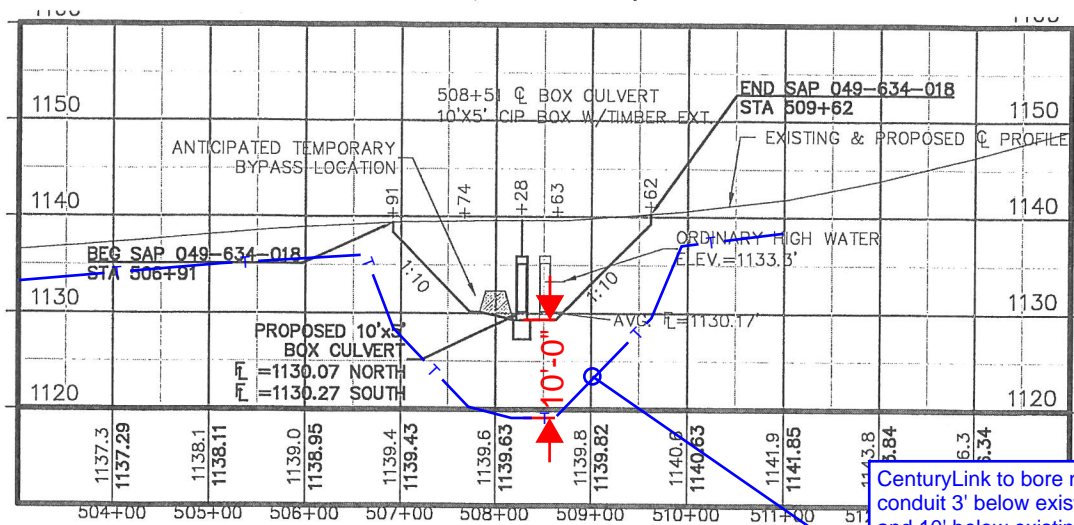


CSAH 34 (93RD ST) PROFILE



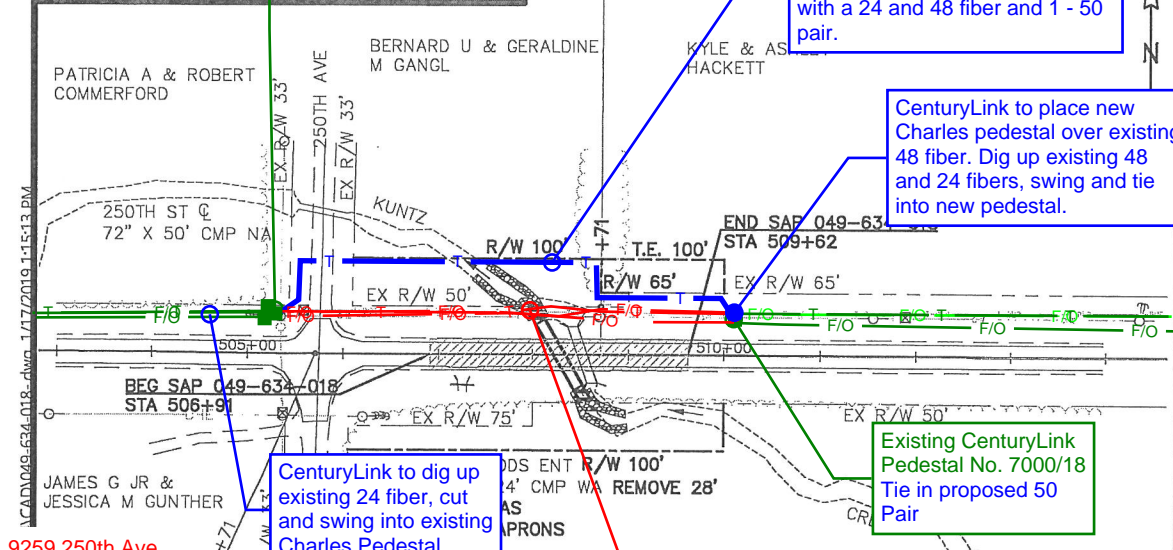
CenturyLink to bore new 4" conduit 3' below existing grade and 10' below existing creek bed. Pull through 1 - 1.25" innerduct with a 24 and 48 fiber and 1 - 50 pair.

