

FEDERAL ROAD REGION NO.	DIVISION	PROJ NO	SHEET NO	TOTAL SHEETS
9	COLORADO	CC 61-0009-19	1	

COLORADO DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED STATE PROJECT NO. CC 61-0009-19 STATE HIGHWAY NO. 9 SUMMIT COUNTY

RIGHT OF WAY (S.H. 9)
FRISCO - BRECKENRIDGE

INDEX OF SHEETS

- SHEET NO.
- 1 SKETCH MAP AND TITLE PAGE.
 - 2 TABULATION OF PROPERTIES.
 - 3-9 ALIGNMENT PLAN AND PROFILE.
 - 10 OWNERSHIP MAP

REVISIONS	

CONVENTIONAL SIGNS

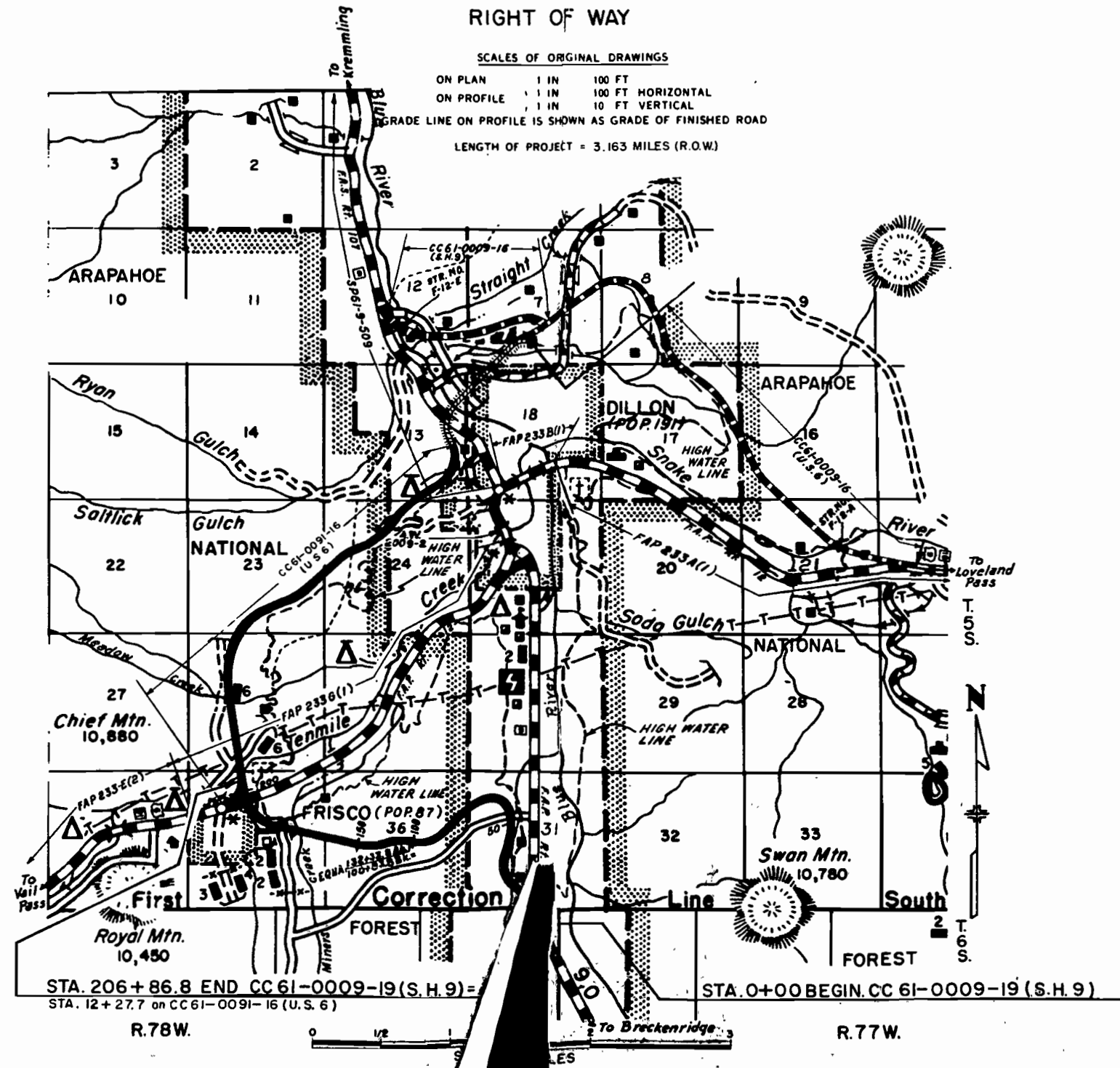
ENTER LINE	PLAN SHEET	TITLE SHEET
RIGHT OF WAY LINE	ROW MARKER	
COUNTY LINE		
TOWNSHIP OR RANGE LINE		
LAND LINES	SECTION LINE	1/4 SECTION LINE
RAILROAD	TITLE SHEET	PLAN SHEET
BARBED WIRE FENCE		
COMBINATION WIRE FENCE		
SNOW FENCE		
TELEPHONE & TELEGRAPH LINES		
POWER LINE		
DETRUR		
PRESENT ROAD (Plan Sheets)		

SCALES OF ORIGINAL DRAWINGS

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

LENGTH OF PROJECT = 3.163 MILES (R.O.W)



Δ 46°35'00" L
 Ts 644.7'
 Δc 31°35'00" L
 Dc 5°00'
 Tc 324.3'
 Lc 631.7'
 Rc 1146.0'
 HSD > 570'
 S 0.08' / Ft.
 MDS 60 MPH

Δ 65°00'00" R
 Ts 559.0'
 Δc 38°00'00"
 Dc 9°00'
 Tc 219.2'
 Lc 422.2'
 Rc 636.6'
 HSD > 371'
 S 0.08' / Ft.
 MDS 46 MPH

Alignment and Grades as shown, are subject to modification during construction, after approval by the Denver Office.
 The Soil Data shown on the plans is obtained from best available testing laboratory information. This information is shown for the convenience of the Contractor, and the Department does not guarantee the accuracy of these tests. If materials not conforming to the data on the plans are encountered during construction, necessary modifications of the Grading and/or Stabilization plan, will be made to secure dense, stable Embankments.

