

## MAD-SR29-1061 Estimated Quantities

Des: Parsons

Submittal:

Calculated:	JRE 7/7/2017
Checked:	RWB 7/14/2017
Backchecked:	JRE 7/14/2017
Corrected:	JRE 7/14/2017
Verified:	RWB 7/17/2017

513E90000

STRUCTURAL STEEL, MISC.:

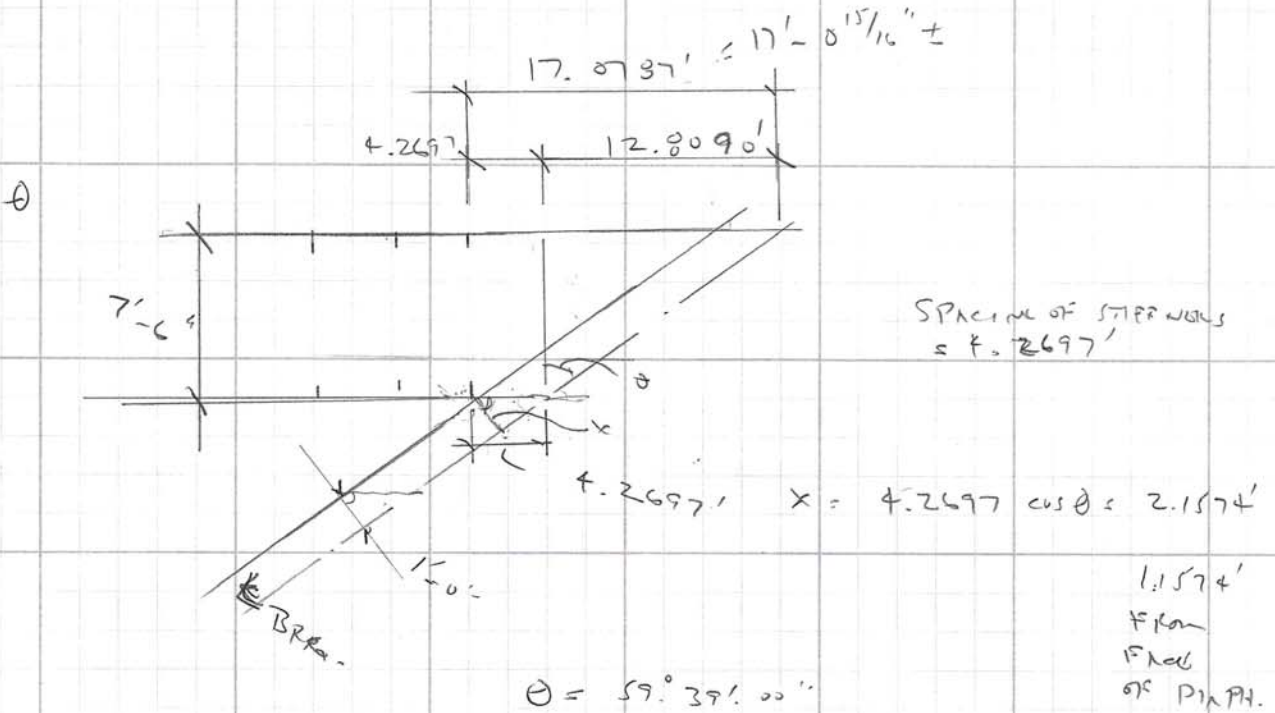
LB

Supplemental Description: ADDITIONAL INTERMEDIATE BRACING MEMBERS AND END DL

1,782

						LB
End Diaphragms	<b>VOID END DIAPHRAGMS DUE TO SEMI-INTEGRAL DIAPHRAGM</b>				<b>Revised 9/8/20</b>	
	Typ. Plate Thickness	5/8	in	Checked: JRE	09/29/2020	
	Steel Unit Weight	490.00	lb/ft^3			
	Length	Width	Number/X-Frame	Weight		
	2' x 2' Plate	Incidental to Expansion Joint		0	0.00	
	1' x 1' Plate	Incidental to Expansion Joint		0	0.00	
	2'-6" x 2'-2" Plate	2.50	2.17	0	0.00	
	Bent Plate 1	1.75	2.00	0	0.00	
	Bent Plate 2	1.67	2.00	0	0.00	
	Length	Unit Weight	Number/X-Frame	Weight		
(Measured)	Bottom Chord	13.19	9.80	0	0.00	
(Measured)	Diagonals	4.83	9.80	0	0.00	
(Measured)	Vertical Chord	4.00	9.80	0	0.00	
	MC12x45	Incidental to Expansion Joint			0.00	
	Total per Cross Frame			0.00	lb	
	x 4 bays			0.00	lb	
	x 2 ends			0.00	lb	
Additional Intermediate Bracing						
	Additional Bracing Shape	L3x3x5/16				
	Weight per Foot	6.10	lb/ft			
	Length	Number	Weight			
	Pier 1	7.25	8	353.80		
	Pier 2	7.50	8	366.00		
	Pier 3	7.25	8	353.80		
			Total	1,073.60		
<b>Revisions during pre-bid</b>						
	Added bracing at corners (see hand calcs)	608.00				
	Revised bottom chord at piers (see hand calcs)	100.00				
				Gen Subtotal		
				Abut Subtotal		
				Piers Subtotal		
				Super Subtotal		
				1,781.6		

Jeff Miller 770-833-8216

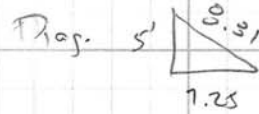


Provide new cross-frames at locations shown. The cross frames shall connect to the existing girder stiffeners. Holes for  $3/4"$  dia. beam bolts shall be field drilled and angles ( $L3 \times 3 \times 5/16"$ ) welded as shown in detail C. Payment for additional bracing shall be included in Item 513 Structural steel, inc. additional intermediate bracing members

Wt. APPROX BRACKETS  $L 3 \times 3 \times 5/16$  (6.1 #/ft)

LENGTH FOR ONE BRACK

Bottom. 7.25'



$$8.31 \times 2 = 17.61$$

$$\text{Wt. single leg} = (7.25 + 17.61) (6.1) = 151.67$$

517 152 #

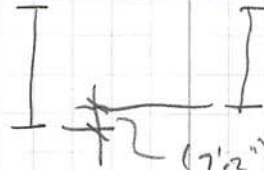
FOR 4 BRACKETS TOTAL = 608 #

$$\text{Run Item 513} = 1074 + 608 = 1682$$

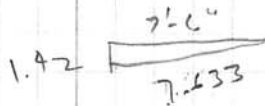
Length of angles at piers 1 + 3

← 7'-6" →

Ref. existing plans (1968)  
shots: 335 + 336



$(7'-2") - (5'-9") = 1.417" \text{ drop}$

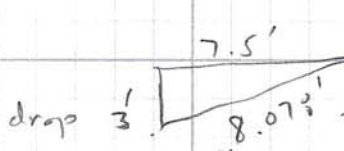


$(7.633 - 7.5)$

$0.133 \text{ min} \times 6.1 \text{ ft} \times 16 = 13 \#$

← No. of locations

⊙ Pier 2 9'-0" to 6'-0"



$(8.073 - 7.5)$

drop  $\frac{1}{3}$   $1.073 \text{ min} \times 6.1 \times \frac{8}{10} = 53 \# \text{ now}$

← No. of locations

Added wt. = 66 # say 100 #

Rev. Total wt. = 1074 + 608 + 100 = 1782 #