SHEET INDEX

SITE DEVELOPMENT PLANS

FOR

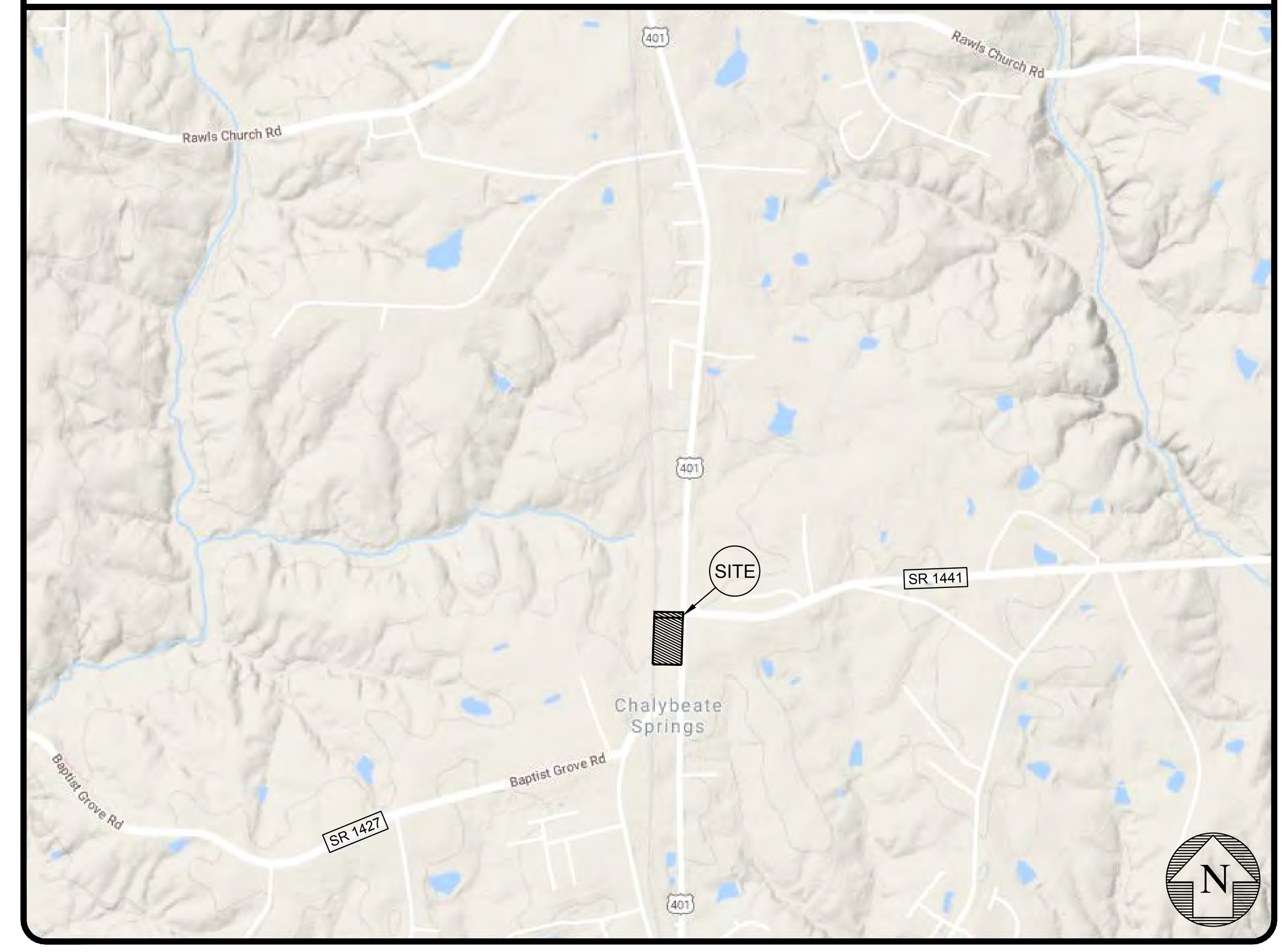
Par 5 Development Group, LLC

U.S. 401 N

Fuquay Varina, NC 27526

VICINITY MAP

NOT TO SCALE



GENERAL NOTES:

1. CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH HARNETT COUNTY, NC, NCDEQ, AND NCDOT STANDARD SPECIFICATIONS.
2. THE GRADE LINES DENOTE THE FINISHED ELEVATIONS OF THE PROPOSED FINISHED PAVEMENT. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING, ENDING, AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO PROVIDE A PROPER TIE-IN.
3. UNDERGROUND UTILITIES MAY EXIST ON, ALONG OR WITHIN CONFLICT OF THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING NC 811 OR THE APPROPRIATE UTILITY COMPANIES 3 FULL BUSINESS DAYS PRIOR TO ANY EXCAVATION. **THE CONTRACTOR MUST FIELD VERIFY ALL E ISTING UTILITIES PRIOR TO CONSTRUCTION.** IN CASE OF CONFLICT, NOTIFY ENGINEER AND DO NOT CONSTRUCT.
4. THE EARTHWORK ON THIS PLAN DOES NOT NECESSARILY BALANCE; OFFSITE BORROW OR WASTE MAY BE REQUIRED.
5. THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION IN ACCORDANCE WITH LOCAL CITY, COUNTY AND STATE BUILDING CODES.
6. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE DEMOLITION OF ALL EXISTING ON SITE FACILITIES, ABOVE AND BELOW GROUND. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REMOVAL OF ALL WASTE RESULTING FROM DEMOLITION, AS WELL AS GRADING AND FILLING OF ALL DEPRESSIONS TO INSURE THAT THE SITE REMAINS AESTHETICALLY ACCEPTABLE. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL RULES & REGULATIONS.
7. THE CONTRACTOR SHALL OBSERVE ALL REQUIRED SAFETY PRECAUTIONS IN THE PERFORMANCE OF ALL WORK IN ACCORDANCE WITH OSHA.
8. THE CONTRACTOR SHALL GRADE, SEED AND SOD OR OTHERWISE PROVIDE TEMPORARY AND PERMANENT STABILIZATION OF ALL DISTURBED AREAS, ESPECIALLY SLOPES. SEE EROSION CONTROL INSTRUCTIONS, IF APPLICABLE.
9. WORK WITHIN PUBLIC RIGHT-OF-WAYS SHALL BE IN ACCORDANCE WITH ALL STATE AND LOCAL REQUIREMENTS, NOTIFICATIONS, STANDARDS AND POLICIES.
10. ANY SUBSTITUTIONS, CHANGES, OR MODIFICATIONS SHALL BE APPROVED BY THE PROJECT ENGINEER, PLANNING DEPARTMENT STAFF, AND DEVELOPER.
11. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS NECESSARY TO CONSTRUCTION. THE CONTRACTOR SHALL READ ALL PERMITS AND ENSURE THAT CONSTRUCTION COMPLIES WITH THE PERMITS. REQUIRED PERMITS MAY INCLUDE, BUT ARE NOT LIMITED TO: CITY/COUNTY APPROVALS/PERMITS, VDOT PERMITS, DRIVEWAY PERMITS, EROSION CONTROL PERMITS, VDEQ PERMITS, ENVIRONMENTAL PERMITS, STREAM CROSSING PERMITS, USACE/DWQ PERMITS, AND STORMWATER PERMITS. IF THE CONTRACTOR HAS QUESTIONS ABOUT PERMIT LANGUAGE, OR THE NEED FOR A PERMIT, HE MUST CONTACT THE DEVELOPER AND THE ENGINEER PRIOR TO BEGINNING CONSTRUCTION.
12. THE GRADING CONTRACTOR MUST MAINTAIN COPIES OF THE LAND DISTURBANCE PERMIT AND THE NPDES PERMIT ONSITE. HE MUST READ AND FOLLOW THE CONDITIONS OF THE PERMITS.
13. THE CONTRACTOR MUST VERIFY ALL FIELD ELEVATIONS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY VARIATION OF FIELDS ELEVATIONS.
14. BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY STEVEN CRUTCHFIELD, DATED JUNE 28, 2018.
15. US 401 IS ON THE HARNETT COUNTY COMPREHENSIVE TRANSPORTATION PLAN.
16. THIS DEVELOPMENT IS WITHIN ONE MILE OF A VOLUNTARY AGRICULTURAL DISTRICT.

CONSTRUCTION SEQUENCE:

1. OBTAIN APPROVED SET OF CONSTRUCTION DRAWINGS. A ZONING COMPLIANCE PERMIT FROM HARNETT COUNTY AND A LAND DISTURBANCE PERMIT SHALL BE REQUIRED BEFORE THE ONSET OF ANY GRADING ACTIVITY. KEEP A COPY OF BOTH ITEMS ONSITE THROUGHOUT CONSTRUCTION. SEE PUBLIC SERVICE CONTACT THIS SHEET. CONTACT BUILDING INSPECTIONS & NCDEQ LAND QUALITY - (919) 791-4211 - 1 WEEK PRIOR TO INITIATING LAND DISTURBANCE ACTIVITIES.
2. INSTALL TEMPORARY CONSTRUCTION ENTRANCE/EXIT AND MAINTAIN PER THE NOTES ON THIS SHEET AND IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL GUIDELINES. ALL CONSTRUCTION TRAFFIC MUST ENTER AND EXIT THE PROPERTY AT THIS LOCATION.
3. CLEAR ONLY AS NECESSARY TO INSTALL THE EROSION CONTROL DEVICES AS SHOWN ON THIS PLAN. INSTALL SILT FENCING SHOWN AND IN ADDITIONAL LOCATIONS IF WARRANTED BY FIELD CONDITIONS.
4. INSTALL SKIMMER BASIN AS SHOWN ON E&S SHEET C-4, D-4 & D-5.
5. TEMPORARILY SEED, MULCH, ANCHOR AND STABILIZE ALL EROSION CONTROL DEVICES IMMEDIATELY AFTER CONSTRUCTION.
6. BEGIN CLEARING AND GRUBBING VEGETATION AND DEMOLITION OF OTHER SITE ITEMS AS SHOWN ON THIS SHEET AS WELL AS THE EXISTING CONDITIONS PLAN. DISPOSE OF ALL WASTE MATERIALS IN ACCORDANCE WITH THE APPROVED SOLID WASTE MANAGEMENT PLAN AND ALL APPLICABLE GUIDELINES OF HARNETT COUNTY PUBLIC WORKS.
7. BEGIN CUT/FILL ACTIVITIES TO OBTAIN FINISHED GRADES AS SHOWN ON THE PLANS. **CONTRACTOR SHALL AVOID THE USE OF HEAVY E UIPMENT ABOVE THE SI E OF A SKIDSTEER FOR CLEARING OR GRADING IN THE DRAINFIELD AREA AS THERE ARE LIMITED SEPTIC SOILS AVAILABLE.**
8. PREPARE A SOIL STOCKPILE/SPOIL AREA AS SHOWN ON E&S PLANS.
9. TEMPORARY SEED AS CONDITIONS WARRANT THE NEED IN AREAS WITH NO CURRENT WORK.
10. INSTALL UTILITIES AS CUT/FILL ACTIVITIES PROMOTE. AS NEW STORM INLETS ARE INSTALLED PROVIDE PROPER INLET PROTECTION.
11. CONTINUE MAINTENANCE AND INSPECTION OF EROSION CONTROL DEVICES AFTER RUNOFF PRODUCING STORM EVENTS. **NO DISTURBED AREA IS TO BE LEFT WITHOUT PROTECTIVE COVER MULCH OR STRAW TACK AFTER COMPLETION OF CONSTRUCTION OR DEVELOPMENT ACTIVITIES PER THE TIME FRAMES ESTABLISHED IN THE STABILI ATION CHART ON THIS SHEET. DURING CONSTRUCTION OR DEVELOPMENT ACTIVITIES ANY DISTURBED AREAS SHALL BE PROTECTED AND STABILI ED ACCORDING TO THE STABILI ATION TIMEFRAME CHART. DISTURBED AREAS FOR ANY PORTION OF THE SITE SHALL BE STABILI ED WITHIN DAYS UPON COMPLETION OF CONSTRUCTION OR DEVELOPMENT ACTIVITIES IN THAT AREA.**
12. INSTALL SUBGRADE STONE PER PLANS AND BEGIN CONSTRUCTION STAKING ACTIVITIES.
13. BEGIN BUILDING AND PARKING LOT CONSTRUCTION.
14. NO SEDIMENT CONTROL MEASURES ARE TO BE REMOVED WITHOUT APPROVAL OF NCDEQ LAND QUALITY SECTION - (919) 791-4211.
15. UPON ACHIEVING ROUGH GRADE OF FINISHED ELEVATIONS AND ALL NECESSARY GRADING ACTIVITIES, APPLY TOPSOIL A MINIMUM OF 4" THICK TO ALL AREAS REQUIRING PERMANENT VEGETATION.
16. APPLY FERTILIZER, LIME, PERMANENT SEEDING OR SOD TO ALL FINISHED AREAS PER THE DETAILS SHEET.
17. INSTALL BLANKET MATTING ON ALL SLOPES 3:1 OR GREATER. WHEN THE SITE IS STABILIZED. MAT SLOPES IN SUMMER AND WINTER. GRADED SLOPES AND FILLS SHALL BE PROTECTED WITH A ROLLED EROSION CONTROL PRODUCT IF COMPLETED OUTSIDE OPTIMUM GERMINATION SEASONS, WHEN UNFAVORABLE WEATHER CONDITION PREVENT ESTABLISHMENT OF VEGETATED GROUND COVER.
18. ONCE THE SITE IS STABILIZED CONVERT SKIMMER BASIN TO PERMANENT STRUCTURE BY DEWATERING THROUGH A SILT SOCK, REMOVING & DISPOSING OF ACCUMULATED SEDIMENT, EXCAVATING A DAM OPENING, SEEDING & CONSTRUCTING IN ACCORDANCE W/ PLAN SHEET D-6. THE SITE IS ONLY 22% IMPERVIOUS SO A PERMANENT STORMWATER DEVICE IS NOT REQUIRED.
19. REMOVE TEMPORARY EROSION CONTROL MEASURES, INCLUDING SILT FENCE, INLET PROTECTION & TEMPORARY DIVERSIONS ONCE SITE IS STABILIZED.
20. WHEN THE SITE IS FULLY STABILIZED, AND PERMANENT VEGETATION IS ESTABLISHED, CONTACT ENGINEER, HARNETT COUNTY, & NCDEQ.

SITE LOCATION MAP

NOT TO SCALE

CURRENT OWNER

SENTER V OTHERS
2330 CHURCH HILL ROAD
RALEIGH, NC 27608
(601)420-5020

DEVELOPER/FUTURE OWNER

PAR 5 DEVELOPMENT GROUP, LLC
JODY BLAND
2075 JUNIPER LAKE RD
WEST END, NC 27376
(910) 944-0881 (PHONE)
JODY@PAR5DEVELOPMENT.COM

ENGINEER CONTACT

SUMMIT DESIGN & ENGINEERING SERVICES
MATT HASTINGS, PE
606 BROAD STREET, SUITE C
SOUTH BOSTON, VA 24592
(434) 579-4604 (PHONE)
(434) 575-0614(FAX)
MATT.HASTINGS@SUMMITDE.NET

PUBLIC SERVICE CONTACTS :

WATER:	HARNETT COUNTY PUBLIC WORKS 700 MCKINNEY PARKWAY LILLINGTON, NC 27546 (910) 893-7575
SEWER:	HARNETT COUNTY HEALTH DEPARTMENT 307 W CORNELIUS HARNETT BOULEVARD LILLINGTON, NC 27546 (919) 996-4540
FIRE:	NORTHWEST HARNETT CHRIS PRINCE, CHIEF 6015 CHRISTIAN LIGHT ROAD FUQUAY VARINA, NC 27526 (919) 552-8371
ELECTRIC:	DUKE ENERGY PROGRESS (800) 636-0581
TELEPHONE:	AT&T (800) 929-1925
GAS:	PIEDMONT NATURAL GAS (800) 252-533-2844
STATE ROADWAYS:	NCDOT - DIVISION 6, DISTRICT 2 LEE R. HINES, JR., PE 600 SOUTHERN AVENUE FAYETTEVILLE, NC 28306 (910) 364-0602
SOLID WASTE:	HARNETT COUNTY RANDALL W. SMITH 449 DANIELS ROAD DUNN, NC 28334 (910) 814-6156
PLANNING:	HARNETT COUNTY JAY SIKES, MGR. OF PLANNING SERVICES 108 E. FRONT STREET LILLINGTON, NC 27546 (910) 893-7525
E&S:	NCDEQ LAND QUALITY RALEIGH REGIONAL OFFICE 3800 BARRETT DRIVE RALEIGH NC 27609 (919) 791-4211

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

CONTRACTOR SHALL NOTIFY "NC811" (811) OR (1-800-632-4949) AT LEAST 3 FULL BUSINESS DAYS PRIOR TO BEGINNING CONSTRUCTION OR EXCAVATION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NC811". REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

NO.	REVISIONS	DATE	BY
1	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS	02/22/19	BWH
2	LOWER SITE 0.5'	07/16/19	BWH
3			
4			
5			
6			
7			

PROJECT ENGINEER/ARCHITECT
MWH (MATT.HASTINGS@SUMMITDE.NET)

PROJECT MANAGER
MWH (MATT.HASTINGS@SUMMITDE.NET)

DRAWN BY
BWH (BRAD.HOPPE@SUMMITDE.NET)

FIRST ISSUE DATE
08-08-2018

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 38098 MATTHEW W. HASTINGS

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www.summitde.net

CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

COVER SHEET

PROJECT NO.
18-0174

DRAWING NAME:
18-0174_CS

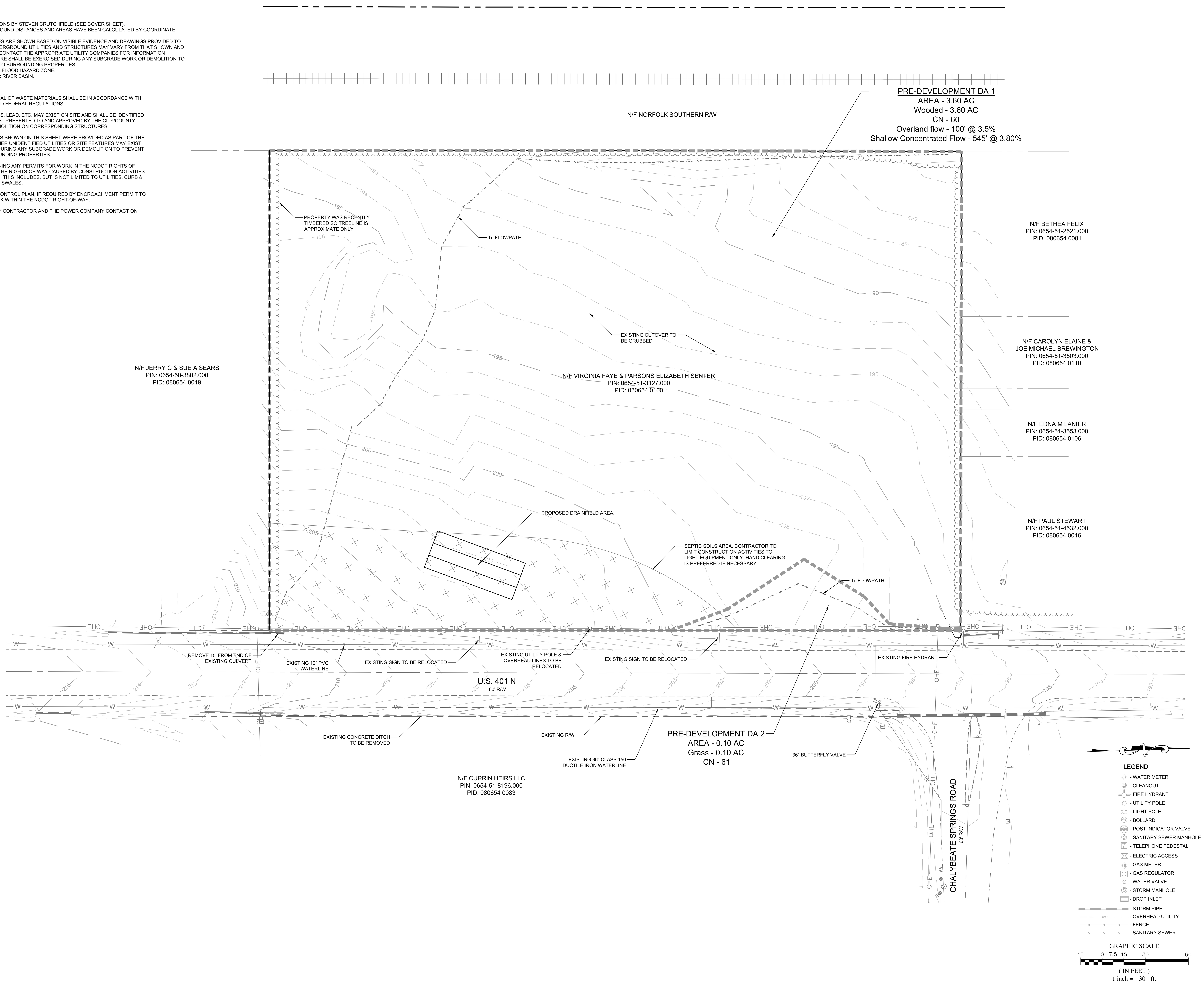
SHEET NO.
C-1

E ISTING CONDTIONS SURVEY NOTES:

1. TOPOGRAPHIC SURVEY, DATA AND LOCATIONS BY STEVEN CRUTCHFIELD (SEE COVER SHEET).
2. ALL MEASUREMENTS ARE HORIZONTAL GROUND DISTANCES AND AREAS HAVE BEEN CALCULATED BY COORDINATE METHOD.
3. THE LOCATION OF UNDERGROUND UTILITIES ARE SHOWN BASED ON VISIBLE EVIDENCE AND DRAWINGS PROVIDED TO THE SURVEYOR. EXACT LOCATION OF UNDERGROUND UTILITIES AND STRUCTURES MAY VARY FROM THAT SHOWN AND ADDITIONAL BURIED UTILITIES MAY EXIST. CONTACT THE APPROPRIATE UTILITY COMPANIES FOR INFORMATION REGARDING BURIED UTILITIES. SPECIAL CARE SHALL BE EXERCISED DURING ANY SUBGRADE WORK OR DEMOLITION TO PREVENT UNINTENDED LOSS OF SERVICE TO SURROUNDING PROPERTIES.
4. THIS PROPERTY IS NOT LOCATED WITHIN A FLOOD HAZARD ZONE.
5. THIS PROPERTY IS WITHIN THE CAPE FEAR RIVER BASIN.

DEMOLITION NOTES:

1. ALL DEMOLITION, TRANSPORT, AND DISPOSAL OF WASTE MATERIALS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE TOWN, COUNTY, STATE AND FEDERAL REGULATIONS.
2. REGULATED MATERIALS SUCH AS ASBESTOS, LEAD, ETC. MAY EXIST ON SITE AND SHALL BE IDENTIFIED AND A PLAN FOR DEMOLITION AND DISPOSAL PRESENTED TO AND APPROVED BY THE CITY/COUNTY AND OWNERS PRIOR TO COMMENCING DEMOLITION ON CORRESPONDING STRUCTURES.
3. THE LOCATIONS OF ALL EXISTING FEATURES SHOWN ON THIS SHEET WERE PROVIDED AS PART OF THE SURVEY REFERENCED ON THIS SHEET. OTHER UNIDENTIFIED UTILITIES OR SITE FEATURES MAY EXIST AND SPECIAL CARE SHALL BE EXERCISED DURING ANY SUBGRADE WORK OR DEMOLITION TO PREVENT UNINTENDED LOSS OF SERVICE TO SURROUNDING PROPERTIES.
4. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY PERMITS FOR WORK IN THE NCDOT RIGHTS OF WAY. ANY DAMAGED INFRASTRUCTURE IN THE RIGHTS-OF-WAY CAUSED BY CONSTRUCTION ACTIVITIES MUST BE REPAIRED TO NCDOT STANDARDS. THIS INCLUDES, BUT IS NOT LIMITED TO UTILITIES, CURB & GUTTER, PAVEMENT, SIGNS AND ROADSIDE SWALES.
5. CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL PLAN, IF REQUIRED BY ENCROACHMENT PERMIT TO NCDOT FOR APPROVAL PRIOR TO ANY WORK WITHIN THE NCDOT RIGHT-OF-WAY.
6. POLE RELOCATION TO BE COORDINATED BY CONTRACTOR AND THE POWER COMPANY CONTACT ON SHEET C-1.



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

	REVISIONS	DATE	BY
7			
6			
5			
4			
3			
2	LOWER SITE 0.5'	07/16/19	BWH
1	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS	02/22/19	BWH

PROJECT ENGINEER/ARCHITECT
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FIRST ISSUE DATE
08-08-2018

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05/29/19

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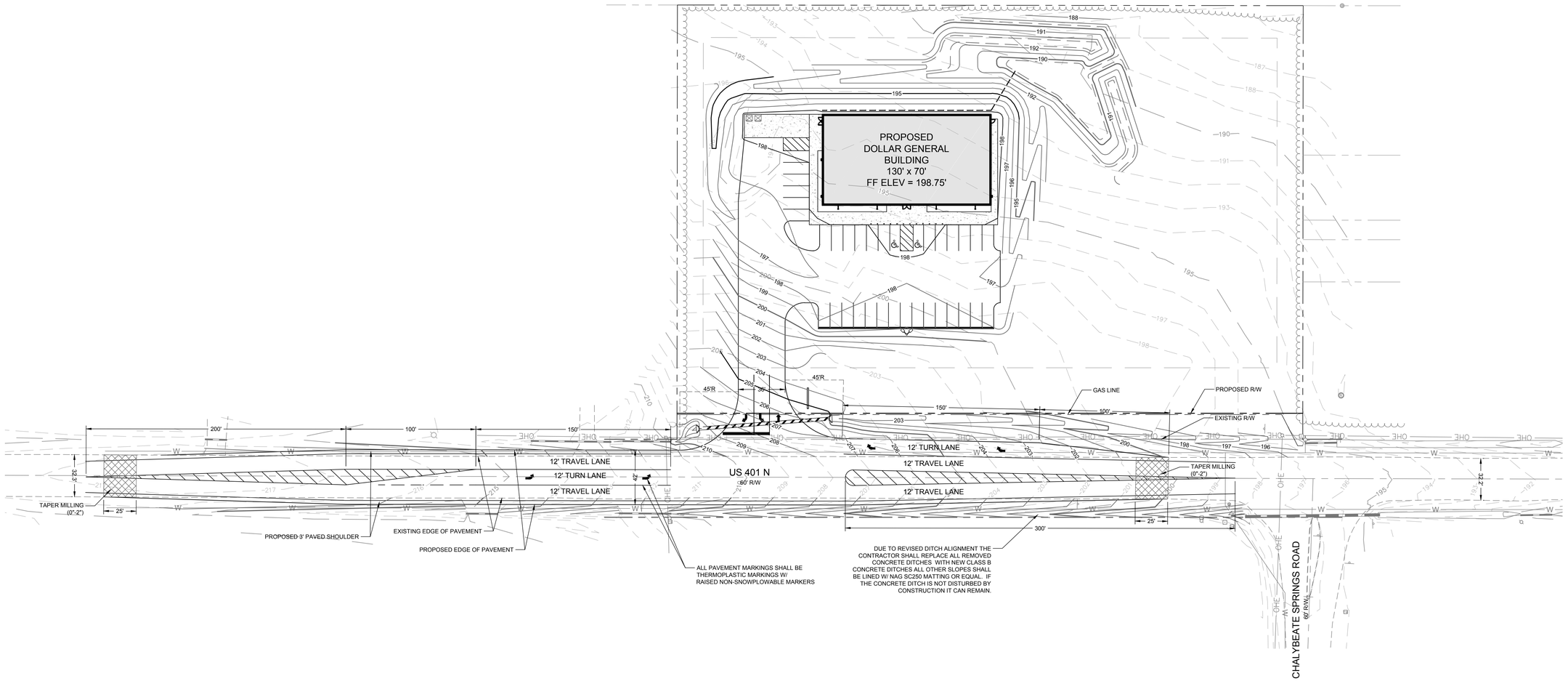
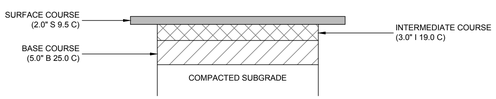
CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

EXISTING CONDITIONS AND DEMOLITION PLAN

PROJECT NO.
18-0174
DRAWING NAME:
18-0174_XC
SHEET NO.
C-2





NOTE:
1. 2" SURFACE COURSE TO COVER ENTIRE WIDTH OF ROAD FROM BEGINNING OF WIDENING TO THE END OF WIDENING.

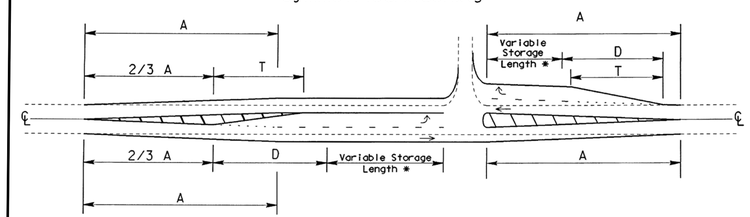
PAVEMENT WIDENING DETAIL
N.T.S.

DESIGN CRITERIA
S=50 MPH W=6'
A=WS=6(50)=300'

NCDOT ROAD DESIGN MANUAL - PART I
SECTION 9-1, FIGURE 4 (F-4B)

Recommended Treatment for Turn Lanes

Symmetrical Widening



Design Speed (mph)	Posted Speed (mph)	Minimum Deceleration Length (D)	Desirable Deceleration Length (D)	Bay Taper Length (T)	Approach / Departure Taper (A)
~~30~~	~~≤ 25~~	~~100'~~	~~150'~~	~~75'~~	$A = WS^2/60$ (IF $S \leq 40$ MPH)
~~35~~	~~30~~	~~100'~~	~~150'~~	~~75'~~	$A = WS$ (IF $S > 40$ MPH)
~~40~~	~~35~~	~~150'~~	~~200'~~	~~100'~~	S = Design Speed
~~45~~	~~40~~	~~150'~~	~~250'~~	~~100'~~	W = Width of Lateral Shift
50	45	150'	300'	100'	* Storage length for waiting vehicles should be calculated based on the latest version of the Highway Capacity Manual or Policy on Street and Driveway Access to North Carolina Highways.
~~55~~	~~50~~	~~200'~~	~~500'~~	~~150'~~	
~~60~~	~~55~~	~~250'~~	~~575'~~	~~200'~~	

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

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 40 ft.

