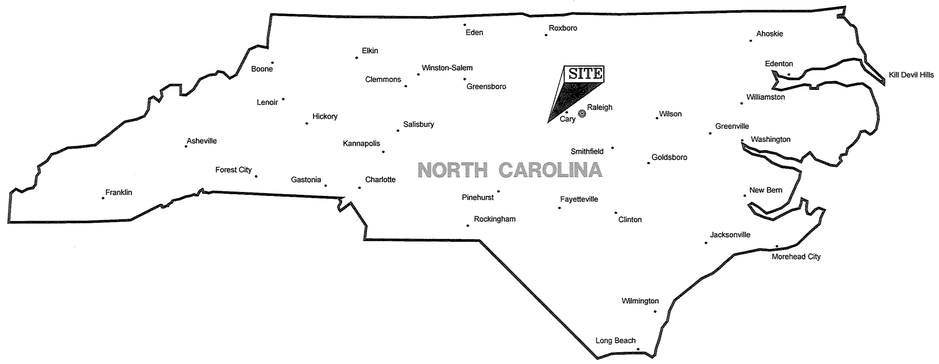
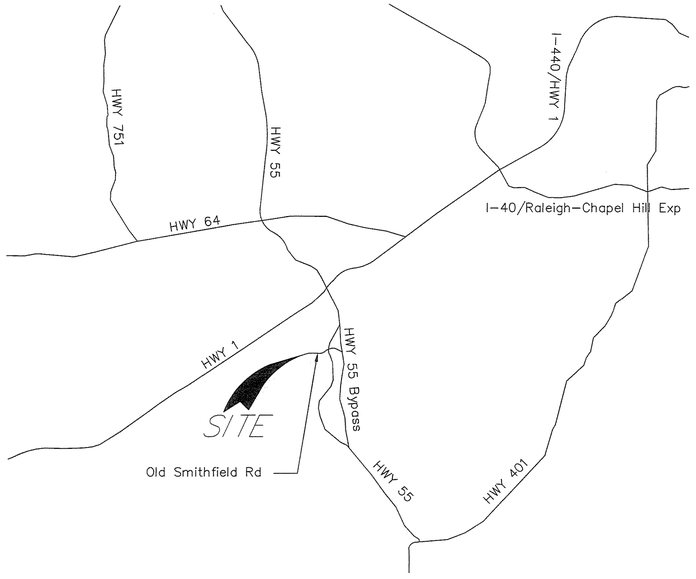


VICINITY MAP
N.T.S.
NORTH



LOCATION MAP
N.T.S.
NORTH

PHASE 1 AND 2 CLOSURE MODIFICATION FOR CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL AND LARGE TYPE 1 SOLID WASTE COMPOST AND REPROCESSING FACILITY NO. 92-30-CDLF

owner:

HIGHWAY 55 C&D LANDFILL, LLC.

operator:

GREENWAY WASTE SOLUTIONS OF APEX, LLC

5940 OLD SMITHFIELD ROAD
APEX, NC 27539

LIST OF DRAWINGS

C000	COVER SHEET
C100	EXISTING SITE CONDITIONS
C200	PROPOSED LANDFILL CLOSURE GRADING PLAN
C300	PROPOSED LANDFILL CLOSURE DRAINAGE BASIN MAP
C400	DETAILS

OWNER/DEVELOPER:

GREENWAY WASTE SOLUTIONS OF APEX, LLC
19109 WEST CATAWBA AVE.
SUITE 200
CORNELIUS, NC 28031-5614
CONTACT: JOHN BROWN
PHONE: 919.795.0599

NORTH CAROLINA BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS LICENSE NO. C-3035

