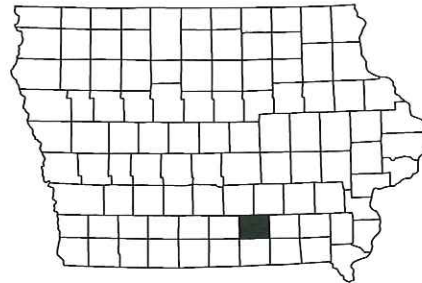


IOWA DEPARTMENT OF NATURAL RESOURCES

CONSTRUCTION DOCUMENTS FOR SEDIMENTATION PONDS AT LAKE MIAMI

MONROE COUNTY, IOWA

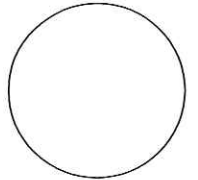
PROJECT # 15-05-68-01



SHEET INDEX

A.01	COVER SHEET
A.02	LOCATION MAP
B.01	TRASH RACK DETAIL
B.02	ROCK CHECK DAM DETAIL
C.01	QUANTITIES AND GENERAL INFORMATION
D.01	OVERALL SITE PLAN
D.02	POND 1 CROSS SECTION
D.03	POND 1 PLAN AND PROFILE
D.04	TERRACE PLAN AND PROFILE
D.05	POND 3 CROSS SECTION
D.06	POND 3 PLAN AND PROFILE
D.07	POND 4 CROSS SECTION
D.08	POND 4 PLAN AND PROFILE
D.09	POND 5 CROSS SECTION
D.10	POND 5 PLAN AND PROFILE
D.11	SITE 6

CONSULTANT:



IOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



COVER SHEET

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

DIRECTORY		CONSTRUCTION INSPECTOR	
PROJECT MANAGER		CONSTRUCTION INSPECTOR	
COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES	COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES
ADDRESS	502 EAST 9TH STREET	ADDRESS	
CITY, STATE, ZIP	DES MOINES, IA, 50319	CITY, STATE, ZIP	
CONTACT	"MIKE" SHAHID HAMEED	CONTACT	JASON KRUSE
TELEPHONE	515-725-8467	TELEPHONE	515-250-3707
FAX		FAX	
EMAIL	mike.hameed@dnr.iowa.gov	EMAIL	jason.kruse@dnr.iowa.gov

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF CONSTRUCTING VARIOUS SEDIMENT CONTROL STRUCTURES

AUTHORIZATION TO BID

12/16/16

AUTHORIZATION - PARKS | WILDLIFE | FISHERIES | LAW ENFORCEMENT | FORESTRY DATE

12/13/16

ENGINEERING BUREAU CHIEF DATE

NO. DATE REVISION

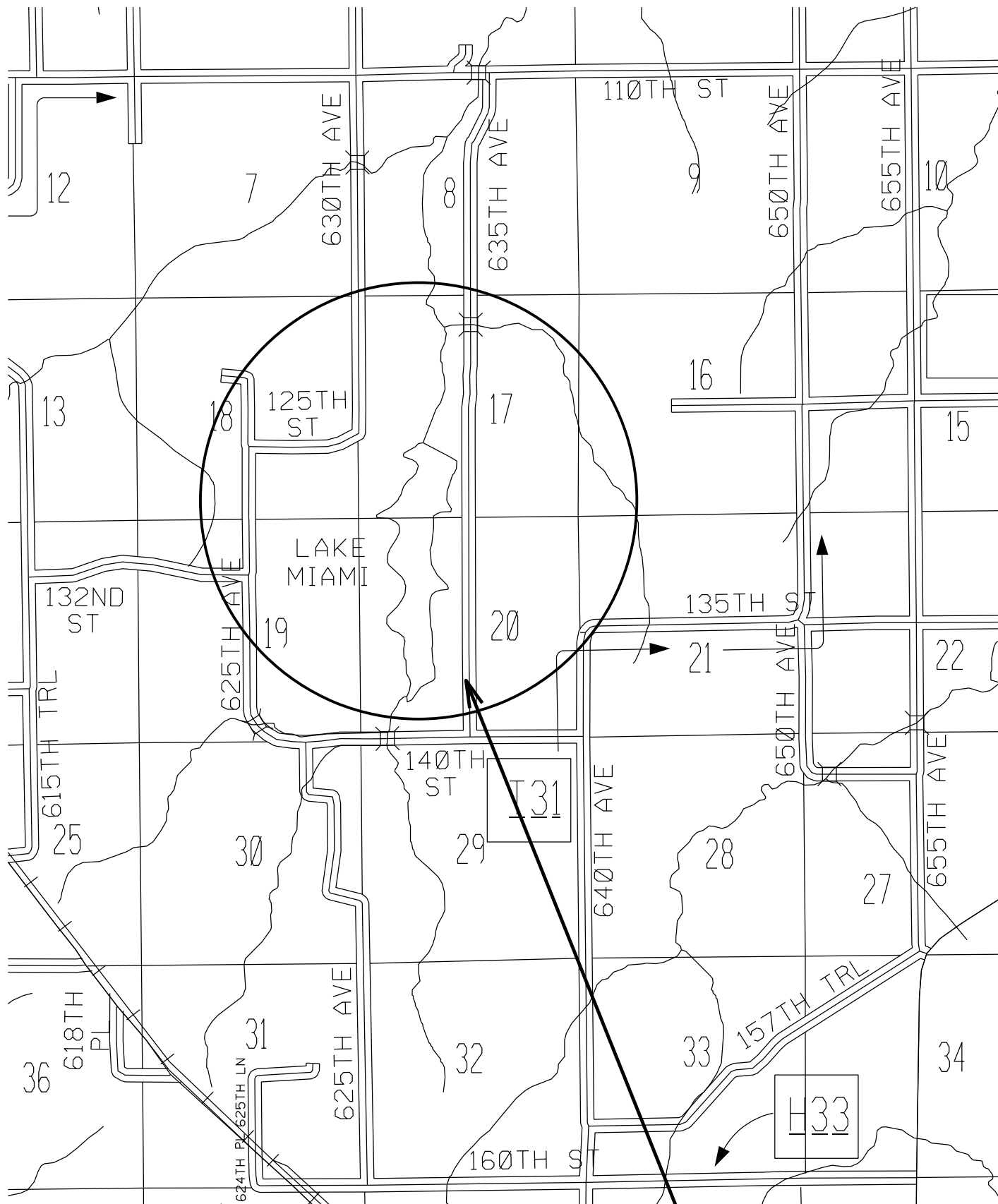
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15-05-68-01

CHECKED BY: DATE:

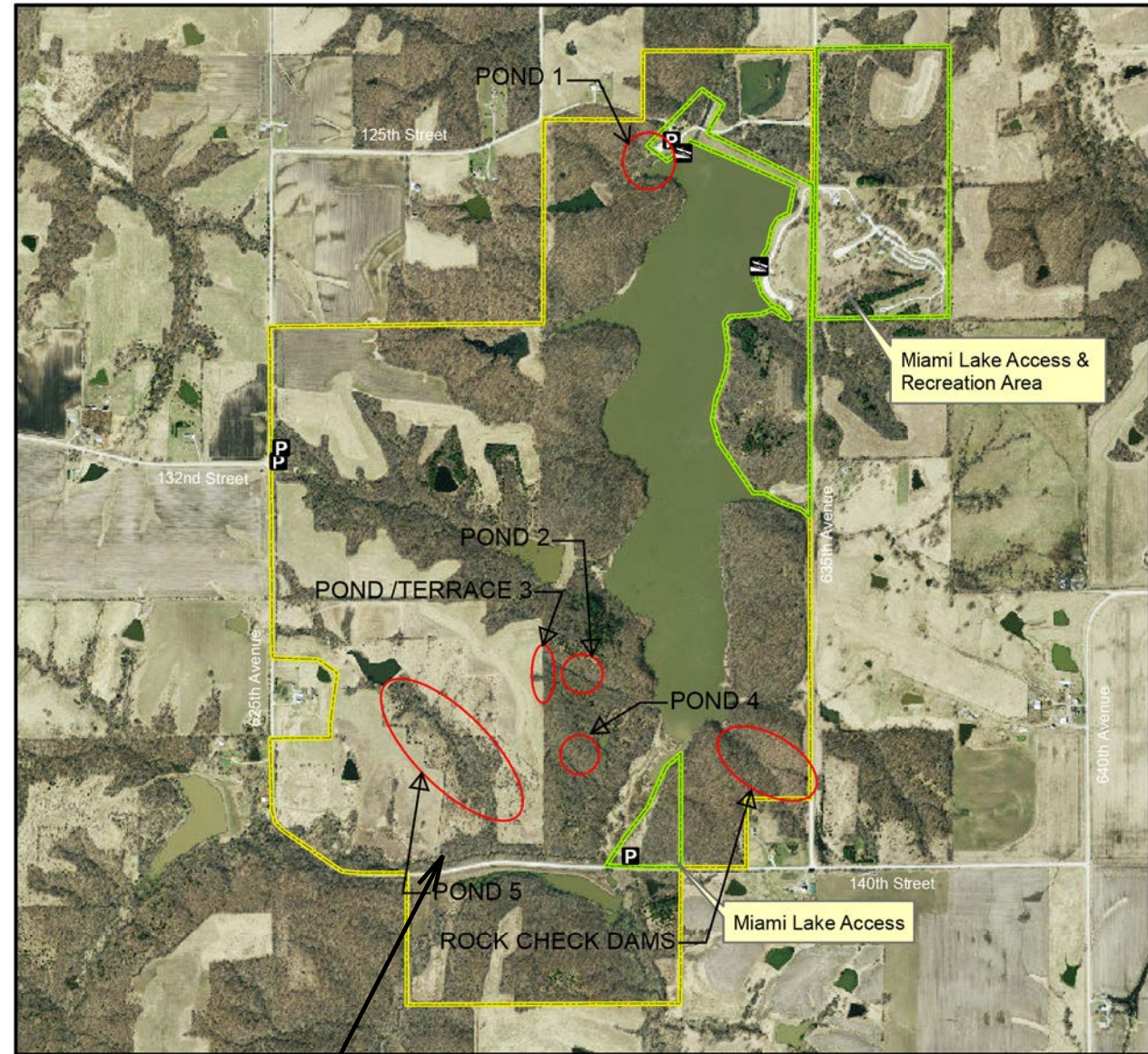
SHEET NO.:

A.01



PROJECT LOCATION

Miami Lake Wildlife Management Area



Legend

- State Areas open to hunting
- WMA Boundary
- Parking Lot
- Boat Ramp
- Other Public Land
- 2009 Aerial Photography



Acres: 771
 Habitat: 1/4 Lake, 1/4 Upland, 1/2 Timber
 Species: Deer, Turkey, Rabbit, Quail, Dove
 Contact: Jeff Telleen
 Rathbun Wildlife Unit
 641-414-1513

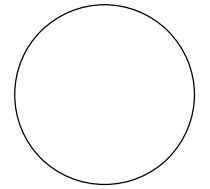
Map Creation Date: 8/2012

Every effort has been made to accurately depict the boundaries on this map. However, users should rely on boundary signs actually located in this area to ensure they do not trespass on private property.

