

LEGEND

- PARCEL LINE
- SECTION LINE
- - - ROAD CENTERLINE
- EDGE OF ROAD
- >— SANITARY SEWER
- >>— STORM SEWER
- UG — UNDERGROUND GAS
- W — WATERMAIN
- | DITCH CENTERLINE
- | DITCH CHECK
-  HYDRANT
-  WATER VALVE
-  SANITARY SEWER MANHOLE
-  STORM SEWER MANHOLE
-  CATCH BASIN

SCALES

PLAN 0 15' 30'

INDEX MAP 0 500' 1000'



MN. TOLL FREE 1-800-252-1166

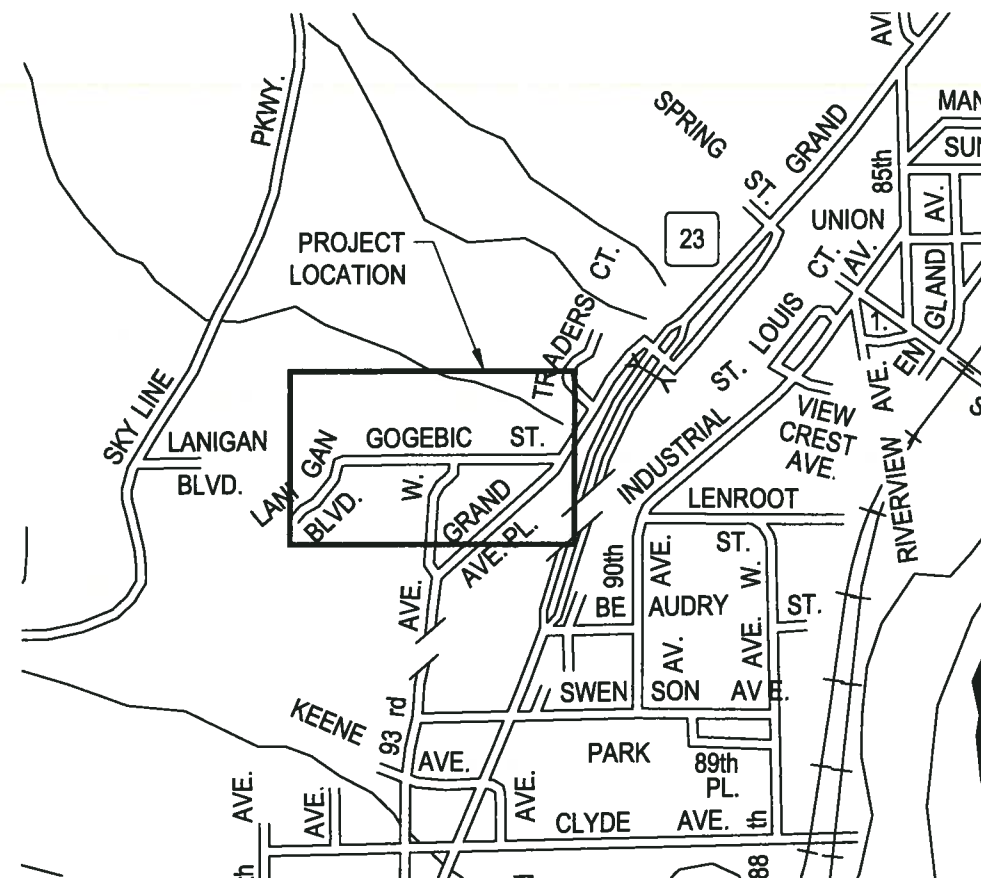
CITY OF DULUTH

DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

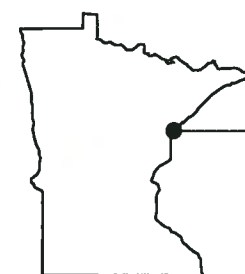
CONSTRUCTION PLANS FOR:

LANIGAN BLVD. / GOGEBIC ST. DITCH, CULVERT & STORM SEWER IMPROVEMENTS

CITY PROJECT NO. 1142
FLOOD SITE NO. 472



THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF C/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".



