

FAP

295-D

RED. 23-1

COLORADO STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. 295-D STATE HIGHWAY NO. 17 CONEJOS COUNTY.

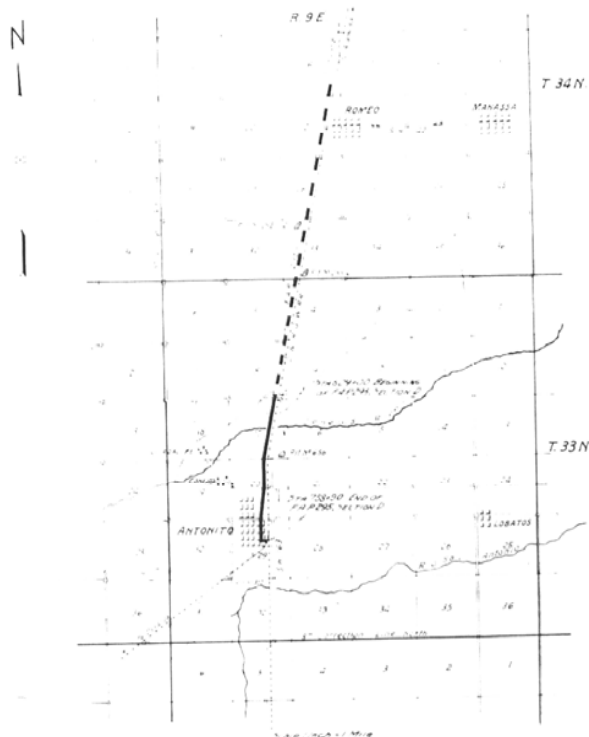
INDEX OF SHEETS

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CONVENTIONAL SIGNS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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SCALES
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, 1.220 MILES
NET LENGTH OF PROJECT, 1.220 MILES



RECOMMENDED FOR APPROVAL
[Signature]
ASSISTANT ENGINEER

APPROVED
[Signature]
STATE HIGHWAY ENGINEER

RECOMMENDED FOR APPROVAL
DIST. ENG. BUREAU PUBLIC ROADS

RECOMMENDED FOR APPROVAL
CHIEF ENG. BUREAU PUBLIC ROADS

APPROVED
DIRECTOR BUREAU PUBLIC ROADS

TABULATION OF STRUCTURES



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

Borrow Excavation: All roadway excavation outside of ditch and cut slope shown on Typical Sections, except ditches and other special items of excavation noted on plans, is to be classified and paid for as Borrow Excavation. Unless otherwise stated, all borrow excavation required is available from the right of way or immediately adjacent thereto within the free haul limit of 300 ft. Borrow Excavation required to be taken from special pits noted on plans is to be used before using material from other sources. Where practicable, material from ditch channels is to be placed in the roadway embankment. All excavated material outside of the typical sections shall be considered waste, and no payment shall be made for these quantities unless specifically provided for by written order from the Department. To the Contractor.

Headwalls are not to be placed on corrugated metal pipe culverts unless called for on plans

Overhaul on Borrow Excavation is indicated by "B & H" on profile

Surfacing Materials. The Department estimates that surfacing material for this project will be obtained from the vicinity of Pit #456 indicated on the Title sheet. This plan involves approximately 5500 yds of overhauled surfacing material. It is estimated that ample material can be obtained from the vicinity of Pit #456. If the Contractor, for his own convenience, elects to use a plan other than the above, overhauled in excess of the Departments plan will not be allowed.

Replacement Gravel. Stock piles of gravel surfacing material, each to contain approximately 100 Cu Yds, are to be made approximately one half mile apart as directed by the Engineer. This material is for use in maintenance operations after completion of project.

Oil Processing. The top course of gravel surfacing is to be oil processed by State Forces

Gates, as per detail on sheet N113, are to be provided opposite all side drain culverts and at other places noted on plans. The cost of these gates is to be included in the contract unit price for Barbed Wire fence.

Traffic During Construction. Between Sta 609 and 692 and between Sta 713 and 758+00 the new Work lies upon the present traveled road. The Contractor shall, at his own expense, so prosecute construction in such a manner that traffic may readily pass over the road. Also the Contractor shall maintain in safe condition and at his own expense, all temporary approaches to and crossings of intersecting highways.

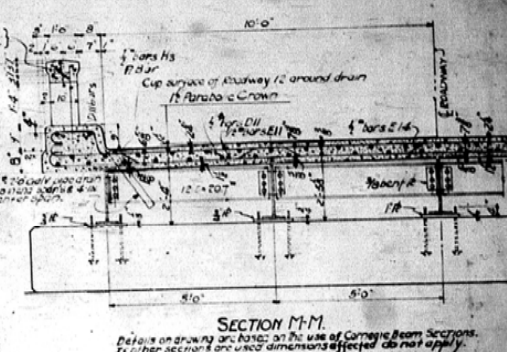
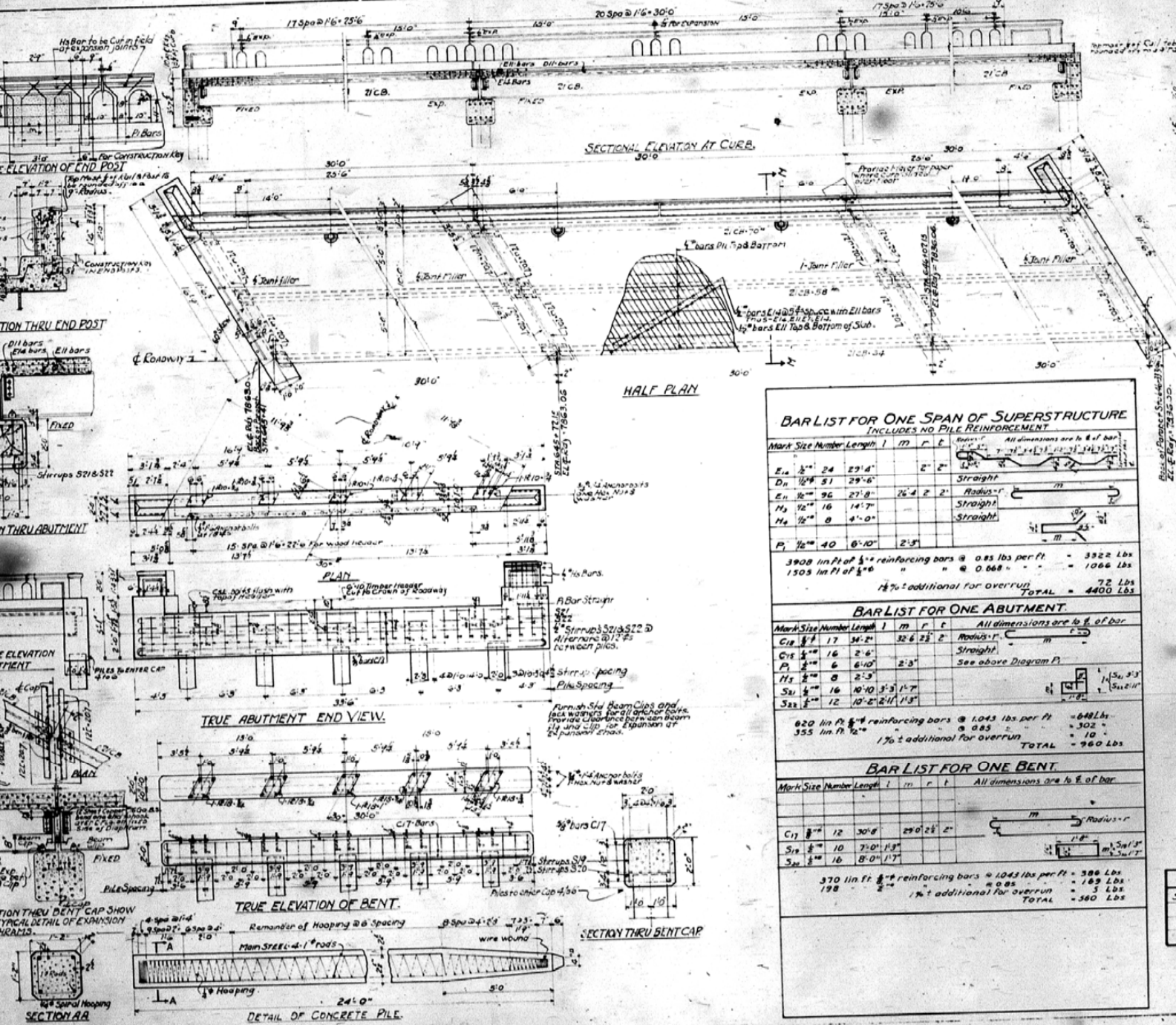
SUMMARY OF APPROXIMATE QUANTITIES

SUMMARY OF APPROXIMATE QUANTITIES.									
No	Item	Unit	Bridge Abutment	Bridge Abutment	Bridge Abutment	Bridge Abutment	Total		
			100' - 125'	125' - 150'	150' - 175'	175' - 200'	Quantities	Unit	
148b	Clearing and Grubbing	Lump Sum	Item 1b	Item 1b	Item 1c			Lump Sum	
24	Removing & Structures								
25	Removing & Grass Walks					810		4200	
3	Removing Fence	Lb Ft	3390			100		2800	
53	Common Excavation	Cu Yd	2600	100		4400	5500	28400	
5	Borrow		9800	8760		20000	12000	155000	
16	Overhaul	Sale Yd	32000					340	
73	Dry Common Structure Excavation	Cu Yd	300	20	40			720	
75	Net		300	90	20	310		15	
76	Dry Rock		5					270	
78	Net		5			10		60	
110	15" Corrugated Metal Culvert Pipe	Lb Ft	272					151	
116	16" Siphon		40					6470	
126	Gravel Surfacing	Cu Yd	5620	545	215		290	3700	
22	Overhaul on Surfacing	Yd Mt	4000	930	400		400	375	
334	Class A concrete	Cu Yd	315	114	.36		110	109	
336	Class B	Lb	5				104	75200	
35	Reinforcement	Lb	31400	11900	5200		20500	165600	
36	Structural Steel	M Bk Ft		35000	11200		11900		
40	Untreated Timber	Lb		0.2	0.2		0.2	500	
41C	Precast Concrete Piles	Lb Ft		480	240		240	500	
434	Wire Cable Guard Fence			400	400		400	11700	
438	Barbed Wire Fence		8530	1210	510		1450	1000	
470	Grouted Rock Slope Paving (4" thick)	Sq Yd		360			400	2	
500	Brass Name Plates	Each						6	
50C	Sheet Copper	Lb		120				1	
52	Trash Guards for 16" Siphons	Each	6					3	
55	Concrete Project Marker		1	8	4		20	32	
64	Balanzized 5' Drain Pipes							600	
71A	Replacement Gravel (No Federal Aid)	Cu Yd	400	100					

Materials to be furnished and work to be done by State Forces						
70	Asphaltic Road Oil	Gal	4760	4230	1650	2040
71	Oil Processing	Sq Yd	2970	2800	1100	1490
72	Scarifying and Harrowing Surfacing		1330	140	35	75
						51880
						14580
						1660

FENCING REQUIRED

Station	Remove	Build
429+00 to 431+95	605 ft	595 ft
432+40	65	
432+50 - 445+20		1920
446+40 - 457+40		1090
455+30 - 479+00	2320	2310
489+00 - 486+55		2820
486+40	100	
486+55 - 495+60		925
496+40	90	
496+45 - 712+80		2415
712+80	60	
Total	4160	4167.5



GENERAL NOTES

- All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department.
- All concrete shall be Class "A".
- All exposed surfaces shall be rubbed free of form marks.
- All exposed corners, except on handrails, shall be beveled to a 2" face.
- Floor slab and curb shall be poured monolithically.
- All construction joints shall be thoroughly cleaned before fresh concrete is poured.
- All reinforcing bars shall be round or square, plain or deformed as shown and noted.
- All reinforcing bars shall be tagged with the station number and the letter designation.
- Secondary bars when spliced shall be given a lap of 30 diameters.
- Main bars shall not be spliced.
- Piles must be driven in line without jacking or bending.
- If piling is to be driven without suitable jacking the steam hammer shall develop on each full stroke an energy per blow of not less than 1000 ft lbs for a single acting hammer, and 1000 ft lbs for a double acting hammer.
- Fixed leads required.
- Drop hammer shall not be used.
- Pile reinforcement permits picking up at one third points only.

BAR LIST FOR ONE SPAN OF SUPERSTRUCTURE
INCLUDES NO PILE REINFORCEMENT

Mark	Size	Number	Length	l	m	r	t	All dimensions are to E. of bar
E ₁	2"	24	29'-4"			2	2	Straight
D ₁	12"	51	29'-8"			2	2	Straight
E ₂	1/2"	96	27'-8"			26	4	Straight
H ₁	1/2"	16	14'-7"					Straight
H ₂	1/2"	8	4'-0"					Straight
P ₁	1/2"	40	6'-10"			2	3	Straight

3908 lin ft of 1/2" reinforcing bars @ 0.85 lbs per ft = 3322 Lbs
 1305 lin ft of 1/2" " " @ 0.668 " = 1066 Lbs
 1% additional for overrun TOTAL = 4400 LBS

BAR LIST FOR ONE ABUTMENT

Mark	Size	Number	Length	l	m	r	t	All dimensions are to E. of bar
C ₁	1/2"	17	34'-2"			32	6	Radius r
C ₂	1/2"	16	2'-6"					Straight
P ₁	1/2"	6	6'-10"			2	3	See above Diagram P ₁
H ₁	1/2"	8	2'-3"					
S ₁	1/2"	16	10'-10"	3'-3"	1'-7"			
S ₂	1/2"	12	10'-2"	2'-11"	1'-5"			

620 lin ft of 1/2" reinforcing bars @ 0.85 lbs per ft = 527 Lbs
 355 lin ft of 1/2" " " @ 0.668 " = 236 Lbs
 1% additional for overrun TOTAL = 760 LBS

BAR LIST FOR ONE BENT

Mark	Size	Number	Length	l	m	r	t	All dimensions are to E. of bar
C ₁	1/2"	12	30'-8"			29	2	Radius r
S ₁	1/2"	10	7'-0"	1'-8"				
S ₂	1/2"	16	8'-0"	1'-7"				

370 lin ft of 1/2" reinforcing bars @ 0.85 lbs per ft = 315 Lbs
 198 " " " " @ 0.668 " = 132 Lbs
 1% additional for overrun TOTAL = 447 LBS

SUMMARY OF QUANTITIES FOR ENTIRE STRUCTURE

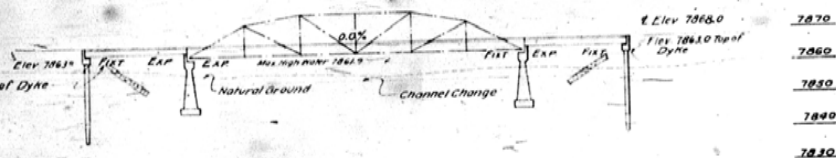
Item No.	DESCRIPTION	Unit	SUPER-STRUCTURE	ABUTMENT	BENT
33-a	Class "A" Concrete (Piles not included)	CuYd	69'	18'	63'
35	Reinforcing Steel (- - - - -)	Lbs	13200	1920	1120
36	Structural Steel (overrun included)	Lbs	34000	360	560
40-a	Untreated Timber Header	CBM	200		
64	Galv. Iron Drain Pipes 3"x2'-0"	ea.	8		
41-c	Pre-cast Concrete Piles 24" long	LINEAL FT			240
47-d	Grouted Rock Slope Paving 1' thick	SqYd			338.3
	Structural Excavation	CuYd			27.9
7-a	Dry Common	CuYd			217.0
7-b	Wet Common	CuYd			
7-d	Wet Rock	CuYd			
50-c	Street Copper	Lbs	115		

LOADING DATA:
 LL - A.A.S.H.O. CLASS "A" JUL
 DL - ASSUMES 15 LBS. PER S.
 WEARING SURFACE THIS IN
 1/4" MONOLITHIC WEARING SURF.

