Index 102-600 and Specification 102
General Information for Traffic Control Through Work Zones

ORIGINATION

Date: 7/20/2022
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COMMENTARY

This redevelopment is part of the phased approach of implementing updates to the Standard Plans, 102 Series. The initial changes occurred with the FY 2021-22 Standard Plans and included redevelopment of all Typical Applications (Indexes 102-601 through 102-680). These changes for FY 2023-24 include consolidation of construction requirements into Specification 102, Material/APL requirements into Specification 990, and design requirements into FDM 240. The Index was reorganized as appropriate to coalesce the remaining information. Updated 'lane widths' requirements to add direction to get concurrence from the Engineer on which lane will be the designated 12' and added 12' minimum lane width for single-lane ramps. Added basic detail for survey signage. Added new posted speed limit signs to reestablish existing posted speed for locations where an existing sign isn't present within 1000'. Added auxiliary lane (turn-lane) closure detail to clarify the layout previously noted on Index 102-615, Sheet 2 & 3.

COMMENTS AND RESPONSES

BLACK = Internal Review Comments **RED** = Standard Plans Response GREEN = Change Made to Index

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Name: Kerrie Harrell
Date: 8/2/2022

COMMENT: For all of the deletions in the Standard Plan that are being moved to a specification, have you considered Maintenance and our Permit offices utilize and reference these standards for work being done in the right of way? A maintenance contractor or developer is not going to be looking in our construction specifications. You need to address this before you delete all of this information from the Standard plan sheets.

RESPONSE: The purpose of the proposed revisions to *Index 102-600* and *Specification 102* is to consolidate materials, operational, workmanship, and payment requirements into one document. Currently, these documents contain a blend of information which is sometimes redundant, inconsistent, or requires cross-referencing to know all of the requirements for a specific topic. There is also currently information that is only found in the *Specifications* that must be followed by both Construction and Maintenance (e.g., *MUCTD* referencing for flagging procedures, vehicle and equipment visibility, traffic control officers, and device requirements).

All of the Department's *Standard Plans* are intended to work hand-in-hand with the *Specifications*. This is not unique to Temporary Traffic Control (TTC/MOT). For any work performed under maintenance

contract or permit on the State Highway System; the materials and workmanship must meet FDOT *Standard Plans and Specifications*. By Contract, all maintenance personal must follow the requirements of the *Standard Specifications* and when appropriate the ***Maintenance Special Provisions***. Florida Statutes and Rules require permittees to also follow Standards and Specifications (e.g., *Rule 14-96*, *State Highway System Connection Permits*, references both the Standards and Specifications). Additionally, Utilities are controlled by the *2017 UAM*, which specifically references the *2016 Design Standards* for TTC/MOT requirements. Modifications to the *UAM* will be needed in a future revision, if the current *Standard Plans* are adopted.

There are a number of operational and device requirements that are only found in the Specifications; therefore, all work forces will need to become familiar with both documents. This is true now but will be reinforced as part of the changes to *Index 102-600* and *Specification 102*. This is a cultural shift as it relates to TTC/MOT. The *Standard Plans* have been viewed as a "one-stop" shop for TTC/MOT for quite some time and we understand there will be a learning curve.

Change made to Specification: To aid Maintenance and Permits, and as previously agreed upon through coordination with the State and District Maintenance Offices, a standalone ***Maintenance Special Provisions*** for *Specification 102* will be created. This will give maintenance personnel and permittees the ability to retrieve and print a complete copy of *Specification 102* (with all maintenance special provisions included) to accompany their copy of the *Standard Plans*.

Response Date: 8/3/2022

Name: Michael Drew
Date: 7/26/2022

COMMENT: Current Sheet 3 of 11: if an additional speed limit sign instructing drivers to get back up to speed is being added it seems unnecessary considering Contractor's will have to identify locations of existing speed limit signs outside of work zones. A Contractor could be held liable if a sign, outside of the work zone, is hit/damaged requiring this added speed limit sign to be installed, without knowledge, because the distance to the next speed limit sign is more than 1,000 feet. Also, there could be confusion if a speed limit at the beginning of the project is different than the speed limit sign through the project or after the project. A regulatory sign that says END REDUCED SPEED would be a better option.

