

The background of the slide features a large, light blue watermark of the Indiana Department of Transportation (INDOT) logo. The logo is circular and contains the text "INDIANA DEPARTMENT OF TRANSPORTATION" around the perimeter. In the center of the logo is a shield with various symbols, including a car, a truck, and a train. The text "INDOT" is prominently displayed in the center of the shield.

# Design Memo 26-09

## Positive Protection and Mitigation Strategies for Maintenance of Traffic

INDOT

Standards and Policy

Work Zone Safety

# Design Memo 26-09(Effective Lettings on or after Dec. 1, 2026)

## Need for Positive Protection and Mitigation Strategies for MOT

- Amendment to the FHWA Final Rule 23 CFR 630, subparts J and K
  - Requires use of positive protection in work zones with high anticipated operating speeds that provide workers no means of escape from a vehicle that intrudes into the work space.
  - Consider use of positive protection in all other work zones to offer the highest potential for increased safety for workers and road users.
    - Work zones that provide no means of escape for workers
    - Long duration work zones where workers and road users are subject to greater exposure to vehicle intrusions into the work zone and substandard roadway cross sections.
    - Excessive drop off exposure, e.g. unfinished bridge decks.

# Design Memo 26-09

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Why is this Good for INDOT?

- Promote consistency in work zones
  - Make the environment safer for workers
  - Improve driver expectation
  - Uniform experience for workers in the work zones
  - More reliable planning for associated project costs for project types

In short:

- Improves the awareness of work zones, therefore should improve safety, and
- Easier to predict costs of projects and setting INDOT program budgets

# Design Memo 26-09

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INDOT Implementation of Positive Protection and Mitigation Strategies for MOT

Creation of Two tables through coordination with multiple departments of INDOT (Work Zone Safety, Asset Management, Highway Design, Construction, to name a few) and Indiana Contractors, Inc. (ICI).

- **Table 1:** Positive Protection and Mitigation Strategies for MOT
  - To be used for all project types, except for:
    - freeway and interstate patching projects or
    - full closures.
- **Table 2:** Positive Protection and Mitigation Strategies for Freeway and Interstate Patching Projects
  - To be used for all freeway and interstate patching projects, except for:
    - full closures.

# Design Memo 26-09

## Work Zone Layout and Definitions

**Work Zone:** An area of highway with construction, maintenance, or utility work activities. This area extends from the first warning sign or temporary traffic control device, to the "END ROAD WORK" sign or last temporary traffic control device. A single work zone can include multiple worksites.

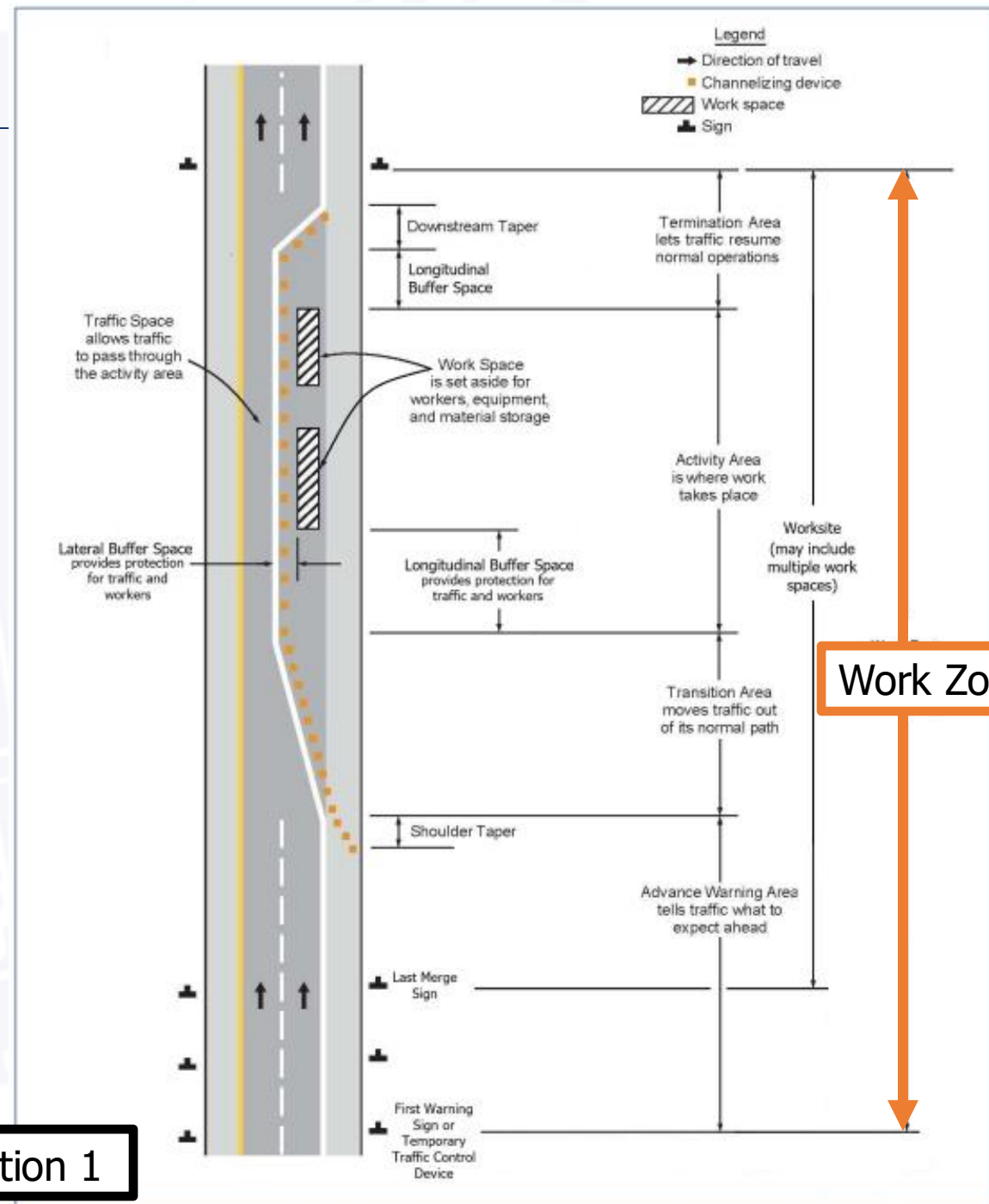


Illustration 1

# Design Memo 26-09

## Work Zone Layout and Definitions

**Worksite.** An individual area within the work zone where construction, maintenance, or utility work activities occur. This term includes the lanes of a highway leading up to the area leading to where the work is being performed, beginning at the point where appropriate signs directing vehicles to merge from one lane into another lane are posted. A single worksite can include multiple work spaces.

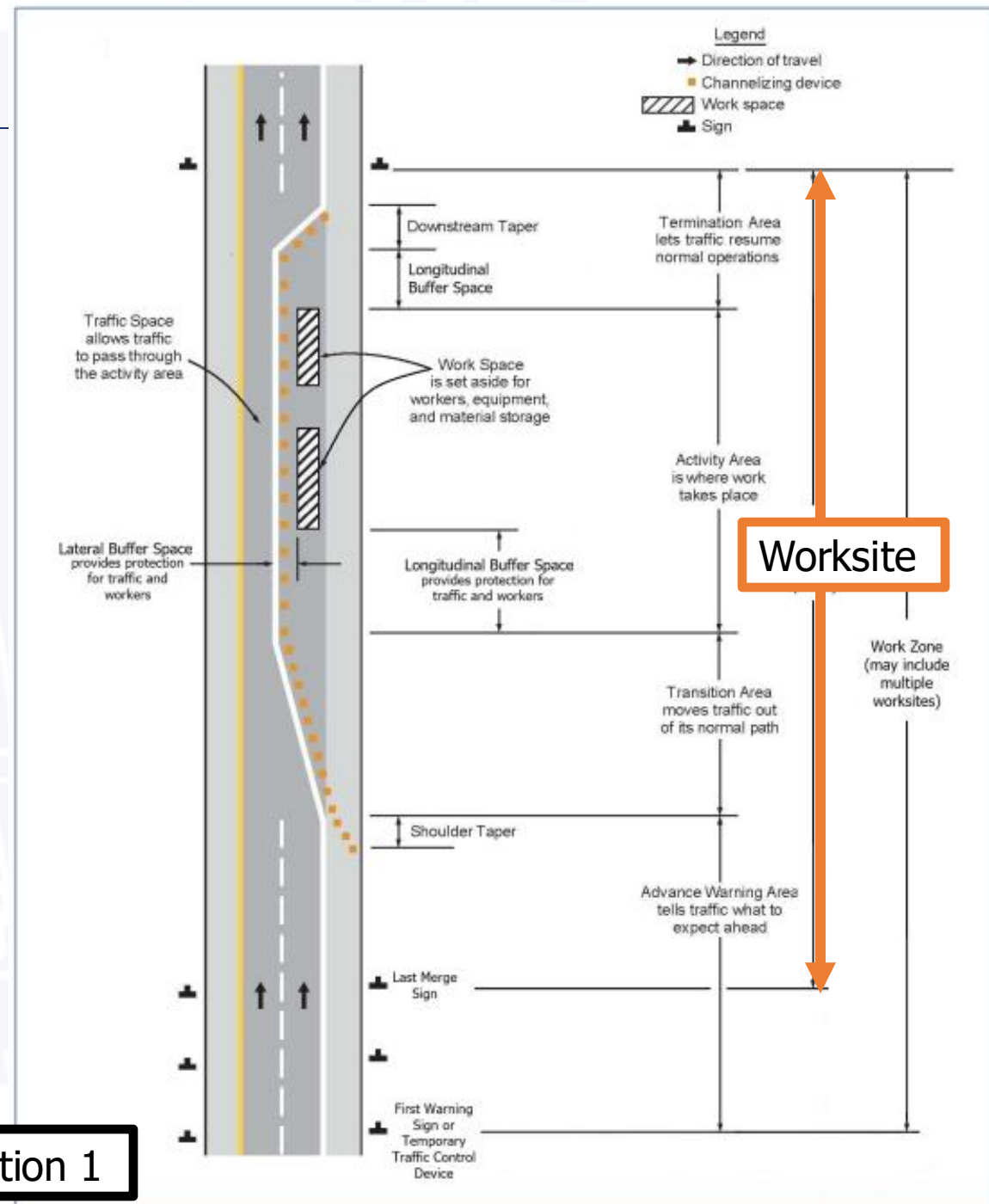


Illustration 1

# Design Memo 26-09

## Work Zone Layout and Definitions

**Work Space:** The area off limits to any road traffic, excluding any buffer space. This area includes the limits of the worksite as well as any additional working room that may be required for equipment and materials staging. The term “work space” is currently referred as “work area” or “construction area” in the Indiana Design Manual.

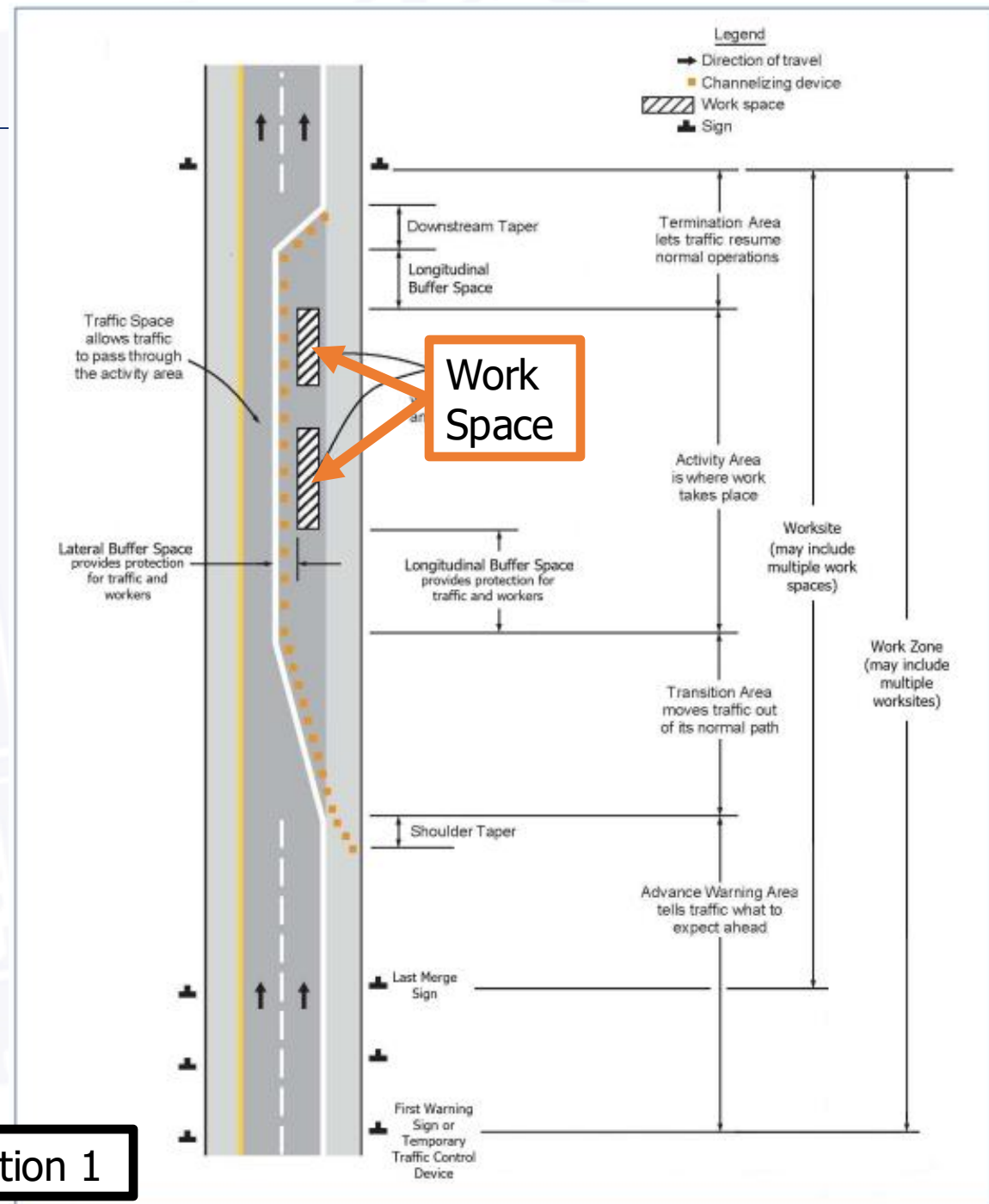


Illustration 1

# Design Memo 26-09

## Work Zone Layout and Definitions

**Lateral Buffer:** The area that separates live traffic from the work space. The lateral buffer distance is measured from the closest edge of the active travel lane to the nearest edge of the work space.

