

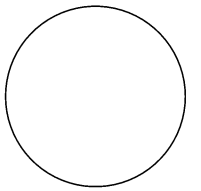
Typical Roadway Section - Center Crown

Note:

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer.

STATION	TO STATION	LOCATION	WIDTH
0+00	11+42	BABCOCK	16'
0+00	32+61	NORTH WEST	18'

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



TYPICAL DETAILS

ROAD MAINTENANCE FOR:

HAWKEYE WILDLIFE UNIT

JOHNSON COUNTY

NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:
21-06-52-02

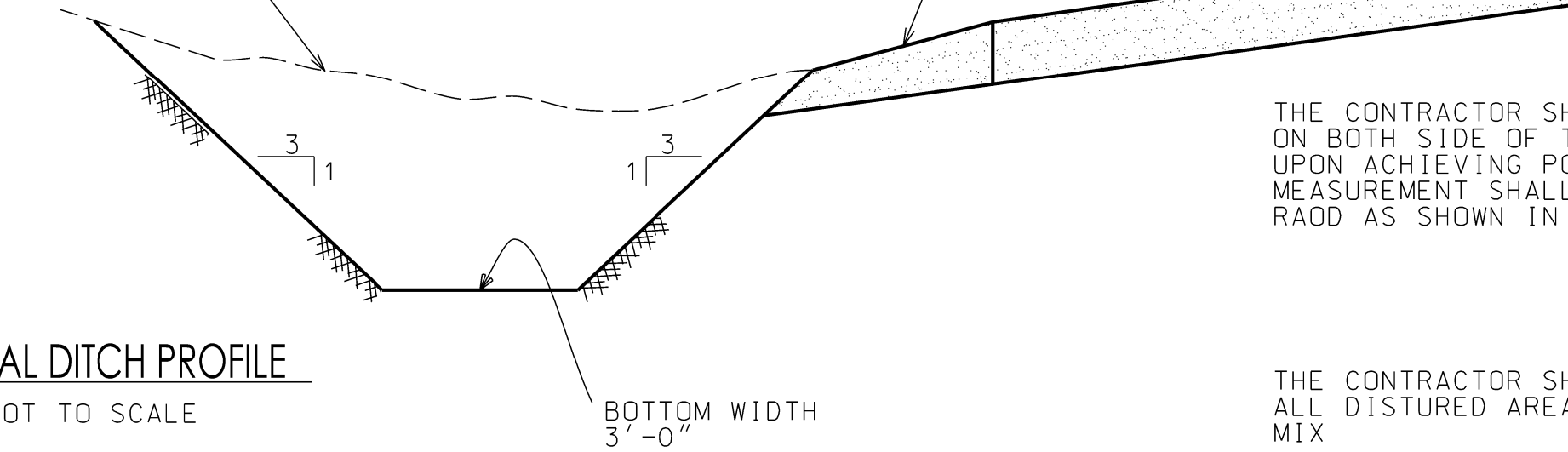
CHK'D BY: DATE:
FEB/2021

SHEET No:

B.01

EXISTING
GROUND
PROFILE

ROAD SHOULDER



THE CONTRACTOR SHALL ESTABLISH DITCHES ON BOTH SIDE OF THE ROAD. DEPTH DEPENDENT UPON ACHIEVING POSITIVE DRAINAGE. MEASUREMENT SHALL BE PER EACH SIDE OF THE ROAD AS SHOWN IN THE PLANS

