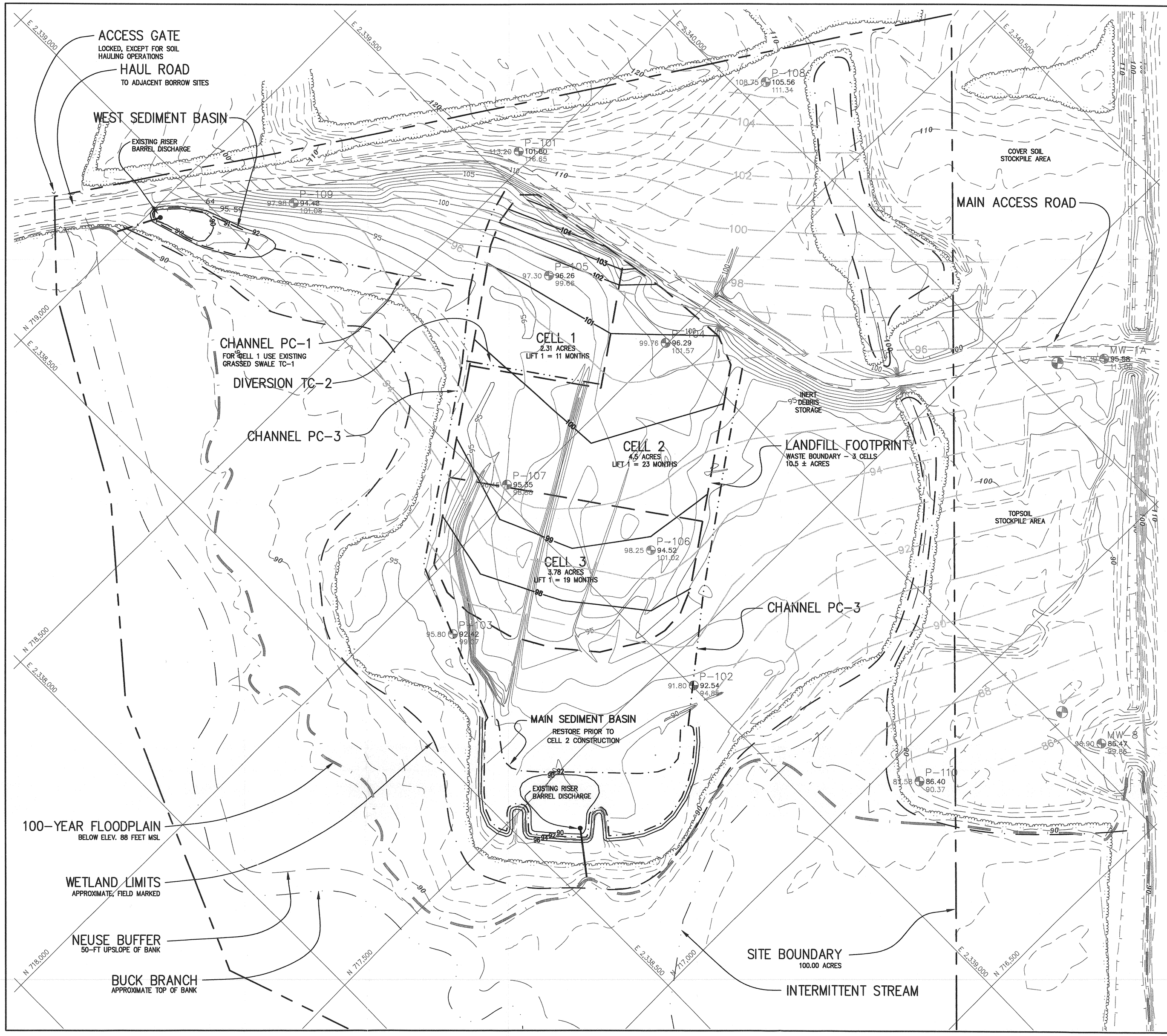

CONSTRUCTION NOTES:

1. PURPOSE. THIS FACILITY PLAN FOR THE WESTSIDE CONSTRUCTION AND DEMOLITION LANDFILL FACILITY, OWNED BY WILSON COUNTY, NORTH CAROLINA, IS PREPARED FOR A PERMIT TO CONSTRUCT ISSUED BY THE NC DENR DIVISION OF WASTE MANAGEMENT IN ACCORDANCE WITH THE 15A NCAC 13B.

2. BASE GRADE. AN AVERAGE 2-FOOT LAYER OF COMPACTED SOIL WILL BE ADDED TO THE EXISTING GRADE WITHIN THE FOOTPRINT. UNDER THE INITIAL 5-YEAR PERMIT TO CONSTRUCT, THE COMPACTED SOIL LAYER WILL BE CONSTRUCTED IN THREE TO FOUR LIFTS WITH SOILS APPROVED BY THE ENGINEER. WHERE THE BASE LAYER THICKNESS EXCEEDS 2 FEET, A LEVELING LIFT SHALL BE PLACED PRIOR TO THE THREE LIFTS (8-IN NOMINAL). AT AN AVERAGE LAYER THICKNESS OF 3.0 FEET, THE REQUIRED SOIL VOLUME FOR BASE CONSTRUCTION IS APPROXIMATELY 50,000 CUBIC YARDS.

3. CELL 1 EXISTING CONDITIONS. AS REPRESENTED IN THIS DRAWING AND ACCORDING TO THE DESIGN REQUIREMENTS OF THE ENGINEERING PLAN, BASE GRADE FOR CELL 1 WAS CONSTRUCTED DURING SITE GRADE RESTORATION ACTIVITIES PERFORMED IN SEPTEMBER 2003. GRADES HAVE BEEN VERIFIED BY THE PROJECT NC LICENSED SURVEYOR. BORINGS AND PIEZOMETERS INSTALLED IN THE CELL 1 AREA HAVE BEEN ABANDONDED BY A NC LICENSED WELL DRILLER, IN ACCORDANCE WITH PROJECT REQUIREMENTS AND 15A NCAC 2C. UPON INSPECTION BY THE PROJECT ENGINEER AND ISSUANCE OF A PERMIT TO OPERATE BY THE NC SOLID WASTE SECTION, CELL 1 IS APPROVED FOR OPERATION. DOCUMENTATION OF CONSTRUCTION SHALL BE PLACED IN THE OPERATING RECORD AND SEALED BY THE PROJECT ENGINEER.

4. GROUNDWATER SEPARATION. BASE GRADES ARE A MINIMUM OF 4.5 ABOVE THE SEASONAL HIGH GROUNDWATER TABLE.

LEGEND

- BASE GRADE — 1-FOOT CONTOURS
- POTENTIOMETRIC CONTOUR — OBSERVED SEASONAL HIGH LEVEL 11/19/02
- WESTSIDE SITE BOUNDARY
- LANDFILL FOOTPRINT — 10.5 ACRES
- EXISTING LANDFILL LIMITS
- 100-YEAR FLOODPLAIN
- NEUSE BUFFER
- SURFACE WATER
- WETLAND BOUNDARY
- 2003 TOPOGRAPHY — 1-FT CONTOUR WITHIN CONSTRUCTION LIMITS
- 1998 TOPOGRAPHY — 2-FT CONTOUR SITE PERIMETER AREA
- DRAINAGE CHANNEL
- GMW-4 GROUNDWATER MONITORING WELL

Carver Johnson 10/11/12

PERMIT ISSUE
NOT FOR CONSTRUCTION

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

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PROJECT:
WESTSIDE C&D LANDFILL
CONSTRUCTION PLAN PERMIT
WILSON, NORTH CAROLINA

PREPARED FOR:
WILSON COUNTY
DEPARTMENT OF SOLID WASTE
113 E. NASH STREET
WILSON, NORTH CAROLINA 27894

NO.	DESCRIPTION	DATE

REVISIONS

NORTH CAROLINA PROFESSIONAL SEAL 10006 ENGINEER GARY W. AHLBERG

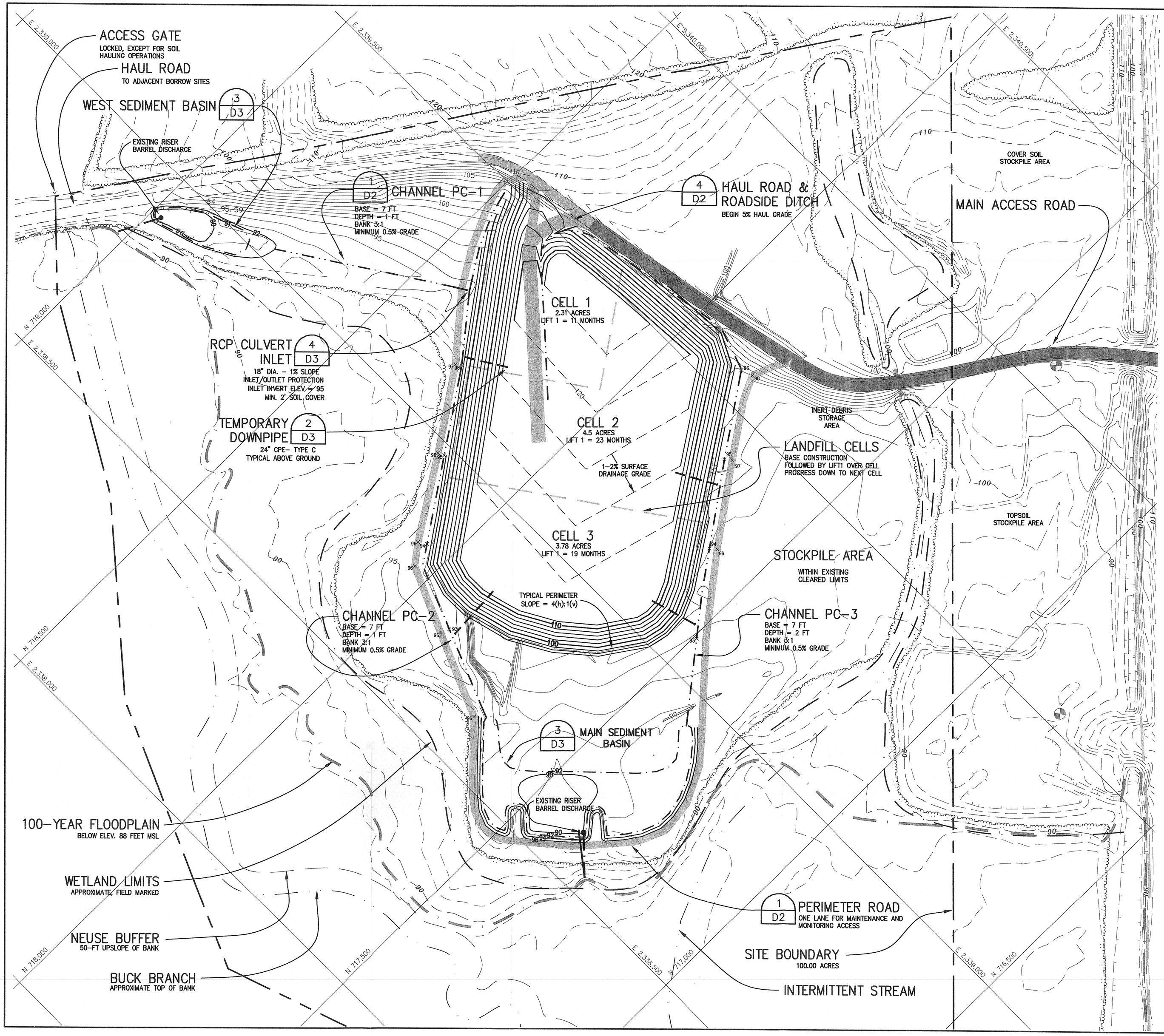
BASE GRADE PLAN

SCALE:	1"=100'
DATE:	9/01/04
DRN. BY:	GWA
CHECKED BY:	GWA

PROJECT NO:

DRAWING NO.
C1

[redacted] 9809- CDLF-



CONSTRUCTION NOTES:

1. PURPOSE. THIS PLAN FOR THE WESTSIDE CONSTRUCTION AND DEMOLITION LANDFILL FACILITY, OWNED BY WILSON COUNTY, NORTH CAROLINA, IS PREPARED FOR A PERMIT TO CONSTRUCT ISSUED BY THE NC DENR DIVISION OF WASTE MANAGEMENT IN ACCORDANCE WITH THE 15A NCAC 13B.

2. WASTE STREAM AND DISPOSAL RATE. THE LANDFILL WILL RECEIVE CONSTRUCTION AND DEMOLITION WASTE GENERATED WITHIN WILSON COUNTY, NORTH CAROLINA. OTHER WASTE TYPES APPROVED BY THE DIVISION FOR DISPOSAL; SEE PERMIT CONDITIONS OR AGENCY CORRESPONDENCE FOR SPECIFIC APPROVED WASTE TYPES, INCLUDING SPLIT TIRES AND TOBACCO DUST. THE ESTIMATED AVERAGE ANNUAL DISPOSAL RATES IS 20,000 TONS/YEAR.

3. ACCESS CONTROL. NATURAL TOPOGRAPHIC AND VEGETATIVE CONDITIONS AND CONTROL MEASURES LIMIT PUBLIC ACCESS TO THE SITE. WILSON COUNTY WILL MAINTAIN THE GATED ENTRANCE TO THE EXISTING MSW FACILITY. ACCESS TO THE WESTSIDE SITE WILL BE CONTROLLED VIA THE EXISTING MANNED SCALEHOUSE DURING OPERATING HOURS.

4. LANDFILL OPERATIONAL GRADE. THE LANDFILL WILL BE OPERATED IN 5 TO 10–FOOT LIFTS, PROGRESSING EVENLY ACROSS THE FOOTPRINT. AT THE INTERMEDIATE HEIGHT OF 10 FEET ABOVE BASE GRADE, THE ENTIRE 10.5 ACRE FOOTPRINT PROVIDES APPROXIMATELY 4 YEARS OF CAPACITY. INTERMEDIATE GRADE WITH A 1–2% SURFACE SLOPE SOILS SHALL BE MAINTAINED TO DIVERT STORMWATER OFF THE LANDFILL.

5. LANDFILL CAPACITY AND CELL CONSTRUCTION SCHEDULE. THE BASE SOIL LAYER SHALL BE CONSTRUCTED IN THREE CELLS. THE OPERATING LIFE FOR EACH INITIAL LIFT OVER A CELL AREA IS ESTIMATED AT 5 MONTHS/ACRE AS FOLLOWS:

CELL 1 – 2.31 ACRES: 11 MONTHS
CELL 2 – 4.50 ACRES: 23 MONTHS
CELL 3 – 3.78 ACRES: 19 MONTHS

6. COVER SOILS. DUE TO THE NON–PUTRESCIBLE NATURE OF THE WASTE, THE WORKING LIFT SHALL BE TYPICALLY COVERED ON A WEEKLY BASIS. THE TOP PORTION OF THE LIFT SHALL RECEIVE A MINIMUM COVER OF SIX INCHES. AS SECTIONS OF THE PERIMETER SLOPES ARE COMPLETED, THE 24–INCH FINAL COVER VSL SHALL BE PLACED AND COMPACTED. THE TOTAL SOIL VOLUME REQUIRED FOR THE WESTSIDE C&D LANDFILL PROJECT IS APPROXIMATELY 165,000 CUBIC YARDS. BASED ON AN AVERAGE EXCAVATION DEPTH OF 5 FEET BELOW THE EXISTING LAND SURFACE FROM THE 50 ACRES AVAILABLE FROM THE TUCKER AND MOHESKY SITES, THE MINIMUM ESTIMATE OF REMAINING SOIL RESOURCES FOR THE OFF–SITE BORROW AREAS IS 400,000 CUBIC YARDS. THE ENGINEER SHALL SPECIFY SOIL PROPERTIES FOR SPECIFIC LANDFILL APPLICATIONS.

7. FILL PROGRESSION. LANDFILL OPERATIONS ARE DESIGNED TO FILL THE CELLS IN SEQUENTIAL ORDER, WITH A TOP–DOWN PROGRESSION. SURFACE DRAINAGE SHALL BE MAINTAINED FROM THE CENTER TOWARD THE PERIMETER SLOPES. TEMPORARY DOWNPIPES SHALL BE USED TO CONVEY SURFACE DRAINAGE TO CHANNELS.

8. PERIMETER SLOPES. EXCEPT FOR SOIL EMBANKMENTS, PERIMETER SLOPES SHALL BE CONSTRUCTED AT A MAXIMUM GRADE OF 4(h):1(v).

9. INERT DEBRIS STORAGE (IDS) AREA. INERT DEBRIS MAY BE STORED TEMPORARILY FOR FUTURE USE IN HAUL OR ACCESS ROAD BASE CONSTRUCTION. NO LAND CLEARING DEBRIS OR OTHER WASTES ARE ALLOWED IN THE IDS AREA.

LEGEND

- 24" CPP TYPE C–DOWNDRAIN
- WESTSIDE SITE BOUNDARY
- LANDFILL CELLS C1+C2+C3=10.59 ACRES TOTAL
- EXISTING LANDFILL LIMITS
- 100–YEAR FLOODPLAIN
- NEUSE BUFFER
- SURFACE WATER
- WETLAND BOUNDARY
- 120 P1 INTERMEDIATE GRADE 2–FT CONTOUR
- 150 FINAL GRADE 2–FT CONTOUR
- 100 2003 TOPOGRAPHY 1–FT CONTOUR
- 90 1998 TOPOGRAPHY 2–FT CONTOUR
- DRAINAGE CHANNEL

PERMIT ISSUE
NOT FOR CONSTRUCTION

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

GARY W. AHLBERG, P.E.
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PROJECT: WESTSIDE C&D LANDFILL CONSTRUCTION PLAN PERMIT WILSON, NORTH CAROLINA

PREPARED FOR: WILSON COUNTY DEPARTMENT OF SOLID WASTE 113 E. NASH STREET WILSON, NORTH CAROLINA 27894

NO.	DESCRIPTION	DATE

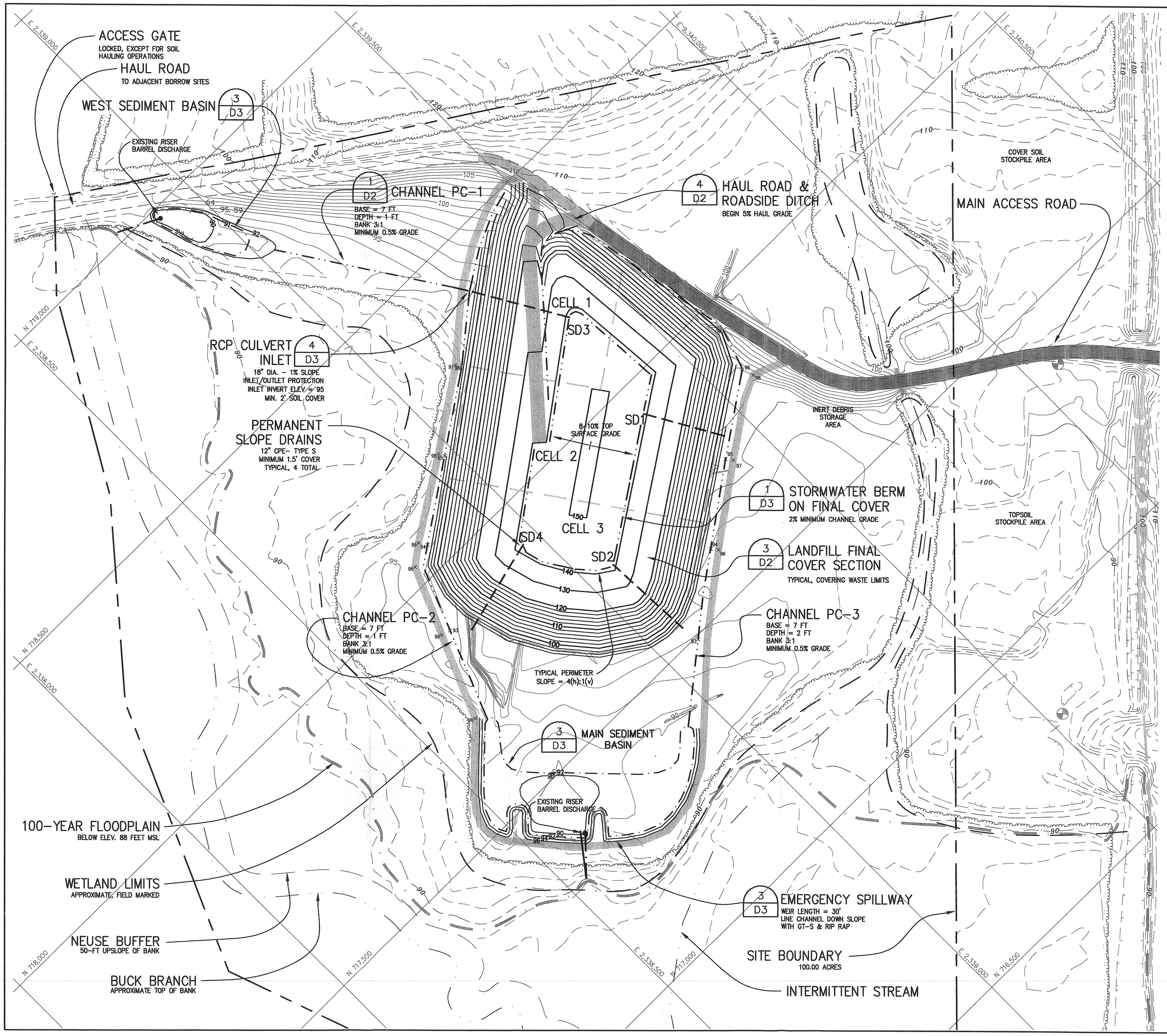
REVISIONS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 20100 GARY W. AHLBERG

