

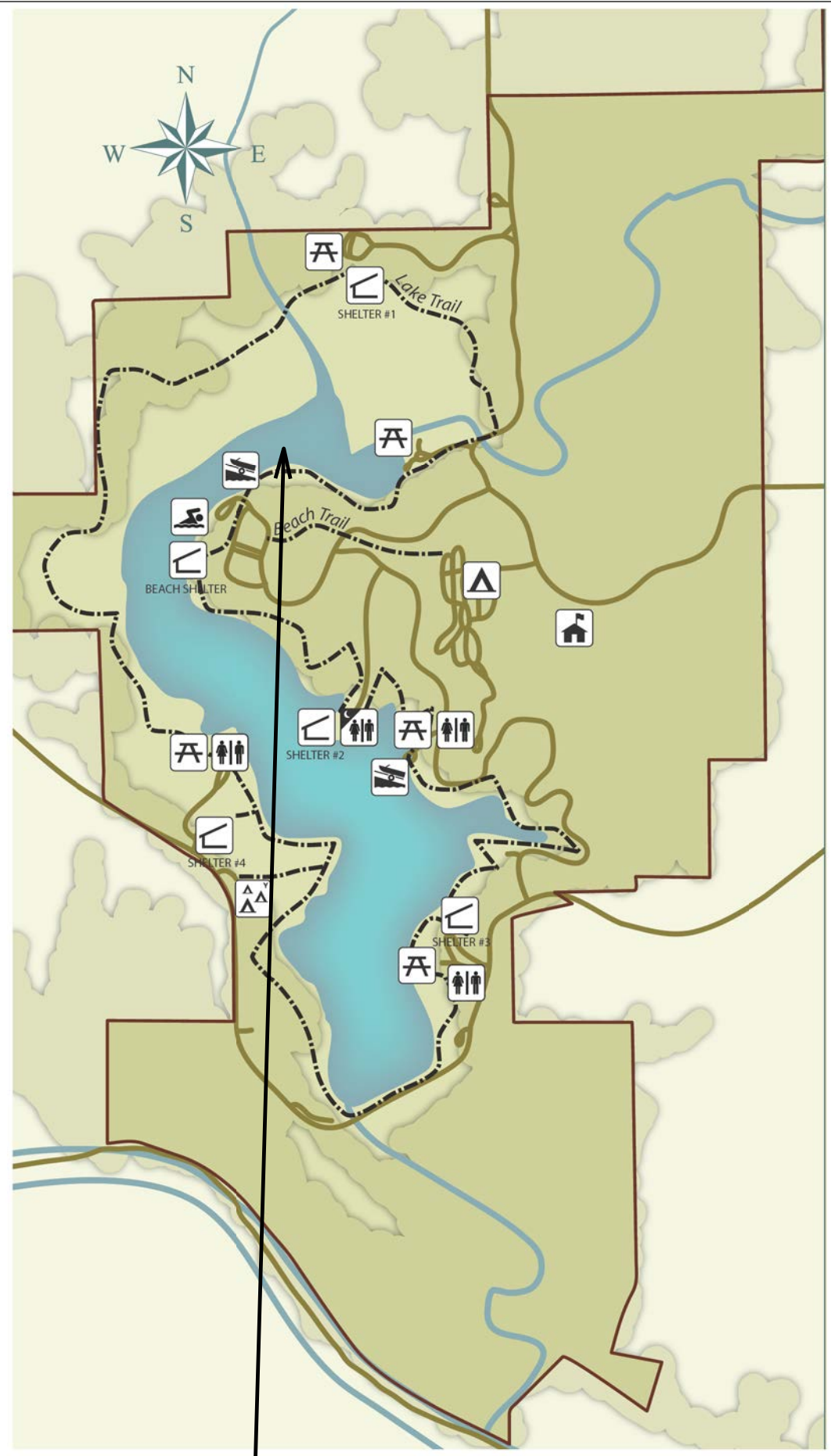
R-5W

LEE CO.

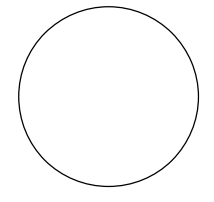
DES MOINES CO.

T-70N

PROJECT LOCATION



CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

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



PROJECT LOCATION MAP

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

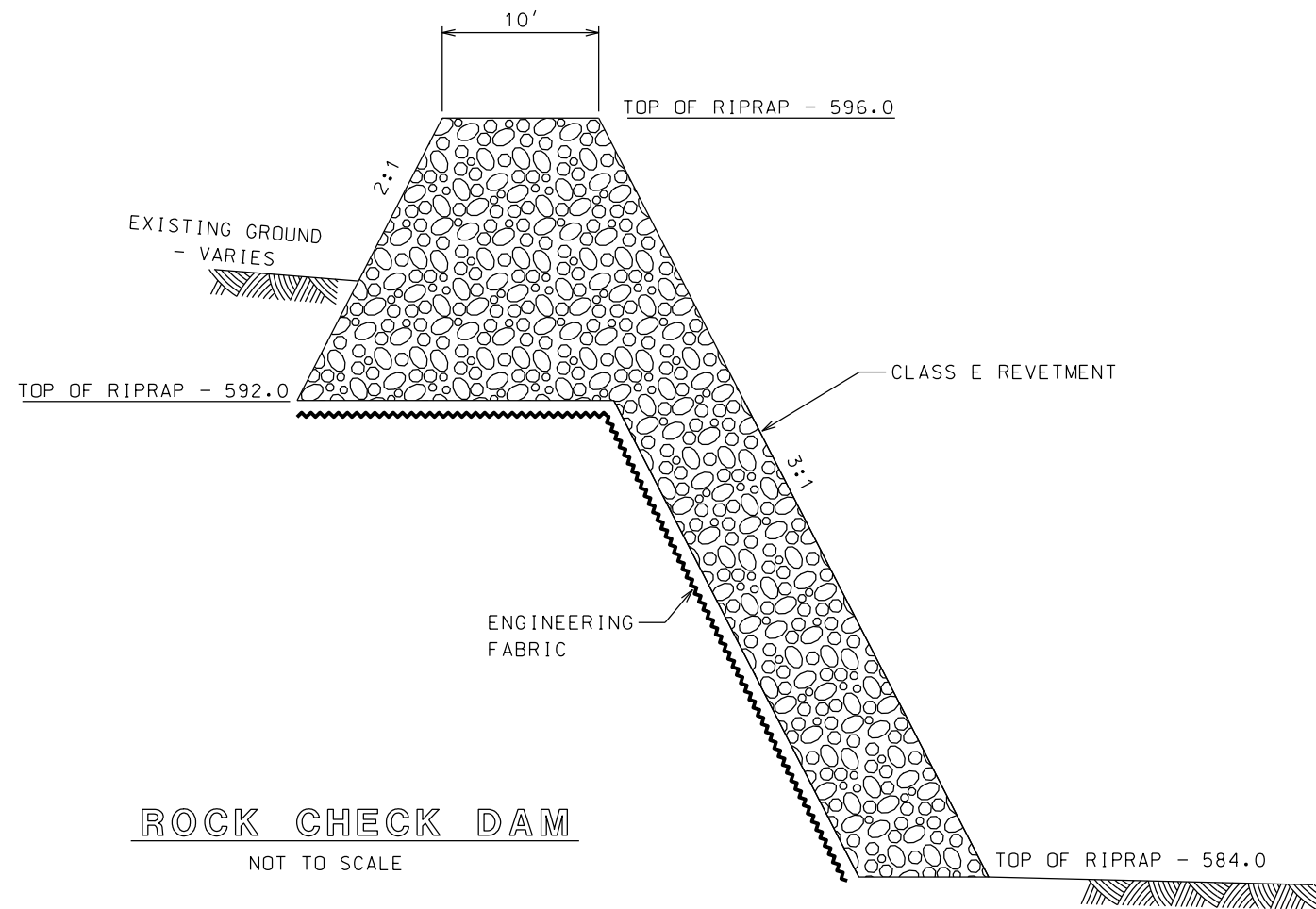
NO.	BY	REVISION
DATE		

DRAWN BY: PROJECT NUMBER:
17-06-44-02

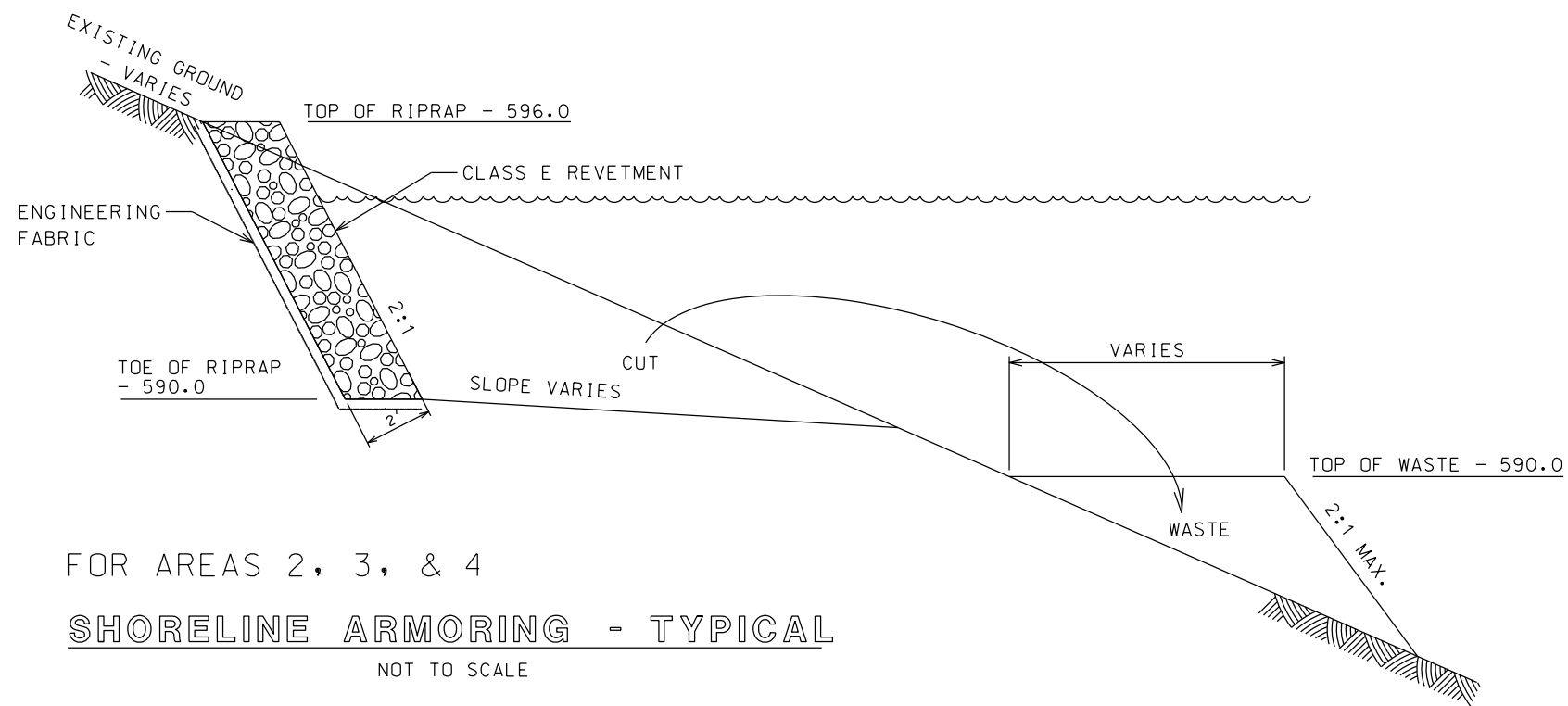
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SHEET No:

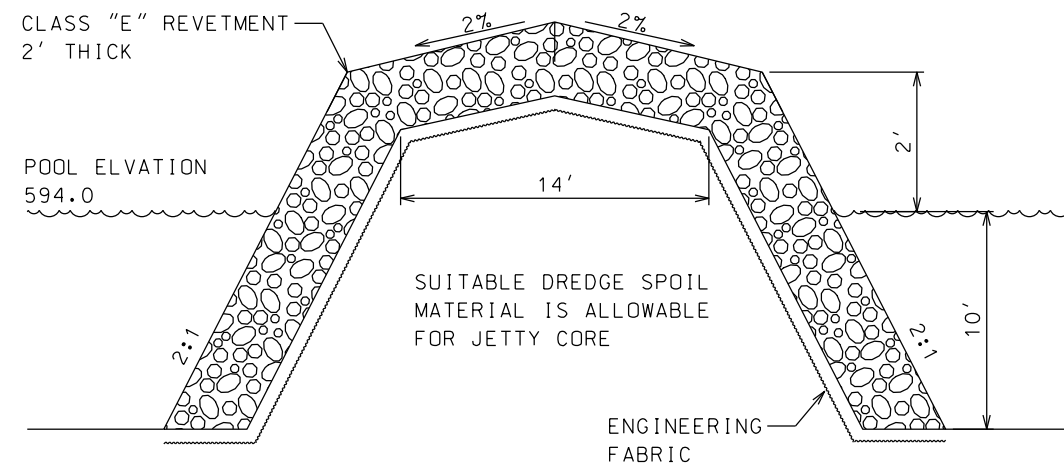
A.02



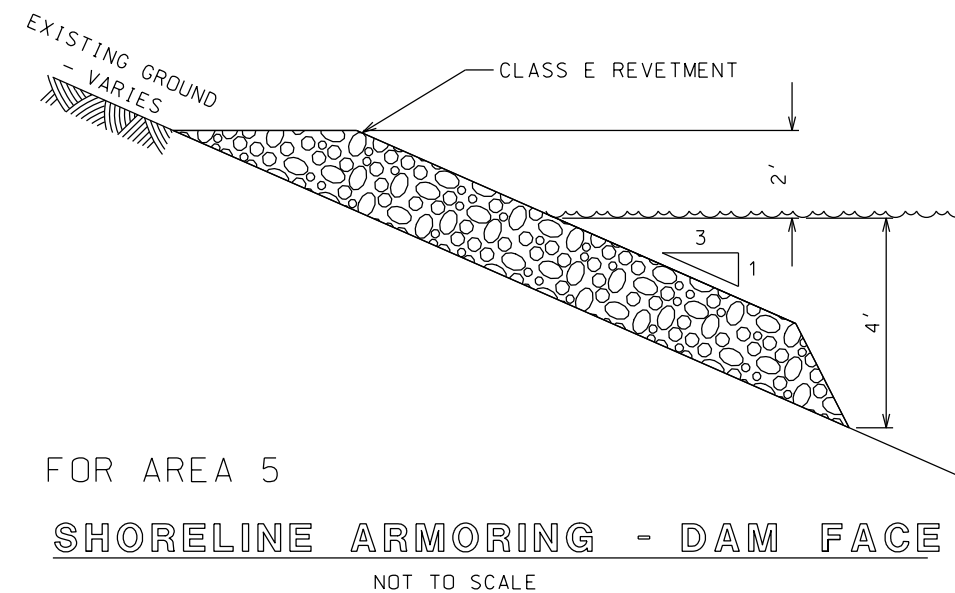
ROCK CHECK DAM
NOT TO SCALE



FOR AREAS 2, 3, & 4
SHORELINE ARMORING - TYPICAL
NOT TO SCALE

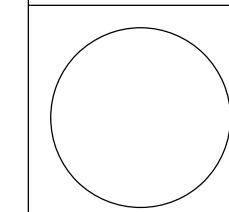


IN-LAKE SILT DAM DETAIL
NOT TO SCALE



FOR AREA 5
SHORELINE ARMORING - DAM FACE
NOT TO SCALE

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



TYPICAL CROSS SECTIONS AND DETAILS

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

NO. BY REVISION

DATE

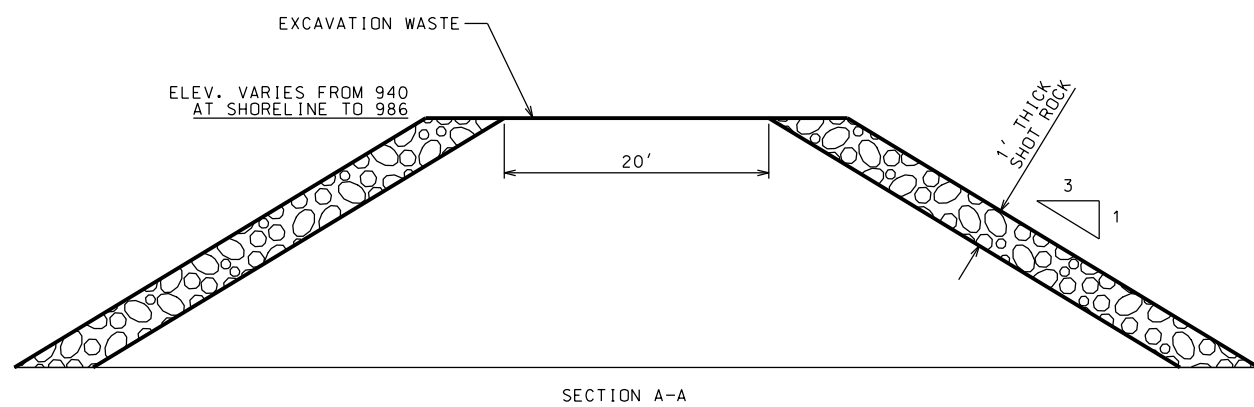
DRAWN BY: PROJECT NUMBER:

17-06-44-02

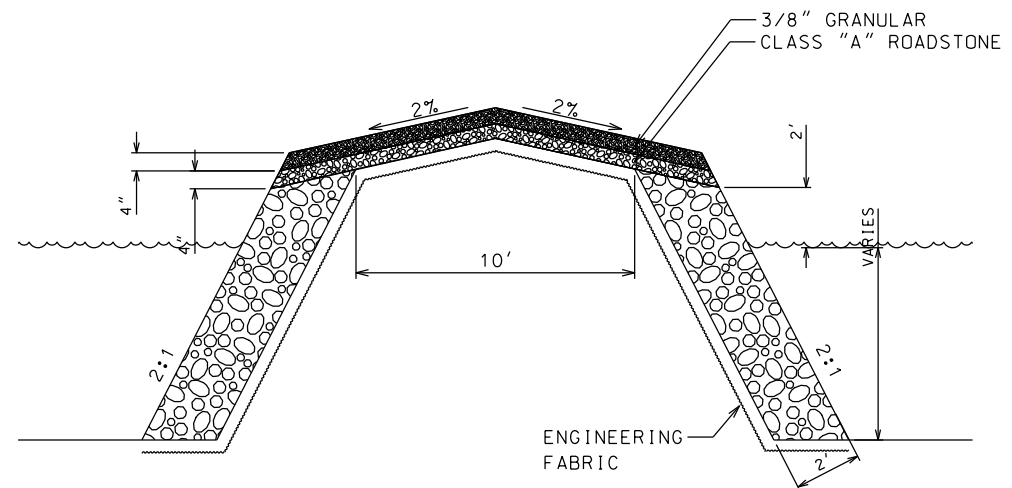
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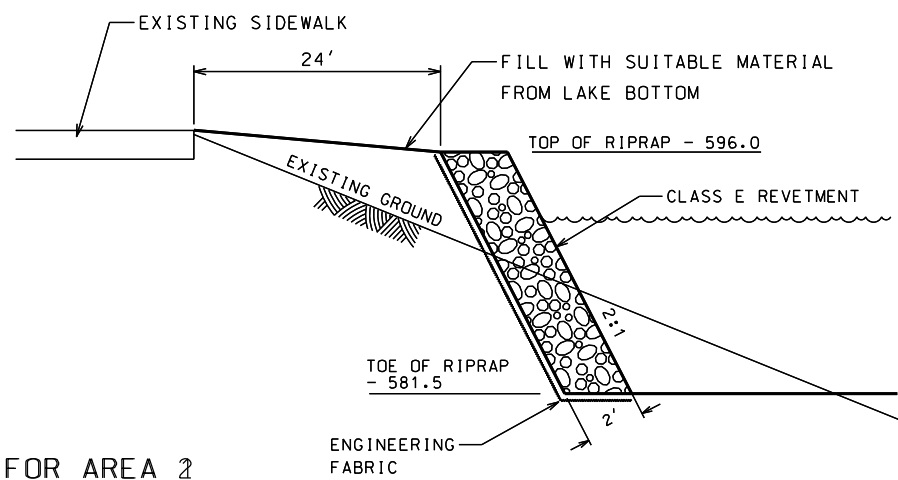
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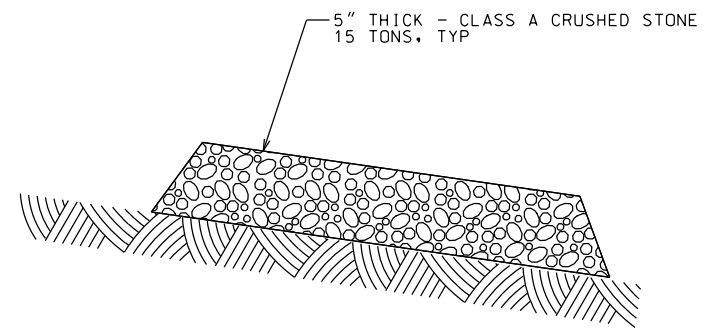
UNDERWATER MOUND DETAIL
NOT TO SCALE



JETTY DETAIL (TYP.)
NOT TO SCALE

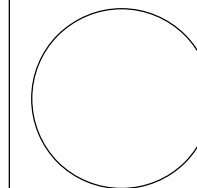


FOR AREA 2
SHORELINE ARMORING - TYPICAL
NOT TO SCALE



FISH HABITAT DETAIL
NOT TO SCALE

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

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



TYPICAL CROSS SECTIONS AND DETAILS

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

NO. BY REVISION

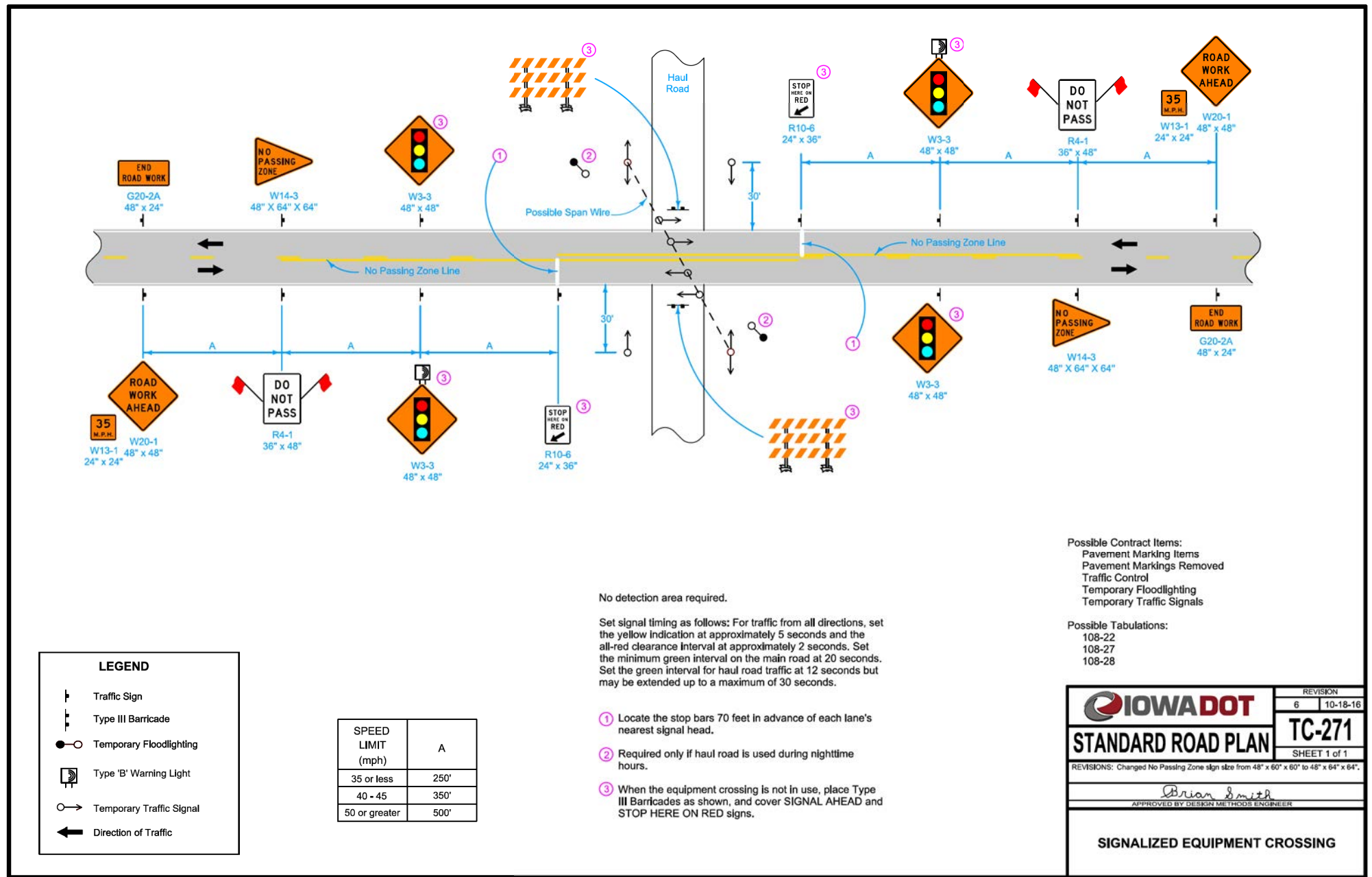
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17-06-44-02

