MINNESOTA DEPARTMENT OF TRANSPORTATION

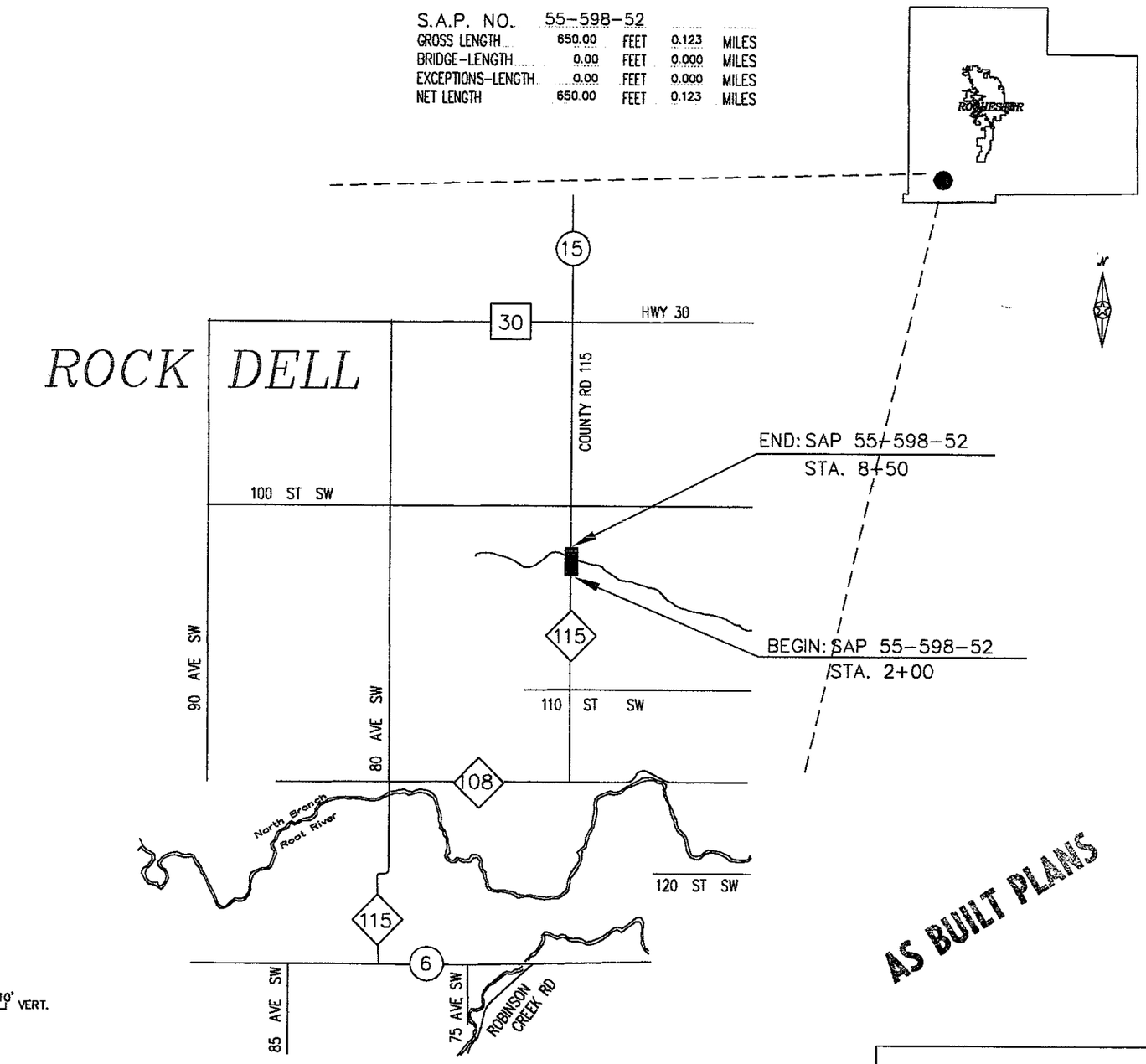
THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR GRADING & PRECAST CONC. BOX (BRIDGE NO. 55J35)