CLEARING & GRUBBING
 0+ to 24+ - Hay Meadow
 24+ to 28+ - Sage

INV. OF UNDERDRAIN TO CONFORM TO BOTTOM OF MUCK REMOVAL. SLOPE AS INDICATED ON PLAN.

0+00 TO 28+65 REMOVE MUCK APPROX. 2' DEEP

CAV
 B.X.II
 A.Y.D.O.H.
 M.I.O.H.
 C.E.S.S.
 R.R.O.W.
 J.R.C.E.

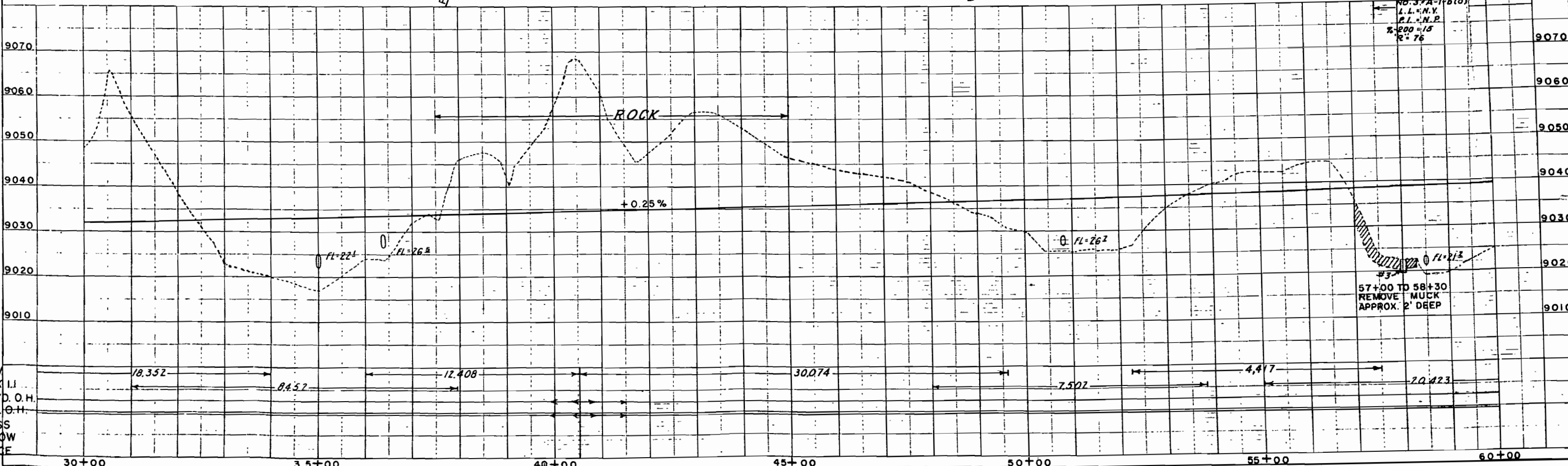
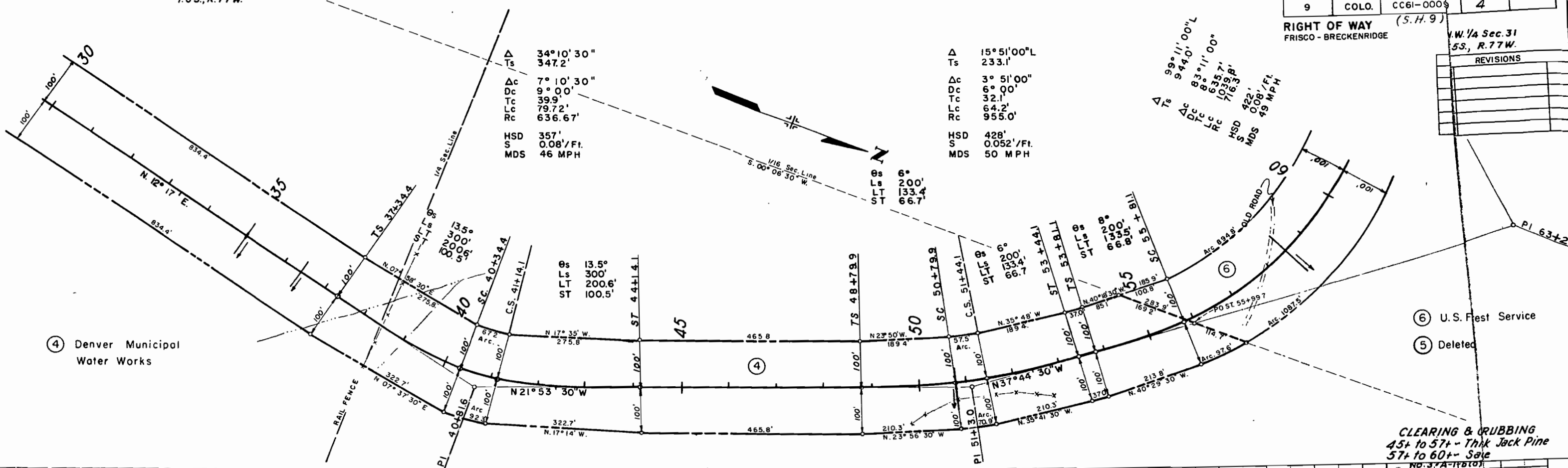
S.W. 1/4 Sec. 31
T.5S., R.77W.

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	CC61-0009	4	

RIGHT OF WAY
FRISCO - BRECKENRIDGE
(S.H. 9)

S.W. 1/4 Sec. 31
T.5S., R.77W.

