

FED. ROAD DIST. NO.	STATE	F.A.P. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78 (2)	1	

Rev. 6-15-29 W.H.H.

Rev. 6-14-40 W.H.H.

S. of Minturn

CONVENTIONAL SIGNS

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

INDEX OF SHEETS

1. SKETCH MAP AND TITLE SHEET
2. TYPICAL SECTION AND SUMMARY OF APPROXIMATE QUANTITIES
- 3-4. LIST OF STRUCTURES
- 5-6. DETAILS OF RETAINING WALLS STA. 99+ & 105+
- 6A. PRECAST CONCRETE CRIBBING ALTERNATE
7. 75' MULTIPLE PLATE CORR. METAL CULVERT STA. 131+
8. STANDARD HEADWALLS FOR C.M.P. CULVERTS
9. TIMBER GUARD POSTS
10. WIRE CABLE GUARD FENCE
11. deleted
12. STANDARD MARKER POSTS
13. PICKET SNOW FENCE WITH STEEL POSTS
14. METHODS FOR SUPERELEVATION & WIDENING OF CURVES
15. TYPICAL SIDE APPROACH ROADS - ROADWAY CONSTRUCTION TRAFFIC SIGNS
- 16-21. PLAN AND PROFILE SHEETS
- 22-156. CROSS SECTION SHEETS

M-102-E

M-19-B

M-20-B

M-7-B

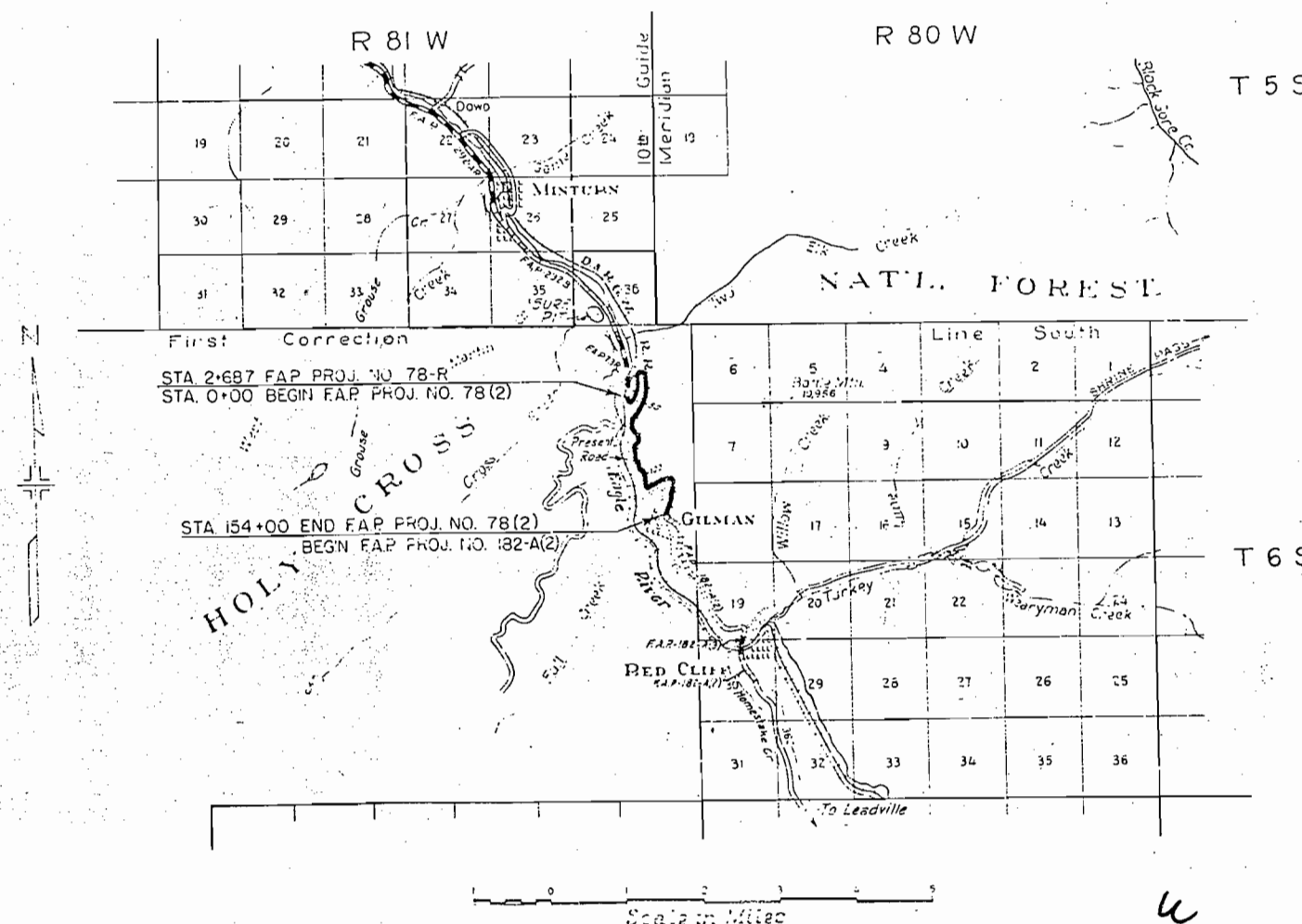
M-25-B

M-1-B

M-2-B

COLORADO STATE HIGHWAY DEPARTMENT PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. 78 (2) STATE HIGHWAY NO. 24 EAGLE COUNTY

SCALES OF 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 14,977.0 FT. = 2.835 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 the department.
D.W. Ormsbee Construction Engineer Denver
H.L. Jenness Division Glenwood Springs
H.E. Rowbotham Resident Red Cliff

RECOMMENDED FOR APPROVAL
Assistant Engineer

APPROVED
State Highway Engineer

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

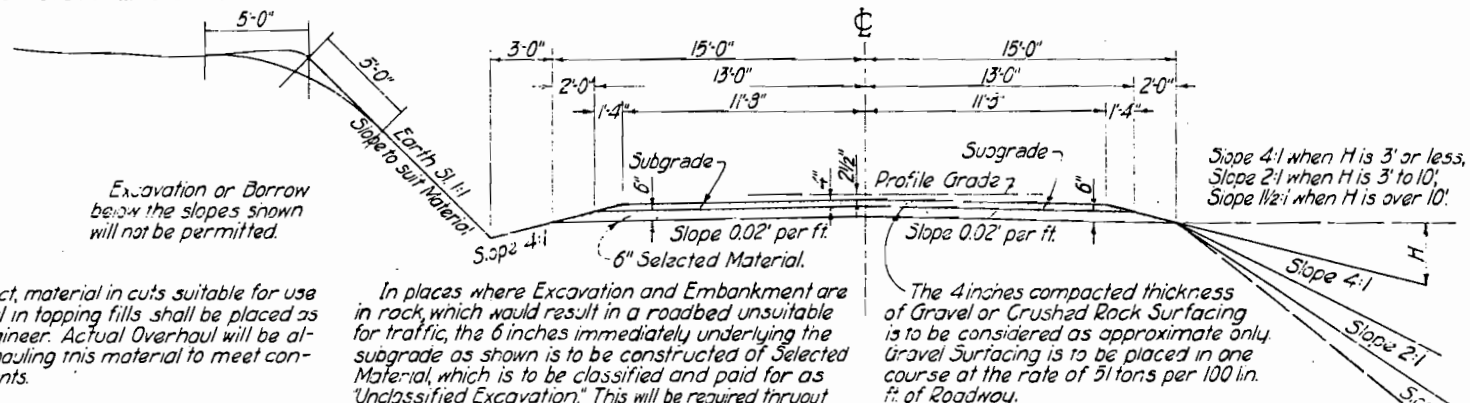
The intersection of Cut Slopes with the existing ground shall be rounded in earth cuts, beginning 5 ft. outside the slope stakes and extending 5 ft. down the cut slope. Where the Cut Slope is less than 5 ft. reduce each of the above widths of Slope Treatment to the actual slope distance. Quantities involved in Slope Treatment shall be included in "Unclassified Excavation."

TYPICAL CROSS SECTION OF IMPROVEMENT AND SUMMARY OF QUANTITIES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78 (2)	2	

Revised 6-9-39. H.M.M.
Rev. 6-19-39

TYPICAL CROSS SECTION



Throughout this Project, material in cuts suitable for use as Selected Material in topping fills shall be placed as directed by the Engineer. Actual Overhaul will be allowed and paid for hauling this material to meet construction requirements.

In places where Excavation and Embankment are in rock, which would result in a roadbed unsuitable for traffic, the 6 inches immediately underlying the subgrade as shown is to be constructed of Selected Material, which is to be classified and paid for as "Unclassified Excavation." This will be required thruout the entire project.

The 4 inches compacted thickness of Gravel or Crushed Rock Surfacing is to be considered as approximate only. Gravel Surfacing is to be placed in one course at the rate of 51 tons per 100 lin. ft. of Roadway.

GENERAL NOTES

This Project is to be constructed in accordance with the Standard Specifications of the Colorado State Highway Department, adopted June 1, 1937.

All Quantities on Preliminary Plans are to be considered approximate only.

Throughout the entire project shooting shall be done in such a manner as to avoid damaging timber beyond clearing limits.

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 "Embankment," 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 and widened as provided for by the Standard and Superelevation Sheet included with Plans.

The inlet ends of all Corrugated Metal Pipe Cross Culverts are to be protected with Standard Concrete Headwalls or Dry Rubble Masonry as noted in the "List of Structures" and on Plan and Profile Sheets. Dry Rubble Masonry for inlet protection shall be placed as directed by the Engineer to fit Construction requirements. Material excavated for Inlets shall be used for dikes or otherwise placed as directed by the Engineer. Quantities of Dry Rubble Masonry and Inlet Excavation shown in the "List of Structures" are approximate only and subject to adjustment to fit actual requirements encountered on Construction.

All Poles encroaching on Construction are to be moved by Owners.

Except as otherwise noted on the Plans, Overhaul will be paid for as measured along the center line of the Project.

All side approach roads to the Project shall be gravel surfaced with a 4" thickness of Gravel or Crushed Rock Surfacing" extending approximately 30 ft. from edge of highway. Estimated tonnage of surfacing material required in this operation is shown in the "List of Structures."

During construction of this Project, Traffic will use the present traveled Roadway. At all places on the Project where new construction encroaches on the present road, traffic must be adequately provided for at the Contractor's expense. Also the Contractor shall construct and maintain all temporary approaches to and crossings of intersecting roads.

The ends of Corrugated Metal Culvert Pipes, which are not provided with headwalls, shall be covered with approximately six (6) inches of material in such manner that a minimum of metal shall be exposed in the completed work. This shall be accomplished by warping embankment slopes around and adjacent to the culvert.

The Right of Way shall be cleared between cut slope stakes and a line approximately 10 feet inside fill slope stakes before grading operations commence. After completion of grading work, the Right of Way shall be cleared to 15 feet outside of the cut slopes and to the toe of fills on fill slopes. Trees inside of toes of fill slopes shall be cut off flush with fill slopes after embankments are completed. Any trees interfering with visibility shall be removed as directed by the Engineer.

GRAVEL OR CRUSHED ROCK SURFACING

Gravel Surfacing Material for surfacing operations is to be obtained from pit located 18 miles northwest of Sta. 2+00 or from pit in the vicinity thereof. This pit is located in the S.W. 1/4, Sec. 36, Twp. 4 S., R. 31 W. Estimated Quantities involved in surfacing operations are:-
Gravel or Crushed Rock Surfacing, 3500 tons.
Overhaul of Surfacing, 19000 ton mi.

