

UNITED STATES DEPARTMENT OF THE INTERIOR

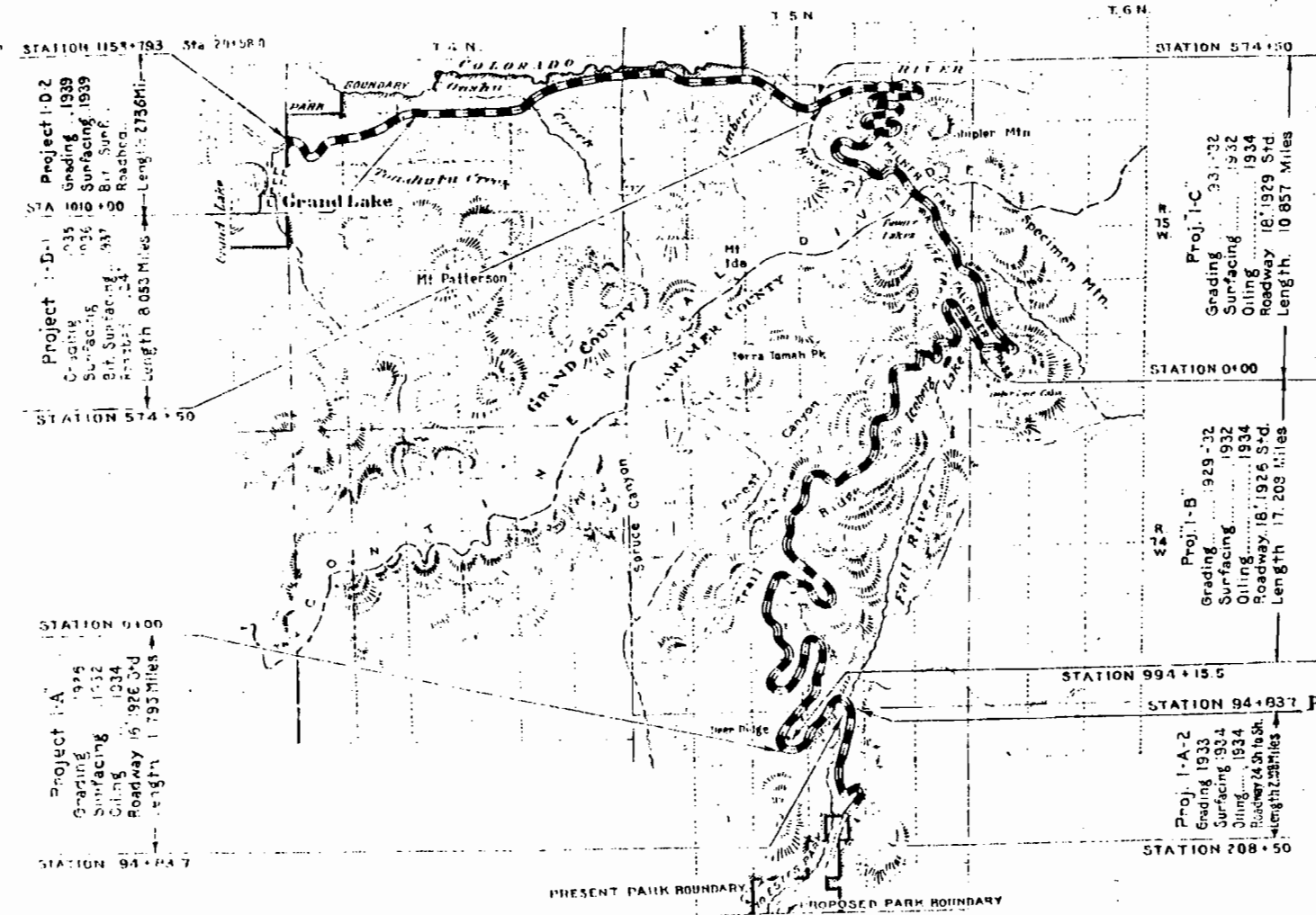
NATIONAL PARK SERVICE

AS CONSTRUCTED
 FALL RIVER WEST SIDE - GRAND LAKE PROJ. 1-D-2 GRADING & SURF.
 ROUTE NO. 1 FALL RIVER
 ROCKY MOUNTAIN NATIONAL PARK
 HIGHWAY SYSTEM
 COLORADO

INDEX TO SHEETS

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1	Title Sheet		
2	(1 Sheet) Typical Sec.		
3	Summary		
37-42	Plan & Profile	1010+00	1155+76.4
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	Drop Inlets 24"		
	30"		
	Conc. Man's for Pipe Arch Cole		
52-57	6" Misc. Structures		
58-63	24" Batted Misc. Frames		
64-67	Typical Const. Sigs.		
68-70	(2 Sheets) Grand Lake Entrance		
71-100	Cross Sections	1101+00	1155+76.4

