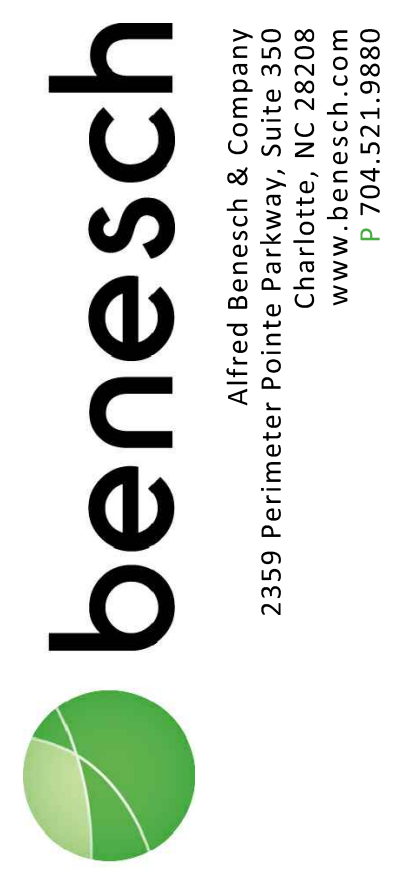


DEMOLITION/CLEARING NOTES

- BOUNDARY INFORMATION TAKEN FROM A GIS DATA AND TOPOGRAPHIC INFORMATION PROVIDED BY TIDEMARK LAND SERVICES, SURVEY DATED 6/02/20.
- CONTRACTOR SHALL REMOVE EXISTING TREES, CONCRETE, ASPHALT AND OTHER EXISTING STRUCTURES INDICATED ON PLAN. CONTRACTOR TO DISPOSE OF ALL DEBRIS IN AN APPROVED (LEGAL) OFF-SITE LOCATION.
- PROTECT ADJACENT CURBS, TREES, BUILDINGS, UTILITIES AND OTHER ITEMS TO REMAIN FROM DAMAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND/OR PAYMENT OF ANY DAMAGED ITEMS TO REMAIN.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK, BOTH PUBLIC AND PRIVATE. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL REPAIR ANY DAMAGE AS A RESULT OF THIS CONTRACT.
- CONTRACTOR SHALL REPORT ANY ENCROACHMENTS OR DISCREPANCIES IMMEDIATELY TO ALFRED BENESCH & COMPANY FOR DECISION.
- CONTRACTOR SHALL MAKE EVERY EFFORT TO SAVE ADDITIONAL TREES WHEREVER FEASIBLE.
- NO SOIL DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE SAVE AREA.
- CLEARING LIMITS ON THE PLAN INDICATE THE EXTENT OF ALL MAJOR CLEARING REQUIRED, CONTRACTOR IS ALSO RESPONSIBLE FOR ANY INCIDENTAL CLEARING REQUIRED FOR MINOR DISCREPANCIES IN GRADE, UTILITY OR STORM PIPE INSTALLATIONS, EROSION CONTROL MEASURES, ETC.



Sheet List Table

Sheet Number	Sheet Title
C100	EXISTING CONDITIONS & DEMOLITION PLAN
C200	SITE PLAN
C201	RETAINING WALL PROFILES
C300	EROSION CONTROL NOTES
C301	EROSION CONTROL PLAN - PRE DEVELOPMENT
C302	EROSION CONTROL PLAN - POST DEVELOPMENT
C303	GRADING & DRAINAGE PLAN
C304	GRADING AND DRAINAGE ENLARGEMENTS
C305	STORM PROFILES
C400	UTILITY PLAN
C401	UTILITY PLAN & PROFILE
C500	CONSTRUCTION DETAILS
C501	CONSTRUCTION DETAILS
C502	CONSTRUCTION DETAILS
C503	CONSTRUCTION DETAILS
C504	CONSTRUCTION DETAILS
C505	CONSTRUCTION DETAILS
C600	LANDSCAPE PLAN

Seals:



Corp. NC license: F-1320

LEGEND

- EXISTING SIGN
- EXISTING IRON PIN
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- RIGHT-OF-WAY
- ACCESSIBLE SPACE
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SEWER MANHOLE
- EXISTING STORM MANHOLE
- EXISTING DRAINAGE STRUCTURE
- EXISTING CLEANOUT
- EXISTING SPOT ELEVATION
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING ITEMS TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- SAWCUT LINE
- EXISTING CURB AND GUTTER
- PROPERTY LINE
- EXISTING FENCE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING FIBER OPTIC LINE
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING CONTOUR LINE
- TEMPORARY TREE PROTECTION BARRICADE
- EXISTING TREELINE
- EXISTING EASEMENT

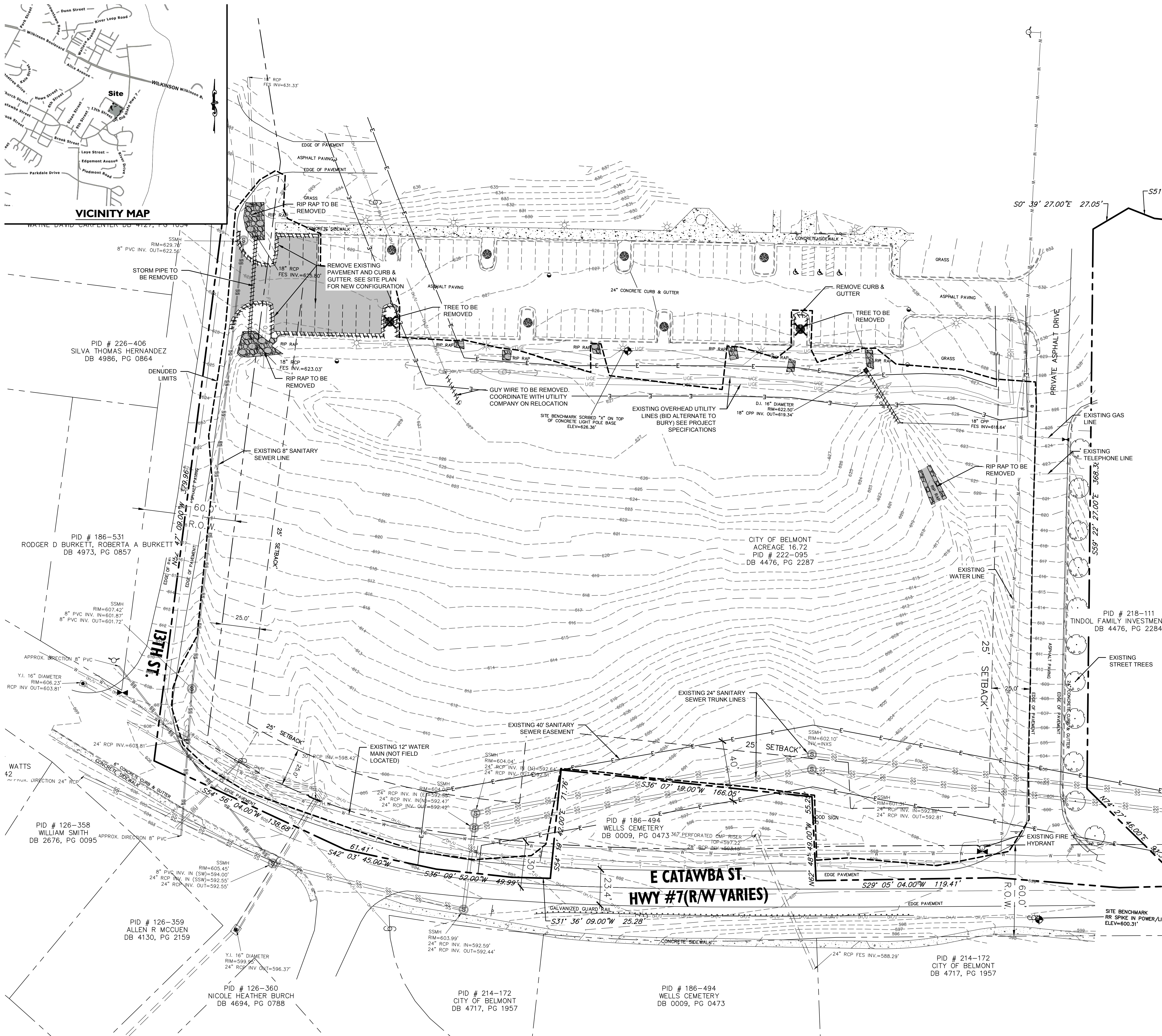
Belmont Community Center

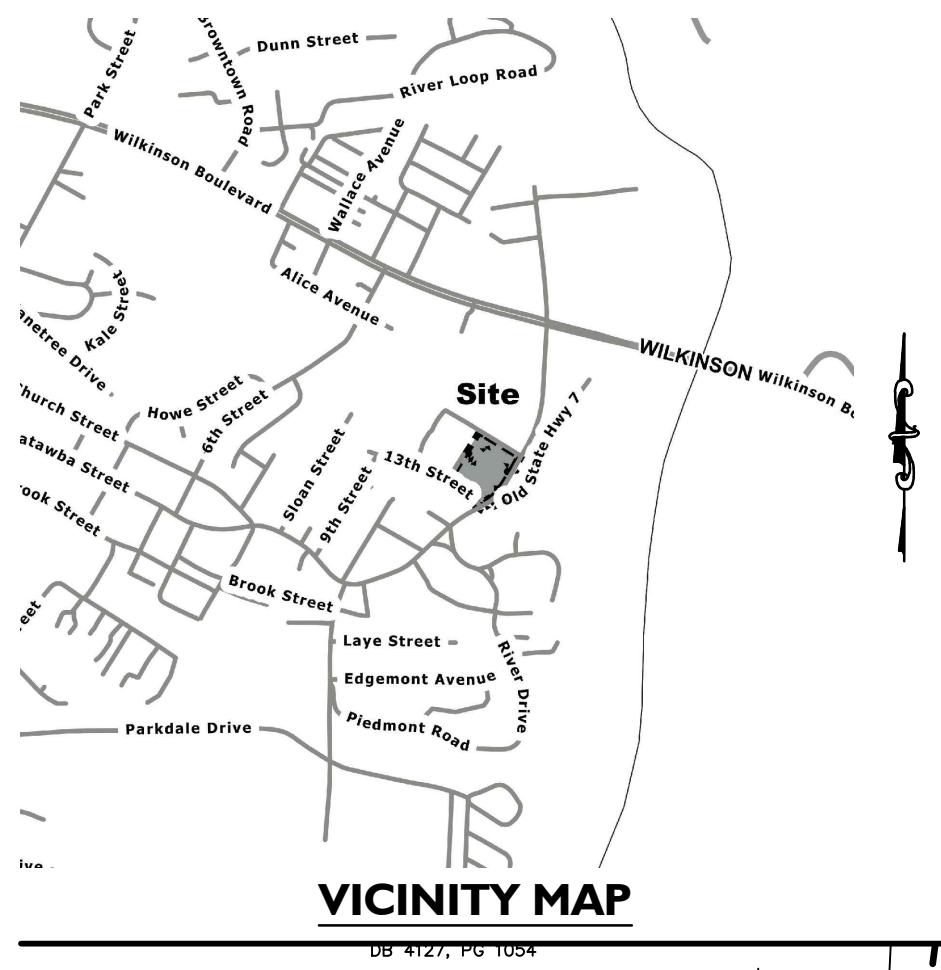
1315 Catawba Street
Belmont, North Carolina

Project no: 17000385
Date: 02.17.21
Revisions:

Sheet Title:
EXISTING CONDITIONS & DEMOLITION PLAN

Sheet No:
C100





SITE NOTES

- DIMENSIONS AND COORDINATE POINTS ARE TO FACE OF CURB, EDGE OF PAVEMENT, OR CORNER OF BUILDING UNLESS OTHERWISE NOTED.
- ALL IMPROVEMENTS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH STATE AND LOCAL STANDARDS.
- ANY DISCREPANCIES FOUND IN THE FIELD SHALL BE CALLED TO THE ATTENTION OF THE OWNER OR ENGINEER PRIOR TO PROCEEDING WITH WORK.
- PRIOR TO BEGINNING CONSTRUCTION, UNLESS OTHERWISE PROVIDED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS (BOTH SITE AND BUILDING RELATED) INCLUDING BUT NOT LIMITED TO REGULATORY FEES, LICENSES, AND INSPECTIONS NECESSARY FOR PROPER EXECUTION AND COMPLETION OF THE WORK.
- THE GENERAL CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES, AND RIGHT-OF-WAYS, PUBLIC AND PRIVATE, PRIOR TO WORKING IN THESE AREAS.
- GENERAL CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND THE PUBLIC SHALL BE PROTECTED FROM INJURY.
- SIGHT TRIANGLES SHOWN ARE THE MINIMUM REQUIRED.
- USE CAUTION WHEN REPRODUCING COPIES OF THE CONSTRUCTION DRAWINGS. COPIES ARE SUBJECT TO DISTORTION AND INACCURACY IN THE SCALE OF DRAWINGS. VERIFY ANY DISCREPANCIES WITH BENESCH.
- ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION AS AMENDED.
- ALL PAVEMENT MARKINGS SHALL BE FOUR (4) INCHES WIDE UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS AS SHOWN ON THE PLANS.
- CONTRACTOR SHALL SAW-CUT EXISTING ASPHALT PAVEMENT AREAS TO THE IN SMOOTHLY TO PROPOSED PAVEMENT AT DRIVEWAY ENTRANCES.
- REFER TO ARCHITECTURAL PLANS FOR ACTUAL BUILDING DIMENSIONS.
- THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH AN ELECTRONIC FILE OF THESE DRAWINGS UPON REQUEST.
- CONTACT THE UTILITY COMPANY TO RELOCATE ANY EXISTING UTILITY POLES. ALL EXISTING FACILITIES WHICH CONFLICT WITH THE IMPROVEMENTS UNDER THE SCOPE OF THIS PROJECT MUST BE RELOCATED AT THE EXPENSE OF THE OWNER.
- STOP BEFORE YOU DIG. CALL 811. IT'S THE LAW.
- HEAVY DUTY PAVEMENT SHOWN ON THIS PLAN IS CAPABLE OF SUPPORTING AN 80,000 LB FIRE TRUCK.
- ALL ROAD IMPROVEMENTS AT 13th STREET TO BE COORDINATED WITH ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
- THE (CITY OF BELMONT) ENGINEERING DEPARTMENT HAS NOT REVIEWED THE STRUCTURAL STABILITY OF ANY RETAINING WALLS ON THE SITE AND DOES NOT ASSUME RESPONSIBILITY FOR THEM.

SITE DEVELOPMENT DATA

PROJECT NAME: BELMONT COMMUNITY RECREATION CENTER
 PROJECT ADDRESS: 1401 CATAWBA STREET, BELMONT, NC 28012
 OWNER: CITY OF BELMONT PHONE # 704 901-2067
 PLANS PREPARED BY: BENESCH PHONE # 704-521-9880
 ZONING: IC-D JURISDICTION: CITY OF BELMONT
 PROPOSED USE: RECREATION CENTER TAX PARCEL #: 222095
 WATERSHED DISTRICT: WS-IV-CA
 BUILDING HEIGHT: 45' 8" Feet, Stories: 2
 BUILDING COVERAGE: 33,959 Sq. Ft. GROSS FLOOR AREA: 42,025 Sq. Ft.
 LOT SIZE: 4.5 Sq. Ft./Acre

YARD REQUIREMENTS:
 Setback (front): 25 Ft. from R/W,
 Side Yard (L): 25 Ft. Side Yard (R): 25 Ft.
 Rear Yard: 25 Ft.

REQUIRED BUFFERS:
 Front: NO / YES ___ Ft. Rear: NO / YES ___ Ft.
 Side (L): NO / YES ___ Ft. Side (R): NO / YES ___ Ft.

REQUIRED SCREENING:
 Front: NO / YES ___ Ft. Rear: NO / YES ___ Ft.
 Side (L): NO / YES ___ Ft. Side (R): NO / YES ___ Ft.
 Parking, Dumpster & Utilities Only: NO / YES ___ Ft.

VEHICLE PARKING DATA:

EXISTING PARKING:	81 SP. includes: 3 accessible sp.
NET LOSS W/ PARKING LOT TIE IN	-3 SP.
PROPOSED PARKING	106 SP. includes: 4 accessible sp.
TOTAL	184 SP. includes: 7 (2 van sp.)

ALL SIGNAGE WILL BE APPROVED AND PERMITTED SEPARATELY.

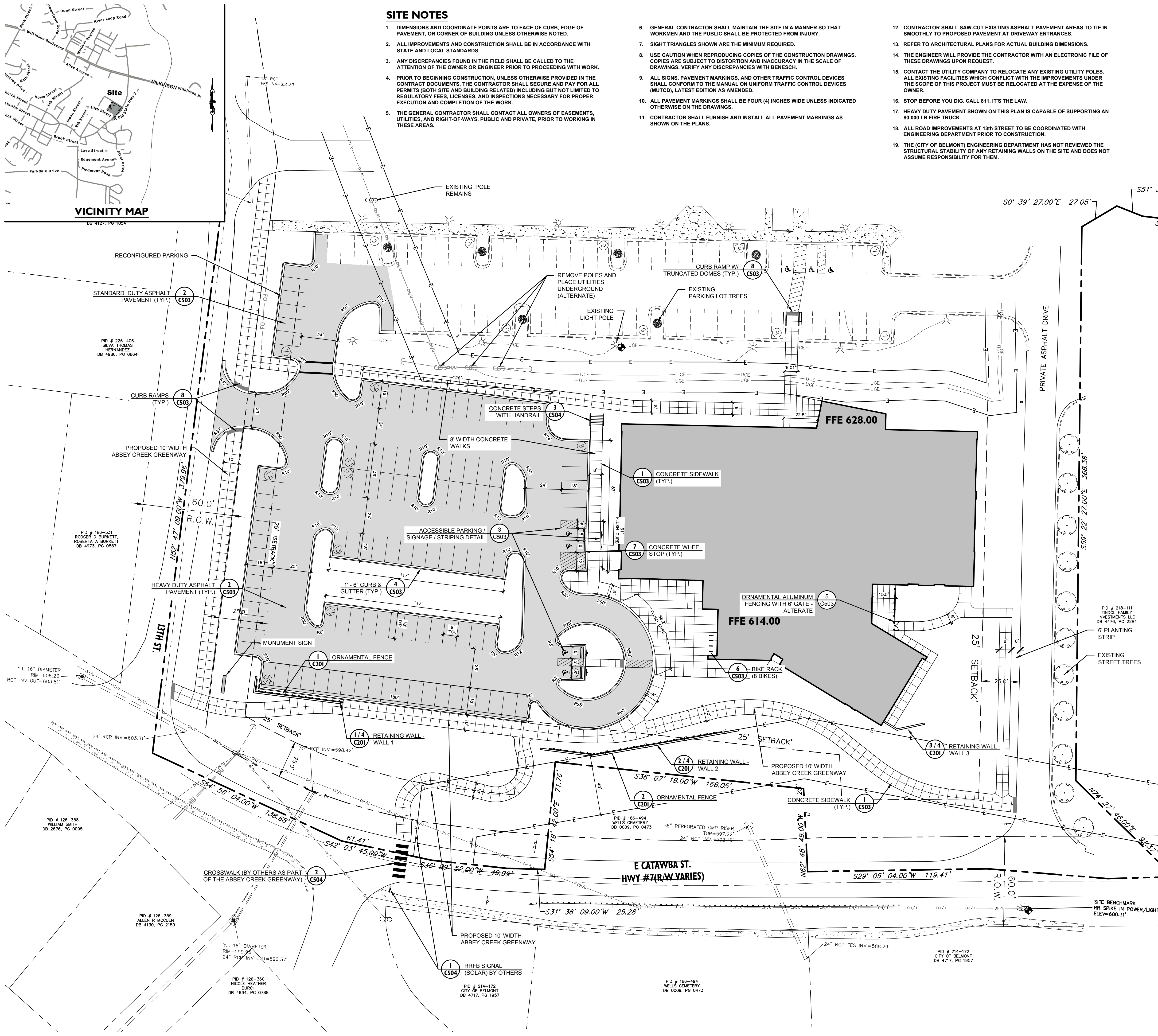
PROJECT TIMETABLE:
 PERMITTING: FEBRUARY 2021 - MAY 2021
 CONSTRUCTION BALANCE OF WORK BEGINS: JULY 2021
 CONSTRUCTION COMPLETE: OCTOBER 2022

Site Lighting

SITE LIGHTING (PARKING LOT AND PEDESTRIAN) IS TO BE PROVIDED BY DUKE ENERGY. BENESCH IS CURRENTLY COORDINATING THIS PLAN WITH DUKE. PLAN TO BE SUBMITTED WHEN AVAILABLE.

LEGEND

- EXISTING SIGN
- PROPOSED SIGN
- EXISTING IRON PIN
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- RIGHT-OF-WAY
- ACCESSIBLE SPACE
- EXISTING TREE TO REMAIN
- EXISTING FIRE HYDRANT
- # OF PARKING SPACES
- CENTERLINE
- ACCESSIBLE RAMP
- PROPOSED BOLLARD
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- PROPOSED FLUSH CURB AND GUTTER
- PROPERTY LINE
- EXISTING EASEMENT
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING OVERHEAD UTILITY LINE
- EXISTING ASPHALT PAVEMENT
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED VEHICULAR CONCRETE PAVEMENT



Corp. NC license: F-1320

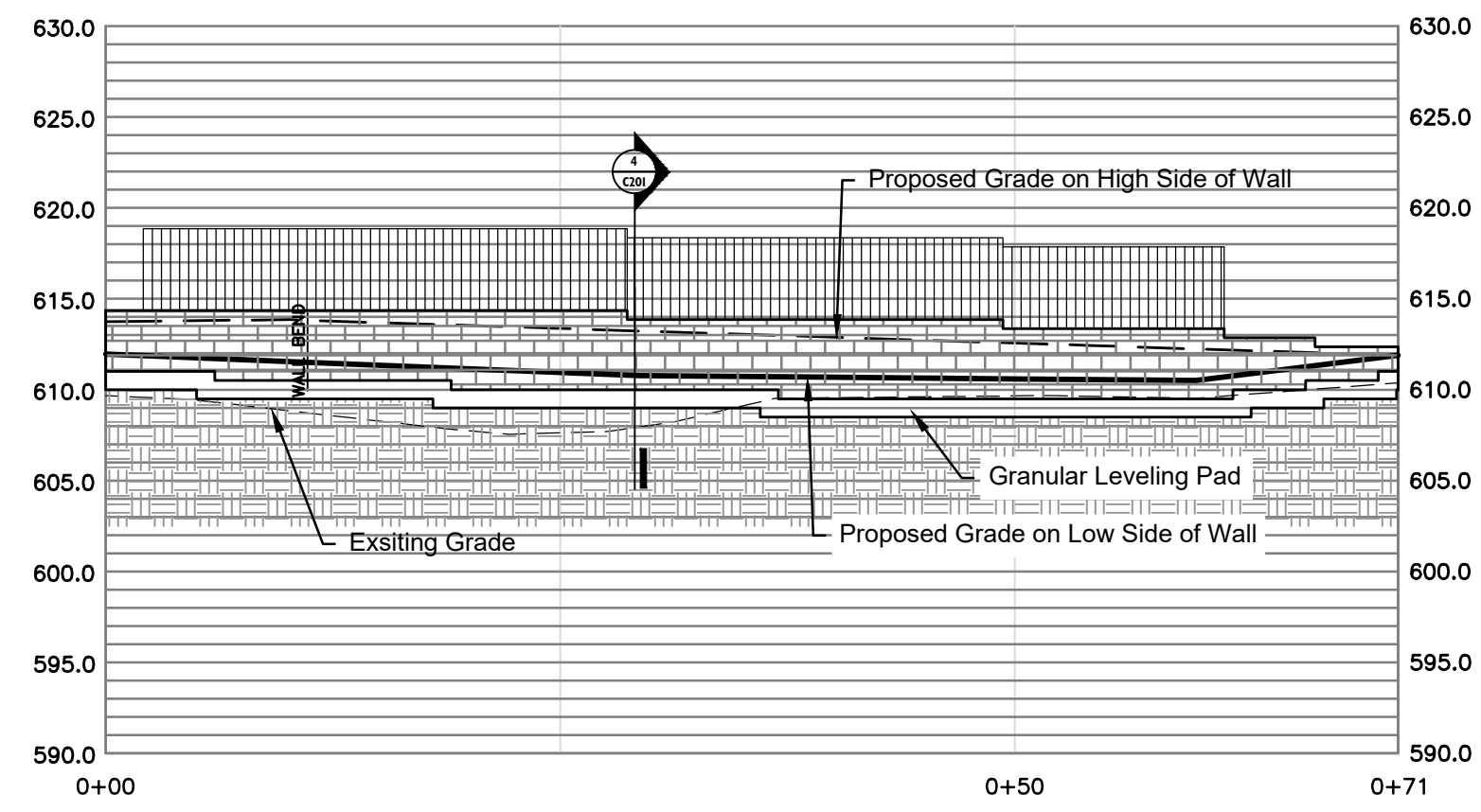
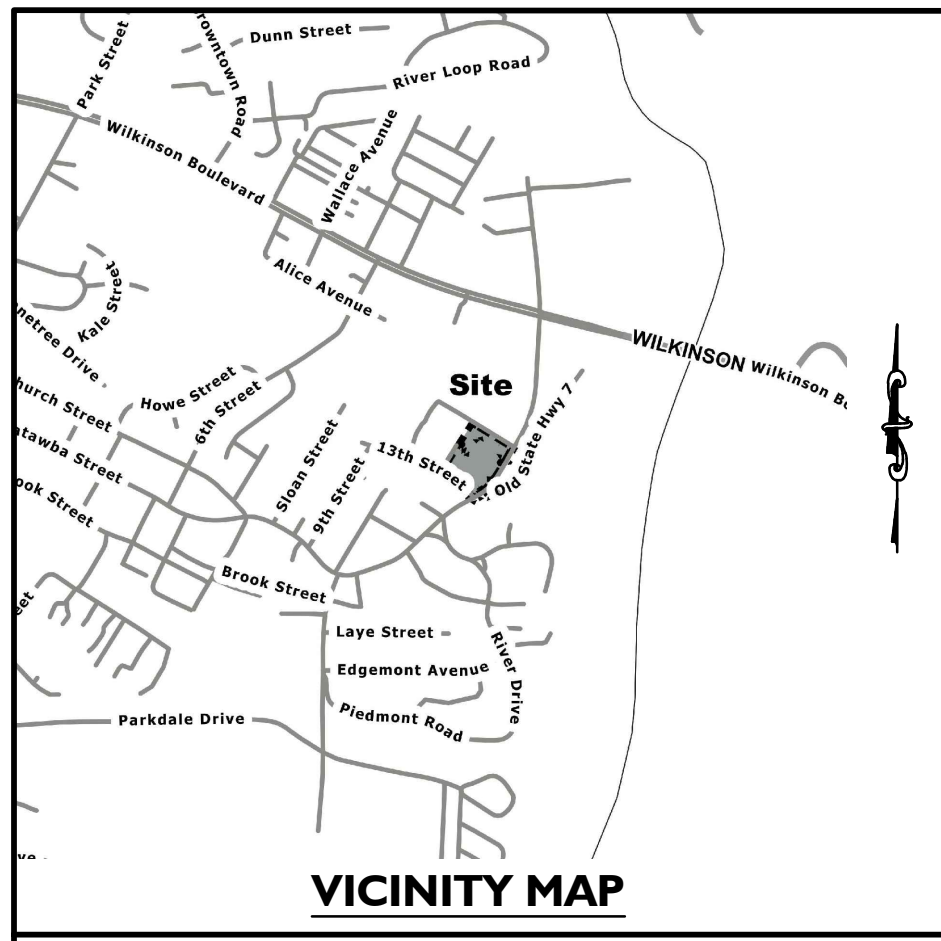
Belmont Community Center
 1315 Catawba Street
 Belmont, North Carolina

Project no: 17000385
 Date: 02.17.21
 Revisions:

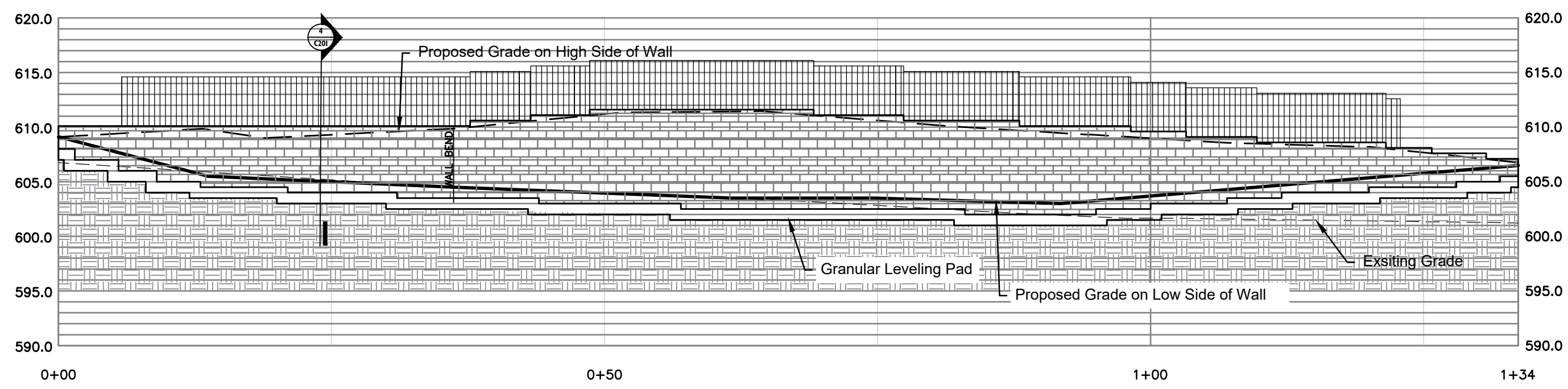
Sheet Title:
SITE PLAN

Sheet No:
C200

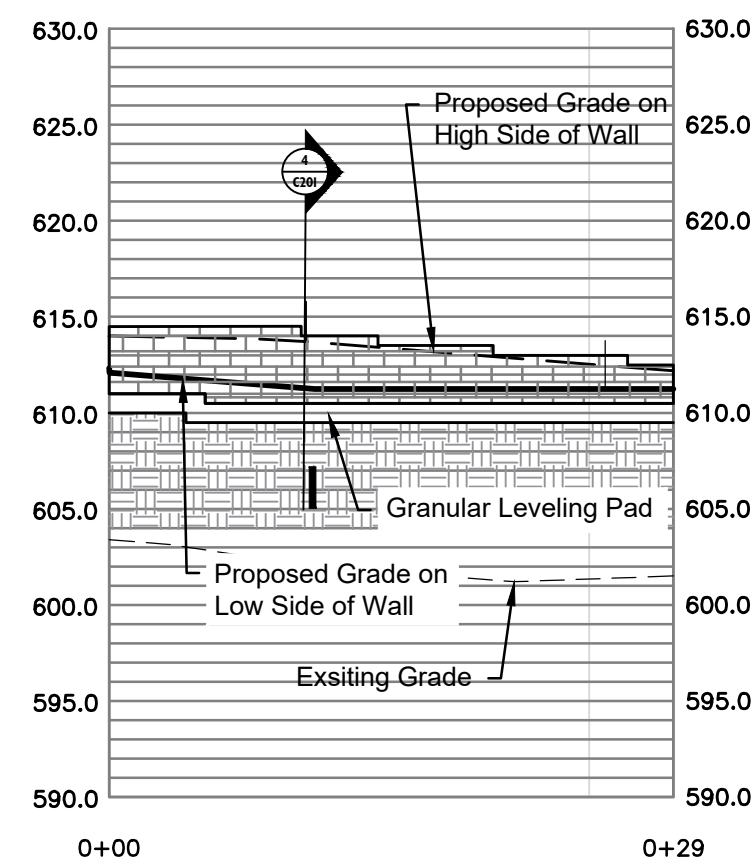




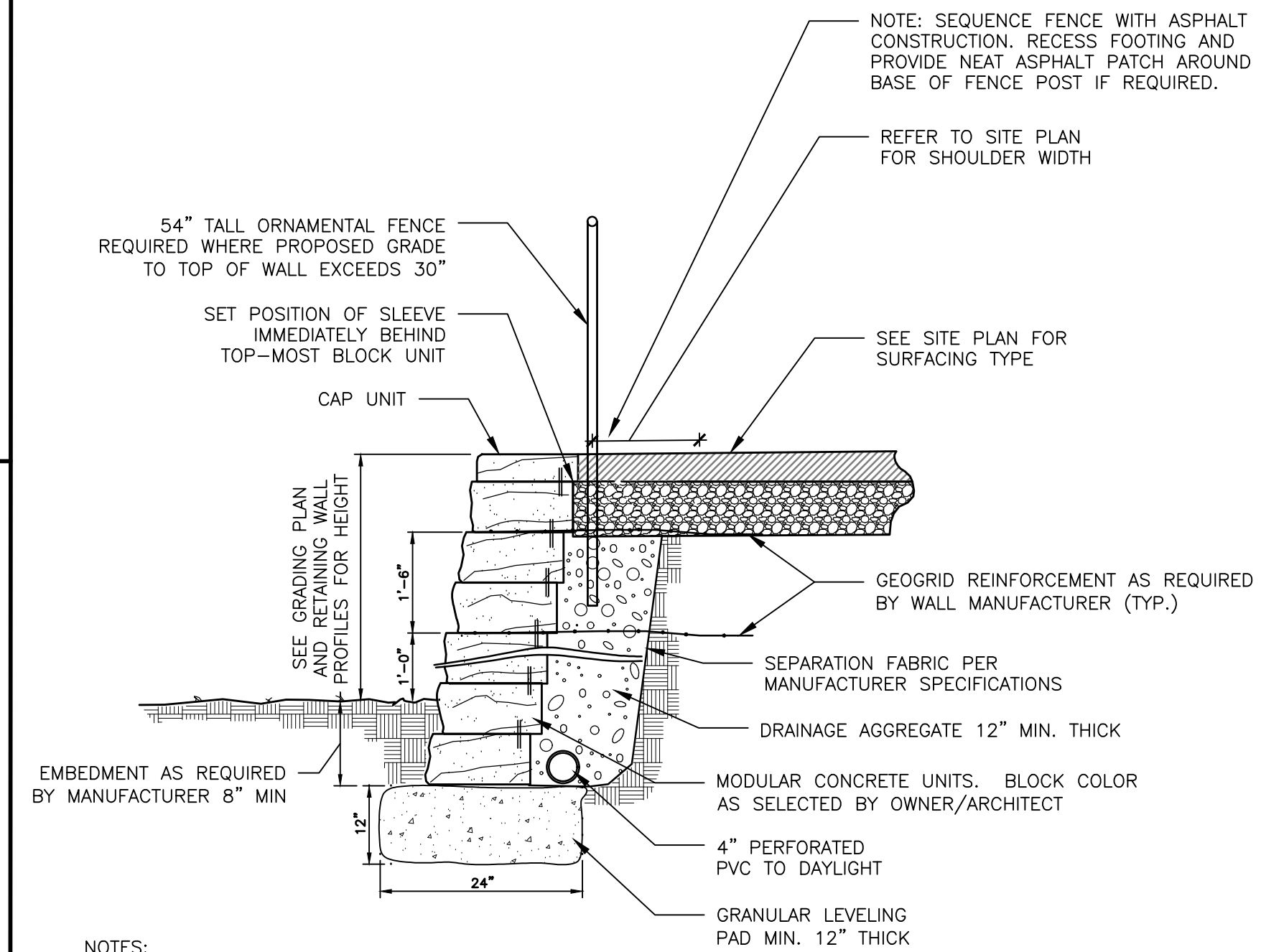
1 Wall 1 Profile
1"=10'-0"



2 Wall 2 Profile
1"=10'-0"



3 Wall 3 Profile
1"=10'-0"



NOTES:
GENERAL CONTRACTOR SHALL EMPLOY PROFESSIONAL ENGINEER, LICENSED IN THE STATE OF NORTH CAROLINA, TO PREPARE & SEAL FULL CONSTRUCTION SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
1. TYPICAL SECTION SHOWING FULL RANGE OF WALL HEIGHTS & CONDITIONS, GRID PLACEMENTS.
2. WALL ELEVATION INDICATING TOP, BOTTOM & EXTENT OF WALL, GRID SPACING.
3. WALL HEIGHT/GEOGRID SCHEDULE FOR ALL CONDITIONS GIVING LENGTH, SPACING, GRID SPECIFICATIONS, ETC.
4. WALL CAPPING DETAIL.
5. CONSTRUCTION SPECIFICATIONS FOR ALL MATERIALS, METHODS, EXECUTIONS.
THE ABOVE DATA SHALL BE SUBMITTED TO THE CONSULTANT FOR APPROVAL PRIOR TO BEGINNING EARTHWORK.
APPROVED MANUFACTURERS: VERSA-A-LOK, KEYSTONE, RIDGEROCK, ALLAN BLOCK, OR APPROVED EQUAL.
CONTRACTOR SHALL SUBMIT WALL FOR REQUIRED BUILDING PERMITS.
CONTRACTOR SHALL PROVIDE ALL WALL CERTIFICATIONS OR SPECIAL INSPECTIONS IF REQUIRED. FOOTING SYSTEM MUST BE INSTALLED DURING WALL CONSTRUCTION (GENERAL CONTRACTOR'S WALL INSTALLER MUST COORDINATE POST LOCATIONS WITH FENCE OR RAILING INSTALLER).

