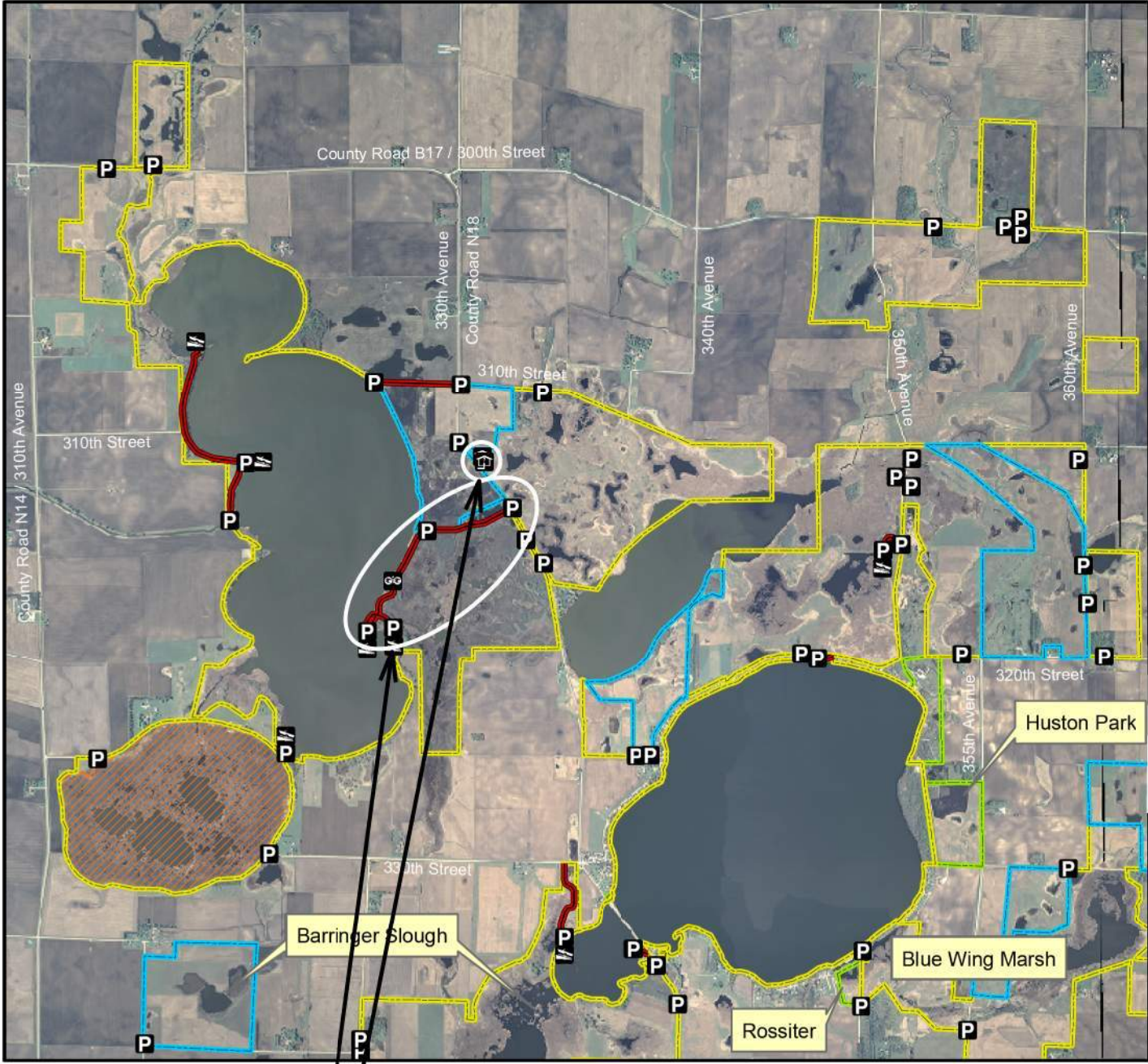


Dewey's Pasture Wildlife Management Area



Legend Map Creation Date: 8/2011

- State Areas open to hunting
- WMA Boundary
- WPA Boundary
- Refuge
- H Unit Headquarters
- P Parking Lot
- /P Boat Ramp
- S Scenic Overlook
- A Access Road
- Other Public Land

