

Origination Form

Proposed Revisions to a Standard Plans Index

Originator:	McGinnis, James	Index Number:	102-600
Date:	1/4/2024	Sheet Number(s):	6
E-mail:	James.McGinnis@dot.state.fl.us	Index Title:	General Information for Traffic Control Through Work Zones

Summary of the changes:

Sheet 3: Updated HIGH-VISIBILITY SAFETY APPAREL note to refer to "ANSI/ISEA 107-2015".

Sheet 4: Updated flag color in the Hand-Signaling Devices note to "red or fluorescent orange-red in color".

Sheet 6: Changed the color code of sign W3-5 from "B/O" to "BW/O". Changed W16-1P sign to match MUTCD.

Commentary/Background:

The W3-5 update will provide clarification that the speed limit sign in the center of the TTC Reduced Speed Sign, should be white with black letters, not black letters on an orange background. The note updated and W16-1P change will update the standard to be compliant with the MUTCD 11th edition.

Other Affected Documents/Offices	Person Contacted	Affected (Yes/No)
Other Standard Plans		No
FDOT Design Manual		No
Standard Specifications		No
Basis of Estimates Manual		No
Approved Product List		No
Construction Office		No
Maintenance Office		No

Implementation

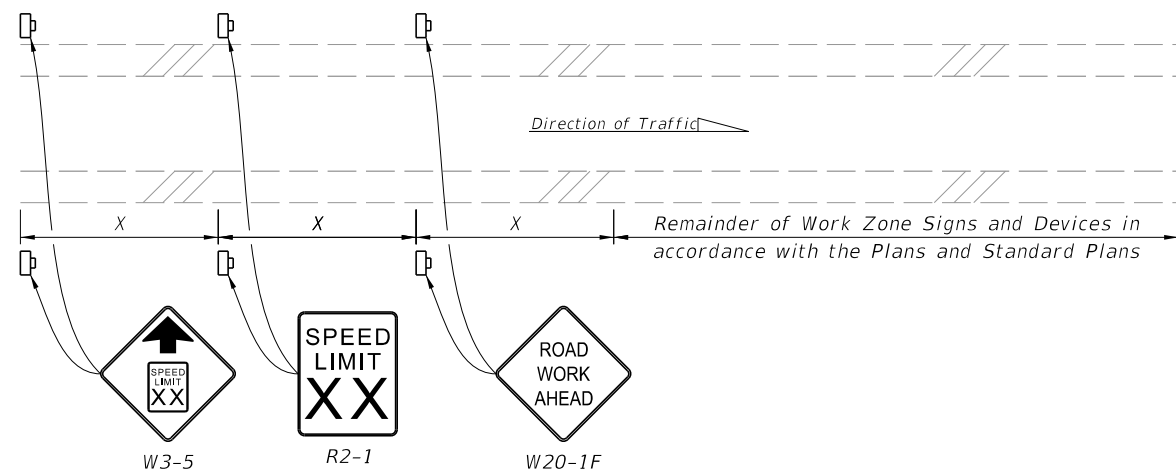
["FY-Standard Plans (Next Release)"]

CLEAR ZONE WIDTHS FOR WORK ZONES:

The term 'clear zone' describes the unobstructed relatively flat area, impacted by construction, extending outward from the edge of the traffic lane. The table below gives clear zone widths in work zones for medians and roadside conditions other than for roadside canals; where roadside canals are present, clear zone widths are to conform with the distances to canals as described in the FDOT Design Manual 215.2.

WORK ZONE SPEED (MPH)	TRAVEL LANES & MULTILANE RAMPS (feet)	AUXILIARY LANES & SINGLE LANE RAMPS (feet)
60-70	30	18
55	24	14
45-50	18	10
30-40	14	10
ALL SPEEDS CURB & GUTTER	4' BEHIND FACE OF CURB	4' BEHIND FACE OF CURB

NOTE: For temporary conditions where existing curb has been removed but not reconstructed, curb and gutter values may be used.



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.

SPEED REDUCTION SIGNING

SUPERELEVATION:

Horizontal curves constructed in conjunction with work zone traffic control should have the required superelevation applied to the design radii. Under conditions where normal crown controls curvature, the minimum radii that can be applied are listed in the table below.