Office Copy



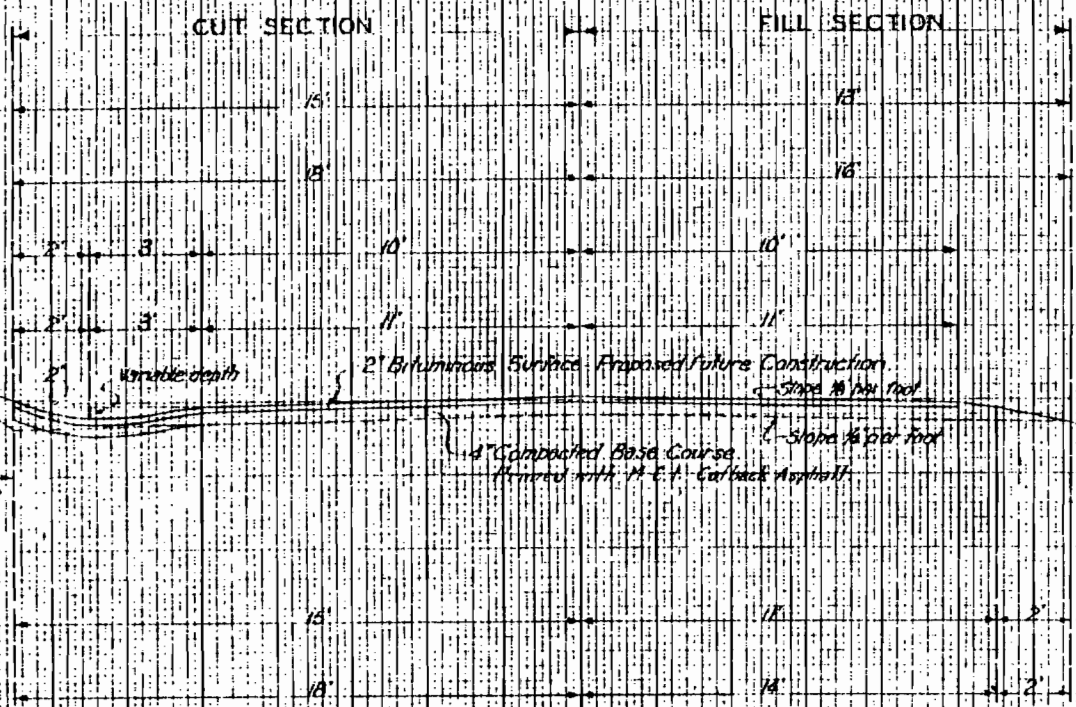
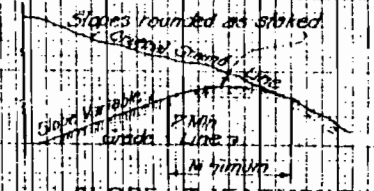
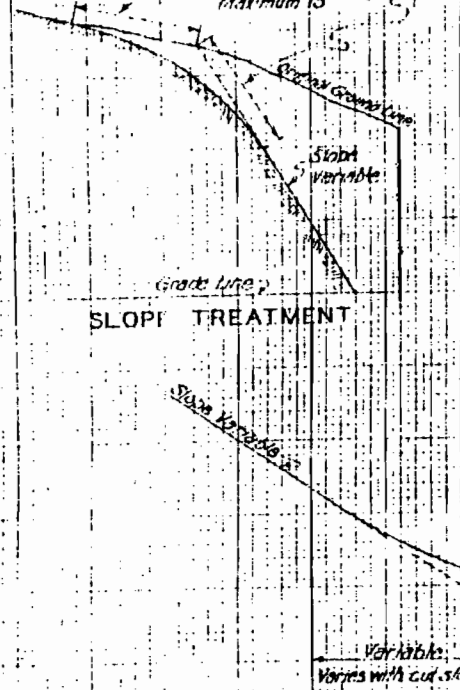
INDEX MAP

PREPARED BY
 FEDERAL WORKS AGENCY
 PUBLIC ROADS ADMINISTRATION

RECOMMENDED FOR APPROVAL	DATE	19
DISTRICT ENGINEER		
CHIEF OF WESTERN REGION	DATE	17
APPROVED	DATE	17
COMMISSIONER		
RECOMMENDED FOR APPROVAL NATIONAL PARK SERVICE	DATE	19
CHIEF OF PLANNING	DATE	
SUPERINTENDENT ROCKY MOUNTAIN NATIONAL PARK	DATE	
DIRECTOR	DATE	

5' for cuts up to 4'
 7' for cuts over 4'
 1/8 L (Length of Slope)
 Maximum 15'

When the cut slope length is less than 5 feet, the treatment shall be applied for the full distance back into the cut slope and extend 5 feet back of the cut slope.



Grading Sta. 1010+10 to Sta. 1135+47
 Grading Sta. 1145+57 to Sta. 1155+26.8
 Bituminous Surface Sta. 1010+10 to Sta. 1133+47
 Bituminous Surface Sta. 1145+57 to Sta. 1155+26.8
 Base Course Surfacing Sta. 1010+10 to Sta. 1135+47
 Base Course Surfacing Sta. 1145+57 to Sta. 1155+26.8

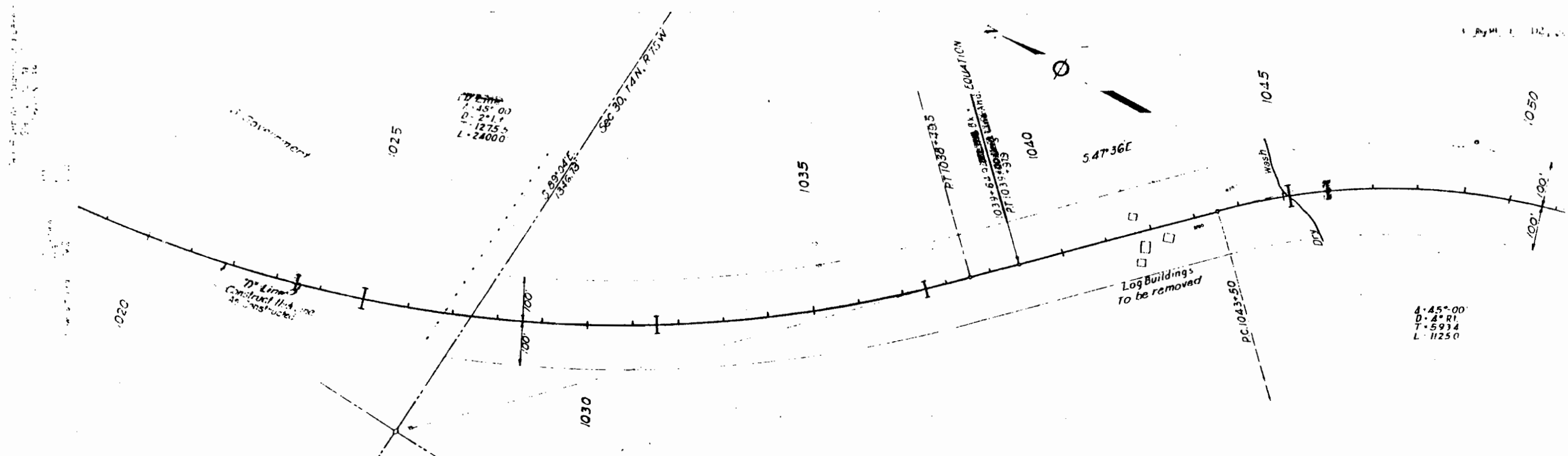
NOTE:
 For Section to be used from Sta. 1135+47 to Sta. 1145+57 see Park Service Drawing # 2017-212 sheet Proposed Future Construction.

