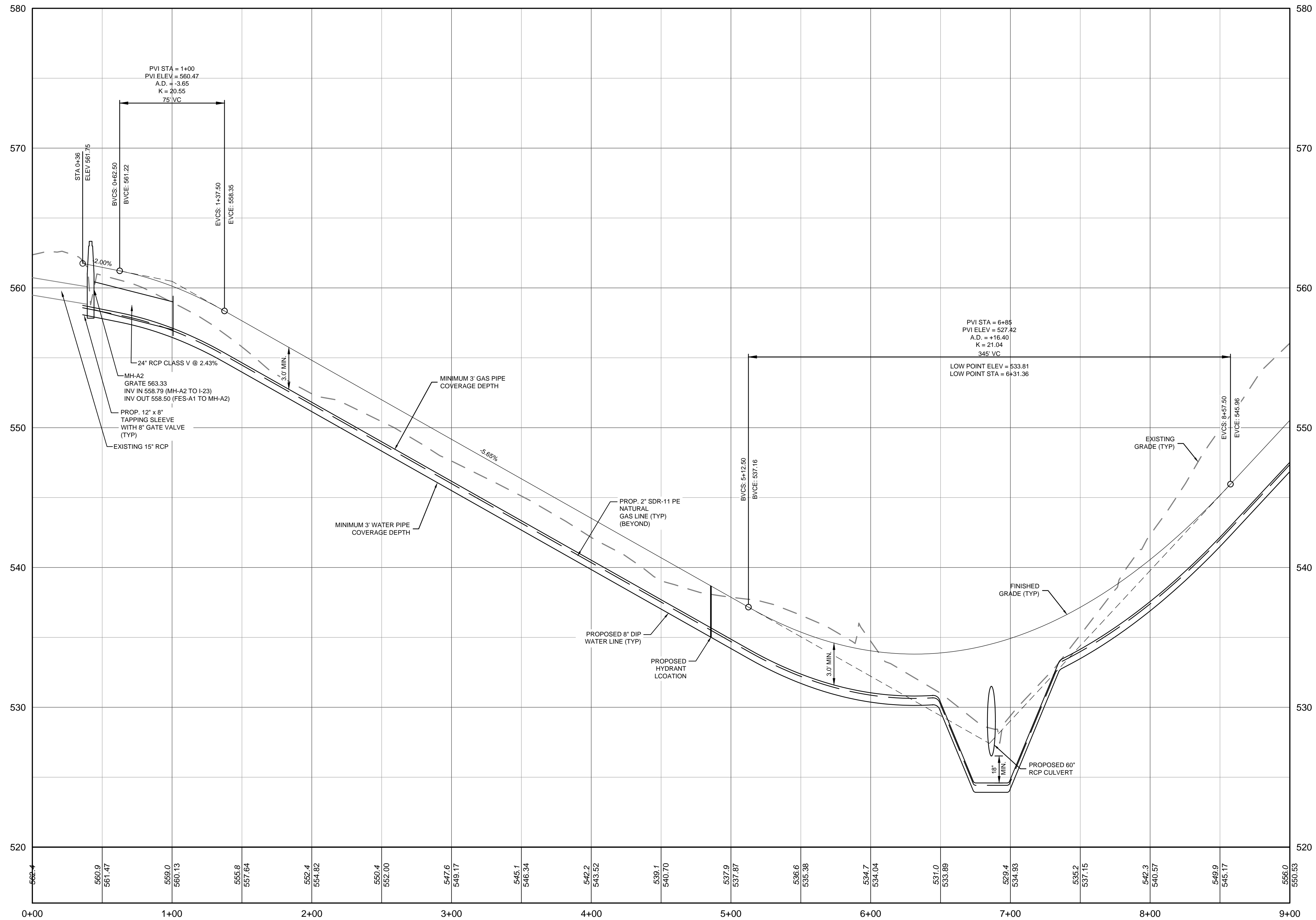


L:\Projects\2018\151\151-Mann Chapel Rd\Subdivision\CS1504_Plan\Bentley\CS1504.dwg PLOTTED: 6/20/2018 8:12 AM BY: Carol Jenkins F:\CSTYLE\Penmon\NCS.dwg PROJECT STATUS: MAJOR SUBDIVISION CONSTRUCTION DRAWING APPROVAL



BONTERRA WAY PROFILE
(STA: 0+00 - 9+00)
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK



BONTERRA SUBDIVISION
3954 MANN CHAPEL ROAD
CHAPEL HILL, NC 27516

BONTERRA WAY PROFILE (NORTH)

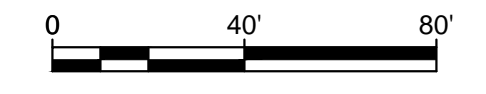
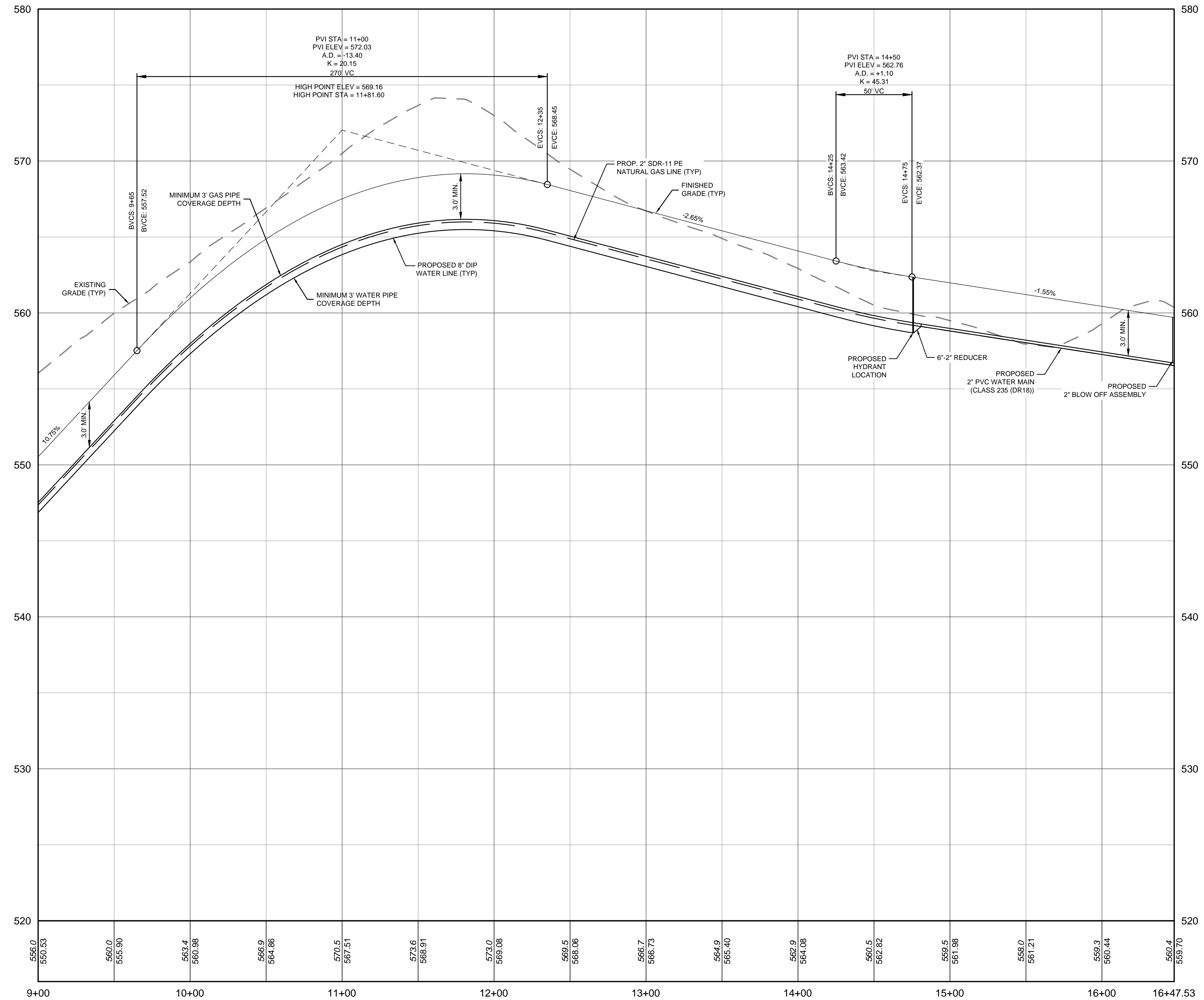
MANN CHAPEL DEVELOPMENT LLC
2100 COOK RIDGE COURT
RALEIGH, NC 27615

DATE	NO.	REVISIONS	BY
5/16/2019	6	PER CHATHAM COUNTY SW & EC	CJJ
4/29/2019	5	PER CHATHAM COUNTY SW & EC	CJJ
4/10/2019	4	PER CHATHAM COUNTY SW & EC	CSB
2/27/2019	3	REV. PER NCDOT COMMENTS	CSB
2/05/2019	2	REV. PER NCDOT COMMENTS	CSB
10/11/2018	1	NCDOT SUBMITTAL	AAA

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE ENTERED INTO BY AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES AND OTHERS SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT: DLAZ1701
DATE: 10/11/2018
DRAWING SCALE: 1" = 40'
DRAWN BY: AAA
APPROVED BY: PCB

L:\Projects\2018\12\17\18-Manns Chapel Rd Subdivision\CS1505.dwg PLOT DATE: 12/20/18 11:24 AM BY: Gerd Jankovics PROJECT STATUS: MAJOR SUBDIVISION CONSTRUCTION DRAWING APPROVAL



ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

Peter C. Beebe
 PROFESSIONAL ENGINEER
 SEAL NO. 033040
 PETER C. BEEBE
 12/22/18

BONTERRA SUBDIVISION
 3954 MANNS CHAPEL ROAD
 CHAPEL HILL, NC 27516

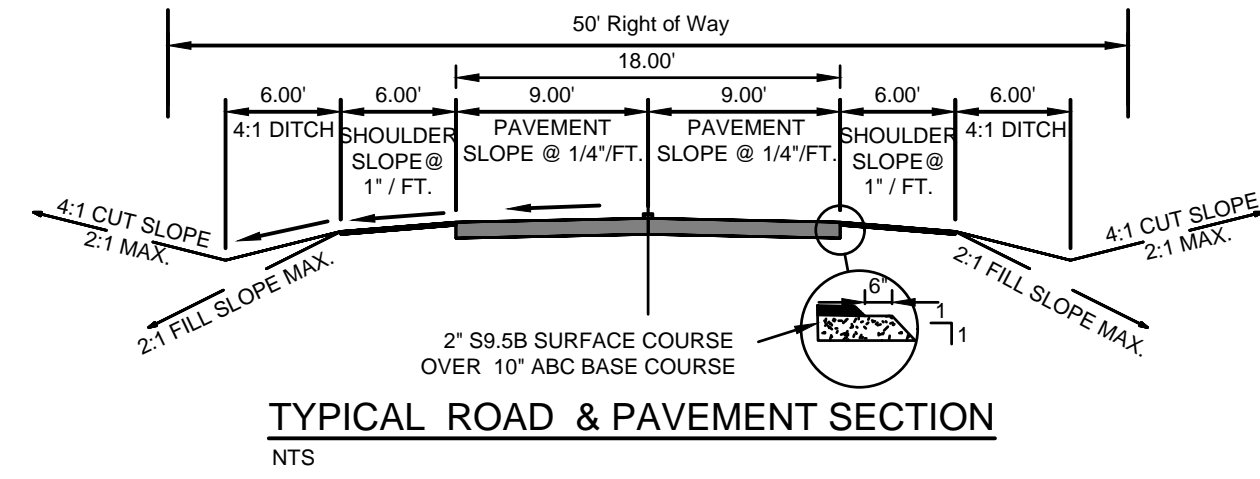
BONTERRA WAY PROFILE (SOUTH)

