PLANS, PROFILES AND CROSS SECTIONS FOR
POPE / STEARNS JUDICIAL DITCH NO. 1
GROVE LAKE AND BANGOR TOWNSHIPS IN POPE COUNTY
RAYMOND AND NORTH FORK TOWNSHIPS IN STEARNS COUNTY
MARCH 2016

NOTES:
1. GEODETIC CONTROL
   VERTICAL: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)
   HORIZONTAL: COUNTY COORDINATES (WDT01), POPE COUNTY, US FOOT
2. FIELD SURVEY COMPLETED BY HOUSTON ENGINEERING, INC. IN NOVEMBER AND DECEMBER OF 2015.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Signature: [Signature]
Date: 3-11-2016
Printed Name: Joseph A. Lewis
License #: 46215

PREPARED BY:
Houston Engineering Inc.
MAPLE GROVE, MINNESOTA
TYPICAL DITCH REPAIR EXCAVATION & SPOIL BANK LEVELING

EXISTING GROUND

PROPOSED SPOIL PLACEMENT

EXISTING GROUND

PROPOSED SPOIL PLACEMENT

ACSIC CHANNEL BOTTOM WIDTHS

<table>
<thead>
<tr>
<th>SEGMENT</th>
<th>START STATION</th>
<th>END STATION</th>
<th>BOTTOM WIDTH &quot;X&quot; (FEET)</th>
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<tr>
<td>MAIN TRUNK</td>
<td>0+00</td>
<td>21+00</td>
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<td>200+00</td>
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<td>24+00</td>
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<td>0+00</td>
<td>55+92</td>
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<td>0+00</td>
<td>129+87</td>
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<td>70+00</td>
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<td>70+50</td>
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<td>89+31</td>
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<td>BRANCH 12 FORK 6 SPUR 2</td>
<td>0+00</td>
<td>90+45</td>
<td>3</td>
</tr>
</tbody>
</table>

NOTES AND DETAILS

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Signature: ____________________________ Date: 3-11-16
Printed Name: JOSEPH A. LEWIS License #: 46215
AS-CONSTRUCTED AND SUBSEQUENTLY IMPROVED CONDITION (ACSIC) PROFILES ARE BASED ON THE 1907 DESIGN PROFILE WITH A DATUM ADJUSTMENT OF 1274.98 ESTABLISHED BY A COMPARISON WITH HAND SOIL BORINGS.

EXISTING DITCH BOTTOM (NOVEMBER AND DECEMBER 2015)

STA 526+32 FIELD CROSSING

STA 526+46 INV: 1333.02 (US)

STA 526+16 INV: 1333.14 (DS)

PUBLIC WATER 61-020 P

EXISTING DITCH BOTTOM (NOVEMBER AND DECEMBER 2015)

STA 526+31

48" CMP

BRANCH 5

NORTH FORK CROW RIVER

MAIN TRUNK

LINCOLN LAKE

PUBLIC WATER 61-020 P

NORTH FORK CROW RIVER

LINCOLN LAKE

PUBLIC WATER 61-020 P

NORTH FORK CROW RIVER WATERSHED DISTRICT

NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY

BANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY

POPE-STEARNS JUDICIAL DITCH 1

PLANS, PROFILES AND CROSS SECTIONS

By

Houston Engineering Inc.

P:   763.493.4522

Maple Grove

F:   763.493.5572

H:\Maple Grove\JBN\5021-018_JD1_Repair_Survey\CAD\Plans\RepairSurvey\5021018-PandP_MAIN TRUNK - (11).dwg

- 3/12/2016 1:00 PM - (dlitterer)

N

Feet

Scale

0

400

200

200

I

hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature:

JOSEPH A. LEWIS

Date:

3-11-16

Printed Name:

License #:

46215

Drawn by

Checked by

SHEET

DJL

JAL

3-11-16

AS SHOWN

PROJECT NO.

