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July 15, 2025

Addendum Number 4

Invitation to Bid 25-46-213487

25-46 ARRC ITB BR 6.0 Bridge Cap Fabrication

Closing date, offers will be received until 3:00 pm local time on July 16, 2025

This addendum is being issued to provide information as follows:

Question: Per the specification you're calling out the W14x211 as A709 Gr.50W3(or A588). Per ASTM on the Gr.50W there is F3 and T3. You're calling this out as only 3. F3 is fracture critical and T3 is non-fracture critical. Our supplier is asking which is it. Can you define more what the "3" designator in your specification is?

If fracture critical, can you tell me what your Low Temp Charpy Values are that are needed for this? Per a preliminary independent test this is covered to 15ft-lbs @ 10 deg. It's likely they will pass other values but are not guaranteed.

Response: The beams are fracture-critical and require the following impact test requirements for Zone 3.

Sincerely,

C. Lee Thompson
Contract Administrator
Alaska Railroad Corporation

Addendum 4 Continues on Next Page

Table 15-9-3. ASTM A709 Impact Test Requirements for Structural Steel - Fracture-Critical Members

(See Articles 1.14.5, 1.2.1b, and Notes 1 and 2)

ASTM Designation	Thickness, In. (Note 3)	Minimum Test Value Energy Ft-lb	Minimum Average Energy, Ft-lb and Test Temperatures		
			Zone 1	Zone 2	Zone 3
A36 A709, Grade 36F	All available	20	25 @ 70°F	25 @ 40°F	25 @ 10°F
A992 A709, Grade 50SF A572, Grade 50 A709, Grade 50F A588 A709, Grade 50WF (For all grades in this row, see Note 4.)	To 2 incl. Over 2	20 24	25 @ 70°F 30 @ 70°F	25 @ 40°F 30 @ 40°F	25 @ 10°F 30 @ 10°F
A709, Grade HPS 50WF (Note 4)	All available	24	30 @ 10°F	30 @ 10°F	30 @ 10°F
A709, Grade HPS 70WF (Note 5)	All available	28	35 @ -10°F	35 @ -10°F	35 @ -10°F
<p>Note 1: This table summarizes for the designer's convenience the impact energy requirements of ASTM A709 (or as applied per 1.2.1b to other steels) for FCMs (fracture-critical members) and is current as of December 2016. It does not cover every aspect of CVN testing given in ASTM A709.</p> <p>Note 2: For shapes, impact testing is at "P" (plate frequency) as defined in ASTM A673. For plates, specimens are selected as follows:</p> <ul style="list-style-type: none"> (1) As-rolled plates are sampled at each end of each plate-as-rolled. (2) Normalized plates are sampled at one end of each plate-as-heat-treated. (3) Quenched and tempered plates are sampled at each end of each plate-as-heat-treated. <p>Note 3: See Table 15-9-1 for limitations on available thicknesses.</p> <p>Note 4: If the yield point of the material as given in the test report exceeds 65,000 psi the test temperature for the minimum average energy required is reduced by 15°F for each increment or fraction of 10,000 psi above 65,000 psi. For example, if the yield point or yield strength is more than 65,000 psi but not more than 75,000 psi, the test temperature reduction is 15°F. If the yield point or yield strength is more than 75,000 psi but not more than 85,000 psi, the test temperature reduction is 30°F.</p> <p>Note 5: If the yield strength of the material as given in the test report exceeds 85,000 psi the test temperature for the minimum average energy required is reduced by 15°F for each increment or fraction of 10,000 psi above 85,000 psi. For example, if the yield point or yield strength is more than 85,000 psi but not more than 95,000 psi, the test temperature reduction is 15°F. If the yield point or yield strength is more than 95,000 psi but not more than 105,000 psi, the test temperature reduction is 30°F.</p>					