BY	DATE	REVISIONS
BWH	07/16/19	LOWER SITE 0.5'
BWH	02/22/19	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS

PROJECT ENGINEER/ARCHITECT
MWH (MATT.HASTINGS@SUMMITDE.NET)
PROJECT MANAGER
MWH (MATT.HASTINGS@SUMMITDE.NET)

DRAWN BY
BWH (BRAD.HOPPES@SUMMITDE.NET)
FIRST ISSUE DATE
08-08-2018

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07/24/19

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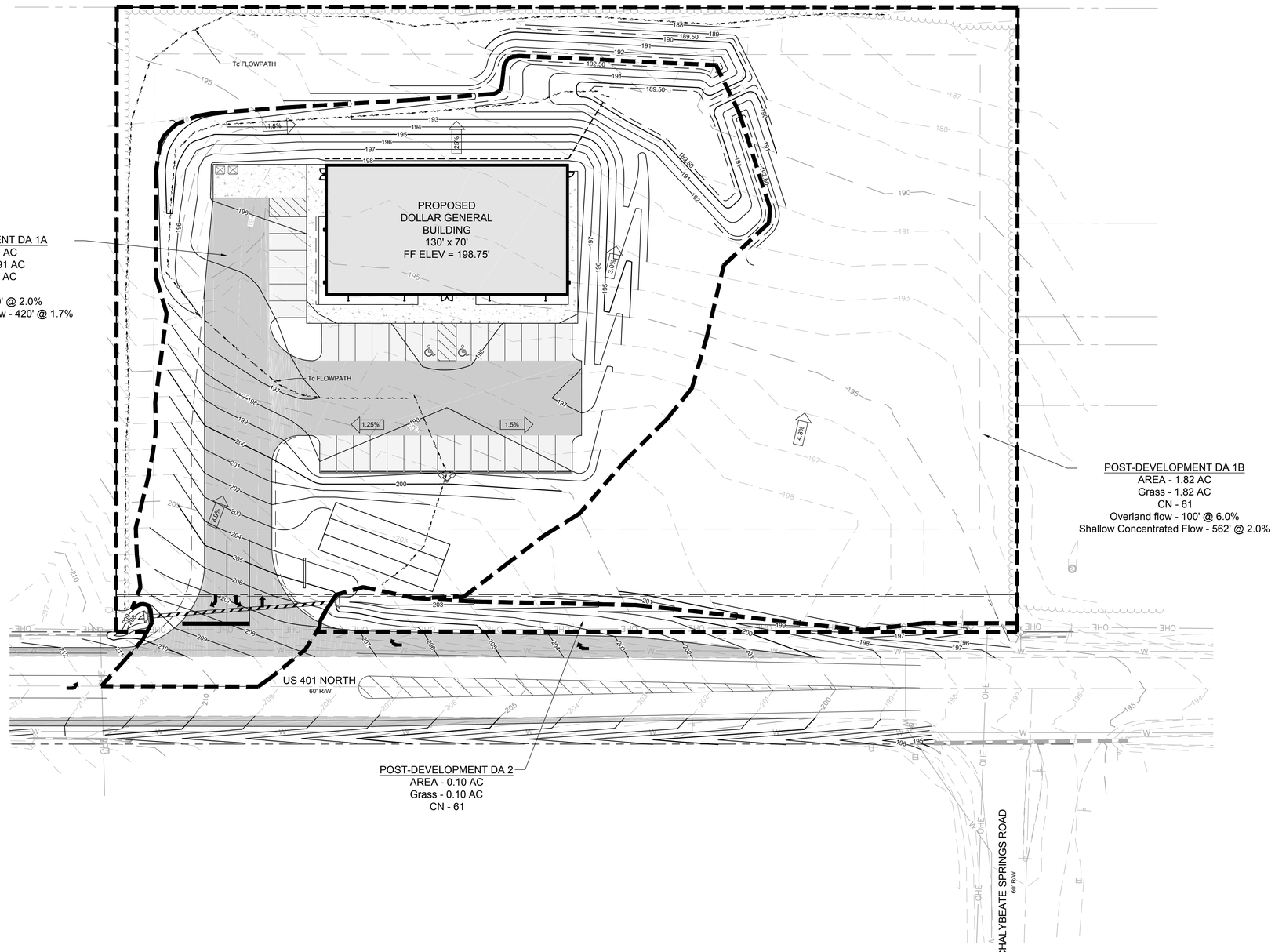
CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

TURN LANE PLAN AND SYMMETRICAL WIDENING

PROJECT NO.
18-0174
DRAWING NAME:
17-0374_S
SHEET NO.
C-2A



POST-DEVELOPMENT DA 1A
AREA - 1.725 AC
Impervious - 0.91 AC
Grass - 0.815 AC
CN - 80.5
Overland flow - 100' @ 2.0%
Shallow Concentrated Flow - 420' @ 1.7%

POST-DEVELOPMENT DA 1B
AREA - 1.82 AC
Grass - 1.82 AC
CN - 61
Overland flow - 100' @ 6.0%
Shallow Concentrated Flow - 562' @ 2.0%

POST-DEVELOPMENT DA 2
AREA - 0.10 AC
Grass - 0.10 AC
CN - 61

GRADING & STORM LEGEND:

- EXISTING WATER METER
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING BOLLARD
- EXISTING POST INDICATOR VALVE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING ELECTRIC ACCESS
- EXISTING GAS METER
- EXISTING GAS REGULATOR
- EXISTING WATER VALVE

EXIST / PROPOSED

- CURB INLET
- DROP INLET
- JUNCTION BOX
- FLARED END SECTION (FES)
- EXISTING STORM PIPE
- PROPOSED STORM PIPE
- LIMITS OF DISTURBANCE
- LIMITS OF DISTURBANCE & TREE PROTECTION FENCE
- TREE PROTECTION FENCE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- WOODS LINE

GRAPHIC SCALE
15 0 15 30 60
(IN FEET)
1 inch = 30 ft.

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

7			
6			
5			
4			
3			
2	LOWER SITE 0.5'	07/16/19	BWH
1	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS	02/22/19	BWH
	REVISIONS	DATE	BY

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PROJECT MANAGER
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BWH (BRAD.HOPPE@SUMMITDE.NET)
FIRST ISSUE DATE
08-08-2018

NORTH CAROLINA
REGISTERED
SEAL
38098
ENGINEER
MATTHEW W. HASTINGS
07/24/19

SUMMIT
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www.summitde.net

CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

POST DEVELOPMENT DRAINAGE MAP

PROJECT NO.
18-0174
DRAWING NAME:
18-0174_G
SHEET NO.
C-3

STABILIZATION TIMEFRAMES

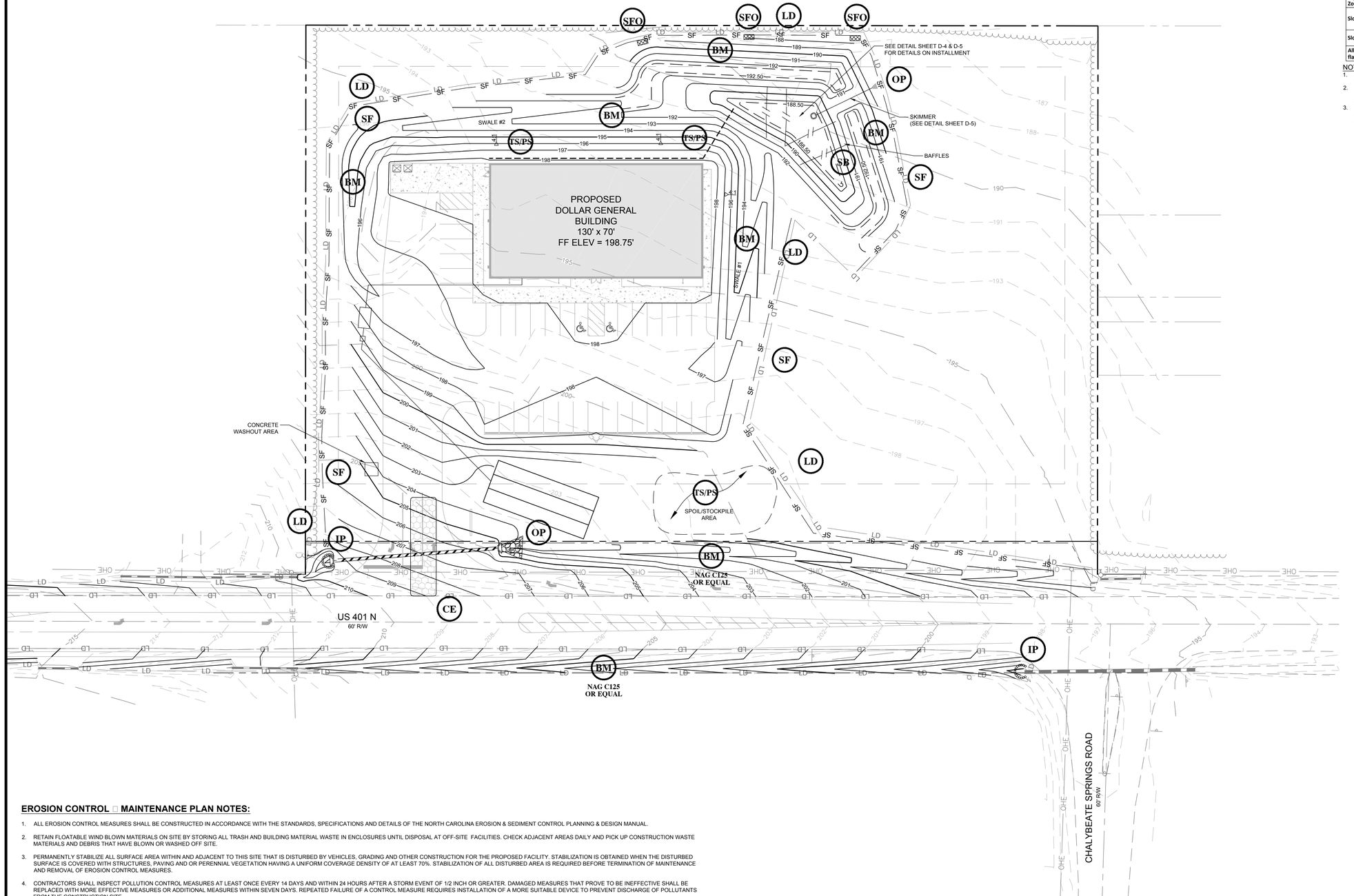
Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches and slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones

NOTES:

1. ALL SLOPES 3:1 AND STEEPER, AND DITCHES SHALL BE STABILIZED WITHIN 7 DAYS AND BE LINED WITH BLANKET MATTING.
2. PERMANENT GROUNDCOVER WILL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR NO MORE THAN 90 CALENDAR DAYS (WHICHEVER IS SHORTER).
3. ROADSIDE DITCHES MUST HAVE MATTING IMMEDIATELY UPON CONSTRUCTION OR BY END OF DAY IF CONSTRUCTION CANNOT BE COMPLETED IN ONE DAY.

DISTURBED AREA
2.73 ACRES

*NO NATURAL WETLANDS ARE IDENTIFIED ON THIS SITE.



GRAPHIC SCALE
15 0 7.5 15 30 60
(IN FEET)
1 inch = 30 ft.

LEGEND:

EXIST / PROPOSED

- CURB INLET
- DROP INLET
- JUNCTION BOX
- FLARED END SECTION (FES)
- EXISTING STORM PIPE
- PROPOSED STORM PIPE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- WOODS LINE
- SFO — SILT FENCE OUTLET
- LD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- TS/PS — TEMPORARY & PERMANENT SEEDING
- CE — TEMPORARY STONE CONSTRUCTION ENTRANCE (26'X100')
- OP — OUTLET PROTECTION
- IP — INLET PROTECTION
- DD — DIVERSION DITCH
- BM — BLANKET MATTING
- SB — SKIMMER BASIN

Know what's below.
Call before you dig.

EROSION CONTROL □ MAINTENANCE PLAN NOTES:

1. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS, SPECIFICATIONS AND DETAILS OF THE NORTH CAROLINA EROSION & SEDIMENT CONTROL PLANNING & DESIGN MANUAL.
2. RETAIN FLOATABLE WIND BLOWN MATERIALS ON SITE BY STORING ALL TRASH AND BUILDING MATERIAL WASTE IN ENCLOSURES UNTIL DISPOSAL AT OFF-SITE FACILITIES. CHECK ADJACENT AREAS DAILY AND PICK UP CONSTRUCTION WASTE MATERIALS AND DEBRIS THAT HAVE BLOWN OR WASHED OFF SITE.
3. PERMANENTLY STABILIZE ALL SURFACE AREA WITHIN AND ADJACENT TO THIS SITE THAT IS DISTURBED BY VEHICLES, GRADING AND OTHER CONSTRUCTION FOR THE PROPOSED FACILITY. STABILIZATION IS OBTAINED WHEN THE DISTURBED SURFACE IS COVERED WITH STRUCTURES, PAVING AND OR PERENNIAL VEGETATION HAVING A UNIFORM COVERAGE DENSITY OF AT LEAST 70%. STABILIZATION OF ALL DISTURBED AREA IS REQUIRED BEFORE TERMINATION OF MAINTENANCE AND REMOVAL OF EROSION CONTROL MEASURES.
4. CONTRACTORS SHALL INSPECT POLLUTION CONTROL MEASURES AT LEAST ONCE EVERY 14 DAYS AND WITHIN 24 HOURS AFTER A STORM EVENT OF 1/2 INCH OR GREATER. DAMAGED MEASURES THAT PROVE TO BE INEFFECTIVE SHALL BE REPLACED WITH MORE EFFECTIVE MEASURES OR ADDITIONAL MEASURES WITHIN SEVEN DAYS. REPEATED FAILURE OF A CONTROL MEASURE REQUIRES INSTALLATION OF A MORE SUITABLE DEVICE TO PREVENT DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE.
5. INSTALLATION OF ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE CITY OR COUNTY. CONTRACTOR TO VERIFY REQUIREMENTS PRIOR TO BEGINNING ANY WORK ON PROJECT SITE.
6. CARE SHALL BE TAKEN TO MINIMIZE THE ENCROACHMENT OF SEDIMENT INTO ALL STORM DRAIN APPURTENANCES, PUBLIC STREETS, AND ONTO PRIVATE PROPERTY UNTIL IMPERVIOUS MATERIAL (ROAD/PARKING AREA SURFACE) IS APPLIED OR UNTIL PROPOSED LANDSCAPE HAS BEEN ESTABLISHED.
7. ALL AREAS NOT SHOWN AS PAVEMENT OR BUILDING UNDER FINAL CONSTRUCTION SHALL BE TEMPORARILY AND PERMANENTLY SEEDED AS REQUIRED.
8. ALL GRASS SLOPES WHICH EXCEED 3:1 (H:V) AND ALL SWALES SHALL UTILIZE NORTH AMERICAN GREEN (NAG) CONSTRUCTION PRODUCTS TURF REINFORCEMENT MATS SC150 OR APPROVED EQUAL UNLESS OTHERWISE SPECIFIED ON PLANS. MATS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND STANDARDS. CONTRACTOR SHALL COORDINATE INSTALLATION INSPECTION WITH MANUFACTURER.
9. THE CONTRACTOR SHALL PROVIDE COPIES OF VALID PERMITS FOR ANY OFFSIDE BORROW OR WASTE AREAS.

CONSTRUCTION ENTRANCE NOTES:

1. CONSTRUCTION ENTRANCE SHALL BE 12' MINIMUM WIDTH AND 70' MINIMUM LENGTH AND 6" MINIMUM THICKNESS OF STONE (1.5"-3.5") COARSE AGGREGATE WITH GEOTEXTILE UNDERLINER. SEE SHEET D-2
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1.5"-3.5" STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN OUT OF ANY STRUCTURE USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
3. WHEELS MUST BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN LOCATED PER THE CITY OR STATE REQUIREMENTS.

DIVERSION/DITCH/SWALE SCHEDULE (MINIMUM SIZING)

Q=cia

NAME	DRAINAGE AREA (AC)	DEPTH (FT.)	SLOPE (%)	Q (cfs)	V (fps)	FLOW DEPTH (ft)	SHEAR STRESS (psf)	MATTING
PERMENANT DITCHES								
SWALE 1	0.32	1.00	3.00%	1.83	1.74	0.25	0.47	**NAG S150 OR EQUAL**
SWALE 2	1	1.00	1.70%	5.72	2.00	0.55	0.58	**NAG S150 OR EQUAL**

NO.	REVISIONS	DATE	BY
7			
6			
5			
4			
3		07/16/19	BWH
2	LOWER SITE 0.5'	02/22/19	BWH
1	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS		

PROJECT ENGINEER/ARCHITECT
MWH (MATT.HASTINGS@SUMMITDE.NET)
PROJECT MANAGER
MWH (MATT.HASTINGS@SUMMITDE.NET)

DRAWN BY
BWH (BRAD.HOPPE@SUMMITDE.NET)
FIRST ISSUE DATE
08-09-2018

NORTH CAROLINA REGISTERED PROFESSIONAL SEAL 38098 ENGINEER MATTHEW W. HASTINGS
01/24/19

SUMMIT
DESIGN AND ENGINEERING SERVICES
Creatively Inspired - Technically Executed
License #: P-0403
5541 Greenwood Drive
Hillsborough, NC 27278-8561
Voice: (919) 732-3883 Fax: (919) 732-6676
www.summitde.net

CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

SEDIMENT AND EROSION CONTROL PLAN

PROJECT NO.
18-0174
DRAWING NAME:
18-0174_EC
SHEET NO.
C-4

SITE INFORMATION

OWNER	PAR 5 DEVELOPMENT GROUP, LLC
CONTACT:	JODY BLAND
MAILING ADDRESS:	2075 JUNIPER LAKE RD WEST END, NC 27376
TELEPHONE NUMBER:	(919) 944-0881
PRN:	0654-51-3127
PROPERTY ADDRESS:	US ROUTE 401 N
PLANNING JURISDICTION:	HARNETT COUNTY
STATE:	NORTH CAROLINA
RECEIVING CHANNEL	HECTOR CREEK
RIVER:	CAPE FEAR RIVER
RIVER BASIN:	CAPE FEAR
HUC:	.
FEMA MAP NUMBER:	3720065400J

SOILS:	NAME:	DESCRIPTION:	SLOPES:
	DoB	(DOTHAN LOAMY SAND)	2-6%
	FaB	(FUQUAY LOAMY SAND)	0-6%

DB/PG:	2001/169
TOTAL AREA:	3.69 ACRES
PROP. IMPERVIOUS AREA:	0.83 ACRES (22%)
MAX. ALLOWABLE:	36%
MIN. LOT SIZE:	30,000 SF
MIN. LOT WIDTH:	100'
OPEN SPACE:	-
ZONING	COMM
CURRENT USE:	VACANT
PROPOSED USE:	COMMERICAL - RETAIL
LAND USE CLASSIFICATION:	EMPLOYMENT - MIXED USE
NC WATERSHED:	WS-IV
FRONT SETBACKS:	35'
SIDE SETBACK:	20'
REAR SETBACKS:	25'
HOURS OF OPERATION:	SUNDAY-SATURDAY; 8AM-10PM

OWNER / DEVELOPER:

PAR 5 DEVELOPMENT GROUP, LLC
JODY BLAND
2075 JUNIPER LAKE RD
WEST END, NC 27376
(910)944-0881 (PHONE)

CIVIL & SITE ENGINEER CONTACT:

MATT HASTINGS, PE
SUMMIT DESIGN & ENGINEERING SERVICES
606 BROAD STREET, SUITE C
SOUTH BOSTON, VA 24592
(434) 575-0617 (PHONE)
(434) 579-4604 (CELL)
MATT.HASTINGS@SUMMITDE.NET

A. GENERAL CIVIL SITEWORK NOTES:

1. DEVELOPER AND/OR CONTRACTOR IS RESPONSIBLE FOR ANY NATIONAL, STATE AND/OR LOCAL STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS. EROSION CONTROL MEASURES SHALL BE INSTALLED AS REQUIRED TO INSURE THAT NO SEDIMENT IS CONVEYED OFF THE SITE TO ADJACENT PROPERTIES. AT A MINIMUM, CONTRACTOR/DEVELOPER SHALL SEED, FERTILIZE AND MULCH ALL DISTURBED AREAS. A SUITABLE STAND OF GRASS SHALL BE OBTAINED AT ALL UNIMPROVED AND NON-LANDSCAPED AREAS.
2. PROVISIONS FOR LOCAL AND/OR REGIONAL LANDSCAPING REQUIREMENTS, INCLUDING LANDSCAPING IRRIGATION, ARE NOT SHOWN ON THESE DRAWINGS. DEVELOPER SHALL PROVIDE LANDSCAPING IN ACCORDANCE WITH JURISDICTIONAL REQUIREMENTS.
3. HANDICAP REQUIREMENTS SHOWN ON THE DRAWINGS ARE MINIMUM REQUIREMENTS. DEVELOPMENT SHALL BE IN ACCORDANCE WITH FEDERAL AND LOCAL REQUIREMENTS FOR HANDICAP ACCESSIBILITY, INCLUDING BUT NOT LIMITED TO THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES.
4. PRIOR TO FINAL ACCEPTANCE OF STORE BY DOLLAR GENERAL, THE SITE SHALL BE CLEAN OF ALL DEBRIS AND TRASH.
5. DEVELOPER SHALL OBTAIN ALL JURISDICTIONAL APPROVALS AND PERMITS REQUIRED FOR THE DEVELOPMENT.
6. DOLLAR GENERAL MINIMUM PAVEMENT RECOMMENDATIONS MUST BE MET. DEVIATIONS WILL REQUIRE A GEOTECHNICAL INVESTIGATION INCLUDING DESIGN RECOMMENDATIONS AND APPROVAL BY DOLLAR GENERAL ARCHITECTURAL AND ENGINEERING DEPARTMENT.
7. CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES SHALL BE MADE AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH HRW REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY. THE CONNECTIONS MUST BE MADE IN A TIME ACCEPTABLE TO HRW.

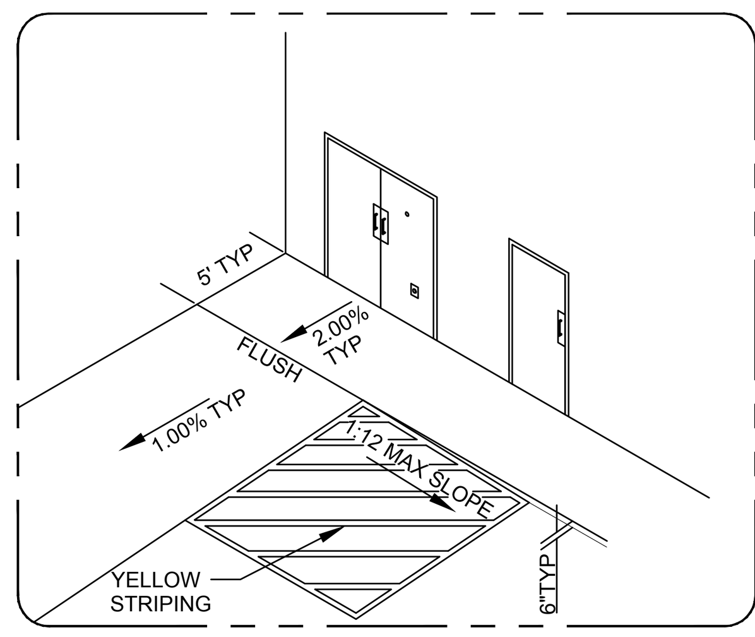
B. SITE ELECTRICAL AND SIGNAGE GENERAL NOTES:

1. UNDERGROUND ELECTRICAL SERVICE IS PREFERRED FOR DOLLAR GENERAL DEVELOPMENTS. TRANSFORMER PAD DESIGN SHALL BE PROVIDED BY ELECTRICAL UTILITY PROVIDER AND SHALL BE BOLLARD PROTECTED WHEN LOCATED IN A HAZARDOUS AREA.
2. SITE LIGHTING SHALL BE DESIGNED TO PROVIDE A MINIMUM OF 1.5 FOOT-CANDLES AT THE PARKING LOT AREAS, BUILDING ENTRANCES, DUMPSTER AREA AND TRUCK DELIVERY AREA. THE OUTER PERIMETER OF THE BUILDING SHALL BE LIGHTED FOR SECURITY. SITE LIGHTING SHALL BE INSTALLED ALONG THE WALLS OF THE BUILDING AND POLE MOUNTED AT THE PERIMETER OF THE PARKING LOT AS NECESSARY.
3. REQUIRED POLE MOUNTED LIGHTING: 24' HEIGHT POLES WITH LED HEADS. CONFIRM WITH ELECTRICAL DRAWINGS AND PHOTOMETRICS.
4. REQUIRED WALL MOUNTED LIGHTING: 400 WATT METAL HALIDE WALL PACKS. CONFIRM WITH ELECTRICAL DRAWINGS AND PHOTOMETRICS.
5. LIGHTED PYLON SIGN: PROVIDE CONDUIT FROM ELECTRICAL PANEL TO LOCATION OF THE PYLON SIGN BASE. BURY CONDUIT TO PYLON. THE CONDUIT IS TO BE 1" AND HAVE ONE SET OF 10/2 WIRE WITH GROUND AND A 20-AMP 2-POLE BREAKER AT THE PANEL. A TEMPORARY 3' TALL WIRING STAKE SHALL BE PROVIDED AT THE PYLON SIGN LOCATION UNTIL THE SIGN IS PERMANENTLY INSTALLED.
6. LIGHTED BUILDING SIGN: PROVIDE CONDUIT FROM ELECTRICAL PANEL TO THE CENTER OF THE SIGN CANOPY. THE CONDUIT IS TO BE 1" AND HAVE ONE SET OF 10/2 WIRE WITH GROUND AND A 20-AMP 2-POLE BREAKER AT THE PANEL. BUILDING CANOPY MUST BE SUFFICIENTLY BUILT TO SUPPORT THE DOLLAR GENERAL SIGN. SIGN WEIGHT UP TO 1,400 LBS.

   NOTE: IF THE LEASE SPECIFIES A 5'-0" X 40'-0" BUILDING SIGN OR 24" (OR LARGER) LETTER SET, WITH TWO - 10/2 WIRE WITH GROUND AND TWO 20 AMP FUSES THE BUILDING CANOPY MUST BE SUFFICIENTLY BUILT TO SUPPORT THE DOLLAR GENERAL SIGN
7. UNDERGROUND ELECTRICAL SHALL BE PROVIDED TO THE SITE LIGHT POLES.
8. THE FINAL PYLON SIGN CONNECTION AND UNDERGROUND CONDUIT IS LANDLORD RESPONSIBILITY.
9. DOLLAR GENERAL VENDOR PRICING FOR LIGHTING WALL PACKS AND POLE LIGHT FIXTURES ARE AVAILABLE FROM:
   LED LLC, DISTRIBUTOR FOR ETI AND LSG. REFER TO VENDOR LIST.
   IF STANDARD DG LIGHTING DOES NOT MEET JURISDICTIONAL REQUIREMENTS, CONTACT
   LED LLC FOR ALTERNATIVE SITE SPECIFIC PHOTOMETRIC CALCULATIONS.

