FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351-E(1)	1	

COLORADO
STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. 351-E(1)
STATE HIGHWAY NO. 36 (102)
WASHINGTON COUNTY

AS CONSTRUCTED PLANS
RETURN TO DIST. 4 DES.

INDEX OF SHEETS

Sheet No.	1	Title Sheet
" "	2	Typical Section, Summary of Quantities, R.O.W. Markers.
" "	3,4	List of Structures, Surfacing Plan, Guard Posts, Fencing & Gates.
" "	5-9	Details of Bridge, Sta. 1748+.
" "	10	" " " Sta. 1799+.
" "	11-15	" " " Sta. 1955+ & 2141+.
" "	16-17	Details of Concrete Box Culvert, Sta. 2005+.
" "	18	" " " " " Sta. 2048+.
" "	19-20	" " " " " Sta. 2123+.
" "	21	Standard Name Plate, M6D.
" "	22	Standard Headwalls for C.M.P. Culverts, M102E.
" "	23	Special 6'×7' Concrete Box Culvert, M101B.
" "	24	Concrete Box Culverts, M103D.
" "	25	Standard Timber Guard Posts, M19A.
" "	26	Standard Wire Fences with Steel Posts & Marker Posts, M27A.
" "	27	Chain Link Wire Mesh (School) Fence, M26A.
" "	28	Standard Structure Number Lettering, M10A.
" "	29	Typical Side Approach Roads~Roadway Construction Traffic Signs, M2B.
" "	30-47	Plan and Profile
" "	48-165	Cross Sections, Roadway.
" "	166-175	" " , Channel Change.

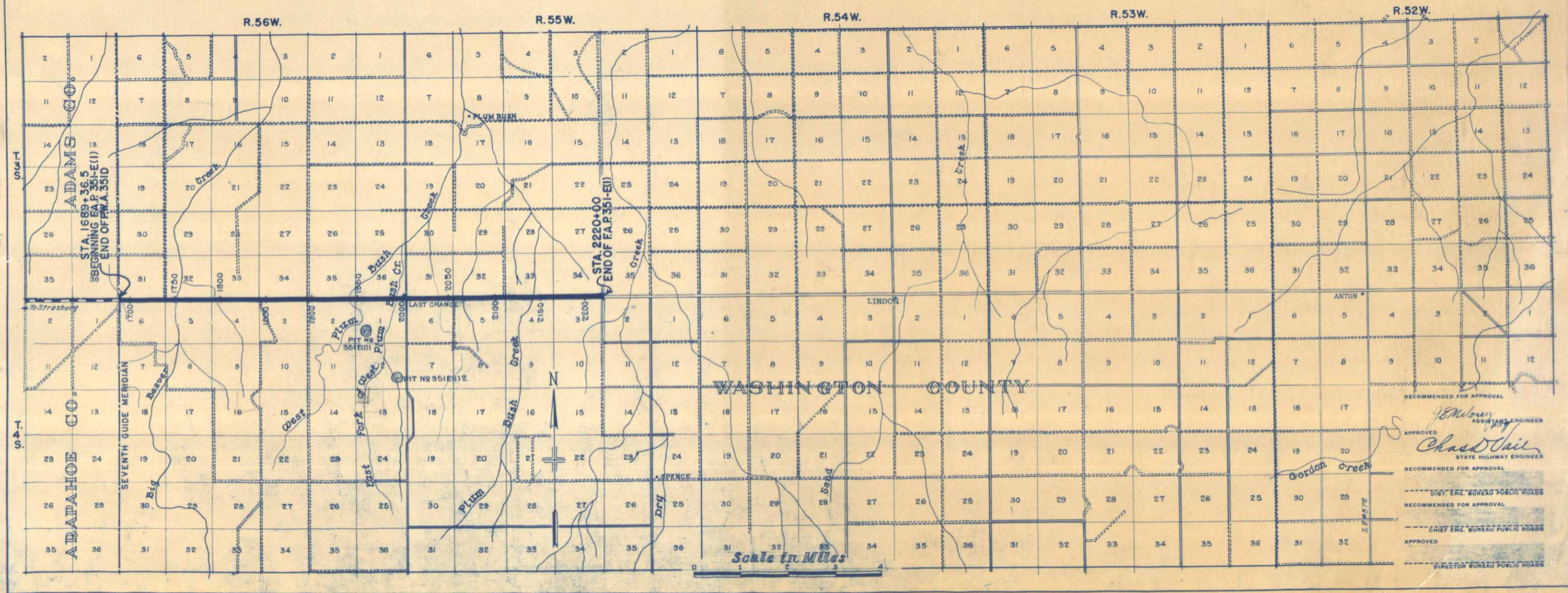
SCALES

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
NET LENGTH OF PROJECT } 53,063.5 FT. = 10.049 MI.

CONVENTIONAL SIGNS

Centerline of Improvement — 2005
Right Of Way Lines
County Lines
Section Lines
Quarter Section Lines
Barbed Wire Fence
Combination Wire Fence
Picket Snow Fence
Secondary Roads

NOTE:
It is recommended that Bidders on this Project go over the plan details with one of the following field represenatives of this department.
R.J. Randall ~ Div. Engineer ~ Greeley
D.S. Moore ~ Res. Engineer ~ Akron



RECOMMENDED FOR APPROVAL
J.E. Nelson
ASSISTANT ENGINEER
APPROVED
Chas. D. Vail
STATE HIGHWAY ENGINEER
RECOMMENDED FOR APPROVAL
DIST. ENG. BUREAU PUBLIC ROADS
RECOMMENDED FOR APPROVAL
CHIEF ENG. BUREAU PUBLIC ROADS
APPROVED
DIRECTOR BUREAU PUBLIC ROADS

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351-E (1)	30	

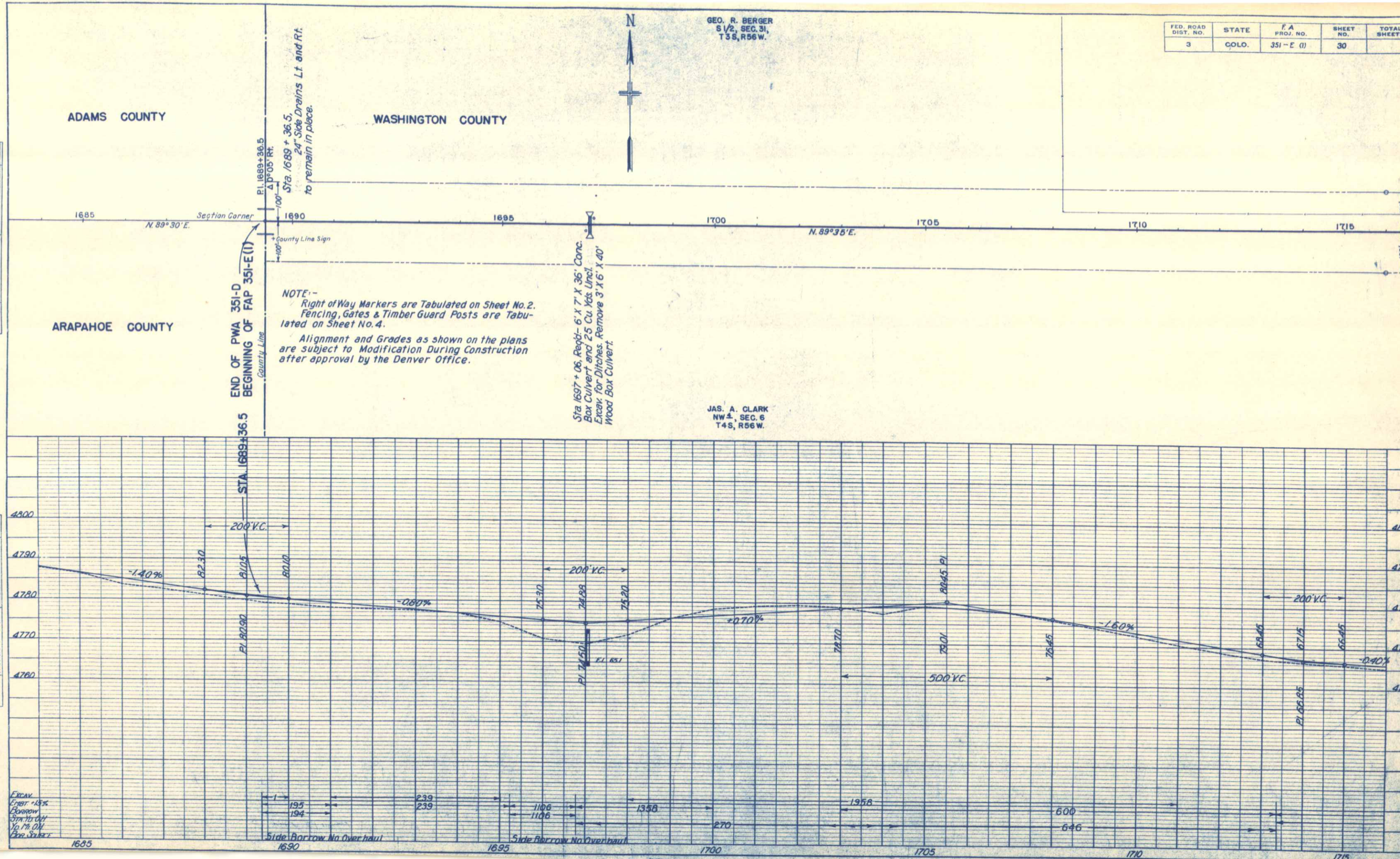
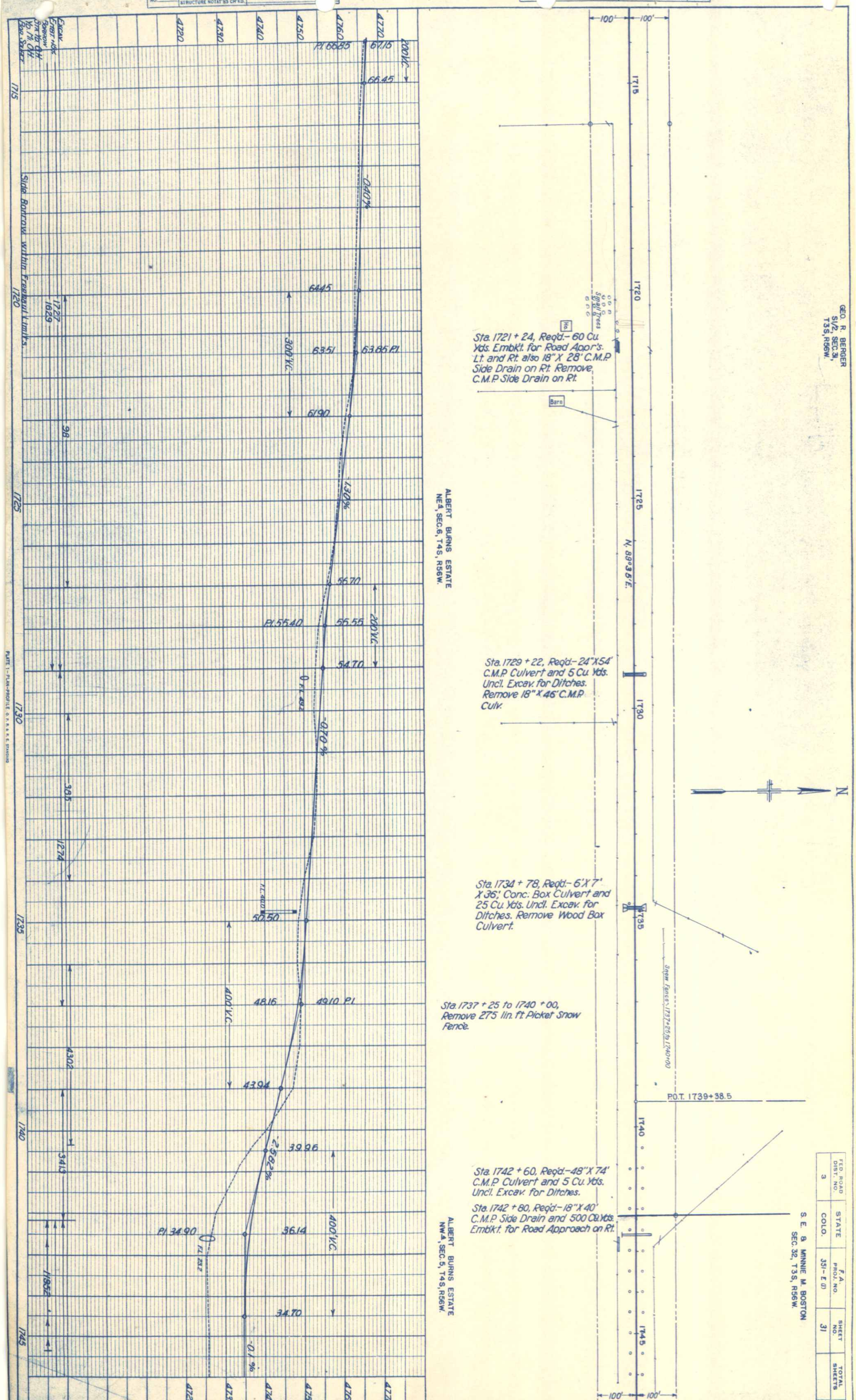


PLATE 1—PLAN-PROFILE O. P. R. & R. E. STANDARD



FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351- E (1)	31	

GEO. R. BERGER
S1/2, SEC.31,
T3S, R56W.
N
S. E. & MINNIE M. BOSTON
SEC. 32, T3S, R56W.
P.O.T. 1739+38.5
Snow Fence: 1737+25 to 1740+00
100'
100'
1715
1720
1725
1730
1735
1740
1745
N. 89°35'E.
Small Trees
Ho.
Barn
ALBERT BURNS ESTATE
NE¼, SEC.6, T4S, R56W.
ALBERT BURNS ESTATE
NW¼, SEC.5, T4S, R56W.
200'V.C.
4770
4760
4750
4740
4730
4720
67.15
P.I. 66.85
66.45
-0.40%
64.45
63.51
63.85 P.I.
61.90
300'V.C.
-1.30%
56.70
55.55
P.I. 55.40
54.70
200'V.C.
-0.70%
F.L. 49.2
50.50
F.L. 40.0
48.16
49.10 P.I.
400'V.C.
43.94
39.96
2.582%
36.14
34.70
-0.1%
400'V.C.
P.I. 34.90
F.L. 23.2
Excav.
Embt. +15%
Borrow
Sta. Yd. O.H.
Yd. Mi. O.H.
Bor. Source
1727
1629
98
385
1274
4302
3413
11852
Side Borrow within Freehaul Limits.

