



ColeJenest & Stone

Shaping the Environment
Realizing the Possibilities

Land Planning
Landscape Architecture
Civil Engineering
Urban Design

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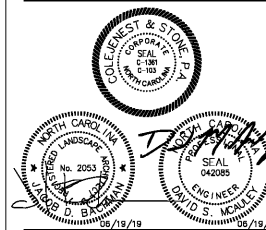
ONE NORMAN

20101 West Catawba Avenue
Cornelius
North Carolina 28031

SITE DETAILS

Project No.
4493
Issued
03/26/19

Revised

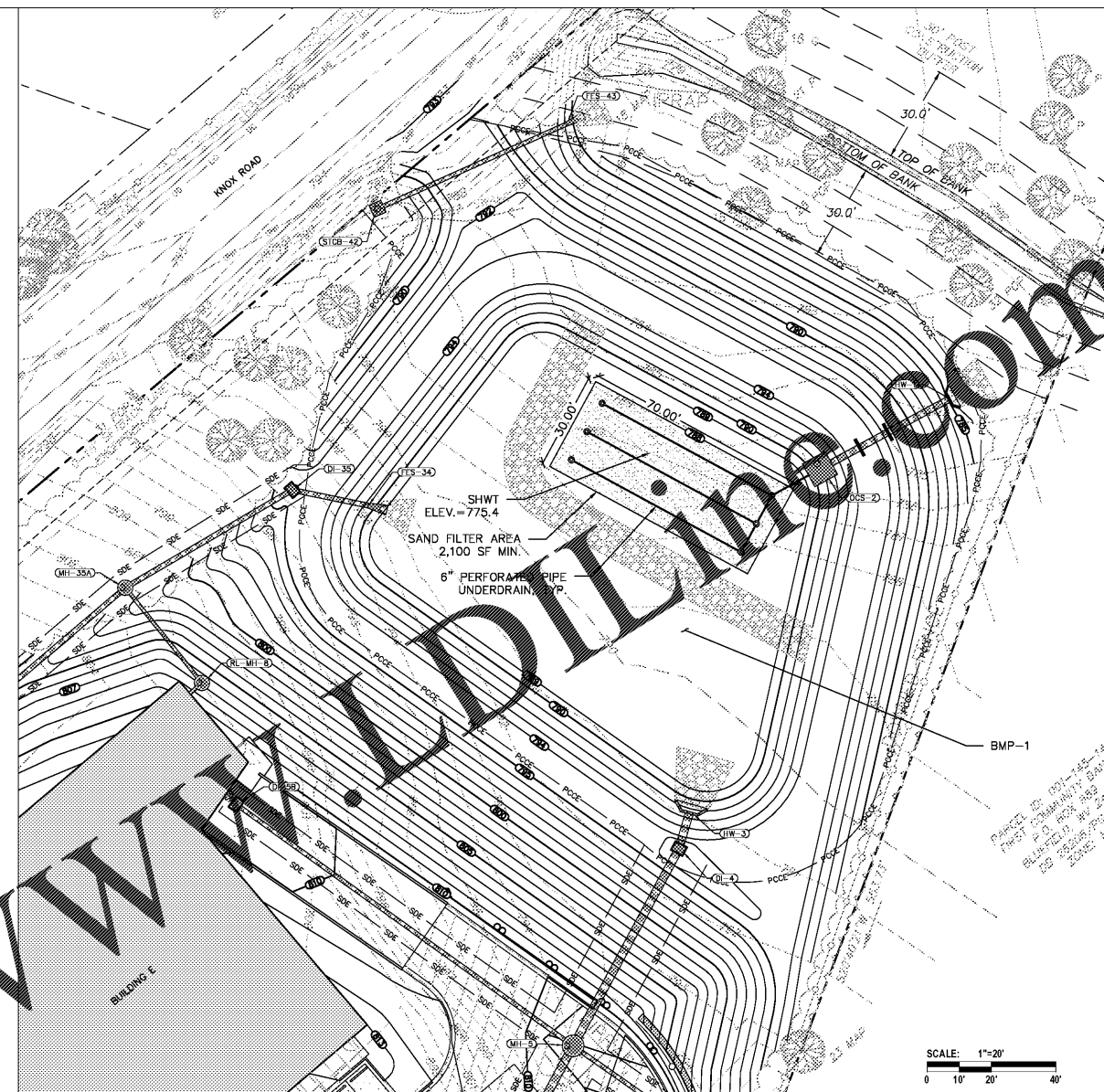


C-807

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ColeJenest & Stone, P.A. 2019