TYPICAL DITCH PROFILE

NOT TO SCALE

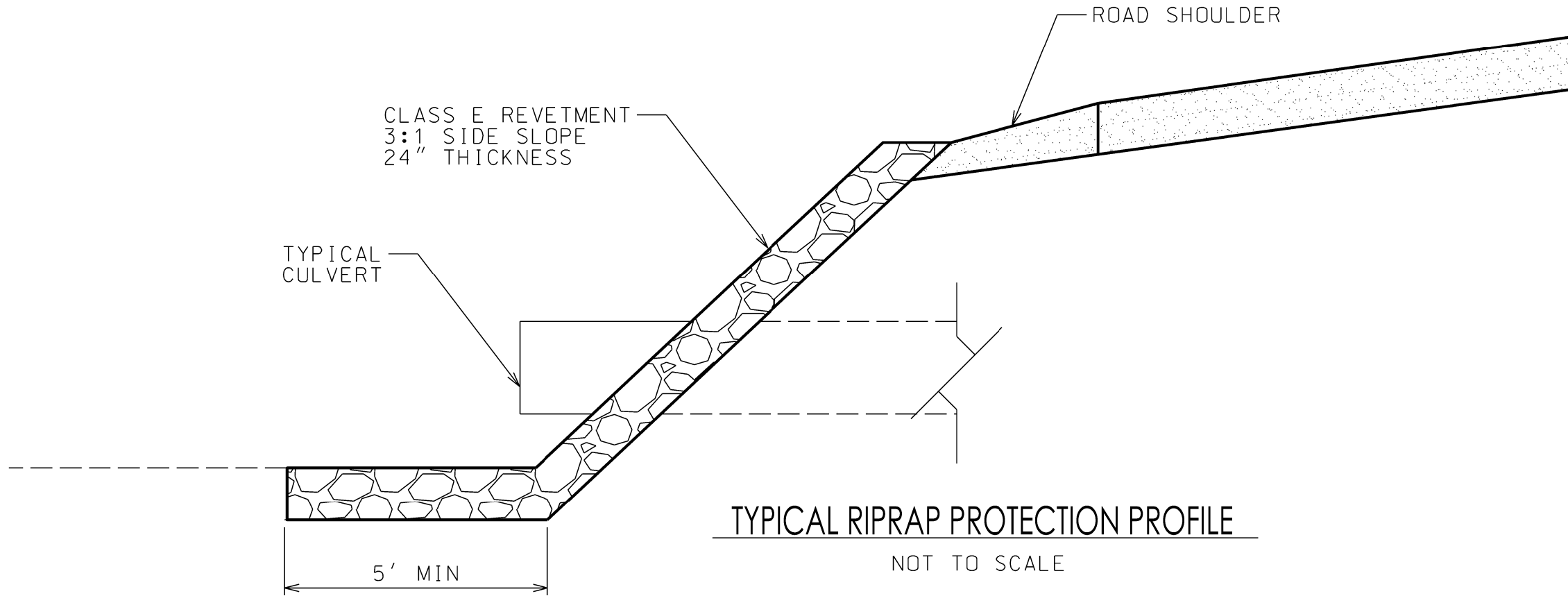
BOTTOM WIDTH
3'-0"

THE CONTRACTOR SHALL SEED AND MULCH ALL DISTURBED AREAS WITH IA DOT RURAL MIX

ROAD SHOULDER

CLASS E REVETMENT
3:1 SIDE SLOPE
24" THICKNESS

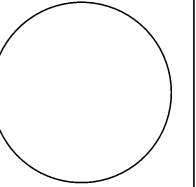
TYPICAL
CULVERT



TYPICAL RIPRAP PROTECTION PROFILE

NOT TO SCALE

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NATURAL RESOURCES

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



TYPICAL DETAILS

ROAD MAINTANCE FOR:
HAWKEYE WILDLIFE UNIT
JOHNSON COUNTY

NO. BY DATE REVISION

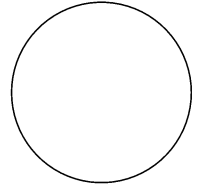
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B.02

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

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



DR 101
ROAD MAINTENANCE FOR:
HAWKEYE WILDLIFE UNIT
JOHNSON COUNTY

NO.	BY	DATE	REVISION

SHEET No: **B.03**

Refer to DR-104 for minimum and maximum allowable cover (H) for the particular kind of pipe culvert.

- ① The backfill adjacent to and above the pipe culvert may be placed in conjunction with normal embankment construction. Thoroughly tamp the embankment within the limits shown.
- ② Take extra care to ensure complete and satisfactory tamping of backfill material in the area immediately adjacent to the lower portion of pipe.
- ③ Carefully shape excavation below groundline either using a template conforming to actual dimension and shape of the pipe or using other means. If using other means, check with a template conforming to the actual dimension and shape of the pipe.
- ④ For culverts backfilled by flooding, place a cohesive soil plug at the inlet, outlet, and, when necessary, sides, prior to flooding.
- ⑤ 4-inch Porous Backfill bedding. 2-inch Floodable Backfill bedding may be used under unsealed rigid pipe.
- ⑥ Extend Porous Backfill through the outlet end soil plug when used for bedding.
- ⑦ Quantity calculations are based upon a 1:1 slope and minimum trench dimension. Actual slope of trench may vary based upon Contractor's operations.
- ⑧ Ground Line at time of pipe installation. When existing ground exceeds 5 feet depth over pipe, backfill and compaction by flooding is not required more than 5 feet above the pipe.
- ⑨ Where a corrugated metal pipe culvert requiring elongation is to be installed (to counteract deformation caused by backfill), complete elongation using a means approved by the Engineer. Elongation may be developed either as part of shop fabrication or field installation. Install with elongated axis vertical.

