

FLOOD SALES TAX COMMITTEE
AGENDA FOR MAY 2, 2016

Cass County Commission
Conference Room
1:00 PM

1. Call to Order
2. Approve minutes from previous meeting
3. Flood sales tax fund update
4. Status of previously approved projects
5. Review of projects and selection of projects to be funded in 2016
6. Other business
7. Adjournment

cc: Local Media

**FLOOD SALES TAX COMMITTEE
OCTOBER 19, 2015—1:30 PM**

1. MEETING TO ORDER

Commissioner Ken Pawluk called a meeting of the Flood Sales Tax Committee to order on Monday, October 19, 2015, at 1:30 PM, in the Commission Conference Room, Cass County Courthouse, with the following present: County Administrator Keith Berndt; County Commissioner Ken Pawluk; and County Commissioner Rick Steen. County Auditor Michael Montplaisir and Joint Water Resource District Representative Rodger Olson were absent.

Also present were: County Commissioner Arland Rasmussen; Brandon Oye, Moore Engineering; Public Works Director Kevin Mayer, City of Casselton; City Councilman Mike Eberhardt, City of Casselton; and County Commissioner Mary Scherling.

2. MINUTES APPROVED

MOTION, passed

Mr. Steen moved and Mr. Berndt seconded to approve the meeting minutes from June 15, 2015, as presented. Motion carried.

3. REVIEW OF AMENDED CASSELTON INDUSTRIAL PARK FLOOD IMPROVEMENTS PROJECT

Mr. Oye provided the background for the amended request. Subsequent to the approval of the original project request in April, a proposal was presented to industrial park property owners. After public meetings, it became clear that property owners did not support the high cost of the project for the proposed benefits. It was decided to revise the scope and cost of the project, to which there has been no further protest from property owners.

MOTION, passed

Mr. Berndt moved and Mr. Steen seconded to approve the amended Casselton Industrial Park Flood Improvements project in the amount of \$242,500. Motion carried.

4. NEXT MEETING

A meeting will be set for a later date.

5. ADJOURNMENT

MOTION, passed

On motion by Mr. Steen, seconded by Mr. Berndt, and all voting in favor, the meeting was adjourned at 1:46 PM.

Cass County Sales Tax Activity (420)			
Cash Basis - 2016			
Updated 4/26/2016			
Date	Description	Amount	Balance
	Balance Forward		29,806,781.62
2016	Sales Tax	5,124,024.20	34,930,805.82
2016	Interest	18,185.65	34,948,991.47
3/4/2016	Transfer	160.87	34,949,152.34
1/31/2016	County Projects	(174,592.08)	34,774,560.26
			34,774,560.26
			34,774,560.26

Reserved for County Projects - Cash	3,907,498.15	
Reserved for Diversion Project	30,867,062.11	34,774,560.26

Summary

2016 Receipts

Transfer	160.87
Sales Tax Revenue	5,124,024.20
Interest Revenue	18,185.65
Total Receipts	<u>5,142,370.72</u>

2016 Expenditures

Diversion Board of Authority	-
City of Fargo - Cash Flow Other Sources	-
County Projects	(174,592.08)
Land Purchase	-
Total Expenditures	<u>(174,592.08)</u>

Receipts over Expenditures 4,967,778.64

Balance from 2015 29,806,781.62

Balance Current 2016 34,774,560.26

Reserve for County Projects 2015 Activity

Balance of Cash Carried forward from 2015	3,619,291.34
2016 Reserves (9%)	<u>462,798.89</u>
Total	<u>4,082,090.23</u>

County Projects - Expenses Paid in 2016

2012 City of Argusville Diking	-
2012 Maple-Steele WRD Study	-
2012 City of Mapleton - Lift Station	-
2013 Pontiac Township - Project No 73	-
2013 City of Argusville - Levee improvement	-
2013 City of Casselton - Levee Repairs	-
2013 Maple-Steele - Dam Project	-
2014 City of Mapleton Levee Recertification 2012-1	-
2014 Pontiac township Project no 73 additional	-
2014 Upper Maple River Dam	-
2014 Lake Bertha Flood Water Detention	-
2014 Detention project Development	-
2015 Normanna Township Slide Repair and Road Move	-
2015 Upper Maple River Detention Study Phase II	-
2015 Rush River Detention Study Phase II	-
2015 Swan Creek Detention Study Phase II	-
2015 Harwood Levee Improvements	174,592.08
2015 Casselton Industrial Park Improvements	-
2015 Reed Township Road Raise	-
Total County Project Expenditures 2016	<u>174,592.08</u>

Cash Balance Reserve for County Projects	<u>3,907,498.15</u>
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Encumbrances:

2012 City of Argusville Diking	-	
2012 Maple-Steele WRD Study	-	
2012 City of Mapleton - Lift Station	-	
2013 Pontiac Township - Project No 73	-	
2013 City of Argusville - Levee improvement	-	
2013 City of Casselton - Levee Repairs	(5,039.05)	PO124255
2013 Maple-Steele - Dam Project	(17,500.00)	PO124256
2014 City of Mapleton Levee Recertification 2012-1	(28,675.90)	PO124257
2014 Pontiac township Project no 73 additional	-	
2014 Upper Maple River Dam	-	
2014 Lake Bertha Flood Water Detention	(242,500.00)	PO124260
2014 Detention project Development	-	
2015 Normanna Township Slide Repair and Road Move	-	
2015 Upper Maple River Detention Study Phase II	(45,500.00)	PO124261
2015 Rush River Detention Study Phase II	(45,500.00)	PO124261
2015 Swan Creek Detention Study Phase II	(45,500.00)	PO124261
2015 Harwood Levee Improvements	(249,321.22)	PO124262
2015 Casselton Industrial Park Improvements	(242,500.00)	PO124263
2015 Reed Township Road Raise	-	
Total Encumbrances	<u>(922,036.17)</u>	-

Available Balance for County Projects	<u>2,985,461.98</u>
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Current County Projects

Updated 4/26/2016

Project	Total Approved	Paid	Left to Pay
Round Hill Project	\$ 350,696.00	\$ 350,696.00	\$ -
City of Oxbow Diking	\$ 105,284.29	\$ 105,284.29	\$ -
2012 City of Argusville Diking	\$ 168,925.00	\$ 168,925.00	\$ -
2012 Maple-Steele WRD Study	\$ 20,562.00	\$ 20,562.00	\$ -
2012 City of Mapleton - Lift Station	\$ 52,500.00	\$ 52,500.00	\$ -
2013 Pontiac Township - Project No 73	\$ 448,000.00	\$ 448,000.00	\$ -
2013 City of Argusville - Levee improvement	\$ 23,874.73	\$ 23,874.73	\$ -
2013 City of Casselton - Levee Repairs	\$ 23,750.00	\$ 18,710.95	\$ 5,039.05
2013 Maple-Steele - Dam Project	\$ 17,500.00	\$ -	\$ 17,500.00
2014 City of Mapleton Levee Recertification 2012-1	\$ 543,324.58	\$ 514,648.68	\$ 28,675.90
2014 Pontiac township Project no 73 additional	\$ 52,000.00	\$ 52,000.00	\$ -
2014 Upper Maple River Dam	\$ 706,000.00	\$ 706,000.00	\$ -
2014 Lake Bertha Flood Water Detention	\$ 242,500.00	\$ -	\$ 242,500.00
2014 Detention project Development	\$ -	\$ -	\$ -
2015 Normanna Township Slide Repair and Road Mov	\$ 40,500.00	\$ 40,500.00	\$ -
2015 Upper Maple River Detention Study Phase II	\$ 45,500.00	\$ -	\$ 45,500.00
2015 Rush River Detention Study Phase II	\$ 45,500.00	\$ -	\$ 45,500.00
2015 Swan Creek Detention Study Phase II	\$ 45,500.00	\$ -	\$ 45,500.00
2015 Harwood Levee Improvements	\$ 556,935.00	\$ 307,613.78	\$ 249,321.22
2015 Casselton Industrial Park Improvements	\$ 242,500.00	\$ -	\$ 242,500.00
2015 Reed Township Road Raise	\$ 60,308.18	\$ 60,308.18	\$ -
Total	\$ 3,791,659.78	\$ 2,869,623.61	\$ 922,036.17

**HARWOOD TOWNSHIP
CASS COUNTY, NORTH DAKOTA**

% 126 Brooktree Park
Harwood, ND 58042-4304

Wayne D. Freedland, Chairman
Steven M. Cossette, Supervisor
Lucas M. Steinberger, Supervisor

Jann Monson, Treasurer
Douglas A. Warnecke, Clerk/Assessor
Douglas A. Warnecke, Zoning/Flood

dwjwdakota@earthlink.net

9 February 2016

RECEIVED
CASS COUNTY COMMISSION

Mrs. Mary Scherling, Chairperson
Cass County ND Commission
P O Box 2806
Fargo, ND 58108-2806

FEB 9 2016

REF: Flood Risk
Reduction Projects

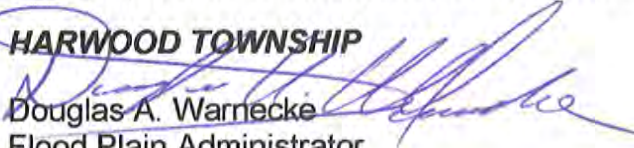
Dear Mrs. Scherling:

Reference your inquiry letter of 3 February 2016 and the ½ cent, 20 year flood risk reduction sales tax. On behalf of the Harwood Township residents and the Township Board of Supervisors, the following considerations, observations and opinions are offered:

1. **Point of Contact (POC):** Douglas (Doug) A. Warnecke, Flood Plain Admin. Hwd Twp.
2. **Funding Sources:** Federal Emergency Mgmt Agency, Soil Conservation Service, State Water Commission, Water Resource Districts, ND Disaster Agency, Sales Tax and Landowners among any other available source(s).
3. **Project (site) Ownership/Maintenance :** Individual benefactor(s) and legal Owner associations on private property. Cass County and/or Harwood Township on road and bridge/culvert projects.
4. **Project Descriptions:** Please see attached suggestions for serious consideration.

Consideration and observations are based on protection of health and safety, population aging/abilities, existing infra-structure, government entities and individual financial burdens, U. S. Postal Service delivery delays, ingress and egress from all Township points to emergency services, educational facilities, etc..

HARWOOD TOWNSHIP


Douglas A. Warnecke
Flood Plain Administrator
Zoning Administrator
Township Assessor
Township Clerk
701-282-0356

dwjwdakota@earthlink.net

5 Attachments:
Contents/Abbreviations
Projects 1-12
Township Map
Siebels Subd Plat
Brooktree Pk Plat

cc: Twp Bd Members
File - Residents

ATTACHMENT CONTENTS

<u>LOCATION NUMBER</u>	<u>PHYSICAL LOCATION</u>	<u>PAGE NUMBER</u>
1	N ½ S ½ Sec 30, 28 th and 29 th St's (CC 32)	1
2	N ½ S ½ Sec 30, 28 th and 29 th St's (CC 32)	1
3	Sections 30 & 19 & Sec's 29 & 20. (CC 32)	1
4	Sections 29 & 20 - east side. (CC 32)	2
5	South East ¼ Section 20 Harwood Twp	2
6	NW¼ Sec 28 S of 28 th St E of I-29 & W of BNSF	3
7	E end Sec 29 170 th Ave-Rush River Crossing	3
8	E edge Sec 32, ½ mile N on 170 th Ave - 30 th St	4
9	NW ¼ Section 28 - Brooktree Pk Subdivisions	4 & 5
10	171 st Ave/29 th St & 27 th St/Sheyenne River. (Between Sections 21/22 and 28/27)	5
11	Sec's 16,15, 14, 11, 12, 13 /24, 25, 35, 36, 34	6
12	CC roads in Harwood Twp, all Hwd Twp roads	6 & 7

ABBREVIATIONS

BFE	Base Flood Elevation - 100 year water elevation.
BNSF	Burlington Northern Santa Fe Railroad.
CC	Cass County
FEMA	Federal Emergency Management Agency
I-29	Interstate Hiway # 29
NDCC	North Dakota Century Code
N	North
NFIP	National Flood Insurance Program
S	South
SEC	Section
SWC	State Water Commission
TWP	Township
WRD	Water Resource District

SUGGESTED FLOOD RISK REDUCTION PROJECTS
HARWOOD TOWNSHIP, ND

NOTE: PROJECTS NOT PRIORITIZED

LOCATION 1 & 2:

Part of the N ½ and S ½ of Sec 30 between 28th Street (CC Hiway 32) and 29th Street:

BENEFITTED:

Individual landowners and Formal Association (to be formulated) Siebels 1st and 2nd Subdivisions. Township road 169th Avenue. Cass County Hiway 32. Cass County, Federal Emergency Mgmt Agency and National Flood Insurance Program.

