FORM 129 A

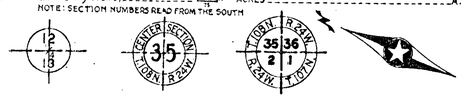
CONVENTIONAL SIGNS

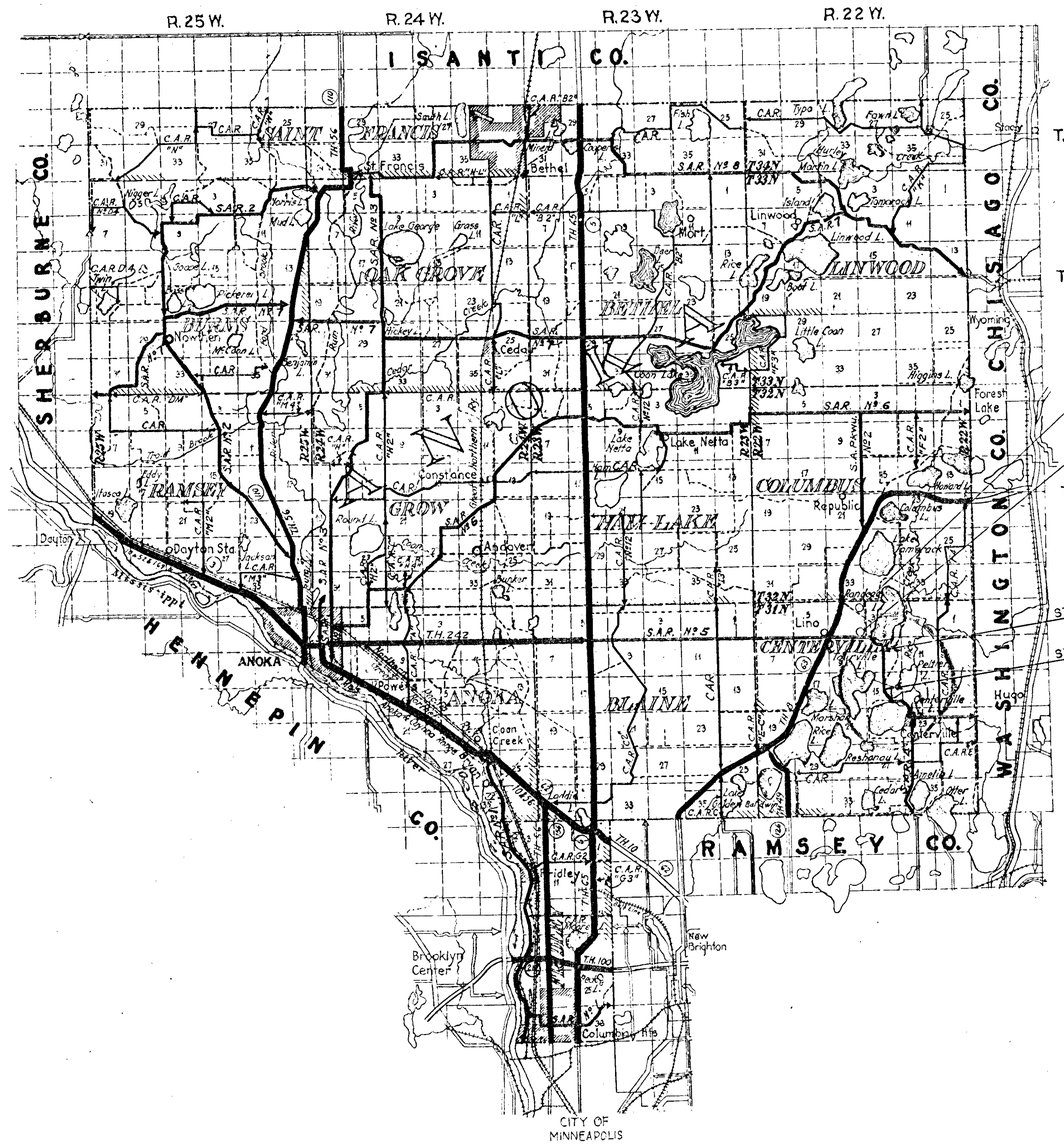
STATE LINE
COUNTY LINE
TWP OR RANGE LINE
SECTION LINE
RIGHT OF WAY LINE
CORPORATE OR CITY LIMITS
ROAD CENTER LINE
RETAINING WALL
RAILROADS
CREEK
DRY RUN
DRAINAGE DITCH
POWER POLE LINE
TELEPHONE OR TELEGRAPH LINE
CULVERTS - PLAIN
WITH ENDWALLS
WITH WINGWALLS
DROP INLET
FENCE LINE
GRAVEL PIT
SAND PIT
CLAY PIT
ROCK QUARRY
SPRINGS
MARSH
BRUSH OR TIMBER
HEDGE
ROCK LEDGE
SAND
EDGE OF CUT
TOE OF EMBANKMENT
RAILROAD R/W LINE
BUILDING (One Story Frame) 1 STY