C. SITE PLAN GENERAL NOTES:

1. THE SITE PLAN IS BASED ON MINIMUM REQUIREMENTS FOR SITE ACCESS, PARKING AND FREIGHT DELIVERY. DEVIATIONS FROM THIS PLAN SHALL INSURE PROPER SITE ACCESS FOR DOLLAR GENERAL'S FREIGHT TRUCKS DURING NORMAL BUSINESS (OPERATING) HOURS. ON-SITE DELIVERY TRUCK MANEUVERING PATHS SHALL BE DESIGNED UTILIZING DOLLAR GENERAL'S 73-FOOT LONG FREIGHT TRUCK. PATHS SHALL BE UNOBSTRUCTED AND FREE OF LANDSCAPE ISLANDS, SIGNS, LIGHT POLES, BOLLARDS, ETC. HEAVY DUTY PAVEMENT IS REQUIRED ALONG THE ENTIRE DELIVERY TRUCK (MANEUVERING) PATH. (SEE SHEET C-6)
2. A MINIMUM OF 30 PARKING SPACES, WHICH INCLUDE 2 HANDICAP ACCESSIBLE SPACES, ARE REQUIRED FOR THIS DEVELOPMENT. THE NUMBER OF PARKING SPACES SHALL BE INCREASED AS REQUIRED BY JURISDICTIONAL REQUIREMENTS. IF ADDITIONAL PARKING SPACES ARE REQUIRED OR PROVIDED, THE TOTAL NUMBER OF H.C. SPACES SHALL BE INCREASED IN ACCORDANCE WITH ADA REQUIREMENTS.
3. STANDARD PARKING SPACES SHALL HAVE MINIMUM SIZE OF 9'X 20' UNLESS LOCAL JURISDICTION REQUIRE LARGER SPACES. PARKING SPACE STRIPING SHALL BE STANDARD 90 DEGREE STYLE. MINIMUM SIZE OF H.C. PARKING SPACES AND ACCESS AISLE ARE SHOWN ON DETAILS.
4. PAINTED STANDARD PARKING SPACE AND ISLAND STRIPE COLOR SHALL BE YELLOW FOR ASPHALT PAVEMENT AND CONCRETE PAVEMENT. COLOR FOR PAINTED H.C. ACCESSIBLE PARKING SPACE STRIPES, ACCESS AISLE OR ISLAND STRIPES, H.C. SYMBOLS, SHALL BE PAINTED PER THE REQUIREMENTS OF THE AUTHORITY HAVING JURSIDICTION. BOLLARDS SHALL BE PAINTED YELLOW. PAINT SHALL BE REFLECTIVE TYPE.
5. PAINTED FIRE LANE STRIPING OR PAINTED CURBS SHALL BE PROVIDED AS REQUIRED BY JURISDICTIONAL REQUIREMENTS.
6. CONCRETE PARKING STOPS SHALL BE USED AT PARKING SPACES ALONG THE OUTER PERIMETER OF PARKING LOT WHEN CONCRETE CURBS ARE NOT USED.
7. CONCRETE PARKING STOPS SHALL NOT BE USED AT THE FRONT OF THE BUILDING OR ALONG THE PERIMETER (ADJACENT) TO THE BUILDING.
8. THE SIDEWALK AT THE FRONT OF THE BUILDING SHALL BE A MINIMUM OF 9-FEET WIDE. THE SIDEWALK SHALL INCLUDE A 10-FOOT MINIMUM WIDE ADA ACCESSIBLE RAMP CLOSE TO THE STORE MAIN ENTRANCE. SIDEWALKS ALONG OTHER SIDES OF BUILDING SHALL BE MINIMUM 3'-6" WIDE. SIDEWALKS ADJACENT TO BUILDING SLABS SHALL HAVE SEALED ISOLATION JOINTS AND SHALL BE 6" HIGH ABOVE EXTERIOR OR PAVEMENT FINISH GRADES. ALL EXTERIOR SIDEWALKS SHALL HAVE A BROOM FINISH.
9. PORTLAND CEMENT SIDEWALKS SHALL BE MINIMUM 4" THICK WITH A 6" HIGH CURB AT ALL PAVEMENT TRANSITIONS, USE WELDED WIRE FABRIC REINFORCING.
10. THE PREFERRED WIDTH OF SITE CURB CUTS IS 36' WITH ONE ENTRANCE LANE AND TWO (RIGHT TURN AND LEFT TURN) EXIT LANES.
11. DRIVEWAY CONSTRUCTION WITHIN ROAD RIGHT-OF-WAYS, INCLUDES RADIUS SIZES, PAVEMENT MARKINGS, DRIVEWAY WIDTHS, ETC., SHALL BE IN ACCORDANCE WITH JURISDICTIONAL REQUIREMENTS.
12. SITE PLANS SHALL UTILIZE DOLLAR GENERAL'S PROTOTYPICAL BUILDING DESIGN WITH 70'-0" BY 130'-0" DIMENSIONS. SHOULD SITE CONSTRAINTS NOT ALLOW THE PROTOTYPICAL BUILDING DESIGN, DEVELOPER SHALL CONTACT DOLLAR GENERAL SITE COMPLIANCE COORDINATORS FOR OPTIONS AND APPROVAL. GROW BUILDING OUTWARD IF NECESSARY TO MAINTAIN CLEAR SALES FLOOR AREA AS SHOWN ON SHEET A1.
13. THE ACTUAL LOCATION FOR THE PYLON SIGN SHALL BE SITUATED FOR OPTIMUM VISIBILITY ALONG THE MAIN FRONT TRAFFIC CORRIDOR.
14. THE LANE OR DRIVE BETWEEN PARKING SPACES SHALL HAVE A MINIMUM WIDTH OF 36' WHEN LANE IS HEAVY DUTY PAVEMENT AND USED FOR FREIGHT TRUCK MANEUVERING. THE LANE SHALL HAVE A MINIMUM WIDTH OF 24' WHEN THE LANE IS CONSTRUCTED OF STANDARD DUTY PAVEMENT AND NOT USED FOR FREIGHT TRUCK MANEUVERING.
15. BUILDING CORNERS ADJACENT TO PAVED AREAS SHALL BE BOLLARD PROTECTED. ABOVE GROUND UTILITY APPURTENANCES, SUCH AS METERS, TRANSFORMERS, FIRE HYDRANTS IN PAVED AREAS, ETC. SHALL BE BOLLARD PROTECTED.
16. DOWNSPOUTS SHALL NOT BE ALLOWED TO DISCHARGE ON CONCRETE SIDEWALKS. SEE DETAIL ON THIS SHEET.
17. DUMPSTER AND DELIVERY PADS SHALL BE CONSTRUCTED OF CONCRETE AS DETAILED ON THE DRAWINGS. AN ENCLOSURE SHALL BE PROVIDED ON THE DUMPSTER PAD IF REQUIRED BY JURISDICTIONAL REQUIREMENTS, OR IF VISIBLE BY CUSTOMER TRAFFIC OR ABUTTING RESIDENTIAL. SANITARY SEWER AND DOMESTIC HOT WATER SHALL BE PROVIDED AT DUMPSTER AREA IF REQUIRED BY JURISDICTIONAL REQUIREMENTS.
18. SEPTIC SYSTEM DESIGN BY OTHERS.
19. HOLDING TANK SYSTEMS ARE NOT ALLOWED.
20. LIFT STATIONS ARE NOT ALLOWED WITHOUT DOLLAR GENERAL APPROVAL.
21. EXTERIOR WALLS AND FOUNDATION SHALL HAVE WATERPROOFING.
22. FINISHED GRADE AT EXTERIOR WALLS SHALL BE A MINIMUM OF 6" BELOW FINISHED FLOOR AT ALL NON-PAVED AREAS.
23. ALL DOWNSPOUTS DISCHARGING ONTO NON PAVED AREAS ARE TO HAVE A MINIMUM FIVE FOOT PERFORATED LANDSCAPE PIPE STRAPPED TO A MINIMUM 12 INCH X 24 INCH CONCRETE SPLASH BLOCK.
24. FINISH FLOOR TO BE A MINIMUM OF 12 INCHES ABOVE 100 YEAR FLOOD PLAIN.
25. IF AN UNOBSTRUCTED VIEW EXISTS OF A RESIDENTIAL BUILDING BETWEEN TENANT PARCEL AND ADJACENT PARCEL, THEN LESSOR SHALL CONSTRUCT A PRIVACY FENCE IN ACC0RDANCE WITH TENANT'S PROTOTYPE CRITERIA SET PLANS AND ANY APPLICABLE GOVERNMENTAL AGENCIES.
26. PAR 5 DEVELOPMENT GROUP IS RESPONSIBLE FOR SITE AND LANDSCAPING MAINTENANCE, INCLUDING PARKING LOT AND ALL BUFFERS.
27. THE EXPECTED WATER DEMAND FOR THIS STORE IS 200 GALLONS PER DAY. THIS IS BASED ON ACTUAL USAGE AT OTHER STORE LOCATIONS.
28. CONTRACTOR SHALL ADJUST ALL WATER VALVES, METER BOXES, ETC. TO FINISH GRADE IN ACCORDANCE WITH HARNETT CO. DEPARTMENT OF PUBLIC WORKS STANDARDS AND SPECIFICATIONS.



STRIPING LEGEND	
YELLOW CURBING AND BOLLARDS - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY AND METAL SURFACES FREE OF HEAVY RUST 2 COATS SHERWIN WILLIAMS - KEM 4000 ACRYLIC ALKYD ENAMEL SAFETY YELLOW B55Y300
STRIPING - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY. TOP COAT SHERWIN WILLIAMS - PROMAR TRAFFIC MARKING PAINT YELLOW TM5495
HANDICAP STRIPING - PARKING LOT	SURFACES SHOULD BE CLEAN, DRY. TOP COAT SHERWIN WILLIAMS - PROMAR TRAFFIC MARKING PAINT "H.C." BLUE

CONTRACTOR IS RESPONSIBLE FOR ALL PUBLIC UTILITY CONNECTIONS (ELECTRIC, WATER, GAS, SEPTIC, SEWER) AS WELL AS PROVIDING ALL INFRASTRUCTURES REQUIRED BY UTILITY COMPANY

UTILITIES LEGEND:

EXIST / PROPOSED

- WATER VALVE
- FIRE HYDRANT
- WATER METER
- FIRE DEPT. CONNECTION (FDC)
- REDUCER
- PLUG & BLOCK
- MECHANICAL JOINT / BEND
- POST INDICATOR VALVE (PIV)
- AIR RELEASE VALVE (ARV)
- SANITARY SEWER MANHOLE
- SEWER CLEAN OUT
- CURB INLET
- DROP INLET
- JUNCTION BOX
- FLARED END SECTION (FES)
- EXISTING WATER MAIN
- PROPOSED WATER MAIN / SERVICE
- EXISTING GAS MAIN
- PROPOSED GAS MAIN
- EXISTING OVERHEAD ELECTRIC
- PROPOSED UNDERGROUND ELECTRIC
- EXISTING SEWER MAIN
- PROPOSED SEWER MAIN / SERVICE
- EXISTING STORM PIPE
- PROPOSED STORM PIPE

GENERAL LANDSCAPING NOTES:

1. LANDSCAPE CONTRACTOR SHALL HAVE ALL UNDERGROUND UTILITIES AND PROPOSED SITE LIGHTING POLE LOCATIONS LOCATED PRIOR TO INSTALLING PLANT MATERIAL.
2. CONTRACTOR SHALL COMPLY WITH SIZING AND GRADING STANDARDS OF THE LATEST EDITION OF THE "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN).
3. CONTRACTOR SHALL NOT PLANT NEW PLANT MATERIAL IN CRITICAL ROOT ZONES OF EXISTING TREES TO BE SAVED AND PROTECTED ON SITE.
4. ANY DISTURBED AREAS NOT SCHEDULED FOR HARDSCAPE, PLANTING, SOD OR MULCH SHALL BE SEEDED LAWN.
5. CONTRACTOR SHALL AMEND ALL PROPOSED PLANT BEDS WITH ORGANIC SOIL AMENDMENT (COMPOST). ROTOTILL BEDS TO A DEPTH OF 8", ADD 2" OF COMPOST AND ROTOTILL AGAIN. REMOVE ALL EXIST. WEEDS, GRASS AND ROOTS.
6. CONTRACTOR SHALL RAKE SMOOTH AND APPLY 1" TO 2" TOPSOIL TO ALL LAWN AREAS RECEIVING SEED. REMOVE ALL EXIST. WEEDS, GRASS AND ROOTS.
7. ALL PLANT AND BED LINE LOCATIONS SHALL BE STAKED IN THE FIELD AND APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
8. ALL PLANTINGS SHALL BE INSTALLED WITH THE SPECIFIED LAYER OF MULCH. REFERENCE DETAILS FOR DEPTH AND TYPE OF MULCH. ALL TREES AND SHRUBS SHALL BE PLANTED IN MULCH BEDS.
9. OWNERS OPTION: INSTALL $\frac{1}{8}$" THK. x 4" WIDE GREEN STEEL EDGING WITH STEEL STAKES BETWEEN PLANTING BEDS AND LAWN.
10. FINISHED GRADE IN LANDSCAPE ISLANDS THAT ARE TO RECEIVE MULCH SHALL BE SET SO THAT IT IS ONE INCH LOWER THAN THE TOP OF SURROUNDING CURBS. MULCH WITH 3" OF TRIPLE SHREDDED HARDWOOD MULCH FROM A REPUTABLE LOCAL SOURCE.
11. CONTRACTOR SHALL PROVIDE WATER PERMEABLE WEED MAT FOR ALL PLANTING BEDS.
12. ALL PLANTS/TREES SHALL BE PLANTED IN A MULCH BED 4' WIDE MINIMUM.

D. SITE PARKING LOT:

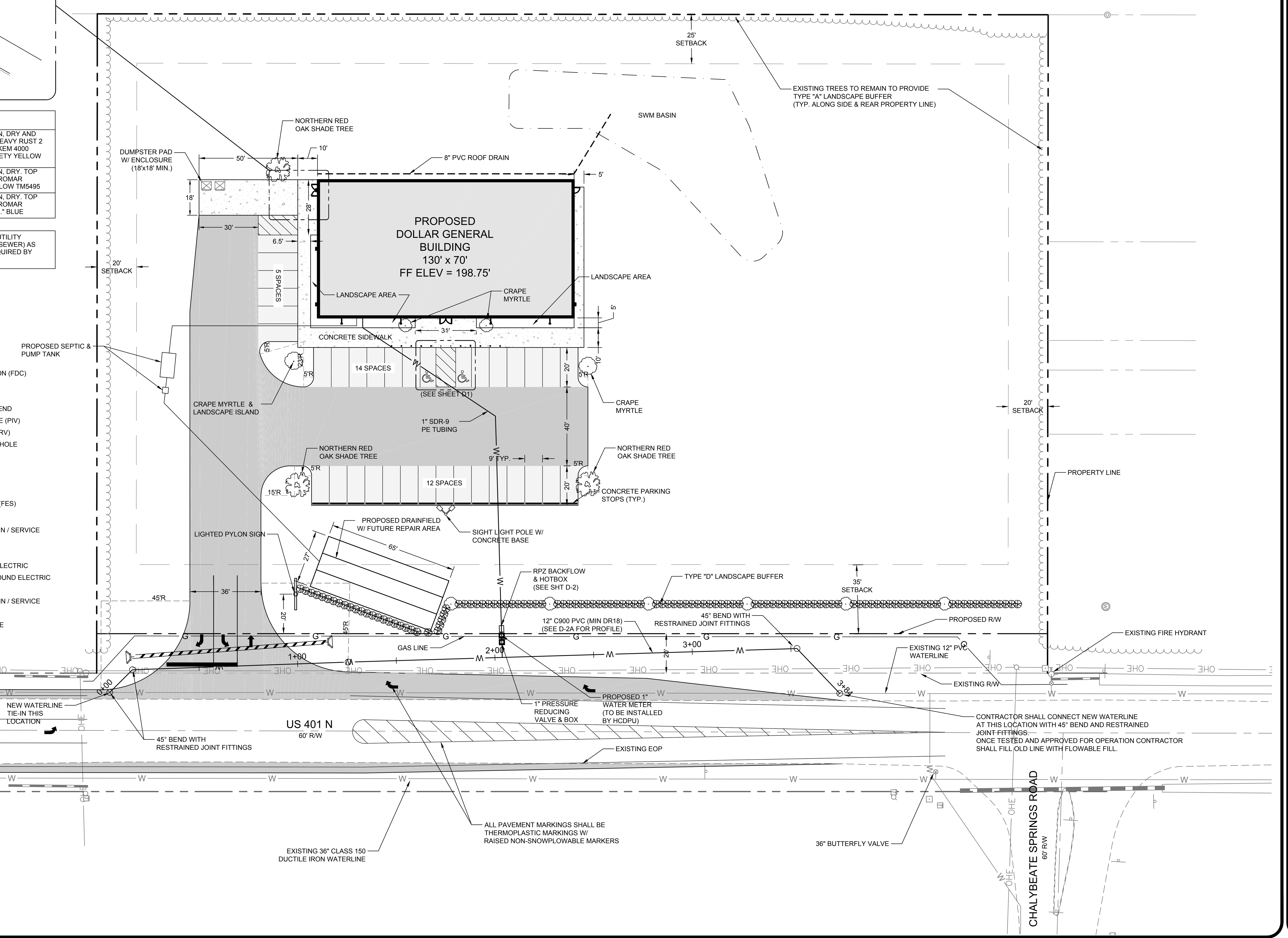
1. USE PAVING SPECIFICATIONS NOTED ON SHEET D1 UNLESS A CERTIFIED GEOTECH REPORT SPECIFIES AN ALTERNATE REQUIREMENT (SEE PAGE D4 FOR DETAILS) AND IS APPROVED BY DOLLAR GENERAL.
2. PROVIDE PARKING LOT IN GOOD CONDITION, PROPERLY STRIPED WITH YELLOW PAINT. MINIMUM OF 30 PARKING SPACES REQUIRED, INCLUDING A MINIMUM OF 2 HANDICAP ACCESSIBLE SPACES (PROPERLY MARKED, SIGNED, AND ADA COMPLIANT).
3. PROPER ACCESS FOR DOLLAR GENERAL'S FREIGHT TRUCKS (FREIGHT TRUCKS ARE APPROXIMATELY 73'-0" IN TOTAL LENGTH) ARE REQUIRED DURING NORMAL BUSINESS HOURS. THIS INCLUDES A TRUCK PATH THAT IS FREE OF LANDSCAPE ISLANDS, SIGNS, LIGHT POLES, AND OTHER BARRIERS WHILE MAINTAINING WIDE RADIUS CURVES ON ALL ENTRANCES AND EXITS. HEAVY DUTY PAVING REQUIRED FOR TRUCK PATHS.
4. PROVIDE PROTECTION (BOLLARDS, GUARD RAILS, OR EQUIVALENT) FOR ELECTRIC, GAS, HVAC, AND WATER METERS THAT ARE IN POTENTIALLY HAZARDOUS LOCATIONS.
5. CONTRACTOR WILL COMPLETE ALL SITE WORK: FINAL GRADING, LANDSCAPING, SEEDING, PAVING, RETENTION, AND REMOVAL OF DEBRIS.
6. ROUTE DOWNSPOUTS UNDER SIDEWALKS AS DETAILED ON THIS SHEET AT ALL SIDEWALK LOCATIONS.
7. PLEASE NOTE THAT THERE SHOULD NOT BE ANY PARKING STOPS LOCATED DIRECTLY IN FRONT OF OR DIRECTLY ADJACENT TO THE BUILDING.
8. EROSION CONTROL AROUND PROPERTY IS REQUIRED BY CONTRACTOR.
9. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING ALL VEGETATION AND REGIONAL APPROPRIATE LANDSCAPING. ALL LOCAL LANDSCAPE REQUIREMENTS MUST BE MET.
10. THE CONCRETE DELIVERY TRUCK RECEIVING PAD MUST BE A MINIMUM OF 16'X16'. THE CONCRETE PAD MUST SLOPE AWAY FROM THE BUILDING AT 1/8" PER FOOT.
11. THE CONCRETE DUMPSTER PAD MUST BE A MINIMUM OF 18' X 18'.
12. THE DUMPSTER ENCLOSURE MUST BE 18' WIDE BY 12' DEEP AND HAVE WOOD FENCE ON ALL SIDES AND REAR WITH CHAIN LINK GATES AND PRIVACY SLATS AS A MINIMUM BASIS OF DESIGN.
13. CONCRETE PARKING STOPS SHOULD BE LOCATED AT PERIMETER PARKING ZONES ONLY.
14. LANDSCAPING AND SITE WORK SHALL BE FREE OF DEBRIS AND IN LIKE NEW CONDITION.

E. HVAC SECURITY FENCING:

(**ONLY TO BE USED IF HVAC UNITS ARE ON THE GROUND)

PROVIDE THE FOLLOWING WHEN THE STORE IS DEFINED AS BOTH SELECT AND UTILIZING NNN LEASE.

1. PROVIDE 69 LINEAL FEET x 8'-0" HIGH 6 GAUGE CHAIN LINK FENCING.
2. SCHEDULE 40 GALVANIZED PIPE.
3. PROVIDE POLYETHYLENE THERMOPLASTIC PRIVACY SLATS, COLOR TO MATCH BUILDING WITH UV INHIBITORS. USE WHEN UNITS ARE FACING STREET OR RESIDENTIAL.
4. PROVIDE (2) 30" GATES WITH COMMERCIAL GRADE HEAVY DUTY HINGES AND LOCKS, FRAMES TO BE SAME AS TOP RAIL.
5. MAINTAIN A MINIMUM OF 4'-0" IN-BETWEEN UNITS AND FENCING. FENCING IS TO BE 6" INSIDE OF THE EDGE OF CONCRETE PAD. ADJUST PAD AND FENCING DIMENSIONS ACCORDINGLY.
6. PROVIDE RAZOR COIL FULL LENGTH OF FENCING, 18" DIAMETER, GALVANIZED.
7. CONFIRM NUMBER OF UNITS AND SIZE OF UNITS AND ADJUST PAD AND FENCING ACCORDINGLY.
8. ALL MECHANICAL AREAS LOCATED ON, BESIDE OR ADJACENT TO BUILDING SHALL BE SCREENED FROM THE VIEWS OF STREETS AND ADJACENT PROPERTY.



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

GRAPHIC SCALE
15 0 15 30 60
(IN FEET)
1 inch = 30 ft.

NO.	REVISIONS	DATE	BY
1	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS	02/22/19	BWH
2	LOWER SITE 0.5'	07/16/19	BWH
3			
4			
5			
6			
7			

PROJECT ENGINEER/ARCHITECT
MWH (MATT.HASTINGS@SUMMITDE.NET)
PROJECT MANAGER
MWH (MATT.HASTINGS@SUMMITDE.NET)
DRAWN BY
BWH (BRAD.HOPPE@SUMMITDE.NET)
FIRST ISSUE DATE
08-08-2018

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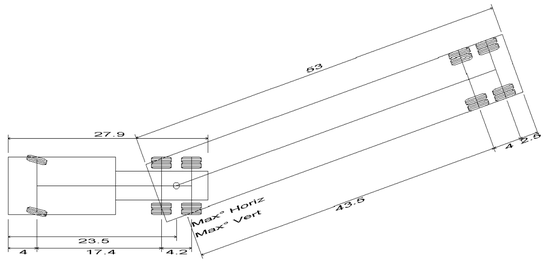
CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

SITE & UTILITY PLAN

PROJECT NO.
18-0174
DRAWING NAME:
17-0374_S
SHEET NO.
C-5

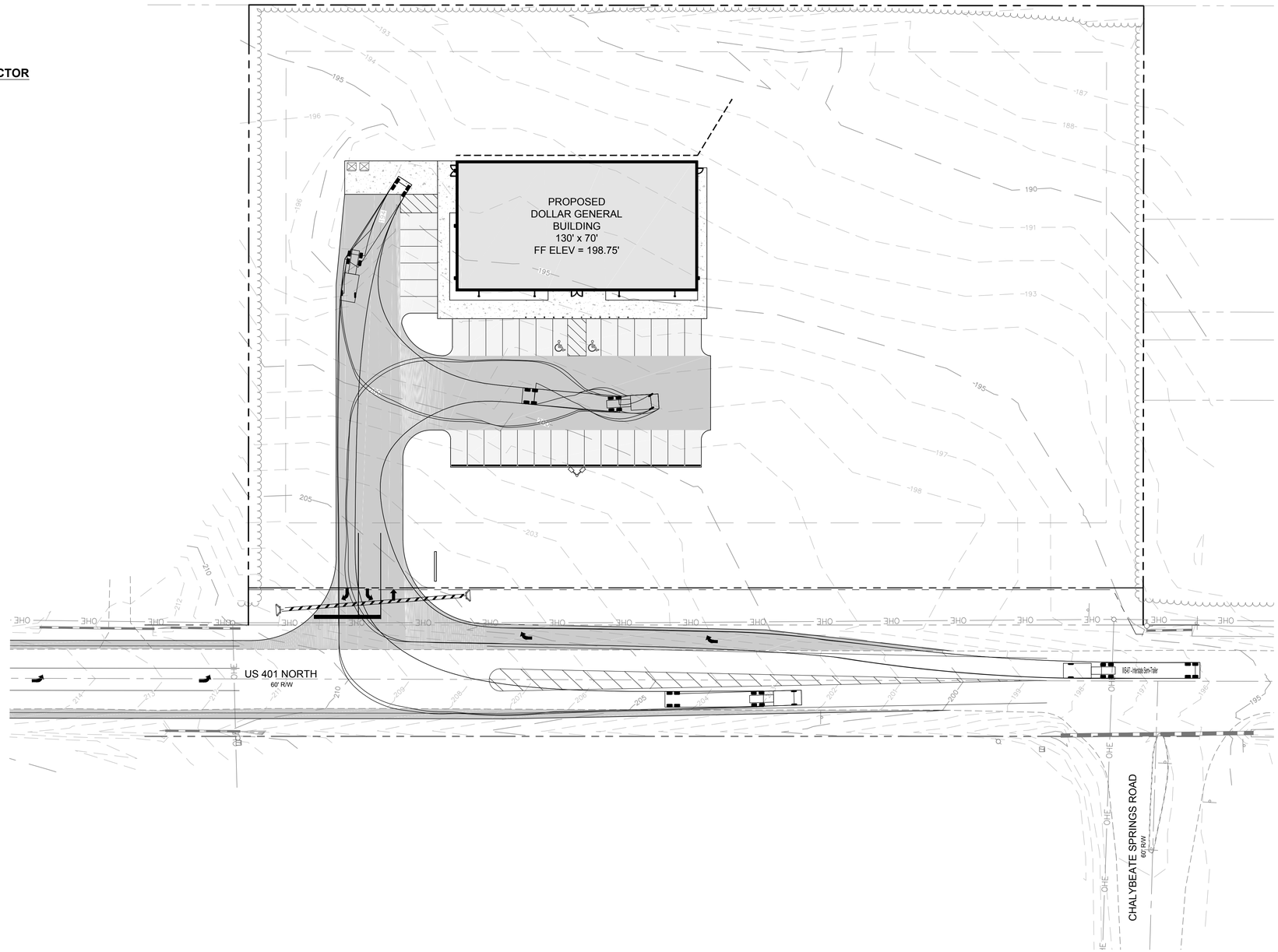


WB □□□ INTERSTATE SEMI TRAILER TRACTOR

SCALE: 1"= 10'

Vehicle Tracking Vehicle Details **Ref: 100033**

Unit Name:	**WB-67 - Interstate Semi-Trailer Tractor**
Type:	Tractor (with driver controlled steering)
Body style:	Articulated Vehicle Tractor (Large Sleeper Cab)
Classification	Autodesk
Source:	AASHTO handbook 2001
Description:	Design vehicle
Notes:	
Datum:	Front Primary Axle
Front Axle(s):	1 Ackerman (axles fixed, wheels turn)
Primary Front Axle Offset:	0.000ft
Effective Front Axle Offset:	0.000ft (Auto Calculated)
Maximum Wheel Angle:	28.400deg (Any Front Wheel)
Status:	Active Non Self-Steered
Track Width:	8.000ft
Total Wheels:	2 (positioned at the ends of the axle)
Tire Width:	0.800ft (Auto Calculated - proportion of Track Width)
Tire Diameter:	2.800ft (Auto Calculated - proportion of Track Width)
Rear Axle(s):	2 Fixed (All axles identical)
Primary Rear Axle Offset:	17.400ft (Innermost Axle behind Front Primary Axle)
Effective Rear Axle Offset:	19.500ft (Auto Calculated)
Maximum Wheel Angle:	Unlimited
Rear Axle Spacing:	4.200ft
Status:	Active Non Self-Steered
Track Width:	8.000ft
Total Wheels:	4 (positioned at the ends of the axle)
Tire Width:	0.800ft (Auto Calculated - proportion of Track Width)
Tire Diameter:	2.800ft (Auto Calculated - proportion of Track Width)
Steering:	Front Axle(s):
Maximum Virtual Steering Angle:	28deg
Lock-to-Lock Time (Fwd/Rev):	6.0sec / 6.0sec
Driver / Pilot	
Driver Offset Longitudinally:	-0.921ft (in front of Front Primary Axle)
Driver / Pilot Offset Laterally:	-1.969ft (Right of Centerline)
Driver Height:	7.382ft (Above ground level)
Front Coupling:	None
Rear Coupling:	Generic
Coupling Offset:	19.500ft (behind Front Primary Axle)
Coupling Height:	2.800ft (Auto Calculated - proportion of Tire Diameter)
Capability:	Can Tow or be Towed
Max. Horizontal Articulation Angle:	68.500deg
Max. Vertical Articulation Angle:	10.000deg
Body outline (plan):	
Outline Type:	Tractor Body



GRAPHIC SCALE

15 0 15 30 60

(IN FEET)

1 inch = 30 ft.

Know what's below. Call before you dig.

7			
6			
5			
4			
3			
2	LOWER SITE 0.5'	07/16/19	BWH
1	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS	02/22/19	BWH
	REVISIONS	DATE	BY

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PROJECT MANAGER
MWH (MATT.HASTINGS@SUMMITDE.NET)

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FIRST ISSUE DATE
08-08-2018

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CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

TRUCK TRACKING PLAN

PROJECT NO.
18-0174
DRAWING NAME:
17-0374_S
SHEET NO.
C-6

GRADING GENERAL NOTES

1. PREFERRED GRADING PLAN SHOWN HEREIN IS PROVIDED FOR INFORMATIONAL AND PRELIMINARY PURPOSES ONLY. DEVELOPER SHALL SUBMIT DESIGN GRADING PLAN TO DOLLAR GENERAL FOR PRIOR APPROVAL.
2. A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE COMPLETED FOR THIS PROJECT IN ACCORDANCE WITH JURISDICTIONAL REQUIREMENTS.
3. SIDEWALKS ADJOINING THE BUILDING MUST HAVE A 6" HIGH INTEGRAL CURB.
4. PLAN SHOWN HEREIN DOES NOT ASSUME ANY LEDGES AT BUILDING EXTERIOR FOR BRICK VENEER OF METAL BUILDING WALLS PANELS.
5. PLAN SHOWN HEREIN IS BASED ON PAVEMENT WITHOUT CURBS AND/OR GUTTERS. PLAN IS BASED ON SHEET FLOW TO EARTHEN DITCHES BEYOND THE EDGES OF THE PAVEMENT.
6. SLOPE CONCRETE SIDEWALKS AWAY FROM BUILDING AT A SLOPE OF 1/8" PER FOOT. INCLUDING RECESSED ENTRY.
7. FINISHED GRADE AT EXTERIOR WALLS SHALL BE A MINIMUM OF 6" BELOW FINISHED FLOOR AT ALL NON-PAVED AREAS.
8. FINISH FLOOR TO BE A MINIMUM OF 12 INCHES ABOVE 100 YEAR FLOOD PLAIN.

