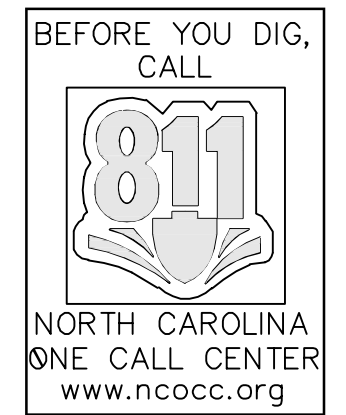


HARDEE'S - CAMERON, N.C.

NC HWY 87 & BUFFALO LAKE RD.

CAMERON, NORTH CAROLINA



CONTACT INFORMATION

PLANNING/ZONING: HARNETT COUNTY
108 E. FRONT STREET
LILLINGTON, NC 27546
JAY SIKES
910-893-7523

WATER & SEWER: HARNETT REGIONAL WATER
700 MCKINNEY PKY
LILLINGTON, NC 27546
CONTACT: SHANE CUMMINGS
910-893-7575

STORM DRAINAGE & ENGINEERING: NCDENR-DWQ
FAYETTEVILLE REGIONAL OFFICE
225 GREEN STREET, SUITE 714
FAYETTEVILLE, NC 28301
CONTACT: BELINDA HENSON
910-433-3300

TELEPHONE: WINDSTREAM
CONTACT: DWIGHT BELL
DWIGHT.BELL@VERIZON.COM
877-610-2905 EXT. 41010

ELECTRIC: DUKE ENERGY
3308 NC-5
ABERDEEN, NC 28315
800-452-2777



SITE INFORMATION

PROJECT NAME: HARDEE'S AT CAMERON, NC
LOCATION: BUFFALO LAKE RD. & NC HWY 87
CAMERON, NC 28326
COUNTY: HARNETT COUNTY
PIN: 9575-95-4454
DEED BOOK/PAGE: 3332/314

TOTAL SITE ACREAGE: 1.77 Ac. (77,159 SF)
ZONING: COMM (COMMERCIAL BUSINESS DISTRICT)
OVERLAY DISTRICT: HIGHWAY CORRIDOR
EXISTING USE: VACANT
PROPOSED USE: RESTAURANT
TOTAL BUILDING SIZE: 3,162 Sq. Ft.
TOTAL SEATS: 69 SEATS

EX. IMPERVIOUS AREA: 0.02 Ac.
PRO. IMPERVIOUS AREA: 34,383 SF (0.79 Ac.)
PRO. PERVIOUS AREA: 42,776 SF (0.98 Ac.)
BUILDING HEIGHT: 23'

BUILDING SETBACK REQUIRED:
FRONT: 35'
SIDE STREET: 20'
SIDE (INTERIOR): 0'
REAR: 25'

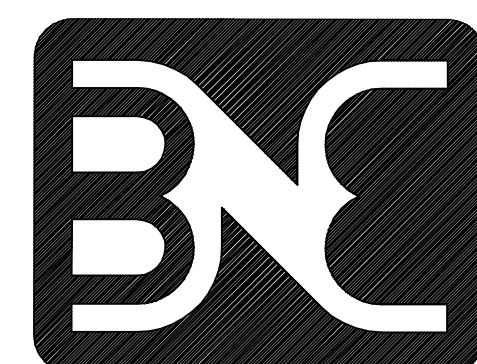
REQUIRED PARKING: 1 SPACE PER 4 SEATS
PARKING PROVIDED: + 1 PER 2 EMPLOYEES
REGULAR 9x19': 40
H.C. (REGULAR): 1
H.C. (VAN ACCESSIBLE): 1
TOTAL PROVIDED: 42

DISTURBED AREA: ±1.32 AC.
PROPOSED WASTEWATER ALLOCATION: 20 GPD PER SEAT
(RESTAURANT SINGLE SERVICE) 20 GPD X 69 SEATS = 1,380 GPD

INDEX OF SHEETS

- COVER COVER SHEET
- CE-01 EXISTING CONDITIONS and DEMOLITION PLAN
- CE-02 ROAD WIDENING PLAN
- CE-03 SITE PLAN
- CE-04 UTILITY PLAN
- CE-05 GRADING and DRAINAGE PLAN
- CE-06 LANDSCAPE PLAN
- CE-07 EROSION CONTROL
- CE-08 EROSION CONTROL DETAILS
- CE-09 EROSION CONTROL DETAILS
- CE-10 LIGHTING PLAN
- CE-11 STORMWATER WETLAND DETAILS
- CE-12 SITE NOTES and DETAILS
- CE-13 UTILITY NOTES and DETAILS
- CE-14 NCG01 NOTES SHEET
- CE-15 NCG01 NOTES SHEET

Owner/Developer:



BODDIE-NOELL
ENTERPRISES, INC.
P.O. BOX 1908
ROCKY MOUNT, N.C.
27802-1908
(252) 937-2800

Contact: Reggie Barnacascel
reggiebarnacascel@boddienoell.com

Civil Engineering:



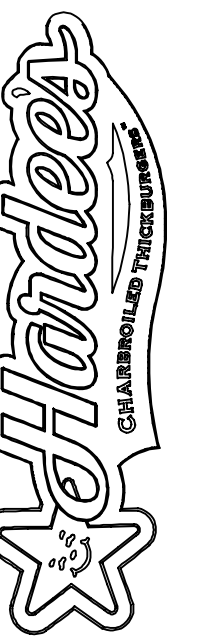
Contact: J. Michael Stocks, PE
mstocks@stocksengineering.com
License Number: 19843

Surveyor:



FREELAND & ASSOCIATES, INC.
323 WEST STONE AVE.
GREENVILLE S.C. 29609
TEL. (864) 271-4924 FAX: (864) 233-0315
EMAIL: info@freeland-associates.com

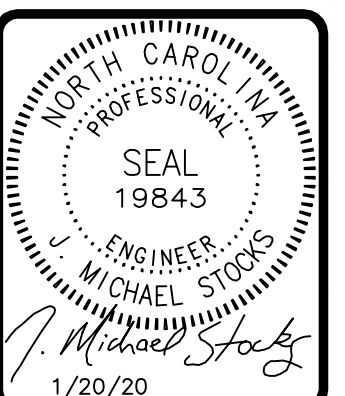
BLN-C-1874



BODDIE-NOELL
ENTERPRISES, INC.
P.O. BOX 1908
ROCKY MOUNT, N.C.
27802-1908
(252) 937-2800



Hardee's at
BUFFALO LAKE RD.
CAMERON, N.C.

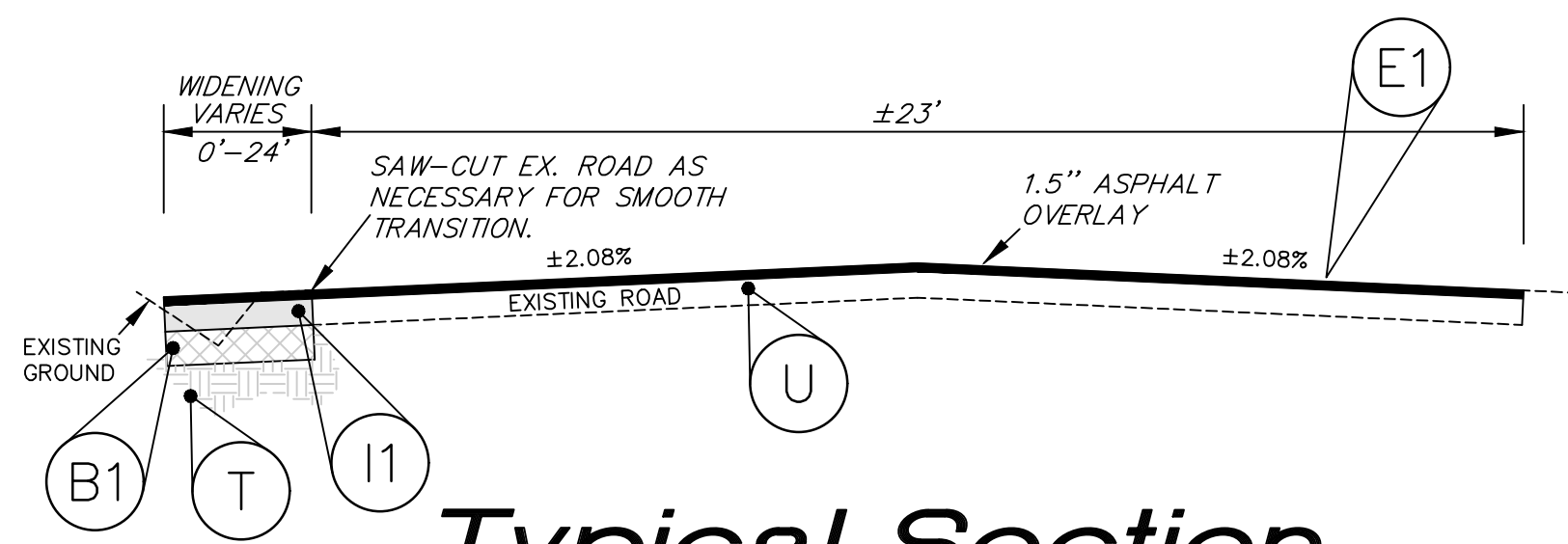


COVER

REVISIONS
2/21/20 - BNE COMMENTS

FILE NO.: 2017-013
HORZ. SCALE: NONE
VERT. SCALE: NONE

COVER



Typical Section
NOT TO SCALE

LEGEND

- (I1) 3.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1-19.0B
- (B1) 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B @ AN AVERAGE RATE OF 684 LBS. PER SQUARE YARD.
- (E1) 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B (OVERLAY)
- (U) EXISTING PAVEMENT
- (T) EXISTING EARTH

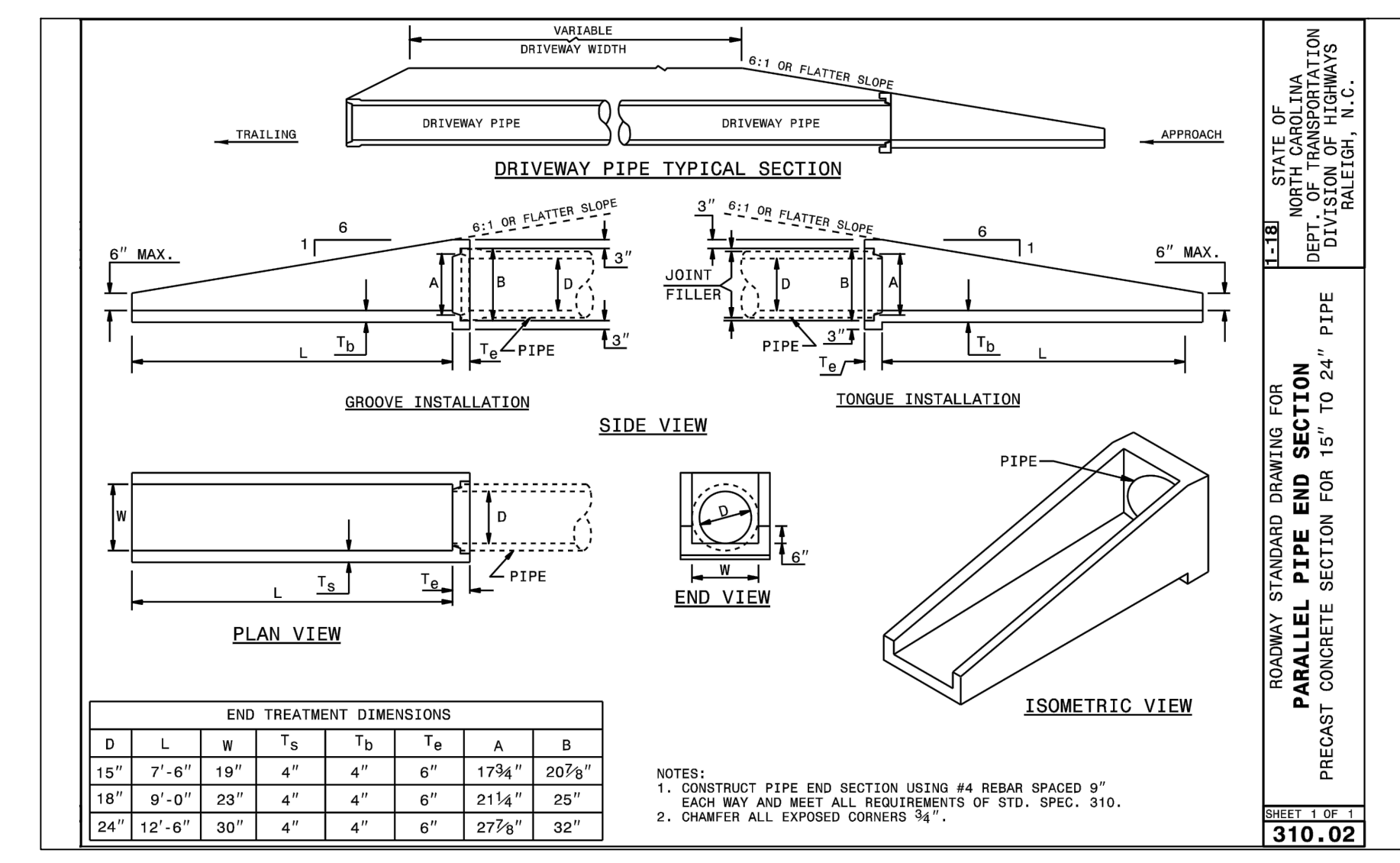
PAVEMENT MARKING LEGEND

- (TC) 10 FOOT WHITE SKIP (4" @ 120 MILS)
- (RD) YELLOW DOUBLE CENTER LINE (4" @ 120 MILS)
- (TO) WHITE EDGELINE (4" @ 90 MILS)
- (TE) WHITE SOLID LANE LINE (4" @ 90 MILS)
- (TH) YELLOW SINGLE CENTER (4" @ 90 MILS)
- (TF) 10 FT. YELLOW SKIP (4" @ 90 MILS)
- (UB) LEFT/RIGHT TURN ARROW (90 MILS)
- (T2) WHITE STOP BAR (24" @ 120 MILS)

POSTED SPEED	45
DESIGN SPEED	50
LATERAL SHIFT	12'
STORAGE LENGTH	100'
BAY TAPER	100'
DECELERATION LENGTH	150'
APPROACH/DEPARTURE TAPER	600

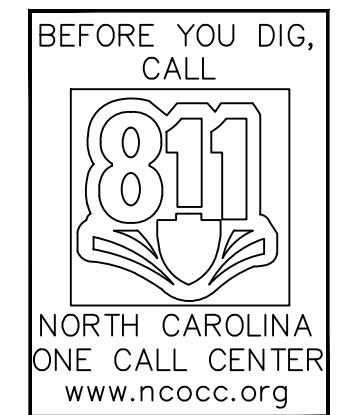
- ASPHALT MILLING AREA
- ASPHALT OVERLAY AREA (1 1/2" S9.5B ASPHALT CONCRETE SURFACE COURSE)
- ASPHALT WIDENING AREA (3.5" 1-19.0B ASPHALT CONCRETE INTERMEDIATE COURSE OVER 5" B25.0B ASPHALT CONCRETE BASE COURSE)