5021-018

PLAN AND PROFILE

MAIN TRUNK
Branch 12

Existing ditch bottom (November and December 2015)

STA = 54+76
ELEV = 1302.27
SB Top Hard Pan

STA = 44+79
ELEV = 1298.22
SB Top Hard Pan

STA = 33+55
ELEV = 1297.26
SB Top Hard Pan

STA = 23+60
ELEV = 1293.40
SB Top Hard Pan

STA = 13+55
ELEV = 1291.13
SB Top Hard Pan

STA = 3+41
ELEV = 1289.21
SB Top Hard Pan

Branch 12

Main Trunk

PVIS: 0+00
PVIE: 1286.75

PVIS: 2+00
PVIE: 1288.99

PVIS: 49+30
PVIE: 1299.87

ACSI

Plan and Profile Branch 12

State of Minnesota - DNR Div. of Lands

ROGER A OLSON
STATE OF MINNESOTA-DNR DIV OF LANDS

STEVEN J MOENING

ERNEST J & JOLENE K MARTIN

GERARD J & LINDA V JENNISSEN

By

Date

Revision No.

Houston Engineering Inc.

Maple Grove

P: 763.493.4522
F: 763.493.5572

H:\Maple Grove\JBN\5021-018_JD1_Repair_Survey\CAD\Plans\RepairSurvey\5021018-PandP_BRANCH 12 - (1).dwg
The page contains a detailed map of a section of land with various annotations and measurements. The map includes the following information:

- **Branch 12 Fork 6 Spur 1**
- **PLANS, PROFILES AND CROSS SECTIONS**
- **POPE-STEARNS JUDICIAL DITCH 1**
- **LANSING & GROVE LAKE TOWNSHIPS, POPE COUNTY**
- **NORTH FORK & RAYMOND TOWNSHIP, STEARNS COUNTY**
- **NORTH FORK CROW RIVER WATERSHED DISTRICT**

The map also includes various annotations and measurements, such as:

- **STA 5+30 Field Crossing**
- **STA 5+30 36" CMP**
- **PVIS: 0+00 PVIE: 1330.57**
- **PVIS: 0+93 PVIE: 1331.41**
- **PVIS: 13+93 PVIE: 1334.01**
- **PVIS: 26+99 PVIE: 1334.66**

The map is drawn by Houston Engineering Inc. and is labeled as Sheet 20 of 20. The drawing is dated 3-11-16 and is marked AS SHOWN.

The map includes details such as:

- **Existing ditch bottom information**
- **ACSC profiles based on the 1987 design profile with a datum adjustment of 1274.98 established by hand soil borings.**

The map also includes various scales and units of measurement, indicating a high level of detail in the survey and construction plans.
As-constructed and subsequently improved condition
ACSC Profiles are based on the 1907 design profile with a
data adjustment of 1274.98 established by a comparison
with hand soil borings between stations 65+00 and 79+20.
Above station 79+20, the ACSIC is based on a best fit to
match hand soil borings.

ARThUR QUADE JR
CLARENCE H ROONEY TRUST

CSAH 26
CSAH 18

BRANCH 11

Maple Grove

PLAN AND PROFILE

POPE-STEARNs JUDICIAL DITCH

P: 763.493.4522
F: 763.493.5271

Printed Name: JOSEPH A. LEWIS
License #: 46215

SCALE 3-11-16

Sheet: 3-11-16

DESIGNED BY

HELPED BY

CHECKED BY

P: 763.493.4522
F: 763.493.5271

PLAN AND PROFILE
BRANCH 11

PROJECT NO. 5021-018

PLANS, PROFILES AND CROSS SECTIONS
POPE-STEARNs JUDICIAL DITCH

NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY
BANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY

