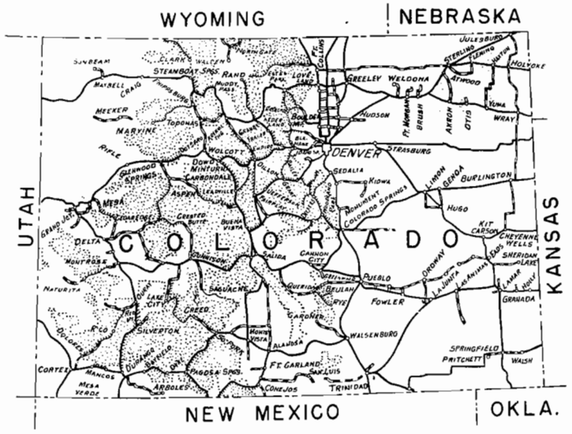


U.S. DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

AS CONSTRUCTED

COLORADO FOREST HIGHWAY PROJECT 38-1(1)

INDEPENDENCE PASS

LENGTH 2.1~~78~~94 MILES

CLASS 2

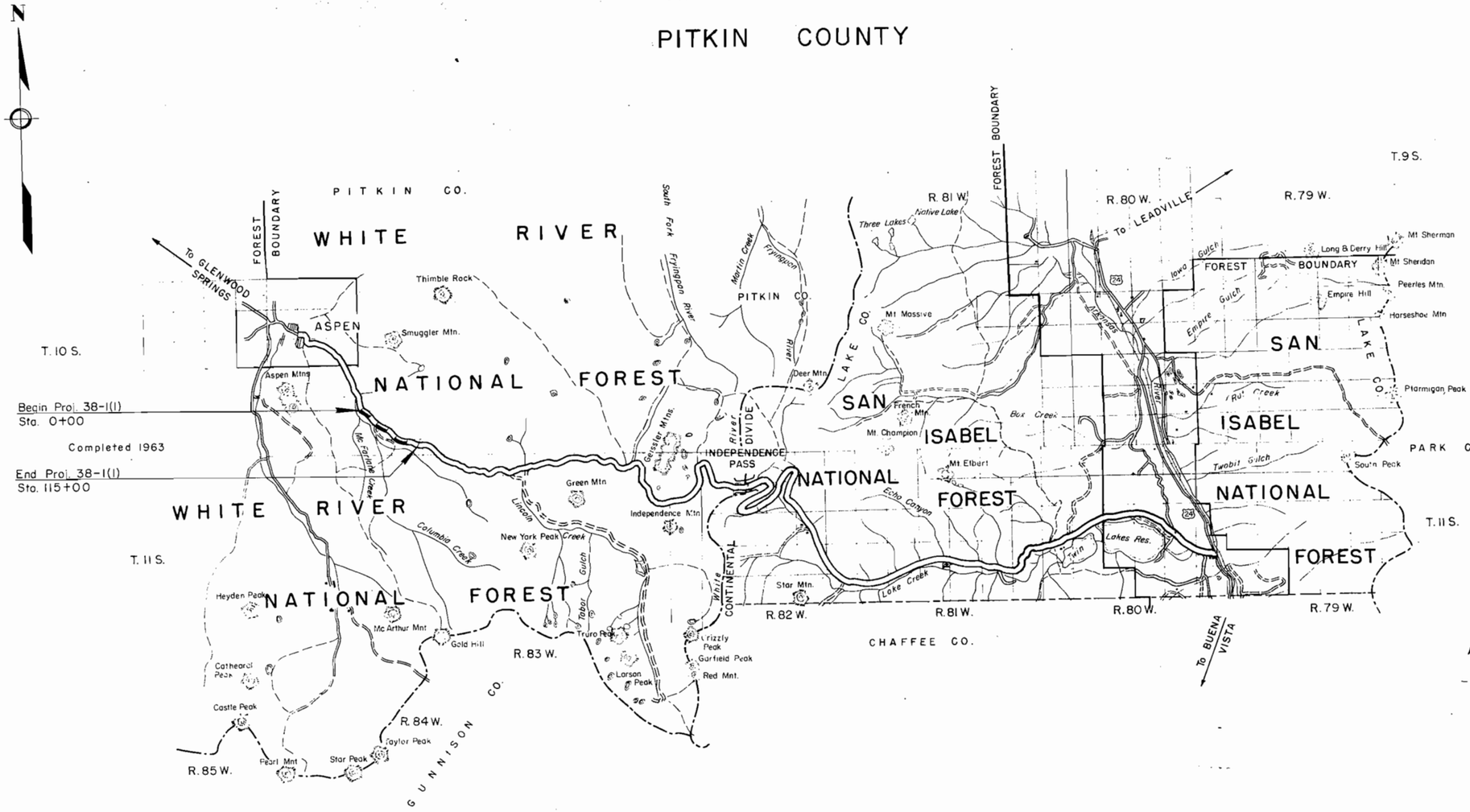
WHITE RIVER
NATIONAL FOREST

PITKIN COUNTY

REGION 9 STATE COLORADO
PROJECT 38-1(1), Independence Pass
SHEET 1 OF ____ SHEETS

INDEX TO SHEETS

SHEET Nº	DESCRIPTION	STATION	to STATION
1	Title Sheet		
2	Typical Sections		
3	Summary (2 Sheets)		
4-7	Plan & Profile	0+00	115+00
R9-Std. 117A	Concrete End Sections, Headwall & Inlets		
R9-Std. 131	Std. Maintenance Marker Posts		