METAL PLATE GUARD FENCE

STA. TO STA.	SIDE	LIN. FT.
8+00 - 10+00	L	200
17+20 - 21+45	L	425
18+00 - 21+80	R	300
36+25 - 39+00	R	275
37+65 - 39+90	L	125
39+90 - 40+90	R	100
41+75 - 44+75	R	300
42+90 - 44+15	L	125
46+25 - 53+25	R	700
54+00 - 56+75	R	275
53+00 - 65+36.6	R	675
67+30 - 73+50	R	650
70+50 - 71+75	L	125
75+30 - 81+30	R	550
85+75 - 90+75	R	500
91+50 - 93+75	R	225
96+15 - 98+15	L	200
99+60 - 102+60	R	300
103+50 - 107+26	R	375
108+50 - 110+25	R	175
113+50 - 120+97.1	R	700
121+50 - 125+25	R	375
125+75 - 133+25	R	750
130+00 - 132+25	L	225
136+70 - 140+95	R	425
152+00 - 153+25	R	125
TOTAL		9200

SELECTED MATERIAL

It is estimated 6" of Selected Material will be required on subgrade thruout the Entire Project. Selected Material shall be placed at the approximate rate of 60 cu yds. per 100 lin. ft. of Roadway. This Material will be available on the Highway Right of Way, and is to be classified and paid for as "Unclassified Excavation." Estimated Quantities involved:- 9300 cu yds. of Selected Material, 50000 sta yds, and 1000 yd. mi. Overhaul.

TIMBER GUARD POSTS

STA. TO STA.	SIDE	NO.	STA. TO STA.	SIDE	NO.
4+45	R	1	82+70	L	1
8+80	R	1	81+50 - 85+70	R	22
10+20 - 12+00	L	35	96+30	L	1
12+00 - 13+00	R	6	101+55	L	1
14+70	R	1	105+40	L	1
17+00	R	1	113+40	L	1
30+75	L	1	126+90	L	1
31+20 - 36+00	R	25	134+50 - 136+50	R	11
37+65	L	1	137+55	L	1
34+65	L	1	141+55	L	1
40+35	L	1	143+45	L	1
47+05	L	1	145+55	L	1
49+55	L	1	148+55	L	1
60+00	L	1	151+65	L	1
64+05	L	1	141+15 - 151+75	R	54
68+05	L	1	110+45	L	1
74+55	L	1	125+30	L	1
78+05	L	1			
TOTAL		183			

POSTS 20' C. TO C.

SUMMARY OF APPROXIMATE QUANTITIES

NO.	ITEM	UNIT	ROADWAY
10a	Clearing & Grubbing Entire Project	Lp. Sum	
13c	Unclassified Excavation	Cu. Yd.	400000
14a	Dry Rock Excavation (Structural)	Cu. Yd.	1350
14b	Dry Com. Excavation (Structural)	Cu. Yd.	2000
14c	Wet Rock Excavation (Structural)	Cu. Yd.	150
14d	Wet Com. Excavation (Structural)	Cu. Yd.	250
18a	Station Yard Overhaul	Sta. Yd.	150000
18b	Yard Mile Overhaul	Yd. Mi.	20000
26a	Gravel or Crushed Rock Surfacing	Ton	8500
26c	Overhaul of Surfacing	Ton. Mi.	19000
46a	Class "A" Concrete	Cu. Yd.	22
46b	Class "B" Concrete	Cu. Yd.	34
47	Reinforcing Steel	Lb.	800
53c	24" Corrugated Metal Culvert Pipe	Lin. Ft.	2210
53e	36" Corrugated Metal Culvert Pipe	Lin. Ft.	410
53g	48" Corrugated Metal Culvert Pipe	Lin. Ft.	62
53h	54" Corrugated Metal Culvert Pipe	Lin. Ft.	484
53j	72" Corrugated Metal Culvert Pipe	Lin. Ft.	94
53cx	24" Asphalt Coated Cor. Metal Culvert Pipe	Lin. Ft.	340
53gx	48" Asphalt Coated Cor. Metal Culvert Pipe	Lin. Ft.	420
57x	78" Multiple Plate Cor. Metal Pipe Culvert	Lin. Ft.	235
63a	Rip Rap	Cu. Yd.	240
72x	6" Perforated Cor. Metal Pipe Underdrain	Lin. Ft.	136
74x	Timber Guard Posts	Each	183
75x	Metal Plate Guard Fence	Lin. Ft.	9200
77	Picket Snow Fence	Lin. Ft.	1316
81a	Project Markers	Each	1
81b	Right of Way Markers	Each	70
11c	Removal of 1 Structure	Lp. Sum	
12a	Removing Fence	Lin. Ft.	500
12c	Removing & Rebuilding Guard Fence	Lin. Ft.	150
50	Dry Rubble Masonry	Cu. Yd.	49
130a	5'-6" Metal Cribbing Stretchers	Each	127
130b	6'-0" Metal Cribbing Stretchers	Each	115
130c	7'-6" Metal Cribbing Stretchers	Each	178
130d	8'-0" Metal Cribbing Stretchers	Each	210
130f	4'-0" Metal Cribbing Headers	Each	22
130g	6'-0" Metal Cribbing Headers	Each	189
130h	8'-0" Metal Cribbing Headers	Each	132
FORCE ACCOUNT			
Benching Fill Slopes			
Moving Power Line, Sta. 8+40 to 11+40			
Moving Telephone Line, Sta. 3+ to 65+ Sta. 72+ to 76+ Sta. 121+ and Sta. 144+ to 147+			
FORCE ACCOUNT - NOT RECEIVING FEDERAL AID			
Moving Power Line, Sta. 49+ to 154+			
ALTERNATE BIDS WILL BE RECEIVED ON "PRECAST CONCRETE CRIBBING" AND "METAL CRIBBING" FOR RETAINING WALLS AS SHOWN ON THE PLANS.			
As an alternate for Item No. 130 in the foregoing summary, bids will be received on the following items involving the construction of Retaining Wall using Precast Concrete Cribbing.			
63a	6'-0" Precast Concrete Cribbing Stretchers	Each	30
63b	6'-3" Precast Concrete Cribbing Stretchers	Each	15
63c	8'-0" Precast Concrete Cribbing Stretchers	Each	394
63d	8'-3" Precast Concrete Cribbing Stretchers	Each	204
63f	4'-0" Precast Concrete Cribbing Headers	Each	39
63g	6'-0" Precast Concrete Cribbing Headers	Each	202
63h	8'-0" Precast Concrete Cribbing Headers	Each	89

Rev 6-9-39 W.V.H. Rev 6-9-39 W.V.H.

Rev 6-9-39 W.V.H. Rev 6-9-39 W.V.H.

DETAILS OF ALTERNATE RETAINING WALLS

STA. 99+75 TO STA. 101+37, RT.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78 (2)	5	

Rev. 5-19-79.

The cost of backfilling crib walls to the top of wall as indicated and as specified in the Special Provisions shall be included in the original contract unit prices for "Stretchers" & "Headers" of the several sizes.

Approximate Quantities:-

Stretchers	6'-0"	8
7'-6"	95	
8'-0"	149	
Headers	4'-0"	22
6'-0"	117	

Structural Excav. 350 cu.yds

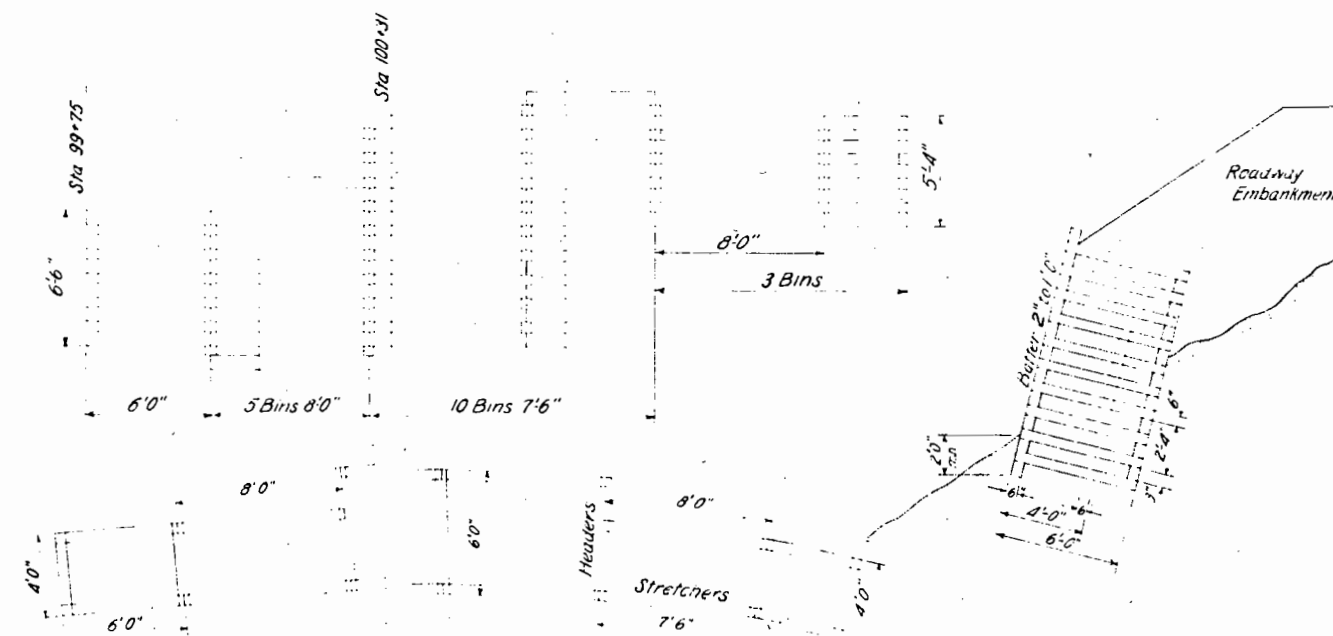
* Note:-

Necessary step-back headers, header spacers, and header inserts shall be furnished and installed as a part of the cost of "Metal Cribbing Headers".

All stretcher caps, header caps, bolts, fittings and accessories required to make complete wall installation shall be furnished and installed by the contractor and the cost thereof included in the contract prices for the several "Metal Cribbing" bid items.

Note:- The approximate layout for Crib Retaining Walls is indicated in Plan view. The approximate number of sections are shown in elevation. Adjustments of height and depth may be made by the Engineer to fit actual conditions encountered on the construction.

Curved Portions of retaining walls are constructed by using shorter stretchers in front of walls than used in back.



METAL CRIB RETAINING WALL

See Sheet #6 for Joint Detail.

