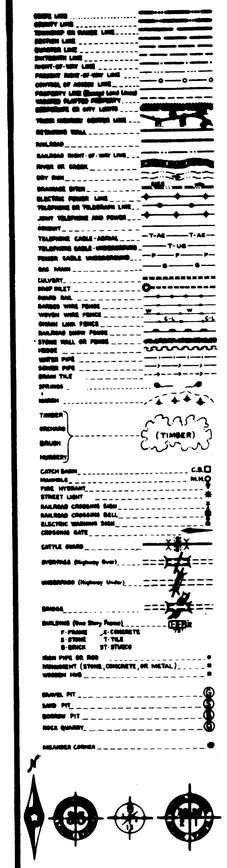
FORM 129 A REV. '64



Fed. Proj. No.

STATE OF MINNESOTA

DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR CULVERT 95167

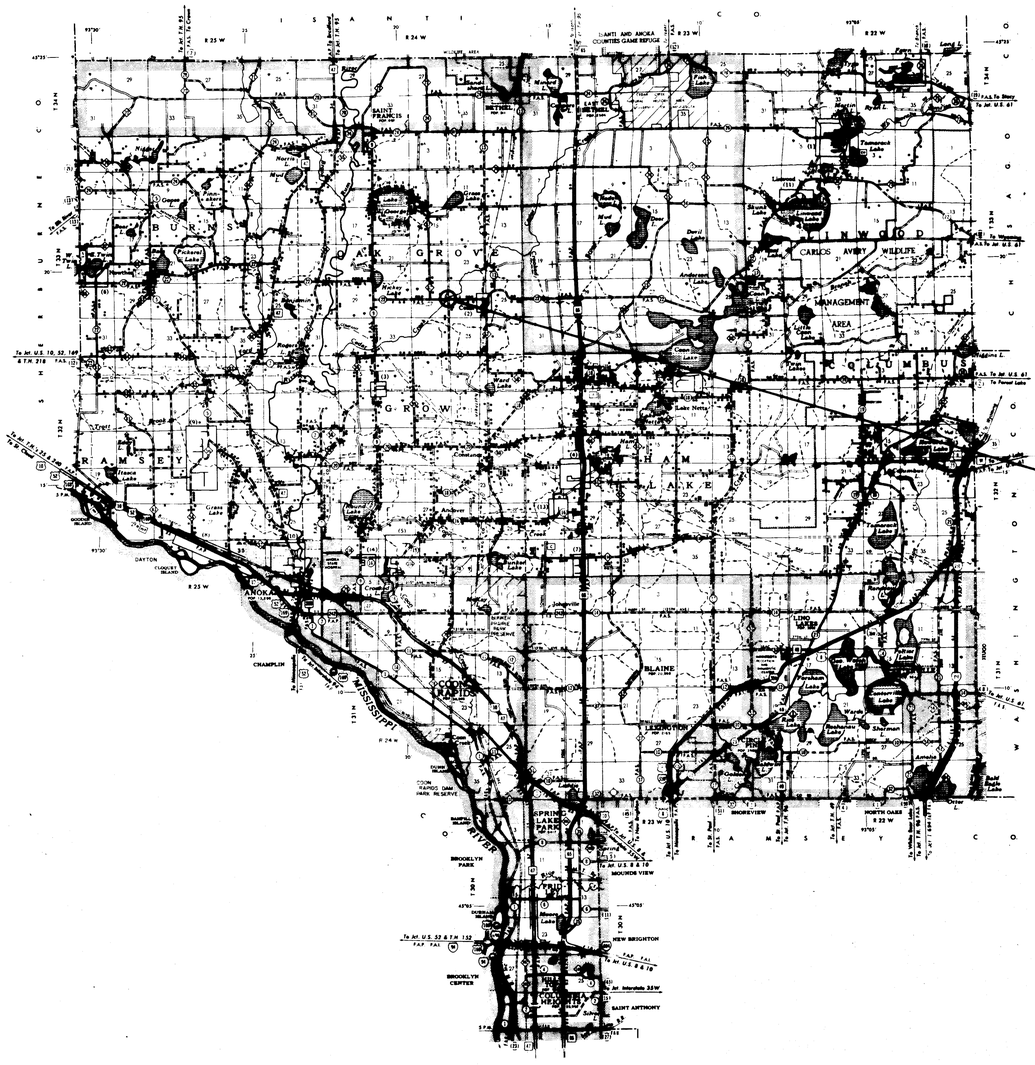
County State Aid Highway No. 82

LOCATED 0.4 MILES EAST OF JUNCTION COUNTY ROAD 67
SEC. 27 T 33N R 24 W

GROSS LENGTH 100.00 FEET 0.019 MILES
BRIDGES-LENGTH FEET 0.019 MILES
EXCEPTIONS-LENGTH 100.00 FEET MILES
NET LENGTH 100.00 FEET 0.019 MILES

