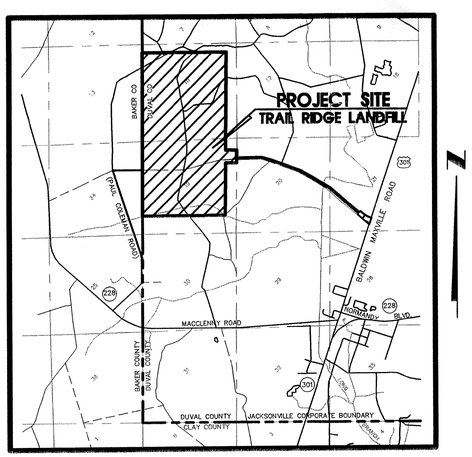
TRAIL RIDGE LANDFILL
PERMIT RENEWAL

FOR

TRAIL RIDGE LANDFILL, INC.
DUVAL COUNTY, FLORIDA

RELEASED FOR REGULATORY REVIEW: SEPTEMBER 25, 2002

Charlotte Bauldom 9/25/02



VICINITY MAP

England · Thimsen & Miller, Inc.

ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD – JACKSONVILLE, FLORIDA 32258
PHONE NUMBER (904) 642-8990
CERTIFICATE OF AUTHORIZATION NUMBER: 2584

SECTION OR DETAIL SYMBOL

1A — SECTION OR DETAIL NUMBER
2B 3C — SHEET ON WHICH SECTION OR DETAIL IS DRAWN
SHEET ON WHICH SECTION OR DETAIL IS TAKEN

PROJECT NUMBER E 02-025
DATE: SEPTEMBER 25, 2002

INDEX OF DRAWINGS

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10	CROSS SECTIONS
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15	CLOSURE PHASING PLAN
16	ANCHOR TRENCH AND LINER DETAILS (NO CHANGE)
17	LEACHATE TRENCH AND SUMP DETAILS (NO CHANGE)
18	LEACHATE SUMP AND VAULT BOX DETAILS (NO CHANGE)
19	LEACHATE CONTAINMENT AREA
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20	CLOSURE DETAILS
21	CLOSURE DETAILS
22	SEDIMENT AND EROSION CONTROL DETAILS
23	STORM WATER POLLUTION PREVENTION PLAN

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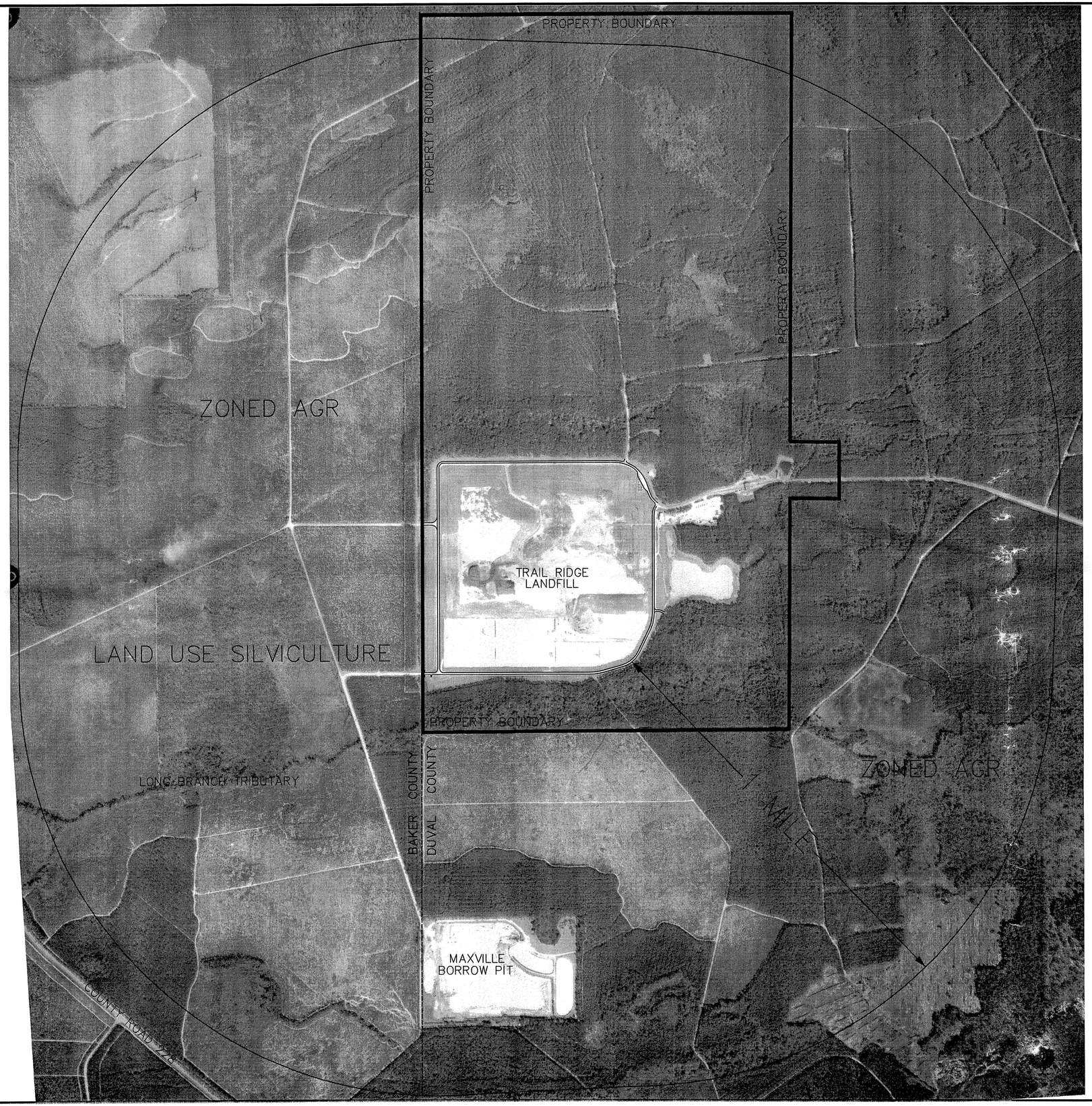


1 INCH = 600 FEET
SCALE
(IN FEET)

AERIAL PHOTOGRAPH PROVIDED
BY AIR SURVEY CORP.
DATE OF PHOTOGRAPH: MARCH 15, 2002

SUBMITTED TO DEP: 9-25-02

Florida Department of Environmental Protection

REVISIONS:
08-08-02 UPDATED

ETM NO.: 02-025-01
DRAWN BY: F.D.D.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

AERIAL PHOTOGRAPH

TRAIL RIDGE LANDFILL PERMIT RENEWAL
FOR
TRAIL RIDGE LANDFILL, INC.

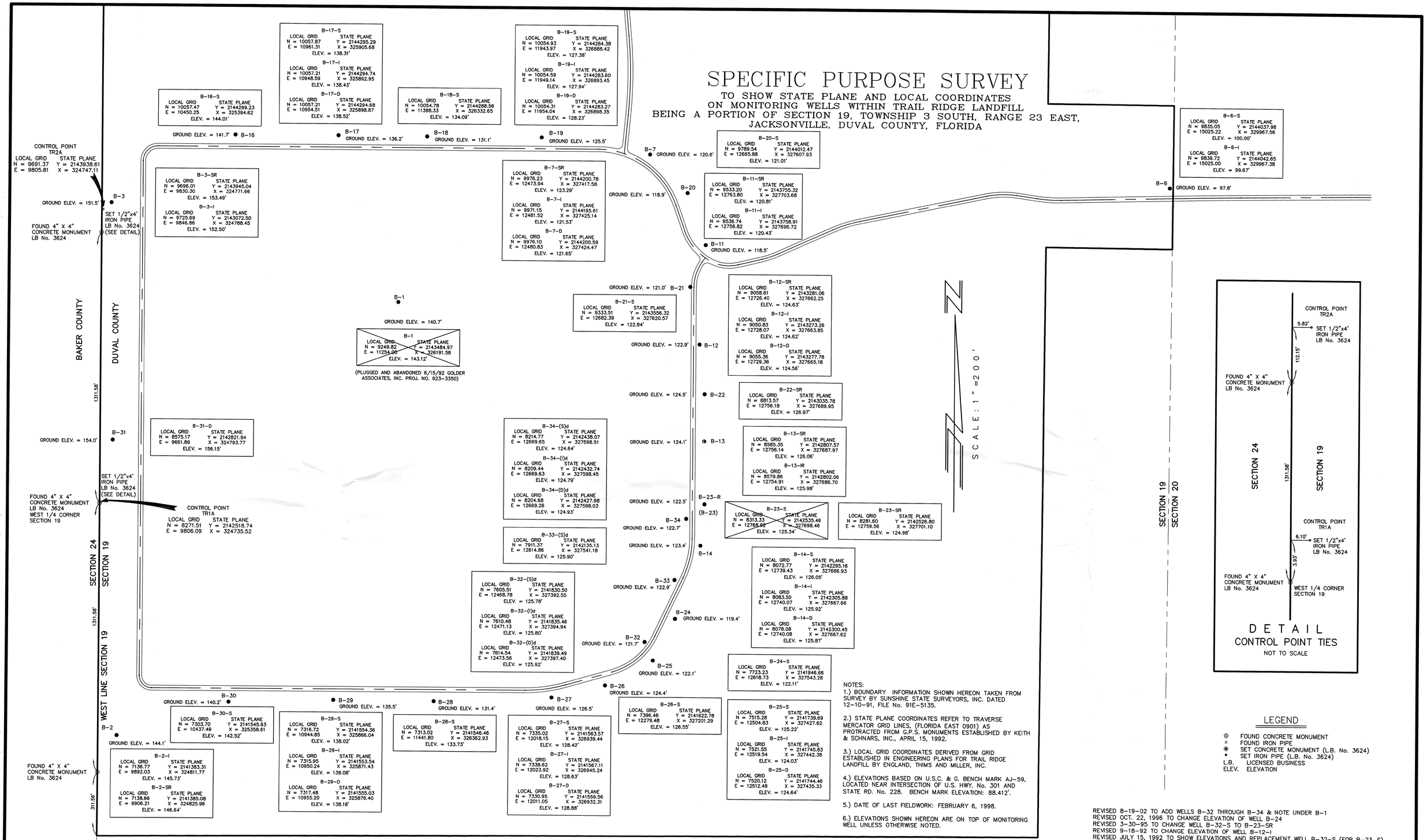
England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2554
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

2

LANDFILL\TRAILRENEWAL\02-025\Design\Photo\Aerial.dwg, 09/18/2002 10:45:11 AM, DaysoF

SPECIFIC PURPOSE SURVEY

TO SHOW STATE PLANE AND LOCAL COORDINATES
ON MONITORING WELLS WITHIN TRAIL RIDGE LANDFILL
BEING A PORTION OF SECTION 19, TOWNSHIP 3 SOUTH, RANGE 23 EAST,
JACKSONVILLE, DUVAL COUNTY, FLORIDA



NOTES:

1.) BOUNDARY INFORMATION SHOWN HEREON TAKEN FROM SURVEY BY SUNSHINE STATE SURVEYORS, INC. DATED 12-10-91, FILE No. 91E-5135.

2.) STATE PLANE COORDINATES REFER TO TRAVERSE MERCATOR GRID LINES, (FLORIDA EAST 0901) AS PROTRACTED FROM G.P.S. MONUMENTS ESTABLISHED BY KEITH & SCHNARS, INC., APRIL 15, 1992.

3.) LOCAL GRID COORDINATES DERIVED FROM GRID ESTABLISHED IN ENGINEERING PLANS FOR TRAIL RIDGE LANDFILL BY ENGLAND, THIMS AND MILLER, INC.

4.) ELEVATIONS BASED ON U.S.C. & G. BENCH MARK AJ-59, LOCATED NEAR INTERSECTION OF U.S. HWY. No. 301 AND STATE RD. No. 228. BENCH MARK ELEVATION: 88.412'.

5.) DATE OF LAST FIELDWORK: FEBRUARY 6, 1998.

6.) ELEVATIONS SHOWN HEREON ARE ON TOP OF MONITORING WELL UNLESS OTHERWISE NOTED.

LEGEND

- ◎ FOUND CONCRETE MONUMENT
- ○ FOUND IRON PIPE
- ◉ SET CONCRETE MONUMENT (L.B. No. 3624)
- • SET IRON PIPE (L.B. No. 3624)
- L.B. LICENSED BUSINESS
- ELEV. ELEVATION

REVISED 8-19-02 TO ADD WELLS B-32 THROUGH B-34 & NOTE UNDER B-1
REVISED OCT. 22, 1996 TO CHANGE ELEVATION OF WELL B-24
REVISED 3-30-95 TO CHANGE WELL B-32-S TO B-23-SR
REVISED 9-18-92 TO CHANGE ELEVATION OF WELL B-12-I
REVISED JULY 15, 1992 TO SHOW ELEVATIONS AND REPLACEMENT WELL B-32-S (FOR B-23-S)

GRAPHIC SCALE

200 0 800 200 400 100

(IN FEET)
1 inch = 200 ft.

JOSEPH LESLIE REYNOLDS, III
PROFESSIONAL SURVEYOR AND MAPPER
STATE OF FLORIDA LS No. 5517

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

Robert M. Angas Associates, inc.
LAND SURVEYORS, PLANNERS AND CIVIL ENGINEERS
SINCE 1924

14775 St. Augustine Road, Jacksonville, FL. 32258 Tel: (904) 642-8550
Certificate of Authorization No.: LB 3624

SHEET GW-1

FORMERLY SUNSHINE STATE SURVEYORS, INC.
ENGINEERS, SURVEYORS & LAND PLANNERS 3131 ST. JOHNS BLUFF RD. SOUTH, JACKSONVILLE, FLORIDA 32216

I HEREBY CERTIFY THAT THE SURVEY REPRESENTED HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THERE ARE NO ENCROACHMENTS EXCEPT AS SHOWN, AND MEETS THE MINIMUM TECHNICAL STANDARDS AS SET FORTH IN CHAPTER 21HH-6, F.A.C.

NOTE: NOT VALID WITHOUT RAISED EMBOSSED SEAL

ARTHUR A. MASTRONICOLA JR.

SCALE 1" = 200'

DATE APRIL 23, 1992

REGISTERED SURVEYOR, No. 4166, FLORIDA

LEGEND
- ◎ CONC. MON. FOUND
- ◉ CONC. MON. (SET)
- • IRON CORNER (SET)
- FENCE
- ○ CORNER (FOUND)
- ● CROSS CUT

ACAD: I:\SURVEY\SUNSHINE\TRAILRDG\MONITORING WELLS.DWG

FIELD BOOK NO. 339/75-78; 363/2-5
DRAWN BY J.L.R.
CHECKED BY R.S.C.

R - 23 - E

ORDER NO. S92-205
FILE NO. 92D-5246

DEP003410

GRAPHIC SCALE

300 0 150 300 600

(IN FEET)
1 INCH = 300 FT.

EXISTING GATE
SECTION 24
SECTION 19
EXISTING GATE
200.0'
BAKER COUNTY
DUVAL COUNTY
PROPERTY BOUNDARY
200.0'
EXISTING FENCE

JURISDICTIONAL WETLANDS LINE

EXISTING PERMITTED CLASS I LANDFILL

C.O.E./S.J.R.W.M.D.
D.E.P.

FUTURE CLASS I LANDFILL EXPANSION (NOT INCLUDED IN THIS PERMIT)

D.E.P.

24" C.M.P.
48"X 36" C.M.P.

EXISTING CONTAINMENT AREA
EXISTING FLARE STATION
EXISTING OPERATIONS BUILDING
FUTURE LEACHATE MANAGEMENT AREA
FUTURE STORMWATER BASIN
EXISTING STORMWATER POND
EXISTING WASTE TIRE STORAGE AND PROCESSING AREA
EXISTING MITIGATION AREA
EXISTING SCALES AND SCALE HOUSE
EXISTING ADMINISTRATION BUILDING
EXISTING DISPERSION POND
EXISTING ANCILLARY FACILITIES DETENTION POND
EXISTING FENCE
PROPERTY BOUNDARY
EXISTING GATE
EXISTING ENTRANCE ROAD

LEGEND	
	JURISDICTIONAL WETLANDS
	LIMITS OF FUTURE EXPANSION
	EXISTING MITIGATION AREA
	EXISTING FENCE

PERMIT DOCUMENT

SUBMITTED TO DEP: 9-25-02

REVISIONS:
8-16-02 REVISED TO SHOW EXISTING FLARE STATION.

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

SITE PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

4

N

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 INCH = 200 FEET

NOTES:

1. TOPOGRAPHIC INFORMATION SHOWN HEREON TAKEN FROM AERIAL TOPOGRAPHY PREPARED BY AIR SURVEY CORP.; MAP DATED 3-15-02. AIR SURVEY CORP. PROJECT NO. 71020260.
2. VERTICAL DATUM BASED ON NGVD 1929.

PERMIT DOCUMENT

EXISTING TOPOGRAPHY

TRAIL RIDGE LANDFILL PERMIT RENEWAL
FOR
TRAIL RIDGE LANDFILL, INC.

SUBMITTED TO DEP: 9-25-02

Cynthia Bogue Cam 9/25/02

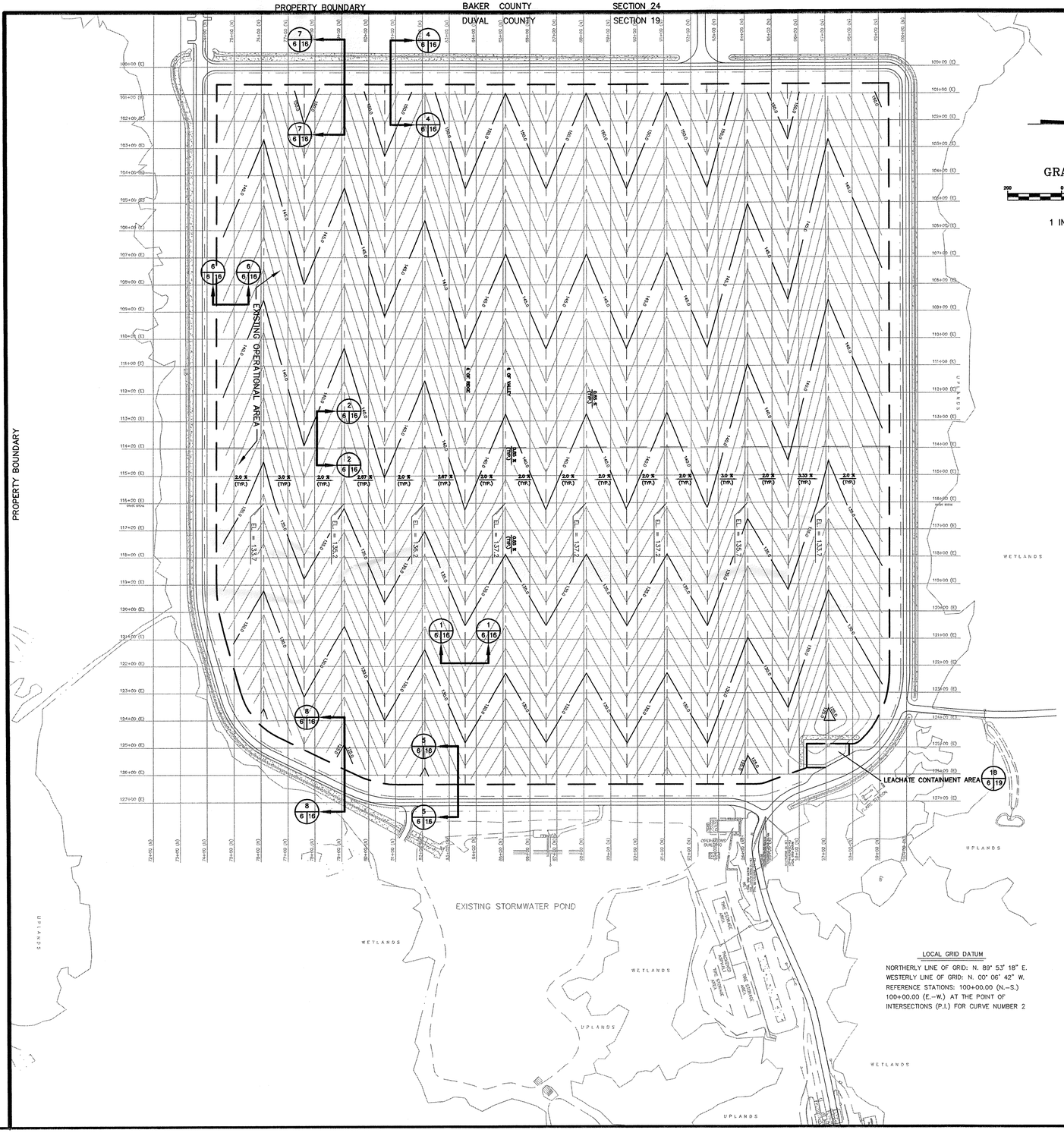
REVISIONS:

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

5



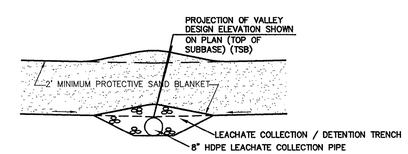
GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 INCH = 200 FEET

LEGEND

- BASE GRADE – 1' CONTOUR
- 135.0 BASE GRADE – 5' CONTOUR
- EDGE OF PRIMARY AND SECONDARY LINER SYSTEM
- ℄ OF VALLEY
- ℄ OF RIDGE
- ℄ OF DITCH
- 1 / 2 3 — SECTION OR DETAIL NUMBER; SHEET ON WHICH SECTION OR DETAIL IS DRAWN; SHEET ON WHICH SECTION OR DETAIL IS TAKEN



REFERENCE POINT FOR SPOT ELEVATION

N.T.S.