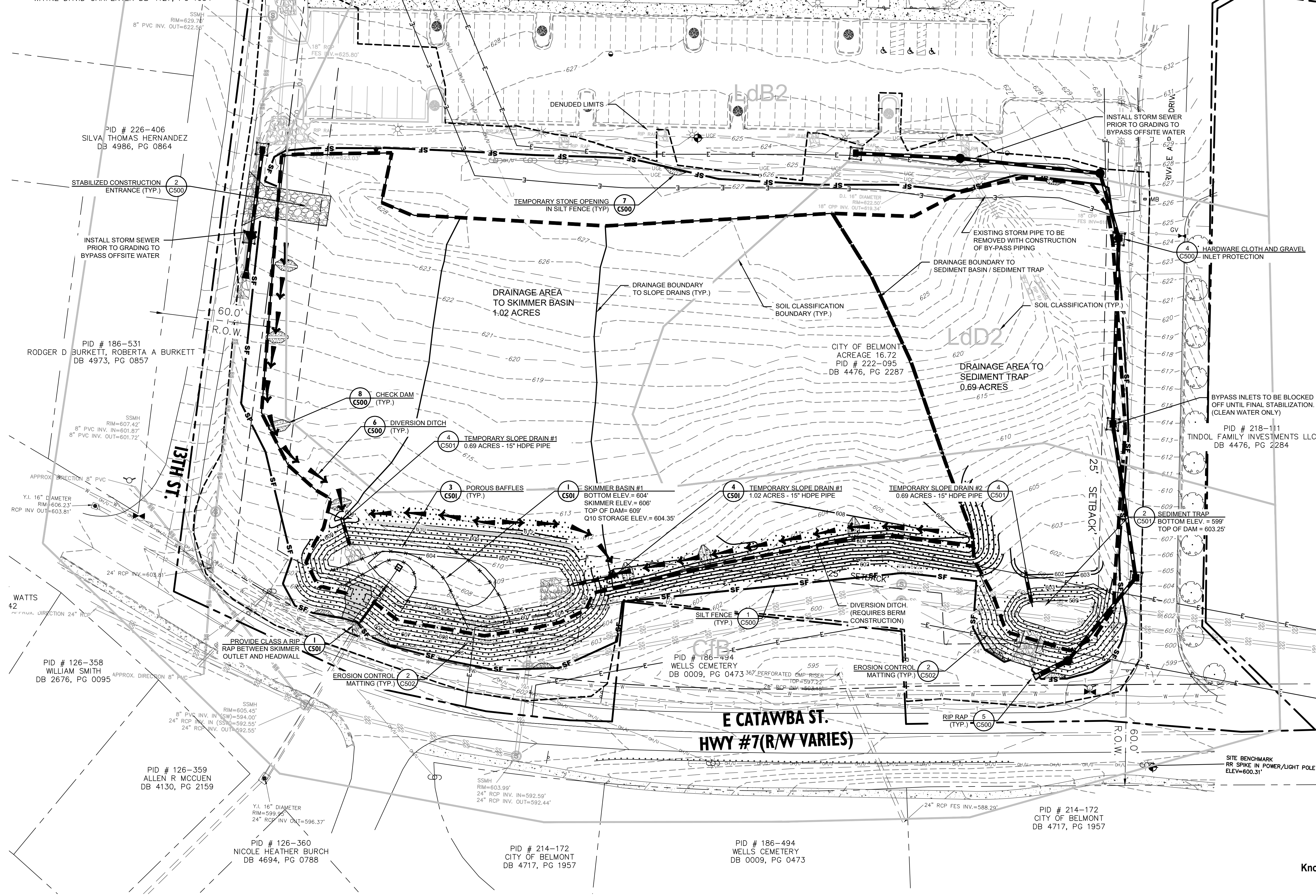
4 Modular Block Retaining Wall



Project no: 17000385
Date: 02.17.21
Revisions:

Sheet Title:
RETAINING WALL PROFILES

Sheet No:
C201



LEGEND

	EXISTING FIRE HYDRANT
	EXISTING STORM MANHOLE
	PROPOSED STORM MANHOLE
	EXISTING DRAINAGE STRUCTURE
	PROPOSED DRAINAGE STRUCTURE
	EXISTING CURB AND GUTTER
	PROPERTY LINE
	EXISTING CONTOUR LINE
	PROPOSED CONTOUR LINE
	EXISTING STORM DRAINAGE PIPE
	PROPOSED STORM DRAINAGE PIPE
	TEMPORARY SILT FENCE
	STONE OPENING IN TEMPORARY SILT FENCE
	LIMITS OF GRADING/CONSTRUCTION
	TEMPORARY INLET PROTECTION
	TEMPORARY ROCK CHECK DAM
	TEMPORARY GRAVEL ENTRANCE
	OUTLET PROTECTION
	PROP. DIVERSION DITCH
	PROP. EROSION CONTROL MATTING

Seals:

 Corp. NC license: F-1320

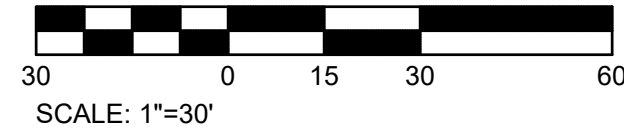
Belmont Community Center

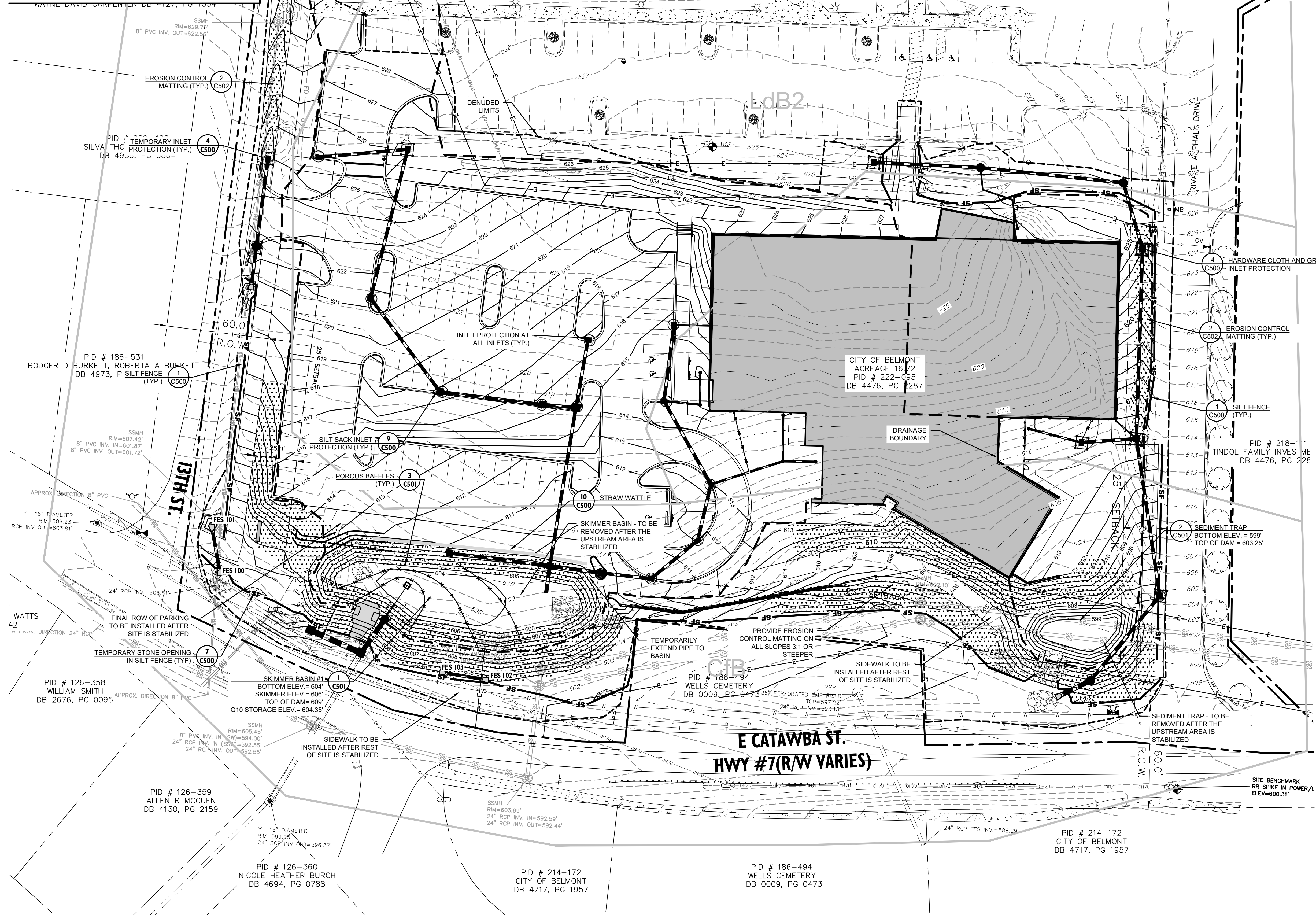
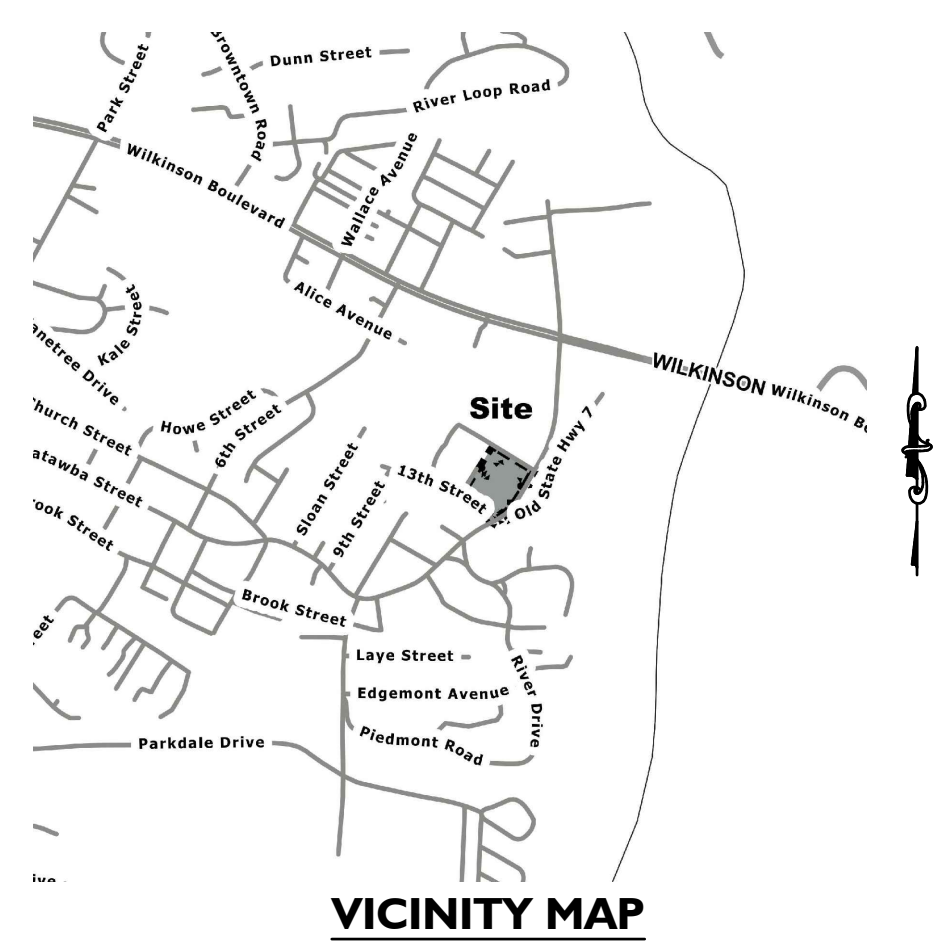
1315 Catawba Street
 Belmont, North Carolina

Project no: 17000385
 Date: 02.17.21
 Revisions:

Sheet Title:
EROSION CONTROL PLAN - PRE DEVELOPMENT

Sheet No:
C301





LEGEND

	EXISTING FIRE HYDRANT
	EXISTING STORM MANHOLE
	PROPOSED STORM MANHOLE
	EXISTING DRAINAGE STRUCTURE
	PROPOSED DRAINAGE STRUCTURE
	EXISTING CURB AND GUTTER
	PROPERTY LINE
	EXISTING CONTOUR LINE
	PROPOSED CONTOUR LINE
	EXISTING STORM DRAINAGE PIPE
	PROPOSED STORM DRAINAGE PIPE
	TEMPORARY SILT FENCE
	STONE OPENING IN TEMPORARY SILT FENCE
	LIMITS OF GRADING/CONSTRUCTION
	TEMPORARY INLET PROTECTION
	TEMPORARY ROCK CHECK DAM
	TEMPORARY GRAVEL ENTRANCE
	OUTLET PROTECTION
	PROP. EROSION CONTROL MATTING

Seals:

 Corp. NC license: F-1320

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 1315 Catawba Street
 Belmont, North Carolina

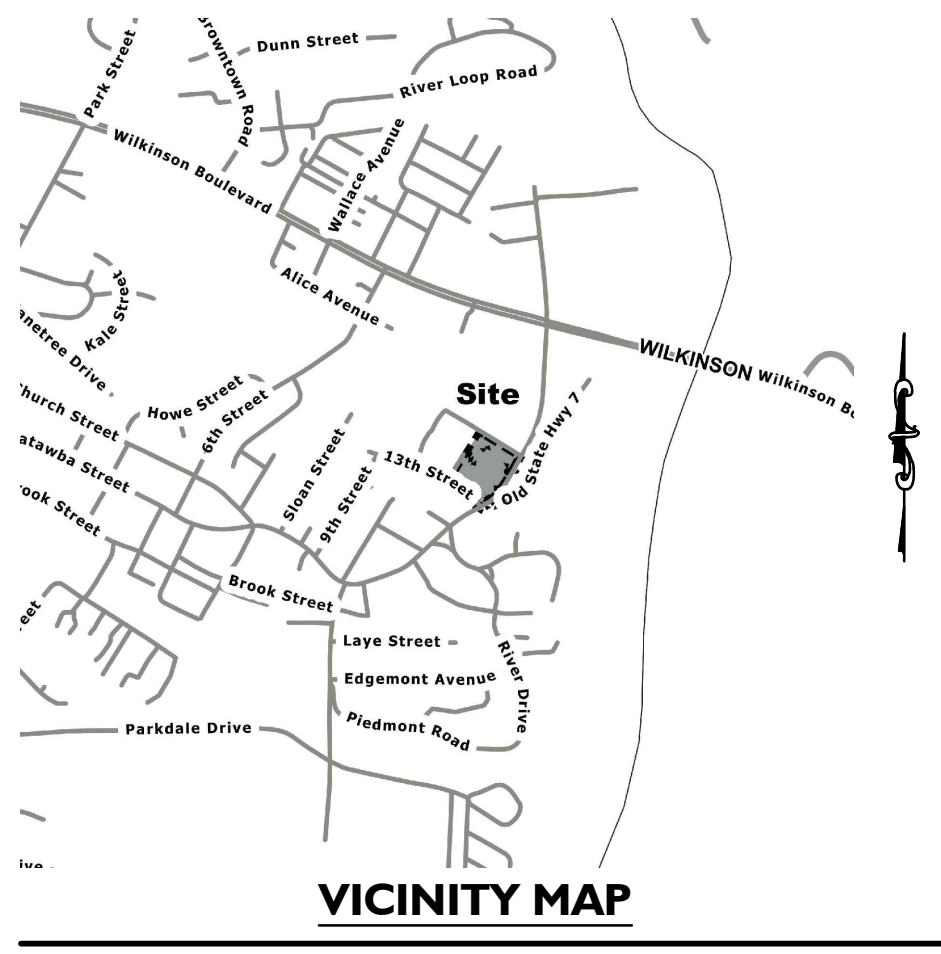
Project no: 17000385
 Date: 02.17.21
 Revisions:

Sheet Title:
EROSION CONTROL PLAN - POST DEVELOPMENT
 Sheet No:
C302

811
 Know what's below.
 Call before you dig.

NORTH

SCALE: 1"=30'



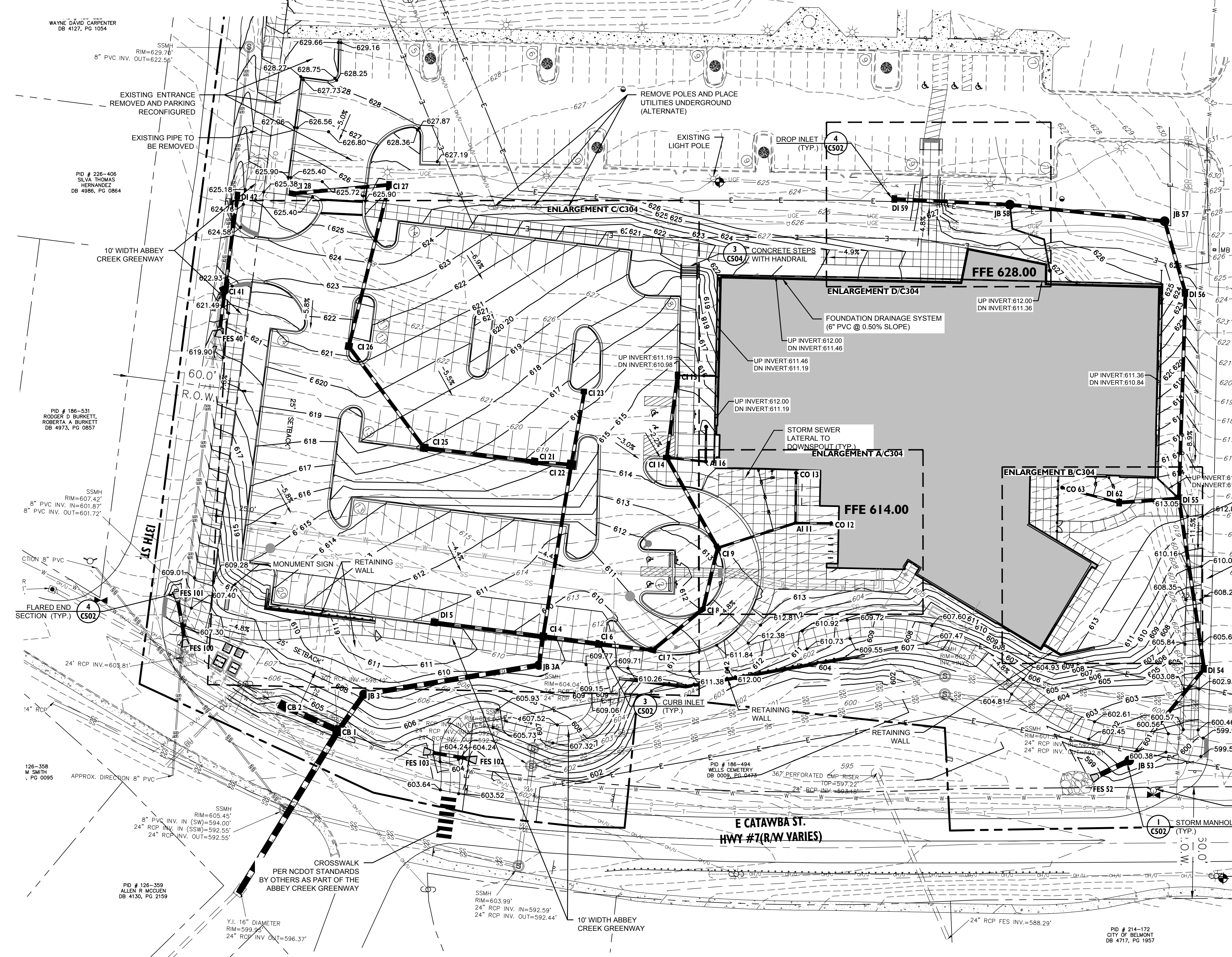
GRADING AND DRAINAGE NOTES

- EARTHWORK QUANTITIES HAVE NOT BEEN ESTIMATED AND SITE AS SHOWN IS NOT ASSUMED TO REPRESENT A BALANCED CUT/FILL CONDITION.
- CONTRACTOR SHALL PERFORM HIS OWN ESTIMATES AND SHALL PROVIDE ALL EARTHWORK NECESSARY TO ACHIEVE THE DESIGN GRADE, INCLUDING ANY OFFSITE BORROW OR SPOILS REQUIRED.
- ROOF LEADERS SHALL BE SCH 40 PVC. MINIMUM COVER SHALL BE 18". MINIMUM SLOPE SHALL BE 1%. PROVIDE CLEANOUTS AT ALL CONNECTIONS WITH BUILDING DRAIN AND WHERE INDICATED. REFER TO ARCHITECTURAL DWGS. FOR THE EXACT LOCATION OF ROOF DRAINS AT THE BUILDING.
- CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN ALL GRADED AREAS, INCLUDING PAVING, LAWN AND LANDSCAPE AREAS.
- THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK, BOTH PUBLIC AND PRIVATE. CONTRACTOR IS FULLY RESPONSIBLE FOR ALL UNDERGROUND UTILITIES AND SHALL REPAIR ANY DAMAGE AS A RESULT OF THIS CONTRACT.
- CONTRACTOR SHALL BLENDEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
- THE PROPOSED CONTOURS AND SPOT ELEVATIONS SHOWN IN DRIVES, PARKING LOTS AND SIDEWALKS ARE FINISHED INCLUDING ASPHALT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
- PROPOSED SPOT ELEVATIONS SHOWN REFER TO BOTTOM OF CURB UNLESS OTHERWISE NOTED ON PLAN.
- PIPE LENGTHS SHOWN ARE THE ENGINEER'S ESTIMATE USED TO COMPUTE PIPE SLOPES AND INVERTS AND SHALL NOT BE CONSIDERED BY THE CONTRACTOR TO REPRESENT THE ACTUAL QUANTITY OF PIPE REQUIRED.
- CROSS SLOPE OF SIDEWALKS SHALL BE 2% (MAX).
- SLOPES SHALL BE GRADED NO STEEPER THAN 2:1.
- NO DISTURBANCE OR COMPACTION, CONSTRUCTION MATERIALS, TRAFFIC, BURIAL PITS, TRENCHING OR OTHER LAND DISTURBING ACTIVITY ALLOWED IN THE TREE PROTECTION ZONE. TREE BARRICADES MUST BE INSTALLED BEFORE ANY DEMOLITION, GRADING OR CONSTRUCTION BEGINS, AND NOT REMOVED UNTIL FINAL INSPECTION.
- NO GRUBBING WITHIN TREE PROTECTION ZONE. LEAVE SOIL AND LEAF LITTER UNDISTURBED. SUPPLEMENT WITH 1-2 INCHES OF MULCH. RE-SEED WITH GRASS ONLY IN DISTURBED/GRADED AREAS.
- BRUSH, VINES AND SMALL TREES (<8 IN. DIA., OR AS SMALL AS 2 IN. CALIPER) MAY BE

- HAND CLEARED ONLY CUT FLUSH WITH GROUND SURFACE. EXISTING TREES MAY BE LIMBED UP 6 FEET (AT LEAST 2/3 OF THE BRANCHES SHOULD BE LEFT) TO IMPROVE VISIBILITY.
- EXPOSED TREE ROOTS MUST BE CLEANLY CUT WITH A SHARP PRUNING TOOL; BACKFILL ASAP TO MINIMIZE EXPOSURE TO THE AIR.
- UNLESS OTHERWISE NOTED, THE PHYSICAL CONNECTION TO THE DOWNSPOUTS INSTALLED BY THE ROOFING CONTRACTOR BETWEEN THE SITE ROOF DRAIN PIPE A SHALL BE MADE BY THE SITE GRADING CONTRACTOR.
- PIPE LENGTHS SHOWN ON CULVERTS INCLUDE FLARED END SECTIONS.
- IN ORDER TO ENSURE ADEQUATE DRAINAGE, FLOW LINES IN GUTTERS SHALL BE 0.50% MINIMUM.

STORM SEWER STRUCTURE & PIPE SCHEDULE									
UPSTREAM STR.	UPSTREAM RIM EL.	INVERT(S) IN	INVERT OUT	DOWNSTREAM STR.	D.S. PIPE LENGTH(FT)	D.S. PIPE DIA(IN)	D.S. PIPE MATERIAL	D.S. PIPE SLOPE(FT/FT)	
CI 4	609.69	605.27 (18" - CI 6) 605.85 (15" - DI 5) 605.85 (15" - CI 22)	605.17	JB 3A	16	18	RCP	0.0150	
DI 5	610.80		606.44	CI 4	59	15	RCP	0.0100	
CI 6	609.07	605.55 (15" - CI 7)	605.50	CI 4	30	18	RCP	0.0075	
CI 7	610.08	606.27 (15" - CI 8)	606.07	CI 6	29	15	RCP	0.0179	
CI 8	611.61	607.64 (15" - CI 9)	607.54	CI 7	35	15	RCP	0.0362	
CI 9	613.02	609.53 (12" - AI 11) 609.15 (15" - CI 14)	608.21	CI 8	34	15	RCP	0.0170	
AI 11	613.69	609.99 (10" - CO 12) 609.89 (10" - CO 13)	609.89	CI 9	44	12	PVC	0.0081	
CO 12	613.93		610.24	AI 11	19	10	PVC	0.0133	
CI 14	614.07	609.95 (15" - CI 15) 610.15 (10" - AI 16)	609.85	CI 9	56	15	RCP	0.0126	
CI 15	614.78	610.98 (6" - FD DRAIN)	610.40	CI 14	45	15	RCP	0.0100	
AI 16	614.00	610.87 (8" - AI 17)	610.78	CI 14	21	10	PVC	0.0300	
CI 22	615.16	611.47 (15" - CI 21)	608.41	CI 4	93	15	RCP	0.0274	
CI 21	615.83	612.28 (15" - CI 25)	612.20	CI 22	20	15	RCP	0.0367	
CI 23	616.33		611.87	CI 22	40	15	RCP	0.0075	
CI 25	617.87	614.42 (15" - CI 26)	614.32	CI 21	60	15	RCP	0.0341	
CI 26	621.23	617.60 (15" - CI 27)	617.50	CI 25	68	15	RCP	0.0454	
CI 27	625.25	621.27 (15" - CI 28)	621.17	CI 26	90	15	RCP	0.0399	
CI 28	625.14		621.58	CI 27	52	15	RCP	0.0060	
CI 41	622.57	619.39 (15" - DI 42)	619.29	FES 40	26	15	RCP	0.0100	
DI 42	621.93		619.90	CI 41	51	15	RCP	0.0100	
JB 53	601.56	597.82 (15" - DI 54)	597.72	FES 52	22	24	RCP	0.0100	
DI 54	604.06	601.10 (15" - DI 55)	601.00	JB 53	64	15	RCP	0.0499	
DI 55	612.85	608.10 (15" - DI 56) 607.71 (15" - DI 62) 610.53 (6" - FD DRAIN)	608.00	DI 54	93	15	RCP	0.0745	
DI 56	623.31	618.45 (15" - JB 57)	618.35	DI 55	111	15	RCP	0.0926	
JB 57	627.30	618.85 (15" - JB 58)	618.75	DI 56	40	15	RCP	0.0075	
JB 58	622.77	621.25 (6" - RD) 619.60 (15" - DI 59)	619.50	JB 57	84	15	RCP	0.0078	
DI 59	623.27		620.17	JB 58	62	15	RCP	0.0092	
DI 62	612.96	609.87 (12" - CO 63)	609.50	DI 55	32	15	RCP	0.0556	
CO 63	613.81		610.19	DI 62	32	12	PVC	0.0100	

SEE SHEET C-305 FOR STORM PROFILES



LEGEND

- EXISTING SIGN
- EXISTING IRON PIN
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- R/W
- ACCESSIBLE SPACE
- EXISTING TREE TO REMAIN
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING WATER METER
- EXISTING SEWER MANHOLE
- EXISTING STORM MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED FLARED END SECTION
- EXISTING DRAINAGE STRUCTURE
- PROPOSED DRAINAGE STRUCTURE
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING CLEANOUT
- EXISTING DOWNSPOUT
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- PROPERTY LINE
- EXISTING FENCE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING OVERHEAD UTILITY LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING FIBER OPTIC LINE
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING CONTOUR LINE
- PROPOSED CONTOUR LINE
- TEMPORARY TREE PROTECTION BARRICADE
- EXISTING STORM DRAINAGE PIPE
- PROPOSED STORM DRAINAGE PIPE
- PROPOSED ROOF DRAIN PIPE
- EXISTING TREE LINE
- EXISTING GAS VALVE
- EXISTING GAS METER



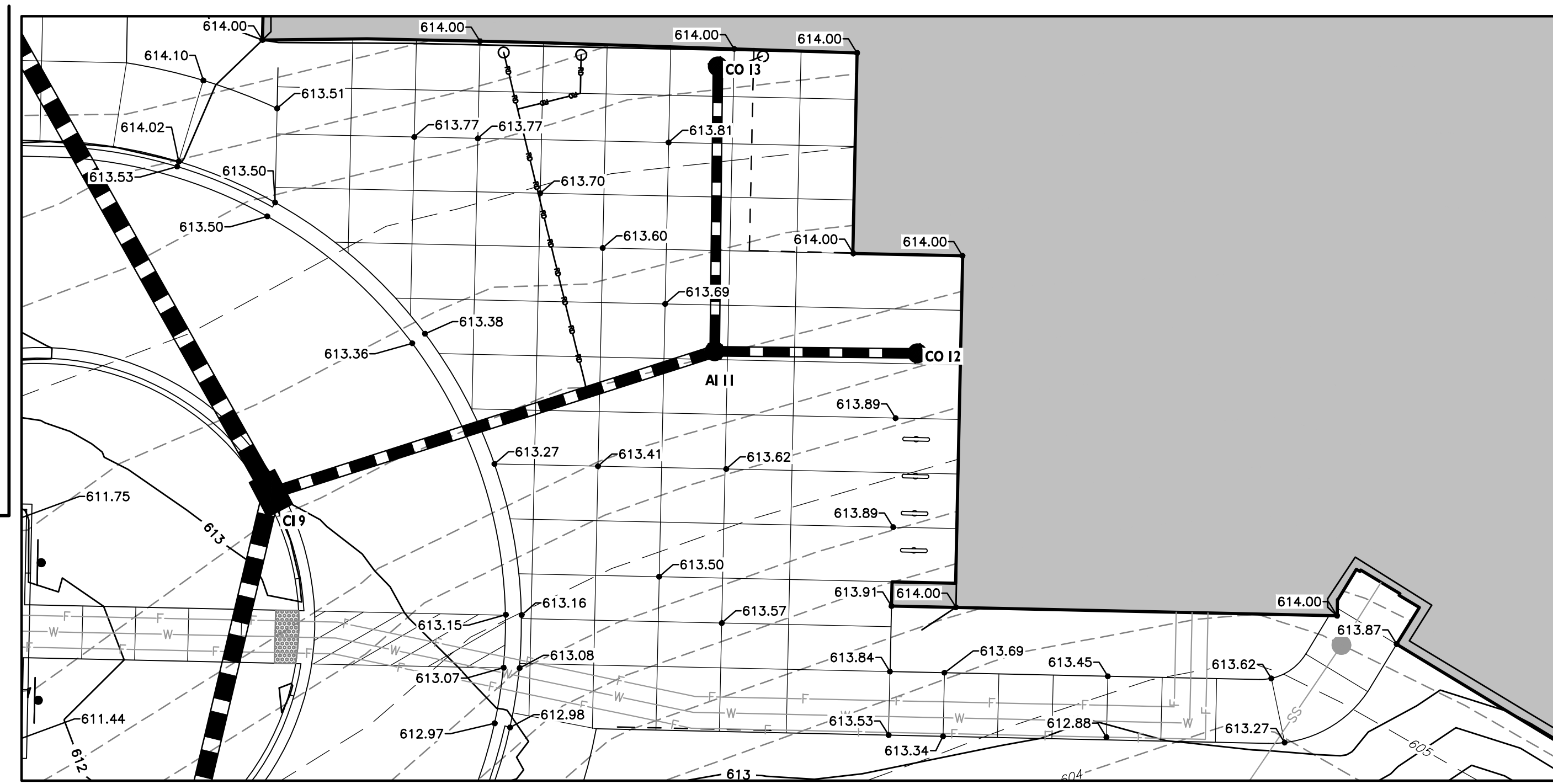
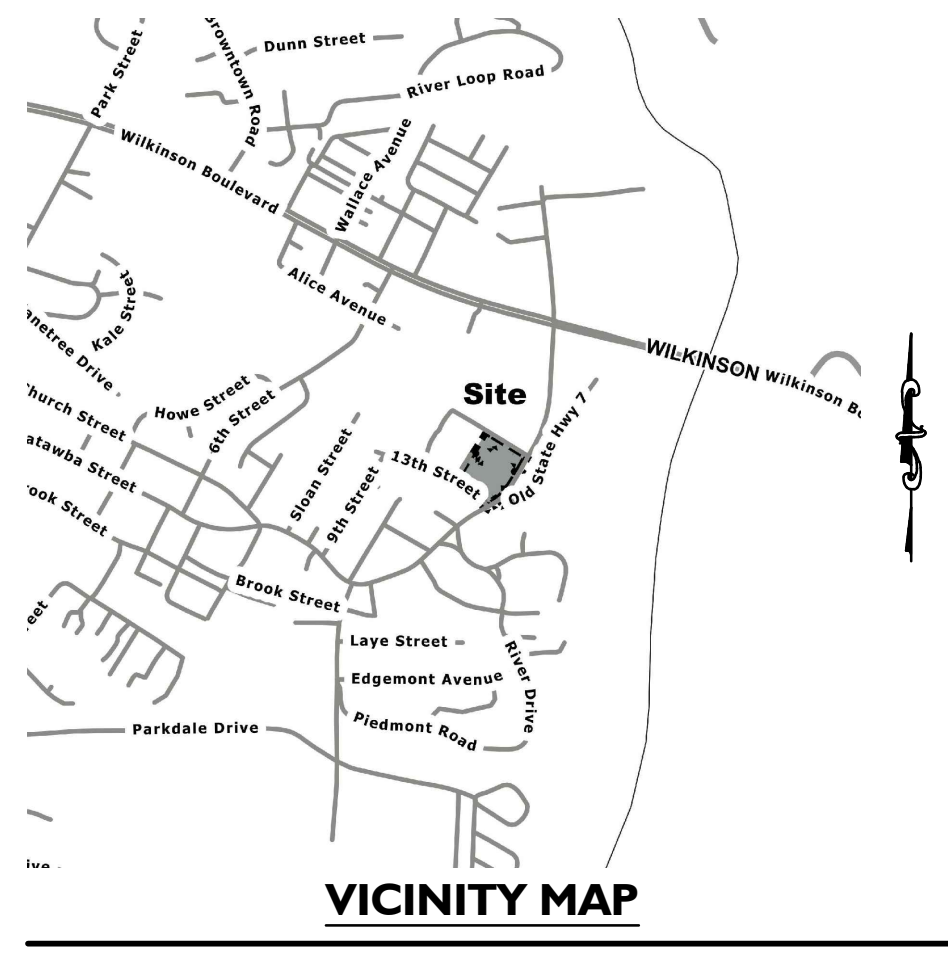
Seals:
NORTH CAROLINA PROFESSIONAL SEAL 041604
ENGINEER KEVIN J. WESTRA
Corp. NC license: F-1320

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Belmont, North Carolina

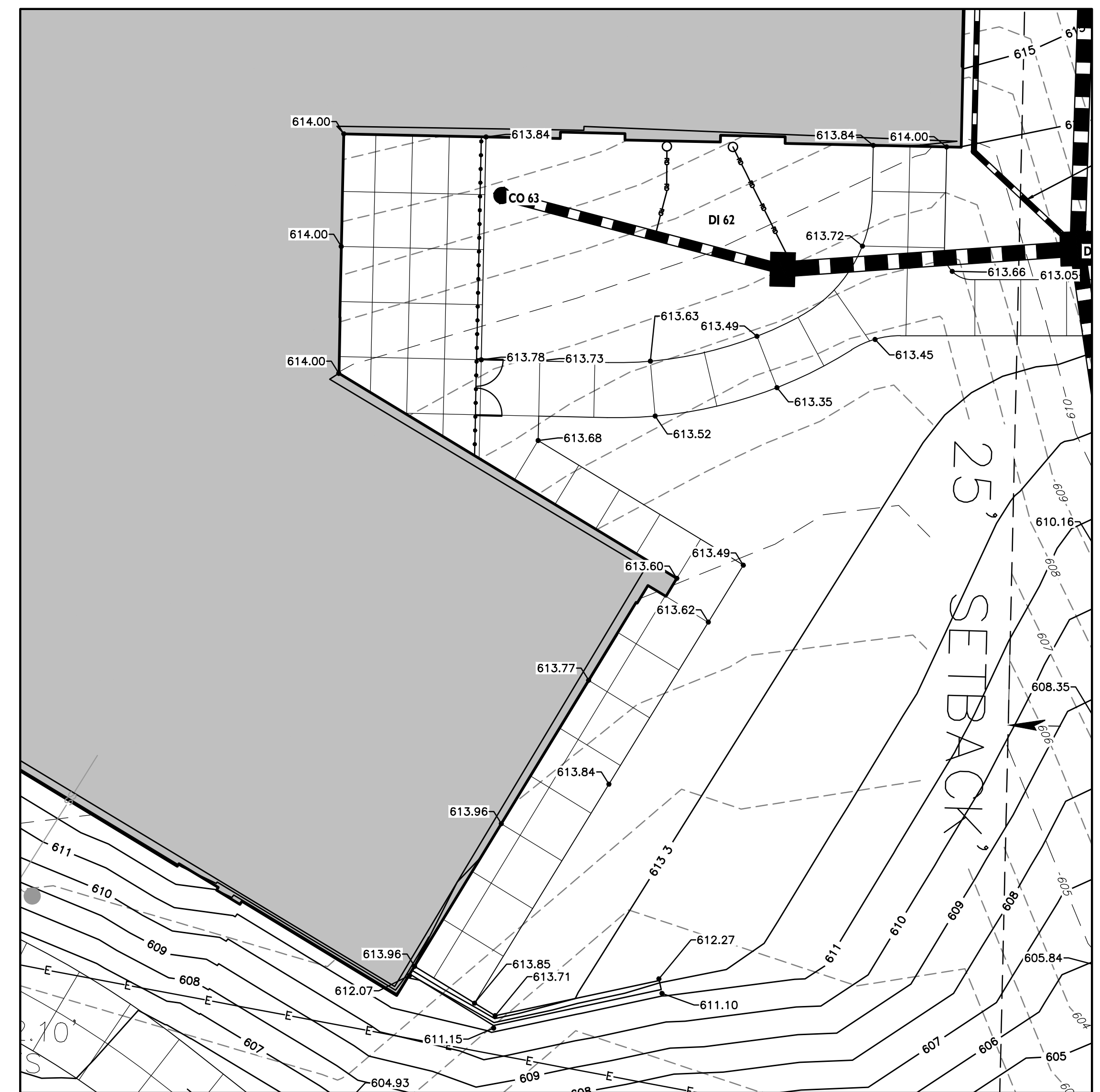
Project no: 17000385
Date: 02.17.21
Revisions:

Sheet Title:
GRADING & DRAINAGE PLAN

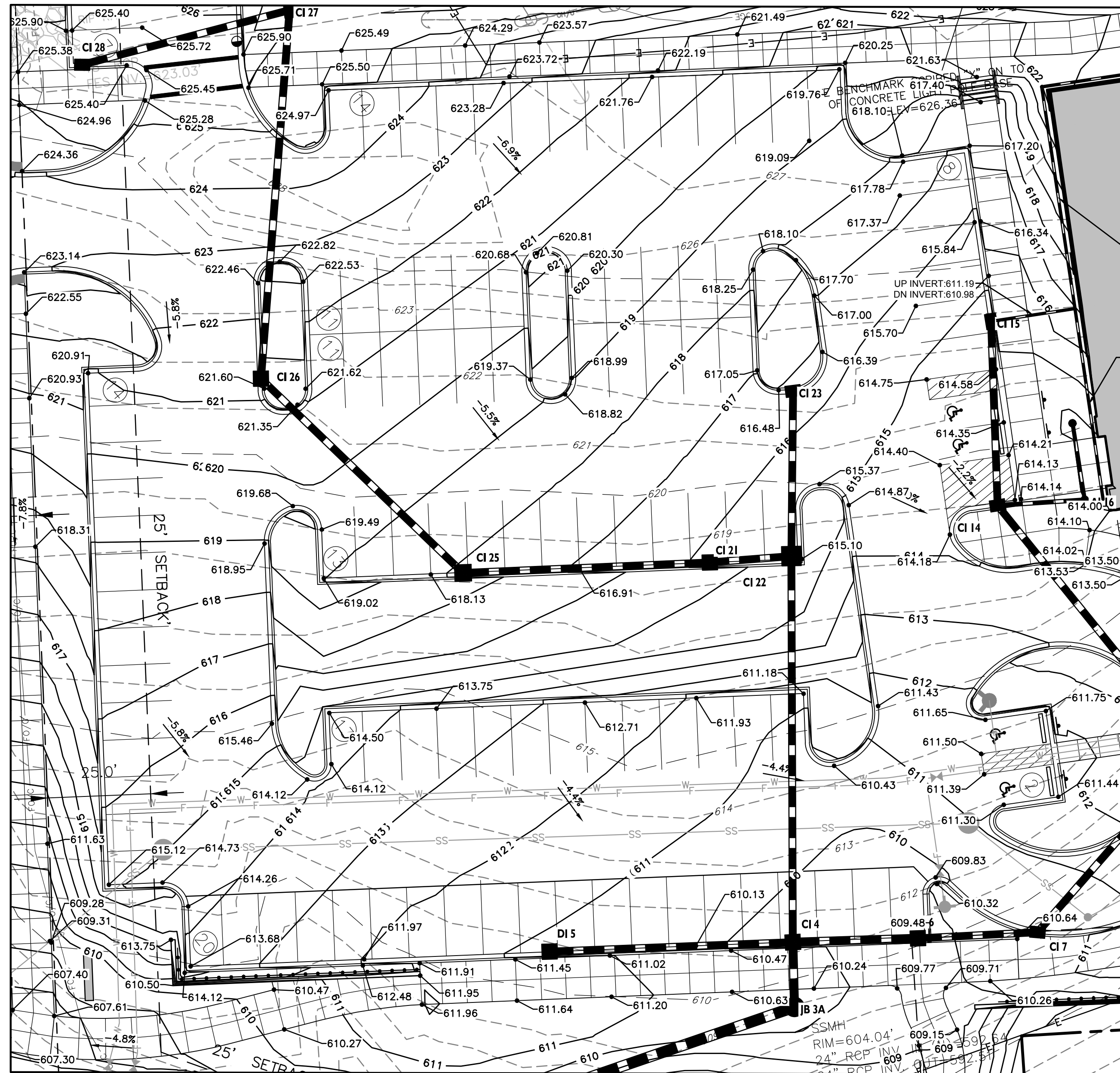
Sheet No:
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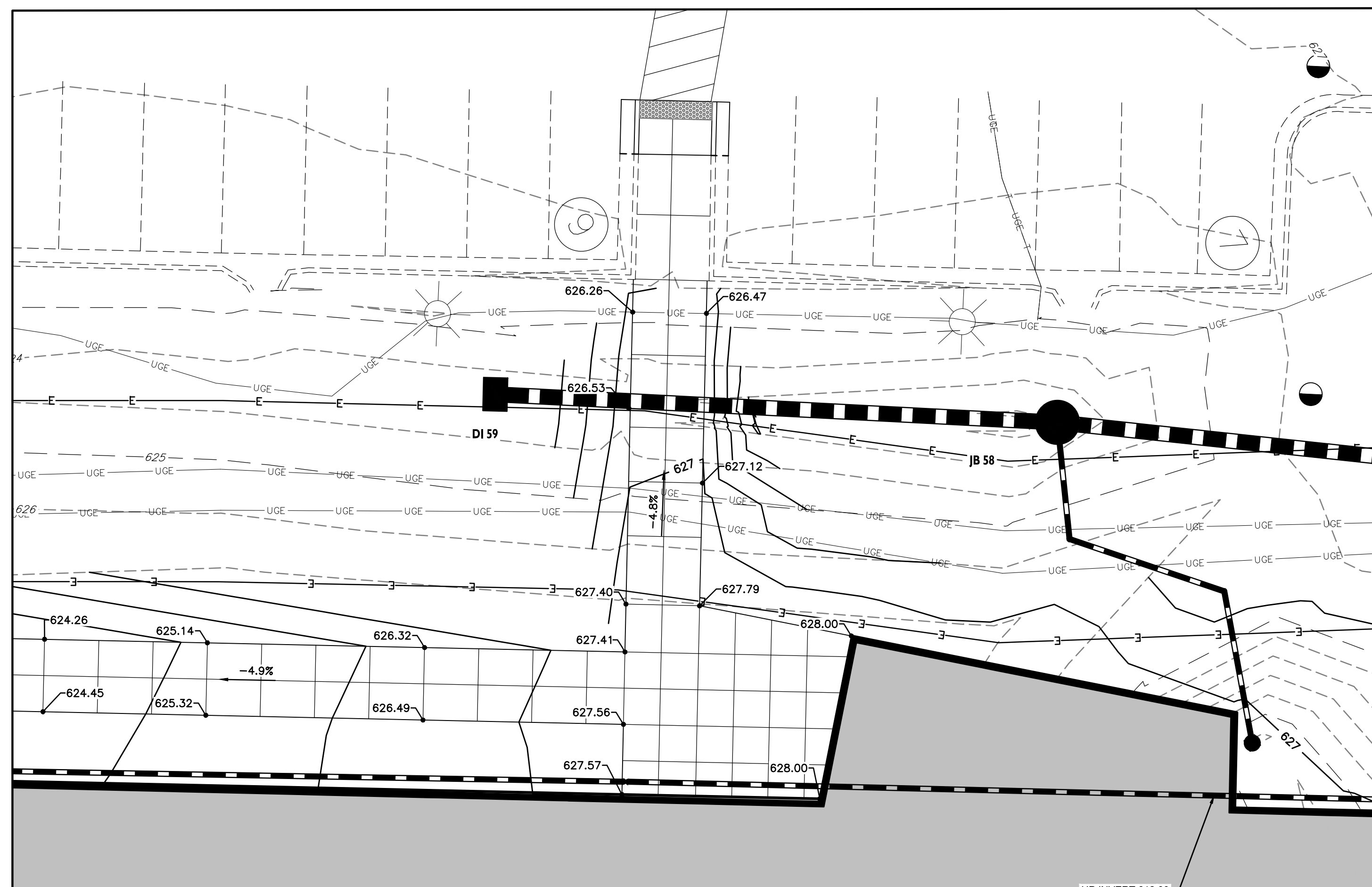
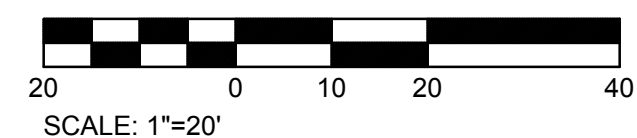
ENLARGEMENT A (SCALE 1" = 10')



ENLARGEMENT B (SCALE 1" = 10')



ENLARGEMENT C (SCALE 1" = 20')



ENLARGEMENT D (SCALE 1" = 10')