N.T.S. 1



PEAK CONTROL STORM EVENTS	PRE-DEVELOPMENT RUNOFF	POST-DEVELOPMENT RUNOFF	POST-ROUTING RUNOFF	ELEVATION
TOP OF DAM				794.00
100YR - 6HR	12.63 CFS	59.38 CFS	21.20 CFS	793.19
50YR - 6HR	10.23 CFS	53.00 CFS	13.47 CFS	792.98
25YR - 6HR	7.67 CFS	46.84 CFS	7.30 CFS	792.75
10YR - 6HR	4.77 CFS	38.49 CFS	3.91 CFS	792.23
1YR - 24HR	0.55 CFS	17.29 CFS	0.94 CFS	790.93
BMP REQUIRED		PROVIDED		
OPV (1YR - 24 HR)	42,393 CF	42,515 CF		790.93
WQV (1" STORM)	19,428 CF	19,471 CF		789.86
SAND FILTER	1448 SF	2100 SF		788.00
SAND FILTER MAX ALLOWABLE BUA				240,462 SF
TOTAL SITE MAX ALLOWABLE BUA				240,462 SF

	Designed (SF)	Surveyed (SF)
Site Area		480841
Roads/Parking		152529
Curbs & Gutters		17385
Sidewalk/Concrete Pads		20986
Buildings		39106
Total Max BUA		230006

NOTE: THAT A BUA AS-BUILT SHALL BE PROVIDED PRIOR TO THE ISSUANCE OF BMP AS-BUILT APPROVAL

Project Name:	One Norman - Commercial Development
Sequence ID:	1
Surface Area (sq. ft.):	17,370
Drainage Area (acres):	7.68
Land Use/Development Type:	Commercial - Heavy
Vegetation Type:	Grassed
Percent Bulk-Upon Area:	50%
Maximum Depth (ft.):	5.19
Detention Basin Type:	Surface
Forebay Present (Y/N):	Y
Flow Diverters Present (Y/N):	N
Regulated By:	Post Construction and Watershed
Treatment Effectiveness:	Optimal
NC State Plane X (easting):	1440181
NC State Plane Y (northing):	636553

TASK	SCHEDULE
Inspect tanks and surrounding drainage areas for erosion and stabilizers if necessary	Monthly
Sweep parking lot	Quarterly
Trash removal	Monthly
Inspect outlet for obstructions	Monthly
Inspect for clogging	Monthly
Inspect inlet gates	Monthly
Skim sand media	Yearly
Pump oil and grit from sedimentation chamber	Yearly or at 90% full
Replace sand media	As needed (expect 3 years)
Grassed Sand Filter Only:	
Mow basin to recommended height in alternating patterns to prevent compaction and prevent weed growth. Bag clippings to prevent sludge build-up.	Weekly to bi-weekly during the growing season, as needed other seasons
Light fertilizing to establish healthy weeds	Only during the first 2 years
Aerate and detatch basin floor	Every 2 Years

Project Name:	One Norman - Commercial Development
Sequence ID:	1
Drainage Area (acres):	7.68
Land Use/Development Type:	Commercial - Heavy
Vegetation Type:	Grassed
Percent Bulk-Upon Area:	50%
Sediment Chamber Length (ft.):	135
Sediment Chamber Width (ft.):	80
Sediment Chamber Height (ft.):	2
Sand Filter Type:	Surface
Media Depth (ft.):	2.5
Media Surface Area (ft ²):	2,100
Flow Diverters Present (Y/N):	N
Regulated By:	Post Construction and Watershed
Treatment Effectiveness:	Optimal
NC State Plane X (easting):	1440181
NC State Plane Y (northing):	636553

