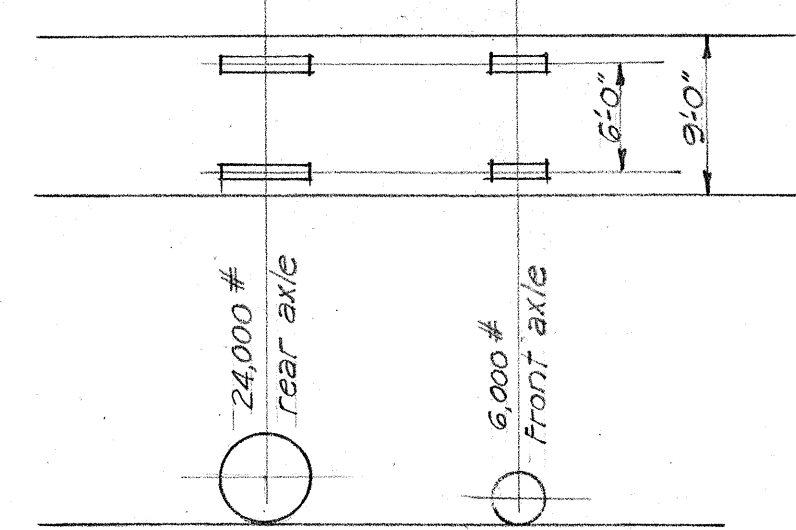
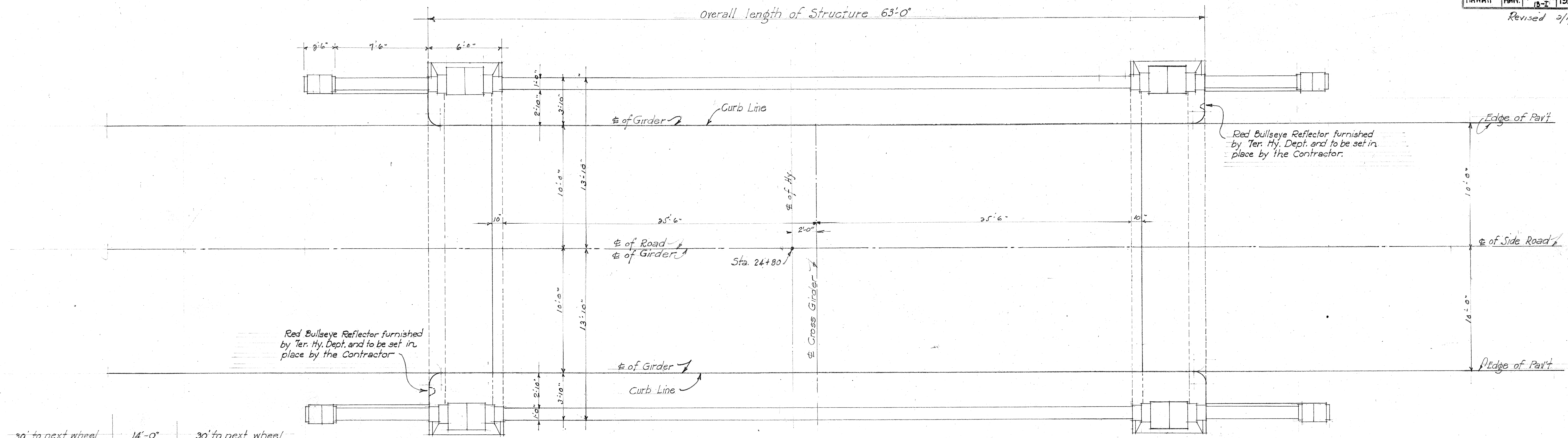
