

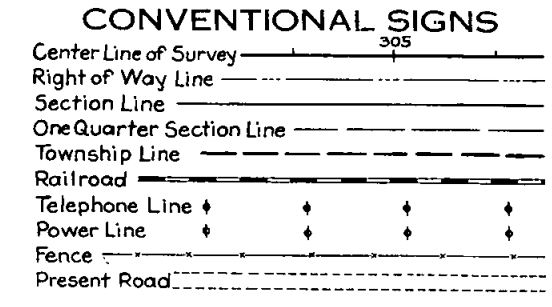
COLORADO

STATE HIGHWAY DEPARTMENT

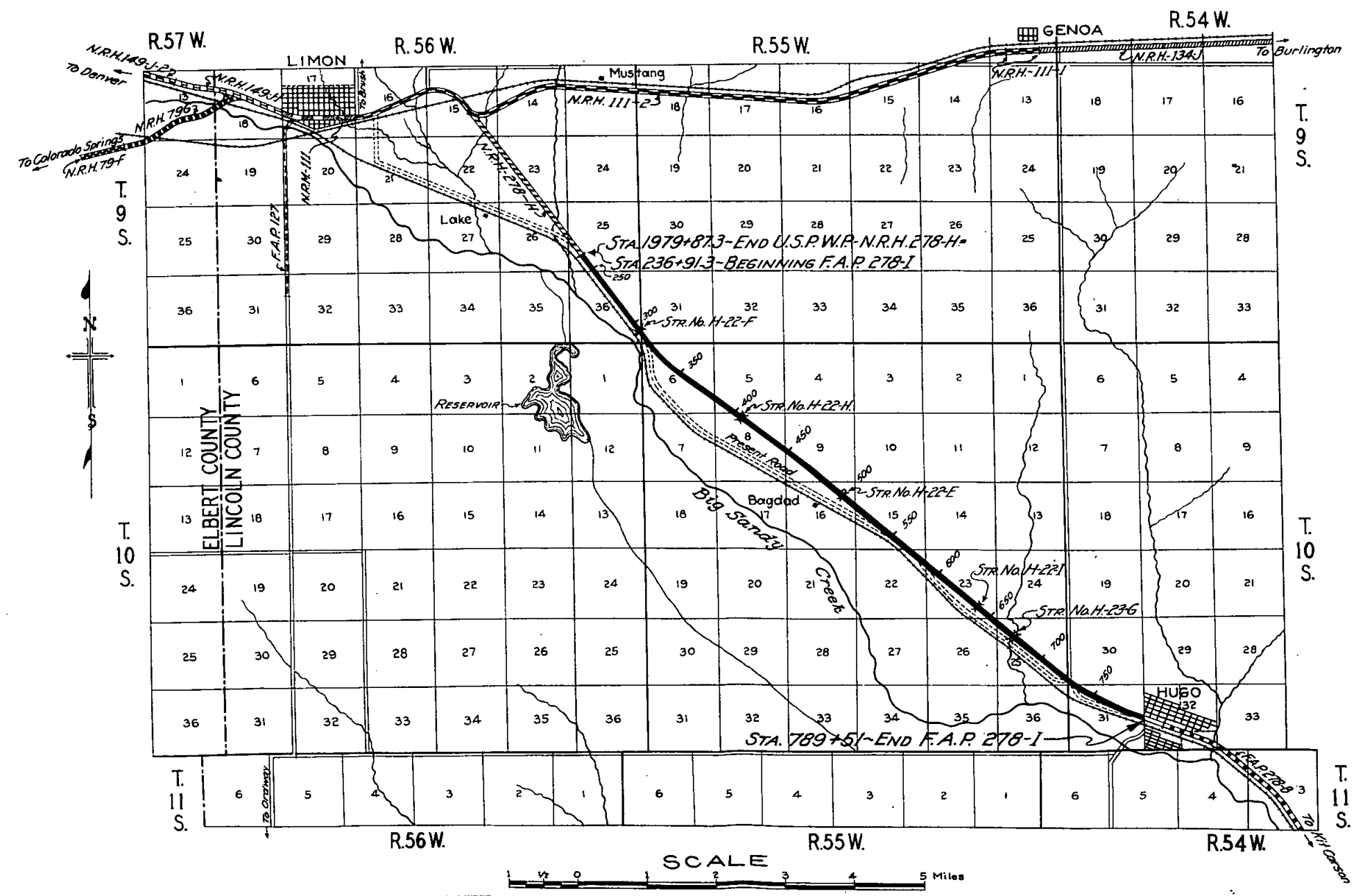
PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. 278-I STATE HIGHWAY NO. 8 LINCOLN COUNTY

INDEX OF SHEETS

- 1. Title Sheet
 - 2. Typical Section and Summary of Quantities
 - 3. List of Structures
 - 4. Details of Bridge Sta. 305+
 - 5. & 5A " " " Sta. 406+
 - 6. " " " Sta. 501+
 - 7. " " " Sta. 638+
 - 8-11. " " " Sta. 672+
 - 12. Standard Approach Roads and Traffic Signs
 - 13. Standard Methods of Superelevation
 - 14. " Structure Number Lettering
 - 15. " Wire Cable Guard Fence
 - 16. " Wire Fences and Marker Posts (Metal Posts)
 - 17. " Headwalls
 - 18. " Conc. Box Culvert, (6'x7')
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| M-1-A |
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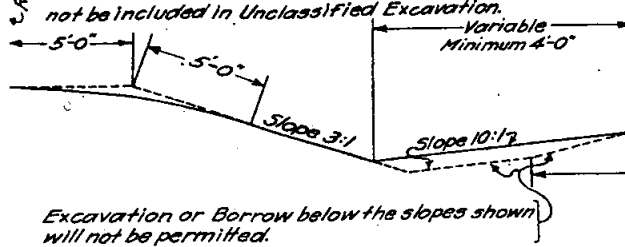
SCALES ON ORIGINAL TRACINGS
ON PLAN, 1 IN. = 100 FT.
ON PROFILE 1 IN. = 100 FT. HORIZONTAL
1 IN. = 10 FT. VERTICAL
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
GROSS LENGTH OF PROJECT 54,754.3 FEET=10.370 MILES
NET LENGTH OF PROJECT



NOTE
It is recommended that bidders on this project go over the plan details with one of the following field representatives of this department.
Ernest Montgomery, Division Engineer, Colorado Springs, Colo.
H.R. Evans, Resident Engineer, Limon, Colo.

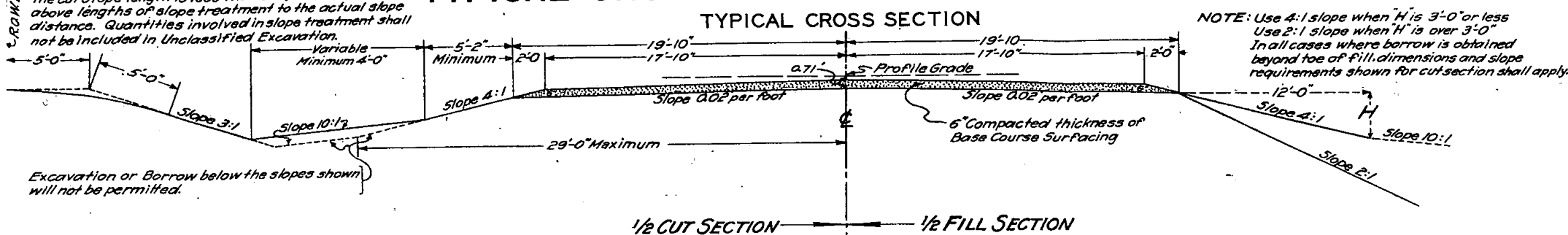
RECOMMENDED FOR APPROVAL 3/14/35
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RECOMMENDED FOR APPROVAL
DIST. ENG. BUREAU PUBLIC ROADS
RECOMMENDED FOR APPROVAL
CHIEF ENG. BUREAU PUBLIC ROADS
APPROVED
DIRECTOR BUREAU PUBLIC ROADS

CUT SLOPE TREATMENT IN EARTH CUTS
The intersection of cut slopes with the existing ground shall be rounded in earth cuts, beginning 5 ft. outside the slope stake and extending 5 ft. down the cut slope. Where the cut slope length is less than 5 ft., reduce each of the above lengths of slope treatment to the actual slope distance. Quantities involved in slope treatment shall not be included in Unclassified Excavation.