PHASE 1 OPERATION PLAN

SCALE: 1"=100'
DATE: 9/01/04
DRN. BY: GWA
CHECKED BY: GWA
PROJECT NO:

DRAWING NO.
C2



CONSTRUCTION NOTES:

1. PURPOSE. THIS FACILITY PLAN FOR THE WESTSIDE CONSTRUCTION AND DEMOLITION LANDFILL FACILITY, OWNED BY WILSON COUNTY, NORTH CAROLINA, IS PREPARED FOR A PERMIT TO CONSTRUCT ISSUED BY THE NC DENR DIVISION OF WASTE MANAGEMENT IN ACCORDANCE WITH THE 15A NCAC 13B.

2. ACCESS CONTROL. NATURAL TOPOGRAPHIC AND VEGETATIVE CONDITIONS AND CONTROL MEASURES LIMIT PUBLIC ACCESS TO THE SITE. WILSON COUNTY WILL MAINTAIN LOCATED GATES AT THE WEST AND MAIN ENTRANCES TO THE FACILITY.

3. FINAL GRADE. DESIGN GRADES PROVIDED ARE FOR TOP OF FINAL COVER. ANY ADJUSTMENTS TO INCREASE THE FINAL COVER THICKNESS WILL REQUIRE MODIFICATION TO INTERMEDIATE COVER GRADES TO ALLOW FOR FINAL COVER CONSTRUCTION.

4. ALL CHANNELS SHALL BE STABILIZED WITH EXCELSIOR CURLEX 2 MATTING OR EQUIVALENT TO SECURE SEED AND ESTABLISH GRASSED CHANNEL. OUTLET PROTECTION SHALL BE CONSTRUCTED WITH D50 = 6-9 INCH RIP RAP, UNDERLAID WITH GT-S.

5. CLOSURE AND POST CLOSURE. WHEN OPERATIONS HAVE REACHED FINAL DESIGN GRADE, THE LANDFILL WILL BE COVERED WITH AT LEAST TWO FEET OF COMPACTED SOIL COVER. THE FINAL SOIL COVER WILL BE VEGETATED WITH NATIVE GRASSES ACCORDING TO THE SITE'S VEGETATION PLAN. INSPECTIONS WILL BE CONDUCTED PERIODICALLY TO OBSERVE THE INTEGRITY OF THE FINAL COVER. REPAIRS WILL BE MADE AS NECESSARY TO RESTORE THE VEGETATIVE SOIL COVER.

LEGEND

- 24" CPP TYPE C-DOWNDRAIN
- WESTSIDE SITE BOUNDARY
- LANDFILL CELLS C1+C2+C3=10.59 ACRES TOTAL
- EXISTING LANDFILL LIMITS
- 100-YEAR FLOODPLAIN
- NEUSE BUFFER
- SURFACE WATER
- WETLAND BOUNDARY
- FINAL COVER GRADE 2-FT CONTOUR
- 150 FINAL COVER GRADE 10-FT CONTOUR
- 100 2003 TOPOGRAPHY 1-FT CONTOUR
- 90 1998 TOPOGRAPHY 2-FT CONTOUR
- DRAINAGE CHANNEL

PERMIT ISSUE
NOT FOR CONSTRUCTION

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

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PROJECT:
WESTSIDE C&D LANDFILL
CONSTRUCTION PLAN PERMIT
WILSON, NORTH CAROLINA

PREPARED FOR:
WILSON COUNTY
DEPARTMENT OF SOLID WASTE
113 E. NASH STREET
WILSON, NORTH CAROLINA 27894

NO.	DESCRIPTION	DATE

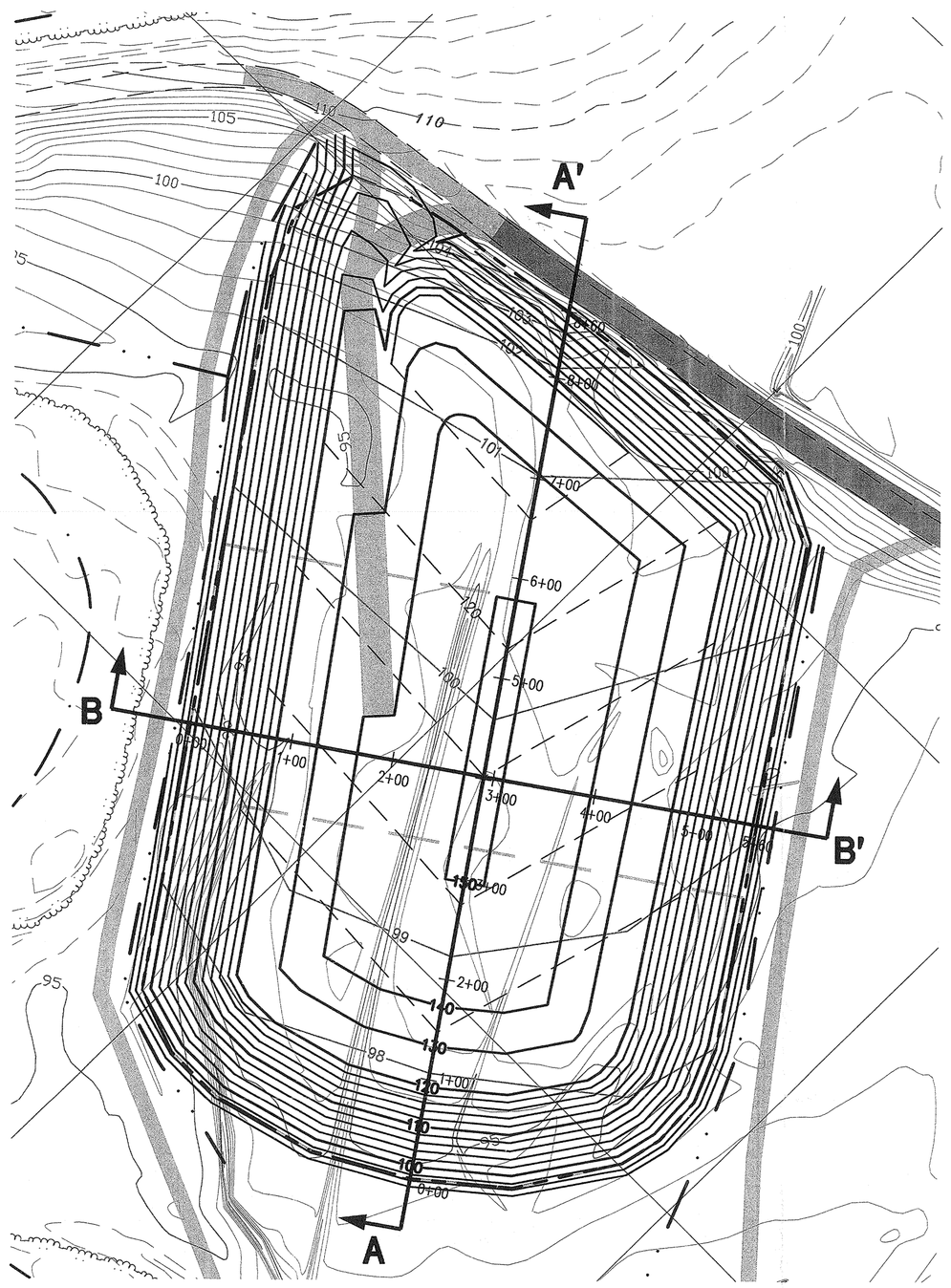
REVISIONS

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER GARY W. AHLBERG 9/01/04

FINAL COVER PLAN

SCALE:	1"=100'
DATE:	9/01/04
DRN. BY:	GWA
CHECKED BY:	GWA
PROJECT NO:	

