MINNESOTA DEPARTMENT OF TRANSPORTATION

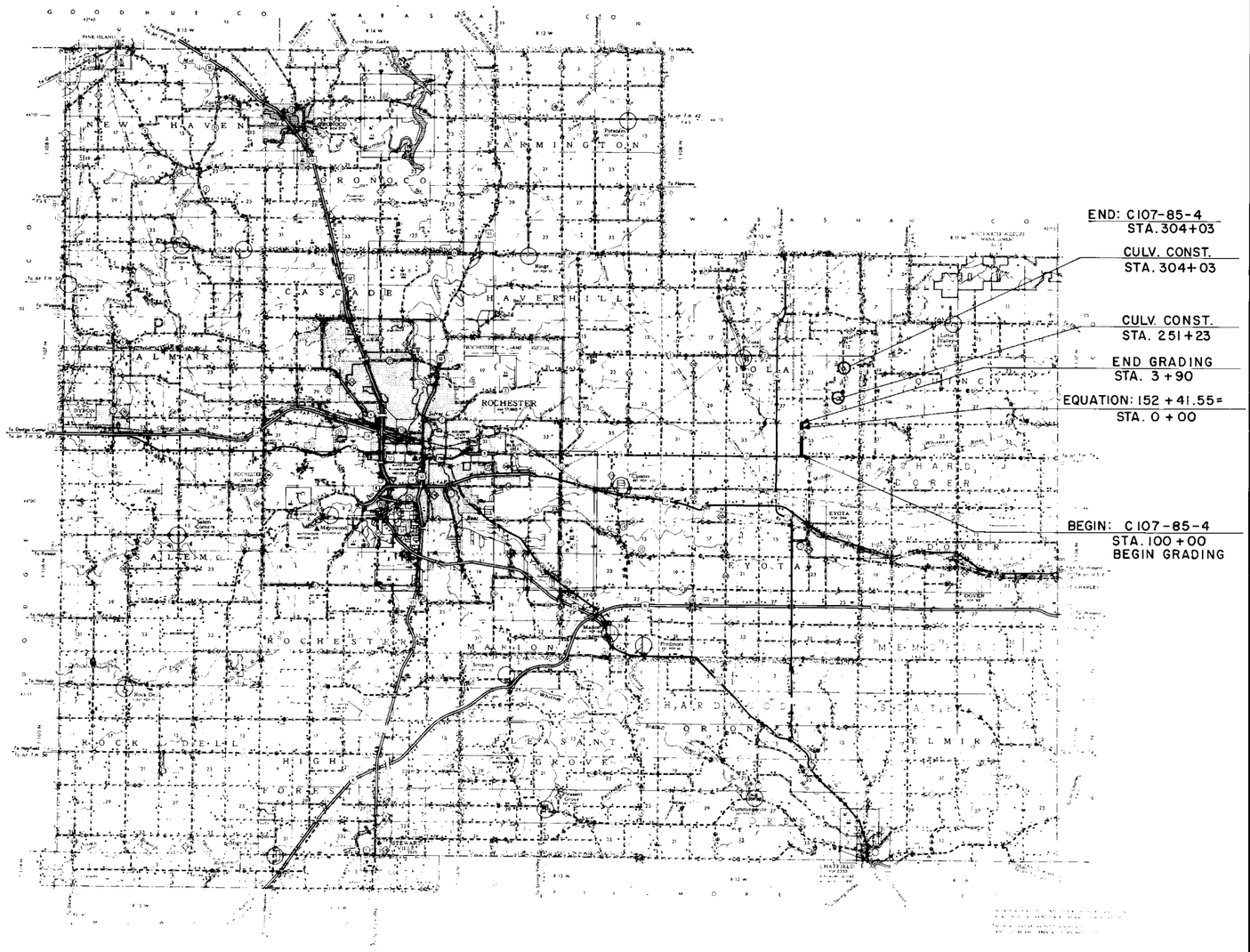
THE COUNTY OF OLMSTED

CONSTRUCTION PLAN FOR GRADING & AGGREGATE BASE

LOCATED ON C.R. 107 **BETWEEN** C.S.A.H. 9 **AND** C.S.A.H. 7 **(GEOGRAPHIC DESCRIPTION)**

FROM APPROX. 1/16 COR. OF S. 35 VIOLA T107N-R12W **TO** APPROX. 390' N. OF 1/16 COR. OF THE S.W. 1/4 **(LEGAL DESCRIPTION)**
N.2 EYOTA T106N-R12W SEC. 26 T107N-R12W