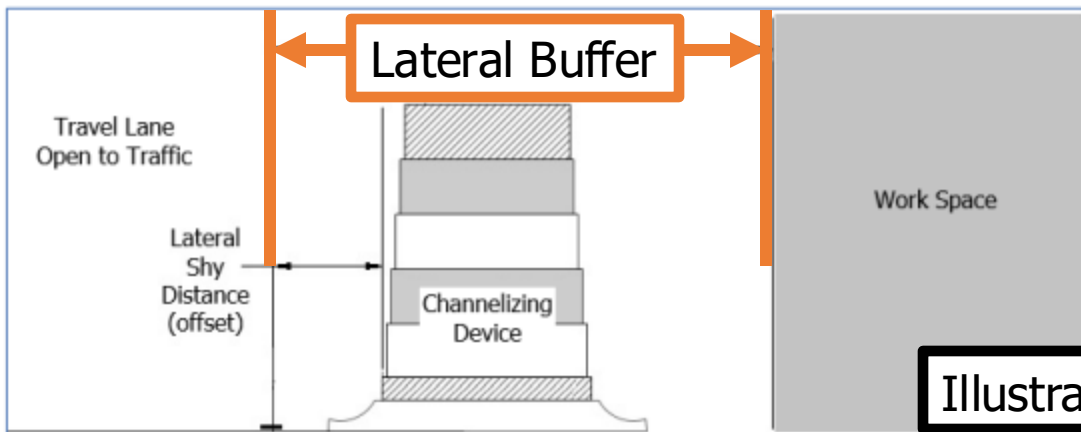
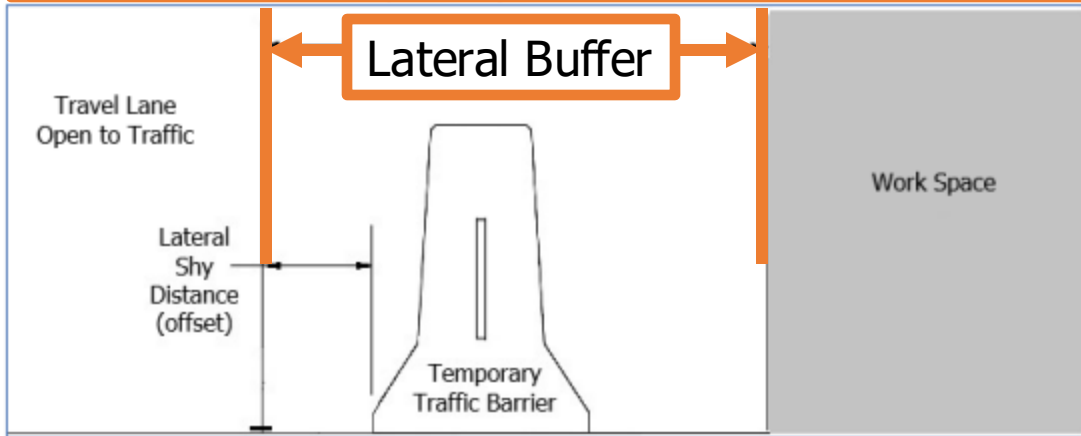
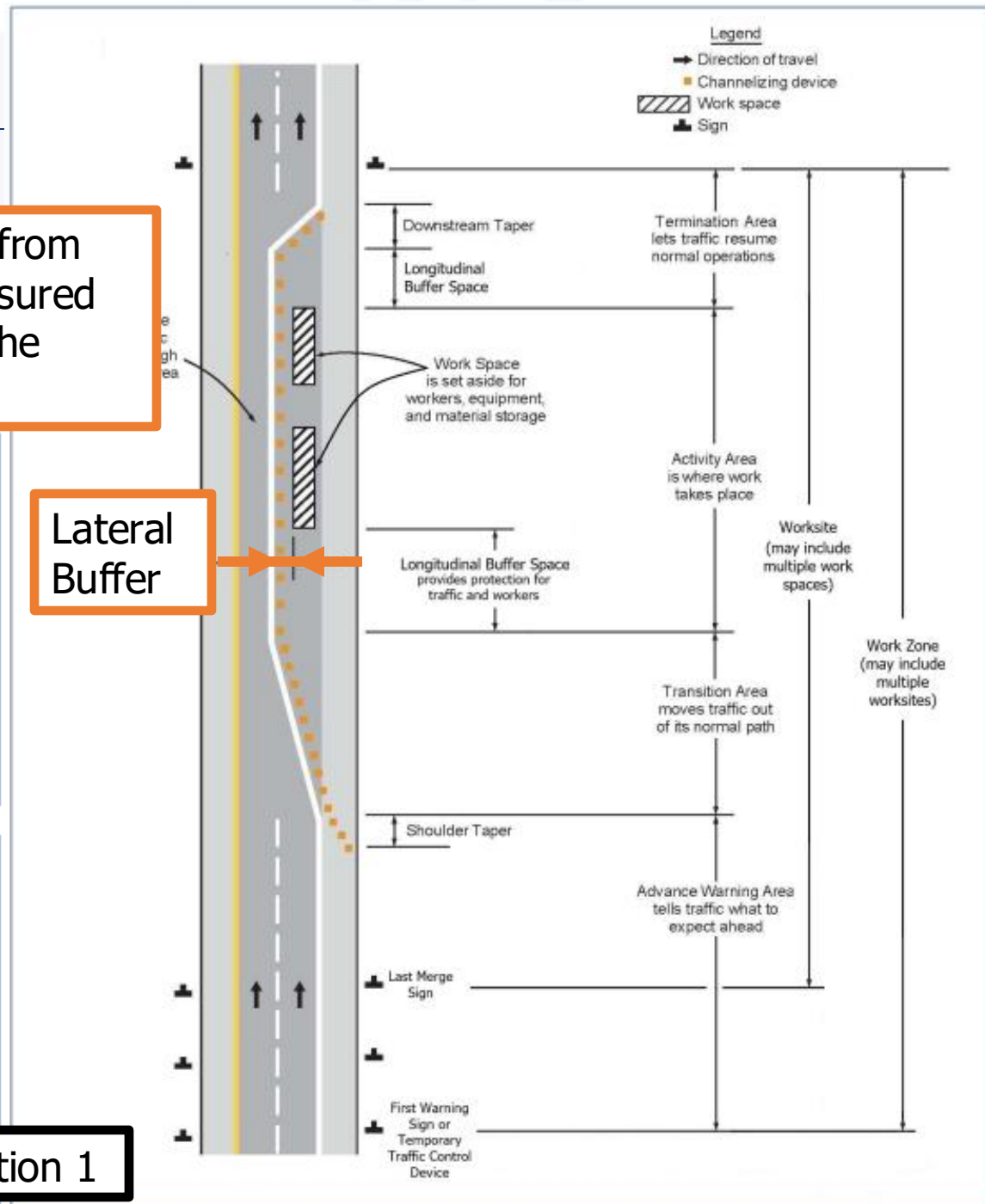


Illustration 1



# Design Memo 26-09

Table 1:

Table 1. Positive Protection and Mitigation Strategies for MOT

| Table 1 - Positive Protection and Mitigation Strategies for MOT                                                                                                                                                            |                                                      |                         |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration*<br>(MUTCD Work Duration Standard)                                                                                                                                                                                | Condition:<br>Drop-off Depth or Duration             | Lateral Buffer Distance | Minimum Requirements (listed in order of preference)                                                                                                                                                                                                                                                                                                |                                                                                                                                                            |
|                                                                                                                                                                                                                            |                                                      |                         | High Speed: 50 MPH or greater<br>(Regulatory speed limit prior to construction)                                                                                                                                                                                                                                                                     | Low Speed: 45 MPH or less<br>(Regulatory speed limit prior to construction)                                                                                |
| <b>Long-Term Stationary</b><br>Work that occupies a location more than 3 days<br><br>Use Table 2 for patching on a freeway or interstate                                                                                   | Drop off depth is 0 to 14 ft                         |                         | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer.                                                                                                                                                                                                                                                 | 1. Temporary Traffic Barrier preferred for worksites with active traffic on both sides (i.e. work in median).<br><br>Should be considered when workers are |
|                                                                                                                                                                                                                            | Drop off depth is greater than 14 ft                 |                         |                                                                                                                                                                                                                                                                                                                                                     | Should be considered when workers are                                                                                                                      |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour<br><br>Use Table 2 for patching on a freeway or interstate | Duration workers are in location is 24 hours or less |                         |                                                                                                                                                                                                                                                                                                                                                     | Should be considered when workers are                                                                                                                      |
|                                                                                                                                                                                                                            | Duration workers are in location is over 24 hours    |                         |                                                                                                                                                                                                                                                                                                                                                     | Should be considered when workers are                                                                                                                      |
| <b>Short-Term Stationary, Short Duration, Mobile</b><br>(max. duration) Daytime work that occupies a location for more than 1 hour within a single daylight period                                                         | Any                                                  | Any                     | Maintenance of traffic in accordance with the INDOT Work Zone Traffic Control Guidelines required. Where cones are used instead of drums, 42 in. cones are required. Document Link: <a href="https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf">https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf</a> |                                                                                                                                                            |

Through Conversations with multiple INDOT departments, past project MOT Strategies were reviewed for worker and road user safety, based on exposure and project layout characteristics, e.g. shoulder width, lateral buffer, no means of escape, etc.

As the title suggests, some strategies include Positive Protection and others Mitigation Devices. This was intentional and was coordinated with ICI. Strategies with Mitigation Devices are used in projects with short exposure for all:

- road users,
- workers setting up and taking down the MOT, and
- workers completing the construction.

# Design Memo 26-09

Table 1:

Table 1. Positive Protection and Mitigation Strategies for MOT

| Table 1 - Positive Protection and Mitigation Strategies for MOT                                                                                                                           |                                          |                         |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration*<br>(MUTCD Work Duration Standard)                                                                                                                                               | Condition:<br>Drop-off Depth or Duration | Lateral Buffer Distance | Minimum Requirements (listed in order of preference)                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                      |
|                                                                                                                                                                                           |                                          |                         | High Speed: 50 MPH or greater<br>(Regulatory speed limit prior to construction)                                                                                                                                                                                                                                          | Low Speed: 45 MPH or less<br>(Regulatory speed limit prior to construction)                                                                                                                          |
| <b>Long-Term Stationary</b><br>Work that occupies a location more than 3 days                                                                                                             | Drop off depth is 5 in. or less          | Less than 12 ft         | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer<br>2. Temporary Traffic Barrier should be considered for work occupying a location less than 14 days or when workers have no means of escape.<br>3. Channelizing devices. TMAs required when workers are present. (3) | 1. Temporary Traffic Barrier preferred for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4)  |
| *The duration is relative to the length of time a work operation occupies a spot location.                                                                                                |                                          |                         |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                      |
|                                                                                                                                                                                           | Drop off depth is greater than 5 in.     | Any                     | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer or when workers have no means of escape.<br>2. Channelizing devices. TMAs required when workers are present.(3)                                                                                                       | 1. Temporary Traffic Barrier preferred for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4)  |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than 3 days or for a period up to 30 days, or work lasting more than 1 hour within a single daylight period | Duration while work is in progress       | Any                     |                                                                                                                                                                                                                                                                                                                          | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4) |
| <b>Short-Term Stationary</b><br>Work that occupies a location for more than 1 hour within a single daylight period                                                                        | Any                                      | Any                     | required. Document Link: <a href="https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf">https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf</a>                                                                                                                                 |                                                                                                                                                                                                      |

Note we say, 'length of time of a work operation',

This means you may visit these tables more than once while determining the MOT strategies for a project. For example, your work may include resurfacing a stretch of Roadway and bridge overlay operation. You will use the table to determine the MOT strategy for the resurface work and the bridge overlay separately.