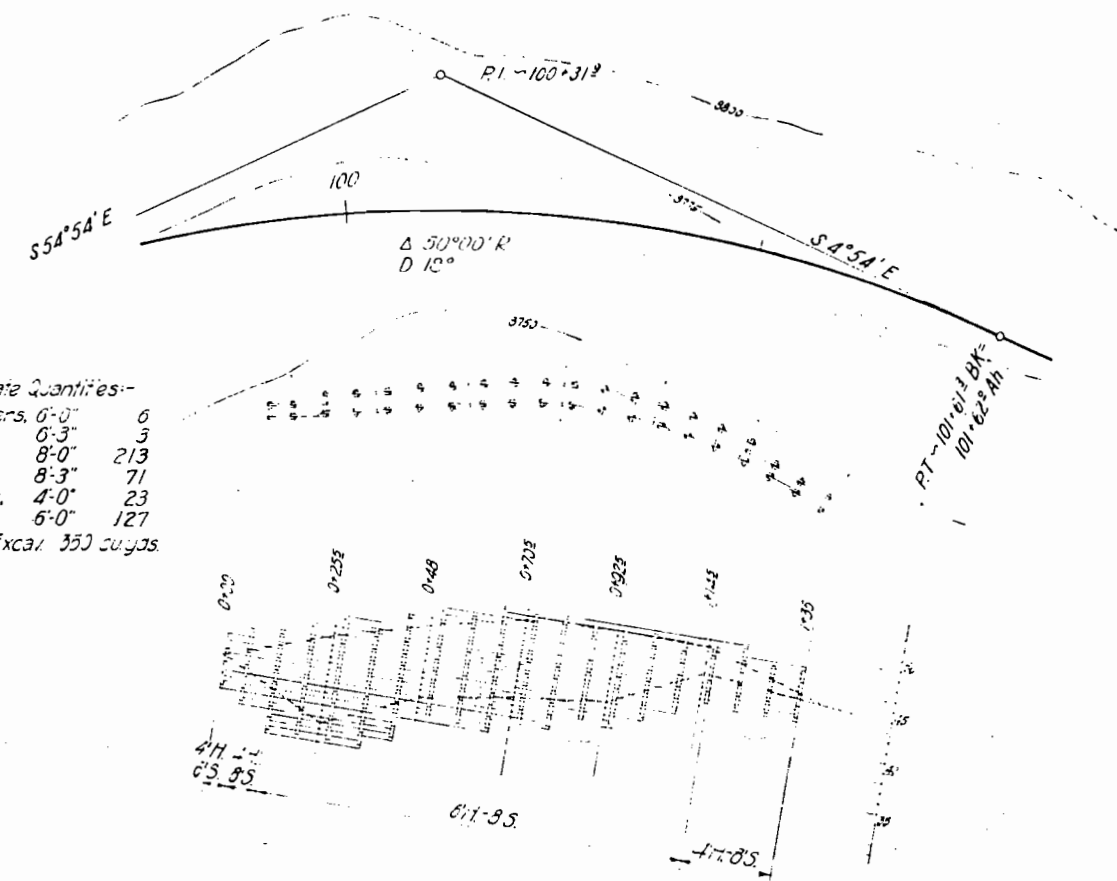
Approximate Quantities:-

Stretchers	6'-0"	6
6'-3"	5	
8'-0"	213	
8'-3"	71	
Headers	4'-0"	23
6'-0"	127	

Struct. Excav. 350 cu.yds

NOTE:-

Alternate bids will be received on the unit quantities of alternate walls as shown. The Department will specify type or types of walls to be constructed at several locations before construction of walls is started. The Department reserves the right to materially increase or decrease the quantities indicated, or to eliminate the walls entirely in order to meet actual construction requirements. The location of all retaining walls and foundations of walls shall be approved by a representative of the Denver Office before construction of walls is commenced and before materials are ordered.



PRECAST CONCRETE CRIB RETAINING WALL

See Sheet #6 & 6A for Additional Details.

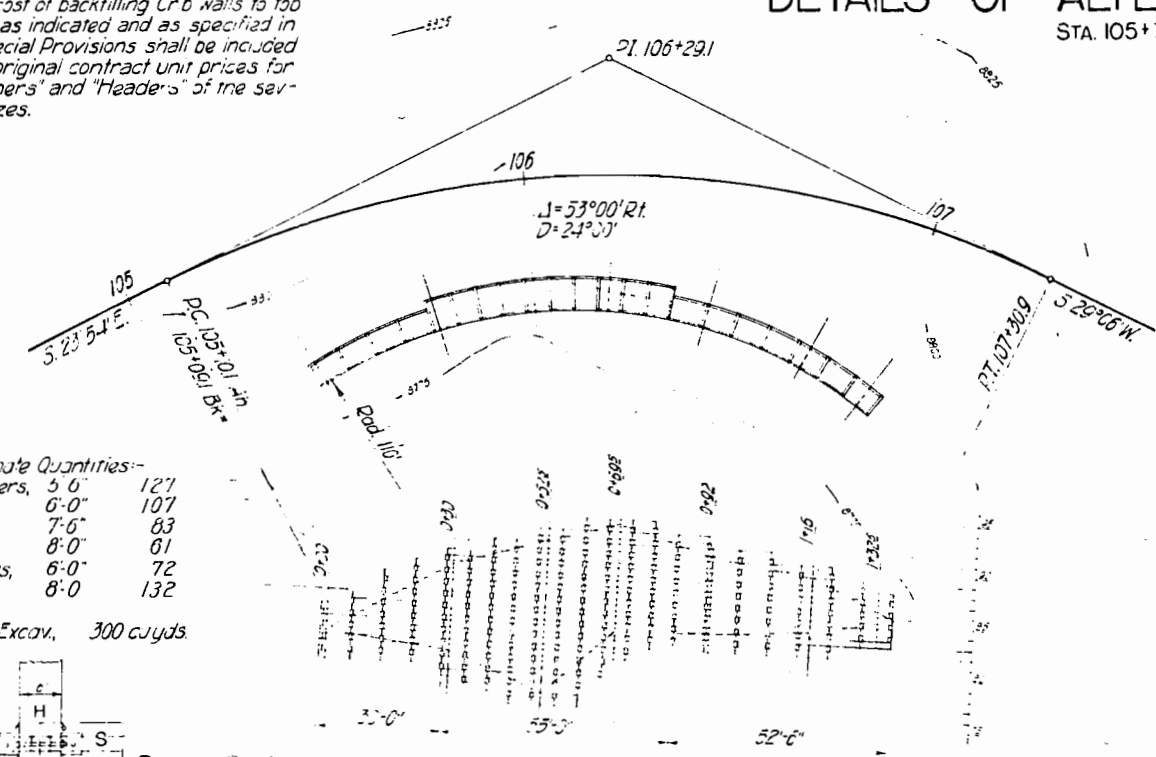
DETAILS OF ALTERNATE RETAINING WALLS

STA. 105+75 TO STA. 106+95, RT.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78 (2)	6	

Rev. 5-19-39

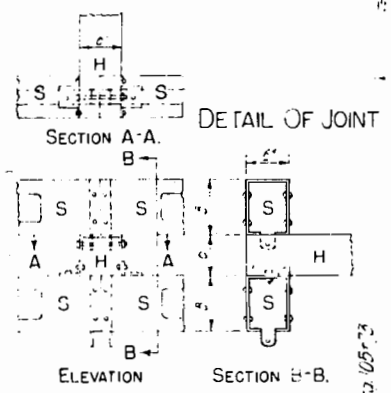
The cost of backfilling Crb walls to top of wall as indicated and as specified in the Special Provisions shall be included in the original contract unit prices for "Stretchers" and "Headers" of the several sizes.



Approximate Quantities:-

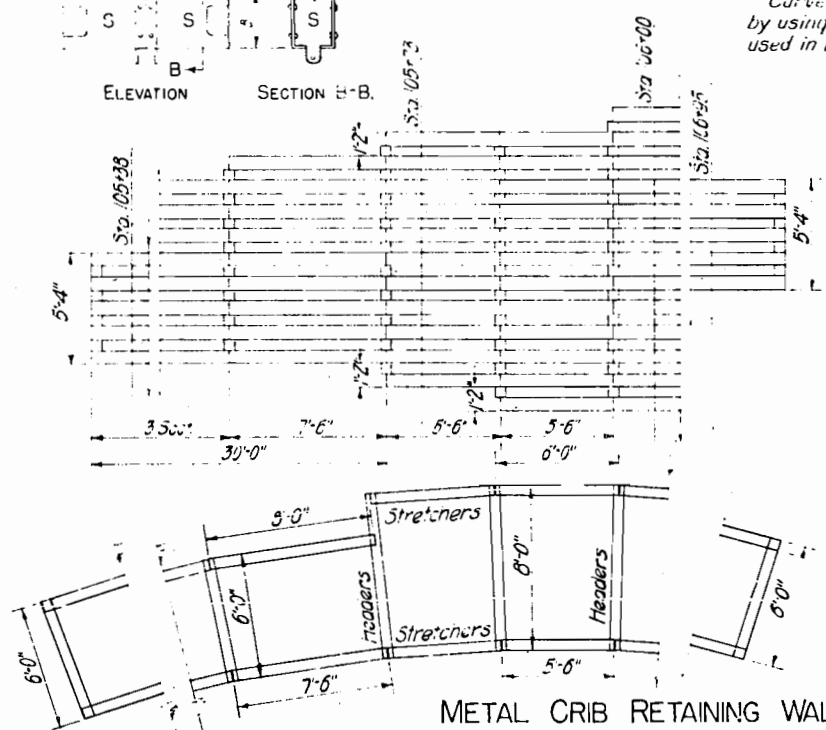
Stretchers, 5'-6"	127
" 6'-0"	107
" 7'-6"	83
" 8'-0"	81
Headers, 6'-0"	72
" 8'-0"	132

Struct. Excav. 300 cu yds.

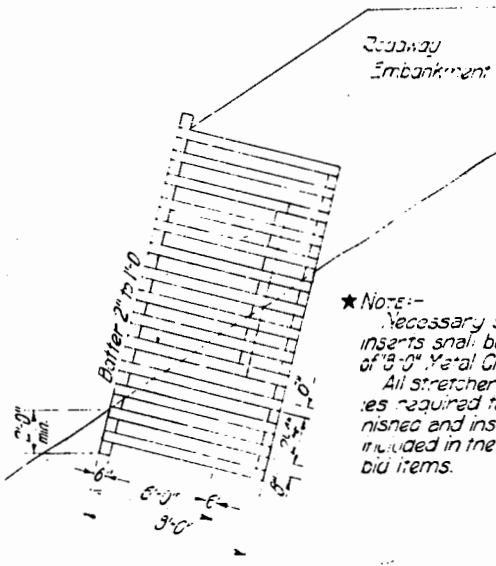


The approximate layout for Crib Retaining Walls is indicated in the Plan view. The approximate number of sections are shown in Elevation. Adjustments of height and depth may be made by the Engineer to fit actual conditions encountered on construction.

Curved Portions of retaining walls are constructed by using shorter stretchers in front of walls than used in back.



