

IOWA DEPARTMENT OF NATURAL RESOURCES

CONSTRUCTION DOCUMENTS

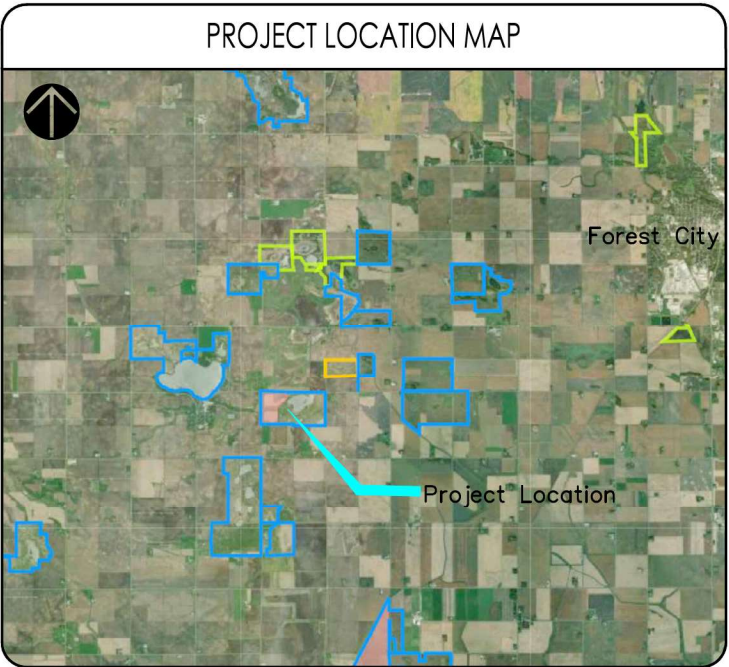
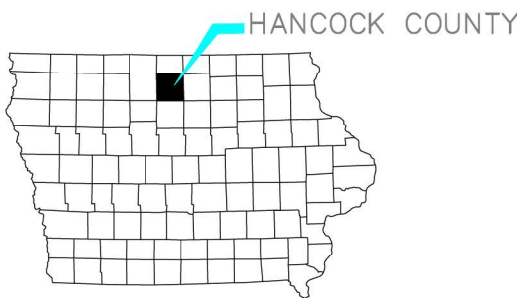
FOR

CRYSTAL HILLS WMA - DIKE REPAIR

HANCOCK COUNTY, IOWA

SECTION 14, T97N, R25W

PROJECT #23-02-41-02



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CONSULTANT:
NONE

IOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES 6200 PARK AVE.,
DES MOINES, IA 50321



COVER SHEET

PROJECT DESCRIPTION FOR:

CRYSTAL HILLS WMA - DIKE REPAIR

HANCOCK COUNTY

DIRECTORY

PROJECT MANAGER

COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES
ADDRESS	3120 330TH AVE
CITY,STATE,ZIP	RUTHVEN, IA 51358
CONTACT	TJ HERRICK
TELEPHONE	515-250-3715
FAX	
EMAIL	tj.herrick@dnr.iowa.gov

CONSTRUCTION INSPECTOR

COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES
ADDRESS	6200 PARK AVE
CITY,STATE,ZIP	DES MOINES, IA 50321
CONTACT	Heath Delzell, P.E.
TELEPHONE	515-979-0104
FAX	
EMAIL	heath.delzell@dnr.iowa.gov

PROJECT DESCRIPTION

THIS PROJECT INCLUDES THE HAULING OF PROPER FILL TO REBUILD AN EARTHEN DIKE, INSTALLING A CMP CULVERT THROUGH THE DIKE, CMP FIREPROOF COVER, CUT AND ROCK EMERGENCY SPILLWAY, AND TREE GRUBBING AND REMOVAL.