Possible Contract Items:
Flowable Mortar
Flooded Backfill
Excavation, Class 20

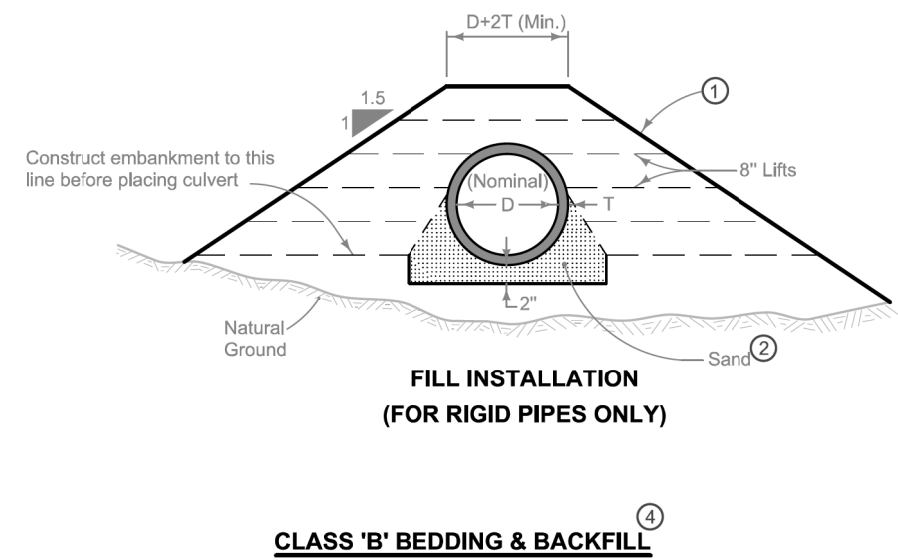
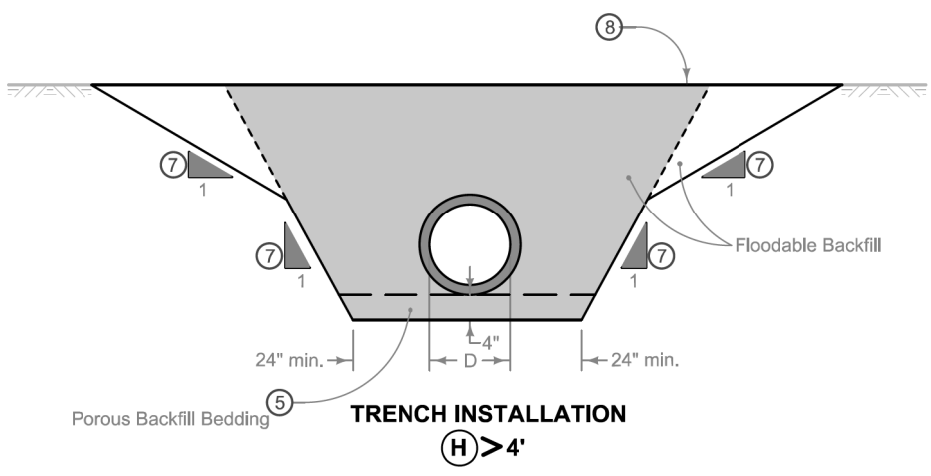
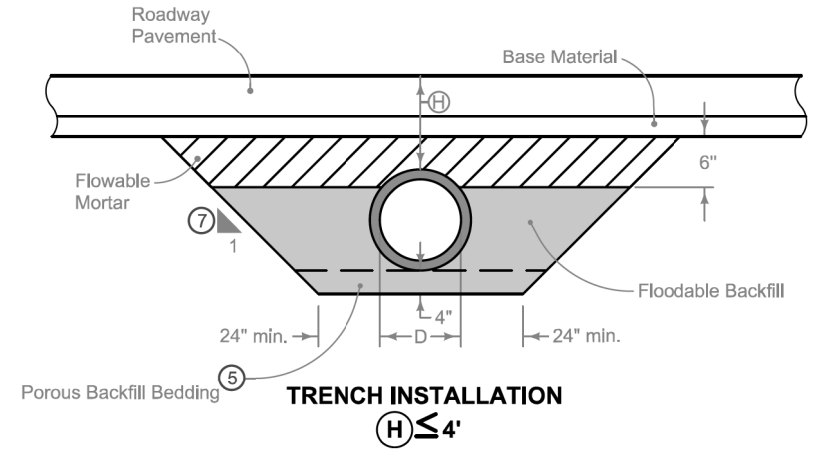
Possible Tabulations:
104-3
104-4

