

FED. ROAD DIST. NO.	STATE	P. W. A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	2003-B UNIT NO.4	1	

2003.0204

INDEX OF SHEETS

- 1 SKETCH MAP & TITLE SHEET
- 2 TYPICAL SECTION & SUMMARY OF QUANTITIES
- 3-5 LIST OF STRUCTURES
- 6 BRIDGE DETAILS, STA. 1650+
- 7 FENCING, R.O.W. MARKERS & DIVISION BOX
- 8 FLUME DETAILS, STA. 1650+
- 9-10 FLUME DETAILS, STA. 1560+ & 1570+
- 11 STANDARD HEADWALLS FOR C.M.P. CULVERTS M-102-E
- 12 " SIPHON, CORR. GALV. IRON PIPE M-123-A
- 13 " TIMBER GUARD POSTS M-19-A
- 14 " SEMI-RIGID METAL PLATE GUARD FENCE M-21-A
- 15 " FLEXIBLE METAL PLATE GUARD FENCE M-22-A
- 16 " WIRE FENCES (Tr. Wd. Posts) & Mk'r Posts M-24-F
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- 19 TYPICAL SIDE APPR. ROADS/ROADWAY CONSTRUCTION TRAFFIC SIGNS (P.W.A.) M-2-BX
- 20-30 PLAN & PROFILE
- 31-202 CROSS SECTIONS

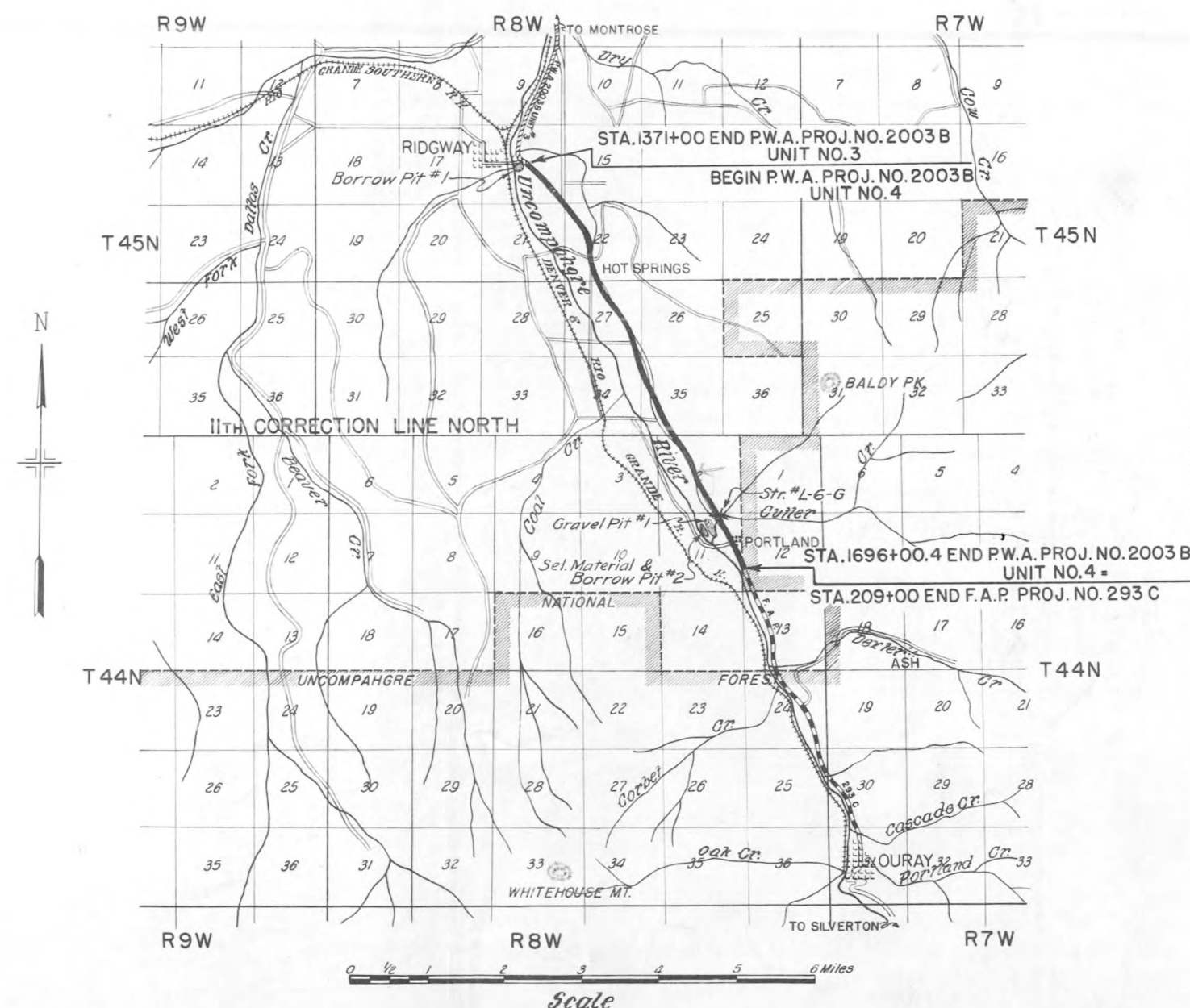
COLORADO STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED P.W.A. DOCKET COLO. 804-D PROJECT NO. 2003B UNIT NO. 4 STATE HIGHWAY NO. 19 OURAY COUNTY

SCALES ON 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 } 32,521.8 FT. = 6.159 MILES
NET LENGTH OF PROJECT }

CONVENTIONAL SIGNS

CENTER LINE OF SURVEY
RIGHT OF WAY LINE
SECTION LINE
ONE QUARTER SECTION LINE
FENCE
POLE LINES
PRESENT ROAD



NOTE
It is recommended that bidders on this project go over the plan details with one of the following field representatives of this department:
Mr. J. J. Vandemoer, Division Engineer, Grand Junction, Colorado.
Mr. J. A. Cavanaugh, Resident Engineer, Montrose, Colorado.

RECOMMENDED FOR APPROVAL 5-17-37

J. J. Vandemoer
ASSISTANT ENGINEER

APPROVED
Charles H. 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

N.E. 1/4 Sec 16

NOTE: All poles encroaching on construction are to be moved by owners.
Fencing requirements, gates and right of way markers are tabulated on Sheet No. 7.
Guard Posts required are tabulated on Sheet No. 5.

T.45N.R.8W.
N.M.P.M.

S.E. 1/4 Sec 16

FED. ROAD DIST. NO.	STATE	P. W. A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	2003-B UNIT NO. 4	20	

Sta 1371+20 to 1404+95 = Reg'd 1050 cu yds.
Uncl. Excav. for Irrigation Ditch Lt.

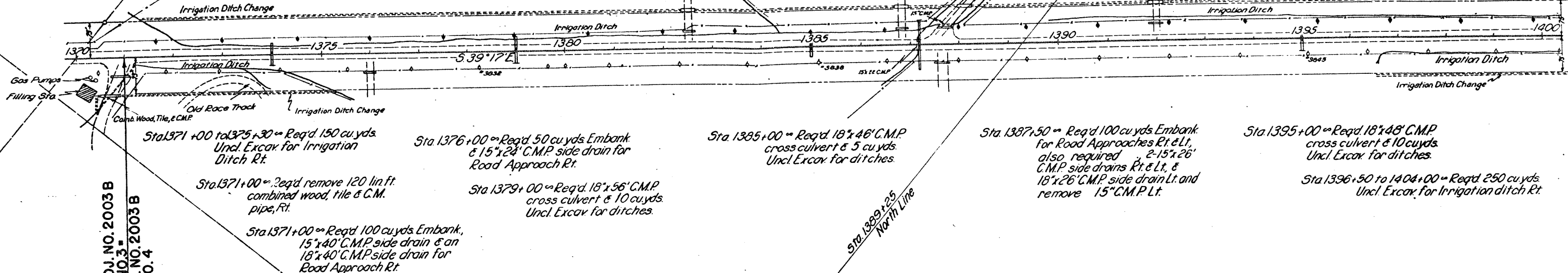
Sta 1374+00 = Reg'd 18'x46' C.M.P.
cross culvert & 10 cu yds
Uncl. Excav. for ditches.