INDEX OF SHEETS

Sheet No. / Title Sheet & Layout Map
2-4 CULVERT PLANS



℄ CULVERT NO. 95167
STA. 10+00.00

DESIGN DESIGNATION

ADT (1980) 1875
ADT (2003) 3495
T (HEAVY COMMERCIAL)
9 Ton Design Soil Factor 50
Design Speed 50 MPH
Design Speed not achieved at:
STA.____ TO STA.____ MPH____
STA.____ TO STA.____ MPH____

SPECIFICATIONS

THE "STANDARD" SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", 1983 EDITION, SHALL GOVERN.

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.

PLANS & R/W APPROVED Paul K. Ruud DATE 2-11-80
COUNTY ENGINEER

Anoka COUNTY REG. NO. 6549

RECOMMENDED FOR APPROVAL [illegible] 19
DISTRICT STATE AID ENGINEER

RECOMMENDED FOR APPROVAL Delbert O. Offstedal 9-20 1982

APPROVED 6-13 1983 for STATE AID ENGINEER

Minn. Proj. No. County Proj. No.

STATE AID PROJ. NO. 08-622-18 S.A.P.

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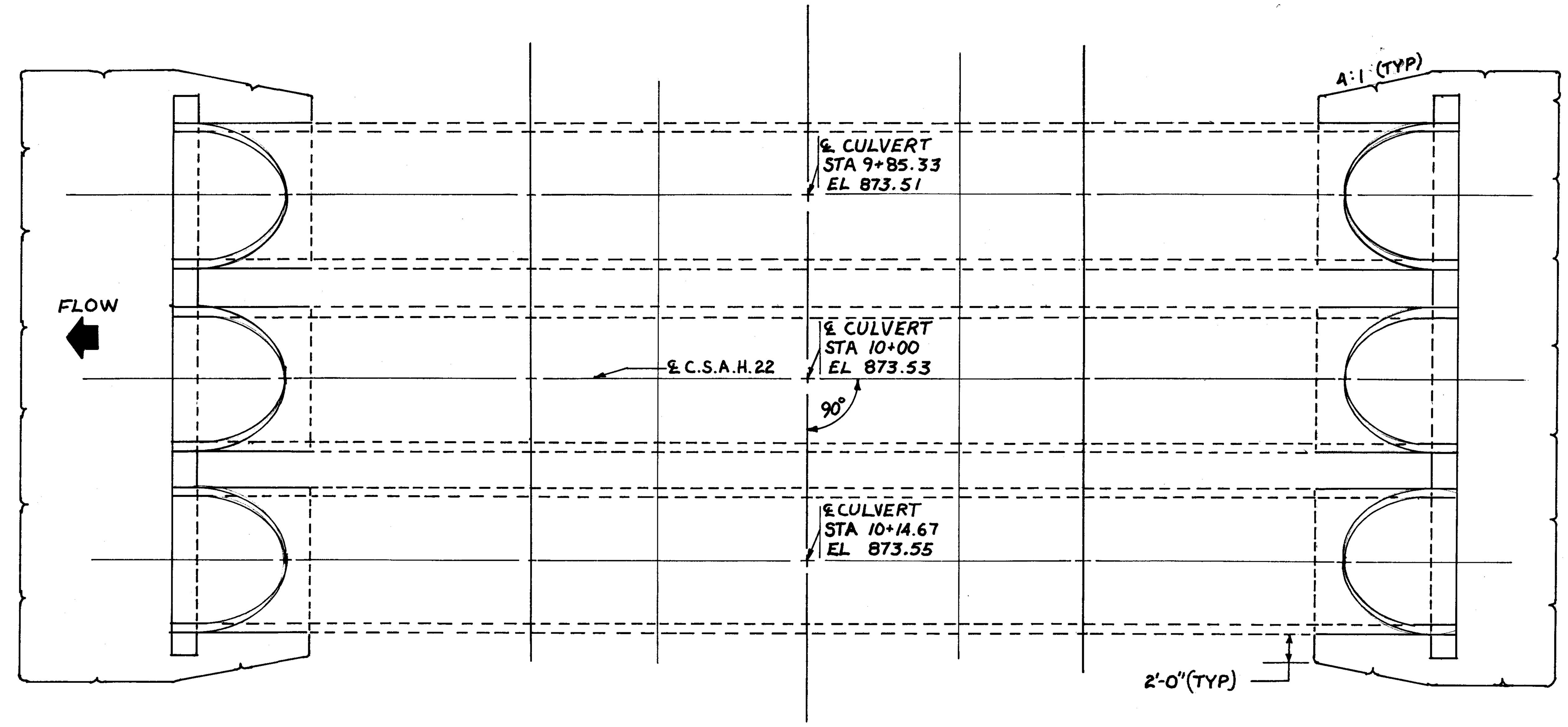
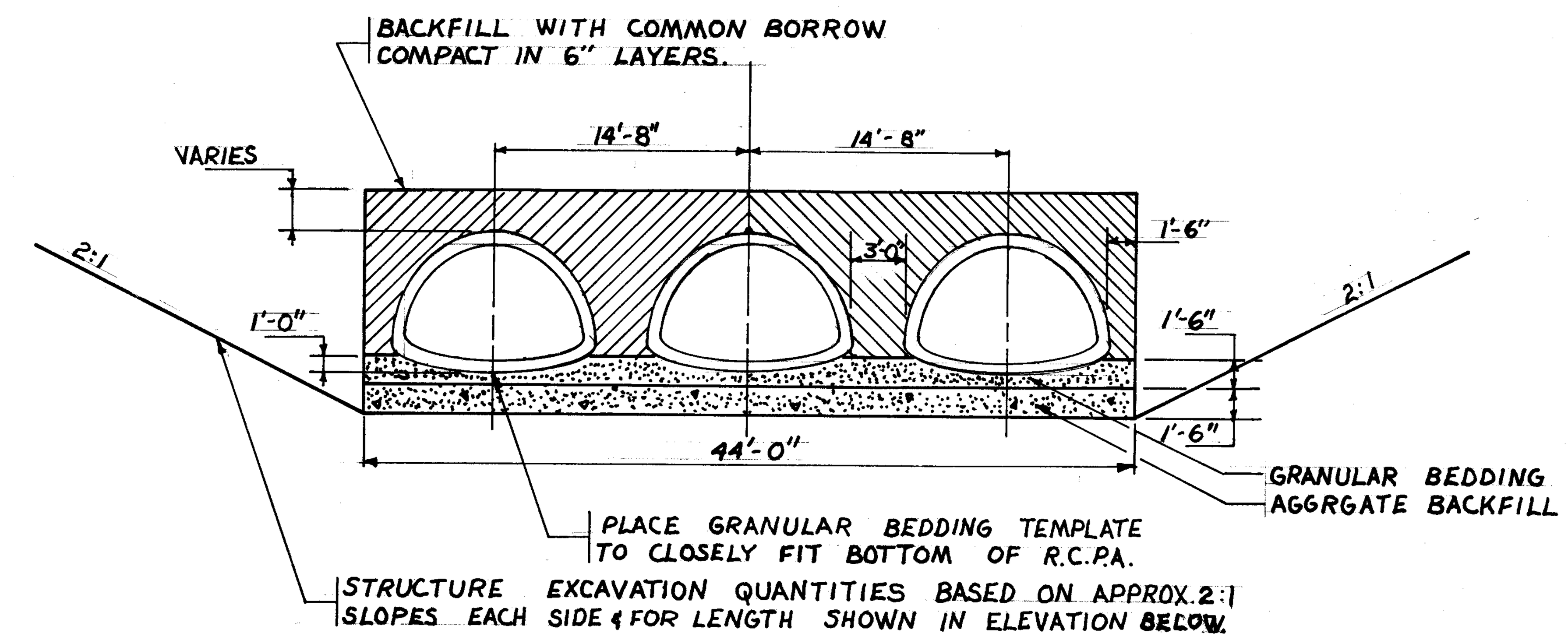
MINNEAPOLIS, 1, MINN.

