

LOCATION MAP

REFERENCE:
USGS QUADRANGLE: GRIFTON QUAD, N.C.



LIST OF DRAWINGS

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8	BORROW AREA GRADING AND EROSION AND SEDIMENT CONTROL PLAN
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11	CAP SYSTEM CONSTRUCTION DETAILS
12	LEACHATE COLLECTION/CONVEYANCE DETAILS

CAP CONSTRUCTION PROJECT KINSTON ASH LANDFILL KINSTON, NORTH CAROLINA

PREPARED FOR

DUPONT CORPORATE REMEDIATION GROUP



Fac/Perm/Cc ID # 5404 Date 9/2/11 DW 5071

NO.	REVISIONS	BY	DATE
1	DESIGN SUBMITTAL TO NCDENR	SCD	2/25/03

DESIGNED	INITIALS
HEATHER DORSEY	HCD
DRAWN	
WAYNE CARR	WC
CHECKED	
CHRIS T. CURRAN	CTC
APPROVED(DESIGN)	
A. MAC BONNER	AMB
APPROVED(CONSTRUCTION)	

DUPONT

Corporate Remediation Group

An Alliance between
DuPont and URS | Diamond
 Barley Mill Plaza, Building 27
 Wilmington, Delaware 19880-0027

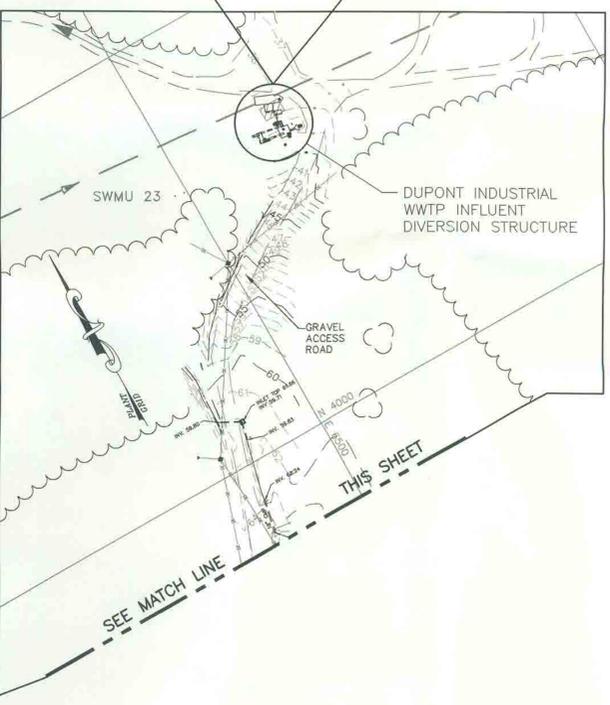
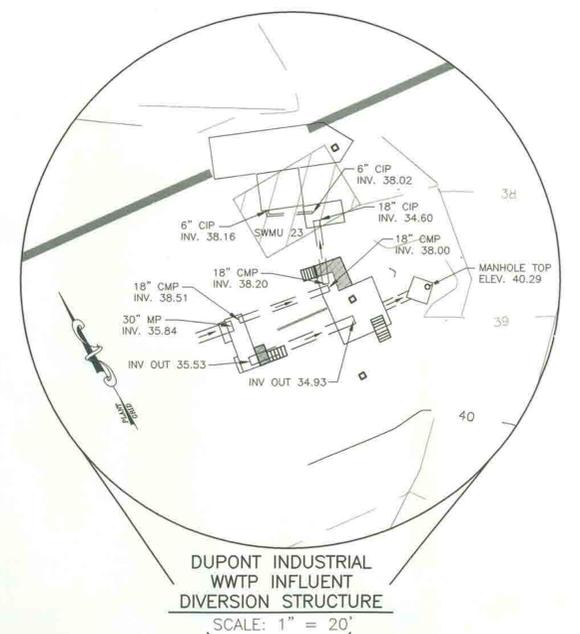
URS

1200 Philadelphia Pike
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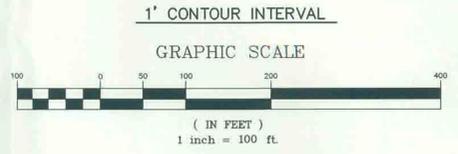
SCALE	DATE	DRAWING NO.	SHEET
AS NOTED	2/25/03		1 OF 12

TITLE SHEET

CAP CONSTRUCTION PROJECT
KINSTON ASH LANDFILL
KINSTON, N.C.



ASH LANDFILL TEST PIT INFORMATION		
TEST PIT	APPROXIMATE G.S. ELEV. (FT.)	APPROXIMATE ACM ELEV. (FT.)
TP-AS-01	84.15	NOT ENCOUNTERED
TP-AS-02	89.41	81.4
TP-AS-03	87.74	NOT ENCOUNTERED
TP-AS-04	84.66	NOT ENCOUNTERED
TP-AS-05	83.11	75.1
TP-AS-06	85.81	77.8
TP-AS-07	88.91	85.9
TP-AS-08	87.29	82.3
TP-AS-09	83.09	75.1
TP-AS-10	83.63	77.6
TP-AS-11	84.69	NOT ENCOUNTERED @ ELEV. 76.7
TP-AS-12	84.7	NOT ENCOUNTERED @ ELEV. 76.7
TP-AS-13	83.53	NOT ENCOUNTERED @ ELEV. 75.5



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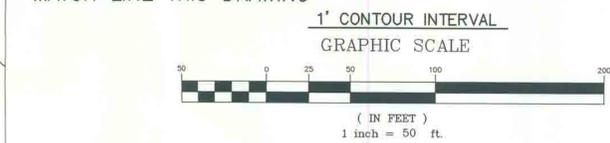
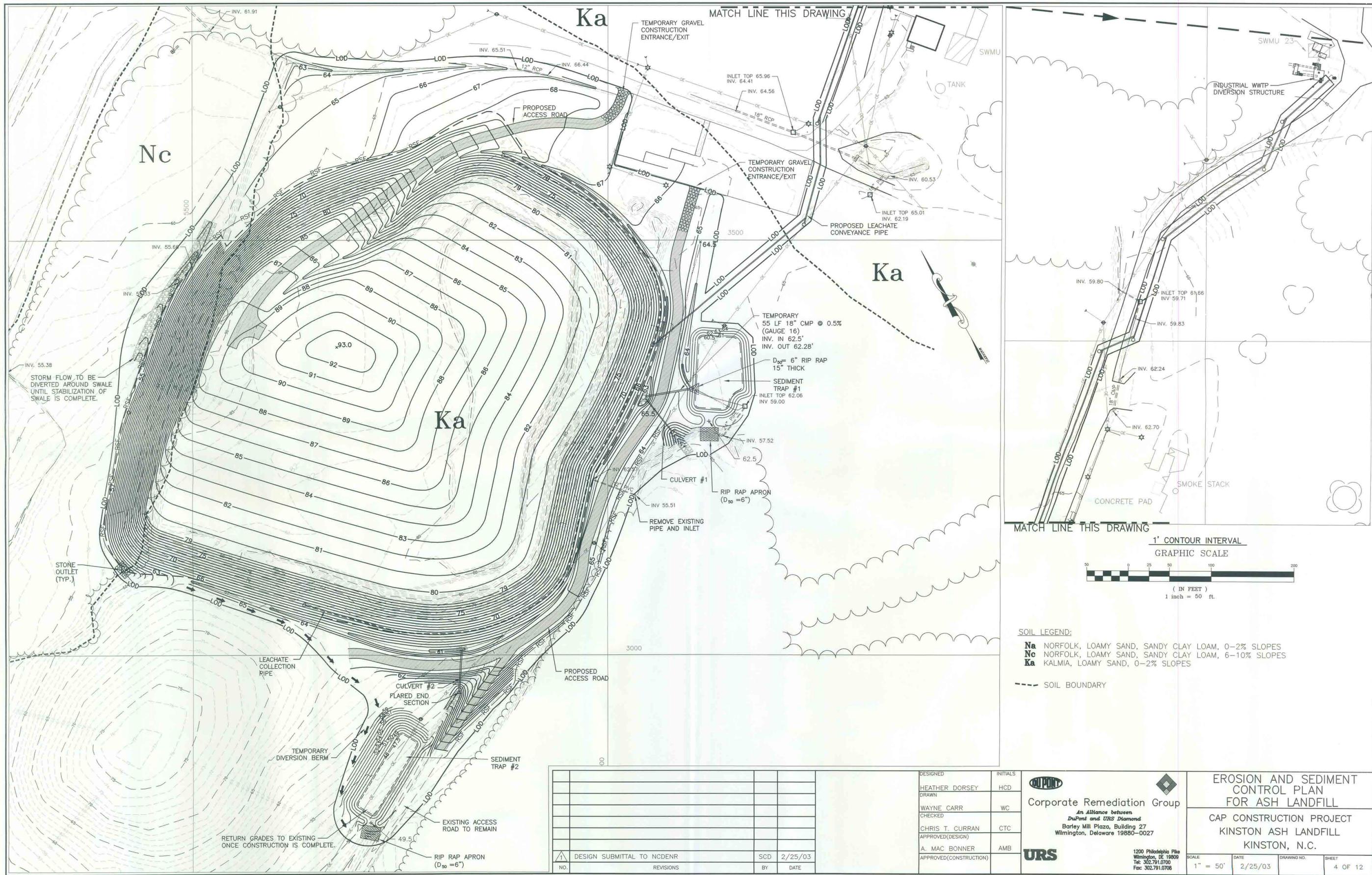
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EXISTING CONDITIONS			
CAP CONSTRUCTION PROJECT			
KINSTON ASH LANDFILL			
KINSTON, N.C.			
SCALE	DATE	DRAWING NO.	SHEET
1" = 100'	2/25/03		3 OF 12



SOIL LEGEND:

- Na** NORFOLK, LOAMY SAND, SANDY CLAY LOAM, 0-2% SLOPES
- Nc** NORFOLK, LOAMY SAND, SANDY CLAY LOAM, 6-10% SLOPES
- Ka** KALMIA, LOAMY SAND, 0-2% SLOPES

--- SOIL BOUNDARY

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WAYNE CARR	WC
CHRIS T. CURRAN	CTC
A. MAC BONNER	AMB

DUPOINT
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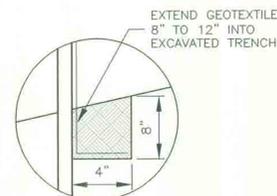
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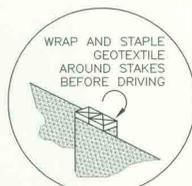
EROSION AND SEDIMENT CONTROL PLAN FOR ASH LANDFILL

CAP CONSTRUCTION PROJECT
KINSTON ASH LANDFILL
KINSTON, N.C.