NOTE:
 The top 12" of the subgrade shall be constructed of material of Types A1, A2 or A3.

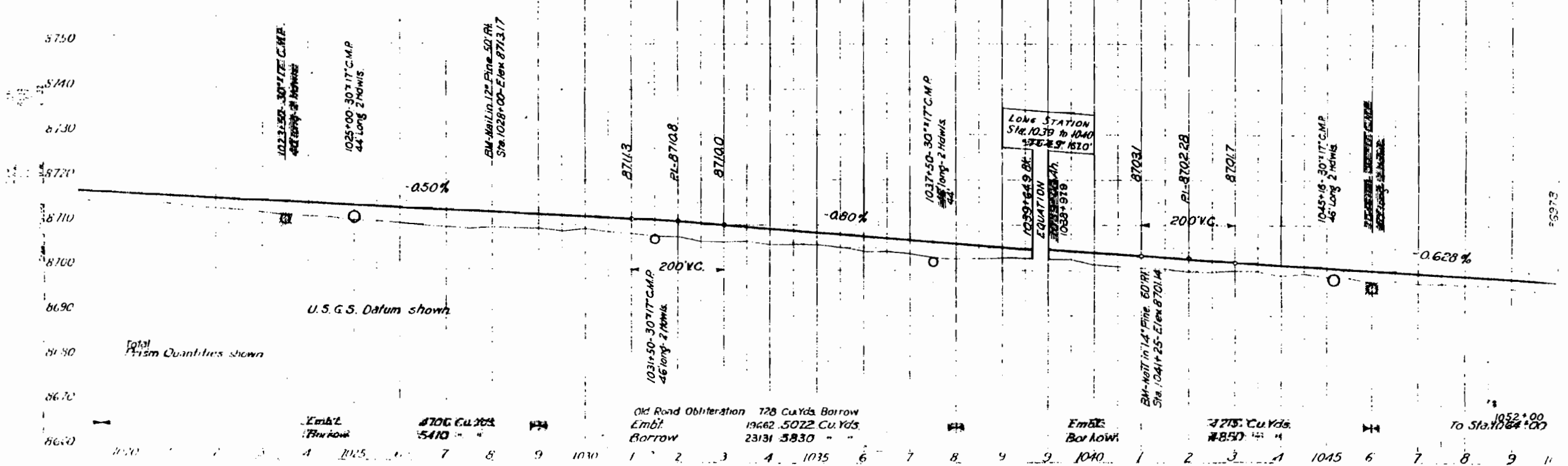
TYPICAL GRADING AND SURFACING SECTION

Slopes	Fill		Cuts Earth		Cuts Rock 1:1 to 1 1/2:1
	Height	Slope	Height	Slope	
	0 to 3'	6:1	0 to 6'	3:1	
	3 to 6'	4:1	6 to 12'	2:1	
	6 to 10'	2:1	12 to 20'	1 1/2:1	
	10 to 15'	1 1/2:1	20 to 30'	1 1/4:1	
			30 to up	1:1	

FEDERAL HIGHWAY AGENCY
 PUBLIC ROADS ADMINISTRATION
 DISTRICT NO. 3 DENVER, COLO.
 DISTRICT NO. 3 STANDARD ROADBED
 PROJECT R.M.K.P. 102 Tall River, West Side
 NATIONAL PARK ROCKY MOUNTAIN
 COUNTY Grand
 STATE Colorado
 Surfacing 22' & 24' (Grades)
 Grading 26' & 32' (Used as 1)



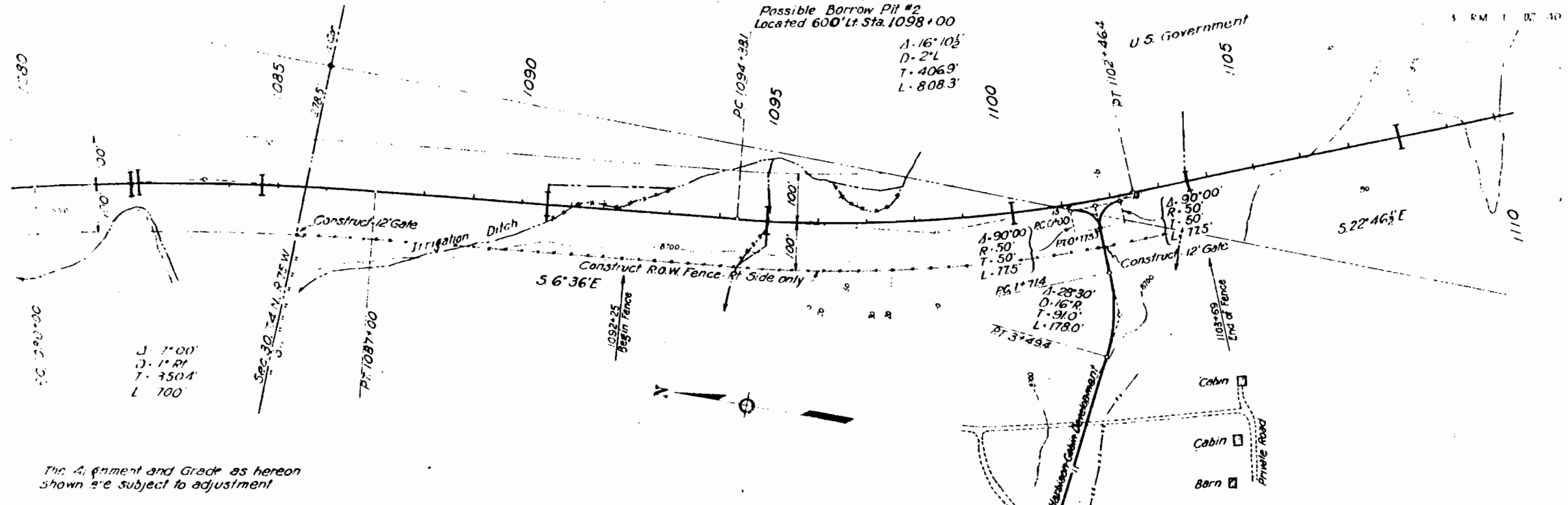
The Alignment and Grade as hereon shown are subject to adjustment



