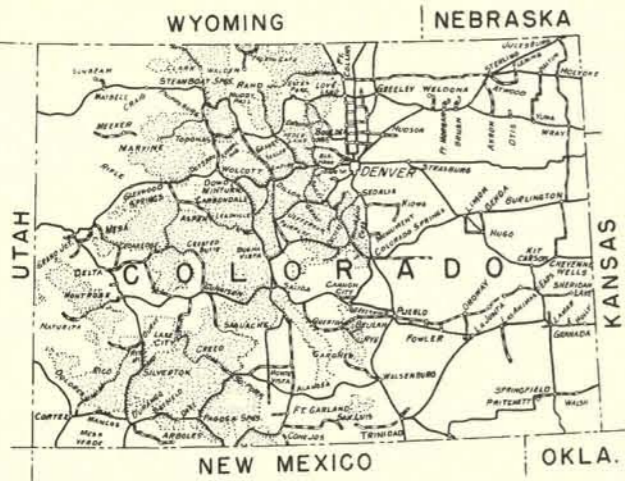


U.S. DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

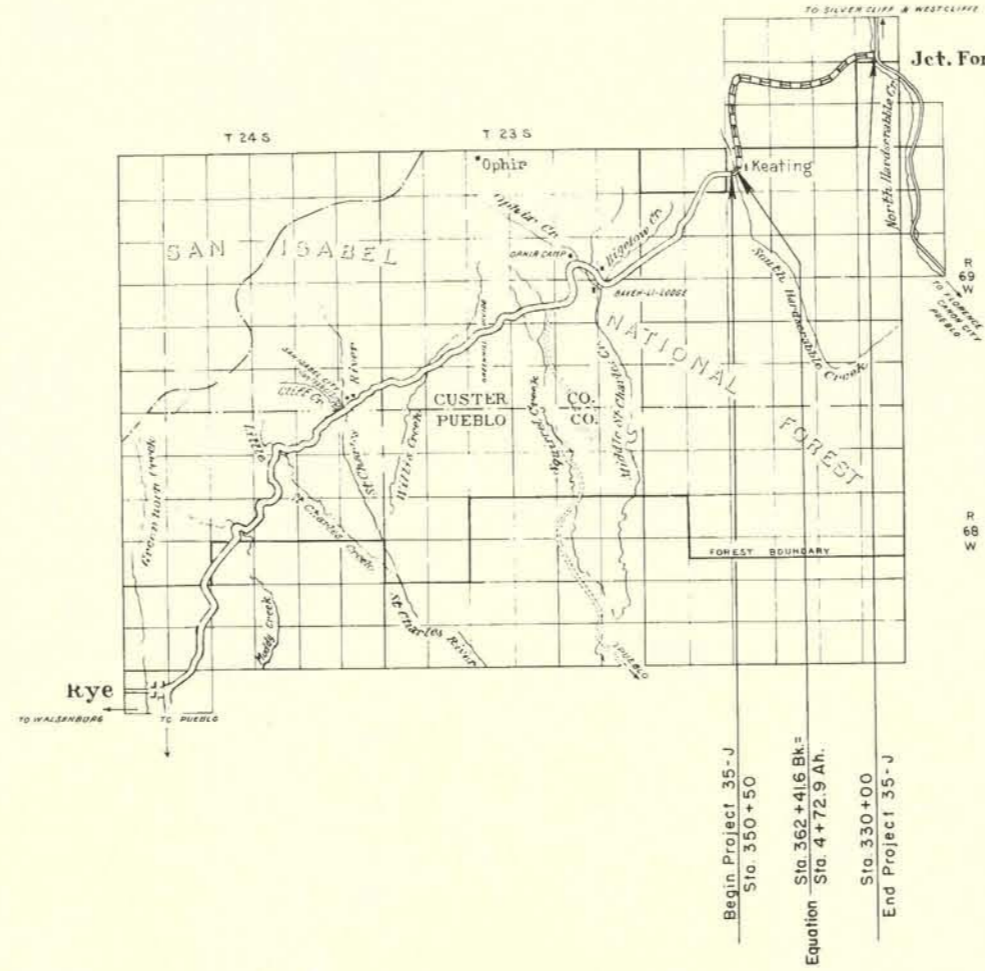
PLANS FOR PROPOSED
COLORADO FOREST HIGHWAY PROJECT 35-J
GREENHORN HIGHWAY
LENGTH 6.301 MILES
CLASS 2
SAN ISABEL NATIONAL FOREST
CUSTER COUNTY

SH. 165



REGION 9 STATE COLORADO
PROJECT 35-J, Greenhorn Highway
SHEET 1 OF SHEETS

INDEX TO SHEETS		
SHEET NO	DESCRIPTION	STATION TO STATION
1	Title Sheet	1
2	Typical Sections	
3 (2 Sh.)	Summary	
15	Plan & Profile	350+50 362+41.6 Bk.
4 - 14	Plan & Profile	+4+729A 330+00
R9-Std. 117	C.R.M. Hdws. for C.M.P. Culv.	
R9-Std. 117A	Conc. End Sec., Hdws. & Inlets	
R9-Std. 129	Std. Miscellaneous Structures	
R9-Std. 131	Std. Maintenance Markers	
R9-Std. 135	Std. Barbed Wire Fence	
R9-Std. 143	Typical Construction Signs	
R9-Std. 145F	Std. 12' Cattle Guard	
R9-Std. 166	Requirements for placing C.M.P. Culv.	
R9-Std. 163 F	6' x 7' x 72'-6" Conc. Box Culv.	357+50
R9-Std. 163	5' x 7' x 55'-0" " " "	29+72
R9-Std. 163	5' x 7' x 48'-0" " " "	69+00
R9-Std. 163	5' x 7' x 59'-0" " " "	184+30
R9-Std. 163	5' x 7' x 59'-0" " " "	219+00
R9-Std. 163	5' x 7' x 58'-6" " " "	231+00
R9-Std. 163E	8' x 7' x 113'-0" " " "	296+50
RG-1440 A-E	South Hardscrabble Creek Bridge (5 Sh.)	359+00
RG-1368 A-E	North " " " "	327+10
1 - 59	Cross Sections	350+50 330+00



R 68 W
O Tel. Pole in R.O.W.
O Power Pole in R.O.W.

Plans prepared by: B.P.R.
Date: November 12, 1958

Description of Project
Improvement: Grading

Code Type: 0011
Bridges - X023
Bridges - X023

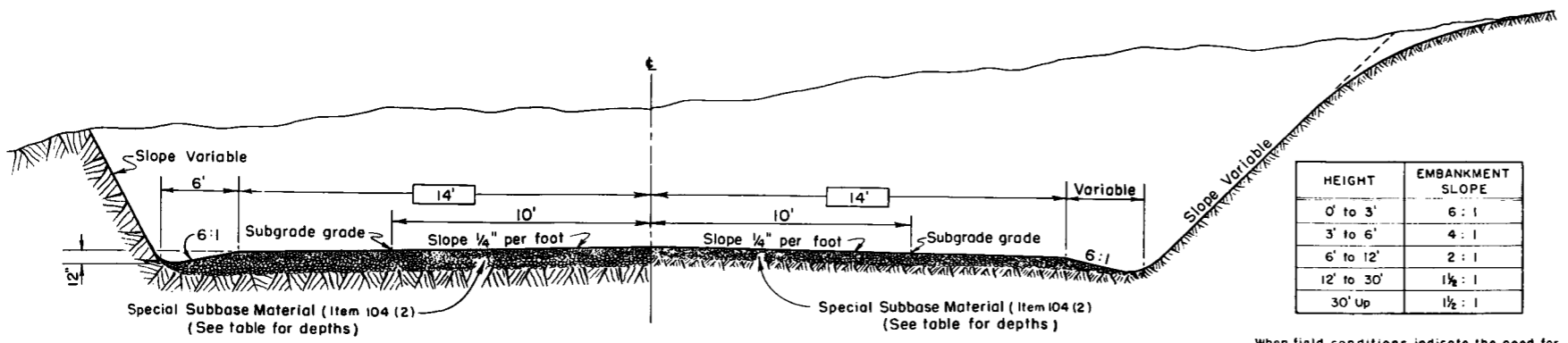
TRAFFIC VOLUME
A.D.T. (1957) 110
A.D.T. (1977) 300
D.H.V. 45
D. 67%
T. 20%
V. 35

