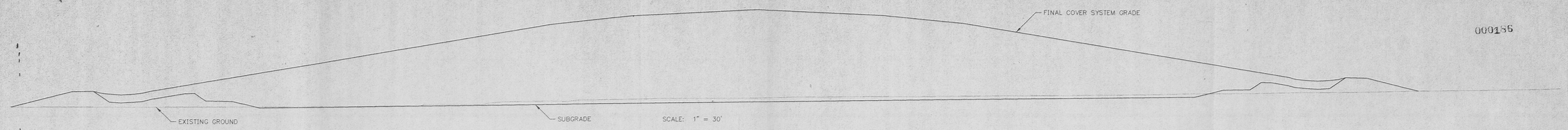
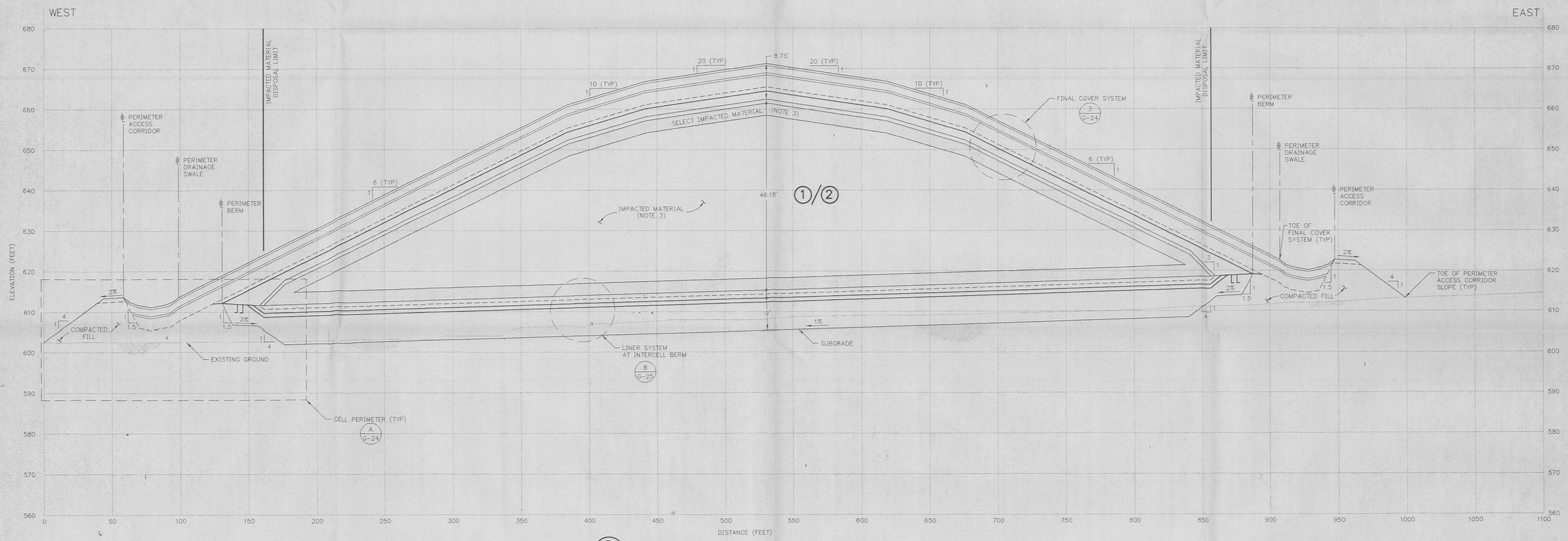
000186





B
G-17
SECTION
EAST-WEST AT CELL 1 AND CELL 2 INTERCELL BERM
HORIZONTAL SCALE: 1" = 30'
VERITCAL SCALE: 1" = 10'

002293

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. IMPACTED MATERIAL AND SELECT IMPACTED MATERIAL SHALL BE PLACED IN ACCORDANCE WITH SECTION 13010 OF THE SPECIFICATIONS.

PRELIMINARY DESIGN PACKAGE

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

30 15 0 30 60 SCALE IN FEET

10 5 0 10 20 SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
EAST-WEST SECTION AT CELL 1 AND CELL 2 INTERCELL BERM

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SIGNATURE

DATE

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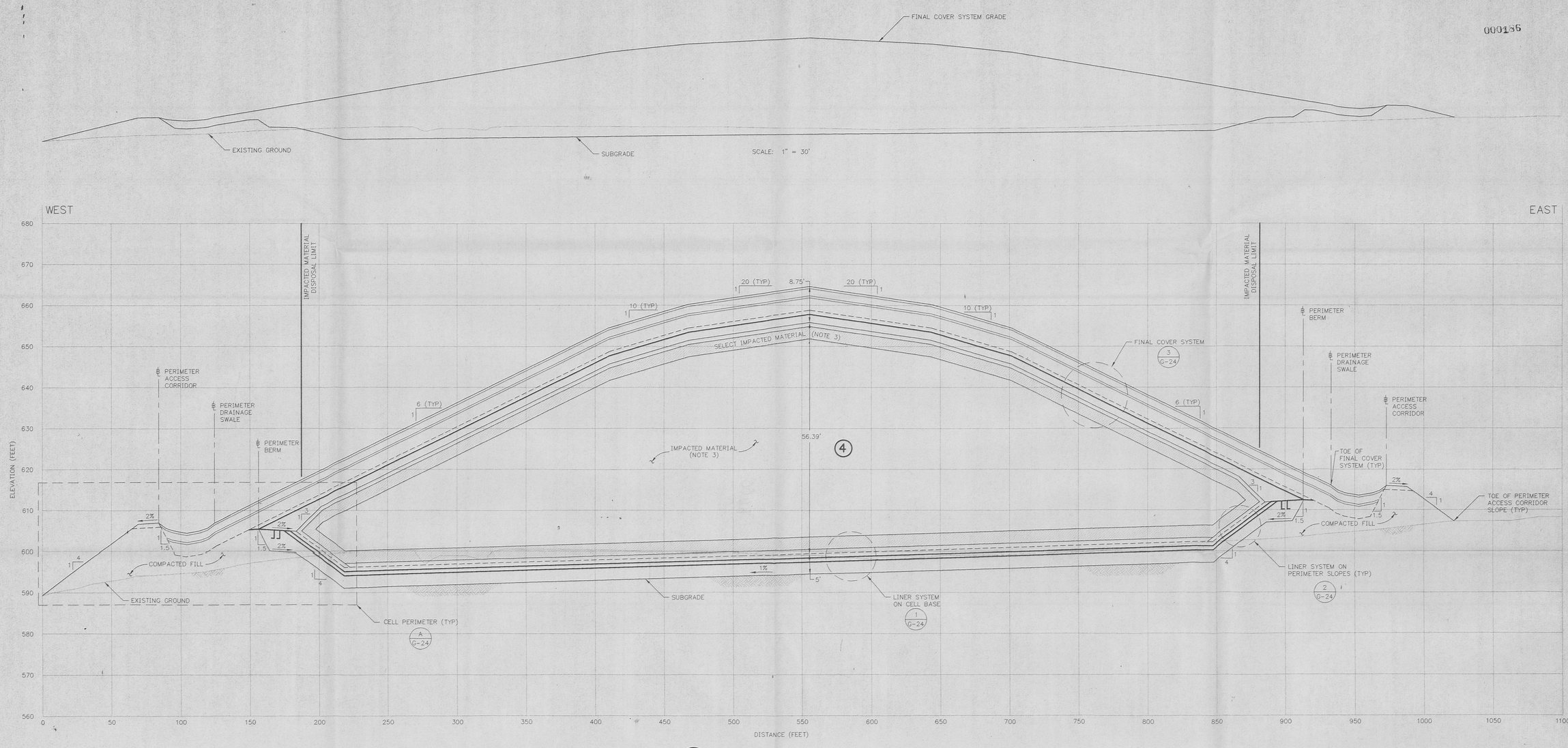
GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00021
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B022
SHEET NO.: G-21
REVISION NO.: B

233650-1

000186



C
G-17
SECTION
EAST-WEST AT CELL 4 BASE
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'

002294

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. IMPACTED MATERIAL AND SELECT IMPACTED MATERIAL SHALL BE PLACED IN ACCORDANCE WITH SECTION 13010 OF THE SPECIFICATIONS.

PRELIMINARY DESIGN PACKAGE

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

30 15 0 30 60 SCALE IN FEET
10 5 0 10 20 SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
EAST-WEST SECTION AT CELL 4 BASE

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GEOSYNTEC CONSULTANTS
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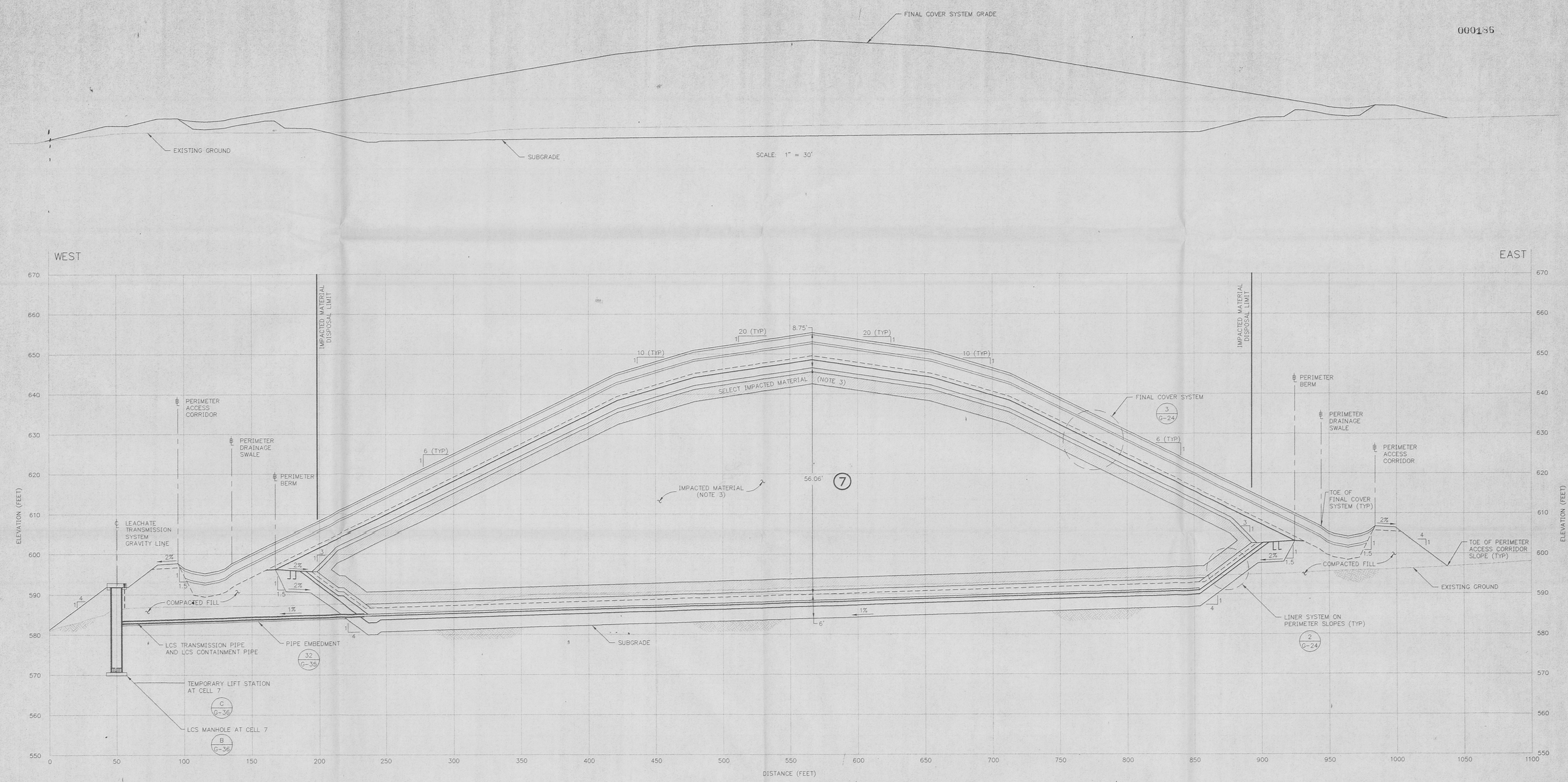
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00022
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B023
SHEET NO.: G-22
REVISION NO.: B

233650_2

000186



D G-17 SECTION
EAST-WEST AT CELL 7 DRAINAGE CORRIDOR
HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'

002295

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. IMPACTED MATERIAL AND SELECT IMPACTED MATERIAL SHALL BE PLACED IN ACCORDANCE WITH SECTION 13010 OF THE SPECIFICATIONS.

PRELIMINARY DESIGN PACKAGE

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE IN FEET (30 15 0 30 60) SCALE IN FEET (10 5 0 10 20)

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT: ON-SITE DISPOSAL FACILITY

TITLE: EAST-WEST SECTION AT CELL 7 DRAINAGE CORRIDOR

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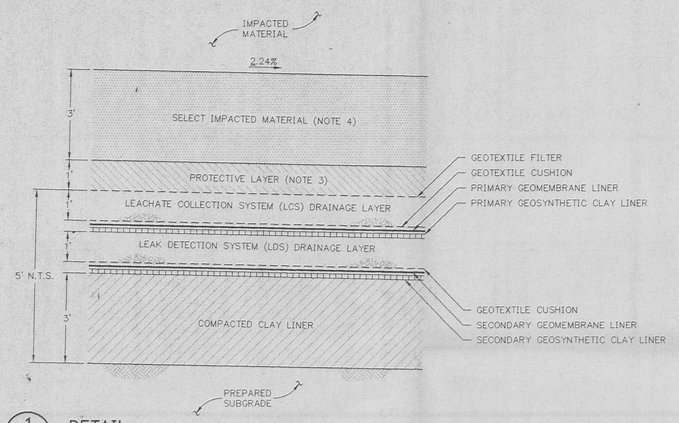
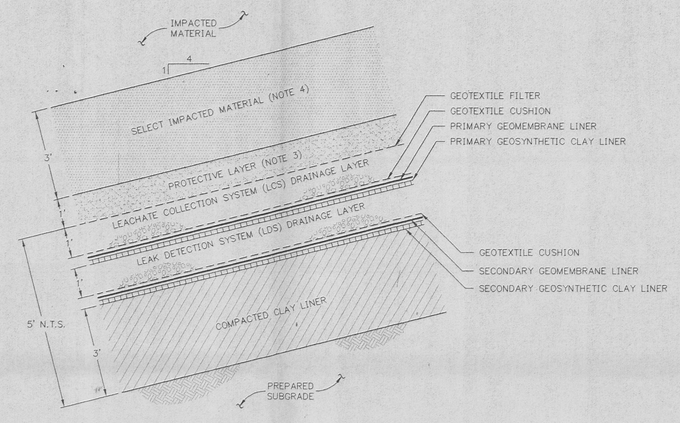
GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00023
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B021
SHEET NO.: G-23
REVISION NO.: B

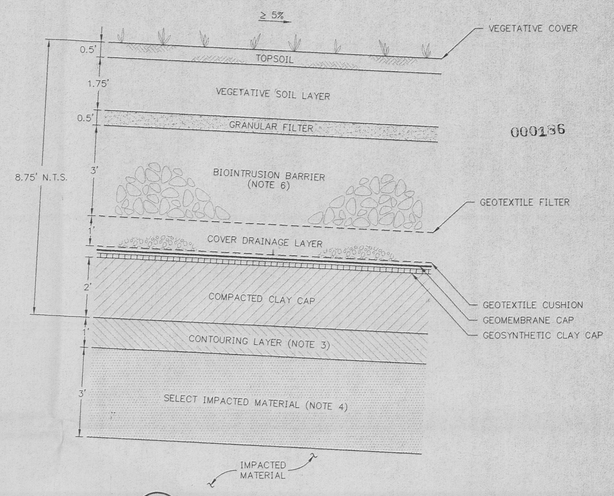
233650-3



1 G-20 DETAIL
LINER SYSTEM ON CELL BASE AND INTERCELL BERM SOUTH SLOPES
SCALE: 1" = 2' (NOTE 1)

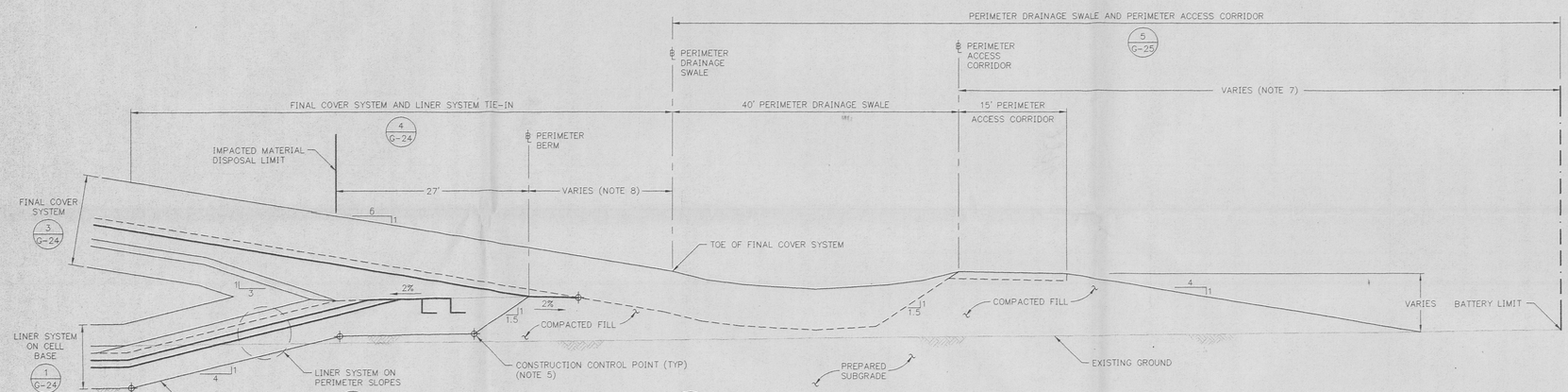


2 G-20 DETAIL
LINER SYSTEM ON PERIMETER SLOPES AND INTERCELL BERM NORTH SLOPES
SCALE: 1" = 2' (NOTE 1)

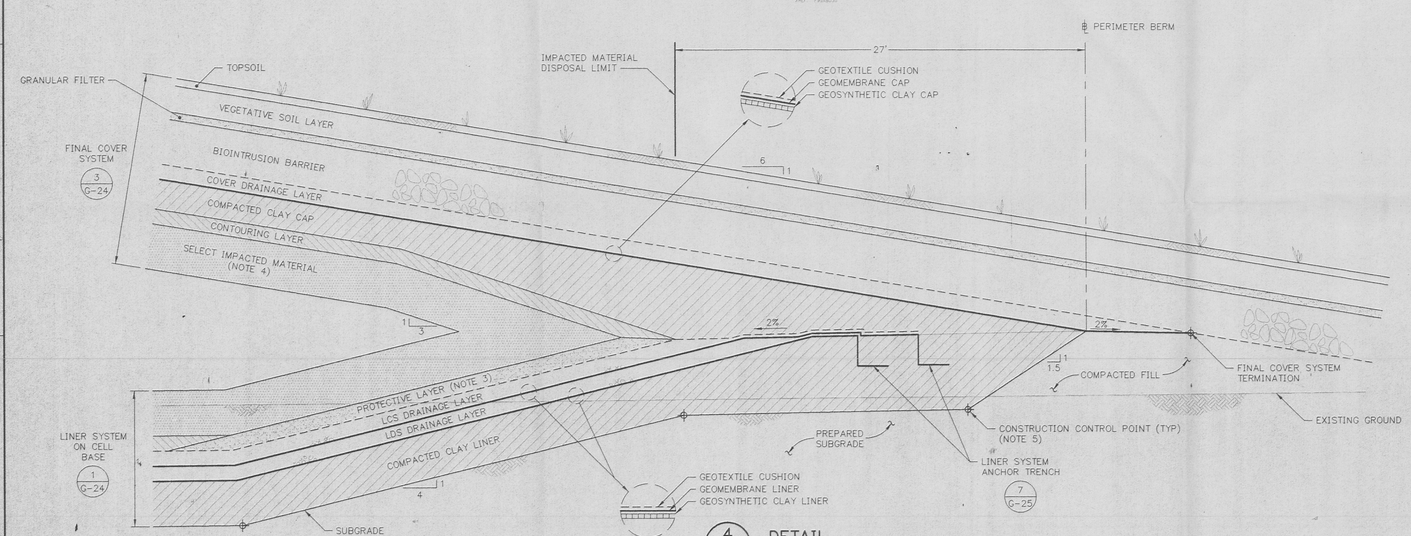


000136

3 G-20 DETAIL
FINAL COVER SYSTEM
SCALE: 1" = 2' (NOTE 1)



A G-5 SECTION (TYPICAL)
CELL PERIMETER
SCALE: 1" = 8'



4 G-24 DETAIL
FINAL COVER SYSTEM AND LINER SYSTEM TIE-IN
SCALE: 1" = 4' (NOTE 1)

002296

LINER AND COVER SYSTEM COMPONENT SUMMARY (NOTE 2)

GEOSYNTHETICS

COMPONENT	MATERIAL	SPECIFICATION SECTION
PRIMARY GEOMEMBRANE LINER	TEXTURED 80-mil HDPE	02770
SECONDARY GEOMEMBRANE LINER	TEXTURED 80-mil HDPE	02770
GEOMEMBRANE CAP	TEXTURED 60-mil HDPE	02770
PRIMARY GEOSYNTHETIC CLAY LINER	SODIUM MONTMORILLONITE CORE WITH TEXTURED 40-mil HDPE GEOMEMBRANE BACKING	02772
SECONDARY GEOSYNTHETIC CLAY LINER	INTERNALLY-REINFORCED SODIUM MONTMORILLONITE CORE WITH GEOTEXTILE BACKING (BOTH SIDES) OR SAME AS PRIMARY GEOSYNTHETIC CLAY LINER	02772
GEOSYNTHETIC CLAY CAP	INTERNALLY-REINFORCED SODIUM MONTMORILLONITE CORE WITH GEOTEXTILE BACKING (BOTH SIDES) OR SAME AS PRIMARY GEOSYNTHETIC CLAY LINER	02770
GEOTEXTILE FILTER	POLYPROPYLENE OR POLYESTER NEEDLE-PUNCHED NONWOVEN GEOTEXTILE	02714
GEOTEXTILE CUSHION	POLYPROPYLENE OR POLYESTER NEEDLE-PUNCHED NONWOVEN GEOTEXTILE	02714
GEOCOMPOSITE DRAINAGE LAYER	POLYETHYLENE GEONET CORE WITH POLYPROPYLENE OR POLYESTER NEEDLE-PUNCHED NONWOVEN GOETEXTILE BONDED TO EACH SIDE	02716

SOILS

COMPONENT	SOURCE	SPECIFICATION SECTION
PREPARED SUBGRADE/COMPARED FILL	ON-SITE BORROW	02200
COMPACTED CLAY LINER AND CAP	ON-SITE BORROW	02225
LDS DRAINAGE LAYER	OFF-SITE BORROW	02710
LCS DRAINAGE LAYER	OFF-SITE BORROW	02710
SELECT IMPACTED MATERIAL	ON-SITE IMPACTED MATERIAL	13010
PROTECTIVE LAYER (NON-GRANULAR)	ON-SITE IMPACTED MATERIAL	02240
PROTECTIVE LAYER (GRANULAR)	OFF-SITE BORROW	02240
CONTOURING LAYER	ON-SITE IMPACTED MATERIAL	02240
COVER DRAINAGE LAYER	OFF-SITE BORROW	02710
BIOINTRUSION BARRIER	OFF-SITE BORROW	02280
GRANULAR FILTER	OFF-SITE BORROW	02712
VEGETATIVE SOIL LAYER	ON-SITE BORROW	02250
TOPSOIL	OFF-SITE BORROW	02920

NOTES:

1. DETAILS ARE SHOWN TO SCALE AS NOTED EXCEPT FOR THE GEOSYNTHETICS, WHICH ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY. MATERIAL TOLERANCES SHALL BE WITHIN THE LIMITS GIVEN IN THE SPECIFICATIONS.
2. LINER AND COVER SYSTEM COMPONENT SUMMARY IS PROVIDED FOR INFORMATION PURPOSES ONLY. THE SPECIFICATIONS SHALL BE REFERENCED FOR DETAILED MINIMUM REQUIREMENTS FOR EACH MATERIAL.
3. PROTECTIVE LAYER ON THE CELL BASE, ON INTERCELL BERM SOUTH SLOPES, AND THE CONTOURING LAYER IN THE FINAL COVER SYSTEM SHALL CONSIST OF IMPACTED MATERIAL FROM THE OPERABLE UNITS OR OTHER ACCEPTABLE SOIL THAT MEETS THE REQUIREMENTS OF SECTION 02240 OF THE SPECIFICATIONS. THE PROTECTIVE LAYER ON PERIMETER SLOPES AND ON INTERCELL BERM NORTH SLOPES SHALL CONSIST OF FREE-DRAINING GRANULAR MATERIAL THAT MEETS THE REQUIREMENTS OF SECTION 02240.
4. A MINIMUM THICKNESS OF 3 FEET OF SELECT IMPACTED MATERIAL SHALL BE PLACED ABOVE THE PROTECTIVE LAYER AND BELOW THE CONTOURING LAYER. SEE SECTION 13010 OF THE SPECIFICATIONS.
5. CONSTRUCTION CONTROL POINTS ARE SHOWN ON THE 1 INCH EQUALS 50 FEET SCALE SUBGRADE GRADING PLANS.
6. A GRAVEL CHOKE LAYER SHALL BE COMPACTED INTO THE TOP 6 INCHES OF THE BIOINTRUSION BARRIER. SEE SECTION 02280 OF THE SPECIFICATIONS.
7. DISTANCE BETWEEN THE BASELINE OF THE PERIMETER ACCESS CORRIDOR AND BATTERY LIMIT VARIES.
8. DISTANCE BETWEEN THE BASELINE OF THE PERIMETER BERM AND THE BASELINE OF THE PERIMETER DRAINAGE SWALE VARIES FROM 20 FEET ON THE NORTH AND EAST SIDES OF THE OSDF TO 32 FEET ON THE SOUTH AND WEST SIDES OF THE OSDF.

PRELIMINARY DESIGN PACKAGE

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE AS SHOWN

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
LINER AND COVER SYSTEM DETAILS I

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SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-00024
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-9084
SHEET NO.: G-24
REVISION NO.: B

23650_4

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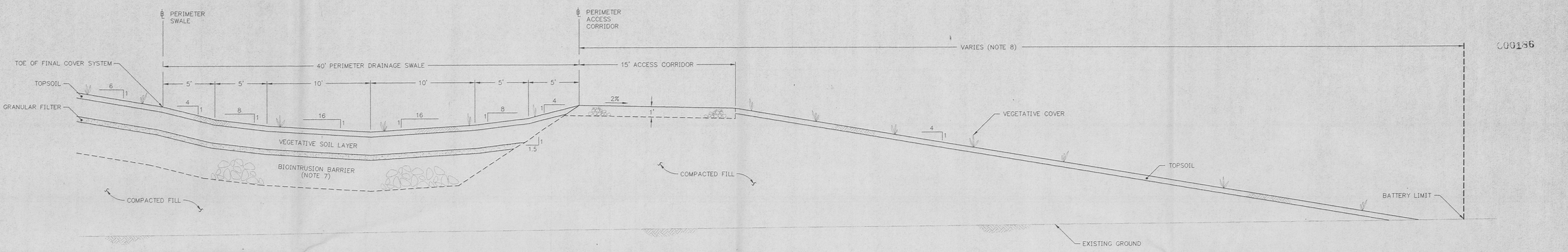

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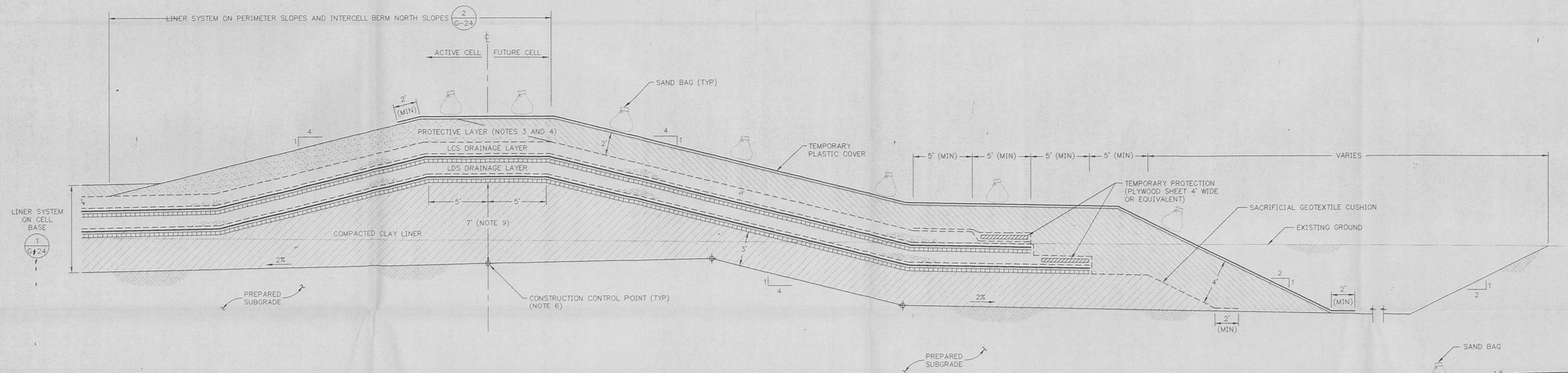
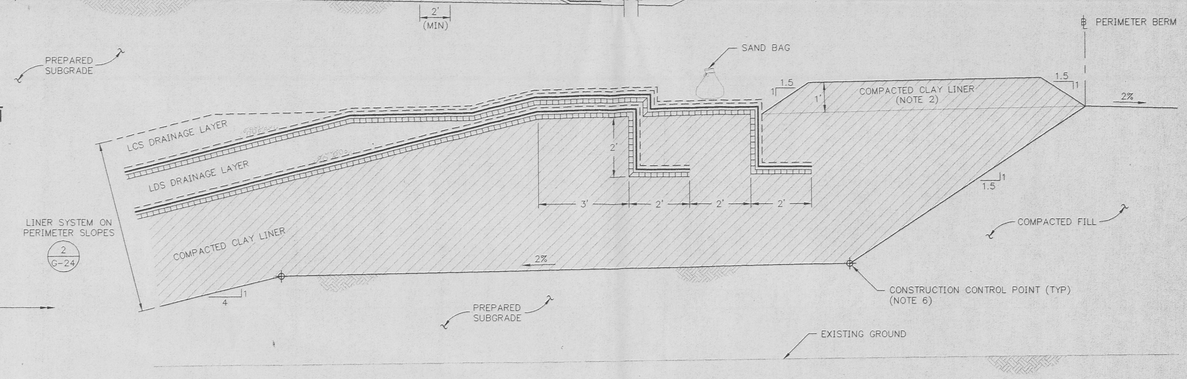
5 / G-24 DETAIL
PERIMETER DRAINAGE SWALE AND PERIMETER ACCESS CORRIDOR
SCALE: 1" = 4'

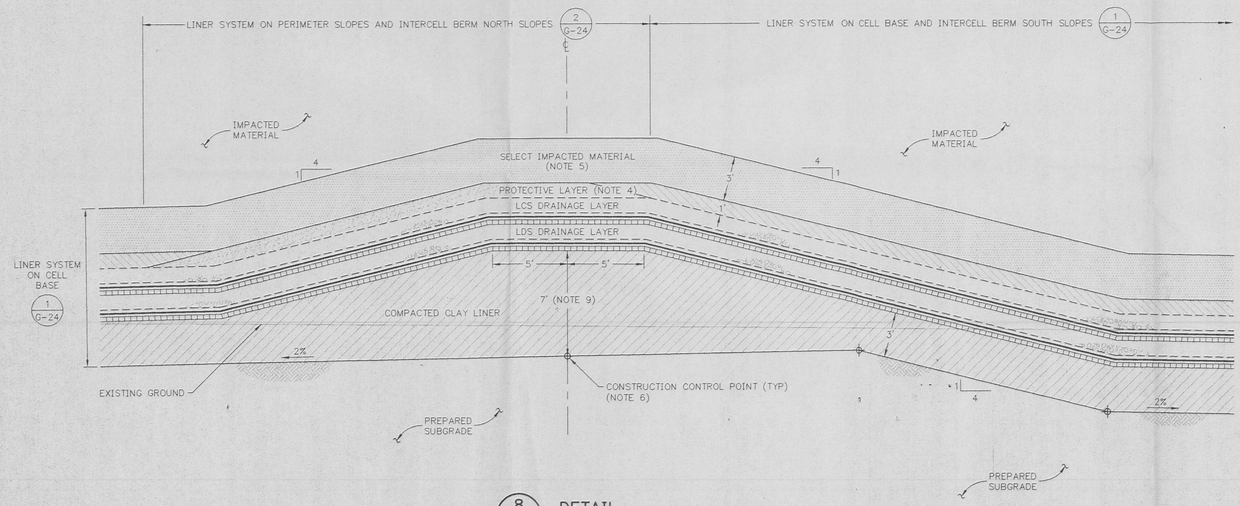


6 / G-26 DETAIL
LINER SYSTEM TEMPORARY TERMINATION AT INTERCELL BERM
SCALE: 1" = 4' (NOTE 1)



7 / G-24 DETAIL
LINER SYSTEM ANCHOR TRENCH
SCALE: 1" = 2' (NOTE 1)

002297



8 / G-5 DETAIL
LINER SYSTEM AT INTERCELL BERM
SCALE: 1" = 4' (NOTE 1)

NOTES:

1. DETAILS ARE SHOWN TO SCALE AS NOTED EXCEPT FOR THE GEOSYNTHETICS, WHICH ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY. MATERIAL TOLERANCES SHALL BE WITHIN THE LIMITS GIVEN IN THE SPECIFICATIONS.
2. COMPACTED CLAY LINER AT THE CREST OF SLOPE SHALL BE OVER BUILT A MINIMUM OF 12 INCHES AND CUT BACK JUST PRIOR TO CONSTRUCTION OF THE FINAL COVER SYSTEM. OVER BUILT CLAY LINER WILL NOT BE TESTED FOR PERMEABILITY.
3. PROTECTIVE LAYER SHALL BE PLACED OVER ALL TEMPORARY LINER SYSTEM TERMINATIONS TO PROVIDE A MINIMUM COVER OF 4 FEET ABOVE TOP OF COMPACTED CLAY LINER ELEVATIONS.
4. PROTECTIVE LAYER ON THE CELL BASE, ON INTERCELL BERM SOUTH SLOPES, AND THE CONTOURING LAYER IN THE FINAL COVER SYSTEM SHALL CONSIST OF IMPACTED MATERIAL FROM THE OPERABLE UNITS OR OTHER ACCEPTABLE SOIL THAT MEETS THE REQUIREMENTS OF SECTION 02240 OF THE SPECIFICATIONS. THE PROTECTIVE LAYER ON PERIMETER SLOPES AND ON INTERCELL BERM NORTH SLOPES SHALL CONSIST OF FREE-DRAINING GRANULAR MATERIAL THAT MEETS THE REQUIREMENTS IN SECTION 02240.
5. A MINIMUM THICKNESS OF 3 FEET OF SELECT IMPACTED MATERIAL SHALL BE PLACED ABOVE THE PROTECTIVE LAYER AND BELOW THE CONTOURING LAYER. SEE SECTION 13010 OF THE SPECIFICATIONS.
6. CONSTRUCTION CONTROL POINTS ARE SHOWN ON THE 1 INCH EQUALS 50 FEET SUBGRADE GRADING PLANS.
7. A GRAVEL CHOKE LAYER SHALL BE COMPACTED INTO THE TOP 6 INCHES OF THE BIOINTRUSION BARRIER. SEE SECTION 02280 OF THE SPECIFICATIONS.
8. DISTANCE BETWEEN BASELINE OF THE PERIMETER ACCESS CORRIDOR AND BATTERY LIMIT VARIES.
9. THICKNESS OF COMPACTED CLAY LINER ALONG CENTERLINE OF INTERCELL BERM VARIES FROM A MINIMUM OF 3 FEET TO A MAXIMUM OF 7 FEET.