LOCAL GRID DATUM

NORTHERLY LINE OF GRID: N. 89° 53' 18" E.
WESTERLY LINE OF GRID: N. 00° 06' 42" W.
REFERENCE STATIONS: 100+00.00 (N.–S.)
100+00.00 (E.–W.) AT THE POINT OF INTERSECTIONS (P.I.) FOR CURVE NUMBER 2

PERMIT DOCUMENT

BASE GRADING PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

SUBMITTED TO DEP: 9-25-02

REVISIONS:

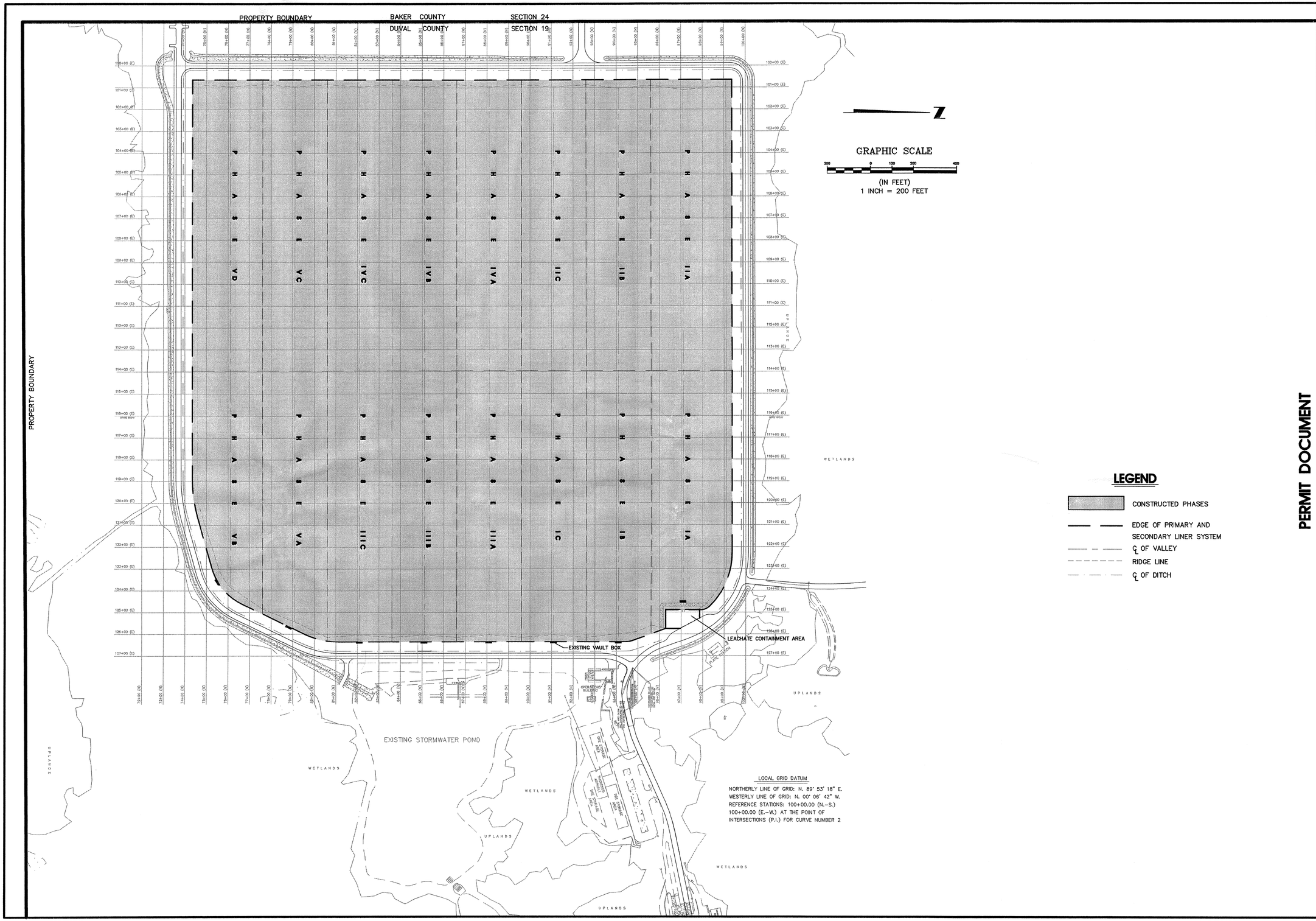
ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2684
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

6

DEP003413



PERMIT DOCUMENT

BOTTOM LINER PHASING PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL
FOR
TRAIL RIDGE LANDFILL, INC.

SUBMITTED TO DEP: 9-25-02

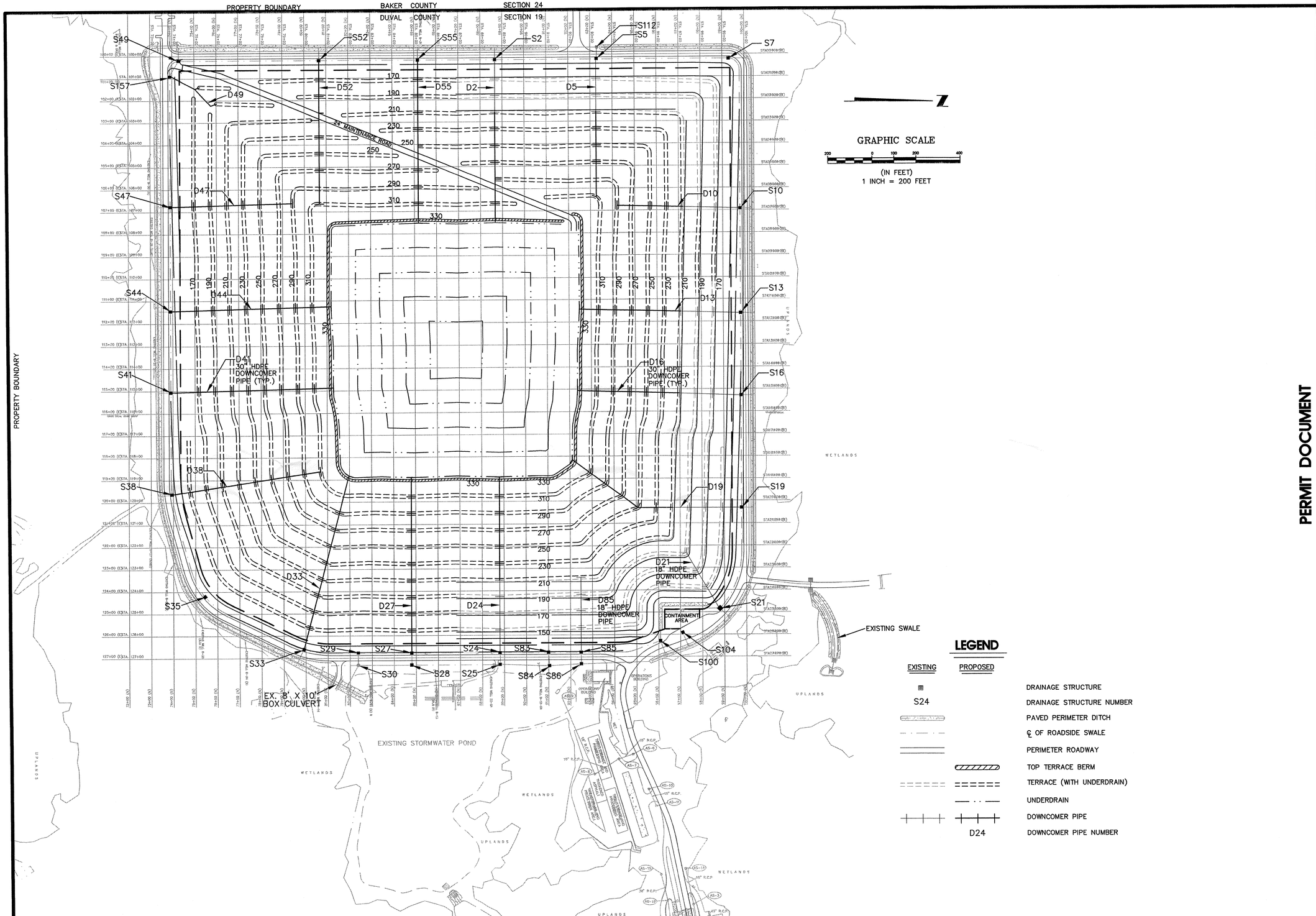
REVISIONS:

ETN NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

7



LEGEND

EXISTING	PROPOSED	
■		DRAINAGE STRUCTURE
S24		DRAINAGE STRUCTURE NUMBER
		PAVED PERIMETER DITCH
		℄ OF ROADSIDE SWALE
		PERIMETER ROADWAY
		TOP TERRACE BERM
		TERRACE (WITH UNDERDRAIN)
		UNDERDRAIN
		DOWNCOMER PIPE
	D24	DOWNCOMER PIPE NUMBER

SUBMITTED TO DEP: 9-25-02

REVISIONS: 08-09-02: SHIFTED DOWNCOMER D27 20 FT. AND MODIFIED DOWNCOMER D49.

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

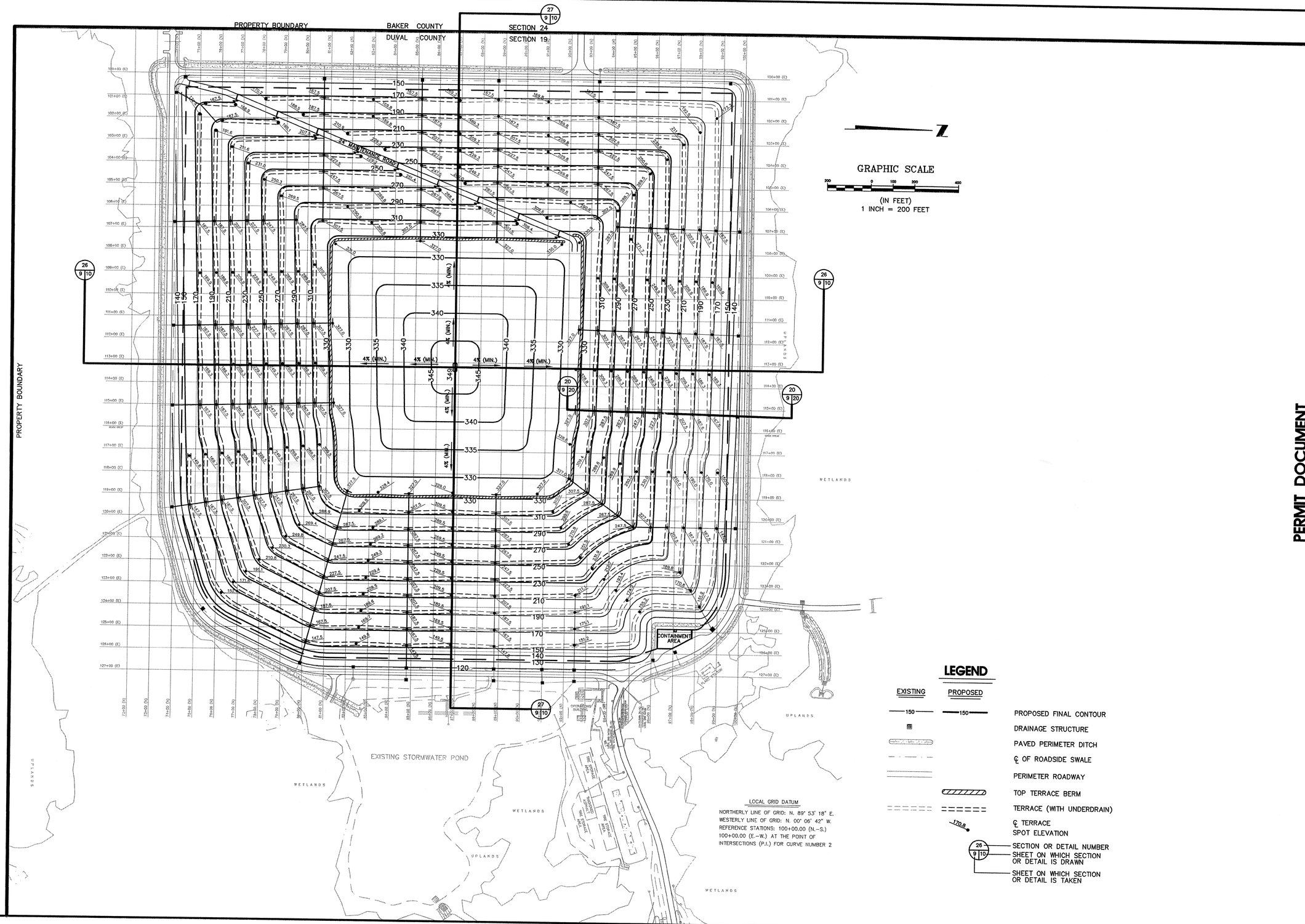
PERMIT DOCUMENT

MASTER DRAINAGE PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2264
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.
8



SUBMITTED TO DEP: 9-25-02

REVISIONS: 08-08-02 REVISED TERRACE ELEVATIONS BETWEEN DOWNCOMERS AT SE CORNER.

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

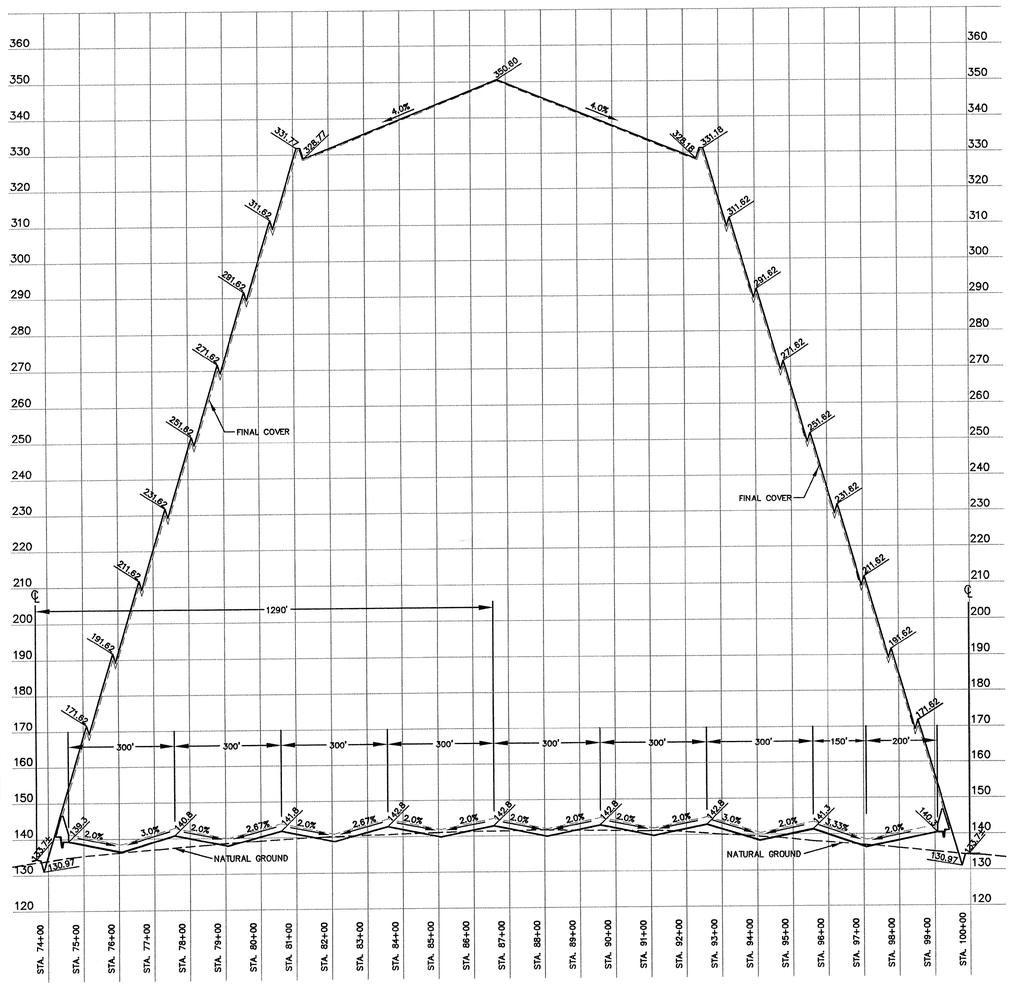
PERMIT DOCUMENT

FINAL CONTOUR PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL
FOR
TRAIL RIDGE LANDFILL, INC.