REVISIONS	TOTAL SHEETS



CLEARING & GRUBBING
45+ to 57+ - Thick Jack Pine
57+ to 60+ - Sale

NO. 37-A-11610
L.L. & N.Y.
P.L. & N.P.
% 200 = 15
R = 76

57+00 TO 58+30
REMOVE MUCK
APPROX. 2' DEEP

N.W. 1/4 Sec. 31
T.5S., R.77W.

N.E. 1/4 Sec. 36
T.5S., R.78W.

REVISIONS	

FRISCO - BRECKENRIDGE			
FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.
9	COLO.	CC 610009-19	5
RIGHT OF WAY			TOTAL SHEETS
			5

99°11'00"
944.0'
83°11'00"
635.7'
1039.8'
716.3'
HSD 408'
S MDS 008'/Fl.
49 MPH

- ⑥ U. S. Forest Service
- ⑤ Deleted

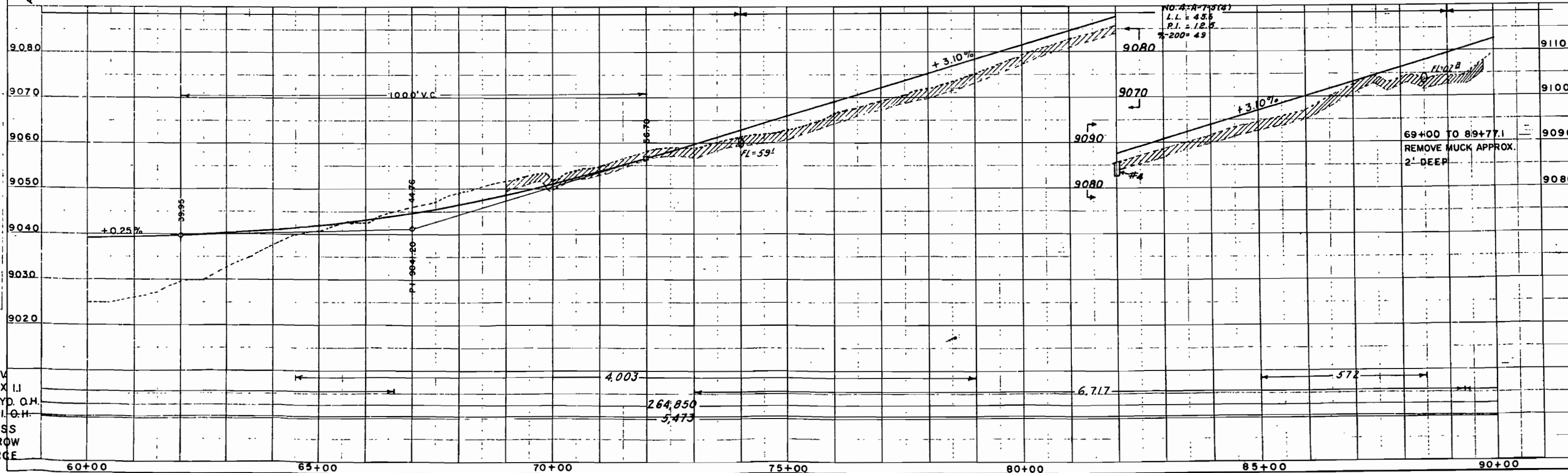
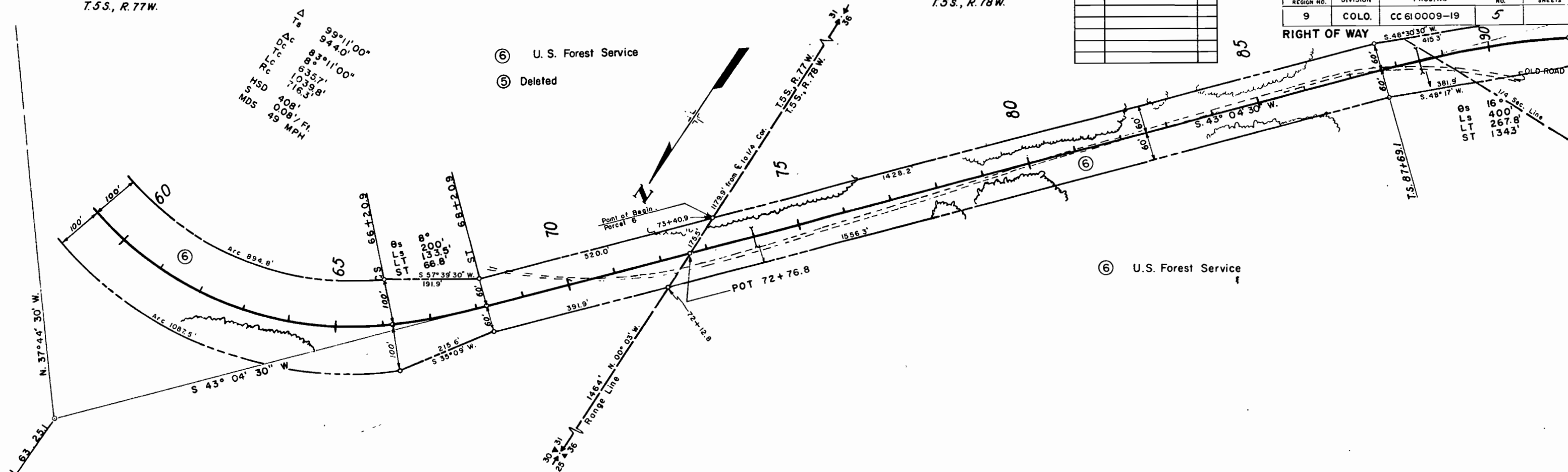


PLATE 1 PLAN PROFILE

DONALD C SUTHERLAND INC.
CONSULTING CIVIL ENGINEERS

S.E. 1/4 Sec. 36
T.5S., R.78 W.