Existing CenturyLink Crossbox VIRTUAL X BKMN 7000/19 X CONN Tie in proposed 50 Pair

Terminal Enclosure PIRZMNBZ00_CAF045 Tie in proposed and existing 24 Fibers

Charles Ped PED_24991 93RD ST Tie in proposed 48 and 24 fibers and existing 24 fiber

PLAT B.M. ELEV. 1136.91 PK SW CORNER TIMBER BOX STATION 508+57 RIGHT 30'



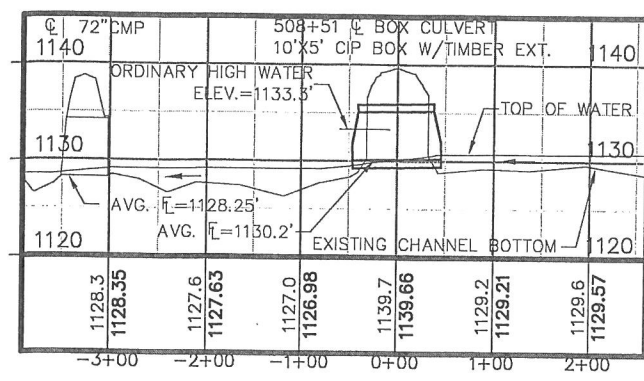
2929 250th Ave Royalton, MN 56373

Conflict #1 Existing CenturyLink 24 fiber, 48 fiber, and 50 pair to be cut from service and left in place.

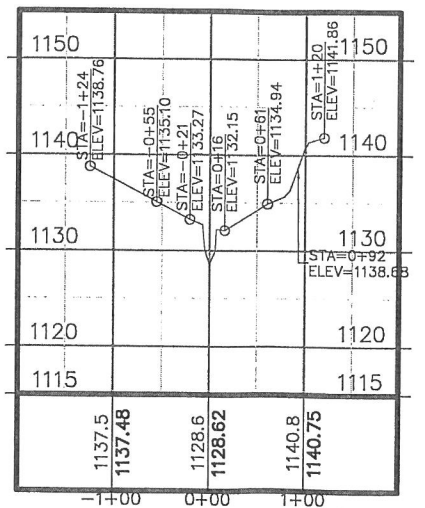
EXISTING STRUCTURE STA. 508+51 BRIDGE #88074 1-LINE 10' X 5' CIP CONC BOX CULVERT W/ TREATED TIMBER EXT SKEW = 19' TOTAL WATERWAY=50 S.F. 32' ROADWAY OVER

PROPOSED STRUCTURE BR# 49K01 STA. 508+28 WATERWAY AREA=50 SQ. FT. 32' ROADWAY OVER 1 LINE 10'X5' PCST. CONC. BOX CULV. 30' SKEW; 2-TYPE III END SECTIONS