Monroe County, Iowa
 T-73N, R-17W,
 Sections 17, 19-20, 29-30

Directions: 2 miles N of Albia on Hwy 137, 1.5 miles W on H33, 2 miles N on T31, 0.5 mile W and 1.5 miles N on gravel

CONSULTANT:



IOWA DEPARTMENT OF
 NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
 502 E. 9TH ST., DES MOINES, IA 50319-0034



PROJECT LOCATION MAP

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

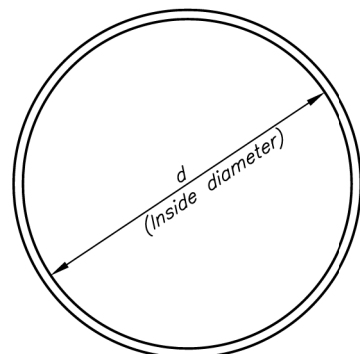
NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:
 15-05-68-01

CHK'D BY: DATE:

SHEET NO.:

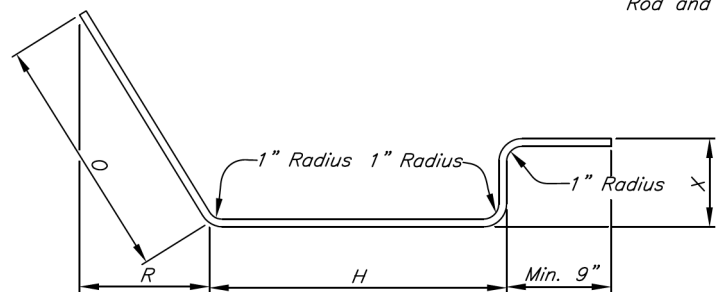
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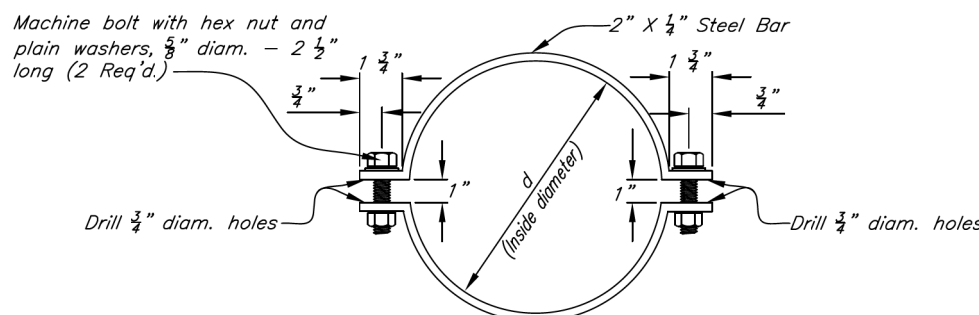
BENDING DIAGRAM FOR (b) AND (c) RODS

NPS	PIPE O.D.	APPROX. WEIGHT LBS.	(a) ROD SIZE IN.	H IN.	R IN.	X IN.	O IN.	LENGTH IN.	NUMBER REQUIRED	N IN.	(b) ROD SIZE IN.	d IN.	LENGTH IN.	NUMBER REQUIRED	(c) ROD SIZE IN.	d IN.	LENGTH IN.	NUMBER REQUIRED	(a) ROD SIZE IN.	d IN.	LENGTH IN.	NUMBER REQUIRED
6	6 5/8	18.9	3/8	9	4	6	9 1/2	33 1/2	14	4 1/8	3/8	17 1/8	53 3/4	3	--	--	--	0	2 X 1/2	7 3/8	14 3/8	2
8	8 5/8	22.3	3/8	11	4	6	10 1/2	36 1/2	10	6 1/2	3/8	19 1/8	60 1/8	3	--	--	--	0	2 X 1/2	9 3/8	17 3/4	2
10	10 5/8	24.7	3/8	13	5 1/2	6	12	40	10	7 1/2	3/8	21 1/8	66 3/8	3	--	--	--	0	2 X 1/2	11 3/8	20 3/8	2
12	13 1/8	27.1	3/8	15	5 1/2	6	13	43	10	7 3/8	3/8	23 3/8	74 1/4	3	--	--	--	0	2 X 1/2	13 3/8	24 3/4	2
15	16 1/8	48.4	1/2	18	6	6	14 1/2	47 1/2	10	8 3/8	1/2	26 1/8	82 1/8	3	1/2	11	34 1/2	1	2 X 1/2	17 1/8	29 3/8	2
18	19 1/8	52.4	1/2	22	8	9	19 1/2	59 1/2	12	9 3/4	1/2	35 1/8	110 3/8	3	1/2	14	44	1	2 X 1/2	20 1/8	34 5/8	2
21	22 1/8	69.5	5/8	25	8 1/2	9	21	64	12	10 1/2	5/8	37 3/8	118 1/4	3	5/8	17	53 3/8	1	2 X 1/2	23 3/8	39 3/4	2

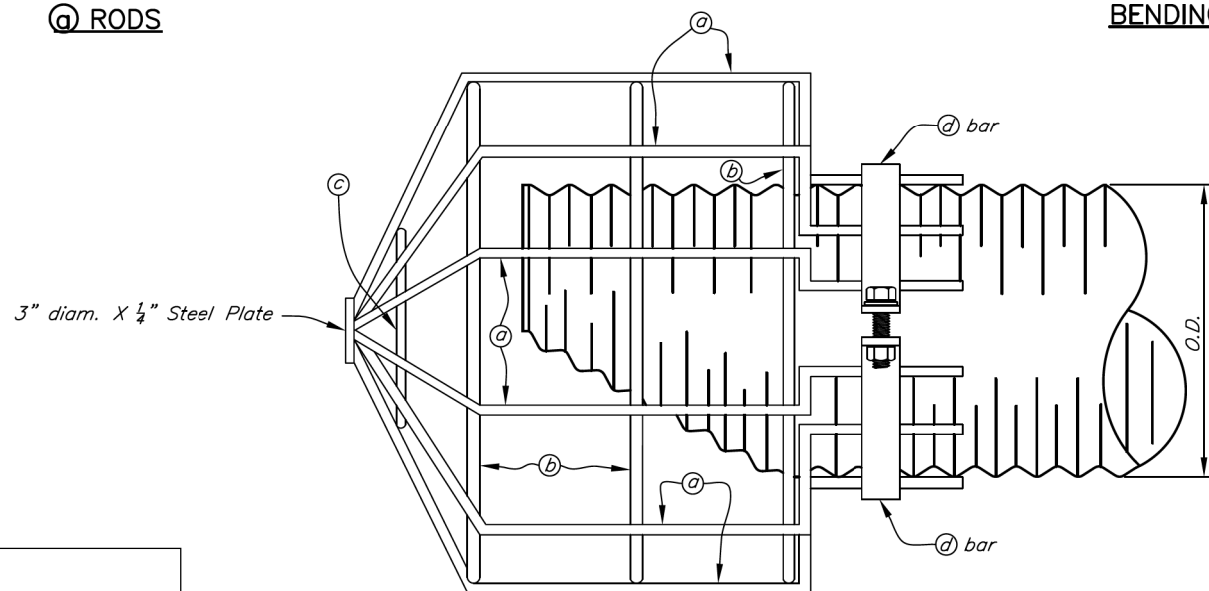
Note: Weld (b) and (c) rods and (a) bars to (a) rods and weld (a) rods to 3" diam. Steel Plate.
 16 Gage, 1/4" corrugations on 6" - 10" pipe.
 16 Gage, 1/2" corrugations on 12" - 21" pipe.
 Rod and bar dimensions calculated from inside diameter and rounded to the nearest 1/8 inch.



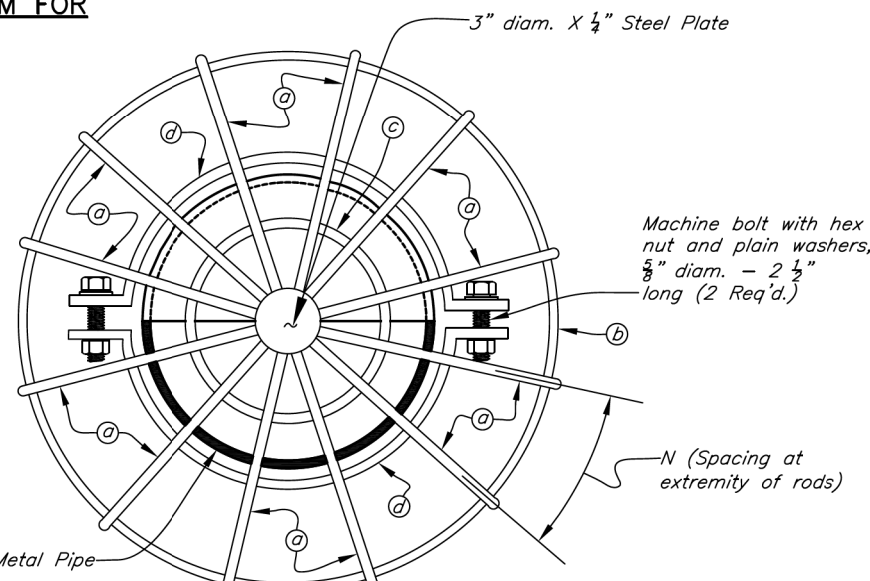
BENDING DIAGRAM FOR (a) RODS



BENDING DIAGRAM FOR (d) BARS



ELEVATION



END ELEVATION

STANDARD DWG. IA-1167

DATE Oct. 2012 PAGE 1 OF 1

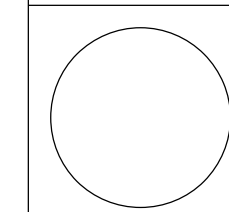
Date _____
 Designed _____
 Drawn _____
 Checked _____
 Approved _____

TRASH RACK FOR
 CORRUGATED METAL PIPE
 CANOPY INLET



File No. _____
 Drawing No. _____
 Sheet of _____

CONSULTANT:



IOWA DEPARTMENT OF
 NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
 502 E. 9TH ST., DES MOINES, IA 50319-0034

TRASH RACK DETAILS

SEDIMENTATION PONDS AT:
 LAKE MIAMI WMA

MONROE COUNTY

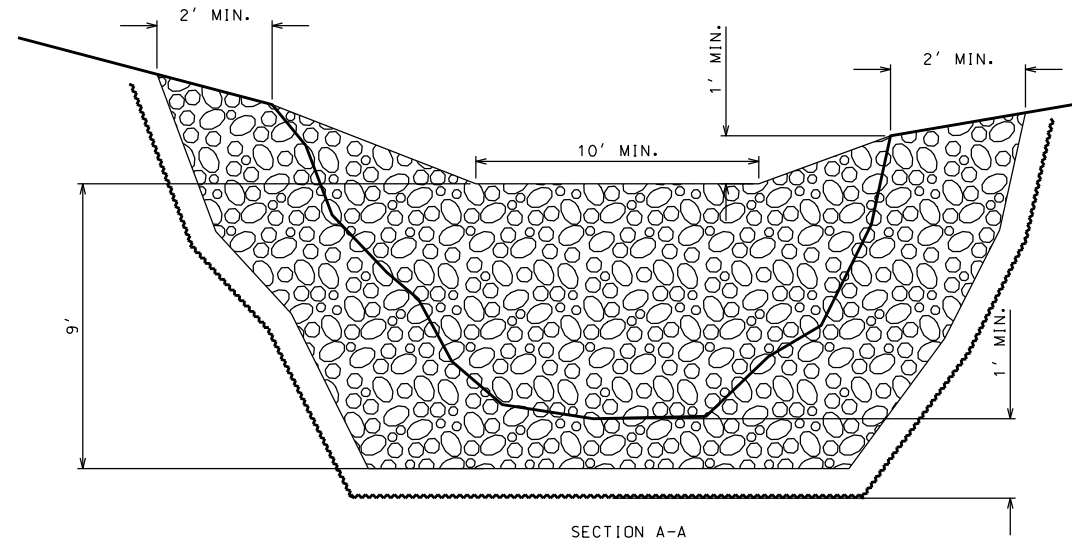
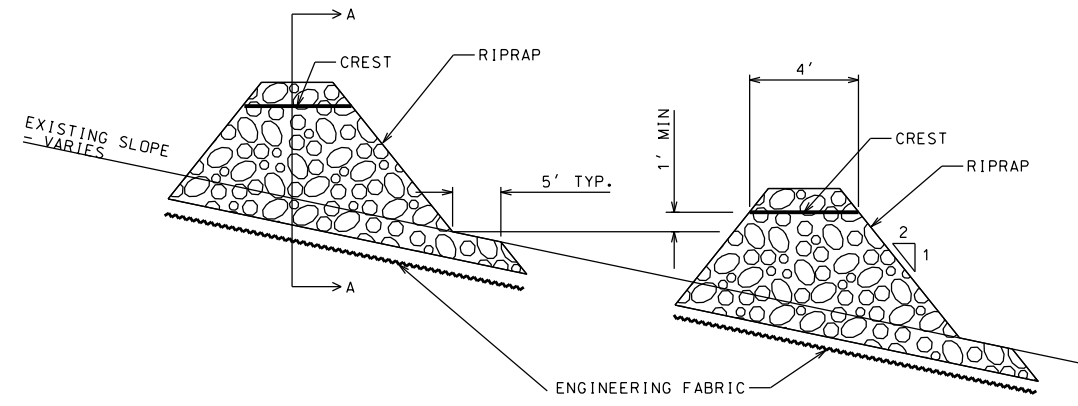
NO.	BY	DATE	REVISION

DRAWN BY: PROJECT NUMBER:
 15-05-68-01

CHK'D BY: DATE:

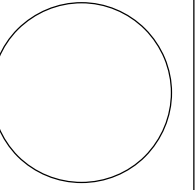
SHEET No:

B.01



ROCK CHECK DAM DETAIL
NOT TO SCALE

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034

ROCK CHECK DAM DETAIL

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

NO.	BY	REVISION

DATE

DRAWN BY: PROJECT NUMBER:

15-05-68-01

CHK'D BY: DATE:

SHEET No:

B.02

ESTIMATED PROJECT QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
1	MOBILIZATION	LS	1
2	6" DIA. SMOOTH STEEL PIPE	LF	469
3	12" DIA. SMOOTH STEEL PIPE	LF	142
4	TRASH RACK / BAR GUARD ASMBLY (6")	EA	2
5	TRASH RACK / BAR GUARD ASMBLY (12")	EA	1
6	5'X5'x1/4" ANTISEEP	EA	21
7	EARTHFILL	CY	59711
8	CORE TRENCH	CY	2854
9	SEED & MULCH	AC	3.5
10	CLEARING & GRUBBING	AC	4
11	6" STRIPPING	CY	8737
	Alternate #1 - Site 5		
12	6" DIA. SMOOTH STEEL PIPE	LF	177
13	TRASH RACK / BAR GUARD ASMBLY (6")	EA	1
14	5'X5'x1/4" ANTISEEP	EA	5
15	EARTHWORK/FILL/GRADE	CY	34071
16	CORE TRENCH	CY	1346
17	SEED & MULCH	AC	1.5
18	CLEARING & GRUBBING	AC	7
19	6" STRIPPING	CY	3630
	Alternate #2 - Site 6		
20	RIPRAP	Tons	3266
21	ENGINEERING FABRIC	SY	546

ESTIMATE REFERENCE INFORMATION

ITEM NO.	DESCRIPTION
7	The plan quantity includes 30% increase for shrinkage.
8	The plan quantity includes 30% increase for shrinkage.
15	The plan quantity includes 30% increase for shrinkage.
16	The plan quantity includes 30% increase for shrinkage.