PROJECT DESCRIPTION:

Construct earthen dike south of and north of Rush River channel. Approximately .5 mile in length and 2' above base flood elevation.

PROJECT COST: To be determined upon completion of comprehensive study.

FUNDING SOURCES: All Available...

COMMENT:

This project would alleviate immediate flooding concerns in the interim to a possible diversion project - it would also be a long term backup in the event of a diversion failure. (New Orleans Levy and central states Mississippi River levies!)

LOCATION 3:

Between Sections 30 and 19 and Section 29 and 20. (CC Hiway 32)

BENEFITTED:

All individual residents upon sections 29 and 30. CC Hiway Dept., Harwood Township

PROJECT DESCRIPTION:

Install additional - larger flow culvert(s) under 28th Street (CC Hiway 32) oriented north and south on both the east and west sides of 169th Avenue. Large Tax base Contributor

PROJECT COST: To be determined.

FUNDING SOURCE: Cass County Hiway Department.

COMMENT:

Peak flood period photo's are available to show water levels at this site and on Sections 19 and 20 (Dry!)

HARWOOD TOWNSHIP, ND

NOTE: PROJECTS NOT PRIORITIZED

LOCATION: 4

Between Sections 29 and 20 - east side. (CC Hiway 32).

BENEFITTED:

Cass County Hiway Dept., Harwood Township and residents on Section 29.

PROJECT DESCRIPTION:

Elevate 28th Street (CC Hiway 32) at west terminus of paved section on the west side of I-29 overpass and install additional, larger flow culverts.

PROJECT COST: To be Determined.

FUNDING SOURCE: Cass County Hiway Department.

COMMENT:

Peak flood period photo's are available to show water levels at this site and on Sections 19 and 20 (Dry!)

LOCATION 5:

SE ¼ Section 20 Harwood Twp

BENEFITTED:

Farmstead owner - Lloyd Amundson

PROJECT DESCRIPTION:

Construct earthen dike along west side of farmstead site - east of 28th street culverts.

PROJECT COST: To be determined

FUNDING SOURCE:

Individual ring dike program, SWC, Soil Conservation Service, Water Resource Dist., Owner.

HARWOOD TOWNSHIP, ND

NOTE: PROJECTS NOT PRIORITIZED

LOCATION 6:

NW ¼ Section 28 - south of 28th street and east of I-29 and west of BNSF tracks.

BENEFITTED:

Two Residences and a farming related business entity.

PROJECT DESCRIPTION:

Elevate private roadway/dike to 2' above 100 year flood level. Provide adequate culvert controls for internal water collection.

PROJECT COST: To be determined.

FUNDING SOURCE:

Individual Ring Dike program - Soil Conservation Svc, Water Resource Dist. SWC, Owners.

LOCATION 7:

East end of Section 29 under 170th Avenue. Rush River Crossing.

BENEFITTED:

All residents west of I-29 in Harwood Township. Harwood Township. Rush River Water Resource District.

PROJECT DESCRIPTION:

Elevate road to 1' above 100 year Base Flood Elevation. Remove the "S" curve in 170th Avenue - straighten and replace culverts with a bridge structure and proper guardrails and signage.

PROJECT COST: To be determined.

FUNDING SOURCE: Rush River Water Resource District, Cass County, Harwood Twp, SWC et al.....

COMMENT:

Without providing elevation and suitable drainage under 28th Street (CC 32) to section 20 - this site is subject to flood failure and is the only routine as well as emergency vehicle roadway available to all areas west of I-29 in Harwood Township. It is currently an extremely dangerous culvert crossing whether flooding or not, day/nite, clear, stormy

HARWOOD TOWNSHIP, ND

NOTE: PROJECTS NOT PRIORITIZED

LOCATION 8:

East edge of Section 32, Approximately ½ mile north on 170th Ave from 30th St.

BENEFITTED:

All residents along and west of 170th Ave., Harwood Township, FEMA, et al.

PROJECT DESCRIPTION:

Elevate low section of road to 1' above 100 year Base Flood Elevation. Install suitable culverts or bridge structure to alleviate road overtopping and drainage for Section 32.

PROJECT COST: To be Determined

FUNDING SOURCE: All Available.

COMMENT:

This is a primary service road to all residents west of I-29 and is closed due to high water during flood periods.

LOCATION 9:

Brooktree Park and Brooktree Park 1st Subdivisions on NW ¼ Section 28 - North of 28th Street and East of CC Hiway 81, west and north of and on the Sheyenne River.

BENEFITTED:

Formal Association of Twenty Five family households, Harwood Township, West Fargo School District, City of Harwood and Cass County, Federal Emergency Mgmt Agency, ND Disaster Services and the National Flood Insurance Program.

PROJECT DESCRIPTION:

Raise north and east earthen dikes to 2' above 100 year Base Flood Elevation. Elevate east approach into development from CC hiway 81 by a minimum of 1 foot. Develop and provide a permanent water pumping system to drain "Park area" during river flood periods when culverts are closed. The "Park Area" contains development electrical and telephone services, a municipal sewage lift/pumping station to Harwood City; a swimming pool, ball diamond and playground equipment. Additionally, it is the central collection point for all interior snow melt/excess rainfall which must be pumped out to alleviate threat to the lift station and sewer manholes.

PROJECT COST: To be determined.

FUNDING SOURCE: All Available Programs.

ATCH 1 PG 5 of 7 - CCC/VANYO - 1Oct10

HARWOOD TOWNSHIP, ND

NOTE: PROJECTS NOT PRIORITIZED

LOCATION 9: (Cont'd)

COMMENT:

The road/dike is utilized by all residents and West Fargo and Northern Cass School District buses. It is owned and maintained by Harwood Township. Brooktree Park represents a substantial contributor to the tax base of Harwood Township and Cass County.

LOCATION 10:

Low portions of 171st Ave between 29th St and 27th Street to the Sheyenne River.
(Between Sections 21/22 and 28/27 Harwood Twp.

Additionally, there are several residences bordered on one side by the Sheyenne River which could be ring diked and are not included individually herein as "Location Sites".

BENEFITTED:

Residences, FEMA, ND Disaster Svcs, W Fargo School District, US Postal Svc, Harwood Twp, et al.

PROJECT DESCRIPTION:

Install proper culverts to aid drainage. Raise roadway by approximately 6" in low areas.
Construct ring dikes

PROJECT COST: To be determined.

FUNDING SOURCE: All available.

COMMENT:

This is a critical emergency vehicle, school bus, mail delivery roadway serving several residents and a commercial farming business along the west and east sides thereof. This is the only ingress/egress roadway, during peak flood periods, as 28th St. east to 173rd Avenue (CC 32) is virtually impassable due to overland, Sheyenne flood and Red River back waters.

HARWOOD TOWNSHIP, ND

NOTE: PROJECTS NOT PRIORITIZED

LOCATION: 11:

Residents and Farmsteads in Sections 16,15, 14, 11, 12 and 13 as well as 24 and 25, 35, 36 and 34.

BENEFITTED:

Individual Owners, FEMA, NFIP, ND Disaster Svcs, Harwood Twp, et al.

PROJECTS DESCRIPTION:

Individual Ring Dikes constructed to a minimum of 2' over 100 year Base Flood Elev.

PROJECTS COST: To be determined on an individual site basis.

FUNDING SOURCE: Cost share among all available sources.

COMMENT:

The flooding in Harwood Township is reaching epic proportions and are increasing on an annual basis. The hardships, health and safety hazards, inconvenience, loss of individual productivity by employees and employers alike and loss of local business revenues are seriously impacted by these on-going events.

Additionally, the constant drain on Federal, State, County, Township and resident budgets can only worsen with additional events.

LOCATON 12:

All Cass County roads in Harwood Township and all Township roads with spot elevations below the 100 year BFE as mapped and as revised from time to time need to be elevated with the addition of suitable cap controlled culverts installed. As an example of a primary essential services roadway 173rd Ave, (CC 31) in several places should be raised with additional capped culverts added as required to continue adequate drainage and prevent backwater inundation.

COMMENTS:

Additionally, with the raising of I-29 and the increased flow thru new bridge structures there-under as well as the BNSF tracks - CC 81 will experience greater overtopping and shoulder erosion in Reed Township at the south edge of the City of Harwood.

Further, great concerns are being expressed with the prospect of Devils Lake waters into the Sheyenne River - which is already at capacity in these wet periods. Increased diking by Moorhead and Minnesota - narrowing the Red River Channel and forcing those waters to the west can only increase the levels in ND bordering areas.

HARWOOD TOWNSHIP, ND

NOTE: PROJECTS NOT PRIORITIZED

LOCATON 12: COMMENTS: (Cont'd)

More concerns are being expressed with the as planed termination of the proposed US Army Corps of Engineers ND Diversion project near Argusville. The concerns are with the backwaters from this terminus, in addition to the Sheyenne River terminus with the Red River in close proximity. It would appear, during peak floods, I.e., 1975, 1997, 2009 and 2010, diversion backwaters would aggravate flood conditions all along the Sheyenne River east of the BNSF tracks (CC 81) and along the Red River to Section 24 in Harwood Twp.

Further detailed clarifications and study are needed to refute or substantiate these expressed concerns.

A couple of substantial farm site ring dikes are in planning or progress stages in Harwood Township in Section 1 and 17.

A short road mitigation project on 27th St. at the SE corner of Section 16 has been approved by the State of ND - currently pending FEMA approval.

I recall the NDCC addresses and does not allow the using of roads as water dikes - however, with the installation of suitable culverts and elevating the roads in those areas - it would not impede the flow of water, which I believe is the purpose of the law.

