MICHIGAN

DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION

FOR

**MAINTAINING TRAFFIC**

***ALL YELLOW HIGHLIGHTED TEXT MUST BE EDITED PRIOR TO DISTRIBUTION.***

***CYAN HIGHLIGHTED TEXT INDICATES THAT ONLY ONE HIGHLIGHTED SECTION SHOULD BE CHOSEN TO KEEP IN THE SP, AND THE OTHER HIGHLIGHTED OPTION DELETED PRIOR TO DISTRIBUTION.***

***RED TEXT INDICATES THAT THE SECTION IS OPTIONAL, DEPENDANT ON THE DETAILS OF THE PROJECT. DELETE RED TEXT AND SUBSECTIONS IF NOT APPLICABLE. CHANGE ALL RED TEXT THAT WILL REMAIN IN DOCUMENT TO BLACK TEXT PRIOR TO DISTRIBUTION.***

Region or TSC:Author 1 of 14 APPR:Region:T&S eng:Date

**a. Description.** This special provision consists of requirements and restrictions to maintain traffic for Job Number (JN) on (Route) in the city of (City), (Name of) Township, (Name of) County.

**b. General.** Maintain traffic throughout the project in accordance with the standard specifications, typicals, and supplemental specifications in the contract and as described on the plans for this project.

**c. Construction Influence Area (CIA).** The CIA includes the right-of-way of the following roadways, within the approximate limits described below:

1. On \* (ROUTE) from approximately \* miles east of \* to \* miles west of \*\*.

2. In addition, the CIA includes the right-of-way of any designated detour route or alternate route, intersecting roads and ramps adjacent to the work zone for a distance of approximately 1/4 mile in advance of the work zone or as far as the construction or detour signing extends. The roads include but are not limited to Street, Road, Boulevard, etc.

**d. Traffic Restrictions.** Maintain traffic in accordance with the Maintaining Traffic Typicals contained herein, except as noted below. Changes or adjustments to the Maintaining Traffic Typicals may be necessary to fit field conditions, subject to approval of the Engineer or as determined by the Engineer.

1. Utilize the following Maintaining Traffic Typicals:

A. 100-GEN-KEY

B. 101-GEN-SPACING-CHARTS

C. 114-TR-HAUL-AW

D. WZD-

E. Etc.

2. Do not deliver material, or close lanes (other than approved stage closures) during the holiday periods as defined in Table 1. Cover or remove “45 where workers present” signing during the holiday periods as defined in Table 1.

**Table 1: 20XX Holiday Periods**

|  |  |  |
| --- | --- | --- |
| Holiday | Start Date and Time | End Date and Time |
| Memorial Day |  |  |
| Independence Day |  |  |
| Labor Day |  |  |

3. Do not deliver material, or close lanes (other than approved stage closures) during the Special Events as defined in Table 2. Cover or remove “45 where workers present” signing during the Special Event periods as defined in Table 2.

**Table 2: 20XX Special Events**

|  |  |  |
| --- | --- | --- |
| Local Event | Start Dates and Time | End Date and Time |
| Sample Event | 3:00 p.m. Friday, June 5th | 6:00 a.m. Monday, June 8th |
| Sample Event 2 | 3:00 p.m. Wednesday, August 12th | 7:00 a.m. Monday, August 17th |

4. Perform work and lane closures within the allowable time frames as shown in Tables 3, 4, 5 and X, unless otherwise approved by the Engineer. Traffic switch operations on freeways may take place within the allowable times listed below in the traffic restriction tables and/or as otherwise approved by the Engineer. Additional lane, ramp, and/or roadway closures and shifts may be implemented during maintaining traffic stage and traffic switch operations with prior Engineer approval.

5. Traffic switch operations are exempt from lane rental assessments or liquidated damage assessments for 8 hours for each traffic switch. Perform traffic switch operations within the allowable “traffic restriction tables” as shown below.