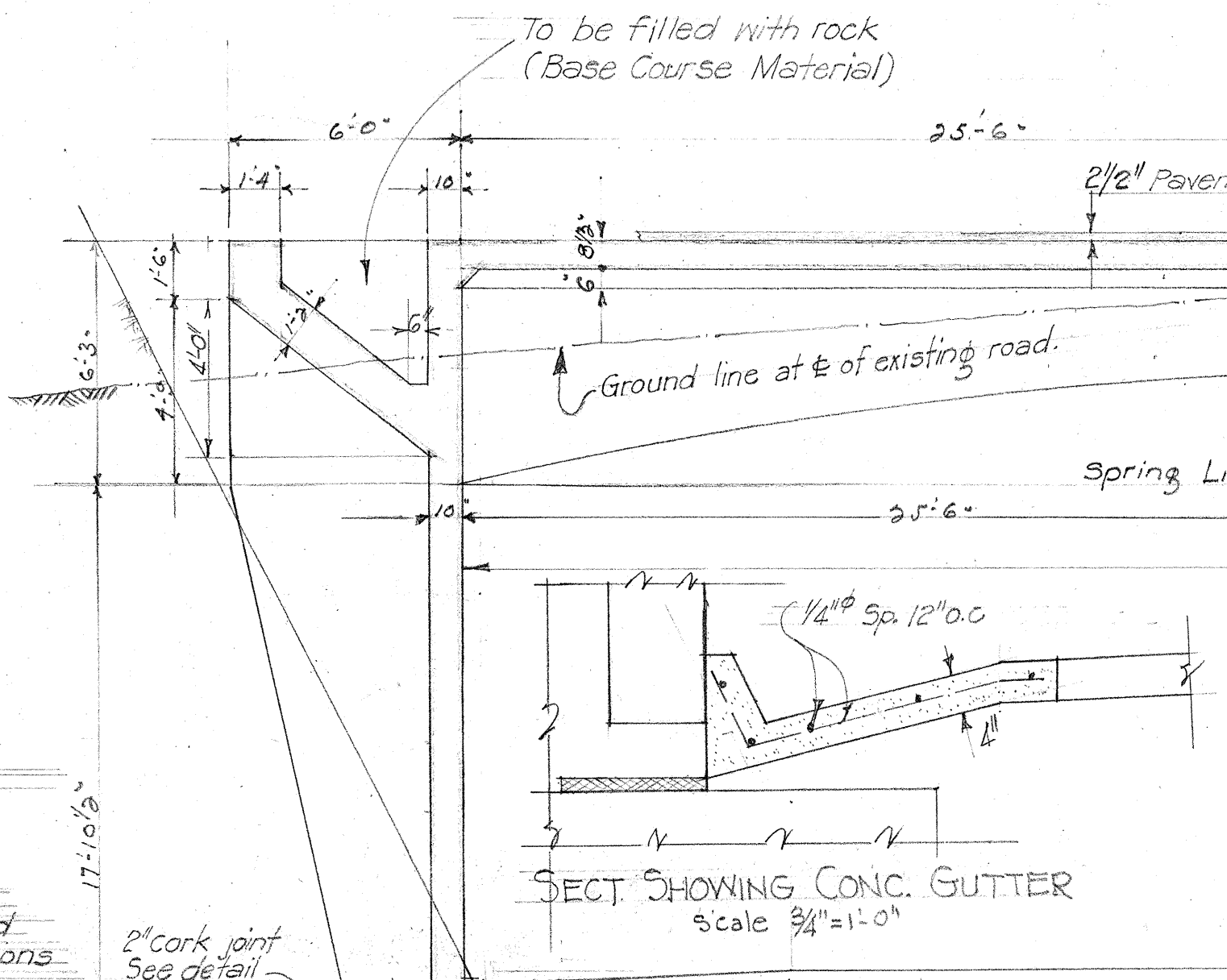


