FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	233-D(1)	1	

Rev. 4-16-40 P.B.B. - Added Sheets No. 5a & 5b
Rev. 6-11-40-JWS. - Changed Standard Conc. Box Culv. (Sheet # 7)

COLORADO
STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. 233-D (1)

STATE HIGHWAY NO. 91

SUMMIT COUNTY

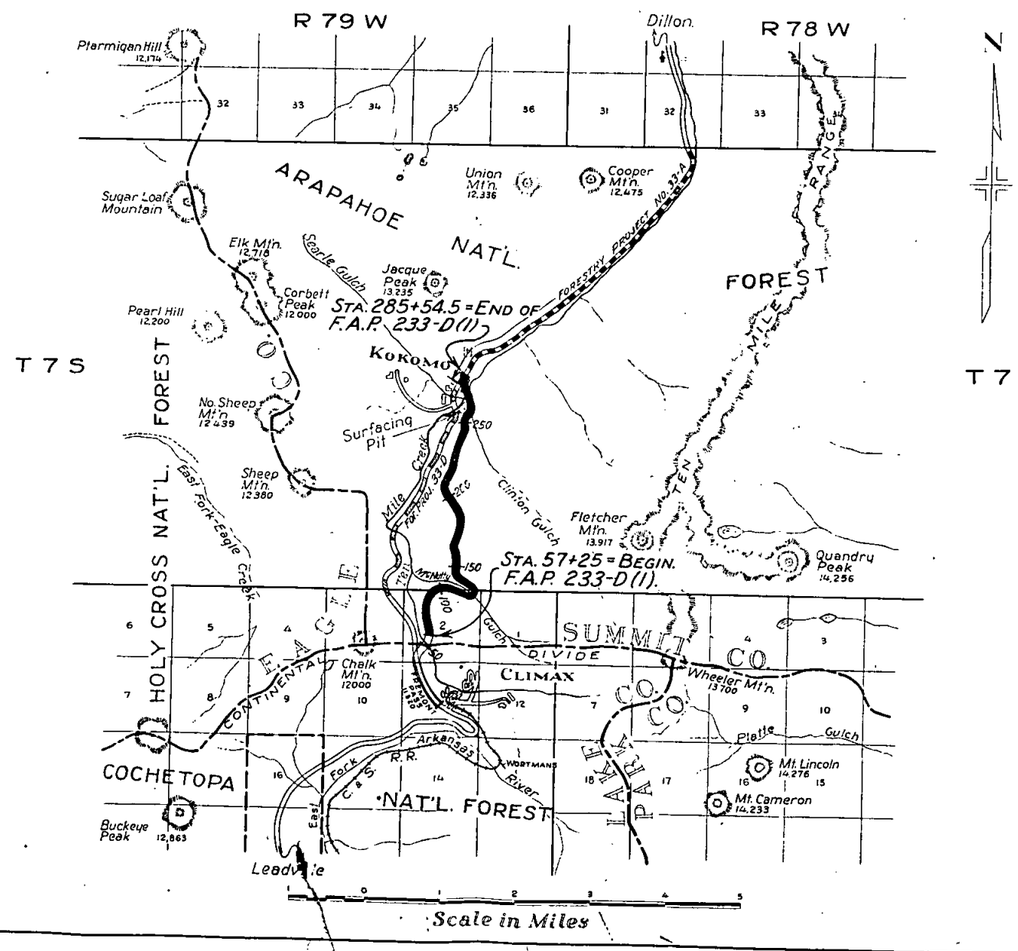
INDEX OF SHEETS

Sheet No. 1 Title sheet
" 2 Typical Cross Section and Summary
" 3-4 List of Structures, Right-of-Way Markers & Guard Fence
" 5 Details of Underdrain, Manhole and Slope Paving
" 6 Standard Headwalls for C.M.P. Culverts M-102-E
" 7 " Double Concrete Box Culvert M-110-B
" 7a Special Concrete Box Culvert, Sta. 118+
" 8 Standard Timber Guard Posts M-19-B
" 9 " Wire Cable Guard Fence M-20-B
" 10 " Marker Posts M-7-B
" 11 Standard Method for Superelevation and Widening of Curves M-1-B
" 12 Typical Side Approach Roads and Roadway Construction Traffic Signs M-2-B
" 13-21 Plan and Profile Sheets
" 22-179 Cross Section Sheets and Earthwork Summary
" 5a Detail of 60" Reinf. Conc. Pipe Culv., Sta. 210+
" 5b Reinforced Conc. Culv. Pipe M-113-A

SCALES OF ORIGINAL TRACINGS
ON PLAN, 1 IN. - 100 FT.
ON PROFILE 1 IN. - 100 FT. HORIZONTAL
1 IN. - 10 FT. VERTICAL
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
GROSS LENGTH OF PROJECT } 22,710.5 FT. = 4.301 MI.
NET LENGTH OF PROJECT }

CONVENTIONAL SIGNS

Center Line
Right-of-Way Lines
County Lines
Township or Range Lines
Section Line
Quarter Section Line
Property or Tract Line
City Limits
Wire Cable Guard Fence
Teleph. & Teleg. Line
Power Line



NOTE-
It is recommended that bidders on this Project go over the plan details with one of the following field representatives of this department:

H.L. Jenness Division Engineer Glenwood Springs, Colo.
H. T. Stitt Resident Engineer Dillon Colo.

RECOMMENDED FOR APPROVAL
ASSISTANT ENGINEER DATE Feb. 5, 1940

APPROVED
STATE HIGHWAY ENGINEER DATE

RECOMMEDED FOR APPROVAL
DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

RECOMMENDED FOR APPROVAL
CHIEF, WESTERN REGION
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED
COMMISSIONER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

