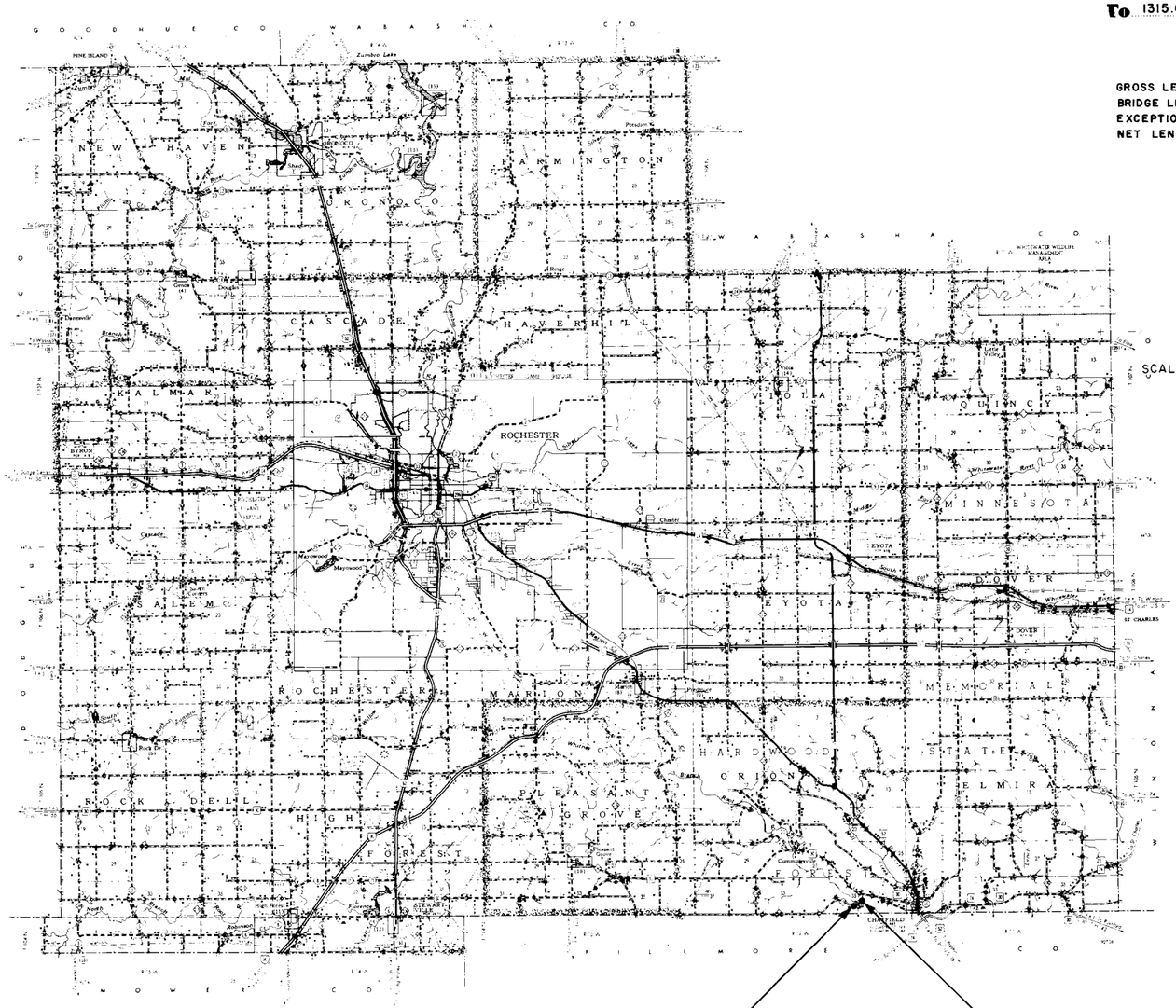
FORM 100-A '65

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 (NAME)
DRY RUN
DRAINAGE DITCH (SIZE)
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE (W)
CHAIN LINK FENCE (C-L)
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 (TIMBER)
NURSERY
CATCH BASIN (C.B.)
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame) 1-S-F
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 (G)
SAND PIT (S)
BORROW PIT (B)
ROCK QUARRY (Q)

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 (G)
WATER MAIN (I)
CONDUIT
TELEPHONE CABLE IN CONDUIT (T)
ELECTRIC CABLE IN CONDUIT (P)
TELEPHONE MANHOLE (T)
ELECTRIC MANHOLE (P)
BURIED TELEPHONE CABLE T-BUR
BURIED ELECTRIC CABLE P-BUR
AERIAL TELEPHONE CABLE T-AE
SEWER, (SANITARY OR STORM)
SEWER MANHOLE



SCALES

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

BEGIN: C138-78-6
STA. 216+80.0

END: C138-78-6
STA. 217+00

BEGIN: SAP 55-598-04
STA. 232+20.0

END: SAP 55-598-04
STA. 232+40.0

- SPECIFICATION REFERENCE -

THE 1978 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" SHALL GOVERN.