Sta. 1721 + 24, Reqd.– 60 Cu. Yds. Embkt. for Road Appr's. Lt. and Rt. also 18" X 28' C.M.P. Side Drain on Rt. Remove C.M.P. Side Drain on Rt.

Sta. 1729 + 22, Reqd.– 24" X 54' C.M.P. Culvert and 5 Cu. Yds. Uncl. Excav. for Ditches. Remove 18" X 46' C.M.P. Culv.

Sta. 1734 + 78, Reqd.– 6' X 7' X 36' Conc. Box Culvert and 25 Cu. Yds. Uncl. Excav. for Ditches. Remove Wood Box Culvert.

Sta. 1737 + 25 to 1740 + 00, Remove 275 lin. ft. Picket Snow Fence.

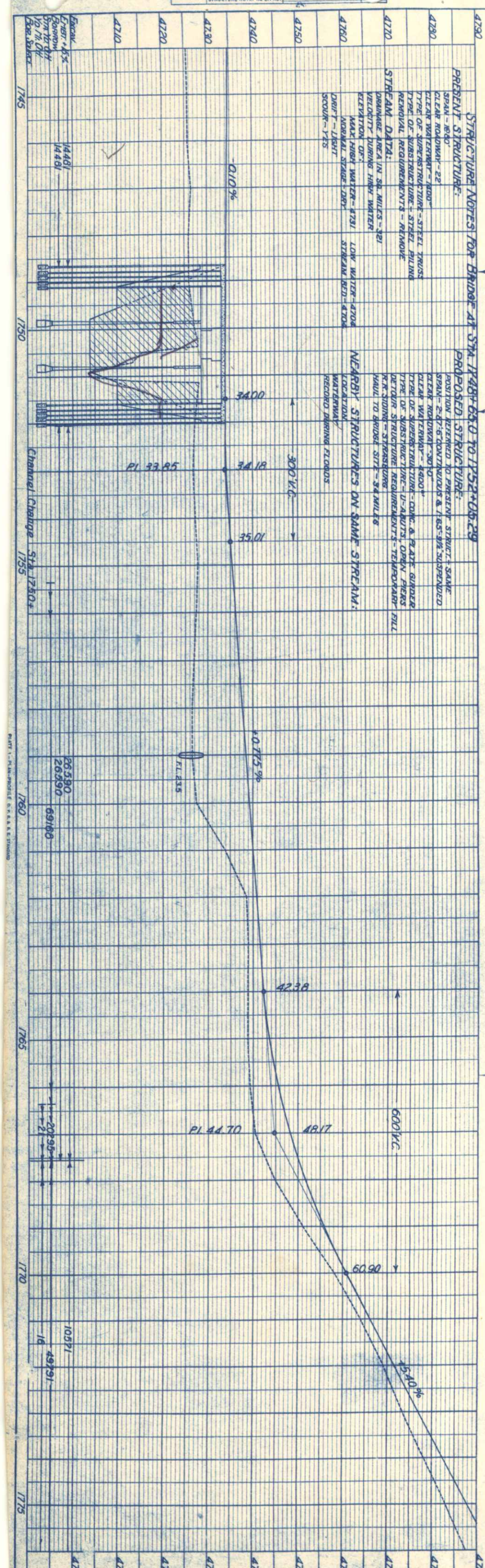
Sta. 1742 + 60, Reqd.– 48" X 74' C.M.P. Culvert and 5 Cu. Yds. Uncl. Excav. for Ditches.

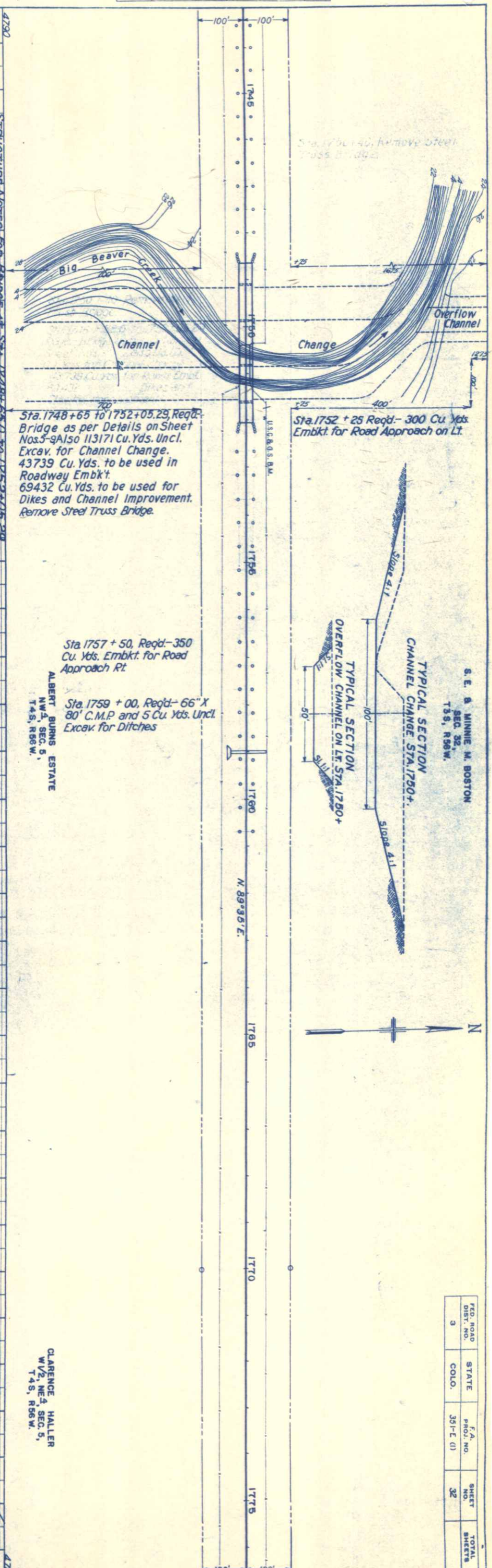
Sta. 1742 + 80, Reqd.– 18" X 40' C.M.P. Side Drain and 500 Cu. Yds. Embkt. for Road Approach on Rt.

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

PROFILE
SURVEYED
PLOTTED
NOTE BOOK NO.
GRADES CHECKED
B. M.S NOTED
STRUCTURE NOTAT'NS CH'KD.
BY
DATE

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





FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351-E (1)	32	

S. E. & MINNIE M. BOSTON
SEC. 32,
T3S, R56W.

TYPICAL SECTION
CHANNEL CHANGE STA. 1750+.

Slope 4:1 — 100' — Slope 4:1

TYPICAL SECTION
OVERFLOW CHANNEL ON LT. STA. 1750+

5:1 — 50' — 5:1

N

Overflow Channel

Change

Sta. 1752 + 25 Reqd.- 300 Cu. Yds. Embkt. for Road Approach on Lt.

U.S.C.&G.S. B.M.

1745 — 1750 — 1755 — 1760 — N. 89°35' E. — 1765 — 1770 — 1775

Big Beaver Creek

Channel

Sta. 1748+65 to 1752+05.29 Reqd. Bridge as per Details on Sheet Nos. 7-9 Also 113171 Cu. Yds. Uncl. Excav. for Channel Change. 43739 Cu. Yds. to be used in Roadway Embk't. 69432 Cu. Yds. to be used for Dikes and Channel Improvement. Remove Steel Truss Bridge.

Sta. 1757 + 50. Reqd.- 350 Cu. Yds. Embkt. for Road Approach Rt.

Sta. 1759 + 00. Reqd.- 66" X 80' C.M.P. and 5 Cu. Yds. Uncl. Excav. for Ditches

ALBERT BURNS ESTATE
NW¼, SEC. 5,
T4S, R56W.

CLARENCE HALLER
W½, NE¼, SEC. 5,
T4S, R56W.

STRUCTURE NOTES FOR BRIDGE AT STA. 1748+65.0 TO 1752+05.29

PRESENT STRUCTURE:
- SPAN - 16'00'
- CLEAR ROADWAY - 22'
- CLEAR WATERWAY - 1400"
- TYPE OF SUPERSTRUCTURE - STEEL TRUSS
- TYPE OF SUBSTRUCTURE - STEEL PILING
- REMOVAL REQUIREMENTS - REMOVE

STREAM DATA:
- DRAINAGE AREA IN SQ. MILES - 321
- VELOCITY DURING HIGH WATER
- ELEVATION OF:
  - MAX. HIGH WATER - 4731 LOW WATER - 4704
  - NORMAL STAGE - DRY STREAM BED - 4704
- DRIFT - LIGHT
- SCOUR - YES

PROPOSED STRUCTURE:
- POSITION REFERRED TO PRESENT STRUCT. - SAME
- SPAN - 2-27'-6" CONTINUOUS & 1-65'-9½" SUSPENDED
- CLEAR ROADWAY - 30'-0"
- CLEAR WATERWAY - 4400"
- TYPE OF SUPERSTRUCTURE - CONC. & PLATE GIRDER
- TYPE OF SUBSTRUCTURE - U-ABUTS, OPEN PIERS
- DETOUR STRUCTURE REQUIREMENTS - TEMPORARY FILL
- R.R. SIDING - STRASBURG
- HAUL TO BRIDGE SITE - 34 MILES

NEARBY STRUCTURES ON SAME STREAM:
- LOCATION
- WATERWAY
- RECORD DURING FLOODS

300' V.C. — 600' V.C.

-0.10% — +0.775% — +5.40%

34.00 — 34.18 — 35.01 — 42.36 — 48.17 — 50.90

Pl. 33.95 — F.L. 23.5 — Pl. 44.70

Excav.											
Embt. + 15%											
Borrow	14481					26590				10571	
Sta. Yd. Ord.	14481					26590				49791	
Yd. Mi. Ord.						69168			20295		
Bor. Source									21	16	

Channel Change Sta. 1750+

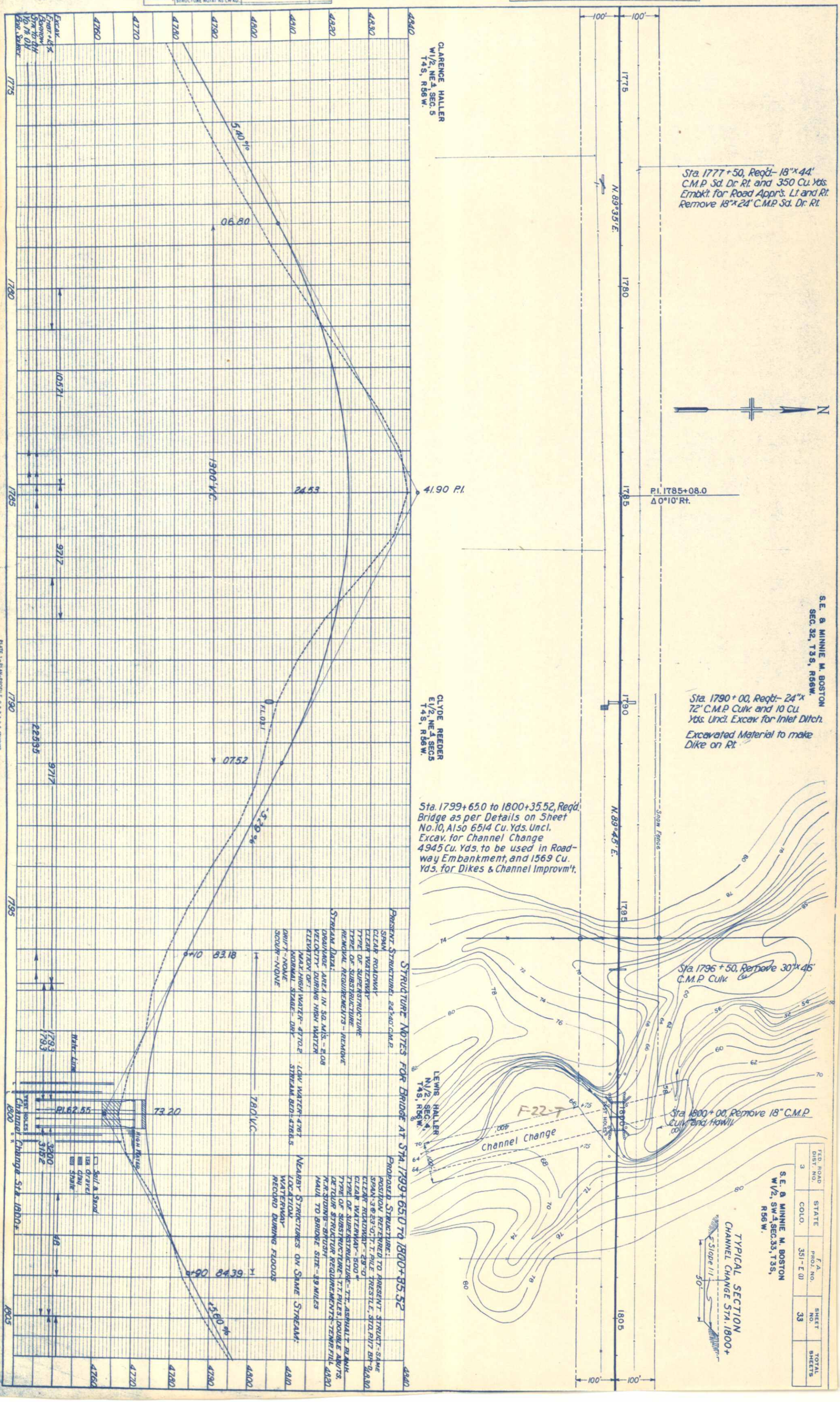
1745 — 1750 — 1755 — 1760 — 1765 — 1770 — 1775