GGH

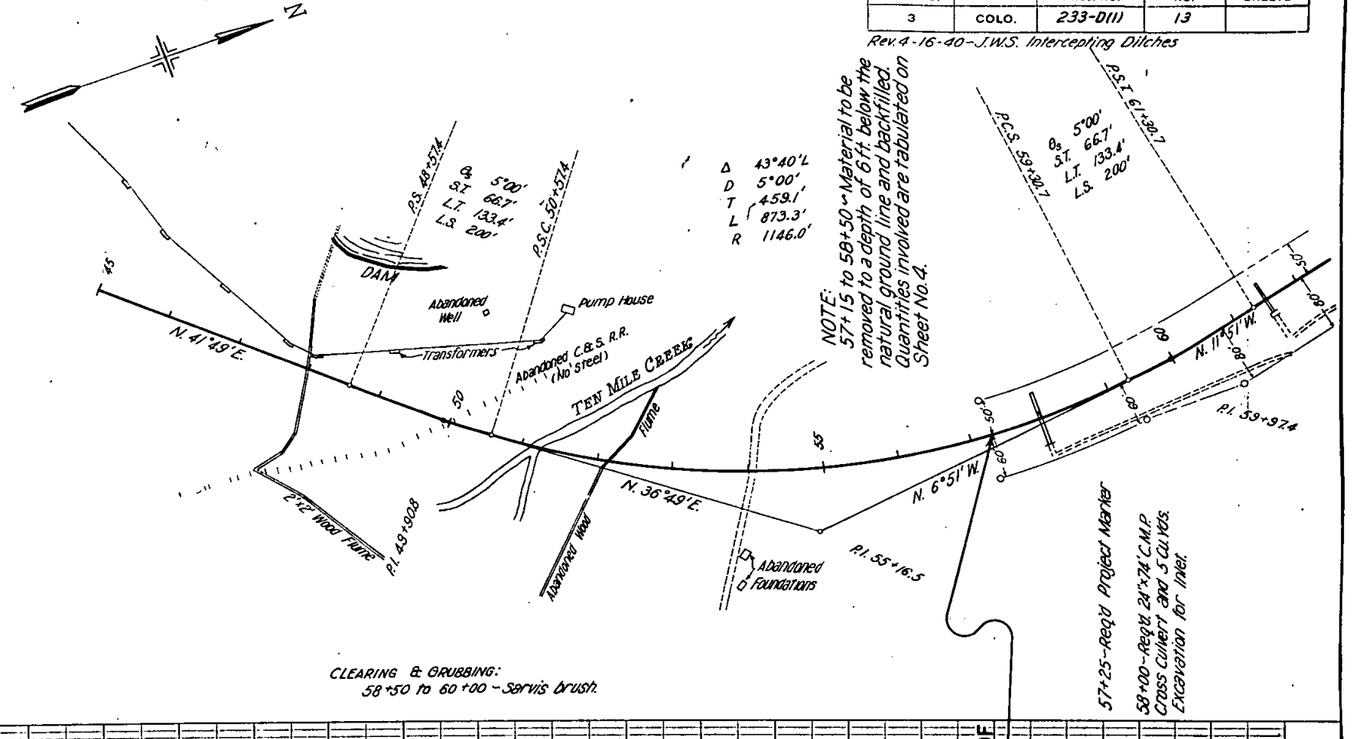
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	233-D(1)	13	

Rev. 4-16-40-J.W.S. Intercepting Ditches

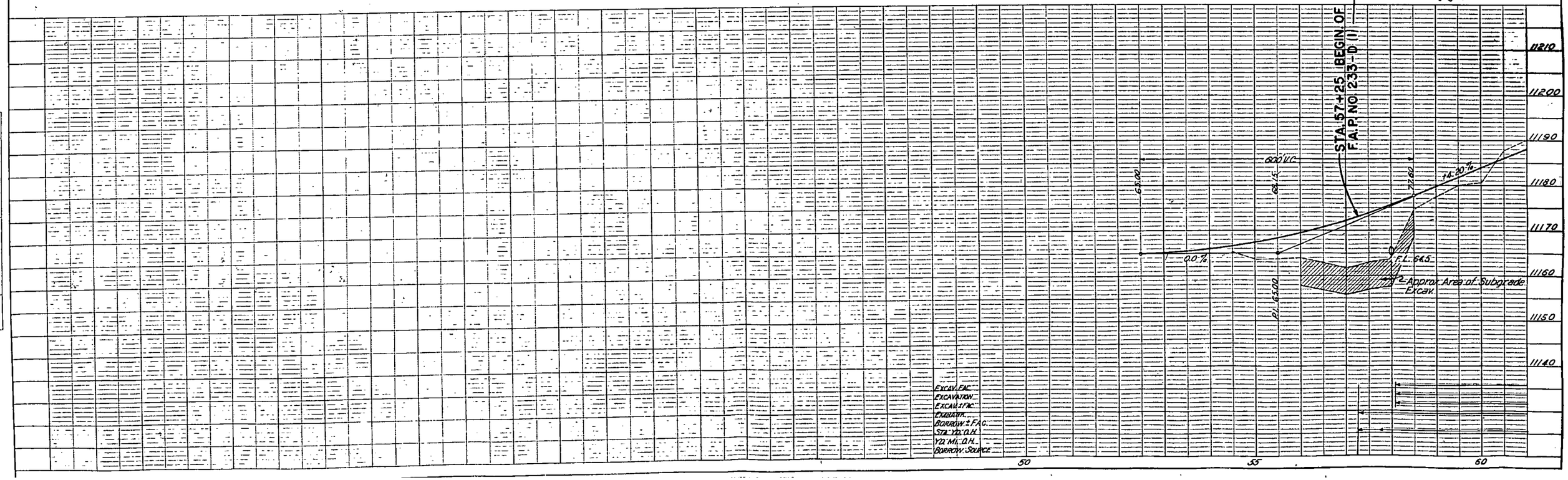
Alignment and grades as hereon shown are subject to modification during construction after approval by the Denver Office.

Poles encroaching on the R.O.W. are to be removed by their owners. (except as otherwise noted on plans.)

Right of Way Markers, Guard Posts and Guard Fence required are tabulated on Sheet No. 3



CLEARING & GRUBBING:
58+50 to 60+00 - Service brush.



NOTE BOOK NO. | PLOTTED | ALIGNMENT CHECKED | RT. OF WAY CHECKED

NOTE BOOK NO. | PLOTTED | GRADES CHECKED | B.M.'S NOTED | STRUCTURE NOTATIONS CH'KD.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	233-D(1)	14	

Rev. 4-16-40 - J.W.S. Changed note re. tailings line. Length C.M.P. Sta. 69+50 & added 60" pipe, Sta. 68+50.