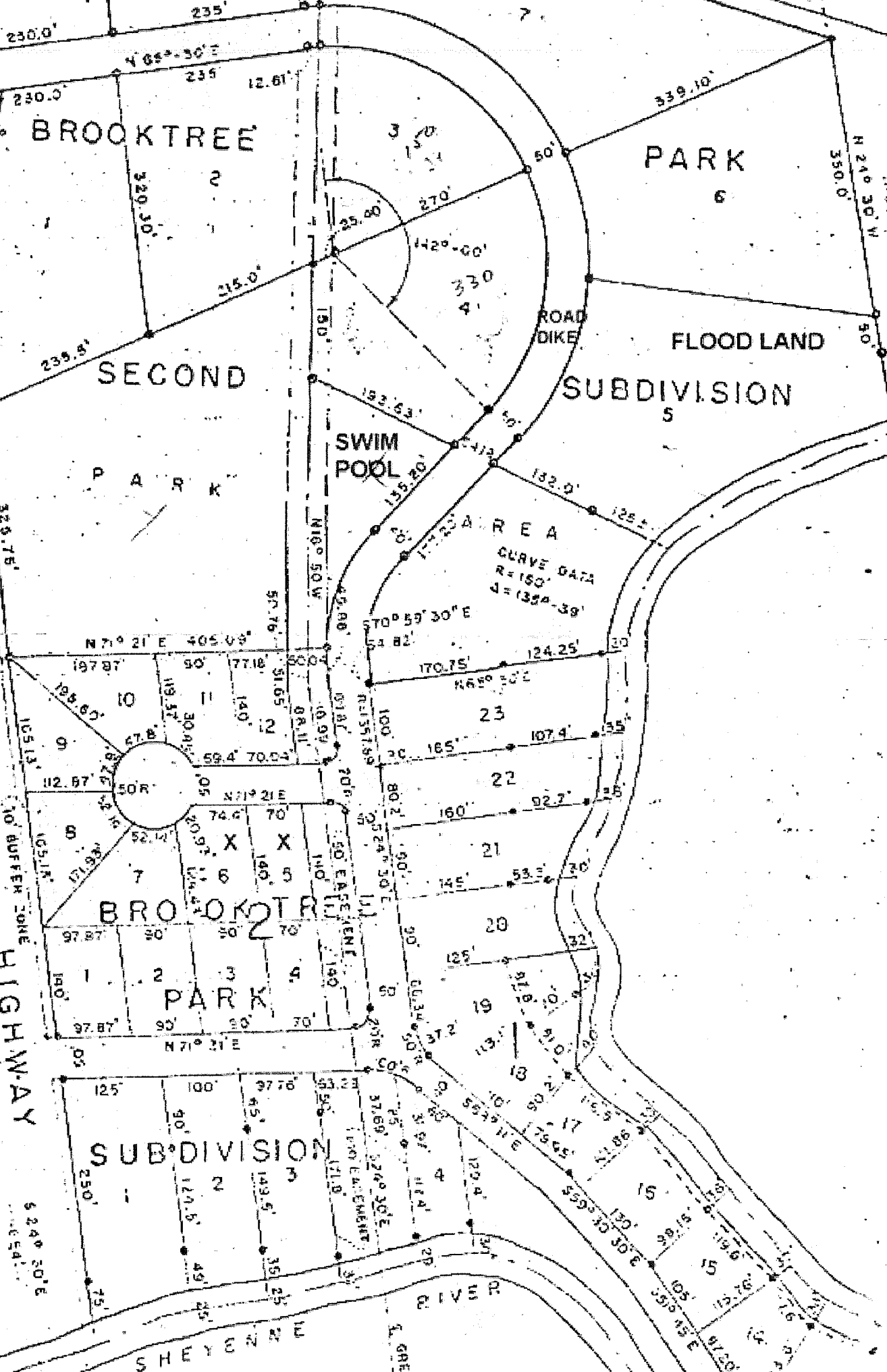
Also, there are several farm fields which are diked and dry during flood periods and could hold substantial water for short durations. (Section 19 et al).

ADDITIONAL COMMENT:

A comprehensive approach should be taken by the Water resource District(s), Cass County, State of North Dakota, and Soil Conservation Service to cleaning all drainage ways, ditches and rivers/streams of wild trees, cattails, bush, top soils and other debris which has accumulated over several decades of neglect. (I.e. Sheyenne River corridor, bottoms of county drains, north and south side ditches along 28th Street from CC 81 to the Sheyenne River between sections 21 and 28.

This action alone would enable a smoother flow of flood water as well as increased storage capacity when required.

1292.97'



BROOKTREE

PARK

SECOND

SUBDIVISION

PARK

SWIM POOL

AREA

CURVE DATA
 R=150'
 D=(350'-39')

U.S.

HIGHWAY

10' BUFFER ZONE
 524° 30'E
 654'

BROOKTREE

PARK

SUBDIVISION

SHEYENNE

RIVER

ROAD DIKE

FLOOD LAND

350.0'
 595.2'

110° 50' W

N70° 21' E 405.09'

T0° 59' 30" E

N156° 39' E

N10° 50' W

N115° 19' E

S0° 24' 30" E

S0° 24' 30" E

S0° 24' 30" E

S0° 24' 30" E

S0° 24' 30" E

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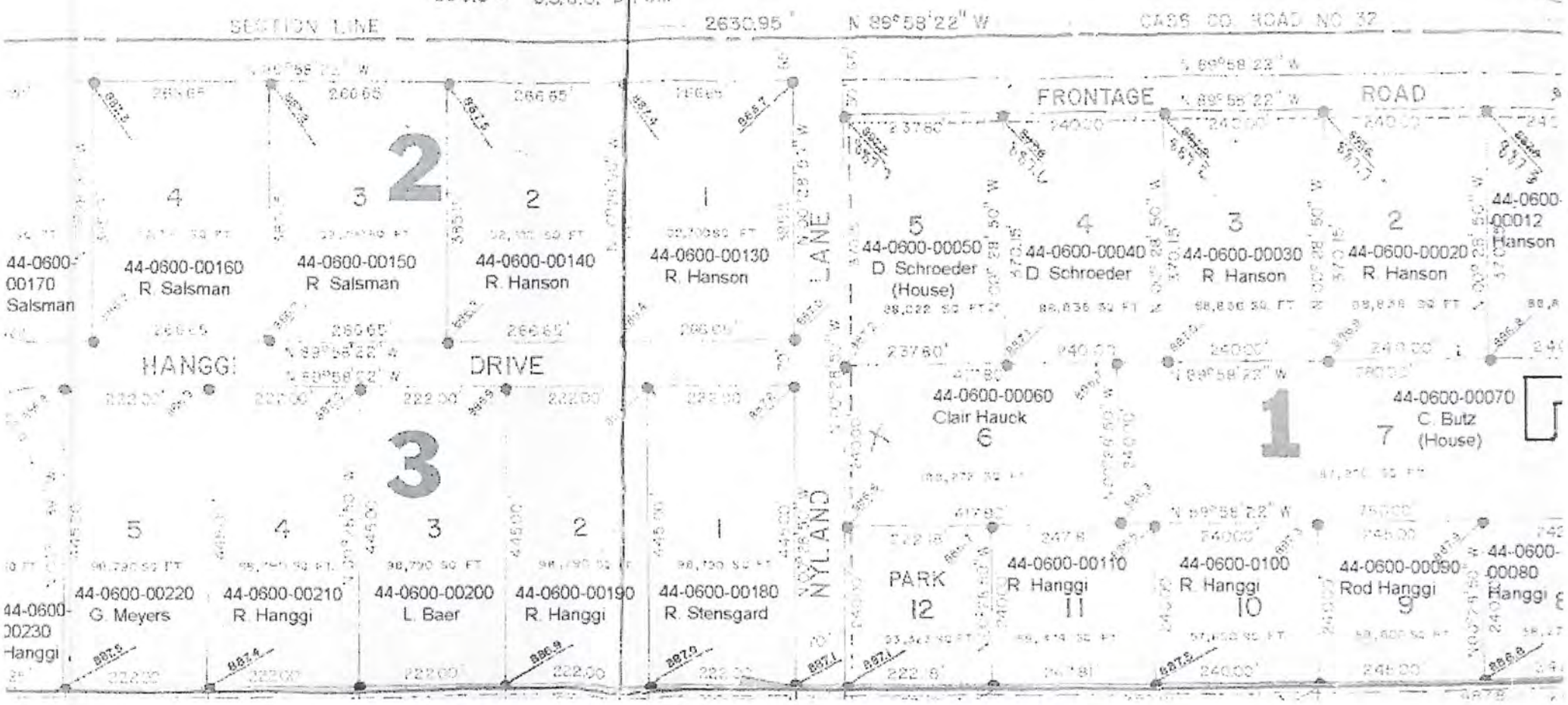
S0° 24' 30" E



- IRON MONUMENT FOUND
- IRON MONUMENT PLACED

SPOT ELEVATION

100 YEAR FLOOD LEV. =
890.5 * U.S.G.S. DATUM



Siebers End.

Worden, Heather

From: Berndt, Keith
Sent: Wednesday, March 23, 2016 1:15 PM
To: Worden, Heather
Subject: FW: Sales Tax Projects - Mapleton Recertification
Attachments: 15173 District 2012-1 Levee Raise Improvements.pdf; 15173 District 2012-1 164th Ditch Improvements.pdf

Heather,
Please print these out for consideration at the next sales tax meeting
Keith

From: Brandon Oye [mailto:BOye@mooreengineeringinc.com]
Sent: Wednesday, March 23, 2016 8:44 AM
To: Berndt, Keith
Cc: Eric Hillman (eric.hillman@midco.net); City Of Mapleton; Jeremy Dewald
Subject: RE: Sales Tax Projects - Mapleton Recertification

Keith:

The City of Mapleton is currently working on two modifications to the current Levee Recertification project. They include the following:

1. The City will need to raise their levee in select areas based on the new preliminary FIRMs. We knew it would be probable they would need to raise their levee in certain areas based on the current USACE model, but we determine it would be better to wait until the official FEMA maps came out to analyze what areas truly need to be raised and to what elevation. We are about 80% complete with our study of that work that needs to be completed and are working closely with David Sutley of FEMA on the requirements for the necessary freeboard. Attached is our preliminary Opinion of Cost and drawings, which will need to be updated as we continue to work with FEMA to refine the work needed. We anticipate the plans will be completed in about one month. Then we will work with Industrial Builders Inc. (IBI, the current contractor for the Levee recertification project) to determine the actual cost. The City will be requesting that this work is considered for cost-share.
2. There is a storm lift station that pumps from the City's old Industrial Park into a ditch that drains south along 164th Ave that provides flood protection along the southeast portion of town. See 2nd attachment with General Layout on Page 1. The discharged storm water currently backups up and floods the field adjacent to the ditch which eventually makes its way to Gene Cross' property. Gene has filed many complaints with the city about water coming through his property. This section of roadway also provides flood protection to the southeast portion of the city, so it is important to not allow water pooling along the roadway, similar to along any levee segment. We've identified an area of the ditch to be reconstructed which will allow the water to continue down the designed drainage path to the north ditch of I-94, which then flows east. We've prepared a plan and received a quote from IBI. The quote, plan and picture of the flooding are attached on the following pages of the 2nd attachment. The City is requesting cost-share to assist with this work.

Please let me know if you have any questions on the two requests. Also, please let me know when you schedule your next meeting to review the requests.

Thanks!

Brandon Oye, PE
Project Manager
moore engineering, inc.

Phone 701.282.4692 | Cell 701.306.3951
925 10th Ave E, West Fargo, ND 58078
boye@mooreengineeringinc.com | www.mooreengineeringinc.com

From: Berndt, Keith [<mailto:BerndtK@casscountynd.gov>]
Sent: Tuesday, March 01, 2016 4:21 PM
To: Brandon Oye <BOye@mooreengineeringinc.com>
Subject: Sales Tax Projects

Brandon,
We'll keep the acceptance period open for a couple of weeks for submissions of projects.

