

## **11 MAINTENANCE OF TRAFFIC, HAUL ROUTES AND ACCESS**

### **11.1 General**

Maintenance of Traffic (MOT) shall be performed in a manner that minimizes construction, rehabilitation, maintenance duration, and impact to the traveling public. This Section 11 defines specific requirements, restrictions, and allowable closure durations for both travel lanes and ramps.

Design-Build Contractor shall design and construct the MOT, haul routes, and access in accordance with the applicable requirements of the PPA Documents, including Project Standards, this Section 11 and its Attachment 11-1 (Unique Special Provisions: Maintenance of Traffic); Governmental Approvals; and applicable laws.

### **11.2 Performance Requirements**

#### **11.2.1 *Project-Wide Transportation Management Plan***

Design-Build Contractor shall prepare, implement, and maintain a Transportation Management Plan (TMP). The TMP shall include a Traffic Operations Plan (TOP), a Temporary Traffic Control Plan (TTCP), and a coordination process with the Public Involvement Plan (PIP), described in Section 5 (Public Involvement), and must be approved before initiation of any Construction Work. INDOT will provide Design-Build Contractor with a list of INDOT representatives for the Project traffic management team to be included in Design-Build Contractor's TMP. The TMP shall be developed in coordination with, and include procedures to communicate, all MOT phase installations and changes with emergency service providers, school transportation officials, and all affected local public agencies.

The TMP shall be developed in coordination with and be consistent with the PIP and include procedures to communicate TMP information to the Public Information Coordinator for communication of all MOT work to the public prior to implementation of any MOT phase or phase change.

The Traffic Operations Plan (TOP) shall include:

1. Design-Build Contractor identification of an MOT Manager to coordinate all construction traffic impacts with INDOT's PIP Manager and TMP team, and with Design-Build Contractor's Certified Worksite Traffic Supervisor (CWTS), who is responsible to monitor daily MOT activities.
2. Descriptions of contact methods and response times of the CWTS to address any conditions needing attention during all hours.
3. Coordination with the Emergency Plan, including identification of staging areas where equipment or vehicles needed for incident clearance response can be stored and have reasonable and safe access to the construction zones. Design-Build Contractor shall have the necessary equipment on-Site to repair temporary barrier and/or to set up temporary traffic control until the barrier can be repaired.
4. Procedures to identify and incorporate the needs of transit operators, Utility Owners, and business owners in the Project corridor, including Utility Owner access and business access signing.

5. Identification of measurable limits for the repair and replacement of traffic control devices, including pavement markings, as called out in the Standard Specifications.
6. A process to identify, design, and receive approval for all necessary temporary traffic signals.
7. A process to determine the need for revised traffic signal timings, and if revisions are required, detailed procedures for the development, approval, implementation, testing, and maintenance of all affected signals.
8. A work zone access management map and a construction haul route map for each construction phase.
9. Methods and frequency of inspection and maintenance of all traffic control throughout the Project limits.
10. Provisions to provide continuous access to established truck routes and any hazardous material routes.
11. Procedures for modification of the MOT Plans as needed to adapt to current Project circumstances.

### **11.2.2 Temporary Traffic Control Plan**

Design-Build Contractor shall prepare, submit, and implement a Temporary Traffic Control Plan (TTCP). Approved TTCP shall be included with each applicable RFC package. TTCP shall become part of the appropriate TMP as amendments once the TTCP is approved by INDOT.

The TTCP defines how Design-Build Contractor is to phase construction and detail all the required elements of the physical work zone. The TTCP for the Project includes queuing/delay analysis. No queuing analysis for a given travel direction is needed if two lanes of travel are maintained. Upon completion of queuing/delay analysis, MOT Plans and MOT Special Provisions shall be developed and included with the RFC Design Documents. The MOT Plans shall include all major traffic shifts, Lane Closures, use of temporary roadways, temporary traffic signals, and access modifications to businesses and residences. The anticipated duration of each phase shall also be noted on the plan.

In addition to the requirements in the IDM, the TTCP shall include the following information:

1. A cover page/title sheet sealed by a Registered Professional Engineer.
2. Standard Drawings
3. MOT Plans, with a traffic and mobility analysis performed for each phase of construction. Refer to Section 11.2.4 for analysis requirements. The MOT Plans shall detail phases and durations and shall identify all long-term Lane Closures and lane restrictions anticipated during the Work.
4. Descriptions of the design methods to be used for temporary roadways.
5. Detour and haul routes required for the purpose of Construction Work. Design-Build Contractor shall obtain approval from local agencies for all proposed detour and haul routes and shall obtain, pay for, and comply with requirements of all necessary Governmental Approvals and agreements required for said routes.
6. Special Provisions that include a switching procedure between each controlled MOT phase change. The switching procedure shall consist of the methods, actions, and

signing necessary to complete the switch and the number and duties of traffic personnel assigned to perform the switch.