LOCATED ON C.R. 115 BETWEEN 7200' SOUTH OF JCT CR 115 & TH 30 AND 6550' SOUTH OF JCT CR 115 & TH 30 (GEOGRAPHIC DESCRIPTION)

FROM APPROX. 1900 FEET SOUTH OF SEC. COR. 23,24,25 & 26 T 105 N-R 15 W TO APPROX. 1250 FEET SOUTH OF SEC. COR. 23,24,25 & 26 T 105 N-R 14 W (LEGAL DESCRIPTION)

S.A.P. NO.	55-598-52			
GROSS LENGTH	650.00	FEET	0.123	MILES
BRIDGE-LENGTH	0.00	FEET	0.000	MILES
EXCEPTIONS-LENGTH	0.00	FEET	0.000	MILES
NET LENGTH	650.00	FEET	0.123	MILES



AS BUILT PLANS

PLAN 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
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
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 POLE
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN
WATER MAIN
CONDUIT
TELEPHONE CABLE IN CONDUIT
ELECTRICAL CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRICAL MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRICAL CABLE
AERIAL TELEPHONE CABLE
SEWER (SANITARY OR SEWER)
SEWER MANHOLE

EROSION CONTROL SYMBOLS

TEMPORARY SILT FENCE
RIP RAP DITCH CHECKS

SCALES

PLAN 0 50'
PROFILE 0 50' HORIZ. 0 10' VERT.
CROSS SECTIONS 0 10'
INDEX MAP 0 2640'

MINN. PROJ. NO.

GOVERNING SPECIFICATIONS

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE MAY 2, 1994, SUPPLEMENT SPECIFICATION SHALL GOVERN.

INDEX

SHEET NO. 1	TITLE SHEET
SHEET NO. 2	TYPICAL SECTION & ESTIMATE OF QUANTITIES
SHEET NO. 3 - 4	BRIDGE SHEETS
SHEET NO. 5	CROSS SECTIONS
SHEET NO. 6 - 11	EROSION CONTROL
SHEET NO. 12	TRAFFIC CONTROL

THIS PLAN CONTAINS 12 SHEETS.

DESIGN DESIGNATION: S.A.P. 55-598-52

R ΣN18(20)
ADT (Current Year) = 80 (2001) Design Speed 55 MPH
ADT (Future Year) = 128 (2021) Based on STOPPING Sight Distance
DHV (Design Hr. Vol.) = Height of eye 3.5 FT. Height of object 0.5 FT
D (Directional Distr.) = Design Speed not achieved at:
T (Heavy Commercial) = STA. TO STA. mph
SUBGRADE = STA. TO STA. mph
LANE WIDTH 11 FT.
SHOULDER WIDTH 3 FT.
SOIL FACTOR = 1.30%

DESIGN ENGINEER: 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 3/1/01 LICENSE NUMBER 19917

PRINTED NAME: KAYE M. BIENIEK

SIGNED NAME: Kaye M. Bieniek

APPROVED: COUNTY DESIGN ENGINEER

DESIGN SQUAD: Holmes

DATE 3/1/01 LICENSE NUMBER 10397

APPROVED: OLMSTED COUNTY ENGINEER

STATE AID APPROVALS:

DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY DATE: 3-8-01

APPROVED FOR STATE AID FUNDING: STATE AID ENGINEER DATE: 4/4/01

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	NON PARTICIPATING	PARTICIPATING	TOTAL ESTIMATED QUANTITIES
①	2101.511	CLEARING & GRUBBING	LUMP SUM	1		1
	2104.501	REMOVE METAL CULVERT	LIN. FT.	20		20
	2104.509	REMOVE BOX CULVERT	EACH	1		1
②	2105.515	UNCLASSIFIED EXCAVATION	CU. YDS.	586		(P) 586
	2105.523	COMMON BORROW (CV)	CU. YDS.	990		(P) 990
	2211.501	AGGREGATE BASE CLASS 5	TON	728		728
	2451.507	GRANULAR BEDDING (CV)	CU. YDS.		51	(P) 51
	2501.511	18" C.S. PIPE CULVERT	LIN. FT.	36		36
	2501.515	18" G.S. PIPE APRON	EACH	2		2
	2501.521	102" SPAN RC PIPE-ARCH CULV CL IIA	LIN. FT.		76	76
	2501.525	102" SPAN RC PIPE-ARCH APRON	EACH		4	4
③	2511.501	RANDOM RIPRAP CL. III	CU. YDS.		72	72
④	2573.502	SILT FENCE, TYPE HEAVY DUTY	LIN FT	600		600
	2575.501	SEEDING	ACRE	1		(P) 1
	2575.502	SEED MIXTURE 50A	POUND	50		50
	2575.502	SEED MIXTURE 110A	POUND	80		80
	2575.511	MULCH MATERIAL TYPE 1	TON	2		2
	2575.519	DISC ANCHORING	ACRE	1		(P) 1
	2575.532	COMMERCIAL FERTILIZER ANALYSIS 12-12-12	POUND	200		200