MANNS CHAPEL DEVELOPMENT LLC
 2100 COOK RIDGE COURT
 RALEIGH, NC 27615

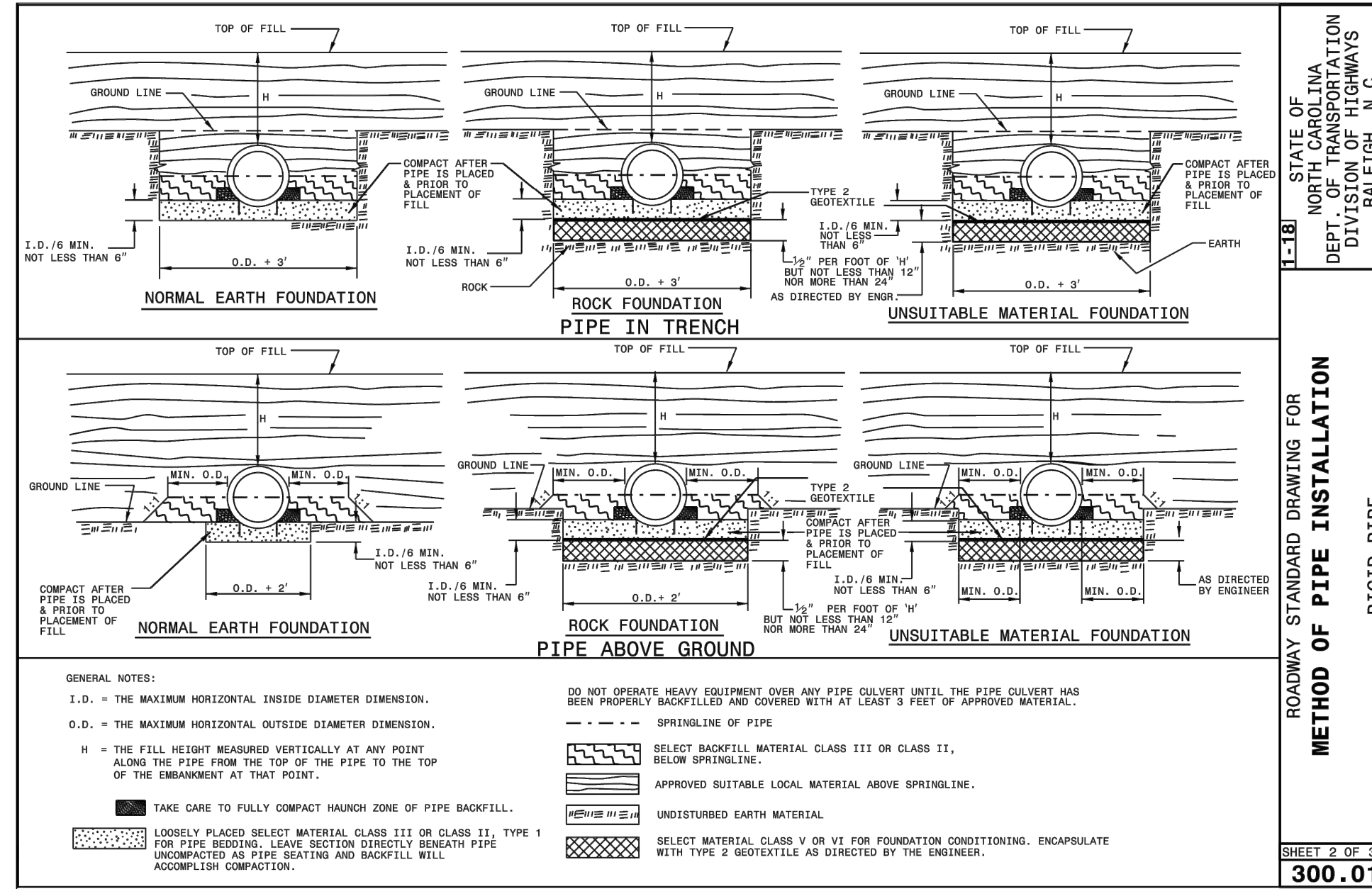
DATE	NO.	REVISIONS	BY
5/16/2019	6	PER CHATHAM COUNTY SW & EC	CJJ
4/29/2019	5	PER CHATHAM COUNTY SW & EC	CJJ
4/10/2019	4	PER CHATHAM COUNTY SW & EC	CSB
2/27/2019	3	REV. PER NCDOT COMMENTS	CSB
2/05/2019	2	REV. PER NCDOT COMMENTS	CSB
10/11/2018	1	NCDOT SUBMITTAL	AAA

ALL DOCUMENTS PREPARED BY PENNONI ASSOCIATES ARE INSTRUMENTS OF SERVICE IN RESPECT OF THE PROJECT. THEY ARE NOT INTENDED OR REPRESENTED TO BE SUITABLE FOR REUSE BY OWNER OR OTHERS ON THE EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT. ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY PENNONI ASSOCIATES FOR THE SPECIFIC PURPOSE INTENDED WILL BE AT OWNERS SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO PENNONI ASSOCIATES AND OTHERS. SHALL INDEMNIFY AND HOLD HARMLESS PENNONI ASSOCIATES FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES ARISING OUT OF OR RESULTING THEREFROM.

PROJECT	DLAZ1701
DATE	10/11/2018
DRAWING SCALE	1" = 40'
DRAWN BY	AAA
APPROVED BY	PCB

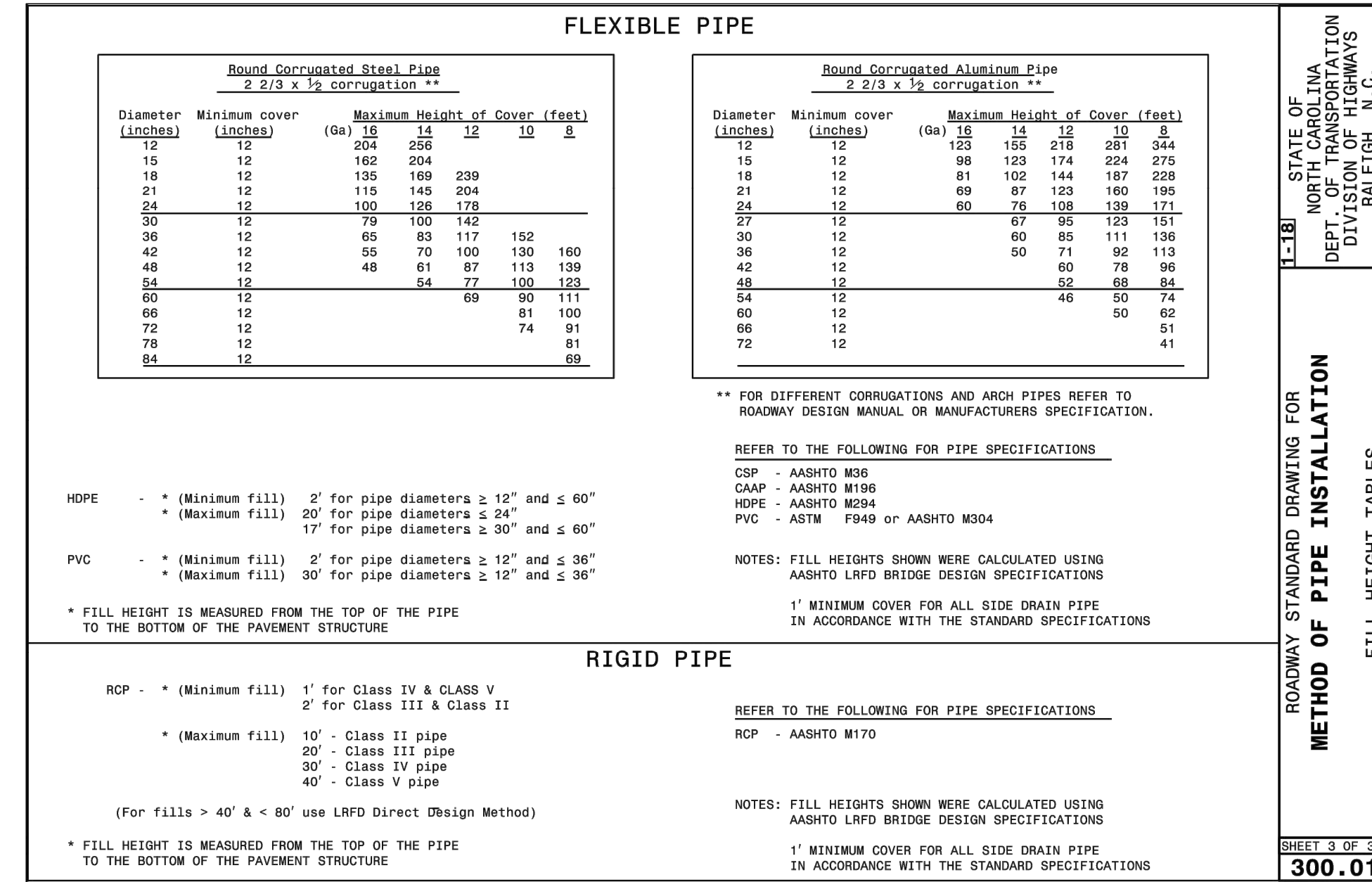


TYPICAL ROAD & PAVEMENT SECTION
NTS



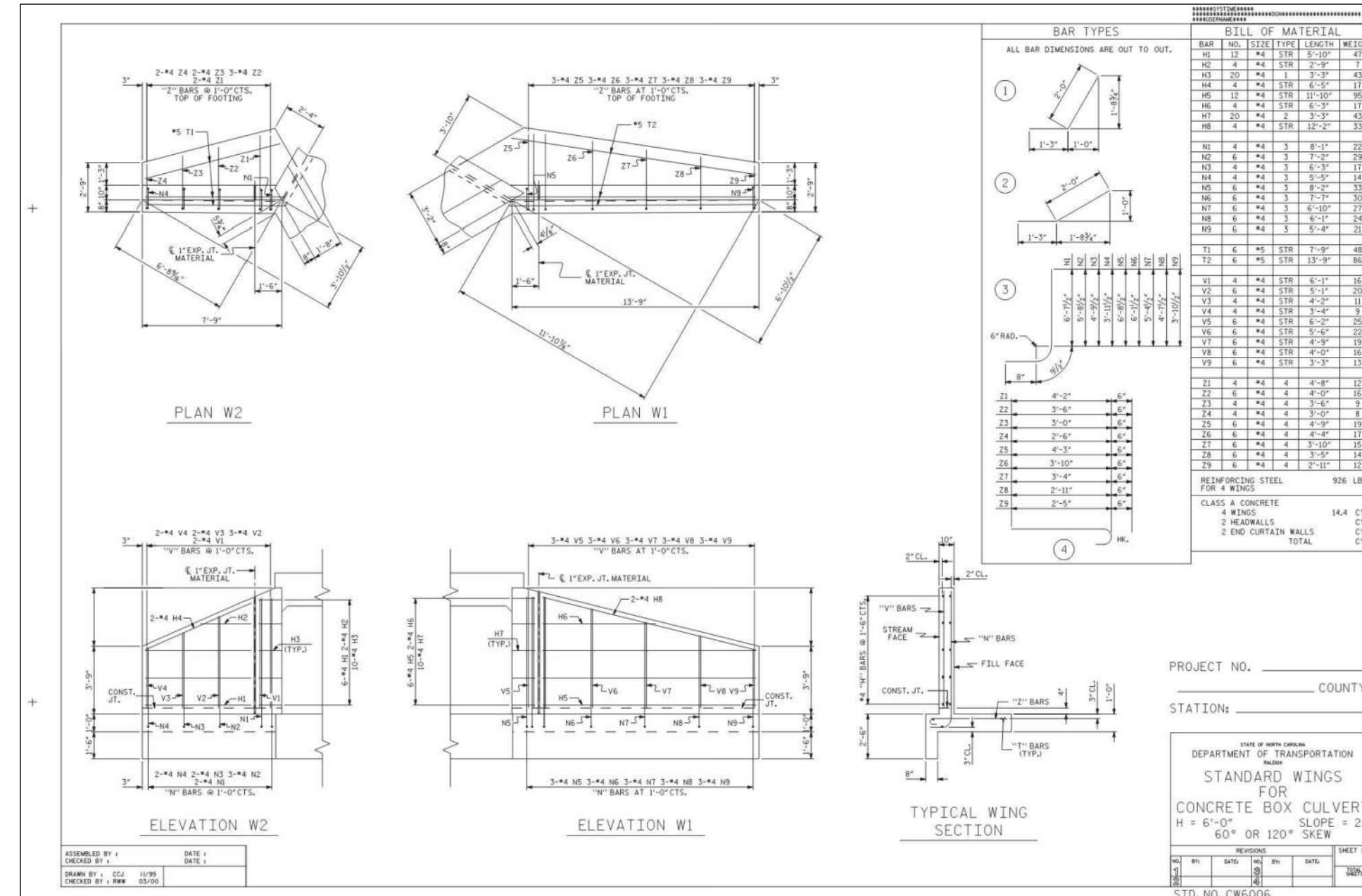
ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

