**SPP00222 (11-13-2020)**

***(Follow all instructions. If there are no instructions above a subsection, paragraph, sentence or bullet, then include them in the project but make necessary modifications to only include project specific specifications. Delete specifications that do not apply to the project. Remove all instructions before preparing the final document.)***

# Section 00222 – Temporary Traffic Control Signs

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

Comply with section 00222 of the Standard Construction Specifications modified as follows:

 (Use the following subsection .40(e) when adding any of the following temporary signs.)

**00222.40(e) Temporary Sign Placement** ‑ Add the following to the end of the numbered list:

(Use the following bullet if a flagger is to be used to provide pedestrian guidance through the TPAR during flagging operations.)

* Place a “WAIT FOR FLAGGER” (CR4-23) sign approximately 50 feet in advance of each flagger station, facing incoming pedestrian traffic. Install the sign on a conical marker or other temporary sign support, as shown or as directed. Do not allow the sign installation height or location to block the visibility of the flagger for incoming public traffic.

(Use the following three bullets when maintaining pedestrian access through the work area using the existing roadway shoulder or other portion of the roadway. Number appropriately.)

* At least ten calendar days prior to the start of work, place a “SIDEWALK OPEN” (CW11-3) sign in advance of each end of the work area. Locate the sign so it is legible from the nearest alternate pedestrian pathway facing incoming pedestrian traffic. The sign may be mounted between the panels of a Type II barricade, or on a single-post TSS. Do not place the sign or support such that it narrows the pedestrian pathway to a width less than four (4) feet.
* Before starting work, place pedestrian-specific TCM as shown in the TCP, or as directed. Maintain “SIDEWALK OPEN” (CW11-3) signs while work is affecting the pedestrian pathway.
* Place a “PEDESTRIANS ON ROADWAY” (CW11-2) sign at the beginning of each end of the work area, facing incoming traffic as shown, or as directed.

(Use the following bullets if there are high site-specific truck volumes expected on the project. Number appropriately)

* Install a "TRUCKS" (W11-10) sign, with a "500 FEET" (W14-4P) rider, approximately 500 feet before each point of access of all noncommercial stockpile sites, work zone staging area, material sources, waste areas, and plant set-up areas to a public roadway.
* Install a 54-inch "TRUCKS LEAVING HIGHWAY XXXX FT" sign in advance of each entrance point to the work area at sign spacing “A” from the “TCD Spacing Table” shown on the standard drawings. Install a 54-inch "TRUCKS ENTERING HIGHWAY XXXX FT" sign in advance of each exit point from the work area at sign spacing “A” from the “TCD Spacing Table” shown on the ODOT standard drawings.

***(Use the following bullet when project identification signs will be included for a project. Project ID signs are required on all Fixing Our Streets Projects and must include project cost and Fixing Our Streets logo. For all other funding sources contact the PBOT project manager to determine if a Project ID sign is needed and to identify what information to include on the signs. Supplement the paragraph as directed by the traffic engineer to provide adequate details. Delete parentheses once information is provided and change red text to black.)***

* Install a “PROJECT IDENTIFICATION” sign with silver-white Type III or Type IV sheeting background with blue transparent screened legend or blue Type III or Type IV cut-out permanent legend on ***(***street name***)***, according to sign spacing “A” from the “TCD Spacing Table” shown on the ODOT standard drawings, in advance of the “ROAD WORK AHEAD” sign at each end of the project, facing incoming traffic. The traffic engineer will determine the sign legend. Include “Info/Erosion Concerns: 503-823-1414” at bottom of sign. Remove all “PROJECT IDENTIFICATION” signs at the end of the Contract time or as directed by the Owner’s Representative.

(Use the following when using "END ROAD WORK" signing. Number appropriately.)

* Install beyond each end of the project, facing outgoing traffic, an "END ROAD WORK" (CG20‑2A‑24) sign a distance of (A ÷ 2) according to the "TCD Spacing Table" shown on the ODOT standard drawings or as modified by the plans.

(Use the following bullet when project identification signs will not be included for a project and when the project will result in ground disturbance. Supplement the paragraph as directed by the traffic engineer to provide adequate details. Delete parentheses once information is provided and change red text to black.)

