



INDIANA DEPARTMENT OF TRANSPORTATION

Driving Indiana's Economic Growth

Design Memorandum No. 23-04

May 12, 2023

Rev. May 30, 2023

TO: All Design, Operations, and District Personnel, and Consultants

FROM: /s/David Boruff
David Boruff
Manager, Office of Traffic Administration
Traffic Engineering Division

SUBJECT: *Indiana Design Manual Chapter 503*

REVISES: Sections 503-1.0, 503-2.0, 503-2.01, 503-2.02, 503-2.02(01), 503-2.02(02), 503-2.04, 503-2.04(01) thru 503-2.04(04), 503-2.05(01) thru 503-2.05(05), 503-2.06(01), 503-2.07, 503-3.01(01), 503-3.01(03), 503-3.01(04), 503-3.02, 503-3.04, 503-3.04(02) thru 503-3.04(04), 503-3.05(02), 503-3.05(04), 503-3.05(07), 503-4.01, 503-4.02, 503-6.01, 503-7.01(02), 503-7.01(03), 503-7.01(05), 503-7.02, 503-7.02(01), 503-7.02(04), 503-7.02(05), 503-7.03(01), 503-7.04(02), 503-7.05, 503-7.07, 503-7.07(01) thru 503-7.07(04) (new)

SUPERSEDES: Design Memos 21-05, 21-07, and 21-10

EFFECTIVE: Stage 1 submittals on or after September 1, 2023

This memo has been revised to identify revisions to the noted Traffic Maintenance (MOT) editable documents and new Chapter 503 figures and that were inadvertently omitted from the original memo.

Revised Editable Documents (available from [Editable Documents](#) webpage)

| Editable Document Number | Document Title |
|--------------------------|--|
| 503-2.02.1 | Significant Work Zone Impact Determination Worksheet (rev. May 2023) |
| 503-2.05.1 | Traffic Control Strategy Memo (rev. May 2023) |
| 503-2.05.2 | Detour Worksheet - Non-Interstate (rev. May 2023) |
| 503-2.05.3 | Crossover and Runaround Viability Worksheet |
| 503-2.05.4 | Detour Worksheet - Interstate (rev. May 2023) |
| 503-2.06.1 | Determination of Incentive Disincentive Amount (rev. May 2023) |
| 503-3.01.1 | Traffic Control Plan Checklist (rev. May 2023) |

New IDM Figures (included for reference at the end of the memo)

| Figure | Title |
|--------|---------------------|
| 503-3G | Sidewalk Diversions |
| 503-3H | Sidewalk Detours |

Chapter 503, Maintenance of Traffic, has been revised to enhance mobility and safety for all road users during construction. The revision also provides clarification and additional information on the timing of MOT plan development and plan content. Design Memos 21-05, 21-07, and 21-10 have been incorporated with some modification and therefore have been superseded.

For questions related to this design memo, please contact Dave Boruff, Office of Traffic Administration Manager, at dboruff@indot.in.gov.