4790 — 4780 — 4770 — 4760 — 4750 — 4740 — 4730 — 4720 — 4710 — 4700

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

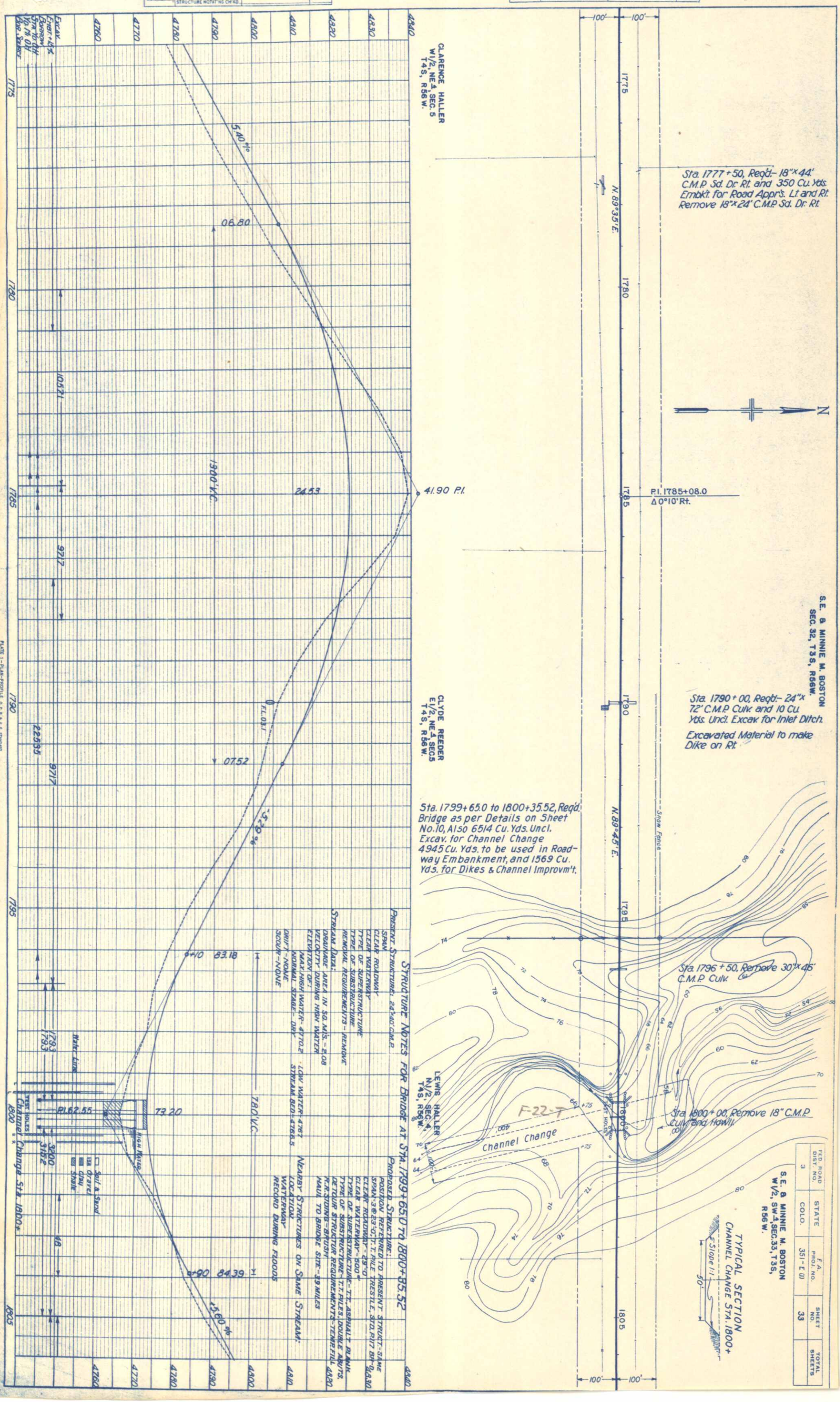
PROFILE		BY	DATE
NOTE BOOK NO.	SURVEYED		
	PLOTTED		
	GRADES CHECKED		
	B. M.S NOTED		
	STRUCTURE NOTAT'NS CH'KD.		

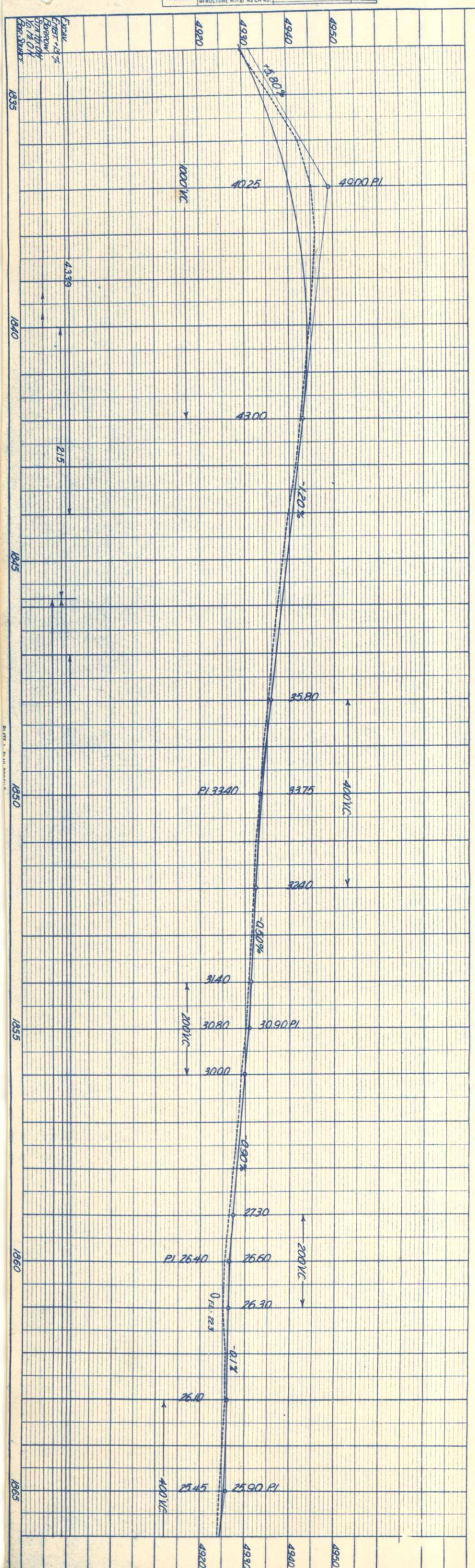
PLAN			
NOTE NO.	SURVEYED		
	PLOTTED		
	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		

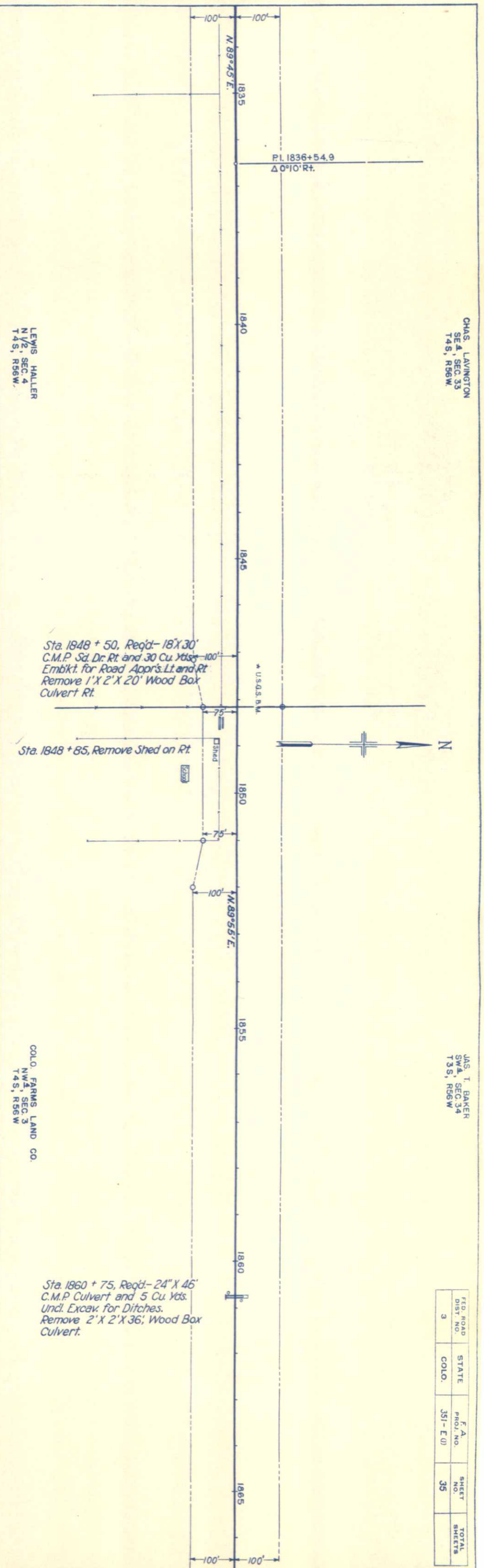


PROFILE		BY	DATE
NOTE BOOK NO.	SURVEYED		
	PLOTTED		
	GRADES CHECKED		
	B. M.'S NOTED		
	STRUCTURE NOTAT'NS CH'KD.		

PLAN			
NOTE NO.	SURVEYED		
	PLOTTED		
	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		







FED. ROAD DIST. NO.	STATE	F. A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351- E (J)	35	

PLAN
BY
DATE
NOTE B
NO.
RVEYED
OTTED
GNMENT CHECKED
PT. OF WAY CHECKED

CHAS. LAVINGTON
SE¼, SEC. 33
T4S, R56W.
JAS. T. BAKER
SW¼, SEC. 34
T3S, R56W
N
P.I. 1836+54.9
Δ 0°10' Rt.
100'
100'
N. 89°45' E.
1835
1840
1845
★ U.S.G.S. B.M.
1850
75'
75'
100'
100'
Shed
School
N. 89°55' E.
1855
1860
1865
100'
100'

Sta. 1848 + 50, Reqd:- 18"X 30'
C.M.P. Sd. Dr. Rt. and 30 Cu. Yds.
Embkt. for Road Appr's. Lt. and Rt.
Remove 1'X 2'X 20' Wood Box
Culvert Rt.

Sta. 1848 + 85, Remove Shed on Rt.

Sta. 1860 + 75, Reqd:- 24"X 46'
C.M.P. Culvert and 5 Cu. Yds.
Und. Excav. for Ditches.
Remove 2'X 2'X 36' Wood Box
Culvert.

LEWIS HALLER
N 1/2, SEC. 4
T4S, R56W.

COLO. FARMS LAND CO.
NW¼, SEC. 3
T4S, R56W

PROFILE
BY
DATE
SURVEYED
PLOTTED
NOTE BOOK
GRADES CHECKED
NO.
B. M.S NOTED
STRUCTURE NOTAT'NS CH'KD.