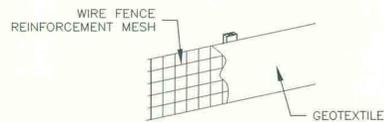
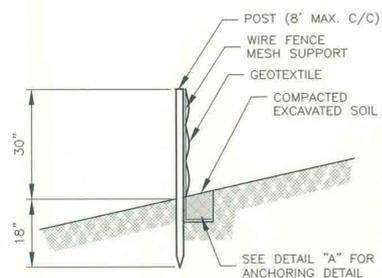
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DATE: 2/25/03
DRAWING NO.:
SHEET: 4 OF 12



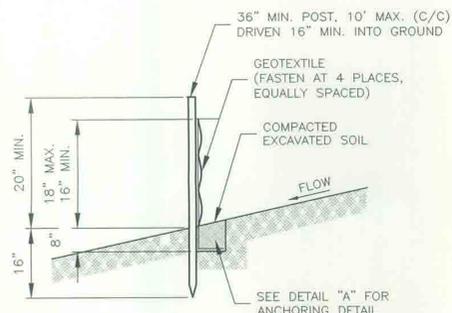
DETAIL "A"
ANCHORING SEDIMENT FENCE



DETAIL "B"
JOINING SECTIONS
OF SEDIMENT FENCE



CUTAWAY VIEW
REINFORCED SEDIMENT FENCE (30" HIGH)
(N.T.S.)



SEDIMENT FENCE
(N.T.S.)

DETAIL 1
SEDIMENT FENCE
(N.T.S.)

SPECIFIC NOTES:

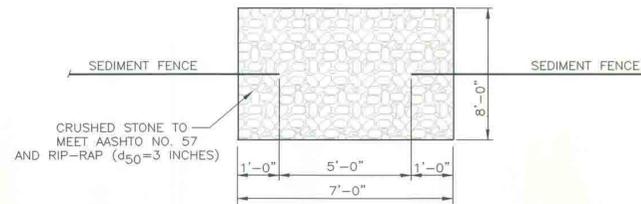
- USE A GEOTEXTILE OR A PERVIOUS SHEET OF POLYPROPYLENE, NYLON, POLYESTER OR POLYETHYLENE YARN, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS:

PHYSICAL PROPERTY	REQUIREMENTS
FILTERING EFFICIENCY	88% (MIN.)
TENSILE STRENGTH AT 20% (MAX.) ELONGATION	STANDARD STRENGTH—30 LB./LIN. IN. (MIN.) EXTRA STRENGTH—50 LB./LIN. IN. (MIN.)
SLURRY FLOW RATE	0.3 GAL./SQ.FT./MIN. (MIN.)
GRAB ELONGATION	15% ASTM D 4632
PERMITTIVITY	0.05 SEC ⁻¹ ASTM D 4491
APPARENT OPENING SIZE	US STD. SIEVE NO. 50 ASTM D 4751
UV RESISTANCE @ 500 HOURS	70% MIN. STRENGTH RETAINED ASTM D 4355

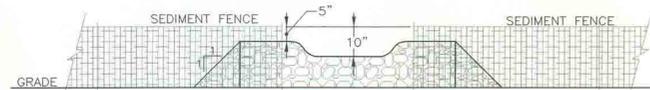
- GEOTEXTILE SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 TO 120°F.
- ENSURE THAT POSTS FOR SEDIMENT FENCES ARE EITHER 4-INCH DIAMETER PINE, 2-INCH DIAMETER OAK, OR 1.33 LB./LINEAR FT. STEEL WITH A MINIMUM LENGTH OF 4 FEET. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE GEOTEXTILE.
- FOR REINFORCEMENT OF STANDARD STRENGTH GEOTEXTILE, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AND A MAXIMUM MESH SPACING OF 6 INCHES.
- SUPPORT STANDARD STRENGTH GEOTEXTILE BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, OR TIE WIRES. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH.
- WHEN TWO SECTIONS OF GEOTEXTILE MATERIAL ADJOIN EACH OTHER, THE GEOTEXTILE SHALL OVERLAP BY 6 INCHES AND BE WRAPPED AROUND THE TWO STAKES. THE TWO STAKES SHALL BE DRIVEN INTO THE GROUND AS ONE UNIT. SEE DETAIL "B".
- WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND TO A MINIMUM OF 18 INCHES.
- EXTRA STRENGTH GEOTEXTILE WITH 6 FEET POST SPACINGS DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. STAPLE OR WIRE THE GEOTEXTILE DIRECTLY TO POSTS.
- EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM BARRIER.
- BACKFILL THE TRENCH WITH COMPACTED SOIL OR GRAVEL PLACED OVER THE GEOTEXTILE.
- DO NOT ATTACH GEOTEXTILE TO EXISTING TREES.

MAINTENANCE

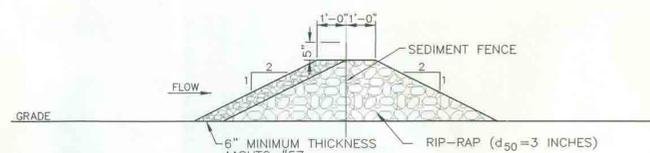
- INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
- SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
- REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
- REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



PLAN



ELEVATION

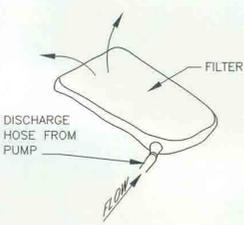


TYPICAL SECTION

DETAIL 2
TYPICAL STONE OUTLET DETAIL
(N.T.S.)

GENERAL NOTES:

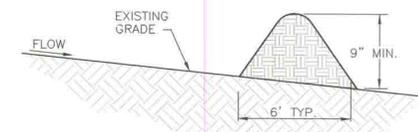
- SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.
- STONE OUTLETS TO BE INSTALLED AT LOCATIONS WHERE SEDIMENT FENCE HAS BEEN UNDERMINED OR OVERTOPPED.



DETAIL 5
SEDIMENT FILTER BAG DETAIL
NOT TO SCALE

GENERAL NOTES:

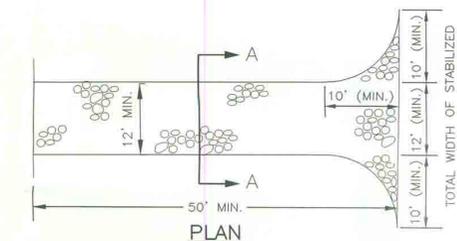
- CONTRACTOR SHALL USE A SEDIMENT FILTER BAG TO DEWATER TRENCHES.
- SEDIMENT FILTER BAG SHALL HAVE A NON-EROSIVE DISCHARGE TO A STABILIZED LOCATION.
- SEDIMENT FILTER BAG IS TO BE REMOVED AND REPLACED WHEN FULL.
- ALL SEDIMENT IS TO BE PROPERLY DISPOSED OR PERMANENTLY STABILIZED.
- DURING DEWATERING OPERATIONS, CONTRACTOR MUST MAN THE SEDIMENT FILTER BAG TO ENSURE PROPER OPERATIONS.
- PUMP INTAKE HOSE MUST NOT BE SET ON THE TRENCH BOTTOM THROUGHOUT DEWATERING. PROVISIONS MUST BE MADE TO ELEVATE THE INLET HOSE TO AT LEAST ONE FOOT ABOVE THE BOTTOM UNTIL BOTTOM DEWATERING IS NECESSARY.



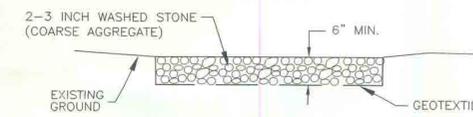
DETAIL 3
TEMPORARY DIVERSION BERM
(N.T.S.)

GENERAL NOTES:

- THE DIVERSION BERM SHALL HAVE AN UNINTERRUPTED POSITIVE GRADE TO A SEDIMENT CONTROL DEVICE.
- RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
- STABILIZATION OF THE AREA DISTURBED BY THE DIVERSION BERM SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATION FOR SEED AND STRAW MULCH.
- PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED BY THE CONTRACTOR AFTER EACH RAIN EVENT.



PLAN



SECTION

DETAIL 6
TEMPORARY GRAVEL CONSTRUCTION
ENTRANCE/EXIT
(N.T.S.)