GENERAL NOTES

Verify actual locations and elevations with DNR Engineer.

All work shall conform to and be performed in accordance with all applicable codes and ordinances.

The contractor shall visit the site and inspect the project area and thoroughly familiarize themselves with the actual job conditions prior to bidding and the start of work. Failure to visit the project site shall not relieve the contractor from performing the work in accordance to the plans, specification, special provisions and contract.

The contractor shall verify, at the site, all dimensions and conditions shown on the plans and shall notify the DNR Engineer of any discrepancies, omissions, and/or conflicts prior to proceeding with the work.

It shall be the contractor's responsibility to provide waste areas or disposal sites for excess material (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this project. No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans or approved by the DNR Engineer.

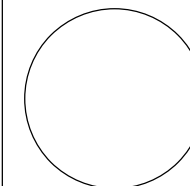
The contractor shall not disturb desirable grass areas and desirable trees outside the construction limits. The contractor will not be permitted to park or service vehicles and equipment or use these areas for storage of materials. Storage, parking and service areas will be subject to the approval of the DNR Engineer.

Where utilities and fixtures are shown as Existing on the plans or encountered within the construction area, it shall be the responsibility of the contractor to notify the DNR Engineer of those utilities prior to the beginning of any construction. The contractor shall be afforded access to these facilities for necessary modification of services. Underground facilities, structures and utilities have been plotted from available surveys and records and therefore their locations must be considered approximate only. It is possible there may be others, the existence of which is presently not known or shown. It is the contractor's responsibility to determine their existence and exact location and to avoid damage thereto. No claims for additional compensation will be allowed to the contractor for any interference or delay caused by such work.

The contractor shall shape graded area to maintain surface drainage. All elevations are to finish grade.

The contractor is expected to have materials, equipment, and labor available on a daily basis to install and maintain erosion control features on the project. This may involve seeding, silt fence, rock ditch checks, silt basins or silt dikes.

CONSULTANT:



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NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



QUANTITIES AND GENERAL INFORMATION

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

NO. BY REVISION

DATE

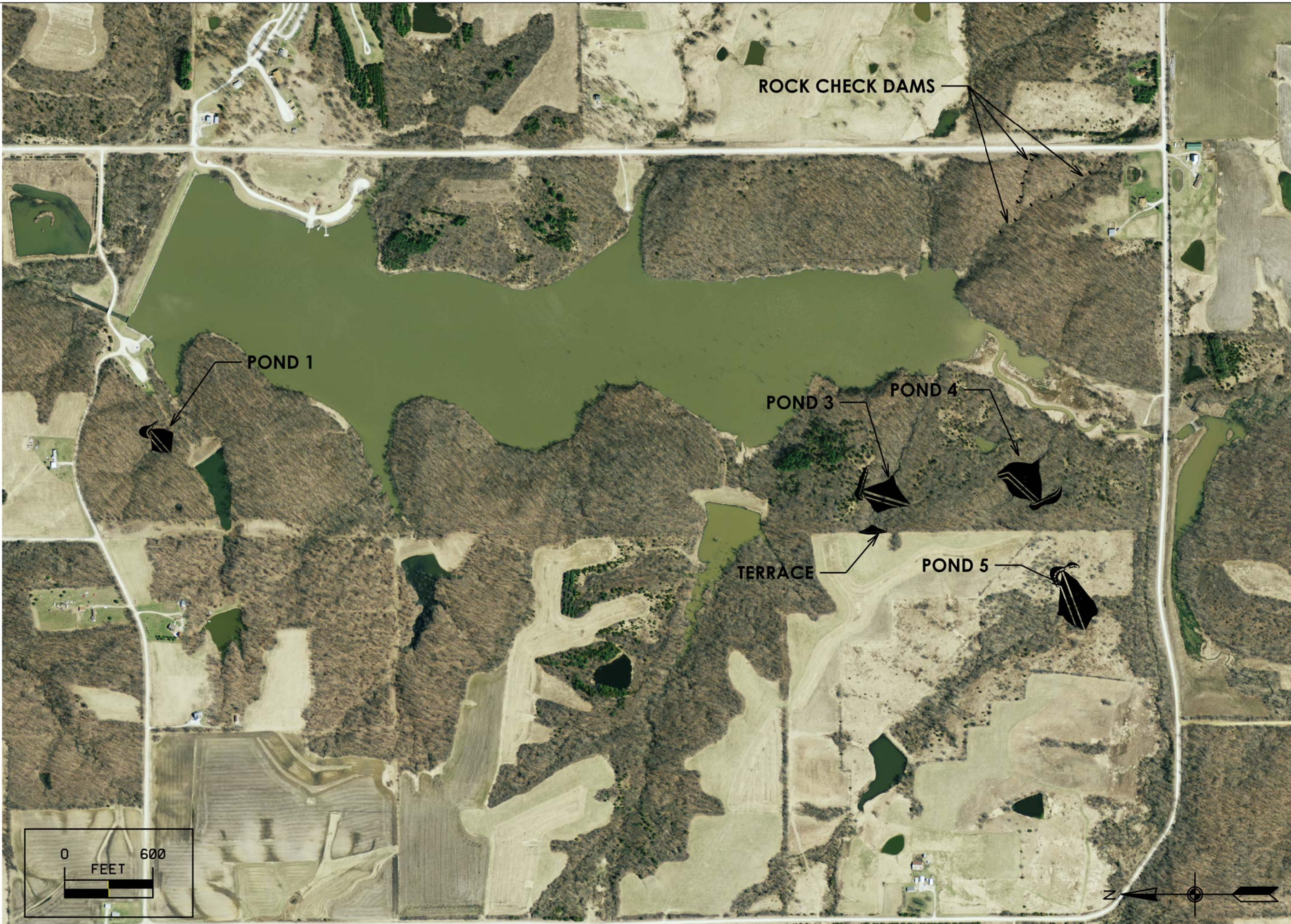
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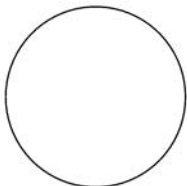
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SHEET NO.:

C.01



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



OVERALL SITE PLAN

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

NO.	BY	REVISION

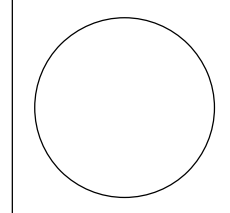
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15-05-68-01

CHK'D BY: DATE:

SHEET NO.:

D.01

CONSULTANT:



IOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



POND 1 CROSS SECTION

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

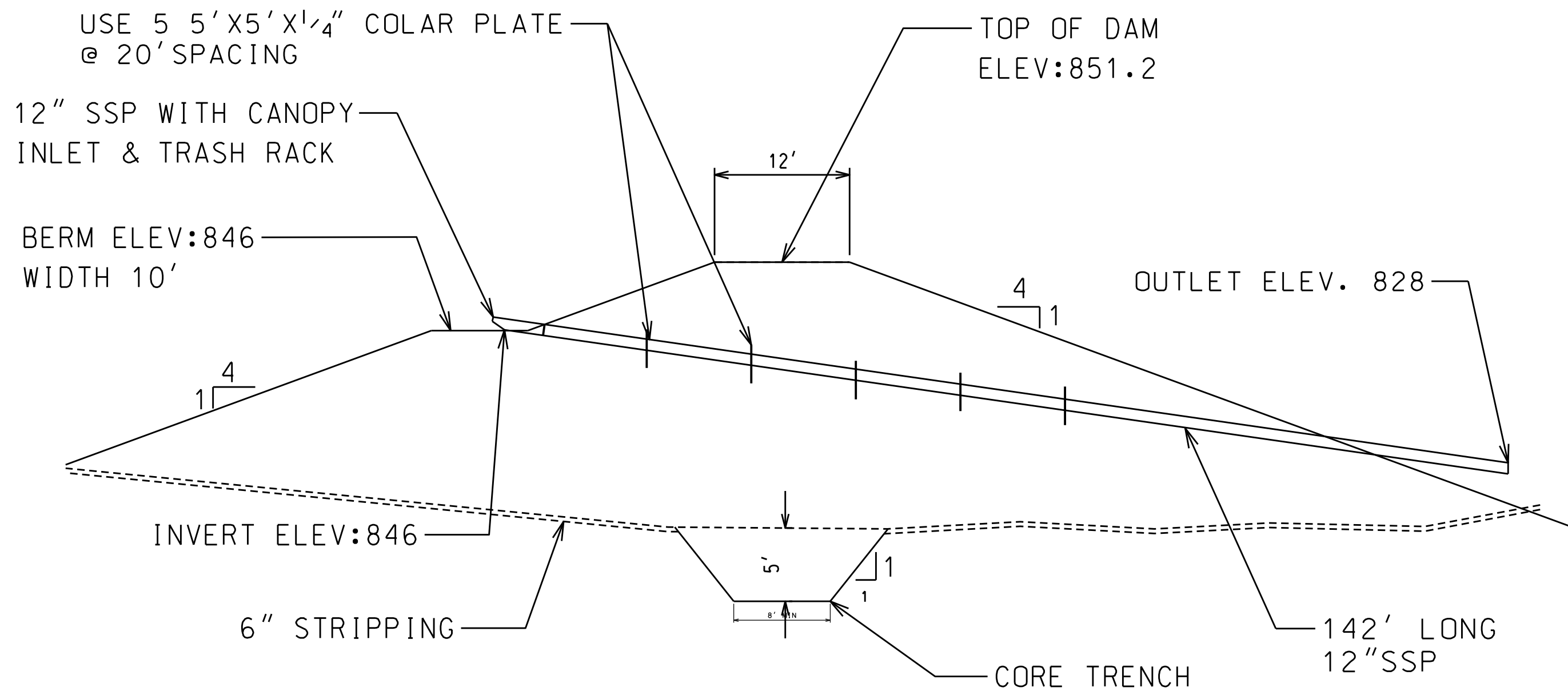
NO.	BY	REVISION

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15-05-68-01

CHK'D BY: DATE:

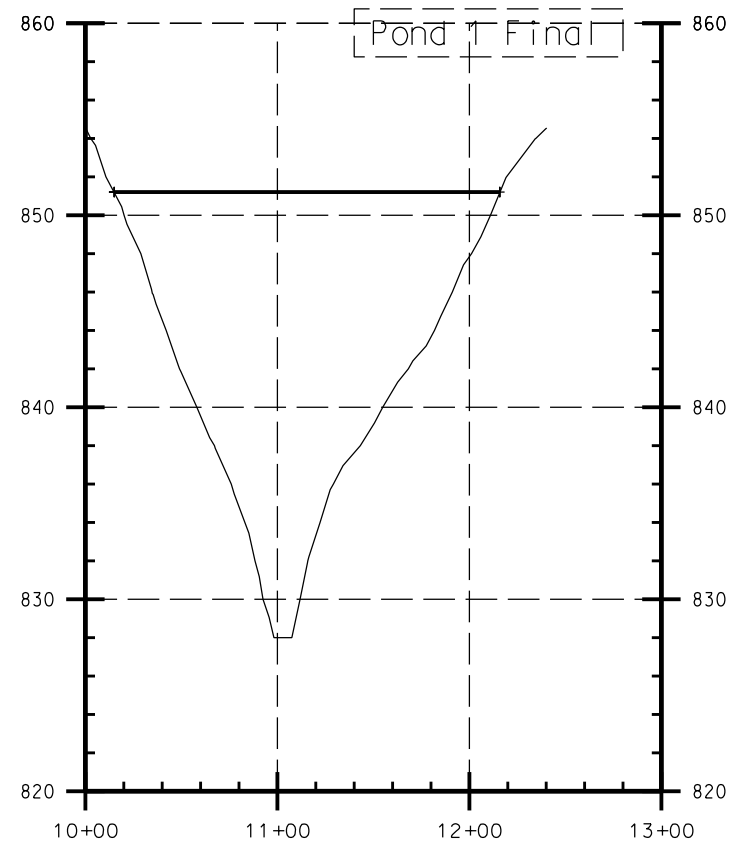
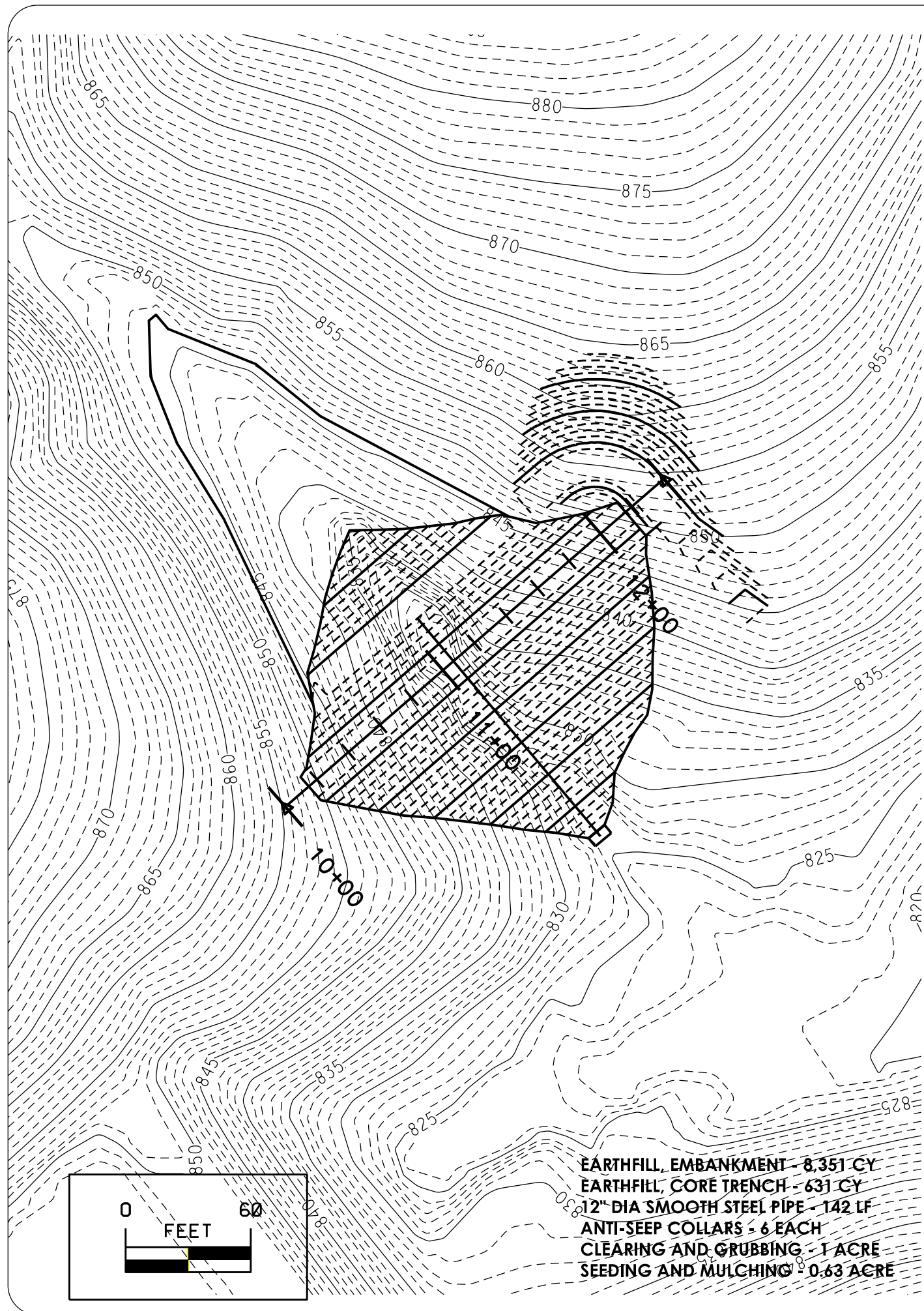
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D.02

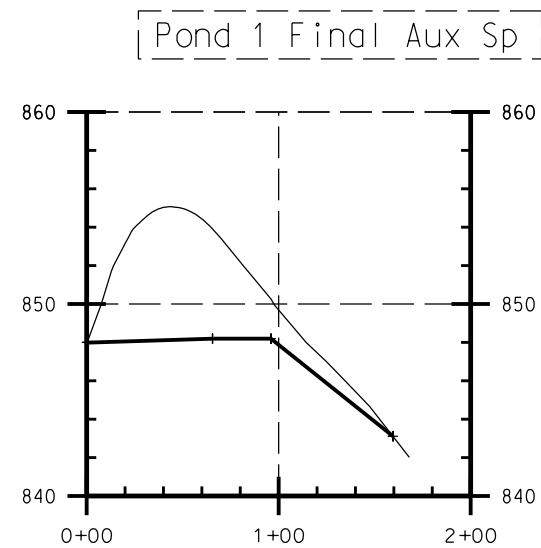


CROSS-SECTION OF DAM

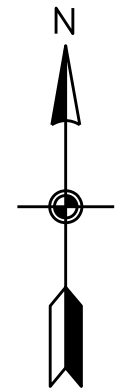
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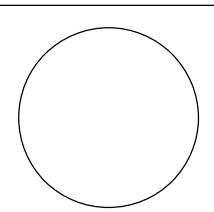
LINE	SURFACE	OFFSET
---	Lidar Mike	0.00
Scaled 10.0000 Times Ver.		
Scaled 1.0000 Times Hor.		



LINE	SURFACE	OFFSET
---	Lidar Mike	0.00
Scaled 10.0000 Times Ver.		
Scaled 1.0000 Times Hor.		



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



POND 1 PLAN AND PROFILE

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

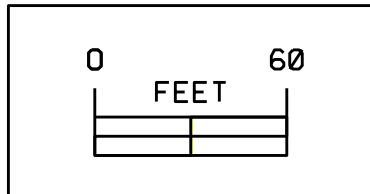
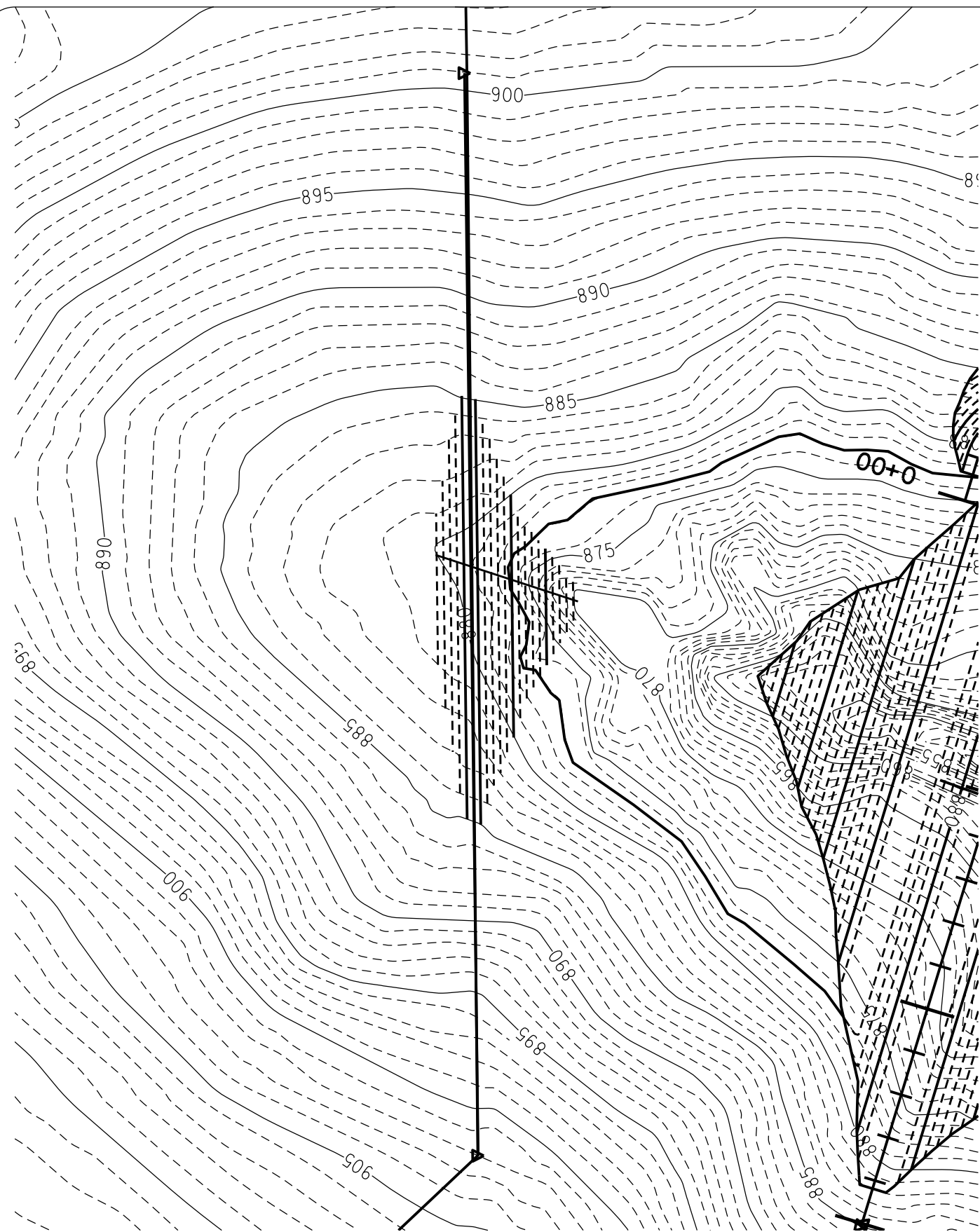
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DRAWN BY: PROJECT NUMBER:
15-05-68-01

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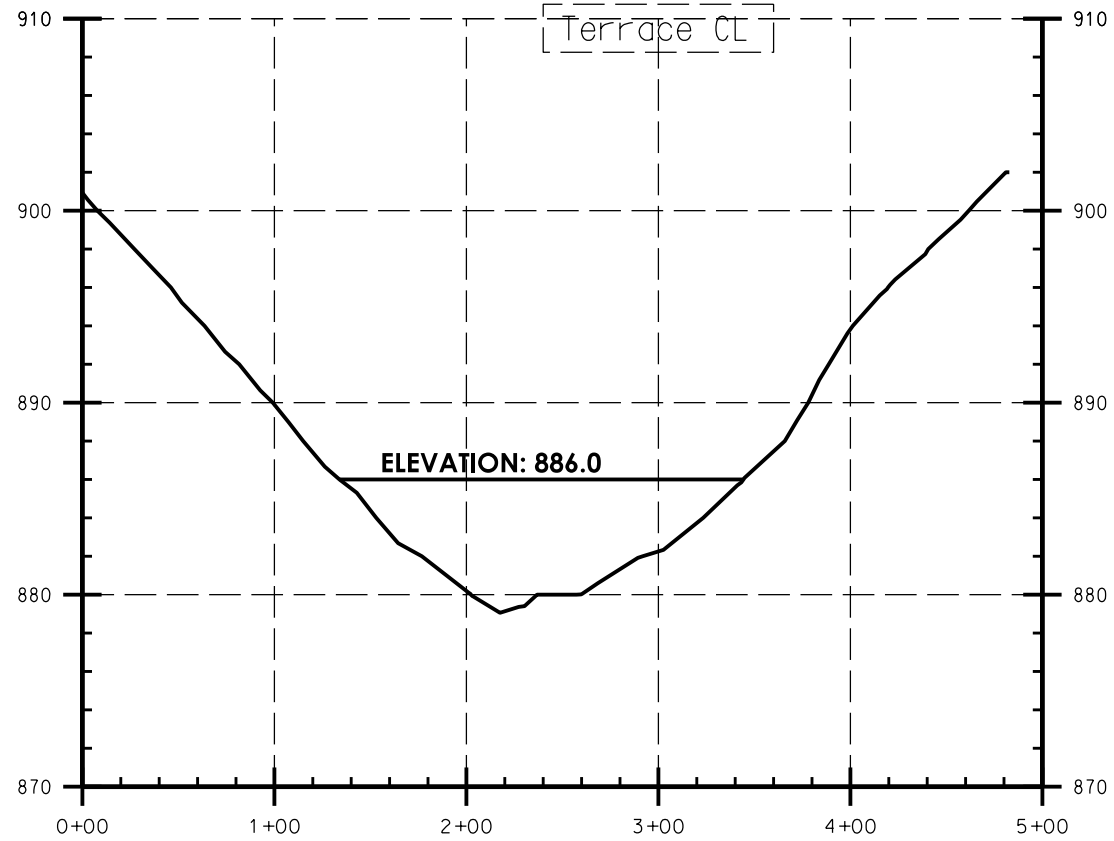
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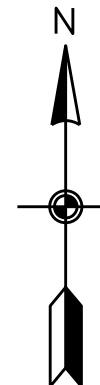


EARTHFILL, EMBANKMENT - 1,004 CY
6" PERF TILE W/ 12" HICKENBOTTOM STYLE INTAKE - 70 LF
CLEARING AND GRUBBING - 0.2 ACRE
SEEDING AND MULCHING - 0.2 ACRE

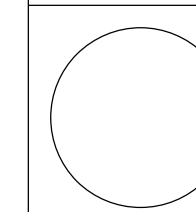
NOTE:
TERRACE SHALL BE CONSTRUCTED WITH
3:1 SIDESLOPES



LINE	SURFACE	OFFSET
---	Lidar Mike	0.00
---	Terrace2	0.00
Scaled 10.0000 Times Ver.		
Scaled 1.0000 Times Hor.		