7. Special Provisions that describe a process for transitioning from temporary signage and temporary pavement marking to permanent signing and permanent pavement marking.
8. Special Provisions that specify Design-Build Contractor coordination work with the construction and maintenance projects of Governmental Entities that are adjacent to or near the Project ROW. The Special Provisions shall include a coordination clause listing other adjacent or nearby construction projects. At a minimum, this shall include the projects listed in Section 1 (General Scope of Work).
9. Special Provisions that require Design-Build Contractor to maintain existing access to all properties within the Project limits for the duration of the Construction Work, except as provided elsewhere in the PPA Documents. Appropriate information about access modifications shall be made available to the property owners as required in the PIP.
10. All information required in Section 11.3.8.

The MOT Plans shall be prepared at an appropriate scale to facilitate INDOT review, according to the IDM and include the following components for each phase of construction:

1. Plan insert sheets, including ingress/egress locations for Design-Build Contractor-Related Entities
2. Haul routes

### **11.2.3 Approved Analysis Techniques and Software for the TMP**

Until Substantial Completion, the criteria used to determine the impact of proposed work zones shall be queue length and minimum delay times. Design-Build Contractor may utilize Quewz-98 or similar programs to model the expected queue lengths and delay times that will be generated.

### **11.2.4 Work Zone Mobility Impact Analysis**

Using no-build traffic data or, if not available, existing traffic counts supplemented by additional traffic counts by Design-Build Contractor, and analysis techniques described in Section 11.2.3, Design-Build Contractor shall test all MOT phases proposed on the Project to ensure compliance with Project Standards. The traffic alternative analysis shall be submitted to INDOT LaPorte District Traffic Engineer Alan Holderread, (219) 325-7426, with the MOT Plans and be subject to the same review requirements. The traffic analysis shall be summarized in report format, and all supporting documentation shall also be submitted to INDOT. The requirements of this Section 11.2.4 apply through Substantial Completion.

The following thresholds for mainline and arterials shall be used by Design-Build Contractor in the evaluation of the work zone mobility impacts:

#### **11.2.4.1 I-65 and Ramps**

Design-Build Contractor shall maintain two lanes in each direction at all times during construction except as described in Section 11.3.8. Design-Build Contractor shall evaluate work zone mobility impacts associated with each MOT phase to ensure compliance with the INDOT Interstate Highways Congestion Policy.

Ramps shall be evaluated as arterial roadways, except areas at ramp terminals, where Sections 11.2.4.2 or 11.2.4.3 apply. No queue from any ramp shall back up onto I-65 as a result of MOT phasing.

#### **11.2.4.2 Signalized Intersections**

If the existing LOS on each approach to a signalized intersection is between A and C, then the LOS during MOT operations on each approach shall not be reduced below a D with a control delay of up to 45 seconds. If the 45-second control delay is exceeded, Design-Build Contractor shall submit alternative strategies to INDOT for approval. If the existing LOS on each approach is D or worse, then the control delay during MOT operations on each approach shall not increase more than 30 percent. If the 30 percent threshold is exceeded, Design-Build Contractor shall submit alternative strategies to INDOT for approval. Traffic analysis shall not assume more than 25% volume diversion due to drivers avoiding the work zone.

#### **11.2.4.3 Unsignalized Intersections**

If the LOS on each approach under stop or yield control is between A and C, then the LOS during MOT operations on each approach shall not be reduced below a D with an average control delay per vehicle of up to 30 s/veh. If the 30 s/veh control delay is exceeded, alternative strategies shall be submitted to INDOT for approval. If the existing LOS on each approach is D or worse, then the control delay during MOT operations on each approach shall not increase more than 30 percent. If the 30 percent threshold is exceeded, alternative strategies shall be submitted to INDOT for approval. Traffic analysis shall not assume more than 25% volume diversion due to drivers avoiding the work zone.