SPECIFIC NOTES:

- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT WILL BE CONSTRUCTED TO THE MINIMUM DIMENSIONS SHOWN ON THIS DETAIL AND LOCATED AT ALL POINTS OF INGRESS OR EGRESS FROM DISTURBED AREAS INCLUDING BORROW AREA.
- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED OF 2-3 INCH COARSE WASHED AGGREGATE.
- AN 8 OZ. NONWOVEN GEOTEXTILE FABRIC UNDERLAYMENT SHALL BE PLACED OVER THE ENTIRE AREA AS PER SECTION GEOTEXTILE OF THE SPECIFICATIONS.
- IF CONDITIONS AT THE SITE ARE SUCH THAT MOST OF THE MUD AND SEDIMENT ARE NOT REMOVED BY VEHICLES TRAVELING OVER THE GRAVEL, THE TIRES SHOULD BE WASHED. WASHING SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO A SEDIMENT TRAP OR OTHER SUITABLE DISPOSAL AREA. A WASH RACK MAY ALSO BE USED TO MAKE WASHING MORE CONVENIENT AND EFFECTIVE.
- 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 PAVED ROADWAYS.

DETAIL 4
UTILITY LINE TRENCH EXCAVATION NOTES

1. GENERAL

EXPOSED TRENCH EXCAVATIONS HAVE HIGH POTENTIAL FOR ACCELERATED EROSION AND SEDIMENT POLLUTION. SINCE THESE EXCAVATIONS ARE USUALLY LOCATED AT LOWER ELEVATIONS ALONG OR ACROSS EARTH DISTURBANCE SITES, OPEN TRENCHES SERVE TO CONCENTRATE SEDIMENT LADEN RUNOFF AND CONVEY IT TO SITE BOUNDARIES OR WATERWAYS. THE MOST IMPORTANT EROSION AND SEDIMENT POLLUTION CONTROL CONSIDERATION FOR TRENCH CONSTRUCTION IS THE LIMITING AND SPECIFIC SCHEDULING OF WORK ACTIVITIES.

2. CONSTRUCTION REQUIREMENTS

- LIMIT ADVANCE CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
- WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
- LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
- WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING TO A SEDIMENT FILTER BAG. SEDIMENT FILTER BAG IS TO BE REMOVED AND REPLACED WHEN FULL. DURING DEWATERING OPERATIONS, THE CONTRACTOR MUST MAN THE SEDIMENT FILTER BAG TO INSURE PROPER OPERATION. THE PUMP INTAKE HOSE MUST NOT BE ALLOWED TO SET ON THE TRENCH BOTTOM THROUGHOUT DEWATERING. PROVISIONS MUST BE MADE TO ELEVATE THE INLET HOSE TO AT LEAST ONE FOOT ABOVE THE BOTTOM UNTIL BOTTOM DEWATERING IS NECESSARY.
- IMMEDIATELY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND APPROPRIATE TEMPORARY EROSION AND SEDIMENT POLLUTION CONTROL MEASURES/FACILITIES WILL BE INSTALLED OR PERMANENT SEEDING AND MULCHING WILL BE DONE.

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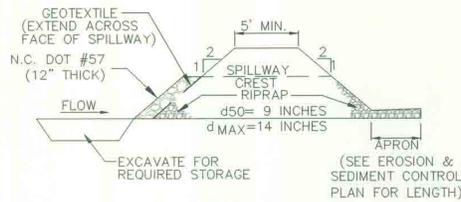
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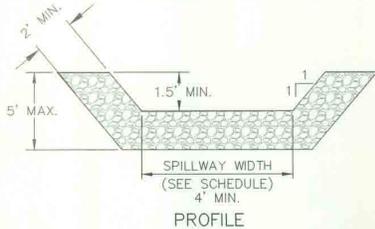
EROSION AND SEDIMENT CONTROL DETAILS-1

**CAP CONSTRUCTION PROJECT
KINSTON ASH LANDFILL
KINSTON, N.C.**

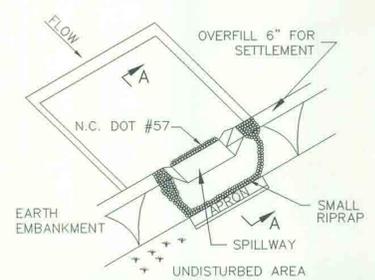
SCALE	DATE	DRAWING NO.	SHEET
AS NOTED	2/25/03		5 OF 12



CROSS SECTION A-A



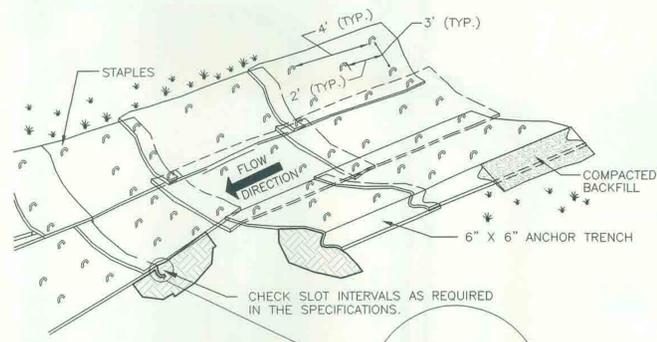
PROFILE



DETAIL 7

STONE OUTLET SEDIMENT TRAP

(N.T.S.)



DETAIL 9

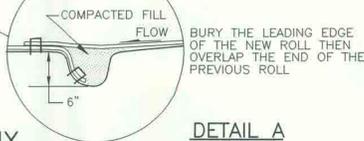
DITCH PROTECTION

EROSION CONTROL BLANKET AND TURF REINFORCEMENT MATRIX

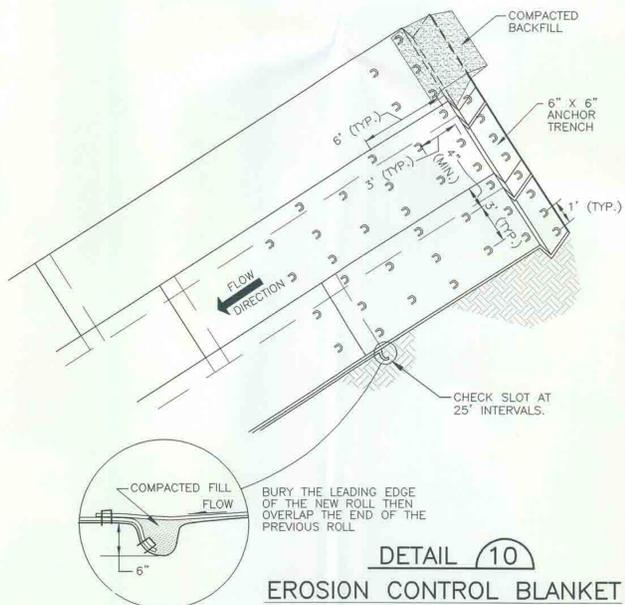
(N.T.S.)

GENERAL NOTES:

1. EROSION CONTROL BLANKETS SHALL BE AS SPECIFIED IN SECTION: EROSION CONTROL MEASURES.
2. BLANKETS SHALL BE PLACED IN A MANNER WHICH WILL NOT CAUSE THE BLANKET TO BRIDGE OR TENT OVER OBSTRUCTIONS.
3. BLANKETS SHALL BE STAPLED AS SHOWN ON THE DETAIL OR IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS (WHICHEVER IS MORE STRINGENT) USING A MINIMUM NO. 11 GAUGE STAPLE 8 INCHES IN LENGTH. USE A 9 GAUGE STAPLE IF HARD SOILS ARE ENCOUNTERED.
4. BLANKETS SHALL BE PLACED PARALLEL TO SLOPE DIRECTION, MINIMIZING THE SEAMS. IF SEAMING IS NECESSARY, A MINIMUM 4" OVERLAP SHALL BE USED, ENSURING THAT THE UPSLOPE SEAM OVERLAPS THE DOWNSLOPE SEAM.
5. CHECK SLOTS SHALL BE AS REQUIRED IN SECTION EROSION CONTROL MEASURES OF THE SPECIFICATIONS AND SHALL BE A MINIMUM OF 6 INCHES DEEP. A MINIMUM OF 8 INCHES OF THE NEW ROLL SHALL BE STAPLED INTO THE BOTTOM OF THE TRENCH AND SHALL BE BACKFILLED AND COMPACTED. THE PREVIOUS ROLL PANEL SHALL BE PLACED A MINIMUM OF 6 INCHES OVER THE CHECK SLOT AND STAPLED EVERY 20 INCHES, OR AS RECOMMENDED BY THE MANUFACTURER.
6. CHECK SLOTS SHALL EXTEND THE ENTIRE WIDTH OF THE CHANNEL.



DETAIL A



DETAIL 10

EROSION CONTROL BLANKET SLOPE PROTECTION

(N.T.S.)

GENERAL NOTES:

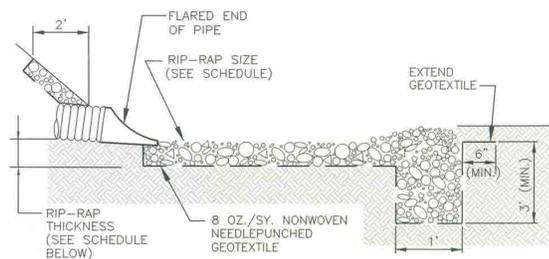
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5. STAPLES IN THE ANCHOR TRENCH SHALL BE PLACED, AT A MINIMUM, EVERY 2 FEET EXTENDING THE ENTIRE LENGTH OF THE TRENCH.