POPE-STEARNS JUDICIAL DITCH

11600 11500 11400 11300 11200 11100 11000 10900 10800 10700 10600 10500 10400 10300 10200 10100 10000 9900 9800 9700 9600 9500 9400 9300 9200 9100 9000 8900 8800 8700 8600 8500 8400 8300 8200 8100 8000 7900 7800 7700 7600 7500 7400 7300 7200 7100 7000 6900 6800 6700 6600 6500 6400 6300 6200 6100 6000 5900 5800 5700 5600 5500 5400 5300 5200 5100 5000 4900 4800 4700 4600 4500 4400 4300 4200 4100 4000 3900 3800 3700 3600 3500 3400 3300 3200 3100 3000 2900 2800 2700 2600 2500 2400 2300 2200 2100 2000 1900 1800 1700 1600 1500 1400 1300 1200 1100 1000 900 800 700 600 500 400 300 200 100 0
Plan and Profile

Branch 9

By: Houston Engineering Inc.

Date: 3-11-16

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POPE-STEARN'S JUDICIAL DITCH 1

ANGUS & GROVE LAKE TOWNSHIPS, POPE COUNTY

NORTH FORK & RAYMOND TOWNSHIPS, STEARN'S COUNTY

Pope-Stearns Judicial Ditch 1

Plans, Profiles and Cross Sections

P.O. Box 5064
Maple Grove, MN 55360

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Mailing Address: Houston Engineering Inc.

3930 Woodland Drive

Maple Grove, MN 55311

Printed Name: JOSEPH A. LEWIS
License #: 46215

Signature: 

Date: 3-11-16

Scale: 1" = 200'

Sheet No.: 29

Project No.: 5021-018

Branch 9

Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: 

Date: 3-11-16

Printed Name: JOSEPH A. LEWIS
License #: 46215

Scale: 1" = 200'

Drawn by: 

Date: 

Checked by: 

SHEET

DJL

JAL

3-11-16

AS SHOWN

PLAN AND PROFILE

BRANCH 9
NOTES:

1. AS-CONSTRUCTED AND SUBSEQUENTLY IMPROVED CONDITION (ACSIC) PROFILES ARE BASED ON THE 1907 DESIGN PROFILE WITH A DATUM ADJUSTMENT OF 1274.98 ESTABLISHED BY A COMPARISON WITH HAND SOIL BORINGS BETWEEN STATIONS 0+00 AND 72+75. ABOVE STATION 72+75 THE ACSIC IS BASED ON A BEST FIT TO MATCH HAND SOIL BORINGS.

2. STA=128+41
   ELEV=1322.48
   NO CLAY TO DEPTH

3. STA=138+28
   ELEV=1322.72
   NO CLAY TO DEPTH

PVIS: 139+87
PVIE: 1326.35

AS-CONSTRUCTED AND SUBSEQUENTLY IMPROVED CONDITION (ACSIC) PROFILES ARE BASED ON THE 1907 DESIGN PROFILE WITH A DATUM ADJUSTMENT OF 1274.98 ESTABLISHED BY A COMPARISON WITH HAND SOIL BORINGS BETWEEN STATIONS 0+00 AND 72+75. ABOVE STATION 72+75 THE ACSIC IS BASED ON A BEST FIT TO MATCH HAND SOIL BORINGS.

PUBLIC WATER 61-316 W
STA 127+33 130TH AVE

PUBLIC WATER 61-316 W
STA 127+55 INV: 1327.61 (US)
STA 127+10 INV: 1327.68 (DS)

PUBLIC WATER 61-316 W
STA 107+43
24" RCP

PUBLIC WATER 61-316 W
STA 117+54
30" CPP

PUBLIC WATER 61-316 W
STA 97+67
42" CPP

PUBLIC WATER 61-316 W
STA 117+61
45 L.F., 24" CMP @ 0.16%

PUBLIC WATER 61-316 W
STA 127+33 130TH AVE

PUBLIC WATER 61-316 W
STA 127+55 INV: 1327.61 (US)
STA 127+10 INV: 1327.68 (DS)

