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_	Computer File Information	4	Sheet Ro	evisions	Colorado Department of Trans	portation	TRAFFIC CONTROLS	STANDARD PLAN NO.
<u> </u>	Creation Date: 07/04/12	. '	Date:	Comments	2829 W. Howard Pl.		FOR HIGHWAY	S-630-1
	Created By: Nakao	R-10	01/20/23 ADD CASE N	IUMBERS 40, 41, AND 42				
	Last Modification Date: 01/20/23	1	MOVED TO S	SHEET 1 UPDATED TABLE	Phone: 303-757-965 FAX: 303-757-9219	-	CONSTRUCTION	Standard Sheet No. 1 of 26
1	Last Modified By: NRIVERA				Traffic Safety & Engineering	EB		
	CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English				Traine Safety & Engineering		Issued By: Traffic Safety & Engineering Branch July 31, 2019	Project Sheet Number:

GENERAL NOTES

- S, INCLUDING BUT NOT LIMITED TO

 II. IF CONSTRUCTION RELATED TRAFFIC CONGESTION BACKS UP BEYOND THE
 INSTALLED ADVANCE SIGN SEQUENCE, ADDITIONAL ADVANCE SIGNING SHALL
 BE PLACED BEYOND THE CONGESTION.

 SE AND RETURNED WHEN REQUIRED,
 - 12. ALL SIGN MATERIAL SHALL BE SOUND AND DURABLE TO THE DEGREE NECESSARY FOR MAINTAINING EFFECTIVE AND NEAT APPEARING TRAFFIC CONTROLS, AND:
 - SIGN PANELS MAY BE FABRICATED FROM PLYWOOD, STEEL, ALUMINUM, OR OTHER SUITABLE MATERIAL.
 - REFLECTIVE SHEETING SHALL CONFORM TO ASTM D4956. THE TYPE SHALL BE AS DESCRIBED IN THE STANDARD SPECIFICATIONS AND/OR AS SHOWN ON THE PLANS.
 - :. SYMBOLS AND LEGEND SHALL BE OF GOOD WORKMANSHIP (UNEVEN OR HAND LETTERING WILL NOT BE ACCEPTED).
 - d. PORTABLE OR TEMPORARY MOUNTING SHALL NOT BE CONSTRUCTED OR WEIGHTED BY ANY METHOD OR MATERIAL THAT MAKES THEM HAZARDOUS TO TRAFFIC.
 - e. CERTAIN POST SIZES AND SHAPES REQUIRE A "BREAK-AWAY" DEVICE.

 SEE THE APPLICABLE STANDARD PLAN. OTHER POST DESIGNS OR

 SYSTEMS REQUIRE THE SUBMITTAL OF AN FHWA LETTER OF ACCEPTANCE
 TO THE ENGINEER, AND MUST BE APPROVED BY THE ENGINEER PRIOR
 TO THEIR USE.
 - ALL CONSTRUCTION SIGN PLACEMENT SHALL BE IN ACCORDANCE WITH STANDARD PLAN "TYPICAL GROUND SIGN PLACEMENT" UNLESS OTHERWISE APPROVED.

SIGNS APPROVED TO BE MOUNTED ON PORTABLE SUPPORTS, OR APPROPRIATE SIGNS MOUNTED ON BARRICADES, MAY BE AT LOWER HEIGHTS, BUT THE BOTTOM OF THE SIGNS SHALL NOT BE LESS THAN ONE FOOT ABOVE THE PAVEMENT ELEVATION.

- 14. SIGNS MOUNTED ON THE MEDIAN OF DIVIDED HIGHWAYS WHERE MEDIAN BARRIER IS IN PLACE MAY BE MOUNTED ON THE BARRIER WITH A SADDLE TYPE BRACKET. IF THE BRACKET ALLOWS THE SIGN PANEL TO BE TURNED PARALLEL TO THE ROADWAY, THE SIGN MAY REMAIN IN PLACE WHEN NOT APPLICABLE, BUT LAYING THE SIGN PANEL DOWN IN A HORIZONTAL POSITION IS NOT PERMITTED.
- 15. TRAFFIC CONES SHALL BE AT LEAST 28 INCHES IN HEIGHT. HOWEVER, THE MINIMUM SIZE SHALL BE 36 INCHES WHEN THEY ARE USED ON FREEWAYS AND EXPRESSWAYS, OR DURING NIGHT TIME WORKING HOURS. THEY SHOULD ALSO BE 36 INCHES WHEN USED ON OTHER HIGH SPEED ROADWAYS (45 MPH OR MORE) WITH AN ADT OF 6,000 OR MORE.
- 16. TYPE 1 BARRICADES SHALL NOT BE USED ON FREEWAYS, EXPRESSWAYS, OR OTHER HIGH SPEED ROADWAYS (55 MPH OR MORE).
- 7. WHEN TWO-WAY TRAFFIC IS PLACED ON ONE ROADWAY OF A NORMALLY DIVIDED HIGHWAY, OPPOSING TRAFFIC SHALL BE SEPARATED EITHER WITH CONCRETE BARRIER (TEMPORARY), OR WITH CHANNELIZING DEVICES APPROVED FOR THIS APPLICATION, THROUGHOUT THE LENGTH OF TWO-WAY OPERATION. THE TRANSITION ZONES SHALL HAVE CONCRETE BARRIER (TEMPORARY). THE BARRIER SHALL BE TIED TO AN EXISTING STRUCTURE OR GUARD RAIL, FLARED OR EXTENDED, TO MEET CLEAR ZONE REQUIREMENTS, OR FITTED WITH AN IMPACT ATTENUATION DEVICE.
- 18. CHANNELIZING DEVICE SPACING, IN FEET, SHALL BE AS FOLLOWS:

 a. FOR TAPERS AND TRANSITIONS, SPACING EQUALS THE

 NUMERICAL VALUE OF THE SPEED LIMIT.

 (e.g. 45 MPH = 45 FEET)
 - FOR TANGENTS ALONG THE BUFFER SPACE OR WORK
 AREA, SPACING MAY NOT BE GREATER THAN TWO TIMES THE
 SPEED LIMIT. (e.q. 50 MPH = 50 FEET TO 100 FEET MAXIMUM)

- FOR DETAILS ON BARRICADES, CONCRETE BARRIER (TEMPORARY), VERTICAL PANELS, AND FLASHING BEACON (PORTABLE), SEE THE APPLICABLE STANDARD PLANS.
- 20. FLAGGER STATION SHALL COMPRISE OF EITHER A FLAGGER OR AN AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD). SEE THE MOST RECENT CDOT STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION FOR ADDITIONAL GUIDANCE REGARDING AFAD.
- 21. FLAGGING OPERATIONS SHALL NOT OVERRIDE VISIBLE REGULATORY SIGNING OR TRAFFIC SIGNALS, EVEN WHEN TRAFFIC SIGNALS HAVE BEEN DISABLED OR SET TO FLASH MODE. ONLY A UNIFORMED POLICE OFFICER MAY DIRECT TRAFFIC IN A SIGNALIZED INTERSECTION. FLAGGING IS NOT PERMITTED ON INTERSTATES UNLESS APPROVED BY THE REGION TRAFFIC ENGINEER.
- 22. FLOOD LIGHTS SHALL BE USED TO ILLUMINATE FLAGGER STATIONS DURING THE HOURS OF DARKNESS UNLESS OTHERWISE APPROVED. A TYPICAL LIGHT SHOULD PROVIDE THE FOLLOWING: A FULLY DIRECTIONAL SWIVEL MOUNT QUARTZ LIGHT SOURCE (500 WATT MINIMUM), SELF-SUPPORTING STAND WITH VARIABLE LIGHT HEIGHT FROM A MINIMUM OF EIGHT FEET ABOVE THE ROADWAY, AND A POWER SOURCE. IT SHALL ILLUMINATE THE STATION AREA AND A FLAGGER ESCAPE PATH, BUT SHALL NOT PRESENT ANY GLARE TO TRAFFIC.
- 23. FOR TEMPORARY PAVEMENT MARKINGS AND CONTROL POINTS FOR INSTALLING THOSE PAVEMENT MARKINGS FOR UNDIVIDED ROADWAYS THAT ARE BEING CONSTRUCTED UNDER TRAFFIC, FULL COMPLIANCE CENTER LINE, LANE LINE, AND EDGE LINE TEMPORARY MARKINGS SHALL BE IN PLACE AT THE END OF EACH WORK DAY IN ACCORDANCE WITH THE MOST RECENT CDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

FOR ADDITIONAL PAVEMENT MARKING DETAILS, SEE STANDARD PLAN S-627-1 "PAVEMENT MARKINGS".

- 24. BUFFER SPACE IS OPTIONAL NEED MUST BE DETERMINED ON A PROJECT OR SITE SPECIFIC BASIS AS DIRECTED BY THE ENGINEER. WHEN A BUFFER SPACE IS USED, DIMENSIONS AND/OR DEVICES USED ARE TO BE INCORPORATED IN THE TRAFFIC CONTROL PLAN (TCP) OR THE CONTRACTOR'S METHOD OF HANDLING TRAFFIC (MHT).
- 25. ADDITIONAL VMS SIGNAGE SHOULD BE CONSIDERED AT LEAST A MILE IN ADVANCE OF THE SIGNING SHOWN IN THE DETAIL FOR ANY LANE CLOSURES ON INTERSTATE AND OTHER HIGH SPEED FACILITIES ESPECIALLY WHEN THE LEVEL OF SERVICE IS SIGNIFICANTLY REDUCED AS A RESULT OF CONSTRUCTION. THE LEGENDS SHOULD BE CHANGED TO ADVISE MOTORISTS OF UPCOMING TRAFFIC CONDITIONS AND TO ALERT THEM OF UPCOMING LANE USAGE.

ADDITIONAL ADVANCE WARNING SIGNAGE IS ENCOURAGED IN ALL CASES WHERE TRAFFIC VOLUMES AND SPEEDS ARE HIGH AND/OR WHERE THERE ARE INFREQUENT EXITS. ADDITIONAL SIGNAGE IS ALSO ENCOURAGED IN LOCATIONS WHERE DRIVERS'LINE OF SIGHT TO ADVANCE WARNING SIGNS IS OBSTRUCTED.

26. WHEN ARROW BOARDS ARE USED TO CLOSE MULTIPLE LANES, A SEPARATE ARROW BOARD SHALL BE USED FOR EACH CLOSED LANE.

IF ARROW BOARDS ARE USED FOR SHOULDER WORK, BLOCKING THE SHOULDER, FOR ROADSIDE WORK NEAR THE SHOULDER, OR FOR TEMPORARILY CLOSING ONE LANE ON A TWO-LANE, TWO-WAY ROADWAY, USE THE ARROW BOARDS ONLY IN THE CAUTION MODE.

- 27. RAISED PAVEMENT MARKERS MAY BE USED TO SUPPLEMENT TEMPORARY STRIPING DURING NON-SNOW PERIODS. THEIR USE IS ENCOURAGED ON HIGHER SPEED FACILITIES WHEN TRAFFIC IS BEING DIVERTED FROM ITS USUAL COURSE.
- 28. THE TYPICAL CASES DEPICTED IN THIS STANDARD REFLECT THE MINIMUM REQUIREMENTS, UNLESS AS OTHERWISE DIRECTED BY THE PROJECT PLANS AND SPECIFICATIONS, AND/OR THE PROJECT ENGINEER.
- 29. A SIGNIFICANT PROJECT IS DEFINED AS ONE THAT, ALONE OR IN COMBINATION WITH OTHER CONCURRENT PROJECTS NEARBY, IS ANTICIPATED TO CAUSE SUSTAINED WORK ZONE IMPACTS AT A LOCATION FOR THREE OR MORE CONSECUTIVE DAYS WITH EITHER INTERMITTENT OR CONTINUOUS LANE CLOSURES.

1.	ALL CONSTRUCTION ZONE TRAFFIC CONTROL DEVICES, INCLUDING BUT NOT LIMITED TO
	BARRICADES, SIGNS, ARROW PANELS, FLASHING BEACON (PORTABLE), AND CHANNELIZING
	DEVICES, SHALL BE FURNISHED, INSTALLED, MAINTAINED (INCLUDING WASHING), REPLACED
	IF DAMAGED, REMOVED WHEN TEMPORARILY NOT IN USE AND RETURNED WHEN REQUIRED,
	RESET AS NECESSARY DURING THE PROGRESS OF CONSTRUCTION, AND REMOVED ENTIRELY
	WHEN THE PROJECT IS COMPLETED. ALL DEVICES SHALL MEET THE REQUIREMENTS OF THE
	LATEST EDITION OF THE ATSSA "QUALITY GUIDELINES FOR TEMPORARY TRAFFIC CONTROL
	DEVICES & FEATURES".

- WORK ON THE PROJECT SHALL NOT BE STARTED UNTIL ALL REQUIRED TRAFFIC CONTROL
 DEVICES ARE IN PLACE, AND APPROVED BY THE ENGINEER.
- 3. WHEN SPEED LIMIT REDUCTION IS REQUIRED, SUCH REDUCTION SHALL BE IN ACCORDANCE WITH COOT FORM 568, "COOT TEMPORARY SPEED LIMIT REDUCTION."

WHEN A CHANGE IN AN EXISTING SPEED LIMIT IS REQUIRED, THE R2-1 SIGNS, SHOWN ON THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES, SHOULD BE INSTALLED AT THE LOCATIONS SHOWN ON THE TYPICAL CASES BY R2-1 (OPTIONAL) SIGNS.

AN ADVISORY SPEED PLATE (W13-1P) MAY BE USED WITH A WARNING SIGN WHEN THE MAXIMUM RECOMMENDED SPEED FOR CONDITION NAMED IS LOWER THAN THE POSTED SPEED LIMIT.

THE REGULATORY OR ADVISORY SPEED REDUCTION DISPLAYED SHALL NOT EXCEED 15 MPH PER SIGN INSTALLATION.

- 4. WORK ZONE (G20-5P) AND FINES DOUBLE (R2-6P) SIGNS SHALL BE PROVIDED EVERY 2640' BETWEEN R2-10 AND R2-11 SIGNS. THE SPACING OF THESE SIGNS MAY BE CHANGED AS DIRECTED BY THE ENGINEER
- 5. ANY TRAFFIC CONTROL DEVICE THAT IS DAMAGED, WEATHERED, WORN, OR OTHERWISE DEEMED UNACCEPTABLE BY THE ENGINEER, SHALL BE REPLACED.
- CONTRACTOR AND PERSONAL VEHICLE PARKING IS PROHIBITED WITHIN THE RIGHT-OF-WAY UNLESS DESIGNATED ON THE PLANS, OR APPROVED BY THE ENGINEER.
- 7. CONSTRUCTION TRAFFIC SIGNS SHALL BE MEASURED BY THE FOLLOWING SIZES AND DESCRIPTIONS:

PANEL SIZE A 0.01 TO 9.00 SQ. FT. (INCLUDING TYPE 1 AND TYPE 2

BARRICADES).

PANEL SIZE B 9.01 TO 16.00 SQ. FT.

PANEL SIZE C GREATER THAN 16 SQ. FT.

CONSTRUCTION TRAFFIC SIGN (SPECIAL), SQ. FT., MAY BE USED FOR SOME PROJECT SPECIFIC INFORMATION SIGNS.

FOR DETAILED DIMENSIONS OF SIGNS WITH SIGN CODE NUMBERS, SEE "STANDARD HIGHWAY SIGNS" AND THE "COLORADO SUPPLEMENT" THERETO. SIGN LAYOUTS FOR OTHER SIGNS WILL BE FURNISHED IN THE PLANS, TRANSMITTED TO THE ENGINEER AFTER AWARD, OR MAY BE AVAILABLE UPON REQUEST.

W20-5 WARNING SIGNS SHALL BE FURNISHED WITH EXCHANGEABLE PLAQUES READING "RIGHT", "LEFT", "CENTER", "RIGHT 2", ETC. AT NO ADDITIONAL COST.

- 3. ALL WARNING AND REGULATORY SIGNS SHALL BE POSTED ON BOTH SIDES OF THE ROADWAY ON DIVIDED HIGHWAYS, MULTI-LANE RAMPS, ONE-WAY STREETS, AND AS DIRECTED BY THE ENGINEER, EXCEPT WHERE DNLY DNE SHOULDER IS CLOSED (EX: CASE 11 ON SHEET 7).
- ADDITIONAL TRAFFIC CONTROL DEVICES ADDRESSING FLAGGING, SPEED REDUCTION, ETC. WILL BE NECESSARY FOR SET-UP AND TAKE-DOWN OF MOST CASE APPLICATIONS; DAILY WORK SITE ACCESS; AND PAVEMENT MARKING REMOVAL AND INSTALLATION OPERATIONS.
- 10. BASED ON SIGHT DISTANCE AND OTHER CONSIDERATIONS, THE FINAL LOCATIONS OF SIGNS ARE SUBJECT TO APPROVAL OF THE ENGINEER.