U.S. DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
REGION NO. 9 DENVER, COLORADO

APPROVED: _____ DATE _____ 1958
REGIONAL ENGINEER

LEGEND

EXISTING ROAD	UNIMPROVED	GRADED	REINFORCED SUBGRADE	BASE COURSE	SURFACE TREATMENT	ROAD PLANT MIX BITUM.	CONCRETE
---------------	------------	--------	---------------------	-------------	-------------------	-----------------------	----------



HEIGHT	EMBANKMENT SLOPE
0' to 3'	6 : 1
3' to 6'	4 : 1
6' to 12'	2 : 1
12' to 30'	1 1/2 : 1
30' Up	1 1/2 : 1

When field conditions indicate the need for slopes other than those indicated above, they shall be constructed as staked by the Engineer.

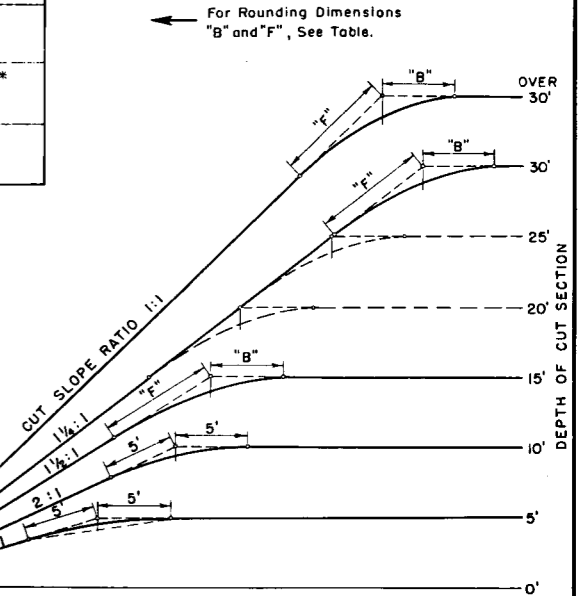
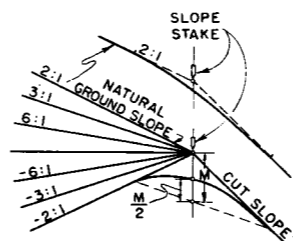
SLOPE ROUNDING FACTORS			ALTERNATE ROUNDING DIMENSIONS	
NATURAL GROUND SLOPE	CUT SLOPE		SEMI-TANGENTS †	
	HEIGHT	RATIO	Back of Slope Stake "B"	Front of Slope Stake "F"
VARIABLE VARIABLE	0' - 5'	3 : 1	5'	5'
	5' - 10'	2 : 1		
RELATIVELY FLAT (6:1 AND FLATTER)	10' - 15'	1 1/2 : 1	5'	8'
	15' - 30'	1 1/4 : 1		
	OVER 30'	1 : 1		
MODERATELY STEEP (6:1 TO 3:1)	10' - 15'	1 1/2 : 1	5'	8' **
	15' - 30'	1 1/4 : 1		
	OVER 30'	1 : 1		
STEEP (STEEPER THAN 3:1)	10' - 15'	1 1/2 : 1	3'	5' *
	15' - 30'	1 1/4 : 1		
	OVER 30'	1 : 1		

† Measured on slope surface.
 ** Desirable
 * Minimum (Wooded)
 These ratios are desirable in steep terrain.

NOTE: In areas where existing conditions permit, use more liberal rounding with unequal semi-tangents. (Approximating a parabolic curve.)

ROUNDING, WARPING, AND FINISHING SLOPES, AS PROVIDED IN ART. 102-3.8, F.P.-57 SPECIFICATIONS.

SLOPE ROUNDING TO BE CONSIDERED AS A SUBSIDIARY PART OF THE WORK REQUIRED IN DRESSING THE CUT SLOPES AND NO ALLOWANCE WILL BE MADE FOR MATERIALS MOVED.



GENERAL NOTES

Where Borrow is specified in the contract and satisfactory material is found in the roadway excavation, the right is reserved to increase the amount of Unclassified Excavation and reduce the Borrow Excavation. When additional material is needed for completing embankments, stabilizing the subgrade, or for selected cushion or topping, it may be secured by uniformly widening thru or sidehill cuts or flattening cut slopes where satisfactory material is available. The slopes at the ends of all cuts shall be flattened and flared to improve appearance.

Furrow ditches shall be constructed on approximate one percent grades following the ground contour and when possible shall be so constructed that the direction of flow will be away from the roadway.

Topsoil shall be conserved and either placed in stockpiles or spread over cut and embankment slopes as directed and in accordance with the specifications.

Roadway ditches at the ends of cuts shall be constructed so as to carry the flow away from the adjacent embankment slopes.

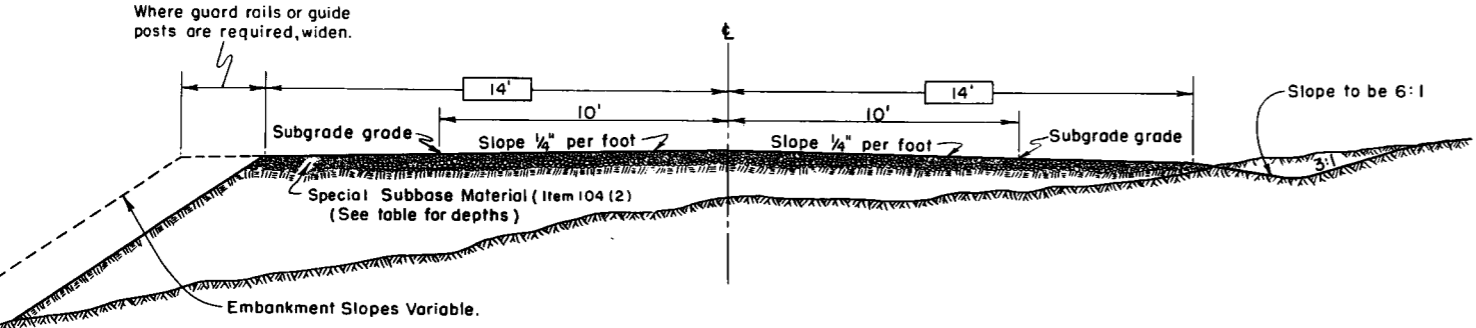
Embankment slopes shall be uniformly warped between one rate of slope and another. The transition shall cover a distance of not less than fifty feet.

Subgrade grade to be on the surface of stabilized graded road and located ten feet from center line on tangents and insides of curves.

Bureau of Public Roads book of, "Transition Curves for Highways," shall be used to determine superelevation and transition lengths (Table I), and widening of curves (Table II).

