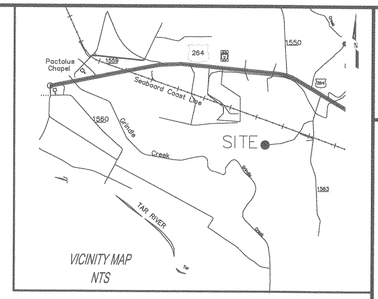
C&D Landfill, Inc.

C&D Landfill - Phase 2

Pitt County, North Carolina



OWNER - DEVELOPER

C & D LANDFILL, INC.
802 Recycling Lane
Greenville, NC 27834

VOICE (252) 752-8274
FAX (252) 752 9016

ENGINEER:

JOHN A.K. TUCKER, PE
CONSULTING ENGINEER
PO BOX 297
FUQUAY VARINA, NC 27526

VOICE (919) 567-0483
FAX (919) 567-3611

GENERAL NOTES:

1. Boundary, topographic and wetland information take from maps prepared by James A. Burgess, PLS, P.O. Box 881, Greenville, NC 27834, 252-758-4900
2. All work shall be in accordance with applicable Federal, State and Local regulations.
3. Contractor shall at all times maintain adequate safety measures , activities, and barricades, for the protection of all persons on or about the site.
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LEGEND

EXIST GROUND 18
GROUND WATER 18
PROPSED GRADE 18
DIVERSION BERM
SILT FENCE
WETLANDS
FLOOD ZONE

PRELIMINARY
NOT FOR
CONSTRUCTION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 19641 JOHN A.K. TUCKER

February 18, 2008

John A. K. Tucker, P.E.
Consulting Engineer
P.O. Box 297 Fuquay-Varina, North Carolina 27526
(919) 567-0483 fax (919) 567-3611
Email: johnak@johntuckerpe.com

C & D LANDFILL, INC.
802 Recycling Lane
Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
COVERSHEET

REVISIONS

COVER

ATTACHMENT 2

11-3-08

POTENTIAL SOURCES OF GROUNDWATER CONTAMINATION

1. GAS STATION - US 264 & NC 30
2. LUMBER DRYING YARD
3. SOLID WASTE CONVENIENCE CENTER - SECOND ST. (PACTOLUS)
4. AUTO WRECKING YARD - US 264
5. AUTO WRECKING YARD - GRIMESLAND BRIDGE RD
6. WELDING SHOP - US 264

POTENTIAL SIGNIFICANT GROUNDWATER USER

6. NATIONAL SPINNING (DISTRIBUTION CENTER) SHEPPARD MILL RD (FACILITY CLOSED)

UTILITY DATA FROM STOKES REGIONAL WATER COMPANY SERVICE MAP

WATER WELL SURVEY CONDUCTED 12/12/2000 - DAVID GARRETT, P.G., P.E.
UPDATED 05/21/2003 - JOHN A.K. TUCKER, P.E.

MAP TAKEN FROM PORTIONS OF USGS 7.5 MIN QUADRANGLE MAPS:

LEGGETS CROSSROADS

GRIMESLAND

GRID NORTH
NAD 83

LEGEND

- EXIST GROUND 18
- GROUND WATER 18
- PROPSED GRADE 18
- DIVERSION BERM
- SILT FENCE
- WETLANDS
- FLOOD ZONE

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GRAPHIC SCALE 1"= 2000'

0 2000 4000 6000

11-3-08

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER JOHN A.K. TUCKER

February 18, 2008

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C & D LANDFILL, INC.
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Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
REGIONAL CHARACTERIZATION MAP

REVISIONS

S 1

N

GRID NORTH
NAD 83

NOTE:

IMAGE TAKEN FROM AERIAL PHOTOGRAPH OBTAINED FROM THE NORTH CAROLINA FLOOD MAPPING PROGRAM, CIRCA 2000

LEGEND

EXIST GROUND	18
GROUND WATER	18
PROPSED GRADE	18
DIVERSION BERM	<<<
SILT FENCE	X
WETLANDS	
FLOOD ZONE	

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GRAPHIC SCALE 1"= 500'

0 500 1000 1500

11-3-08

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL JOHN A. K. TUCKER

February 18, 2008

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C & D LANDFILL, INC.
802 Recycling Lane
Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
LOCAL AREA MAP

REVISIONS

S 2

GRID NORTH
NAD 83

NOTE:

IMAGE TAKEN FROM AERIAL PHOTOGRAPH OBTAINED FROM
THE NORTH CAROLINA FLOOD MAPPING PROGRAM, CIRCA 2000

FIELD VERIFIED BY DAVID GARRETT, P.G., P.E. - 12/12/2000
UPDATED BY JOHN A.K. TUCKER, P.E. - 05/15/2003

LEGEND

EXIST GROUND	
PROPSED GRADE	18
GROUND WATER	18
WETLANDS	
FLOOD ZONE	
BORING - SEASONAL HIGH WATER ELEVATION	B-18 15.40
BORING COORDINATES	B-18 N 5000 E 5000

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February 18, 2008

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C & D LANDFILL, INC.
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Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
LOCAL AREA PHOTO & FACILITY PLAN

REVISIONS		
1.	REVISED PER DSW COMMENTS	10/30/08

11-3-08

S 3

David Garrett, P.G., P.E.
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1408 Rock Drive, Raleigh, North Carolina 27610
Telephone/Fax (919) 231-1818

LEGEND

EXIST GROUND	18
GROUND WATER	18
PROPSED GRADE	18
DIVERSION BERM	<<<
SILT FENCE	
WETLANDS	
FLOOD ZONE	

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GRAPHIC SCALE 1"= 200'

