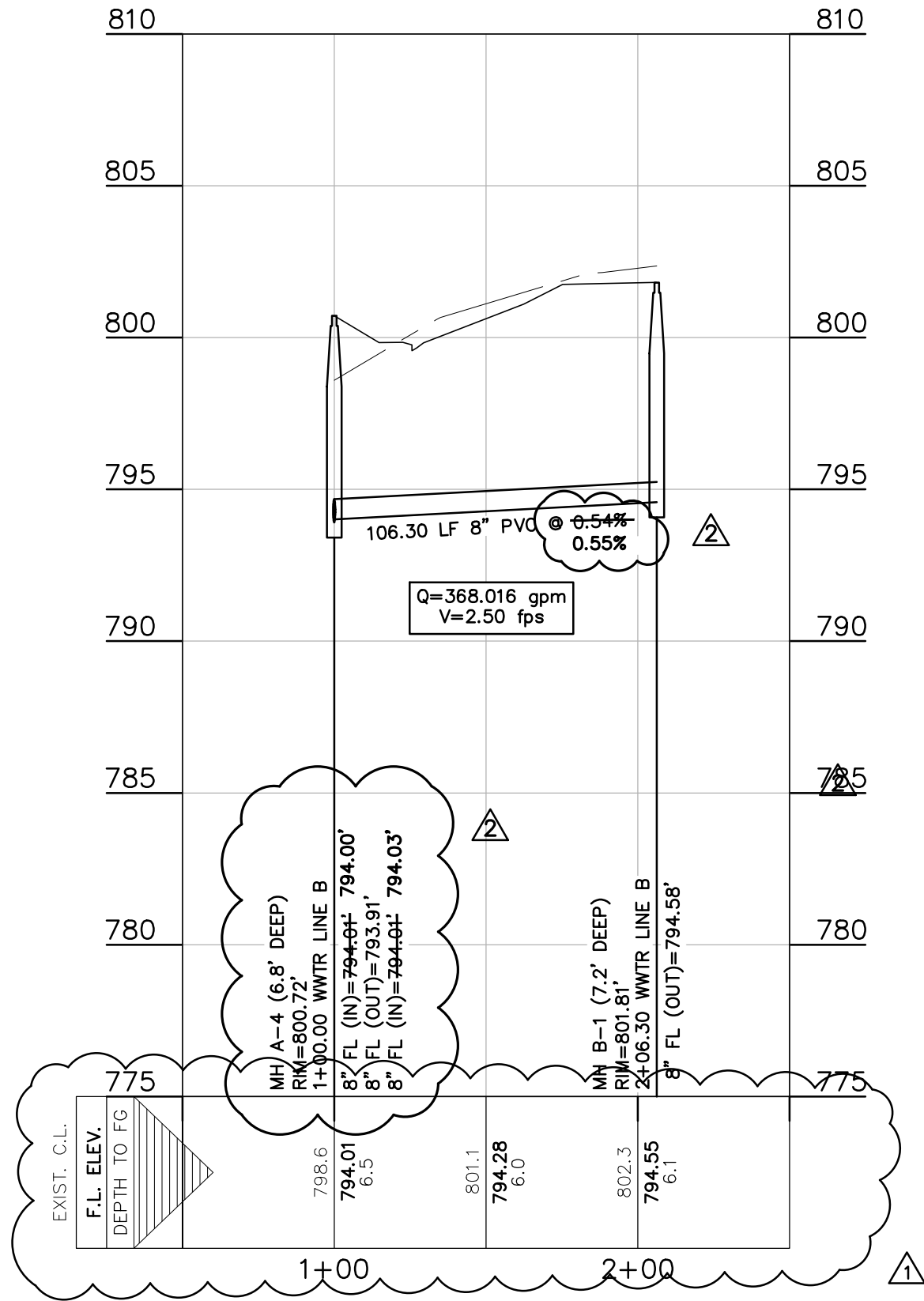


LEGEND

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



WWTR LINE B  
0+50 - 2+50



CALCULATED FLOWS		
SCENARIO	FLOW (GPM)	VELOCITY (FPS)
AVERAGE FLOW	7.58	1.01
PEAK DRY FLOW	31.72	1.44
PEAK WET FLOW	36.77	1.49
MINIMUM FLOW	0.98	0.83

RECORD DRAWING

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

HMT ENGINEERING AND SURVEYING

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.