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Project no: 17000385
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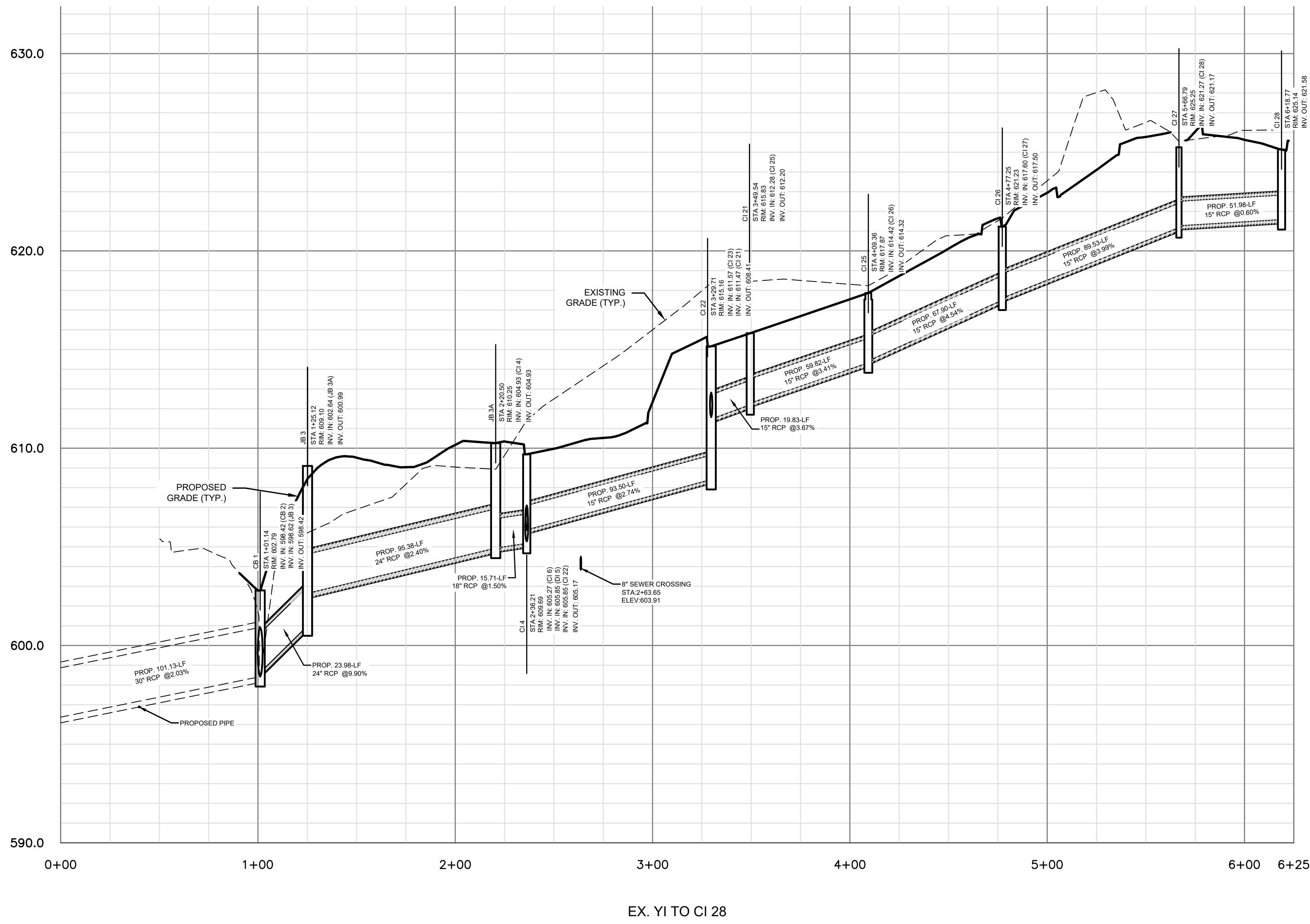


Know what's below.
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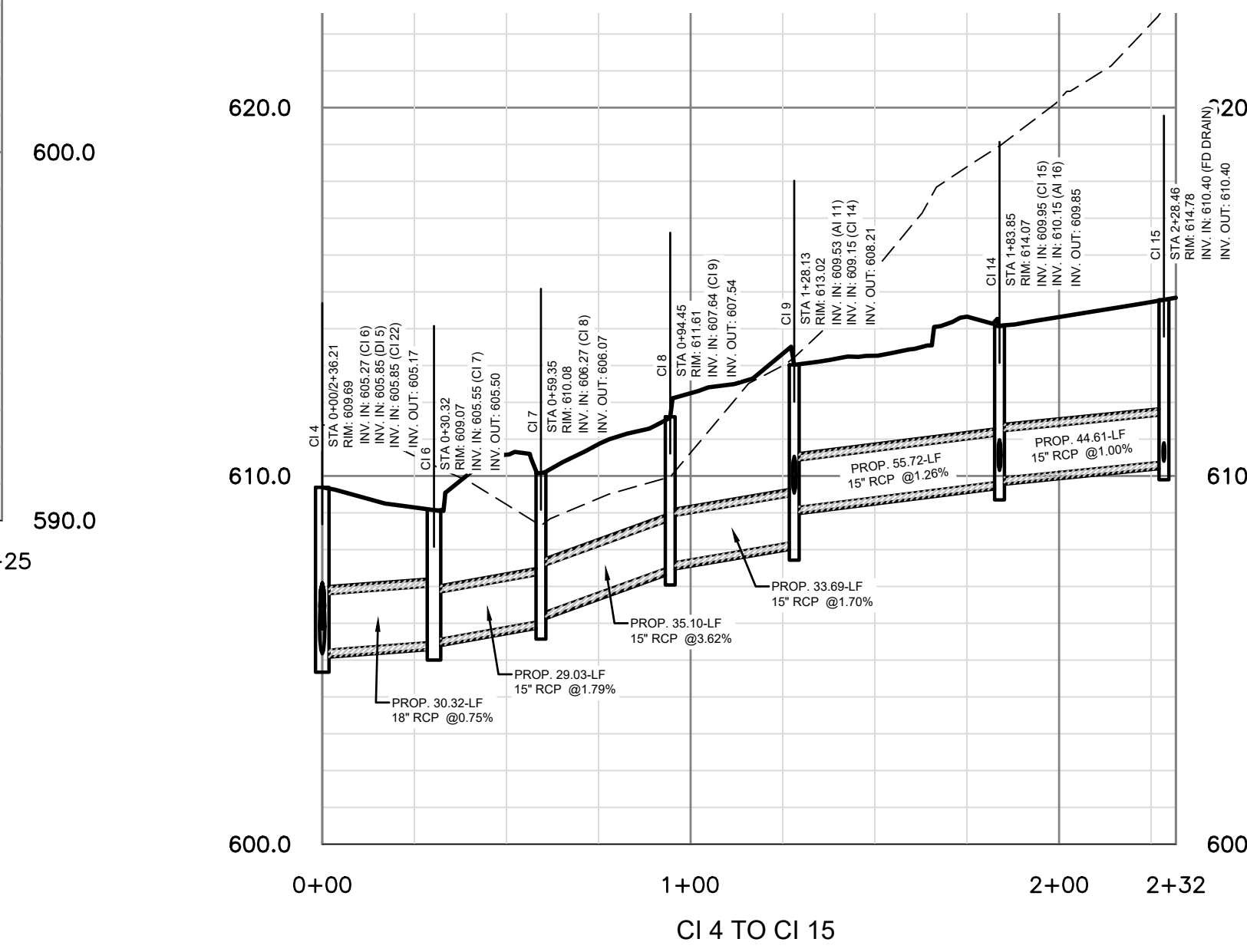
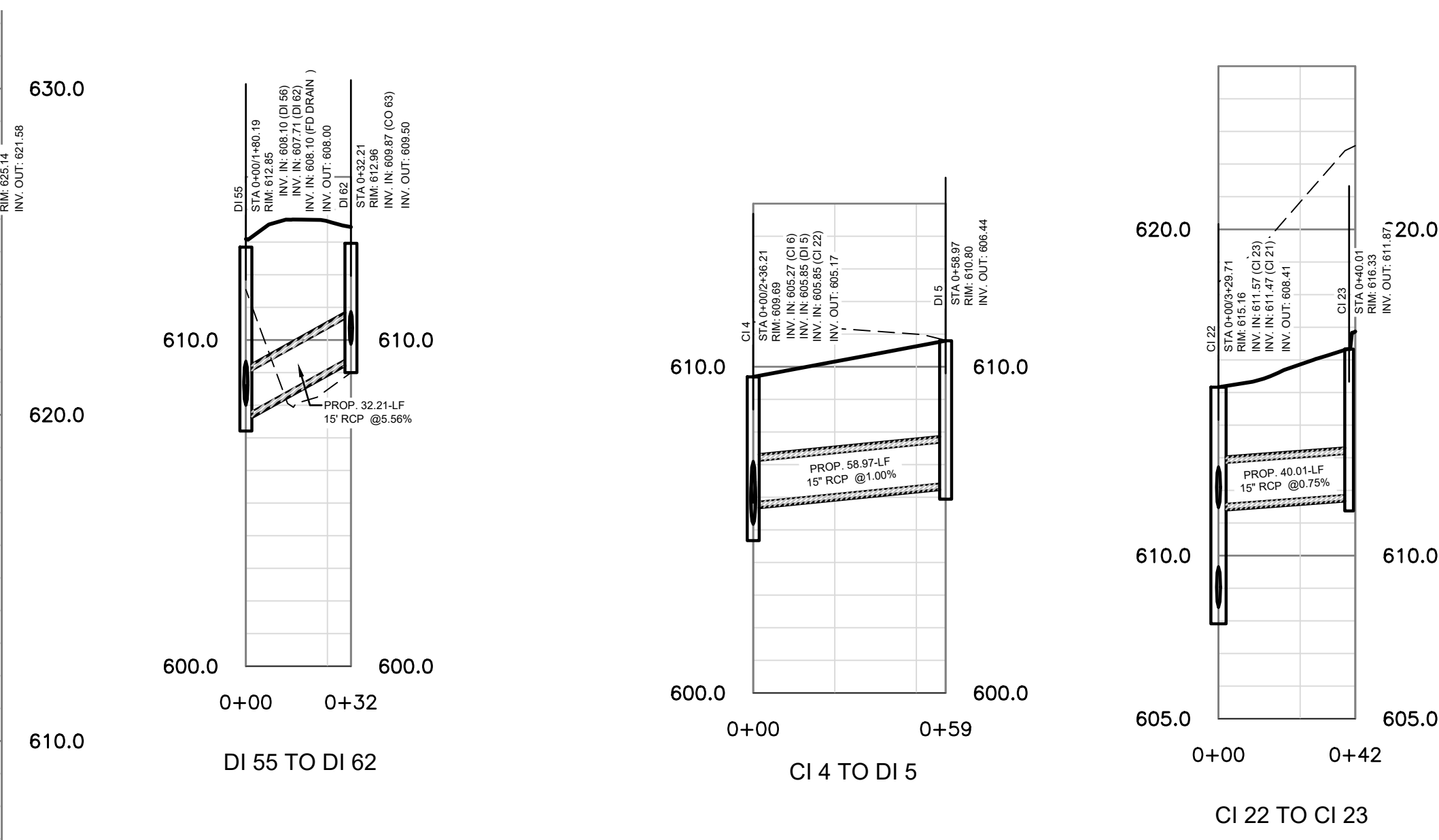


Sheet Title:
**GRADING
 AND
 DRAINAGE
 ENLARGEMENTS**

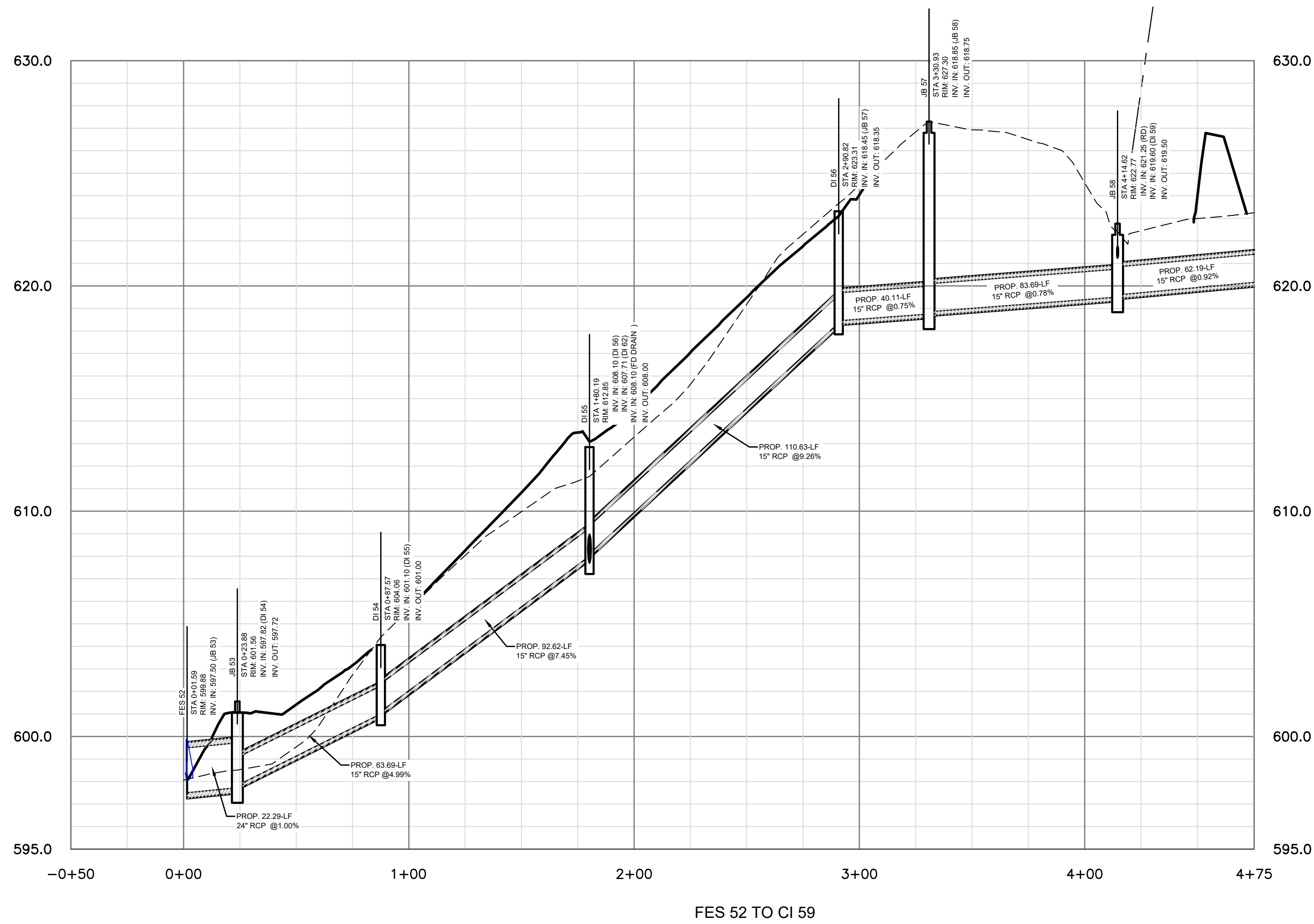
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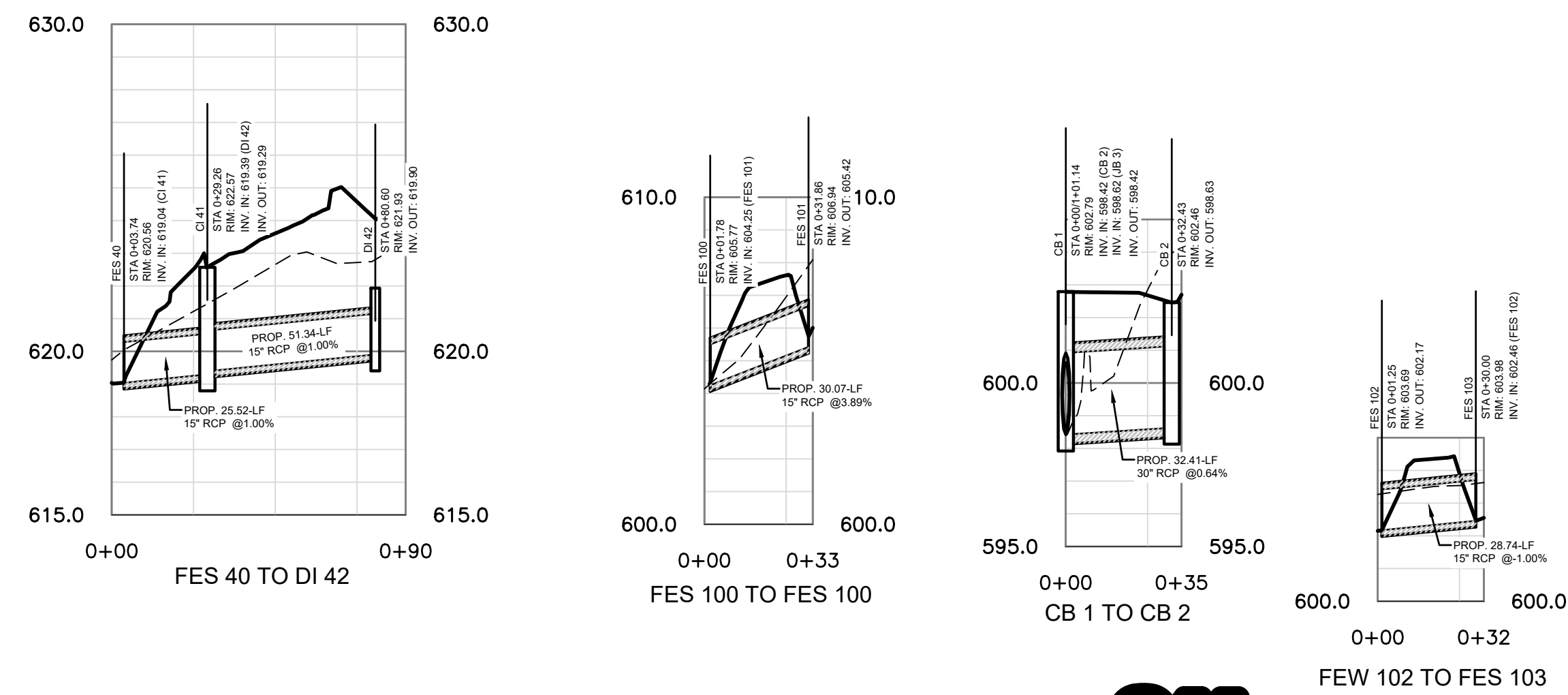
EX. Y1 TO CI 28



CI 4 TO CI 15



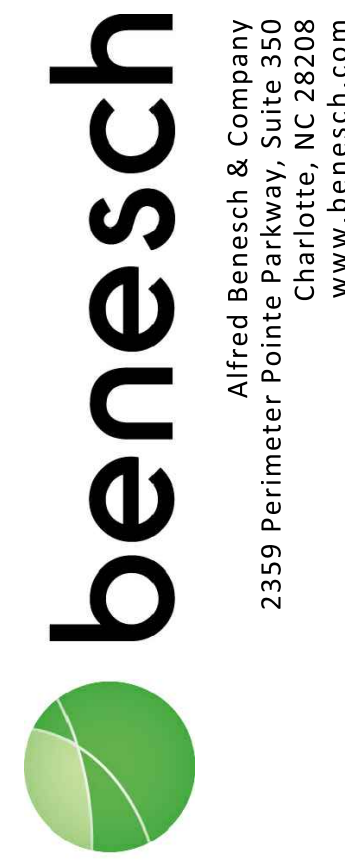
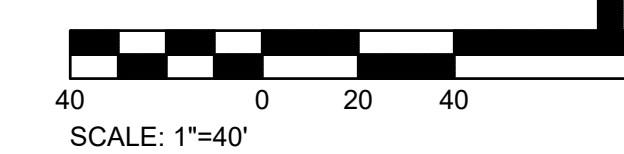
FES 52 TO CI 59



FES 40 TO DI 42
FES 100 TO FES 100
CB 1 TO CB 2
FES 102 TO FES 103



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Date: 02.17.21

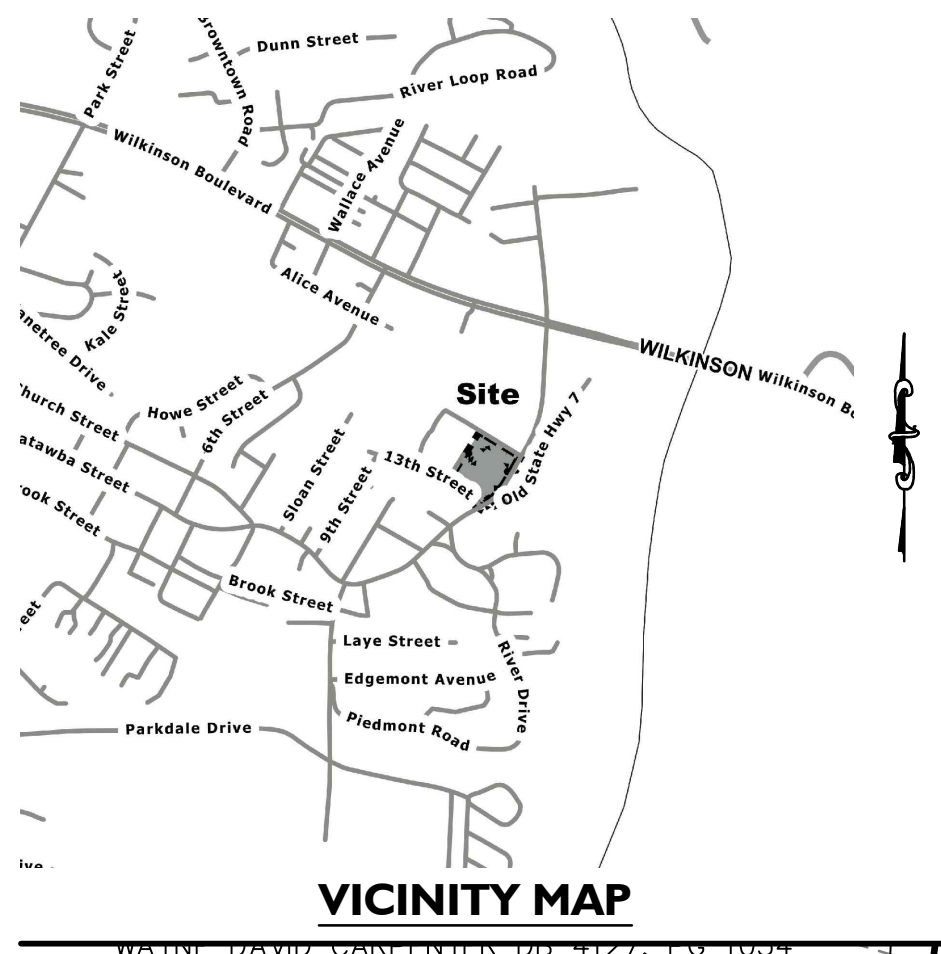
Revisions:

Sheet Title:

**STORM
PROFILES**

Sheet No:

C305



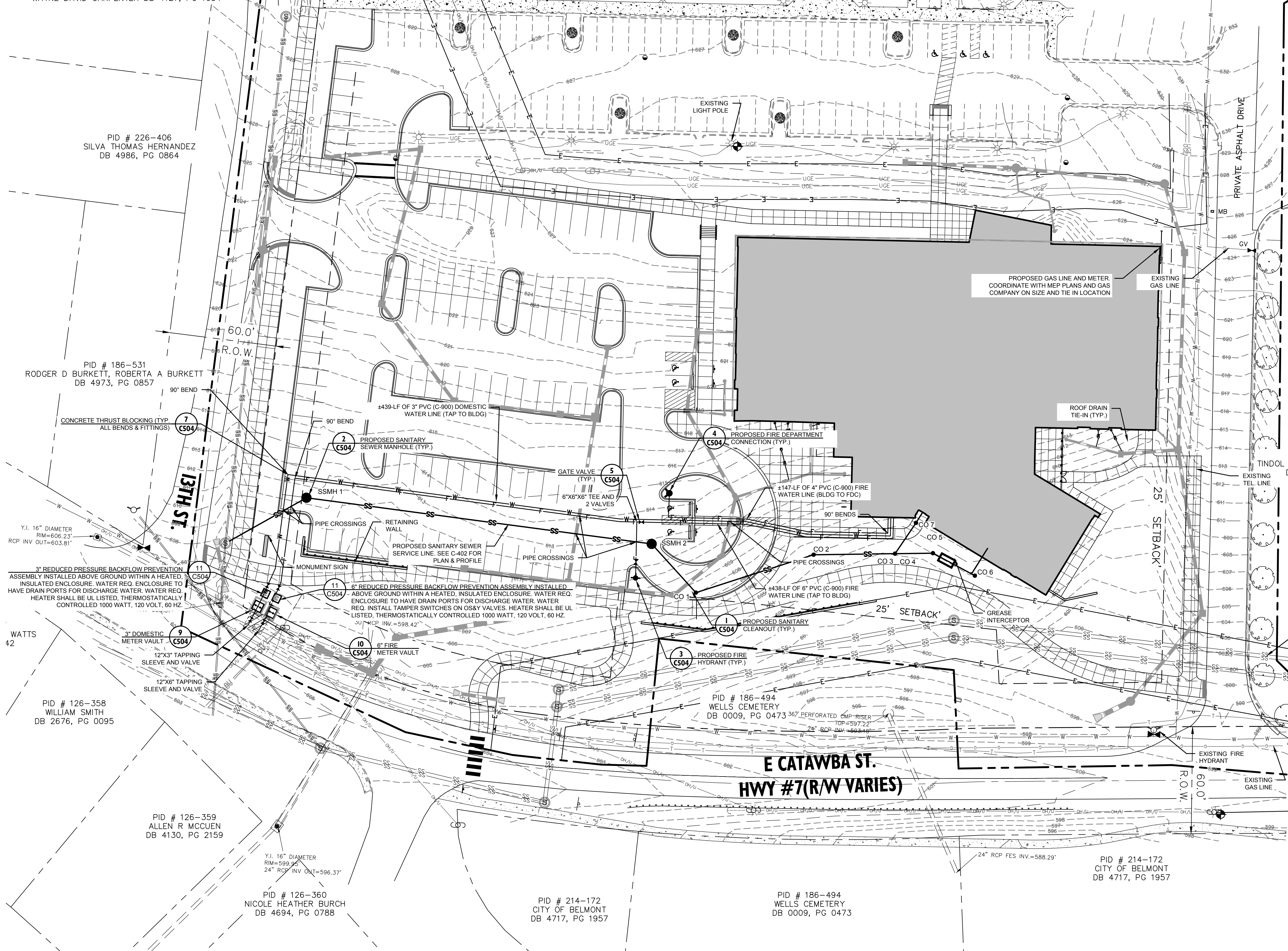
SANITARY SEWER STRUCTURE SCHEDULE				
STRUCTURE	RIM	INVERT IN	INVERT OUT	CONNECTED PIPES
CO 1	610.59	604.72 (CO 2)	604.72	36.84-LF 6" PVC @ 1.04%
CO 2	612.37	605.44 (CO 3)	605.44	69.33-LF 6" PVC @ 1.04%
CO 3	610.73	605.90 (CO 5) 608.24 (CO 7)	605.90	45.63-LF 6" PVC @ 1.00%
CO 5	610.46	606.11 (CO 6)	606.11	21.24-LF 6" PVC @ 1.00%
CO 6	608.64		606.38	26.67-LF 6" PVC @ 1.00%
CO 7	613.85	609.00 (FROM BLDG)	609.00	20.86-LF 6" PVC @ 3.64%

UTILITY NOTES

- UTILITY CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODE REQUIREMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES (STORM DRAINAGE, ELECTRIC, GAS, TELEPHONE, ETC.) PRIOR TO CONSTRUCTION. INFORMATION SHOWN ON THIS PLAN IS FOR REFERENCE ONLY AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY IF ANY DISCREPANCIES BETWEEN THE CONSTRUCTION PLANS AND ACTUAL FIELD CONDITIONS ARE FOUND.
- MINIMUM COVER FOR ALL SANITARY SEWER MAINS SHALL BE 3'-0". DUCTILE IRON PIPE SHALL BE SUBSTITUTED WHEN MINIMUM COVER CAN NOT BE MAINTAINED.
- THE STANDARD DEPTH OF COVER FOR WATER MAINS SHALL BE 3'-0" MIN. EXCEPT AT VALVE OR HYDRANT LOCATIONS, OR OTHER SPECIAL CONDITIONS.
- THE CONNECTION TO EXISTING WATER MAINS SHALL BE PERFORMED ONLY AFTER ALL PRESSURE TESTING AND CHLORINATION ARE SUCCESSFULLY COMPLETED AND THE LOCAL REVIEW AUTHORITY HAS APPROVED THE CONNECTION. THE CONTRACTOR SHALL AVOID DISRUPTION OF EXISTING SERVICE.
- REFER TO PLUMBING DRAWING SERIES FOR THE LOCATION OF WATER AND SANITARY SEWER SERVICE CONNECTIONS AT THE BUILDING.
- UNLESS OTHERWISE NOTED, THE PHYSICAL CONNECTION BETWEEN THE SITE UTILITY LINES AND THE PIPE INSTALLED BY THE PLUMBING CONTRACTOR SHALL BE MADE BY THE SITE UTILITY CONTRACTOR.
- PIPE LENGTHS SHOWN ON PLAN ARE THE ENGINEER'S ESTIMATE USED TO COMPUTE PIPE SLOPES AND INVERTS AND SHALL NOT BE CONSTRUED BY THE CONTRACTOR TO REPRESENT THE ACTUAL QUANTITY OF PIPE REQUIRED.
- IF WATER LINE CROSSES OVER SANITARY SEWER WITH LESS THAN 18 INCHES VERTICAL CLEARANCE BOTH PIPES SHALL BE DUCTILE IRON 10' EACH SIDE. IF WATER CROSSES UNDER THE SEWER REGARDLESS OF CLEARANCE, BOTH PIPES SHALL BE DUCTILE IRON 10' EACH SIDE. IF WATER LINE RUNS PARALLEL TO SEWER LINE WITH LESS THAN 18" VERTICAL CLEARANCE AND LESS THAN 10' SIDE CLEARANCE BOTH PIPES SHALL BE DUCTILE IRON.
- IF REQUIRED BY NUMBER 10 ABOVE, REPLACE EXISTING SEWER WITH DUCTILE IRON PIPE, CLASS 350 WORKING PRESSURE WITH GASKETED JOINTS, 10' EACH SIDE OF WATER MAIN.
- THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPT. CONNECTION POINTS, OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS CITY OF BELMONT REQUIRED BACKFLOW PREVENTER.
- EACH REQUIRED BPA IS REQUIRED TO BE TESTED BY A CITY OF BELMONT APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM IN SERVICE.

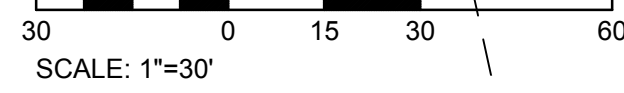
LEGEND

- EXISTING SIGN
- EIP EXISTING IRON PIN
- EXISTING LIGHT POLE
- PROPOSED LIGHT POLE
- EXISTING UTILITY POLE
- R/W RIGHT-OF-WAY
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED FIRE DEPT. CONNECTION
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- PROPOSED CHECK VALVE
- PROPOSED POST INDICATOR VALVE
- EXISTING WATER METER
- PROPOSED WATER METER
- PROPOSED BACKFLOW PREVENTER
- EXISTING SEWER MANHOLE
- PROPOSED SEWER MANHOLE
- EXISTING CLEANOUT
- PROPOSED CLEANOUT
- EXISTING DRAINAGE STRUCTURE
- PROPOSED DRAINAGE STRUCTURE
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- PROPERTY LINE
- EXISTING FENCE
- EXISTING UNDERGROUND ELECTRIC LINE
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING UNDERGROUND TELEPHONE LINE
- EXISTING SANITARY SEWER LINE
- PROPOSED SANITARY SEWER LINE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- PROPOSED DOMESTIC WATER LINE
- PROPOSED FIRE LINE
- EXISTING CONTOUR LINE
- PROPOSED CONTOUR LINE
- EXISTING STORM DRAINAGE PIPE
- PROPOSED STORM DRAINAGE PIPE
- EXISTING GAS LINE
- EXISTING GAS LINE
- EXISTING STORM MANHOLE
- PROPOSED STORM MANHOLE
- EXISTING EASEMENT



PID # 218-111 TINDOL FAMILY INVESTMENTS LLC DB 44789 PG 2284

SITE BENCHMARK RR SPIKE IN POWER/LIGHT POLE ELEV=600.31'



Seals:

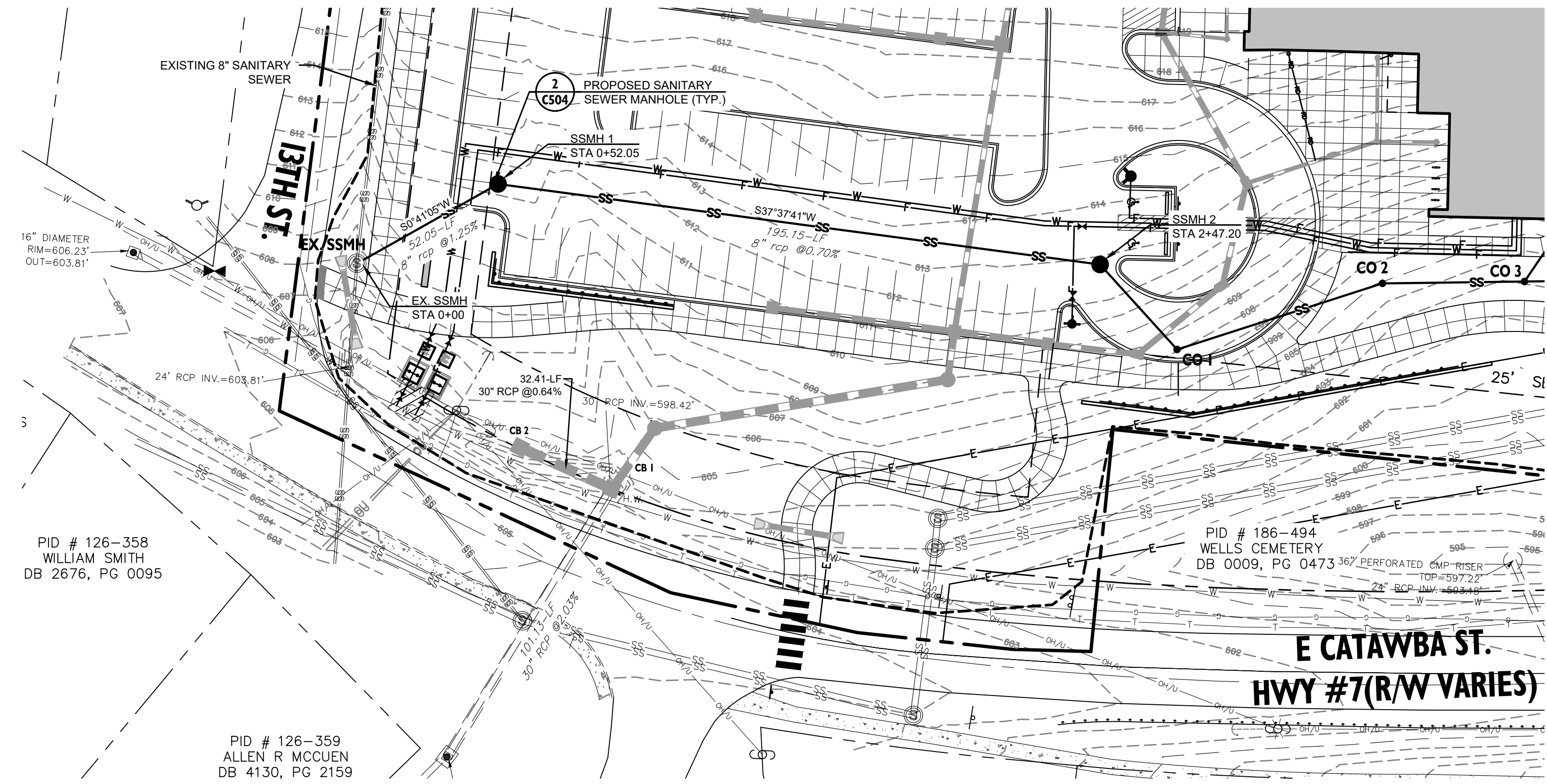
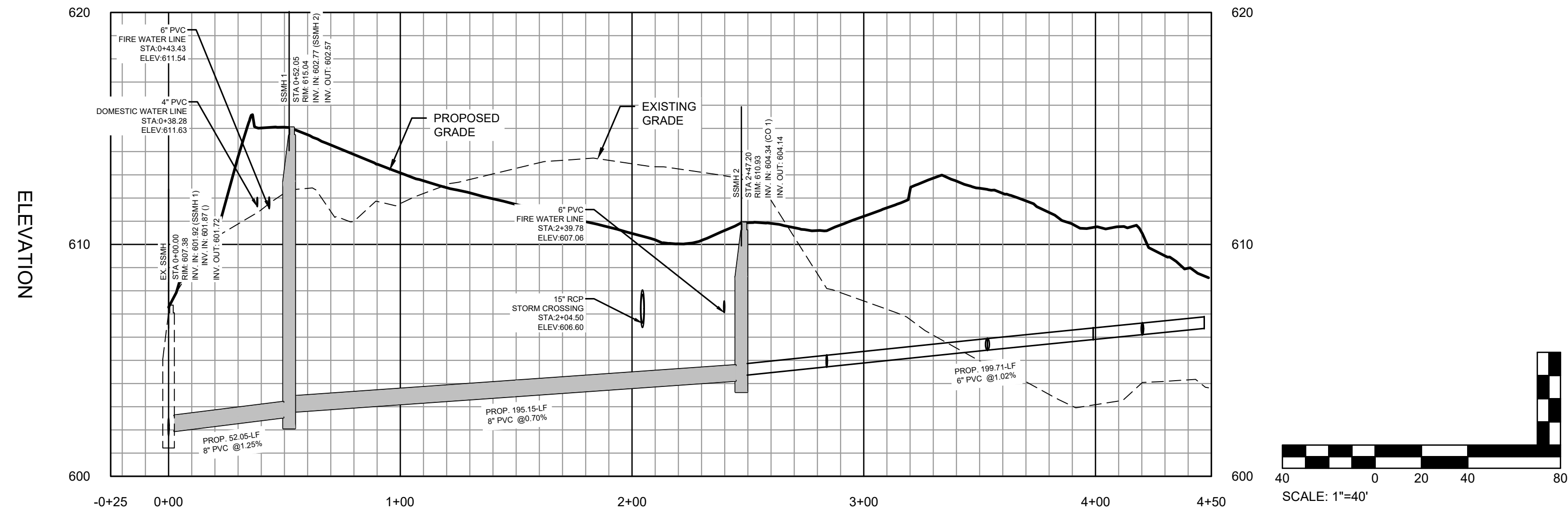
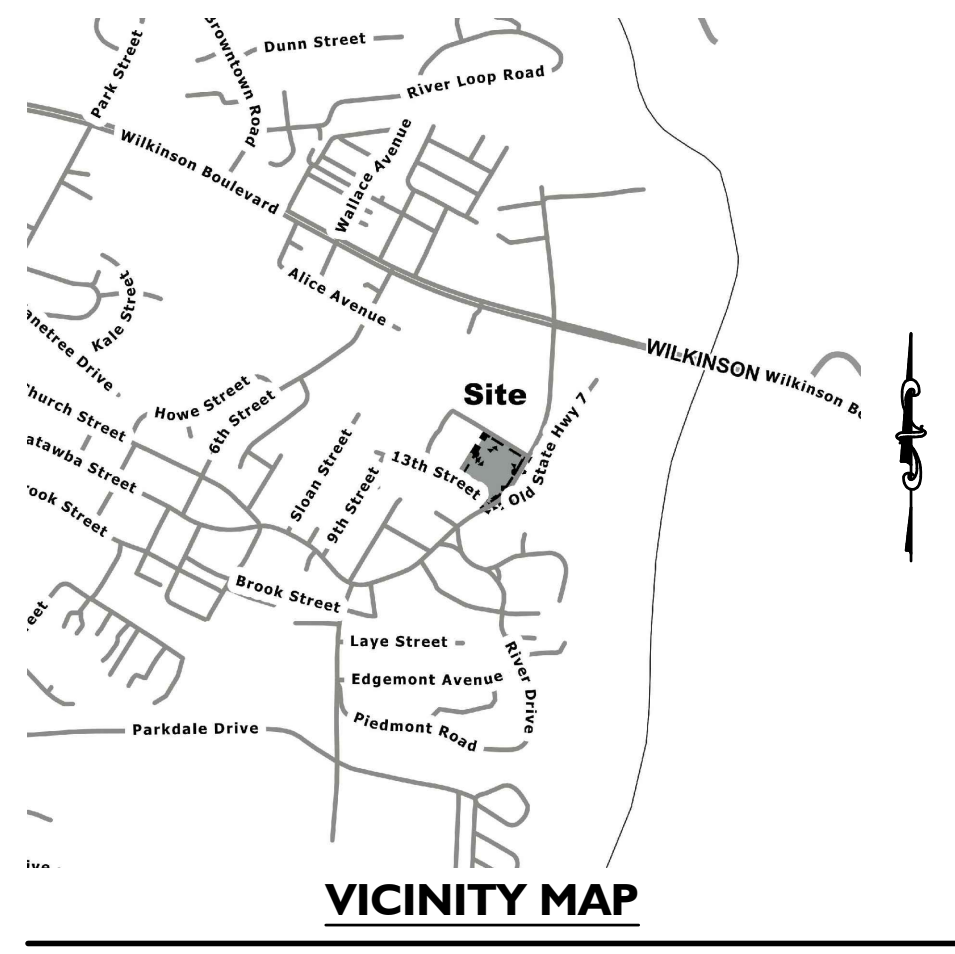
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 Belmont, North Carolina

Project no: 17000385
 Date: 02.17.21
 Revisions:

Sheet Title:
UTILITY PLAN

Sheet No:
C400

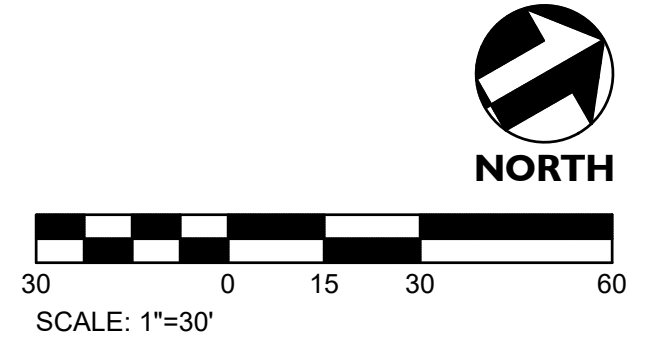


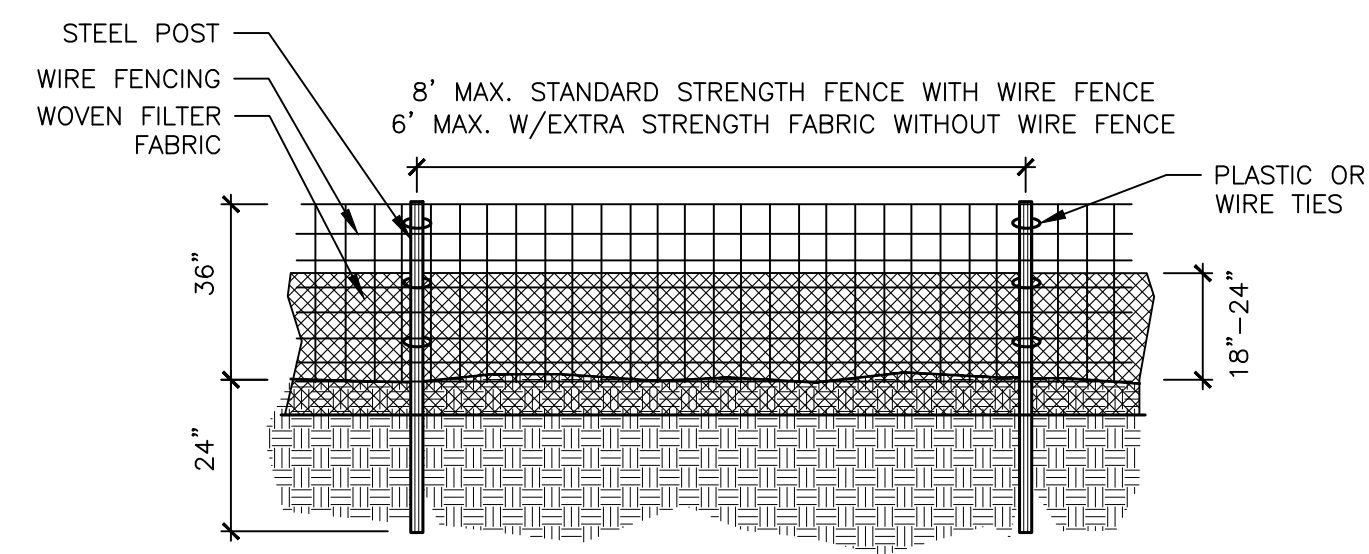
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1315 Catawba Street
Belmont, North Carolina

Project no: 17000385
Date: 02.17.21
Revisions:

Sheet Title:
UTILITY PLAN & PROFILE

Sheet No:
C401





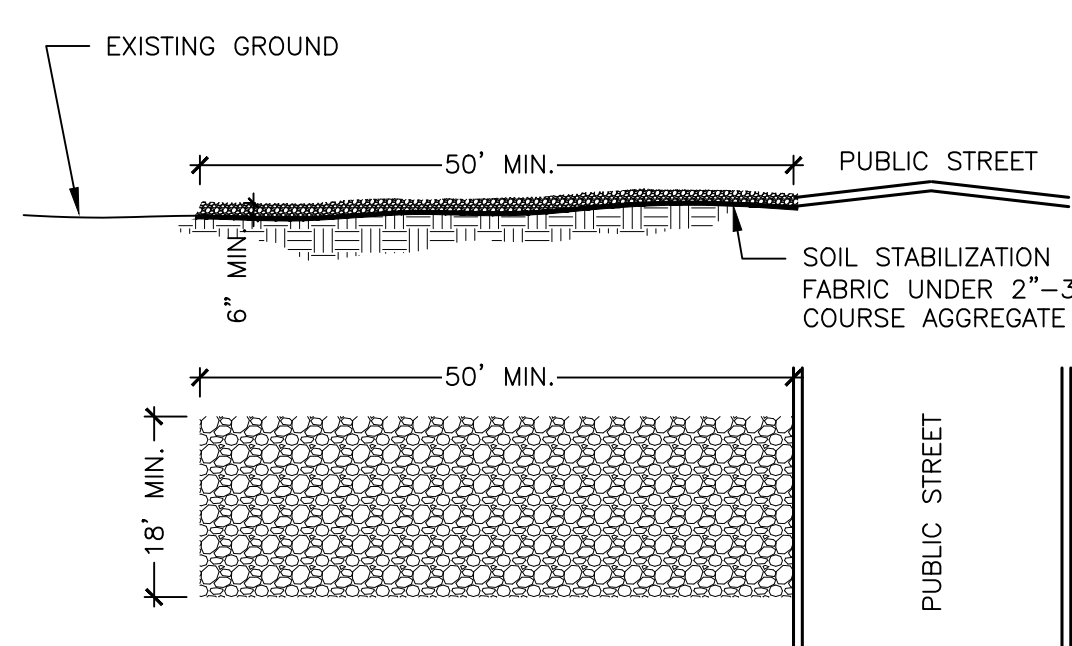
GENERAL NOTES:

1. FILTER FABRIC FENCE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
2. WOVEN FILTER FABRIC BE USED WHERE SILT FENCE IS TO REMAIN FOR A PERIOD OF MORE THAN 30 DAYS.
3. STEEL POSTS SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
4. WIRE FENCING SHALL BE AT LEAST #10 GAGE WITH A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
5. TURN SILT FENCE UP SLOPE AT ENDS.
6. WIRE MESH SHALL BE MIN. 14 GAGE WITH MAXIMUM 6" OPENINGS.
7. ORANGE SAFETY FENCE IS REQUIRED AT BACK OF SILT FENCE (WITHIN 5 FT.) WHEN GRADING IS ADJACENT TO SWIM BUFFERS OR WETLANDS (REFER TO SWIM BUFFER GUIDELINES).