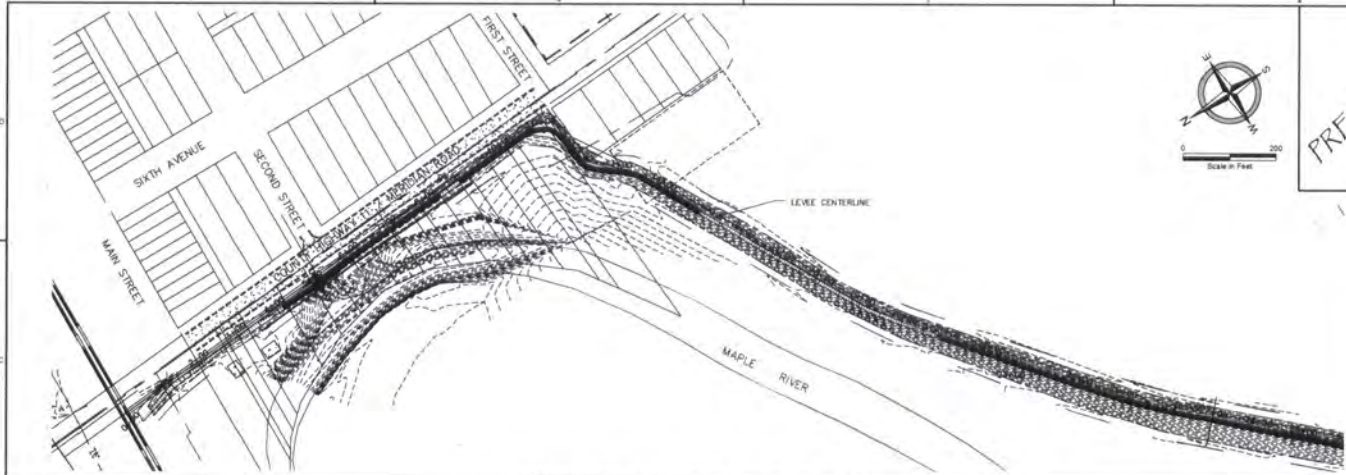
Keith Berndt, PE
Cass County Administrator
701-241-5770

**LEEVE IMPROVEMENT DISTRICT NO. 2012-1
Mapleton, North Dakota**

PRELIMINARY Engineer's Opinion of Probable Cost-03/23/2016
Levee Raise

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL	FUNDING SOURCES		
					NDSWC	COUNTY	LOCAL
1. Sediment Control Wattle - 9"	LF	100	\$2.80	\$280.00	\$0.00	\$140.00	\$140.00
2. Topsoil Stripping	SY	8,021	\$3.70	\$29,677.70	\$0.00	\$14,838.85	\$14,838.85
3. Clay - Import	CY	1,694	\$20.00	\$33,880.00	\$0.00	\$16,940.00	\$16,940.00
4. Topsoil Replacement	SY	8,021	\$6.50	\$52,136.50	\$0.00	\$26,068.25	\$26,068.25
5. Topsoil - Import	CY	511	\$20.50	\$10,475.50	\$0.00	\$5,237.75	\$5,237.75
6. Seed - Type III	SY	8,021	\$1.75	\$14,036.75	\$0.00	\$7,018.38	\$7,018.38
7. Mulch - Type A	SY	8,021	\$0.80	\$6,416.80	\$0.00	\$3,208.40	\$3,208.40
8. Watering	MG	180	\$21.00	\$3,780.00	\$0.00	\$1,890.00	\$1,890.00
9. Weed Control - Type B	SY	8,021	\$0.10	\$802.10	\$0.00	\$401.05	\$401.05
10. Stormwater Management	LS	1	\$1,000.00	\$1,000.00	\$0.00	\$500.00	\$500.00
11. Material Testing	ALLOWANCE	1	\$2,000.00	\$2,000.00	\$0.00	\$1,000.00	\$1,000.00
Total Construction				\$154,205.35	\$0.00	\$77,102.68	\$77,102.68
Engineering				\$30,000.00	\$0.00	\$15,000.00	\$15,000.00
Contingencies (10%)				\$15,420.00	\$0.00	\$7,710.00	\$7,710.00
Total Project Cost				\$199,625.35	\$0.00	\$99,812.68	\$99,812.68

FILE LOCATION: R:\CADD\2012\PROJECTS\2012\MAPLE RIVER\DESIGN\1212\PLAN\20120001.dwg

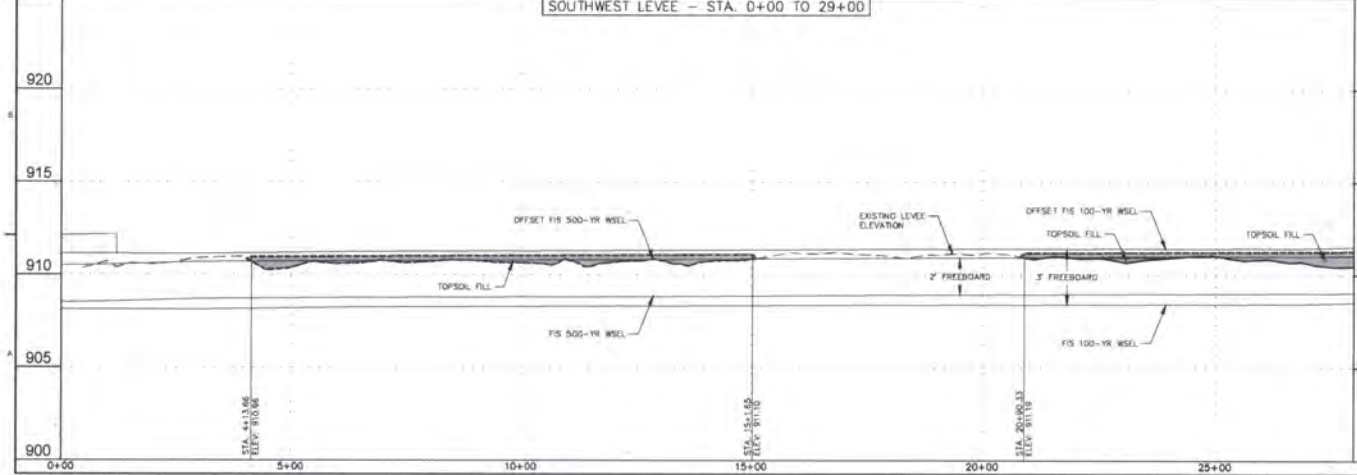


PRELIMINARY
03.16.16



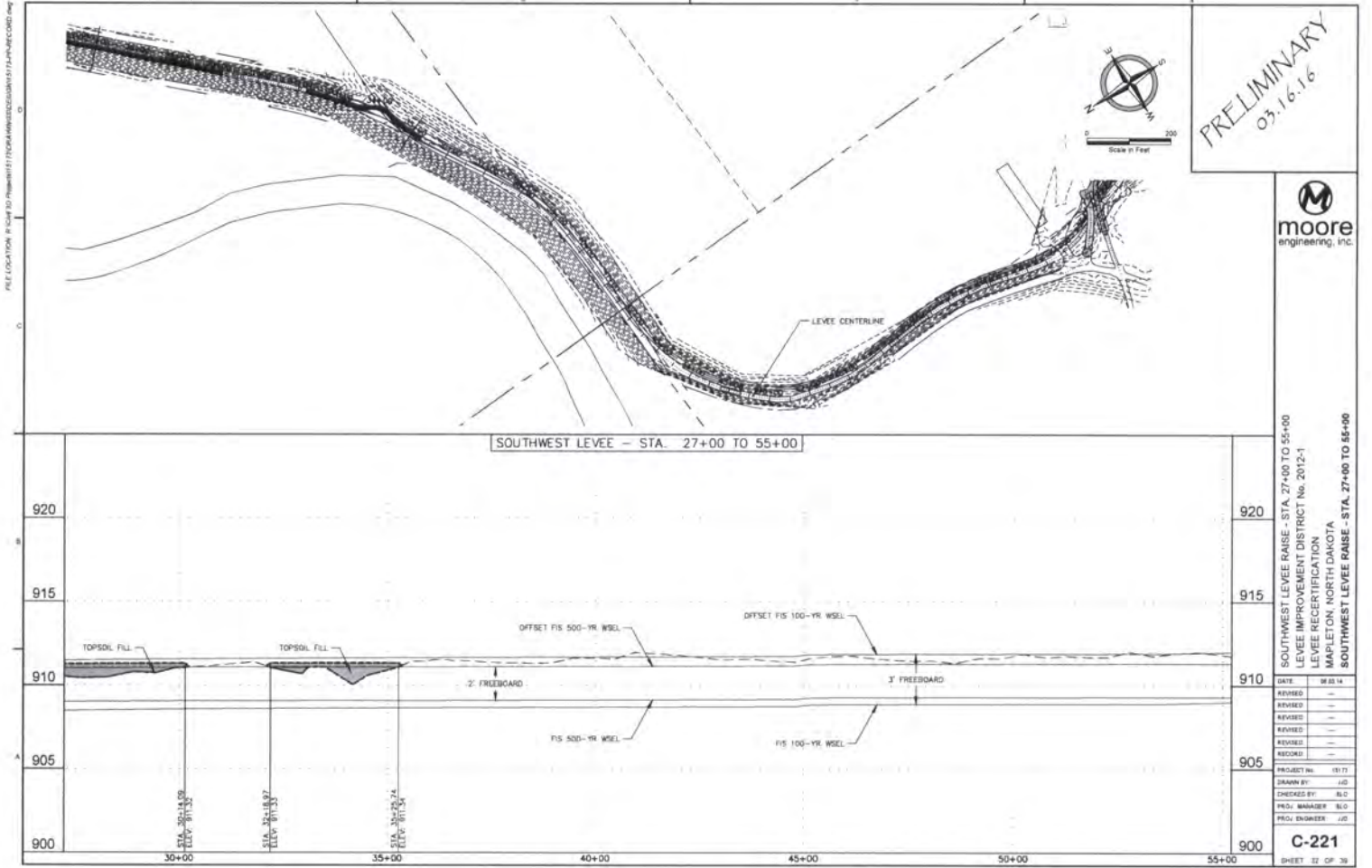
moore
engineering, inc.

SOUTHWEST LEVEL - STA. 0+00 TO 29+00



DATE	08.03.14
DESIGNED BY	JLD
CHECKED BY	BLO
PROJECT NO.	18173
PROJ. MANAGER	BLO
PROJ. ENGINEER	JLD
C-220	
SHEET 31 OF 38	

SOUTHWEST LEVEL RAISE - STA. 0+00 TO 29+00
LEVEE IMPROVEMENT DISTRICT No. 2012-1
MAPLETON, NORTH DAKOTA
SOUTHWEST LEVEL RAISE - STA. 0+00 TO 29+00



PRELIMINARY
03.16.16



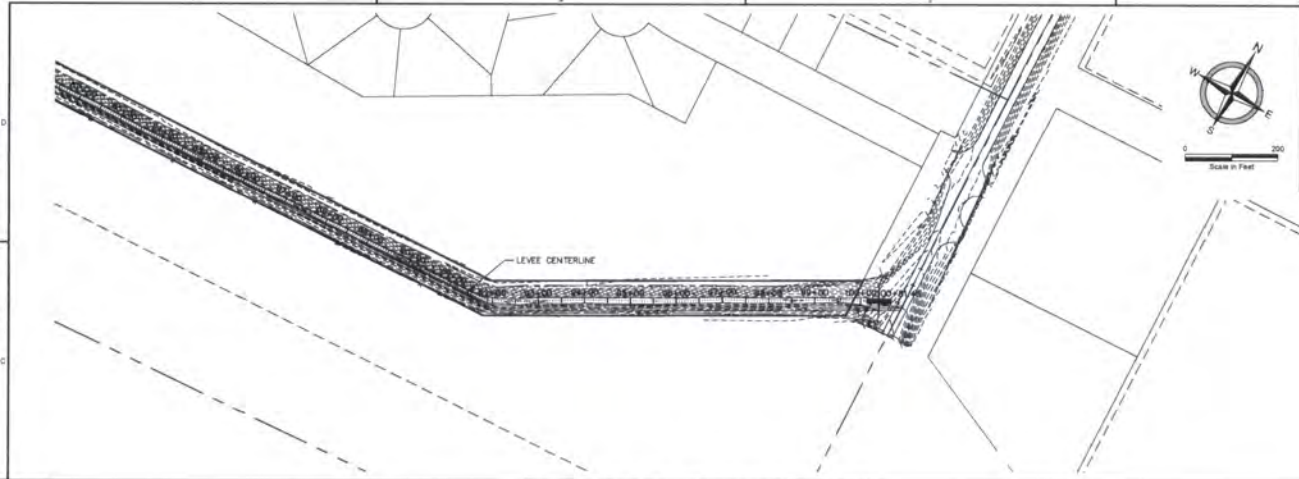
SOUTHWEST LEVEE - STA. 27+00 TO 55+00

SOUTHWEST LEVEE RAISE - STA. 27+00 TO 55+00
LEVEE IMPROVEMENT DISTRICT No. 2012-1
LEVEE RECERTIFICATION
MAPLETON, NORTH DAKOTA
SOUTHWEST LEVEE RAISE - STA. 27+00 TO 55+00

DATE	W 03 14
DESIGNED BY	J.C.
CHECKED BY	B.C.
PROJ. MANAGER	B.C.
PROJ. ENGINEER	J.C.
PROJECT No.	1612
DRAWN BY	J.C.
CHECKED BY	B.C.
PROJ. MANAGER	B.C.
PROJ. ENGINEER	J.C.