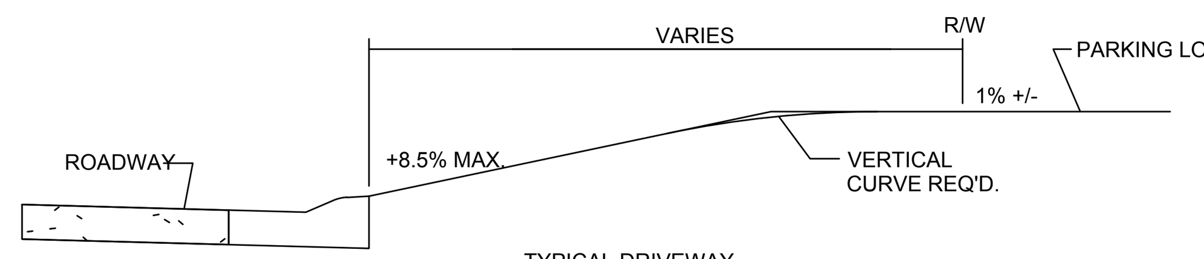
GRADING REQUIREMENTS

(1)	DELIVERY TRUCK UNLOADING ZONE/DUMPSTER AREA:	
	PREFERRED SLOPE =	0.50%
	MINIMUM SLOPE =	0.50%
	MAXIMUM SLOPE =	1.00%
(2)	DELIVERY TRUCK PARKING AREA:	
	PREFERRED SLOPE =	1.25%
	MINIMUM SLOPE =	1.25%
	MAXIMUM SLOPE =	2.50%
(3)	CUSTOMER PARKING AREAS:	
	PREFERRED SLOPE =	2.00%
	MINIMUM SLOPE =	1.00%
	MAXIMUM SLOPE =	3.50%
	NOTE: ANY SLOPE ABOVE 3.50% MUST HAVE PRIOR WRITTEN APPROVAL BY DOLLAR GENERAL STORE CONSTRUCTION DEPT.	
(4)	HANDICAP PARKING AREAS:	
	PREFERRED SLOPE =	1.00%
	MINIMUM SLOPE =	1.00%
	MAXIMUM SLOPE =	2.00%
	NOTE: SLOPE SHALL NOT EXCEED 2.00% IN ANY DIRECTION AT ACCESSIBLE PARKING STALLS, ACCESS AISLES AND ROUTE TO BLDG.	
(5)	SIDEWALKS:	
	PREFERRED SLOPE =	2.00%
	MINIMUM SLOPE =	1.00%
	MAXIMUM SLOPE =	2.00%
(6)	ENTRY DRIVE/DRIVEWAY:	
	NOTES: 1. SEE DRIVEWAY DETAILS BELOW. 2. GRADES WITH HIGHWAYS/STREET RIGHT-OF-WAYS SHALL MEET JURISDICTIONAL REQUIREMENTS. 3. THE "LEAST" PERCENT GRADE REQUIREMENTS IN NOTES 1 & 2 ABOVE SHALL GOVERN.	
(7)	ON-SITE UNIMPROVED (NON-PAVED) AREAS (WITHIN 6' OF BUILDING & PAVED AREAS):	
	PREFERRED SLOPE	5.00%
	MINIMUM SLOPE =	2.00%
	MAXIMUM SLOPE =	12.50%
	NOTES: 1. THE FFE OF BUILDING SHALL BE 6" ABOVE FINISHED GRADE AT EXTERIOR PERIMETER OF BUILDING. 2. TRANSITION GRADES TO CONCRETE DOOR STOOPS AS REQUIRED.	
(8)	ON-SITE UNIMPROVED (NON-PAVED) AREAS (BEYOND 6' OF BUILDING & PAVED AREAS):	
	PREFERRED SLOPE =	2.00%
	MINIMUM SLOPE =	0.50%
	MAXIMUM SLOPE =	25.00% (4:1)
(9)	OFF-SITE UNIMPROVED AREAS:	
	NOTE: GRADES WITHIN HIGHWAY/STREET RIGHT-OF-WAYS SHALL MEET JURISDICTIONAL REQUIREMENTS.	
(10)	OFF-SITE DRAINAGE CONDUITS AND DITCHES:	
	NOTE: OFF-SITE DRAINAGE CONDUIT SHALL BE SIZED, AND OFF-SITE DITCHES SHALL BE GRADED IN ACCORD WITH JURISDICTIONAL REQUIREMENTS.	

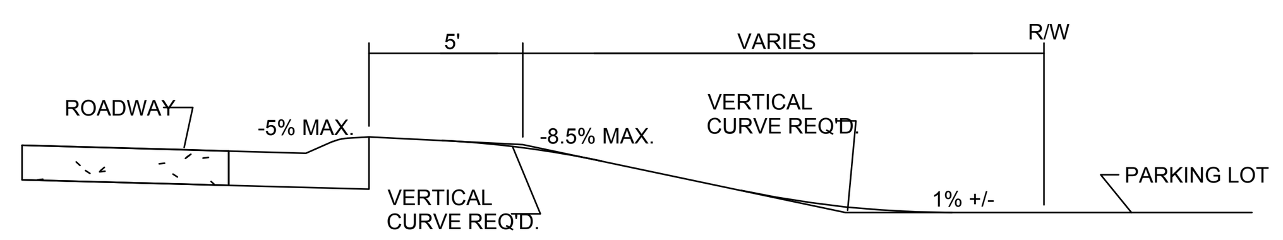
Know what's **below.**
Call before you dig.

DRIVEWAY DETAIL NOTES:

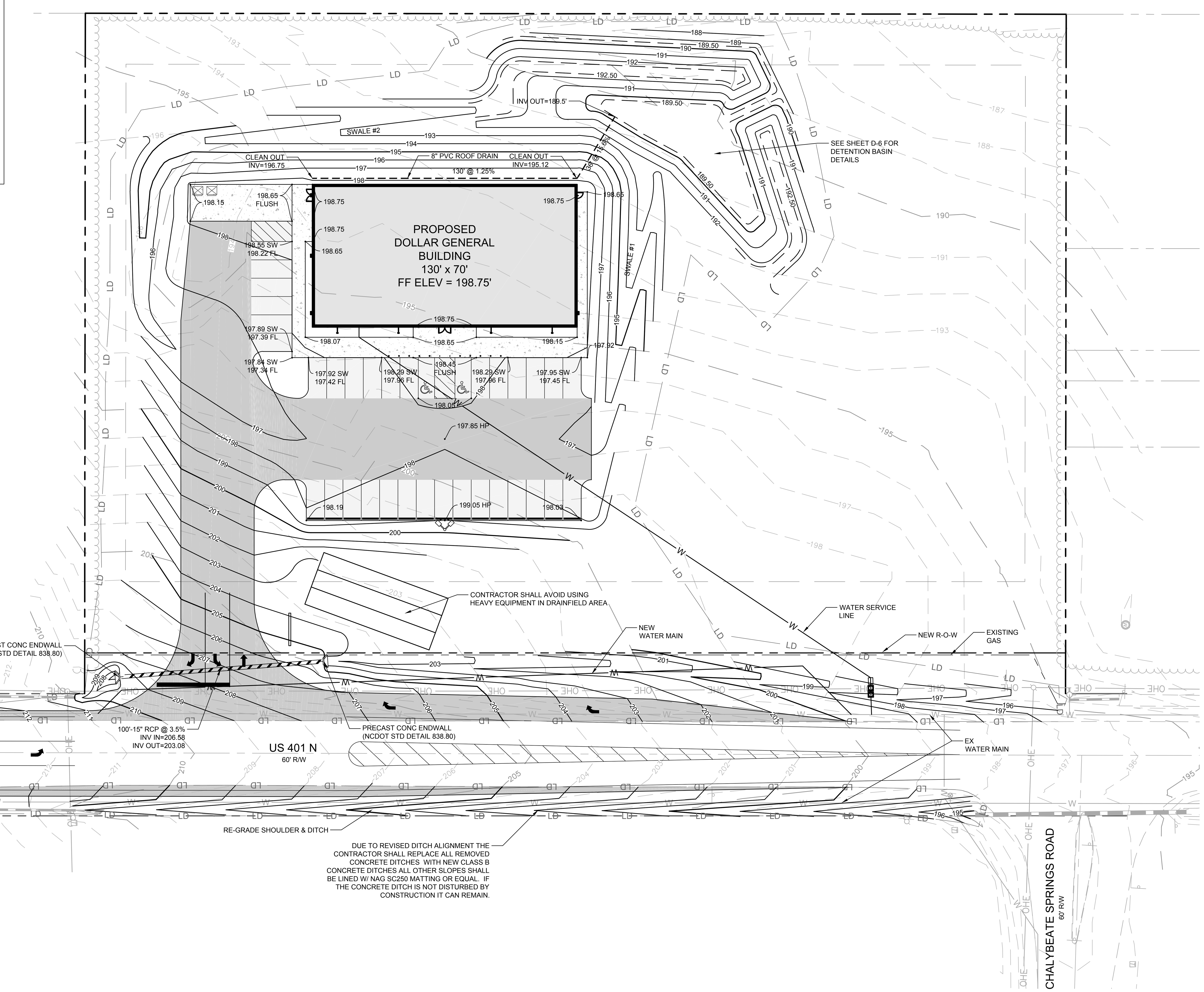
1. DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH JURISDICTIONAL REQUIREMENTS AND DOLLAR GENERAL REQUIREMENTS SHOWN HEREIN. DRIVEWAY GRADES SHOWN HEREIN ARE DOLLAR GENERAL'S PREFERRED MAXIMUM AND MINIMUM GRADES. IT IS UNDERSTOOD THAT EXCEPTIONS TO THESE REQUIREMENTS MAY BE REQUIRED AT SOME SITES BASED ON ACCEPTABLE GRADING REQUIREMENTS AT DIFFERENT GEOGRAPHIC REGIONS THROUGHOUT THE USA. HOWEVER, ANY EXCEPTIONS SHALL BE SUBMITTED TO DOLLAR GENERAL ARCHITECTURAL AND ENGINEERING DEPARTMENT FOR PRIOR APPROVAL. SUBMITTAL SHALL INCLUDE DATA INDICATING THAT PROPOSED DESIGN IS IN ACCORDANCE WITH JURISDICTIONAL (CITY, COUNTY, STATE, ETC.) ACCEPTABLE STANDARDS. DATA SHALL INCLUDE DRAWING DETAILS, LOCAL JURISDICTIONAL APPROVALS (LETTERS, PERMITS, COPIES OF LOCAL DESIGN GUIDELINES, ETC.), AND ENGINEERING DATA THAT ILLUSTRATES THAT A TYPICAL DOLLAR GENERAL TRACTOR TRAILER DELIVERY TRUCK CAN ACCESS THE SITE WITHIN NORMAL OR REASONABLE MANEUVERING TOLERANCES. SUBMITTAL SHALL INCLUDE A SIGNED AND PROFESSIONALY SEALED LETTER FROM A LICENSED CIVIL ENGINEER CERTIFYING THAT THE DESIGN IS IN ACCORDANCE WITH APPLICABLE GOVERNING AGENCY(IES) REQUIREMENTS. DOLLAR GENERAL DELIVERY TRUCK INGRESS AND EGRESS REQUIREMENTS SHOULD BE VERIFIED THROUGH DOLLAR GENERAL ARCHITECTURAL AND ENGINEERING DEPARTMENT. DEVELOPER SHALL CONTACT DOLLAR GENERAL ARCHITECTURAL AND ENGINEERING DEPARTMENT TO DETERMINE WHICH TYPE OF DELIVERY TRUCK THE DESIGN SHALL BE BASED UPON.
2. VERIFY JURISDICTIONAL REQUIREMENTS WILL ALLOW THE PAVEMENT TO SLOPE DIRECTLY TO THE ROAD AS SHOWN ON THE DETAIL WHERE THE PARKING LOT IS HIGHER THAN THE ROAD ELEVATION. MAINTAIN POSITIVE SLOPE AWAY FROM THE BUILDING TO PREVENT FLOODING.

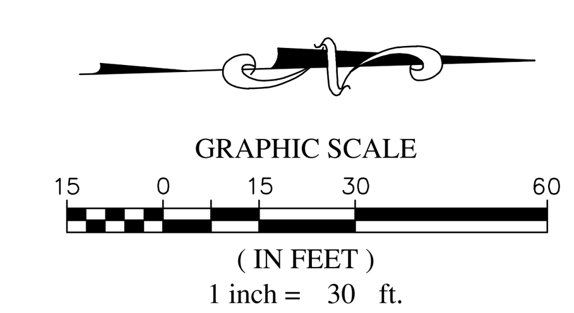


TYPICAL DRIVEWAY
(WHERE ELEVATION OF PARKING LOT IS HIGHER THAN ADJACENT ROADWAY)



TYPICAL DRIVEWAY
(WHERE ELEVATION OF PARKING LOT IS LOWER THAN ADJACENT ROADWAY)





GRADING & STORM LEGEND:

EXISTING WATER METER
EXISTING CLEANOUT
EXISTING FIRE HYDRANT
EXISTING UTILITY POLE
EXISTING LIGHT POLE
EXISTING BOLLARD
EXISTING POST INDICATOR VALVE
EXISTING SANITARY SEWER MANHOLE
EXISTING TELEPHONE PEDESTAL
EXISTING ELECTRIC ACCESS
EXISTING GAS METER
EXISTING GAS REGULATOR
EXISTING WATER VALVE

EXIST / PROPOSED
CURB INLET
DROP INLET
JUNCTION BOX
FLARED END SECTION (FES)

EXISTING STORM PIPE
PROPOSED STORM PIPE
LIMITS OF DISTURBANCE
LIMITS OF DISTURBANCE & TREE PROTECTION FENCE
TREE PROTECTION FENCE
EXISTING MAJOR CONTOUR
EXISTING MINOR CONTOUR
PROPOSED MAJOR CONTOUR
PROPOSED MINOR CONTOUR
WOODS LINE

DIVERSION/DITCH/SWALE SCHEDULE (MINIMUM SIZING)								
Q=cia								
NAME	DRAINAGE AREA (AC)	DEPTH (FT.)	SLOPE (%)	Q (cfs)	V (fps)	FLOW DEPTH (ft)	SHEAR STRESS (psf)	MATTING
PERMENANT DITCHES								
SWALE 1	0.32	1.00	3.00%	1.83	1.74	0.25	0.47	**NAG S150 OR EQUAL**
SWALE 2	1	1.00	1.70%	5.72	2.00	0.55	0.58	**NAG S150 OR EQUAL**

NO.	REVISIONS	DATE	BY
7			
6			
5			
4			
3			
2	LOWER SITE 0.5'	07/16/19	BWH
1	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS	02/22/19	BWH

PROJECT ENGINEER/ARCHITECT
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PROJECT MANAGER
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FIRST ISSUE DATE
08-08-2018

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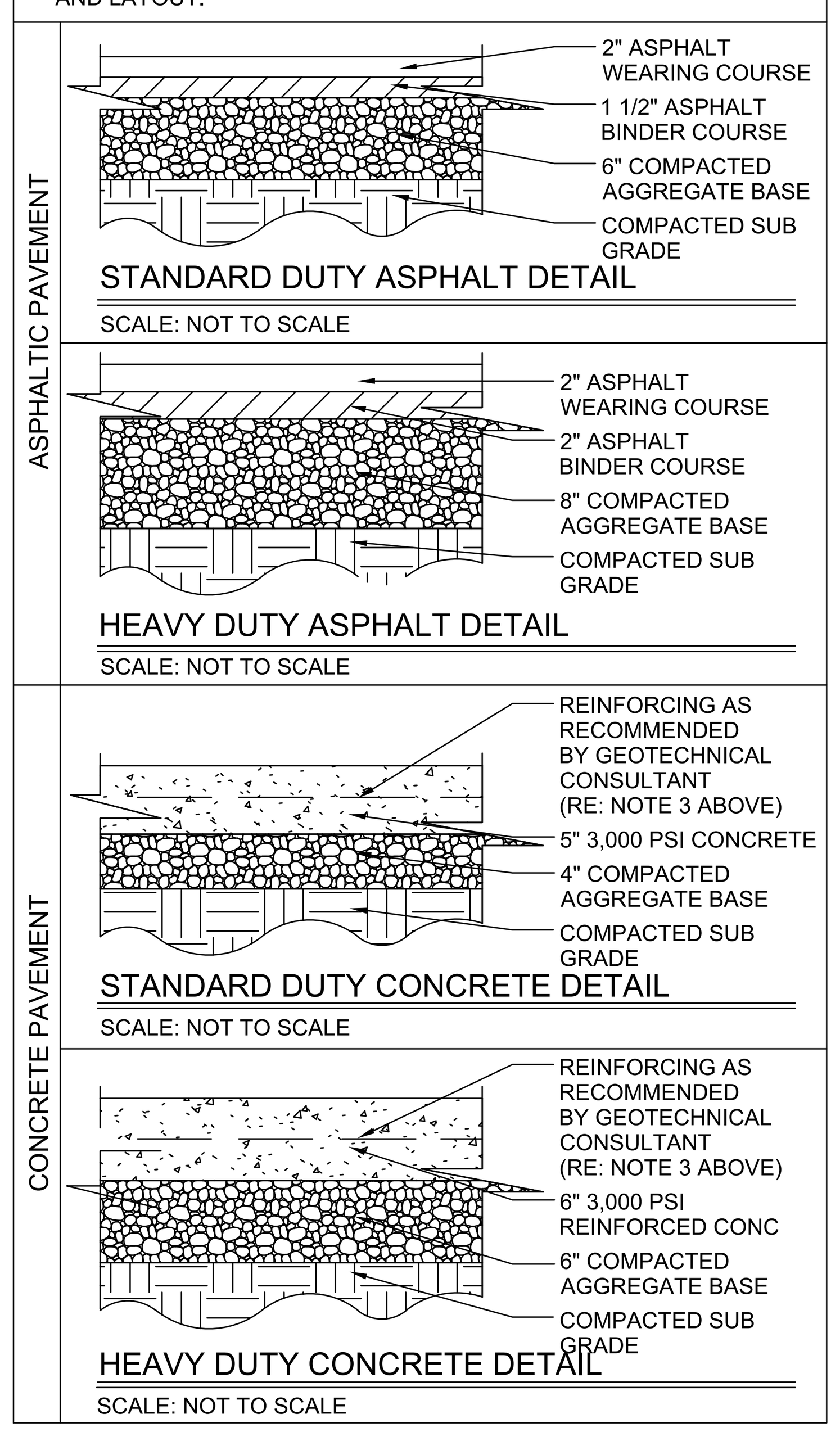
CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

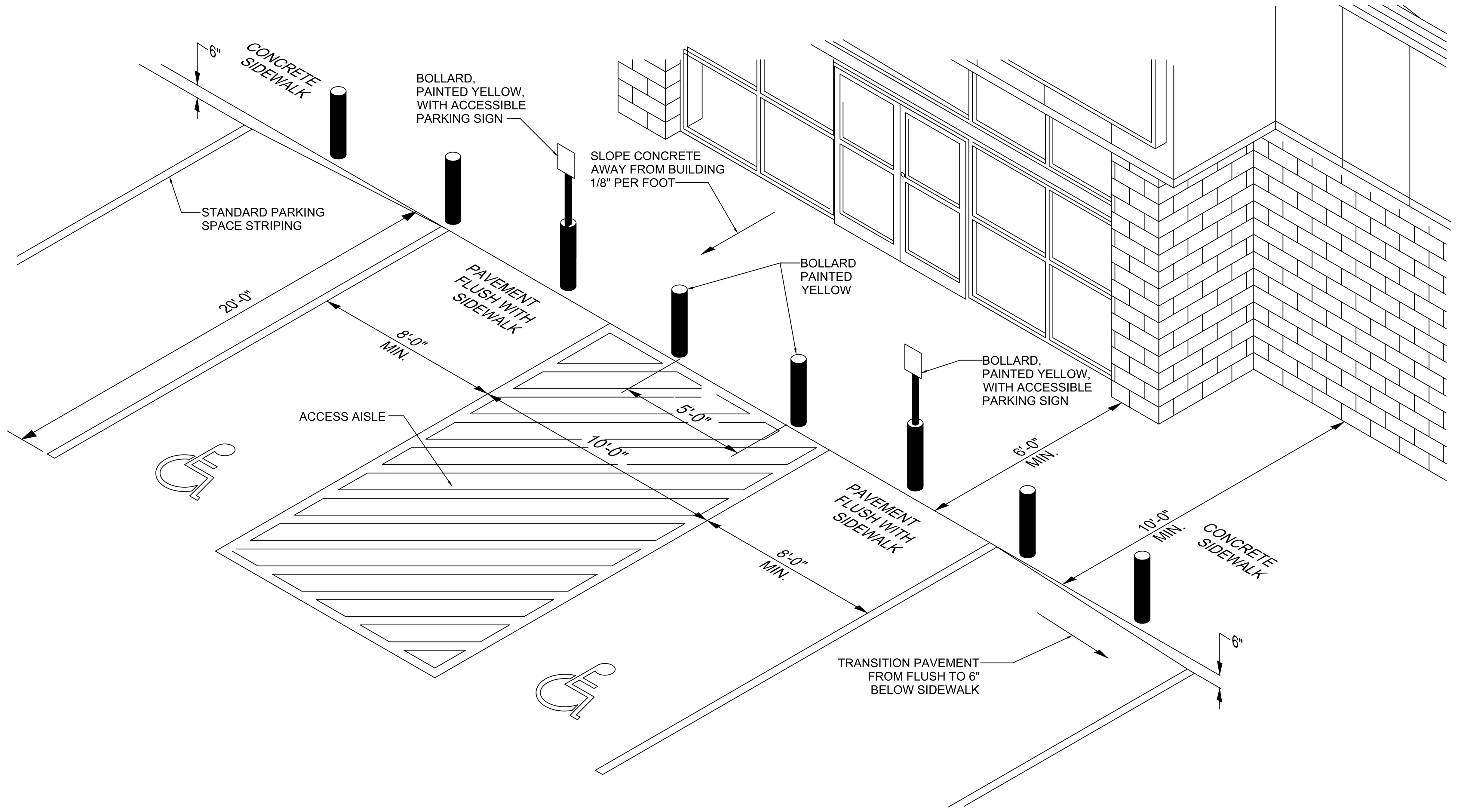
GRADING & STORM DRAINAGE PLAN

PROJECT NO.
18-0174
DRAWING NAME:
18-0174_G
SHEET NO.
C-7

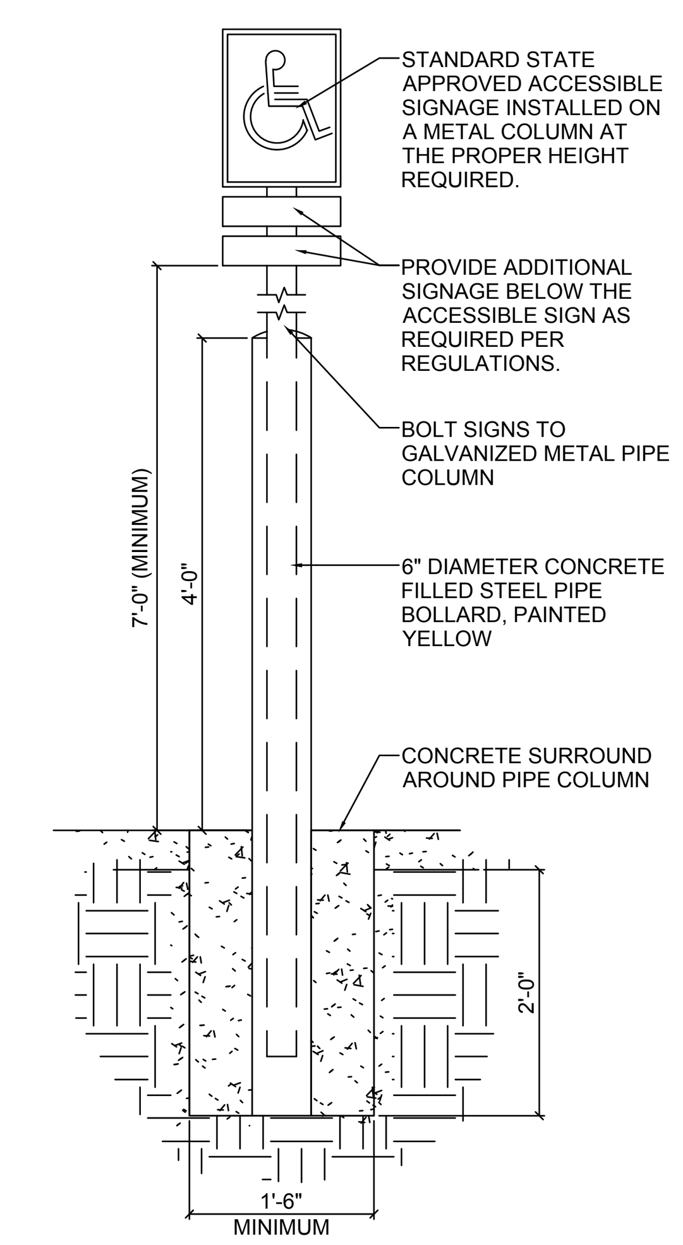
PAVEMENT DETAILS

1. DETAILS ARE DOLLAR GENERAL STANDARD REQUIREMENTS AND MAY INCREASE OR DECREASE WITH VARIOUS SOIL CONDITIONS. A GEOTECHNICAL INVESTIGATION WITH PAVEMENT DESIGN RECOMMENDATIONS SHALL BE COMPLETED FOR EACH DEVELOPMENT. THE FOLLOWING DETAILS ARE MINIMUM DOLLAR GENERAL PAVEMENT REQUIREMENTS, INCREASED RECOMMENDATIONS ARE TO BE USED.
2. THE SUBGRADE MATERIALS SHALL BE PROOF ROLLED AND/OR SCARIFIED AND COMPACTED PRIOR TO PLACEMENT OF BASE MATERIAL. WHERE EXISTING SUBGRADE MATERIALS ARE UNSUITABLE, THEY SHALL BE REMOVED AND REPLACED WITH COMPACTED SELECT MATERIAL IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS.
3. HEAVY DUTY CONCRETE PAVEMENT AND STANDARD DUTY CONCRETE PAVEMENT (AS RECOMMENDED BY THE GEOTECHNICAL REPORT OR DOLLAR GENERAL MINIMUMS) SHALL BE STEEL REINFORCED. REINFORCEMENT TYPE SHALL BE PRIOR APPROVED BY DOLLAR GENERAL.
4. CONCRETE PAVEMENT PLAN SHALL BE PROVIDED TO DOLLAR GENERAL FOR PRIOR APPROVAL. ALL JOINTS MUST BE SEALED WITH AN APPROVED SEALANT. STEEL REINFORCING SHALL BE USED AT JOINTS. REFER TO ACI 330R (GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS) FOR JOINT DESIGN AND LAYOUT.