MAINTENANCE NOTES:

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

1 Temporary Silt Fence
NCDEQ STD. 6.62



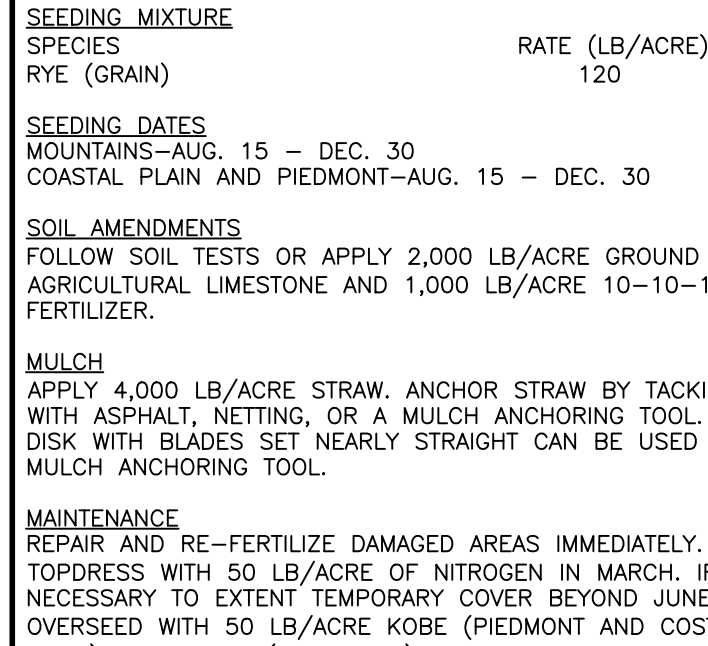
NOTES:

1. A STABILIZED ENTRANCE PAD OF 2"-3" COURSE AGGREGATE SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET.
2. FILTER FABRIC OR COMPACTED CRUSHER RUN STONE MAY BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.
5. WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.
6. SOIL STABILIZATION FABRIC (AS SPECIFIED BY THE DESIGNER) SHALL BE USED.

MAINTENANCE NOTES:

1. MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED OR TRACKED ONTO PUBLIC ROADWAYS.

2 Temporary Gravel Construction Entrance
NCDEQ STD. 6.06



NOTES:

1. IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUDAGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE.

TEMPORARY SEEDING RECOMMENDATIONS FOR LATE WINTER AND EARLY SPRING

SEEDING MIXTURE SPECIES	RATE (LB/ACRE)
GERMAN MILLET	40

- MULCH**
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKLING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

- MAINTENANCE**
REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

TEMPORARY SEEDING RECOMMENDATIONS FOR SUMMER

3 Seeding Specifications for Temporary Erosion Control
NCDEQ STD. 6.10

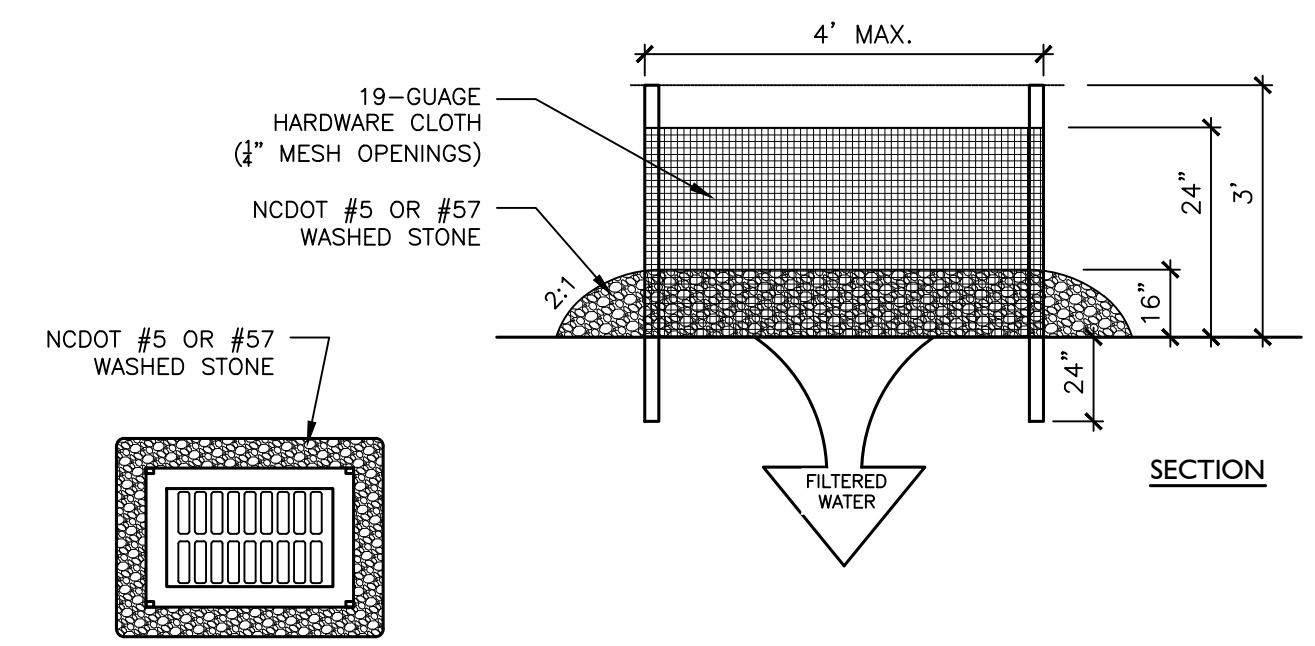


FIGURE 6.51A HARDWARE CLOTH AND GRAVEL INLET PROTECTION PLAN

CONSTRUCTION SPECIFICATIONS

1. UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING INLET.
2. DRIVE 5-FOOT STEEL POSTS 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
3. SURROUND THE POSTS WITH WIRE MESH HARDWARE CLOTH. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM. PLACING A 2-FOOT FLAP OF WIRE MESH UNDER THE GRAVEL FOR ANCHORING IS RECOMMENDED.
4. PLACE CLEAN GRAVEL (NCDOT#5 OR #57 STONE) ON A 2:1 SLOPE WITH A HEIGHT OF 16 INCHES AROUND THE WIRE, AND SMOOTH TO AN EVEN GRADE.
5. ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE ACCUMULATED SEDIMENT, AND ESTABLISH FINAL GRADING ELEVATIONS.
6. COMPACT THE AREA PROPERLY AND STABILIZE IT WITH GROUNDCOVER.

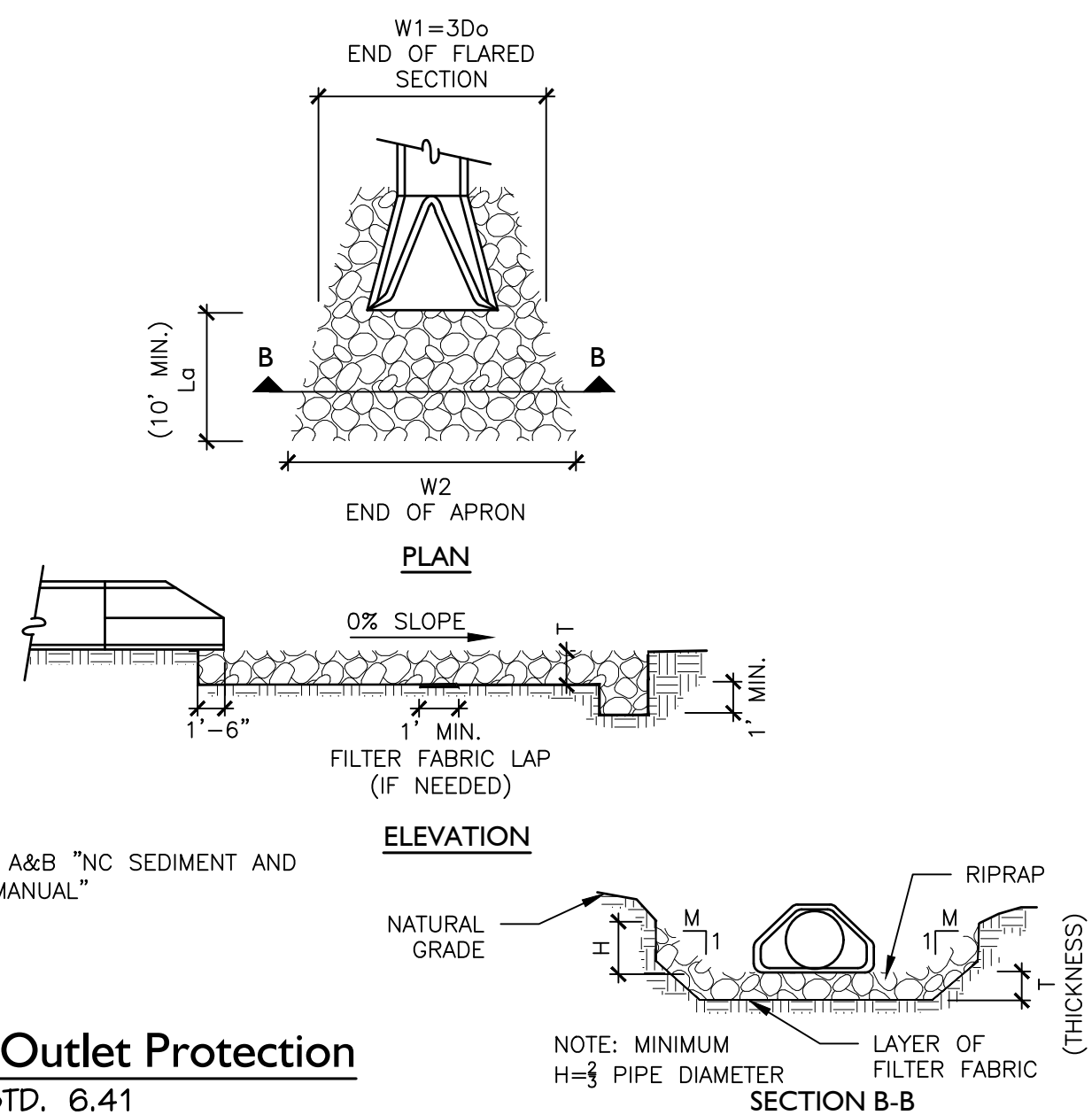
MAINTENANCE

- INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

REFERENCES

- INLET PROTECTION 6.52, BLOCK AND GRAVEL INLET PROTECTION 6.54, ROCK DOUGHNUT INLET PROTECTION
- NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROADS AND STRUCTURES

4 Hardware Cloth and Gravel Inlet Protection
NCDEQ STD. 6.51



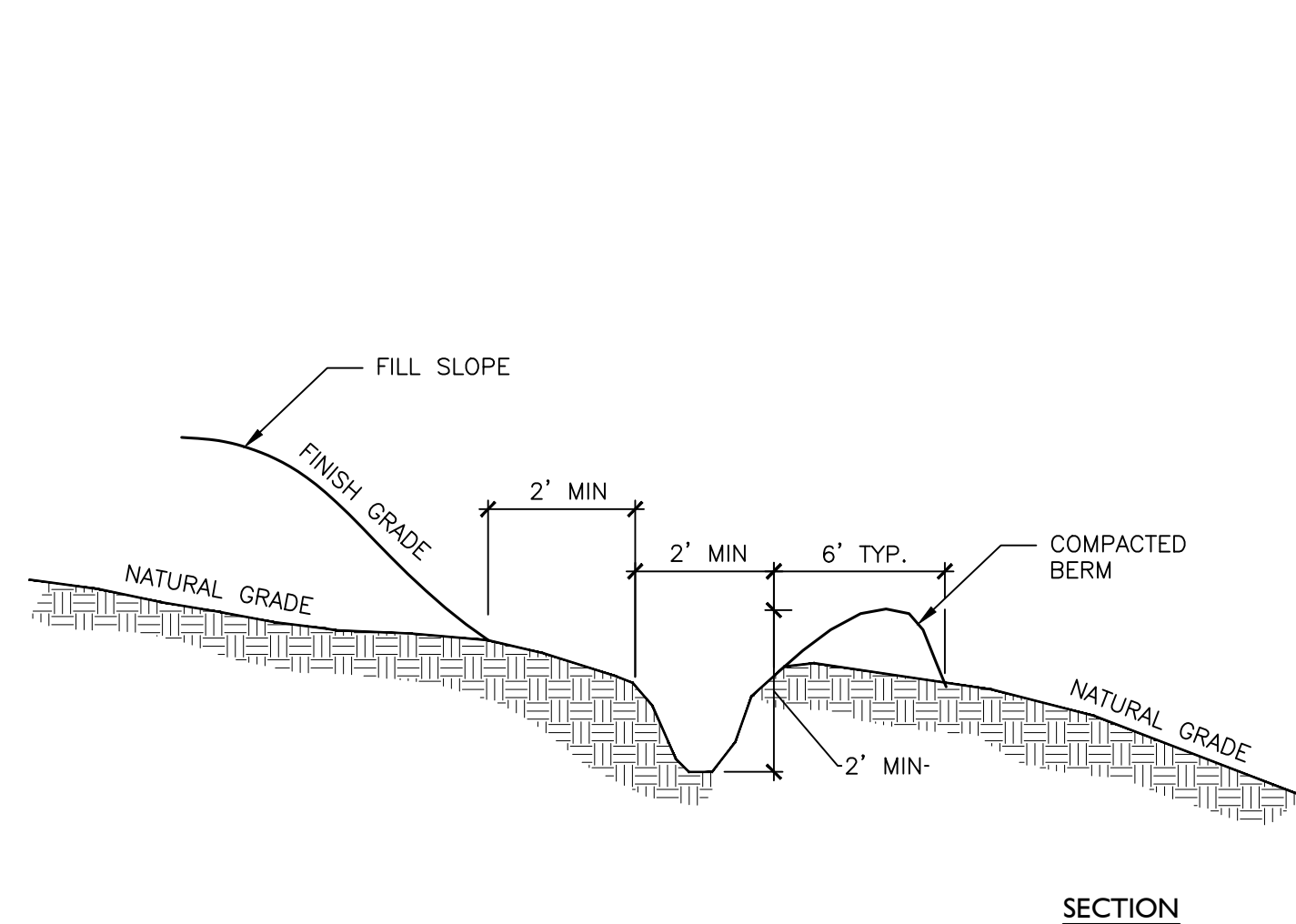
NOTES:

1. CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER.
2. REFER TO THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES' EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL FOR RIPRAP APRON DESIGN STANDARDS.
3. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
4. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
5. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1
6. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
7. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
8. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
9. FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIPRAP.
10. ANY DISTURBED AREA FROM END OF APRON TO RECEIVING CHANNEL MUST BE STABILIZED.

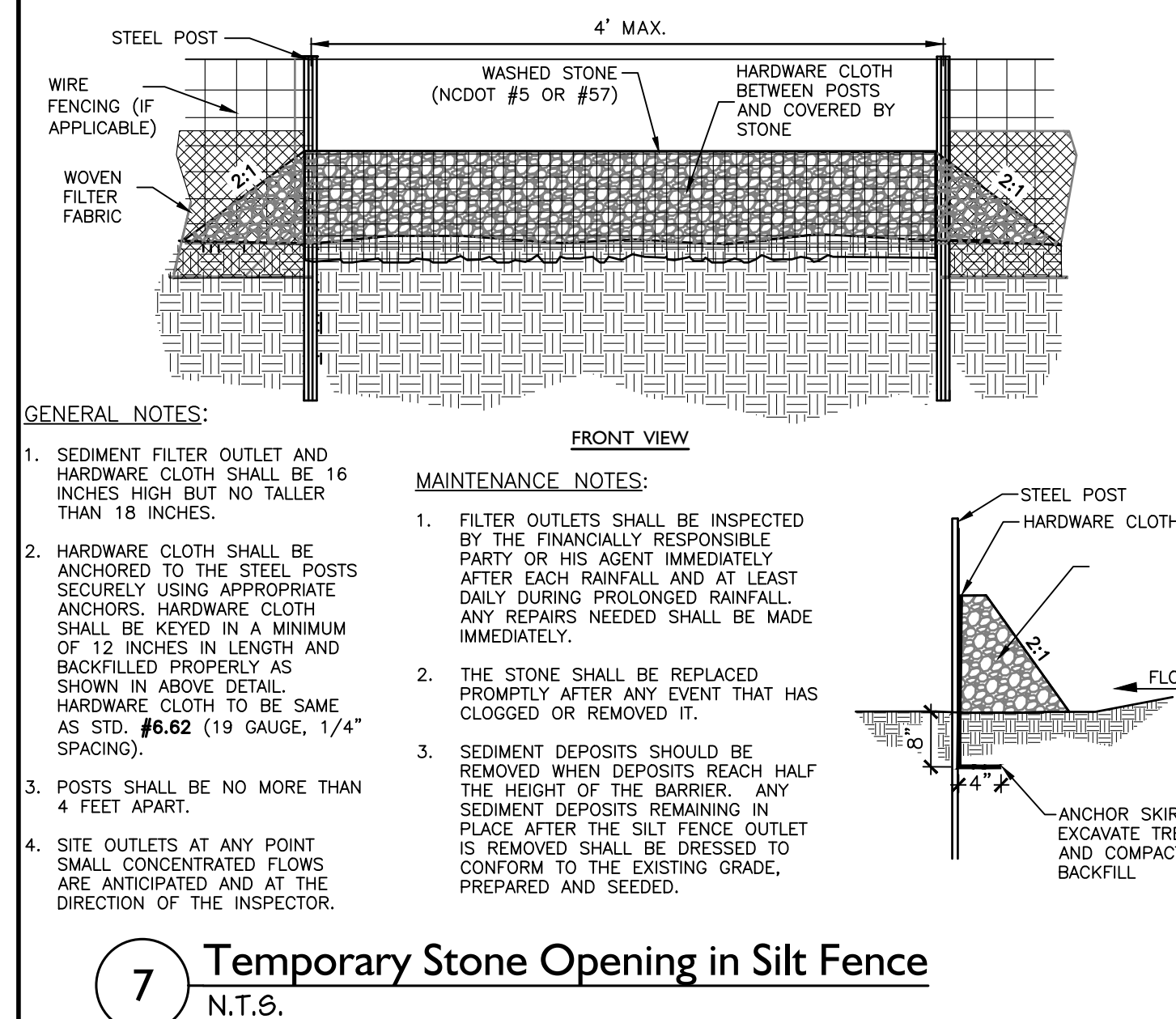
DESIGN DATA TAKEN FROM THE USDA NOMOGRAPH LOCATED IN THE NC SEDIMENT AND EROSION CONTROL MANUAL

OUTLET PROTECTION SUMMARY						
FES	Lg	W1	W2	*T	H	CLASS RR
TSD 1	8.0	3.75	9.25	9	10	A
TSD 2	8.0	3.75	9.25	9	10	A
FES 40	9.0	3.75	10.25	9	10	A
FES 52	9.5	3.75	10.75	9	10	A
FES 100	9.0	4.50	10.50	9	12	A

5 Riprap Outlet Protection
NCDEQ STD. 6.41



6 Temporary Diversion
NCDENR STD. 6.20



GENERAL NOTES:

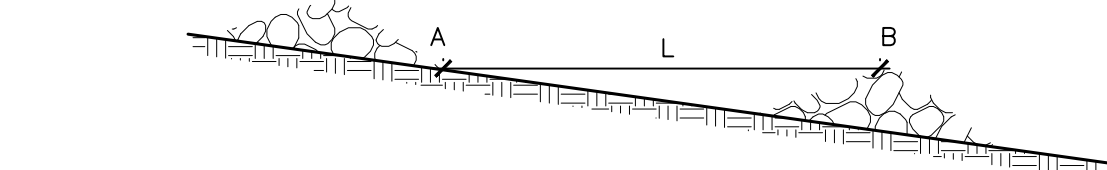
1. SEDIMENT FILTER OUTLET AND HARDWARE CLOTH SHALL BE 16 INCHES HIGH BUT NO TALLER THAN 18 INCHES.
2. HARDWARE CLOTH SHALL BE ANCHORED TO THE STEEL POSTS SECURELY USING APPROPRIATE ANCHORS. HARDWARE CLOTH SHALL BE KEPT IN A MINIMUM OF 12 INCHES IN LENGTH AND BACKFILLED PROPERLY AS SHOWN IN ABOVE DETAIL. HARDWARE CLOTH TO BE SAME AS STD. #6.62 (19 GAUGE, 1/4\"/>

MAINTENANCE NOTES:

1. FILTER OUTLETS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
2. THE STONE SHALL BE REPLACED PROMPTLY AFTER AN EVENT THAT HAS CLOGGED OR REMOVED IT.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH HALF THE HEIGHT OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OUTLET IS REMOVED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDING.

7 Temporary Stone Opening in Silt Fence
N.T.S.

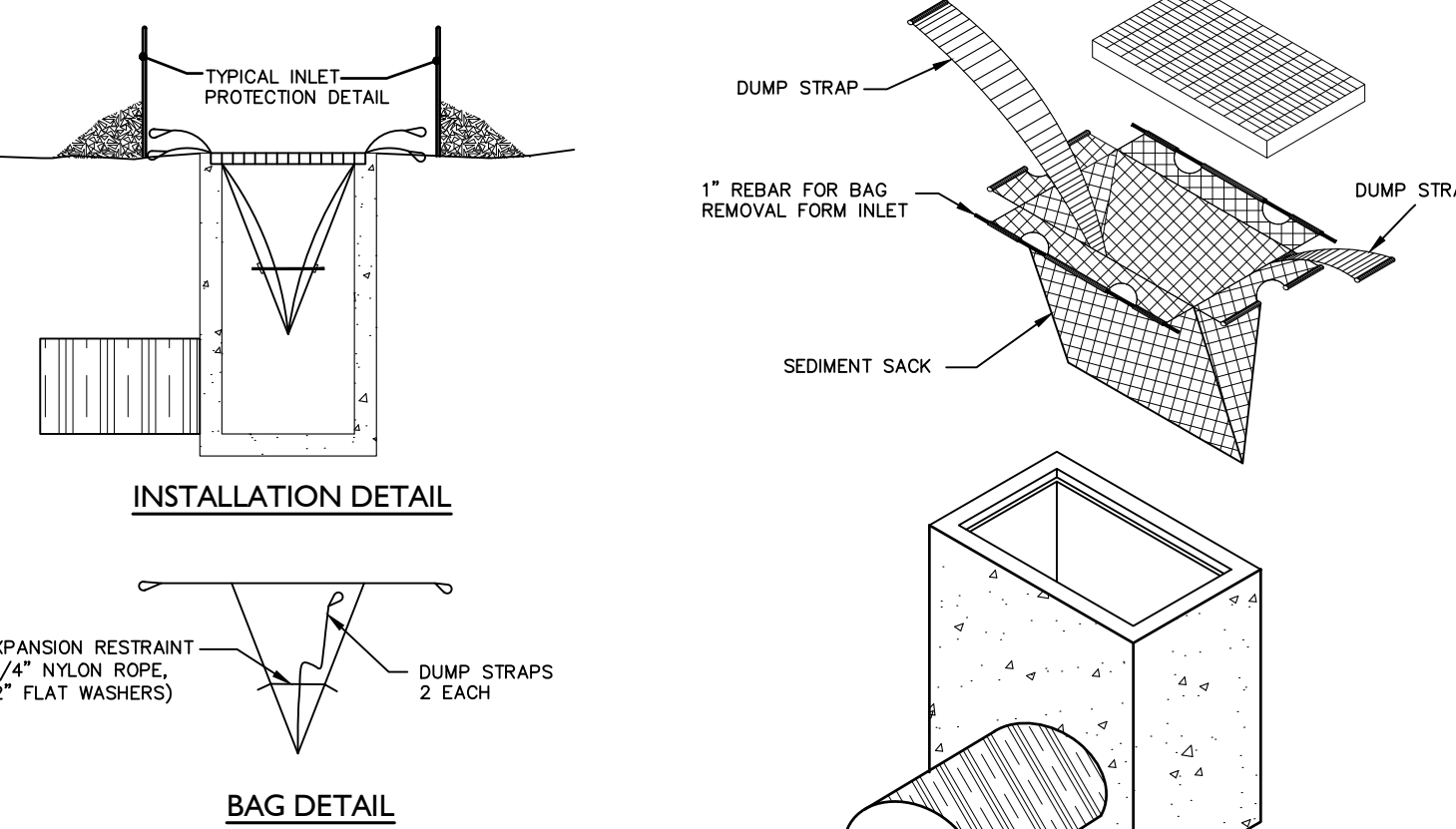
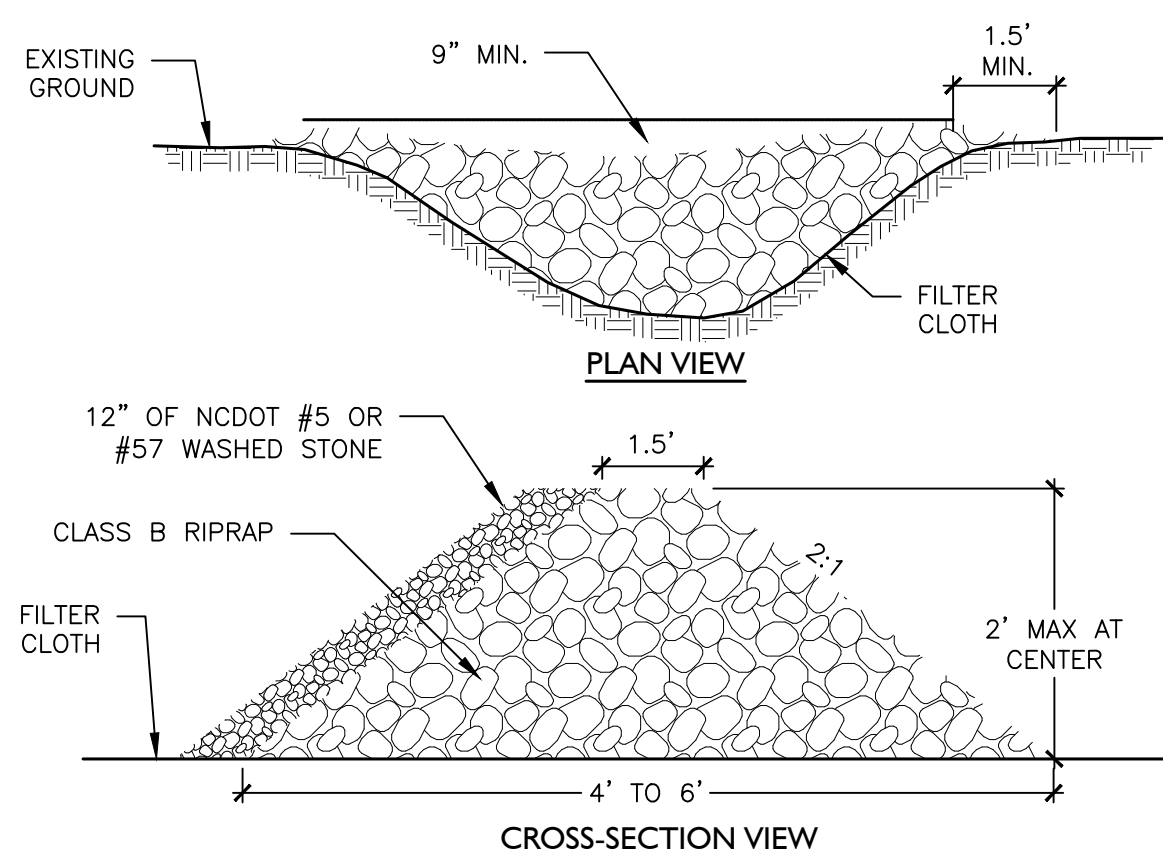
L = THE DISTANCE SUCH THAT POINTS A AND B ARE EQUAL ELEVATIONS



NOTES:

1. PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.
2. KEE THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CANNEL BANKS.
3. EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM.
4. SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF THE LOWER DAM IS THE SAME AS THE TOE ELEVATION OF THE UPPER DAM.
5. PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.
6. MAKE SURE THAT THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE.
7. ENSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS CULVERT ENTRANCES BELOW THE CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FORM DISPLACED STONES.

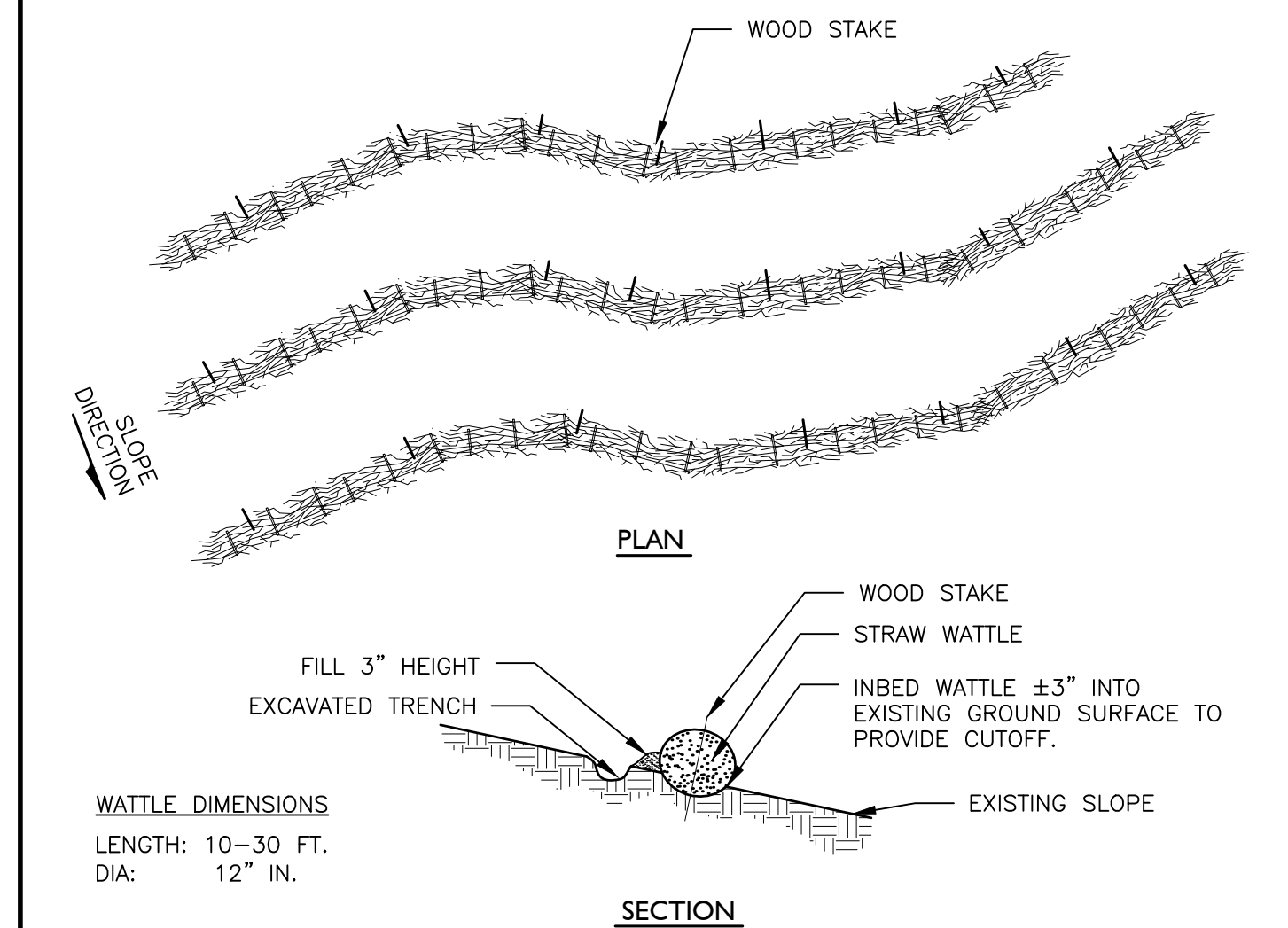
8 Check Dam
NCDEQ STD. 6.83



MAINTENANCE NOTES:

1. SILT SACKS SHALL BE INSPECTED BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
2. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE SILT SACK STILL IS NECESSARY, THE DEVICE SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROX. HALF THE HEIGHT OF THE SILT SACKS.

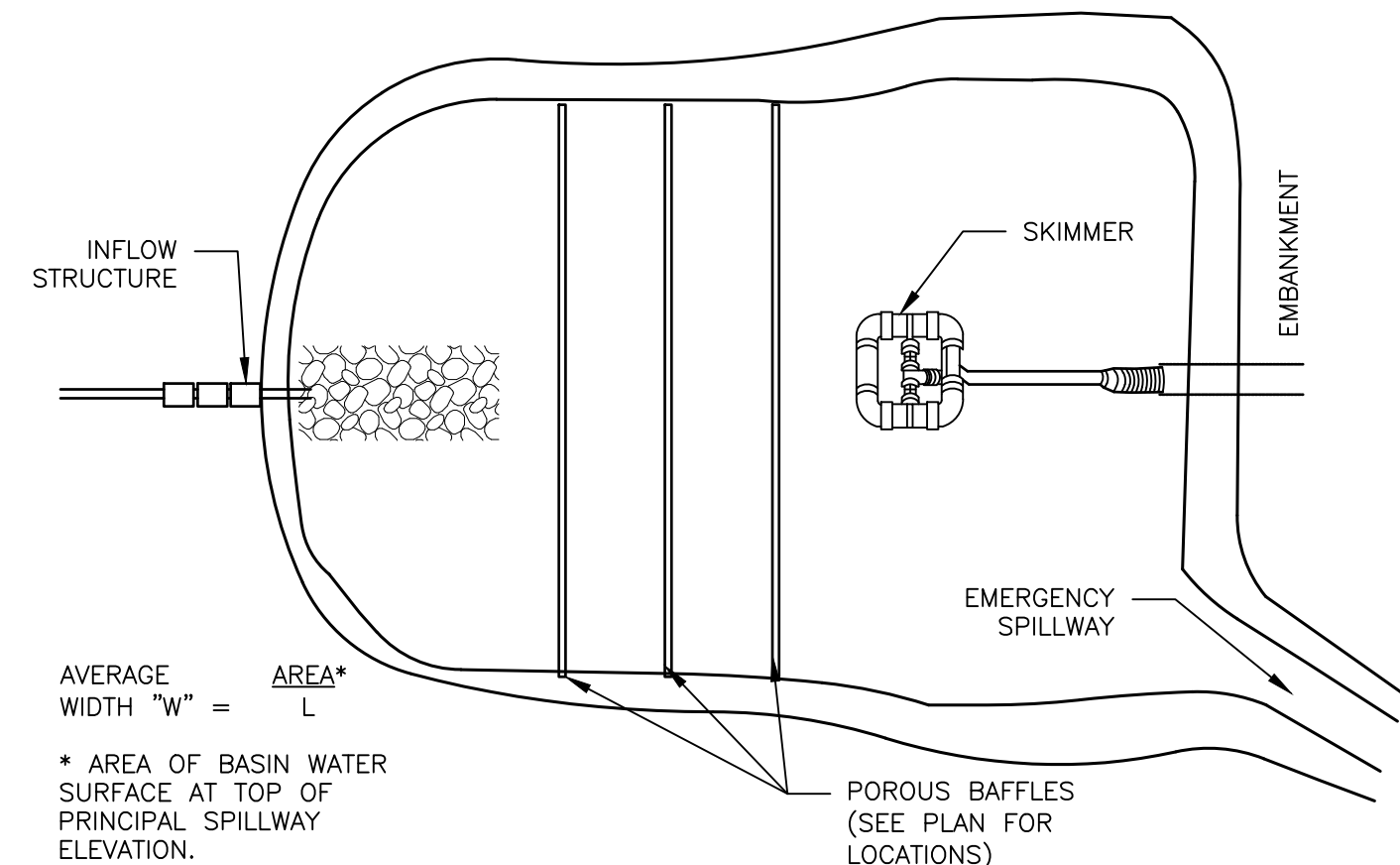
9 Temporary Silt Sack
N.T.S.