0 200 400 600

11-3-08

NORTH CAROLINA PROFESSIONAL ENGINEER JOHN A. K. TUCKER

February 18, 2008

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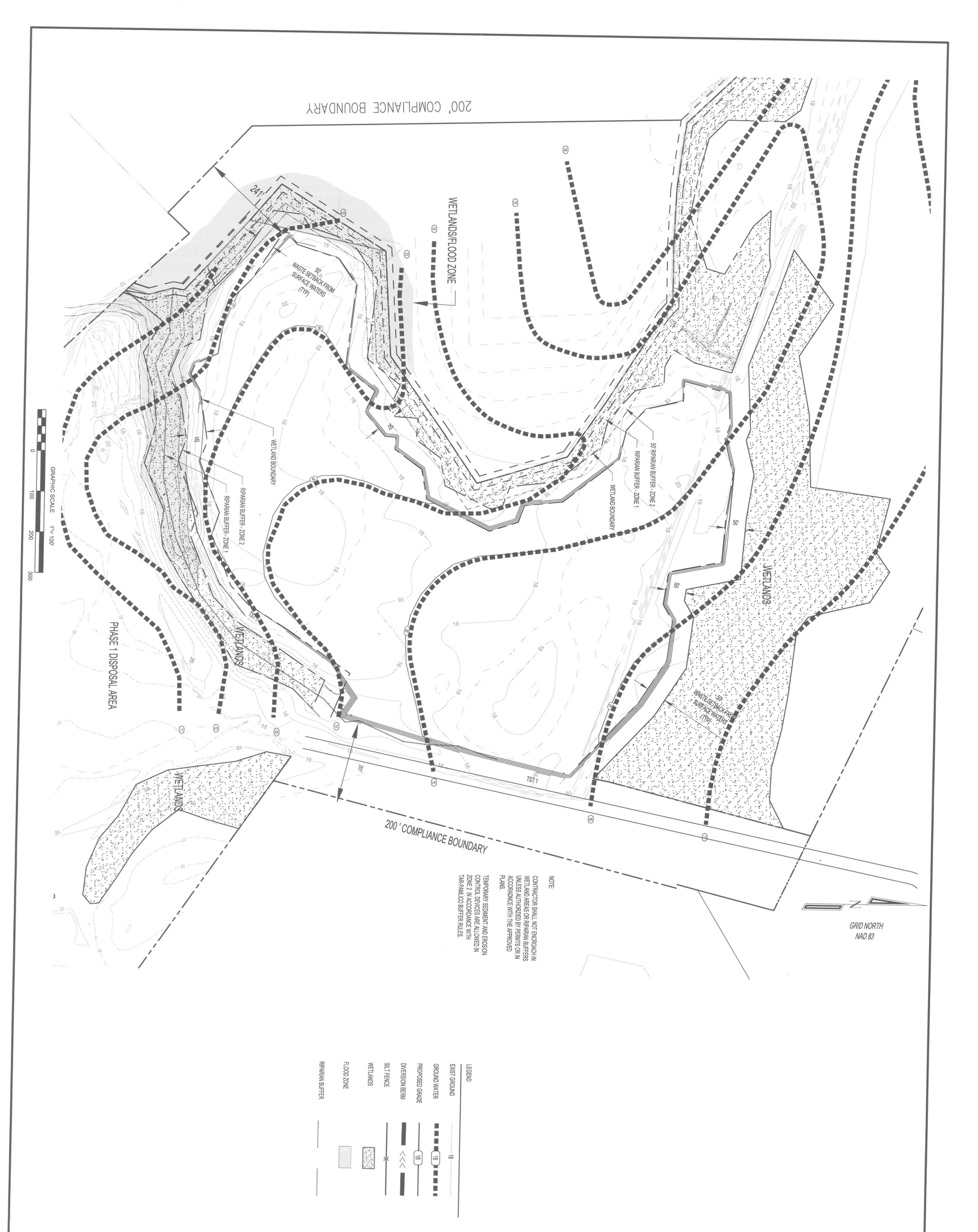
C & D LANDFILL, INC.
802 Recycling Lane
Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
SITE BOUNDARY & TEST BORINGS

REVISIONS

S 4



11-3-08

E 1			
	1. REVISED PER DSW COMMENTS	10-29-08	
	REVISIONS		

C&D LANDFILL - PHASE 2

PERMIT TO CONSTRUCT

BASE GRADE CONTOURS

C & D LANDFILL, INC.
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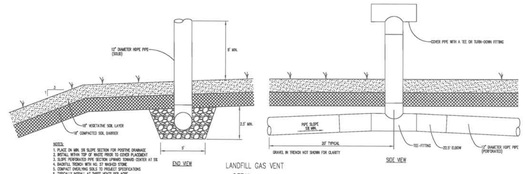
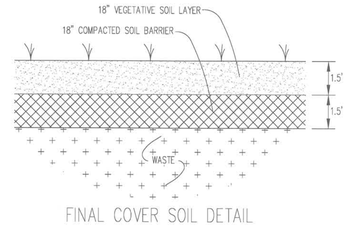
Email: johnak@johntuckerpe.com

February 18, 2008



LANDFILL GAS VENT DETAIL
N.T.S.



FINAL COVER SOIL DETAIL

LEGEND

EXIST GROUND	18
GROUND WATER	18
PROPSED GRADE	18
DIVERSION BERM	
SILT FENCE	
WETLANDS	
FLOOD ZONE	

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GRAPHIC SCALE 1"= 100'

0 100 200 300

11-3-08

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER JOHN A. K. TUCKER

February 18, 2008

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Consulting Engineer
P.O. Box 297 Fuquay-Varina, North Carolina 27526
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Email: johnak@johnktuckerpe.com

C & D LANDFILL, INC.
802 Recycling Lane
Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
FINAL COVER CONTOURS