- NOTES:**
- CONTRACTOR TO ENSURE POSITIVE DRAINAGE PRIOR TO POURING CONCRETE
 - CONTRACTOR TO INCLUDE IN BASE BID THE BACKFILLING BEHIND CURB, OFFSITE DISPOSAL OF EXCESS MATERIAL, OFF-SITE BORROW, TEMPORARY AND PERMANENT SEED, STRAW & TACK.
 - CONTRACTOR TO INCLUDE IN BASE BID THE SAW-CUTTING, REMOVAL, & REPLACEMENT OF ASPHALT REQUIRED TO INSTALL CURB & GUTTER.
 - ASPHALT SHALL BE SAW-CUT TO PROVIDE SMOOTH EDGE TO PLACE CURB & GUTTER.
 - TWO-WAY TRAFFIC TO BE MAINTAINED AT ALL TIMES.
 - WIDENING, STRIPING AND SIGNAGE TO MATCH NCDOT STANDARDS AND DETAILS LATEST EDITION.
 - ALL STRIPING TO BE THERMOPLASTIC PER NCDOT STANDARDS AND SPECIFICATIONS.
 - CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND OR RELOCATION OF EXISTING UTILITIES, DRIVEWAY REPAIR, AND TRAFFIC CONTROL PER THE MUTCD, LATEST EDITION.
 - RAISED REFLECTIVE PAVEMENT MARKERS SHALL ALSO BE INSTALLED WITHIN TURN LANE CONSTRUCTION LIMITS IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS



- NOTES:**
- CONSTRUCT PIPE END SECTION USING #4 REBAR SPACED 9"
 - EACH WAY AND MEET ALL REQUIREMENTS OF STD. SPEC. 310.
 - CHAMFER ALL EXPOSED CORNERS 3/4"

SCALE: 1" = 30'



STOCKS ENGINEERING
801 EAST WASHINGTON STREET
NASHVILLE, N.C. 27856
WWW.STOCKSENGINEERING.COM
P.O. BOX 1108
PHONE: (252) 459-8196

BLN-C-1874
Hardee's
BODDE-NOELL ENTERPRISES, INC.
P.O. BOX 1908
ROCKY MOUNT, N.C. 27802-1908
(252) 807-2800

Hardee's at BUFFALO LAKE RD. CAMERON, N.C.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
RALEIGH, N.C.
SEAL 19843
MICHAEL STOCK
1/20/20

ROAD WIDENING PLAN

REVISIONS
2/21/20 - BNE COMMENTS






FILE NO. 2017-013
HORIZ. SCALE: 1"=30'
VERT. SCALE: NONE

CE-02

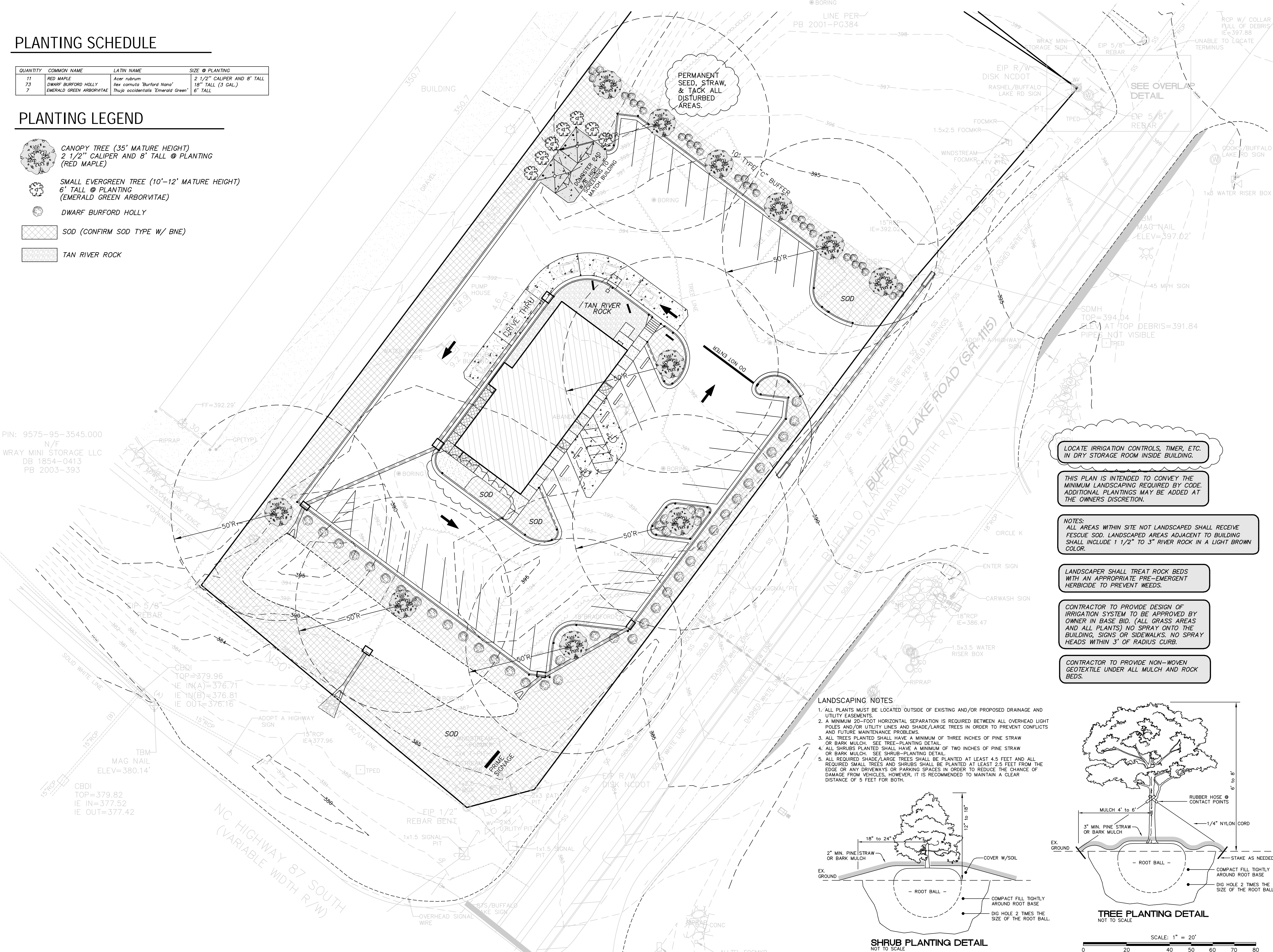
PLANTING SCHEDULE

QUANTITY	COMMON NAME	LATIN NAME	SIZE @ PLANTING
11	RED MAPLE	<i>Acer rubrum</i>	2 1/2" CALIPER AND 8' TALL
73	DWARF BURFORD HOLLY	<i>Ilex cornuta 'Burford Nano'</i>	18" TALL (3 GAL.)
7	EMERALD GREEN ARBORVITAE	<i>Thuja occidentalis 'Emerald Green'</i>	6' TALL

PLANTING LEGEND

-  CANOPY TREE (35' MATURE HEIGHT)
2 1/2" CALIPER AND 8' TALL @ PLANTING
(RED MAPLE)
-  SMALL EVERGREEN TREE (10'-12' MATURE HEIGHT)
6" TALL @ PLANTING
(EMERALD GREEN ARBORVITAE)
-  DWARF BURFORD HOLLY
-  SOD (CONFIRM SOD TYPE W/ BNE)
-  TAN RIVER ROCK

PIN: 9575-95-3545.000
N/F
WRAY MINI STORAGE LLC
DB 1854-0413
PB 2003-393



LOCATE IRRIGATION CONTROLS, TIMER, ETC.
IN DRY STORAGE ROOM INSIDE BUILDING.

THIS PLAN IS INTENDED TO CONVEY THE
MINIMUM LANDSCAPING REQUIRED BY CODE.
ADDITIONAL PLANTINGS MAY BE ADDED AT
THE OWNERS DISCRETION.

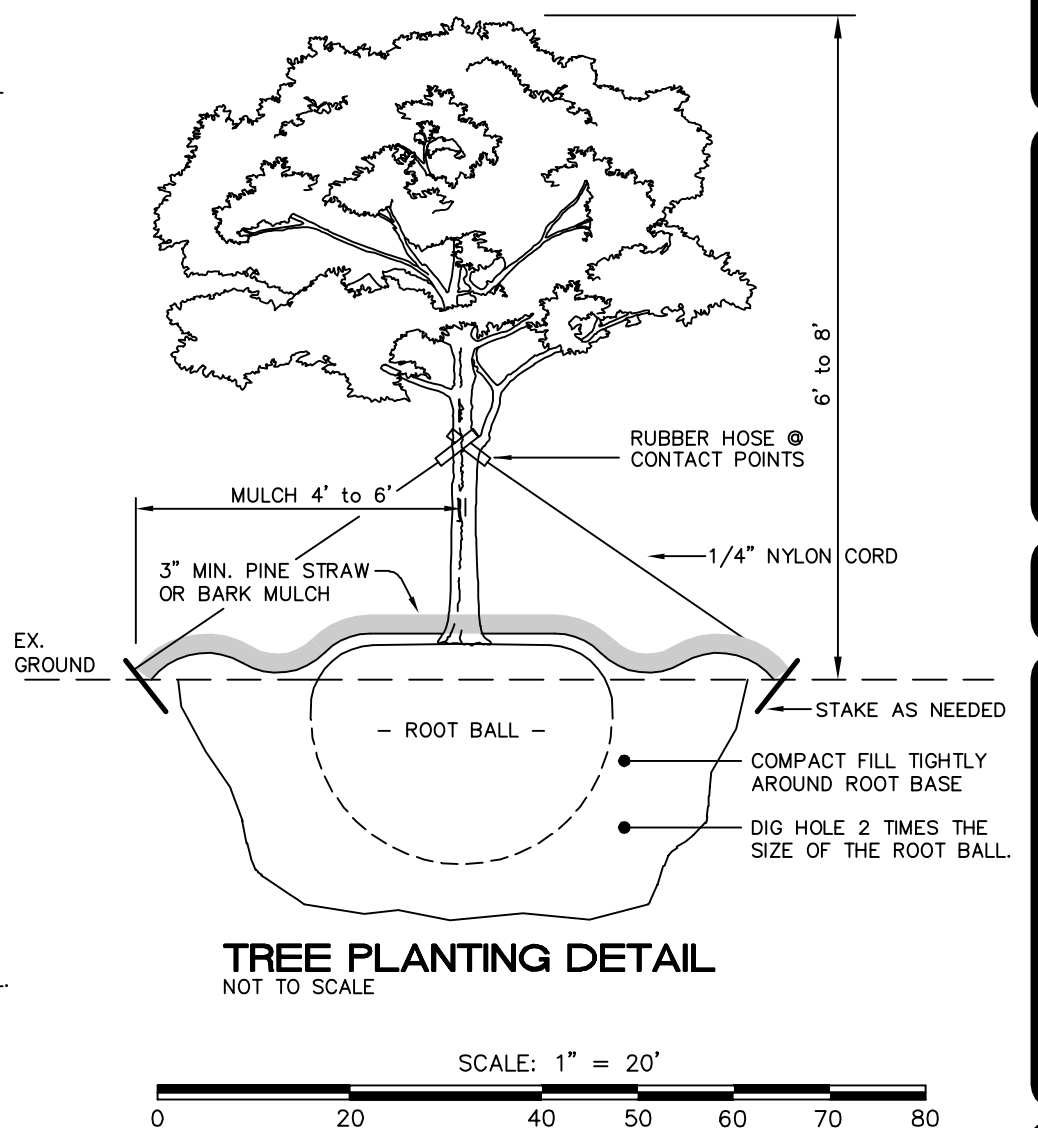
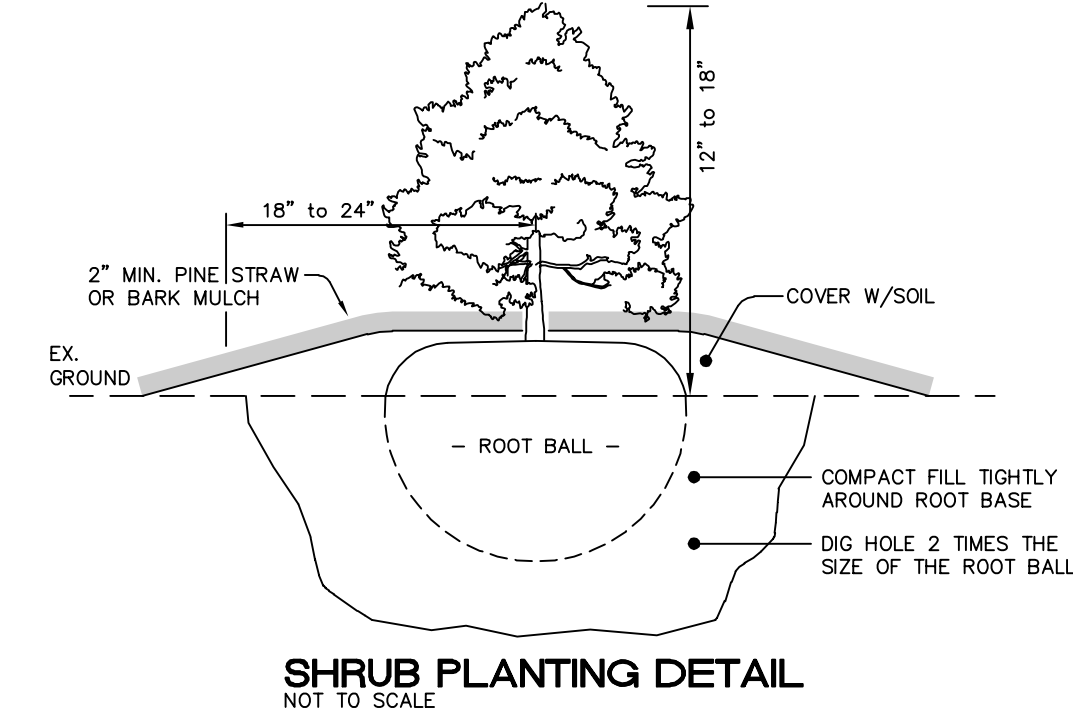
NOTES:
ALL AREAS WITHIN SITE NOT LANDSCAPED SHALL RECEIVE
FESCUE SOD. LANDSCAPED AREAS ADJACENT TO BUILDING
SHALL INCLUDE 1 1/2" TO 3" RIVER ROCK IN A LIGHT BROWN
COLOR.

LANDSCAPER SHALL TREAT ROCK BEDS
WITH AN APPROPRIATE PRE-EMERGENT
HERBICIDE TO PREVENT WEEDS.

CONTRACTOR TO PROVIDE DESIGN OF
IRRIGATION SYSTEM TO BE APPROVED BY
OWNER IN BASE BID. (ALL GRASS AREAS
AND ALL PLANTS) NO SPRAY ONTO THE
BUILDING, SIGNS OR SIDEWALKS. NO SPRAY
HEADS WITHIN 3' OF RADIUS CURB.

CONTRACTOR TO PROVIDE NON-WOVEN
GEOTEXTILE UNDER ALL MULCH AND ROCK
BEDS.

- LANDSCAPING NOTES**
- ALL PLANTS MUST BE LOCATED OUTSIDE OF EXISTING AND/OR PROPOSED DRAINAGE AND UTILITY EASEMENTS.
 - A MINIMUM 20'-FOOT HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL OVERHEAD LIGHT POLES AND/OR UTILITY LINES AND SHADE/LARGE TREES IN ORDER TO PREVENT CONFLICTS AND FUTURE MAINTENANCE PROBLEMS.
 - ALL TREES PLANTED SHALL HAVE A MINIMUM OF THREE INCHES OF PINE STRAW OR BARK MULCH. SEE TREE-PLANTING DETAIL.
 - ALL SHRUBS PLANTED SHALL HAVE A MINIMUM OF TWO INCHES OF PINE STRAW OR BARK MULCH. SEE SHRUB-PLANTING DETAIL.
 - ALL REQUIRED SHADE/LARGE TREES SHALL BE PLANTED AT LEAST 4.5 FEET AND ALL REQUIRED SMALL TREES AND SHRUBS SHALL BE PLANTED AT LEAST 2.5 FEET FROM THE EDGE OF ANY DRIVEWAYS OR PARKING SPACES IN ORDER TO REDUCE THE CHANCE OF DAMAGE FROM VEHICLES, HOWEVER, IT IS RECOMMENDED TO MAINTAIN A CLEAR DISTANCE OF 5 FEET FOR BOTH.