QUANTITY NOTES:

① APPROX. 0.1 ACRES OF TREES IN R/W. TREES FOR REMOVAL SHALL BE DESIGNATED BY THE ENGINEER.

② UNCLASSIFIED EXCAVATION INCLUDES SUBGRADE TREATMENT AS SHOWN IN TYPICAL SECTION AND CROSS SECTIONS. 129 CU. YDS. OF EXCAVATION TO BE USED AS SALVAGED TOPSOIL.

③ PLACE RIPRAP ON GRANULAR FILTER OR GEOTEXTILE MATERIAL WHICH SHALL BE CONSIDERED INCIDENTAL AND NO DIRECT COMPENSATION WILL BE MADE THEREFOR.

④ SPECIFICATION 1903 SHALL NOT APPLY FOR THIS ITEM.

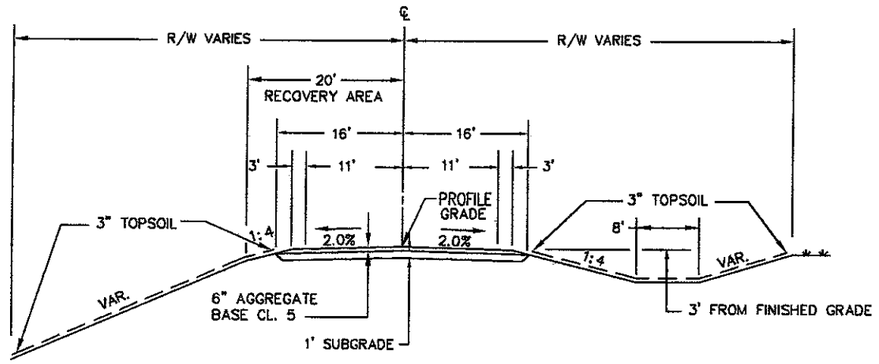
STANDARD PLATES

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

PLATE NO.	DESCRIPTION
	NUMERICAL INDEX OF STANDARD PLATES
3007 C	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3014 J	REINFORCED CONCRETE PIPE-ARCH
3040 F	CORRUGATED METAL PIPE CULVERT
3110 G	CONCRETE APRON FOR REINFORED CONCRETE PIPE-ARCH
3123 K	METAL APRON FOR C.S. PIPE
3124 B	METAL APRON CONNECTION
3145 E	CONCRETE PIPE TIES
3221 C	CORRUGATED STEEL PIPE COUPLING BAND
8000 I	STANDARD BARRICADES
9000 C	APPROACHES AND ENTRANCES

TYPICAL SECTION

STA. 2+00 TO 8+50



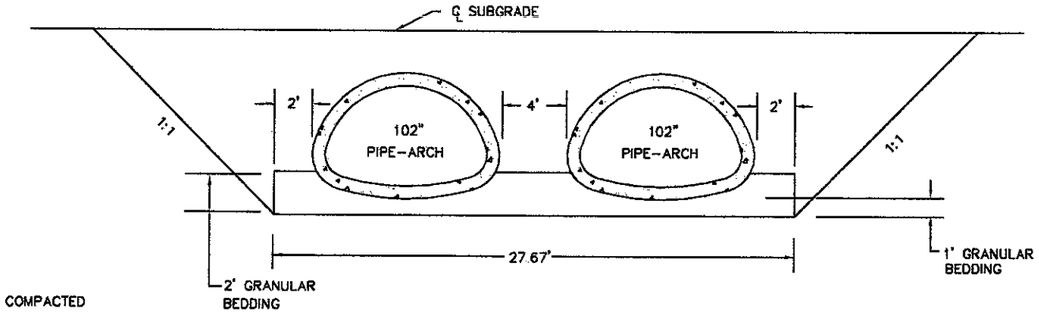
NOTES: ALL UTILITY POLES AND UNYIELDING OBJECTS WILL BE LOCATED OUTSIDE THE 20' RECOVERY AREA BY OTHERS.