	REVISIONS	
1.	REVISED PER DSW COMMENTS	10-28-08

E 2

PHASE 2A PROGRESSION

YEAR 1 CELL 1
YEAR 2 CELL 2
YEAR 3 CELL 3
YEAR 4 CELL 4
YEAR 5 CELL 5

LEGEND

EXIST GROUND 18
GROUND WATER 18
PROPSED GRADE 18
DIVERSION BERM
SILT FENCE
WETLANDS
FLOOD ZONE

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0 100 200 300

11-3-08

NORTH CAROLINA PROFESSIONAL ENGINEER JOHN A. K. TUCKER

February 18, 2008

John A. K. Tucker, P.E.
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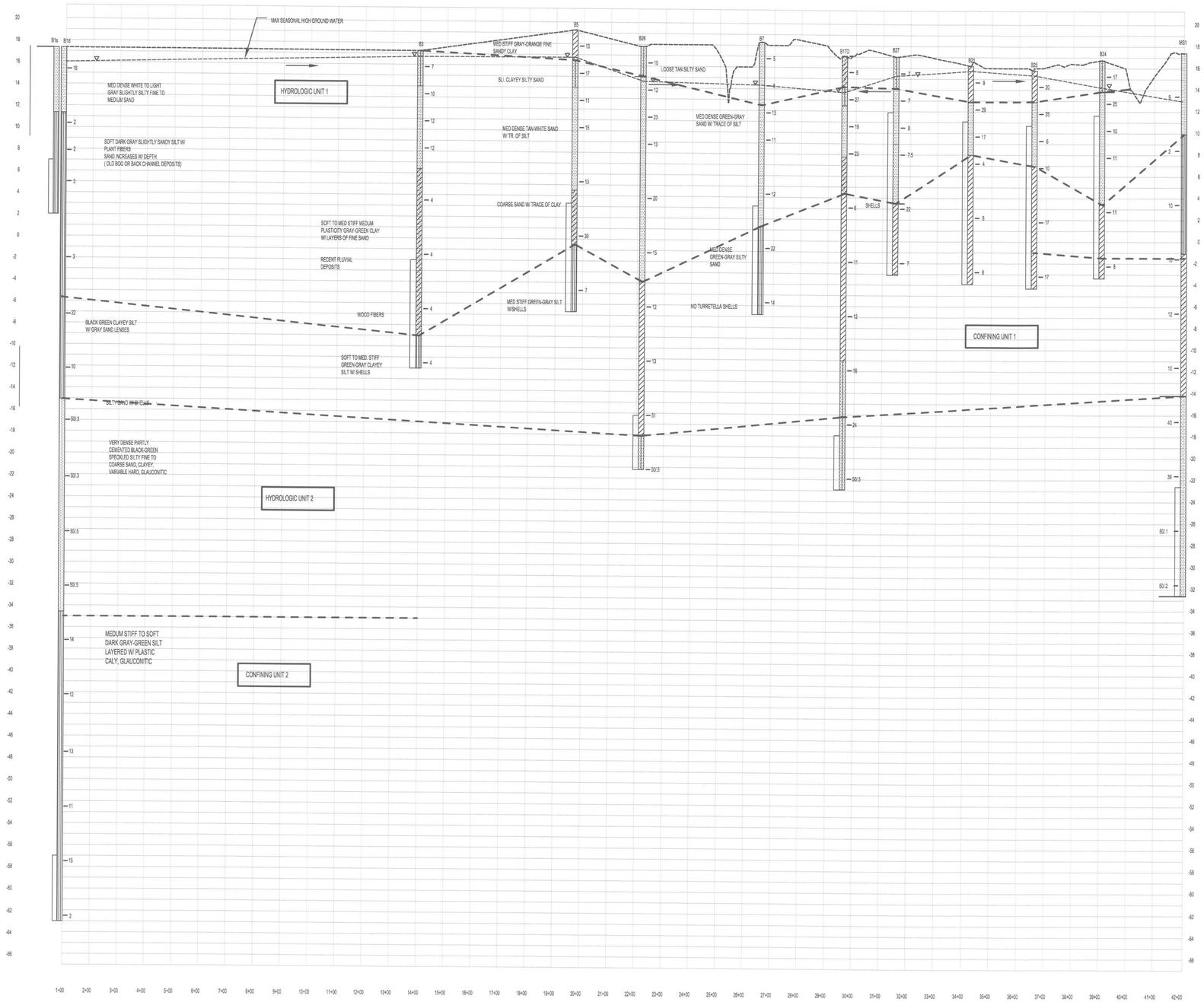
C & D LANDFILL, INC.
802 Recycling Lane
Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
PHASE 2A -GRADING PLAN

REVISIONS	
1.	REVISED PER DSW COMMENTS
	10-28-08

E 3

David Garrett, P.G., P.E.
Engineering and Geology
1408 Rock Drive, Raleigh, North Carolina 27610 Telephone/Fax (919) 231-1818



SLIGHTLY SILTY TO CLEAN SAND
SILTY SAND, MAY BE CLAYEY
CLAYEY SAND
SILT, TYPICALLY CLAYEY
CLAY, TYPICALLY PLASTIC, STICKY
12 STANDARD PENETRATION RESISTANCE VALUE (BLOWS PER FOOT)
MAXIMUM SEASONAL HIGH GROUNDWATER LEVEL
GROUNDWATER FLOW

TYPICALLY OBSERVED FEB-APRIL 2002 BORINGS 1-7
TYPICALLY OBSERVED FEB-APRIL 2003 BORINGS 8-28

SCALE: 1" = 200 H
1" = 5 V

11-3-08

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER JOHN A. K. TUCKER

February 18, 2008

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Consulting Engineer
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C & D LANDFILL, INC.
802 Recycling Lane
Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
HYDROGEOLOGICAL CROSS SECTION

REVISIONS

X 1

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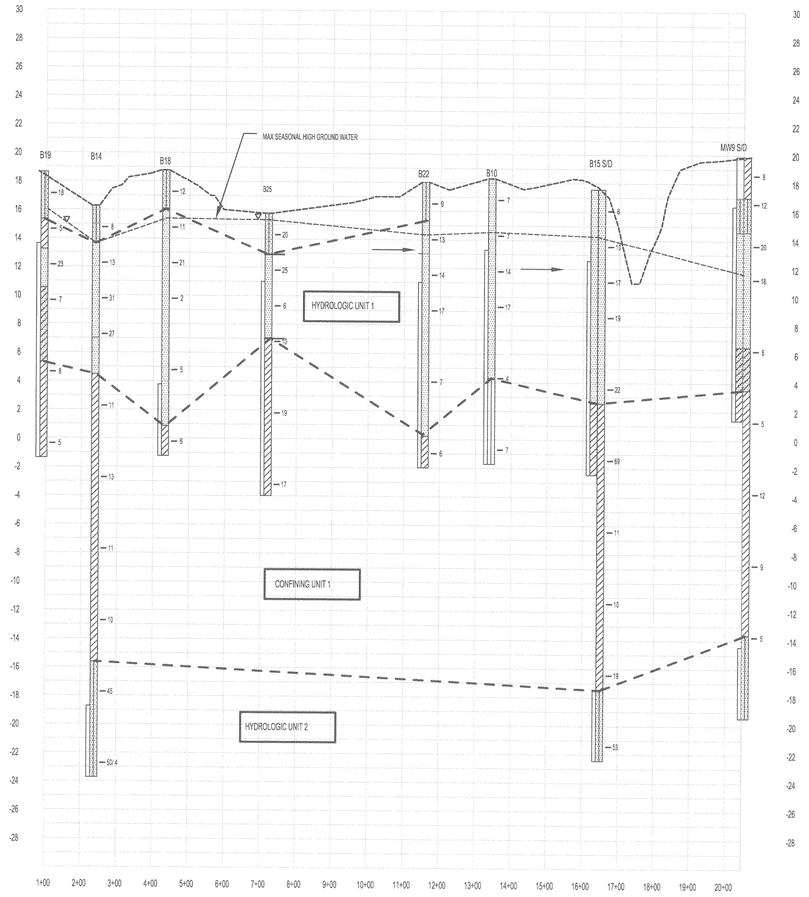

