MINNESOTA DEPARTMENT OF TRANSPORTATION

THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR BRIDGE NO. 92573 CULVERT EXTENSION & GRADING

LOCATED ON CR 129 **BETWEEN** C.S.A.H. 32 **AND** C.S.A.H. 10 **(GEOGRAPHIC DESCRIPTION)**

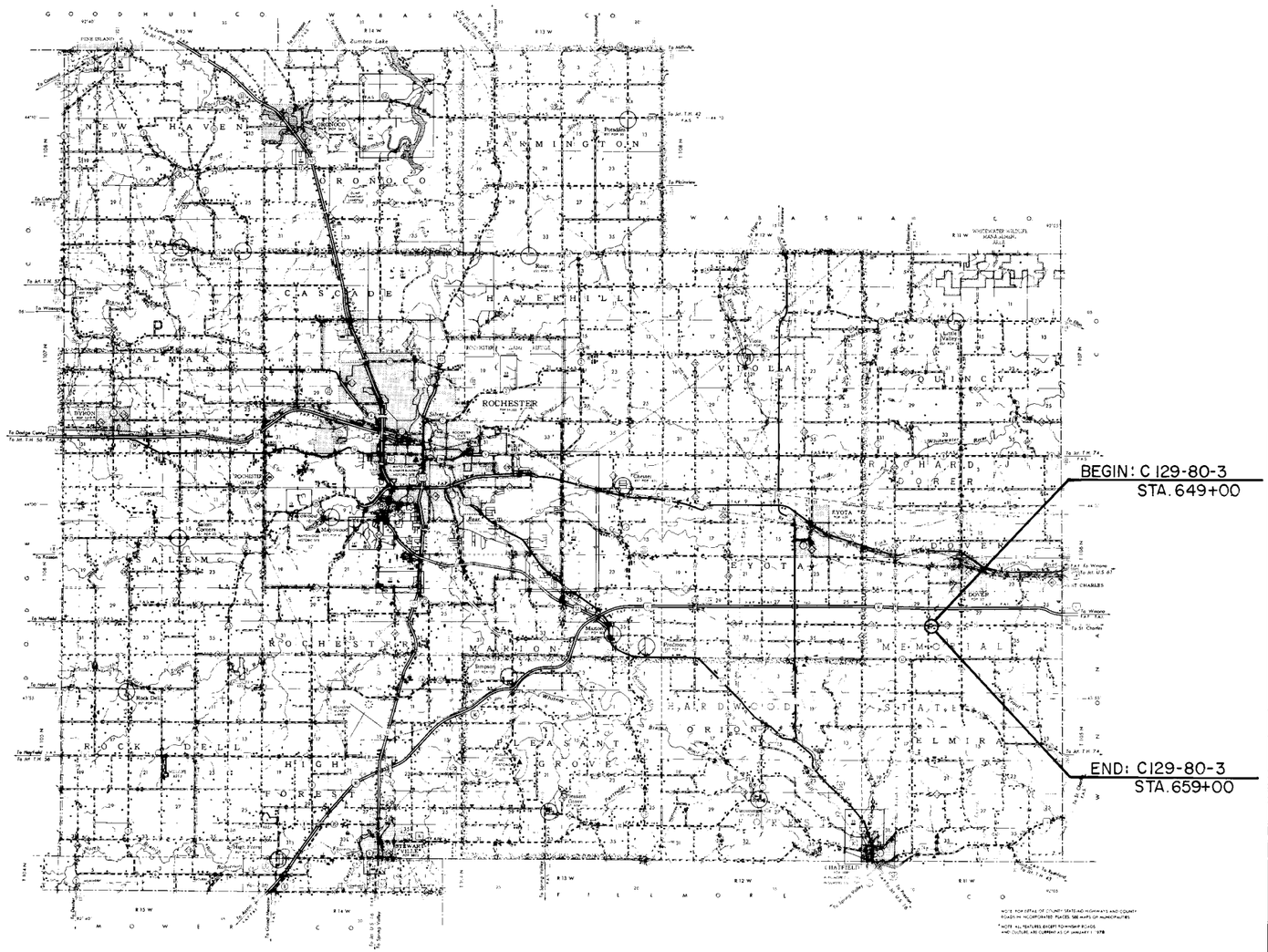
FROM 380' W. OF S.E. COR. SEC. 29 T106N-R11W **TO** 620' EAST OF S.E. COR. SEC. 29 T106N-R11W **(LEGAL DESCRIPTION)**

STATE PROJ. NO. .....