* Install an “EROSION CONCERNS” sign on ***(***street name***)***, at each end of the project. Place the sign according to sign spacing "A" from the "TCD Spacing Table" shown on the ODOT standard drawings, or as shown in the plans. Install the sign so that the sign face is rotated 90 degrees to approaching traffic and faces the roadway centerline. The traffic engineer will determine the sign legend. Include “EROSION CONCERNS?”, ***(***project name***)***, and “503-823-1414”. Use fluorescent orange TVII, Type VIII, Type IX, or Type X sheeting background with black nonreflective permanent legend according to 02910.02. Remove all “EROSION CONCERNS” signs at the end of the Contract time or as directed by the Owner’s Representative.

(Use the bullet when flaggers are needed at a single location for 24 or more consecutive hours.)

* Install a "24 HR FLAGGING AHEAD" (CW20‑9) sign in each direction approximately 250 feet prior to the "BE PREPARED TO STOP" sign. Remove the temporary signs when 24‑hour flagging is no longer required, or as directed.

***(Use the following bullets on all projects that have a modified traffic signal or stop sign altered during construction. Supplement the bullets as directed by the traffic engineer to provide adequate details and address all affected legs of the intersection. Delete the language in red parentheses that does not apply and delete parentheses once information is provided and change red text to black.)***

* Install “TRAFFIC CONTROL CHANGE AHEAD” (W5340C) sign with flags approximately 100 feet in advance of ***(***location details***)***, facing ***(***northbound***)(***eastbound***)*** incoming traffic.
* Install “TRAFFIC CONTROL CHANGE AHEAD” (W5340C) sign with flags approximately 100 feet in advance of ***(***location details***)***, facing ***(***southbound***)(***westbound***)*** incoming traffic.
* Keep the new “TRAFFIC CONTROL CHANGE AHEAD” sign***(***s***)*** in place 30 calendar days after altering the ***(***stop sign***) (***traffic signal***)***.

***(Use the following bullets on all projects that have a new traffic signal installed during construction. Supplement the bullets as directed by the traffic engineer to provide adequate details and address all affected legs of the intersection. Delete the language in red parentheses that does not apply and delete parentheses once information is provided and change red text to black.)***

* Install “TRAFFIC CONTROL CHANGE AHEAD” (W5340C) sign with flags approximately 200 feet in advance of ***(***location details***)***, and Type OO “Signal Ahead” (W3-3) sign with flags approximately 100 feet in advance of ***(***location details***)***, facing ***(***northbound***)(***eastbound***)*** incoming traffic.
* Install “TRAFFIC CONTROL CHANGE AHEAD” (W5340C) sign with flags approximately 200 feet in advance of ***(***location details***)***, and Type OO “Signal Ahead” (W3-3) sign with flags approximately 100 feet in advance of ***(***location details***)***, facing ***(***southbound***)(***westbound***)*** incoming traffic.
* Keep the new “TRAFFIC CONTROL CHANGE AHEAD” sign***(***s***)*** in place 30 calendar days after installing the “Signal Ahead” sign***(***s***)***.

***(Use the following bullets on all projects where traffic patterns have changed, such as revised lane usage, roadway geometry or signal phasing. Supplement the bullets as directed by the traffic engineer to provide adequate details and address all affected legs of the intersection. Delete the language in red parentheses that does not apply and delete parentheses once information is provided and change red text to black.)***

* Install “NEW TRAFFIC PATTERN AHEAD” (W23-2) sign with flags approximately 100 feet in advance of ***(***location details***)***, facing ***(***northbound***)(***eastbound***)*** incoming traffic.
* Install “NEW TRAFFIC PATTERN AHEAD” (W23-2) sign with flags approximately 100 feet in advance of ***(***location details***)***, facing ***(***southbound***)(***westbound***)*** incoming traffic.
* Keep the "NEW TRAFFIC PATTERN AHEAD" sign***(***s***)*** in place 30 calendar days after installing the ***(***modification details***)***.

***(Use the following bullet on all projects that have a new stop sign installed or that have the stop signs flipped to the opposite street during construction.)***

* Before implementing the installation of a new STOP sign or changing the stop-controlled direction from one street to another street at a two-way stop controlled intersection, protect traffic by installing orange warning flags atop the newly installed STOP sign. These flags shall remain in place for at least 30 calendar days after completion of the modifications to the STOP sign and then removed by the Contractor.