1. A traffic switch is defined as a change in the existing (original or staged) traffic configuration which requires multiple (more than one) lane lines and/or edge lines to be relocated in a new location and the old lines to be removed either between construction stages, or maintenance of traffic stages.

**Table 3: I-XX Northbound/Eastbound Traffic Restrictions**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Closure Type | Start Time | End Time | M | Tu | W | Th | F | Sa | Su |
| Shoulder Closures | 00:00 | 24:00 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| Single Lane Closures | 00:00 | 08:00 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 08:00 | 18:00 | ∞ | ∞ | ∞ | ∞ | 0 | 0 | 0 |
| 18:00 | 24:00 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| Single Lane Closures | ☼ | ▼ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| Double Lane Closures | 00:00 | 07:00 | 4 | 4 | 4 | 4 | 4 | 2 | 2 |
| 07:00 | 19:00 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 19:00 | 24:00 | 4 | 4 | 4 | 4 | 4 | 2 | 2 |
| ☼ = half hour before sunrise as defined by the [National Oceanic and Atmospheric Administration](https://gml.noaa.gov/grad/solcalc/) (NOAA)  ▼ = half hour after sunset as defined by [NOAA](https://gml.noaa.gov/grad/solcalc/)  ∞ = Closure is allowed, and the frequency is not limited during the project timeframe  # = The number of times closures can take place during the project timeframe. | | | | | | | | | |

**Table 4: I-XX Traffic Restrictions**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Closure Type | Start Time | End Time | M | Tu | W | Th | F | Sa | Su |
| Shoulder Closures | 00:00 | 24:00 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| Single Lane Closures | 00:00 | 08:00 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| 08:00 | 18:00 | ∞ | ∞ | ∞ | ∞ | 0 | 0 | 0 |
| 18:00 | 24:00 | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| Single Lane Closure | ☼ | ▼ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ | ∞ |
| Double Lane Closures | 00:00 | 07:00 | 4 | 4 | 4 | 4 | 4 | 2 | 2 |
| 07:00 | 19:00 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| 19:00 | 24:00 | 4 | 4 | 4 | 4 | 4 | 2 | 2 |
| ☼ = half hour before sunrise as defined by the [National Oceanic and Atmospheric Administration](https://gml.noaa.gov/grad/solcalc/) (NOAA)  ▼ = half hour after sunset as defined by [NOAA](https://gml.noaa.gov/grad/solcalc/)  ∞ = Closure is allowed, and the frequency is not limited during the project timeframe  # = The number of times closures can take place during the project timeframe | | | | | | | | | |

6. Maintain a minimum of one/two/three lane(s) of traffic in each direction at all times on \*. (And all intersecting roads and ramps, except where detoured.)

7. Maintain a minimum of one lane of traffic in each direction at all times on all signalized side roads.

8. No more than X# of closures are allowed in each direction of travel at the same time.

A. Provide at least one mile(s) between two consecutive shoulder or lane closures in the same direction of travel. Connect closures if this distance cannot be provided.

B. The maximum closure length is X miles unless otherwise approved by the Engineer.

C. Consecutive lane closures on the same bound must originate on the same side of the roadway.

9. Close any dedicated lanes (exit, ramp, turn, etc.) prior to the location under construction.

10. When a lane is closed, place channelizing devices at cross streets and major drives to form a radius that clearly defines the approaches to the through and turning traffic.

11. Close the ramps below during a time frame that does not conflict with holidays or special events.

A. The following ramps can be closed for up to X calendar days.

(1) Lake Lansing Northbound US-127 on ramp.

B. The following ramps can be closed for X hours.

(1) Lake Lansing Southbound US-127 on ramp.

12. Unless otherwise directed by the Engineer, close entrance and exit ramps when working in the vicinity of the ramp(s).

13. Coordinate work such that no two adjacent interchange ramps that operate in the same direction are closed simultaneously unless otherwise approved by the Engineer.