Sta 1382+50 = Reg'd 50 cu yds Embank.
15'x26' C.M.P. side drain &
18'x26' C.M.P. side drain for
Road Approach Lt.

Sta 1386+85 = Reg'd 50 cu yds Embank.
15'x26' C.M.P. side drain &
18'x26' C.M.P. side drain for
Road Approach Lt.

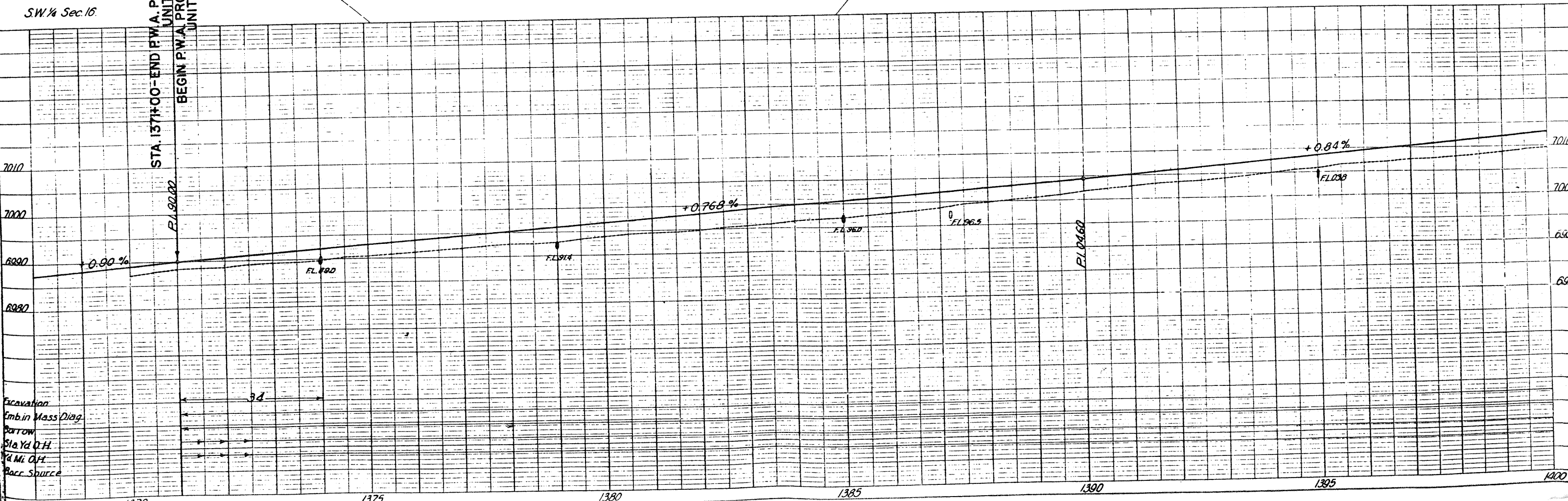
Sta 1387+20 = Reg'd 18'x100' C.M.P.
cross culvert, 30 cu yds.
Uncl. Excav. for ditches &
remove 15'x22' C.M.P.

Sta 1392+00 = Reg'd 50 cu yds Embank.
15'x26' C.M.P. side drain &
18'x26' C.M.P. side drain for
Road Approach Lt.



SW 1/4 Sec 16

STA 1371+00-END P.W.A. PROJ. NO. 2003B
UNIT NO. 3
BEGN P.W.A. PROJ. NO. 2003B
UNIT NO. 4



S.E. 1/4 Sec 16

1.45 IN. R.O.W.
N.M.P.M.

N.W. 1/4 Sec 22

DIST. NO.	STATE	PROJ. NO.	NO.	SHEETS
3	COLO.	2003-B UNIT NO. 4	21	

Sta 1404+30 ~ Req'd 18"x120' C.M.P.
cross culvert (skew 55°)
20 cu yds Uncl. Excav for
ditches & remove 15"x20'
C.M.P.

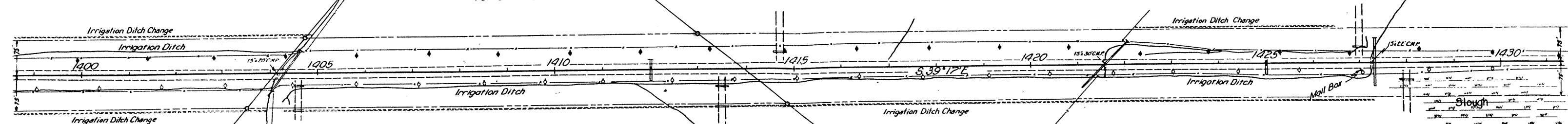
Sta 1412+00 ~ Req'd 18"x44'
C.M.P. cross culvert &
10 cu yds Uncl. Excav
for ditches.

Sta 1421+55 ~ Req'd 18"x140' C.M.P.
cross culvert (skew 45°)
20 cu yds Uncl. Excav for
ditches & remove 15"x30'
C.M.P.

Sta 1422+20 to 1426+50 ~ Req'd 130 cu yds
Uncl. Excav for ditch change Lt.

Sta 1427+32 ~ Req'd 18"x100' C.M.P.
cross culvert, 20 cu yds.
Uncl. Excav for ditches &
remove 15"x22' C.M.P.

Sta 1427+32 ~ Remove & Reset Headgate
off R.O.W. Rt.



Sta 1404+30 to 1427+30 ~ Req'd 700 cu yds
Uncl. Excav for Irrigation Ditch Rt.

Sta 1404+60 ~ Req'd 50 cu yds Embank,
15"x26' C.M.P. side drain &
18"x26' C.M.P. side drain for
Road Approach Rt.

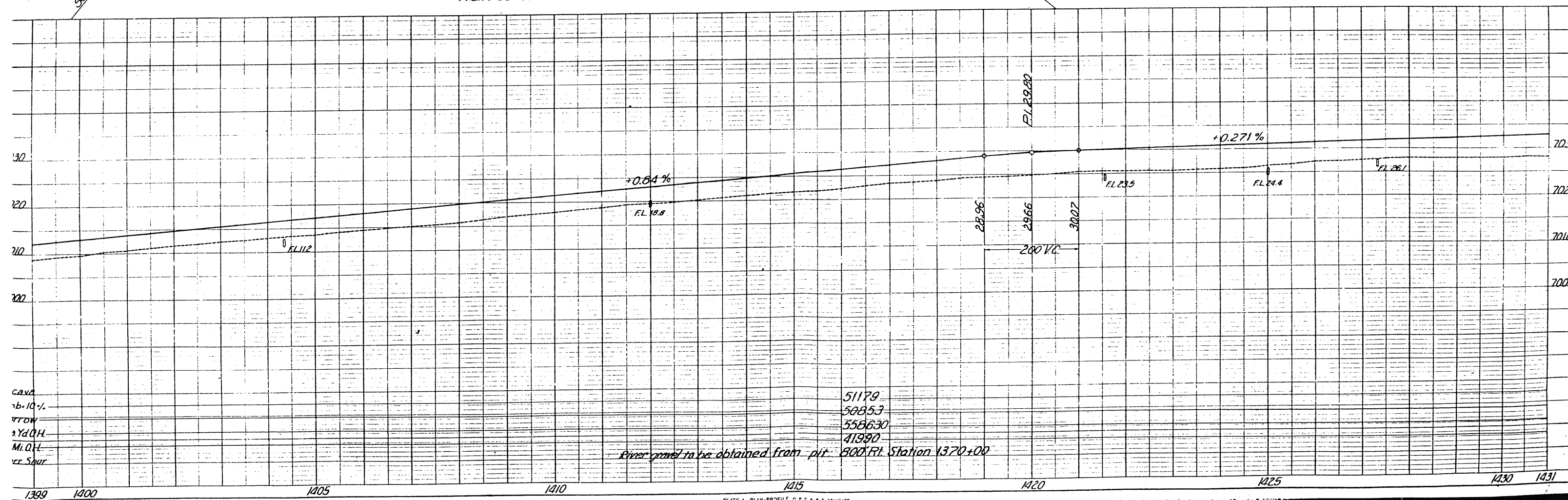
Sta 1413+50 ~ Req'd 50 cu yds Embank
15"x26' C.M.P. side drain &
18"x26' C.M.P. side drain for
Road Approach Rt.