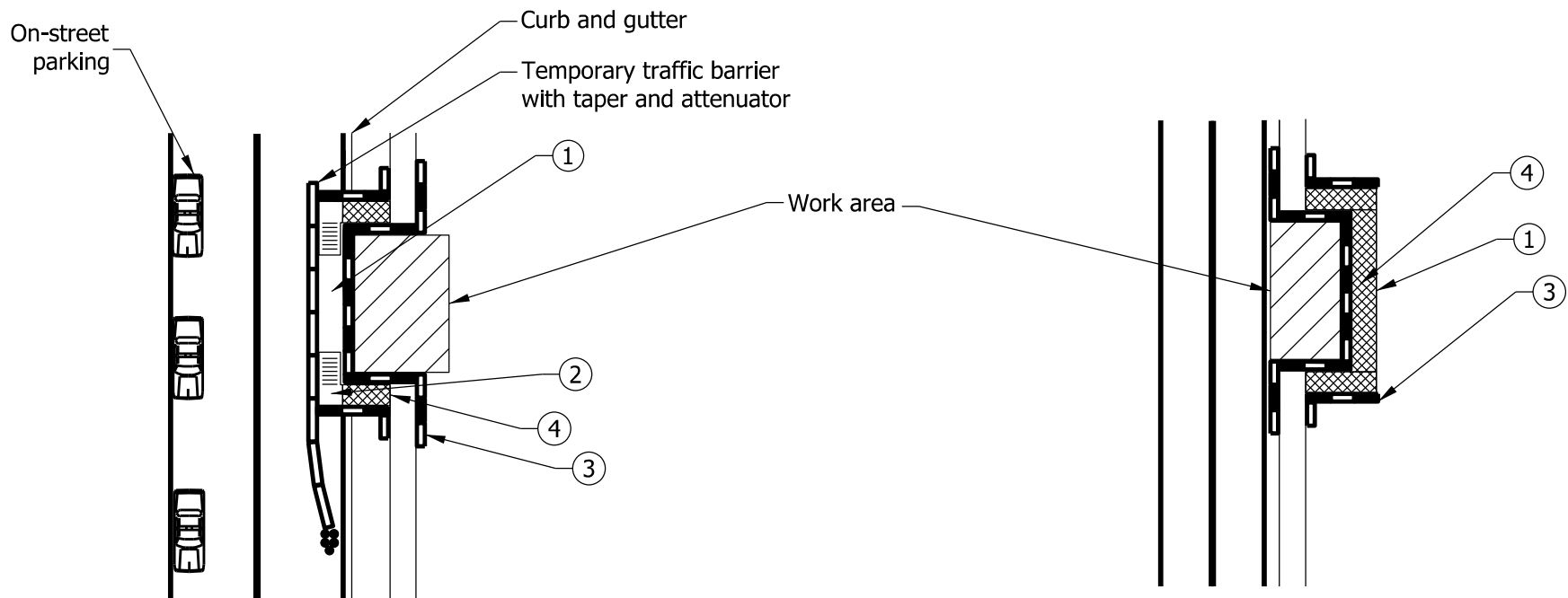
IDM Revisions

| IDM Section | Title | Revision |
|--------------|--|--|
| 503-2.02 | Work Zone for Significant and Non-Significant Projects | A note that the designer should make the determination of significant or non-significant work zone impacts as soon as Notice to Proceed is received if the determination was not provided in the Engineers Report. |
| 503-2.02(01) | Significant Projects | Adjustments to the criteria used to classify a project as either having significant or non-significant work zone impacts. These changes are intended to make the criteria clearer and easier to apply. |
| 503-2.04(03) | Significant Interstate Projects Not Requiring Exceptions to the IHCP | Clarification that a formal TMP Team or special Traffic Operations or Public Information measures may be simplified for projects on the interstate that are deemed significant by the federal rule- occupying a travel lane for more than 3 days and within a Transportation Management Area – but that will not require an exception to the IHCP. Additional Traffic Operations or Public Information measures beyond what is provided by standard practice, e.g., posting lane or road closures on the agency’s CARS webpage typically are not needed. |
| 503-2.05(01) | Traffic Control Strategy Terminology and Guidelines | New guidance that for long term work in the center lane of a six-lane freeway that the left lane should also be closed- this corresponds to a recently approved revision to the Standard Drawings on Lane Closures (801-TCLC). |

| IDM Section | Title | Revision |
|--------------|--------------------------------------|---|
| 503-2.05(02) | Selecting a Traffic Control Strategy | Adjustments to the criteria used to determine whether a potential detour route is viable, allowing a complete closure of the roadway. These changes are based on recommendations from research projects SPR 4405 and 4409 which examined the viability of using closure with detouring on rural interstates. A new hierarchy on strategy selection for rural interstates has been incorporated: 1) a check for the presence of crossovers that are in good condition and in close proximity to the work area, if not present then 2) checking the viability of closure in a single direction at a time with detour, if not viable then 3) use of new or reconstructed crossovers. |
| 503-3.01(03) | Schedule | Guidance that the IHCP should be reviewed at stage 1 of project development and that the MOT plan should be drafted by stage 2 submittal and completed by stage 3. This replaces and supersedes content issued under Design Memo 21-05. This timing recognizes that the MOT can drive other elements of the project design, but mitigation measures are often not determined prior to stage 3. |
| 503-3.01(04) | Design Considerations, Item 2 | New guidance on limiting the physical length of restricted roadway (reduced lane and/or shoulder width) to 5 miles unless a distinct advantage can be shown in allowing longer work areas. Operational issues have been noted in longer work zones as drivers don't always pay attention after negotiating the crossover or initial lane merge, they tend to drive at varying speeds within the work zone, some accept much shorter headways than others. |