# Design Memo 26-09

Table 1:

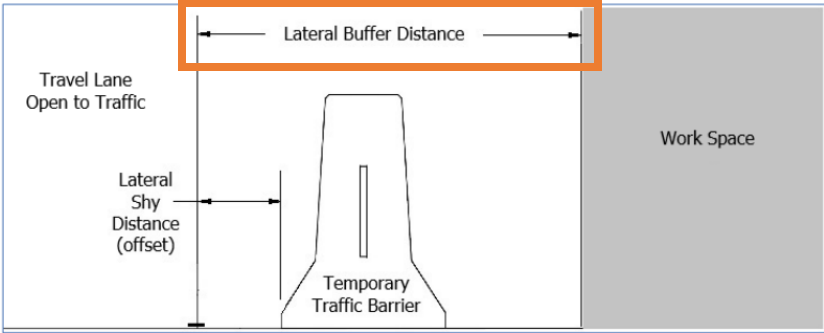
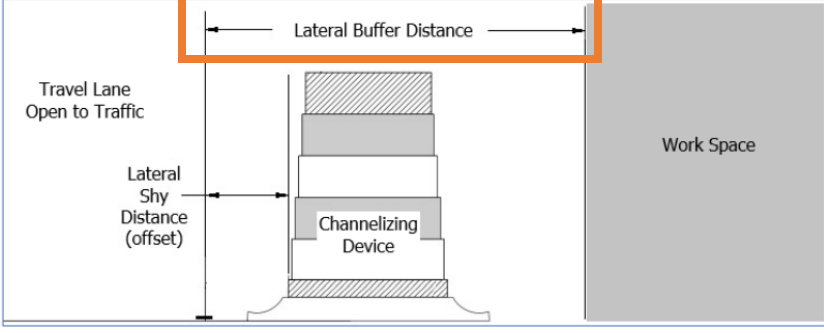
Table 1. Positive Protection and Mitigation Strategies for MOT

| Table 1 - Positive Protection and Mitigation Strategies for MOT                                                                                                                                                            |                                                        |                                      |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration*<br>(MUTCD Work Duration Standard)                                                                                                                                                                                | Condition:<br>Drop-off Depth or Duration               | Lateral Buffer Distance              | Minimum Requirements (listed in order of preference)                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                      |
|                                                                                                                                                                                                                            |                                                        |                                      | High Speed: 50 MPH or greater<br>(Regulatory speed limit prior to construction)                                                                                                                                                                                                                                                                     | Low Speed: 45 MPH or less<br>(Regulatory speed limit prior to construction)                                                                                                                          |
| <b>Long-Term Stationary</b><br>Work that occupies a location more than 3 days<br><br>Use Table 2 for patching on a freeway or interstate                                                                                   | Drop off depth is 5 in. or less                        | Less than 12 ft                      | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer<br>2. Temporary Traffic Barrier should be considered for work occupying a location less than 14 days or when workers have no means of escape.<br>3. Channelizing devices. TMAs required when workers are present. (3)                            | 1. Temporary Traffic Barrier preferred for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4)  |
|                                                                                                                                                                                                                            |                                                        | 12 ft or greater                     | 1. Temporary Traffic Barrier should be considered where there is no means of escape.<br>2. Channelizing devices. TMAs required when workers are present. (3)                                                                                                                                                                                        |                                                                                                                                                                                                      |
|                                                                                                                                                                                                                            |                                                        | Drop off depth is greater than 5 in. | Drop off depth deemed critical is a drop off greater than 5 inches.                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                      |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour<br><br>Use Table 2 for patching on a freeway or interstate | Duration while workers are present is 24 hours or less | Any                                  |                                                                                                                                                                                                                                                                                                                                                     | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4) |
|                                                                                                                                                                                                                            | Duration while workers are present is over 24 hours    | Less than 12 ft                      | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer<br>2. Temporary Traffic Barrier should be considered for work occupying a location less than 14 days or when workers have no means of escape.<br>3. Channelizing devices. TMAs required when workers are present. (3)                            | 1. Temporary Traffic Barrier preferred for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4)  |
|                                                                                                                                                                                                                            |                                                        | 12 ft or greater                     | 1. Channelizing devices. TMAs required when workers are present.(3)(5)<br>2. Channelizing devices. TMAs required when workers are present.(3)(5)                                                                                                                                                                                                    |                                                                                                                                                                                                      |
| <b>Short-Term Stationary, Short Duration, Mobile</b><br>(max. duration) Daytime work that occupies a location for more than 1 hour within a single daylight period                                                         | Any                                                    | Any                                  | Maintenance of traffic in accordance with the INDOT Work Zone Traffic Control Guidelines required. Where cones are used instead of drums, 42 in. cones are required. Document Link: <a href="https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf">https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf</a> |                                                                                                                                                                                                      |

# Design Memo 26-09

Table 1:

Table 1. Positive Protection and Mitigation Strategies for MOT

| Table 1 - Positive Protection and Mitigation Strategies for MOT                                                                                                                                                            |                                                        |                                                                                      |                                                                                                                                                                                                                                    |                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration*<br>(MUTCD Work Duration Standard)                                                                                                                                                                                | Condition:<br>Drop-off Depth or Duration               | Lateral Buffer Distance                                                              | Minimum Requirements (listed in order of preference)                                                                                                                                                                               |                                                                                                                                                                                                       |
|                                                                                                                                                                                                                            |                                                        |                                                                                      | High Speed: 50 MPH or greater<br>(Regulatory speed limit prior to construction)                                                                                                                                                    | Low Speed: 45 MPH or less<br>(Regulatory speed limit prior to construction)                                                                                                                           |
| <b>Long-Term Stationary</b><br>Work that occupies a location more than 3 days<br><br>Use Table 2 for patching on a freeway or interstate                                                                                   | Drop off depth is 4 in. or less                        |   | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer or when workers have no means of escape. (3)                                                                                    | 1. Temporary Traffic Barrier preferred for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4)  |
|                                                                                                                                                                                                                            | Drop off depth is greater than 5 in.                   |                                                                                      | 1. Temporary Traffic Barrier required when occupying a location for 14 days or longer or when workers have no means of escape. (3)                                                                                                 | 1. Temporary Traffic Barrier required when occupying a location for 14 days or longer or when workers have no means of escape. (3)                                                                    |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour<br><br>Use Table 2 for patching on a freeway or interstate | Duration while workers are present is 24 hours or less |  | 3)(5)                                                                                                                                                                                                                              | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4) |
|                                                                                                                                                                                                                            | Duration while workers are present is over 24 hours    |                                                                                      | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4)                              | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4) |
| <b>Short-Term Stationary, Short Duration, Mobile</b><br>(max. duration) Daytime work that occupies a location for more than 1 hour within a single daylight period                                                         | Any                                                    |                                                                                      | Traffic Control Guidelines required. Where cones are used instead of drums, 42 in. cones are required. <a href="https://www.fhwa.dot.gov/traffic/files/WorkZoneTCH.pdf">https://www.fhwa.dot.gov/traffic/files/WorkZoneTCH.pdf</a> |                                                                                                                                                                                                       |

Lateral Buffer Space. How far the active travel lane is from the work space.

# Design Memo 26-09

Table 1:

Table 1. Positive Protection and Mitigation Strategies for MOT

| Table 1 - Positive Protection and Mitigation Strategies for MOT                                                                                                                                                            |                                                        |                         |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                      |                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration*<br>(MUTCD Work Duration Standard)                                                                                                                                                                                | Condition:<br>Drop-off Depth or Duration               | Lateral Buffer Distance | Minimum Requirements (listed in order of preference)                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                      |                                                                                                                                                                                                      |
|                                                                                                                                                                                                                            |                                                        |                         | High Speed: 50 MPH or greater<br>(Regulatory speed limit prior to construction)                                                                                                                                                                                                                                                                     | Low Speed: 45 MPH or less<br>(Regulatory speed limit prior to construction)                                                                                                                                          |                                                                                                                                                                                                      |
| <b>Long-Term Stationary</b><br>Work that occupies a location more than 3 days<br><br>Use Table 2 for patching on a freeway or interstate                                                                                   | Drop off depth is 5 in. or less                        | Less than 12 ft         | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer<br>2. Temporary Traffic Barrier should be considered for work occupying a location less than 14 days or when workers have no means of escape.<br>3. Channelizing devices. TMAs required when workers are present. (3)                            | 1. Temporary Traffic Barrier preferred for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4)                  |                                                                                                                                                                                                      |
|                                                                                                                                                                                                                            |                                                        | 12 ft or greater        | 1. Temporary Traffic Barrier should be considered where there is no means of escape.                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                      |                                                                                                                                                                                                      |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour<br><br>Use Table 2 for patching on a freeway or interstate | Drop off depth is greater than 5 in.                   | Any                     |                                                                                                                                                                                                                                                                                                                                                     | 1. Temporary Traffic Barrier required when occupying a location for 14 days or longer or when workers have no means of escape.<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4) |                                                                                                                                                                                                      |
|                                                                                                                                                                                                                            |                                                        |                         |                                                                                                                                                                                                                                                                                                                                                     | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4)                 |                                                                                                                                                                                                      |
|                                                                                                                                                                                                                            | Duration while workers are present is 24 hours or less | Any                     |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                      | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4) |
|                                                                                                                                                                                                                            |                                                        |                         |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                      | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4) |
| Duration while workers are present is over 24 hours                                                                                                                                                                        | Less than 12 ft                                        |                         |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                      | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4) |
|                                                                                                                                                                                                                            |                                                        |                         |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                      | 12 ft or greater                                                                                                                                                                                     |
| <b>Short-Term Stationary, Short Duration, Mobile</b><br>(max. duration) Daytime work that occupies a location for more than 1 hour within a single daylight period                                                         | Any                                                    | Any                     | Maintenance of traffic in accordance with the INDOT Work Zone Traffic Control Guidelines required. Where cones are used instead of drums, 42 in. cones are required. Document Link: <a href="https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf">https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf</a> |                                                                                                                                                                                                                      |                                                                                                                                                                                                      |

The speed to be used is the Posted Regulatory Speed Limited prior to construction.

Why? Because road users do not always reduce their speed or if they do it may be reduced to the original Posted Regulatory Speed Limit.

# Design Memo 26-09

Table 1:

Table 1. Positive Protection and Mitigation Strategies for MOT

| Table 1 - Positive Protection and Mitigation Strategies for MOT                                                                                                                                                                                                                                                                                     |                                             |                            |                                                                                                                                                                                                                                                                                                                                |                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Duration*<br>(MUTCD Work Duration<br>Standard)                                                                                                                                                                                                                                                                                                      | Condition:<br>Drop-off Depth or<br>Duration | Lateral Buffer<br>Distance | Minimum Requirements (listed in order of preference)                                                                                                                                                                                                                                                                           |                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                     |                                             |                            | High Speed: 50 MPH or greater<br>(Regulatory speed limit prior to construction)                                                                                                                                                                                                                                                | Low Speed: 45 MPH or less<br>(Regulatory speed limit prior to construction)                                                      |
| <b>Long-Term Stationary</b><br>Work that occupies a location<br>more than 3 days<br><br>Use Table 2 for patching on a<br>freeway or interstate                                                                                                                                                                                                      | Drop off depth is 5<br>in. or less          | Less than 12 ft            | 1. Temporary Traffic Barrier required when occupying a location continuously for 14<br>days or longer<br>2. Temporary Traffic Barrier should be considered for work occupying a location less<br>than 14 days or when workers have no means of escape.<br>3. Channelizing devices. TMAs required when workers are present. (3) | 1. Temporary Traffic Barrier on both sides of work area.<br>2. Channelizing devices. TMAs required when workers are present. (3) |
|                                                                                                                                                                                                                                                                                                                                                     |                                             | 12 ft or greater           | 1. Temporary Traffic Barrier should be considered where there is no means of escape.<br>2. Channelizing devices. TMAs required when workers are present. (3)                                                                                                                                                                   |                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                     | Drop off depth is<br>greater than 5 in.     | Any                        | 1. Temporary Traffic Barrier required when occupying a location continuously for 14<br>days or longer when workers have no means of escape.<br>2. Channelizing devices. TMAs required when workers are present. (3)                                                                                                            | 1. Temporary Traffic Barrier on both sides of work area.<br>2. Channelizing devices. TMAs required when workers are present. (3) |
| <b>Intermediate-Term Stationary</b>                                                                                                                                                                                                                                                                                                                 | Duration while                              |                            |                                                                                                                                                                                                                                                                                                                                | 1. Temporary Traffic Barrier on both sides of work area.<br>2. Channelizing devices. TMAs required when workers are present. (3) |
| <div>1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer</div> <div>2. Temporary Traffic Barrier should be considered for work occupying a location less than 14 days or when workers have no means of escape.</div> <div>3. Channelizing devices. TMAs required when workers are present. (3)</div> |                                             |                            |                                                                                                                                                                                                                                                                                                                                |                                                                                                                                  |
| daylight period                                                                                                                                                                                                                                                                                                                                     |                                             |                            |                                                                                                                                                                                                                                                                                                                                |                                                                                                                                  |

Using the project characteristics will get you to a set of options. These options are ordered in a hierarchy, preferred being listed first.

# Design Memo 26-09

Table 1:

Table 1. Positive Protection and Mitigation Strategies for MOT

|                                                          |                                                                                                                                            |                                                   |
|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Duration*<br>(MUTCD Work Duration Standard)              | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer                                         |                                                   |
| Long-Term Status<br>Work that occupies more than 30 days | 2. Temporary Traffic Barrier should be considered for work occupying a location less than 14 days or when workers have no means of escape. | Construction with active traffic when workers are |
| Use Table 2 for patterns of freeway or interchanges      | 3. Channelizing devices. TMAs required when workers are present. (3)                                                                       | Occupying a location for                          |

Why 14 days? It all has to do with exposure: Per *ATSSA Guidelines on the Use of Positive Protection in Temporary Traffic Control Zones* the Final Rule 23 CFR 630 :

- Positive protection devices such as TTB become more cost effective when used on longer term projects (time to set the TTB).
- They go on to define longer term projects as longer than 2 weeks.
- The exposure of the workers placing the TTB is appropriate for the time the construction will occupy a location. The example given is, a long run of TTB may not be feasible where a project duration is shorter than the time it takes to set the TTB.

# Design Memo 26-09

Table 1:

Table 1. Positive Protection and Mitigation Strategies for MOT

| Table 1 - Positive Protection and Mitigation Strategies for MOT                                                                            |                    |                                                                                                                                                                    |                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Duration*                                                                                                                                  | Condition          | Minimum Requirements (listed in order of preference)                                                                                                               |                                                                     |
| 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer                                         |                    | Speed: 45 MPH or less<br>(preferred limit prior to construction)<br>(preferred for worksites with active traffic median).<br>Should be considered when workers are |                                                                     |
| 2. Temporary Traffic Barrier should be considered for work occupying a location less than 14 days or when workers have no means of escape. |                    | Required when occupying a location for<br>workers have no means of escape.                                                                                         |                                                                     |
| 3. Channelizing devices. TMAs required when workers are present. (3)                                                                       | greater than 5 in. | 2. Channelizing devices. TMAs required when workers are present.(3)                                                                                                | 2. Channelizing devices. TMAs should be considered when workers are |

When should a designer consider using temporary traffic barrier rather than channelizing devices and TMAs?

- Where there is no means of escape, e.g. work on a bridge where there is nowhere to run from an errant vehicle.
- Set up of a run of temporary traffic barrier is practical for the work being completed, e.g. workers will be closer to the active travel lane in one general location and work is more than 3 days trending to closer to 14 days.
- Placing a run of TTB is a shorter duration than the time to complete the project.
- Discuss the practical placement of TTB with the District Area Engineer.