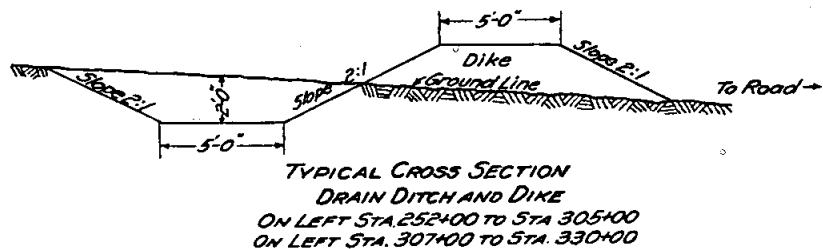
TYPICAL CROSS SECTION OF IMPROVEMENT AND SUMMARY OF QUANTITIES

Rev. 8-23-35-H.S.
Rev. 10-3-35 R.L.E.



NOTE: 8,200 tons of Grade "B" Surfacing required for this Project, is to be placed in Stock Piles on areas indicated below:
4100 tons on Right of Way between Sta. 440 and Sta. 450
4100 tons on Right of Way between Sta. 585 and Sta. 595.

NOTE: Thickness of Gravel or Crushed Rock Surfacing is to be considered approximate only. Gravel Surfacing is to be placed at the rate indicated below:
3" thickness Bottom Course Surfacing 58 tons per 100 ft. of Roadway,
and 2 1/4" thickness Upper Course Surfacing 42 tons per 100 ft. of Roadway.
The 3/4" thickness of Grade "B" Surfacing, which shall be Stockpiled on Right of Way at the Stations indicated, will be spread and Oil Processed by the State at the rate of 15 tons per 100 ft. of Roadway.



SUMMARY OF APPROXIMATE QUANTITIES

NO.	DESCRIPTION	UNIT	ROADWAY	BRIDGE STA. 305+	BRIDGE STA. 405+	BRIDGE STA. 504+	BRIDGE STA. 638+	BRIDGE STA. 672+	PROJECT TOTAL
10a	Clearing & Grubbing the Entire Project	Lump Sum	•						•
11	Removing 8 Structures	"	•						•
12a	Removing Fence	Lin. Ft.	12,500						12,500
12c	Removing & Rebuilding Snow Fence	"	1,650						1,650
13c	Unclassified Excavation	Cu. Yd.	250,000	500	5,000	1,000	500	2,000	259,000
13y	Cut Slope Treatment	1000 Sq. Ft.	16.4						16.4
14a	Dry Rock Excavation (Structural)	Cu. Yd.	110					10	120
14b	" Com.	"	930	30	50	60	50	480	1,600
14c	Wet Rock	"	40					190	230
14d	" Com.	"	310					660	970
18a	Station Yard Overhaul	Sta. Yd.	1,000,000						1,000,000
18b	Yard Mile Overhaul	Yd. Mi.	5,000						5,000
30x	Gravel or Crushed Surfacing	Ton	54,300	22	0.8	1.2	0.8	0.4	54,300
42a	Untreated Bridge Timber	M.R.B.M.							
42b	Treated Bridge Timber	"		520	30	17.7	14.2		569
43x	Asphalt Plank Wearing Surface	Sq. Ft.		3,335		1,102	667		5,104
46a	Class "A" Concrete	Cu. Yd.	519		226			476	1,221
46b	Class "B" Concrete	"	41						41
47	Reinforcing Steel	Lb.	42,400		33,300			59,900	135,600
48	Structural Steel	"			97,700			105,800	203,500
53b	18" Corrugated Metal Culvert Pipe	Lin. Ft.	140						140
53c	24" "	"	874						874
53d	30" "	"	502						502
53e	36" "	"	52						52
53f	42" "	"	92						92
60a	Treated Tim. or Piling	Lin. Ft.		1,360	1,616	680	724		4,380
61a	Treated Sheet Piling	"				2,224			2,224
72	Wire Cable Guard Fence	"	1,000						1,000
75x	Galv. Barbed Wire Fence (Metal Posts)	"	98,300						98,300
75y	Gates in "	Each	15						15
78	Project Markers	"	1						1
79	Right of Way Markers	"	59						59
84	Removal of Disused Bridge App. Sta. 672+	Lump Sum	•						•
89b	Drain Pipe with Flange (3"x3'-6")	Each						12	12
90	" " (end) " (3"x2'-4")	"		10		4	2		16
101a	Boring Holes to Facilitate Pile Driving	Lin. Ft.		500	1,200	425	550		2,675
30b	Grade B Surfacing	Ton	8,200						8,200
63a	Riprap (18" Thick)	Cu. Yd.	285						285
89a	Drain Pipe with Flange (3"x2'-6")	Each			20				20
95x	Combination Wire Fence	Lin. Ft.	600						600
82	Sheet Copper	Lb.			408				408
(Obliterating Old Road (Force Acct.))			Lump Sum	•					•

GENERAL NOTES

This Project is to be constructed in accordance with the Standard Specifications of the Colorado State Highway Department adopted January 1, 1930.

All quantities on preliminary plans are to be considered as approximate only.

All roadway excavation required to construct this project is to be obtained as indicated on the plans. Quantities involved beyond the limits of the ditch as shown on the Typical Cross Section, either noted on the Profile as "Borrow," or on List of Structures as "Embarkment," are to be classified and paid for as "Unclassified Excavation." These quantities are to be staked as part of the Original Excavation at locations indicated on the plans. Slope stakes beyond the limits of the Typical Cross Section are subject to change by the Engineer to fit Embankment requirements actually encountered on Construction.

All curves are to be superelevated as provided for by the Standard Superelevation Sheet included with plans.

All poles encroaching on construction are to be moved by owners.

The entire project is to be cleared for the full width of the Right of Way and the cost thereof included in the lump sum price for "Clearing and Grubbing the Entire Project."

Except as limited by the Special Provisions, Power Equipment may be used on this Project.

All corrugated metal pipe cross culverts are to be provided with one headwall on the inlet end, unless otherwise noted on the plans.

Where the new work lies along the present travelled roadway, the contractor shall, at his own expense, so prosecute construction that traffic may readily pass over the road. Also, the contractor shall, at his own expense, maintain in safe condition all temporary approaches to and crossings of intersecting roads.