NOTE: SECTION NUMBERS READ FROM THE SOUTH

ABBREVIATIONS

EXCAVATION	EXC.
EARTH	E.
LOOSE ROCK	L.R.
SOLID ROCK	S.R.
EMBANKMENT	F.
OVERHAUL	H.
SURFACING	S.
HAND DITCHING	H.D.
SPECIAL EXCAVATION	S.E.
SPECIAL PLOWING	S.P.
GUARD RAIL	G.R.
CORRUGATED METAL CULVERT	C.M.CULV.
SECTIONAL CONCRETE CULVERT	R.CULV.
SECTIONAL CONCRETE CULVERT (Heavy Type)	R.CULV.
TON MILES	T.M.
TELEPHONE POLE	TEL.P.
POWER POLE	P.P.
PLACE	P.
INPLACE	INP.
REPLACE	REP.
RIGHT	RT.
LEFT	LT.
INTERSECTION ANGLE	Δ
RADIUS	R.
TANGENT	T.
LENGTH OF CURVE	L.
POINT OF CURVE	P.C.
POINT OF TANGENT	P.T.
POINT OF INTERSECTION	P.I.
VERTICAL CURVE	V.C.
BENCH MARK	B.M.
ELEVATION	EL.
ACRES	A.





BORROW PIT B

BORROW PIT A

BEG. S.P. 02-509-04 ER 16 STA. 80+00

END S.P. 02-509-04 ER 16 STA. 167+60

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
Plan and Profile of State Road No. 5
ANOKA COUNTY

From A POINT 1248.2' SOUTH OF THE N 1/4 COR. OF SEC. 10 T.31N- R.22W. To A POINT 4577.7' SOUTH & 1024.0' EAST OF THE N.1/4 COR. SEC. 15 T.31N- R.22W.

Gi. a proper reference to Sections, Township and Range

GROSS LENGTH- 8,760 FEET 1.659 MILES
LENGTH OF EXCEPTIONS- 0 FEET 0 MILES
NET LENGTH 8,760 FEET 1.659 MILES

SCALES
PLAN, 1 Inch = 200 Feet.
PROFILE, Horz. 1 Inch = 200 Feet, Vert. 1 Inch = 20 Feet
WORKING PLANS: Horz. 1 Inch = 100 Feet; Vert. 1 Inch = 10 Feet; Cross-Section, 1 Inch = Feet

LAYOUT
Scale, 1 Inch = 10560 Feet

INDEX OF SHEETS

ER 16

SPECIFICATIONS

THE SPECIFICATIONS FOR HIGHWAY CONSTRUCTION DATED JULY 1, 1947, AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF THE PUBLIC ROADS ADMINISTRATION, OCTOBER 15, 1947, AS MODIFIED BY "SUPPLEMENT 1" THERETO DATED APRIL 15, 1953, AND SUBMITTED FOR APPROVAL BY THE DIVISION ENGINEER OF B.P.R. ON MARCH 25, 1953, AND THE "SPECIFICATIONS FOR BITUMINOUS ROAD MATERIALS" DATED JAN. 7, 1952 AND RECOMMEND FOR APPROVAL AS STANDARD BY THE DIVISION ENGINEER OF THE B.P.R. ON FEB. 8, 1952 SHALL GOVERN.

