

**CONSTRUCTION NOTES**

Obtain Construction Plans from Designer prior to starting job.  
 Coordinate with Contractor / Engineering Firm for exact locations of proposed structures and facilities prior to installation of gas facilities.  
 Install new main as shown or as directed in field at time of installation.  
 Long side mains and services to be installed below proposed sub-outs (See Construction Plans).  
 All test points should be installed in the boulevard or other acceptable locations and avoid placement in driving lanes.  
 Verify Coating test results if required prior to abandoning main.

**CONSTRUCTION PROCEDURES**

Install: Clean and Test; and Put in Service; Proposed new main per CenterPoint Energy Construction and Services Manual.  
 Procedure for tapping or making tie-ins to existing gas mains: Verify existing gas main size, type, and location prior to tapping or making tie-in. Monitor and verify, using a pressure gauge, existing gas main Pressure Class within the bell hole of tap location or tie-in location prior to tapping or making tie-in.  
 Purge new main until essentially 100% reading is obtained on Combustible Gas Indicator. See CenterPoint Energy Construction and Services Manual Section CS-B-1.220 for purging mains into service.  
 Complete all Service / Meter Work as directed. (See Service Survey)  
 See Abandonment Procedures for abandonment and purging procedures.  
 Install a marker ball at a new end of main, at a valve, at each end of a horizontal offset, at road crossings and at any fitting or pressure control identified as needing to be located in the future. Refer to CenterPoint Energy Construction and Services Manual section CS-B-1.310 for installation procedures.

**ABANDONMENT PROCEDURES**

See Construction Procedures for installation of mains and services prior to abandonments.  
 Cut and Abandon existing main as shown. Purge abandoned mains until essentially 0% gas reading is obtained on Combustible Gas Indicator. See CenterPoint Energy Construction and Services Manual Section CS-B-1.110 and Section CS-B-1.230 for purging mains out of service using air movers.  
 Contact Engineering with questions.

**NOTE: BORE ALL PAVED STREETS AND DRIVEWAYS**

Minimum depth requirements for crossings of state highways and county roads is 60". Minimum depth requirements for crossings of city streets and township roads is 48".  
 Minimum depth for parallel installations on state highways and county roads is 36". Minimum depth for parallel installations on city streets and township roads is 30". All steel pipe welds to be coated with 2 part epoxy.

Pipe being removed must be tested for PCBs and asbestos to confirm disposal requirements - contact Environmental, 612-861-8471. For pipe to be abandoned, refer to CNP Construction and Service Manual CS-B-1.110, CS-B-1.330, and CS-B-1.100.

It is a requirement on the Hennepin County permit that they be notified 24 hours prior to the start of any excavation. Please read the permit prior to starting excavation. Please call the county at 612-596-0339 or the individual county inspector's cell phone number listed on the permit.  
 north - Jake Cardinal - 612-528-1822  
 south - Bob Rumsch - 612-490-5416

THE CALL IS TO BE MADE 24 HOURS PRIOR TO CONSTRUCTION. PLEASE REMEMBER THAT THIS IS A COUNTY REQUIREMENT.

**TEST PROCEDURES - TROY LN  
 WO90878685**

**DESIGN DATA & PARAMETERS:**

Establish MAOP = **215 psig**

Hoop stress (P=2S/D)	S (psi)	t (in)	D (in)	P (psig) at 100% SMYS	% SMYS at MAOP	% SMYS at REC. STRENGTH TEST	Pmax (psig) LEAK TEST	Pmax (psig) STRENGTH TEST
8" Steel Pipe	52000	0.188	8.625	2267	9.5	15.4	453	1133
8" Fitting	35000	0.322	8.625	2613	8.2	13.4	523	1307

**TEST DATA**

TEST CONDITIONS: Pipe shall be operated at a hoop stress less than 30% of SMYS. CenterPoint Energy will perform both Strength and Leak test to substantiate the proposed MAOP, as indicated above.  
 TEST MEDIUM: Nitrogen shall be used as a test medium.  
 SAFETY: Reasonable precautions should be made to protect employees and the general public during the testing.  
 Personnel to remain on-site during testing.