PROJECT LOCATION
ST. LOUIS COUNTY
CITY OF DULUTH
LANIGAN BOULEVARD
& GOGEBIC STREET

GOVERNING SPECIFICATIONS

THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.
(AVAILABLE AT: <http://www.dot.state.mn.us/tecsup/>)

THE 2360 PLANT MIXED ASPHALT PAVEMENT COMBINED 2360/2350 (GYRATORY/MARSHALL DESIGN) SPECIFICATION FOR 2012 CONSTRUCTION SEASON SHALL APPLY.

*AVAILABLE AT: <http://www.mrr.dot.state.mn.us/pavement/bituminous/bituminous.asp>

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MN MUTCD, INCLUDING THE FIELD MANUAL DATED FEBRUARY 2011.

*AVAILABLE AT:
<http://www.dot.state.mn.us/trafficeng/otepubl/fieldmanual2007/index.html>

THE CURRENT EDITION OF THE CITY OF DULUTH PUBLIC WORKS AND UTILITIES DEPARTMENT STANDARD CONSTRUCTION SPECIFICATIONS AND SUPPLEMENTS OR ADDENDUMS SHALL APPLY.

INDEX

SHEET NO.	DESCRIPTION
C1.0	TITLE SHEET
C2.0	DETAILS
C3.0	LANIGAN BOULEVARD / GOGEBIC STREET OVERVIEW
C4.0	GOGEBIC STREET OVERVIEW

THIS PLAN SET CONTAINS 4 SHEETS

APPROVALS

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.


DAVID G. BOLF - PROJECT ENGINEER

40926
REG. NO.

08/21/12
DATE

CITY APPROVALS

APPROVED  CHIEF ENGINEER - TRANSPORTATION

8/28/12
DATE

APPROVED  CHIEF ENGINEER - UTILITIES

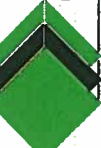
8/29/12
DATE

APPROVED  CITY ENGINEER

8/29/12
DATE

CITY OF DULUTH PROJECT NO. 1142

Northland
Consulting Engineers L.L.P.



Project Name:
LANIGAN BLVD. / GOGEBIC ST.
DITCH RECLAIM PROJECT
Lanigan Blvd. / Gogebic St. Duluth, MN

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Date: 08/21/12
Reg. #: 40926
David G. Bolf

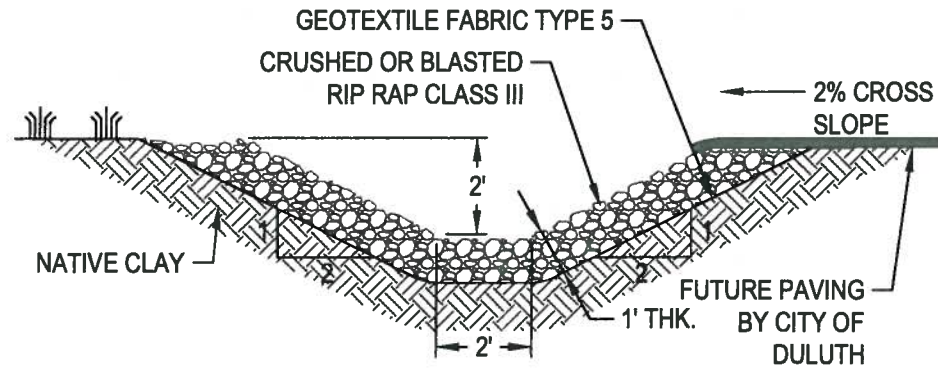
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Date: 08/21/12
Drawn By: EGT
Checked By: DGB

Revisions:

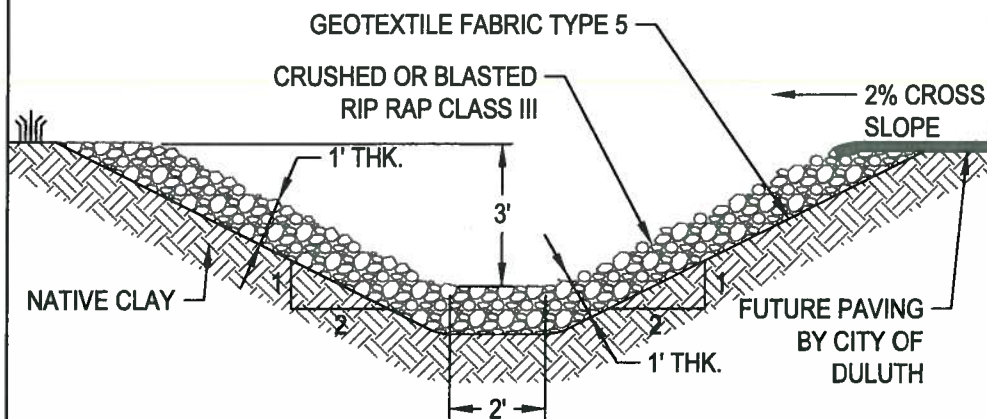
TITLE SHEET

sheet
title
sheet
number

C1.0

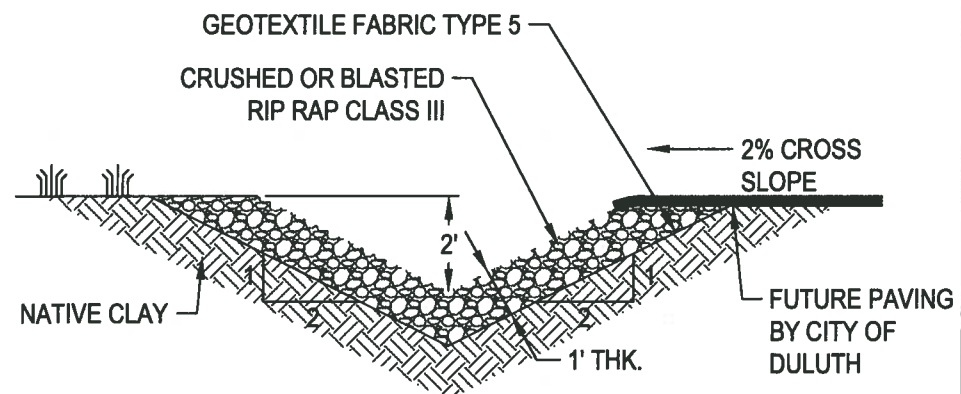


1 TYPE 1 DITCH SECTION
C2.0 NOT TO SCALE

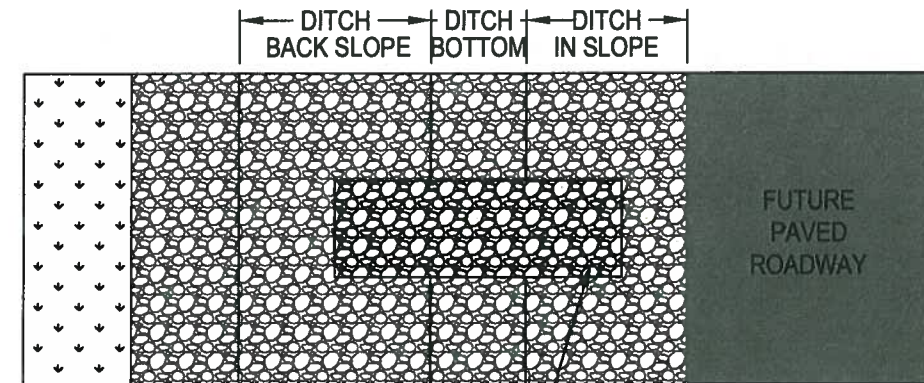


NOTE:
WHERE APPLICABLE CONTRACTOR MAY SALVAGE ONSITE ROCKS & PLACE IN
DITCH BOTTOM.

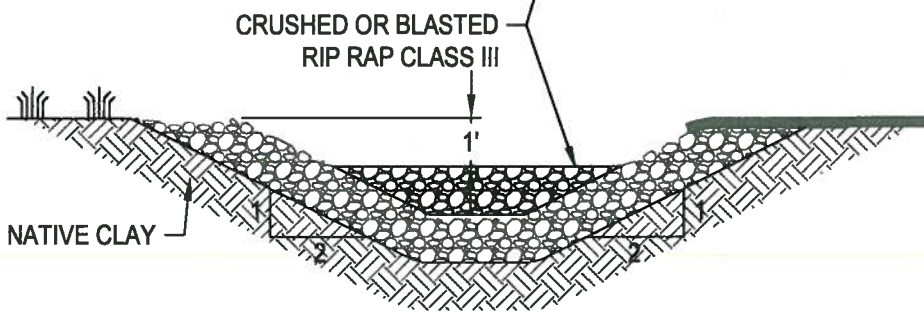
2 TYPE 2 DITCH SECTION
C2.0 NOT TO SCALE