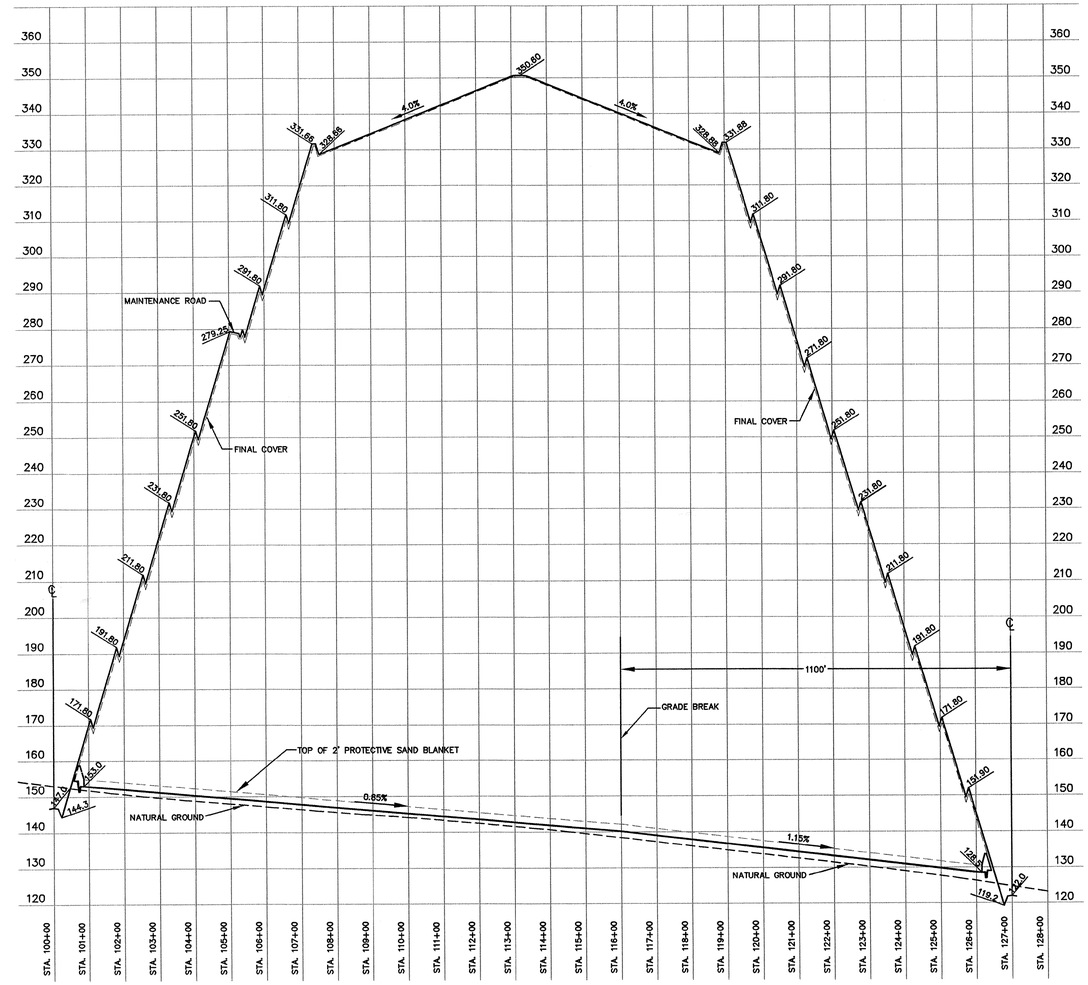
England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9486

DRAWING NO.
9



SECTION 26 (9 | 10)

SCALE: 1" = 200' HORIZ.
1" = 20' VERT.



SECTION 27 (9 | 10)

SCALE: 1" = 200' HORIZ.
1" = 20' VERT.

PERMIT DOCUMENT

CROSS SECTIONS

TRAIL RIDGE LANDFILL PERMIT RENEWAL
FOR
TRAIL RIDGE LANDFILL, INC.

SUBMITTED TO DEP: 9-25-02

REVISIONS:

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

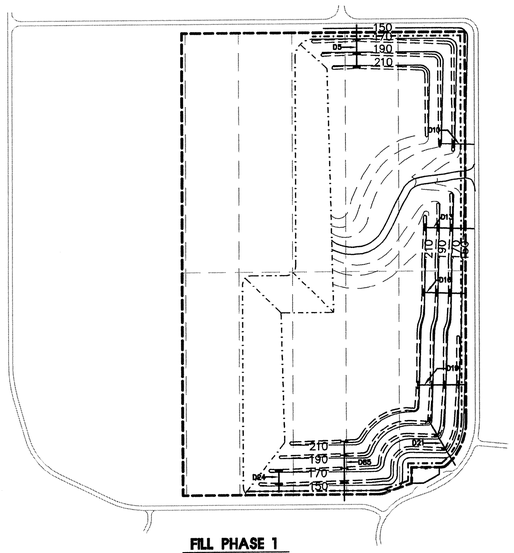
England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.
10

LANDFILL\TRAILRIDGE\RENEWAL\02-025\Design\Plots\Cross Sections.dwg, 09/18/2002 11:06:37 AM, DeyneF

GRAPHIC SCALE

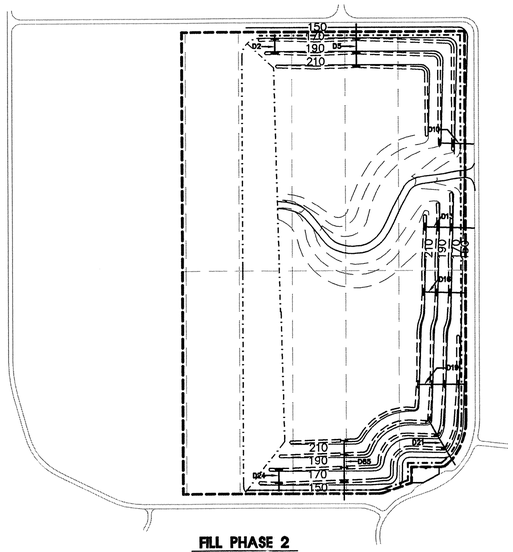
(IN FEET)



FILL PHASE 1
COMPLETE

GRAPHIC SCALE

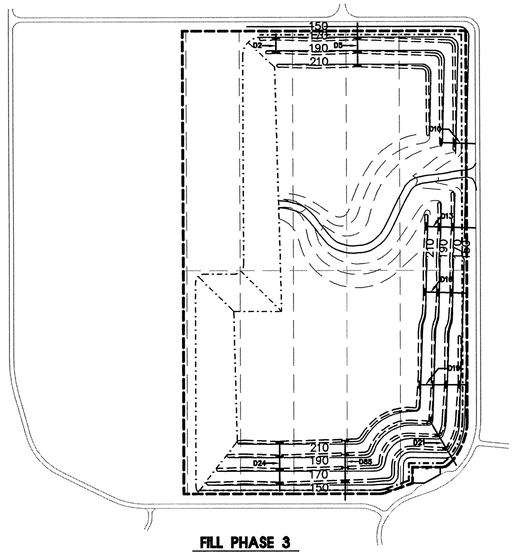
(IN FEET)



FILL PHASE 2
COMPLETE

GRAPHIC SCALE

(IN FEET)



FILL PHASE 3
COMPLETE

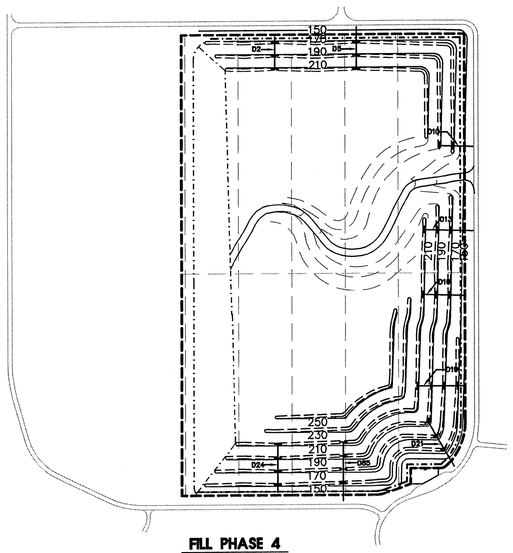
LEGEND

—150—	FINAL CONTOUR
	LIMITS OF LINER
	LINER PHASE LINE
	LIMITS OF FILL
	ACCESS ROAD
	ROADWAY
	TERRACE
	DOWNCOMER PIPE

NOTE:
FILL PHASING MAY BE CHANGED DUE TO OPERATIONAL NEEDS.

GRAPHIC SCALE

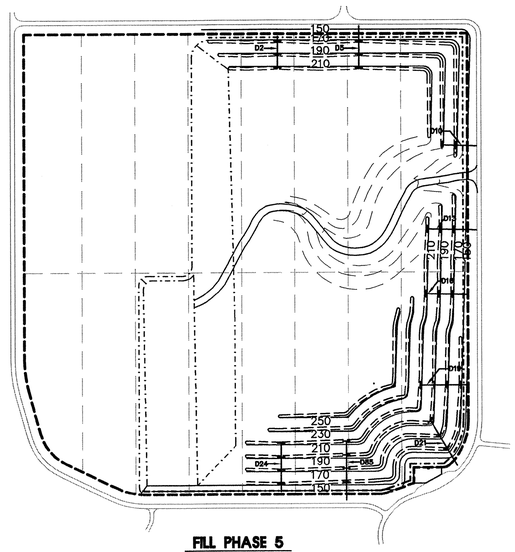
(IN FEET)



FILL PHASE 4
COMPLETE

GRAPHIC SCALE

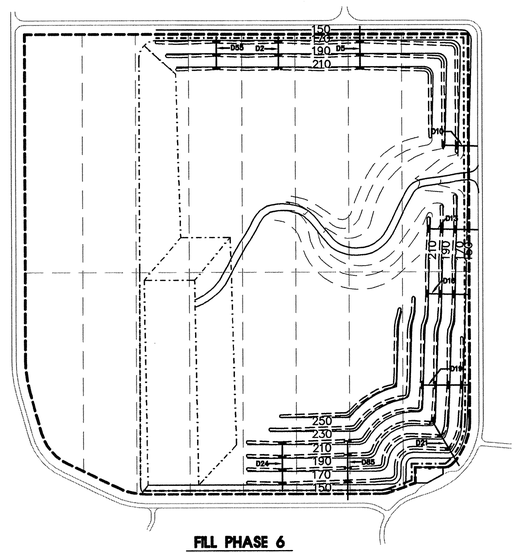
(IN FEET)



FILL PHASE 5
COMPLETE

GRAPHIC SCALE

(IN FEET)



FILL PHASE 6
COMPLETE

PERMIT DOCUMENT

FILL PHASING PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

SUBMITTED TO DEP: 9-25-02

REVISIONS:
8-20-02 MODIFIED FILL PHASES 5 AND 6 AND UPDATED ACCESS ROAD.

E.T.M. NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

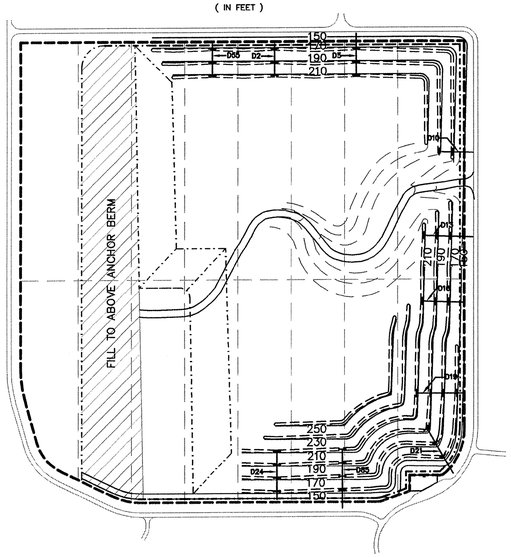
DRAWING NO.

11

LANDFILL\TRAILRIDGE\RENEWAL\02-025\Design\Phase\Fill Phasing.dwg, 09/18/2002 11:07:44 AM, DaynaF

GRAPHIC SCALE

(IN FEET)

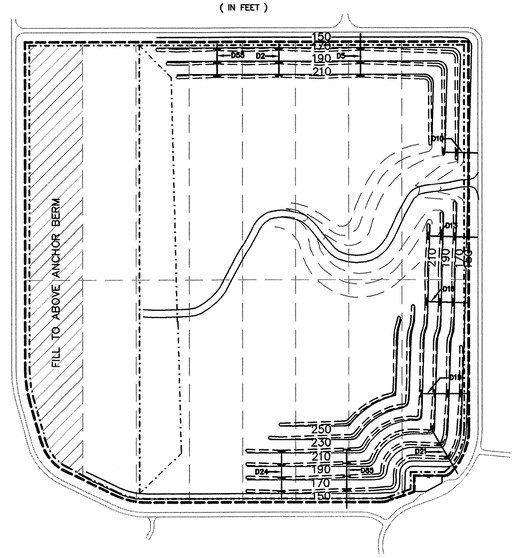


FILL PHASE 6A

COMPLETE

GRAPHIC SCALE

(IN FEET)

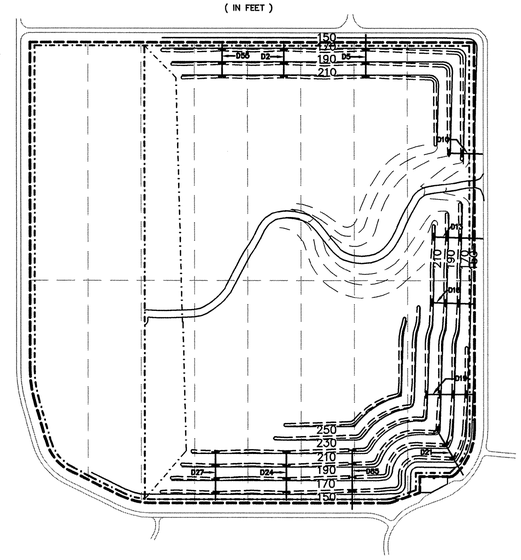


FILL PHASE 6B

CURRENT OPERATIONS

GRAPHIC SCALE

(IN FEET)



FILL PHASE 6C

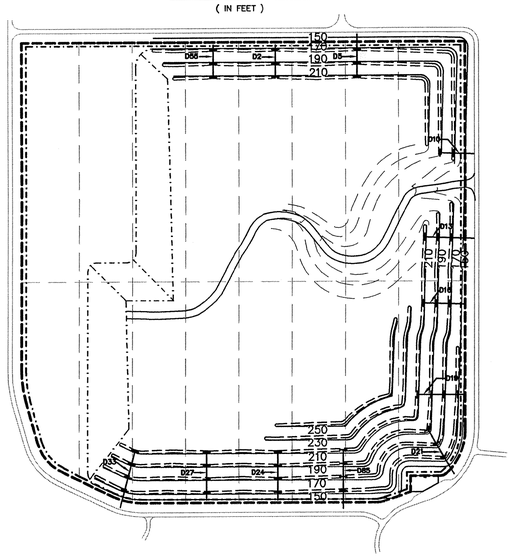
LEGEND

—150—	FINAL CONTOUR
	LIMITS OF LINER
	LINER PHASE LINE
	LIMITS OF FILL
	ACCESS ROAD
	ROADWAY
	TERRACE
	DOWNCOMER PIPE

NOTE:
FILL PHASING MAY BE CHANGED DUE TO OPERATIONAL NEEDS.

GRAPHIC SCALE

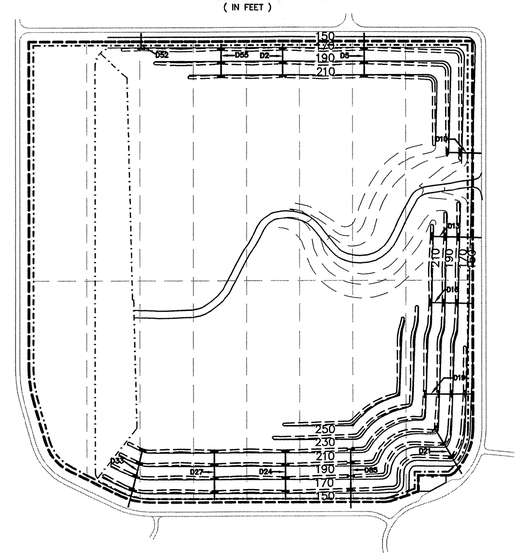
(IN FEET)



FILL PHASE 7

GRAPHIC SCALE

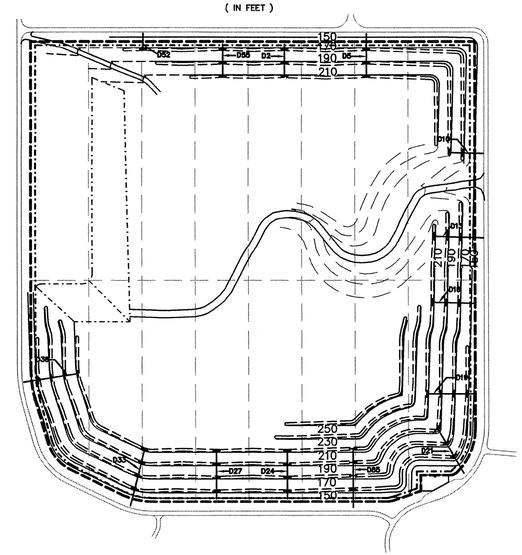
(IN FEET)



FILL PHASE 8

GRAPHIC SCALE

(IN FEET)



FILL PHASE 9

PERMIT DOCUMENT

FILL PHASING PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2654
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

12

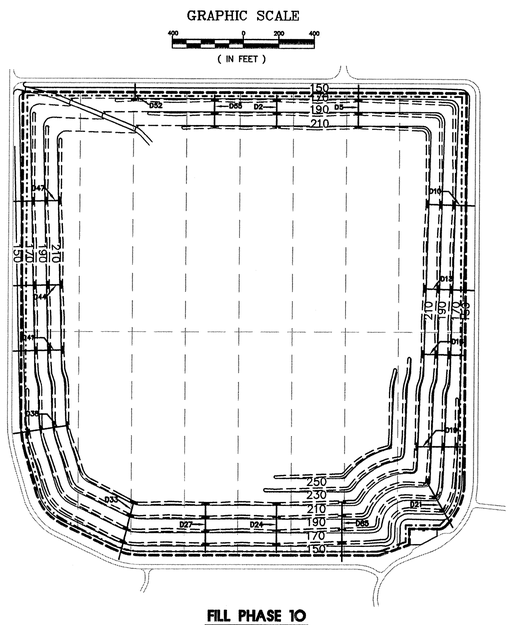
ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

REVISIONS:
2-25-00 REVISED FILL PHASES 7 - 12
12-6-00 REVISED FILL PHASES 9, 2510 TO REMOVE WESTERN HIGH RISE BLOCK AND ROAD
11-15-01 ADDED FILL PHASES 6A AND 6B AND MODIFIED FILL PHASES 7, 8 & 9
8-20-02 MODIFIED FILL PHASES 6A AND 6B; ADDED PHASE 6C; UPDATED ACCESS ROAD

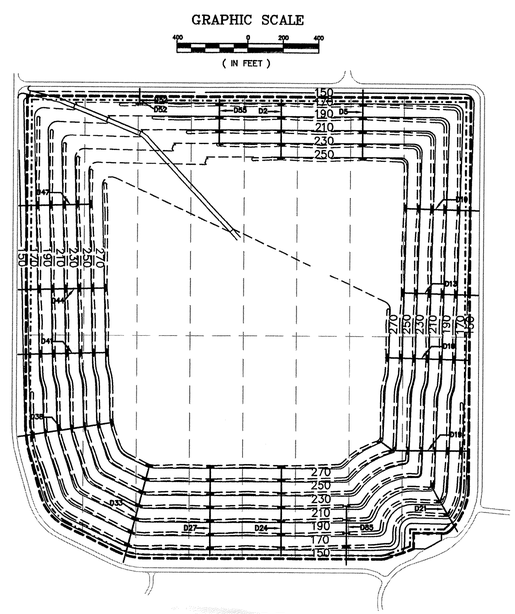
SUBMITTED TO DEP: 9-25-02

Charlie Cam
Bobby Cam
9/25/02

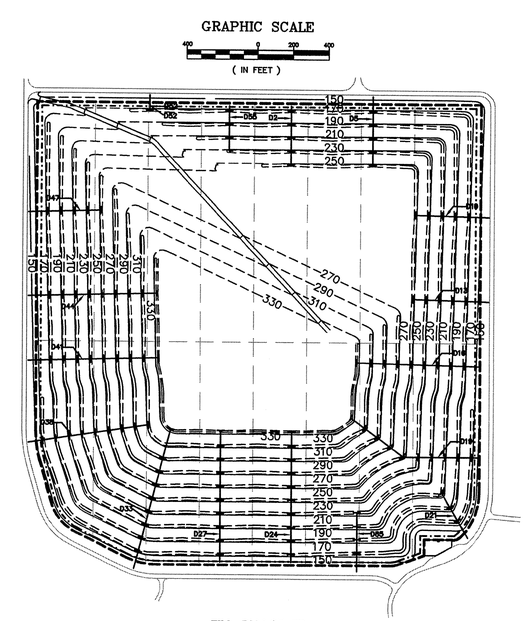
I:\LANDFILL\TRAIL\RENEWAL\02-025\Design\Plots\Fill Phasing.dwg, 09/19/2002 11:07:55 AM, DwyssF