Revised 2/1/36



*** GENERAL NOTES ***

Dead Load: Concrete at 150# per cu. ft.; Pavement at 25# per sq. ft.
Live Load: Train of 15 ton trucks in two traffic lanes impact allowance 50%
 Spacing of trucks as per diagram.
Concrete: Class A (1:2:4) with all exposed edges chamfered 3/4\" unless otherwise noted. Allowable compression 750# per sq. inch.
Reinforcing Steel: Intermediate grade, allowable tensile stress 18,000# per sq. inch. All steel to be round or square deformed bars of approved design, square twisted bars not to be considered deformed. All dimensions relating to reinforcing are to centers of bars unless otherwise noted. Where splicing of reinforcing is necessary, bars are to be lapped 40 diameters and splices are to be staggered. Regarding splicing of main longitudinal bars see below. No allowance will be made in the quantities for extra weight of steel required for splicing. Unless otherwise noted the minimum covering measured from the surface of concrete to the face of any steel shall be not less than 2 1/2\" in abutments and abutment footings, 2\" in beams, girders and handrails and 1 1/2\" in slabs. Steel to be held rigidly & accurately in place before and during placing of concrete.
Splices: Splices are permitted in main bars exceeding 60'-0\" in length at points to be indicated by the Engineer, to be electrically arc welded, using wedge cut backs and 1/8\" collars. Splices to test at least full strength.
Brush Coat Waterproofing: Remove all projections, cement film, dirt etc., and apply waterproofing as specified. Waterproofing is incidental to the concrete used, and will not be paid for separately.
Construction Joints: All construction to have surface roughened and 1:2 cement grout applied immediately before second pour. Bottom construction joints to be at top of footings, top constr. joints at bottom of girder haunches, railing construction joints at top of curb.



HALF SECTION

HALF ELEVATION

STRUCTURE QUANTITIES				
LOCATION	CONCRETE	STEEL	STR. EXC.	SPECIAL ROCK FILL
FOOTINGS	49.46 c.y.	5168.		
ABUTMENTS	113.49 "	18,739.		
WINGWALLS	9.42 "	858.	350 cu. yds	700 cu. yds
SUPERSTRUCTURE	86.32 "	19,437.		
RAILING	17.23 "	2,319.		
TOTALS	275.92 c.y.	46,571.	350 cu. yds	700 cu. yds

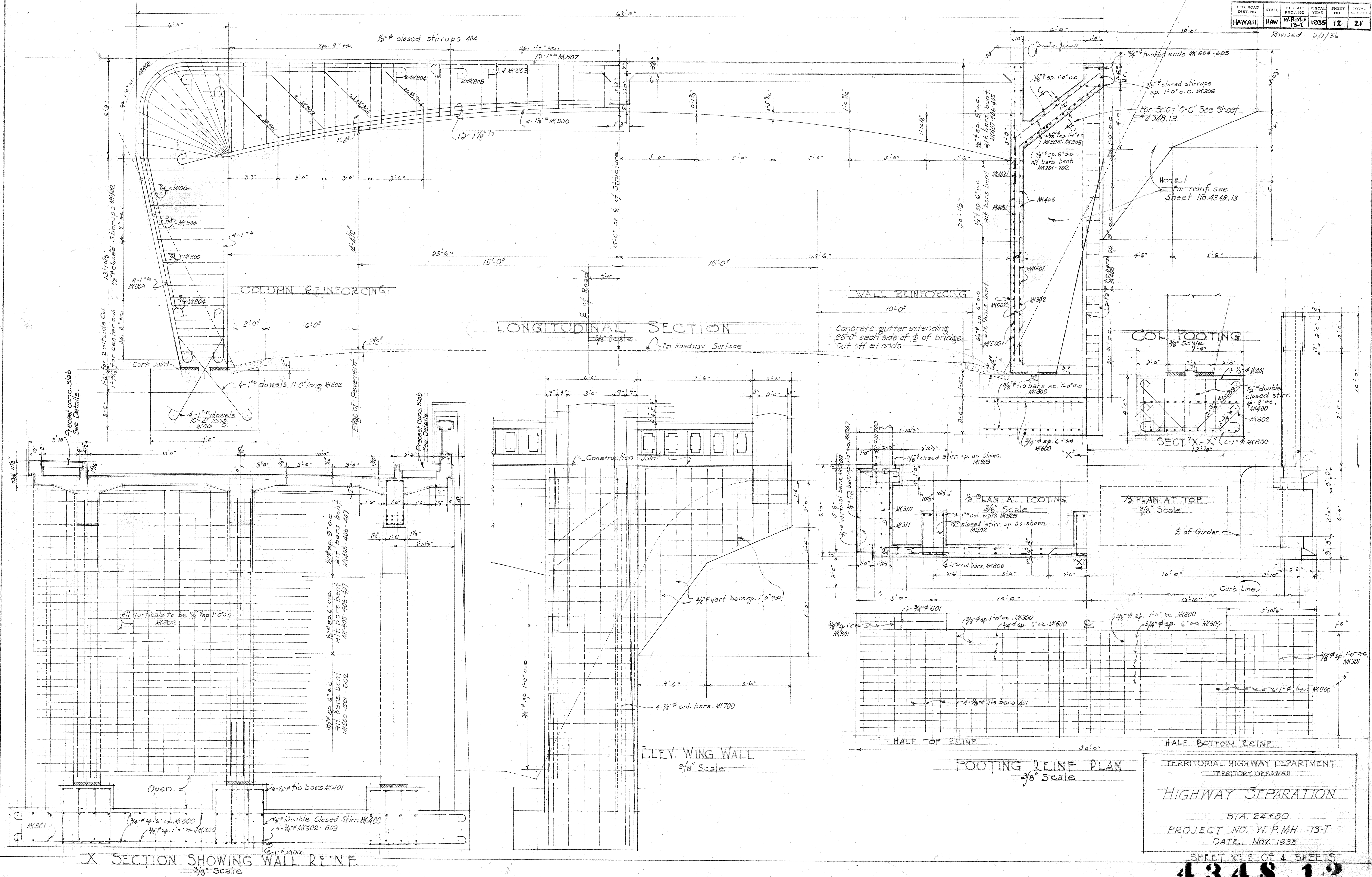
CONTRACTORS NOTE:
 Special hand placed rock fill at this end.
 Footings must be excavated to neat lines.