R9-Std. 162A	Timber Guide Posts W/Refl. Strips		
R9-Std. 166A	Requirements for Placing C.M.P. Culverts		
R9-Std. 168	Straight Type Concrete Hdwls		
R9-Std. 143B	Project Identification Signs		
R9-Sp. 354	Bin Type Metal Cribbing (2 Sheets)		



LEGEND

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

Plans prepared by: B.P.R.
Date: May, 1962

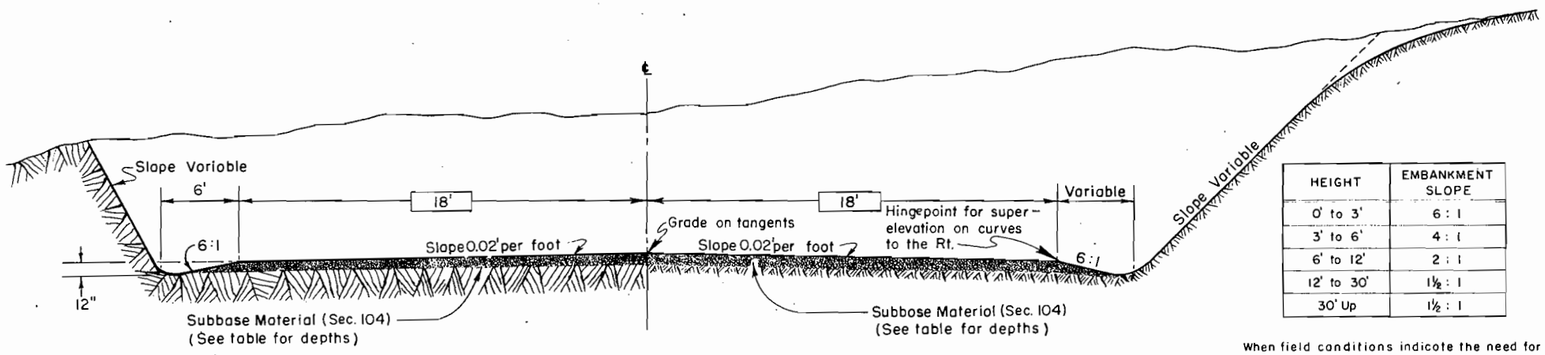
Description of Project
Improvement: Grading & Bit. Stab. Base
Roadbed Widths:
Grading: 36'
Base: 32'
Type Code: 2013

Traffic Volume
A.D.T. (1961): 275
A.D.T. (1981): 1000
D.H.V.: 150
D.: 65 %
T.: 5 %
V.: 45

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

APPROVED:

_____ DATE _____ 19____
REGIONAL ENGINEER

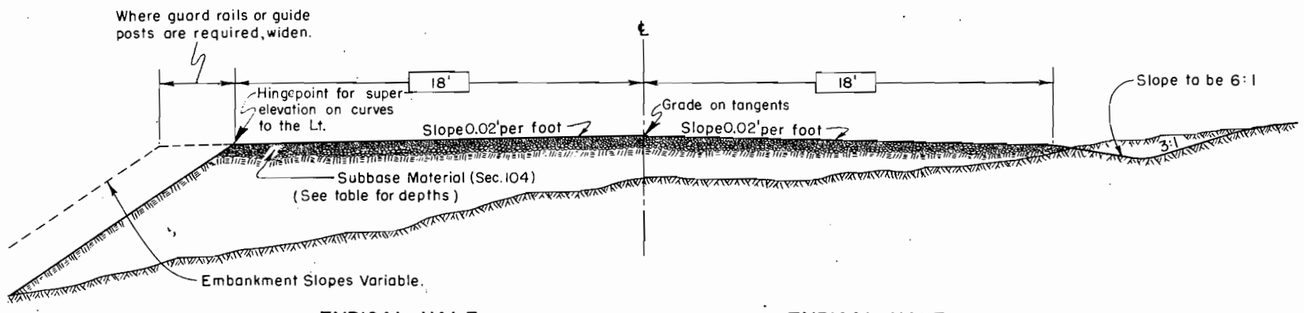


TYPICAL HALF
CUT SECTION IN ROCK

TYPICAL HALF
CUT SECTION IN COMMON

HEIGHT	EMBANKMENT SLOPE
0' to 3'	6 : 1
3' to 6'	4 : 1
6' to 12'	2 : 1
12' to 30'	1½ : 1
30' Up	1½ : 1

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



TYPICAL HALF
EMBANKMENT SECTION

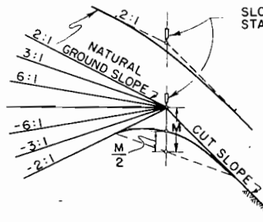
TYPICAL HALF
SHALLOW EMBANKMENT SECTION

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	0'-5'	3:1	5'	5'
VARIABLE	5'-10'	2:1		
RELATIVELY FLAT (6:1 AND FLATTER)	10'-15'	1½:1	5'	8'
	15'-30'	1¼:1		
	OVER 30'	1:1		
MODERATELY STEEP (6:1 TO 3:1)	10'-15'	1½:1	5' OR 3'	8' ** 5' *
	15'-30'	1¼:1		
	OVER 30'	1:1		
STEEP (STEEPER THAN 3:1)	10'-15'	1½:1	3'	5' *
	15'-30'	1¼:1		
	OVER 30'	1:1		

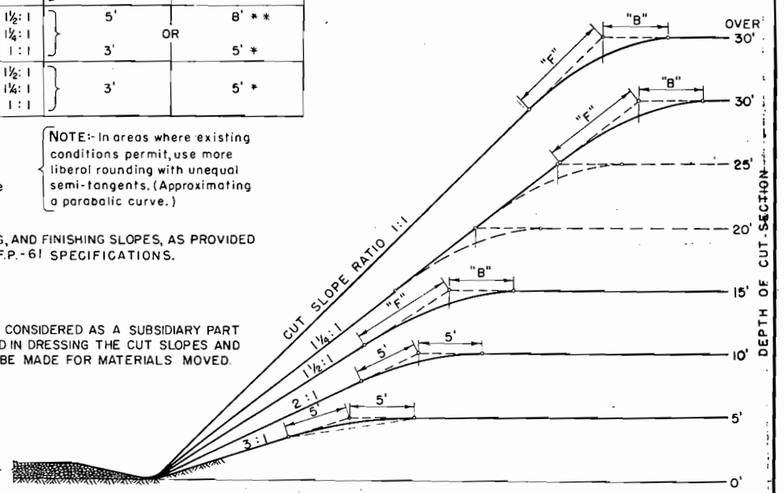
† Measured on slope surface.
** Desirable
* Minimum (Wooded)
▽ These ratios are desirable in steep terrain.

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.-61 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.



CUT SLOPE ROUNDING

SPECIAL STABILIZING MATERIAL

STATION	to STATION	SUBBASE Item 104(2)	SELECTED BORROW Item 102( )
0+00	115+00	9"	

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.