WORK ZONE POSTED SPEED	MINIMUM RADIUS
MPH	feet
70	4090
65	3130
60	2400
55	1840
50	1390
45	1080
40	820
35	610
30	430
Superelevate When Smaller Radii is Used	

OVERWEIGHT/OVERSIZE VEHICLES:

Restrictions to Lane Widths, Heights or Load Capacity can greatly impact the movement of over dimensioned loads. The Contractor shall notify the Engineer who in turn shall notify the State Permits Office, phone no. (850) 410-5777, at least seven calendar days in advance of implementing a maintenance of traffic plan which will impact the flow of overweight/oversized vehicles. Information provided shall include location, type of restriction (height, width or weight) and restriction time frames. When the roadway is restored to normal service the State Permits Office shall be notified immediately.

LANE WIDTHS:

Lane widths of through roadways should be maintained through work zone travel ways wherever practical. Provide minimum widths for work zone travel lanes as follows: 11' for Interstate with at least one 12' lane provided in each direction, unless formally excepted by the Federal Highway Administration; 11' for all other limited access roadways; and 10' for all other facilities.

HIGH-VISIBILITY SAFETY APPAREL:

UPDATED:107-2015

All high-visibility safety apparel shall meet the requirements of the International Safety Equipment Association (ISEA) and the American National Standards Institute (ANSI) for "High-Visibility Safety Apparel", and labeled as ANSI/ISEA 107-2004 or newer. The apparel background (outer) material color shall be either fluorescent orange-red or fluorescent yellow-green as defined by the standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. Class 3 apparel may be substituted for Class 2 apparel. Replace apparel that is not visible at 1,000 feet.

WORKERS: All workers within the right-of-way shall wear ANSI/ISEA Class 2 apparel. Workers operating machinery or equipment in which loose clothing could become entangled during operation shall wear fitted high-visibility safety apparel. Workers inside the bucket of a bucket truck are not required to wear high-visibility safety apparel.

UTILITIES: When other industry apparel safety standards require utility workers to wear apparel that is inconsistent with FDOT requirements such as NFPA, OSHA, ANSI, etc., the other standards for apparel may prevail.

FLAGGERS: For daytime activities, Flaggers shall wear ANSI/ISEA Class 2 apparel. For nighttime activities, Flaggers shall wear ANSI/ISEA Class 3 apparel.

LENGTH OF LANE CLOSURES:

For interstates and state highways with a posted speed of 55MPH or greater, lane closures must not exceed 3 miles (includes taper, buffer, and work zone) in any given direction and must not close two consecutive interchanges.

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FLAGGER CONTROL:

Regulatory Speed (In Work Zones)

Where flaggers are used, a FLAGGER symbol or legend sign must replace the WORKERS symbol or legend sign.

The flagger must be clearly visible to approaching traffic for a distance sufficient to permit proper response by the motorist to the flagging instructions, and to permit traffic to reduce speed or to stop as required before entering the work site. Flaggers shall be positioned to maintain maximum color contrast between the Flagger's high-visibility safety apparel and equipment and the work area background.

Hand-Signaling Devices

STOP/SLOW paddles are the primary hand-signaling device. The STOP/SLOW paddle shall have an octagonal shape on a rigid handle. If the STOP/SLOW paddle is placed on a rigid staff, the minimum length of the staff, measured from the bottom of the paddle to the end of the staff that rests on the ground, must not be less than 6 ft. STOP/SLOW paddles shall be at least 24 inches wide with letters at least 6 inches high and should be fabricated from light semirigid material. The background of the STOP face shall be red with white letters and border. The background of the SLOW face shall be orange with black letters and border. When used at night-time, the STOP/SLOW paddle shall be retroreflectorized.

Flag use is limited to immediate emergencies, intersections, and when working on the centerline or shared left turn lanes where two (2) flaggers are required and there is opposing traffic in the adjacent lanes. Flags, when used, shall be a minimum of 24 inches square, ~~made of a good grade of red material~~, and securely fastened to a staff that is approximately 36 inches in length. When used at nighttime, flags shall be retroreflectorized red.

UPDATED: red or fluorescent orange-red in color

Flashlight, lantern or other lighted signal that will display shall be used at night.

Flagger Stations

Flagger stations shall be located far enough in advance of the work area so that approaching road users will have sufficient distance to stop before entering the work area. When used at nighttime, the flagger station shall be illuminated.

SURVEY WORK ZONES:

The SURVEY CREW AHEAD symbol or legend sign shall be the principal Advance Warning Sign used for Traffic Control Through Survey Work Zones and may replace the ROAD WORK AHEAD sign when lane closures occur, at the discretion of the Party Chief.

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.

Survey 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) A STAY IN YOUR LANE (MOT-1-06) sign shall be added 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.