SHEET 2 OF 3
300.01



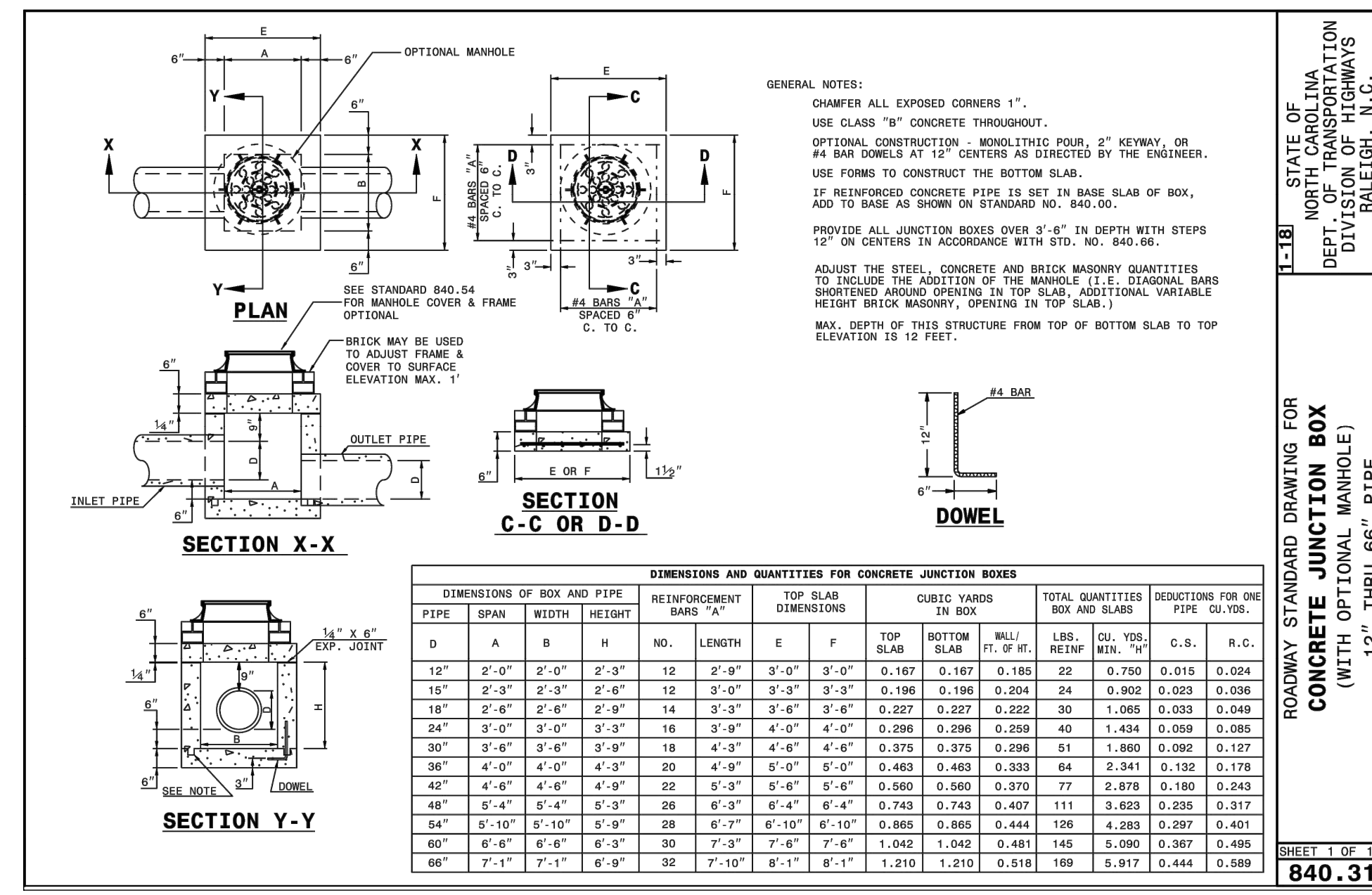
ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
FILL HEIGHT TABLES

SHEET 3 OF 3
300.01



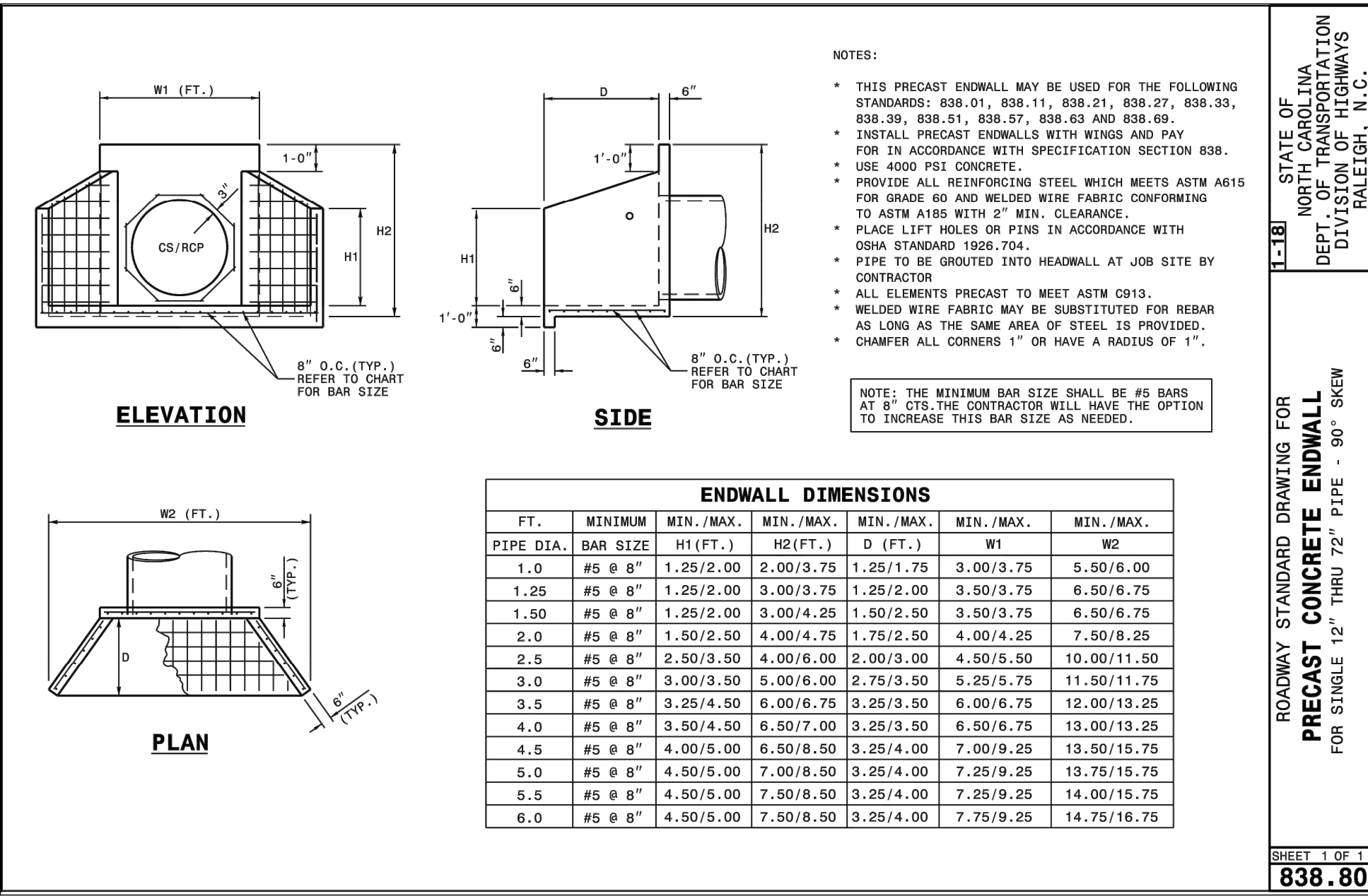
ROADWAY STANDARD DRAWING FOR
CONCRETE JUNCTION BOX
(WITH OPTIONAL MANHOLE)
12" THRU 66" PIPE

SHEET 1 OF 1
840.31



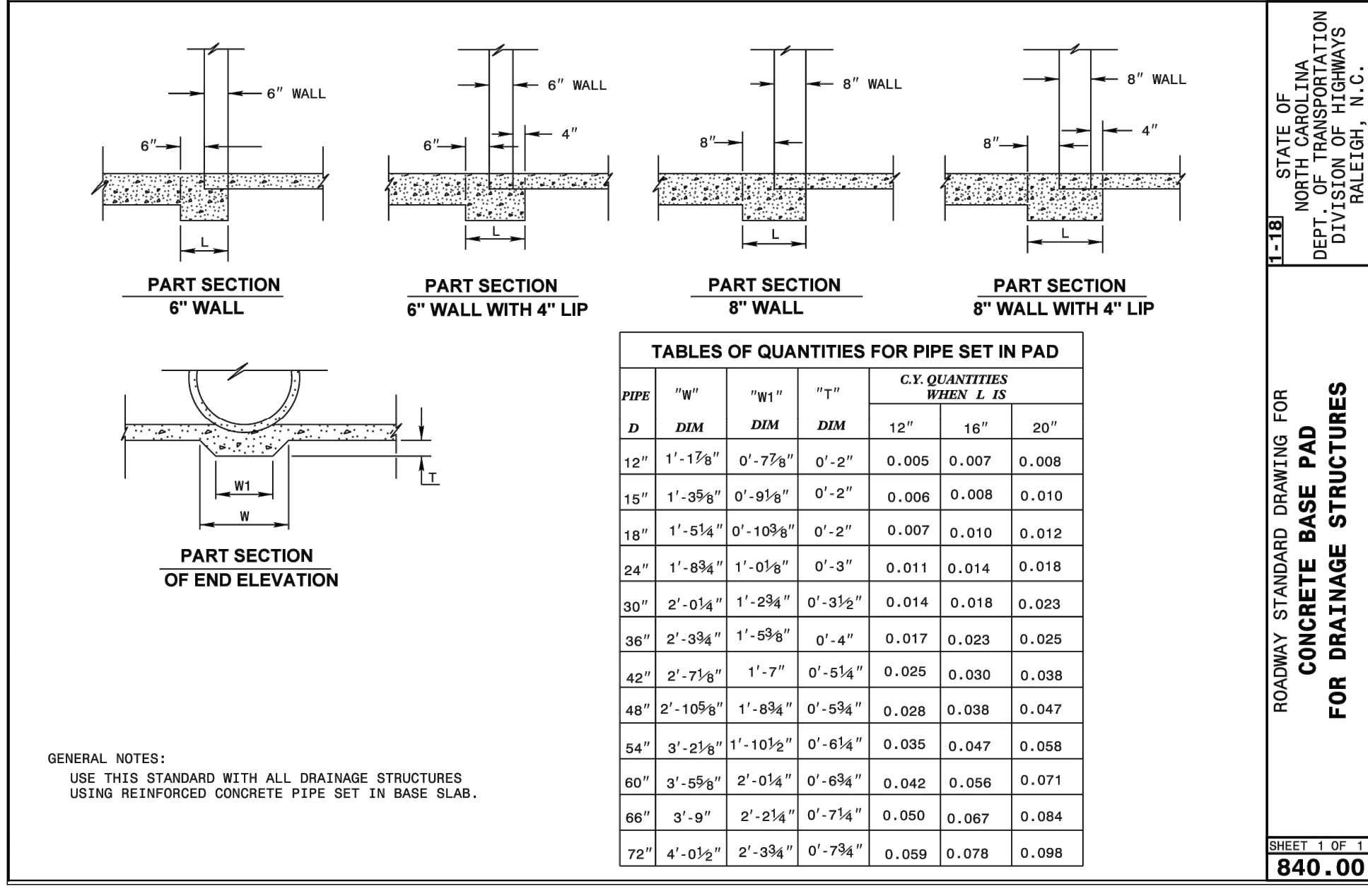
ROADWAY STANDARD DRAWING FOR
CONCRETE BOX CULVERT
(WITH OPTIONAL MANHOLE)
12" THRU 66" PIPE