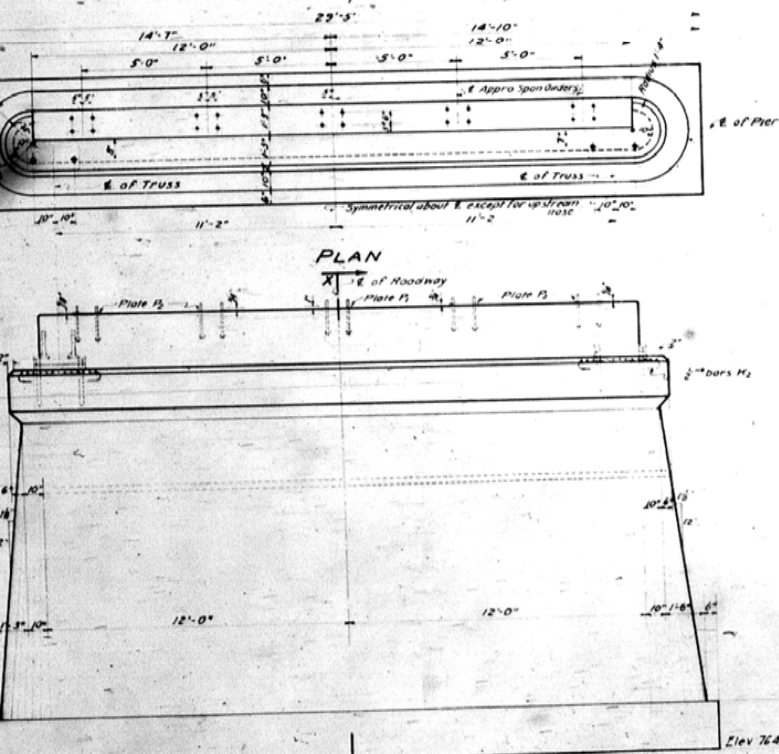
TABLE OF ALTERNATE SECTIONS

ITEM & PLACE	CARNegie BEAMS	BETH BEAMS
STRINGER - INTERIOR	21" @ 58"	22" @ 58"
OUTSIDE	21" @ 70"	22" @ 67.5"
AT E. OF BRIDGE	21" @ 64"	22" @ 62.5"

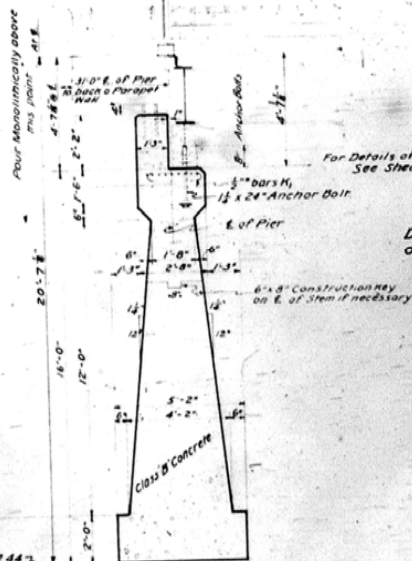
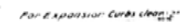
COLORADO STATE HIGHWAY DEPARTMENT
 30 FT. CONCRETE
 PILE TRESTLE AT
 STEEL BEAM GIRDER
 CONEJO RIVER
 Across Sec. 645 & 41 to 646
 Near Antonio Sec. 17 T. 33 S. R.
 Designed by H.A.R.
 Checked by P.S.B.



ELEVATION @ E.
GENERAL LAYOUT



FRONT ELEVATION.



DETAILS FOR NORTH & SOUTH PIERS

COLORADO
STATE HIGHWAY
DEPARTMENT
CONEJOS RIVER
BUILT BY
(CONTRACTOR'S NAME)
1929

BRONZE NAME PLATE
TWO REQUIRED

*One Bronze name plate with letters raised
1/8" shall be placed in the panel of Right hand
End Post of each abutment
Plans to be approved by the Engineer*

SUMMARY OF QUANTITIES FOR ENTIRE STRUCTURE

ITEM No	DESCRIPTION	UNIT	SUPERSTRUCTURE			SUBSTRUCTURE				TOTAL
			100' STEEL TRUSS SPAN	SOUTH 30' APPROACH SPAN	NORTH 30' APPROACH SPAN	SOUTH ABUTMENT	NORTH ABUTMENT	SOUTH PIER	NORTH PIER	
33 a	Class 'A' Concrete	Cu Yd	52.5	22"	22"	6.75	6.75	52	52	100.0
33 b	Class 'B' Concrete	Cu Yd						150	150	100.0
35	Reinforcing Steel, overrun included	Lbs	11000	3940	3070	650	650	150	150	20410
36	Structural Steel, overrun included	Lbs	97000	10750	10750	225	225	225	225	119400
64	3" Galvanized Pipe Drains 24" long	Pcs	12	4	4					20
7 a	Dry Common Structural Excav	Cu Yd				527	623			122
7 b	* Wet Common	Cu Yd				81	60.1	119.5	99.6	360.2
7 d	* Wet Rock	Cu Yd								0
47 b	Grouted Rock Slope Paving 6" thick	Sq Yd				219.3	150.3			369.6
50	Bronze Name Plates	Pcs		1	1					2
40 a	Untreated Timber Healer	LF3M		100	100					200
41 c	Precast Concrete Piles (24" long)	Lin Ft				120	120			240

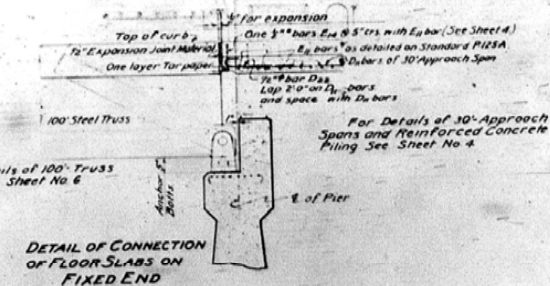
* Net Excavation Computed from Elevation 7860.0

BAR LIST FOR ADDITIONAL STEEL IN FLOOR
SLAB CONNECTION FIXED END TRUSS

Sewage Division			
Mark	Size	Number	Length
D ₁₂	1/2"	24	3'-8"

@ 14 Lb Ft. Y₂" #4 reinforcing bars @ 0.666 lbs per ft. = 16
 2 1/2% additional for over run = 1
 Total = 17

	12"	24"	36"	
80	Lim ft.	92 ⁻⁸	reinforcing bars @ 0.000 lbs per ft = 3	
			2% additional for overrun	/
			Total	/



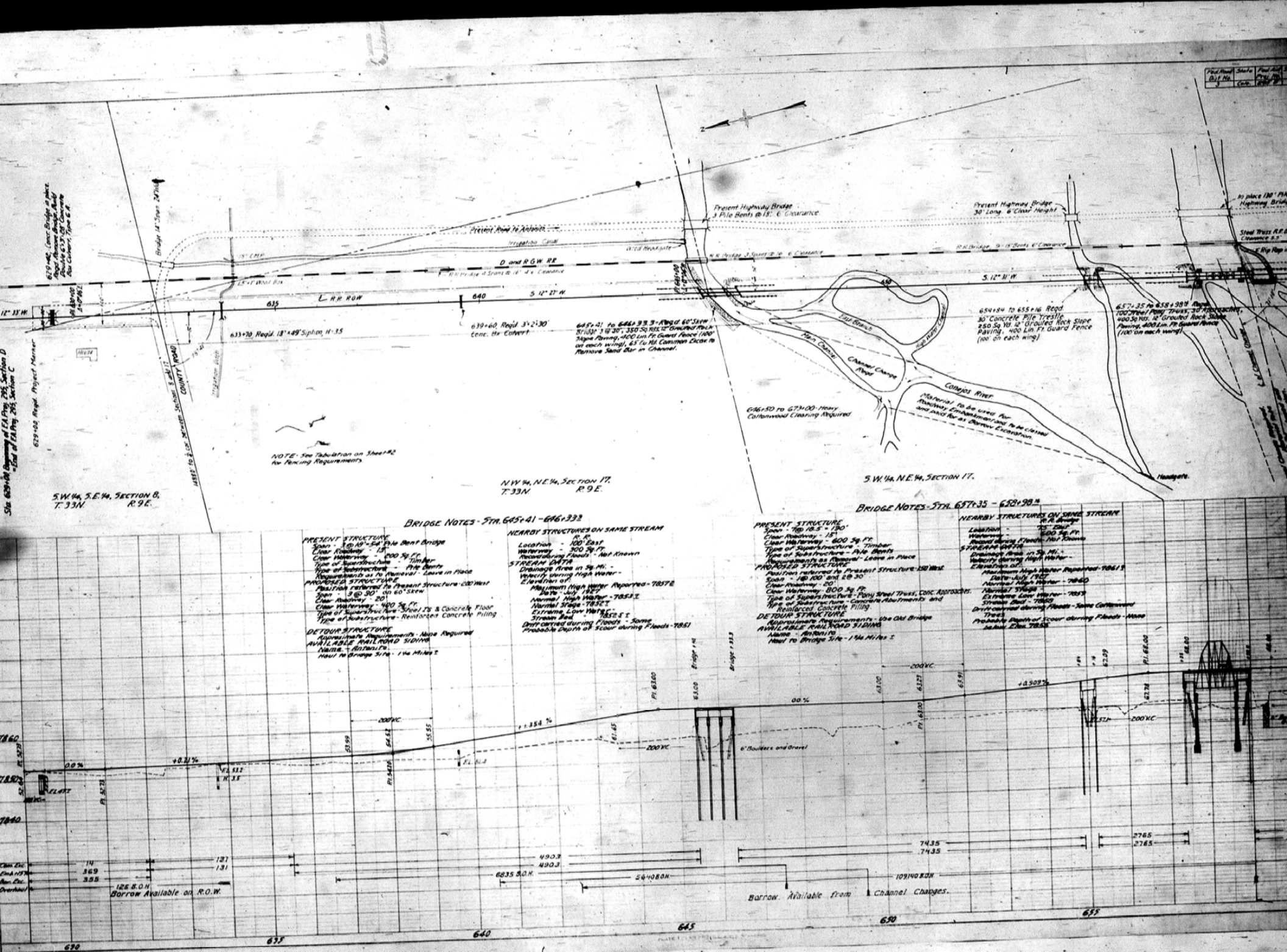
DETAIL OF CONNECTION
OF FLOOR SLABS ON
FIXED END

GENERAL NOTES

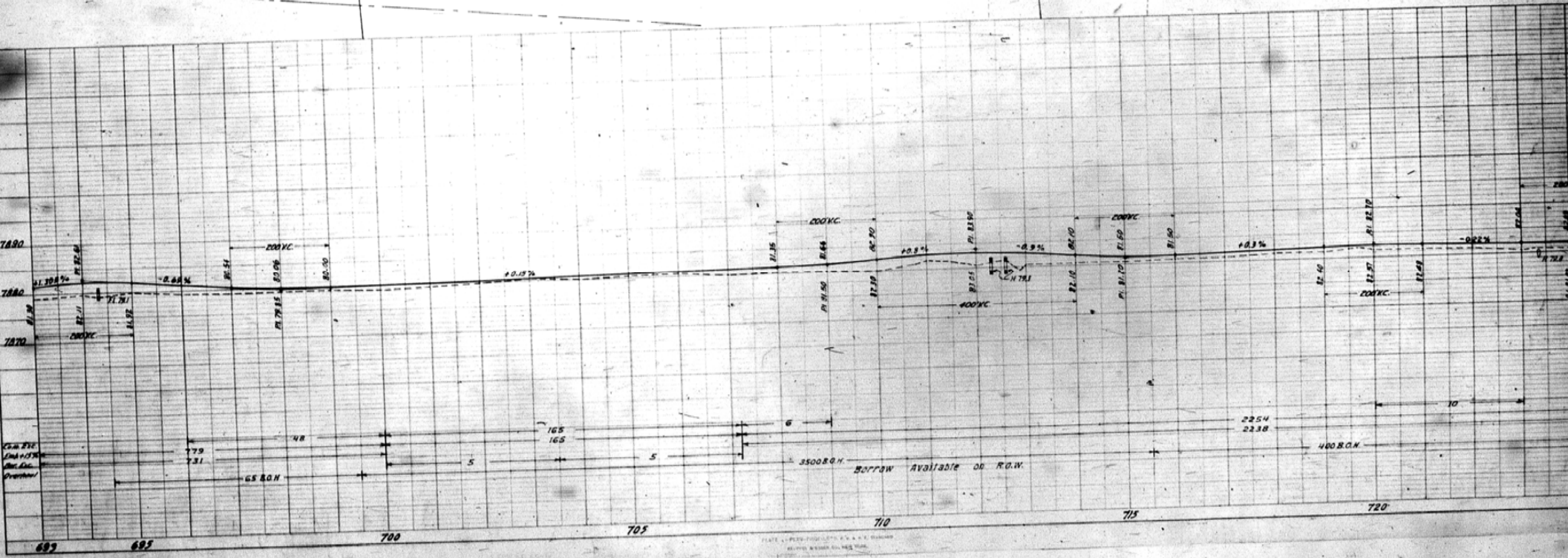
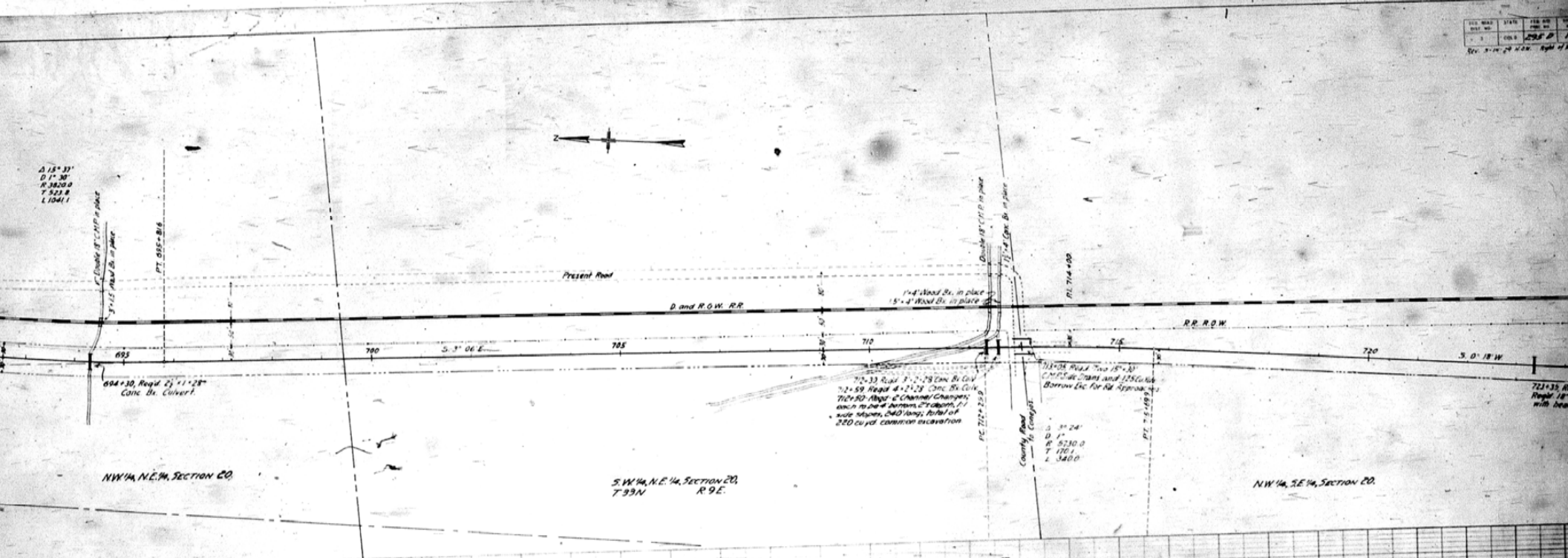
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COLORADO STATE HIGHWAY DEPARTMENT GENERAL LAYOUT, & DETAILS & TOTAL QUANTITIES FOR BRIDGE Across CONEJOS RIVER Sta. 657+35.1 - 658+11.0 Near Animeto Sec. 17 T. 33S. R. 6E	
Designed by RMA Made by RMA Checked by RMA	Approved by <i>[Signature]</i> Bridge Engineer Date: <i>April 1988</i>

STRUCTURE NO P-12-



Δ 15° 31'
D 1" 30'
R 3820.0
T 523.8
L 1046.1



Sheet No.
18
Not in Folder

F.A. D 29.5-D.
Overhaul on Surfacing

Sta. 629+00
Beginning of Proj.

Sta. 751+80
End of Proj.