Fed. Proj. No.

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR CULVERT CONSTRUCTION

COUNTY **AID HIGHWAY NO.** CR. 138

BETWEEN TH 30 **AND** SOUTH COUNTY LINE.

From 2565.0' WEST AND 1700' SOUTH OF THE S.W.1/4 CORNER SEC. 35 T.105N. – R. 12 W.
(Give proper reference to Sections, Township and Range)

To 1315.0' WEST AND 1380.0' SO. OF THE S.W.1/4 CORNER SEC. 35 T.105N. – R.12 W.

C.P. C138-78-6

GROSS LENGTH	20.0	FEET	0.004 MILES
BRIDGE LENGTH		FEET	MILES
EXCEPTION LENGTH		FEET	MILES
NET LENGTH	20.0	FEET	0.004 MILES

SAP 55-598-04

GROSS LENGTH	20.0	**FEET**	0.004 **MILES**
BRIDGES-LENGTH		**FEET**	**MILES**
EXCEPTIONS-LENGTH		**FEET**	**MILES**
NET LENGTH	20.0	**FEET**	0.004 **MILES**

INDEX OF SHEETS

Sheet No 1 Title Sheet & Layout Map
" No 2 Est Quantities & Typical Sec
" No 3 To Plan & Profile
" No 4. To Cross Sections

DESIGN SPEED _____ **M. P. H.**

PROJECTED A. D. T. 57

_____ **TON DESIGN**

SOIL FACTOR _____

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

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.

R K Dolan — COUNTY ENGINEER — DATE 5/3/78

Olmsted — COUNTY — REG. NO. 10219

RECOMMENDED FOR APPROVAL: _____ DISTRICT STATE AID ENGINEER — 5 4 — 19 78

RECOMMENDED FOR APPROVAL: Robert D. Ofte Lah — 6-26 — 19 78

APPROVED 7-3 — 19 78 — for DIRECTOR, OFFICE OF STATE AID — Lloyd L. Hanson

Minn. Project No. _____ S.A.P. 55-598-04 State Project No. _____

OLMSTED County, Minnesota. County Proj. No. C3878-6 **Plan No.** _____ **Sheet 1 of 4 Sheets**

ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	C 138-78-6 NON PARTICIPATING	SAP55-598-04 NON PART.	SAP55-598-04 PART.	TOTAL ESTIMATED QUANTITIES	
2104.509	REMOVE BOX CULVERT	LUMP SUM	1	1		2	
2501.521	138" SPAN R.C.P. - ARCH CULV. CLASS II A	LIN. FT.	45		40	85	
2501.525	138" SPAN R.C.P. - ARCH APRONS	EACH	2		2	4	
2511.501	RANDOM RIPRAP CLASS "A"	CU. YD.	30		30	60	
2451.509	AGGREGATE BEDDING (CV.)	CU. YD.	90		80	170	(P)

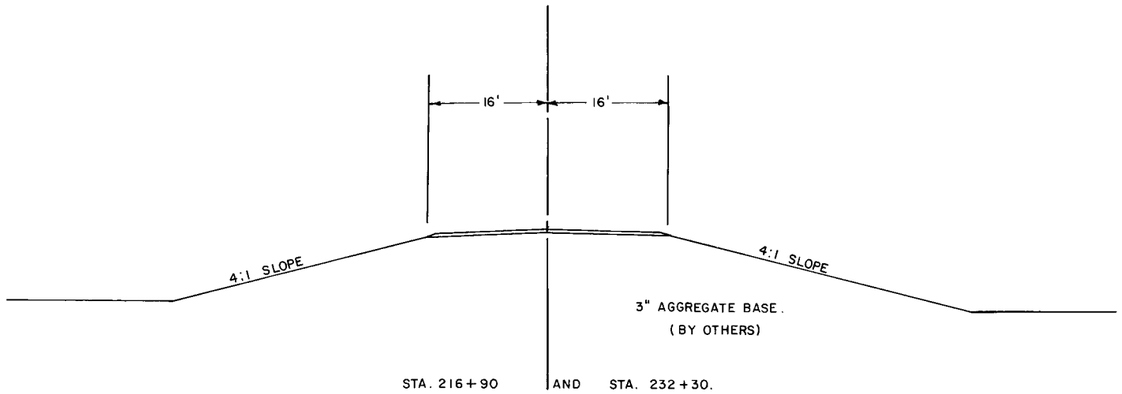
(P) PLAN QUANTITY.