NORTH CAROLINA PROFESSIONAL SEAL 026435 ENGINEER SCOTT L. BROWN
7-21-14

SUBMITTAL & REVISION RECORD

NO	DATE	DESCRIPTION

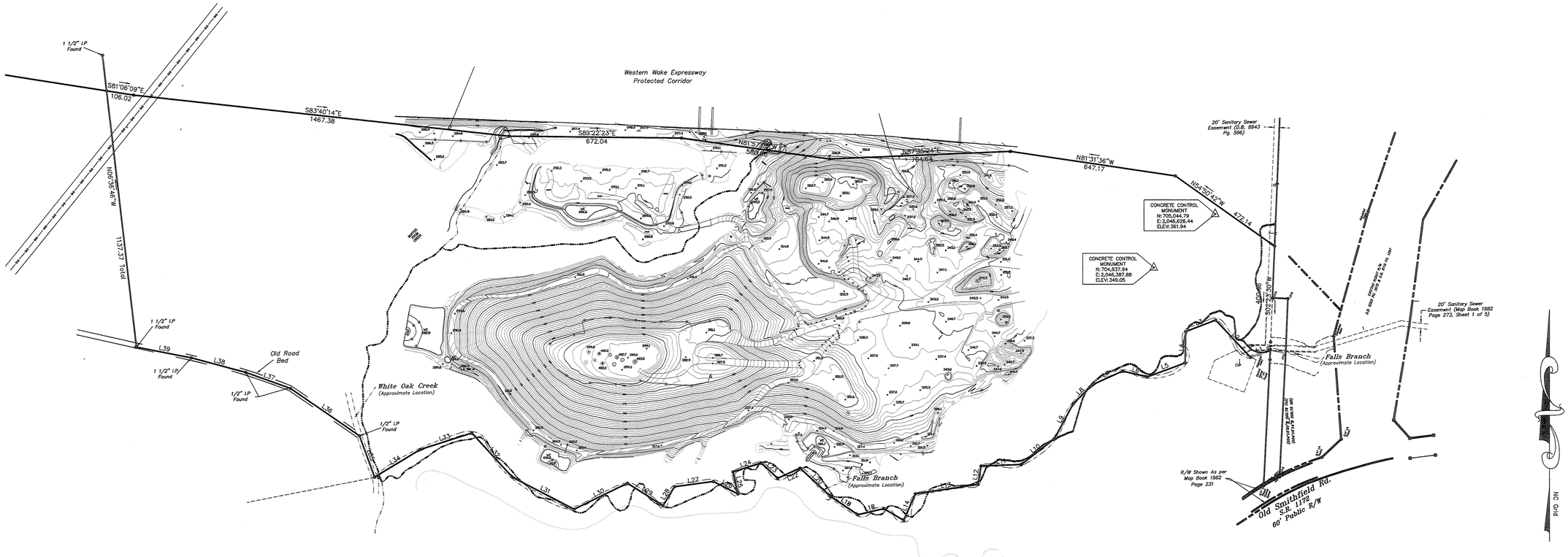
Civil & Environmental Consultants, Inc.
1900 Center Park Drive - Suite A - Charlotte, NC 28217
Ph: 980.237.0373 - Fax: 980.237.0372
www.cecinc.com

GREENWAY WASTE SOLUTIONS OF APEX, LLC. HWY 55 C&D LANDFILL, LLC.
PHASE 1 AND 2 CLOSURE MODIFICATION PLAN
5940 OLD SMITHFIELD ROAD APEX, NC

COVER SHEET

DATE:	JULY 2014	DRAWN BY:	TMG
DWG SCALE:	N.T.S.	CHECKED BY:	NTB
PROJECT NO:			111-370.003
APPROVED BY:			SLB

DRAWING NO.: C000
SHEET 1 OF 5



County of Wake
Deed Bk: 2272 Pg: 678

LINE TABLE		
LINE	LENGTH	BEARING
L1	82.95	S69°04'26"W
L2	197.13	N43°14'02"W
L3	125.20	S69°14'46"W
L4	120.77	S00°48'46"W
L5	156.46	S69°42'27"W
L6	99.08	N76°50'37"W
L7	127.19	S65°48'50"W
L8	104.40	S45°57'35"W
L9	155.68	S28°28'04"W
L10	162.59	S52°26'45"W
L11	156.63	S87°55'40"W
L12	72.11	S08°53'46"W
L13	246.55	S81°30'48"W
L14	112.16	S23°58'09"W
L15	104.07	S76°53'03"W
L16	104.07	S76°53'03"W
L17	104.07	S76°53'03"W
L18	128.16	N56°10'48"W
L19	128.16	N56°10'48"W
L20	160.15	N47°22'08"W
L22	95.59	S65°28'28"W
L23	87.66	N46°48'28"W
L24	114.69	S72°32'09"W
L25	87.05	S12°12'19"E
L26	106.40	N63°15'10"W
L27	152.16	S82°24'23"W
L28	85.70	S31°27'32"W
L29	163.19	N57°57'30"W
L30	238.69	S64°14'29"W
L31	269.37	N62°42'46"W
L32	233.34	N42°41'42"W
L33	210.49	S72°20'28"W
L34	206.57	S59°11'54"W
L35	169.59	N20°10'59"W
L36	325.79	N55°28'04"W
L37	183.82	N70°27'18"W
L38	219.38	N74°59'27"W
L39	217.53	N78°57'55"W

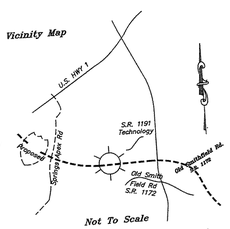
1) This property may be subject to any easements and/or Rights-of-way of record.

2) Area by coordinate method.