SEDIMENT TRAP SCHEDULE		
	1	2
REQUIRED VOLUME (cf)	7,450	4,765
PROPOSED VOLUME (cf)	8,735	6,426
BOTTOM ELEVATION	60.5'	47.5'
TOP OF BERM	64'	51'
SPILLWAY ELEVATION	62.5'	49.5'
SPILLWAY WIDTH	10'	8'
CLEANOUT ELEVATION	61.5'	48.5'

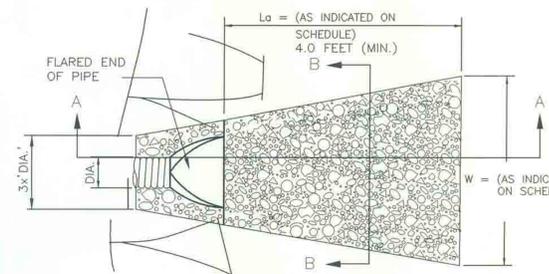
NOTES:

1. THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. THE VOLUME OF SEDIMENT STORAGE SHALL BE 1,800 CUBIC FEET PER ACRE OF DRAINAGE AREA.
4. ALL FILL SLOPES SHALL BE 2H:1V OR FLATTER, CUT SLOPES 1H:1V OR FLATTER.
5. THE STONE USED IN THE OUTLET SHALL BE RIPRAP (d₅₀ = 9 INCHES, d_{max} = 14 INCHES) ALONG WITH A 1 FOOT THICKNESS OF N.C.DOT #57 AGGREGATE PLACED ON THE UP-GRADE SIDE ON THE SMALL RIPRAP. PLACE GEOTEXTILE BETWEEN THE RIPRAP AND N.C. DOT #57 STONE.
6. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO THE CLEANOUT ELEVATION OF THE TRAP AS LISTED IN THE SCHEDULE OR TO 1/2 THE DESIGN DEPTH OF THE TRAP.
7. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED OR AS DIRECTED BY THE CONSTRUCTION MANAGER.
8. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
9. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

MAXIMUM DRAINAGE AREA: 5 ACRES



SECTION A-A



PLAN

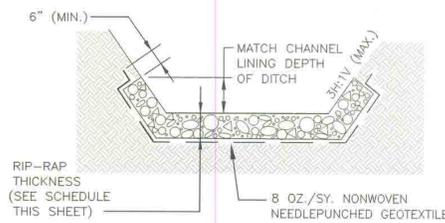
DETAIL 8

PIPE INLET/OUTLET PROTECTION

(N.T.S.)

PIPE INLET/OUTLET PROTECTION SCHEDULE							
CULVERT	PIPE DIA. (in.)	RIP-RAP SIZE (d ₅₀) (in.)	RIP-RAP THICKNESS (in.)	INLET L _a (ft.)	INLET W (ft.)	OUTLET L _a (ft.)	OUTLET W (ft.)
1	18	12	27	*	*	**	10
2	18	12	27	*	*	*	10

* INLET STONE LIMITS INDICATED ON FINAL GRADING.
** OUTLET STONE LIMITS INDICATED ON FINAL GRADING.



SECTION B-B

GENERAL NOTES:

1. RIP-RAP STONE SIZE (d₅₀) SHALL BE AS SPECIFIED ON SCHEDULE (THIS SHEET).
2. THICKNESS OF APRON SHALL BE 1.5 X d_{max} OF SPECIFIED RIP-RAP.
3. GEOTEXTILE SHALL BE AN 8 OZ. NONWOVEN, NEEDLEPUNCHED MATERIAL.
4. OUTLET AREAS SHALL BE MAINTAINED, KEPT FREE OF SEDIMENT BUILD UP, OR OTHER BLOCKAGE (E.G. LEAVES) AFTER EACH STORM EVENT OR AS DETERMINED NECESSARY BY THE CONSTRUCTION MANAGER.

NO.	DESIGN SUBMITTAL TO NCDENR	SCD	2/25/03
NO.	REVISIONS	BY	DATE

DESIGNED	INITIALS
HEATHER DORSEY	HCD
DRAWN	
WAYNE CARR	WC
CHECKED	
CHRIS T. CURRAN	CTC
APPROVED(DESIGN)	
A. MAC BONNER	AMB
APPROVED(CONSTRUCTION)	

Corporate Remediation Group
An Alliance between DuPont and URS Diamond
 Barley Mill Plaza, Building 27
 Wilmington, Delaware 19880-0027

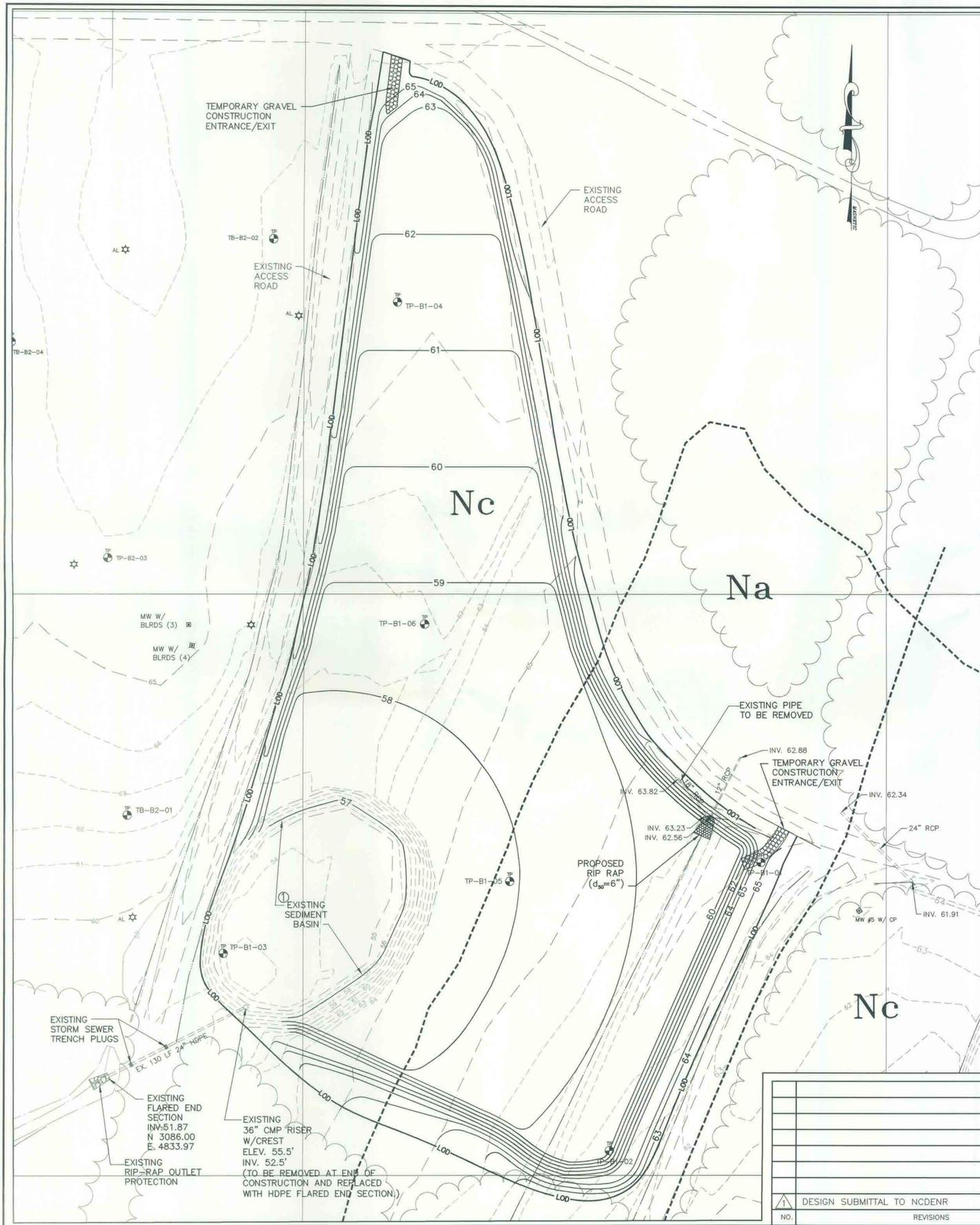
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 Fax: 302.791.0708

EROSION AND SEDIMENT CONTROL DETAILS-2

CAP CONSTRUCTION PROJECT
 KINSTON ASH LANDFILL
 KINSTON, N.C.

SCALE	DATE	DRAWING NO.	SHEET
AS NOTED	2/25/03		6 OF 12



SOIL LEGEND:

- Na** NORFOLK, LOAMY SAND, SANDY CLAY LOAM, 0-2% SLOPES
- Nc** NORFOLK, LOAMY SAND, SANDY CLAY LOAM, 6-10% SLOPES
- SOIL BOUNDARY

SPECIFIC NOTES

1. CHECK SEDIMENT BASIN AFTER PERIODS OF SIGNIFICANT RUNOFF. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE HALF THE DESIGN DEPTH.
2. 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 RISER AND POOL AREA.