GROSS LENGTH	..... FEET	.....	MILES
BRIDGES-LENGTH	..... FEET	.....	MILES
EXCEPTIONS-LENGTH	..... FEET	.....	MILES
NET LENGTH	..... FEET	.....	MILES

PROJ. NO. C 129-80-3

GROSS LENGTH	1000.00 FEET	0.189	MILES
BRIDGES-LENGTH	..... FEET	.....	MILES
EXCEPTIONS-LENGTH	..... FEET	.....	MILES
NET LENGTH	1000.00 FEET	0.189	MILES



PLANS SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT RIGHT-OF-WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY LINE
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER
SPRINGS
MARSH
TIMBER
ORCHARD
BRUSH
NURSERY
CATCH BASIN C.B.
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame)
F FRAME C CONCRETE
S STONE T TILE
B BRICK ST STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY
SLOPE EASEMENT

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRIC CABLE
AERIAL TELEPHONE CABLE
SEWER, (SANITARY OR STORM)
SEWER MANHOLE

SCALES

PLAN	100 FEET
PROFILE	100 FEET HORZ. & 10' VERT.
INDEX MAP	10,560 FEET
CROSS SECTION	10 FEET

STATE AID TITLE SHEET 6-77 ALBINSON, MYLES SCARS

MINN. PROJ. NO. .....

SPECIFICATIONS REFERENCE

The 1978 Edition of the Minnesota Department of Transportation "Standard Specifications For Highway Construction" Shall Govern.

INDEX

SHEET NO. 1		TITLE SHEET & LAYOUT MAP
NO. 2		ESTMATE OF QUANTITIES & TYPICAL SECTIONS
NO. 3-5		CROSS SECTIONS
NO. 6		BRIDGE SHEET

DESIGN DESIGNATION

R .....

ADT (Current Year) = 450

ADT (Future Year) = ...

DHV (Design Hr. Vol.) = ...

D (Directional Distr.) = ... %

T (Heavy Commercial) = ... %

SOIL FACTOR .....

ΣN18 (20) .....

Design Speed – 25 MPH

Based on STOPPING Sight Distance

Height of eye 3.75' Height of object 0.5'

Design Speed not achieved at:

STA. ..... TO STA. ..... MPH

STA. ..... TO STA. ..... MPH

STA. ..... TO STA. ..... MPH

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.

DATE 8-30-79 REG. NO. 10219 ENGR. J.K. Nolan

COUNTY Olmsted

Recommended for Approval 8-30 19 79
DISTRICT STATE AID ENGINEER

Recommended for Approval ..... 19 .....
STATE AID PLANS AND SPECS ENGINEER

Approved ..... 19 .....
STATE AID ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
....
DIVISION ADMINISTRATOR DATE

STATE AID PROJ. NO. .....

STATE PROJ. NO. C 129-80-3 **SHEET NO.** 1 **OF** 6 **SHEETS**

ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	NON PARTICIPATING	PARTICIPATING	TOTAL ESTIMATED QUANTITIES	
2021.501	MOBILIZATION	LUMP SUM	1		1	
2101.502	CLEARING	TREE	11		11	
2101.507	GRUBBING	TREE	11		11	
2104.501	REMOVE PIPE CULVERTS	LIN. FT.	56		56	
2104.521	SALVAGE 154" SPAN R.C. PIPE-ARCH CULVERT	LIN. FT.	46		46	
2105.501	COMMON EXCAVATION	CU. YD.	2547		2547	(P)
2105.503	ROCK EXCAVATION	CU. YD.	910		910	
2501.511	18" C.S. PIPE CULVERT	LIN. FT.	28		28	
2501.511	24" R.C. PIPE CULVERT CLASS III	LIN. FT.	86		86	
2501.515	18" G.S. PIPE APRONS	EACH	2		2	
2501.515	24" R.C. PIPE APRONS	EACH	2		2	
2501.521	154" SPAN R.C.P. - ARCH CULV. CL. II A	LIN. FT.	25		25	
2501.525	154" SPAN R.C. PIPE-ARCH APRONS	EACH	2		2	
2501.571	INSTALL 154" SPAN R.C. PIPE-ARCH CULVERT	LIN. FT.	46		46	①
2511.501	RANDOM RIP RAP CLASS "B"	CU. YD.	97		97	
2511.504	FILTER BLANKET, TYPE I	CU. YD.	49		49	