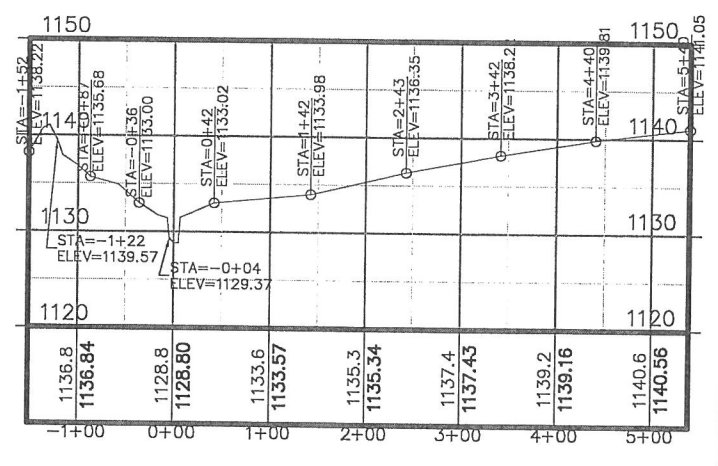
KUNTZ CREEK PROFILE



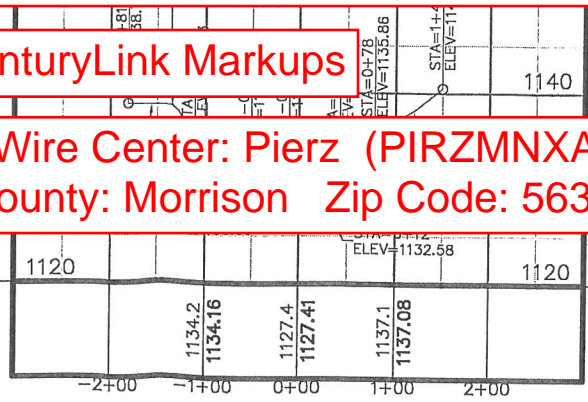
261' UPSTREAM CROSS-SECTION



43' UPSTREAM CROSS-SECTION



164' DOWNSTREAM CROSS-SECTION



CL19.80184_SAP 049-634-018 CSAH 34 Ave Box Culvert - Morrison County

CenturyLink Markups

Wire Center: Pierz (PIRZMNXA)
County: Morrison Zip Code: 56373

Contacts:
TT - Lindsey Kirkham 612.867.1145 lkirkham@terratechllc.net
CTL - Blayne Leuthard 320.255.8350 blayne.leuthard@centurylink.com
Project - John Kostreba 320.631.2865 johnk@co.morrison.mn.us

- LOCATION ENGINEER'S OBSERVATIONS AT BRIDGE SITE
Special features: Channel bottom is silty and sandy with less than 6" of loose material in the bottom
- Other bridges or culverts over the same stream (particularly structures which carry high water without overflow of roadway): Given location, type, length, height above high water, cross-sectional area etc.
UPSTREAM—CR 236 B3" SPAN X 57" RISE CMP ARCH WATERWAY AREA = 27.4 S.F.
CR 236 48" RCP WATERWAY AREA = 12.6 S.F.
TOTAL UPSTREAM WATERWAY AREA = 40.0 S.F.
DOWNSTREAM—250TH AVE 72" CMP TOTAL DOWNSTREAM WATERWAY AREA = 28.3 S.F.
- Apparent highwater elevation _____ Obtained from a lifetime area resident.
- Other data: Approx. velocity of water at time of survey A.D.T. (2017) = 850
AVERAGE BANK FULL WIDTH = 17' +/-

HYDRAULIC ENGINEER'S RECOMMENDATION DATE: 1-3-2019

Stream or ditch designation: KUNTZ CREEK
Drainage area: 4.72 Sq. Miles
Max. discharge on record: UNKNOWN
Design discharge: (275 yr. freq.) 315 cfs
Apparent highwater elevation: UNKNOWN
Design highwater elevation: 1138.3 ft
Design mean velocity through structure: 6.3 ft/sec
Flowline elevation INLET=1130.3 OUTLET=1130.1
Skew angle 30'
Scour Code E
Fill Height at $C_v = 3.75$

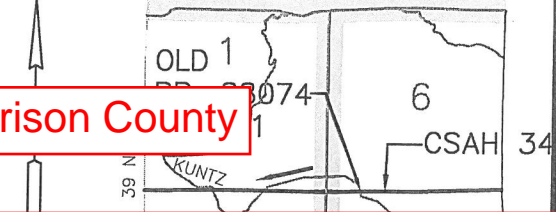
In the interest of flood plain zoning the regional flood(100 yr. freq.) is 277 C.F.S. at stage 1137.1 mean channel velocity of 2.3 ft/sec mean velocity through structure of 5.5 ft/sec. with 0.6 ft. stage increase.

The above recommendation will provide a structure of adequate waterway to pass the regional flood within criteria established by the Dept. of Natural Resources.

THE HYDRAULIC INFORMATION PROVIDED IS FOR BRIDGE REPLACEMENT PURPOSES ONLY, SPECIFICALLY THE PREDICTED 100 YEAR FLOOD STAGE SHALL NOT BE USED FOR FLOOD PLAIN ZONING AS THE ACCURACY OF THE DATA IS INSUFFICIENT FOR FLOOD PLAIN ZONING PURPOSES.

Bridge survey sheets made from: SURVEY DONE BY MORRISON COUNTY PUBLIC WORKS NOV. 2018

BRIDGE SURVEY ON CSAH 34 (93RD STREET).
SEC. 1, 12 TWP. 39 N R. 31 W. &
SEC. 6, 7 TWP. 39 N R. 30 W.
TOWNSHIP: BUCKMAN (W & E)
COUNTY: MORRISON



BRIDGE SHEET OLD BRIDGE NO. 88074

STEVEN C. BACKOWSKI LIC. NO. 18286 DATE 1/12/19

STATE AID PROJ. NO. 049-634-018 SHEET NO. 7 OF 13 SHEETS