RESPONSE: Returning traffic to the original posted speed after the work zone is an existing FDOT Policy. If a sign is not added, the regulatory speed will be the 'work zone speed' until the next 'existing speed limit' sign is reached. The addition of sign will reestablish the existing posted speed limit in locations where the next speed limit sign may be a considerable distance from the work area. Contractors are not liable for signs outside the project limits. The proposed sign was reviewed, and its agreed that a "End Work Zone Speed Limit" would also be acceptable.

Change made to Index: Changed SPEED LIMIT sign (R2-1) to END WORK ZONE SPEED LIMIT sign (R2-12). Changed Note 8 to have the SPEED LIMIT sign (R2-1) be optional instead of the END WORK ZONE SPEED LIMIT SIGN (R2-12).

Response Date: 7/27/2022

Name: David Zeller
Date: 7/21/2022

COMMENT: Please consider the following suggestion regarding Work Zone Speed Reduction signing: On Sheet 3 of Index 102-600, add a G20-5aP WORK ZONE plaque above the SPEED LIMIT sign to emphasize that a reduced speed limit is in effect within a TTC zone. Please refer to MUTCD Sec. 6F.12

RESPONSE: The Department has already standardized to the use of the W3-5, work zone speed reduction ahead message sign. The G20-5aP plaque may be added in accordance with the MUTCD at the option of the Designer, Engineer, or Contractor, but will not be standardized at this time.

Response Date: 7/27/2022

Name: K.C. Jose
Date: 7/25/2022

COMMENT: TCOPs staff have reviewed the subject topic and offer few comments (K.C. Jose and Marla Hewson)

1. **Sheet 2/11** of existing Redline draft - Definition of "Travel way" is missing in the Draft sheet 2/10. – It's suggested to retain the definition of Travel way.

   RESPONSE: Work zone Traveled Way definition is included in *Section 102-5.13* of the proposed *FY 2023-24 Standard Specifications*.

2. "Above ground hazard" definition is deleted- It's suggested to retain this, as MOT managing crew usually have copies of Standard plan pages, but they rarely carry the Spec book with them. We cannot expect the crew to be so diligent and pick on the spec book to refer.

   RESPONSE: Aboveground Hazard is defined in *Section 102-5.14* of the proposed *FY 2023-24 Standard Specifications*. Also, please see Response to Comment above from Kerrie Harrell.

3. **Sheet 5/11** of existing Redline draft- It's suggested to retain the notes 1, 2 and 12 for reasons stated above in 2.

   RESPONSE: All of the notes removed from Sheet 5 are requirements of U-Channel posts to be included on the APL. Therefore, they have been appropriately moved to *Specification 990*. The only requirement relevant to construction or maintenance activities is that sign posts be installed in accordance with the details on Index 102-600, Sheet 5 and the APL.

4. **Sheet 6/11** of existing Redline draft- It's suggested to retain notes 1 and 2 (regarding 48"x48" size and fluorescent color) for reasons stated in 2.

   RESPONSE: Fluorescent orange is a requirement for the sign sheeting to be on the APL and is covered in *Specification 990-8.3*.

5. **Sheet 9/11** of existing Redline draft: Typical entrance to a 4 lane divided highway is shown. It's suggested to depict an illustration for a 2-way 2 lane roadway as well

   RESPONSE: The business entrance channelization and signage would be the same for both scenarios.

Response Date: 7/27/2022

Name: Erik B. Johnson
Date: 7/26/2022

COMMENT: With respect to the milled surface language addition to current SS 102-5.2, to be renumbered as 102-5.3, is there a maximum duration that this milled surface will be allowed or is there another SS or FDM language that will apply to this temporary surface? Suggest changing the language to "When a milled surface will be opened to traffic in accordance with section 327-3, place a "Grooved Pavement" sign (W8-15) with a "Motorcyclists" plaque (W8-15P) 500 feet in advance of the milled surface". This way there no room for interpretation on the application of this "milled surface", now being called out in the Maintenance of Roadway Section 102, such as for use in temporary permanent condition to remove Conflicting Pavement Markings between phases

RESPONSE: Agreed, the language will be updated to avoid misinterpretation.