Material sta. 629 to 640+70 =
Asy. per sta. $\times 11.75$ sta's = 526.5 yds.
Mean dist. Hauled = $\frac{1178 \text{ ft}}{526} \times \frac{1}{2} = .11 \text{ Miles}$
Overhaul = $.11 \times 526.5 = 58.41 \text{ Yd. Miles}$

Material sta. 732+30 to 746+85 =
45 yds. per sta. $\times 14.55$ sta's = 654.75 yds.
Mean dist. hauled = $\frac{1455 \text{ ft}}{526} \times \frac{1}{2} = .1375 \text{ Miles}$
Overhaul = $.1375 \times 654.75 = 90.03 \text{ Yd. Miles}$

Material sta. 746+85 to 751+80 =
123 yds. per sta. $\times 12.15$ sta's = 1494.45 yds.
Mean dist. Hauled = sta. 752+70 - sta. 732+30 = 20.4 sta's = .31 Miles
Overhaul = $1494.45 \times .31 = 469.47 \text{ Yd. Miles}$

FINAL CONSTRUCTION SHEET

Summary	
58.41	✓
90.03	✓
469.47	✓
Total 609.91	

Calculations by: H. J. Walek
Checked by: C. E. Burnett

COLORADO STATE HIGHWAY DEPARTMENT TABULATION OF GRADING QUANTITIES AND PROFILE DATA									
PROJECT LOCATED BETWEEN <i>Barab</i> AND <i>Barab</i> IN <i>Barab</i> COUNTY, STATE ROAD NO. 17									
STATION	EXIST. GRADE	PROPOSED GRADE	CUT	FILL	WATER	WATER	WATER	WATER	WATER
100	100.00	100.00							
101	100.00	100.00							
102	100.00	100.00							
103	100.00	100.00							
104	100.00	100.00							
105	100.00	100.00							
106	100.00	100.00							
107	100.00	100.00							
108	100.00	100.00							
109	100.00	100.00							
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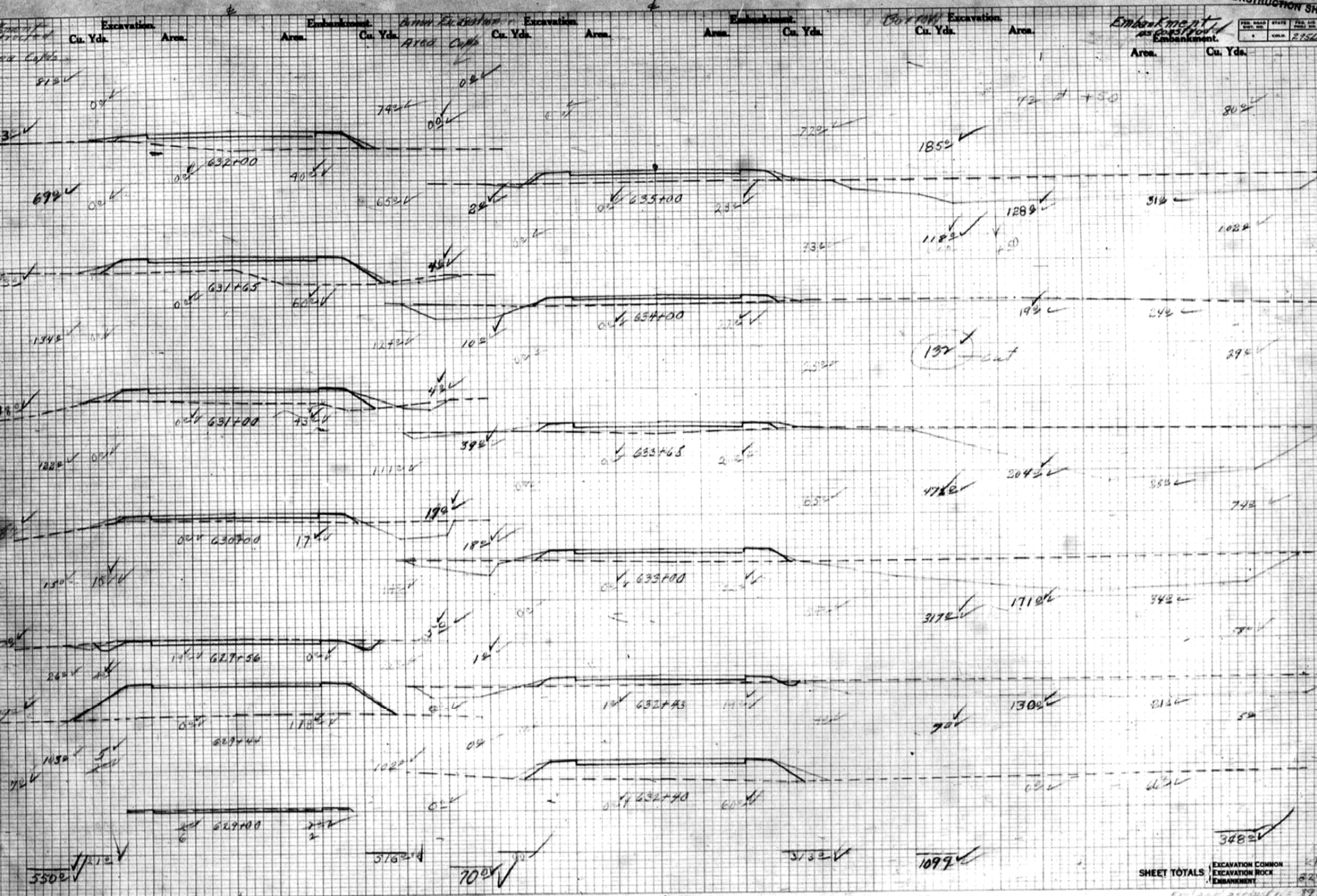
**COLORADO STATE HIGHWAY DEPARTMENT
TABULATION OF GRADING QUANTITIES
FINAL CONSTRUCTION SHEET**

SHEET NO. **2**
OF **4** SHEETS

PROJECT LOCATED BETWEEN *Barab* AND *Barab* IN *Barab* COUNTY, STATE ROAD NO. **17**

STATION	EXIST. GRADE	PROPOSED GRADE	CUT	FILL	WATER	WATER	WATER	WATER	WATER	CUT		FILL		TOTAL	REMARKS
										FEET	PERCENT	FEET	PERCENT		
661-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
662-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
663-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
664-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
665-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
666-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
667-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
668-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
669-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
670-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
671-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
672-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
673-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
674-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
675-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
676-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
677-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
678-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
679-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
680-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
681-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
682-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
683-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
684-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
685-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
686-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
687-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
688-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
689-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
690-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
691-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
692-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
693-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
694-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
695-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
696-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
697-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
698-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
699-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
700-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
701-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
702-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
703-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
704-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
705-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
706-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
707-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
708-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
709-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
710-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
711-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
712-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
713-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
714-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
715-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
716-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
717-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
718-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
719-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
720-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
721-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
722-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
723-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
724-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
725-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
726-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
727-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
728-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
729-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
730-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
731-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
732-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
733-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
734-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
735-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
736-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
737-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
738-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
739-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
740-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
741-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
742-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
743-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
744-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
745-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
746-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
747-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
748-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
749-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
750-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
751-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
752-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
753-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
754-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
755-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
756-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
757-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
758-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
759-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
760-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
761-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
762-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
763-170	170.00	170.00	0	0	0	0	0	0	0	0	0	0	0	0	
764-170	170.00	170.00	0	0	0	0	0	0	0						

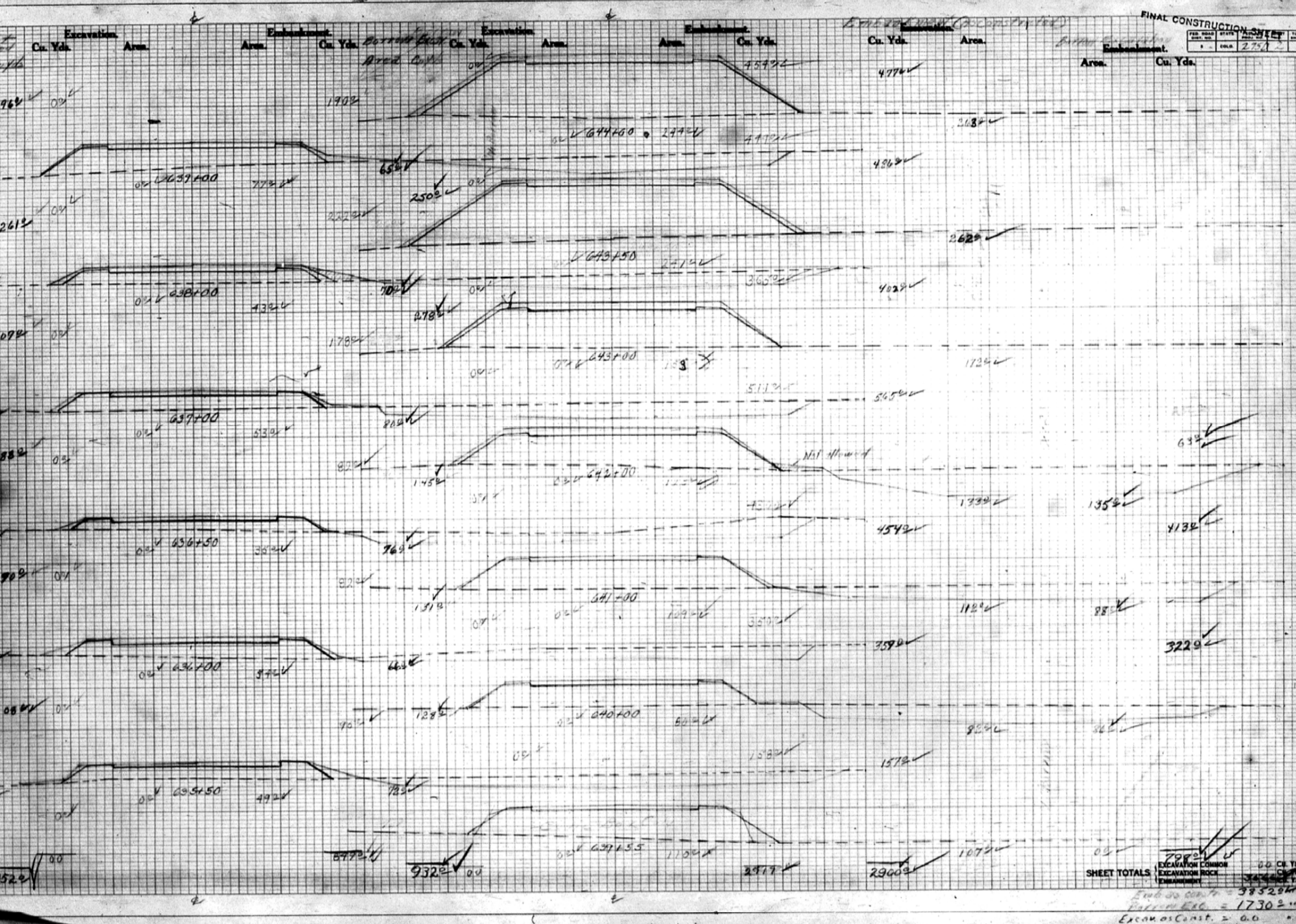
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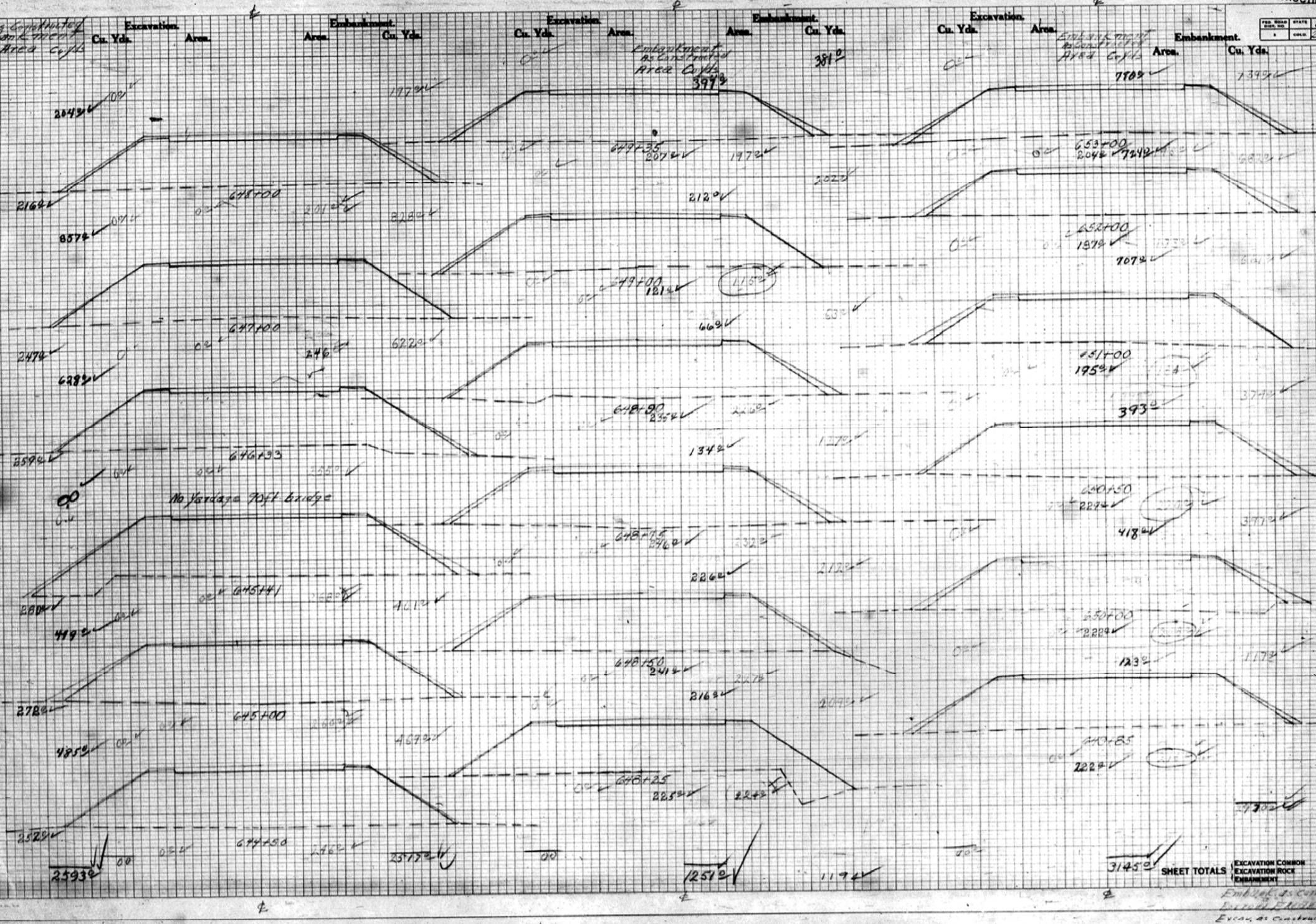