SHEET 1 OF 1
840.31



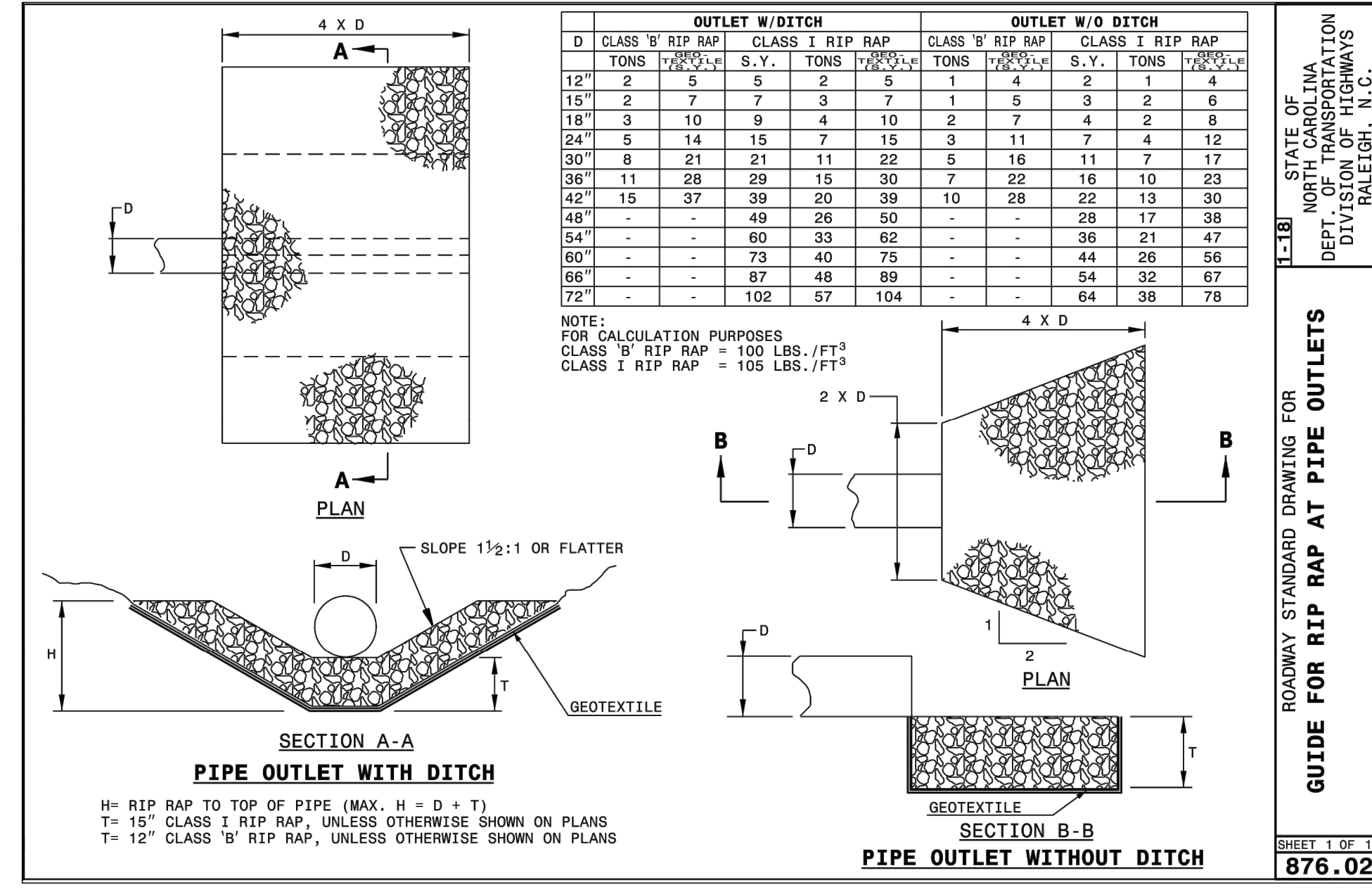
ROADWAY STANDARD DRAWING FOR
PRECAST CONCRETE ENDWALL
FOR SINGLE 12" THRU 72" PIPE - 90° SKEW

SHEET 1 OF 1
838.80



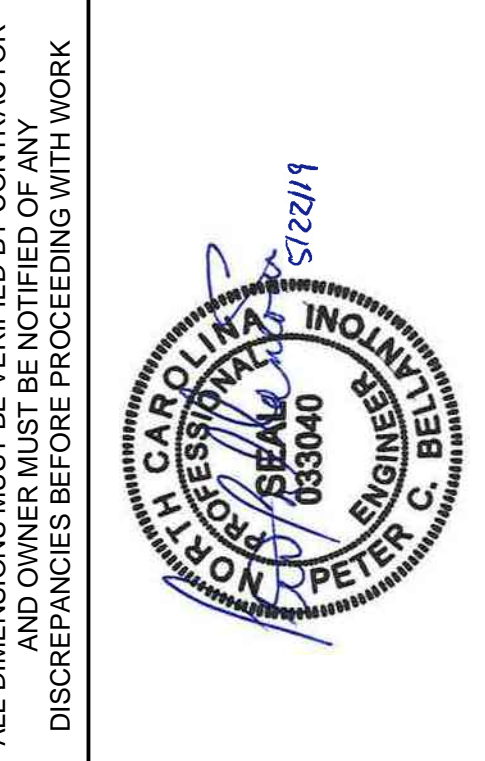
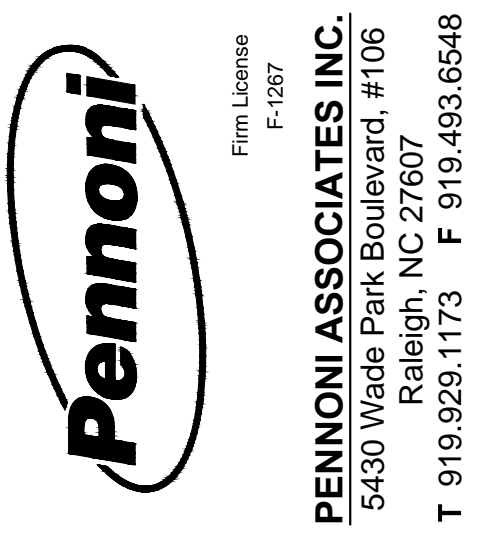
ROADWAY STANDARD DRAWING FOR
CONCRETE BASE PAD
FOR DRAINAGE STRUCTURES

SHEET 1 OF 1
840.00



ROADWAY STANDARD DRAWING FOR
GUIDE FOR RIP RAP AT PIPE OUTLETS

SHEET 1 OF 1
876.02



BONTERRA SUBDIVISION
3954 MANNS CHAPEL ROAD
CHAPEL HILL, NC 27516

SITE DETAILS

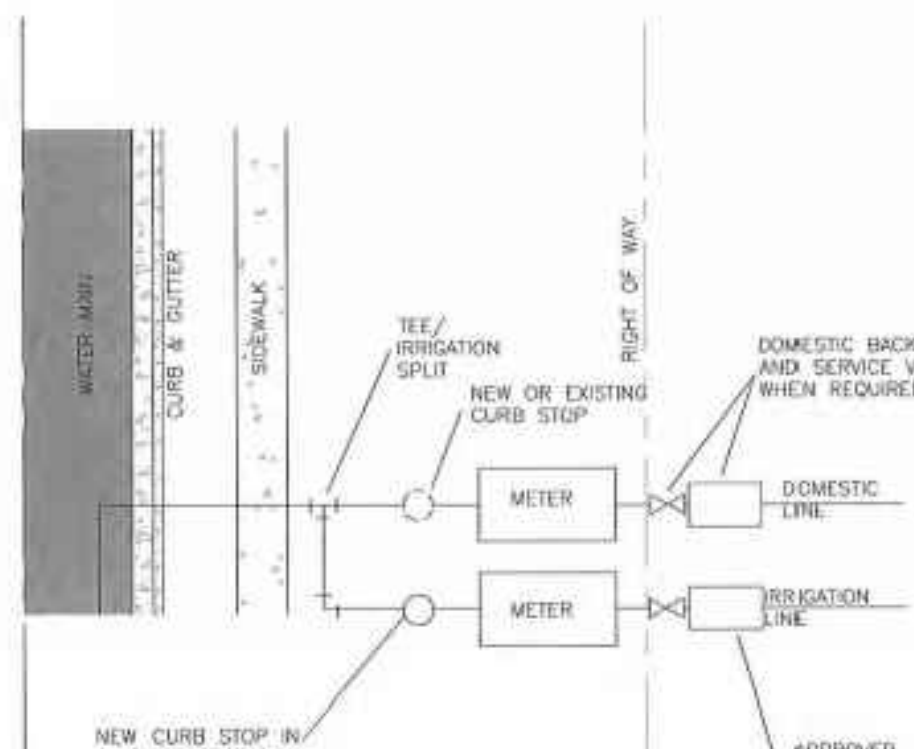
MANNS CHAPEL DEVELOPMENT LLC
2100 COOK RIDGE COURT
RALEIGH, NC 27615

PROJECT	DATE	REVISIONS	BY
CJ/J			
CJ/J			
CSB			
CSB			
CSB			
AAA			

DATE	NO.	REVISIONS
5/16/2019	6	PER CHATHAM COUNTY SW & EC
4/29/2019	5	PER CHATHAM COUNTY SW & EC
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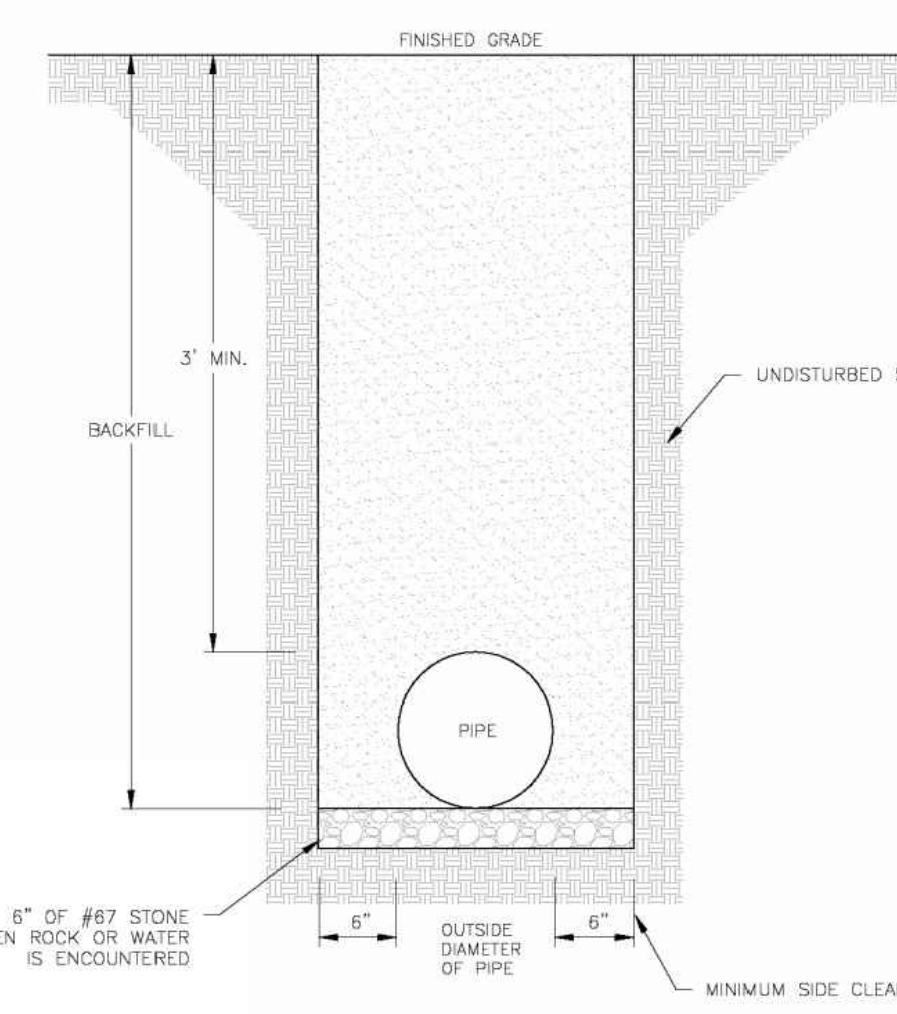
PROJECT DLAZ1701
DATE 10/11/2018
DRAWING SCALE NTS
DRAWN BY AAA
APPROVED BY PCB