~~STATE PROJ. NO.~~ C107-85-4			STATE PROJ. NO.		
GROSS LENGTH	5,631.55 FEET	1.066 MILES	GROSS LENGTH	FEET	MILES
BRIDGES-LENGTH	0 FEET	0 MILES	BRIDGES-LENGTH	FEET	MILES
EXCEPTIONS-LENGTH	0 FEET	0 MILES	EXCEPTIONS-LENGTH	FEET	MILES
NET LENGTH	5,631.55 FEET	1.066 MILES	NET LENGTH	FEET	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 (NAME)
DRY RUN
DRAINAGE DITCH (SIZE)
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
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)
F FRAME C CONCRETE
S STONE T TILE
B BRICK ST STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
AGGDEN HUB
GRAVEL PIT (G)
SAND PIT (S)
BORROW PIT (B)
ROCK QUARRY (Q)
SLOPE EASEMENT (SE)

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 (W)
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

AI RIXSON MPLS 51405

SCALES

PLAN ..... 100 FEET
PROFILE ..... 100 FEET HORIZ & 10 FEET VERT.
INDEX MAP ..... 2 MILES
X-SECTIONS
~~GENERAL LAYOUT~~ ..... 10 FEET

MINN. PROJ. NO. .....

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

INDEX

SHEET NO. 1 TITLE SHEET & LAYOUT MAP

SHEET NO. 2 ESTIMATE OF QUANTITIES & TYPICAL SECTIONS

SHEET NO. 3&4 PLAN & PROFILE

SHEET NO. 5-12 X-SECTIONS

DESIGN DESIGNATION

R .....
ADT (Current Year) = 78
ADT (Future Year) = 140
DHV (Design Hr. Vol.) = ... %
D (Directional Distr.) = ... %
T (Heavy Commercial) = ... %
SOIL FACTOR 130

EN18(20)
Design Speed 40 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 7-7-85 REG. NO. 11611 ENGR. [signature]

COUNTY [signature]

Recommended for Approval ..... 19 .....
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.~~ C107-85-4
~~STATE PROJ. NO.~~