FENCING REQUIREMENTS

STATION	SIDE	REMOVE FENCE Lin. Ft.	BUILD FENCE Lin. Ft.	GATES No.
236+91.3-312+40	L.	7,700	7,580	1
251+50	L.			1
290+75	L.			1
312+40-329+00	L.&R.		3,320	1
316+00	R.			1
320+60	X.	310		
329+00-390+00	L.&R.		12,200	
390+00-453+00	L.&R.		12,600	
425+00	L.			2
446+58	X.	160		
447+40	X.	160		
448+00	L.&R.			2
453+00-515+00	L.&R.		12,400	
513+00	L.&R.			2
514+35	X.	170		
515+00-553+50	L.&R.		7,700	
547+00	R.			1
545+60-550+00	R.	460		
550+00-572+70	L.	1,840		
553+50-586+50	L.		2,840	
586+50-643+00	L.&R.		11,300	
591+00	R.			1
643+00-721+10	L.&R.		15,620	
703+54	X.	170		
721+10-726+70	R.		760	
721+10-727+10	L.			600
721+76	X.	170		
726+00	R.		9,530	
728+70-776+34	L.&R.			
729+50-735+30	L.	600		
734+67	X.	140		
735+50	L.			1
776+00	L.			1
776+34-782+20	L.	620	540	
776+34-789+51	L.		1,300	
782+20-789+00	R.		580	
789+51	R.			1
TOTALS		12,500	98,270	600 15

R.O.W. MARKERS

STATION	SIDE	No.	STATION	SIDE	No.
236+91.3	L.	1	657+42	L.	1
252+30	R.	1	658+52	R.	1
253+15	L.	1	692+52	L.	1
264+30	L.	1	692+78	R.	1
266+05	R.	1	693+64	R.	1
284+02	R.	1	694+23	L.	1
284+88	L.	1	727+50	L.	1
308+95	L.	1	728+60	R.	1
310+70	R.	1	733+42	R.	1
316+24	R.	1	735+13	L.	1
317+13	L.	1	759+38	L.	1
348+02	L.	1	760+18	R.	1
348+93	R.	1	789+18	L.	1
355+22	R.	1	789+50	R.	1
356+96	L.	1			
380+58	L.	1			
381+48	R.	1			
400+35	R.	1			
402+05	L.	1			
413+69	L.	1			
414+60	R.	1			
441+68	R.	1			
443+38	L.	1			
446+77	L.	1			
447+72	R.	1			
479+70	L.	1			
480+82	R.	1			
485+26	R.	1			
486+68	L.	1			
513+86	L.	1			
514+93	R.	1			
525+64	R.	1			
527+08	L.	1			
548+73	L.	1			
549+83	R.	1			
571+10	R.	1			
572+43	L.	1			
588+22	L.	1			
589+32	R.	1			
611+32	R.	1			
612+75	L.	1			
622+77	L.	1			
623+86	R.	1			
652+16	R.	1			
653+57	L.	1			
TOTAL					59

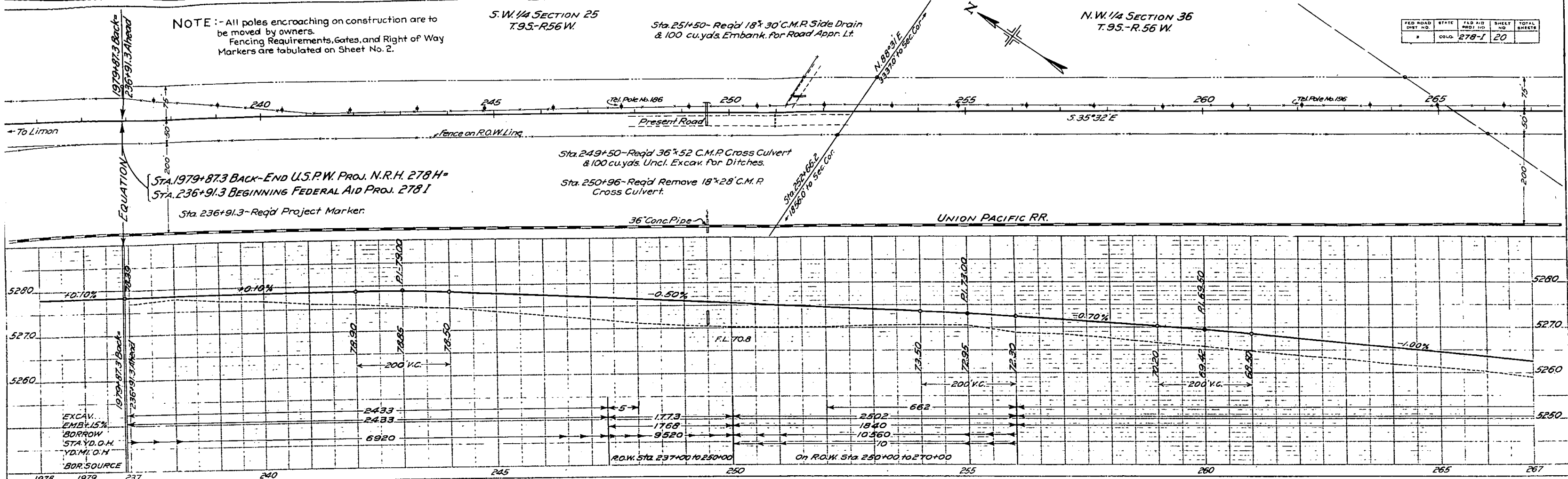
NOTE: - All poles encroaching on construction are to be moved by owners.
Fencing Requirements, Gates, and Right of Way Markers are tabulated on Sheet No. 2.

S.W. 1/4 SECTION 25
T.9S.-R.56W.

Sta. 251+50-Req'd 18" x 30" C.M.P. Side Drain
& 100 cu.yds. Embank. for Road Appr. Lt.

N.W. 1/4 SECTION 36
T.9S.-R.56W.

FED. ROAD DIST. NO.	STATE	F&D AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
2	COLO.	278-1	20	



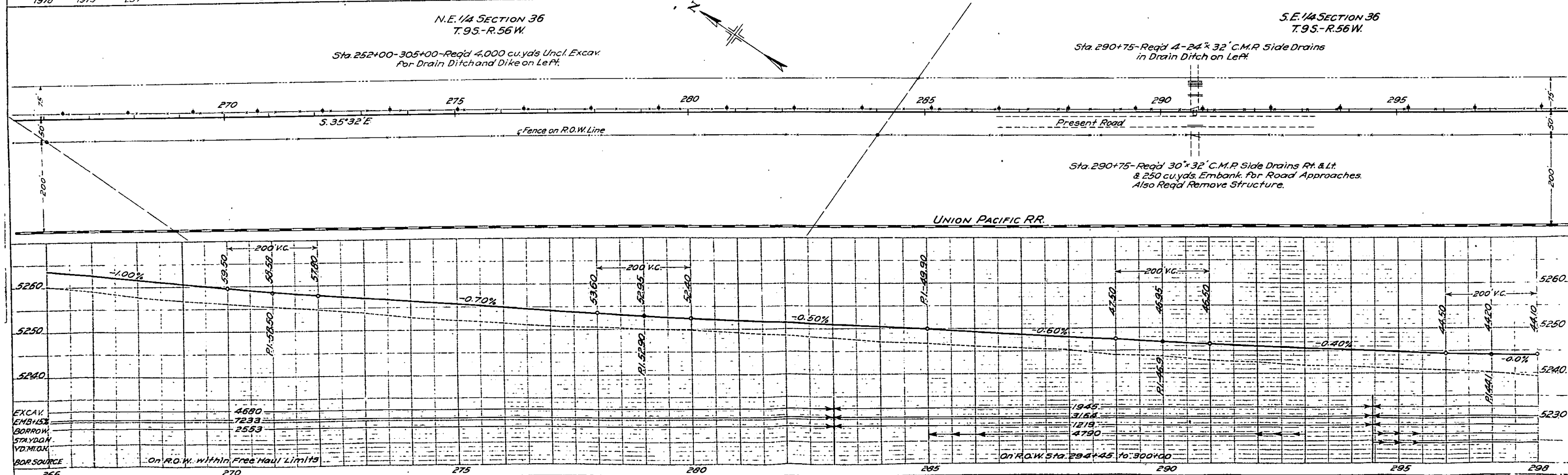
N.E. 1/4 SECTION 36
T.9S.-R.56W.

Sta. 252+00-305+00-Req'd 4,000 cu.yds Uncl. Excav.
for Drain Ditch and Dike on Left.

S.E. 1/4 SECTION 36
T.9S.-R.56W.

Sta. 290+75-Req'd 4-24" x 32" C.M.P. Side Drains
in Drain Ditch on Left.