STOCKS ENGINEERING
801 EAST WASHINGTON STREET
NASHVILLE, N.C. 27856
PHONE: (252) 459-8196
WWW.STOCKSENGINEERING.COM

BLN-C-1874
Hardee's
BODDIE-NOELL ENTERPRISES, INC.
P.O. BOX 1908
ROCKY MOUNT, NC 27802-1908
(252) 987-2800

BNE
Hardee's at BUFFALO LAKE RD. CAMERON, N.C.

SEAL 19843
MICHAEL STOCK
1/20/20

LANDSCAPE PLAN

REVISIONS	DATE	BY	COMMENTS
1	2/21/20	BNE	COMMENTS

FILE NO. 2017-013
HORZ. SCALE: 1"=20'
VERT. SCALE: NONE

EROSION AND SEDIMENT CONTROL NARRATIVE

PROJECT DESCRIPTION
The purpose of this project is for the construction of a Hardee's Restaurant. The project is owned by Boddie-Noell Enterprises Inc. The site is currently vacant. Approximately 1.32 acres will be disturbed during construction.

The project is scheduled to begin construction in Summer 2019 with project completion and final stabilization by Winter 2019. The erosion and sediment control program for this project will include the installation of a suitable construction entrance, silt fence, inlet protection with seeding.

ADJACENT PROPERTY
The adjacent property is commercial.

SOILS
The soil at this site is a sandy clay.

EROSION AND SEDIMENT CONTROL MEASURES
All vegetative and structural erosion and sediment control practices shall be constructed and maintained by the contractor according to these plans and specifications and the minimum standards of the Dept. of Environmental Management, Land Quality Section and City of Clayton. The contractor shall also follow any additional requirements as outlined by the Project Engineer.

Structural Practices

- Vehicle wheels shall be clean when leaving the site to prevent the tracking of mud on paved roads.
- Construction Road Stabilization: Construction traffic shall be limited to stabilized areas. At a minimum, a temporary gravel construction entrance shall be provided as shown on this drawing.
- Silt Fence: Silt fences shall be provided where shown and as needed on the site plan. These barriers shall be used to contain sediment.
- Rip Rap/Gravel Filter Sediment Basins: Construct basin to the shape and dimensions shown in the details. The basin is to be placed below the existing ditch flow line by 2' with the berm built above as dimensioned.

Vegetative Practices (Ground Stabilization)

Site Area Description:	Stabilization Time Frame:	Stabilization Time Frame Exceptions:
Perimeter dikes, swales, ditches & slopes.	7 Days	None
High Quality Water (HOW) Zones.	7 Days	None
Slope steeper than 3:1	7 Days	None
Slopes 3:1 or flatter.	10 Days	7 Days for slopes greater than 50 feet in length.

Seeding Schedule

Grading Activity. Land left exposed shall be planted or otherwise provided with temporary ground cover, devices, or structures sufficient to restrain erosion within the applicable time period after completion of any phase of grading or period of inactivity as follows: seven (7) days for steep slope or inclination, ten (10) days for a moderate slope, fourteen (14) days for land with no slope or inclination. For purposes of this section, a moderate slope means an inclined area, the inclination of which is less than or equal to three (3) units of horizontal distance to one (1) unit of vertical distance; and a steep slope means an inclined area, the inclination of which is greater than three (3) units of horizontal distance to one (1) unit of vertical distance. No other criteria apply.

Completed Activity. For any area of land-disturbing activity where grading activities have been completed, temporary or permanent ground cover sufficient to restrain erosion shall be provided as soon as practicable, but in no case later than seven (7) days after completion of grading.

Management Strategies

- Perimeter measures are to be installed prior to grubbing or grading.
- Tail Ditches shall be stabilized immediately following their construction. As an alternate, rock check dams may be provided at their outlets and/or the terminal downstream end of disturbance until ground cover is implemented.
- Stockpile and/or waste areas must be maintained within the limits of the areas protected by the proposed measures and otherwise temporarily seeded if to be left stockpiled over 15 days.
- Construction shall be planned so that grading operations can begin and end as quickly as possible.
- Silt Fences shall also be installed prior to or as a first step in construction.
- The Contractor shall be responsible for the installation and maintenance of all erosion and sediment control practices.

Vegetative Ground Cover
Immediately following grading, all areas shall receive either permanent or temporary seeding, as applicable, as follows:

TEMPORARY SEEDING SPECIFICATIONS

BETWEEN MAY 1 AND AUGUST 15, ADD 40 LB/ACRE GERMAN MILLET. PRIOR TO MAY 1 OR AFTER AUGUST 15, ADD 120 LB/ACRE RYE (GRAIN).

FALL IS BEST FOR TALL FESCUE AND LATE WINTER FOR LESPEDEZAS. OVERSEEDING OF KOBE LESPEDEZAS OVER THE FALL SEEDED TALL FESCUE IS VERY EFFECTIVE. USE UNHULLED BERMUDAGRASS SEED IN FALL.

SOIL AMENDMENTS
APPLY LIME AND FERTILIZER ACCORDING TO TESTS, OR APPLY 2,000 LB/ACRE GROUND AGRICULTURE LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER

MULCH
APPLY 4,000 LB/ACRE GRAIN STRAW, OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCHING MATERIAL. ANCHOR MULCH BY TACKLING WITH ASPHALT, RAVING OR NETTING. NETTING IS THE PREFERRED ANCHORING METHOD ON STEEP SLOPES.

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

PERMANENT SEEDING SPECIFICATIONS

FESCUE - 200 Lbs./Ac.
CENTIPEDE - 20 Lbs./Ac.

SOIL AMENDMENTS
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TEST.

MAINTENANCE
IF GROWTH IS LESS THAN FULLY ADEQUATE, REFERTILIZE THE SECOND YEAR. ACCORDING TO SOIL TESTS OR TOPDRESS WITH 500 LB/ACRE 10-10-10 FERTILIZER. MOW AS NEEDED. REPLACE, FERTILIZE, AND MULCH DAMAGED AREAS IMMEDIATELY.

Maintenance

- Reseed and mulch bare spots larger than 9 square feet (limited to 5% maximum of site area).
- Maintain all seeded areas until uniform stand is acceptable.
- If growth is not established by final project inspection, continue specified attention until the stand is acceptable.
- Correct and repair all undue settling and erosion within 1 year after final inspection.
- Remove from the site, all erosion control structures after complete stabilization at end of construction period.
- Remove silt from sediment pits and from behind check dams when silt is within half depth of the pit or spillway. Dispose of in an area where silt cannot re-enter pit / trap.

Calculations
The practice utilized for the proposed site did require formal calculations. Calculations have been provided.

OWNER
Boddie-Noell Enterprises, Inc.
P.O. Box 1908
Rocky Mount, NC 27802-1908
252.937.2800

Maintenance Notes:

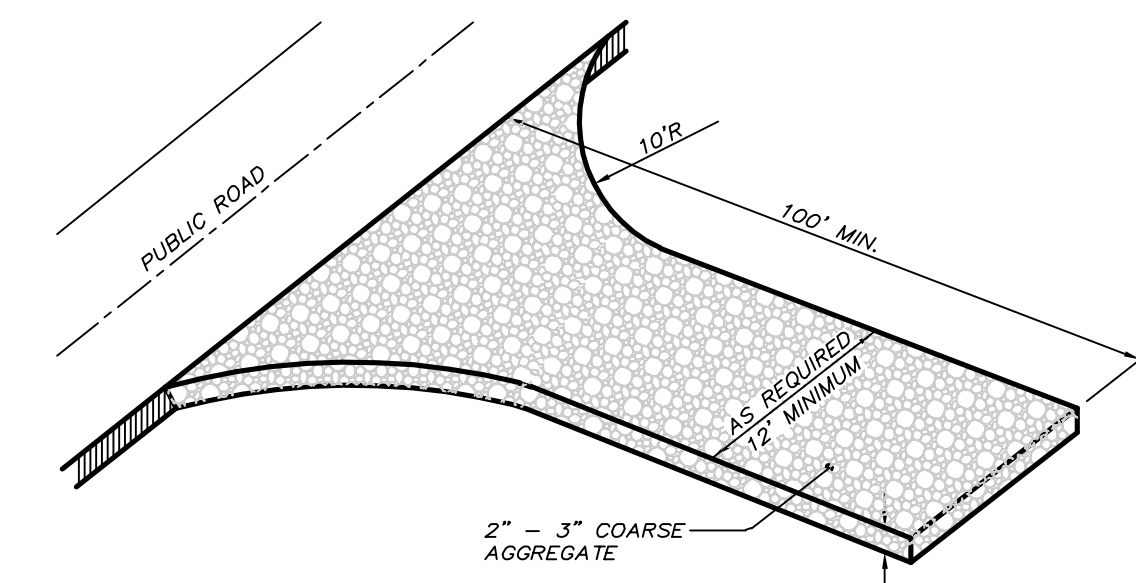
- Follow chart for timelines of when to apply temporary seeding.
- Maintain all erosion control measures daily and reseed disturbed areas as needed.
- Inspect all erosion control measures weekly and after each rainfall event. Repair as needed.

GENERAL NOTES:

- All Stockpile areas shall be a minimum of 100' away from surface waters and inside the perimeter EC Measures.
- All Concrete Washout areas shall be a minimum of 100' away from surface waters and inside the perimeter EC Measures.
- If an offsite soil spoil or borrow site is utilized, then the disturbed area for the spoil/borrow site must be included in the land-disturbance plan and permit unless the spoil/borrow site already has a land-disturbance permit.

CONSTRUCTION ENTRANCE

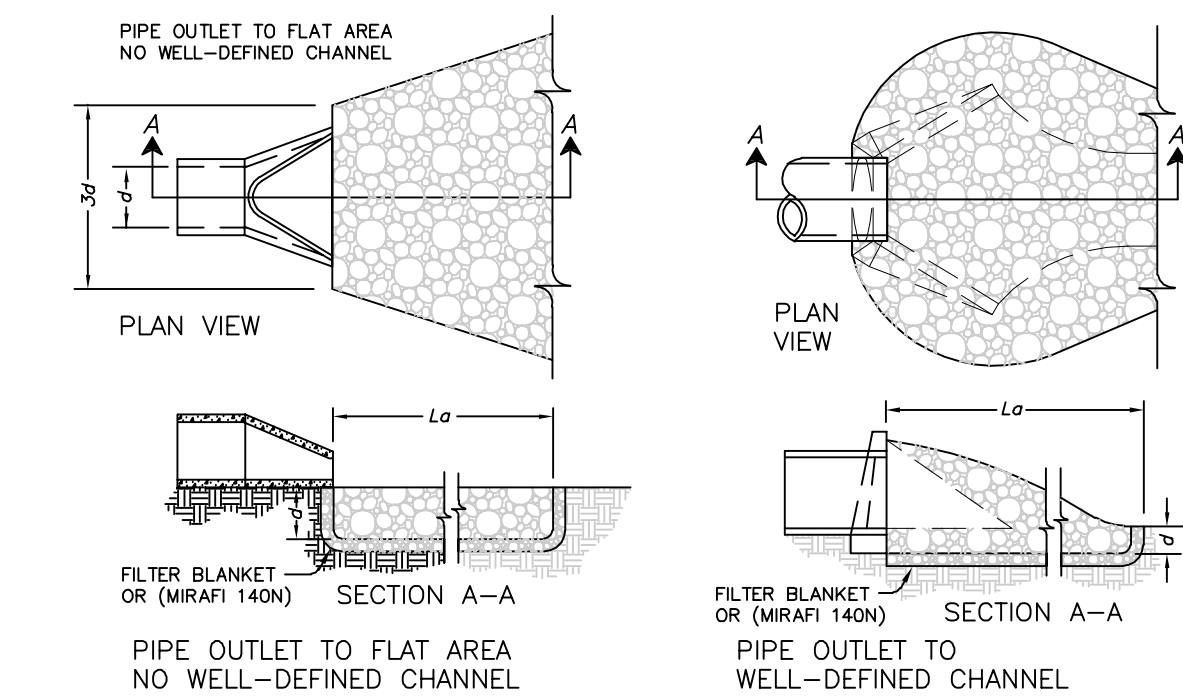
NOT TO SCALE



CONSTRUCTION SPECIFICATIONS:

- CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.
- PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
- PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
- USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

MAINTENANCE:
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.



GENERAL NOTES:

- L_a = THE LENGTH OF THE RIP RAP APRON.
- d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
- IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
- A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIP RAP AND SOIL FOUNDATION.
- FLARED END SECTION IS OPTIONAL. SEE PLANS FOR REQUIREMENT.
- SEE PLAN AND PROFILES FOR ACTUAL DIMENSIONS.

MAINTENANCE:
INSPECT RIP RAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/4 INCH OR GREATER) RAINFALL. EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

PIPE OUTLET PROTECTION

SCALE: N.T.S.