Computer File Information Sheet Revisions Creation Date: 07/04/12 Date: Comments Created By: Nakao \mathbb{R} -2 07/20/2 ADDED NOTE 21. IPDATED NOTES LAYOUT. Last Modification Date: 07/20/23 ADDED NOTE 4 & 20. Last Modified By: NRIVERA \mathbb{R} -1 01/20/23 UPDATED NOTE 3 and 22. CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

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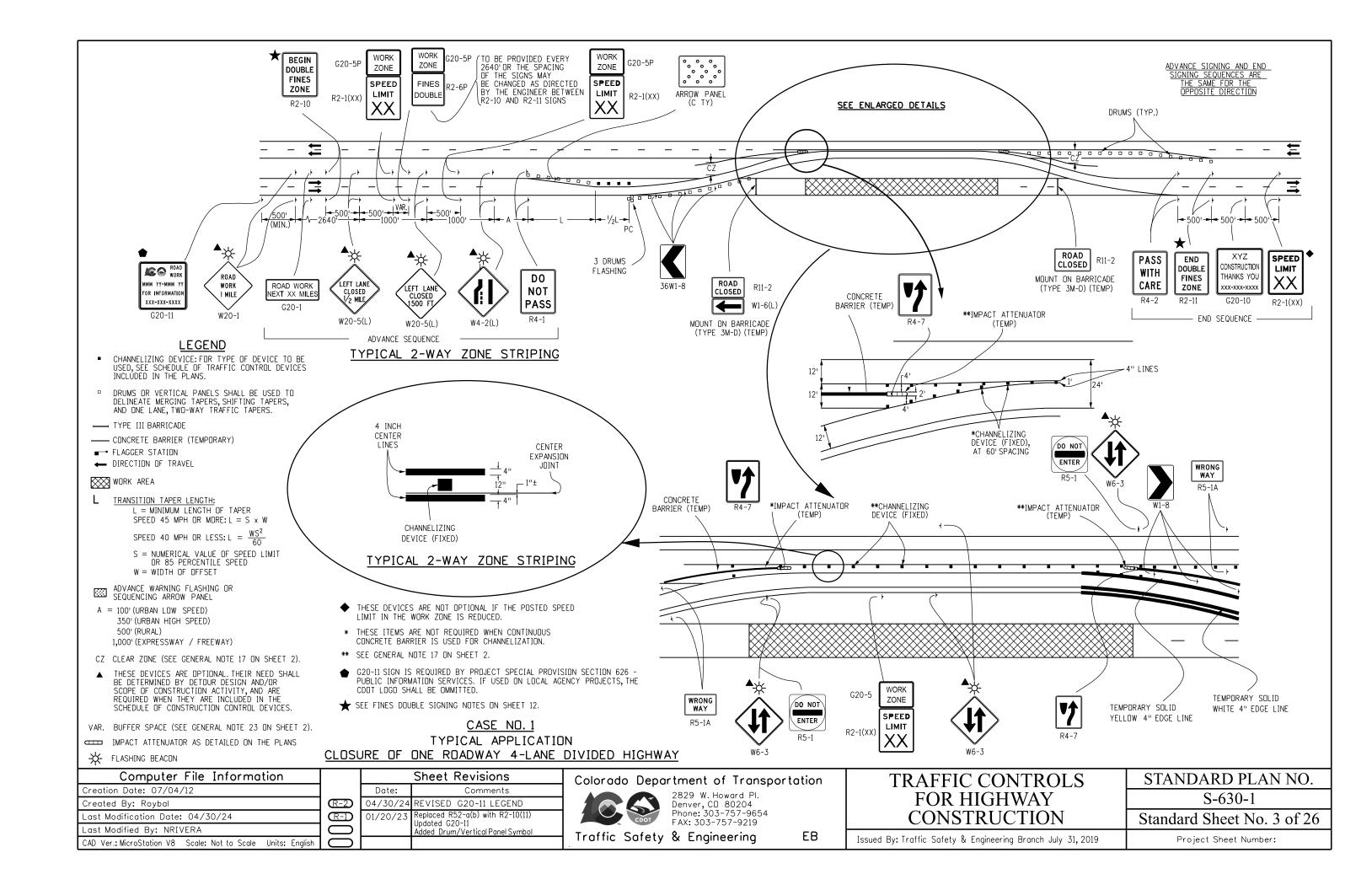
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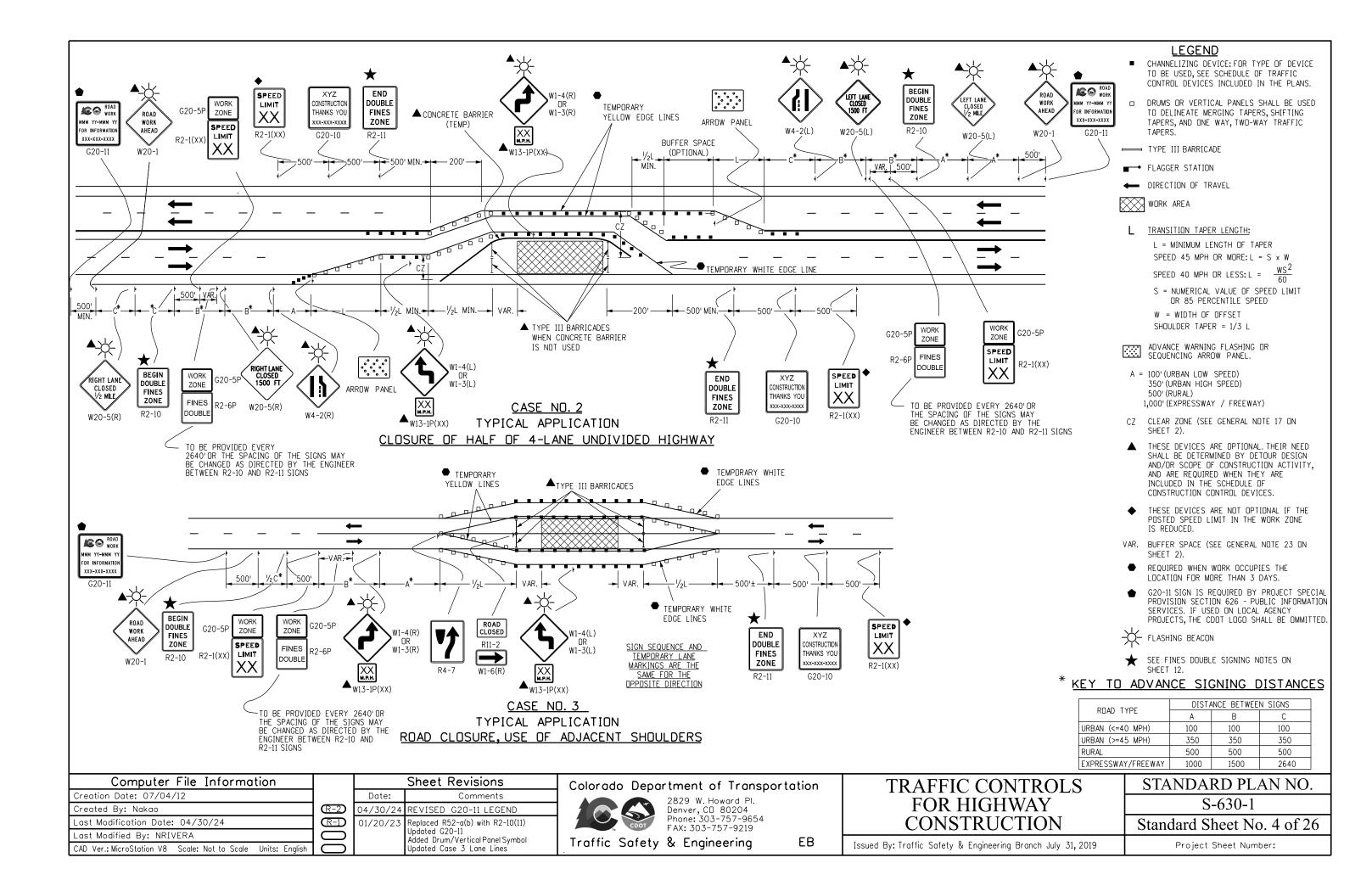
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TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION STANDARD PLAN NO. S-630-1

Standard Sheet No. 2 of 26

Issued By: Traffic Safety & Engineering Branch July 31, 2019





CONCRETE BARRIER (TEMP) G20-5 ZONE BARRICADE TEMPORARY DOUBLE R2-1(XX) YELLOW CENTERLINE TEMPORARY WHITE EDGE LINE \rightarrow 100' ➡ VARIE\$ ➡ ^{_} 1500'± TYP. BARRICADES ROAD R11-2 END XYZ SPEED SIGN SEQUENCE IS THE SAME DOUBLE LIMIT CONSTRUCTION BEGIN W1-6(L) FOR THE OPPOSITE DIRECTION FINES THANKS YOU DOUBLE FINES ZONE ROAD ZONE xxx-xxx-xxx WORK WORK WORK 1000 F R2-11 ROAD G20-10 W24-1(L) WORK MMM YY-MMM 1500 F **▲** XX W13-1P(XX) FOR INFORMATION W20-1 XXX-XXX-XXX W20-1 G20-11 CASE NO. 4

TYPICAL APPLICATION

ROAD CLOSURE, BYPASS DETOUR PROVIDED

● TEMPORARY YELLOW EDGE LINE BARRICADES → 100' | LANE #2 LANE #3 LANE #4 -500'--500'--500'→ - 1500' END ROAD BEGIN XYZ SPEED WORK WORK G20-5F G20-5 DOUBLE WORK DOUBLE CONSTRUCTIO ZONE ZONE WORK FINES FINES 1 MILE G20-5P THANKS YOU ARROW PANEL ZONE SPEED SPEED ZONE xxx-xxx-xxxx xxx-xxx-xxx LIMIT R2-10 R2-1(XX) W20-1 R2-1(XX FINES W4-2(L) CASE NO. 5 TO BE PROVIDED EVERY 2640' OR THE SPACING OF THE SIGNS MAY BE CHANGED AS DIRECTED BY THE ENGINEER BETWEEN TYPICAL_APPLICATION

LEGEND

- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE SCHEDULE OF TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS.
- DRUMS OR VERTICAL PANELS SHALL BE USED TO DELINEATE MERGING TAPERS, SHIFTING TAPERS, AND ONE LANE, TWO-WAY TRAFFIC TAPERS.
- TYPE III BARRICADE
- CONCRETE BARRIER (TEMPORARY)
- FLAGGER STATION
- DIRECTION OF TRAVEL
- WORK AREA
- TRANSITION TAPER LENGTH: L = MINIMUM LENGTH OF TAPERSPEED 45 MPH OR MORE: $L = S \times W$ SPEED 40 MPH OR LESS: $L = \frac{WS^2}{60}$ S = NUMERICAL VALUE OF SPEED LIMITOR 85 PERCENTILE SPEED W = WIDTH OF OFFSET

SHOULDER TAPER = 1/3 L

- CLEAR ZONE (SEE GENERAL NOTE 17 ON SHEET 2).
- THESE DEVICES ARE OPTIONAL THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.

ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL

THESE DEVICES ARE NOT OPTIONAL IF THE POSTED SPEED LIMIT IN THE WORK ZONE IS REDUCED.

VARIES BUFFER SPACE (SEE GENERAL NOTE 23 ON SHEET 2).

- REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
- G20-11 SIGN IS REQUIRED BY PROJECT SPECIAL PROVISION SECTION 626 - PUBLIC INFORMATION SERVICES. IF USED ON LOCAL AGENCY PROJECTS, THE CDOT LOGO SHALL BE OMMITTED.

MOBILE ATTENUATOR

FLASHING BEACON

SEE FINES DOUBLE SIGNING NOTES ON SHEET 12.

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Created By: Nakao	R
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	Date:	Comments]
)	04/30/24	REVISED G20-11 LEGEND]
0	01/20/23	Replaced R52-a(b) with R2-10(11) Updated G20-11 Added Drum/Vertical Panel Symbol	
)		•	1