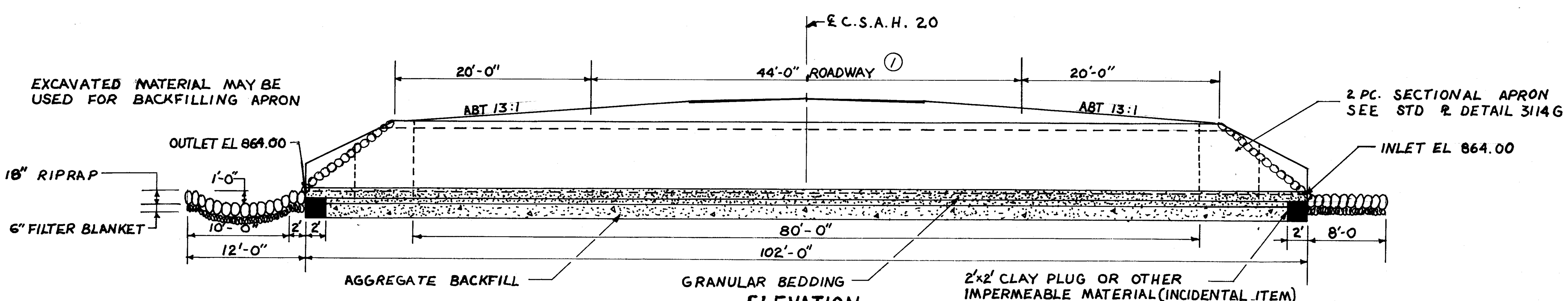
ANOKA County, Minnesota SHEET 1 OF 4 SHE



PLAN
SCALE 1/8"=1'-0"



SECTION THRU CULVERT
SCALE 1/8"=1'



ELEVATION
SCALE 1/8"=1'-0"

THE PLACING OF THE FILTER BLANKET MAY BE ELIMINATED IF IN THE OPINION OF THE ENGINEER THE MATERIAL IN PLACE WILL DRAIN PROPERLY WITHOUT SCOURING.

LIMITS OF RANDOM RIPRAP AS SHOWN ARE APPROX. ONLY EXACT LIMITS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

① RESTORATION OF THE BASE & THE BITUMINOUS PORTION OF THE ROADWAY SHALL BE DONE BY THE COUNTY.

ESTIMATED QUANTITIES

ITEM NO.	ITEM	UNIT	PARTICIPATING	NON-PARTICIPATING	TOTAL
2105.523	COMMON BORROW (C.V.)	CU. YD.	1000	200	1200
2451.501	STRUCTURE EXCAVATION CLASS U	CU. YD.	900		900
2442.501	REMOVE OLD BRIDGE #90719	LUMP SUM.		1	1
2451.505	AGGREGATE BACKFILL (C.V.)	CU.YD.	240		240
2451.507	GRANULAR BEDDING (C.V.)	CU.YD.	170		170
2501.521	F&I 122" SPAN R.C.P.A. CULVERT	LIN.FT.	240		240
2501.525	F&I 122" SPAN R.C.P.A. APRONS	EACH	6		6
2511.501	RANDOM RIPRAP CLASS B	CU.YD.	80		80
2511.504	FILTER BLANKET TYPE 1	CU.YD.	20		20

NOTE:
AN APPROVED AGGREGATE MAY BE SUBSTITUTED FOR AGGREGATE BACKFILL PENDING APPROVAL OF THE ENGINEER IN THE FIELD.

STANDARD PLATES AS APPROVED BY F.H.W.A. SHALL APPLY
STANDARD PLATES

0002A	SPECIFICATION REFERENCES TO STANDARD PLATES.
3014 J	REINFORCED CONCRETE PIPE-ARCH DETAIL.
3114 G	SECTIONAL CONCRETE APRON FOR R.C.P.A.
3145 C	CONCRETE PIPE JOINT TIES.
8000 H	STANDARD BARRICADES.

GOVERNING SPECIFICATIONS
THE 1983 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" SHALL GOVERN.

APPROVED: Paul K. Ruud
COUNTY ENGINEER
DATE: ANOKA COUNTY

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
[signature]
DATE: 7-6-79 REG. NO. 6924