#### **11.2.4.4 Local and other State Route Arterial Roadway Segments**

If flagging operations are performed on a local or other state route arterial roadway segment, maximum delay shall be no greater than 10 minutes for any vehicle. In addition, maximum queue lengths as described in the IDM shall not be exceeded. At signalized intersections, an LOS on each approach shall be maintained at or above an LOS D with a control delay of up to 45 seconds.

If specific work activities and time periods preclude compliance with the threshold levels listed in this Section 11.2.4, Design-Build Contractor shall submit a request for Deviation to INDOT for approval in accordance with Section 13 of the PPA. All Deviations from the threshold levels shall be submitted as early in the design process as possible. The request for Deviations from the threshold levels shall include the following:

1. Description:
  - a. Specific location and work required
  - b. Existing condition
  - c. Purpose for the threshold exception request, along with how long and what hours the Lane Closures will be in effect
  - d. Recommendations to minimize impacts
2. MOT Alternatives – All potential options for MOT with descriptions and discussions of each, including the following:

- a. Advantages/disadvantages
  - b. Estimated time frame
  - c. User and construction cost
  - d. Potential economic impact to communities and businesses
  - e. Ability to gain public buy-in and awareness of the impacts and means to mitigate those impacts
3. Traffic Analysis:
  - a. Queue/delay analysis
  - b. Percent diversion that is reasonable to expect for the location and conditions
  - c. Queues with expected percentage of traffic diverting
4. Summary and Recommendations:
  - a. List alternatives in order of preference and explain why the alternative is or is not preferred.
  - b. Summarize alternatives in table format, including important comparison items such as maximum queue lengths, the number and width of open lanes, the length, dates and duration of construction period, incremental construction cost associated with each option, etc.

Design-Build Contractor shall monitor queues and delays during MOT operations. If the thresholds listed in Section 11.2.4 are being exceeded, Design-Build Contractor shall modify the MOT Plans to mitigate the queues and keep delays below the threshold levels. All proposed changes to the MOT Plans shall be submitted to INDOT for review and comment.

### **11.3 Design and Construction Requirements**

#### **11.3.1 Design Criteria**

The information listed below shall be incorporated into the MOT Plans and the TMP.

1. Design Speed
  - a. The design speed and posted speed on state highways shall be the existing posted speed limit on approaches to the work zone, with a maximum 10-mile-per-hour speed reduction within the work zone; all worksite speed limit signs must conform to the provisions found in INDOT Construction memo 14-06.
  - b. The design speed on non-state highway facilities shall be the existing posted speed limit on approaches to the work zone, with a maximum 10-mile-per-hour reduction of posted speed within the work zone. The posted speed can be reduced an additional 10 miles per hour in the work zone using flashing worksite speed limit assemblies as shown in the Department Standard Drawings 801-TCDV-10 and 801-TCDV-1 and “When Workers Are Present” signing.
2. Lane Widths. The minimum MOT lane width shall be 11 feet on State, city, and county routes.

3. Uncurbed Edge of Pavement Widths. All pavement edges shall be a minimum of 2 feet away from the edge of a travel lane.
4. Separation
  - a. A minimum clearance of 2 feet between barrier and edge of travel lane is required. One foot shoulder widths on or under bridges may be allowed upon approval of a Level One Design Exception(s). Design-Build Contractor is responsible for preparing and submitting any MOT Design Exceptions to INDOT for review. Design-Build Contractor shall obtain INDOT's written approval of Design Exceptions prior to inclusion in the plans.
  - b. Temporary concrete barrier and approved end treatments shall be used to protect the motoring public from the work area within the Project limits when work or equipment, including personal vehicles and trucks used for loading and unloading, are within an 8-foot offset of the travel lane. Portable concrete barrier or temporary guardrail shall be provided if the entire clear zone is not traversable or if hazards exist within the clear zone.
  - c. Portable concrete barrier on bridge decks shall be installed per the Department Standard Drawings.
  - d. On State highways, tubular delineators shall be used between opposite bounds to separate two-way traffic when opposing traffic is maintained on the same roadbed, in accordance the Department Standard Drawings.
5. Crash Compliance. All work zone traffic control devices shall be compliant with National Cooperative Highway Research Program (NCHRP) 350 requirements.
6. Signing/Lane Shifts/Closures. All MOT procedures shall be in accordance with the MUTCD.
7. Pavement Edge Drop-Offs
  - a. Drop-off conditions 3 inches or less shall be delineated by barrels, vertical panels, or tubular markers spaced every 40 feet or a distance in feet equivalent to two times the speed limit in miles per hour, whichever is less.
  - b. Drop-offs greater than 3 inches shall comply with the following restrictions:
    - 1) When drop-off is a result of excavations adjacent to traffic with a horizontal separation of 0 to 2 feet, the drop-off shall be limited to 500 feet in continuous length per location unless positive protection is provided before excavation commences. Locations of drop-offs shall be separated by at least 1.0 mile.
    - 2) Shall be wedged with dense graded aggregate or HMA on a 3:1 (H:V) or flatter slope if horizontal separation is less than 8 feet between traffic and the drop-off and no positive protection is provided. If a horizontal separation of 8 feet or greater can be achieved between traffic and the drop-off, no wedging is required. Design-Build Contractor shall provide the wedge prior to the stoppage of work at that location.
    - 3) Shall be delineated by barrels spaced every 40 feet or at an interval in feet equivalent to two times the speed limit in miles per hour, whichever is less.
  - c. Temporary drop-offs during working hours in which construction operations are taking place shall be kept to a minimum, and are restricted to off-peak hours.