Conversion Procedure - Sediment Basin to Constructed Wetland

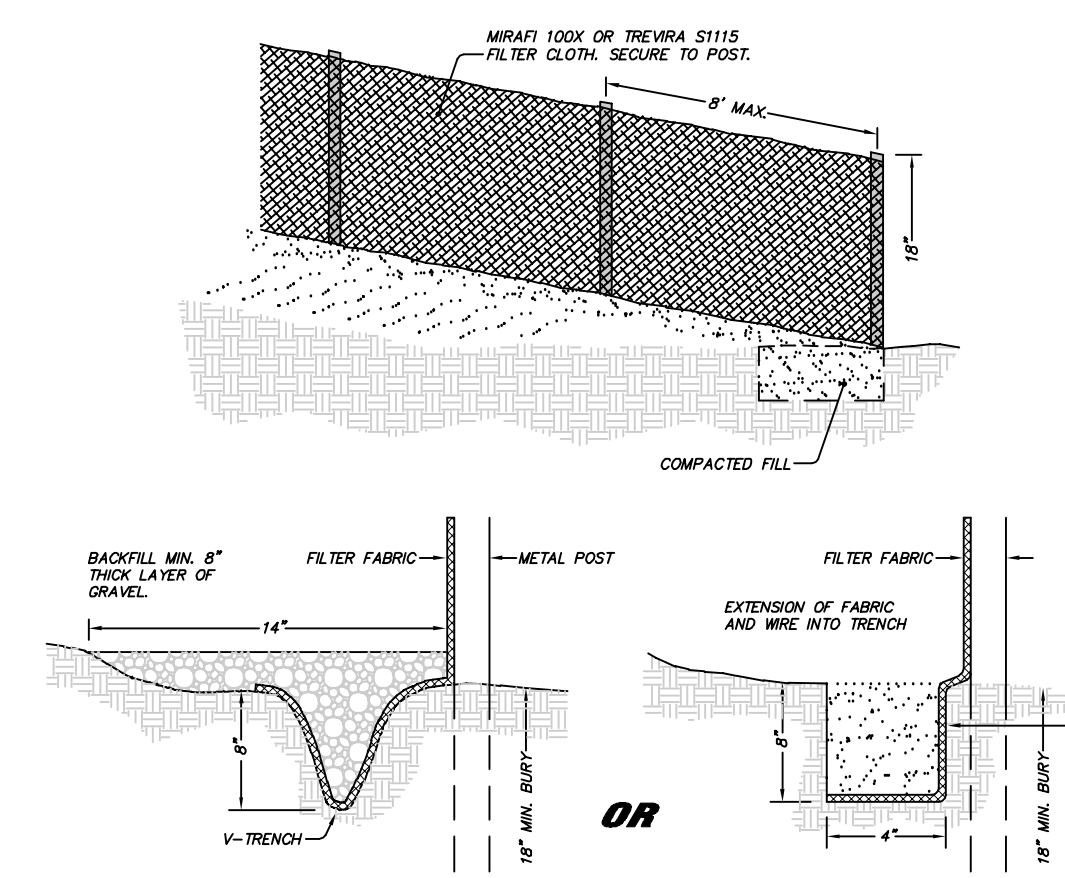
- After the site is completely stabilized, contact Stocks Engineering @ 252-459-8196 for verification of completion and stabilization.
- Contact NCDEQ for approval to remove all temporary erosion control measures.
- Upon approval from NCDEQ, begin the conversion of the wetland from a temporary sediment trap to a permanent BMP as follows.
- If standing water is in the basin, contractor shall pump the water out discharging through a silt bag.
- Bring the side slopes surrounding the pond and vegetated shelf to the proposed grade.
- Contractor shall excavate the bottom of the pond to the depth of the proposed wetland.
- Excavated material must be disposed of in an approved off-site location.
- Care must be taken to prevent any sedimentation/re-sedimentation during this process, as sediment deposits in the bottom of the pond may affect the depth. If any sedimentation occurs during this process, Contractor shall remove sediment immediately.
- Contact Stocks Engineering @ 252-459-8196 to inspect excavated pond before continuing construction.
- Upon approval of Stocks Engineering, continue constructing wetland per details. Establish appropriate permanent vegetation around pond as soon as possible.
- Upon completion of wetland construction, remove sediment from silt fence and dispose of at an approved off-site location. Plant vegetation as called for in planting schedule and seed and mulch side slopes.
- Contact Stocks Engineering @ 252-459-8196 to inspect completed pond before placing pond in service.

Construction Sequence

- Schedule and hold a pre-construction conference prior to beginning any land-disturbing activities. This conference should be attended by a representative of the financially responsible party and/or the general contractor, grading sub-contractor, erosion control sub-contractor and the Engineer.
- Obtain Land Disturbing Permit and placard, and post the placard on site.
- Obtain an approved (stamped) S&E control plan and keep it on site, either in the inspection box, construction office with the contractor, or with the contractor.
- Install construction egress/exit, silt fencing with outlets, inlet/outlet protection, concrete truck wash, and other initial erosion control measures as specified in the plan. Remove only trees and ground cover necessary to install these devices.
- Notify the Harnett County S&E site inspector after measures have been installed and project has started.
- Begin demolition, clearing, grubbing and grading of site in accordance with the approved S&E control plan.
- Provide all disturbed areas with ground cover as per ground stabilization table or after completion of any phase of clearing, grubbing or grading. The seeding, seedbed preparation, mulch and/or rolled erosion control product installation must be in accordance with the seeding schedule provided in this S&E plan.
- At the conclusion of building or if land-disturbing activity is stopped temporary or permanent vegetative cover shall be installed in accordance with ground stabilization table. If required include excelsior matting.
- Remove all erosion control measures after the Harnett County S&E office approval of permanent stabilization.

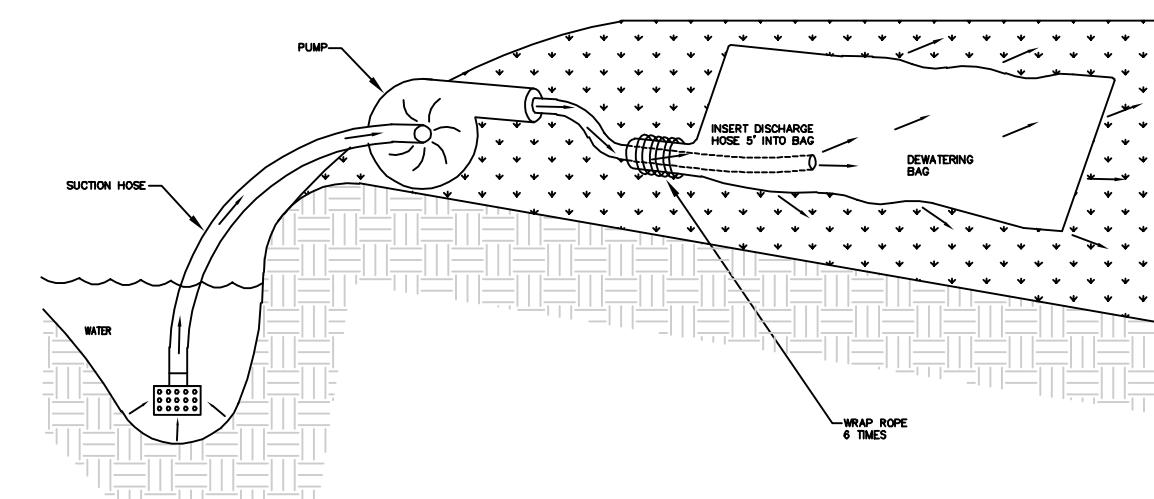
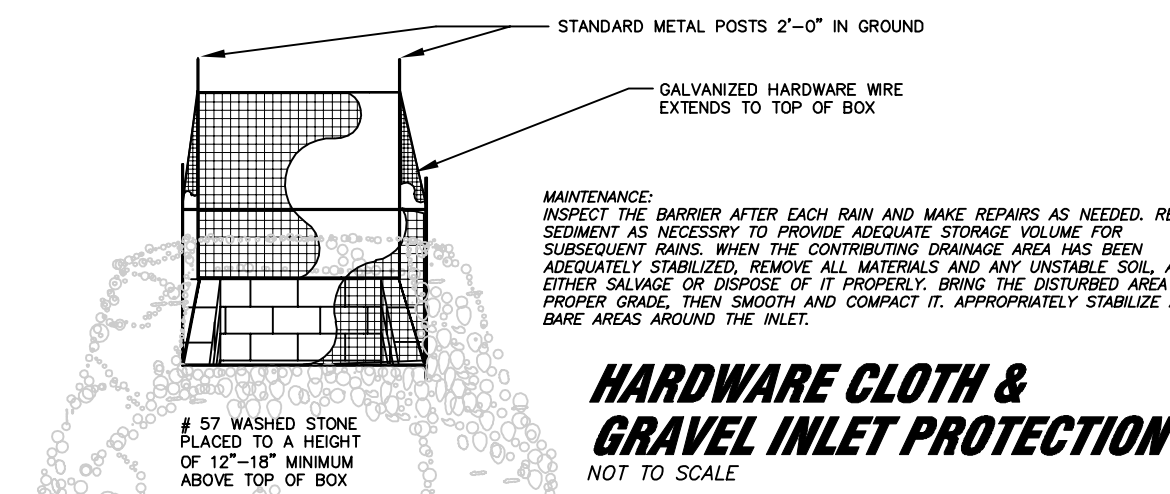
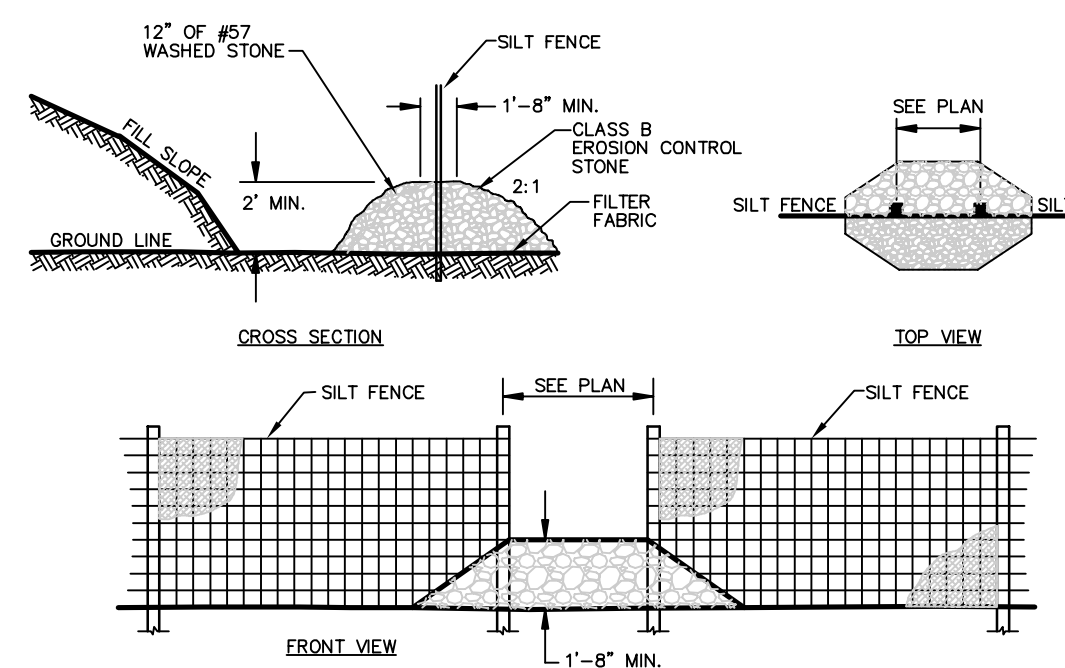
SILT FENCE

NOT TO SCALE



SILT FENCE OUTLET

NOT TO SCALE



Installation and Use:

- Place Dewatering Bag on the ground or on a trailer over a relatively level, stabilized area.
- Insert discharge pipe a minimum of 5ft. inside dewatering bag and secure with a rope wrapped 6 times around the snout over a 6 inch width of the bag.
- Replace Dewatering Bag when half full of sediment or when the sediment has reduced the flow rate of the pump discharge to an impractical amount.

Maintenance and Disposal:

- Remove and dispose of accumulated sediment away from waterways or environmentally sensitive areas. Silt open Sediment Bag and remove accumulated sediment. Dispose of bag at an appropriate recycling or solid waste facility. OR, as directed by engineer or inspector.

DEWATERING BAG

SCALE: N.T.S.

CONSTRUCTION SPECIFICATIONS:

- CONSTRUCT THE SEDIMENT BARRIER OF STANDARD OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.
- ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE GROUND SURFACE. HIGHER FENCES MAY IMPROUD VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE.
- CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL OUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH A FEET MINIMUM OVERLAP TO THE NEXT POST.
- SUPPORT STANDARD FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
- WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES.
- EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.
- EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
- PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
- BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.
- DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

MAINTENANCE:

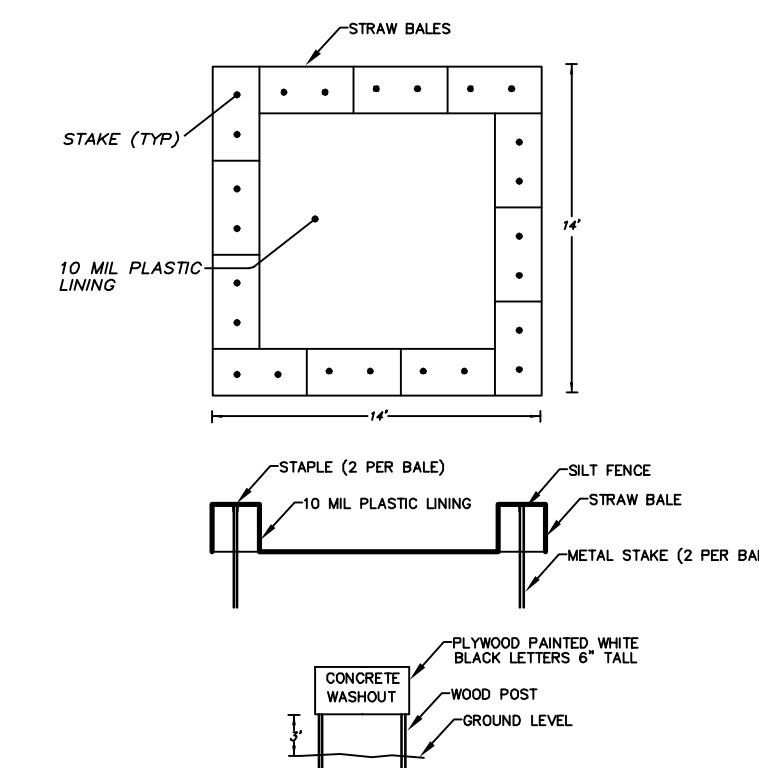
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. 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.

CONSTRUCTION SPECS:

- CLEAR & GRUB THE AREA AROUND THE SILT FENCE OUTLET AND PROPERLY DISPOSE OF DEBRIS.
- PLACE GRAVEL TO THE SPECIFIC GRADE AS SHOWN PER THE DETAIL.
- PROPERLY OVERLAP STONE BEYOND EDGES OF SILT FENCE OPENING.

MAINTENANCE:

INSPECT OUTLETS WEEKLY AND AFTER EACH RAIN EVENT. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR AS NEEDED. CAREFULLY CHECK OUTLETS FOR EROSION AND REPAIR IMMEDIATELY. ENSURE THERE IS NO SCOURING APPARENT DOWNSTREAM OF OUTLET. IMMEDIATELY STABILIZE ANY AREAS THAT NEED REPAIR.



CONSTRUCTION SPECIFICATIONS:

- CONCRETE WASHOUT SIGN SHALL BE INSTALLED NO FURTHER THAN 25' FROM THE FRONT OF THE WASHOUT AND SHALL BE VISIBLE TO ALL CONSTRUCTION TRAFFIC.
- POLYETHYLENE SHEETING SHALL BE 10 MILS FREE OF HOLES, TEARS, OR LEAKS.

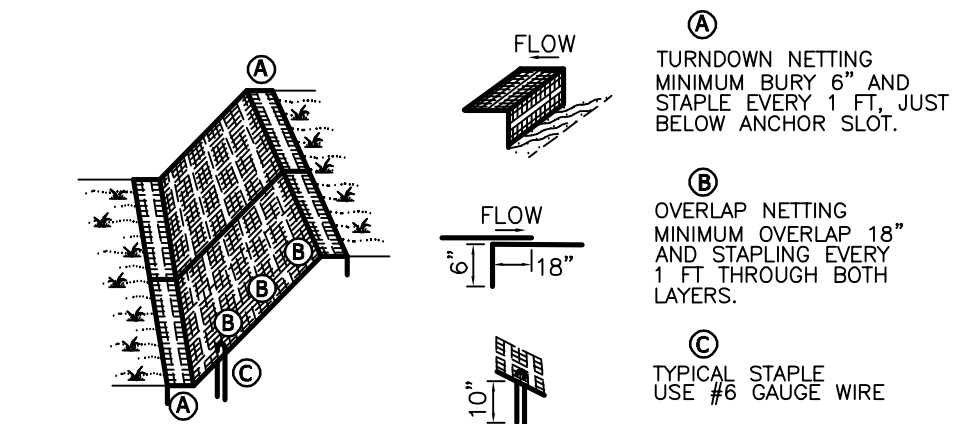
MAINTENANCE:
FACILITY SHALL NOT BE FILLED MORE THAN 12" FROM THE TOP BEFORE DISPOSING OF CONCRETE. CONCRETE SHALL BE DISPOSED OF IN THE SAME MANNER AS OTHER NON-HAZARDOUS MATERIALS FROM THE SITE OR MAY BE BROKEN UP AND USED AS FILL IN NON-STRUCTURAL AREAS.

