Purpose of assessing and managing work zone impacts:

- Safety
- Mobility
- Constructability
Work Zone Speed Limit

- The Tollway’s system has normal posted speed limits of 55 MPH or 65 MPH.
- All work zones within the Tollway system shall have a posted speed limit of 45 MPH...
Exceptions:

- Shoulder closures where posted speed limit of 55 MPH remains.
- Shoulder closures where the posted speed limit of 65 MPH is reduced to 55 MPH.
Work Zone Speed Limit

- Unique project conditions.
  - WZSL $> 45$ MPH
  - WZSL no greater than 55 MPH
  - A design deviation required.
Guidelines for Work Zone Speed Limits

“To determine the safest and most efficient speed limit within work zones based on roadway conditions”.
Guidelines for Work Zone Speed Limits

Currently under review by:
- Illinois Department Of Transportation (IDOT)
- American Council of Engineering Companies (ACEC)
- Illinois Road and Transportation Builders Association (IRTBA)
Guidelines on Managing Speeds in Work Zones

Developed By:
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Laborers’ International Union of North America
Laborers’ Health and Safety Fund of North America
LIUNA Training and Education Fund
American Road and Transportation Builders Association
National Asphalt Pavement Association
International Union of Operating Engineers
American Association of State Highway and Transportation Officials
Texas Transportation Institute
FOF Communications

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“While the speed of traffic can affect crash frequency and severity, speed variance is also an important factor. Traffic moving along at a uniform pace, albeit somewhat faster, may be safer than traffic moving at slower, non-uniform speeds which increases the potential for conflicts between vehicles.”
Work Zone Issues

- LONGITUDINAL DROP- OFF POLICY

Drop-off is a temporary condition defined as an elevational difference between lanes, or the traveled lane and shoulder, as traversed by the wheel of a motor vehicle.
LONGITUDINAL DROP-OFF

Condition 1

No Closures

Length of continuous drop-off: Any
Duration: Any

45 MPH

Typical Applications:
• Milling existing wearing surface.
• Resurfacing operations.

Drop-offs of \( \leq 2'' \), from the edge of traffic carrying lanes do not require any traffic control treatments.
**LONGITUDINAL DROP-OFF**

**Condition 2**

- **No Closures**
- **Length of continuous drop-off:** Any
- **Duration:** Any
- **All Speeds**

**Typical Applications:**
- Milling existing wearing surface.
- Resurfacing operations.
- Partial depth pavement patching.

Drop-offs of > 2” to 3”, from the edge of traffic carrying lanes are permitted with the installation of a temporary HMA wedge.
The HMA wedge taper rate shall be:
1/2" (V) to 12" (H).
Work Zone Issues

- Temporary Concrete Barrier
- Anchoring Systems
  - Free-Standing System.

TCB placement consists of the end barrier units being anchored into pavement or deck. The remaining units set atop pavement which are attached together by a constrained pin and loop type connection.
Temporary Concrete Barrier
Free-Standing System.

Free-standing TCB placement consists of the end barrier units being anchored into pavement or deck.

Individual barrier units set atop pavement which are attached together by a constrained pin and loop type connection.
Free-Standing System.
Temporary Concrete Barrier

**Rebar Used**
Work Zone Issues

- Temporary Concrete Barrier
- Anchoring Systems.
  - Bolt System.
  - When overturning and lateral deflections cannot be tolerated, the temporary concrete barrier system must be anchored to the bridge deck or concrete pavement.
Temporary Concrete Barrier

Anchored Systems.

Counterflow Lanes
TCB Anchored to Pavement On Both Sides of Barrier
6 Pins Per Section

TCB Anchored on Traffic Side Face of Barrier
3 Pins Per Section
Work Zone Issues

TCB Quality

Spalls and chipped concrete are not greater than 1.5 inches in depth and 4.0 inches in length measured horizontally, vertically, or diagonally.

Cracks are less than 0.007 inches in width and do not compromise the structural integrity of the wall.
Spalls and chipped concrete greater than 1.5 inches in depth and 4.0 inches in length measured horizontally, vertically, or diagonally, any cracks greater than 0.007 inches, or multiple defects which combine to make the barrier structurally unsound per engineering judgment, is cause for rejection.
EVALUATION GUIDE - TEMPORARY CONCRETE BARRIER

Spalls and chipped concrete greater than 1.5 inches in depth and 4.0 inches in length measured horizontally, vertically, or diagonally, any cracks greater than 0.007 inches, or multiple defects which combine to make the barrier structurally unsound per engineering judgment, is cause for rejection.
EVALUATION GUIDE - TEMPORARY CONCRETE BARRIER
Questions?

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