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL:

DISTRICT ENGINEER — DATE

APPROVED:

DIVISION ENGINEER — DATE

PLANNED BY _____ 1953
COUNTY ENGINEER FOR ANOKA COUNTY

RECOMMENDED FOR APPROVAL E.H. McCluskey 2-13 1953
DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL S.M. Evans 3-3 1953
ENGINEER OF COUNTY DIVISION

APPROVED 3/3 1953 J.A. Elstad
ENGINEER OF PLANS AND SURVEYS

3-53 2865

S.P. 02-509-04 ER 16

Anoka County, Minnesota. County Proj. No. _____ Plan No. _____ Sheet 1 of 9 Sheets

FORM 129c-#1 Rev. '46

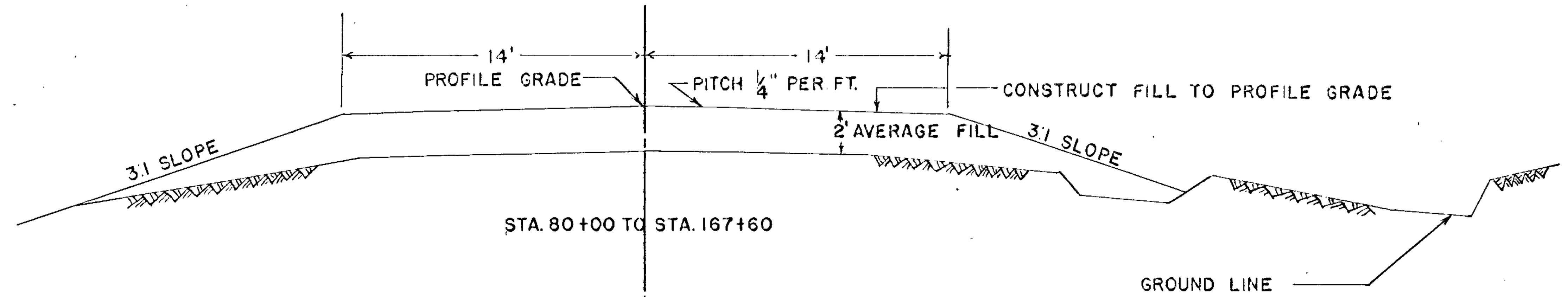
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SEC	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MINN.					

ESTIMATED QUANTITIES

SPECIFICATION NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES
* 2105.508	BORROW EXCAVATION (CLASS "C")	CU. YD.	42894
2202.527	GRAVEL BASE INPLACE	CU. YDS. (VM)	2,716
2130.501	WATER	M-GAL.	54
2321.501	BITUMINOUS MATERIAL FOR PRIME	GAL.	7,592
2321.503	BITUMINOUS MATERIAL FOR MIXTURE	GAL.	23,554
2321.507	AGGREGATE	CU. YDS. (V M)	1,150
2321.512	BITUMINOUS SURFACE	SQ. YD.	21,413 ✓