SURVEY WORK ZONES: (Cont.)

(C) Horizontal Control-With traffic flow in the same direction, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' towards the flow of traffic.

(D) Horizontal Control-With traffic flow in opposite directions, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' in both directions towards the flow of traffic.

SIGNS:

SIGN MATERIALS

Mesh signs and non-retroreflective vinyl signs may only be used for daylight operations. Non-retroreflective vinyl signs must meet the requirements of Specifications Section 994.

Retroreflective vinyl signs meeting the requirements of Specification Section 994 may be used for daylight or night operations not to exceed 1 day except as noted in the Indexes.

Rigid or Lightweight sign panels may be used in accordance with the vendor APL drawing for the sign stand to which they are attached.

INTERSECTING ROAD SIGNING

Signing for the control of traffic entering and leaving work zones by way of intersecting crossroads shall be adequate to make drivers aware of work zone conditions. When Work operations exceed 60 minutes, place the ROAD WORK AHEAD sign on the side street entering the work zone.

ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING

Adjoining work zones may not have sufficient spacing for standard placement of signs and other traffic control devices in their advance warning areas or in some cases other areas within their traffic control zones. Where such restraints or conflicts occur or are likely to occur, one of the following methods will be employed to avoid conflicts and prevent conditions that could lead to misunderstanding on the part of the traveling public as to the intended travel way by the traffic control procedure applied:

(A) For scheduled projects the engineer in responsible charge of project design will resolve anticipated work zone conflicts during the development of the project traffic control plan. This may entail revision of plans on preceding projects and coordination of plans on concurrent projects.

(B) Unanticipated conflicts arising between adjoining in progress highway construction projects will be resolved by the Resident Engineer for projects under his residency, and, by the District Construction Engineer for in progress projects under adjoining residencies.

(C) The District Maintenance Engineer will resolve anticipated and occurring conflicts within scheduled maintenance operations.

(D) The Unit Maintenance Engineer will resolve conflicts that occur within routine maintenance works; between routine maintenance work, unscheduled work and/or permitted work; and, between unit controlled maintenance works and highway construction projects.

SIGNS: (Cont.)

SIGN COVERING AND INTERMITTENT WORK STOPPAGE SIGNING

Existing or temporary traffic control signs that are no longer applicable or are inconsistent with intended travel paths shall be removed or fully covered.

Sign blanks or other available coverings must completely cover the existing sign. Rigid sign coverings shall be the same size as the sign it is covering, and bolted in a manner to prevent movement.

Sign covers are incidental to work operations and are not paid for separately.

SIGNING FOR DETOURS, LANE SHIFTS AND DIVERSIONS

Detours should be signed clearly over their entire length so that motorists can easily determine how to return to the original roadway. The reverse curve (W1-4) warning sign should be used for the advanced warning for a lane shift. A diversion should be signed as a lane shift.

EXTENDED DISTANCE ADVANCE WARNING SIGN

Advance Warning Signs shall be used at extended distance of one-half mile or more when limited sight distance or the nature of the obstruction may require a motorist to bring their vehicle to a stop. Extended distance Advanced Warning Signs may be required on any type roadway, but particularly be considered on multilane divided highways where vehicle speed is generally in the higher range (45 MPH or more).

UTILITY WORK AHEAD SIGN

The UTILITY WORK AHEAD (W21-7) sign may be used as an alternate to the ROAD WORK AHEAD or the ROAD WORK XX FT (W20-1) sign for utility operations on or adjacent to a highway.

LENGTH OF ROAD WORK SIGN

The length of road work sign (G20-1) bearing the legend ROAD WORK NEXT _____ MILES is required for all projects of more than 2 miles in length. The number of miles entered should be rounded up to the nearest mile. The sign shall be located at begin construction points.