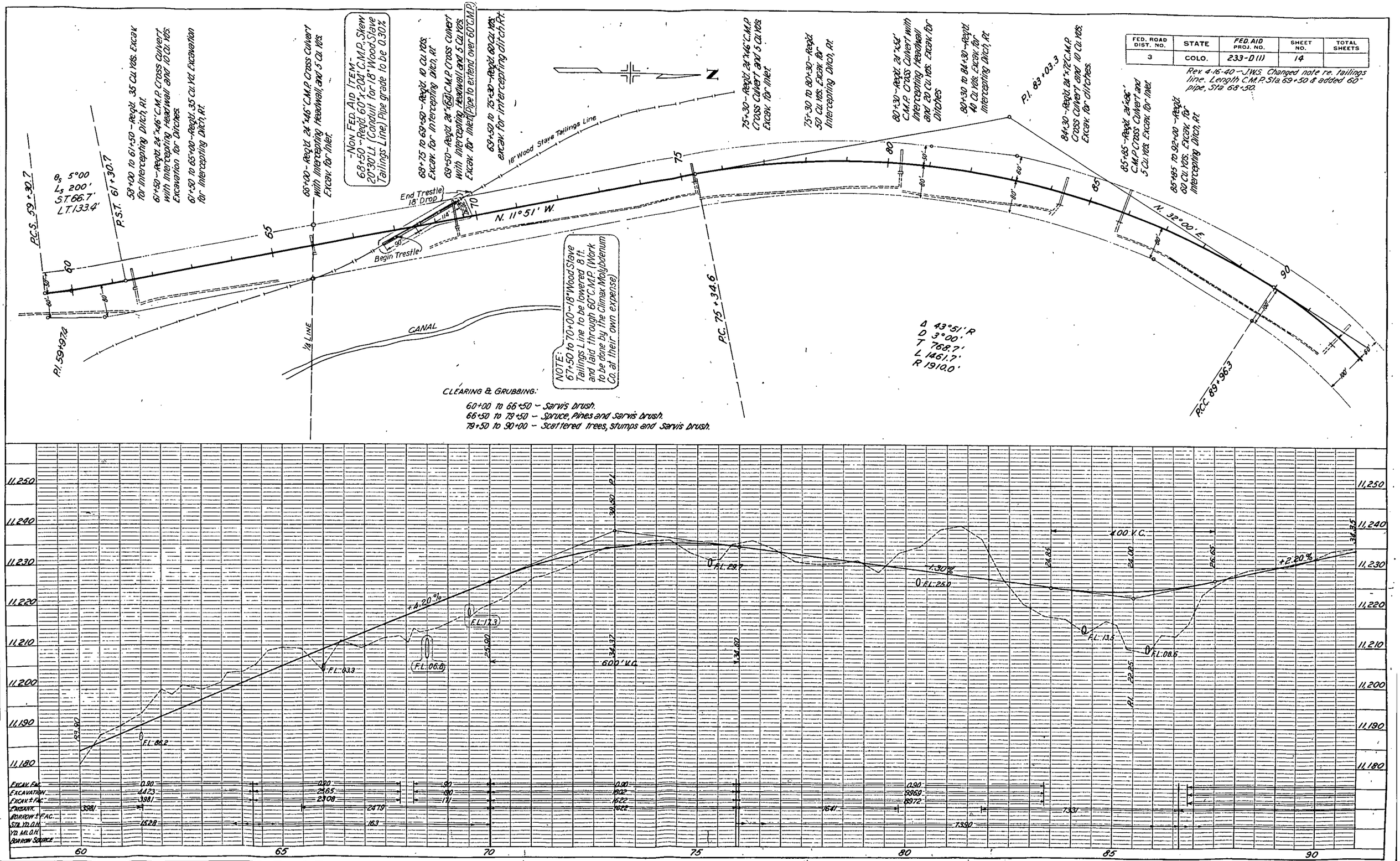


PLATE 1 - PLAN-PROFILE O. P. R. & R. E. STANDARD

NOTE BOOK NO. ALIGNMENT CHECKED RT. OF WAY CHECKED

NOTE BOOK NO. GRADES CHECKED B. M.'S NOTED STRUCTURE NOTATIONS CHKD.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	233-D111	15	

Rev. 4-16-40 – J.W.S. Ditches

92+00 – Reqd. 24"x66' C.M.P. Cross Culv. and 5 Cu. Yds. Excav. for Inlet.

92+00 to 97+50 – Reqd. 55 Cu. Yds. Excav. for Intercepting Ditch, Rt.

97+50 – Reqd. 24"x44' C.M.P. Cross Culv. and 5 Cu. Yds. Excav. for Inlet.

P.I. 98+57.3

P.O.S.T. 94+46.0 (Calc.)

N. 32°00' E.

S. 74°10' E.

P.I. 103+38.7

111+60 – Reqd. 24"x42' C.M.P. Cross Culvert and 5 Cu. Yds. Excavation for Inlet.

117+30 to 118+90 – Remove Log Dam. Lt.

Wire Stay

Old Mine Tunnel (Caved in)

118+40 – Reqd. Special 8'x10'x68' C.B.C. (Stepped 85° Rt.); also 250 Cu. Yds. Excav. for Inlet and Outlet Ditches. (See details on Sheet No. 7a.)

119+40 – Reqd. 18"x34' C.M.P. Side Drain, Rt. and 130 Cu. Yds. Embank. for Road Approach, Rt.

N

T. 7 S., R. 79 W. (Unsurveyed)

T. 8 S., R. 79 W.

676.4' to ¼ Cor. (Calc.)

¼ Cor.

Sta. 108+08.6 (Calc.)

20°50'

CANAL

Δ 164°54' L
D 30°00'
T 1441.1'
L 548.7
R 191.0'

S. 35°39' W.
241.3'

ROAD

N. 54°04' W.

121+95 Alt. Equation
P.I. 121+68.3 (BK)

16.8° (Calc.)

Prospect Hole

Log Dam

85°

119+70 to 124+25 – Reqd. 50 Cu. Yds. Excav. for Intercepting Ditch, Rt.

S. 69°10' E.

P.C. 116+18.6
Sta. 116+41.4

S. 76°00'18" E., 351.0'

McNulty Gulch

97+50 to 102+40 – Reqd. 50 Cu. Yds. Excav. for Intercepting Ditch, Rt.

Δ 73°50'
D 5°00'
T 861.0'
L 1476.7'
R 1146.0'

102+40 – Reqd. 24"x110' C.M.P. Cross Culvert, and 5 Cu. Yds. for Inlet.

¼ LINE

103+90 – Reqd. 24"x86' C.M.P. Cross Culv. and 10 Cu. Yds. Excav. for Inlet

105+45 – Reqd. 24"x64' C.M.P. Cross Culv. and 10 Cu. Yds. Excav. for Ditches

P.C.S. 104+73.0

Δ 5°00'
L 200'
L.T. 133.4'
S.T. 66.7'

P.S.T. 106+73.0

108+75 – Reqd. 24"x52' C.M.P. Cross Culv. and 5 Cu. Yds. Excav. for Inlet.