* INCLUDES 36720 CU. YDS. USED TO MAKE GRADE LIFT AND 6174 CU. YDS. OF STRIPPING. SEE SHEET NO. 5

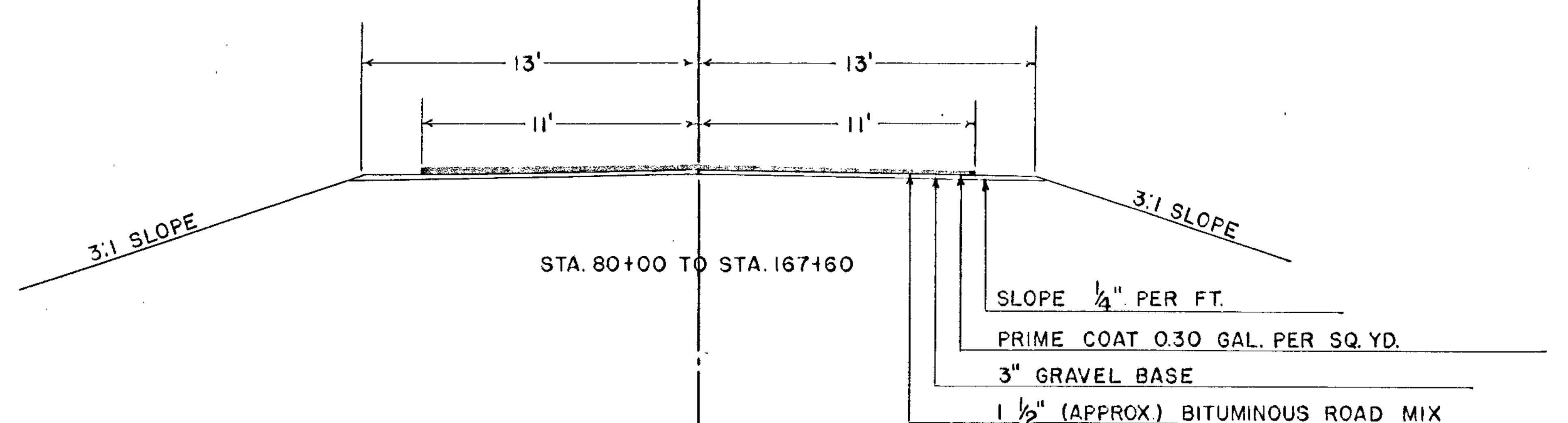
TYPICAL GRADING SECTIONS



SPECIAL DETAILS

2' AVERAGE FILL
AVERAGE HAUL -
FILL MATERIAL TO BE OBTAINED FROM BORROW PIT

TYPICAL BASE & SURFACE SECTIONS



BASIS FOR COMPUTATION OF QUANTITIES

PRIME COAT 0.30 GAL. PER SQ.YD. (MC O OR MC 1)
BITUMINOUS MATERIAL FOR MIXTURE 1.10 GAL. PER. SQ.YD. (MC2 OR MC 3)
AGGREGATE 150# PER. SQ. YD.
MOTOR GRADER 10 HRS. PER. MILE
GRAVEL MATERIAL ASSUMED TO WEIGH 2800 LBS. PER. CU. YD.
3" DEPTH BASE CONSTRUCTION 31.0 CU. YDS. PER. STA.
WATER FOR COMPACTION 20 GALS. PER. CU. YD. OF BASE CONSTRUCTION
PNEUMATIC-TIRED ROLLER 5 HRS. PER. MILE

STANDARD DETAIL PLATES

Standard Detail Plates issued October 1, 1947 and approved by the Public Roads Administration April 1, 1948, with revisions Approved Feb. 24, 1949, shall govern.

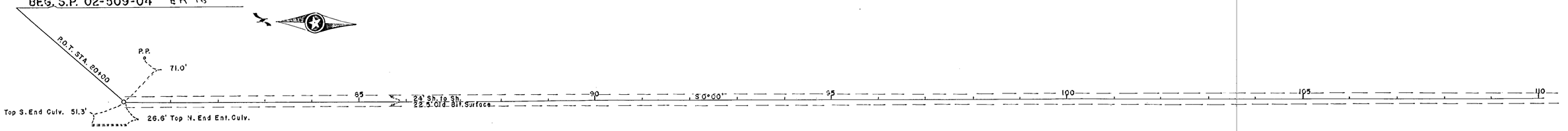
PLATE NO.	STANDARD DETAIL PLATES

..................County, Minn. Proj. No............. Plan No............. Sheet No. 2 of 9 Sheets.

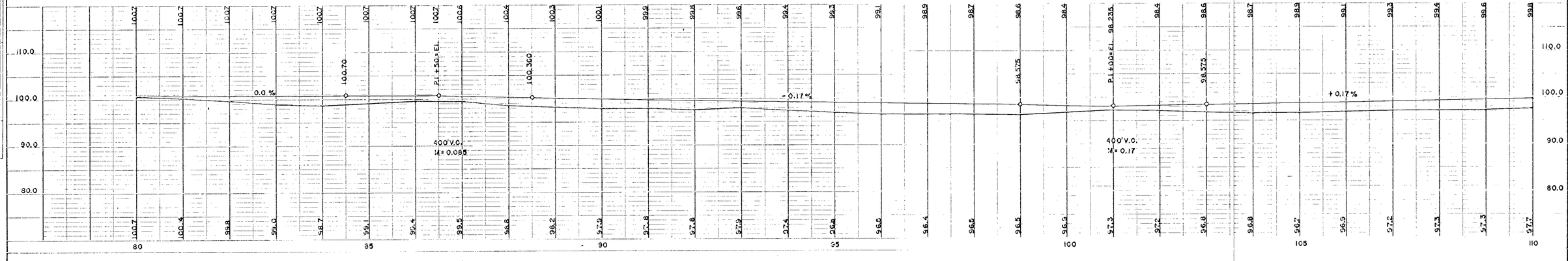
DAHMS PHOTO PRINT CO. MPLS. 1, MINN.