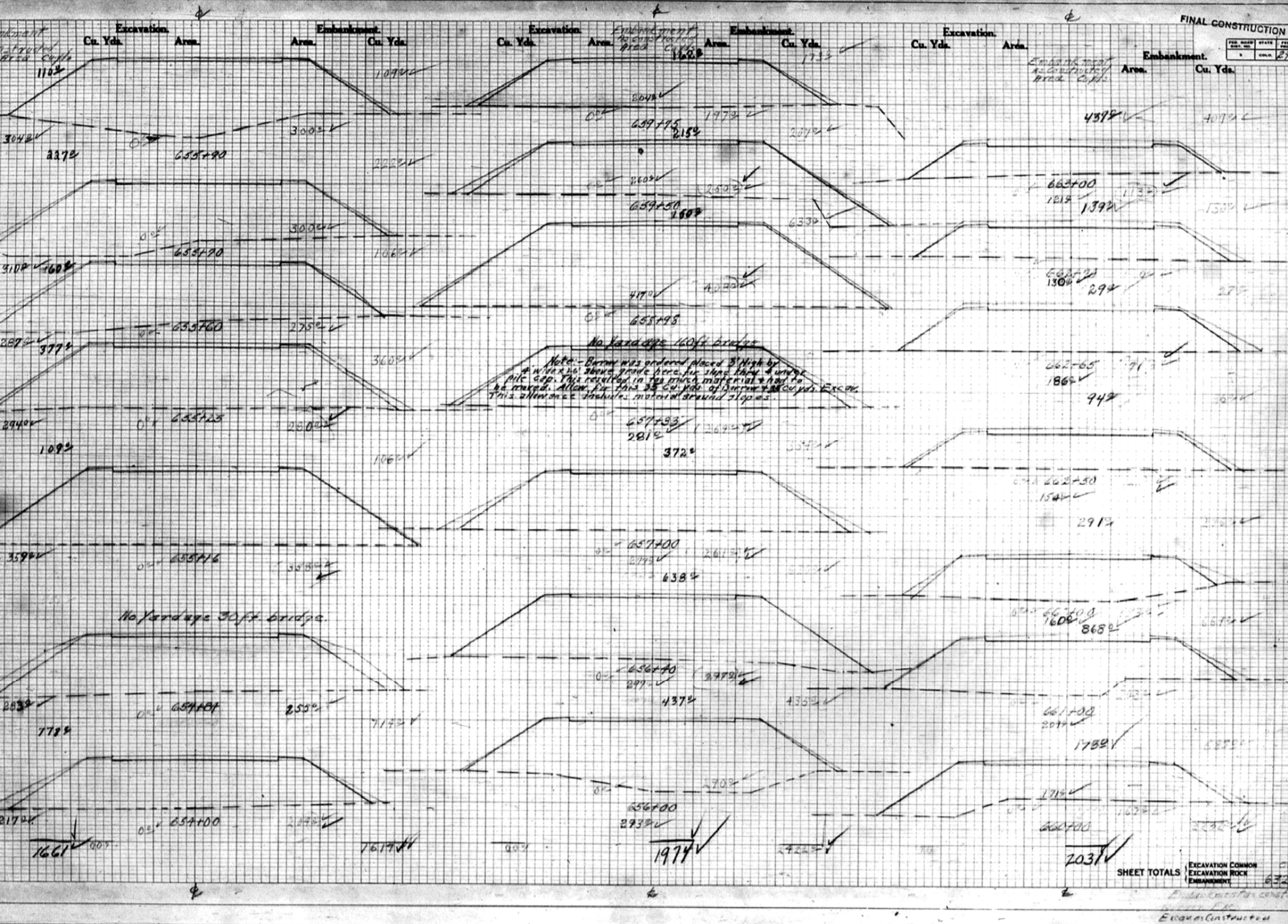
SHEET TOTALS

EXCAVATION COMMON
EXCAVATION ROCK
EMBANKMENT

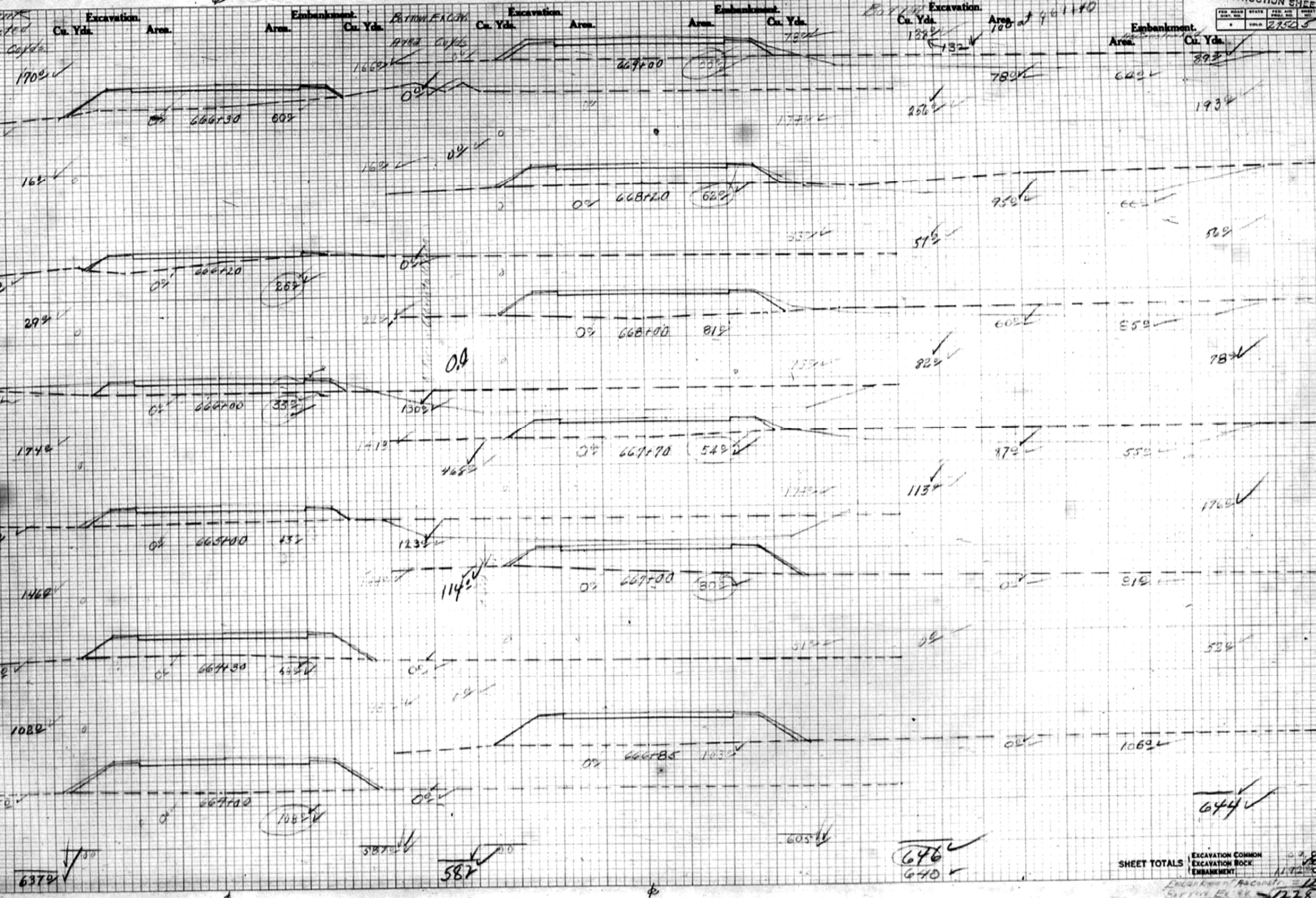
Excavation Common 89
Excavation Rock 89
Embankment 110



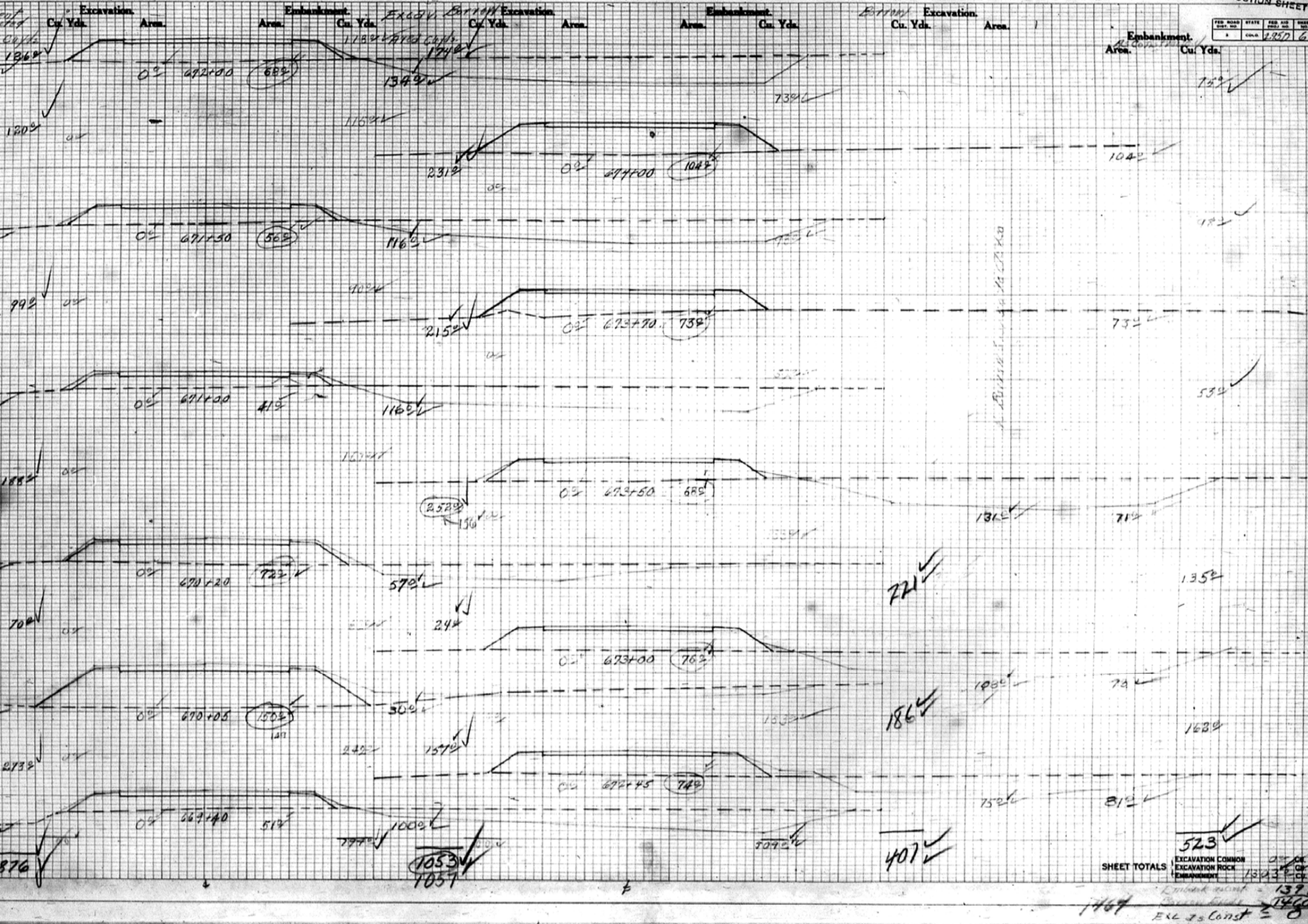




NO.	DATE	BY	CHKD.	APP.
2250				



SHEET TOTALS	EXCAVATION COMMON	EXCAVATION ROCK	EMBANKMENT	1272
				1272
				1272



Excavation Common	Excavation Rock	Embankment
523	1392	1467
SHEET TOTALS		
Exc. to Const = 8		



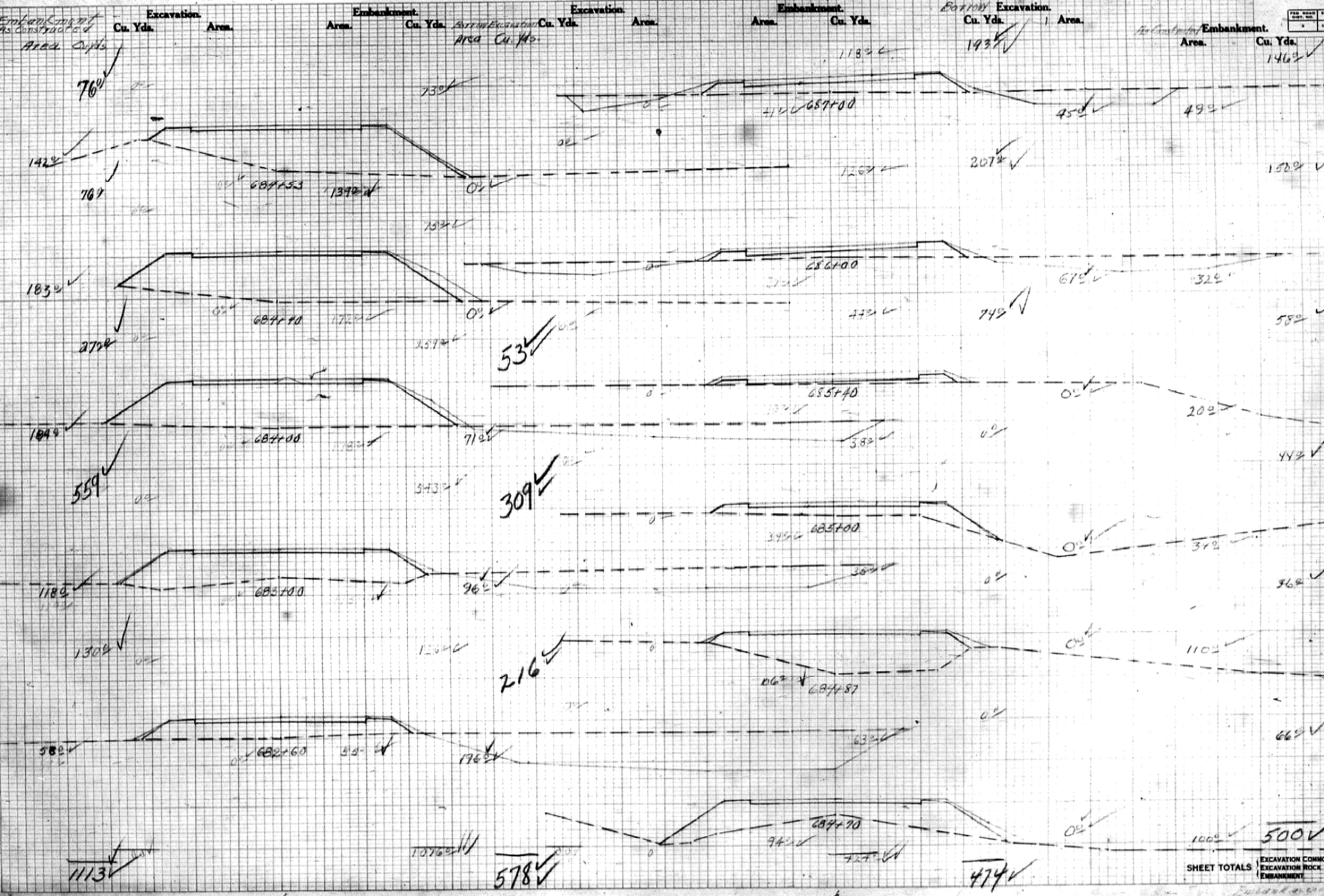
EXCAVATION COMMON
EXCAVATION ROCK
EMBANKMENT

Exc is const. =



EXCAVATION COMMON
EXCAVATION ROCK
EMBANKMENT

Embroid. de Compt
Bureau de
E. de Compt



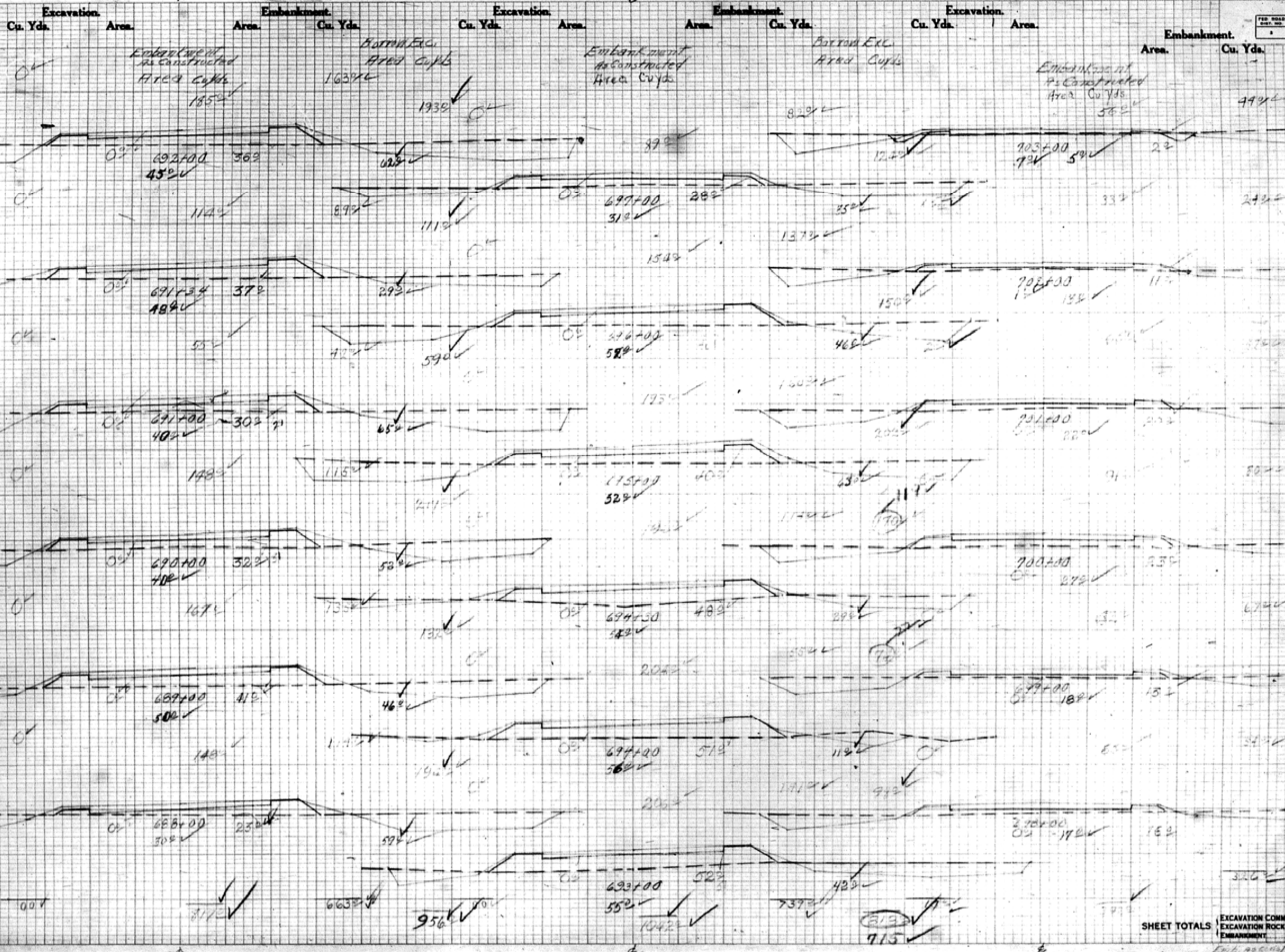
SHEET TOTALS

EXCAVATION COMM

EXCAVATION ROCK

EMBANKMENT

EXC-45 0078



102
48
17
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18
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236*
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112
362*
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76
272
139
130
1113*
146
150
78
44
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66
500*
185
114
55
148
167
148
117*
89
84
193
196
204
206
1063*
130
110
110
117
116
814*
143
111
139
83
82
87
617*
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41
62
66
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13*
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18*
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210
210
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896
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98
93
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106
43
540*
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493*
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70
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100
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451*
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82
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248*
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142*
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76
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216*

