(Bidding on or after: 07~~6~~-01-24
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***This Section requires SP00221, SP00222 and SP00223 when mobile barrier is required.*)**

SECTION 00226 - TEMPORARY ROADSIDE BARRIERS AND IMPACT ATTENUATORS

(Follow all instructions and make all edits with "Track Changes" turned on. If there are no instructions [orange text] above a subsection, paragraph, sentence, or bullet, then include it in the Project. Delete all orange text before preparing the final document. All other modifications to this Section will require ODOT Technical Resource and State Specifications Engineer approval.)

(Use the following lead-in paragraph when none of the following subsections are included in the Project.)

Comply with Section 00226 of the Standard Specifications.

(Use the following lead-in paragraph when any of the following subsections are included in the Project.)

Comply with Section 00226 of the Standard Specifications modified as follows:

(Use the following subsection .11(a) when concrete barrier terminals or barrier transitions are required. Delete "(s)" or the parentheses as applicable.)

00226.11(a)(2) Temporary Concrete Barrier - Add the following paragraph*(*s*)* after the bullet list:

(Use the following paragraph when cast-in-place concrete barrier transition to Bridge rail or cast-in-place tall concrete barrier transition to Bridge rail are required. Include Standard Drawing RD520 or RD550 (tall concrete barrier). Delete "(tall)" or the parentheses as applicable.)

Provide cast-in-place *(*tall*)* concrete barrier transitions as shown on the Standard Drawings.

(Use the following paragraph when cast-in-place tall concrete barrier transition to standard concrete barrier is required. Include Standard Drawing RD560.)

Provide cast-in-place tall concrete barrier transitions to standard concrete barrier as shown on the Standard Drawings.

(Use the following lead-in paragraph and subsection .15 when Temporary Glare Screens are required. Do not use Temporary Glare Screens on permanent Bridge concrete barrier or rail without Technical Resource approval.)

Add the following subsection:

00226.15 Temporary Glare Screens - Use temporary glare screens from the QPL or Conditional Use List.

(Use the following lead-in paragraph and subsection .16 when mobile barrier is required.)

Add the following subsection:

00226.16 Mobile Barrier - Use a mobile barrier from the QPL or conditional use list.

(Use the following lead-in paragraph and subsection .24 when mobile barrier is required.)

Add the following subsection:

00226.24 Mobile Barrier - Use a semi-tractor truck according to the mobile barrier manufacturer's recommendations to haul and operate the mobile barrier and conforming to the following:

- Equipped to perform with all mobile barrier functions and operations.
- Equipped with portable, self-contained two-way radios with a range suitable for communications throughout each Work Zone, unless otherwise directed.

Equip mobile barrier with a temporary impact attenuator, truck mounted.

(Use the following lead-in paragraph and subsection .30 when mobile barrier is required.)

Add the following subsection:

00226.30 Mobile Barrier - Provide semi-tractor truck operator to haul and operate the mobile barrier and a mobile barrier technician qualified to set up and operate the features of the mobile barrier. Each person has to have completed at least 4 hours of training on use and operation of the mobile barrier within the past 2 years. Obtain training from the mobile barrier manufacturer or mobile barrier vendor listed in 00226.16. Provide a mobile barrier technician on-site while the mobile barrier is in use.

(Use the following subsection .43. On Freeway and Multi-lane highway projects with lane and shoulder closures and no positive protection, provide one Impact Attenuator – Truck Mounted in the quantity of items for each shoulder or each lane closed, not to exceed the maximum number of shoulder or lane closures that will occur at any given time.)

00226.43 Truck Mounted Attenuator – Replace the paragraph that begins "When workers or construction Equipment…" with the following paragraphs:

Use a truck mounted impact attenuator (TMA), when workers or construction Equipment are exposed to Public Traffic on a Freeway or Multi-Lane Highway and are not located behind a rigid barrier system, as follows unless otherwise shown or directed:

- Each Shoulder or each lane closure where the preconstruction posted speed is 45 mph or more.

(Use the following bullet when TMA is required on multi-lane highways where the preconstruction posted speed is 40 mph or less. TMA is required on multi-lane highway projects with lane closures and no positive protection and intermediate duration work is located in the traffic lane. Provide one Impact Attenuator – Truck Mounted in the quantity of items for each lane closed, not to exceed the maximum number of lane closures that will occur at any given time.)

- Each lane closure, when (_brief description of Work_) on the _____ Highway is occurring in the Traffic Lane, where the preconstruction posted speed is 40 mph or less.

Place the TMA in advance of the exposed workers or Equipment, located as shown in the TMA Support Vehicle Placement tables, or as directed. If the TMA is not available when the Work requires its use, postpone the Work until the TMA is available.

(Use the following lead-in paragraph and subsection .45 when Temporary Glare Screens are required.)