| IDM Section | Title | Revision |
|--------------|--|--|
| 503-3.01(04) | Design Considerations, Items 13 and 14 | Additional guidance on maintaining pedestrian accessibility during construction. A new hierarchy on selecting the strategy to accommodate pedestrians is provided: if sidewalk is to be closed or restricted that first a pedestrian diversion be considered (temporary path adjacent to the closed sidewalk). If a diversion is not viable, then a pedestrian detour be established. Additional detail on devices used in diversions and for detours is also provided. |
| 503-3.04(02) | Lane or Shoulder Width, Lateral Offsets | Clarifying for freeway projects that reduced lane width (11 ft) in combination with reduced shoulder width (1 ft) is acceptable only at bridges and their approaches. If needed elsewhere, a design exception is called for. |
| 503-3.04(03) | Transition Taper Rate and Longitudinal Buffer Spaces | Guidance on longer tapers for freeway projects, staggering shifts of multiple lanes, and requirements/recommendation for providing longitudinal buffer spaces for lane closures. Taken from Design Memo 21-05 as well as recent changes to the Standard Drawing for lane closures. The increased taper length for urban freeways recognizes operating speeds that are significantly greater than posted speed limits, staggered shifts result in wider lanes through the shift which makes the movement easier for heavy vehicles, |
| 503-3.05(02) | Use of Positive Protection, item 5 | Noting that TMAs are now required for shadow vehicles positioned on shoulder as well as travel lanes, this corresponds to revisions to Standard Drawings on Mobile Operations. |

| IDM Section | Title | Revision |
|--------------|--|---|
| 503-3.05(07) | Temporary Transverse Rumble Strips | Revised guidance on use of Temporary Transverse Rumble Strips, noting that portable strips should not be used on freeways but should be considered with flagging operations. |
| 503-7.01(03) | Advanced Warning Signs | New guidance on Zipper Merge signing, incorporated from Design Memo 21-10. |
| 503-7.01(05) | Portable Changeable Message Sign, item 3 | Noting that the ATMS (Advanced Traffic Management System) coverage area now extends statewide on all interstates and freeways. |
| 503-7.04(02) | Application (Signals) | New guidance on Driveway Assistance Devices-DADs are used with portable signals to control private drives located within the one-lane, two-way work zone. They have shown to be effective but are still considered experimental, while experimental use should be coordinated with the Traffic Administration Office. |
| 503-7.05 | Automated Flagger Assistance Devices | More guidance on Automated Flagger Assistance Devices, AFADs should be considered particularly for high-speed roadways. Unless specified in the plans their use is a contractor option. |
| 503-7.07 | ADA Compliant Temporary Pedestrian Devices | New Content was added to detail ADA Compliant Temporary Pedestrian Devices including temporary pedestrians accessible paths, curb ramps, channelizers, and audible information devices. |