PUBLIC WATER 61-316 W
STA 107+43
24" RCP

PUBLIC WATER 61-316 W
STA 117+54
30" CPP

PUBLIC WATER 61-316 W
STA 97+67
42" CPP

PUBLIC WATER 61-316 W
STA 117+61
45 L.F., 24" CMP @ 0.16%
BRANCH 8 FORK 1

PUBLIC WATER 91-015 W

11-0008-000
SHIKE/ROGER & JEAN

11-0045-000
JOHNSON/LYLE T & JUDY A

11-0042-000
WELLER/GREGG D & BRENDA W

11-0043-000
THE OF ST CLOUD

11-0044-000
WELLER/CASIMIR

PUBLIC WATER 61-015 W

AS-CONSTRUCTED AND SUBSEQUENTLY IMPROVED CONDITION (ACSIC)

PROFILES ARE BASED ON THE 1907 DESIGN PROFILE WITH A DATUM
ADJUSTMENT OF 1274.98 ESTABLISHED BY A COMPARISON WITH HAND SOIL
BORINGS BETWEEN STATIONS 0+00 AND 19+00. ABOVE STATION 19+00 THE
ACSIC IS BASED ON A BEST FIT TO MATCH HAND SOIL BORINGS.

EXISTING DITCH BOTTOM
(NOVEMBER AND DECEMBER 2015)

Existing ditch bottom is 1347.58 ft. above NGVD 1929.

ACCESS TO PUBLIC WATER 61-015 W

Access to public water 61-015 W is via a 6" plastic water line attached to
the ditch bottom.

ACSF

AS SHOWN

PLAN AND PROFILE

BRANCH 8 FORK 1

PROJECT NO. 5021-018

PLAN AND PROFILES AND CROSS SECTIONS

POPE-STEARNSD JUDICIAL DITCH 1

ANGEL & LAKE TOWNSHIPS, POPE COUNTY

NORTH FORK & RAYMOND TOWNSHIP, STEARNS COUNTY

NORTH FORK CROW RIVER WATERSHED DISTRICT

35

Houston Engineering Inc.

Maple Grove

P. 763-433-0522
F. 763-433-5071

3-11-16

Printed Name: JOSEPH A. LEWIS

Signature: JOSEPH A. LEWIS

License #: 46215

Date: 3-11-16

Checked by JAL

Drawn by DIL

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SHEET
10-0152-000
ROELIKE/MICHAEL R

10-0155-000
WILSON/DALE F / REVOCABLE TRUST

10-0151-000
BRECHT/LARRY D & JO LYNN

10-0154-000
ROSLIE/NEUMANN GARY & EILEEN

10-0152-000
WILSON/DALE F / REVOCABLE TRUST

10-0154-000
ROSLIE/NEUMANN GARY & EILEEN

ACSH 22
105TH AVE

27-1877-000
RAGGE L ELYN

PUBLIC WATER 61-019 P

PUBLIC WATER 61-019 P

MUD LAKE
PUBLIC WATER 61-019 P

ST. PAUL AREA FLOOD CONTROL DISTRICT

BRANCH 1
MUD LAKE
PUBLIC WATER 61-019 P

NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY
BANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY
POPE-STEARNS JUDICIAL DITCH 1
PLANS, PROFILES AND CROSS SECTIONS

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-40 PLAN AND PROFILE BRANCH 2

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-dlitterer

Signature:
Date:

Printed Name:
License #:

Drawn by
Date

Checked by
Date

SHEET

AS SHOWN

PROJECT NO.

PLAN AND PROFILE
BRANCH 2

40

5021-018

Maple Grove

P: 763.493.4522
F: 763.493.5572

Houston Engineering Inc.

DIL

3-11-16

JAL

JOSEPH A. LEWIS

46215

HEREBY CERTIFY

THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

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-40 PLAN AND PROFILE BRANCH 2

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-dlitterer

Signature:
Date:

Printed Name:
License #:

Drawn by
Date

Checked by
Date

SHEET

AS SHOWN

PROJECT NO.

PLAN AND PROFILE
BRANCH 2

40

5021-018

Maple Grove

P: 763.493.4522
F: 763.493.5572

Houston Engineering Inc.