SHEET NO. 1 OF 12 SHEETS

ESTIMATED QUANTITIES

	SPECIFICATION NO.	ITEM	UNIT	MUNICIPAL	RURAL	TOTAL ESTIMATED QUANTITIES	
	2021.501	MOBILIZATION	LUMP SUM		1	1	
	2101.502	CLEARING	TREE		~~7~~	~~7~~	10
	2101.507	GRUBBING	TREE		~~7~~	~~7~~	10
①	2104.501	REMOVE PIPE CULVERT	LIN. FT.		258	258	
①	2104.509	REMOVE BOX CULVERT	EACH		3	3	
	2104.523	SALVAGE METAL APRON	EACH		1	1	
	2105.503	ROCK EXCAVATION	CU. YD.		~~180~~	~~180~~	0
	2105.501	COMMON EXCAVATION (P)	CU. YD.		17,449	17,449	
	2105.507	SUBGRADE EXCAVATION (P)	CU. YD.		2,985	2,985	
	2105.535	SALVAGED TOPSOIL (EV) (P)	CU. YD.		2,988	2,988	
②	2211.501	AGGREGATE BASE CLASS 2	TON		~~5,932~~	~~5,932~~	5,903
③	2123.509	DOZER	HOUR		8	~~8~~	10.5
③	0123.601	15CU. YD. BACKHOE	HOUR		6	~~6~~	6.5
	2501.511	18"C.S. PIPE CULVERT	LIN. FT.		~~492~~	~~492~~	460
	2501.521	57" SPAN C.S. PIPE-ARCH CULV.	LIN. FT.		6	6	
	2501.511	24" R.C. PIPE CULVERT CLASS II	LIN. FT.		128	128	
	2501.511	30" R.C. PIPE CULVERT CLASS II	LIN. FT.		36	36	
	2501.511	54" R.C. PIPE CULVERT CLASS III	LIN. FT.		48	48	
	2501.511	54" R.C. PIPE CULVERT CLASS IV	LIN. FT.		32	32	
	2501.515	18" G.S. PIPE APRONS	EACH		~~34~~	~~34~~	32
	2501.515	24" R.C. PIPE APRONS	EACH		6	6	
	2501.515	30" R.C. PIPE APRONS	EACH		2	2	
	2501.515	54" R.C. PIPE APRONS	EACH		2	2	
	2501.541	72"HIGH R.C. CATTLE PASS CLASS III	LIN. FT.		70	70	
	2501.545	72"HIGH R.C. CATTLE PASS APRONS	EACH		2	2	
	2501.573	INSTALL METAL APRON	EACH		1	1	
	2511.501	RANDOM RIPRAP CLASS III	CU. YD.		~~284~~	~~284~~	230
	2511.511	GRANULAR FILTER	CU. YD.		~~109~~	~~109~~	125
	2575.505	SODDING	SQ. YD.		~~2500~~	~~2500~~	1,764
	2575.501	ROADSIDE SEEDING (P)	ACRE		10	10	
	2575.502	SEED, MIXTURE 2	POUND		1,000	1,000	
	2575.502	SEED, MIXTURE 5	POUND		500	500	
	2575.511	MULCH MATERIAL, TYPE 1	TON		~~20~~	~~20~~	21
	2575.519	DISC ANCHORING (P)	ACRE		10	10	
	2575.531	COMMERCIAL FERTILIZER, ANALYSIS 12-12-12	TON		1	1	
	2501.521	138"SPAN R.C. PIPE-ARCH CULV. CL. 2A.	LIN. FT.		36	36	
	2501.521	169" SPAN R.C. PIPE-ARCH CULV. CL. 2A.	LIN. FT.		58	58	
	2501.525	138" SPAN R.C. PIPE-ARCH APRONS	EACH		2	2	
	2501.525	169" SPAN R.C. PIPE-ARCH APRONS (14' LONG)	EACH		2	2	

(P) PLAN QUANTITY

① 6'x8'x24' STONE CATTLE PASS STA. 126+75, 5.5'x6'x19.5' LIMESTONE BOX CULV. STA. 251+23, AND 7'x4'x24' CONC. BOX STA. 304+03.

② ITEM 2211.501 AGGREGATE BASE CLASS III. INCLUDES 500 TONS FOR 20 APPROACHES.

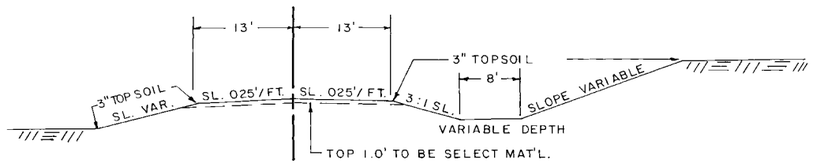
③ EQUIPMENT HOUR LISTED ARE TO BE USED FOR CHANNEL WORK AT INLET AND OUTLET ℄ CULV. STA.304+03 AS DRECTED BY THE ENGINEER.

