

# DIVISION 11

## WORK ZONE TRAFFIC CONTROL

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### SECTION 1101

#### WORK ZONE TRAFFIC CONTROL GENERAL REQUIREMENTS

##### 1101-1 TRANSPORTATION MANAGEMENT PLAN (TMP)

Maintain traffic through work zones in accordance with these Specifications, the MUTCD, *Roadway Standard Drawings*, 23 CFR 630 Subparts J and K and the Transportation Management Plan (TMP).

Below is a list of the possible TMP components:

- (A) Temporary Traffic Control Plan (TTC),
- (B) Transportation Operations Plan (TO), and
- (C) Public Information Plan (PI).

A TMP will always have a TTC component. The TTC will contain the project notes, phasing, detail sheets and other supporting information typically found in a TMP, per *TMP Guidelines* found on the Department's web site.

##### 1101-2 TEMPORARY TRAFFIC CONTROL PLAN (TTC)

###### (A) General

Typically, phasing and drawings govern over project notes, and local notes govern over general notes. If a conflict arises in the TTC, refer to Article 105-4.

###### (B) Phasing

Complete the requirements of each phase before proceeding to the next phase and the requirements of each step before proceeding to the next step, unless the plans permit work to be performed concurrently.

If a TTC phasing is broken into areas, work may be performed in more than one area simultaneously as described in the plan.

###### (C) Project Notes

Two types of project notes may be included in the TTC:

- (1) General Notes apply at all times during the project, and
- (2) Local Notes apply only for the specific times and locations that they are referred to in the phasing and detail sheets.

###### (D) Alternate to Transportation Management Plan

If desired, submit an alternate TMP a minimum of 30 calendar days in advance of the anticipated implementation to allow for adequate review time. Do not implement alternate plans for traffic control until approved in writing and properly sealed. No adjustment in compensation or extension of the completion date(s) will be allowed due to the review time of the alternate. If an alternate TMP is implemented, the Contractor shall be responsible for any unanticipated changes to subsequent phases and steps.

## Section 1101

### 1 (E) Temporary Traffic Control Plan Not Fully Covered in the Contract

2 When the TTC does not cover a particular work function, notify the Engineer to allow for  
3 the development or modification of a sealed set of the Temporary Traffic Control Plans.

### 4 1101-3 BLASTING ZONE

5 When blasting operations are within 1,000 feet of a travelway, provide the appropriate traffic  
6 control as shown in the plans and/or the *Roadway Standard Drawings*.

### 7 1101-4 CONSTRUCTION VEHICLE CROSSINGS

8 Do not cross the median, ramps or loops with vehicles or equipment unless a specific location  
9 for crossing is approved and required traffic control devices are used as shown in the  
10 *Roadway Standard Drawings*.

### 11 1101-5 ON-ROAD CONSTRUCTION VEHICLES

12 When operating outside of a closed lane or haul road crossing in a work zone, on-road  
13 construction vehicles are subject to the Department's Division of Motor Vehicle weight and  
14 safety regulations as commercial vehicles. Work vehicles must always use warning lights  
15 with at least 50% being amber in color attached to the vehicle as high as possible and in a  
16 manner such that they are not obscured by equipment or supplies. Vehicle hazard signals or  
17 lights may be used to supplement this requirement. This requirement applies to all work  
18 vehicles and equipment not inside lane closures or behind barriers. This requirement does not  
19 apply to dump trucks but it is encouraged.

### 20 1101-6 EXCAVATIONS WITHIN TRAVELWAY

21 During the process of excavating in a travelway where traffic is to be later maintained, make  
22 provisions to backfill and repair any excavated or damaged pavement before allowing traffic  
23 to proceed over the affected lanes. In low speed areas (35 mph or less), metal plates may be  
24 used to cover excavated areas.

### 25 1101-7 HAULING OPERATIONS

26 Comply with the multiple and single vehicle hauling restrictions as shown in the TMP when  
27 performing hauling of equipment or materials to or from the project.

28 Define "Multiple Vehicle Hauling" as the hauling of equipment or materials to or from the  
29 project with delivery at intervals of less than 5 minutes or results in more than one vehicle at  
30 a particular work site at a time.

31 Define "Single Vehicle Hauling" as the hauling of equipment or materials to or from the  
32 project with delivery at intervals of more than 5 minutes and results in no more than one  
33 vehicle at a particular work site at a time.

### 34 1101-8 MATERIAL AND EQUIPMENT STORAGE

35 When work is not in progress, keep all personnel, equipment, machinery, tools, construction  
36 debris, materials and supplies at least 40 feet away from active travel lanes. When vehicles,  
37 equipment and materials are protected by concrete barrier or guardrail, they shall be offset at  
38 least 5 feet from the barrier or guardrail.

### 39 1101-9 PARKING OF PERSONAL VEHICLES

40 Provide staging areas for personal vehicle parking a safe distance, at least 40 feet, from open  
41 travel lanes or as directed by the Engineer before use..

### 42 1101-10 PROTECTION OF HAZARDS

43 Mark all hazards with signs, barricades, drums or other warning devices.

44 At each location where work is started which creates a safety hazard, continue the work until  
45 completed to the extent that the safety hazard is eliminated. If the work is not pursued in

1 a continuous manner the Engineer will not allow any other work on the project to be  
2 performed until the existing safety hazard is eliminated.