C-221
SHEET 22 OF 38

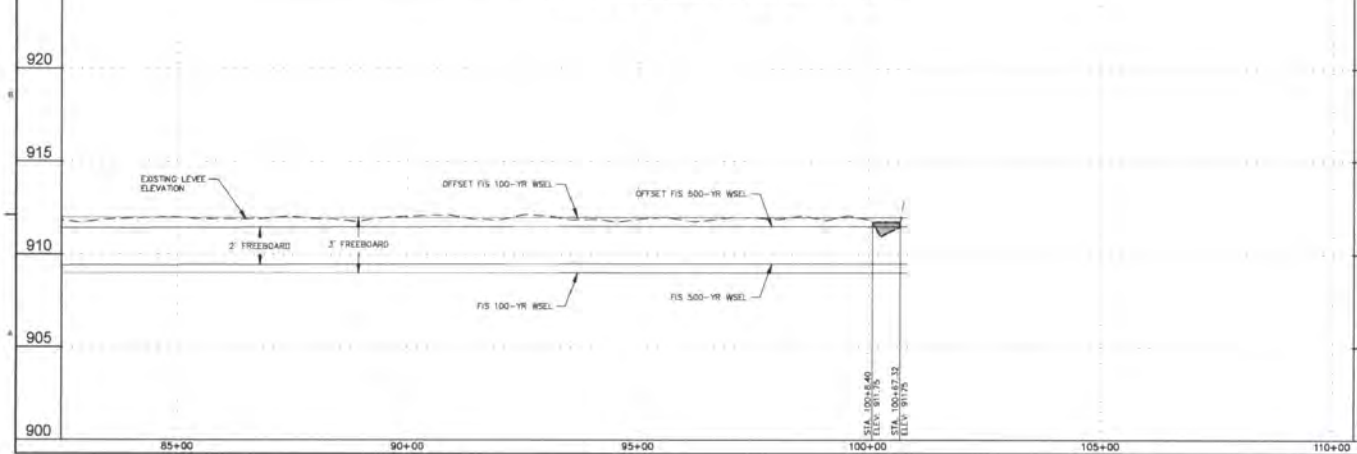
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PRELIMINARY
03.16.16

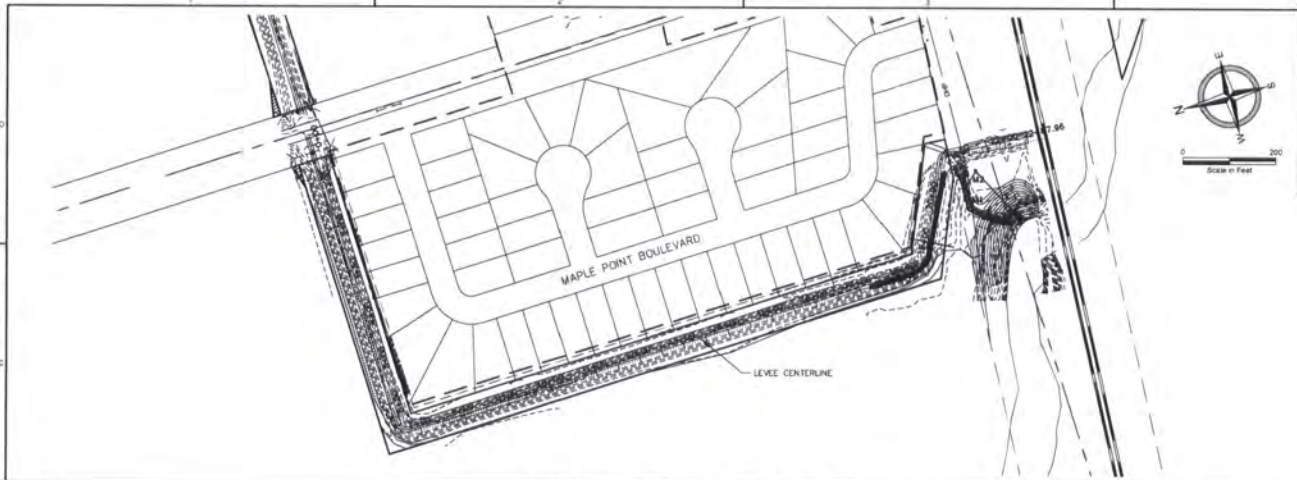


SOUTHWEST LEVEE - STA. 82+00 TO 100+82



920	920	SOUTH WEST LEVEE RAISE - STA. 82+00 TO 100+82 LEVEE IMPROVEMENT DISTRICT No. 2012-1 LEVEE RECERTIFICATION MAPLETON, NORTH DAKOTA SOUTH WEST LEVEE RAISE - STA. 82+00 TO 100+82
915	915	
910	910	
905	905	
900	900	
		DATE: 09/21/14 DESIGNED BY: JLD CHECKED BY: BLO PROJECT MANAGER: BLO PROJECT ENGINEER: JLD
		C-222
		SHEET 33 OF 38

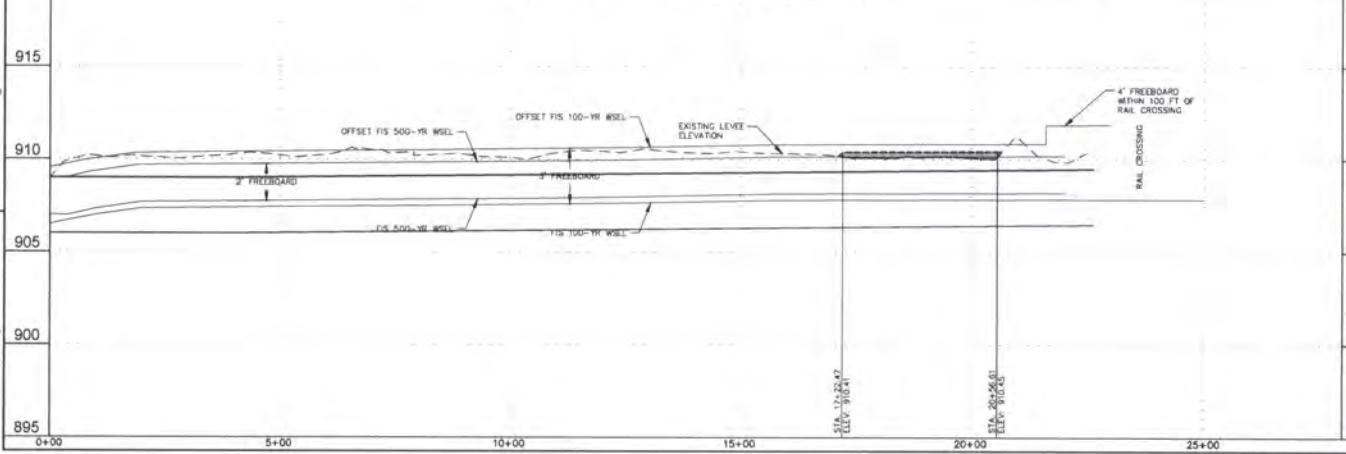
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PRELIMINARY
03.16.16

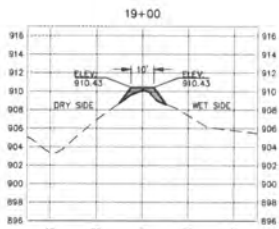
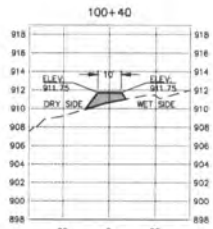
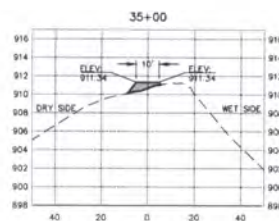
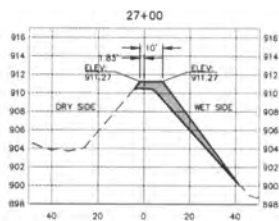
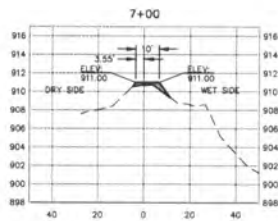


NORTHWEST LEVEE - STA. 0+00 TO 23+00



915	NORTHWEST LEVEE RAISE - STA. 0+00 TO 23+00 LEVEE IMPROVEMENT DISTRICT No. 2012-1 LEVEE RECERTIFICATION MAPLETON, NORTH DAKOTA NORTHWEST LEVEE RAISE - STA. 0+00 TO 23+00
910	
905	
900	
895	DATE: 06/01/14 DESIGNED: --- CHECKED: --- REVISIONS: --- REVISIONS: --- REVISIONS: --- REVISIONS: --- REVISIONS: --- PROJECT No.: 9173 DRAWN BY: JAC CHECKED BY: BLO PROJ. MANAGER: BLO PROJ. ENGINEER: JAC C-223 SHEET 34 OF 38