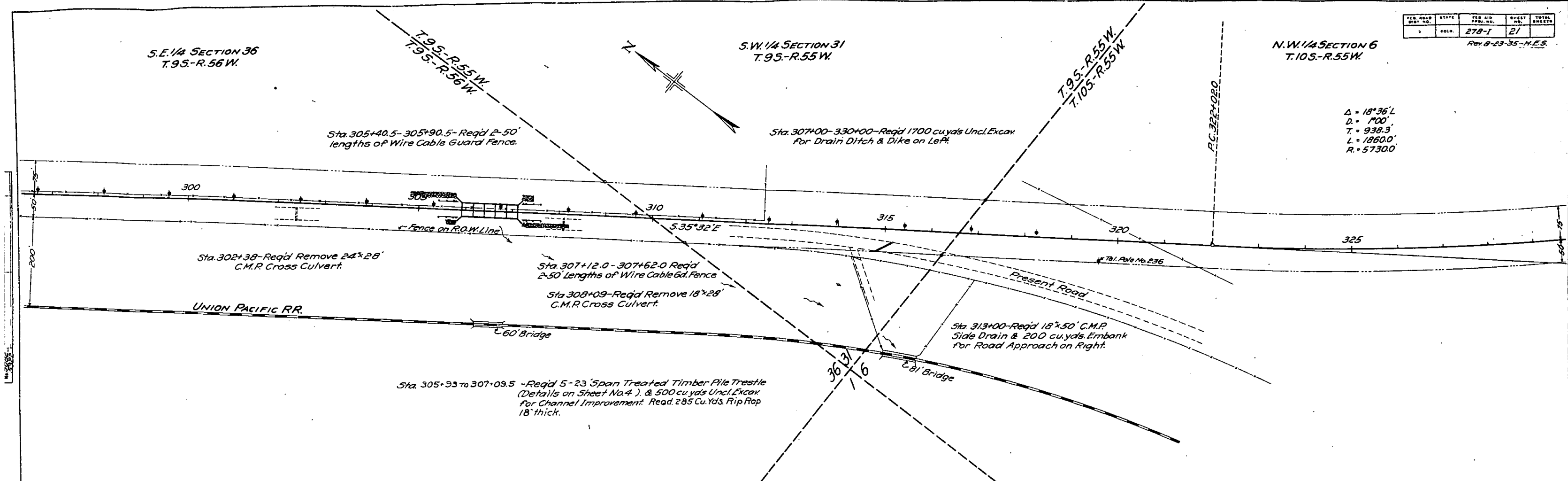
Sta. 290+75-Req'd 30" x 32" C.M.P. Side Drains Rt. & Lt.
& 250 cu.yds. Embank. for Road Approaches.
Also Req'd Remove Structure.



N.W. 1/4 SECTION 6
T.10S.-R.55W.

Rev 8-23-35-H.E.S.

$\Delta = 18^{\circ}36' L$
 $D = 1^{\circ}00'$
 $T = 938.3'$
 $L = 1860.0'$
 $R = 5730.0'$



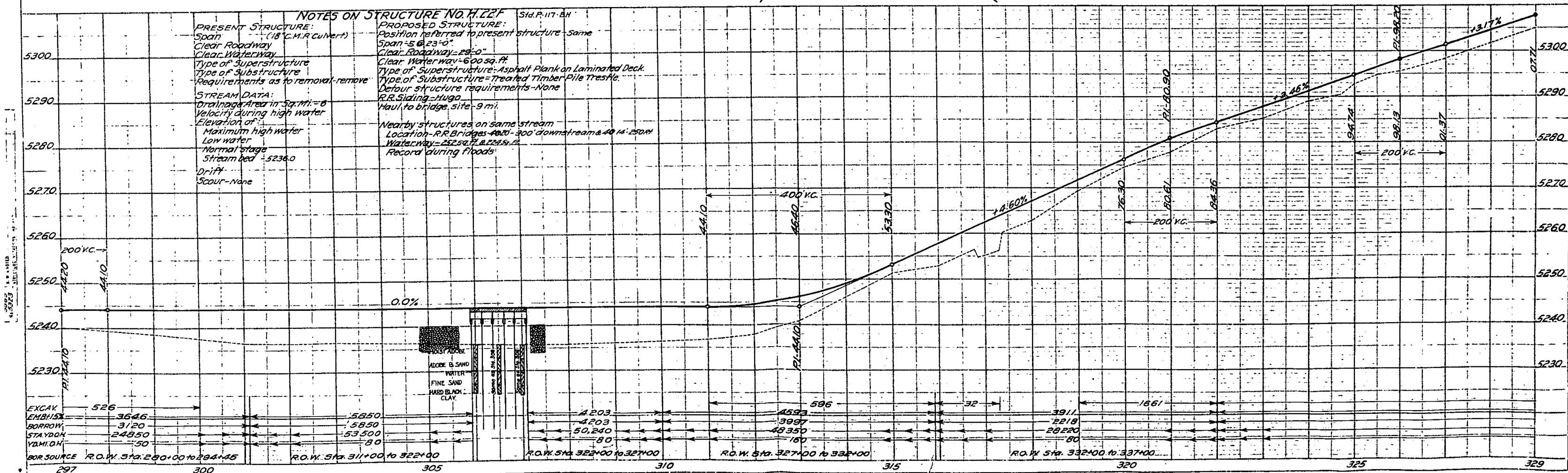
NOTES ON STRUCTURE NO. H.22F

PRESENT STRUCTURE:
Span (18' C.M.R. Culvert)
Clear Roadway
Clear Waterway
Type of Superstructure
Type of Substructure
Requirements as to removal-remove