IOWADOT	REVISION	
	2	04-18-17
	DR-101	
SHEET 1 of 1		

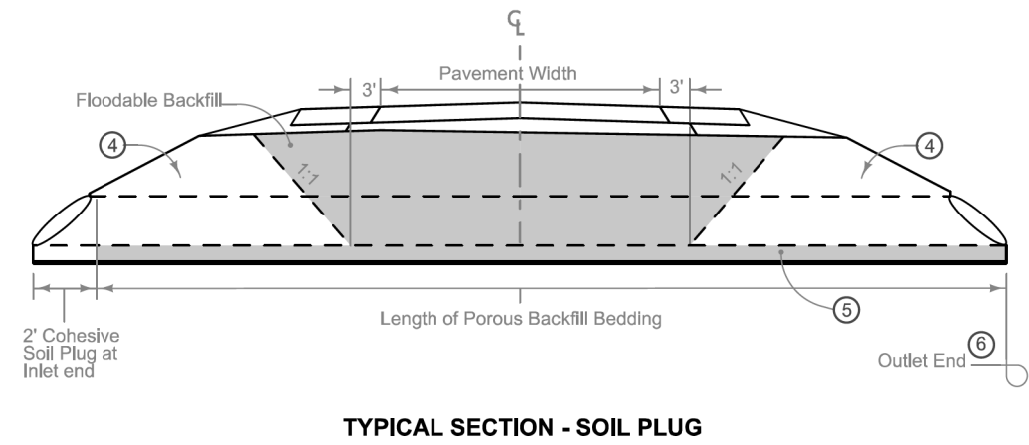
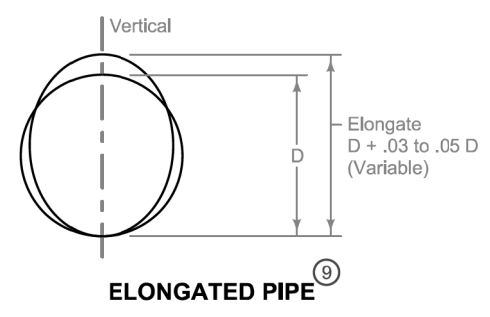
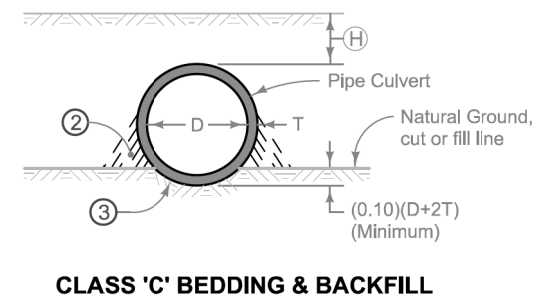
REVISIONS: Changed "Porous Backfill" to "Porous Backfill Bedding" for clarity. Modified trench installation detail for H>4' to clarify pay limits.

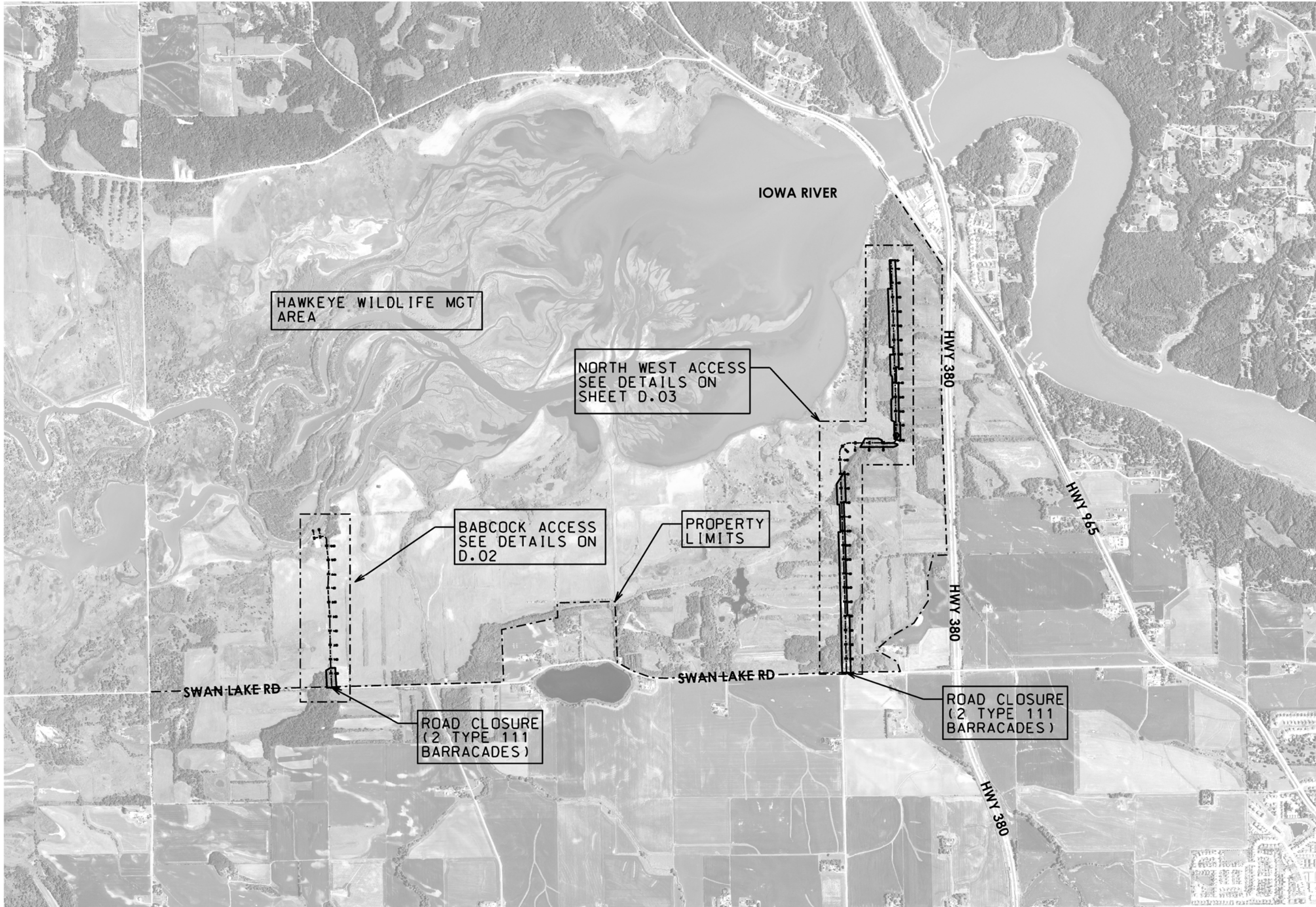
Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