P.C.C. 89+96.3

CLEARING & GRUBBING:
90+00 to 115+70 – Scattered tress, stumps and sarvis brush.
115+70 to 118+00 – Heavy sarvis brush.

N.W. ¼ SEC. 2

N.E. ¼ SEC. 2.

PROFILE

SURVEYED
PLOTTED
NOTE BOOK CHECKED
NO.

PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED

NOTE BOOK CROSS CHECKED
NO. B. M. NOTED
STRUCTURE NOTATIONS CHECKED

11,260
11,250
11,240
11,230
11,220
11,210
11,200

+2.2%

+1.7266%

50.0' V.C.

60.0' V.C.

FL. 27.3

FL. 34.7

FL. 16.4

FL. 19.6

FL. 26.0

FL. 33.0

FL. 39.6

FL. 37.9

EXCAV. FAC.
EXCAVATION
EXCAV. ≠ FAC.
EMBANK.
BORROW ≠ FAC.
STA. YD. O.H.
YD. MI. O.H.
PAR. DIRN. SHUTTLE

5750 Cu. Yds. obtained by Widening Cut & Using 2:1 Back Slopes Rt. Sta. 93+00 to 101+00

90
95
100
105
110
115
120

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	233-D(1)	16	

Rev. 4-16-40-J.W.S. Intercepting Ditches

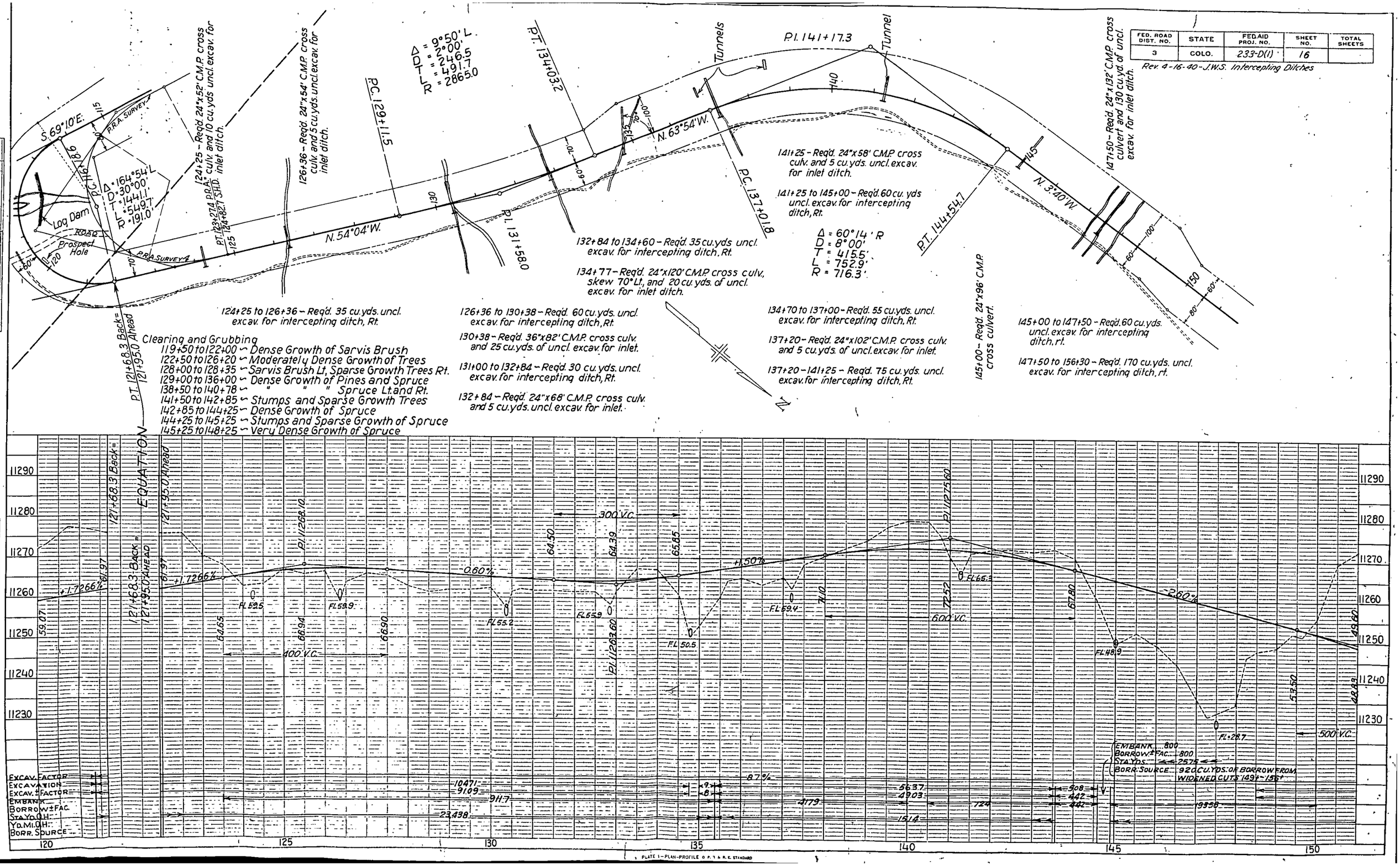


PLATE 1 - PLAN-PROFILE O.P.T.A.R.E. STANDARD

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	233-D(1)	17	

Rev. 4-16-40 – J.W.S. Intercepting Ditches

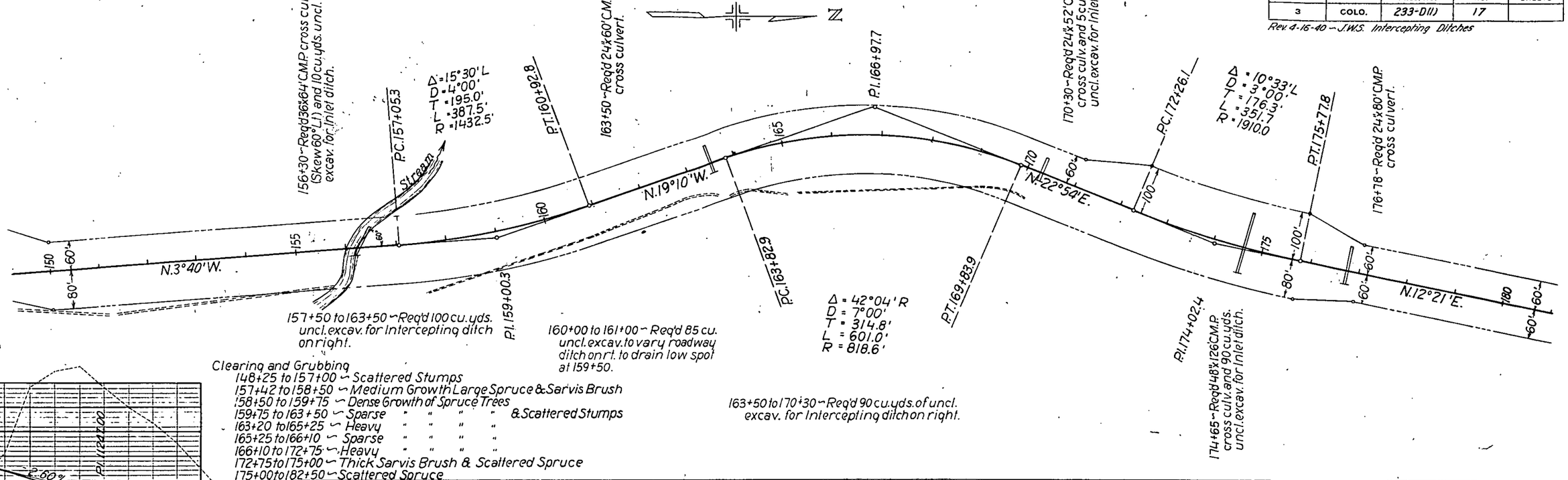
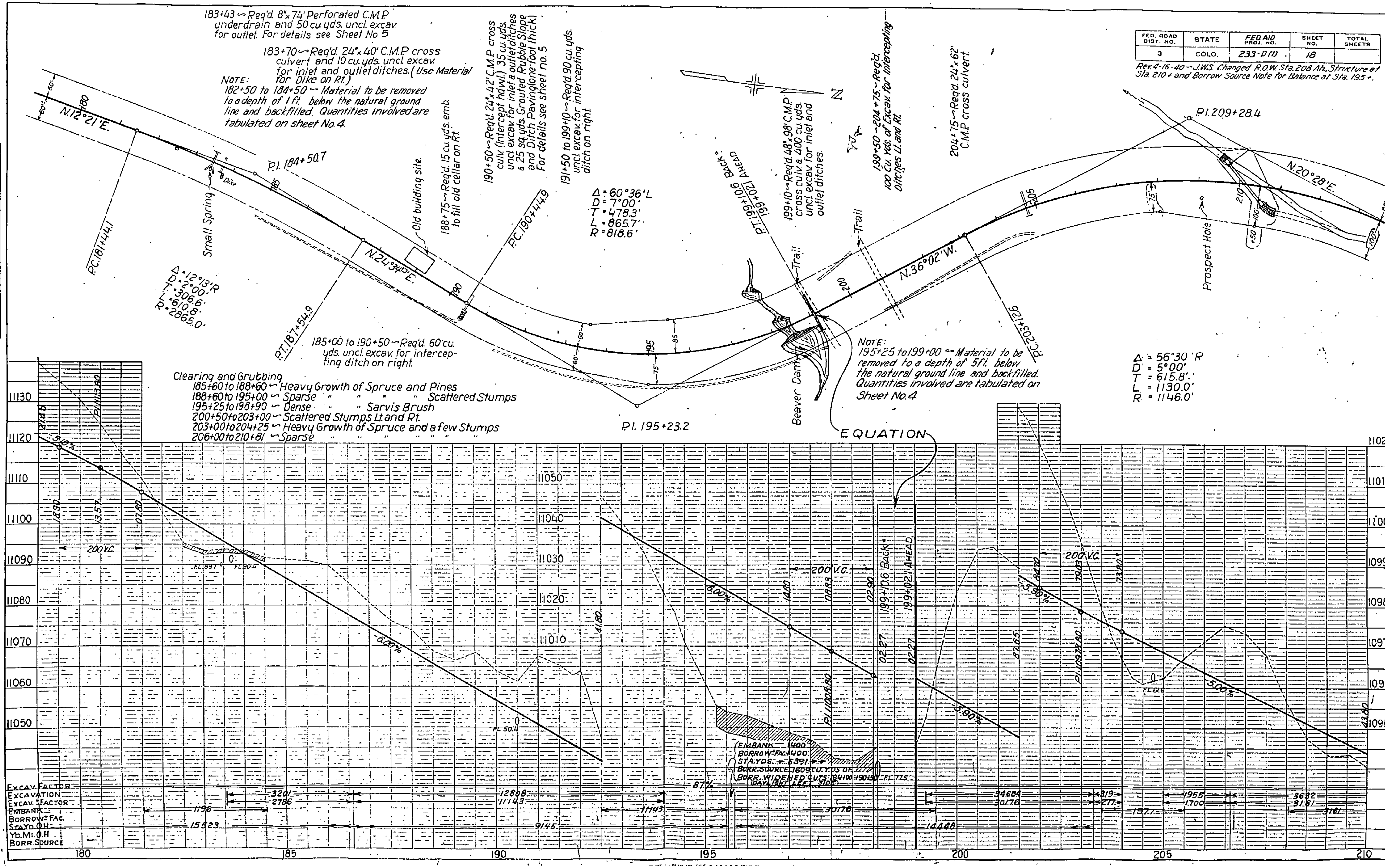