CONSULTANT:



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NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
 502 E. 9TH ST., DES MOINES, IA 50319-0034



TERRACE PLAN AND PROFILE

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

NO. BY DATE REVISION

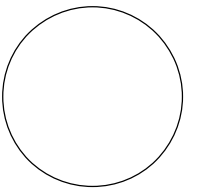
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 15-05-68-01

CHK'D BY: DATE:

SHEET No:

D.04

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



POND 3 CROSS SECTION

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

NO. BY REVISION

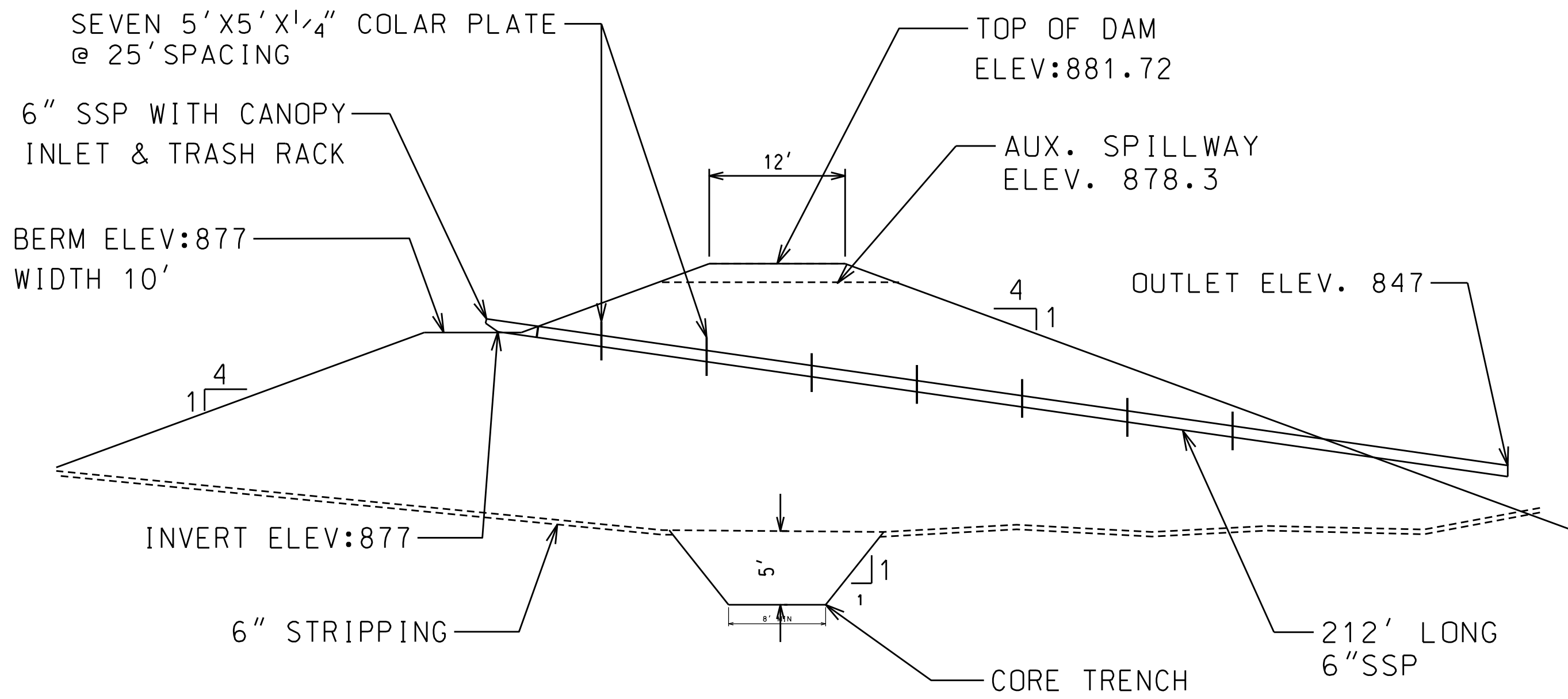
DATE

DRAWN BY: PROJECT NUMBER:
15-05-68-01

CHK'D BY: DATE:

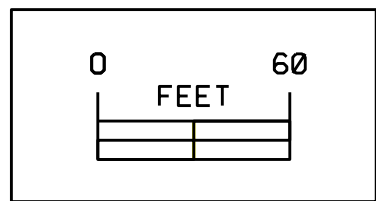
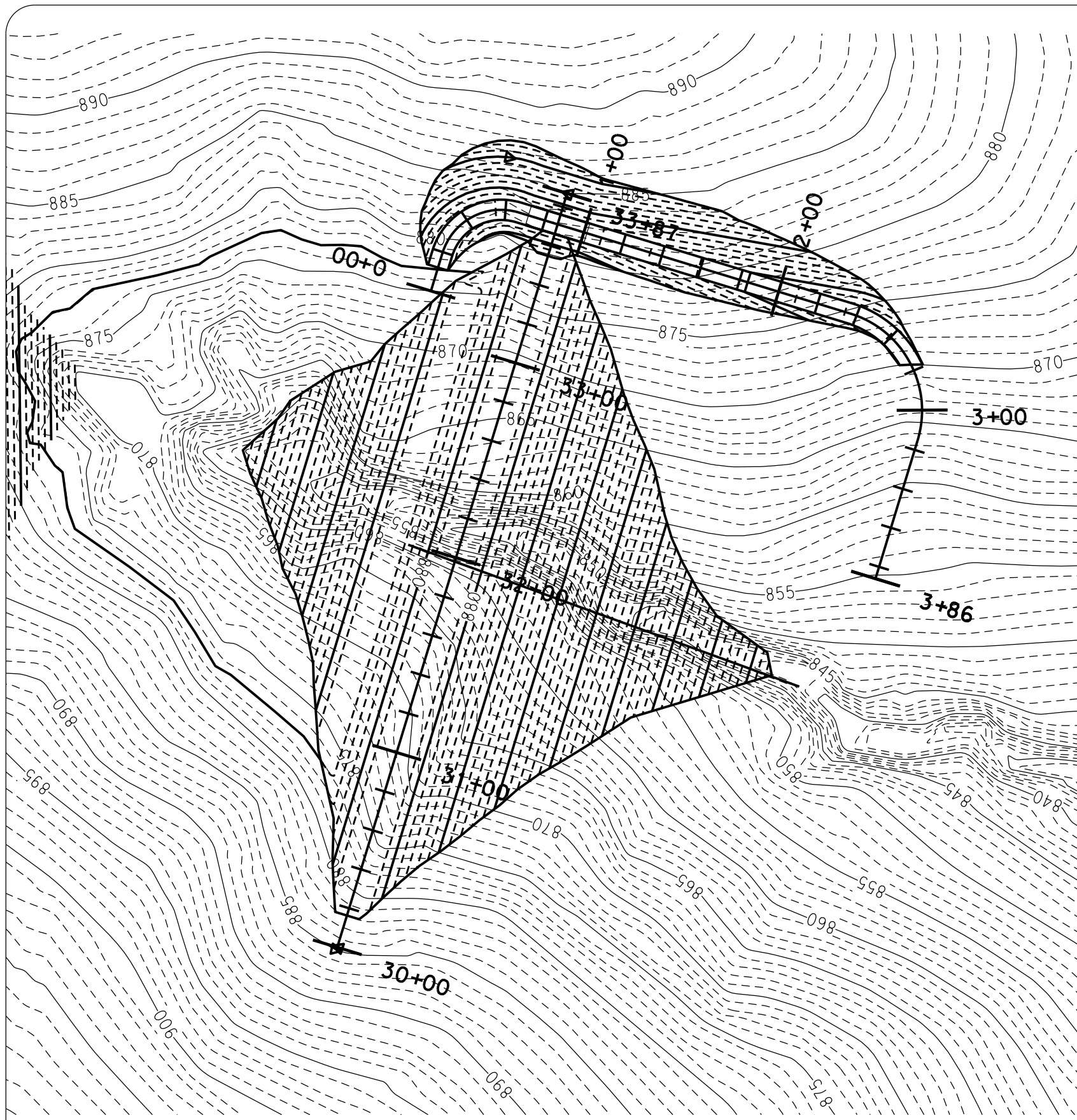
SHEET No:

D.05

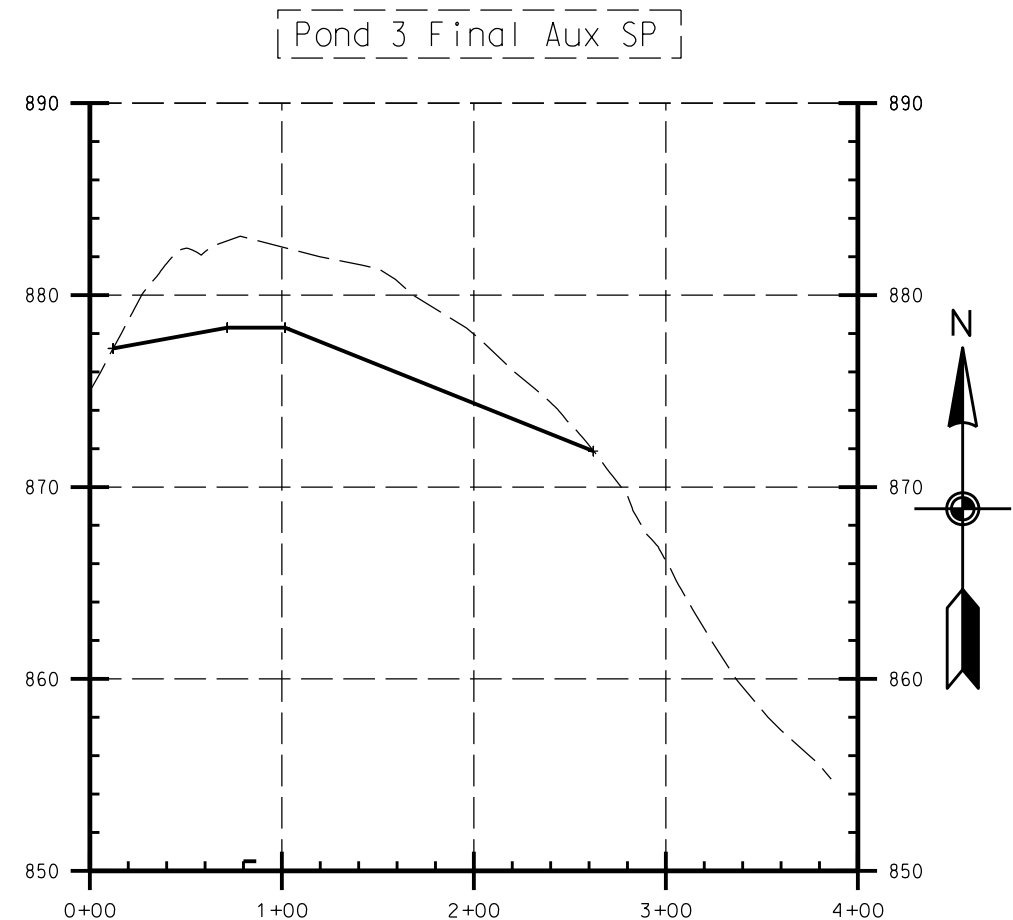
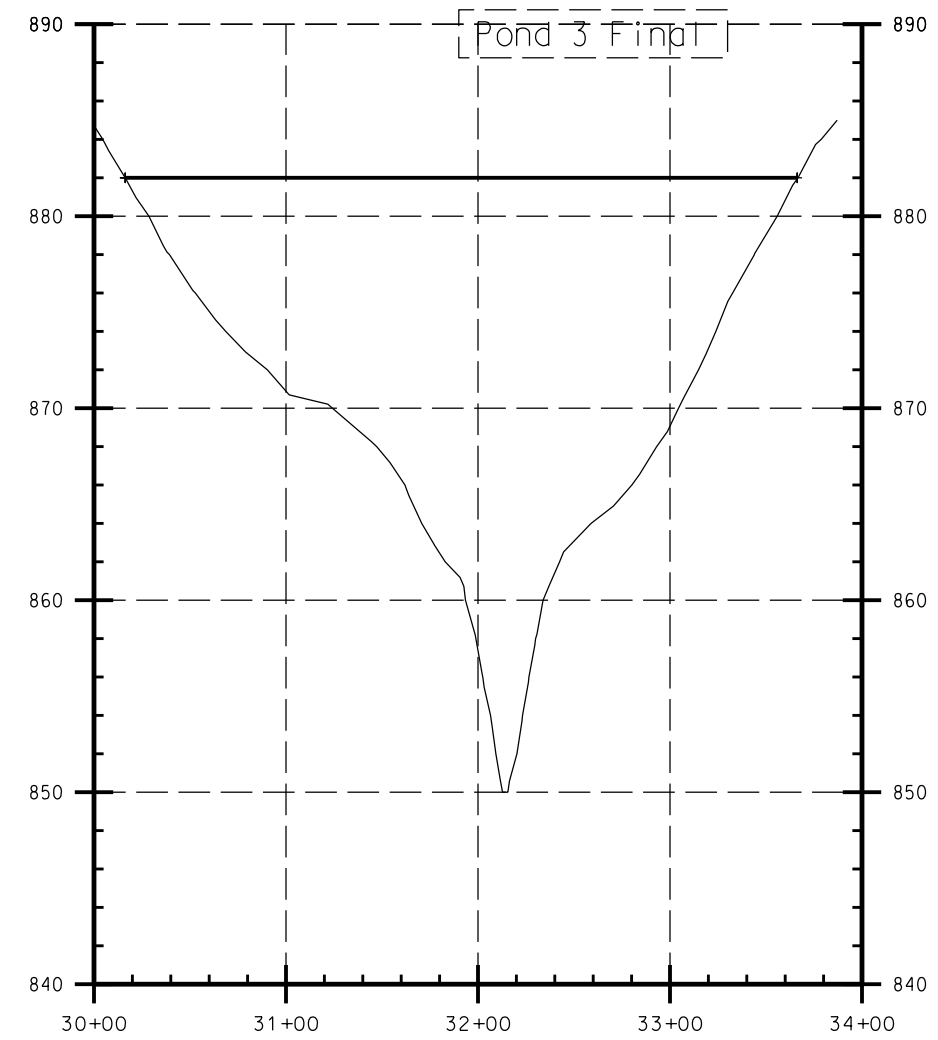