**PIPE CULVERT
(BEDDING AND BACKFILL)**

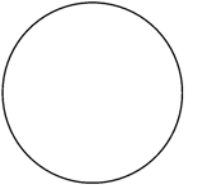


Denotes pay limits for flooded backfill





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502 E. 9TH ST., DES MOINES, IA 50319-0034



SITE PLAN

ROAD MAINTENANCE FOR:

HAWKEYE WILDLIFE UNIT

JOHNSON COUNTY

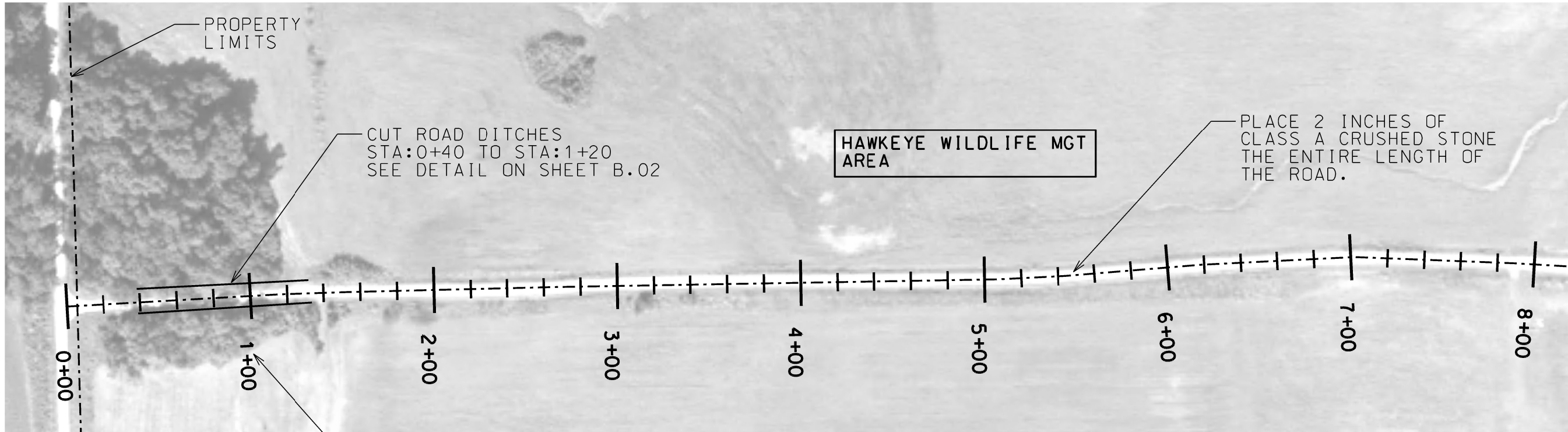
NO.	BY	REVISION