2007 Aerial Photography

DNR DEPARTMENT OF NATURAL RESOURCES

Map Creation Date: 8/2011

Ares: 5,522

Habitat: 2/5 Lakes, 2/5 Marsh, 1/5 Upland

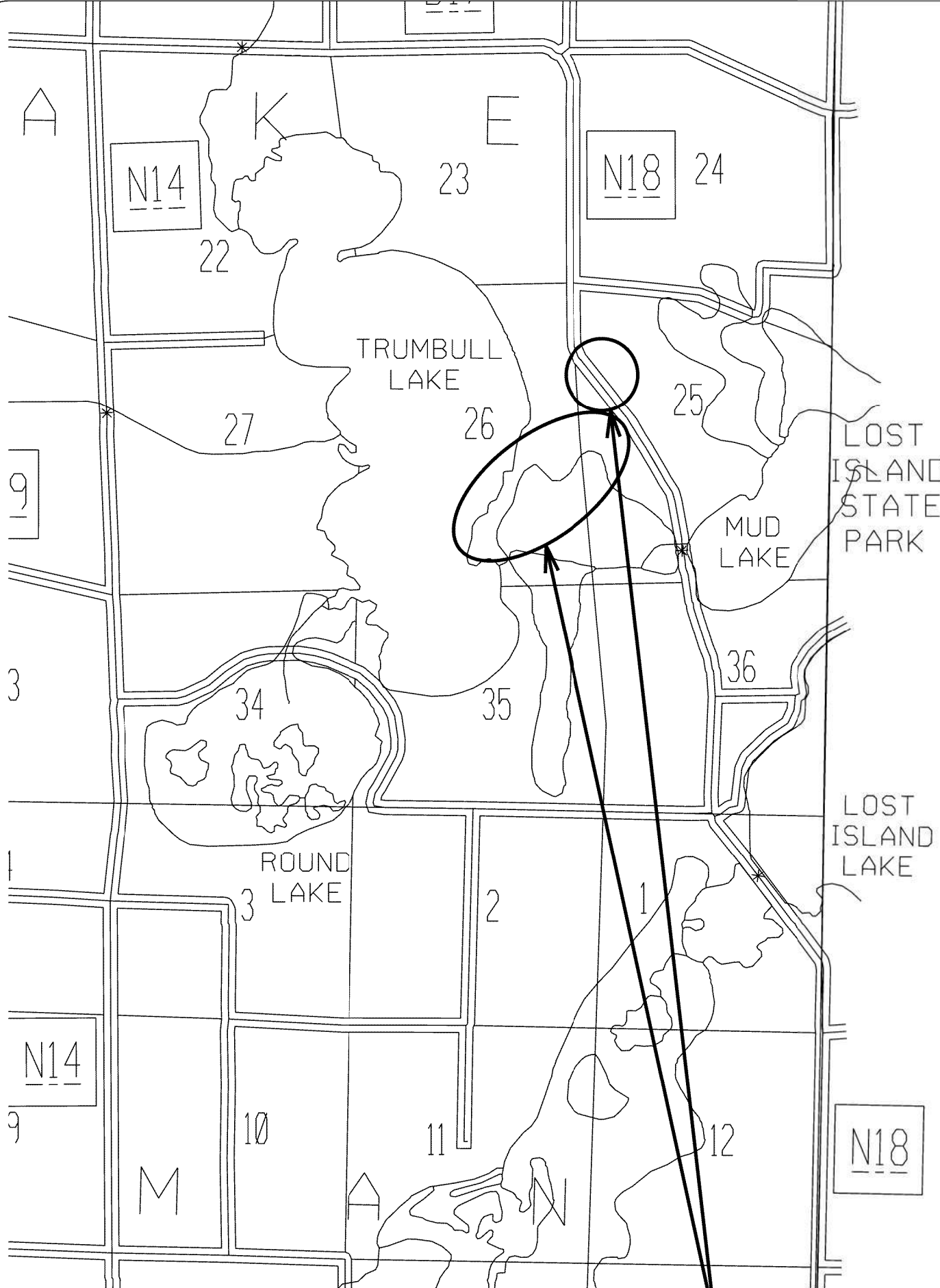
Species: Deer, Squirrel, Pheasant, Waterfowl, Rabbit, Dove