METAL CRIB RETAINING WALL

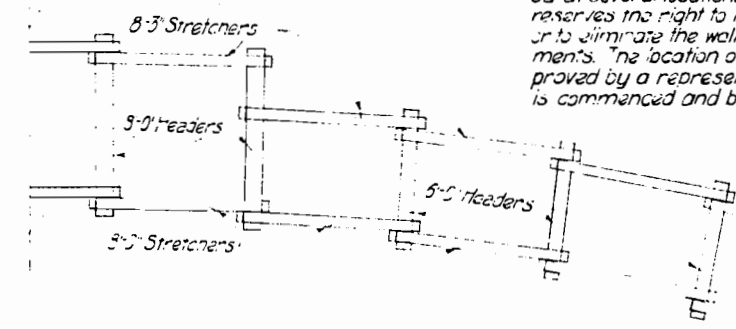
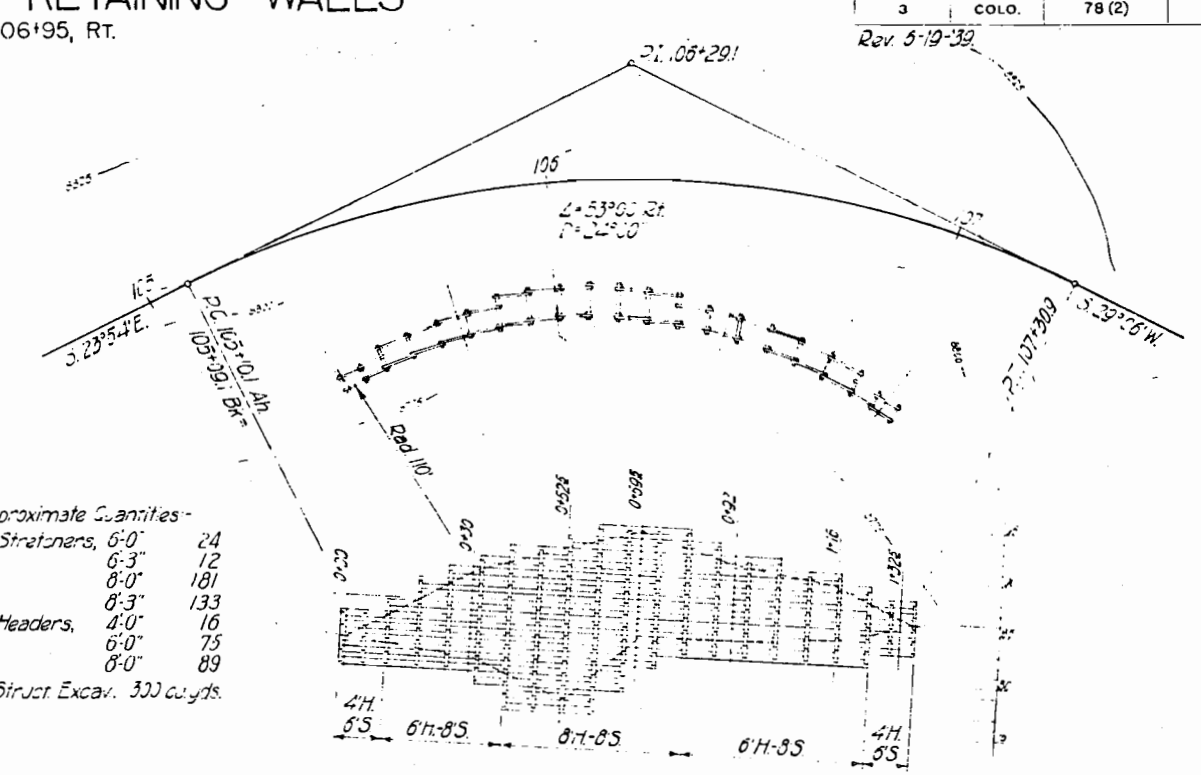


★ Notes:-
Necessary step-back headers, header spacers, and header inserts shall be furnished and installed as a part of the cost of 3'-0" Metal Cribbing Headers.
All stretcher caps, header caps, bolts, fittings and accessories required to make complete wall installation shall be furnished and installed by the contractor and the cost thereof included in the contract prices for the several "Metal Cribbing" bid items.

Approximate Quantities:-

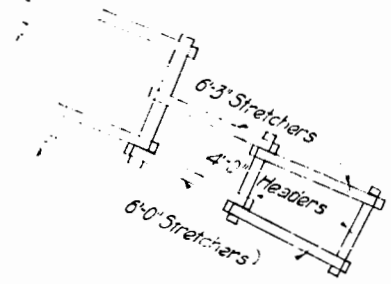
Stretchers, 6'-0"	24
" 6'-3"	12
" 8'-0"	181
" 8'-3"	133
Headers, 4'-0"	16
" 6'-0"	75
" 8'-0"	89

Struct. Excav. 300 cu yds.



TYPICAL CURVE LAYOUT

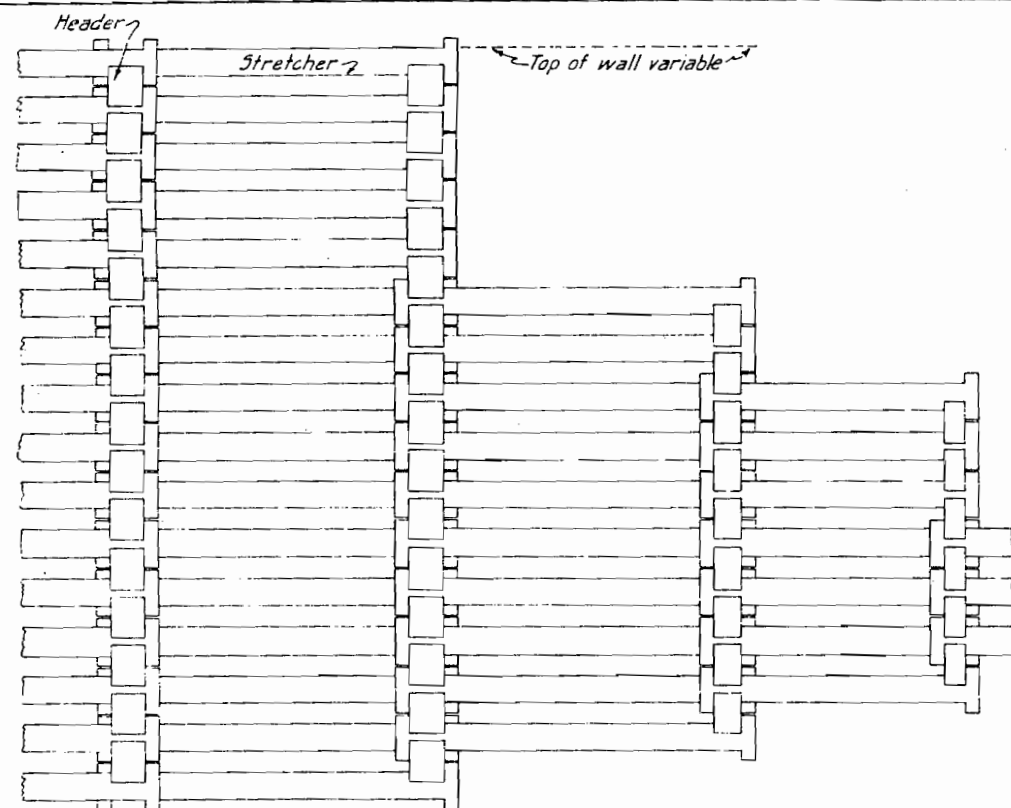
NOTE:-
Alternate bids will be received on the unit quantities of alternate walls as shown. The Department will specify type or types of walls to be constructed at several locations before construction of walls is started. The Department reserves the right to materially increase or decrease the quantities indicated, or to eliminate the walls entirely in order to meet actual construction requirements. The location of all retaining walls and foundations of walls shall be approved by a representative of the Denver Office before construction of walls is commenced and before materials are ordered.



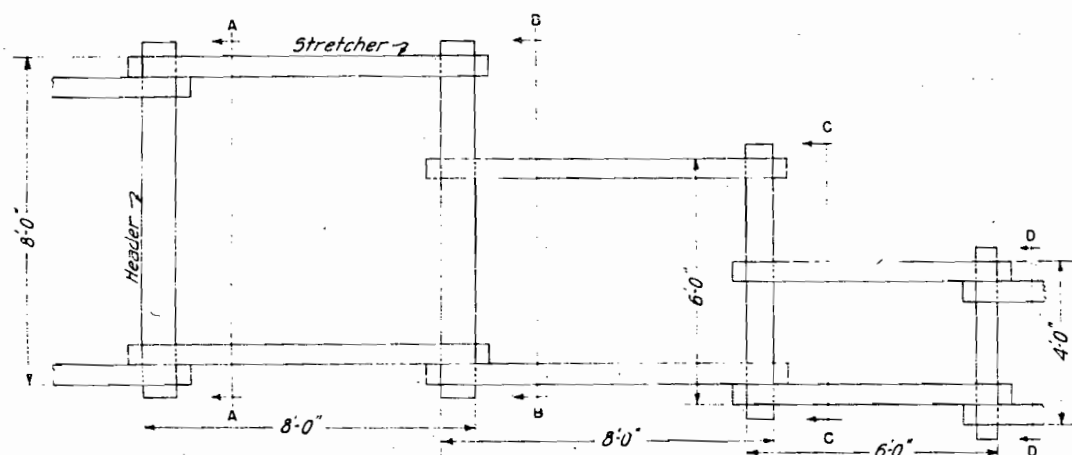
PRECAST CONCRETE CRIB RETAINING WALL
See Sheet "G A for Additional Details.

FED. ROAD DIST. NO.	STATE	F.A.P. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78(2)	6-A	

Rev. 6-19-39.

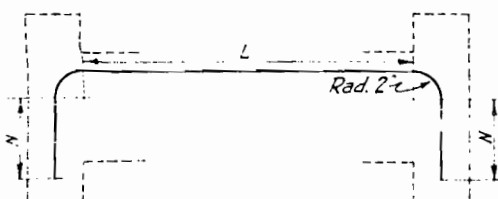


FRONT ELEVATION



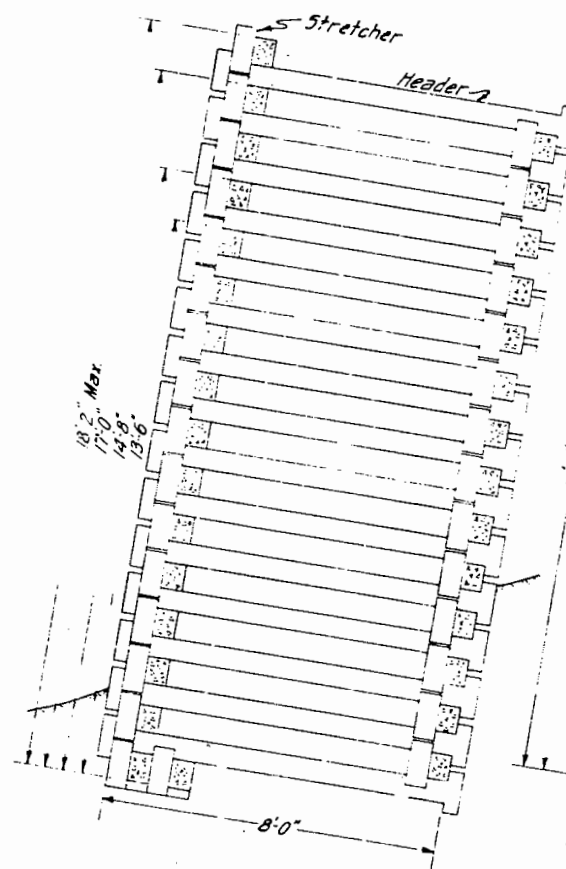
PLAN

BENDING DIAGRAM

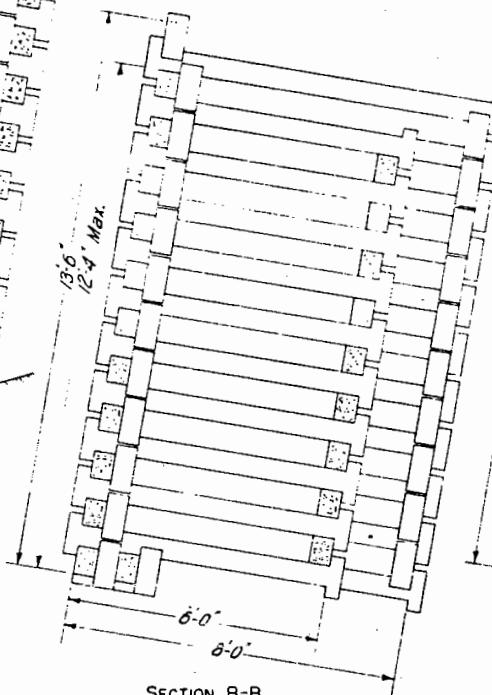


BAR LIST

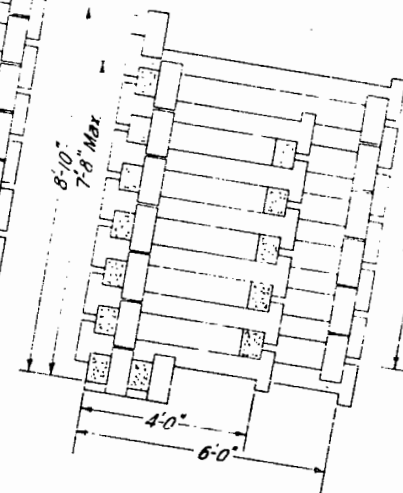
1/2" SQ. BARS	NO.	LENGTH	L	N	NO STRAIGHT BARS
4'-0" Stretcher	4	5'-6"	4'-0"	5 3/4"	2 @ 4'-5"
4'-3"	4	5'-9"	4'-3"	5 3/4"	2 @ 4'-8"
6'-0"	4	7'-6"	6'-0"	5 3/4"	2 @ 6'-5"
6'-3"	4	7'-9"	6'-3"	5 3/4"	2 @ 6'-8"
8'-0"	4	9'-6"	8'-0"	5 3/4"	2 @ 8'-5"
8'-3"	4	9'-9"	8'-3"	5 3/4"	2 @ 8'-8"
4'-0" Header	6	5'-3"	4'-0"	4 1/4"	None
6'-0"	6	7'-3"	6'-0"	4 1/4"	
8'-0"	6	9'-3"	8'-0"	4 1/4"	