Sta 1414+70 ~ Req'd 50 cu yds Embank &
15"x26' C.M.P. side drain for
Road Approach Lt.

Sta 1425+00 ~ Req'd 18"x54' C.M.P.
cross culvert & 20 cu yds
Uncl. Excav for ditches.

Sta 1428+00 ~ Req'd 50 cu yds
Embank & 15"x26' C.M.P.
side drain for Rd Appr Rt.

Sta 1427+00 ~ Req'd 50 cu yds Embank
& 15"x26' C.M.P. side drain for
Road Approach Lt.



N.W. 1/4 Sec 22

T. 45N. R. 8W.
N.M.P.M.

S.W. 1/4 Sec 22

FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	2003-B UNIT NO. 4	22	

Sta 1434+90 ~ Req'd 70 cu yds Embank.
& 15"x28' C.M.P. side drain for
Road Approach Lt.

Sta 1448+50 to 1449+30 ~ Req'd 30 cu yds.
Uncl. Excav. for Irrigation Ditch Lt.

Sta 1449+30 ~ Req'd 18"x66' C.M.P.
cross culvert & 20 cu yds.
Uncl. Excav. for ditches.

Sta 1449+50 to 1460+00 ~ Req'd 160 cu yds.
Uncl. Excav. for Intersecting Ditch Lt.

Sta 1460+00 to 1465+30 ~ Req'd 80 cu yds.
Uncl. Excav. for Intersecting Ditch Lt.

Δ 39°54' L
D 4°00'
T 520.8'
L 997.5'
R 1432.5'

Δ 51°21' R
D 5°48'
T 474.8'
L 885.3'
R 987.8'

Sta 1436+50 ~ Req'd 18"x70' C.M.P.
cross culvert & remove
old headgate Rt. & 5 cu yds.
Uncl. Excav. for ditches.

Sta 1445+50 ~ Req'd 50 cu yds Embank.
& 15"x26' C.M.P. side drain for
Road Approach Rt.

Sta 1448+00 to 1449+30 ~ Req'd 40 cu yds.
Uncl. Excav. for Irrigation Ditch Rt.

Sta 1448+50 to 1449+30 ~ Req'd
transplant 4 trees, Rt.

Sta 1456+50 ~ Req'd 18"x52' C.M.P.
cross culvert & 10 cu yds.
Uncl. Excav. for ditches.

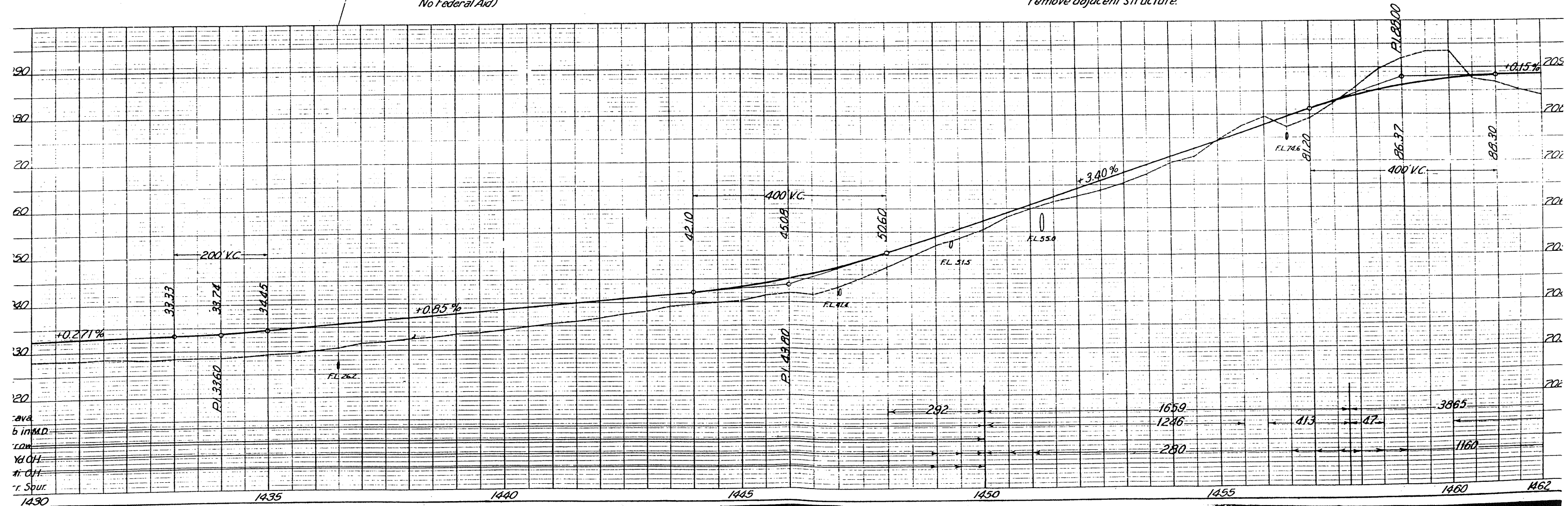
Sta 1451+25 ~ Req'd 48"x 90' C.M.P.
cross culvert & 50 cu yds.
Uncl. Excav. for ditches and
remove adjacent structure.

Sta 1447+30 ~ Req'd remove
& reset sign, Rt. Lump
Sum. (Force Account,
No Federal Aid)