Change made to Specification: Edited language in Specification to reflect comment.

Response Date: 7/27/2022

Name: Ananth Prasad
Date: 7/25/2022

COMMENT:

1. Proposed language in 102-5.5 Crossings and Intersections "Traffic control devices at intersections must provide sight distances for the road user to perceives potential conflicts and to traverse the intersection safely" is very vague and ambiguous. How does a contractor determine if they are meeting this spec language?

   RESPONSE: There is no change in existing language or policy. This was previously stated on *Standard Plan 102-600, Sheet 2* and was consolidated with *Specification 102.5*.

2. Same issue with 102-5.8 Flagger "Flagger must be positioned to maintain maximum contrast between the Flagger's high-viability safety apparel and equipment, and the work are background". How would a contractor or anyone for that matter know that they are meeting this spec fully?

   RESPONSE: There is no change in existing language or policy. This was previously stated on *Standard Plan 102-600, Sheet 4* and was consolidated with *Specification 102.5.8*.

3. 102-9.2.1 and 102-9.2.2. This continues the requirement that signs be posted if in place for more than 24 hours. We have talked at length during MOT committee meetings about allowing detour signs to be placed on portables for operations less than 3 days. Seems like a good time to amend the spec to allow for this

   RESPONSE: The request will be reviewed with the State Construction Office for consideration in the final draft.

Response Date: 7/27/2022

Name: Jenifer Olsen
Date: 7/27/2022

COMMENT: The following are my comments on the proposed revisions to the Standard Plans 102-600 internal review.
RAILROADS
Recommend that the note on 102-600 sheet 2 of 11 remain. The note being removed is not covered in Standard Specification 7-11.4. The note describes the need to evaluate the traffic controls to reduce queuing on the tracks. *The evaluation should include as a minimum: traffic volumes, distance from the tracks to the intersections, lane closure or taper locations, signal timing etc.*
Standard Specification 7-11.4 talks about construction equipment or devices on RR ROW and the need for a railroad flagger. It does not address the safety issue of a TTC set up that is technically correct but leaves traveling vehicles on the tracks during congestion. The WTS should be checking their TTC to make sure that vehicles are not left on the tracks.

FLORIDA DESIGN MANUAL (FDM)
In the redline document, there were several references to the requirements for the user to use the FDM for information. The FDM is not referenced in the standard specifications (did a word search) nor is it listed in Standard Specification 5-2 and would not be considered part of the contract document.

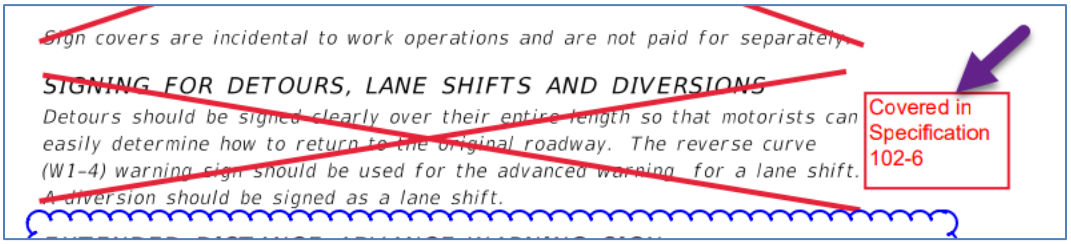
RESPONSE: It is not the responsibility of the Contractor to analysis traffic volumes, signal timing, etc. The evaluation described in the note should be done during the design phase of the project and the Temporary Traffic Control Plans should adequately address any provisions needed prevent traffic queues on railroad tracks. The policy to covered in FDM 240. Any changes to the TTCP by the contractor would require them to follow the FDM and provide a Signed and Sealed ATCP. *Specification 7-11.4* covers all other coordination requirements.