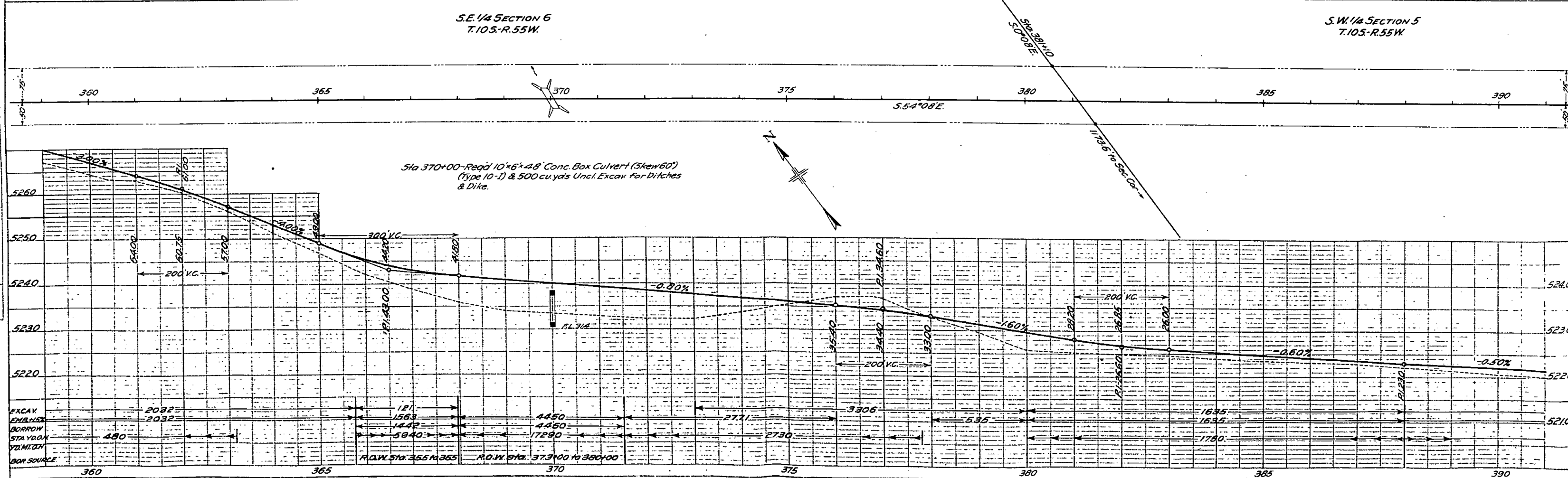
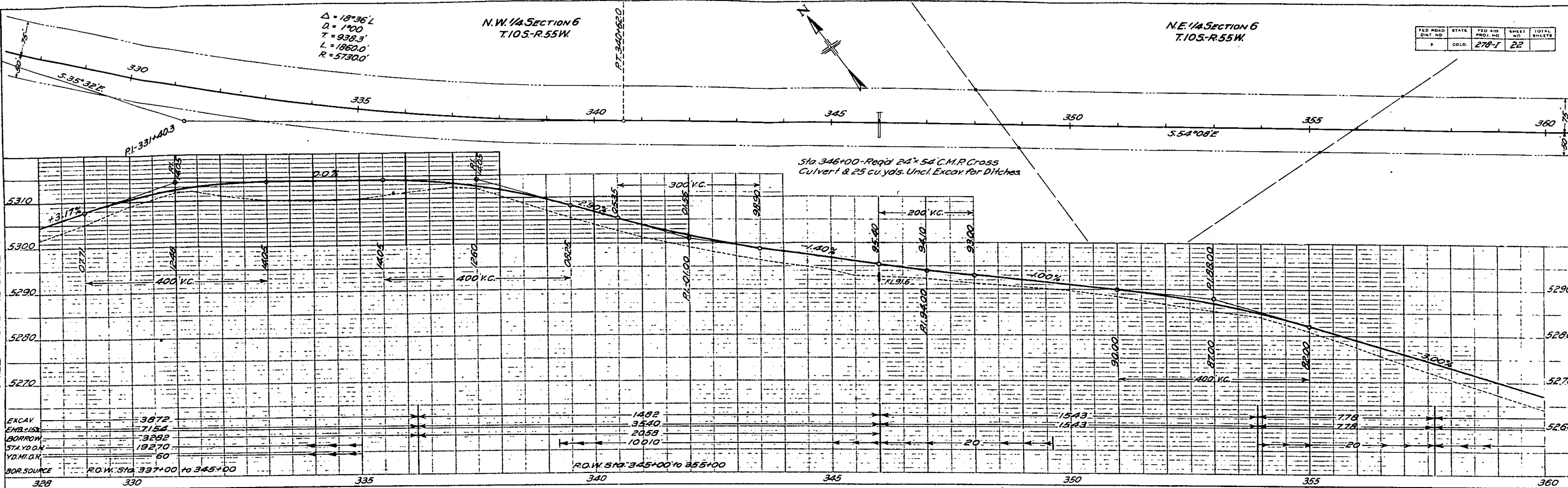
STREAM DATA:
Drainage Area in Sq. Mi. = 0
Velocity during high water
Elevation of:
Maximum high water
Low water
Normal stage
Stream bed - 5236.0
Drift
Scour - None

PROPOSED STRUCTURE:
Position referred to present structure - Same
Span - 5 @ 23'-0"
Clear Roadway - 29'-0"
Clear Waterway - 600 sq. ft.
Type of Superstructure - Asphalt Plank on Lam.
Type of Substructure - Treated Timber Pile T.
Detour structure requirements - None
R.R. Siding - Hugo
Haul to bridge site - 9 mi.

Nearby structures on same stream
Location - R.R. Bridges 400 - 300' downstream & 40' 14" 250R
Waterway - 252.50 ft. R. 224.54 ft.
Record during floods



FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	278-T	22	

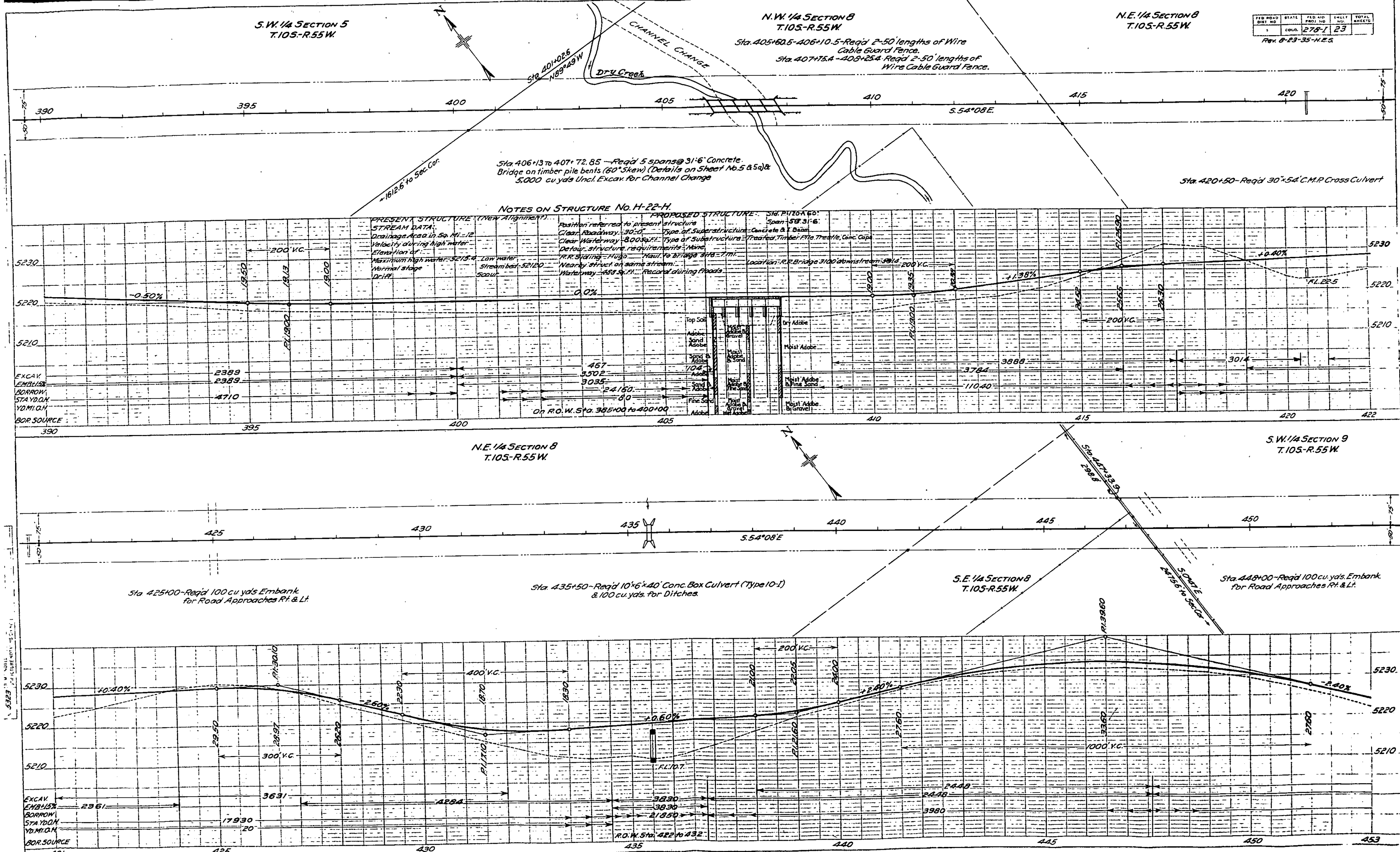


S.W. 1/4 SECTION 5
T.10S-R.55W.

