

PLAN LEGEND

RIGHT OF WAY LINE	---
DITCH CENTERLINE	---
FENCE LINE	---
RETAINING WALL	---
GRAVEL LINE	---
GUARD RAIL LINE	---
RAILROAD TRACK LINE	---
ROAD CENTERLINE	---
TREE LINE	---
STREAM LINE	---
WETLAND LINE	---
EX SANITARY LINE	---
PR SANITARY LINE	---
AB SANITARY LINE	---
EX FORCEMAIN LINE	---
PR FORCEMAIN LINE	---
AB FORCEMAIN LINE	---
EX STORM LINE	---
PR STORM LINE	---
AB STORM LINE	---
EX WATER LINE	---
PR WATER LINE	---
AB WATER LINE	---
EX GAS LINE	---
PR GAS LINE	---
AB GAS LINE	---
EX STEAM LINE	---
PR STEAM LINE	---
AB STEAM LINE	---
UG CABLE TV LINE	---
AB CABLE TV LINE	---
UG ELECTRIC LINE	---
AB ELECTRIC LINE	---
UG FIBEROPTIC LINE	---
AB FIBEROPTIC LINE	---
UG TELEPHONE LINE	---
AB TELEPHONE LINE	---
OH ELECTRIC LINE	---
OH TELEPHONE LINE	---
OH CABLE TV LINE	---

SYMBOLS

EX SANITARY MANHOLE	(SAN)
EX SANITARY CLEANOUT	(X)
EX STORM MANHOLE	(STRM)
EX STORM CATCHBASIN	(Hatched)
EX. WATER MANHOLE	(W)
EX. WATER VALVE	(WV)
EX. WATER HYDRANT	(WV with cross)
EX. WATER SHUTOFF	(WV with circle)
EX. WATER & GAS MH	(W&G)
EX. GAS MANHOLE	(GAS)
EX. GAS VALVE	(GV)
EX. GAS SHUTOFF	(GV with circle)
EX. STEAM MANHOLE	(STEAM)
EX. TELEPHONE MANHOLE	(T)
EX. ELECTRIC MANHOLE	(E)
EX. POWERPOLE	(Pole symbol)
EX. LIGHT POLE	(Light pole symbol)
EX. ELECTRIC VAULT	(Vault symbol)
EX. ANCHOR	(Anchor symbol)
EX. ELECTRIC TRANSFORMER	(ET)
EX. STREET LIGHT	(Street light symbol)
EX. SIGNAL W/ STREET LIGHT	(Signal symbol)
EX. HANDHOLE	(H.H.)
EX. HANDHOLE	(H.H. with circle)
EX. TELEPHONE PEDESTAL	(Pedestal symbol)
EX. WELL	(Well symbol)
BENCHMARK	(Benchmark symbol)
FOUND CI MONUMENT	(Monument symbol)
EX. SIGN	(Sign symbol)
CONTROL POINT	(Control point symbol)
EX DECIDUOUS TREE	(Deciduous tree symbol)
EX CONIFEROUS TREE	(Coniferous tree symbol)
EX. PARKING METER	(Parking meter symbol)
EX. SOIL BORING	(Soil boring symbol)
SB#: ??	(SB symbol)
ELEV: ??	(Elev symbol)