R2-10 AND R2-11 SIGNS

Colorado Department of Transportation



LANE #1 CLOSURE, MULTI-LANE FREEWAY

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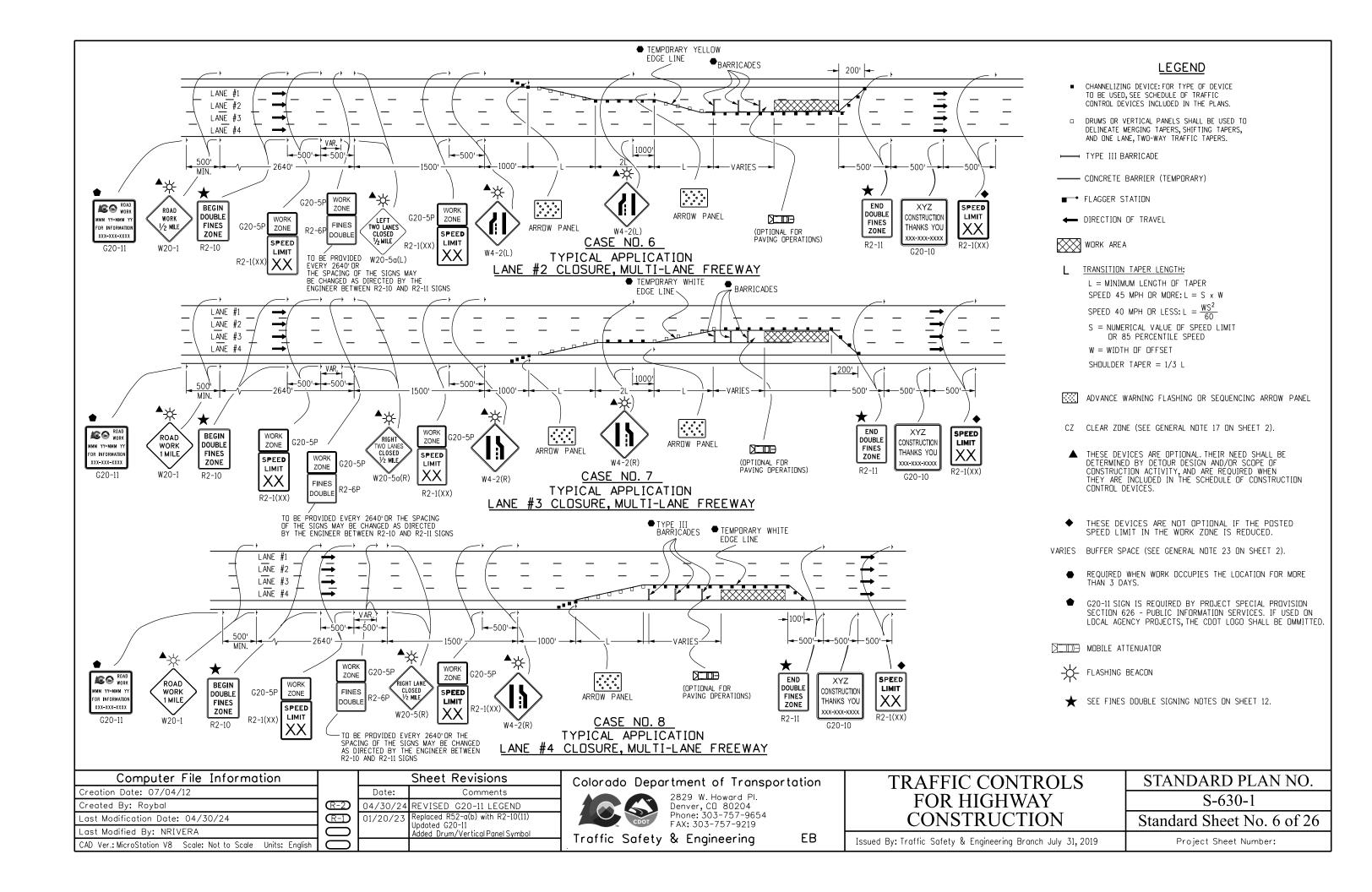
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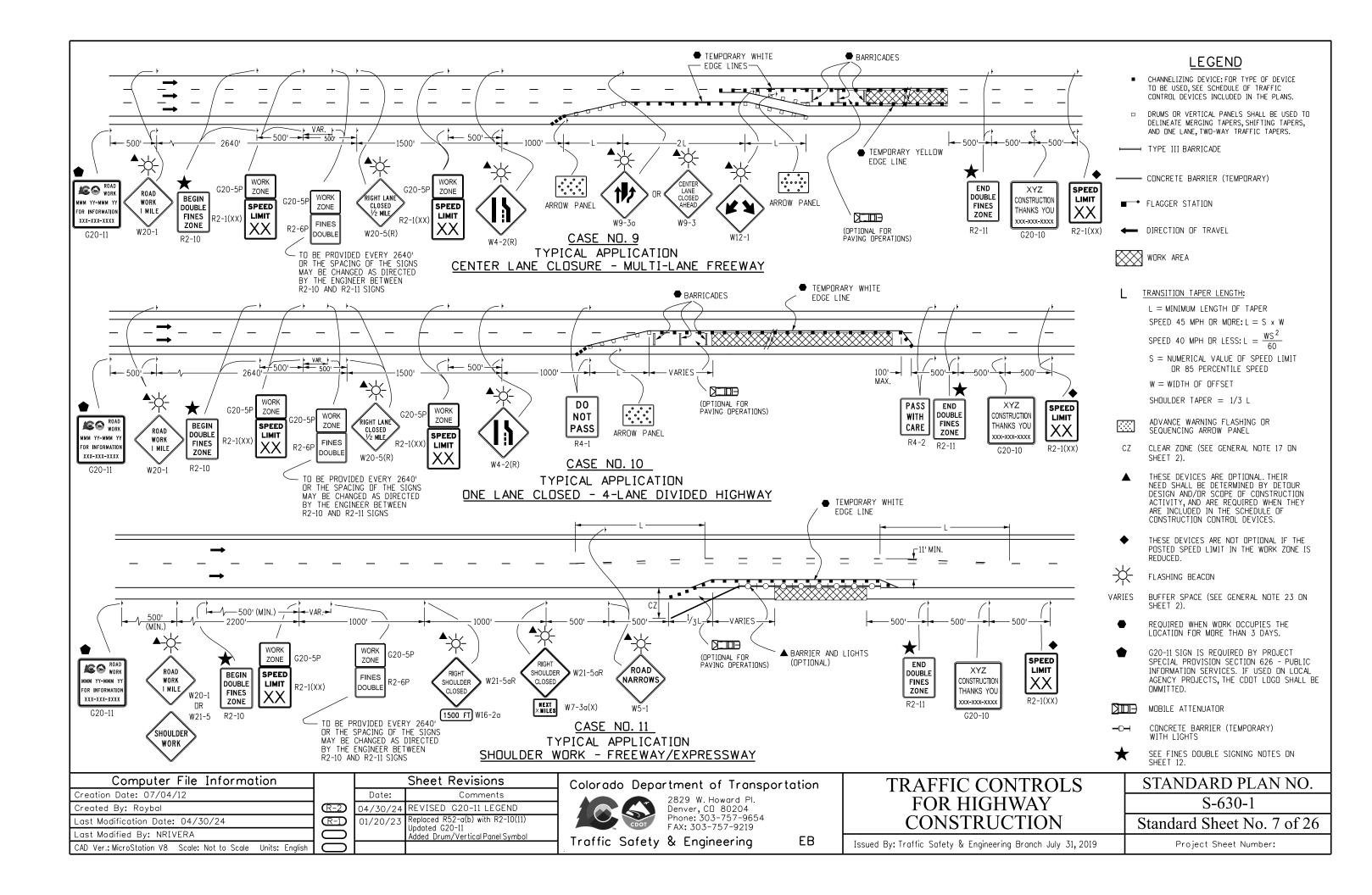
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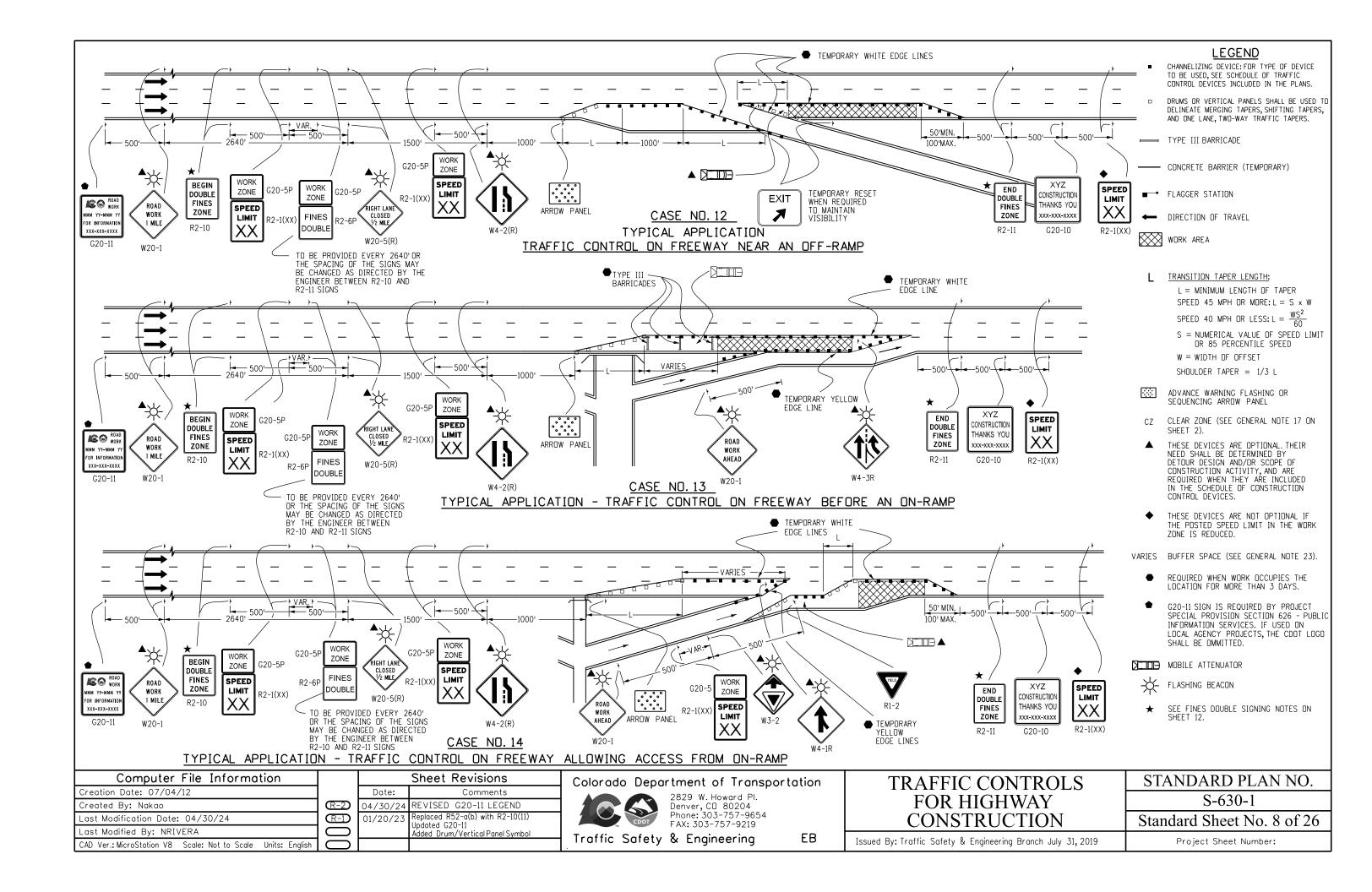
S-630-1 Standard Sheet No. 5 of 26

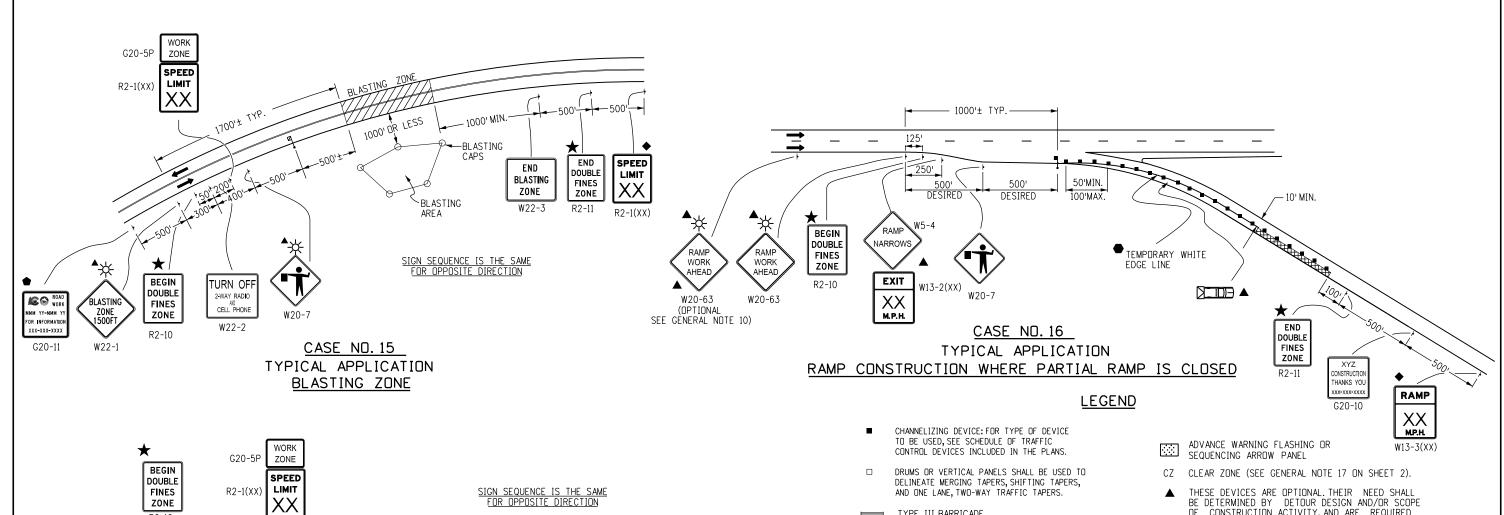
STANDARD PLAN NO.

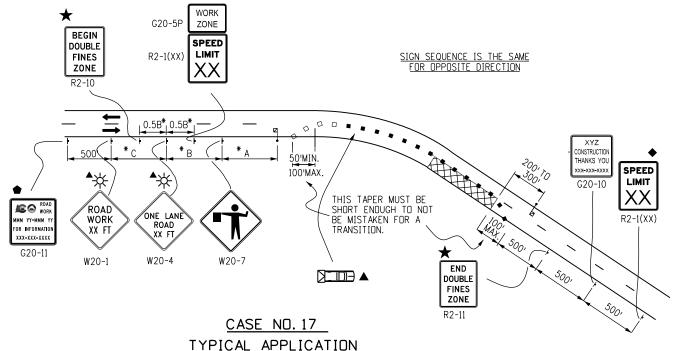
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Sheet Revisions

LANE CLOSURE, 2-LANE HIGHWAY, AT CURVE

Computer File Information

- TYPE III BARRICADE
- CONCRETE BARRIER (TEMPORARY)
- FLAGGER STATION
- DIRECTION OF TRAVEL
- WORK AREA
 - TRANSITION TAPER LENGTH: L = MINIMUM LENGTH OF TAPER SPEED 45 MPH OR MORE: $L = S \times W$ SPEED 40 MPH OR LESS: $L = \frac{WS^2}{60}$ S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED W = WIDTH OF OFFSET SHOULDER TAPER = 1/3 L
- MOBILE ATTENUATOR
 - SEE FINES DOUBLE SIGNING NOTES ON SHEET 12.

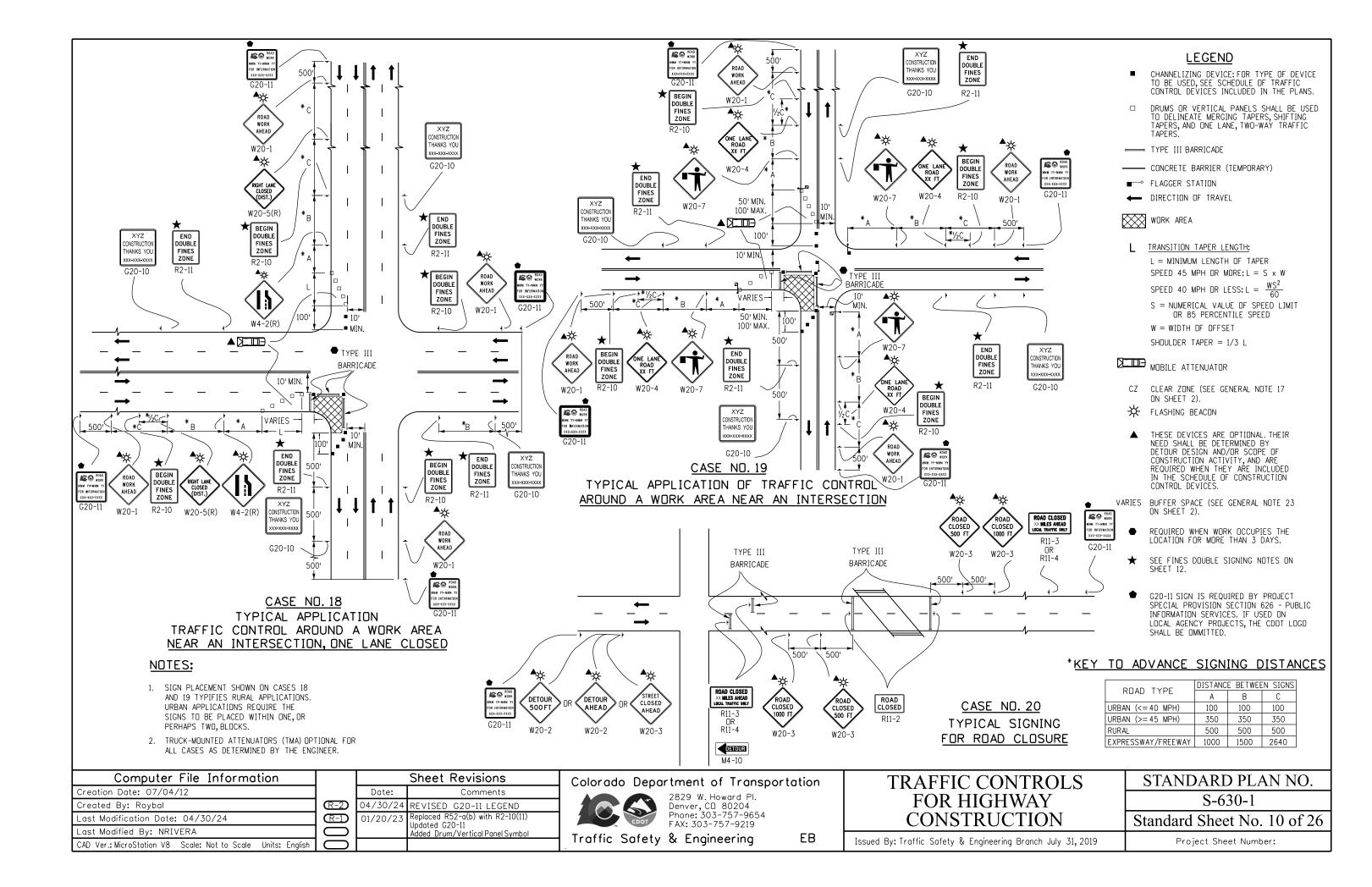
TRAFFIC CONTROLS

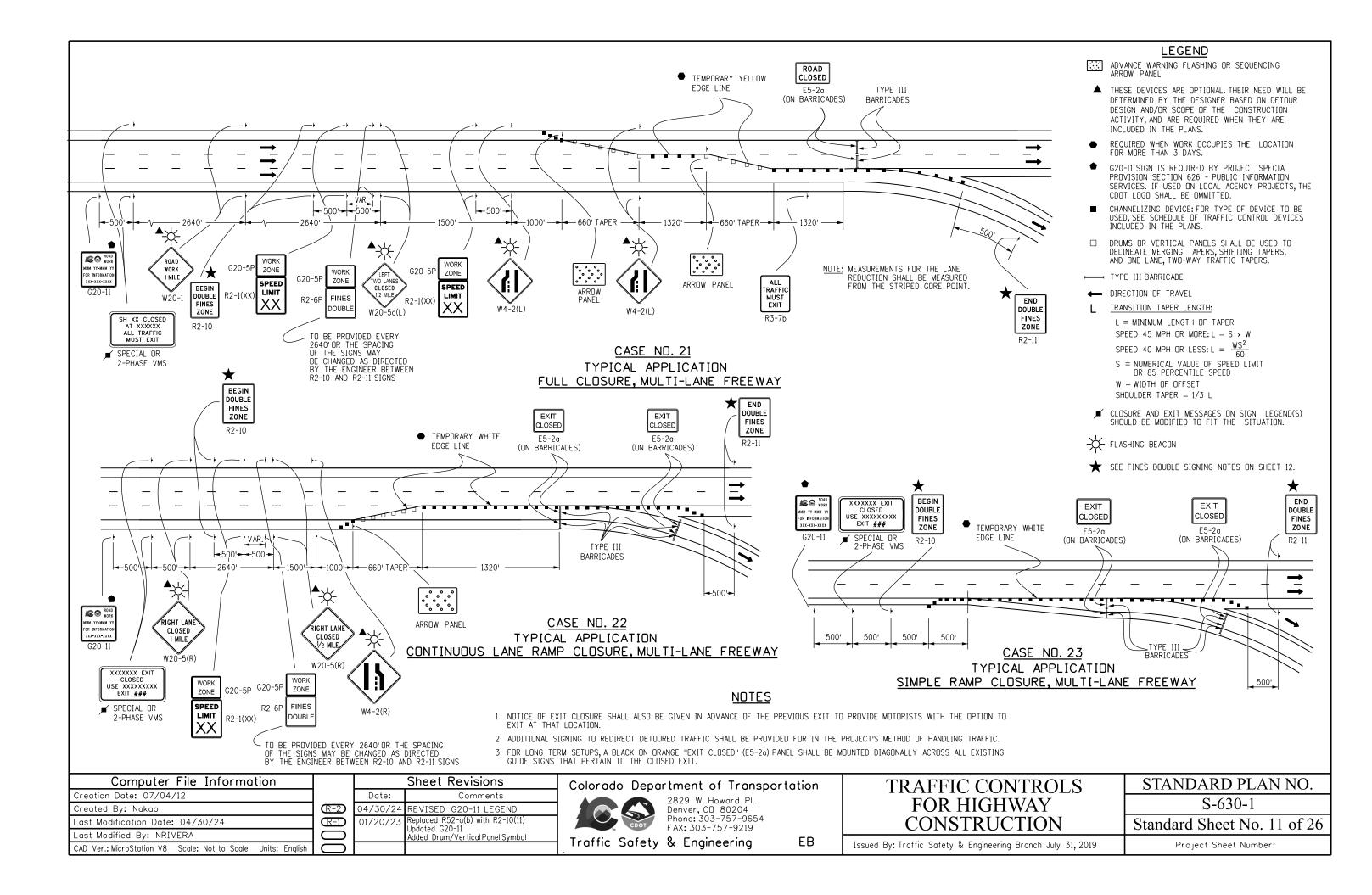
- THESE DEVICES ARE OPTIONAL THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
- THESE DEVICES ARE NOT OPTIONAL IF THE POSTED SPEED LIMIT IN THE WORK ZONE IS REDUCED.
- FLASHING BEACON
- REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
- G20-11 SIGN IS REQUIRED BY PROJECT SPECIAL PROVISION SECTION 626 - PUBLIC INFORMATION SERVICES. IF USED ON LOCAL AGENCY PROJECTS, THE CDOT LOGO SHALL BE OMMITTED.