GROOVED PAVEMENT AHEAD SIGN

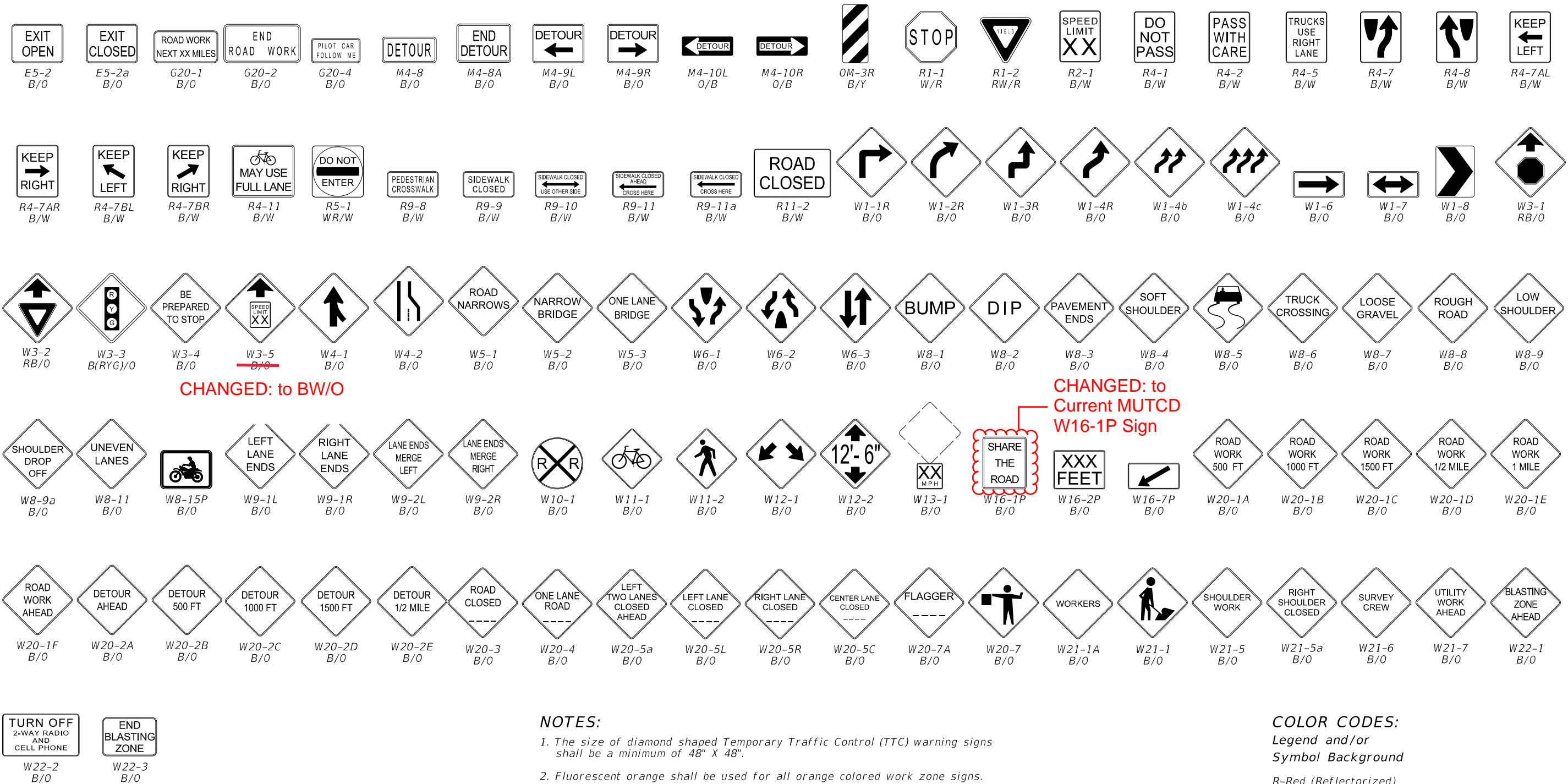
The GROOVED PAVEMENT AHEAD sign is required 500 feet in advance of a milled or grooved surface open to traffic. The W8-15P placard shall be used in conjunction with the GROOVED PAVEMENT AHEAD sign.

END ROAD WORK SIGN

The END ROAD WORK sign (G20-2) should be installed on all projects, but may be omitted where the work operation is less than 1 day. The sign should be placed approximately 500 feet beyond the end of a construction or maintenance project unless other distance is called for in the plans. When other Construction or Maintenance Operations occur within 1 mile this sign should be omitted and signing coordinated in accordance with Index 102-600, ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING.

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CHANGED: to BW/O

CHANGED: to Current MUTCD W16-1P Sign

NOTES:

1. The size of diamond shaped Temporary Traffic Control (TTC) warning signs shall be a minimum of 48" X 48".
 2. Fluorescent orange shall be used for all orange colored work zone signs.
 3. The sign shields, symbols and messages contained on this sheet are provided for ready reference to those signs used in the development of the 102 Series of Indexes and are commonly used in the development of traffic control plans. For additional signs and sign detail information refer to the STANDARD HIGHWAY SIGNS MANUAL as specified in the MUTCD. Special signs for traffic control plans will be as approved by the State Traffic Plans Engineer.
- The sign codes shown on this sheet are for the purpose of identifying cell names found in the Traffic Control Cell Library (TCZ.Cel).
- The STANDARD HIGHWAY SIGNS MANUAL should be referenced for the official sign codes for use in the development of traffic control plans.
- See Index 700-102 for MOT sign details.