# CITY OF DULUTH

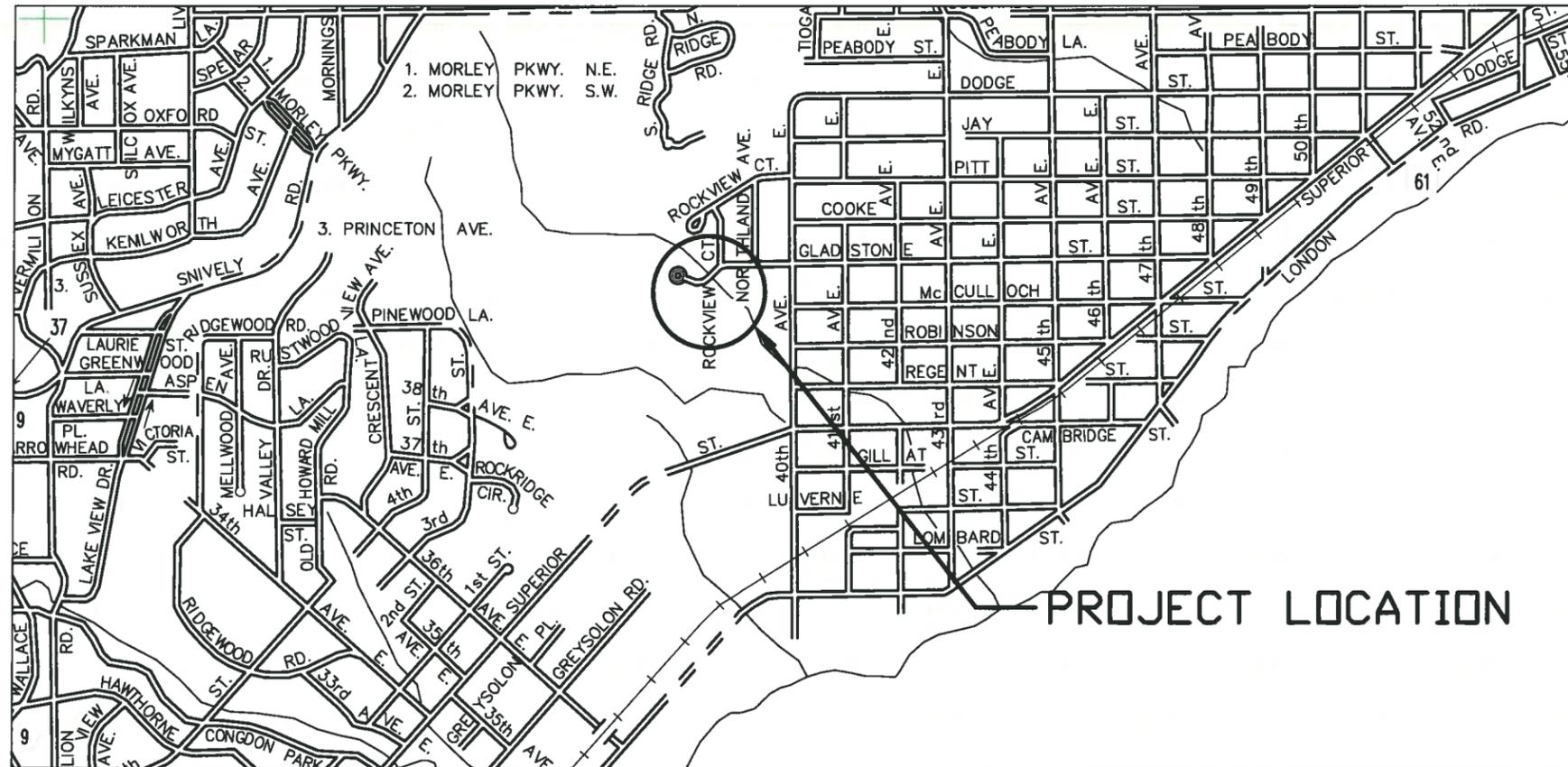
## DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING DIVISION

### CONSTRUCTION PLANS FOR:

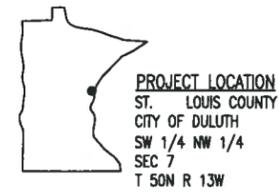
43RD AVENUE EAST CREEK OUTFALL BELOW GLADSTONE STREET

FLOOD SITE NO. 338

CITY PROJECT NO. 1198



PROJECT LOCATION



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

WARNING:  
LOCATION OF UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR. CALL BEFORE DIGGING. GOPHER STATE ONE CALL 1-800-252-1166 REQUIRED BY LAW

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/pre-letting/spec/index.html>

THE 2360 PLANT MIXED ASPHALT PAVEMENT SPECIFICATION DATED ~~02/01/2011~~ **01/23/13** SHALL APPLY.  
AVAILABLE AT: <http://www.dot.state.mn.us/materials/bituminous.html>

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/publ/fieldmanual2011/>

THE 2013 EDITION OF THE CITY OF DULUTH PUBLIC WORKS AND UTILITIES DEPARTMENT STANDARD CONSTRUCTION SPECIFICATIONS AND SUPPLEMENTS OR ADDENDUMS SHALL APPLY.  
AVAILABLE AT: [http://www.duluthmn.gov/engineering/spec\\_book/](http://www.duluthmn.gov/engineering/spec_book/)

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES & DETAIL DRAWINGS
3	PLAN & PROFILE

THIS PLAN CONTAINS 3 SHEETS

I HEREBY CERTIFY THAT THIS PLAN 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.