QUANTITY NOTES:

AGGREGATE BASE CLASS 5 – 140LBS./CU.FT. COMPACTED
SEED MIXTURE 50A – 50 LBS/ACRE
SEED MIXTURE 110A – 80 LBS/ACRE
MULCH MATERIAL – 2 TONS/ACRE
DISK ANCHORING – ALL SEEDING AREAS EXCEPT 1:2 SLOPES
COMMERCIAL FERTILIZER – 200 LBS/ACRE

BEDDING DETAIL

STA. 5+12 AND STA. 5+25.83



NOTES:
1. CULVERT EXCAVATION WILL BE CONSIDERED INCIDENTAL AND WILL BE INCLUDED FOR PAYMENT UNDER UNIT PRICE FOR ITEM NO. 2501.521 AND ITEM NO. 2501 525.
2. CULVERT TO BE BACKFILLED WITH EXCAVATION MATERIAL OR COMMON BORROW AND WILL BE CONSIDERED INCIDENTAL TO UNCLASSIFIED EXCAVATION AND NO DIRECT COMPENSATION WILL BE MADE.
3. ALL DIMENSIONS AND SLOPES SHOWN ON TYPICAL SECTION ARE APPROXIMATE.
4. GRANULAR BEDDING TO BE PLACED UNDER BARREL SECTIONS ONLY.