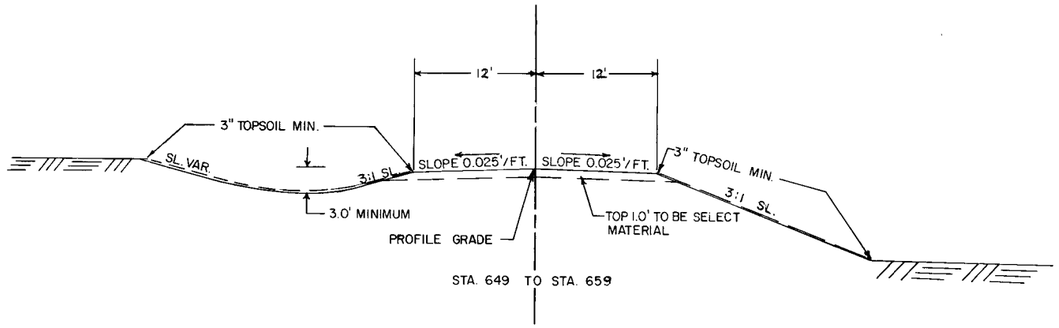
① ITEM NO. 2501.571 INSTALL 154" SPAN R.C. PIPE-ARCH CULVERT SHALL INCLUDE NEW CONCRETE PIPE JOINT EYE BOLT TIES.

STANDARD PLATES

THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT.

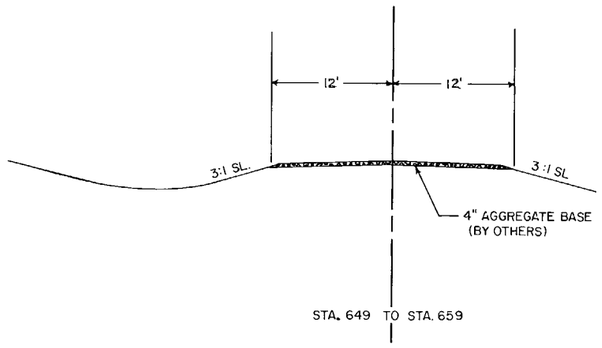
PLATE NO		DESCRIPTION
0003	A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000	H	REINFORCED CONCRETE PIPE
3014	H	REINFORCED CONCRETE PIPE-ARCH DETAIL
3040	F	CORRUGATED METAL PIPE CULVERT
3100	F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3114	G	SECTIONAL CONC. APRON FOR REINF. CONC. PIPE-ARCH
3123	H	METAL APRON FOR C.M. PIPE
3124	A	METAL APRON CONNECTION
3133	A	RIPRAP AT RCP OUTLETS
3145	A	CONCRETE PIPE JOINT TIES. EYE BOLT TIE
3221	A	CORRUGATED STEEL PIPE COUPLING BAND.
8000	F	STANDARD BARRICADES
9000	B	APPROACHES AND ENTRANCES
3007	A	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES.