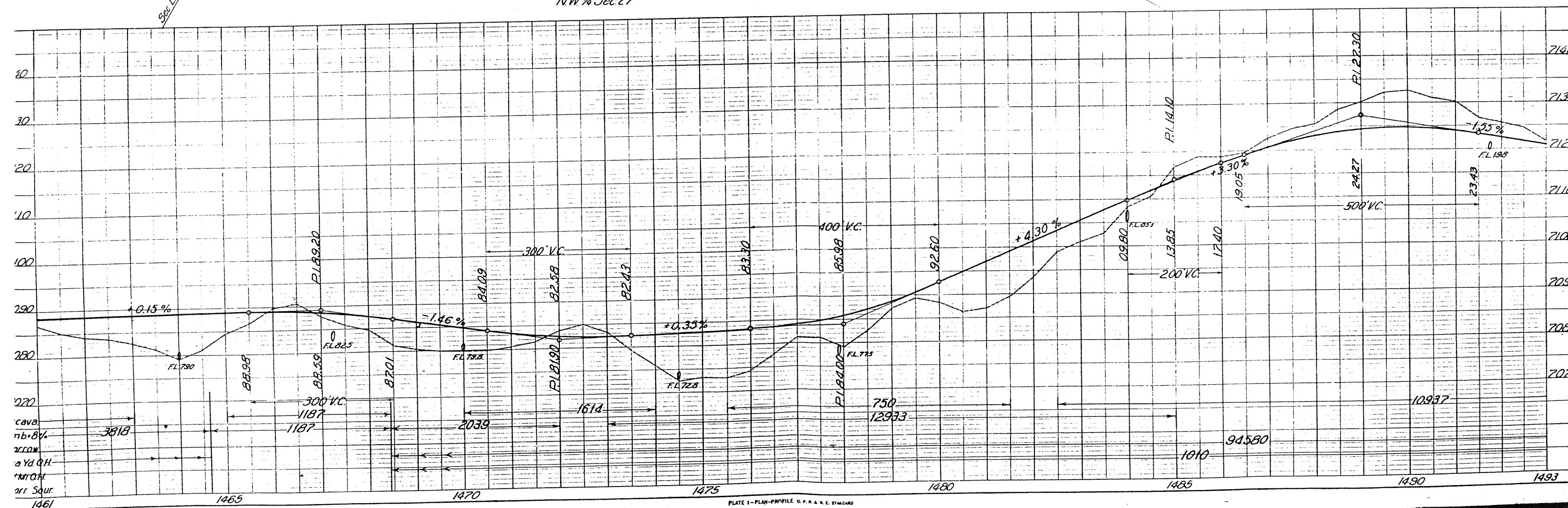
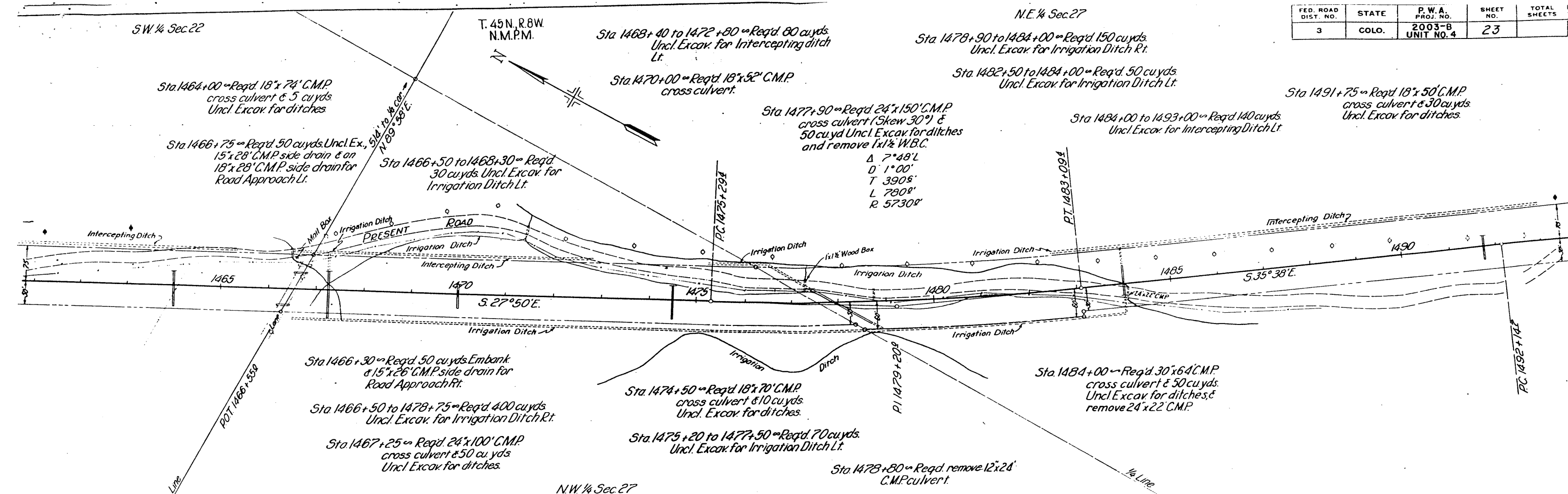
Sta 1447+05 ~ Req'd 18"x74' C.M.P. cross
culvert, 50 cu yds. Uncl. Excav. for
ditches & remove W.B.C.

Sta 1432+50 to 1434+75 ~ Req'd
225 lin. ft Guard
fence, Lt.

Sta 1435+05 to 1442+06 ~ Req'd
700 lin. ft Guard
fence Lt.



FED. ROAD DIST. NO.	STATE	P. W. A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	2003-B UNIT NO. 4	23	



NE 1/4 Sec 27

T. 45N. R. 8W.
N.M.P.M.

FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	2003-B UNIT NO. 4	24	

Sta. 1493+00 to 1524+00 ~ Req'd. 470 cu. yds.
Uncl. Excav. for Intercepting Ditch Lt.Sta. 1495+00 ~ Req'd. 24'x52' C.M.P.
cross culvert, 10 cu. yds.
Uncl. Excav. for ditches &
remove 18'x20' C.M.P.Sta. 1500+00 ~ Req'd. 24'x50' C.M.P.
cross culvert & 10 cu. yds.
Uncl. Excav. for ditches.Sta. 1507+25 ~ Req'd. 24'x46' C.M.P.
cross culvert & 5 cu. yds.
Uncl. Excav. for ditches.Sta. 1511+30 ~ Req'd. 48'x52' C.M.P.
cross culvert & 15 cu. yds.
Uncl. Excav. for ditches.Sta. 1513+45 ~ Req'd. 24'x62' C.M.P.
cross culvert & 20 cu. yds.
Uncl. Excav. for ditches.Sta. 1518+70 ~ Req'd. 24'x60' C.M.P.
cross culvert, 5 cu. yds.
Uncl. Excav. for ditches &
remove on 18" C.M.P. Rt.