COLOR CODES:

- Legend and/or Symbol Background
- R-Red (Reflectorized)
 - Y-Yellow (Reflectorized)
 - G-Green (Reflectorized)
 - O-Orange (Reflectorized)
 - B-Black (Non-Reflectorized)
 - W-White (Reflectorized)

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COMMONLY USED WARNING AND REGULATORY SIGNS IN WORK ZONES

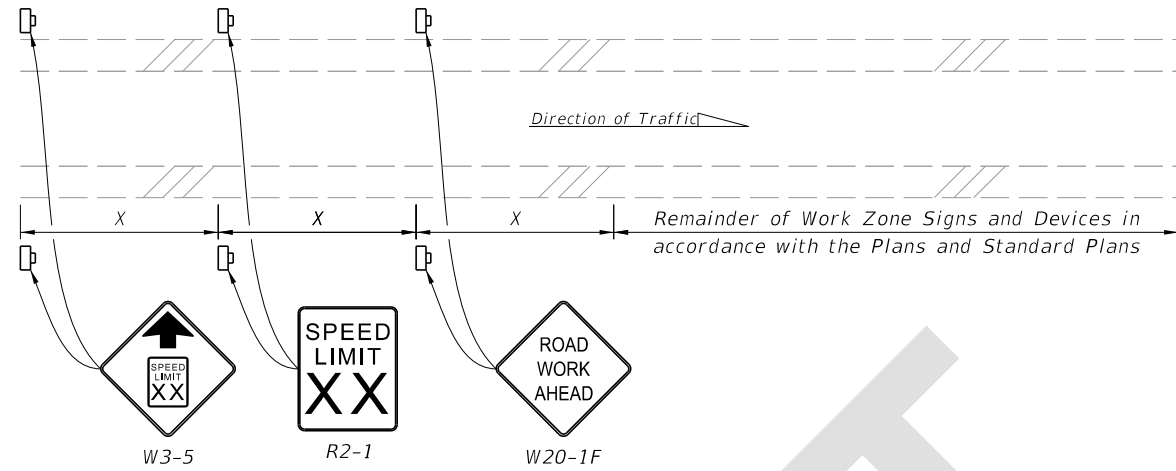
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CLEAR ZONE WIDTHS FOR WORK ZONES:

The term 'clear zone' describes the unobstructed relatively flat area, impacted by construction, extending outward from the edge of the traffic lane. The table below gives clear zone widths in work zones for medians and roadside conditions other than for roadside canals; where roadside canals are present, clear zone widths are to conform with the distances to canals as described in the FDOT Design Manual 215.2.

WORK ZONE SPEED (MPH)	TRAVEL LANES & MULTILANE RAMPS (feet)	AUXILIARY LANES & SINGLE LANE RAMPS (feet)
60-70	30	18
55	24	14
45-50	18	10
30-40	14	10
ALL SPEEDS CURB & GUTTER	4' BEHIND FACE OF CURB	4' BEHIND FACE OF CURB

NOTE: For temporary conditions where existing curb has been removed but not reconstructed, curb and gutter values may be used.



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.

SPEED REDUCTION SIGNING

SUPERELEVATION:

Horizontal curves constructed in conjunction with work zone traffic control should have the required superelevation applied to the design radii. Under conditions where normal crown controls curvature, the minimum radii that can be applied are listed in the table below.

WORK ZONE POSTED SPEED	MINIMUM RADIUS
MPH	feet
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50	1390
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35	610
30	430
Superelevate When Smaller Radii is Used	

OVERWEIGHT/OVERSIZE VEHICLES:

Restrictions to Lane Widths, Heights or Load Capacity can greatly impact the movement of over dimensioned loads. The Contractor shall notify the Engineer who in turn shall notify the State Permits Office, phone no. (850) 410-5777, at least seven calendar days in advance of implementing a maintenance of traffic plan which will impact the flow of overweight/oversized vehicles. Information provided shall include location, type of restriction (height, width or weight) and restriction time frames. When the roadway is restored to normal service the State Permits Office shall be notified immediately.