TYPICAL GRADING SECTION



STA. 649 TO STA. 659

TYPICAL BASE SECTION



STA. 649 TO STA. 659

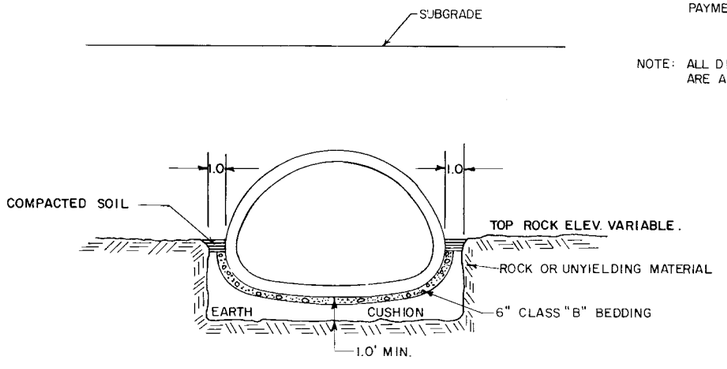
NOTE: MATERIAL FROM THE UPPER 1.0' OF THE NATURAL TOP SOIL SHALL NOT BE USED IN THE UPPER 1.0' OF THE ROAD BED. PART OF THIS MATERIAL SHALL BE UNIFORMLY SPREAD ON SLOPES AND DITCH BOTTOMS TO A DEPTH OF 3". NO PAYMENT IN ADDITION TO THE CONTRACT PRICE FOR COMMON EXCAVATION WILL BE MADE FOR SPREADING THE TOPSOIL AS ABOVE PROVIDED, NOR WILL ANY UNDERCUTTING MADE IN EXCAVATION PRIOR TO PLACING THE TOPSOIL BE MEASURED FOR PAYMENT.

NOTE: PLACE SECTIONAL CONCRETE PIPE ON CLASS "B" BEDDING AS DIRECTED BY THE ENGINEER. ALL BEDDING TO BE CONSIDERED AS INCIDENTAL AND NO DIRECT COMPENSATION SHALL BE MADE THERE FOR.

NOTE: REINFORCED CONCRETE PIPE CULVERT EXCAVATION WILL BE CONSIDERED INCIDENTAL AND WILL BE INCLUDED FOR PAYMENT UNDER UNIT PRICE FOR "PIPE CULVERT."

NOTE: ALL DIMENSIONS AND SLOPES SHOWN ON TYPICAL SECTIONS ARE APPROXMATE.