## Table 1:

**Table 1 - Positive Protection and Mitigation Strategies for MOT**

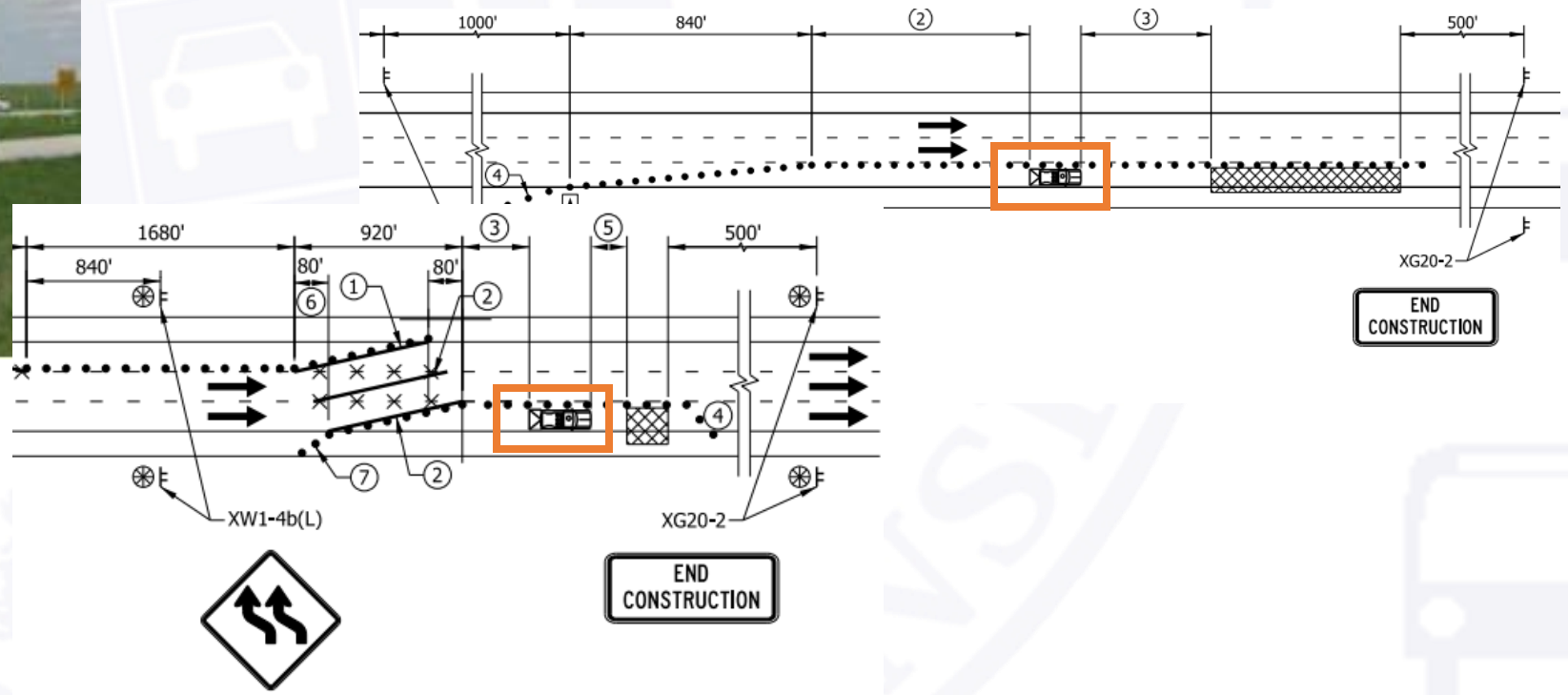
| Duration*<br>(MUTCD Work Duration<br>Standard)                                                                                                                                                                                                 | Condition:<br>Drop-off Depth or<br>Duration | Lateral Buffer<br>Distance | Minimum Requirements (listed in order of preference)                                                                                       |                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                |                                             |                            | High Speed: 50 MPH or greater<br>(Regulatory speed limit prior to construction)                                                            | Low Speed: 45 MPH or less<br>(Regulatory speed limit prior to construction)                                                 |
| Work that occupies a location for less than 14 days and there is means of escape, for example a cable barrier project, Channelizing devices may be utilized and TMA's are required for when workers are present.                               | Any                                         | Any                        | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer                                         | 1. Temporary Traffic Barrier preferred for worksites with active traffic (median).<br>should be considered when workers are |
|                                                                                                                                                                                                                                                |                                             |                            | 2. Temporary Traffic Barrier should be considered for work occupying a location less than 14 days or when workers have no means of escape. | required when occupying a location for<br>workers have no means of escape.<br>should be considered when workers are         |
|                                                                                                                                                                                                                                                |                                             |                            | 3. Channelizing devices. TMA's required when workers are present. (3)                                                                      | considered for worksites with active traffic                                                                                |
| Where your work will occupy a location for less than 14 days and there is means of escape, for example a cable barrier project, Channelizing devices may be utilized and TMA's are required for when workers are present.                      |                                             |                            |                                                                                                                                            | on both sides (i.e. work in median).<br>workers are<br>active traffic<br>workers are                                        |
|                                                                                                                                                                                                                                                | 12 ft. or greater                           |                            | 1. Channelizing devices. TMA's required when workers are present.(3)(5)                                                                    | present.(3)(4)                                                                                                              |
| (3) Coordinate the use of TMA's with the District Area Engineer. On a high-speed, high volume project and where the lateral buffer is less than 12 ft use of the Mobile Barrier may be considered. See table 2 for Mobile Barrier limitations. |                                             |                            | cones are                                                                                                                                  |                                                                                                                             |

# Design Memo 26-09

## Truck-Mounted Attenuator (TMA)



TMA's are not new. They have been in the Standard E801–TCLC Drawing Series since June 2022.



# Design Memo 26-09

Table 1:

Table 1. Positive Protection and Mitigation Strategies for MOT

| Table 1 - Positive Protection and Mitigation Strategies for MOT                                                                                                                                                              |                                                                                                                                                                               |                            |                                                                                                                                                                   |                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration*<br>(MUTCD Work Duration<br>Standard)                                                                                                                                                                               | Condition:<br>Drop-off Depth or<br>Duration                                                                                                                                   | Lateral Buffer<br>Distance | Minimum Requirements (listed in order of preference)                                                                                                              |                                                                                                                                                                   |
|                                                                                                                                                                                                                              |                                                                                                                                                                               |                            | High Speed: 50 MPH or greater<br>(Regulatory speed limit prior to construction)                                                                                   | Low Speed: 45 MPH or less<br>(Regulatory speed limit prior to construction)                                                                                       |
| Work that occupies a location continuously for 14 days or longer                                                                                                                                                             | Less than 14 days or when workers have no means of escape.                                                                                                                    | Any                        | 1. Temporary Traffic Barrier preferred for worksites with active traffic (median).<br>2. Temporary Traffic Barrier should be considered when workers are present. | 1. Temporary Traffic Barrier preferred for worksites with active traffic (median).<br>2. Temporary Traffic Barrier should be considered when workers are present. |
|                                                                                                                                                                                                                              |                                                                                                                                                                               |                            |                                                                                                                                                                   | 1. Temporary Traffic Barrier preferred for worksites with active traffic (median).<br>2. Temporary Traffic Barrier should be considered when workers are present. |
|                                                                                                                                                                                                                              |                                                                                                                                                                               |                            |                                                                                                                                                                   | 1. Temporary Traffic Barrier preferred for worksites with active traffic (median).<br>2. Temporary Traffic Barrier should be considered when workers are present. |
| Work that occupies a location continuously for less than 14 days and there is means of escape, for example a cable barrier project, Channelizing devices may be utilized and TMAs are required for when workers are present. | Less than 14 days and there is means of escape, for example a cable barrier project, Channelizing devices may be utilized and TMAs are required for when workers are present. | Any                        | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           |
|                                                                                                                                                                                                                              |                                                                                                                                                                               |                            |                                                                                                                                                                   | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           |
|                                                                                                                                                                                                                              |                                                                                                                                                                               |                            |                                                                                                                                                                   | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           |
| Work that occupies a location continuously for less than 14 days and there is means of escape, for example a cable barrier project, Channelizing devices may be utilized and TMAs are required for when workers are present. | Less than 14 days and there is means of escape, for example a cable barrier project, Channelizing devices may be utilized and TMAs are required for when workers are present. | 12 ft or greater           | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           |
|                                                                                                                                                                                                                              |                                                                                                                                                                               |                            |                                                                                                                                                                   | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           |
|                                                                                                                                                                                                                              |                                                                                                                                                                               |                            |                                                                                                                                                                   | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           |
| Work that occupies a location continuously for less than 14 days and there is means of escape, for example a cable barrier project, Channelizing devices may be utilized and TMAs are required for when workers are present. | Less than 14 days and there is means of escape, for example a cable barrier project, Channelizing devices may be utilized and TMAs are required for when workers are present. | 12 ft or greater           | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           |
|                                                                                                                                                                                                                              |                                                                                                                                                                               |                            |                                                                                                                                                                   | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           |
|                                                                                                                                                                                                                              |                                                                                                                                                                               |                            |                                                                                                                                                                   | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                           |

# Design Memo 26-09

## Table 2: Table Correction 4/21/2026

**Table 2. Positive Protection and Mitigation Requirements for Freeway and Interstate Patching**

| Table 2 - Positive Protection and Mitigation Requirements for Freeway and Interstate Patching (1)(2)(3)                                                          |                |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration of Work*                                                                                                                                                | Drop-off Depth | Lateral Buffer Distance | Minimum Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                  |                |                         | Any speed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Long-Term Stationary</b><br>Work that occupies a location continuously for more than 3 days                                                                   | Any            | Any                     | Long-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA + length of unanchored temporary traffic barrier (TTB), Type 2 at initial lane closure. <ul style="list-style-type: none"> <li>All flare rates based on 70 mph</li> <li>At initial lane closure, TTB flared at 20:1 to edge of the lane and a CZ unit placed. Allow the appropriate roll ahead distance of the TMA.</li> <li>TTB extended 100 ft beyond the initial work space. See note (2) for determining length of initial work space.</li> <li>As work progresses the TMA is relocated to the next active work space. Channelizing devices for the lane closure remain in place between start of work zone and the beginning of the next work space.</li> </ul> See Illustration 2 – Freeway and Interstate Patching, Long-Term Stationary<br><br>Where there is a single worksite, the downstream area beyond the worksite should be transitioned to be open to traffic. Details have not been developed for multiple concurrent worksites. |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour. | Any            | Less than 12 ft         | Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)<br><br>See Illustration 3 – Freeway and Interstate Patching, Intermediate-Term Stationary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                  |                | 12 ft or greater        | Intermediate-Term Lane closure Standard Drawing Series 801-TCLC : Channelizing devices + TMA required when workers present (3) <ul style="list-style-type: none"> <li>Mobile Barrier may be considered but requires approval from the State Construction Engineer. See note (4) for limitations.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

\*The duration is relative to the length of time a work operation occupies a spot location.

(1) Using the strategy from this table does not preclude compliance with the Interstate Highways Congestion Policy. All conditions and mitigation measures associated with an IHCP exception must be implemented..

(2) Coordinate work space length with the District Area Engineer to determine the length of TTB for initial closure.

(3) When patching is part of a resurfacing project, use of a TMA is not required for the resurfacing operation.

(4) Coordinate use of Mobile Barrier with the District Area Engineer. Limitations include

- INDOT only has access to a single mobile barrier system. Two or more crews working in different areas cannot be shielded at the same time.
- Mobile barrier will occupy a full lane width adjacent the work space. Where work or large equipment (e.g. paver) occupies a full lane width of the work space, the adjacent lane must be closed for the Mobile Barrier.
- One day is required to modify the mobile barrier wall from left side shielding to right side shielding. Work on opposite sides cannot occur in the same day and must be accounted for in the schedule.

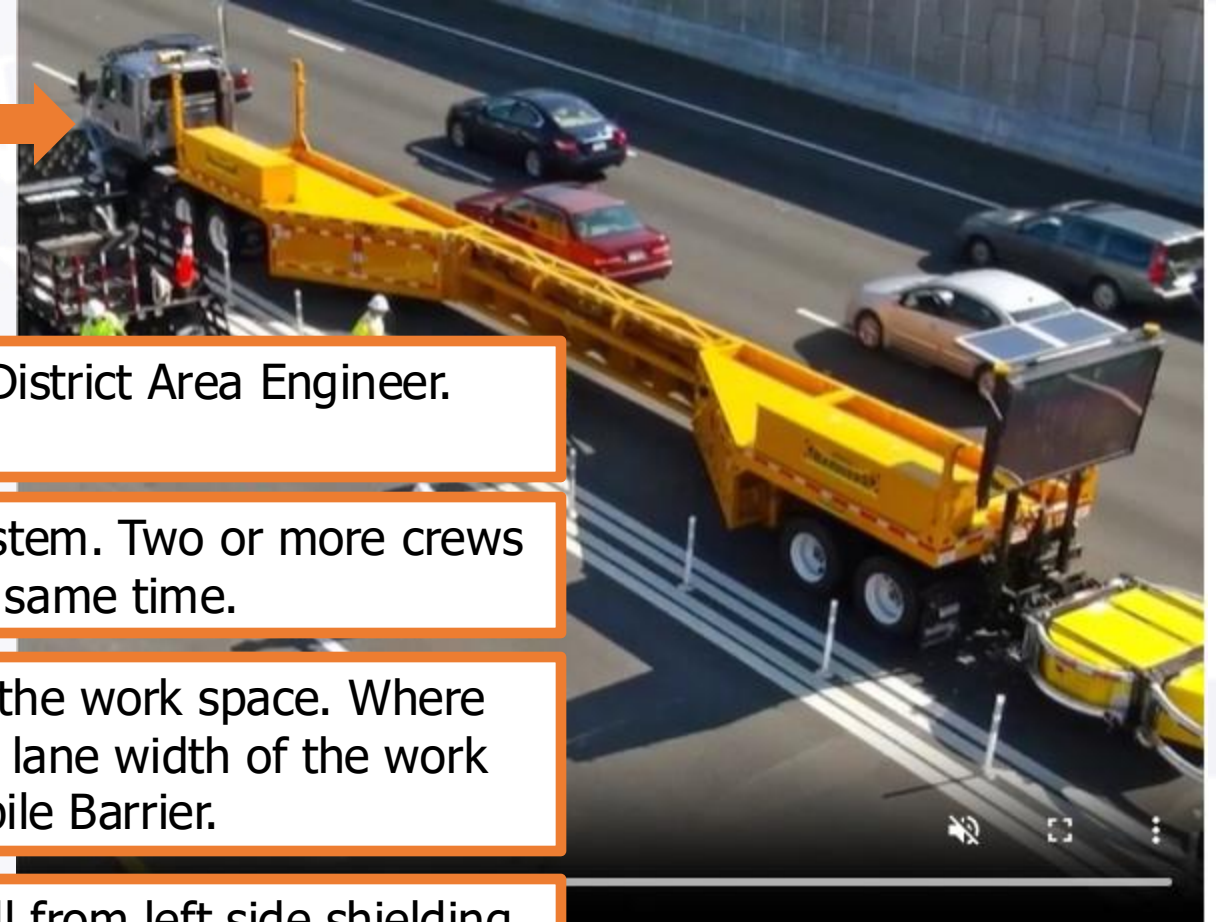
# Design Memo 26-09

Mobile Barrier

... See table 2 for Mobile Barrier limitations.