LANE WIDTHS:

Lane widths of through roadways should be maintained through work zone travel ways wherever practical. Provide minimum widths for work zone travel lanes as follows: 11' for Interstate with at least one 12' lane provided in each direction, unless formally excepted by the Federal Highway Administration; 11' for all other limited access roadways; and 10' for all other facilities.

HIGH-VISIBILITY SAFETY APPAREL:

All high-visibility safety apparel shall meet the requirements of the International Safety Equipment Association (ISEA) and the American National Standards Institute (ANSI) for "High-Visibility Safety Apparel", and labeled as ANSI/ISEA 107-2015 or newer. The apparel background (outer) material color shall be either fluorescent orange-red or fluorescent yellow-green as defined by the standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. Class 3 apparel may be substituted for Class 2 apparel. Replace apparel that is not visible at 1,000 feet.

WORKERS: All workers within the right-of-way shall wear ANSI/ISEA Class 2 apparel. Workers operating machinery or equipment in which loose clothing could become entangled during operation shall wear fitted high-visibility safety apparel. Workers inside the bucket of a bucket truck are not required to wear high-visibility safety apparel.

UTILITIES: When other industry apparel safety standards require utility workers to wear apparel that is inconsistent with FDOT requirements such as NFPA, OSHA, ANSI, etc., the other standards for apparel may prevail.

FLAGGERS: For daytime activities, Flaggers shall wear ANSI/ISEA Class 2 apparel. For nighttime activities, Flaggers shall wear ANSI/ISEA Class 3 apparel.

LENGTH OF LANE CLOSURES:

For interstates and state highways with a posted speed of 55MPH or greater, lane closures must not exceed 3 miles (includes taper, buffer, and work zone) in any given direction and must not close two consecutive interchanges.

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FLAGGER CONTROL:

Regulatory Speed (In Work Zones)

Where flaggers are used, a FLAGGER symbol or legend sign must replace the WORKERS symbol or legend sign.

The flagger must be clearly visible to approaching traffic for a distance sufficient to permit proper response by the motorist to the flagging instructions, and to permit traffic to reduce speed or to stop as required before entering the work site. Flaggers shall be positioned to maintain maximum color contrast between the Flagger's high-visibility safety apparel and equipment and the work area background.

Hand-Signaling Devices

STOP/SLOW paddles are the primary hand-signaling device. The STOP/SLOW paddle shall have an octagonal shape on a rigid handle. If the STOP/SLOW paddle is placed on a rigid staff, the minimum length of the staff, measured from the bottom of the paddle to the end of the staff that rests on the ground, must not be less than 6 ft. STOP/SLOW paddles shall be at least 24 inches wide with letters at least 6 inches high and should be fabricated from light semirigid material. The background of the STOP face shall be red with white letters and border. The background of the SLOW face shall be orange with black letters and border. When used at night-time, the STOP/SLOW paddle shall be retroreflectorized.

Flag use is limited to immediate emergencies, intersections, and when working on the centerline or shared left turn lanes where two (2) flaggers are required and there is opposing traffic in the adjacent lanes. Flags, when used, shall be a minimum of 24 inches square, red or fluorescent orange-red in color, and securely fastened to a staff that is approximately 36 inches in length. When used at nighttime, flags shall be retroreflectorized.

Flashlight, lantern or other lighted signal that will display a red warning light shall be used at night.

Flagger Stations

Flagger stations shall be located far enough in advance of the work area so that approaching road users will have sufficient distance to stop before entering the work area. When used at nighttime, the flagger station shall be illuminated.

SURVEY WORK ZONES:

The SURVEY CREW AHEAD symbol or legend sign shall be the principal Advance Warning Sign used for Traffic Control Through Survey Work Zones and may replace the ROAD WORK AHEAD sign when lane closures occur, at the discretion of the Party Chief.

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.

Survey 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) A STAY IN YOUR LANE (MOT-1-06) sign shall be added 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.

SURVEY WORK ZONES: (Cont.)

(C) Horizontal Control-With traffic flow in the same direction, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' towards the flow of traffic.

(D) Horizontal Control-With traffic flow in opposite directions, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' in both directions towards the flow of traffic.

SIGNS:

SIGN MATERIALS

Mesh signs and non-retroreflective vinyl signs may only be used for daylight operations. Non-retroreflective vinyl signs must meet the requirements of Specifications Section 994.

Retroreflective vinyl signs meeting the requirements of Specification Section 994 may be used for daylight or night operations not to exceed 1 day except as noted in the Indexes.