CONCRETE TRUCK WASHOUT

NOT TO SCALE

EXCELSIOR MATTING

NOT TO SCALE



GENERAL NOTES:

- Apply seed, and tack with rs or crs liquid emulsified asphalt at a rate equal to 10 gal. per 1000 s.f. Cover w/excelsior matting.
- Staple every 24" along perimeter edges and overlaps. Staple every 36" to 48" randomly to secure netting.
- Roll out netting in the direction of water flow. Do not stretch.

STOCKS ENGINEERING
801 EAST WASHINGTON STREET
NASHVILLE, N.C. 27856
WWW.STOCKSENGINEERING.COM
P.O. BOX 1108
(252) 459-8196

BLN-C-1874

Hardee's
CHARLESTON, SOUTH CAROLINA

BODDIE-NOELL ENTERPRISES, INC.
P.O. BOX 1908
ROCKY MOUNT, NC
27802-1908
(252) 937-2800

BN

Hardee's at
**BUFFALO LAKE RD.
CAMERON, N.C.**

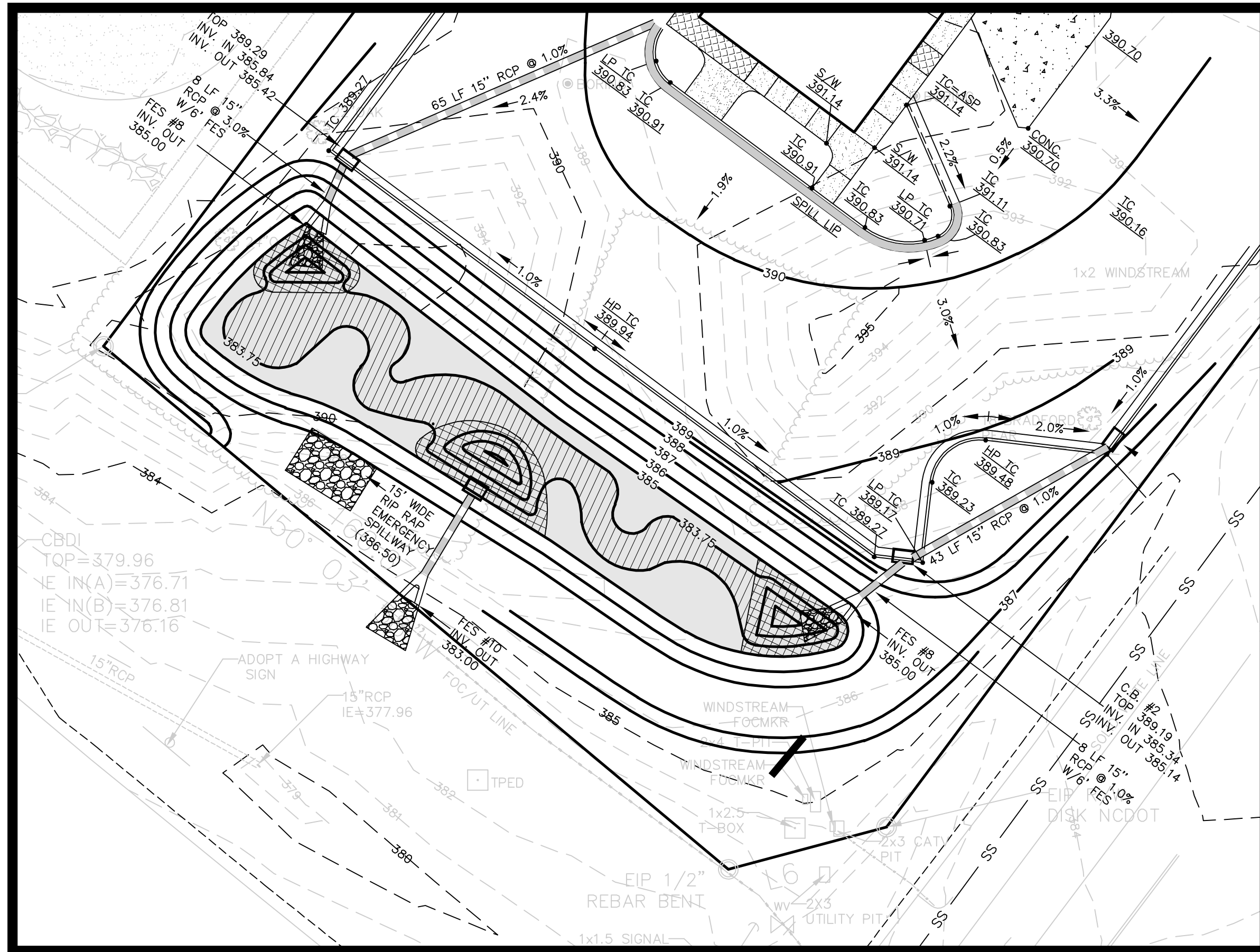
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL
19843
MICHAEL STOCK
1/20/20

EC NOTES AND DETAILS

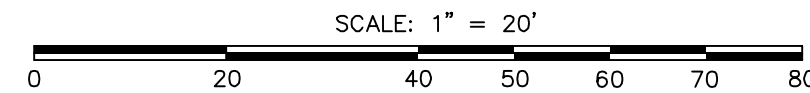
REVISIONS
2/21/20 - DEQ COMMENTS

FILE NO. 2017-013
HORZ. SCALE: 1"=20'
VERT. SCALE: NONE

CE-08

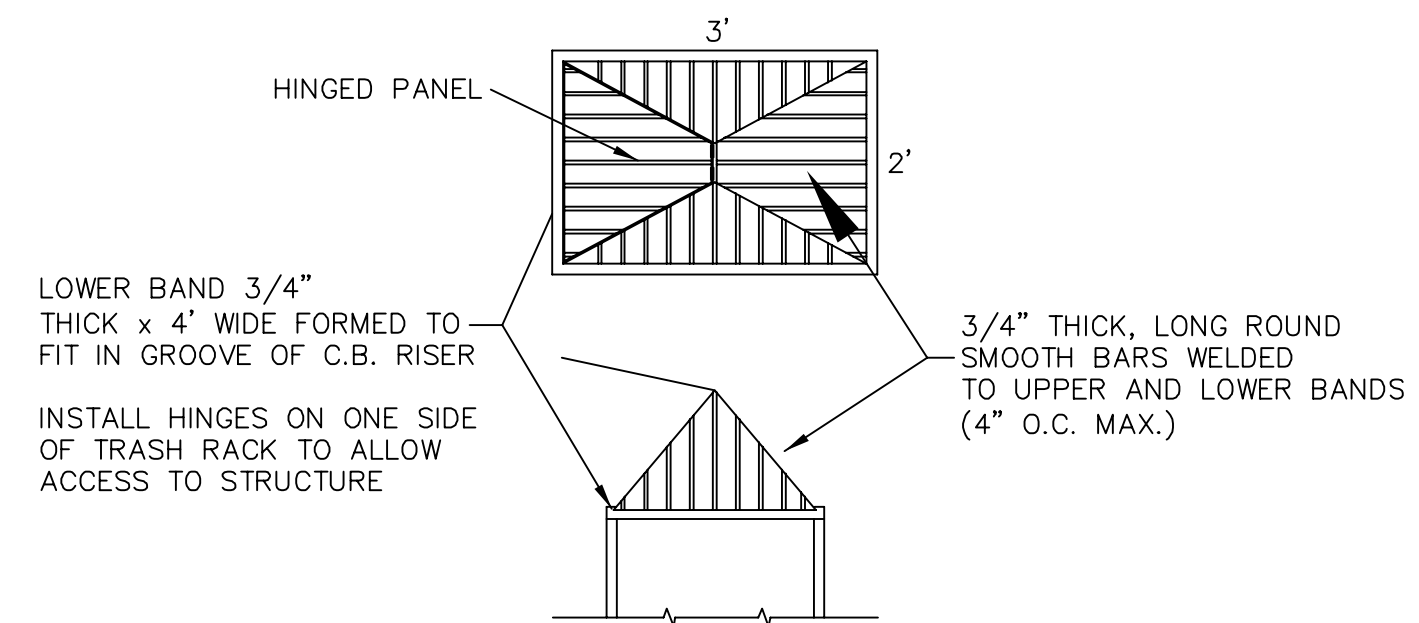


WETLAND AREA
 FOREBAY 453 S.F. (15%)
 NON-FOREBAY 327 S.F. (11%)
 SHALLOW WATER 1,078 S.F. (35%)
 TEMP. INUNDATION ZONE 1,193 S.F. (39%)
 3,051 Sq. Ft.

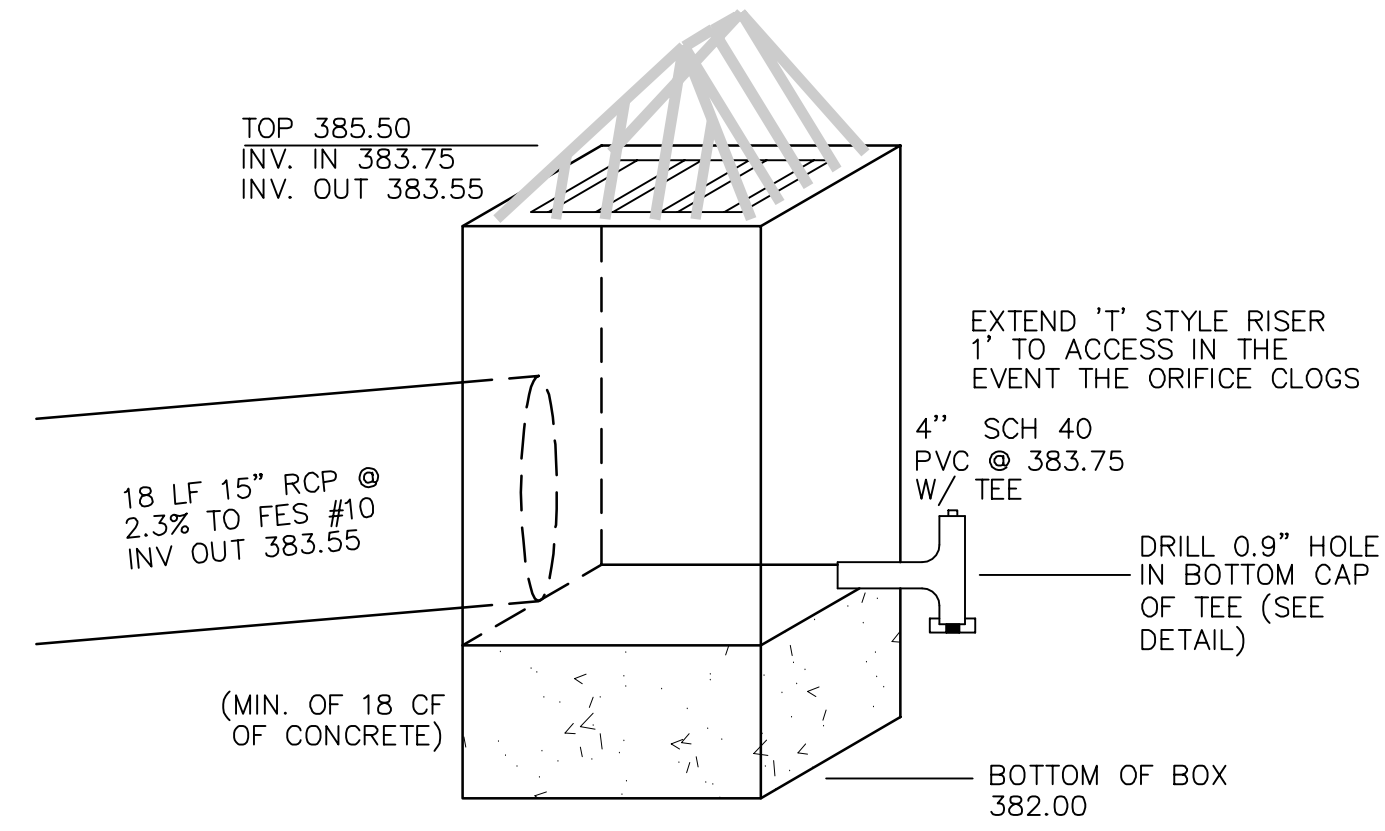


NOTE:
CONTRACTOR TO COMPACT BOTTOM OF POND TO ENSURE INFILTRATION IS LESS THAN 0.01 IN./HR. OR IMPORT IMPERMEABLE CLAY AS NEEDED.

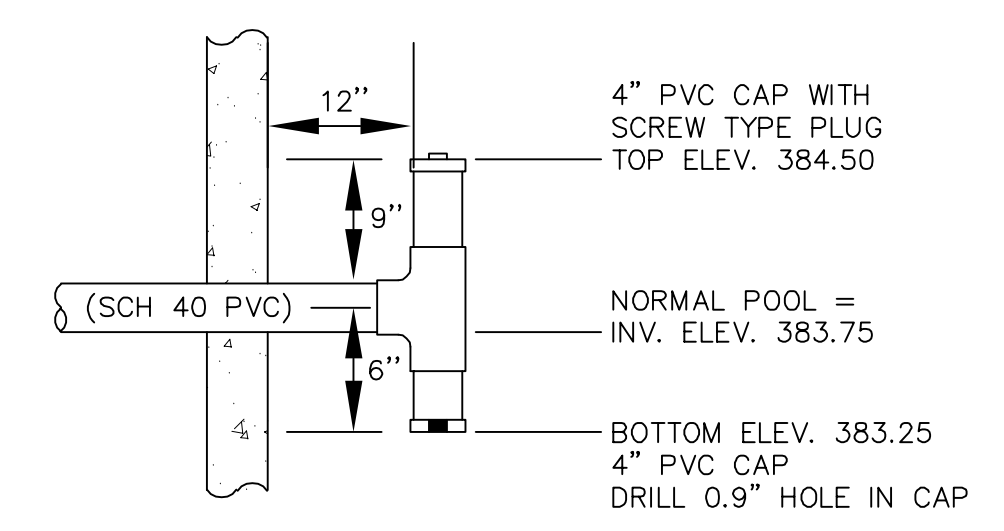
NOTE:
A PORTABLE PUMP SHALL BE USED DURING MAINTENANCE AND EMERGENCIES. THE DRAWDOWN PUMP RATE SHOULD ALLOW FOR THE SCM TO BE DRAWN DOWN OVER A 3 DAY OF LONGER PERIOD TO PREVENT THE COLLAPSE OF THE SATURATED SIDE SLOPES.