14. Failure to meet the traffic restrictions described herein will result in the assessment of liquidated damages for other Department costs per subsection 108.10.C.2 of the Standard Specifications for Construction. Amounts are detailed in the Special Provision for Liquidated Damages for Other Department Costs for Contract Identification XXXXX-XXXXXX.

15. Obtain written approval for any requested full freeway closure dates and approval for a freeway closure plan from the Engineer a minimum of 7 calendar days prior to the requested full freeway closure dates. The full freeway closure plan must include but is not limited to advance notification to the public, freeway closure coordination, coordination with other projects in the area, and coordination with first responders, especially the law enforcement agency having jurisdiction.

16. Conduct all traffic stoppages for \* on \* between the hours of \* and utilize law enforcement officials or other approved methods by the Engineer. Ensure these stoppages are for a duration of no longer than 15 minutes after which traffic must be allowed to proceed until such time traffic has been free flowing at the speed limit for a minimum period of 5 minutes, or until the last vehicles in line during the previous stoppage have proceeded through the zone.

17. Restrict access to \* from side roads for short durations at specific locations as the Engineer directs or approves. Where an intersection is closed or partially closed, allow the adjacent intersections one block to the \* and \* to remain open to traffic, unless otherwise approved by the Engineer. The following work items listed are eligible to take place under a traffic stoppage, (list work items). Additional work items can be allowed as approved by the Engineer.

18. Close median crossovers when working on, or within the influence area of, the median crossover. Simultaneous closure of consecutive directional median crossovers is prohibited, unless otherwise approved by the Engineer. Gap the work area where crossovers are maintained.

19. Maintain access to all driveways as directed by the Engineer unless prior agreements are made with the respective property owners. The cost of constructing driveways part width will not be paid for separately but will be considered included in the cost of other driveway pay items.

**e. Traffic General.**

1. For any lane open to traffic, provide a minimum lane width of 11 feet with 2 feet of shy distance on both sides unless identified otherwise on plans.

2. Do not close lanes or utilize traffic regulation sequences where work can be accomplished with a shoulder closure. Do not occupy any part of the active traffic lane with personnel or equipment when utilizing a shoulder closure. Place lane closures and traffic regulation operations only in areas as show on the plans unless otherwise directed by the Engineer.

3. Prior to shifting traffic onto shoulders or opening any lanes/shoulders and/or ramps, remove, by sweeping all accumulated debris that has collected within the shoulder and/or within the closed lane/shoulder.

4. A speed reduction will/will not be used. Set the work zone speed limit on I-XX to 60 miles per hour (mph).

5. Develop and submit to the Engineer an Internal Traffic Control Plan (ITCP) per subsection 104.11.B of the Standard Specifications for Construction. The requirements listed herein are the requirements for a Type A ITCP. Submit the Type A ITCP at the preconstruction meeting. The Engineer will have 7 calendar days to review the ITCP for approval or provide comments for revisions required to obtain approval. Include in the ITCP, at a minimum, the proposed ingress/egress locations for construction equipment and vehicles, traffic control devices that will be utilized to warn the motoring public of ingress/egress locations, and measures that will be taken to ensure compliance with the ITCP. Ensure that the ITCP minimizes conflicts between construction vehicles and motorists and maintains overall safety and mobility within the work zone. No work may begin prior to approval of the ITCP. Additional time required to obtain an approved ITCP will not be cause for delay or impact claims. All costs associated with obtaining an approved ITCP, providing and executing all parts of the approved ITCP including required traffic control devices, or resolving an incomplete or unacceptable ITCP will be borne by the Contractor.