CROSS-SECTION OF DAM

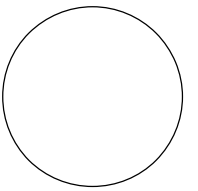
NOT TO SCALE



EARTHFILL, EMBANKMENT - 20,783 CY
EARTHFILL, CORE TRENCH - 1,096 CY
6" DIA SMOOTH STEEL PIPE - 212 LF
ANTI-SEEP COLLARS - 8 EACH
CLEARING AND GRUBBING - 1.2 ACRE
SEEDING AND MULCHING - 1.4 ACRE



CONSULTANT:



**IOWA DEPARTMENT OF
 NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
 502 E. 9TH ST., DES MOINES, IA 50319-0034



POND 3 PLAN AND PROFILE

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

NO.	BY	REVISION

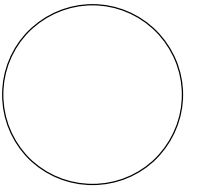
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 15-05-68-01

CHK'D BY: DATE:

SHEET NO:

D.06

CONSULTANT:



IOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



POND 4 CROSS SECTION

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

NO. BY REVISION

DATE

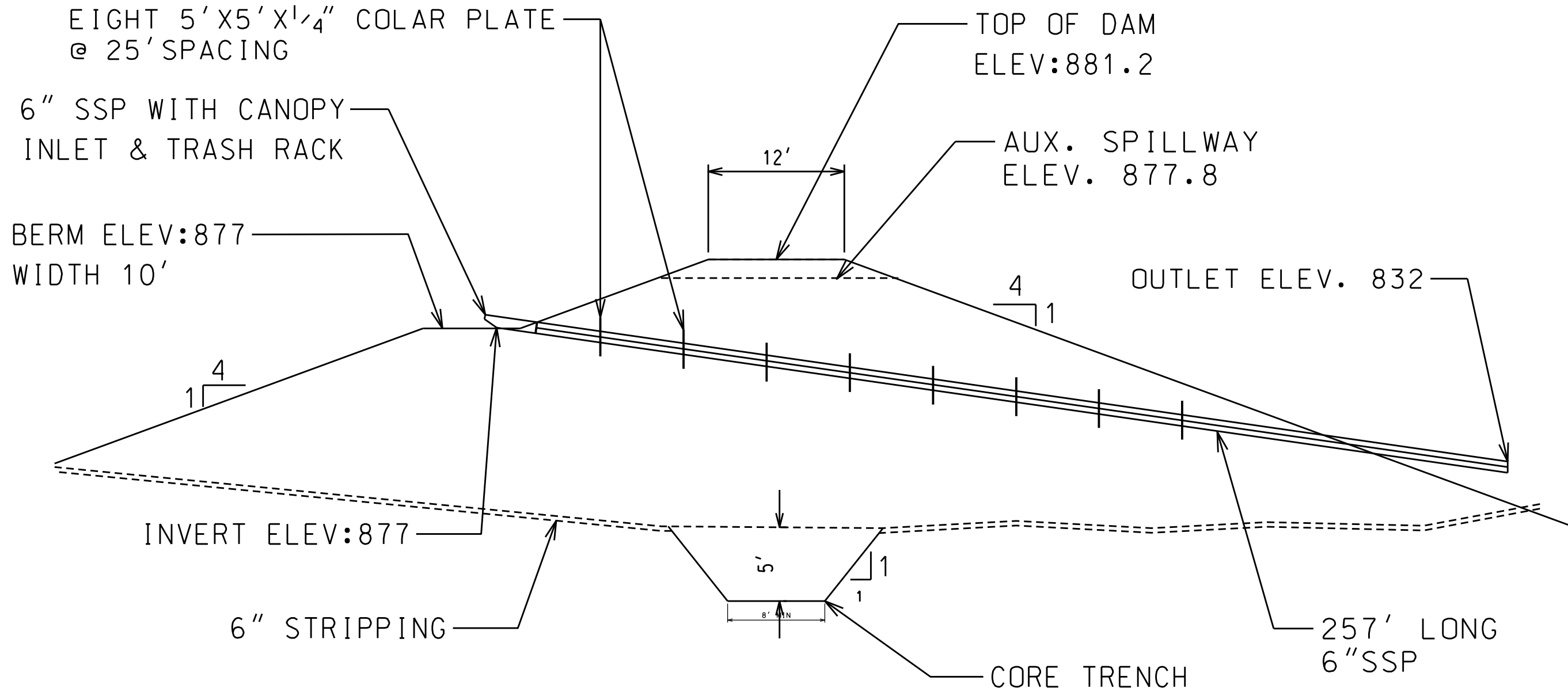
DRAWN BY: PROJECT NUMBER:

15-05-68-01

CHK'D BY: DATE:

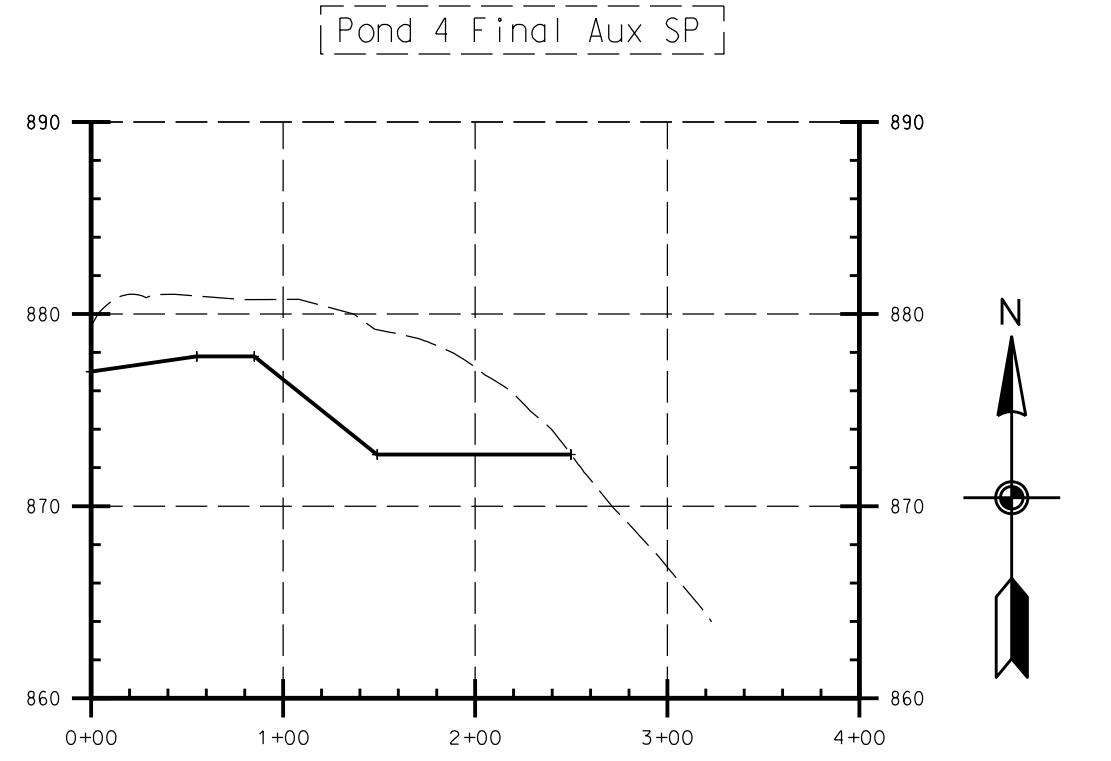
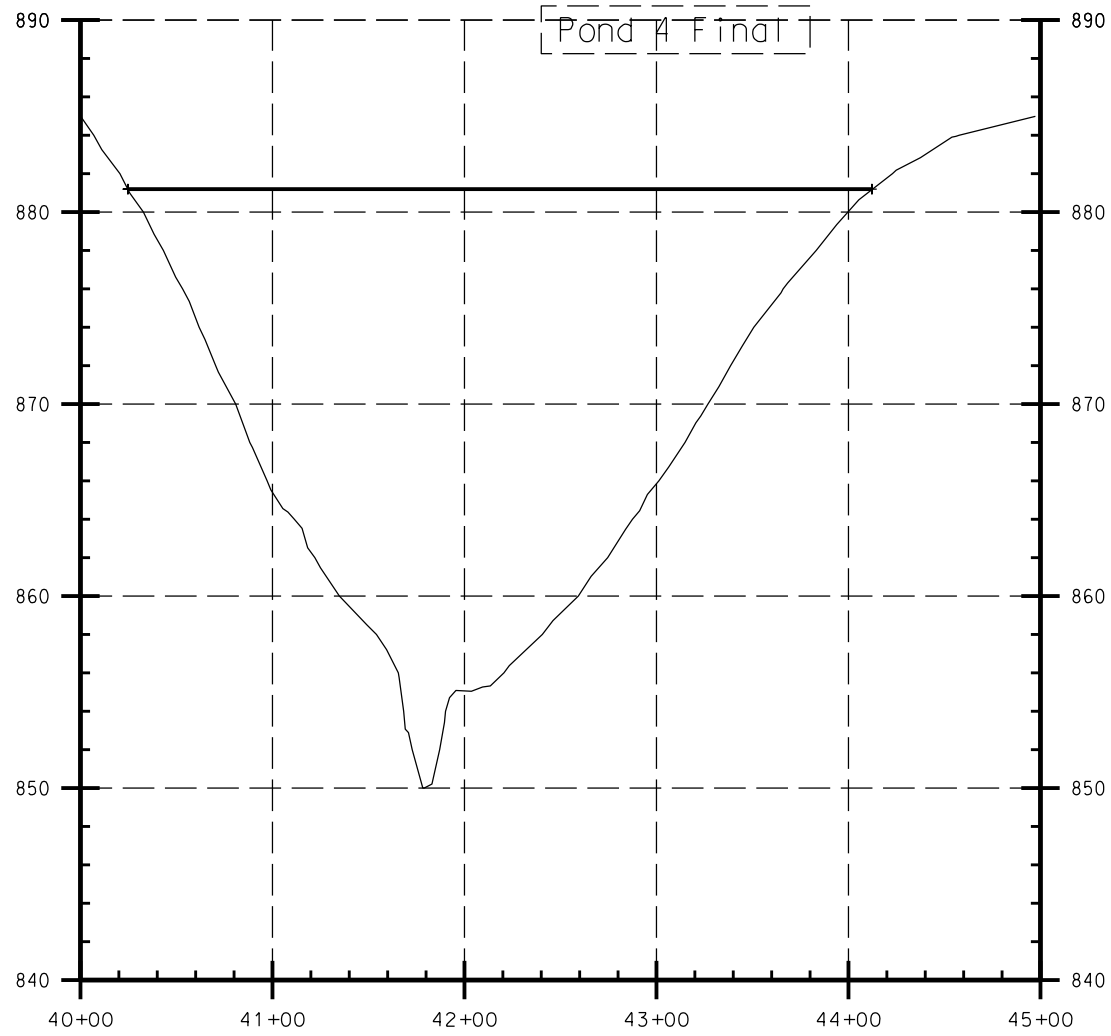
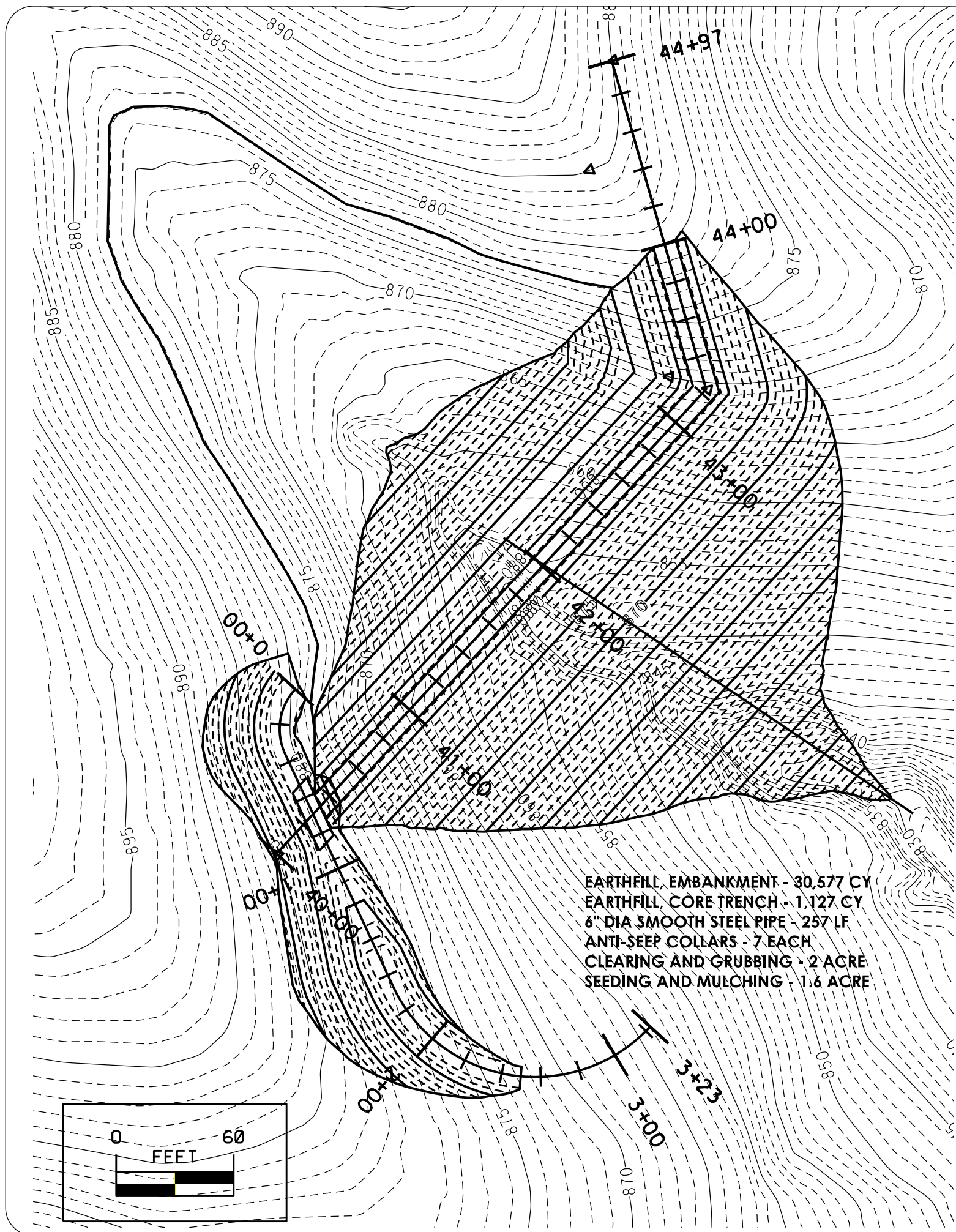
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D.07