CONTRACTORS NOTE:
 Special hand placed rock fill at this end.

TERRITORIAL HIGHWAY DEPARTMENT
 TERRITORY OF HAWAII
HIGHWAY SEPARATION
 STA. 24+80
 PROJECT NO. W.P.M.H. 13-1
 DATE: NOV. 1935

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	W.P.M.H 13-1	1935	12	21

Revised 2/1/36



TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

HIGHWAY SEPARATION

STA. 24+80

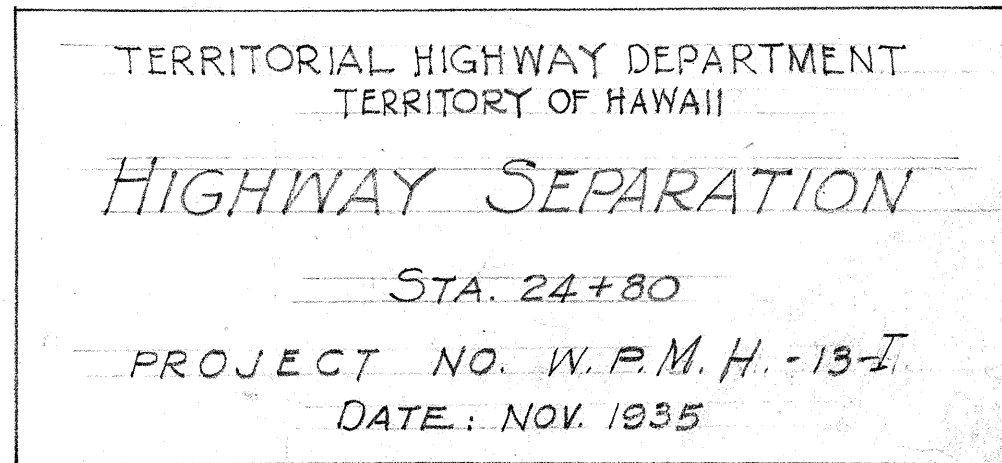
PROJECT NO. W.P.MH -13-I

DATE: NOV. 1935

SHEET NO 2 OF 4 SHEETS

4 3 4 8 . 1 2

Revised 2/1/36

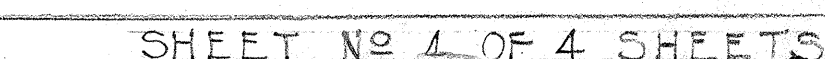


SHEET No 3 OF 4 SHEETS
4348.13

Rev. by C.F.W. (Sidewalks added)