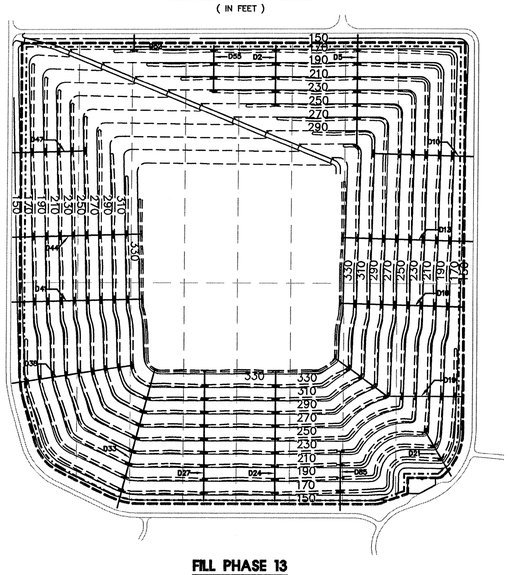
FILL PHASE 10



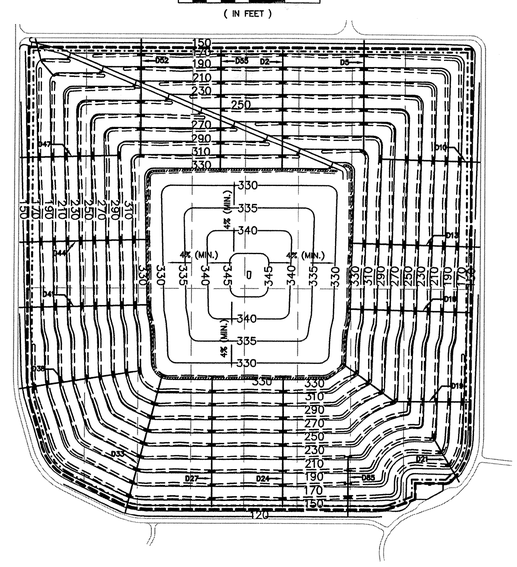
FILL PHASE 11



FILL PHASE 12



FILL PHASE 13

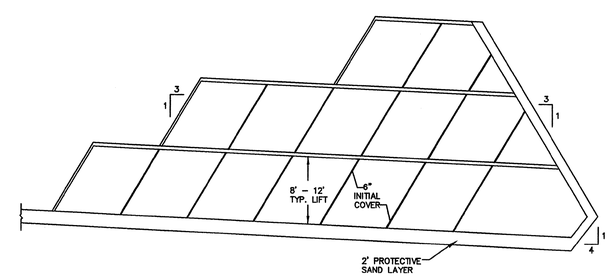


FILL PHASE 14

LEGEND

—150—	FINAL CONTOUR
	LIMITS OF LINER
	LINER PHASE LINE
	LIMITS OF FILL
	ACCESS ROAD
	ROADWAY
	TERRACE
	DOWNCOMER PIPE

NOTE:
FILL PHASING MAY BE CHANGED DUE TO OPERATIONAL NEEDS.



TYPICAL FILL SECTION
N.T.S.

PERMIT DOCUMENT

FILL PHASING PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

SUBMITTED TO DEP: 9-25-02

REVISIONS:
2-25-00 REVISED FILL PHASES 7 – 12 (INITIAL FILL PHASES 7 – 10)
12-6-00 REVISED FILL PHASES 7 – 10 (TO REFLECT HIGH RISE (EL 230 & 255))
11-15-01 MOVED FILL PHASES 11 AND 12 TO THIS SHEET
8-20-02 MOVED FILL PHASE 10 TO THIS SHEET.

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.
13

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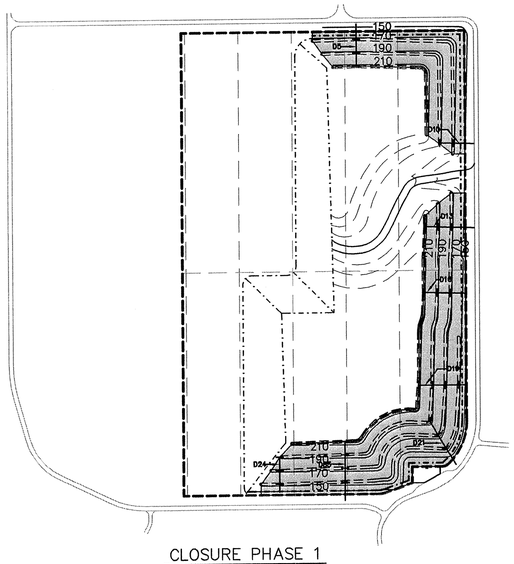
GRAPHIC SCALE

(IN FEET)



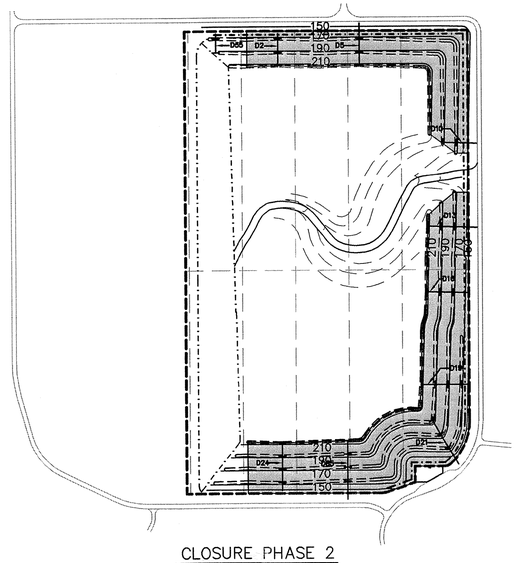
CLOSURE PHASE 1

(CLOSURE PHASE 1 INCLUDES FILL PHASE I.
CLOSURE PHASE 1 INCLUDES EXISTING CLOSURE.)

NOTE: CLOSURE PHASE I IS COMPLETE

GRAPHIC SCALE

(IN FEET)



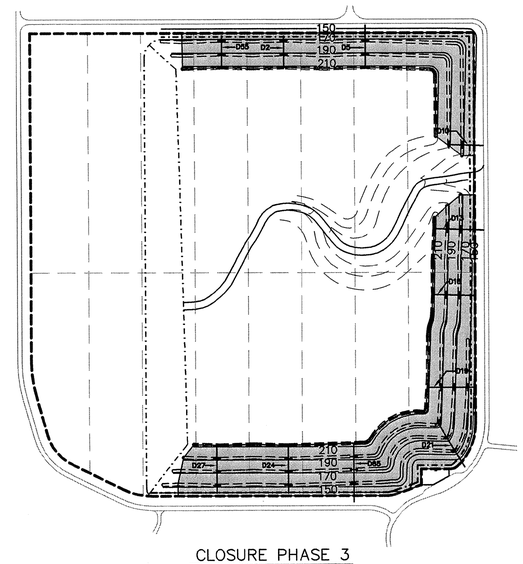
CLOSURE PHASE 2

(CORRESPONDS TO FILL PHASES 2, 3 & 4.)

NOTE: CLOSURE PHASE 2 IS COMPLETE

GRAPHIC SCALE

(IN FEET)

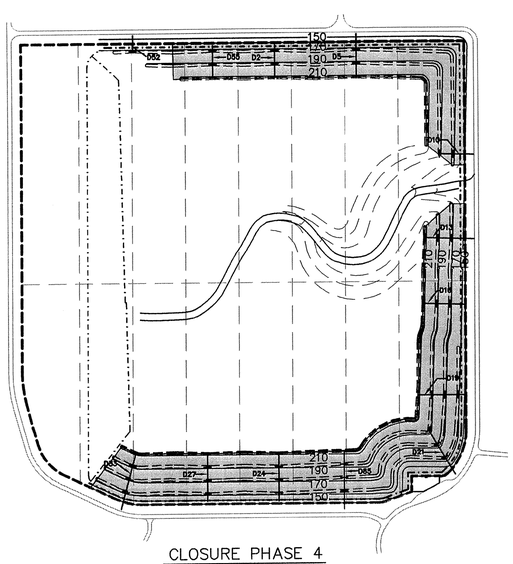


CLOSURE PHASE 3

(CORRESPONDS TO FILL PHASES 5 THRU 6C)

GRAPHIC SCALE

(IN FEET)

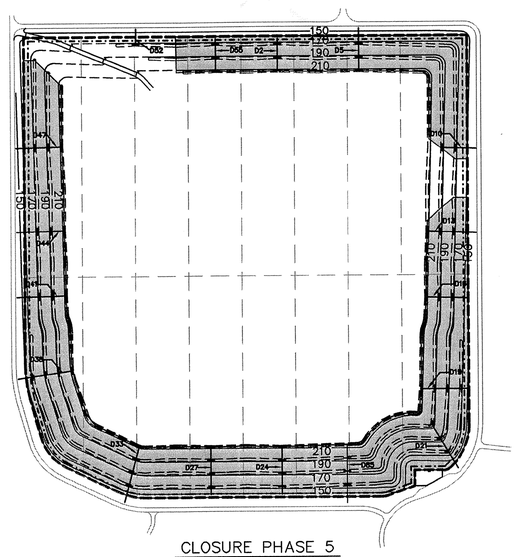


CLOSURE PHASE 4

(CORRESPONDS TO FILL PHASES 7 & 8.)

GRAPHIC SCALE

(IN FEET)

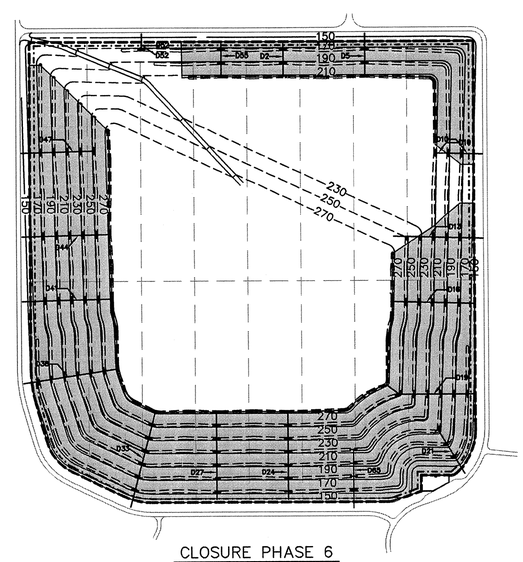


CLOSURE PHASE 5

(CORRESPONDS TO FILL PHASES 9 & 10.)

GRAPHIC SCALE

(IN FEET)



CLOSURE PHASE 6

(CORRESPONDS TO FILL PHASE 11.)

LEGEND

—150—	FINAL CONTOUR
	LIMITS OF LINER
	LINER PHASE LINE
	LIMITS OF FILL
	ACCESS ROAD
	ROADWAY
	TERRACE
	DOWNCOMER PIPE
	10' BERM
	CLOSURE LIMITS

NOTE:
CLOSURE PHASES MAY BE CHANGED DUE TO OPERATIONAL NEEDS.

PERMIT DOCUMENT

CLOSURE PHASING PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL
FOR
TRAIL RIDGE LANDFILL, INC.

SUBMITTED TO DEP: 9-25-02

Jonathan Bowman Bolstad

REVISIONS:

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2554
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

14

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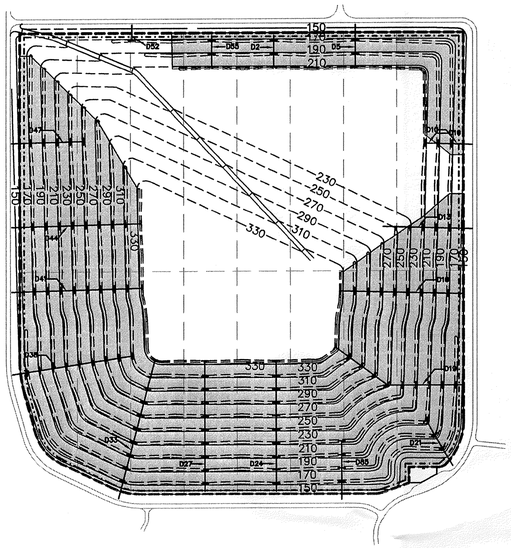
GRAPHIC SCALE

(IN FEET)

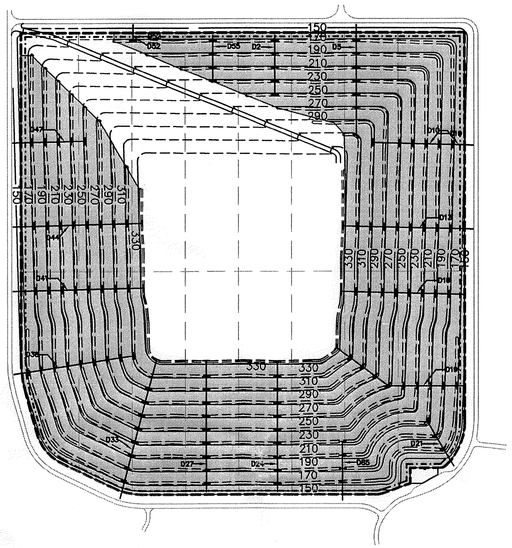


CLOSURE PHASE 7

(CORRESPONDS TO FILL PHASE 12.)

GRAPHIC SCALE

(IN FEET)

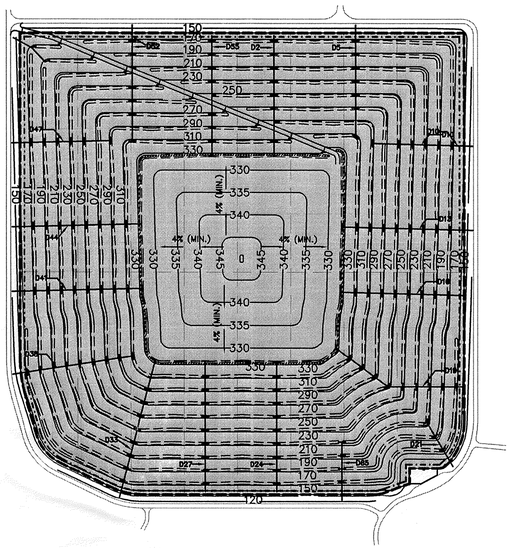


CLOSURE PHASE 8

(CORRESPONDS TO FILL PHASE 13.)

GRAPHIC SCALE

(IN FEET)



CLOSURE PHASE 9

(CORRESPONDS TO FILL PHASE 14.)

LEGEND

- —150— FINAL CONTOUR
- LIMITS OF LINER
- LINER PHASE LINE
- LIMITS OF FILL
- ACCESS ROAD
- ROADWAY
- TERRACE
- DOWNCOMER PIPE
- 10' BERM
- CLOSURE LIMITS

NOTE:
CLOSURE PHASES MAY BE CHANGED DUE TO OPERATIONAL NEEDS.

PERMIT DOCUMENT

SUBMITTED TO DEP: 9-25-02

REVISIONS:

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

CLOSURE PHASING PLAN

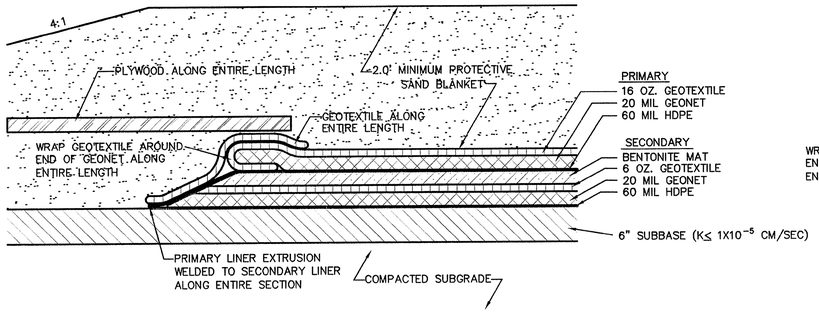
TRAIL RIDGE LANDFILL PERMIT RENEWAL
FOR
TRAIL RIDGE LANDFILL, INC.

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2684
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

15

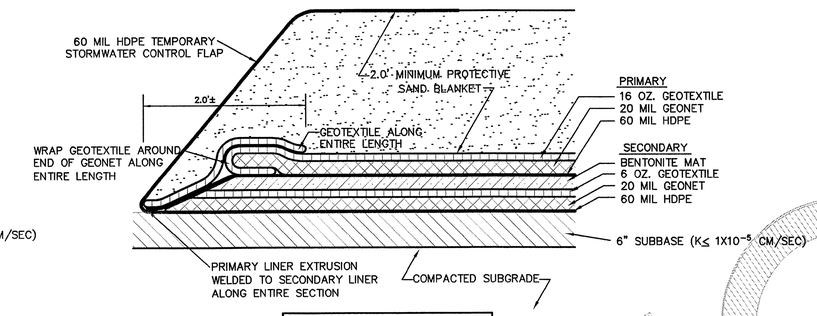
LANDFILL\TRAIL\RENEWAL\02-025\Design\PhaseFill Phasing.dwg, 09/16/2002 11:08:42 AM, DaysaF



NOTE:
VERTICAL THICKNESS OF THE LINER SYSTEMS HAVE BEEN EXAGGERATED FOR CLARITY PURPOSES ONLY.

TYPICAL PRIMARY AND SECONDARY LINER END TREATMENT BETWEEN NORTH – SOUTH PHASES (1 / 6 16)

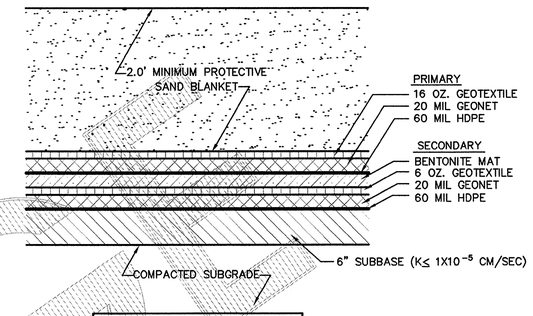
N.T.S.



NOTE:
VERTICAL THICKNESS OF THE LINER SYSTEMS HAVE BEEN EXAGGERATED FOR CLARITY PURPOSES ONLY.

TYPICAL PRIMARY AND SECONDARY LINER END TREATMENT BETWEEN EAST – WEST PHASES (2 / 6 16)

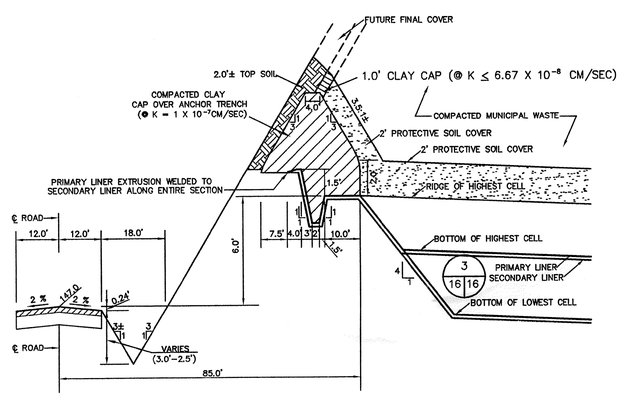
N.T.S.