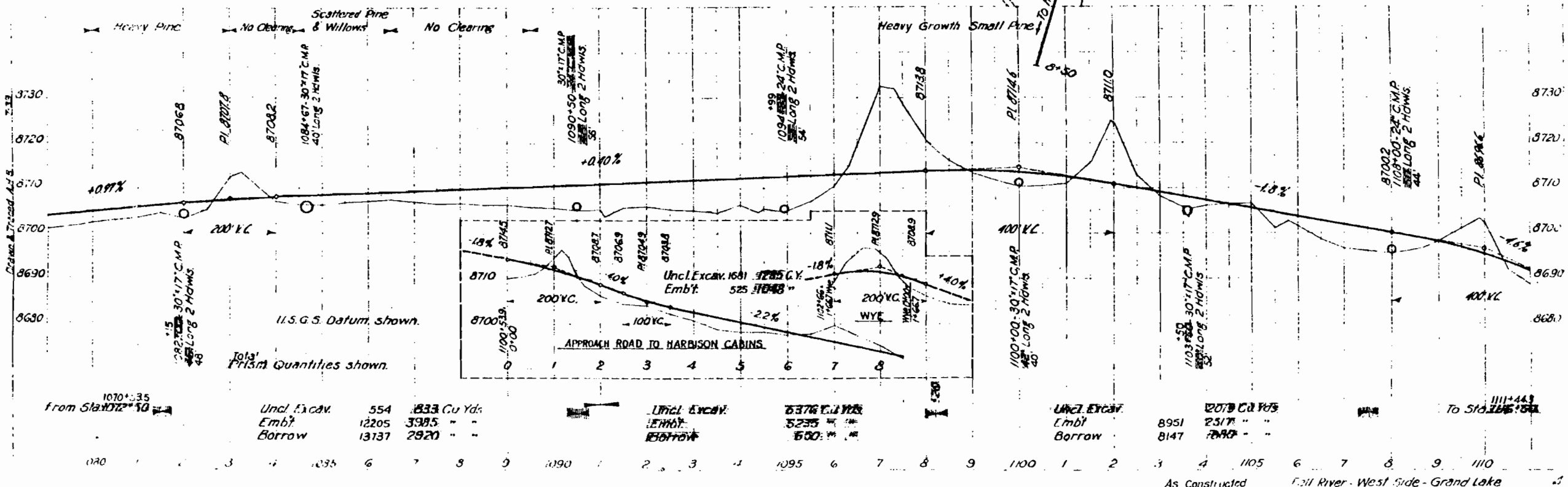
Old Road Obliteration 728 Cu.Yds. Borrow
 Embt. 19682 .5022 Cu. Yds.
 Borrow 23131 5830 " "

Embt. 7775 Cu. Yds.
 Borrow 7850 " "

To Sta. 1052+00
 1052+00



The Alignment and Grade as hereon shown are subject to adjustment



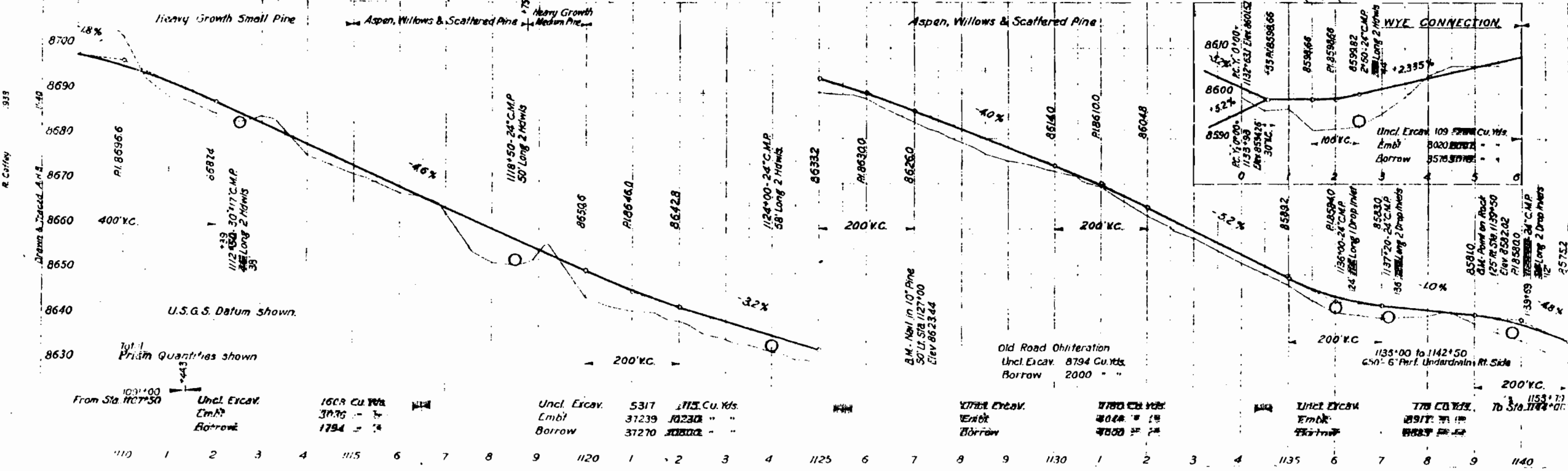
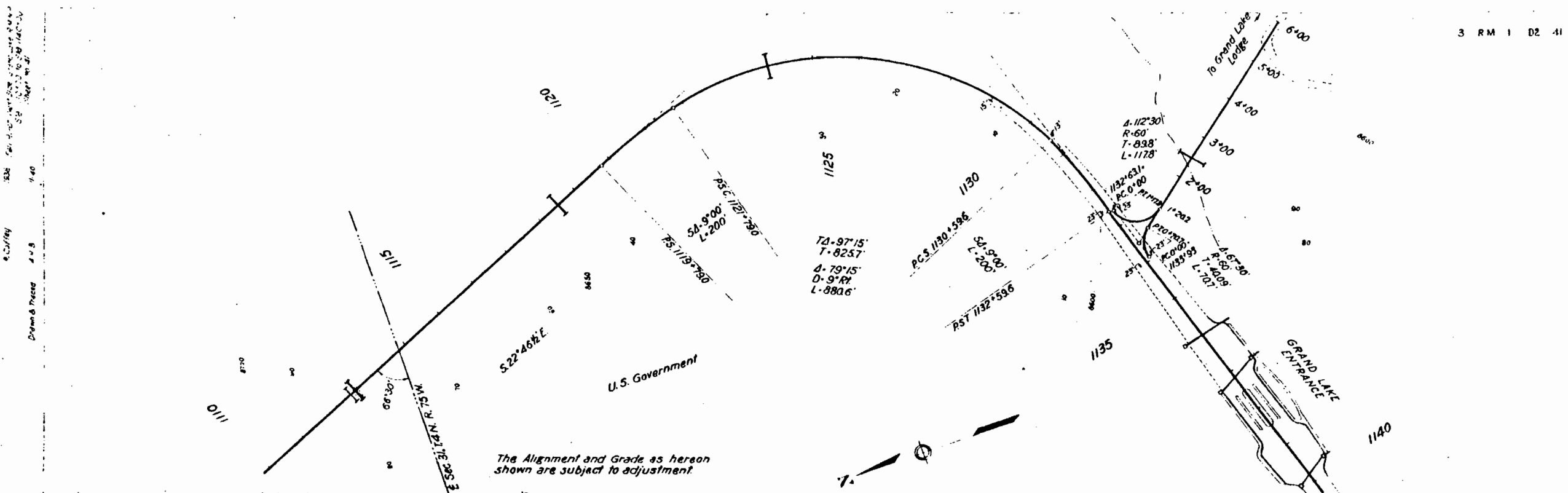
1070+35
from Sta 1072+50