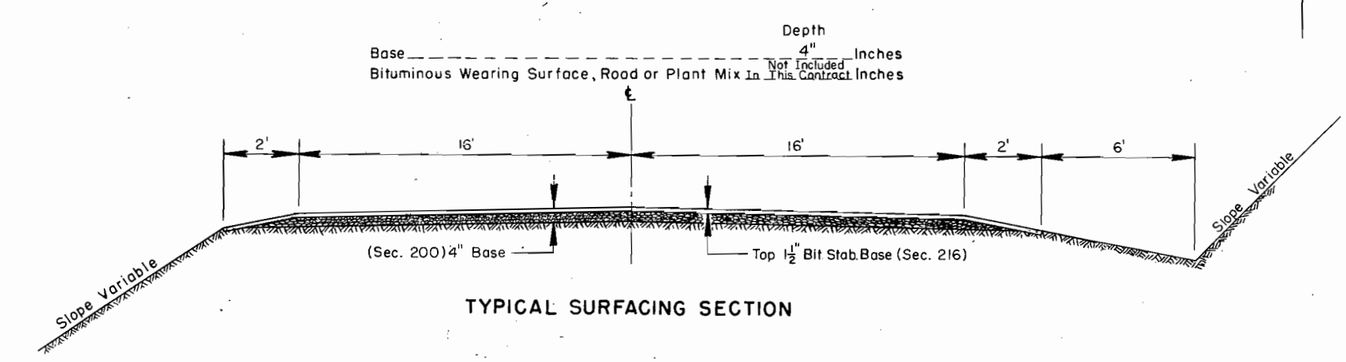
Embankment slopes shall be uniformly warped between one rate of slope and another. The transition shall cover a distance of not less than fifty feet.

The grade line shown on the plan and profile sheets is centerline grade, not corrected for curvature.

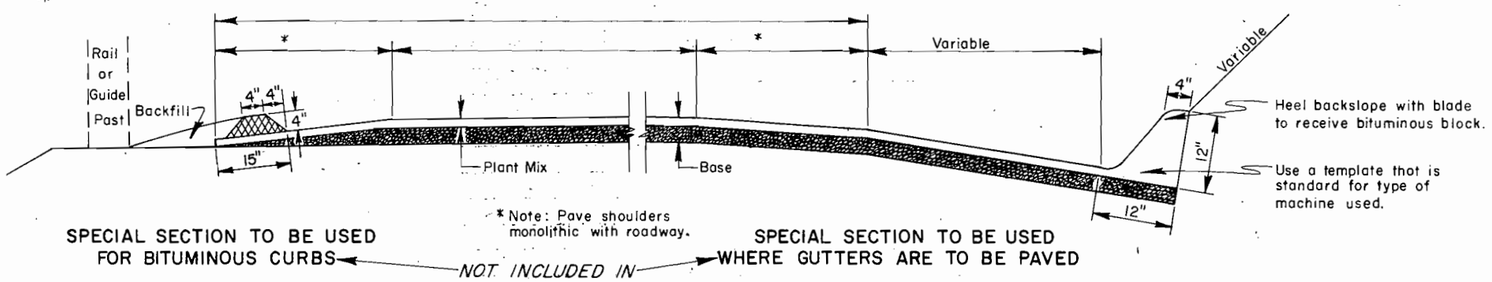
Curves are superelevated and widened in accordance with AASHO standards.

SOILS DATA

Any 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.