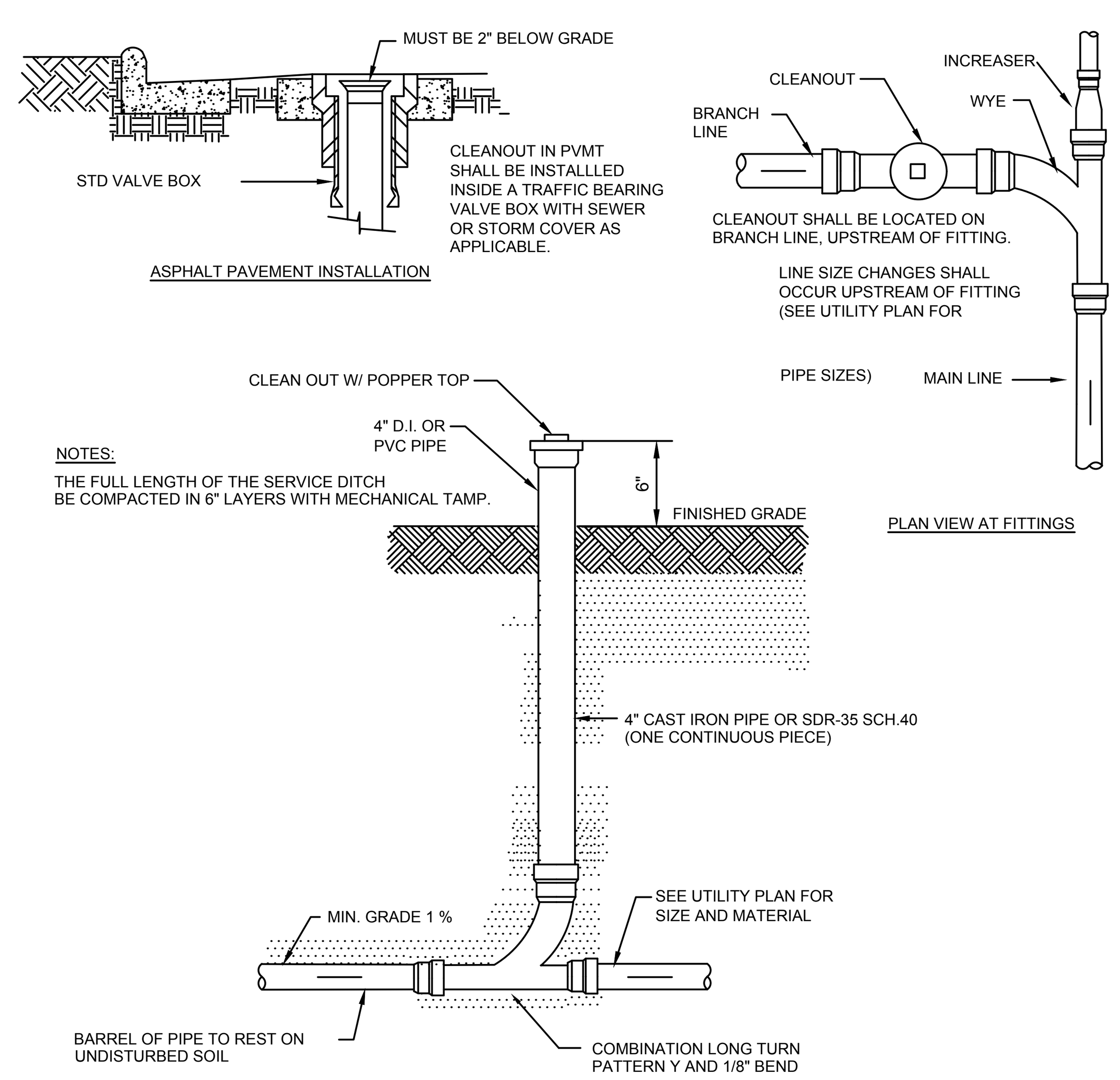




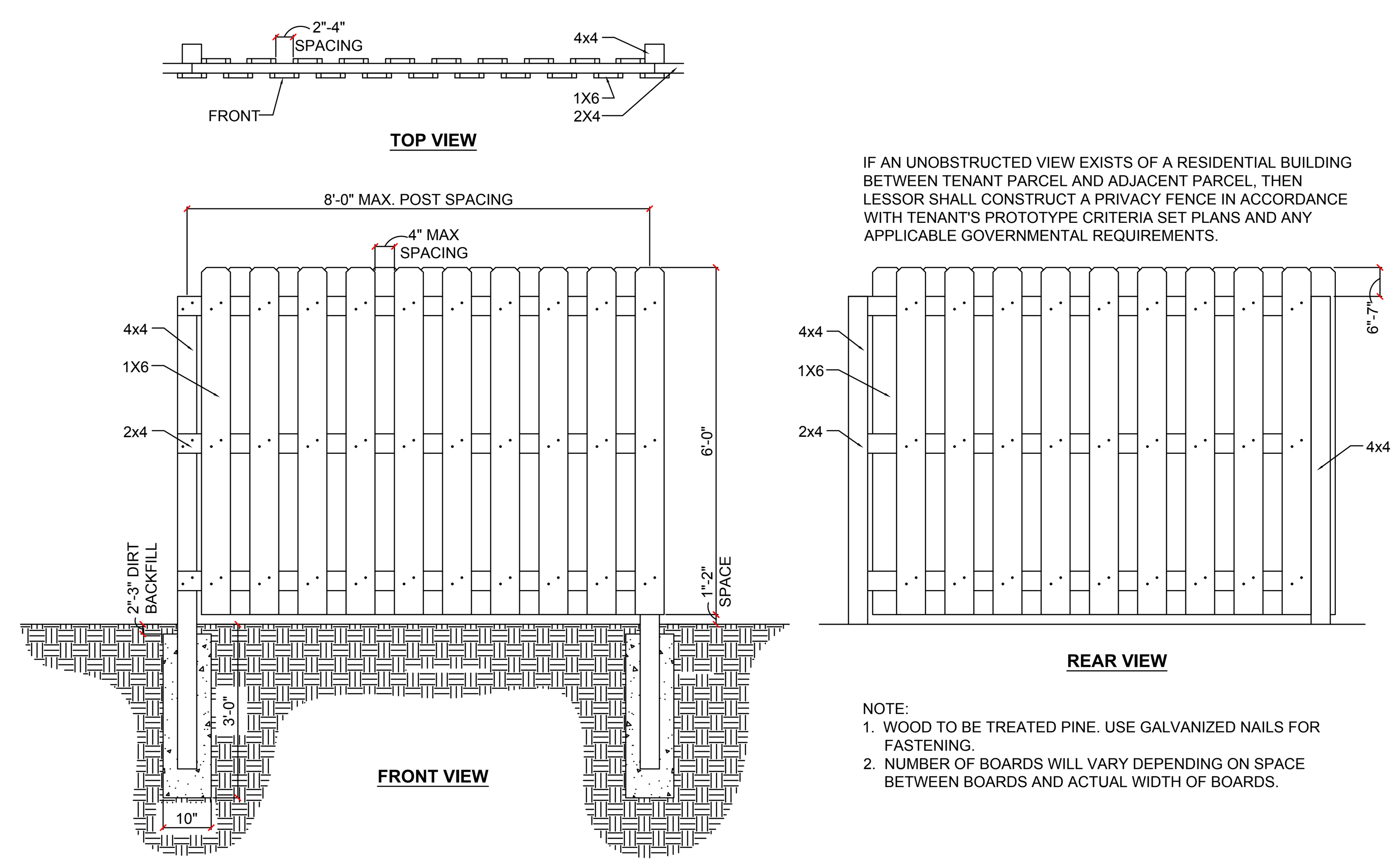
ACCESSIBLE PARKING
ACCESSIBLE RAMP AND ACCESS AISLE DETAILS
SCALE: NTS



ACCESSIBLE PARKING DETAIL
SCALE: NTS



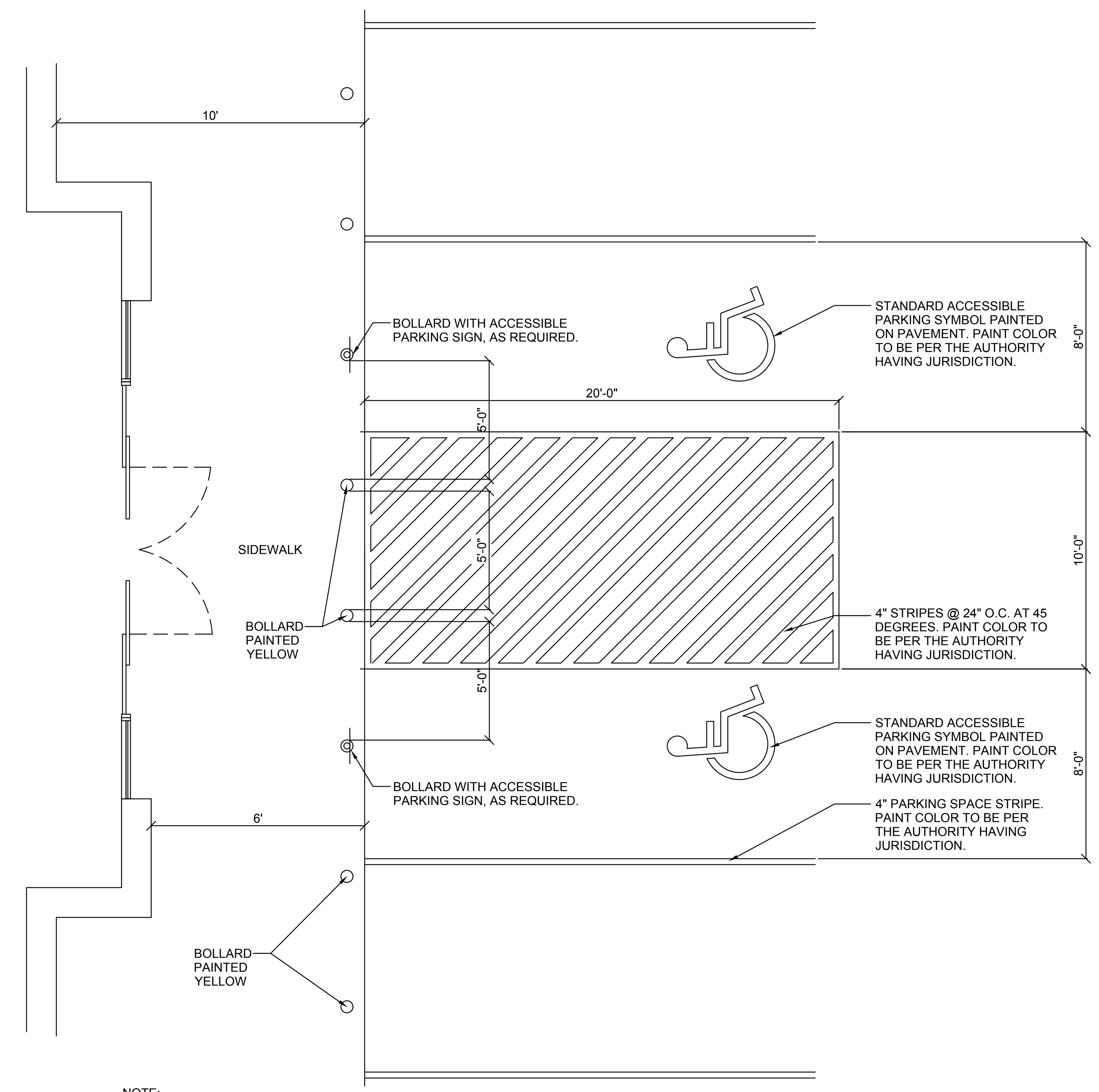
CLEANOUT DETAIL
NOT TO SCALE



IF AN UNOBSTRUCTED VIEW EXISTS OF A RESIDENTIAL BUILDING BETWEEN TENANT PARCEL AND ADJACENT PARCEL, THEN LESSOR SHALL CONSTRUCT A PRIVACY FENCE IN ACCORDANCE WITH TENANT'S PROTOTYPE CRITERIA SET PLANS AND ANY APPLICABLE GOVERNMENTAL REQUIREMENTS.

NOTE:
1. WOOD TO BE TREATED PINE. USE GALVANIZED NAILS FOR FASTENING.
2. NUMBER OF BOARDS WILL VARY DEPENDING ON SPACE BETWEEN BOARDS AND ACTUAL WIDTH OF BOARDS.

PRIVACY FENCE DETAIL
SCALE: NTS



NOTE:
ALL ACCESSIBLE RAMPS AND ACCESS AISLES SHALL MEET ALL CODES AND ADAAG REGULATIONS.

ACCESSIBLE PARKING DETAIL
SCALE: NTS

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

7			
6			
5			
4			
3	LOWER SITE 0.5'	07/16/19	BWH
2	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS	02/22/19	BWH
1			
	REVISIONS	DATE	BY

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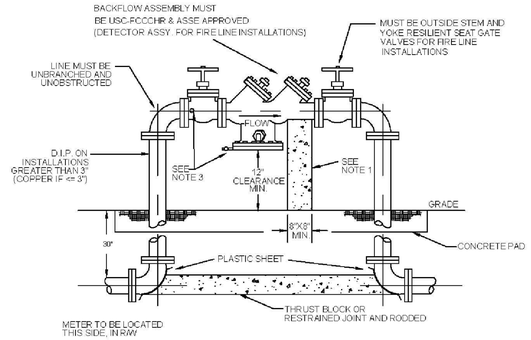
CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

SITE DETAILS

PROJECT NO.
18-0174
DRAWING NAME:
18-0174_D
SHEET NO.
D-1

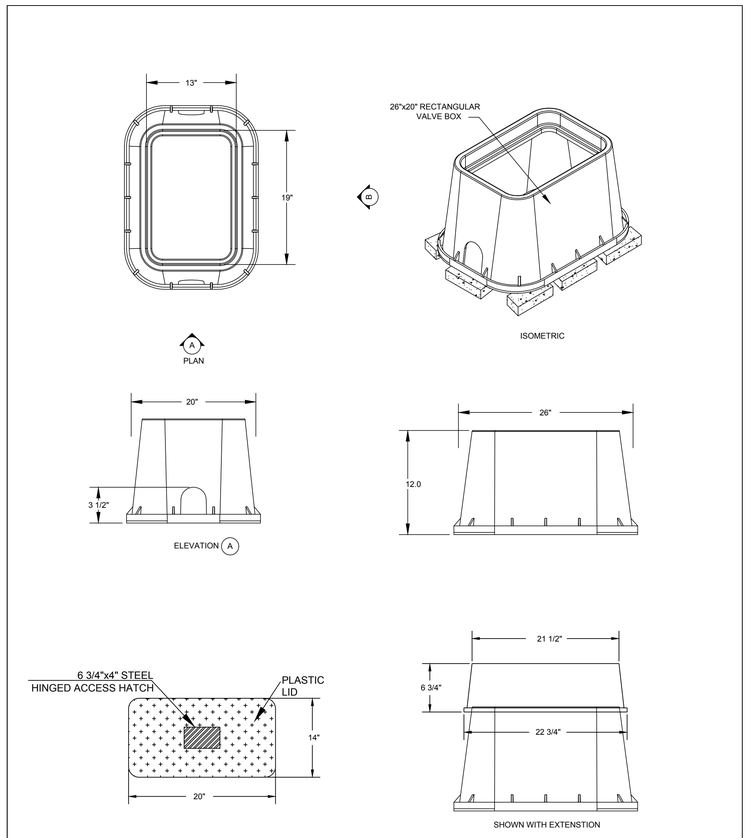


NOTES:

1. CONCRETE SUPPORT BLOCK REQUIRED ON 2 1/2" & LARGER BACKFLOW PREVENTERS
2. THE DEVICE MUST BE INSTALLED WITH MINIMUM HORIZONTAL CLEARANCES OF 30" FOR SIDE WITH TEST COCKS AND 9" FOR BACK SIDE (N/A WITH REMOVABLE BOX OR PANELS)
3. ASSEMBLY IS NOT COMPLETE UNLESS ALL TEST COCKS ARE INSTALLED PER MANUFACTURERS SPECIFICATIONS
4. ASSE 1060 ENCLOSURE REQUIRED FOR ALL BACKFLOW ASSEMBLIES

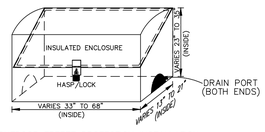
RPZ BACKFLOW PREVENTER

NOT TO SCALE



TYPICAL METER BOX DETAIL FOR 1" SERVICE

NO SCALE — W-17

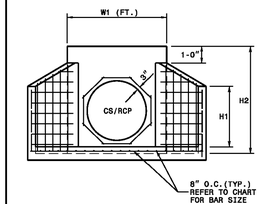


OUTDOOR FREEZE PROTECTION INSTALLATION

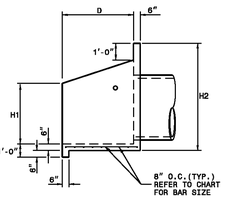
ENCLOSURE: HOTBOX® HB.75 – HB3E OR APPROVED EQUIVALENT.
ENCLOSURE SHALL MEET ASSE STD. 1060.

INSULATED HOTBOX ENCLOSURE

NOT TO SCALE



ELEVATION

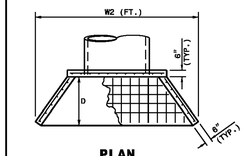


SIDE

NOTES:

- THIS PRECAST ENDWALL MAY BE USED FOR THE FOLLOWING STANDARDS: 838.01, 838.11, 838.21, 838.27, 838.33, 838.39, 838.51, 838.57, 838.63 AND 838.69.
- INSTALL PRECAST ENDWALLS WITH WINGS AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 838.
- USE 4000 PSI CONCRETE.
- PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A185 WITH 2" MIN. CLEARANCE.
- PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
- PIPE TO BE GROUTED INTO HEADWALL AT JOB SITE BY CONTRACTOR
- ALL ELEMENTS PRECAST TO MEET ASTM C913.
- WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
- CHAMFER ALL CORNERS 1" OR HAVE A RADIUS OF 1".

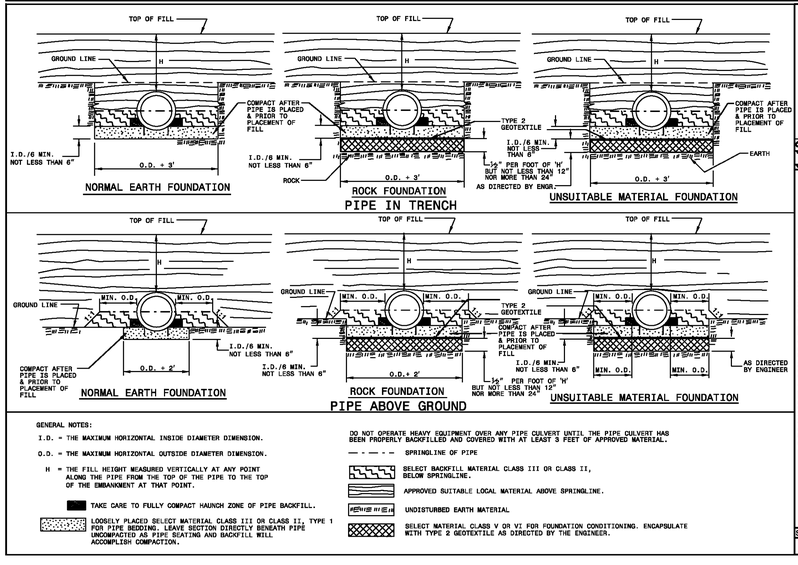
NOTE: THE MINIMUM BAR SIZE SHALL BE #5 BARS AT 8" C/S. THE CONTRACTOR WILL HAVE THE OPTION TO INCREASE THIS BAR SIZE AS NEEDED.



PLAN

ENDWALL DIMENSIONS

FT.	MINIMUM	WIN./MAX.	WIN./MAX.	WIN./MAX.	WIN./MAX.	WIN./MAX.
PIPE DIA.	BAR SIZE	H1(FT.)	H2(FT.)	D (FT.)	W1	W2
1.0	#5 @ 8"	1.25/2.00	2.00/3.75	1.25/1.75	3.00/3.75	5.50/6.00
1.25	#5 @ 8"	1.25/2.00	3.00/3.75	1.25/2.00	3.50/3.75	6.50/6.75
1.50	#5 @ 8"	1.25/2.00	3.00/4.25	1.50/2.50	3.50/3.75	6.50/6.75
2.0	#5 @ 8"	1.50/2.50	4.00/4.75	1.75/2.50	4.00/4.25	7.50/8.25
2.5	#5 @ 8"	2.50/3.50	4.00/6.00	2.00/3.00	4.50/5.50	10.00/11.50
3.0	#5 @ 8"	3.00/3.50	5.00/6.00	2.75/3.50	5.25/5.75	11.50/11.75
3.5	#5 @ 8"	3.25/4.50	6.00/6.75	3.25/3.50	6.00/6.75	12.00/13.25
4.0	#5 @ 8"	3.50/4.50	6.50/7.00	3.25/3.50	6.50/6.75	13.00/13.25
4.5	#5 @ 8"	4.00/5.00	6.50/8.50	3.25/4.00	7.00/9.25	13.50/15.75
5.0	#5 @ 8"	4.50/5.00	7.00/8.50	3.25/4.00	7.25/9.25	13.75/15.75
5.5	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.25/9.25	14.00/15.75
6.0	#5 @ 8"	4.50/5.00	7.50/8.50	3.25/4.00	7.75/9.25	14.75/16.75



GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

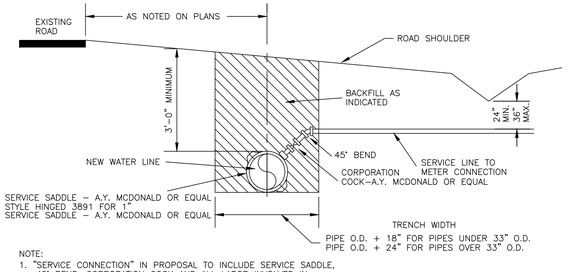
— - — - — SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

APPROVED SUITABLE LOCAL MATERIAL ABOVE SPRINGLINE.

UNDISTURBED EARTH MATERIAL

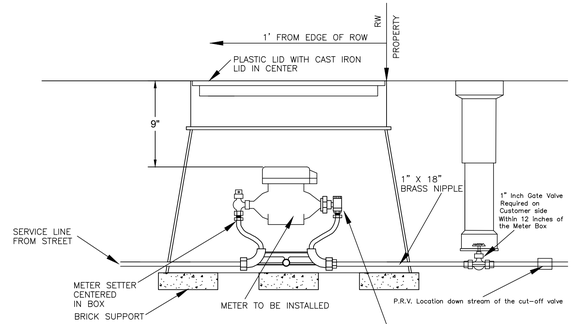
SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE 2 GEOTEXTILE AS DIRECTED BY THE ENGINEER.



NOTE:
1. "SERVICE CONNECTION" IN PROPOSAL TO INCLUDE SERVICE SADDLE, 45° BEND, CORPORATION COCK AND ALL LABOR INVOLVED IN MAKING A COMPLETE SERVICE CONNECTION.
2. SERVICE PIPING TO BE 1" SDR–9 PE TUBING
3. ALL BRASS FITTINGS SHALL BE COMPRESSION TYPE

TYPICAL WATER SERVICE CONNECTION USING TAPPING SADDLE DETAIL

NO SCALE — W-13



1. METER AND PRIVATE SERVICE LINE NOT IN CONTRACT UNLESS SPECIFIED
2. INCLUDE STONE IN PRICE OF METER BOX.
3. METER SETTER SIZE AS NOTED ON PLANS.
4. ALL BRASS FITTINGS SHALL BE COMPRESSION TYPE.

METER SETTER WITH DOUBLE CHECK VALVE (BACKFLOW PREVENTER)

TYPICAL 1" METER SETTER INSTALLATION DETAIL

NO SCALE — W-16

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

1-18

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

SHEET 1 OF 1
838.80

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

1-18

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

SHEET 2 OF 3
300.01

BY	DATE	REVISIONS
BWH	07/16/18	LOWER SITE 0.5'
BWH	02/22/19	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS

PROJECT ENGINEER/ARCHITECT
MWH (MATT.HASTINGS@SUMMITDE.NET)
PROJECT MANAGER
MWH (MATT.HASTINGS@SUMMITDE.NET)

DRAWN BY
BWH (BRAD.HOPPE@SUMMITDE.NET)
FIRST ISSUE DATE
08-08-2018

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 38098 — 02/22/19 — MATTHEW W. HASTINGS

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CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

SITE DETAILS

PROJECT NO.
18-0174
DRAWING NAME:
18-0174_D
SHEET NO.
D-2

2016 HCDPU REQUIRED UTILITY NOTES

WATER

A. THE FIRE MARSHAL'S OFFICE SHALL APPROVE ALL HYDRANT TYPES AND LOCATIONS IN NEW SUBDIVISIONS. HOWEVER, HARNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES (HCDPU) PREFERS THE CONTRACTORS TO INSTALL ONE OF THE FOLLOWING FIRE HYDRANTS:
   1. MUELLER - SUPER CENTURION 250 A-423 MODEL WITH A 5¼" MAIN VALVE OPENING THREE WAY (TWO HOSE NOZZLES AND ONE PUMPER NOZZLE)
   2. AMERICAN DARLING - MARK B-84-B MODEL WITH A 5¼" MAIN VALVE OPENING THREE WAY (TWO HOSE NOZZLES AND ONE PUMPER NOZZLE)
   3. WATEROUS - PACER B-67-250 MODEL WITH A 5¼" MAIN VALVE OPENING THREE WAY (TWO HOSE NOZZLES AND ONE PUMPER NOZZLE) OR APPROVED EQUAL FOR STANDARDIZATION

B. FIRE HYDRANTS ARE INSTALLED AT CERTAIN ELEVATIONS. ANY GRADE CHANGE IN THE VICINITY OF ANY FIRE HYDRANT WHICH IMPEDES ITS OPERATION SHALL BECOME THE RESPONSIBILITY OF THE UTILITY CONTRACTOR FOR CORRECTION. CORRECTIONS WILL BE MONITORED BY THE HCDPU UTILITY CONSTRUCTION INSPECTOR AND THE HARNETT COUNTY FIRE MARSHALL.

C. THE PROFESSIONAL ENGINEER (PE) SHALL OBTAIN AND PROVIDE THE NCDENR "AUTHORIZATION TO CONSTRUCT" PERMIT TO THE UTILITY CONTRACTOR BEFORE THE CONSTRUCTION OF THE WATER LINE SHALL BEGIN. THE UTILITY CONTRACTOR MUST POST A COPY OF THE NCDENR "AUTHORIZATION TO CONSTRUCT" PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES – DIVISION OF ENVIRONMENTAL HEALTH, PUBLIC WATER SUPPLY SECTION (NCDENR DEH,PWSS) ON SITE PRIOR TO THE START OF CONSTRUCTION. THE PERMIT MUST BE MAINTAINED ON SITE THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS OF THE PROPOSED WATER LINES THAT WILL SERVE THIS PROJECT.

D. THE UTILITY CONTRACTOR SHALL NOTIFY HARNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES (HCDPU) AND THE PROFESSIONAL ENGINEER (PE) AT LEAST TWO DAYS PRIOR TO CONSTRUCTION COMMENCING. THE UTILITY CONTRACTOR MUST SCHEDULE A PRE CONSTRUCTION CONFERENCE WITH MR. ALAN MOSS, HCDPU UTILITY CONSTRUCTION INSPECTOR AT LEAST TWO (2) DAYS BEFORE CONSTRUCTION WILL BEGIN AND THE UTILITY CONTRACTOR MUST COORDINATE WITH HCDPU FOR REGULAR INSPECTION VISITATIONS AND ACCEPTANCE OF THE WATER SYSTEM(S). CONSTRUCTION WORK SHALL BE PERFORMED ONLY DURING THE NORMAL WORKING HOURS OF HCDPU WHICH IS 8:00 AM – 5:00 PM MONDAY THROUGH FRIDAY. HOLIDAY AND WEEKEND WORK IS NOT PERMITTED BY HCDPU.

E. THE PROFESSIONAL ENGINEER (PE) SHALL PROVIDE HCDPU AND THE UTILITY CONTRACTOR WITH A SET OF NCDENR APPROVED PLANS MARKED "RELEASED FOR CONSTRUCTION" AT LEAST TWO DAYS PRIOR TO CONSTRUCTION COMMENCING. THE REGISTERED LAND SURVEYOR (RLS) SHOULD STAKE OUT ALL LOT CORNERS AND THE GRADE STAKES FOR THE PROPOSED FINISH GRADE FOR EACH STREET BEFORE THE UTILITY CONTRACTOR BEGINS CONSTRUCTION OF THE WATER LINE(S). THE GRADE STAKES SHOULD BE SET WITH A CONSISTENT OFFSET FROM THE STREET CENTERLINE SO AS NOT TO INTERFERE WITH THE STREET GRADING AND UTILITY CONSTRUCTION.

F. THE UTILITY CONTRACTOR SHALL PROVIDE THE HCDPU UTILITY CONSTRUCTION INSPECTOR WITH MATERIAL SUBMITTALS AND SHOP DRAWINGS FOR ALL PROJECT MATERIALS PRIOR TO THE CONSTRUCTION OF ANY WATER LINE EXTENSION(S), AND ASSOCIATED WATER SERVICES IN HARNETT COUNTY. THE MATERIALS TO BE USED ON THE PROJECT MUST MEET THE ESTABLISHED SPECIFICATIONS OF HCDPU AND BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION. ALL SUBSTANDARD MATERIALS OR MATERIALS NOT APPROVED FOR USE IN HARNETT COUNTY FOUND ON THE PROJECT SITE MUST BE REMOVED IMMEDIATELY WHEN NOTIFIED BY THE HCDPU UTILITY CONSTRUCTION INSPECTOR.

G. THE WATER MAIN(S), FIRE HYDRANTS, SERVICE LINES, METER SETTERS AND ALL ASSOCIATED APPURTENANCES SHALL BE CONSTRUCTED IN STRICT IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE HARNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES (HCDPU). THE UTILITY CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE THE NEWLY INSTALLED WATER MAIN(S), WATER SERVICE LINES AND ALL ASSOCIATED METER SETTERS AND METER BOXES FOR OTHER UTILITY COMPANIES AND THEIR CONTRACTORS UNTIL THE NEW WATER MAIN(S) HAVE BEEN APPROVED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES – DIVISION OF ENVIRONMENTAL HEALTH, PUBLIC WATER SUPPLY SECTION (NCDENR-DEH, PWSS)AND ACCEPTED BY HCDPU.

H. PRIOR TO ACCEPTANCE, ALL SERVICES WILL BE INSPECTED TO INSURE THAT THEY ARE INSTALLED AT THE PROPER DEPTH. ALL METER BOXES MUST BE FLUSH WITH THE GROUND LEVEL AT FINISH GRADE AND THE METER SETTERS MUST BE A MINIMUM OF 8" BELOW THE METER BOX LID. METER SETTERS SHALL BE CENTERED IN THE METER BOX AND SUPPORTED BY BRICK, BLOCK OR STONE.

I. THE UTILITY CONTRACTOR SHALL PROVIDE THE PROFESSIONAL ENGINEER (PE) AND HCDPU UTILITY CONSTRUCTION INSPECTOR WITH A SET OF RED LINE DRAWINGS IDENTIFYING THE COMPLETE WATER SYSTEM INSTALLED FOR EACH PROJECT. THE RED LINE DRAWINGS SHOULD IDENTIFY THE MATERIALS, PIPE SIZES AND APPROXIMATE DEPTHS OF THE WATER LINES AS WELL AS THE GATE VALVES, FIRE HYDRANTS, METER SETTERS, BLOW OFF ASSEMBLIES AND ALL ASSOCIATED APPURTENANCES FOR ALL WATER LINE(S) CONSTRUCTED IN HARNETT COUNTY. THE RED LINE DRAWINGS SHOULD CLEARLY IDENTIFY ANY DEVIATIONS FROM THE NCDENR APPROVED PLANS. ALL CHANGE ORDERS MUST BE APPROVED BY HCDPU AND THE PROFESSIONAL ENGINEER (PE) IN WRITING AND PROPERLY DOCUMENTED IN THE RED LINE FIELD DRAWINGS.

J. POTABLE WATER MAINS CROSSING OTHER UTILITIES AND NON-POTABLE WATER LINES (SANITARY SEWER, STORM SEWER, RCP, ETC.) SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF TWENTY-FOUR (24") INCHES BETWEEN THE POTABLE WATER MAIN AND ALL OTHER UTILITIES. NCDOT REQUIRES THE NEW WATER MAINS TO BE INSTALLED UNDER THE STORM WATER LINES. THE POTABLE WATER MAIN SHALL BE INSTALLED WITH TWENTY-FOUR (24") INCHES OF VERTICAL SEPARATION AND WITH DUCTILE IRON PIPE WHEN DESIGNED TO BE PLACED UNDER A NON-POTABLE WATER LINE SUCH AS SANITARY SEWER OR STORM SEWER LINES. IF THESE SEPARATIONS CANNOT BE MAINTAINED THEN THE WATER MAIN SHALL BE INSTALLED WITH DUCTILE IRON PIPE. BOTH THE POTABLE WATER MAIN AND THE NON-POTABLE WATER LINE MUST BE CAST IRON OR DUCTILE IRON PIPE (DIP) IF THE STATE MINIMUM SEPARATIONS CANNOT BE MAINTAINED. THE DUCTILE IRON PIPE MUST BE LAID SO THE MECHANICAL JOINTS ARE AT LEAST (10') FEET FROM THE POINT WHERE THE POTABLE WATER MAIN CROSSES THE NON-POTABLE WATER LINE.

K. POTABLE WATER MAINS INSTALLED PARALLEL TO NON-POTABLE WATER LINES (SANITARY SEWER, STORM SEWER, RCP, ETC.) SHALL BE LAID TO PROVIDE A MINIMUM HORIZONTAL DISTANCE OF TEN (10') FEET BETWEEN THE POTABLE WATER MAIN AND SANITARY SEWER MAINS, SEWER LATERALS AND SERVICES. THE HORIZONTAL SEPARATION BETWEEN THE POTABLE WATER MAIN AND ANY OTHER UTILITY OR STORM SEWER SHALL NOT BE LESS THAN FIVE (5') FEET. THE POTABLE WATER MAIN MUST BE DUCTILE IRON PIPE IF THIS HORIZONTAL SEPARATION OF TEN (10') FEET CANNOT BE MAINTAINED. THE DUCTILE IRON PIPE SHALL EXTEND AT LEAST TEN (10') FEET BEYOND THE POINT WHERE THE MINIMUM REQUIRED HORIZONTAL SEPARATION OF TEN (10') FEET CAN BE RE-ESTABLISHED.

