

Delaware Department of Transportation

QUESTIONS AND ANSWERS

T201901002.01

Median Barrier Installation, Statewide, Open-End, New Castle County

Thursday, September 13, 2018

Q #	Question	Answer
10	Your answer to question 7 does not equal the 25 miles of quantity for the guardrail and cable barrier items. In order to properly bid the item, can more information be given concerning the Lump Sum price for Clearing and Grubbing?	<p>The answer to question 7 are the limits of the first set of plans that will be provided to the contractor awarded the bid. The Department anticipates adding additional locations to install median barrier along SR 1 extending to northern Dover, DE. As such, additional quantities were provided.</p> <p>The Department anticipates minor tree and shrubbery removal for the installation of median barrier along I-95 and SR 1. Most of the vegetation for the limits of the median barrier will be grass where payment will be covered under the 202000 bid item.</p>
9	Can an EADY item be given for MOT typical application scenarios?	Typical Applications 5A and 5B from the DE MUTCD will be required for the proposed median barrier locations. Based on the quantities and preliminary design, a production rate of 35 days per mile is anticipated. It is anticipated that night work will be required.
8	The Department wants a lump Sum price for maintenance of traffic, the information you give us is 1500 EADY of item 808002 Furnish TMA. Is the Department informing us to expect 1500 days for maintenance of traffic?	No, the anticipated construction duration for the contract is not 1500 days. The quantity of 1500 EADY for item 808002 was based on the anticipated construction duration and need for median barrier installation at multiple locations.

Q #	Question	Answer
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Wednesday, September 12, 2018

7	<p>With so many variables associated with a project like this we ask that the bids be postponed two weeks and the department provide additional pay items to cover contingencies or, provide some actual locations where this work will take place.</p>	<p>Median barrier will be installed at various locations where guardrail is not present between the following limits:</p> <ul style="list-style-type: none"> • I-95 from 800 ft south of the NB I-95 Harvey Rd. Exit to the Pennsylvania State Line • SR 1 from Duck Creek to the Biddles Toll Plaza. <p>Plans have already been developed for these locations and will be made available to the contractor awarded the T201901002 Median Barrier Installation, Statewide, Open End bid. Any additional compensation for work not included in the open end contract will follow the DelDOT Standard Specifications, Section 109.04. The bid opening date will not be extended at this time.</p>
6	<p>Parts of this project are anticipated to be installed along I-95. As there are no locations available at this time and, I-95 traverses through the Wilmington area, there is no provision in the bid for rock excavation. It is highly likely that rock will be encountered in this area. As drilling in the median of SR-1 is significantly easier than drilling in rock we ask that the department add a rock excavation item to the bid to cover this contingency.</p>	<p>The Department does not anticipate encountering rock for the installation of median barrier. If rock removal or drilling into rock is required, payment will follow the DelDOT Standard Specifications, Section 109.04.</p>
5	<p>Is there a requirement as to how many soil borings need to be done in a typical run of cable barrier?</p>	<p>No soil borings will be necessary for this contract.</p>
4	<p>At what offset from the edge of traveled way will the cable barrier be installed?</p>	<p>The offset from the edge of travel lane to the center of high tension cable barrier will vary between 13' and 20'.</p>

Q #	Question	Answer
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Tuesday, September 11, 2018

3	There are no details provided for the dimensions associated with the asphalt mow strip. Please provide typical width and thickness of asphalt and aggregate layers.	The dimensions for the Asphalt Maintenance Strip will detail a 4 ft. width consisting of 4” of 301001 – Graded Aggregate Base Course, Type B and 4” of 401014 – Superpave, Type B, PG 64-22.
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Wednesday, September 05, 2018

2	In Section 722.02.01 Wire Rope calls for a minimum modulus of elasticity 21,661,553psi. The industry standard is a minimum modulus of elasticity of 11,805,090 pounds/in ² .(8300 kg/mm) after prestretching. The higher minimum it is not the industry standard and would require the product and process to be redesigned to meet the higher minimum.	According to ISO 12076-2002 specifications, “calculated metallic cross-sectional area, the area normally used to determine the stress, a design value obtained from the sum of the metallic cross-sectional areas of the individual wires in the rope based on their nominal diameters”, which is typically 0.1205 inches. Using the 0.1205 inch diameter for the cable, the fixed steel surface area will yield 0.2394877 in ² . This difference in area generates an area change factor of 1.834889. Multiplying the area change factor of 1.834889 times the adequate pre-stretched MOE of 11,805,375 psi will yield an adjusted MOE of 21,661,557 psi. This MOE was also included in previous HTCB installation contracts in Delaware without issue.
1	In Section 722.02 Materials it calls for a NCHRP 350 or MASH TL-4 system with 4 pre-stretched ropes and a maximum 8 foot deflection, but nowhere does it state maximum post spacing. Previous contracts called out a maximum 10.5ft post spacing, which is generally accepted as the maximum spacing needed for 350 systems to meet the 8 foot deflection on fence runs typically installed which are much longer than the 100 meters typically tested. Without specifying post spacing manufacturers will be quoting 21 foot post spacing.	A maximum 10.5 foot post spacing shall be used for all High Tension Cable Barrier.