3) PREPARED BY PHOTOGRAMMETRIC METHODS USING AERIAL PHOTOGRAPHY DATED: JUNE 1, 2013
GROUND CONTROL SURVEYS BY PATTERSON LAND SURVEYING, PA. MORRESVILE, N.C.
HORIZONTAL CONTROL SURVEYS BASED ON NORTH CAROLINA STATE PLANE NAD83
VERTICAL CONTROL SURVEYS BASED ON NAVD88
ALL AREAS OF DASHED CONTOURS MAY NOT MEET NATIONAL MAP ACCURACY STANDARDS AND SHOULD BE FIELD VERIFIED
PROJECT # 312012722 APEX LANDFILL

LEGEND

R/W = Right-of-way
I.P.S. = #4 Rebar Set
= Not to scale
= Telephone Pedestal
= Utility Pole
= Cable Pedestal
= Water Meter



GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

CONTOUR INTERVAL: 2 FEET

Land Surveying by:
PATTERSON LAND SURVEYING, PA
C-3390
P.O. Box 5010, Mooresville, NC 28117
704/361-0415 * Fax 704/528-4038

JOB NAME:
AERIAL TOPOGRAPHICAL SURVEY
OF
Highway 55 C & D Landfill, LLC.

LOCATION: Holly Springs Township, Wake County, N.C.
Tax Parcel Number:740-02-55-8687

OWNERS:
C & D Management Company, LLC
19141 West Catawba Ave.
Cornelius, NC 28031

DRAWN BY: JHP | CHECKED BY: JHP
SCALE: 1" = 200'
DATE OF FIELD SURVEY: JUNE, 2013
DATE OF MAP: JULY 9, 2013
JOB NUMBER 10006/AerialTopo | SHEET NUMBER

SUBMITTAL & REVISION RECORD

NO	DATE	DESCRIPTION

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1900 Center Park Drive - Suite A - Charlotte, NC 28217
Ph: 980.237.0373 - Fax: 980.237.0372
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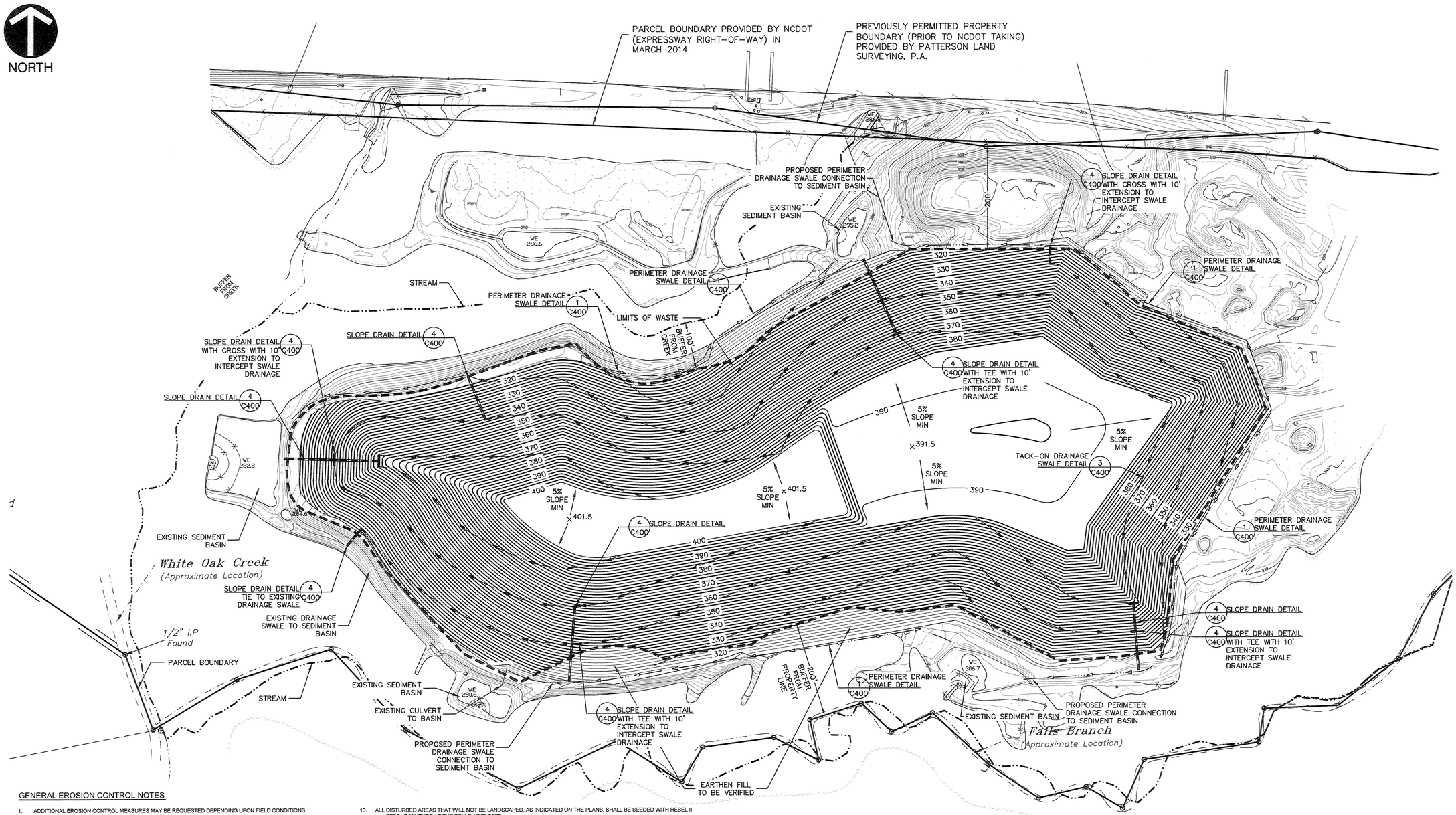
GREENWAY WASTE SOLUTIONS OF APEX, LLC: HWY 55 C&D LANDFILL, LLC.
PHASE 1 AND 2 CLOSURE
MODIFICATION PLAN
5940 OLD SMITHFIELD ROAD APEX, NC