PLATE 1 – PLAN-PROFILE O. P. R. & R. E. STANDARD



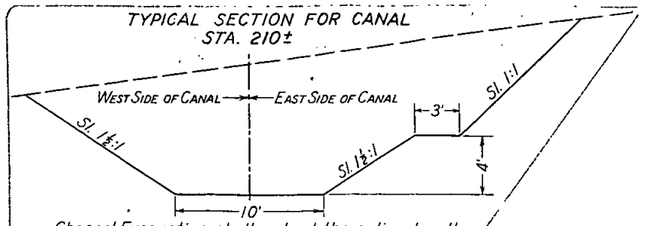
FED. ROAD DIST. NO. 3 | STATE COLO. | FED AID PROJ. NO. 233-D(1) | SHEET NO. 18 | TOTAL SHEETS
Rev. 4-16-40 – J.W.S. Changed R.O.W. Sta. 208 Ah., Structure at Sta. 210 + and Borrow Source Note for Balance at Sta. 195 +.
183+43 ~ Req'd. 8"x 74' Perforated C.M.P. underdrain and 50 cu. yds. uncl. excav. for outlet. For details see Sheet No. 5
183+70 ~ Req'd. 24"x 40' C.M.P. cross culvert and 10 cu. yds. uncl. excav. for inlet and outlet ditches. (Use Material for Dike on Rt.)
NOTE: 182+50 to 184+50 ~ Material to be removed to a depth of 1 ft. below the natural ground line and backfilled. Quantities involved are tabulated on sheet No. 4.
190+50 ~ Req'd. 24"x 42' C.M.P. cross culv. (Intercept. hdwl.) 35 cu. yds. uncl. excav. for inlet & outlet ditches & 25 sq. yds. Grouted Rubble Slope and Ditch Paving (one foot thick). For details see Sheet No. 5
191+50 to 199+10 ~ Req'd. 90 cu. yds. uncl. excav. for intercepting ditch on right.
188+75 ~ Req'd. 15 cu. yds. emb. to fill old cellar on Rt.
Old building site.
199+10 ~ Req'd. 48"x 98' C.M.P. cross culv. & 400 cu. yds. uncl. excav. for inlet and outlet ditches.
199+50 – 204+75 – Req'd. 100 Cu. Yds. of Excav. for Intercepting Ditches Lt. and Rt.
204+75 ~ Req'd. 24"x 62' C.M.P. cross culvert
N.12°21'E.
N.24°34'E.
N.36°02'W.
N.20°28'E.
P.I. 184+50.7
P.C. 181+44.1
P.T. 187+54.9
P.C. 190+44.9
P.T. 199+10.6 Back = 199+02.1 Ahead
P.C. 203+12.6
P.I. 195+23.2
P.I. 209+28.4
Δ = 12°13'R
D = 2°00'
T = 306.6'
L = 610.8'
R = 2865.0'
Δ = 60°36'L
D = 7°00'
T = 478.3'
L = 865.7'
R = 818.6'
Δ = 56°30'R
D = 5°00'
T = 615.8'
L = 1130.0'
R = 1146.0'
Small Spring
Dike
Trail
Beaver Dam
Prospect Hole
185+00 to 190+50 ~ Req'd. 60 cu. yds. uncl. excav. for intercepting ditch on right.
NOTE: 195+25 to 199+00 ~ Material to be removed to a depth of 5 ft. below the natural ground line and backfilled. Quantities involved are tabulated on Sheet No. 4.
Clearing and Grubbing
185+60 to 188+60 ~ Heavy Growth of Spruce and Pines
188+60 to 195+00 ~ Sparse " " " Scattered Stumps
195+25 to 198+90 ~ Dense " Sarvis Brush
200+50 to 203+00 ~ Scattered Stumps Lt. and Rt.
203+00 to 204+25 ~ Heavy Growth of Spruce and a few Stumps
206+00 to 210+81 ~ Sparse " " " " " "
EQUATION
199+10.6 BACK = 199+02.1 AHEAD
P.I. 11113.80
-5.10%
-6.00%
6.00%
-5.90%
-3.90%
3.00%
200 V.C.
FL. 89.7
FL. 90.4
FL. 50.4
FL. 61.6
FL. 77.5
P.I. 11008.80
P.I. 10978.80
EMBANK. 1400
BORROW FAC. 1400
STA. YDS. 6391
BORR. SOURCE 1609 CU. YDS. OF BORR. WIDENED CUTS 184+00–190+50 (DAYLIGHT LEFT SIDE)
87%
EXCAV. FACTOR
EXCAVATION
EXCAV. FACTOR
EMBANK.
BORROW FAC.
STA. YD. O.H.
YD. MI. O.H.
BORR. SOURCE
3201
2786
1196
15523
12808
11143
9145
11143
30178
34684
30176
14448
319
277
1955
1700
1977
3682
3181
180
185
190
195
200
205
210

FED. ROAD DIST. NO.	STATE	FEDAID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	233-D(1)	19	

Rev. 4-16-40 – J.W.S. Changed R.O.W. Sta. 208 to 220. Structure at Sta. 210+ and Channel Impr. & Sl. Pav. Sta. 213+ to 215+, and Earthwork Data Sta. 211+ to 213+.

210+10 – Req'd 60"x110' Extra Strength Reinforced Conc. Culv. pipe (Skew 45° Rt.) with Conc. Intake & Outlet transitions & 8" Drain on Lt. Also Req'd 160 Sq. Yds. Grouted Rubble Slope & Ditch Paving (12" thick) for protection at inlet and Outlet and 5200 Cu. Yds. Uncl. Excavation for Realignment of Canal. (4000 Cu. Yds. to be used in Roadway Fill and 1200 Cu. Yds. to be used to Backfill over Structure) See details on Sheet No.

TYPICAL SECTION FOR CANAL
STA. 210±



Channel Excavation shall extend the entire length of the canal realignment and shall be included in, and paid for as "Unclassified Excavation."
Structural Excavation to be measured between the typical section for canal and the bottom of footings as excavated.