L. METER SETTERS SHALL BE INSTALLED IN PAIRS ON EVERY OTHER LOT LINE WHERE POSSIBLE TO LEAVE ADEQUATE SPACE FOR OTHER UTILITIES TO BE INSTALLED AT A LATER TIME. THE METER SETTERS SHALL BE INSTALLED AT LEAST ONE (1') FOOT INSIDE THE RIGHT-OF-WAY AND AT LEAST THREE (3') TO FIVE (5') FEET FROM THE PROPERTY LINE BETWEEN THE LOTS.

M. HCDPU REQUIRES THAT METER BOXES FOR ¾" SERVICES SHALL BE 12" WIDE X 17" LONG ABS PLASTIC BOXES AT LEAST 18" IN HEIGHT WITH CAST IRON LIDS/COVERS. METER BOXES FOR 1" SERVICES SHALL BE 17" WIDE X 21" LONG ABS PLASTIC BOXES AT LEAST 18" IN HEIGHT WITH PLASTIC LIDS AND CAST IRON FLIP COVERS IN THE CENTER OF THE LIDS. METER BOXES FOR 2" SERVICES SHALL BE 20" WIDE X 32" LONG ABS PLASTIC BOXES AT LEAST 20" IN HEIGHT WITH PLASTIC LIDS AND CAST IRON FLIP COVERS IN THE CENTER OF THE LIDS.

N. N.MASTER METERS MUST BE INSTALLED IN CONCRETE VAULTS SIZED FOR THE METER ASSEMBLY AND ASSOCIATED APPURTENANCES SO AS TO PROVIDE AT LEAST EIGHTEEN (18") INCHES OF CLEARANCE BETWEEN THE BOTTOM OF THE CONCRETE VAULT AND THE BOTTOM OF THE METER SETTER. THE MASTER METER MUST BE PROVIDED TEST PORTS IF THE METER IS NOT EQUIPPED WITH TEST PORTS FROM THE MANUFACTURER IN ACCORDANCE WITH THE HCDPU ESTABLISHED STANDARD SPECIFICATIONS AND DETAILS. DUCTILE IRON PIPE MUST BE USED FOR THE MASTER METER VAULT PIPING AND VALVE VAULT PIPING. THE UTILITY CONTRACTOR MUST PROVIDE SHOP DRAWINGS FOR THE METER VAULTS TO HCDPU PRIOR TO ORDERING THE CONCRETE VAULTS.

O. O.THE UTILITY CONTRACTOR WILL INSTALL POLYETHYLENE SDR-9 WATER SERVICE LINES THAT CROSS UNDER THE PAVEMENT INSIDE A SCHEDULE 40 PVC CONDUIT TO ALLOW FOR REMOVAL AND REPLACEMENT IN THE FUTURE. TWO (2) INDEPENDENT ¾" WATER SERVICE LINES MAY BE INSTALLED INSIDE ONE (1) - TWO (2") INCH SCHEDULE 40 PVC CONDUIT OR TWO (2) INDEPENDENT 1" WATER SERVICE LINES MAY BE INSTALLED INSIDE ONE(1) - THREE (3") INCH SCHEDULE 40 PVC CONDUIT, BUT EACH WATER SERVICE SHALL BE TAPPED DIRECTLY TO THE WATER MAIN. SPLIT SERVICES ARE NOT ALLOWED BY HCDPU.

P. THE WATER MAIN(S), FIRE HYDRANTS, GATE VALVES, SERVICE LINES, METER SETTERS AND ASSOCIATED APPURTENANCES MUST BE RATED FOR 200 PSI AND HYDROSTATICALLY PRESSURE TESTED TO 200 PSI. THE HYDROSTATIC PRESSURE TEST(S) MUST BE WITNESSED BY THE HCDPU UTILITY CONSTRUCTION INSPECTOR. THE UTILITY CONTRACTOR MUST NOTIFY HCDPU WHEN THEY ARE READY TO BEGIN FILLING IN LINES AND COORDINATE WITH HARNETT COUNTY TO WITNESS ALL PRESSURE TESTING.

Q. THE UTILITY CONTRACTOR SHALL CONDUCT A PNEUMATIC PRESSURE TEST USING COMPRESSED AIR OR OTHER INERT GAS ON THE STAINLESS STEEL TAPPING SLEEVE(S) PRIOR TO MAKING THE TAP ON THE EXISTING WATER MAIN. THIS PNEUMATIC PRESSURE TEST MUST BE WITNESSED BY THE HCDPU UTILITY CONSTRUCTION INSPECTOR. THE UTILITY CONTRACTOR SHALL USE ROMAC BRAND STAINLESS STEEL TAPPING SLEEVE(S) OR APPROVED EQUAL FOR ALL TAPS MADE IN HARNETT COUNTY. ALL NEW WATER LINE EXTENSIONS MUST BEGIN WITH A RESILIENT WEDGE TYPE GATE VALVE SIZED EQUAL TO THE DIAMETER OF THE NEW WATER LINE EXTENSION IN ORDER TO PROVIDE A MEANS OF ISOLATION BETWEEN HARNETT COUNTY'S EXISTING WATER MAINS AND THE NEW WATER LINE EXTENSIONS UNDER CONSTRUCTION.

R. R. ALL WATER MAINS WILL BE CONSTRUCTED WITH SDR 21 PVC PIPE OR CLASS 50 DUCTILE IRON PIPE RATED FOR AT LEAST 200 PSI OR GREATER. ALL PIPES MUST BE PROTECTED DURING LOADING, TRANSPORT, UNLOADING, STAGING, AND INSTALLATION. PVC PIPE MUST BE PROTECTED FROM EXTENDED EXPOSURE TO SUNLIGHT PRIOR TO INSTALLATION.

S. ALL WATER MAINS WILL BE FLUSHED AND DISINFECTED IN STRICT ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE HARNETT COUNTY DEPARTMENT OF PUBLIC UTILITIES. ALL WATER SAMPLES COLLECTED FOR BACTERIA TESTING WILL BE COLLECTED BY THE HCDPU UTILITY CONSTRUCTION INSPECTOR AND TESTED IN THE HCDPU LABORATORY.

T. ALL FITTINGS LARGER THAN TWO (2") INCHES DIAMETER SHALL BE DUCTILE IRON. HCDPU REQUIRES THAT MECHANICAL JOINTS BE ASSEMBLED WITH GRIP RINGS AS "MEGALUG" FITTINGS ARE NOT APPROVED BY HARNETT COUNTY FOR PIPE SIZES SMALLER THAN TWELVE INCHES (12") DIAMETER. PVC PIPE USED FOR WATER MAINS SHALL BE CONNECTED BY SLIP JOINT OR MECHANICAL JOINT WITH GRIP RINGS. GLUED PIPE JOINTS ARE NOT ALLOWED ON PVC PIPE USED FOR WATER MAINS IN HARNETT COUNTY.

U. HCDPU REQUIRES THAT THE UTILITY CONTRACTOR INSTALL TRACER WIRE IN THE TRENCH WITH ALL WATER LINES. THE TRACER WIRE SHALL BE 12 GA. INSULATED, SOLID COPPER CONDUCTOR AND IT SHALL BE TERMINATED AT THE TOP OF THE VALVE BOXES OR MANHOLES. NO SPLICED WIRE CONNECTIONS SHALL BE MADE UNDERGROUND ON TRACER WIRE INSTALLED IN HARNETT COUNTY. THE TRACER WIRE MAY BE SECURED WITH DUCT TAPE TO THE TOP OF THE PIPE BEFORE BACKFILLING.

V. THE UTILITY CONTRACTOR WILL PROVIDE PROFESSIONAL ENGINEER (PE) AND THE HCDPU UTILITY CONSTRUCTION INSPECTOR WITH A SET OF RED LINE FIELD DRAWINGS TO IDENTIFY THE INSTALLED LOCATIONS OF THE WATER LINE(S) AND ALL ASSOCIATED SERVICES. ALL CHANGE ORDERS MUST BE PRE-APPROVED BY HCDPU AND THE PROFESSIONAL ENGINEER (PE) IN WRITING AND PROPERLY DOCUMENTED IN THE RED LINE FIELD DRAWINGS.

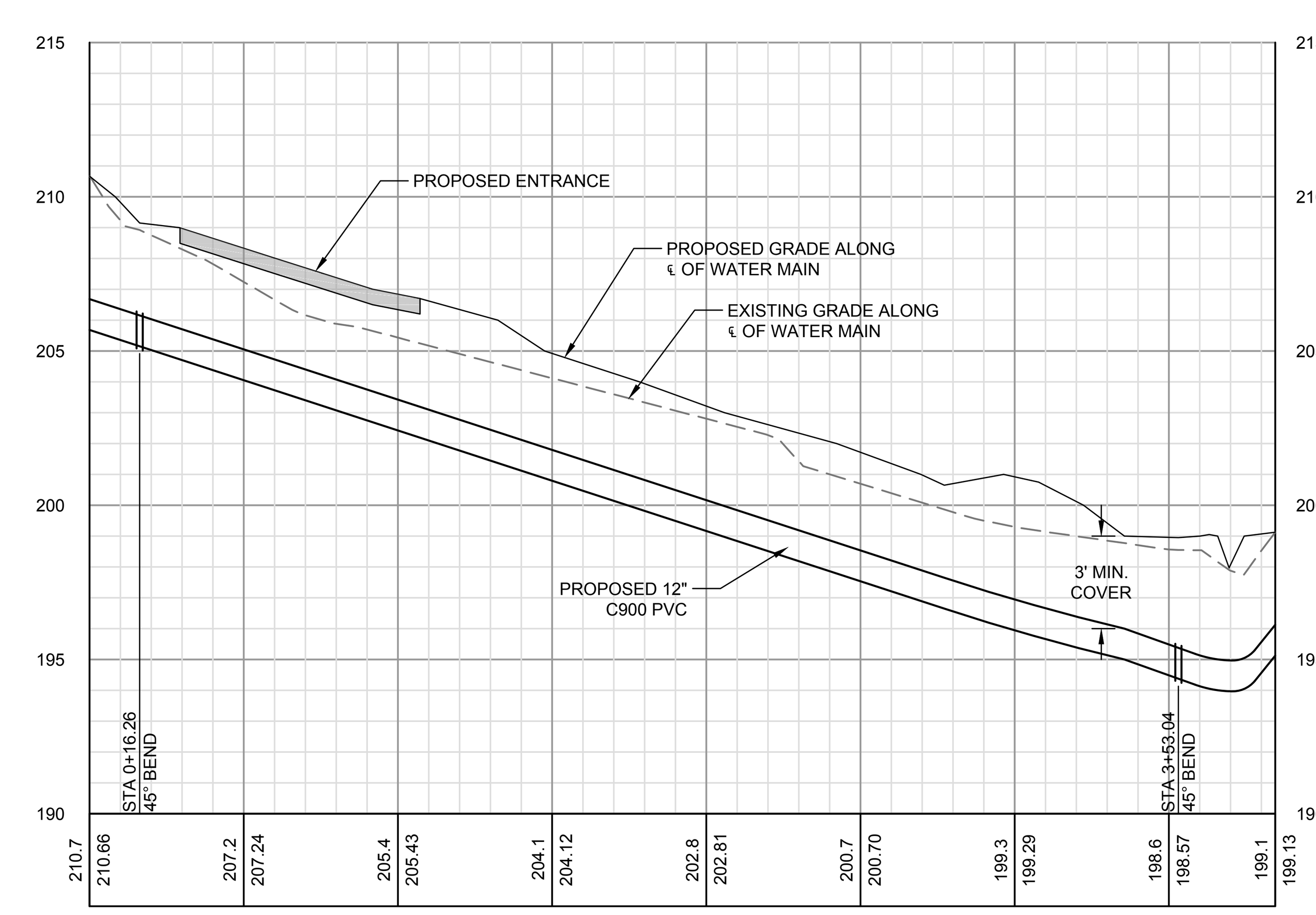
W. THE UTILITY CONTRACTOR SHALL SPOT DIG TO EXPOSE EACH UTILITY PIPE OR LINE WHICH MAY CONFLICT WITH CONSTRUCTION OF PROPOSED WATER LINE EXTENSIONS WELL IN ADVANCE TO VERIFY LOCATIONS OF THE EXISTING UTILITIES. THE UTILITY CONTRACTOR SHALL PROVIDE BOTH HORIZONTAL AND VERTICAL CLEARANCES TO THE PROFESSIONAL ENGINEER (PE) TO ALLOW THE PE TO ADJUST THE WATER LINE DESIGN IN ORDER TO AVOID CONFLICTS WITH EXISTING UNDERGROUND UTILITIES. THE UTILITY CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER AND BE RESPONSIBLE FOR TEMPORARY RELOCATION AND/OR SECURING EXISTING UTILITY POLES, PIPES, WIRES, CABLES, SIGNS AND/OR UTILITIES INCLUDING SERVICES IN ACCORDANCE WITH THE UTILITY OWNER REQUIREMENTS DURING WATER LINE INSTALLATION, GRADING AND STREET CONSTRUCTION.

X. PRIOR TO THE COMMENCEMENT OF ANY WORK WITHIN ESTABLISHED UTILITY EASEMENTS OR NCDOT RIGHT-OF-WAYS THE UTILITY CONTRACTOR IS REQUIRED TO HAVE A SIGNED NCDOT ENCROACHMENT AGREEMENT POSTED ON SITE AND NOTIFY ALL CONCERNED UTILITY COMPANIES IN ACCORDANCE WITH G.S. 87-102. THE UTILITY CONTRACTOR MUST CALL THE NC ONE CALL CENTER AT 811 OR (800) 632-4949 TO VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION. EXISTING UTILITIES SHOWN IN THESE PLANS ARE TAKEN FROM MAPS FURNISHED BY VARIOUS UTILITY COMPANIES AND HAVE NOT BEEN PHYSICALLY LOCATED OR VERIFIED BY THE P.E. (I.E. TELEPHONE, CABLE, WATER, SEWER, ELECTRICAL POWER, FIBER OPTIC, NATURAL GAS, ETC.). THE UTILITY CONTRACTOR WILL BE RESPONSIBLE TO REPAIR ANY AND ALL DAMAGES TO THE SATISFACTION OF THE RELATED UTILITY COMPANY.

Y. THE UTILITY CONTRACTOR SHALL PROVIDE HCDPU WITH AT LEAST ONE (1) FIRE HYDRANT WRENCH AND ONE (1) BREAK-AWAY FLANGE KIT FOR EVERY SUBDIVISION WITH FIRE HYDRANTS DEVELOPED IN HARNETT COUNTY. THESE ITEMS MUST BE PROVIDED TO HCDPU BEFORE THE FINAL INSPECTION WILL BE SCHEDULED BY THE HCDPU UTILITY CONSTRUCTION INSPECTOR. IN ADDITION, THE UTILITY CONTRACTOR SHALL INSTALL A 4" X 4" CONCRETE VALVE MARKER AT THE EDGE OF THE RIGHT-OF-WAY TO IDENTIFY THE LOCATION OF EACH GATE VALVE INSTALLED IN THE NEW WATER SYSTEM WITH THE EXCEPTION OF THE FIRE HYDRANT ISOLATION VALVES. THE CONTRACTOR SHALL MEASURE THE DISTANCE FROM THE CENTER OF THE CONCRETE MARKER TO THE CENTER OF THE VALVE BOX. THIS DISTANCE (IN LINEAR FEET) SHALL BE STAMPED ON THE BRASS PLATE LOCATED ON THE TOP OF THE CONCRETE VALVE MARKER. IN LIEU OF INSTALLING THE CONCRETE VALVE MARKERS, THE UTILITY CONTRACTOR MAY PROVIDE AT LEAST TWO MEASUREMENTS FROM TWO INDEPENDENT PERMANENT ABOVE GROUND STRUCTURES TO THE PROFESSIONAL ENGINEER (PE) IN THE RED LINE DRAWINGS TO IDENTIFY THE VALVE LOCATIONS. THE PROFESSIONAL ENGINEER (PE) MUST INCLUDE THESE MEASUREMENTS IN THE AS BUILT RECORD DRAWINGS SUBMITTED TO HCDPU.

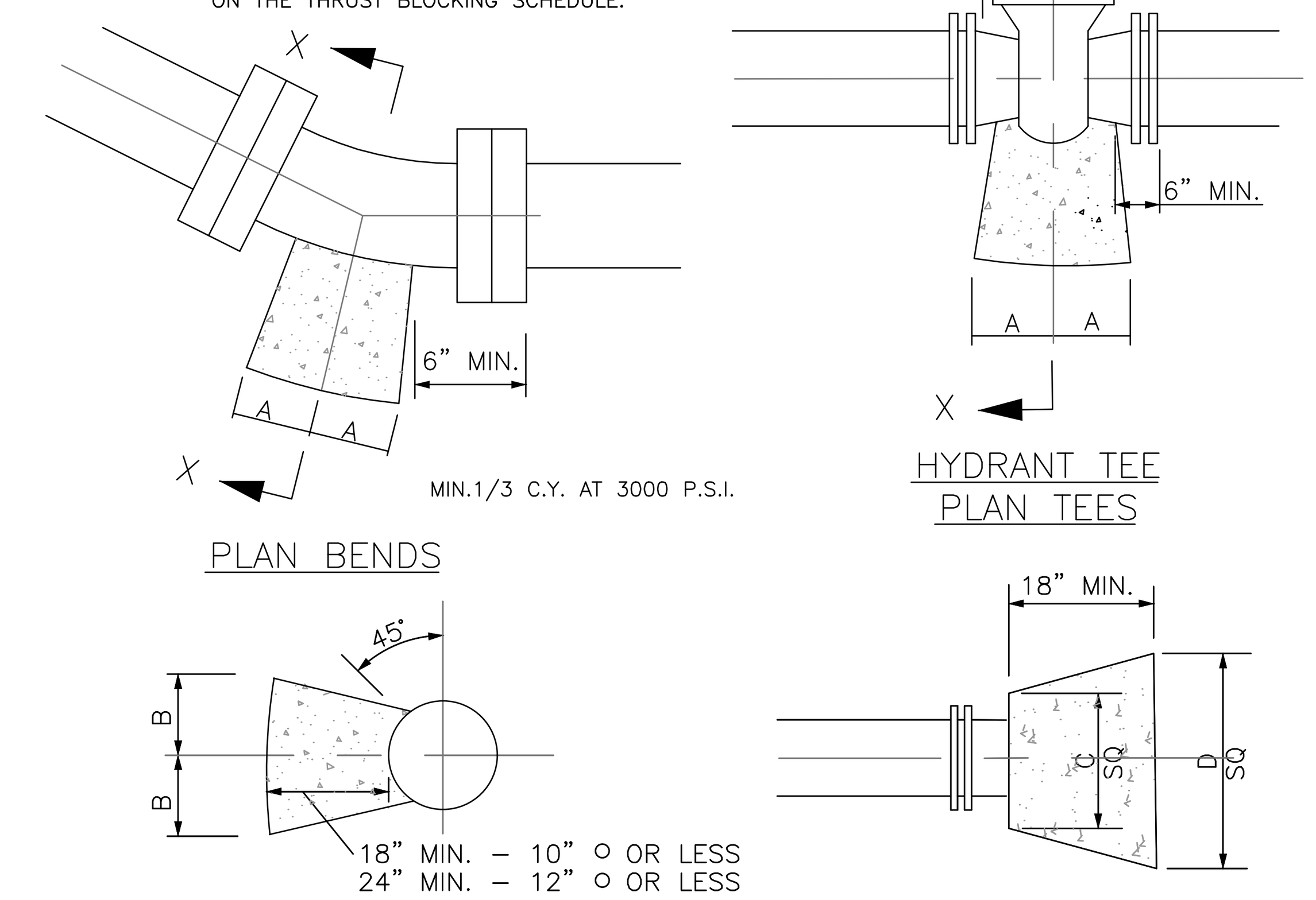
Z. THE UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL REPAIRS DUE TO LEAKAGE DAMAGE FROM POOR WORKMANSHIP DURING THE ONE (1) YEAR WARRANTY PERIOD ONCE THE WATER SYSTEM IMPROVEMENTS HAVE BEEN ACCEPTED BY HARNETT COUNTY. HARNETT COUNTY WILL PROVIDE MAINTENANCE AND REPAIRS WHEN REQUESTED AND BILL THE DEVELOPER AND/OR UTILITY CONTRACTOR IF NECESSARY DUE TO LACK OF RESPONSE WITHIN 48 HOURS OF NOTIFICATION OF WARRANTY WORK. THE UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL REPAIRS DUE TO DAMAGES RESULTING FROM FAILURE TO LOCATE THE NEW WATER LINES AND ASSOCIATED APPURTENANCES FOR OTHER UTILITIES AND THEIR CONTRACTORS UNTIL THE WATER LINES HAVE BEEN APPROVED BY NCDENR AND ACCEPTED BY HCDPU. THE FINAL INSPECTION OF WATER SYSTEM IMPROVEMENTS CANNOT BE SCHEDULED WITH HCDPU UNTIL THE STREETS HAVE BEEN PAVED; THE RIGHTS-OF-WAY AND UTILITY EASEMENTS HAVE BEEN SEEDED AND STABILIZED WITH AN ADEQUATE STAND OF GRASS IN PLACE TO PREVENT EROSION ISSUES ON SITE.

AA. THE ENGINEER OF RECORD IS RESPONSIBLE TO INSURE THAT CONSTRUCTION IS, AT ALL TIMES, IN COMPLIANCE WITH ACCEPTED SANITARY ENGINEERING PRACTICES AND APPROVED PLANS AND SPECIFICATIONS. NO FIELD CHANGES TO THE APPROVED PLANS ARE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY HCDPU. A COPY OF EACH ENGINEER'S FIELD REPORT IS TO BE SUBMITTED TO HCDPU AS EACH SUCH INSPECTION IS MADE ON SYSTEM IMPROVEMENTS OR TESTING IS PERFORMED BY THE CONTRACTOR. WATER AND SEWER INFRASTRUCTURE MUST PASS ALL TESTS REQUIRED BY HCDPU SPECIFICATIONS AND THOSE OF ALL APPLICABLE REGULATORY AGENCIES. THESE TESTS INCLUDE, BUT ARE NOT LIMITED TO: AIR TEST, VACUUM TEST, MANDREL TEST, VISUAL TEST, PRESSURE TEST, BACTERIOLOGICAL TEST, ETC. A HCDPU INSPECTOR MUST BE PRESENT DURING TESTING AND ALL TEST RESULTS SHALL BE SUBMITTED TO HCDPU. ALL TESTS MUST BE SATISFIED BEFORE THE FINAL INSPECTION WILL BE SCHEDULED WITH THE HCDPU INSPECTOR. THE ENGINEER OF RECORD MUST REQUEST IN WRITING TO SCHEDULE THE FINAL INSPECTION ONCE ALL CONSTRUCTION IS COMPLETE. THE DEVELOPER'S ENGINEER OF RECORD AND THE HCDPU UTILITY CONSTRUCTION INSPECTOR SHALL PREPARE A WRITTEN PUNCH LIST OF ANY DEFECTS OR DEFICIENCIES NOTED DURING THE FINAL INSPECTION, SHOULD ANY EXIST. UPON COMPLETION OF THE PUNCH LIST, THE DEVELOPER'S ENGINEER OF RECORD WILL SCHEDULE ANOTHER INSPECTION. IN THE EVENT THE NUMBER OF INSPECTIONS PERFORMED BY THE HCDPU EXCEEDS TWO, ADDITIONAL FEES MAY BE ACCESSED TO THE DEVELOPER



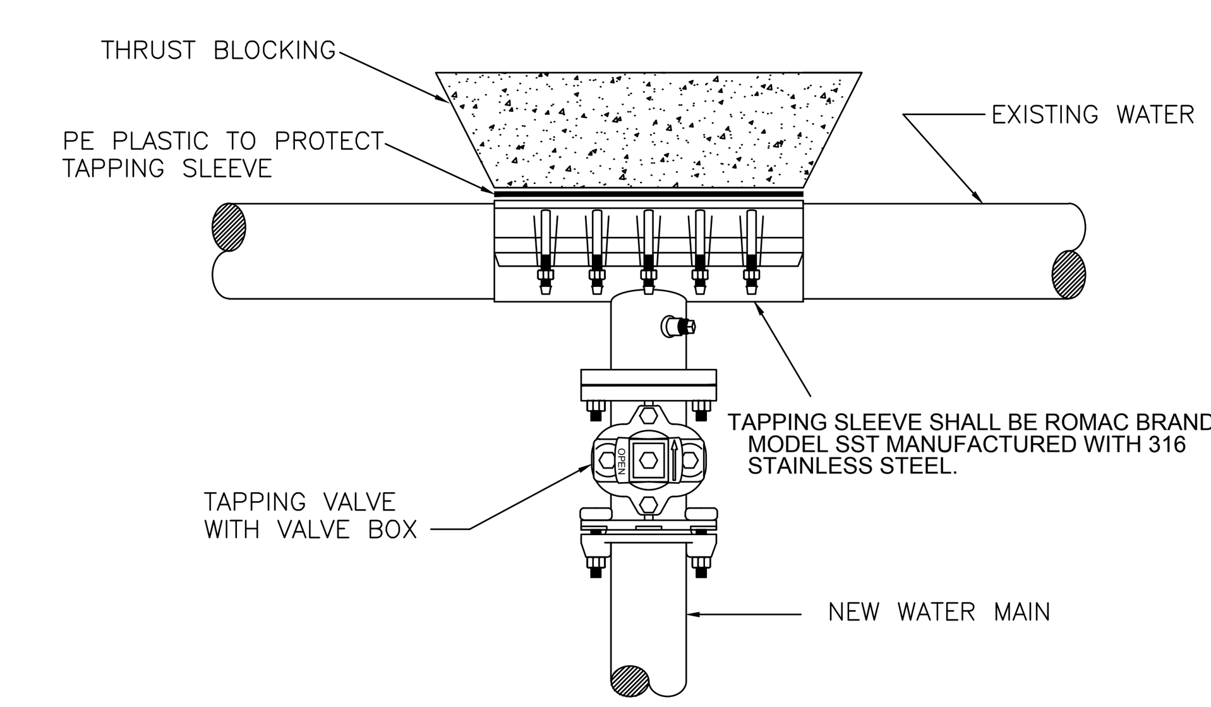
WATER MAIN PROFILE
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

NOTES:
1. CONCRETE SHALL BE 3,000 PSI MIN.
2. CONCRETE FOR THRUST BLOCKING SHALL BE KEPT FAIRLY DRY, THUS MAKING THE CONCRETE WEDGE SHAPE MORE EASILY FORMED WITH THE WIDEST PART (BLOCKING AREA) AGAINST UNDISTURBED SOIL.
3. NO CONCRETE SHALL COVER ANY BOLTS OR GLANDS.
4. ALL PIPING AND ACCESSORIES TO BE WRAPPED WITH 10 MIL. POLYETHYLENE PRIOR TO POURING BLOCKING.
5. VOLUME OF THRUST BLOCKING SHALL BE AS SHOWN ON THE THRUST BLOCKING SCHEDULE.

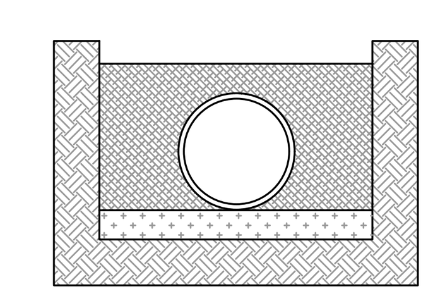


PIPE SIZE	90° BEND		45° BEND		221/2° BEND		11/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
12"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"

TYPICAL THRUST BLOCK DETAIL W/7
NO SCALE



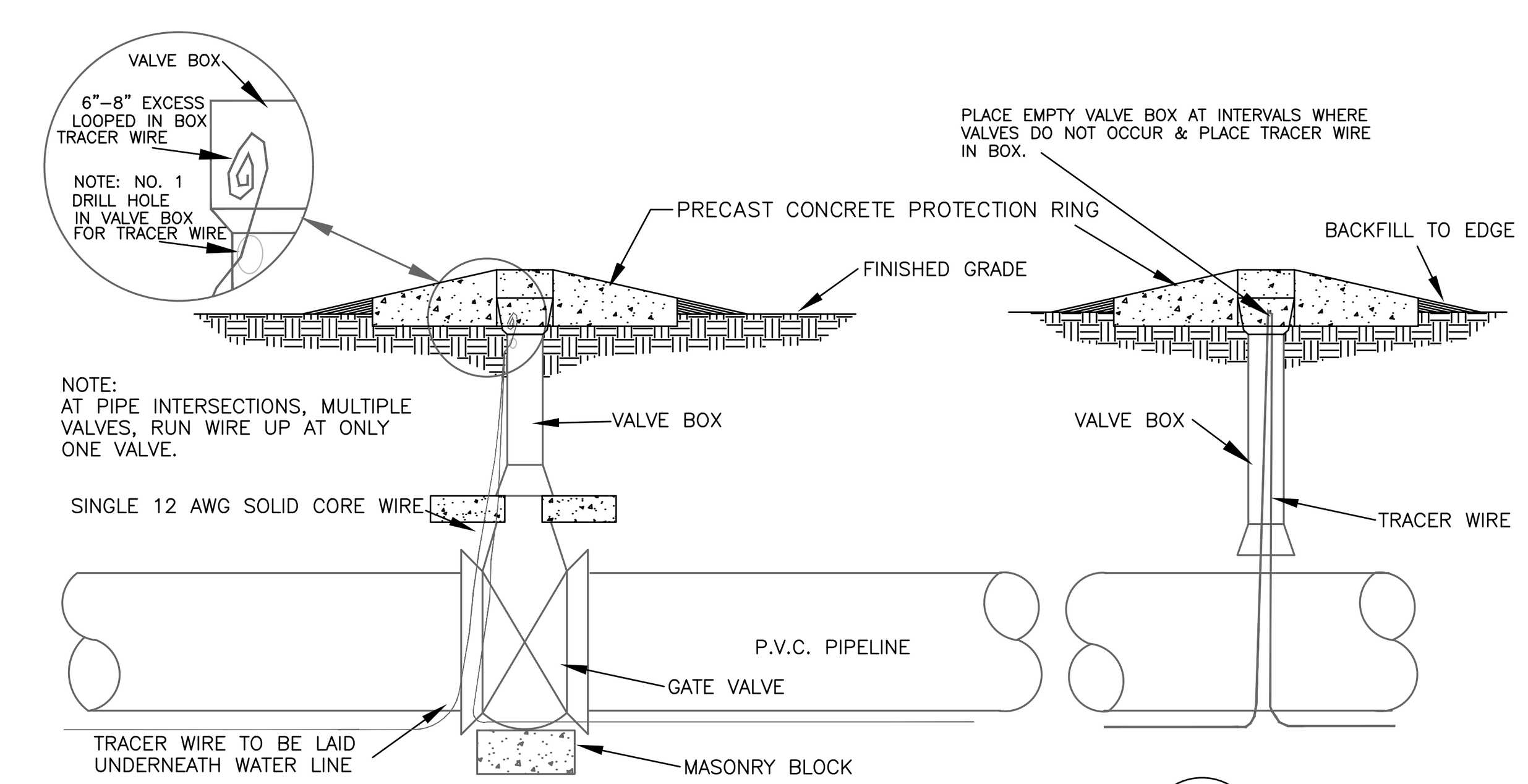
TYPICAL TAPPING SLEEVE AND VALVE ASSEMBLY DETAIL W/5
NO SCALE



PIPE BEDDED IN SAND, GRANULAR MATERIAL OR GRADED GRAVEL TO THE DEPTH OF 1/8 PIPE DIAMETER, 4" MIN. JOB EXCAVATED MATERIAL COMPACTED TO 4" ABOVE TOP OF PIPE. (APPROX. 95% STANDARD PROCTOR, AASHTO T-99)

ALL PVC WATER LINE AND PVC FORCE MAIN.