FILE LOCATION: R:\CADD\Projects\172074\MINNISCHEWAN\172074\MAPLETON.dwg



PRELIMINARY
03.16.16

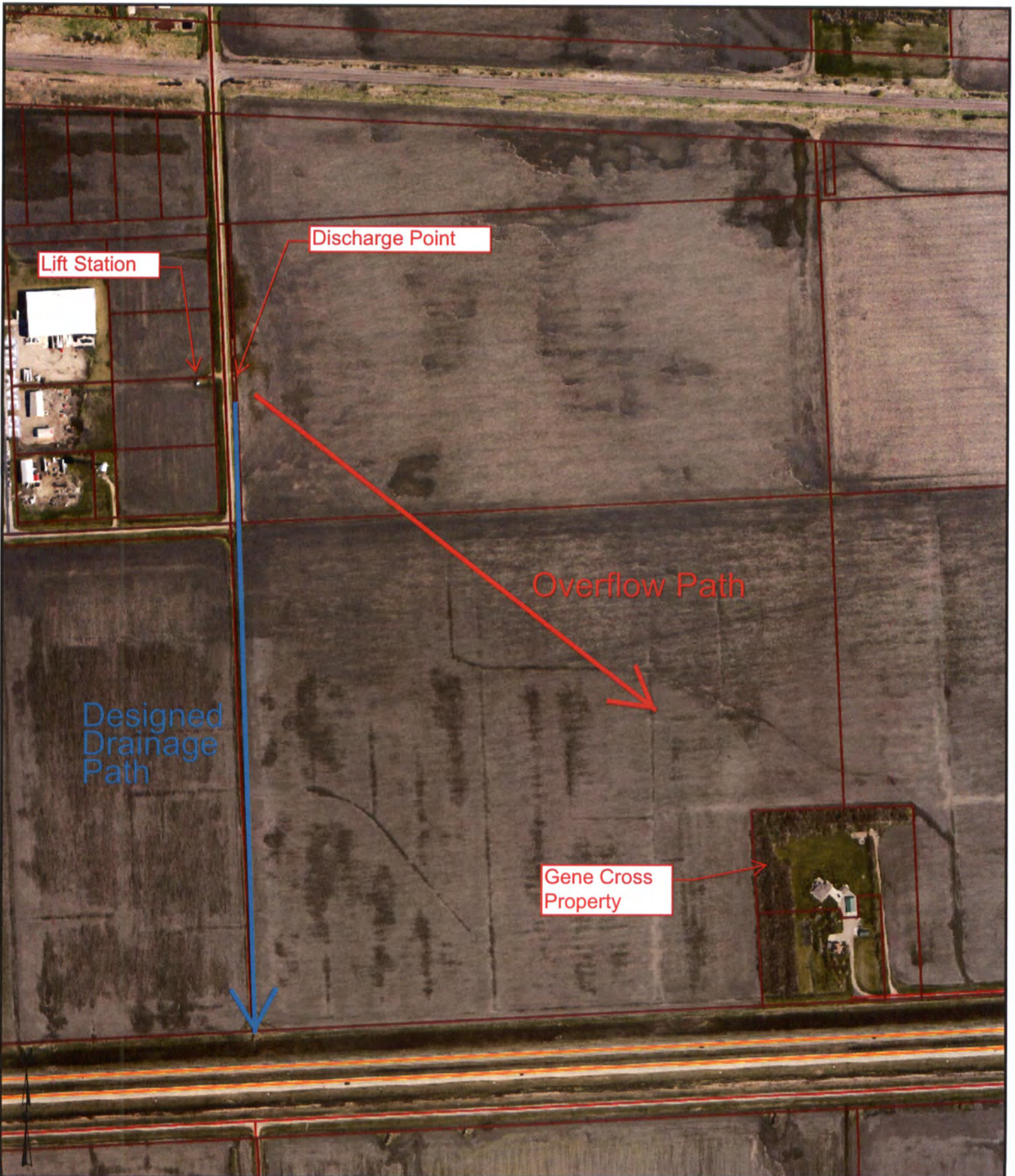


moore
engineering, inc.

CROSS SECTIONS - LEVEL RAISE
LEVEE IMPROVEMENT DISTRICT No. 2012-1
LEVEE RECERTIFICATION
MAPLETON, NORTH DAKOTA
CROSS SECTIONS - LEVEL RAISE

DATE	06.05.14
REVISED	10.02.14
REVISED	—
REVISED	—
REVISED	—
REVISED	—
RECORD	—
PROJECT No.	16173
DRAWN BY	JJC
CHECKED BY	B.L.G.
PROJ. MANAGER	B.L.G.
PROJ. ENGINEER	JJC

C-303
SHEET 33 OF 38



These data are provided on an "AS-IS" basis, without warranty of any type, expressed or implied, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Mapleton, ND

Date: 3/23/2016

This map is not a substitute for accurate field surveys or for locating actual property lines and any adjacent features.

CASS COUNTY
GOVERNMENT



**Levee Improvement District No. 2012-1
Levee Recertification
Mapleton ND**

BID PROPOSAL - PROPOSED CHANGE ORDER

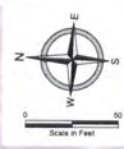
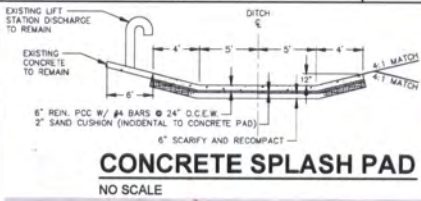
BID ITEM NO. & DESCRIPTION	UNIT	ESTIMATED QUANTITY	BID UNIT PRICE	BID PRICE
1. Mobilization	LS	1	3000 ⁰⁰	3000 ⁰⁰
2. Topsoil Stripping	SY	440	2 ⁰⁰	880 ⁰⁰
3. Concrete Apron - Remove	SY	10	100 ⁰⁰	1000 ⁰⁰
4. Riprap - Remove	LS	1	1500 ⁰⁰	1500 ⁰⁰
5. Concrete - Reinforced - 6"	SY	20	475 ⁰⁰	9500 ⁰⁰
6. Topsoil Replacement	SY	440	3 ⁰⁰	1320 ⁰⁰
7. Ditching	LF	220	45 ⁰⁰	9900 ⁰⁰
8. Seed - Type III	SY	440	135	594 ⁰⁰
9. Erosion Control Blanket - Type III	SY	440	425	1870 ⁰⁰
10. Sedimentation Control Wattle - 9"	LF	40	425	170 ⁰⁰
			TOTAL BID	29,734 ⁰⁰

BY Ty Eickman
 TITLE Vice President of Eng
 FIRM Industrial Builders, Inc.

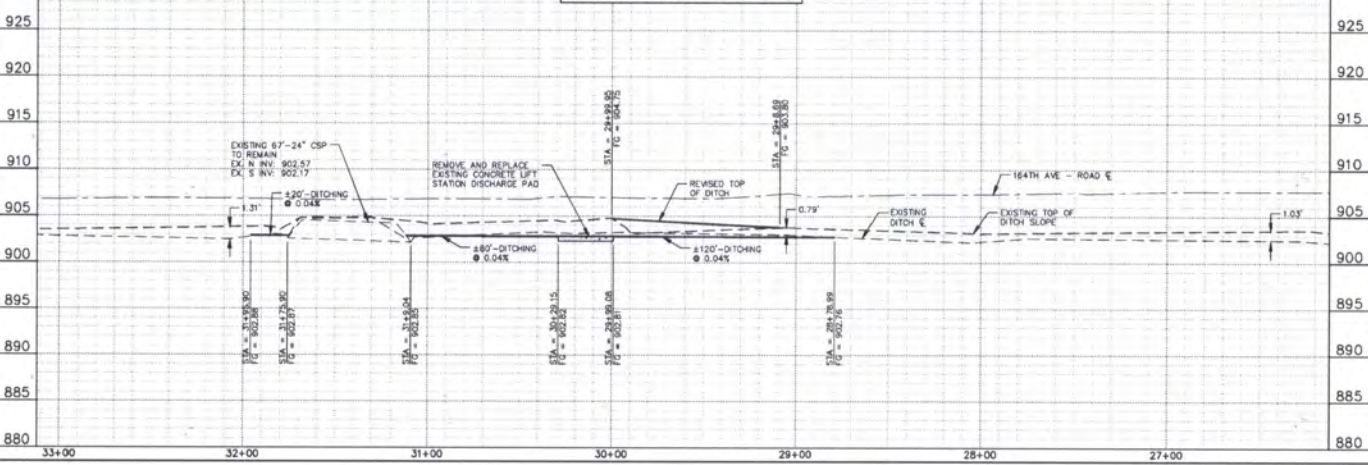
Notes:

1. Reference sheet C-220 dated 6-4-2015
2. Intent of work is to improve drainage north of the lift station splash pad and through the splash pad to the south. Currently water backs up in the ditch north of the splash pad.

FILE LOCATION: P:\CADD\PROJECTS\17704\17704\17704.DWG



This document was originally issued and sealed by JEREMY DEWALD, Registration No. PE-8769, on 06/04/14 and the original document is stored at Moore Engineering, Inc., West Fargo, N.D.



925	164TH AVENUE DITCHING LEVEE IMPROVEMENT DISTRICT No. 2012-1 MAPLETON, NORTH DAKOTA 164TH AVENUE DITCHING - STA. 25+50 TO 32+00
920	DATE: 06/04/15
915	REVISION: ---
910	REVISION: ---
905	REVISION: ---
900	REVISION: ---
895	REVISION: ---
890	REVISION: ---
885	PROJECT No: 13173
880	DRAWN BY: JLD
	CHECKED BY: BLD
	PROJ. MANAGER: BLD
	PROJ. ENGINEER: JLD
	C-220
	SHEET 1 OF 1

Looking Southeast north of Lift Station Discharge Point

Lift Station
Discharge Point



05.11.2015



February 24, 2016

Rush River
Water Resource
District

Raymond Wolfer
Manager
Argusville, North Dakota

William A. Hejl
Manager
Amenia, North Dakota

Dick Sundberg
Manager
Harwood, North Dakota

Mary Scherling, Chair
Cass County Commission
P.O. Box 2806
Fargo, ND 58108-2806

Dear Chair Scherling:

RE: Erie Dam / Brewer Lake
Cass County, North Dakota

The Rush River Water Resource District (WRD) is a stakeholder in the maintenance and operation of Erie Dam (Brewer Lake) located in Erie Township. The dam impounds the water that makes up Brewer Lake and the impoundment provides recreational opportunities, as well as flood storage benefits. The WRD works closely with various agencies, including the North Dakota Game and Fish Department and the Cass County Board of Park Commissioners to operate and maintain the dam.

The dam has been in place since the 1960s and the primary control structure is currently in need of repairs and improvements. The WRD is working with their partners to address these issues; however, the WRD does not have an adequate funding source available to cover their share of the expenses. Because the dam provides flood risk reduction benefits for areas downstream of the dam, the WRD wants to make sure the dam stays operational.

The costs associated with the repairs are anticipated to be as much as \$50,000. The WRD respectfully requests consideration from the Cass County Flood Sales Tax Committee for 50% cost-share or \$25,000.

If you have any questions, please feel free to contact us or the WRD engineer, Mike Opat, Moore Engineering, Inc., at 701-282-4692.

Sincerely,

RUSH RIVER WATER RESOURCE DISTRICT

Carol Harbeke Lewis
Secretary-Treasurer

Carol Harbeke Lewis
Secretary-Treasurer

1201 Main Avenue West
West Fargo, ND 58078-1301

701-298-2381
FAX 701-298-2397
wrld@casscountynd.gov
www.casscountynd.gov



January 21, 2016

RECEIVED
CASS COUNTY COMMISSION

JAN 25 2016

Cass County
Joint Water
Resource
District

Mary Scherling, Chair
Cass County Commission
P.O. Box 2806
Fargo, ND 58108-2806

Dear Chair Scherling:

Mark Brodshaug
Chairman
Fargo, North Dakota

RE: Lake Bertha Flood Control Project No. 75
Eldred Township, Cass County, North Dakota

Rodger Olson
Manager
Leonard, North Dakota

Dan Jacobson
Manager
West Fargo, North Dakota

Ken Lougheed
Manager
Gardner, North Dakota

Jacob Gust
Manager
Fargo, North Dakota

The Cass County Joint Water Resource District (CCJWRD) is proposing to construct a controlled outlet for the Lake Bertha basin near Alice, North Dakota. The outlet would enable the CCJWRD to mitigate the damages caused by excess water levels in recent years and provide an opportunity to utilize the existing storage capacity within the basin for future floodwater detention benefits. Initial estimates indicate that more than 3,000 acre-feet of storage could be provided if the project is constructed.

The Lake Bertha basin is situated in Eldred Township of Cass County, about 2 miles east of Alice, and is bisected by Cass County Highway 6. Within the past few years, this highway has been inundated by high water levels in the basin and numerous other township roadways have also been impacted; some currently remaining underwater. The basin naturally overflows to the north into an existing drainage channel that discharges into Buffalo Creek, a tributary of the Maple River, and contributes to flooding downstream.

The proposed project involves a control structure with stop logs that would provide an opportunity to draw water levels down to elevation 1086.0 feet and allow the water levels in the basin to be managed for floodwater detention benefits. The basin currently contributes to downstream flooding when water levels are high and the project will allow these discharges to be controlled in the future. The project includes buried pipe that would convey water to the north, to an existing drainage channel. A portion of the existing channel will be modified to accommodate the depth and size of the new outlet.