DRAWING NO.
C3

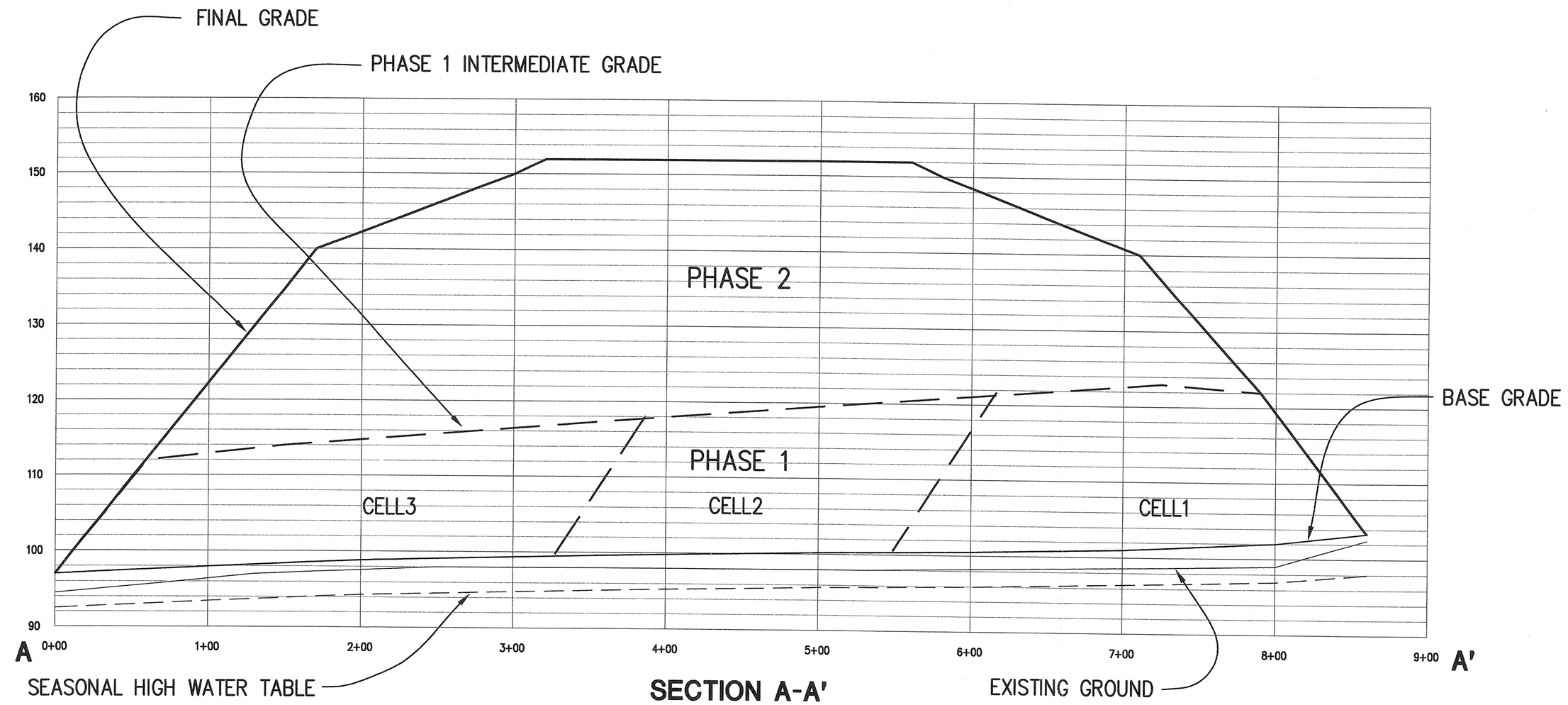


PLAN SECTION ALIGNMENT
SCALE 1" = 100'

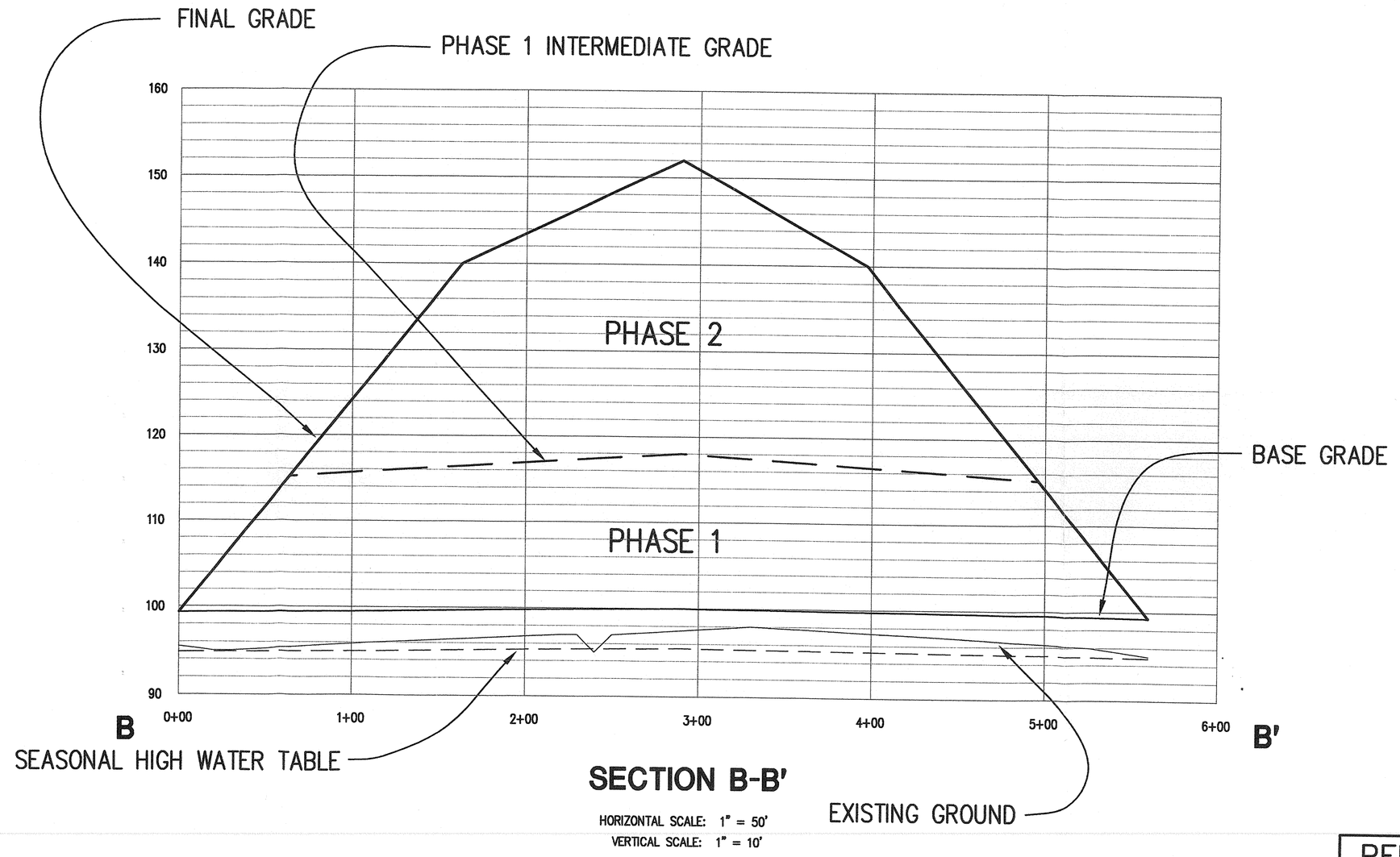
GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

LEGEND

- LANDFILL FOOTPRINT 10.5 ACRES
- 101 LANDFILL BASE GRADE 1-FT CONTOUR
- 120 P1 INTERMEDIATE GRADE 2-FT CONTOUR
- 150 FINAL GRADE 2-FT CONTOUR
- 100 2003 TOPOGRAPHY 1-FT CONTOUR
- 90 1998 TOPOGRAPHY 2-FT CONTOUR
- DRAINAGE CHANNEL



SECTION A-A'
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



SECTION B-B'
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'

PERMIT ISSUE
NOT FOR CONSTRUCTION

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PROJECT:
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CONSTRUCTION PLAN PERMIT
WILSON, NORTH CAROLINA

PREPARED FOR:
WILSON COUNTY
DEPARTMENT OF SOLID WASTE
113 E. NASH STREET
WILSON, NORTH CAROLINA 27894

NO.	DESCRIPTION	DATE

REVISIONS

NORTH CAROLINA PROFESSIONAL SEAL 20100 ENGINEER GARY W. AHLBERG

LANDFILL CROSS SECTIONS

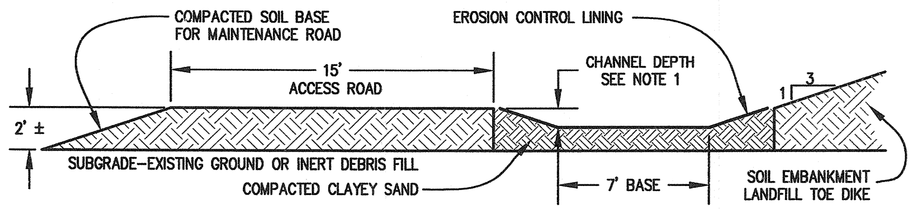
SCALE: 1"=100'
DATE: 9/01/04
DRN. BY: GWA
CHECKED BY: GWA
PROJECT NO:

DRAWING NO.
D1

NOTES:

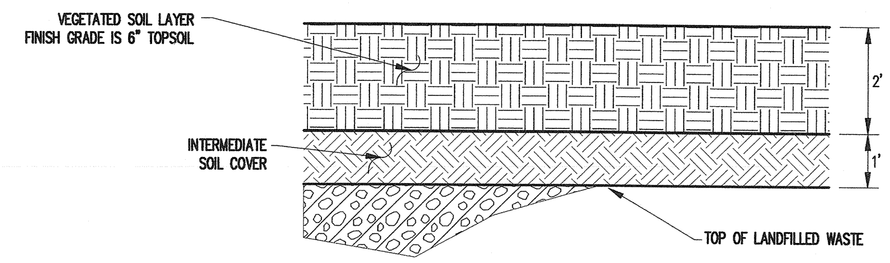
1. TYPICAL CHANNEL DEPTH IS 1 FOOT. PC-3 DEPTH IS 2 FEET. APPARENT DEPTH INCREASES WITHIN 300 FEET OF CHANNEL DISCHARGE TO THE MAIN BASIN DUE TO FIXED ELEVATION OF ACCESS ROAD AT 96.0.