TYPICAL SURFACING SECTION



SPECIAL SECTION TO BE USED FOR BITUMINOUS CURBS

NOT INCLUDED IN THIS CONTRACT

SPECIAL SECTION TO BE USED WHERE GUTTERS ARE TO BE PAVED

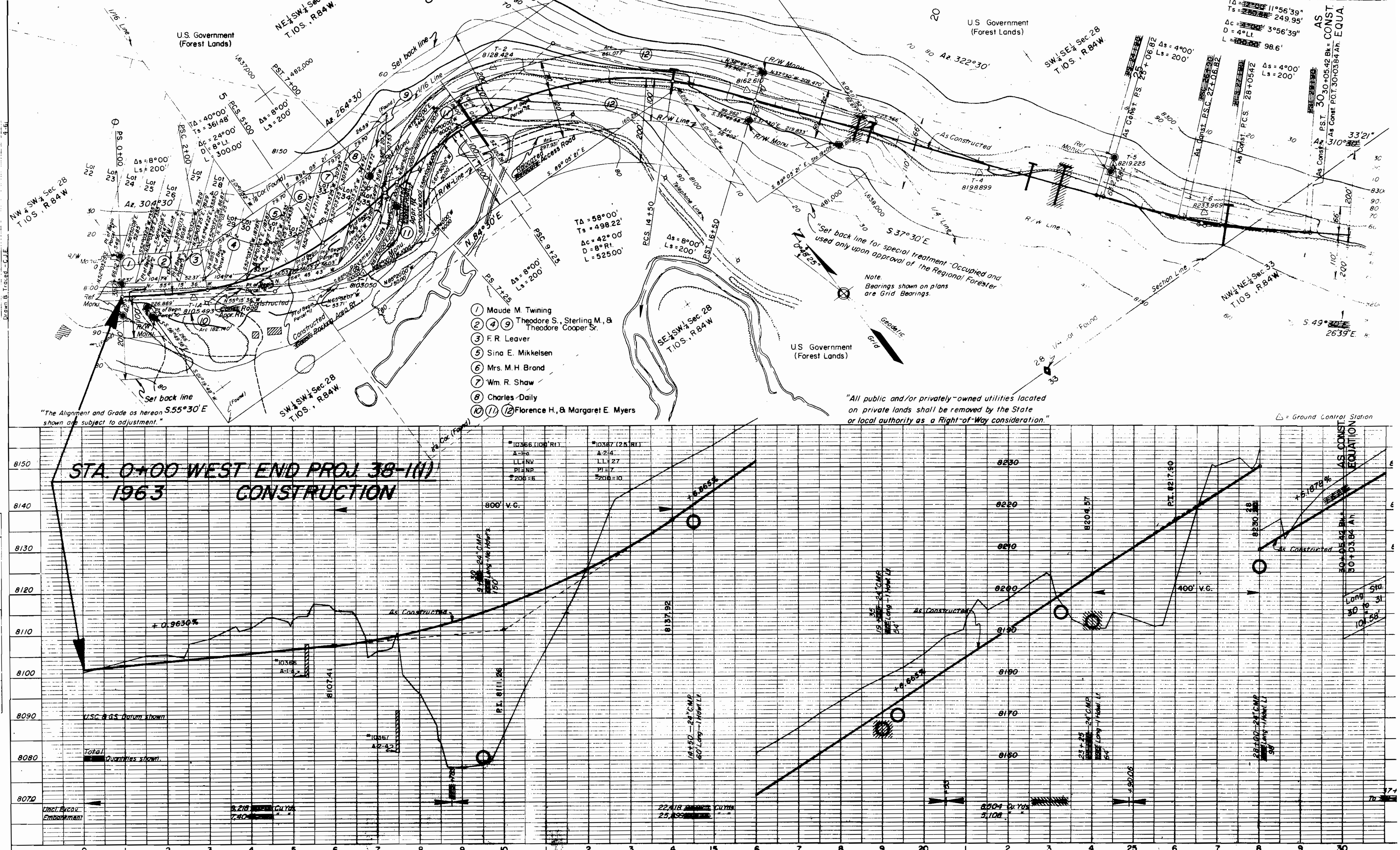
APPROVED: A. B. Barrington Date: 2/26/68
Federal Highway Projects Engineer

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 36' Shoulder to Shoulder; BASE 32' " " "; BITUMINOUS WEARING SURFACE Not Included in This Contract
PROJECT 38-1(1), Independence Pass
NATIONAL Forest: White River
COUNTY Pitkin
STATE Colorado