8. Channelizing Devices
  - a. Channelizing devices approved for use are detailed in the Project Standards. Design-Build Contractor shall comply with Recurring Special Provision 107-C-208 regarding the utilization of drums or other channelizing devices for traffic control.
  - b. Temporary channelizing device spacing in tapers shall be a maximum of 40 feet center-to-center or a distance in feet equivalent to the speed limit in miles per hour, whichever is less. Device spacing in tangent sections of mainline and ramps (including curves) shall be a maximum of 80 feet center-to-center or a distance in feet equivalent to two times the speed limit in miles per hour, whichever is less. On local roadways, device spacing shall be a maximum of 20 feet center-to-center in tapers, 40 feet center-to-center in tangent sections, and 6 feet center-to-center in radii.
  - c. Design-Build Contractor shall provide, erect, and maintain channelizing devices, signs, barriers, and other traffic control devices used for MOT in acceptable condition, in accordance with the Project Standards.
9. Flashing Arrows and Variable Message Boards. Design-Build Contractor shall supply all flashing arrows and variable message boards necessary to maintain traffic. Upon completion of the Project, the flashing arrows and variable message boards shall remain the property of Design-Build Contractor.
10. Drainage shall be maintained at all times during all phases of Construction Work.
11. Traffic signals, either temporary or permanent, shall remain operational from beginning of implementation to end of implementation.
12. Temporary crossovers shall be per INDOT standard drawings. Final location of the crossovers shall have prior approval of INDOT.
13. Wherever shoulders are used for maintaining traffic Design-Build Contractor shall provide a paved surface with the wheel path free of existing shoulder corrugations. When necessary, the wheel path may cross existing corrugations for no more than a 400-foot segment.
14. Mile markers shall be maintained during construction.
15. Access to all INDOT Intelligent Transportation System (ITS) and Automatic Traffic Recorder (ATR) equipment shall be maintained at all times.
16. If traffic lanes in one direction are split using a temporary or permanent crossover, construction signing shall direct trucks to utilize the right most lanes.
17. Crossover protection for opposing traffic shall be in place throughout the duration of the project and the limits shall not be any less than is currently provided by the existing median protection.
18. Barriers shall not impede snow removal operations. To facilitate snow removal operations by INDOT, from December 1 through March 31 each year Design-Build Contractor shall maintain open areas along I-65 with a minimum 4 feet inside shoulder and 8 feet outside shoulder. Shoulders adjacent to temporary barriers on bridges are exempt from width requirements in this Item 12. Based on conditions and weather forecast at the time the December 1 date may be extended until December 15 and the

March 31 date may be extended back to March 1. INDOT has sole discretion to approve any extension.

19. All pedestrian facilities shall remain open for pedestrian use during all phases of construction.

### **11.3.2 Traffic through the Construction Zone**

Design-Build Contractor shall provide a CWTS on-Site whose responsibility is to supervise and continuously monitor the installation and maintenance of all traffic control devices, under the supervision of the MOT Manager. Design-Build Contractor shall authorize the CWTS to direct traffic changes to ensure safe and continuous traffic flow and to direct traffic operations after a traffic incident has occurred. The CWTS shall inspect all traffic control devices at least once daily and shall provide for the repair or replacement of defective devices. The CWTS shall submit a weekly written report of the daily traffic control device inspections to INDOT for review and comment. The report shall include comments on all MOT setups, including temporary signals, maximum queue lengths/delays, work zone modifications, MOT phase changes, incidents, repairs and replacements made and suggested improvements.