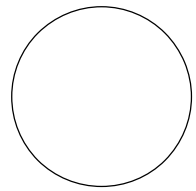
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SHEET No.:

B.02



CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

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



TYPICAL CROSS SECTIONS AND DETAILS

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

NO. BY DATE REVISION

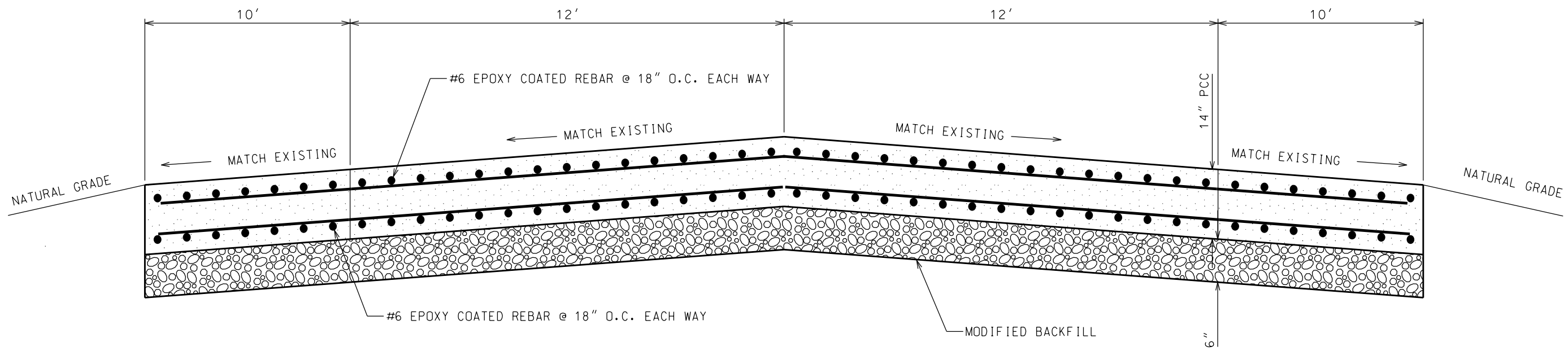
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17-06-44-02

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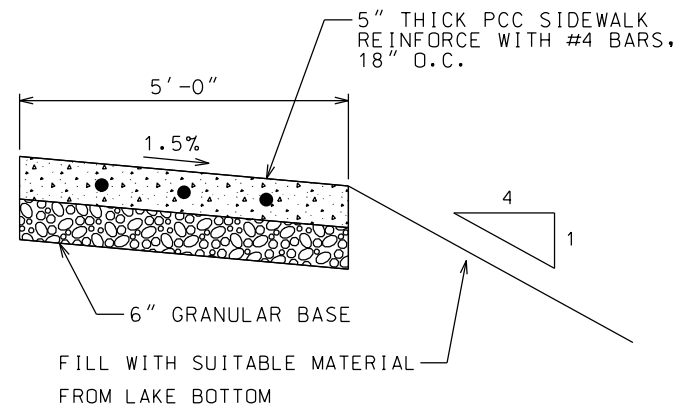
SHEET No:

B.04



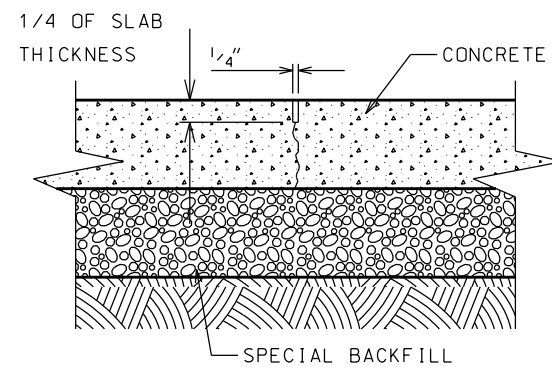
COUNTY ROAD CROSSING DETAIL

NOT TO SCALE



SIDEWALK

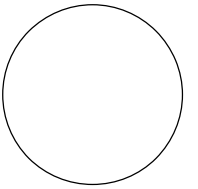
NOT TO SCALE



TYPICAL CONTROL JOINT

NOT TO SCALE

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



TYPICAL CROSS SECTIONS AND DETAILS

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

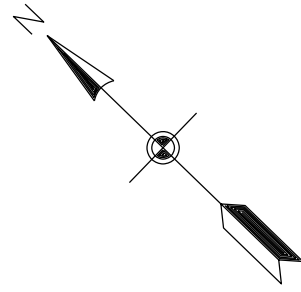
NO.	BY	REVISION

DRAWN BY: PROJECT NUMBER:
17-06-44-02

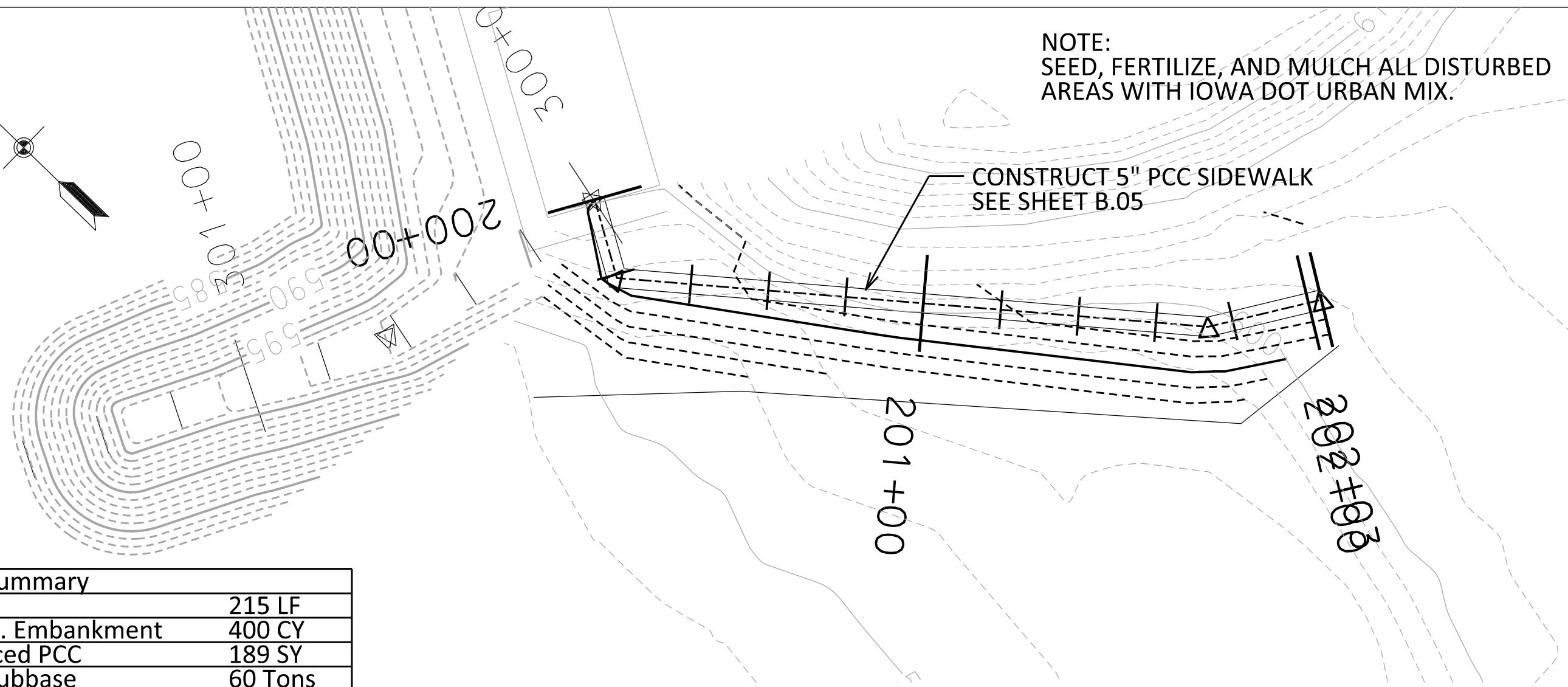
CHK'D BY: DATE:

SHEET No:

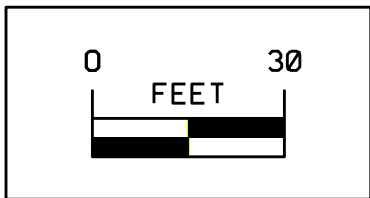
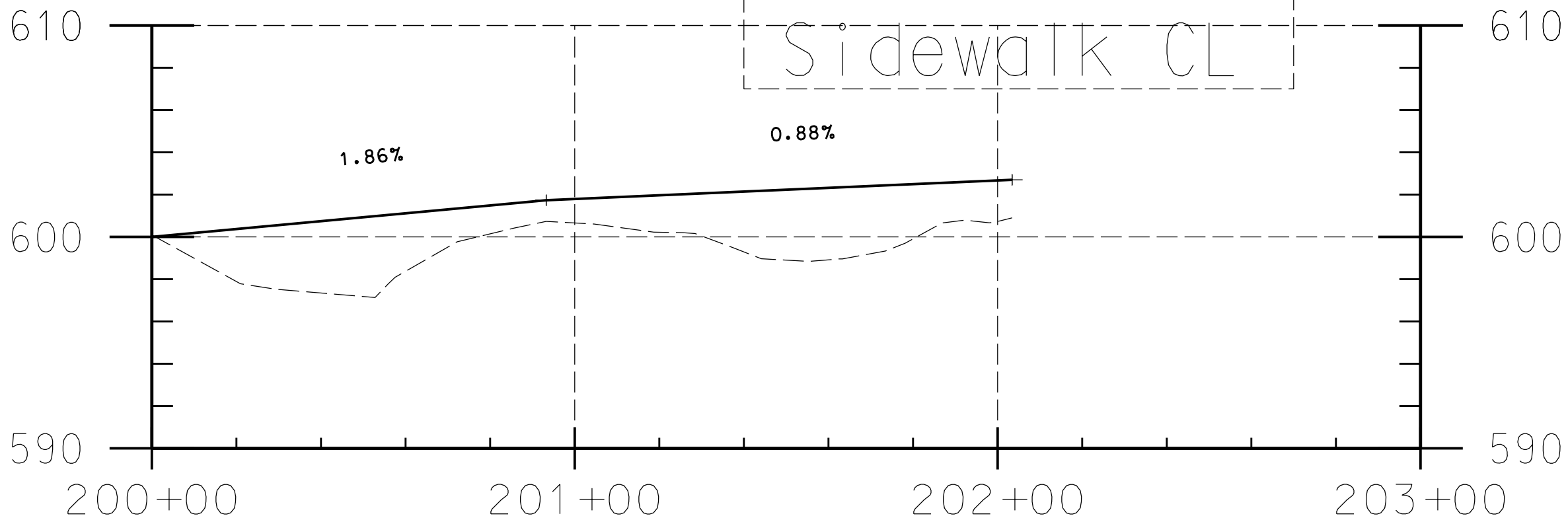
B.05



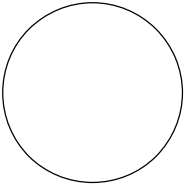
NOTE:
SEED, FERTILIZE, AND MULCH ALL DISTURBED
AREAS WITH IOWA DOT URBAN MIX.