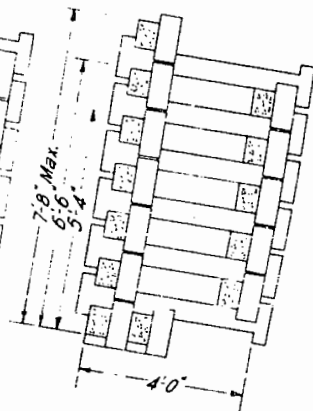
SECTION A-A



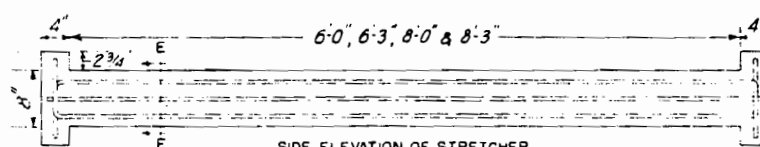
SECTION B-B



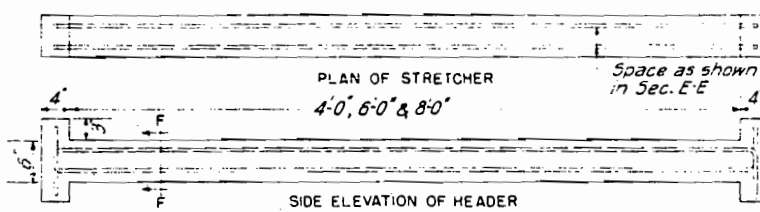
SECTION C-C



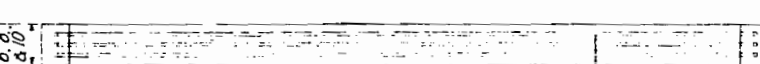
SECTION D-D



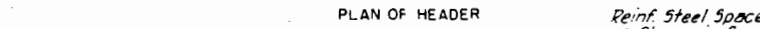
SIDE ELEVATION OF STRETCHER



PLAN OF STRETCHER



SIDE ELEVATION OF HEADER

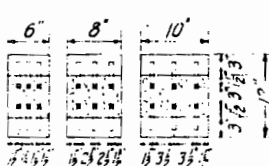


PLAN OF HEADER

Reinf. Steel Spaced as Shown in Sec. F-F



SECTION E-E



SECTION F-F

GENERAL NOTES

All Concrete shall be Class 'D' conforming to item 48 of the Standard Specifications.

On Curves, back Stretchers are 3' longer than front.

Use 2 Stretchers on bottom along outside of walls as indicated by sections above.

COLORADO
STATE HIGHWAY DEPARTMENT

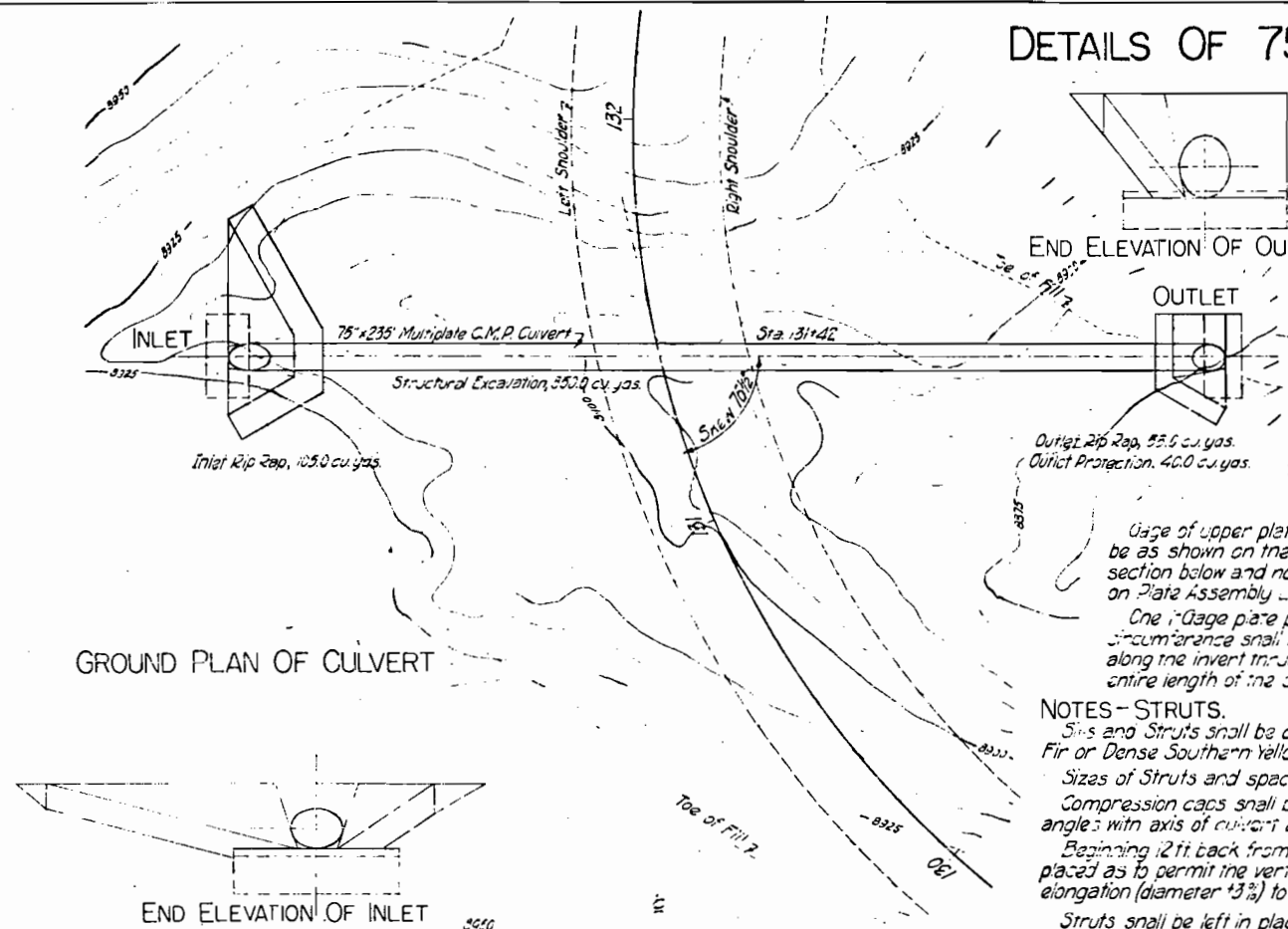
PRECAST
CONCRETE CRIBBING
ALTERNATE

DESIGNED BY	APPROVED BY
MADE BY WWH	
CHECKED BY	DATE

DETAILS OF 75"x235' MULTIPLE PLATE C.M.P. CULVERT STA. 131+42

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78(2)	7	

Rev. 6-19-39.
Rev. 7-13-39-H.M.M. Note.



END ELEVATION OF OUTLET

OUTLET

Outlet Rip Rap, 55.5 cu. yds.
Outlet Protection, 400 cu. yds.

Use of upper plates to be as shown on the cross section below and noted on Plate Assembly List.
One 1/4" gage plate per circumference shall be used along the invert throughout the entire length of the culvert.

NOTES - STRUTS.

Sills and Struts shall be of Select Structural Grade West Coast Doug fir or Dense Southern yellow Pine.

Sizes of Struts and spacing to be as shown above.

Compression caps shall be of soft wood placed with grain at right angles with axis of culvert and vertical elongation.

Beginning 12 ft. back from the ends of the pipe the strutting shall be so placed as to permit the vertical elongation to diminish uniformly from full elongation (diameter +3%) to zero at the ends of the pipe.

Struts shall be left in place until the fill has taken initial settlement and shall not be removed until completion of contract or until ordered removed by the Engineer. Struts shall be removed in such a manner as not to damage the pipe or the spelter coating of the plates.

Sizes of timber and length of struts given above are for full sized timber. If surfaced timber is used for strutting, the length of the struts shall be increased an amount sufficient to maintain the full vertical elongation as shown.

Strut spacing thruout the transition shall increase or decrease uniformly as shown in the detail above; 3'-6", 4'-0", 4'-6", 5'-0", 5'-6", 6'-0".

Upper End Section; 7 at 5'-0"

Transition; One each, 5'-6", 5'-0", 4'-6", 4'-0"

Midle Section; 24 at 3'-6"

Transition; One each, 4'-0", 4'-6", 5'-0", 5'-6"

Lower End Section; 10 at 5'-0"

DETAILS OF
RIP RAP AT INLET & OUTLET OF CULVERT
STRUTTING OF PIPE

GENERAL NOTES

The Department will accept for consideration, pipes designed on the basis of full circumferential seams and staggered longitudinal seams in place of arrangement shown.

Plates must be placed in conformity with the diagrams shown on this sheet.

The footage of the pipe to be paid for shall be measured along the center line of the pipe as indicated.

All Struts are to be as indicated on the layout for the culvert.

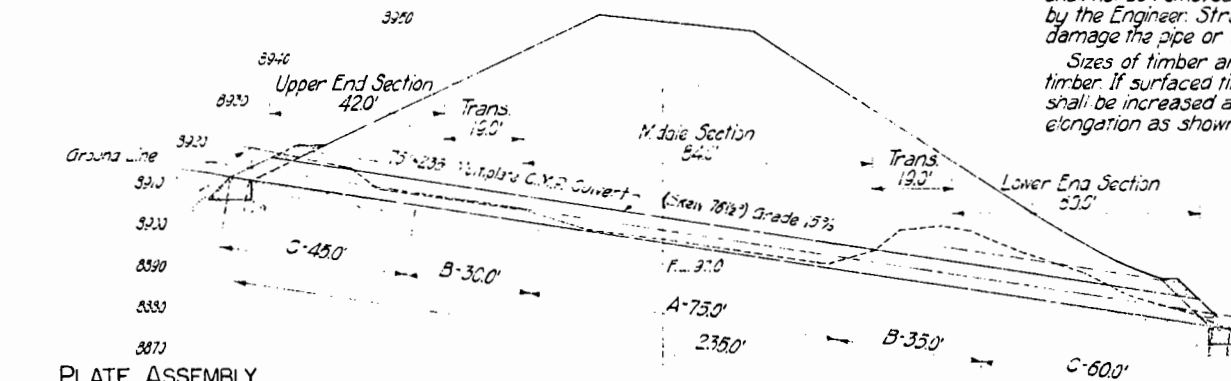
Bolts in circumferential seams shall be spaced not more than 12 inches apart, and bolts in longitudinal seams shall be placed in conformity with information given on the layout for the structure.