[illegible]

156	
276	
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407	*
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309	
244	
1516	*
370	
216	
395	*
309	
216	
578	*
193	
207	
74	
474	*
103	
111	
59	
217	
194	
774	*
124	
150	
202	
170	
74	
98	
418	*
117	
130	
111	
111	
122	
144	
761	*
25	
25	
25	
24	
6F	
197	*
152	
167	
196	
46	
413	*
16	
17	
182	
94	
447	*
70	
109	*
116	*
412	
79	
1730	*
587	
450	
122	*
167	*
407	
1460	*
59	
595	
454	*
378	*
474	
1052	*
58	
118	
384	
2628	*
763	
197	
161	
1139	*
578	
413	
447	
1936	*
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1460	
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2628	
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21
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1307*

F.A.P.
295-D

15 ✓
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#1 21 ✓
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#12 23 ✓
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 130 ✓

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#8 303 ✓
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109 ✓
42 ✓
#9 1300 ✓
104
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32 ✓
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#10 172 ✓
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317 ✓
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#12 1402 ✓
74
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24 ✓
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14

[Handwritten notes and calculations from a document:]

11 ✓
6 ✓
24 ✓
1 ✓

300 ✓
24 ✓
130 ✓
300 ✓

No 13 (675) ✓
15 ✓
1 ✓
1 ✓
80 ✓

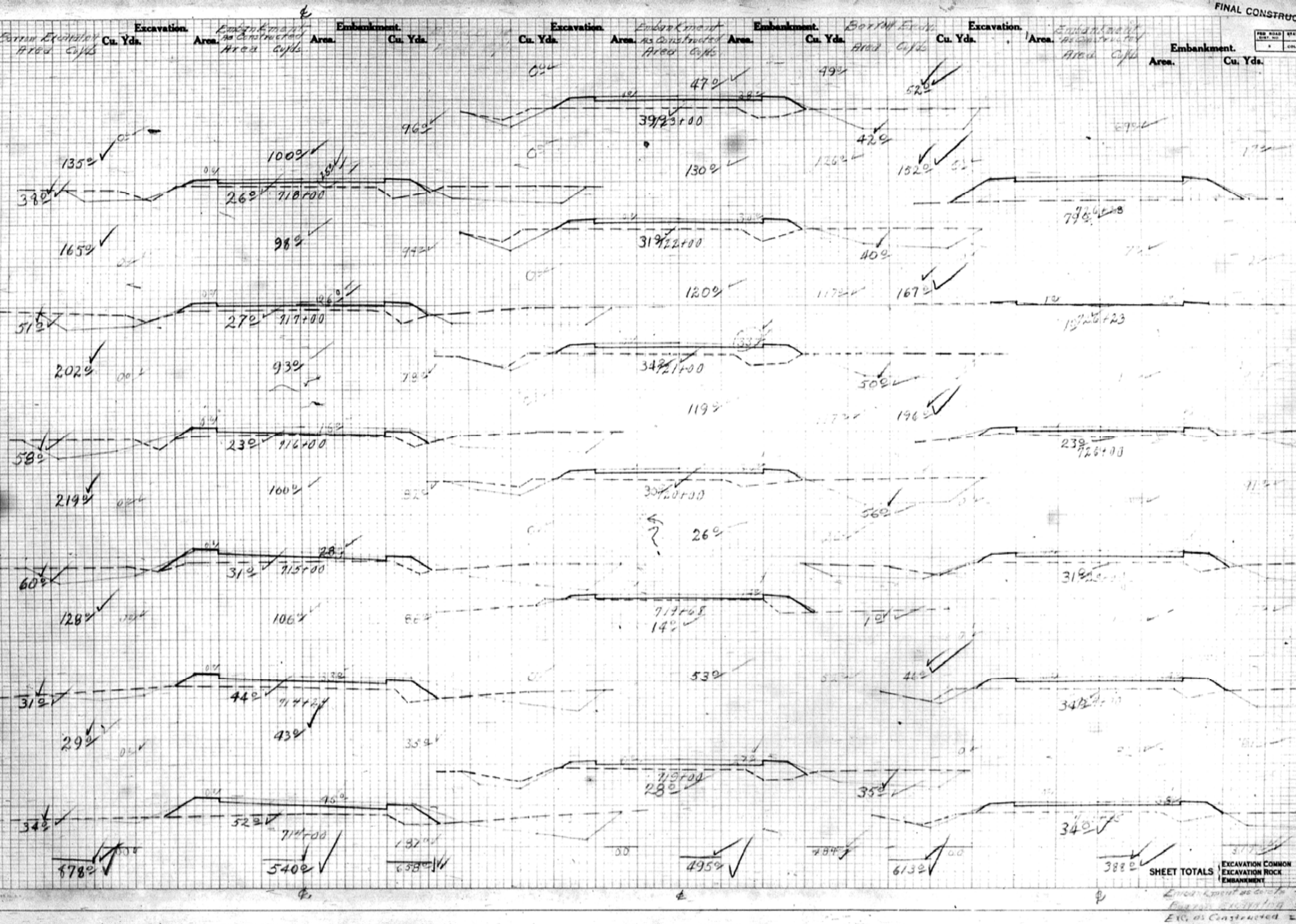
120 ✓
9 ✓
10 ✓
120 ✓
130 ✓

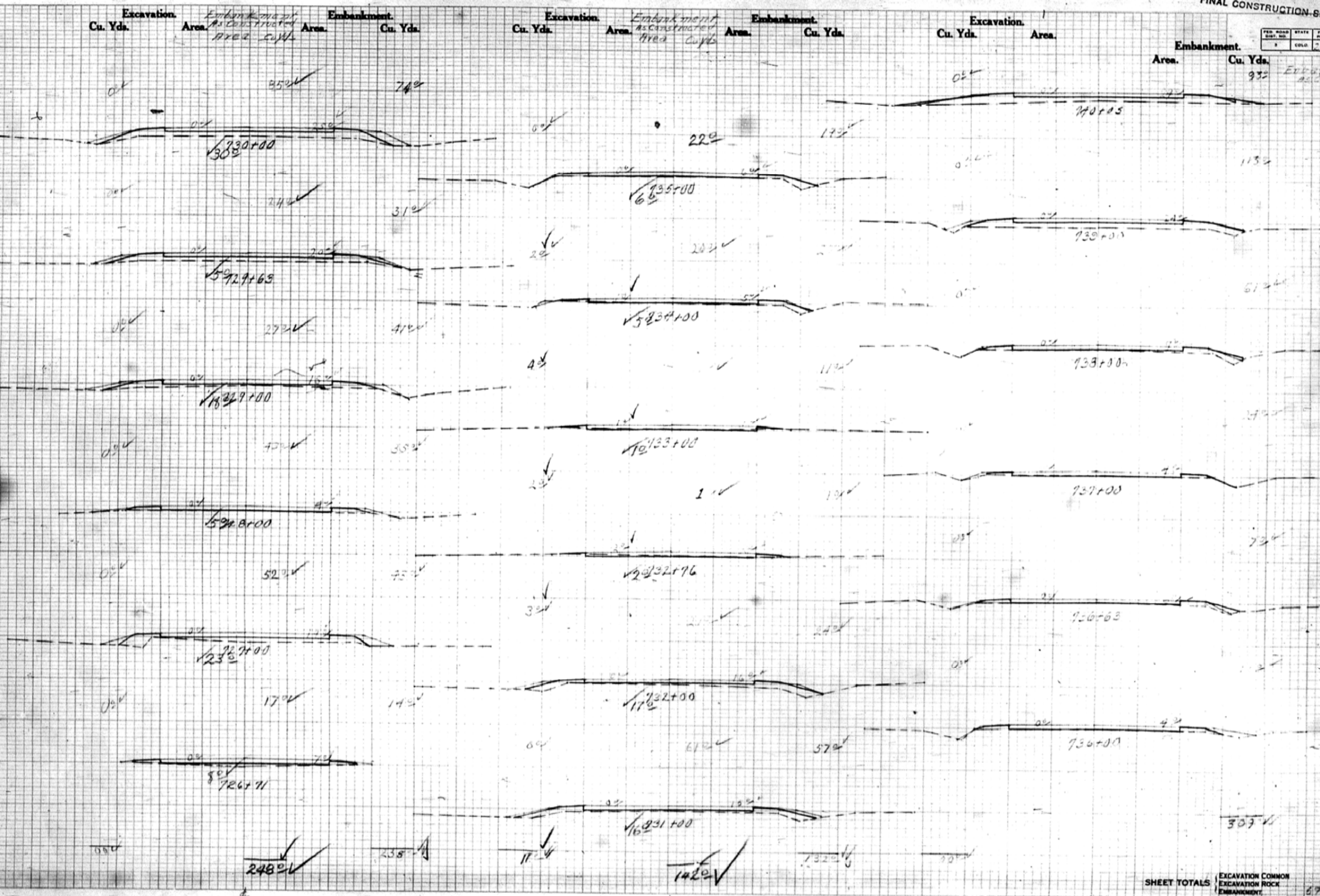
A. 14 130 ✓
JUN 20

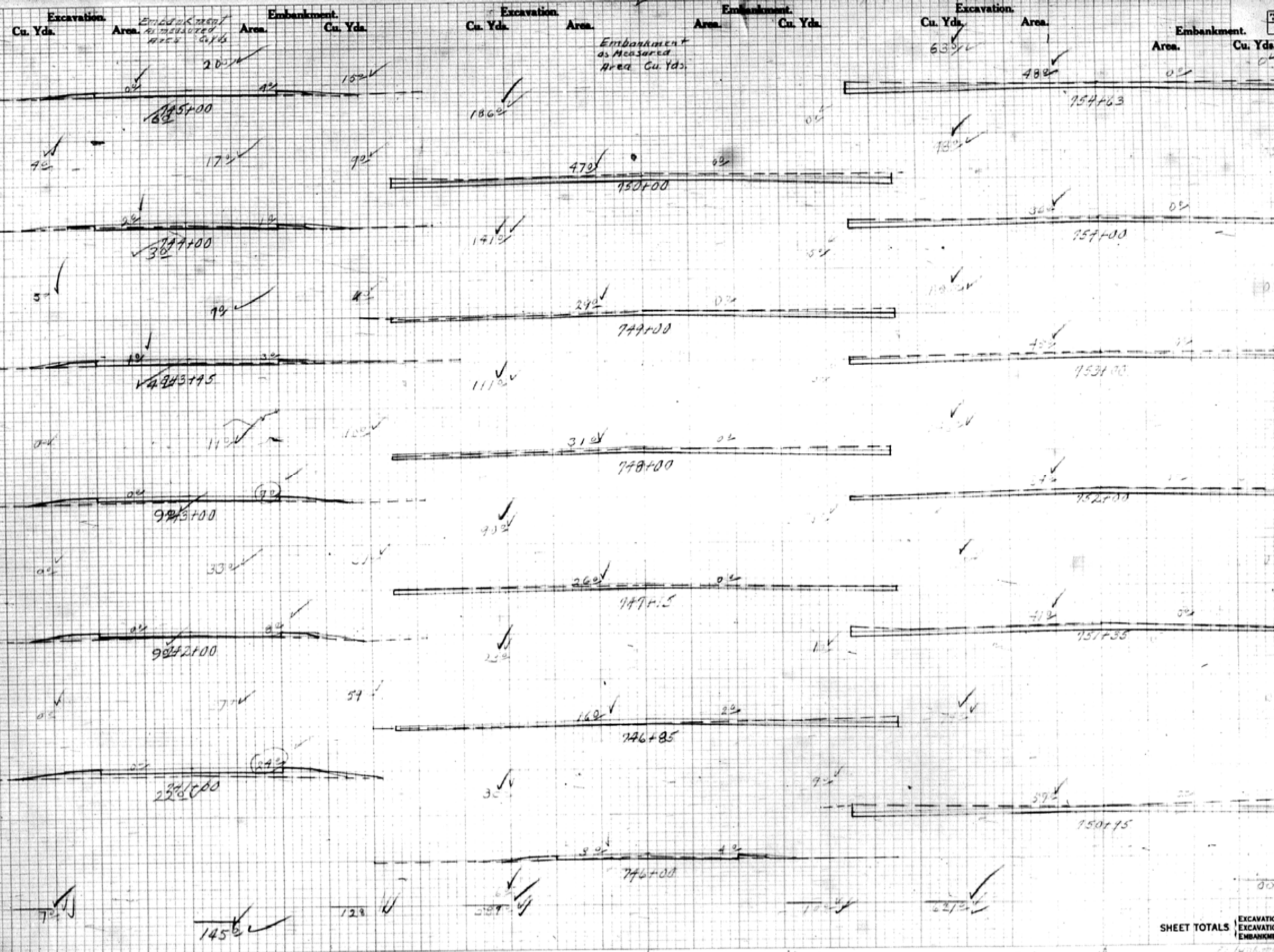
EXCOK ✓
101 ✓
54 ✓
135 ✓

220 ✓
300 ✓
300 ✓
110 ✓
130 ✓
120 ✓
100 ✓
170 ✓
110 ✓
150 ✓
70 ✓
180 ✓

END ✓
20315 ✓
F.A.P. 295-D







SHEET TOTALS

EXCAVATION COMMON
EXCAVATION ROCK
EMBANKMENT

2.1416 m. embankment
EXC. 1.1416 m. embankment
EMBANKMENT 1.1416 m. embankment

Excavation		Embankment		Excavation		Embankment		Excavation		Embankment	
Cu. Yds.	Area	Cu. Yds.	Area	Cu. Yds.	Area	Cu. Yds.	Area	Cu. Yds.	Area	Cu. Yds.	Area

FEED ROAD	STATE	FEED
22	22	22

End of Project

20% 158+00

158+00

157+00

156+00

155+00

Summary of Grading Quantities

EXCAV. Common (cut template)	1534 cu yds
Embankment	28313 cu yds
Embankment + 15%	32,560 "
Borrow Excavation (Emb + 15% - Exc.)	31,026 "
" " (As measured)	

As Constructed

Embankment	29,862 cu yds.
EXCAV. Common	1,507 cu yds
Borrow from pits on R.O.W.	14,314 "
" Chanl. chgs.	19,259 "
See chanl. chg. x section sheet	33,608 cu yds.