3 TYPE 3 DITCH SECTION
C2.0 NOT TO SCALE

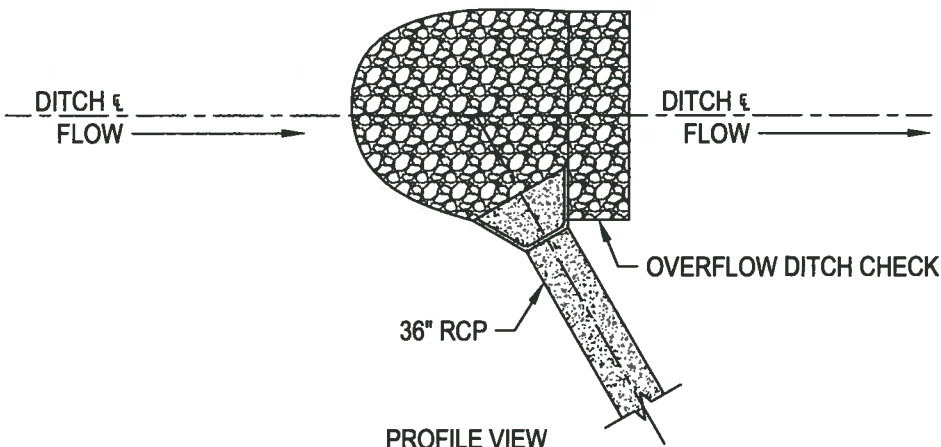


PLAN VIEW

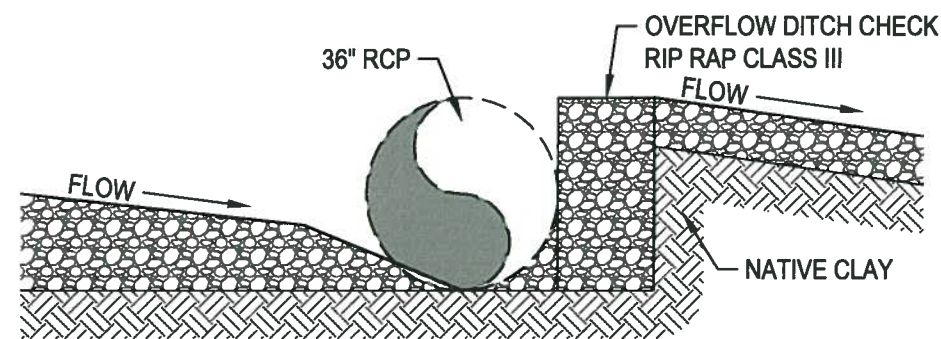


PROFILE VIEW

4 ROCK DITCH CHECK
C2.0 NOT TO SCALE

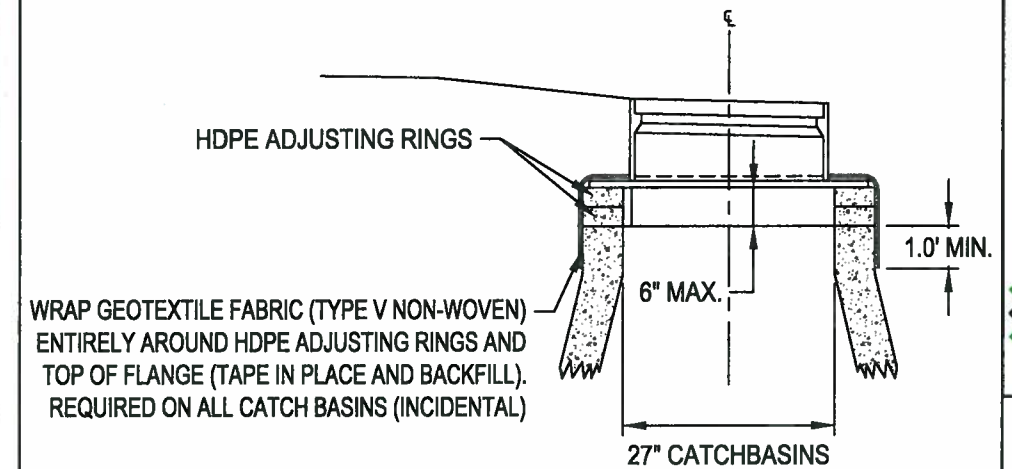


PROFILE VIEW