2. RECP LINING IS EXCELSIOR CURLEX 2 OR EQUIVALENT, INSTALLED ACCORDING TO MANUFACTERERS GUIDELINES.



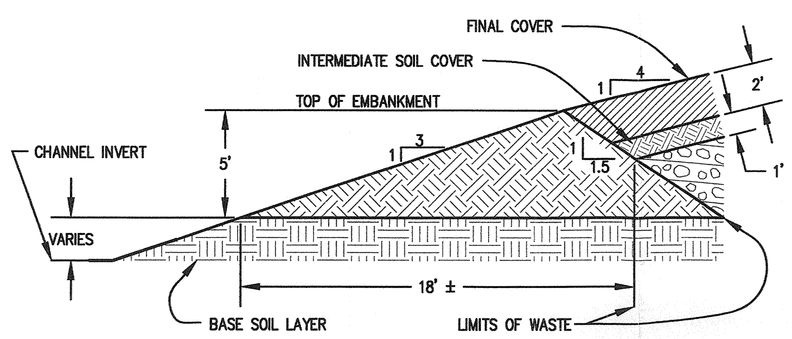
1 - ACCESS ROAD & PERIMETER CHANNEL

SCALE: 1" = 5'



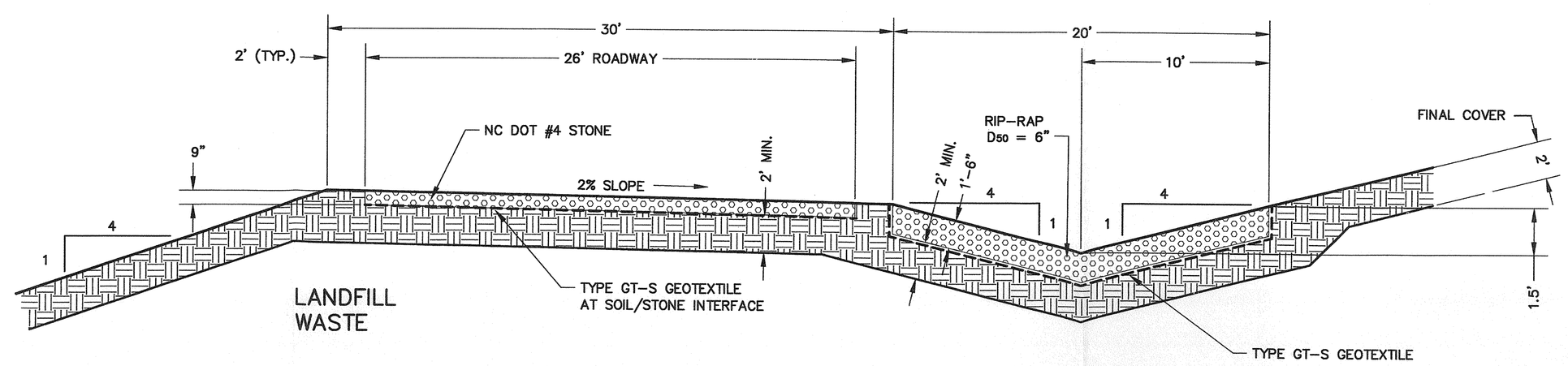
3 - TYPICAL LANDFILL FINAL COVER SECTION

SCALE: 1"= 2'-0"



2 - LANDFILL PERIMETER TOE DIKE

SCALE: 1" = 5'



4 - HAUL ROAD AND ROADSIDE DITCH

NOT TO SCALE

PERMIT ISSUE
NOT FOR CONSTRUCTION

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PROJECT:
WESTSIDE C&D LANDFILL
CONSTRUCTION PLAN PERMIT
WILSON, NORTH CAROLINA

PREPARED FOR:
WILSON COUNTY
DEPARTMENT OF SOLID WASTE
113 E. NASH STREET
WILSON, NORTH CAROLINA 27894

NO.	DESCRIPTION	DATE

REVISIONS

NORTH CAROLINA PROFESSIONAL SEAL 20109 8/31/04 ENGINEER GARY W. AHLBERG

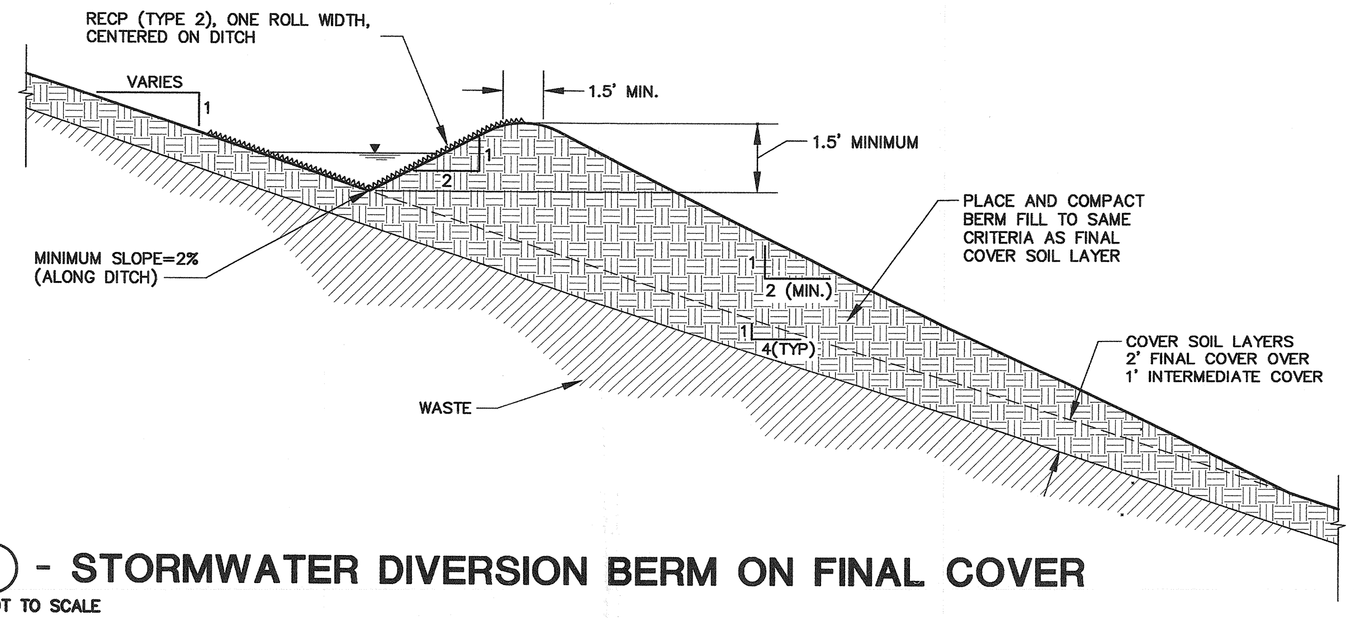
DETAILS

SCALE: AS SHOWN
DATE: 8/31/04
DRN. BY: GWA
CHECKED BY: GWA

PROJECT NO:

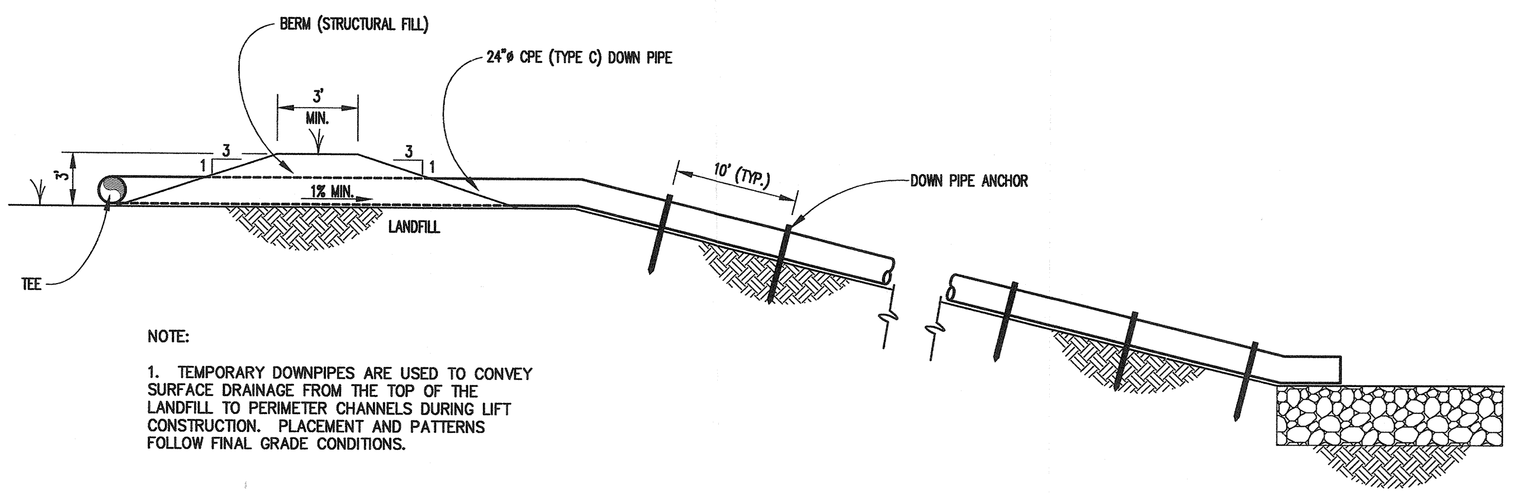
DRAWING NO.

D2



1 - STORMWATER DIVERSION BERM ON FINAL COVER

NOT TO SCALE

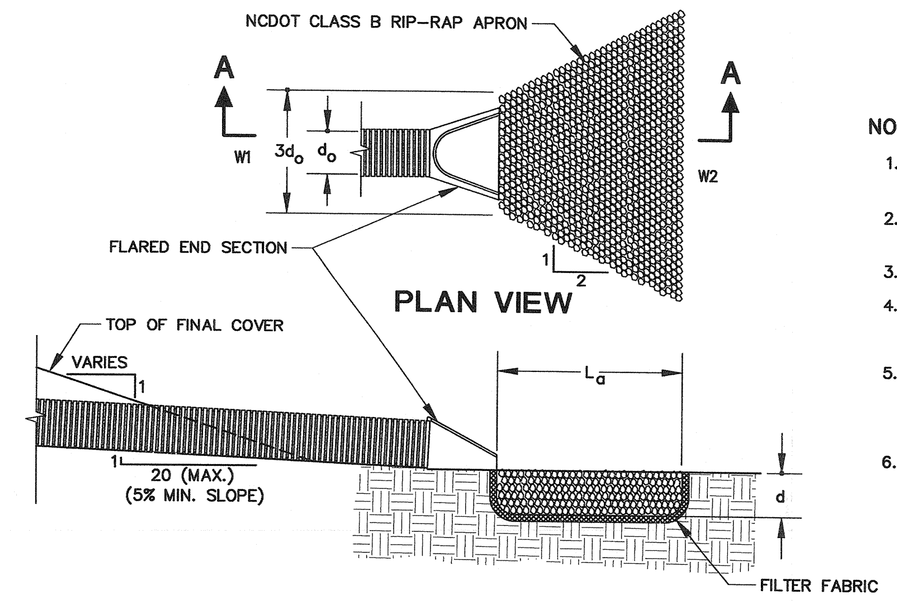


NOTE:

1. TEMPORARY DOWNPIPES ARE USED TO CONVEY SURFACE DRAINAGE FROM THE TOP OF THE LANDFILL TO PERIMETER CHANNELS DURING LIFT CONSTRUCTION. PLACEMENT AND PATTERNS FOLLOW FINAL GRADE CONDITIONS.