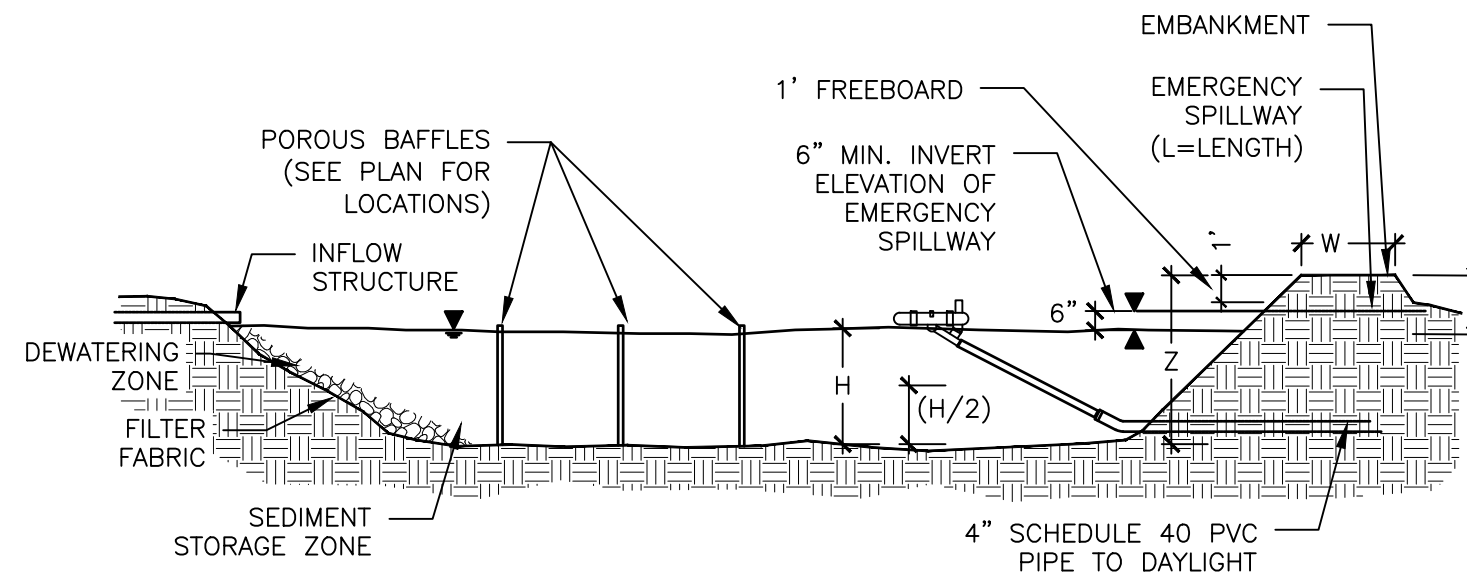
WATTLE DIMENSIONS

- LENGTH: 10-30 FT.
- DIA: 12\"/>

10 Straw Wattle
N.T.S.



PLAN VIEW



CROSS-SECTION VIEW

GENERAL NOTES:

- CONSTRUCTION OPERATION SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS NEEDED.
- THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE BEING CONSTRUCTED. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVERFILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT. SPILLWAYS SHOULD NOT BE CONSTRUCTED THROUGH FILL SECTIONS. ALL SPILLWAYS SHOULD BE LINED AND/OR INSTALL RIPRAP.
- ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER, UNLESS CERTIFIED BY REGISTERED GEOTECHNICAL ENGINEER.
- SEDIMENT BASIN EMBANKMENTS SHOULD BE PROVIDED WITH EROSION CONTROL AND STABILIZATION.
- STORAGE AREA IS SHOWN AS RECTANGULAR FOR ILLUSTRATIVE PURPOSES ONLY, AND MAY BE CONSTRUCTED IN ANY SHAPE PROVIDED THE MINIMUM STORAGE VOLUME REQUIREMENT IS MET. THE BASIN SHOULD ALSO BE ORIENTED SUCH THAT THE FILTER AND THE MAIN FLOW OF WATER AND SEDIMENT ARE ON OPPOSITE ENDS ON THE LONGER BASIN DIMENSIONS.
- REQUIRED STORAGE IS 1800 CUBIC FEET OF STORAGE VOLUME PER ACRES OF DISTURBED AREA. MINIMUM REQUIRED SURFACE AREA REQUIRED SHALL BE 325 ST PER CFS OF Q10 PEAK INFLOW.
- THE LENGTH OF THE STONE OUTLET (SPILLWAY) IS TO BE BASED ON A 10 YEAR STORM. EARTHEN SPILLWAYS-INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADES, DESIGN, WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8-INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTION(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGES AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS.
- INLETS-DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT-LADEN WATER UPPER END OF THE TRAP.
- EROSION CONTROL - CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.
- WHENEVER TOPOGRAPHY ALLOWS, THE BASIN LENGTH SHOULD BE TWICE (2X) THE BASIN WIDTH, TO ALLOW FOR SETTLING. BAFFLES SHOULD BE PROVIDED IN THE BASIN, BASED ON SECTION 6.65.
- CLEANOUT STAKES SHALL BE PLACED IN ALL SEDIMENT BASINS AT THE LOW POINT IN THE BASIN. THE STAKES SHALL BE MARKED SHOWING THE HALF FULL, CLEANOUT POINT, OF THE BASIN.
- SAFETY FENCING 3' HIGH SHOULD BE PLACED AROUND ALL SEDIMENT TRAPS THAT ARE IN VICINITY TO NON-CONSTRUCTION PEDESTRIAN TRAFFIC AND NOT ALREADY PROTECTED BY FENCING.
- FOR SLOPES GREATER THAN 10' IN LENGTH AND PROTECTED BY SILT FENCE AT THE TOE OF THE SLOPE, SLOPE TERRACING WILL BE REQUIRED.
- THE BERM ON SEDIMENT BASINS SHALL BE SEEDED ONCE FINAL GRADE HAS BEEN REACHED. THE SILT FENCE AND BASIN MAY BE REMOVED IF PERMISSION HAS BEEN GRANTED BY NCDENR LAND DEVELOPMENT INSPECTOR AFTER THE GRASS HAS GERMINATED AND STABLE GROUND HAS BEEN ESTABLISHED.
- ALL EROSION CONTROL MEASURES ARE TO BE DESIGNED TO THE STANDARDS DOCUMENTED IN THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES, EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

SKIMMER CONSTRUCTION SPECIFICATIONS

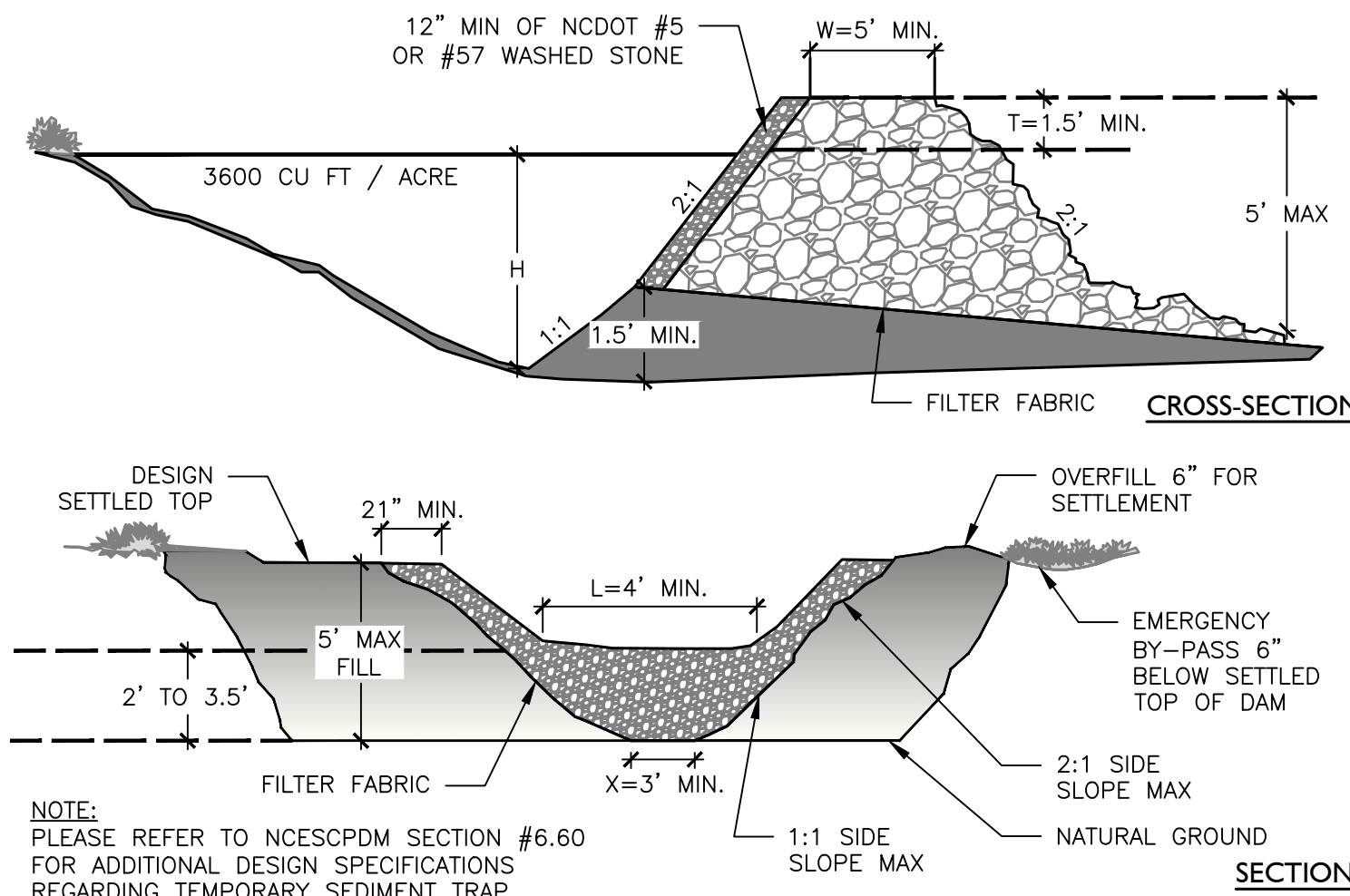
- PLACE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
- PLACE THE BARREL (TYPICALLY 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE OR AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
- ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURER'S INSTRUCTIONS, OR AS DESIGNED.
- LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.

MAINTENANCE

- INSPECT SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
- REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
- IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.
- IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
- CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.
- FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

BASIN NO.	DRAINAGE AREA (AC.)	DENUDE AREA (AC.)	Q10 (CFS)	BASIN VOLUME		BASIN SURFACE AREA		CLEANOUT DEPTH (FT.) H/2	H (FEET)	Z (FEET)	L (FEET)	T (FEET)	W (FEET)	SKIMMER Ø (IN.)
				REQUIRED (CU. FT.)	PROVIDE (CU. FT.)	REQUIRED (SQ. FT.)	PROVIDE (SQ. FT.)							
PRE	1.85	1.85	7.33	3330	6810	2381	4520	1.00	2.00	5.00	15.0	2.00	5.00	3.0
POST	2.30	0.64	13.89	1152	6810	4514	4520	1.00	2.00	5.00	15.0	2.50	5.00	3.0

1 Temporary Skimmer Basin
NCDENR STD. 6.64



GENERAL NOTES:

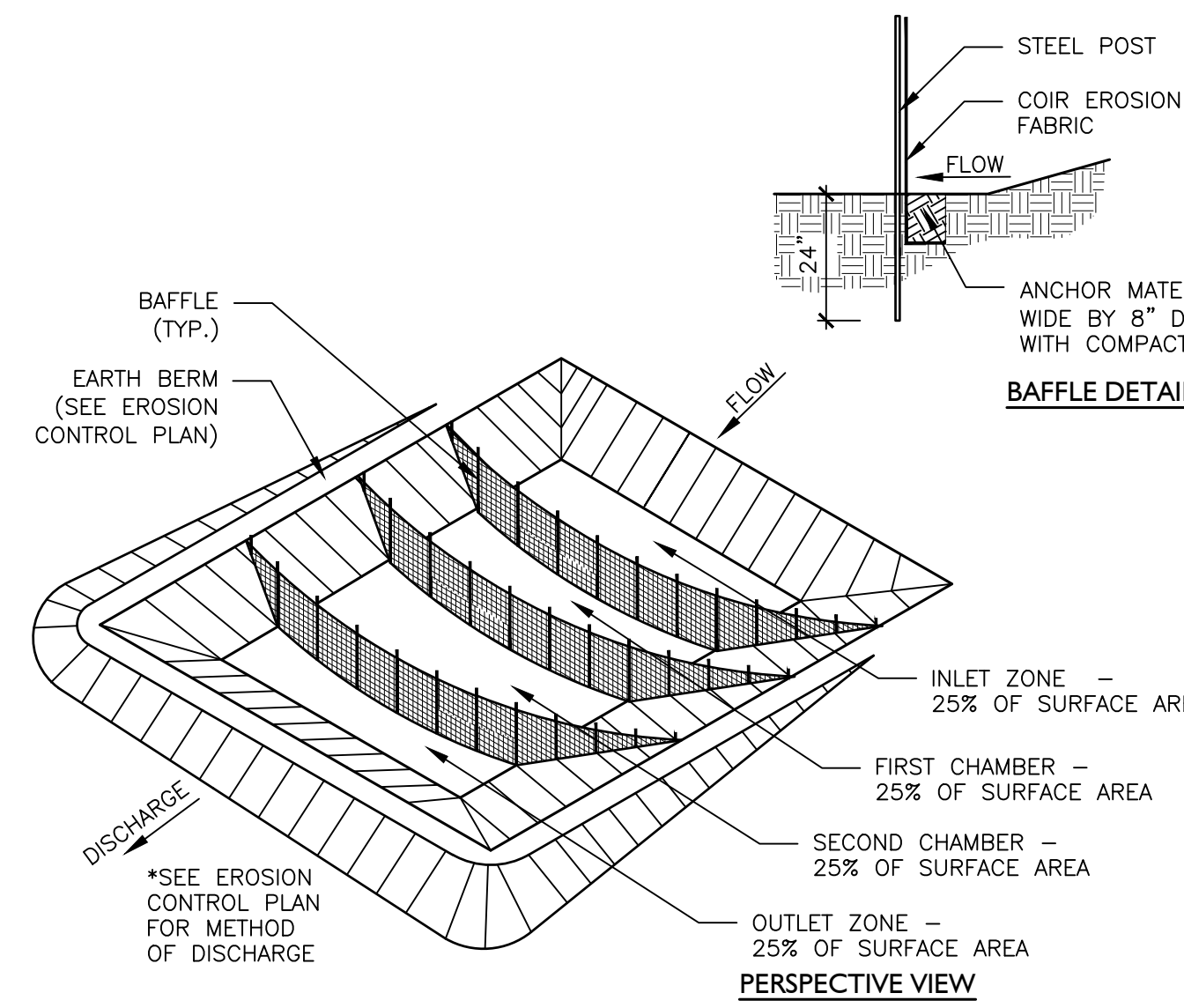
- CONSTRUCTION OPERATION SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAIL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW TRAP AS NEEDED.
- THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE BEING CONSTRUCTED. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVERFILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT. SPILLWAYS SHOULD NOT BE CONSTRUCTED THROUGH FILL SECTIONS. ALL SPILLWAYS SHOULD BE LINED AND/OR RIPRAPPED.
- ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER, UNLESS CERTIFIED BY REGISTERED GEOTECHNICAL ENGINEER.
- SEDIMENT TRAP EMBANKMENTS SHOULD BE PROVIDED WITH EROSION CONTROL AND STABILIZATION.
- STORAGE AREA IS SHOWN AS RECTANGULAR FOR ILLUSTRATIVE PURPOSES ONLY, AND MAY BE CONSTRUCTED IN ANY SHAPE PROVIDED THE MINIMUM STORAGE VOLUME REQUIREMENT IS MET. THE TRAP SHOULD ALSO BE ORIENTED SUCH THAT THE FILTER AND THE MAIN FLOW OF WATER AND SEDIMENT ARE ON OPPOSITE ENDS ON THE LONGER TRAP DIMENSIONS.
- REQUIRED STORAGE IS 3600 CUBIC FEET OF STORAGE VOLUME PER ACRES OF DISTURBED AREA. MINIMUM REQUIRED SURFACE AREA REQUIRED SHALL BE 435 ST PER CFS OF Q10 PEAK INFLOW.
- THE LENGTH OF THE STONE OUTLET (SPILLWAY) IS TO BE BASED ON A 10 YEAR STORM. EARTHEN SPILLWAYS-INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADES, DESIGN, WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8-INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTION(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGES AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS.
- INLETS-DISCHARGE WATER INTO THE TRAP IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT-LADEN WATER UPPER END OF THE TRAP.
- EROSION CONTROL - CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.
- WHENEVER TOPOGRAPHY ALLOWS, THE TRAP LENGTH SHOULD BE TWICE (2X) THE TRAP WIDTH, TO ALLOW FOR SETTLING. BAFFLES SHOULD BE PROVIDED IN THE TRAP, BASED ON SECTION 6.65.
- CLEANOUT STAKES SHALL BE PLACED IN ALL SEDIMENT TRAPS AT THE LOW POINT IN THE TRAP. THE STAKES SHALL BE MARKED SHOWING THE HALF FULL, CLEANOUT POINT, OF THE TRAP.
- SAFETY FENCING 3' HIGH SHOULD BE PLACED AROUND ALL SEDIMENT TRAPS THAT ARE IN VICINITY TO NON-CONSTRUCTION PEDESTRIAN TRAFFIC AND NOT ALREADY PROTECTED BY FENCING.
- FOR SLOPES GREATER THAN 10' IN LENGTH AND PROTECTED BY SILT FENCE AT THE TOE OF THE SLOPE, SLOPE TERRACING WILL BE REQUIRED.
- THE BERM ON SEDIMENT TRAPS SHALL BE SEEDED ONCE FINAL GRADE HAS BEEN REACHED. THE SILT FENCE AND TRAPS MAY BE REMOVED IF PERMISSION HAS BEEN GRANTED BY NCDENR LAND DEVELOPMENT INSPECTOR AFTER THE GRASS HAS GERMINATED AND STABLE GROUND HAS BEEN ESTABLISHED.
- ALL EROSION CONTROL MEASURES ARE TO BE DESIGNED TO THE STANDARDS DOCUMENTED IN THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES, EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

TRAP NO.	DRAINAGE AREA (AC.)	DENUDE AREA (AC.)	Q10 (CFS)	TRAP VOLUME		TRAP SURFACE AREA		CLEANOUT DEPTH (FT.) H/2	X (FEET)	L (FEET)	H (FEET)	Z (FEET)	W (FEET)
				REQUIRED (CU. FT.)	PROVIDE (CU. FT.)	REQUIRED (SQ. FT.)	PROVIDE (SQ. FT.)						
1	2.75	2.66	10.55	9576	9946	4590	7041	1.27	2.53	10	1.53	5	7

MAINTENANCE

- INSPECT SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE.
- REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
- CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE POOL AREAS.

2 Temporary Sediment Trap
NCDENR STD. 6.60



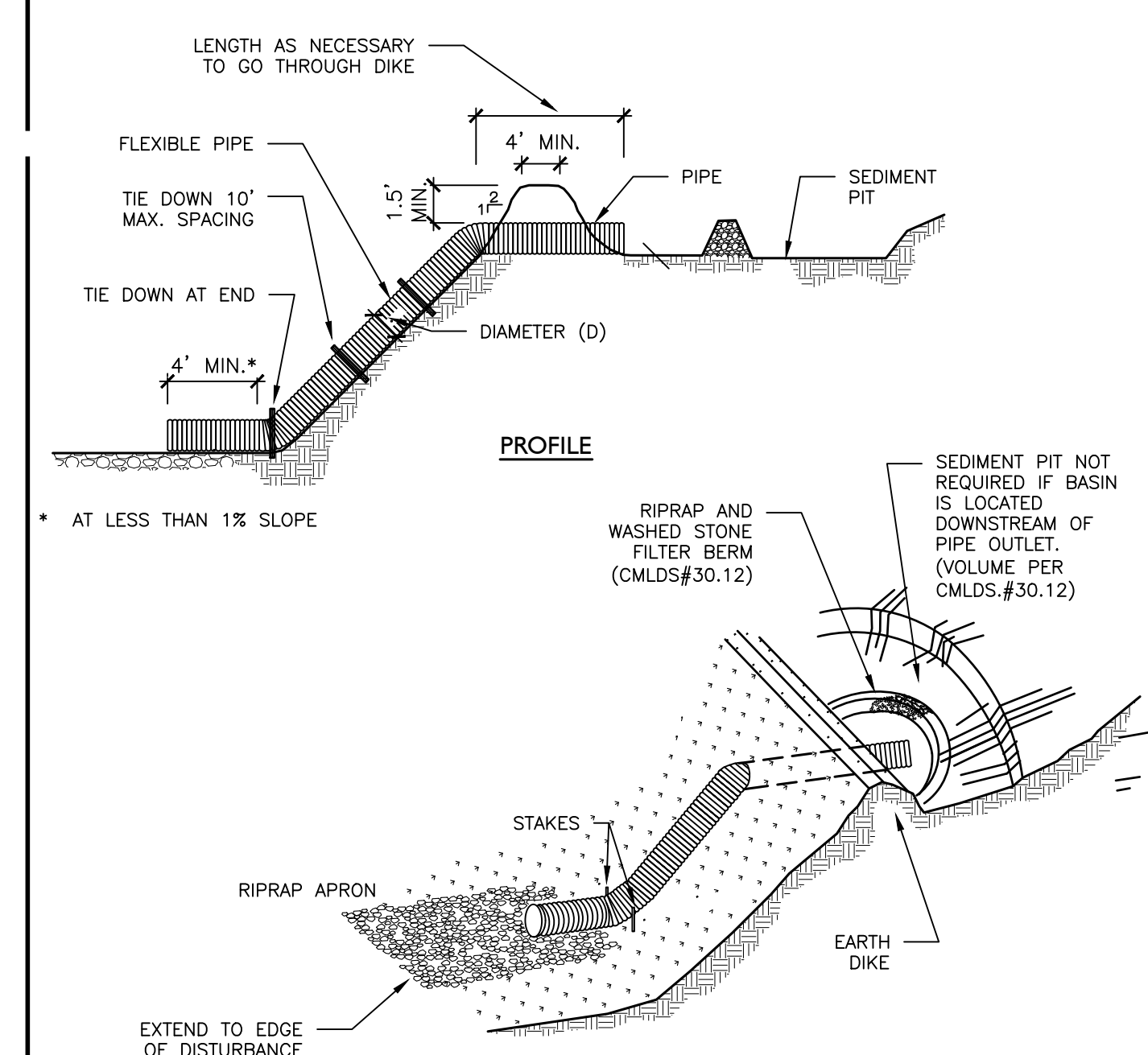
CONSTRUCTION SPECIFICATION

- GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
- INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP, SEDIMENT BASIN AND/OR SKIMMER BASIN AS SHOWN.
- STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES, SPACED A MAXIMUM OF 4 FEET APART, AND INSTALLED UP THE SIDES OF THE BASIN AS WELL. THE TOP OF THE FABRIC SHOULD BE 6 INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS.
- BAFFLE MATERIAL SHALL BE 700 G/M² COIR EROSION FABRIC.
- INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN 20 FEET IN LENGTH MAY USE 2 BAFFLES THAT DIVIDES THE BASIN IN THIRDS.
- ADD A SUPPORT WIRE OR ROPE ACROSS THE TOP OF THE MEASURE TO PREVENT SAGGING.
- WRAP BAFFLE MATERIAL OVER THE TOP WIRE. ATTACH FABRIC TO A ROPE AND A SUPPORT STRUCTURE WITH ZIP TIES, WIRE, OR STAPLES. USE 3 TIES PER POST ALL WITHIN TOP 8" OF FABRIC.
- THE BOTTOM AND SIDES OF THE FABRIC SHOULD BE ANCHORED IN A TRENCH 8" DEEP. IN LIEU OF EXCAVATING A TRENCH, THE FABRIC MAY BE INSTALLED WITH A PIECE OF EQUIPMENT SPECIFICALLY DESIGNED TO SLICE THE GROUND WITH A DISC.
- DO NOT SPLICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE BASIN.

MAINTENANCE

- INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
- BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
- REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.

3 Temporary Porous Baffle
NCDEQ STD. 6.65



CONSTRUCTION SPECIFICATIONS:

- THE TOP OF THE EARTH DIKE OVER THE INLET PIPE AND THOSE DIKES CARRYING WATER TO THE PIPE SHALL BE AT LEAST 1.5 FEET HIGHER AT ALL POINTS THAN THE TOP OF THE INLET PIPE.
- THE PIPE SHALL BE FLEXIBLE WITH WATER TIGHT CONNECTING BANDS. FLEXIBLE PIPE SHOULD BE STAKED ON EITHER SIDE.
- A RIPRAP APRON SHALL BE PROVIDED AT THE OUTLET, IF EMPTYING INTO A DISTURBED AREA.
- THE SOIL AROUND AND UNDER THE INLET PIPE AND ENTRANCE SECTION SHALL BE HAND TAMPED IN 4" LIFTS TO THE TOP OF THE EARTH DIKE.
- FOLLOW-UP INSPECTION AND ANY NEEDED MAINTENANCE SHALL BE PERFORMED AFTER EACH STORM BY THE FINANCIALLY RESPONSIBLE PARTY OR HIS AGENT.
- OUTLET PIPE SHOULD BE TAKEN OVER OR THROUGH ANY SILT FENCE, TAKING CARE NOT TO VOID THE EFFECTIVENESS OF THE SILT FENCE.

4 Temporary Pipe Slope Drain
N.T.S.

Seals:



Corp. NC license: F-1320

Project no: 17000385

Date: 02.17.21

Revisions:

Sheet Title:

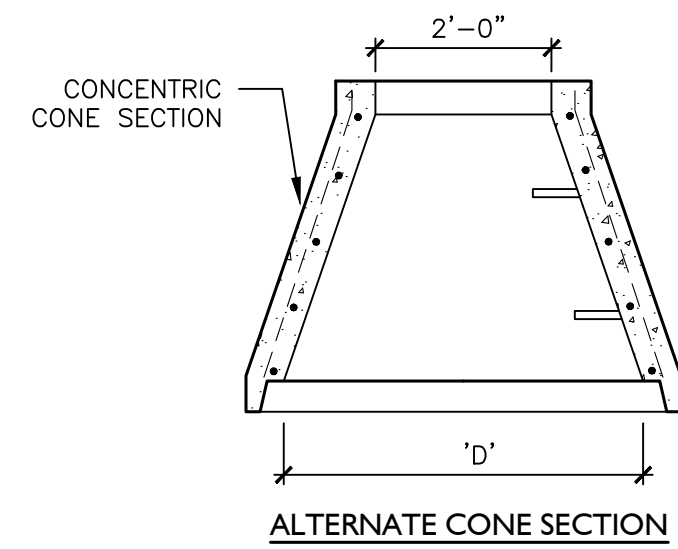
SITE
CONSTRUCTION
DETAILS

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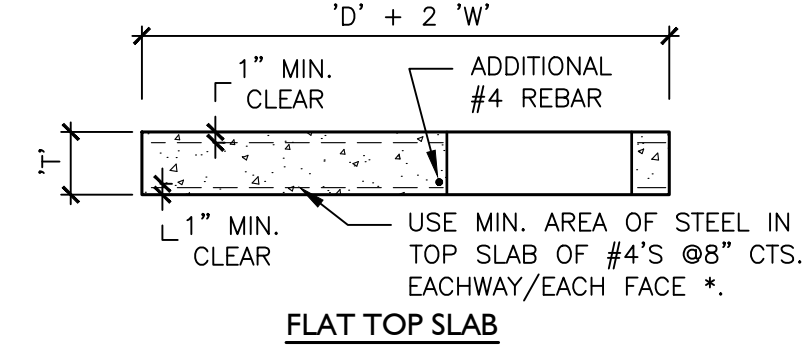
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GENERAL NOTES

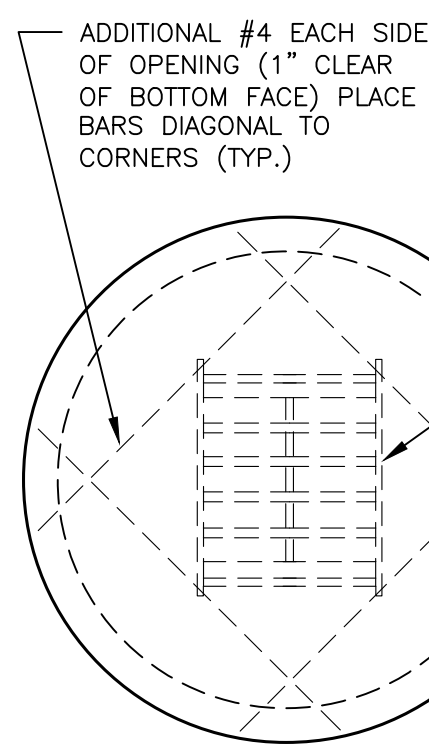
- USE 4000 PSI MINIMUM COMPRESSIVE STRENGTH CONCRETE.
- FABRICATE, ASSEMBLE AND DESIGN PRECAST MANHOLE COMPONENTS ACCORDANCE WITH AASHTO M199.
- ASSEMBLE RISER AND GRADE RINGS WITH THE STEPS SPACED 12" FROM THE TOP TO THE BOTTOM OF THE MANHOLE.
- WHERE THE MANHOLE IS EXPOSED TO ROAD TRAFFIC, CONSTRUCT THE TOP OF MANHOLE FLUSH WITH THE GROUND AND A MINIMUM OF 9" ABOVE THE GROUND AT OTHER LOCATIONS.
- LIMIT DEPTH OF FILL TO 30"-0" FROM FINISH GRADE TO TOP OF BOTTOM SLAB.
- THE MIN. SLAB THICKNESS 'T' IS THE DIMENSION OF THE THINNEST PORTION OF THE TOP/BOTTOM SLAB.
- * TOP MAT OF REINFORCEMENT MAY BE NEGLECTED IF TOP SLAB HAS A DISTINGUISHABLE TOP AND BOTTOM.



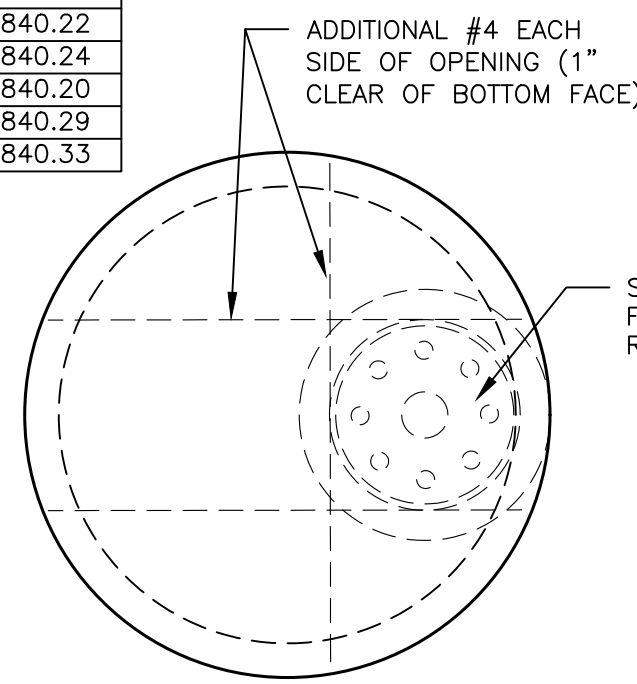
D	W	T	As
INTERNAL DIAMETER (FT.)	MIN. WALL THICKNESS (IN.)	MIN. TOP/BOTTOM SLAB THICKNESS (IN.)	MIN. CIRCUM-FERENTIAL AREA OF STEEL PER VERTICAL FT. (SQ. IN.)
4	4	6	0.12
5	5	8	0.15
6	6	8	0.18



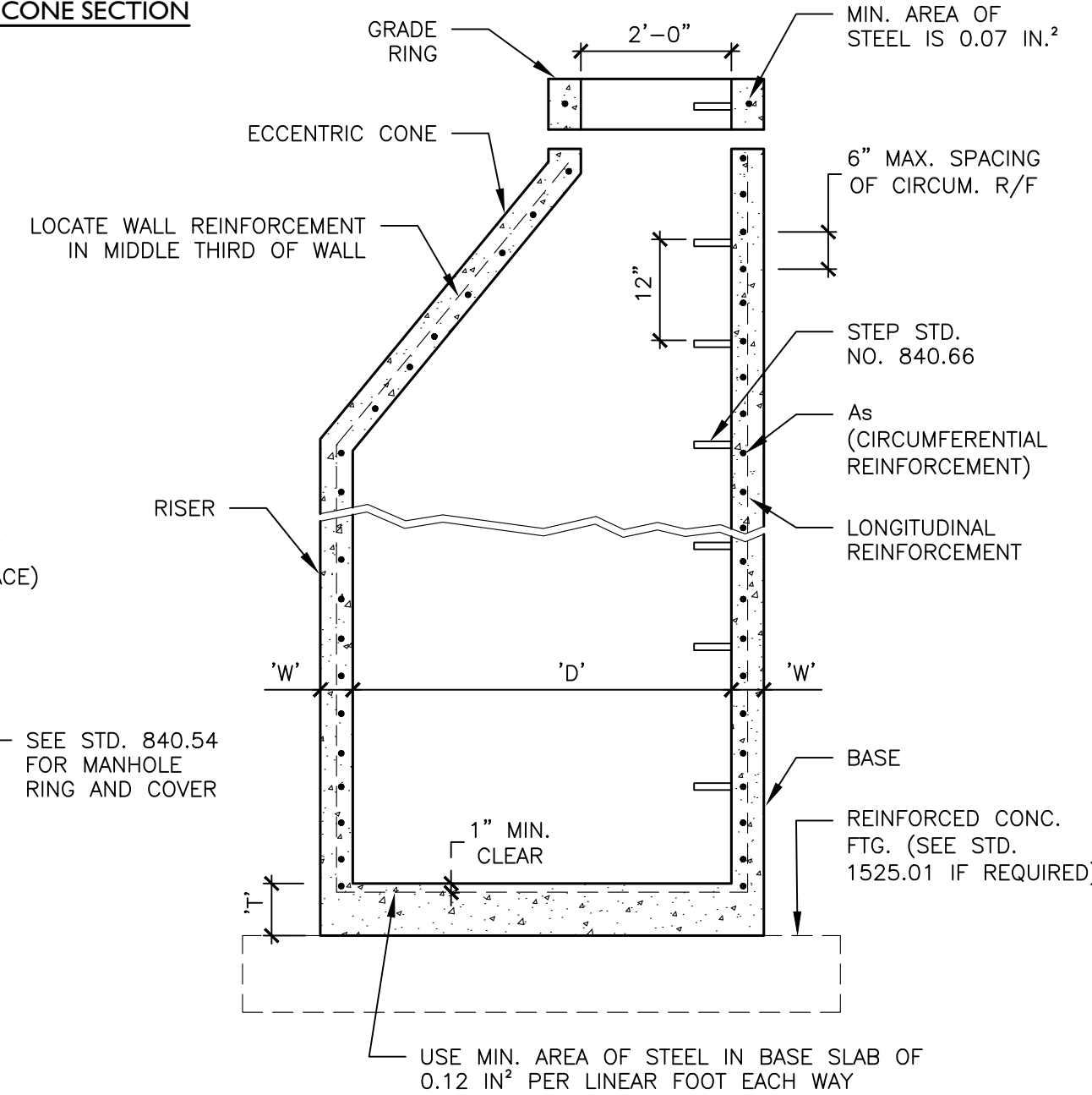
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	840.20
	840.29
	840.33



GRATED INLET OPTION

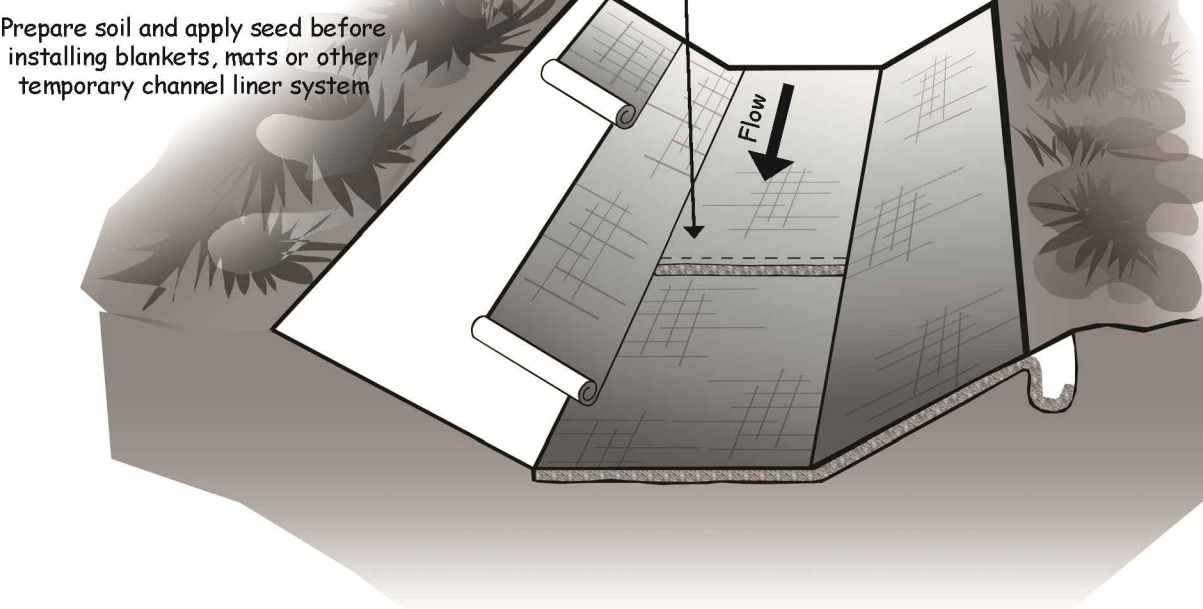
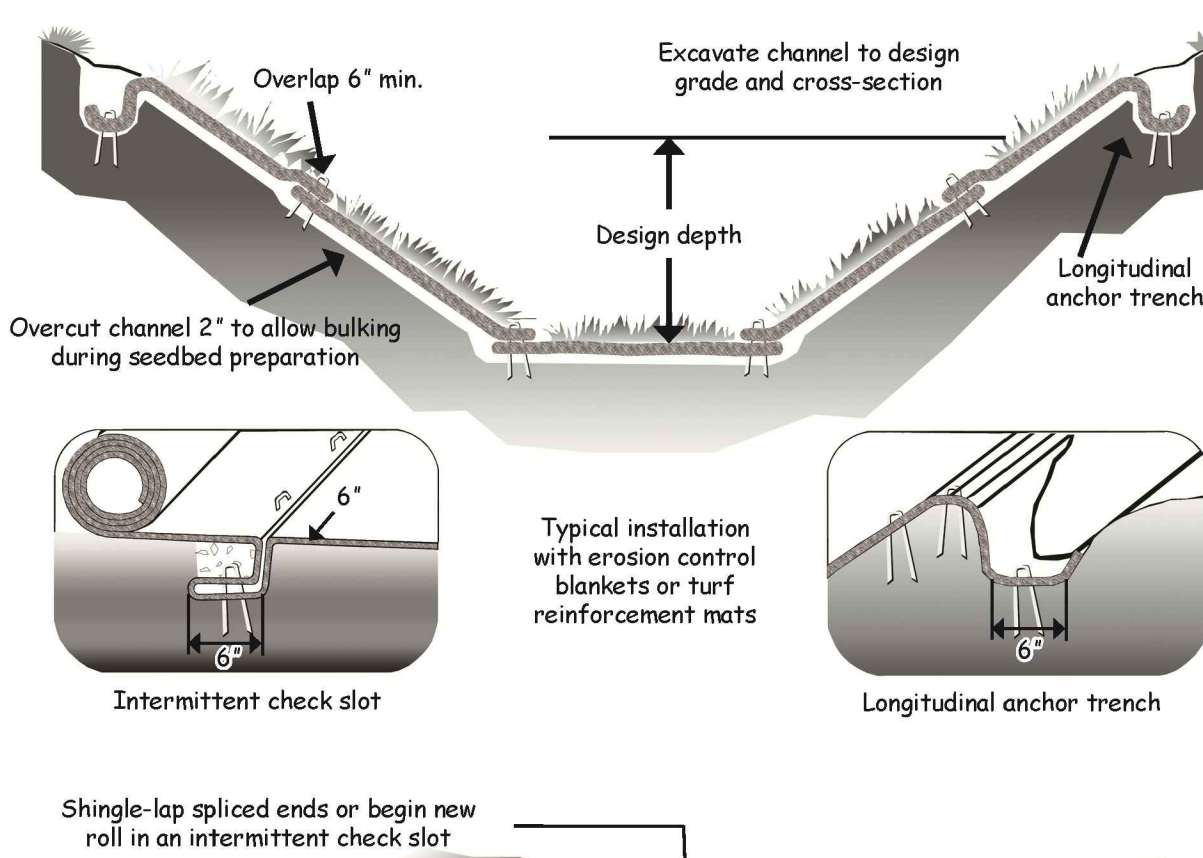


MANHOLE OPTION



TYPICAL MANHOLE SECTION

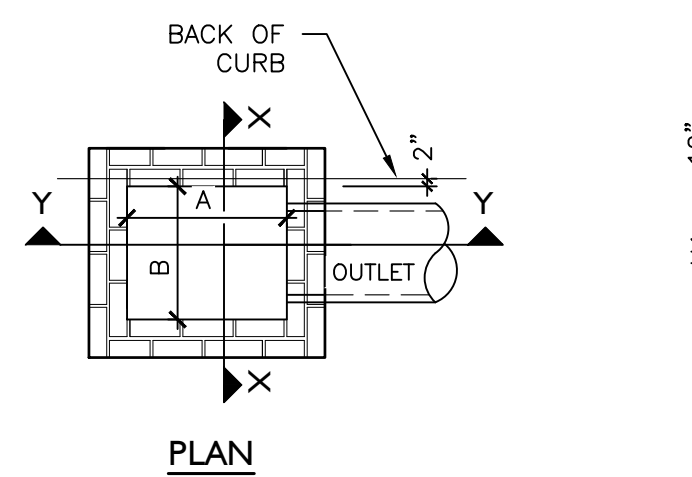
1 Precast Storm Manhole 12" Thru 48" Pipe
NCDOT STD. 840.52



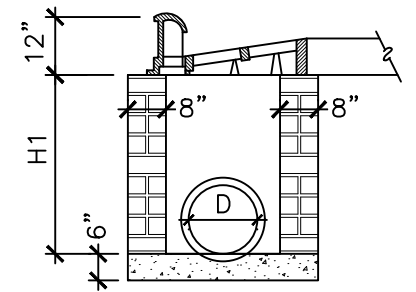
- MAINTENANCE NOTES**
- INSPECT ROLLED EROSION CONTROL PRODUCTS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. REPAIR IMMEDIATELY.
 - GOOD CONTACT WITH THE GROUND MUST BE MAINTAINED AND EROSION MUST NOT OCCUR BENEATH RECP.
 - ANY AREAS OF THE RECP THAT ARE DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPLACED AND STAPLED.
 - IF EROSION OCCURS DUE TO POORLY CONTROLLED DRAINAGE, THE PROBLEM SHALL BE FIXED AND THE ERODED AREA PROTECTED.
 - MONITOR AND REPAIR THE RECP AS NECESSARY UNTIL GROUND COVER IS ESTABLISHED.