***(Use the following bullets on all projects that have a new stop sign installed during construction. Do not use when the new stop sign(s) create an all way stop control. Supplement the bullets as directed by the traffic engineer to provide adequate details. Delete the language in red parentheses that does not apply and delete parentheses once information is provided and change red text to black.)***

* Install “CROSS TRAFFIC DOES NOT STOP” (W4-4P) sign beneath the STOP sign***(***s***)*** with flags above the STOP signs facing incoming ***(***northbound***)(***westbound***)*** and ***(***southbound***)(***eastbound***)*** traffic at the following intersections:

***(***intersection***)***

***(***intersection***)***

* Keep the "CROSS TRAFFIC DOES NOT STOP" sign***(***s***)*** in place 30 calendar days after installing the new stop sign***(***s***)***.

(Use the following Pilot Car Language on projects that include a pilot car in the bid schedule.)

[ Begin Pilot Car Language]

(Use one of the following two options, as instructed below. Delete the option that does not apply.)

[Option 1 - Use the following bullet when plan sheets are being developed for the traffic control plan and qualifying side road locations can be shown.]

* During pilot car operations, install a 15 by 24-inch "WAIT FOR PILOT CAR" (CR4‑20) sign at stop-controlled side roads and accesses intersecting the highway within the limits of the pilot car operation, as shown.

[Option 2 - Use the following bullets when plan sheets are not being developed for the traffic control plan. Fill in the blanks with the location of each “WAIT FOR PILOT CAR” sign.]

* During pilot car operations, install a 15 by 24-inch "WAIT FOR PILOT CAR" (CR4‑20) sign at stop-controlled side roads and accesses intersecting the highway within the limits of the pilot car operation at the following locations:
* \_\_\_\_(Side road name, STA XXX+XX)\_\_\_\_\_\_

\_\_\_\_(Side road name, STA XXX+XX)\_\_\_\_\_\_

\_\_\_\_(Side road name, STA XXX+XX)\_\_\_\_\_\_

* During pilot car operations, install a 12 by 12-inch "WAIT FOR PILOT CAR" (CR4‑20a) sign in private residential driveways accessing the highway within the limits of the pilot car operation. Place the sign in the driveway facing the private residence and so the sign face is not visible to public traffic on the highway. Do not use the sign for apartments, condominiums or business accesses.
* At accesses, side roads, or residential driveways where "WAIT FOR PILOT CAR" (CR4‑20) signs are installed, do not allow traffic to be stopped or held for longer than 20 minutes.
* In addition to the signs, public notification (e.g. flyers, door hangers) may be used to inform the residents that may be affected by the pilot car operations and the "WAIT FOR PILOT CAR" signs.

[ End Option 2 ]

(Use the following bullet only on preservation projects that include a pilot car in the bid schedule.)

For each location of the "WAIT FOR PILOT CAR" sign, closely monitor for traffic compliance, operation, and safety at least once per hour during pilot car operations. If operational issues are observed, or if notified of operational issues, at stop-controlled accesses or side roads utilizing the "WAIT FOR PILOT CAR" (CR4‑20) sign, remove the sign and replace it with a flagger.

[ End Pilot Car Language]

(Use the following lead-in paragraph and subsections .41(g) when a temporary speed zone order has been signed by the City Traffic Engineer. The temporary speed zone order allows you to include sign quantities and determine recommended locations in the Plans only (show signs as a blank sign with dashed outline, no legend). Do not draft specific temporary regulatory speed zone signs into the plans. Exact signs and locations will be discussed during Pre-Construction Meeting when the actual Order is issued to the contractor.)

Add the following subsection:

**00222.40(f) Temporary Speed Zone Reduction** - Install a temporary regulatory speed zone, as directed. Use regulatory signs for all required temporary speed zone signage.

(Use the following bullet when a PCMS is used in advance of a roadway closure or ramp closure. Fill in the blank with the name of the road that will be closed. Modify the PCMS messages to reflect the name of the road that will be closed and the time frame for the closure.)