CONSTRUCTION PER IOWA STATEWIDE URBAN DESIGN AND SPECIFICATIONS (SUDAS)

NO.	BY	REVISION
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PROJECT NUMBER:
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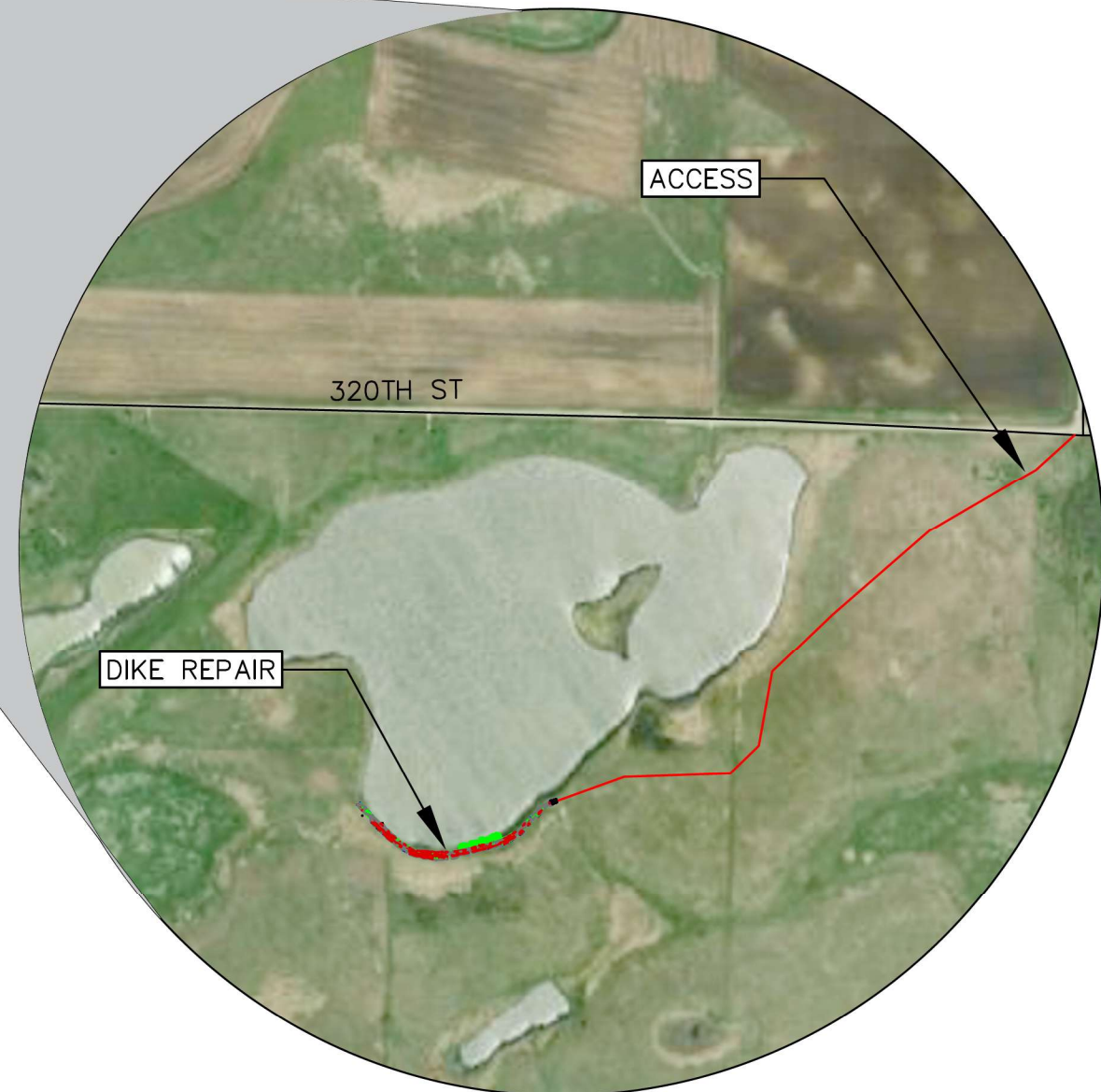
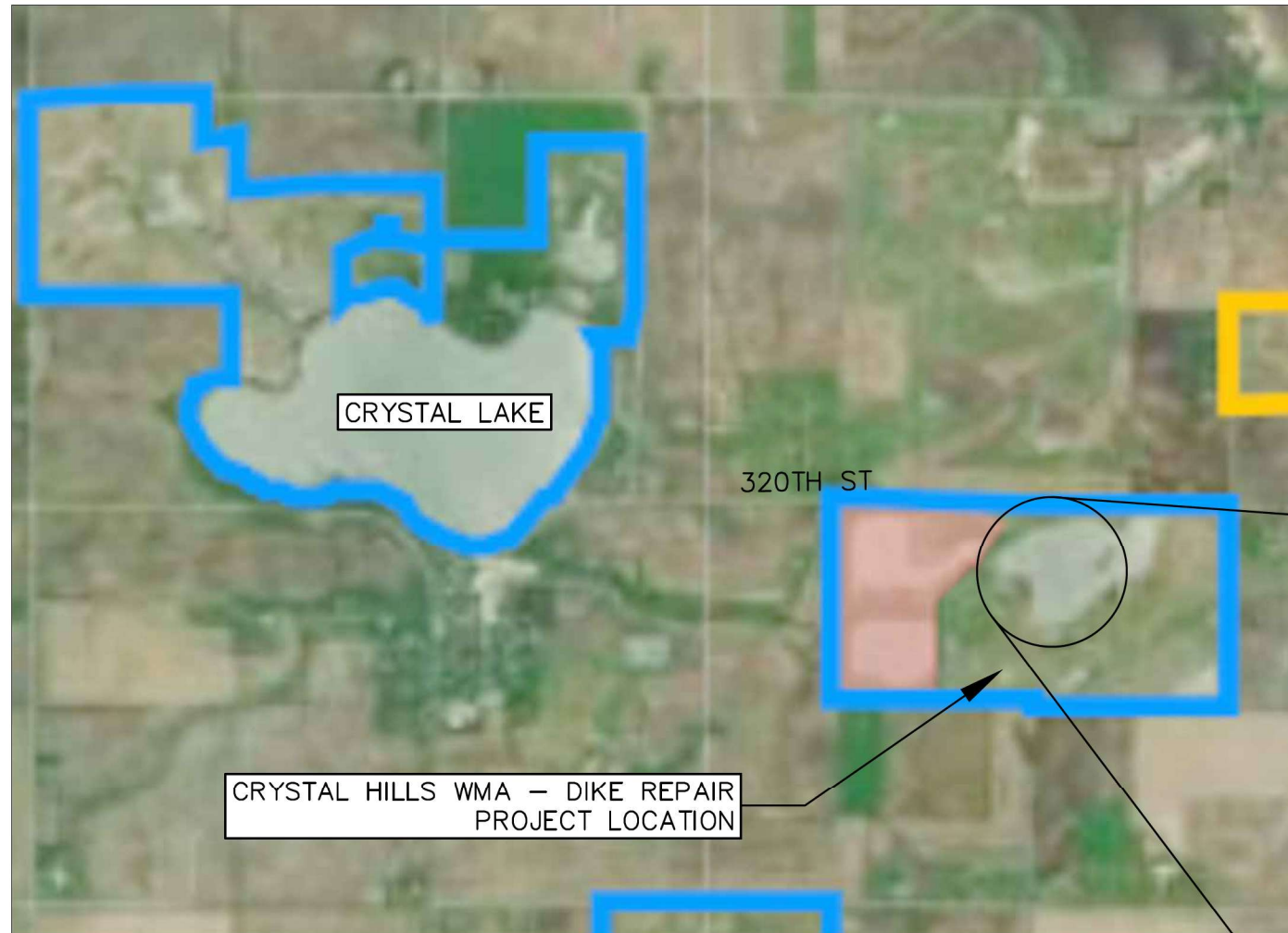
DATE:
APRIL 1, 2025