NOTE:
VERTICAL THICKNESS OF THE LINER SYSTEMS HAVE BEEN EXAGGERATED FOR CLARITY PURPOSES ONLY.

TYPICAL PRIMARY AND SECONDARY LINER SECTION (3 / 16 16 / 18)

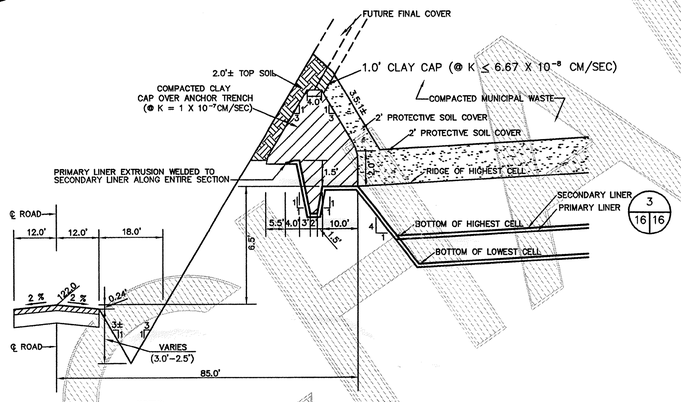
N.T.S.



NOTES:
1. 1.0' CLAY CAP SHALL BE PLACED IN TWO 6" LIFTS (COMPACTED) AND SHALL HAVE A MINIMUM OVERALL THICKNESS OF 12".

WEST ANCHOR TRENCH AND BERM SECTION (4 / 6 16 / 16)

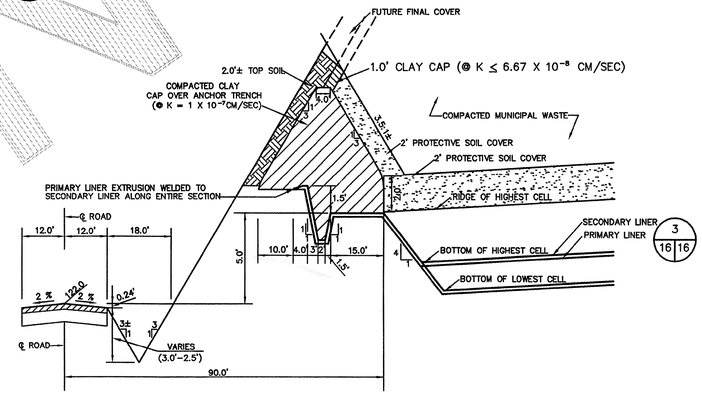
N.T.S.



NOTES:
1. 1.0' CLAY CAP SHALL BE PLACED IN TWO 6" LIFTS (COMPACTED) AND SHALL HAVE A MINIMUM OVERALL THICKNESS OF 12".

EAST ANCHOR TRENCH AND BERM SECTION (5 / 6 16 / 16 / 17 / 18)

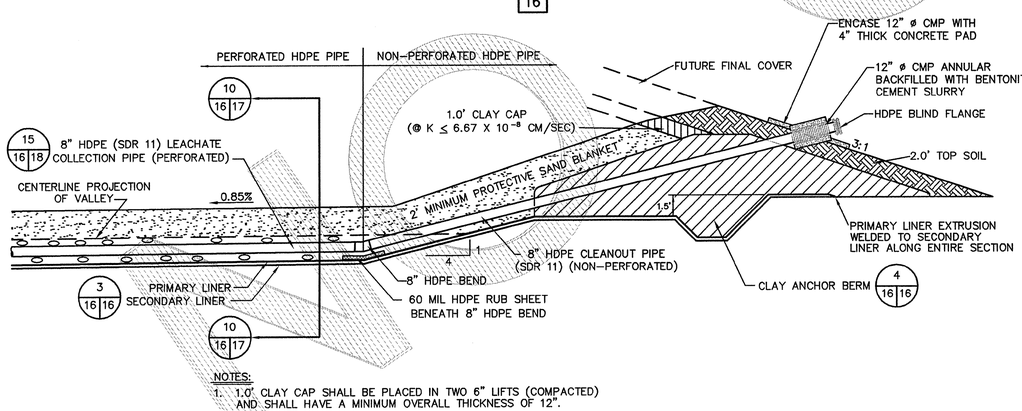
N.T.S.



NOTES:
1. 1.0' CLAY CAP SHALL BE PLACED IN TWO 6" LIFTS (COMPACTED) AND SHALL HAVE A MINIMUM OVERALL THICKNESS OF 12".

SOUTH ANCHOR TRENCH AND BERM SECTION (6 / 6 16)

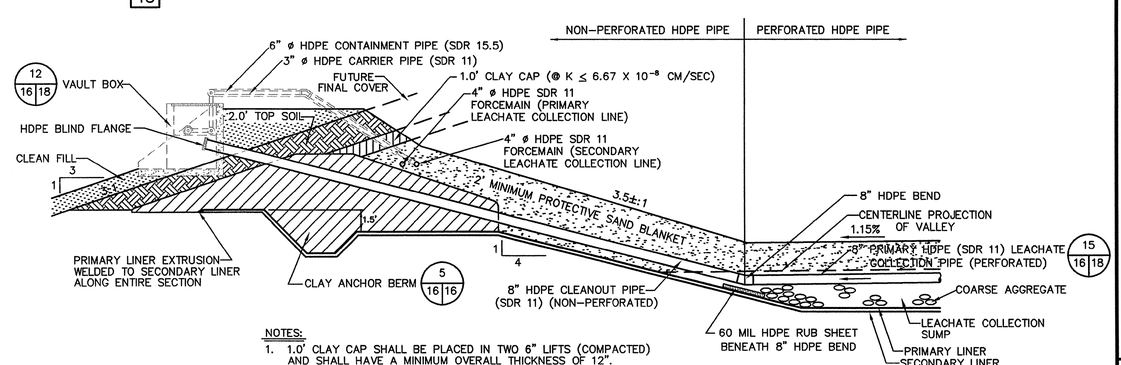
N.T.S.



NOTES:
1. 1.0' CLAY CAP SHALL BE PLACED IN TWO 6" LIFTS (COMPACTED) AND SHALL HAVE A MINIMUM OVERALL THICKNESS OF 12".

8" LEACHATE CLEANOUT RISER SECTION (WEST SIDE ONLY) (7 / 6 16)

SCALE: 1" = 5'



NOTES:
1. 1.0' CLAY CAP SHALL BE PLACED IN TWO 6" LIFTS (COMPACTED) AND SHALL HAVE A MINIMUM OVERALL THICKNESS OF 12".

8" LEACHATE CLEANOUT RISER SECTION (EAST SIDE ONLY) (8 / 6 16 / 17)

SCALE: 1" = 5'

SUBMITTED TO DEP: 9-25-02

REVISIONS:

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

PERMIT DOCUMENT

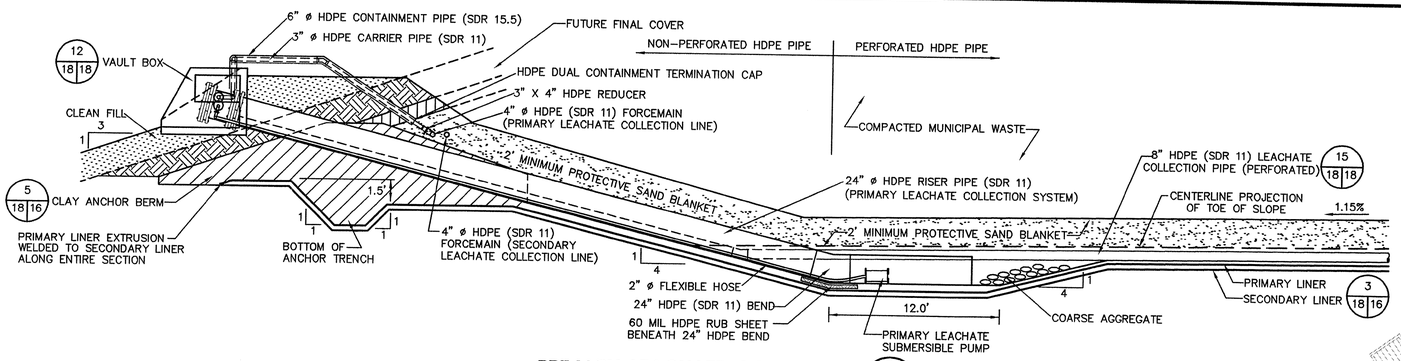
ANCHOR TRENCH AND LINER DETAILS

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2594
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

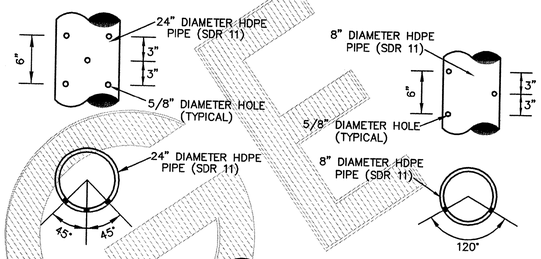
DRAWING NO.
16

LANDFILL\TRAILRENEWAL\02-025\Design\Pools\Inardetail.dwg, 09/18/2002 11:18:01 AM, DayanF



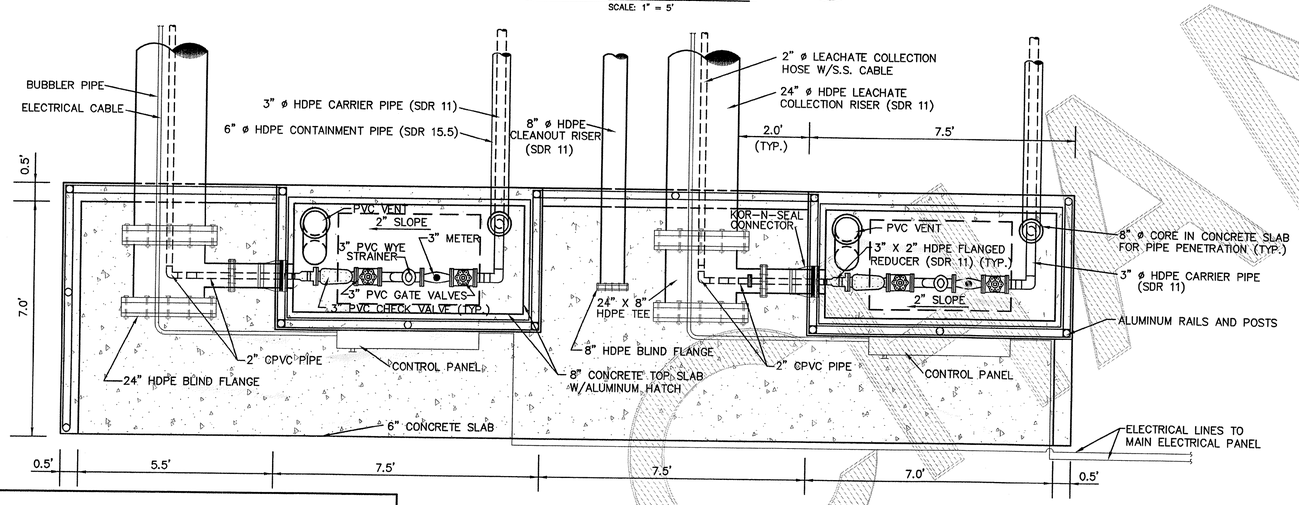
PRIMARY LEACHATE COLLECTION SYSTEM SUMP SECTION (11 / 17 18)

SCALE: 1" = 5'



24" LEACHATE COLLECTION PIPING PERFORATION (14 / 17 18)

8" LEACHATE COLLECTION PIPING PERFORATION (15 / 16 18 / 17 / 18)

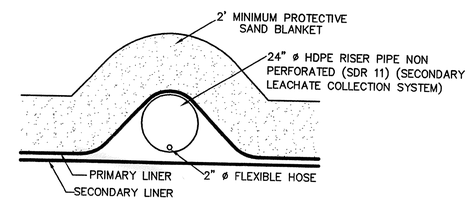


NOTES:

1. CONTROL PANELS SHALL BE NEMA 4X CONTROL PANELS PROVIDED WITH: NEMA RATED MOTOR STARTERS; ELAPSED TIME METERS; HOA SELECTORS; HEAT SENSORS; LIGHTNING ARRESTORS; SURGE SUPPRESSORS; AND POWER MONITORS.
2. INTERIOR OF VAULT BOXES SHALL BE COATED WITH WATERPROOFING.

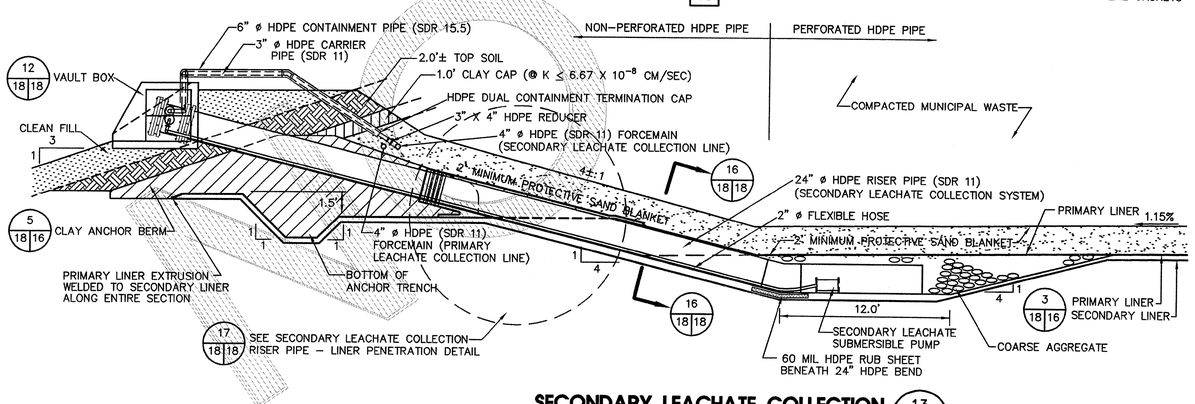
PLAN VIEW VAULT BOX (12 / 16 18 / 17 / 18)

N.T.S.



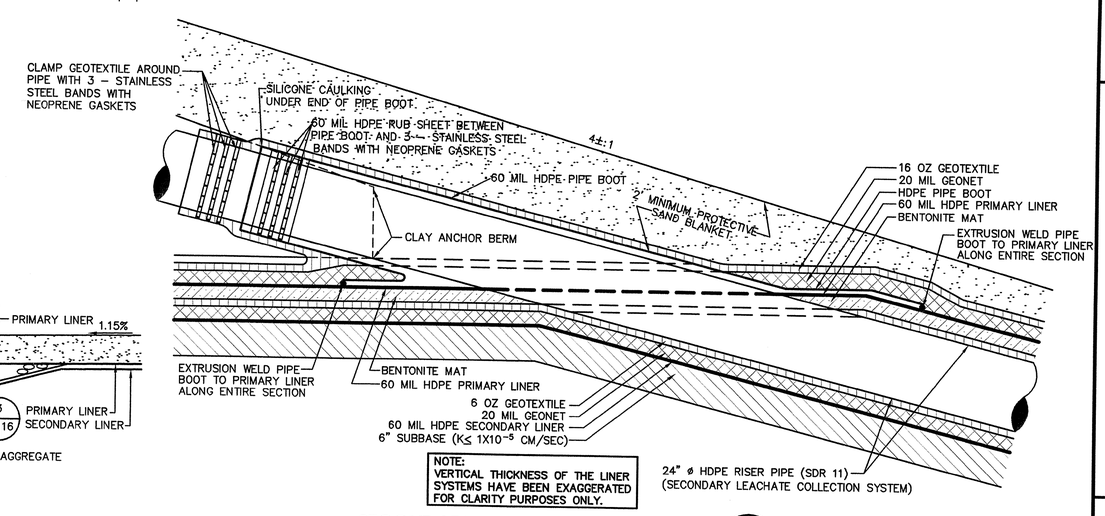
SECONDARY LEACHATE COLLECTION PIPE SECTION (16 / 18 18)

N.T.S.



SECONDARY LEACHATE COLLECTION SYSTEM SUMP SECTION (13 / 17 18)

SCALE: 1" = 5'



NOTE:
VERTICAL THICKNESS OF THE LINER SYSTEMS HAVE BEEN EXAGGERATED FOR CLARITY PURPOSES ONLY.

SECONDARY LEACHATE COLLECTION RISER PIPE – LINER PENETRATION DETAIL (17 / 18 18)

N.T.S.