SOILS DATA

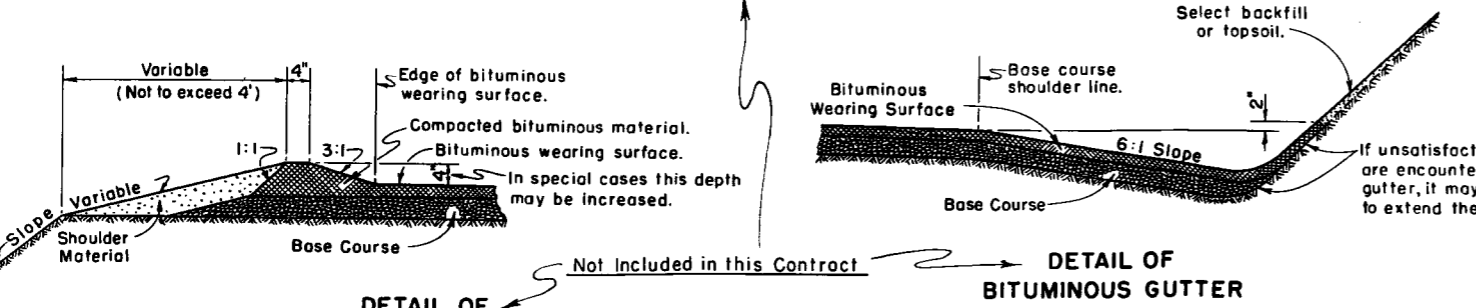
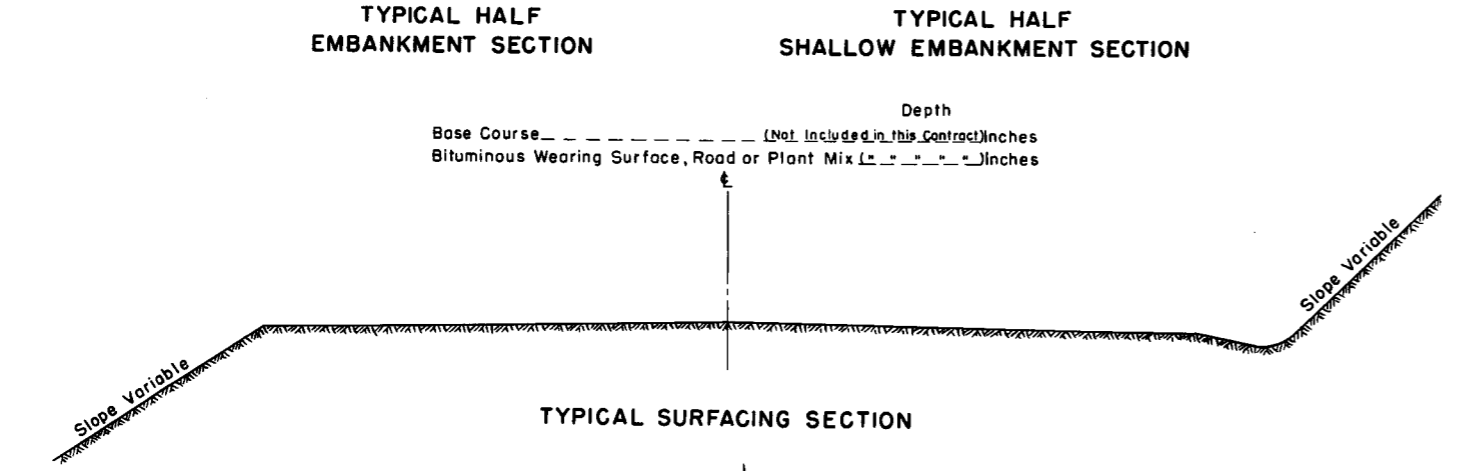
The materials soils data shown on these plans are based on tests of samples obtained from the locations and depths shown, and are only for informational purposes. They do not reflect classification of the excavation. No responsibility is assumed by the Government as to the extent of materials represented by these tests. Any assumption by the contractor as to the extent of the materials represented by these samples is strictly his responsibility. The contractor must satisfy himself as to the nature of materials to be encountered by personal inspection of the project on the ground. If materials not conforming to the data show on these plans are encountered during construction, the grading plan will be modified where necessary to insure proper design.



SPECIAL SUBBASE MATERIAL

STATION to STATION	DEPTH	DEPTH
350+50	362+41.6 Bk=	6"
4+72.9 Ah.	330+00	6"

Any materials encountered in the Roadway and Borrow Excavation Section 102, which are, in the opinion of the engineer, equal in quality to the above Item 104 (2) shall be used in place thereof and Item 104 (2) reduced accordingly.



U.S. DEPARTMENT OF COMMERCE
 BUREAU OF PUBLIC ROADS
 REGION NO.9 DENVER, COLO.

TYPICAL CROSS SECTIONS
 NATIONAL FOREST & PARK HIGHWAYS

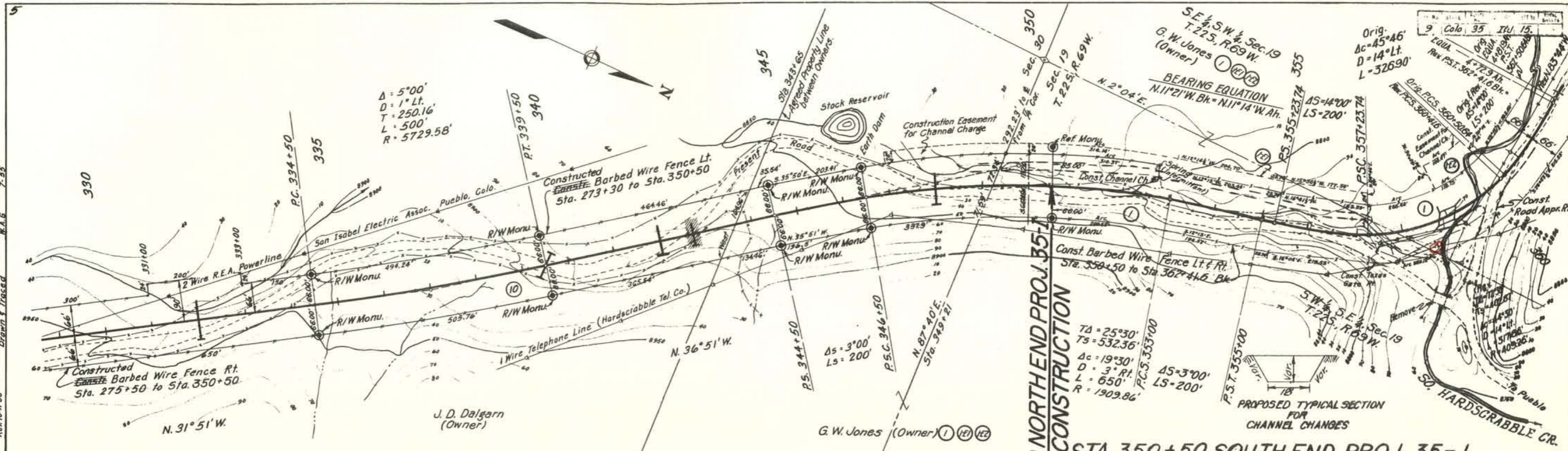
REGION No. 9 STANDARD ROADBED: GRADED 28' Shoulder to Shoulder
 PROJECT 35-J, Greenhorn Highway
 NATIONAL Forest: San Isabel
 COUNTY Custer
 STATE Colorado

APPROVED: [Signature] Date: 2/26/58
 Federal Highway Projects Engineer

Greenhorn Highway, Colo. 35-
Sta. 330+00 to Sta. 360+00
Sheet No. 15

PLAN	SURVEYED	BY	W.A.G.
	PLOTTED	BY	W.A.G.
	ALIGNED	BY	W.A.G.
	CHECKED	BY	W.A.G.
	REVISION	BY	W.A.G.
	DATE	BY	W.A.G.

