




# Highway Division Maintenance Leadership Team Operational Notice

Number	Supersedes	Effective Date	Cancellation Date
MG 144-03	Oct 18, 2017	Dec 1, 2017	
Subject	Issuing Body		
Traffic Signal Work and Americans with Disabilities Act (ADA)	 Maintenance and Operations Engineer		

**PURPOSE:**

Provide guidance on when traffic signal work activities trigger the obligation to upgrade a traffic signal for compliance with the ADA requirements.

**DEFINITIONS:**

"Trigger" is a work activity that requires verification of three pushbutton features: 1) Mounting height 2) Reach range 3) Level landing area. If pushbuttons meet all three requirements, as determined by inventory or field verification by trained staff, then the work activity can move forward. If not, then seek guidance from the Region Tech Center on the required action.

"Work activity related to a part failure, damage from the public, or acts of god" is needed to keep the signal operational and is a reactive unplanned event. This work is NOT considered an upgrade to the signal and is typically not a trigger.

"Work activity related to preventative maintenance" is intended to keep the signal operational by replacing parts on a known life cycle to limit failures. For example we do not wait for vehicle signal LED modules to burn out before we replace them. This work is NOT considered an upgrade to the signal and is typically not a trigger.

"Work activity related to planned and systematic upgrade" is associated with items that are not at their end of life. For this type of work, there is always adequate time to plan, design and implement the changes without the urgency associated with replacing broken or unreliable aging items to ensure the traffic signal is functional in the immediate future. An example would be replacing a non-countdown pedestrian signal head that is only 1 year old and in working condition. This work is considered an upgrade to the signal and is typically a trigger.

"End of life" is defined as any item that is at or has exceeded its normal useful life. For example vehicle signal LED modules have a useful life of 5 years. It would be good preventative maintenance to change out all vehicle signal LED modules at 4 years of life to avoid failures.

**BACKGROUND:**

There is a wide range of traffic signal work that is performed on a regular basis to keep a traffic signal operational and running smoothly. Signal maintenance work that does not impact pedestrian pushbuttons or pedestrian signals is not a trigger. Pursuant to the requirements of the settlement agreement, the signal work activities that are triggers have been identified in this document. This is not an exhaustive list, but addresses the most common work activities that are performed. In addition, a Frequently Asked Questions (FAQ) section is included in this document to provide further clarification.

**WORK FLOW PROCESS:**

If the traffic signal work you are performing is not a trigger, you can perform the signal work without any further required steps. If the work you are doing is a trigger or you are unsure if the work is a trigger, contact the Region Tech Center for help in verifying whether or not the work is a trigger and what the required action will be. See the flowchart in this document for a more detailed view of the decision making process.

**WORK ACTIVITIES & TRIGGERS**

**1 Pedestrian pedestal/post or signal pole replacement with an existing pushbutton mounted on it**

Work activity related to a part failure, damage from the public, or acts of god.

Not a Trigger	Replace a knocked down mast arm pole, strain pole, vehicle pedestal, ped pedestal, or push button post on the existing foundation. Button height needs to be 36" to 48" vertical.
Not a Trigger	Replace a knocked down mast arm pole, strain pole, vehicle pedestal, ped pedestal, or push button post on the existing foundation. The existing foundation anchor rods and foundation need some repair also. Button height needs to be 36" to 48" vertical.
Trigger	Replace a knocked down mast arm pole, strain pole, vehicle pedestal, ped pedestal, or push button post on new foundation. This is a trigger because a new foundation requires adequate time to plan, design & construct.

Work activity related to preventative maintenance (note mast arm pole & strain pole replacement is not considered preventive maintenance)

Not a Trigger	Replace an existing end of life vehicle pedestal, ped pedestal, or push button post on the existing foundation. Button height needs to be 36" to 48" vertical.
Not a Trigger	Replace an existing end of life vehicle pedestal, ped pedestal, or push button post on the existing foundation. The existing foundation anchor rods and foundation need some repair also. Button height needs to be 36" to 48" vertical.
Trigger	Replace an existing end of life vehicle pedestal, ped pedestal, or push button post on new foundation. This is a trigger because a new foundation requires adequate time to plan, design & construct.

Work activity related to planned and systematic upgrade

Trigger	Replace an existing mast arm pole, strain pole, vehicle pedestal, ped pedestal, or pushbutton post on the existing foundation
Trigger	Replace an existing mast arm pole, strain pole, vehicle pedestal, ped pedestal, or pushbutton post on new foundation

**2 New installation of pushbuttons, new audible pushbuttons, or new pedestrian pedestal/post where pushbuttons did not exist previously**

Work activity related to a part failure, damage from the public, or acts of god.

N/A	Does not apply since this talks about adding where they did not exist
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Work activity related to preventative maintenance

N/A	Does not apply since this talks about adding where they did not exist
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Work activity related to planned and systematic upgrade

Trigger	Install a new pushbutton (or new audible pushbutton) on an existing pole/pedestal/post prior to end of life preventative maintenance schedule
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Trigger	Install a new pushbutton (or new audible pushbutton) on a new vehicle pedestal, ped pedestal, or push button pole on new foundation
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**3 Change an existing non-countdown pedestrian signal head to a countdown pedestrian signal head**

Work activity related to a part failure, damage from the public, or acts of god.