Uncl. Excav.	554	833	Cu Yds.
Emb't	12205	3385	" "
Borrow	13137	2920	" "

Uncl. Excav.	5376	Cu Yds.
Emb't	5235	" "
Borrow	550	" "

Uncl. Excav.	2079	Cu Yds.
Emb't	8951	" "
Borrow	8147	" "

1111+44.9
To Sta 1085+50



From Sta. 1107+50

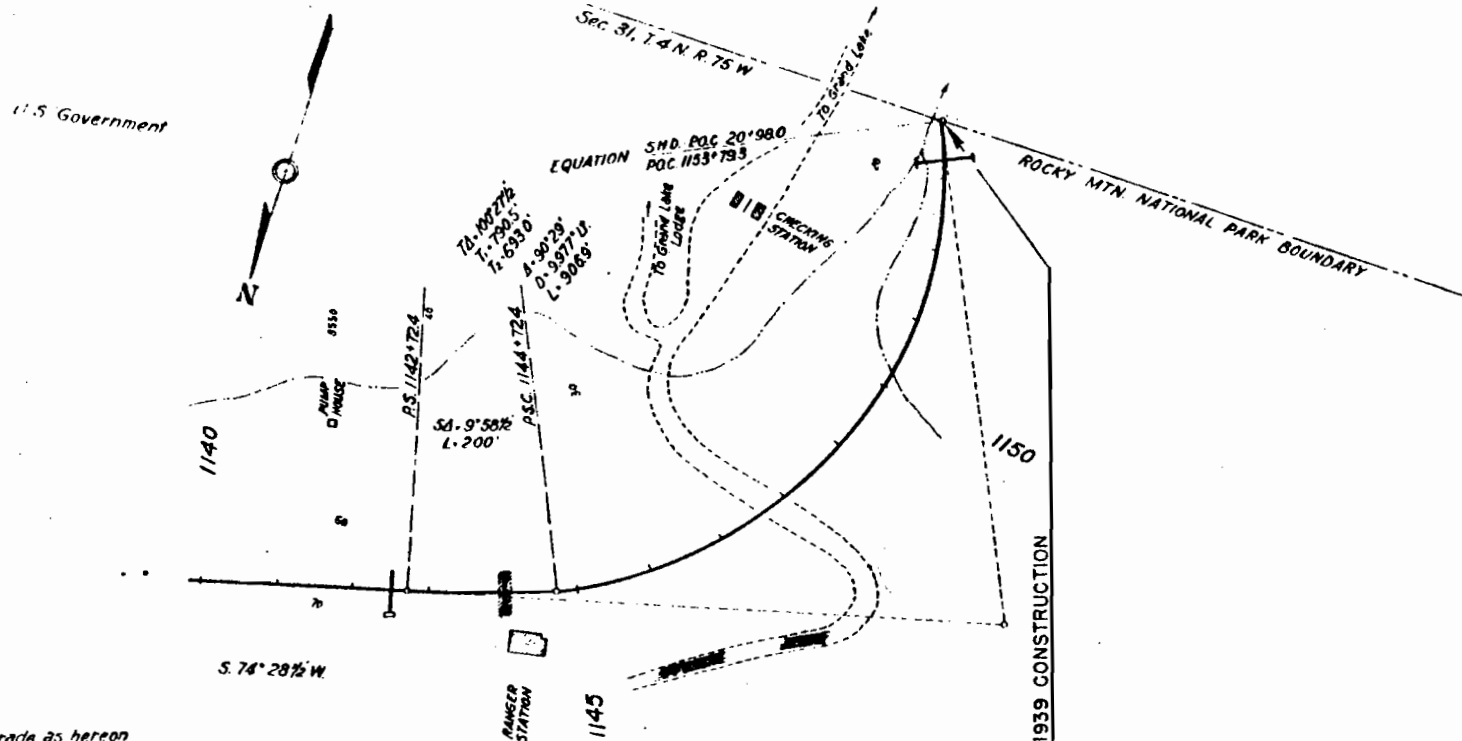
Uncl. Excav.	1608 Cu. Yds.
Embl.	3075 "
Borrow	1754 "

Uncl. Excav.	5317	1113 Cu. Yds.
Embl.	31239	10230 "
Borrow	31270	10200 "