5. Develop and submit to the Engineer an Internal Traffic Control Plan (ITCP) per subsection 104.11.B of the Standard Specifications for Construction. The requirements listed herein are the requirements for a Type B ITCP. Submit the Type B ITCP a minimum of 30 calendar days prior to the start of work. Submit subsequent ITCPs for the Engineer’s review a minimum of 14 calendar days prior to all stage changes and/or major changes in traffic patterns. Allow the Engineer 7 calendar days to review the ITCP for approval or provide comments for revisions to obtain approval. At a minimum, the ITCP must include the proposed ingress/egress locations for construction equipment and vehicles, traffic control devices that will be utilized to warn the motoring public of ingress/egress locations, and measures that will be taken to ensure compliance with the ITCP. Ensure that the ITCP minimizes conflicts between construction vehicles and motorists and maintains overall safety and mobility within the work zone. Access for construction vehicles between the travel lanes and work areas will be restricted to specific locations (this includes the workers’ private vehicles). The number of access points and their locations will require prior approval from the Engineer. Ingress and egress locations must include a minimum of 600-foot acceleration and deceleration area from the work zone to the travel lanes. The acceleration and deceleration locations must have a paved surface. Perform any work required to upgrade existing conditions to meet these requirements at no additional cost to the Department. The hauling of materials and equipment in and out of the work zone at any time must be approved the Engineer, a hauling schedule must be included in the ITCP. The hauling of materials and equipment in and out of the work zone is prohibited on [FILL IN RESTRICTED DAYS/TIMES]. No work will be allowed to begin prior to approval of the ITCP. Additional time required to obtain an approved ITCP will not be considered cause for delay or contractor claims. All costs associated with obtaining an approved ITCP, providing and executing all parts of the approved ITCP including required traffic control devices, or resolving an incomplete or unacceptable ITCP will be borne by the Contractor. No full or partial payments will be made for minor traffic devices until the Contractor’s ITCP is approved.

6. Upon approval of the ITCP, complete and submit the “Lane Closure Notification/Request Form or approved equal” to the Engineer for approval prior to the actual closure date. Submit the lane closure request 7 calendar days in advance of the lane closure for approval. This includes all shifts/shoulder/lane/ramp closures as stated per the proposal or any new lane closure requests submitted by the Contractor. The Engineer will have 4 calendar days to review the lane closure request for approval or provide comments for revisions required to obtain approval. Do not implement a lane closure prior to approval by the Engineer. In addition, notify the Engineer when the lane closure is removed or cancelled. See Lane Closure Notification/Request Form contained in the proposal.

7. Protect the work area at the end of each day. Close all open access points on the project to traffic with Type III barricades or other devices approved by the Engineer.

8. The Engineer will be responsible for notifying emergency services, transit agencies, law enforcement and schools prior to any lane closures, detours or major traffic shifts. In addition, the Contractor will be responsible for working with and complying with any coordination that is necessary with the Department and emergency services, transit agencies, law enforcement and schools. All costs associated with these coordination efforts will be considered included in the pay item “Minor Traf Devices”.

9. Obtain all necessary permits from local governments within areas of local jurisdiction, including noise/dust ordinance waivers when required, prior to placing construction signing on local roads.

A. The Department will reimburse permit costs in accordance with subsection 107.02.A of the Standard Specification for Construction. Adhere to all requirements made by local maintaining agencies regarding placement of traffic control devices prior to closing lanes on roadways not under MDOT jurisdiction.

A. Prior to placing construction signing on local roads, obtain an approved permit from the Road Commission for XXX County and any local agencies. The MDOT XXX TSC has submitted the permit application, however the Contractor is responsible for providing the required information to obtain a final approved permit.

10. Bolt or tack weld all structure castings that will be required to carry traffic prior to implementation of any construction staging or traffic shifts.

11. Remove all temporary traffic control devices from MDOT right-of-way during any shut down periods unless needed for directly maintaining or channelizing traffic. No additional payment will be made for removal and/or redeployment of these devices except for in the case of an approved extension of time.

12. When not in use, close all temporary crossovers constructed for this project as detailed on the plans to prohibit access, as directed by the Engineer.