Contact: Bryan Hellyer
Prairie Lakes Wildlife Unit
712-330-2563

Restrictions: Non-Toxic Shot
Canada Goose Closed Area #2

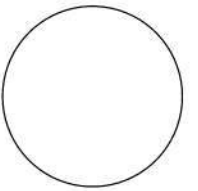
Clay & Palo Alto Counties, Iowa
T-96&97N, R-34&35W,
Sections 1,3,6,15,17,19-20,22-23,25-36

Directions: 0.5 mile W of Ruthven on Hwy 18, 4 miles N on N18.



PROJECT LOCATIONS

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

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



PROJECT LOCATION MAP

ROAD REPAIRS FOR:
DEWEY'S PASTURE/SMITH SLOUGH

CLAY COUNTY

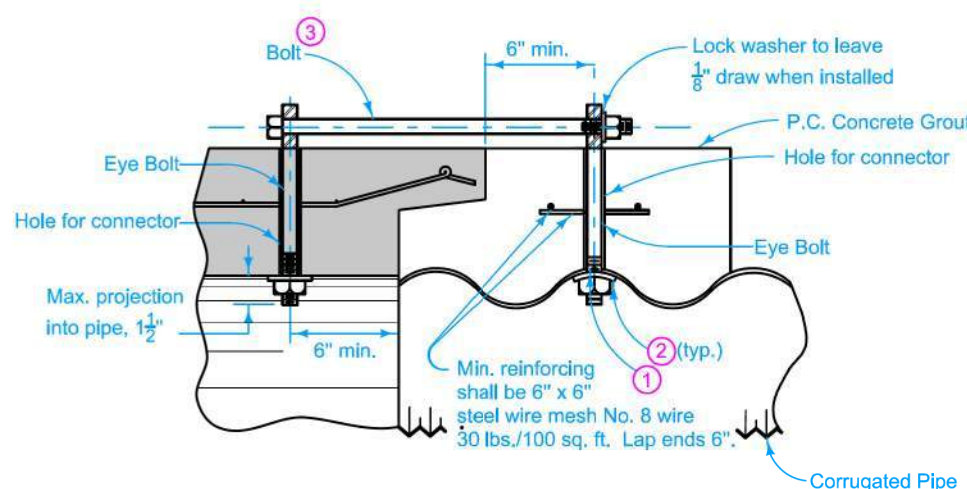
NO.	BY	REVISION

DRAWN BY: BLF
PROJECT NUMBER: 23-01-21-01

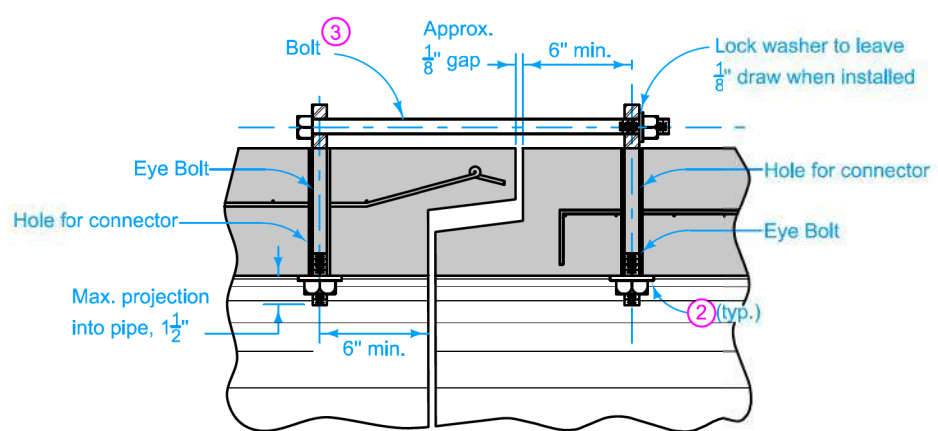
CHKD BY: DATE: APRIL 2022

SHEET NO:

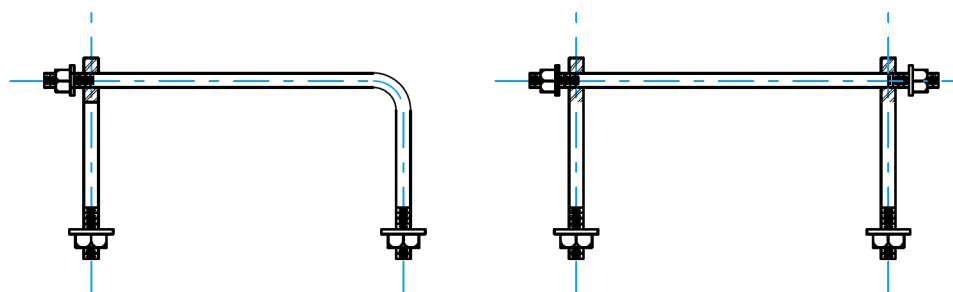
A.02



**SECTION OF PIPE CONNECTOR
(Concrete Pipe to Corrugated Pipe)**



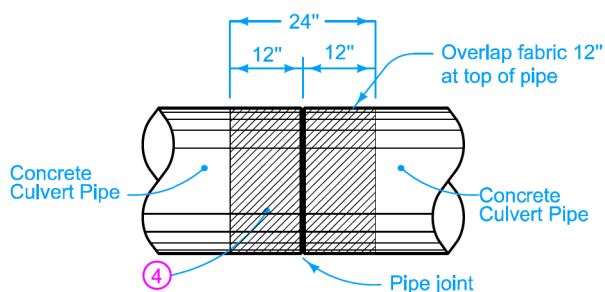
**SECTION OF PIPE CONNECTOR
(Concrete Pipe to Concrete Pipe)**



ONE BEND END

THREADED AT BOTH ENDS

OPTIONAL BOLTS/CONNECTORS



PIPE JOINT WRAPPING

PIPE SIZE (in)	CONNECTOR AND BOLT SIZE (in.)	HOLE FOR CONNECTOR (in.)
12 to 27	5/8	7/8
30 to 60	3/4	1.0
66 to 132	1.0	1 1/4

Wrap all joints on concrete roadway pipe culverts.
Use Type 3 Connections on all culvert pipes, unless specified otherwise. Refer to Materials I.M. 445.01 for Connector requirements.

Minimum 2 threads showing at all threaded ends.

Connections not required on pipe sections installed by trenchless methods.

For belled concrete pipe joints, connectors may be installed on the inside of the pipe.

TYPE 1

One connector at the top of the pipe section.

TYPE 2 (Sealed Joint)

Two connectors near the top of the pipe section. For details of reinforcement, refer to AASHTO M 170 for the class of pipe required. Refer to Materials I.M. 491.09 for seal requirements.

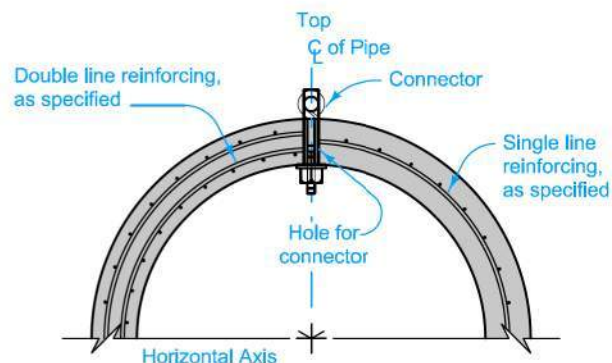
TYPE 3 (Non - Sealed Joint)

Two connectors near the top of the pipe section. For details of reinforcement, refer to AASHTO M 170 for the class of pipe required.