Multiple plate culverts shall not be laid on a soft base. In all cases where the sub-grade material is of a porous or spongy nature, a trench, the full diameter of the pipe, shall be excavated and backfilled with selected material. Before any pipe is placed, approval of the foundation must be obtained from the Denver Office of the Department.

The Contractor's attention is especially directed to any portion of the foundation where filling is required between ground and bottom of structure. Material approved by the Engineer shall be placed above the ground and thoroughly compacted in layers not exceeding six (6) inches in thickness to a height of one (1-0") ft. above the flow line of the structure and after compaction shall be excavated to the flow line of structure. Should the natural ground at this location prove unsuitable for filling on top of ground, this material shall be excavated to a depth necessary to reach suitable material and shall then be backfilled with material approved by the Engineer and be thoroly compacted as outlined above.

Headwall dimensions may be modified in the field to fit construction requirements. Rip Rap for Outlet protection shall be placed as stated by the Engineer.

Ends of pipe are to be cut on bevel slope of 1 1/2 to 1 with the pipe as indicated.



CROSS SECTION ON AXIS OF CULVERT

STA. 131+42

PLATE ASSEMBLY.

A-1, 1'-Ga. & 4, 3'-Ga. Plates per circumference.

B-1, 1'-Ga. & 4, 5'-Ga.

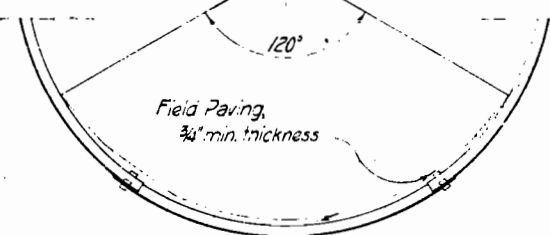
C-1, 1'-Ga. & 4, 7'-Ga.

NOTE - BOLTS.

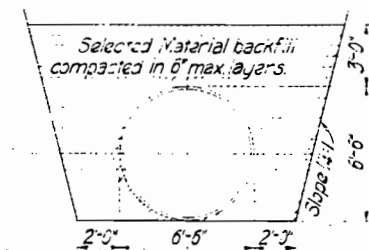
On this structure a sufficient number of bolts per lin. ft. of longitudinal seam shall be provided by the manufacturer and used in this structure to develop a minimum ultimate strength of 90000 lbs. in shear-tension per lin. ft. of longitudinal seam. A minimum of 4 bolts and a maximum of 8 bolts per lin. ft. of longitudinal seam shall be used.

NOTE - FIELD PAVING.

Field Paving required as indicated in the sketch and as specified after struts are removed. Minimum thickness of Field Paving three-fourths (3/4) inch above crests of corrugations and above all bolts with valleys of corrugations completely filled as indicated.



DETAIL OF FIELD PAVING



SECTION OF STRUCT. EXCAV.

Sta. 0+00-Reqd.-Project Marker.

D. & R.G.W.R.R.

T. 6 S. R. 81 W.
Unsurveyed.

Sta. 14+00-17+00-Reqd. 50 Cu. Yds. Uncl. Excav.
for Intercepting Ditch Rt.

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78(2)	16	

Revised-6-9-39-H.J.S.
Revised-6-19-39-H.J.S.

Sta. 22+25-41+00-Reqd.-400 Cu. Yds. Uncl. Excav.
for Intercepting Ditch. Lt. *

FORCE ACCOUNT-WORK BY TELEPHONE CO. FORCES.
Sta. 3+7-Reqd.-Move Telephone Line.

Sta. 2+00-5+90-Reqd.-80 Cu. Yds. Uncl. Excav.
for Intercepting Ditch Rt.

Sta. 19+50-Reqd.-24"x216' C.M.P. Cr. Culv. &
30 Cu. Yds. Uncl. Excav. for Ditches.
(Std. Hdwl.)(Asph. Coated C.M.P.)

P.I. 5+18.0

STA. 2+68.7-FED. AID PROJ.-78-R
STA. 0+00-BEGIN FED. AID PROJ.-78(2)

Sta. 1+50-Reqd.-50 Cu. Yds. Uncl. Excav. for
Road Appr. Rt.

Sta. 1+81-Reqd.-24"x50' C.M.P. Sd. Dr. Rt.

Sta. 4+50-Reqd.-24"x60' C.M.P. Cr. Culv. &
320 Cu. Yds. Uncl. Excav. for Ditches.
(Masonry Inlet)

Sta. 1+-2+-Reqd.-Rem. & Rebuild 50 lin. ft. Guard
Fence Rt.

Sta. 2+41-Reqd.-Rem. 370 lin. ft. B.W. Fence
across E.

CLEARING & GRUBBING
Sta. 1+50-37+00-Aspen & Brush.

Sta. 5+90-8+85-Reqd.-1700 Cu. Yds. Uncl.
Excav. for Intercepting Ditch Rt.

Sta. 9+00-Reqd.-72"x94' C.M.P. Cr. Culv.(Sk. 60°)
& 200 Cu. Yds. Uncl. Excav. for Ditches.
(Std. Hdwl.)

Sta. 12+35-Reqd.-36"x92' C.M.P. Cr. Culv. &
10 Cu. Yds. Uncl. Excav. for Inlet.
(Std. Hdwl.)

Sta. 14+70-Reqd.-24"x64' C.M.P. Cr. Culv.(Sk. 80°)
& 10 Cu. Yds. Uncl. Excav. for Inlet.
(Std. Hdwl.)

Sta. 17+19-Reqd.-48"x166' C.M.P. Cr. Culv.(Sk. 54°)
& 20 Cu. Yds. Uncl. Excav. for Ditches.
(Std. Hdwl.)(Asph. Coated C.M.P.)

TE:
alignment and grades shown hereon
subject to adjustment during con-
struction after approval by the Denver
Office.

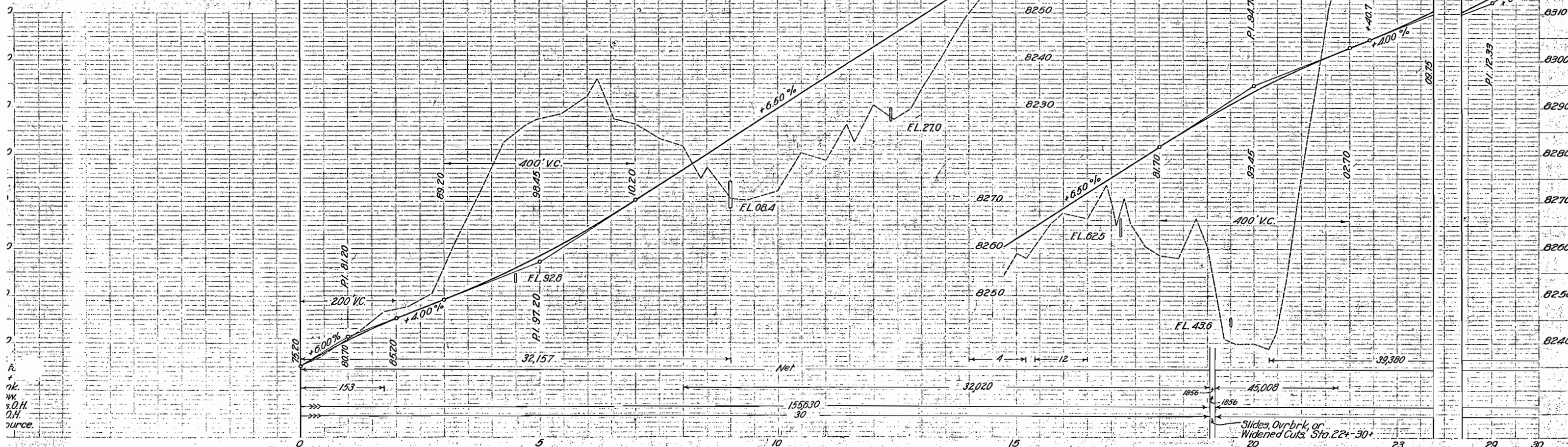
tal Plate Guard Fence & Timber Guard
fences are tabulated on Sheet #2

W. Markers are tabulated on Sheet #4

poles encroaching on construction are to
be moved by owners.

profile shown on plan sheets is taken from
four map projection sheets.

Coated Metal Culvert Pipe used at Stas.
19, 32+34 & 38+ shall be Asphalt Coated as
specified in the Special Provisions.



Sta. 30+70-Req'd-24"x56" C.M.P. Cr. Culv. &
100 Cu. Yds. Uncl. Excav. for Inlet.
(Masonry Inlet.) (Asph. Coat. C.M.P.)

Sta. 32+50-Req'd-48"x92" C.M.P. Cr. Culv. (Sk. 60")
& 50 Cu. Yds. Uncl. Excav. for Ditches.
(Std. Hdwl.) (Asph. Coated C.M.P.)

Sta. 34+50-Req'd-24"x68" C.M.P. Cr. Culv. &
30 Cu. Yds. Uncl. Excav. for Inlet.
(Std. Hdwl.) (Asph. Coated C.M.P.)

Sta. 38+35-Req'd-48"x162" C.M.P. Cr. Culv. &
50 Cu. Yds. Uncl. Excav. for Inlet.
(Std. Hdwl.) (Asph. Coated C.M.P.)

Sta. 40+30-Req'd-24"x64" C.M.P. Cr. Culv. &
110 Cu. Yds. Uncl. Excav. for Inlet.
(Masonry Inlet.)

Sta. 41+00-71+50-Req'd-600 Cu. Yds. Uncl. Excav.
for Intercepting Ditch. Lt.

Sta. 43+65-Req'd-54"x244" C.M.P. Cr. Culv. (Sk. 80")
& 20 Cu. Yds. Uncl. Excav. for Ditches.
(Std. Hdwl.)

Sta. 47+00-Req'd-24"x76" C.M.P. Cr. Culv. &
80 Cu. Yds. Uncl. Excav. for Inlet.
(Masonry Inlet.)

Sta. 49+50-Req'd-24"x126" C.M.P. Cr. Culv. &
10 Cu. Yds. Uncl. Excav. for Inlet.
(Std. Hdwl.)

Sta. 54+50-Req'd-24"x46" C.M.P. Cr. Culv. &
300 Cu. Yds. Uncl. Excav. for Inlet.
(Masonry Inlet.)

Sta. 59+60-Req'd-24"x156" C.M.P. Cr. Culv. (Sk. 30")
& 120 Cu. Yds. Uncl. Excav. for Ditches.
(Masonry Inlet.)