13. Cover or remove construction signing that refers to work zone speed when work at a location is planned to be inactive for a period greater than 2 days, unless otherwise specified on the plans or as directed by the Engineer.

14. Once work is initiated that includes any lane restrictions, that work must be continued daily until completed. A lack of work activity for more than 3 days will require the removal of lane closures at no expense to the Department.

**f.** **Traffic Regulator Control.**

1. Maintain two-way traffic at all times on (route/segment) using traffic regulator control. A traffic regulator sequence is allowed to cover a maximum closure length of (#) miles. Place the arrow panel, signs and channelizing taper for the traffic regulator operation at locations approved by the Engineer for adequate visibility by oncoming traffic.

1. Maintain two-way traffic at all times on (route/segment) using traffic regulator control with Automated Flagger Assistance Devices (AFADs). A traffic regulator sequence is allowed to cover a maximum closure length of (#) miles. Place the AFAD, signs and channelizing taper for the traffic regulator operation at locations approved by the Engineer for adequate visibility by oncoming traffic.

2. Do not utilize more than (#) traffic regulator operation(s) at one time on (route).

3. Provide at least (#) miles between consecutive traffic regulator operations.

4. Crossroads should remain open to traffic at all times. Use intermediate traffic regulators at each intersection approach and commercial driveways within the closure limits, as directed by the Engineer. Use traffic regulator control as directed by the Engineer for cross street traffic while paving through intersections.

5. Follow the [Michigan Traffic Regulator’s Instruction Manual](https://www.michigan.gov/mdot/-/media/Project/Websites/MDOT/Business/Work-Zone-Mobility/MDOT-Traffic-Regulator-Manual-2010.pdf?rev=2d781e8581ff4f0eafa064efbd4de56e&hash=3E61132890F72CCF6CA899C256EB37EC) for operations at signalized intersections. Contact the MDOT region electrician or applicable maintaining agency prior to work on traffic signals. Only the MDOT region electrician or applicable maintaining agency may make changes to the traffic signal controllers.

**g. Stage Construction.** Maintain traffic in accordance with the restrictions listed in section d. Traffic Restrictions and the sequence of operations contained herein. Use of an alternate traffic control plan is subject to review and approval by the Engineer.

1. Stage 1.

A. Describe work to be done in this stage.

B. Describe traffic control for this stage.

2. Stage 2.

A. Describe work to be done in this stage.

B. Describe traffic control for this stage.

**h. Detours.**

1. Do not detour traffic until all proposed contract work on the detour route is completed, inspected, and approved by the Engineer.

2. Signs should be on both sides of the roadway when the work is taking place on the freeway or a boulevard section.

3. Cover all detour signs installed prior to closing a road or ramp. Do not uncover detour signing until just before the closure is in effect. Immediately remove or cover all detour signing upon opening the road or ramp to traffic.

**i. Unique Traffic Control Requirements.**

1. Any and all project specific MOT Requirements should be listed here.

**j. Special Considerations at Railroad Crossings.**

1. Any work (or equipment being staged onsite during the work) performed at or near a railroad crossing must not obstruct the view of railroad protective warning devices (signs, flashing light units or gates) to oncoming traffic at any time.

2. Do not extend lane closure taper(s) through the crossing. Traffic lane shifts cannot transition over the crossing.

3. Do not place construction traffic control devices in the railroad crossing or closer than 25 feet from the outside rail on either crossing approach.

4. Do not direct traffic over crossing in opposing direction than normal.

5. When the railroad crossing is in the influence zone of active construction work, but not in any lane closure, the roadways traffic regulator will give immediate preference to clearing any traffic from queueing over the crossing.

6. When traffic is queued to a gated crossing, a railroad watchperson will be present to provide notice of train approach to the crossing in advance of railroad warning device activation, so the crossing may be cleared of vehicular traffic. The Contractor is responsible for contacting the applicable railroad to obtain and pay for a railroad watchperson.