Office Check
 Emb = 29,862 Cu Yd
 Com. Exc. Shit 15 = 1507 Cu Yd
 Borrow from pits on R.O.W. = 14,314
 Chanl. chgs. = 19,259
 Total = 53,545

Shrinkage Factor computed from above figures
 $19,259 + 14,314 + 1507 - [29,862] = 5218$
 Then $5218 \div 29,862 = 17.83\%$
 Borrow from pits on R.O.W. = 14,314
 Chanl. chgs. = 19,259
 Exc. Com. from pits on R.O.W. = 1507
 Etc " " R.O.W. = 1507
 Overhaul on Grading = 147,669

Shrinkage factor computed from above figures

$19,259 + 14,314 + 1507 - [29,862] = 5218$ Then $5218 \div 29,862 = 17.83\%$
 $19,259 + 14,314 + 1507 - [29,862] = 5218$

Borrow from pits on R.O.W.	14,314
Chanl. chgs.	19,259
Exc. Com. from pits on R.O.W.	1507
Etc " " R.O.W.	1507
Overhaul on Grading	147,669

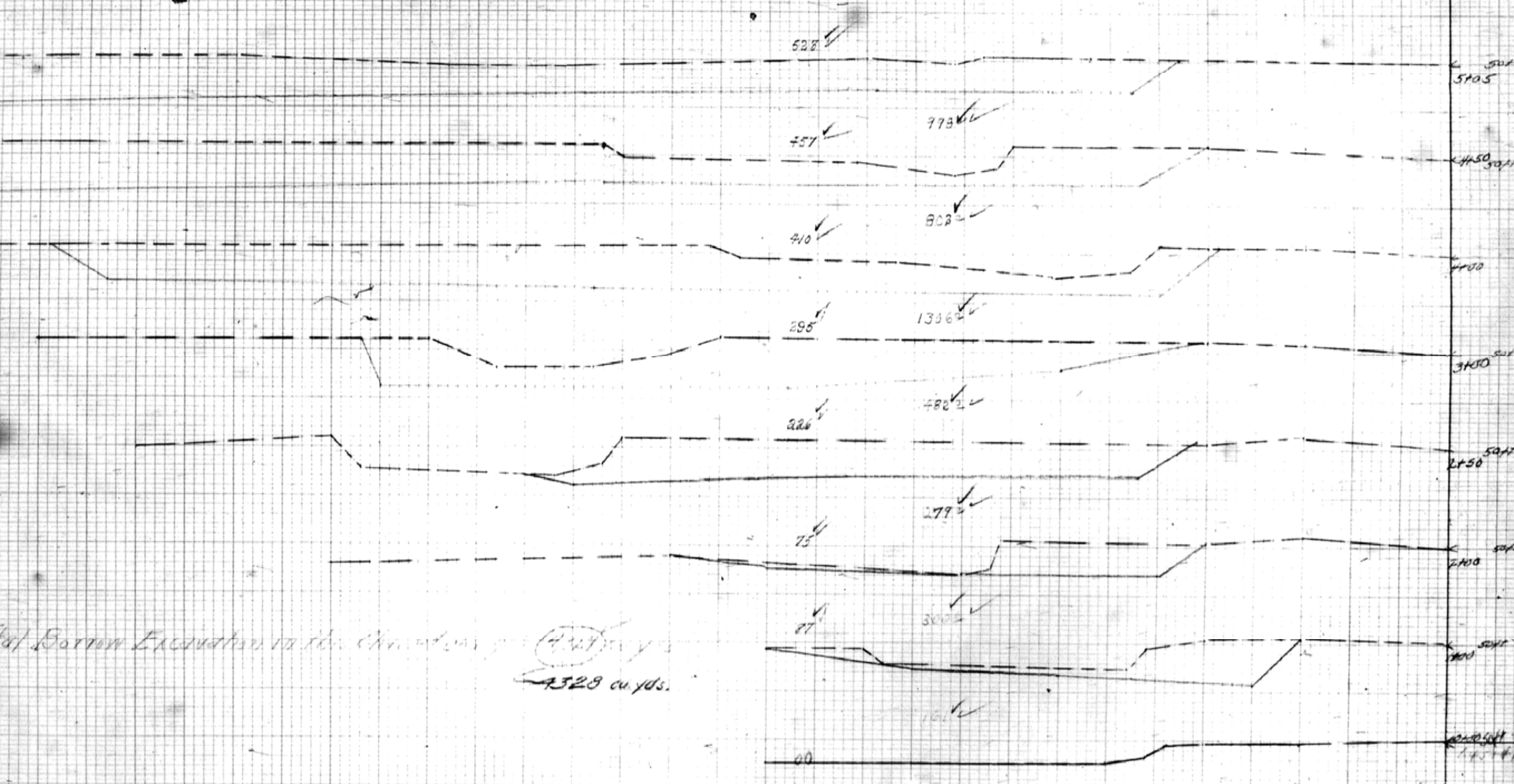
Overhaul on grading 123,891.55 cu yds

SHEET TOTALS	EXCAVATION COMMON	EXCAVATION ROCK	EMBANKMENT
--------------	-------------------	-----------------	------------

Excavation	Area	Excavation	Area	Excavation	Area	Excavation	Area
Cu. Yds.		Cu. Yds.		Cu. Yds.		Cu. Yds.	

Channel Change 645+41
 BORROW EXCAVATION

AREA COYS



645+41 BORROW EXCAVATION IN THE CHANNEL
 4328 cu. yds.

DATE	PER. AD.	REVIEW	APPROVED
1	2	3	4

Excavation
Cu. Yds. Area.

Embankment
Area. Cu. Yds.

Barrow Excavation
Cu. Yds. Area.

Embankment
Area. Cu. Yds.

Excavation
Cu. Yds. Area.

Embankment
Cu. Yds.

Channel Change opposite Sta 658+16

2661 ✓

815 ✓ 5+00

1501 ✓

806 ✓ 4+50

1468 ✓

7802 ✓ 4+00

2700 ✓

678 ✓ 3+00

2200 ✓

570 ✓ 2+00

1047 ✓

518 ✓ 1+45

277 ✓

430 ✓ 1+30

420 ✓

370 ✓ 1+00

852 ✓

70 ✓ 0+00

131742 ✓

Channel Change
opposite Sta
658+16

EXCAVATION COMMON
EXCAVATION ROCK
EMBANKMENT

Cu. Yds.
Cu. Yds.
Cu. Yds.

Excavation	Area	Embarkment	Cu. Yds.	Excavation	Area	Embarkment	Cu. Yds.	Excavation	Area	Embarkment	Cu. Yds.
Cu. Yds.				Cu. Yds.				Cu. Yds.			

BARRY

Channel Change opposite Sta 658+16

Embarkment	Area	Cu. Yds.

2661 ✓

815 ✓ 5+00

1501 ✓

806 ✓ 4+50

1468 ✓

7802 ✓ 4+00

2730 ✓

678 ✓ 3+00

2200 ✓

510 ✓ 2+00

1047 ✓

518 ✓ 1+45

279 ✓

485 ✓ 1+30

436 ✓

390 ✓ 1+00

852 ✓

70 ✓

0+00
Channel Change
opposite
658+16

131740 ✓

Excavation
Cu. Yds. Area.

Embankment
Area. Cu. Yds.

Bottom/Excavation
Cu. Yds. Area.

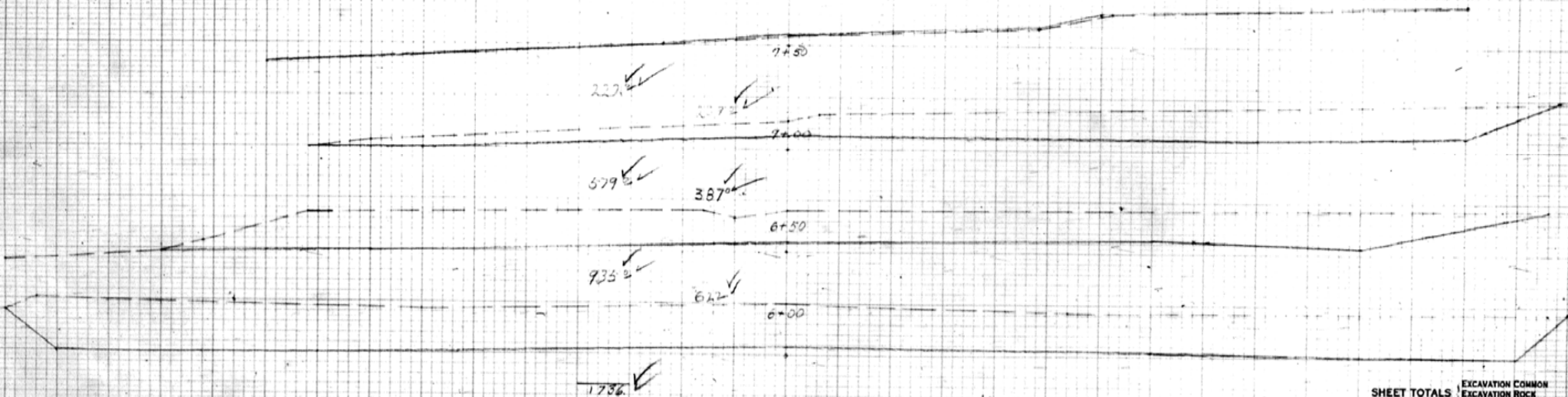
Embankment
Area. Cu. Yds.

Excavation
Cu. Yds. Area.

FINAL CONSTRUCTION SHEET
Embankment.
Area. Cu. Yds.

295D Channel Chg. opposite 658±
295D
FINAL CONSTRUCTION SHEET
Embankment.
Area. Cu. Yds.

Total Bottom EXCAV. in Channel Chg. opposite 658± = 14,930 cu. yds.



SHEET TOTALS
EXCAVATION COMMON
EXCAVATION ROCK
EMBANKMENT

Equation 3105 = 646 + 33

$$\text{Remainder } 2 \times 50 = 699 + 99$$

TOTAL = 147.669 STA. YDS

Division of overhead
 check figures. Now

Bridge	Bridge
434 5 451	451 5 456
72	
128	14 415
710 8	2852
14 412	42
13 00	1313
7538	
70023 14W	14205

Prof. T.

Total Paid -

Note: - All excavations taken out of Burnside Park between
S.W. 5th & S.W. 7th St., and deposited between S.W. 5th & 7th
and S.W. 6th & 7th, and 500 ft. extra haul.

$2050 \times 11.95 = 24,490$ Sm Yds
 $940 \times 9.70 = 9,106$ " "
 $5540 \times 4.45 = 24,533$ " "
 $940 \times 3.20 = 3,008$ " "
 $20 \times 2.85 = 57$ " "
 $1530 \times 1.08 = 1,652$ " "
 $\hline$
 $\text{Total} = 61,793$ Sm Yds

70 x 40	= 420.500 Yds.
120 x 40	= 714.285 "
70 x 145	= 102.142 "
<u>Total</u>	<u>1236.927 Yds.</u>

$10 \times 10.1 = 101 \text{ Str. Yds}$
 $10 \times 5.9 = 59 \text{ Str. Yds}$
 $10 \times 2.6 = 26 \text{ Str. Yds}$
 $120 \times 1.5 = 180 \text{ " "}$
 $\text{Total} = 196 \text{ Str. Yds.}$

$$210 \times 39.05 = 8199.50 \text{ Yds.}$$

90	23.25
390	18.25
110	11.55
210	5.5
50	12.5
Total	

Equation 3105 = 646 + 33

$$549 \times 124 = 67992$$

TOTAL = 147.669 STA. YDS

DIVISION of Overhead

Expend	Expend
651 11 651	651 11 651
72	
128	14 435
710 8	2852
174 12	1313
13 00	
73 38	
70 483 14 11	17205

Prof. T.

Total Paid -

Note:- All excavations taken out of Burrow Pit are made.
Sta. 570 to Sta. 750, and opposite between Sta. 650 & 700
and Sta. 630 & 650, and 500 ft. extra haul.

$2050 \times 11.95 = 24,490$ Sm Yds
 $940 \times 9.70 = 9,106$ " "
 $5540 \times 6.45 = 35,733$ " "
 $920 \times 3.20 = 2,944$ " "
 $20 \times 2.85 = 57$ " "
 $1530 \times 1.08 = 1,652$ " "
 $\hline$
 $\text{Total} = 61,983$ Sm Yds

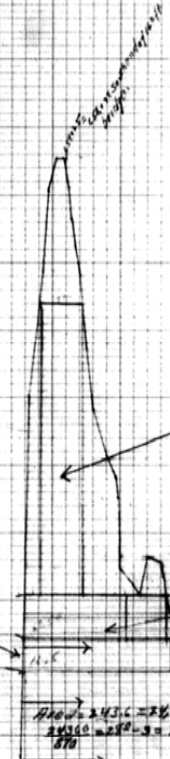
70 x 40	= 420.500 Yds.
120 x 40	= 714.285 "
70 x 145	= 102.142 "
<u>Total</u>	<u>1236.927 Yds.</u>

$90 \times 12.1 = 1089 \text{ lbs.}$
 $40 \times 5.9 = 236 \text{ lbs.}$
 $80 \times 2.6 = 208 \text{ lbs.}$
 $120 \times 1.5 = 180 \text{ lbs.}$
 $\text{Total} = 1613 \text{ lbs.}$

90	23.25
390	18.25
110	11.55
210	5.5
50	12.5
Total	

9000
8500
8000
7500
7000
6500
6000
5500
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
1000
2000
2500

Each small square = 100 sta. yds.



$$\text{Area} = 102 \text{ sq.} = 10,200 \text{ sta. yds.}$$

$$\text{Then } \frac{10,200}{2,150} = 4.74 \text{ sta.} - 3 = 1.74 \text{ sta.}$$

$$1.74 \times 2,150 = 3,741 \text{ sta. yds.}$$

$$\text{Area} = 66.5 \text{ sq.} \times 66.5$$

$$\frac{66.5}{2.4} = 27.7 - 3 = 24.7 \text{ sta.}$$

$$24.7 \times 40 = 988 \text{ sta. yds.}$$

$$\text{Area} = 57.5 \text{ sq.} = 5,750$$

$$\frac{5,750}{400} = 14.375 - 3 = 11.375 \text{ sta.}$$

$$11.375 \times 400 = 4,550 \text{ sta. yds.}$$

$$\text{Area} = 36 \text{ sq.} \text{ or } 3,600 \text{ sta. yds.}$$

$$\text{Then } \frac{3,600}{400} = 9.0 \text{ sta.} - 3 = 6.0 \text{ sta.}$$

$$6.0 \times 400 = 2,400 \text{ sta. yds. overhaul}$$

$$\text{Area} = 14.17 \text{ sq.} = 1,417$$

$$\frac{1,417}{330} = 4.29 - 3 = 1.29 \text{ sta.}$$

$$1.29 \times 330 = 426 \text{ sta. yds. overhaul}$$

$$\text{Area} = 243.6 = 24,360$$

$$\frac{24,360}{870} = 28.0 - 3 = 25.0 \text{ sta.}$$

$$25.0 \times 70 = 1,750 \text{ sta. yds. overhaul}$$

$$\text{Area} = 15 \text{ squares or } 1,500 \text{ sta. yds.}$$

$$\text{Then } \frac{1,500}{120} = 12.5 - 3 \text{ sta.} = 9.5$$

$$9.5 \times 120 = 1,140 \text{ sta. yds. Overhaul}$$

$$\text{Area} = 13.8 \text{ sq.} \text{ or } 1,380$$

$$\text{Then } \frac{1,380}{900} = 1.53 - 3 = 1.53 \text{ sta.}$$

$$\text{Then } 1.53 \times 900 = 1,377 \text{ sta. yds. overhaul}$$

$$\text{Area} = 79.7 \text{ sq.} \text{ or } 7,970 \text{ sta. yds.}$$

$$\text{Then } \frac{7,970}{900} = 8.85 - 3 = 5.85 \text{ sta.}$$

$$5.85 \times 9,000 = 52,650 \text{ sta. yds.}$$

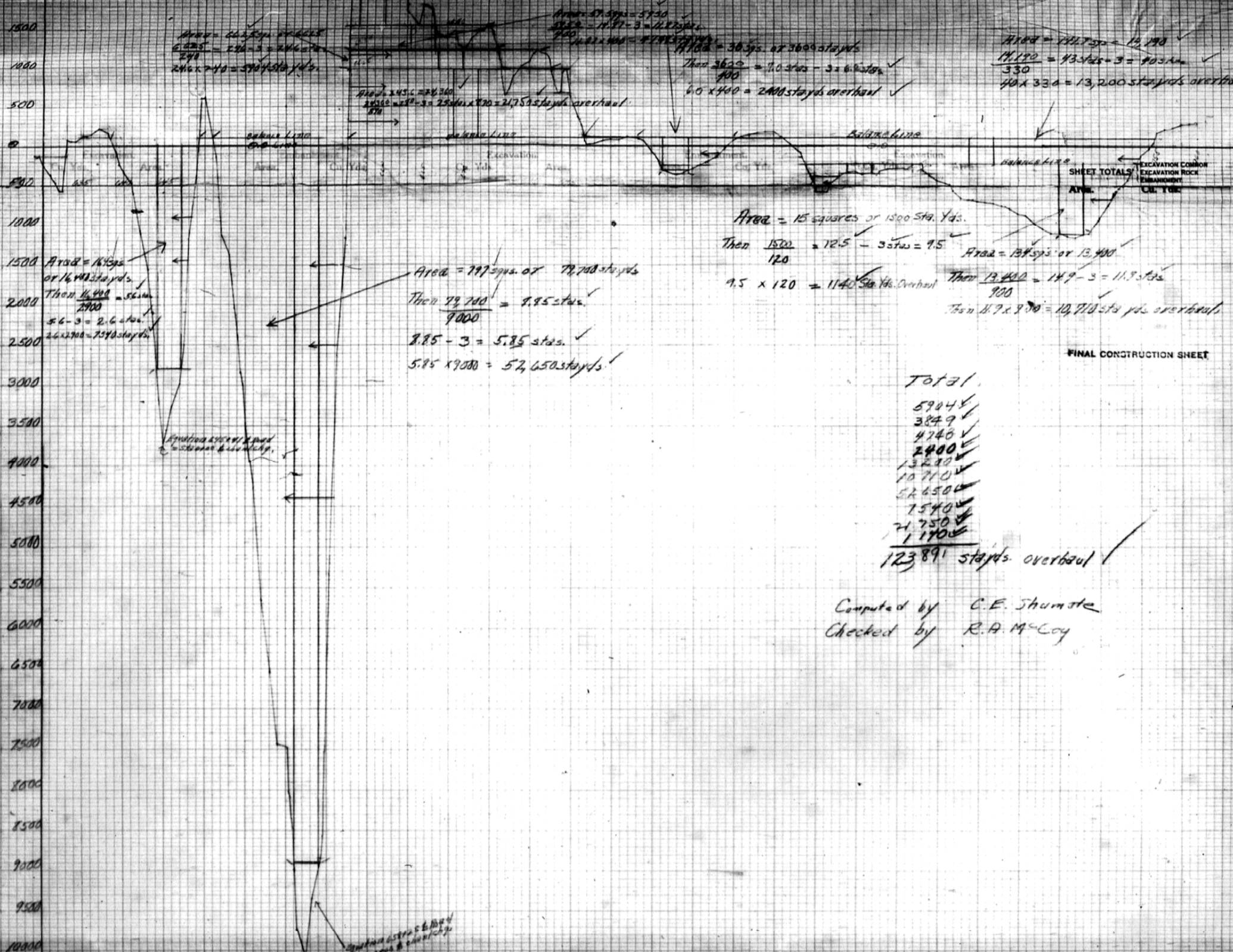
$$\text{Area} = 16 \text{ sq.}$$

$$\text{Then } \frac{16,000}{2,500} = 6.4 - 3 = 3.4 \text{ sta.}$$

$$3.4 \times 2,500 = 8,500 \text{ sta. yds.}$$

SHEET TOTALS
Excavation
Common
Excavation Rock
Embankment
Cu. Yds.