STANDARD PLATES

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

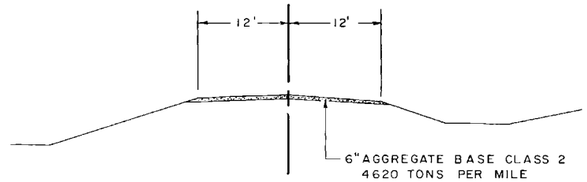
PLATE NO		DESCRIPTION
0003	A	SPECIFICATION REFERENCE TO STANDARD PLATES.
3000	H	REINFORCED CONCRETE PIPE.
3007	A	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES.
3014	J	REINFORCED CONCRETE PIPE-ARCH DETAIL.
3040	F	CORRUGATED METAL PIPE CULVERT.
3100	F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE.
3110	F	CONCRETE APRON FOR REINFORCED CONCRETE PIPE-ARCH.
3123	H	METAL APRON FOR C.M. PIPE.
3124	A	METAL APRON CONNECTION
3133	A	RIP-RAP AT R.C.P. OUTLETS
3145	C	CONCRETE PIPE JOINT TIES. (EYE BOLT TIE)
3221	C	CORRUGATED STEEL PIPE COUPLING BAND.
8000	H	STANDARD BARRICADES.
9000	B	APPROACHES AND ENTRANCES.

TYPICAL GRADING SECTION



STA. 0+00 TO STA. 3+90
STA. 100+00 TO STA. 152+41.55

TYPICAL AGGREGATE BASE SECTION



STA. 0+00 TO STA. 3+90
STA. 100+00 TO STA. 152+41.55

NOTE: PLACE REINFORCED CONCRETE PIPE ON CL. "B" BEDDING AS DIRECTED BY THE ENGINEER. ALL BEDDING TO BE CONSIDERED AS INCIDENTAL AND NO DIRECT COMPENSATION SHALL BE MADE THEREFORE.

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

NOTE: SALVAGED TOPSOIL TO BE PLACED ON SLOPES AS SHOWN ON PLANS AND AS DIRECTED BY THE ENGINEER.

NOTE: SUBGRADE TREATMENT:
EXCAVATE 1.0' BELOW PROFILE GRADE FOR COMPACTION, AS SHOWN ON THE PLAN AND PROFILE SHEETS. EXCAVATION HAS BEEN COMPUTED AND IS LISTED AS SUBGRADE EXCAVATION. BACKFILL WITH SELECT MATERIAL FROM THE R.O.W. TAPERS SHALL BE 50:1 IN ALL CASES.

ALBINSON, INC. MINNEAPOLIS 55405

℄ CULV. 100+30
INPL. 18"x 32' C.M.P.
W/APRONS

REMOVE CULV.
MOVE CULV. TO STA. 100+40
24"x 54' R.C. PIPE CL. II
2-24" R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING
F+I CONC. PIPE JOINT TIES

F.E. LT. 100+74
INPL. 15"x 28' C.M.P.

REMOVE CULV.
~~MOVE F.E. LT. TO STA. 102+00~~
18"x 28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

AS BUILT PLANS

F.E. LT. 111+~~38~~
NO CULV. INPL.

INPL. 6" METAL
DRAIN TILE
115+21

18"x 28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS
MOVED TO 111+15

~~F.E. LT. 115+57~~
~~NO CULV. INPL.~~

NO CULV. REQ'D.
REMOVED

F.E. L.T. 120+88
NO CULV. INPL.

18"x 28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

F.M.E. LT. 122+24
NO CULV. INPL.

18"x 32' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

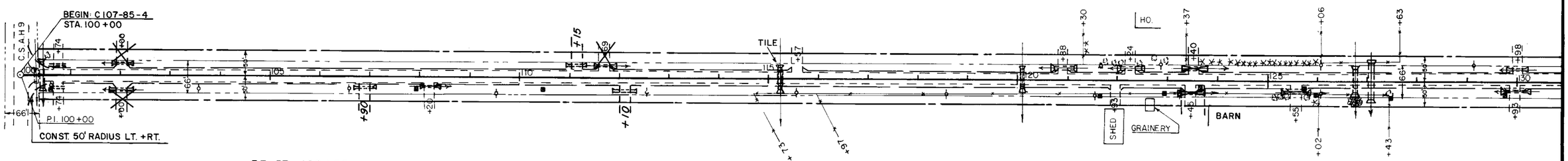
F.E. LT. 123+40
NO CULV. INPL.