PRELIMINARY DESIGN PACKAGE

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SCALE AS SHOWN

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
LINER AND COVER SYSTEM DETAILS II

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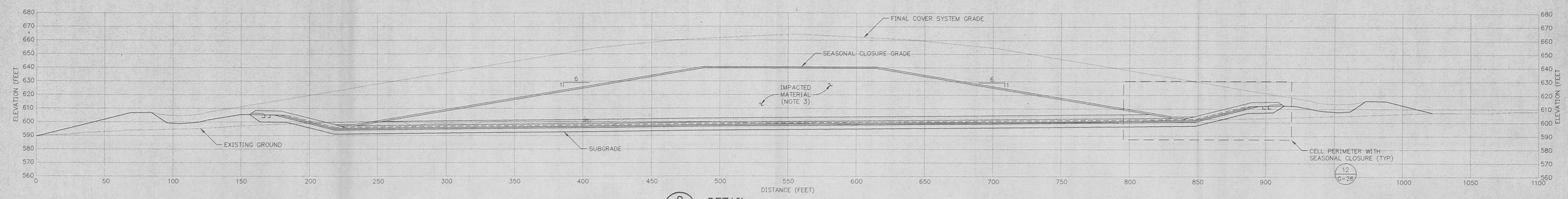
GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE, ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-00025
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B027
SHEET NO.: G-25
REVISION NO.: B

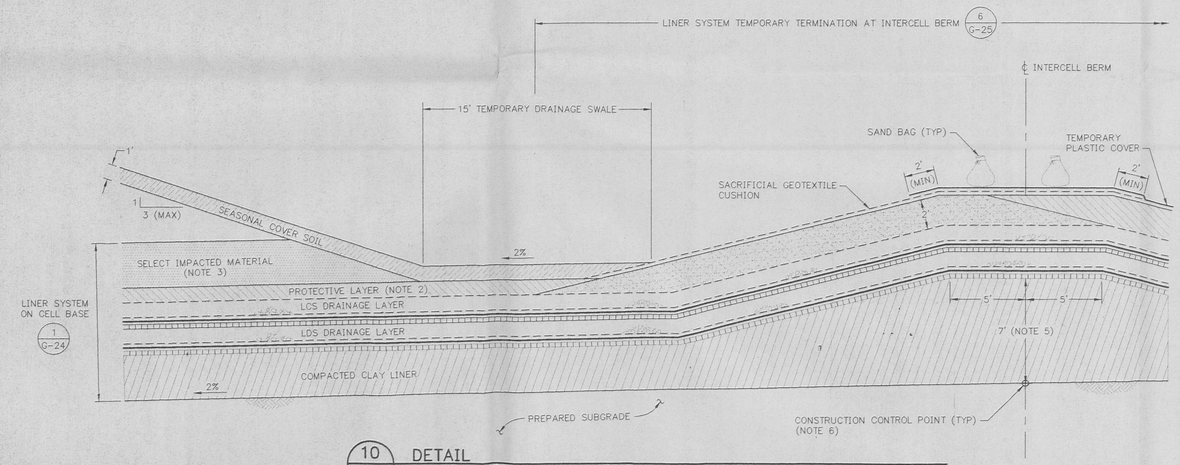
233650-5

M:\GACADD\GE3900-12\F95-B027 Fri Dec 15 17:17:13 1995

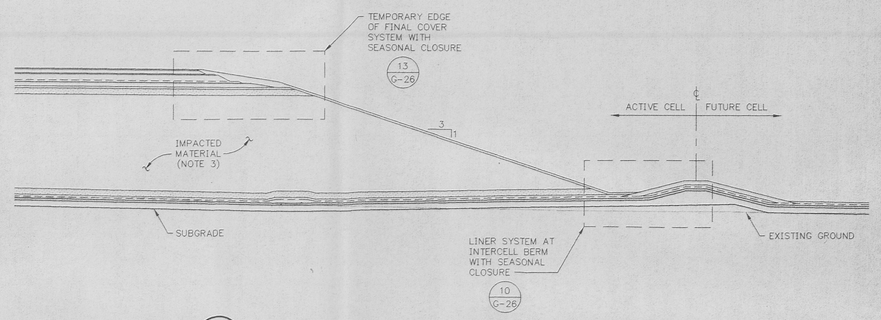


9 — DETAIL
SEASONAL CLOSURE COVER SYSTEM EAST-WEST
SCALE: 1" = 30'

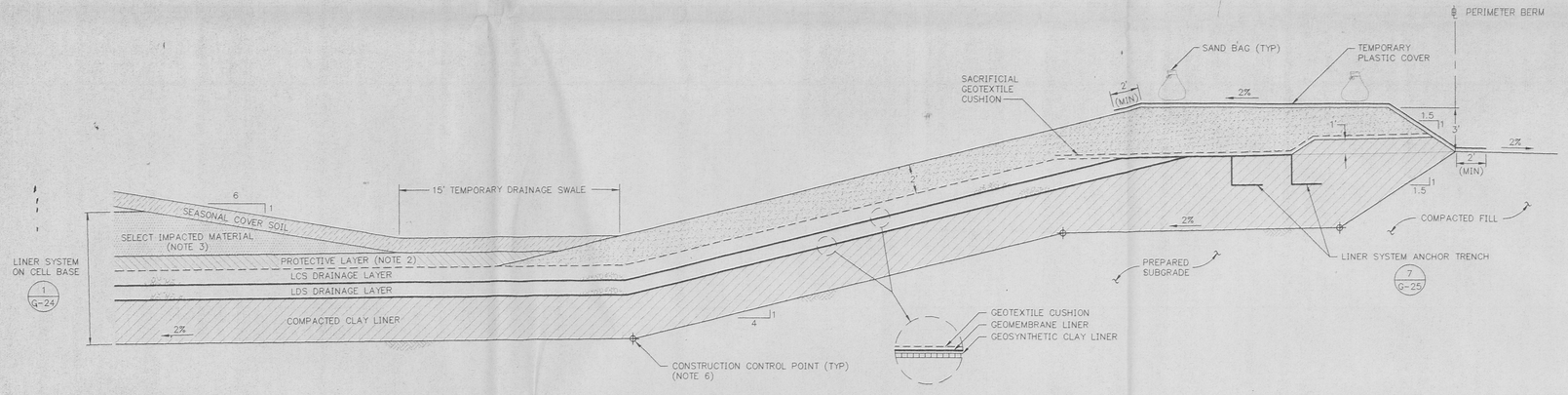
000186



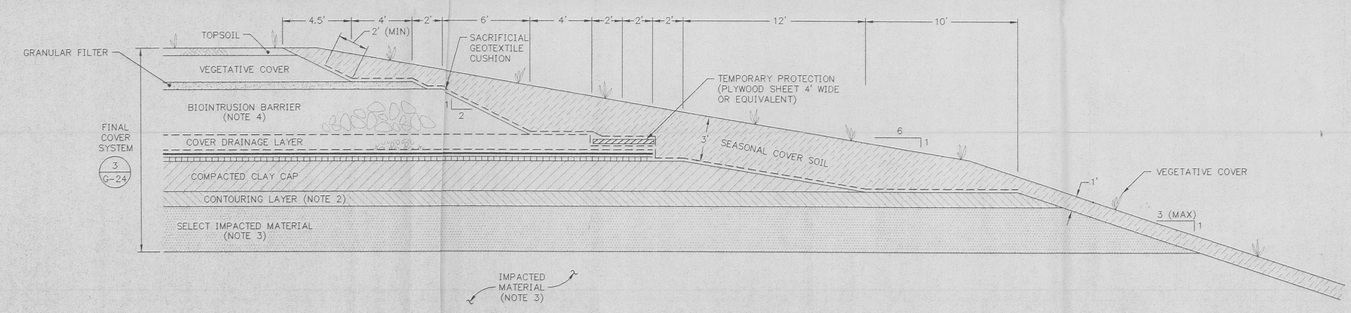
10 G-26 — DETAIL
LINER SYSTEM AT INTERCELL BERM WITH SEASONAL CLOSURE
SCALE: 1" = 4' (NOTE 1)



11 G-20 — DETAIL
SEASONAL CLOSURE COVER SYSTEM NORTH-SOUTH
SCALE: 1" = 30'



12 G-26 — DETAIL
CELL PERIMETER WITH SEASONAL CLOSURE
SCALE: 1" = 4' (NOTE 1)



13 G-26 — DETAIL
TEMPORARY EDGE OF FINAL COVER SYSTEM WITH SEASONAL CLOSURE
SCALE: 1" = 4' (NOTE 1)

NOTES:

1. DETAILS ARE SHOWN TO SCALE AS NOTED EXCEPT FOR THE GEOSYNTHETICS, WHICH ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY. MATERIAL TOLERANCES SHALL BE WITHIN THE LIMITS GIVEN IN THE SPECIFICATIONS.
2. PROTECTIVE LAYER ON THE CELL BASE, ON INTERCELL BERM SOUTH SLOPES, AND THE CONTOURING LAYER IN THE FINAL COVER SYSTEM SHALL CONSIST OF IMPACTED MATERIAL FROM THE OPERABLE UNITS OR OTHER ACCEPTABLE SOIL THAT MEETS THE REQUIREMENTS OF SECTION 02240 OF THE SPECIFICATIONS. THE PROTECTIVE LAYER ON PERIMETER SLOPES AND ON INTERCELL BERM NORTH SLOPES SHALL CONSIST OF FREE-DRAINING GRANULAR MATERIAL THAT MEETS THE REQUIREMENTS OF SECTION 02240.
3. IMPACTED MATERIAL AND SELECT IMPACTED MATERIAL SHALL BE PLACED IN ACCORDANCE WITH SECTION 13010 OF THE SPECIFICATIONS.
4. A GRAVEL CHOKE LAYER SHALL BE COMPACTED INTO THE TOP 6 INCHES OF THE BIOINTRUSION BARRIER. SEE SECTION 02280 OF THE SPECIFICATIONS.
5. THICKNESS OF COMPACTED CLAY LINER ALONG CENTERLINE OF INTERCELL BERM VARIES FROM A MINIMUM OF 3 FEET TO A MAXIMUM OF 7 FEET.
6. CONSTRUCTION CONTROL POINTS ARE SHOWN ON THE 1 INCH EQUALS 50 FEET SCALE SUBGRADE GRADING PLANS.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE AS SHOWN

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
LINER AND COVER SYSTEM DETAILS III

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GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95F5005028
FERMCO DRAWING NO.: 90X-6000-00026
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B036
SHEET NO.: G-26
REVISION NO.: B

002298

PRELIMINARY DESIGN PACKAGE

233650_6

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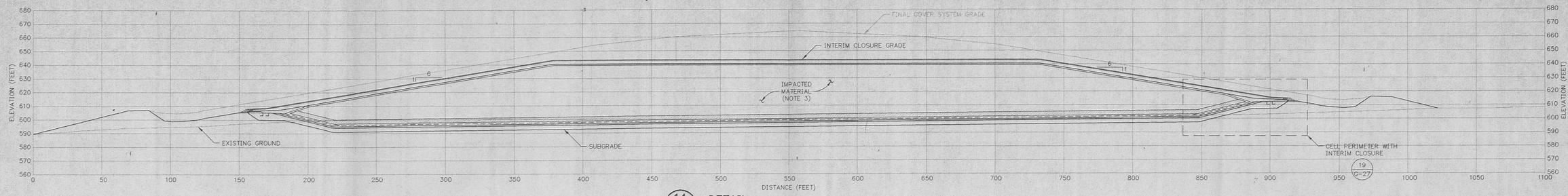
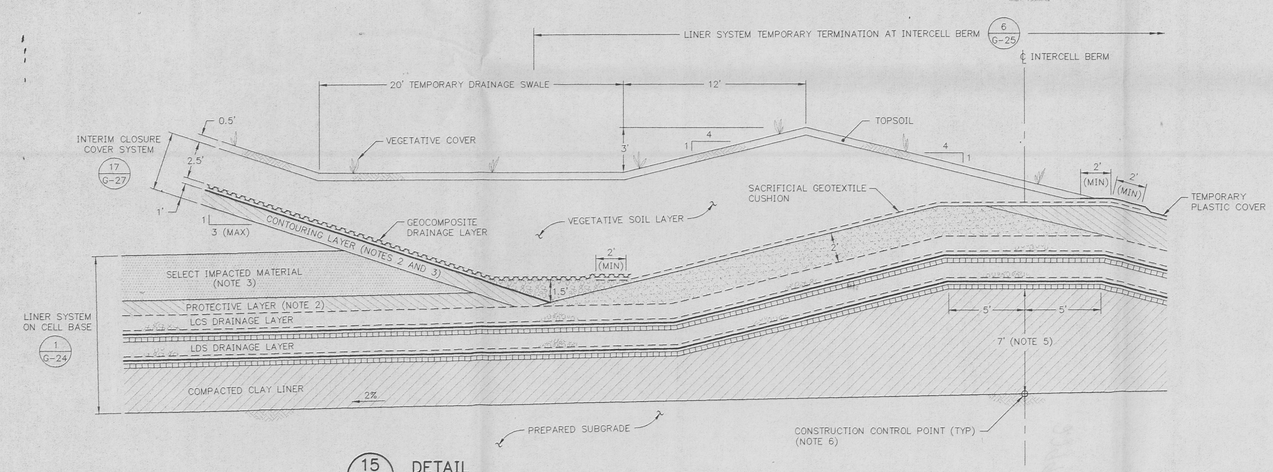
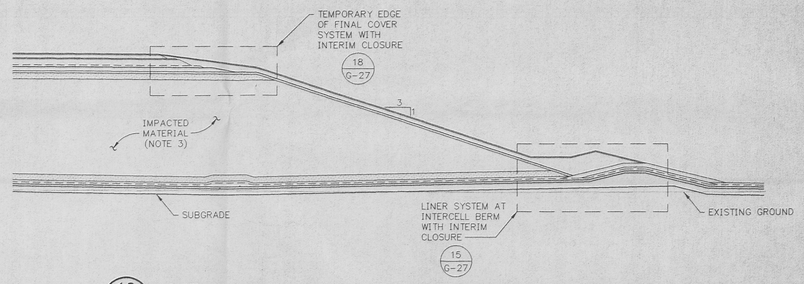


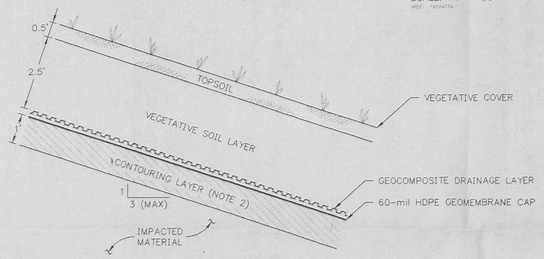
14 / - DETAIL
INTERIM CLOSURE COVER SYSTEM EAST-WEST
SCALE: 1" = 30'



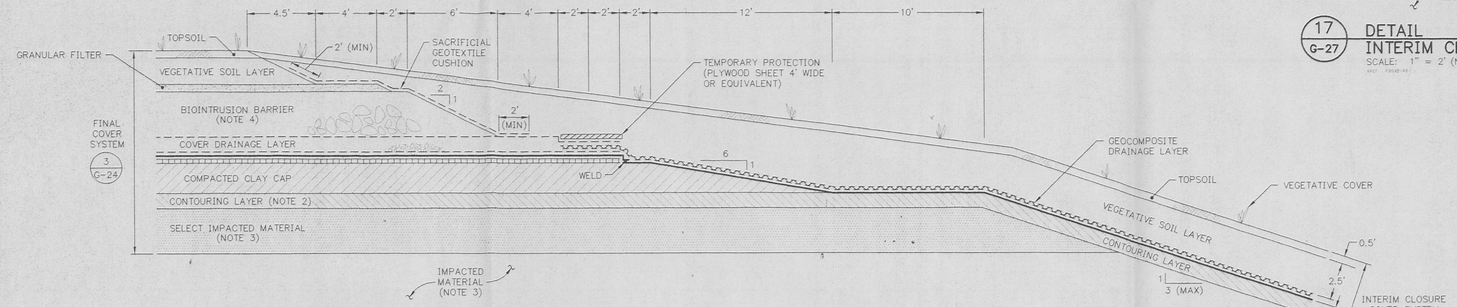
15 / G-27 DETAIL
LINER SYSTEM AT INTERCELL BERM WITH INTERIM CLOSURE
SCALE: 1" = 4' (NOTE 1)



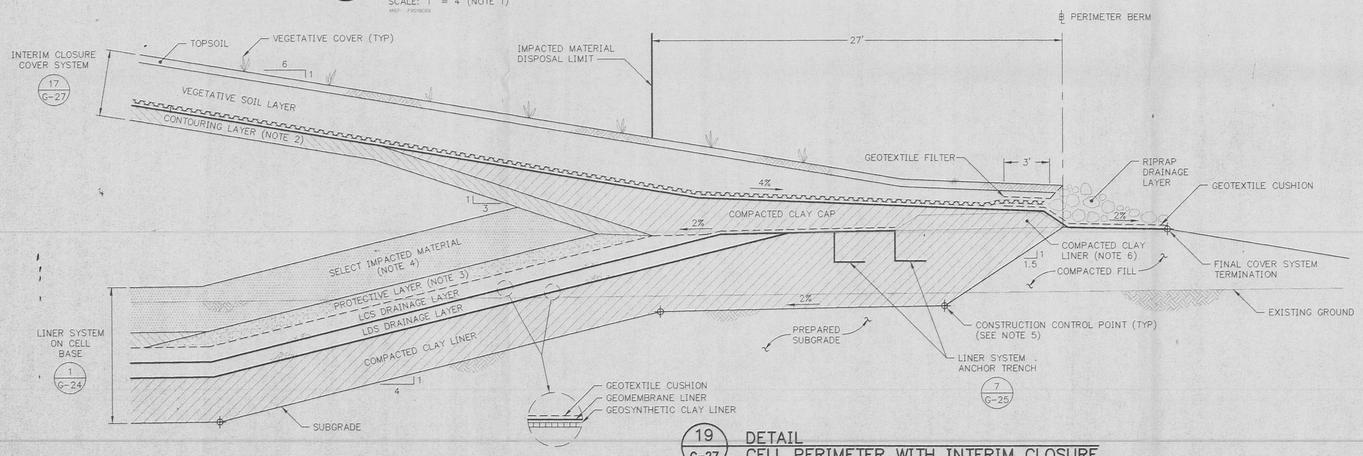
16 / G-20 DETAIL
INTERIM CLOSURE COVER SYSTEM NORTH-SOUTH
SCALE: 1" = 30'



17 / G-27 DETAIL
INTERIM CLOSURE COVER SYSTEM
SCALE: 1" = 2' (NOTE 1)



18 / G-27 DETAIL
TEMPORARY EDGE OF FINAL COVER SYSTEM WITH INTERIM CLOSURE
SCALE: 1" = 4' (NOTE 1)



19 / G-27 DETAIL
CELL PERIMETER WITH INTERIM CLOSURE
SCALE: 1" = 4' (NOTE 1)

NOTES:

1. DETAILS ARE SHOWN TO SCALE AS NOTED EXCEPT FOR THE GEOSYNTHETICS, WHICH ARE SHOWN AT AN EXAGGERATED SCALE FOR CLARITY. MATERIAL TOLERANCES SHALL BE WITHIN THE LIMITS GIVEN IN THE SPECIFICATIONS.
2. PROTECTIVE LAYER ON THE CELL BASE, ON INTERCELL BERM SOUTH SLOPES, AND THE CONTOURING LAYER IN THE FINAL COVER SYSTEM AND INTERIM CLOSURE COVER SYSTEM SHALL CONSIST OF IMPACTED MATERIAL FROM THE OPERABLE UNITS OR OTHER ACCEPTABLE SOIL THAT MEETS THE REQUIREMENTS OF SECTION 02240 OF THE SPECIFICATIONS. THE PROTECTIVE LAYER ON PERIMETER SLOPES AND ON INTERCELL BERM NORTH SLOPES SHALL CONSIST OF FREE-DRAINING GRANULAR MATERIAL THAT MEETS THE REQUIREMENTS OF SECTION 02240.
3. IMPACTED MATERIAL AND SELECT IMPACTED MATERIAL SHALL BE PLACED IN ACCORDANCE WITH SECTION 13010 OF THE SPECIFICATIONS.
4. A GRAVEL CHOKE LAYER SHALL BE COMPACTED INTO THE TOP 6 INCHES OF THE BIOINTRUSION BARRIER. SEE SECTION 02280 OF THE SPECIFICATIONS.
5. THICKNESS OF COMPACTED CLAY LINER ALONG CENTERLINE OF INTERCELL BERM VARIES FROM A MINIMUM OF 3 FEET TO A MAXIMUM OF 7 FEET.
6. COMPACTED CLAY LINER AT THE CREST OF SLOPE SHALL BE OVER BUILT A MINIMUM OF 12 INCHES AND CUT BACK JUST PRIOR TO CONSTRUCTION OF THE FINAL COVER SYSTEM. OVER BUILT CLAY LINER WILL NOT BE TESTED FOR PERMEABILITY.
7. CONSTRUCTION CONTROL POINTS ARE SHOWN ON THE 1 INCH EQUALS 50 FEET SCALE SUBGRADE GRADING PLANS.
8. INTERIM CLOSURE DETAILS SHALL BE INSTALLED WHEN A TEMPORARY SHUTDOWN IN OSDF DISPOSAL OPERATIONS IS PLANNED FOR A PERIOD EXCEEDING ONE YEAR. INTERIM CLOSURE SHALL ONLY BE UNDERTAKEN FOR TEMPORARY SHUTDOWN WHEN A CONFIRMED PLAN EXISTS TO REOPEN THE OSDF AND CONTINUE DISPOSAL OPERATIONS. OTHERWISE; INTERIM CLOSURE SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS FOR FINAL CLOSURE.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE AS SHOWN

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO — FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
LINER AND COVER SYSTEM DETAILS IV

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SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95P5005028
FERMCO DRAWING NO.: 90X-6000-00027
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B037
SHEET NO.: G-27
REVISION NO.: B

PRELIMINARY DESIGN PACKAGE

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23360_7

M:\CACADD\GE3900-12\F95-B037 Fri Dec 15 15:30:09 1995

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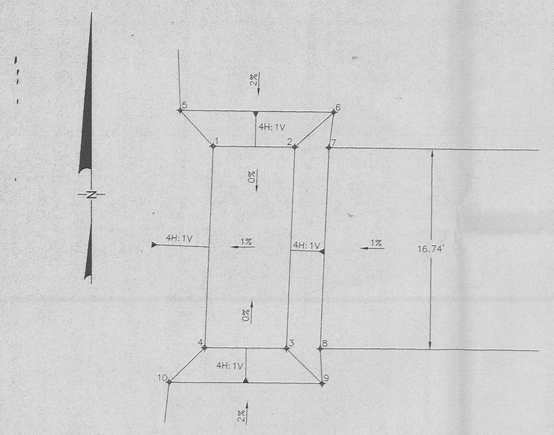
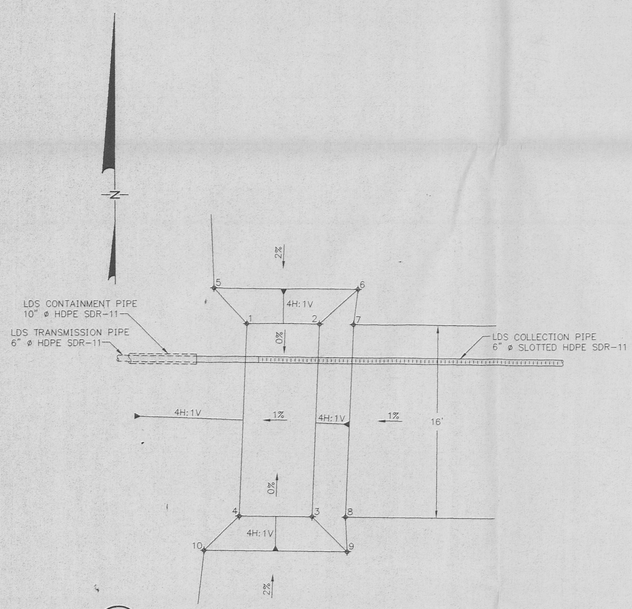


20 / G-5 PLAN
TOP OF SUBGRADE AT CELL OUTLET
SCALE: 1" = 5'



21 / – PLAN
TOP OF COMPACTED CLAY LINER AT CELL OUTLET
SCALE: 1" = 5'

CONSTRUCTION CONTROL POINTS TOP OF SUBGRADE AT CELL OUTLET

	POINT	NORTHING	EASTING	ELEVATION		POINT	NORTHING	EASTING	ELEVATION		POINT	NORTHING	EASTING	ELEVATION
CELL 1					CELL 4					CELL 7				
CELL 2					CELL 5					CELL 8				
CELL 3					CELL 6					CELL 9				

CONSTRUCTION CONTROL POINTS TOP OF COMPACTED CLAY LINER AT CELL OUTLET

	POINT	NORTHING	EASTING	ELEVATION		POINT	NORTHING	EASTING	ELEVATION		POINT	NORTHING	EASTING	ELEVATION
CELL 1					CELL 4					CELL 7				
CELL 2					CELL 5					CELL 8				
CELL 3					CELL 6					CELL 9				

NOTES:

1. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
2. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

5 2.5 0 5 10
SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
CELL OUTLET GRADING PLANS I

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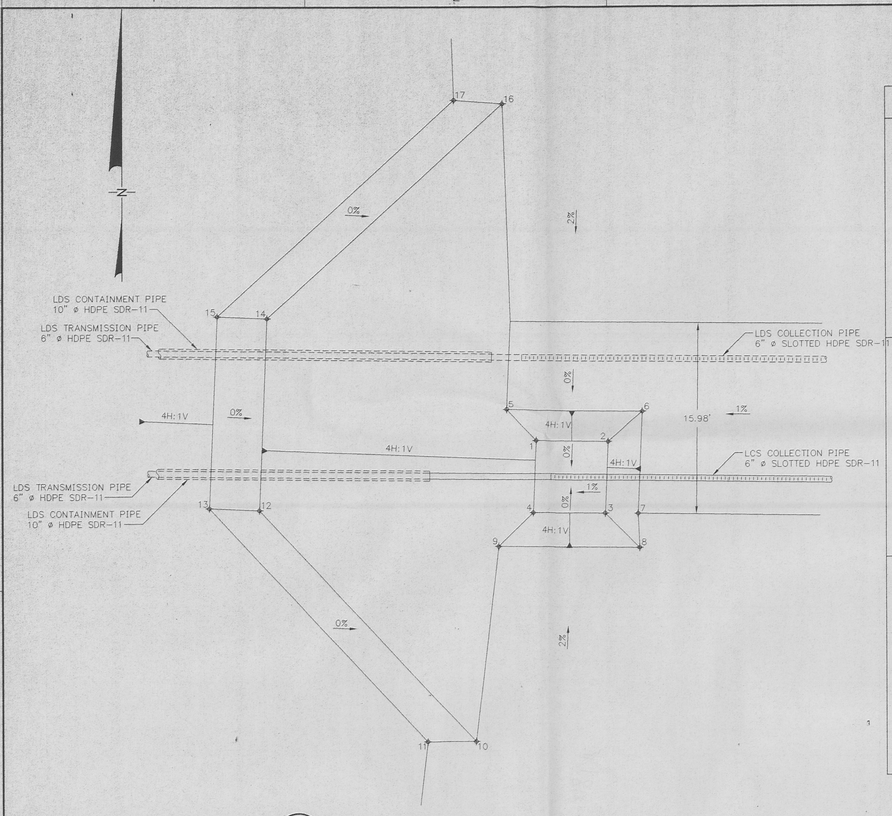
GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00028
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B053
SHEET NO.: G-28
REVISION NO.: B

002300

PRELIMINARY DESIGN PACKAGE

233650-8



22 — PLAN
TOP OF LDS DRAINAGE LAYER AT CELL OUTLET
SCALE: 1" = 5'

CONSTRUCTION CONTROL POINTS TOP OF LDS DRAINAGE LAYER AT CELL OUTLET

	POINT	NORTHING	EASTING	ELEVATION		POINT	NORTHING	EASTING	ELEVATION		POINT	NORTHING	EASTING	ELEVATION
CELL 1					CELL 4					CELL 7				
CELL 2					CELL 5					CELL 8				
CELL 3					CELL 6					CELL 9				

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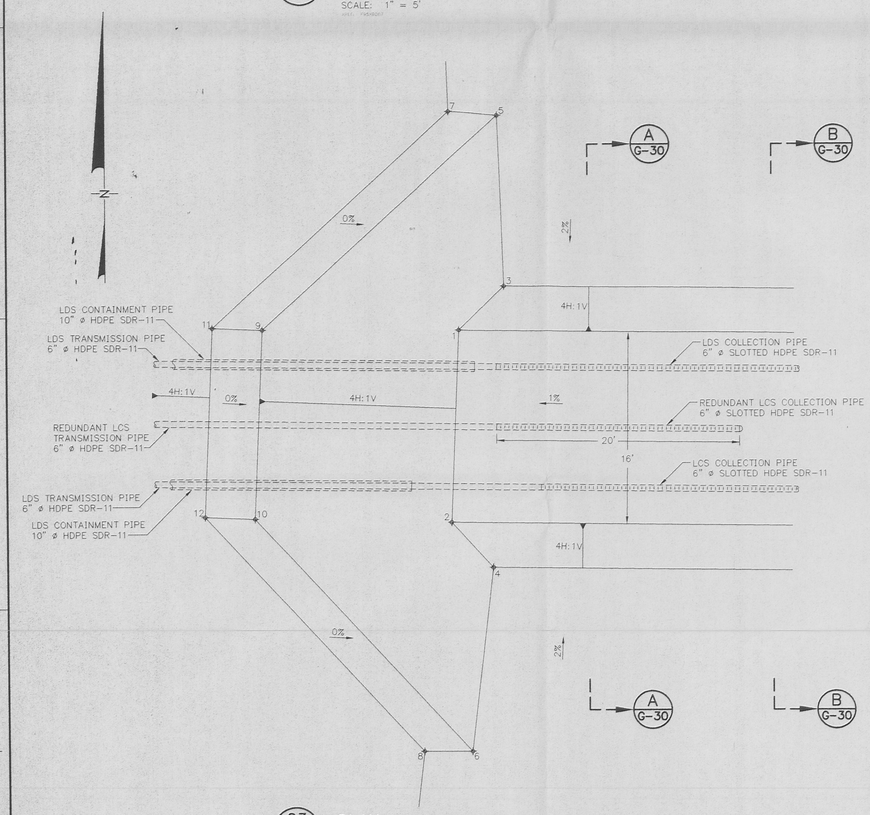

23 — PLAN
TOP OF LCS DRAINAGE LAYER AT CELL OUTLET
SCALE: 1" = 5'

CONSTRUCTION CONTROL POINTS TOP OF LCS DRAINAGE LAYER AT CELL OUTLET

	POINT	NORTHING	EASTING	ELEVATION		POINT	NORTHING	EASTING	ELEVATION		POINT	NORTHING	EASTING	ELEVATION
CELL 1					CELL 4					CELL 7				
CELL 2					CELL 5					CELL 8				
CELL 3					CELL 6					CELL 9				

NOTES:

1. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
2. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.

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5 2.5 0 5 10
SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Fernald Environmental Restoration Management Corporation
FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
CELL OUTLET GRADING PLANS II

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FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00029
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B049
SHEET NO.: G-29
REVISION NO.: B

002301

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233650_9

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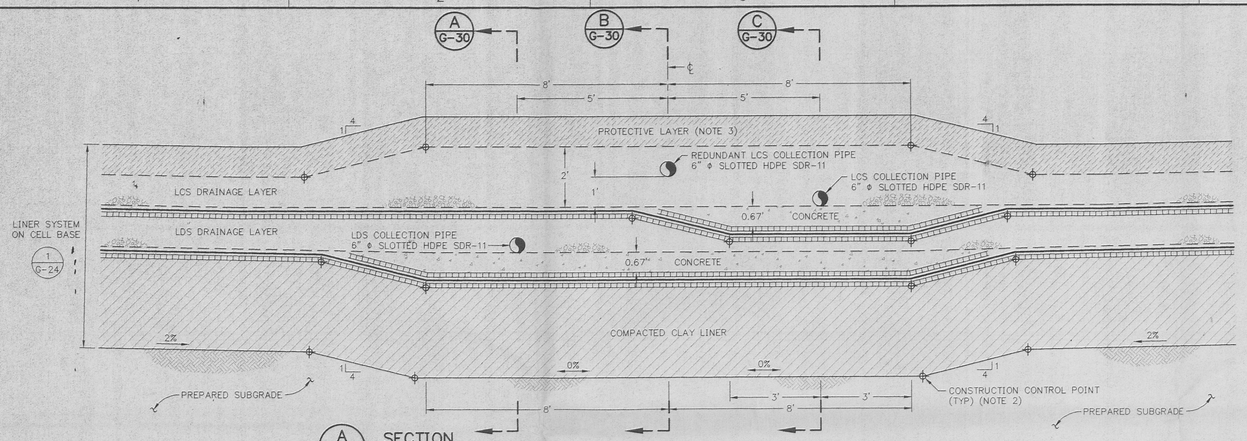
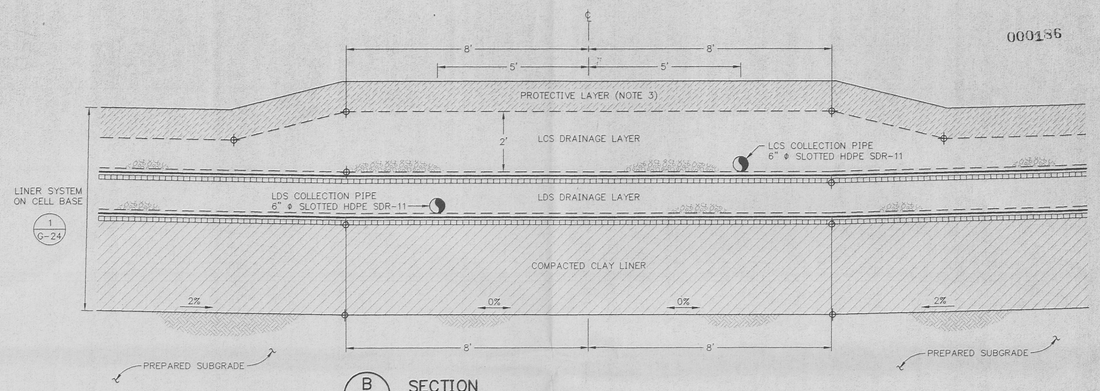
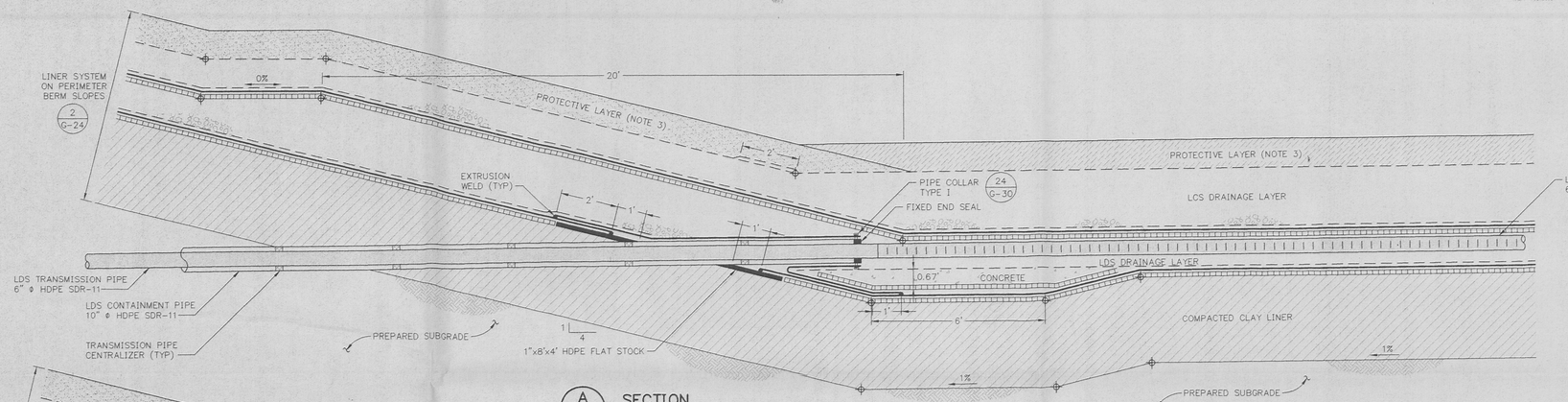


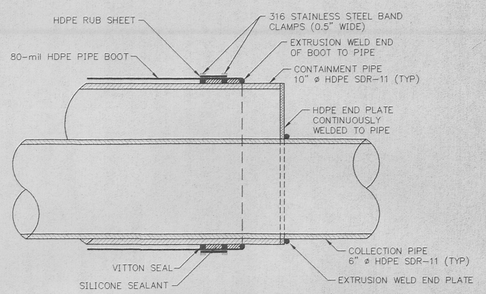
A G-29 SECTION
LEACHATE COLLECTION AND LEAK DETECTION CORRIDOR AT CELL OUTLET
SCALE: 1" = 2' (NOTE 1)