4950
4940
4930
4920
4900 P.I.
+5.80%
40.25
1000' V.C.
43.00
-1.20%
400' V.C.
35.80
33.75
P.I. 33.40
32.40
-0.50%
31.40
30.90 P.I.
30.80
200' V.C.
30.00
-0.90%
200' V.C.
27.30
26.60
P.I. 26.40
26.30
0 F.L. 22.3
-0.1%
26.10
25.90 P.I.
25.45
400' V.C.
4950
4940
4930
4920
Excav.
Embt. +15%
Borrow
Sta. Yd. O.H.
Yd. Mi. O.H.
Bor. Source
4339
215
1835
1840
1845
1850
1855
1860
1865

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351-E (1)	36	

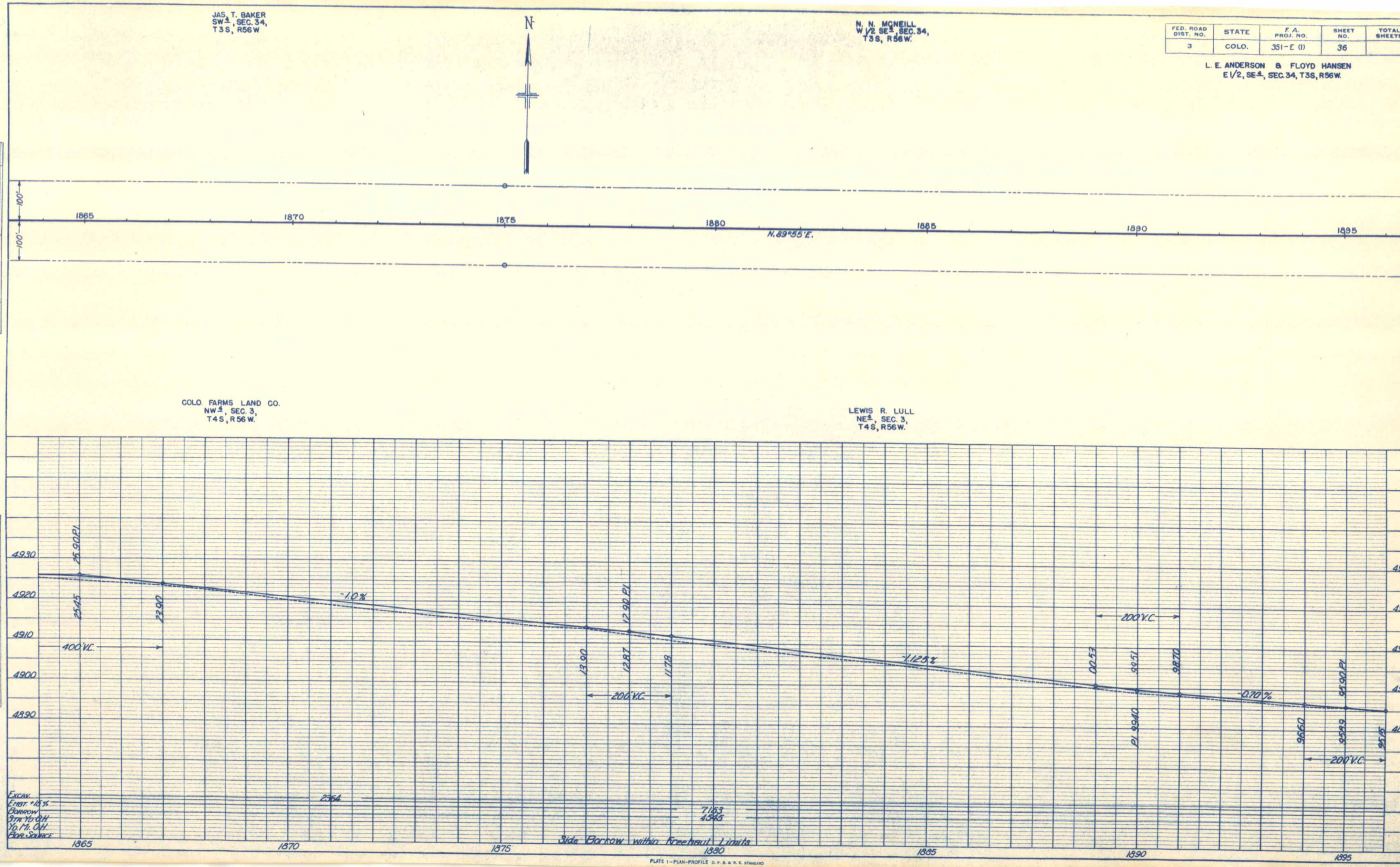
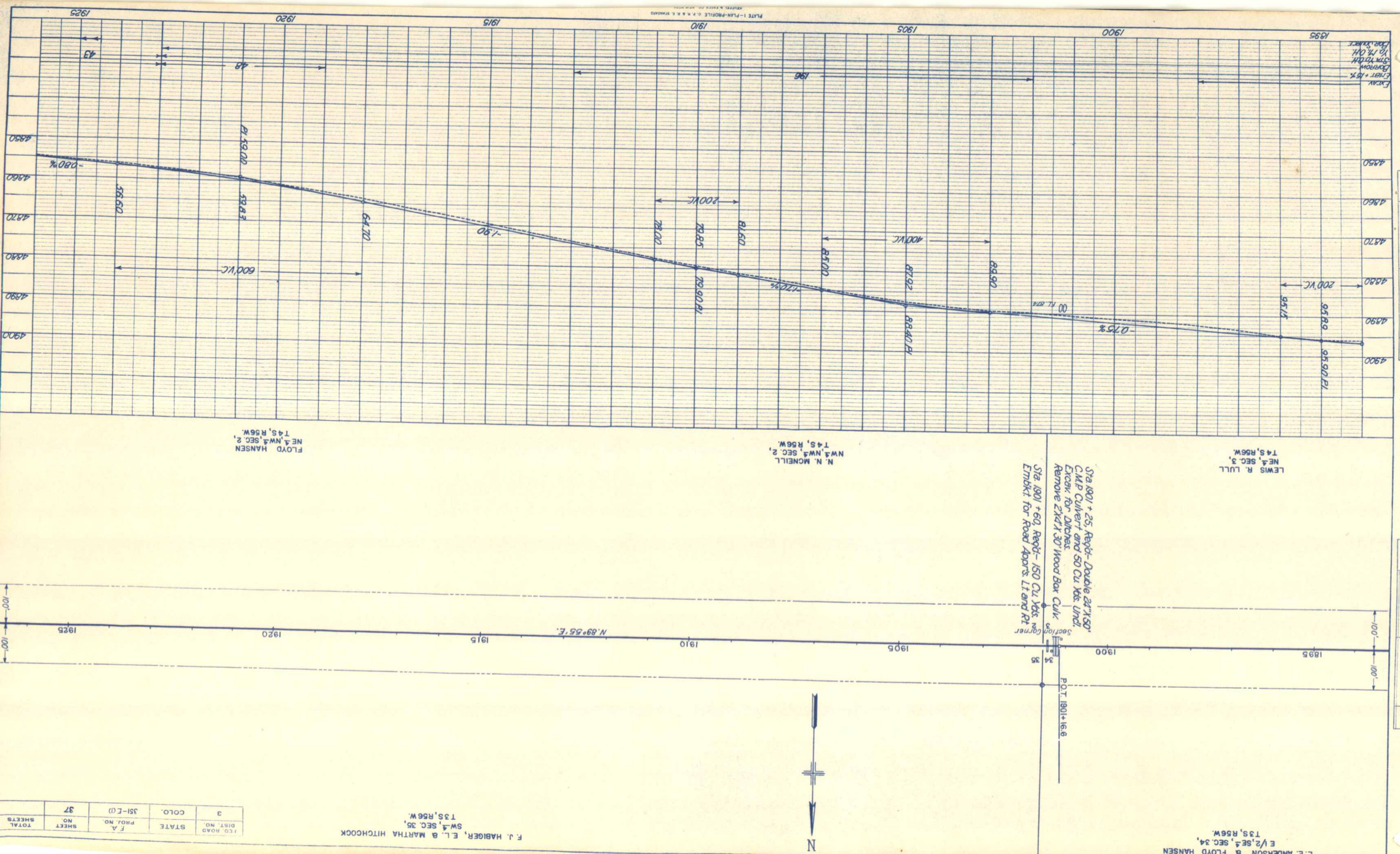


PLATE 1—PLAN-PROFILE O. P. R. & R. E. STANDARD


PROFILE
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
NOTE BOOK
GRADES CHECKED
O. M. NOTED
STRUCTURE NOTE NO. CH. NO.
NO.
BY
DATE
PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE
PLOTTED - PLAN-PROFILE C. P. R. R. R. C. STANDARD
ROGERS & FINCH CO. CHICAGO
Excav. Lt Rt + 10% Borrow Sta 1900 to Sta 1905 Dbl. Slope
196
48
43
Sta 1890 + 25, Repl.- Double 24"X50' C.M.P. Culvert and 50 Cu. Yds. Und. Excav. for Ditches. Remove 2'X4'X 30' Wood Box Culv.
Sta 1901 + 60, Repl.- 150 Cu. Yds. Embkt. for Road Aprs. Lt and Rt
Section Corner
N.89°55'E.
P.O.T. 1901+16.6
34
35
LEWIS R. LULL
NE 1/4, SEC. 3,
T 4 S, R56W.
N. N. MCNEILL
NW 1/4, NW 1/4, SEC. 2,
T 4 S, R56W.
FLOYD HANSEN
NE 1/4, NW 1/4, SEC. 2,
T 4 S, R56W.
L. E. ANDERSON & FLOYD HANSEN
E 1/2, SE 1/4, SEC. 34,
T 3 S, R56W.
F. J. HABIGER, E. L. & MARTHA HITCHCOCK
SW 1/4, SEC. 35,
T 3 S, R56W.
N
1895
1900
1905
1910
1915
1920
1925
4900
4890
4880
4870
4860
4850
-0.80%
-1.90
-1.70%
-0.75%
00 FL. BFA
56.60
64.70
72.00
79.85
79.64 PI
81.60
85.00
88.40 PI
89.90
95.56
95.90 PI
97.56
600' VC.
200' VC.
400' VC.
200' VC.
100'
100'
100'
100'
ICC. ROAD DIST. NO.
3
STATE
COLO.
F. A. PROJ. NO.
351-E (1)
SHEET NO.
37
TOTAL SHEETS