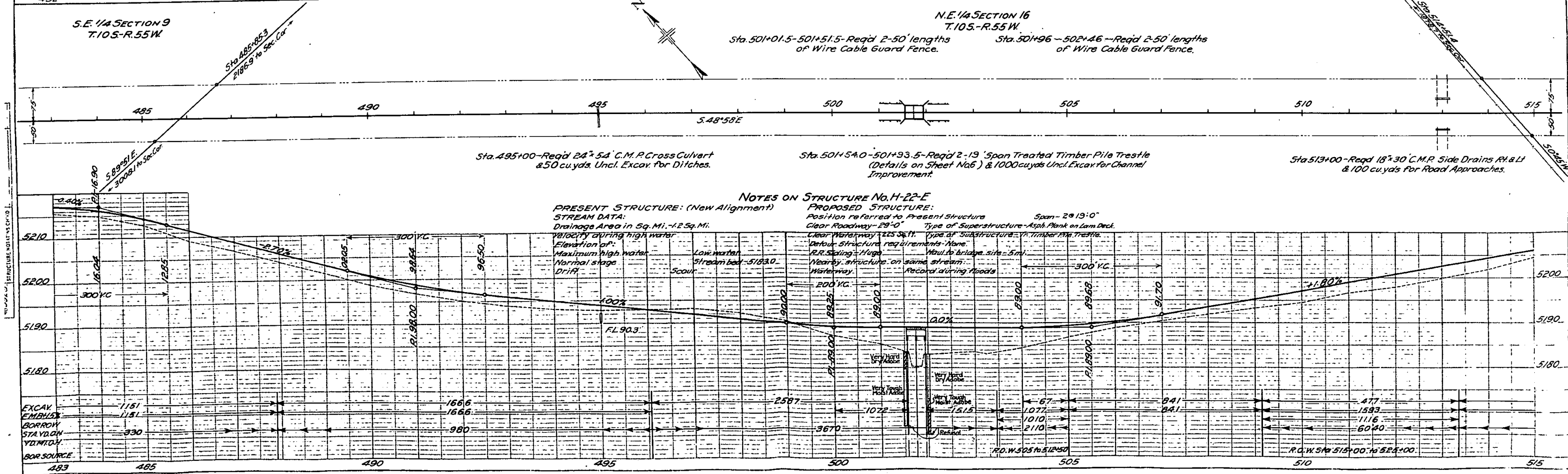
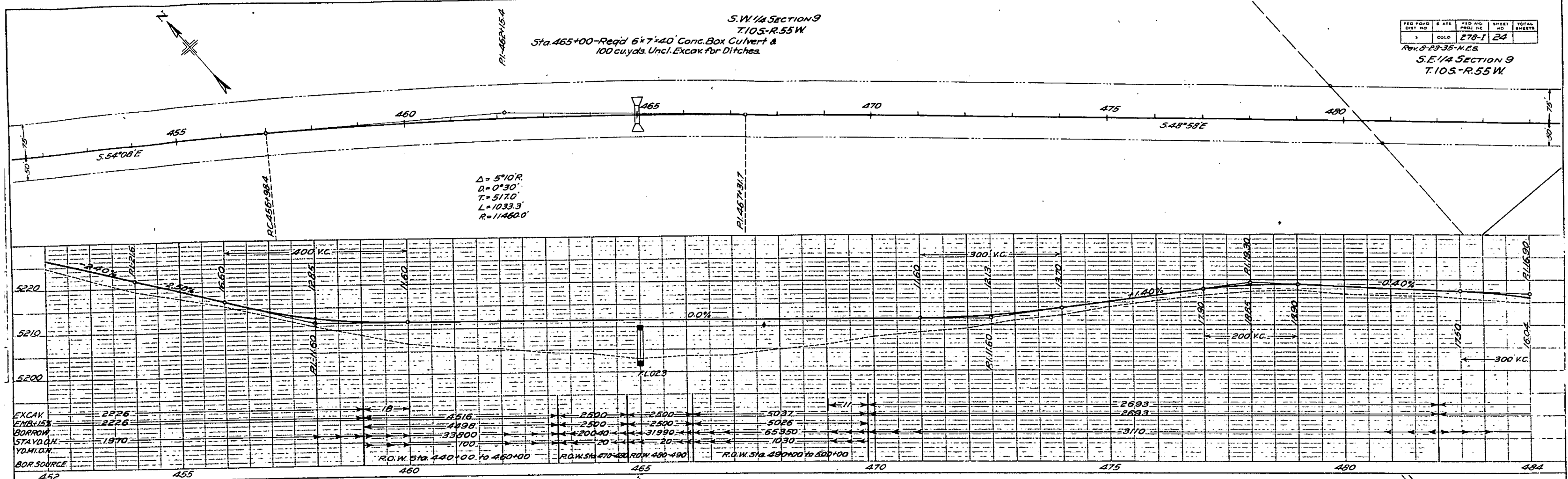
N.W. 1/4 SECTION 8
T.10S-R.55W.

N.E. 1/4 SECTION 8
T.10S-R.55W.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
5	COLO.	278-1	23	
REV. 8-23-35-H.E.S.				



**S.W. 1/4 SECTION 9
T.10S-R.55W**
Sta. 465+00-Req'd 6'x7'x40' Conc. Box Culvert & 100 cu.yds. Uncl. Excav. for Ditches.

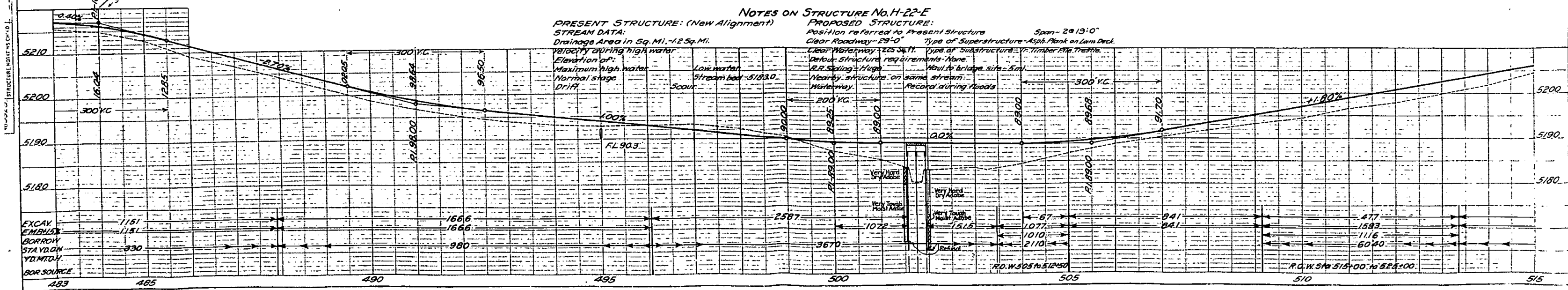


NOTES ON STRUCTURE No. H-22-E

PRESENT STRUCTURE: (New Alignment)
 STREAM DATA:
 Drainage Area in Sq. Mi. - 1.25 Sq. Mi.
 Velocity during high water
 Elevation of:
 Maximum high water
 Normal stage
 Drip

PROPOSED STRUCTURE:
 Position referred to Present Structure
 Clear Roadway - 28'-0"
 Clear Waterway - 225 Sq. Ft.
 Defour Structure requirements - None
 R.R. siding - None
 Nearby structure on same stream
 Waterway
 Record during floods

Span - 28' 19" 0"
 Type of Superstructure - Asph. Plank on Lam Deck.
 Type of Substructure - V. Timber Pile Trestle.
 Haul to bridge site - 5 mi.
 Record during floods