* At least seven (7) calendar days before the \_\_\_\_\_\_ closure, place one or more PCMS displaying the following message as shown, or as directed:

 **Panel 1 Panel 2**

 (Name/# of highway) CLOSURE

 (Location) (Time Frame)

 CLOSURE (Time Frame)

***(Consider the modifications to .45 when BES is managing the contract.***

***OPTIONAL - Use the following to provide a basis for estimating by bidders when opting to pay for Temporary Electrical Signs (SAS or PCMS) by the week.***

***OPTIONAL - Or provide another basis for the number of weeks that SAS or PCMS must be provided listed in the bid tab: ("See TCP for number and placement of SAS or PCMS" or "...two signs for 8 weeks each totaling 16 weeks..., etc."))***

**00222.45 Temporary Electrical Signs** - Insert the following table (or paragraph) after the lead-in sentence to this subsection:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sign Type** |  **Location** | **Purpose** | **From (date)** | **To (date)** | **Total Weeks** |
| SAS or PCMS | NE 16th & Fremont | Project Warning | 1-week before project start | End of Construction | 6 weeks |
| SAS or PCMS | NE 28th & Fremont | Project Warning | 1-week before project start | End of Construction | 6 weeks |

(Use the following subsection .45(c) when including a Radar Speed Trailer on the project.)

[Begin Radar Speed Trailer Language]

**00222.45(c) Radar Speed Trailers** - Add the following bullet(s) to the end of the bulleted list:

(Use the following bullet to specify the max blackout speed threshold for the Radar Speed Trailer. Fill in the blank with a value for “XX” between 10 and 15 mph above the regulatory posted speed for the work zone. Contact the traffic engineer.)

* Use a blackout speed threshold of ***(***XX***)*** mph, which does not allow the radar speed trailer to display a speed or message when the measured speed exceeds ***(***XX***)*** mph.

(Use the following bullet for projects when using the Radar Speed Trailer with advisory speed signing. Fill in the blank with a value for “XX” between 10 and 20 mph below the regulatory posted speed for the Work Zone. Contact the traffic engineer.)

* Install a 36 by 36-inch “ROAD WORK XX MPH” (CW20‑1a) sign below the trailer display panel. Use a value of \_\_\_\_\_ for “XX” on the sign

[End Option]

[End Radar Speed Trailer Language]

***(Check with CDS Designer/Construction Manager before using this subsection to change the Sequential Arrow Sign and Portable Changeable Message Signs unit of measure from “each” to “time”.***

***Replace this subsection .80(b) when PCMS use will be used intermittently. PCMS rental cost is approximately $600 per week plus $300 for installation for each PCMS location. If the estimated total cost for PCMS usage exceeds $16000, consider measuring on a unit “each” basis, which allows the purchase of the units.)***

**00222.80(b) Unit Basis** – Replace the subsection with the following:

**00222.80(b) Time Basis** – Temporary electrical signs will be measured on the time basis, of the actual number of days that they are in use on the project.

***(Check with CDS Designer/Construction Manager before using this subsection to change the SAS and/or PCMS unit of measure from “each” to “day”. Remove any inapplicable language if only one of the following is required in the project.)***

**00222.90 Payment** – Replace the pay items (c) and (d) and unit of measurement as follows:

**Pay Item Unit of Measurement**

 (c) Sequential Arrow Signs Day

 (d) Portable Changeable Message Signs Day

***(May be used when BES is managing the contract to change the SAS and PCMS unit of measure from “each” to “week”. Remove any inapplicable language if only one of the following is required in the project.)***

**00222.90 Payment** – Replace the pay items and unit of measurement in the first paragraph as follows:

**Pay Item Unit of Measurement**

####

#### (c) Sequential Arrow Signs ………………………..…………...Week

(d) Portable Changeable Message Signs …………...………..Week

(Use the following subsection .90 when a project contains multiple work zones, multi-lane projects, speed reduction measures or when pay item (e) is included in the pay item list.)

**00222.90 Payment** - Add the following to the end of this subsection:

(Use the following paragraphs to limit the number of signs paid for when a project contains multiple work zones. Delete "(s)" or parentheses as applicable.)

Payment will be made for not more than \_\_\_\_\_ set***(***s***)*** of work area signs. All additional sets of work area signs will be at no additional cost to the Owner.

(Use the following bullet for all high-speed, multi-lane projects.)

No separate or additional payment will be made for furnishing, installing, and maintaining 72 by 24-inch "CONSTRUCTION VEHICLE DO NOT FOLLOW" (CW23‑14) signs. Payment will be included in 00221.90(b).