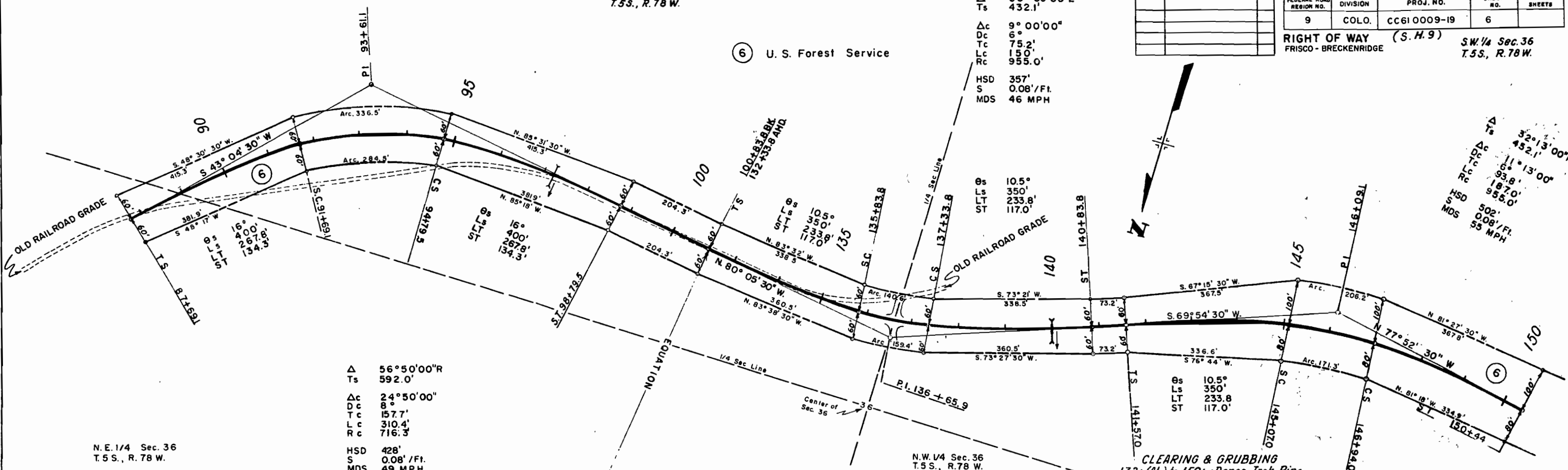
6 U. S. Forest Service

Δs 30° 00' 00" L
432.1'
Δc 9° 00' 00"
Dc 6°
Tc 75.2'
Lc 150'
Rc 955.0'
HSD 357'
S 0.08' / Ft.
MDS 46 MPH

REVISIONS				
FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEETS NO.	TOTAL SHEETS
9	COLO.	CC610009-19	6	

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEETS NO.	TOTAL SHEETS
9	COLO.	CC610009-19	6	

RIGHT OF WAY (S.H.9)
FRISCO - BRECKENRIDGE
S.W. 1/4 Sec. 36
T.5S., R.78 W.



N.E. 1/4 Sec. 36
T.5S., R.78 W.

Δ 56° 50' 00" R
Ts 592.0'
Δc 24° 50' 00"
Dc 8°
Tc 157.7'
Lc 310.4'
Rc 716.3'
HSD 428'
S 0.08' / Ft.
MDS 49 MPH

N.W. 1/4 Sec. 36
T.5S., R.78 W.

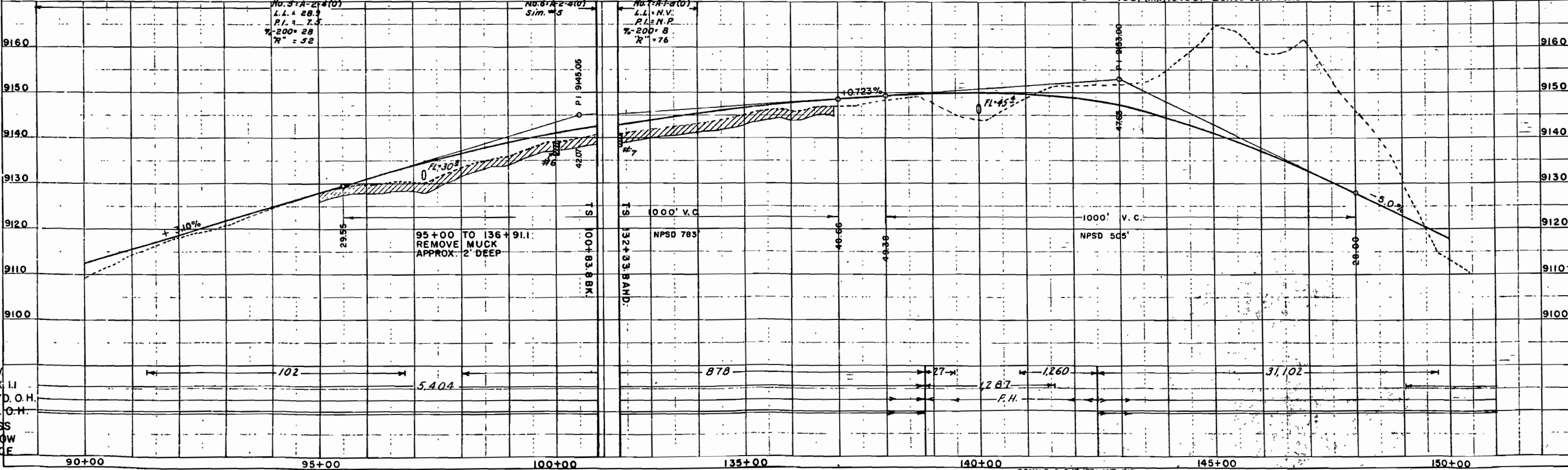


PLATE 1 PLAN PROFILE PART

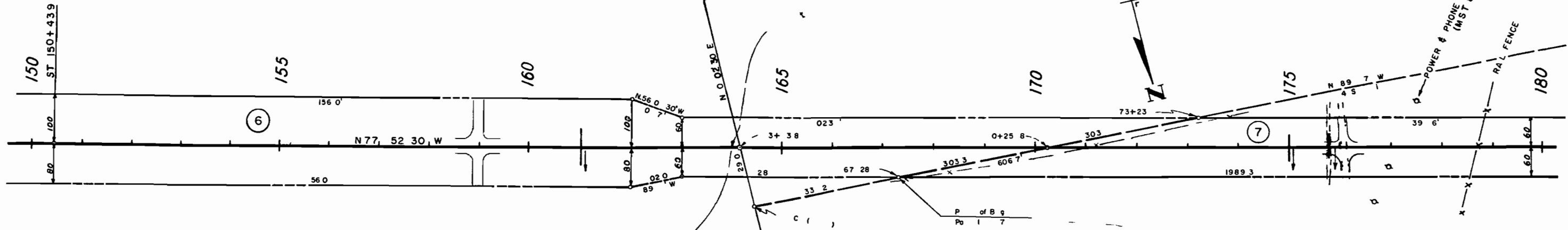
DONALD C. SUTHERLAND INC.
CONSULTING CIVIL ENGINEERS