*<u>KEY TO ADVANCE SIGNING DISTANCES</u>

RNAD TYPE	DISTANCE BETWEEN SIGNS				
RUAD ITPE	Α	В	С		
URBAN (<=40 MPH)	100	100	100		
URBAN (>=45 MPH)	350	350	350		
RURAL	500	500	500		
EXPRESSWAY/FREEWAY	1000	1500	2640		

Computer File Information			Sheet Revisions	Colorado Department of Transportation	TRAFFIC CONTROLS	STANDARD PLAN NO.
Creation Date: 07/04/12		Date:	Comments	2829 W. Howard Pl.	FOR HIGHWAY	S-630-1
Created By: Roybal Last Modification Date: 04/30/24	(R-2)	04/30/24	REVISED G20-11 LEGEND Replaced R52-a(b) with R2-10(11)	Denver, CD 80204 Phone: 303-757-9654	CONSTRUCTION	
Last Modified By: NRIVERA		01/20/23	Updated G20-11 Added Drum/Vertical Panel Symbol	FAX: 303-757-9219	CONSTRUCTION	Standard Sheet No. 9 of 26
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	<u>)</u>		Added Drufffy vertical Fuller Symbol	Traffic Safety & Engineering EB	Issued By: Traffic Safety & Engineering Branch July 31, 2019	Project Sheet Number:

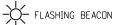








- ▲ THESE DEVICES ARE OPTIONAL. THEIR NEED WILL BE DETERMINED BY THE DESIGNER BASED ON DETOUR DESIGN AND/OR SCOPE OF THE CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE PLANS.
- ♠ G20-11 SIGN IS REQUIRED BY PROJECT SPECIAL PROVISION SECTION 626 - PUBLIC INFORMATION SERVICES. IF USED ON LOCAL AGENCY PROJECTS, THE CDOT LOGO SHALL BE DMMITTED.



FINES DOUBLE SIGNING NOTES, SEE BELOW

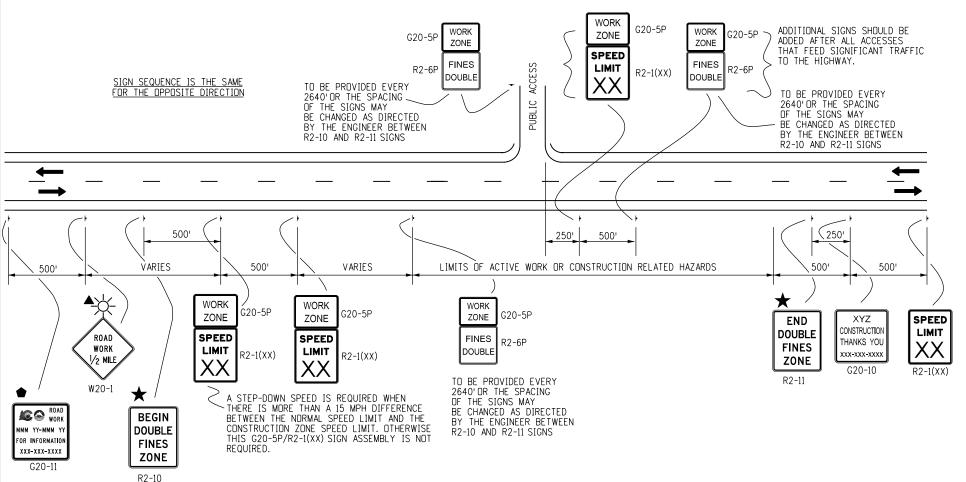
FINES DOUBLE SIGNING NOTES:

1. SIGNS SHALL NOT BE PLACED SOONER THAN FOUR HOURS BEFORE WORK IS TO BEGIN AND SHALL BE REMOVED AS SOON AS WORK ACTIVITIES ARE CONCLUDED, UNLESS POTENTIAL HAZARDS INTRODUCED AS A RESULT OF THE WORK ARE STILL PRESENT AT THE END OF THE WORK DAY. IF SIGNS ARE LEFT IN PLACE AFTER WORK ACTIVITIES, THE TRAFFIC CONTROL SUPERVISOR SHALL MAKE AN ENTRY IN THEIR DAILY DIARY THAT JUSTIFIES THEIR USE.

"HAZARDS" INCLUDE BUT ARE NOT LIMITED TO:

EDGE DROP DFFS
EQUIPMENT, WORKERS OR NON-SHIELDED OBJECTS IN THE CLEAR ZONE
ROUGH PAVEMENT
MAJOR CHANGE IN ALIGNMENT
REDUCED SHOULDER WIDTH
TEMPORARY GUARD RAIL OR BARRIER
LANE CLOSURE

- 2. SIGNS SHALL ONLY BE PLACED WHERE WORKERS ARE PRESENT IN THE ROADWAY OR CLEAR ZONE OR ARE AT RISK, OR WHERE THERE ARE HAZARDS IN THE TRAVELWAY, SHOULDERS OR CLEAR ZONE.
- 3. SIGNS SHOULD BE PLACED SO THAT MOTORISTS IMMEDIATELY ASSOCIATE THE SIGNS WITH PRESENT WORK ACTIVITIES. IF THE ZONE OF WORK ACTIVITY MOVES, THE SIGNS SHOULD BE MOVED ACCORDINGLY
- 4. SIGNING SHOWN IS REQUIRED TO ENFORCE DOUBLE FINES IN A WORK ZONE. ADDITIONAL SIGNING SHALL BE IN ACCORDANCE WITH THAT NORMALLY REQUIRED FOR THE PARTICULAR WORK ZONE. PLACEMENT OF "FINES DOUBLE" SIGNING MAY BE ADJUSTED AS NEEDED TO PROVIDE A MINIMUM 250' SPACING BETWEEN OTHER SIGNING REQUIRED FOR THE SPECIFIC WORK ZONE SETUP.



CASE NO. 24
TYPICAL APPLICATION
"FINES DOUBLE IN WORK ZONE" SIGNING
(WITH SPEED REDUCTION)

Creation Date: 07/04/12
Created By: Roybal
Last Modification Date: 04/30/24
Last Modified By: NRIVERA
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

R2-10 SHALL BE

PLACED NOT MORE

THAN 500' BEFORE THE FIRST SPEED

LIMIT SIGN ARRAY.

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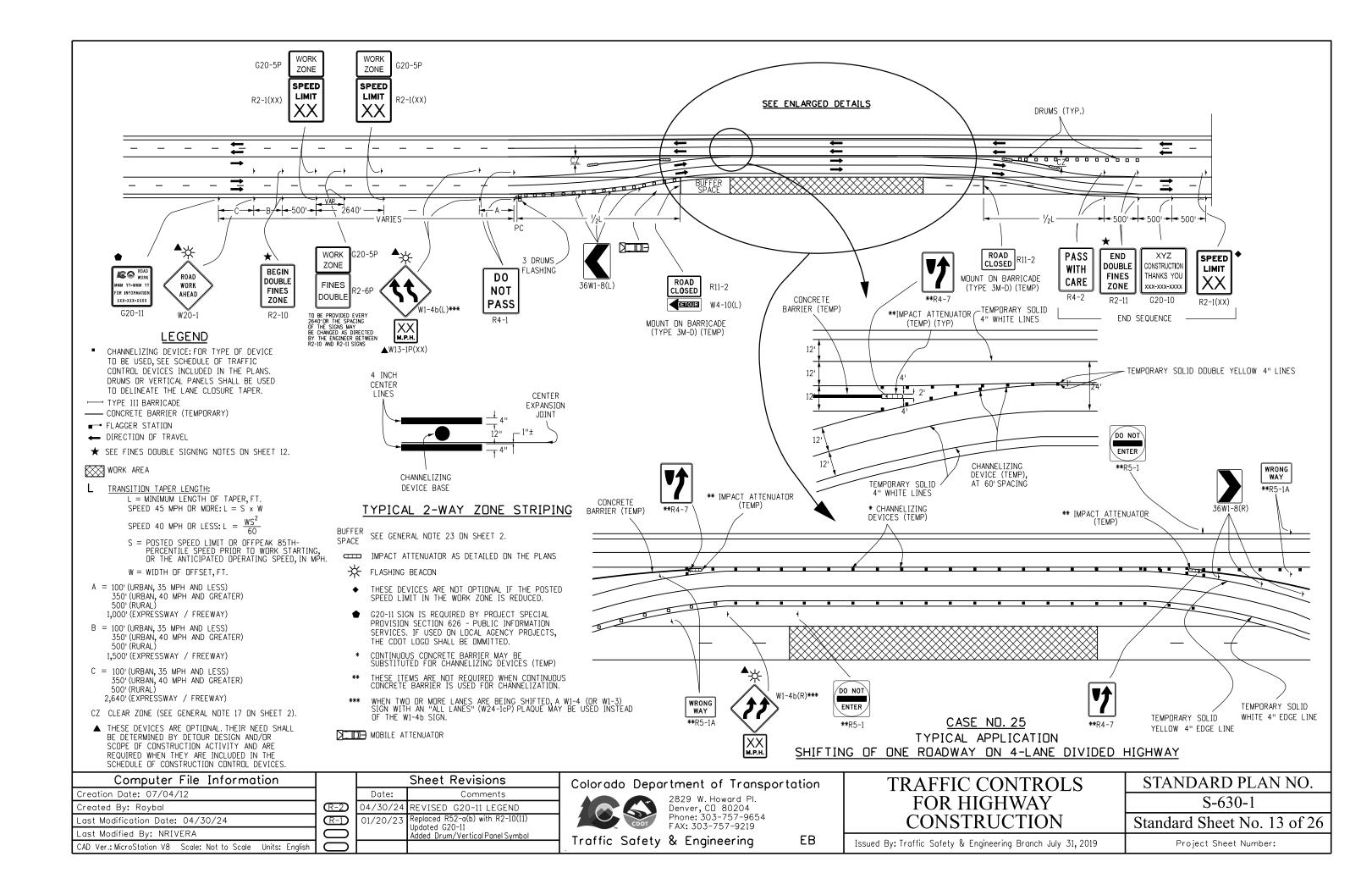
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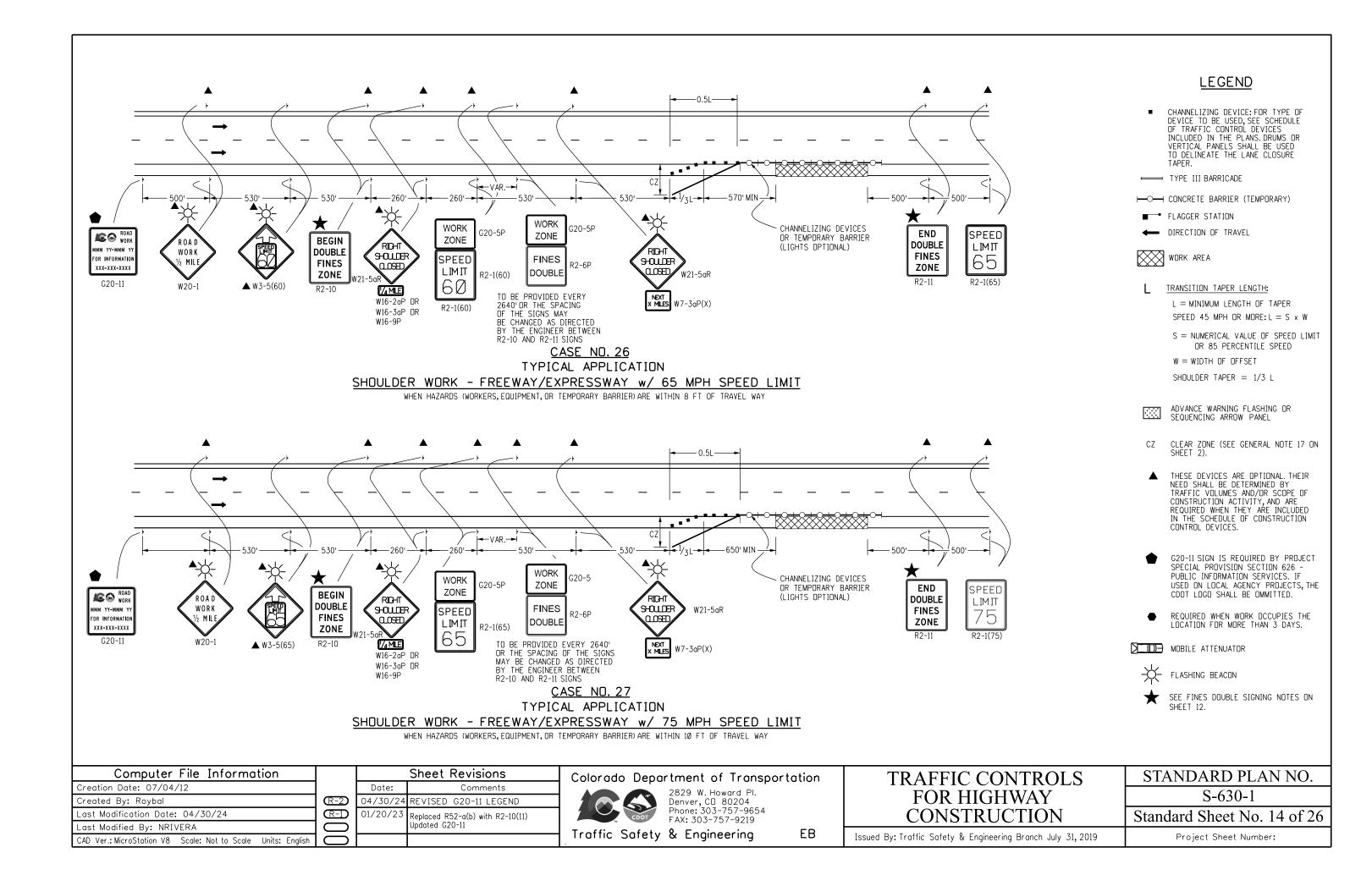
Traffic Safety & Engineering

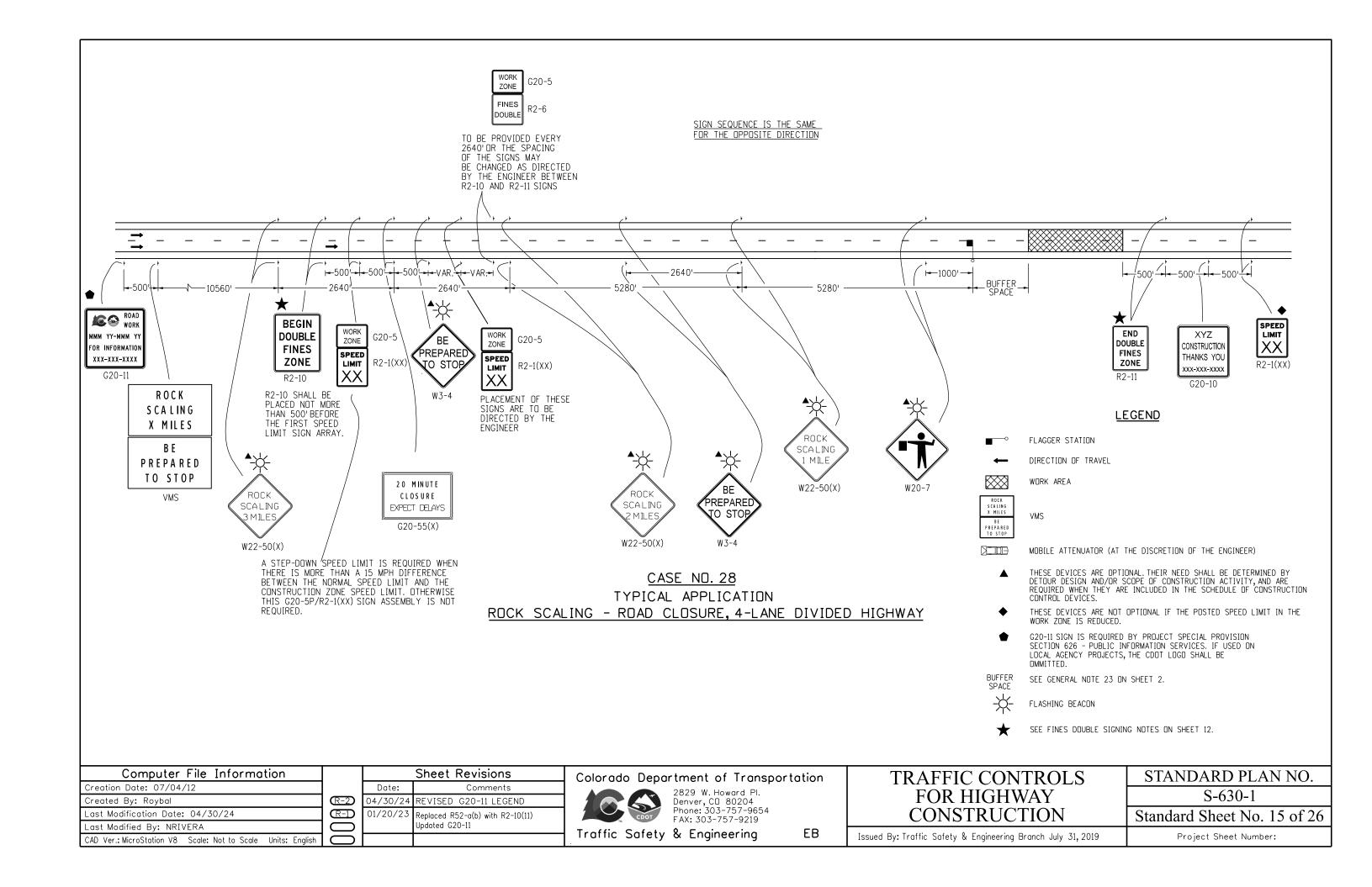
TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION STANDARD PLAN NO. S-630-1