Add the following subsection:

00226.45 Temporary Glare Screens - Install temporary glare screens as shown or directed, and according to the following:

- Install according to manufacturer's instructions.
- Install vertical and true to line.
- Install using a QPL approved pipe from the same manufacturer as the temporary glare screen.
- Install on concrete barrier by drilling holes as shown and placing the manufacturer's QPL approved pipe in the holes. Submit for approval, in writing, any other proposed method of installation.
- Immediately repair any temporary barrier segment that is damaged during temporary glare screen installation at no additional cost to the Agency.
- Do not install on permanent Bridge rail or permanent Bridge barrier.
- Temporary glare screens that are installed in a continuous run shall be from the same manufacturer and of like appearance throughout the entire installation.

For any segment of concrete barrier that will be used for permanent installations, fill holes and repair according to Section 00820 after removing the temporary glare screen.

(Use the following lead-in paragraph and subsection .46 when mobile barrier is required.)

Add the following subsection:

00226.46 Mobile Barrier - Configure, place, and move the mobile barrier according to the manufacturer's recommendations, according to the TCP, or as directed.

(Use the following lead-in paragraph and subsection .65 when Temporary Glare Screens are required.)

Add the following subsection:

00226.65 Temporary Glare Screens - Immediately replace or repair any temporary glare screen segment that is damaged. Repair to the Engineer's satisfaction or replace with an undamaged segment. If the temporary glare screen segment is damaged by the Contractor, repair or replace at no additional cost to the Agency.

(Use the following lead-in paragraph and subsection .66 when mobile barrier is required.)

Add the following subsection:

00226.66 Mobile Barrier - Maintain the mobile barrier according to the manufacturer's recommendations. Perform routine maintenance of the mobile barrier at no additional cost to the Agency. Be responsible for all necessary service and maintenance of the mobile barrier while in use.

(Use the following subsection .80(b)(2) when temporary barrier is required.)

00226.80(b)(2) Temporary Barrier - Add the following to the end this subsection:

The quantities will be limited to those shown in Table 00226-1. The estimated quantity of Temporary Barrier is:

TABLE 00226-1

Stage/Phase	Location (STA to STA)	Temporary Barrier (foot)	Temporary Barrier, Minimum Deflection (foot)
	Total Quantity		

(Use the following subsection .80(b)(4) when minimum deflection Bridge temporary barrier is required.)

00226.80(b)(4) Minimum Deflection Bridge Temporary Barrier - Add the following to the end this subsection:

The quantities will be limited to those shown in Table 00226-2. The estimated quantity of Minimum Deflection Bridge Temporary Barrier is:

TABLE 00226-2

Stage/Phase	Location (STA to STA)	Minimum Deflection Bridge Temporary Barrier (foot)

	Total Quantity	

(Use the following lead-in paragraph and subsection .80(b)(5) when Temporary Glare Screens are required.)

Add the following subsection:

00226.80(b)(5) Temporary Glare Screens - Temporary glare screens and moving temporary glare screens will be measured on the length basis, determined by measuring from end to end of the devices, as installed on temporary barrier along the line and grade of each separate run.

(Use the following lead-in paragraph and subsection .80(c) when mobile barrier is required.)

Add the following subsection:

00226.80(c) Time Basis - The quantity of mobile barrier will be measured on the time basis, of the number of Days the mobile barrier is in actual use on the Project according to the approved Traffic Control Plan. One mobile barrier will be allowed per Day unless otherwise approved.

(Use the following subsection .90 when Pay Item (g), mobile barrier or temporary glare screens are required. Delete Pay Items that do not apply, and delete "(s)" or parentheses as applicable.)

00226.90 Payment - Add the following Pay Item(s) to the end of the Pay Item list:

(o) Mobile Barrier .....Day
(p) Temporary Glare Screens..... Foot
(q) Moving Temporary Glare Screens ..... Foot

(Use the following paragraph when Pay Item (g) is required.)

Add the following paragraphs after the paragraph that begins "In items (g) and (h)…":

Payment for items (g) performed beyond the quantity shown in the Contract Schedule of Items will be made at the Contract unit price if the Engineer determines that the Contract unit price does not exceed the value of the Work as determined according to Section 00197. If the Engineer determines that the Contract unit price exceeds the value of the Work, payment for the Additional Work will be made according to 00195.20.

(Use the following three paragraphs when mobile barrier is required.)

Add the following paragraphs after the paragraph that begins "Item (l) includes…":

Item (o) will be payment in full for all labor, training, Equipment, and Materials required for mobile barrier, regardless of length and number of moves. Item (s) will also be payment in

full for operation of the semi-tractor truck in conjunction with the mobile barrier, training, service, maintenance, and all Incidentals necessary to complete the Work as specified.

Items (h) and (j) include truck mounted temporary impact attenuators attached to mobile barrier(s).

(Use the following three paragraphs when temporary glare screens are required.)

Add the following paragraphs after the paragraph that begins "Item (l) includes…":

Item (p) includes furnishing, installing, and removing temporary glare screens.

Item (q) includes moving the temporary glare screens from one location of actual use to another location of actual use on the temporary barrier.