TOM JOHNSON  
PROJECT ENGINEER (TYPED OR PRINTED NAME)  
*[Signature]* 7-30-13 46744  
PROJECT ENGINEER DATE REG. NO.

CITY APPROVAL  
*[Signature]* 8/2/13  
APPROVED CHIEF ENGINEER OF TRANSPORTATION DATE

*[Signature]* 8/5/2013  
APPROVED CHIEF ENGINEER OF UTILITIES DATE

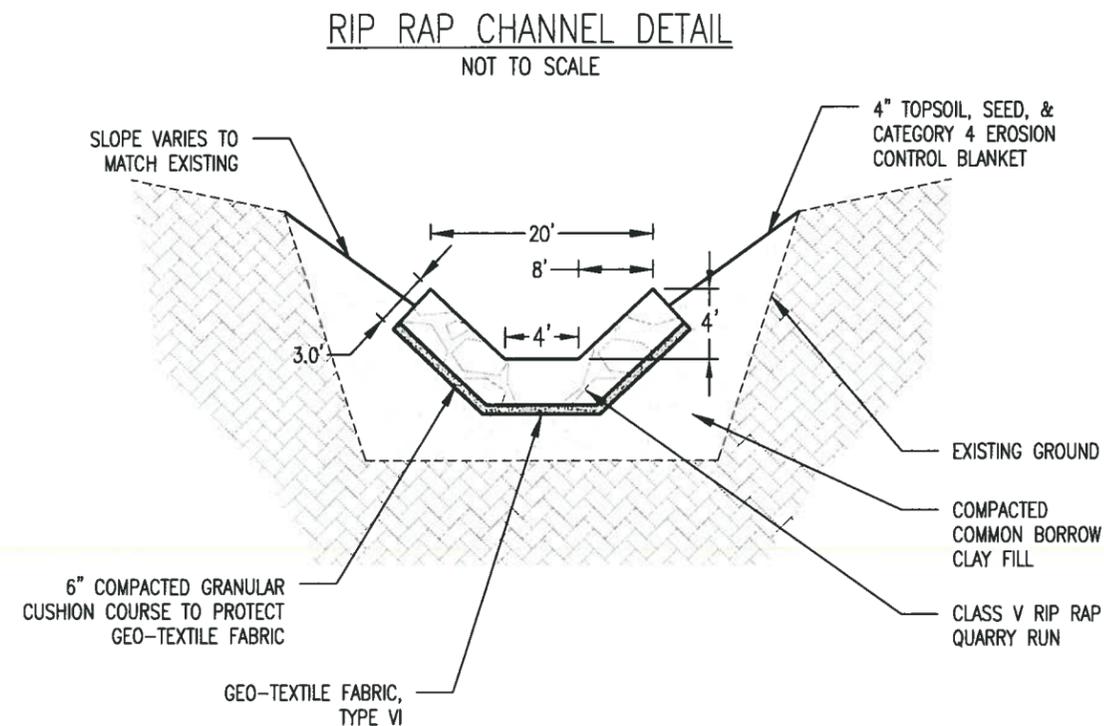
*[Signature]* 8/5/13  
APPROVED CITY ENGINEER DATE

I:\PWU\ENGINEER\PROJECTS\2012\1198\_43rd\_Ave\_E\_Storm\_Culvert\Constructions\Plan\DWG\1198\_43RD\_AVE\_CREEK\_OUTFALL\_RESTORATION.dwg Wednesday, July 31, 2013 1:18:47 PM