SUBMITTED TO DEP: 9-25-02

REVISIONS:

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

PERMIT DOCUMENT

LEACHATE TRENCH AND SUMP DETAILS

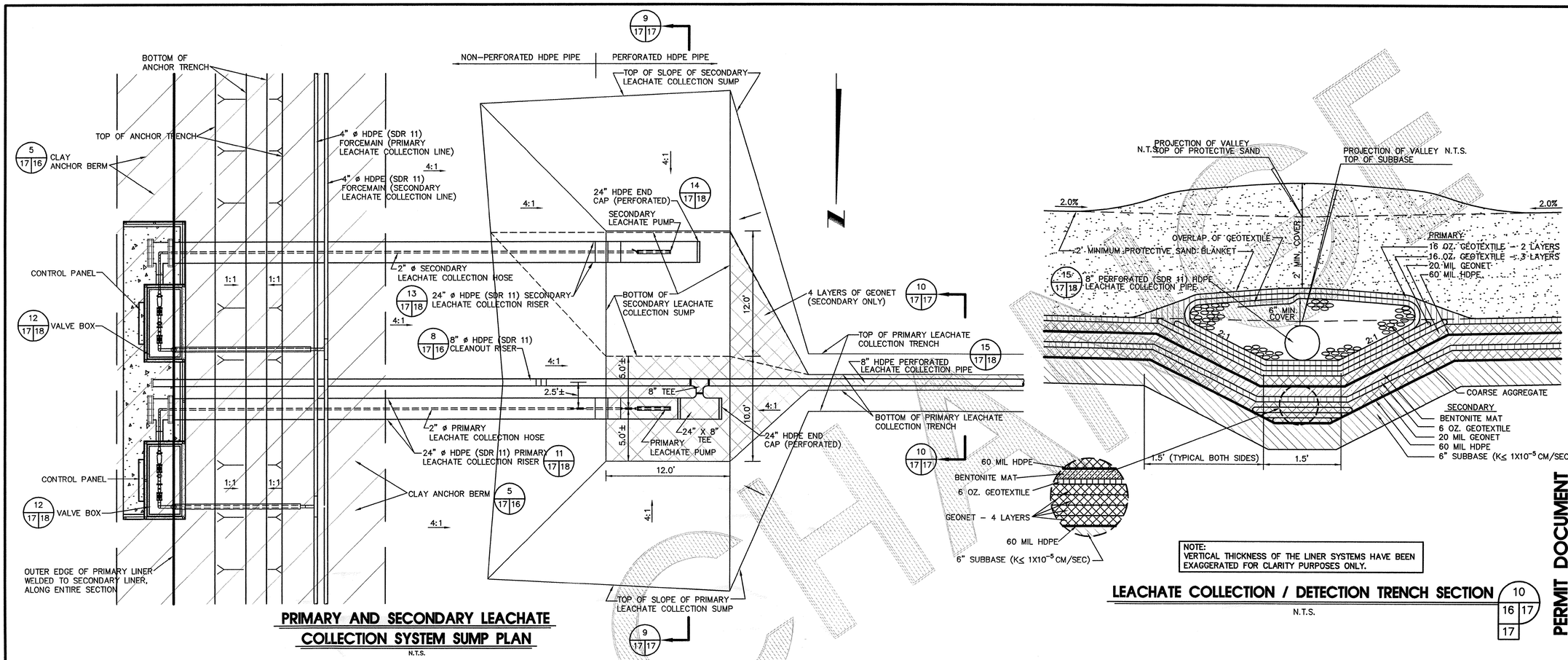
TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2554
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

17

LANDFILL\TRAIL\RENEWAL\02-025\Design\Plots\Sumpdetail.dwg, 09/18/2002 11:16:55 AM, DaysoF



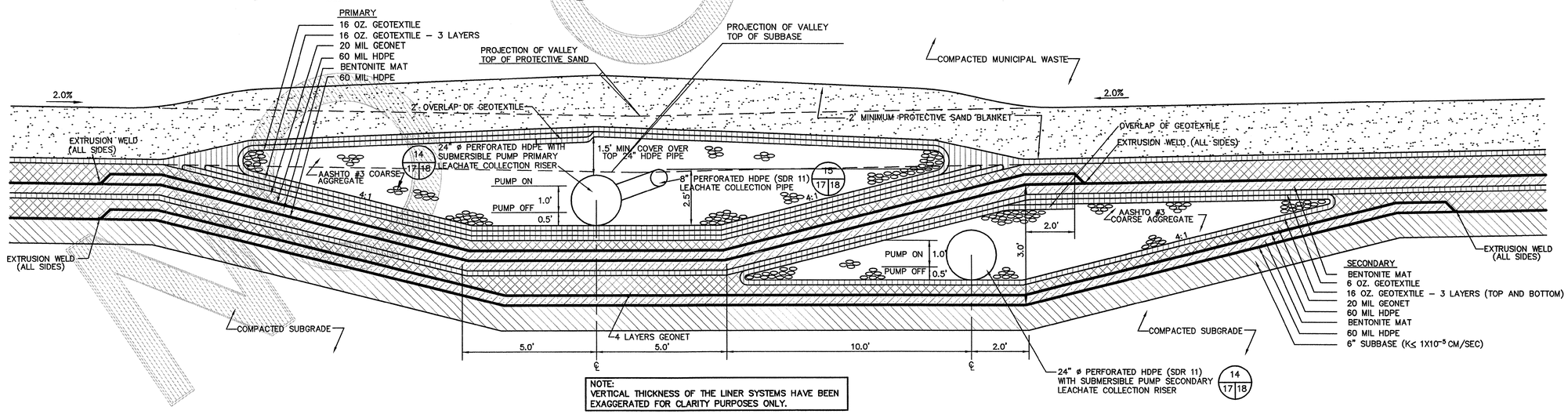
NOTE:
VERTICAL THICKNESS OF THE LINER SYSTEMS HAVE BEEN EXAGGERATED FOR CLARITY PURPOSES ONLY.

PRIMARY AND SECONDARY LEACHATE COLLECTION SYSTEM SUMP PLAN

N.T.S.

LEACHATE COLLECTION / DETECTION TRENCH SECTION 10 | 16 17 | 17

N.T.S.



NOTE:
VERTICAL THICKNESS OF THE LINER SYSTEMS HAVE BEEN EXAGGERATED FOR CLARITY PURPOSES ONLY.

LEACHATE COLLECTION SUMP SECTION 9 | 17 17

N.T.S.

PERMIT DOCUMENT

SUBMITTED TO DEP: 9-23-02

REVISIONS:

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

LEACHATE SUMP AND VAULT BOX DETAILS

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

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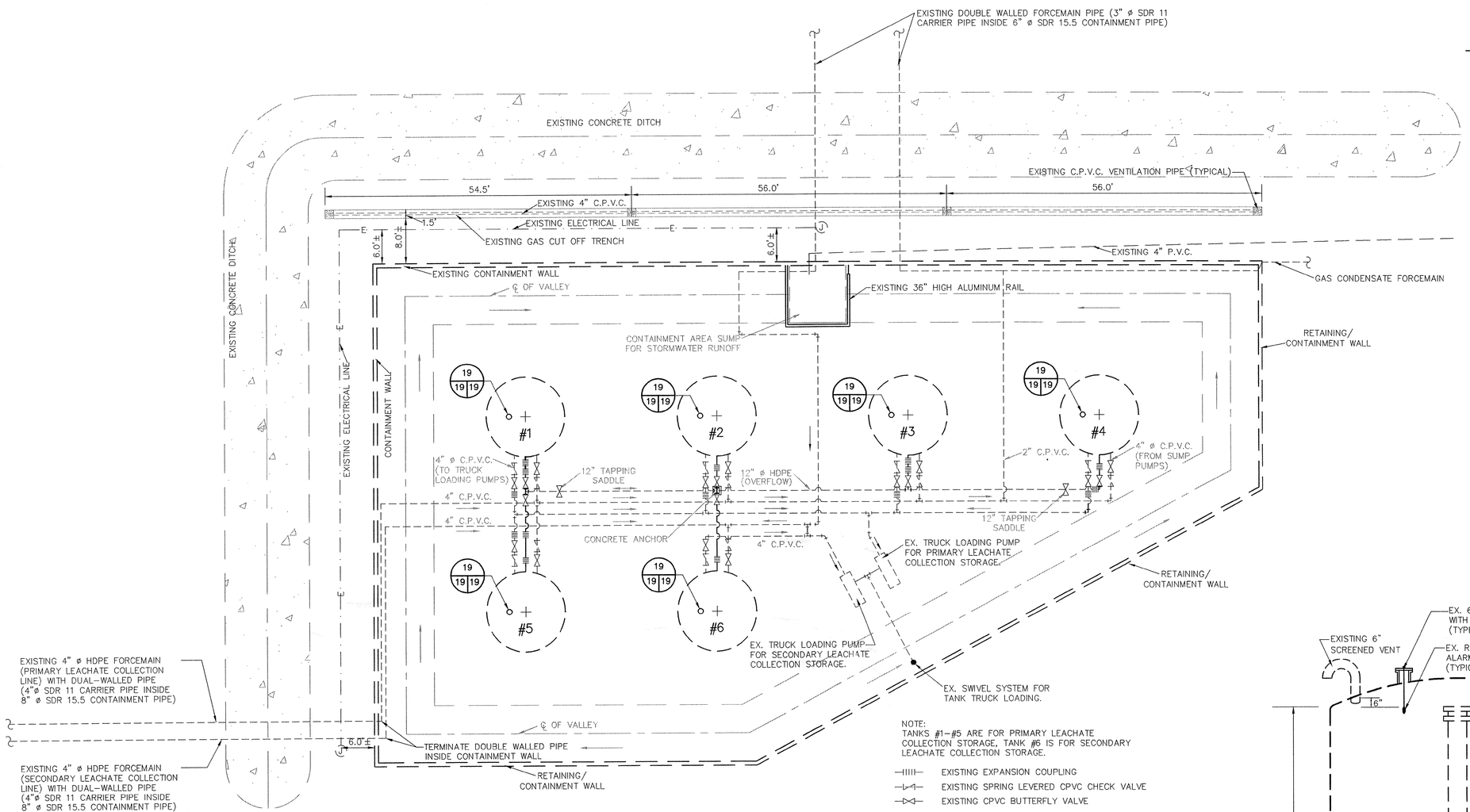

EXISTING LEACHATE CONTAINMENT AREA (18 / 6 | 19)

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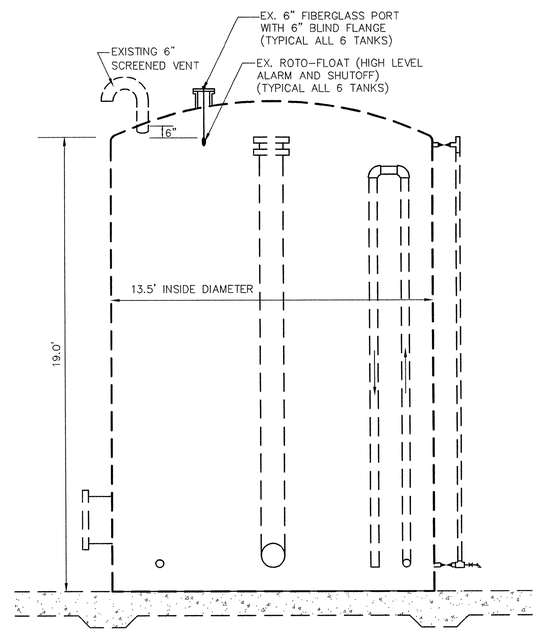


EXISTING LEACHATE STORAGE TANKS (19 / 19 | 19)

N.T.S.

PERMIT DOCUMENT

CONTAINMENT AREA DETAILS

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

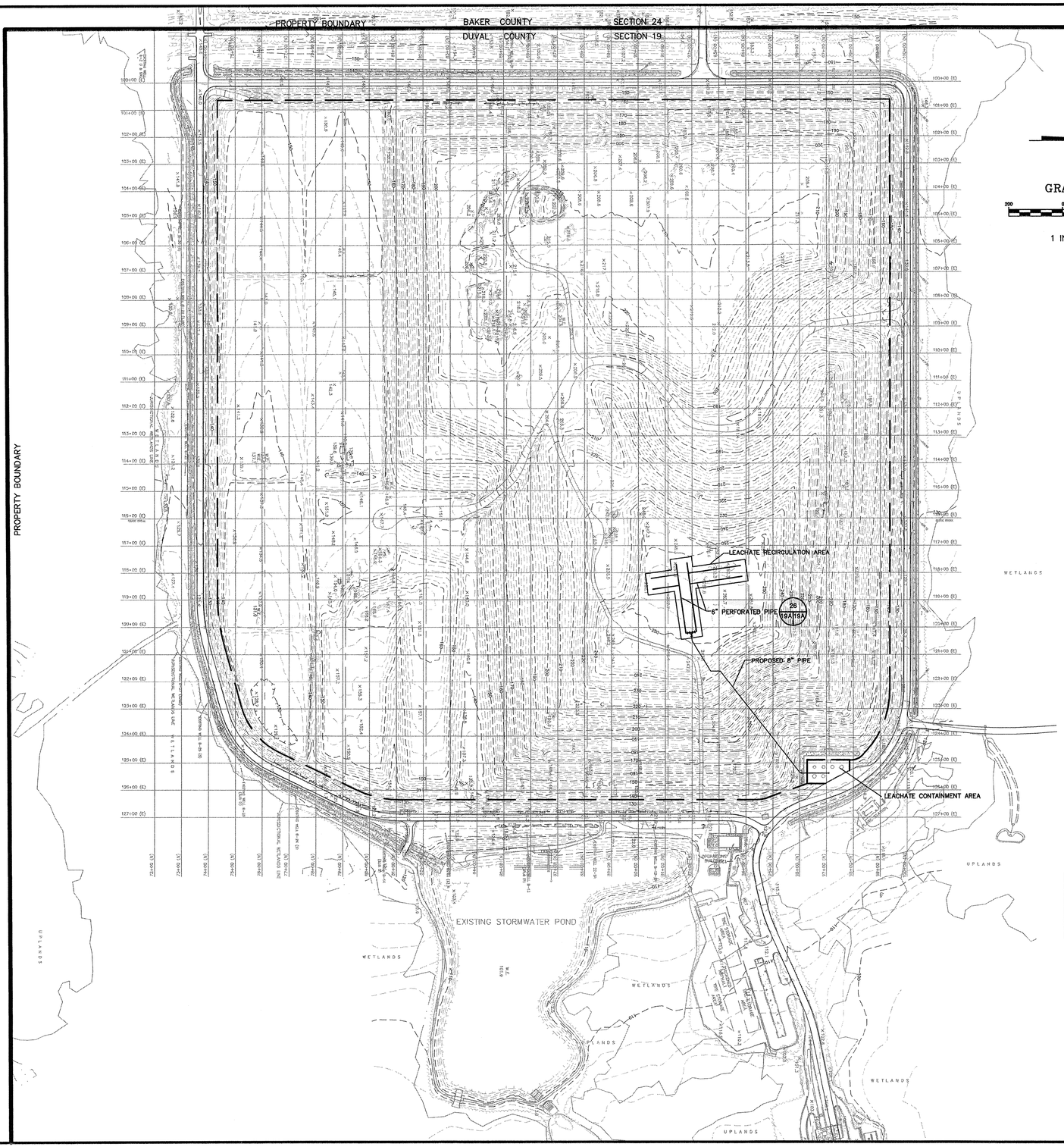
SUBMITTED TO DEP: 9-25-02

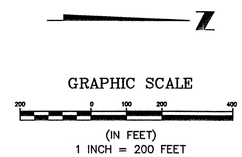
REVISIONS:
9-12-02: ADDED CONDENSATE FORCEMAIN

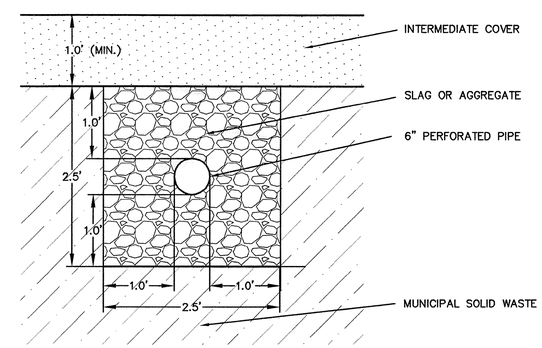
ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9465

DRAWING NO.
19







PROPOSED LEACAHATE RECIRCULATION TRENCH

N.T.S.

26
19A|19A

NOTE:

THE LEACHATE RECIRCULATION AREA WILL BE MOVED PERIODICALLY AS NEEDED BUT WILL BE A MINIMUM OF 1 ACRE IN SIZE OVER A MINIMUM OF 55 FEET OF WASTE. THE LEACHATE RECIRCULATION TRENCH SHALL HAVE A MINIMUM OF 1,100 LINEAR FEET OF PIPE.

SUBMITTED TO DEP: 9-25-02

REVISIONS:

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

PERMIT DOCUMENT

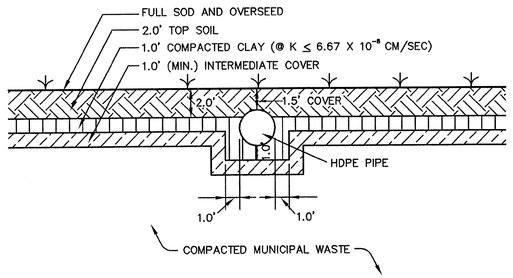
LEACHATE RECIRCULATION PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL
FOR
TRAIL RIDGE LANDFILL, INC.

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

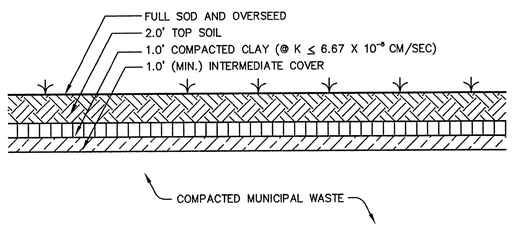
19A



NOTE:
THE 12" COMPACTED CLAY LAYER SHALL BE PLACED IN TWO 6" (MINIMUM) LIFTS.

TYPICAL PIPE ENCASEMENT SECTION (21 / 20 20)

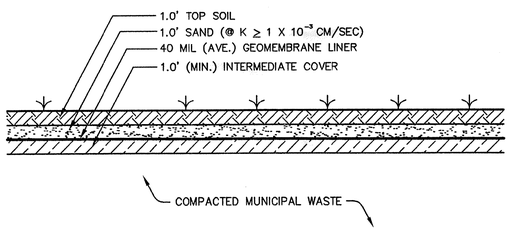
N.T.S.



NOTE:
THE 12" COMPACTED CLAY LAYER SHALL BE PLACED IN TWO 6" (MINIMUM) LIFTS.

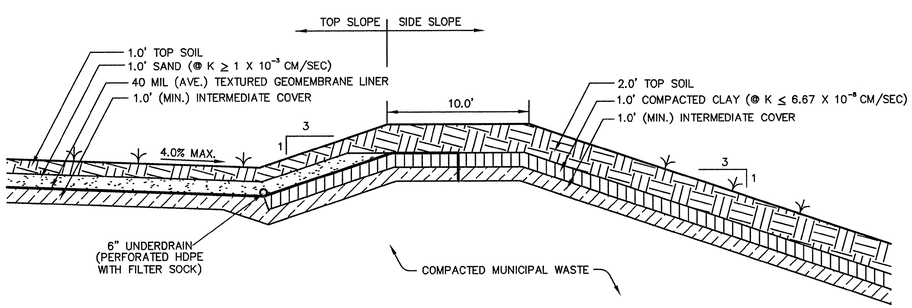
FINAL COVER - SIDE SLOPE UNIT

N.T.S.



FINAL COVER - TOP SLOPE

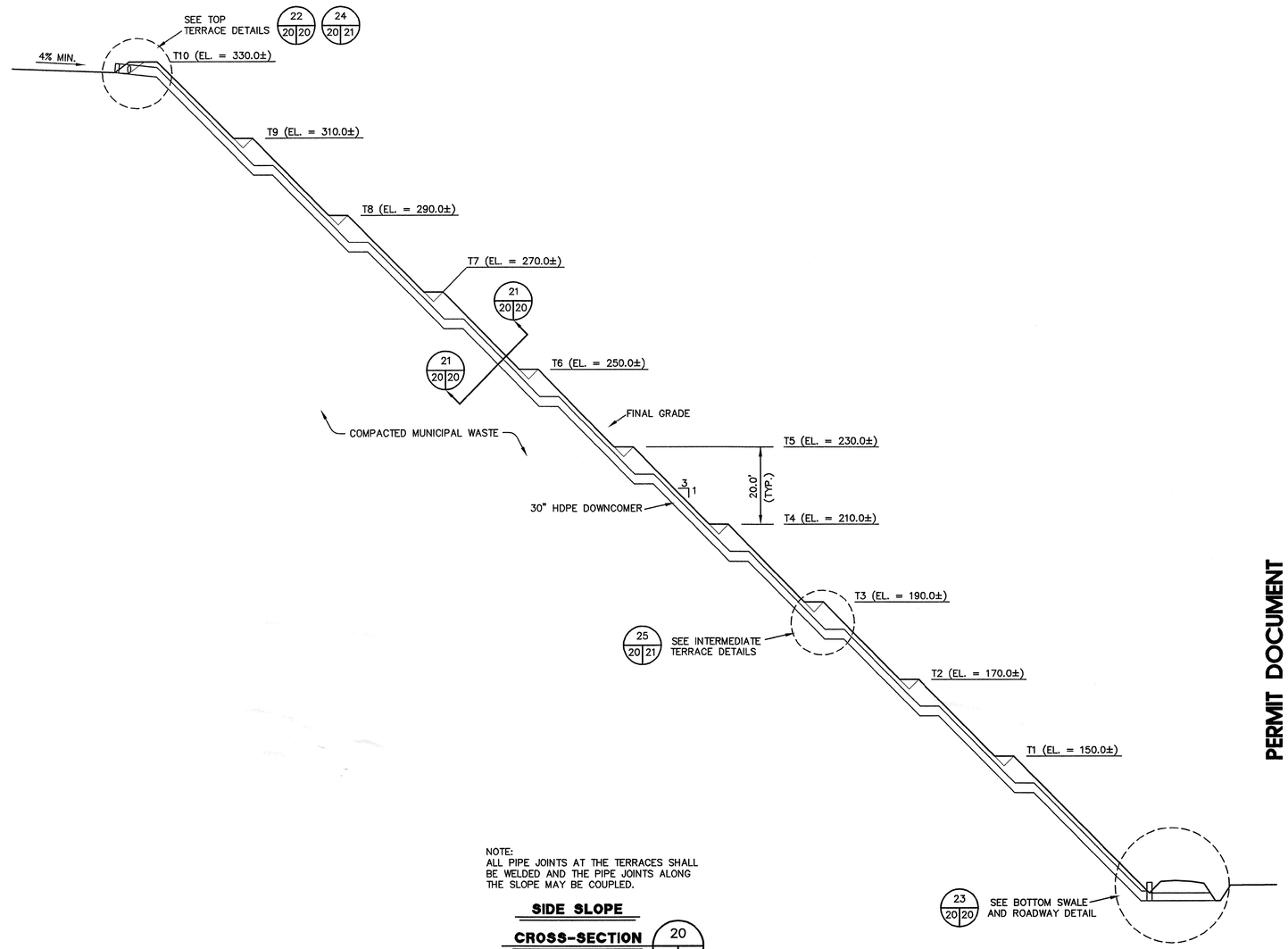
N.T.S.