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



07/10/2020

WASTEWATER LINE B  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

REVISION DATE	REVISION DESCRIPTION	NO.
2/3/2020	UPDATED PROFILE BANDS	1
7/10/2020	ASBUILTS	2

DATE: FEBRUARY 2020

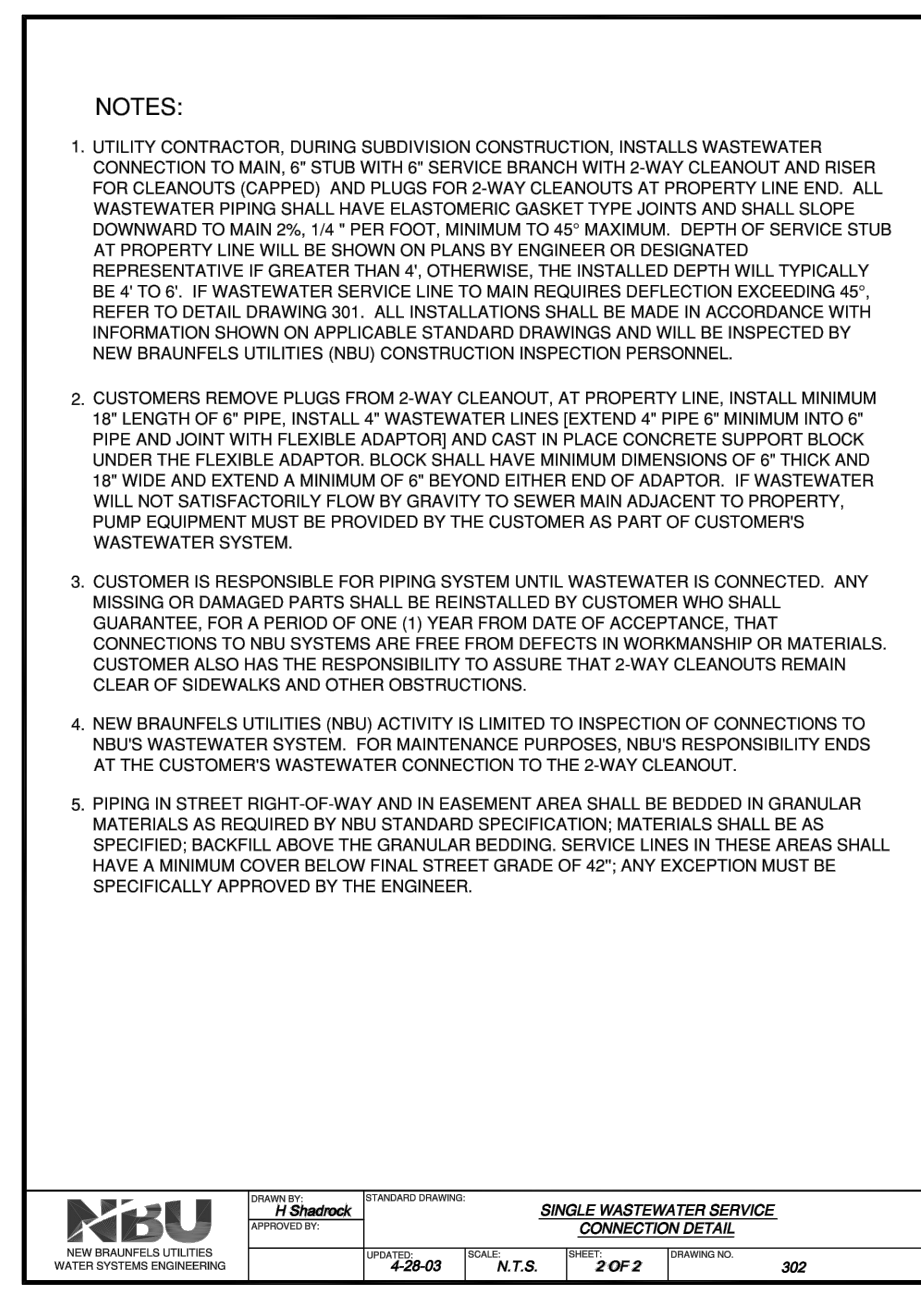