~~18"x 28' C.S. PIPE CULV.~~
~~2-18" G.S. PIPE APRONS~~

Fed. Proj. No.

℄ CULV. 126+75
INPL. 6'x 8'x 24' STONE
CATTLE PASS
REMOVE BOX CULV.
54"x 48" R.C. PIPE CULV. CL. III
54"x 32" R.C. PIPE CULV. CL. IV
2-54" R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING
F+I CONC. PIPE JOINT TIES
24 CU. YDS. RANDOM RIPRAP CL. III
18" DEPTH
12 CU. YDS. GRANULAR FILTER
9" DEPTH

F.E. LT. 129+98
INPL. 15" x 20' C.M.P.
NO APRONS
REMOVE CULV.
18"x 28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS



F.E. RT. 100+74
NO CULV. INPL.
~~MOVE F.E. RT. TO STA. 102+00~~
18"x 28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

F.E. RT. 106+90
INPL. 18"x 32' CMP
APRONS

F.E. RT. 108+20
BURIED
REMOVE CULV.
18"x 28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

F.E. RT. 112+10
INPL. 18"x 28' CMP
APRONS

℄ CULV. 115+20
INPL. 57" SPAN x 32'
W/APRONS
SALVAGE OUTLET APRON
EXTEND 57" SPAN x 6' P-ARCH
INSTALL OUTLET APRON

℄ CULV. 120+08
INPL. 15"x 26' C.M.P.
W/CONC. HDWL. ON
OUTLET
REMOVE CULV.
24"x 38' R.C. PIPE CULV. CL. II
2-24" R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING
F+I CONC. PIPE JOINT TIES

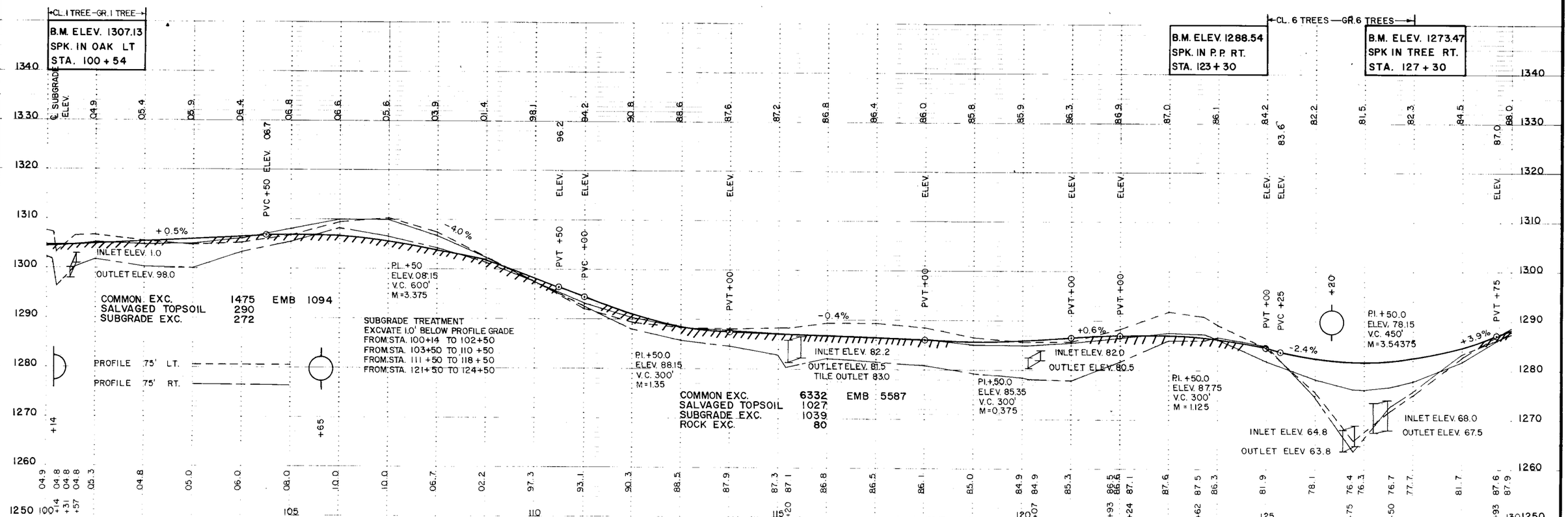
F.M. E. RT. 121+93
NO CULV. INPL.
NO CULV. REQ'D.