APR 10-11-55



The Alignment and Grade as hereon shown are subject to adjustment.

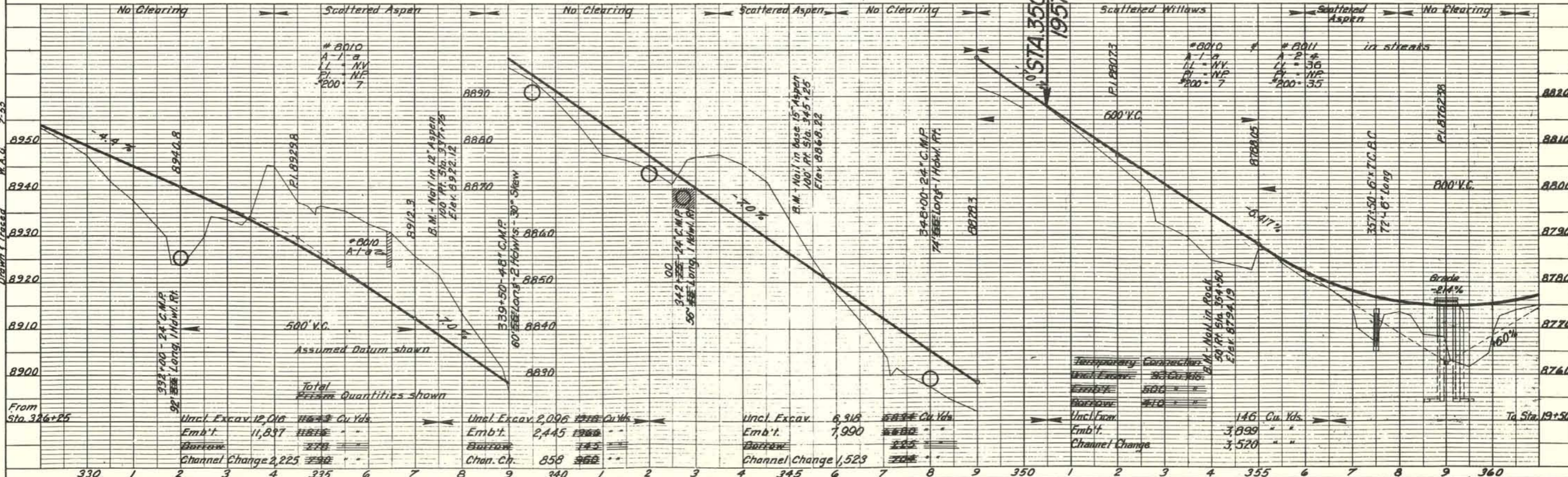
All public and/or privately-owned utilities located on private lands shall be removed by the State or local authority as a right-of-way consideration.

STA. 350+50 NORTH END PROJ. 35-J CONSTRUCTION

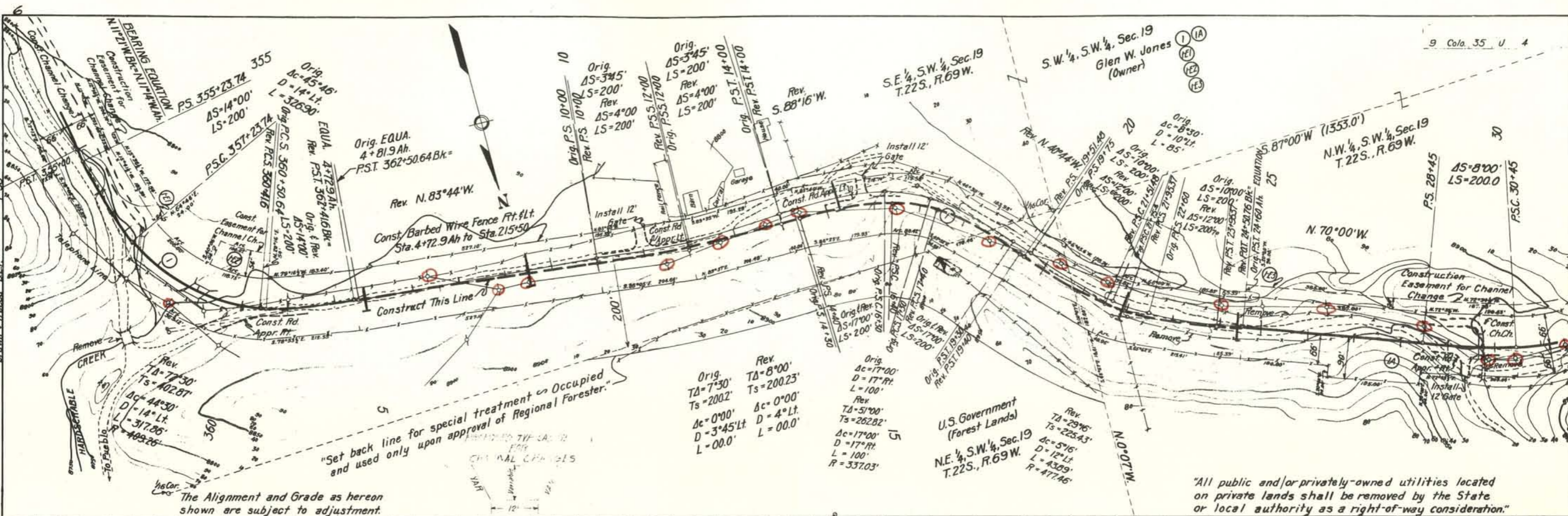
STA. 350+50 SOUTH END PROJ. 35-J PROPOSED CONSTRUCTION

PROFILE	SURVEYED	BY	W.A.G.
	PLOTTED	BY	W.A.G.
	GRADES CHECKED	BY	W.A.G.
	STRUCTURE NOTATION CHECKED	BY	W.A.G.
	REVISION	BY	W.A.G.
	DATE	BY	W.A.G.