The CWTS shall be available at all times and be on-site within a half-hour of notification throughout the duration of the Construction Work. The minimum qualifications of the CWTS shall include certification as a certified worksite traffic supervisor by the American Traffic Safety Services Association (ATSSA), or an approved equal certifying organization.

Access to all businesses and residences shall be maintained at all times.

Design-Build Contractor shall design, place, and maintain all approved construction detour routes and shall obtain all necessary Governmental Approvals for detours from the appropriate Governmental Entities.

Design-Build Contractor shall be responsible for all needed construction and haul roads required for the delivery of materials required for the Work and shall obtain, pay for, and comply with the conditions of all necessary Governmental Approvals from the appropriate Governmental Entities for temporary roadways, including Construction Work and, as applicable, haul routes.

Design-Build Contractor shall arrange and hold an initial MOT meeting with INDOT and all affected Governmental Entities at least four weeks prior to initial installation of traffic control devices for any MOT phase and shall hold a MOT phase switch meeting with INDOT and all affected Governmental Entities at least two weeks before any MOT phase switch.

Design-Build Contractor shall design all geometric aspects of temporary roadways, except for single lane temporary crossovers, for the accepted work zone design speed.

Design-Build Contractor shall coordinate the operation of portable changeable message signs with INDOT. Changeable message signs shall be used four weeks in advance to denote changes to traffic patterns.

Design-Build Contractor shall not use local streets through residential neighborhoods for access to the Site without approval of the local jurisdiction. Appropriate MOT and flagging procedures shall be followed during all Construction Work, including mobilization and demobilization

activities. Deliveries and hauling to and from the construction Site shall be confined to the Project ROW and performed via designated haul routes along the mainline.

### **11.3.3 Construction Access and Haul Routes**

Design-Build Contractor shall develop a Work Vehicle Traffic Control Plan 90 days after NTP1 and submit to INDOT for approval in its good faith discretion. The Work Vehicle Traffic Control Plan shall depict how deliveries and hauling to and from the Site shall be performed via haul routes as permitted by INDOT and the entity owning the haul route. Movement of materials from one location to another within the Project ROW shall be confined to the Project ROW and performed via haul routes, as permitted by INDOT and the entity owning the haul route. Design-Build Contractor shall comply with the local agency's bonding and other requirements for haul roads.

Design-Build Contractor may use local streets for the following activities after obtaining all required approvals from the local jurisdiction:

- Local roadway improvements
- Utility Adjustments
- Construction Work and implementation of roadway detours

Construction vehicles used by Design-Build Contractor shall comply with any and all load restrictions and vehicle delineation requirements when used on roads open to the public.

Construction equipment shall be stored in locations that do not pose a safety risk to the traveling public. Construction equipment shall be stored either behind barriers or outside of the construction clear zone. Construction equipment shall be stored outside sidewalks and bike lanes/paths that are open to traffic.

Construction traffic will be allowed to cross roadways that intersect with the mainline alignment as long as the crossing is maintained within the Project ROW. With INDOT approval, proper flagging procedures and, as applicable, temporary traffic signals can be used to facilitate construction traffic crossing local roadways. At-grade roadway crossings are not allowed during the times identified in Table 11-1 unless prior written approval is granted by INDOT.

**Table 11-1: Construction Traffic Roadway Crossing Restrictions**

| <b>Roadway</b>                   | <b>Day of Week</b>    | <b>Prohibited Crossing Times</b>  |
|----------------------------------|-----------------------|-----------------------------------|
| All crossing roadways along I-65 | Monday through Friday | 5 a.m. – 9 a.m. & 4 p.m. – 7 p.m. |

### **11.3.4 Detour Routes**

Design-Build Contractor shall maintain detour routes in a condition that is reasonably smooth and free from holes, ruts, ridges, bumps, dust, and standing water. Once the detour is removed and traffic is returned to its normal pattern, the detour route shall be restored to a condition that is equivalent or better than the condition that existed before its use as a detour. All required pavement markings shall meet IMUTCD standards and local requirements.