Rigid or Lightweight sign panels may be used in accordance with the vendor APL drawing for the sign stand to which they are attached.

INTERSECTING ROAD SIGNING

Signing for the control of traffic entering and leaving work zones by way of intersecting crossroads shall be adequate to make drivers aware of work zone conditions. When Work operations exceed 60 minutes, place the ROAD WORK AHEAD sign on the side street entering the work zone.

ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING

Adjoining work zones may not have sufficient spacing for standard placement of signs and other traffic control devices in their advance warning areas or in some cases other areas within their traffic control zones. Where such restraints or conflicts occur or are likely to occur, one of the following methods will be employed to avoid conflicts and prevent conditions that could lead to misunderstanding on the part of the traveling public as to the intended travel way by the traffic control procedure applied:

(A) For scheduled projects the engineer in responsible charge of project design will resolve anticipated work zone conflicts during the development of the project traffic control plan. This may entail revision of plans on preceding projects and coordination of plans on concurrent projects.

(B) Unanticipated conflicts arising between adjoining in progress highway construction projects will be resolved by the Resident Engineer for projects under his residency, and, by the District Construction Engineer for in progress projects under adjoining residencies.

(C) The District Maintenance Engineer will resolve anticipated and occurring conflicts within scheduled maintenance operations.

(D) The Unit Maintenance Engineer will resolve conflicts that occur within routine maintenance works; between routine maintenance work, unscheduled work and/or permitted work; and, between unit controlled maintenance works and highway construction projects.

SIGNS: (Cont.)

SIGN COVERING AND INTERMITTENT WORK STOPPAGE SIGNING

Existing or temporary traffic control signs that are no longer applicable or are inconsistent with intended travel paths shall be removed or fully covered.

Sign blanks or other available coverings must completely cover the existing sign. Rigid sign coverings shall be the same size as the sign it is covering, and bolted in a manner to prevent movement.

Sign covers are incidental to work operations and are not paid for separately.

SIGNING FOR DETOURS, LANE SHIFTS AND DIVERSIONS

Detours should be signed clearly over their entire length so that motorists can easily determine how to return to the original roadway. The reverse curve (W1-4) warning sign should be used for the advanced warning for a lane shift. A diversion should be signed as a lane shift.

EXTENDED DISTANCE ADVANCE WARNING SIGN

Advance Warning Signs shall be used at extended distance of one-half mile or more when limited sight distance or the nature of the obstruction may require a motorist to bring their vehicle to a stop. Extended distance Advanced Warning Signs may be required on any type roadway, but particularly be considered on multilane divided highways where vehicle speed is generally in the higher range (45 MPH or more).

UTILITY WORK AHEAD SIGN

The UTILITY WORK AHEAD (W21-7) sign may be used as an alternate to the ROAD WORK AHEAD or the ROAD WORK XX FT (W20-1) sign for utility operations on or adjacent to a highway.

LENGTH OF ROAD WORK SIGN

The length of road work sign (G20-1) bearing the legend ROAD WORK NEXT _____ MILES is required for all projects of more than 2 miles in length. The number of miles entered should be rounded up to the nearest mile. The sign shall be located at begin construction points.