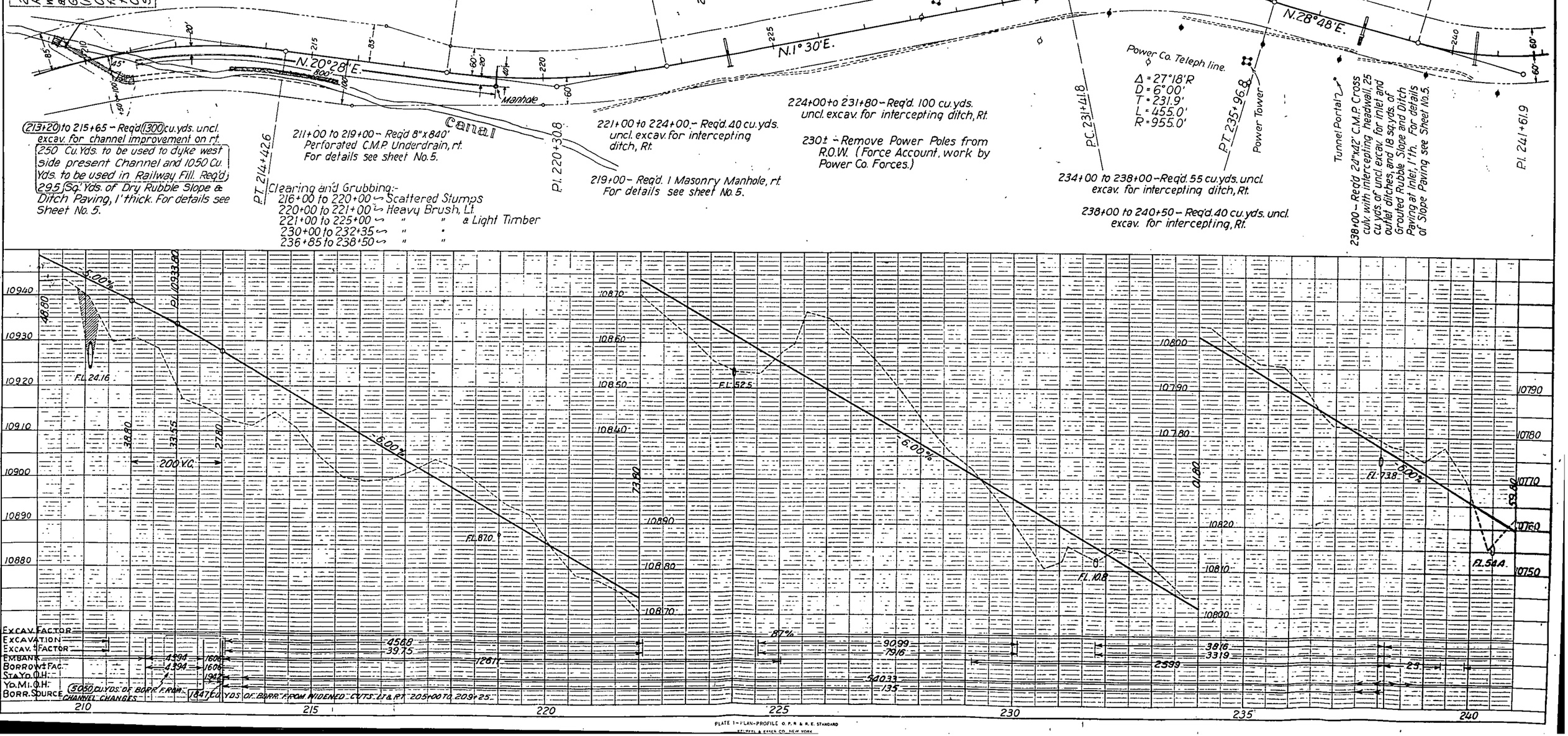
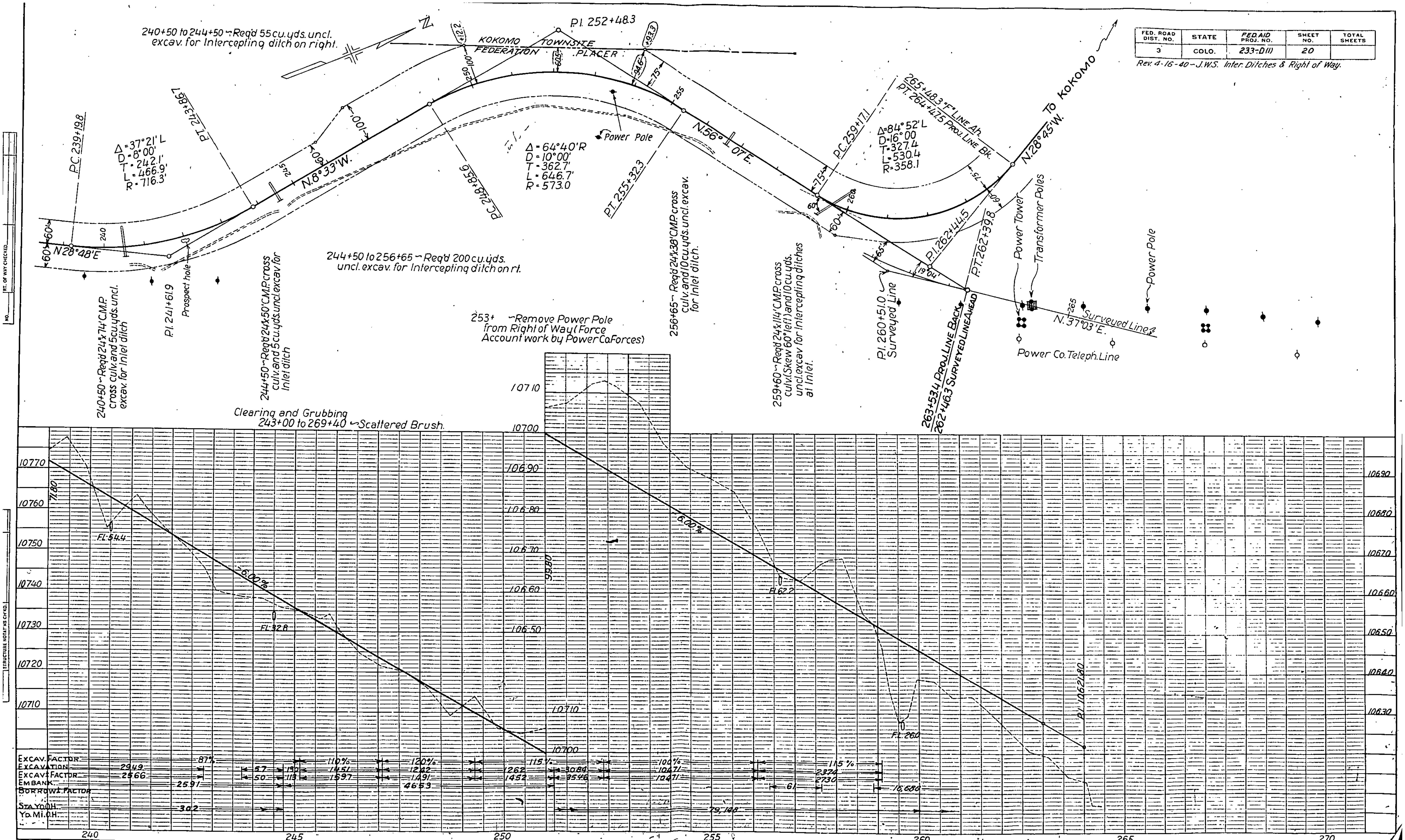