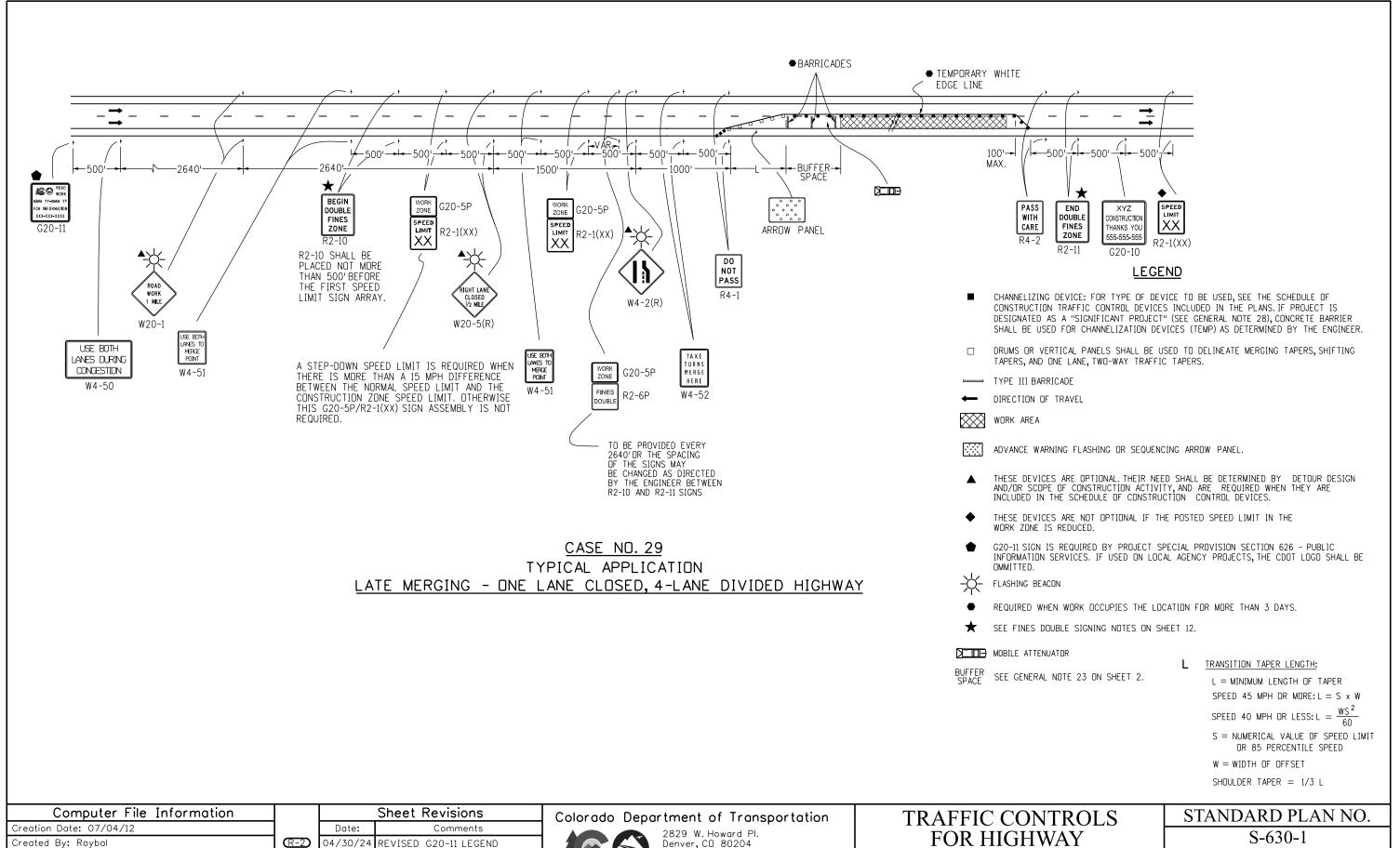
Standard Sheet No. 12 of 26

Issued By: Traffic Safety & Engineering Branch July 31, 2019



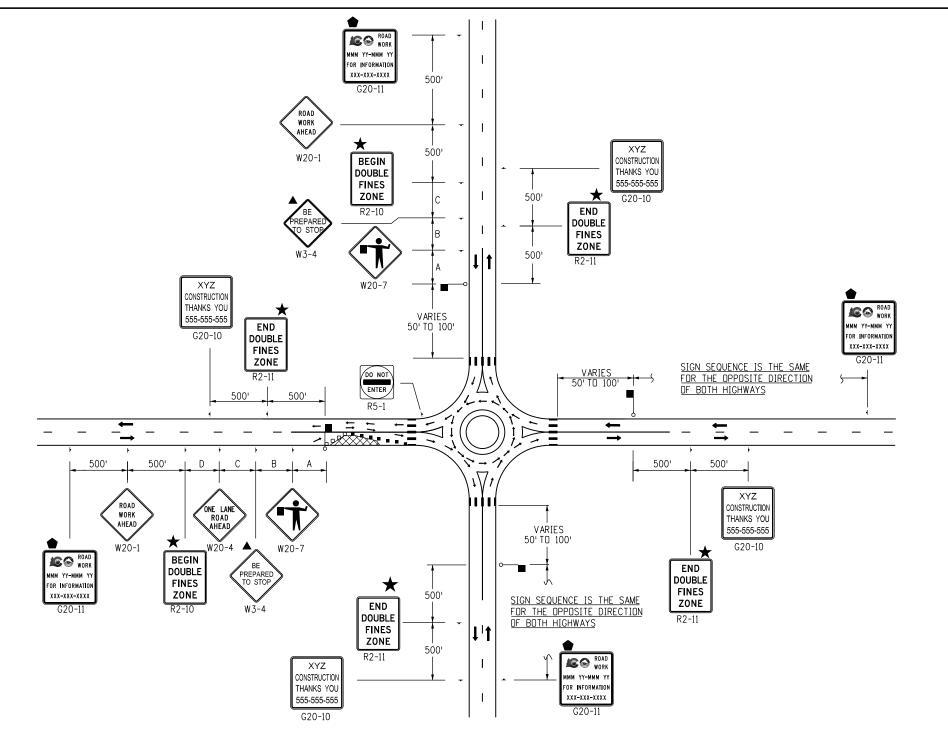






Computer File Information			Sheet Revisions	Colorado Department of Transportation	n I	TRAFFIC CONTROLS	STANDARD PLAN N
Creation Date: 07/04/12		Date:	Comments	2829 W. Howard Pl.			
Created By: Roybal	(R-2)	04/30/24	REVISED G20-11 LEGEND	Denver CD 80204		FOR HIGHWAY	S-630-1
Last Modification Date: 04/30/24	R-D	01/20/23	Replaced R52-a(b) with R2-10(11) Updated G20-11	Phone: 303-757-9654 FAX: 303-757-9219		CONSTRUCTION	Standard Sheet No. 16 o
Last Modified By: NRIVERA			Added Drum/Vertical Panel Symbol	Traffic Safety & Engineering EB	, l		
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English				Thattic Safety & Engineering EB	,	Issued By: Traffic Safety & Engineering Branch July 31, 2019	Project Sheet Number:

of 26



CASE NO. 30 TYPICAL APPLICATION ROUNDABOUT - PARTIAL CLOSURE NEAR ONE-LANE ROUNDABOUT

LEGEND

- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS. IF PROJECT IS DESIGNATED AS A "SIGNIFICANT PROJECT" (SEE GENERAL NOTE 28), CONCRETE BARRIER SHALL BE USED FOR CHANNELIZATION DEVICES (TEMP) AS DETERMINED BY THE ENGINEER.
- DRUMS OR VERTICAL PANELS SHALL BE USED TO DELINEATE MERGING TAPERS, SHIFTING TAPERS, AND ONE LANE, TWO-WAY TRAFFIC TAPERS.
- TYPE III BARRICADE
- ← DIRECTION OF TRAVEL

WORK AREA

ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL.

- THESE DEVICES ARE OPTIONAL. THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
- THESE DEVICES ARE NOT OPTIONAL IF THE POSTED SPEED LIMIT IN THE WORK ZONE IS REDUCED.
- © G20-11 SIGN IS REQUIRED BY PROJECT SPECIAL PROVISION SECTION 626 PUBLIC INFORMATION SERVICES. IF USED ON LOCAL AGENCY PROJECTS, THE COOT LOGO SHALL BE OMMITTED.

- FLASHING BEACON

- REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
- ★ SEE FINES DOUBLE SIGNING NOTES ON SHEET 12.

MOBILE ATTENUATOR

TRANSITION TAPER LENGTH:

L = MINIMUM LENGTH OF TAPER

SPEED 45 MPH OR MORE: $L = S \times W$

SPEED 40 MPH OR LESS: $L = \frac{WS^2}{GO}$

S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED

W = WIDTH OF OFFSET

SHOULDER TAPER = 1/3 L

BUFFER SEE GENERAL NOTE 23 ON SHEET 2.

■ FLAGGER STATION

ROAD TYPE	DISTANCE BETWEEN SIGNS			
RUAD TIPE	Α	В	С	
URBAN (<=40 MPH)	100	100	100	
URBAN (>= 45 MPH)	350	350	350	
RURAL	500	500	500	
EXPRESSWAY/FREEWAY	1000	1500	2640	

Computer File Information	
Creation Date: 07/04/12	
Created By: Nakao	R-2
Last Modification Date: 04/30/24	(R-1)
Last Modified By: NRIVERA	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	

	Sheet Revisions		
	Date:	Comments	
- 2		REVISED G20-11 LEGEND	
$\bigcap_{i=1}^{n}$	01/20/23	Replaced R52-a(b) with R2-10(11) Updated G20-11 Added Drum/Vertical Panel Symbol	
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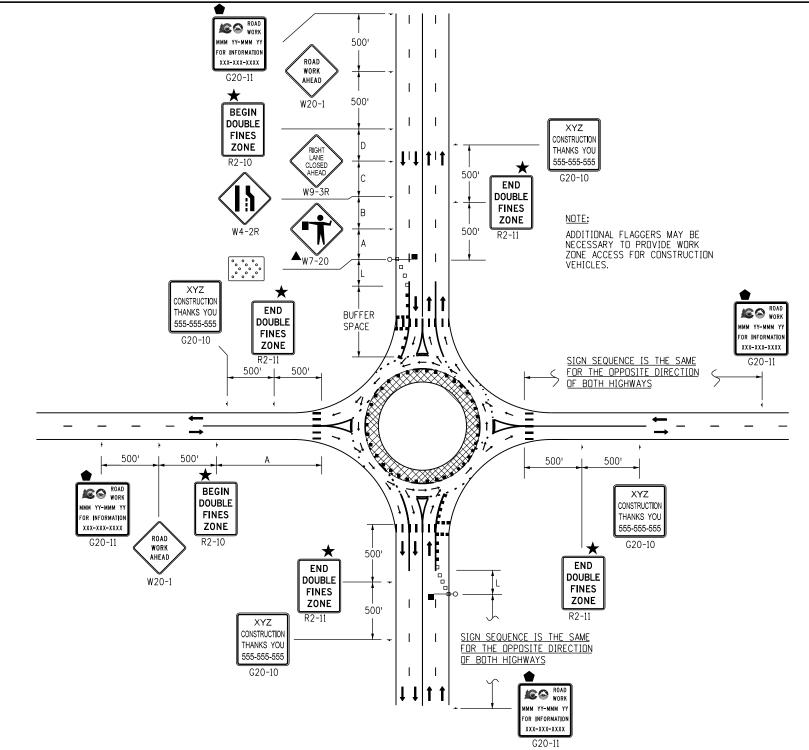
FOR HIGHWAY
CONSTRUCTION

TRAFFIC CONTROLS STANDARD PLAN NO. S-630-1

Project Sheet Number:

CONSTRUCTION Standard Sheet No. 17 of 26

Issued By: Traffic Safety & Engineering Branch July 31, 2019



CASE NO. 31

TYPICAL APPLICATION *

ROUNDABOUT - INSIDE LANE CLOSURE FOR TWO-LANE ROUNDABOUT

LEGEND

- * A TRUCK DETOUR ROUTE MAY BE NECESSARY TO DIVERT TRUCKS AWAY FROM THE ROUNDABOUT CIRCLE. ALSO NECESSARY IS A STREET NAME AND/OR ROUTE NUMBER SIGN, INFORMING MOTORISTS WHERE THEY NEED TO EXIT THE ROUNDABOUT CIRCLE TO ENTER THE DESIRED STREET AND/OR ROUTE NUMBER.
- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS. IF PROJECT IS DESIGNATED AS A "SIGNIFICANT PROJECT" (SEE GENERAL NOTE 28), CONCRETE BARRIER SHALL BE USED FOR CHANNELIZATION DEVICES (TEMP) AS DETERMINED BY THE ENGINEER.
- DRUMS OR VERTICAL PANELS SHALL BE USED TO DELINEATE MERGING TAPERS, SHIFTING TAPERS, AND ONE LANE, TWO-WAY TRAFFIC TAPERS.

TYPE III BARRICADE

← DIRECTION OF TRAVEL

WORK AREA

🔛 ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL.

- THESE DEVICES ARE OPTIONAL. THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
- THESE DEVICES ARE NOT OPTIONAL IF THE POSTED SPEED LIMIT IN THE WORK ZONE IS REDUCED.

FLASHING BEACON

- REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
- ★ SEE FINES DOUBLE SIGNING NOTES ON SHEET 12.