2 - TEMPORARY DOWNPIPE

NOT TO SCALE – TYPICAL



SECTION A-A

NOTES:

1. L_a IS THE LENGTH OF THE RIP-RAP APRON (MIN. $4d_o$).
2. d=1.5 TIMES THE MAXIMUM SPECIFIED STONE DIAMETER (MIN. 12").
3. d_o=PIPE DIAMETER.
4. IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO THE TOP OF THE BANK.
5. AN APPROVED FILTER FABRIC SHALL BE INSTALLED BETWEEN THE RIP-RAP AND SOIL FOUNDATION, WITH THE EDGES ANCHORED, PER MANUFACTURER'S GUIDELINES.
6. OUTLET PROTECTION SHALL CONFORM TO NC EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS.

CULVERT DIAMETER do	LENGTH Lo	DEPTH D	WIDTH 1 W1	WIDTH 2 W2
1	4	1.25	3	7
1.5	6	1.25	4.5	10.5

4 - SLOPE DRAIN/CULVERT OUTLET

NOT TO SCALE

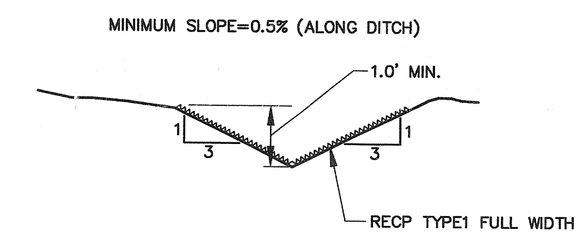
SEEDING REQUIREMENTS

1. SEEDBED PREPARATION.
   APPLY LIME AND FERTILIZER AT RATES LISTED IN (2) AND INCORPORATE INTO THE TOP 4–6 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. HYDROSEEDING MAY BE USED FOR APPLICATION.
2. SOIL AMENDMENTS.
   THE FOLLOWING LIME AND FERTILIZER APPLICATION RATES ARE MINIMUM REQUIREMENTS. CONTRACTOR SHOULD TEST SOIL FOR DETERMINING SPECIFIC RATES.

   AGRICULTURAL LIME 1.5 TONS/ACRE
   5–10–10 FERTILIZER 0.5 TON/ACRE
3. SEED.
   LEGUME SEED SHALL BE INOCULATED WITH RHIZOBIUM BACTERIA. ALL SEED SHALL BE "CERTIFIED SEED". APPLY SEED UNIFORMLY AND MULCH WITH STRAW OR WOOD FIBER MULCH AT A RATE OF 1 TON/ACRE.
4. EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, NC LAND QUALITY SECTION. INCLUDING HYDROSEEDING, ALL SEEDING APPLICATIONS SHALL BE CONSISTENT WITH THE REQUIREMENTS PROVIDED IN THE ESCPD MANUAL. UPON REQUEST, ENGINEER SHALL PROVIDE CONTRACTOR WITH SPECIFIC SECTIONS.

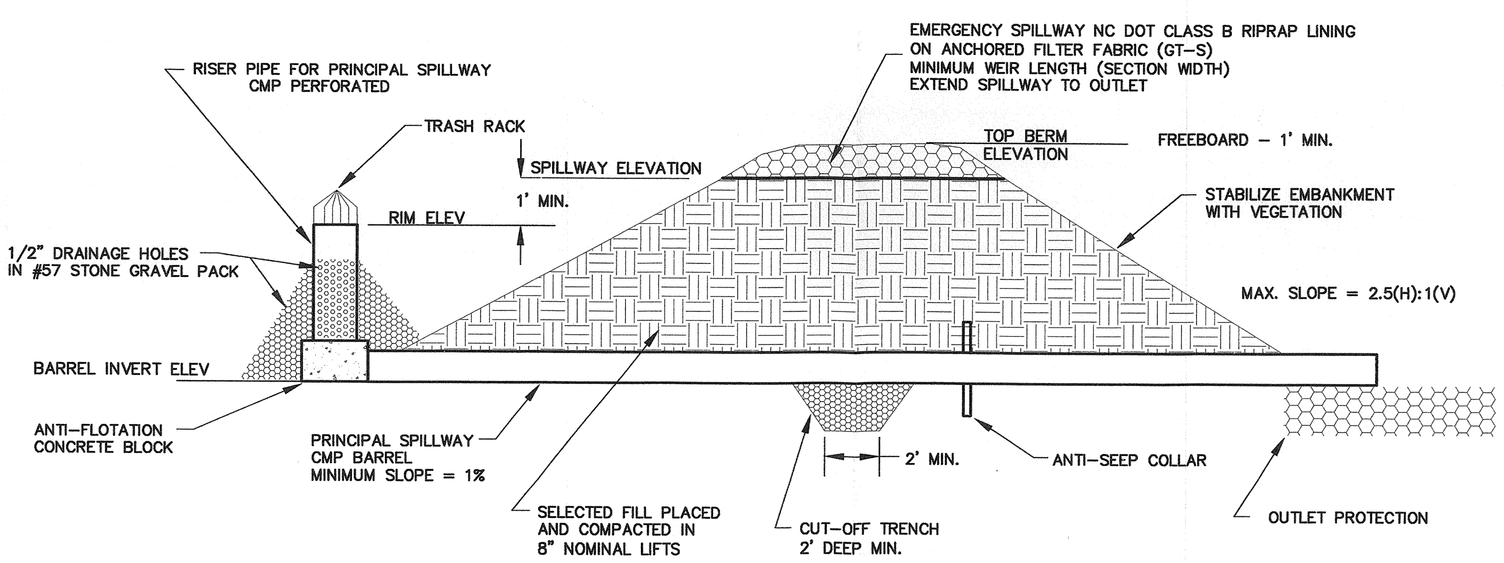
NOTES:

1. TC–2 IS INSTALLED AS A TEMPORARY DIVERSION ROUTING ALL CELL 1 RUNOFF TO THE WEST BASIN.



5 - V-DITCH TC-2

NOT TO SCALE



CROSS SECTION

3 - SEDIMENT BASIN

NOT TO SCALE

TABLE 1: SEDIMENT BASIN DATA

BASIN	MAIN	WEST
Q 10-YR	85	26
VOLUME (CF)	84,050	17,000
SURFACE AREA (SF)	57,800	12,000
RISER DIA.	36"	15"
RIM ELEVATION	92	91
BARREL DIA.	30"	12"
INVERT ELEV.	87	88
SPILLWAY ELEV.	94	92
TOP OF BERM	96	94
WEIR LENGTH	30'	20'

TABLE 2: SEEDING SCHEDULE

APPLICATION AREA	SEEDING MIX	RATE (lb/acre)	BEST DATES	POSSIBLE DATES
Grass Lined Channels	Tall Fescue Millet	100 100	late Aug – Oct Mar – Aug	Feb – mid April
Borrow Areas	Tall fescue Sericea lespedeza	80 25	8/15 – 9/15 or 2/15 – 3/21	8/20 – 10/25 or 2/1 – 4/15
Landfill – temporary	Tall fescue Sericea lespedeza	80 25	8/15 – 9/15 or 2/15 – 3/21	8/20 – 10/25 or 2/1 – 4/15
Landfill – final	Tall fescue Kobe lespedeza	80 40	2/15 – 3/20 or 9/1 – 9/30	2/15 – 4/30 or 9/1 – 10/31

PERMIT ISSUE
NOT FOR CONSTRUCTION

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PROJECT:
WESTSIDE C&D LANDFILL
CONSTRUCTION PLAN PERMIT
WILSON, NORTH CAROLINA

PREPARED FOR:
WILSON COUNTY
DEPARTMENT OF SOLID WASTE
113 E. NASH STREET
WILSON, NORTH CAROLINA 27894

NO.	DESCRIPTION	DATE

REVISIONS

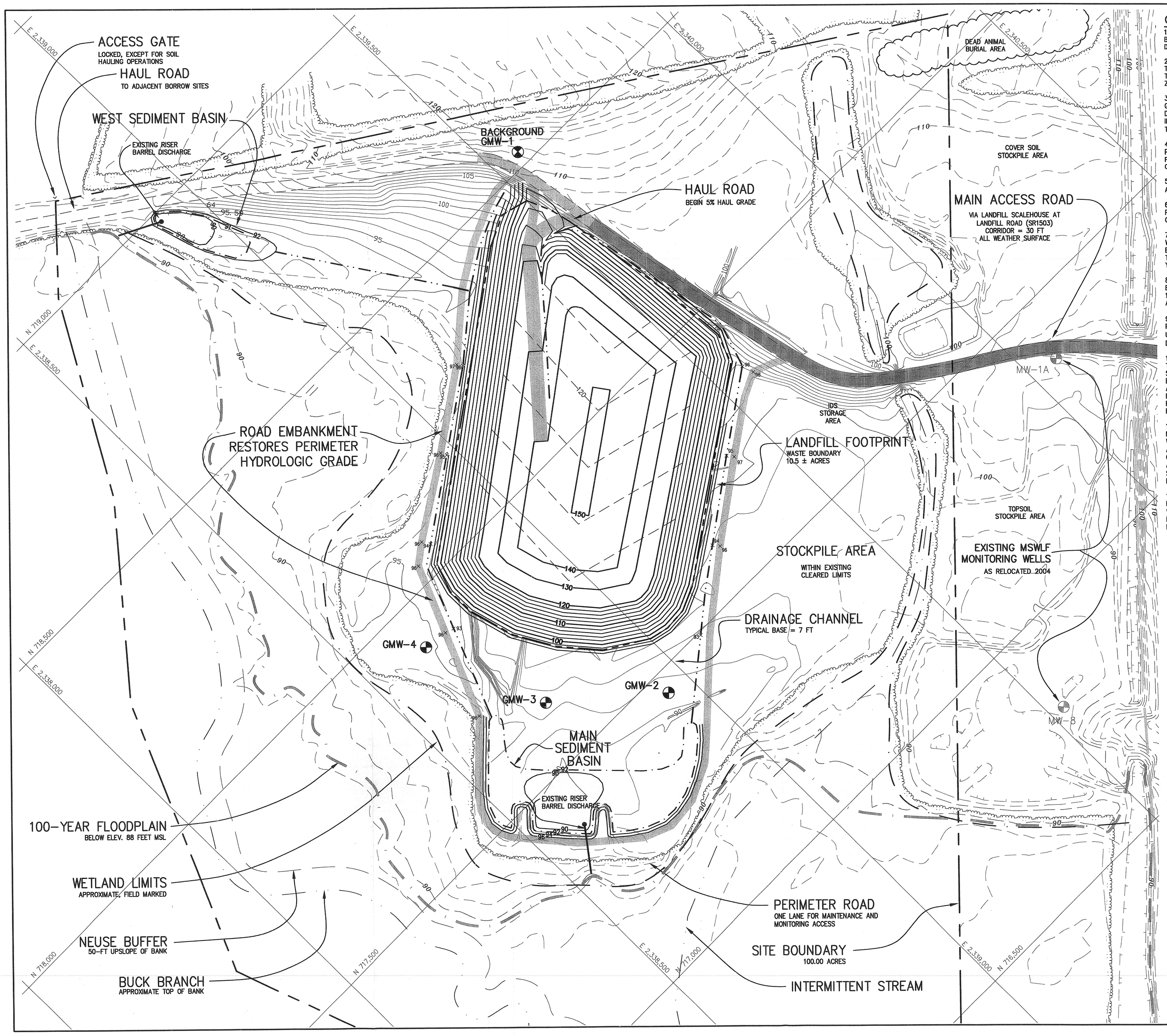
NORTH CAROLINA PROFESSIONAL SEAL 20101 ENGINEER GARY W. AHLBERG

DETAILS

SCALE: AS SHOWN
DATE: 8/31/04
DRN. BY: GWA
CHECKED BY: GWA

PROJECT NO:

DRAWING NO.
D3



CONSTRUCTION NOTES:

1. PURPOSE. THIS FACILITY PLAN FOR THE WESTSIDE CONSTRUCTION AND DEMOLITION LANDFILL. FACILITY, OWNED BY WILSON COUNTY, NORTH CAROLINA, IS PREPARED FOR A PERMIT TO CONSTRUCT ISSUED BY THE NC DENR DIVISION OF WASTE MANAGEMENT IN ACCORDANCE WITH THE 15A NCAC 13B.

2. FACILITY DESCRIPTION. THE PROPOSED FACILITY PROPERTY IS 100.00 ACRES OWNED BY WILSON COUNTY. THE PROPOSED WASTE BOUNDARY IS 10.5 ACRES, AND IS DEFINED AS THE LANDFILL FOOTPRINT. IN ADDITION TO THE LANDFILL, THE PLAN ALSO DELINEATES SEDIMENT BASINS, ROADS, EARTHEN EMBANKMENTS, AND BUFFER ZONES. THE ESTIMATED FACILITY LIFE IS 10.8 YEARS.

3. WASTE STREAM AND DISPOSAL RATE. THE LANDFILL WILL RECEIVE CONSTRUCTION AND DEMOLITION WASTE GENERATED WITHIN WILSON COUNTY, NORTH CAROLINA. OTHER WASTE TYPES APPROVED BY THE DIVISION FOR DISPOSAL; SEE PERMIT CONDITIONS OR AGENCY CORRESPONDENCE FOR SPECIFIC APPROVED WASTE TYPES, INCLUDING SPLIT TIRES AND TOBACCO DUST. THE ESTIMATED AVERAGE ANNUAL DISPOSAL RATES IS 20,000 TONS/YEAR.

4. ACCESS CONTROL. NATURAL TOPOGRAPHIC AND VEGETATIVE CONDITIONS AND CONTROL MEASURES LIMIT PUBLIC ACCESS TO THE SITE. WILSON COUNTY WILL MAINTAIN THE GATED ENTRANCE TO THE EXISTING MSW FACILITY. ACCESS TO THE WESTSIDE SITE WILL BE CONTROLLED VIA THE EXISTING MANNED SCALEHOUSE DURING OPERATING HOURS.

5. LOCAL GOVERNMENT APPROVAL. THE PROPOSED LAND USE HAS BEEN APPROVED BY THE CITY OF WILSON AND WILSON COUNTY, ESTABLISHING PRIOR APPROVAL FOR THE DIVISION'S LANDFILL PERMIT.

6. HYDROLOGIC GRADE RESTORATION. APPROXIMATELY 1000 LINEAR FEET OF SOIL EMBANKMENT FILL WILL BE PLACED TO RESTORE HYDROLOGIC CONDITIONS AND ESTABLISH STORMWATER CONTROL FOR THE LANDFILL CONSTRUCTION LIMITS. THE MINIMUM PEAK ELEVATION FOR THE EMBANKMENT FILL IS 94 MSL.

7. BASE GRADE. AN AVERAGE 2-FOOT LAYER OF COMPACTED SOIL WILL BE ADDED TO THE EXISTING GRADE WITHIN THE FOOTPRINT. UNDER THE INITIAL 5-YEAR PERMIT TO CONSTRUCT, THE COMPACTED SOIL LAYER WILL BE CONSTRUCTED IN THREE TO FOUR LIFTS WITH SOILS APPROVED BY THE ENGINEER. AT AN AVERAGE LAYER THICKNESS OF 3.0 FEET, THE REQUIRED SOIL VOLUME FOR BASE CONSTRUCTION IS APPROXIMATELY 50,000 CUBIC YARDS. SEE ENGINEERING PLAN AND BASE GRADE PLAN DRAWING C1 FOR REQUIREMENTS.

8. LANDFILL OPERATIONAL GRADE. THE LANDFILL WILL BE OPERATED IN 5 TO 10-FOOT LIFTS, PROGRESSING EVENLY ACROSS THE FOOTPRINT. AT THE INTERMEDIATE HEIGHT OF 10 FEET ABOVE BASE GRADE, THE ENTIRE 10.5 ACRE FOOTPRINT PROVIDES APPROXIMATELY 4 YEARS OF CAPACITY. SOILS FOR COVER CONSTRUCTION ARE AVAILABLE FROM THE DEDICATED BORROW SITES ADJACENT TO THE SITE AND OWNED BY WILSON COUNTY.

9. LANDFILL CAPACITY AND PROJECT LIFE. THE FINAL GRADING PLAN FOR THE LANDFILL'S CONCEPTUAL DESIGN PROVIDES 433,560 CUBIC YARDS OF AIRSPACE FOR LANDFILL OPERATION AND FINAL COVER CONSTRUCTION. USING AN IN-PACE DENSITY OF 0.66 TONS/CUBIC YARD AND A 1:8 SOIL TO WASTE RATIO (0.167), THE AVERAGE DISPOSAL RATE OF 20,000 TONS/YEAR YIELDS A PROJECT LIFE = 10.8 YEARS.

10. COVER SOILS. DUE TO THE NON-PUTRESCIBLE NATURE OF THE WASTE, THE WORKING LIFT SHALL BE TYPICALLY COVERED ON A WEEKLY BASIS. THE TOP PORTION OF THE LIFT SHALL RECEIVE A MINIMUM COVER OF SIX INCHES. AS SECTIONS OF THE PERIMETER SLOPES ARE COMPLETED, THE 24-INCH FINAL COVER VSL SHALL BE PLACED AND COMPACTED. THE TOTAL SOIL VOLUME REQUIRED FOR THE WESTSIDE C&D LANDFILL PROJECT IS APPROXIMATELY 165,000 CUBIC YARDS. BASED ON AN AVERAGE EXCAVATION DEPTH OF 5 FEET BELOW THE EXISTING LAND SURFACE FROM THE 50 ACRES AVAILABLE FROM THE TUCKER AND MOHESKY SITES, THE MINIMUM ESTIMATE OF REMAINING SOIL RESOURCES FOR THE OFF-SITE BORROW AREAS IS 400,000 CUBIC YARDS. THE ENGINEER SHALL SPECIFY SOIL PROPERTIES FOR SPECIFIC LANDFILL APPLICATIONS.

11. WATER QUALITY MONITORING PLAN. THE DETECTION MONITORING NETWORK INCLUDES FOUR GROUNDWATER MONITORING WELLS. OVERALL, ONE UPGRADIENT AND THREE DOWNGRADIENT LOCATIONS PROVIDE A MONITORING WELL DENSITY OF 1 DETECTION STATION PER 3.5 ACRES OF LANDFILL AREA. DOWNGRADIENT WELL INSTALLATIONS ARE SPACED EQUALLY ACROSS A 125-FOOT OFFSET (REVIEW BOUNDARY) TO THE LANDFILL FOOTPRINT. COMPLETION INTERVALS SHALL BE WITHIN THE UPPERMOST 10-15 FEET OF THE SEASONAL HIGH WATER TABLE AND SHALL TARGET THE TAN AND ORANGE SAND UNITS IN THE CHARACTERIZED STRATIGRAPHY. GROUND SURFACE ELEVATIONS LEADING TO (4W DRIVE PATH) AND SURROUNDING THE WELLS SHALL BE AT LEAST 93 FEET MSL.

12. CLOSURE AND POST CLOSURE. WHEN OPERATIONS HAVE REACHED FINAL DESIGN GRADE, THE LANDFILL WILL BE COVERED WITH AT LEAST TWO FEET OF COMPACTED SOIL COVER. THE FINAL SOIL COVER WILL BE VEGETATED WITH NATIVE GRASSES ACCORDING TO THE SITE'S VEGETATION PLAN. INSPECTIONS WILL BE CONDUCTED PERIODICALLY TO OBSERVE THE INTEGRITY OF THE FINAL COVER. REPAIRS WILL BE MADE AS NECESSARY TO RESTORE THE VEGETATIVE SOIL COVER.