DETAIL OF BEDDING MATERIAL ℄ CULVERT STA. 652+37

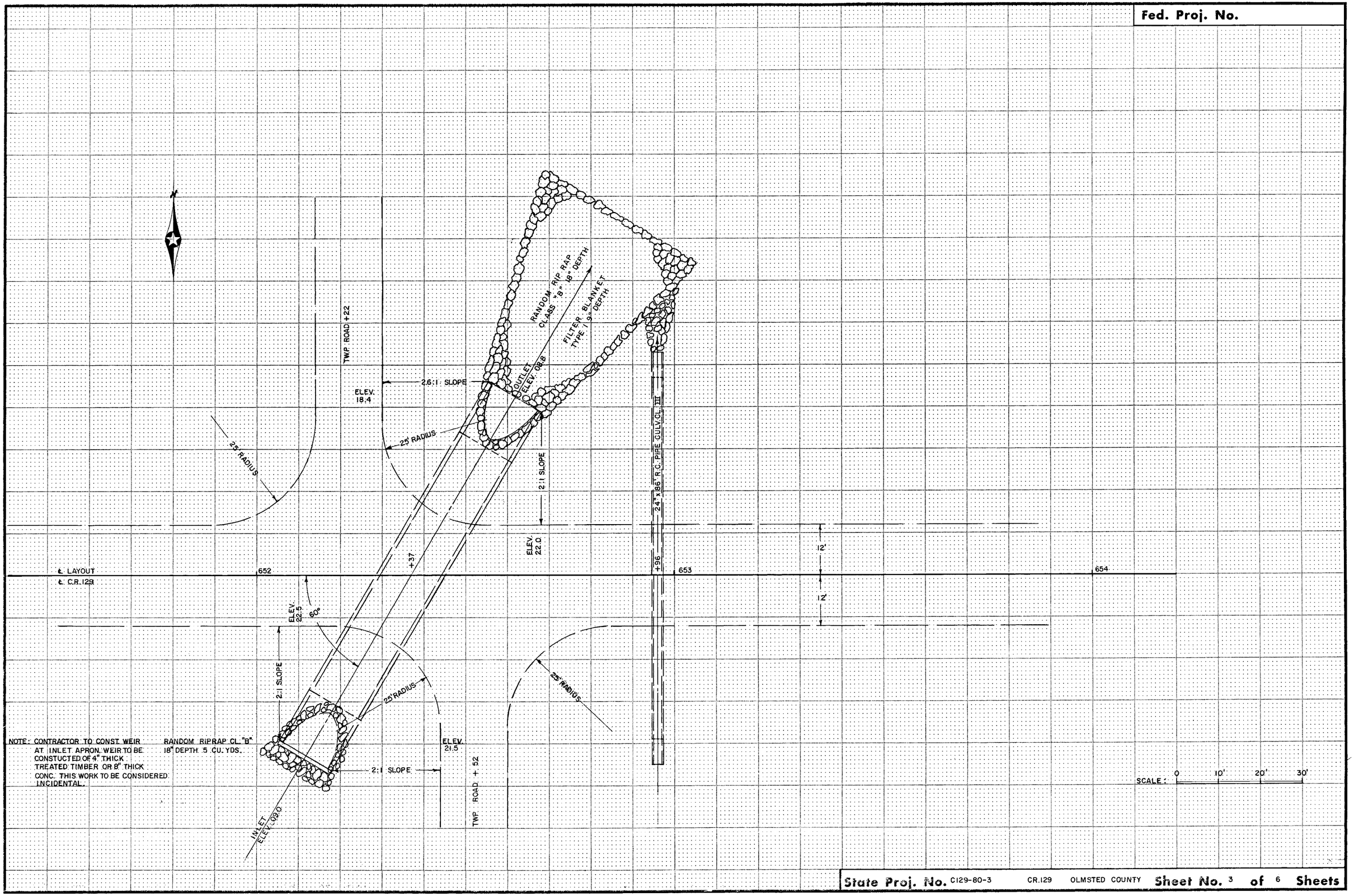


S. A. P.

State Proj. No. CR 129 OLMSTED COUNTY **Sheet No.** 2 **of** **Sheets**

ALBINSON INC. MINNEAPOLIS 55414

Fed. Proj. No.



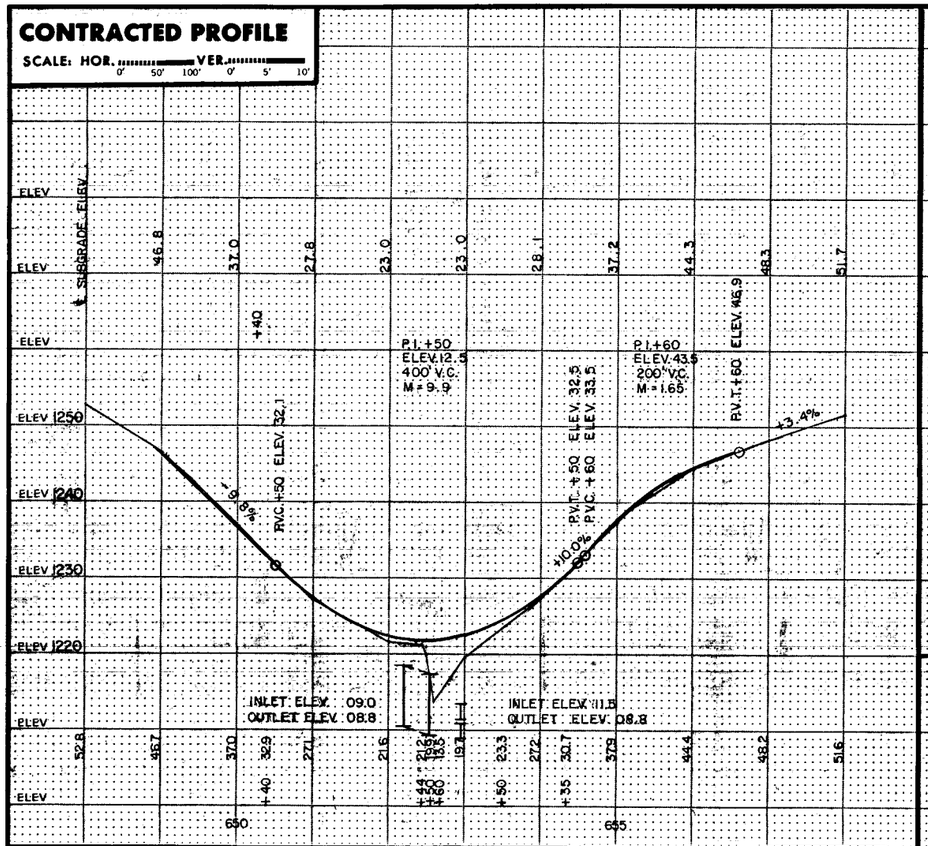
NOTE: CONTRACTOR TO CONST. WEIR AT INLET APRON. WEIR TO BE CONSTUCTED OF 4" THICK TREATED TIMBER OR 8" THICK CONC. THIS WORK TO BE CONSIDERED INCIDENTAL.