SW 1/4 Sec 36
T5S R78W

NE 1/4 Sec 35
T5S R78W

FE REGO	9	DAD	COLO	DISION	CC 61 0009-19	OJ NO.	7
RIGHT OF WAY (S H 9) FRISCO BRECKENRIDGE							
P	w	L	i	C	e	a	e 20
Ph	L	i	e	C	i	c	9

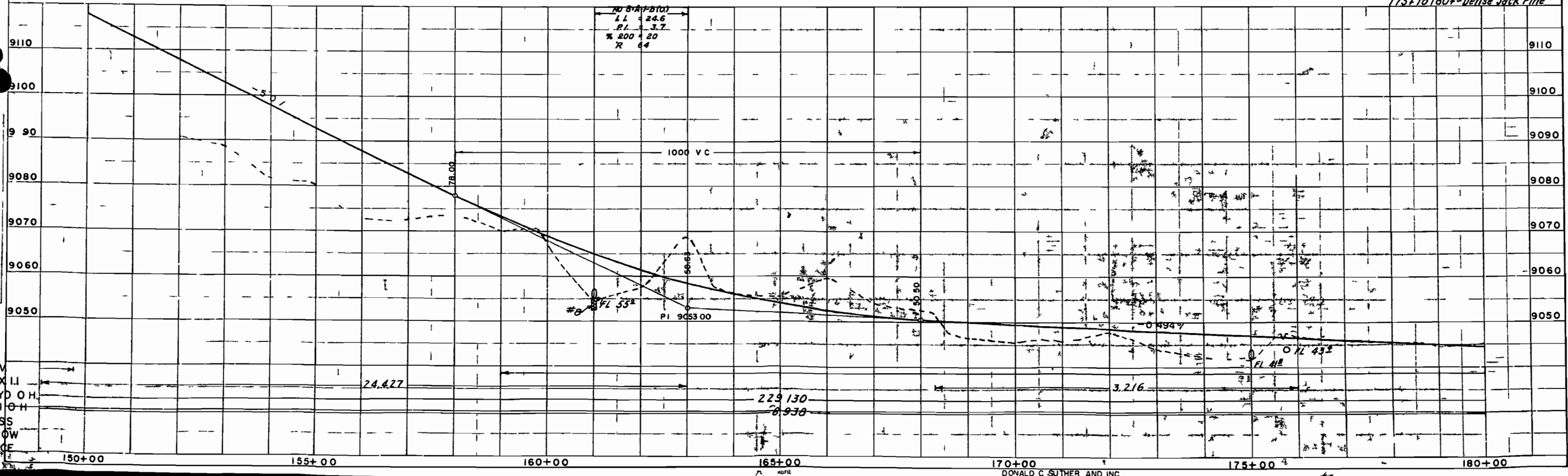
REVISIONS	



⑥ U S Forest Service

⑦ Mearl L Stewart & Edith R Stewart JT

CLEARING & GRUBBING
150+ to 163+ Dense Jack Pine
163+ to 173+ Sage
173+ to 180+ Dense Jack Pine