TRASH GRATE DETAIL
TO BE CONSTRUCTED ALUMINUM
N.T.S



2'x3' RISER STRUCTURE
W/ ALUMINUM TRASH RACK

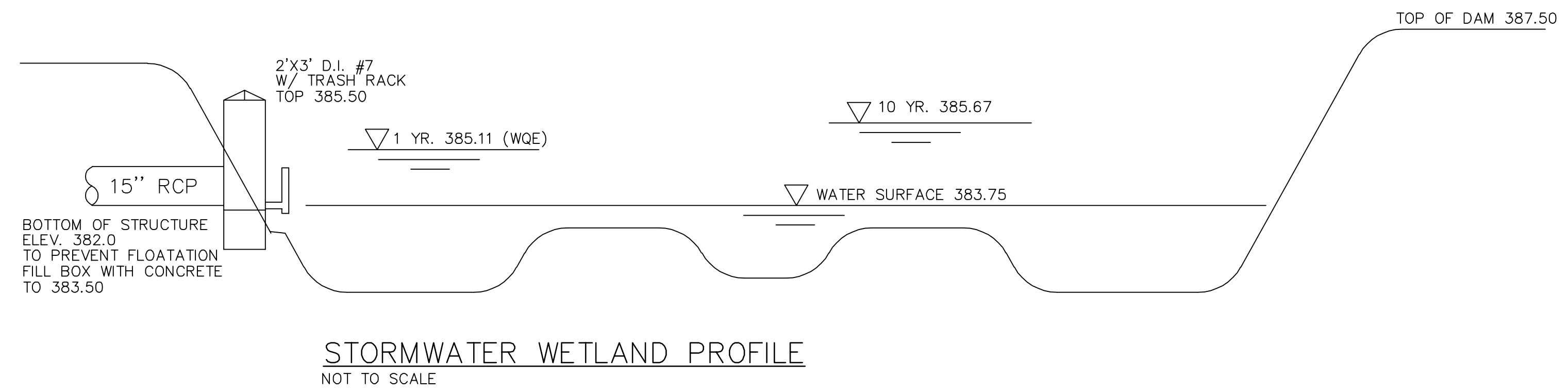


PLANTING NOTE: PLANTINGS SHALL BE EVENLY SPACED TO COVER THE ENTIRE POND AREA EXCLUDING THE FOREBAY AND OUTLET DEEP POOL.

- VEGETATED SHELF LANDSCAPE PLAN**
 CHOOSE A MINIMUM OF 5 OF THE FOLLOWING SPECIES FOR EACH AREA W/NO MORE THAN 33% OF ANY SPECIES. PLANTS SHALL BE IN 4" CONTAINERS.
- SHALLOW WATER (BELOW PERM. POOL) (MIN. 270 PLANTS)**
- | Botanical Name | Common Name |
|-----------------------|-----------------|
| Iris virginica | Blue flag iris |
| Ludwigia spp. | Primrose willow |
| Peltandra virginica | Arrow arum |
| Pontederia cordata | Pickeralweed |
| Sagittaria latifolia | Duck Potato |
| Sagittaria lancifolia | Bulltongue |
- SHALLOW LAND (ABOVE PERM. POOL) (MIN. 300 PLANTS)**
- | Botanical Name | Common Name |
|-------------------------|--------------------|
| Chelone glabra | White Turtlehead |
| Eupatoriadelphus dubius | Dwarf Joe Pye Weed |
| Kosteletzkya virginica | Seashore Mallow |
| Lobelia cardinalis | Cardinal flower |
| Lobelia siphilitica | Great blue Lobelia |
| Rhynchospora colorata | Starrush whitetop |

STAGE/STORAGE TABLE

STAGE	ELEVATION	CONTOUR AREA (SF)	INCREMENTAL STORAGE (CF)	TOTAL STORAGE (CF)
0	383.75	1,858	0	0
1.25	385.00	3,051	3,068	3,068
2.25	386.00	4,019	3,535	6,603
3.25	387.00	5,045	4,532	11,135
3.75	387.50	6,108	2,788	13,923

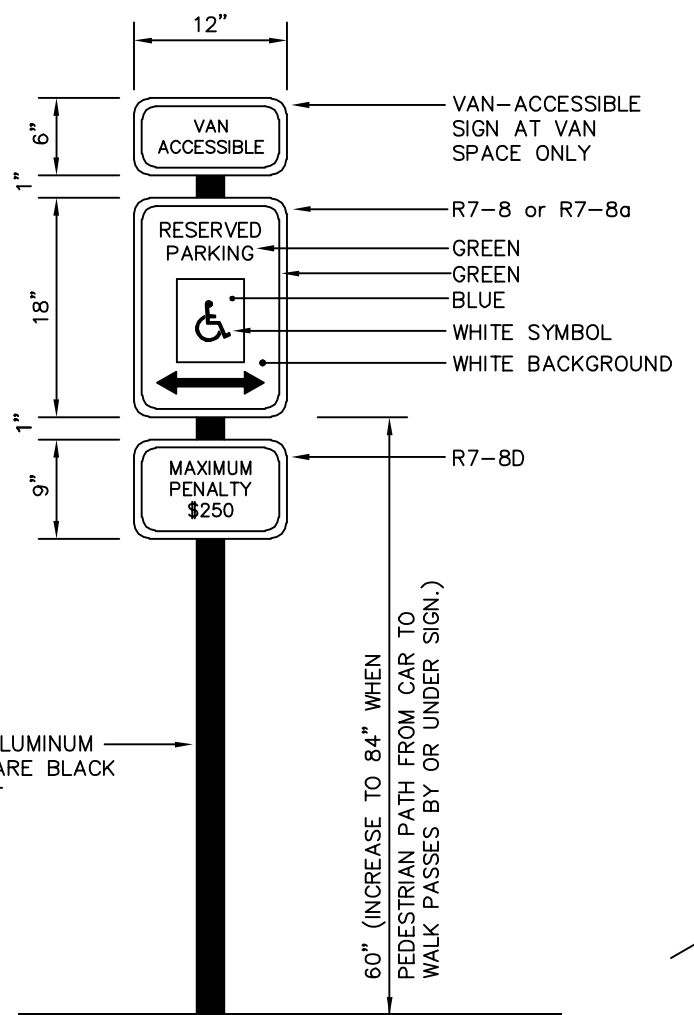


STORMWATER WETLAND PROFILE
NOT TO SCALE

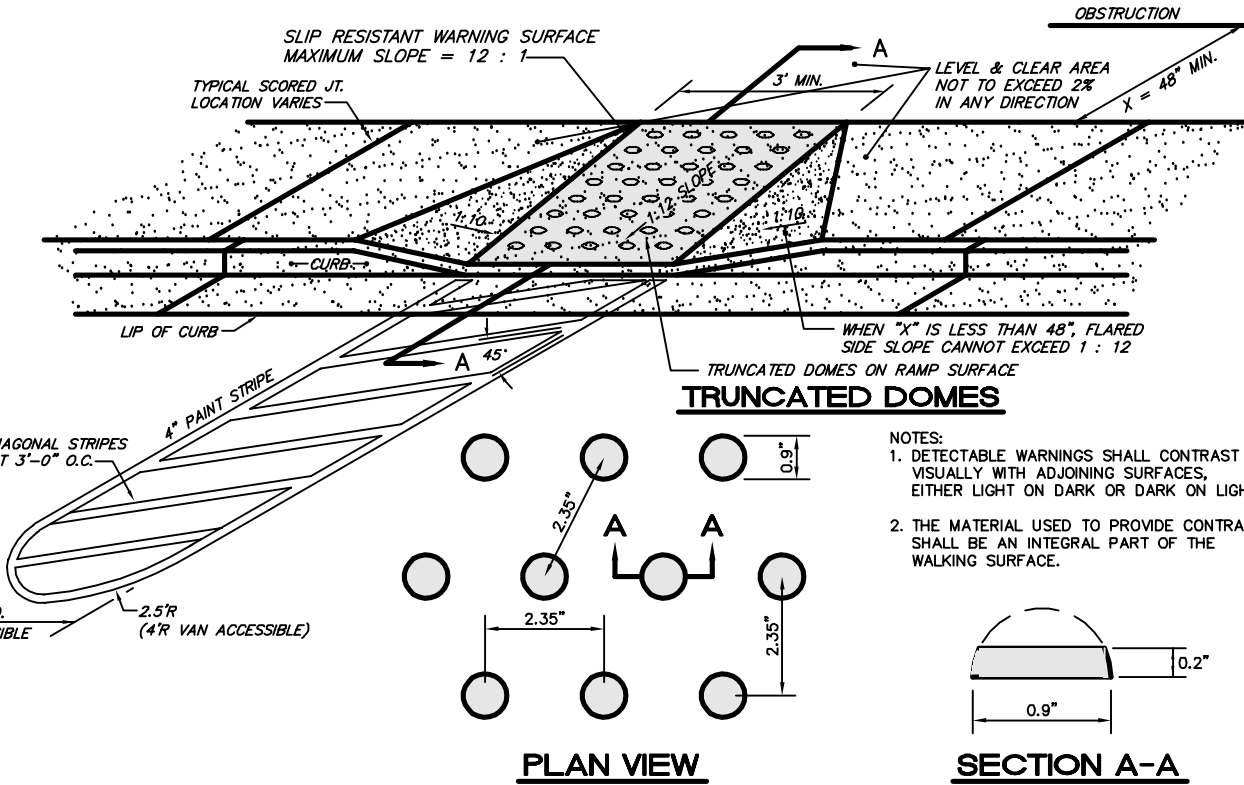
REVISIONS

NO.	DESCRIPTION

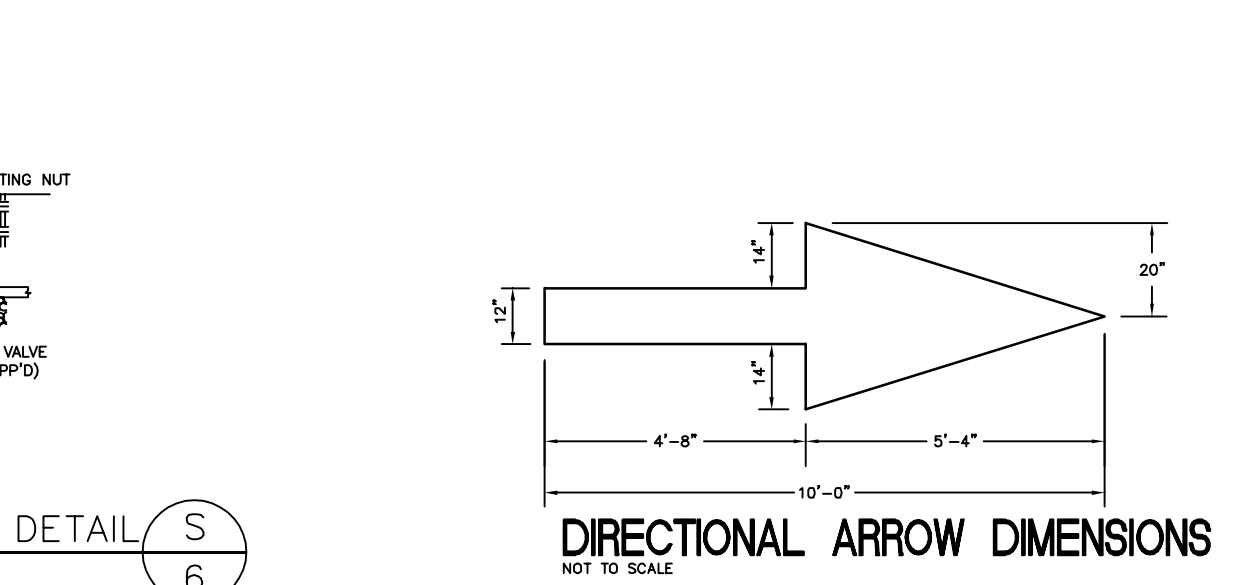
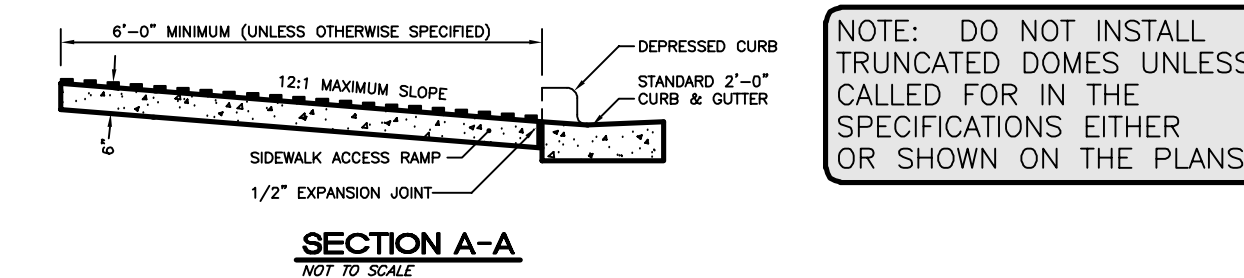
FILE NO. 2017-013
 HORZ. SCALE: 1"=20'
 VERT. SCALE: NONE



R7-8 HANDICAP SIGN



HANDICAP RAMP



TYPICAL YARD HYDRANT INSTALLATION DETAIL

Gospel Notes

The following notes do not represent the belief of any municipality, government organization, or client of Stocks Engineering. The detail is included to show the foundation of Stocks Engineering and its employees. Our prayer is that through the truth outlined below you will clearly see what it means to have a relationship with Christ.

1. GOD'S LOVE
God loves you and he created you to know him personally. He has a wonderful plan for your life.
John 3:16 "For God so loved the world that he gave his only son, that whoever believes in him shall not perish but have eternal life."
What prevents us from knowing God personally?

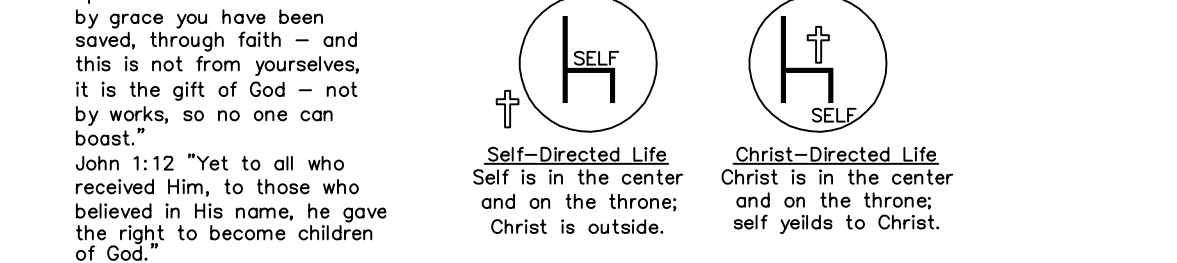
2. OUR CONDITION
People are sinful and separated from God, so we cannot know him personally and experience his love and plan.
Romans 3:23 "For all have sinned and fall short of the glory of God."
Romans 6:23 "For the wages of sin is death" (Spiritual separation from God)

There is only one way to bridge this gap...

3. GODS RESPONSE
Jesus Christ is God's only provision for sin, through Him alone we can know God personally and experience his love and plan.
Romans 5:8 "But God demonstrated His own love for us in this: While we were still sinners, Christ died for us."
John 14: Jesus answered, "I am the way, the truth and the life. No one comes to the Father except through me."

It is not enough just to know these truths...