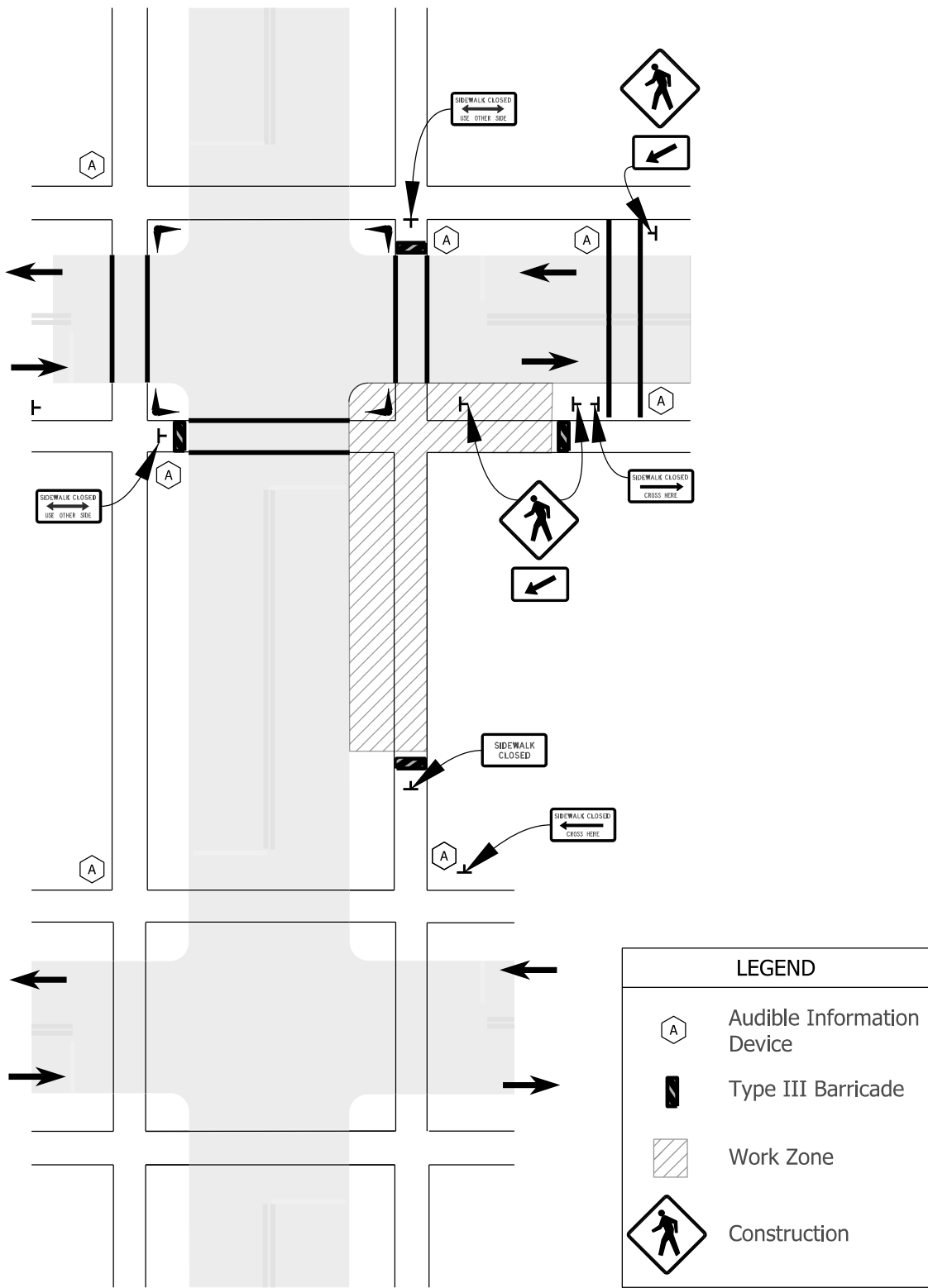
STREET SIDE DIVERSION

ROW SIDE DIVERSION

- ① Temporary pedestrian access route width of 60 in. is preferred. A 48 in. width may be used if at least one 60 in. by 60 in. passing space is provided every 200 ft.
- ② Temporary curb ramp that covers any rough, soft, or uneven ground, has a turning space of 48 in. by 48 in., an 8.00% or flatter running slope, a 2.00% or flatter cross slope, and a non-slip surface. Edge protection is required for curb heights > 4 in. and handrails are required for curb heights > 6 in.
- ③ Temporary pedestrian channelizer
- ④ Temporary accessible pedestrian path

SIDEWALK DIVERSIONS

Figure 503-3G



SIDEWALK DETOURS

Figure 503-3H