MOBILE ATTENUATOR

TRANSITION TAPER LENGTH:

L = MINIMUM LENGTH OF TAPER

SPEED 45 MPH OR MORE: L = S x W

SPEED 40 MPH OR LESS: $L = \frac{WS^2}{60}$

S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED

W = WIDTH OF OFFSET

SHOULDER TAPER = 1/3 L

BUFFER SEE GENERAL NOTE 23 ON SHEET 2. SPACE

■ FLAGGER STATION

RNAD TYPE	DISTANCE BETWEEN SIGNS			
RUAD ITPE	Α	В	С	
URBAN (<=40 MPH)	100	100	100	
URBAN (>=45 MPH)	350	350	350	
RURAL	500	500	500	
EXPRESSWAY/FREEWAY	1000	1500	2640	

Computer File Information			Sheet Revisions
Creation Date: 07/04/12		Date:	Comments
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Last Modification Date: 04/30/24	\mathbb{R} -1	01/20/23	Replaced R52-a(b) with R2-10(11) Updated G20-11
Last Modified By: NRIVERA			Added Drum/Vertical Panel Symbol
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English			

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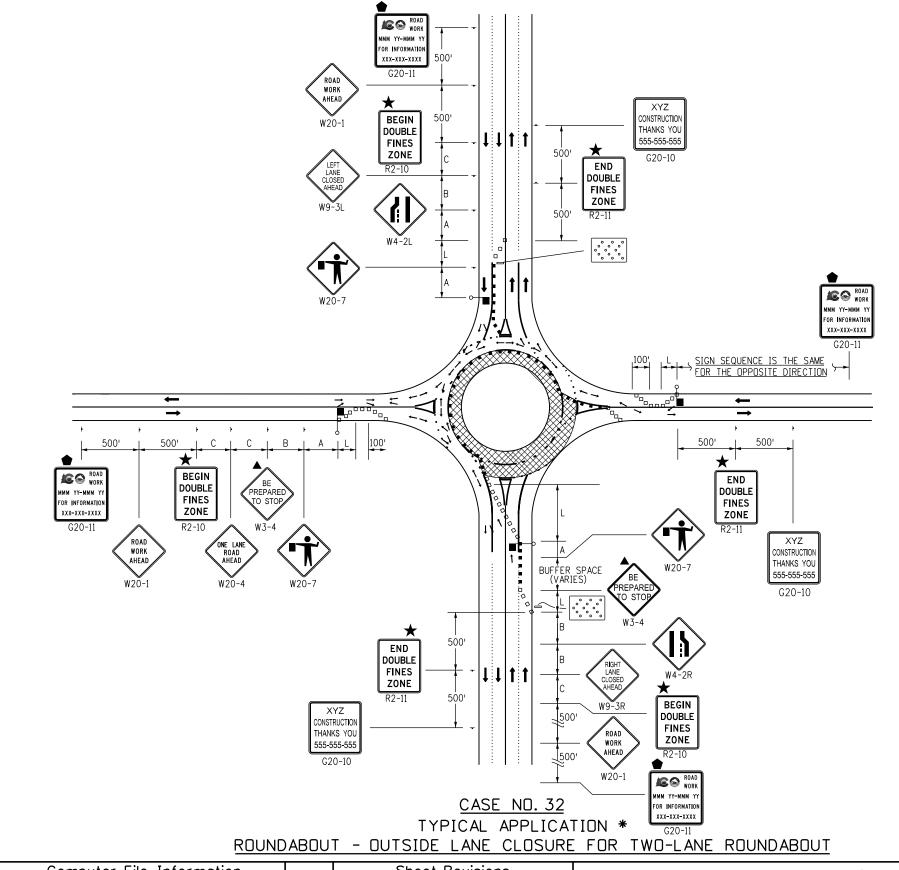
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TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION STANDARD PLAN NO. S-630-1

Issued By: Traffic Safety & Engineering Branch July 31, 2019

Standard Sheet No. 18 of 26



LEGEND

- * A TRUCK DETOUR ROUTE MAY BE NECESSARY TO DIVERT TRUCKS AWAY FROM THE ROUNDABOUT CIRCLE. ALSO NECESSARY IS A STREET NAME AND/OR ROUTE NUMBER SIGN, INFORMING MOTORISTS WHERE THEY NEED TO EXIT THE ROUNDABOUT CIRCLE TO ENTER THE DESIRED STREET AND/OR ROUTE NUMBER.
- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS. IF PROJECT IS DESIGNATED AS A "SIGNIFICANT PROJECT" (SEE GENERAL NOTE 28), CONCRETE BARRIER SHALL BE USED FOR CHANNELIZATION DEVICES (TEMP) AS DETERMINED BY THE ENGINEER.
- DRUMS OR VERTICAL PANELS SHALL BE USED TO DELINEATE MERGING TAPERS, SHIFTING TAPERS, AND ONE LANE, TWO-WAY TRAFFIC TAPERS.
- TYPE III BARRICADE
- ← DIRECTION OF TRAVEL

WORK AREA

ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL.

- THESE DEVICES ARE OPTIONAL. THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
- THESE DEVICES ARE NOT OPTIONAL IF THE POSTED SPEED LIMIT IN THE WORK ZONE IS REDUCED.
- © G20-11 SIGN IS REQUIRED BY PROJECT SPECIAL PROVISION SECTION 626 PUBLIC INFORMATION SERVICES. IF USED ON LOCAL AGENCY PROJECTS, THE CDOT LOGO SHALL BE DMMITTED.

- FLASHING BEACON

- REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
- ★ SEE FINES DOUBLE SIGNING NOTES ON SHEET 12.

MOBILE ATTENUATOR

L TRANSITION TAPER LENGTH:

L = MINIMUM LENGTH OF TAPER

SPEED 45 MPH OR MORE: $L = S \times W$

SPEED 40 MPH OR LESS: $L = \frac{WS^2}{60}$

S = NUMERICAL VALUE OF SPEED LIMIT

OR 85 PERCENTILE SPEED

W = WIDTH OF OFFSET

SHOULDER TAPER = 1/3 L

BUFFER SEE GENERAL NOTE 23 ON SHEET 2.

■ FLAGGER STATION

ROAD TYPE	DISTANCE BETWEEN SIGNS			
RUAD ITPE	Α	В	С	
URBAN (<=40 MPH)	100	100	100	
URBAN (>= 45 MPH)	350	350	350	
RURAL	500	500	500	
EXPRESSWAY/FREEWAY	1000	1500	2640	

Computer File Information	
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Last Modified By: NRIVERA	
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Date: Comments

04/30/24 REVISED G20-11 LEGEND

01/20/23 Replaced R52-a(b) with R2-10(11) Updated G20-11 Added Drum/Vertical Panel Symbol

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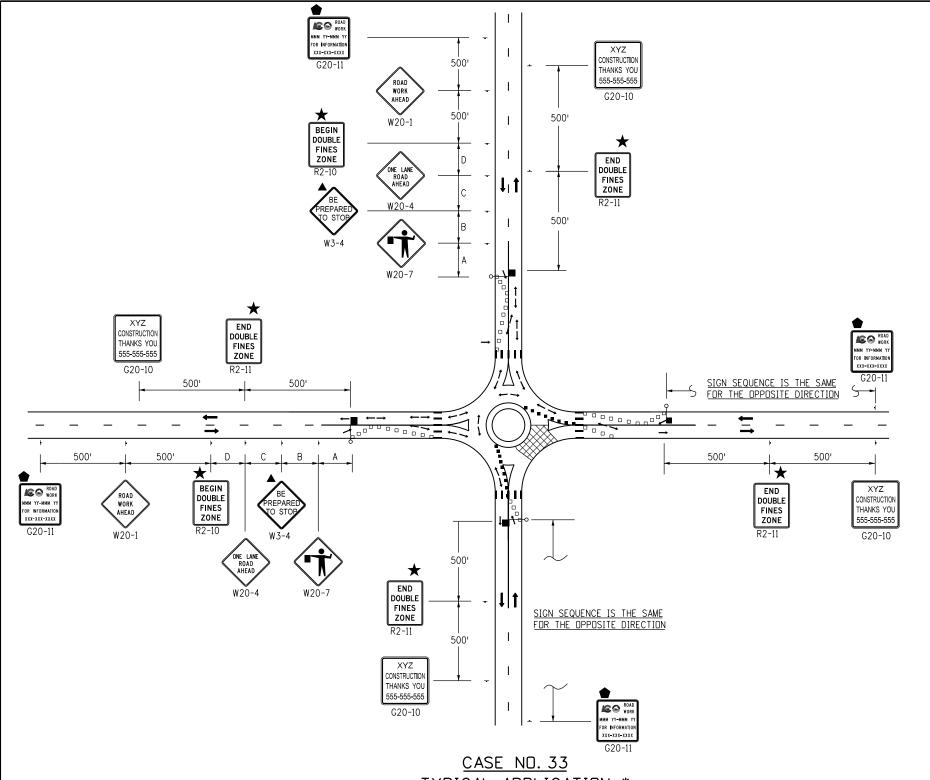
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TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION STANDARD PLAN NO. S-630-1

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Issued By: Traffic Safety & Engineering Branch July 31, 2019



CASE NO. 33

TYPICAL APPLICATION *

ROUNDABOUT - PARTIAL CLOSURE FOR ONE-LANE ROUNDABOUT

LEGEND

- * A TRUCK DETOUR ROUTE MAY BE NECESSARY TO DIVERT TRUCKS AWAY FROM THE ROUNDABOUT CIRCLE. ALSO NECESSARY IS A STREET NAME AND/OR ROUTE NUMBER SIGN, INFORMING MOTORISTS WHERE THEY NEED TO EXIT THE ROUNDABOUT CIRCLE TO ENTER THE DESIRED STREET AND/OR ROUTE NUMBER.
- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE THE SCHEDULE OF CONSTRUCTION TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS. IF PROJECT IS DESIGNATED AS A "SIGNIFICANT PROJECT" (SEE GENERAL NOTE 28), CONCRETE BARRIER SHALL BE USED FOR CHANNELIZATION DEVICES (TEMP) AS DETERMINED BY THE ENGINEER.
- DRUMS OR VERTICAL PANELS SHALL BE USED TO DELINEATE MERGING TAPERS, SHIFTING TAPERS, AND ONE LANE, TWO-WAY TRAFFIC TAPERS.
- TYPE III BARRICADE
- ← DIRECTION OF TRAVEL

WORK AREA

🔛 ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL.

- THESE DEVICES ARE OPTIONAL THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
- THESE DEVICES ARE NOT OPTIONAL IF THE POSTED SPEED LIMIT IN THE WORK ZONE IS REDUCED.
- © G20-11 SIGN IS REQUIRED BY PROJECT SPECIAL PROVISION SECTION 626 PUBLIC INFORMATION SERVICES. IF USED ON LOCAL AGENCY PROJECTS, THE CDOT LOGO SHALL BE OMMITTED.

FLASHING BEACON

- REQUIRED WHEN WORK OCCUPIES THE LOCATION FOR MORE THAN 3 DAYS.
- ★ SEE FINES DOUBLE SIGNING NOTES ON SHEET 12.

MOBILE ATTENUATOR

L TRANSITION TAPER LENGTH:

L = MINIMUM LENGTH OF TAPERSPEED 45 MPH OR MORE: $L = S \times W$

SPEED 40 MPH OR LESS: $L = \frac{WS^2}{60}$

S = NUMERICAL VALUE OF SPEED LIMIT
OR 85 PERCENTILE SPEED

W = WIDTH OF OFFSET

SHOULDER TAPER = 1/3 L

BUFFER SEE GENERAL NOTE 23 ON SHEET 2.

■ FLAGGER STATION

DOAD TYPE	DISTANCE BETWEEN SIGNS			
ROAD TYPE	Α	В	С	
URBAN (<=40 MPH)	100	100	100	
URBAN (>= 45 MPH)	350	350	350	
RURAL	500	500	500	
EXPRESSWAY/FREEWAY	1000	1500	2640	

Computer File Information	
Creation Date: 07/04/12	
Created By: Nakao	R-
Last Modification Date: 04/30/24	(R-
Last Modified By: NRIVERA	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	U

	Sheet Revisions		
	Date:	Comments]
₹-2	04/30/24	REVISED G20-11 LEGEND]
₹-1)	01/20/23	Replaced R52-a(b) with R2-10(11) Updated G20-11 Added Drum/VerticalPanelSymbol	
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TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION STANDARD PLAN NO. S-630-1

Standard Sheet No. 20 of 26

Issued By: Traffic Safety & Engineering Branch July 31, 2019

<u>LEGE</u>ND

MOBILE ATTENUATOR VEHICLE, TWO 360-DEGREE YELLOW FLASHING BEACONS, AND YELLOW FLASHING VEHICLE LIGHTS OR STROBES.

VMS

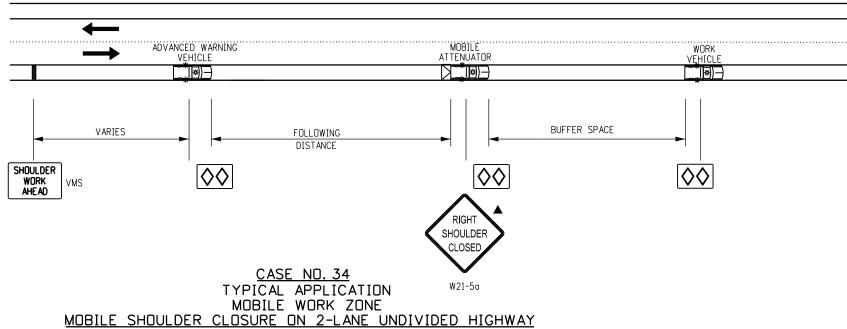
VARIABLE MESSAGE SIGN (VMS).

 $\Diamond \Diamond$ ARROW BOARD

- WHEN VMS IS USED, THE "RIGHT SHOULDER CLOSED" (W21-50) SIGN BECOMES OPTIONAL.
- IF TRACKING OF THE WET PAINT IS ANTICIPATED, THE USE OF CONES OR STATIONARY "WET PAINT" SIGNS SHALL BE POSTED.
- THE VARIABLE SEPARATION DISTANCE BETWEEN THE "CONE PLACEMENT VEHICLE" AND "CONE PICKUP VEHICLE" SHALL BE DETERMINED BY THE TRACK DRYING TIME OF THE PAVEMENT MARKING MATERIAL.
- OPTIONAL

FOLLOWING DISTANCE CHART FOR WARNING AND MOBILE ATTENUATOR (OR CONE PICKUP) VEHICLE

POSTED WZ SPEED LIMIT (MPH)	FOLLOWING DISTANCE (FEET)	BUFFER SPACE (FEET)
0 - 30	250 - 550	100 - 120
35 - 40	325 - 700	100 - 120
45 - 50	600 - 900	120 - 140
55	750 - 1200	120 - 140
60	1000 - 1400	180 - 200

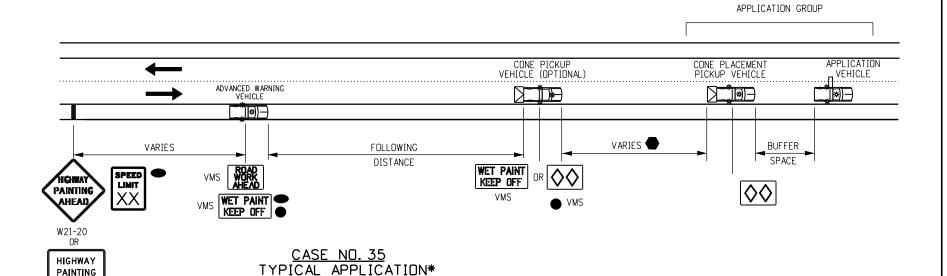


* USE CASE 35 IF SHOULDER IN CASE 34 IS TOO NARROW FOR GROUP VEHICLE USE.

MOBILE PAVEMENT MARKING ZONE

CENTERLINE STRIPING ON 2-LANE UNDIVIDED HIGHWAY

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Computer File Information			Sheet Revisions
Creation Date: 07/04/12		Date:	Comments
Created By: Nakao	R-2	01/20/23	UPDATED LEGEND DELETED NOTE UPDATED FOLLOWING DISTANCE
Last Modification Date: 01/20/23			CHART MOVED NOTE UNDER CASE 34
Last Modified By: NRIVERA	(R-1)	06/03/21	UPDATED FOR BUFFER SPACE.
CAD Ver.; MicroStation V8 Scale: Not to Scale Units: English	0		

Colorado Department of Transportation



NEXT X MILES

W21-20a

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TRAFFIC CONTROLS
FOR HIGHWAY
CONSTRUCTION

STANDARD PLAN NO. S-630-1 Standard Sheet No. 21 of 26

Issued By: Traffic Safety & Engineering Branch July 31, 2019

FOR CASE #36, VEHICLE/SIGN SEQUENCE IS THE SAME FOR THE LEFT SIDE OF HIGHWAY, WHILE TAPER IS MIRRORED ABOUT THE CENTER LANE, WHEN MOBILE WORK ZONE IS LOCATED ON THE LEFT SIDE OF HIGHWAY.

<u>LEGEND</u>

MOBILE ATTENUATOR VEHICLE, TWO 360-DEGREE YELLOW FLASHING BEACONS, AND YELLOW FLASHING VEHICLE LIGHTS OR STROBES.

ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL.

YMS

VARIABLE MESSAGE SIGN (VMS).

 $\Diamond \Diamond$

ARROW BOARD

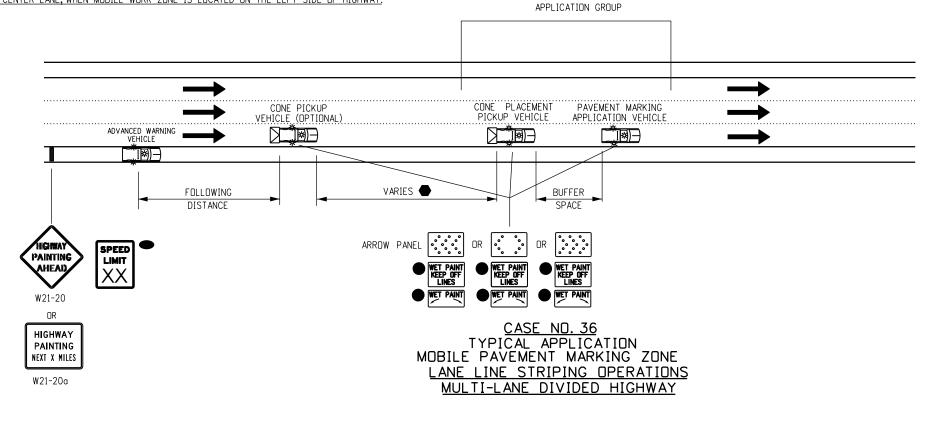
- WHEN THE VMS IS USED, THE "SHOULDER CLOSED" W21-5σ(R/L) AND "RAMP CLOSED AHEAD" W5-40 SIGNS BECOME OPTIONAL.
- IF TRACKING OF THE WET PAINT IS ANTICIPATED, THE USE OF CONES OR STATIONARY "WET PAINT" SIGNS SHALL BE POSTED.
- THE VARIABLE SEPARATION DISTANCE BETWEEN THE "CONE PLACEMENT VEHICLE" AND "CONE PICKUP VEHICLE" SHALL BE DETERMINED BY THE TRACK DRYING TIME OF THE PAVEMENT MARKING MATERIAL.
- OPTIONAL

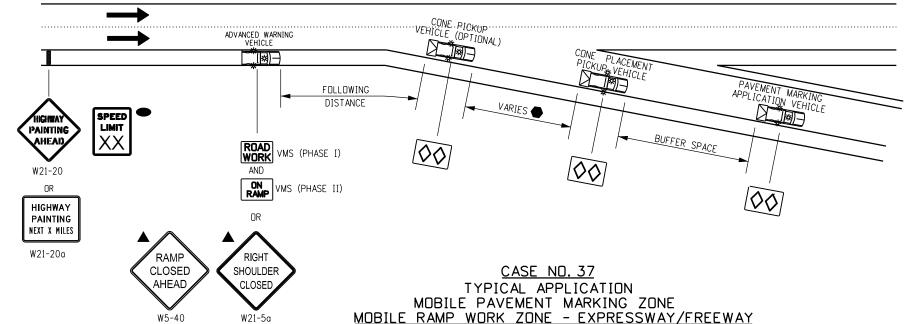
NOTES

- 1. THE SIGNING VEHICLES MAY ENCROACH INTO THE TRAFFIC LANE WHEN THE SHOULDER IS TOO NARROW TO DRIVE ON.
- 2. IF THE RAMP CANNOT BE REOPENED WITHIN 15 MINUTES, USE CASE NO. 22 OF THE S-630-1 STANDARD PLAN.