EXISTING SITE CONDITIONS

DATE: JULY 2014 | DRAWN BY: TMG
DWG SCALE: 1"=200' | CHECKED BY: MTB
PROJECT NO: 111-370.003
APPROVED BY: SLB

DRAWING NO.: C100
SHEET 2 OF 5

P:\2011\111-370\~DOD\003\Dwg\Phase1and 2Permit\111-370.003_PhaseI_ModificationA1.14.dwg(100-ESTI LS(7/8/2014 - robertsu) - LP: 7/21/2014 10:37 AM



GENERAL EROSION CONTROL NOTES

1. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUESTED DEPENDING UPON FIELD CONDITIONS.
2. ON-SITE BURIAL PITS REQUIRE AN ON-SITE DEMOLITION LANDFILL PERMIT.
3. ANY ADDITIONAL CLEARING OR GRADING REQUIRED FOR STOCKPILES OR BURIAL PITS WILL BE COORDINATED IN THE FIELD WITH THE EROSION CONTROL OFFICER WHO WILL DETERMINE APPROPRIATE EROSION CONTROL MEASURES FOR SAME.
4. ALL EXISTING CONTOURS SHOWN ON PLAN ARE AT 2' INTERVALS AND ALL PROPOSED CONTOURS SHOWN ON PLAN ARE AT 2' CONTOUR INTERVALS.
5. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS. ALL GRADED SLOPES SHOULD HAVE GROUNDCOVER PROVIDED ON EXPOSED GRADED SLOPES STEEPER THAN 3:1 AND HIGH QUALITY WATER ZONES (HQW) WITHIN 7 CALENDAR DAYS; SLOPES THAT ARE 3:1 OR FLATTER MUST ESTABLISH GROUNDCOVER WITHIN 14 CALENDAR DAYS.
6. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE TOWN EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
7. CONTRACTOR TO INSTALL SILT FENCE FOR SITE GRADING WHERE NO ADEQUATE EROSION CONTROL MEASURES HAVE BEEN PROVIDED OR IN LOCATIONS WHERE CONDITIONS ARE NOT AS THEY APPEAR ON THESE PLANS.
8. INSTALL MATTING AND SEED ALL PROPOSED CHANNELS AS SOON AS THE CHANNELS HAVE BEEN CUT.
9. ANY GRADING BEYOND THE DENUDED LIMITS, SHOWN ON THE PLAN IS A VIOLATION OF THE TOWN EROSION CONTROL ORDINANCE, AND IS SUBJECT TO A FINE.
10. ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE TOWN ENGINEERING DEPARTMENT.
11. SLOPES SHALL BE GRADED NO STEEPER THAN 2:1.
12. SEEDBED PREPARATION - APPLY GROUND AGRICULTURAL LIMESTONE AT A RATE OF 1 TO 1 1/2 TONS/ACRE ON COARSE-TEXTURED SOILS AND 2-3 TONS/ACRE ON FINE-TEXTURED SOILS. APPLY LIMESTONE UNIFORMLY AND INCORPORATE INTO THE TOP 4-6 INCHES OF SOIL. APPLY A 10-10-10 GRADE FERTILIZER AT 700-1,000 LB/ACRE. FERTILIZER SHOULD BE INCORPORATED INTO THE TOP 4-6 INCHES OF SOIL. IF A HYDRAULIC SEEDER IS USED, DO NOT MIX SEED AND FERTILIZER MORE THAN 30 MINUTES BEFORE APPLICATION.
13. ALL DISTURBED AREAS THAT WILL NOT BE LANDSCAPED, AS INDICATED ON THE PLANS, SHALL BE SEEDED WITH REBEL II FESCUE MIXTURE AT THE FOLLOWING RATE:
    FESCUE AT 5-6 LBS/1000 S.F.
    10-10-10 FERTILIZER AT 20 LBS/1000 S.F.
    LIME AT 100 LBS/1000 S.F.
    STRAW MULCH AT 1 1/2 BALES/1000 S.F.