SHEET NO:

A.01

CRYSTAL HILLS WMA - DIKE REPAIR DETAIL

MAP



NORTH

CONSULTANT:
NONE

**IOWA DEPARTMENT OF
NATURAL RESOURCES**

ENGINEERING SERVICES - WALLACE BUILDING
502 E. 9TH ST., DES MOINES, IA 50321-0034



LOCATION DETAIL MAP

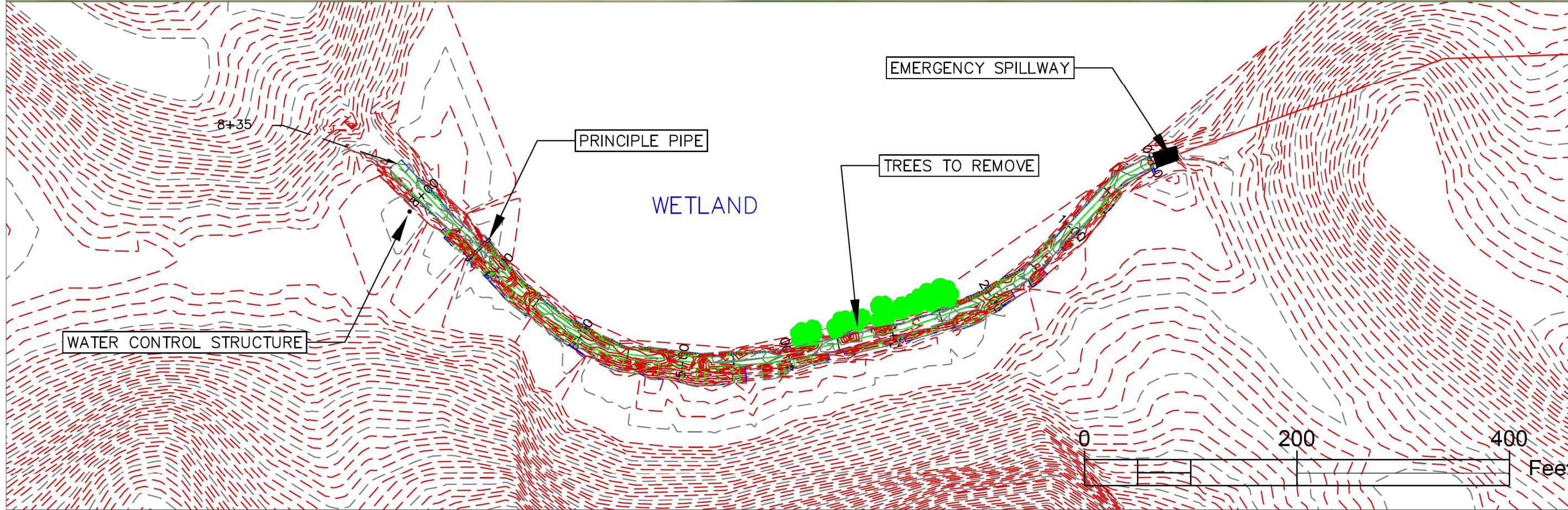
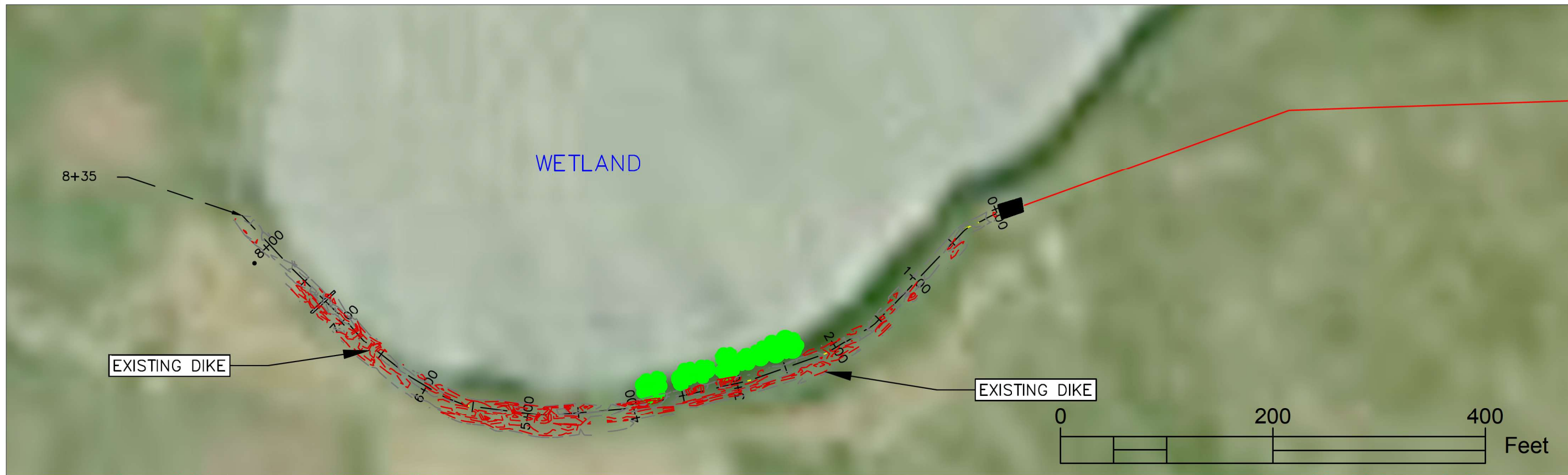
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A.02



CONSULTANT:
NONE

IOWA DEPARTMENT OF
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ENGINEERING SERVICES -
6200 PARK AVE, DES MOINES, IA 50321



DIKE PLAN

PROJECT DESCRIPTION FOR:

CRYSTAL HILLS WMA - DIKE REPAIR

HANCOCK COUNTY

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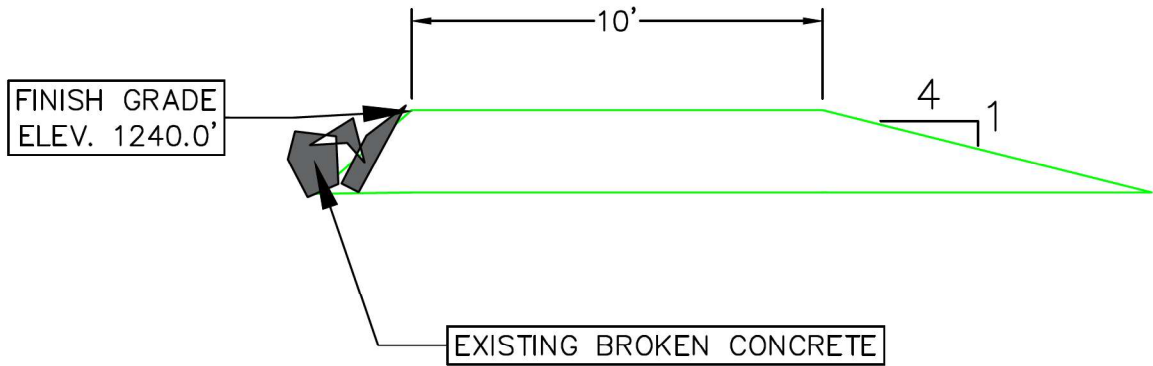
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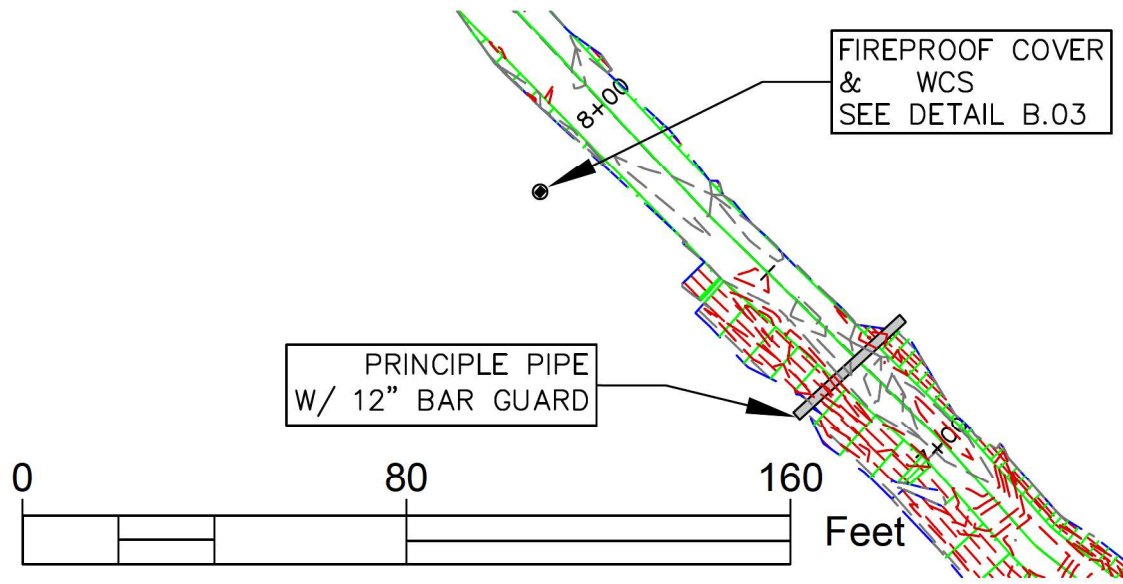
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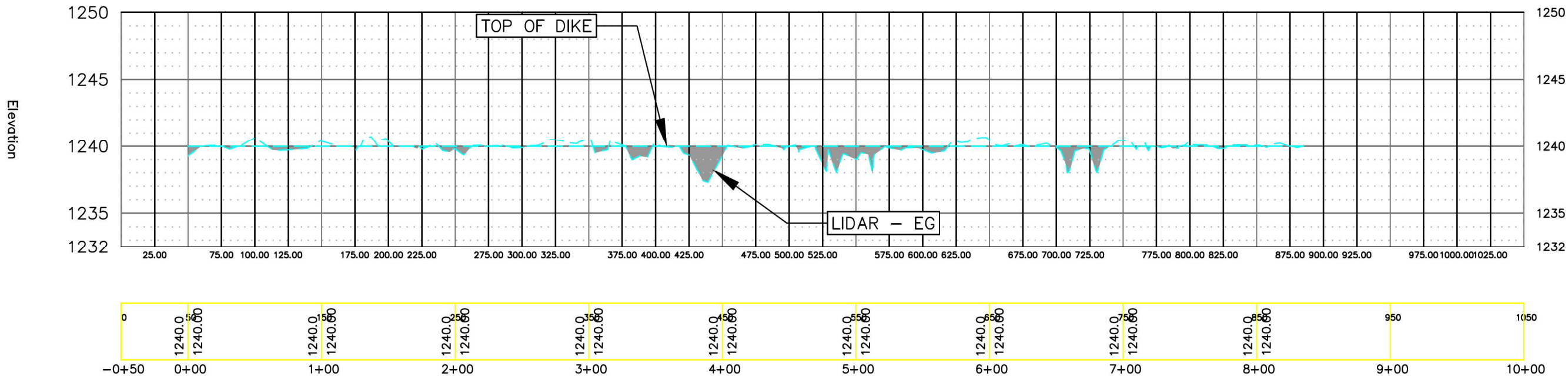
TYP. DIKE SECTION