PLANS PREPARED BY
ERICKSON ENGINEERING
3340 REPUBLIC AVE.
ST. LOUIS PARK, MN 55426

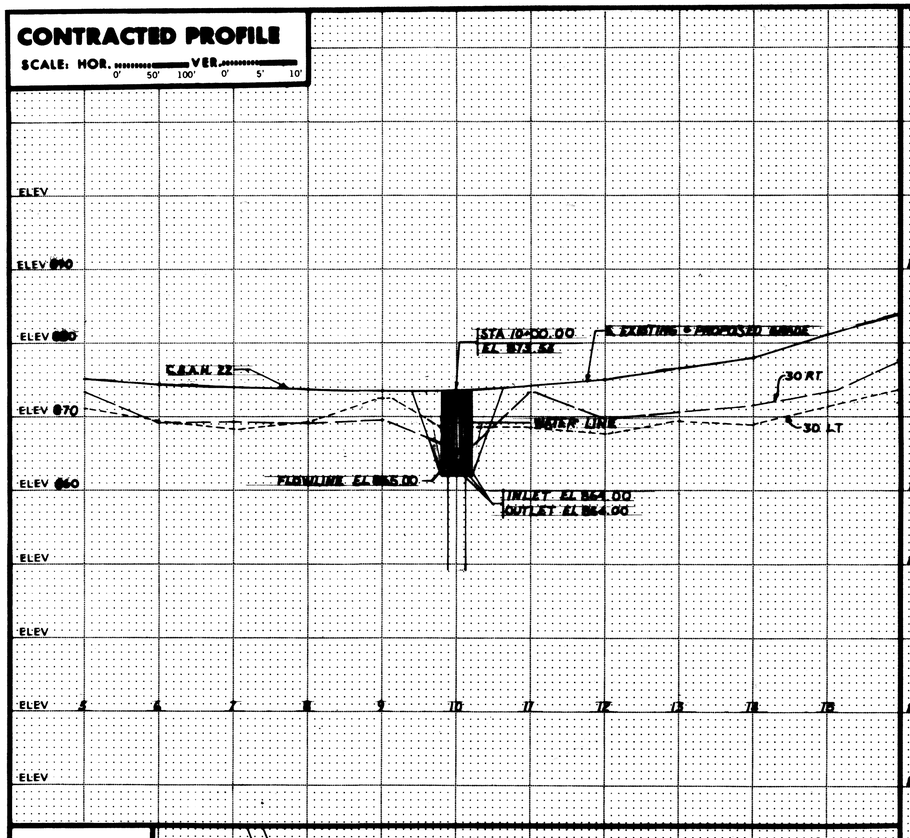
C.S.A.H. 22 ANOKA COUNTY
MINNESOTA DEPARTMENT OF TRANSPORTATION

CULVERT NO. 95167
LOCATED ON C.S.A.H. 22 0.4 MILES EAST OF JCT OF C.R. 67
IDENT. NO. 115
SEC. 27 TWP 33N R 24W
TOWNSHIP: OAK GROVE COUNTY: ANOKA
APPROVED:
BRIDGE ENGINEER

GENERAL PLAN & ELEVATION
S.A.P. 02-622-18

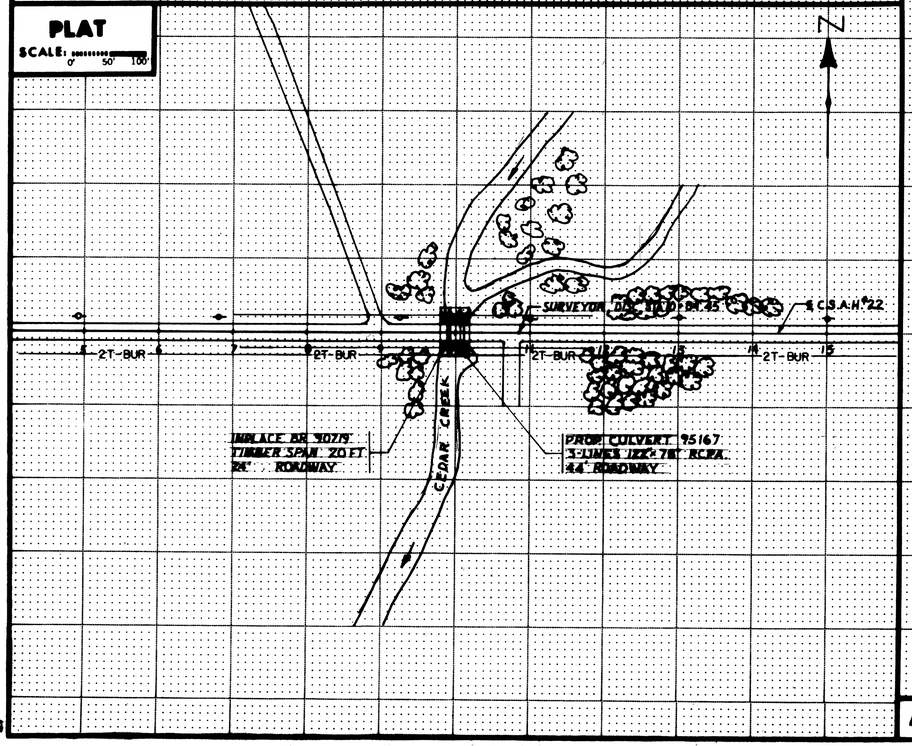
CONTRACTED PROFILE

SCALE: HOR. 0' 50' 100' VER. 0' 5' 10'