2 Rolled Erosion Control Products
NCDEQ STD. 6.17

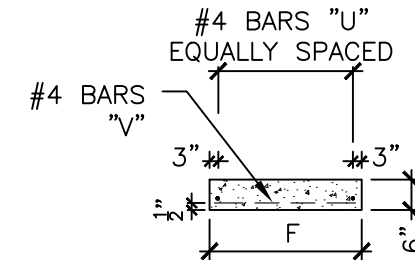
DIMENSIONS OF BOX AND PIPE										DIMENSIONS AND QUANTITIES FOR BRICK CATCH BASIN									
PIPE	SPAN		WIDTH		HEIGHT	COVER		REINFORCING				CUBIC YARDS OF CONCRETE IN BOX				BRICK MASONRY			
	D	A	B	C		E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	TOTAL	TOTAL	C.U. YDS.	PER FT. HT.
15"	3'-0"	2'-4"	-	-	2'-6"	-	-	-	-	-	-	-	-	-	-	0.294	0.294	0.823	0.329
18"	3'-0"	2'-4"	-	-	2'-10"	-	-	-	-	-	-	-	-	-	-	0.294	0.294	0.933	0.329
24"	3'-0"	2'-4"	-	-	3'-4"	-	-	-	-	-	-	-	-	-	-	0.294	0.294	1.098	0.329
30"	3'-0"	2'-4"	3'-4"	3'-0"	3'-2"	1'-10"	4'-4"	4	1'-6"	3	4'-1"	3	4'-1"	45	0.147	0.374	0.522	1.306	0.329
36"	3'-0"	2'-4"	3'-10"	3'-0"	3'-8"	2'-4"	4'-4"	4	2'-0"	4	4'-1"	3	4'-1"	49	0.187	0.415	0.602	1.870	0.329
42"	3'-0"	2'-4"	-	4'-5"	4'-4"	2'-11"	3'-6"	4	1'-9"	3	3'-3"	3	3'-3"	38	0.135	0.390	0.525	1.847	0.329
48"	3'-0"	2'-4"	-	5'-0"	4'-10"	2'-8"	3'-6"	4	2'-6"	4	3'-3"	3	3'-3"	40	0.173	0.430	0.603	2.185	0.329
54"	3'-0"	2'-4"	-	5'-7"	5'-4"	3'-3"	3'-6"	4	3'-0"	6	3'-3"	3	3'-3"	48	0.211	0.470	0.680	2.553	0.329



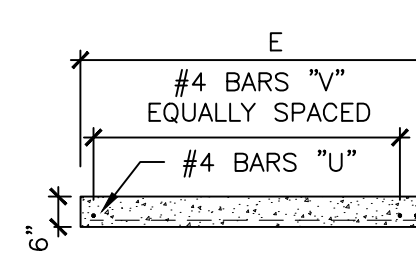
PLAN



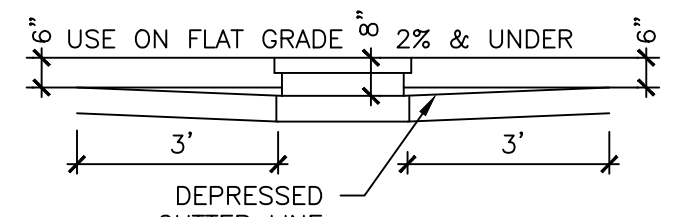
SECTION X-X



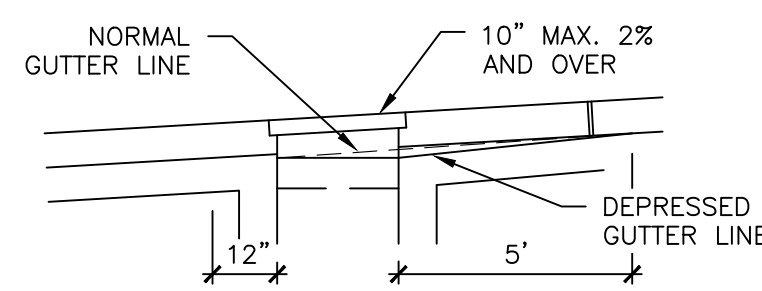
SECTION S-S



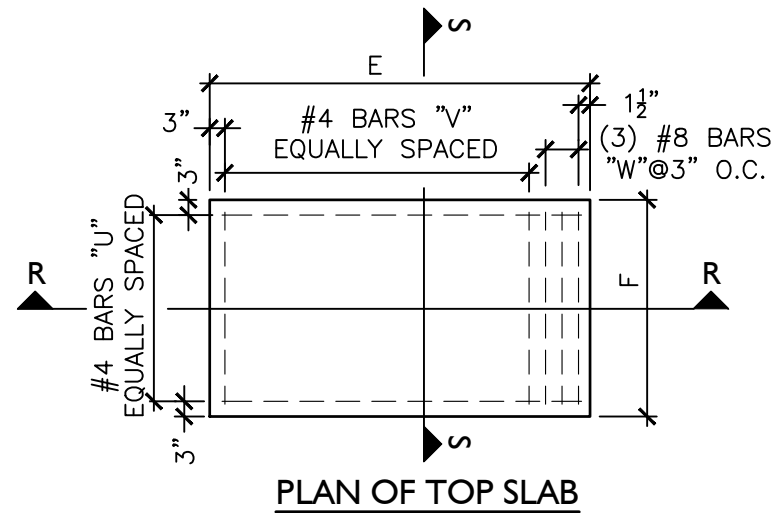
SECTION R-R



ELEVATION

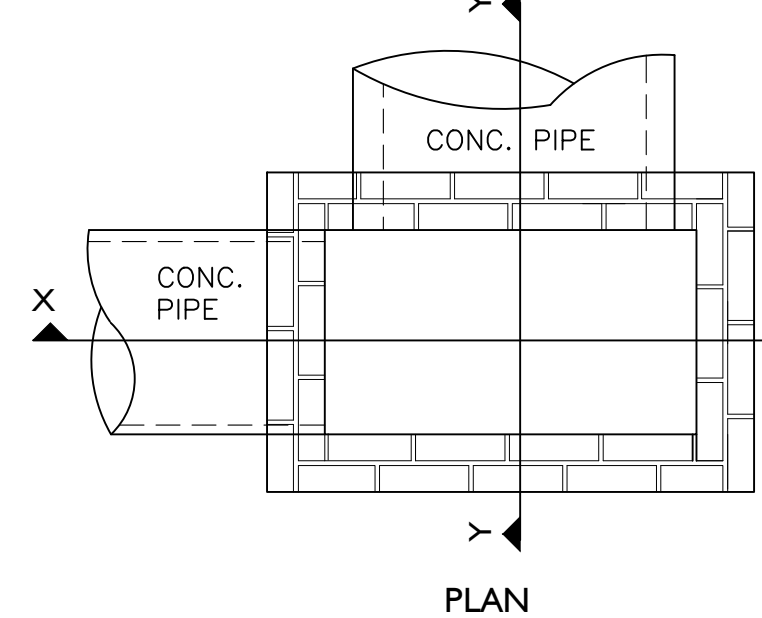


ELEVATION

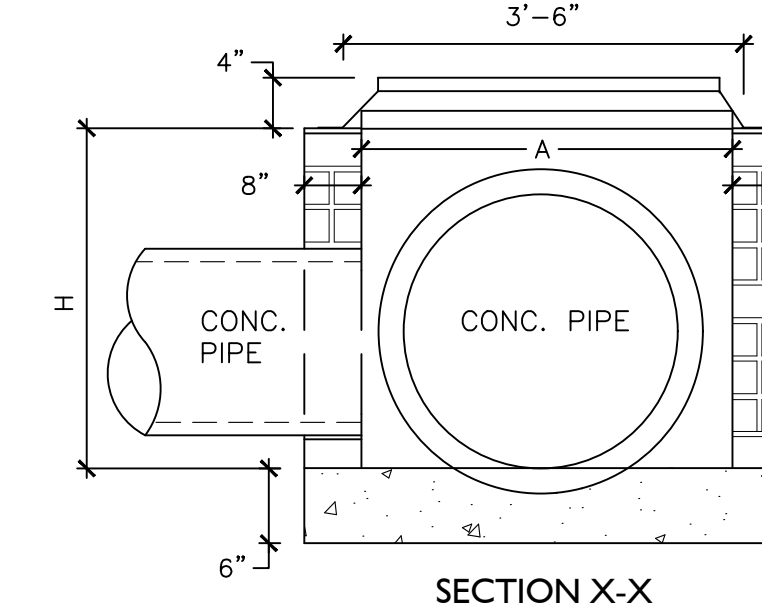


PLAN OF TOP SLAB

- NOTES:**
- MORTAR JOINTS SHOULD BE BETWEEN 1/2" ± 1/4" THICK.
 - ALL CONCRETE TO BE 3000 P.S.I. COMPRESSIVE STRENGTH.
 - PRECAST CAN BE SUBSTITUTED. SUBMIT SHOP DRAWINGS ON ALL STRUCTURES.
 - ALL CATCH BASINS OVER 3'-6" IN DEPTH SHALL BE PROVIDED WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH NCDOT STD. #840.66.
 - CONCRETE BRICK MAY BE USED IN LIEU OF HARD COMMON CLAY BRICK.
 - JUMBO BRICK WILL BE PERMITTED.
 - FOR 8'-0" IN HEIGHT OR LESS USE 8" WALL OVER 8'-0" IN HEIGHT USE 12" WALL TO 6'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY.
 - ALL PIPE IN STORM DRAIN STRUCTURE TO BE STRUCK EVEN WITH THE INSIDE WALL, GROUTED AND BRUSHED SMOOTH.
 - WEEP HOLE(S) SHALL BE PLACED IN BACK WALL. A STONE DRAIN CONSISTING OF 1 (ONE) CUBIC FOOT OF NUMBER 78M STONE CONTAINED IN A BAG OF POROUS FABRIC SHALL BE PLACED AT WEEP HOLE.
 - BRICK SHALL BE BONDED WITH FULL HEADERS EVERY 3 COURSES.
 - FRAME AND GRATE SHALL BE IN ACCORDANCE WITH NCDOT STD. NO. 840.03 WITH DIRECTIONAL GRATES AS APPROPRIATE.



PLAN



SECTION X-X

- NOTES:**
- ALL DROP INLETS OVER 3'-6" IN DEPTH TO BE PROVIDED WITH STEPS 1'-2" ON CENTERS.
 - ALL CONCRETE TO BE 3000 P.S.I. COMPRESSIVE STRENGTH.
 - MORTAR JOINTS SHOULD BE BETWEEN 1/2" AND 3/4" THICK.
 - BRICK MASONRY DROP INLET NOT TO BE USED IN LOCATIONS SUBJECT TO TRAFFIC. FOR STRUCTURES WITHIN TRAFFIC BEARING AREAS, USE PRE-CAST STRUCTURE INSTEAD.
 - JUMBO BRICK WILL BE PERMITTED. CONCRETE BRICK OR 4" SOLID CONCRETE BLOCKS MAY BE USED IN LIEU OF HARD COMMON CLAY BRICK.
 - FOR 8'-0" IN HEIGHT OR LESS USE 8" WALL OVER 8'-0" IN HEIGHT USE 12" WALL TO 6'-0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY.
 - ALL PIPE IN STORM DRAIN STRUCTURE TO BE STRUCK EVEN WITH THE INSIDE WALL, GROUTED AND BRUSHED SMOOTH.
 - ALL SLABS SHALL BE FORMED.
 - FRAME AND GRATE FOR THIS STRUCTURE IN ALL SITUATIONS SHALL BE "US FOUNDRY" #4139 & #6429 OR APPROVED EQUAL WITH H2O LOADING CAPACITY.
 - REFER TO NCDOT STRUCTURE DETAILS FOR PIPE SIZES LARGER THAN 24".
 - USE CONCRETE MASONRY UNITS OR (2) 6" PRECAST GRADE RINGS TO SET GRATES. ALLOW FOR TOP 1" TO BE ADJUSTED ACCORDINGLY.
 - PRE-CAST BOXES CAN BE SUBSTITUTED. SUBMIT SHOP DRAWINGS ON ALL STRUCTURES.

DIMENSIONS AND QUANTITIES									
PIPE SIZE	DIMENSIONS OF BOX & PIPE			CONC. IN BASE C.U. YDS.	TOTAL PER FT. HEIGHT	TOTAL BRICK MASONRY		DEDUCTIONS FOR ONE PIPE	
	SPAN	WIDTH	HEIGHT			BRICK	MIN. COPING	H	C.M.
12"	3'-0"	2'-0"	2'-8"	0.267	0.313	0.037	0.871	0.020	0.032
15"	/	/	3'-0"	/	/	/	0.976	0.031	0.047
18"	/	/	3'-5"	/	/	/	1.106	0.044	0.065
24"	3'-0"	2'-0"	4'-0"	0.267	0.313	0.037	1.289	0.078	0.113

4 Drop Inlet Detail
N.T.S.

3 Curb Inlet Detail
N.T.S.



Seals:



Corp. NC license: F-1320

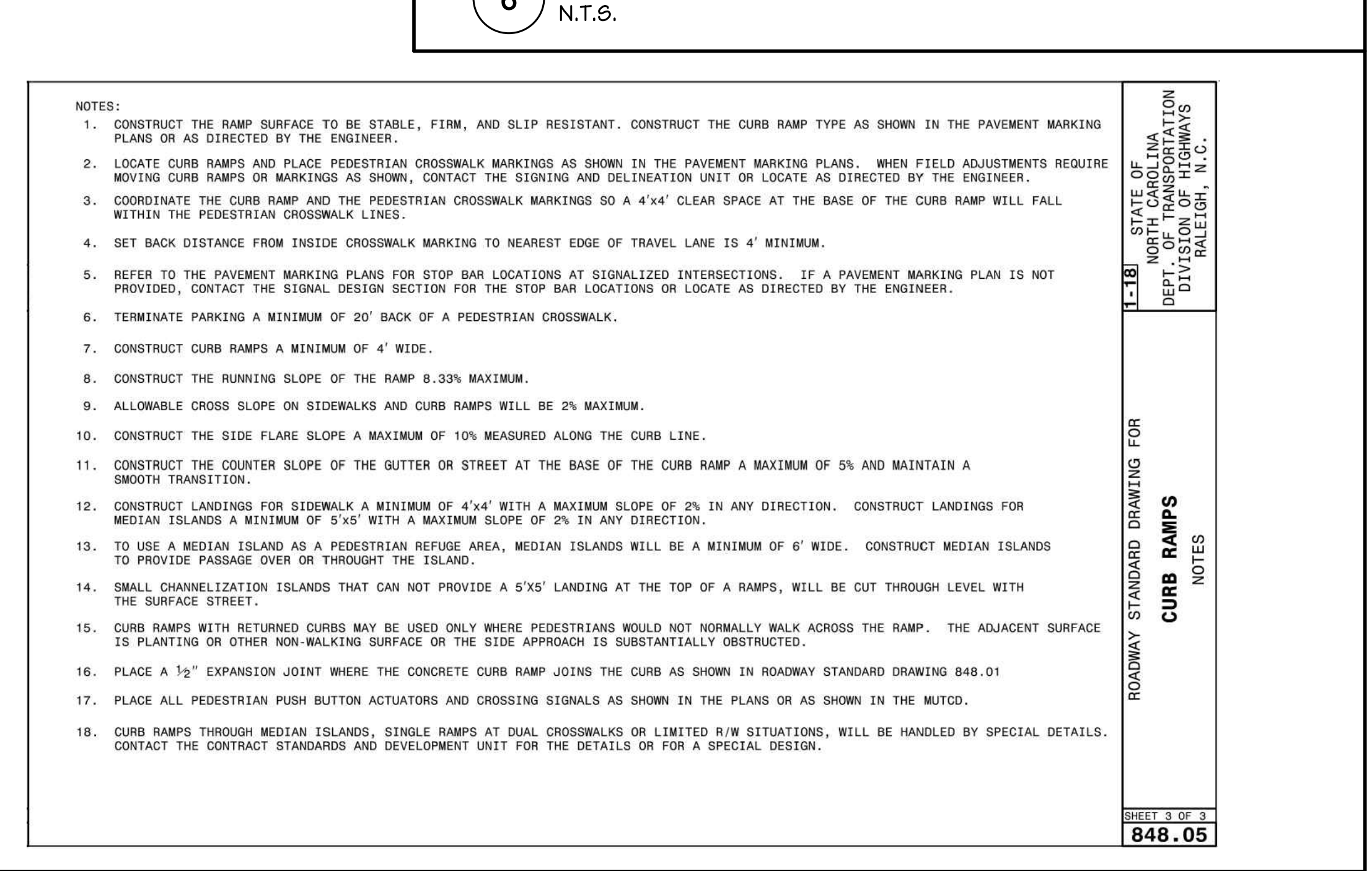
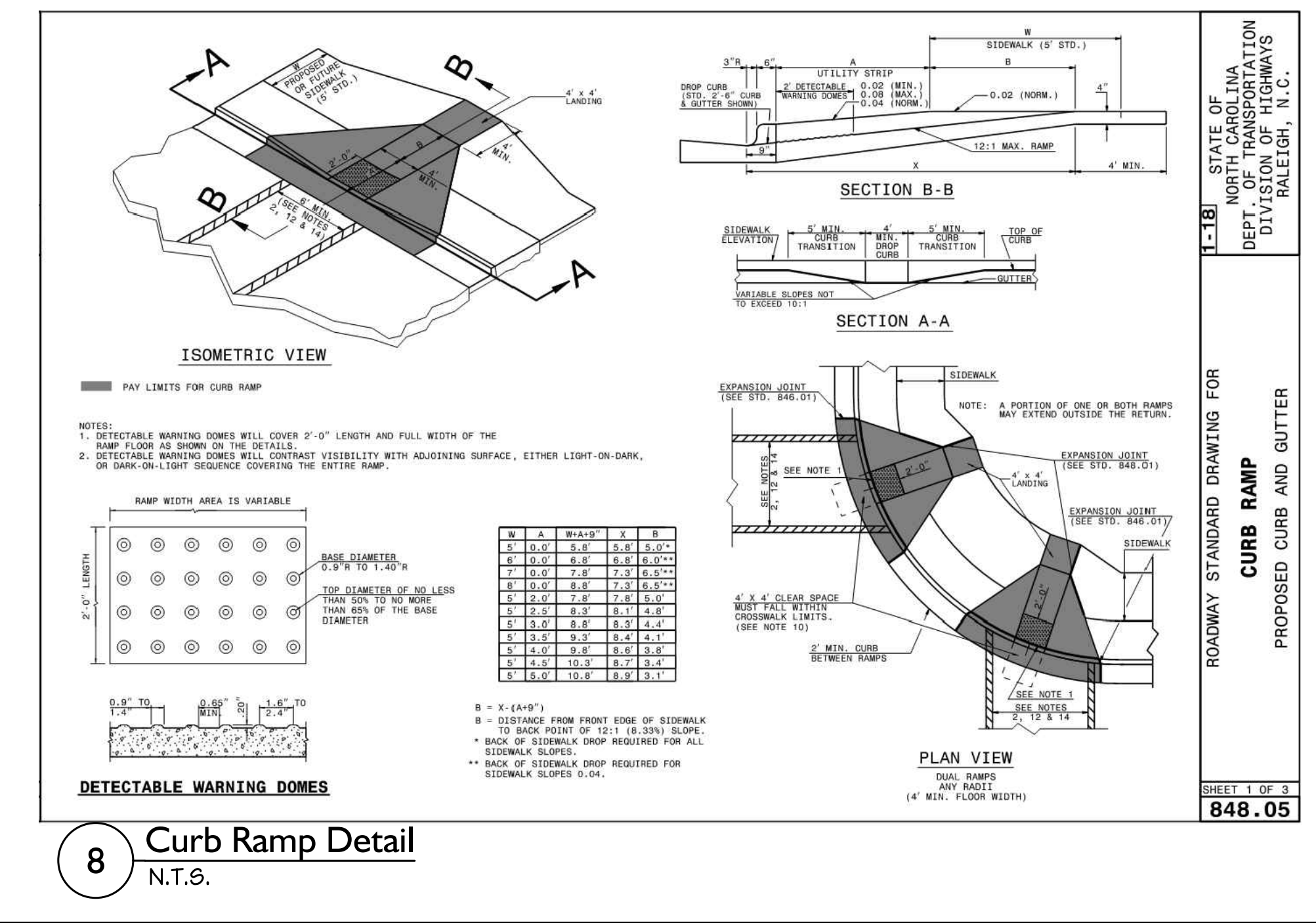
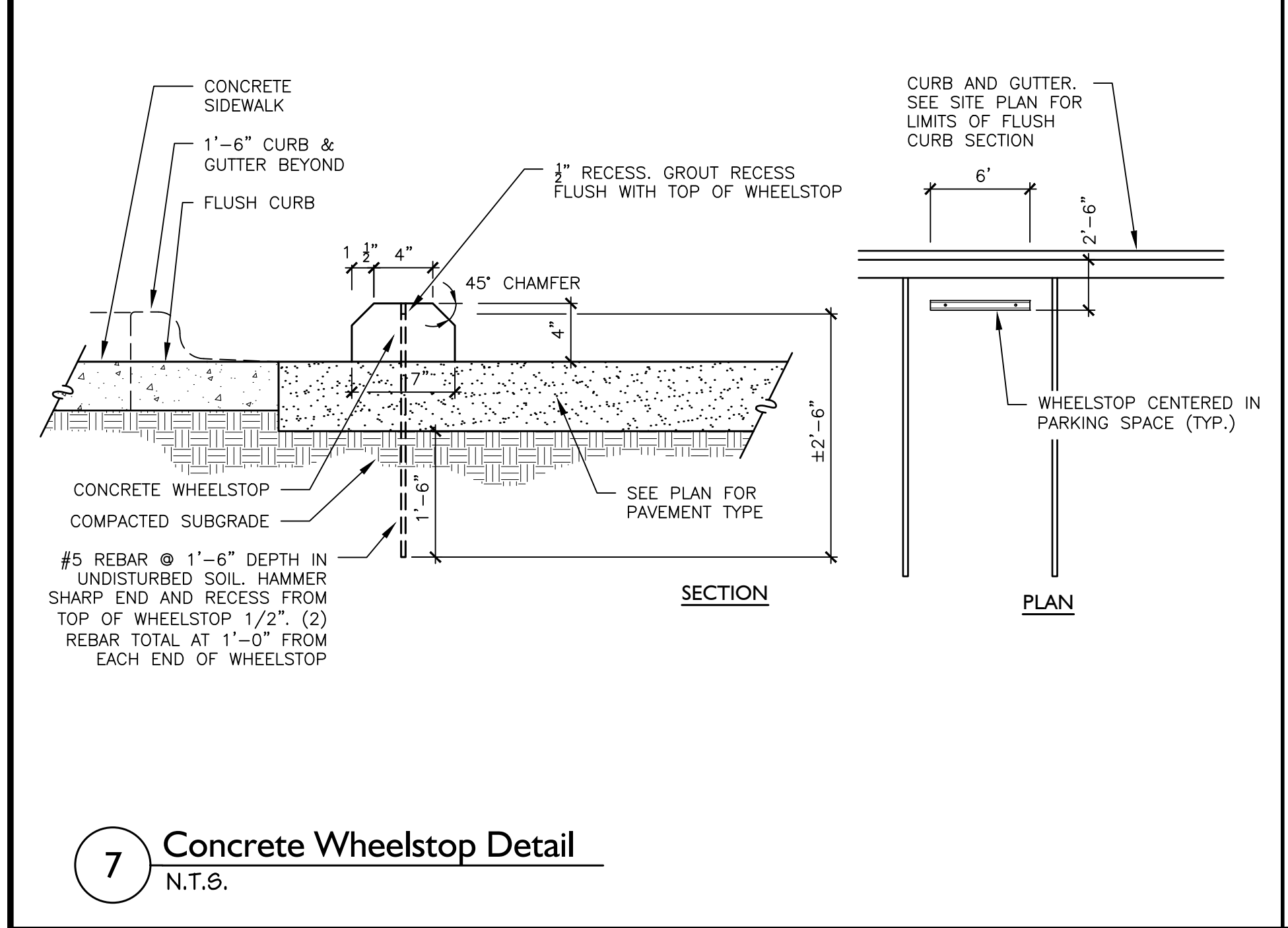
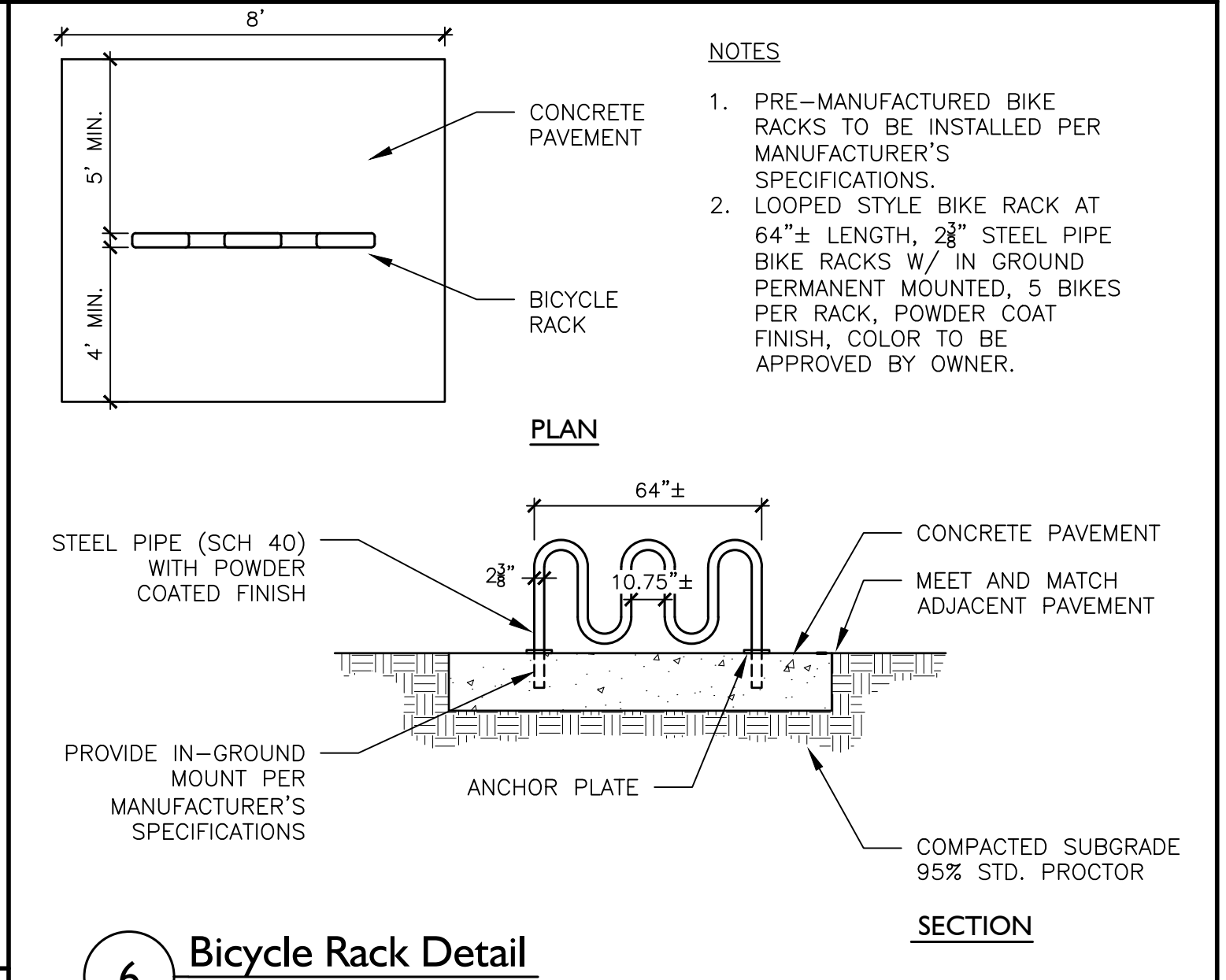
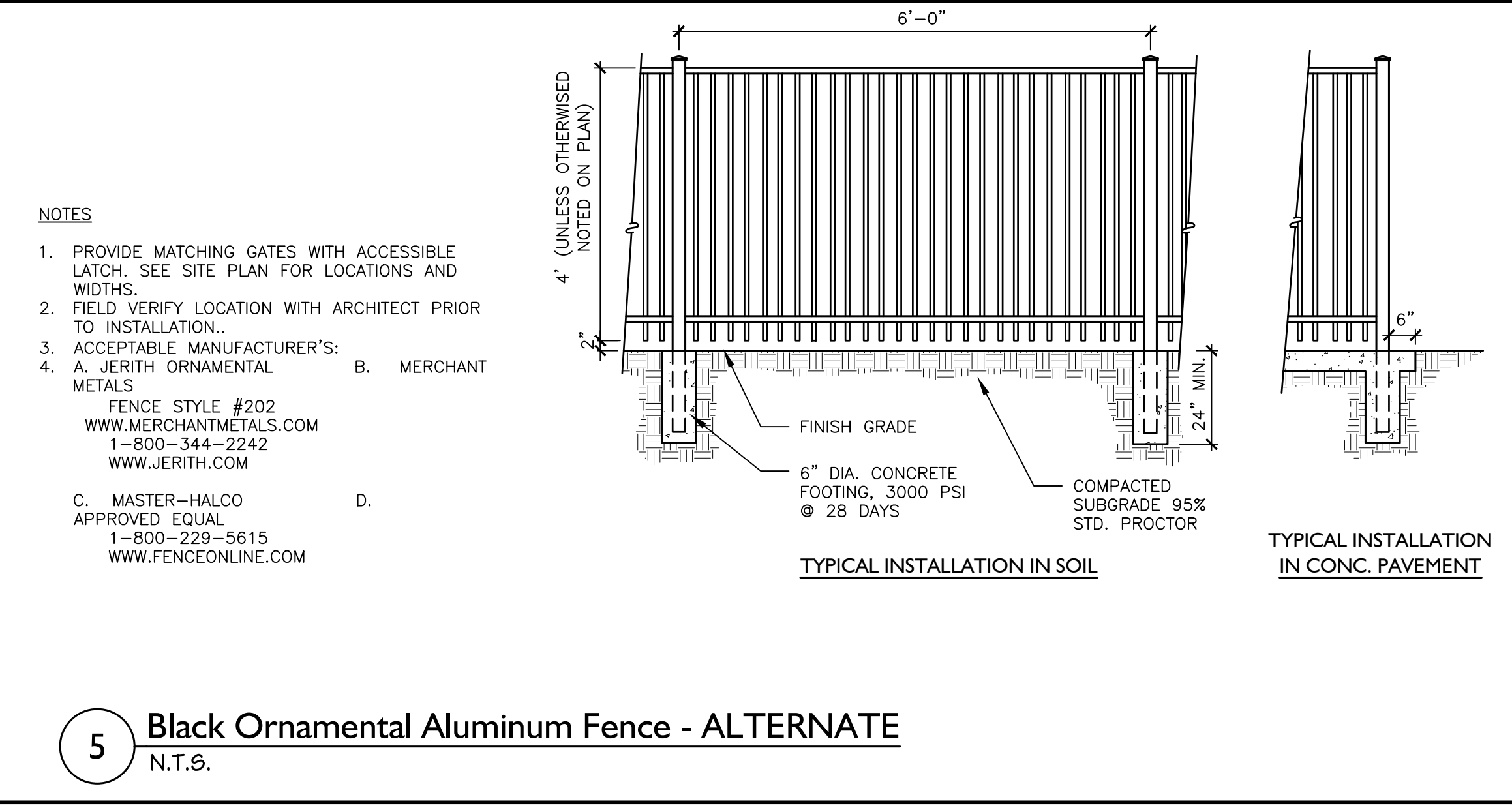
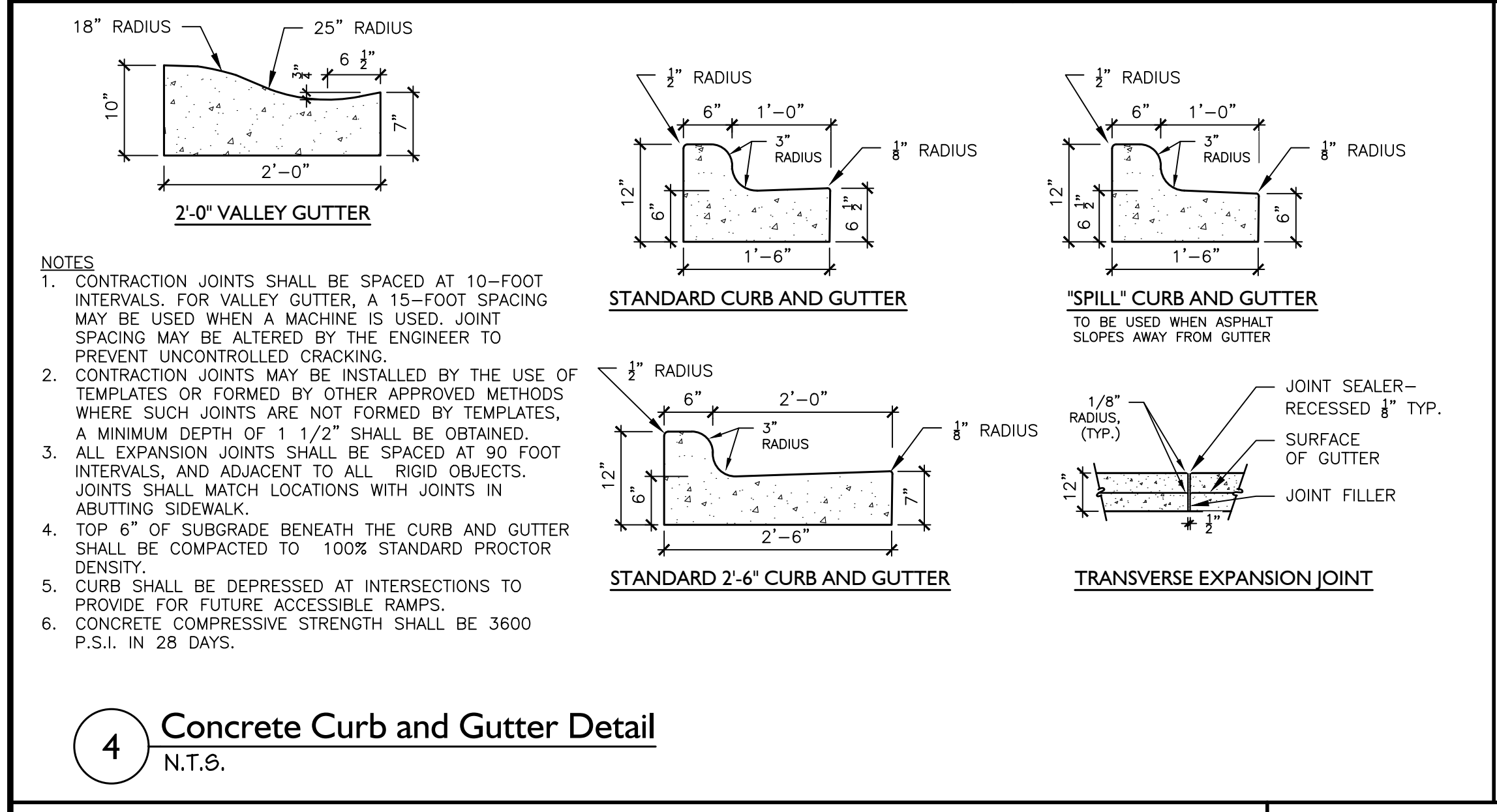
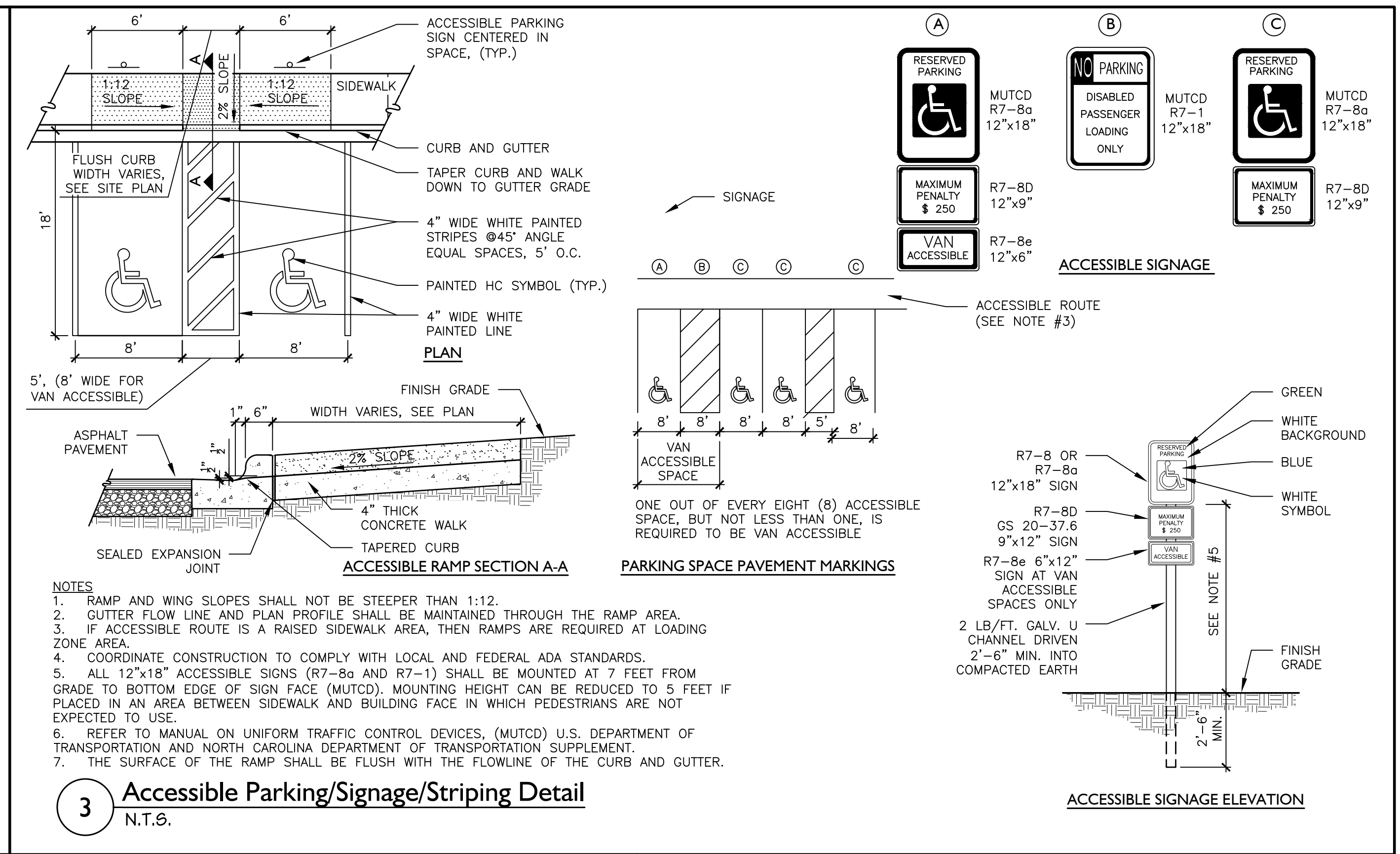
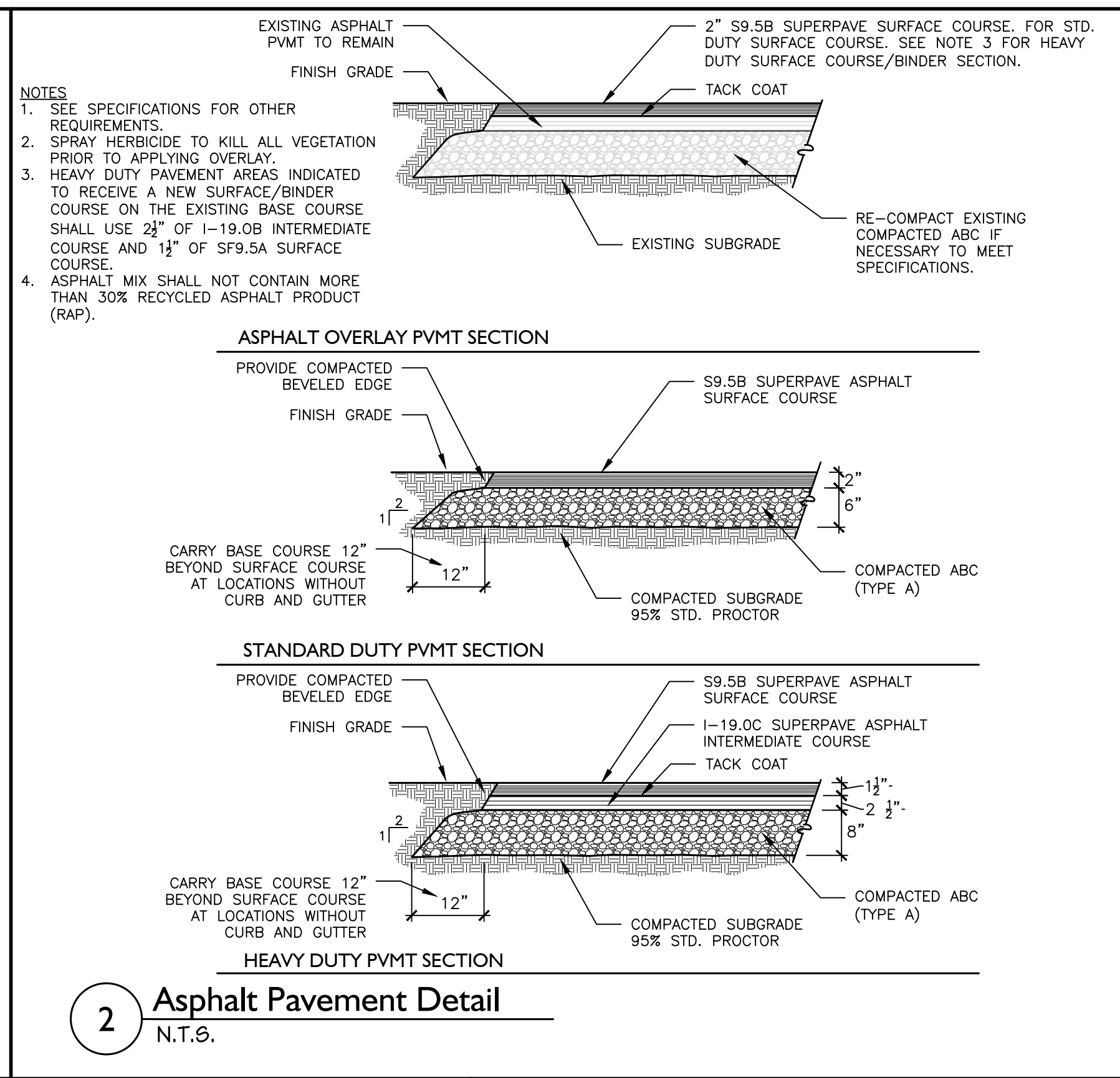
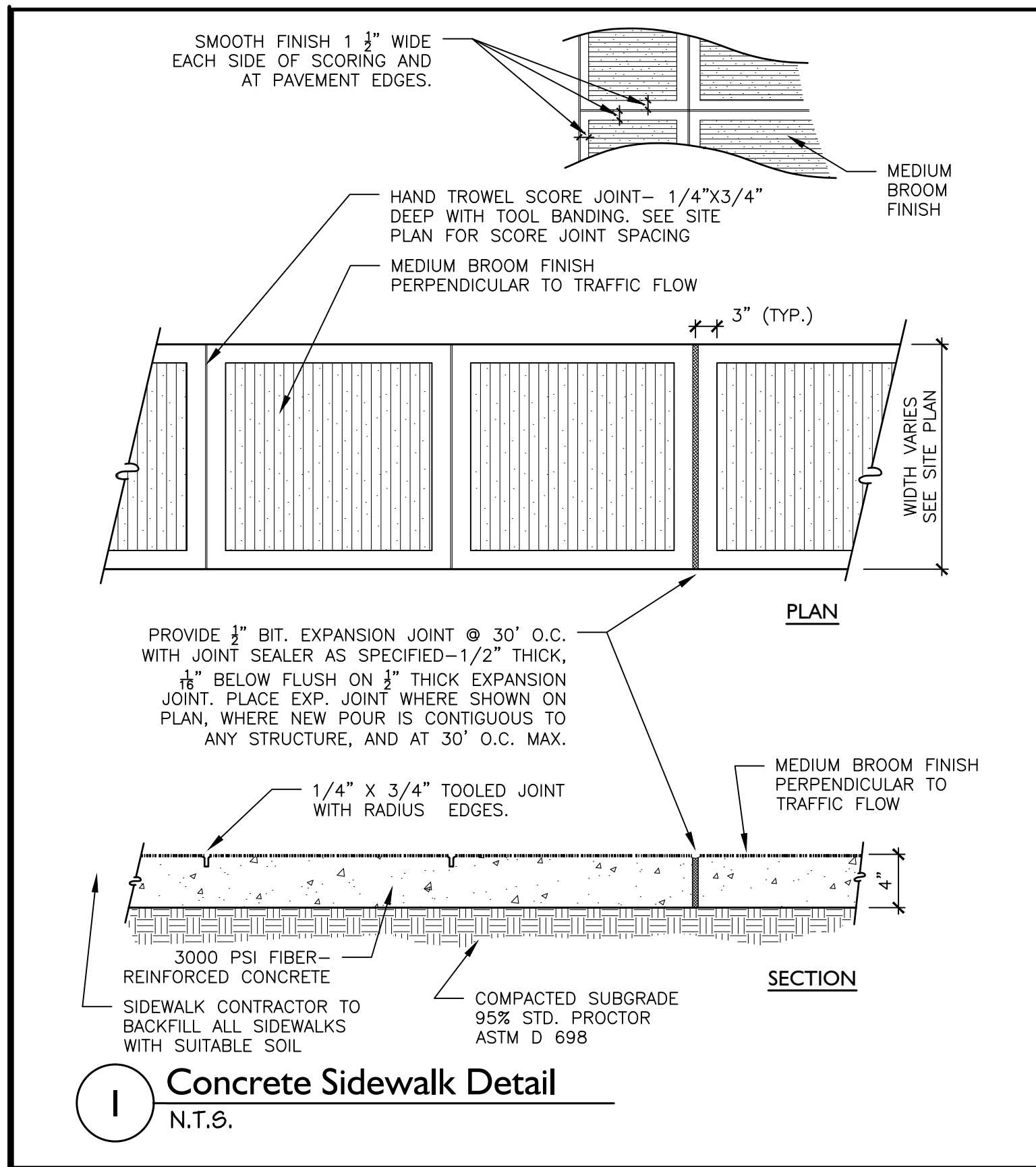
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Date: 02.17.21
Revisions:

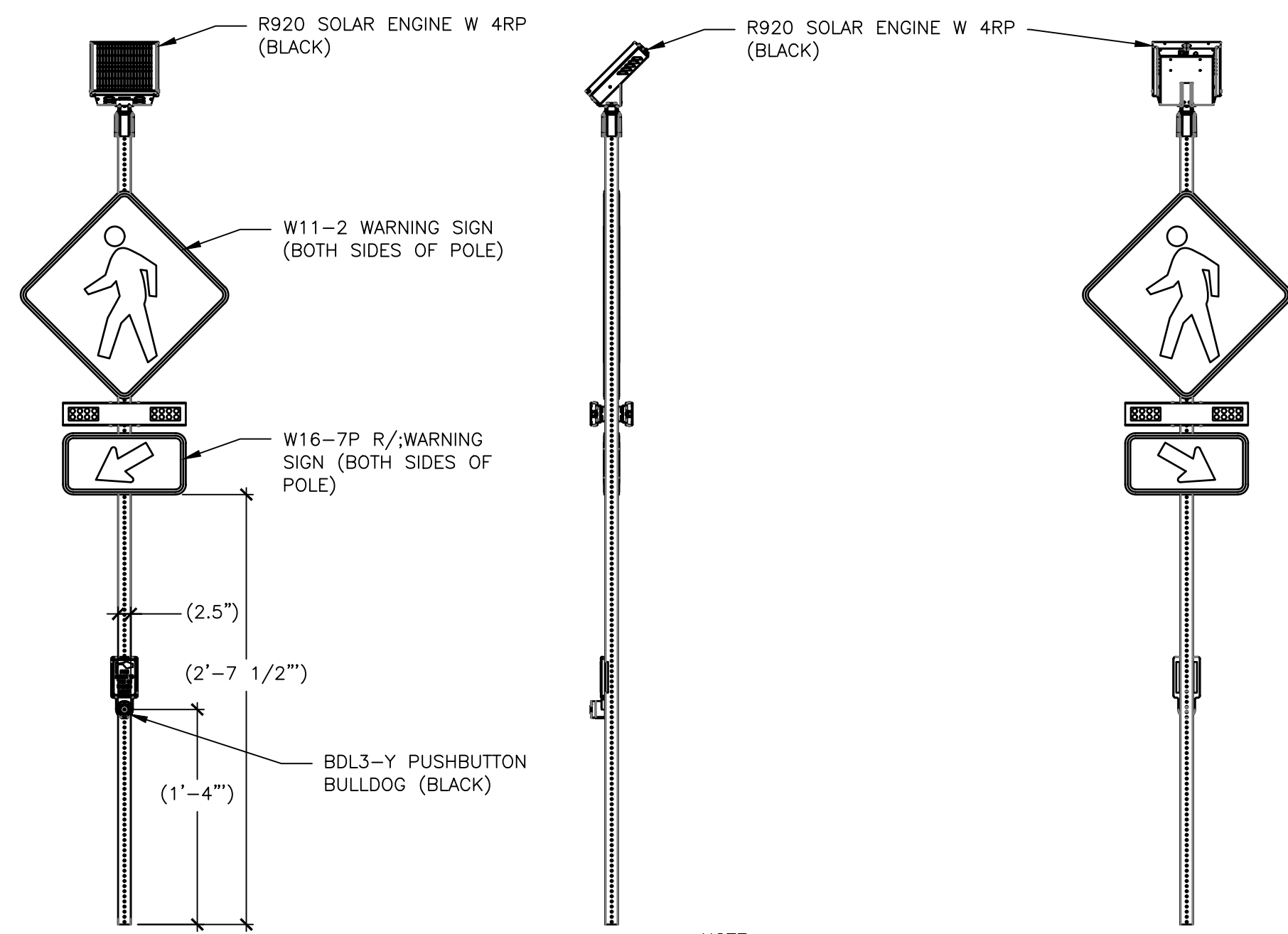
Sheet Title:

SITE CONSTRUCTION DETAILS

Sheet No:

C502





- NOTE:**
1. RECTANGULAR RAPID FLASHING BEACON (RRFB) TO BE R920-E MODEL BY CARMANAH TRAFFIC OR APPROVED EQUAL. MODEL SHALL BE SELECTED WITH BI-DIRECTIONAL BEACONS & SIGNAGE ON 2.5 INCH PERFORATED SQUARE POLE MOUNT.
 2. COORDINATED WITH CITY OF CONCORD FOR ADDITIONAL SPECIFICATIONS FOR THE RRFB SOLAR FLASHERS.

1 RRFB Double Sided (Solar)
N.T.S. - BY OTHERS

CONTINUOUS LINES	10'-30'/SP SKIP LINE	2'-6'/SP MINI-SKIP LINE
EDGE LINE YELLOW OR WHITE 4" / 6"	10'-30'/SP SKIP LINE UNLESS OTHERWISE SHOWN, USE 10'-30' SP SKIP FOR GRAP LANE LINES AND SKIP CENTER LINES. YELLOW OR WHITE 4" / 6"	2'-6'/SP MINI-SKIP LINE UNLESS OTHERWISE SHOWN, USE 2'-6' SP MINI-SKIP FOR LANE LINE EXTENDING THROUGH INTERSECTIONS, STOP LINE EXTENDING THROUGH INTERSECTIONS AND MINI-SKIPS USED FOR RETRADE LANE LINES. YELLOW OR WHITE 4" / 6"
LANE LINE WHITE 4" / 6"	3'-3'/SP MINI-SKIP LINE UNLESS OTHERWISE SHOWN, USE 3'-3' SP MINI-SKIP FOR THE WHITE EDGE LINE EXTENDING AT INTERSECTIONS. WHITE 4" / 6"	3'-9'/SP MINI-SKIP LINE UNLESS OTHERWISE SHOWN, USE 3'-9' SP MINI-SKIP FOR THROUGH LANE LINES AND LINE EXTENDING THROUGH INTERSECTIONS. WHITE 4" / 6"
CENTER LINE YELLOW 4" / 6"		
GORE LINE WHITE 8" / 12"		
DIAGONAL LINE YELLOW OR WHITE 12" AS MPH OR HIGHER 8" LESS THAN 45 MPH		
CROSSWALK LINE WHITE 6" TRANSVERSE 24" LONGITUDINAL		
RXR LINE WHITE 16"		
STOP OR TRANSVERSE BAR WHITE 24"		

GENERAL NOTES:

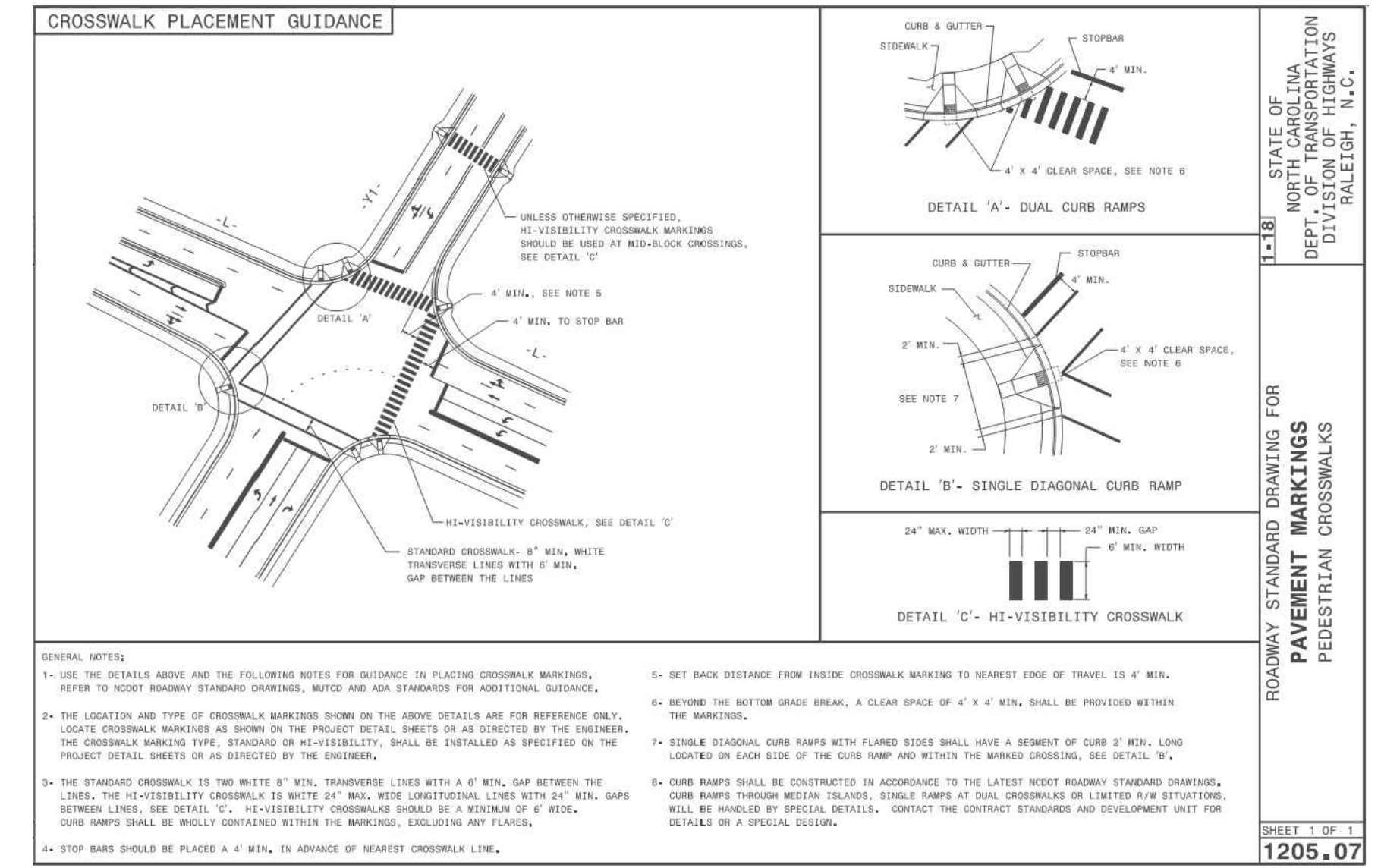
- 1- USE 6" LANE, EDGE, AND CENTER LINES ON ALL FULL CONTROL OF ACCESS FACILITIES AND OTHER ROUTES AS DIRECTED BY THE ENGINEER.
- 2- LANE LINES INDICATED AS "WIDE" ON THE ROADWAY STANDARD DRAWINGS SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.
- 3- GORE LINES SHALL BE TWICE THE WIDTH OF THE NORMAL LINE.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
PAVEMENT MARKINGS
LINE TYPES AND OFFSETS

SHEET 1 OF 2
1205.01

2 Cross Walk Detail
N.T.S. - BY OTHERS



Seals:

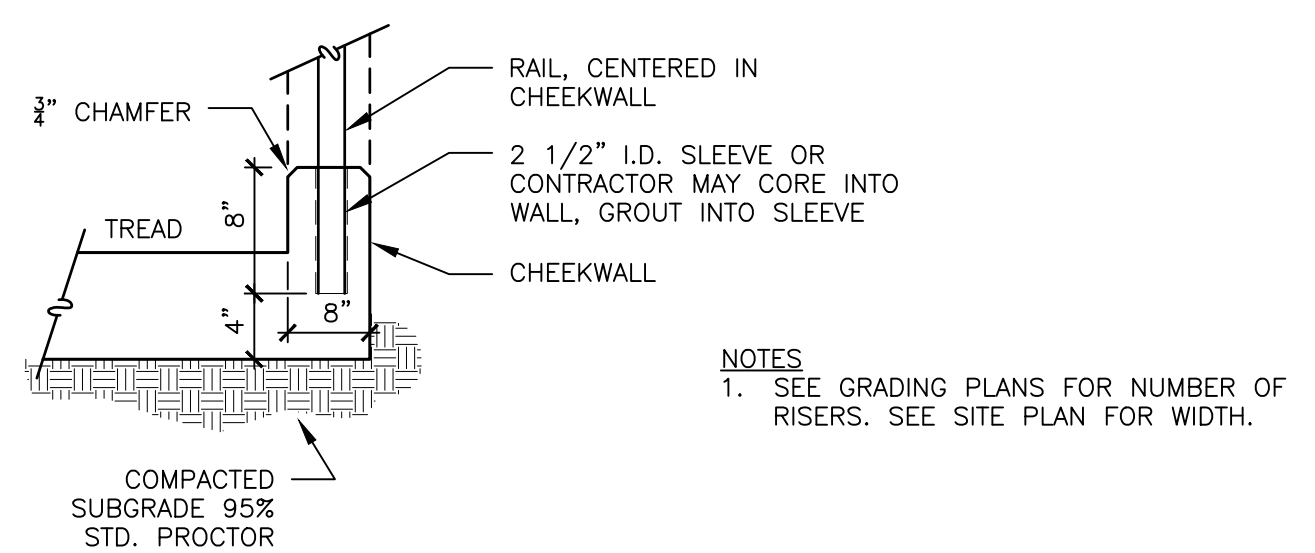
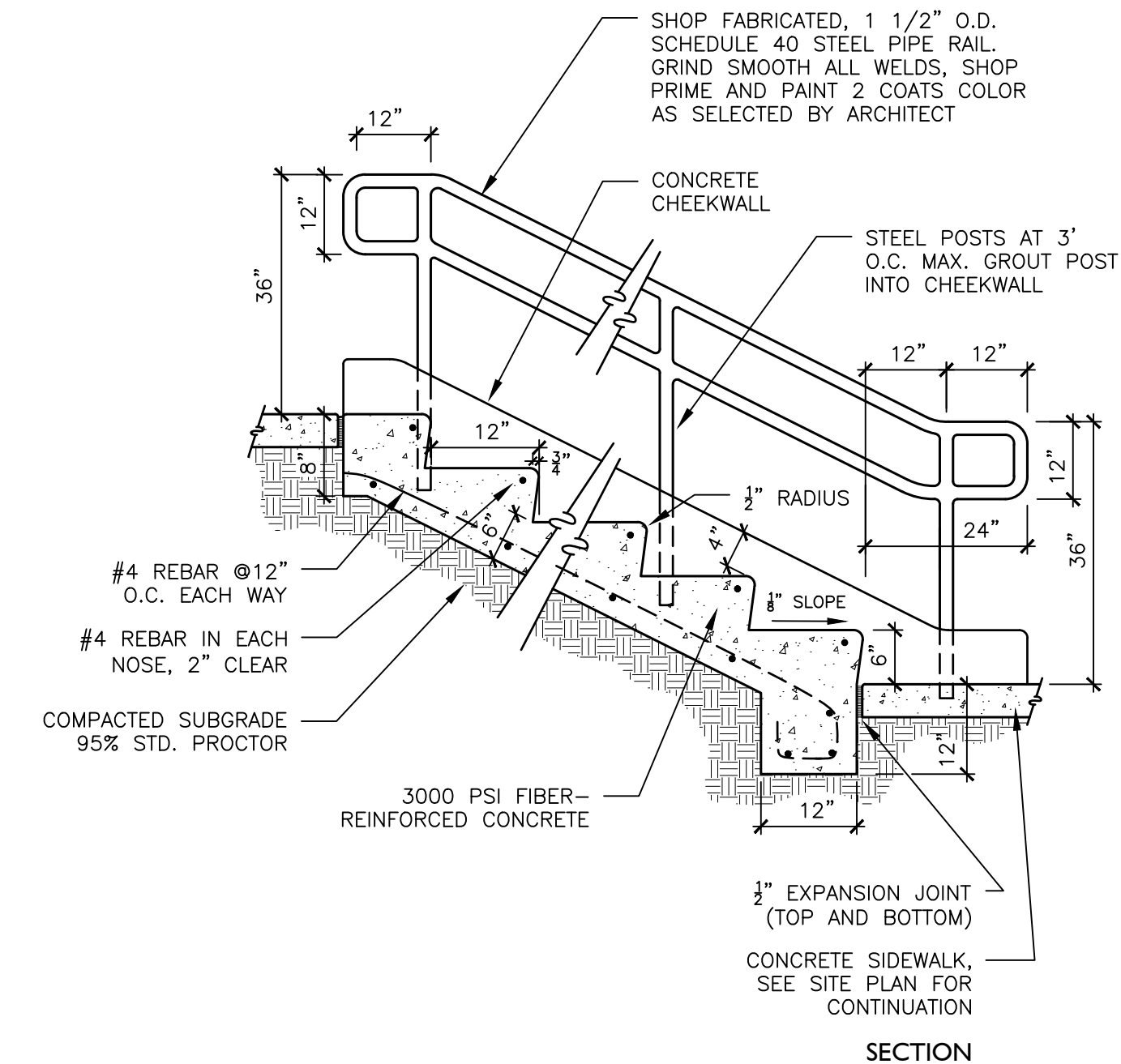
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL
041664
KEVIN J. WESTRA
CORP. NC LICENSE: F-1320

Belmont Community Center
1315 Catawba Street
Belmont, North Carolina

Project no: 17000385
Date: 02.17.21
Revisions:

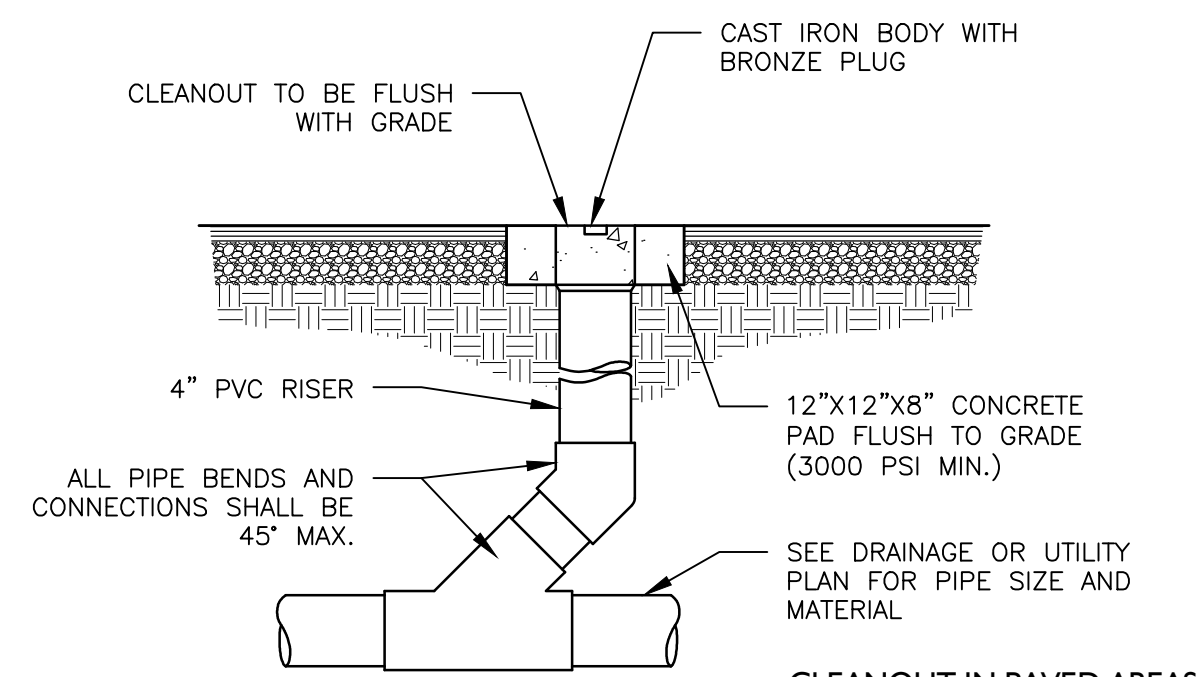
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Sheet No:
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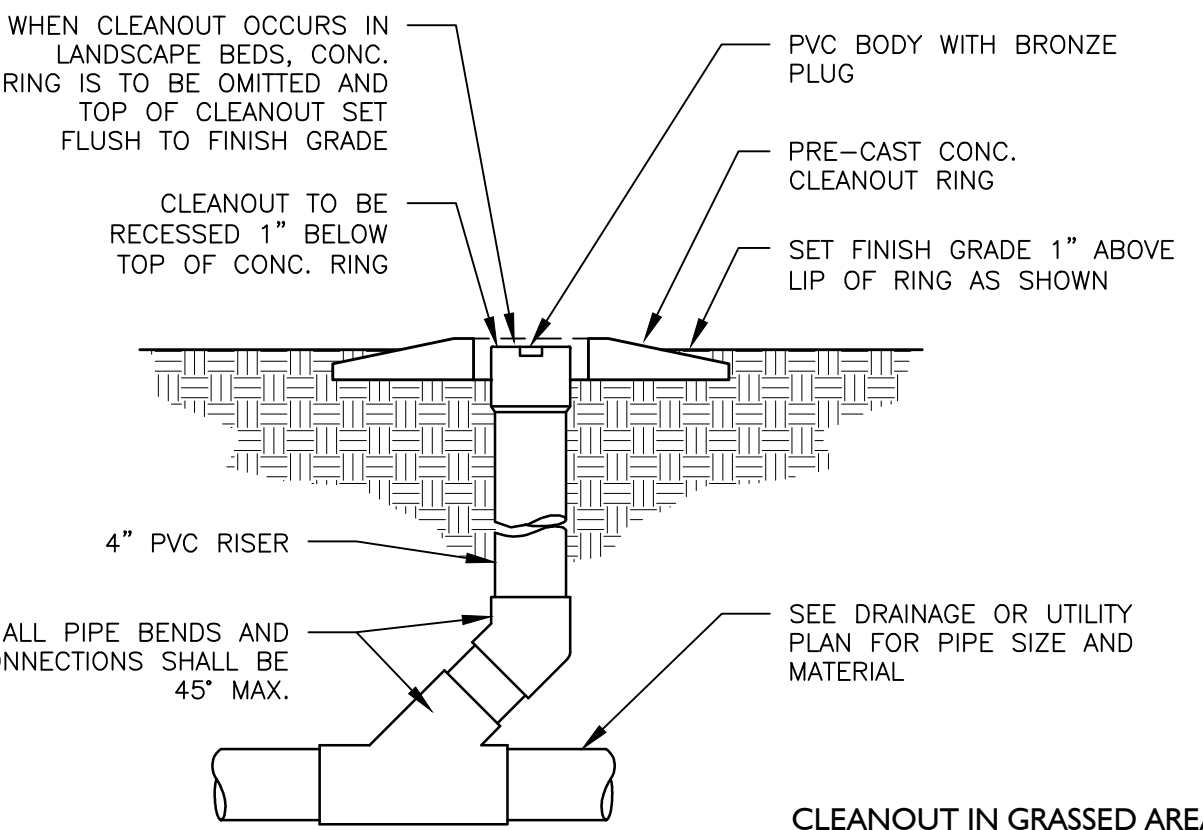


3 Concrete Steps with Handrail
N.T.S.

benesch
Alfred Benesch & Company
2359 Perimeter Pointe Parkway, Suite 350
Charlotte, NC 28208
WWW.BENESCH.COM
P. 704.521.9880



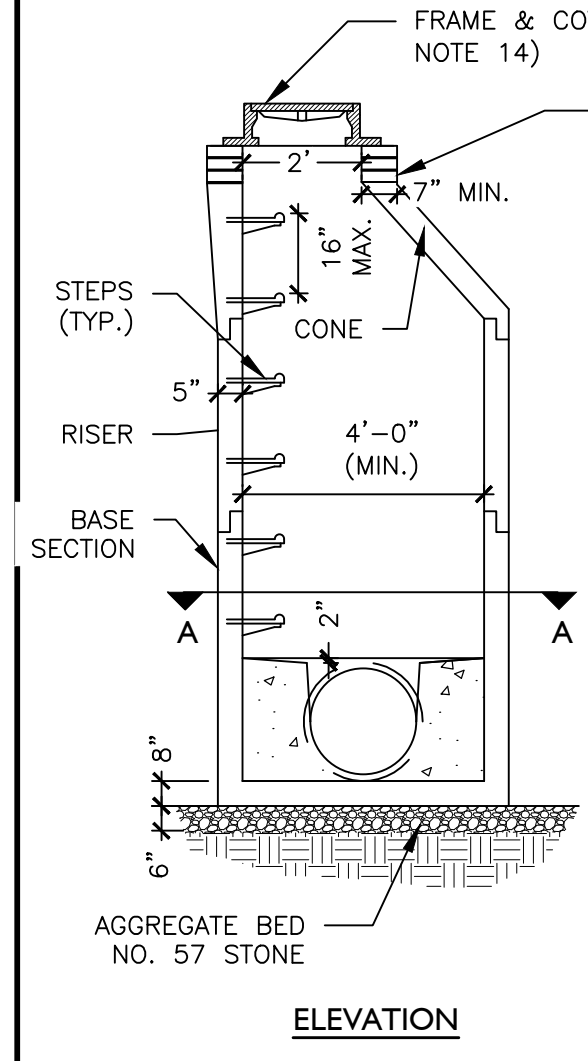
CLEANOUT IN PAVED AREAS



CLEANOUT IN GRASSED AREAS

1 Cleanout
N.T.S.

NOTE: ENGRAVE "SS" IN SANITARY SEWER PLUG AND ENGRAVE "SD" IN STORM DRAIN PLUG.



ELEVATION

SECTION A-A

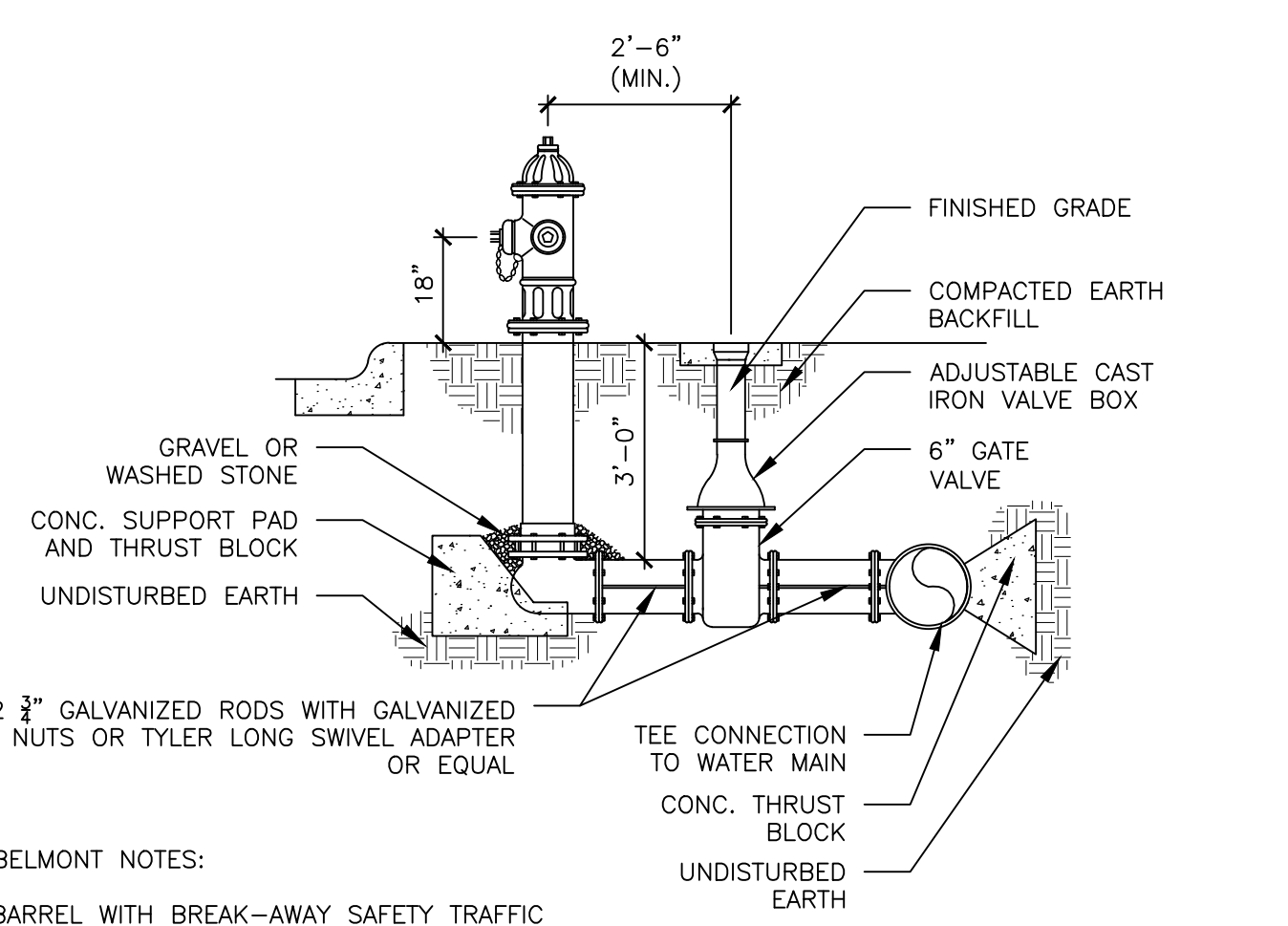
2 Precast Sanitary Sewer Manhole
N.T.S.

- NOTES:**
1. MANHOLE TO CONFORM TO ASTM C478, EXCEPT AS MODIFIED BELOW.
 2. CARE MUST BE TAKEN TO FORM A SMOOTH FINISHED TROUGH FROM ENTRANCE PIPES TO EXIT PIPE, AND IN CURVED MANHOLES THE TROUGH MUST BE A SMOOTH CIRCULAR ARC TANGENT TO THE INSIDE WALLS OF THE PIPES AT THEIR ENDS. PRECAST CONCRETE CONSTRUCTION WITH MONOLITHICALLY CAST BASE MANHOLE SHALL BE DESIGNED TO SUPPORT AN H-20 WHEEL LOAD.
 3. ALL JOINTS SHALL CONFORM TO ASTM C443.
 4. ALL MANHOLES OVER 3'-6" IN DEPTH SHALL BE PROVIDED WITH STEPS 1'-4" ON CENTERS. STEPS SHALL BE POLYPROPYLENE PLASTIC COATED STEEL.
 5. ALL PIPE OPENINGS TO BE NO GREATER THAN O.D. OF PIPE AND ADDITIONALLY REINFORCED WITH A MINIMUM OF 0.20 SQ. IN. OF STEEL AT 90 DEGREES. PIPE TO BE CENTERED IN OPENINGS. ADDITIONAL REINFORCING NOT REQUIRED FOR CORED OPENINGS.
 6. ALL SURFACES SHALL BE SMOOTH EVEN TEXTURED WITH A MINIMUM OF HONEYCOMB, FINS AND OTHER IMPERFECTIONS.
 7. RAMSET MASONARY TIES EVERY 12 INCHES.
 8. ALL CONCRETE TO BE 3600 P.S.I.
 9. INVERTS IN 5' DIAMETER MANHOLES TO BE OVER WIDEST SHELF.
 10. STEPS IN 5' DIAMETER MANHOLES TO BE OVER WIDEST SHELF.
 11. LIFTING HOLES SHALL BE PLUGGED WITH MORTAR FROM OUTSIDE PRIOR TO BACKFILLING.
 12. STRAIGHT WALL OF MANHOLE TO BE LOCATED OVER INFLUENT PIPE OR OVER WIDEST SHELF.
 13. MANHOLE SIDEWALL SECTIONS SHALL BE SEALED WITH EXTERNAL JOINT SEALING BANDS CONFORMING TO ASTM C877, TYPE 1, RUBBER AND MASTIC BANDS, CADILLAC EXTERNAL PIPE JOINT, OR AS APPROVED.
 14. RESILIENT PENETRATION GASKETS SHALL BE PROVIDED FOR THE CONNECTION OF SEWERS TO THE MANHOLE.
 15. THE FRAME AND COVER SHALL BE U.S. FOUNDRY 669 OR APPROVED EQUAL WITH "SANITARY SEWER" CAST INTO THE COVER. MANHOLES EXTENDING ABOVE FINAL GRADE SHALL HAVE THE FRAME BOLTED TO THE MANHOLE. IN AREAS WHERE FLOODING OF THE MANHOLE MAY OCCUR, A WATERTIGHT CITY OF BELMONT LAND DEVELOPMENT STANDARDS MANUAL AMENDED - 9/6/2011 9-4 FRAME AND COVER ASSEMBLY BOLTED TO MANHOLE SHALL BE PROVIDED. CITY MAY REQUIRE WATERTIGHT FRAMES AND COVERS BOLTED TO MANHOLE IN OTHER LOCATIONS.
 16. DROP PIPE ASSEMBLIES SHALL BE EXTERNAL.
 17. WHERE DIRECTED BY CITY, CONCRETE MARKER POSTS SHALL BE INSTALLED WITHIN FIVE FEET OF MANHOLE.

CITY OF BELMONT NOTES:

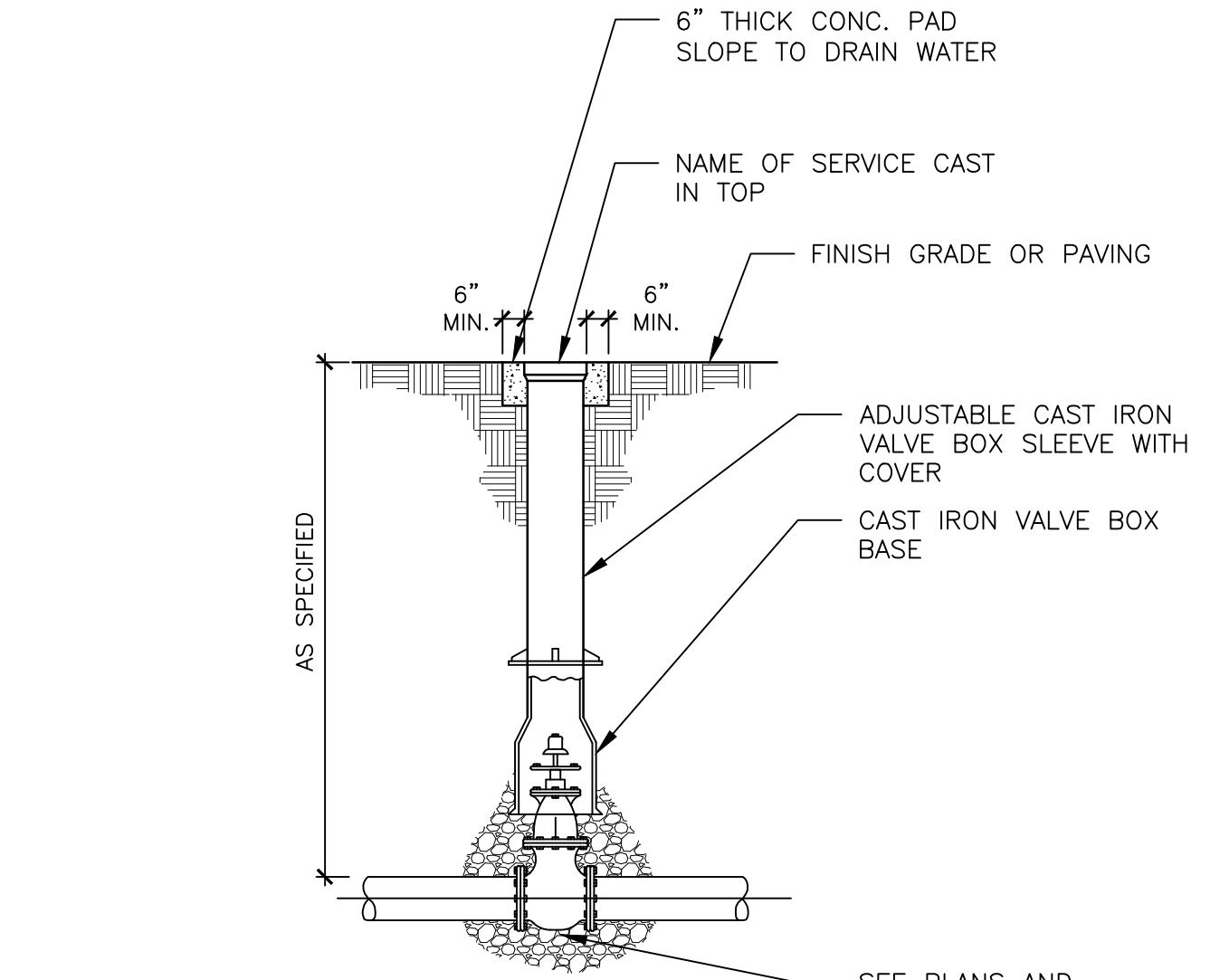
1. DRY BARREL WITH BREAK-AWAY SAFETY TRAFFIC FLANGE, TWO 2-1/2 INCH NOZZLES, ONE 4-1/2 INCH PUMPER NOZZLE WITH 5 INCH STORZ PUMPER NOZZLE CONNECTION, OPEN LEFT. NOZZLE THREADS SHALL BE BELMONT STANDARD.
2. ALL FIRE HYDRANTS MUST BE INSTALLED WITH AN ISOLATION VALVE AND MINIMUM ONE FOOT SLEEVE FROM VALVE TO FIRE HYDRANT.
3. HYDRANTS SHALL BE INSTALLED WITH GRADE RING NO MORE THAT 2 INCHES ABOVE FINISHED GROUND ELEVATION. IF NECESSARY, BARREL EXTENSION KITS SHALL BE USED TO RAISE THE HYDRANT.
4. THE ONLY ACCEPTED HYDRANT MANUFACTURER AND MODEL IS AMERICAN-DARLING, 4-1/2 INCH MARK 73-5 WITH 5 INCH STORZ PUMPER NOZZLE CONNECTION.
5. E. FIRE HYDRANTS SHALL BE PAINTED CHROME YELLOW PER BELMONT STANDARD. PRIVATELY OWNED AND MAINTAINED FIRE HYDRANTS SHALL BE PAINTED RED.

3 Fire Hydrant Assembly
N.T.S.



NOTES:

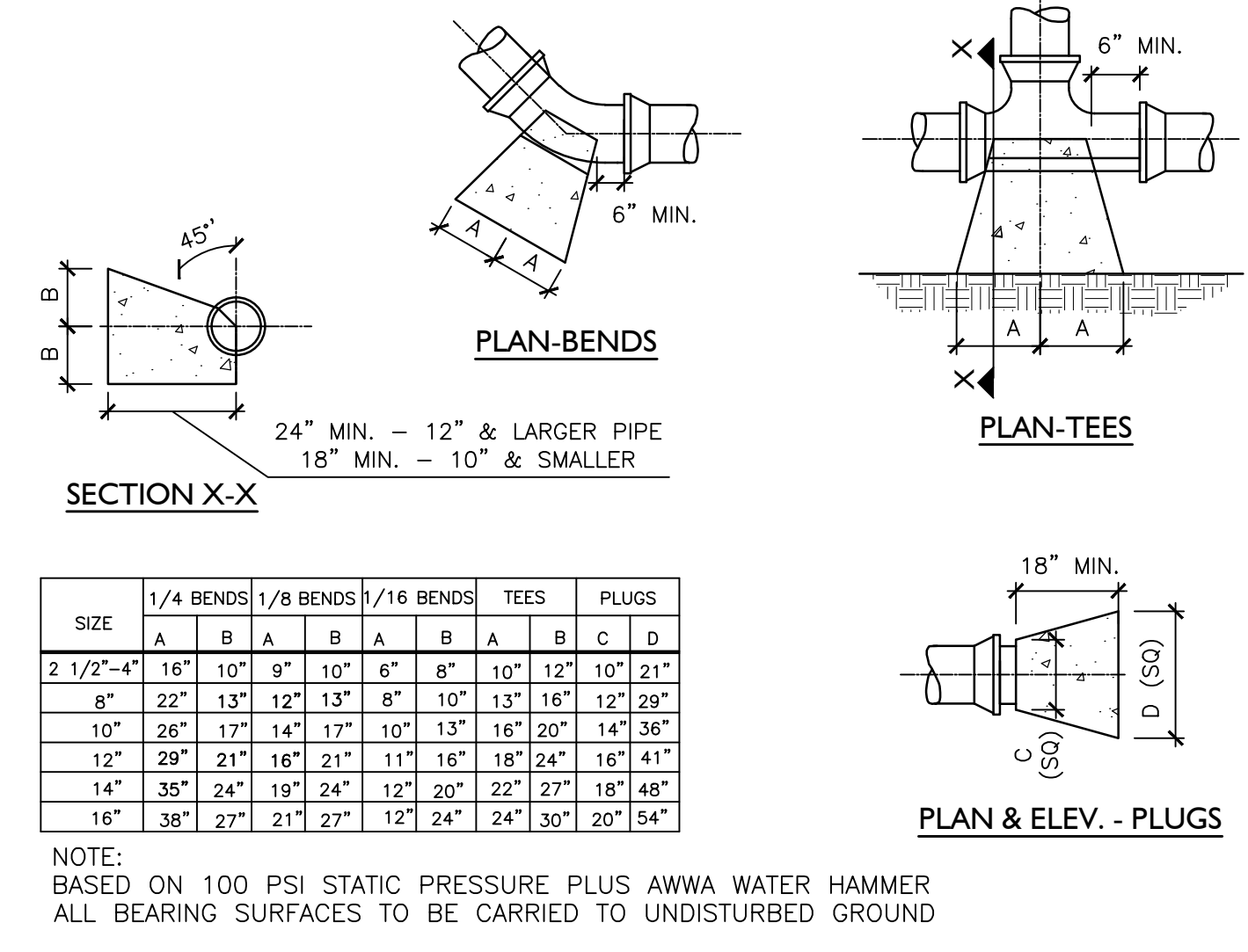
1. ON ROADS WITH CURB AND GUTTER, INSTALL HYDRANT 2' FROM BACK OF CURB; ON ROADS WITHOUT CURB AND GUTTER, INSTALL HYDRANT 6' FROM EDGE OF PAVEMENT.
2. 4" OUTLET TO BE TURNED FACING ROADWAY.
3. CONCRETE BLOCKING TO EXTEND TO UNDISTURBED EARTH, SEE DETAIL FOR MINIMUM DIMENSIONS.
4. FIRE HYDRANT TO BE MUELLER CENTURIN II OR APPROVED EQUAL.