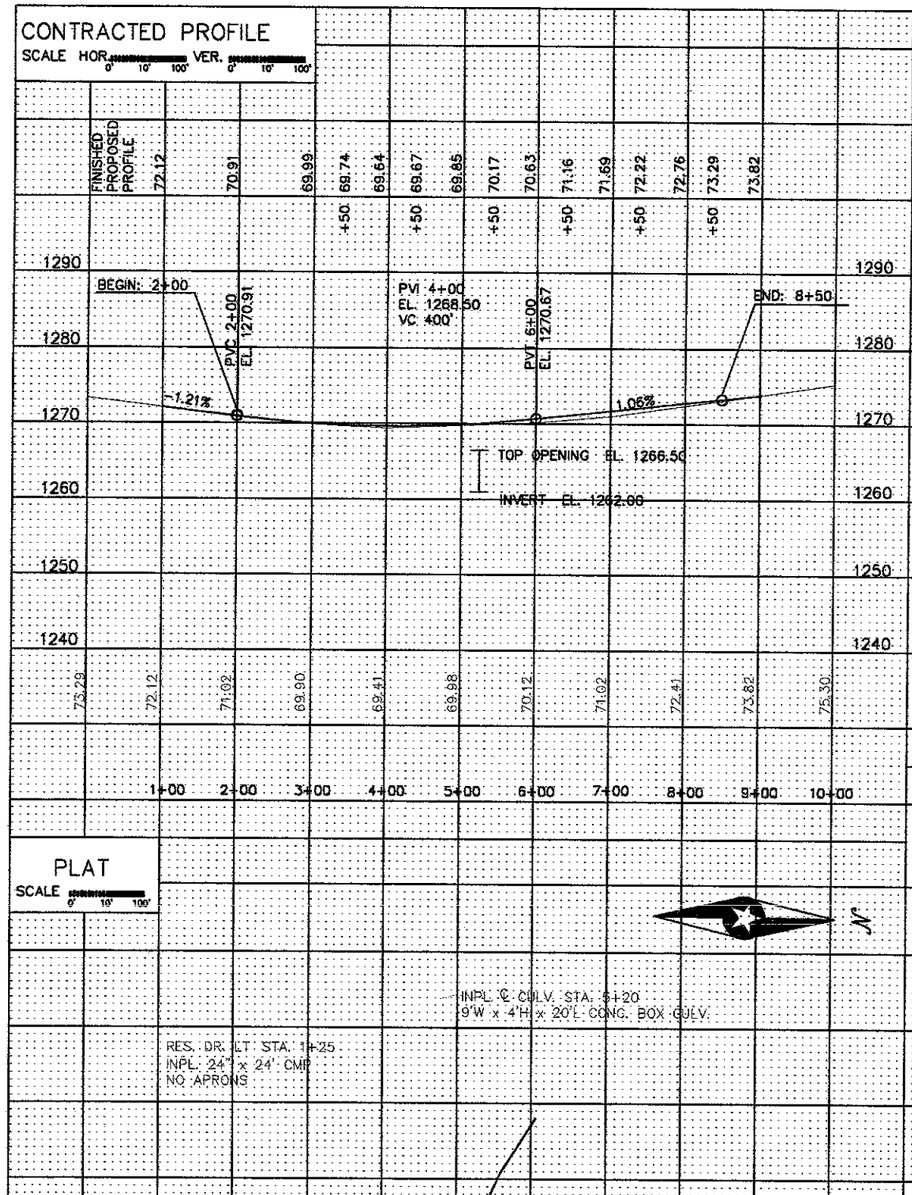
AS BUILT PLANS

CERTIFIED BY Kaye M. Bienick LIC. NO. 19917 3/1 2001
LICENSED PROFESSIONAL ENGINEER

S.A.P. 55-598-52 CR 115

CONTRACTED PROFILE

SCALE HOR. 0' 10' 100' VER. 0' 10' 100'