**LEAK TEST REQUIREMENTS:**

A leak test must be made at a pressure between 100 psig and the pressure required to produce a hoop stress of 20% of SMYS; or the line must be walked to check for leaks while the hoop stress is held at approximately 20% of SMYS - 192.507 (b).  
 Maximum Leak Test Pressure (Use component with the highest stress):  
 Pmax=20% of 2S/D  
 Limiting Component: 8" Steel Pipe  
**Pmax (psig) 453**

LEAK TEST DURATION: The pressure must be maintained at or above the test pressure for at least 1 hour - 192.507 (c).

**REQUIRED STRENGTH TEST PRESSURE:**

Minimum required test pressure: **MAOP \* 1.5 = 215 \* 1.5 = 322.5**  
 192.503/192.619 Federal Standard Testing for Class 3/Class 4 Location  
 Maximum Strength Test Pressure: **Pmax = (S x 2/D) x F x E x T** assuming F=0.5 E=1 T=1  
**Pmax (psig) 1133**

**TEST REQUIREMENTS:**

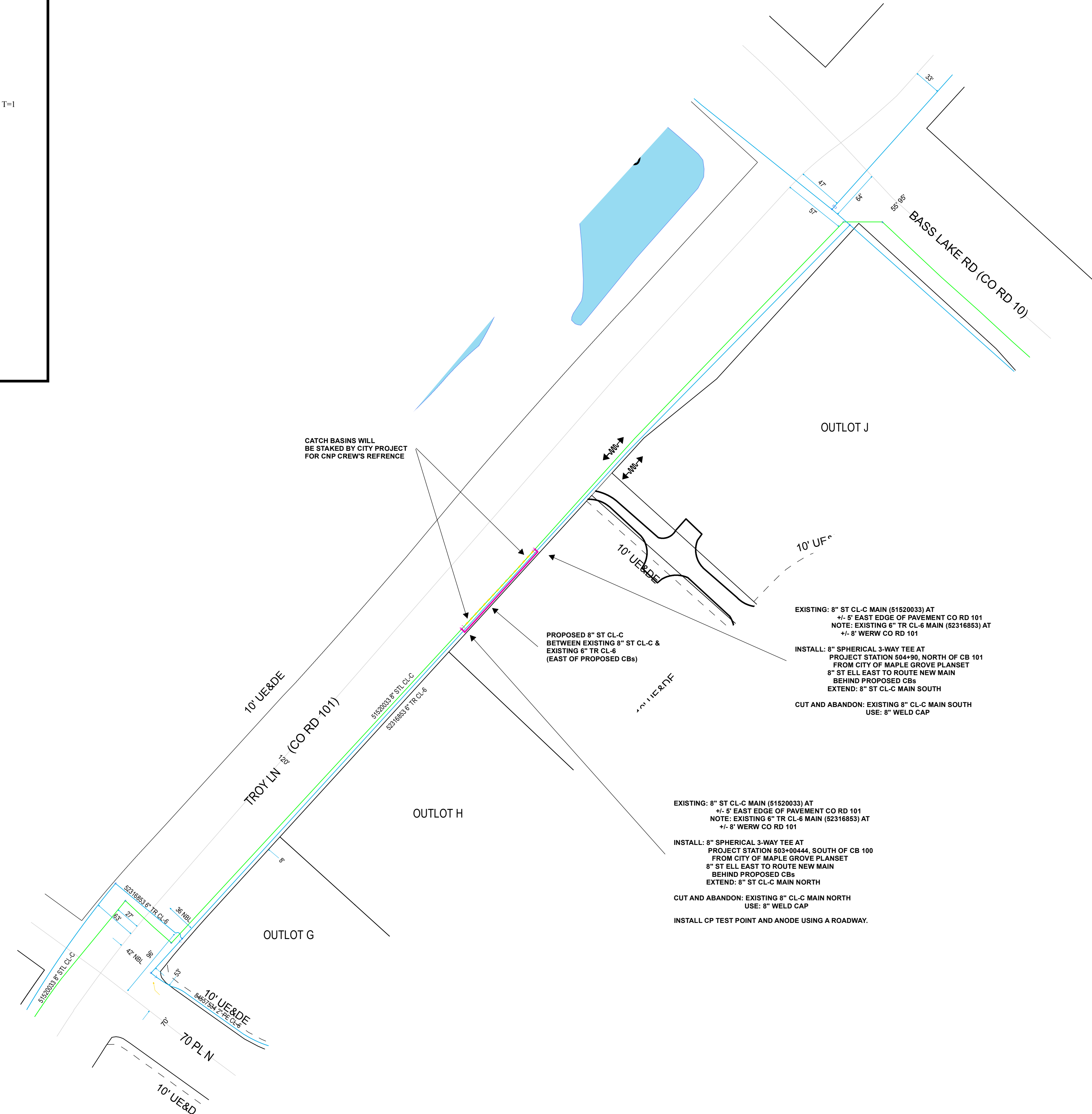