    113A-57. MANDATORY STANDARDS FOR LAND-DISTURBING ACTIVITY.
14. NO LAND-DISTURBING ACTIVITY DURING PERIODS OF CONSTRUCTION OR IMPROVEMENT TO LAND SHALL BE PERMITTED IN PROXIMITY TO A LAKE OR NATURAL WATERCOURSE UNLESS A BUFFER ZONE IS PROVIDED ALONG THE MARGIN OF THE WATERCOURSE OF SUFFICIENT WIDTH TO CONFINE VISIBLE SILTATION WITHIN THE TWENTY-FIVE PERCENT (25%) OF THE BUFFER ZONE NEAREST THE LAND-DISTURBING ACTIVITY. WATERS THAT HAVE BEEN CLASSIFIED AS TROUT WATERS BY THE ENVIRONMENTAL MANAGEMENT COMMISSION SHALL HAVE AN UNDISTURBED BUFFER ZONE 25 FEET WIDE OR OF SUFFICIENT WIDTH TO CONFINE VISIBLE SILTATION WITHIN THE TWENTY-FIVE PERCENT (25%) OF THE BUFFER ZONE NEAREST THE LAND-DISTURBING ACTIVITY, WHICHEVER IS GREATER. PROVIDED, HOWEVER, THAT THE SEDIMENTATION CONTROL COMMISSION MAY APPROVE PLANS WHICH INCLUDE LAND-DISTURBING ACTIVITY ALONG TROUT WATERS WHEN THE DURATION OF SAID DISTURBANCE WOULD BE TEMPORARY AND THE EXTENT OF SAID DISTURBANCE WOULD BE MINIMAL. THIS SUBDIVISION SHALL NOT APPLY TO A LAND-DISTURBING ACTIVITY IN CONNECTION WITH THE CONSTRUCTION OF FACILITIES TO BE LOCATED ON, OVER, OR UNDER A LAKE OR NATURAL WATERCOURSE.
15. THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE WHICH CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES, IN ANY EVENT, SLOPES STEEPER THAN 3:1 AND HIGH QUALITY WATER ZONES (HQW) MUST ESTABLISH GROUND COVER WITHIN 7 CALENDAR DAYS; SLOPES THAT ARE 3:1 OR FLATTER MUST ESTABLISH GROUNDCOVER WITHIN 14 CALENDAR DAYS, OR BE PLANTED OR OTHERWISE PROVIDED WITH GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.
16. WHENEVER LAND-DISTURBING ACTIVITY IS UNDERTAKEN ON A TRACT COMPRISING MORE THAN ONE ACRE, IF MORE THAN ONE ACRE IS UNCOVERED, THE PERSON CONDUCTING THE LAND-DISTURBING ACTIVITY SHALL INSTALL SEDIMENTATION AND EROSION CONTROL DEVICES AND PRACTICES AS ARE SUFFICIENT TO RETAIN THE SEDIMENT GENERATED BY THE LAND-DISTURBING ACTIVITY WITHIN THE BOUNDARIES OF THE TRACT DURING CONSTRUCTION UPON AND DEVELOPMENT OF SAID TRACT, AND SHALL PLANT OR OTHERWISE PROVIDE A PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION AFTER COMPLETION OF CONSTRUCTION OR DEVELOPMENT, GRADED SLOPES STEEPER THAN 3:1 AND HIGH QUALITY WATER ZONES (HQW) MUST ESTABLISH GROUND COVER WITHIN 7 CALENDAR DAYS; SLOPES THAT ARE 3:1 OR FLATTER MUST ESTABLISH GROUNDCOVER WITHIN 14 CALENDAR DAYS.
17. NO PERSON SHALL INITIATE ANY LAND-DISTURBING ACTIVITY ON A TRACT IF MORE THAN ONE ACRE IS TO BE UNCOVERED UNLESS, 30 OR MORE DAYS PRIOR TO INITIATING THE ACTIVITY, AN EROSION AND SEDIMENTATION CONTROL PLAN FOR SUCH ACTIVITY IS FILED WITH THE AGENCY HAVING JURISDICTION. THE AGENCY HAVING JURISDICTION SHALL FORWARD TO THE DIRECTOR OF THE DIVISION OF WATER QUALITY A COPY OF EACH EROSION AND SEDIMENTATION CONTROL PLAN FOR A LAND-DISTURBING ACTIVITY THAT INVOLVES THE UTILIZATION OF DITCHES FOR THE PURPOSE OF DE-WATERING OR LOWERING THE WATER TABLE OF THE TRACT.