LOOSE TO M DENSE VARIABLE SILTY AND CALYEY SAND W/OCC. CLAY POCKETS

RECENT ALUVIAL SEDIMENTS

AQUIFER UNIT 1

STIFF GRAY-GREEN VAR.ALBY FINE SANDY SILT AND SILTY CLAY W/ SHELL WASH

YORKTOWN FORMATION

CONFINING UNIT 1

VERY DENSE GREEN-BLACK PARLY CEMENTED SILTY AND CLAYEY SAND W/GLAUCONITE

PROBABLE CASTLE-HAYNE FORMATION

AQUIFER UNIT 2

SLIGHTLY SILTY TO CLEAN SAND

SILTY SAND, MAY BE CLAYEY

CLAYEY SAND

SILT, TYPICALLY CLAYEY

CLAY, TYPICALLY PLASTIC, STICKY

12 STANDARD PENETRATION RESISTANCE VALUE (BLOWS PER FOOT)

MAXIMUM SEASONAL HIGH GROUNDWATER LEVEL

GROUNDWATER FLOW

TYPICALLY OBSERVED FEB-APRIL 2002 BORINGS 1-7
TYPICALLY OBSERVED FEB-APRIL 2003 BORINGS 8-28

SCALE: 1" = 200 H
1" = 5 V

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February 18, 2008

C & D LANDFILL, INC.
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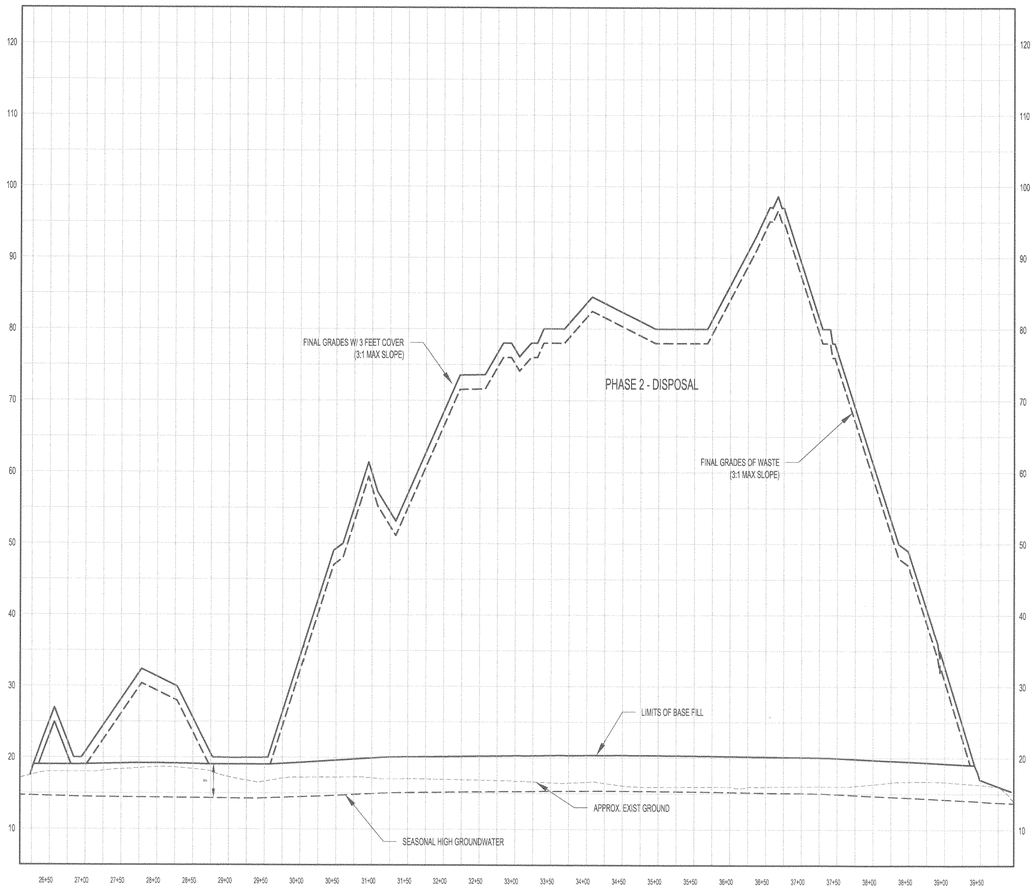
Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
HYDROGEOLOGICAL CROSS SECTION

REVISIONS

11-3-08

X 2



PROFILE - SECTION A-A

SCALE 1" = 100' H
1" = 10' V

GRAPHIC SCALE 1"= 100'