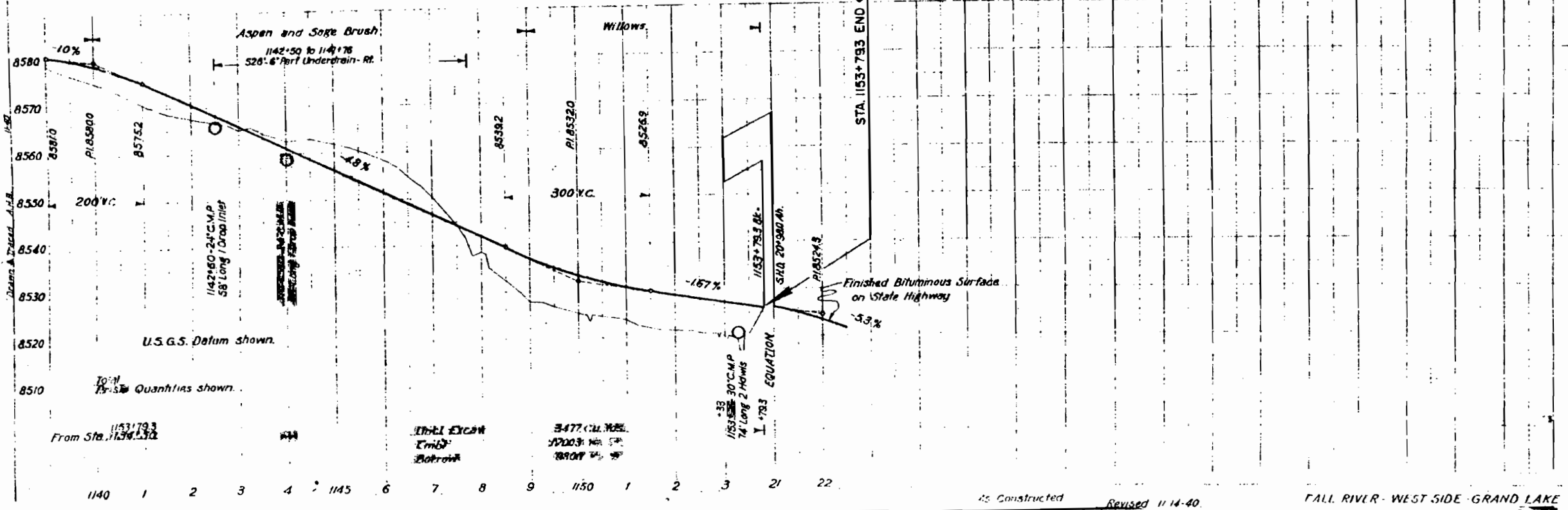
Uncl. Excav.	1770	527 Cu. Yds.
Embl.	4048	1320 "
Borrow	4750	1520 "

Uncl. Excav.	170	52 Cu. Yds.
Embl.	2917	970 "
Borrow	2827	920 "

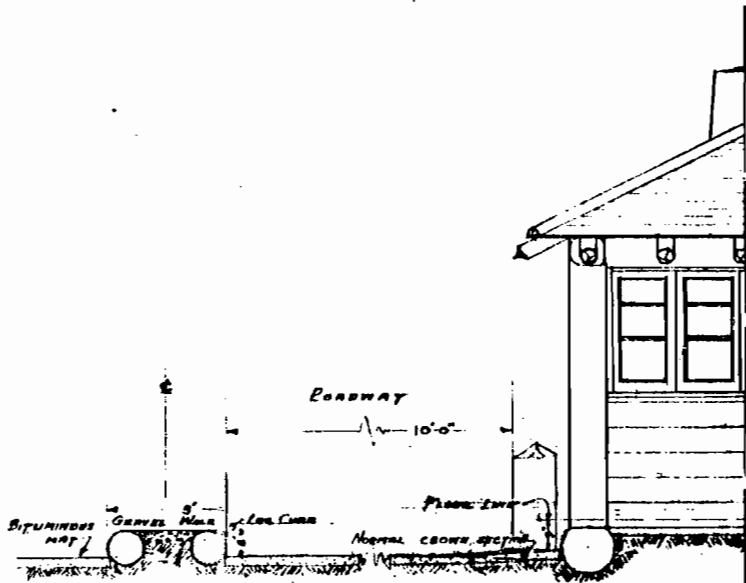
1938 Fall River West Side Grand Lake
S.D. 140+00 to 519+33.73
Sheet No. 42
R. Coffey
C. W. & T. Co.
A.M.B.



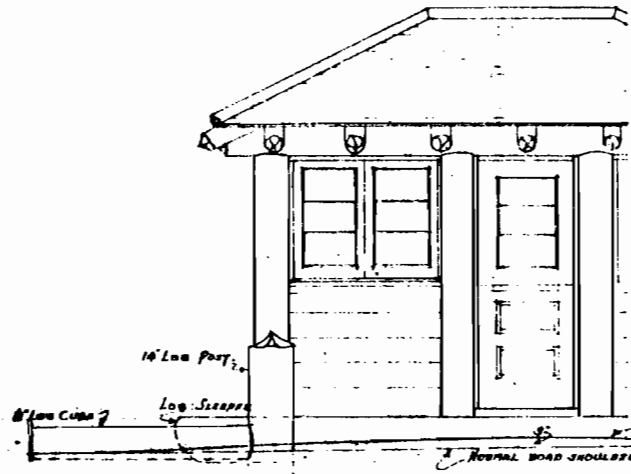
The Alignment and Grade as hereon shown are subject to adjustment.



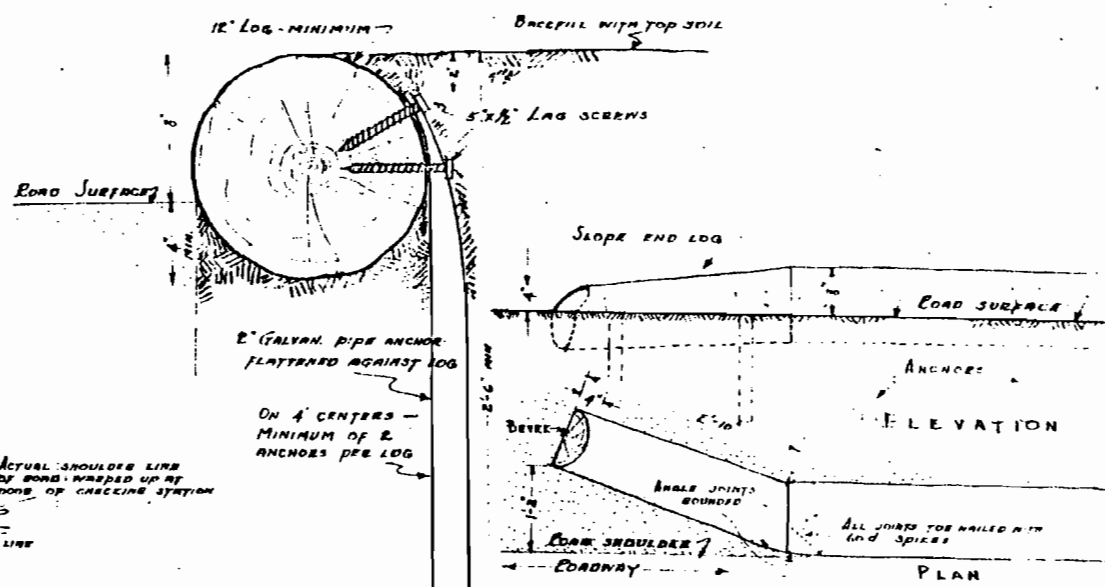
R. Coffey
1938
C. W. & T. Co.
A.M.B.