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351-E (1)	38	

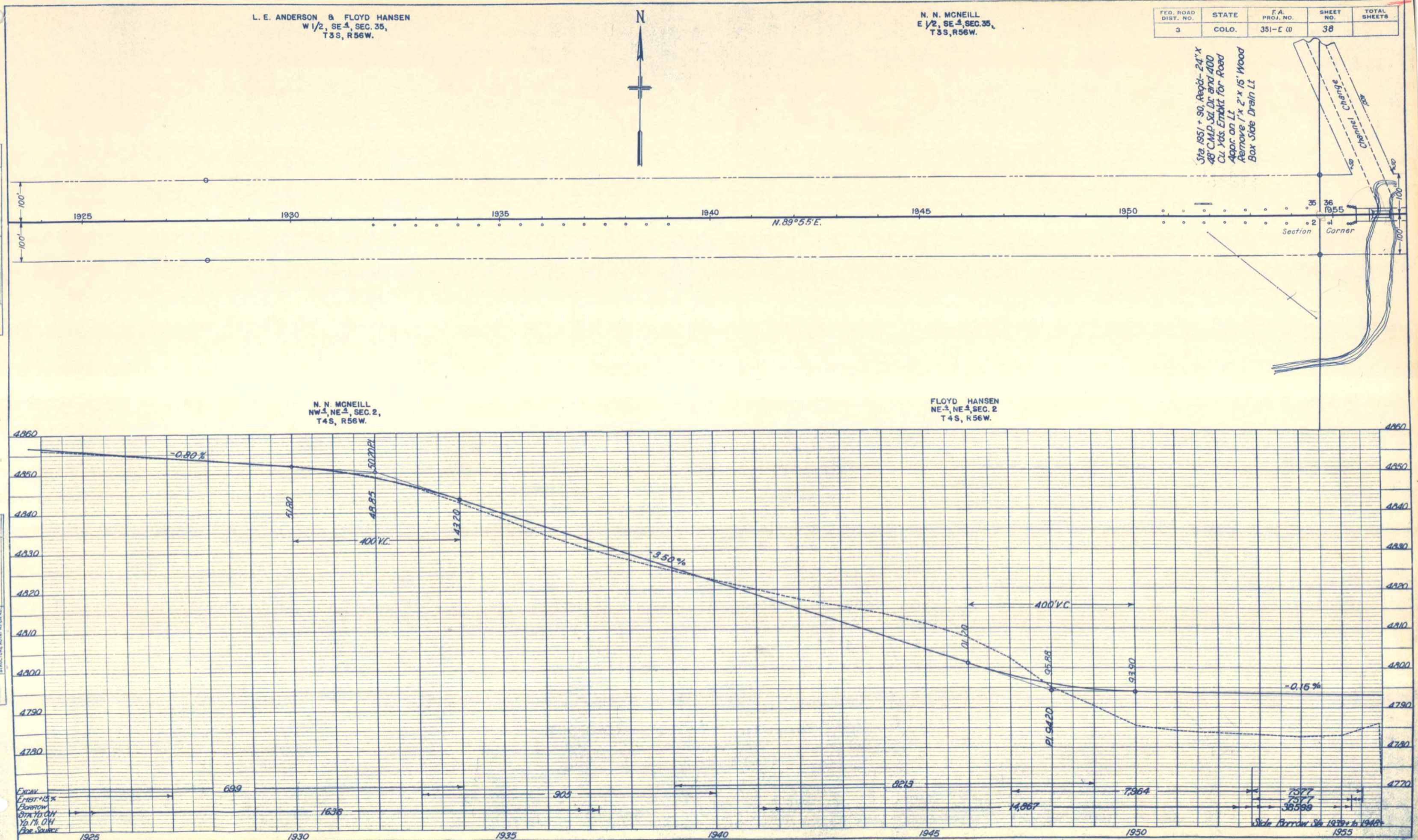
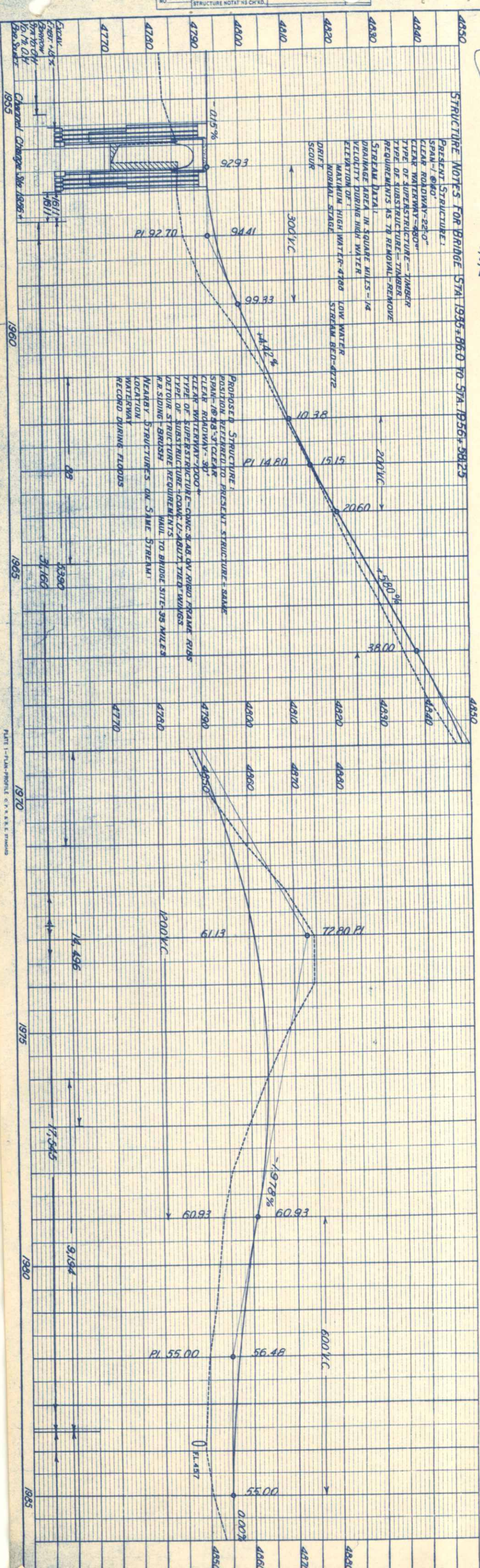
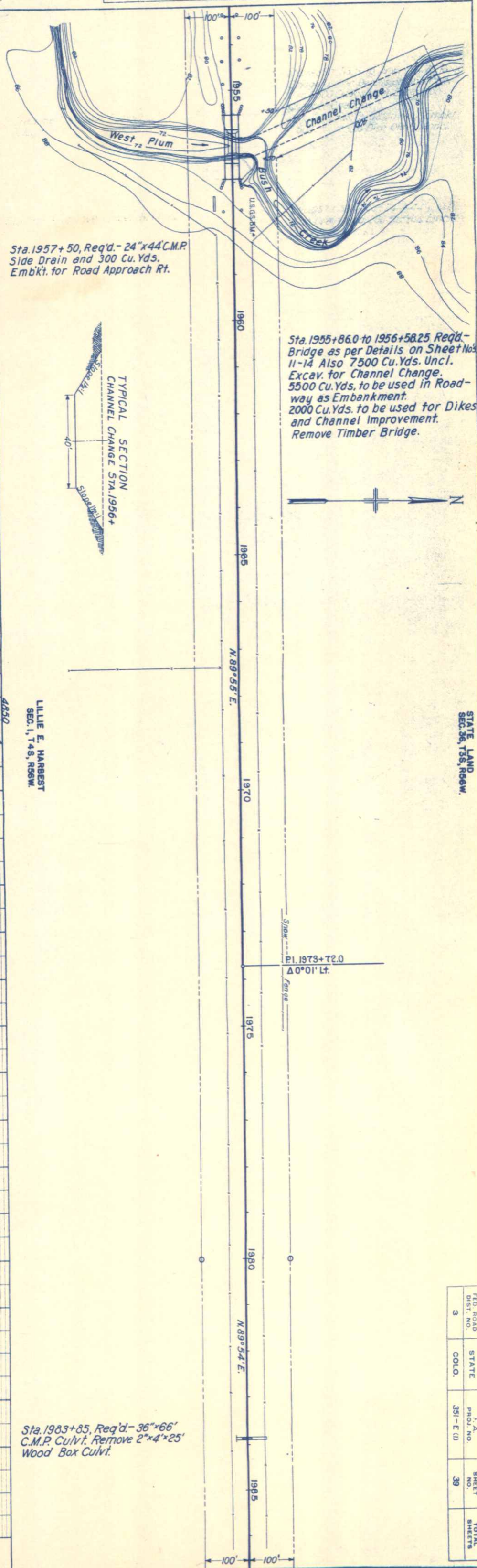


PLATE 1—PLAN-PROFILE C. P. R. & R. E. STANDARD

PLAN
SURVEYED
PLOTTED
NOTE BOOK
NO.
ALIGNMENT CHECKED
RIGHT OF WAY CHECKED

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
NO.
GRADES CHECKED
B. M.'S NOTED
STRUCTURE NOTAT'NS CH'KD.





FED. ROAD DIST. NO.	STATE	F. A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351-E (1)	39	

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

STATE LAND
SEC. 36, T3S, R56W.

LILLIE E. HARBEST
SEC. 1, T4S, R56W.

N
Channel Change
Bush Creek
West Plum
U.S.G.S.B.M.
1955
1960
1965
1970
1975
1980
1985
100'
N.89°55'E.
N.89°54'E.
P.I. 1973+72.0
Δ0°01' Lt.
Snow
Fence
TYPICAL SECTION
CHANNEL CHANGE STA. 1956+
Slope 1½:1
40'
4850
4840
4830
4820
4810
4800
4790
4780
4770
4880
4870
4860
-0.15%
9293
94.41
PI 92.70
99.33
300' V.C.
+4.42%
10.38
15.15
PI 14.80
20.60
200' V.C.
+5.80%
38.00
72.80 PI
61.13
60.93
1200' V.C.
-1.978%
600' V.C.
56.48
PI 55.00
55.00
0.00%
FL.457
1611
88
5390
31,160
14,496
17,545
9,194

Sta. 1955+86.0 to 1956+58.25 Reqd-
Bridge as per Details on Sheet Nos.
11-14 Also 7500 Cu. Yds. Uncl.
Excav. for Channel Change.
5500 Cu. Yds. to be used in Road-
way as Embankment.
2000 Cu. Yds. to be used for Dikes
and Channel Improvement.
Remove Timber Bridge.

Sta. 1957+50, Req'd.- 24"x44' C.M.P.
Side Drain and 300 Cu. Yds.
Emb'k't. for Road Approach Rt.

Sta. 1983+85, Req'd.- 36"x66'
C.M.P. Culvt. Remove 2"x4"x25'
Wood Box Culvt.

STRUCTURE NOTES FOR BRIDGE STA. 1955+86.0 TO STA. 1956+58.25

PRESENT STRUCTURE:
SPAN-1 @40'
CLEAR ROADWAY-22'-0"
CLEAR WATERWAY-480□'
TYPE OF SUPERSTRUCTURE—TIMBER
TYPE OF SUBSTRUCTURE—TIMBER
REQUIREMENTS AS TO REMOVAL—REMOVE

STREAM DATA:
DRAINAGE AREA IN SQUARE MILES-14
VELOCITY DURING HIGH WATER
ELEVATION OF:
MAXIMUM HIGH WATER-4788 LOW WATER
NORMAL STAGE STREAM BED-4772
DRIFT
SCOUR

PROPOSED STRUCTURE:
POSITION REFERRED TO PRESENT STRUCTURE-SAME
SPAN-1@58'-3" CLEAR
CLEAR ROADWAY-30'
CLEAR WATERWAY-1000□'
TYPE OF SUPERSTRUCTURE—CONC. SLAB ON RIGID FRAME RIBS
TYPE OF SUBSTRUCTURE-CONC. U-ABUT. "TIED" WINGS
DETOUR STRUCTURE REQUIREMENTS
R.R. SIDING-BRUSH HAUL TO BRIDGE SITE-35 MILES

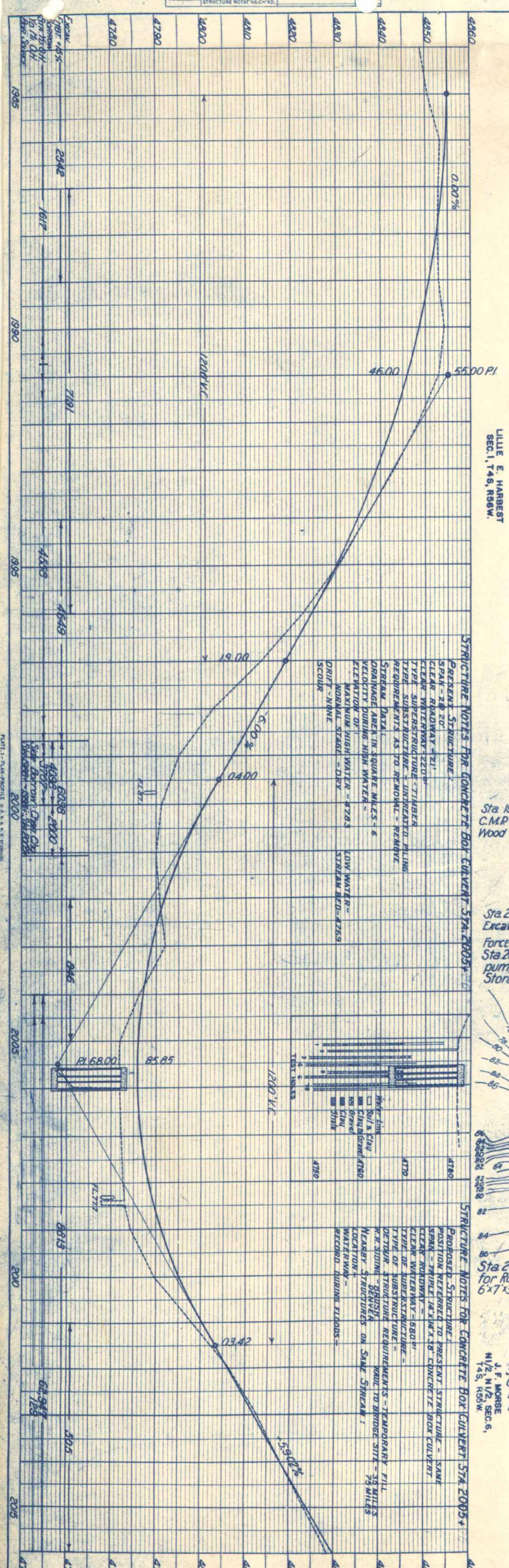
NEARBY STRUCTURES ON SAME STREAM:
LOCATION
WATERWAY
RECORD DURING FLOODS

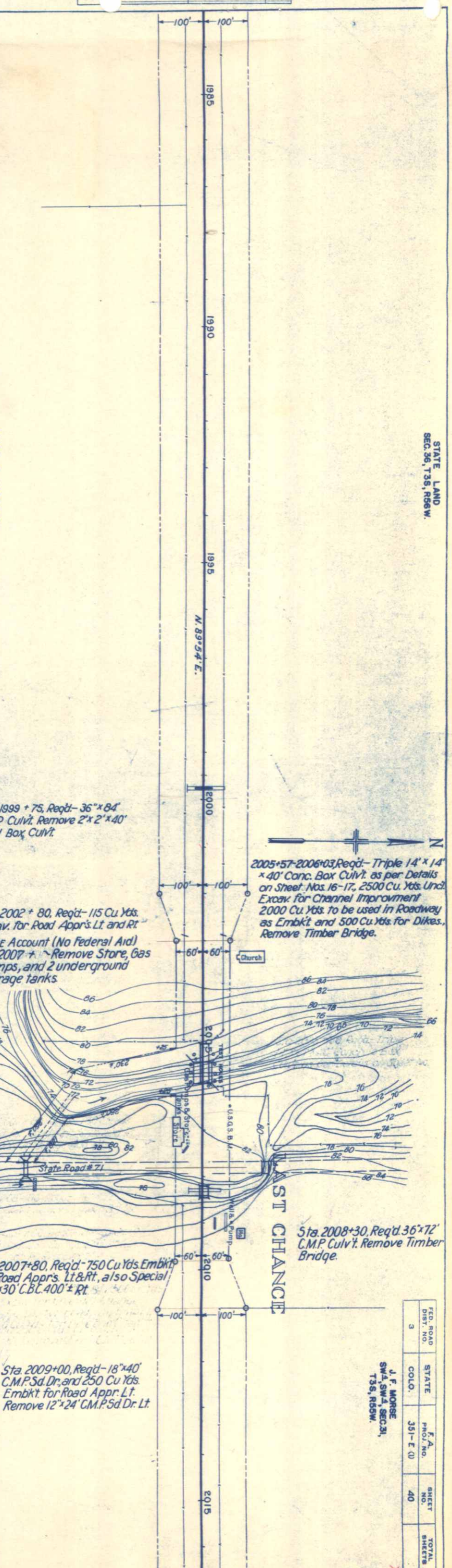
EXCAV.
EMBT. +15%
BORROW
STA. YD. O.H.
YD. MI. O.H.
BOR. SOURCE