FIREPROOF COVER AND PIPE PLAN



DIKE REPAIR PROFILE



NOT TO SCALE

CONSULTANT:
NONEIOWA DEPARTMENT OF
NATURAL RESOURCES

ENGINEERING SERVICES -
6200 PARK AVE, DES MOINES, IA 50321



DIKE SECTION & PROFILE

PROJECT DESCRIPTION FOR:

CRYSTAL HILLS WMA - DIKE REPAIR

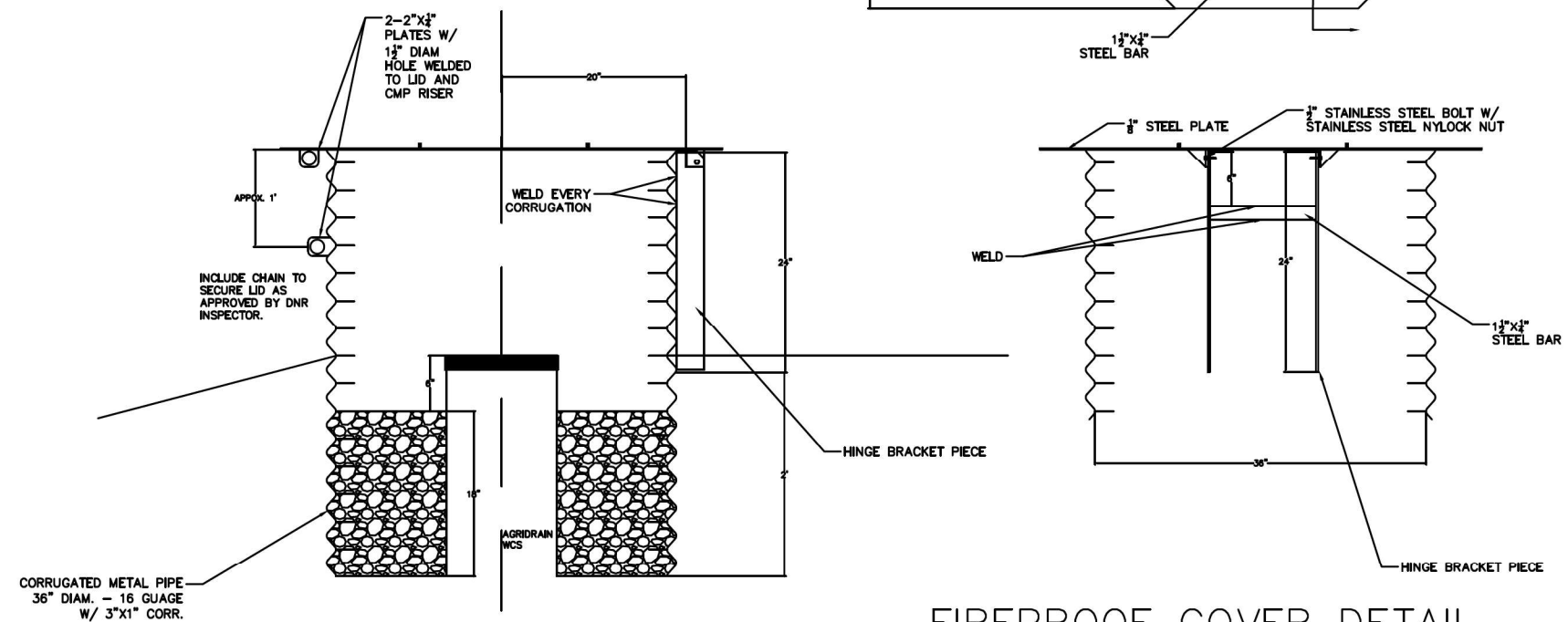
HANCOCK COUNTY

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B.02

FIREPROOF COVER PLAN VIEW

The diagram shows a plan view of a roof cover. A central feature is a circle containing a black diamond, labeled "EXISTING AGRIDRAIN WCS". To the left of this feature is a rectangular box labeled "FIREPROOF COVER TO BE ADDED", with an arrow pointing from the box to the diamond. The diagram includes a scale bar at the bottom with markings for 0, 20, and 40 feet. The scale bar is divided into segments: a 10-foot segment from 0 to 10, a 5-foot segment from 10 to 15, a 5-foot segment from 15 to 20, and a 20-foot segment from 20 to 40. The word "Feet" is written to the right of the scale bar. The roof cover is depicted with green lines, and the existing agridrain WCS is shown as a dashed line.



1 1/2"x3/4" BARS WELDED TO PLATE

48"

20"

36"

48"

20"

CMP

B-B

A-A

1 1/2"x3/4" STEEL BAR

1/2" STEEL PLATE

1/2" STAINLESS STEEL BOLT W/
STAINLESS STEEL NYLOCK NUT

WELD

2"

1 1/2"x3/4" STEEL BAR

36"

HINGE BRACKET PIECE

HINGE BRACKET PIECE

B.03

ESTIMATED PROJECT QUANTITIES

Item No.	Description	Quantity	Unit
1	Mobilization	1	LS
2	12" CMP, 14 Ga.	1	LS
3	Onsite Topsoil	214	CY
4	Class 10 Excavation, Onsite Barrow	150	CY