4. OUR RESPONSE
We must individually receive Jesus Christ as Savior and Lord; only then can we know God personally and experience His love and plan.
Ephesians 2:8-9 "For it is by grace you have been saved, through faith - and this is not from yourselves, it is the gift of God - not by works, so no one can boast."
John 1:12 "Yet to all who received Him, to those who believed in His name, he gave the right to become children of God."
Which circle best represents your life?
Which circle would you like to have represent your life?
You can receive Christ right now by faith in prayer.
"Lord Jesus, I need you. Thank you for dying on the cross for my sins. I open the door to my life and receive you as my Savior and Lord. Thank you for forgiving my sins and giving me eternal life. Take control of the throne of my life. Make me the kind of person you want me to be."
If this prayer expresses the desire of your heart, then you can pray this prayer and Christ will come into your life as He promised.
For more information on what it means to have a relationship with God, or if you have any questions or prayer requests please submit them to stocksengineering@gmail.com, call us at 252.459.8196, or visit our web site, www.stocksengineering.com



Grading Notes

- Site Contractor to inform General Contractor to verify finished grade at building before digging footings.
- Some portions of the building foundation wall may of necessity need to retain building soil fill to allow exterior grades to be dropped. In this case, step footings may be necessary to achieve the desired grade variations.
- Finished contours shown are top of future paving in areas to receive pavement and top of footings in areas to be seeded or sodded.
- Areas outside of the parking lot perimeters shown to be seeded shall receive 4 inches of topsoil. This topsoil to be placed and leveled by the Contractor.
- Dimensions on buildings are for grading purposes only and are not to be used to lay-off footings. See Architectural Plans.
- Contractor shall notify and cooperate with all utility companies or firms having facilities on or adjacent to the site before disturbing, altering, removing, relocating, adjusting or connecting to said facilities.
- Contractor shall locate and mark all existing manholes, as required, to match finished grades.
- All catch basin grates and frames are to be vulcan or approved equal. Verify that dimension heights on castings are not exceeded in critical areas before ordering substitute castings.
- All areas not covered by an impervious surface or landscaped planting beds are to be grassed.
- Unusable excavated materials and all waste resulting from clearing and grubbing shall be disposed off-site by Contractor.
- All excavation is unclassified and shall include all materials encountered.
- Before any machine work is done, Contractor shall stake out and mark the items established by the Site Plan. Control points shall be preserved at all times during the course of the project. Look of proper working points and grade stakes may require cessation of operations until such points and grades have been placed to the Owner's satisfaction.

Parking, Roadway and Building Subgrade Preparation

- Subgrade on Precompacted Original Soil
 - Remove all the topsoil and all questionable organic soil and extend a minimum of four (4) feet beyond the outside edge of the pavement. Stockpile all topsoil that is free from trash and debris for re-use.
 - Precompact the exposed grade with a vibratory roller weighing a minimum of ten (10) tons (static load) or equal to stabilize the initial settlement of the top strata of the soil. The stability of the subgrade will be considered adequate when the total settlement after the test four (4) complete passes by the vibratory roller does not exceed 1/8". Any area that settles excessively and fails to stabilize under continued rolling should be further underlaid and reprocessed with properly compacted select granular fill.
- Subgrade on Certified Compacted Fill
 - Prepare the site following the same procedures as outlined in Items 1 and 2 above.
 - Using the same compaction equipment as outlined above, compact new fill soil in +/- 8-inch layers to a minimum 98-percent of the maximum dry density at its optimum moisture content in accordance with the Standard Proctor Method, ASTM Standard D 698-78 and field controlled in accordance with ASTM Standard D 2167-84, or equal. The top one (1) foot of the prepared fill subgrade should be compacted to 100-percent of the maximum dry density using the Standard Proctor Method.
 - The end of the fill should be terminated at the minimum slope of two (2) horizontal to one (1) vertical measured from three (3) feet beyond the outside edge of the pavement to the toe of the fill. The fill soil is to be select granular soil weighing a minimum of 110 pcf at its optimum moisture content.

Site Plan Notes

- Contractor to provide full water service to site including meter, setting, and connection fees in his bid.
- The Site Contractor is to assume responsibility for all water and sewer utilities from a point 5' outside of the building to the point of public connection.
- Contractor to furnish all pipe stringing.
- Owner to purchase or lease dumpsters & recycle bins. These will not be provided by City.
- Geotechnical investigation prepared for this project. Contractor is responsible for digging site, if desired prior to bid. Contact Engineer at 252.459.8196 at least 48 hours prior to work to gain access. Contact Denny Mures to obtain copy of Geotech Report # (770) 729-5700
- All site plumbing is to meet the NC State Building Code, Volume II, Plumbing.
- Water service lines to be HDPE 1 1/4 inch w/1 inch meter and backflow preventer.
- Sewer services to be PVC, service weight. Minimum grades for 4-inch lines to be 2.08-percent.
- Pressure reducing valve, if needed, to be located in building and is not Site Contractor's responsibility.
- Provide handicap signs, markings and ramp per the details.
- All signs, pavement markings, and other traffic control devices are the Site Contractor's responsibility and shall conform to: Manual on Uniform Traffic Control Devices, current edition, as amended; ADA guidelines; and, ANSI A117.
- All dimensions are to face of curb unless indicated otherwise. Staking pin coordinates are to back of curb.
- Contractor shall coordinate installation of all signs, pavement markings, and other traffic control devices with other Contractors on the site.
- Contractor shall saw-cut to provide smooth transition at tie-in to existing edge of pavement when applicable.
- Do not pour any concrete before forms are inspected and approved by Engineer/Owner.
- Contractor shall comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by AGC of America, Inc., and the Safety and Health Regulations for Construction issued by the U.S. Department of Labor.
- Storm drainage is to be Class III reinforced concrete meeting ASTM C-76, latest revision.
- All handicap ramps are to meet "ADA Accessibility Guidelines for Buildings and Facilities" as detailed in Federal Register, Vol. 56, No. 144, dated July 26, 1991, rules and regulations activated January 26, 1992, latest revision. Also, refer to North Carolina State Building Code Volume 1-C, "Making Buildings and Facilities Accessible To and Usable by the Physically Handicapped", 1991, latest edition and ANSI A117.1, current edition, as amended.

Concrete Notes

- All construction, placing, pouring and curing concrete is to conform to the latest edition of ACI 318.
- All reinforcing steel is to be cold cut and bent in conformance with the latest edition of ACI 318 and ASTM A-615.
- Portland Cement Concrete shall have a minimum 28-day compressive strength of 4,000 PSI (or noted), a non-vibrated slump between 2.5 and 4-inches, a minimum cement content of 545 pounds per cubic yard, and an air entrainment of 5-7-percent and a maximum water-cement ratio of 0.545 in accordance with Class B concrete as described in the NCDOT Standard Specifications for Roads and Structures unless otherwise specified.
- Do not use chloride in any concrete which has reinforcing steel or wire fabric.
- Reinforcing steel shall meet ASTM A-615, Grade 60. Welded wire fabric shall meet ASTM A-185. The wire shall conform to ASTM A-82.
- Lap welded wire fabric a minimum of one inch. Lap all bars a minimum of 24 inch. Alternate adjacent bar splices a minimum of 48".
- Use only approved chairs with sand plates to support reinforcing on grade.
- All crossings of reinforcement are to be tied. Supports for reinforcing to hold bars against movement during pour and finish operation. Supports for reinforcing bars to be a minimum of 48 inches apart.
- Concrete shall be only plant-mixed, transit-mixed or ready-mixed concrete. The time elapsing from mixing to placing the concrete shall not exceed ninety (90) minutes.
- Concrete shall not be deposited on frozen subgrade and shall be poured when the air temperature for the succeeding 24-hour period is less than 32 degrees F.
- All concrete when placed in forms shall have a temperature between 50 degrees F and 90 degrees F and shall be maintained at a temperature of not less than 50 degrees F for 72 hours for normal concrete and 24 hours for high early strength concrete.
- Do not place fresh concrete on a dry substrate. Moistest subgrade before placing concrete.
- Areas of soil to be removed shall be saw cut before removing. The saw cut shall provide a smooth, straight edge approximately two (2) inches deep before breaking away the adjacent concrete.
- Immediately after the forms have been removed and all honeycombed areas are repaired, backfill to prevent underwash.
- Brooming of the concrete surface shall be done transverse to the direction of traffic for all pedestrian areas.
- Joint spacing shall be no less than 8-feet. Where existing sidewalks are being widened, transverse joints shall be located so as to tie up with existing joints in the adjacent existing sidewalk. Grooved joints shall not be sealed.
- Concrete Sub shall be responsible for all score joints and expansion joints. A preliminary score joint pattern and expansion joint pattern shall be submitted to the project engineer for review prior to pouring concrete.
- Expansion joints shall be one-half (1/2) inch in width and shall be placed between all rigid objects at a distance of no more than thirty (30) feet apart and shall extend the full depth of the concrete with the top of the filler one-half (1/2) inch below the finished surface.
- The edges of the curb/sidewalk shall be finished with an approved edging tool one-half (1/2) inch radius. Joints shall be similarly finished immediately after templates have been removed.
- Saw control joints as soon as fresh concrete will retain coarse aggregate against the sawing action.
- Contractor SHALL NOT POUR any concrete before forms are inspected by the project engineer and/or the owner. Any concrete that has not been approved by the engineer and/or owner will be the responsibility of the contractor.

Concrete and Asphalt Testing

Portland Cement Concrete Testing Requirements
Initial Test: The initial test (from first ready-mix truck) is to be taken after the second cubic yard is dispensed from the mixer and is to consist of the following:
1. One slump test
2. Three cylinders pulled, prepared and stored on-site for 24 hours
3. Temperature recording
Subsequent Tests: After the above tests are pulled from the initial truck, every 5th truck thereafter is to be tested in the same manner as noted above.

Asphalt Concrete Testing Requirements
Composition: Testing for asphalt density is to follow NCDOT "Standard Specifications for Roads and Structures", Section 609-9, "Field Compaction Quality Management", latest revision.
Thickness: The minimum frequency of coring for thickness testing shall be on the basis of test sections consisting of not more than 1500 linear feet of lay down width, exclusive of intersections and irregular areas. The test sample is to be a 6-inch core sample. The sample is to be numbered and logged for identification purposes.
Contractor's Quality Control System: Follow NCDOT "Standard Specifications for Roads and Structures", Section 609-5, "Contractor's Quality Control System", latest revision.
Mixture and Job Mix Formula Adjustments: Follow NCDOT "Standard Specifications for Roads and Structures", Section 609-4, "Field Verification of Mixture and Job Mix Formula Adjustments", latest revision.
General: All other applicable sections of Section 609 of the NCDOT "Standard Specifications for Roads and Structures" shall apply relating to Quality Control Plan, mix design, control limits, corrective action, equipment and methods that have not been approved by the engineer and/or owner will be the responsibility of the contractor. Testing Cost: Site Contractor is responsible for cost of testing.

Sewer Notes

- No Sewer line installation shall take place until on approved Site Plan has been issued.
- Sewer Pipe:
 - SDR-35 SMOOTHWALL: Pipe shall conform to ASTM D-3034 Type FPM, SDR-35.
 - Pipe bedding shall be Class B modified (i.e. stone to top of pipe).
 - Any well pointing, dewatering, etc. needed during sewer construction is to be included in the cost of the line laid. Utilize select fill from on-site for trench borrow when needed. If material of a select nature is not available, bring in from off-site.
 - The minimum clearances for water, sewer and storm drainage lines shall be as follows:

Between Water and Sewer	Horizontal 10'	Vertical 18" w/water above sewer
Water and Storm/Drainage	-	12" w/water above storm drainage
Sewer and Storm Drainage	-	24" w/water above sewer
- The Contractor shall make arrangements with the local utility authority when connecting to existing manholes or mains.
- Location, size and invert elevations of clean outs shown on "private" services are to be coordinated with the approved Plumbing Plans for the building. All plumbing is to meet the requirements of the NC State Building Code, Volume II, Plumbing, latest revision.
- Contractor shall seed, mulch and tack all disturbed areas within 7 days after backfilling trench. All sedimentation control measures shall be kept in operable condition until a stand of grass is established and the area is capable of resisting erosion by wind and rain. All erosion control measures shall be removed when authorized by the Engineer after the completion of the project.
- All excavated wood and rocks shall be disposed of offsite by the Contractor. Bury will not be permitted on-site.
- Contractor shall take proper precautions not to disturb existing property corner markers. All disturbed property corner markers shall be replaced by a Registered Land Surveyor.
- All cost for the provision of erosion control rip rap, jute meshing, matting, grass seeding and silt fences may be included in the bid.
- Manholes or Wetwells qualify as "confined" and require compliance with OSHA "Confined Access Entry" requirements. Certified equipment, proper notification and other applicable equipment and/or devices may be required to protect workers, after system is operational, from hydrogen-sulfide gas build-up or an otherwise oxygen-less environment.
- The contractor shall provide, upon completion of water and sewer construction, record drawings of the sewer installation specifically showing/describing any deviations from the permitted plans. Plans are to be marked surveyed and submitted to Engineer. The final payment request will not be submitted to the owner nor will a "certificate of substantial completion" be issued until these "surveyed plans" have been completed and received by the Engineer.
- Utility contractor is responsible for notifying local authority of time and date he plans to commence construction.
- Where lines cross gravel/asphalt driveways, Contractor is to restore driveways to the original condition. Drives shall be repaired within 7-days of open cut.
- All Sanitary Sewer shall be in accordance to Town of Clayton Standards and Specifications.
- All Frames and Lids to receive a bituminous coating.