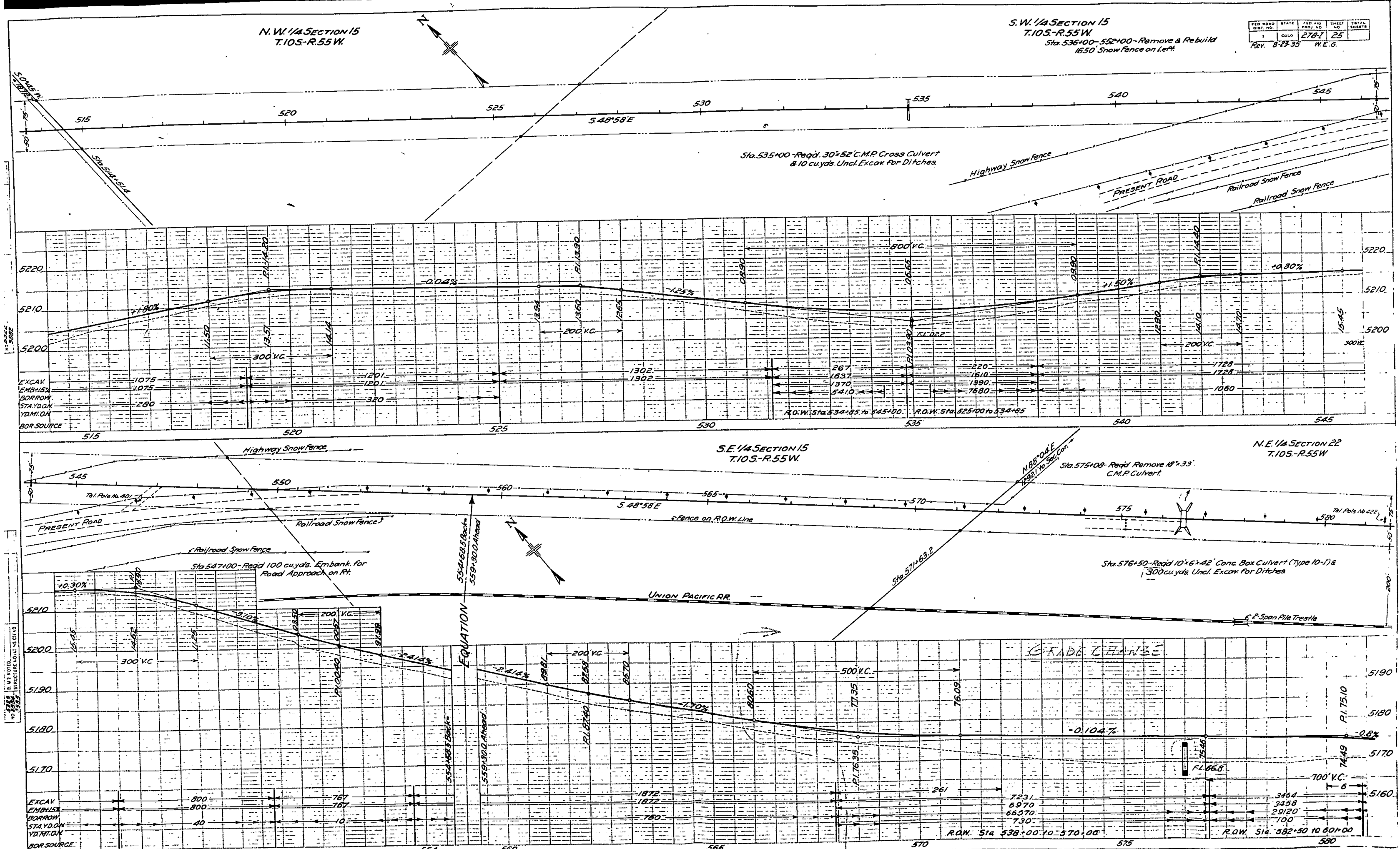


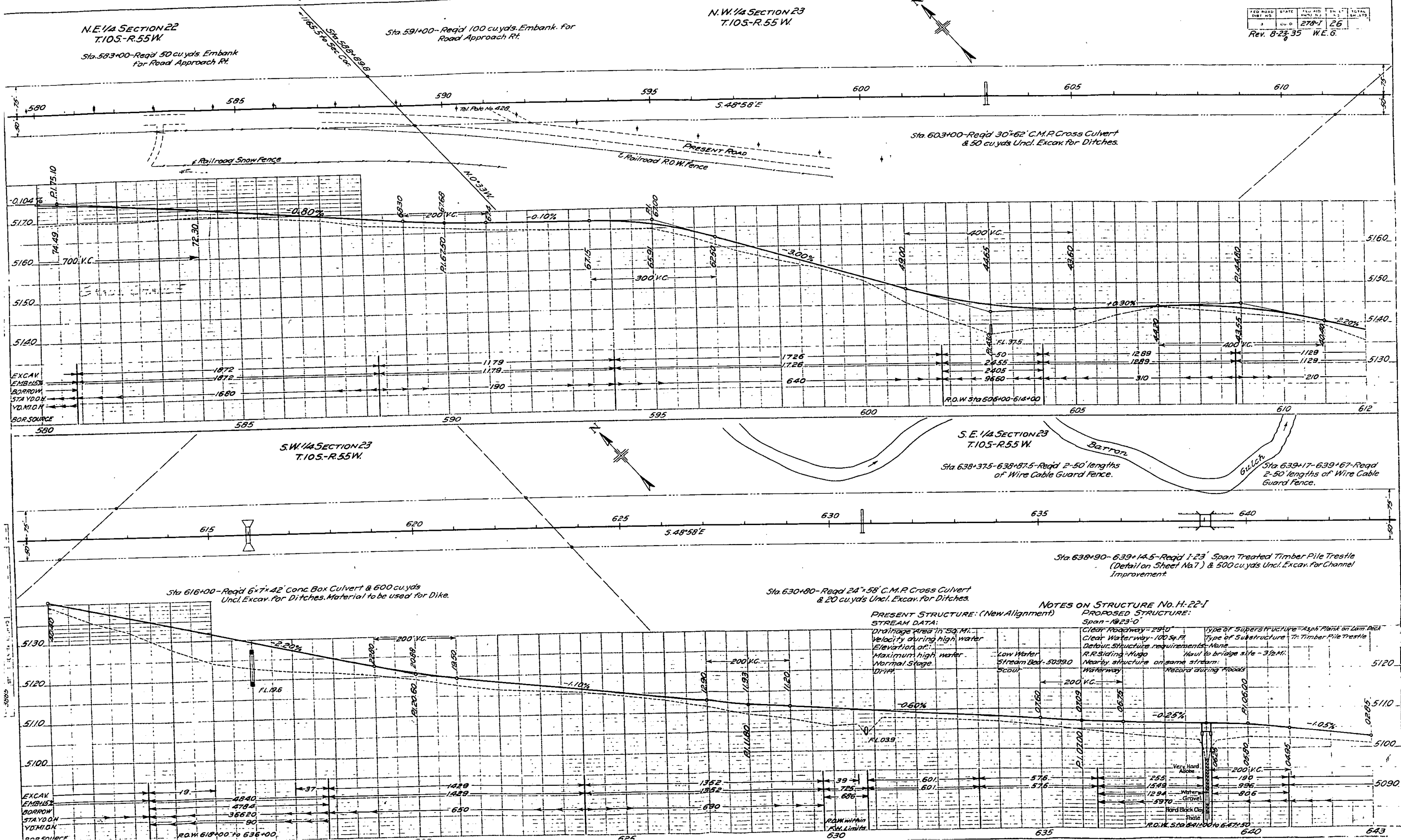
N.W. 1/4 SECTION 15
T.10S-R.55W.