Table 2: (4) Coordinate use of Mobile Barrier with the District Area Engineer.  
Limitations include:

- INDOT only has access to a single mobile barrier system. Two or more crews working in different areas cannot be shielded at the same time.
- Mobile barrier will occupy a full lane width adjacent the work space. Where work or large equipment (e.g. paver) occupies a full lane width of the work space, the adjacent lane must be closed for the Mobile Barrier.
- One day is required to modify the mobile barrier wall from left side shielding to right side shielding. Work on opposite sides cannot occur in the same day and must be accounted for in the schedule.



# Design Memo 26-09

Table 2:

Table 2. Positive Protection and Mitigation Requirements for Freeway and Interstate Patching

| Table 2 - Positive Protection and Mitigation Requirements for Freeway and Interstate Patching (1)(2)(3)                                                                                                    |                |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration of Work*                                                                                                                                                                                          | Drop-off Depth | Lateral Buffer Distance | Minimum Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                            |                |                         | Any speed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Long-Term Stationary</b><br>Work that occupies a location continuously for more than 3 days                                                                                                             | Any            | Any                     | <p>Long-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA + length of unanchored temporary traffic barrier (TTB), Type 2 at initial lane closure.</p> <ul style="list-style-type: none"><li>All flare rates based on 70 mph</li><li>At initial lane closure, TTB flared at 20:1 to edge of the lane and a CZ unit placed. Allow the appropriate roll ahead distance of the TMA.</li><li>TTB extended 100 ft beyond the initial work space. See note (2) for determining length of initial work space.</li><li>As work progresses TTB and TMA are relocated to the next active work space. Channelizing devices for the lane closure remain in place between start of work zone and the beginning of the next work space.</li></ul> <p>See Illustration 2 – Freeway and Interstate Patching, Long-Term Stationary</p> |
| the TMA is                                                                                                                                                                                                 |                |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| As work progresses TTB and TMA are relocated to the next active work space. Channelizing devices for the lane closure remain in place between start of work zone and the beginning of the next work space. |                |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour.                                           | Any            | Less than 12 ft         | <p>Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)</p> <p>See Illustration 3 – Freeway and Interstate Patching, Intermediate-Term Stationary</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                                                            |                | 12 ft or greater        | <p>Intermediate-Term Lane closure Standard Drawing Series 801-TCLC : Channelizing devices + TMA required when workers present (3)</p> <ul style="list-style-type: none"><li>Mobile Barrier may be considered but requires approval from the State Construction Engineer. See note (4) for limitations.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

\*The duration is relative to the length of time a work operation occupies a spot location.

(1) Using the strategy from this table does not preclude compliance with the Interstate Highways Congestion Policy. All conditions and mitigation measures associated with an IHCP exception must be implemented..

(2) Coordinate work space length with the District Area Engineer to determine the length of TTB for initial closure.

(3) When patching is part of a resurfacing project, use of a TMA is not required for the resurfacing operation.

(4) Coordinate use of Mobile Barrier with the District Area Engineer. Limitations include

- INDOT only has access to a single mobile barrier system. Two or more crews working in different areas cannot be shielded at the same time.
- Mobile barrier will occupy a full lane width adjacent the work space. Where work or large equipment (e.g. paver) occupies a full lane width of the work space, the adjacent lane must be closed for the Mobile Barrier.
- One day is required to modify the mobile barrier wall from left side shielding to right side shielding. Work on opposite sides cannot occur in the same day and must be accounted for in the schedule.

# Design Memo 26-09

Table 2:

Table 2. Positive Protection and Mitigation Requirements for Freeway and Interstate Patching

| Table 2 - Positive Protection and Mitigation Requirements for Freeway and Interstate Patching (1)(2)(3)                                                          |                |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration of Work*                                                                                                                                                | Drop-off Depth | Lateral Buffer Distance | Minimum Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                  |                |                         | Any speed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Long-Term Stationary</b><br>Work that occupies a location continuously for more than 3 days                                                                   | Any            | Any                     | Long-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA + length of unanchored temporary traffic barrier (TTB), Type 2 at initial lane closure. <ul style="list-style-type: none"> <li>All flare rates based on 70 mph</li> <li>At initial lane closure, TTB flared at 20:1 to edge of the lane and a CZ unit placed. Allow the appropriate roll ahead distance of the TMA.</li> <li>TTB extended 100 ft beyond the initial work space. See note (2) for determining length of initial work space.</li> <li>As work progresses the TMA is relocated to the next active work space. Channelizing devices for the lane closure remain in place between start of work zone and the beginning of the next work space.</li> </ul> See Illustration 2 – Freeway and Interstate Patching, Long-Term Stationary<br><br>Where there is a single worksite, the downstream area beyond the worksite should be transitioned to be open to traffic. Details have not been developed for multiple concurrent worksites. |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour. | Any            | Less than 12 ft         | Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)<br><br>See Illustration 3 – Freeway and Interstate Patching, Intermediate-Term Stationary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                  |                | 12 ft or greater        | Intermediate-Term Lane closure Standard Drawing Series 801-TCLC : Channelizing devices + TMA required when workers present (3) <ul style="list-style-type: none"> <li>Mobile Barrier may be considered but requires approval from the State Construction Engineer. See note (4) for limitations.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

See Next Slide

\*The duration is relative to the length of time a work operation occupies a spot location.

(1) Using the strategy from this table does not preclude compliance with the Interstate Highways Congestion Policy. All conditions and mitigation measures associated with an IHCP exception must be implemented..

(2) Coordinate work space length with the District Area Engineer to determine the length of TTB for initial closure.

(3) When patching is part of a resurfacing project, use of a TMA is not required for the resurfacing operation.

(4) Coordinate use of Mobile Barrier with the District Area Engineer. Limitations include

- INDOT only has access to a single mobile barrier system. Two or more crews working in different areas cannot be shielded at the same time.
- Mobile barrier will occupy a full lane width adjacent the work space. Where work or large equipment (e.g. paver) occupies a full lane width of the work space, the adjacent lane must be closed for the Mobile Barrier.
- One day is required to modify the mobile barrier wall from left side shielding to right side shielding. Work on opposite sides cannot occur in the same day and must be accounted for in the schedule.

# Design Memo 26-09

Table 2:

The TTB flare should be extended to the shoulder and a CZ unit placed parallel to oncoming traffic. One segment of TTB directly downstream of the CZ unit must be parallel to the CZ unit.

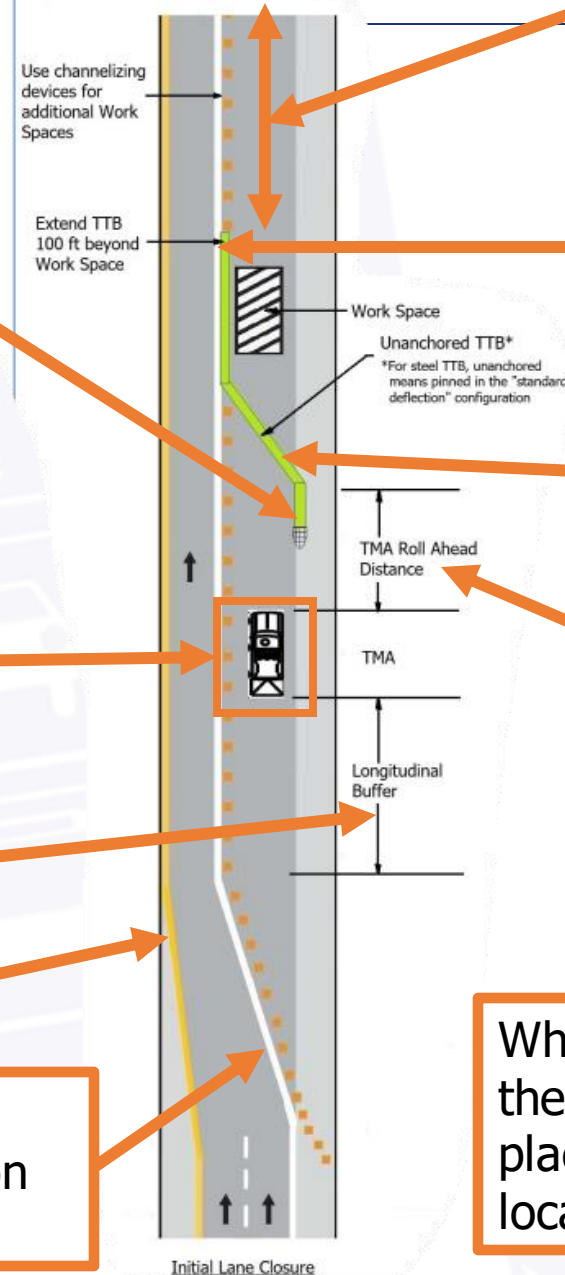
Initial set up the TMA will be there for visual awareness at the start of the project, e.g. the initial lane merge.

The initial longitudinal buffer should be based on 70 mph

Illustration only Do not combine merger and shift taper.

The initial taper should be based on 70 mph

Illustration 2



Where additional work spaces are anticipated, channelizing devices should be continued for the lane closure.

The TTB must extend 100 ft beyond the initial work space

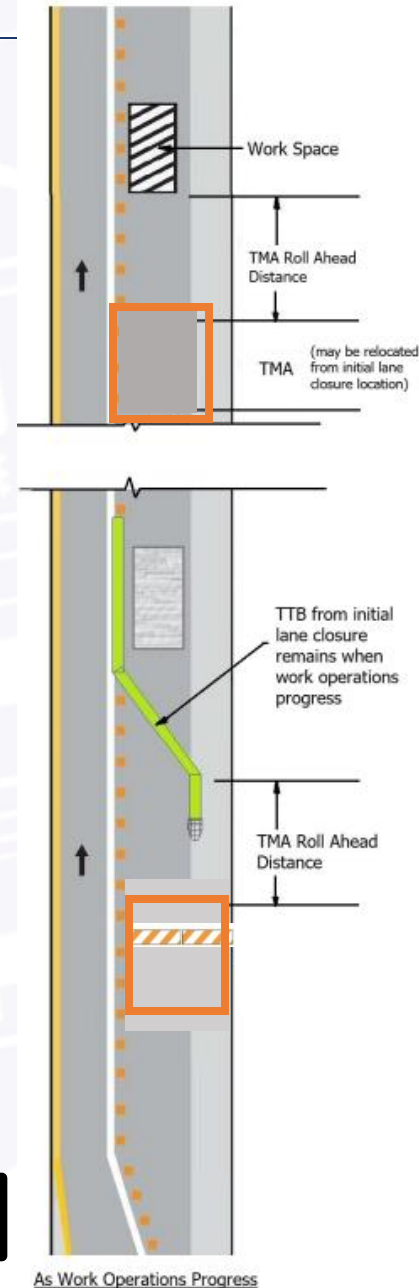
The TTB flare should be based on 70 mph

Allow for the appropriate roll ahead distance between the TMA and the start of the TTB entering the closed lane.

Where there are multiple work spaces the initial lane closure and TTB placement will remain at the same location through the close of the project.

# Design Memo 26-09

Table 2:



However, when work progresses further into the project the TMA may be replaced by Barricades at the start of the project and relocated to stay with the work crew.

Illustration 2

As Work Operations Progress

# Design Memo 26-09

Table 2:

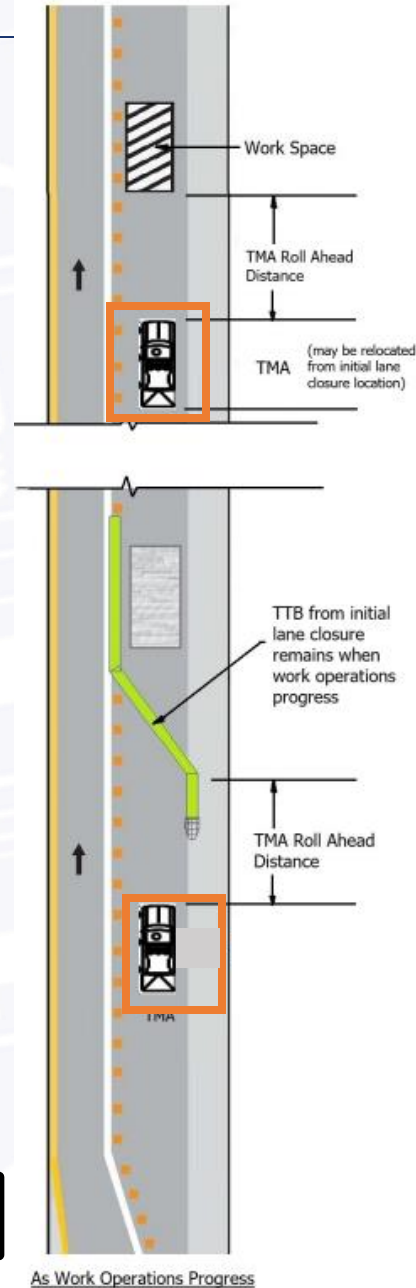


Illustration 2

Where a designer chooses to use 2 TMA's, this should be made clear with in the plans, through details, notes/USP, or both. Given TMA's are paid for by the day, it may not be clear just through the pay item quantity.