STANDARD PLATES

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

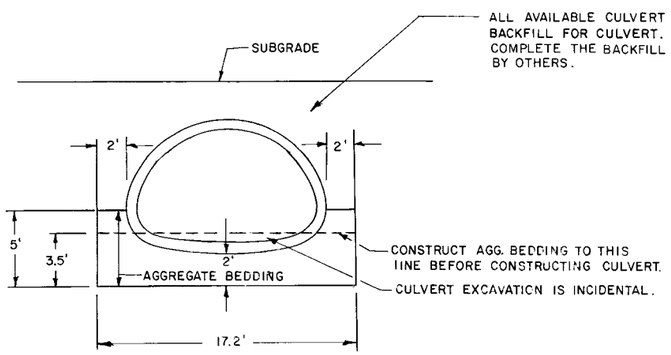
PLATE NO	DESCRIPTION
0003 A	SPECIFICATION REFERENCE TO STANDARD PLATES.
3014 G	REINFORCED CONCRETE PIPE ARCH DETAIL.
3114 G	SECTIONAL CONC. APRON FOR REINFORCED CONC. PIPE-ARCH.
3133 A	RIPRAP AT R.C.P. OUTLETS.
3145 A	CONCRETE PIPE JOINT TIES.
8000 F	STANDARD BARRICADES.

TYPICAL SECTION



STA. 216+90 AND STA. 232+30.

DETAIL OFF BEDDING MATERIAL
& CULVERTS ONLY



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

NOTE: AGGREGATE BEDDING COMPUTED FOR LENGTH OF CULVERT BARREL. APRONS NOT INCLUDED.

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

Fed. Proj. No.

F.E. RT. 215+77
NO CULV. INPL.
NO CHANGE

℄ BOX CULV. 216+90.1
9.5'x 5'x 20' MASONARY BOX CULV.
REMOVE BOX CULV.

138" SPAN x 45' RCP-ARCH CULV. CL. II A
2-138"SPAN RCP-ARCH APRONS
PLACE CULV. ON "B" BEDDING
F&I APPROVED JOINT TIES.
RANDOM RIPRAP CLASS "A"
12" DEPTH 30 CU. YDS.

F.E. LT. 217+26
NO CULV. INPL.
NO CHANGE

℄ BOX CULV. 225+38.3
10'x 8'x 20' MASONRY BOX CULV.
NO CHANGE

F.E. LT. 231+58
NO CULV. INPL.
NO CHANGE

BR. NO. L 9027
℄ BOX CULV. 232+30
10'x 6.3'x 20' MASONRY BOX CULV.
REMOVE BOX CULVERT.

F.E. RT. 233+17
NO CULV. INPL.
NO CHANGE

138" SPAN x 40' RCP-ARCH CULV. CL. II A.
2-138" SPAN RCP- ARCH APRONS.
PLACE CULV. ON "B" BEDDING.
F&I APPROVED JOINT TIES.
RANDOM RIPRAP CLASS "A"
12" DEPTH 30 CU. YDS.