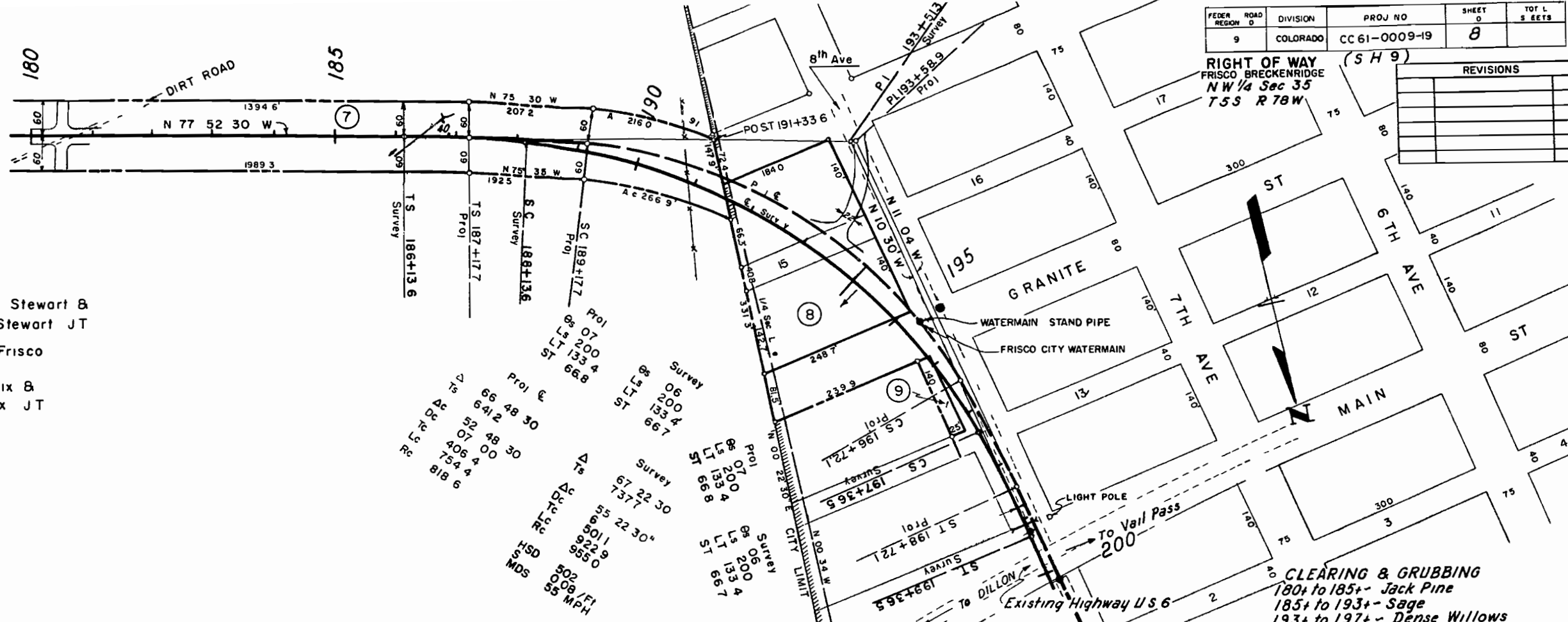


CAV
B X I I
A Y D O H
M I O H
CESS
R R O W
URCE

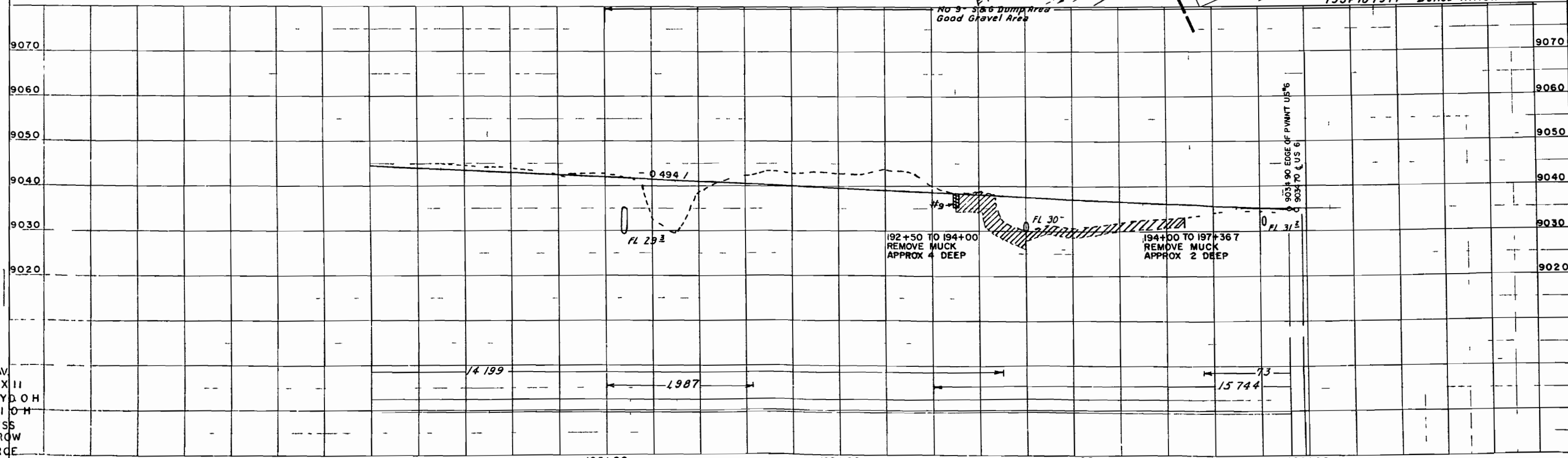
RIGHT OF WAY (S H 9)
FRISCO BRECKENRIDGE
NW 1/4 Sec 35
T5S R78W

REVISIONS	

- ⑦ Mearl L Stewart & Edith R Stewart JT
- ⑧ Town of Frisco
- ⑨ John T Nix & Martha Nix JT



CLEARING & GRUBBING
 180+ to 185+ - Jack Pine
 185+ to 193+ - Sage
 193+ to 197+ - Dense Willows