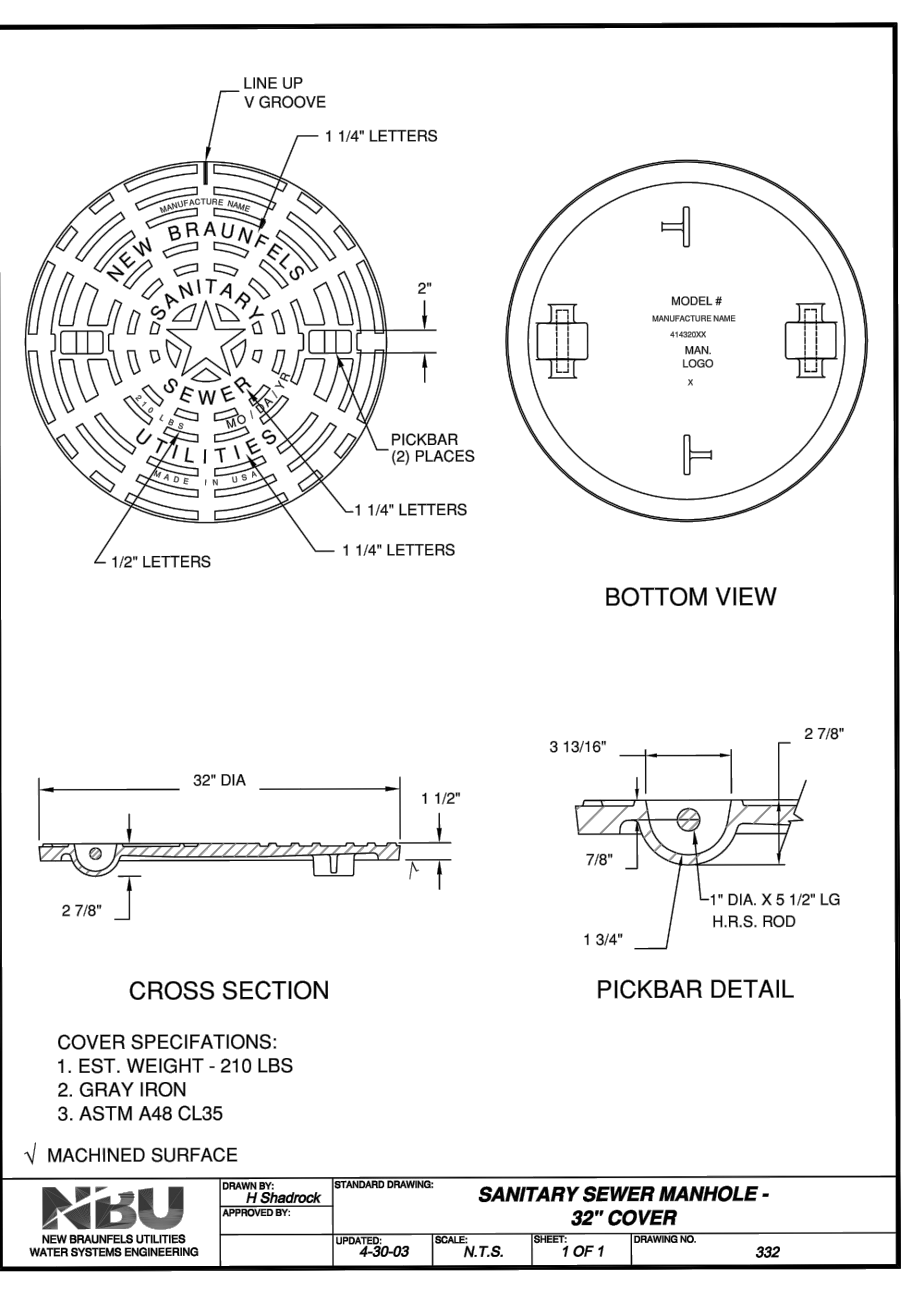
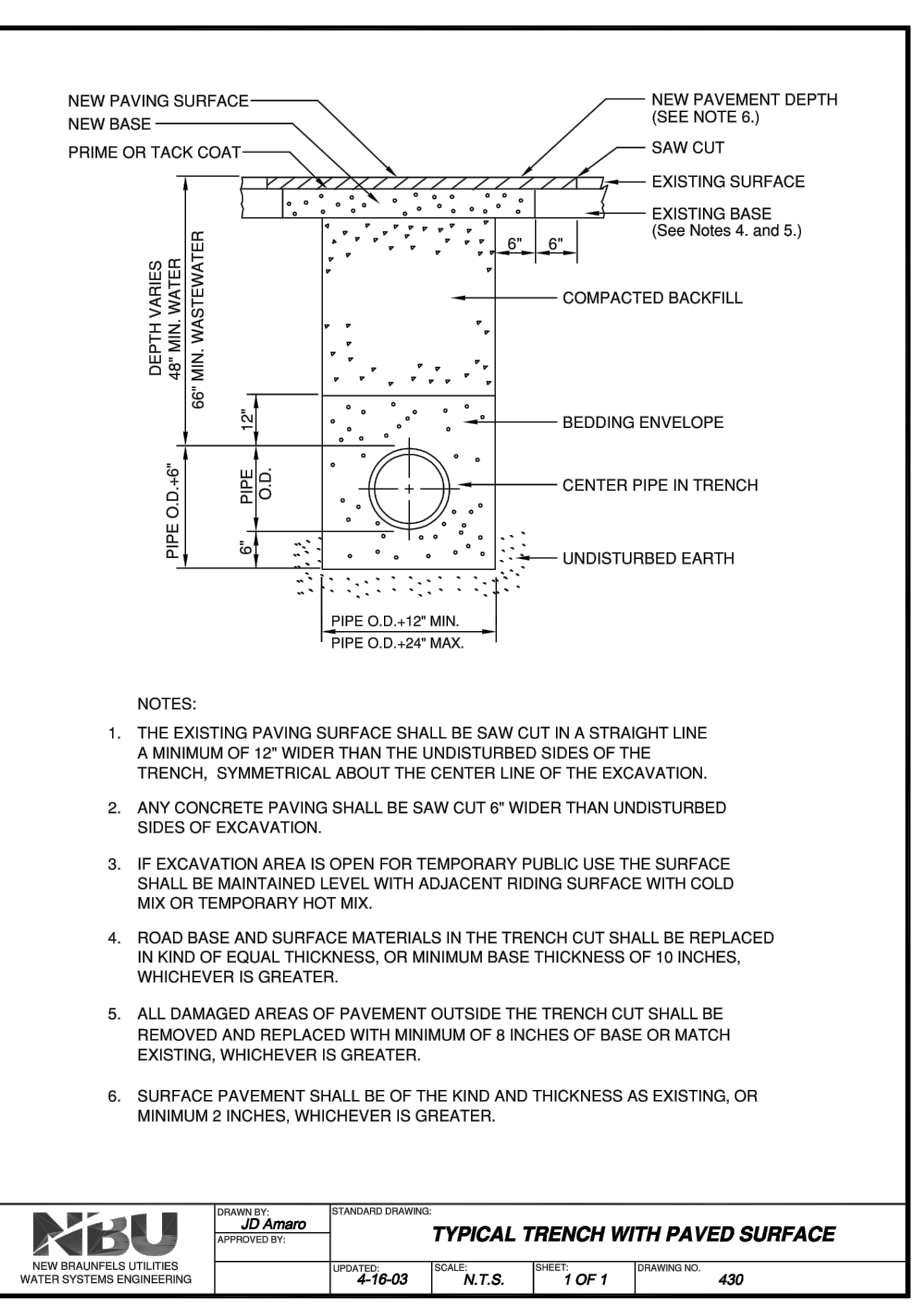
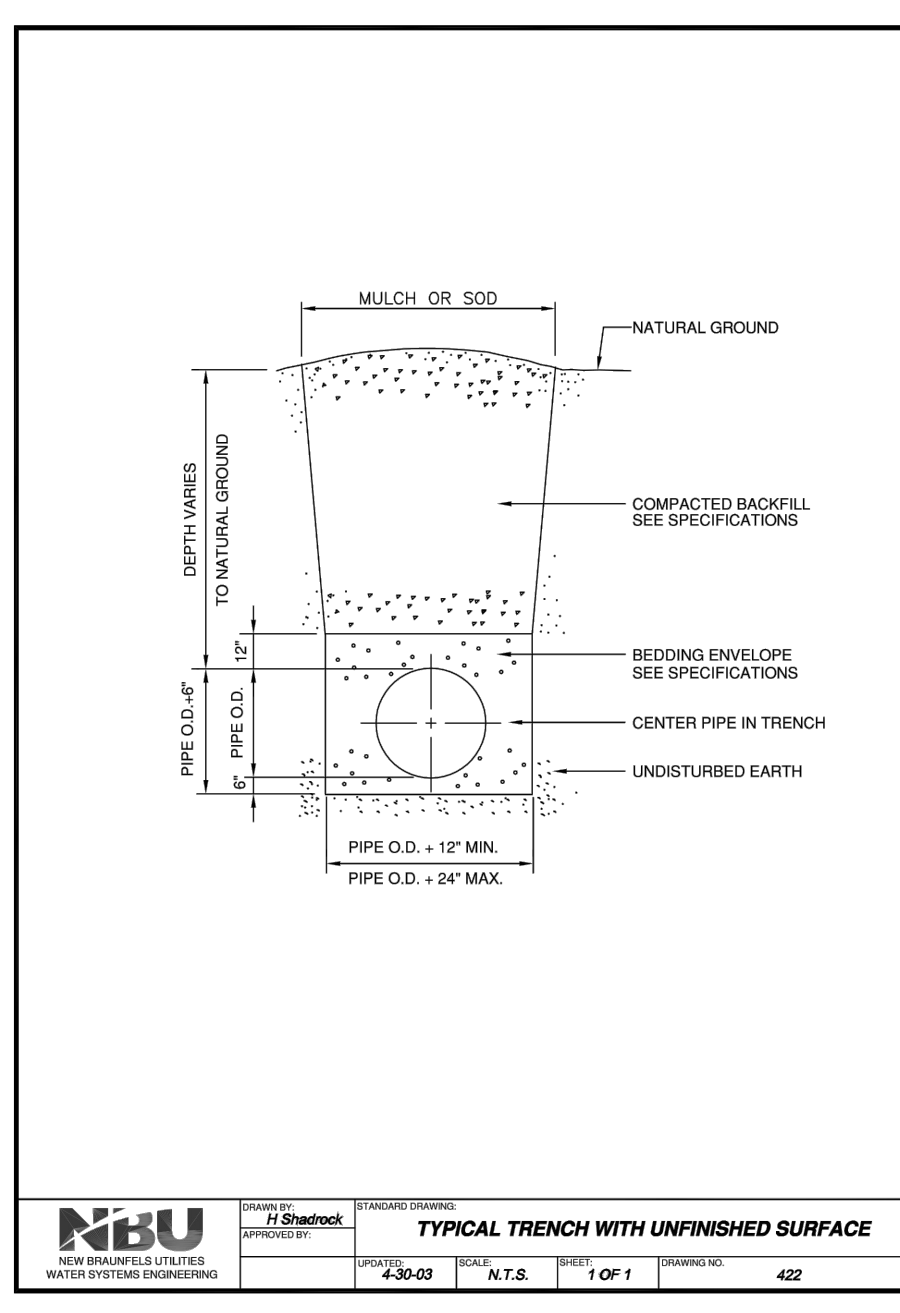