F.M. E. RT. 123+45
NO CULV. INPL.
~~18"x 32' PIPE CULV~~
~~2-18" G.S. PIPE APRONS~~

F.M. E. RT. 125+55
INPL. 15" x 20' C.M.P.
NO APRONS
REMOVE CULV.
18"x 28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

F.M. E. RT. 129+93
INPL. 18" x 32' C.M.P.
W/APRONS
REMOVE CULV.
18"x 32' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

CONST. CATTLE PASS 127+10
72"x 70' R.C. CATTLE PASS CL. III
2-72" R.C. APRONS
PLACE CATTLE PASS ON "B" BEDDING
F+I CONC. PIPE JOINT TIES



~~State Proj. No.~~ C107-85-4 C.R. 107 **Sheet No. 3 of 12 Sheets**

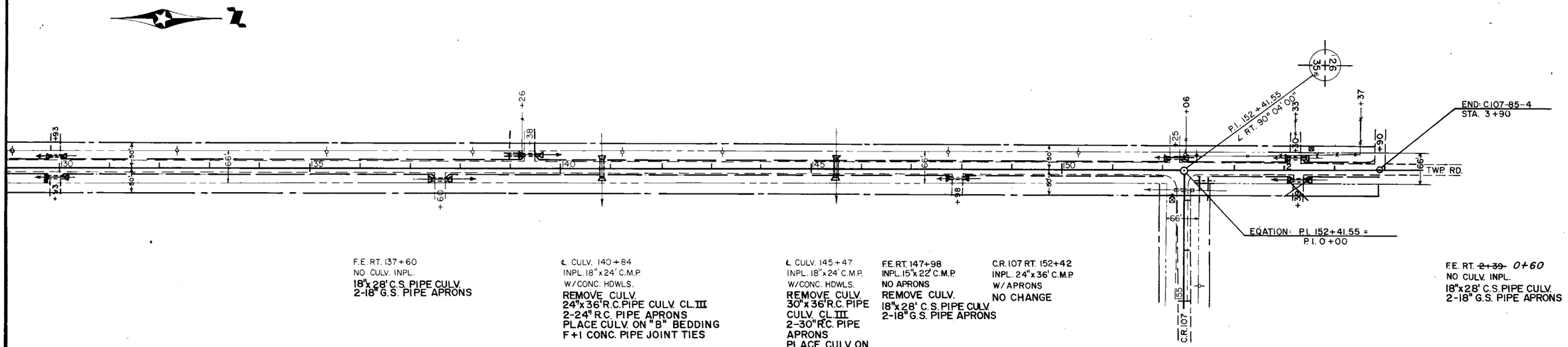
F.E. LT. ~~139+38~~ *138+26*
NO CULV. INPL.
18"x*56*" C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

F.E. LT. 152+25
INPL. 15"x20' C.M.P.
NO APRONS
REMOVE CULV.
18"x28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

Fed. Proj. No.