GROOVED PAVEMENT AHEAD SIGN

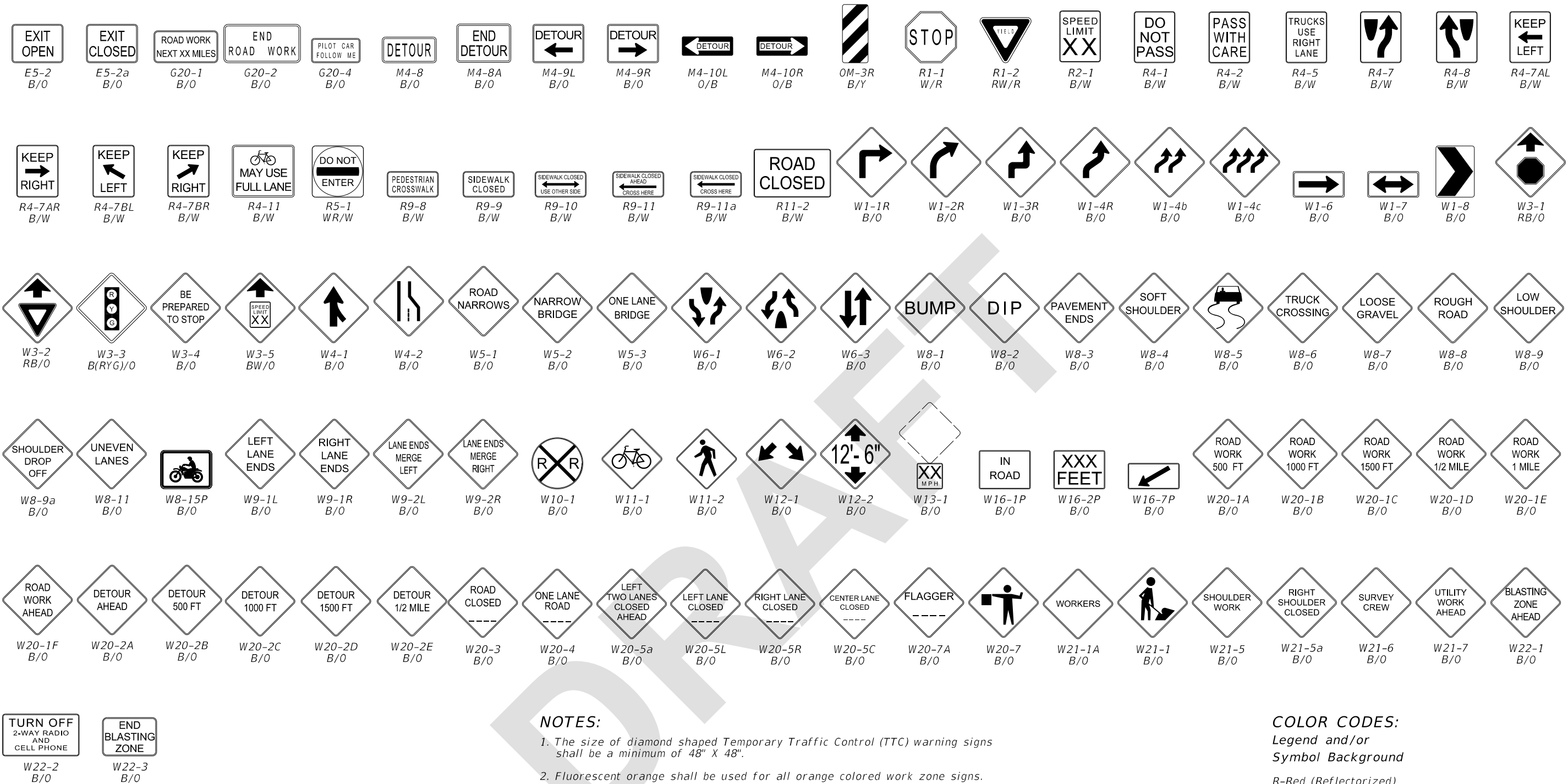
The GROOVED PAVEMENT AHEAD sign is required 500 feet in advance of a milled or grooved surface open to traffic. The W8-15P placard shall be used in conjunction with the GROOVED PAVEMENT AHEAD sign.

END ROAD WORK SIGN

The END ROAD WORK sign (G20-2) should be installed on all projects, but may be omitted where the work operation is less than 1 day. The sign should be placed approximately 500 feet beyond the end of a construction or maintenance project unless other distance is called for in the plans. When other Construction or Maintenance Operations occur within 1 mile this sign should be omitted and signing coordinated in accordance with Index 102-600, ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING.

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NOTES:

1. The size of diamond shaped Temporary Traffic Control (TTC) warning signs shall be a minimum of 48" X 48".
2. Fluorescent orange shall be used for all orange colored work zone signs.
3. The sign shields, symbols and messages contained on this sheet are provided for ready reference to those signs used in the development of the 102 Series of Indexes and are commonly used in the development of traffic control plans. For additional signs and sign detail information refer to the STANDARD HIGHWAY SIGNS MANUAL as specified in the MUTCD. Special signs for traffic control plans will be as approved by the State Traffic Plans Engineer.

The sign codes shown on this sheet are for the purpose of identifying cell names found in the Traffic Control Cell Library (TCZ.Cel).

The STANDARD HIGHWAY SIGNS MANUAL should be referenced for the official sign codes for use in the development of traffic control plans.

See Index 700-102 for MOT sign details.


COLOR CODES:

Legend and/or Symbol Background

- R-Red (Reflectorized)
- Y-Yellow (Reflectorized)
- G-Green (Reflectorized)
- O-Orange (Reflectorized)
- B-Black (Non-Reflectorized)
- W-White (Reflectorized)

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COMMONLY USED WARNING AND REGULATORY SIGNS IN WORK ZONES

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