FOLLOWING DISTANCE CHART FOR WARNING VEHICLE AND CONE PICKUP VEHICLES

POSTED WZ SPEED LIMIT (MPH)	FOLLOWING DISTANCE (FEET)	BUFFER SPACE (FEET)
0 - 30	250 - 550	100 - 120
35 - 40	325 - 700	100 - 120
45 - 50	600 - 900	120 - 140
55	750 - 1200	120 - 140
60	1000 - 1400	180 - 200





Computer File Information	1		Sheet Revisions	Colorado Department of Transportation	TRAFFIC CONTROLS	STANDARD PLAN NO.
Creation Date: 07/04/12	_	Date:	Comments	2829 W. Howard Pl.		C 620 1
Created By: Nakao	R-D	01/20/23	UPDATED LEGEND	Denver, CD 80204	FOR HIGHWAY	S-630-1
Last Modification Date: 01/20/23			CHART	Phone: 303-757-9654 FAX: 303-757-9219	CONSTRUCTION	Standard Sheet No. 22 of 26
Last Modified By: NRIVERA						
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English				Traffic Safety & Engineering EB	Issued By: Traffic Safety & Engineering Branch July 31, 2019	Project Sheet Number:

LEGEND

MOBILE ATTENUATOR TRUCK, TWO 360-DEGREE YELLOW FLASHING BEACONS, AND YELLOW FLASHING VEHICLE LIGHTS OR STROBES.



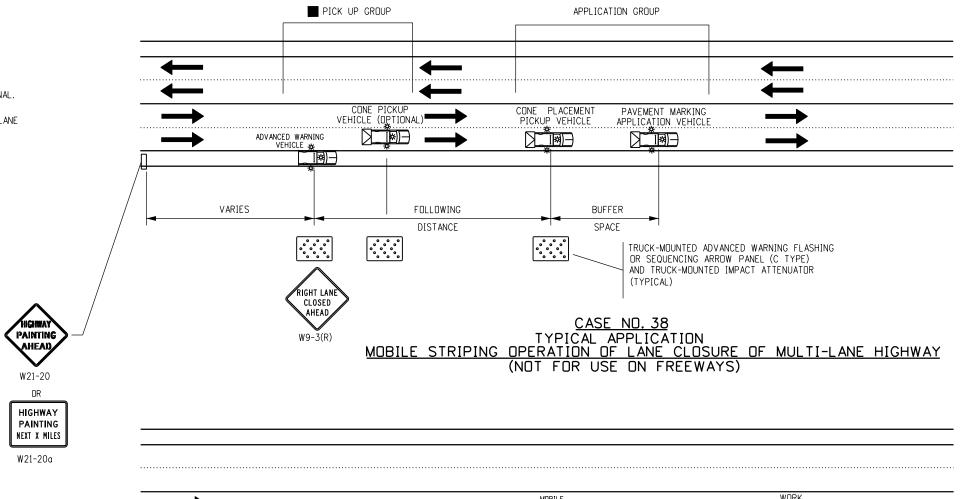
ADVANCE WARNING FLASHING OR SEQUENCING ARROW PANEL.

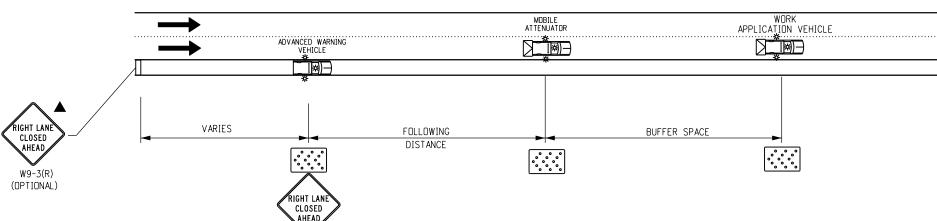
WHEN THE VMS IS USED, THE "RIGHT LANE CLSED AHEAD" W9-3(R/L) SIGN BECOMES OPTIONAL.

THE "CONE PICK UP VEHICLE" OR "WARNING VEHICLE" MAY ENCROACH INTO THE TRAFFIC LANE WHEN THE SHOULDER IS TOO NARROW TO DRIVE ON.

NOTES

- IN ROADWAY WHERE THE AADT IS 2,000 OR LESS, A SINGLE WORK VEHICLE WITH APPROPRIATE WARNING DEVICES ON THE VEHICLE MAY BE USED.
- 2. RADIO COMMUNICATIONS BETWEEN THE WORKCREW AND THE MOVING BLOCKADE ARE REQUIRED TO ADJUST THE BLOCKADE TO INCREASE OR DECREASE THE CLOSURE TIME. RELEASE TRAFFIC ONLY AFTER CONFIRMATION THAT ALL WORKERS AND THEIR VEHICLES ARE CLEAR OF THE ROADWAY.
- 3. IF APPLICABLE, ALL RAMPS AND ACCESS BETWEEN THE MOVING BLOCKADE AND WORK OPERATION AREA SHALL BE TEMPORARILY CLOSED USING TRAFFIC CONTROL EQUIPMENT AND PERSONNEL. EACH RAMP MUST REMAIN CLOSED UNTIL THE CREW DOING THE WORK GIVES THE "ALL CLEAR" SIGNAL OR UNTIL THE FRONT OF THE MOVING BLOCKADE PASSES THE CLOSED RAMP(S).





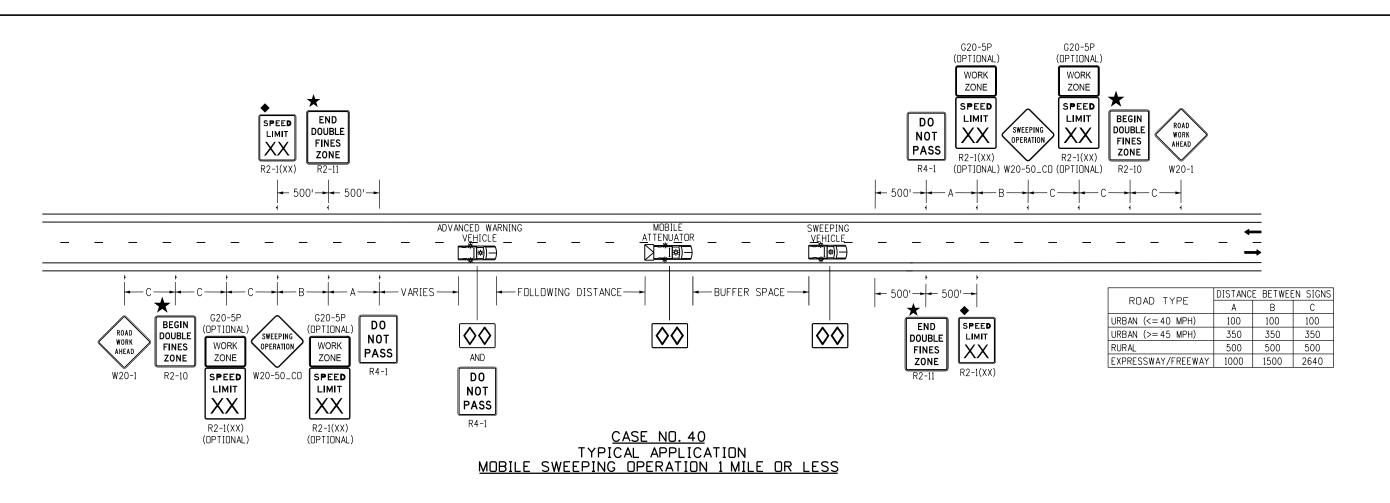
FOLLOWING DISTANCE CHART FOR WARNING VEHICLE AND SIGNING VEHICLES

POSTED WZ SPEED LIMIT (MPH) FOLLOWING DISTANCE (FEET) 0 - 30 250 - 550	BUFFER SPACE (FEET)
0 70 250 550	
0 - 30 250 - 550	100 - 120
35 - 40 325 - 700	100 - 120
45 - 50 600 - 900	120 - 140
55 750 - 1200	120 - 140
60 1000 - 1400	180 - 200

<u>CASE NO. 39</u> TYPICAL APPLICATION MOBILE OPERATION OF LANE CLOSURE OF MULTI-LANE HIGHWAY

	Sheet Revisions	Colorado Department of Transportation	TRAFFIC CONTROLS	STANDARD PLAN NO.
	Date: Comments	2829 W. Howard Pl.		S-630-1
	01/20/23 UPDATED LEGEND UPDATED FOLLOWING DISTANCE			
\cong \vdash	CHART	FAX: 303-757-9219	CONSTRUCTION	Standard Sheet No. 23 of 26
\preceq \vdash		Traffic Safety & Engineering EB	Issued By: Traffic Safety & Engineering Branch July 31, 2019	Project Sheet Number:
	-	Date: Comments 01/20/23 UPDATED LEGEND UPDATED FOLLOWING DISTANCE CHART	Date: Comments O1/20/23 UPDATED LEGEND UPDATED FOLLOWING DISTANCE CHART Date: Comments 2829 W. Howard Pl. Denver, C0 80204 Phone: 303-757-9654 FAX: 303-757-9219	Date: Comments O1/20/23 UPDATED LEGEND UPDATED FOLLOWING DISTANCE CHART Date: Comments O1/20/23 UPDATED LEGEND UPDATED FOLLOWING DISTANCE CHART CONSTRUCTION FOR HIGHWAY CONSTRUCTION

W9-3(R)



FOLLOWING DISTANCE CHART FOR WARNING AND MOBILE ATTENUATOR (OR SWEEPING) VEHICLE

POSTED WZ SPEED LIMIT (MPH)	FOLLOWING DISTANCE (FEET)	BUFFER SPACE (FEET)
0 - 30	250 - 550	100 - 120
35 - 40	325 - 700	100 - 120
45 - 50	600 - 900	120 - 140
55	750 - 1200	120 - 140
60	1000 - 1400	180 - 200

		CTION CHART AL NOTE 3)	
EXISTING POSTED SPEED	FIRST WORK ZONE SPEED	SECOND WORK ZONE SPEED	SPEED AFTER WORK ZONE
75 MPH	60 MPH	45 MPH	75 MPH
70 MPH	55 MPH	40 MPH	70 MPH
65 MPH	50 MPH	40 MPH	65 MPH
60 MPH	45 MPH	40 MPH	60 MPH
55 MPH	40 MPH	N/A	55 MPH
50 MPH	40 MPH	N/A	50 MPH
45 MPH	40 MPH	N/A	45 MPH

<u>LEGEND</u>

MOBILE ATTENUATOR VEHICLE, TWO 360-DEGREE YELLOW FLASHING BEACONS, AND YELLOW FLASHING VEHICLE LIGHTS OR STROBES.

♦♦ ARROW BOARD

THESE DEVICES ARE NOT OPTIONAL IF THE POSTED SPEED LIMIT IN THE WORK ZONE IS REDUCED.

★ SEE FINES DOUBLE SIGNING NOTES ON SHEET 12.

Computer File Information			Sheet Revisions
Creation Date: 01/20/23		Date:	Comments
Created By: AVU	(R-1)	04/30/24	REMOVED G20-11 AND G20-10
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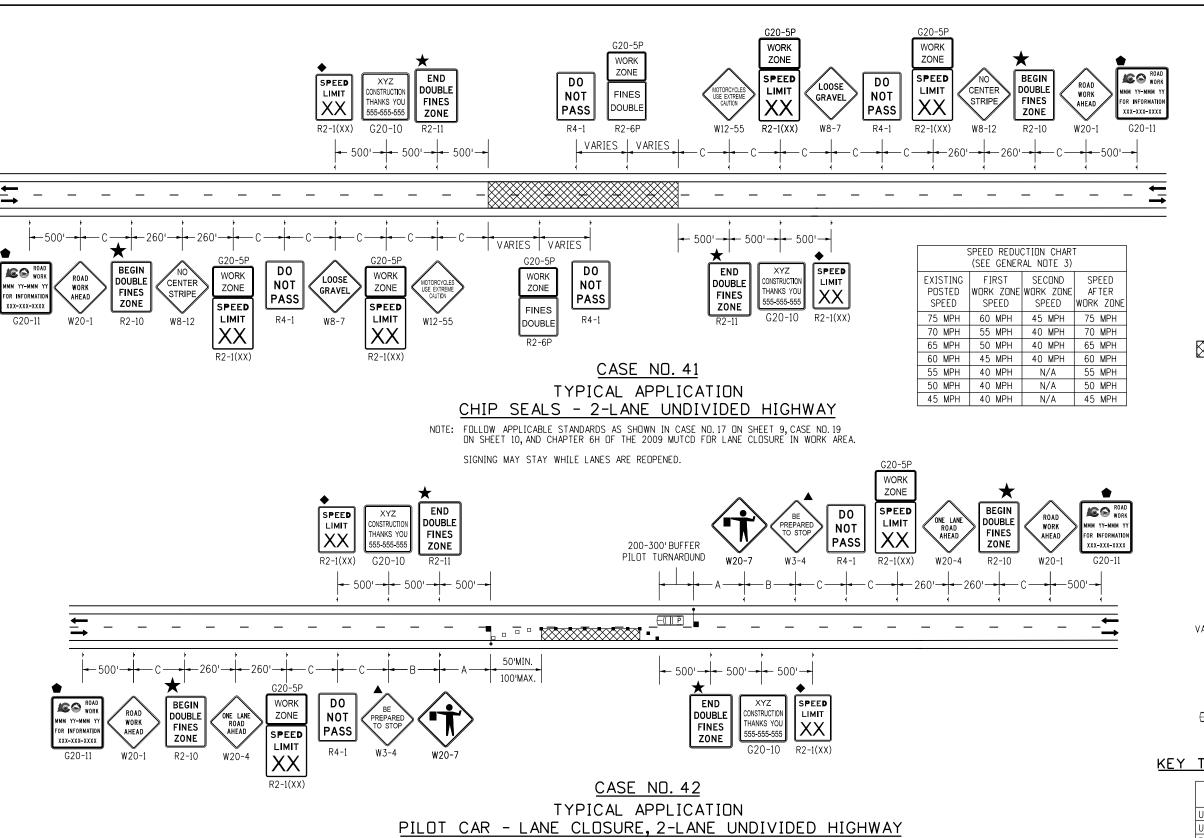
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Traffic Safety	&	Engineering	
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TRAFFIC CONTROLS
FOR HIGHWAY
CONSTRUCTION

STANDARD PLAN NO.
S-630-1
Standard Sheet No. 24 of 26

Issued By: Traffic Safety & Engineering Branch July 31, 2019



SIGNS C

NOTES

- ALL NIGHT HAZARDS WILL BE MARKED AND DELINEATED.
- 2. ALL SPEED LIMIT SIGNS CONFLICTING WITH WORK ZONE SPEED SHALL BE COVERED DURING SPEED REDUCTION.

LEGEND

- CHANNELIZING DEVICE: FOR TYPE OF DEVICE TO BE USED, SEE SCHEDULE OF TRAFFIC CONTROL DEVICES INCLUDED IN THE PLANS.
- DRUMS OR VERTICAL PANELS SHALL BE USED TO DELINEATE MERGING TAPERS, SHIFTING TAPERS, AND ONE LANE, TWO-WAY TRAFFIC TAPERS.
- FLAGGER STATION
- ← DIRECTION OF TRAVEL



WORK AREA

TRANSITION TAPER LENGTH:

L = MINIMUM LENGTH OF TAPER SPEED 45 MPH OR MORE: L = S x W

SPEED 40 MPH OR LESS: $L = \frac{WS^2}{60}$

S = NUMERICAL VALUE OF SPEED LIMIT OR 85 PERCENTILE SPEED

W = WIDTH OF OFFSET

SHOULDER TAPER = 1/3 L

- ▲ THESE DEVICES ARE OPTIONAL THEIR NEED SHALL BE DETERMINED BY DETOUR DESIGN AND/OR SCOPE OF CONSTRUCTION ACTIVITY, AND ARE REQUIRED WHEN THEY ARE INCLUDED IN THE SCHEDULE OF CONSTRUCTION CONTROL DEVICES.
- THESE DEVICES ARE NOT OPTIONAL IF THE POSTED SPEED LIMIT IN THE WORK ZONE IS REDUCED.