F.E. L.T. 2+30
NO CULV. INPL.
18"x28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

F.M. E. L.T. 3+90
NO CULV. INPL.
NO CHANGE



F.E. RT. 137+60
NO CULV. INPL.
18"x28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

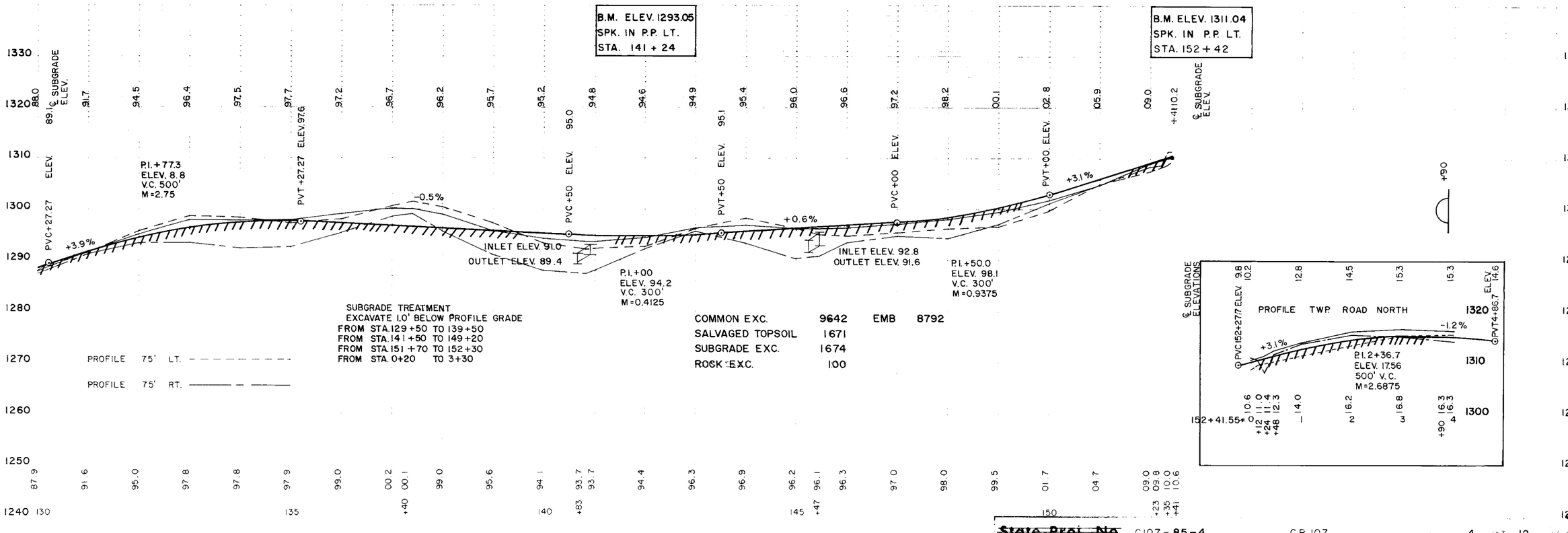
℄ CULV. 140+84
INPL. 18"x24' C.M.P.
W/CONC. HDWLS.
REMOVE CULV.
24"x36' R.C. PIPE CULV. CL. III
2-24" R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING
F+I CONC. PIPE JOINT TIES

℄ CULV. 145+47
INPL. 18"x24' C.M.P.
W/CONC. HDWLS.
REMOVE CULV.
30"x36' R.C. PIPE CULV. CL. III
2-30" R.C. PIPE APRONS
PLACE CULV. ON "B" BEDDING
F+I CONC. PIPE JOINT TIES

F.E. RT. 147+98
INPL. 15"x22' C.M.P.
NO APRONS
REMOVE CULV.
18"x28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS

C.R. 107 RT. 152+42
INPL. 24"x36' C.M.P.
W/APRONS
NO CHANGE

F.E. RT. ~~2+39~~ *0+60*
NO CULV. INPL.
18"x28' C.S. PIPE CULV.
2-18" G.S. PIPE APRONS



SUBGRADE TREATMENT
EXCAVATE 1.0' BELOW PROFILE GRADE
FROM STA. 129+50 TO 139+50
FROM STA. 141+50 TO 149+20
FROM STA. 151+70 TO 152+30
FROM STA. 0+20 TO 3+30

COMMON EXC.	9642	EMB	8792
SALVAGED TOPSOIL	1671		
SUBGRADE EXC.	1674		
ROCK EXC.	100		

State Proj. No. C107-85-4 CR 107 4 of 12 sheets