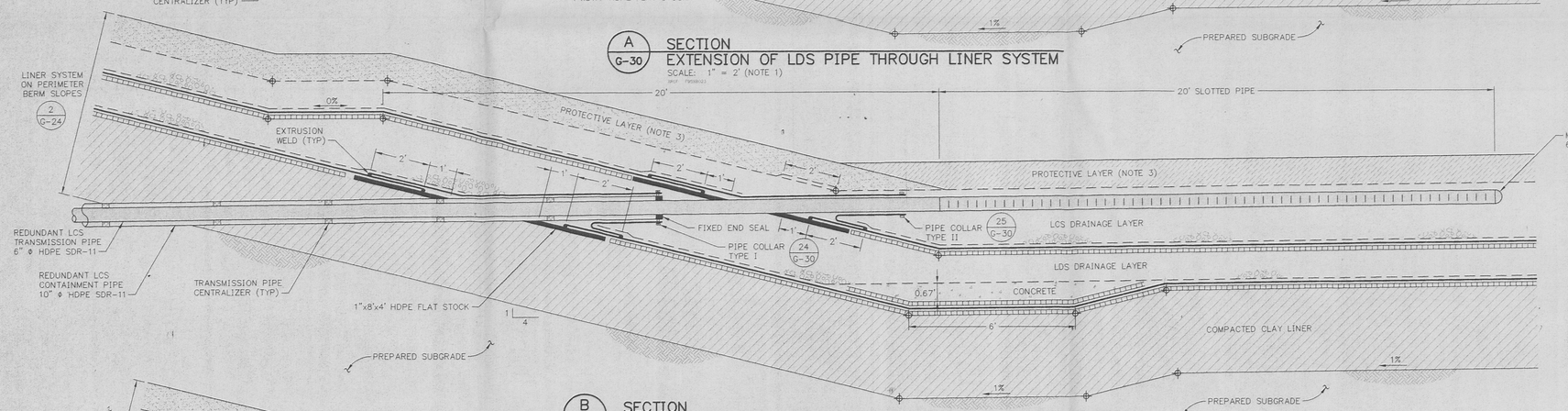
B G-29 SECTION
LEACHATE COLLECTION AND LEAK DETECTION CORRIDOR
SCALE: 1" = 2' (NOTE 1)



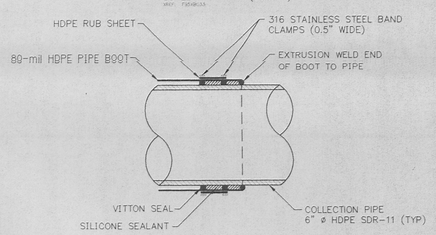
A G-30 SECTION
EXTENSION OF LDS PIPE THROUGH LINER SYSTEM
SCALE: 1" = 2' (NOTE 1)



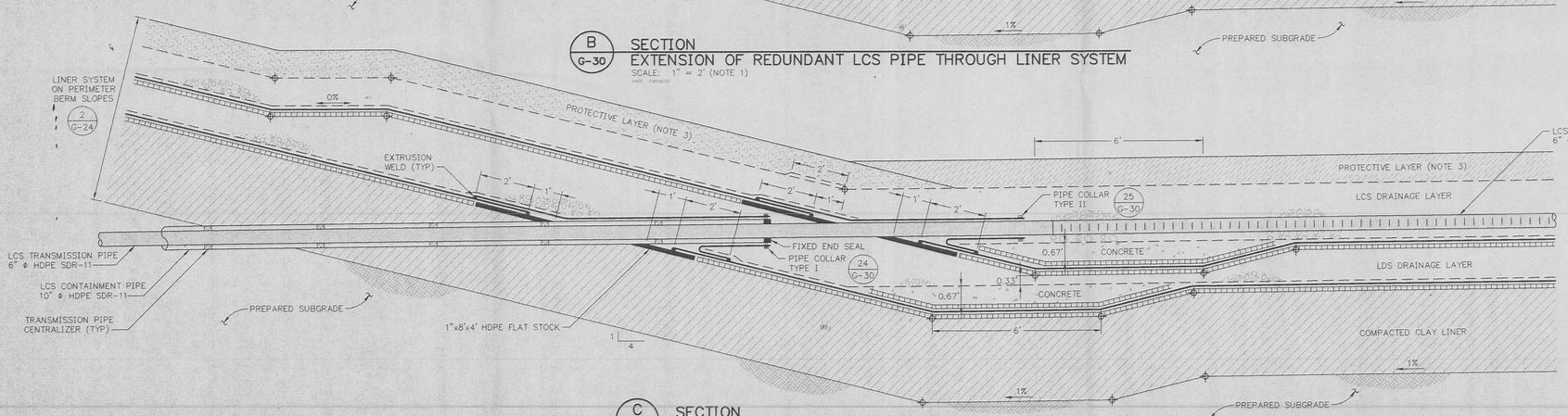
24 G-30 DETAIL
PIPE COLLAR TYPE I
SCALE: 1" = 4" (NOTE 1)



B G-30 SECTION
EXTENSION OF REDUNDANT LCS PIPE THROUGH LINER SYSTEM
SCALE: 1" = 2' (NOTE 1)



25 G-30 DETAIL
PIPE COLLAR TYPE II
SCALE: 1" = 4" (NOTE 1)



C G-30 SECTION
EXTENSION OF LCS PIPE THROUGH LINER SYSTEM
SCALE: 1" = 2' (NOTE 1)

NOTES:

1. DETAILS ARE SHOWN TO SCALE AS NOTED, EXCEPT FOR THE GEOSYNTHETICS, WHICH ARE SHOWN AT EXAGGERATED SCALE FOR CLARITY. MATERIAL TOLERANCES SHALL BE WITHIN THE LIMITS GIVEN IN THE SPECIFICATIONS.
2. CONSTRUCTION CONTROL POINTS ARE SHOWN ON CELL OUTLET GRADING PLANS.
3. PROTECTIVE LAYER ON THE CELL BASE SHALL CONSIST OF IMPACTED MATERIAL FROM THE OPERABLE UNITS OR OTHER ACCEPTABLE SOIL THAT MEETS THE REQUIREMENTS OF SECTION 02240 OF THE SPECIFICATIONS. THE PROTECTIVE LAYER ON PERIMETER SLOPES SHALL CONSIST OF FREE-DRAINING GRANULAR MATERIAL THAT MEETS THE REQUIREMENTS OF SECTION 02240.

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OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
CELL OUTLET SECTIONS

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FERMCO SUBCONTRACT NO.:	95PS005028
FERMCO DRAWING NO.:	90X-6000-G-00030
GEOSYNTEC PROJECT NO.:	GE3900-11
GEOSYNTEC DOCUMENT NO.:	F95-B029
SHEET NO.:	G-30
REVISION NO.:	B

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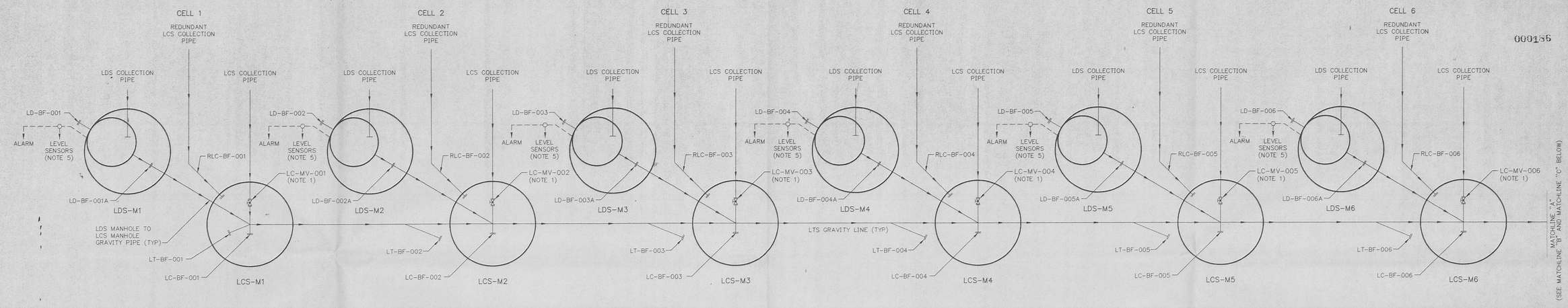
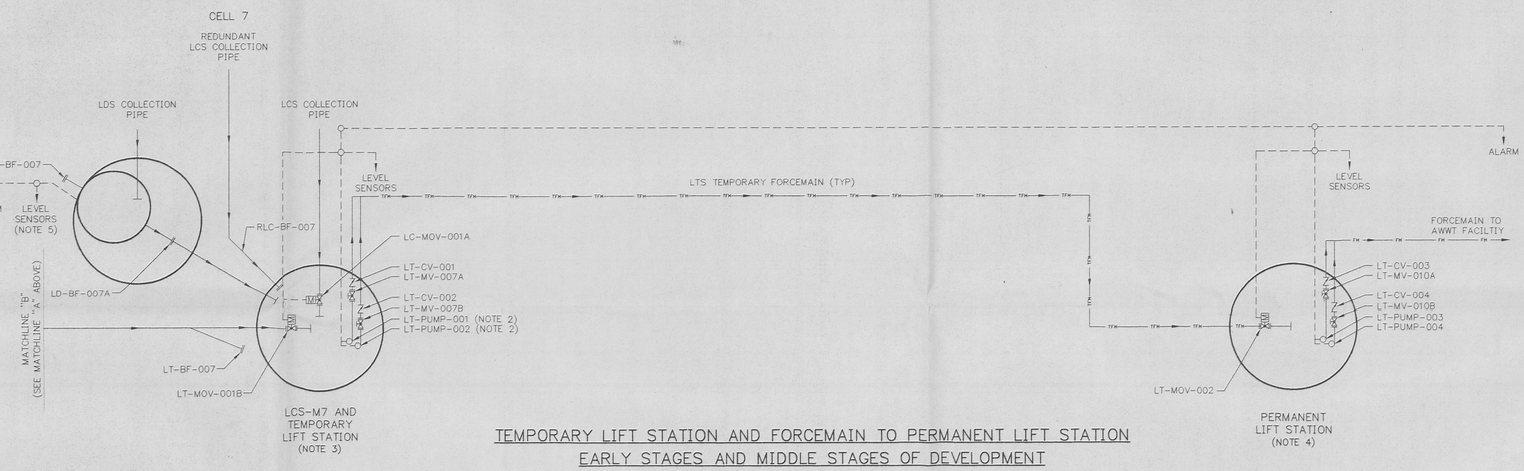
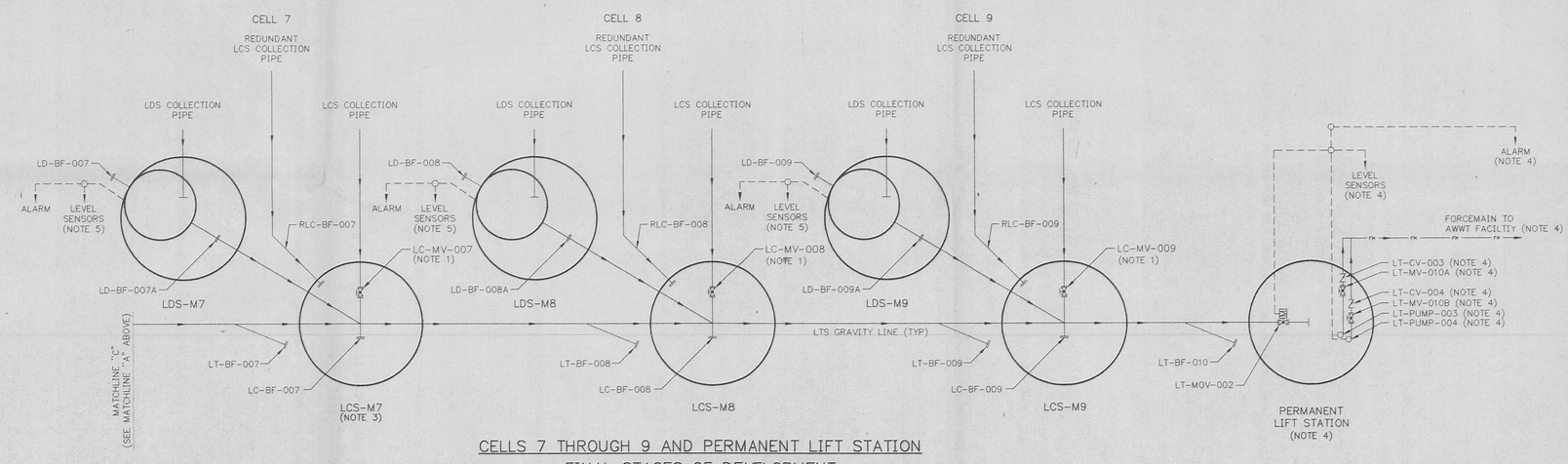


CELLS 1 THROUGH 6
EARLY STAGES, MIDDLE STAGES, AND FINAL STAGES OF DEVELOPMENT



TEMPORARY LIFT STATION AND FORCEMAIN TO PERMANENT LIFT STATION
EARLY STAGES AND MIDDLE STAGES OF DEVELOPMENT



CELLS 7 THROUGH 9 AND PERMANENT LIFT STATION
FINAL STAGES OF DEVELOPMENT

LEGEND

- BLIND FLANGE
- CHECK VALVE
- MOTOR OPERATED VALVE
- PROCESS SIGNAL
- PUMP CONTROLS
- SIGNAL CONDITIONER/RELAY
- BALL VALVE

NOTES:

1. BALL VALVE IN LCS MANHOLE IS TEMPORARY AND SHALL BE INSTALLED TO REGULATE FLOW IN THE LTS GRAVITY LINE DURING CONSTRUCTION. BALL VALVE WILL BE REMOVED AND REPLACED WITH SOLID WALL HDPE PIPE AFTER CONSTRUCTION OF CELL 9.
2. PUMPS WILL ALTERNATE LEAD AND LAG PUMP DESIGNATION WITH EACH DISCHARGE CYCLE. PUMPS WILL ALTERNATE DISCHARGE CYCLES. EACH PUMP WILL BE INDEPENDENTLY CAPABLE OF CONVEYING THE DESIGN DISCHARGE TO THE PERMANENT LIFT STATION. LAG PUMP WILL CONVEY EXCESS DISCHARGE IN THE EVENT OF AN EMERGENCY (E.G., LEAD PUMP FAILURE, ETC.) DURING A DISCHARGE CYCLE. HIGH ALARM SWITCH WILL ACTIVATE AUTOMATIC FLOW CONTROL VALVE TO DISCONTINUE FLOW TO THE LIFT STATION. AT THE TIME WHEN HIGH ALARM SWITCH IS ACTIVATED, THE LEAD AND LAG PUMPS WILL COMPLETE THE DISCHARGE CYCLE UNTIL SHUT-OFF OF THE PUMPS IS ACTIVATED BY THE PUMP OFF SWITCH.
3. TEMPORARY LIFT STATION SHALL BE CONSTRUCTED IN THE PERMANENT LCS MANHOLE AT CELL 7. TEMPORARY LIFT STATION SHALL BE CONVERTED TO THE PERMANENT LCS MANHOLE AT CELL 7 AFTER CONSTRUCTION OF LCS MANHOLES AT CELLS 8 AND 9.
4. PIPING AND INSTUMENTATION WITHIN PERMANENT LIFT STATION IS PROVIDED FOR ILLUSTRATION PURPOSES ONLY AND IS NOT PART OF THE CONTRACT. SEE SEPARATE DESIGN FOR THE DESIGN OF THE FORCE MAIN FROM THE PERMANENT LIFT STATION TO THE AWWT FACILITY (INCLUDES LIFT STATION PUMP REQUIREMENTS, VALVES, AND DOUBLE WALL HDPE FORCEMAIN).
5. LEVEL SENSOR WILL INDICATE LIQUID LEVEL IN LDS PRIMARY CONTAINMENT VESSEL AND WILL ACTIVATE ALARM AT CELL AND AT REMOTE MONITORING LOCATION (LOCATION WILL BE PRESENTED IN THE INTERMEDIATE DESIGN PACKAGE).

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE AS SHOWN

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Fernald Environmental Restoration Management Corporation
FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
LEACHATE TRANSMISSION SYSTEM
PIPING AND INSTRUMENTATION DIAGRAM

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1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.:	95PS005028
FERMCO DRAWING NO.:	90X-6000-G-00032
GEOSYNTEC PROJECT NO.:	GE3900-11
GEOSYNTEC DOCUMENT NO.:	F95-B043
SHEET NO.:	G-32
REVISION NO.:	B

26 — PIPING AND INSTRUMENTATION DIAGRAM
LEACHATE COLLECTION SYSTEM AND LEACHATE TRANSMISSION SYSTEM
SCALE: N.T.S.
REV. F95-B043

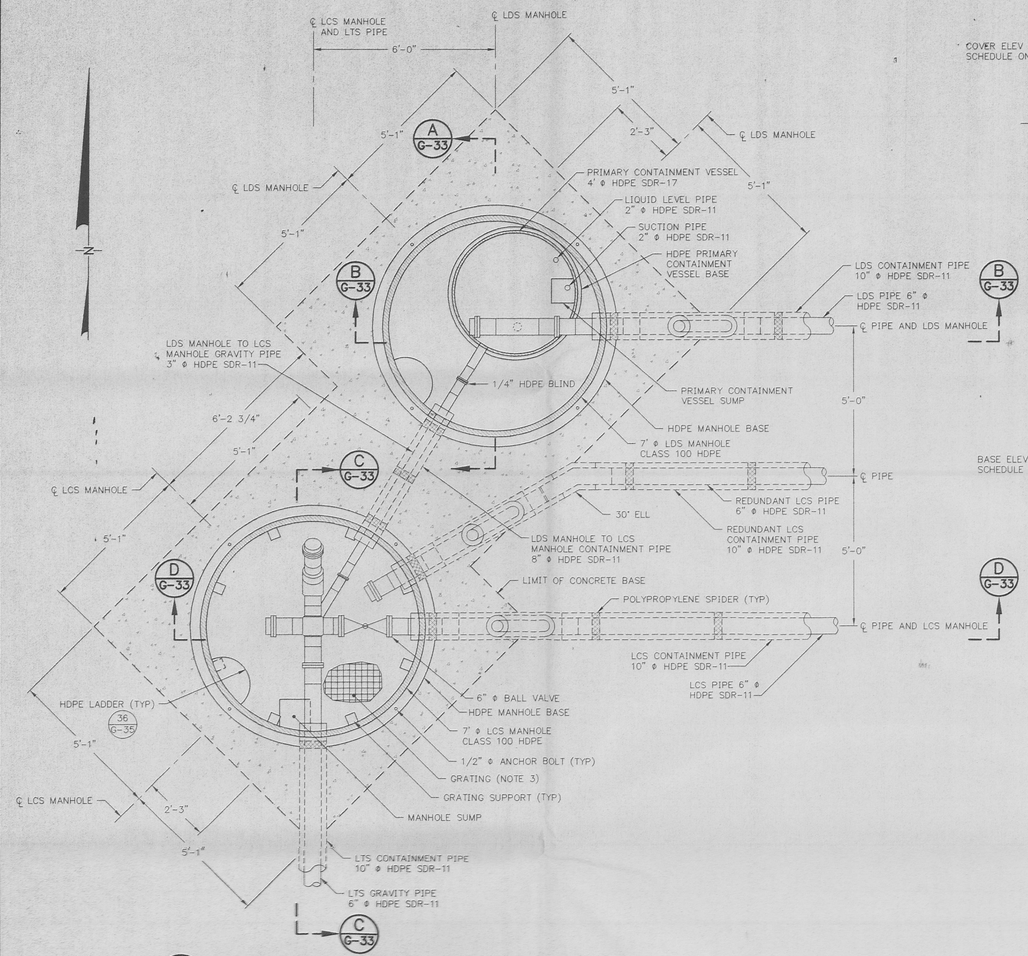
PRELIMINARY DESIGN PACKAGE

000186

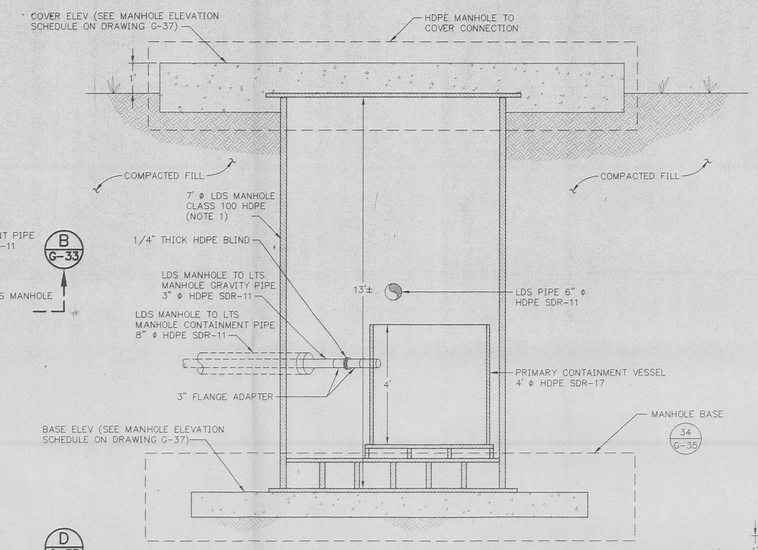
002303

233680_11

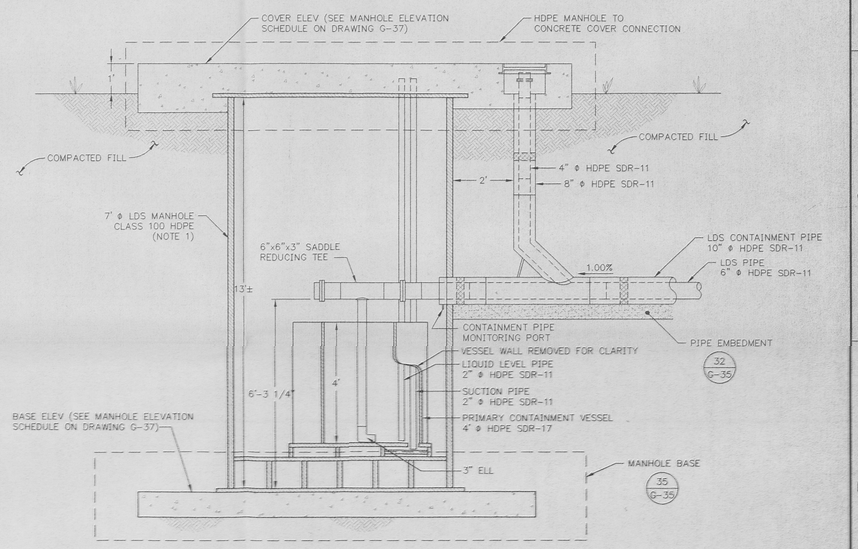
W:\GA2A02\GE3900- 12\F95-B043 Sat Dec 16 14:31:58 1995



27 G-5 SECTIONAL PLAN
LDS MANHOLE AND LCS MANHOLE AT CELL 1
SCALE: 1" = 2'



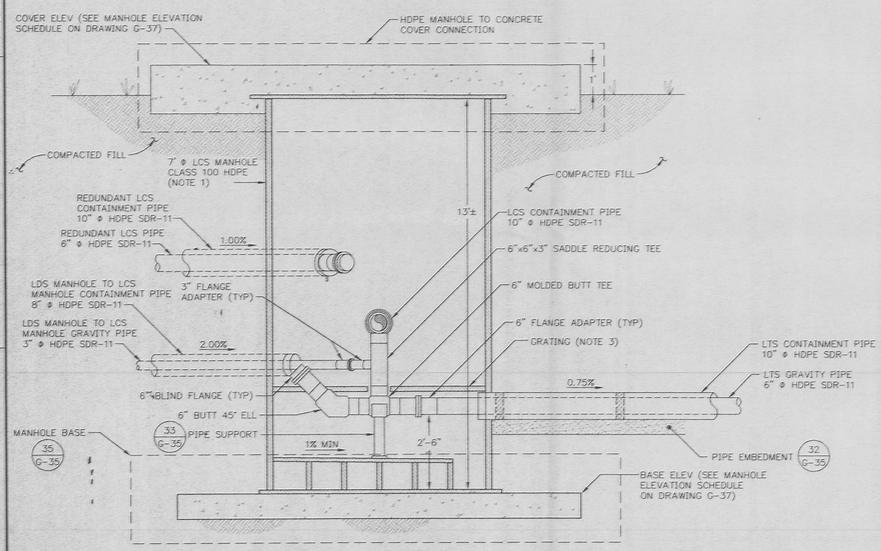
A G-33 SECTION (TYPICAL)
LDS MANHOLES AT CELLS 1 THROUGH 9
SCALE: 1" = 2'



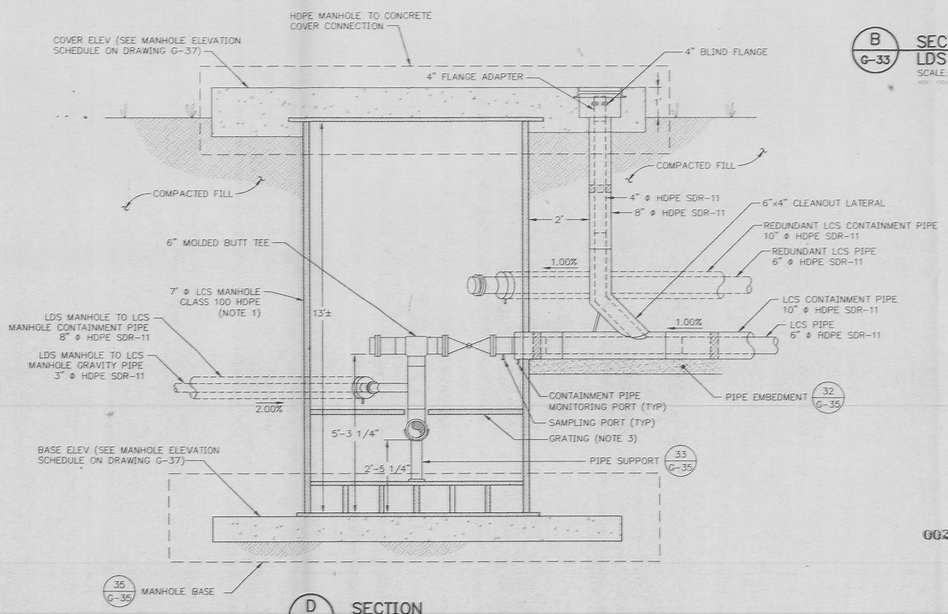
B G-33 SECTION (TYPICAL)
LDS MANHOLES AT CELLS 1 THROUGH 9
SCALE: 1" = 2'

NOTES:

1. MANHOLES SHALL BE SHOP FABRICATED AND DELIVERED TO SITE FULLY ASSEMBLED WITH 1-FOOT MINIMUM CONTAINMENT PIPE STUBS.
2. BALL VALVE IN LCS MANHOLE IS TEMPORARY AND SHALL BE INSTALLED TO REGULATE FLOW IN THE LTS GRAVITY LINE DURING CONSTRUCTION. BALL VALVE WILL BE REMOVED AND REPLACED WITH AN HDPE SPOOL AFTER CONSTRUCTION OF CELL 9.
3. GRATING SHALL BE DESIGNED FOR A MINIMUM OF 300 POUNDS PER SQUARE FOOT.



C G-33 SECTION
LCS MANHOLE AT CELL 1
SCALE: 1" = 2'



D G-33 SECTION
LCS MANHOLE AT CELL 1
SCALE: 1" = 2'

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OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
LEACHATE TRANSMISSION SYSTEM GRAVITY LINE AND MANHOLE DETAILS I

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FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00033
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B056
SHEET NO.: G-33
REVISION NO.: B

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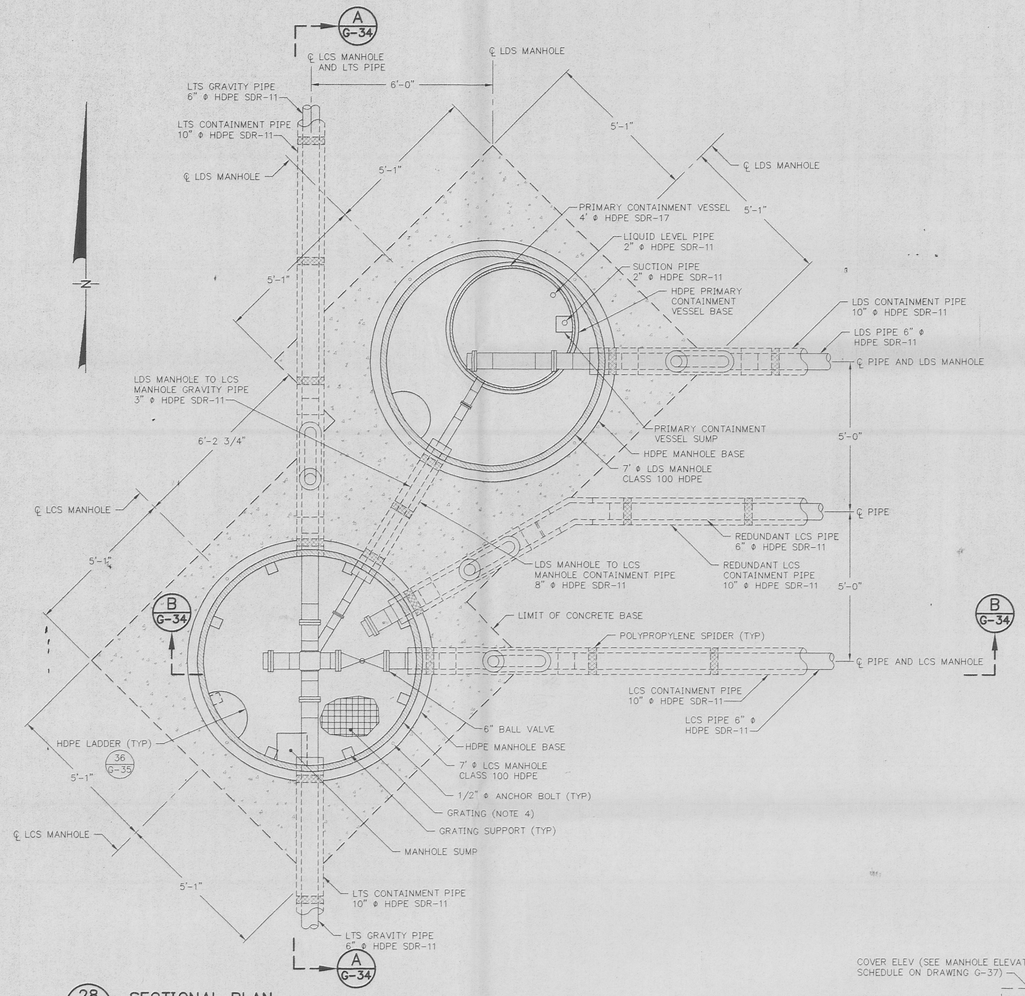
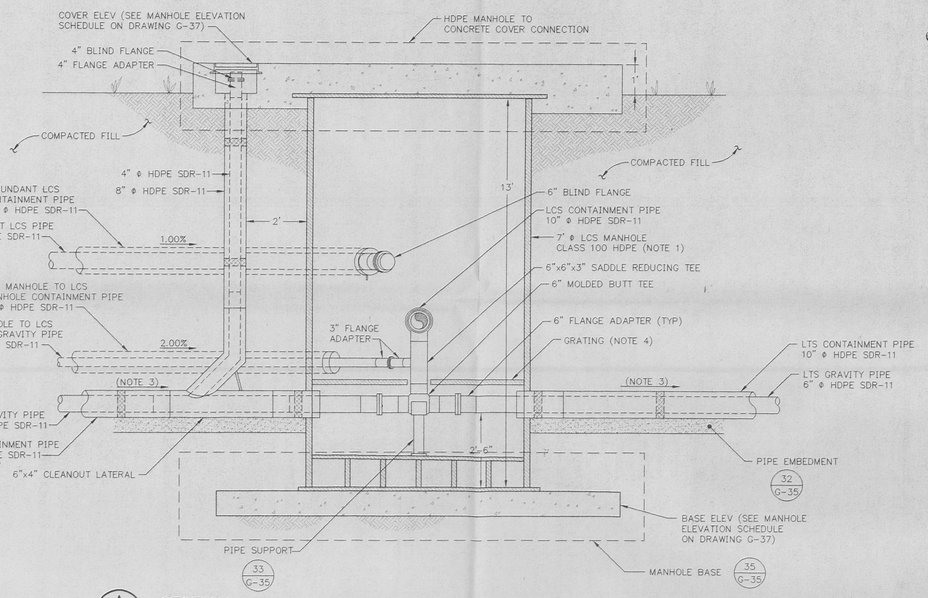
233650-12
F:\F95-B056 Sun Dec 17 10:24:21 1995

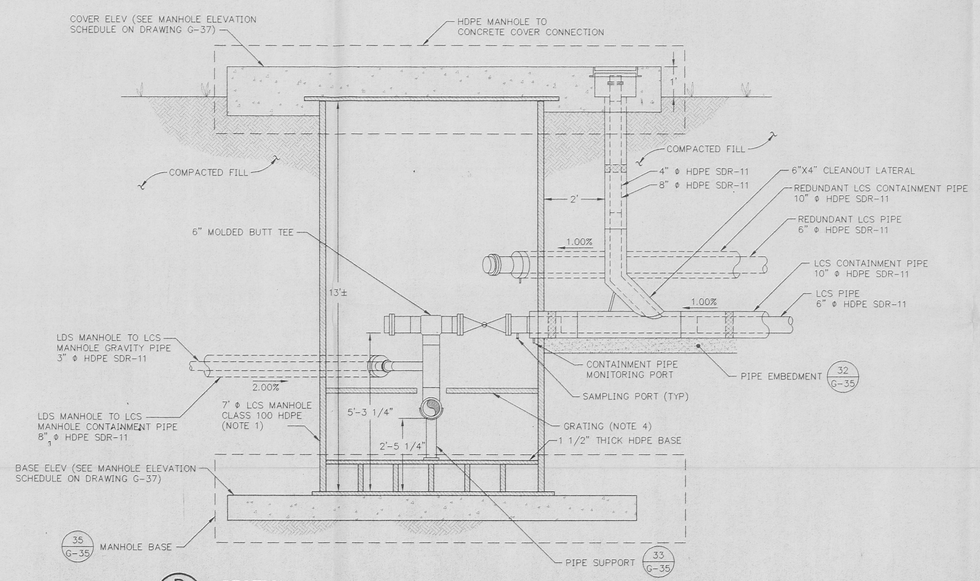


28 G-5 SECTIONAL PLAN
LDS AND LCS MANHOLES AT CELLS 2 THROUGH 6 AND CELLS 8 AND 9
SCALE: 1" = 2'



A G-34 SECTION
LCS MANHOLE AT CELLS 2 THROUGH 6 AND CELLS 8 AND 9
SCALE: 1" = 2'

000136



B G-34 SECTION
LCS MANHOLE AT CELLS 2 THROUGH 6 AND CELLS 8 AND 9
SCALE: 1" = 2'

002305

NOTES:

1. MANHOLES SHALL BE SHOP FABRICATED AND DELIVERED TO SITE FULLY ASSEMBLED WITH 1-FOOT MINIMUM CONTAINMENT PIPE STUBS.
2. BALL VALVE IN LCS MANHOLE IS TEMPORARY AND SHALL BE INSTALLED TO REGULATE FLOW IN THE LTS GRAVITY LINE DURING CONSTRUCTION. BALL VALVE WILL BE REMOVED AND REPLACED WITH AN HDPE SPOOL AFTER CONSTRUCTION OF CELL 9.
3. GRADE OF LTS GRAVITY LINE IS 0.75% BETWEEN LCS MANHOLES 2 AND 6 AND IS 0.50% BETWEEN LCS MANHOLE 7 AND THE PERMANENT LIFT STATION.
4. GRATING SHALL BE DESIGNED FOR A MINIMUM OF 300 POUNDS PER SQUARE FOOT.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE AS SHOWN

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Fernald Environmental Restoration Management Corporation
FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
LEACHATE TRANSMISSION SYSTEM GRAVITY LINE AND MANHOLE DETAILS II

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GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.:	95PS005028
FERMCO DRAWING NO.:	90X-6000-G-00034
GEOSYNTEC PROJECT NO.:	CE3900-11
GEOSYNTEC DOCUMENT NO.:	F95-B057
SHEET NO.:	G-34
REVISION NO.:	B