Revised 2/1/36

For SECT. "C-C" See Sheet 4347.14



4348.14

STEEL SCHEDULE

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW	W.P.M.H. 13-1	1935	14A	21

MK	DESCRIPTION	LOCATION	SIZE	LENGTH	No. OF BARS IN EA. UNIT	No. OF UNITS	TOTAL LENGTH	WT. PER FOOT	TOTAL WEIGHT
600		FOOTING Top & bottom	3/4"	31'-2"	26	2	52	1620.67	1.52 2,463.0
300		"	3/8"	6'-6"	24	2	72	168.0	0.38 178.0
301		"	3/4"	7'-6"	6	4	24	180.0	" 68.0
601		"	3/4"	7'-0"	4	4	16	112.0	1.52 1,170.0
800		" Bottom of cols	1"	8'-8"	6	6	36	312.0	2.70 842.0
602		"	3/4"	9'-2"	2	6	12	112.0	1.52 170.0
603		"	3/4"	10'-6"	2	6	12	126.0	" 192.0
400		double stirr	1/2"	12'-0"	20	6	120	1440.0	0.68 979.0
401		Top of cols	3/4"	6'-6"	4	6	24	156.0	" 106.0
801		COLUMNS DOWELS	1"	10'-4"	4	6	24	248.0	3.44 853.0
802		"	1"	11'-0"	4	6	24	264.0	" 908.0
803		Col's	1"	44'-0"	4	6	24	1056.0	" 3,633.0
804		"	1"	34'-2"	2	6	12	410.0	" 1,410.0
805		"	1"	35'-2"	2	6	12	422.0	" 1,452.0
806		Front face	1"	20'-3"	4	6	24	486.0	3.44 1,672.0
402		Stirr	1/4"	Varies	21	6	126	1512.0	0.68 1,028.0
900		GIRDERS Bottom	1/8"	60'-8"	4	3	12	728.0	4.35 3,167.0
901		"	1/8"	63'-4"	2	3	6	380.0	" 1,653.0
902		"	1/8"	62'-6"	2	3	6	375.0	" 1,631.0
903		Girder & Col.	1/8"	81'-2"	2	3	6	487.0	" 2,118.0
904		"	1/8"	84'-6"	2	3	6	507.0	" 2,205.0
807		Top of girders	1"	26'-10"	2	3	6	161.0	3.44 554.0
403		Girder Stirr. corner	1/2"	Varies	10	6	60	980.0	0.68 666.0
404		"	1/2"	Varies	60	3	180	2,130.0	" 1,448.0
500		End walls	3/8"	29'-0"	8	2	16	464.0	1.06 492.0
405		"	1/2"	28'-6"	9	2	18	513.0	0.68 349.0
501		"	3/8"	14'-11"	8	2	16	238.67	1.06 253.0