4. A traffic regulator is required at the railroad crossing while it is in the zone where traffic is being directed over a crossing in opposing direction than normal. The traffic regulator will serve to stop traffic and prevent them from entering the crossing upon a train approaching the crossing. When the railroad crossing is in the influence zone of active construction work, but not in a lane closure, the roadway traffic regulator will give immediate preference to clearing any traffic which backup over the crossing.

5. Place a temporary stop line and sign R15-1 (crossbuck) to indicate the stopping point in advance of the crossing for vehicles traveling in a direction opposed to normal flow. Place temporary W10-1 (Advance Warning) if traffic is shifted away from the existing sign.

6. When traffic is directed over a gated crossing in opposed direction than normal with half-roadway gates, a railroad watchperson will be present to provide notice of train approach to the crossing in advance of railroad warning device activation, so the crossing may be cleared of vehicular traffic. The Contractor is responsible for contacting the applicable railroad to obtain and pay for a railroad watchperson.

7. The presence of a railroad flagger does not relieve the Contractor of the responsibility for intermediate traffic regulators.

8. Nighttime work or nighttime traffic control that impacts the crossing requires approval from the railroad. The contractor is responsible to provide lighting to illuminate traffic regulators and railroad flaggers when nighttime work is being performed. This approval may necessitate temporary railroad flashers.

9. Changes in Contract during construction phase that impacts crossings require approval from the railroad.

**k.** **Pedestrian or Non-Motorized Facilities.**

1. Maintain all facilities in accordance with *The Americans with Disability Act* (ADA) requirements and the Public Rights-of Way Accessibility Guidelines (PROWAG). Provide facilities equivalent to or better than the route a person would have encountered prior to construction activities.

2. Submit an “ADA Work Plan” for sidewalk and ADA ramp construction prior to any sidewalk ramp closures or removals. The work plan must address pedestrian access and detours. Plan will allow a ramp closure up to (96) hours. The Engineer will have 7 calendar days to review the plan for approval or provide comments for revisions required to obtain approval. Do not proceed with the work until the Engineer has approved the plan.

3. Close and detour any sidewalk ramps and crosswalk areas to pedestrian traffic that are impacted by the work. Cover pedestrian signal heads when the crosswalk or ramp is affected.

4. Always keep sidewalk areas clear of any equipment or materials when the sidewalks are open to pedestrian traffic. When open to pedestrian traffic, maintain a 4foot clear path on all sidewalks.

**l. Earthwork and Excavation.**

1. Restore undercuts or excavations in the work areas within 3 feet of the active traffic lanes to no steeper than a 1 on 4 slope from the edge of the roadway at the end of each work day. If this condition is not met, provide a nighttime closure.

2. Delineate excavated areas located within 3 feet of traffic with channelizing devices at 20 feet spacing along the excavated area, and 100 feet before the area, or as shown on the maintaining traffic plans.

3. Use protective fencing to protect open excavations within the work zone during non-working hours.

**m. Hot Mix Asphalt (HMA) Work.**

1. Resurface all HMA milled areas the same day as the HMA cold milling operation.

2. No traffic is allowed on the HMA milled surface, unless directed by the Engineer.

2. Traffic is allowed on the milled surface, for X hours unless otherwise directed by the Engineer.

3. Provide transverse and longitudinal HMA tapers at all grade changes greater than X inches caused by cold milling and overlay. Place W8-1 (“BUMP”) signs in advance of transverse HMA tapers. Place W8-11 (“UNEVEN LANES”) signs in advance of longitudinal HMA tapers. Place W8-9 (“LOW SHOULDER”) signs in advance of and every mile within the shoulder drop off.

**n. Bridge Work.**

1. Use Mobile Attenuators (MAs) on all roadways for false decking and other work as directed by the Engineer. Placement of MA’s will be as directed by the Engineer. Relocating MAs will be included in the payment for this item. Remove MAs from the roadway when not in use. If the Contractor elects to work at more locations than can be protected with the MAs provided, the Contractor must supply the additional MAs at their expense.