FINAL CONSTRUCTION SHEET

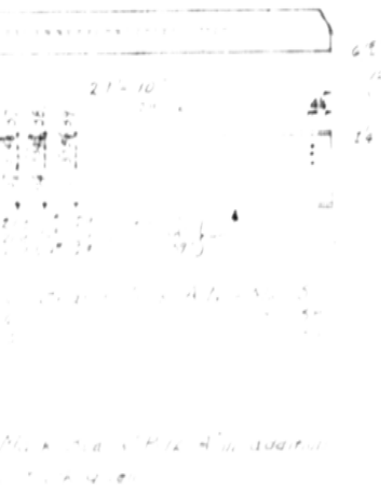


FINAL CONSTRUCTION SHEET

Total
 5944
 3849
 4740
 2400
 13200
 10710
 52650
 7540
 21750
 11700
 123891 st. yds. overhaul

Computed by C.E. Shumate
 Checked by R.A. McCoy

MINNEAPOLIS STEEL AND MACHINERY COMPANY Sheet No. 7
 BEAMS FOR 90' SKEW SHED
 STRUCTURE P-12-A
 Order No. B46590
 Made by R.C.R.
 Ch. by *Richards*
 Date 6/20/29
 Civil Eng. DEPT. - F.A.P. 2954



MINNEAPOLIS STEEL AND MACHINERY COMPANY Sheet No. 5
 BEAMS FOR 90' SKEW SHED
 STRUCTURE P-12-B
 Order No. B46590
 Made by R.C.R.
 Ch. by *Richards*
 Date 6/20/29
 Civil Eng. DEPT. - F.A.P. 2954



Note: Make 4 Beams Thus A.N. Mk. S1

Note: Make 4 Beams Thus A.N. Mk. S1

MINNEAPOLIS STEEL AND MACHINERY COMPANY Sheet No. 6
 BEAMS FOR 90' SKEW SHED
 STRUCTURE P-12-F
 Order No. B46590
 Made by R.C.R.
 Ch. by *Richards*
 Date 6/20/29
 Civil Eng. DEPT. - F.A.P. 2954



Note: Make 4 Beams Thus A.N. Mk. S1

Note: Make 4 Beams Thus A.N. Mk. S1

MINNEAPOLIS STEEL AND MACHINERY COMPANY

Sheet No. 8

Order No. 246510

Made by 27

Ch by 124

Date 6-20-27

OTHER
ENDS SIMILAR

AKS-24-CHANNELS THUS MK. C3-P-12-A"

Form Standard 121

MINNEAPOLIS STEEL AND MACHINERY COMPANY

Sheet No. 9

Rivets

Holes as Mtd.

Paint One Coat of

Red Lead (1 lb. per sq. ft.)

Shut Ins. by J. A. Hill

CAST STEEL ROCKER 1

SOLE PLATE - FOR

1100 x 20' Riv. Span F.A.P. #215 D

Red Lead (1 lb. per sq. ft.)

Long Center Co. - Antonito, Colo.

Order No. 1-16-27

Made by Alabon

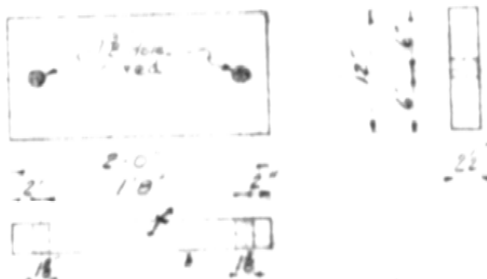
Ch by Sangster

Date 6-24-27

Cast Steel - ASTM Spec A27 24
Class B Medium Grade



M-1-2-CAST STEEL EXPANSION ROLLER THUS E-51



M-1-2-CAST STEEL SOLE PLATE THUS E-52

CASTS BOUGHT ON P.A.O.
PATENTS BY U.S.
FINISH IN OUR SHOP

MINNEAPOLIS STEEL AND MACHINERY COMPANY

Sheet No.

10.

Rivets

CAST STEEL - FIXED END SHOE

Order No **24659**

Holes

Ad

Made by *M. J. C. A.*

Paint One Coat of

1-100'-20 Riv Span F.R.P. #295-D

Ch by Ja 2018

Red Lead (Spec) Levy Const. Co. - Antonito, Colo.

Date 6-24-27

Shop Insp. by Q. A. Hall

Cast Steel - A.S.T.M Spec A27-24
Class B Medium Grade

$$-4 - \frac{1}{2} \left\{ \frac{1}{2} \right\} - \frac{1}{2} =$$

Alfred B...



100 100



Range Finish - 4" - 6"
18"

Fillable not to exceed 2 in.

Panel-2-Cast Steel Fixed End SHOPS THUS "FSI

BOUGHT ON PAO
PATTES BY JC
FINISH - JUA SMOE

LATERAL SUPPORTS

Holes

1- 100' x 20' RLV SPAN

Paint One Coat

COLORADO HILLY DEPT. F.A.P. 2932

Red Lead + Oil

ANTONY LTD. COLORADO

Made by

Ch. by

Date _____

SHOP INSPECTION BY Q.A. HAL



— 12 —

[illegible]

MINNEAPOLIS STEEL AND MACHINERY CO.

PIN LIST.

FOR

1-100'x20' RIV SPAN COLORADO HWY DEPT
ANTONITO COLORADO FAP#295D
SHOP INSP. & A HALL

ORDER NO. **B4659a**

MADE BY

ON, BY **CORRELL**

~~7-24-29~~



STANDARD NUTS

 $D \quad F$

GRIP 6

 τ

LENGTH OVER ALL L

PAINT 1-ET WHITE LEAD & TALLOW

MARK	NO REQD	DIAM.	GRIP	SCREW		LENGTH OVER ALL	REMARKS
				DIAM	LENGTH		
	1	P	6	D	T	L	
"a"	4	4	1 1/4	3	1 7/8	1 1/8	Shoulder Both ends

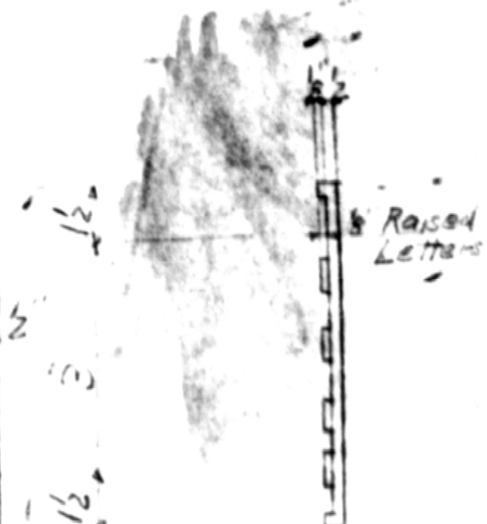
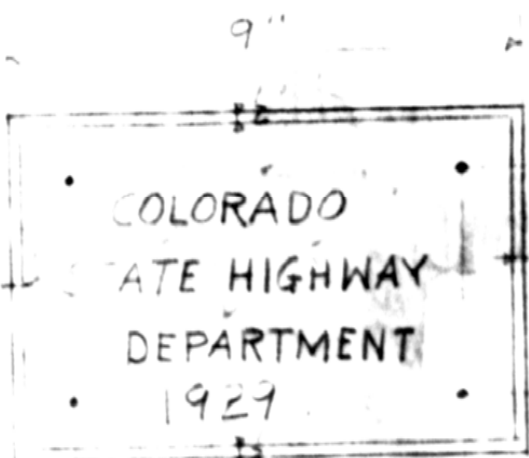
MINNEAPOLIS STEEL AND MACHINERY COMPANY

Sheet No.

19

ORDER NO. 192
COLORADO HIGHWAY DEPT.
ANTHONY CO. FARNS
(12.100)

Order No. 192
Made by
Ch. by CORRELL
Date 7-22-20

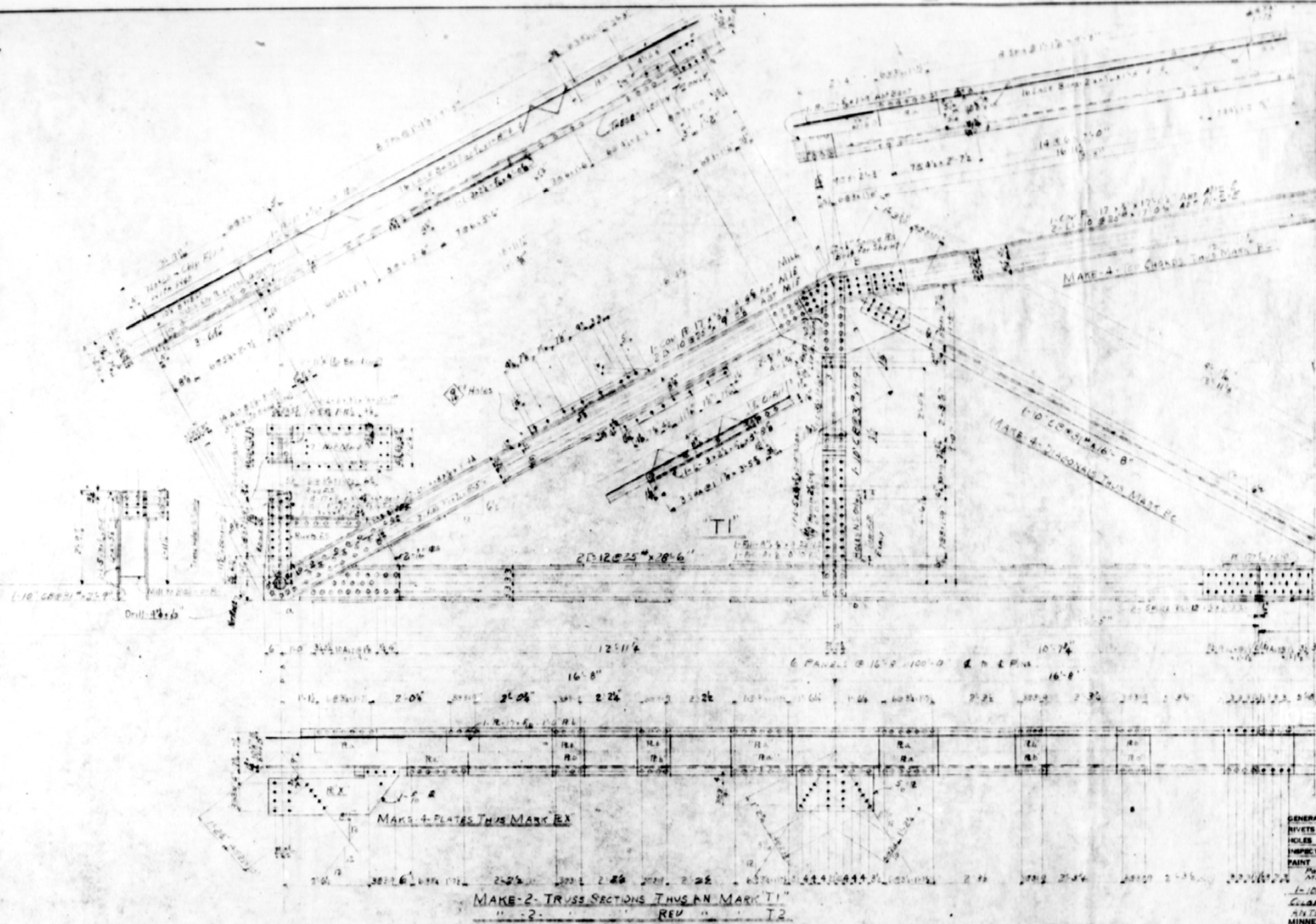


NOTE

LETTERS TO BE 1/2" HIGH

(4- 1/2" x 2" ROUND HEAD
BOLTS FOR EACH 12"
BOLT FOR SHPNT

MAKE 2- C I NAME RES THW M N P



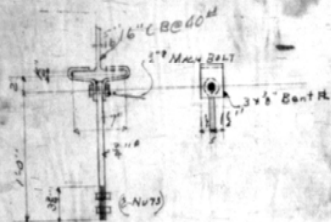
GENERAL NOTE
 RIVETS 3/4"
 HOLES 1 1/8"
 INSPECTION BY C. A. HALL
 PAINT 1-C1 Red Lead
 Paint on both sides
 Mark on Rivets
 1-100x20 Riv Spacing
 COLORADO HIGHWAY
 AUSTON TO COLORADO
 MINNEAPOLIS STEEL & IRON
 MINNEAPOLIS, MN
 APPROVED _____ ENG
 MADE BY _____ DAY
 TRACED BY _____ DAY
 CHECKED BY Corral DAY
 ORDER NO. 22-1003 SHE



MAKE 5 FLOOR BEAMS THUS MARK 'FBI'

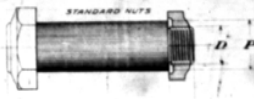
MAKE-2-TRUSS SECTIONS THUS MARK "T"

MINNEAPOLIS STEEL AND MACHINERY COMPANY Sheet No. 17
 Order No. 846590
 Rivets: LATERAL SUPPORTS
 Made by: C. A. HALL
 Hub: 1-100' RIV. SPAN
 Paint One Coat of: COLORADO HWY. DEPT. FAB#295D
 Red Lead: ANTONITO COLORADO
 Date: 7-24-29
 SHOP INSP BY Q.A. HALL



MAKE-6-LATERAL SUPPORTS THUS MARK L3

MINNEAPOLIS STEEL AND MACHINERY CO. SHEET NO. 18
 PIN LIST
 FOR 1-100' RIV. SPAN COLORADO HWY. DEPT.
 ANTONITO COLORADO FAB#295D
 ORDER NO. 846590
 MADE BY: C. A. HALL
 CH. BY: C. A. HALL
 DATE: 7-24-29
 SHOP INSP. Q.A. HALL

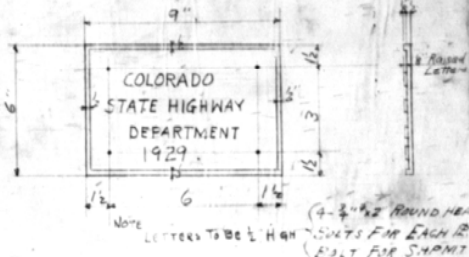


LENGTH OVER ALL L

PAINT LET. WHITE LEAD TALLON

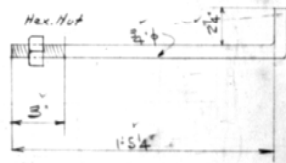
MARK	NO REQ'D	DIAM	GRID	SCREW			LENGTH	REMARKS
				P	G	D		
		P	G	D	T	L		
"a"	4	4	1 1/4	3	1 1/2	1' 8 1/2"	Shoulder Both ends	

MINNEAPOLIS STEEL AND MACHINERY COMPANY Sheet No. 19
 Order No. 846590
 Rivets: 1-100' RIV. SPAN
 Made by: C. A. HALL
 Hub: COLORADO HWY. DEPT.
 Paint One Coat of: ANTONITO COL. FAB#295D
 Red Lead: ANTONITO (See Spec.)
 Date: 7-24-29
 SHOP INSP. Q.A. HALL



MAKE-2-C-1 NAME PLATES THUS MARK L3

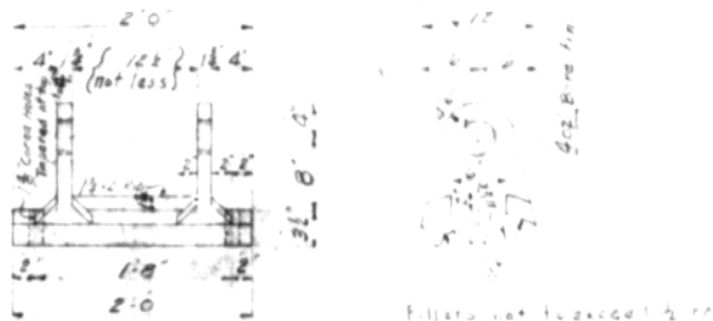
MINNEAPOLIS STEEL AND MACHINERY COMPANY Sheet No. 20
 Order No. 846590
 Rivets: HOOK BOLTS 1-100' RIV.
 Made by: C. A. HALL
 Hub: SPAN COLO. HWY. DEPT.
 Paint One Coat of: FAB#295D
 Red Lead: ANTONITO, COLORADO
 Date: 7-24-29
 SHOP INSP. Q.A. HALL



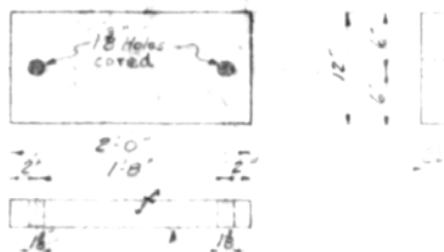
MAKE-12-HOOK BOLTS THUS (SPEC.)