Response Date: 7/27/2022

Name: Edgar Muñoz
Date: 7/27/2022

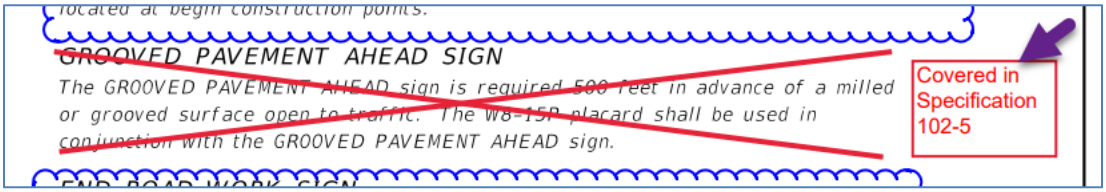
COMMENT:

1. Sheet 4 of 11:
   This information regarding the Signing for the Detour, Lane Shift and diversions is not currently in Spec 102-6. Will it be added?



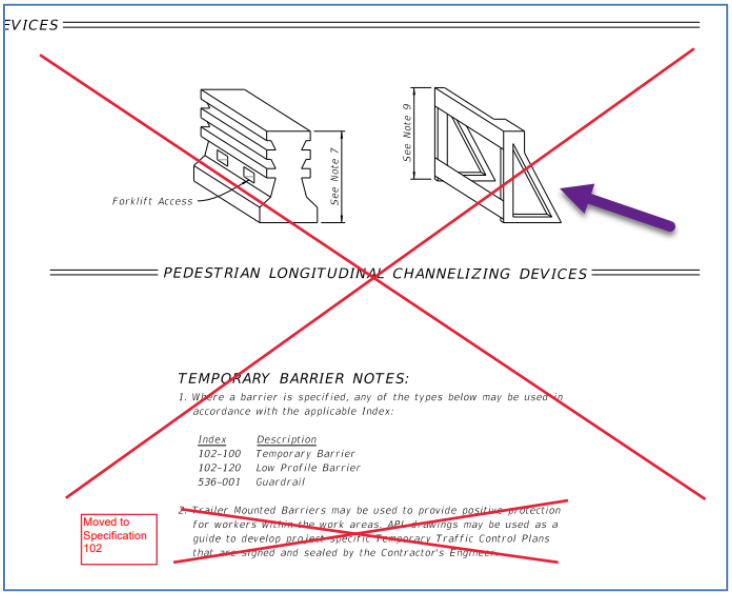
RESPONSE: Signing detours is the responsibility of designer developing the TTC Plans and should follow the requirements of the *MUTCD* and *FDM 240*. This language was deleted. Information relevant to the Contractor concerning Detours is covered in *Specification 102-6*.

2. Sheet 4 of 11:
   The information for the signing ahead of grooved or milled pavement is not in the specifications 102-5.

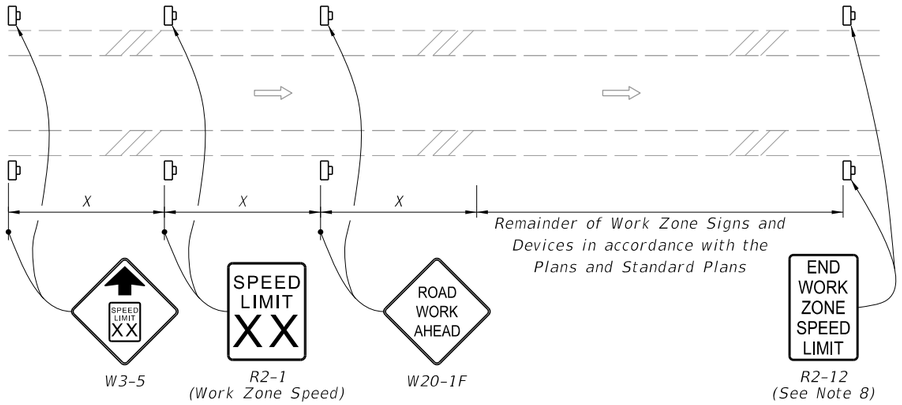


RESPONSE: This language is being added to Specification 102-5.3 (Maintenance of Roadway Surface). Please refer to draft *Specification 102* revisions.

3. Sheet 10 of 11,
   This diagram does not serve a purpose at this time because it does not have any measurements. However, instead of deleting this, it should be better to keep them and add dimensions.
   The other barriers are in the index with dimensions.