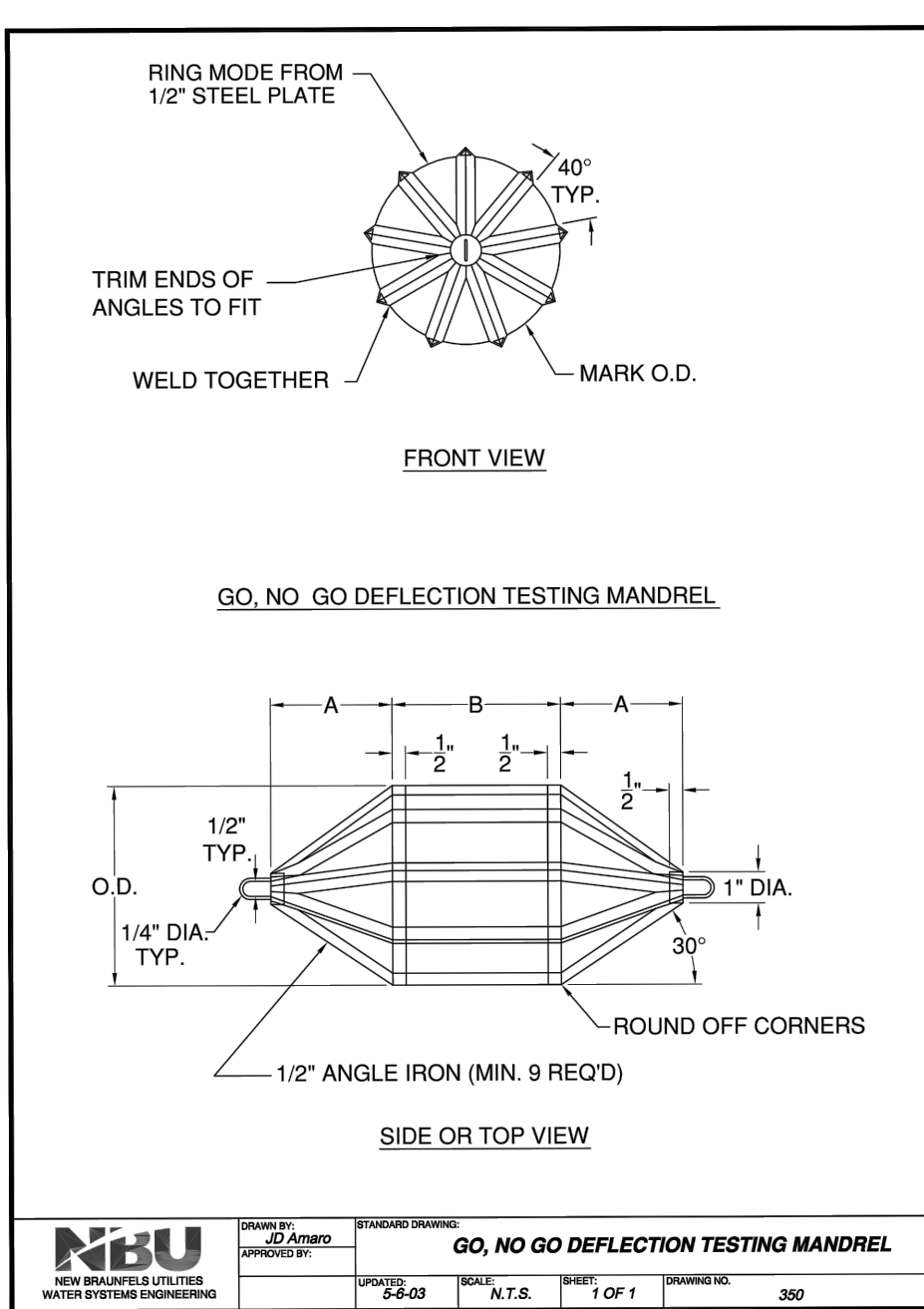
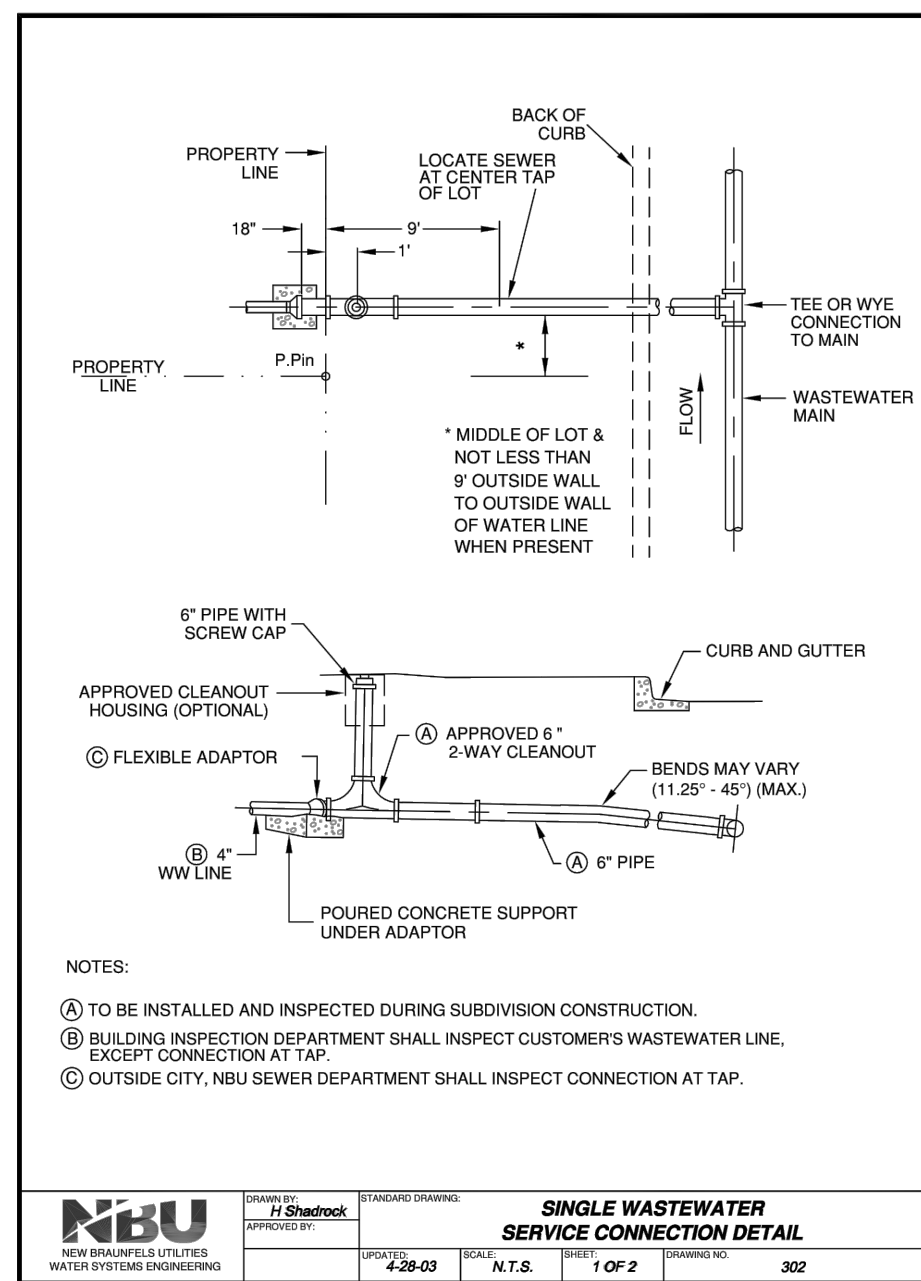
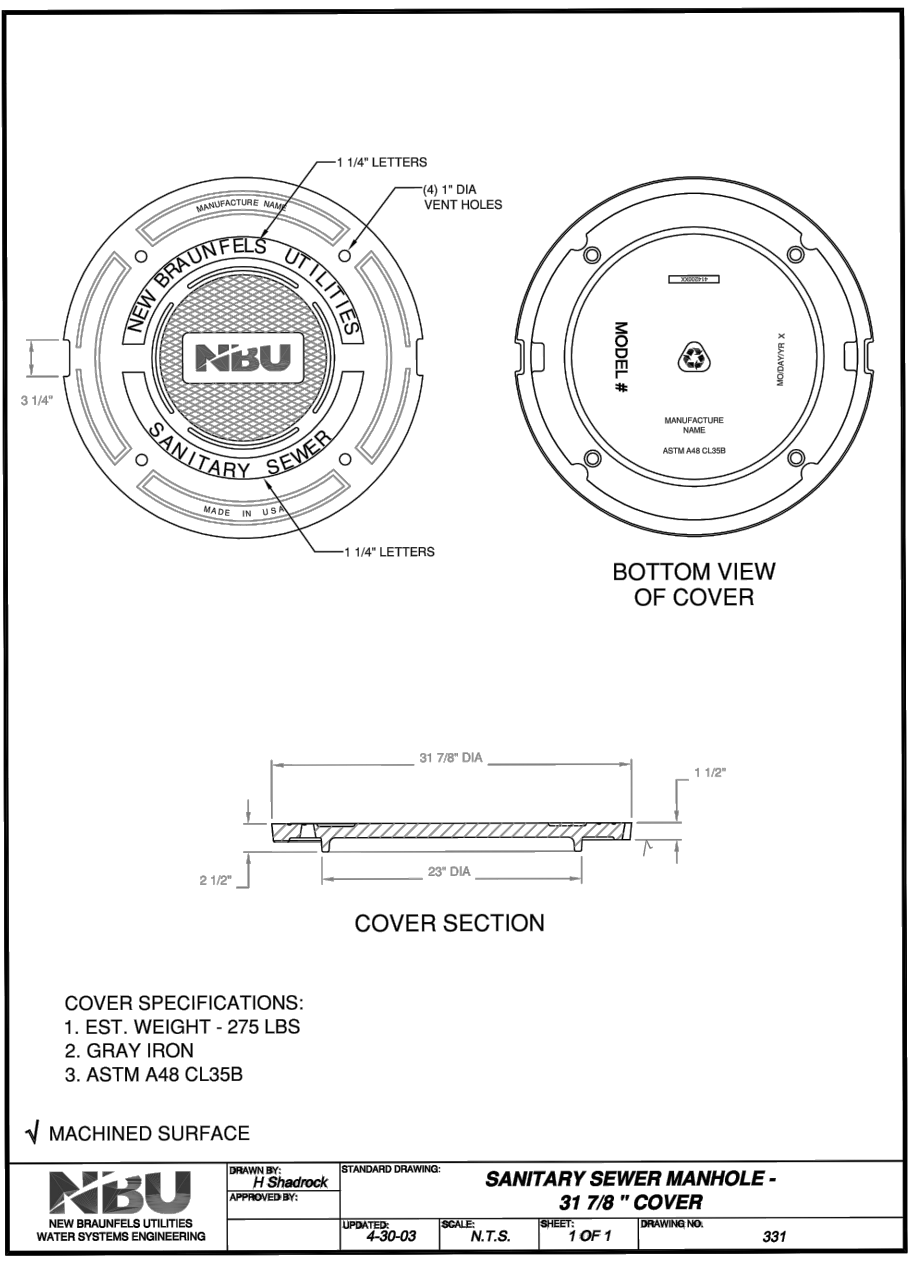