0 100 200 300

PRELIMINARY
NOT FOR
CONSTRUCTION

11-3-08

February 18, 2008

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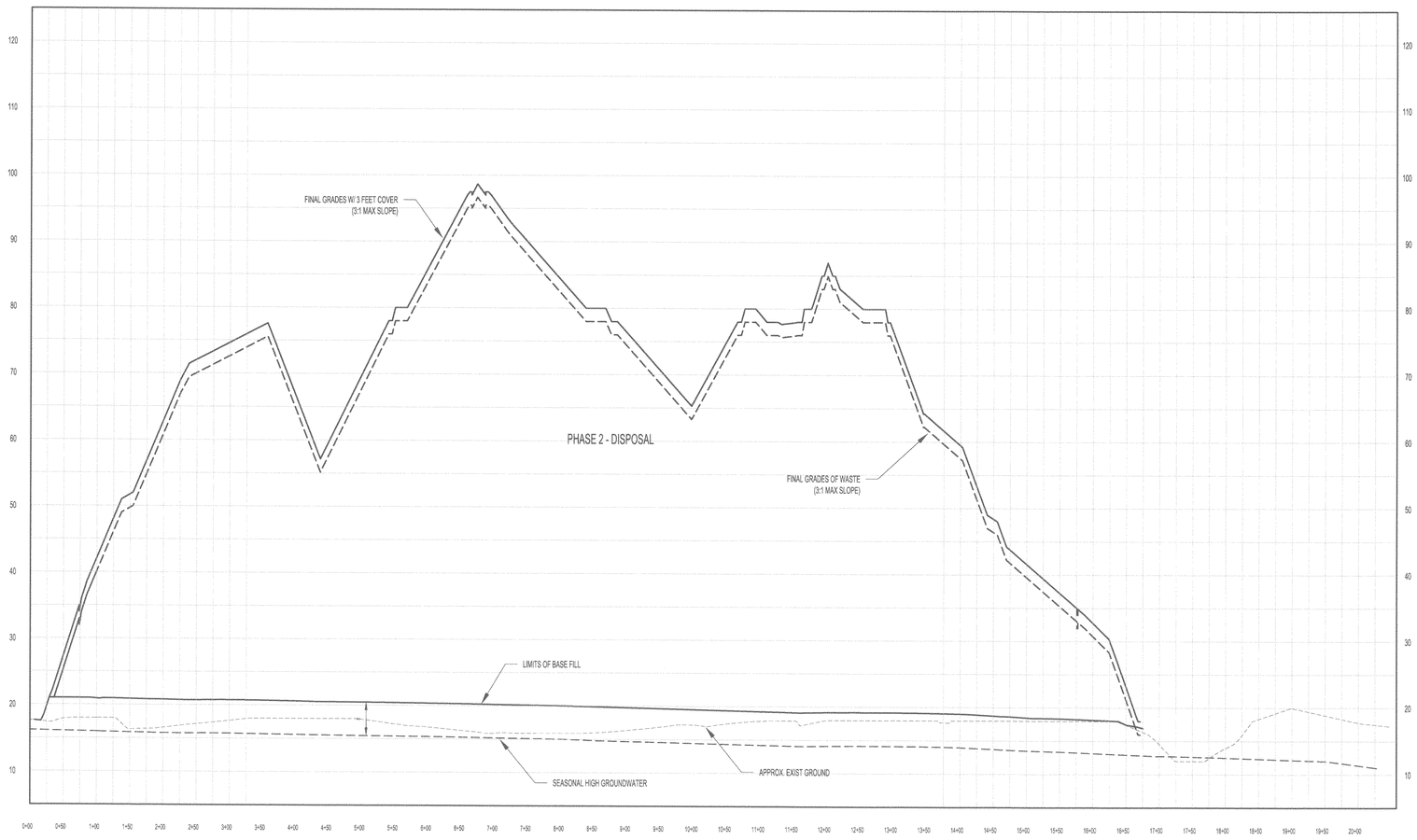
C & D LANDFILL, INC.
802 Recycling Lane
Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
CROSS SECTIONS A-A

REVISIONS

X 3



PROFILE - SECTION B-B

SCALE 1" = 100' H
1" = 10' V

GRAPHIC SCALE 1"= 100'

0 100 200 300

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February 18, 2008

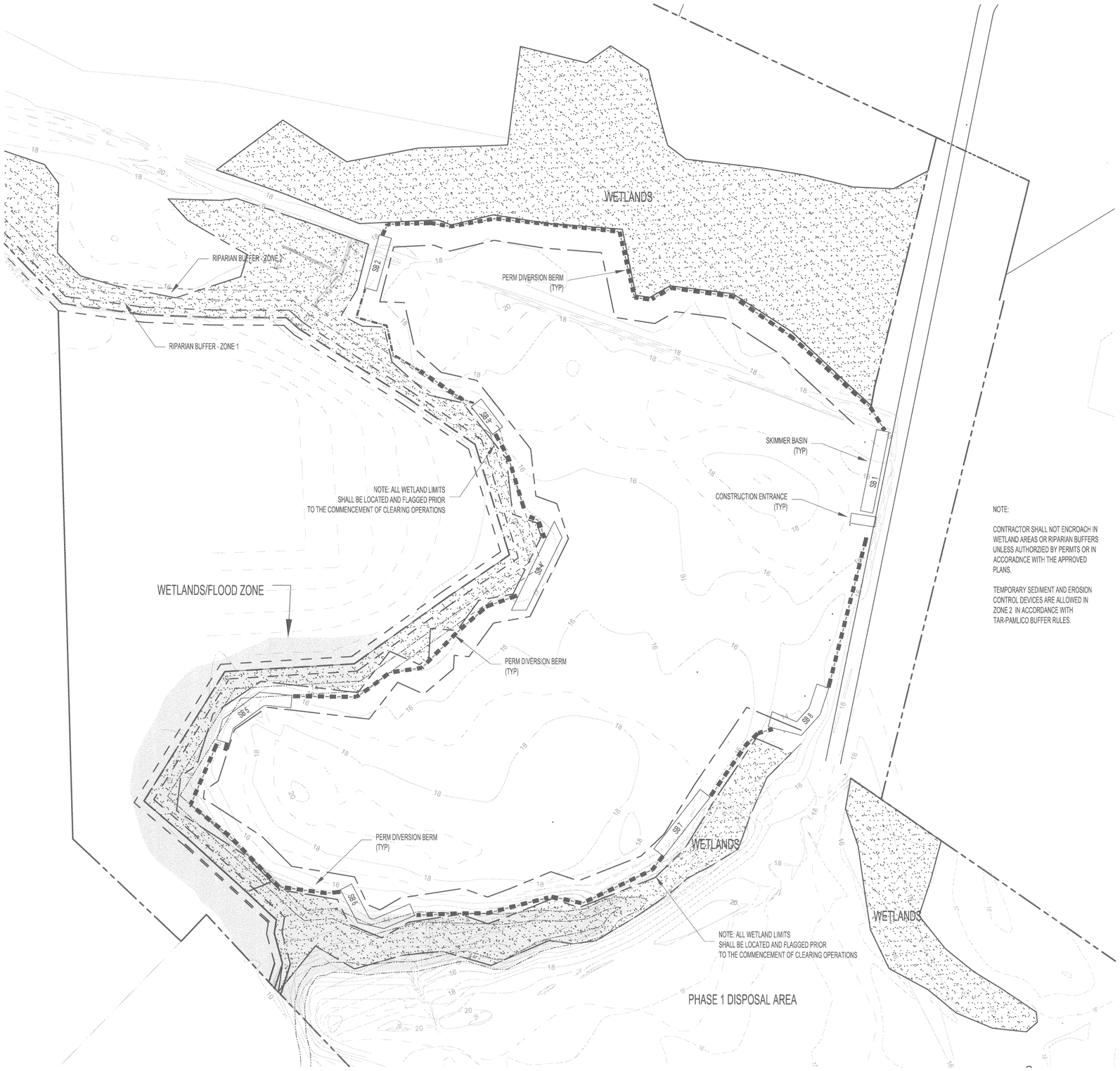
C & D LANDFILL, INC.
802 Recycling Lane
Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
CROSS SECTIONS B-B

REVISIONS

11-3-08

X 4



GRID NORTH
NAD 83

NOTE:

CONTRACTOR SHALL NOT ENCROACH IN WETLAND AREAS OR RIPARIAN BUFFERS UNLESS AUTHORZIED BY PERMITS OR IN ACCORADNCE WITH THE APPROVED PLANS.

TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES ARE ALLOWED IN ZONE 2 IN ACCORDANCE WITH TAR-PAMLICO BUFFER RULES.

PITT COUNTY CONSTRUCTION SEQUENCE

1. Obtain a land-disturbing permit. Schedule a pre-construction conference with the Environmental Engineer
2. Locate and flag all adjoining wetlands and riparian buffers. Contractor assume all reponsibility for any unauthorized encroachment into these areas
3. Install gravel construction pad, permanent diversions, silt fence, sediment basins or other measures as shown on the approved plan. Clean only as necessary to install these devices. Seed temporary diversions, berms and basins immediately after construction.
4. Call Pitt County for an onsite inspections by the Environmental Engineer to obtain a Certificate of Compliance.
5. Begin clearing and grubbing. Maintain devices as needed.
6. Begin bringing site to grade.
7. Stabilize site as areas are brought up to finish grade with vegetation, paving, ditch linings, etc. Seed and mulch denuded areas within fifteen (15) days of completion of any phase of construction.
8. When construction is complete and all areas are stabilized completely, call Pitt County for an inspection by the Environmental Engineer.
9. If site is approved, remove temporary diversions, silt fence, sediment basins, etc., and seed out or stabilize any resulting bare areas. All remaining permanent erosion control devices, such as velocity dissipators, should now be installed. Sediment basins removed only with approval of Pitt County.
10. When vegetation has established, call Pitt County for a final site inspection by the Environmental Engineer. Obtain a Certificate of Completion.

SEEDING SCHEDULE
(REVISED: 1-1-86)

Shoulders, Side Ditches, Slopes (Max 3:1)

DATE	TYPE	PLANTING RATE
Aug 15 - Nov 1	Tall Fescue	300 lbs/acre
Nov 1 - Mar 1	Tall Fescue & Abruzzi Rye	300 lbs/acre 25 lbs/acre
Mar 1 - Apr 15	Tall Fescue	300 lbs/acre
Apr 15 - Jun 30	Hulled Common Bermudagrass	25 lbs/acre
Jul 1 - Aug 15	Tall Fescue and ***Browntop Millet ***or Sorghum-Sudan Hybrids	120 lbs/acre 35 lbs/acre 30 lbs/acre

Slopes (3:1 to 2:1)

Mar 1 - Jun 1	Sericea Lespedeza (scarified) &	50 lbs/acre
(Mar 1 - Apr 15)	Add Tall Fescue	120 lbs/acre
(Mar 1 - Jun 30)	Or Add Weeping Lovegrass	10 lbs/acre
(Mar 1 - Jun 30)	Or Add Hulled Common Bermudagrass	25 lbs/acre
Jun 1 - Sep 1	***Tall Fescue and ***Browntop Millet ***or Sorghum-Sudan Hybrids	120 lbs/acre 35 lbs/acre 30 lbs/acre
Sep 1 - Mar 1	Sericea Lespedeza (unhulled-unscarified) and Tall Fescue	70 lbs/acre 120 lbs/acre
(Nov 1 - Mar 1)	Add Abruzzi Rye	25 lbs/acre

Consult Conservation Engineer or Soil Conservation Service for additional information concerning other alternatives for vegetation of denuded areas. The above vegetation rates are those which do well under local conditions; other seeding rate combinations are possible.
***Temporary - Reseed according to optimum season for desired permanent vegetation. Do not allow temporary cover to grow over 12" in height before mowing, otherwise fescue may be shaded out.

SEEDBED PREPARATION

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. SUPERPHOSPHATE

4.) APPLY AGRICULTURAL LIME, FERTILIZER, AND UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).

5.) CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM INCHES REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 DEEP.

6.) SEED ON A FRESHLY PREPARED SEEDBED AND COVER AFTER SEEDING. SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK.

7.) MULCH WITH STRAW (1-2 TNS PER AC) IMMEDIATELY AFTER SEEDING. ANCHOR MULCH WITH ASPHALT. APPLY ASPHALT AT 10 GAL PER 1000 SQUARE FEET. HEAVIER APPLICATIONS CAUSE STRAW TO "PERCH" OVER RILLS.

8.) INSPECT ALL SEEDED AREAS AND MAKE NECESSARY RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. FOLLOWING STAND SHOULD BE OVER 60%DAMAGED, REESTABLISH ORIGINAL LIME, FERTILIZER AND SEEDING RATES.

9.) CONSULT CONVERSATION INSPECTOR ON MAINTENANCE ESTABLISHED.

TREATMENT 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

C&D Landfill Phase 2
Skimmer Basin Design

Basin Number	DA	Peak Q - 10 yr	Top Width	Top Length	Side Slope	Depth	Bottom Width	Bottom Length	Bottom Area	Actual Volume	Actual Area	Trial Weir Lenth
	(ac)	(cfs)	(ft)	(ft)	(z:1)	(ft)	(ft)	(ft)	(sf)	(cf)	(sf)	(ft)
1	3.15	9.3	25	130	2	2.5	15	120	1800	5224	3250	10
2	2.01	5.9	25	110	2	2.5	15	100	1500	5234	2750	6
3	1.36	4	25	110	2	2.5	15	100	1500	5234	2750	6
4	3.34	9.8	25	130	2	2.5	15	120	1800	5224	3250	10
5	2.92	8.6	25	120	2	2.5	15	110	1650	5729	3000	10
6	2.81	8.3	25	110	2	2.5	15	100	1500	5234	2750	10
7	2.92	8.6	25	120	2	2.5	15	110	1650	5729	3000	10
8	2.36	7	25	110	2	2.5	15	100	1500	5234	2750	10