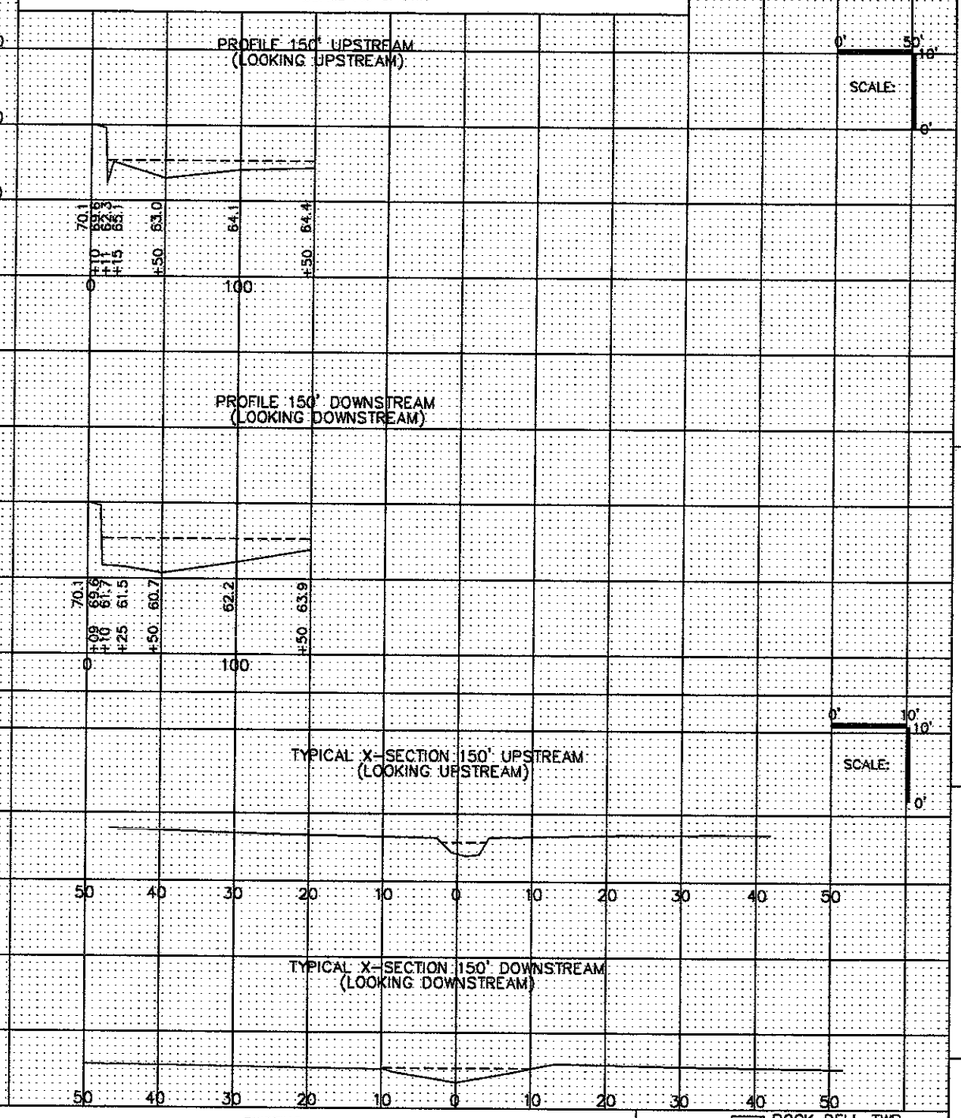


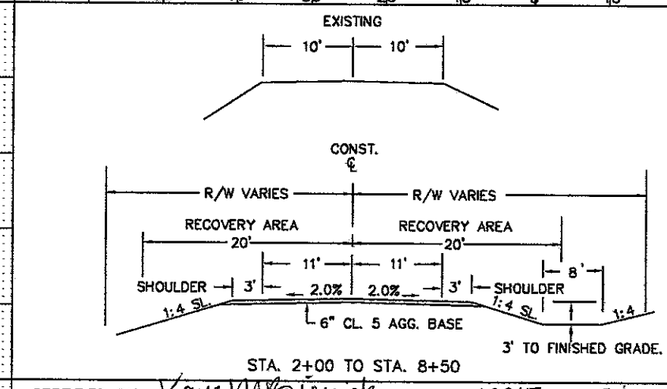
PLAT

SCALE 0' 10' 100'

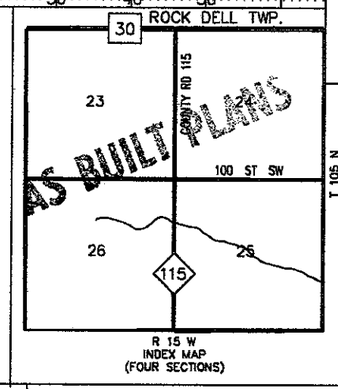
TYPICAL SECTIONS & PERTINENT DATA

SCALE AS SHOWN





STA. 2+00 TO STA. 8+50



Fed. Proj. No.

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 10-24-2001

Stream or ditch designation UNNAMED
Drainage area 1.9 SQ. MILES
Max. flood on record UNK Design flood (25 yr. freq.) 550 C.F.S.
Max. observed highwater elevation 1270.9 Design highwater elevation 1269.6
Design mean velocity through structure 7.9 F.P.S.
Low superstructure at or above elevation .....
Flowline 1262.6 Skew angle .....
Waterway area req'd. below elevation 1270.5= 132 Sq. Ft. at Rt. angles to channel

In the interest of flood plain zoning the regional flood (100 yr. freq.) is 870 C.F.S. at stage 1270.5 and mean velocity of 8.1 F.P.S. with 1.5 Ft. swellhead. The above recommendation will provide a structure of adequate waterway to pass the regional flood within criteria established by the Dept. of National Resources.

FOUNDATION ENGINEERS RECOMMENDATION

DATE .....

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

Bench mark elevation .....(M.S.L. 1929 Adj.)
Location: .....

MINNESOTA
DEPARTMENT OF TRANSPORTATION

BRIDGE SURVEY

AT MILE POINT 0.30 MI. S. OF TWP. RD. 78 ON C.R. 115 (T.H., C.S.A.H., C.R. etc.)
PROPOSED BRIDGE LOCATED 1.30 MILES SOUTH OF STATE HWY 30
SEC. 25 TWP. 105 N R 15 W
TOWNSHIP ROCK DELL COUNTY OLMSTED
BRIDGE NO. 55J35

CERTIFIED BY Kaye M Petenek LICENSED PROFESSIONAL ENGINEER LIC. NO. 19917 3/1 2001

State Aid Proj. No. 55-598-52 Sheet No. 3 of 12 Sheets

RES. DR. LT. STA. 1+25
INPL. 24"x24' CMP
NO APRONS

PLACE 6 CU YDS CL. III RIPRAP @ INLET

INPL ℄ CULV STA. 5+20
9' x 4' x 20' CONC. BOX CULV

REMOVE CONC. BOX CULV.