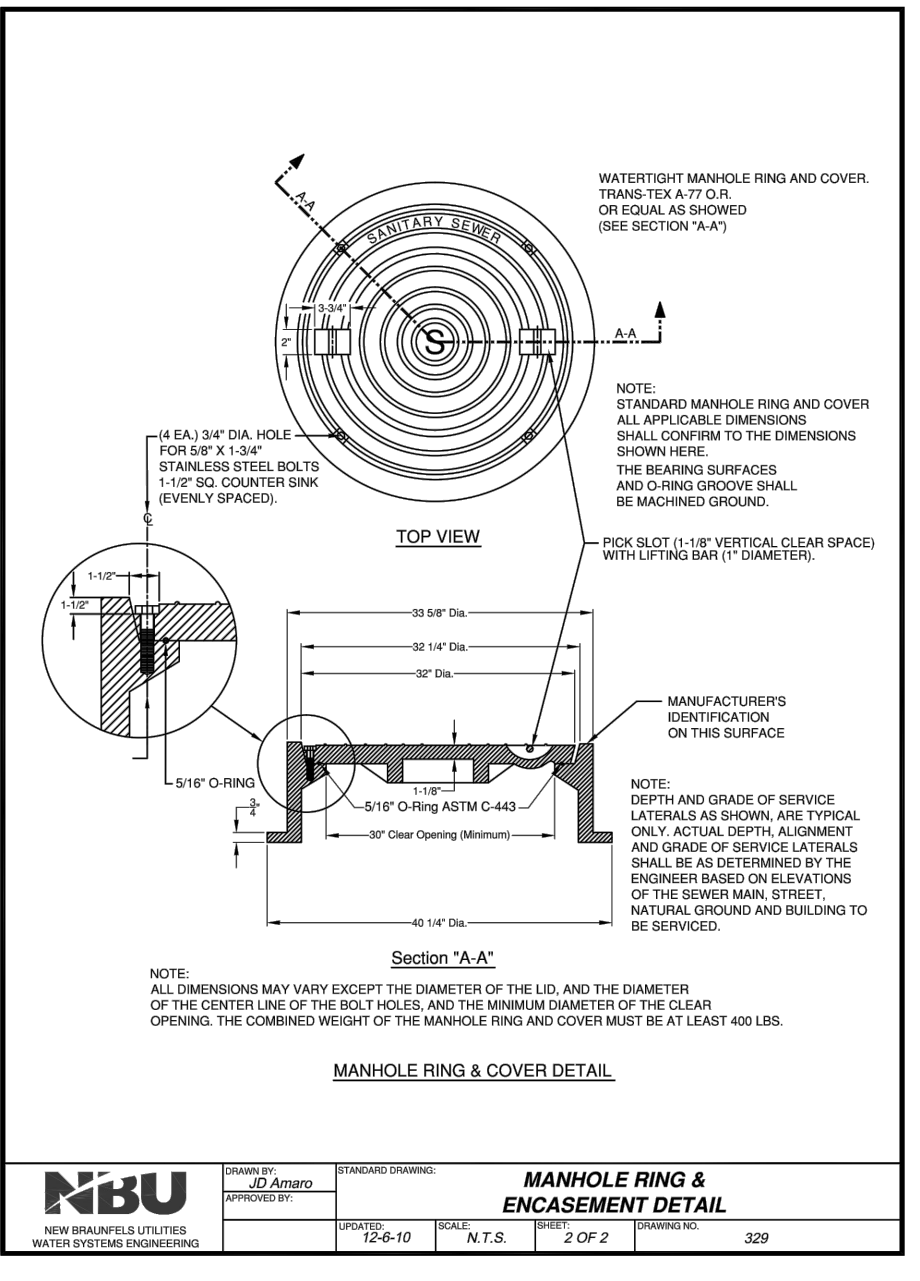
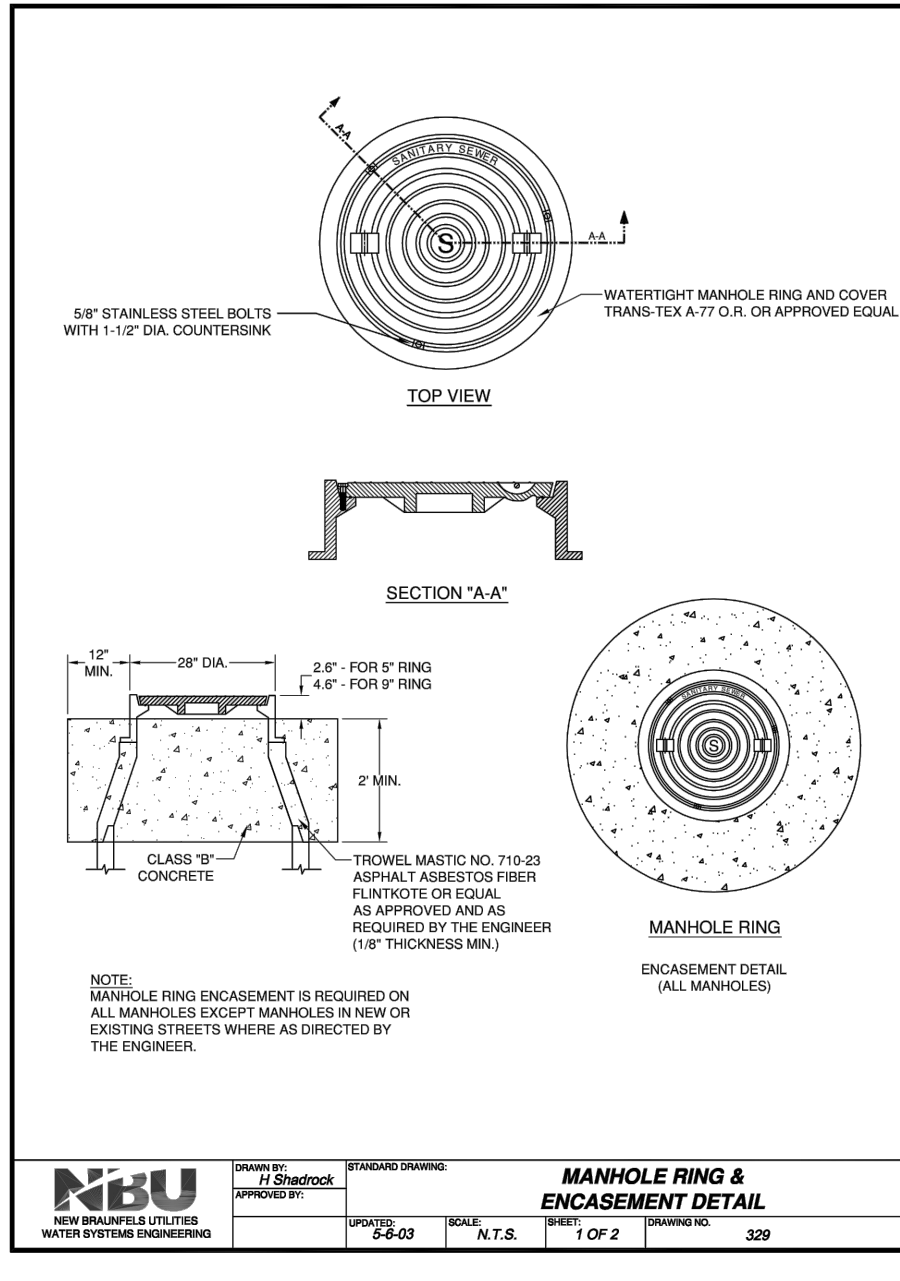
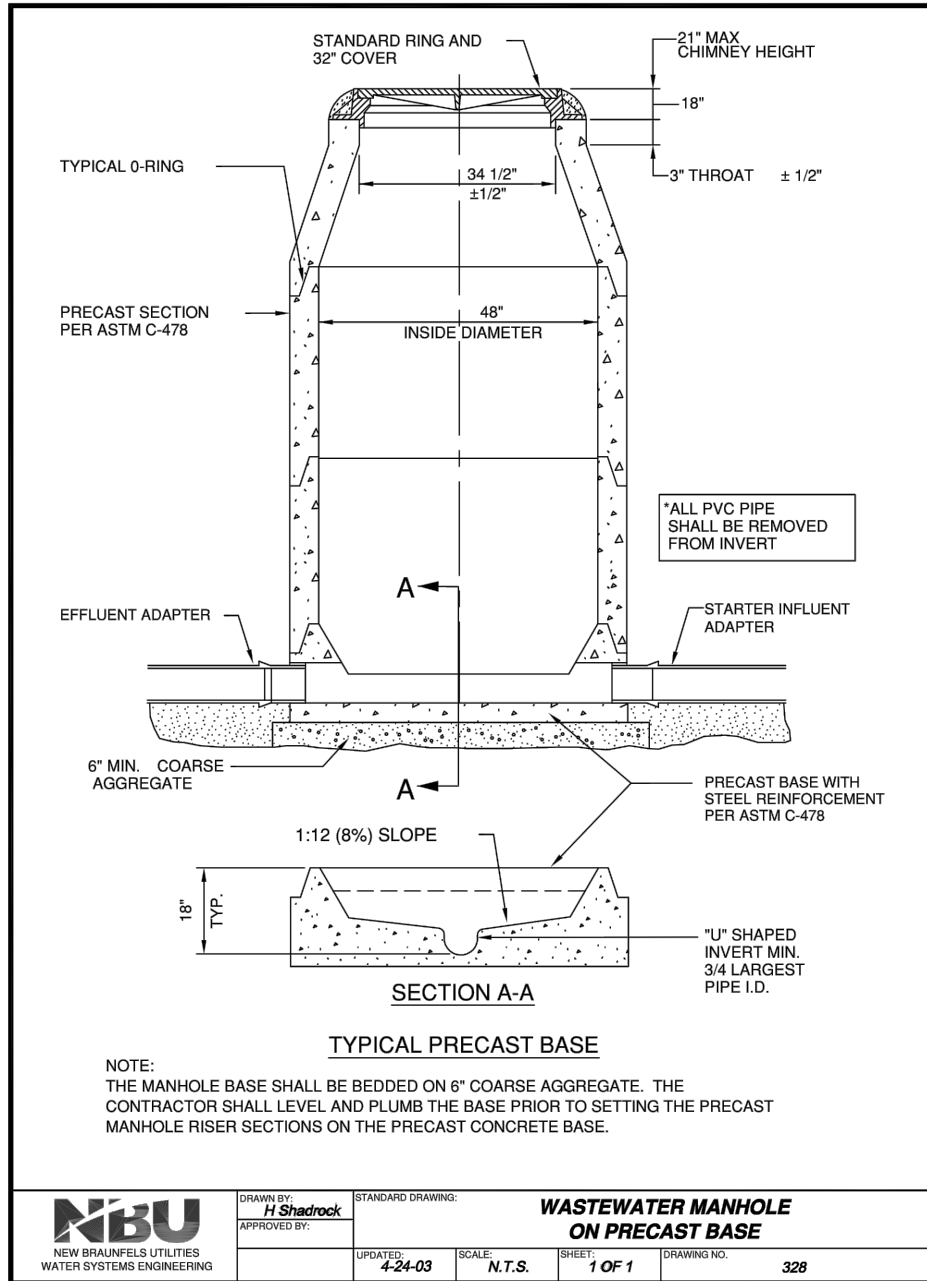
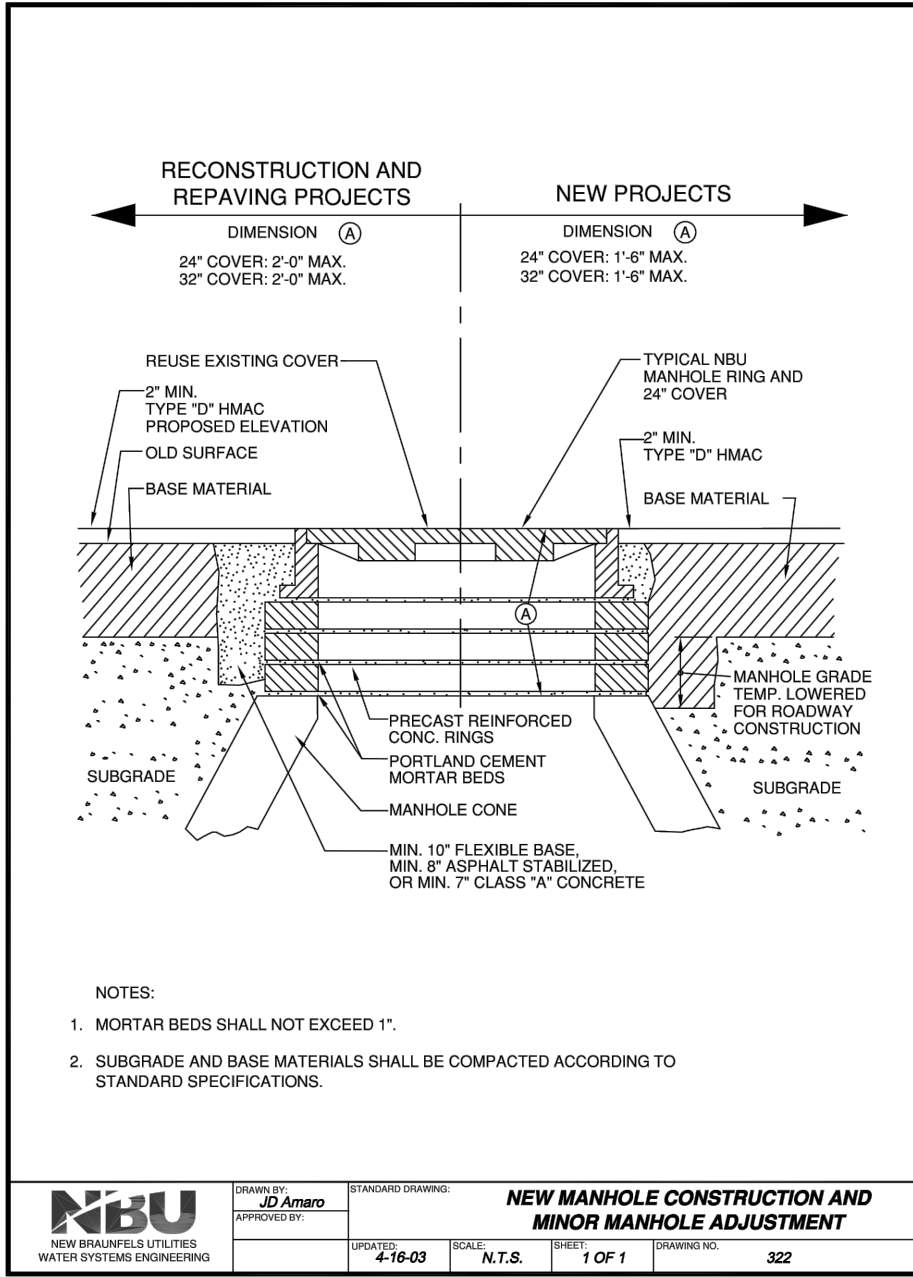