# Design Memo 26-09

## Table 2: Table Correction 4/21/2026

Table 2. Positive Protection and Mitigation Requirements for Freeway and Interstate Patching

| Table 2 - Positive Protection and Mitigation Requirements for Freeway and Interstate Patching (1)(2)(3) |                |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------|----------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration of Work*                                                                                       | Drop-off Depth | Lateral Buffer Distance | Minimum Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                         |                |                         | Any speed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Long-Term Stationary</b><br>Work that occupies a location continuously for more than 3 days          | Any            | Any                     | <p>Long-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA + length of unanchored temporary traffic barrier (TTB), Type 2 at initial lane closure.</p> <ul style="list-style-type: none"><li>• All flare rates based on 70 mph</li><li>• At initial lane closure, TTB flared at 20:1 to edge of the lane and a CZ unit placed. Allow the appropriate roll ahead distance of the TMA.</li><li>• TTB extended 100 ft beyond the initial work space. See note (2) for determining length of initial work space.</li><li>• As work progresses the TMA is relocated to the next active work space. Channelizing devices for the lane closure remain in place between start of work zone and the beginning of the next work space.</li></ul> <p>See Illustration 2 – Freeway and Interstate Patching, Long-Term Stationary</p> <p>Where there is a single worksite, the downstream area beyond the worksite should be transitioned to be open to traffic. Details have not been developed for multiple concurrent worksites.</p> |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight         |                | Less than 12 ft         | <p>Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)</p> <p>See Illustration 3 – Freeway and Interstate Patching, Intermediate-Term Stationary</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

Where there is a single worksite, the downstream area beyond the worksite should be transitioned to be open to traffic. Details have not been developed for multiple concurrent worksites.

\*The duration is relative to the length of time a work operation occupies a spot location.

(1) Using the strategy from this table does not preclude compliance with the Interstate Highways Congestion Policy. All conditions and mitigation measures associated with an IHCP exception must be implemented..

(2) Coordinate work space length with the District Area Engineer to determine the length of TTB for initial closure.

(3) When patching is part of a resurfacing project, use of a TMA is not required for the resurfacing operation.

(4) Coordinate use of Mobile Barrier with the District Area Engineer. Limitations include

- INDOT only has access to a single mobile barrier system. Two or more crews working in different areas cannot be shielded at the same time.
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- One day is required to modify the mobile barrier wall from left side shielding to right side shielding. Work on opposite sides cannot occur in the same day and must be accounted for in the schedule.

# Design Memo 26-09

## Work Zone Layout and Definitions

Where a work zone has one worksite, return the traffic to original configuration following the worksite.

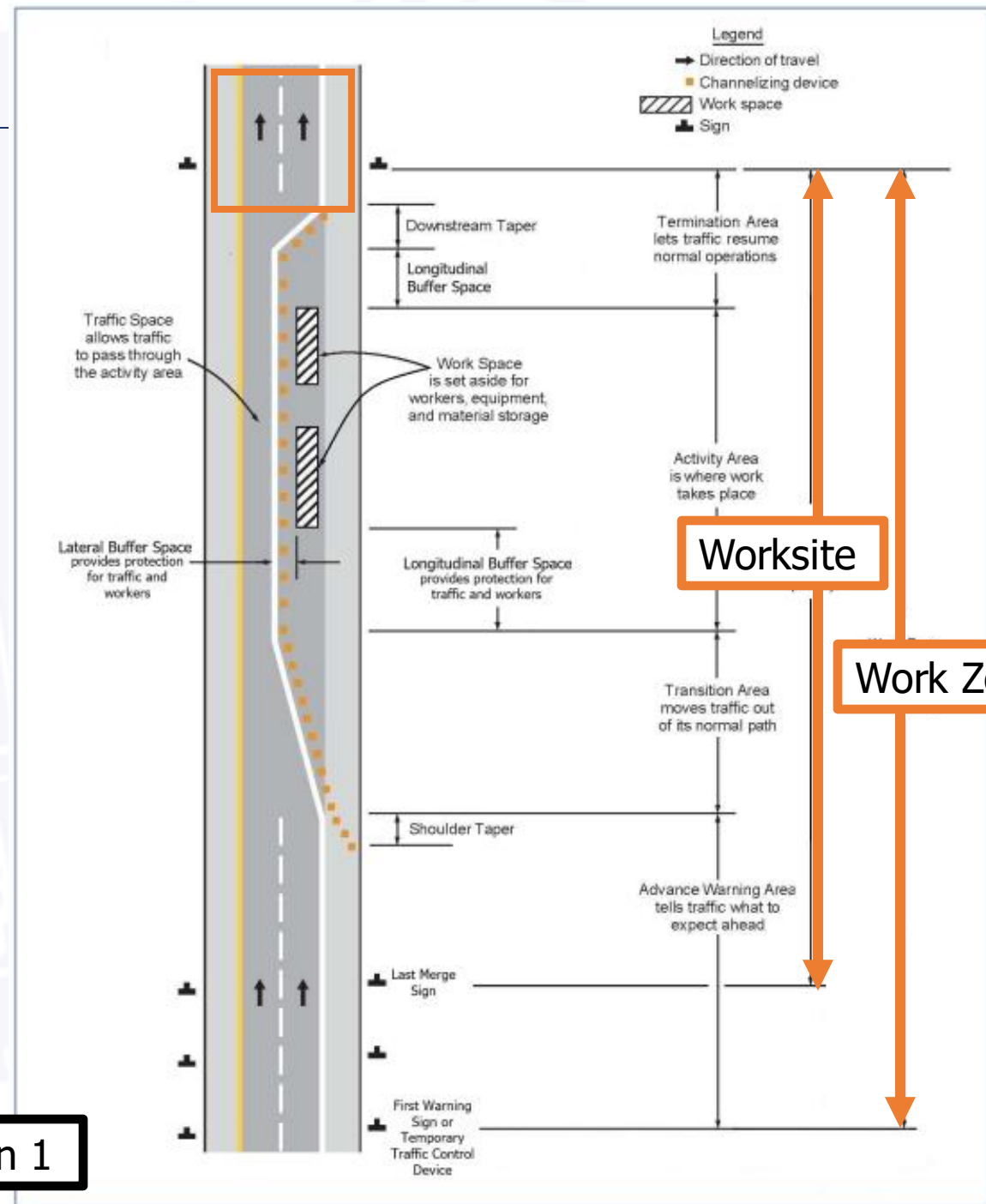


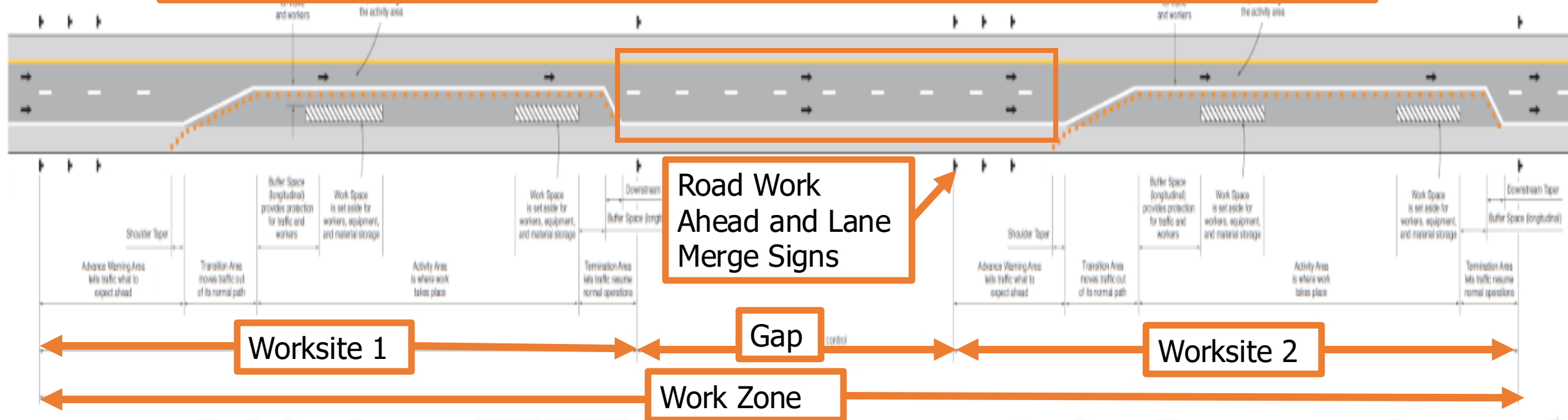
Illustration 1

# Design Memo 26-09

## Work Zone Layout and Definitions

A work zone may have multiple concurrent worksites. This detail has not been developed yet, below is a work in progress. The big question is, what gap between the worksites could allow for traffic to be restored to the original configuration

As of now, designers should coordinate with the District Area Engineer to determine, in this situation, if traffic should be restored to the original configuration between worksites.



# Design Memo 26-09

## Table 2: Table Correction 4/21/2026

Table 2. Positive Protection and Mitigation Requirements for Freeway and Interstate Patching

| Table 2 - Positive Protection and Mitigation Requirements for Freeway and Interstate Patching (1)(2)(3)                                                          |                |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration of Work*                                                                                                                                                | Drop-off Depth | Lateral Buffer Distance | Minimum Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                  |                |                         | Any speed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Long-Term Stationary</b><br>Work that occupies a location continuously for more than 3 days                                                                   | Any            | Any                     | <p>Long-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA + length of unanchored temporary traffic barrier (TTB), Type 2 at initial lane closure.</p> <ul style="list-style-type: none"><li>• All flare rates based on 70 mph</li><li>• At initial lane closure, TTB flared at 20:1 to edge of the lane and a CZ unit placed. Allow the appropriate roll ahead distance of the TMA.</li><li>• TTB extended 100 ft beyond the initial work space. See note (2) for determining length of initial work space.</li><li>• As work progresses the TMA is relocated to the next active work space. Channelizing devices for the lane closure remain in place between start of work zone and the beginning of the next work space.</li></ul> <p>See Illustration 2 – Freeway and Interstate Patching, Long-Term Stationary</p> <p>Where there is a single worksite, the downstream area beyond the worksite should be transitioned to be open to traffic. Details have not been developed for multiple concurrent worksites.</p> |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour. | Any            | Less than 12 ft         | <p>Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)</p> <p>See Illustration 3 – Freeway and Interstate Patching, Intermediate-Term Stationary</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                  |                | 12 ft or greater        | <p>Intermediate-Term Lane closure Standard Drawing Series 801-TCLC : Channelizing devices + TMA required when workers present (3)</p> <ul style="list-style-type: none"><li>• Mobile Barrier may be considered but requires approval from the State Construction Engineer. See note (4) for limitations.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

\*The duration is relative to the length of time a work operation occupies a spot location.

(1) Using the strategy from this table does not preclude compliance with the Interstate Highways Congestion Policy. All conditions and mitigation measures associated with an IHCP exception must be implemented..

(2) Coordinate work space length with the District Area Engineer to determine the length of TTB for initial closure.

(3) When patching is part of a resurfacing project, use of a TMA is not required for the resurfacing operation.

(4) Coordinate use of Mobile Barrier with the District Area Engineer. Limitations include

- INDOT only has access to a single mobile barrier system. Two or more crews working in different areas cannot be shielded at the same time.
- Mobile barrier will occupy a full lane width adjacent the work space. Where work or large equipment (e.g. paver) occupies a full lane width of the work space, the adjacent lane must be closed for the Mobile Barrier.
- One day is required to modify the mobile barrier wall from left side shielding to right side shielding. Work on opposite sides cannot occur in the same day and must be accounted for in the schedule.

# Design Memo 26-09

## Table 2: Table Correction 4/21/2026

Table 2. Positive Protection and Mitigation Requirements for Freeway and Interstate Patching

| Table 2 - Positive Protection and Mitigation Requirements for Freeway and Interstate Patching (1)(2)(3)                                                          |                |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration of Work*                                                                                                                                                | Drop-off Depth | Lateral Buffer Distance | Minimum Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                  |                |                         | Any speed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Long-Term Stationary</b><br>Work that occupies a location continuously for more than 3 days                                                                   | Any            | Any                     | <p>Long-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA + length of unanchored temporary traffic barrier (TTB), Type 2 at initial lane closure.</p> <ul style="list-style-type: none"><li>• All flare rates based on 70 mph</li><li>• At initial lane closure, TTB flared at 20:1 to edge of the lane and a CZ unit placed. Allow the appropriate roll ahead distance of the TMA.</li><li>• TTB extended 100 ft beyond the initial work space. See note (2) for determining length of initial work space.</li><li>• As work progresses the TMA is relocated to the next active work space. Channelizing devices for the lane closure remain in place between start of work zone and the beginning of the next work space.</li></ul> <p>See Illustration 2 – Freeway and Interstate Patching, Long-Term Stationary</p> <p>Where there is a single worksite, the downstream area beyond the worksite should be transitioned to be open to traffic. Details have not been developed for multiple concurrent worksites.</p> |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour. | Any            | Less than 12 ft         | <p>Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)</p> <p>See Illustration 3 – Freeway and Interstate Patching, Intermediate-Term Stationary</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                  |                | 12 ft or greater        | <p>Intermediate-Term Lane closure Standard Drawing Series 801-TCLC : Channelizing devices + TMA required when workers present (3)</p> <ul style="list-style-type: none"><li>• Mobile Barrier may be considered but requires approval from the State Construction Engineer. See note (4) for limitations.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

\*The duration is relative to the length of time a work operation occupies a spot location.

Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)

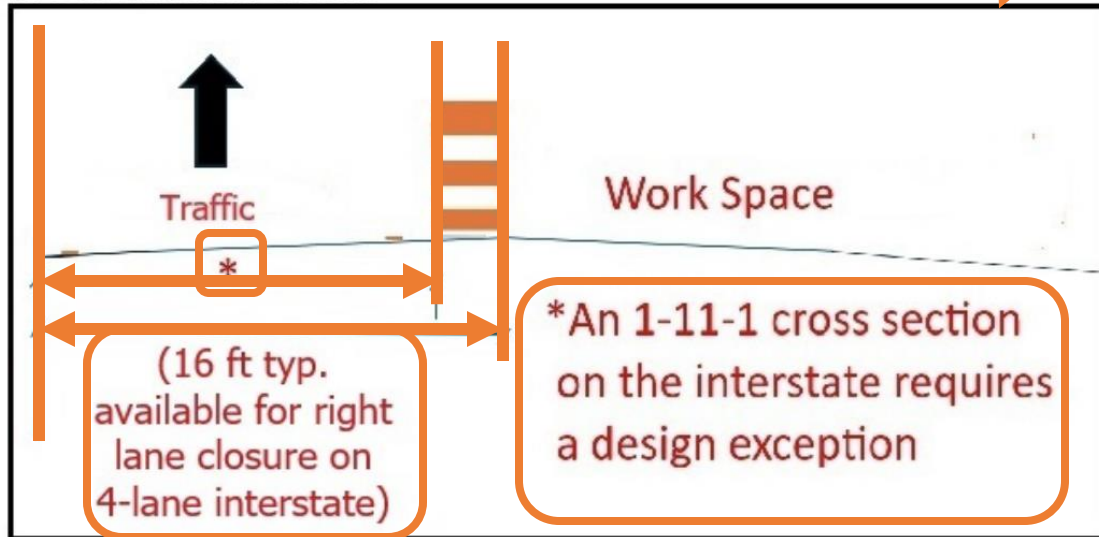
See Illustration 3 – Freeway and Interstate Patching, Intermediate-Term Stationary

One day is required to modify the mobile barrier wall from left side shielding to right side shielding. Work on opposite sides cannot occur in the same day and must be accounted for in the schedule.

# Design Memo 26-09

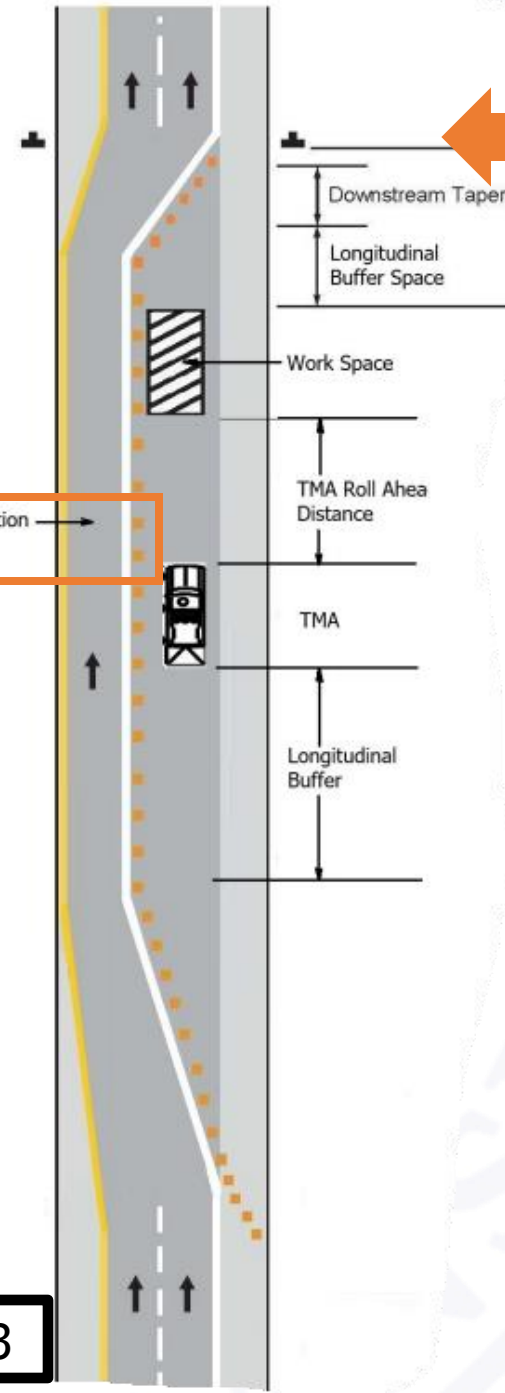
## Table 2: Table Correction 4/21/2026

Cross section detail



See cross section detail

Illustration 3



This figure complements the Standard Drawing series 801-TCLC

# Design Memo 26-09

## Table 2: Table Correction 4/21/2026

Table 2. Positive Protection and Mitigation Requirements for Freeway and Interstate Patching

| Table 2 - Positive Protection and Mitigation Requirements for Freeway and Interstate Patching (1)(2)(3)                                                          |                |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration of Work*                                                                                                                                                | Drop-off Depth | Lateral Buffer Distance | Minimum Requirement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|                                                                                                                                                                  |                |                         | Any speed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Long-Term Stationary</b><br>Work that occupies a location continuously for more than 3 days                                                                   | Any            | Any                     | <p>Long-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA + length of unanchored temporary traffic barrier (TTB), Type 2 at initial lane closure.</p> <ul style="list-style-type: none"><li>• All flare rates based on 70 mph</li><li>• At initial lane closure, TTB flared at 20:1 to edge of the lane and a CZ unit placed. Allow the appropriate roll ahead distance of the TMA.</li><li>• TTB extended 100 ft beyond the initial work space. See note (2) for determining length of initial work space.</li><li>• As work progresses the TMA is relocated to the next active work space. Channelizing devices for the lane closure remain in place between start of work zone and the beginning of the next work space.</li></ul> <p>See Illustration 2 – Freeway and Interstate Patching, Long-Term Stationary</p> <p>Where there is a single worksite, the downstream area beyond the worksite should be transitioned to be open to traffic. Details have not been developed for multiple concurrent worksites.</p> |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour. | Any            | Less than 12 ft         | <p>Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)</p> <p>See Illustration 3 – Freeway and Interstate Patching, Intermediate-Term Stationary</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                  |                | 12 ft or greater        | <p>Intermediate-Term Lane closure Standard Drawing Series 801-TCLC : Channelizing devices + TMA required when workers present (3)</p> <ul style="list-style-type: none"><li>• Mobile Barrier may be considered but requires approval from the State Construction Engineer. See note (4) for limitations.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

\*The duration is relative to the length of time a work operation occupies a spot location.

(4) Using the standards from this table does not preclude compliance with the State Highway Construction Policy. All conditions and mitigation measures associated with an HCR operation must be implemented.

Intermediate-Term Lane closure Standard Drawing Series 801-TCLC : Channelizing devices + TMA required when workers present (3)

- Mobile Barrier may be considered but requires approval from the State Construction Engineer. See note (4) for limitations.

# Design Memo 26-09

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## Example 2-Freeway Resurface Project with HMA Patching

- Freeway Carries Two Lanes of Traffic in each Direction
- Two Work Operations
  - Patching (Full and Partial) and
  - Resurfacing (2 inch Mill and Fill)
- Each Work Operation will take 3 Days or less
- No bridge work
- Project Work Operations will be Completed using Nightly Lane Closures
- Speed Limit Prior to Construction is 55 mph
- Lateral Buffer is 4 ft



# Design Memo 26-09

The First Work Operation is Patching on a Freeway, Use Table 2

Table 2:

Table 2. Positive Protection and Mitigation Requirements for Freeway and Interstate Patching

| Table 2 - Positive Protection and Mitigation Requirements                                                                                                        |                |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration of Work*                                                                                                                                                | Drop-off Depth | Lateral Buffer Distance | Any speed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Long-Term Stationary</b><br>Work that occupies a location continuously for more than 3                                                                        |                |                         | Long-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)<br>• All flare rates based on 70 mph<br>• At initial lane closure, TTB flared<br>• TTB extended 100 ft beyond the work zone and the beginning of the next work zone<br>See Illustration 2 – Freeway and Interstate Patching, Long-term Stationary<br>Where there is a single worksite, the downstream area beyond the worksite should be transitioned to be open to traffic. Details have not been developed for multiple concurrent worksites. |
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour. | Any            | Less than 12 ft         | Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)<br>See Illustration 3 – Freeway and Interstate Patching, Intermediate-Term Stationary                                                                                                                                                                                                                                                                                                                                                   |
|                                                                                                                                                                  |                | 12 ft or greater        | Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)<br>• Mobile Barrier may be considered but requires approval from the State Construction Engineer. See note (4) for limitations.                                                                                                                                                                                                                                                                                                         |



Duration of Patching will be 3 days or less, Intermediate-Term Stationary



|                                                                                                                                                                  |     |                  |                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Intermediate-Term Stationary</b><br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour. | Any | Less than 12 ft  | Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)<br>See Illustration 3 – Freeway and Interstate Patching, Intermediate-Term Stationary                                           |
|                                                                                                                                                                  |     | 12 ft or greater | Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present (3)<br>• Mobile Barrier may be considered but requires approval from the State Construction Engineer. See note (4) for limitations. |



\*The duration is relative to the length of the work operation occupies a spot location.  
(1) Using the strategy from this table does not preclude compliance with the Interstate Highways Congestion Policy. All conditions must be met.  
(2) The strategy from this table does not preclude compliance with the Interstate Highways Congestion Policy. All conditions must be met.  
(3) The strategy from this table does not preclude compliance with the Interstate Highways Congestion Policy. All conditions must be met.  
(4) The strategy from this table does not preclude compliance with the Interstate Highways Congestion Policy. All conditions must be met.

Patching Depth Does Not Matter

Lateral Buffer is Less Than 12 ft

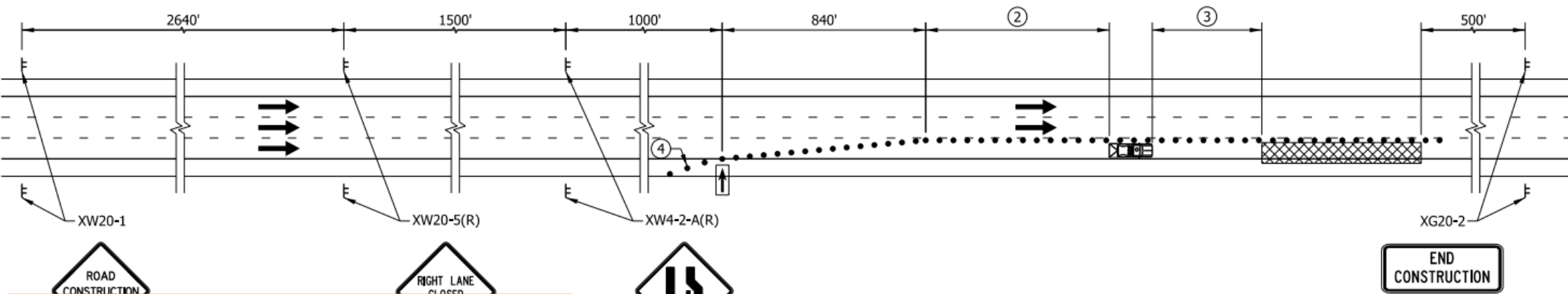
Maintenance of Traffic Strategy

- Mobile barrier will occupy a full lane width adjacent the work space. Where work or large equipment (e.g. paver) occupies a full lane width of the work space, the adjacent lane must be closed for the Mobile Barrier.
- One day is required to modify the mobile barrier wall from left side shielding to right side shielding. Work on opposite sides cannot occur in the same day and must be accounted for in the schedule.

# Design Memo 26-09

Table 2:

Intermediate-Term Lane closure Standard Drawing Series 801-TCLC: Channelizing devices + TMA required when workers present: (3)



(3) When patching is part of a resurfacing project, use of a TMA is not required for the resurfacing operation.

We are reviewing the patching work operation, therefore the TMA's will be required and the final strategy to be used is Channelizing Devices with TMAs when workers are present.

Three Lane Section: Where two lane shift is required, temporary lane markings are required. If this is not possible reduce down to one lane.

truck mounted attenuator manufacturer.