DIL

3-11-16

JAL

JOSEPH A. LEWIS

46215

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THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
-2+00 0+00 2+00 4+00 6+00 8+00 10+00 12+00 14+00 16+00 18+00 20+00 22+00 24+00 26+00 28+00 30+00 32+00 34+00 36+00

-2+00 0+00 2+00 4+00 6+00 8+00 10+00 12+00 14+00 16+00 18+00 20+00 22+00 24+00 26+00 28+00 30+00 32+00 34+00 36+00

1337.70 1334.37 1337.74 1335.17 1337.79 1335.97 1338.20 1336.17 1338.58 1336.37 1338.51 1336.57 1338.60 1336.77 1339.08 1336.97 1338.63 1337.17 1338.83 1337.37 1339.01 1337.57 1340.07 1337.77 1337.97

STA=15+16 ELEV=1336.48 SB TOP HARD PAN EXISTING DITCH BOTTOM (NOVEMBER AND DECEMBER 2015)

PUBLIC WATER 61-019 P MUD LAKE

PVIS: 0+00 PVIE: 1334.37
PVIS: 4+00 PVIE: 1335.97
PVIS: 24+00 PVIE: 1337.97

26 L.F., 16" CIP @ 1.54%
STA 8+77 INV: 1338.73 (US) STA 8+51 INV: 1339.13 (DS)

STA 00+00 MAIN TRUNK STA 8+64 FIELD CROSSING STA 22+64 DRIVEWAY

10-0141-000 10-0147-001 10-0154-000 10-0154-001 10-0158-002 10-0141-002
WILSON/DALE F/TRUST WILSON/DALE F/REVOCABLE TRUST ROELIKE/MICHAEL R NEUMANN/GARY & EILEEN

MUD LAKE PUBLIC WATER 81-019 P PUBLIC WATER 61-019 P

MUD LAKE

PUBLIC WATER 61-019 P

PUBLIC WATER 81-019 P

ACSID AS-CONSTRUCTED AND SUBSEQUENTLY IMPROVED CONDITION (ACSID) PROFILES ARE BASED ON THE 1907 DESIGN PROFILE WITH A DATUM ADJUSTMENT OF 1274.98 ESTABLISHED BY A COMPARISON WITH HAND SOIL BORINGS.

NORTH FORK CROW RIVER WATERSHED DISTRICT NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY BANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY POPE-STEARNS JUDICIAL DITCH 1 PLANS, PROFILES AND CROSS SECTIONS

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---

HEREBY CERTIFY that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Printed Name: JOSEPH A. LEWIS License #: 46215

---

SCALE 1:400

---

DESIRED ROUTE AND SUPERIMPOSED IMPROVEMENT SUMMARY DRAFT PROFILES ARE BASED ON THE 1907 DESIGN PROFILE WITH A DATUM ADJUSTMENT OF 1274.98 ESTABLISHED BY A COMPARISON WITH HAND SOIL BORING.
EXISTING GROUND (DECEMBER 2015)

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: [Signature]
Date: 3-11-16
Printed Name: JOSEPH A. LEWIS
License #: 46215
EXISTING GROUND (DECEMBER 2015)

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Signature: ____________________________ Date: 3-11-16

Printed Name: JOSEPH A. LEWIS License #: 46215
EXISTING GROUND (DECEMBER 2015)

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: 
Date: 3-11-16
Printed Name: JOSEPH A. LEWIS
License #: 46215

Scale: Drawn by Date
Checked by SHEET

50 PROJECT NO. 5021-018 PLANS, PROFILES AND CROSS SECTIONS POPE-STEARNS JUDICIAL DITCH 1 ANGIER & GROVE LAKE TOWNSHIPS, POPE COUNTY NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY NORTH FORK CROW RIVER WATERSHED DISTRICT CROSS SECTIONS MAIN TRUNK AS SHOWN
EXISTING GROUND (DECEMBER 2015)

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: JOSEPH A. LEWIS
License #: 46215

SCALE

Drawn by:
Date:
Checked by:

SHEET

PROJECT NO.