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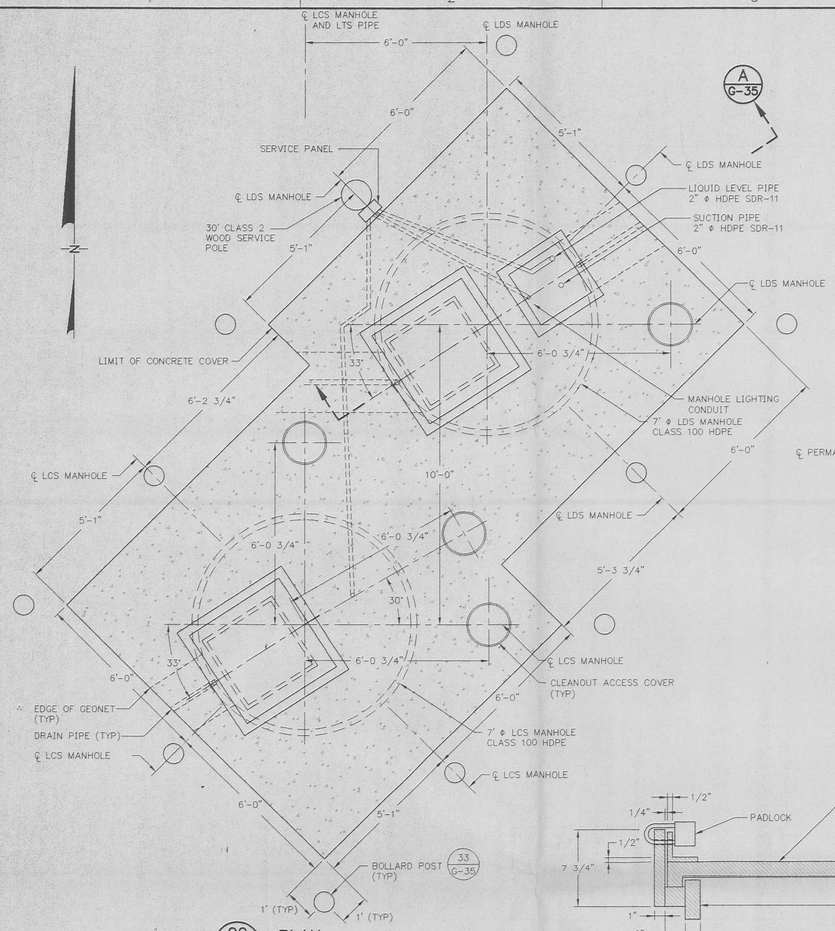
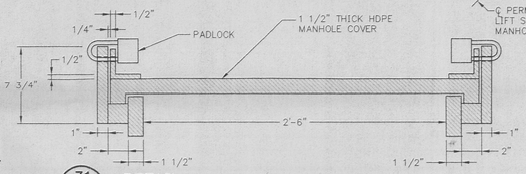
233650-13

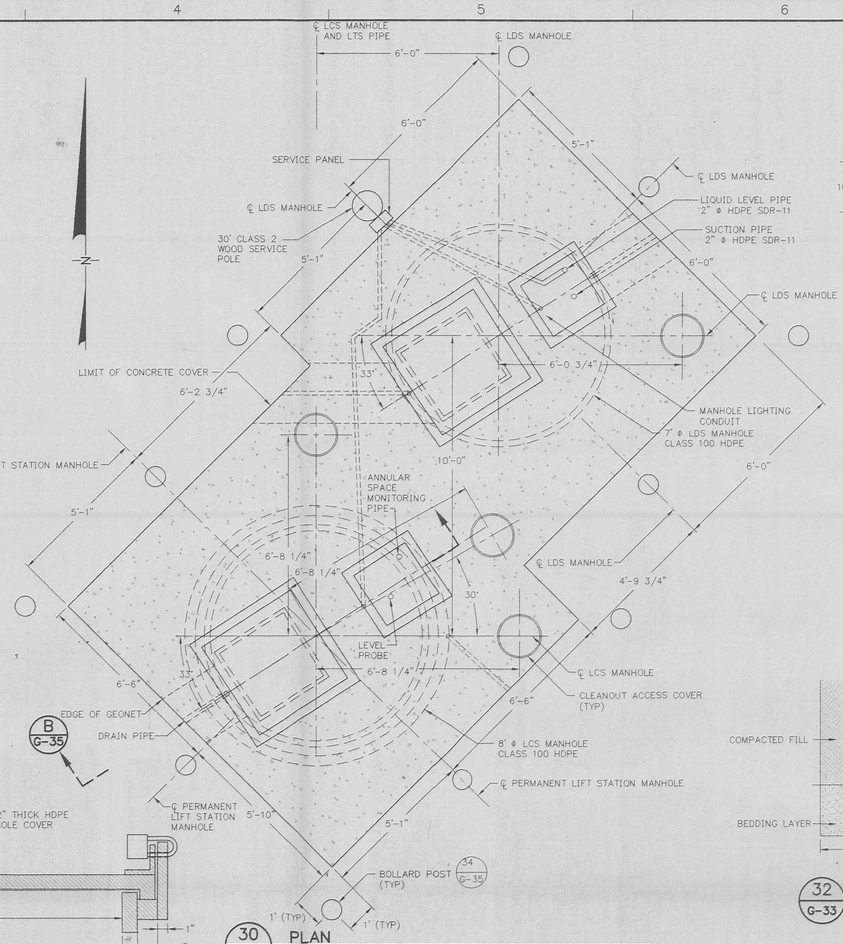
M:\GACAD2\CE3900-12\F95-B057 Sun Dec 17 11:27:53 1995



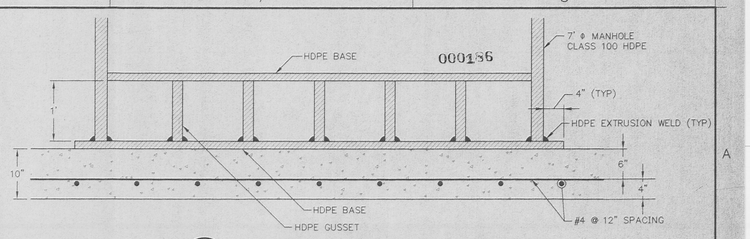
29 - PLAN
LDS AND LCS MANHOLE COVERS
SCALE: 1" = 2'



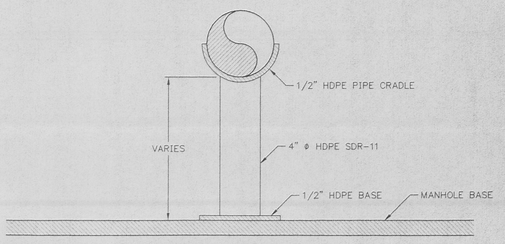
31 G-35 DETAIL
MANHOLE COVER LOCK
SCALE: 1" = 6"



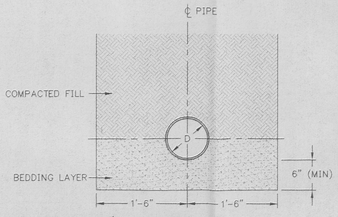
30 - PLAN
LIFT STATION AND LCS MANHOLE COVERS
SCALE: 1" = 2'



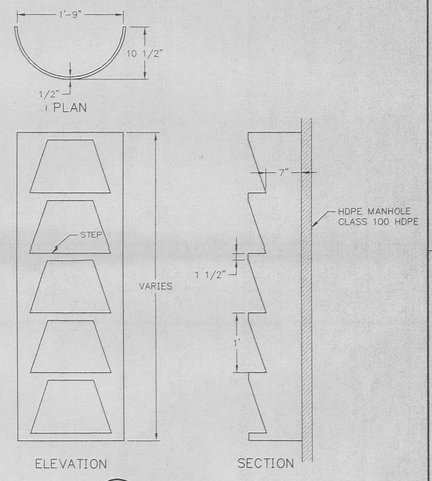
35 G-33 DETAIL
MANHOLE BASE
SCALE: 1" = 1'



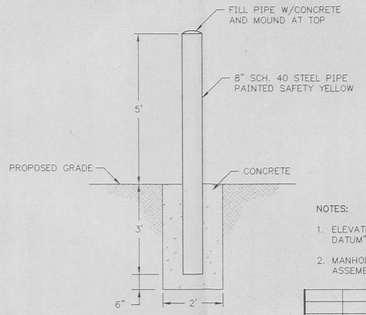
33 G-33 DETAIL
PIPE SUPPORT
SCALE: 1" = 6"



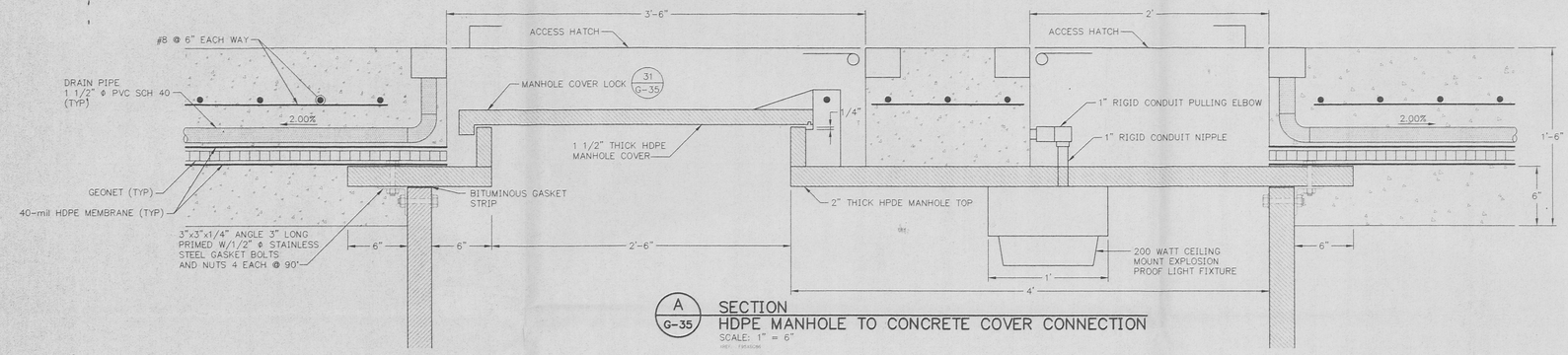
32 G-33 DETAIL
PIPE EMBEDMENT
NTS



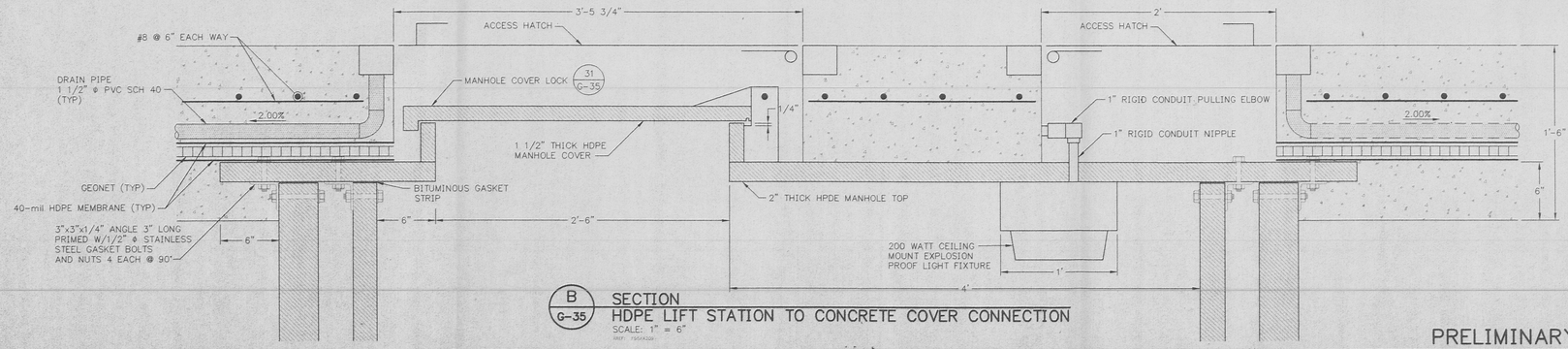
36 G-33 DETAIL
HDPE LADDER
SCALE: 1" = 1'



34 G-35 DETAIL
BOLLARD POST
SCALE: 1" = 2'



A G-35 SECTION
HDPE MANHOLE TO CONCRETE COVER CONNECTION
SCALE: 1" = 6"



B G-35 SECTION
HDPE LIFT STATION TO CONCRETE COVER CONNECTION
SCALE: 1" = 6"

002306

NOTES:

1. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
2. MANHOLES SHALL BE SHOP FABRICATED AND DELIVERED TO SITE FULLY ASSEMBLED WITH 1-FOOT MIMIMUM CONTAINMENT PIPE STUBS.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE AS SHOWN

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
LEACHATE TRANSMISSION SYSTEM GRAVITY LINE AND MANHOLES DETAILS III

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GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00035
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B058
SHEET NO.: G-35
REVISION NO.: B

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233650-14

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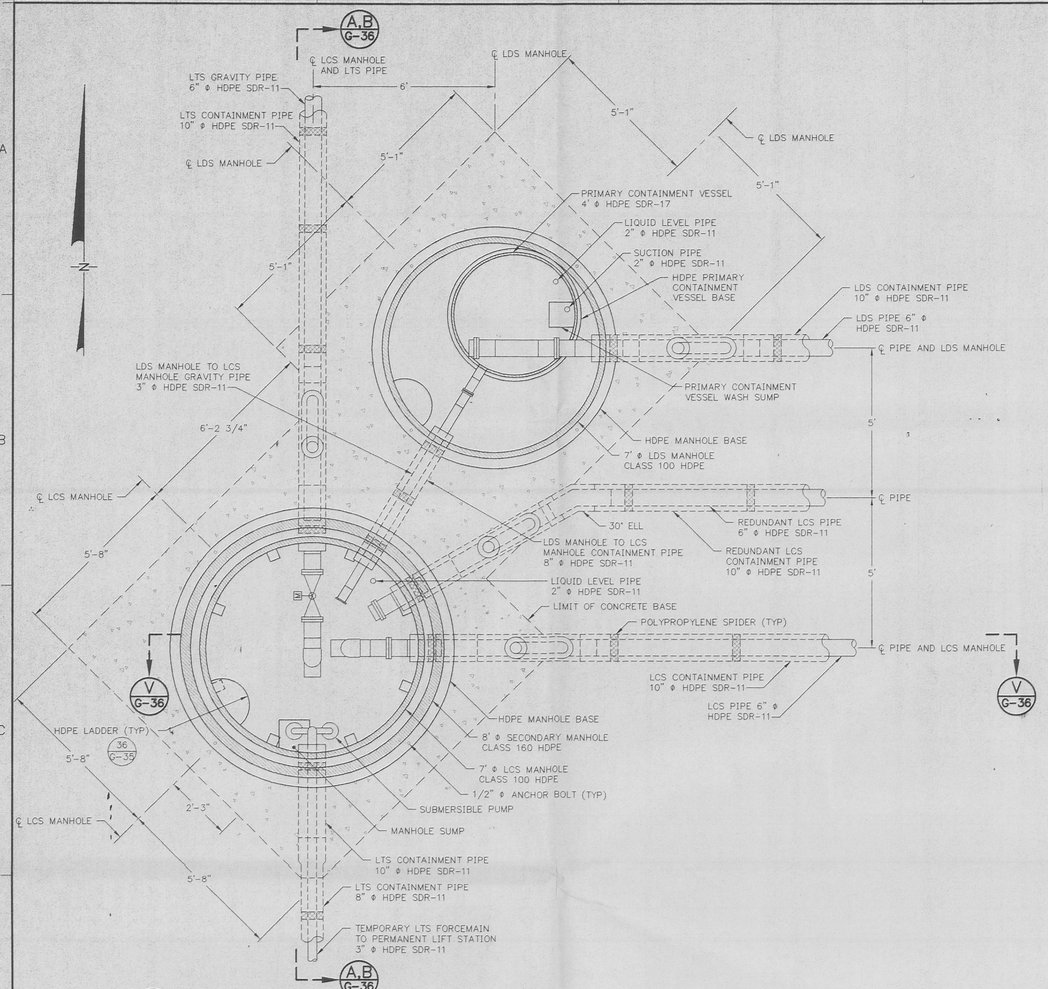
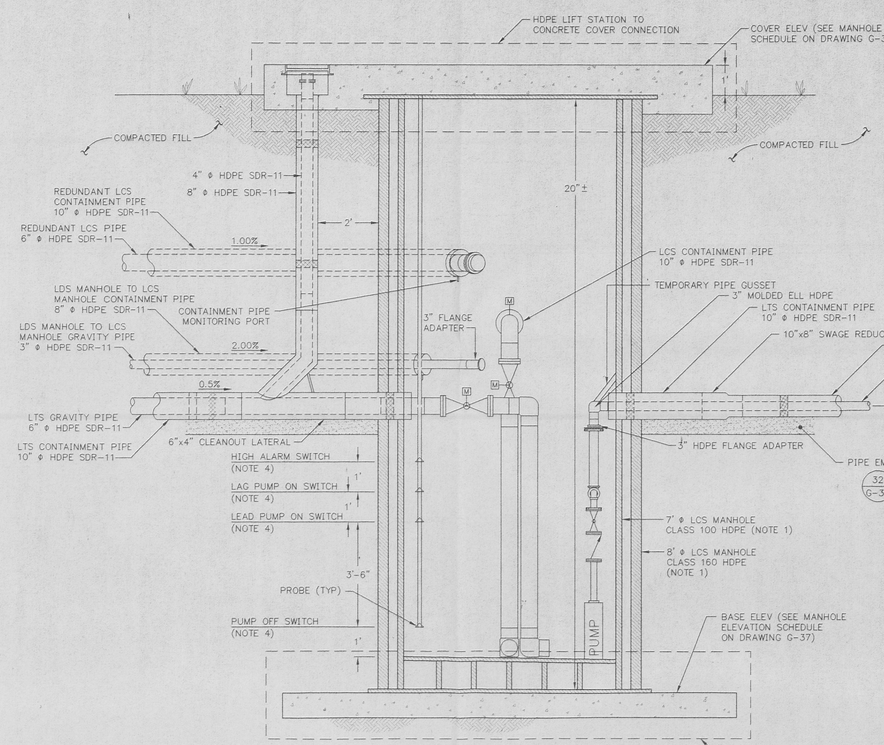
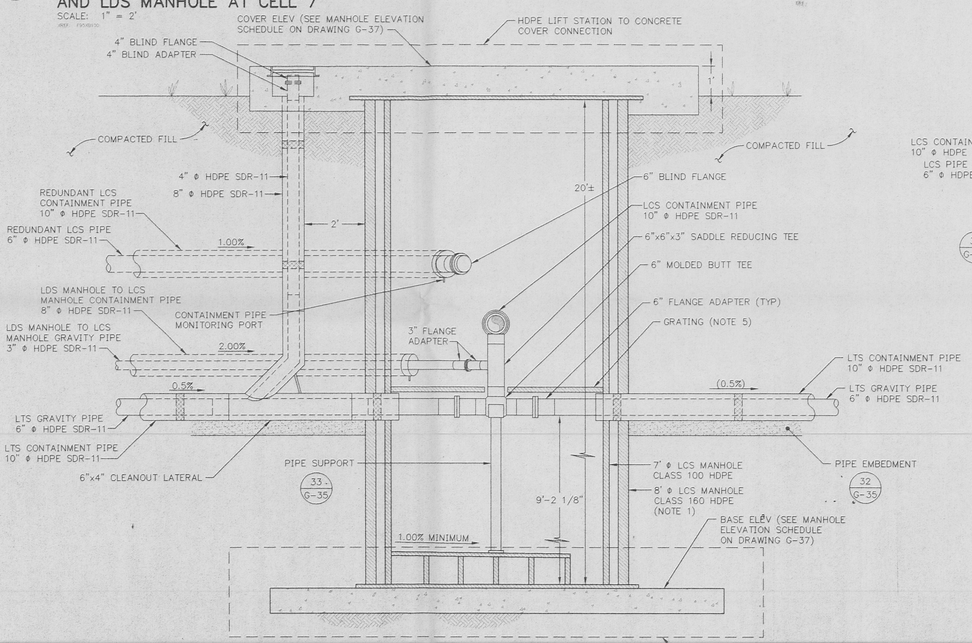


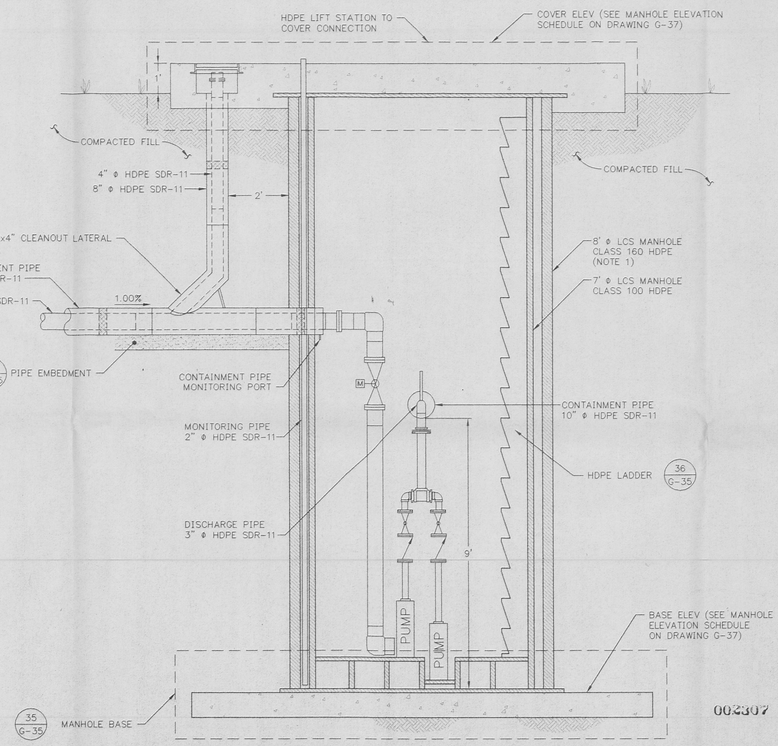
37 G-5 SECTIONAL PLAN
TEMPORARY LIFT STATION AND LDS MANHOLE AT CELL 7
SCALE: 1" = 2'



A G-36 SECTION
TEMPORARY LIFT STATION AT CELL 7
SCALE: 1" = 2'



B G-36 SECTION
LCS MANHOLE AT CELL 7 (NOTE 3)
SCALE: 1" = 2'



C G-36 SECTION
TEMPORARY LIFT STATION AT CELL 7 (NOTE 6)
SCALE: 1" = 2'

NOTES:

1. MANHOLES SHALL BE SHOP FABRICATED AND DELIVERED TO SITE FULLY ASSEMBLED WITH 1-FEET MINIMUM CONTAINMENT PIPE STUBS.
2. BALL VALVE IN LCS MANHOLE IS TEMPORARY AND SHALL BE INSTALLED TO REGULATE FLOW IN THE LTS GRAVITY LINE DURING CONSTRUCTION. BALL VALVE WILL BE REMOVED AND REPLACED WITH SOLID WALL HDPE PIPE AFTER CONSTRUCTION OF CELL 9.
3. TEMPORARY LIFT STATION SHALL BE CONSTRUCTED IN THE PERMANENT LCS MANHOLE AT CELL 7. TEMPORARY LIFT STATION SHALL BE CONVERTED TO THE PERMANENT LCS MANHOLE AT CELL 7 AFTER CONSTRUCTION OF LCS MANHOLES 8 AND 9.
4. PUMPS WILL ALTERNATE LEAD AND LAG PUMP DESIGNATION WITH EACH DISCHARGE CYCLE. PUMPS WILL ALTERNATE DISCHARGE CYCLES. EACH PUMP WILL BE INDEPENDENTLY CAPABLE OF CONVEYING THE DESIGN DISCHARGE TO THE PERMANENT LIFT STATION. LAG PUMP WILL CONVEY EXECESS DISCHARGE IN THE EVENT OF AN EMERGENCY (E.G., LEAD PUMP FOLW CONTROL VALVE TO DISCONTINUE FLOW TO THE LIFT STATION. AT THE TIME WHEN HIGH ALARM SWITCH IS ACTIVATED, THE LEAD AND LAG PUMPS WILL COMPLETE THE DISCHARGE CYCLE UNTIL SHUT-OFF OF THE PUMPS IS ACTIVATED BY THE PUMP OFF SWITCH.
5. GRATING SHALL BE DESIGNED FOR A MINIMUM OF 300 POUNDS PER SQUARE FOOT.
6. LTS GRAVITY PIPE IS NOT SHOWN FOR CLARITY.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE AS SHOWN

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Fernald Environmental Restoration Management Corporation
FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
LEACHATE TRANSMISSION SYSTEM
LIFT STATION DETAILS I

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GEO SYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.:	95PS005028
FERMCO DRAWING NO.:	90X-6000-G-00036
GEOSYNTEC PROJECT NO.:	GE3900-11
GEOSYNTEC DOCUMENT NO.:	F95-B054
SHEET NO.:	G-36
REVISION NO.:	B

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23360-15

N:\F95-B054 Sun Dec 17 11:36:07 1995

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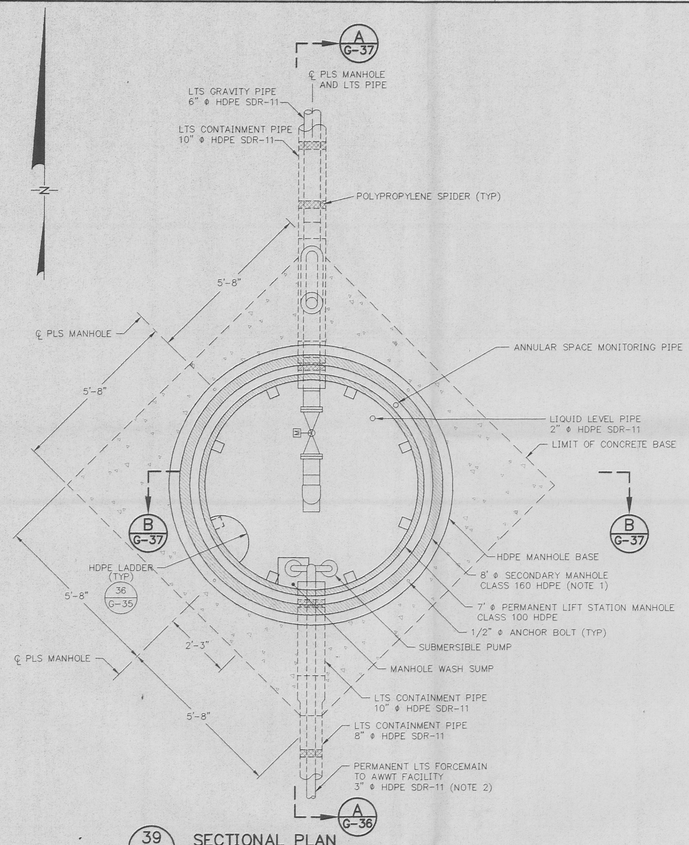
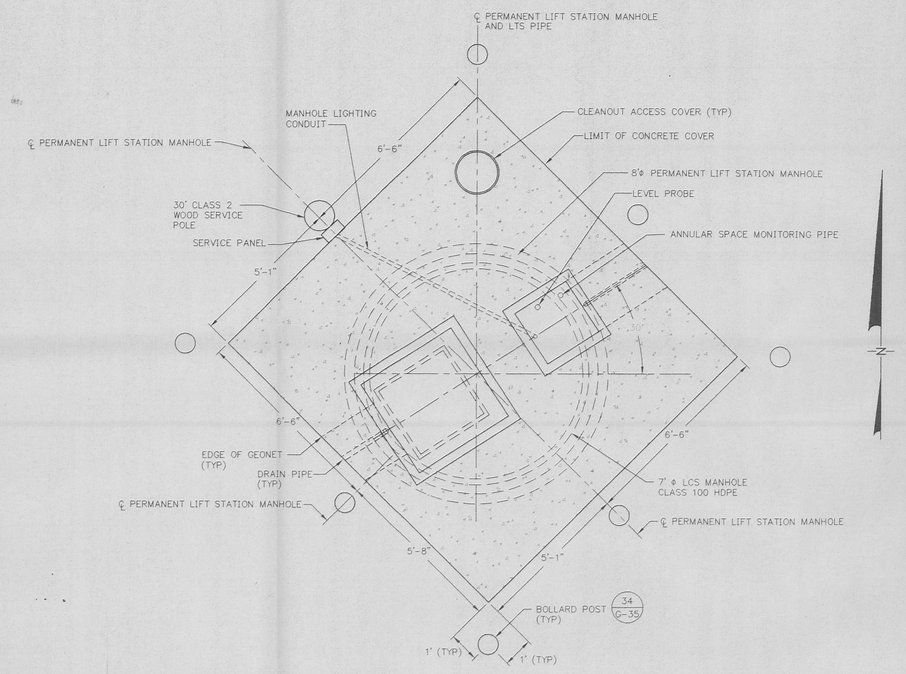


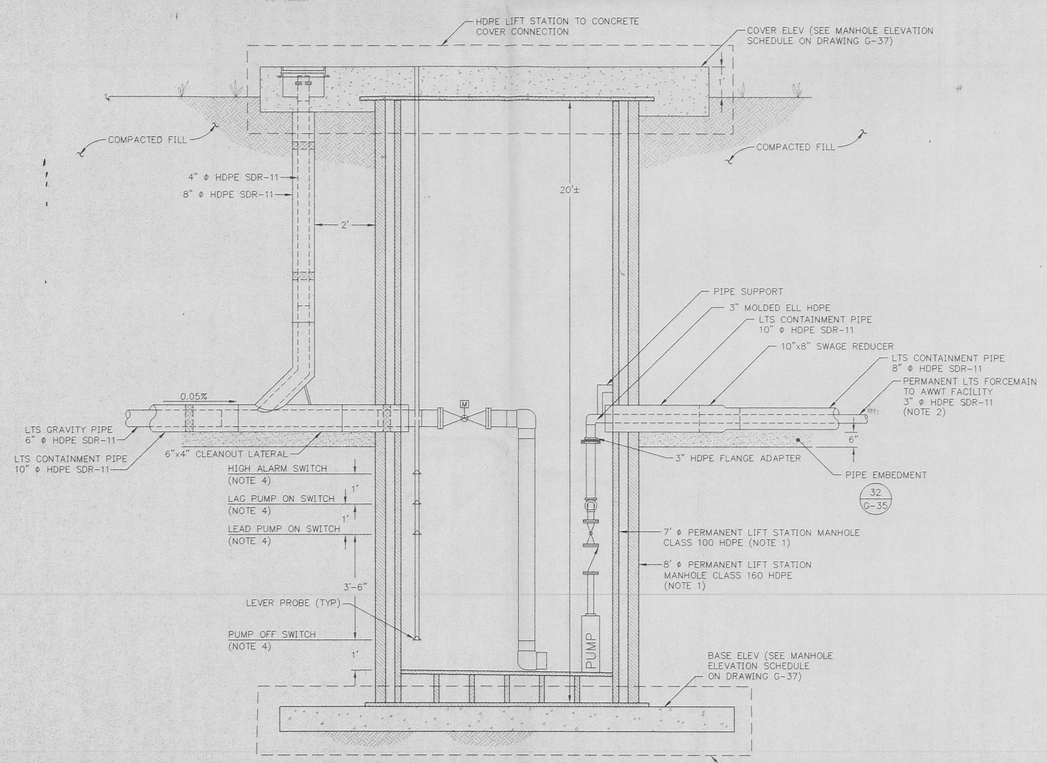
39 G-5 SECTIONAL PLAN
PERMANENT LIFT STATION
SCALE: 1" = 2'



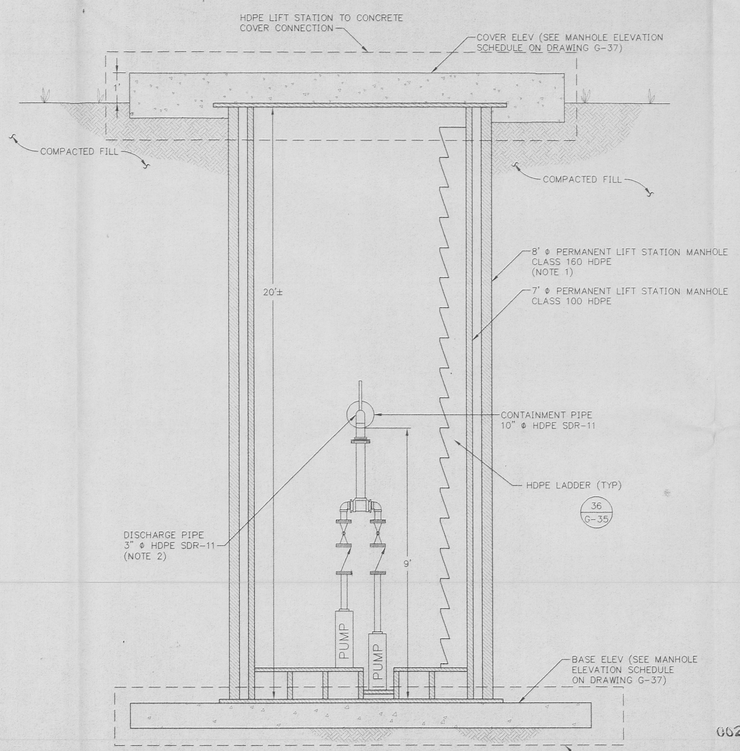
38 - PLAN
PERMANENT LIFT STATION COVER
SCALE: 1" = 2'

LCS MANHOLE ELEVATION SCHEDULE (NOTE 1)							
LCS MANHOLE NUMBER	TOP OF MANHOLE COVER ELEV	BOTTOM OF MANHOLE BASE ELEV	GRAVITY LINE INVERT AT INLET	GRAVITY LINE INVERT AT OUTLET	LCS PIPE INVERT	REDUNDANT LCS PIPE INVERT	LDS TO LCS MANHOLE GRAVITY PIPE INVERT

LDS MANHOLE ELEVATION SCHEDULE (NOTE 1)						
LDS MANHOLE NUMBER	TOP OF MANHOLE COVER ELEV	BOTTOM OF MANHOLE BASE ELEV	GRAVITY LINE INVERT AT INLET	GRAVITY LINE INVERT AT OUTLET	LDS PIPE INVERT	LDS TO LCS MANHOLE GRAVITY PIPE INVERT



A G-37 SECTION
PERMANENT LIFT STATION
SCALE: 1" = 2'



B G-37 SECTION
PERMANENT LIFT STATION (NOTE 3)
SCALE: 1" = 2'

NOTES:

1. MANHOLES SHALL BE SHOP FABRICATED AND DELIVERED TO SITE FULLY ASSEMBLED WITH 1-FOOT MINIMUM CONTAINMENT PIPE STUBS.
2. PIPING AND INSTRUMENTATION WITHIN PERAMENT LIFT STATION IS PROVIDED FOR ILLUSTRATION PURPOSES ONLY AND NOT PART OF THE CONTRACT. SEE SEPARATE DESIGN FOR THE DESIGN OF THE FORCE MAIN FROM THE PERMANENT LIFT STATION TO THE AWWT FACILITY (INCLUDES LIFT STATION PUMP REQUIREMENTS, VALVES, AND DOUBLE WALL HDPE FORCEMAIN).
3. LTS GRAVITY LINE IS NOT SHOWN FOR CLARITY.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE AS SHOWN

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Fernald Environmental Restoration Management Corporation
FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
LEACHATE TRANSMISSION SYSTEM
LIFT STATION DETAILS II

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1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.:	95PS005028
FERMCO DRAWING NO.:	90X-6000-G-00037
GEOSYNTEC PROJECT NO.:	GE3900-11
GEOSYNTEC DOCUMENT NO.:	F95-B059
SHEET NO.:	G-37
REVISION NO.:	B