Carol Harbeke Lewis
Secretary-Treasurer

1201 Main Avenue West
West Fargo, ND 58078-1301

701-298-2381
FAX 701-298-2397
wrd@casscountynd.gov
casscountygov.com

The CCJWRD has conducted public input meetings and met with impacted landowners to develop the proposed project. The CCJWRD has also coordinated the project with the Natural Resources Conservation Service and the United States Fish and Wildlife Service.

Mary Scherling
Page 2
January 21, 2016

The CCJWRD respectfully requests cost-share assistance from the Cass County Flood Sales Tax Committee in the amount of \$66,215.45 (50% of the local share) for the above referenced project. The remaining cost will be funded by the North Dakota State Water Commission, Red River Joint Water Resource District, CCJWRD and a proposed assessment district.

Enclosed is the preliminary cost estimate and a location map for the proposed project. If you have any questions, please feel free to contact us or the CCJWRD Engineer, Mike Opat, Moore Engineering, Inc., at 701-282-4692.

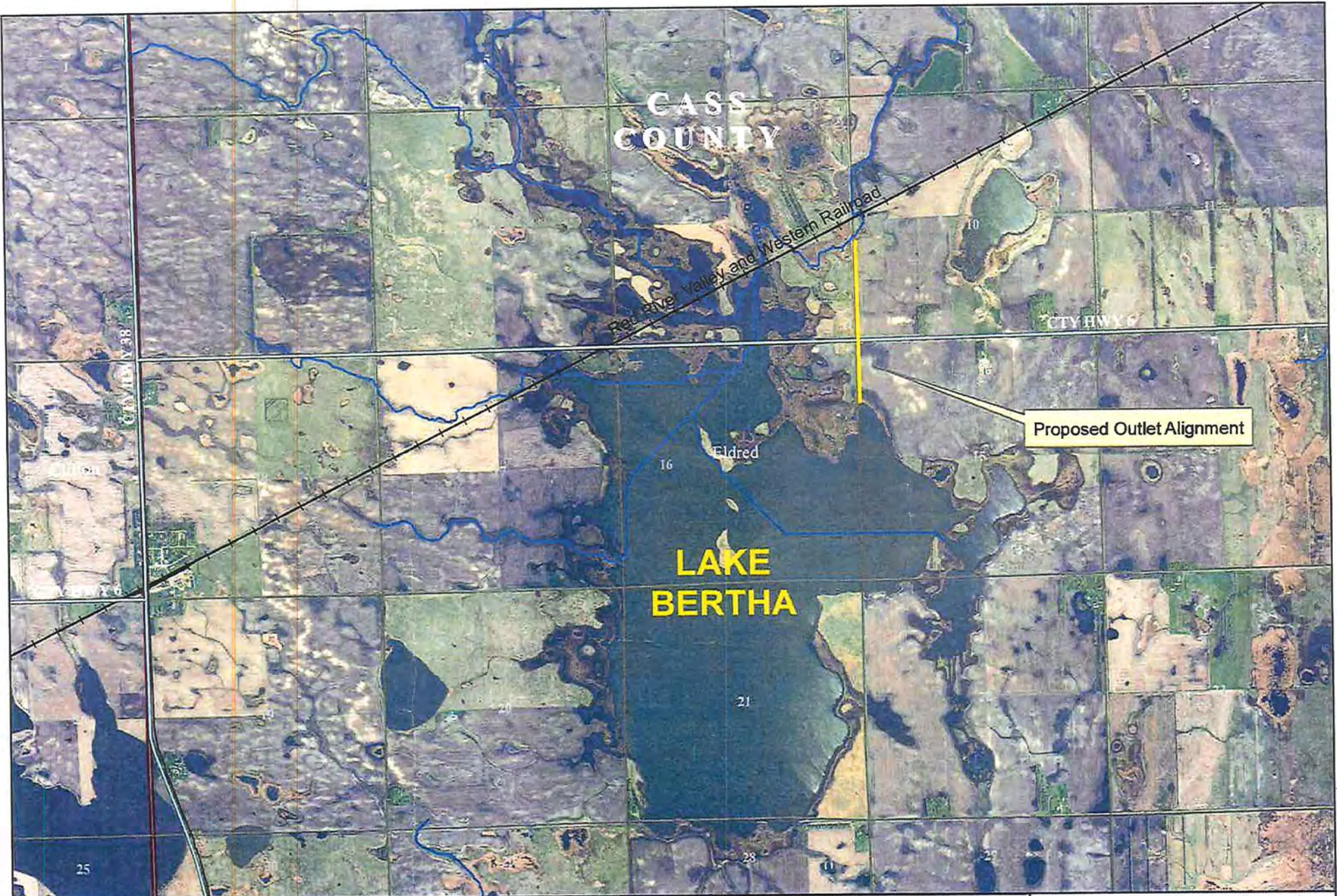
Sincerely,

CASS COUNTY JOINT WATER RESOURCE DISTRICT

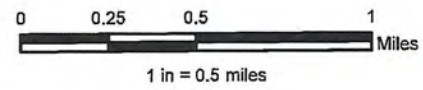


Carol Harbeke Lewis
Secretary-Treasurer

Enclosures



**LAKE BERTHA OUTLET
ELDRED TOWNSHIP, CASS COUNTY**



Created By: HSM/GZ Date Created: 7/1/14 Date Saved: 12/18/15 Date Plotted: 07/18/14 Date Exported: 12/18/15
 Plotted By: gary.zimmer Aerial Image: 2012 County NAIP SIDS Elevation Data: MW Lidar
 Horizontal Datum: NAD83 UTM zone 14N Vertical Datum: NAVD1888
 T:\Projects\16000\16074\16074_LocationMap.mxd



October 20, 2015

RECEIVED

OCT 26 2015

CASS COUNTY COMMISSION

Maple River
Water Resource
District

Chad Peterson
Chairman
Cass County Commission
P.O. Box 2806
Fargo, ND 58108-2806

Rodger Olson
Chairman
Leonard, North Dakota

Jurgen Suhr
Manager
Page, North Dakota

Gerald Melvin
Manager
Buffalo, North Dakota

Dear Chairman Peterson:

RE: Swan Buffalo Detention Dam #12 (Absaraka Dam)
Dam Safety Improvements

Swan Buffalo Detention Dam #12 (Absaraka Dam), located on Swan Creek in Empire Township, Cass County, is owned and operated by the Maple River Water Resource District (WRD). The dam was originally built in 1960 and permitted by the North Dakota State Water Commission (SWC) under Water Permit No. 01442. Since it was constructed, the dam has served as flood protection for properties along Swan Creek.

The purpose of the proposed project is to repair deteriorated portions of the dam. The deterioration, if not repaired, will ultimately affect the function and stability of the dam. The dam would continue to provide benefits to downstream properties and Cass County roadways affected by high water. In order to address this dam safety issue, the WRD proposes to perform the following repairs:

- Sealant/mortar has deteriorated or is missing in a number of principal spillway conduit joints. Cured-In-Place Pipe (CIPP) lining is proposed to rehabilitate the interior of the conduit. One large joint gap, about 32' upstream from the outlet, will be mechanically repaired prior to installing the CIPP.
- Rusted and broken items at the spillway inlet structure will be replaced.
- The principal spillway outlet and the two foundation drain pipes have settled and will be replaced.
- Erosion issues at the inlet headwall, spillway pipe and the plunge pool will be repaired.

Carol Harbeke Lewis
Secretary-Treasurer

1201 Main Avenue West
West Fargo, ND 58078-1301

701-298-2381
FAX 701-298-2397
wrld@casscountynnd.gov
www.casscountynnd.gov

With this letter and attachments, the WRD respectfully requests the Cass County Commission's consideration for cost-share assistance in the amount of \$11,183.50 (50% of the local share).

Chad Peterson
Page 2
October 20, 2015

Enclosed is the preliminary cost estimate and a location map for the proposed project. If you have any questions, please feel free to contact us or the District's Engineer, Mike Opat, Moore Engineering, Inc., at 701-282-4692.

Sincerely,

MAPLE RIVER WATER RESOURCE DISTRICT



Carol Harbeke Lewis
Secretary-Treasurer

Enclosures

Maple River Water Resource District
Absaraka Dam Repairs

Project # 18237-890
Date: 10/1/15

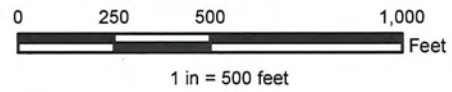
Engineer's Opinion of Probable Cost

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL	FUNDING SOURCES				
					NDSWC (75%)	RRJWRD (65%)	CASS COUNTY (50%)	LOCAL	
1	Mobilization	LS	1	\$5,000.00	\$5,000.00	\$3,750.00	\$812.50	\$218.75	\$218.75
2	Cured-In-Place Pipe Lining (18" dia.)	LF	134	\$280.00	\$37,520.00	\$28,140.00	\$6,097.00	\$1,641.50	\$1,641.50
3	Spillway Pipe Joint Repair (32' upstream of outlet)	EA	1	\$15,000.00	\$15,000.00	\$11,250.00	\$2,437.50	\$656.25	\$656.25
4	Inlet Structure Repair (drawdown pipe, gate, ladder, trash rack)	LS	1	\$20,000.00	\$20,000.00	\$15,000.00	\$3,250.00	\$875.00	\$875.00
5	Spillway Pipe Outfall Repair	LS	1	\$5,000.00	\$5,000.00	\$3,750.00	\$812.50	\$218.75	\$218.75
6	Spillway Pipe Support Structure	LS	1	\$5,000.00	\$5,000.00	\$3,750.00	\$812.50	\$218.75	\$218.75
7	Foundation Drain Repair	LS	1	\$4,500.00	\$4,500.00	\$3,375.00	\$731.25	\$196.88	\$196.88
8	Sinkhole & Erosion Repair	LS	1	\$10,000.00	\$10,000.00	\$7,500.00	\$1,625.00	\$437.50	\$437.50
9	Riprap (inlet headwall, spillway outfall, plunge pool)	CY	80	\$90.00	\$7,200.00	\$5,400.00	\$1,170.00	\$315.00	\$315.00
10	Material Testing	LS	1	\$2,000.00	\$2,000.00	\$1,500.00	\$325.00	\$87.50	\$87.50
11	Stormwater Management	LS	1	\$2,500.00	\$2,500.00	\$1,875.00	\$406.25	\$109.38	\$109.38
12	Dewatering	LS	1	\$2,500.00	\$2,500.00	\$1,875.00	\$406.25	\$109.38	\$109.38
Total Construction					\$116,220.00	\$87,165.00	\$18,885.75	\$5,084.63	\$5,084.63
Preliminary Engineering					\$4,000.00	\$1,400.00	\$1,690.00	\$455.00	\$455.00
Engineering-Design					\$10,000.00	\$3,500.00	\$4,225.00	\$1,137.50	\$1,137.50
Engineering-Construction					\$15,000.00	\$11,250.00	\$2,437.50	\$656.25	\$656.25
Legal & Admin.					\$500.00	\$0.00	\$325.00	\$87.50	\$87.50
Contingencies					\$23,244.00	\$1,743.30	\$13,975.46	\$3,762.62	\$3,762.62
TOTAL PROJECT					\$168,964.00	\$105,058.30	\$41,538.71	\$11,183.50	\$11,183.50



**SWAN, BUFFALO DETENTION DAM #12 (ABSARAKA DAM)
SECTION 33, EMPIRE TOWNSHIP, NORTH DAKOTA**

Created By: GZ Date Created: 10/02/15 Date Saved: 10/02/15 Date Plotted: NEVER Date Exported: 10/02/15
Plotted By: gary.zimmer Parcel Date: NA Aerial Image: 2014 County NAIP SIDS Elevation Data: NA
Horizontal Datum: NAD 1983 StatePlane North Dakota South FIPS 3302 Feet Vertical Datum: NA
T:\Projects\1820018237\18237_Dam12_EmpireTwp.mxd





October 20, 2015

RECEIVED

OCT 26 2015

CASS COUNTY COMMISSION

Maple River
Water Resource
District

Rodger Olson
Chairman
Leonard, North Dakota

Jurgen Suhr
Manager
Page, North Dakota

Gerald Melvin
Manager
Buffalo, North Dakota

Chad Peterson
Chairman
Cass County Commission
P.O. Box 2806
Fargo, ND 58108-2806

Dear Chairman Peterson:

RE: Swan Buffalo Detention Dam #5 (Garsteig Dam)
Dam Safety Improvements

Swan Buffalo Detention Dam #5 (Garsteig Dam), located on a tributary to Buffalo Creek in Gill Township, Cass County, is owned and operated by the Maple River Water Resource District (WRD). The dam was originally built in 1961 and permitted by the North Dakota State Water Commission (SWC) under Water Permit No. 01440. Since it was constructed, the dam has served as flood protection for properties along the tributary and Buffalo Creek.