(As Constructed) INDEPENDENCE PASS

PLATE 1—PLAN-PROFILE D. P. R. & B. S. STANDARD
KEUFFEL & ESSER CO., NEW YORK.
K & E Co. No. 346-1CA

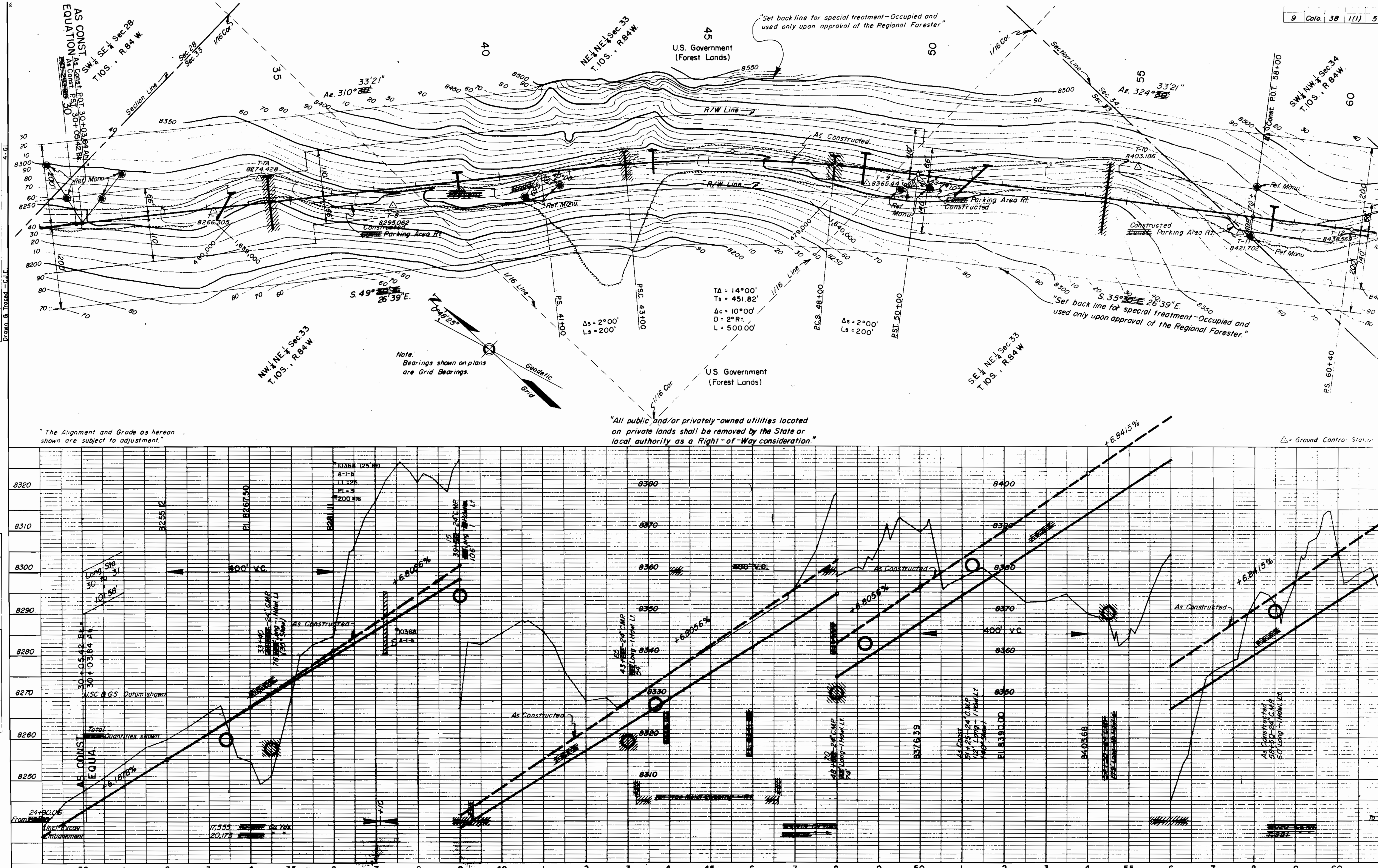


PLATE 1—PLAN-PROFILE O.P.R. & R.E. STANDARD
KEUFFEL & ESSER CO., NEW YORK

(As Constructed) INDEPENDENCE PASS

Note: Bearings shown on plans are Grid Bearings.

Geodetic / Grid

"Set back line for special treatment—Occupied and used only upon approval of the Regional Forester."