5021-018

PLANS, PROFILES AND CROSS SECTIONS
POPE-STEAMNS JUDICIAL DITCH 1
ANGIER & GROVE LAKE TOWNSHIPS, POPE COUNTY
NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY
NORTH FORK CROW RIVER WATERSHED DISTRICT

CROSS SECTIONS
MAIN TRUNK

51
EXISTING GROUND (DECEMBER 2015)

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: ___________________________  Date: 3-11-16
Printed Name: JOSEPH A. LEWIS  License #: 46215

Scale

Drawn by  Date
Checked by  SHEET

PROJECT NO. 5021-018
PLANS, PROFILES AND CROSS SECTIONS
POPE-STEARNS JUDICIAL DITCH 1
HANSON & GROVE LAKE TOWNSHIP, POPE COUNTY
NORTH FORK & RAYMOND TOWNSHIP, STEARNS COUNTY
NORTH FORK CROW RIVER WATERSHED DISTRICT

CROSS SECTIONS
MAIN TRUNK

55
EXISTING GROUND (DECEMBER 2015)

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Signature: ____________________________
Date: 3-11-16
Printed Name: JOSEPH A. LEWIS
License #: 46215

Maple Grove

Drawn by: ____________________________
Date: 3-11-16

Checked by: ____________________________
Date: 3-11-16

Project No.: 5021-018

Plans, Profiles and Cross Sections
POPE-STEARN'S JUDICIAL DITCH 1
ANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY
NORTH FORK & RAYMOND TOWNSHIPS, STEARN'S COUNTY
NORTH FORK CROW RIVER WATERSHED DISTRICT

CROSS SECTIONS
MAIN TRUNK

Sheet: 57
EXISTING GROUND
(DECEMBER 2015)

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature:

Date:

Printed Name:

License #:

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PROJECT NO.

PLANS, PROFILES AND CROSS SECTIONS
POPE-STEARNS JUDICIAL DITCH 1
AMISH & GROVE LAKE TOWNSHIPS, POPE COUNTY
NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY
NORTH FORK CROW RIVER WATERSHED DISTRICT

CROSS SECTIONS
BRANCH 12

3-11-16
AS SHOWN
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Signature: 
Date: 3-11-16
Printed Name: JOSEPH A. LEWIS
License #: 46215
EXISTING GROUND
(DECEMBER 2015)

By [Signature]
Date: 3-11-16

Printed Name: JOSEPH A. LEWIS
License #: 46215

Scale Drawn by
Date
Checked by

SHEET

PLANS, PROFILES AND CROSS SECTIONS
POPE-STEARNS JUDICIAL DITCH 1
ANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY
NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY
NORTH FORK CROW RIVER WATERSHED DISTRICT

CROSS SECTIONS
BRANCH 12 FORK 6
PROJECT NO. 5021-018

66
EXISTING GROUND (DECEMBER 2015)

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Signature:

Date:

Printed Name:

JOSEPH A. LEWIS

License #:

46215

SCALE

Drawn by

Date

Checked by

SHEET

67

PROJECT NO.

5021-018

AS SHOWN

Plans, Profiles and Cross Sections

POPE-STEARNS JUDICIAL DITCH 1

ANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY

NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY

NORTH FORK CROW RIVER WATERSHED DISTRICT

Maple Grove

DIL

3-11-16

JAL

DIL

JAL
EXISTING GROUND (DECEMBER 2015)

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Signature:  
Printed Name:  JOSEPH A. LEWIS  
License #: 46215

Scale:Drawn by  
Date:  
Checked by  
SHEET  
PROJECT NO. 5021-018  
POPE-STEARNS JUDICIAL DITCH 1  
NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY  
NORTH FORK CROW RIVER WATERSHED DISTRICT

68

H:\Maple Grove\JBN\5021-018_JD1_Repair_Survey\CAD\Plans\RepairSurvey\5021018-Section_BRANCH 12 FORK 6 SPUR 1.dwg