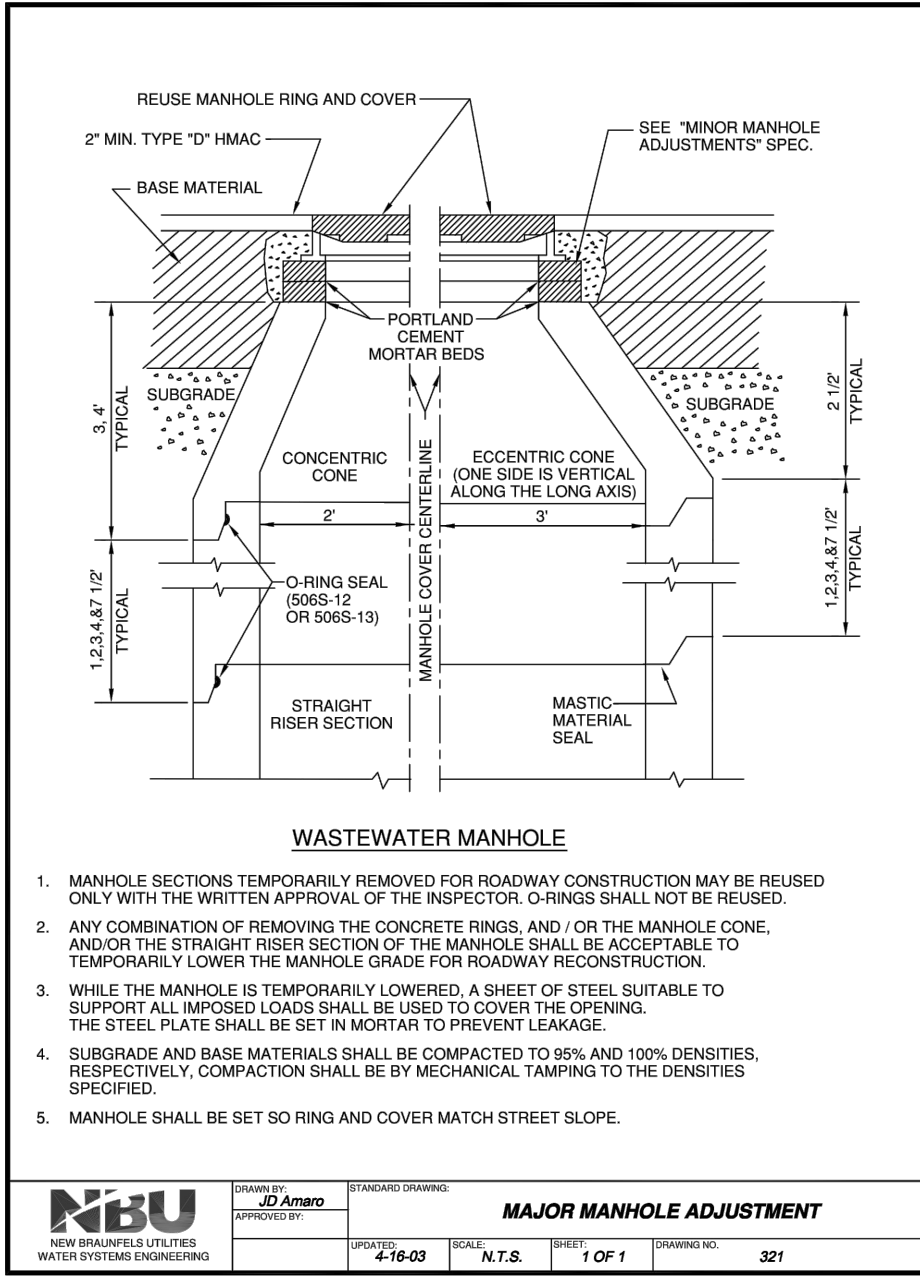
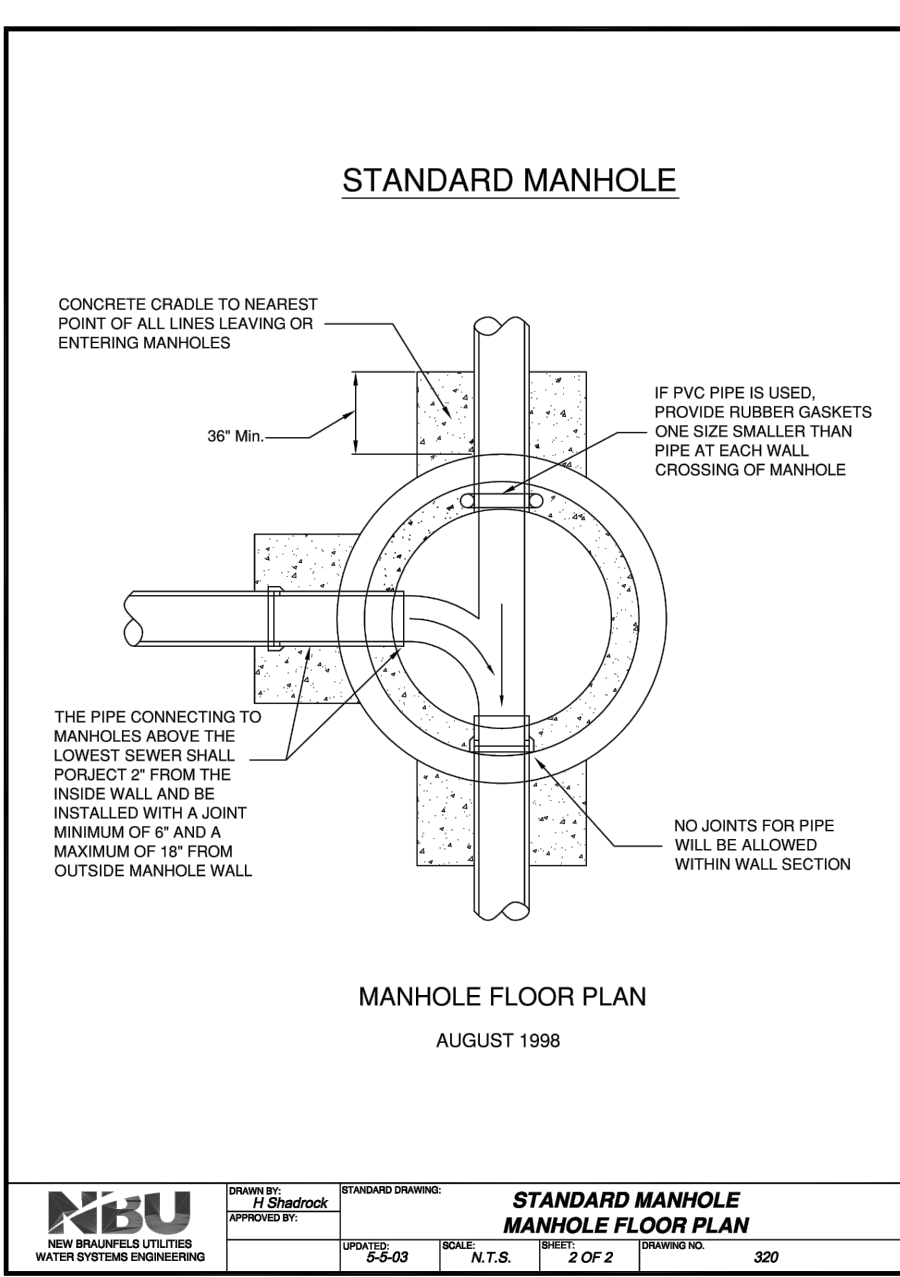
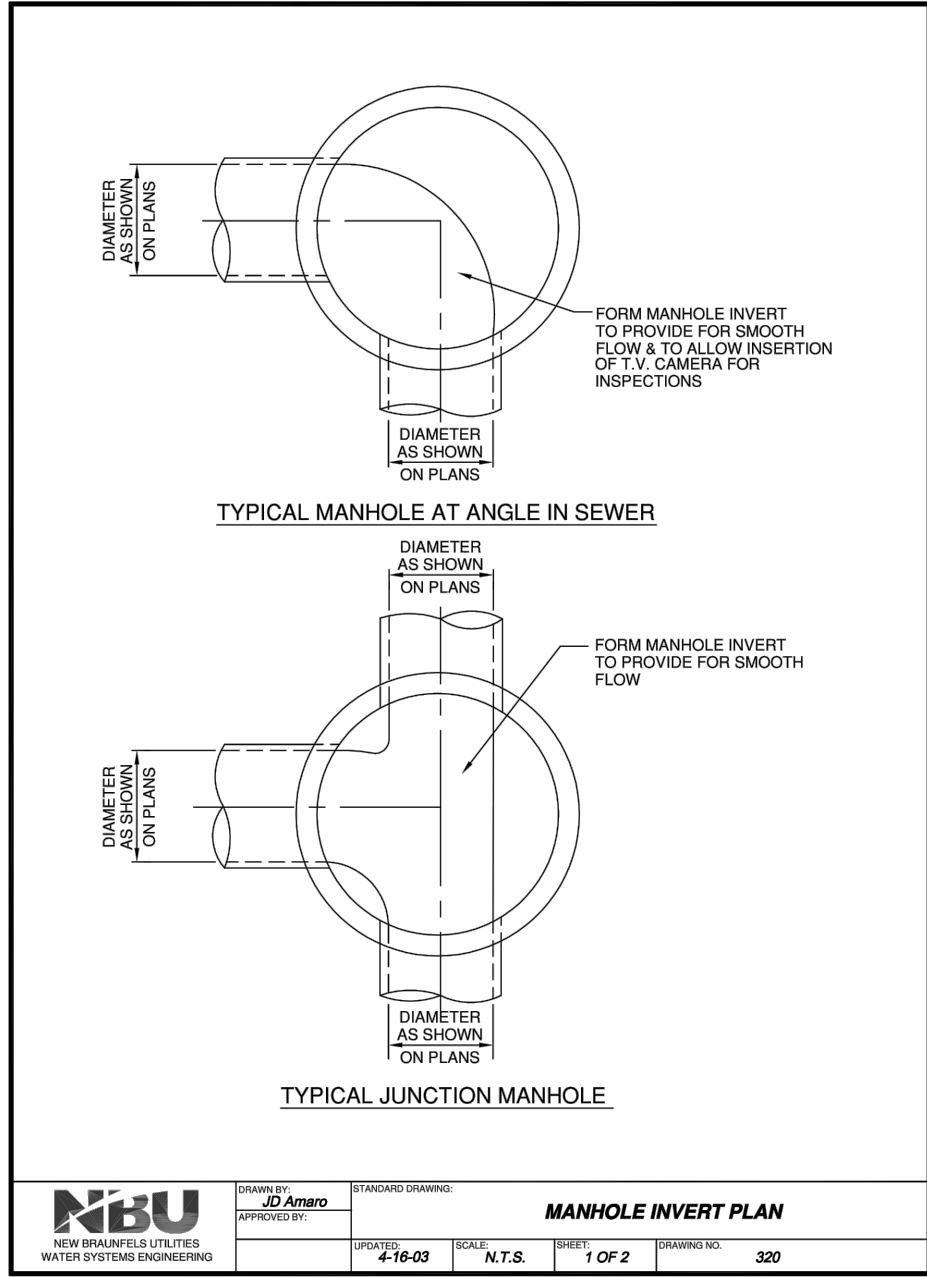
DRAWN BY: JAD