### **11.3.5 Improvements to Existing Roadway Network**

Design-Build Contractor shall videotape haul routes and detour routes before construction operations. Design-Build Contractor shall maintain these routes in a condition that is reasonably smooth and free from holes, ruts, ridges, bumps, dust, and standing water. Once the haul route and detour route is removed and traffic returned to its normal pattern, or construction operations are completed, the route shall be restored to a condition that is equivalent or better than the condition which existed before its use for this purpose. Design-Build Contractor shall include in the MOT Plans a schedule for restoring any damaged route to its preconstruction condition. All required pavement markings shall meet IMUTCD standards and applicable laws and requirements.

### **11.3.6 MOT Manager**

Design-Build Contractor shall identify an MOT Manager to perform the following:

- Coordinate MOT activities with INDOT
- Implement traffic management strategies
- Provide an MOT report to INDOT with each change in traffic phasing, including expected queue lengths/delays, a summary of expected operations, and MOT durations
- Be continuously available during construction until Final Acceptance and the elimination of all temporary traffic control and after Final Acceptance whenever temporary traffic control is required
- Supervise the activities of the CWTS

### **11.3.7 Restrictions for Construction Work**

Design-Build Contractor's attention is directed to the provisions of PPA Exhibit 10 related to Construction Closures that failure to comply with the restrictions in this Section 11.3.7 may result in deductions from the Final Payment.

Design-Build Contractor shall comply with Standard Specification 108.08 regarding working restrictions during holiday periods, except as modified herewith. Design-Build Contractor will be permitted to work during holiday periods and Days with local events, if desired, in accordance with road Lane Closure restrictions as listed in Table 11-2; however, Design-Build Contractor shall be required to suspend work associated with deliveries and off-Site hauling operations during holiday periods and Days with local events. Design-Build Contractor shall not change traffic patterns, and shall suspend deliveries and off-Site hauling operations during local events. Design-Build shall identify local events that could affect traffic patterns Design-Build Contractor shall coordinate with INDOT and stakeholders regarding all restriction dates.

Construction operations using shoulder closures will be allowed (except Holidays), provided any resulting temporary drop-off conditions and signing requirements shall be addressed in the TMP.

### **11.3.8 Mainline/Ramp/Roadway Closures and Restrictions**

The requirements of this Section 11.3.8 apply through Substantial Completion. Design-Build Contractor shall maintain all ramp movements at all interchanges during construction. Design-

Build Contractor shall maintain two travel lanes in each direction on I-65 from the US 231 interchange north to the north project limits. Design-Build Contractor shall maintain two travel lanes in each direction on I-65 from the US 231 interchange south to the south project limit subject to the Interstate Highways Congestion Policy.

Table 11-2 summarizes the allowable closures and restrictions for specified roadways in the Project area.

**Table 11-2: Allowable Construction Closures**

|     | A                                             | B                               | C                                                | D                                    | E       |
|-----|-----------------------------------------------|---------------------------------|--------------------------------------------------|--------------------------------------|---------|
| No. | Facility                                      | Allowable Construction Closures | Additional Allowable Lane Closures with Approval | Subject to Lane Charges <sup>2</sup> | Remarks |
| 1   | I-65 North of US 231 <sup>1</sup> Interchange | None                            | No                                               | No                                   |         |
| 2   | I-65 South of US 231 <sup>1</sup>             | Nighttime only                  | No                                               | Yes                                  |         |

Notes

1. North of US 231 is defined as north of the gore areas for the ramps on the south side of the interchange.  
South of US 231 is defined as south of the gore areas for the ramps on the south side of the interchange.
2. Per PPA Exhibit 10 Table 10-2

For all other roads within the Project limits not itemized on Table 11-2 above, a Construction Closure is not allowed without prior INDOT approval, except as noted otherwise in this Section 11.

Closures on roadways that overpass I-65 are allowed if:

- The closure is included in the approved TMP
- The TTCP is coordinated with the appropriate Governmental Entity having jurisdiction and is approved by INDOT
- Adjacent roadways are not closed at the same time

Lane closures on state and US roads that underpass I-65 are allowed if:

- The closure is included in the approved TMP
- Consecutive interchanges are not closed at the same time

Lane closures at times other than those allowed in Table 11-2 and/or lane closures without INDOT approval are subject to Liquidated Damages per Table 10-1 of Exhibit 10 of the PPA.

### **11.3.9 North Access Road Allowable Closures**

The allowable closures for the north access road under the I-65 bridges (over the Kankakee River) are as follows:

- Nighttime
- October 1 through January 3.

### **11.3.10 Notification and Coordination**

The MOT Manager shall notify INDOT at least 28 days before the start of any construction activities that would affect traffic operations, including placement or relocation of work zone signs.