APR 10-11-55



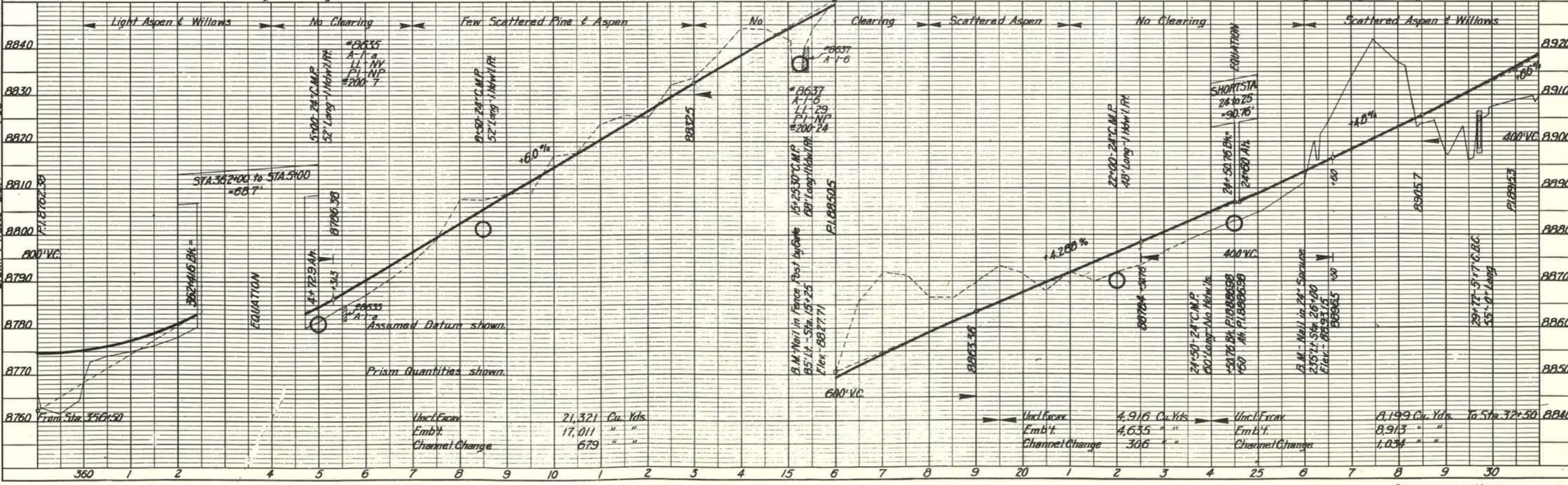
PLAN
 SURVEYED BY A.T.S.
 PLOTTED BY A.T.S.
 NOTE BOOK NO. 79507
 RT. OF WAY CHECKED BY A.T.S.
 NO. 7-58



The Alignment and Grade as hereon shown are subject to adjustment.

All public and/or privately-owned utilities located on private lands shall be removed by the State or local authority as a right-of-way consideration.

PROFILE
 SURVEYED BY A.T.S.
 PLOTTED BY A.T.S.
 NOTE BOOK NO. 79507
 RT. OF WAY CHECKED BY A.T.S.
 NO. 7-58



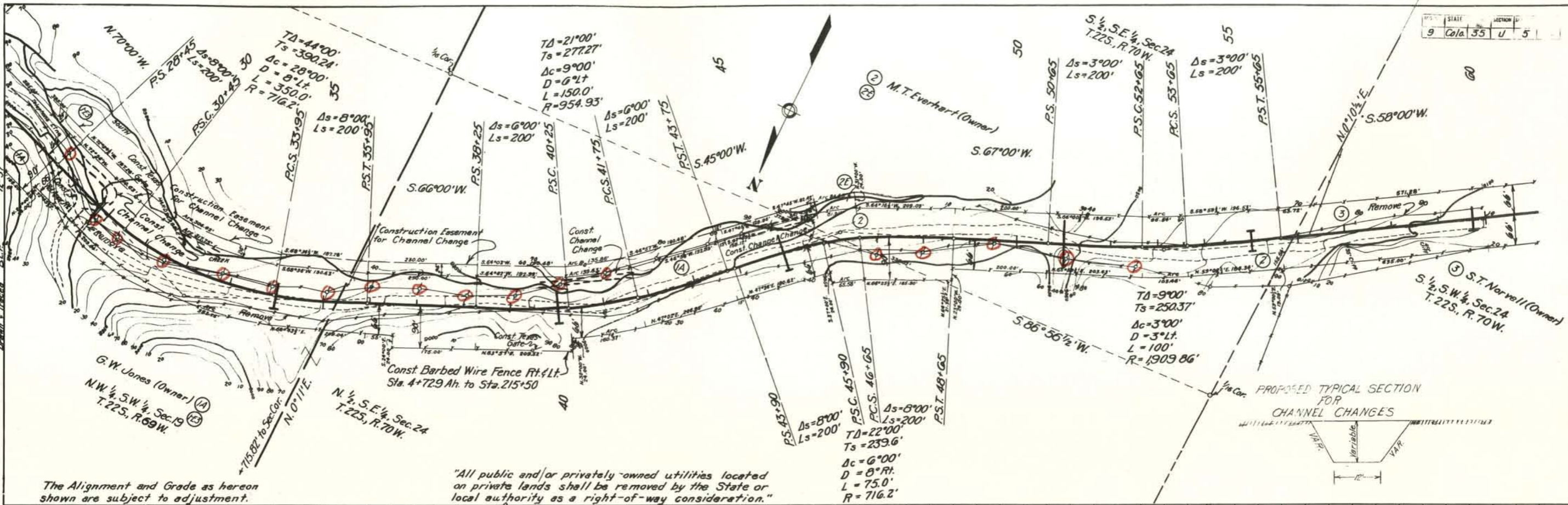
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 17,011 " "
 679 " "

Uncl. Excav. Emb't. Channel Change 4,916 Cu. Yds.
 4,635 " "
 306 " "

Uncl. Excav. Emb't. Channel Change 8,199 Cu. Yds.
 8,913 " "
 1,034 " "

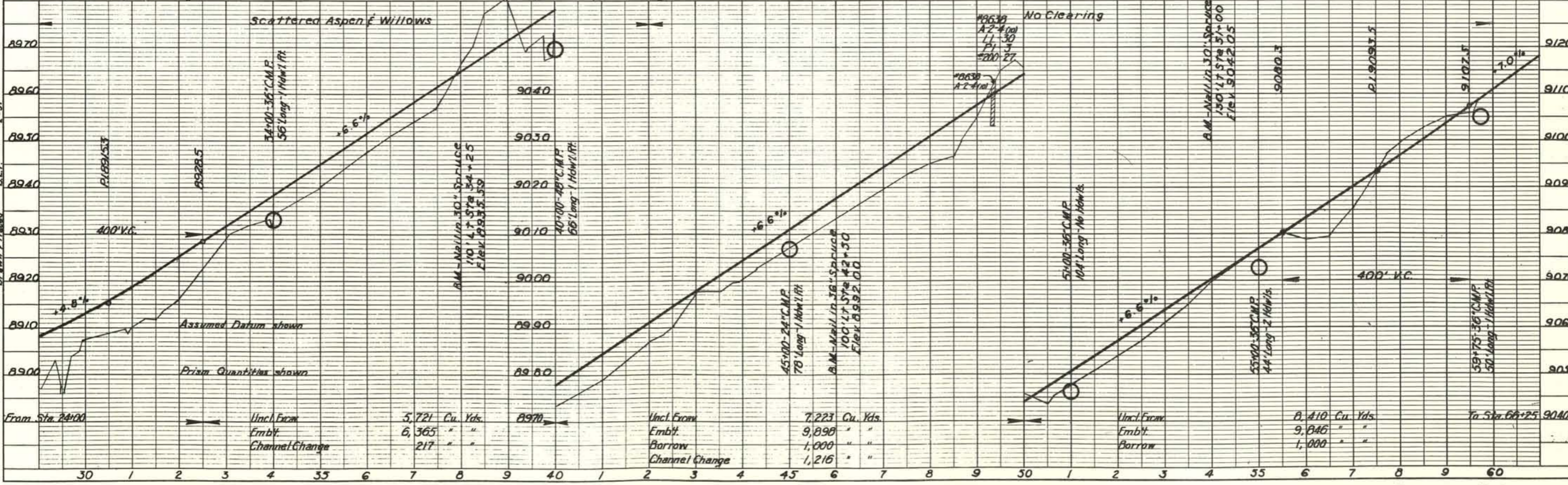
PLAN
DATE 2/25/55
BY A.L.S.
SURVEYED BY A.L.S.
CHECKED BY B.M. MOYER
NOTE: BOOK NO. OF PLAN CHECKED
NO. OF PLAN CHECKED