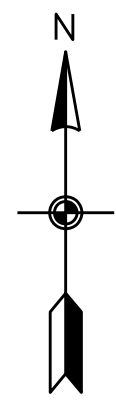


CROSS-SECTION OF DAM

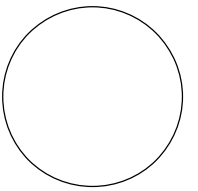
NOT TO SCALE



LINE SURFACE OFFSET
 Merged 4 final
 Scaled 10.0000 Times Ver.
 Scaled 1.0000 Times Hor.



CONSULTANT:



**IOWA DEPARTMENT OF
 NATURAL RESOURCES**
 ENGINEERING SERVICES - WALLACE BUILDING
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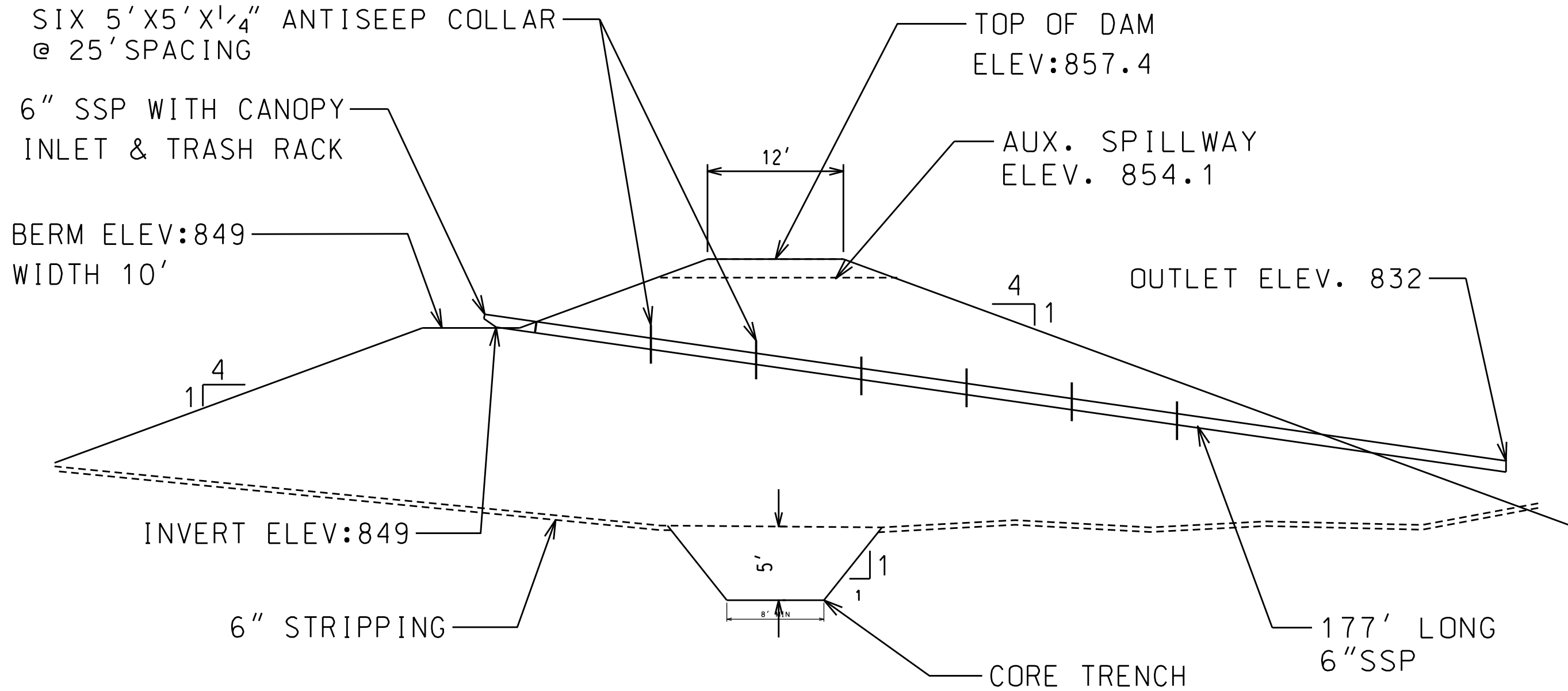


POND 4 PLAN AND PROFILE

SEDIMENTATION PONDS AT:
LAKE MIAMI WMA
 MONROE COUNTY

NO.	BY	REVISION

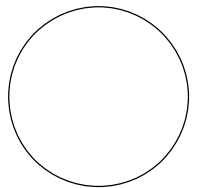
DRAWN BY: PROJECT NUMBER:
 15-05-68-01
 CHK'D BY: DATE:
 SHEET No: **D.08**



CROSS-SECTION OF DAM

NOT TO SCALE

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



POND 5 CROSS SECTION

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

NO.	BY	REVISION

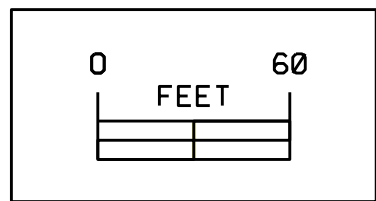
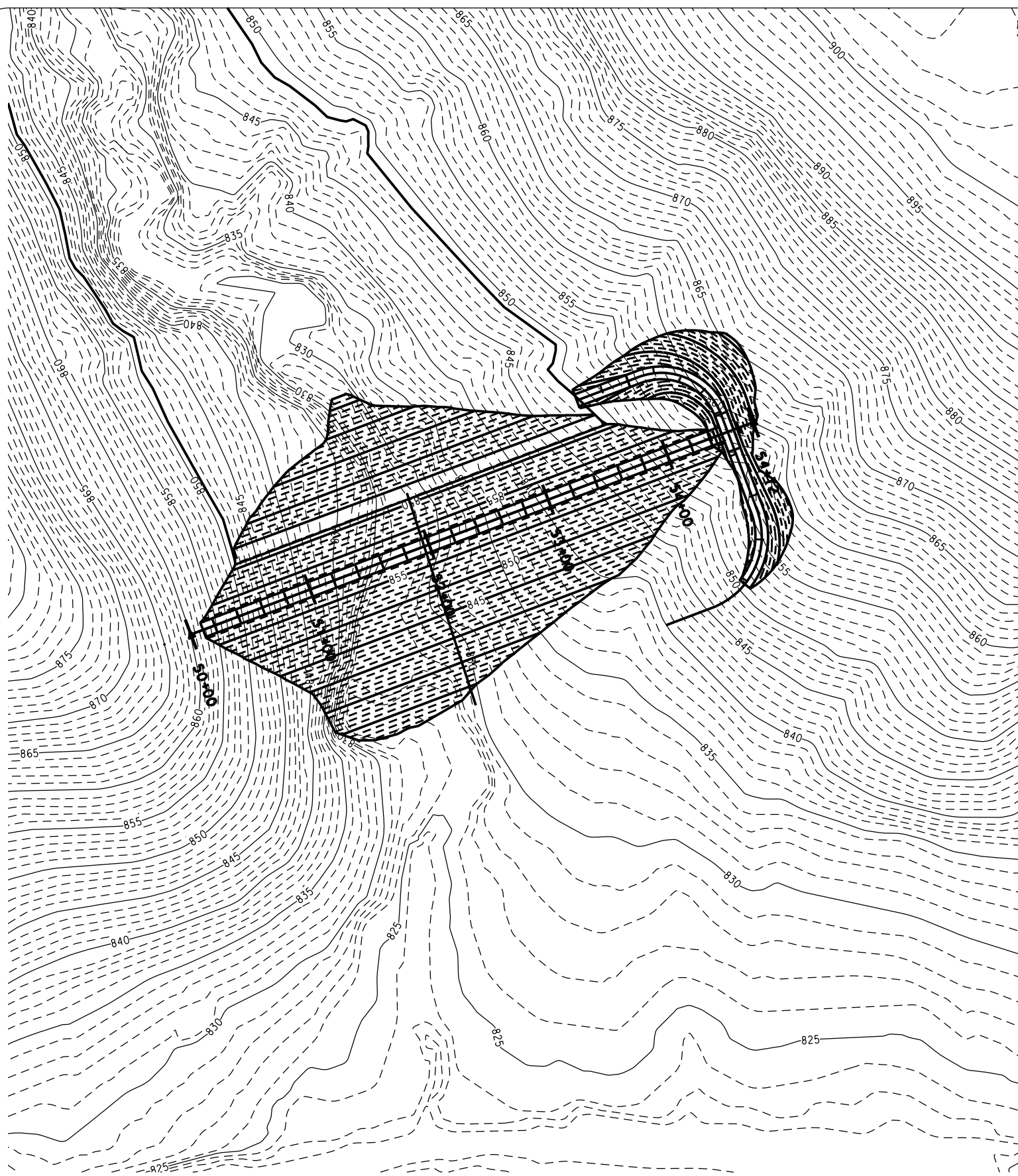
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15-05-68-01