ROOT
SLOPE EASEMENT
WOODS
RIVER
POND
DRY RUN
SLOPE EASEMENT
SLOPE EASEMENT

BEGIN: C138-78-6 STA. 216+80.0
END: C138-78-6 STA. 217+00

BEGIN: SAP 55-598-04 STA. 232+20.0
END: SAP 55-598-04 STA. 232+40.0

F.E. RT. 217+75
NO CULV. INPL.
NO CHANGE

F.E. RT. 224+05
NO CULV. INPL.
NO CHANGE

F.E. RT. 225+77
NO CULV. INPL.
NO CHANGE

F.E. RT. 228+80
NO CULV. INPL.
NO CHANGE

B.M. EL. 982.0
STATE RT.
STA. 211+67

B.M. EL. 975.64
TOP OF HDWL.
S.W. COR 232+30

+2.25%

INLET ELEV. 74.5
OUTLET ELEV. 71.9

INLET ELEV. 64.3
OUTLET ELEV. 63.9

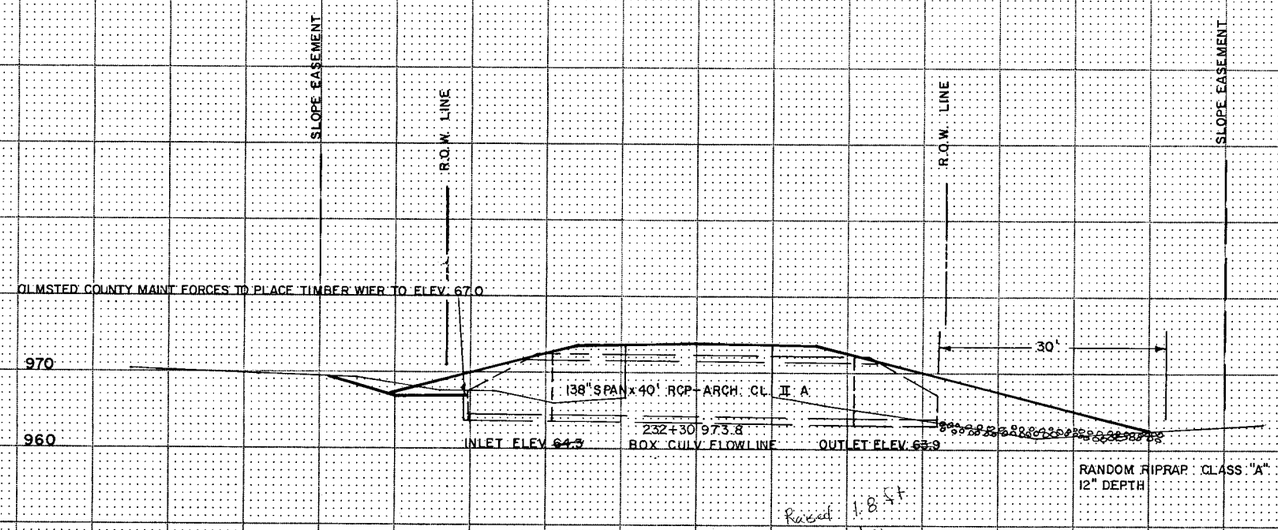
NOTE: CONTRACTOR TO BACKFILL CULVERT WITH AVAILABLE EXCAVATION IF BORROW MATERIAL IS REQUIRED TO COMPLETE THE BACKFILL THIS WILL BE FURNISHED AND PLACED BY OTHERS.

990
980
970

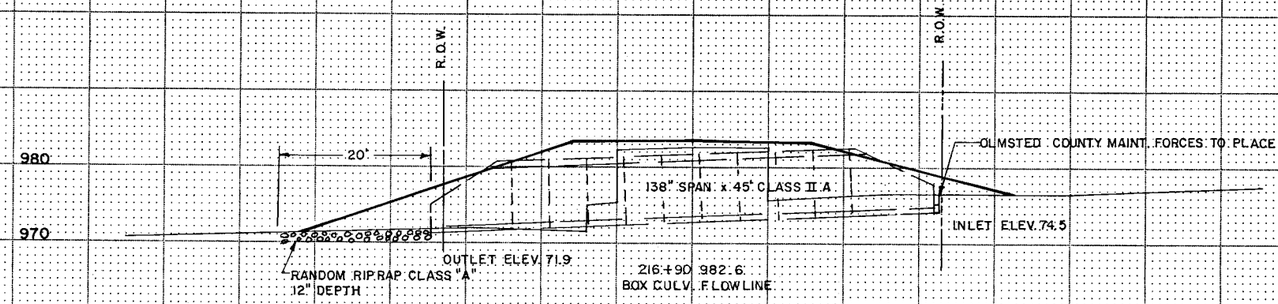
215 220 225 230 235

State Proj. No. SAP55-598-04 CP C138-78-6 CR 138 OLMSTED COUNTY Sheet No. 3 of 4 Sheets

Fed. Proj. No.



Raised 1.8 ft above Flow line



State Proj. No. SAP 55-598-04 CP C138-78-6 CR 138 OLMSTED CO. Sheet No. 4 of 4 Sheets