P.I. 1521+602

Sec. Line

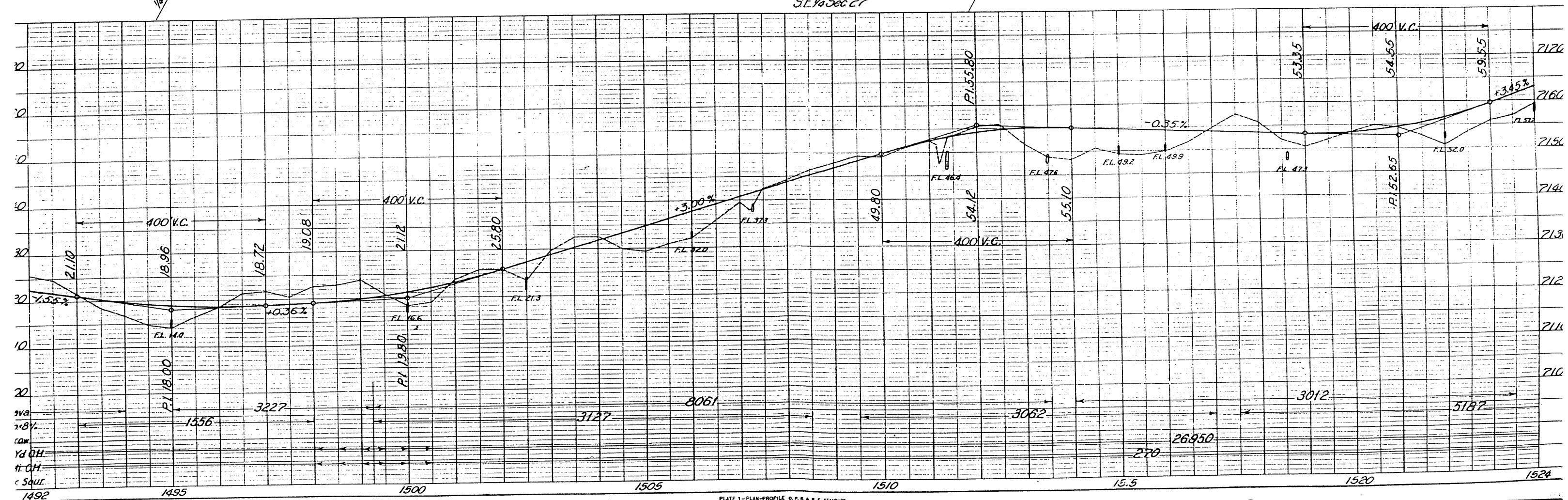
Intercepting Ditch

Uncompensated for Springs Reservation Boundary

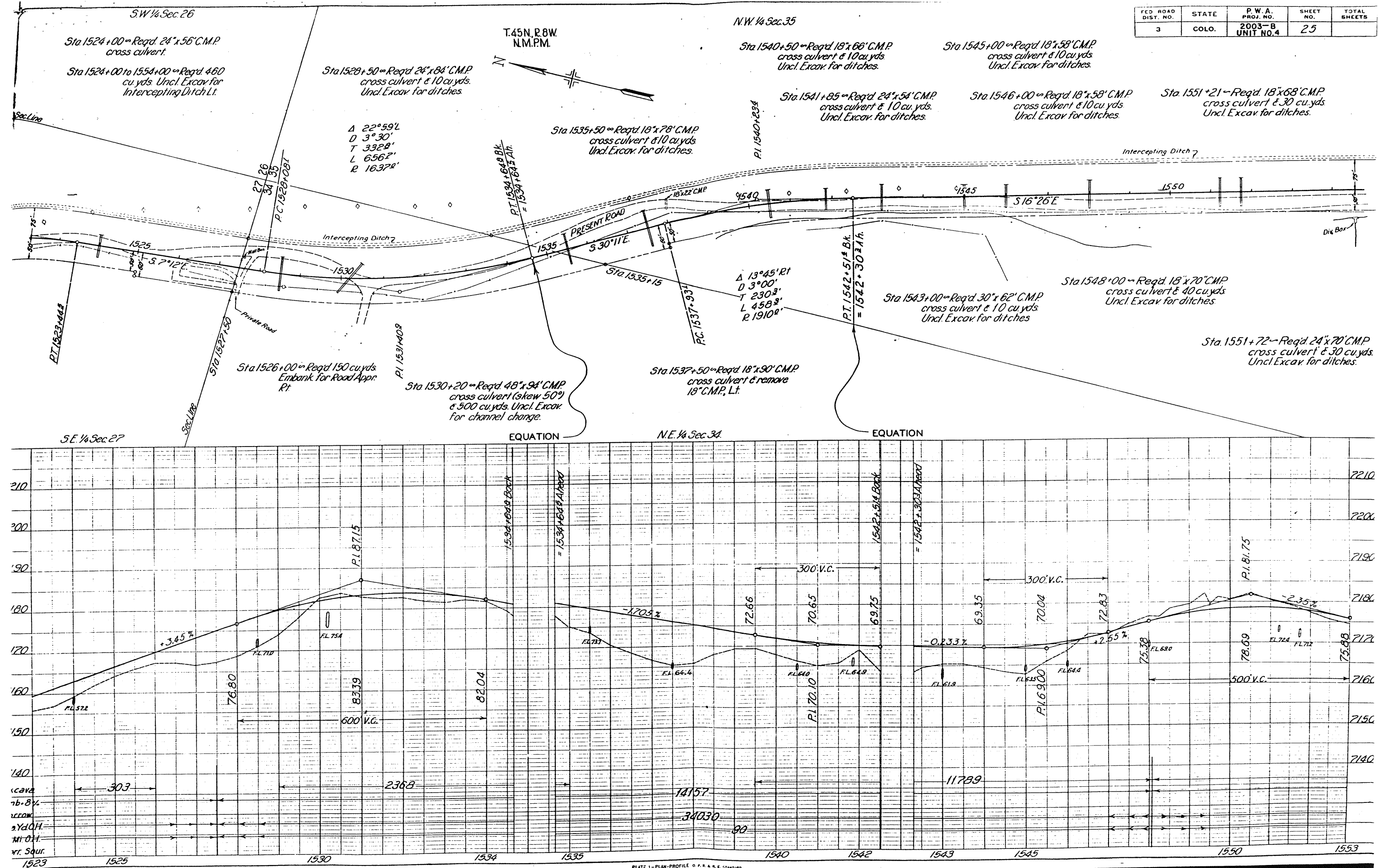
Δ 6°00'
D 1°00'
T 3003'
L 6002'
R 57302'Sta. 1494+00 ~ Req'd. 50 cu. yds. Embank
& 15'x26' C.M.P. side drain for
Road Approach Rt.Sta. 1502+50 ~ Req'd. 36'x52' C.M.P.
cross culvert, 10 cu. yds.
Uncl. Excav. for ditches &
remove 15'x20' C.M.P.Sta. 1506+00 ~ Req'd. 18'x56' C.M.P.
cross culvert & 5 cu. yds.
Uncl. Excav. for ditches.Sta. 1510+00 ~ Req'd. 70 cu. yds. Uncl.
Excav. & 50 cu. yds. Embank
for Road Approaches Rt. &
Lt., 2-15'x26' C.M.P. side
drains Lt. & 15'x28' C.M.P.
side drain Rt.Sta. 1515+00 ~ Req'd. 24'x52' C.M.P.
cross culvert & 10 cu. yds.
Uncl. Excav. for ditches.Sta. 1516+00 ~ Req'd. 18'x50' C.M.P.
cross culvert & 5 cu. yds.
Uncl. Excav. for ditches.Sta. 1522+00 ~ Req'd. 18'x56' C.M.P.
cross culvert & 5 cu. yds.
Uncl. Excav. for ditches.Δ 22°26'R
D 6°00'
T 1894'
L 3738'
R 9552'

P.I. 1523+445

SE 1/4 Sec 27



FED ROAD DIST. NO.	STATE	P. W. A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	2003-B UNIT NO.4	25	



NW 1/4 Sec 35

T. 45N. R. 8W.
N.M.P.M.

Sta. 1569+20 to 1571+98 ~ Req'd. 278 lin. ft.
No. 60 Lennon Type Flume & intake &
outlet Transitions Rt. (Details see
Sheets No. 9 & 10)

Sta. 1576+30 ~ Req'd. 36"x72" C.M.P.
cross culvert.

Sta. 1580+00 to 1583+25 ~ Req'd. 100 cu yds
Uncl. Excav. for Irrigation
ditch Lt.

Sta. 1580+00 to 1585+00 ~ Req'd. 150 cu yds.
Uncl. Excav. for Irrigation
ditch Rt.

Δ 18°30' L
D 1°00'
T 933.8'
L 1850.8'
R 5730.8'

Sta. 1568+00 ~ Req'd. 18"x88" C.M.P.
cross culvert & 10 cu yds.
Uncl. Excav. for ditches.

Sta. 1569+00 ~ Req'd. 18"x78" C.M.P.
cross culvert & 10 cu yds.
Uncl. Excav. for ditches.

Sta. 1570+00 ~ Req'd. 18"x82" C.M.P.
cross culvert & 10 cu yds.
Uncl. Excav. for ditches.

Sta. 1565+50 ~ Req'd. 48"x60" C.M.P.
cross culvert & 20 cu yds.
Uncl. Excav. for ditches.

Sta. 1559+93 to 1562+93 ~ Req'd.
300 lin. ft. guard
fence Rt.

Sta. 1562+00 to 1563+00 ~ Req'd.
100 lin. ft. guard
fence Lt.

Sta. 1554+00 to 1575+70 ~ Req'd.
330 cu yds. Uncl. Excav.
for Intercepting ditch Lt.

Sta. 1555+75 ~ Req'd. 18"x60" C.M.P.
cross culvert & 20 cu yds.
Uncl. Excav. for ditches &
remove 12"x28" C.M.P.

Sta. 1558+50 ~ Req'd. 24"x70" C.M.P.
cross culvert, 30 cu yds.
Uncl. Excav. for ditches.