GENERAL NOTES

1. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND APPROVALS PRIOR TO COMMENCING WORK.
2. ANY CONFLICTS BETWEEN THESE PLANS AND THE PERMIT DRAWINGS SHOULD BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER (OLVER INCORPORATED).
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO COMMENCING WORK.
4. CONDITIONS AT THE SITE, FOR PURPOSE OF THIS WORK, MAY VARY FROM THOSE SHOWN AND ARE THE RESPONSIBILITY OF THE CONTRACTOR TO INCORPORATE THE ACTUAL EXISTING CONDITIONS IN THE EXECUTION OF THE WORK.
5. THE CONTRACTOR SHALL NOT BLOCK WASTE HAULING OR OTHER LANDFILL OPERATIONS.
6. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SITE SAFETY ASSOCIATED WITH THE WORK UNDER THIS CONTRACT AND FOR COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL HEALTH AND SAFETY LAWS, CODES, REGULATIONS AND ORDINANCES INCLUDING BUT NOT LIMITED TO THOSE MANDATED BY OSHA.
7. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE LOCATION OF ALL UTILITIES PRIOR TO BEGINNING WORK.
8. THE CONTRACTOR SHALL RESTORE TO THE OWNERS SATISFACTION ALL AREAS DISTURBED BY CONSTRUCTION; INCLUDING ROADWAY SURFACES, ROADWAY SHOULDERS AND DITCHES, DRAINAGE STRUCTURES, UTILITIES AND OTHER EXISTING FEATURES.
9. THE CONTRACTOR IS RESPONSIBLE FOR DEWATERING (IF REQUIRED) ALL EXCAVATION, FILL AREAS, ETC. TO WORK IN DRY CONDITIONS. EXCESS EXCAVATED MATERIALS FROM THE WORK SHALL BE STOCKPILED IN THE AREA DESIGNATED AND STABILIZED.
10. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND AVOIDING DAMAGE TO ALL MONITORING WELLS. IN THE EVENT OF DAMAGE, THE CONTRACTOR WILL PAY FOR WELL REPLACEMENT.

LEGEND

	EXISTING	NEW
CONTOURS (2')		
CONTOURS (10')	90	400
EDGE OF ROAD		N/A
PROPERTY LINE		N/A
LIMITS OF WASTE	N/A	
TACK-ON DRAINAGE SWALE	N/A	
PERIMETER DRAINAGE SWALE	N/A	
SLOPE DRAIN	N/A	

SCALE IN FEET
0 100 200

NORTH CAROLINA BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS LICENSE NO. C-3035

NORTH CAROLINA PROFESSIONAL SEAL 026435 ENGINEER SCOTT L. BROWN
7-21-14

SUBMITTAL & REVISION RECORD

NO.	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
1900 Center Park Drive - Suite A - Charlotte, NC 28217
Ph: 980.237.0373 - Fax: 980.237.0372
www.ceiinc.com

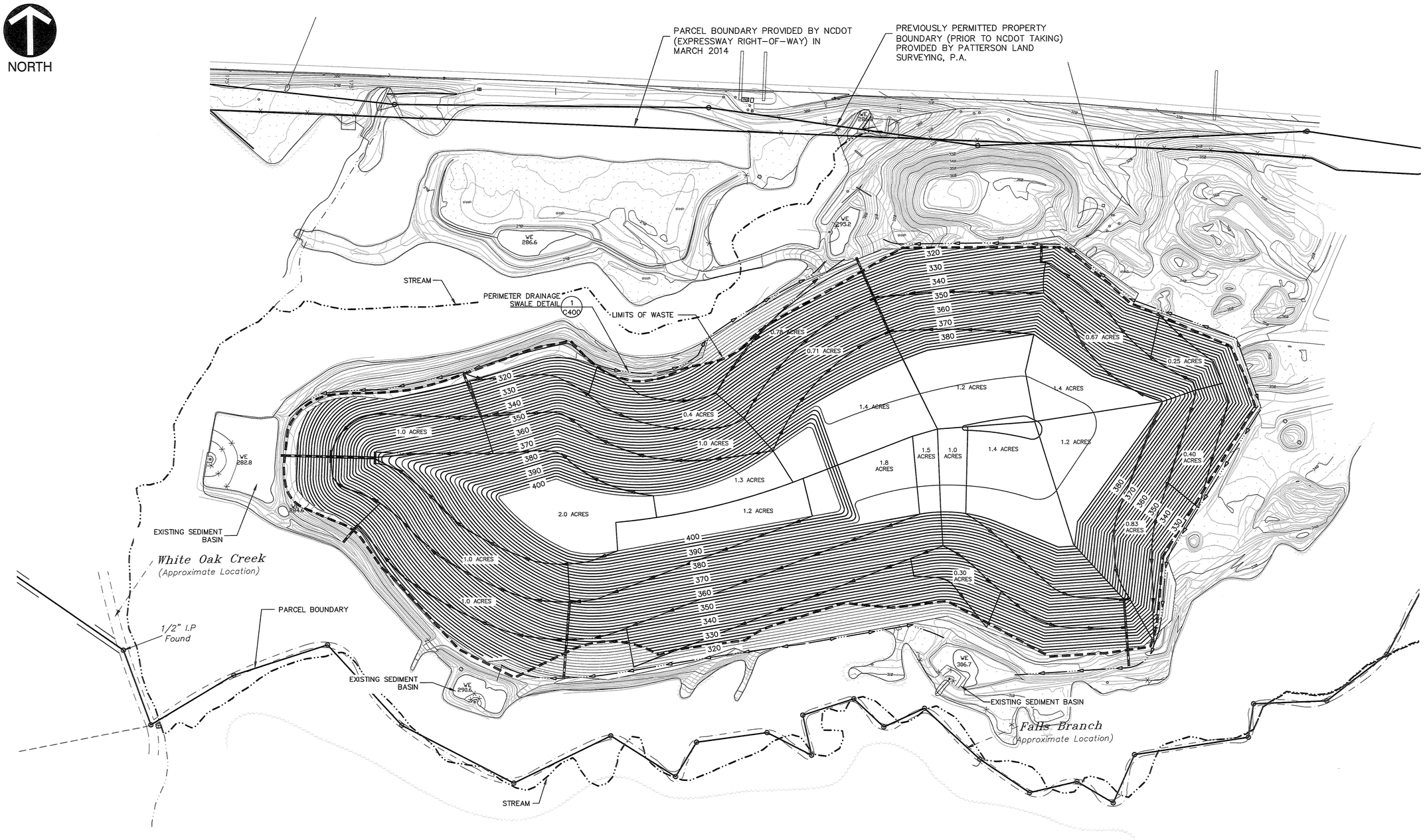
GREENWAY WASTE SOLUTIONS OF APEX, LLC. HWY 55 C&D LANDFILL, LLC.
PHASE 1 AND 2 CLOSURE
MODIFICATION PLAN
5940 OLD SMITHFIELD ROAD APEX, NC