CS6001
SHEET 10 OF 19



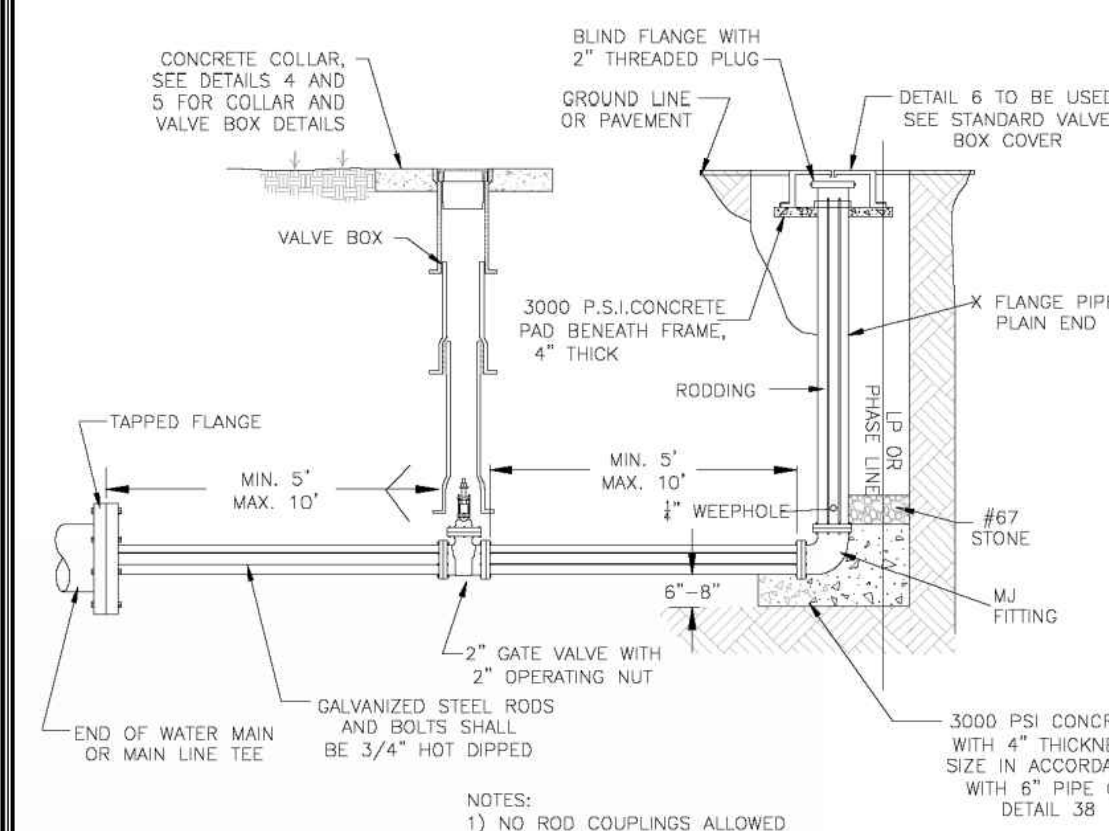
NOTES:
 1. IRRIGATION METER SHALL BE LOCATED ON THE SIDE OF DOMESTIC METER WITH INCREASING ADDRESSES.
 2. THE BACKFLOW SHALL BE INSTALLED NO MORE THAN 10' FROM THE METER IN A VISIBLE LOCATION.
 3. BACKFLOW RISER/STEMPIPE SHALL BE OF COPPER OR BRASS.
 4. A SERVICE VALVE IS REQUIRED AFTER THE METER BUT BEFORE THE BACKFLOW ASSEMBLY FOR MAINTENANCE AND REPLACEMENT PURPOSES.
 5. THE INSTALLATION MUST ALSO MEET ALL CODE REQUIREMENTS PER THE NC PLUMBING CODE.

DETAIL 23
 REVISION DATE JULY 1, 2015
IRRIGATION TAP ON NEW AND EXISTING SERVICES
 CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION
 P.O. BOX 930
 PITTSBORO, NC 27312
 964 EAST STREET, SUITE 205
 PITTSBORO, NC 27312
 (919) 852-8270 (R) (919) 852-4262 (F)



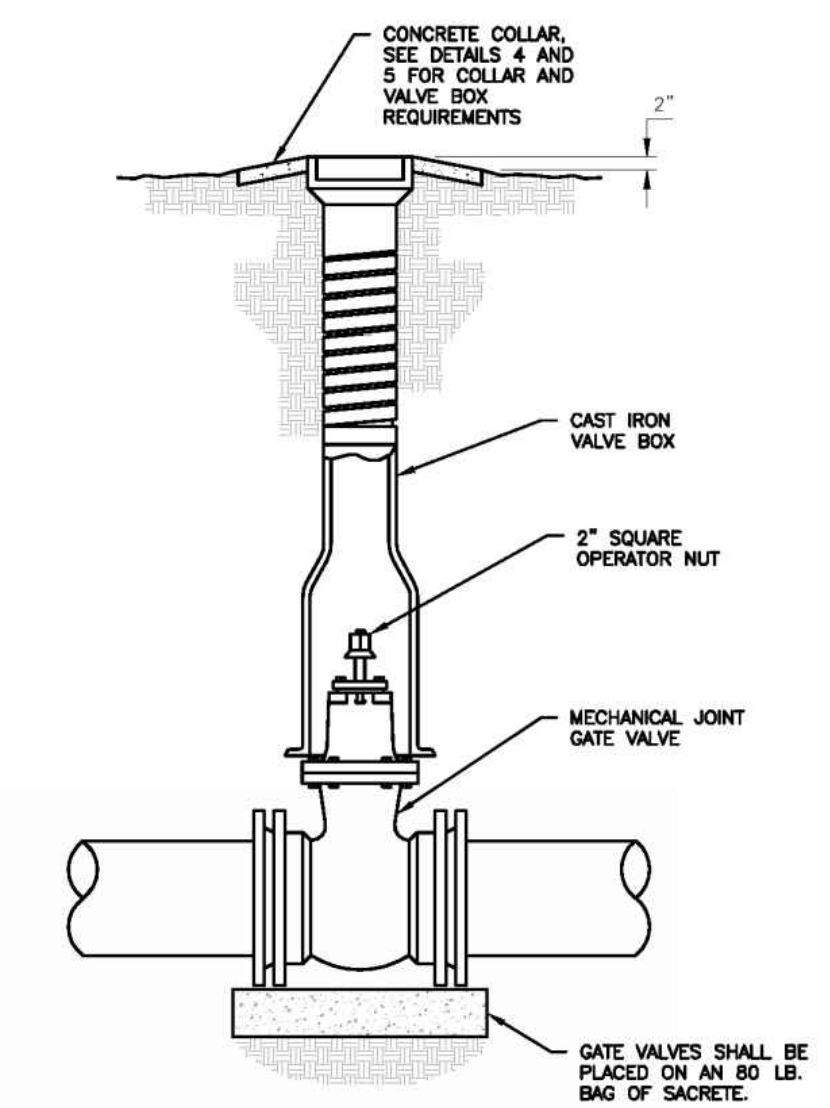
NOTES:
 1. TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
 2. NO ROCKS OR BOULDERS 2" OR LARGER IN DIAMETER TO BE USED IN BACKFILL.
 3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
 4. BACKFILL SHALL BE TAMPED IN 6" LIFTS.
 5. ACHIEVE 95% COMPACTION IN BACKFILL.

DETAIL 35
 REVISION DATE JULY 1, 2015
DUCTILE IRON PIPE TRENCH BOTTOM DIMENSIONS AND BACKFILLING REQUIREMENTS
 CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION
 P.O. BOX 930
 PITTSBORO, NC 27312
 964 EAST STREET, SUITE 205
 PITTSBORO, NC 27312
 (919) 852-8270 (R) (919) 852-4262 (F)



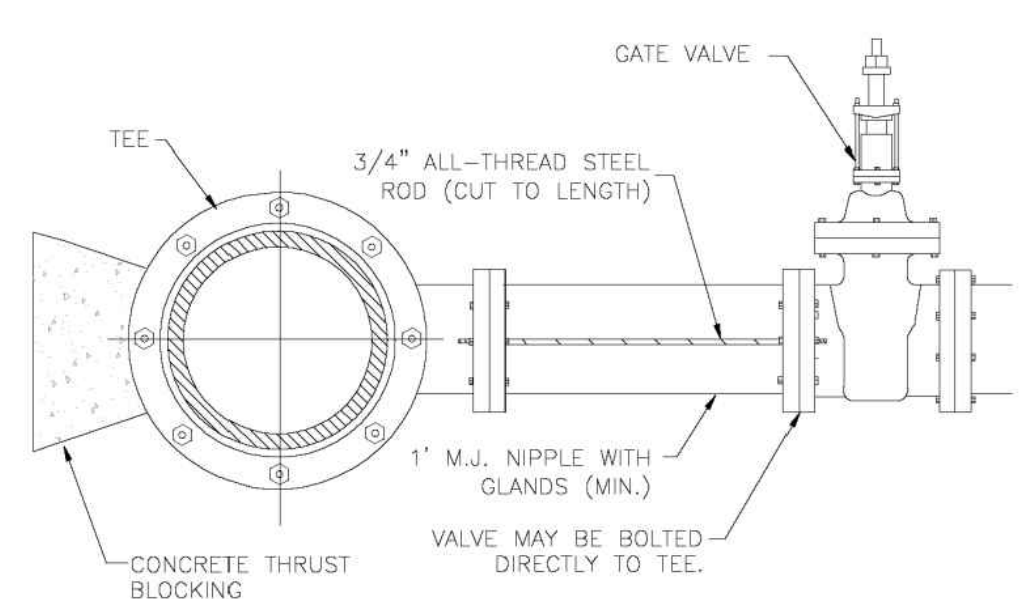
NOTES:
 1) NO ROD COUPLINGS ALLOWED.

DETAIL 13
 REVISION DATE JULY 1, 2015
2" BLOW-OFF ASSEMBLY AT END OF WATER MAIN
 CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION
 P.O. BOX 930
 PITTSBORO, NC 27312
 964 EAST STREET, SUITE 205
 PITTSBORO, NC 27312
 (919) 852-8270 (R) (919) 852-4262 (F)



NOTES:
 GATE VALVES SHALL BE PLACED ON AN 80 LB. BAG OF SACRETE.

DETAIL 3
 REVISION DATE JULY 1, 2015
GATE VALVE ASSEMBLY
 CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION
 P.O. BOX 930
 PITTSBORO, NC 27312
 964 EAST STREET, SUITE 205
 PITTSBORO, NC 27312
 (919) 852-8270 (R) (919) 852-4262 (F)

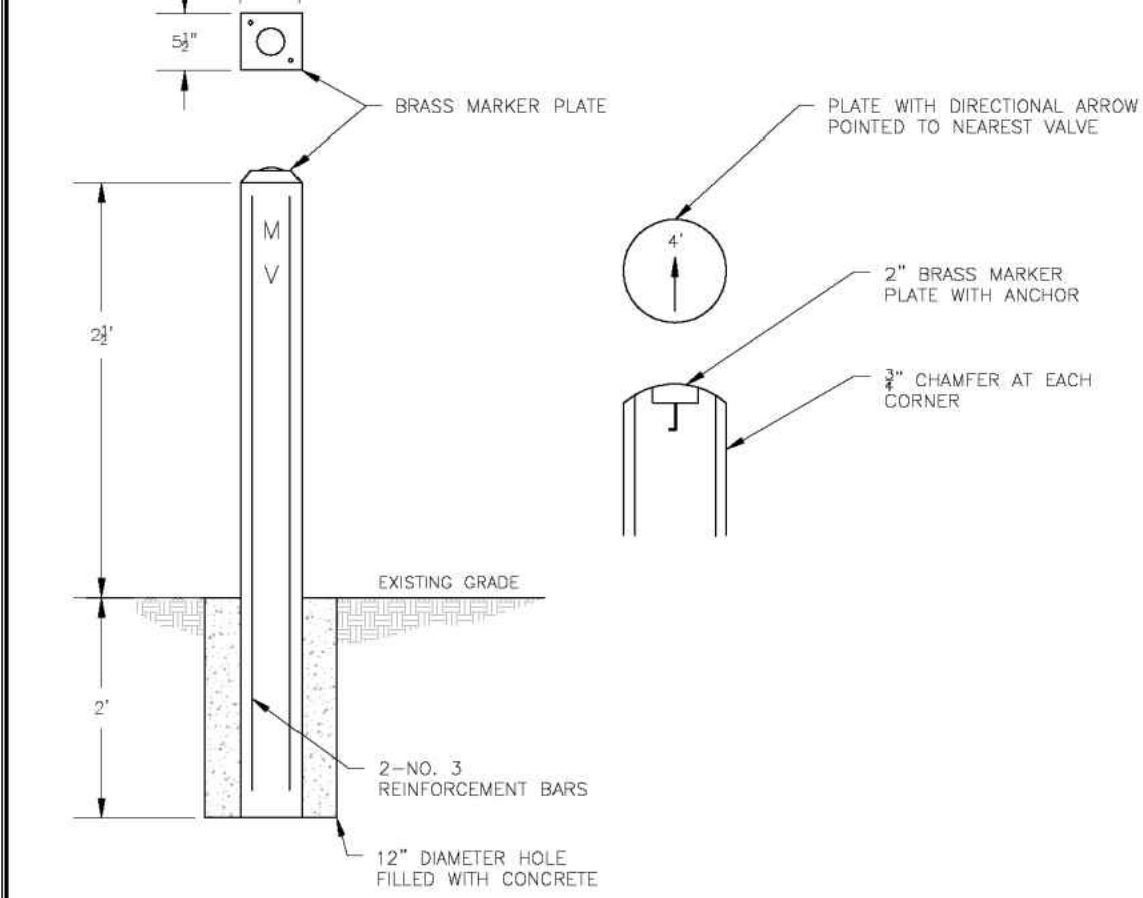


NOTES:
 1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
 2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL FITTINGS.
 3. THIS RODDING REQUIREMENT DOES NOT APPLY TO FIRE HYDRANTS.
 4. SEE DETAILS 38 AND 39 FOR THRUST BLOCK SIZING.