LEGEND
CLEARING LIMITS/PERM. DIVERSION BERM <<<
TAR-PAM BUFFER
SILT FENCE

11-3-08

John A. K. Tucker, P.E.
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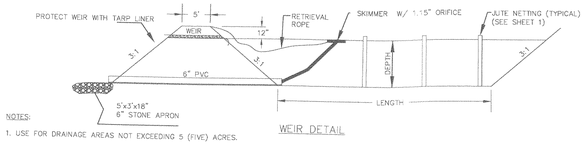
February 18, 2008

C & D LANDFILL, INC.
802 Recycling Lane
Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
SEDIMENTATION & EROSION CONTROL

NO.	REVISIONS	DATE
1	REVISED PER DSW COMMENTS	10-28-08

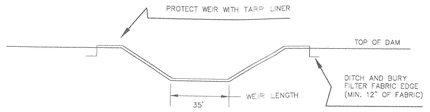
EC 1



NOTES:

1. USE FOR DRAINAGE AREAS NOT EXCEEDING 5 (FIVE) ACRES.
2. EARTH BERM SHALL BE STABILIZED w/SEEDING ACCORDING TO SPECIFICATIONS.

WEIR DETAIL



STANDARD SKIMMER FILTER BASIN

Maintenance

Inspect skimmer sediment basins at least weekly and after each significant (one-half inch or greater) rainfall event and repair immediately. Remove sediment and restore the basin to its original dimensions when sediment accumulates to one-half the height of the first baffle. Pull the skimmer to one side so that the sediment underneath it can be excavated. Excavate the sediment from the entire basin, not just around the skimmer or the first cell. Make sure vegetation growing in the bottom of the basin does not hold down the skimmer.

Repair the baffles if they are damaged. Re-anchor the baffles if water is flowing underneath or around them.

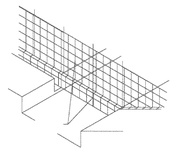
If the skimmer is clogged with trash and there is water in the basin, usually jerking on the rope will make the skimmer bob up and down and dislodge the debris and restore flow. If this does not work, pull the skimmer over to the side of the basin and remove the debris. Also check the orifice inside the skimmer to see if it is clogged; if so remove the debris.

If the skimmer arm or barrel pipe is clogged, the orifice can be removed and the obstruction cleared with a plumber's snake or by flushing with water. Be sure and replace the orifice before repositioning the skimmer.

Check the fabric lined spillway for damage and make any required repairs with fabric that spans the full width of the spillway. Check the embankment, spillways, and outlet for erosion damage, and inspect the embankment for piping and settlement. Make all necessary repairs immediately. Remove all trash and other debris from the skimmer and pool areas.

Freezing weather can result in ice forming in the basin. Some special precautions should be taken in the winter to prevent the skimmer from plugging with ice.

6.64.8



BAFFLE INSTALLATION – STEP 1

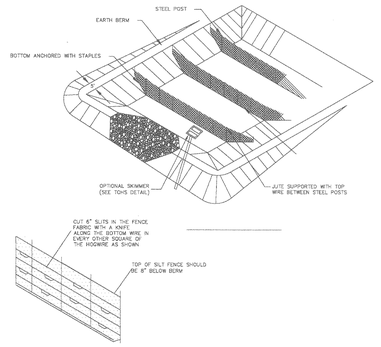
Maintenance

Inspect baffles at least once a week and after each rainfall. Make any required repairs immediately.

Be sure to maintain access to the baffles. Should the fabric of a baffle collapse, tear, decompose, or become ineffective, replace it promptly.

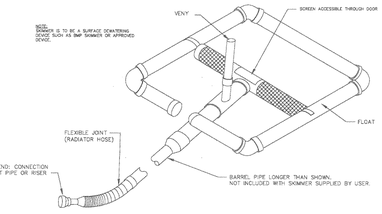
Remove sediment deposits when it reaches half full to provide adequate storage volume for the next rain and to reduce pressure on the baffles. Take care to avoid damaging the baffles during cleanout. Sediment depth should never exceed half the designed storage depth.

After the contributing drainage area has been properly stabilized, remove all baffle materials and unstable sediment deposits, bring the area to grade, and stabilize it.



STANDARD SKIMMER FILTER BASIN

NTS



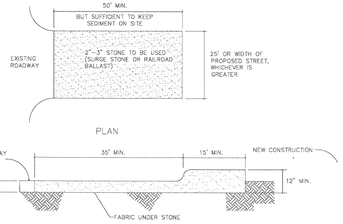
STANDARD SKIMMER DETAIL

NTS

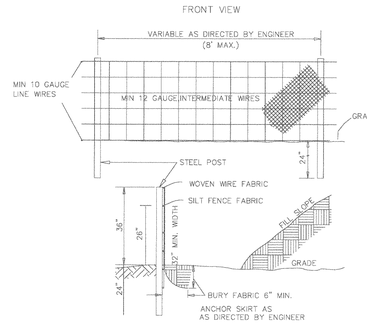
NOTES:

1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
3. IF A PROJECT CONTINUES TO PULL MUD AND DEBRIS ON TO THE PUBLIC ROAD, THE GOVERNING AUTHORITY WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PERSON AS INDICATED ON THE FINANCIAL RESPONSIBILITY FORM.

Maintenance
Maintain the gravel pad in a condition to prevent mud or sediment from leaving the construction site. This may require periodic top-dressing with 2-inch stone. After each rainfall, inspect any structure used to trap sediment and clean it out as necessary. Immediately remove all objectionable materials spilled, washed, or tracked onto public roadways.



CONSTRUCTION ENTRANCE
NTS



Maintenance

Inspect sediment fences at least once a week and after each rainfall. Make any required repairs immediately.

Should the fabric of a sediment fence collapse, tear, decompose or become in-effective, replace it promptly. Replace burlap every 60 days.

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.