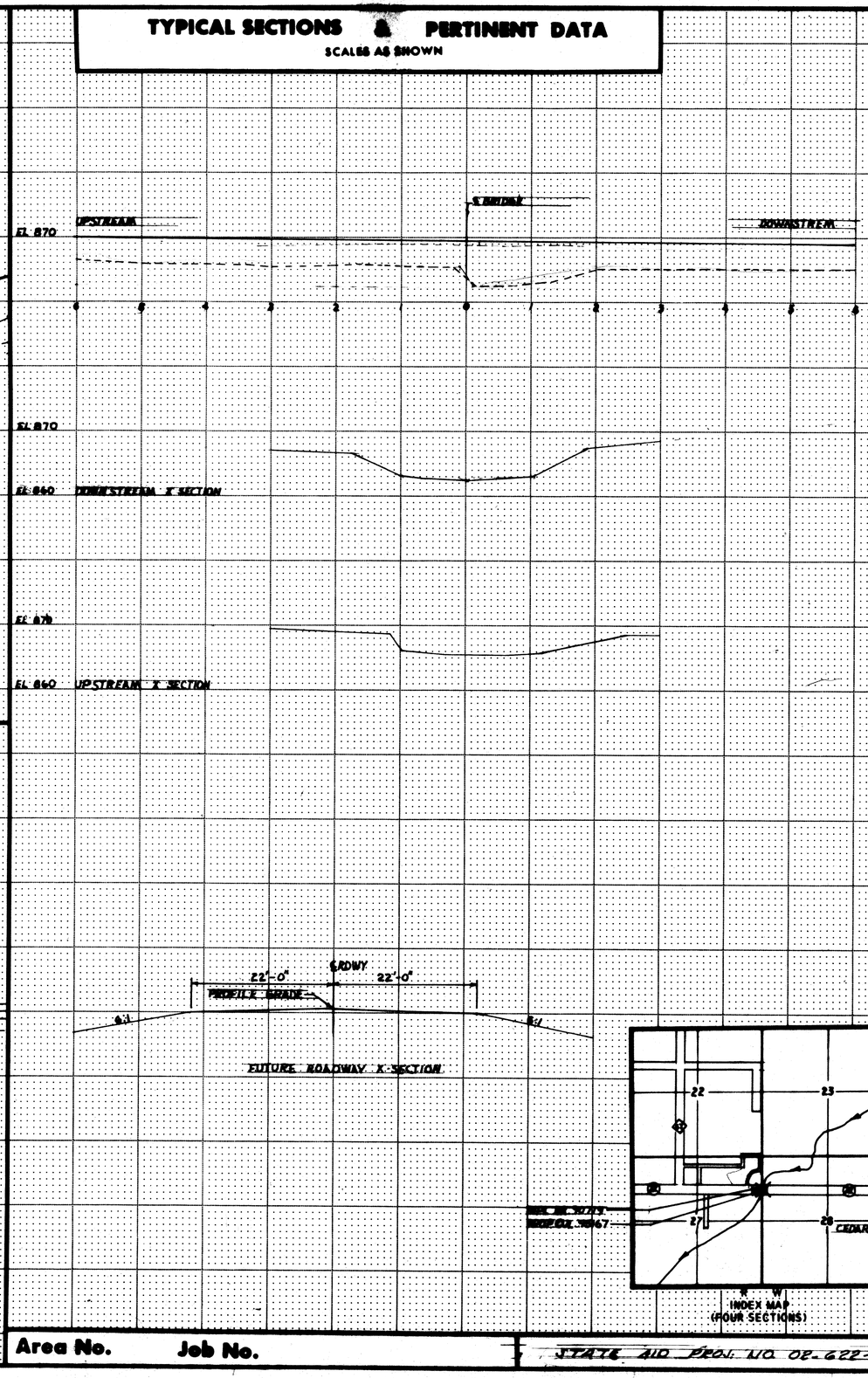
PLAT

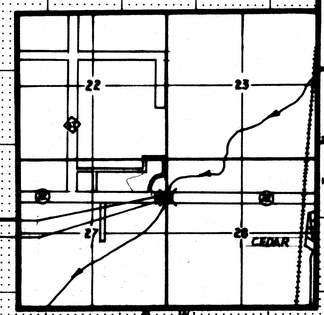
SCALE: 0' 50' 100'



TYPICAL SECTIONS & PERTINENT DATA

SCALES AS SHOWN





Fed. Proj. No.