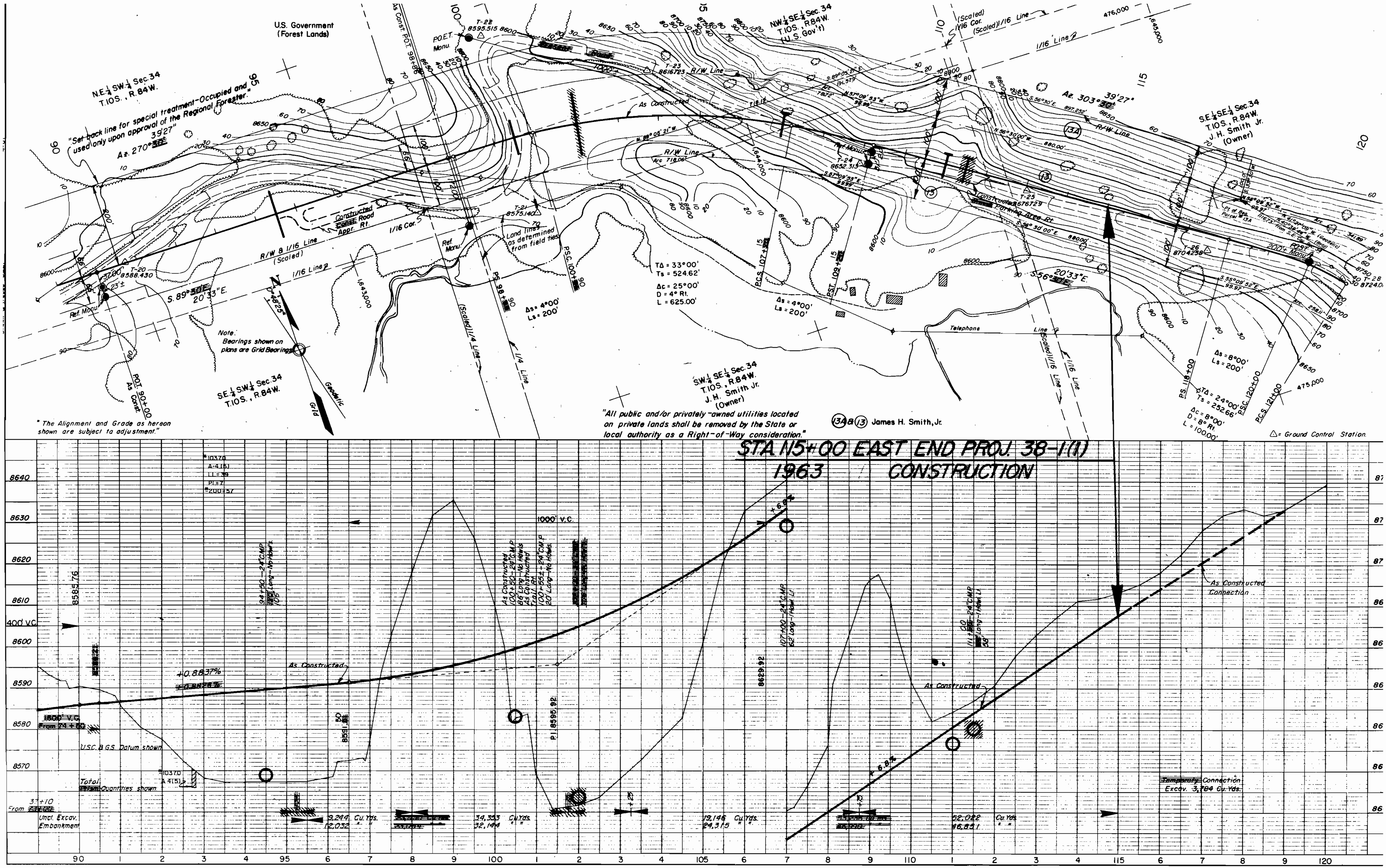
"All public and/or privately-owned utilities located on private lands shall be removed by the State or local authority as a Right-of-Way consideration."

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

△= Ground Control Station.

PLATE 1 - PLAN-PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

(As Constructed) INDEPENDENCE PASS



(As Constructed) INDEPENDENCE PASS