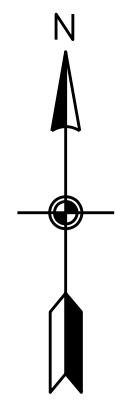
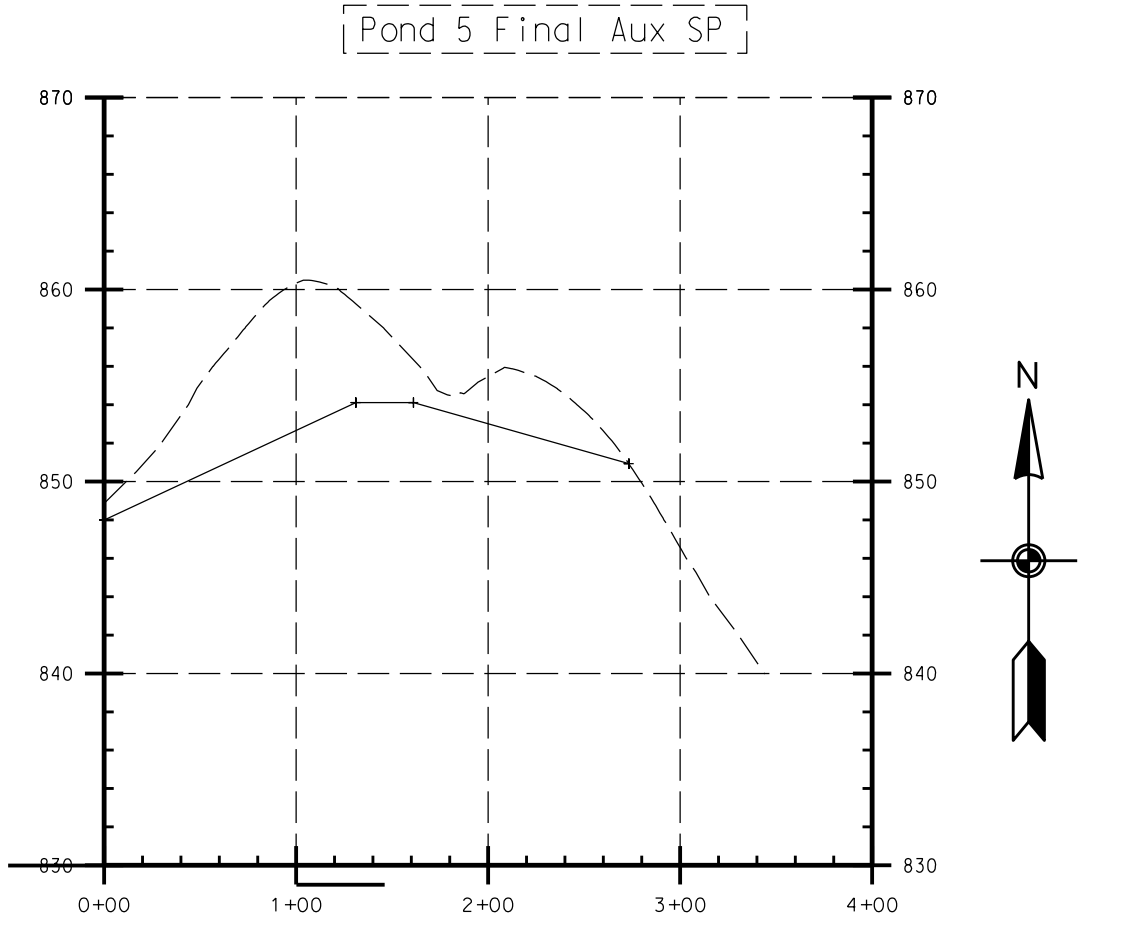
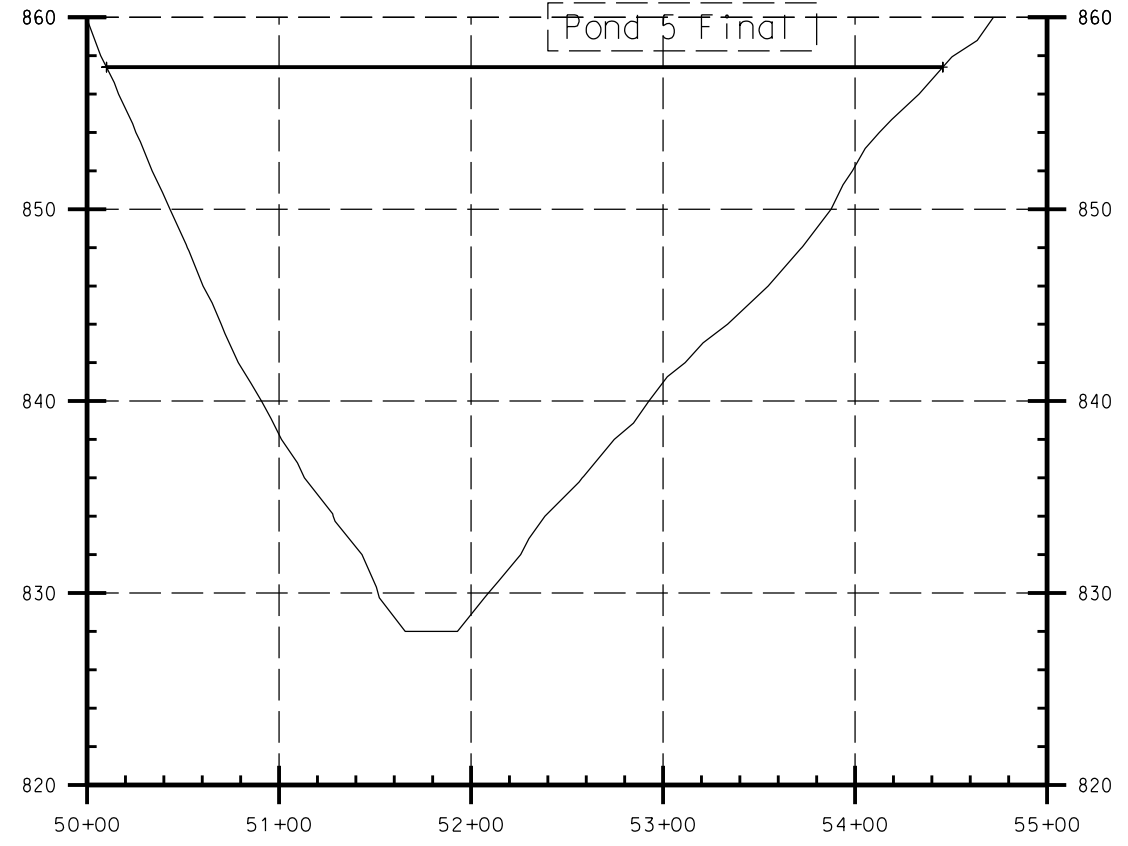
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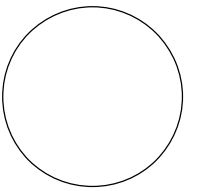
D.09



EARTHFILL, EMBANKMENT - 34,071CY
EARTHFILL, CORE TRENCH - 1,346 CY
6" DIA SMOOTH STEEL PIPE - 177 LF
ANTI-SEEP COLLARS - 5 EACH
CLEARING AND GRUBBING - 7 ACRE
SEEDING AND MULCHING - 1.5 ACRE



CONSULTANT:



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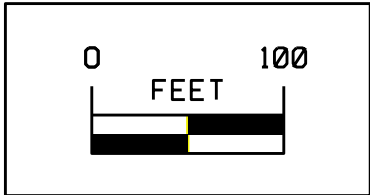
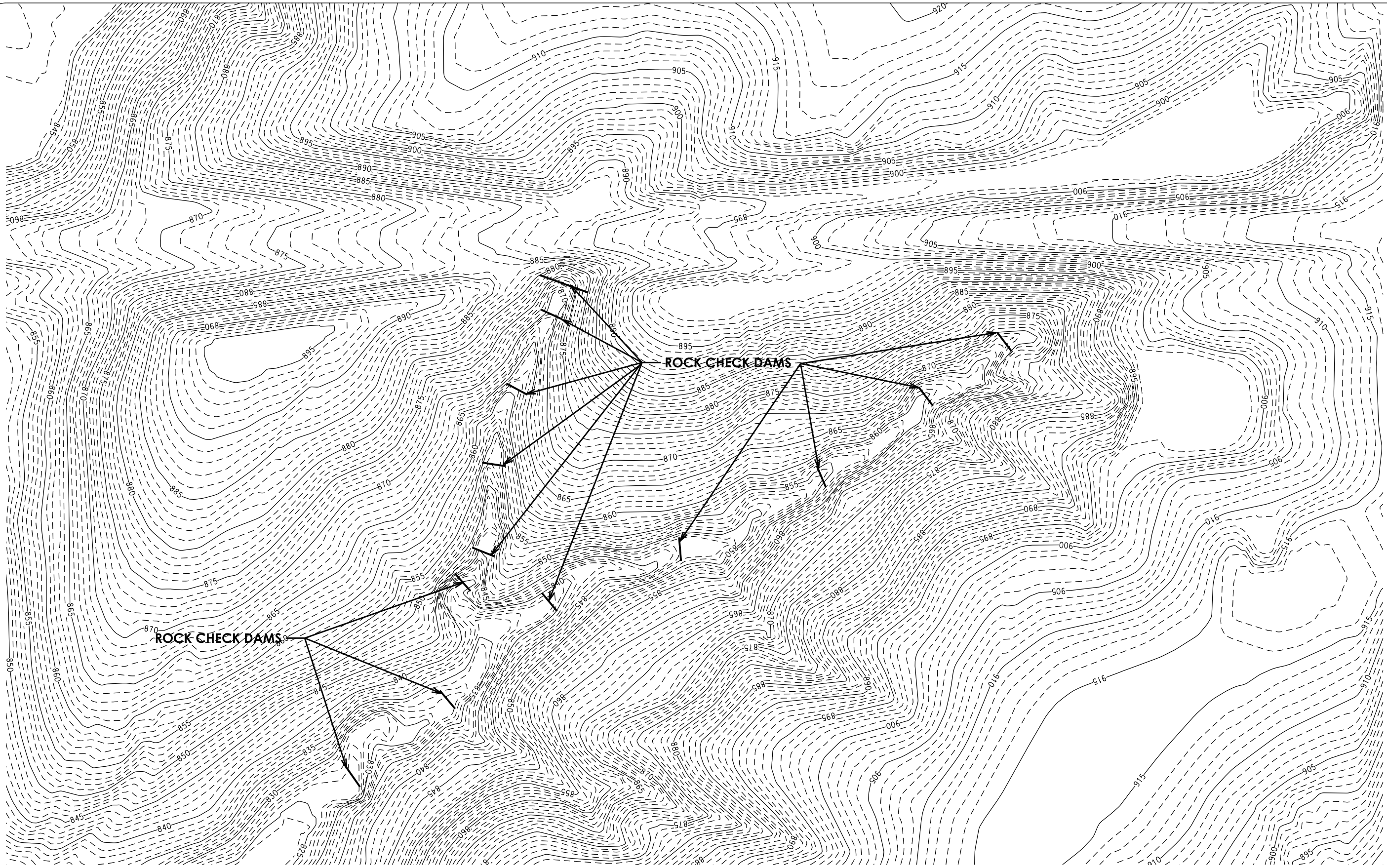


POND 5 PLAN AND PROFILE

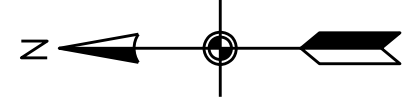
SEDIMENTATION PONDS AT:
LAKE MIAMI WMA
MONROE COUNTY

NO.	BY	REVISION
DRAWN BY:	PROJECT NUMBER: 15-05-68-01	
CHK'D BY:	DATE:	

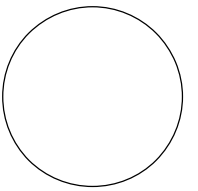
SHEET NO:
D.10



CONSTRUCT 13 ROCK CHECK DAMS
RIPRAP - 3,266 TONS
ENGINEERING FABRIC - 546 SY



CONSULTANT:



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SITE 6

SEDIMENTATION PONDS AT:

LAKE MIAMI WMA

MONROE COUNTY

NO.	BY	REVISION

DRAWN BY: PROJECT NUMBER:
 15-05-68-01

CHK'D BY: DATE:

SHEET NO.:

D.11