TYPICAL LAYING CONDITIONS DETAIL W/11
NO SCALE



TYPICAL TRACER WIRE INSTALLATION DETAIL W/3
NO SCALE

NOTES:
1. DRILL HOLE IN VALVE BOX TO INSERT TRACER WIRE,BRING UP TO INSIDE AND ROLL UP AT LEAST 6"–8" EXCESS
2. PLACE TRACER WIRE IN VALVE BOX AT 1,000" INTERVALS OR AS NOTED ON THE PLANS, TYPICAL.
3. DO NOT SPLICE WIRE WHEN BEGINNING A NEW SPOOL. INSTEAD INSTALL A VALVE BOX AND ATTACH EACH WIRE WITH A BRASS SCREW TO THE VALVE BOX.

NO.	REVISIONS	DATE	BY
7			
6			
5			
4			
3	LOWER SITE 0.5'	07/16/19	BWH
2	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS	02/22/19	BWH
1			

PROJECT ENGINEER/ARCHITECT
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PROJECT MANAGER
MWH (MATT.HASTINGS@SUMMITDE.NET)
DRAWN BY
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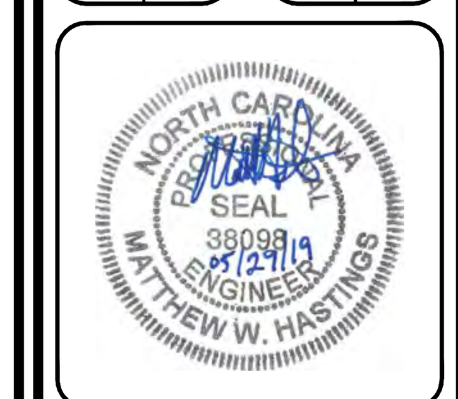
FIRST ISSUE DATE
08-08-2018



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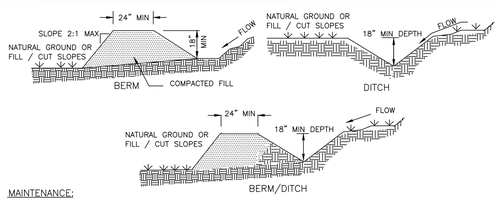
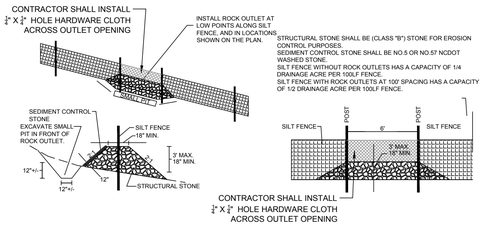
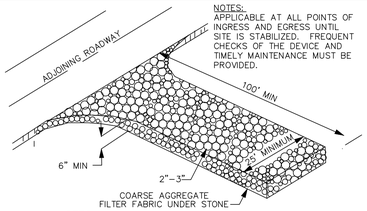
CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

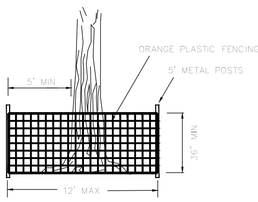
WATER MAIN DETAILS, NOTES & PROFILE

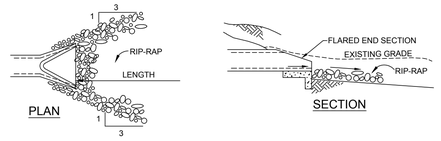
PROJECT NO.
18-0174
DRAWING NAME:
18-0174_D
SHEET NO.
D-2A

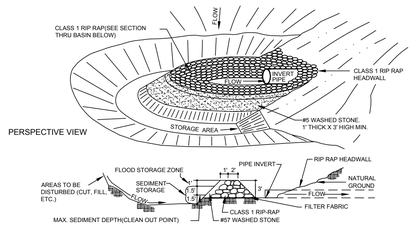


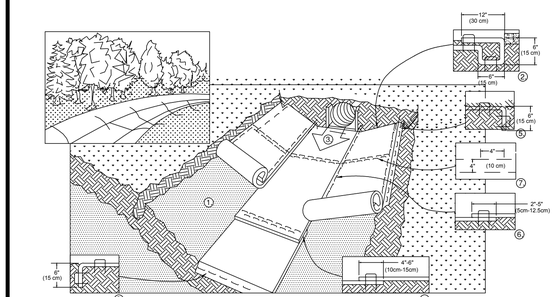


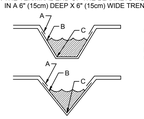


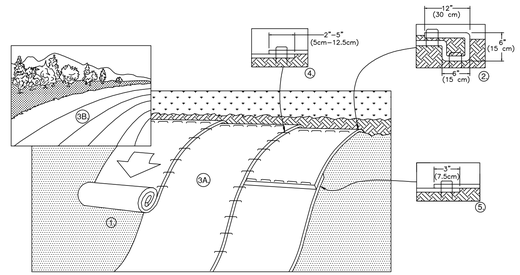


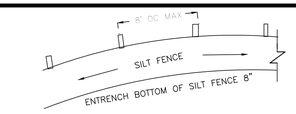


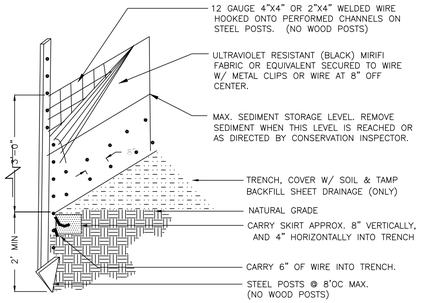


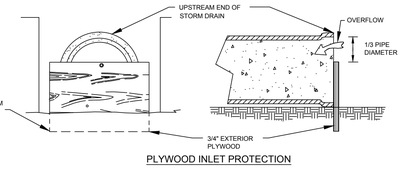


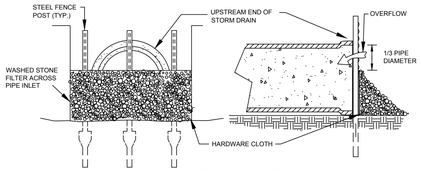


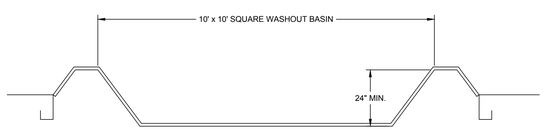












MAINTENANCE:

INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.
WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND AREA WITH NATURAL GROUND LEVEL AND STABILIZE APPROPRIATELY.

NOTES:

POSITIVE GRADE MUST BE PROVIDED TO ASSURE DRAINAGE IF SLOPE EXCEEDS 2%, SEED AND MULCH DIVERSION. TRY NOT TO EXCEED 5% (HIGH VELOCITIES RESULT). MAXIMUM D.A.= 5ac WITHOUT SUPPORTING CALCS. DIVERSIONS AT THE TOP OF SLOPES MUST EMPTY INTO AN APPROVED SLOPE DRAIN. BERM/DITCH IS MOST COMMONLY USED SUFFICIENT TO DIRECT ALL SEDIMENT–LADEN STORMWATER INTO A SEDIMENT CONTROL DEVICE. MUST BE INSTALLED PRIOR TO CLEARING AND GRUBBING OF THE AREA (OR IN CONJUNCTION WITH THIS OPERATION IF SEDIMENT CONTROLS AND DIVERSIONS ARE INSTALLED AS EACH CRITICAL POINT IS REACHED).

1. DIVERSIONS SHOULD BE LOCATED TO MINIMIZE DAMAGES BY CONSTRUCTION OPERATIONS.
2. DIVERSIONS SHOULD BE SEEDED AND MULCHED IF THEY ARE TO REMAIN IN PLACE OVER 30 DAYS.
3. CHECK DEVICE AFTER EACH RAIN, BUT ONCE A WEEK REGARDLESS REPAIR AS NECESSARY.

TEMPORARY DIVERSION BERM / DITCH

STRUCTURAL STONE SHALL BE (CLASS "B") STONE FOR EROSION CONTROL PURPOSES.
SEDIMENT CONTROL STONE SHALL BE NO.5 OR NO.57 NCDOT WASHED STONE.
SILT FENCE WITHOUT ROCK OUTLETS HAS A CAPACITY OF 1/4 DRAINAGE ACRE PER 100LF FENCE.
SILT FENCE WITH ROCK OUTLETS AT 100' SPACING HAS A CAPACITY OF 1/2 DRAINAGE ACRE PER 100LF FENCE.

MAINTENANCE:

INSPECT OUTLETS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE EXCAVATED PIT AND PROPERLY DISPOSED OF. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE DEVICE & BLEND AREA WITH NATURAL GROUND LEVEL AND STABILIZE APPROPRIATELY.

TEMPORARY SILT FENCE ROCK OUTLET

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" (10cm-15cm) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (5cm-12.5cm) (DEPENDING ON BLANKET TYPE) AND STAPLED. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON™ THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9m-12m) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10cm) APART AND 4" (10cm) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

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TYPICAL CHANNEL LINER INSTALLATION

NOTES:
APPLICABLE AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED. FREQUENT CHECKS OF THE DEVICE AND TIMELY MAINTENANCE MUST BE PROVIDED.

NOTES:
- A. WASHED STONE PAD TO BE 100'L X 25'W X 6"TH MINIMUM. IF THE ADJOINING ROADWAY IS WIDER THAN 25', THEN THE WASHED STONE SHALL BE AS WIDE AS THE ADJOINING ROADWAY.
- B. TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED.
- C. ENTRANCE(S) SHOULD BE LOCATED TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES. MUST BE MAINTAINED IN A CONDITION WHICH WILL
- D. PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS.
- E. PERIODIC TOP DRESSING WITH STONE (2" THICK) WILL BE NECESSARY; KEEP SOME HANDY. ANY MATERIAL WHICH STILL MAKES IT ONTO THE ROAD MUST BE CLEANED UP IMMEDIATELY.

TEMPORARY CONSTRUCTION EXIT

NOTES:
1. TREE PROTECTION FENCING MUST BE IN PLACE PRIOR TO ANY DEMOLITION, LAND DISTURBANCE OR ISSUANCE OF A GRADING PERMIT.
2. SIGNS IN BOTH ENGLISH AND SPANISH SHALL BE BE PLACE IN TREE PROTECTION AREAS. THE SIGNS SHOULD READ, "TREE PROTECTION AREA/NO TRESPASSING" AND "ZONA PROTECTORA PARA LOS ARBOLES/ PROHIBIDO ENTRA".

TREE PROTECTION FENCE

ROLLED EROSION CONTROL PRODUCT MAINTENANCE

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

MAINTENANCE:
INSPECT RIPRAP OUTLET STRUCTURES AFTER HEAVY RAINS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE OR IF STONES HAVE BEEN DISLODGED. IMMEDIATLY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

RIPRAP @ FES

SECTION THRU BASIN,
FILTER AND CULVERT PIPE

MAINTENANCE:
INSPECT, CLEAN AND PROPERLY MAINTAIN THE INLET PROTECTION AFTER EVERY STORM UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED. TO PROVIDE SATISFACTORY BASIN EFFICIENCY, REMOVE SEDIMENT WHEN THE SEDIMENT STORAGE AREA IS HALF FULL. SPREAD ALL EXCAVATED MATERIAL EVENLY OVER THE SURROUNDING LAND AREA OR STOCKPILE AND STABILIZE IT APPROPRIATELY.

TEMPORARY HORSESHOE INLET PROTECTION (ARC FILTER)

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE™ PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

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TYPICAL SLOPE BLANKET INSTALLATION

NOTES:
1. TOTAL DRAINAGE AREA FLOWING FENCE MAY NOT EXCEED 1 ACRE.
2. SILT FENCES SHOULD NOT BE USED AT PIPE OUTLETS OR IN AREAS OF CONCENTRATED FLOW (CREEKS, DITCHLINES, SWALES ETC.)

MAINTENANCE:

INSPECT TEMPORARY SILT FENCE ONCE A WEEK AND AFTER EVERY 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.

TEMPORARY SILT FENCE

PLYWOOD INLET PROTECTION

STONE FILTER INLET PROTECTION

MAINTENANCE:
INSPECT, CLEAN AND PROPERLY MAINTAIN THE INLET PROTECTION AFTER EVERY STORM UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED. TO PROVIDE SATISFACTORY BASIN EFFICIENCY, REMOVE SEDIMENT WHEN THE SEDIMENT STORAGE AREA IS HALF FULL. SPREAD ALL EXCAVATED MATERIAL EVENLY OVER THE SURROUNDING LAND AREA OR STOCKPILE AND STABILIZE IT APPROPRIATELY.

TEMPORARY IN TRENCH PIPE PROTECTION

TO BE USED IN TRENCHES WHEN PIPE INSTALLATION IS INTERRUPTED BY RAINFALL

NOTES:

1. INSTALL CONCRETE WASHOUT PIT AT LOCATION(S) SHOWN ON PLANS.
2. LINE PIT WITH IMPERVIOUS FABRIC OR POLYETHYLENE SHEET. ANCHOR FABRIC INTO GROUND OUTSIDE PIT AS SHOWN.
3. MAXIMUM WATER AND SEDIMENT DEPTH IS 12". PIT MUST BE EXCAVATED AND RE-LINED WHEN DEPTH OF SEDIMENT REACHES 12" OR COMBINED WATER/SEDIMENT DEPTH EXCEEDS 12" FOLLOWING WASHOUT OF CONCRETE TRUCK.
4. ALLOW WATER TO EVAPORATE COMPLETELY PRIOR TO EXCAVATING PIT.
5. WASHOUT PIT MAY BE LOCATED NO CLOSER THAN 50' TO DRAINS, INLETS, OR SURFACE WATERS.

CONCRETE WASHOUT PIT

TEMPORARY SEEDING IN NORTH CAROLINA

SEEDING MIXTURE

	SPECIES	RATE (LB/ACRE)
LATE WINTER & EARLY SPRING	RYE (GRAIN)	120
	ANNUAL LESPEDEZA (KOBE IN PIEDMONT AND COASTAL PLAIN, KOREAN IN MOUNTAINS)	50
SUMMER	GERMAN MILLET	40
	OMIT ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IN THE PIEDMONT AND MOUNTAINS, A SMALL-STEMMED SUNDAGRASS	
FALL	RYE (GRAIN)	120
	IS NOT TO EXTEND BEYOND JUNE. MAY BE SUBSTITUED AT A RATE OF 50 LB/ACRE.	

SEEDING DATES:

LATE WINTER & EARLY SPRING	MOUNTAINS - ABOVE 2500 ft: FEB. 15 - MAY 15 BELOW 2500 ft: FEB. 1 - MAY 1 PIEDMONT - JAN. 1 - MAY 1 COASTAL PLAIN - DEC. 1 - APR. 15
SUMMER	MOUNTAINS - MAY 15 - AUG. 15 PIEDMONT - MAY 1 - AUG. 15 COASTAL PLAIN - APR. 15 - AUG. 15
FALL	MOUNTAINS - AUG. 15 - DEC. 15 COASTAL PLAIN AND PIEDMONT - AUG. 15 - DEC. 30

SOIL AMENDMENTS
FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LBS/ACRE 10-10-10 FERTILIZER

MULCH
APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING 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, FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

PERMANENT SEEDING IN NORTH CAROLINA (TABLE 6.11L)

SEEDING MIXTURE

SPECIES	RATE (LB/ACRE)
TALL FESCUE	250
SERICEA LESPEDEZA	20
KOBE LESPEDEZA	10
	50

SEEDING NOTES
1. AFTER AUGUST 15 USE UNSCARIFIED SERICEA SEED.
2. WHERE PERIODIC MOWING IS PLANNED OR A NEAR APPEARANCE IS DESIRED, OMIT SERICEA AND INCREASE KOBE LESPEZEDA TO 40 LB/ACRE.
3. TO EXTEND SPRING SEEDING DATES INTO JUNE, ADD 15LB/ACRE HULLED BERMUDAGRASS. HOWEVER, AFTER MID-APRIL IT IS PREFERABLE TO SEED TEMPORARY COVER.

NURSE PLANTS
BETWEEN MAY 1 AND AUGUST 15, ADD 10 LB/ACRE GERMAN MILLET OR 15LB/ACRE SUDANGRASS. PRIOR TO MAY 1 OR AFTER AUGUST 15 ADD 40 LB/ACRE RYE (GRAIN).

SEEDING DATES

	BEST	POSSIBLE
FALL:	AUGUST 25 - SEPTEMBER 15	AUGUST 20 - OCTOBER 25
LATE WINTER:	FUBRUARY 15 - MARCH 21	FEBRUARY 1 - APRIL 15

FALL IS BEST FOR ALL FESCUE AND LATE WINTER FOR LESPEDEZAS. OVER SEEDING OF KOBE LESPEZEDA OVER FALL-SEEDED TALL FESCUE IS VERY EFFECTIVE.

SOIL AMENDMENTS
APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY 4,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER.

MULCH
APPLY 4,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER OF ANOTHER SUITABLE MULCH. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING OR ROVING OR BY CRIMPING WITH A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

MAINTENANCE
REFERTILIZE IN THE SECOND YEAR UNLESS GROWTH IS FULLY ADEQUATE. MAY BE MOWED ONCE OR TWICE A YEAR, BUT MOWING IS NOT NECESSARY. RESEED, FERTILIZE AND MULCH DAMAGED AREAS IMMEDIATELY.

SEEDING SCHEDULE

1.) CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2.) RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
3.) REMOVE ALL LOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4.) APPLY AGRICULTURAL LIME, FERTILIZER, AND UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).
5.) CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6
6.) SEED ON A FRESHLY PREPARED SEEDBED AND SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK
7.) MULCH IMMEDIATELY AFTER SEEDING AND
8.) INSPECT ALL SEEDED AREAS AND MAKE NECESSARY RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9.) CONSULT CONSERVATION INSPECTOR ON MAINTENANCE AND FERTILIZATION AFTER PERMANENT COVER IS

* APPLY:
AGRICULTURAL LIMESTONE - 2 TONS/ ACRES (3 TONS/ ACRE IN CLAY SOILS)
FERTILIZER - 1,000 lbs. / ACRE -10-10-10
SUPERPHOSPHATE- 500 lbs> / ACRE -20% ANALYSIS
MLCH -2 TONS / ACRE (5000 LBS/AC FOR STEEP SLOPES) - SMALL GRAIN STRAW
ANOTHER - ASPHALT EMULSION @ 300 GALS./ ACRE

SEEDBED PREPARATION

MAINTENANCE:
NEW SEEDLINGS SHOULD BE INSPECTED FREQUENTLY AND MAINTENANCE PERFORMED AS NEEDED. IF RILLS ANG GULLIES DEVELOP, THEY MUST BE FILLED, RE-SEEDED, AND MULCHED AS SOON AS POSSIBLE. DIVERSIONS MAY BE NEEDED UNTIL NEW PLANTS TAKE HOLD. DAMAGE TO VEGETATION FROM DISEASE, INSECTS, TRAFFIC, ETC., CAN OCCUR AT ANY TIME.HERBICIDES AND REGULAR MOWING MAY BE NEEDED TO CONTROL WEEDS. DUST AND SPRAYS MAY BE NEEDED TO CONTROL INSECTS.
WEEK OR DAMAGED SPOTS MUST BE RELIMED, FERTILIZED, MULCHED, AND RESEEDED AS PROMPTLY AS POSSIBLE.

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2	LOWER SITE 0.5'	07/16/19	BWH
1	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS	02/22/19	BWH
	REVISIONS	DATE	BY

DRAWING ALTERATION
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED ARCHITECT, PROFESSIONAL ENGINEER, LANDSCAPE ARCHITECT, OR LAND SURVEYOR TO ALTER ANY ITEM ON THIS DOCUMENT IN ANY WAY. ANY LICENSEE WHO ALTERS THIS DOCUMENT IS REQUIRED BY LAW TO AFFIX HIS OR HER SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS OR HER SIGNATURE AND SPECIFIC DESCRIPTION OF THE ALTERATIONS.

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CONSTRUCTION DRAWINGS
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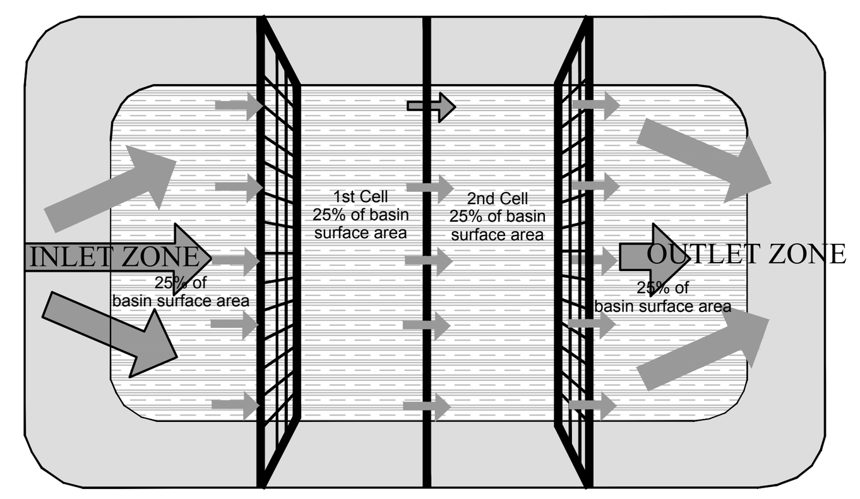
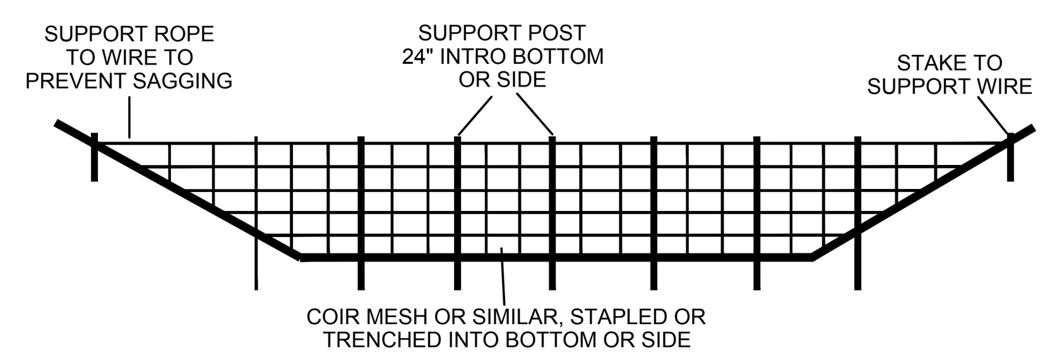
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

EROSION CONTROL DETAILS

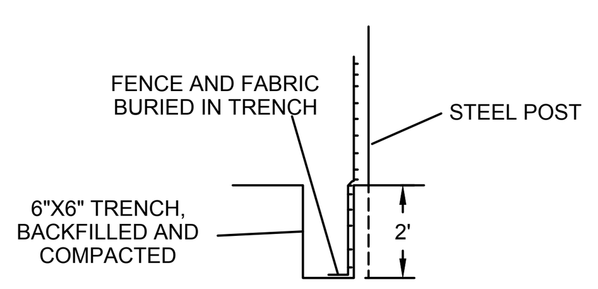
PROJECT NO.
18-0174
DRAWING NAME:
18-0174_D
SHEET NO.
D-3



PLAN VIEW

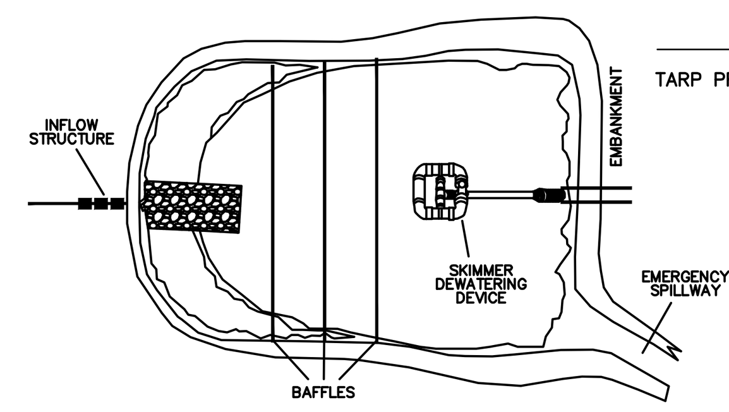


CROSS SECTION

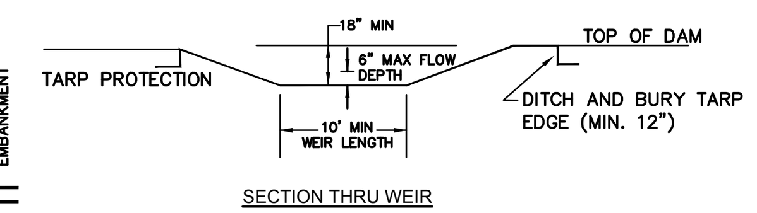


SECTION VIEW AT OPENING

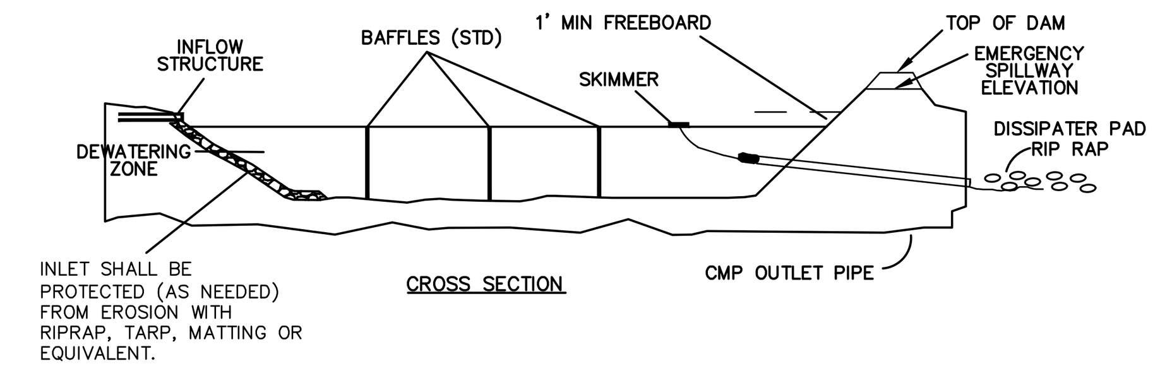
NOTES:
1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
4. BAFFLE SHALL BE 700 G/M2 COIR EROSION BLANKET.
5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS
6. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL



PLAN VIEW



SECTION THRU WEIR



CROSS SECTION

NOTES:
1. BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF–FULL.
2. THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARPAULINS OR EQUIVALENT FOR U.V. RESISTANCE.
3. PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
4. BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE.
5. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.
6. DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP OF PIPE.
7. POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

SKIMMER □ SKIMMER BASIN MAINTENANCE

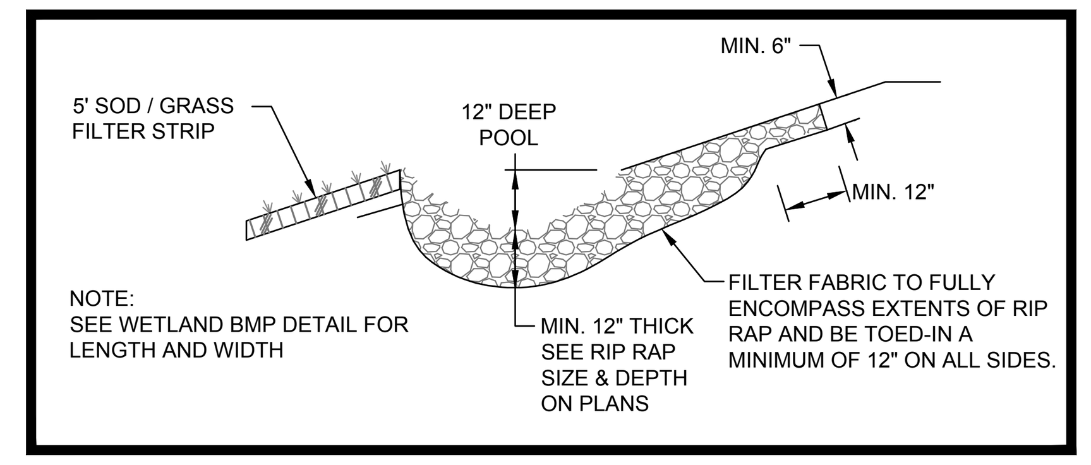
1. INSPECT SKIMMER SEDIMENT BASIN AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2" OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE 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.
2. REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
3. 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.

SKIMMER □ SKIMMER BASIN MAINTENANCE CONT□D

4. 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.
5. 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 POOR AREAS.
6. 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.