CHECKING STATION - END ELEVATION
SCALE - 1/2" = 1'-0"



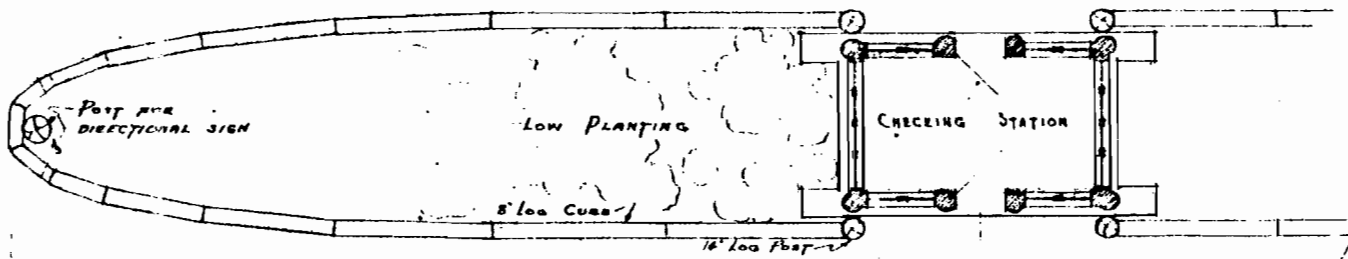
CHECKING STATION - SIDE ELEVATION
SCALE - 1/2" = 1'-0"



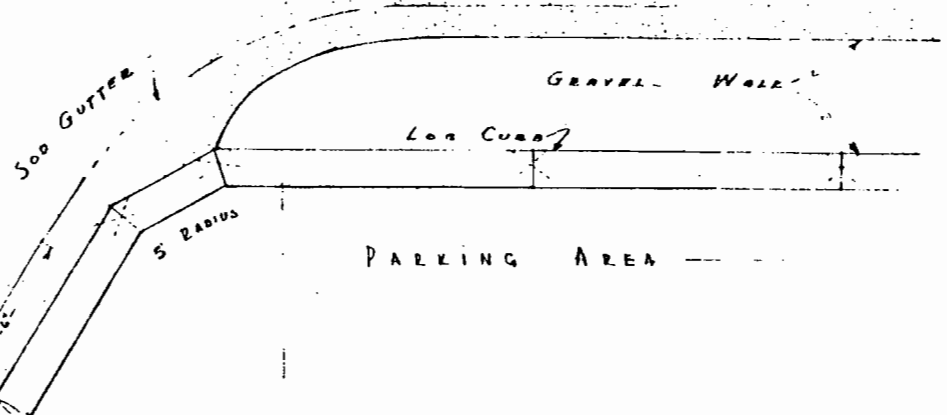
SECTION - LOG CURB
SCALE - 9" = 1'-0"

TERMINUS OF LOG CURB
SCALE - 1" = 1'-0"

NOTE - ROUGH GRADED ROAD SURFACE SHALL BE BUILT TO FINISH GRADE ELEVATION BY CHECKING STATIONS. BEFORE PLACING BITUMINOUS MAT, SURPLUS ROUGH-GRADED MATERIAL SHALL BE REMOVED.



HALF-PLAN - ISLAND & CHECKING STATION
SCALE - 1/4" = 1'-0"



DETAIL OF CURB AT PARKING AREA
SCALE - 1/2" = 1'-0"

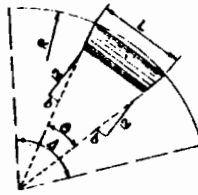
NOTE: Buildings and Bituminous Surfacing are not included in this contract.

DRAWN BY CHECKED BY

RECOMMENDED BY: *Thos. C. Carpenter* April 1938
Dept. of Planning

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE BRANCH OF PLANS AND DESIGN REGION 5		REGION 5 SHEET NO. 7 DRAWING NO. 2017B
GRAND LAKE ENTRANCE PLAN GRAND LAKE ROCKY MOUNTAIN NATIONAL PARK		

- Δ - Total Central Angle
- n - No of Logs on Curve
- θ - $\frac{\Delta}{n}$ - Central Angle for one Log
- R - Outside Radius
- L - Outside Length of Log
- b - Bevel in 12" at ends of Log
- $L = 2R \sin \frac{\theta}{2}$
- $b = 12 \tan \frac{\theta}{4}$



LOGS WITH BEVEL CUTS

No. Pcs	Size	Δ	n	θ	R	L	b
16	12" Dia	180°	4	45°	3'	2'-3 3/4"	5"
16	12"	180°	8	22 1/2°	9'	3'-6 1/2"	2 1/2"
18	14"	45°	3	15°	25'	6'-6 1/2"	1 1/8"
6	14"	93°44'	6	15°52'	25'	6'-9 1/8"	1 1/8"
6	14"	86°16'	6	14°30'	25'	6'-3 3/8"	1 1/8"
3	14"	40°	3	13°25'	25'	5'-9 1/8"	1 1/8"
6	14"	50°	2	25°	10'	4'-3 3/8"	2 1/8"
4	14"	40°	2	20°	10'	3'-5 3/8"	2 1/8"
6	14"	Ends of Type A Curb				10'-2"	2"

LOGS WITH SQUARE CUTS

No. Pcs	Size	Length
4	12" Dia	10'-6"
8	"	11'-6"
8	"	12'-0"
16	"	14'-0"
1	14" Dia	9'-0"
1	"	10'-0"
1	"	10'-10"
1	"	11'-8 1/2"
44	"	12'-0"
1	"	14'-0"
1	"	16'-2"
1	"	16'-4 1/2"
2	"	11'-7 1/2"
12	12" Dia	3'-0" End Posts
98	10" x 10"	1'-6" Blocks

150° - 10" SPIKES WITH
FLAT HEAD & DIAMOND POINT
175 - 1/2" x 18" LAG SCREWS

* TO BE FRAMED IN ACCORDANCE WITH DETAILS

400' Uniform Taper 74' to 22', EXCEPT GRAND LAKE LODGE ROAD CONNECTION WIDENING.