- 3/12/2016 1:15 PM - (dlitterer)
EXISTING GROUND (DECEMBER 2015)
EXISTING GROUND (DECEMBER 2015)

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Signature:  
Date: 3-11-16

Printed Name: JOSEPH A. LEWIS  
License #: 46215

Scale

Drawn by  
Date

Checked by

SHEET

6SHEET

PLANS, PROFILES AND CROSS SECTIONS  
POPE-STEARNS JUDICIAL DITCH 1  
ANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY  
NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY  
NORTH FORK CROW RIVER WATERSHED DISTRICT

CROSS SECTIONS  
BRANCH 11

PROJECT NO. 5021-018

72
EXISTING GROUND
(DECEMBER 2015)

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Signature:
Date: 3-11-16
Printed Name: JOSEPH A. LEWIS
License #: 46215

Scale Drawn by
Date
Checked by

SHEET
DJL
JAL
3-11-16
AS SHOWN

LINE PLANS, PROFILES AND CROSS SECTIONS
POPE-STEARNS JUDICIAL DITCH 1
BANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY
NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY
NORTH FORK CROW RIVER WATERSHED DISTRICT

CROSS SECTIONS
BRANCH 10
PROJECT NO. 5021-018
SHEET 79
EXISTING GROUND
(DECEMBER 2015)

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Signature: ____________________________
Printed Name: JOSEPH A. LEWIS
License #: 46215

Scale

Drawn by: ____________________________
Checked by: ____________________________

Date: 3-11-16

PROJECT NO.
5021-018

PLANS, PROFILES AND CROSS SECTIONS
POPE-STEARN'S JUDICIAL DITCH 1
ANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY
NORTH FORK & RAYMOND TOWNSHIPS, STEARN'S COUNTY
NORTH FORK CROW RIVER WATERSHED DISTRICT

CROSS SECTIONS
BRANCH 9

SHEET
81

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(dlitterer)
EXISTING GROUND
(DECEMBER 2015)

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Signature: JOSEPH A. LEWIS
Printed Name: JOSEPH A. LEWIS
License #: 46215

Scale

Drawn by
Date
Checked by
SHEET

89

PROJECT NO.

PLANS, PROFILES AND CROSS SECTIONS
POPE-STEARNS JUDICIAL DITCH 1
ANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY
NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY
NORTH FORK CROW RIVER WATERSHED DISTRICT

CROSS SECTIONS
BRANCH 8 FORK 1

PROJECT NO. 5021-018

3-11-16

3-11-16

8+74

19+02

1+04
EXISTING GROUND (DECEMBER 2015)

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Signature: JOSEPH A. LEWIS
Printed Name: JOSEPH A. LEWIS
License #: 46215

Scale

Drawn by
Date
Checked by
SHEET

PLANS, PROFILES AND CROSS SECTIONS
POPE-STEARN'S JUDICIAL DITCH 1
NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY
NORTH FORK CROW RIVER WATERSHED DISTRICT

CROSS SECTIONS
BRANCH 8 FORK 1
PROJECT NO. 5021-018

90
EXISTING GROUND (DECEMBER 2015)

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Signature: 
Date: 3-11-16

Printed Name: JOSEPH A. LEWIS
License #: 46215

Scale Drawn by Date
Checked by SHEET

DJL JAL 3-11-16 AS SHOWN

PLANS, PROFILES AND CROSS SECTIONS
POPE-STEARNS JUDICIAL DITCH 1
BANGOR & GROVE LAKE TOWNSHIPS, POPE COUNTY
NORTH FORK & RAYMOND TOWNSHIPS, STEARNS COUNTY
NORTH FORK CROW RIVER WATERSHED DISTRICT

CROSS SECTIONS
BRANCH 8 FORK 1
PROJECT NO. 5021-018 SHEET 92
EXISTING GROUND (DECEMBER 2015)

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Signature: JOSEPH A. LEWIS
Date: 3-11-16

Printed Name: JOSEPH A. LEWIS
License #: 46215