The purpose of the proposed project is to repair deteriorated portions of the dam. The deterioration, if not repaired, will ultimately affect the function and stability of the dam. The dam would continue to provide benefits to downstream properties and Cass County roadways affected by high water. In order to address this dam safety issue, the WRD proposes to perform the following repairs:

- Sealant/mortar has deteriorated or is missing in a number of principal spillway conduit joints. Cured-In-Place Pipe (CIPP) lining is proposed to rehabilitate the interior of the conduit. One large joint gap, about 36' upstream from the outlet, will be mechanically repaired prior to installing the CIPP.
- Rusted and broken items at the spillway inlet structure will be replaced.
- The foundation drain pipe has settled and will be replaced.
- Erosion issues at the downstream embankment and the plunge pool will be repaired.

Carol Harbeke Lewis
Secretary-Treasurer

1201 Main Avenue West
West Fargo, ND 58078-1301

701-298-2381
FAX 701-298-2397
wrld@casscountynynd.gov
www.casscountynynd.gov

With this letter and attachments, the WRD respectfully requests the Cass County Commission's consideration for cost-share assistance in the amount of \$12,696.50 (50% of the local share).

Chad Peterson
Page 2
October 20, 2015

Enclosed is the preliminary cost estimate and a location map for the proposed project. If you have any questions, please feel free to contact us or the District's Engineer, Mike Opat, Moore Engineering, Inc., at 701-282-4692.

Sincerely,

MAPLE RIVER WATER RESOURCE DISTRICT



Carol Harbeke Lewis
Secretary-Treasurer

Enclosures

**Maple River Water Resource District
Garsteig Dam Repairs**

Project # 18237-891
Date: 10/1/15

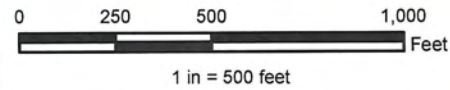
Engineer's Opinion of Probable Cost

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL	FUNDING SOURCES			
					NDSWC (75%)	RRJWRD (65%)	CASS COUNTY (50%)	LOCAL
1 Mobilization	LS	1	\$5,000.00	\$5,000.00	\$3,750.00	\$812.50	\$218.75	\$218.75
2 Cured-In-Place Pipe Lining (36" dia.)	LF	178	\$400.00	\$71,200.00	\$53,400.00	\$11,570.00	\$3,115.00	\$3,115.00
3 Spillway Pipe Joint Repair (36' upstream of outlet)	EA	1	\$5,000.00	\$5,000.00	\$3,750.00	\$812.50	\$218.75	\$218.75
4 Inlet Structure Repair (drawdown pipe, gate, ladder rungs, trash rack)	LS	1	\$20,000.00	\$20,000.00	\$15,000.00	\$3,250.00	\$875.00	\$875.00
5 Spillway Pipe Outfall Repair	LS	1	\$5,000.00	\$5,000.00	\$3,750.00	\$812.50	\$218.75	\$218.75
6 Foundation Drain Repair	LS	1	\$4,500.00	\$4,500.00	\$3,375.00	\$731.25	\$196.88	\$196.88
7 Sinkhole & Erosion Repair	LS	1	\$10,000.00	\$10,000.00	\$7,500.00	\$1,625.00	\$437.50	\$437.50
8 Riprap (inlet headwall, spillway outfall, plunge pool)	CY	80	\$90.00	\$7,200.00	\$5,400.00	\$1,170.00	\$315.00	\$315.00
9 Material Testing	LS	1	\$2,000.00	\$2,000.00	\$1,500.00	\$325.00	\$87.50	\$87.50
10 Stormwater Management	LS	1	\$2,500.00	\$2,500.00	\$1,875.00	\$406.25	\$109.38	\$109.38
11 Dewatering	LS	1	\$2,500.00	\$2,500.00	\$1,875.00	\$406.25	\$109.38	\$109.38
Total Construction				\$134,900.00	\$101,175.00	\$21,921.25	\$5,901.88	\$5,901.88
Preliminary Engineering				\$4,800.00	\$1,680.00	\$2,028.00	\$546.00	\$546.00
Engineering-Design				\$10,000.00	\$3,500.00	\$4,225.00	\$1,137.50	\$1,137.50
Engineering-Construction				\$15,000.00	\$11,250.00	\$2,437.50	\$656.25	\$656.25
Legal & Admin.				\$500.00	\$0.00	\$325.00	\$87.50	\$87.50
Contingencies				\$26,980.00	\$2,023.50	\$16,221.73	\$4,367.39	\$4,367.39
TOTAL PROJECT				\$192,180.00	\$119,628.50	\$47,158.48	\$12,696.51	\$12,696.51



**SWAN BUFFALO DETENTION DAM #5 (GARSTEIG DAM)
SECTION 6, GILL TOWNSHIP, CASS COUNTY, ND**

Created By: GZ Date Created: 10/02/15 Date Saved: 10/02/15 Date Plotted: NEVER Date Exported: 10/02/15
Plotted By: gary.zimmer Parcel Date: NA Aerial Image: 2014 County NAIP SIDS Elevation Data: NA
Horizontal Datum: NAD 1983 StatePlane North Dakota South FIPS 3302 Feet Vertical Datum: NA
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October 20, 2015

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CASS COUNTY COMMISSION

Maple River
Water Resource
District

Rodger Olson
Chairman
Leonard, North Dakota

Jurgen Suhr
Manager
Page, North Dakota

Gerald Melvin
Manager
Buffalo, North Dakota

Chad Peterson
Chairman
Cass County Commission
P.O. Box 2806
Fargo, ND 58108-2806

Dear Chairman Peterson:

RE: Swan Buffalo Detention Dam # 8 (Embden Dam)
Dam Safety Improvements

Swan Buffalo Detention Dam # 8 (Embden Dam), located on Buffalo Creek in Howes Township, Cass County, is owned and operated by the Maple River Water Resource District (WRD). The dam was originally built in 1968 and permitted by the North Dakota State Water Commission (SWC) under Water Permit No. 01441. Since it was constructed, the dam has served as flood protection for properties along Buffalo Creek.

The purpose of the proposed project is to repair deteriorated portions of the dam. The deterioration, if not repaired, will ultimately affect the function and stability of the dam. The dam would continue to provide benefits to downstream properties and Cass County roadways affected by high water. In order to address this dam safety issue, the WRD proposes to perform the following repairs:

- Sealant/mortar has deteriorated or is missing in a number of principal spillway conduit joints. Cured-In-Place Pipe (CIPP) lining is proposed to rehabilitate the interior of the conduit. One large joint gap, about 52' upstream from the outlet, will be mechanically repaired prior to installing the CIPP.
- Rusted and broken items at the spillway inlet structure will be replaced.
- Erosion issues at the downstream embankment and the plunge pool will be repaired.

Carol Harbeke Lewis
Secretary-Treasurer

1201 Main Avenue West
West Fargo, ND 58078-1301

701-298-2381
FAX 701-298-2397
wrld@casscountynd.gov
www.casscountynd.gov

With this letter and attachments, the WRD respectfully requests the Cass County Commission's consideration for cost-share assistance in the amount of \$12,167.50 (50% of the local share).

Chad Peterson
Page 2
October 20, 2015

Enclosed are the preliminary cost estimate and a location map for the proposed project. If you have any questions, please feel free to contact us or the District's Engineer, Mike Opat, Moore Engineering, Inc., at 701-282-4692.

Sincerely,

MAPLE RIVER WATER RESOURCE DISTRICT



Carol Harbeke Lewis
Secretary-Treasurer

Enclosures

Maple River Water Resource District
Embden Dam Repairs

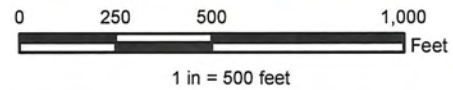
Project # 18237-892
Date: 10/1/15

Engineer's Opinion of Probable Cost

ITEM	UNIT	QUANTITY	UNIT PRICE	TOTAL	FUNDING SOURCES				
					NDSWC (75%)	RRJWRD (65%)	CASS COUNTY (50%)	LOCAL	
1	Mobilization	LS	1	\$5,000.00	\$5,000.00	\$3,750.00	\$812.50	\$218.75	\$218.75
2	Cured-In-Place Pipe Lining (36" dia.)	LF	184	\$400.00	\$73,600.00	\$55,200.00	\$11,960.00	\$3,220.00	\$3,220.00
3	Spillway Pipe Joint Repair (52' upstream of outlet)	EA	1	\$5,000.00	\$5,000.00	\$3,750.00	\$812.50	\$218.75	\$218.75
4	Inlet Structure Repair (drawdown pipe, gate, ladder, trash rack)	LS	1	\$20,000.00	\$20,000.00	\$15,000.00	\$3,250.00	\$875.00	\$875.00
5	Sinkhole & Erosion Repair	LS	1	\$10,000.00	\$10,000.00	\$7,500.00	\$1,625.00	\$437.50	\$437.50
6	Riprap (inlet headwall, spillway outfall, plunge pool)	CY	80	\$90.00	\$7,200.00	\$5,400.00	\$1,170.00	\$315.00	\$315.00
7	Material Testing	LS	1	\$2,000.00	\$2,000.00	\$1,500.00	\$325.00	\$87.50	\$87.50
8	Stormwater Management	LS	1	\$2,500.00	\$2,500.00	\$1,875.00	\$406.25	\$109.38	\$109.38
9	Dewatering	LS	1	\$2,500.00	\$2,500.00	\$1,875.00	\$406.25	\$109.38	\$109.38
Total Construction					\$127,800.00	\$95,850.00	\$20,767.50	\$5,591.25	\$5,591.25
Preliminary Engineering					\$4,900.00	\$1,715.00	\$2,070.25	\$557.38	\$557.38
Engineering-Design					\$10,000.00	\$3,500.00	\$4,225.00	\$1,137.50	\$1,137.50
Engineering-Construction					\$15,000.00	\$11,250.00	\$2,437.50	\$656.25	\$656.25
Legal & Admin.					\$500.00	\$0.00	\$325.00	\$87.50	\$87.50
Contingencies					\$25,560.00	\$1,917.00	\$15,367.95	\$4,137.53	\$4,137.53
TOTAL PROJECT					\$183,760.00	\$114,232.00	\$45,193.20	\$12,167.40	\$12,167.40



**SWAN BUFFALO DETENTION DAM #8 (EMBDEN DAM)
SECTION 25, HOWES TOWNSHIP, CASS COUNTY, ND**



Created By: GZ Date Created: 10/02/15 Date Saved: 10/02/15 Date Plotted: NEVER Date Exported: 10/02/15
 Plotted By: gary.zimmer Parcel Date: NA Aerial Image: 2014 County NAIP SIDS Elevation Data: NA
 Horizontal Datum: NAD 1983 StatePlane North Dakota South FIPS 3302 Feet Vertical Datum: NA
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