BRANCH SIZE	NO. OF RODS
4"	2
6"	2
8"	4
12"	4
16"	6
24"	6
30"	8
36"	8

DETAIL 42
 REVISION DATE JULY 1, 2015
4" - 24" RESTRAINED TEE AND VALVE ON DEAD ENDS
 CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION
 P.O. BOX 930
 PITTSBORO, NC 27312
 964 EAST STREET, SUITE 205
 PITTSBORO, NC 27312
 (919) 852-8270 (R) (919) 852-4262 (F)

NOTES:
 1. MARKER POST SHALL BE INSTALLED AT THE EDGE OF THE DOT RIGHT-OF-WAY OR PROPERTY LINE.
 2. MARKER POST SHALL BE PROVIDED AT ALL VALVES.
 3. ABBREVIATIONS STAMPED ON POST SHALL BE MV = MAIN VALVE AND BO = BLOW OFF.



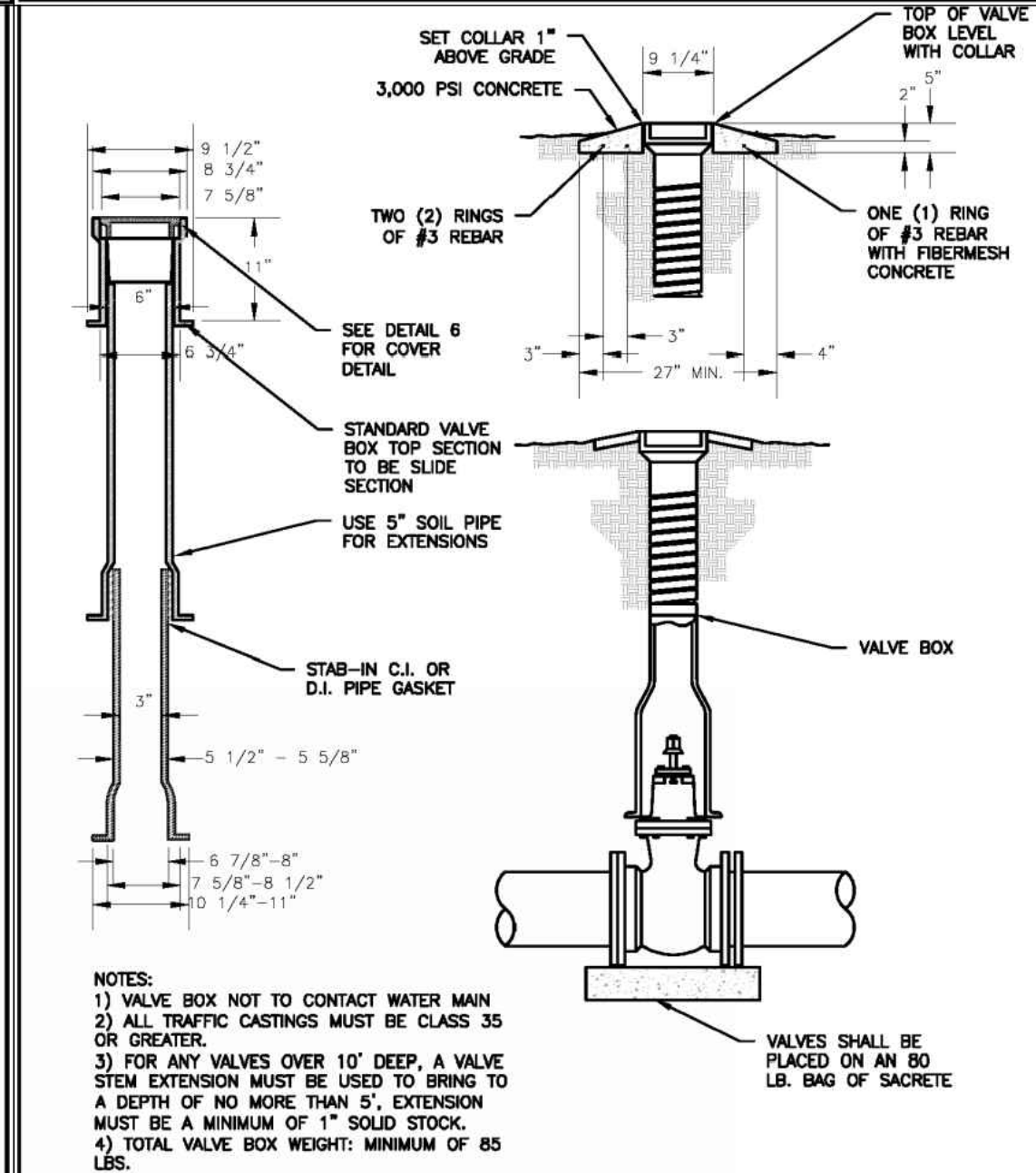
DETAIL 7
 REVISION DATE JULY 1, 2015
VALVE MARKER POST
 CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION
 P.O. BOX 930
 PITTSBORO, NC 27312
 964 EAST STREET, SUITE 205
 PITTSBORO, NC 27312
 (919) 852-8270 (R) (919) 852-4262 (F)

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS
 (BASED ON TEST PRESSURE OF 200 P.S.I.)
 ALL AREAS GIVEN IN SQUARE FEET.

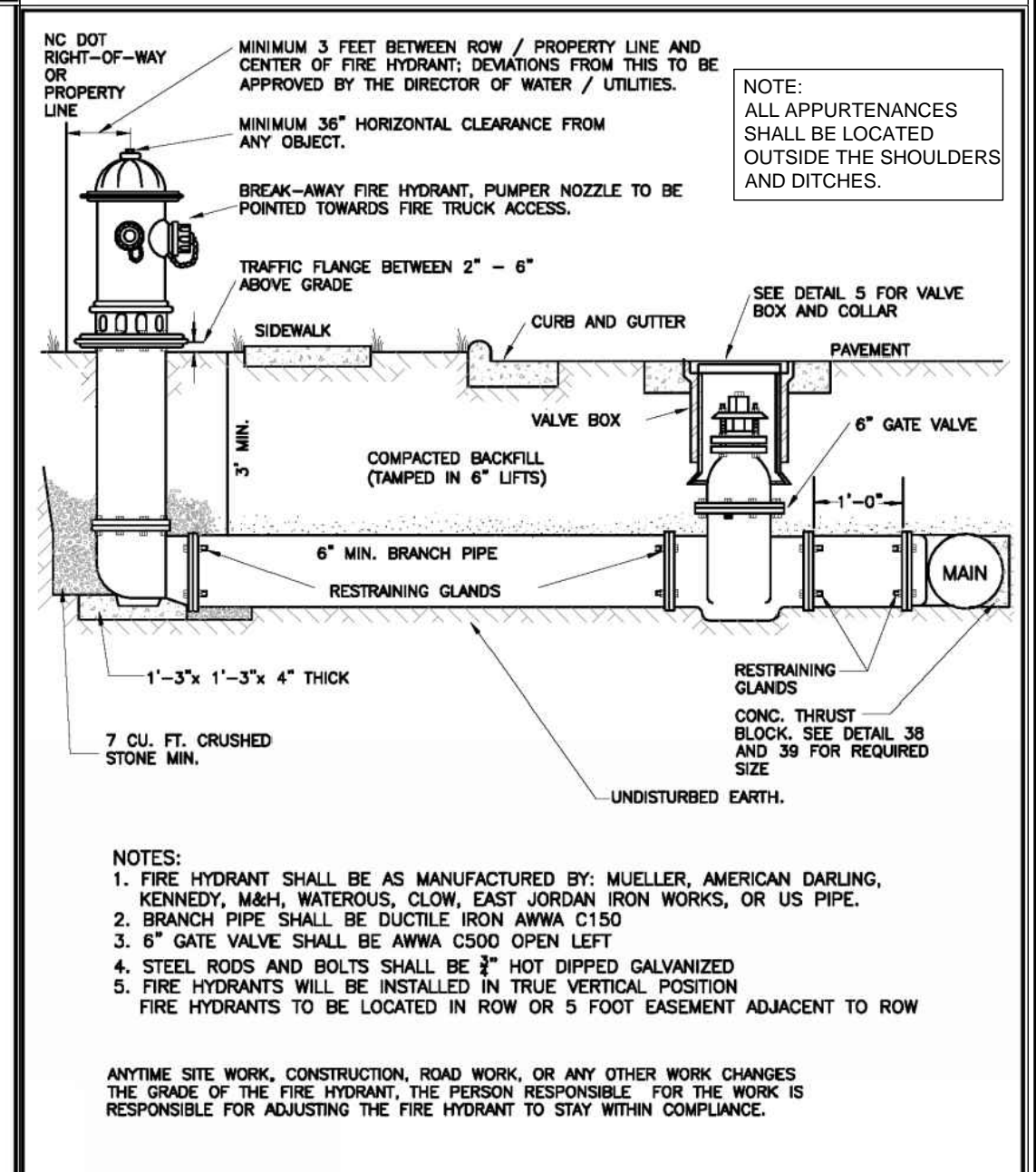
SIZE AND DEGREE OF BEND	STATIC LOADS	WATER/STEAM	WATER/STEAM	WATER/STEAM	WATER/STEAM	WATER/STEAM	WATER/STEAM
6"							
11 1/4"	1,108	1	1	1	1	1	2
22 1/2"	2,207	1	2	2	1	1	3
45"	4,328	2	3	3	1	1	5
90"	7,996	2	4	5	1	2	8
PLUG	5,655	2	3	4	1	1	6
8"							
11 1/4"	1,970	1	1	2	1	1	2
22 1/2"	3,922	1	2	3	1	1	4
45"	7,694	2	4	5	1	1	8
90"	14,215	4	8	9	2	2	13
PLUG	10,353	3	5	6	2	2	10
12"							
11 1/4"	4,433	2	3	3	1	1	5
22 1/2"	8,826	3	5	6	2	2	9
45"	17,312	5	9	11	3	3	18
90"	31,983	8	16	19	4	4	32
PLUG	22,618	6	12	14	3	3	23
16"							
11 1/4"	7,881	2	4	5	1	1	8
22 1/2"	15,691	4	8	10	2	2	16
45"	30,779	8	16	19	4	4	31
90"	56,861	15	29	35	8	8	57
PLUG	40,213	10	21	25	5	5	41

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.
 USE 6° - 90° DEGREE BEND VALUE FOR HYDRANTS FOR: ADDITIONAL SAFETY FACTOR.

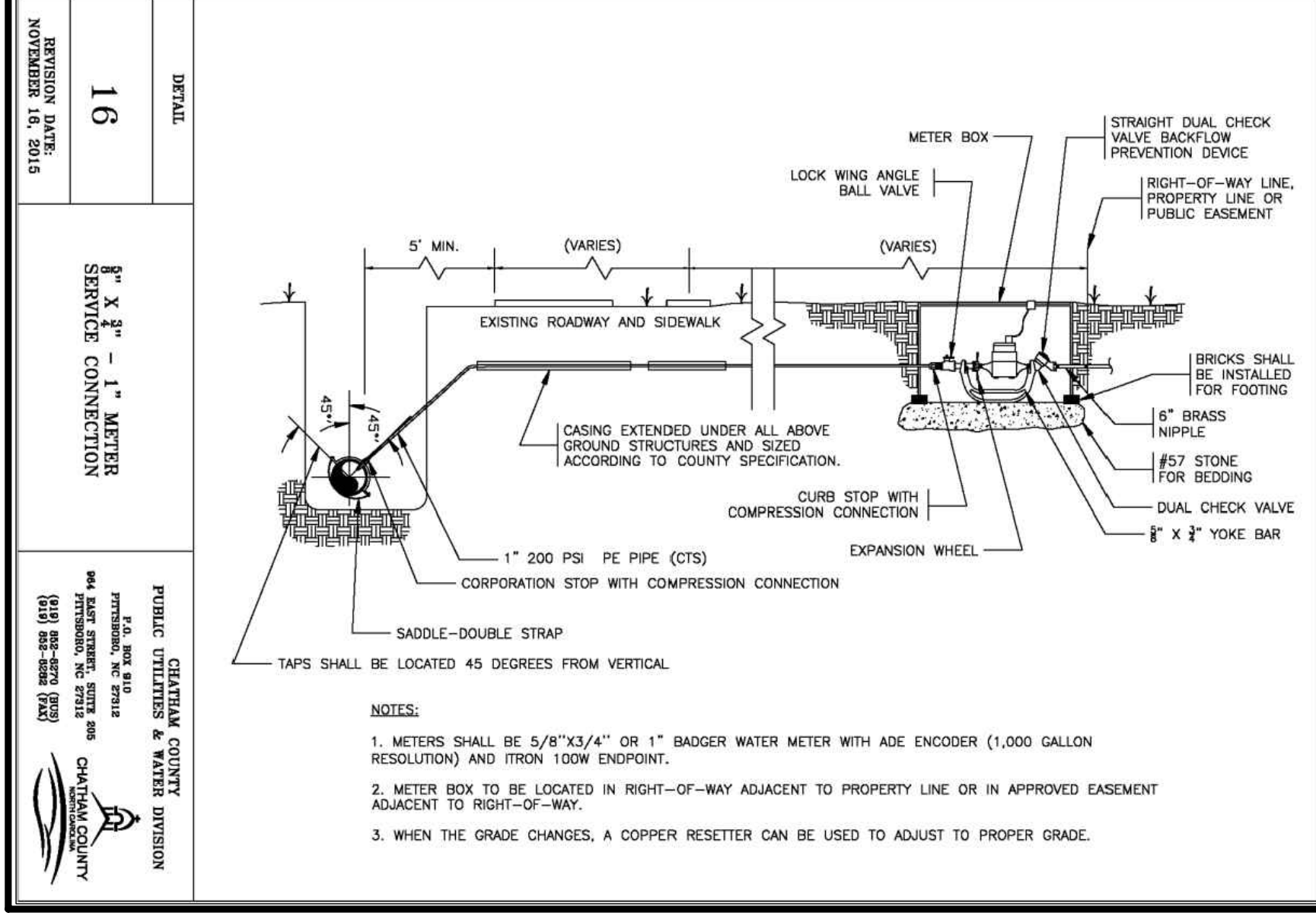
DETAIL 38
 REVISION DATE JULY 1, 2015
CONCRETE THRUST BLOCKING QUANTITY TABLE, 6" - 16" PIPE
 CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION
 P.O. BOX 930
 PITTSBORO, NC 27312
 964 EAST STREET, SUITE 205
 PITTSBORO, NC 27312
 (919) 852-8270 (R) (919) 852-4262 (F)