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21-06-52-02

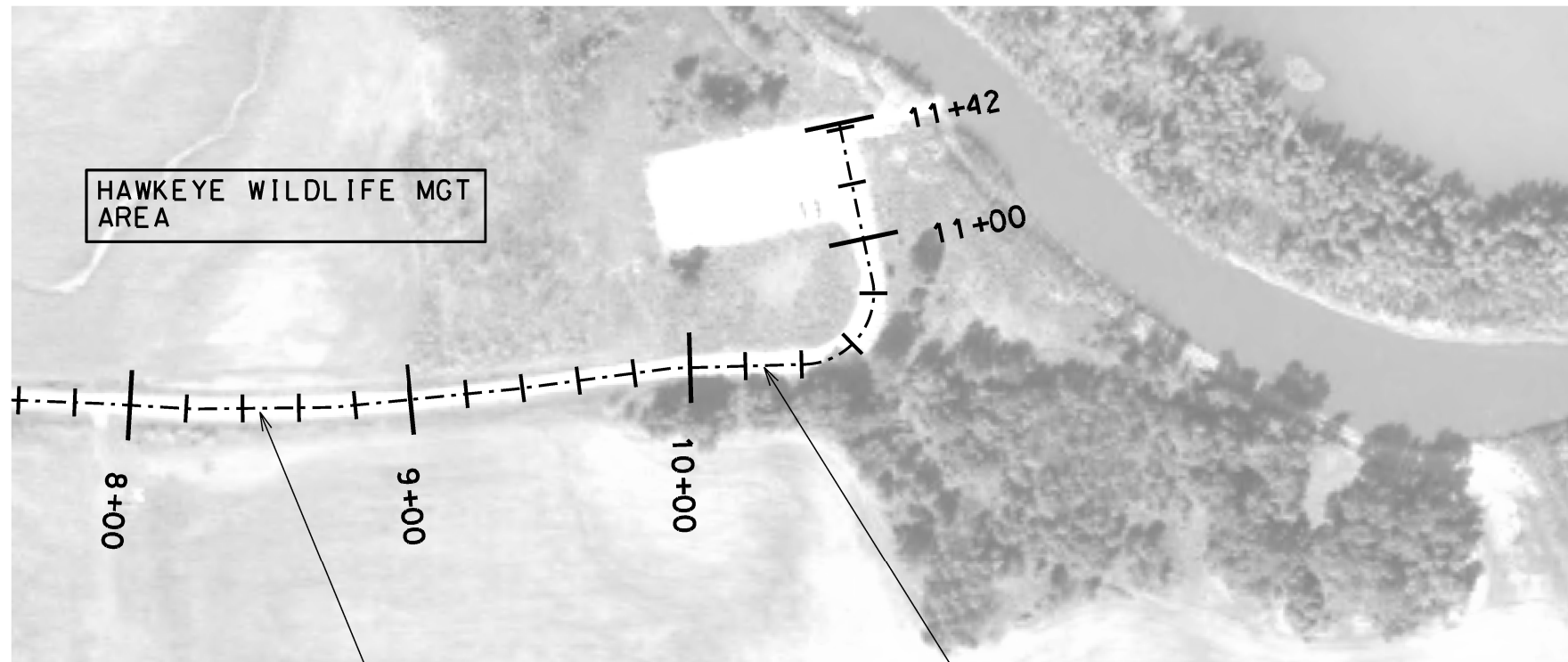
CHK'D BY: DATE:
FEB/2021

SHEET NO:

D.01



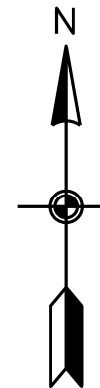
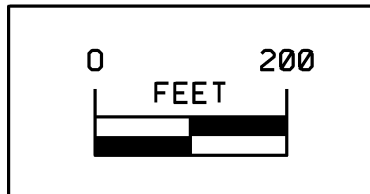
DITCH CLEARING
ENTIRE ROAD LENGTH
SEE NOTE ON SHEET C.01



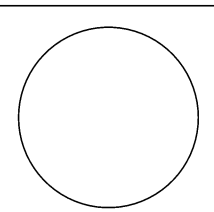
PLACE 2 INCHES OF
CLASS A CRUSHED STONE
THE ENTIRE LENGTH OF
THE ROAD.