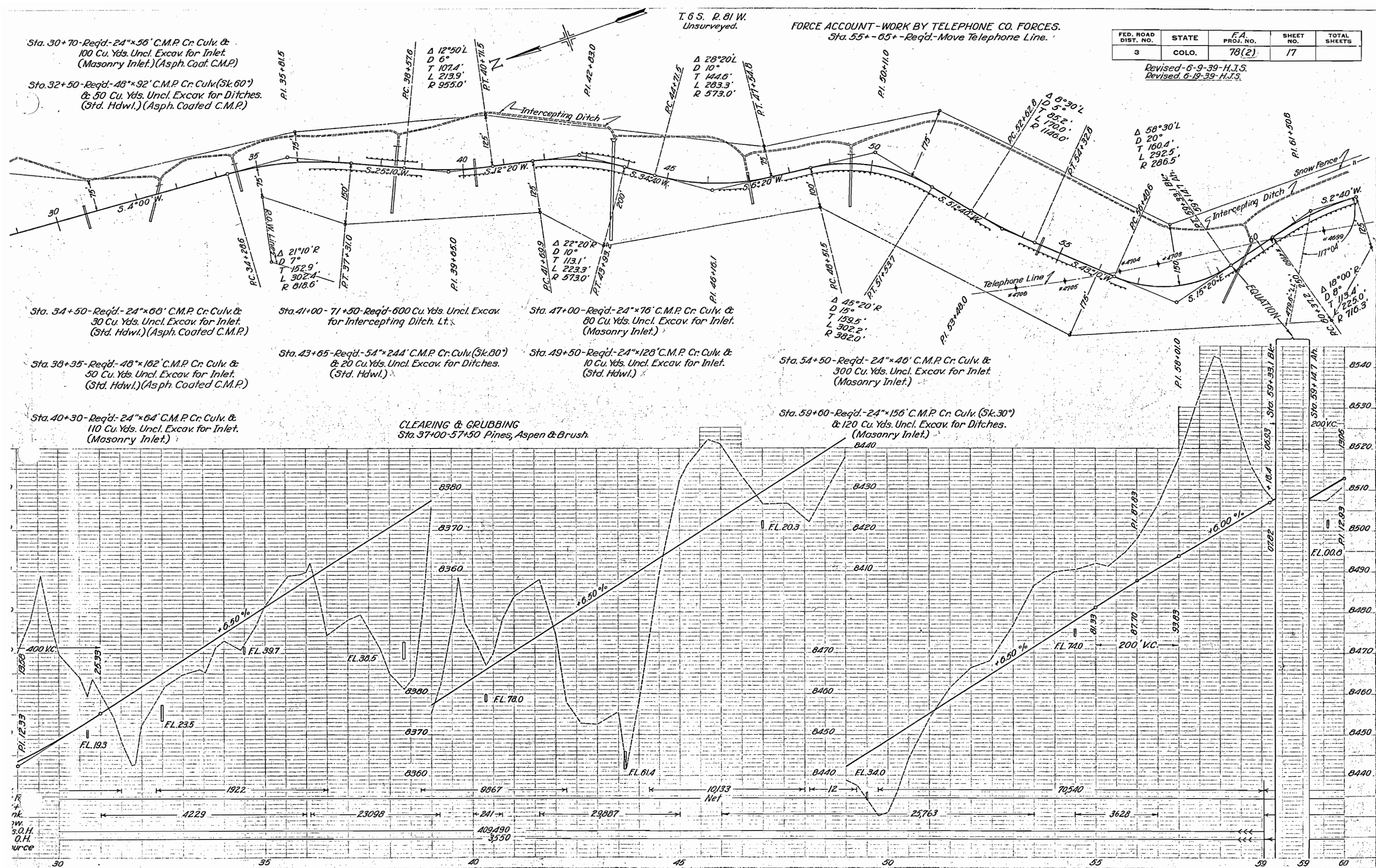
CLEARING & GRUBBING
Sta. 37+00-57+50 Pines, Aspen & Brush.

T. 6 S. R. 81 W.
Unsurveyed.

FORCE ACCOUNT-WORK BY TELEPHONE CO. FORCES.
Sta. 55+ - 65+ - Req'd- Move Telephone Line.

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78(2)	17	

Revised-6-9-39-H.J.S.
Revised-6-19-39-H.J.S.

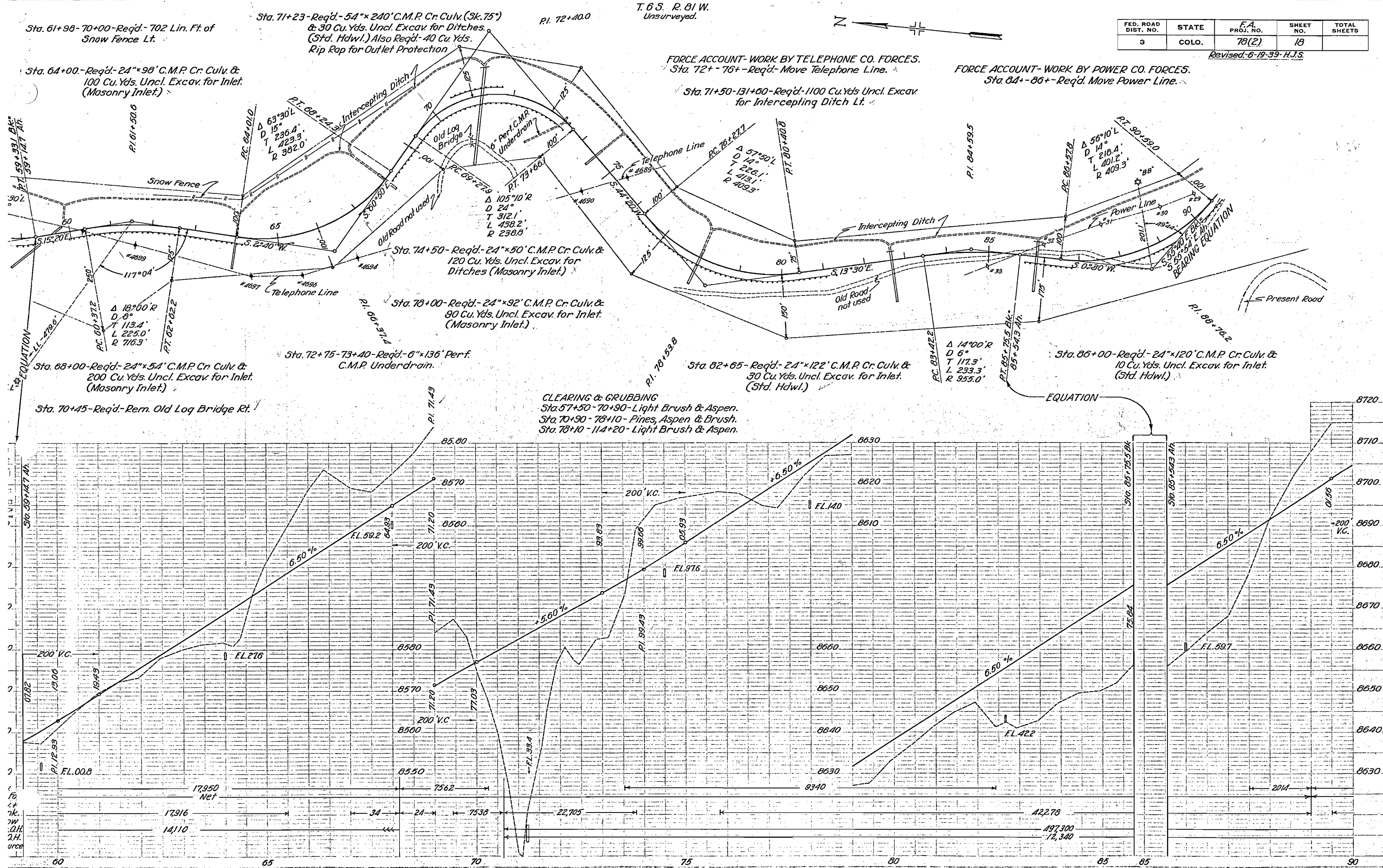


FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78(2)	18	

Revised: 6-19-39- H.J.S.

FORCE ACCOUNT-WORK BY TELEPHONE CO. FORCES.
Sta 72+-76+-Pea'd-Move Telephone Line.

FORCE ACCOUNT-WORK BY POWER CO. FORCES.



(FORCE ACCOUNT-WORK BY POWER CO. FORCES)
Sta. 90+33-Reqd. Move Power Line.

(FORCE ACCOUNT-WORK BY POWER CO. FORCES)
Sta. 98+101-Reqd. Move Power Line.

T.O.S. R. 81 W.
Unsurveyed.

Sta. 107+10-108+72-Reqd. 162 Lin. Ft. of Snowfence Rt.
Sta. 110+00-113+32-Reqd. 452 " " " "

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78(2)	19	

Revised: 6-19-39-H.J.S.

Sta. 101+50-Reqd. 24"x82' C.M.P. Cr. Culv. &
100 Cu. Yds. Uncl. Excav. for Inlet.
(Masonry Inlet.)

Sta. 105+25-Reqd. 48"x62' C.M.P. Cr. Culv. (Sk. 62")
& 200 Cu. Yds. Uncl. Excav. for Inlet.
(Masonry Inlet.)

Sta. 110+40-Reqd. 24"x54' C.M.P. Cr. Culv. &
150 Cu. Yds. Uncl. Excav. for
Ditches. (Masonry Inlet.)

Sta. 105+38-106+95-Reqd. Retaining Wall Rt.
(Details on Sheet #5-6A)

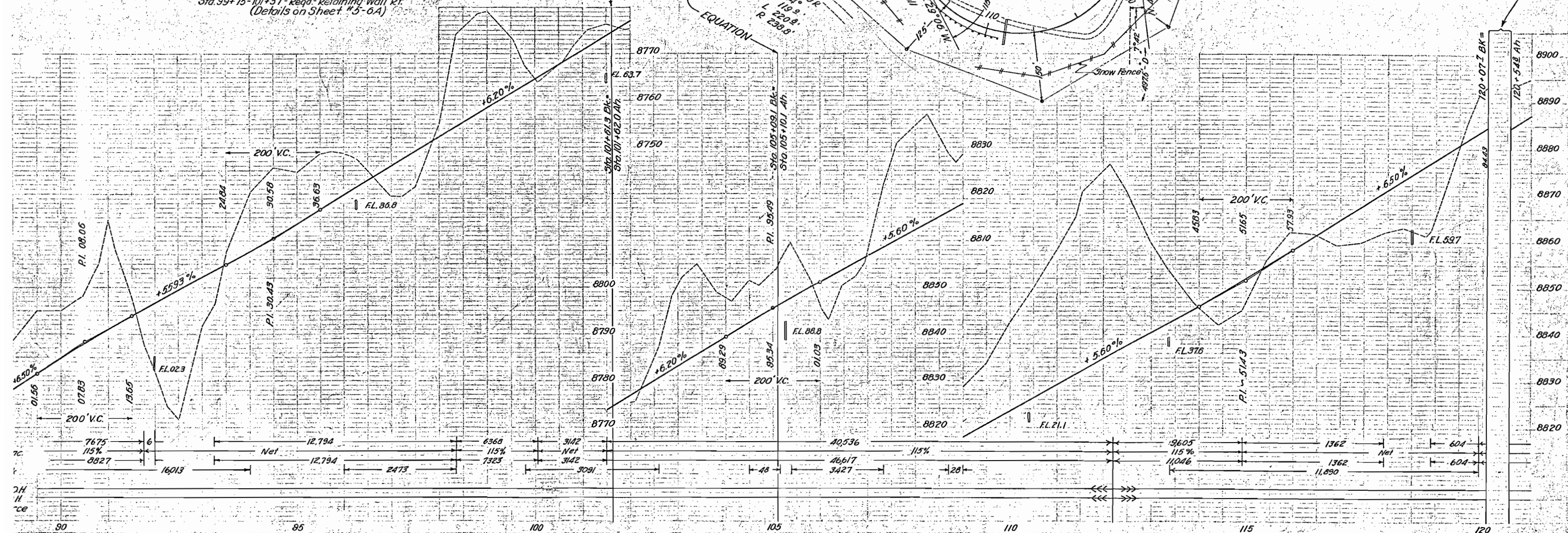
Sta. 118+50-Reqd. 36"x142' C.M.P. Cr. Culv. &
10 Cu. Yds. Uncl. Excav. for Ditches.
(Std. Headwall)

Sta. 113+35-Reqd. 24"x60' C.M.P. Cr. Culv. &
150 Cu. Yds. Uncl. Excav. for Ditches.
(Masonry Inlet.)