MK	DESCRIPTION	LOCATION	SIZE	LENGTH	No. OF BARS IN EA. UNIT	No. OF UNITS	TOTAL LENGTH	WT. PER FOOT	TOTAL WEIGHT
406		End walls (Front)	1/2"	14'-5"	10	2	20	288.33	0.68 196.00
502		End walls (Rear)	1/2"	33'-0"	8	2	16	528.00	1.06 560.00
407		"	1/2"	32'-6"	10	2	20	650.0	0.68 442.00
302		End walls (Both faces)	3/8"	19'-0"	36	2	72	1,368.0	0.38 520.00
700		Corner Cols	7/8"	28'-5"	4	4	16	454.67	2.07 941.00
408		"	1/2"	23'-3"	2	4	8	186.00	0.68 126.00
303		Col. Stirr.	3/8"	5'-7"	29	4	116	647.67	0.38 246.00
701		Bracket	7/8"	30'-1"	5	2	10	300.83	2.07 623.00
702		Bracket (Top & bottom)	1/2"	29'-0"	11	2	22	638.0	" 1,321.00
304		Bracket (Top)	3/4"	9'-9"	16	2	32	312.0	0.38 119.00
305		Bracket (Bottom)	3/4"	9'-6"	16	2	32	304.0	" 116.00
604		Beam (Corner cols)	3/4"	35'-6"	2	2	4	142.0	1.52 216.00
605		"	1/2"	29'-0"	2	2	4	116.0	" 176.00
306		"	3/8"	4'-7"	18	2	36	165.0	0.38 63.00
703		CROSS GIRDER (Top)	7/8"	28'-6"	3	1	3	85.50	2.07 177.00
704		Bottom	1/2"	22'-11"	3	1	3	68.75	" 142.00
409		Stirr.	1/2"	7'-2"	18	1	18	129.0	0.68 88.00
307		Col. Posts	1/2"	Varies	20	4	80	753.33	0.38 286.00
308		Outside (Vert.)	1/2"	22'-3"	5	4	20	445.00	" 169.00
309		Middle & Rear (Vert.)	1/2"	24'-6"	10	4	40	980.0	" 372.00
310		Middle (Hor.)	1/2"	8'-0"	9	4	36	288.0	" 109.00
311		Rear (Hor.)	1/2"	6'-3"	9	4	36	225.0	" 86.00
312		Col. Posts & Wingwalls (Hor.)	1/2"	Varies	6	4	24	256.0	" 97.00
313		"	1/2"	Varies	2	4	8	122.67	" 47.00
314		"	1/2"	18'-0"	3	4	12	216.0	" 82.00
315		"	1/2"	Varies	9	4	36	318.0	" 121.00
316		"	1/2"	Varies	5	4	20	271.67	" 103.00

MK	DESCRIPTION	LOCATION	SIZE	LENGTH	No. OF BARS IN EA. UNIT	No. OF UNITS	TOTAL LENGTH	WT. PER FOOT	TOTAL WEIGHT
317		Col. Post & Wingwalls (Hor.)	3/8"	16'-3"	7	4	28	455.00	0.38 173.00
318		Wingwalls Both faces	3/8"	Varies	20	4	80	593.33	0.38 225.00
503		Deck	3/8"	28'-7"	48	1	48	1,372.00	1.06 1,454.00
504		" (Top)	1/2"	27'-10"	50	1	50	1,391.67	" 1,475.00
505		" (Bottom)	1/2"	23'-3"	50	1	50	1,162.50	" 1,232.00
319		" (Temp)	1/8"	52'-0"	22	1	22	1,144.00	0.38 435.00
320		RAILING CURB	1/8"	52'-0"	26	1	26	1,352.00	" 514.00
321		"	1/2"	82'-0"	4	2	8	656.00	" 249.00
322		"	1/2"	50'-6"	6	2	12	606.00	" 230.00
322A		"	1/2"	7'-0"	6	2	12	84.00	" 32.00
410		"	1/2"	3'-6"	2	94	188	658.00	0.68 447.00
200		"	1/4"	2'-0"	90	2	180	360.00	0.17 61.00
201		"	1/4"	1'-8"	90	2	180	300.00	" 51.00
411		W.W. Posts	1/2"	5'-6"	6	4	24	132.00	0.68 90.00
323		"	3/8"	6'-6"	3	4	12	78.00	0.38 30.00
412		Deck (Bottom)	1/2"	52'-0"	30	1	30	1,560.00	0.68 1,061.00
413		Posts (Vert.)	1/2"	5'-0"	4	4	16	80.00	" 54.00
414		"	1/2"	5'-6"	6	4	24	132.00	" 90.00
324		" (Stirr.)	3/8"	13'-4"	3	4	12	160.00	0.38 61.00
325		" (Stirr.)	3/8"	9'-3"	4	4	16	148.0	" 56.00
202		Deck	1/4"	2'-0"	64	2	128	256.0	0.17 44.00
203		"	1/2"	62'-0"	3	2	6	372.0	" 63.00
TOTAL WEIGHT									46,003.00

TERRITORIAL HIGHWAY DEPARTMENT
HIGHWAY SEPARATION
 STA. 24+80 W.P.M.H. 13-1

4348.14A

ORIGINAL PLANNED BY DATE
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