1' CONTOUR INTERVAL

GRAPHIC SCALE



NO.	REVISIONS	BY	DATE
1	DESIGN SUBMITTAL TO NCDENR	SCD	2/25/03

DESIGNED	INITIALS
HEATHER DORSEY	HCD
DRAWN	
WAYNE GARR	WC
CHECKED	
CHRIS T. CURRAN	CTC
APPROVED(DESIGN)	
A. MAC BONNER	AMB
APPROVED(CONSTRUCTION)	

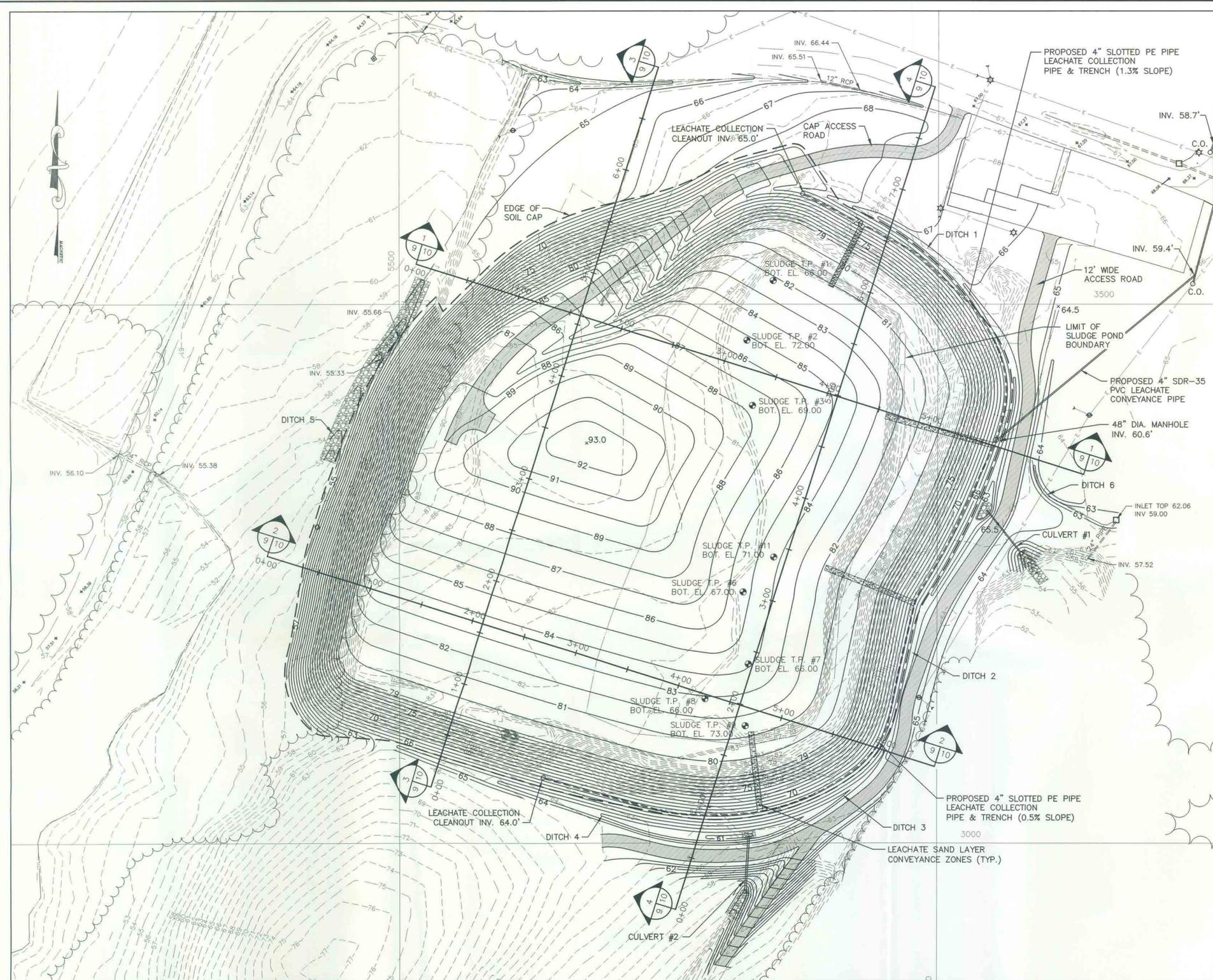
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An Alliance between
DuPont and URS | Diamond
 Barley Mill Plaza, Building 27
 Wilmington, Delaware 19880-0027

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 1200 Philadelphia Pike
 Wilmington, DE 19809
 Tel: 302.791.0700
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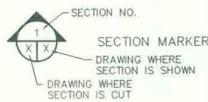
BORROW AREA GRADING AND EROSION AND SEDIMENT CONTROL PLAN

CAP CONSTRUCTION PROJECT
KINSTON ASH LANDFILL
KINSTON, NC

SCALE	DATE	DRAWING NO.	SHEET
1" = 50'	2/25/03		8 OF 12



LEGEND



1' CONTOUR INTERVAL

GRAPHIC SCALE



(IN FEET)
1 inch = 50 ft.

NO.	REVISIONS	BY	DATE
1	DESIGN SUBMITTAL TO NCDENR	SCD	2/25/03

DESIGNED	INITIALS
CHRIS T. CURRAN	CTC
DRAWN	
SEAN C. DALY	SCD
CHECKED	
A. MAC BONNER	AMB
APPROVED(DESIGN)	
JAMES E. WHITTY	JEW
APPROVED(CONSTRUCTION)	