Quantity Summary	
Silt Fence	215 LF
Class 10 Ex. Embankment	400 CY
5" Reinforced PCC	189 SY
Granular Subbase	60 Tons
Seeding and Fertilizing	0.3 Acres
Mulching	0.3 Acres



CONSULTANT:



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



SIDEWALK PLAN AND PROFILE

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

NO. BY REVISION

DATE

DRAWN BY: PROJECT NUMBER:

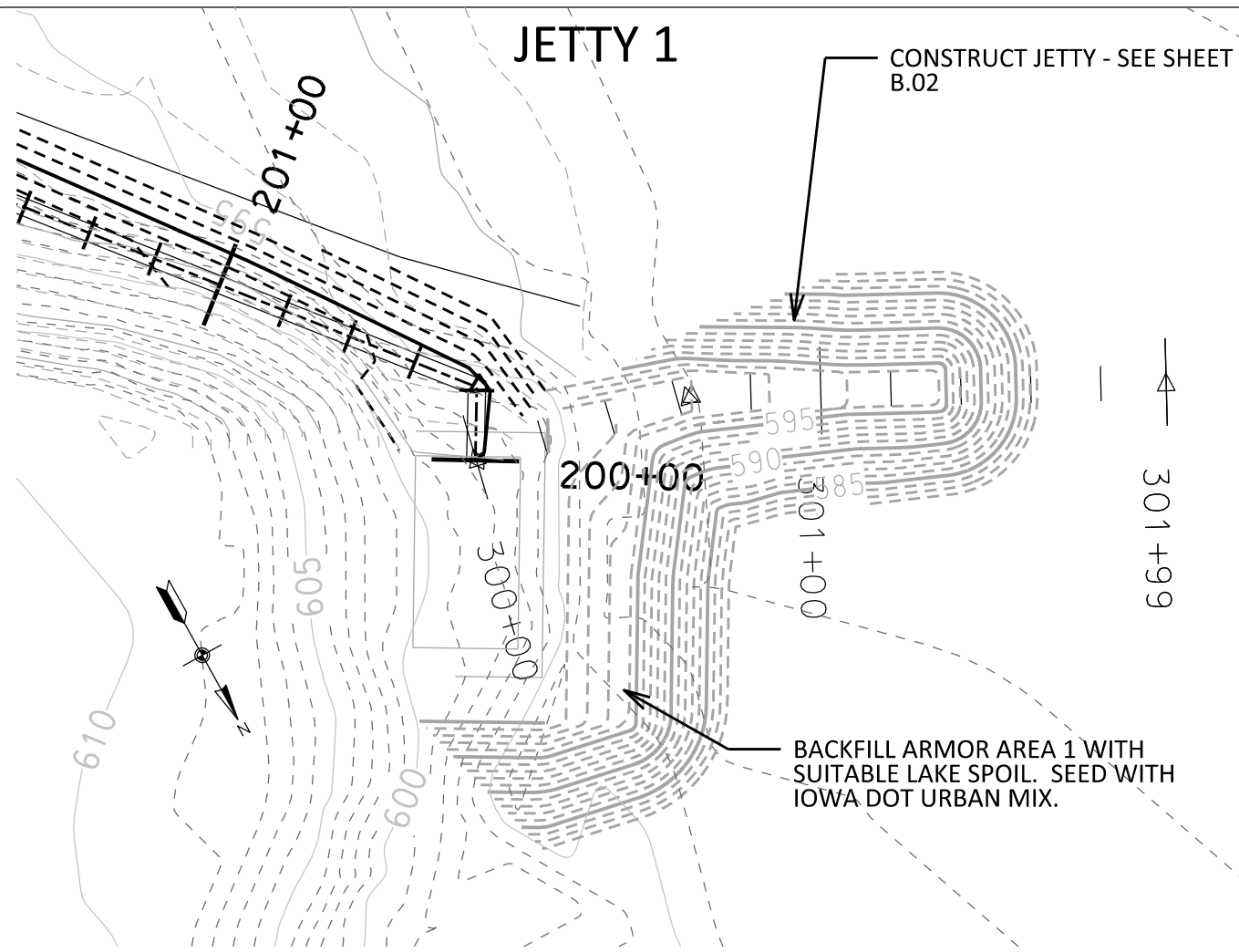
17-06-44-02

CHK'D BY: DATE:

SHEET NO.:

D.05

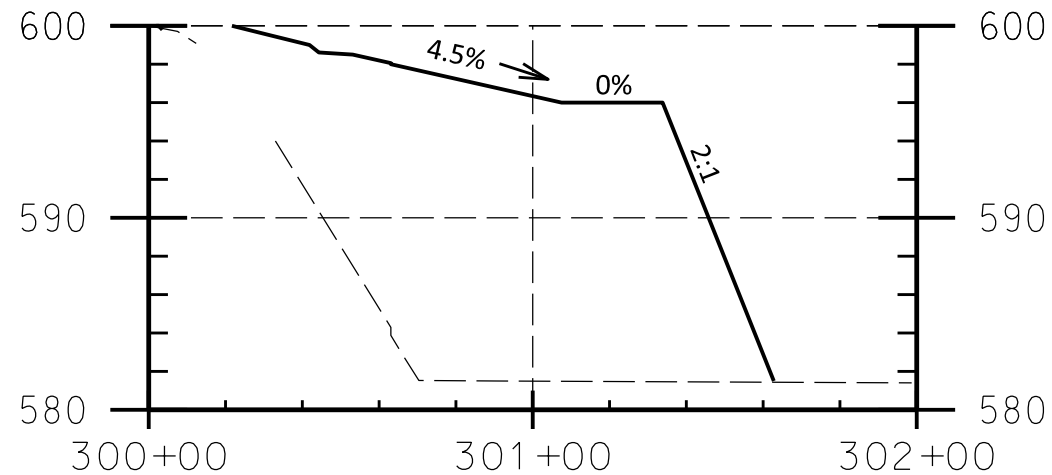
JETTY 1



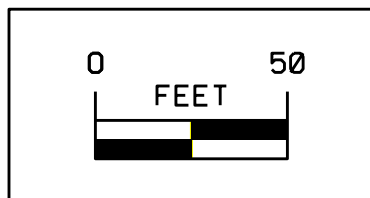
CONSTRUCT JETTY - SEE SHEET B.02

BACKFILL ARMOR AREA 1 WITH SUITABLE LAKE SPOIL. SEED WITH IOWA DOT URBAN MIX.

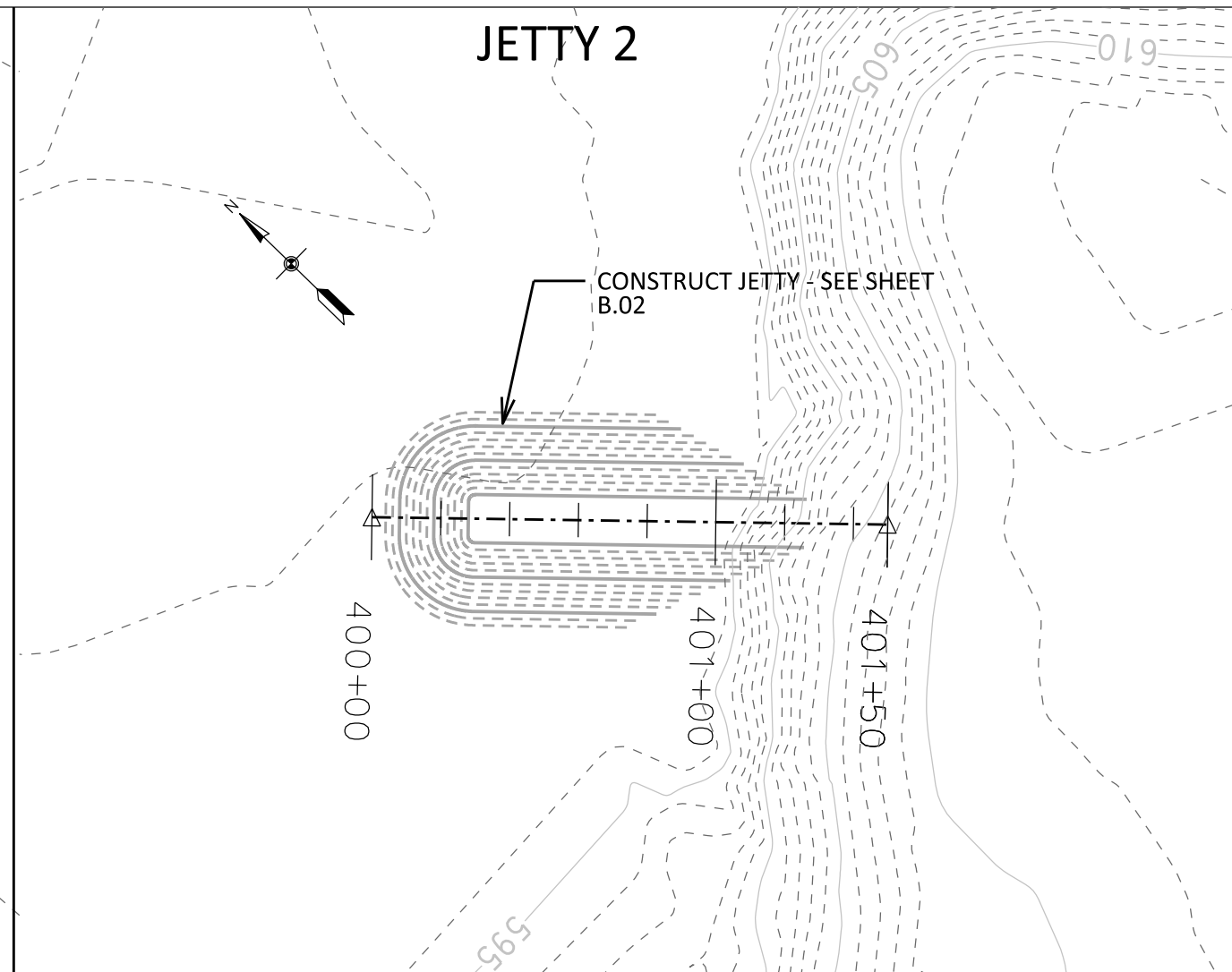
Jetty CL 1



Quantity Summary	
Class 10 Ex. Embankment	2637 CY
Class E Revetment	1,242 Tons
Engineering Fabric	1,317 SY
Class A Crushed Stone	24 Tons
3/8" Minus Crushed Stone	24 Tons
Seeding and Fertilizing	0.1 Acres
Mulching	0.1 Acres

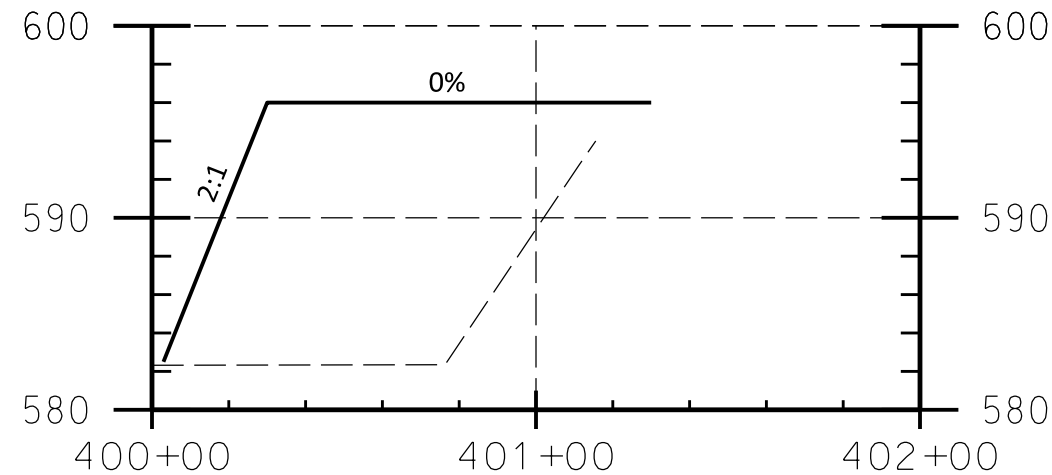


JETTY 2



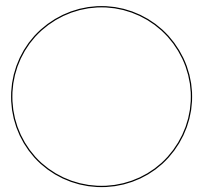
CONSTRUCT JETTY - SEE SHEET B.02

Jetty CL 2



Quantity Summary	
Class 10 Ex. Embankment	1,467 CY
Class E Revetment	660 Tons
Engineering Fabric	778 SY
Class A Crushed Stone	21 Tons
3/8" Minus Crushed Stone	21 Tons

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

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



JETTIES 1 AND 2

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

NO.	BY	REVISION

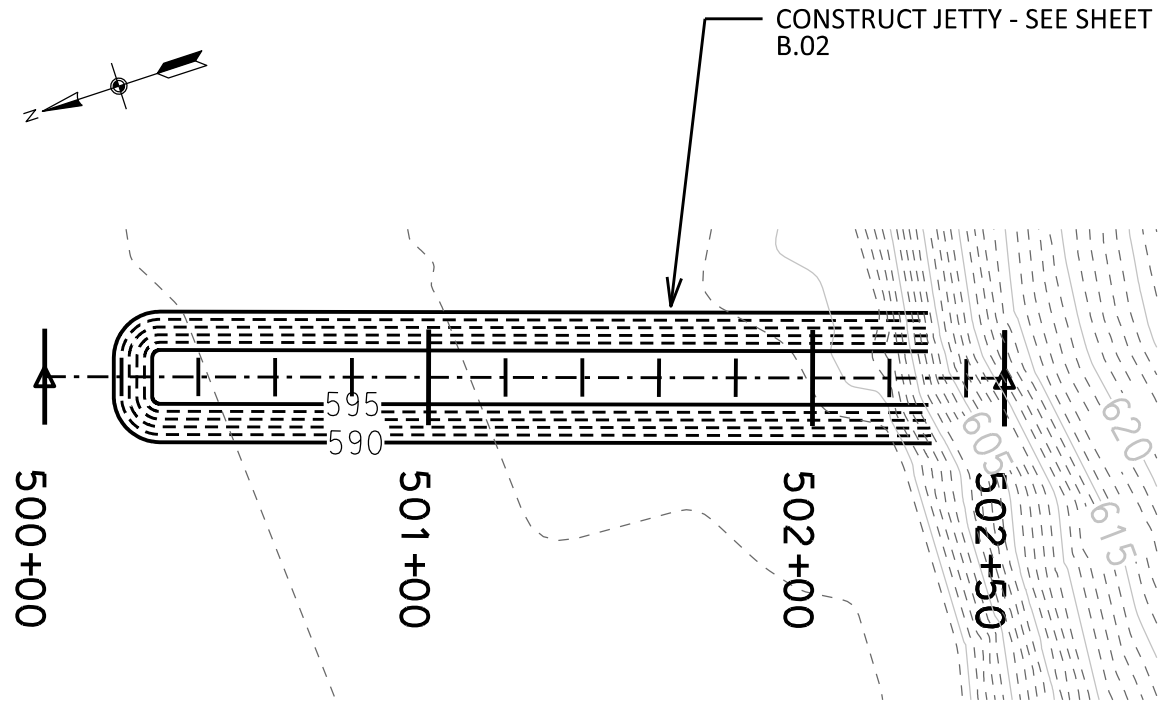
DRAWN BY: PROJECT NUMBER:
17-06-44-02

CHK'D BY: DATE:

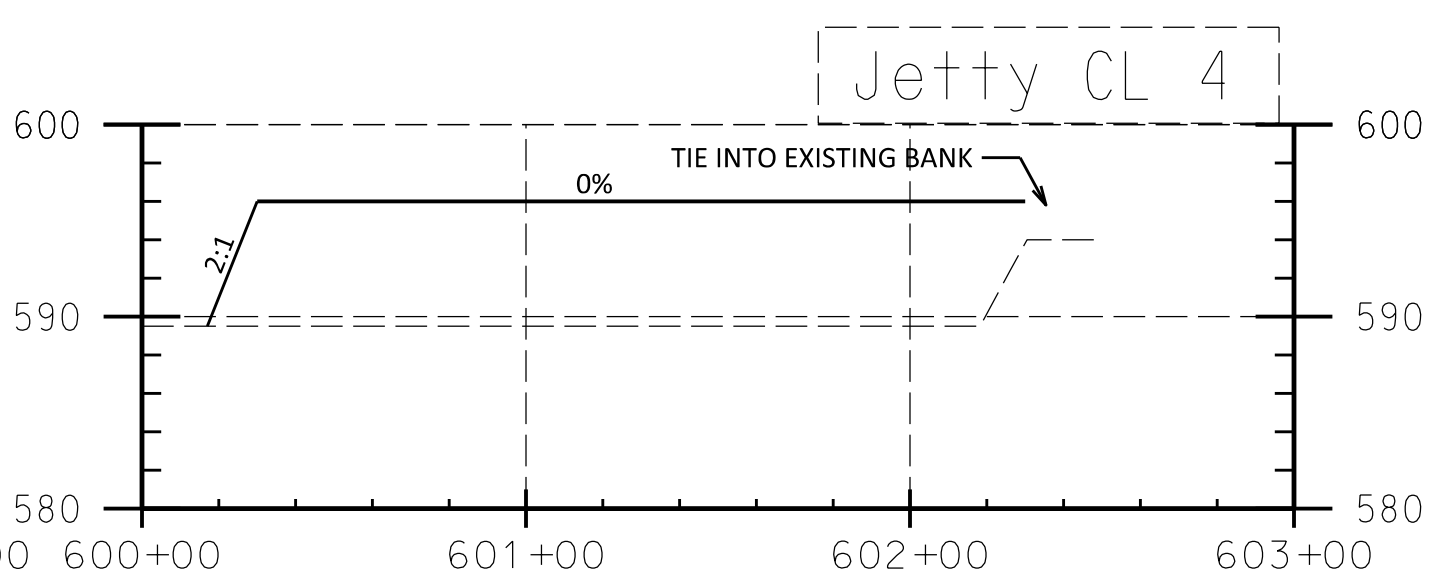
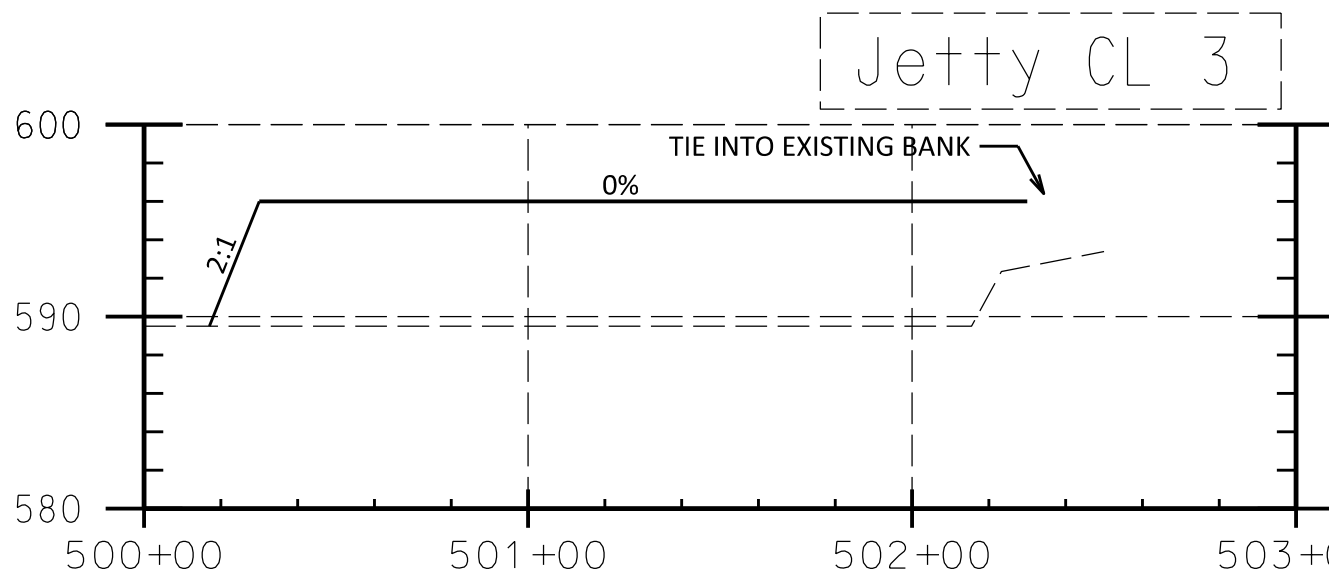
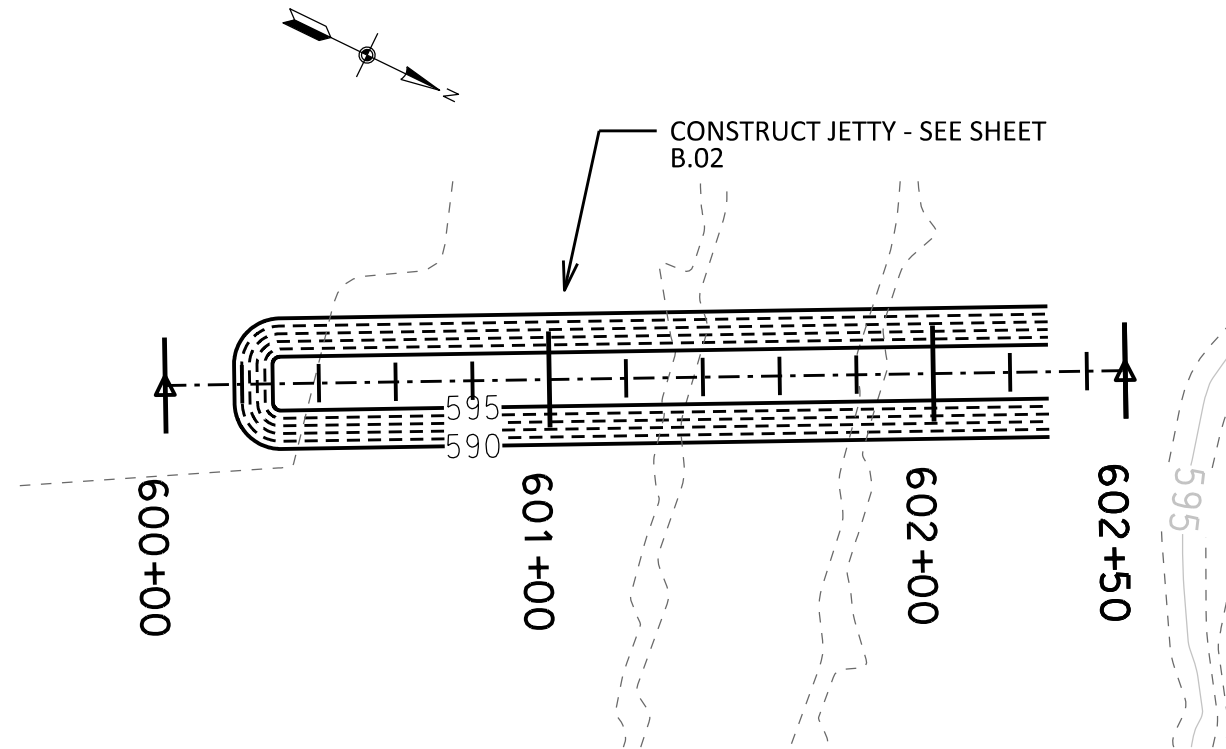
SHEET NO:

D.06

JETTY 3

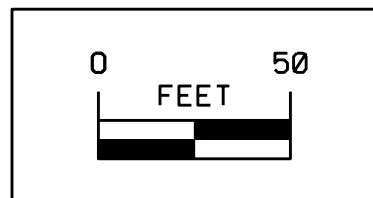


JETTY 4

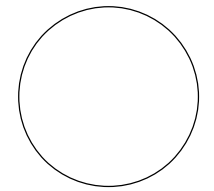


Quantity Summary	
Class 10 Ex. Embankment	1,094 CY
Class E Revetment	689 Tons
Engineering Fabric	918 SY
Class A Crushed Stone	42 Tons
3/8" Minus Crushed Stone	42 Tons

Quantity Summary	
Class 10 Ex. Embankment	1,094 CY
Class E Revetment	689 Tons
Engineering Fabric	918 SY
Class A Crushed Stone	42 Tons
3/8" Minus Crushed Stone	42 Tons



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



JETTIES 3 AND 4

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

NO. BY REVISION

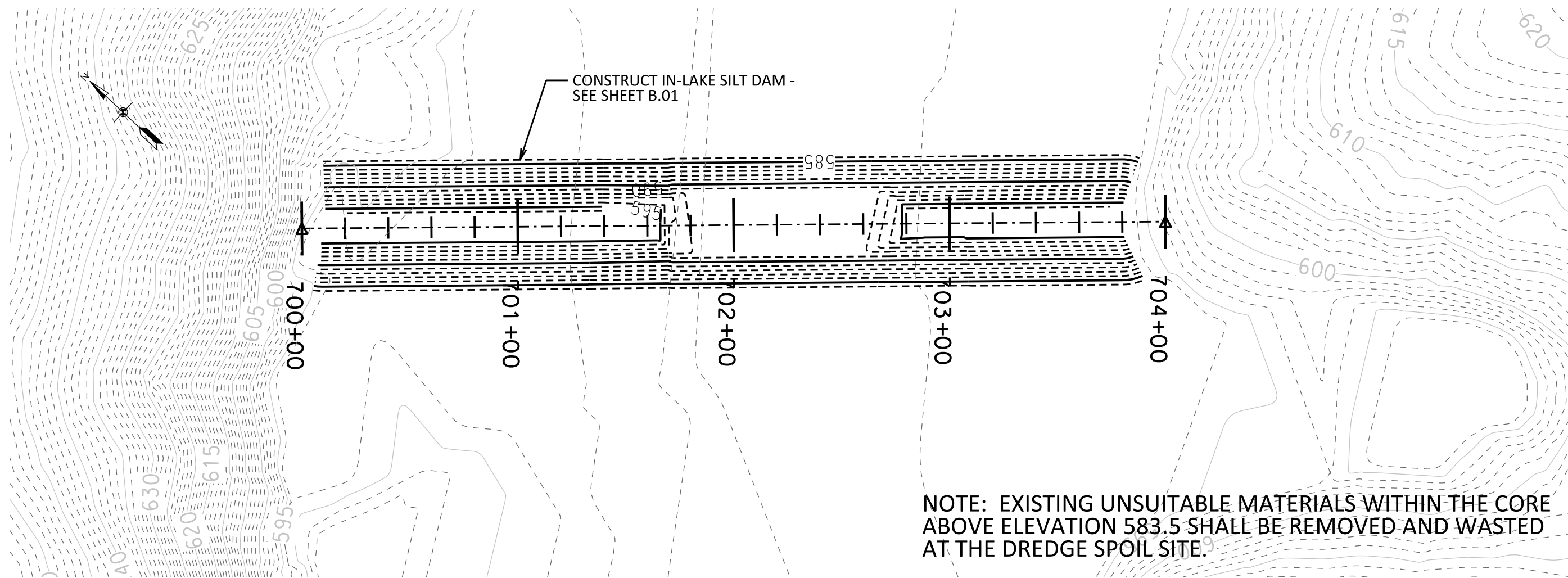
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DRAWN BY: PROJECT NUMBER:
17-06-44-02