5 Gate Valve Detail
N.T.S.

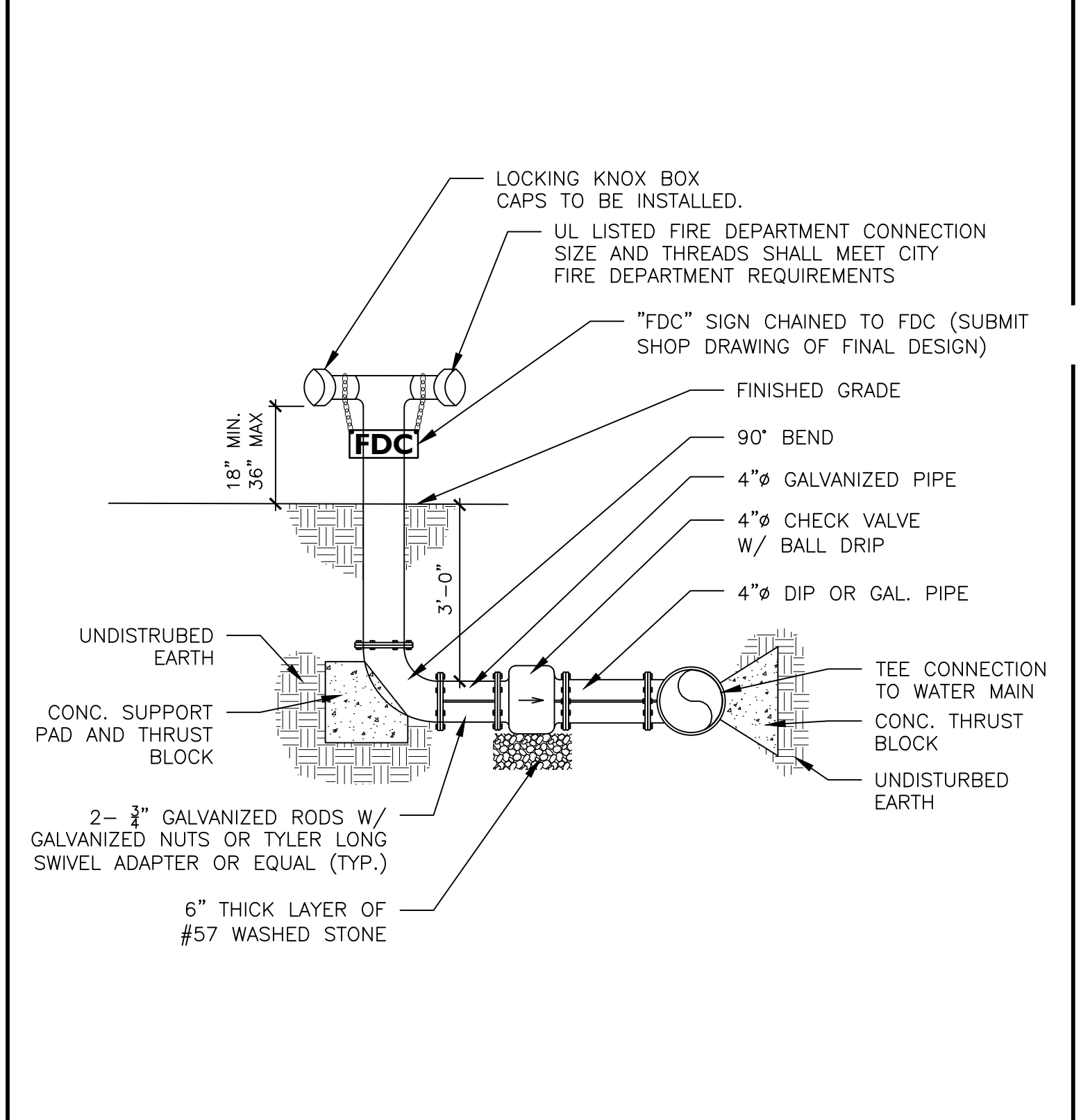
SEE PLANS AND SPECIFICATIONS FOR SIZE AND TYPE OF VALVE

6 Not Used
N.T.S.

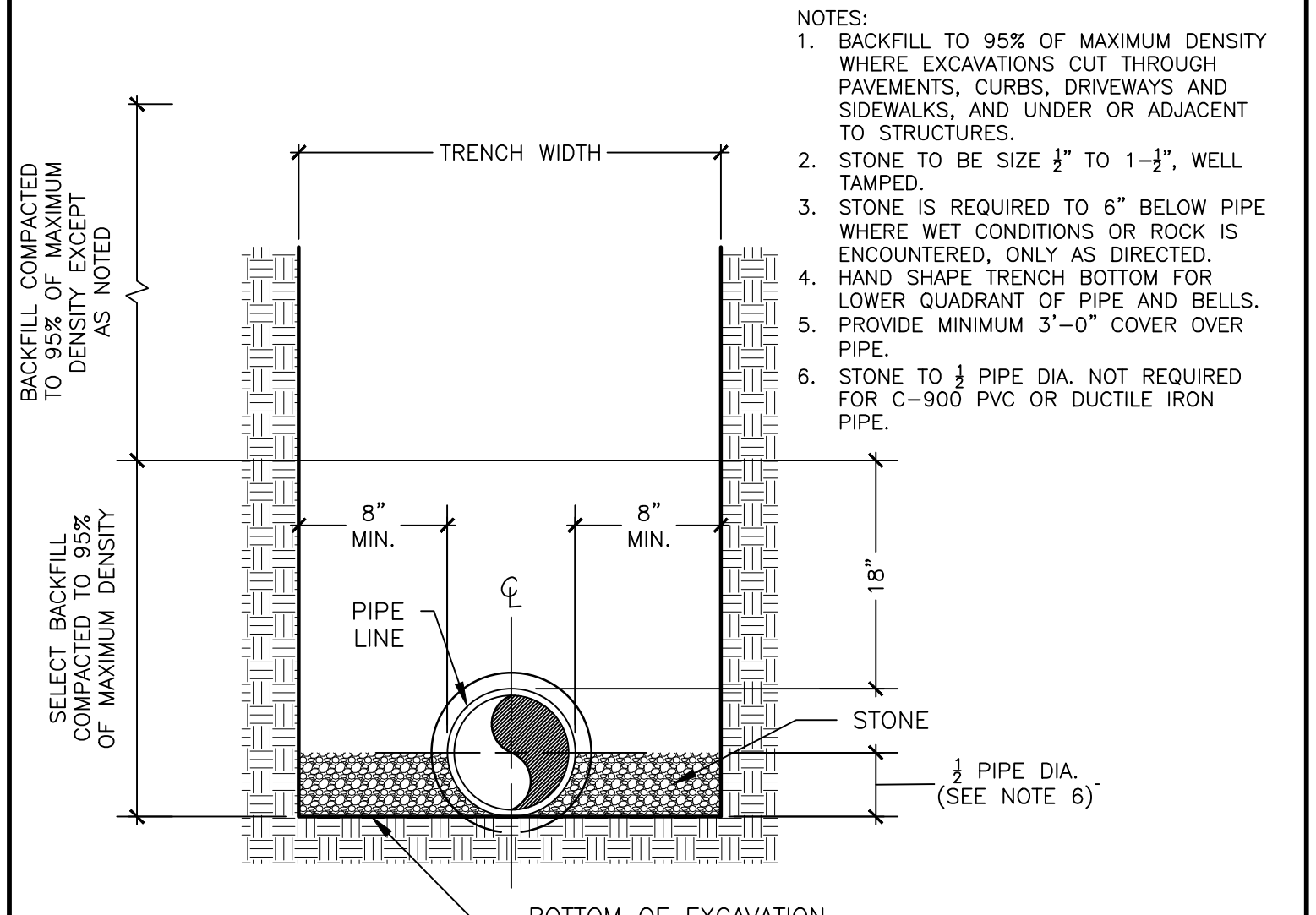


7 Concrete Thrust Block
N.T.S.

NOTE: BASED ON 100 PSI STATIC PRESSURE PLUS AWWA WATER HAMMER ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND

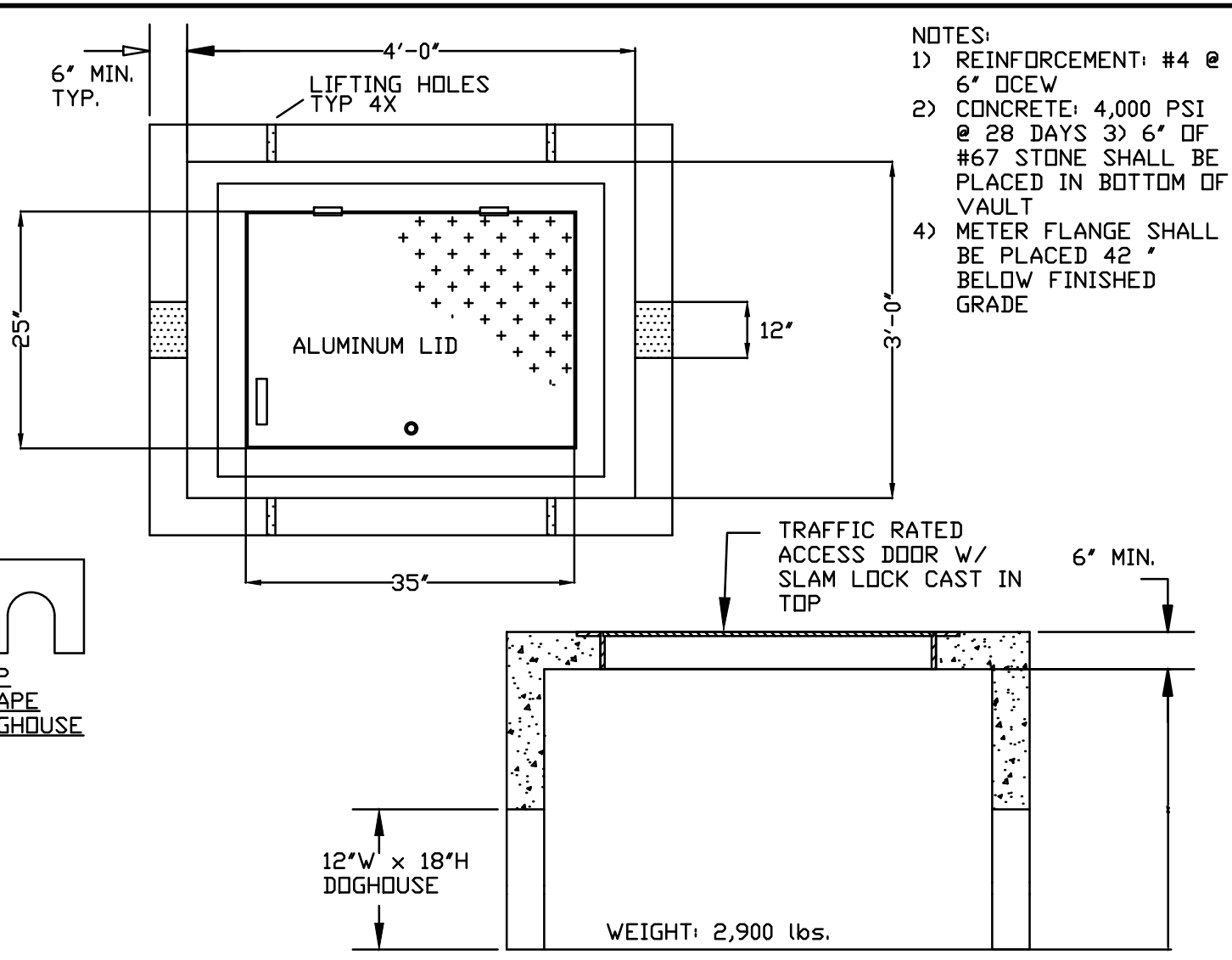


4 Fire Department Connection
N.T.S.



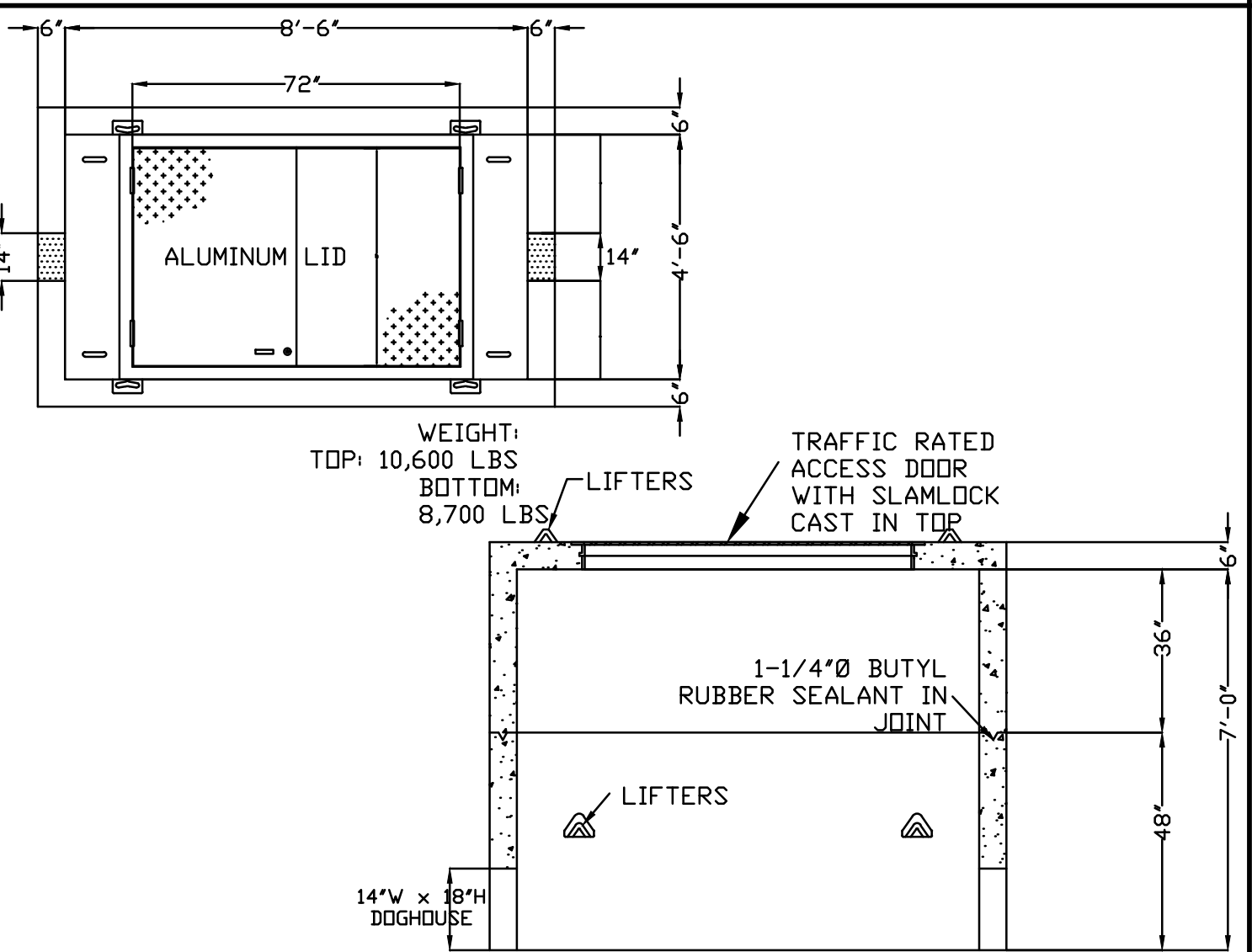
8 Utility Trench
N.T.S.

- NOTES:**
1. BACKFILL TO 95% OF MAXIMUM DENSITY WHERE EXCAVATIONS CUT THROUGH PAVEMENTS, CURBS, DRIVEWAYS AND SIDEWALKS, AND UNDER OR ADJACENT TO STRUCTURES.
 2. STONE TO BE SIZE 1/2" TO 1-1/2", WELL TAMPED.
 3. STONE IS REQUIRED TO 6" BELOW PIPE WHERE WET CONDITIONS OR ROCK IS ENCOUNTERED, ONLY AS DIRECTED.
 4. HAND SHAPE TRENCH BOTTOM FOR LOWER QUADRANT OF PIPE AND BELLS. PROVIDE MINIMUM 3'-0" COVER OVER PIPE.
 5. STONE TO 1/2 PIPE DIA. NOT REQUIRED FOR C-900 PVC OR DUCTILE IRON PIPE.



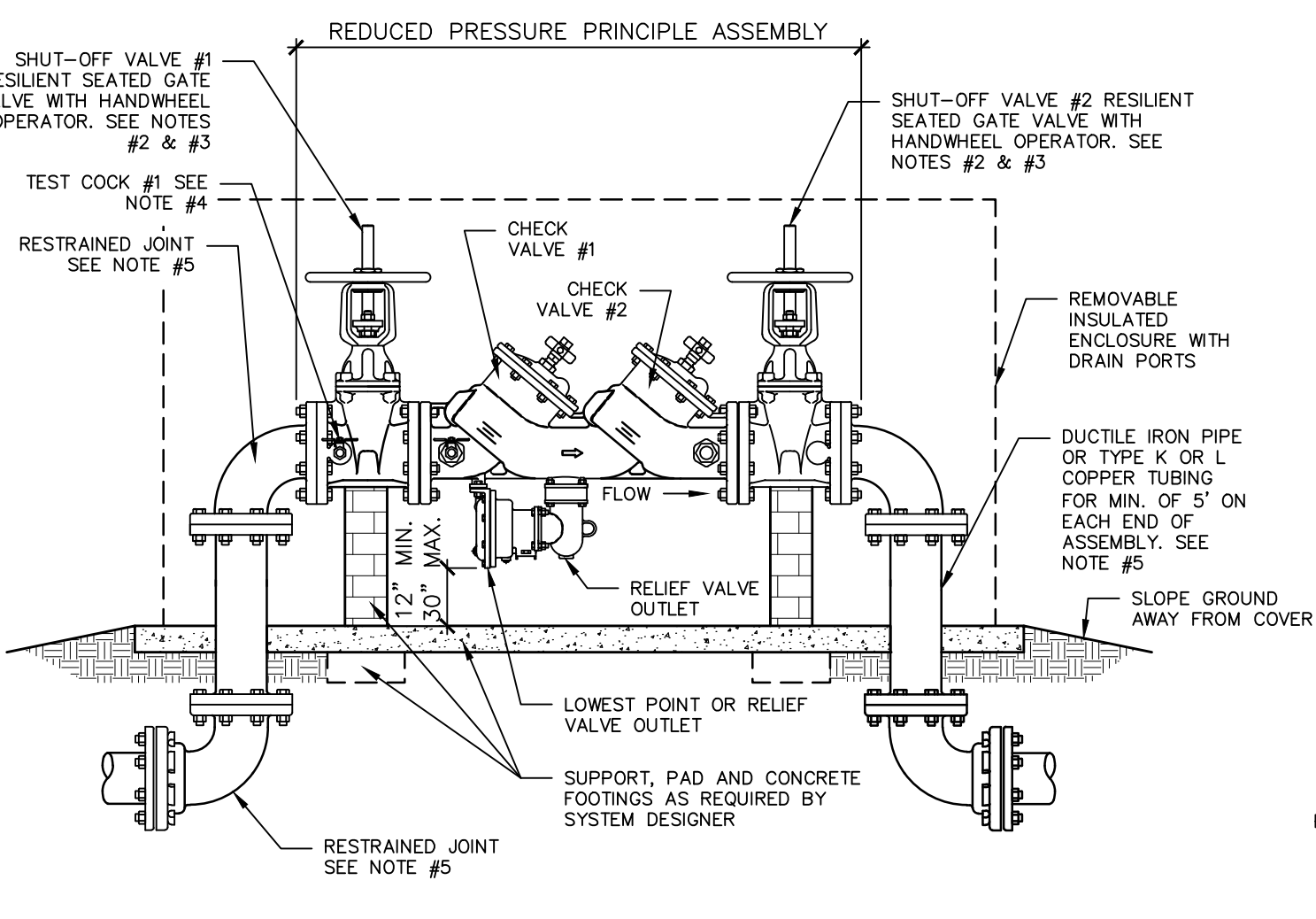
9 3" Water Meter Vault
N.T.S.

- NOTES:**
- 1) REINFORCEMENT: #4 @ 6" C/W
 - 2) CONCRETE: 4,000 PSI @ 28 DAYS
 - 3) 6" OF #67 STONE SHALL BE PLACED IN BOTTOM OF VAULT
 - 4) METER FLANGE SHALL BE PLACED 42" BELOW FINISHED GRADE



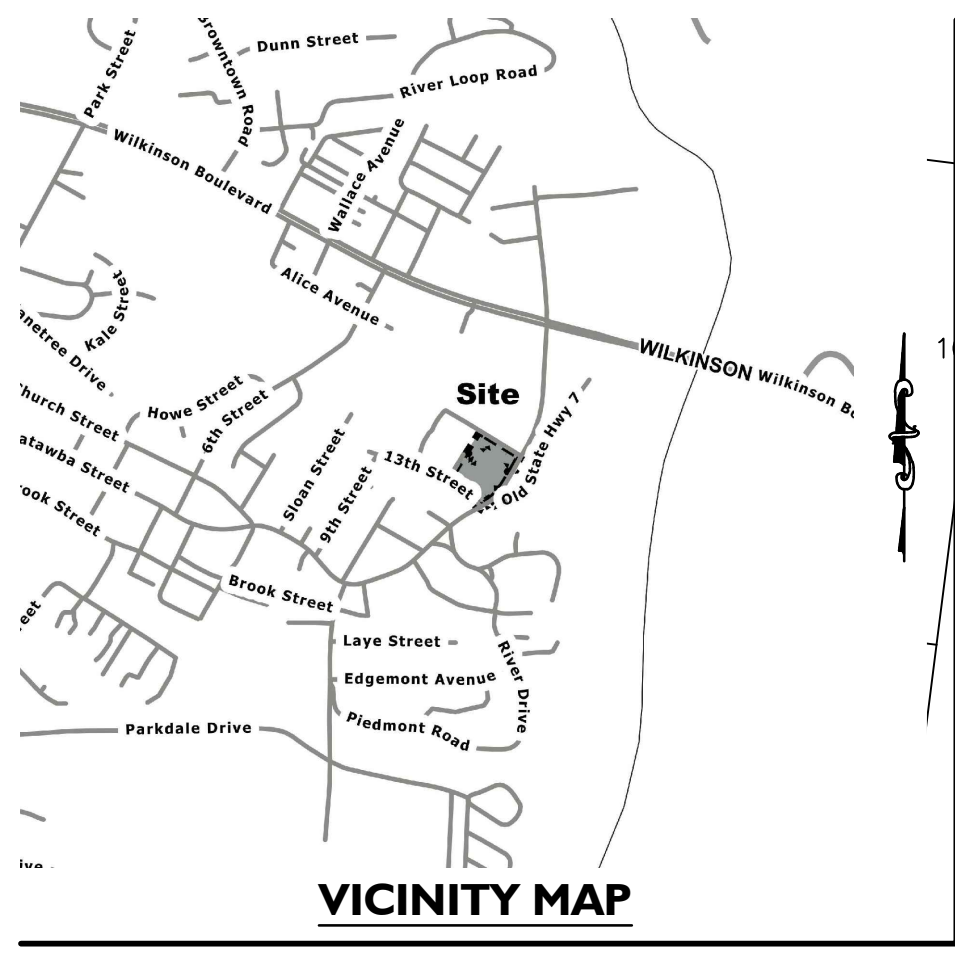
10 6" Water Meter Vault
N.T.S.

WEIGHT: TOP: 10,600 LBS
BOTTOM: 8,700 LBS

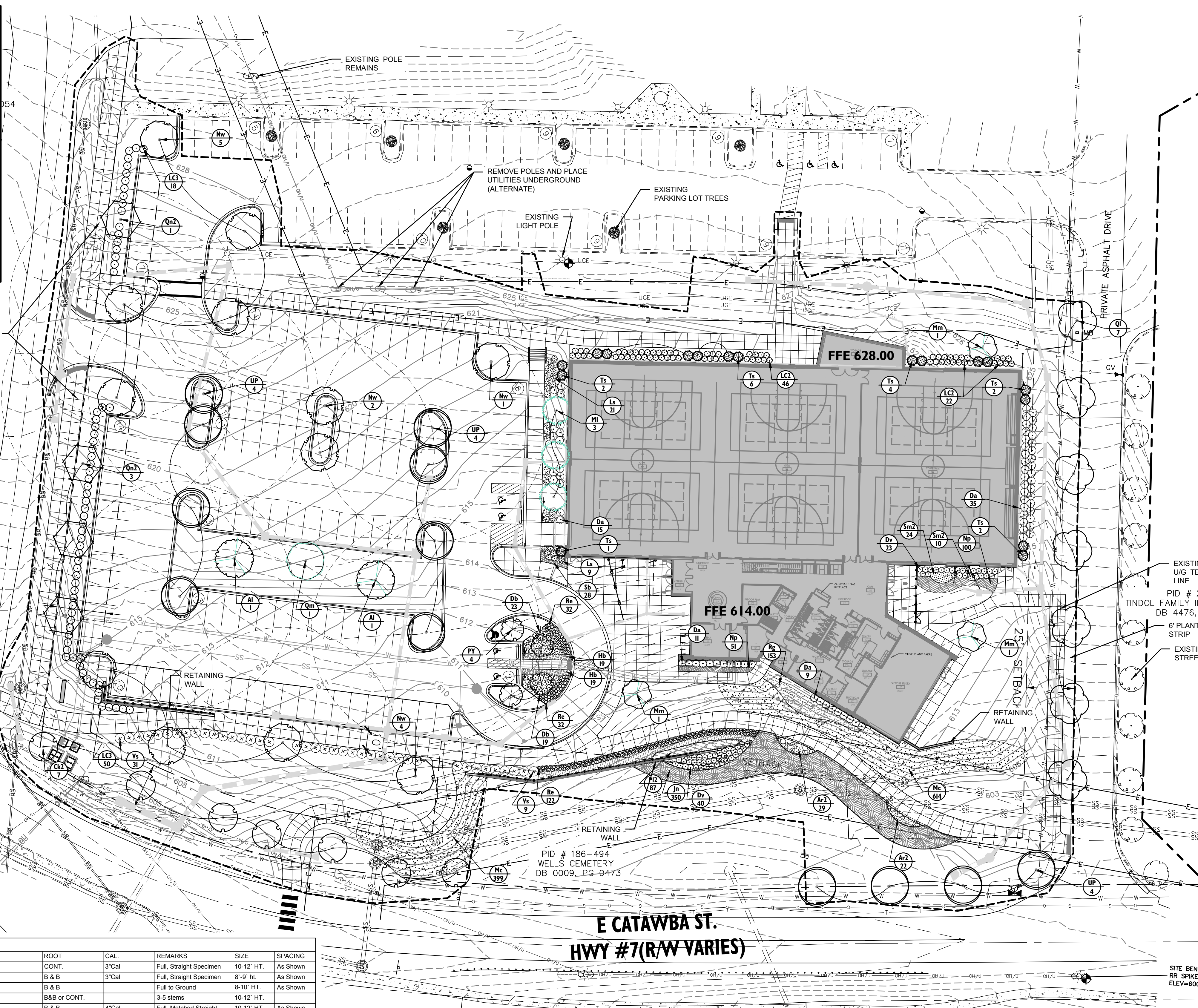


11 2 1/2" - 10" Reduced Pressure Principle Assembly
(Above Ground), N.T.S.

- NOTES:**
1. REDUCED PRESSURE PRINCIPLE ASSEMBLIES (RP) MUST CONFORM TO CITY OF BELMONT SPECIFICATIONS. REFER TO CITY OF BELMONT APPROVED LIST OF BPA'S.
 2. CITY OF BELMONT APPROVED RP INCLUDES SHUT-OFF VALVES #1 AND #2 AS PART OF THE ASSEMBLY. NO SUBSTITUTIONS SHALL BE PERMITTED.
 3. FIRE LINE SERVICES SHALL HAVE OUTSIDE STEM AND YOKE (OS & Y) HANDWHEEL OPERATORS. IF SERVING FIRE SPRINKLERS, TAMPER SWITCHES ARE REQUIRED.
 4. TEST COCK #1 SHALL BE UPSTREAM OF SHUT-OFF VALVE #1 AND IS PART OF THE APPROVED ASSEMBLY.
 5. PIPE MATERIAL AND FITTINGS SHALL BE AS SPECIFIED IN CITY OF BELMONT STANDARDS SPECIFICATION. ALL JOINTS SHALL BE RESTRAINED WITH MEGALUG RESTRAINTS OR APPROVED EQUAL.
 6. 8" - 10" RP SHALL BE SUPPORTED AT CENTER WITH BRICK PEDESTAL AND SHALL NOT BLOCK RELIEF VALVE ON DRAIN PORT.
 7. INSULATED ENCLOSURE SHALL BE AS SPECIFIED IN CITY OF BELMONT ENCLOSURE INFORMATION.
 8. ALL LOCATIONS FOR BPA'S REQUIRE CITY OF BELMONT APPROVAL.
 9. THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPT. CONNECTION POINTS, OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS CITY OF BELMONT REQUIRED BACKFLOW PREVENTER.
 10. EACH CITY OF BELMONT REQUIRED BPA IS REQUIRED TO BE TESTED BY A CITY OF BELMONT APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM IN SERVICE.



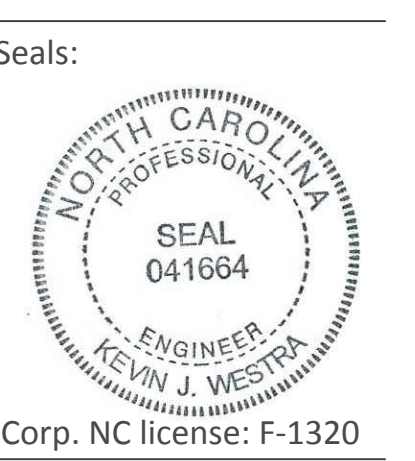
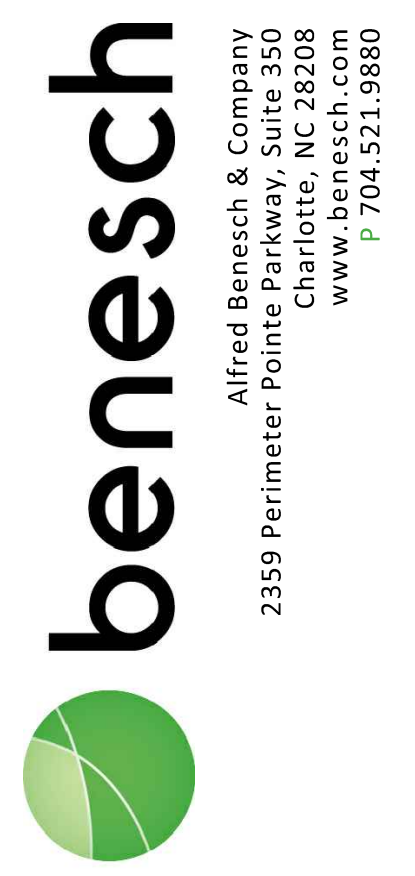
VICINITY MAP



LANDSCAPE NOTES

- PLANT MATERIAL**
- MINIMUM TREE SIZE AT PLANTING IS 2" CALIPER AND 8' TALL FOR SINGLE-STEM TREES. ALL MULTI-STEM PLANTS MUST BE TREE FORM, MAXIMUM 3 TO 5 TRUNKS, AND MINIMUM 10' TALL.
 - ALL NEW TREES MUST HAVE STRAIGHT TRUNKS WITH STRONG CENTRAL LEADERS INTACT TO THE TOP OF THE CROWN UNLESS MULTI-STEM TREES ARE SPECIFIED. ALL TREES SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, HAVE WELL-DEVELOPED BRANCHES, BE VIGOROUS AND HAVE FIBROUS ROOT SYSTEMS. TREES WITH CO-DOMINANT BRANCHING WILL NOT BE ACCEPTED. TREES THAT HAVE BEEN SHEARED, TOPPED OR CUT BACK TO MULTIPLY THE BRANCHING STRUCTURE WILL NOT BE ACCEPTED. TREES SHALL BE FREE OF ABRASIONS, DAMAGE, DISEASE, PESTS AND CRACKS. ALL PRUNING CUTS GREATER THAN 1/2" DIAMETER SHALL HAVE CALLUS TISSUE FORMED PRIOR TO PLANTING. NO PRUNING CUT ON THE TRUNK SHALL BE MORE THAN ONE-HALF THE DIAMETER OF THE CENTRAL LEADER AT THE HEIGHT WHERE THE CUT WAS MADE. ROOT FLARES SHALL BE LOCATED AT GRADE. TREES WITH MORE THAN 2" OF SOIL COVERING THE ROOT BALL/FLARE FROM WILL NOT BE ACCEPTED. SIZE OF PLANTS, SPREAD OF ROOTS AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH ANSI Z60.1 (LATEST EDITION) AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
 - ALL TREES OF A PARTICULAR SPECIES AND VARIETY SHALL BE UNIFORM IN SIZE AND CONFIGURATION.
- PLANTING REQUIREMENTS**
- PLASTIC HOSE PARTS WILL NOT BE ACCEPTED FOR TREE STAKING. SEE DETAILS AND SPECIFICATIONS FOR APPROVED STAKING METHOD/MATERIALS.
 - ALL STRAPPING, AND TOP 1/2 OF WIRE BASKET AND BURLAP MUST BE CUT AWAY AND REMOVED FROM ROOT BALL WHEN PLANTING.
 - FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 24" NEW TOPSOIL, OR TILL AND AMEND THE TOP 24" OF EXISTING SOIL TO MEET TOPSOIL PLANTING MIX STANDARDS FOR TREES.
 - ALL SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING PLANTING.
 - THE TOP OF ALL ROOT BALLS FOR SHRUBS & GROUNDCOVERS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE, AS BORN TO PREVIOUS GROWING CONDITIONS.
 - ALL ROOT BALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO BACKFILLING.
 - MULCH A MINIMUM 4 FOOT AREA AROUND EACH TREE AND - MULCH A CONTINUOUS AREA AROUND ALL SHRUB BEDS, AS INDICATED ON THE PLAN. MULCH SHALL BE 3-4" THICK. MULCH AROUND TREES SHALL BE TAPERED TOWARD TRUNK SO THAT NO MORE THAN 2" IS PLACED AT TREE TRUNK AS SHOWN ON DETAIL. SEE SPECIFICATIONS FOR TYPE.
- UTILITY ISSUES**
- LARGE MATURING TREES MAY NOT BE PLANTED WITHIN 25' OF OVERHEAD POWER DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CALL LANDSCAPE ARCHITECT TO RESOLVE BEFORE PLANTING.
 - CONTRACTOR IS RESPONSIBLE FOR HAVING ALL UNDERGROUND UTILITIES LOCATED AND CLEARLY PAINTED WITHIN 10 DAYS OF ANY GROUND DISTURBING ACTIVITY. OWNER WILL NOT PAY FOR UTILITY REPAIRS DUE TO FAILURE TO MARK AND OBSERVE UTILITY LOCATIONS.
 - ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES- PLANT 15' FROM ALL UNDERGROUND UTILITIES (SEWER AND STORM DRAINAGE, GAS WATER, PHONE AND ELECTRICAL LINES).
- GENERAL**
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUANTITY OF PLANTS SHOWN ON THE PLAN. ANY DISCREPANCIES BETWEEN QUANTITIES ON PLAN AND PLANT LIST SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AND ANY FIELD ADJUSTMENTS OR QUANTITY ADJUSTMENTS MUST BE AUTHORIZED PRIOR TO PLANTING.
 - ALL PLANTS SHALL BE GUARANTEED TO BE IN HEALTHY CONDITION FOR ONE (1) YEAR AFTER ACCEPTANCE BY OWNER OF ALL PLANT MATERIAL.
 - ALL DISTURBED AREAS SHALL BE SEEDED AS SPECIFIED.
 - SEE EROSION CONTROL/GRADING PLAN FOR ADDITIONAL TREE PRESERVATION NOTES.

- TREE SAVE NOTE**
- THERE ARE NO EXISTING TREES WITH IN THE PROJECT LIMITS, REQUIRED TREE SAVE AREA TO BE PROVIDED IN WOODED AREA NORTH AND EAST OF CITY WORKS & TINDOL BUILDINGS (ON THIS SAME PARCEL).



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Belmont Community Center
1315 Catawba Street
Belmont, North Carolina

TREES	QTY	BOTANICAL / COMMON NAME	ROOT	CAL.	REMARKS	SIZE	SPACING
AI	2	Acer saccharum 'Legacy' / Legacy Sugar Maple	CONT.	3" Cal	Full, Straight Specimen	10-12' HT.	As Shown
Ck2	7	Cornus kousa / Kousa Dogwood	B & B	3" Cal	Full, Straight Specimen	8-9' HT.	As Shown
M	3	Magnolia grandiflora 'Little Gem' / Little Gem Magnolia	B & B	3" Cal	Full to Ground	8-10' HT.	As Shown
Mm	3	Magnolia x soulangeana / Saucer Magnolia Multi-Trunk	B&B or CONT.		3-5 stems	10-12' HT.	
Nw	12	Nyssa sylvatica 'Wildfire' / Black Gum	B & B	4" Cal	Full, Matched, Straight	10-12' HT.	As Shown
PV	4	Prunus x yedoensis / Yoshino Cherry	B & B	3" Cal	MATCHED, STRAIGHT	8-10' HT.	As Shown
QI	7	Quercus lyrata / Overcup Oak	B & B	4" Cal	Full, Matched, Straight	10-12' HT.	As Shown
Qm	1	Quercus macrocarpa / Burr Oak	B & B	2" Cal	Full, Straight Specimen	10-12' HT.	As Shown
Qn2	4	Quercus nuttallii / Nuttall Oak	B & B	4" Cal	Full, Straight Specimen	12' min.	As Shown
Ts	17	Thuja occidentalis 'Smaragd' / Emerald Green Arborvitae	B&B or CONT.		Full, Matched, Straight	6-8' HT.	As Shown
UP	12	Ulmus parvifolia 'Bosque' / Bosque Elm	B & B	4" Cal	Full, Matched, Straight	10-12' HT.	As Shown

SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT.	REMARKS	HEIGHT	SPREAD
Db	42	Distylium x 'BLDY01' TM / Jewel Box Distylium	3 gal	3" O.C.	12-15"	15-18"
Da	70	Distylium x 'PHIDIST-II' TM / Blue Cascade Distylium	Container	Full Specimen	24-30" HT.	24-30"
Dv	63	Distylium x 'Vintage Jade' / Vintage Jade Distylium	3 gal	3" O.C.	15-18" HT.	18-24"
Ls	30	Loropetalum chinense rubrum 'Peack' TM / Purple Pixie Fringe Flower	3 gal	3.5" O.C.	6-12" oc	24-30"
LC2	68	Loropetalum chinense 'Danuma' / Danuma Dwarf Loropetalum	3 gal	3" O.C.	15-18" HT.	15-18"
LC3	68	Loropetalum chinense 'Ruby' / Ruby Loropetalum	5 gal	4" O.C.	18-24" HT.	18-24"
Re	186	Rosa 'Meigigili' / Peach Drift Groundcover Rose	3 gal	24" O.C.	6-12"	12'-15"
Vs	40	Viburnum tinus 'Spring Bouquet' / Spring Bouquet Viburnum	Container or B&B	Full Specimen	24"	24"

GROUND COVERS	QTY	BOTANICAL / COMMON NAME	CONT.	REMARKS	SPACING
Ar2	51	Achillea millefolium 'Red Velvet' / Red Velvet Common Yarrow	1 gal	Full Specimen	24" O.C.
Hb	38	Hemerocallis x 'Barbara Mitchell' / Barbara Mitchell Daylily	3 gal	Full Specimen	24" O.C.
Hr	336	Hemerocallis x 'Ruby Stella' / Ruby Stella Daylily	1 gal	18" O.C.	18" O.C.
Jn	350	Juniperus procumbens 'Nana' / Japanese Garden Juniper	3 gal	Full Specimen	30" O.C.
Mc	1,013	Muhlenbergia capillaris / Pink Muhly Grass	3 gal	Full Specimen	24" O.C.
Np	151	Nassella tenuissima 'Pony Tails' / Mexican Feathergrass	3 gal	Full Specimen	18" O.C.
P2	87	Perovskia atriplicifolia 'Little Spire' / Little Spire Russian Sage	3 gal	Full Specimen	18" O.C.
Rg	153	Rudbeckia fulgida sultivanti 'Goldsturm' / Goldsturm Coneflower	3 gal	Full Specimen	18" O.C.
Sm2	34	Salvia nemorosa 'May Night' / May Night Sage	1 gal	Full Specimen	18" O.C.
Sb	28	Stachys byzantina 'Big Ears' / Big Ears Lamb's Ear	1 qt.	Full Specimen	15" O.C.

811
Know what's below.
Call before you dig.

NORTH

SCALE: 1"=30'

Project no: 17000385
Date: 02.17.21
Revisions:

Sheet Title:
LANDSCAPE PLAN

Sheet No:
C600