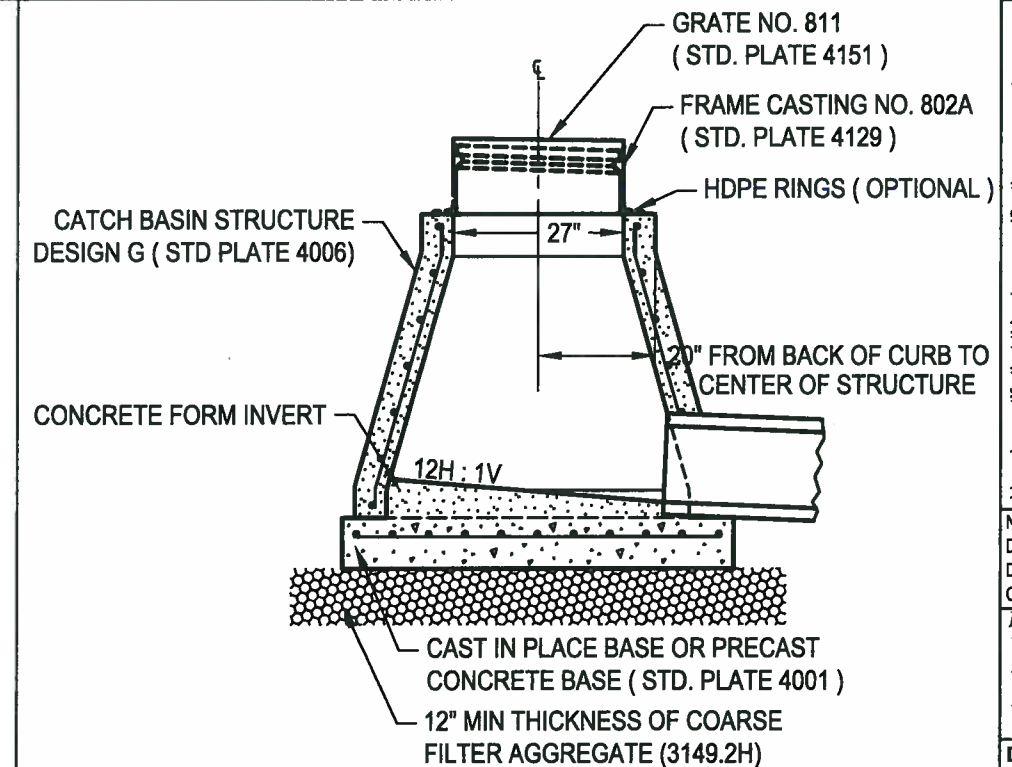
PROFILE VIEW

5 OVERFLOW DITCH CHECK
C2.0 NOT TO SCALE



WRAP GEOTEXTILE FABRIC (TYPE V NON-WOVEN)
ENTIRELY AROUND HDPE ADJUSTING RINGS AND
TOP OF FLANGE (TAPE IN PLACE AND BACKFILL).
REQUIRED ON ALL CATCH BASINS (INCIDENTAL)