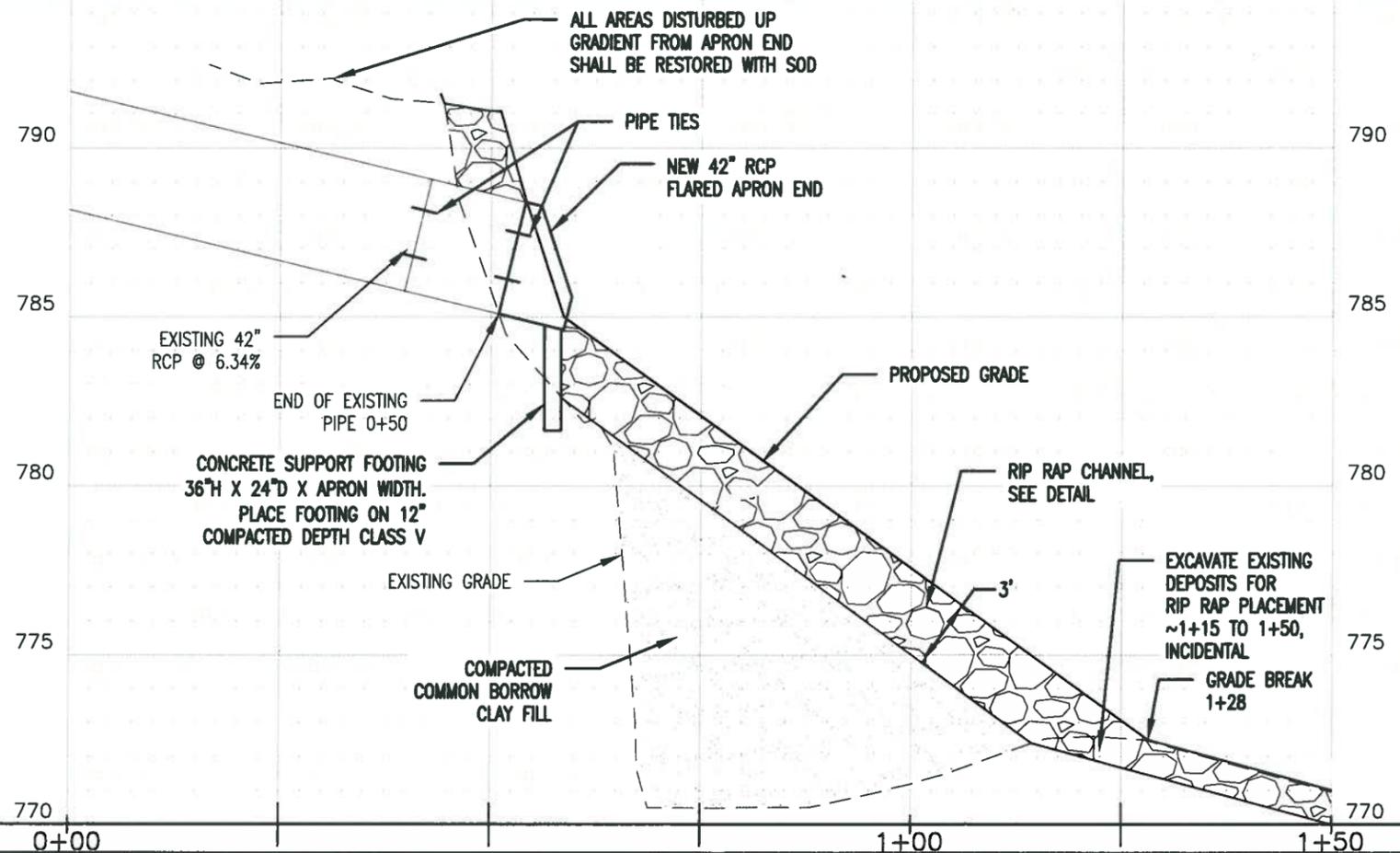
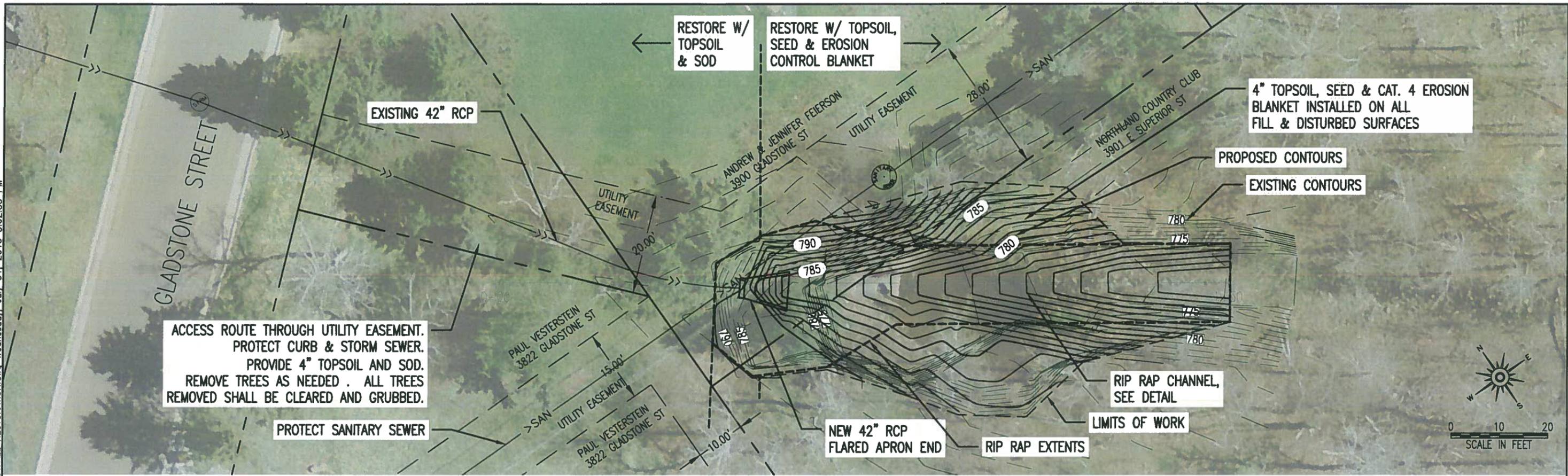
**STATEMENT OF ESTIMATED QUANTITIES - FOR REFERENCE ONLY**