LOCATION ENGINEER'S OBSERVATIONS AT BRIDGE SITE

1. Special Features: Waterfalls, dams, floods, ice, debris, sliding banks, recreational boating.

2. 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.

3. Apparent highwater elevation..... Obtained from.....

4. Other data: Approx. velocity of water at time of survey.....

HYDRAULIC ENGINEERS RECOMMENDATION

DATE .....

Stream or ditch designation CEDAR CREEK

Drainage area 68.58 MI.

Max. flood on record UNK Design flood (50 yr. freq.) 880 C.F.S.

Max. observed highwater elevation UNK Design highwater elevation 872.7

Design mean velocity through structure 3.6 F.P.S.

Low superstructure at or above elevation .....

Flowline elevation 865.00 Skew angle NONE

Waterway area req'd. below elevation ..... = ...Sq. Ft. at Rt. angles to channel

INLET EL 864.00

In the interest of flood plain zoning the regional flood (100 yr. freq.) is 1000 C.F.S. at stage 872.50 and mean velocity of 5.7 F.P.S. with 1.1 Ft. freeboard.

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

3-LINES 72"x78" RCPA

44' ROADWAY

PROJ. NOT FOR HYD. PURPS

Bridge survey sheets made from: NOTES BY ERICKSON ENGINEERING

Bench mark elevation 872.36 (M.S.L. 1929 Adj.)

Location: SPIKE IN N.E. ABUT CURB

MINNESOTA
DEPARTMENT OF TRANSPORTATION

BRIDGE SURVEY

AT MILE POINT ..... ON C.S.A.H. 22 (T.H., C.S.A.H., C.R. etc.)