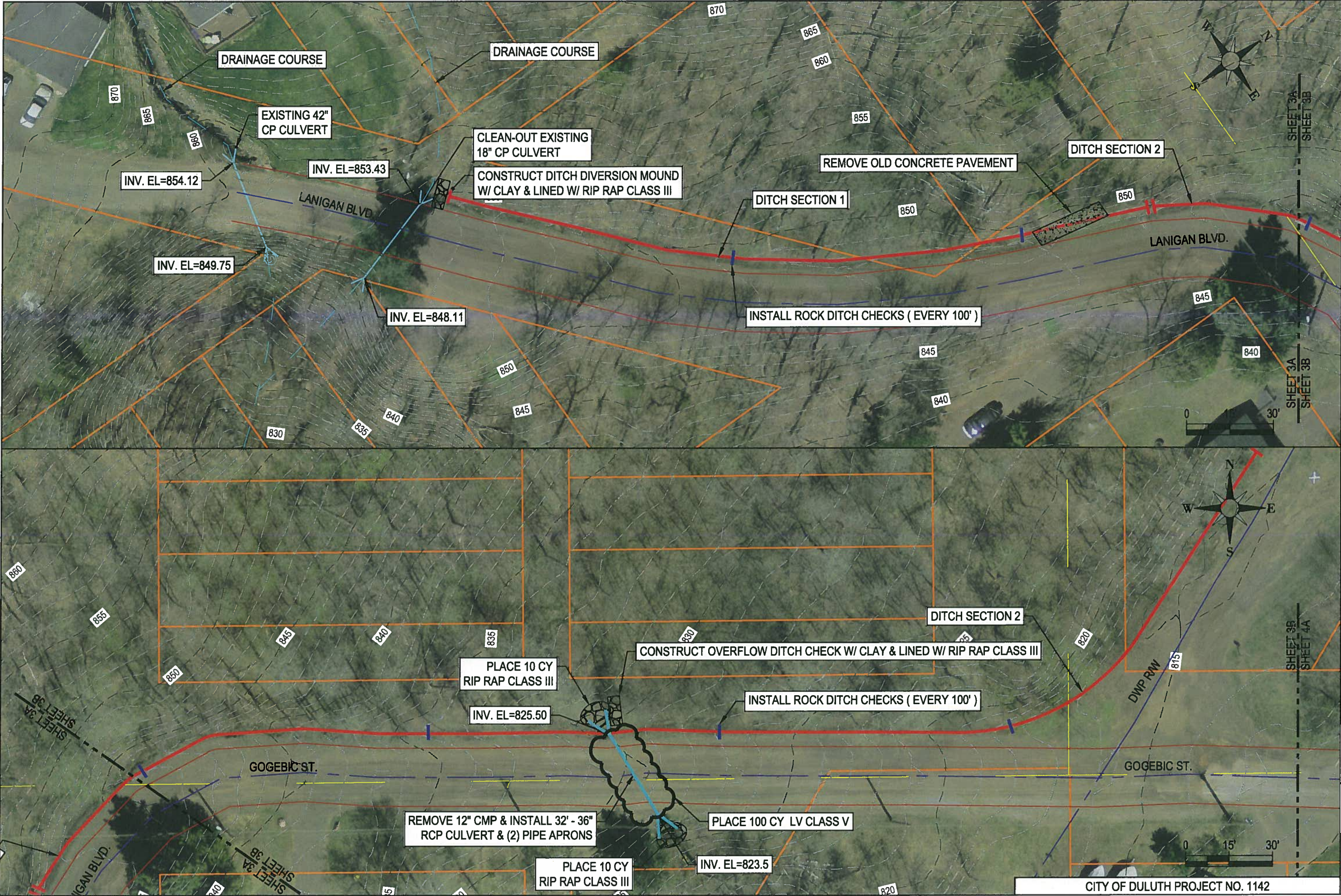
6 FABRIC WRAPPED CATCH BASIN CASTING
C2.0 NOT TO SCALE



NOTES:
1. CASTING ASSEMBLY INCLUDES GRATE, GRATE FRAME AND CURB BOX.
2. ALL GROUTING TO BE NON-SHRINK GROUT.