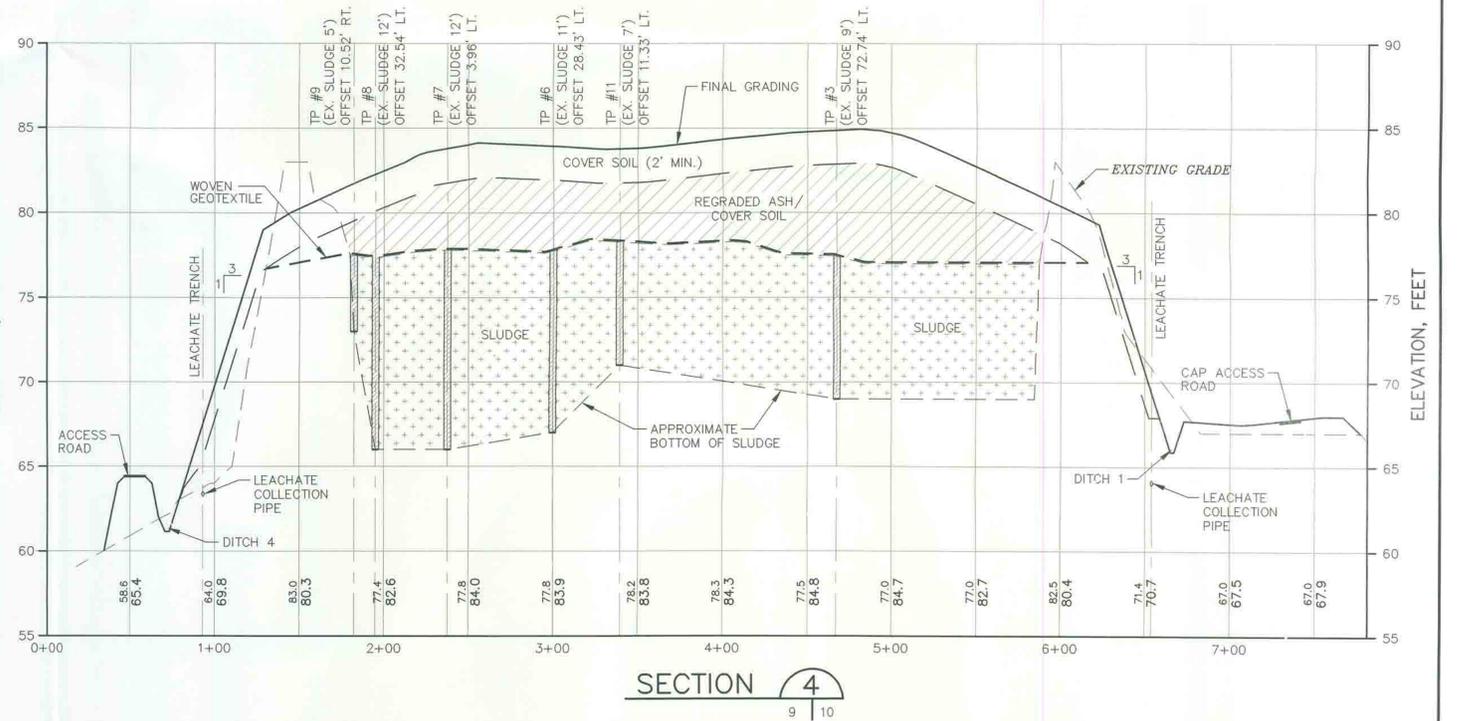
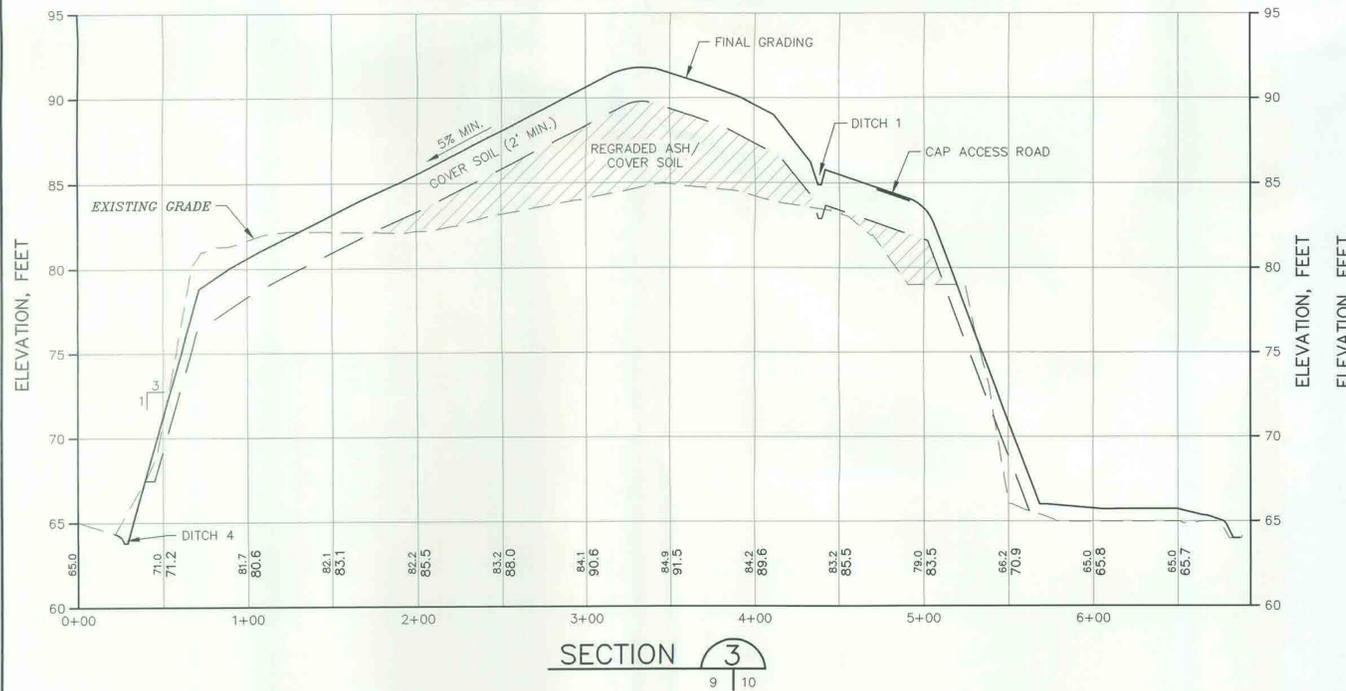
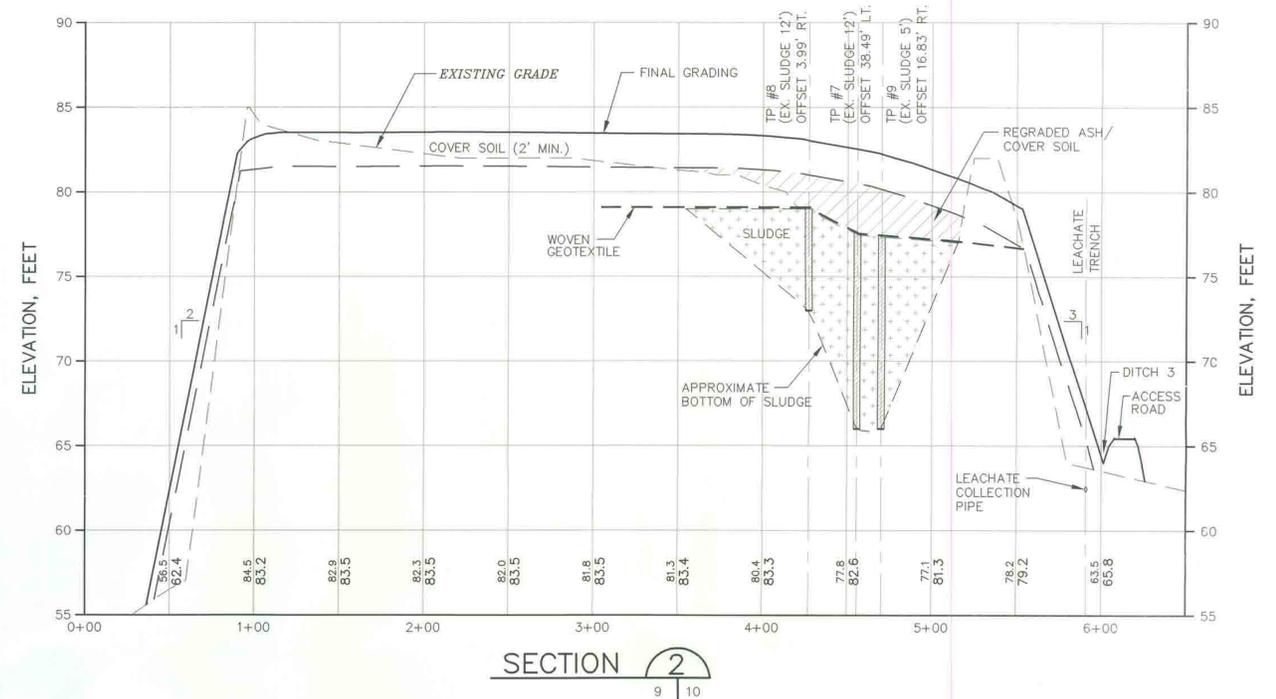
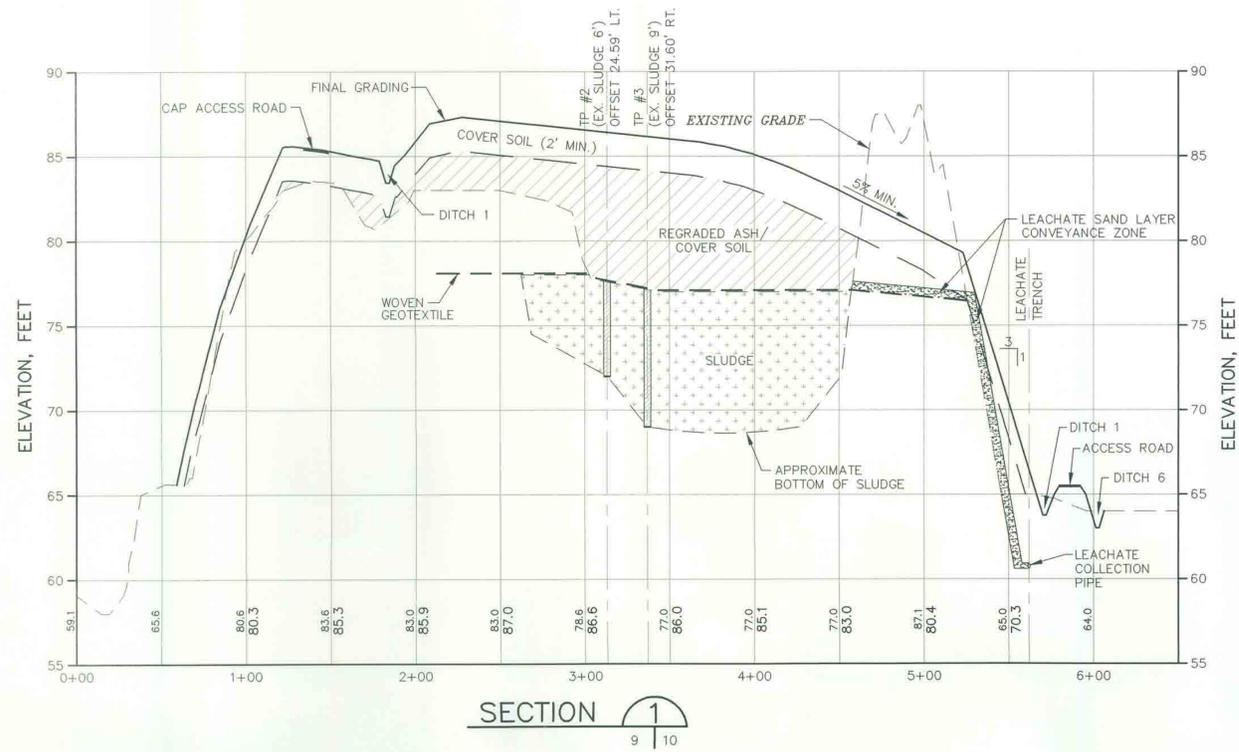
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Wilmington, Delaware 19880-0027

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Wilmington, DE 19809
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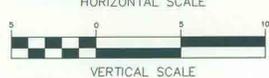
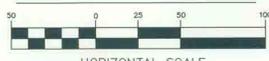
CAP CROSS SECTION PLAN

CAP CONSTRUCTION PROJECT
KINSTON ASH LANDFILL
KINSTON, NC

SCALE	DATE	DRAWING NO.	SHEET
1" = 50'	2/25/03		9 OF 12



10X VERTICAL EXAGGERATION



NO.	REVISIONS	BY	DATE
1	DESIGN SUBMITTAL TO NCDENR	SCD	2/25/03

DESIGNED	INITIALS
CHRIS T. CURRAN	CTC
SEAN C. DALY	SCD
A. MAC BONNER	AMB
JAMES E. WHITTY	JEW

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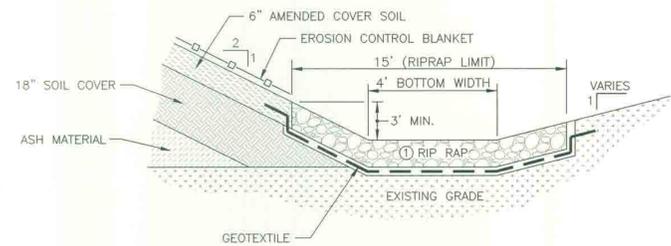
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CAP CROSS SECTIONS

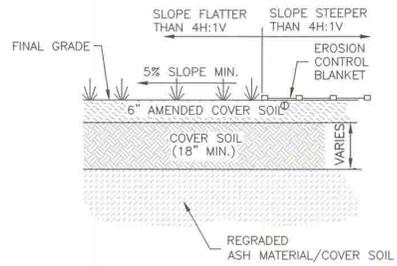
CAP CONSTRUCTION PROJECT
 KINSTON ASH LANDFILL
 KINSTON, NC

SCALE: 1" = 50'
 DATE: 2/25/03
 DRAWING NO.:
 SHEET: 10 OF 12



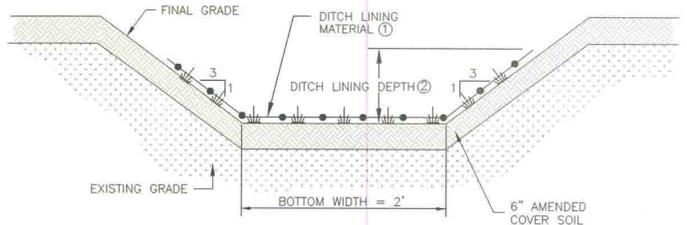
DETAIL 1
OFF CAP RIP RAP
LINED DITCH 5
(N.T.S.)