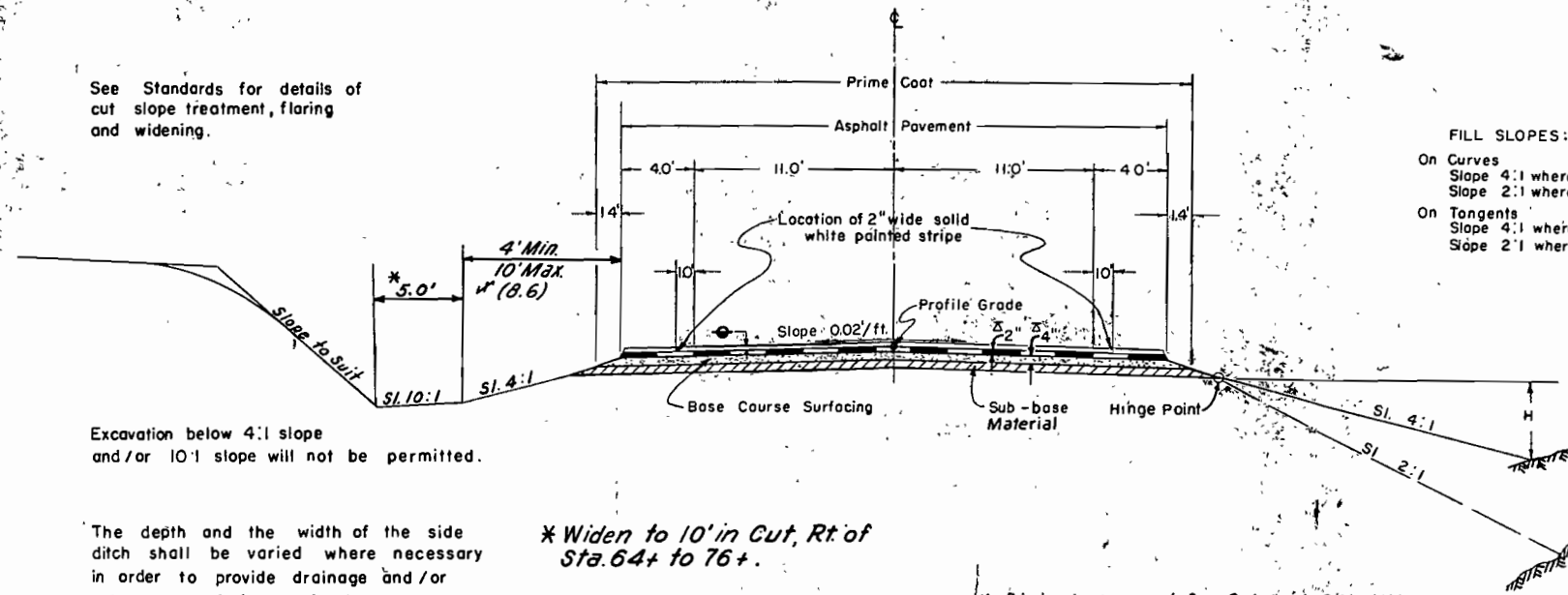


CAV
B-X II
A Y D O H
M I O H
CESS
RIOW
JRCE

TYPICAL SECTION ROADWAY

FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	CC 61-0009-19	2	3

See Standards for details of cut slope treatment, flaring and widening.



Excavation below 4:1 slope and/or 10:1 slope will not be permitted.

The depth and the width of the side ditch shall be varied where necessary in order to provide drainage and/or entrance to drainage structure

***Widen to 10' in Cut, Rt. of Sta. 64+ to 76+.**

"T" Design thickness of Sub-base Material. Material above the subgrade is to be constructed of sub-base material of location designated in sub-base material tabulation. Estimated quantities involved in this operation and thickness of material required are tabulated in the sub-base material plan.

Dimensions used for Original Quantities.

- 1/2" Asphaltic Pavement - Future Construction
- - Approximate Thickness
- Surfacing Materials shall be placed in separate courses at the following rates per 100 sq. ft. of roadway:
 - Plant Mixed Asphaltic Surfacing - 37 tons
 - Base Course Surfacing - 70 tons

FILL SLOPES:
 On Curves
 Slope 4:1 where "H" is 5' or less
 Slope 2:1 where "H" is over 5'
 On Tangents
 Slope 4:1 where "H" is 3' or less
 Slope 2:1 where "H" is over 3'

GENERAL NOTES

This project is to be constructed in conformity with the Standard Specifications of the Colorado Department of Highways, adopted January 1, 1958.

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

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

Approximate location and quantities involved in construction of intercepting ditches are tabulated in Summary of Earthwork Quantities Tabulation

All curves are to be superelevated and widened as provided by the Standard Superelevation sheet included with the plans.

If excavation operations develop materials which will stand on slopes steeper than slope stake lines, the Department reserves the right to change cut slopes during the progress of such excavations.

For preliminary plan quantities of Asphaltic Road Materials, the following rates of application were used:

PRIME COAT ----- MC ----- 0.40 Gals. per Sq. Yd.
 PAVING ASPHALT (200-300 Penetration) ----- 5.50 % by weight of Mix

Rate of application and grade of Asphaltic Material shall be as determined by the Engineer at time of application.

All Pipe Cross Culverts shall be laid without Headwalls on either end, unless otherwise noted on plans

Thickness of Sub-base, Surfacing and Asphaltic Pavement Materials as shown on plans is approximate only. These materials are to be placed on the basis of tonnage shown on plans.

All side approach roads shall be primed and paved with 2" of Asphaltic Surfacing to a distance out from edge of Asphaltic Surfacing as follows:

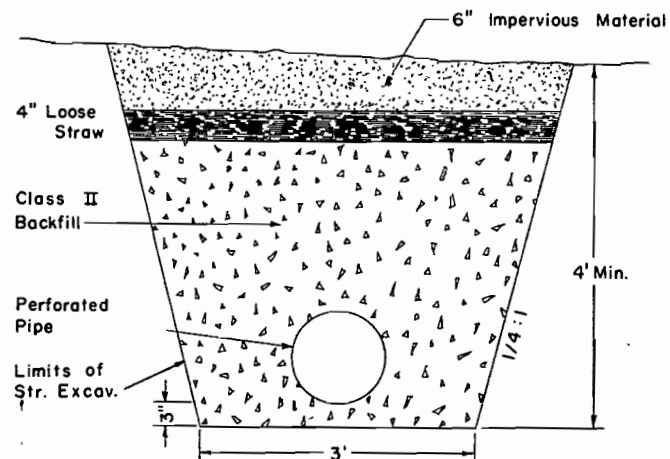
Field Approaches ----- 4ft.
 All other Approaches -- 50ft. or to the R.O.W. Line, whichever is less.

During construction of this project, traffic will use the present traveled roadway.

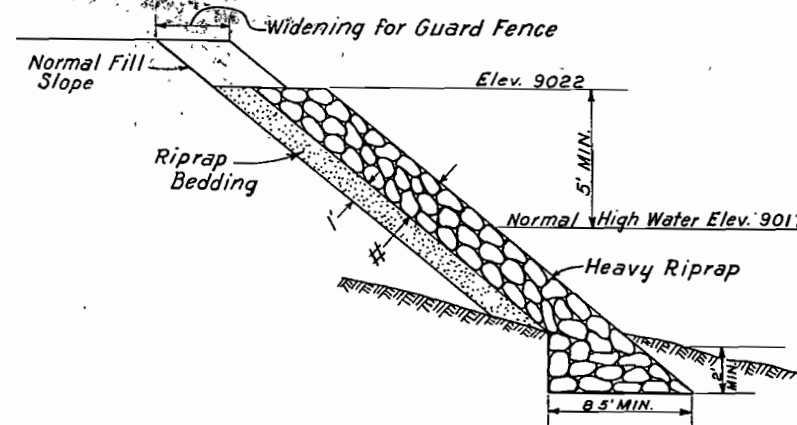
The Force Account Item "Clearing of Building Sites, Etc." shall include removal of all foundations, wells, outhouses and other appurtenances not removed by the owner, and any necessary backfilling of cellars, cesspools, wells, etc. to provide neat roadside conditions. It is estimated that this item applies at the following locations: Rt. & Lt. Sta. 25+ to Sta. 27+ & Rt. Sta. 200+

Pipes draining Embankment Protectors shall be covered in accordance with Paragraph 45.3.13 of Standard Specifications.