Sta. 96+25-Reqd. 24"x56' C.M.P. Cr. Culv. &
140 Cu. Yds. Uncl. Excav. for Ditches.
(Masonry Inlet.)

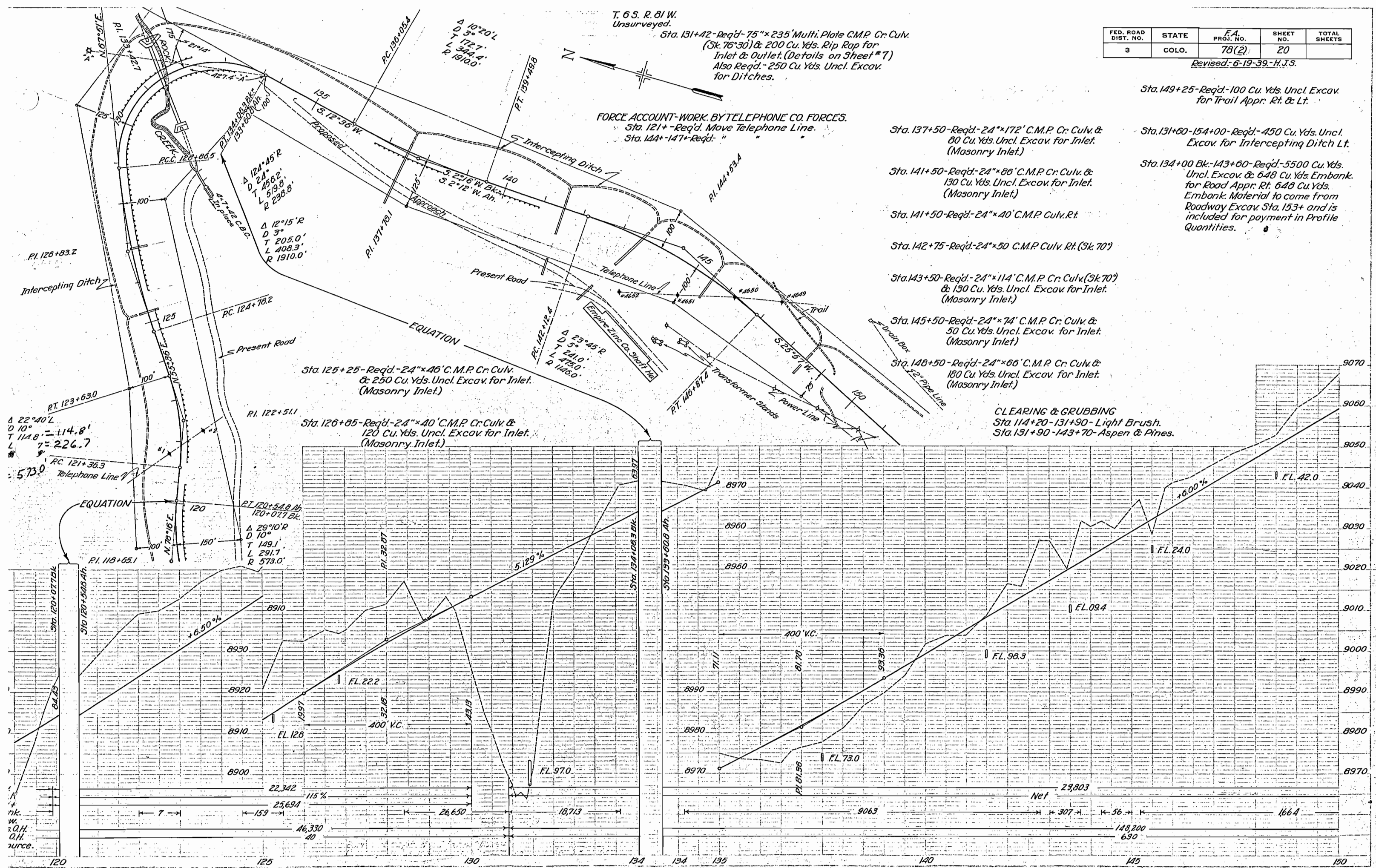
Sta. 99+75-101+37-Reqd. Retaining Wall Rt.
(Details on Sheet #5-6A)

(FORCE ACCOUNT-WORK BY POWER CO. FORCES)
Sta. 113+Reqd. Move Power Line.



FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78(2)	20	

Revised: 6-19-39-H.J.S.



T. 6 S. R. 81 W.
Unsurveyed.

Sta. 131+42-Req'd-75"x235' Multi-Plate C.M.P. Cr. Culv.
(Sk. 76'30") & 200 Cu. Yds. Rip Rap for
Inlet & Outlet. (Details on Sheet #7)
Also Req'd-250 Cu. Yds. Uncl. Excav.
for Ditches.

FORCE ACCOUNT-WORK BY TELEPHONE CO. FORCES.
Sta. 121+-Req'd. Move Telephone Line.
Sta. 144+-Req'd. "

Sta. 149+25-Req'd-100 Cu. Yds. Uncl. Excav.
for Trail Appr. Rt. & Lt.

Sta. 131+60-154+00-Req'd-450 Cu. Yds. Uncl.
Excav. for Intercepting Ditch Lt.

Sta. 134+00 Bk.-143+60-Req'd-5500 Cu. Yds.
Uncl. Excav. & 648 Cu. Yds. Embank.
for Road Appr. Rt. 648 Cu. Yds.
Embank. Material to come from
Roadway Excav. Sta. 153+ and is
included for payment in Profile
Quantities.

Sta. 137+50-Req'd-24"x172' C.M.P. Cr. Culv. &
80 Cu. Yds. Uncl. Excav. for Inlet.
(Masonry Inlet)

Sta. 141+50-Req'd-24"x86' C.M.P. Cr. Culv. &
130 Cu. Yds. Uncl. Excav. for Inlet.
(Masonry Inlet)

Sta. 141+50-Req'd-24"x40' C.M.P. Culv. Rt.

Sta. 142+75-Req'd-24"x50' C.M.P. Culv. Rt. (Sk. 70')

Sta. 143+50-Req'd-24"x114' C.M.P. Cr. Culv. (Sk. 70')
& 130 Cu. Yds. Uncl. Excav. for Inlet.
(Masonry Inlet)

Sta. 145+50-Req'd-24"x74' C.M.P. Cr. Culv. &
50 Cu. Yds. Uncl. Excav. for Inlet.
(Masonry Inlet)

Sta. 148+50-Req'd-24"x66' C.M.P. Cr. Culv. &
180 Cu. Yds. Uncl. Excav. for Inlet.
(Masonry Inlet)

CLEARING & GRUBBING
Sta. 114+20-131+90- Light Brush.
Sta. 131+90-143+70- Aspen & Pines.

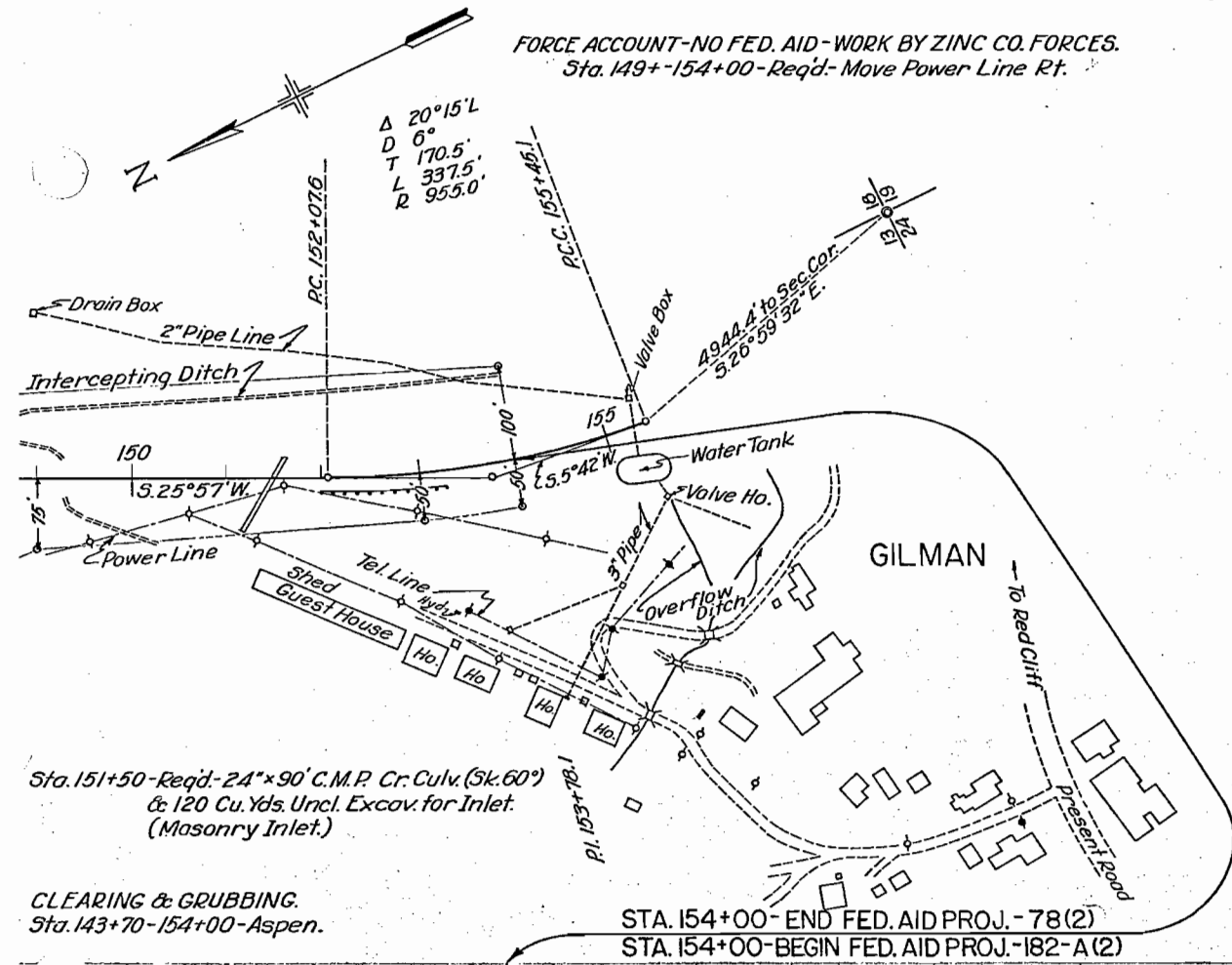
nk.
w.
O.H.
O.H.
source.

T. 6 S. R. 81 W.
Unsurveyed.

FED. ROAD DIST. NO.	STATE	F.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	78(2)	21	

Revised: 6-19-39 - H.J.S.

FORCE ACCOUNT-NO FED. AID-WORK BY ZINC CO. FORCES.
Sta. 149+ - 154+00 - Req'd: Move Power Line Rt.



SECRET

JERSEY ZINC COMPANY

Re-Drawn and Revised June 10, 1939 C.T.L.
(Voids all Previous Prints)
Revised. 6-19-39 - H.J.S. For Project Number
Revised. 7-10-39 - H.J.S.

Said Right-of-Way in parts a. and b. contains 82,227 acres of land, of which 1,061 acres are contained in the present road, leaving 81,166 acres of land to be acquired.