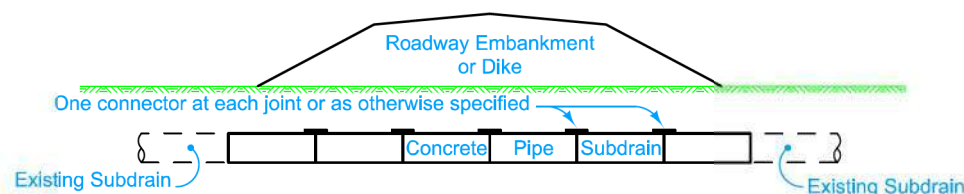
- ① If holes are field drilled, place a ribbon of butyl sealant around bolts before placing 3 in. x 3 in. x 1/4 in. plate on bolts through corrugated metal pipe and tightening nuts.
- ② 1 3/4 inch round x 5/64 inch thick washer or 3 in. x 3 in. x 1/4 in. square plate (shaped to pipe radius).
- ③ Connectors with One Bend End and Bell End spacers allowed per Materials I.M. 451. Refer to Optional Bolts detail.
- ④ Engineering fabric for embankment erosion control.

Possible Tabulations:

104-3
104-5B



**TYPICAL SECTION
(Non-Sealed Joint)**



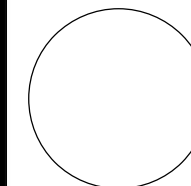
TYPICAL INSTALLATION

TYPE 1 CONNECTION

IOWA DOT	REVISION	
	3	10-17-17
STANDARD ROAD PLAN		DR-121
		SHEET 1 of 2
<small>REVISIONS: Added 104-5B to Possible Tabulations. Added Type 3 connection to storm sewer outlet.</small>		
<i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER		

CONNECTED PIPE JOINTS

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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

TYPICAL CROSS SECTIONS AND DETAILS

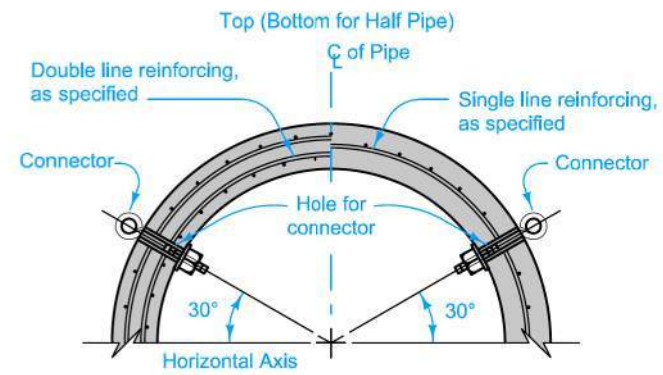
ROAD REPAIRS FOR:

DEWEY'S PASTURE/SMITH SLOUGH

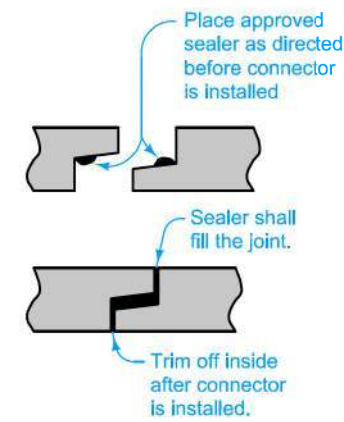
CLAY COUNTY

NO.	DATE	REVISION

B.01

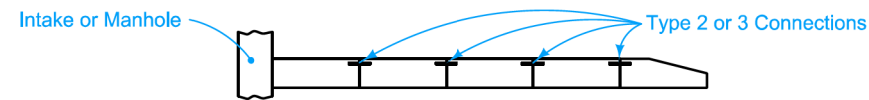


**TYPICAL SECTION
TYPE 2 CONNECTION
TYPE 3 CONNECTION**

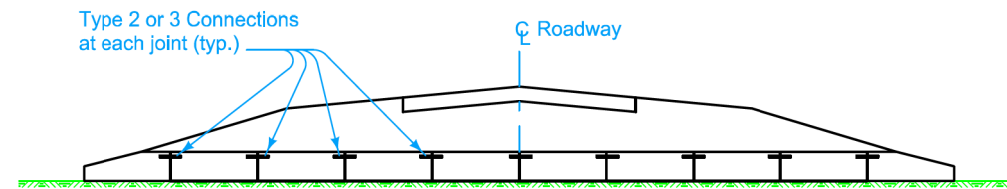


**SEALED JOINT
TYPE 2 CONNECTION**

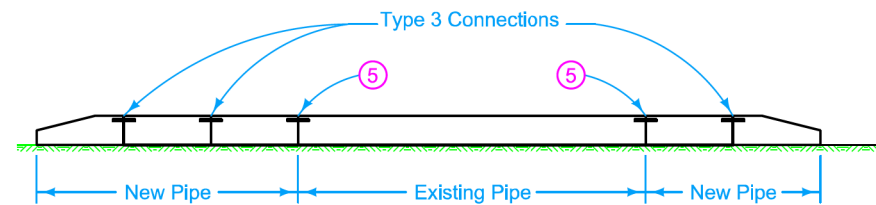
⑤ On culvert extensions, connect all new joints including the joint between the old and new culvert pipe. Holes may need to be drilled into existing pipes.



**TYPICAL INSTALLATION
STORM SEWER OUTLET - TYPE 2 OR TYPE 3 CONNECTION**



**TYPICAL INSTALLATION
NEW CONSTRUCTION - TYPE 2 or 3 CONNECTION**



**TYPICAL INSTALLATION
PIPE EXTENSION - TYPE 3 CONNECTION**

TYPE 2 AND TYPE 3 CONNECTIONS

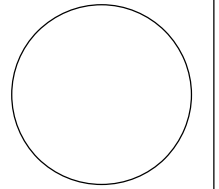
	REVISION	
	3	10-17-17
STANDARD ROAD PLAN		DR-121
		SHEET 2 of 2

REVISIONS: Added 104-5B to Possible Tabulations. Added Type 3 connection to storm sewer outlet.

APPROVED BY DESIGN METHODS ENGINEER
Brian Smith

CONNECTED PIPE JOINTS

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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

TYPICAL CROSS SECTIONS AND DETAILS

ROAD REPAIRS FOR:
DEWEY'S PASTURE/SMITH SLOUGH

CLAY COUNTY

NO.	DATE	REVISION

DRAWN BY: PROJECT NUMBER:
BLF 23-01-21-01

CHK'D BY: DATE:
APRIL 2022

SHEET NO.:

B.02

ESTIMATED PROJECT QUANTITIES			
ITEM NO.	ITEM	UNIT	TOTAL
1	2102 - SPECIAL BACKFILL(PIPE BEDDING)	TON	34
2	2102 - EXCAVATION, CL 10, RDWY+BORROW	CY	40
3	2113 - SUBGRADE STABIL MAT'L, POLYMER GRID	SY	236
4	2115 - MODIFIED SUBBASE	TON	72
5	2306 - ASPH EMULSION-FOG SEAL (PAV'T)	GAL	635
6	2416 - CULV, CONC RDWY PIPE, 24"	LF	40
7	2416 - CULV, CONC RDWY PIPE, 30"	LF	80
8	2507 - EROSION STONE	TON	20
9	2518 - SAFETY CLOSURE	EACH	1
10	2528 - TRAFFIC CONTROL	LS	1
11	2529 - PATCHES, FULL-DEPTH FINISH, BY AREA. 6" HMA	SY	236
12	2529 - PATCHES, FULL-DEPTH FINISH, 6-IN., BY COUNT, HMA	EACH	8
13	2533 - MOBILIZATION	LS	1
14	2541 - CRACK AND JOINT CLEANING AND SEALING (HMA SURFACES)	MILE	1.41
15	2541 - SEALER MATERIAL (HMA SURFACES)	LB	1033
16	2543 - TRANSVERSE JOINT REPAIR	TON	71
17	2602 - SILT FENCE	LF	40