Channel Change Sta. 1956+

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B. M.S NOTED
STRUCTURE NOTAT'NS CH'KD.
NOTE BOOK
NO.
BY
DATE

PLATE 1—PLAN-PROFILE C. P. R. & R. E. STANDARD





FED. ROAD DIST. NO.	STATE	F. A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351- E (1)	40	

STATE LAND
SEC.36, T3S, R56W.
J. F. MORSE
SW¼, SW¼, SEC.31,
T3S, R55W.
LILLIE E. HARBEST
SEC.1, T4S, R56W.
J. F. MORSE
N1/2, N1/2, SEC.6,
T4S, R55W.
N
LAST CHANCE
N. 89°54' E.
1985
1990
1995
2000
2005
2010
2015
100'
60'
Church
U.S.G.S. B.M.
TEST HOLES
Gas Pumps & Stor's Tanks
Store
Well & Pump
State Road #71
PLAN
SURVEYED
PLOTTED
NOTE BOOK
ALIGNMENT CHECKED
OF WAY CHECKED
NO.
BY
DATE
PROFILE
SURVEYED
PLOTTED
NOTE BOOK
GRADES CHECKED
B. M.S NOTED
NO.
STRUCTURE NOTAT'NS CH'KD.
BY
DATE
4860
4850
4840
4830
4820
4810
4800
4790
4780
4770
0.00%
55.00 P.I.
46.00
1200' V.C.
19.00
-6.00%
04.00
F.L. 87.1
85.85
P.I. 68.00
F.L. 77.7
03.42
+5.902%
4780
4770
4760
4750
Water Line
Soil & Clay
Clay & Gravel
Gravel
Clay
Shale
TEST HOLES
EXCAV.
EMBT. +15%
BORROW
STA. YD. O.H.
YD. MI. O.H.
BOR. SOURCE
2542
7191
1617
4556
4649
6098
4098
2000
3707
846
6813
505
62,947
125
Side Borrow: Chan. Chg.
Sta. 1986+ ~ 1996±: Sta. 2005+

2005+57-2006+03, Req'd.- Triple 14'x 14' x 40' Conc. Box Culv't. as per Details on Sheet Nos. 16-17, 2500 Cu. Yds. Und. Excav. for Channel Improvement 2000 Cu. Yds. to be used in Roadway as Embk't. and 500 Cu. Yds. for Dikes. Remove Timber Bridge.

Sta. 2008+30, Req'd. 36"x72' C.M.P. Culv't. Remove Timber Bridge.

Sta. 1999 + 75, Req'd.- 36"x 84' C.M.P. Culv't. Remove 2'x 2'x 40' Wood Box Culv't.

Sta. 2002 + 80, Req'd.- 115 Cu. Yds. Excav. for Road Appr's. Lt. and Rt.

Force Account (No Federal Aid)
Sta. 2007 + ~ Remove Store, Gas pumps, and 2 underground Storage tanks.

Sta. 2007+80, Req'd.- 750 Cu. Yds. Embk't. for Road Appr's. Lt. & Rt., also Special 6'x 7'x 30' C.B.C. 400' ± Rt.

Sta. 2009+00, Req'd.- 18"x 40' C.M.P. Sd. Dr., and 250 Cu. Yds. Embk't. for Road Appr. Lt. Remove 12"x 24' C.M.P. Sd. Dr. Lt.

STRUCTURE NOTES FOR CONCRETE BOX CULVERT STA. 2005+

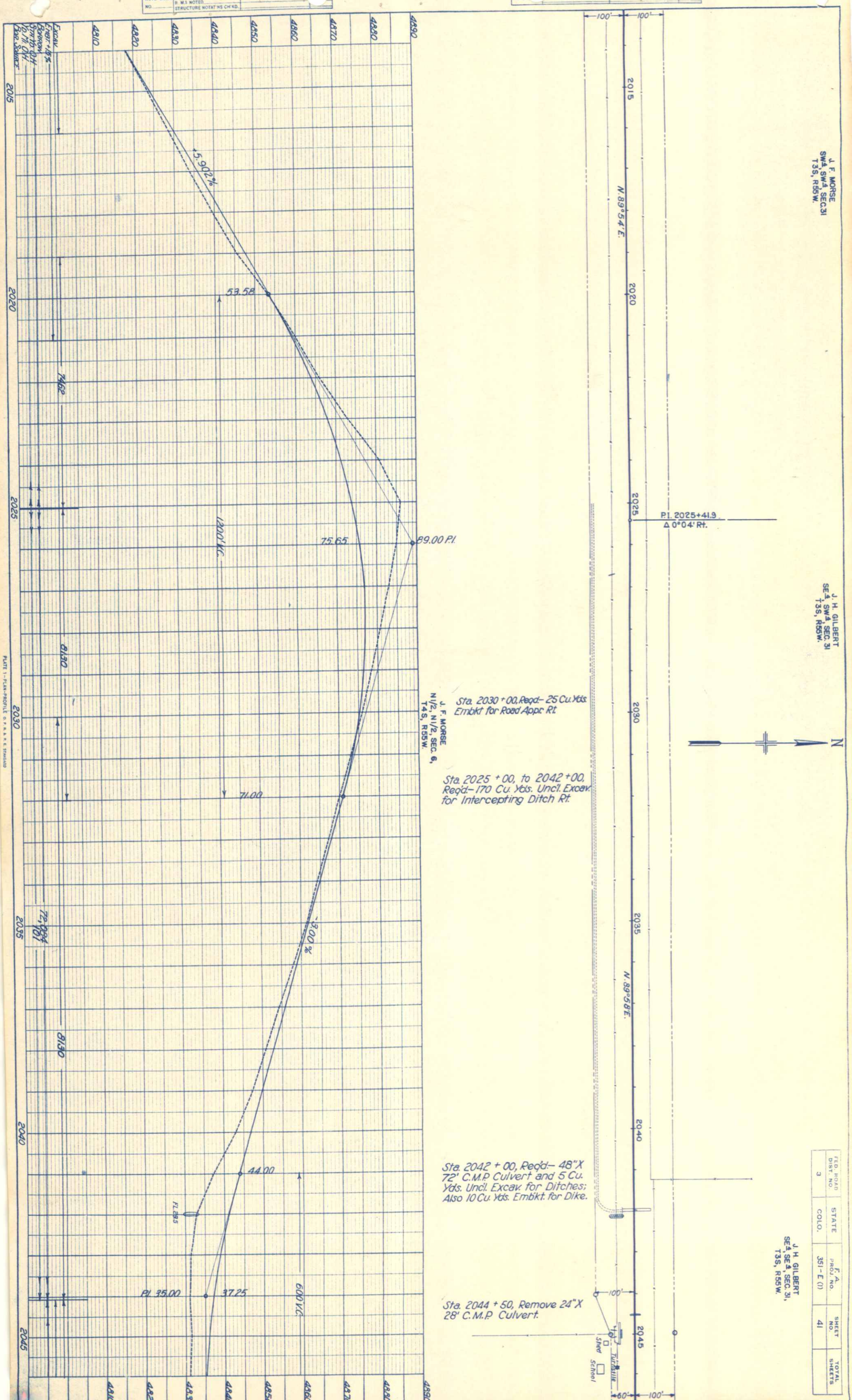
PRESENT STRUCTURE:
SPAN - 2 @ 20'
CLEAR ROADWAY - 21'
CLEAR WATERWAY - 220 □'
TYPE SUPERSTRUCTURE - TIMBER
TYPE SUBSTRUCTURE - UNTREATED PILING
REQUIREMENTS AS TO REMOVAL - REMOVE

STREAM DATA:
DRAINAGE AREA IN SQUARE MILES - 6
VELOCITY DURING HIGH WATER -
ELEVATION OF:
MAXIMUM HIGH WATER - 4783 LOW WATER -
NORMAL STAGE - DRY STREAM BED - 4769
DRIFT - NONE
SCOUR

STRUCTURE NOTES FOR CONCRETE BOX CULVERT STA. 2005+

PROPOSED STRUCTURE:
POSITION REFERRED TO PRESENT STRUCTURE - SAME
SPAN - TRIPLE 14'x 14'x 38' CONCRETE BOX CULVERT
CLEAR ROADWAY -
CLEAR WATERWAY - 580 □'
TYPE OF SUPERSTRUCTURE -
TYPE OF SUBSTRUCTURE -
DETOUR STRUCTURE REQUIREMENTS - TEMPORARY FILL
R.R. SIDING - BRUSH HAUL TO BRIDGE SITE - 35 MILES
DENVER 75 MILES
NEARBY STRUCTURES ON SAME STREAM:
LOCATION -
WATERWAY -
RECORD DURING FLOODS -

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



FED. ROAD DIST. NO.	STATE	F. A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351-E (1)	41	

J. F. MORSE
SW¼, SW¼, SEC.31
T3S, R55W.
J. H. GILBERT
SE¼, SW¼, SEC. 31
T3S, R55W.
N
J. H. GILBERT
SE¼, SE¼, SEC. 31,
T3S, R55W.
P.I. 2025+41.9
Δ 0°04' Rt.
100'
100'
2015
2020
2025
2030
2035
2040
2045
N.89°54'E.
N.89°58'E.
100'
60'
Turnstile
Shed
School
Sta. 2030+00, Reqd– 25 Cu.Yds. Embkt for Road Appr. Rt.
Sta. 2025+00, to 2042+00, Reqd–170 Cu. Yds. Uncl. Excav. for Intercepting Ditch Rt.
J. F. MORSE
N1/2, N1/2, SEC. 6,
T4S, R55W.
Sta. 2042+00, Reqd:– 48"X 72' C.M.P Culvert and 5 Cu. Yds. Uncl. Excav. for Ditches; Also 10 Cu. Yds. Embkt. for Dike.
Sta. 2044+50, Remove 24"X 28' C.M.P Culvert.
PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
T. OF WAY CHECKED
NOTE
NO.
BY
DATE
PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B. M.S NOTED
STRUCTURE NOTATNS CH'KD.
NOTE BOOK
NO.
BY
DATE
4890
4880
4870
4860
4850
4840
4830
4820
4810
89.00 P.I.
75.65
53.58
71.00
44.00
37.25
P.I. 35.00
+5.902%
-3.00%
1200' V.C.
600 V.C.
FL.895
EXCAV
EMBT. +15%
BORROW
STA.YD. O.H.
YD.MI. O.H.
BOR. SOURCE
7462
8130
8130
72,084
101
PLATE 1–PLAN–PROFILE O. P. R. & R. E. STANDARD