CONST. ℄ CULVERTS @ STA. 5+12 & 5+25.83
102" x 62" x 38' SPAN R.C. PIPE-ARCH CULV.
2-102" SPAN R.C. PIPE-ARCH APRON
PLACE BARREL SECTIONS ON 51 CU YDS GRANULAR BEDDING

BEGIN SAP 55-598-52
STA. 2+00

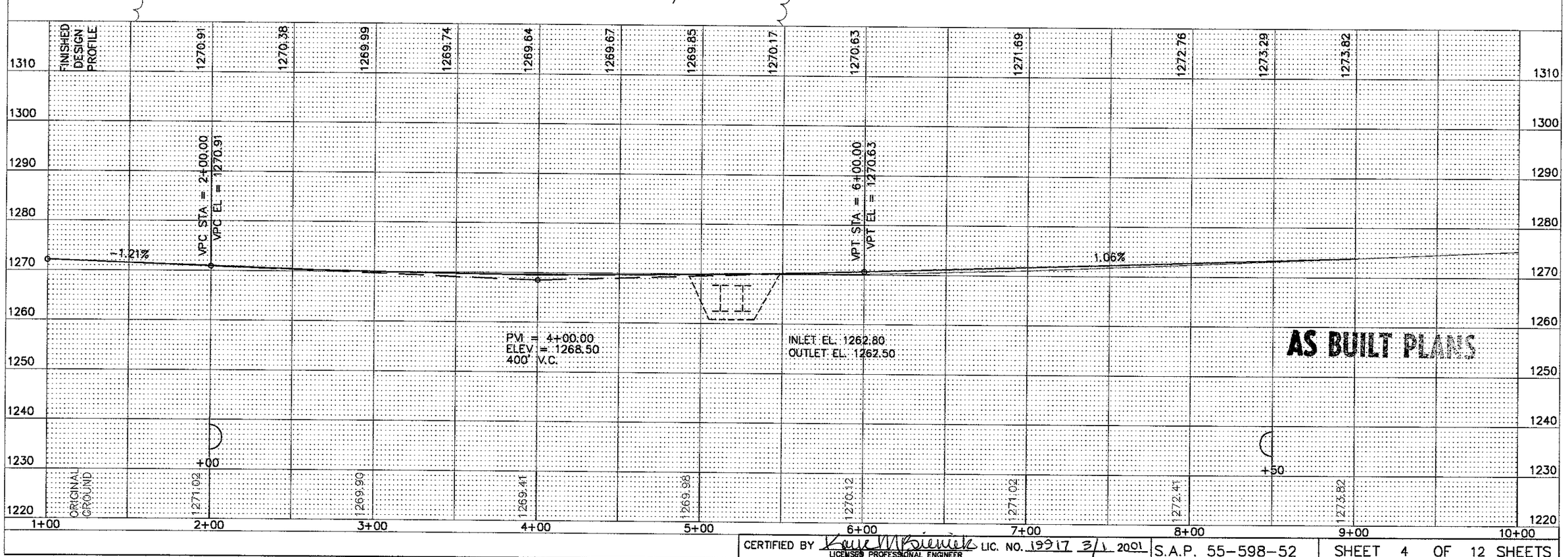
FIELD ENT RT STA 1+60
INPL. 24"x20' CMP
NO APRONS

PLACE 66 CU YDS CL. III RIPRAP @ OUTLET

FIELD ENT RT STA 5+75
INPL. 18"x20' CMP
NO APRONS

REMOVE 20 LIN. FT.
18" x 36' C.S. PIPE CULVERT
2-18" G.S. PIPE APRONS

END SAP 55-598-52
STA. 8+50



AS BUILT PLANS

CERTIFIED BY Kurt M. Bierwirth LIC. NO. 19917 3/1 2001
LICENSED PROFESSIONAL ENGINEER

S.A.P. 55-598-52

SHEET 4 OF 12 SHEETS