SPECIFIC NOTES:
① RIP RAP D₅₀ IS 6-INCHES, LIMITS OF RIPRAP INDICATED ON FINAL GRADING.



DETAIL 4
ASH LANDFILL CAP
(N.T.S.)

① AMEND COVER SOIL AS PER SECTION: EARTHWORK OF THE SPECIFICATIONS.

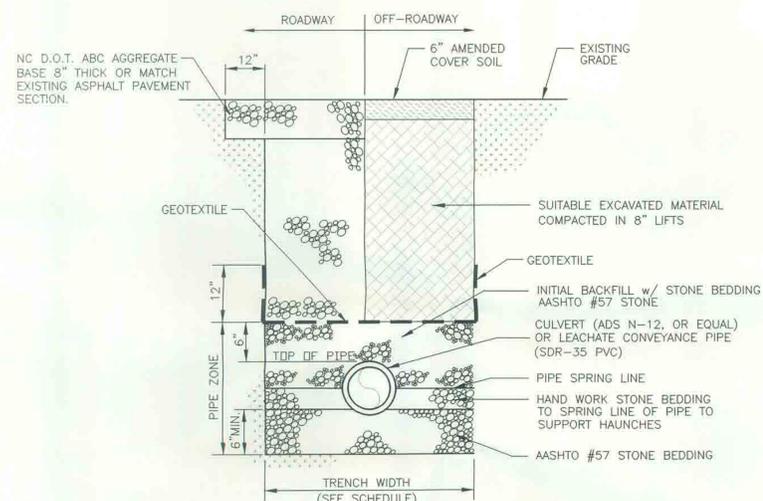


OFF CAP TRAPEZOIDAL DITCH SCHEDULE

DITCH	DITCH LINING MATERIAL ①	DITCH LINING DEPTH ② (FT)
1	TRM	1
2	ECB	1
4	ECB	1.5
6	ECB	1

TRM = TURF REINFORCEMENT MATRIX
ECB = EROSION CONTROL BLANKET

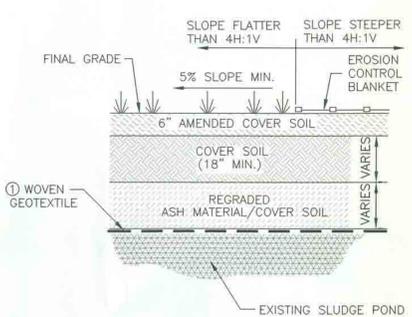
DETAIL 7
OFF CAP TRAPEZOIDAL DITCH
(N.T.S.)



DETAIL 2
TYPICAL TRENCH DETAIL
(N.T.S.)

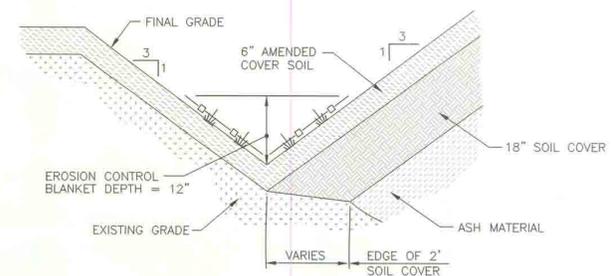
GENERAL NOTES:
1. ALL BACKFILL MATERIAL SHALL BE COMPACTED IN 8" LIFTS UNLESS OTHERWISE SPECIFIED.
2. BOTTOM OF TRENCH SHALL BE FIRM. REMOVE ALL LOOSE MATERIAL.

PIPE DIA. (IN.)	TRENCH WIDTH
4"	30"
18"	42"
24"	54"



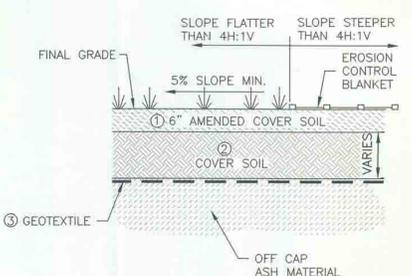
DETAIL 5
ASH LANDFILL CAP
ABOVE SLUDGE POND
(N.T.S.)

① THE LIMITS OF THE GEOTEXTILE ARE SHOWN ON THE GRADING PLAN



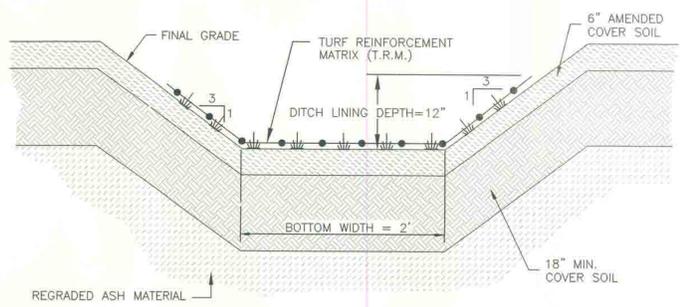
DETAIL 8
OFF CAP V-DITCH
(N.T.S.)

GENERAL NOTE: THIS DETAIL IS APPLICABLE TO DITCH 3.



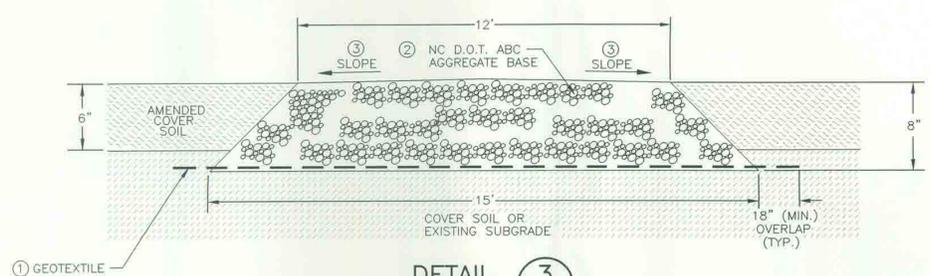
DETAIL 6
OFF CAP SOIL COVER
(N.T.S.)

SPECIFIC NOTES:
① AMEND COVER SOIL AS PER SECTION: EARTHWORK OF THE SPECIFICATIONS.
② COVER SOIL THICKNESS WILL VARY FROM 0-INCHES TO 18-INCHES. SEE GRADING PLAN FOR FINAL GRADES AND COVER SOIL THICKNESS.
③ GEOTEXTILE SHALL BE AS SPECIFIED IN SECTION: GEOTEXTILE OF THE SPECIFICATIONS.



DETAIL 9
ON CAP TRAPEZOIDAL DITCH
(N.T.S.)

GENERAL NOTE: THIS DETAIL IS APPLICABLE TO DITCH 1.



DETAIL 3
TYPICAL ACCESS ROADWAY
(N.T.S.)

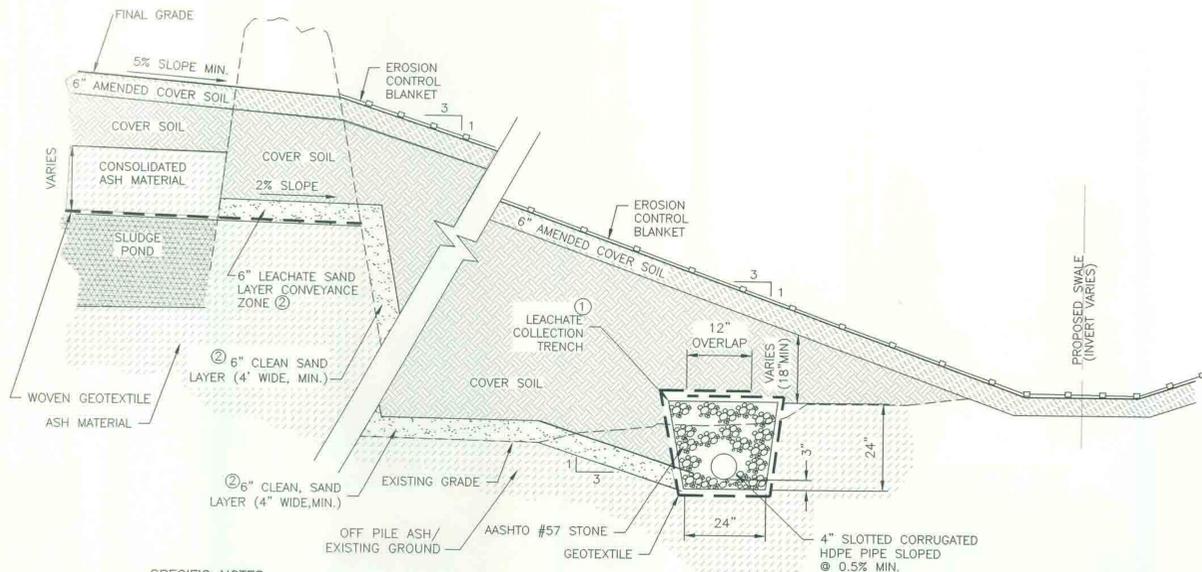
SPECIFIC NOTES:
① GEOTEXTILE SHALL BE AS SPECIFIED IN SECTION: GEOTEXTILE OF THE SPECIFICATIONS.
② AGGREGATE SHALL BE AS SPECIFIED IN SECTION: ROADWAY CONSTRUCTION OF THE SPECIFICATIONS.
③ SEE FINAL GRADING PLAN FOR CROSS SLOPE DIRECTION.