PROPOSED LANDFILL CLOSURE
GRADING PLAN

DRAWN BY:	TMG
DATE:	JULY 2014
CHECKED BY:	NTB
DWG SCALE:	1" = 100'
PROJECT NO:	111-370.003
APPROVED BY:	SLB

DRAWING NO.: C200
SHEET 3 OF 5

P:\2011\111-370\1-CAD\1003\Dwg\Phase Ind 2Permit\Rev1\111-370.003J_Phase1_Modification3.14.dwg[200-C][5/28/2014 LS] LS(18/28/2014 - mbarlow) - LP, 7/21/2014 10:38 AM



County of Wake
Deed Bk: 2272 Pg: 678

LEGEND

	EXISTING	NEW
CONTOURS (2')		
CONTOURS (10')	90	400
EDGE OF ROAD		N/A
PROPERTY LINE		N/A
LIMITS OF WASTE	N/A	
TACK-ON DRAINAGE SWALE	N/A	
TYPE 2 DRAINAGE SWALE	N/A	
SLOPE DRAIN	N/A	

SCALE IN FEET
0 100 200

NORTH CAROLINA BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS LICENSE NO. C-3035

NORTH CAROLINA PROFESSIONAL SEAL 026435 ENGINEER SCOTT L. BROWN
7-21-14

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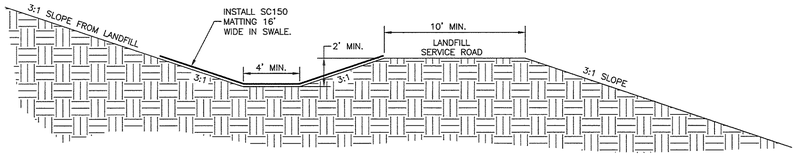
PHASE 1 AND 2 CLOSURE
MODIFICATION PLAN
5940 OLD SMITHFIELD ROAD APEX, NC

PROPOSED LANDFILL CLOSURE DRAINAGE BASIN MAP

DATE:	JULY 2014	DRAWN BY:	TMG
DWG SCALE:	1"=100'	CHECKED BY:	NTB
PROJECT NO:			111-370.003
APPROVED BY:			SLB

DRAWING NO.: C300
SHEET 4 OF 5



NOTE:

1. PERIMETER DRAINAGE SWALE CHANNEL SHOULD BE PROPERLY LINED WITH NA GREEN SC150 EROSION CONTROL MATTING. MATTING AND INSTALLATION SHOULD MEET MANUFACTURERS SPECIFICATIONS AND ALL REQUIREMENTS SET FORTH IN THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

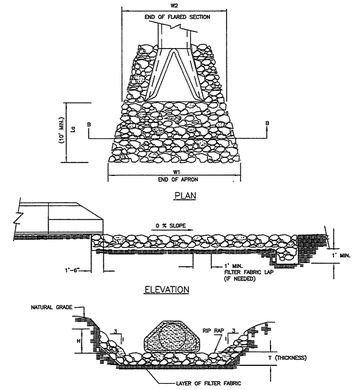
2. LONGITUDINAL SLOPE OF SWALE NOT TO EXCEED 5%.

3. VEGETATE SWALE IMMEDIATELY AFTER SWALE CONSTRUCTION IS COMPLETED AND MATTING IS INSTALLED.

4. INSPECT SWALES IN ACCORDANCE WITH NCDENR REQUIREMENTS.

1/C200 1/C300 PERIMETER DRAINAGE SWALE DETAIL

NOT TO SCALE



NOTES:

1. CLASS OR MEDIAN SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER AND ARE SUMMARIZED BELOW.

2. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.

3. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.

4. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1.

5. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.

6. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.

7. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.