002308

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23360_16

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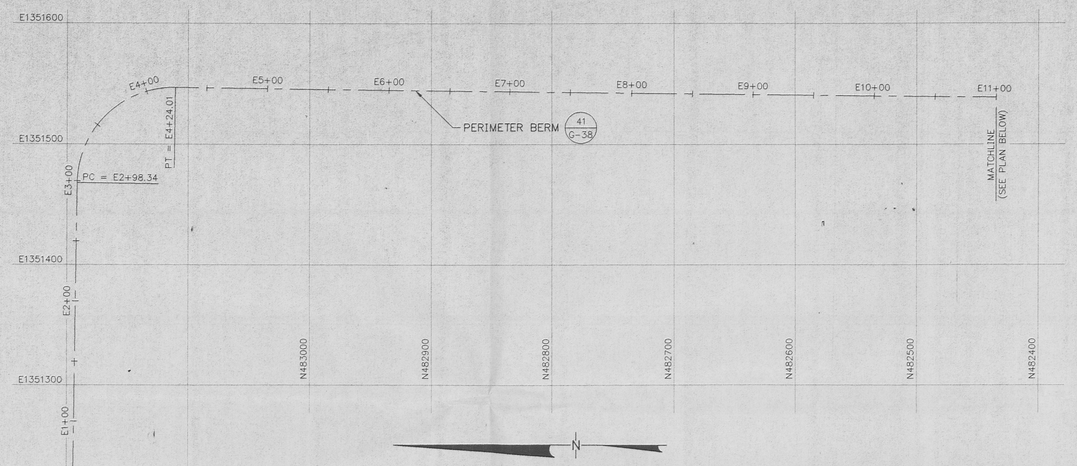
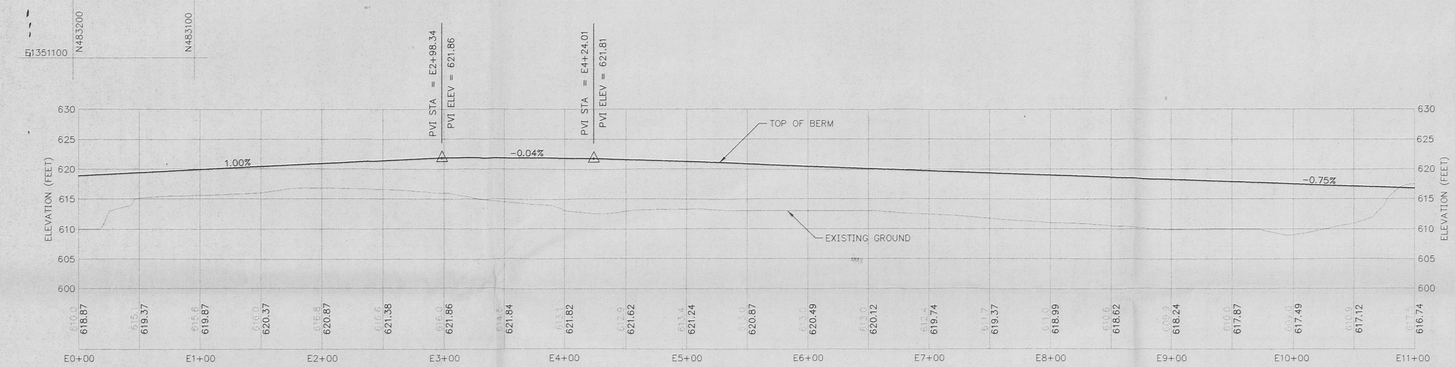
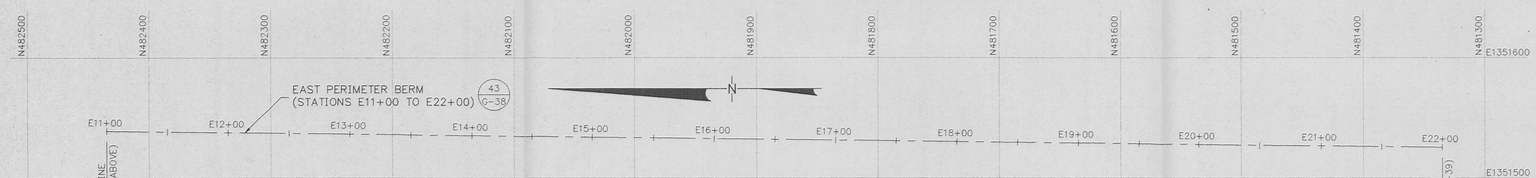


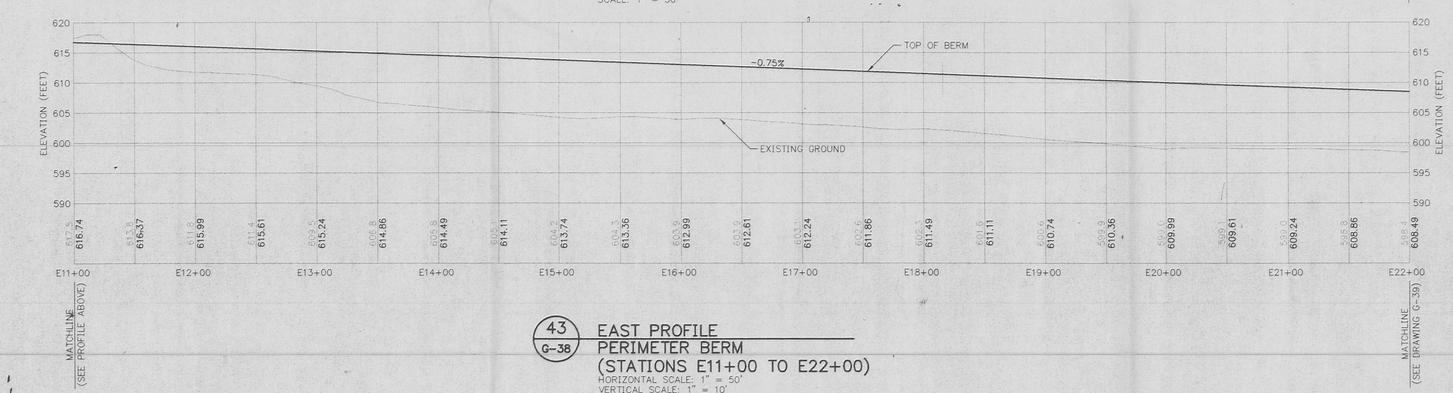
40 / G-5 EAST PLAN
PERIMETER BERM
(STATIONS E0+00 TO E11+00)
SCALE: 1" = 50'



41 / G-38 EAST PROFILE
PERIMETER BERM
(STATIONS E0+00 TO E11+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'

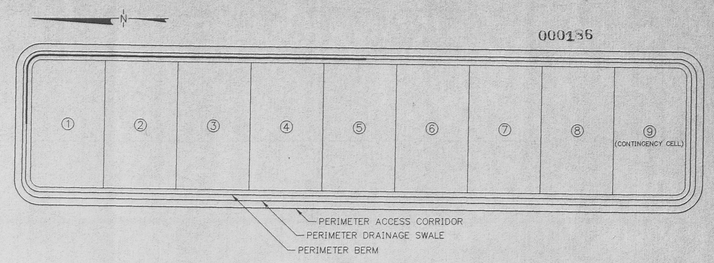


42 / G-5 EAST PLAN
PERIMETER BERM
(STATIONS E11+00 TO E22+00)
SCALE: 1" = 50'



43 / G-38 EAST PROFILE
PERIMETER BERM
(STATIONS E11+00 TO E22+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'

000136



KEY MAP

Horizontal Alignment Station and Curve Report (NOTE 4)
PERIMETER BERM EAST

Desc.	Station	Spiral/Curve Data		Northing	Easting
POB	E0+00			483195.3758	1351169.6401
	Length:	378.34	Course:	S 89-17-59 E	
PI	E3+78.34			483190.7521	1351547.9542
	Length:	3654.01	Course:	S 00-42-01 W	
	Delta:	90-00-00			
		Tangent Data			
	E0+00			483195.3758	1351169.6401
	E2+98.34			483191.7298	1351467.9602
	Length:	298.34	Course:	S 89-17-59 E	
		Circular Curve Data			
PC	E2+98.34			483191.7298	1351467.9602
RP				483111.7358	1351466.9826
PT	E4+24.01			483110.7581	1351546.9766
	Delta:	90-00-00	Type:	RIGHT	
	Radius:	80.00	DOC:	71-37-11	
	Length:	125.66	Tangent:	80.00	
	Mid-Ord:	23.43	External:	33.14	
	Chord:	113.14	Course:	S 44-17-59 E	
	Es:	33.14			
PI	E39+98.02			479537.0114	1351503.2990
	Length:	378.34	Course:	N 89-17-59 W	
	Delta:	90-00-00			
		Tangent Data			
	E4+24.01			483110.7581	1351546.9766
	E39+18.02			479617.0054	1351504.2767
	Length:	3494.01	Course:	S 00-42-01 W	
		Circular Curve Data			
PC	E39+18.02			479617.0054	1351504.2767
RP				479617.9831	1351424.2827
PT	E40+43.68			479537.9891	1351423.3050
	Delta:	90-00-00	Type:	RIGHT	
	Radius:	80.00	DOC:	71-37-11	
	Length:	125.66	Tangent:	80.00	
	Mid-Ord:	23.43	External:	33.14	
	Chord:	113.14	Course:	S 45-42-01 W	
	Es:	33.14			
POE	E43+42.03			479541.6351	1351124.9849
		Tangent Data			
	E40+43.68			479537.9891	1351423.3050
	E43+42.03			479541.6351	1351124.9849
	Length:	298.34	Course:	N 89-17-59 W	

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE EASTERN PORTION OF PERIMETER BERM AND IS REPEATED ON PERIMETER BERM EAST PLAN AND PROFILE DATA II.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

50 25 0 50 100 SCALE IN FEET
10 5 0 10 20 SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Fernald Environmental Restoration Management Corporation
FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
CELL PERIMETER BERM
EAST PLAN AND PROFILE DATA I

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1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.:	95PS005028
FERMCO DRAWING NO.:	90X-6000-G-00038
GEOSYNTEC PROJECT NO.:	GE3900-11
GEOSYNTEC DOCUMENT NO.:	F95-8030
SHEET NO.:	G-38
REVISION NO.:	B

000309

PRELIMINARY DESIGN PACKAGE

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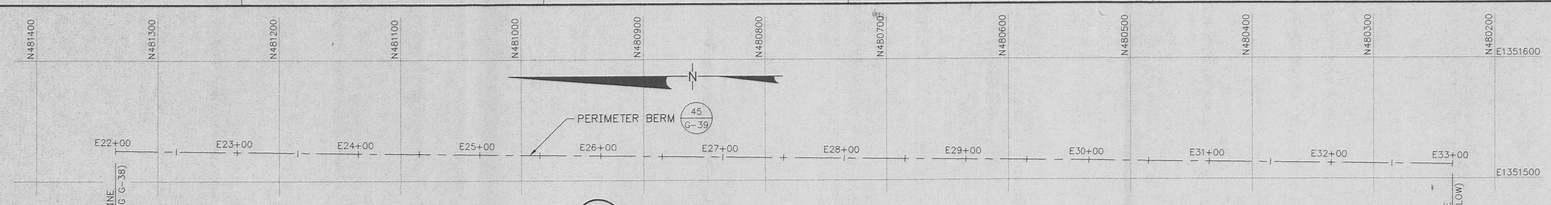
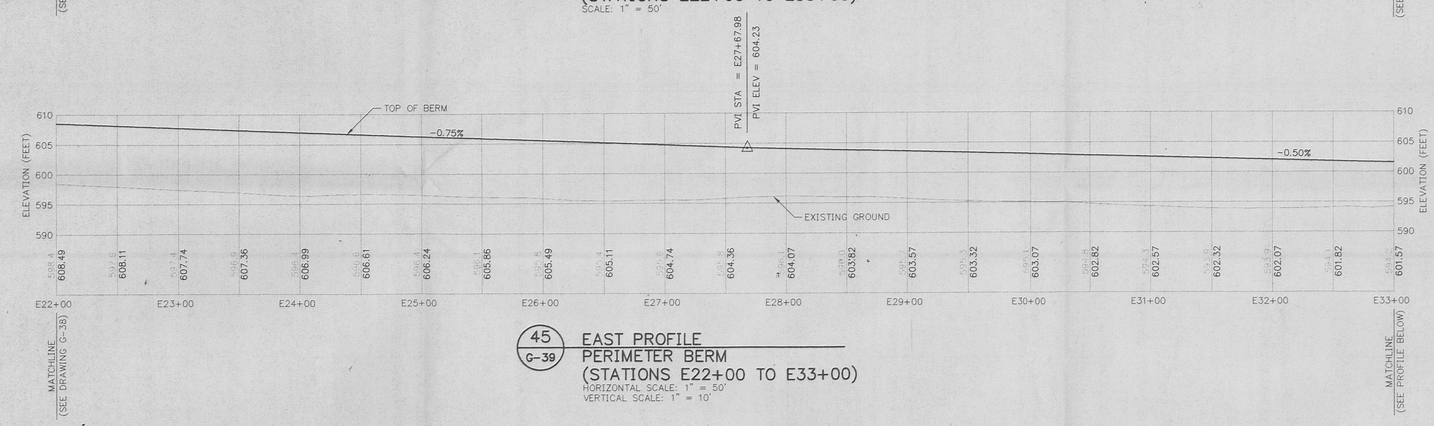
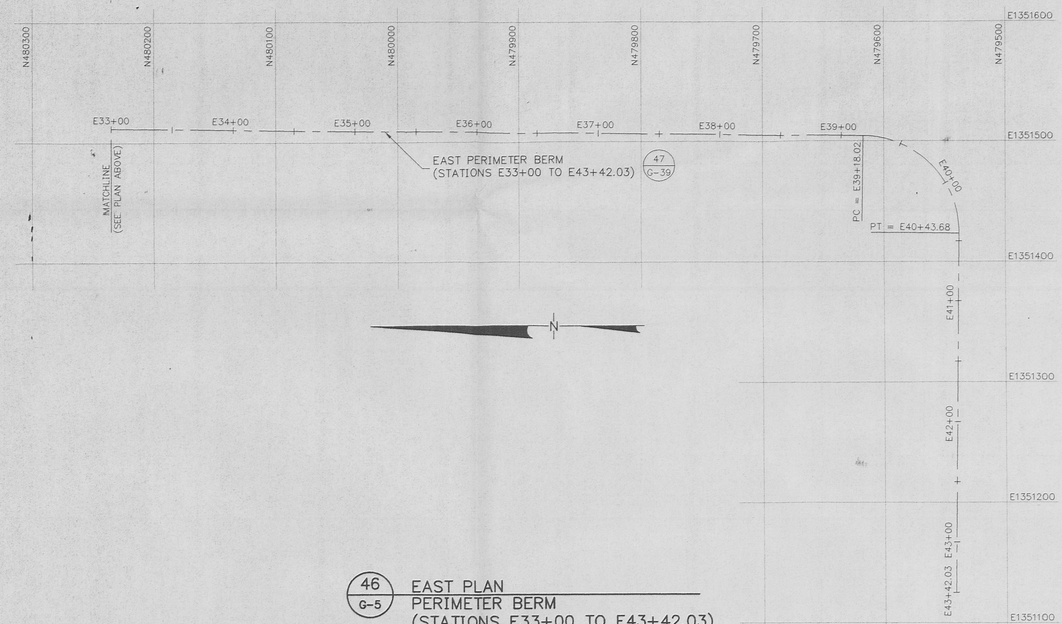
233650_17



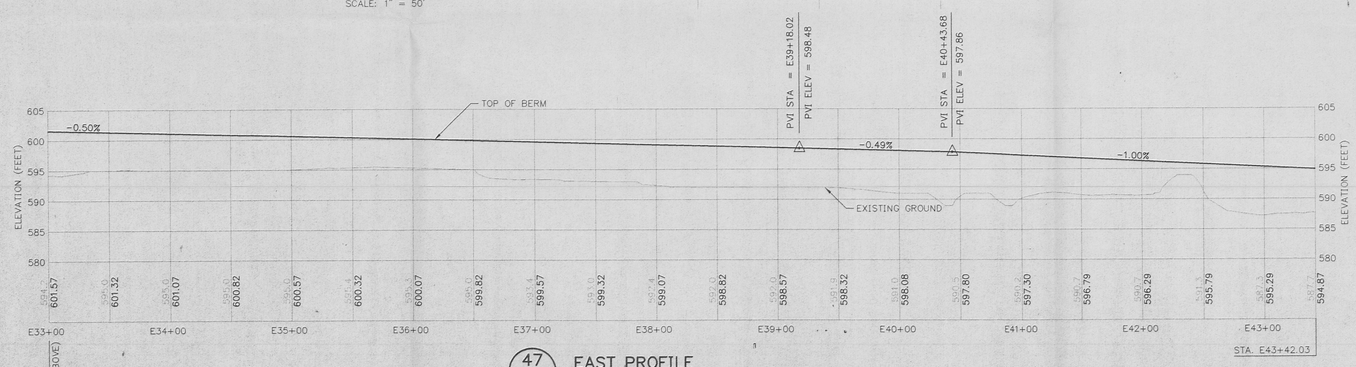
44 G-5 EAST PLAN
PERIMETER BERM
(STATIONS E22+00 TO E33+00)
SCALE: 1" = 50'



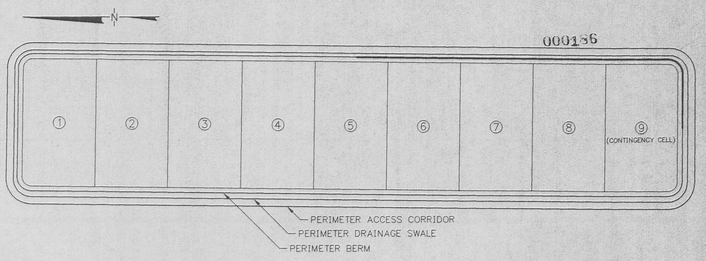
45 G-39 EAST PROFILE
PERIMETER BERM
(STATIONS E22+00 TO E33+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



46 G-5 EAST PLAN
PERIMETER BERM
(STATIONS E33+00 TO E43+42.03)
SCALE: 1" = 50'



47 G-39 EAST PROFILE
PERIMETER BERM
(STATIONS E33+00 TO E43+42.03)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



KEY MAP

Horizontal Alignment Station and Curve Report (NOTE 4)
PERIMETER BERM EAST

Desc.	Station	Spiral/Curve Data		Northing	Easting
POB	E0+00			483195.3758	1351169.6401
	Length:	378.34	Course:	S 89-17-59 E	
PI	E3+78.34			483190.7521	1351547.9542
	Length:	3654.01	Course:	S 00-42-01 W	
	Delta:	90-00-00			
		Tangent Data			
	E0+00			483195.3758	1351169.6401
	E2+98.34			483191.7298	1351467.9602
	Length:	298.34	Course:	S 89-17-59 E	
		Circular Curve Data			
PC	E2+98.34			483191.7298	1351467.9602
RP				483111.7358	1351466.9826
PT	E4+24.01			483110.7581	1351546.9766
	Delta:	90-00-00	Type:	RIGHT	
	Radius:	80.00	DOC:	71-37-11	
	Length:	125.66	Tangent:	80.00	
	Mid-Ord:	23.43	External:	33.14	
	Chord:	113.14	Course:	S 44-17-59 E	
	Es:	33.14			
PI	E39+98.02			479537.0114	1351503.2990
	Length:	378.34	Course:	N 89-17-59 W	
	Delta:	90-00-00			
		Tangent Data			
	E4+24.01			483110.7581	1351546.9766
	E39+18.02			479617.0054	1351504.2767
	Length:	3494.01	Course:	S 00-42-01 W	
		Circular Curve Data			
PC	E39+18.02			479617.0054	1351504.2767
RP				479617.9831	1351424.2827
PT	E40+43.68			479537.9891	1351423.3050
	Delta:	90-00-00	Type:	RIGHT	
	Radius:	80.00	DOC:	71-37-11	
	Length:	125.66	Tangent:	80.00	
	Mid-Ord:	23.43	External:	33.14	
	Chord:	113.14	Course:	S 45-42-01 W	
	Es:	33.14			
POE	E43+42.03			479541.6351	1351124.9849
		Tangent Data			
	E40+43.68			479537.9891	1351423.3050
	E43+42.03			479541.6351	1351124.9849
	Length:	298.34	Course:	N 89-17-59 W	

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE EASTERN PORTION OF PERIMETER BERM AND IS REPEATED ON PERIMETER BERM EAST PLAN AND PROFILE DATA I.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

50 25 0 50 100 SCALE IN FEET
10 5 0 10 20 SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
CELL PERIMETER BERM
EAST PLAN AND PROFILE DATA II

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

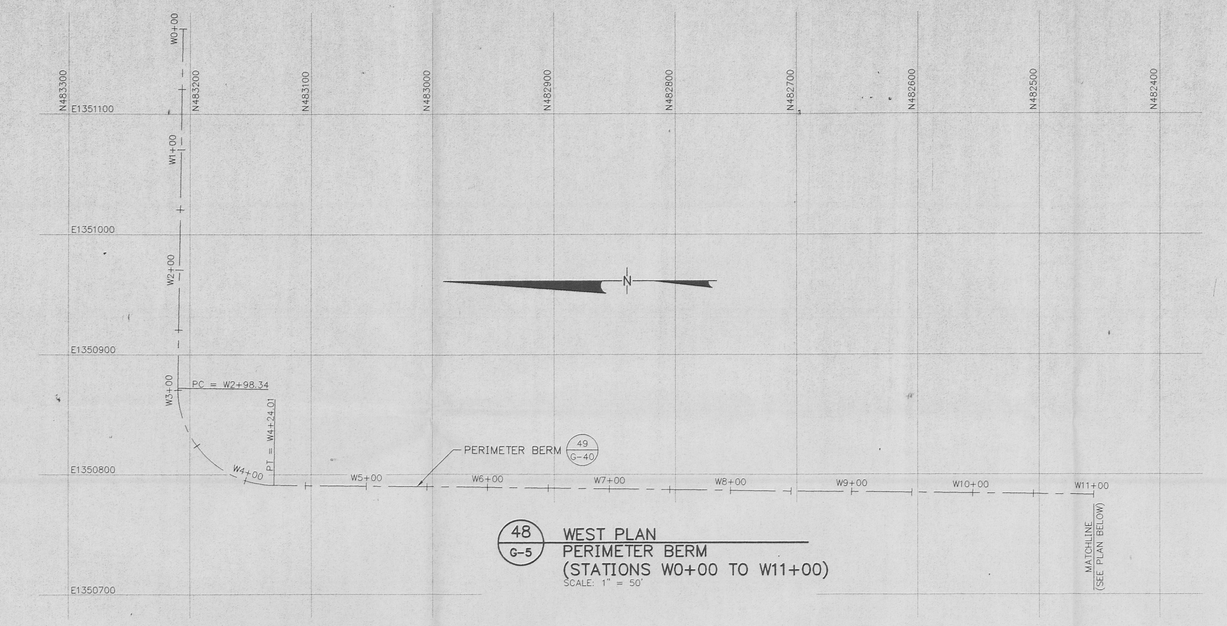
FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00039
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F96-8030
SHEET NO.: G-39
REVISION NO.: B

002510

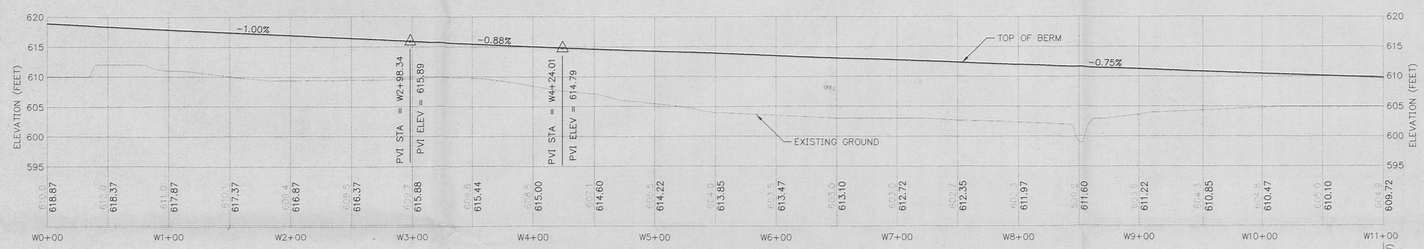
PRELIMINARY DESIGN PACKAGE

23360.18

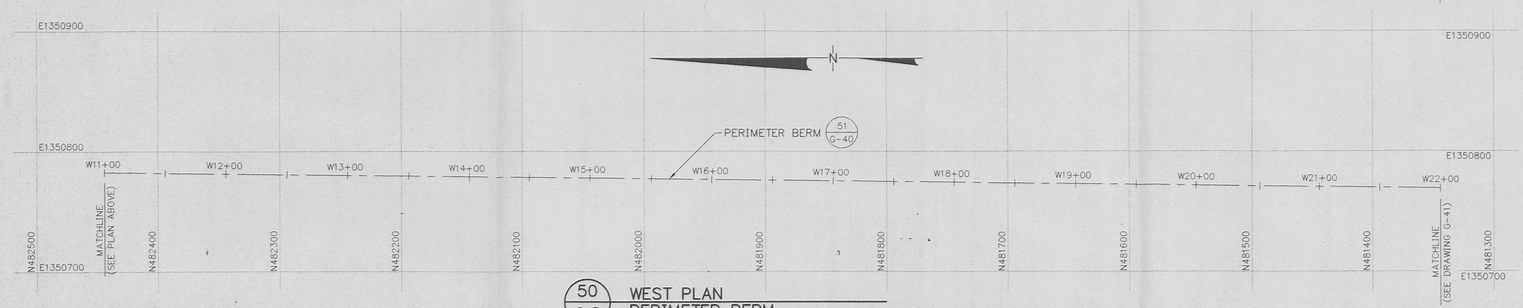
M:\DAGABD\DGE3900-12\F96-8030 Thu Dec 14 13:30:33 1995



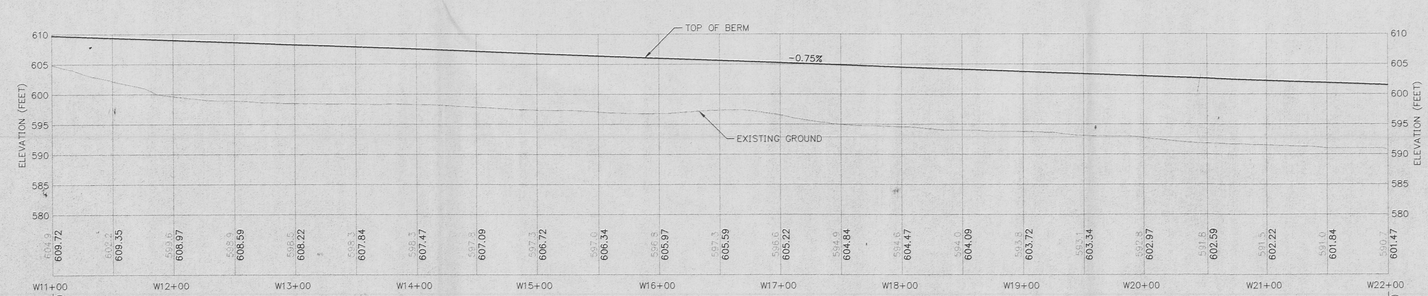
48 / G-5 WEST PLAN
PERIMETER BERM
(STATIONS W0+00 TO W11+00)
SCALE: 1" = 50'



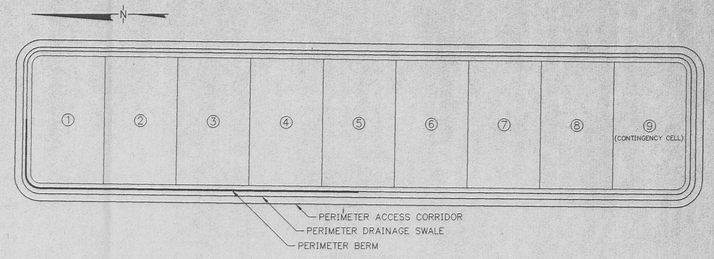
49 / G-40 WEST PROFILE
PERIMETER BERM
(STATIONS W0+00 TO W11+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



50 / G-5 WEST PLAN
PERIMETER BERM
(STATIONS W11+00 TO W22+00)
SCALE: 1" = 50'



51 / G-40 WEST PROFILE
PERIMETER BERM
(STATIONS W11+00 TO W22+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



KEY MAP

000156

Horizontal Alignment Station and Curve Report (NOTE 4)
PERIMETER BERM WEST

Desc.	Station	Spiral/Curve Data		Northing	Easting
POB	W0+00			483195.3758	1351169.6401
	Length:	378.34	Course:	N 89-17-59 W	
PI	W3+78.34			483199.9995	1350791.3260
	Length:	3654.01	Course:	S 00-42-01 W	
	Delta:	90-00-00			
		Tangent Data			
	W0+00			483195.3758	1351169.6401
	W2+98.34			483199.0218	1350871.3200
	Length:	298.34	Course:	N 89-17-59 W	
		Circular Curve Data			
PC	W2+98.34			483199.0218	1350871.3200
RP				483119.0278	1350870.3423
PT	W4+24.01			483120.0054	1350790.3483
	Delta:	90-00-00	Type:	LEFT	
	Radius:	80.00	DOC:	71-37-11	
	Length:	125.66	Tangent:	80.00	
	Mid-Ord:	23.43	External:	33.14	
	Chord:	113.14	Course:	S 45-42-01 W	
	Es:	33.14			
PI	W39+98.02			479546.2587	1350746.6707
	Length:	378.34	Course:	S 89-17-59 E	
	Delta:	90-00-00			
		Tangent Data			
	W4+24.01			483120.0054	1350790.3483
	W39+18.02			479626.2528	1350747.6484
	Length:	3494.01	Course:	S 00-42-01 W	
		Circular Curve Data			
PC	W39+18.02			479626.2528	1350747.6484
RP				479625.2751	1350827.6424
PT	W40+43.68			479545.2811	1350826.6648
	Delta:	90-00-00	Type:	LEFT	
	Radius:	80.00	DOC:	71-37-11	
	Length:	125.66	Tangent:	80.00	
	Mid-Ord:	23.43	External:	33.14	
	Chord:	113.14	Course:	S 44-17-59 E	
	Es:	33.14			
POE	W43+42.03			479541.6351	1351124.9849
		Tangent Data			
	W40+43.68			479545.2811	1350826.6648
	W43+42.03			479541.6351	1351124.9849
	Length:	298.34	Course:	S 89-17-59 E	

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE WESTERN PORTION OF PERIMETER BERM AND IS REPEATED ON PERIMETER BERM WEST PLAN AND PROFILE DATA II.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

50 25 0 50 100 SCALE IN FEET
10 5 0 10 20 SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Fernald Environmental Restoration Management Corporation
FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
CELL PERIMETER BERM
WEST PLAN AND PROFILE DATA I

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

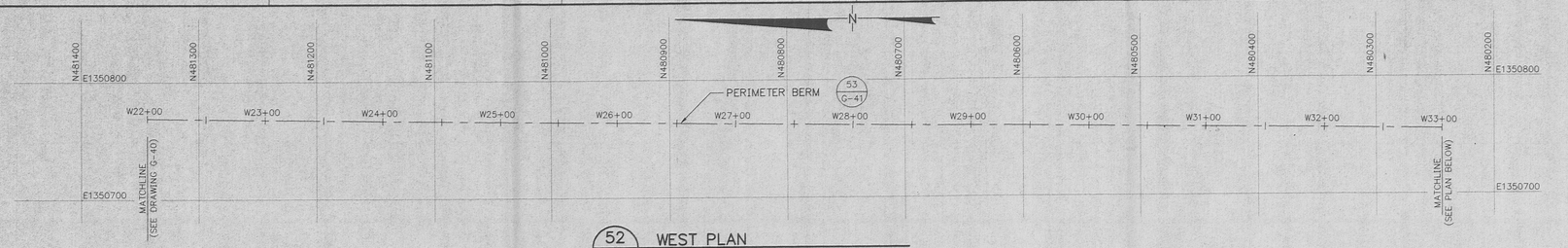
FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00040
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B030
SHEET NO.: G-40
REVISION NO.: B

000511

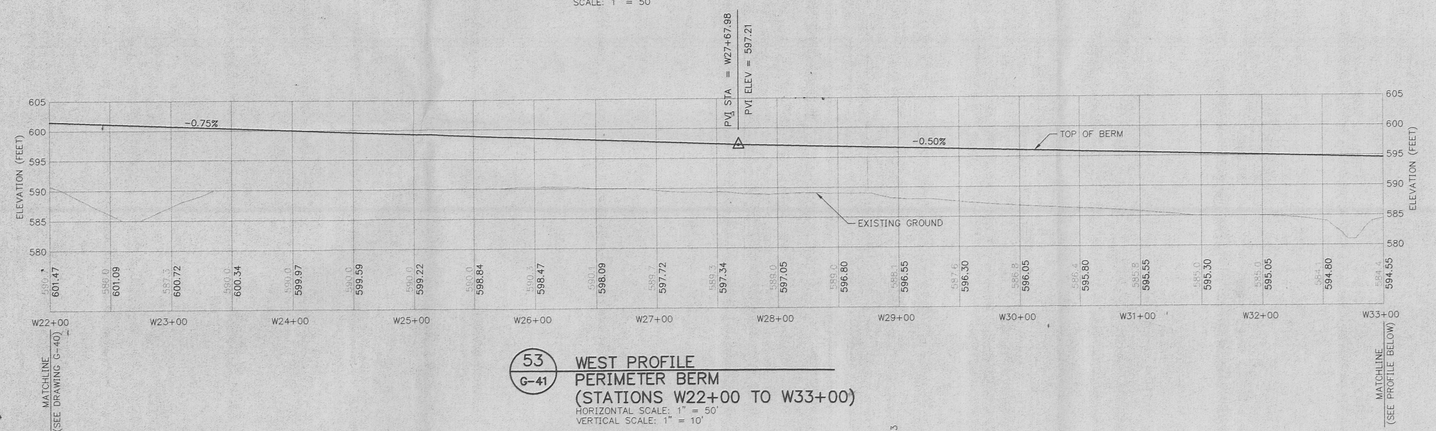
PRELIMINARY DESIGN PACKAGE

233650-19

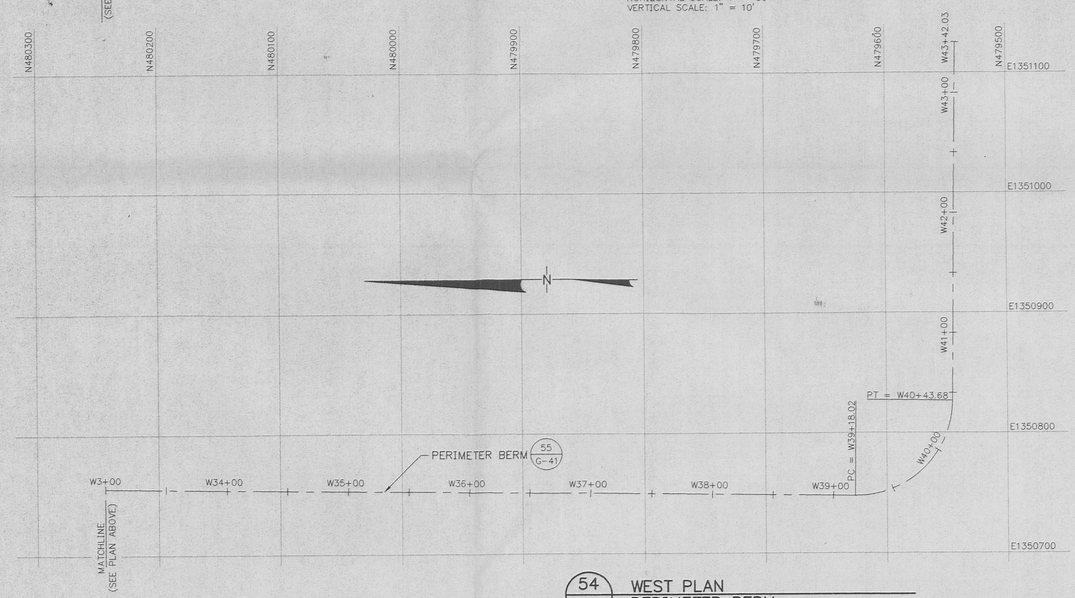
* UNCLASSIFIED; GE3900 - 12VT95-B030 Thu Dec 14 13:27:21 1995



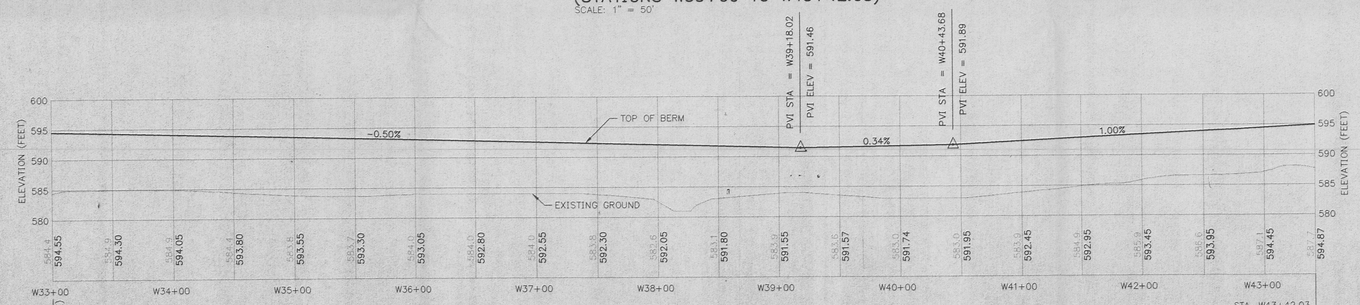
52 G-5 WEST PLAN
PERIMETER BERM
(STATIONS W22+00 TO W33+00)
SCALE: 1" = 50'