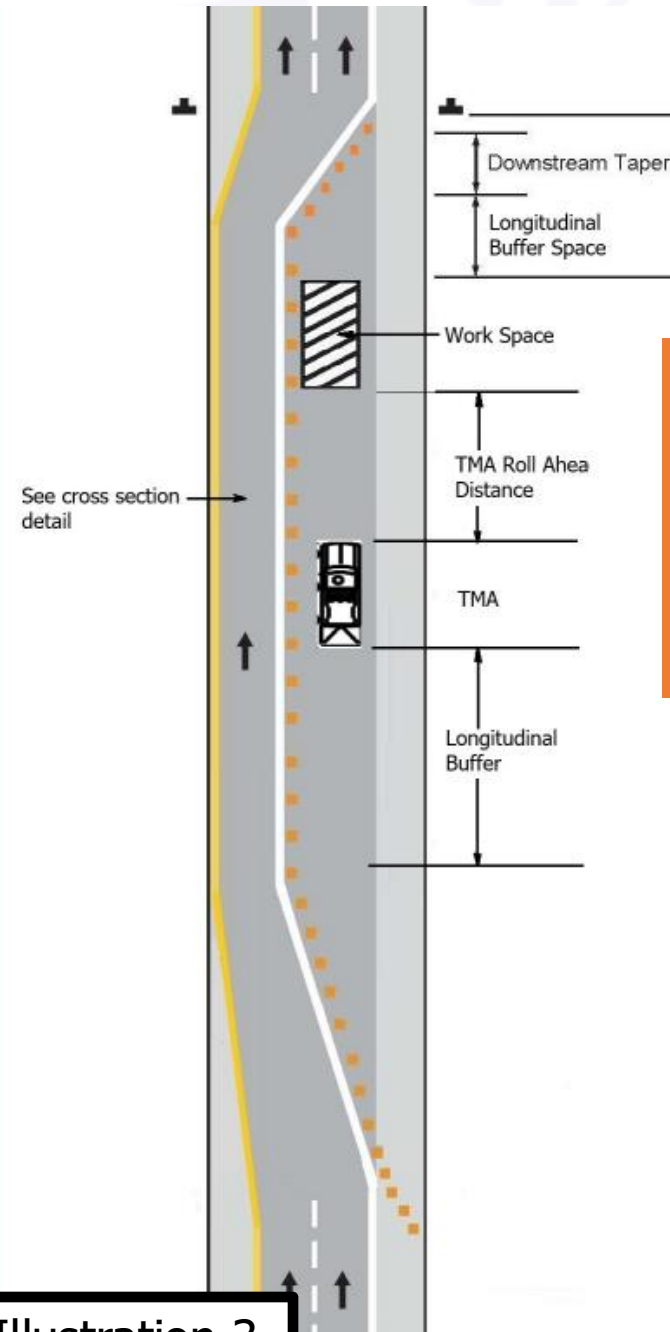
| Posted Speed Limit (mph) | Length (ft) |
|--------------------------|-------------|
| 25                       | 155         |
| 30                       | 200         |
| 35                       | 250         |
| 40                       | 305         |
| 45                       | 360         |
| 50                       | 425         |

|                                                                     |               |
|---------------------------------------------------------------------|---------------|
| DEPARTMENT OF TRANSPORTATION                                        |               |
| SHORT OR INTERMEDIATE TERM STATIONARY<br>FREEWAY RIGHT LANE CLOSURE |               |
| SEPTEMBER 2022                                                      |               |
| STANDARD DRAWING NO.                                                | E 801-TCLC-03 |

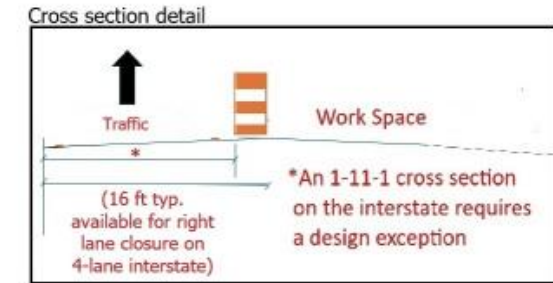
# Design Memo 26-09

Table 2:

In addition, it also states, See Illustration 3 – Freeway and Interstate Patching, Intermediate-Term Stationary



This figure complements the Standard Drawing series 801-TCLC



Make sure your traffic will fit. Given this is night-time lane closures and only one lane is being shifted, temporary lane markings are not required. A design exception may be required based on IDM chapter 503-3.04(02) minimum lane and shoulder width.

Illustration 3

# Design Memo 26-09

Example 2-Freeway Resurface Project with HMA Patching

**Patching Operation MOT Strategy:**

Channelizing Devices with TMAs while workers are present

The next step is to determine the MOT Strategy for the Resurfacing Operation.



# Design Memo 26-09

The Second Work Operation is Resurfacing, Use Table 1

Table 1:

Table 1. Positive Protection and Mitigation Strategies for MOT

| Table 1 - Positive Protection and Mitigation Strategies for MOT                                                                                                                                                 |                                          |                         |                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration*<br>(MUTCD Work Duration Standard)                                                                                                                                                                     | Condition:<br>Drop-off Depth or Duration | Lateral Buffer Distance | Mitigation Strategy                                                                                                                                                                                                                                                                                              |
| Long-Term Stationary                                                                                                                                                                                            | Drop off depth is 5                      | Less than 12 ft         | High Speed: 50 MPH or greater<br>(Regulatory speed limit prior to construction)                                                                                                                                                                                                                                  |
|                                                                                                                                                                                                                 |                                          |                         | 1. Temporary Traffic Barrier required when occupying a lane for more than 14 days or longer<br>2. Temporary Traffic Barrier should be considered for work operations lasting more than 14 days or when workers have no means of escape<br>3. Channelizing devices. TMAs required when workers are present.(3)(4) |
|                                                                                                                                                                                                                 |                                          |                         | 1. Temporary Traffic Barrier should be considered where the lateral buffer is less than 12 ft<br>2. Channelizing devices. TMAs required when workers are present.(3)(4)                                                                                                                                          |
| Intermediate-Term Stationary<br>Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour<br>Use Table 2 for patching on a freeway or interstate | Drop off depth is greater than 5 in.     | Any                     | 1. Temporary Traffic Barrier required when occupying a lane for more than 14 days or longer or when workers have no means of escape<br>2. Channelizing devices. TMAs required when workers are present.(3)(4)                                                                                                    |
|                                                                                                                                                                                                                 |                                          |                         | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4)                                                                                                             |
|                                                                                                                                                                                                                 |                                          |                         | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present.(3)(4)                                                                                                             |
| Short-Term Stationary, Short Duration<br>Nightly Work so Work Hours are Less than 24 hours                                                                                                                      | Drop off depth is 5                      | Less than 12 ft         | 1. Temporary Traffic Barrier should be considered where the lateral buffer is less than 12 ft<br>2. Channelizing devices. TMAs required when workers are present.(3)(5)                                                                                                                                          |
|                                                                                                                                                                                                                 |                                          |                         | 1. Temporary Traffic Barrier should be considered where the lateral buffer is less than 12 ft<br>2. Channelizing devices. TMAs required when workers are present.(3)(5)                                                                                                                                          |
|                                                                                                                                                                                                                 |                                          |                         | 1. Temporary Traffic Barrier should be considered where the lateral buffer is less than 12 ft<br>2. Channelizing devices. TMAs required when workers are present.(3)(5)                                                                                                                                          |

Duration of Resurface will be 3 days or less, Intermediate-Term Stationary

Intermediate-Term Stationary  
Work that occupies a location for more than one daylight period up to 3 days, or nighttime work lasting more than 1 hour  
Use Table 2 for patching on a freeway or interstate

Nightly Work so Work Hours are Less than 24 hours

Lateral Buffer is Less Than 12 ft, However it does not play into the determination for this table

Maintenance of Traffic Strategy

Resurfacing Operation



1. Drums assumed as the channelizing device. A 42 in. ch...
- (2) Use of Mobile Barrier requires coordination with the District Area Engineer and approval from the State Construction Engineer. See Table 2 for Mobile Barrier limitations.
- (3) Coordinate the use of TMAs with the District Area Engineer. On a high-speed, high volume project and where the lateral buffer is less than 12 ft use of the Mobile Barrier may be considered. See table 2 for Mobile Barrier limitations.
- (4) Where anticipated operating speeds exceed 45 mph, a TMA should be considered in addition to channelizing devices.
- (5) Use of a TMA is not required for resurfacing work operations.

# Design Memo 26-09

The Second Work Operation is Resurfacing, Use Table 1

Table 1:

Table 1. Positive Protection and Mitigation Strategies for MOT

| Table 1 - Positive Protection and Mitigation Strategies for MOT           |                                          |                         |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------|------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration*<br>(MUTCD Work Duration Standard)                               | Condition:<br>Drop-off Depth or Duration | Lateral Buffer Distance | Minimum Requirements (listed in order of preference)                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                       |
|                                                                           |                                          |                         | High Speed: 50 MPH or greater<br>(Regulatory speed limit prior to construction)                                                                                                                                                                                                                                                                     | Low Speed: 45 MPH or less<br>(Regulatory speed limit prior to construction)                                                                                                                                           |
| Long-Term Stationary<br>Work that occupies a location more than 3 days    | Drop off depth is 5 in. or less          | Less than 12 ft         | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer<br>2. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                                                                                                       | 1. Temporary Traffic Barrier preferred for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4)                  |
|                                                                           |                                          | 12 ft or greater        | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer or when workers have no means of escape.<br>2. Channelizing devices. TMAs required when workers are present. (3)                                                                                                                                 | 1. Temporary Traffic Barrier required when occupying a location for 14 days or longer or when workers have no means of escape.<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4) |
|                                                                           |                                          | Any                     | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer or when workers have no means of escape.<br>2. Channelizing devices. TMAs required when workers are present. (3)                                                                                                                                 | 1. Temporary Traffic Barrier required when occupying a location for 14 days or longer or when workers have no means of escape.<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4) |
|                                                                           |                                          | Any                     | Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                                                                                                                                                                                                                | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4)                 |
|                                                                           |                                          | Less than 12 ft         | 1. Temporary Traffic Barrier should be considered when workers have no means of escape.<br>2. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                                                                                                                  | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4)                 |
| Work that occupies a location more than 1 hour within the daylight period | Any                                      | Any                     | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                                                                                                                                                                                                             | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4)                 |
|                                                                           |                                          | Any                     | Maintenance of traffic in accordance with the INDOT Work Zone Traffic Control Guidelines required. Where cones are used instead of drums, 42 in. cones are required. Document Link: <a href="https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf">https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf</a> |                                                                                                                                                                                                                       |

(3) Coordinate the use of TMAs with the District Area Engineer. On a high-speed, high volume project and where the lateral buffer is less than 12 ft use of the Mobile Barrier may be considered. See table 2 for Mobile Barrier limitations.

\*The duration is relative to the length of time a work operation occupies a spot location.

1. Drums assumed as channelizing device. A 42 in. channelizer may be considered for minor encroachment. See IDM Section 503-7.02(05) and Standard Drawing series 801-TCDV.

(2) Use of Mobile Barrier requires coordination with the District Area Engineer and approval from the State Construction Engineer. See Table 2 for Mobile Barrier limitations.

(3) Coordinate the use of TMAs with the District Area Engineer. On a high-speed, high volume project and where the lateral buffer is less than 12 ft use of the Mobile Barrier may be considered. See table 2 for Mobile Barrier limitations.

(4) Where anticipated operating speeds exceed 45 mph, a TMA should be considered in addition to channelizing devices.

(5) Use of a TMA is not required for resurfacing work operations.

# Design Memo 26-09

The Second Work Operation is Resurfacing, Use Table 1

Table 1:

Table 1. Positive Protection and Mitigation Strategies for MOT

| Table 1 - Positive Protection and Mitigation Strategies for MOT                                                                          |                                                  |                         |                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Duration*<br>(MUTCD Work Duration Standard)                                                                                              | Condition:<br>Drop-off Depth or Duration         | Lateral Buffer Distance | Minimum Requirements (listed in order of preference)                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                       |
|                                                                                                                                          |                                                  |                         | High Speed: 50 MPH or greater<br>(Regulatory speed limit prior to construction)                                                                                                                                                                                                                                                                     | Low Speed: 45 MPH or less<br>(Regulatory speed limit prior to construction)                                                                                                                                           |
| <b>Long-Term Stationary</b><br>Work that occupies a location more than 3 days<br><br>Use Table 2 for patching on a freeway or interstate | Drop off depth is 5 in. or less                  | Less than 12 ft         | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer<br>2. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                                                                                                       | 1. Temporary Traffic Barrier preferred for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4)                  |
|                                                                                                                                          |                                                  | 12 ft or greater        | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer or when workers have no means of escape.<br>2. Channelizing devices. TMAs required when workers are present. (3)                                                                                                                                 | 1. Temporary Traffic Barrier preferred for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4)                  |
|                                                                                                                                          | Drop off depth is greater than 5 in.             | Any                     | 1. Temporary Traffic Barrier required when occupying a location continuously for 14 days or longer or when workers have no means of escape.<br>2. Channelizing devices. TMAs required when workers are present. (3)                                                                                                                                 | 1. Temporary Traffic Barrier required when occupying a location for 14 days or longer or when workers have no means of escape.<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4) |
|                                                                                                                                          |                                                  | Any                     | Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                                                                                                                                                                                                                | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4)                 |
|                                                                                                                                          | Duration while workers are present over 24 hours | Less than 12 ft         | 1. Temporary Traffic Barrier should be considered when workers have no means of escape.<br>2. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                                                                                                                  | 1. Temporary Traffic Barrier considered for worksites with active traffic on both sides (i.e. work in median).<br>2. Channelizing devices. TMAs should be considered when workers are present. (3)(4)                 |
|                                                                                                                                          |                                                  | 12 ft or greater        | 1. Channelizing devices. TMAs required when workers are present. (3)(5)                                                                                                                                                                                                                                                                             | 2. Channelizing devices. TMAs should be considered when workers are present. (3)(4)                                                                                                                                   |
| Work that occurs for more than 1 hour within a single day                                                                                | Any                                              | Any                     | Maintenance of traffic in accordance with the INDOT Work Zone Traffic Control Guidelines required. Where cones are used instead of drums, 42 in. cones are required. Document Link: <a href="https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf">https://www.in.gov/indot/doing-business-with-indot/files/WorkZoneTCH.pdf</a> |                                                                                                                                                                                                                       |

(5) Use of a TMA is not required for resurfacing work operations.

\*The duration is relative to the length of time a work operation occupies a spot location.

1. Drums assumed as the channelizing device. A 42 in. channelizer may be considered for minor encroachment. See IDM Section 503-7.02(05) and Standard Drawing series 801-TCDV.

(2) Use of Mobile Barrier requires coordination with the District Area Engineer and approval from the State Construction Engineer. See Table 2 for Mobile Barrier limitations.

(3) Coordinate use of TMAs with the District Area Engineer. On a high-speed, high volume project and where the lateral buffer is less than 12 ft use of the Mobile Barrier may be considered. See table 2 for Mobile Barrier limitations.

(4) Where anticipated operating speeds exceed 45 mph, a TMA should be considered in addition to channelizing devices.

(5) Use of a TMA is not required for resurfacing work operations.

# Design Memo 26-09

Example 2-Freeway Resurface Project with HMA Patching

**Patching Operation MOT Strategy:**

Channelizing Devices with TMAs while workers are present

**Resurface Operation MOT Strategy:**

Channelizing Devices without TMAs

For both operations, coordinate the TMAs with the District Area Engineer.



# Design Memo 26-09

Effective for Lettings on or after December 1, 2026

## Questions?