DETAIL 4
 REVISION DATE JULY 1, 2015
VALVE BOX AND COLLAR NOT IN PAVEMENT
 CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION
 P.O. BOX 930
 PITTSBORO, NC 27312
 964 EAST STREET, SUITE 205
 PITTSBORO, NC 27312
 (919) 852-8270 (R) (919) 852-4262 (F)



DETAIL 1
 REVISION DATE JULY 1, 2015
FIRE HYDRANT ASSEMBLY
 CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION
 P.O. BOX 930
 PITTSBORO, NC 27312
 964 EAST STREET, SUITE 205
 PITTSBORO, NC 27312
 (919) 852-8270 (R) (919) 852-4262 (F)



DETAIL 37
 REVISION DATE JULY 1, 2015
STANDARD THRUST BLOCKING VIEWS
 CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION
 P.O. BOX 930
 PITTSBORO, NC 27312
 964 EAST STREET, SUITE 205
 PITTSBORO, NC 27312
 (919) 852-8270 (R) (919) 852-4262 (F)

NOTES:
 1. CONCRETE SHALL BE 3000 PSI.
 2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
 3. TRENCHES SHALL CONFORM TO DETAILS 35 AND 36, AS APPROPRIATE.
 4. SEE STANDARD THRUST BLOCK TABLES, DETAILS 38 AND 39, FOR AREA OF CONCRETE REQUIRED.
 5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.

DETAIL 16
 REVISION DATE NOVEMBER 10, 2015
3" X 3" - 1" METER SERVICE CONNECTION
 CHATHAM COUNTY PUBLIC UTILITIES & WATER DIVISION
 P.O. BOX 930
 PITTSBORO, NC 27312
 964 EAST STREET, SUITE 205
 PITTSBORO, NC 27312
 (919) 852-8270 (R) (919) 852-4262 (F)

NOTES:
 1. METERS SHALL BE 5/8"X3/4" OR 1" BADGER WATER METER WITH ADE ENCODER (1,000 GALLON RESOLUTION) AND FROM 120V ENDPOINT.
 2. METER BOX TO BE LOCATED IN RIGHT-OF-WAY ADJACENT TO PROPERTY LINE OR IN APPROVED EASEMENT ADJACENT TO RIGHT-OF-WAY.
 3. WHEN THE GRADE CHANGES, A COPPER RESETER CAN BE USED TO ADJUST TO PROPER GRADE.

Pennoni
 Firm License F-1287
PENNONI ASSOCIATES, INC.
 5430 Wade Park Boulevard, #106
 Raleigh, NC 27607
 T 919.929.1173 F 919.499.6548

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

PROFESSIONAL ENGINEER
 STATE OF NORTH CAROLINA
 PETER C. BEBER
 033040

BONTERRA SUBDIVISION
 3854 MANN'S CHAPEL ROAD
 CHAPEL HILL, NC 27516

WATER DETAILS

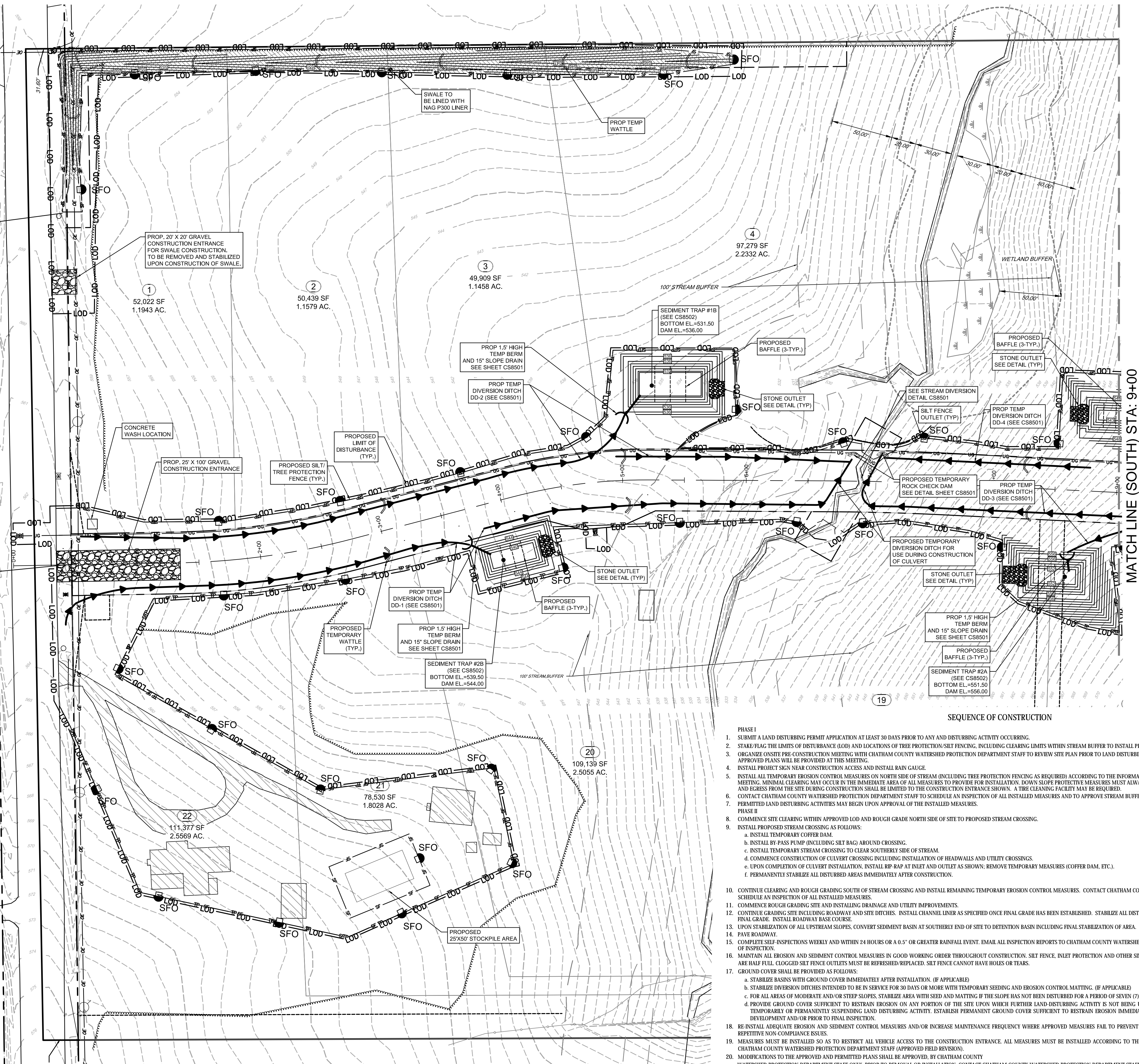
MANN'S CHAPEL DEVELOPMENT LLC
 2100 COOK RIDGE COURT
 RALEIGH, NC 27615

NO.	DATE	REVISIONS	BY
1	10/11/2018	NCDDOT SUBMITTAL	AAA
2	2/05/2019	REV PER NCDOT COMMENTS	CSB
3	2/27/2019	REV PER NCDOT COMMENTS	CSB
4	4/10/2019	REV PER NCDOT COMMENTS	CSB
5	4/29/2019	REV PER CHATHAM COUNTY SW & EC	CJ
6	5/16/2019	REV PER CHATHAM COUNTY SW & EC	CJ

PROJECT DLAZ1701
 DATE 10/11/2018
 DRAWING SCALE NTS
 DRAWN BY AAA
 APPROVED BY PCB

CS6041
 SHEET 11 OF 19

S.R. 1532 (MANN'S CHAPEL ROAD)
(80' PUBLIC R/W) (PLAT 28-54)



LEGEND

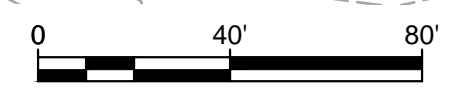
- LOD — LIMIT OF DISTURBANCE
- SF-TP — SILTFREE PROTECTION FENCE
- TP — TREE PROTECTION FENCE
- ⊗ INLET PROTECTION
- ▣ CONSTRUCTION ENTRANCE
- TEMPORARY WATTLE
- SFO SILT FENCE OUTLET
- DIVERSION DITCH
- BERM AND SLOPE DRAIN
- ROCK CHECK DAM