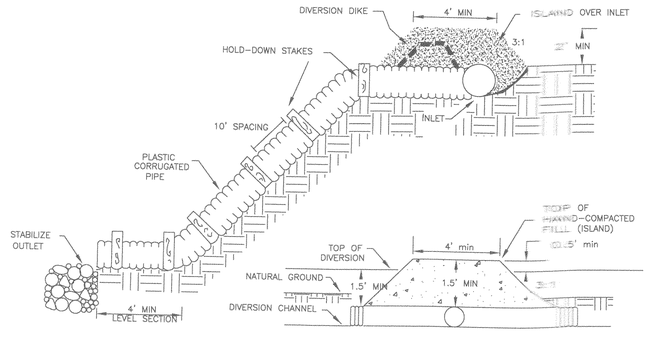
NOTE:

USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW

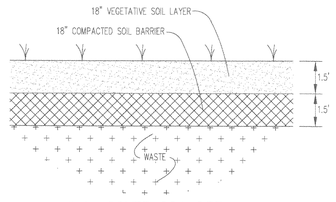
FOR REPAIR OF SILT FENCE FAILURES USE NO. 57 WASHED STONE FOR ANCHOR.

USE NO. 57 WASHED STONE FOR ANCHOR WHEN SILT FENCE IS PROTECTING A CATCH BASIN

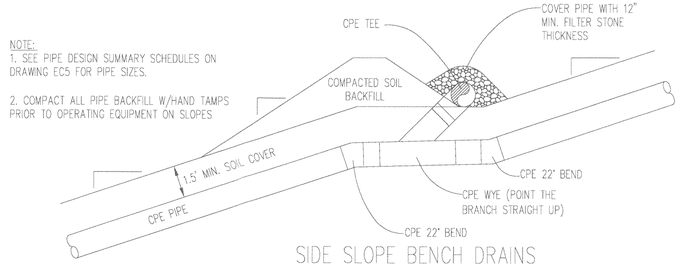
TEMPORARY SILT FENCE
NTS



TEMP SLOPE DRAIN
NTS



FINAL COVER SOIL DETAIL



SIDE SLOPE BENCH DRAINS

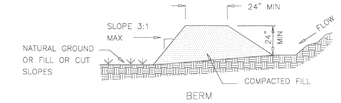
Maintenance
Inspect temporary diversions once a week and after every rainfall. Immediately remove sediment from the flow area and repair the diversion ridge. Carefully check outlets and make timely repairs as needed. When the area protected is permanently stabilized, remove the ridge and the channel to blend with the natural ground level and appropriately stabilize it.

a. MACHINE COMPACTION OF ALL FILL IS REQUIRED. DIVERSIONS 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 IS EACH CRITICAL POINT IS REACHED).

b. DIVERSIONS SHOULD BE LOCATED TO MINIMIZE DAMAGES BY CONSTRUCTION OPERATIONS.

c. DIVERSIONS SHALL BE SEEDED AND MULCHED IMMEDIATELY REGARDLESS.

d. CHECK DEVICE AFTER EACH RAIN, BUT ONCE A WEEK REPAIR AS NECESSARY.



BERM

NOTES:
POSITIVE GRADE MUST BE PROVIDED TO ASSURE DRAINAGE. IF SLOPE EXCEEDS 2% SEED AND MULCH DIVERSION. TRY NOT TO EXCEED 5%(HIGH VELOCITIES RELIST). MAXIMUM D. A. = 5 ACRES WITHOUT SUPPORTING CALCS.. DIVERSIONS AT THE TOP OF SLOPES MUST EMPTY INTO AN APPROVED SLOPE DRAIN. BERM/DITCH IS MOST COMMONLY USED.

PERMANENT DIVERSION BERM
NTS

11-3-08

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Email: johnat@johntuckerpe.com

February 18, 2008

C & D LANDFILL, INC.
802 Recycling Lane
Greenville, NC 27834

C&D LANDFILL - PHASE 2
PERMIT TO CONSTRUCT
S&EC DETAIL SHEET

REVISIONS	
1.	REVISED PER DSW COMMENTS
	10-28-08

EC 2

DATE	NO.	REVISION
10-31-08	1	UPDATED WITH SOIL-GAS PROBES PER REGULATORY COMMENTS
2-28-08	0	ISSUED FOR REGULATORY REVIEW

REFERENCE NOTES:

1. SITE TOPOGRAPHY AND FACILITY DESIGN BY JOHN TUCKER, PE

2. HYDROGEOLOGIC INVESTIGATION BY DAVID GARRETT, PG, PE

QUARTER-MILE RADIUS

ENTRANCE ON US 264 (1000 FEET)

OFFICE AND SCALE HOUSE

FACILITY BOUNDARY

WETLANDS

MAXIMUM LONG-TERM SEASONAL HIGH GROUNDWATER POTENTIOMETRIC CONTOUR (TYP.)

PROPOSED LIMITS OF WASTE

WETLANDS/FLOOD ZONE

MONITORING WELL (TYP.)

SOIL-GAS PROBE (TYP.)

PHASE 2

PHASE 1

GP-1 GP-2 GP-3 GP-4 GP-5 GP-6 GP-7 GP-8 GP-9 GP-10

MW-1d MW-1s MW-2d MW-2i MW-2s MW-3d MW-3s MW-4 MW-5 MW-6 MW-7 MW-8 MW-9A MW-10 MW-11 MW-12 MW-13 MW-14S, D MW-15 MW-16

SW-1 SW-2 SW-3

SURFACE WATER SAMPLING LOCATION (TYP.)

100-YEAR FLOOD BOUNDARY

ED ALTON WHITEHURST SR. DB 70 PG 268

LEGEND

- MW-1 EXISTING MONITORING WELLS
- MW-14 PROPOSED MONITORING WELLS
- SW-1 SURFACE WATER MONITORING POINT
- FACILITY BOUNDARY

0 200' 400' 600'

1" = 200'

11-3-08

David Garrett & Associates
Engineering and Geology
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Email: david_garrett_pg@mindspring.com
919-231-1818 (Office and Fax) 919-418-4375 (mobile)

SEAL

NORTH CAROLINA REGISTERED PROFESSIONAL GEOLOGIST DAVID D. GARRETT SEAL 10-31-2008

PROJECT TITLE:

C&D LANDFILL, INC.
PITT COUNTY, NC
PERMIT TO CONSTRUCT
PERMIT #74-07

DRAWING TITLE:

FACILITY MONITORING PLAN AMENDMENTS (PHASE 2 APPLICATION)

DESIGNED BY:	DRAWN BY:
G.D.G.	G.D.G.
CHECKED BY:	PROJECT NO.:
J.A.T.	CDLF-2
SCALE:	DATE:
AS SHOWN	FEBRUARY 2008
FILE NAME: CDLF-2-WQMP	
SHEET NO.	DRAWING NO.
16	MP1