7 DESIGN "G" CATCH BASIN & CASTING ASSEMBLY DETAIL
C2.0 NOT TO SCALE

CITY OF DULUTH PROJECT NO. 1142



**Northland**
Consulting Engineers L.L.P.

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**LANIGAN BLVD. / GOGEBIC ST.
DITCH RECLAIM PROJECT**

Lanigan Blvd. / Gogebic St. Duluth, MN

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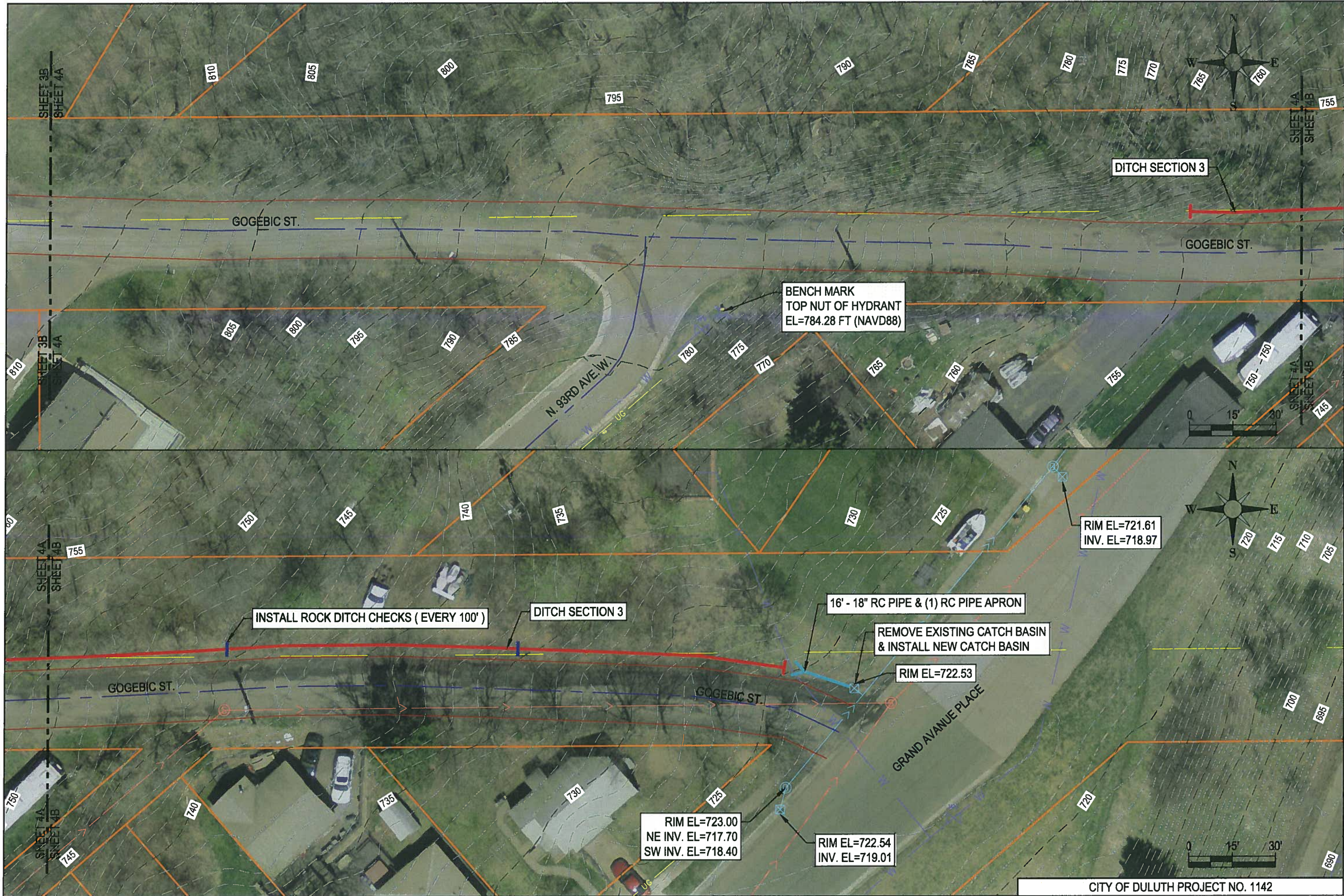
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Date: 08/21/12
Drawn By: EGT
Checked By: DGB

Revisions:

**LANIGAN BLVD. / GOGEBIC ST.
OVERVIEW**
sheet title
sheet number

C3.0

CITY OF DULUTH PROJECT NO. 1142



**Northland**
Consulting Engineers L.L.P.

Structural, Civil and Forensic Engineering Services
Voice: (218)727-5995 Fax: (218)727-7779 www.nce-engineers.com

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Revisions:

**GOGEBIC ST.
OVERVIEW**

sheet
title

sheet
number

C4.0