DESIGNED BY: JMM

REVIEWED BY: CVH

HMT PROJECT NO.:  
216.020

SHEET  
C9.3



**RECORD DRAWING**

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

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

HMT ENGINEERING AND SURVEYING

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

**HMT**  
ENGINEERING & SURVEYING

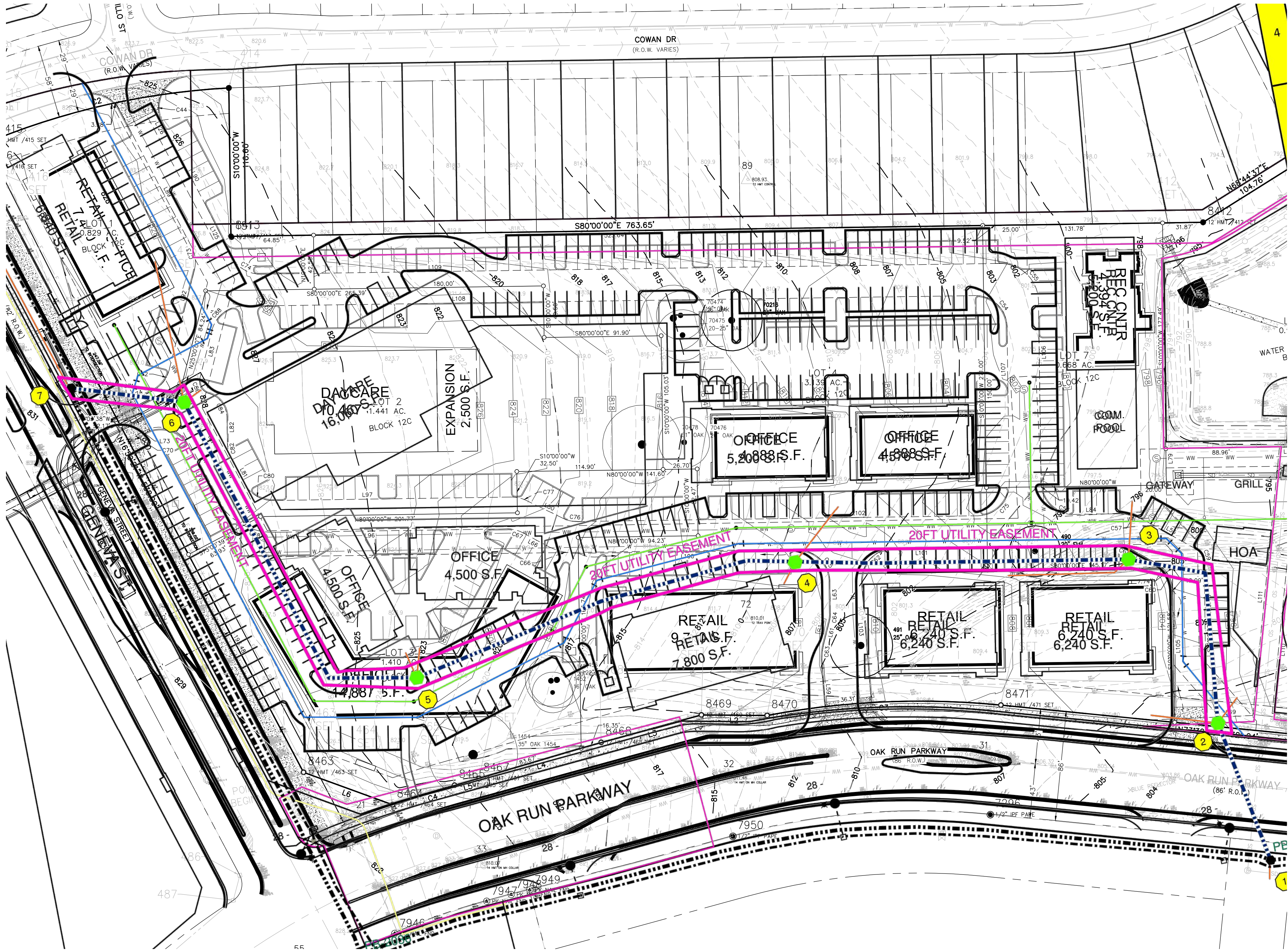
STATE OF TEXAS  
CHRISTOPHER P. VAN HECKE  
93047  
LICENSED PROFESSIONAL ENGINEER

07/10/2020

**WASTEWATER DETAILS**  
VERAMENDI NEIGHBORHOOD  
RETAIL DEVELOPMENT

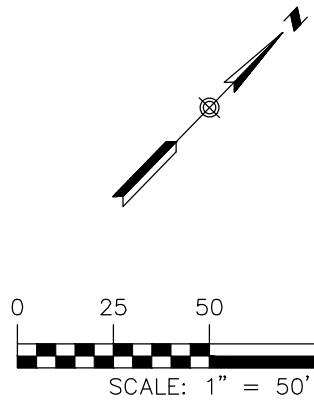
REVISION	DESCRIPTION	REVISION DATE
NO.	ASBUILTS	07/10/2020

DATE: FEBRUARY 2020  
DRAWN BY: JAD  
DESIGNED BY: JMM  
REVIEWED BY: CVH  
HMT PROJECT NO.: 216.020  
**SHEET C9.4**



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

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



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

- UTILITY NOTES:
1. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO THE STREETS.

CONSTRUCTION NOTES:

1. NO VALVES, HYDRANTS, CLEAN-OUTS, ETC. SHALL BE CONSTRUCTED WITHIN CURBS, SIDEWALKS, OR DRIVEWAYS.
2. ALL SEWER PIPE ASTM 3034 (115 PSI)
3. ALL MANHOLES SHALL BE 48" DIAMETER.
4. ALL RING AND COVER SHALL BE 32" DIAMETER.
5. EXISTING MANHOLES, RIM AND FLOWLINE ELEVATIONS SURVEYED BY HMT ENGINEERING & SURVEYING DATED FEBRUARY 22, 2019.
6. POINT OF DELIVERY SHALL BE IN ACCORDANCE WITH NBU WATER AND WASTEWATER DESIGN CRITERIA MANUAL, SECTION 2.3.0.
7. ALL UTILITIES TO BE CONSTRUCTED PRIOR TO STREETS.

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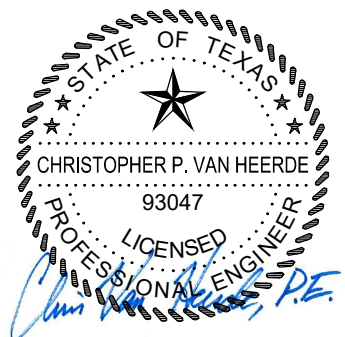
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07/10/2020

DRY UTILITY PLAN  
VERAMEND NEIGHBORHOOD  
RETAIL DEVELOPMENT

NO.	REVISION DESCRIPTION	REVISION DATE	
		DATE	ASBUILTS
1		07/10/2020	

DATE: FEBRUARY 2020

DRAWN BY: JAD

DESIGNED BY: JMM

REVIEWED BY: CVH

HMT PROJECT NO.:  
216.020

SHEET  
C10.0