Water Notes

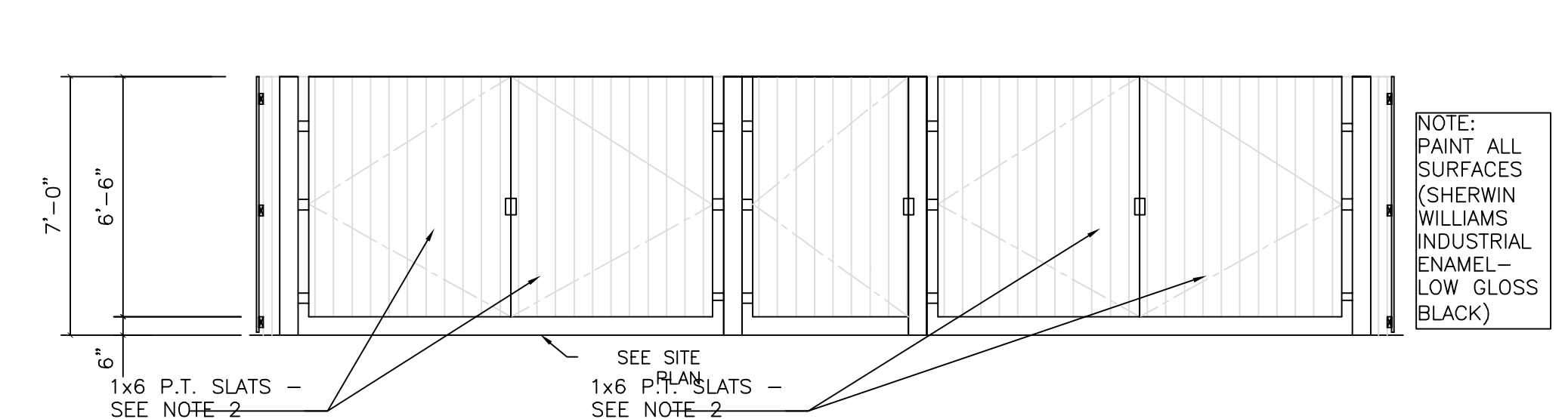
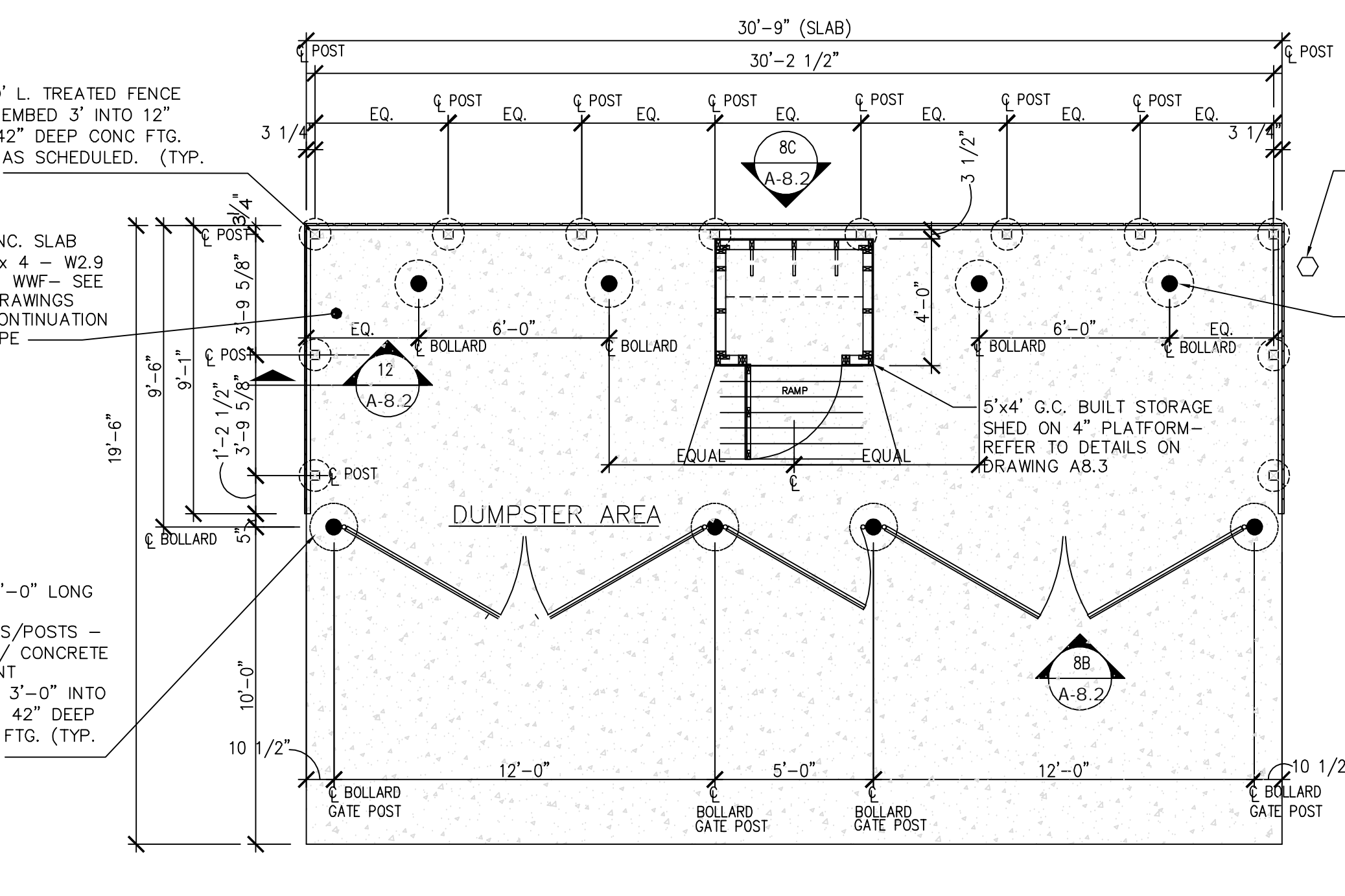
- No existing valves and fire hydrants shall be operated without the explicit permission from the Public Utility Owner. The contractor shall make arrangements with the local utility authority prior to connecting to existing mains.
- Contractor shall seed, mulch, and tack all disturbed area within 7 days after backfilling trench. All sedimentation control measures shall be kept in operable condition until a stand of control measures shall be removed when authorized by the Engineer after the completion of the project.
- All excavated wood and rocks shall be disposed off-site by the Contractor. Bury will not be permitted on-site.
- Water line crossing existing asphalt pavement shall be installed by the Open Cut method.
- Where lines cross gravel/asphalt driveways, Contractor is to restore driveways to the original condition. Drives shall be repaired within 7-days of open cut.
- Contractor shall take proper precautions not to disturb existing property corner markers. All disturbed property corner markers shall be replaced by a Registered Land Surveyor.
- All cost for the provision of erosion control rip rap, jute meshing, matting, grass seeding and silt fences shall be included in the total bid.
- Utility contractor is responsible for notifying local authority of time and date he plans to commence construction.
- Any well pointing, dewatering, etc. needed during construction shall be the responsibility of the contractor. Trench borrow needed during construction shall be included in the cost of the line laid, unless otherwise specified.
- Valve box to be 3 piece telescopic with concrete collar when not in pavement.
- The contractor shall provide all the material and appurtenances necessary for the complete installation of the utilities. All pipe and fittings shall be inspected prior to being covered.
- Lines shall be flushed thoroughly to remove all dirt and debris. Chlorine shall be applied to all water lines in sufficient concentration to leave an overall residual of 50 ppm. The chlorinated water shall remain in the lines for 24 hours at the end of which the chlorine residual shall be at least 10 ppm. The lines shall then be flushed until there is normal chlorine residual present and samples shall be collected for bacteriological analysis.
- The contractor to conduct bacteriological testing of water lines, which have successfully passed hydrostatic testing and have been disinfected in conformance with AWWA Standards. This procedure requires (5) days to complete.
- No contractors are authorized to use un-metered water during construction. All pipe and appurtenances shall be thoroughly cleaned prior to placement. Pipe shall be laid with straight lines and even grades and all joints shall be perfectly fitted. During periods when pipe is not being laid, open ends shall be securely blocked.
- All excavation is unclassified and shall include all materials encountered.
- Concrete used for blocking and concrete collars is to be minimum 3,000 psi at 28 days, air entrained.
- Contractor shall saw-cut to provide smooth transitions where existing asphalt is to be removed.

General Notes:

- This plan must be approved by Harnett County prior to construction of any street, water, storm drainage or other site improvements on this plan.
- All improvements shall conform to Harnett County Standards and Specifications or NCDOT, as applicable. A disturbed area is greater than one acre and formal Sedimentation & Erosion Control plan approval is required as a condition of construction plan approval. Measures shown on the approved Erosion & Sedimentation Control Plan should be regarded as minimum requirements; additional measures shall be put in place to ensure that no sediment is released from the site.
- The General Contractor is responsible for installing and maintaining all measures necessary to ensure that all sediment is contained on-site.
- Omitted.
- Stormwater detention and nutrient management has previously been approved and addressed.
- Water and sewer service fees are due on this site prior to setting of taps or meters. Contact the Harnett County for payment information.
- Contractor shall make arrangements with the local utility authority for connection to existing mains. Do not operate any existing valves without permission of Harnett County.
- Water meters supplied by contractors shall contain encoder register and module for radio transmitted meter reading per Harnett County Standard.
- For the installation of electrical services, location of pad-mounted transformer if needed and to coordinate electrical temporary service, contact Duke Energy.
- Any relocation of existing utilities shall be at the expense of the General Contractor. The Town will not accept responsibility for damages to curb and gutter or street improvements if installed prior to underground services, nor will the Town absorb the cost for pavement patching, damages to landscaping or borings to install underground services.
- Contractor shall be responsible for all work zone traffic control in or adjacent to ROW. All signs, pavement markings and other traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (MUTCD), latest edition as amended.
- Fire Protection water supply system including fire hydrants, shall be installed and in service prior to the construction of the building. Fire hydrants shall be installed prior to the placing of combustible building materials for structures or combustible pre-tested fabricated building assemblies on the project site. Fire hydrants shall be installed and in service prior to the construction of the building. If phased construction is planned, coordinate installation of the fire protection water system is permitted.
- Fire department vehicular access to all structures under construction shall be provided at all times. In areas where ground surfaces are soft or likely to become soft, hard all weather surface roads shall be provided and maintained.
- Omitted.
- Commercial property Address Numbers shall be a minimum of ten (10) inches in height with a minimum stroke width of one (1) inch. These numbers shall contrast with their background and shall be Arabic style numerals.
- Address Numbers must be posted on the front of the structure nearest to the main entrance in a position to be plainly legible, visible and unobstructed from the street or road fronting the property. Any change or deviation from this plan, prior to or during construction, will cause addressing and/or street names to be re-evaluated with possible subsequent change.
- Plans are based on an actual field survey performed by FREELAND SURVEYING, P.C. Reference horizontal datum is NAD 83, reference vertical datum is NAVD 88.
- Contractor to verify all building dimensions and/or location(s) with architectural drawings before beginning construction. If discrepancies are found, cease construction and consult the architect and civil site engineer for resolution.
- Omitted.
- All HVAC equipment shall be screened from the view of all public street rights-of-way for their entire length along those streets, except for necessary access.
- For the installation of gas services, contact Public Utilities.
- The customer is required to provide an outside lockable disconnect.
- Right-of-way Easement must be signed prior to installation of utilities.
- Call NC One Call Center at (800) 632-4949 before digging to locate existing utilities.
- If overhead primary electric lines are present, mature tree height shall not exceed 15 feet.
- Copies of all permits and approved plans must be kept on site in a permit box that is conspicuously located and easily accessible during construction. This includes approved construction plans, approved erosion control plans, encroachment agreements, driveway permits, water/sewer permits, etc.
- Plan approval is valid for two (2) years from approved date.

Drainage Notes

- Boxes may be reinforced masonry, masonry, precast concrete or cast-in-place reinforced concrete.
- The maximum height of an un-reinforced masonry drainage structure with 8" walls shall be limited to 8' - 0" from invert of the outlet pipe to the top of the casting. Depths greater than 8' - 0" shall have walls 12" thick. Basins over 12" in total depth shall be designed by a NC Professional Engineer. 4' walls are not allowed on drainage structures with 8" walls, exclusive of intersections and irregular areas. The test sample is to be a 6-inch core sample. The sample is to be numbered and logged for identification purposes.
- Steps are to be provided on all basins deeper than 42".
- Steps are to be PSI-PF as manufactured by M. A. Industries or an approved equal. Locate on non-pipe walls.
- Mortar in masonry boxes is to be type M.
- Clay brick structures are not allowed.
- Concrete pipe is to be minimum Class III reinforced concrete meeting ASTM C-76, latest revision.
- Concrete building brick is to meet ASTM C-55, Grade N, Type 1.
- All iron castings are to be drilled and lagged to the drainage structure. The drainage structure as well as to be drilled.
- All cast-in-place or precast concrete drainage structures located in paved areas accessible to truck loadings to be designed to meet AASHTO HS 20-44 loading. See manufacturers details for wall, top and bottom thickness.
- All frames, grates, and hoods to receive a bituminous coating.



- GENERAL CONTRACTOR SHALL VERIFY DUMPSTER REQUIREMENTS WITH LOCAL AUTHORITIES AND COORDINATE WITH INDICATED DIMENSIONS.
- MIRATECH BOARD GATE TO BE PAINTED W/ SHERWIN WILLIAMS INDUSTRIAL ENAMEL-LOW GLOSS BLACK.
- DUMPSTER BOLLARDS, DOOR FRAME, HARDWARE AND INSIDE DUMPSTER ENCLOSURE TO BE PAINTED WITH SHERWIN WILLIAMS INDUSTRIAL ENAMEL - LOW GLOSS BLACK
- SUPPLY SHED EXTERIOR FINISH TO BE HARDIE - BOARD PAINTED SHERWIN WILLIAMS COLOR SW7043.
- PROVIDE 2'-0" GRADE 40 #4 LUBRICATED SMOOTH DWEL BARS @ 18" O.C. AT CONCRETE SLAB CONSTRUCTION JOINTS.

THEN, JESUS DECLARED, "I AM THE BREAD OF LIFE. WHOEVER COMES TO ME WILL NEVER GO HUNGRY, AND WHOEVER BELIEVES IN ME WILL NEVER BE THIRSTY. JOHN 6:35

P.O. BOX 1108
NASHVILLE, TN 37202
PHONE: (252) 459-8196

STOCKS ENGINEERING
801 EAST WASHINGTON STREET
NASHVILLE, N.C. 27576
WWW.STOCKSENGINEERING.COM

BLN-C-1874

Hardie's at
BUFFALO LAKE RD.
CAMERON, N.C.

BODIE-NOELL ENTERPRISES, INC.
P.O. BOX 1908
ROCKY MOUNT, NC
27802-1908
(252) 987-2800

B

Hardie's at
BUFFALO LAKE RD.
CAMERON, N.C.

NORTH CAROLINA PROFESSIONAL SEAL
19843
MICHAEL STOCKS
1/20/20

SITE NOTES AND DETAILS

REVISIONS
2/21/20 - BNE COMMENTS

FILE NO. 2017-013
HORZ. SCALE: 1"=20'
VERT. SCALE: NONE

CE-12

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Rolled erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

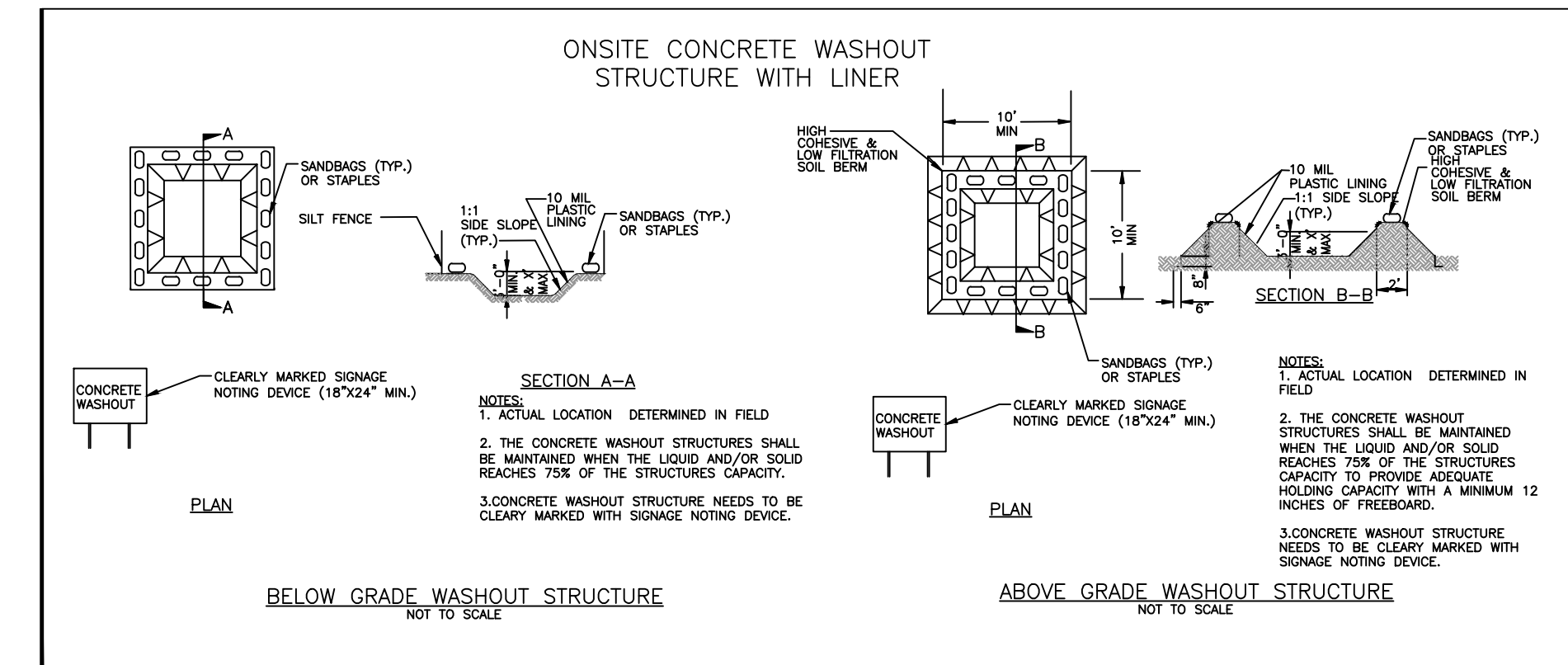
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

