



**OHIO DEPARTMENT OF TRANSPORTATION**  
PLANNING ENGINEERING DEPARTMENT, DISTRICT 4  
PROJECT: ATB-BP-FY2019 (PID 10797)  
DESC: Steel Calcs

Calculated By CMR    Date 0/0/00  
Reviewed By MJA    Date 0/0/00

**ITEM 513 - STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES**

ATB-90-0138

L3x3x5/16                      Weight =              6.1 lb./ft.

Assumed bottom crossframe member length=              8 ft.

Assumed X crossframe member length=              8.5 ft.

Assumed # of bottom crossframe members =              9 each

Assumed # of X crossframe members =              18 each

9 TOTAL LOCATIONS

weight x length x # of members =              1372.5 lbs.

**Using              1380 lbs.**

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**ITEM 513 - STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES**

ATB-90-0234

L3x3x5/16                      Weight =              6.1 lb./ft.

Assumed bottom crossframe member length=              8 ft.

Assumed X crossframe member length=              8.5 ft.

Assumed # of bottom crossframe members =              9 each

Assumed # of X crossframe members =              18 each

9 TOTAL LOCATIONS

weight x length x # of members =              1372.5 lbs.

**Using              1380 lbs.**

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**ITEM 513 - STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES**

ATB-90-1765

L3.5x3.5x5/16                      Weight =              7.2 lb./ft.

Assumed bottom crossframe member length=              8 ft.

Assumed X crossframe member length=                      10 ft.

15 TOTAL LOCATIONS

Assumed # of bottom crossframe members =              15 each

Assumed # of X crossframe members =                      30 each

weight x length x # of members =              3024 lbs.

**Using              3030 lbs.**





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**ITEM 513 - STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES**

ATB-90-1904

L3.5x3.5x5/16                      Weight =              7.2 lb./ft.

Assumed bottom crossframe member length=              8 ft.

Assumed X crossframe member length=              9.5 ft.

Assumed # of bottom crossframe members =              10 each

Assumed # of X crossframe members =              20 each

10 TOTAL LOCATIONS

weight x length x # of members =              1944 lbs.

**Using              1950 lbs.**

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**ITEM 513 - STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES**

ATB-90-2457

L3x3x5/16 Weight = 6.1 lb./ft.

Assumed bottom crossframe member length= 8 ft.

Assumed X crossframe member length= 8.5 ft.

5 TOTAL LOCATIONS

Assumed # of bottom crossframe members = 5 each

Assumed # of X crossframe members = 10 each

weight x length x # of members = 762.5 lbs.

**Using 770 lbs.**



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**ITEM 513 - STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES**

ATB-90-2651

L3x3x5/16                                      Weight =                      6.1 lb./ft.

Assumed bottom crossframe member length=                      8 ft.

Assumed X crossframe member length=                      8.5 ft.

Assumed # of bottom crossframe members =                      7 each

Assumed # of X crossframe members =                      14 each

7 TOTAL LOCATIONS

weight x length x # of members =                      1067.5 lbs.

**Using                      1070 lbs.**

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**ITEM 513 - STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES**

ATB-90-2724

L3.5x3.5x5/16                      Weight =              7.2 lb./ft.

Assumed bottom crossframe member length=              8 ft.

Assumed X crossframe member length=              9 ft.

Assumed # of bottom crossframe members =              7 each

Assumed # of X crossframe members =              14 each

7 TOTAL LOCATIONS

weight x length x # of members =              1310.4 lbs.

**Using              1320 lbs.**

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**ITEM 513 - STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES**

ATB-307-1987

L3x3x5/16                                      Weight =                      6.1 lb./ft.

Assumed bottom crossframe member length=                      8.75 ft.

Assumed X crossframe member length=                      9 ft.

Assumed # of bottom crossframe members =                      3 each

Assumed # of X crossframe members =                      6 each

3 TOTAL LOCATIONS

weight x length x # of members =    489.525 lbs.

**Using                      490 lbs.**

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**ITEM 513 - STRUCTURAL STEEL, MISC.: REPLACEMENT OF DAMAGED CROSSFRAMES**

ATB-322-0528

L3x3x5/16                      Weight =              6.1 lb./ft.

Assumed bottom crossframe member length=      7.3 ft.

Assumed X crossframe member length=              8 ft.

Assumed # of bottom crossframe members =        3 each

Assumed # of X crossframe members =              6 each

3 TOTAL LOCATIONS

weight x length x # of members =      426.39 lbs.

**Using              430 lbs.**

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