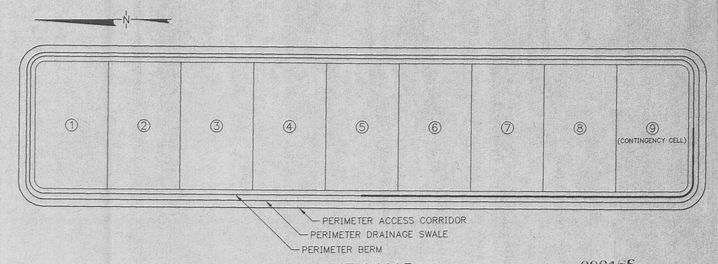
53 G-41 WEST PROFILE
PERIMETER BERM
(STATIONS W22+00 TO W33+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



54 G-5 WEST PLAN
PERIMETER BERM
(STATIONS W33+00 TO W43+42.03)
SCALE: 1" = 50'



55 G-41 WEST PROFILE
PERIMETER BERM
(STATIONS W33+00 TO W43+42.03)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



KEY MAP

000186

Horizontal Alignment Station and Curve Report (NOTE 4)
PERIMETER BERM WEST

Desc.	Station	Spiral/Curve Data		Northing	Easting
POB	W0+00			483195.3758	1351169.6401
	Length:	378.34	Course:	N 89-17-59 W	
PI	W3+78.34			483199.9995	1350791.3260
	Length:	3654.01	Course:	S 00-42-01 W	
	Delta:	90-00-00			
		Tangent Data			
	W0+00			483195.3758	1351169.6401
	W2+98.34			483199.0218	1350871.3200
	Length:	298.34	Course:	N 89-17-59 W	
		Circular Curve Data			
PC	W2+98.34			483199.0218	1350871.3200
RP				483119.0278	1350870.3423
PT	W4+24.01			483120.0054	1350790.3483
	Delta:	90-00-00	Type:	LEFT	
	Radius:	80.00	DOC:	71-37-11	
	Length:	125.66	Tangent:	80.00	
	Mid-Ord:	23.43	External:	33.14	
	Chord:	113.14	Course:	S 45-42-01 W	
	Es:	33.14			
PI	W39+98.02			479546.2587	1350746.6707
	Length:	378.34	Course:	S 89-17-59 E	
	Delta:	90-00-00			
		Tangent Data			
	W4+24.01			483120.0054	1350790.3483
	W39+18.02			479626.2528	1350747.6484
	Length:	3494.01	Course:	S 00-42-01 W	
		Circular Curve Data			
PC	W39+18.02			479626.2528	1350747.6484
RP				479625.2751	1350827.6424
PT	W40+43.68			479545.2811	1350826.6648
	Delta:	90-00-00	Type:	LEFT	
	Radius:	80.00	DOC:	71-37-11	
	Length:	125.66	Tangent:	80.00	
	Mid-Ord:	23.43	External:	33.14	
	Chord:	113.14	Course:	S 44-17-59 E	
	Es:	33.14			
POE	W43+42.03			479541.6351	1351124.9849
		Tangent Data			
	W40+43.68			479545.2811	1350826.6648
	W43+42.03			479541.6351	1351124.9849
	Length:	298.34	Course:	S 89-17-59 E	

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE WESTERN PORTION OF PERIMETER BERM AND IS REPEATED ON PERIMETER BERM WEST PLAN AND PROFILE DATA I.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

50 25 0 50 100 SCALE IN FEET
10 5 0 10 20 SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Restoration Management Corporation
FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
CELL PERIMETER BERM
WEST PLAN AND PROFILE DATA II

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GeoSyntec Consultants
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

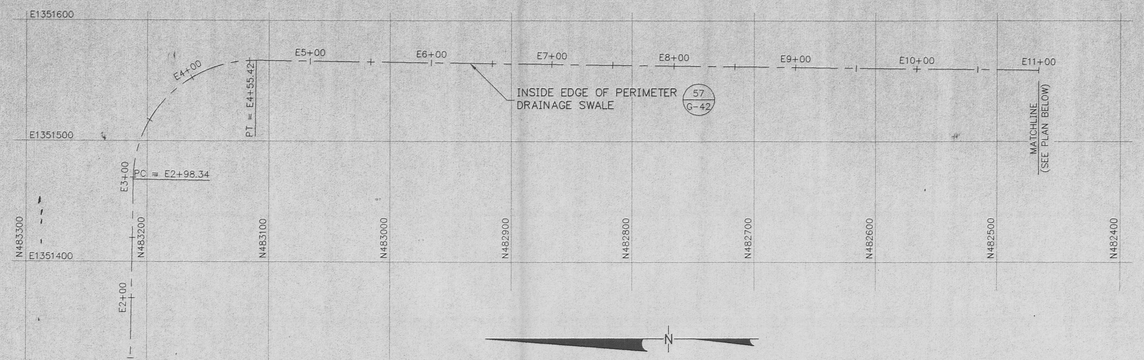
FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00041
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B030
SHEET NO.: G-41
REVISION NO.: B

PRELIMINARY DESIGN PACKAGE

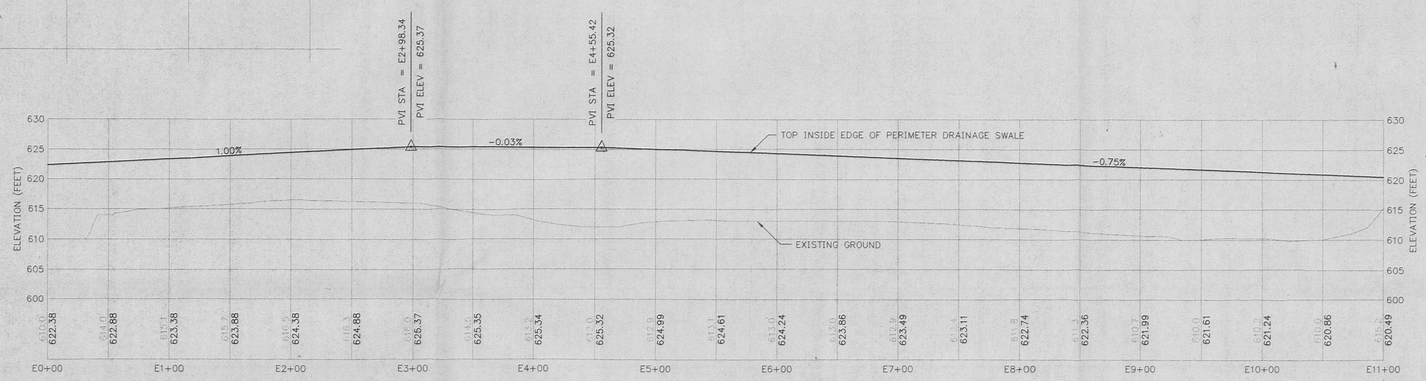
002512

23680-20

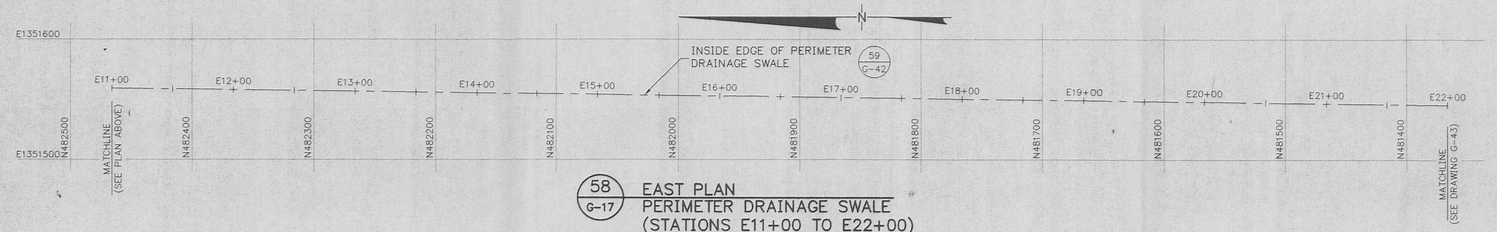
W:\GAUDEP\GE3900-12\F95-B030 Thu Dec 14 13:08:40 1995



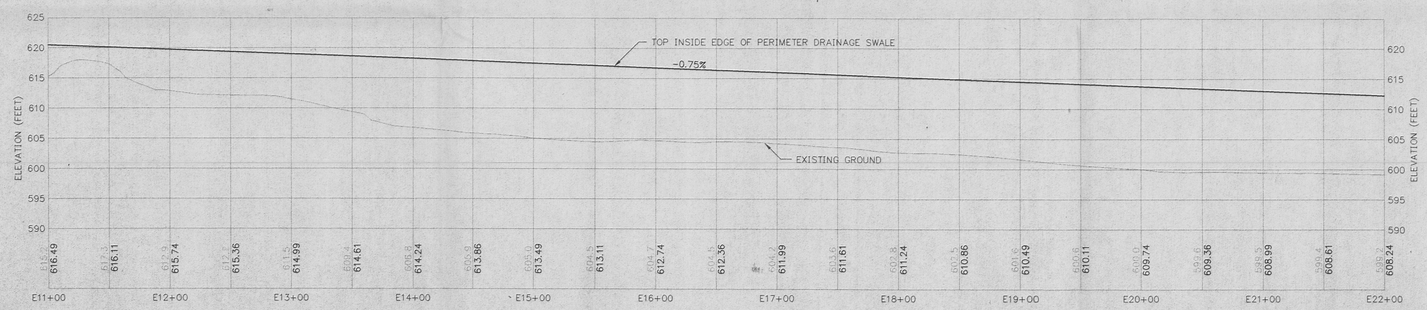
56 G-17 EAST PLAN
PERIMETER DRAINAGE SWALE
(STATIONS E0+00 TO E11+00)
SCALE: 1" = 50'



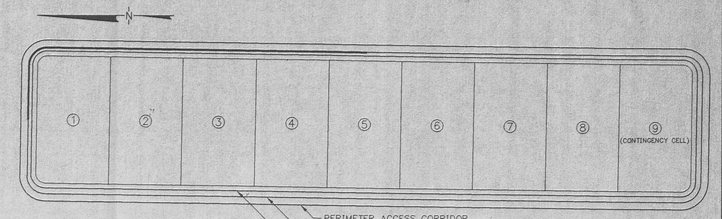
57 G-42 EAST PROFILE
PERIMETER DRAINAGE SWALE
(STATIONS E0+00 TO E11+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



58 G-17 EAST PLAN
PERIMETER DRAINAGE SWALE
(STATIONS E11+00 TO E22+00)
SCALE: 1" = 50'



59 G-42 EAST PROFILE
PERIMETER DRAINAGE SWALE
(STATIONS E11+00 TO E22+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



KEY MAP

000186

Horizontal Alignment Station and Curve Report (NOTE 4)
PERIMETER DRAINAGE SWALE EAST

Desc.	Station	Spiral/Curve Data		Northing	Easting
POB	E0+00			483215.3743	1351169.8845
	Length:	398.34	Course:	S 89-17-59 E	
PI	E3+98.34			483210.5062	1351568.1972
	Length:	100.00	Course:	S 00-42-01 W	
	Delta:	90-00-00			
		Tangent Data			
	E0+00			483215.3743	1351169.8845
	E2+98.34			483211.7283	1351468.2046
	Length:	298.34	Course:	S 89-17-59 E	
		Circular Curve Data			
PC	E2+98.34			483211.7283	1351468.2046
RP				483111.7357	1351466.9825
PT	E4+55.42			483110.5137	1351566.9752
	Delta:	90-00-00	Type:	RIGHT	
	Radius:	100.00	DOC:	57-17-45	
	Length:	157.08	Tangent:	100.00	
	Mid-Ord:	29.29	External:	41.42	
	Chord:	141.42	Course:	S 44-17-59 E	
	Es:	41.42			
PI	E4+55.42			483110.5137	1351566.9752
	Length:	3603.01	Course:	S 00-42-01 W	
	Delta:	0-00-00			
PI	E40+58.44			479507.7691	1351522.9432
	Length:	398.34	Course:	N 89-17-59 W	
	Delta:	90-00-00			
		Tangent Data			
	E4+55.42			483110.5137	1351566.9752
	E39+58.44			479607.7617	1351524.1653
	Length:	3503.01	Course:	S 00-42-01 W	
		Circular Curve Data			
PC	E39+58.44			479607.7617	1351524.1653
RP				479608.9838	1351424.1728
PT	E41+15.52			479508.9912	1351422.9507
	Delta:	90-00-00	Type:	RIGHT	
	Radius:	100.00	DOC:	57-17-45	
	Length:	157.08	Tangent:	100.00	
	Mid-Ord:	29.29	External:	41.42	
	Chord:	141.42	Course:	S 45-42-01 W	
	Es:	41.42			
POE	E44+13.86			479512.6372	1351124.6305
		Tangent Data			
	E41+15.52			479508.9912	1351422.9507
	E44+13.86			479512.6372	1351124.6305
	Length:	298.34	Course:	N 89-17-59 W	

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD])
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE EASTERN PORTION OF PERIMETER DRAINAGE SWALE AND IS REPEATED ON PERIMETER DRAINAGE SWALE EAST PLAN AND PROFILE DATA II.

REV. NO.	DATE	DESCRIPTION	DES. BY	DR. BY	CHK. BY	RVW. BY	APP. BY

SCALE IN FEET (50 25 0 50 100) — SCALE IN FEET (10 5 0 10 20)

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Fernald Environmental Restoration Management Corporation
FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
PERIMETER DRAINAGE SWALE
EAST PLAN AND PROFILE DATA I

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

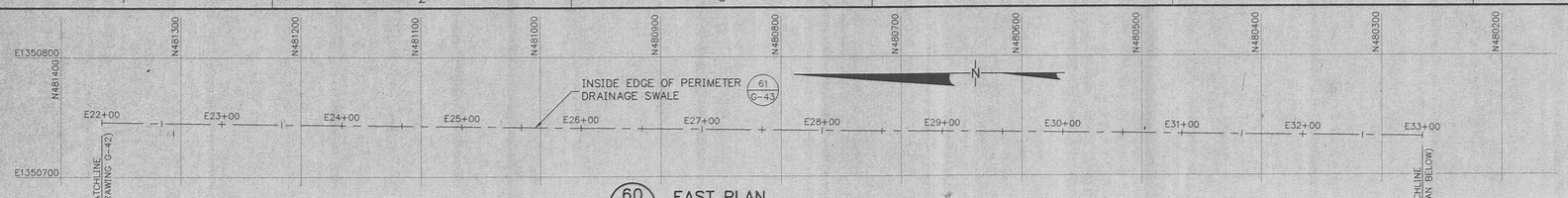
FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00042
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B031
SHEET NO.: G-42
REVISION NO.: B

002313

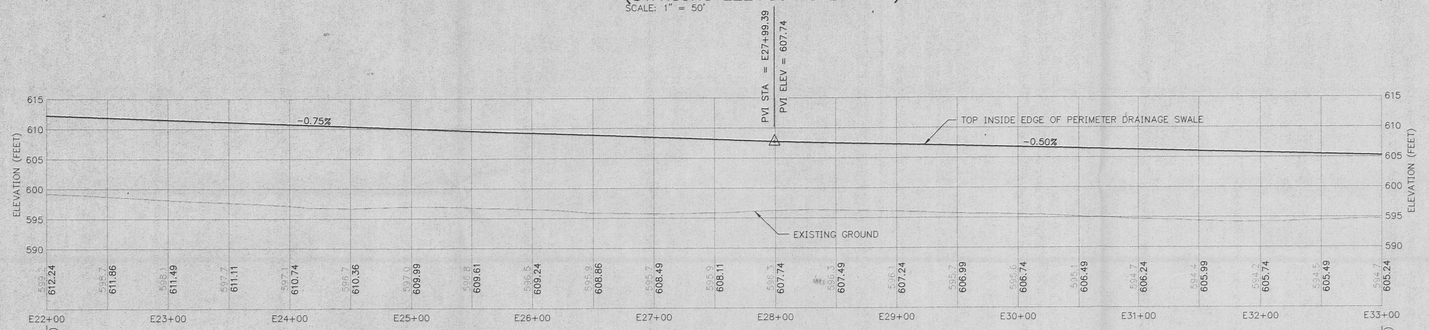
PRELIMINARY DESIGN PACKAGE

233650-51

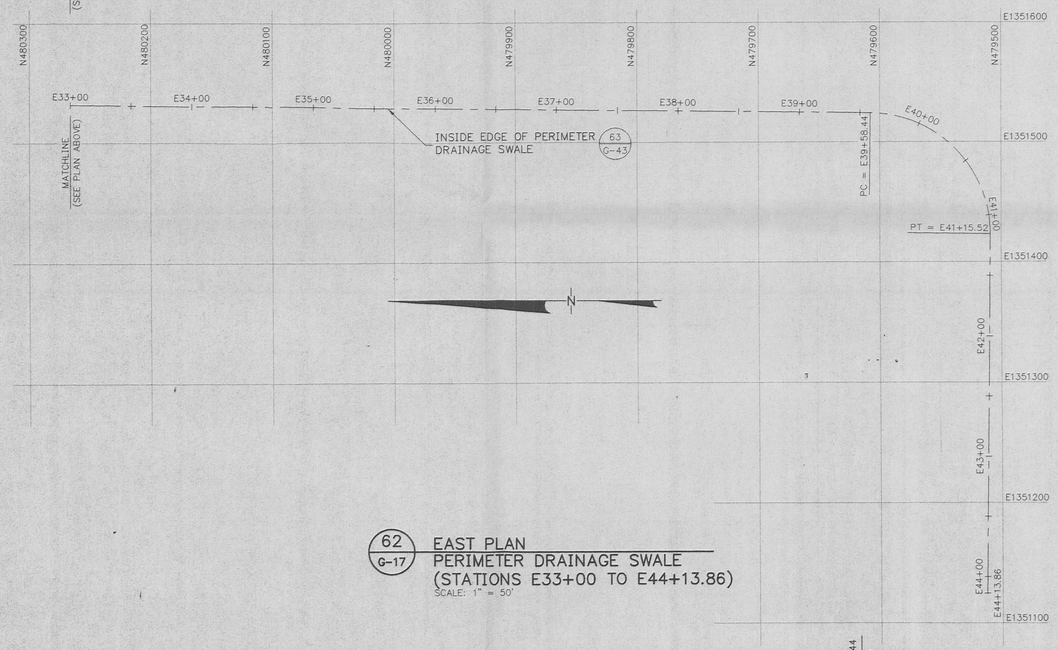
W:\DATA\DOC\GE3900-12\F95-B031 Thu Dec 14 13:38:11 1995



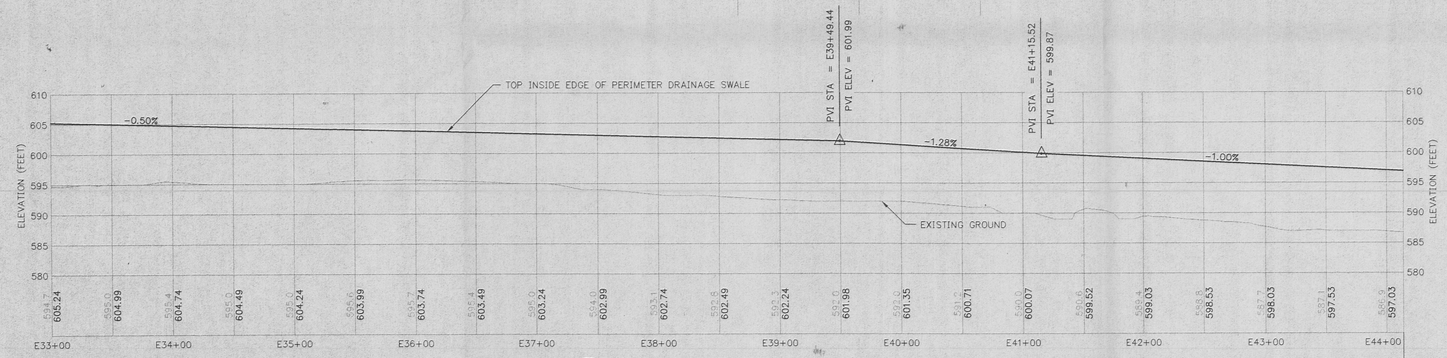
60 G-17 EAST PLAN
PERIMETER DRAINAGE SWALE
(STATIONS E22+00 TO E33+00)
SCALE: 1" = 50'



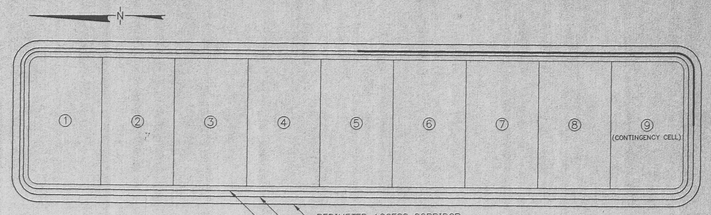
61 G-43 EAST PROFILE
PERIMETER DRAINAGE SWALE
(STATIONS E22+00 TO E33+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



62 G-17 EAST PLAN
PERIMETER DRAINAGE SWALE
(STATIONS E33+00 TO E44+13.86)
SCALE: 1" = 50'



63 G-43 EAST PROFILE
PERIMETER DRAINAGE SWALE
(STATIONS E33+00 TO E44+13.86)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



KEY MAP

000136

Horizontal Alignment Station and Curve Report (NOTE 4)
PERIMETER DRAINAGE SWALE EAST

Desc.	Station	Spiral/Curve Data			Northing	Easting
POB	E0+00				483215.3743	1351169.8845
	Length:	398.34	Course:	S 89-17-59 E		
PI	E3+98.34				483210.5062	1351568.1972
	Length:	100.00	Course:	S 00-42-01 W		
	Delta:	90-00-00				
		Tangent Data				
	E0+00				483215.3743	1351169.8845
	E2+98.34				483211.7283	1351468.2046
	Length:	298.34	Course:	S 89-17-59 E		
		Circular Curve Data				
PC	E2+98.34				483211.7283	1351468.2046
RP					483111.7357	1351466.9825
PT	E4+55.42				483110.5137	1351566.9752
	Delta:	90-00-00	Type:	RIGHT		
	Radius:	100.00	DOC:	57-17-45		
	Length:	157.08	Tangent:	100.00		
	Mid-Ord:	29.29	External:	41.42		
	Chord:	141.42	Course:	S 44-17-59 E		
	Es:	41.42				
PI	E4+55.42				483110.5137	1351566.9752
	Length:	3603.01	Course:	S 00-42-01 W		
	Delta:	0-00-00				
PI	E40+58.44				479507.7691	1351522.9432
	Length:	398.34	Course:	N 89-17-59 W		
	Delta:	90-00-00				
		Tangent Data				
	E4+55.42				483110.5137	1351566.9752
	E39+58.44				479607.7617	1351524.1653
	Length:	3503.01	Course:	S 00-42-01 W		
		Circular Curve Data				
PC	E39+58.44				479607.7617	1351524.1653
RP					479608.9838	1351424.1728
PT	E41+15.52				479508.9912	1351422.9507
	Delta:	90-00-00	Type:	RIGHT		
	Radius:	100.00	DOC:	57-17-45		
	Length:	157.08	Tangent:	100.00		
	Mid-Ord:	29.29	External:	41.42		
	Chord:	141.42	Course:	S 45-42-01 W		
	Es:	41.42				
POE	E44+13.86				479512.6372	1351124.6305
		Tangent Data				
	E41+15.52				479508.9912	1351422.9507
	E44+13.86				479512.6372	1351124.6305
	Length:	298.34	Course:	N 89-17-59 W		

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE EASTERN PORTION OF PERIMETER DRAINAGE SWALE AND IS REPEATED ON PERIMETER DRAINAGE SWALE EAST PLAN AND PROFILE DATA I.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

50 25 0 50 100
SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
PERIMETER DRAINAGE SWALE
EAST PLAN AND PROFILE DATA II

002314

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

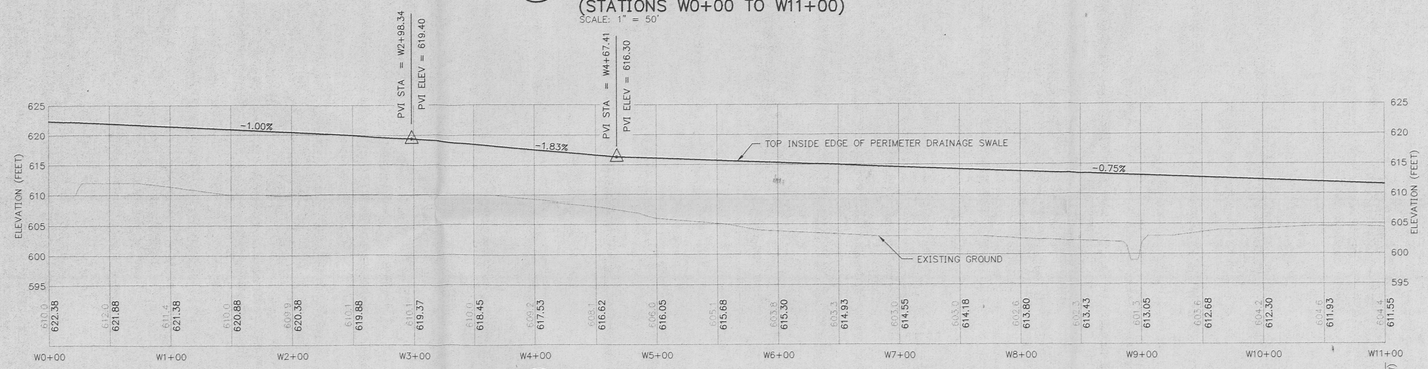
FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00043
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B031
SHEET NO.: G-43
REVISION NO.: B

PRELIMINARY DESIGN PACKAGE

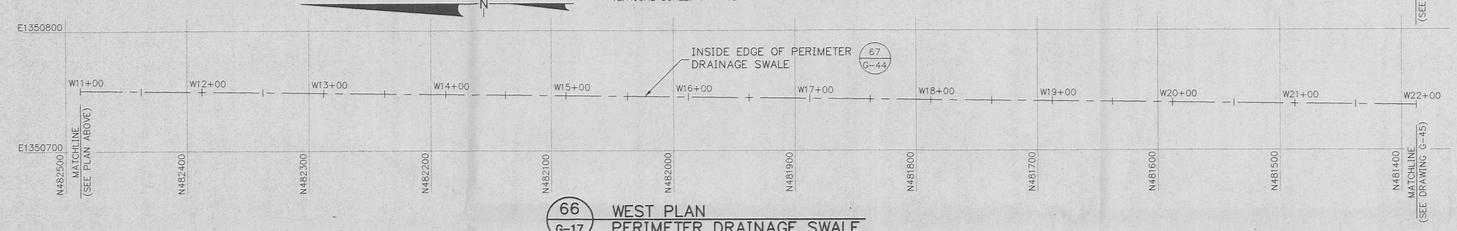
23650-22

M:\GRAD\DD\GE3500-12\F95-B031 Thu Dec 14 13:39:06 1995

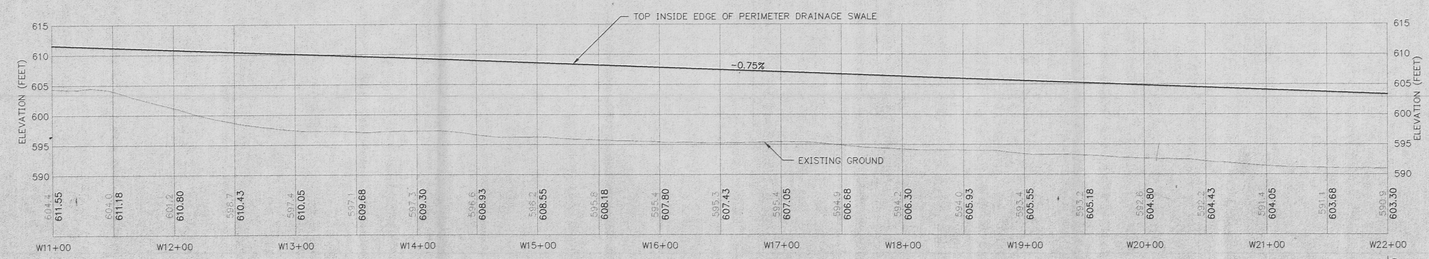
64 G-17 WEST PLAN
PERIMETER DRAINAGE SWALE
(STATIONS W0+00 TO W11+00)
SCALE: 1" = 50'



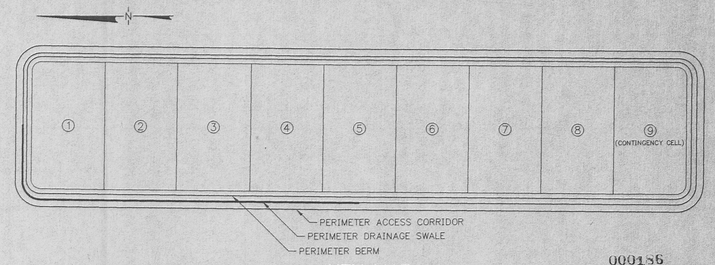
65 G-44 WEST PROFILE
PERIMETER DRAINAGE SWALE
(STATIONS W0+00 TO W11+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



66 G-17 WEST PLAN
PERIMETER DRAINAGE SWALE.
(STATIONS W11+00 TO W22+00)
SCALE: 1" = 50'



67 G-44 WEST PROFILE
PERIMETER DRAINAGE SWALE
(STATIONS W11+00 TO W22+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



KEY MAP

000186

Horizontal Alignment Station and Curve Report (NOTE 4)
PERIMETER DRAINAGE SWALE WEST

Desc.	Station	Spiral/Curve Data			Northing	Easting
POB	W0+00				483215.3743	1351169.8845
	Length:	410.33	Course:		N 89-17-59 W	
PI	W4+10.33				483220.3889	1350759.5828
	Length:	3703.01	Course:		S 00-42-01 W	
	Delta:	90-00-00				
		Tangent Data				
	W0+00				483215.3743	1351169.8845
	W3+10.33				483219.1668	1350859.5753
	Length:	310.33	Course:		N 89-17-59 W	
		Circular Curve Data				
PC	W3+10.33				483219.1668	1350859.5753
RP					483119.1743	1350858.3532
PT	W4+67.41				483120.3964	1350758.3607
	Delta:	90-00-00	Type:		LEFT	
	Radius:	100.00	DOC:		57-17-45	
	Length:	157.08	Tangent:		100.00	
	Mid-Ord:	29.29	External:		41.42	
	Chord:	141.42	Course:		S 45-42-01 W	
	Es:	41.42				
PI	W40+70.43				479517.6519	1350714.3287
	Length:	410.33	Course:		S 89-17-59 E	
	Delta:	90-00-00				
		Tangent Data				
	W4+67.41				483120.3964	1350758.3607
	W39+61.43				479626.6437	1350715.6608
	Length:	3494.01	Course:		S 00-42-01 W	
		Circular Curve Data				
PC	W39+61.43				479626.6437	1350715.6608
RP					479625.3116	1350824.6526
PT	W41+32.64				479516.3198	1350823.3206
	Delta:	90-00-00	Type:		LEFT	
	Radius:	109.00	DOC:		52-33-54	
	Length:	171.22	Tangent:		109.00	
	Mid-Ord:	31.93	External:		45.15	
	Chord:	154.15	Course:		S 44-17-59 E	
	Es:	45.15				
POE	W44+33.97				479512.6372	1351124.6305
		Tangent Data				
	W41+32.64				479516.3198	1350823.3206
	W44+33.97				479512.6372	1351124.6305
	Length:	301.33	Course:		S 89-17-59 E	

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE WESTERN PORTION OF PERIMETER DRAINAGE SWALE AND IS REPEATED ON PERIMETER DRAINAGE SWALE WEST PLAN AND PROFILE DATA II.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE IN FEET (50 25 0 50 100) — SCALE IN FEET (10 5 0 10 20)

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Restoration Management Corporation — FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT: ON-SITE DISPOSAL FACILITY

TITLE: PERIMETER DRAINAGE SWALE
WEST PLAN AND PROFILE DATA I

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE

DATE

SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

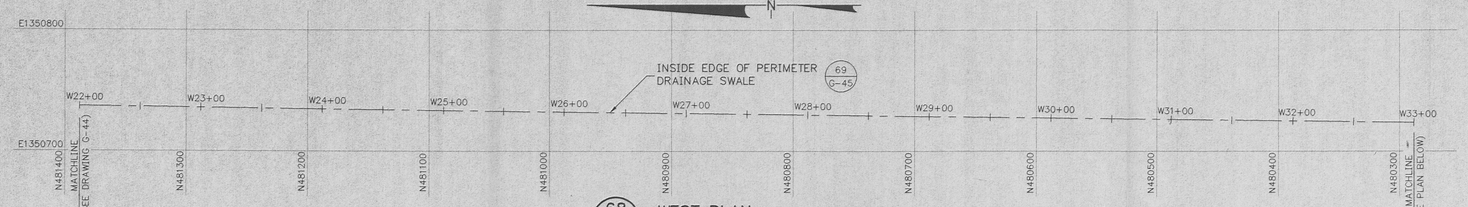
FERMCO SUBCONTRACT NO.:	95PS005028
FERMCO DRAWING NO.:	90X-6000-G-00044
GEOSYNTEC PROJECT NO.:	GE3900-11
GEOSYNTEC DOCUMENT NO.:	F95-B031
SHEET NO.:	G-44
REVISION NO.:	B

PRELIMINARY DESIGN PACKAGE

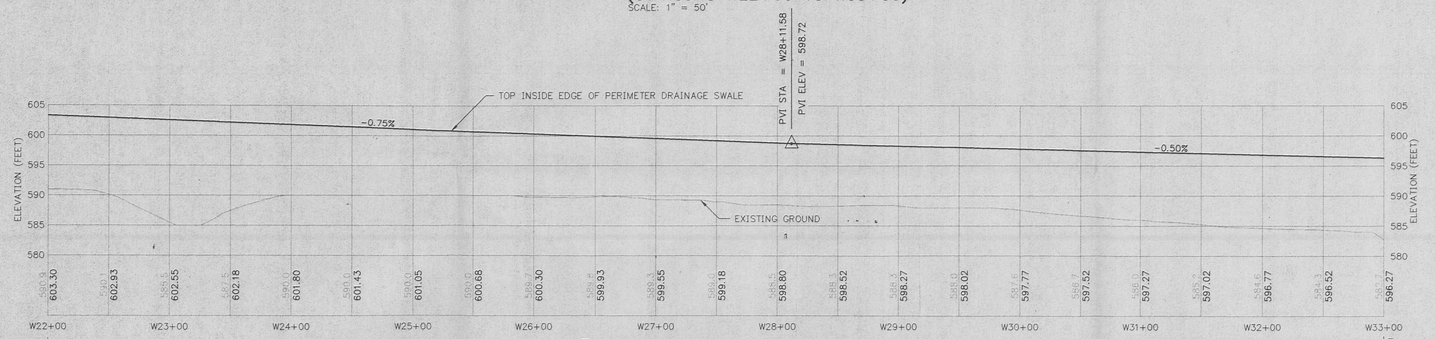
002615

233650-23

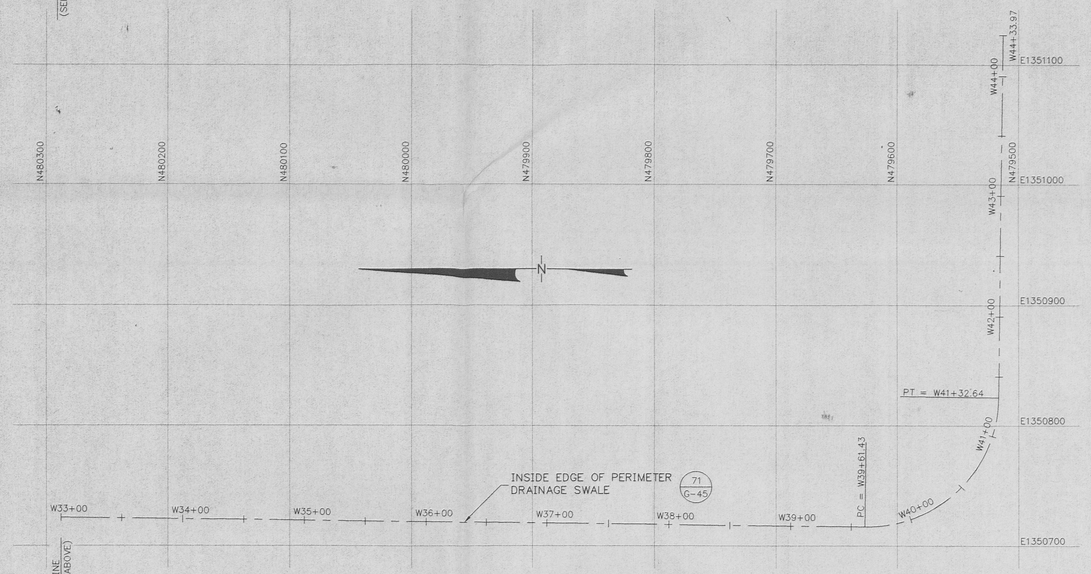
W:\GACADD\GE3900-12\F95-B031, Thu Dec 14 13:36:25 1995