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351-E (1)	42	

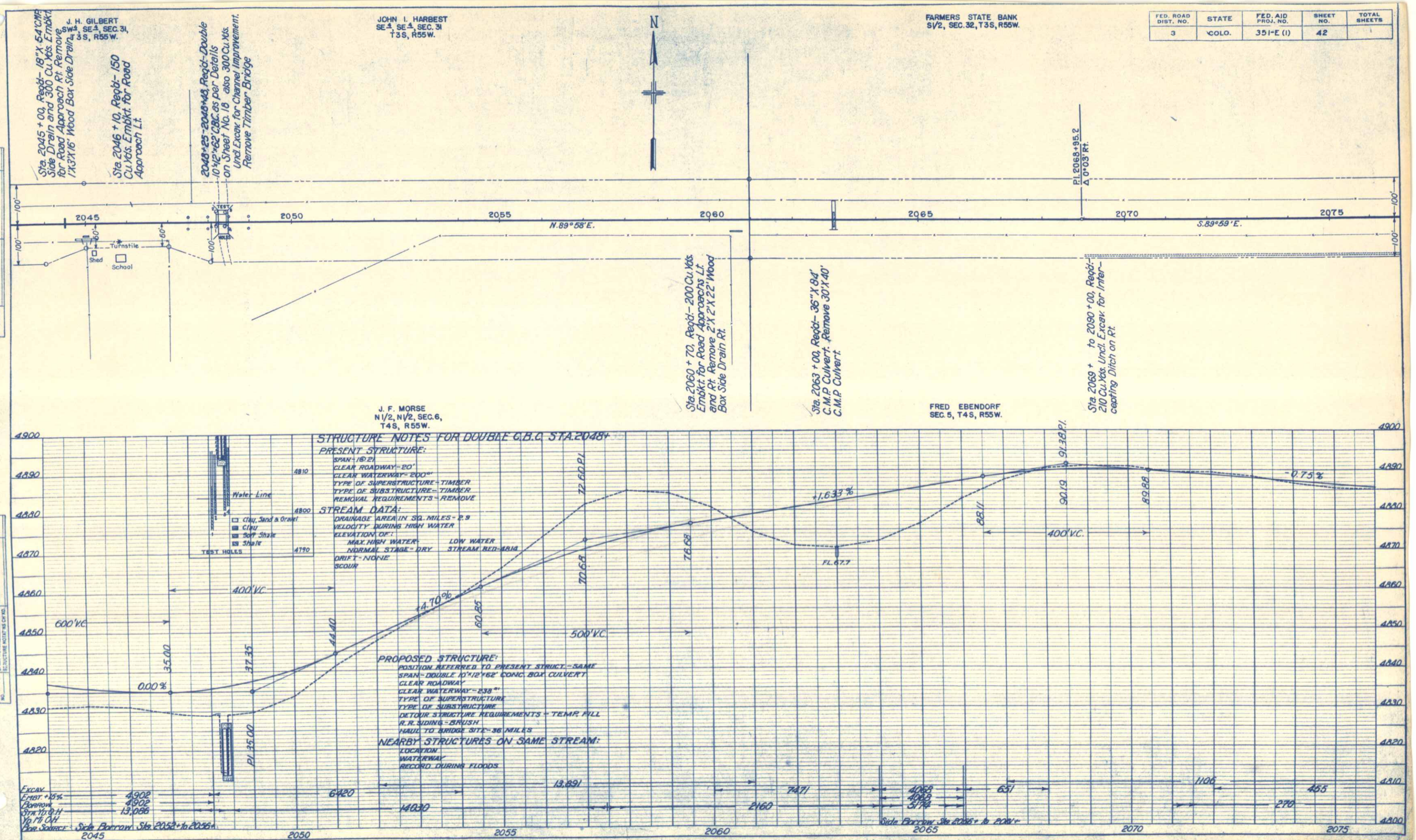
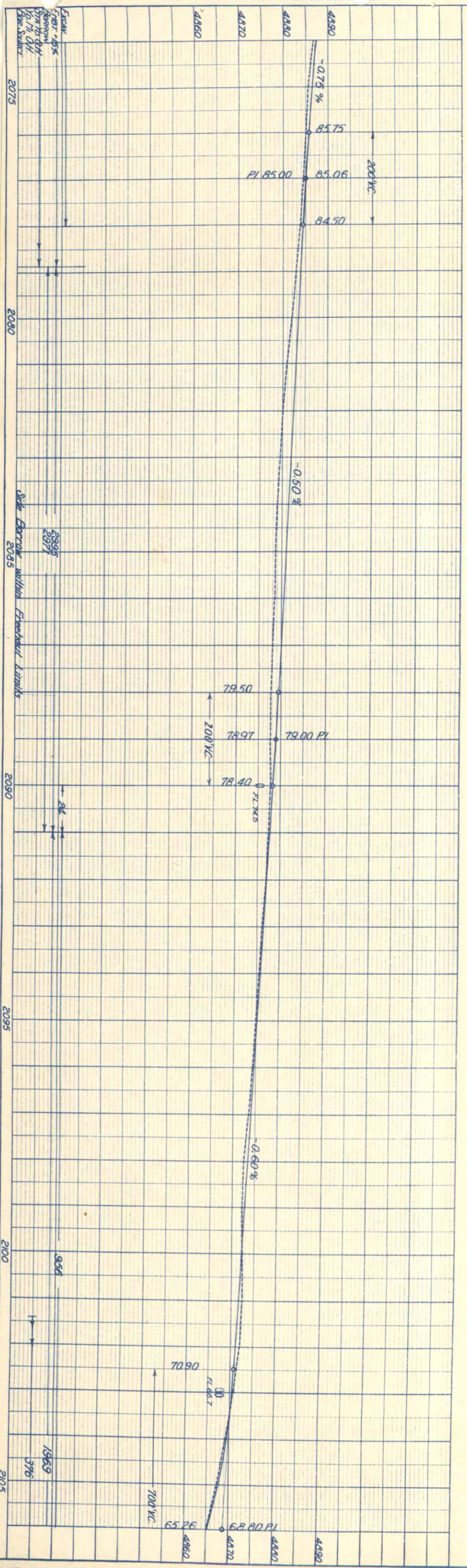
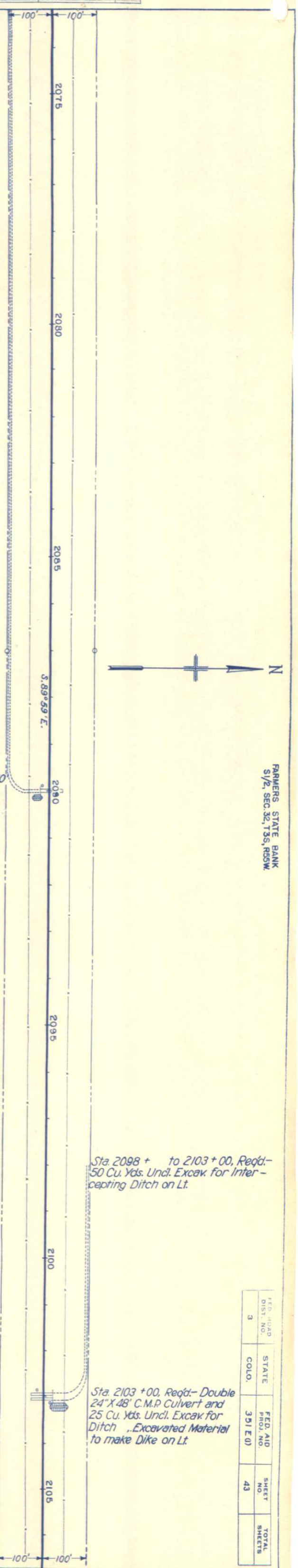


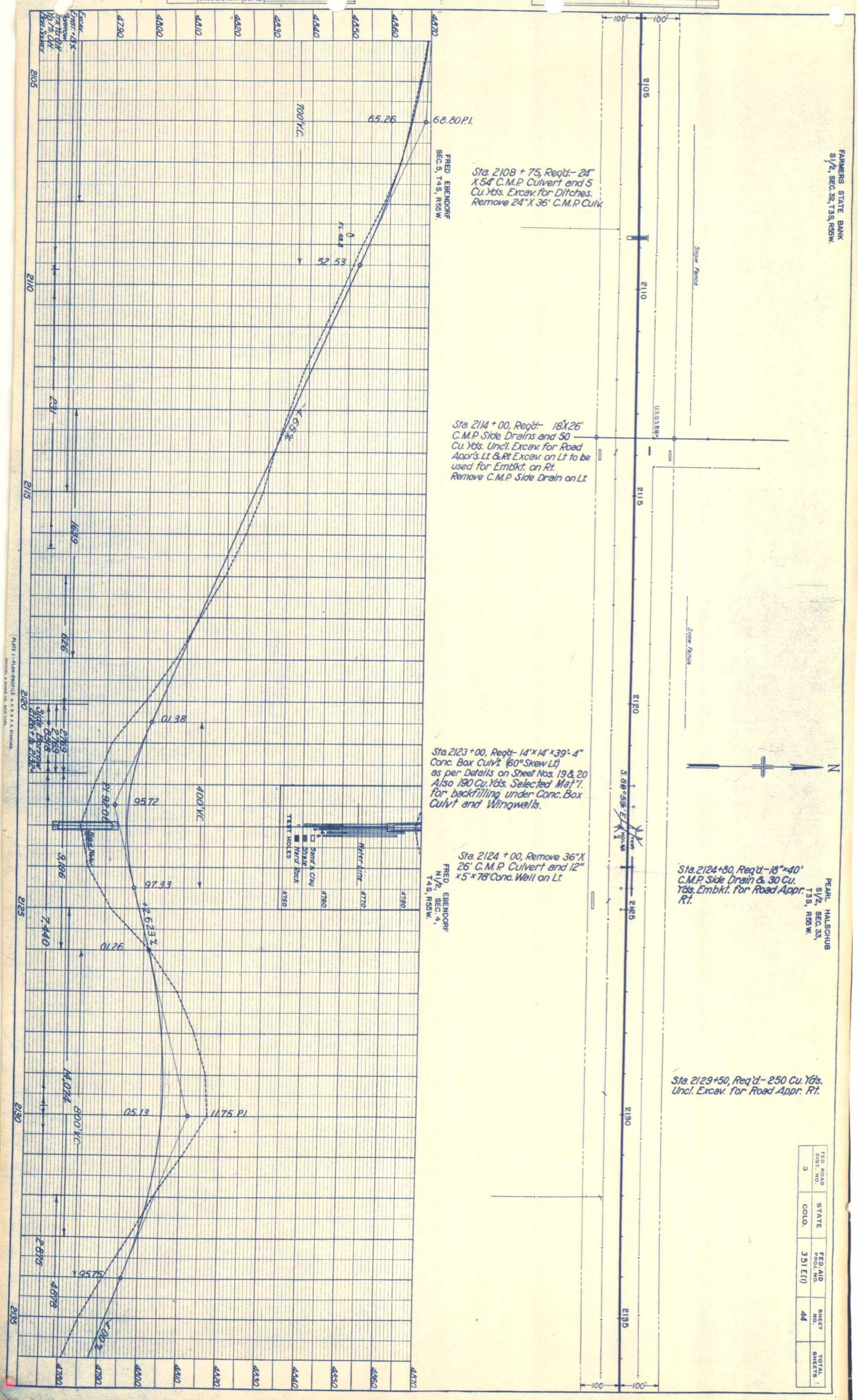
PLATE 1 - PLAN-PROFILE C.P.R. & R.R. STANDARD





FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351 E (1)	43	

N
FARMERS STATE BANK
S1/2, SEC. 32, T3S, R55W.
FRED EBENDORF
SEC. 5, T4S, R55W.
Sta. 2098 + to 2103 + 00, Reqd:- 50 Cu. Yds. Uncl. Excav. for Intercepting Ditch on Lt.
Sta. 2103 + 00, Reqd:- Double 24"X48" C.M.P. Culvert and 25 Cu. Yds. Uncl. Excav. for Ditch , Excavated Material to make Dike on Lt.
Sta. 2090 + 00, Reqd:- 24"X50' C.M.P. Culvert and 10 Cu. Yds. Uncl. Excav. for Ditch Excavated Material to make Dike on Rt.
S.89°59'E.
100'
100'
2075
2080
2085
2090
2095
2100
2105
PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
OF WAY CHECKED
BY
DATE
PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B. M.S NOTED
STRUCTURE NOTAT'NS CH'KD.
BY
DATE
4890
4880
4870
4860
-0.75 %
200' V.C.
85.75
85.06
PI 85.00
84.50
-0.50 %
79.50
78.97
79.00 PI
78.40
FL 74.5
200' V.C.
-0.60 %
70.90
FL 66.7
65.26
68.80 PI
700' V.C.
Excav.
Embt. +15%
Borrow
Sta. Yd. O.H.
Yd. Mi. O.H.
Bor. Source
2995
2971
24
956
1969
376
Side Borrow within Freehaul Limits
PLATE 1 - PLAN-PROFILE O. P. R. & R. E. STANDARD



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351 E(1)	44	

FARMERS STATE BANK
S1/2, SEC. 32, T3S, R55W.
N
PEARL HALSCHUB
S1/2, SEC. 33,
T3S, R55W.
Sta. 2124+80, Req'd.-18"x40' C.M.P. Side Drain & 30 Cu. Yds. Embkt. for Road Appr. Rt.
Sta. 2129+50, Req'd.- 250 Cu. Yds. Uncl. Excav. for Road Appr. Rt.
Snow Fence
Snow Fence
U.S.G.S.BM.
100'
100'
2105
2110
2115
2120
2125
2130
2135
S.88°59'E
TEST HOLES
Sta. 2108 + 75, Req'd.- 24" X 54' C.M.P. Culvert and 5 Cu. Yds. Excav. for Ditches. Remove 24" X 36' C.M.P. Culv.
Sta. 2114 + 00, Req'd.- 18"X26' C.M.P. Side Drains and 50 Cu. Yds. Uncl. Excav. for Road Appr's. Lt. & Rt. Excav. on Lt. to be used for Embkt. on Rt. Remove C.M.P. Side Drain on Lt.
Sta. 2123 + 00, Req'd.- 14'x14'x39'-4" Conc. Box Culv't. (60° Skew Lt.) as per Details on Sheet Nos. 19 & 20 Also 190 Cu. Yds. Selected Mat'l. for backfilling under Conc. Box Culv't and Wingwalls.
Sta. 2124 + 00, Remove 36"X 26' C.M.P. Culvert and 12" x5'x78' Conc. Wall on Lt.
FRED EBENDORF
SEC. 5, T4S, R55W.
FRED EBENDORF
N1/2, SEC. 4,
T4S, R55W.
4870
4860
4850
4840
4830
4820
4810
4800
4790
4780
68.80 P.I.
65.26
52.53
F.L. 48.8
700' V.C.
-4.65%
01.38
400' V.C.
95.72
P.I. 92.06
97.33
+2.623%
01.26
11.75 P.I.
05.13
800' V.C.
95.75
-4.00%
4780
4770
4760
4750
Water Line
Sand & Clay
Shale
Hard Rock
TEST HOLES
High Water
Excav.
Embt. + 13%
Borrow
Sta. Yd. O.H.
Yd. Mi. O.H.
Bor. Source
1639
626
231
2769
2769
8518
Side Borrow
2126+ to 2132+
9,196
7,440
14,074
4878
2,875
PLATE 1 - PLAN-PROFILE C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK
PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
& M'S NOTED
STRUCTURE NOTAT'NS CH'KD.
DATE
BY

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351-E (1)	45	

PEARL HALSCHUB
S1/2, SEC.33,
T3S, R55W.

N

Sta. 2141+08.0–2141+80.25, Reqd.-Bridge as per Details on Sheet No. 11-15. Also 19628 Cu. Yds. Uncl. Excav. for Channel Change 15693 Cu. Yds. to be used in Roadway as Embankment and 3735 to be used for Channel Improvement. Remove Timber Bridge, Conc. Abut's.