5	Class 10 Excavation, Contractor Furnished	265	CY
6	1" Clean Stone	15	TN
7	Erosion Stone	8	TN
8	Fire Proof Cover	1	EA
9	Clearing and Grubbing	1	LS

ITEM No.	ESTIMATE REFERENCE INFORMATION
1	Access from 320th St. DNR Engineer to provide the field location of the start and stop of the dike work and will set an elevation hub
2	Remove and dispose off-site existing dual wall plastic tile. In location where plastic tile is currently found, install 12 inch CMP, 14 Gauge - 40 LF. A 12" standard bar guard, as manufactured by Agri Drain Corp of Adair, Iowa, or approved equal shall be installed on the wetland (inlet) end of the CMP.
3	Existing dike shall be stripped 6" prior to placing approved material. Stripped material may be spread evenly over finished dike surface.
4	Spillway excavated (20'X10X9") to elevation 1238.25'. Erosion stone topped w/ 1" clean stone place into excavated portion to a FG elevation of 1239.0' . Excavated material may be spread evenly over finished dike surface.
5	Embankment to be reshaped to 4to1 side slopes on south side of dike and top width of 10' with material hauled in from off-site and shall be of a suitable material ok'd by DNR Field Engineer. North side of dike is faced with broken concrete and shall be left as is.
6	1" Clean Stone to be used to fill cavity between installed fire proof cover and existing Agri Drain WCS and to choke erosion stone in Emergency Spillway
9	Remove (cut and grubbed out stumps) trees on dike. Trees shall be piled on-site in location identified by DNR Field Engineer. Disposal site will be within 500' of dike.