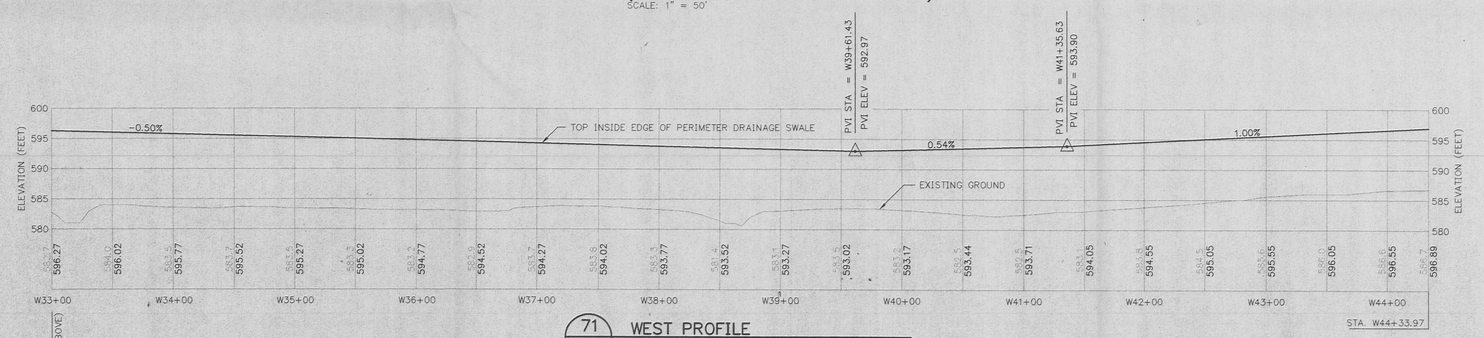
68 G-17 WEST PLAN
PERIMETER DRAINAGE SWALE
(STATIONS W22+00 TO W33+00)
SCALE: 1" = 50'



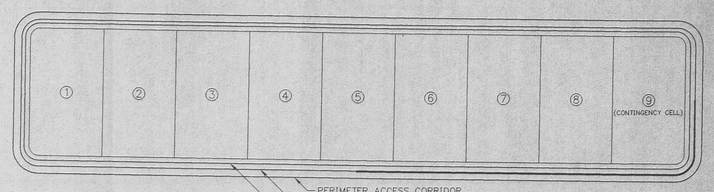
69 G-45 WEST PROFILE
PERIMETER DRAINAGE SWALE
(STATIONS W22+00 TO W33+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



70 G-17 WEST PLAN
PERIMETER DRAINAGE SWALE
(STATIONS W33+00 TO W44+33.97)
SCALE: 1" = 50'



71 G-45 WEST PROFILE
PERIMETER DRAINAGE SWALE
(STATIONS W33+00 TO W44+33.97)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



KEY MAP

000136

Horizontal Alignment Station and Curve Report (NOTE 4)
PERIMETER DRAINAGE SWALE WEST

Desc.	Station	Spiral/Curve Data			Northing	Easting
POB	W0+00				483215.3743	1351169.8845
	Length:	410.33	Course:	N 89-17-59 W		
PI	W4+10.33				483220.3889	1350759.5828
	Length:	3703.01	Course:	S 00-42-01 W		
	Delta:	90-00-00				
	Tangent Data					
	W0+00				483215.3743	1351169.8845
	W3+10.33				483219.1668	1350859.5753
	Length:	310.33	Course:	N 89-17-59 W		
	Circular Curve Data					
PC	W3+10.33				483219.1668	1350859.5753
RP					483119.1743	1350858.3532
PT	W4+67.41				483120.3964	1350758.3607
	Delta:	90-00-00	Type:	LEFT		
	Radius:	100.00	DOC:	57-17-45		
	Length:	157.08	Tangent:	100.00		
	Mid-Ord:	29.29	External:	41.42		
	Chord:	141.42	Course:	S 45-42-01 W		
	Es:	41.42				
PI	W40+70.43				479517.6519	1350714.3287
	Length:	410.33	Course:	S 89-17-59 E		
	Delta:	90-00-00				
	Tangent Data					
	W4+67.41				483120.3964	1350758.3607
	W39+61.43				479626.6437	1350715.6608
	Length:	3494.01	Course:	S 00-42-01 W		
	Circular Curve Data					
PC	W39+61.43				479626.6437	1350715.6608
RP					479625.3116	1350824.6526
PT	W41+32.64				479516.3198	1350823.3206
	Delta:	90-00-00	Type:	LEFT		
	Radius:	109.00	DOC:	52-33-54		
	Length:	171.22	Tangent:	109.00		
	Mid-Ord:	31.93	External:	45.15		
	Chord:	154.15	Course:	S 44-17-59 E		
	Es:	45.15				
POE	W44+33.97				479512.6372	1351124.6305
	Tangent Data					
	W41+32.64				479516.3198	1350823.3206
	W44+33.97				479512.6372	1351124.6305
	Length:	301.33	Course:	S 89-17-59 E		

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE WESTERN PORTION OF PERIMETER DRAINAGE SWALE AND IS REPEATED ON PERIMETER DRAINAGE SWALE WEST PLAN AND PROFILE DATA I.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APR BY

SCALE IN FEET (50 25 0 50 100) — SCALE IN FEET (10 5 0 10 20)

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Fernald Environmental Restoration Management Corporation
FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
PERIMETER DRAINAGE SWALE
WEST PLAN AND PROFILE DATA II

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

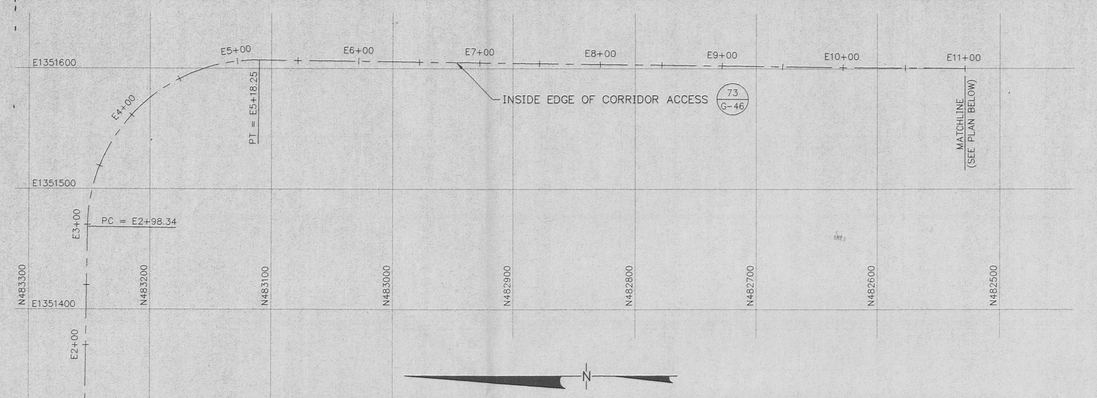
FERMCO SUBCONTRACT NO.:	95P5005028
FERMCO DRAWING NO.:	90X-6000-G-00045
GEOSYNTEC PROJECT NO.:	GE3900-11
GEOSYNTEC DOCUMENT NO.:	F95-B031
SHEET NO.:	G-45
REVISION NO.:	B

002316

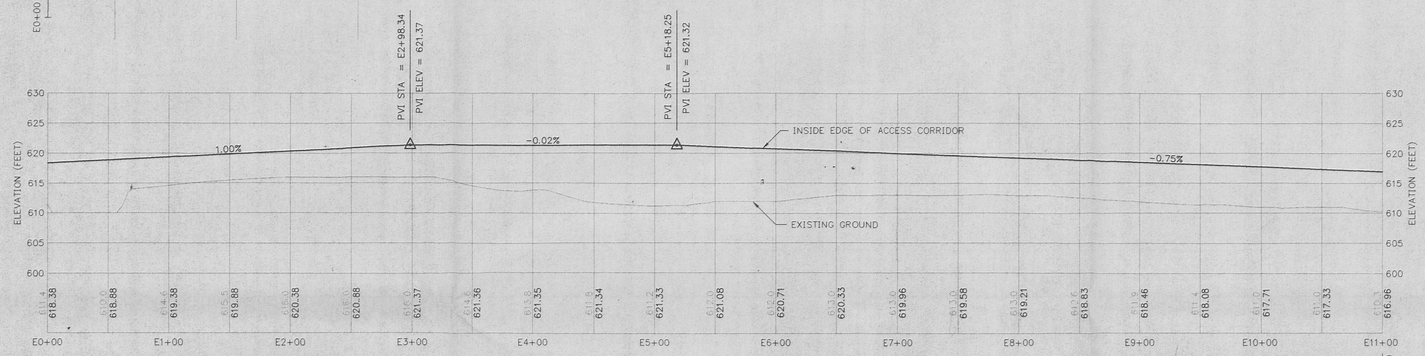
PRELIMINARY DESIGN PACKAGE

233650-24

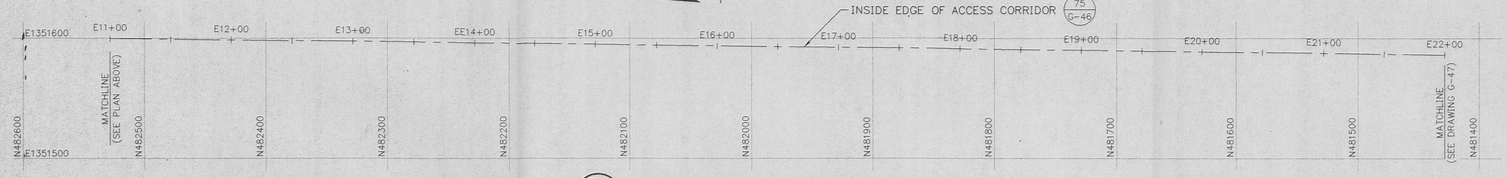
M:\GACADD\GE3900-12\F95-B031 Thu Dec 14 13:37:18 1995



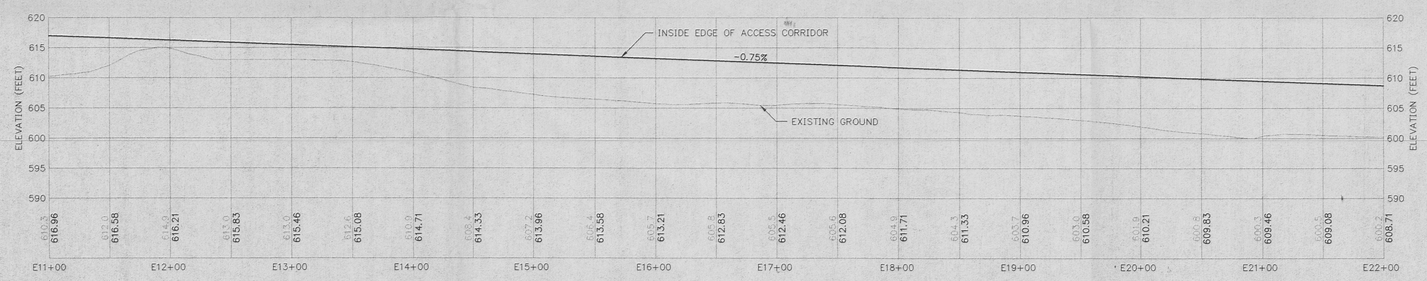
72 G-5 EAST PLAN
ACCESS CORRIDOR
(STATIONS E0+00 TO E11+00)
SCALE: 1" = 50'



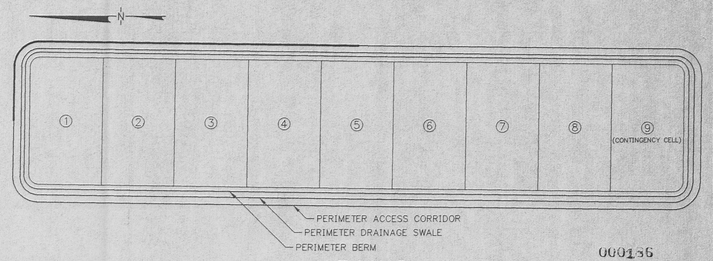
73 G-46 EAST PROFILE
ACCESS CORRIDOR
(STATIONS E0+00 TO E11+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



74 G-5 EAST PLAN
ACCESS CORRIDOR
(STATIONS E11+00 TO E22+00)
SCALE: 1" = 50'



75 G-46 EAST PROFILE
ACCESS CORRIDOR
(STATIONS E11+00 TO E22+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



KEY MAP

000136

Horizontal Alignment Station and Curve Report (NOTE 4)
ACCESS CORRIDOR EAST

Desc.	Station	Spiral/Curve Data		Northing	Easting
POB	E0+00			483255.3713	1351170.3734
	Length:	438.34	Course:	S 89-17-59 E	
PI	E4+38.34			483250.0144	1351608.6830
	Length:	140.00	Course:	S 00-42-01 W	
	Delta:	90-00-00			
		Tangent Data			
	E0+00			483255.3713	1351170.3734
	E2+98.34			483251.7253	1351468.6935
	Length:	298.34	Course:	S 89-17-59 E	
		Circular Curve Data			
PC	E2+98.34			483251.7253	1351468.6935
RP				483111.7357	1351466.9825
PT	E5+18.25			483110.0248	1351606.9722
	Delta:	90-00-00	Type:	RIGHT	
	Radius:	140.00	DOC:	40-55-32	
	Length:	219.91	Tangent:	140.00	
	Mid-Ord:	41.01	External:	57.99	
	Chord:	197.99	Course:	S 44-17-59 E	
	Es:	57.99			
PI	E5+18.25			483110.0248	1351606.9722
	Length:	3643.01	Course:	S 00-42-01 W	
	Delta:	0-00-00			
PI	E41+61.27			479467.2833	1351562.4514
	Length:	438.34	Course:	N 89-17-59 W	
	Delta:	90-00-00			
		Tangent Data			
	E5+18.25			483110.0248	1351606.9722
	E40+21.27			479607.2728	1351564.1623
	Length:	3503.01	Course:	S 00-42-01 W	
		Circular Curve Data			
PC	E40+21.27			479607.2728	1351564.1623
RP				479608.9838	1351424.1728
PT	E42+41.18			479468.9942	1351422.4619
	Delta:	90-00-00	Type:	RIGHT	
	Radius:	140.00	DOC:	40-55-32	
	Length:	219.91	Tangent:	140.00	
	Mid-Ord:	41.01	External:	57.99	
	Chord:	197.99	Course:	S 45-42-01 W	
	Es:	57.99			
POE	E45+39.52			479472.6402	1351124.1416
		Tangent Data			
	E42+41.18			479468.9942	1351422.4619
	E45+39.52			479472.6402	1351124.1416
	Length:	298.34	Course:	N 89-17-59 W	

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE EASTERN PORTION OF ACCESS CORRIDOR AND IS REPEATED ON ACCESS CORRIDOR EAST PLAN AND PROFILE DATA II.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

50 25 0 50 100 SCALE IN FEET
10 5 0 10 20 SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Fernald Environmental Restoration Management Corporation
FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
ACCESS CORRIDOR
EAST PLAN AND PROFILE DATA I

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

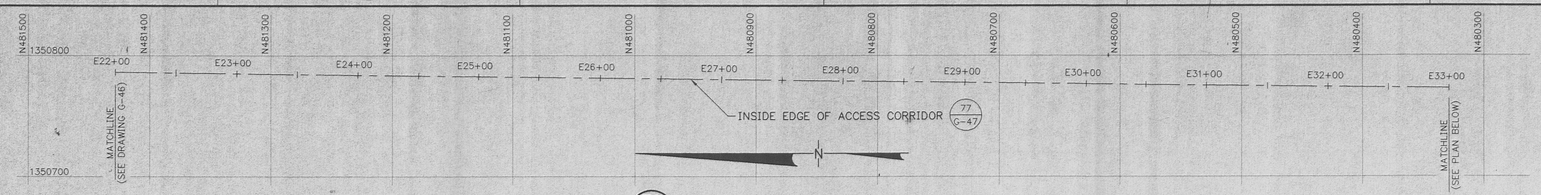
FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00046
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B052
SHEET NO.: G-46
REVISION NO.: B

003317

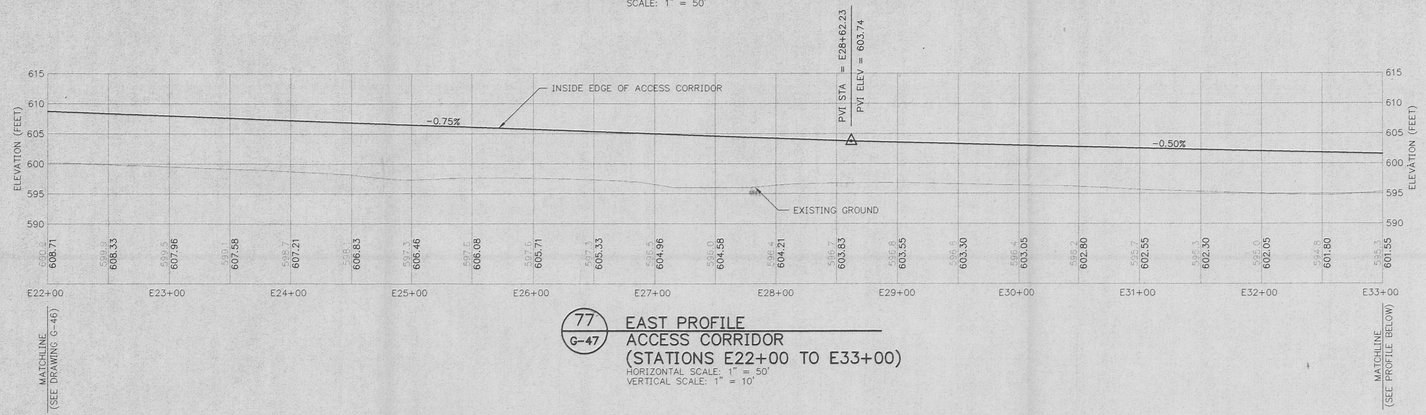
PRELIMINARY DESIGN PACKAGE

233650-25

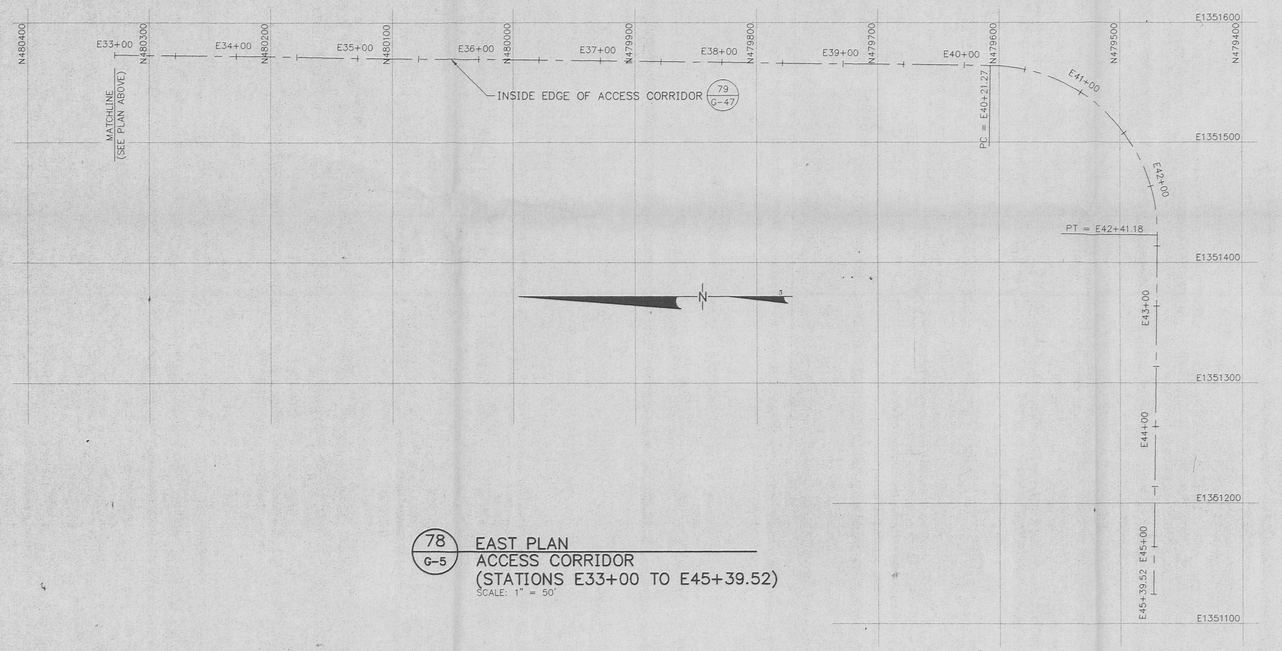
M:\CACADDE\GE3900-12\F95-B052 Thu Dec 14 13:44:45 1995



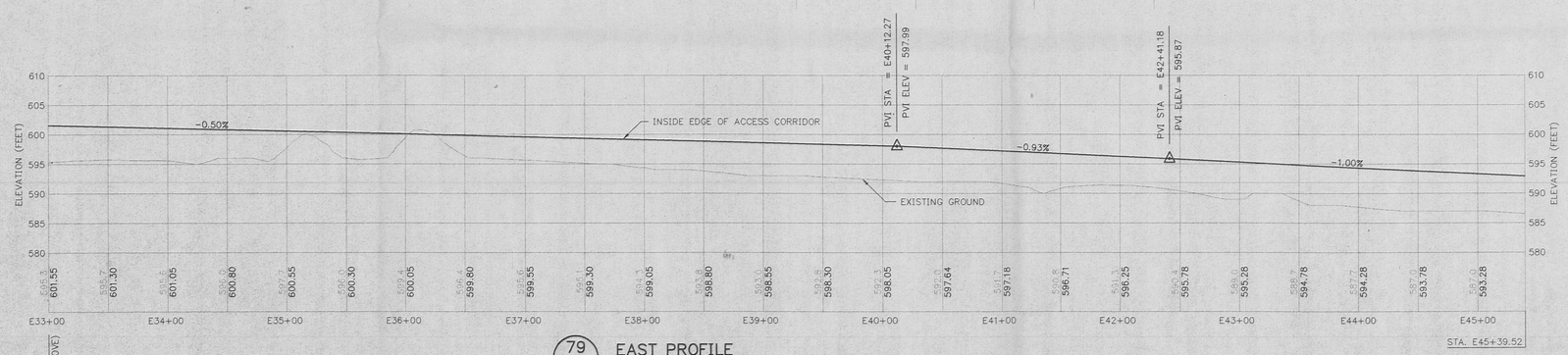
76 G-5 EAST PLAN
ACCESS CORRIDOR
(STATIONS E22+00 TO E33+00)
SCALE: 1" = 50'



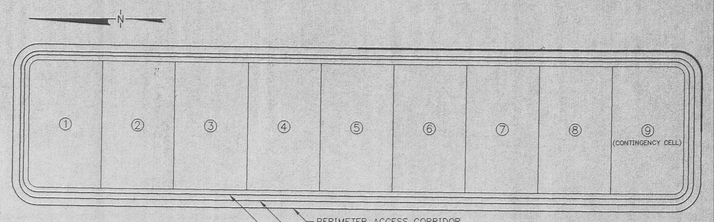
77 G-47 EAST PROFILE
ACCESS CORRIDOR
(STATIONS E22+00 TO E33+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



78 G-5 EAST PLAN
ACCESS CORRIDOR
(STATIONS E33+00 TO E45+39.52)
SCALE: 1" = 50'



79 G-47 EAST PROFILE
ACCESS CORRIDOR
(STATIONS E33+00 TO E45+39.52)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



KEY MAP

000136

Horizontal Alignment Station and Curve Report (NOTE 4)
ACCESS CORRIDOR EAST

Desc.	Station	Spiral/Curve Data			Northing	Easting
POB	E0+00				483255.3713	1351170.3734
	Length:	438.34	Course:	S 89-17-59 E		
PI	E4+38.34				483250.0144	1351608.6830
	Length:	140.00	Course:	S 00-42-01 W		
	Delta:	90-00-00				
		Tangent Data				
	E0+00				483255.3713	1351170.3734
	E2+98.34				483251.7253	1351468.6935
	Length:	298.34	Course:	S 89-17-59 E		
		Circular Curve Data				
PC	E2+98.34				483251.7253	1351468.6935
RP					483111.7357	1351466.9825
PT	E5+18.25				483110.0248	1351606.9722
	Delta:	90-00-00	Type:	RIGHT		
	Radius:	140.00	DOC:	40-55-32		
	Length:	219.91	Tangent:	140.00		
	Mid-Ord:	41.01	External:	57.99		
	Chord:	197.99	Course:	S 44-17-59 E		
	Es:	57.99				
PI	E5+18.25				483110.0248	1351606.9722
	Length:	3643.01	Course:	S 00-42-01 W		
	Delta:	0-00-00				
PI	E41+61.27				479467.2833	1351562.4514
	Length:	438.34	Course:	N 89-17-59 W		
	Delta:	90-00-00				
		Tangent Data				
	E5+18.25				483110.0248	1351606.9722
	E40+21.27				479607.2728	1351564.1623
	Length:	3503.01	Course:	S 00-42-01 W		
		Circular Curve Data				
PC	E40+21.27				479607.2728	1351564.1623
RP					479608.9838	1351424.1728
PT	E42+41.18				479468.9942	1351422.4619
	Delta:	90-00-00	Type:	RIGHT		
	Radius:	140.00	DOC:	40-55-32		
	Length:	219.91	Tangent:	140.00		
	Mid-Ord:	41.01	External:	57.99		
	Chord:	197.99	Course:	S 45-42-01 W		
	Es:	57.99				
POE	E45+39.52				479472.6402	1351124.1416
		Tangent Data				
	E42+41.18				479468.9942	1351422.4619
	E45+39.52				479472.6402	1351124.1416
	Length:	298.34	Course:	N 89-17-59 W		

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE EASTERN PORTION OF ACCESS CORRIDOR AND IS REPEATED ON ACCESS CORRIDOR EAST PLAN AND PROFILE DATA I.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE IN FEET (50 25 0 50 100) — SCALE IN FEET (10 5 0 10 20)

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO — FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
ACCESS CORRIDOR
EAST PLAN AND PROFILE DATA II

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

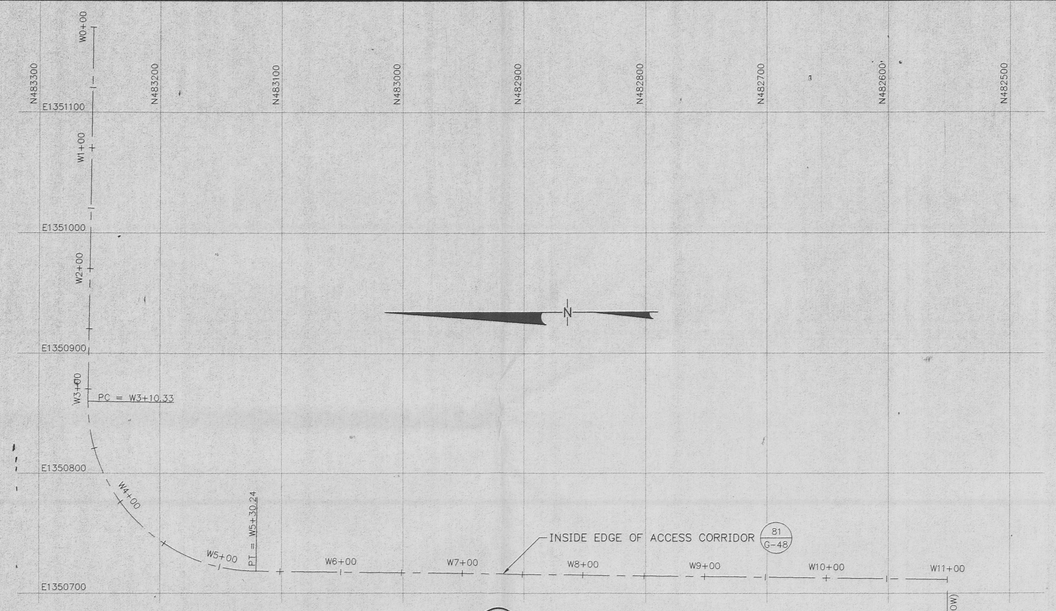
FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00047
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B052
SHEET NO.: G-47
REVISION NO.: B

002318

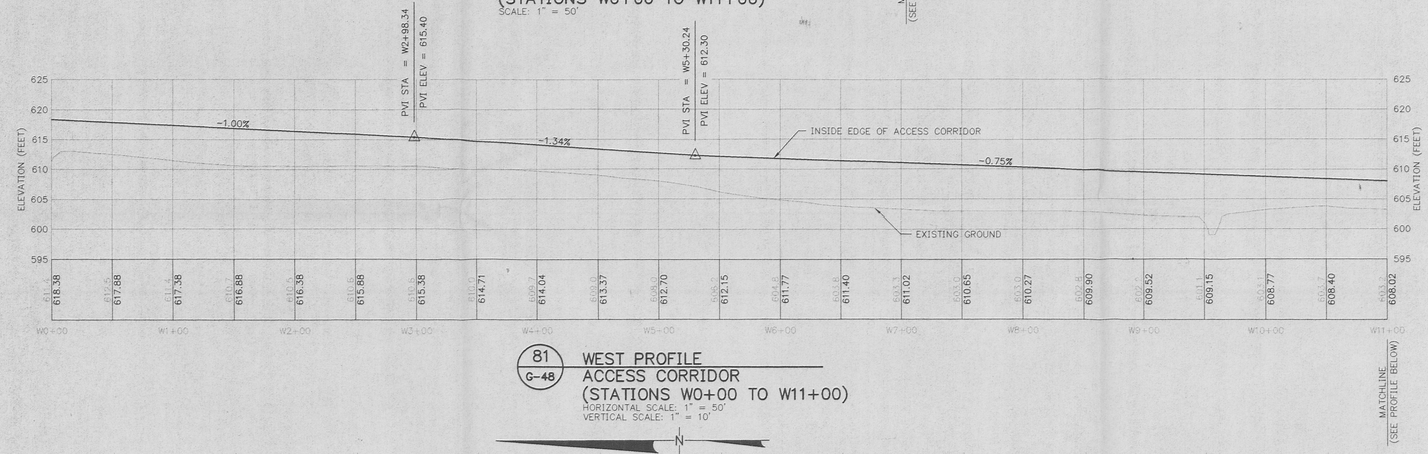
PRELIMINARY DESIGN PACKAGE

2336D-26

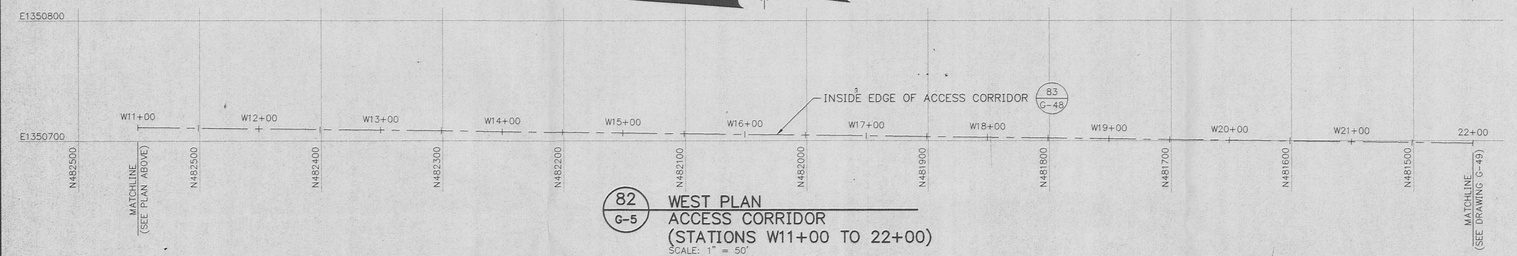
K:\GAGADOC\GE3900-12\F95-B052 Thu Dec 14 13:45:38 1995



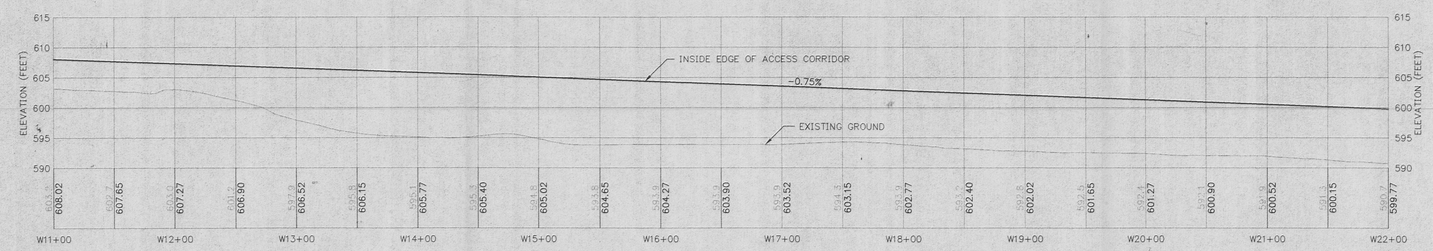
80 / G-5 WEST PLAN
ACCESS CORRIDOR
(STATIONS W0+00 TO W11+00)
SCALE: 1" = 50'



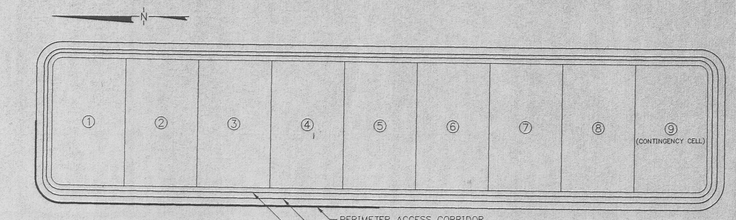
81 / G-48 WEST PROFILE
ACCESS CORRIDOR
(STATIONS W0+00 TO W11+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



82 / G-5 WEST PLAN
ACCESS CORRIDOR
(STATIONS W11+00 TO 22+00)
SCALE: 1" = 50'



83 / G-48 WEST PROFILE
ACCESS CORRIDOR
(STATIONS W11+00 TO W22+00)
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



KEY MAP

000136

Horizontal Alignment Station and Curve Report (NOTE 4)
ACCESS CORRIDOR WEST

Desc.	Station	Spiral/Curve Data			Northing	Easting
POB	W0+00				483255.3713	1351170.3734
	Length:	450.33	Course:	N 89-17-59 W		
PI	W4+50.33				483260.8748	1350720.0746
	Length:	3783.01	Course:	S 00-42-01 W		
	Delta:	90-00-00				
		Tangent Data				
	W0+00				483255.3713	1351170.3734
	W3+10.33				483259.1638	1350860.0641
	Length:	310.33	Course:	N 89-17-59 W		
		Circular Curve Data				
PC	W3+10.33				483259.1638	1350860.0641
RP					483119.1743	1350858.3532
PT	W5+30.24				483120.8852	1350718.3637
	Delta:	90-00-00	Type:	LEFT		
	Radius:	140.00	DOC:	40-55-32		
	Length:	219.91	Tangent:	140.00		
	Mid-Ord:	41.01	External:	57.99		
	Chord:	197.99	Course:	S 45-42-01 W		
	Es:	57.99				
PI	W41+73.26				479478.1437	1350673.8429
	Length:	450.33	Course:	S 89-17-59 E		
	Delta:	90-00-00				
		Tangent Data				
	W5+30.24				483120.8852	1350718.3637
	W40+24.26				479627.1326	1350675.6638
	Length:	3494.01	Course:	S 00-42-01 W		
		Circular Curve Data				
PC	W40+24.26				479627.1326	1350675.6638
RP					479625.3116	1350824.6526
PT	W42+58.31				479476.3228	1350822.8317
	Delta:	90-00-00	Type:	LEFT		
	Radius:	149.00	DOC:	38-27-13		
	Length:	234.05	Tangent:	149.00		
	Mid-Ord:	43.64	External:	61.72		
	Chord:	210.72	Course:	S 44-17-59 E		
	Es:	61.72				
POE	W45+59.64				479472.6402	1351124.1416
		Tangent Data				
	W42+58.31				479476.3228	1350822.8317
	W45+59.64				479472.6402	1351124.1416
	Length:	301.33	Course:	S 89-17-59 E		