Not a Trigger	Replace the failed head/module. Requires replacement of all the heads on the same crossing (generally two). It is NOT OK to have one countdown and one non-countdown on the same crossing.
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Work activity related to preventative maintenance

Not a Trigger	Replace an existing end of life pedestrian signal head. Requires replacement of all the heads on the same crossing (generally two). It is NOT OK to have one countdown and one non-countdown on the same crossing.
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Work activity related to planned and systematic upgrade

Trigger	Replace an existing pedestrian signal head. Requires replacement of all the heads on the same crossing (generally two). It is NOT OK to have one countdown and one non-countdown on the same crossing.
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**4 New controller and firmware installation**

Work activity related to a part failure, damage from the public, or acts of god **OR** Work activity related to preventative maintenance **OR** Work activity related to planned and systematic upgrade

Not a Trigger	Change out the firmware on existing controller (Voyage 5.1 to Voyage 5.2)
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Not a Trigger	Change out a 170 to another 170. Change out a 2070 to another 2070. Change out an ATC to another ATC.
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Not a Trigger	Change out a 170 to a 2070 or ATC. Change out a 2070 to ATC.
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**5 Change an existing pushbutton to an audible pushbutton**

Work activity related to a part failure, damage from the public, or acts of god **OR** Work activity related to preventative maintenance **OR** Work activity related to planned and systematic upgrade

Trigger	Change an existing pushbutton to an audible pushbutton. This is a trigger because there is adequate time to plan and install this upgrade.
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**6 Change an existing audible pushbutton to a new audible pushbutton**

Work activity related to a part failure, damage from the public, or acts of god.

Not a Trigger	Replace only the failed audible pushbutton. Button height needs to be 36" to 48" vertical.
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Work activity related to preventative maintenance

Not a Trigger	Replace an existing end of life audible pushbutton. Button height needs to be 36" to 48" vertical.
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Work activity related to planned and systematic upgrade

Trigger	Replace an existing audible pushbutton
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**7 Add a new pedestrian signal head where one did not exist previously**

Work activity related to a part failure, damage from the public, or acts of god.

n/a	Does not apply since this talks about adding where they did not exist
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Work activity related to preventative maintenance

n/a	Does not apply since this talks about adding where they did not exist
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Work activity related to planned and systematic upgrade

Trigger	Install new pedestrian signal head (typically two for a crossing)
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**8 Replace a controller cabinet**

Work activity related to a part failure, damage from the public, or acts of god **OR** Work activity related to preventative maintenance **OR** Work activity related to planned and systematic upgrade

Not a Trigger	Replace existing controller cabinet with new controller cabinet of same size
Not a Trigger	Replace existing controller cabinet with a new controller cabinet of a different size. Note: The type of audible pedestrian pushbuttons ODOT uses makes this not a trigger (all the electronics are contained within the ped head & button, not the controller cabinet)

**FREQUENTLY ASKED QUESTIONS**

The questions and answers below are for maintenance activities only, NOT planned work or systematic work or new construction.

Q1: Is it OK to have one countdown and one non-countdown pedestrian signal on the same crossing?

A1: No. Each pedestrian crossing must use the same type (matched pairs)

Q2: Can I use my supply of older non-standard parts like H Frame mounts?

A2: Yes. You can replace in kind. If the mount is the new style, then that is what should be reinstalled. The button height needs to be 36" to 48" vertical.

Q3: I don't have any of the older H Frame mounts; can I install the new style mount?

A3: Yes. This is considered replacement in kind. It doesn't need to be the exact same part. The button height needs to be 36" to 48" vertical.

- Q4: The RPS service was hit by a car. I want to install a BMC service. Can I do this?  
A4: Maybe. The work needs to avoid sidewalk ramps or restricting pedestrian paths. Contact the Region Tech Center for guidance.
- Q5: Region Traffic offered to pay for upgrading 170 controllers to ATC controllers. Can I accept?  
A5: Yes, this is not a trigger.
- Q6: A 170 controller just failed and I do not have a spare. Can I install a 2070 controller or ATC?  
A6: Yes, this is not a trigger.
- Q7: My 336 controller cabinet is too small, can I upgrade to a 332 controller cabinet (bigger cabinet)?  
A7: Yes, this is not a trigger. Note: The type of audible pedestrian pushbuttons ODOT uses makes this not a trigger (all the electronics are contained within the ped head & button, not the controller cabinet)
- Q8: Who defines "end of life" of traffic signal components? (For example 5 years on LED modules)  
A8: Each electrical maintenance crew. This should be documented. Some items can use state wide times, while others may vary if they are located on the coast or eastern Oregon. The Traffic Standard Crew can assist if needed.
- Q9: Who defines the list of items we do preventative maintenance on?  
A9: Each electrical maintenance crew. This should be documented. Most will included short life items like LED modules, air filters, etc.
- Q10: If there are no pushbuttons on an existing signal (downtown ped recalled system) will signal work trigger ADA?  
A10: No. Work can be completed at the signal. There are no ped push buttons that would trigger ADA. Also, there is no requirement to add pushbuttons.
- Q11: If I have a trigger, who measures the three pushbutton features (vertical, horizontal, landing)?  
A11: The Traffic-Roadway Section or staff they have trained.
- Q12: If I am installing a new ped pole and new foundation, do I look at all buttons or just the corner where the work is?  
A12: Just the corner where the work is. A general rule for upgrades is if you touch it you fix it.
- Q13: Can I replace components inside the controller cabinet used for pushbuttons or pedestrian signals?  
A13: Yes, this is not a trigger.

## Signal Maintenance and ADA Compliance Process

*Signal Maintenance Staff*

*Region Tech Center Traffic*