ESTIMATE REFERENCE INFORMATION	
ITEM NO.	DESCRIPTION
1	A. 6" of rock under RCP and up to the haunch. B. DOT approved source.
2	A. Overexcavate 6" of existing base/subbase under HMA patches. B. Dispose of spoil offsite.
4	A. Place 6 inches of modified, plus geo-grid, under HMA patches. B. DOT approved source.
5	A. Dilute 2:1 with water. B. Apply at 0.15 GAL/SY. C. DOT approved source.
6,7	A. Flowline MUST be set at 1341.86 above MSL - a benchmark has been provided nearby. Low flow during normal pool, any dewatering is incidental. B. DNR Field Engineer must verify flowline elevations before backfilling. C. Pin and wrap all joints - use Type 3 connections. D. DOT approved source. E. Dispose of old culverts offsite.
8	A. Place around inlet/outlet of RCP at the direction of the DNR Field Engineer. B. DOT approved source.
9	A. Follow Iowa DOT spec 2528 for set up details.
10	A. Full public access required from noon Fridays until Sunday 12 midnight.
11	A. Areas will be marked by DNR Field Engineer. B. Dispose of removed material offsite.
14	A. Fill cracks to within 1/4inch of surface. B. DOT approved source.
15	A. DOT approved source.
16	A. Nominal 2-foot width, 5-inch depth. B. Dispose of millings/material offsite.
17	A. RCP outlet - place at the direction of the DNR Field Engineer. B. DOT approved source.

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.

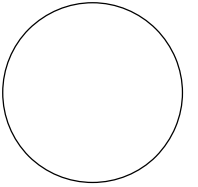
Where utilities and fixtures are shown as Existing on the plans or encountered within the construction area, it shall be the responsibility of the contractor to notify the DNR Engineer of those utilities prior to the beginning of any construction. The contractor shall be afforded access to these facilities 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.

NO WORK FROM 12 NOON FRIDAYS, UNTIL THE FOLLOWING MONDAY.

CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

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



QUANTITIES AND GENERAL INFORMATION

ROAD REPAIRS FOR:
DEWEY'S PASTURE/SMITH SLOUGH
CLAY COUNTY

NO.	DATE	BY	REVISION
DRAWN BY:		PROJECT NUMBER:	
BLF		23-01-21-01	
CHK'D BY:		DATE:	
		APRIL 2022	
SHEET No:			

C.01

310th Street

PROJECT SITES

TRUMBALL LAKE

330th Ave (N18)

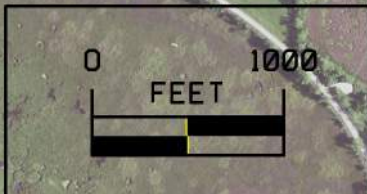
MUD LAKE

PROJECT OVERVIEW

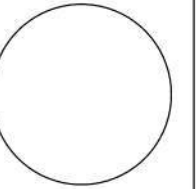
330th Street

320th Street

LOST ISLAND LAKE



CONSULTANT:



IOWA DEPARTMENT OF NATURAL RESOURCES

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



SITE PLAN

ROAD REPAIRS FOR:
DEWEY'S PASTURE/SMITH SLOUGH

CLAY COUNTY

NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:

BLF 23-01-21-01

CHK'D BY: DATE:

APRIL 2022

SHEET NO.:

D.01



SPECIAL BACKFILL (PIPE BEDDING)		MODIFIED SUBBASE		CULV, CONC RDWY PIPE, 30"		PATCHES, FULL-DEPTH FINISH, 5-IN., BY COUNT,	
3+78	3+84	3+78	3+84	3+78	3+84	3+78	3+84
44+87	44+99	1.2 TON		44+93		1 EACH	
34 TON		9+43	9+49	40 LF		9+43	9+49
EXCAVATION, CL 10, RDWY+BORROW		1.2 TON		44+98		1 EACH	
3+78	3+84	33+49	33+59	40 LF		33+49	33+59
0.67 CY		3.4 TON		80 LF TOTAL		1 EACH	
9+43	9+49	43+15	43+50	EROSION STONE		43+86	44+56
0.67 CY		5.9 TON		44+93 L&R		1 EACH	
33+49	33+59	43+86	44+56	20 TON		44+76	45+11
1.85 CY		11.8 TON		SAFETY CLOSURE		1 EACH	
43+15	43+50	44+76	45+11	0+00		45+11	46+03
3.24 CY		18.9 TON		1 EACH		1 EACH	
43+86	44+56	45+11	46+03	PATCHES, FULL-DEPTH FINISH, BY AREA. 6"		7 TOTAL	
6.48 CY		15.3 TON		3+78	3+84	CRACK AND JOINT CLEANING AND SEALING	
44+76	45+11	70.4 TON TOTAL		4 SY		0+00	54+47
10.37 CY		FOG SEAL		9+43	9+49	1.03 MILE	
45+11	46+03	0+00	54+77	4 SY		SEALER MATERIAL (HMA SURFACES)	
15.33		200+00	203+74	33+49	33+59	0+00	54+47
38.6 CY TOTAL		35 GAL		11.1 SY		774 LBS	
		CULV, CONC RDWY PIPE, 24"		43+15	43+50	TRANSVERSE JOINT REPAIR	
		44+82		43+86	44+56		
		40 LF		38.9 SY		0+00	54+47
				44+76	45+11	70 JOINTS	
				62.2 SY		67.7 TON	
		45+11	46+03	92 SY		SILT FENCE	
				44+83	45+03		
				232 SY TOTAL		20 LF	

CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



SITE PLAN

ROAD REPAIRS FOR:

DEWEY'S PASTURE/SMITH SLOUGH

CLAY COUNTY

NO. BY DATE REVISION

DRAWN BY: PROJECT NUMBER:

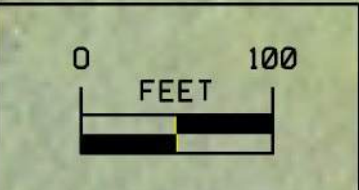
BLF 23-01-21-01

CHKD BY: DATE:

APRIL 2022

SHEET No.:

D.02



EXCAVATION, CL 10, RDWY+BORROW	
103+99	104+05
0.67 CY	
MODIFIED SUBBASE	
103+99	104+05
1.2 TON	
FOG SEAL	
100+00	111+33
82 GAL	
PATCHES, FULL-DEPTH FINISH, BY AREA. 6"	
103+99	104+05
4 SY	
PATCHES, FULL-DEPTH FINISH, 5-IN., BY COUNT,	
103+99	104+05
1 EACH	
CRACK AND JOINT CLEANING AND SEALING	
100+00	111+33
0.21 MILE	
SEALER MATERIAL (HMA SURFACES)	
100+00	111+33
161 LBS	
TRANSVERSE JOINT REPAIR	
100+00	111+33
13 JOINTS	
8.0 TON	



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



SITE PLAN

ROAD REPAIRS FOR:

DEWEY'S PASTURE/SMITH SLOUGH

CLAY COUNTY

NO.	DATE	REVISION

DRAWN BY: PROJECT NUMBER:

BLF 23-01-21-01

CHK'D BY: DATE:

APRIL 2022

SHEET NO:

D.03

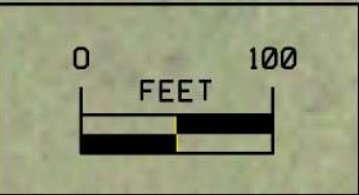
FOG SEAL	
200+00	203+74
35 GAL	
CRACK AND JOINT CLEANING AND SEALING	
200+00	203+74
0.07 MILE	
SEALER MATERIAL (HMA SURFACES)	
200+00	203+74
53 LBS	
TRANSVERSE JOINT REPAIR	
200+00	203+74
3 JOINTS	
3 TON	

FOG SEAL	
PARKING AREAS	
31 GAL	
CRACK AND JOINT CLEANING AND SEALING	
PARKING AREAS	
0.06 MILE	
SEALER MATERIAL (HMA SURFACES)	
PARKING AREAS	
45 LBS	

200+00

203+74

330th Ave



CONSULTANT:



**IOWA DEPARTMENT OF
NATURAL RESOURCES**

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



SITE PLAN

ROAD REPAIRS FOR:

DEWEY'S PASTURE/SMITH SLOUGH

CLAY COUNTY

NO.	DATE	REVISION

DRAWN BY: PROJECT NUMBER:
BLF 23-01-21-01

CHK'D BY: DATE:
APRIL 2022

SHEET NO:

D.04