The MOT Manager shall notify INDOT and the others listed in the TMP and this Section 11 in writing of all traffic restrictions and upcoming MOT changes. Design-Build Contractor shall ensure the written notification is submitted in accordance with Table 11-3. This notification shall be received by INDOT before the physical setup of any applicable signs or message boards.

Information shall include all construction and maintenance activities that impact or interfere with traffic and shall list the specific location, type of work, road status, date and time of restriction, duration of restriction, number of lanes maintained, detour routes if applicable, and any other information requested by INDOT. A summary of the notification time and requirements for closures and restrictions is provided in Table 11-3.

**Table 11-3: Road and Lane Restriction Notification Requirements**

| Item                                                                                                                                                   | Duration of Closure                         | Notification Time Frame         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------|
| Ramp and Road Closures                                                                                                                                 | Greater than 2 weeks                        | 28 Business Days before closure |
|                                                                                                                                                        | Greater than 12 hours and less than 2 weeks | 7 Business Days before closure  |
|                                                                                                                                                        | Less than 12 hours                          | 2 Business Days before closure  |
| Ramp and Road Closures impacting: <ul style="list-style-type: none"><li>• school access and/or bus route</li><li>• transit system operations</li></ul> | All closures                                | 28 Business Days before closure |
| Lane Closure/Restrictions                                                                                                                              | Greater or equal to 2 weeks                 | 7 Business Days before closure  |
|                                                                                                                                                        | Less than 2 weeks                           | 2 Business Days before closure  |

Any unforeseen conditions not specified in the MOT Plans or TTCPs requiring traffic restrictions shall also be reported to INDOT using the above table.

A pre-MOT meeting between INDOT and Design-Build Contractor shall be held a minimum of 10 Business Days before beginning Construction Work or executing any change of MOT staging. This meeting shall include INDOT and any Design-Build Contractor subconsultants involved with temporary traffic control.

### **11.3.11 Incident Management Plans**

Design-Build Contractor is advised that the Department will be implementing Incident management initiatives on this project. This concept requires coordination between key Project personnel and the various agencies responding to crashes and incidents within the limits of the project. This system makes the best use of the assets available to obtain access to the incident scene for emergency vehicles as quickly as possible and return traffic flows to normal with the

least inconvenience to the motoring public. This system will also better facilitate responses to injured workers within the project area.

Coordination of resources on the job and between all the emergency services providers is required for efficient response in emergency situations. Prior to the award of this contract, the Department will establish an Incident Management Task Force comprised of many of the agencies that will likely be involved in the event of an emergency within or adjacent to the work zone.

The Incident Management Task Force facilitated by the Department is responsible for establishing policies and procedures that specifically address the detection, verification, response, management, and clearance of incidents within or adjacent to the work zone. Design-Build Contractor shall assign at a minimum the designated CWTS to participate in the task force as Design-Build Contractor's Incident Management Liaison. Prior to the start of construction the Incident Management Liaison shall arrange for a brief, 1 to 2 hour, Incident Management training session for Design-Build Contractor's Key Personnel, superintendents and lead foremen, to be conducted by the Department. This training will help to familiarize Design-Build Contractor's personnel to the incident management procedures developed by the task force that will need to be followed throughout the project. It will be the responsibility of the Incident Management Liaison to update these personnel when changes to the incident management plan are implemented.

Design-Build Contractor's Incident Management Liaison shall coordinate all incident response requirements per the Indiana Design Manual, Chapter 81, Traffic Incident Management Plan with:

Mr. Guy Boruff  
Director, Public Safety Operations Indianapolis Traffic Management Business  
Unit 8620 East 21st Street Indianapolis, Indiana 46219  
Telephone: 317-899-8605  
Email: gboruff@indot.in.gov

The Incident Management Liaison shall prepare and distribute Incident Management Maps as approved by INDOT to agencies identified by the Incident Management Task Force. Maps shall be updated at a minimum of once per change of phase in maintenance of traffic plan or at the discretion of the Incident Management Task Force. The maps shall be no larger than 11 inches by 17 inches, in color, to scale, and include at a minimum the following:

1. Outline of the roadway geometry
2. Open travel lanes/ramps colored in green
3. Closed travel lanes/ramps with active construction in orange
4. Closed travel lanes/ramps accessible to emergency traffic in red
5. Temporary emergency vehicle access points with identifiers defined by the INDOT
6. Rally points for emergency vehicle escorts into the work area with identifiers defined by the INDOT
7. Control points as designated by the INDOT, such as mile markers and block numbers.
8. Emergency road closure, diversion, points with identifiers defined by the INDOT

9. Diversion equipment locations with quantities
10. All entrance and exit ramps shall be uniquely identified and labeled

The Incident Management Liaison shall meet with local fire department representatives no later than 10 days prior to a change in the maintenance of traffic pattern to coordinate computer aided dispatch response plans.