2. Follow the load restriction staging on the bridge per plans and/or special provision.

3. Provide \_\_\_\_ 28 days minimum for curing concrete prior to application of concrete surface coating, concrete healer sealer, or thin epoxy overlays.

4. Utilize Temporary Concrete Barrier to protect all Temporary Supports adjacent to active traffic.

5. The following bridge work items are designated night work. This list does not restrict other work from taking place at night, and additional work items may be required to take place at night per other restrictions and requirements:

A. Demolition work.

B. Bridge deck pour.

C. Concrete bridge deck overlays.

D. Girder erection.

E. Structural steel cleaning and coating.

F. Sign cantilevers.

G. Sign trusses.

H. (specify any other items).

**o. Chip Seal.**

1. Use yellow temporary raised pavement markings (tabs) for chip seal to mark a temporary centerline, spaced at 25 foot intervals. Use double tabs in no passing zones. Verify centerline alignment and adjust, if necessary, as determined by the Engineer, prior to placement of the tabs.

2. Use white tabs for temporary lane line markings in the passing relief lanes, spaced at 25 foot intervals. Verify lane line alignment and adjust, if necessary, as determined by the Engineer, prior to placement of the tabs.

3. Place the tabs inside a lane closure. Maintain the tabs for the duration of the project or until permanent pavement markings are in place, as directed by the Engineer.

4. Place W8-7 (“LOOSE GRAVEL”) signs with W13-1P (ADVISORY SPEED 35 MPH) per subsection 505.03.D of the Standard Specifications for Construction.

**p. Concrete Pavement.**

1. Delineate uncured/open concrete patches, within the work zone, with two channelizing devices meeting *MMUTCD* standards as directed by the Engineer.

2. Use “Concrete Curing” signs when active work is not taking place within lane closures.

3. Set up and maintain daytime lane closures as detailed in section d. Traffic Restrictions for layout. Work includes setup, maintenance, and removal of all traffic control devices necessary for the closures. Coordinate with the Engineer on the location, length, and duration of each lane closure.

**q. Traffic Control Devices.** Ensure all traffic control devices are in accordance with the *MMUTCD* and must meet the “acceptable” criteria as defined in the *ATSSA* publication entitled “*Quality Guidelines for Temporary Traffic Control Devices and Features*” at the time of initial deployment and after each major stage change.

1. During non-working periods, place applicable advance signs and channelizing devices at specific locations, as directed by the Engineer, at no additional cost to the Department.

2. Notify the Engineer 24 hours in advance of when traffic control devices are being delivered to the project site, to allow for initial inspection of devices to take place.

3. Remove from the project site all traffic control devices (including detour signing) no longer needed for a particular operation and equipment for construction within 14 calendar days of reopening the shoulder/lane/roadway.

4. Channelizing Devices.

A. Ensure all devices have sufficient ballast to prevent moving or tipping. If moving or tipping occurs, place additional ballast, as directed by the Engineer, at no additional cost to the Department. No more than two ballasts are allowed on each channelizing device.

B. Do not use caution tape on channelizing devices for traffic control and/or pedestrian traffic control on this project.

C. Space channelizing devices at X for tapers and X for tangents or tighter as directed by the Engineer.

5. Temporary Signs.

A. Additional W20-1 (ROAD WORK AHEAD) signs are included in the quantities to be placed on all intersecting or adjacent roads where construction activities may be encountered.

B. Place (#) R4-1 (DO NOT PASS) signs, every one-half mile during milling and paving operations.

C. Fabricate, install, and remove temporary sign overlays on existing signs with the pay item for Sign, Type B, Temp, Prismatic, Furn. Attach the overlay in accordance with subsection 812.03.D.2 of the Standard Specifications for Construction.