SKIMMER BASIN

NOT TO SCALE

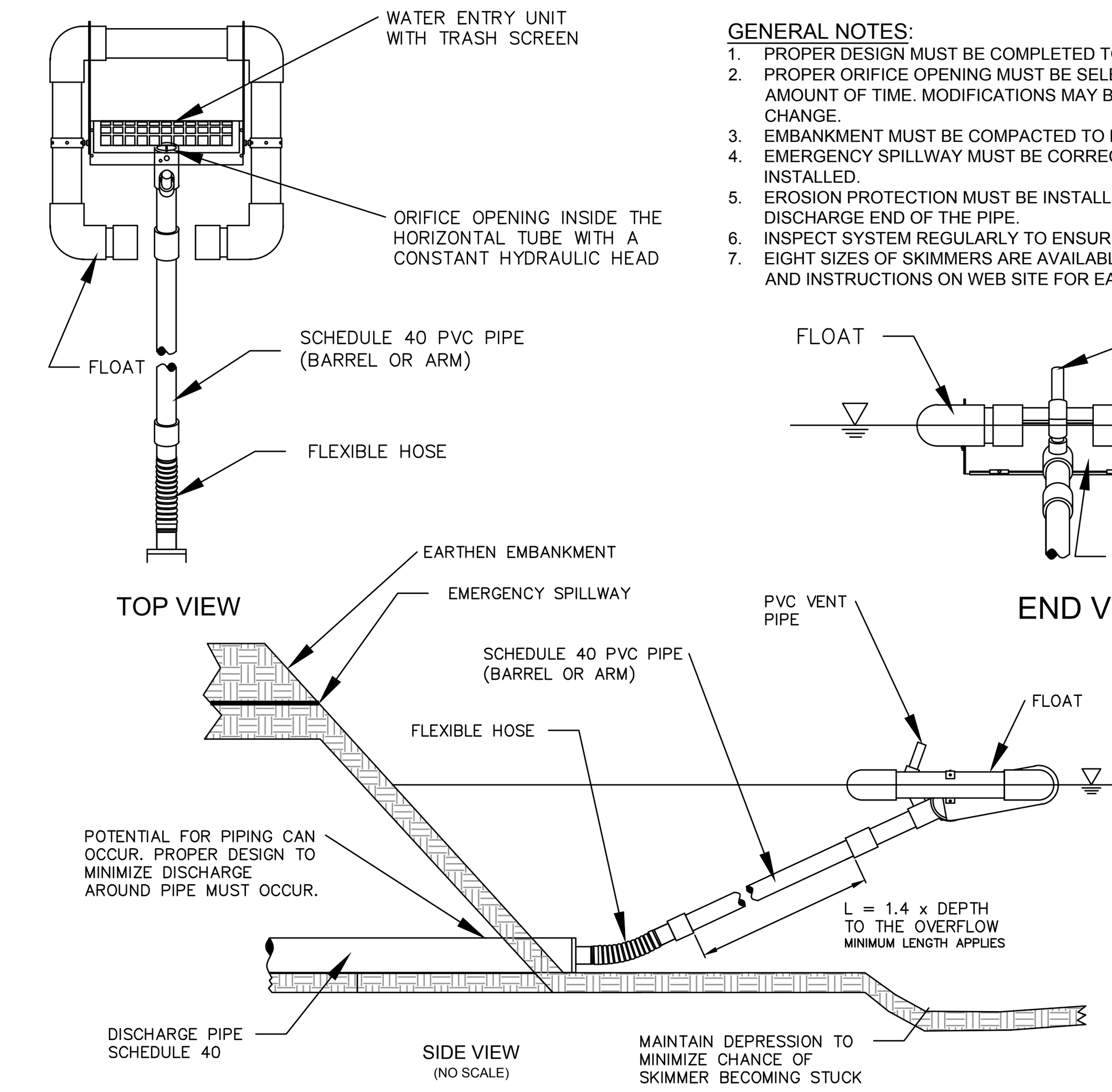


RIP RAP PLUNGE POOL MAINTENANCE

1. INSPECT RIP RAP PLUNGE POOL WEEKLY AND AFTER SIGNIFICANT (1/2" 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.

RIP RAP PLUNGE POOL

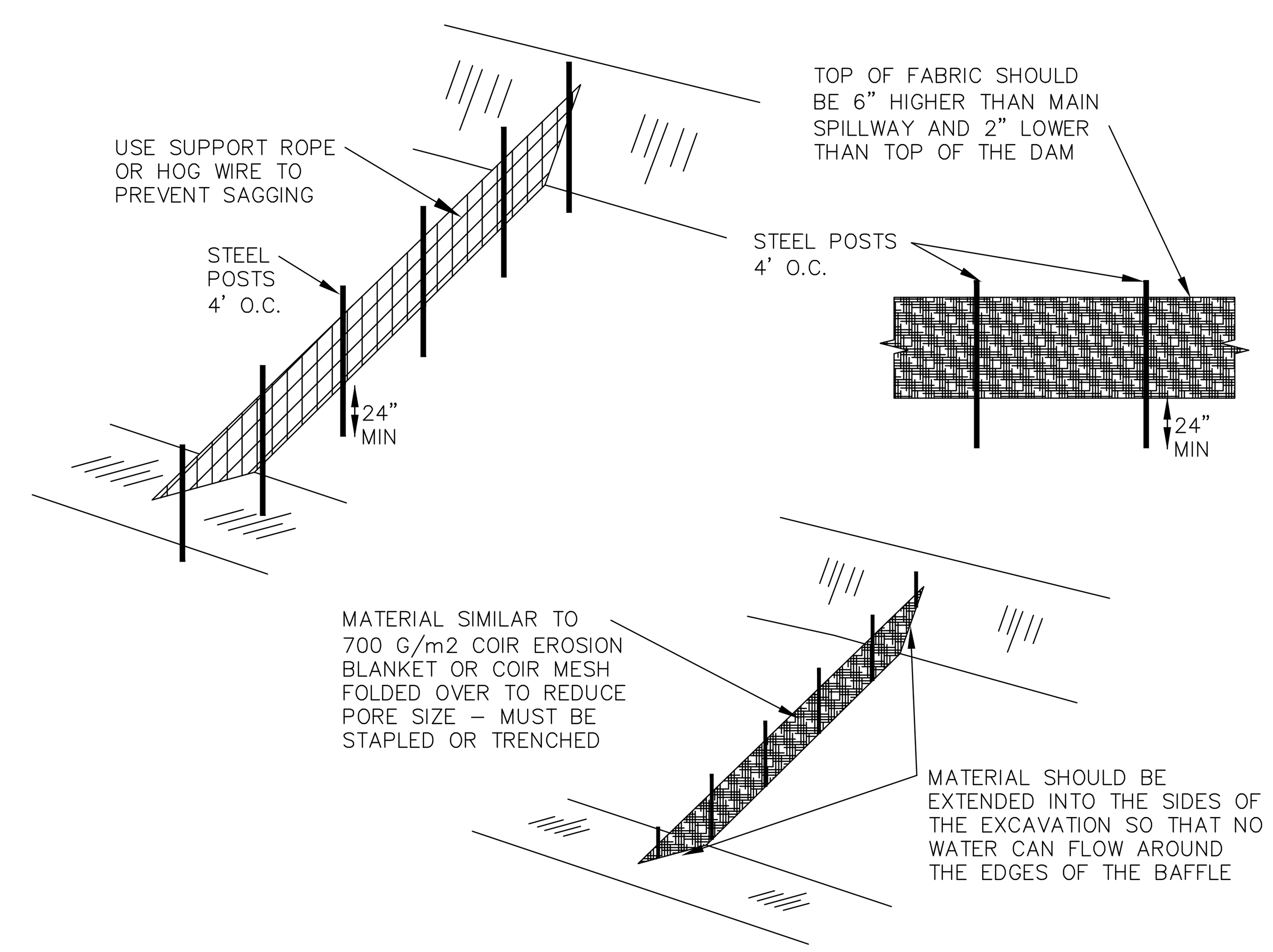
NOT TO SCALE



GENERAL NOTES:
1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.

SKIMMER

NOT TO SCALE

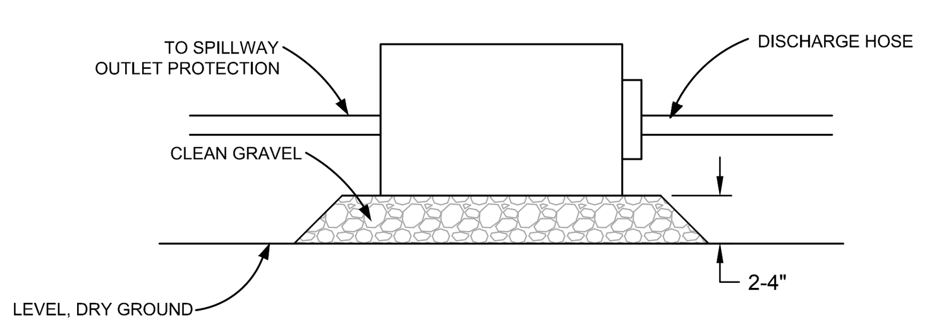


POROUS BAFFLE MAINTENANCE

1. INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. 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, AND REPLACE IF DAMAGED DURING CLEANOUT OPERATIONS. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.
4. AFTER CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.

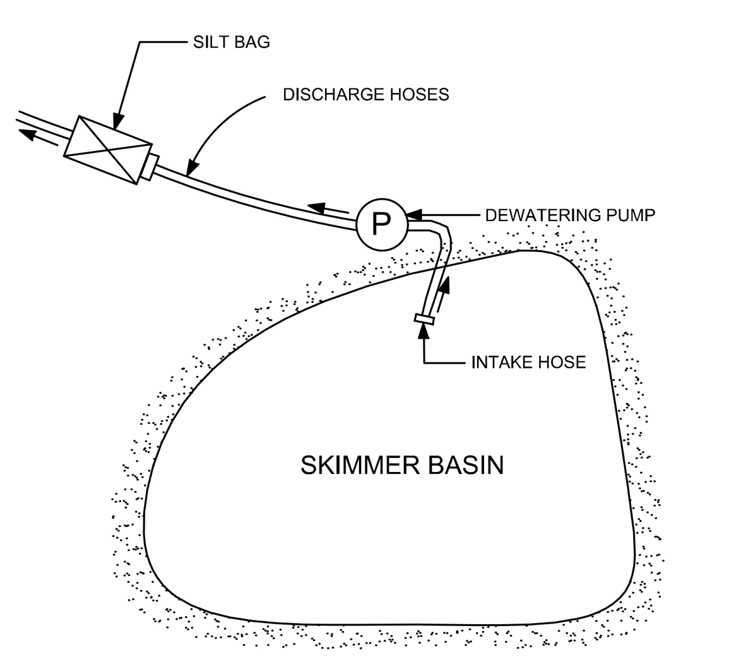
POROUS BAFFLES AND INSTALLATION

NOT TO SCALE



SILT BAG PROFILE VIEW

NOTE: REMOVE GRAVEL AND SEED WHEN PUMP AROUND OPERATION IS COMPLETED.



PLAN VIEW

NOTE: ESTIMATED MINIMUM PUMP SIZE NEEDED FOR BASE FLOW IS 2" PUMP. CONTRACTOR IS RESPONSIBLE FOR SIZING PUMP AND MAINTAINING WORK "IN THE DRY".

SILT BAG MAINTENANCE

1. INSPECT INLET PIPE AND BAG FOR DAMAGE AND BLOCKAGE.
2. REPLACE BAG WHEN 3/4 FULL OF SEDIMENT.

SKIMMER BASIN DEWATERING

NOT TO SCALE

Know what's below. Call before you dig.

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2	LOWER SITE 0.5'	07/16/19	BWH
1	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS	02/22/19	BWH
	REVISIONS	DATE	BY

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FIRST ISSUE DATE
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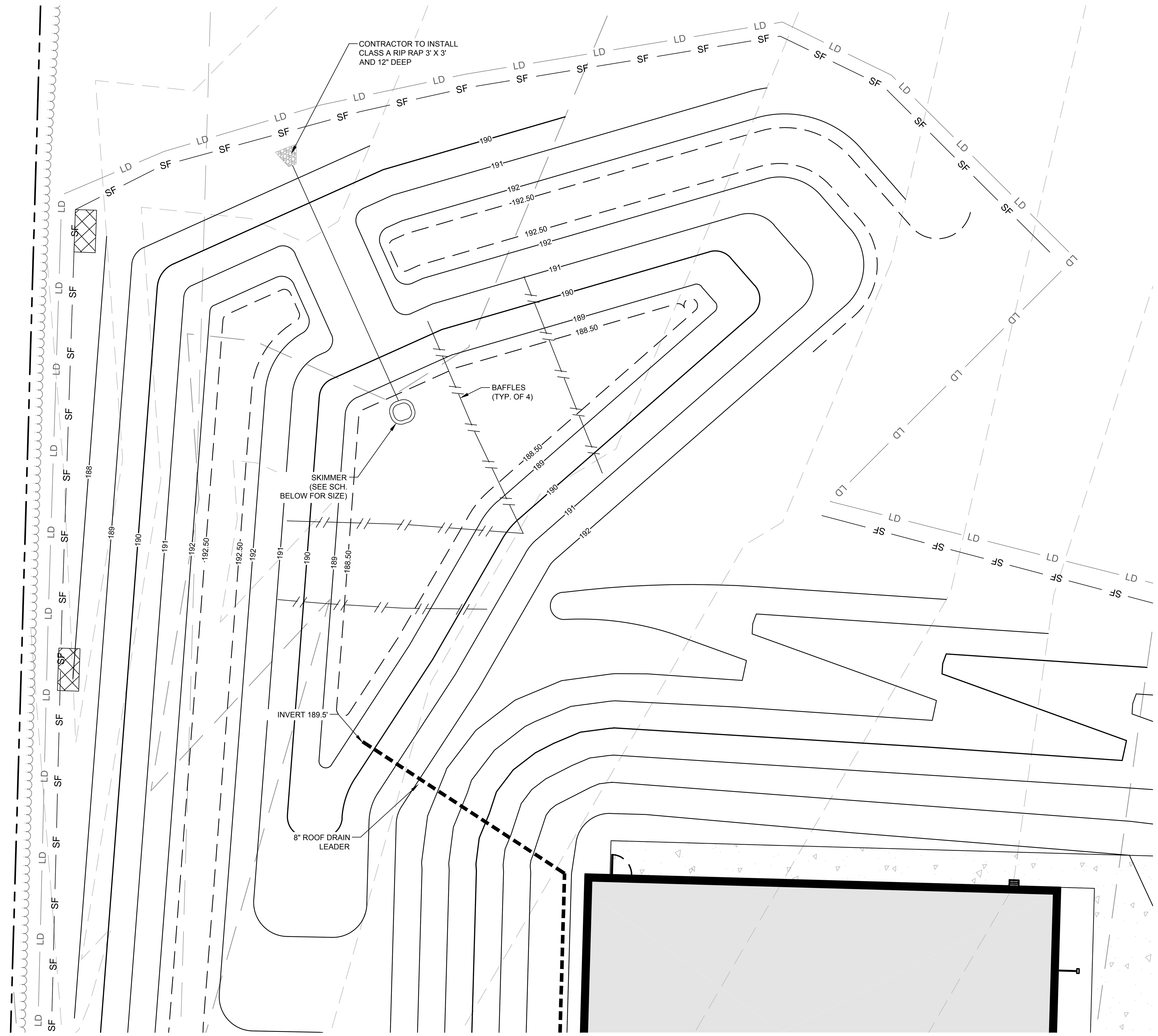
FUQUAY VARINA, NC 27526

SKIMMER BASIN STANDARD DETAILS

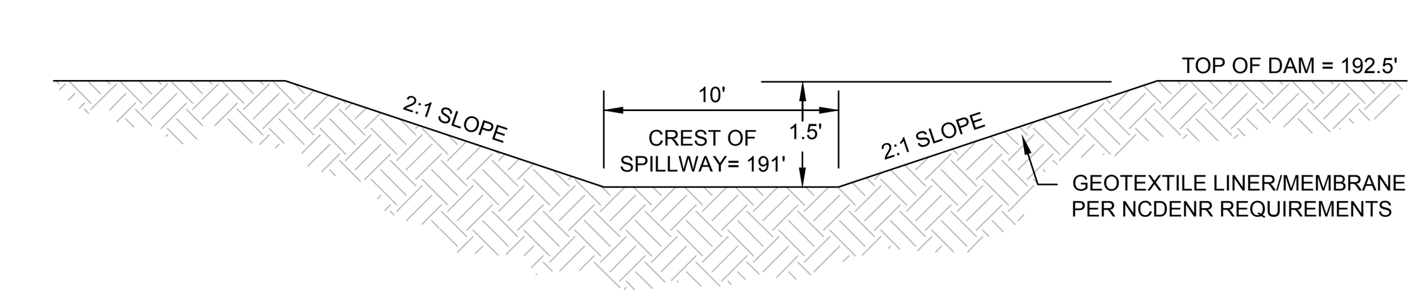
PROJECT NO.
18-0174
DRAWING NAME:
18-0174_D
SHEET NO.
D-4



SKIMMER BASIN

SCALE: 1"=10'

DOLLAR GENERAL CHALYBEATE SPRINGS		
SKIMMER BASIN SCHEDULE		
8/1/2018		
1. SKIMMER BASIN #1		
DRAINAGE AREA (acres):	1.77	
Q25: (CIA) 0.45*1.77 acres		
Q25 (cfs):	5.96	
BASIN INFORMATION	**REQUIRED**	**PROVIDED @ 191'**
SURFACE AREA (sf):	1939	3484
VOLUME (cf):	3186	5353
DEPTH (ft):	2	2.5
WEIR WIDTH (ft):		10
TOP BANK ELEV (ft):		192.5
BOTTOM TRAP ELEV (ft):		188.5
WEIR ELEV (ft):		191
DESIGN STORM ELEV (ft):		191.2
SKIMMER SIZE (in):	1.5	1.5
ORIFACE SIZE (diameter - in):	1.2	1.2
Baffle Spacing (Equidistant, ft):		Varies - Position Minimum of 2 Between Inflow and Skimmer
Basin Dewatering Time, days	2	3



SKIMMER BASIN EMERGENCY SPILLWAY

NOT TO SCALE

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

REV	DESCRIPTION	DATE	BY
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4			
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SKIMMER BASIN DETAILS

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DRAWING NAME:
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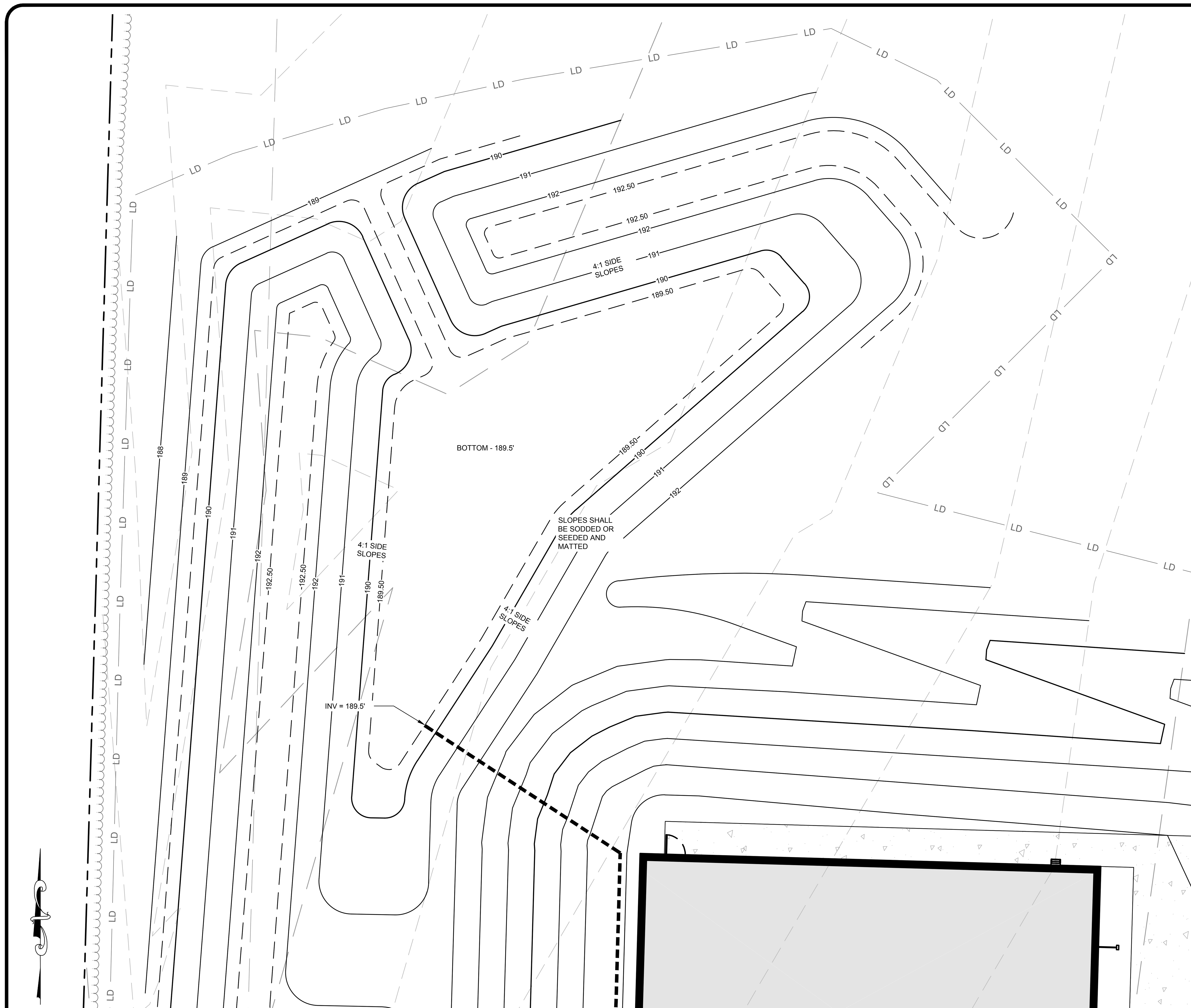
SHEET NO.
D-5



IF DEWATERING IS REQUIRED FOR PLANTING OR REPAIRS IT SHALL BE DONE WITH TEMPORARY PUMPS AND THE DISCHARGE SHALL BE INTO THE RIP RAP SPILLWAY APRON.

CONVERTED SKIMMER BASIN

SCALE: 1"=10'

DAM EMBANKMENT CONSTRUCTION STANDARDS:

1. CONTROLLED FILL, AS SPECIFIED BY THE GEOTECHNICAL ENGINEER, IN THE DAM EMBANKMENT SHALL BE PLACED IN 6-INCH LOOSE LAYERS (3-INCH LOOSE LAYERS WITHIN 3-FEET OF EITHER SIDE OF THE PRINCIPAL SPILLWAY PIPE TO A DEPTH OF 2-FEET OVER THE PIPE) AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF + OR - TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698.
2. ALL VISIBLE ORGANIC DEBRIS SUCH AS ROOTS AND LIMBS SHALL BE REMOVED FROM THE FILL MATERIAL PRIOR TO COMPACTION TO THE REQUIRED DENSITY. SOILS WITH ORGANIC MATTER CONTENT EXCEEDING 5% BY WEIGHT SHALL NOT BE USED. STONES GREATER THAN 3-INCH (IN ANY DIRECTION) SHALL BE REMOVED FROM THE FILL PRIOR TO COMPACTION.
3. FILL MATERIAL PLACED AT DENSITIES LOWER THAN SPECIFIED MINIMUM DENSITIES OR AT MOISTURE CONTENTS OUTSIDE THE SPECIFIED RANGES OR OTHERWISE NOT CONFORMING TO SPECIFIED REQUIREMENTS SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE MATERIALS.
4. ANY FILL LAYER THAT IS SMOOTH DRUM ROLLED TO REDUCE MOISTURE PENETRATION DURING A STORM EVENT SHALL BE PROPERLY SCARIFIED PRIOR TO THE PLACEMENT OF THE NEXT SOIL LIFT.
5. SURFACE WATER AND STREAM FLOW SHALL BE CONTINUOUSLY CONTROLLED THROUGHOUT CONSTRUCTION AND THE PLACEMENT OF CONTROLLED FILL.
6. FOUNDATION AREAS MAY REQUIRE UNDERCUTTING OF COMPRESSIBLE AND/OR UNSUITABLE SOILS IN ADDITION TO THAT INDICATED ON THE PLANS. ALL SUCH UNDERCUTTING SHALL BE PERFORMED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER AND SHALL BE MONITORED AND DOCUMENTED. IN NO CASE SHALL THERE BE AN ATTEMPT TO STABILIZE ANY PORTIONS OF THE FOUNDATION SOILS WITH CRUSHED STONE.
7. TREATMENT OF SEEPAGE AREAS, SUBGRADE PREPARATION, FOUNDATION DEWATERING AND ROCK FOUNDATION PREPARATION (I.E., TREATMENT WITH SLUSH GROUTING, DENTAL CONCRETE, ETC.) MAY BE REQUIRED AT THE DISCRETION OF THE GEOTECHNICAL ENGINEER. ALL SUCH ACTIVITIES SHALL BE CLOSELY MONITORED AND DOCUMENTED BY THE GEOTECHNICAL ENGINEER.
8. FILL ADJACENT TO THE RISER AND PRINCIPAL SPILLWAY PIPE SHALL BE PLACED SO THAT LIFTS ARE AT THE SAME LEVEL ON BOTH SIDES OF THE STRUCTURES.
9. EARTHWORK COMPACTION WITHIN 3-FEET OF ANY STRUCTURES SHALL BE ACCOMPLISHED BY MEANS OF HAND TAMPERS, MANUALLY DIRECTED POWER TAMPERS OR PLATE COMPACTORS OR MINIATURE SELF-PROPELLED ROLLERS.
10. COMPACTION BY MEANS OF DROP WEIGHTS FROM A CRANE OR HOIST SHALL NOT BE PERMITTED.
11. HEAVY EQUIPMENT SHALL NOT BE ALLOWED TO PASS OVER CAST-IN-PLACE STRUCTURES (INCLUDING THE CRADLE) UNTIL ADEQUATE CURING TIME HAS ELAPSED.
12. TO RE-ESTABLISH VEGETATION AFTER CONSTRUCTION, A 2- TO 3- INCH LAYER OF TOPSOIL SHALL BE PLACED ON THE DISTURBED EMBANKMENT SURFACE AND THE AREA SEEDED AND SODDED OR HYDROSEEDED.

SEDIMENT TRAP CONVERSION CONSTRUCTION SE UENCE:

AT THE COMPLETION OF CONSTRUCTION THE SEDIMENT TRAP SHALL BE CONVERTED INTO A PERMANENT STRUCTURE. THE FOLLOWING STEPS SHALL BE FOLLOWED:

1. DEWATER THE BASIN THROUGH SEDIMENT BAG
2. BAG SHALL DISCHARGE INTO A STABLE AGGREGATE DISSIPATOR PAD OR A DENSELY VEGETATED AREA.
3. REMOVE DEPOSITED SEDIMENT AND PROPERLY DISPOSE OF OFF-SITE
4. ADJUST GRADES AS NECESSARY TO MATCH PLANS
5. AS-BUILT CONDITIONS SHOULD BE VERIFIED PRIOR TO PLANTING TO ENSURE SIZE, SLOPES, ETC. ARE ADEQUATE.
6. INSTALL 3-4" OF TOPSOIL TO INTERIOR SLOPES, FERTLIZE, LIME, AND EITHER SOD OR SEED AND MAT
7. WATER GRASS AS NECESSARY TO HELP ESTABLISHMENT. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING HEALTHY STAND OF GRASS

Know what's below. Call before you dig.

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CONSTRUCTION DRAWINGS
FUQUAY VARINA DOLLAR GENERAL
U.S. 401 NORTH
FUQUAY VARINA, NC 27526

CONVERTED SKIMMER BASIN DETAILS

PROJECT NO.
18-0174
DRAWING NAME:
18-0174_D
SHEET NO.
D-6

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
• 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	• 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

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

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. 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

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. 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.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

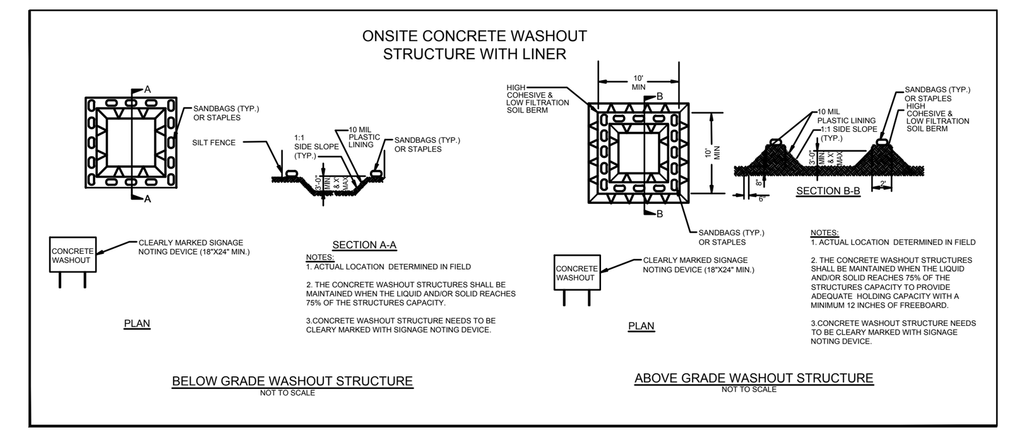
1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled,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

PORTABLE TOILETS

1. 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.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. 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

1. 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.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. 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

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. 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.
3. 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.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

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

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those un-attended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

(a) This General Permit as well as the Certificate of Coverage, after it is received.

(b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:

- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***Within 24 hours***, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***A report at least ten days before the date of the bypass, if possible***. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days,*** a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

	REVISIONS	DATE	BY
7			
6			
5			
4			
3			
2	LOWER SITE 0.5'	07/16/19	BWH
1	REVISE PER COUNTY, PUBLIC WORKS AND DOT COMMENTS	02/22/19	BWH

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FIRST ISSUE DATE
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EPA STORMWATER REQUIREMENTS

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D-7