The Incident Management Liaison shall coordinate with the Department Incident Management Task Force meetings as follows:

1. A minimum of 14 days before a phase change in the maintenance of traffic pattern.
2. A supplementary meeting a minimum of seven days before a change in the maintenance of traffic pattern.
3. A minimum of one meeting per month during any maintenance of traffic phase with a duration of more than 30 days.

The Incident Management Liaison shall maintain the list of Incident Management Task Force members. This list shall include at a minimum the following: name, department, work phone, fax, email, pager, unit/car number. The list shall be sorted in alphabetical order by department and then last name. The Incident Management Liaison shall notify members of the Incident Management Task Force of meetings at least 14 days prior to the meeting.

The Incident Management Liaison shall hold regularly scheduled meetings each month with the Incident Management Task Force members and present project status photos in a presentation.

Design-Build Contractor shall designate a person or persons capable of coordinating Design-Build Contractor's resources who shall be available and on call by the freeway service patrol 24 hours a day, 7 days a week. If necessary, in the event of an incident, the designees shall have a response time of less than 30 minutes to the site to oversee the use of Design-Build Contractor's resources to help resolve an incident. The designees shall also be prepared to contact any necessary Design-Build Contractor's personnel outside normal working hours.

In the event of a major incident while construction operations are underway, Design-Build Contractor's personnel may be required to assist in urgently establishing road or ramp closures to isolate incident scenes. Also, Design-Build Contractor's heavy equipment may be required to assist in moving wreckage or debris from the travel lanes and realigning temporary barriers to facilitate reopening the road to normal traffic. The Incident Management Liaison shall coordinate these activities with the law enforcement or fire department officials on the scene and the Department's Gary Traffic Management Center as needed.

Design-Build Contractor shall remove disabled vehicles from the within the project limits at the request of the INDOT and shall respond within 45 minutes of the request. Design-Build Contractor shall provide a suitable location off of the project to store disabled vehicles until the owner can retrieve the vehicle.

To facilitate with closures and provide current road conditions in an emergency situation, Design-Build Contractor shall supply at a minimum the following pieces of equipment to be located as directed by the Department Traffic Management Business Unit:

1. Flashing arrow sign for each interstate mainline approach to the work zone including ramps leading to the work zone.
2. Safety drums for every lane on the mainline where the flashing arrow sign is positioned.

The Incident Management Liaison will not be required to meet the 30 minute response time during the winter months when all lanes and ramps are open to normal traffic.

### **11.3.12 Incident Response Requirements**

Design-Build Contractor shall coordinate all incident response requirements in accordance with the Indiana Design Manual, Chapter 81, Traffic Management Plan, with:

Ms. Kimberly Peters  
Incident Management Operations Director Indianapolis Traffic Management  
Business Unit 8620 East 21st Street Indianapolis, Indiana 46219  
Telephone: 317-899-8619  
E-mail: kpeters@indot.in.gov

## **11.4 Deliverables**

Deliverables, a non-exhaustive list of which is set forth in the table below, shall be submitted in electronic format in accordance with the schedule set forth below. Acceptable electronic formats include PDF and current versions of Microsoft Word and Microsoft Excel, unless otherwise indicated.

| <b>Deliverable</b>                                                   | <b>Submittal Schedule</b>                                                                                             | <b>TP Section</b> |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------|
| Transportation Management Plan (TMP) for Construction Work           | Draft TMP within 30 Days after NTP1;<br>Final TMP 30 days prior to Commencement of Construction; Updates as needed.   | 11.2.1            |
| Temporary Traffic Control Plan (TTCP)                                | Draft TTCP within 30 Days after NTP1;<br>Final TTCP 30 days prior to Commencement of Construction; Updates as needed. | 11.2.2            |
| Alternative strategies for control delay at signalized intersections | 60 days prior to signal plans inclusion into the RFCs                                                                 | 11.2.4.2          |
| Work Vehicle Traffic Control Plan                                    | 90 days after NTP1                                                                                                    | 11.3.3            |