6. Portable Changeable Message Signs (PCMS’s). Use PCMS’s to warn traffic of upcoming and changing traffic control during the life of the project. Obtain approval from the Engineer for all sign locations.

A. Install PCMS’s and make them operational a minimum of 7 calendar days prior to the start of work, unless otherwise directed by the Engineer. Messages displayed on the PCMS’s must conform to MDOT’s policy on PCMS’s. Notify the Engineer if displaying a different message than those listed below for the project.

B. Do not leave PCMS’s with a blank screen within the clear zone of any roadway at any time. Remove the PCMS or display flashing dots in each corner of the screen when there is no message to display. Update the PCMS messages at the end of each work period to reflect current traffic lane restrictions.

C. Display the following two messages greater than 6 days prior to work/within 6 days prior to work/during work/other.

XXXXXXXX

XXXXXXXX

XXXXXXXX

XXXXXXXX

XXXXXXXX

XXXXXXXX

D. Display the following two messages greater than 6 days prior to work/within 6 days prior to work/during work/other.

XXXXXXXX

XXXXXXXX

XXXXXXXX

XXXXXXXX

XXXXXXXX

XXXXXXXX

E. Display the following two messages greater than 6 days prior to work/within 6 days prior to work/during work/other.

XXXXXXXX

XXXXXXXX

XXXXXXXX

XXXXXXXX

XXXXXXXX

XXXXXXXX

**r. Traffic Signals.**

1. Coordinate the removal or modification of existing traffic signals and installation of temporary or permanent signals with the Engineer.

2. Prior to each stage, all temporary and/or permanent traffic signal work necessary for traffic control during that stage must be complete and fully operational.

3. Adjust placement of temporary signal devices in the field, so that opposing traffic can be seen in a stopped condition where possible, as directed by the Engineer.

4. Prior to each stage, cover any signal indications or overhead signing in conflict with traffic movements during that stage. Methods of covering signs and signal indications require approval by the Engineer before placement.

5. If it becomes necessary to perform installation activities in the middle of an intersection where lane closures would be impractical, obtain police assistance. The Engineer will determine the times police assistance may be used at the intersection. Expedite work in the intersection to minimize the time police assistance is required.

**s. Temporary Barrier (TB).**

1. Perform barrier operations such as slip forming or placing temporary concrete barrier with the flow of the traffic. Place the end treatment first when deploying the TB and remove the end treatment last when removing the TB.

2. Do not place TB on slopes that are steeper than 1:10.

3. Place TB in accordance with Standard Plan R-126 Series. At no time will traffic be exposed to the blunt end of TB or permanent barrier wall without proper attenuation.

**t. Mobile Attenuators.**

1. Mobile attenuators (MA’s) have been included in this project.

**u. Temporary Pavement Markings.**

1. Remove conflicting pavement markings, pavement markings in taper/transition areas and other markings as directed by the Engineer, for operations occupying a location longer than 3 days. Durable markings in these areas should be covered rather than be removed.

2. Quantities for temporary tape to be placed during paving operations are based on the MDOT PAVE 900 Series standard plans.

3. When Type R or NR tape is used, ensure that all temporary pavement markings adhere to the pavement surface until permanent markings are installed.

4. Complete temporary pavement markings in each stage prior to shifting traffic as directed by the Engineer.

5. Replace all existing pavement markings that are removed for traffic control or obliterated during construction.

6. Delineate the edge line as show on the plans.

7. Place permanent pavement markings within 1 week of the completion of over-band crack sealing on each section of roadway. If more than 20 percent of the pavement markings are obscured, install permanent pavement markings within (#) hours.

**v. Measurement and Payment.** Payment will be in accordance with the standard specifications unless otherwise specified. No additional payment will be made for the following activities:

1. Transporting traffic control items from site to site.

2. Providing sufficient vehicles and staff to make changes as-needed on site during work.

3. Providing sufficient vehicles and staff to remove closures from the roadway.