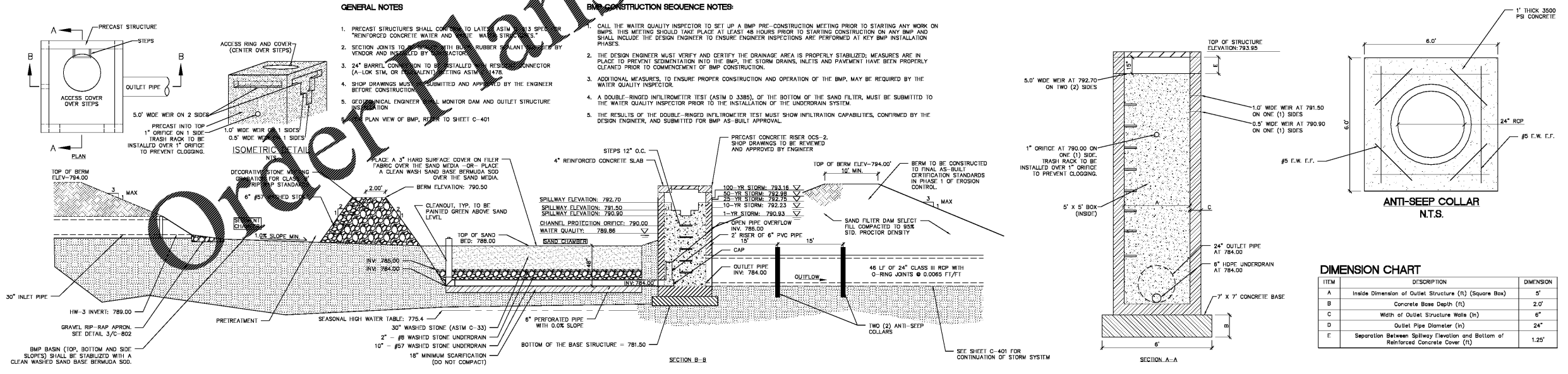
TASK	SCHEDULE
Forebay inspection and cleanout	Monthly inspection. Remove sediment every 7 years or when sediment volume exceeds 50% of storage volume
Bank mowing and inspection / stabilization of eroded areas	Monthly (maintain 3 - 6 inch grass height)
Outlet / inlet inspection and cleanout	Monthly
Unwanted vegetation and trash removal	Monthly
Inspect for structural damage, leaks, etc.	Yearly
Inspect / exercise all mechanical devices, valves, etc.	Yearly
Evaluate sediment level (remove as needed)	Yearly
Security	As needed

GENERAL NOTES

- PRECAST STRUCTURES SHALL CONFORM TO LATEST ASTM SPECIFICATIONS FOR REINFORCED CONCRETE WATER AND SEWER STRUCTURES.
- SECTION JOINTS TO BE SEALED WITH BUTYL RUBBER SEALANT APPLIED BY VENDOR AND INSPECTED BY ENGINEER.
- 24" BARREL CONNECTION TO BE INSTALLED WITH RUBBER CONNECTOR (A-LOK STIM, OR EQUIVALENT) MEETING ASTM 1478.
- SHOP DRAWINGS MUST BE SUBMITTED AND APPROVED BY THE ENGINEER BEFORE CONSTRUCTION.
- GEOTECHNICAL ENGINEER SHALL MONITOR DAM AND OUTLET STRUCTURE DURING CONSTRUCTION.

BMP CONSTRUCTION SEQUENCE NOTES

- CALL THE WATER QUALITY INSPECTOR TO SET UP A BMP PRE-CONSTRUCTION MEETING PRIOR TO STARTING ANY WORK ON BMPs. THIS MEETING SHOULD TAKE PLACE AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION ON ANY BMP AND SHALL INCLUDE THE DESIGN ENGINEER TO ENSURE ENGINEER INSPECTIONS ARE PERFORMED AT KEY BMP INSTALLATION PHASES.
- THE DESIGN ENGINEER MUST VERIFY AND CERTIFY THE DRAINAGE AREA IS PROPERLY STABILIZED, MEASURES ARE IN PLACE TO PREVENT SEDIMENTATION INTO THE BMP, THE STORM DRAINS, INLETS AND PAVEMENT HAVE BEEN PROPERLY CALLED PRIOR TO COMMENCEMENT OF BMP CONSTRUCTION.
- ADDITIONAL MEASURES, TO ENSURE PROPER CONSTRUCTION AND OPERATION OF THE BMP, MAY BE REQUIRED BY THE WATER QUALITY INSPECTOR.
- A DOUBLE-RINGED INFILTROMETER TEST (ASTM D 3385), OF THE BOTTOM OF THE SAND FILTER, MUST BE SUBMITTED TO THE WATER QUALITY INSPECTOR PRIOR TO THE INSTALLATION OF THE UNDERDRAIN SYSTEM.
- THE RESULTS OF THE DOUBLE-RINGED INFILTROMETER TEST MUST SHOW INFILTRATION CAPABILITIES, CONFIRMED BY THE DESIGN ENGINEER, AND SUBMITTED FOR BMP AS-BUILT APPROVAL.



ITEM	DESCRIPTION	DIMENSION
A	Inside Dimension of Outlet Structure (ft) (Square Box)	5'
B	Concrete Base Depth (ft)	2.0'
C	Width of Outlet Structure Walls (in)	6"
D	Outlet Pipe Diameter (in)	24"
E	Separation Between Spillway Elevation and Bottom of Reinforced Concrete Cover (ft)	1.25'

DETENTION BASIN AND SAND FILTER DETAIL