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE WESTERN PORTION OF ACCESS CORRIDOR AND IS REPEATED ON ACCESS CORRIDOR WEST PLAN AND PROFILE DATA II.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE IN FEET: 50 25 0 50 100
SCALE IN FEET: 10 5 0 10 20

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO Fernald Environmental Restoration Management Corporation

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
ACCESS CORRIDOR
WEST PLAN AND PROFILE DATA I

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

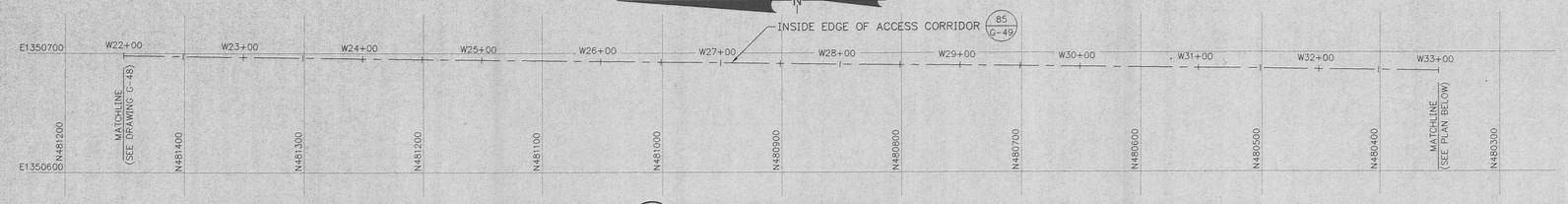
FERMCO SUBCONTRACT NO.:	95PS005028
FERMCO DRAWING NO.:	90X-6000D-G-00048
GEOSYNTEC PROJECT NO.:	GE3900-11
GEOSYNTEC DOCUMENT NO.:	F95-0052
SHEET NO.:	G-48
REVISION NO.:	B

002319

PRELIMINARY DESIGN PACKAGE

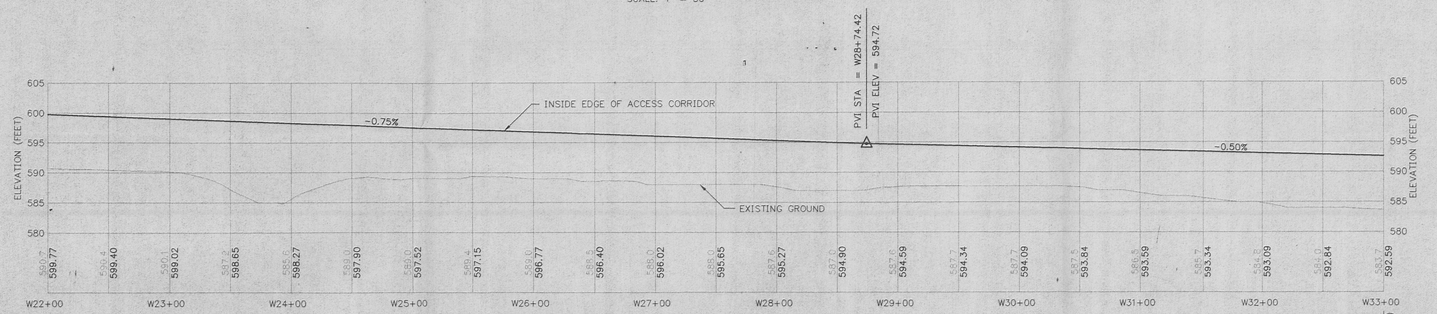
23600-27

K:\acad02\GE3900- 12\F95-0052 Thu Dec 14 13:43:00 1995



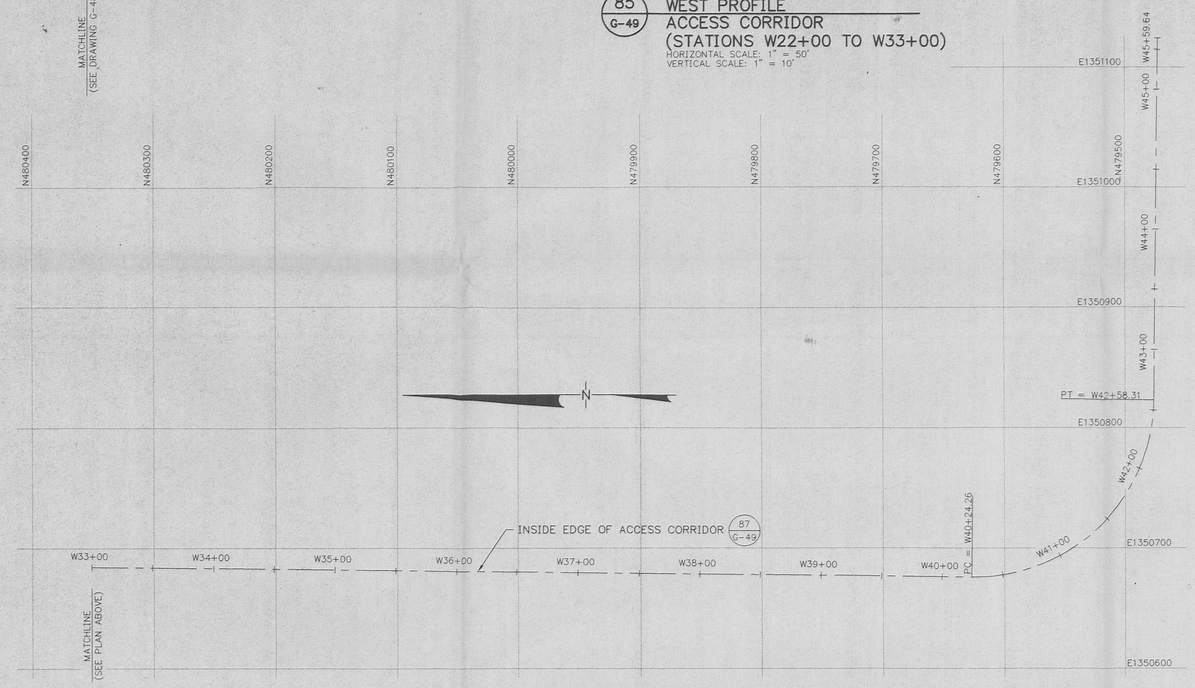
84/G-5 WEST PLAN
ACCESS CORRIDOR
(STATIONS W22+00 TO W33+00)

SCALE: 1" = 50'



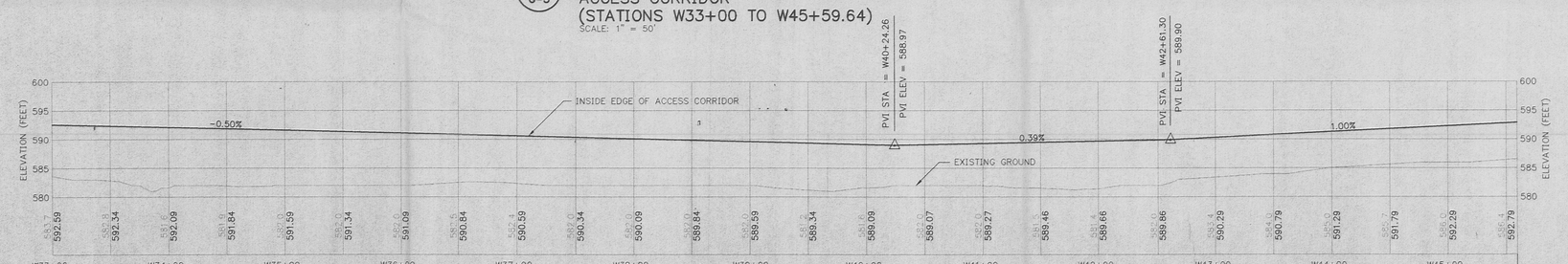
85/G-49 WEST PROFILE
ACCESS CORRIDOR
(STATIONS W22+00 TO W33+00)

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 10'



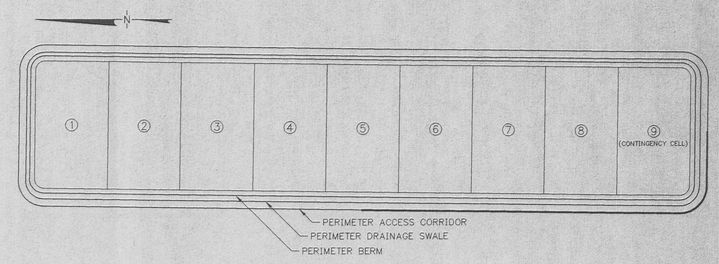
86/G-5 WEST PLAN
ACCESS CORRIDOR
(STATIONS W33+00 TO W45+59.64)

SCALE: 1" = 50'



87/G-49 PROFILE
WEST PERIMETER DRAINAGE SWALE
(STATIONS W33+00 TO W45+59.64)

SCALE: 1"=50' HORIZ.
1"=10' VERT.



KEY MAP

000136

Horizontal Alignment Station and Curve Report (NOTE 4)
ACCESS CORRIDOR WEST

Desc.	Station	Spiral/Curve Data		Northing	Easting
POB	W0+00			483255.3713	1351170.3734
	Length:	450.33	Course:	N 89-17-59 W	
PI	W4+50.33			483260.8748	1350720.0746
	Length:	3783.01	Course:	S 00-42-01 W	
	Delta:	90-00-00			
		Tangent Data			
	W0+00			483255.3713	1351170.3734
	W3+10.33			483259.1638	1350860.0641
	Length:	310.33	Course:	N 89-17-59 W	
		Circular Curve Data			
PC	W3+10.33			483259.1638	1350860.0641
RP				483119.1743	1350858.3532
PT	W5+30.24			483120.8852	1350718.3637
	Delta:	90-00-00	Type:	LEFT	
	Radius:	140.00	DOC:	40-55-32	
	Length:	219.91	Tangent:	140.00	
	Mid-Ord:	41.01	External:	57.99	
	Chord:	197.99	Course:	S 45-42-01 W	
	Es:	57.99			
PI	W41+73.26			479478.1437	1350673.8429
	Length:	450.33	Course:	S 89-17-59 E	
	Delta:	90-00-00			
		Tangent Data			
	W5+30.24			483120.8852	1350718.3637
	W40+24.26			479627.1326	1350675.6638
	Length:	3494.01	Course:	S 00-42-01 W	
		Circular Curve Data			
PC	W40+24.26			479627.1326	1350675.6638
RP				479625.3116	1350824.6526
PT	W42+58.31			479476.3228	1350822.8317
	Delta:	90-00-00	Type:	LEFT	
	Radius:	149.00	DOC:	38-27-13	
	Length:	234.05	Tangent:	149.00	
	Mid-Ord:	43.64	External:	61.72	
	Chord:	210.72	Course:	S 44-17-59 E	
	Es:	61.72			
POE	W45+59.64			479472.6402	1351124.1416
		Tangent Data			
	W42+58.31			479476.3228	1350822.8317
	W45+59.64			479472.6402	1351124.1416
	Length:	301.33	Course:	S 89-17-59 E	

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 OHIO SOUTH.
4. HORIZONTAL ALIGNMENT STATION AND CURVE REPORT PRESENTS DATA FOR ENTIRE WESTERN PORTION OF ACCESS CORRIDOR AND IS REPEATED ON ACCESS CORRIDOR WEST PLAN AND PROFILE DATA I.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE IN FEET (50 25 0 50 100) — SCALE IN FEET (10 5 0 10 20)

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
ACCESS CORRIDOR
WEST PLAN AND PROFILE DATA II

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00049
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B052
SHEET NO.: G-49
REVISION NO.: B

002320

PRELIMINARY DESIGN PACKAGE

233680-28

W:\GAUDIO\GE3900-12\F95-B052 Thu Dec 14 13:43:53 1995

000186

EARLY STAGES
BANK/UNBULKED
AVAILABLE VOLUME (EXCLUDING TOPSOIL) = 237,000 CY.

MIDDLE STAGES
BANK/UNBULKED
AVAILABLE VOLUME (EXCLUDING TOPSOIL) = 301,500 CY.

FINAL STAGES
BANK/UNBULKED AVAILABLE
VOLUME (EXCLUDING TOPSOIL)=275,000 CY.

RELOCATED NORTH ENTRANCE ROAD

NORTH ENTRANCE ROAD

SOUTH ENTRANCE ROAD

WILLEY ROAD

PADDY'S RUN

FUEL OIL LINE

NOTE 7 (TYP)

E 1351000

E 1350000

N 478000

N 470000

EXISTING SWALE
(NOTE 9)

BORROW STAGE LIMIT

BORROW AREA
HAUL ROAD

STORM WATER
DRAINAGE DITCH 2

TEMPORARY
E & S
BASIN 2
2.9 AC-FT (APPROXIMATE)

TEMPORARY
E & S
BASIN 1
7.0 AC-FT (APPROXIMATE)

STORM WATER
DRAINAGE DITCH 1

STORM WATER
DRAINAGE DITCH 3

EXISTING 18-INCH
DIAMETER RCP CULVERT

EXISTING 15-INCH DIAMETER
RCP CULVERT

EXISTING RCP CULVERT

EXISTING 30" DIAMETER
RCP CULVERT

EXISTING 18-INCH
DIAMETER RCP CULVERT

EXISTING 24-INCH
DIAMETER RCP
CULVERT

TEMPORARY
E & S
BASIN 4
2.4 AC-FT (APPROXIMATE)

TEMPORARY
E & S
BASIN 3
7.2 AC-FT (APPROXIMATE)

0.70%
0.67%
0.57%
0.75%

N

LEGEND

600	EXISTING GROUND ELEVATION (FEET)
570	FINISHED GRADE ELEVATION (FEET)
	FEMP PROPERTY LINE
	BATTERY LIMIT
	BORROW STAGE LIMIT
	STORMWATER DRAINAGE DITCH OR SWALE (NOTE 7)
xx xx xx	CONSTRUCTION FENCE
	DRAINAGE FLOW DIRECTION
	TEMPORARY EROSION AND SEDIMENT CONTROL BASIN OUTLET STRUCTURE
1733	TYPE 1 MONITORING WELL
2432	TYPE 2 MONITORING WELL
3068	TYPE 3 MONITORING WELL
4064	TYPE 4 MONITORING WELL

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 COORDINATES.
4. UPPER 6 INCHES OF BORROW AREA MATERIAL SHALL BE EXCAVATED AND STOCKPILED FOR USE AS TOPSOIL.
5. BORROW ACTIVITIES SHALL PROCEED FROM THE LOW POINT TO THE HIGH POINT OF EACH STAGE. TEMPORARY E & S BASIN FOR EACH STAGE SHALL BE CONSTRUCTED PRIOR TO INITIATING BORROW ACTIVITIES AND SHALL BE DECOMMISSIONED AT THE COMPLETION OF BORROW ACTIVITIES IN THAT STAGE CONTRACTOR SHALL DEVELOP EACH STAGE TO DIVERT ALL SEDIMENT LADEN WATER TO AN E & S BASIN.
6. CONTRACTOR SHALL NOT DISTURB MORE THAN 10 ACRES AT ANY ONE TIME. DISTURBED AREAS SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED IN ACCORDANCE WITH THE SPECIFICATIONS.
7. STORMWATER DRAINAGE DITCHES SHALL BE CONSTRUCTED OUTSIDE THE LIMITS OF EXCAVATION AND WITHIN THE BORROW AREA LIMIT TO MINIMIZE THE FLOW OF CLEAN RUNOFF ONTO DISTURBED AREAS.
8. CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE FEATURES AND SURFACE WATER FLOW PATTERNS AS LONG AS POSSIBLE TO DIVERT CLEAN RUNOFF AROUND DISTURBED AREAS.
9. CONTRACTOR SHALL INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROL DEVICES AROUND ACTIVE BORROW EXCAVATIONS TO MINIMIZE RUNOFF FROM DISTURBED AREAS.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

100 50 0 100 200
SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
BORROW AREA DEVELOPMENT PLAN

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95P5005028
FERMCO DRAWING NO.: 90X-6000-G-00055
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B086
SHEET NO.: G-55
REVISION NO.: B

002321

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233650-29

M:\SACADD2\GE3900-12\F95-B086 Thu Dec 14 18:04:07 1995

000186

LEGEND

600	EXISTING GROUND ELEVATION (FEET)
570	FINISHED GRADE ELEVATION (FEET)
	FEMP PROPERTY LINE
	BATTERY LIMIT
	BORROW STAGE LIMIT
	STORMWATER DRAINAGE DITCH OR SWALE
	DRAINAGE FLOW DIRECTION
1733	TYPE 1 MONITORING WELL
2432	TYPE 2 MONITORING WELL
3068	TYPE 3 MONITORING WELL
4064	TYPE 4 MONITORING WELL

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)
3. GRID COORDINATE SYSTEM CORRESPONDS TO STATE PLANAR NORTH AMERICAN DATUM (NAD) 1983 COORDINATES.

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

100 50 0 100 200
SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
BORROW AREA RESTORATION PLAN

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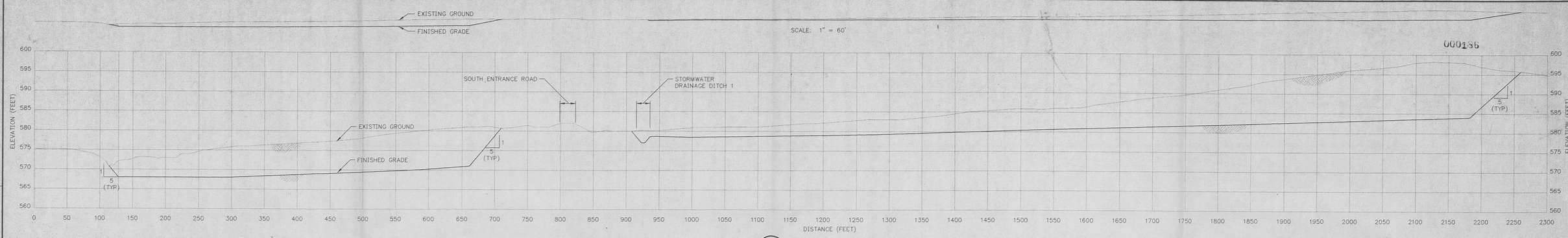
GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00056
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B010
SHEET NO.: G-56
REVISION NO.: B

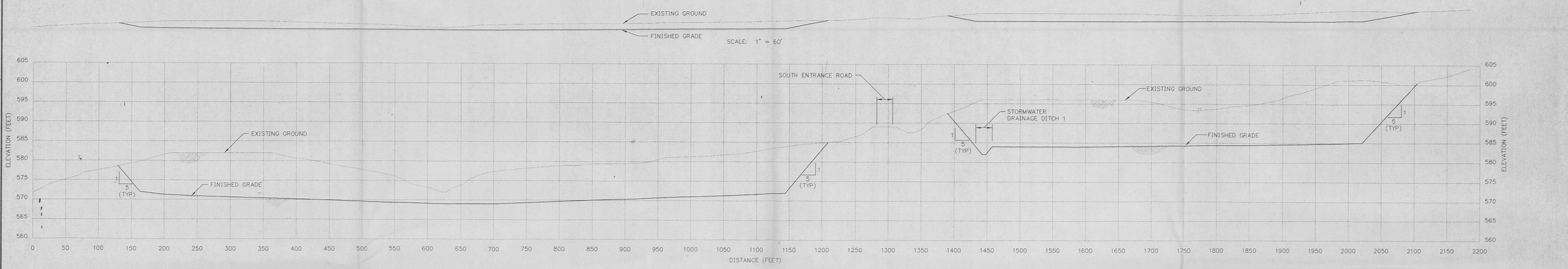
002322

PRELIMINARY DESIGN PACKAGE

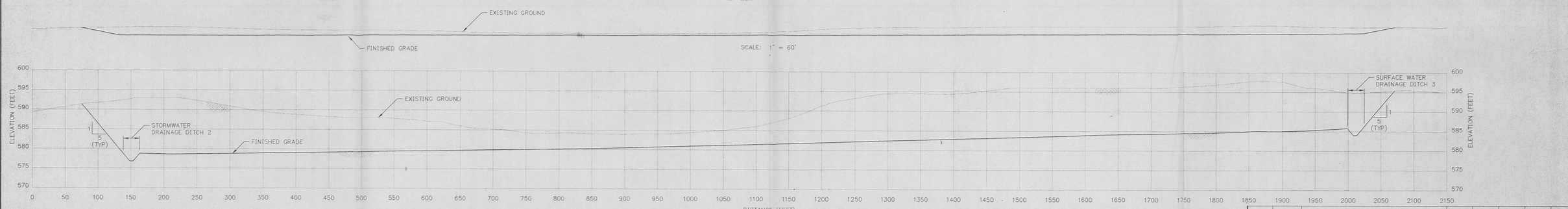
233650-30



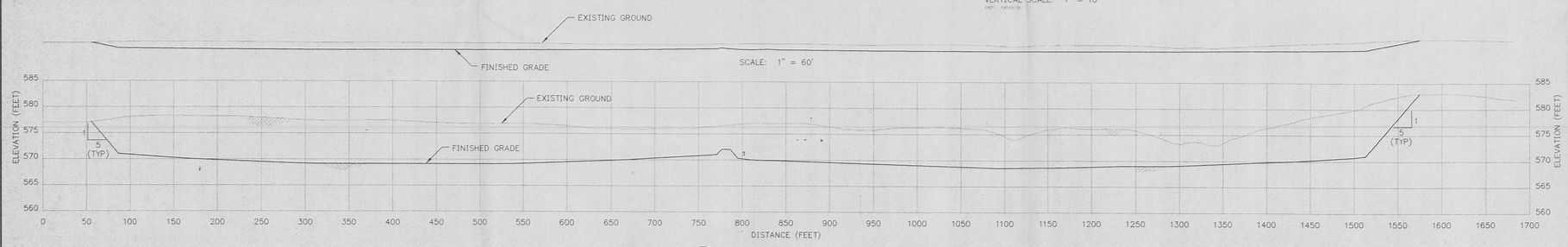
A G-56 SECTION BORROW AREA
HORIZONTAL SCALE: 1" = 60'
VERTICAL SCALE: 1" = 10'



B G-56 SECTION BORROW AREA
HORIZONTAL SCALE: 1" = 60'
VERTICAL SCALE: 1" = 10'



C G-56 SECTION BORROW AREA
HORIZONTAL SCALE: 1" = 60'
VERTICAL SCALE: 1" = 10'



D G-56 SECTION BORROW AREA
HORIZONTAL SCALE: 1" = 60'
VERTICAL SCALE: 1" = 10'

NOTES:

1. TOPOGRAPHIC MAP BASED ON 1992 SITE FLYOVER.
2. ELEVATIONS ARE IN FEET ABOVE SEA LEVEL DATUM. (NOTE: "SEA LEVEL DATUM" REFERS TO THE NATIONAL GEODETIC VERTICAL DATUM [NGVD].)

PRELIMINARY DESIGN PACKAGE

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

60 30 0 60 120 SCALE IN FEET
10 5 0 10 20 SCALE IN FEET

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT: ON-SITE DISPOSAL FACILITY

TITLE: BORROW AREA SECTIONS

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DATE

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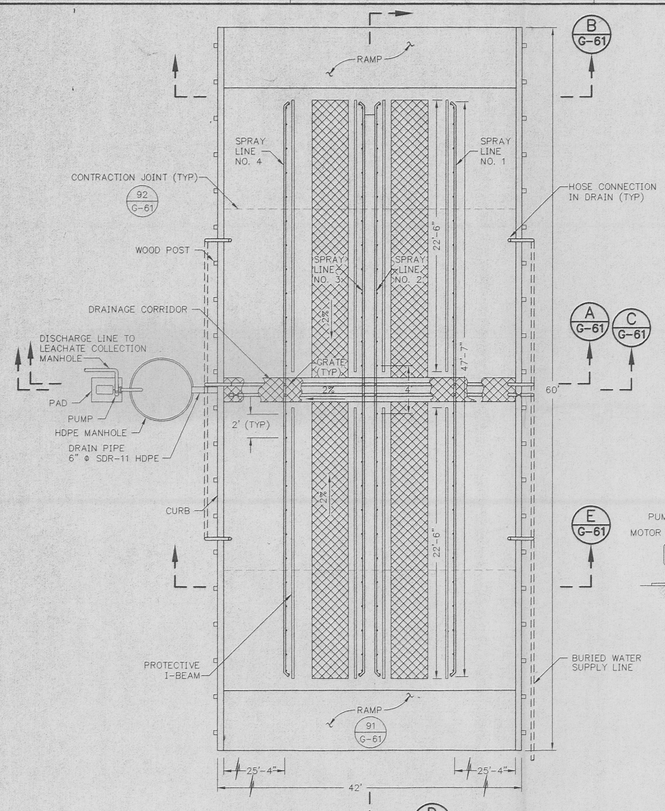
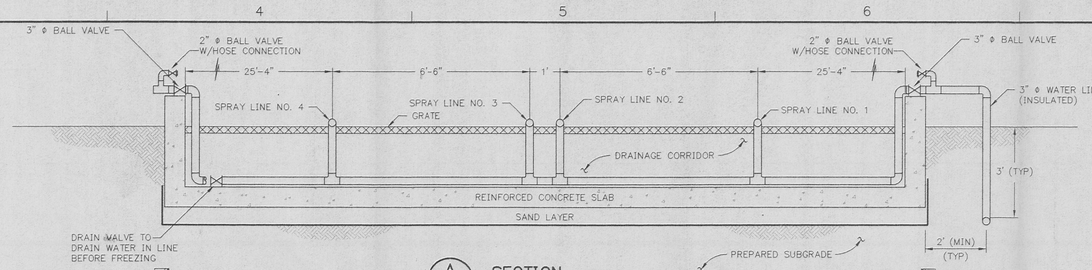
GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE
ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95PS005028
FERMCO DRAWING NO.: 90X-6000-G-00057
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B061
SHEET NO.: G-57
REVISION NO.: B

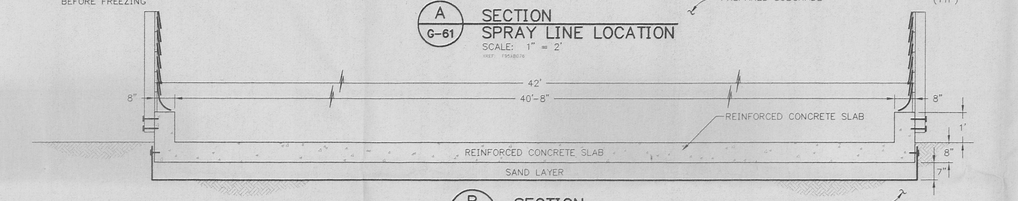
233650-31



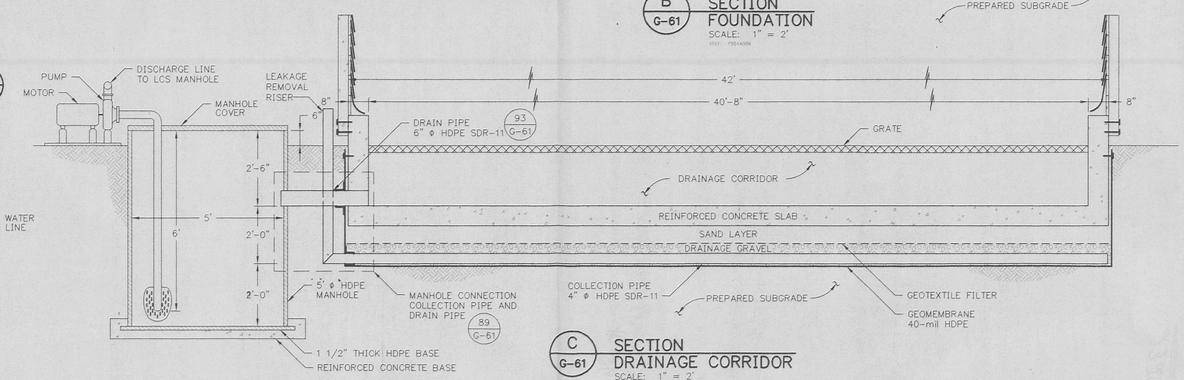
88 G-1 PLAN
EQUIPMENT DECONTAMINATION FACILITY
SCALE: 1" = 5'



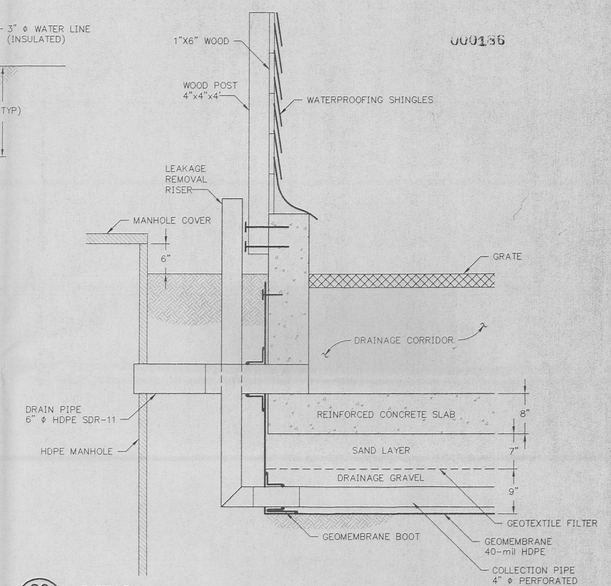
A G-61 SECTION
SPRAY LINE LOCATION
SCALE: 1" = 2'



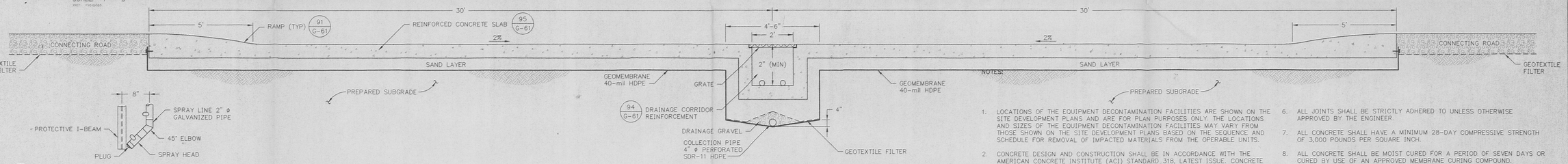
B G-61 SECTION
FOUNDATION
SCALE: 1" = 2'



C G-61 SECTION
DRAINAGE CORRIDOR
SCALE: 1" = 2'



89 G-61 DETAIL
MANHOLE CONNECTION COLLECTION PIPE AND DRAIN PIPE
SCALE: 1" = 1'

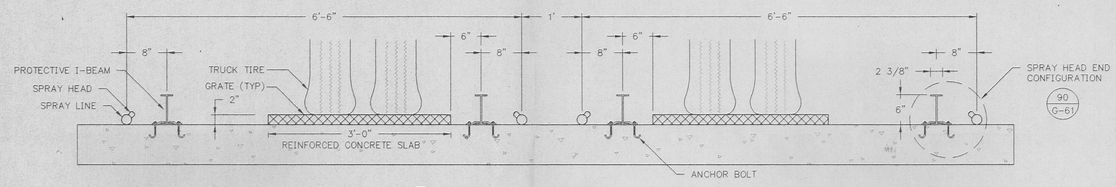


D G-61 SECTION
EQUIPMENT DECONTAMINATION FACILITY
SCALE: 1" = 2'

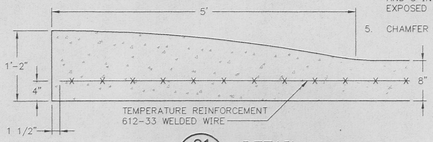
90 G-61 DETAIL
SPRAY HEAD END CONFIGURATION
SCALE: 1" = 1'

NOTES:

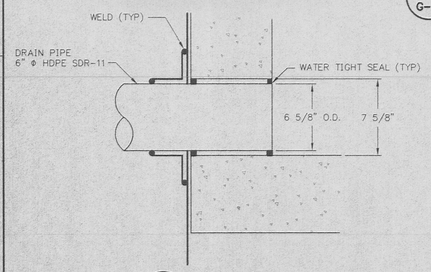
1. LOCATIONS OF THE EQUIPMENT DECONTAMINATION FACILITIES ARE SHOWN ON THE SITE DEVELOPMENT PLANS AND ARE FOR PLAN PURPOSES ONLY. THE LOCATIONS AND SIZES OF THE EQUIPMENT DECONTAMINATION FACILITIES MAY VARY FROM THOSE SHOWN ON THE SITE DEVELOPMENT PLANS BASED ON THE SEQUENCE AND SCHEDULE FOR REMOVAL OF IMPACTED MATERIALS FROM THE OPERABLE UNITS.
2. CONCRETE DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) STANDARD 318, LATEST ISSUE. CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI STANDARD 301, LATEST ISSUE.
3. ALL REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 GRADE 60.
4. CONCRETE PROTECTION FOR REINFORCING STEEL SHALL BE A MINIMUM OF 1 1/2 INCHES FOR #5 BARS OR SMALLER, 2 INCHES FOR #6 BARS OR LARGER AND 3 INCHES WHERE CONCRETE IS PLACED AGAINST AND PERMANENTLY EXPOSED TO EARTH UNLESS OTHERWISE NOTED.
5. CHAMFER ALL EXPOSED EDGES 1 INCH X 45 DEGREES UNLESS OTHERWISE NOTED.
6. ALL JOINTS SHALL BE STRICTLY ADHERED TO UNLESS OTHERWISE APPROVED BY THE ENGINEER.
7. ALL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 POUNDS PER SQUARE INCH.
8. ALL CONCRETE SHALL BE MOIST CURED FOR A PERIOD OF SEVEN DAYS OR CURED BY USE OF AN APPROVED MEMBRANE CURING COMPOUND.
9. ALL WATERSTOPS SHALL BE 6-INCH DUMBBELL TYPE PVC AS MANUFACTURED BY WILLIAMS PRODUCTS COMPANY OR APPROVED EQUIVALENT.
10. FOUNDATION AND ROAD DESIGN CALCULATIONS HAVE ASSUMED AN ALLOWABLE SOIL BEARING PRESSURE OF 3,000 POUNDS PER SQUARE FOOT AT 3 FEET BELOW GRADE.



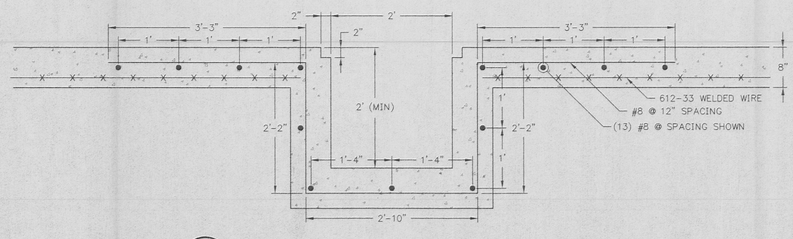
E G-61 SECTION
EQUIPMENT DECONTAMINATION FACILITY
SCALE: 1" = 1'



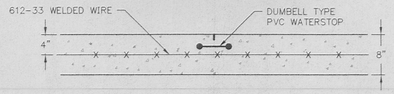
91 G-61 DETAIL
RAMP
SCALE: 1" = 1'



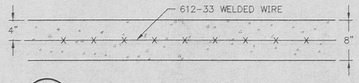
93 G-61 DETAIL
DRAIN PIPE
SCALE: 1" = 6"



94 G-61 DETAIL
DRAINAGE CORRIDOR REINFORCEMENT
SCALE: 1" = 1'



92 G-61 DETAIL
CONTRACTION JOINT
SCALE: 1" = 1'



95 G-61 DETAIL
TEMPERATURE REINFORCEMENT
SCALE: 1" = 1'

002324

PRELIMINARY DESIGN PACKAGE

REV. NO.	DATE	DESCRIPTION	DES BY	DR BY	CHK BY	RVW BY	APP BY

SCALE AS SHOWN

OWNER/FACILITY:
UNITED STATES DEPARTMENT OF ENERGY
FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

CLIENT:
FERMCO FERNALD ENVIRONMENTAL RESTORATION MANAGEMENT CORPORATION

PROJECT:
ON-SITE DISPOSAL FACILITY

TITLE:
EQUIPMENT DECONTAMINATION FACILITY
PLAN AND DETAILS

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE
DATE
SEAL

GEOSYNTEC CONSULTANTS
1100 LAKE HEARN DRIVE, ATLANTA, GEORGIA 30342 USA

FERMCO SUBCONTRACT NO.: 95F5005028
FERMCO DRAWING NO.: 90X-6000-G-00061
GEOSYNTEC PROJECT NO.: GE3900-11
GEOSYNTEC DOCUMENT NO.: F95-B051
SHEET NO.: G-61
REVISION NO.: B

233650-32

M:\GACAD12\GE3900-12\F95-B051 Sat Dec 16 14:12:03 1995