INDOT MOT Standards & Practices
2024 Road School
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MOT Standards & Practices

INDOT 2024 Work Zone Traffic Control Guidelines

- For Shorter duration work/maintenance activities
- Agency best practices- beyond the MUTCD
- Update includes
  - New devices/guidance/practices
  - Clarifications
  - Additional References
- Available on several INDOT Sites:
  - INDOT Safety Page/Resources/Work Zone Safety (Internal)
  - INDOT Work Zone Safety Page/Work Zone Links (External)
Work Zone Traffic Control Guidelines

Shadow Vehicles & Crash Attenuators

• Shadow Vehicles usage no longer based on speed → had been optional for low speed
• Truck or Trailer Mounted Attenuators → must be used if SV is in the travel lane or shoulder
Work Zone Traffic Control Guidelines

Guidance on Closing the Road

• Closing an Entrance Ramp that feeds into mainline work area
  • when adjacent interchanges are close, detour is on the state system
  • IHCP Exception request needed.

• Work in Advance of an Intersection, Approach may be closed
  • Short Duration
  • Low volume or urban areas

• Work in Center of an Intersection
  • Intersection can be closed if it’s not wide enough to allow work and traffic
Work Zone Traffic Control Guidelines

Typical for Work in a Roundabouts

• Work < 12 hours in duration
  If longer consider closing and detouring

• Flagger or Law Enforcement Control,
  releasing one approach at a time

• Conflicting signs are covered
Portable Signals

- Used when two-way traffic is maintained in one lane
- May be preferable to flagging for nighttime work
- Trailer mounted; battery powered
- Timing - consult w/Signal Systems or District Traffic
- Models from the QPL:
Automated Flagger Assistance Devices

- Gets the flagger off the traveled way, flagger uses a handheld remote or smart phone app

- Two Types:
  - RED/YELLOW Lens
  - STOP/SLOW Paddle

QPL: [https://www.in.gov/indot/doing-business-with-indot/files/apl64.pdf](https://www.in.gov/indot/doing-business-with-indot/files/apl64.pdf)
Evaluation Guide For Flashing Arrow Panels
(Merge Mode)

Acceptable
No more than one (1) lamp out in stem and none out in arrowhead. Lights dim properly.

Marginal
Two (2) or fewer lamps in stem out. No lamps out in head. Lights dim properly.

Unacceptable
Any lamp out in the arrowhead, or more than two (2) lamps out in the stem or lights do not dim properly.

Evaluation Guide For Flashing Arrow Panels
(Double Arrow Mode)

Acceptable
No more than one (1) lamp out in stem and none out in arrowhead. Lights dim properly.

Marginal
Two (2) or fewer lamps in stem out. Both arrow heads completely functional with no lamps out. Lights dim properly.
Work Zone Traffic Control Guidelines

Taper and Buffer Lengths on Interstates/Freeways

Base on 70 mph speeds regardless whether rural or urban

Research study findings - most drivers exceed 55 mph

- Longitudinal Buffer - 760 ft
- Roll Ahead Distances - 225/325 Stationary/Mobile
- Merge Taper - 840 ft (12 ft lane width)
- Shift Taper - 440 ft
Intelligent Work Zone Toolkit

- Provides Information on Devices
  - Intended to help improve work zone operations
  - Not yet standardized
  - For Designers and Implementers

- Includes:
  - Description of 13 Devices
  - Selection Guide- Matches expected/observed issue w/ possible mitigation
Intelligent Work Zone Toolkit

Devices

- Radar Speed Display Signs, Variable Speed Limit Signs, RSD/VSL Combo
- Queue Warning Systems
- Real Time Travel and Alternative Route Advisory Signs
- Dynamic Late Lane Merge Systems
- End of Queue Warning Trucks
- Work Vehicle Entering Warning System
- Portable Changeable Message Signs
- Smart Arrow Boards
- Work Zone Presence Lighting
- CCTV
- Digital Vehicle Alert Systems
Intelligent Work Zone Toolkit

Information on Each Device

• Description- What is a ....?

• Circumstances when it is used

• Are there Specifications?
  Yes, Radar Speed Display Signs, VSL, Queue Warning Systems, End of Queue Warning Truck

• MOT Plan Considerations

• Operational Considerations

• Maintenance Needs
Operational Challenges Addressed

- Excessive Speed
- Queuing/Delay
- Frequent Ingress/Egress of Contractor Vehicles
- Lane Closures/Shifts
- Crashes/Criminal Activity
MOT Standards Under Development

New drawing series for Work Vehicle Access Points

- Two details- access from outside shoulder, access from inside shoulder
- Opening dimensions, merge taper
- Advance Signing
MOT Standards Under Development

Revisions to Temporary Crossover Series

• Larger Radius for entry and exits, based on 70 mph

• New Details:
  - Split Crossovers-
    - 4 travel lanes
    - signing
    - channelizing devices
    - typical cross sections
  - Median Runaround w/ Temporary Bridge-
    - signing
    - transverse rumble strips
For more information

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