RESPONSE: The details were removed because the LCD dimensional requirements now prescribed in *Specification 990* and are requirements for the devices to be listed on the APL. Referencing the APL would be a better source of information. No LCD looks like the illustration on the left and many others are not consistent with the illustration on the right. For these reasons they were removed. For the other devices shown on the Sheet 10, the dimensions are used define products acceptance on the APL and the details consistently depict those devices.

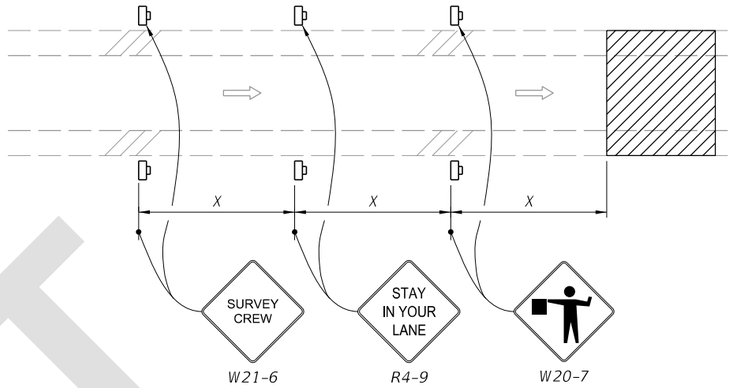


W3-5 | R2-1 (Work Zone Speed) | W20-1F | R2-12 (See Note 8)

NOTES:

1. X = Work Zone Sign Spacing
2. When called for in the Plans, use this detail in accordance with the Plans and Standard Plans. Place the speed reduction signs (W3-5 and R2-1) in advance of the ROAD WORK AHEAD sign (W20-1F) as shown.
3. Do not use this detail in conjunction with the Motorist Awareness System.
4. For speed reductions greater than 10 MPH, reduce the speed in 10 MPH increments of 'X' distance. Do not reduce the speed below the minimum statutory speed for the class of facility.
5. Place additional SPEED LIMIT signs (R2-1) at intervals of no more than one mile for rural conditions and 1,000 feet for urban conditions.
6. For undivided roadways, omit the signs shown in the median.
7. Remove temporary regulatory speed signs as soon as the conditions requiring the reduced speed no longer exist. Once the work zone regulatory speeds are removed, the regulatory speed existing prior to construction will automatically go back into effect.
8. The END WORK ZONE SPEED LIMIT sign (R2-12) may be omitted when there is an existing SPEED LIMIT sign (R2-1) within "X" distance after the last channelizing device or last Work Zone sign. Optionally, a SPEED LIMIT sign (R2-1) with the existing posted speed may be used instead of the END WORK ZONE SPEED LIMIT sign (R2-12).

SPEED REDUCTION SIGNING



W21-6 | R4-9 | W20-7

NOTES:

1. The SURVEY CREW sign may replace the ROAD WORK AHEAD sign at the discretion of the Party Chief where lane closures occur.
2. When Traffic Control Through Work Zones is being used for survey purposes only, the END ROAD WORK sign as called for on certain 102 Series of Indexes should be omitted.
3. When surveying between active traffic lanes or shared left turn lanes, the following provisions apply to Main Roadway Traffic Control Work Zones. These provisions must be adjusted by the Party Chief to fit roadway and traffic conditions when the Survey Work Zone includes intersections.
   A. Add a STAY IN YOUR LANE (MOT-1-06) sign to the Advance Warning Sign sequence as the second most immediate sign from the work area.
   B. Elevation Surveys: Cones may be used at the discretion of the Party Chief to protect prism holder and flagger(s). Cones, if used, may be placed at up to 50' intervals along the break line throughout the work zone.
   C. Horizontal Control: Use cones to protect the backsite tripod or instrument when survey crew members are working between traffic lanes. When traffic flow is in opposite directions, place cones at the equipment and minimum of 200 feet toward both directions of traffic at a maximum of 50-foot intervals. When traffic is in only one direction, place cones at the equipment and a minimum of 200 feet toward the direction of traffic at a maximum of 50-foot intervals.

SURVEY WORK ZONES

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