DITCH CLEARING
ENTIRE ROAD LENGTH
SEE NOTE ON SHEET C.01

BABCOCK ACCESS PLAN



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502 E. 9TH ST., DES MOINES, IA 50319-0034



BABCOCK ACCESS PLAN

ROAD MAINTENANCE FOR:
HAWKEYE WILDLIFE UNIT
JOHNSON COUNTY

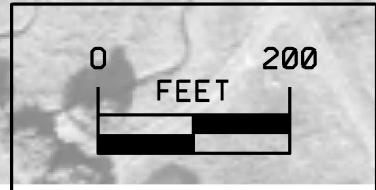
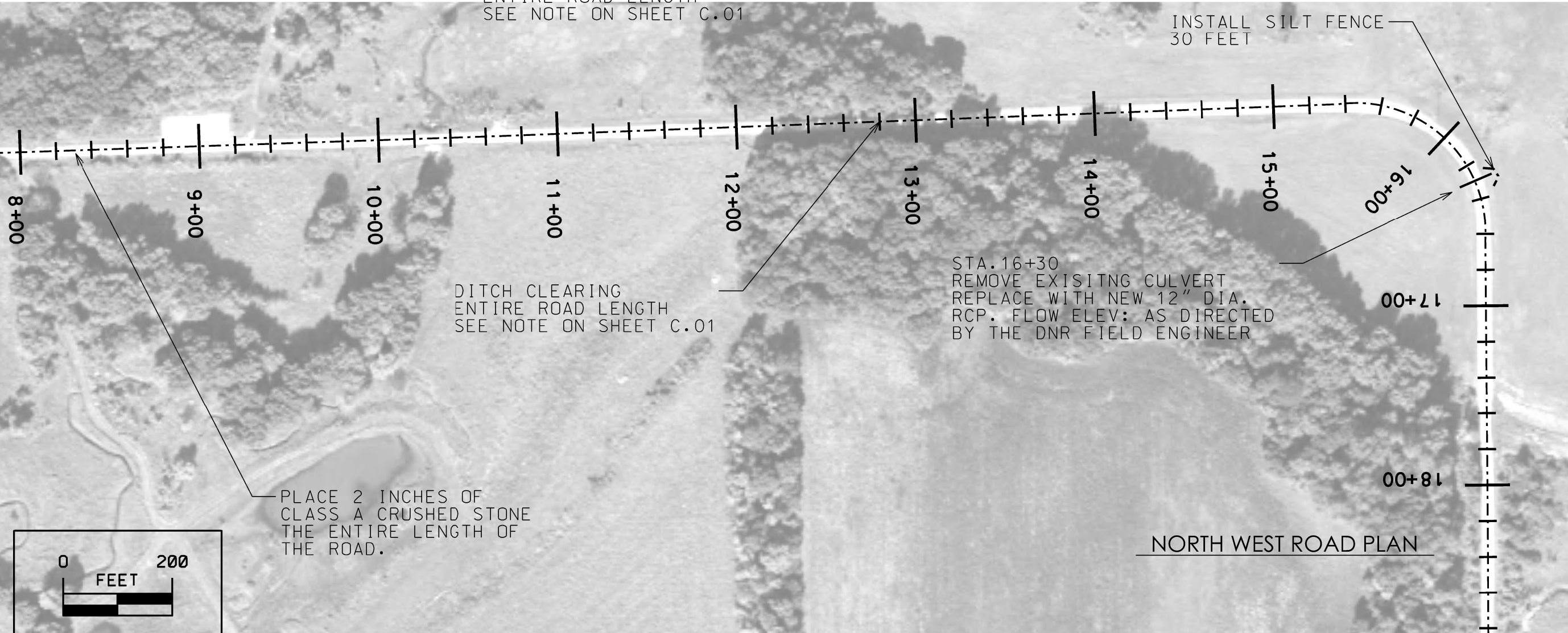
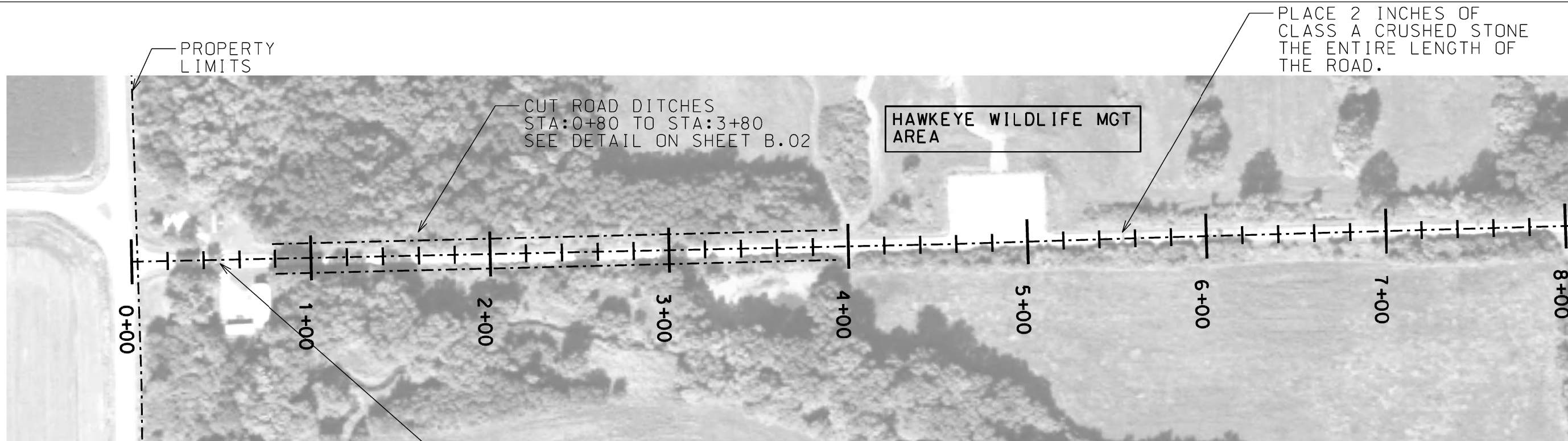
NO.	BY	REVISION