PROFILE
DATE 2/25/55
BY A.L.S.
SURVEYED BY A.L.S.
CHECKED BY B.M. MOYER
NOTE: BOOK NO. OF PROFILE CHECKED
NO. OF PROFILE CHECKED



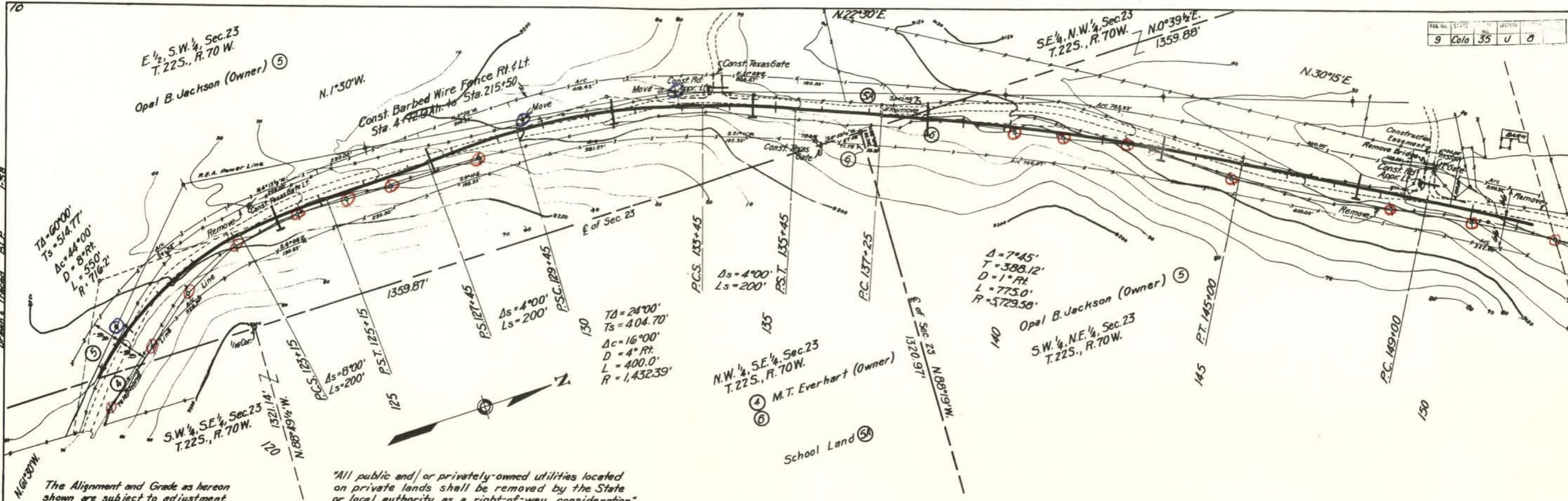
The Alignment and Grade as hereon shown are subject to adjustment.

"All public and/or privately-owned utilities located on private lands shall be removed by the State or local authority as a right-of-way consideration."



PLAN

DATE	7/25/56
BY	A.Z.S.
REVISIONS	
NOTED	
ALIGNED CHECKED	
PLANNING CHECKED	
NOTE BOOK NO.	

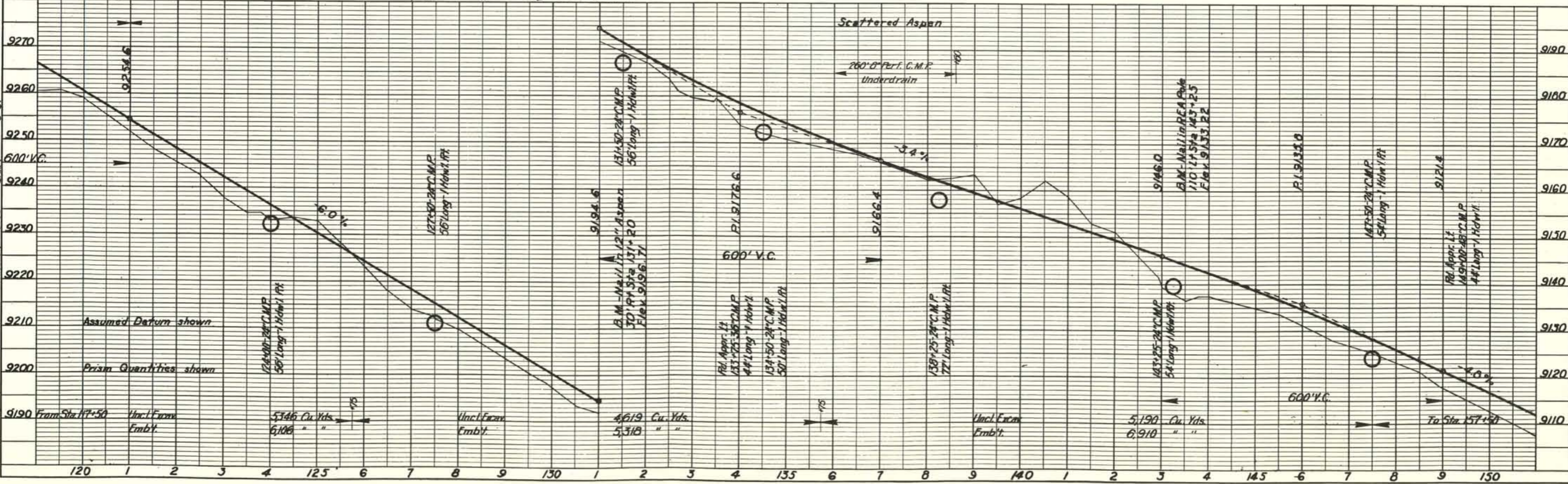


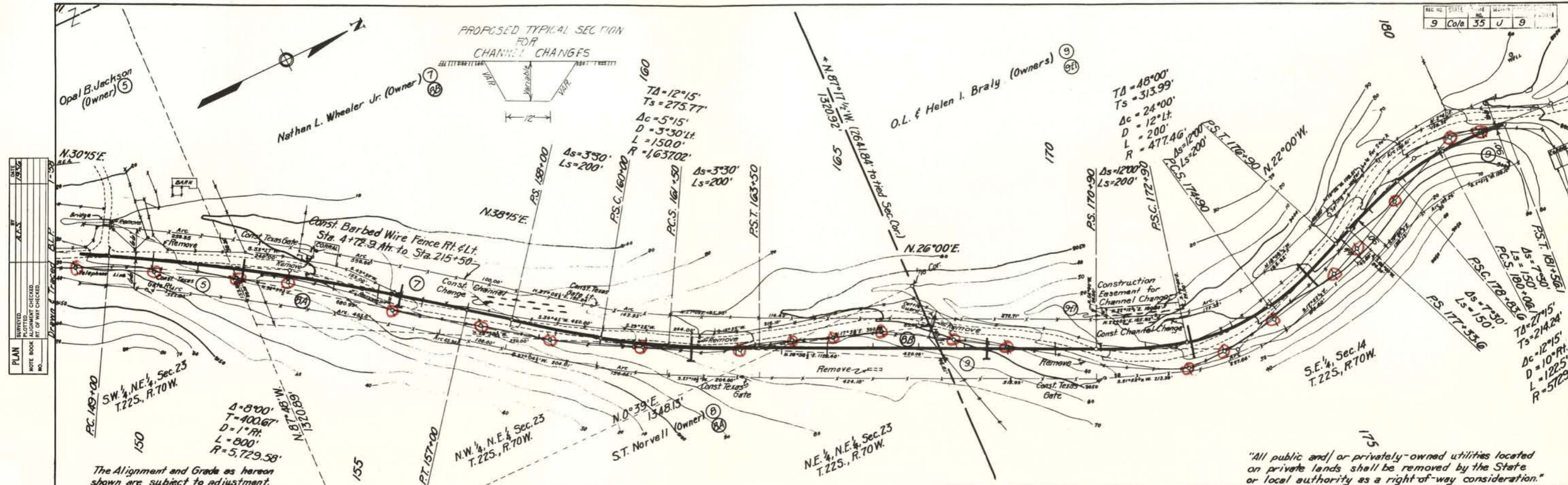
The Alignment and Grade as hereon shown are subject to adjustment.