350'±

225'±

CHAN. CHANGE

PLUM BUSH CR.

100'

2135 2140 2145 2150 2155 2160 2165

S. 89°59' E.

Sta. 2144 + 00, Reqd.-200 Cu. Yds. Embk't. for Road Appr. Rt. Remove 18" x 40' C.M.P. Sd. Dr. Rt.

Sta. 2153 + 90, Reqd.-36" X 48' C.M.P. Culvert and 20 Cu. Yds. Uncl. Excav. for Ditches, Excavated Material to make Dike on Lt. Remove 2' X 2' X 45' Wood Box Culv.

FRED EBENDORF
N 1/2, SEC. 4,
T4S, R55W.

4870 4860 4850 4840 4830 4820 4810 4800 4790 4780 4770 4760 4750

400' V.C.

500' V.C.

200' V.C.

200' V.C.

+0.041 %

+4.10 %

+4.20 %

+5.00 %

89.75 83.77 81.83 82.00 84.64 92.35 35.80 40.20 45.00

P.I. 81.75 P.I. 82.10 14.90 19.03 23.20 P.I. 19.00 P.I. 40.00

FL 03.8

STRUCTURE NOTES FOR BRIDGE STA. 2141+08.0 to 2141+80.25

PRESENT STRUCTURE:
SPAN - 4 @ 30'
CLEAR ROADWAY - 20'
CLEAR WATERWAY - 700 □'
TYPE OF SUPERSTRUCTURE - TIMBER
TYPE OF SUBSTRUCTURE - TIMBER
REQUIREMENTS AS TO REMOVAL - REMOVE

STREAM DATA:
DRAINAGE AREA IN SQUARE MILES - 12.8
VELOCITY DURING HIGH WATER -
ELEVATION OF:
MAXIMUM HIGH WATER - 4774 LOW WATER -
NORMAL STAGE - STREAM BED - 4759
DRIFT -
SCOUR -

Flow Line Elev. 59.0

Depression exists at bridge site only. Has been used to get cattle pass clearance.

PROPOSED STRUCTURE:
POSITION REFERRED TO PRESENT STRUCTURE - SAME
SPAN - 1 @ 58'-3" CLEAR
CLEAR ROADWAY - 30'
CLEAR WATERWAY - 1000 □'
TYPE OF SUPERSTRUCTURE - CONC. SLAB ON RIGID FRAME RIBS
TYPE OF SUBSTRUCTURE - CONC. "U" ABUT'S. TIED WINGS
DETOUR STRUCTURE REQUIREMENTS -
R.R. SIDING - BRUSH HAUL TO BRIDGE SITE - 39 MI.

NEARBY STRUCTURES ON SAME STREAM:
LOCATION -
WATERWAY -
RECORD DURING FLOODS -

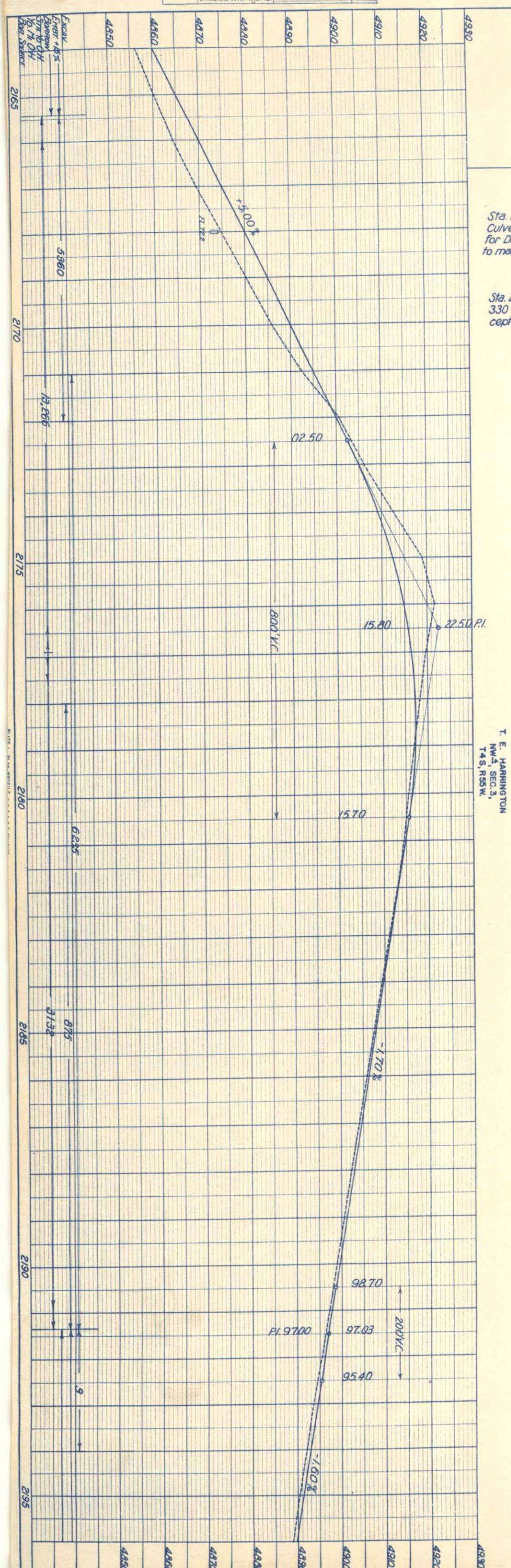
Excav.												
Embk. +15%												
Borrow		796										
Sta. Yd. Ov.		4493										
Yd. Mi. Ov.												
Bor. Source												
		Channel Change		Sta. 2141+		11,400		2767		19,520	164	4259
	2135	2140			2145				2150	2155	2160	2165

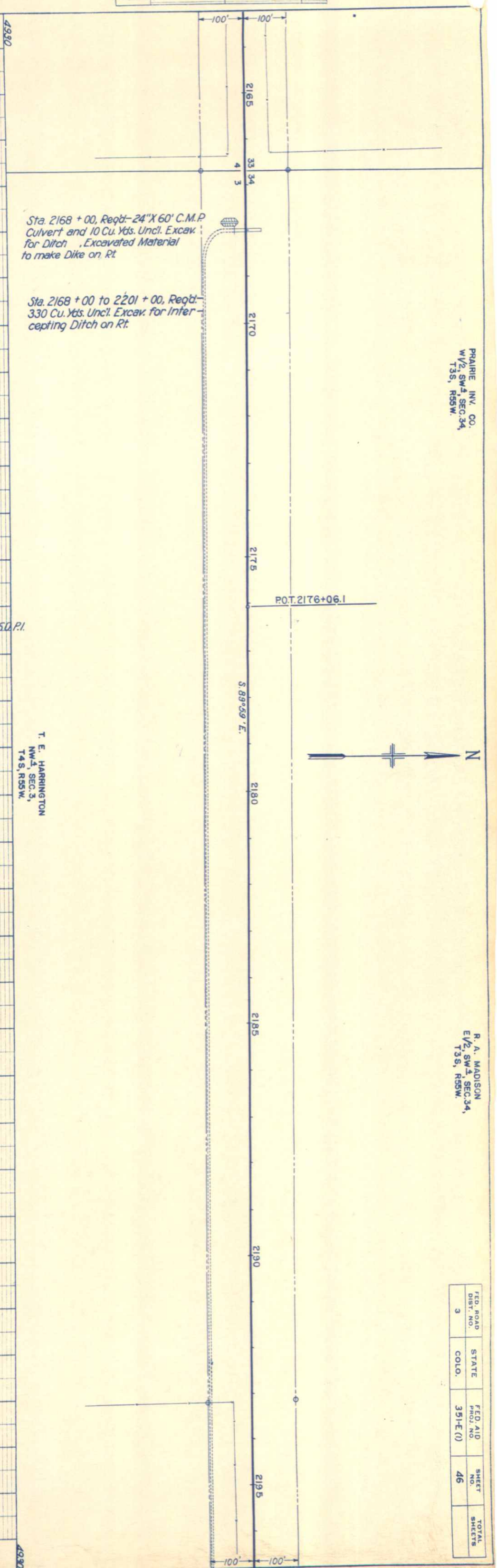
Side Borrow within Free Haul Limits

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

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

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, BRIDGE CHECKED, STRUCTURE NOTE CHECKED, NOTE BOOK, NO., DATE, BY





FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	351-E (1)	46	

PRAIRIE INV. CO.
W1/2, SW1/4, SEC.34,
T3S, R55W.
N
R. A. MADISON
E1/2, SW1/4, SEC.34,
T3S, R55W.
P.O.T. 2176+06.1
100'
100'
2165
33 34
4 3
2170
2175
S. 89°59 'E.
2180
2185
2190
2195
T. E. HARRINGTON
NW1/4, SEC.3,
T4S, R55W.
4930
4920
4910
4900
4890
4880
4870
4860
4850
22.50 P.I.
15.80
02.50
15.70
800' V.C.
+5.00%
FL 72.2
-1.70%
200' V.C.
98.70
97.03
95.40
P.I. 97.00
-1.60%
EXCAV.
EMBT. +15%
BORROW
STA. YD. O.H.
YD. MI. O.H.
BOR. SOURCE
5360
13,266
6235
875
3132
9
PLAN
PROFILE

Sta. 2168 + 00, Reqd.- 24" X 60' C.M.P. Culvert and 10 Cu. Yds. Uncl. Excav. for Ditch , Excavated Material to make Dike on Rt.

Sta. 2168 + 00 to 2201 + 00, Reqd.- 330 Cu. Yds. Uncl. Excav. for Intercepting Ditch on Rt.

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

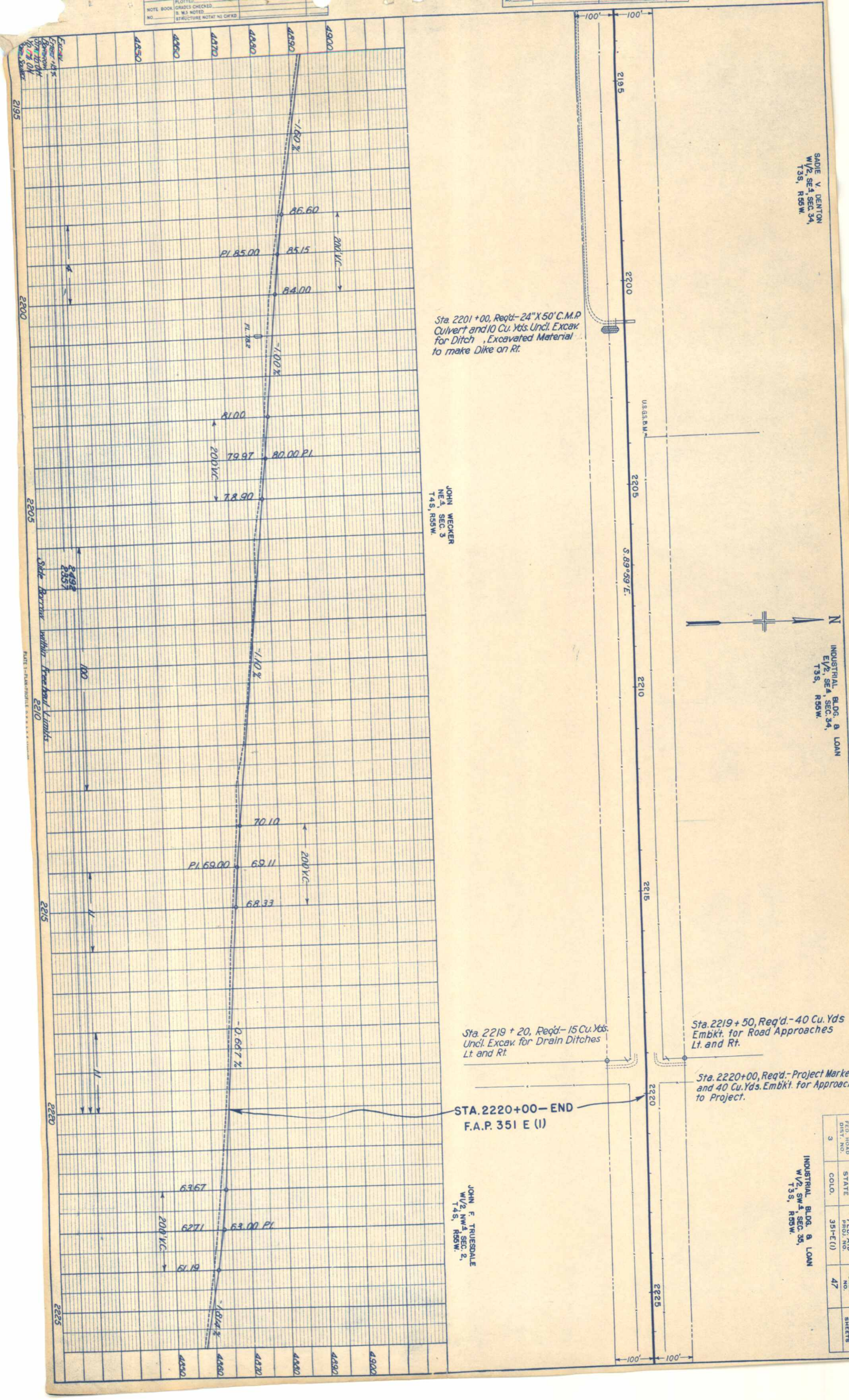


PLATE 1—PLAN-PROFILE