Note: ALL DIMENSIONS TO FACE OF CURB.

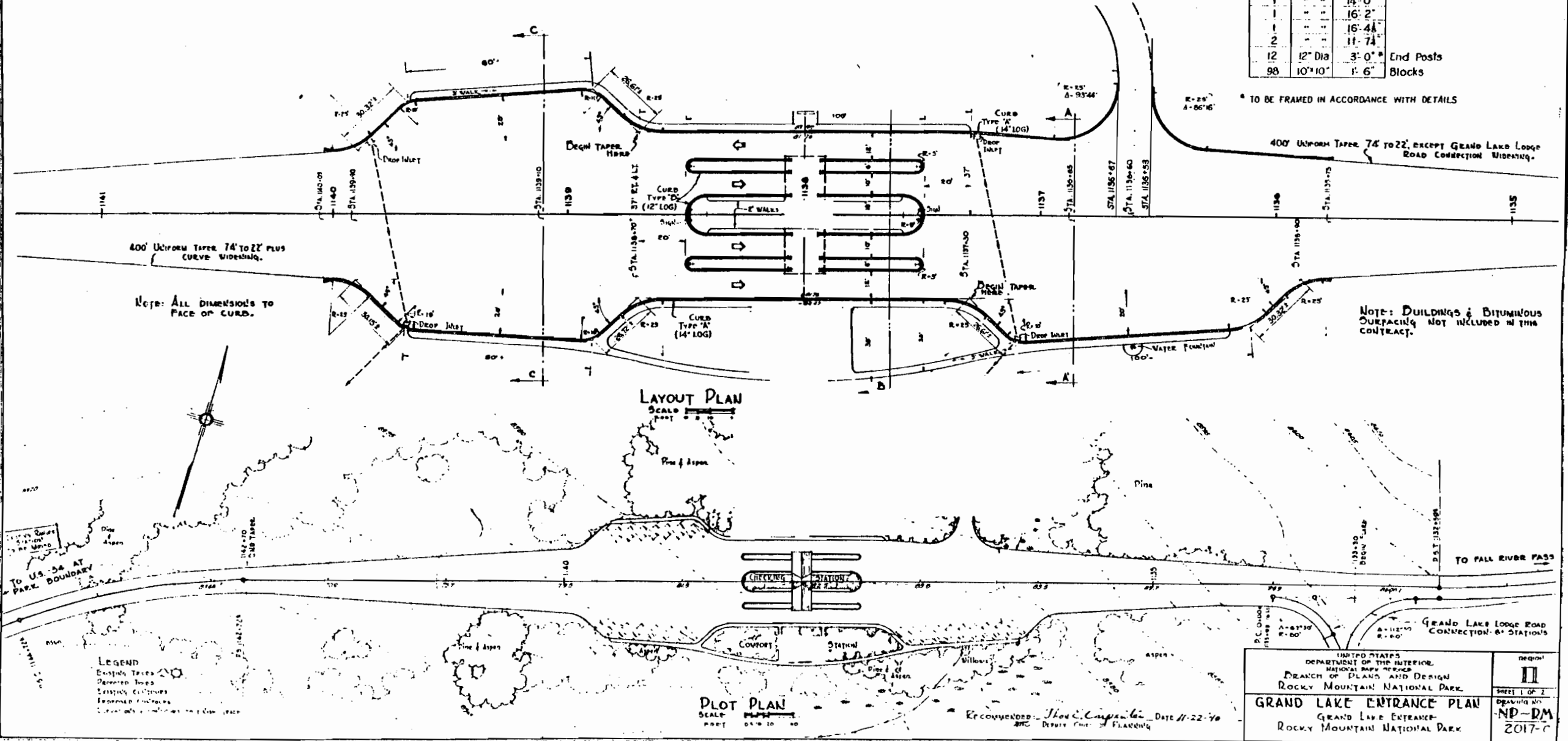
NOTE: BUILDINGS & BITUMINOUS SURFACING NOT INCLUDED IN THIS CONTRACT.

LAYOUT PLAN

SCALE: 1" = 20'

PLOT PLAN

SCALE: 1" = 10'



- LEGEND
- Existing Trees
 - Proposed Trees
 - Existing Structures
 - Proposed Structures

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
BRANCH OF PLANS AND DESIGN
ROCKY MOUNTAIN NATIONAL PARK

REGION II
SHEET 1 OF 2
DRAWING NO. ND-DM
2017-C

GRAND LAKE ENTRANCE PLAN
GRAND LAKE ENTRANCE
ROCKY MOUNTAIN NATIONAL PARK

RECOMMENDED: *Shou C. Cheng* DATE 11-22-70
BY: *DMC* DESIGN CHIEF OF PLANNING

SECTION C-C

SECTION B-B

SECTION A-A

I accept and agree to the changes as shown on this plan sheet which are pertinent to the construction of this project. Prices for the construction items shall be the same as stated in my contract for this project dated _____

400' Uniform Taper 74' to 22' plus CURVE WIDENING.

Note: All dimensions to FACE OF CURB.

NOTE: BUILDINGS & BITUMINOUS SURFACING NOT INCLUDED IN THIS CONTRACT.

LAYOUT PLAN

SCALE 1" = 100'

PLOT PLAN

SCALE 1" = 100'

UNITED STATES DEPARTMENT OF THE INTERIOR NATIONAL PARK SERVICE BRANCH OF PLANS AND DESIGN ROCKY MOUNTAIN NATIONAL PARK		SHEET II
GRAND LAKE ENTRANCE PLAN GRAND LAKE ENTRANCE ROCKY MOUNTAIN NATIONAL PARK		DRAWING NO. NP-D-2017