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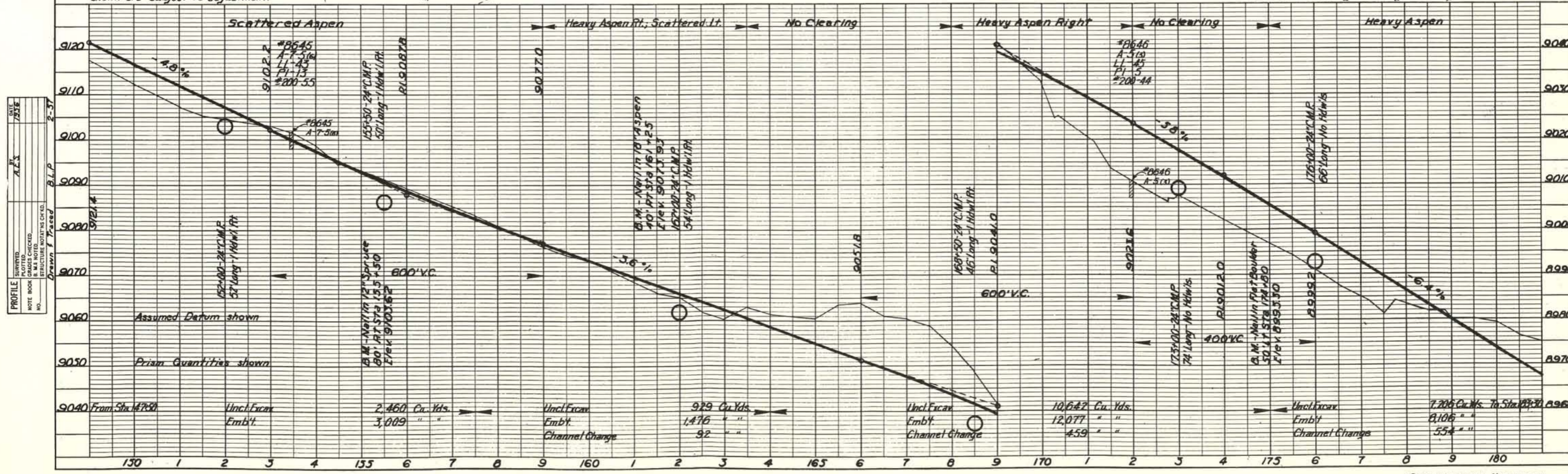
PROFILE

DATE	7/25/56
BY	A.Z.S.
REVISIONS	
NOTED	
GRADES CHECKED	
STRUCTURE NOTATIONS CHECKED	
NOTE BOOK NO.	

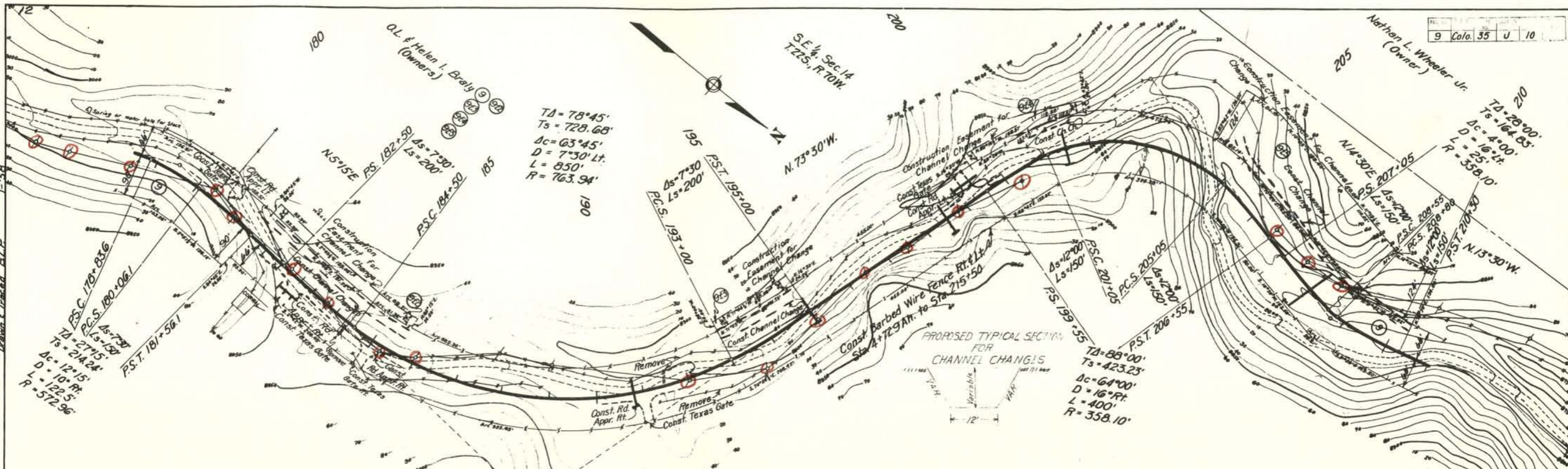




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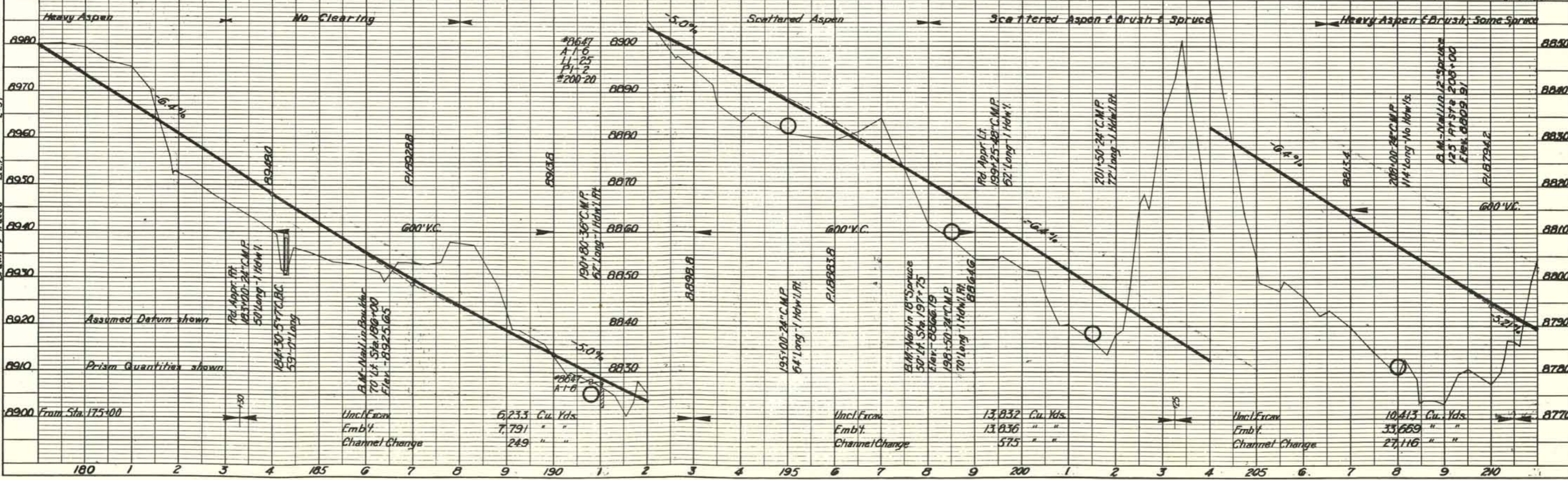
PLAN
 SURVEYED BY A.F.S.
 DATE 7/5/56
 ALIGNED CHECKED
 NOTE BOOK NO. 103
 DRAWN BY A.F.S.
 DATE 7/5/56
 DRAWN CHECKED
 NOTE BOOK NO. 103