Sta. 1559+75 to 1583+20 ~ Req'd. 345 lin. ft.
No. 60 Lennon Type Flume & intake
& outlet transitions Rt. (Details see
Sheets No. 9 & 10)

Sta. 1562+50 ~ Req'd. 24"x106" C.M.P.
cross culvert & 20 cu yds.
Uncl. Excav. for ditches.

Sta. 1563+25 ~ Req'd. 1000 cu yds.
Embank. for road approach Rt.

Sta. 1572+00 ~ Req'd. 36"x92" C.M.P.
cross culvert & 20 cu yds.
Uncl. Excav. for ditches.

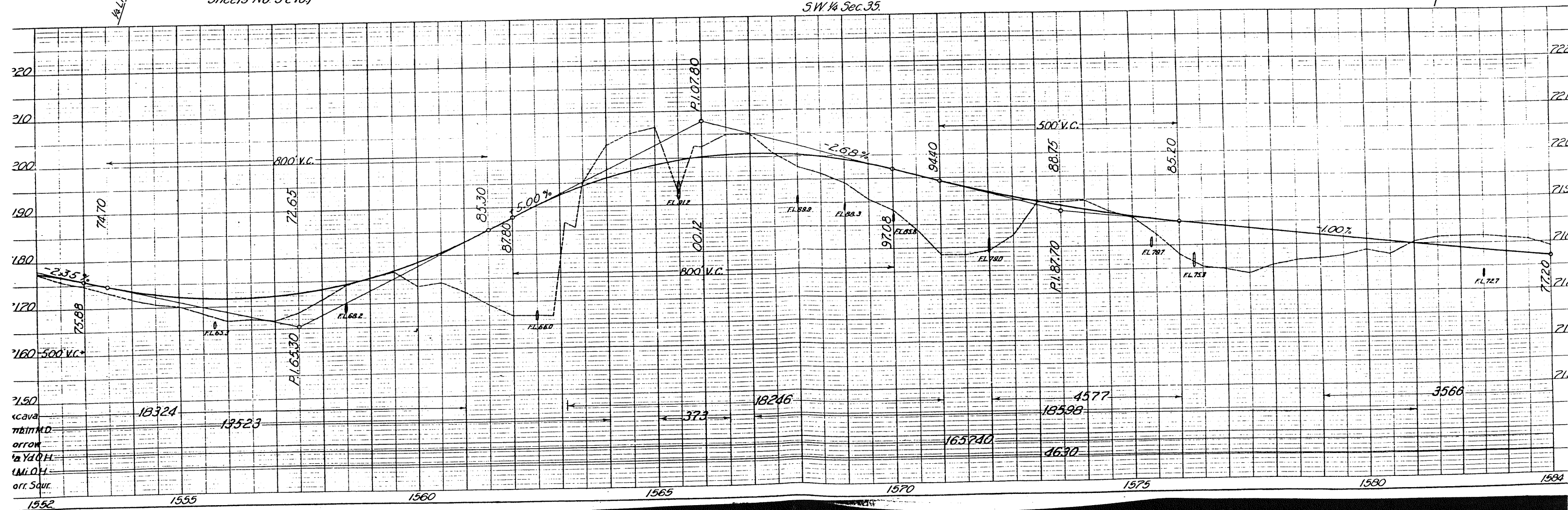
Sta. 1575+40 ~ Req'd. 24"x140" C.M.P.
cross culvert (skew 45°)
& 10 cu yds. Uncl. Excav. for
ditches.

Sta. 1582+50 ~ Req'd. 18"x100" C.M.
Siphon pipe (H in 10') (H out 3')
& remove 15"x24" C.M.P.

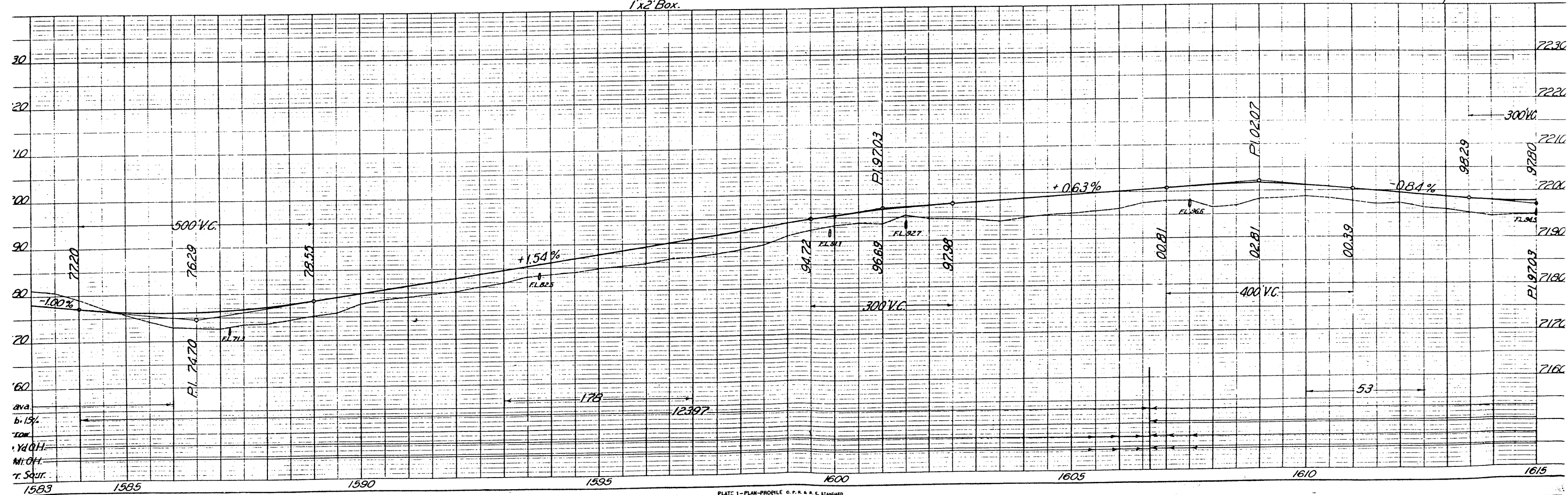
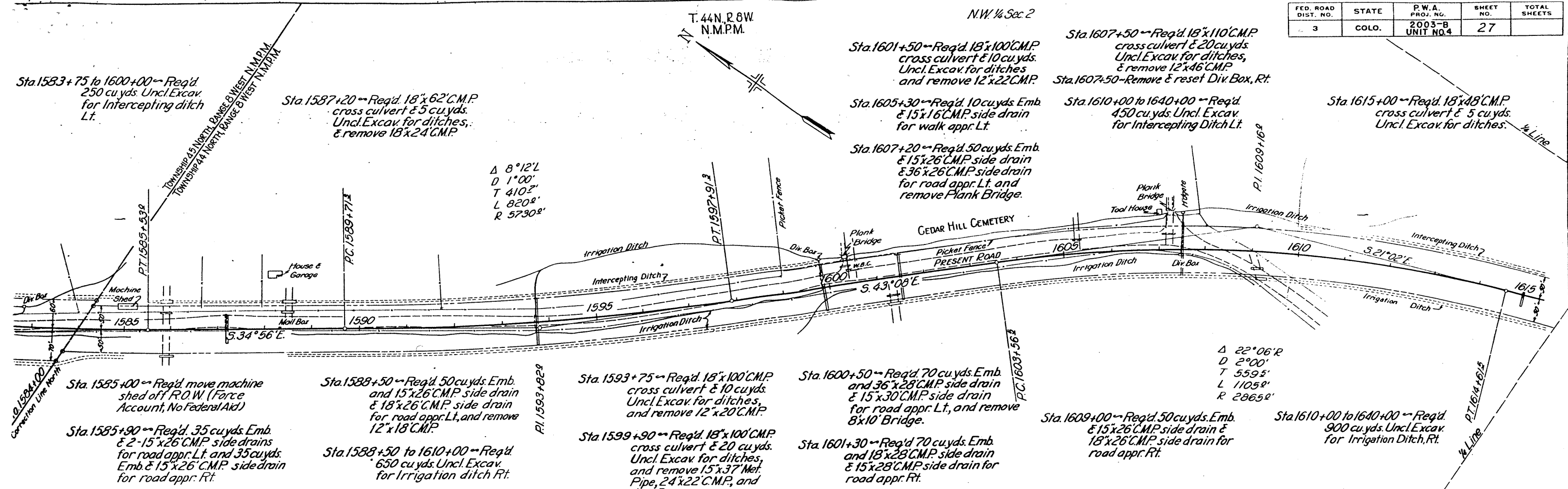
Sta. 1582+50 ~ Req'd. remove &
reset Div. box, Lt.

