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MGS Steel Post Grades

Question	
State	WI
Description Text	<p>I was looking at some on line information about 6PWE06-07 post (I've attached a link). On the backside, there is a note that confuse me.</p> <p>I may be mistaken, but isn't Grade 50W is weathering steel? If the bolt that connects the beam guard to the block and post is galvanized, wouldn't you want a galvanized post?</p>

System Performance Evaluation

System Types

W-beam Guardrails

Applications

System Features

Galvanization and Surface Treatments

Material Specifications/Alternatives

Date September 14, 2010

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Attachment [pwe06 information eoe question v1.pdf \(attachments/5879c386f6f3feff373a5edb2031f5e1.pdf\)](#)

Response	
Response (active)	<p>The AASHTO and ASTM steel specifications for determining the appropriate steel specifications for the W6x9 and W6x8.5 steel posts used within the MGS should be cleared up. Originally, we would have specified ASTM A36/A36M materials that used $F_{ymin}=36$ ksi and $F_{umin}=58$ ksi. The TF13 Hardware guide designation page now also shows AASHTO 270 (ASTM A709) 50W in the 2006 version, which would denote Grade 50. Since there is a difference in the 50S and 50W designations, we need to be clear on whether or not weathering steel is specified. Also, the new W6x9 MGS posts have been being supplied with ASTM A992 (AASHTO ??) steel materials with $F_{ymin}=50$ ksi. We may need to consider updating the TF13 details if the material specifications have changed.</p> <p>Further clarification on steel grades:</p> <p>A709 grade 250 is essentially the same steel as A36. A709 grade 50S is essentially the same steel as A992 A709 grade 50W has nearly identical properties to 50S but is corrosion resistant (weathering steel)</p> <p>So, perhaps the specifications should state: (note both 30 ksi and 50 ksi steel are already approved for use in specs)</p> <p>For 36 ksi steel " A36/A36M or A709/A709M grade 250</p> <p>For 50 ksi steel " A992/A992M or A709/A709M grade 50S. If corrosion resistant steel is desired, use A709/A709M grade 50W</p> <p>I am not sure why we would have listed weathering steel other than it was copied from a prior specifications prepared for the steel guardrail posts already in the hardware guide. Mixing the two different components would likely be disastrous. We would like to not have anyone using corten guardrail steel or posts altogether. Thus, the specification should refer to A36, A992, A709 50S which provide options for using either Grade 36 (36 ksi) or Grade 50 (50 ksi) steel materials for prior guardrail systems.</p> <p>We will need to look into why the note is currently written as it is and hopefully get it fixed. Karla will be meeting with AASHTO TF13 on Monday and Tuesday and can raise this issue with the entire guardrail community. We would not want to use up the zinc coating of the rail, bolts, nuts, etc. to first prevent A588 steel material from rusting the outer post layer.</p>

Date September 16, 2010

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