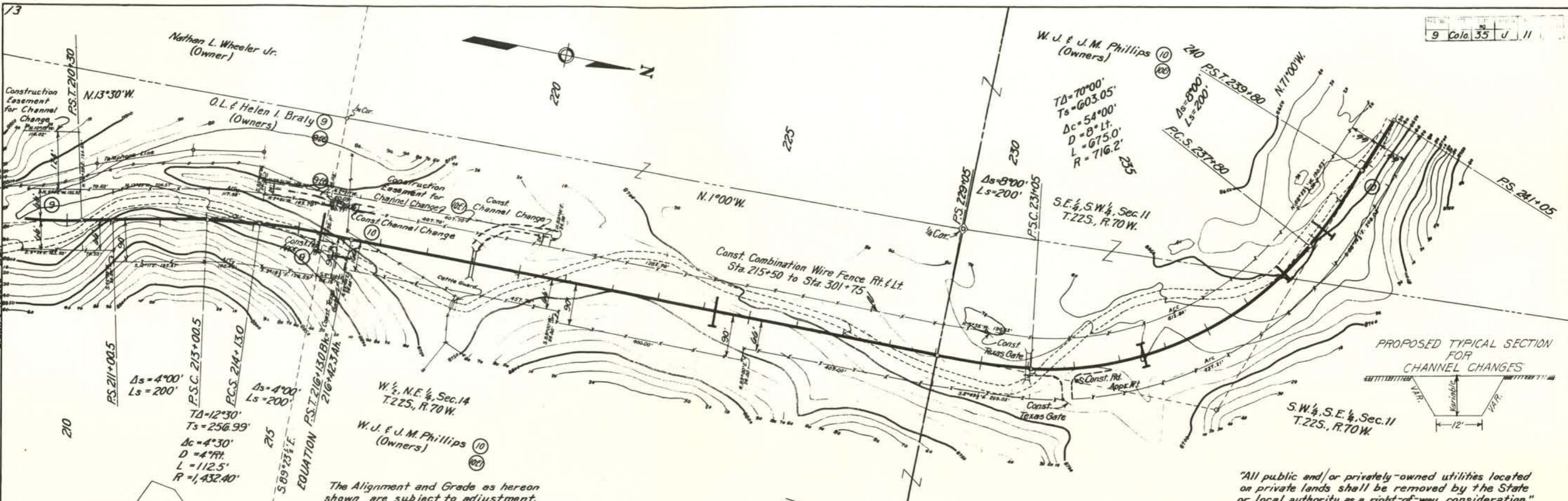
The Alignment and Grade as hereon shown are subject to adjustment.

All public and/or privately-owned utilities located on private lands shall be removed by the State or local authority as a right-of-way consideration.

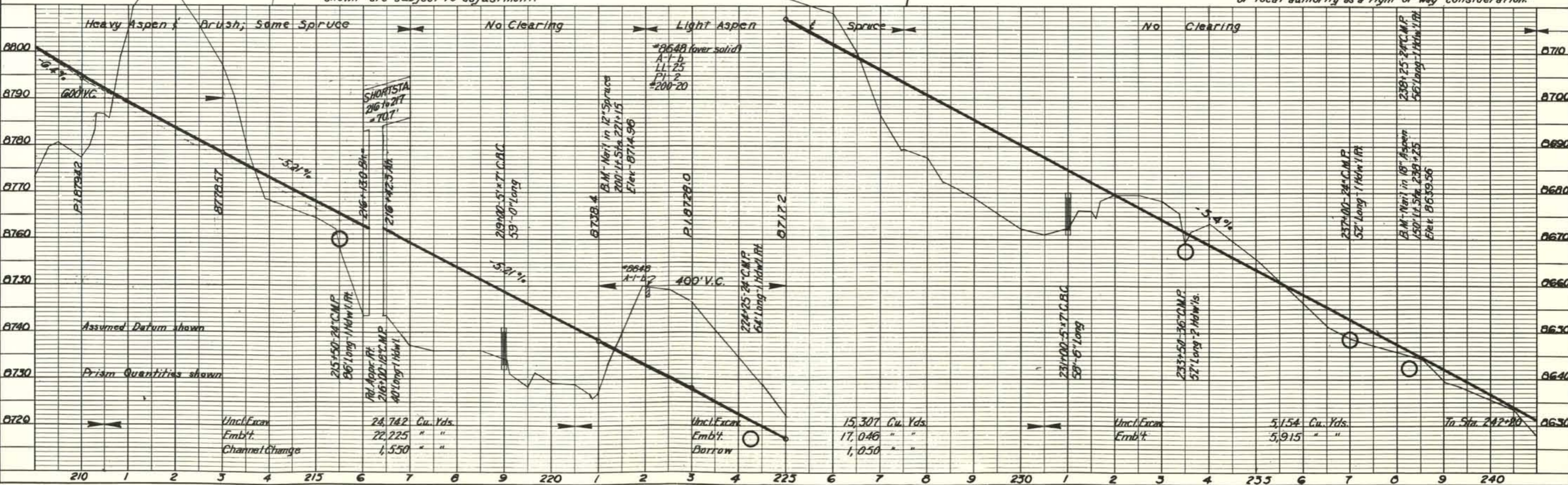
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 DATE 7/5/56
 ALIGNED CHECKED
 NOTE BOOK NO. 103
 DRAWN BY A.F.S.
 DATE 7/5/56
 DRAWN CHECKED
 NOTE BOOK NO. 103



PLAN
 DATE 7/25/66
 BY A.L.S.
 CHECKED
 NOTE BOOK ALIGNED CHECKED
 NO. OF WAY CHECKED



PROFILE
 DATE 7/25/66
 BY A.L.S.
 CHECKED
 NOTE BOOK PLOTTED
 NO. OF UTILITY NOTES CHKD.



Uncl. Excav. Emb't. Channel Change
 24,742 Cu. Yds.
 22,225 " "
 1,550 " "

Uncl. Excav. Emb't. Borrow
 15,307 Cu. Yds.
 17,046 " "
 1,050 " "

Uncl. Excav. Emb't.
 5,154 Cu. Yds.
 5,915 " "

PLAN	SURVEYED	DATE
	PLOTTED	7/5/56
	ALIGNED	
	CHECKED	
	BY	A.E.S.
	NOTE BOOK	
	NO. OF WAY CHECKED	

PROFILE	SURVEYED	DATE
	PLOTTED	7/5/56
	CHECKED	
	BY	A.E.S.
	NOTE BOOK	
	NO. OF WAY CHECKED	