TOP TERRACE BERM DETAIL (22 / 20 20)

N.T.S.

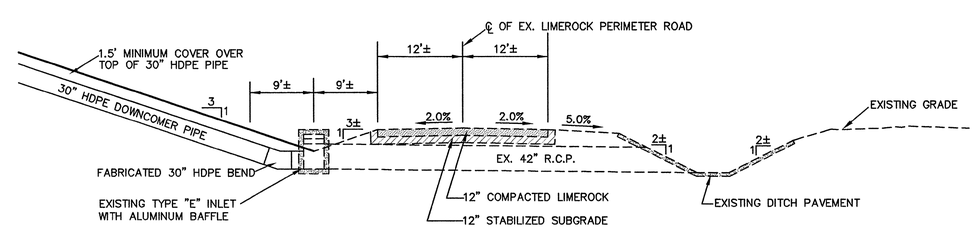
NOTE:
THE 12" COMPACTED CLAY LAYER SHALL BE PLACED IN TWO 6" (MINIMUM) LIFTS.



NOTE:
ALL PIPE JOINTS AT THE TERRACES SHALL BE WELDED AND THE PIPE JOINTS ALONG THE SLOPE MAY BE COUPLED.

SIDE SLOPE CROSS-SECTION (20 / 9 20)

N.T.S.



BOTTOM SWALE AND ROADWAY DETAIL (23 / 20 20)

N.T.S.

PERMIT DOCUMENT

SUBMITTED TO DEP: 9-25-02

REVISIONS:
2-10-97 MODIFIED CLAY PERMEABILITY
9-12-02 REVISED INTERMEDIATE COVER

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

CLOSURE DETAILS

TRAIL RIDGE LANDFILL PERMIT RENEWAL
FOR
TRAIL RIDGE LANDFILL, INC.

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2564
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9465

DRAWING NO.

20

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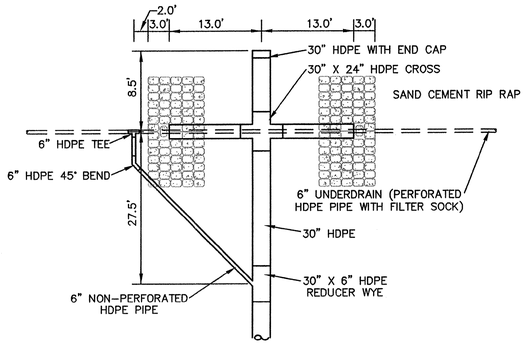
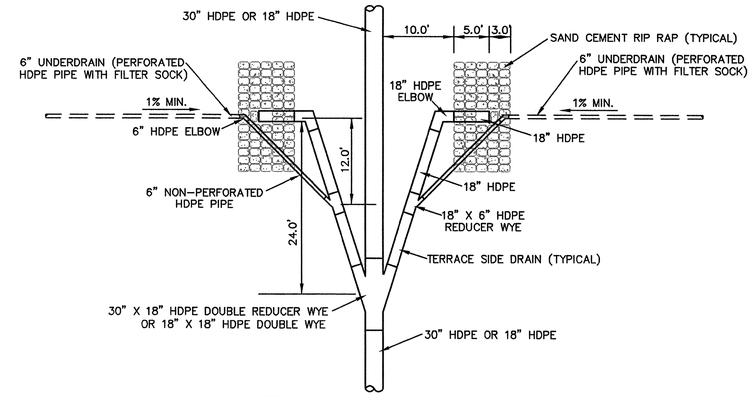


NOTES:

1. ALL PIPE JOINTS INCLUDING END JOINTS AT THE TERRACES SHALL BE WELDED JOINTS.

TOP TERRACE PIPING - PLAN VIEW (24 / 20 21)

N.T.S.

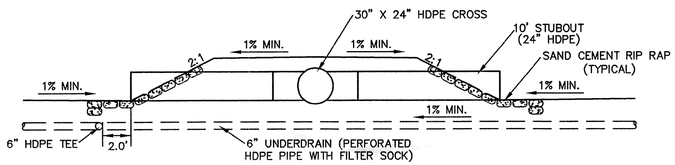


NOTES:

1. ALL PIPE JOINTS INCLUDING END JOINTS AT THE TERRACES SHALL BE WELDED JOINTS.

INTERMEDIATE TERRACE PIPING - PLAN VIEW (25 / 20 21)

N.T.S.

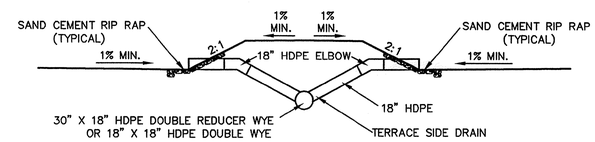


NOTES:

1. ALL PIPE JOINTS INCLUDING END JOINTS AT THE TERRACES SHALL BE WELDED JOINTS.

TOP TERRACE PIPING - SECTION VIEW (24 / 20 21)

N.T.S.

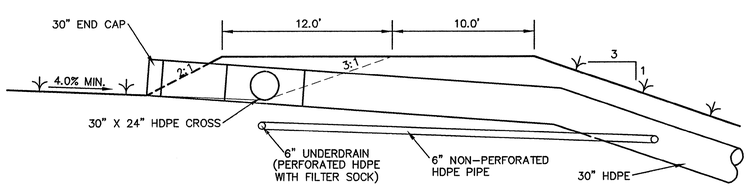


NOTES:

1. ALL PIPE JOINTS INCLUDING END JOINTS AT THE TERRACES SHALL BE WELDED JOINTS.

INTERMEDIATE TERRACE PIPING - SECTION VIEW (25 / 20 21)

N.T.S.

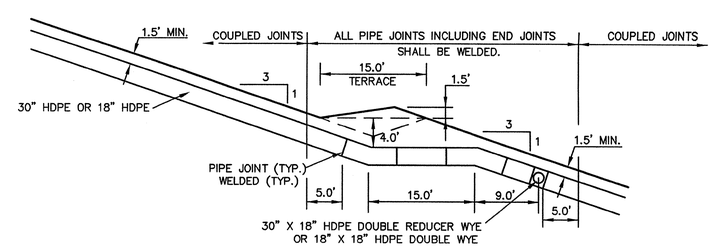


NOTES:

1. ALL PIPE JOINTS INCLUDING END JOINTS AT THE TERRACES SHALL BE WELDED JOINTS.

TOP TERRACE PIPING DETAIL (24 / 20 21)

N.T.S.



NOTES:

1. ALL PIPE JOINTS INCLUDING END JOINTS AT THE TERRACES SHALL BE WELDED JOINTS.

INTERMEDIATE TERRACE PIPING DETAIL (25 / 20 21)

N.T.S.

SUBMITTED TO DEP: 9-25-02

REVISIONS:

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

PERMIT DOCUMENT

CLOSURE DETAILS

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

England-Thims & Miller, Inc.
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14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

21

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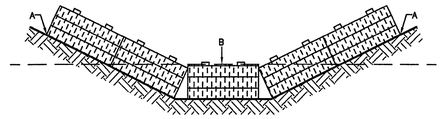
SEDIMENT AND EROSION CONTROL NOTES

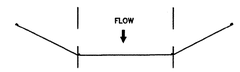
1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL DITCHES AND SWALES AT COMPLETION OF CONSTRUCTION.
2. THE SITE CONTRACTOR IS RESPONSIBLE FOR REMOVING THE TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
3. ADDITIONAL PROTECTION – ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
4. CONTRACTOR SHALL INSURE THAT ALL DRAINAGE STRUCTURES, PIPES, ETC. ARE CLEANED OUT AND WORKING PROPERLY AT TIME OF ACCEPTANCE.
5. WIRE MESH SHALL BE LAID OVER THE DROP INLET SO THAT THE WIRE EXTENDS A MINIMUM OF 1 FOOT BEYOND EACH SIDE OF THE INLET STRUCTURE. HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED. IF MORE THAN ONE STRIP OF MESH IS NECESSARY, THE STRIPS SHALL BE OVERLAPPED.
6. FDOT NO. 1 COARSE AGGREGATE SHALL BE PLACED OVER THE WIRE MESH AS INDICATED ON PLATE 1.08C. THE DEPTH OF STONE SHALL BE AT LEAST 12 INCHES OVER THE ENTIRE INLET OPENING. THE STONE SHALL EXTEND BEYOND THE INLET OPENING AT LEAST 18 INCHES ON ALL SIDES.
7. IF THE STONE FILTER BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONES MUST BE PULLED AWAY FROM THE INLET, CLEANED AND REPLACED.
8. BALES SHALL BE EITHER WIRE-BOUND OR STRING-TIED WITH THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN OVER AND UNDER THE BALES.
9. BALES SHALL BE PLACED LENGTHWISE IN A SINGLE ROW SURROUNDING THE INLET, WITH THE ENDS OF ADJACENT BALES PRESSED TOGETHER.
10. THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 4 INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
11. EACH BALE SHALL BE SECURELY ANCHORED AND HELD IN PLACE BY AT LEAST TWO STAKES OR REBARS DRIVEN THROUGH THE BALE.
12. LOOSE STRAW SHOULD BE WEDGED BETWEEN BALES TO PREVENT WATER FROM ENTERING BETWEEN BALES.
13. STRAW BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
14. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED BALES, END RUNS AND UNDERCUTTING BENEATH BALES.
15. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BALES SHALL BE ACCOMPLISHED PROMPTLY.
16. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
17. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE STRAW BALE BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.
18. SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
19. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.
20. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
21. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
22. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
23. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
24. THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT SPECIFICATIONS AND CRITERIA.
25. FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO "THE FLORIDA DEVELOPMENT MANUAL – A GUIDE TO SOUND LAND AND WATER MANAGEMENT" FROM THE STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (F.D.E.R.) CHAPTER 6.
26. EROSION AND SEDIMENT CONTROL BARRIERS SHALL BE PLACED ADJACENT TO ALL WETLAND AREAS WHERE THERE IS POTENTIAL FOR DOWNSTREAM WATER QUALITY DEGRADATION. SEE DETAIL SHEET FOR TYPICAL CONSTRUCTION.
27. ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, MULCHED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED.
28. SOD SHALL BE PLACED IN AREAS WHICH MAY REQUIRE IMMEDIATE EROSION PROTECTION TO ENSURE WATER QUALITY STANDARDS ARE MAINTAINED.
29. ANY DISCHARGE FROM DEWATERING ACTIVITY SHALL BE FILTERED AND CONVEYED TO THE OUTFALL IN A MANNER WHICH PREVENTS EROSION AND TRANSPORTATION OF SUSPENDED SOLIDS TO THE RECEIVING OUTFALL.
30. DEWATERING PUMPS SHALL NOT EXCEED THE CAPACITY OF THAT WHICH REQUIRES A CONSUMPTIVE USE PERMIT FROM THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT.
31. ALL DISTURBED AREAS TO BE STABILIZED THROUGH COMPACTION, SILT SCREENS, HAY BALES, AND GRASSING. ALL FILL SLOPES 3:1 OR STEEPER TO RECEIVE STAKED SOLID SOD.
32. ALL DEWATERING, EROSION, AND SEDIMENT CONTROL TO REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION AND ONLY WHEN AREAS HAVE BEEN STABILIZED.
33. THIS PLAN INDICATES THE MINIMUM EROSION AND SEDIMENT MEASURES REQUIRED FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MEETING ALL APPLICABLE RULES, REGULATIONS AND WATER QUALITY GUIDELINES AND MAY NEED TO INSTALL ADDITIONAL CONTROLS.
34. THE CONTRACTOR SHALL BE REQUIRED TO RESPOND TO ALL WATER MANAGEMENT DISTRICT INQUIRIES, RELATIVE TO COMPLIANCE OF SJRWMD FOR EROSION AND SEDIMENTATION CONTROL. THE COST OF THIS COMPLIANCE SHALL BE PART OF THE CONTRACT.



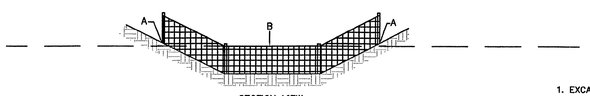
POINTS A SHOULD BE HIGHER THAN POINT B

PROPER PLACEMENT OF STRAW BALE IN A DRAINAGE WAY

N.T.S.



PLAN VIEW

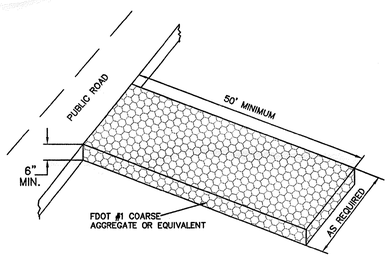


SECTION VIEW

POINTS A SHOULD BE HIGHER THAN POINT B

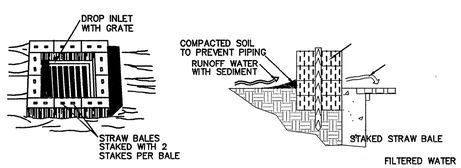
PROPER PLACEMENT OF A FILTER BARRIER IN DRAINAGE WAY

N.T.S.



STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

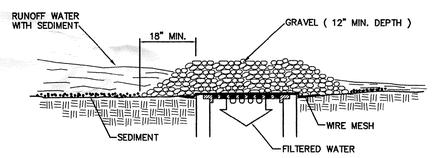


SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPES NO GREATER THAN 5 PERCENT) WHERE SHEET OR OVERLAND FLOWS (NOT EXCEEDING 0.5 cfs) ARE TYPICAL. THE METHOD SHALL NOT APPLY TO INLETS RECEIVING CONCENTRATED FLOWS, SUCH AS IN STREET OR HIGHWAY MEDIANS.

STRAW BALE DROP INLET SEDIMENT FILTER

N.T.S.

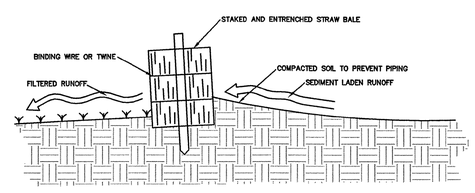


SPECIFIC APPLICATION

THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED, BUT NOT WHERE PONDING AROUND THE STRUCTURE MIGHT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT STRUCTURES AND UNPROTECTED AREAS.

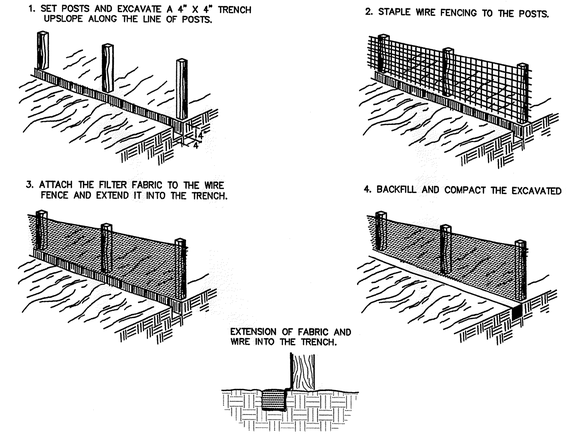
GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER

N.T.S.



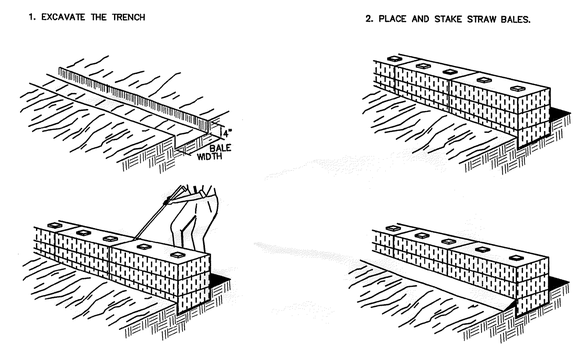
CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE

N.T.S.



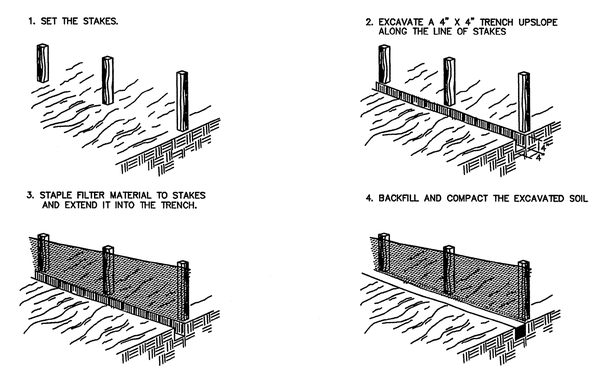
CONSTRUCTION OF SILT FENCE

N.T.S.



CONSTRUCTION OF A STRAW BALE BARRIER

N.T.S.



CONSTRUCTION OF A FILTER BARRIER

N.T.S.

PERMIT DOCUMENT

SEDIMENT AND EROSION CONTROL DETAILS

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

SUBMITTED TO DEP: 9-25-02

REVISIONS:

ETM NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.

22

OWNER'S REQUIREMENTS

SITE DESCRIPTION

PROJECT NAME AND LOCATION:
TRAIL RIDGE LANDFILL
5110 U.S. HIGHWAY 301
BALDWIN, FLORIDA 32234

SECTIONS
LONGITUDE 82° 02' 30"
LATITUDE 30° 14' 00"

OWNER NAME AND ADDRESS:
CITY OF JACKSONVILLE, FLORIDA
DEPARTMENT OF PUBLIC WORKS

DESCRIPTION:

THIS PROJECT WILL CONSIST OF:

CONSTRUCTION AT TRAIL RIDGE LANDFILL

SOIL DISTURBING ACTIVITIES WILL INCLUDE:
INCREMENTAL CLOSURE OF SIDE SLOPES.

RUNOFF CURVE NUMBERS
1. PRE-CONSTRUCTION = 55
2. DURING CONSTRUCTION = 55-95
3. POST-CONSTRUCTION = 95

SOILS:
PREVIOUSLY CLEARED AREAS FOR LANDFILL PHASES
SOLID WASTE INITIAL COVER

SITE MAPS:
* SEE ATTACHED SHEET NUMBER 5 FOR PRE & POST DEVELOPMENT GRADES, AREAS OF SOILS, DISTURBANCE, LOCATION OF SURFACE WATERS, WETLANDS, PROTECTED AREAS, MAJOR STRUCTURAL AND NONSTRUCTURAL CONTROLS AND STORM WATER DISCHARGE POINTS.