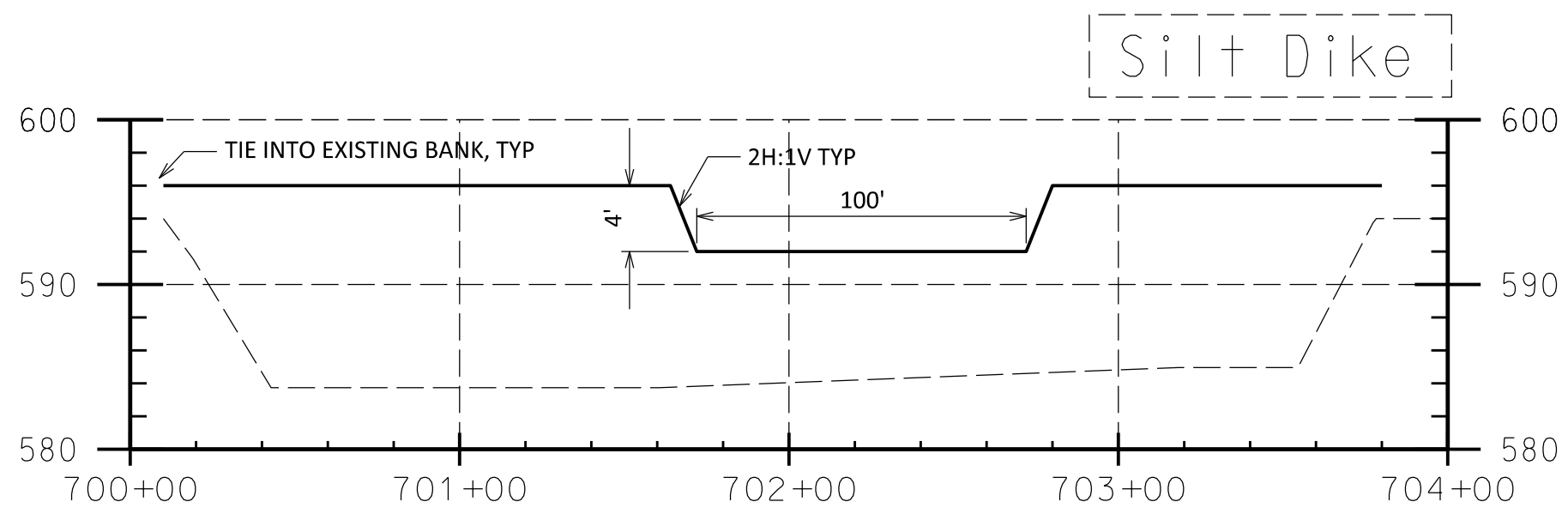
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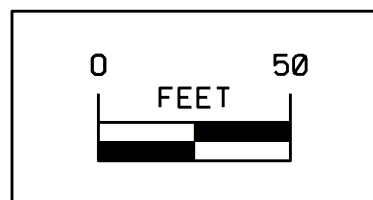
D.07



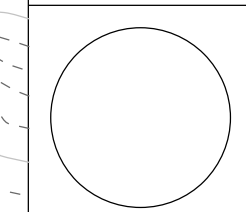
NOTE: EXISTING UNSUITABLE MATERIALS WITHIN THE CORE ABOVE ELEVATION 583.5 SHALL BE REMOVED AND WASTED AT THE DREDGE SPOIL SITE.



Quantity Summary	
Class 10 Ex. Embankment	4,853 CY
Class E Revetment	2,698 Tons
Engineering Fabric	2,725 SY



CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES
 ENGINEERING SERVICES - WALLACE BUILDING
 502 E. 9TH ST., DES MOINES, IA 50319-0034



IN-LAKE SILT DAM PLAN

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

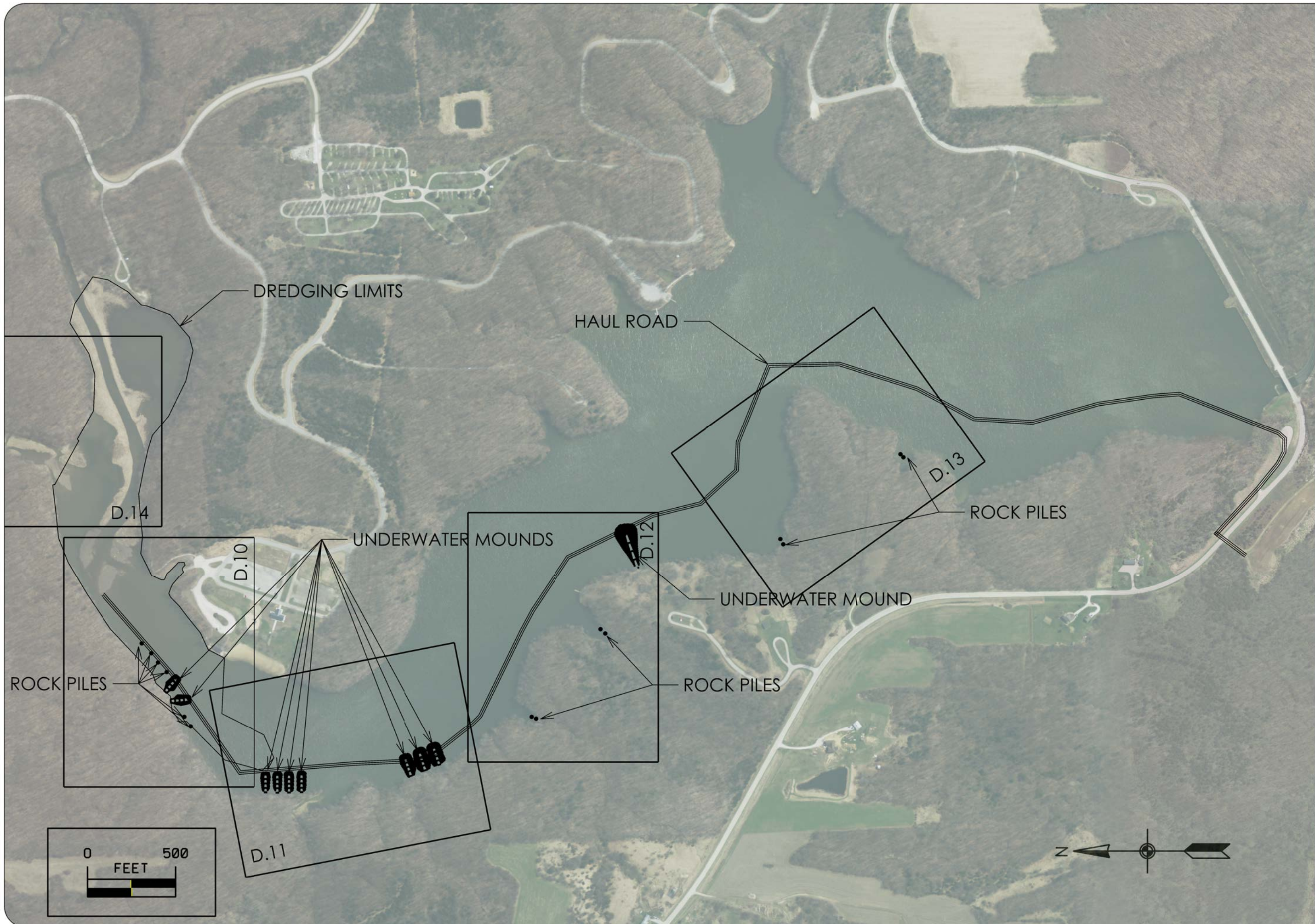
HENRY COUNTY

NO.	BY	REVISION

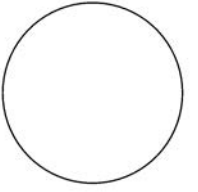
DRAWN BY: PROJECT NUMBER:
17-06-44-02

CHK'D BY: DATE:

SHEET No: **D.08**



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



HABITAT OVERALL PLAN

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

NO.	BY	REVISION

DRAWN BY: PROJECT NUMBER:
17-06-44-02

CHK'D BY: DATE:

SHEET NO:

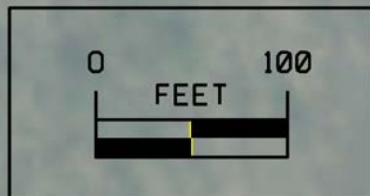
D.09

HAUL ROAD

ROCK PILES, TYP.
SEE SHEET B.01

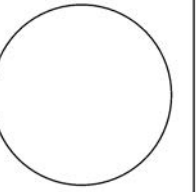
ROCK PILES, TYP.
SEE SHEET B.01

UNDERWATER MOUND - SEE SHEET B.02



Quantity Summary	
Class A Crushed Stone	60 Tons
Class 10 Ex. Embankment	4,911CY
Shot Rock	1,426 Tons

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



FISH HABITAT PLAN

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

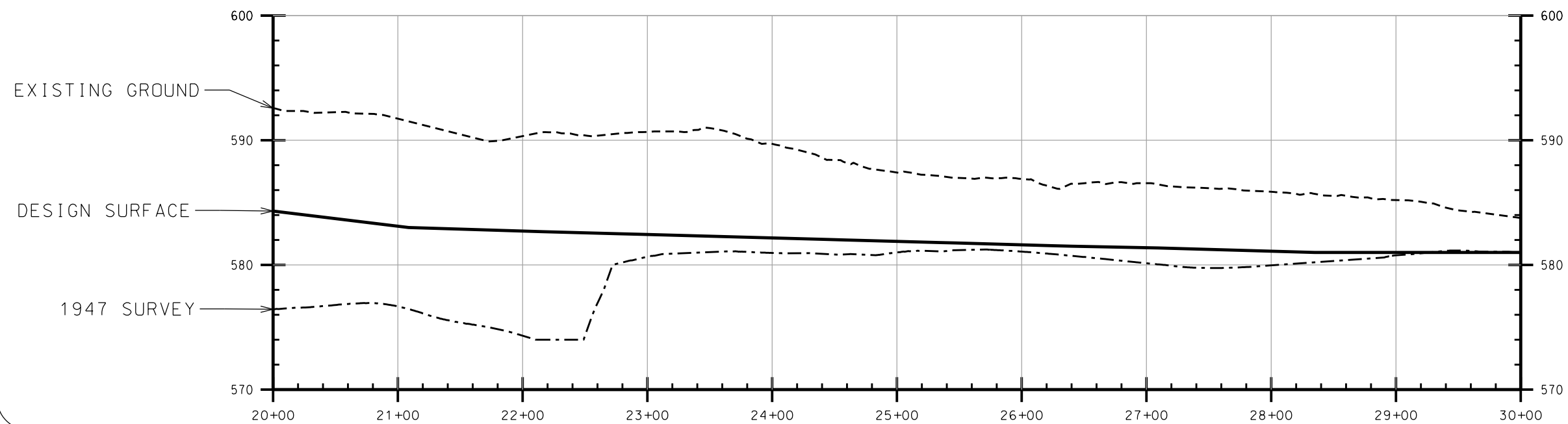
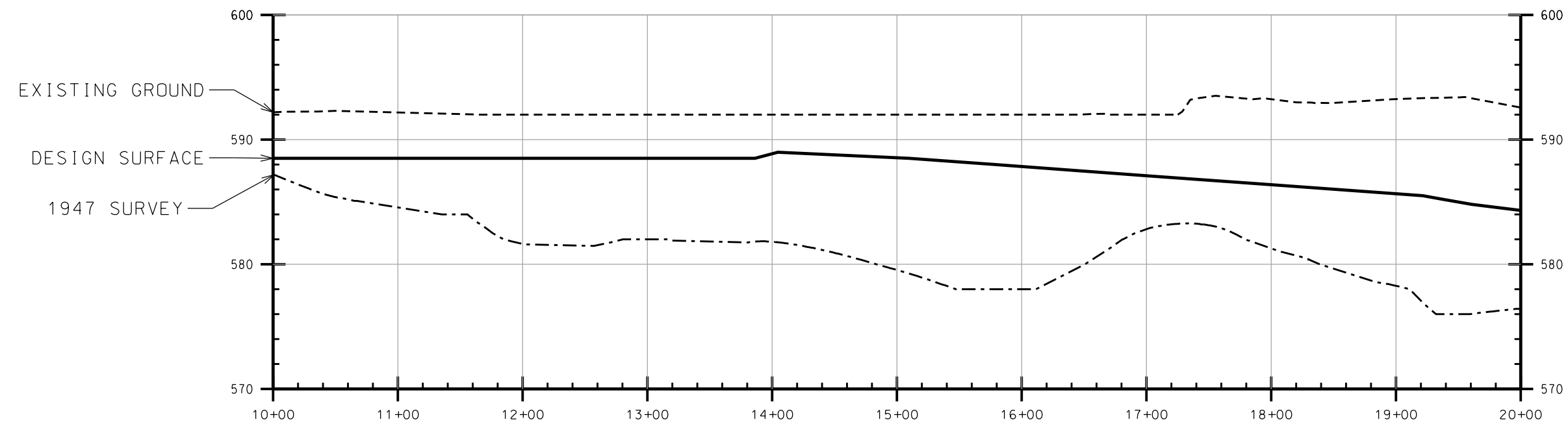
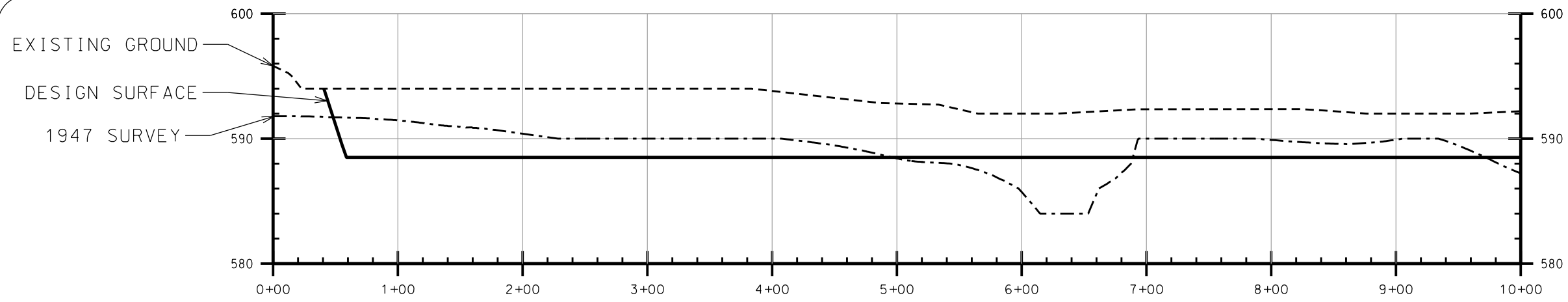
NO.	BY	REVISION