SW 1/4 Sec. 35.

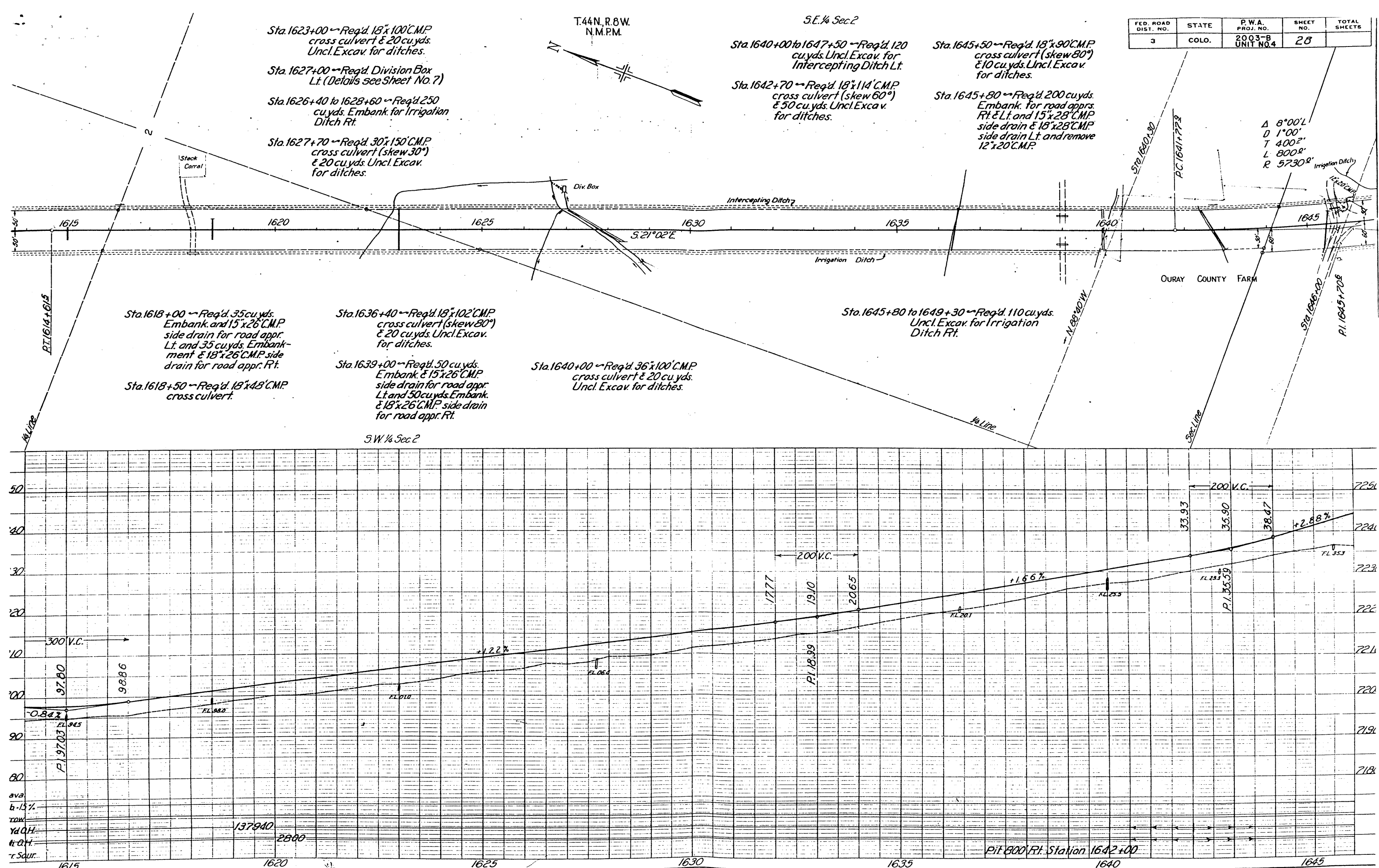
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FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	2003-B UNIT NO. 4	27	



FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	2003-B UNIT NO.4	28	



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Sta. 1647+90 to 1649+45 ~ Req'd. 50 cu. yds. Uncl. Excav. for Irrigation Ditch Lt.

Sta. 1649+45 ~ Req'd. 36'x86' C.M.P. cross culvert & 20 cu. yds. Uncl. Excav. for ditches & remove 2-18'x22' C.M.P.s

Sta. 1650+48 ~ Req'd. 36 lin. ft. No. 60 Lennon Type & intake and outlet transitions Rt. (Details see Sheet No. 8.) & remove wooden flume
Sta. 1650+40 to 1650+64.5 ~ Req'd. 1-span Sta. 1660+75 ~ Req'd. 18'x60' C.M.P. cross culvert & 30 cu. yds. Uncl. Excav. for ditches and remove 15'x22' C.M.P.
Sta. 1650+40 to 1650+64.5 ~ Req'd. 1-span Sta. 1660+75 ~ Req'd. 18'x60' C.M.P. cross culvert & 30 cu. yds. Uncl. Excav. for ditches and remove 15'x22' C.M.P.
Sta. 1650+40 to 1650+64.5 ~ Req'd. 1-span Sta. 1660+75 ~ Req'd. 18'x60' C.M.P. cross culvert & 30 cu. yds. Uncl. Excav. for ditches and remove 15'x22' C.M.P.

Sta. 1659+00 to Sta. 1661+00 ~ Req'd. 60 cu. yds. Uncl. Excav. for Irrigation Ditch Rt.
Sta. 1660+75 to 1664+50 ~ Req'd. 115 cu. yds. Uncl. Excav. for Irrigation Ditch Lt.

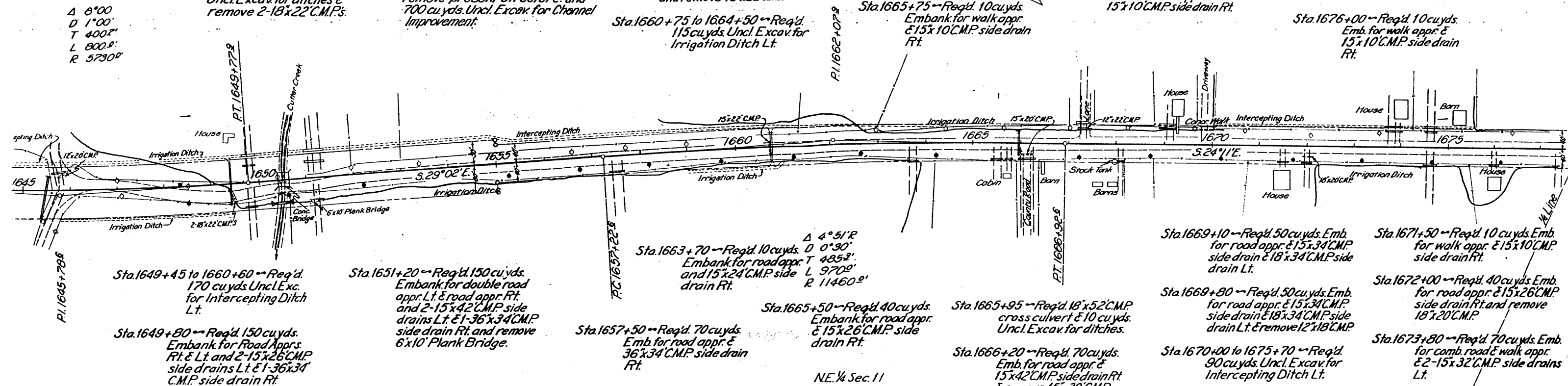
1.44 N. K.O.W. N.M.P.M.