**LIMIT OF DISTURBANCE
AREA = 258,944 SF. (5.94 AC.)**

MATCH LINE (SOUTH) STA: 9+00

SEQUENCE OF CONSTRUCTION

- PHASE I**
- SUBMIT A LAND DISTURBING PERMIT APPLICATION AT LEAST 30 DAYS PRIOR TO ANY AND DISTURBING ACTIVITY OCCURRING.
 - STAKE/FLAG THE LIMITS OF DISTURBANCE (LOD) AND LOCATIONS OF TREE PROTECTION/SILT FENCING, INCLUDING CLEARING LIMITS WITHIN STREAM BUFFER TO INSTALL PROPOSED CROSSING.
 - ORGANIZE ON-SITE PRE-CONSTRUCTION MEETING WITH CHATHAM COUNTY WATERSHED PROTECTION DEPARTMENT STAFF TO REVIEW SITE PLAN PRIOR TO LAND DISTURBING ACTIVITIES. LAND-DISTURBING PERMIT AND APPROVED PLANS WILL BE PROVIDED AT THIS MEETING.
 - INSTALL PROJECT SIGN NEAR CONSTRUCTION ACCESS AND INSTALL RAIN GAUGE.
 - INSTALL ALL TEMPORARY EROSION CONTROL MEASURES ON NORTH SIDE OF STREAM (INCLUDING TREE PROTECTION FENCING AS REQUIRED) ACCORDING TO THE INFORMATION DISCUSSED DURING THE PRE-CONSTRUCTION MEETING. MINIMAL CLEARING MAY OCCUR IN THE IMMEDIATE AREA OF ALL MEASURES TO PROVIDE FOR INSTALLATION. DOWN-SLOPE PROTECTIVE MEASURES MUST ALWAYS BE IN PLACE BEFORE SOIL IS DISTURBED. INGRESS AND EGRESS FROM THE SITE DURING CONSTRUCTION SHALL BE LIMITED TO THE CONSTRUCTION ENTRANCE SHOWN. A TREE CLEANING FACILITY MAY BE REQUIRED.
 - CONTACT CHATHAM COUNTY WATERSHED PROTECTION DEPARTMENT STAFF TO SCHEDULE AN INSPECTION OF ALL INSTALLED MEASURES AND TO APPROVE STREAM BUFFER CLEARING LIMITS.
 - PERMITTED LAND-DISTURBING ACTIVITIES MAY BEGIN UPON APPROVAL OF THE INSTALLED MEASURES.
- PHASE II**
- COMMENCE SITE CLEARING WITHIN APPROVED LOD AND ROUGH GRADE NORTH SIDE OF SITE TO PROPOSED STREAM CROSSING.
 - INSTALL PROPOSED STREAM CROSSING AS FOLLOWS:
 - INSTALL TEMPORARY COFFER DAM.
 - INSTALL BY-PASS PUMP (INCLUDING SILT BAG) AROUND CROSSING.
 - INSTALL TEMPORARY STREAM CROSSING TO CLEAR SOUTHERLY SIDE OF STREAM.
 - COMMENCE CONSTRUCTION OF CULVERT CROSSING INCLUDING INSTALLATION OF HEADWALLS AND UTILITY CROSSINGS.
 - UPON COMPLETION OF CULVERT INSTALLATION, INSTALL RIP-RAP AT INLET AND OUTLET AS SHOWN; REMOVE TEMPORARY MEASURES (COFFER DAM, ETC.).
 - PERMANENTLY STABILIZE ALL DISTURBED AREAS IMMEDIATELY AFTER CONSTRUCTION.
 - CONTINUE CLEARING AND ROUGH GRADING SOUTH OF STREAM CROSSING AND INSTALL REMAINING TEMPORARY EROSION CONTROL MEASURES. CONTACT CHATHAM COUNTY WATERSHED PROTECTION DEPARTMENT STAFF TO SCHEDULE AN INSPECTION OF ALL INSTALLED MEASURES.
 - COMMENCE ROUGH GRADING SITE AND INSTALLING DRAINAGE AND UTILITY IMPROVEMENTS.
 - CONTINUE GRADING SITE INCLUDING ROADWAY AND SITE DITCHES. INSTALL CHANNEL LINER AS SPECIFIED ONCE FINAL GRADE HAS BEEN ESTABLISHED. STABILIZE ALL DISTURBED AREAS AS SOON AS THEY ARE BROUGHT TO FINAL GRADE. INSTALL ROADWAY BASE COURSE.
 - PAVE ROADWAY.
 - PAVE ROADWAY.
 - COMPLETE SELF-INSPECTIONS WEEKLY AND WITHIN 24 HOURS OR A 0.5" OR GREATER RAINFALL EVENT. EMAIL ALL INSPECTION REPORTS TO CHATHAM COUNTY WATERSHED PROTECTION DEPARTMENT STAFF WITHIN 24 HOURS OF INSPECTION.
 - MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES IN GOOD WORKING ORDER THROUGHOUT CONSTRUCTION. SILT FENCE, INLET PROTECTION AND OTHER SIMILAR MEASURES MUST BE CLEANED OUT BEFORE THEY ARE HALF FULL. CLOGGED SILT FENCE OUTLETS MUST BE REFRESHED/REPLACED. SILT FENCE CANNOT HAVE HOLES OR TEARS.
 - GROUND COVER SHALL BE PROVIDED AS FOLLOWS:
 - STABILIZE BASINS WITH GROUND COVER IMMEDIATELY AFTER INSTALLATION. (IF APPLICABLE)
 - STABILIZE DIVERSION DITCHES INTENDED TO BE IN SERVICE FOR 30 DAYS OR MORE WITH TEMPORARY SEEDING AND EROSION CONTROL MATTING. (IF APPLICABLE)
 - FOR ALL AREAS OF MODERATE AND/OR STEEP SLOPES, STABILIZE AREA WITH SEED AND MATTING IF THE SLOPE HAS NOT BEEN DISTURBED FOR A PERIOD OF SEVEN (7) DAYS.
 - PROVIDE GROUND COVER SUFFICIENT TO RESTRAIN EROSION ON ANY PORTION OF THE SITE UPON WHICH FURTHER LAND-DISTURBING ACTIVITY IS NOT BEING UNDERTAKEN WITHIN FIFTEEN (15) CALENDAR DAYS OF TEMPORARILY OR PERMANENTLY SUSPENDING LAND-DISTURBING ACTIVITY. ESTABLISH PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT AND/OR PRIOR TO FINAL INSPECTION.
 - RE-INSTALL ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES AND/OR INCREASE MAINTENANCE FREQUENCY WHERE APPROVED MEASURES FAIL TO PREVENT ACCELERATED EROSION, OFF-SITE SEDIMENTATION, OR REPETITIVE NON-COMPLIANCE ISSUES.
 - MEASURES MUST BE INSTALLED SO AS TO RESTRICT ALL VEHICLE ACCESS TO THE CONSTRUCTION ENTRANCE. ALL MEASURES MUST BE INSTALLED ACCORDING TO THE APPROVED PLAN UNLESS APPROVED IN THE FIELD BY CHATHAM COUNTY WATERSHED PROTECTION DEPARTMENT STAFF (APPROVED FIELD REVISION).
 - MODIFICATIONS TO THE APPROVED AND PERMITTED PLANS SHALL BE APPROVED BY CHATHAM COUNTY WATERSHED PROTECTION DEPARTMENT STAFF ONLY. PRIOR TO REMOVAL OR INSTALLATION, CONTACT CHATHAM COUNTY WATERSHED PROTECTION DEPARTMENT STAFF TO REQUEST AN INSPECTION AND OBTAIN A SIGN-OFF ON THE PLANS OR AN APPROVED FIELD REVISION.
 - ONCE GRADING AND CONSTRUCTION ACTIVITIES ARE COMPLETE, TEMPORARY MEASURES ARE REMOVED, AND THE SITE IS STABILIZED CALL CHATHAM COUNTY WATERSHED PROTECTION DEPARTMENT STAFF TO SCHEDULE THE FINAL INSPECTION.
 - ONCE THE FINAL INSPECTION IS COMPLETE THE PERMIT WILL BE CLOSED, AND NO ADDITIONAL GROUND DISTURBING ACTIVITIES CAN OCCUR.



Pennoni
Firm License F-1287
PENNONI ASSOCIATES, INC.
5430 Wade Park Boulevard, #106
Raleigh, NC 27607
T 919.929.1173 F 919.493.6548

ALL DIMENSIONS MUST BE VERIFIED BY CONTRACTOR AND OWNER MUST BE NOTIFIED OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK

BONTERRA SUBDIVISION
3954 MANN'S CHAPEL ROAD
CHAPEL HILL, NC 27516

EROSION CONTROL PLAN (NORTH)-PHASE I

MANN'S CHAPEL DEVELOPMENT LLC
2100 COOK RIDGE COURT
RALEIGH, NC 27615

NO.	DATE	REVISIONS	BY
1	10/11/2018	NC DOT SUBMITTAL	AAA
2	2/05/2018	REV PER NCDOT COMMENTS	CSB
3	2/27/2019	REV PER NCDOT COMMENTS	CSB
4	4/10/2019	PER CHATHAM COUNTY SW & EC	CSB
5	4/29/2019	PER CHATHAM COUNTY SW & EC	CJJ
6	5/16/2019	PER CHATHAM COUNTY SW & EC	CJJ

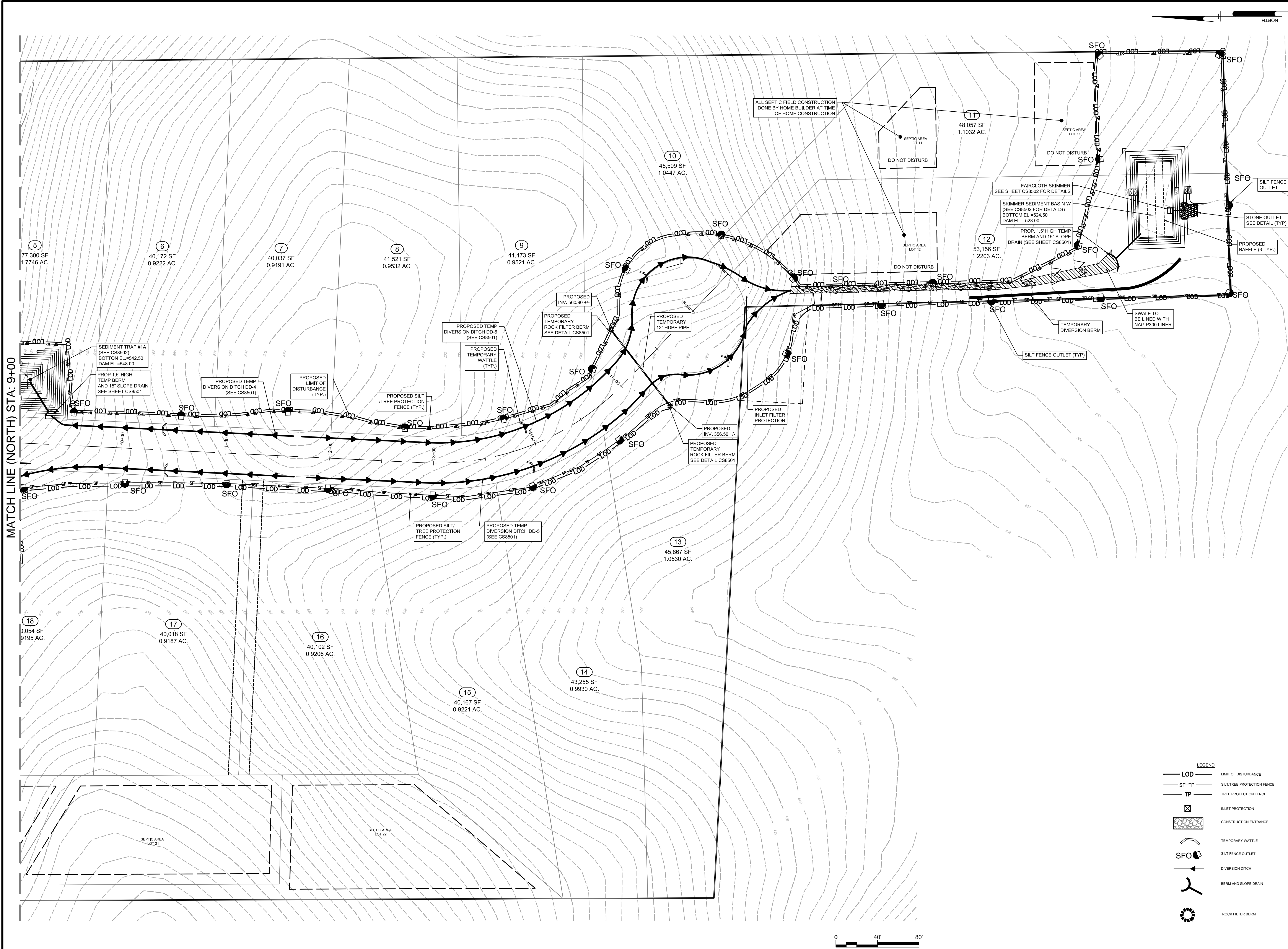
PROJECT	DLAZ1701
DATE	10/11/2018
DRAWING SCALE	1"=40'
DRAWN BY	CJJ
APPROVED BY	PCB

P:\Projects\DLAZ1701\Main\Chapel Hill\Subdivision\EROSION_Control\CS8001.dwg
 PLOTTED: 6/20/2019 8:13 AM BY: Carol Jenkins PLOTFILE: Pennon KCS48 PROJECT STATUS: MAJOR SUBDIVISION CONSTRUCTION DRAWING APPROVAL

L:\Projects\2019\18-14\18-14-Main\ChapelRd\Subdivisions\CONSTRUCTION DRAWING APPROVAL

PLOT DATE: 02/20/2019 9:14 AM BY: Carol Jenkins PLOT STYLE: Pennoni NCS-48

MATCH LINE (NORTH) STA: 9+00



LEGEND

	LIMIT OF DISTURBANCE
	SILT/TREE PROTECTION FENCE
	TREE PROTECTION FENCE
	INLET PROTECTION
	CONSTRUCTION ENTRANCE
	TEMPORARY WATTLE
	SILT FENCE OUTLET
	DIVERSION DITCH
	BERM AND SLOPE DRAIN
	ROCK FILTER BERM

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PROFESSIONAL ENGINEER
PETER C. BEBER
033040
1/22/19

BONTERRA SUBDIVISION
3954 MANN'S CHAPEL ROAD
CHAPEL HILL, NC 27516

EROSION CONTROL PLAN (SOUTH)-PHASE I

MANN'S CHAPEL DEVELOPMENT LLC
2100 COOK RIDGE COURT
RALEIGH, NC 27615

NO.	DATE	REVISIONS	BY
6	9/16/2019	PER CHATHAM COUNTY SW 6 EC	CJJ
5	4/29/2019	PER CHATHAM COUNTY SW 6 EC	CJJ
4	4/10/2019	PER CHATHAM COUNTY SW 6 EC	CSB
3	2/21/2019	REV. PER NCDOT COMMENTS	CSB
2	2/05/2018	REV. PER NCDOT COMMENTS	CSB
1	01/12/2018	NCDOT SUBMITTAL	AAA

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PROJECT: **DLAZ1701**
DATE: 10/11/2018
DRAWING SCALE: 1" = 40'
DRAWN BY: CJJ
APPROVED BY: PCB

CS8002
SHEET 13 OF 19