DRAWN BY: PROJECT NUMBER:
17-06-44-02

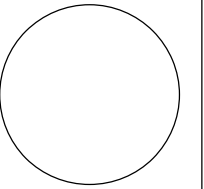
CHK'D BY: DATE:

SHEET No.:

D.12



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



IN-LAKE PROFILE

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

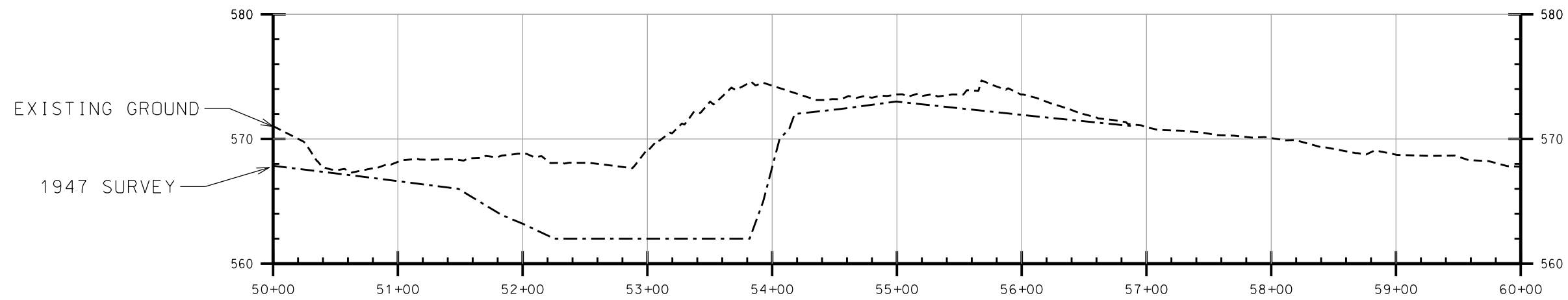
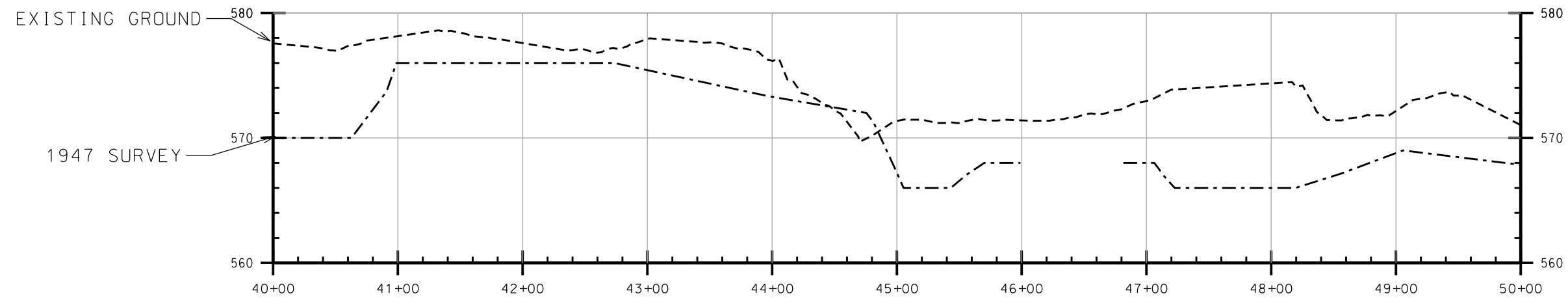
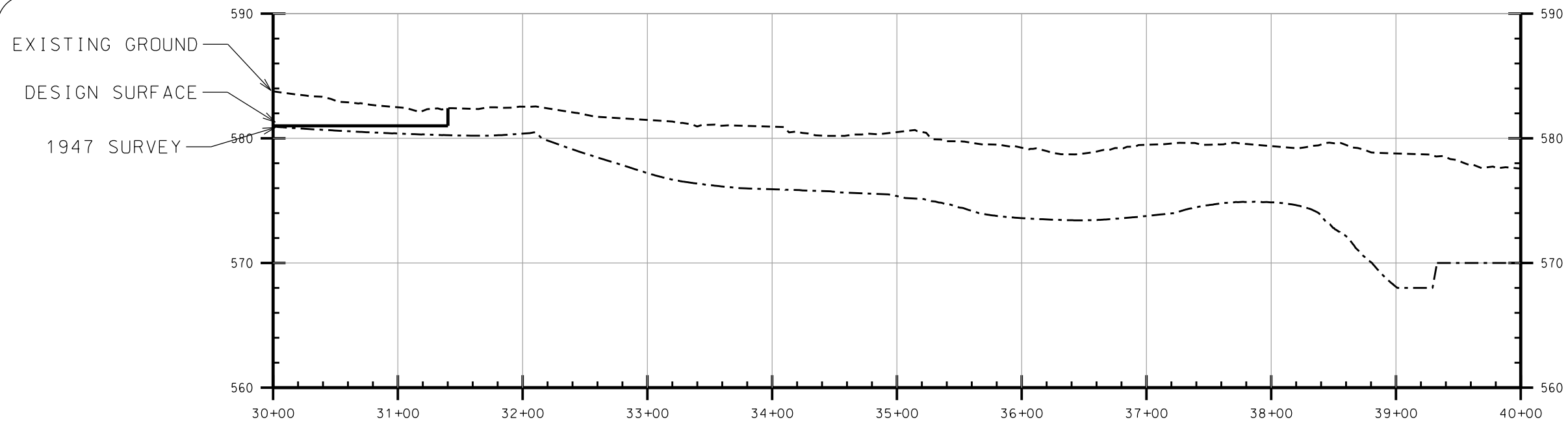
NO.	BY	REVISION

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17-06-44-02

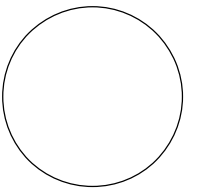
CHK'D BY: DATE:

SHEET No:

H.02



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



IN-LAKE PROFILE

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

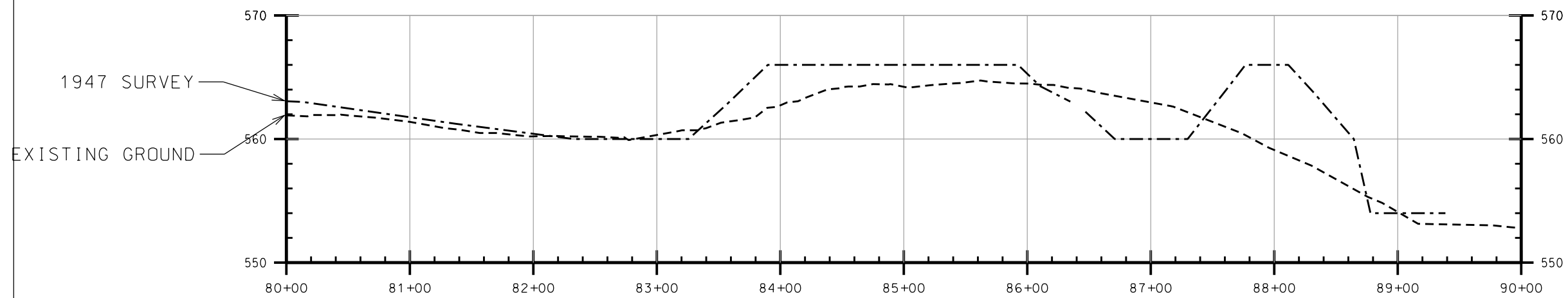
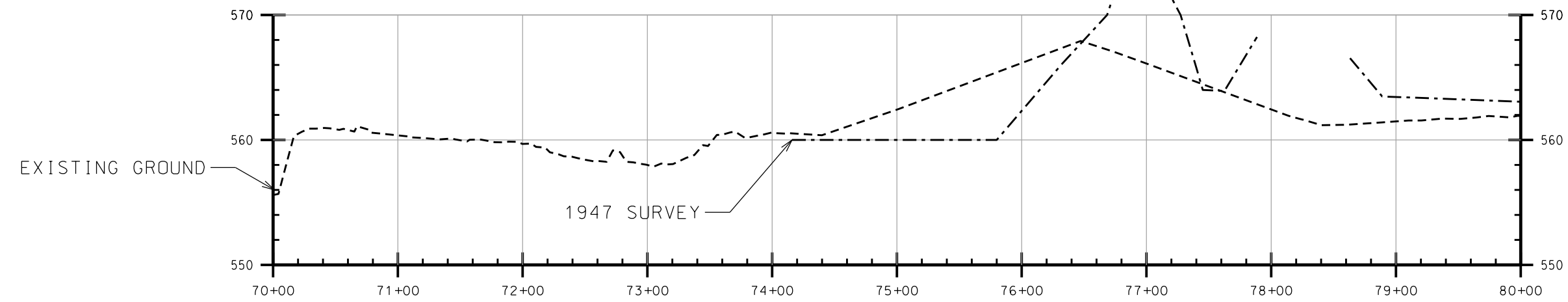
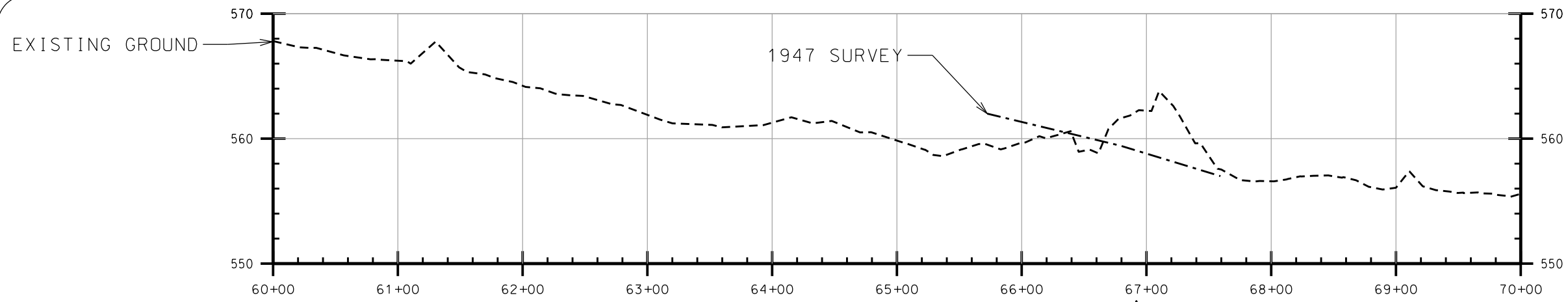
NO.	BY	REVISION

DRAWN BY: PROJECT NUMBER:
17-06-44-02

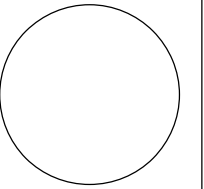
CHK'D BY: DATE:

SHEET No:

H.03



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



IN-LAKE PROFILE

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

NO.	BY	REVISION

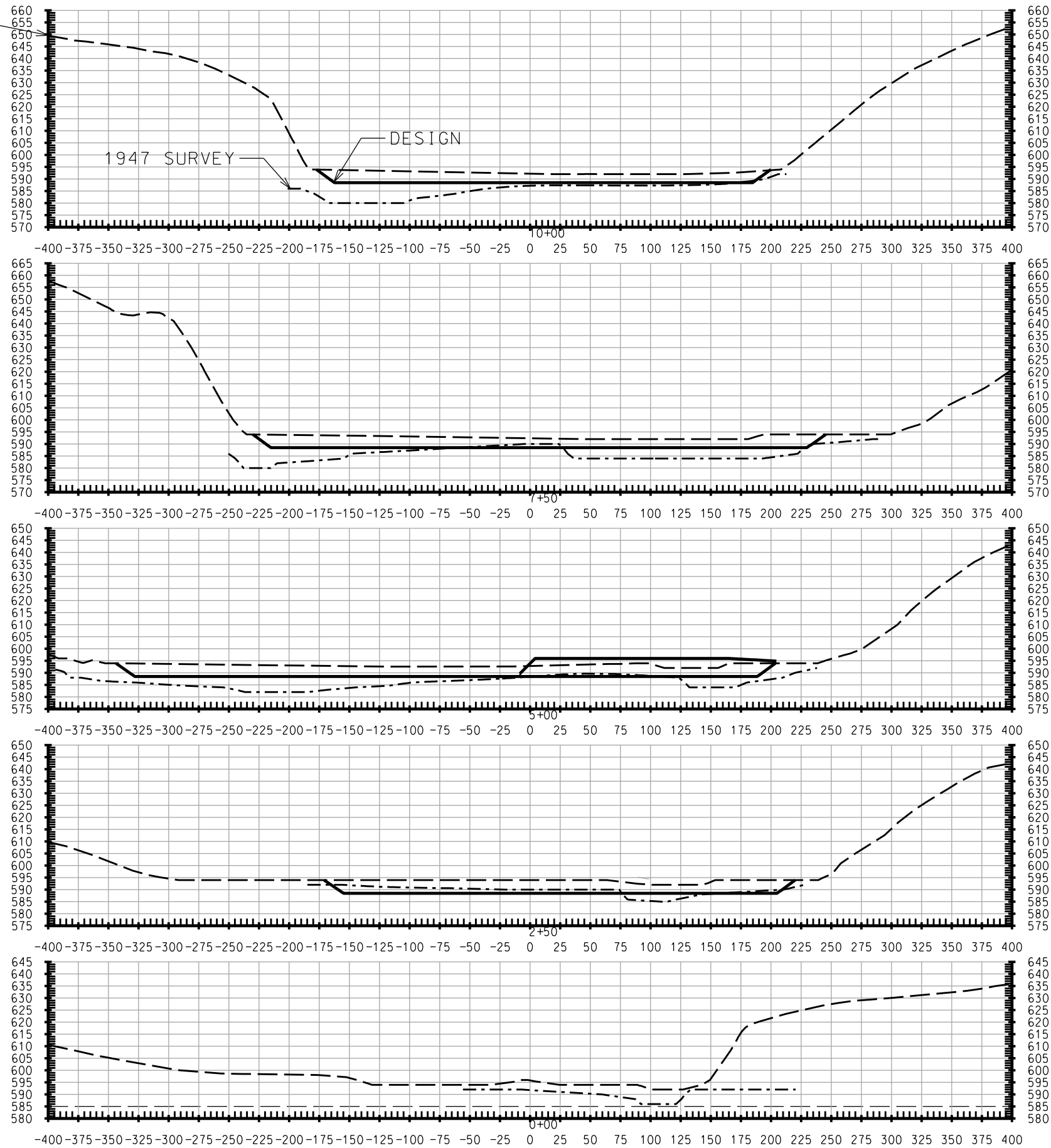
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17-06-44-02

CHK'D BY: DATE:

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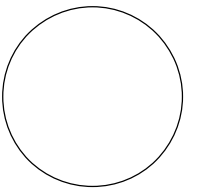
H.04

EXISTING GROUND



1"=100' HORIZONTAL
2"=50' VERTICAL

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**
ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50319-0034



IN-LAKE CROSS SECTIONS

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:
GEODE STATE PARK

HENRY COUNTY

NO.	DATE	BY	REVISION

DRAWN BY: PROJECT NUMBER:
17-06-44-02

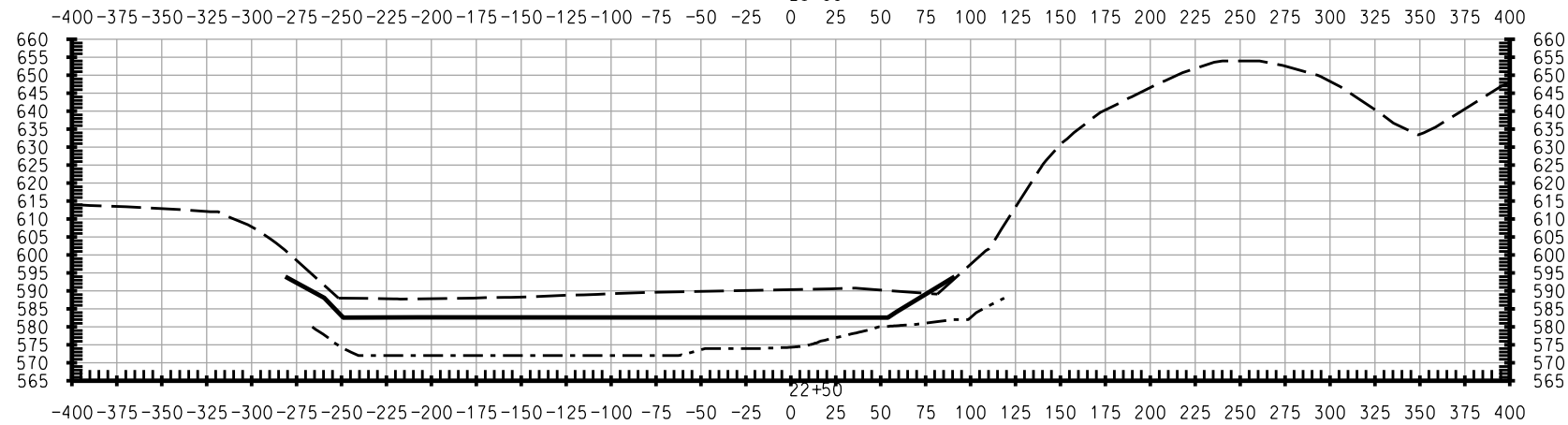
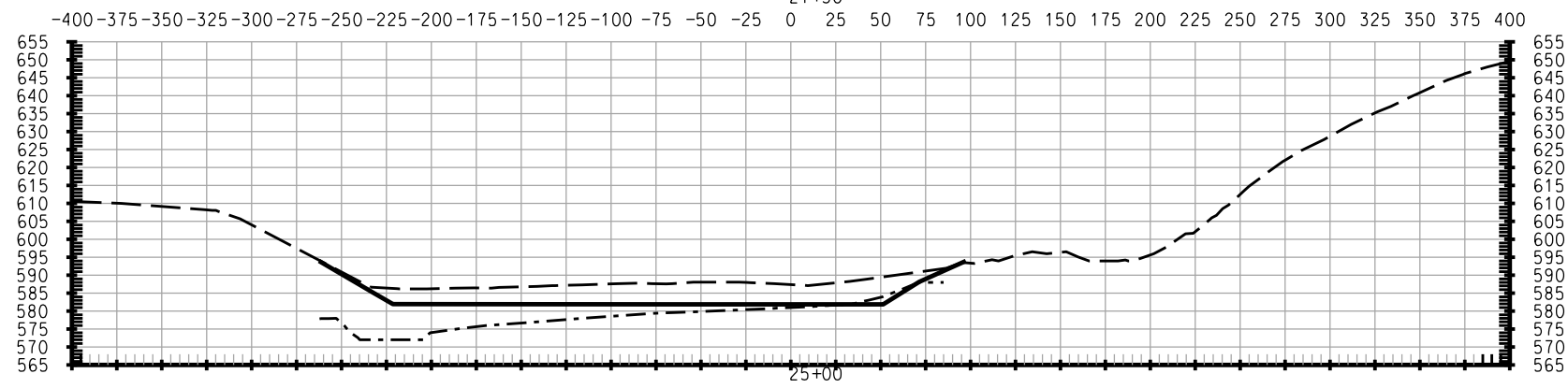
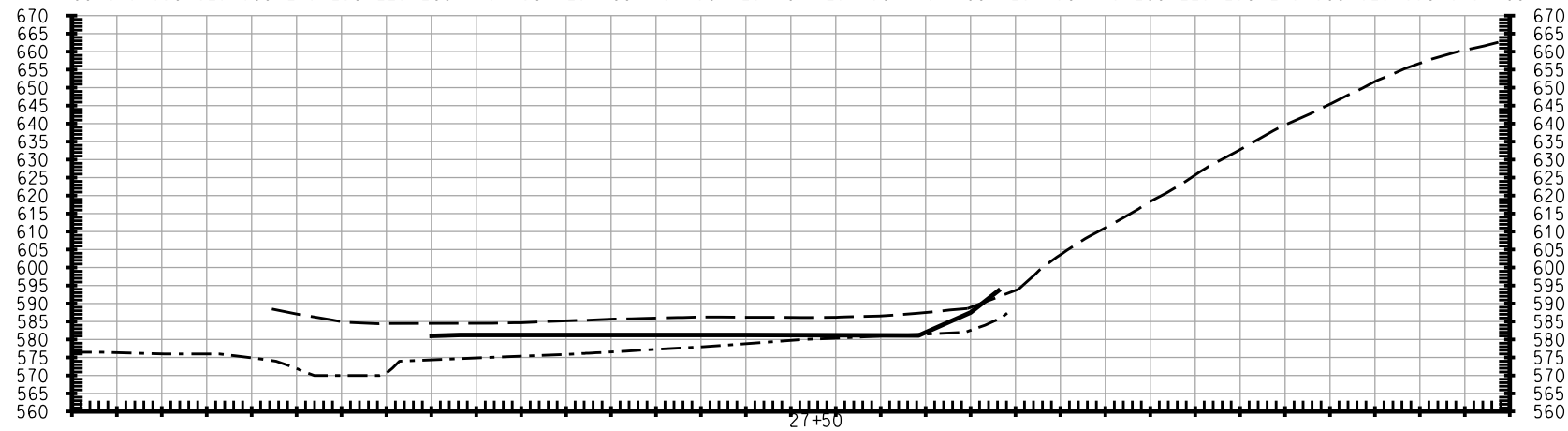
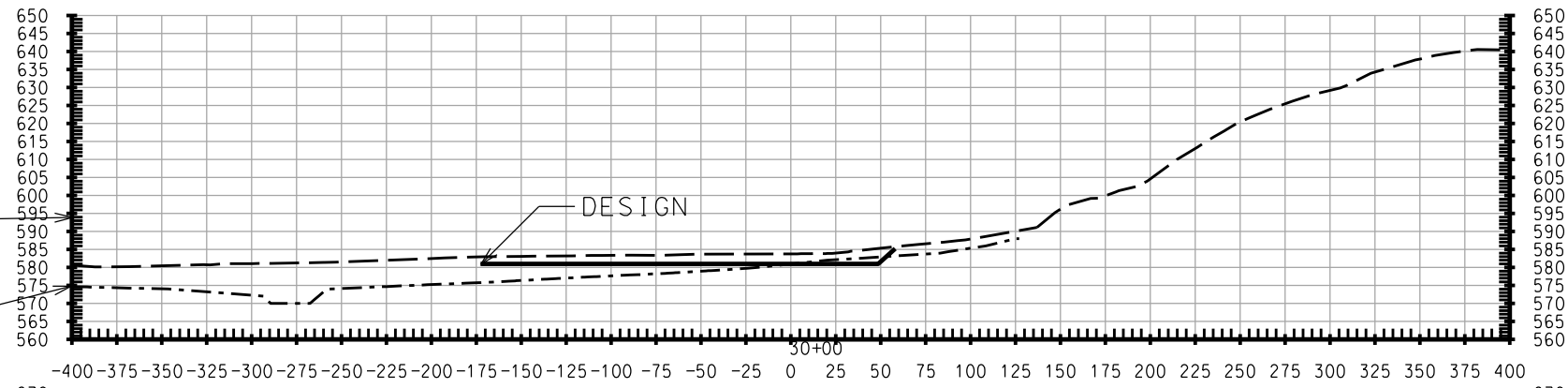
CHK'D BY: DATE:

SHEET No: **1.01**

EXISTING GROUND

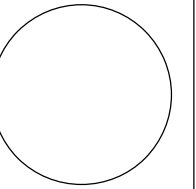
1947 SURVEY

DESIGN



1"=100' HORIZONTAL
2"=50' VERTICAL

CONSULTANT:



IOWA DEPARTMENT OF
NATURAL RESOURCES

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



IN-LAKE CROSS SECTIONS

MECHANICAL DREDGING AND SHORELINE ARMORING FOR:

GEODE STATE PARK

HENRY COUNTY

NO. BY REVISION

DATE

DRAWN BY: PROJECT NUMBER:

17-06-44-02

CHK'D BY: DATE:

SHEET No:

1.03