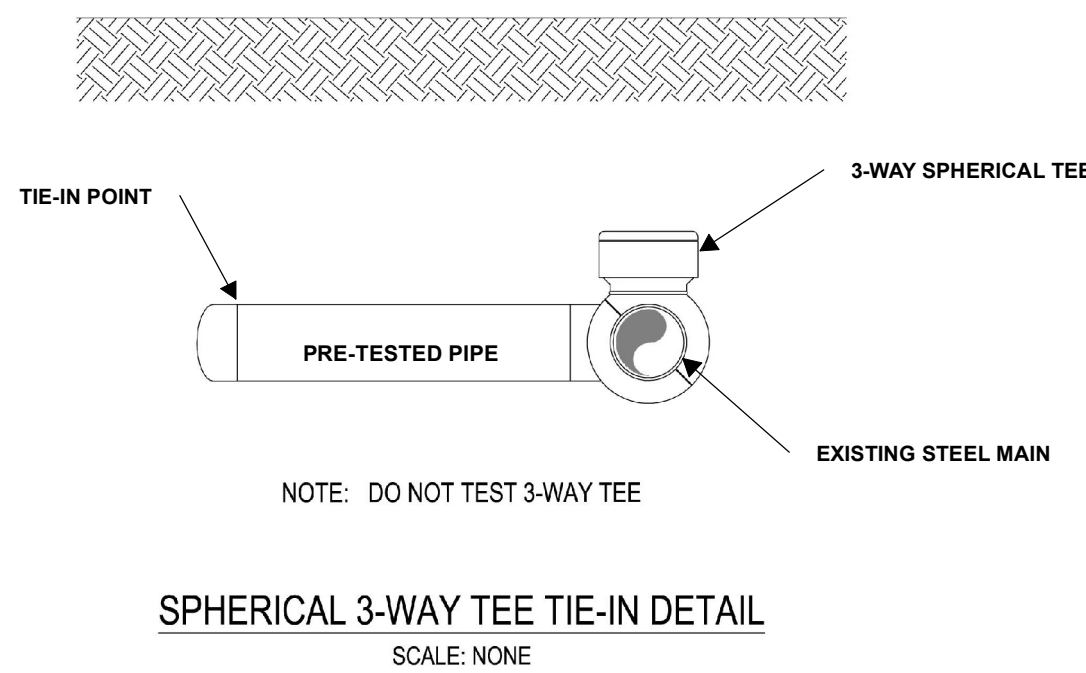
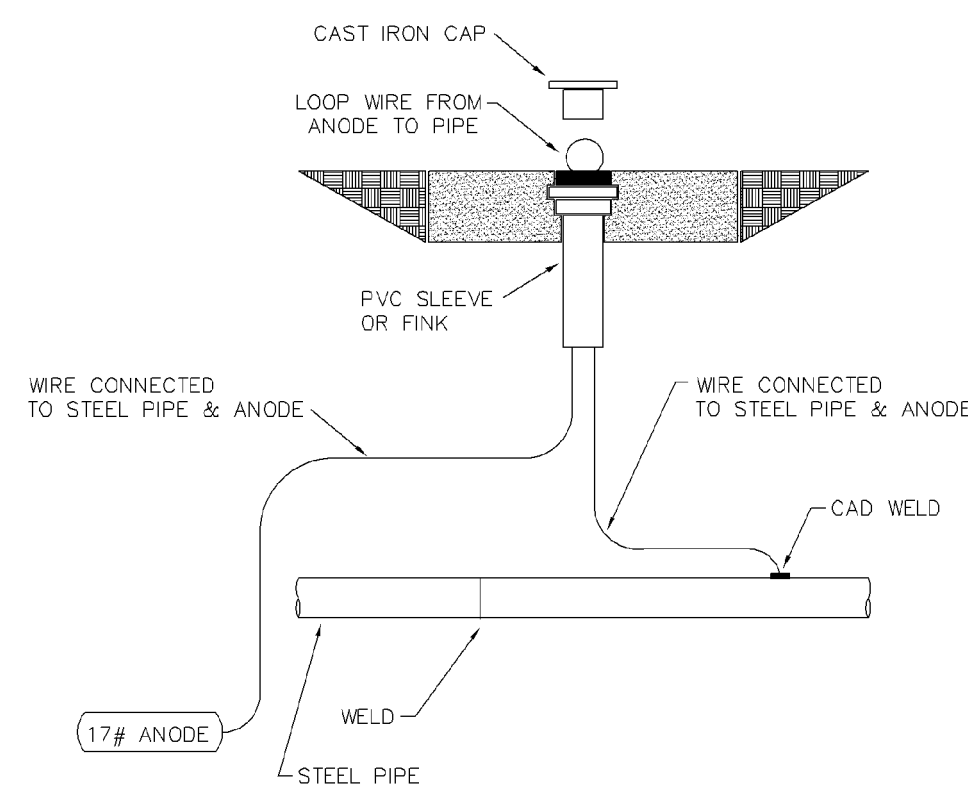
Nitrogen shall be used as test medium for leak and strength tests up to 50% SMYS  
 100% X-ray of all welds is required, including tie-in welds - soap test tie-in welds at line pressure  
 Mag particle all fillet welds  
 Use a digital gauge with 15 minute recordings and pressure chart  
 Measure pipe temperature at an appropriate location  
 Record ambient and pipe temperature at 15 minute intervals  
 Allow pressure and pipe temperature to stabilize prior to starting tests  
 Valves: Follow manufacturer's recommendation for testing position  
 Typically, ball valves are tested in half open position  
 Typically, gate valves are tested in fully open position  
 Test instrument calibration records are required  
 Refer to construction and service manual, CS-B-1.220 for record requirements