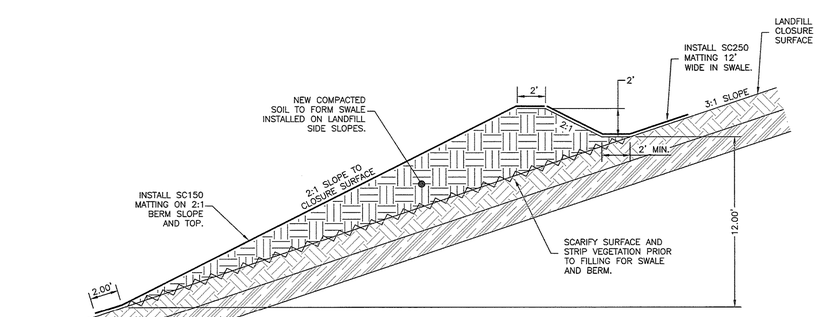
8. FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.

9. ANY DISTURBED AREA FROM END OF APRON TO RECEIVING CHANNEL MUST BE STABILIZED.

OUTLET	Lo	W1	W2	T	H	d_{50}	d_{MAX}
SLOPE DRAIN OUTLET	14 FT	16 FT	6 FT	14 IN.	6 IN.	6 IN.	9 IN.

2/C400 OUTLET PROTECTION DETAIL

NOT TO SCALE



NOTE:

1. TACK-ON DRAINAGE SWALE CHANNEL SHOULD BE PROPERLY LINED WITH NA GREEN SC250 EROSION CONTROL MATTING. TACK-ON DRAINAGE SWALE BERM AND OUTSIDE SLOPE SHOULD BE PROPERLY LINED WITH NA GREEN SC150. MATTING AND INSTALLATION SHOULD MEET MANUFACTURERS SPECIFICATIONS AND ALL REQUIREMENTS SET FORTH IN THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

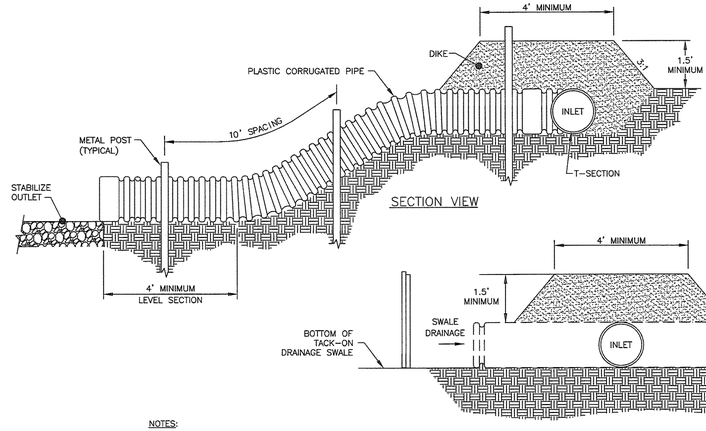
2. LONGITUDINAL SLOPE OF SWALE NOT TO EXCEED 10%.

3. VEGETATE SWALE, SLOPE AND BERM IMMEDIATELY AFTER SWALE CONSTRUCTION IS COMPLETED AND MATTING IS INSTALLED.

4. INSPECT SWALES IN ACCORDANCE WITH NCDENR REQUIREMENTS.

3/C200 TACK-ON DRAINAGE SWALE DETAIL

NOT TO SCALE



NOTES:

1. TEMPORARY DIVERSION: GENERALLY, USE AN EARTHEN DIVERSION WITH A DIKE RIDGE TO DIRECT SURFACE RUNOFF INTO THE TEMPORARY SLOPE DRAIN. MAKE THE HEIGHT OF THE RIDGE OVER THE DRAIN CONDUIT A MINIMUM OF 1.5 FEET AND AT LEAST 6 INCHES HIGHER THAN THE ADJOINING RIDGE ON EITHER SIDE. THE LOWEST POINT OF THE DIVERSION RIDGE SHOULD BE A MINIMUM OF 1 FOOT ABOVE THE TOP OF THE DRAIN SO THAT DESIGN FLOW CAN FREELY ENTER THE PIPE.

2. OUTLET PROTECTION: PROTECT THE OUTLET OF THE SLOPE DRAIN FROM EROSION, SEE OUTLET PROTECTION DETAIL 2/C400.

3. PIPE TO BE 24" HDPE.

4/C200 SLOPE DRAIN DETAIL

NOT TO SCALE

NORTH CAROLINA BOARD OF EXAMINERS FOR ENGINEERS AND SURVEYORS LICENSE NO. C-3035

NORTH CAROLINA PROFESSIONAL SEAL 026935 ENGINEER SCOTT L. BROWN

7-21-14

SUBMITTAL & REVISION RECORD

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PHASE 1 AND 2 CLOSURE
MODIFICATION PLAN
5940 OLD SMITHFIELD ROAD APEX, NC

DETAILS

DATE:	JULY 2014
DWG SCALE:	N.T.S.
PROJECT NO:	111-370.003
DRAWN BY:	TMG
CHECKED BY:	MTB
APPROVED BY:	SLB

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SHEET 5 OF 5

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