

BENCHMARK NO. 1: CHISLED SQ. NE WINGWALL BRIDGE ON S.R. 306 OVER EAST BRANCH CHAGRIN RIVER STA. 228+43.99, 20.162' RT. ELEV. 644.28

BENCHMARK NO. 2: CHISLED SQ. SET ON CONCRETE BASE (SW CORNER) OF O.B.T. BOX AT NE CORNER GARFIELD ROAD AND S.R. 615 STA. 30+55.68, 45.52' RT. ELEV. 650.32

$\Delta = 9^{\circ} 17' 48''$
 $R = 716.20'$
 $T = 58.23'$
 $L = 116.21'$
 $E = 2.36'$
 $D_c = 8^{\circ} 00''$

NOTE: EARTHWORK LIMITS ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS-SECTIONS.

PROPOSED STRUCTURE

TYPE: 3 SPAN CONTINUOUS STEEL COMPOSITE BEAMS (A588) WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
 SPANS: 34'-0", 48'-0", 34'-0" C/C BEARINGS
 ROADWAY: 44'-0" FACE TO FACE OF GUARDRAILS
 LOADING: HS 20-44 (CASE II) AND THE ALTERNATE MILITARY LOADING
 WEARING SURFACE: MONOLITHIC CONCRETE
 SUPERELEVATION: VARIES
 APPROACH SLABS: AS-1-81 (20'-0" LONG)
 SKEW: NONE
 ALIGNMENT: TANGENT

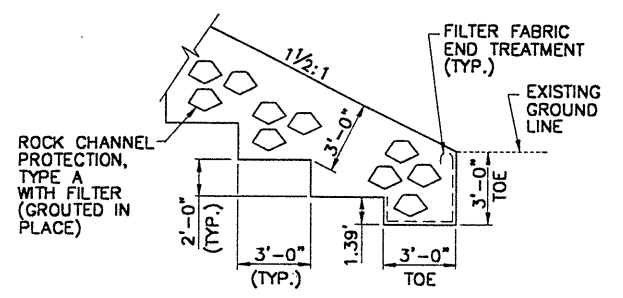
DESIGN AVERAGE DAILY TRAFFIC: 8110 (2023)
 DESIGN AVERAGE DAILY TRUCK: 250 (2023)

HYDRAULIC DATA

PROPOSED STRUCTURE CLEARS DESIGN ESTIMATED 25 YR. WATER BY 3.38'
 DRAINAGE AREA 40.50 SQ. MI.
 ESTIMATED: $Q_{25} = 5508$ CFS
 $V_{25} = 4.93$ FT./SEC.
 $Q_{100} = 7244$ CFS
 $V_{100} = 5.47$ FT./SEC.

FOR SUPERELEVATION DIAGRAM, SEE SHEET 15/16.

— INDICATES SOIL BORING LOCATION.



ROCK CHANNEL PROTECTION STEP AND TOE DETAIL

PLAN

PROPOSED PROFILE	26+00	27+00	28+00	29+00	30+00
654.92	655.07	655.23	655.38	655.54	655.69
710					710
690					690
670					670
650					650
630					630
610					610
EXISTING PROFILE	652.2	652.8	652.2	647.3	639.1

BRIDGE LIMITS = 118.00'
 APPROACH SLAB
 100.00' VERTICAL CURVE
 P.V.I. EL. 656.77
 P.V.I. STA. 29+00
 0.62%
 -2.00%
 25 YR. EL. 649.1
 100 YR. EL. 650.2
 EL. 651.6
 EL. 650.9
 EL. 646.18
 EL. 646.88
 EL. 633.30
 EL. 633.30
 EL. 636.1
 EL. 636.1
 EL. 645.7
 EL. 648.2
 EL. 654.8

PROFILE ALONG C SURVEY & C CONSTRUCTION

H:\CT\97260\SDSK\97260TIN.DWG PLOT SCALE: 1:1 PAPER SPACE

CT Consultants, Inc.
 Engineers • Architects • Planners
 10000 W. 10th Avenue, Suite 100, Denver, CO 80202

DATE: J.E.A. 12/30/99
 STRUCTURE FILE NUMBER: R.L.L.B.
 DRAWN: R.L.L.B.
 REVISION: R.L.L.B.
 DESIGNED: J.P.R.
 CHECKED: I.A.S.

LAKE COUNTY
 STA. 27+70.88
 STA. 28+88.88

SITE PLAN
 KIRTLAND-CHARDON ROAD BRIDGE
 OVER EAST BRANCH CHAGRIN RIVER

LAK - 615 - 0.00

1 / 16

59 / 95