### 3 **1101-11 TEMPORARY LANE CLOSURES**

#### 4 **(A) General**

5 Operate all equipment and personnel within the designated work area during lane  
6 closures. Do not impede or stop traffic for the purpose of performing construction related  
7 work on the traffic side of the lane closure, except when called for in the TMP.

8 Install lane closures with the traffic flow, beginning with devices on the upstream side of  
9 traffic. Remove lane closures against the traffic flow, beginning with devices on the  
10 downstream side of traffic.

11 Vehicles used to install or remove lane closures shall have vehicle warning lights as  
12 described in 1101-5.

#### 13 **(B) Intersections**

14 When construction proceeds through an intersection, provide flaggers and all other  
15 necessary traffic control as required by the TMP to direct the traffic through the  
16 intersection. When an intersection is signalized, place the signal in flash mode and  
17 provide law enforcement or other adequate traffic control measure to direct traffic  
18 through the intersection before beginning work in the intersection.

### 19 **1101-12 TEMPORARY ROAD CLOSURES**

#### 20 **(A) Traffic Pattern Alterations**

21 Notify the Engineer 30 calendar days before altering the existing traffic pattern, unless  
22 otherwise stated in the TMP.

23 Plan all traffic pattern alterations and meet with the Engineer to discuss the  
24 implementation strategy before altering traffic. The Engineer will notify the proper  
25 authorities and other affected parties as necessary.

#### 26 **(B) Detour**

27 Ensure that all required detour signing and delineation, including work done by others,  
28 are in place before placing traffic onto a detour.

#### 29 **(C) Traffic Stoppage**

30 Limit the stoppage of traffic to times specified in the TMP. Provide time between  
31 consecutive stoppages to allow the traffic queue to deplete.

### 32 **1101-13 TRAFFIC CONTROL SUPERVISION**

33 Provide the service of at least one qualified work zone supervisor. The work zone supervisor  
34 shall have the overall responsibility for the proper implementation of the TMP and ensure all  
35 employees working inside the NCDOT right of way have received the proper training  
36 appropriate to the job decisions each individual is required to make.

37 The work zone supervisor is not required to be on site at all times but shall be available to  
38 address concerns of the Engineer. The name and contact information of the work zone  
39 supervisor shall be provided to the Engineer prior to or at the preconstruction conference.

40 Qualification of work zone supervisors shall be done by an NCDOT approved training agency  
41 or other approved training provider. For a complete listing of these, see the Work Zone  
42 Traffic Control's webpage.

43 Coordinate with and cooperate with work zone supervisors of adjacent or overlapping  
44 construction projects to ensure safe and adequate traffic control is maintained throughout the

**Section 1105**

1 projects at all times including periods of construction inactivity in accordance with  
2 Article 105-7.

3 **1101-14 VEHICULAR ACCESS**

4 Maintain continuous and safe vehicular access, including but not limited to, all residences,  
5 businesses, schools, police and fire stations, hydrants, other emergency services, hospitals and  
6 mailboxes. Conduct operations so as to limit the inconvenience to property owners.

7 **1101-15 PEDESTRIAN ACCESS**

8 Maintain pedestrian access at all times as shown in the TMP. When existing pedestrian  
9 facilities are disrupted, closed or relocated, provide temporary facilities that are detectable and  
10 include accessibility features consistent with the features present in the existing pedestrian  
11 facility. The work zone supervisor is responsible for the implementation of the TMP, and  
12 installation and maintenance of the pedestrian devices. The work zone shall be inspected  
13 weekly or as directed by the Engineer. When pedestrian movement through or around a work  
14 zone is necessary, provide a separate usable footpath. If the previous pedestrian facility was  
15 accessible to pedestrians with disabilities, provide a footpath during temporary traffic control  
16 that is comparable. Do not have any abrupt changes in grade or terrain that could cause a  
17 tripping hazard or could be a barrier to wheelchair use. Provide channelizing devices that are  
18 detectable to pedestrians who have visual disabilities. Provide temporary pedestrian facilities  
19 that are made of concrete, asphalt or other suitable material as approved by the Engineer, at  
20 all locations where the existing sidewalks have been removed for construction operations.

21 Do not sever or move pedestrian facilities for non-construction activities such as parking for  
22 vehicles and equipment. Separate pedestrian movements from both work zone activity and  
23 vehicular traffic.

24 **SECTION 1105**  
25 **TEMPORARY TRAFFIC CONTROL DEVICES**

26 **1105-1 DESCRIPTION**

27 Furnish, install, maintain, relocate and remove temporary traffic control devices. All  
28 temporary traffic control devices furnished by the Contractor shall remain the property of the  
29 Contractor, unless otherwise specified in the contract.

30 **1105-2 MATERIALS**

31 Refer to Division 10.

32 Provide temporary traffic control devices that are listed on the NCDOT Approved Product  
33 List.

34 **1105-3 CONSTRUCTION METHODS**

35 Ensure all temporary traffic control devices are inspected and approved before using them on  
36 the project. Install temporary traffic control devices before construction operations begin and  
37 during the proper phase of construction. Maintain and relocate temporary traffic control  
38 devices during the time they are in use. Keep these devices in place as long as they are  
39 needed and immediately remove thereafter. When operations are performed in stages, install  
40 only those devices that apply to the present conditions.