LEGEND

- WESTSIDE SITE BOUNDARY
- LANDFILL FOOTPRINT 10.5 ACRES
- EXISTING LANDFILL LIMITS
- 100-YEAR FLOODPLAIN
- NEUSE BUFFER
- SURFACE WATER
- WETLAND BOUNDARY
- 120 — P1 INTERMEDIATE GRADE 2-FT CONTOUR
- 150 — FINAL GRADE 2-FT CONTOUR
- 100 — 2003 TOPOGRAPHY 1-FT CONTOUR
- 90 — 1998 TOPOGRAPHY 2-FT CONTOUR
- DRAINAGE CHANNEL
- GMW-4 GROUNDWATER MONITORING WELL

PERMIT ISSUE
NOT FOR CONSTRUCTION

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

GARY W. AHLBERG, P.E.
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PROJECT: WESTSIDE C&D LANDFILL CONSTRUCTION PLAN PERMIT WILSON, NORTH CAROLINA

PREPARED FOR: WILSON COUNTY DEPARTMENT OF SOLID WASTE 113 E. NASH STREET WILSON, NORTH CAROLINA 27894

NO.	DESCRIPTION	DATE

REVISIONS

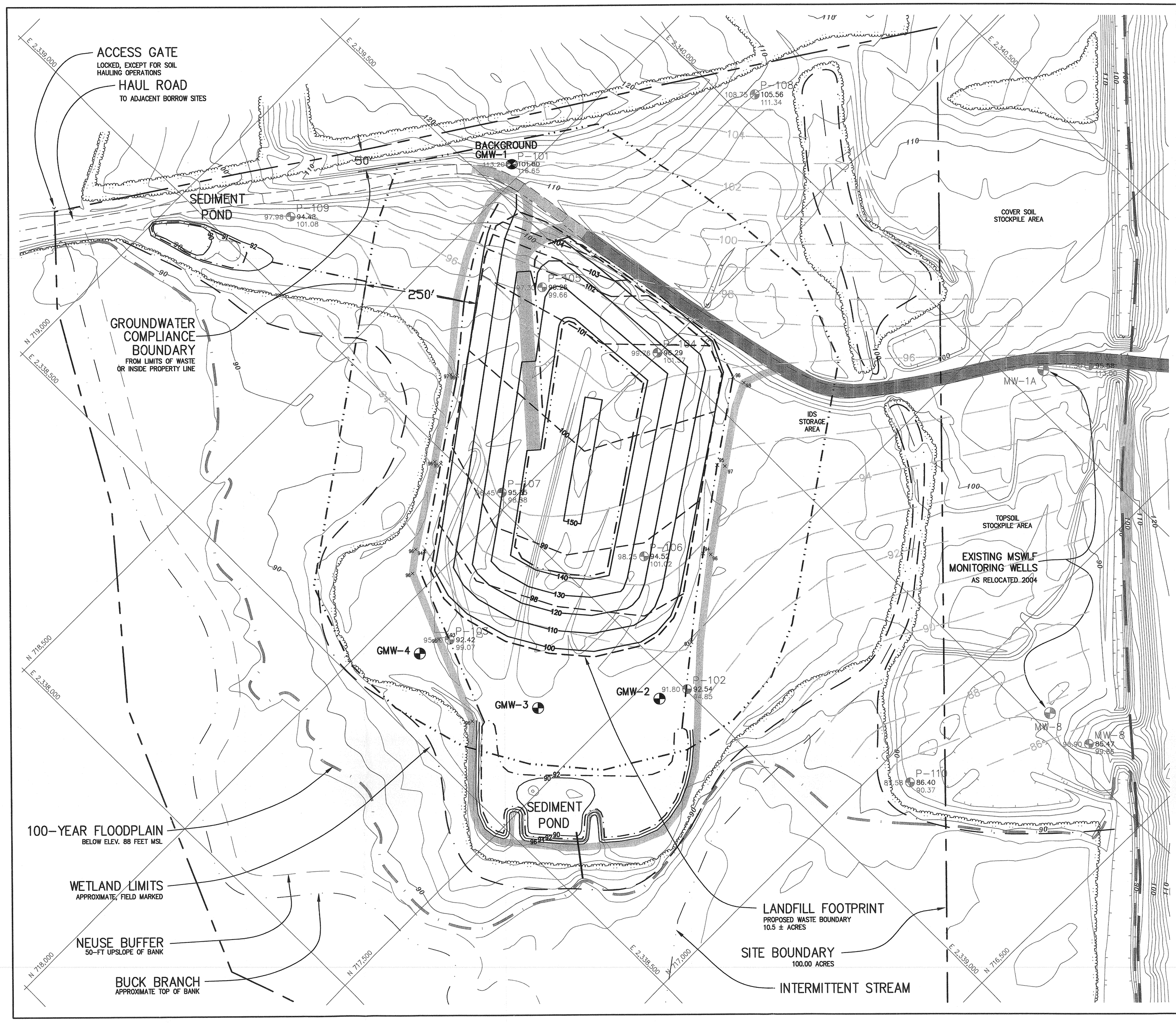
NORTH CAROLINA PROFESSIONAL SEAL SEAL 26001 ENGINEER GARY W. AHLBERG

WESTSIDE FACILITY PLAN

SCALE: 1"=100'
DATE: 9/01/04
DRN. BY: GWA
CHECKED BY: GWA
PROJECT NO:

DRAWING NO. **F1**

9809-CDLF



NOTES:

1. PURPOSE. THIS DETECTION MONITORING PLAN IS PROPOSED FOR THE WESTSIDE CONSTRUCTION AND DEMOLITION LANDFILL FACILITY, OWNED BY WILSON COUNTY, NORTH CAROLINA, PREPARED FOR APPROVAL BY THE NC DENR DIVISION OF WASTE MANAGEMENT IN ACCORDANCE WITH THE 15A NCAC 13B. THE PLAN WAS PREPARED UNDER THE SUPERVISION OF MR. GARY D. BABB, PG.

2. TOPOGRAPHIC FEATURES. SITE TOPOGRAPHY IS FROM AERIAL PHOTOGRAMMETRIC MAPPING PERFORMED BY GEODATA CORP., ZEBULON, NC. MAPPED CONDITIONS FROM MARCH 1998 ARE GENERALLY REPRESENTATIVE OF EXISTING CONDITIONS (JULY 2003). REFERENCE DRAWING SC1 FOR STREAM, WETLAND, FLOODPLAIN, AND OTHER SOURCES.

3. WESTSIDE C&D LANDFILL SITE. THE 100.00 ACRE SITE PROPERTY BOUNDARY ILLUSTRATED ON THIS DRAWING IS REPRESENTATIVE OF THE "RECOMBINATION PLAT FOR THE WESTSIDE C&D LANDFILL SITE" PREPARED BY HERRING–SUTTON & ASSOCIATES, P.C. (WILSON, NORTH CAROLINA), APRIL 2003.

4. MONITORING NETWORK. EXISTING WELL P–101 SHALL BE DESIGNATED AS THE UPGRADIENT BACKGROUND WELL GMW–1. THREE NEW WELLS WILL BE INSTALLED IN THE UPPER 15–20 FEET OF THE IN–SITU SOIL. DOWNGRADIENT WELL INSTALLATIONS ARE SPACED EQUALLY ACROSS A 125–FOOT OFFSET (REVIEW BOUNDARY) TO THE LANDFILL FOOTPRINT. GROUND SURFACE ELEVATIONS LEADING TO (4W DRIVE PATH) AND SURROUNDING THE WELLS SHALL BE AT LEAST 93 FEET MSL.

5. PIEZOMETER ABANDONMENT. ALL PIEZOMETERS SHALL BE ABANDONED ACCORDING TO 15A NCAC 2C, WITH ASSOCIATED DOCUMENTATION.

6. SURVEY DATA. NORTH CAROLINA REGISTERED LAND SURVEYORS, HERRING SUTTON & ASSOCIATES, WILSON, NORTH CAROLINA, SHALL SURVEY THE LOCATION AND ELEVATION POSITIONS OF EACH WELL AFTER INSTALLATION.

7. MONITORING SYSTEM DESIGN. THE LANDFILL BASE DESIGN INCLUDES CONSTRUCTION OF A COMPACTED SOIL LAYER THAT WILL PROVIDE FOR VERTICAL SEPARATION FROM THE SEASONAL HIGH WATER TABLE AND CONTROL INFILTRATION FROM THE LANDFILL BASE. DEEPER IN THE SURFICIAL AQUIFER, THE PRESENCE OF LOW–PERMEABILITY CLAYS DEPOSITED IN HORIZONTAL LENSES SIGNIFICANTLY LIMITS VERTICAL GROUNDWATER FLOW POTENTIAL. MOST IMPORTANTLY, THE PREFERENTIAL LATERAL GROUNDWATER FLOW IN THE UNCONFINED SURFICIAL AQUIFER SANDS TOWARD A GROUNDWATER DISCHARGE ZONE PRESENTS HYDROGEOLOGIC CONDITIONS THAT CAN BE EFFECTIVELY MONITORED WITH SHALLOW GROUNDWATER MONITORING WELLS. DUE TO THE EXTENT OF WETLANDS AND DENSE VEGETATION SURROUNDING BUCK BRANCH, SURFACE WATER MONITORING IS NOT A NECESSARY COMPONENT OF THE SITE'S DETECTION MONITORING SYSTEM.

8. DETECTION INTERVAL IN THE SURFICIAL AQUIFER. COMPLETION INTERVALS SHALL BE WITHIN THE UPPERMOST 10–15 FEET OF THE SEASONAL HIGH WATER TABLE AND SHALL TARGET THE TAN AND ORANGE SAND UNITS IN THE CHARACTERIZED STRATIGRAPHY.

LEGEND

- GMW–2 — MONITORING WELL — DETECTION MONITORING STATION
- 94 — POTENTIOMETRIC CONTOUR — 1–FOOT CONTOUR INTERVAL, 19 NOV 02
- 100 — BASE CONTOUR 1–FOOT — 1–FOOT CONTOUR INTERVAL, 19 NOV 02
- WESTSIDE SITE BOUNDARY
- LANDFILL FOOTPRINT — PROPOSED 10.5 ACRES
- EXISTING LANDFILL LIMITS — OFFSITE MSWLF UNIT
- 100–YEAR FLOODPLAIN
- NEUSE BUFFER
- SURFACE WATER
- WETLAND BOUNDARY
- CONTOUR 2–FOOT MAR98 MAPPING
- CONTOUR 10–FOOT MAR98 MAPPING

GROUND ELEVATION — P–102 — BORING/PIEZO ID
96.1 — 94.5 — WATER ELEVATION AT INSTALLATION 11/19/02
WELL COORDINATES ON CENTER — 98.6 — TOP OF CASING SURVEYED ELEVATION

PERMIT ISSUE
NOT FOR CONSTRUCTION

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

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PROJECT:
WESTSIDE C&D LANDFILL
CONSTRUCTION PLAN APPLICATION
WILSON, NORTH CAROLINA

PREPARED FOR:
WILSON COUNTY
DEPARTMENT OF SOLID WASTE
113 E. NASH STREET
WILSON, NORTH CAROLINA 27894

NO.	DESCRIPTION	DATE

REVISIONS

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 20100 GARY W. AHLBERG

GROUNDWATER MONITORING PLAN

SCALE: 1"=100'
DATE: 09/01/04
DRN. BY: GWA
CHECKED BY: GDB
PROJECT NO:

DRAWING NO.
M1