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DESIGNED	INITIALS
HEATHER DORSEY	HCD
DRAWN	
WAYNE CARR	WC
CHECKED	
CHRIS T. CURRAN	CTC
APPROVED (DESIGN)	
A. MAC BONNER	AMB
APPROVED (CONSTRUCTION)	

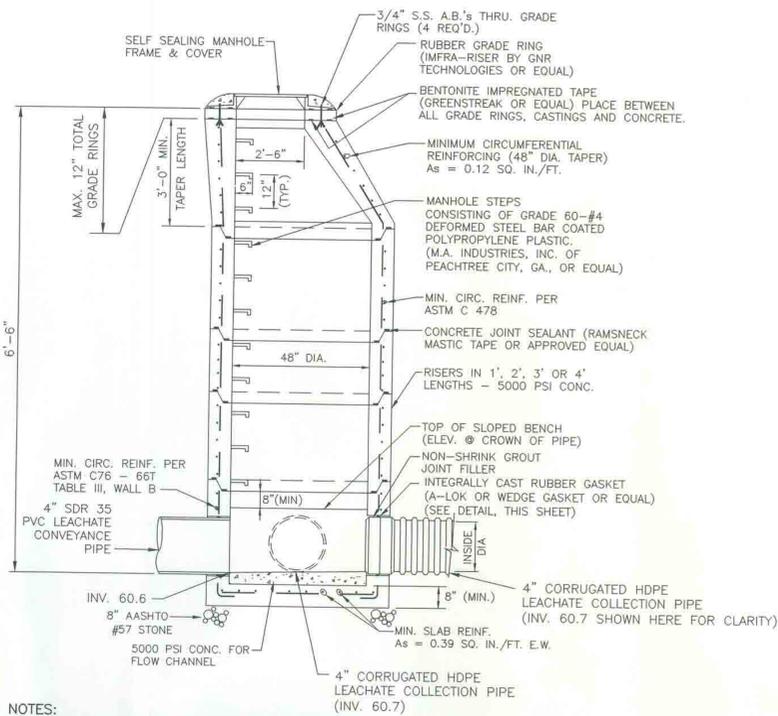
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CAP CONSTRUCTION DETAILS			
CAP CONSTRUCTION PROJECT KINSTON ASH LANDFILL KINSTON, N.C.			
SCALE	DATE	DRAWING NO.	SHEET
AS NOTED	2/25/03		11 OF 12



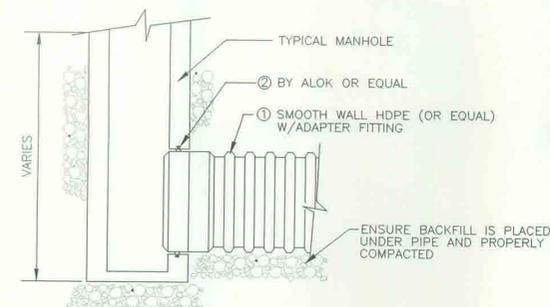
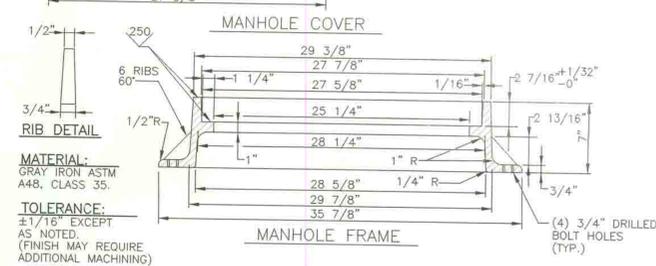
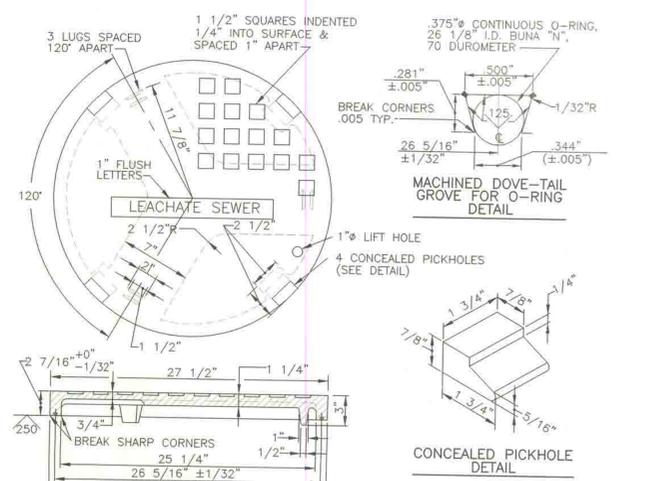
- SPECIFIC NOTES:**
- SEE GRADING PLAN FOR ALIGNMENT AND INVERTS OF LEACHATE COLLECTION TRENCH.
 - EXTEND CLEAN SAND LAYER (4" WIDTH, MIN.) UP SLOPE TO EDGE OF SLUDGE POND IN THE LOCATIONS IDENTIFIED ON THE GRADING PLAN.

DETAIL 1
LEACHATE COLLECTION TRENCH
NOT TO SCALE



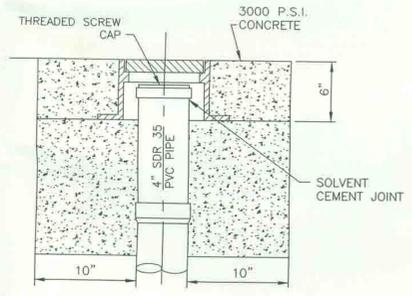
- GENERAL NOTES:**
- UNLESS OTHERWISE NOTED, MANHOLE TAPERS, RISERS, AND BASES SHALL BE FURNISHED IN STRICT ACCORDANCE WITH ASTM DESIGNATION C478 (LATEST) FOR PRECAST REINFORCED CONCRETE MANHOLES.
 - MANHOLES SHALL BE OF 5,000 P.S.I. PRECAST CONCRETE.
 - MANHOLE STEPS SHALL BE SPACED AS SHOWN IN A SINGLE VERTICAL ALIGNMENT. THE STEPS SHALL NOT BE STAGGERED.
 - PRECAST UNIT SHALL BE CAPABLE OF SUPPORTING HIGHWAY LOADS (H-20, ETC.) AS DEFINED BY AASHTO.
 - FLOW CHANNEL IN MANHOLE TO BE PRECAST CONCRETE WITH DEPTH OF AT LEAST ONE HALF DIAMETER OF DISCHARGING PIPE SIZE.
 - MANHOLE TOP SHALL BE FLUSH WITH FINISHED GRADE.
 - ALL MANHOLE EXCAVATIONS SHALL BE BACKFILLED WITH CRUSHER RUN STONE.

DETAIL 2
48\"/>

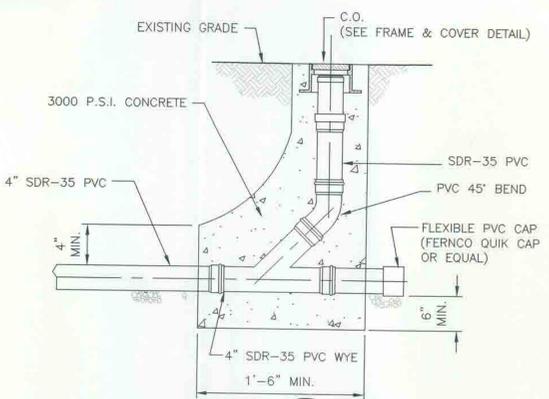


- SPECIFIC NOTES:**
- MAXIMUM INSERTION ANGLE IS 7 DEGREES.
 - PRECAST MANHOLE GASKET TO BE SIZED FROM OUTSIDE DIAMETER OF ADAPTER FITTING.

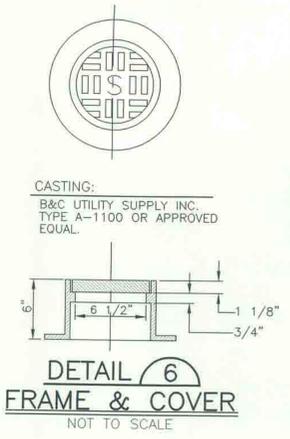
DETAIL 4
HDPE WATERTIGHT CONNECTION PRECAST MANHOLE GASKET
NOT TO SCALE



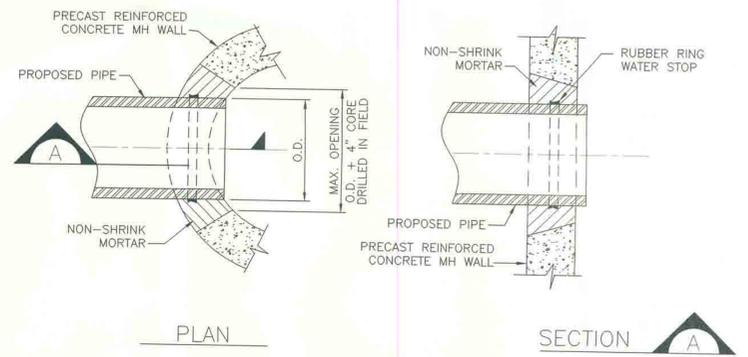
DETAIL 5
PVC CLEANOUT DETAILS
NOT TO SCALE



DETAIL 7
LEACHATE CONVEYANCE PIPE CLEANOUT
NOT TO SCALE



DETAIL 6
FRAME & COVER
NOT TO SCALE



DETAIL 8
CONNECTION OF 4\"/>

- GENERAL NOTE:**
- FLOW THROUGH EXISTING MANHOLE SHALL NOT BE IMPEDED DURING THE INSTALLATION OF THE PROPOSED PIPE. CONTRACTOR SHALL DIVERT FLOW AROUND WORK AREA IF NECESSARY.

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HEATHER DORSEY	HCD
A. MAC BONNER	AMB

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LEACHATE COLLECTION/ CONVEYANCE DETAILS
CAP CONSTRUCTION PROJECT
KINSTON ASH LANDFILL
KINSTON, N.C.

SCALE	DATE	DRAWING NO.	SHEET
AS NOTED	02/25/03		12 OF 12

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