MINNEAPOLIS STEEL AND MACHINERY COMPANY Sheet No. 9

Rivets CAST STEEL ROCKEX 1 Order No. 141214
 Holes as Htd. SOLE RITE - FOR Made by Matson
 Paint One Coat of 1-100 x 20 Riv. Sp. F. A. #275.2 Ch. by Samuel
Red Lead Spec. Levy Constr. Co. - Antwerp, Colo. Date 6-20-29
 Shop Insp. by Q. A. Hall Cast Steel - F. S. T. M. Size A21 24
 Class B Maximum Grade



MAKE 2-CAST STEEL EXTENSION ROCKEX TH - ES1



ROUGH FINISH

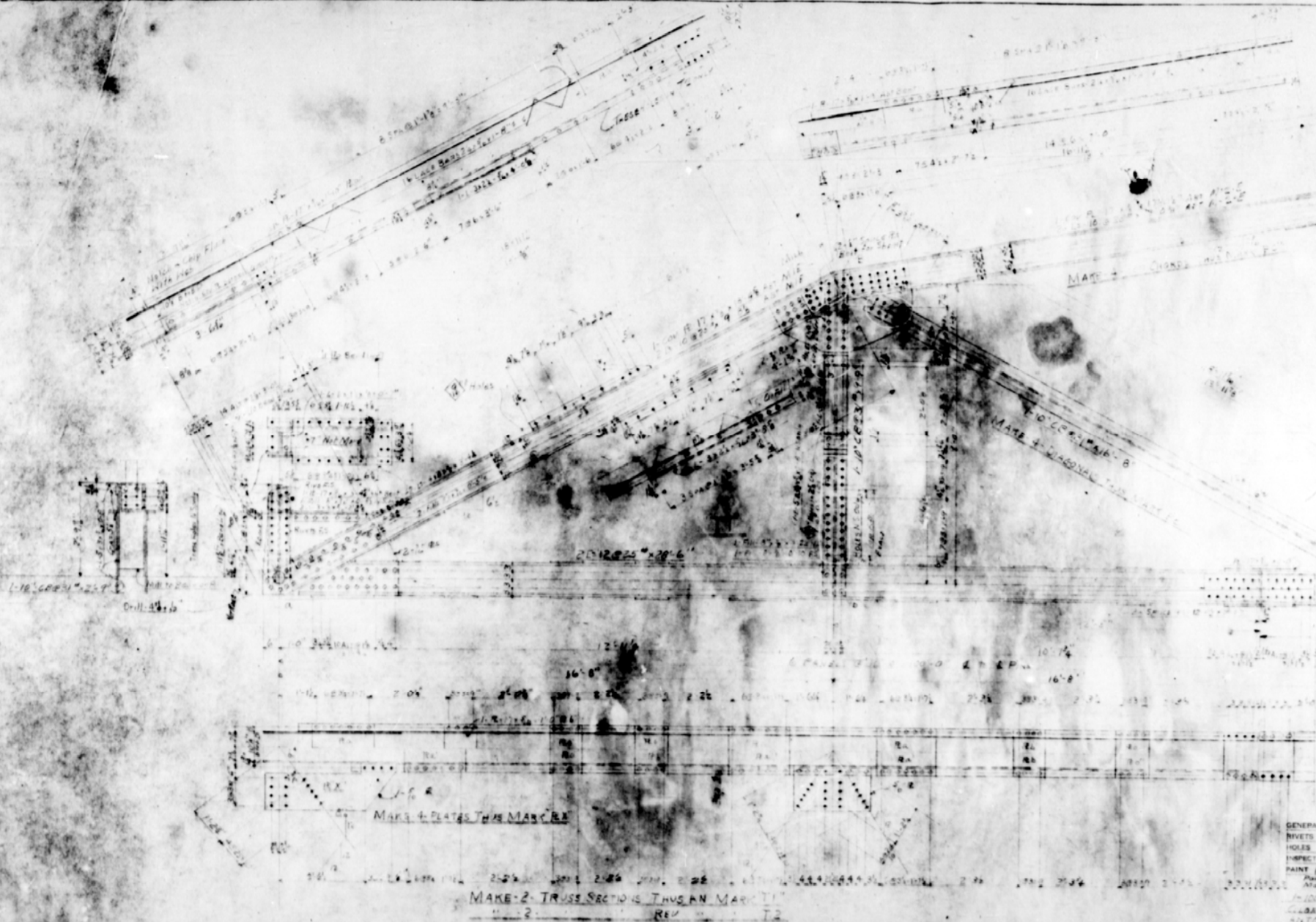
MAKE 2-CAST STEEL SILL PLATES ES2

CASTS BOUGHT ON P.H.O.
 PATNS. BY US
 FINISH BY SHOP

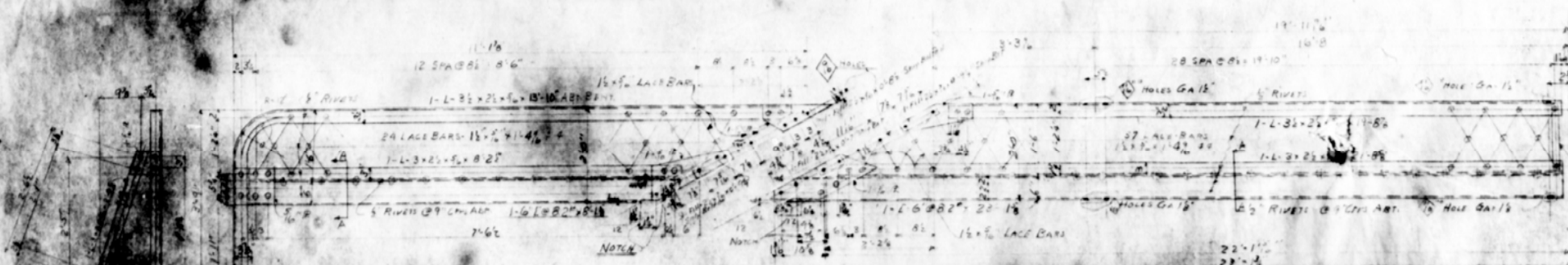


MAKE-2 TRUSS SECTIONS THUS AN MARK T1
 MAKE-2 TRUSS SECTIONS THUS AN MARK T2

GENERAL NOTE
 RIVETS 1/2"
 HOLES 1 1/4"
 INSPECTION BY J. A. HALL
 PAINT 1-1/2" Red Lead
 Mark on Painted Sur.
 1-100 500 PLY SPAN
 COLORADO HIGHWAY DEPT.
 ANTONIO, COLORADO
 MINNEAPOLIS STEEL & MACH.
 MINNEAPOLIS, MINN.
 APPROVED _____ ENGINEER
 MADE BY _____ DATE 7-1-24
 TRACED BY _____ DATE 7-1-24
 CHECKED BY _____ DATE 7-1-24
 ORDER NO. 246008 SHEET 1

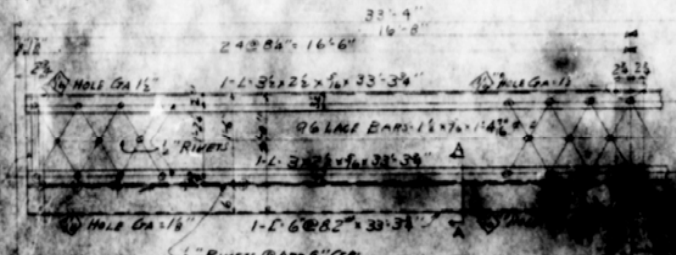


GENERAL NOTE
 RIVETS 1/2"
 HOLES 1/2"
 INSPECTION BY J. A. HALL
 PAINT 1-1/2" Red Lead
 MINNEAPOLIS STEEL & MACHINERY CO.
 MINNEAPOLIS, MINN.
 APPROVED _____ ENGINEER
 MADE BY _____ DATE 1-18-29
 TRACED BY _____ DATE _____
 CHECKED BY Corral DATE 2-26-29
 ORDER NO. 24-002 SHEET NO. 13

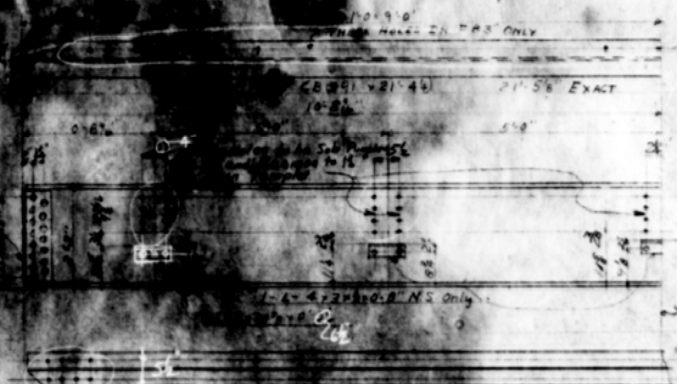


MAKE-2- RAILINGS THUS MARK R1
REV R2

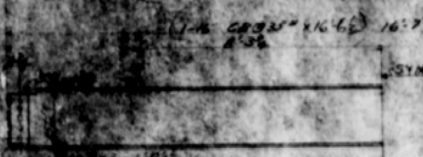
MAKE-2- RAILINGS THUS MARK R3
REV R4



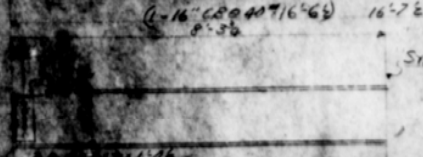
MAKE-2- RAILINGS THUS MARK R5



MAKE-16- STRINGERS THUS MARK S1



MAKE-12- STRINGERS THUS MARK S2

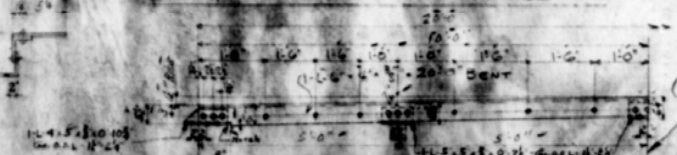


MAKE-6- STRINGERS THUS MARK S3



MAKE-1- EXPANSION THUS MARK E1

MAKE-1- FLOOR BEAM THUS MARK FB3
FB2

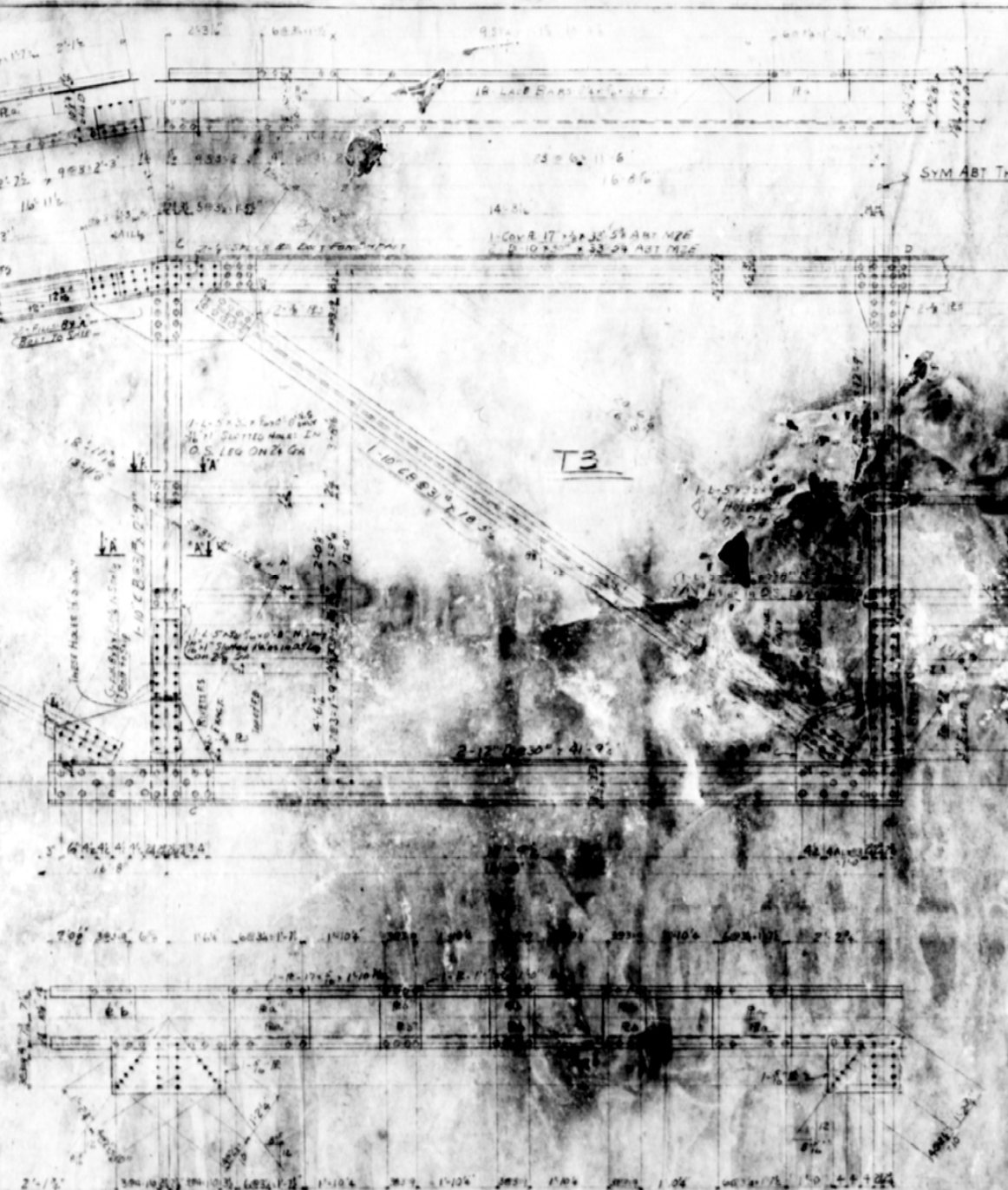


MAKE-1- ANGLE THUS MARK F2

GENERAL NOTE
RIVER S. V. N.
INSPECTION BY S. A. H.
PAINT 1-6' 84" 16'6"
1-16' 6' 84" 16'6"
1-16' 6' 84" 16'6"
MINNEAPOLIS STEEL & IRON
MINNEAPOLIS, MINN.
APPROVED
MADE BY
TRACED BY
CHECKED BY
ORDER NO. 246670 SHEET



SEE A-A SHOWING
DIRECTION OF BOLT



MAKE-2 TRUSS SECTIONS THUS MARK T3

MAKE 6- LATERALS THUS AN MARK L1

1-8 21' 54" EXACT
THESE HOLES SUBPUNCHED TO 1/4" AND
REAMED TO 1/2" TO IRON TEMPLATES

MAKE-5 FLOOR BEAMS THUS MARK F1

GENERAL NOTE
THIS DRAWING IS FOR THE
CONSTRUCTION OF THE
FLOOR BEAMS AND TRUSS
SECTIONS. THE MATERIALS
SHOWN ARE THE MINIMUM
REQUIREMENTS. THE
DESIGNER IS NOT RESPONSIBLE
FOR THE PROPER
INSTALLATION OF THE
STRUCTURE.

Sec. A-A Showing
Direction of Splice

T3

MAKE 6" LATERALS THUS AN MARK L1

21'-54" EXACT

THESE HOLES SHD PUNCHED TO 1/2" AND
REAMED TO 1/2" TO IRON TEMPLATE

MAKE 5" FLOOR BEAMS THIS MARK F B1

MAKE 2" TRUSS SECTIONS THIS MARK T3

GENERAL NOTE
RIVETS
HOLES
INSPECTION BY
PAINTED BY
CHECKED BY
MINNEAPOLIS STEEL & MACHINE
MINNEAPOLIS, MINN.

APPROVED
MADE BY
TRACED BY
CHECKED BY
ORDER NO.

ENGINEER
DATE
DATE
DATE
SHEET NO.