Sta. 1667+30 ~ Req'd. 50 cu. yds. Emb. for road appr. and 1-15'x28' C.M.P. side drain Lt. & remove 12'x22' C.M.P.

Sta. 1668+10 ~ Req'd. 20 cu. yds. Emb. for walk appr. & 15'x10' C.M.P. side drain Rt.

Sta. 1674+60 ~ Req'd. 60 cu. yds. Emb. for road apprs Rt. & Lt. and 2-15'x26' C.M.P. side drains Lt. & 1-15'x26' C.M.P. side drain Rt.

Sta. 1676+00 ~ Req'd. 10 cu. yds. Emb. for walk appr. & 15'x10' C.M.P. side drain Rt.



Sta. 1649+45 to 1660+60 ~ Req'd. 170 cu. yds. Uncl. Exc. for Intercepting Ditch Lt.

Sta. 1649+80 ~ Req'd. 150 cu. yds. Embank. for Road Apprs. Rt. & Lt. and 2-15'x26' C.M.P. side drains Lt. & 1-36'x34' C.M.P. side drain Rt.

Sta. 1651+20 ~ Req'd. 150 cu. yds. Embank. for double road appr. Lt. & road appr. Rt. and 2-15'x42' C.M.P. side drains Lt. & 1-36'x34' C.M.P. side drain Rt. and remove 6'x10' Plank Bridge.

Sta. 1657+50 ~ Req'd. 70 cu. yds. Emb. for road appr. & 36'x34' C.M.P. side drain Rt.

Sta. 1663+70 ~ Req'd. 10 cu. yds. Embank. for road appr. T 485.2' and 15'x24' C.M.P. side drain Rt.

Sta. 1665+50 ~ Req'd. 40 cu. yds. Embank. for road appr. & 15'x26' C.M.P. side drain Rt.

Sta. 1665+95 ~ Req'd. 18'x52' C.M.P. cross culvert & 10 cu. yds. Uncl. Excav. for ditches.

Sta. 1666+20 ~ Req'd. 70 cu. yds. Emb. for road appr. & 15'x42' C.M.P. side drain Rt. & remove 15'x20' C.M.P.

Sta. 1669+10 ~ Req'd. 50 cu. yds. Emb. for road appr. & 15'x34' C.M.P. side drain Lt. & 18'x34' C.M.P. side drain Lt.

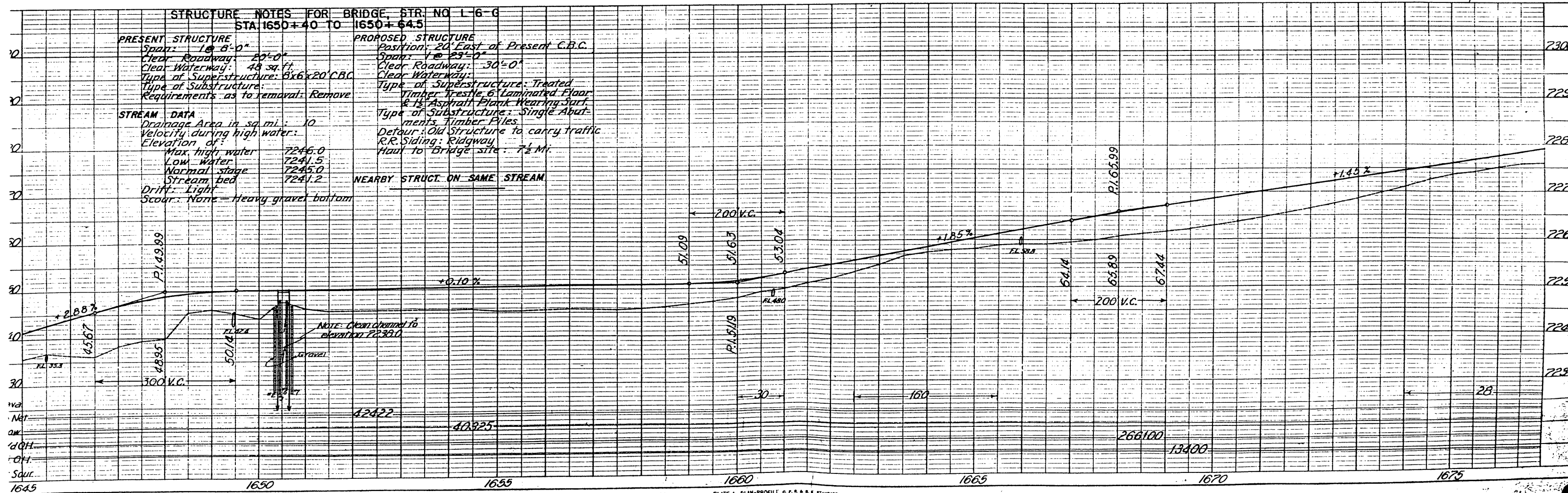
Sta. 1669+80 ~ Req'd. 50 cu. yds. Emb. for road appr. & 15'x34' C.M.P. side drain & 18'x34' C.M.P. side drain Lt. & remove 12'x18' C.M.P.

Sta. 1670+00 to 1675+70 ~ Req'd. 90 cu. yds. Uncl. Excav. for Intercepting Ditch Lt.

Sta. 1671+50 ~ Req'd. 10 cu. yds. Emb. for walk appr. & 15'x10' C.M.P. side drain Rt.

Sta. 1672+00 ~ Req'd. 40 cu. yds. Emb. for road appr. & 15'x26' C.M.P. side drain Rt. and remove 18'x20' C.M.P.

Sta. 1673+80 ~ Req'd. 70 cu. yds. Emb. for comb. road & walk appr. & 2-15'x32' C.M.P. side drains Lt.



STRUCTURE NOTES FOR BRIDGE, STR. NO. 1-6-C

STA. 1650+40 TO 1650+64.5

PRESENT STRUCTURE
Span: 18'-0"
Clear Roadway: 20'-0"
Clear Waterway: 48 sq. ft.
Type of Superstructure: 6x6x20' C.B.C.
Type of Substructure: 6x10' Plank Bridge
Requirements as to removal: Remove

STREAM DATA
Drainage Area in sq. mi.: 10
Velocity during high water: 7246.0
Elevation of:
Max. high water: 7241.5
Low water: 7245.0
Normal stage: 7241.2
Stream bed: 7241.2
Drift: Light
Scour: None - Heavy gravel bottom

PROPOSED STRUCTURE
Position: 20' East of Present C.B.C.
Span: 23'-0"
Clear Roadway: 30'-0"
Clear Waterway: 48 sq. ft.
Type of Superstructure: Treated Timber Truss 6' Laminated Floor & 18' Asphalt Plank Wearing Surf.
Type of Substructure: Single Abutments Timber Piles
Detail: Old Structure to carry traffic R.R. Siding: Ridgway
Haul to Bridge site: 7 1/2 Mi.

NEARBY STRUCT. ON SAME STREAM

NOTE: Clean channel to elevation 7239.0

FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	2003-B UNIT NO. 4	30	