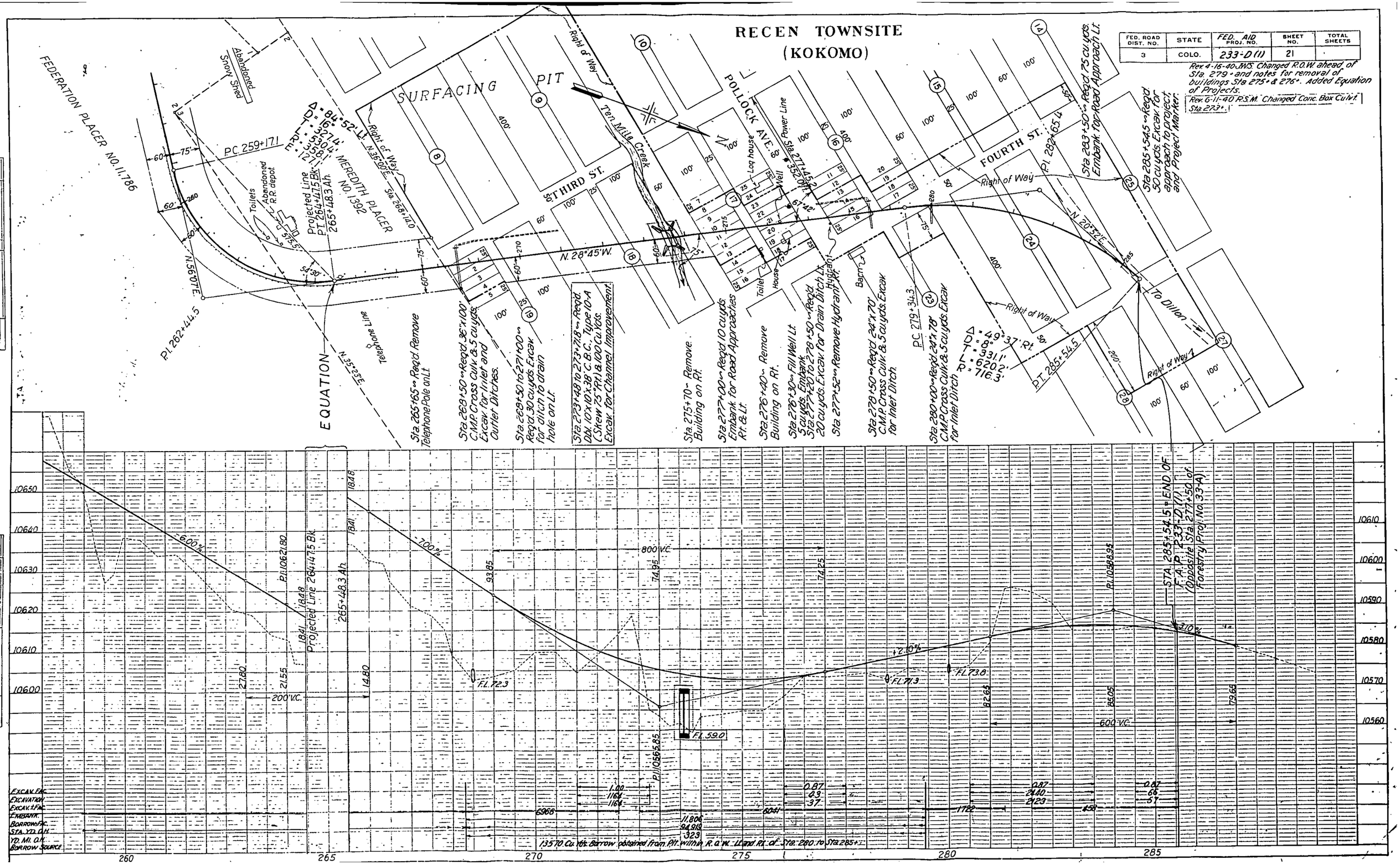
PLATE 1 – PLAN-PROFILE O. P. R. & R. E. STANDARD
REUTTEL & EKER CO. NEW YORK

NOTE BOOK | ALIGNMENT CHECKED | RT. OF WAY CHECKED | NO.

NOTE BOOK | DATUM | B.M.'S NOTED | STRUCTURE NOTATIONS CH'KD. | NO.


FED. ROAD DIST. NO. 3
STATE COLO.
FED. AID PROJ. NO. 233-D(I)
SHEET NO. 20
TOTAL SHEETS
Rev. 4-16-40 - J.W.S. Inter. Ditches & Right of Way.
240+50 to 244+50 ~ Req'd 55 cu. yds. uncl. excav. for Intercepting ditch on right.
KOKOMO TOWNSITE
FEDERATION PLACER
P.I. 252+48.3
TO KOKOMO
P.C. 239+19.8
Δ = 37°21' L
D = 8°00'
T = 242.1'
L = 466.9'
R = 716.3'
P.T. 243+86.7
N.8°33'W.
N.28°48'E
P.C. 248+85.6
Δ = 64°40'R
D = 10°00'
T = 362.7'
L = 646.7'
R = 573.0
Power Pole
P.T. 255+32.3
N.56°07'E.
P.C. 259+17.1
Δ = 84°52'L
D = 16°00'
T = 327.4
L = 530.4
R = 358.1
265+48.3 "F" Line Ah.
P.I. 264+47.5 Proj. Line Bk.
N.28°45'W.
P.I. 262+44.5
P.T. 262+39.8
P.I. 241+61.9
Prospect hole
240+50 ~ Req'd 24"x74' C.M.P. cross culv. and 5 cu. yds. uncl. excav. for Inlet ditch
244+50 ~ Req'd 24"x50' C.M.P. cross culv. and 5 cu. yds. uncl. excav. for Inlet ditch
244+50 to 256+65 ~ Req'd 200 cu. yds. uncl. excav. for Intercepting ditch on rt.
256+65 ~ Req'd 24"x38' C.M.P. cross culv. and 10 cu. yds. uncl. excav. for Inlet ditch.
259+60 ~ Req'd 24"x114' C.M.P. cross culv. (Skew 60° left) and 10 cu. yds. uncl. excav. for Intercepting ditches at Inlet.
P.I. 260+51.0 Surveyed Line
263+53.4 PROJ. LINE BACK
262+46.3 SURVEYED LINE AHEAD
Power Tower
Transformer Poles
Power Pole
Surveyed Line
N.37°03'E.
Power Co. Teleph. Line
253+ ~ Remove Power Pole from Right of Way (Force Account work by Power Co. Forces)
Clearing and Grubbing 243+00 to 269+40 ~ Scattered Brush.
6.00%
6.00%
FL 54.4
FL 32.8
FL 62.2
FL 260
P.I. 10621.80
EXCAV. FACTOR
EXCAVATION
EXCAV. + FACTOR
EMBANK.
BORROW + FACTOR
STA. YD. O.H.
YD. MI. O.H.
240
245
250
255
260
265
270
PLATE 1 - PLAN-PROFILE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	233-D(1)	21	

Rev. 4-16-40 J.M.S. Changed R.O.W. ahead of Sta. 279+ and notes for removal of buildings Sta 275+ & 276+. Added Equation of Projects.

Rev. 6-11-40 R.S.M. Changed Conc. Box Culvt. Sta 273+.1