TYPICAL SECTION OF UNDERDRAIN



DETAILS OF RIPRAP AND RIPRAP BEDDING (FOR PROTECTION AROUND RESERVOIR)



#-2 on slope 2:1 or flatter
 3 on slope 1 1/2:1

It is estimated that material for Subbase and/or Surfacing for the project is available in the vicinity of the pit indicated in the following tabulations. Estimated quantities involved in these operations are shown below.

Alterations of the Subbase Plan and/or Surfacing Plan as here outlined will be allowed only on written permission from the Department.

SUBBASE PLAN

MATERIAL TO BE PLACED	SOURCE	AVAIL. CU. YDS.	"T" THICK- NESS APPROX. INCHES	QUANTITY		OVERHAUL
				CLASS-2 TONS	TON MILES	
0+00 to 55+00	Pit No. 1	100,000	4"	4,180		2,652
55+00 to 100+83.8 Bk.			4"	3,484		1,908
132+33.8 Ah. to 199+75	600 Ft. to Sta. 55+00		4"	5,123		8,300
199+75 to 202+75			"R" = 70+	4"	228	
202+75 to 204+65			4"	89		208
204+65 to 206+86.7			4"	34		81
Est. for Crest Widening				94		105
Estimated For:						
Approaches to Project				38		44
Irregularities in Subgrade				1,327		1,382
TOTAL				14,597		15,201

φ Based on Design Curve "D"

SURFACING PLAN

MATERIAL TO BE PLACED	SOURCE	AVAIL. CU. YDS.	QUANTITY TONS USED		OVERHAUL TON MILES	
			PLANT MIX	BASE COURSE	PLANT MIX	BASE COURSE
0+00 to 55+00	Pit No. 1	100,000	2,035	3,850	1,291	2,443
55+00 to 100+83.8 Bk.			1,696	3,209	929	1,758
132+33.8 Ah. to 199+75	600 Ft. to Sta. 55+00		2,494	4,719	4,041	7,645
199+75 to 202+75			"R" = 79+	111	210	254
202+75 to 204+65			45	83	105	194
204+65 to 206+86.7			19	34	45	81
Estimated Overhaul on Shoulder Roll (For Location and quantity see Shoulder Roll Tabulation)					189	
Approaches to Project			19	35	22	41
From List of Structures			109	317	228	600
TOTAL			6,528	12,457	7,104	13,242

GUARD POSTS & GUARD FENCE

STATION	SIDE	SPACING	GUARD POSTS	GUARD FENCE	STATION	SIDE	SPACING	GUARD POSTS	GUARD FENCE
			NO.	LIN. FT.				NO.	LIN. FT.
0+ to 17+49	Rt.	5° Curve	26		89+30	Rt.	Culvert	1	
5+50	Lt.	Culvert	1		96+81 to 141+87	Rt.	6° Curve	19	
12+60 to 27+81	Lt.	9° Curve	26		149+24 to 155+31	Lt. & Rt.	6° Curve	12	
15+00	Rt. & Lt.	Culvert	2		181+25 to 192+13	Lt.	6° Curve	14	
27+02	Rt. & Lt.	Culvert	2		193+95 to 199+35	Lt.	6° Curve	10	
32+00 to 36+50	Rt.			450	185+05 to 186+73	Rt.	6° Curve	3	
36+40	Lt.	Culvert	1		193+35 to 195+75	Rt.	6° Curve	5	
37+00 to 37+50	Rt.	50	2		202+75 to 206+75	Rt.	100'	5	
39+50 to 40+00	Rt.	50	2						
40+50 to 53+00	Rt.			1,250					
53+50 to 54+50	Rt.	50	3						
55+00 to 62+00	Rt.			700					
57+40 to 63+64	Lt.	8° Curve	13						
62+50 to 72+75	Rt.	8° Curve	15						
83+28 to 132+70	Lt.	8° Curve	27						
TOTAL								189	2,400

R.O.W. MARKERS

STATION	SIDE	NO.
T.S. 0+00	Lt. & Rt.	2
S.T. 12+31.7	" "	2
T.S. 16+80.0	" "	2
S.T. 27+02.2	" "	2
T.S. 37+34.4	Lt.	1
S.T. 44+14.1	"	1
T.S. 48+79.9	Lt.	1
T.S. 53+81.1	Lt.	1
S.T. 68+20.9	Lt. & Rt.	2
T.S. 87+69.1	Lt. & Rt.	2
T.S. 132+33.8 Ah.	" "	2
T.S. 141+57	" "	2
S.T. 150+44	" "	2
168+50 (Tang.)	" "	2
T.S. 186+13.6	" "	2
S.T. 199+36.5	" "	2
TOTAL		28

FENCING REQUIREMENTS

STATION	SIDE	REMOVE FENCE LIN. FT.	BUILD FENCE		GATES	
			BARBED WIRE LIN. FT.		BARBED WIRE EACH	
0+ to 6+	Lt. & Rt.	1,200				
27+65	X	125				
28+25	X	150				
38+45	X	170				
50+ to 52+	Rt.	230				
171+00	X	610				
178+70	X	125				
191+90	X	160				
0+00 to 28+75	Rt.		2,960			
167+75 to 192+30	Rt.		2,430			
0+00 to 55+81.1	Lt.		5,480			
173+75 to 191+30	Lt.		1,785			
176+10	Lt. & Rt.				2	
180+50	Lt. & Rt.				2	
TOTALS		2,770	12,655		4	