PROPOSED BRIDGE LOCATED 0.4 MILES EAST OF JCT CR. 67

SEC. 27 TWP. 33 N R. 28 W

TOWNSHIP OAK GROVE COUNTY ANOKA

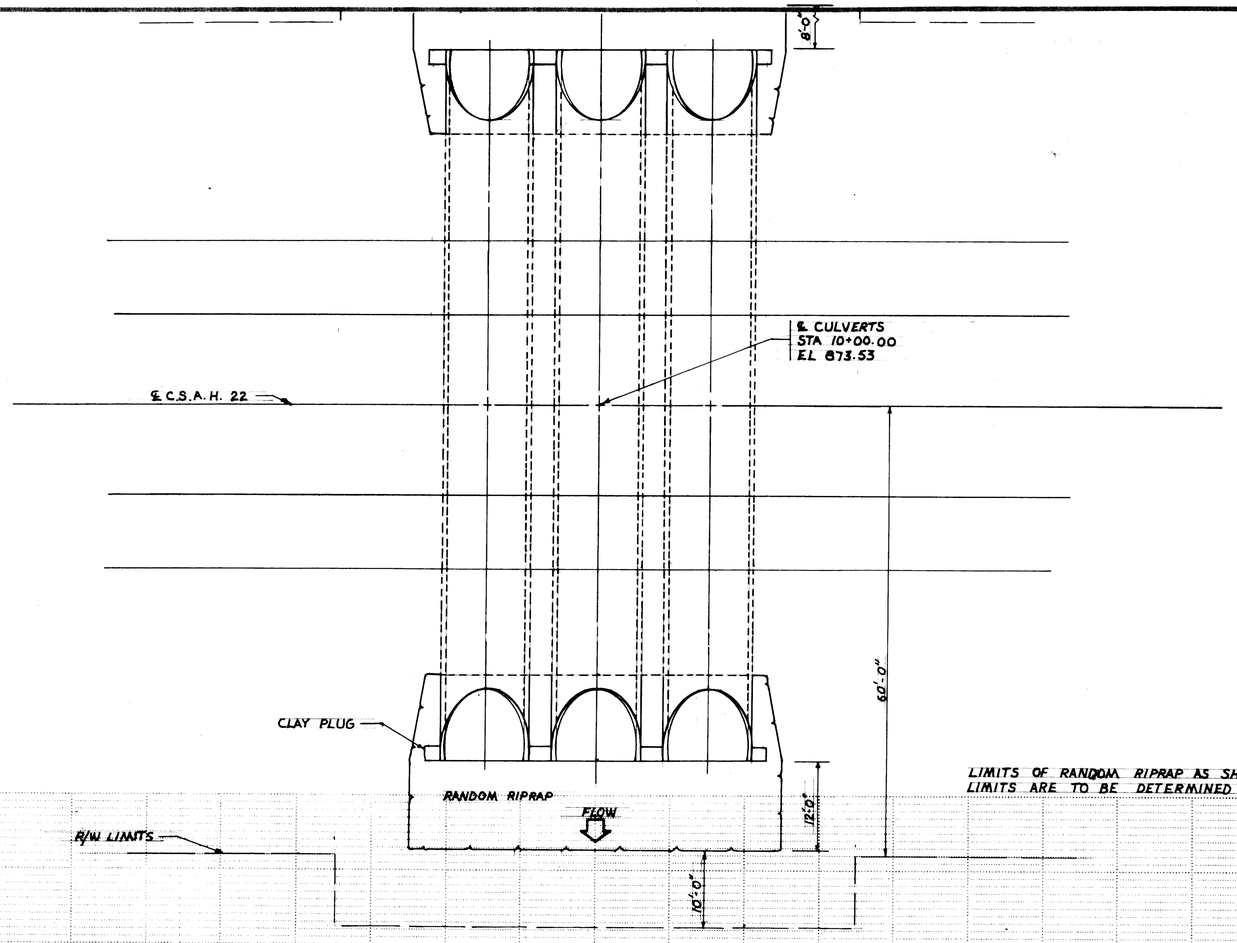
BRIDGE NO. 95167

Area No. Job No.

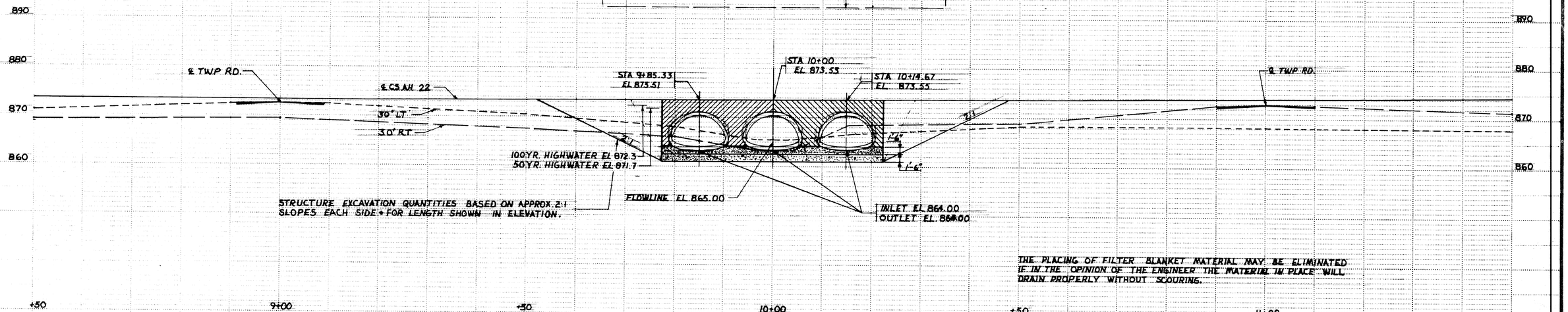
STATE AID PROJ. NO. 02-622-18 Sheet No. 3 of 4 Sheets

TELEDYNE POST BRIDGE SURVEY | BC-219

Fed. Proj. No.



LIMITS OF RANDOM RIPRAP AS SHOWN ARE APPROX. ONLY. EXACT LIMITS ARE TO BE DETERMINED BY THE ENGINEER IN THE FIELD.



THE PLACING OF FILTER BLANKET MATERIAL MAY BE ELIMINATED IF IN THE OPINION OF THE ENGINEER THE MATERIAL IN PLACE WILL DRAIN PROPERLY WITHOUT SCOURING.

BRIDGE SURVEY PLAN AND PROFILE	DES:	DR:	APPROVED:	Bridge No. 95167
	CHK:	CHK:		
STATE AID PROJ. NO. 02-622-18	Sheet No. 4 of 4 Sheets			