**LEAK TEST:** Recommended test pressure: **120 psig (Do not exceed 453.4 psig)**  
 Recommended test duration: **1 hour minimum**

**STRENGTH TEST:** Recommended test pressure: **350 psig (Do not exceed 1133.4 psig)**  
 Recommended test duration: **8 hour minimum**

**CP TEST POINT WITH ANODE  
 ROADWAY INSTALLATION**

- NOTE:
1. Install roadway cap at final grade.
  2. Allow a minimum of 10" of slack in test wires.



CenterPoint Energy  
 MINNESOTA REGION  
 PROPRIETARY AND CONFIDENTIAL  
 PROJECT # **90878685**  
 M52300 MAPLE GROVE

ONE CALL:  
 Hennepin  
 \*SW30 T119/R22  
 \* = this Page

LEGEND:  
 - ACTIVE MAIN  
 - DESIGNED MAIN  
 - PROPOSED ABANDONED/  
 - OUT OF SERVICE MAIN  
 - ABANDONED/  
 - OUT OF SERVICE MAIN

PIPE REQUIRED:  
 140' 8" STL CL-C  
 140' PIPE

PROPOSED ABANDONED PIPE:  
 132' 8" STL CL-C  
 132' PIPE

COPIES:  
 PIPELINE INTEGRITY PACKET: N  
 STATION MANAGER: N  
 DD NUMBER:  
 CORROSION: MIKE MCCALL  
 EMP: N

FOLLOW INTERNAL PIPE SAMPLING REQUIREMENTS? Y

SURVEYOR REQUIRED? N

RETURN PACKET TO ENG? N

GFIP #:  
 PERMITS:  
 CITY OF MAPLE GROVE  
 HENNEPIN COUNTY

PROJECT DESCRIPTION: SREL  
 TROY LN

DESIGNER: TJ Haider  
 PHONE #: 612-321-5132  
 DRAWN BY: TJ Haider  
 DESIGN DATE: 7/23/2019

REVISION INFO:

Main SCALE 1"=80'  
 SSM NONE - OPENING SHEET 1 OF 1

DESIGNER EXPRESS DESIGN

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]*  
 Typed or Printed Name: DANIEL G. CHRISTENSEN  
 Date: 07/29/2019 License Number: 46588