RANDOM RIPRAP CL. "B" 18" DEPTH .5 CU. YDS.

State Proj. No. C129-80-3 CR.129 OLMSTED COUNTY Sheet No. 3 of 6 Sheets

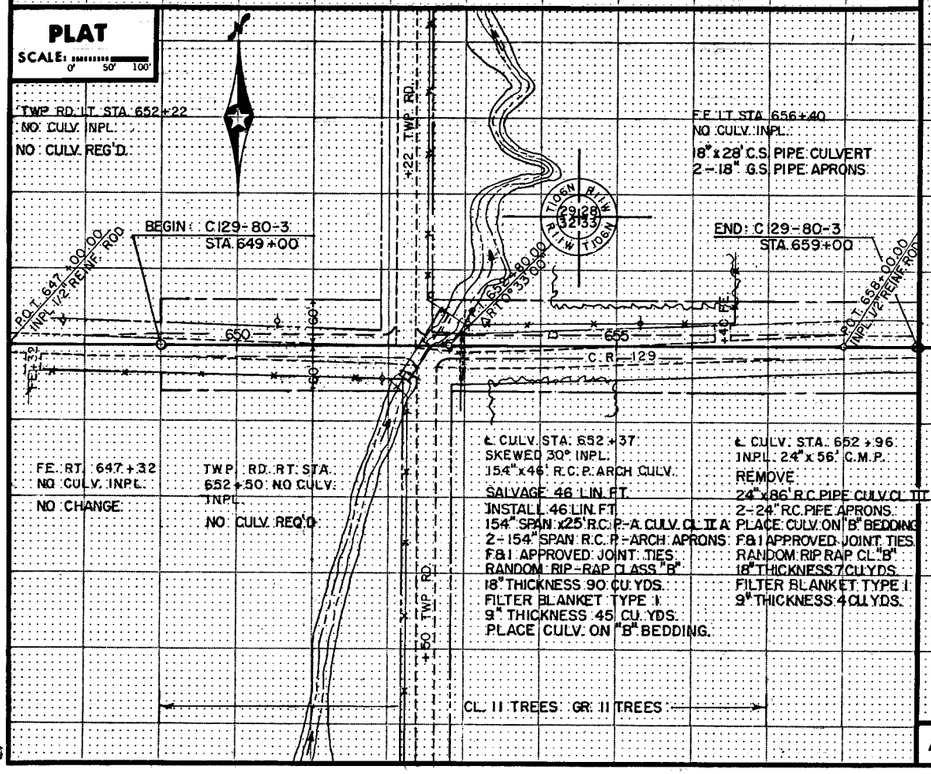
CONTRACTED PROFILE

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



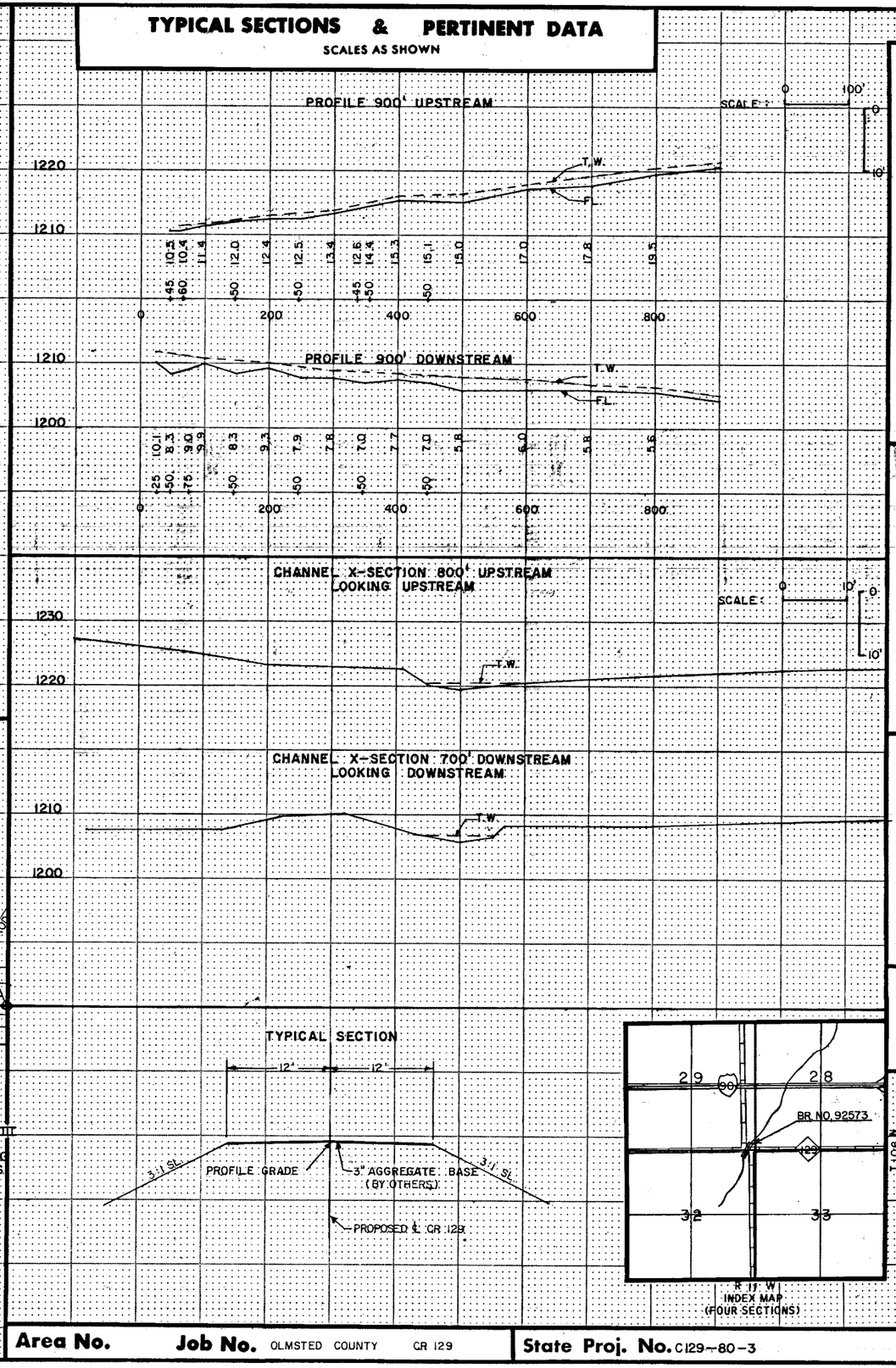
PLAT

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 3-24-80

Stream or ditch designation Unnamed

Drainage area 1.25 Sq. Miles

Max. flood on record Unknown . . Design flood (50) yr. freq.) 630 C.F.S.

Max. observed highwater elevation ..... Design highwater elevation 1217.7

Design mean velocity through structure 12 F.P.S.

Low superstructure at or above elevation .....

Flowline elevation 1209.0 Skew angle 30°

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