GENERAL NOTES:

ITEM	DESCRIPTION
A.	The contractor shall notify the following two weeks prior to construction: 1. District Inspector: Heath Delzell, P.E. 515-979-0104
B.	Verify actual locations and elevations with DNR Engineer.
C.	All work shall conform to and be performed in accordance with all applicable codes and ordinances.
D.	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.
E.	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.
F.	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.
G.	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.
H.	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.
I.	The contractor shall shape graded area to maintain surface drainage. All elevations are to finish grade.
J.	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:
NONE

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ENGINEERING SERVICES -
6200 PARK AVE, DES MOINES, IA 50321



QUANTITIES AND GENERAL NOTES

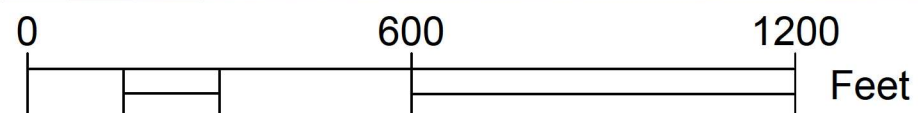
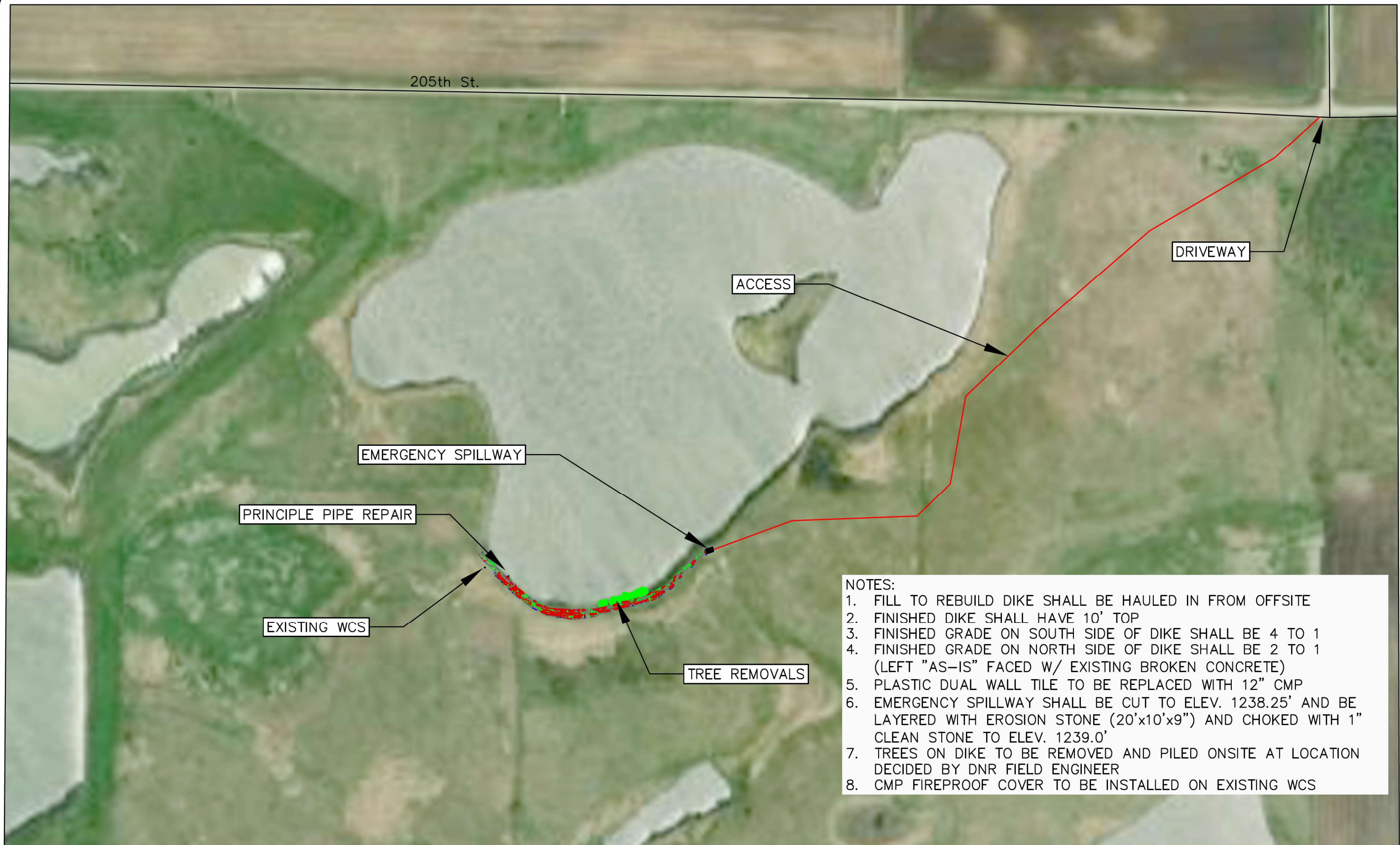
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C.01



CONSULTANT:
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OVERALL PROJECT MAP

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