NOTES	ITEM NUM.	DESCRIPTION	UNIT	EST. QUANTITY	FINAL QUANTITY
	1	MOBILIZATION	LUMP SUM	1	
1	2	CREEK FLOW BYPASSING	LUMP SUM	1	
	3	42" RCP FLARED END STORM SEWER APRON	EACH	1	
2	4	APRON FOOTING	EACH	1	
3	5	PIPE TIES	EACH	6	
4	6	COMMON BORROW	CU YRD	450	
	7	RIP RAP, CLASS V 3601.2A2C - QUARRY RUN	CU YRD	240	
	8	GEO-TEXTILE FABRIC, TYPE VI	CU YRD	315	
	9	TOPSOIL BORROW	CU YRD	25	
	10	EROSION CONTROL BLANKET, CATEGORY 4	SQ YRD	150	
	11	SEED	LB	10	
	12	SOD	SQ YRD	700	
	13	BIOROLL	LN FT	200	
	14	INLET PROTECTION	EACH	2	

NOTES	
1	BYPASS BASE FLOWS AND PEAK FLOWS OF 43RD AVE E CREEK UNTIL CHANNEL IS STABILIZED
2	ITEM MAY BE POURED IN PLACE OR PRECAST. APRON SHALL BE ATTACHED TO FOOT WITH RUST RESISTANT ANCHORS, INCIDENTAL.
3	PIPE TIES SHALL CONFORM TO MNDOT STANDARD PLATE 3145F.
4	COMMON BORROW SHALL BE COMPACTABLE CLAY TYPE MATERIAL.



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CERTIFIED BY: <b>TOM JOHNSON</b>	REG. NO.: <b>46744</b>	REVISION	<b>43RD AVE E CREEK OUTFALL BELOW GLADSTONE STREET</b>	DRAWN BY: <b>JJM</b>
SIGNATURE: _____	DATE: <b>07/26/2013</b>		CITY OF DULUTH	<b>PLAN &amp; PROFILE</b>
			CITY PROJECT NO.: <b>1198</b>	STATE AID PROJECT NO.:
				SHEET NO. <b>3 OF 3</b>