In the interest of flood plain zoning the regional flood (100 yr. freq.) is 750 C.F.S. at stage 1217.7 and mean velocity of 13 F.P.S. with 3.7 Ft. swellhead. The above recommendation will provide a structure of adequate waterway to pass the regional flood within criteria established by the Dept. of Natural Resources.

FOUNDATION ENGINEERS RECOMMENDATION

DATE .....

Bridge survey sheets made from: FIELD SURVEY CONDUCTED BY OLMSTED COUNTY.

Bench mark elevation 1219.58 (M.S.L. 1929 Adj.)

Location: SPK. IN TEL. POLE 45' RT. STA. 651+93

MINNESOTA
DEPARTMENT OF TRANSPORTATION

BRIDGE SURVEY

AT MILE POINT 12.4 ON CR 129 (T.H., C.S.A.H., C.R. etc.)

PROPOSED BRIDGE LOCATED 2.0 MILES S.E. OF DOVER

SEC. 28 TWP. 106 N R. 11 W

TOWNSHIP DOVER COUNTY OLMSTED

BRIDGE NO. 92573

Area No. Job No. OLMSTED COUNTY CR 129 State Proj. No. C129-80-3 Sheet No. 6 of 6 Sheets

TELSTAR POST BRIDGE SURVEY 1BC-2 9/76