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21-06-52-02

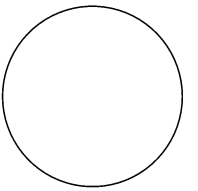
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FEB/2021

SHEET No:

D.02



CONSULTANT:



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



NORTH WEST ROAD PLAN

ROAD MAINTENANCE FOR:
HAWKEYE WILDLIFE UNIT
JOHNSON COUNTY

NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:

21-06-52-02

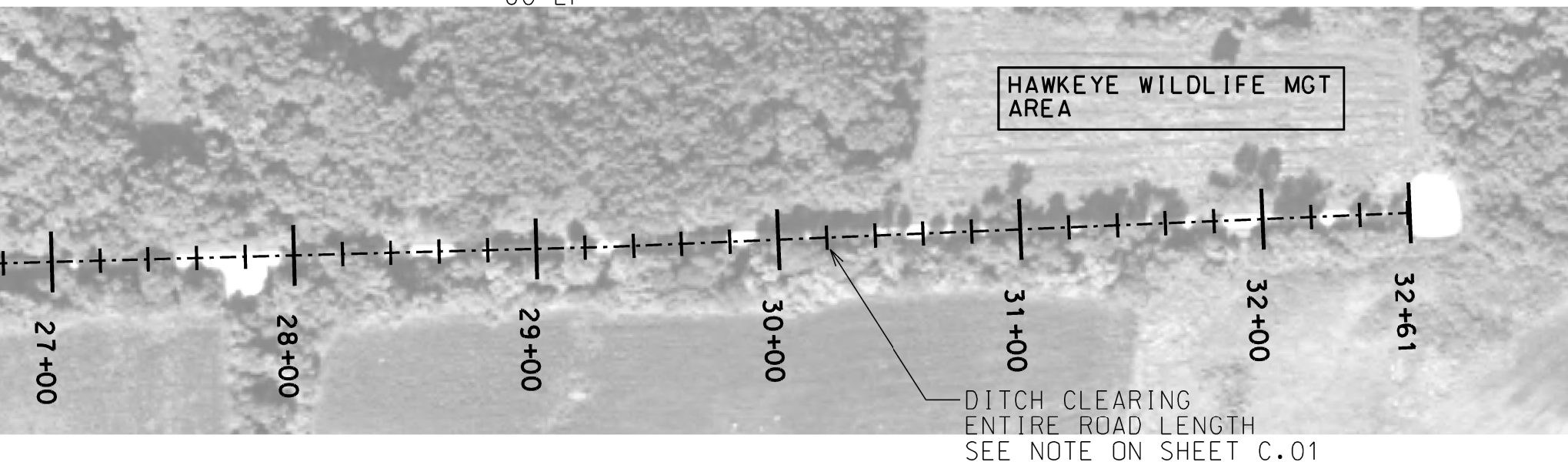
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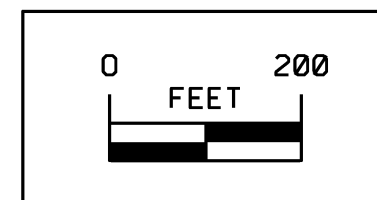
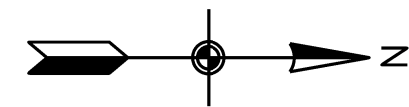
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D.03

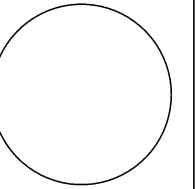
NORTH WEST ROAD PLAN



NORTH WEST ROAD PLAN



CONSULTANT:



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



NORTH WEST ROAD PLAN

ROAD MAINTENANCE FOR:
HAWKEYE WILDLIFE UNIT
JOHNSON COUNTY

NO.	BY	REVISION

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SHEET No:

D.04