S.P. 02-509-04 ER16

BEG. S.P. 02-509-04 ER 16

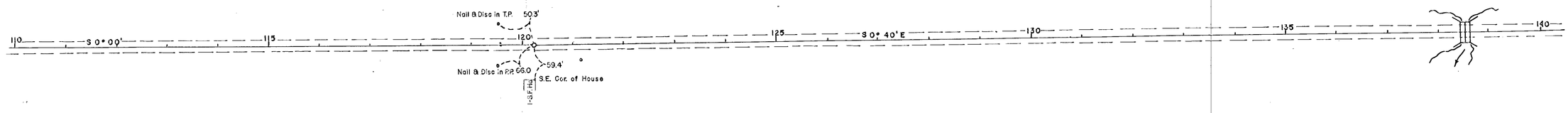


PLAN
BY
DATE
SURVEYED
PLOTTED
NOTE BOOK
ALIGNMENT CHECKED
RT. OF WAY CHECKED
NO.



STA. 138+52 ℄
INP. W 610X40' DOUBLE BOX CULV.
TO REMAIN

Sta. 120+25.0
Δ 0°40' Lt.



PROFILE
BY
DATE
SURVEYED
PLOTTED
NOTE BOOK
GRADES CHECKED
B.M. NOTED
NO.
STRUCTURE NOTATIONS CHECK

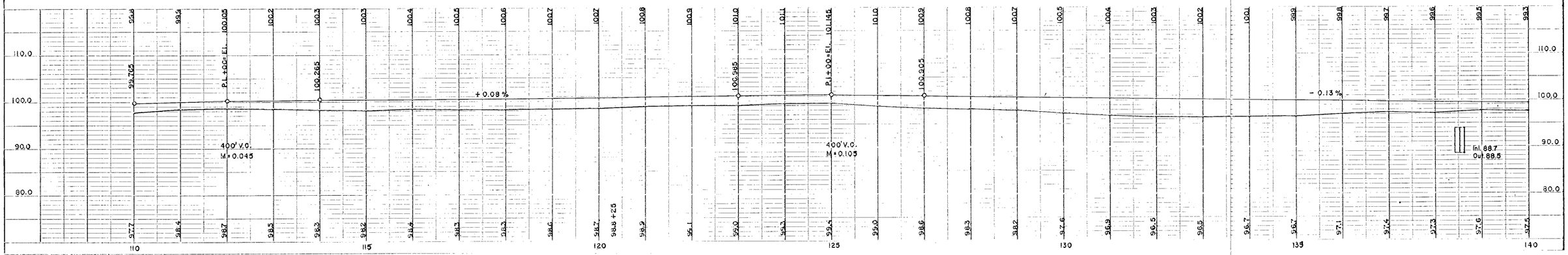


PLATE 2-PLAN-PROFILE D.P.R.S.R.E
CHARLES BRUNING COMPANY, INC.

S.P. 02-509-04 ER 16

Sheet 3 of 9 Sheets

PLATE 2-PLAN-PROFILE

S.P. 02-509-04

See Sheet 9-B of 9 Sheets for Cross Sections

BORROW PIT "B"

In the N.E.¼ N.E.¼ Sec. 4 31-22

19,745 Cu. Yds.
1,280 Cu. Yds. Top Soil
18,465 Cu. Yds. Class "C" Borrow

Dead Haul 6749.4 Feet
Project 4,3800 "
Total Haul 11,129 " =2.11 Mi.

Est. Haul Borrow Pit "B" 38,940 cu. yd. mi.

See Sheet 9-A of 9 Sheets for Cross Sections

BORROW PIT "A"

In the S.E.¼ S.E.¼ Sec. 4 31-22

23,149 Cu. Yds.
4,884 Cu. Yds. Top Soil
18,265 Cu. Yds. Class "C" Borrow

Dead Haul 3,696.3 Feet
Project 4,3800 "
Total Haul 8,076.3 " =1.53 Mi.

Est. Haul Borrow Pit "A" 27,945 Cu. Yd. Mi.

S.E. COR. SECTION 4 31-22
STA. 49+03.7

S.A.R. Nº 5

P.C. 56+44.7

P.T. 59+20.8

P.I. 57+89.0
Δ=44°10'
D=16°00'
T=145.3
L=359.3

P.C. 65+97.0

P.I. 70+14.5
Δ=32°30'
D=4°00'
T=417.5'
L=812.5

P.C. 74+03.5

P.C. 76+16.8

P.I. 78+51.5
Δ=78°10'
D=20°00'
T=232.7
L=390.8'

P.T. 80+09.7

BEG. S.P. 02-509-04 STA. 80+00

N

S.P. 02-509-04 ER 16

PLATE 3 CROSS SECTION O. P. R. & B. E. STANDARD
THE FREDERICK POST CO., CHICAGO

Sheet 5 of 9 Sheets