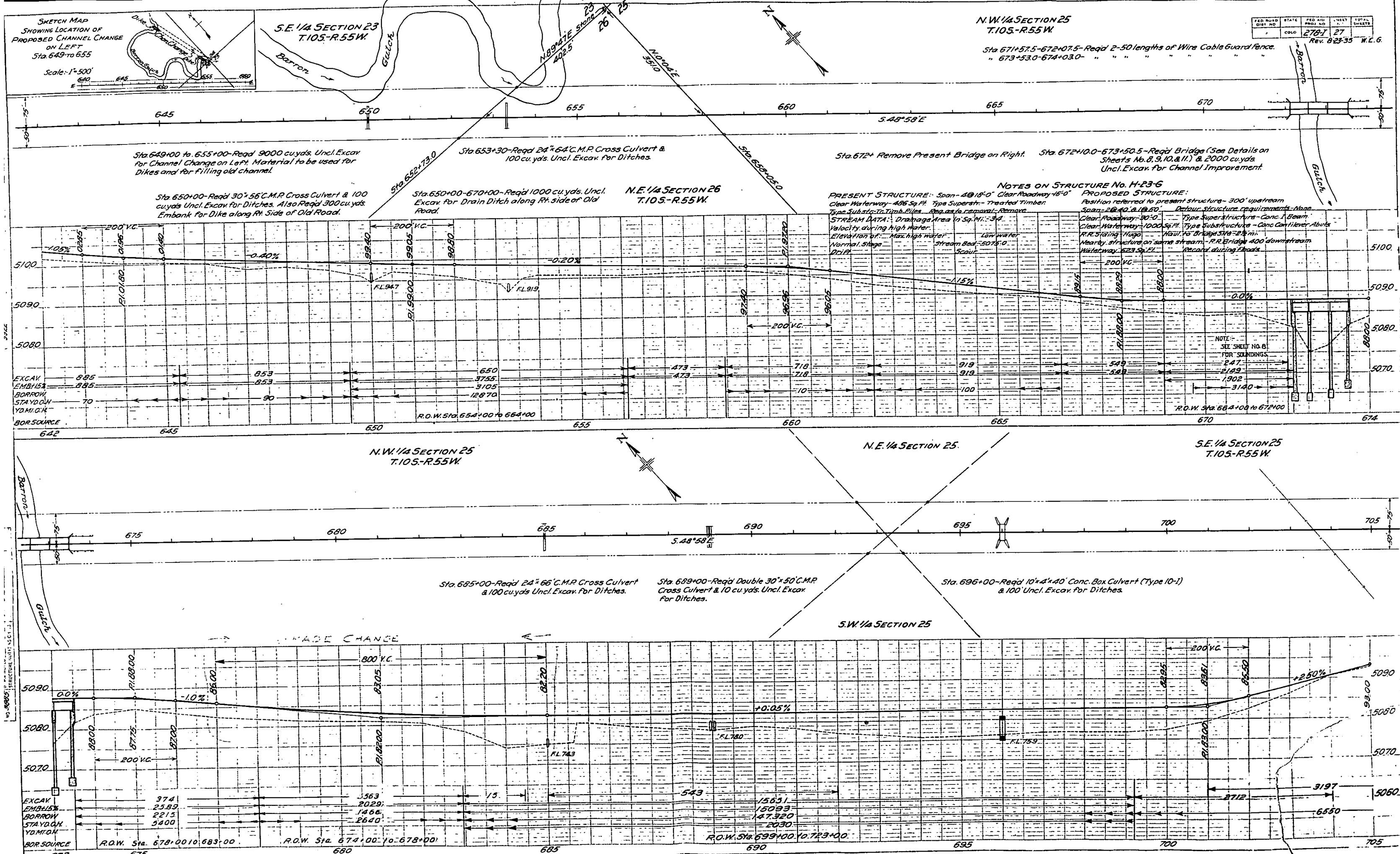
S.W. 1/4 SECTION 15
T.10S-R.55W.

Sta. 536+00-552+00-Remove & Rebuild
1650' Snow Fence on Left.

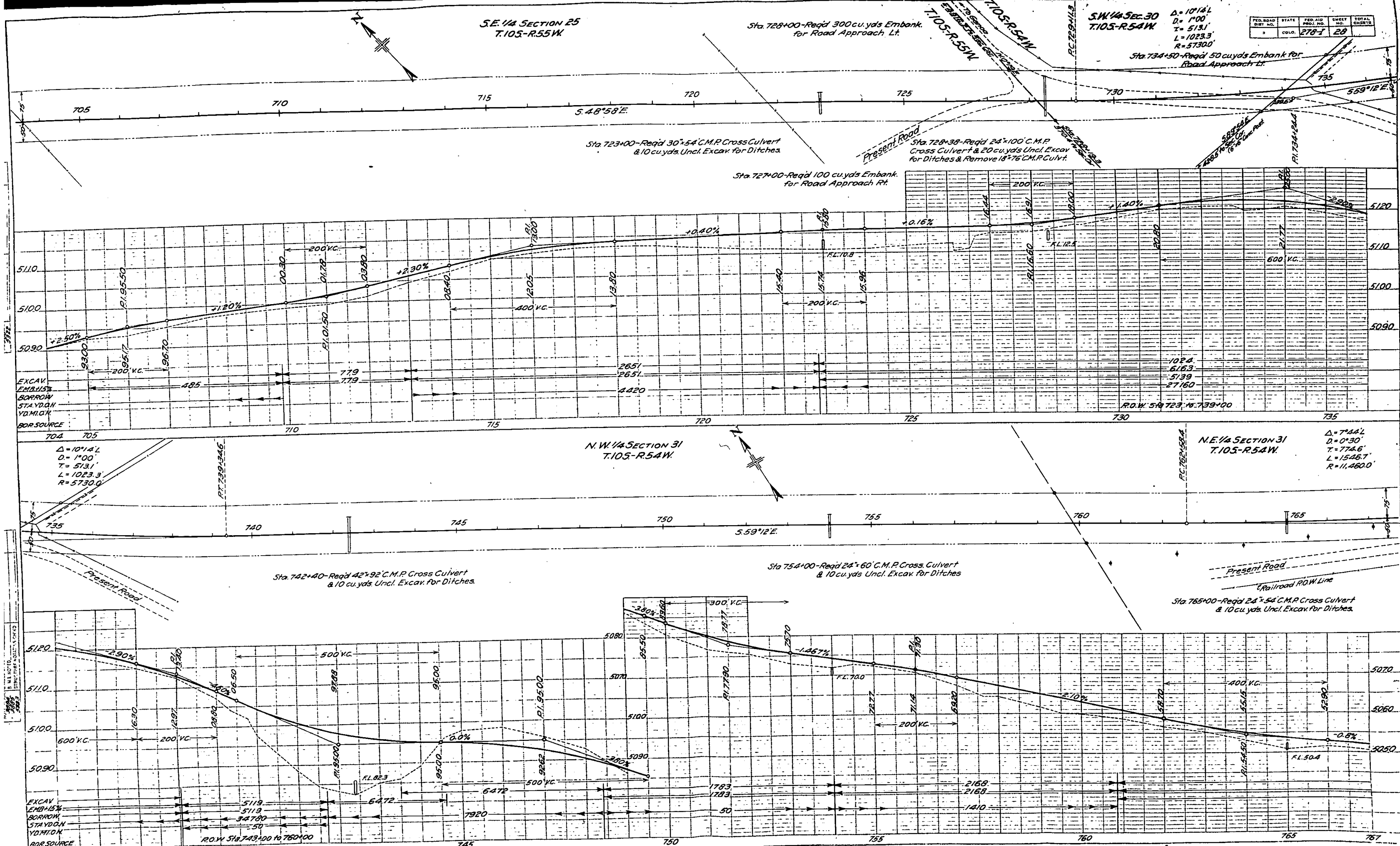
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1	COLORADO	278-1	25	
Rev. 8-23-35			W.E.G.	







S.W. 1/4 Sec. 30
T.10S-R.54W



LEG	STATE	FED AID	SHEET	TOTAL
NO	NO	NO	NO	NO
1	COLD	278-I	29	29

$\Delta = 7^{\circ}44' L$
 $D = 0^{\circ}30'$
 $T = 774.6'$
 $L = 1546.7'$
 $R = 11,460.0'$

N.E. 1/4 SECTION 31
 T.10S-R.54W