SITE AREA:
1. TOTAL AREA OF SITE = 978 ACRES ±

NAME OF RECEIVING WATERS: HEADWATERS OF DEEP CREEK

NOTE
THIS SEDIMENT AND EROSION CONTROL PLAN IS FOR CONSTRUCTION ONLY. SEE OPERATIONS PLAN FOR SEDIMENT AND EROSION CONTROL DURING OPERATION.

CONTROLS

THIS PLAN UTILIZES BEST MANAGEMENT PRACTICES TO CONTROL EROSION AND TURBIDITY CAUSED BY STORM WATER RUN OFF. DRAWING NO. 22 HAVE BEEN PREPARED TO INSTRUCT THE CONTRACTOR ON PLACEMENT OF THESE CONTROLS. IT IS THE CONTRACTORS RESPONSIBILITY TO INSTALL AND MAINTAIN THE CONTROLS AS PER PLAN AS WELL AS ENSURING THE PLAN IS PROVIDING THE PROPER PROTECTION AS REQUIRED BY FEDERAL, STATE AND LOCAL LAWS. REFER TO "CONTRACTORS REQUIREMENTS" FOR A VERBAL DESCRIPTION OF THE CONTROLS THAT MAY BE IMPLEMENTED.

STORM WATER MANAGEMENT

STORM WATER DRAINAGE WILL BE PROVIDED BY SWALES, STORM SEWER, INLETS, CATCH BASINS AND A PERIMETER DITCH. AREAS WHICH ARE NOT DEVELOPED BUT WILL BE REGRADED SHALL BE STABILIZED IMMEDIATELY AFTER THE GRADING IS COMPLETE WHERE PRACTICAL.

WHEN UPSLOPE AREAS ARE STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT BASIN, AND THE AREAS ON THE SIDE OF THE BASIN WILL BE PLANTED WITH VEGETATION. THE STORMWATER POND AND THE WET DETENTION SYSTEM IS DESIGNED WITH A 21 DAY MINIMUM RESIDENCE TIME. THIS IS IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT FOR THIS TYPE OF DEVELOPMENT AT THE TIME OF PERMITTING.

REFER TO " CONTRACTORS REQUIREMENTS" FOR THE TIMING OF CONTROL/MEASURES.

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

IN AN EFFORT TO ENSURE COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS REGARDING EROSION AND TURBIDITY CONTROLS, THE FOLLOWING PERMITS HAVE BEEN OBTAINED.

D.E.P. DREDGE/FILL PERMIT # 161821182
C.O.E. DREDGE/FILL PERMIT # N/A
S.J.R.W.M.D. M.S.S.W. PERMIT # 0013493-002-SC
CITY OF JACKSONVILLE DEVELOPMENT PERMIT # N/A

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

SIGNED: _____

TITLE: _____
CORPORATE OFFICER, GENERAL PARTNER, PROPRIETOR, EXECUTIVE OFFICER, OR RANKING ELECTED OFFICIAL

DATE: _____

GENERAL

THE CONTRACTOR SHALL AT A MINIMUM IMPLEMENT THE CONTRACTOR'S REQUIREMENTS OUTLINED BELOW AND THOSE MEASURES SHOWN ON THE EROSION AND TURBIDITY CONTROL PLAN. IN ADDITION THE CONTRACTOR SHALL UNDERTAKE ADDITIONAL MEASURES REQUIRED TO BE IN COMPLIANCE WITH APPLICABLE PERMIT CONDITIONS AND STATE WATER QUALITY STANDARDS. DEPENDING ON THE NATURE OF MATERIALS AND METHODS OF CONSTRUCTION THE CONTRACTOR MAY BE REQUIRED TO ADD FLOCCULANTS TO THE RETENTION SYSTEM PRIOR TO PLACING THE SYSTEM INTO OPERATION.

SEQUENCE OF MAJOR ACTIVITIES:

THE ORDER OF ACTIVITIES WILL BE AS FOLLOWS:

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE
2. INSTALL SILT FENCES AND HAY BALES AS REQUIRED
3. CLEAR AND GRUB FOR DIVERSION SWALES/DIKES AND SEDIMENT BASIN
4. CONSTRUCT SEDIMENTATION BASIN
5. CONTINUE CLEARING AND GRUBBING
6. STOCK PILE TOP SOIL IF REQUIRED
7. PERFORM PRELIMINARY GRADING ON SITE AS REQUIRED
8. STABILIZE DENUDED AREAS AND STOCKPILES AS SOON AS PRACTICABLE
9. INSTALL UTILITIES, STORM SEWER, CURBS & GUTTER.
10. APPLY BASE TO PARKING AREAS
11. COMPLETE GRADING AND INSTALL PERMANENT SEEDING/SOD AND PLANTING
12. COMPLETE FINAL PAVING
13. REMOVE ACCUMULATED SEDIMENT FROM BASINS
14. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE ANY TEMPORARY DIVERSION SWALES/DIKES AND RESEED/SOD AS REQUIRED

NOTE: VERTICAL CONSTRUCTION OF THE BUILDING WILL BE TAKING PLACE DURING ALL THE SEQUENCE STEPS LISTED ABOVE

TIMING OF CONTROLS/MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, THE SILT FENCES AND HAY BALES, STABILIZED CONSTRUCTION ENTRANCE AND SEDIMENT BASIN WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED PERMANENTLY IN ACCORDANCE WITH THE PLANS. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND THE EARTH DIKE/SWALES WILL BE REGRADED/REMOVED AND STABILIZED IN ACCORDANCE WITH THE SEDIMENT AND EROSION CONTROL PLAN. (DWG. NO.

CONTROLS

IT IS THE CONTRACTORS RESPONSIBILITY TO IMPLEMENT THE EROSION AND TURBIDITY CONTROLS AS SHOWN ON THE SEDIMENT AND EROSION CONTROL PLAN. IT IS ALSO THE CONTRACTORS RESPONSIBILITY TO ENSURE THESE CONTROLS ARE PROPERLY INSTALLED , MAINTAINED AND FUNCTIONING PROPERLY TO PREVENT TURBID OR POLLUTED WATER FROM LEAVING THE PROJECT SITE. THE CONTRACTOR WILL ADJUST THE EROSION AND TURBIDITY CONTROLS SHOWN ON THE SEDIMENT AND EROSION CONTROL PLAN AND ADD ADDITIONAL CONTROL MEASURES, AS REQUIRED,TO ENSURE THE SITE MEETS ALL FEDERAL, STATE AND LOCAL EROSION AND TURBIDITY CONTROL REQUIREMENTS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE IMPLEMENTED BY THE CONTRACTOR AS REQUIRED BY THE EROSION AND SEDIMENT CONTROL PLAN AND AS REQUIRED TO MEET THE SEDIMENT AND TURBIDITY REQUIREMENTS IMPOSED ON THE PROJECT SITE BY THE REGULATORY AGENCIES.

EROSION AND SEDIMENT CONTROLS
STABILIZATION PRACTICES

1. STRAW BALE BARRIER: STRAW BALE BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
   A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
   B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.
   C. WHERE EFFECTIVENESS IS REQUIRED FOR LESS THAN 3 MONTHS.
   D. EVERY EFFORT SHOULD BE MADE TO LIMIT THE USE OF STRAW BALE BARRIERS CONSTRUCTED IN LIVE STREAMS OR IN SWALES WHERE THERE IS THE POSSIBILITY OF A WASHOUT. IF NECESSARY, MEASURES SHALL BE TAKEN TO PROPERLY ANCHOR BALES TO INSURE AGAINST WASHOUT.
2. FILTER FABRIC BARRIER: FILTER FABRIC BARRIERS CAN BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WITH THE FOLLOWING LIMITATIONS:
   A. WHERE THE MAXIMUM SLOPE BEHIND THE BARRIER IS 33 PERCENT.
   B. IN MINOR SWALES OR DITCH LINES WHERE THE MAXIMUM CONTRIBUTING DRAINAGE AREA IS NO GREATER THAN 2 ACRES.
3. BRUSH BARRIER WITH FILTER FABRIC: BRUSH BARRIER MAY BE USED BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION WHERE ENOUGH RESIDUE MATERIAL IS AVAILABLE ON SITE.
4. LEVEL SPREADER: A LEVEL SPREADER MAY BE USED WHERE SEDIMENT-FREE STORM RUNOFF IS INTERCEPTED AND DIVERTED AWAY FROM THE GRADED AREAS ONTO UNDISTURBED STABILIZED AREAS. THIS PRACTICE APPLIES ONLY IN THOSE SITUATIONS WHERE THE SPREADER CAN BE CONSTRUCTED ON UNDISTURBED SOIL AND THE AREA BELOW THE LEVEL LIP IS STABILIZED. THE WATER SHOULD NOT BE ALLOWED TO RECONCENTRATE AFTER RELEASE.
5. STOCKPILING MATERIAL: NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE INTO ANY ADJACENT WATER BODY OR STORM WATER COLLECTION FACILITY.
6. EXPOSED AREA LIMITATION: THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 10 ACRES. THIS REQUIREMENT MAY BE WAIVED FOR LARGE PROJECTS WITH AN EROSION CONTROL PLAN WHICH DEMONSTRATES THAT OPENING OF ADDITIONAL AREAS WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.

CONTRACTOR'S REQUIREMENTS

7. INLET PROTECTION: INLETS AND CATCH BASINS WHICH DISCHARGE DIRECTLY OFF-SITE SHALL BE PROTECTED FROM SEDIMENT -LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.
8. TEMPORARY SEEDING: AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE RE-EXCAVATED OR DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN 30 DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING.
9. TEMPORARY SEEDING AND MULCHING: SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN PARAGRAPH 8 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA ADEQUATE TO PREVENT MOVEMENT OF SEED AND MULCH.
10. TEMPORARY GRASSING: THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED OR HYDROMULCHED OR OTHER SUITABLE METHODS IF REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.
11. TEMPORARY REGRASSING : IF, AFTER 14 DAYS FROM SEEDING, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75 PERCENT GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATIVE COVER.
12. MAINTENANCE: ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.
13. PERMANENT EROSION CONTROL: THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON THE OFFSITE FACILITIES.
14. PERMANENT SEEDING: ALL AREAS WHICH HAVE BEEN DISTURBED BY CONSTRUCTION WILL, AS A MINIMUM, BE SEEDED. THE SEEDING MIX MUST PROVIDE BOTH LONG-TERM VEGETATION AND RAPID GROWTH SEASONAL VEGETATION. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED AND MULCHED OR SODDED.

STRUCTURAL PRACTICES

1. TEMPORARY DIVERSION DIKE: TEMPORARY DIVERSION DIKES MAY BE USED TO DIVERT RUNOFF THROUGH A SEDIMENT-TRAPPING FACILITY.
2. TEMPORARY SEDIMENT TRAP: A SEDIMENT TRAP IS USUALLY INSTALLED IN AN DRAINAGEWAY AT A STORM DRAIN INLET OR AT OTHER POINTS OF DISCHARGE FROM A DISTURBED AREA WITH THE FOLLOWING LIMITATIONS:
   A. THE SEDIMENT TRAP MAY BE CONSTRUCTED EITHER INDEPENDENTLY OR IN CONJUNCTION WITH A TEMPORARY DIVERSION DIKE.
3. OUTLET PROTECTION: APPLICABLE TO THE OUTLETS OF ALL PIPES AND PAVED CHANNEL SECTIONS WHERE THE VELOCITY OF FLOW AT DESIGN CAPACITY OF THE OUTLET WILL EXCEED THE PERMISSIBLE VELOCITY OF THE RECEIVING CHANNEL OR AREA.
4. SEDIMENT BASIN: WILL BE CONSTRUCTED AT THE COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH 10 OR MORE DISTURBED ACRES AT ONE TIME, THE PROPOSED STORM WATER PONDS (OR TEMPORARY PONDS) WILL BE CONSTRUCTED FOR USE AS SEDIMENT BASINS. THESE SEDIMENT BASINS MUST PROVIDE A MINIMUM OF 3,600 CUBIC FEET OF STORAGE PER ACRE DRAINED UNTIL FINAL STABILIZATION OF THE SITE. THE 3,600 CUBIC FEET OF STORAGE AREA PER ACRE DRAINED DOES NOT APPLY TO FLOWS FROM OFFSITE AREAS AND FLOWS FROM ONSITE AREAS THAT ARE EITHER UNDISTURBED OR HAVE UNDERGONE FINAL STABILIZATION WHERE SUCH FLOWS ARE DIVERTED AROUND BOTH THE DISTURBED AREA AND THE SEDIMENT BASIN. ANY TEMPORARY SEDIMENT BASINS CONSTRUCTED MUST BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS FOR STRUCTURAL FILL. ALL SEDIMENT COLLECTED IN PERMANENT OR TEMPORARY SEDIMENT TRAPS MUST BE REMOVED UPON FINAL STABILIZATION.

OTHER CONTROLS

WASTE DISPOSAL

WASTE MATERIALS

ALL WASTE MATERIALS EXCEPT LAND CLEARING DEBRIS SHALL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL LOCAL AND STATE SOLID WASTE MANAGEMENT REGULATIONS. THE DUMPSTER WILL BE EMPTIED AS NEEDED AND THE TRASH WILL BE HAULED TO A STATE APPROVED LANDFILL. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED AT THE CONSTRUCTION SITE BY THE CONSTRUCTION SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES AND THE SITE SUPERINTENDENT, THE INDIVIDUAL WHO MANAGES DAY-TO-DAY SITE OPERATIONS,WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE

ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS AS NEEDED TO PREVENT POSSIBLE SPILLAGE. THE WASTE WILL BE COLLECTED AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL WASTE DISPOSAL REGULATIONS FOR SANITARY SEWER OR SEPTIC SYSTEMS.

OFFSITE VEHICLE TRACKING

A STABILIZED CONSTRUCTION ENTRANCE WILL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS. THE PAVED STREET ADJACENT TO THE SITE ENTRANCE WILL BE SWEPT DAILY TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

INVENTORY FOR POLLUTION PREVENTION PLAN

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED TO BE PRESENT ONSITE DURING CONSTRUCTION:

Concrete	Fertilizers	Wood
Asphalt	Petroleum Based Products	Masonry Blocks
Tar	Cleaning Solvents	Roofing Materials
Detergents	Paints	Metal Studs

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.

* AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.
* ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE.
* PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL.
* SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.
* WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
* MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED.
* THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE MATERIALS ONSITE RECEIVE PROPER USE AND DISPOSAL.

HAZARDOUS PRODUCTS

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

* PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE.
* ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION.
* IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

PRODUCT SPECIFIC PRACTICES

THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ONSITE:

PETROLEUM PRODUCTS

ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS

FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED AREA. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

PAINTS

ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURERS' INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

CONCRETE TRUCKS

CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED ON SITE AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL

INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, LIQUID ABSORBENT (i.e. KITTY LITTER OR EQUAL), SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

SPILL OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE OF THE SPILL.

THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE/SHE WILL DESIGNATE AT LEAST ONE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IF APPLICABLE, IN THE OFFICE TRAILER ONSITE.

MAINTENANCE/INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

THE FOLLOWING ARE INSPECTION AND MAINTENANCE PRACTICES THAT WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS.

* NO MORE THAN 10 ACRES OF THE SITE WILL BE DENUDED AT ONE TIME WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
* ALL CONTROL MEASURES WILL BE INSPECTED BY THE SUPERINTENDENT, THE PERSON RESPONSIBLE FOR THE DAY TO DAY SITE OPERATION OR SOMEONE APPOINTED BY THE SUPERINTENDENT, AT LEAST ONCE A WEEK AND FOLLOWING ANY STORM EVENT OF 0.25 INCHES OR GREATER.
* ALL TURBIDITY CONTROL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT.
* BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
* SILT FENCE WILL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
* THE SEDIMENT BASINS WILL BE INSPECTED FOR THE DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB.
* DIVERSION DIKES/SWALES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
* TEMPORARY AND PERMANENT SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
* A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION. A COPY OF THE REPORT FORM SHALL BE COMPLETED BY THE INSPECTOR
  THE REPORTS WILL BE KEPT ON SITE DURING CONSTRUCTION AND AVAILABLE UPON REQUEST TO THE OWNER, ENGINEER OR ANY FEDERAL, STATE OR LOCAL AGENCY APPROVING SEDIMENT AND AND EROSION PLANS, OR STORM WATER MANAGEMENT PLANS.
  THE REPORTS SHALL BE MADE AND RETAINED AS PART OF THE STORM WATER POLLUTION PREVENTION PLAN FOR AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED AND THE NOTICE OF TERMINATION IS SUBMITTED.
  THE REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE.
* THE SITE SUPERINTENDENT WILL SELECT UP TO THREE INDIVIDUALS WHO WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
* PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE. SUPERINTENDENT. THEY WILL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.

NON-STORM WATER DISCHARGES

* IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:
* WATER FROM WATER LINE FLUSHING
* PAVEMENT WASH WATERS (WHERE NO SPILLS OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED).
* UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION).

ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

DEWATERING

PRIOR TO ANY DISCHARGE OF GROUND WATER (DEWATERING) FROM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT TO WATERS OF THE STATE (INCLUDING, BUT NOT LIMITED TO, WETLANDS, SWALES AND MUNICIPAL STORM SEWERS), THE CONTRACTOR SHALL TEST THE EFFLUENT (WATER TO BE DISCHARGED) IN ACCORDANCE WITH RULE 62-621.300(2), F.A.C. IF THE TEST RESULTS ON THE EFFLUENT ARE BELOW THE SCREENING VALUES OF RULE 62-621.300(2), F.A.C., THE CONTRACTOR SHALL SUBMIT A SUMMARY OF THE PROPOSED CONSTRUCTION ACTIVITY AND THE TEST RESULTS TO THE DEPARTMENT OF ENVIRONMENTAL PROTECTION DISTRICT OFFICE, WITHIN ONE (1) WEEK AFTER DISCHARGE BEGINS. THE CONTRACTOR SHALL CONTINUE TO SAMPLE THE EFFLUENT AS REQUIRED THROUGHOUT THE PROJECT AND COMPLY WITH ALL CONDITIONS OF RULE 62-621.300(2), F.A.C. IF THE GROUND WATER EXCEEDS THE SCREENING VALUES OF RULE 62-621.300(2), F.A.C., THE CONTRACTOR SHALL COMPLY WITH OTHER APPLICABLE RULES AND REGULATIONS PRIOR TO DISCHARGE OF THE EFFLUENT (GROUND WATER) TO SURFACE WATERS OF THE STATE.

SIGNATURE	BUSINESS NAME AND ADDRESS OF CONTRACTOR & ALL SUBS	RESPONSIBLE FOR/DUTIES
		GENERAL CONTRACTOR
		SUB-CONTRACTOR
		SUB-CONTRACTOR
		SUB-CONTRACTOR
		SUB-CONTRACTOR

SUBMITTED TO DEP: 9-25-02.

REVISIONS:

ETN NO. 02-025
DRAWN BY: S.J.L.
DESIGNED BY: J.B.C.
CHECKED BY: J.B.C.
DATE: SEPTEMBER 25, 2002

PERMIT DOCUMENT

STORM WATER POLLUTION PREVENTION PLAN

TRAIL RIDGE LANDFILL PERMIT RENEWAL FOR TRAIL RIDGE LANDFILL, INC.

England-Thims & Miller, Inc.
ENGINEERS - PLANNERS - SURVEYORS - LANDSCAPE ARCHITECTS
14775 ST. AUGUSTINE ROAD JACKSONVILLE, FLORIDA 32258
CERTIFICATE OF AUTHORIZATION NUMBER: 2584
PHONE NUMBER (904) 642-8990 FAX NUMBER (904) 646-9485

DRAWING NO.
23

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