VARIES BUFFER SPACE (SEE GENERAL NOTE 23 ON SHEET 2).

G20-11 SIGN IS REQUIRED BY PROJECT SPECIAL PROVISION SECTION 626 - PUBLIC INFORMATION SERVICES. IF USED ON LOCAL AGENCY PROJECTS, THE CDOT LOGO SHALL BE OMMITTED.

-□IP PILOT CAR

SEE FINES DOUBLE SIGNING NOTES ON SHEET 12.

KEY TO ADVANCE SIGNING DISTANCES

RNAD TYPF	DISTANCE BETWEEN SIGNS				
RUAD TIPE	Α	В	С		
URBAN (<=40 MPH)	100	100	100		
URBAN (>=45 MPH)	350	350	350		
RURAL	500	500	500		
EXPRESSWAY/FREEWAY	1000	1500	2640		

Computer File Information			Sheet Revisions	l C
Creation Date: 06/03/21		Date:	Comments	
Created By: AVU	(R-2)	04/30/24	REVISED G20-11 LEGEND	
Last Modification Date: 04/30/24	R-D		ADDED G20-5P SIGN TO SHEET	,
Last Modified By: NRIVERA			UPDATED NOTE UNDER CASE NO.41 UPDATED SIGN SPACINGS	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English	0		UPDATED FLAGGER TAPER LENGTH	. '

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Colorado Department of Transportation



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Traffic Safety & Engineering

TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

Issued By: Traffic Safety & Engineering Branch July 31, 2019

STANDARD PLAN NO.

S-630-1

Standard Sheet No. 25 of 26

TYPICAL CONSTRUCTION ZONE SIGNS

THESE SIGNING NOTES ARE INTENDED AS A QUICK REFERENCE FOR TYPICAL SIGN USE AND PLACEMENT IN CONSTRUCTION ZONES.

G20-1	"ROAD/WORK/NEXT XX MILES" - THIS SIGN SHALL BE ERECTED AT THE LIMITS OF ANY ROAD CONSTRUCTION OR MAINTENANCE PROJECT OF MORE THAN TWO (2) MILES IN LENGTH WHERE TRAFFIC IS MAINTAINED THROUGH THE PROJECT.	W5-2a	"NARROW BRIDGE SYMBOL" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A BRIDGE OR CULVERT HAVING A CLEAR TWO-WAY ROADWAY WIDTH OF 16 TO 18 FEET OR ANY BRIDGE OR CULVERT HAVING A ROADWAY CLEARANCE LESS THAN THE WIDTH OF THE APPROACH PAVEMENT.★
G20-4	"PILOT CAR/FOLLOW ME" - THIS SIGN SHALL BE MOUNTED IN A CONSPICUOUS POSITION ON THE REAR OF A VEHICLE USED FOR GUIDING ONE-WAY TRAFFIC THROUGH OR AROUND THE PROJECT.	W5-3	"ONE LANE/BRIDGE" - THIS SIGN SHOULD BE PLACED ON TWO-WAY ROADWAYS IN ADVANCE OF
G20-5P	"WORK ZONE" - THIS PLAQUE SHALL BE MOUNTED JUST ABOVE THE WORK ZONE SPEED LIMIT SIGNS PRIOR TO THE WORK ZONE AREA.		THE BRIDGES OR CULVERTS WHERE THE ROADWAY WIDTH IS LESS THAN 16 FEET (18 FEET FOR COMMERCIAL VEHICLES) OR WHEN THE ALIGNMENT IS POOR ON THE APPROACH TO THE STRUCTURE HAVING A CLEAR ROADWAY WIDTH OF 18 FEET OR LESS.★
G20-10	THANK YOU SIGN - THIS SIGN SHOULD BE ERECTED APPROXIMATELY 500 FEET BEYOND THE END OF THE PROJECT.	W6-1	"DIVIDED HIGHWAY SYMBOL" - THIS SIGN SHOULD BE PLACED ON THE APPROACHES TO THE SECTION OF HIGHWAY WHERE OPPOSING FLOWS OF TRAFFIC ARE SEPARATED BY A PHYSICAL MEDIAN.
G20-11	CONSTRUCTION PROJECT INFORMATION SIGN - THIS SIGN SHALL BE ERECTED AS DESCRIBED IN SECTION 626 PROJECT SPECIAL PROVISION - PUBLIC INFORMATION SERVICES. THE COOT LOGO SHALL NOT BE USED ON LOCAL AGENCY PROJECTS.	W6-2	"DIVIDED HIGHWAY ENDS SYMBOL" - THIS SIGN SHOULD BE PLACED AT THE END OF THE SECTION OF PHYSICALLY DIVIDED HIGHWAY AS A WARNING OF TWO-WAY TRAFFIC AHEAD.
G20-55(X		W6-3	"TWO-WAY TRAFFIC SYMBOL" - THIS SIGN IS INTENDED FOR USE TO GIVE WARNING OF TRANSITION FROM A SEPARATED ONE-WAY ROADWAY TO A TWO-WAY ROADWAY. *
M4-9()	"DETOUR/<<<" - THIS SIGN IS USED FOR UNNUMBERED ROUTES; FOR USE IN EMERGENCY SITUATIONS; FOR PERIODS OF SHORT DURATION; OR WHERE, OVER RELATIVELY SHORT DISTANCES. IT IS NOT NECESSARY TO SHOW ROUTE MARKERS TO GUIDE TRAFFIC ALONG THE DETOUR AND BACK TO ITS AUTHORIZED ROUTE.	W7-1	"HILL SYMBOL" - THIS SIGN SHOULD BE PLACED AT A POINT IN ADVANCE OF THE DOWNGRADE WHERE THE LENGTH, PERCENT OF GRADE, HORIZONTAL CURVATURE, OR OTHER PHYSICAL FEATURES REQUIRE SPECIAL CONSIDERATION ON THE PART OF DRIVERS.来
M4-10()	"DETOUR ARROW" - THIS SIGN SHOULD BE MOUNTED JUST BELOW THE ROAD CLOSED SIGN AT THE POINT WHERE THE DETOUR ROADWAY OR ROUTE HAS BEEN ESTABLISHED DUE TO THE CLOSURE OF THE STREET OR HIGHWAY TO THROUGH TRAFFIC.	W8-1,W8-2	"BUMP"/"DIP" - THESE SIGNS ARE INTENDED FOR USE TO GIVE WARNING OF A SHARP RISE OR DEPRESSION IN THE PROFILE OF THE ROAD THAT IS SUFFICIENTLY ABRUPT TO AFFECT VEHICLE OPERATION OR CAUSE CONSIDERABLE DISCOMFORT TO PASSENGERS. **
R2-1()	"SPEED/LIMIT/XX" - THESE SIGNS ARE INTENDED TO REDUCE TRAFFIC SPEED IN ADVANCE OF THE DAILY WORK AREA WITHIN THE OVERALL PROJECT LIMITS.	W8-3a	"PAVEMENT ENDS SYMBOL" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE THE PAVEMENT SURFACE CHANGES FROM A HARD-SURFACED PAVEMENT TO THE LOW-TYPE SURFACE OR EARTH ROAD. *
R2-1(XX)	"SPEED/LIMIT/XX" - THIS SIGN IS INTENDED FOR USE 500 FEET PAST THE "THANK YOU" SIGN TO BRING TRAFFIC BACK TO ORIGINAL POSTED SPEED.	W8-4	"SOFT SHOULDER" - THIS SIGN IS INTENDED FOR USE TO WARN OF A SOFT SHOULDER CONDITION THAT COULD PRESENT A PROBLEM TO VEHICLES THAT MAY GET OFF THE PAVEMENT. *
R2-6P	"FINES DOUBLE" - THIS SIGN IS INTENDED FOR USE WITHIN WORK ZONES TO PROVIDE NOTICE OF INCREASED FINES FOR TRAFFIC VIOLATIONS WITHIN WORK ZONES.	W8-5	"SLIPPERY WHEN WET SYMBOL" - THIS SIGN SHOULD BE PLACED IN ADVANCE OF THE CONDITION WHERE THE HIGHWAY SURFACE IS SLIPPERY BEYOND WHAT IS ORDINARY WHEN WET.
R4-1	"DO NOT PASS" - THIS SIGN SHOULD BE PLACED AT TRANSITION TAPER POINT.	W8-9a	"SHOULDER DROP-OFF" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A SHOULDER DROP-OFF THAT EXCEEDS THREE INCHES IN HEIGHT. **
R4-2 R2-10	"PASS WITH CARE" - THIS SIGN SHOULD BE PLACED AT TRANSITION TAPER POINT. "BEGIN DOUBLE FINES ZONE" SIGN IS PLACED AT THE BEGINNING OF THE ADVANCED	W8-11	"UNEVEN LANES" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF AN UNEVEN ADJACENT LANE SITUATION THAT EXCEEDS ONE INCH IN HEIGHT. *
R2-11	WARNING AREA OF THE TRAFFIC CONTROL ZONE. "END DOUBLE FINES ZONE" SIGN IS PLACED AFTER WORK ZONE AREA, PAST DOWNSTREAM TAPER SECTION.	W9-1()	"LEFT (RIGHT) LANE ENDS" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE PAVEMENT WIDTH TRANSITION SIGN (W4-2).
R11-2	"ROAD/CLOSED" - THIS SIGN IS TO BE MOUNTED ON THE BARRICADE THAT IS PLACED BEFORE THE WORK ZONE ENTRANCE TO PROHIBIT TRAFFIC FROM ENTERING THE WORK ZONE.	W9-2()	"LANE ENDS/MERGE LEFT (RIGHT)" - THIS SIGN IS INTENDED FOR USE AS A SUPPLEMENT TO THE PAVEMENT WIDTH TRANSITION SIGN (W4-2).
R11-3	"ROAD CLOSED/X MILES AHEAD/L.T.O." - THIS SIGN SHOULD BE PLACED WHERE THROUGH TRAFFIC MUST DETOUR TO AVOID THE CLOSURE OF THE ROAD SOME DISTANCE BEYOND, BUT WHERE THE ROAD IS OPEN TO LOCAL TRAFFIC UP TO THE POINT OF CLOSURE.	W9-3 DR W9-3a()	"CENTER LANE CLOSED AHEAD" - THIS SIGN SHOULD BE USED IN ADVANCE OF THE POINT WHERE WORK OCCUPIES THE CENTER LANE AND TRAFFIC IS DIRECTED TO THE RIGHT OR LEFT OF THE WORK ZONE.*
R11-4	"ROAD CLOSED/TO/THRU TRAFFIC" FOR URBAN USE - THIS SIGN SHOULD BE PLACED WHERE THROUGH TRAFFIC MUST DETOUR TO AVOID THE CLOSURE OF THE ROAD SOME DISTANCE BEYOND, BUT WHERE THE ROAD IS OPEN TO LOCAL TRAFFIC UP TO THE POINT OF CLOSURE.	W12-1	"DOUBLE ARROW SYMBOL" - THIS SIGN SHOULD BE PLACED AT THE POINT OF THE OBSTRUCTION IN THE ROADWAY, WHERE TRAFFIC IS PERMITTED TO PASS ON EITHER SIDE OF THE OBSTRUCTION.
W1-1()	"TURN ARROW" - THIS SIGN IS INTENDED FOR USE WHERE ENGINEERING INVESTIGATIONS OF ** ROADWAY CONDITIONS SHOW THE RECOMMENDED SPEED ON THE TURN TO BE 30 MPH OR LESS.	W12-2	"LOW CLEARANCE SYMBOL" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF AN OBSTRUCTION TO WARN VEHICLE OPERATORS OF CLEARANCES LESS THAN THE MAXIMUM VEHICLE HEIGHT PERMITTED PLUS 12 INCHES.*
W1-2()	"CURVE ARROW" - THIS SIGN IS INTENDED FOR USE WHERE ENGINEERING INVESTIGATIONS OF ROADWAY CONDITIONS SHOW THE RECOMMENDED SPEED ON THE CURVE TO BE IN THE RANGE BETWEEN 30 AND 60 MILES PER HOUR.★	W13-1P()	"ADVISORY SPEED PLAQUE" - THIS PLAQUE IS INTENDED TO SUPPLEMENT WARNING SIGNS ONLY AND SHALL NOT BE MOUNTED ALONE. IT IS USED TO INDICATE THE MAXIMUM RECOMMENDED SPEED FOR THE INDICATED CONDITION.
W1-3()	"REVERSE TURN ARROW" - THIS SIGN IS INTENDED FOR USE WHERE TWO TURNS OR THE CURVE *AND A TURN IN OPPOSITE DIRECTIONS ARE SEPARATED BY A TANGENT OF LESS THAN 600 FEET. *	W13-3	"ADVISORY RAMP SPEED" - THIS SIGN IS TO BE POSTED TO INFORM MOTORISTS WHAT THE SUGGESTED SPEED LIMIT IS ON A RAMP.
W1-4()	"REVERSE CURVE ARROW" - THIS SIGN IS INTENDED FOR USE WHERE T₩O CURVES IN OPPOSITE DIRECTIONS ARE SEPARATED BY A TANGENT OF LESS THAN 600 FEET.	W20-1	"ROAD/WORK/AHEAD" - THIS SIGN IS TO BE LOCATED IN ADVANCE OF THE INITIAL ACTIVITY OR DETOUR A DRIVER MAY ENCOUNTER, AND IS INTENDED TO BE USED AS A WARNING
W1-6()	"ARROW" - THIS SIGN SHOULD BE MOUNTED JUST BELOW THE ROAD CLOSED SIGN AT THE POINT WHERE THE DIVERSION HAS BEEN ESTABLISHED DUE TO THE LANE CLOSURE.	W00 0	OF OBSTRUCTIONS OR RESTRICTIONS.
W3-2	"YIELD AHEAD" - THIS SIGN IS INTENDED FOR USE AT THE APPROACH TO THE YIELD SIGN THAT IS NOT VISIBLE FOR A SUFFICIENT DISTANCE TO PERMIT THE DRIVER TO BRING HIS VEHICLE TO	W20-2	"DETOUR/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE POINT AT WHICH TRAFFIC IS DIVERTED OVER A TEMPORARY ROADWAY OR ROUTE.
W3-4	A STOP AT THE YIELD SIGN.** "BE PREPARED TO STOP" - THIS SIGN TO BE PLACED IN ADVANCE OF A FLAGGER.	W20-3	"ROAD/CLOSED/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT AT WHICH A ROADWAY IS CLOSED TO ALL TRAFFIC OR TO ALL BUT LOCAL TRAFFIC.
W4-2(X)	"LEFT (RIGHT) LANE TRANSITION SYMBOL" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE REDUCTION IN THE NUMBER OF TRAFFIC LANES IN THE DIRECTION OF TRAVEL ON THE MULTILANE	W20-4	"ONE LANE/ROAD/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE TRAFFIC IN BOTH DIRECTIONS MUST USE A SINGLE LANE.
W4-50	HIGHWAY.* "USE BOTH LANES DURING CONGESTION" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE "ROAD WORK X MILE" ADVANCED WARNING SIGN.	W20-5()	"XXX LANE/CLOSED/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE ONE LANE OF A MULTIPLE-LANE ROADWAY IS CLOSED. IT SHOULD BE PROVIDED WITH INTERCHANGEABLE PLAQUES READING "RIGHT", "LEFT", AND "CENTER" AT NO ADDITIONAL COST TO THE PROJECT.
W4-51	"USE BOTH LANES TO MERGE POINT" - THIS SIGN IS INTENDED TO DIRECT MOTORISTS TO USE BOTH TRAVEL LANES UNTIL THE LANES ARE REDUCED TO ONE LANE.	W20-7	"FLAGGER SYMBOL" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF ANY POINT AT WHICH A
W4-52	"TAKE TURNS MERGE HERE" - THIS SIGN IS INTENDED TO WARN MOTORISTS IN ADVANCED TO MOVE FROM THE CLOSED TRAVEL LANE TO THE OPEN TRAVEL LANE, USUALLY 500 FEET IN ADVANCED OF THE START OF THE TRANSITION TAPER.	W20-52	FLAGGER HAS BEEN STATIONED TO CONTROL TRAFFIC THROUGH OR AROUND THE PROJECT. ** "GROOVED/PAVEMENT/AHEAD" - THIS SIGN IS INTENDED TO BE USED IN ADVANCE OF A ROADWAY THAT HAS BEEN GROOVED AND/OR ROTO MILLED.
W5-1	"ROAD NARROWS" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE TRANSITION ON THE ROAD WHERE THE PAVEMENT WIDTH IS REDUCED ABRUPTLY TO A WIDTH SUCH THAT TWO CARS CANNOT PASS WITHOUT REDUCING SPEED.来	W21-1a	"WORKER SYMBOL" - THIS SIGN IS INTENDED FOR USE IN CONJUNCTION WITH MINOR MAINTENANCE AND PUBLIC UTILITY OPERATIONS FOR THE PROTECTION OF MEN WORKING IN OR NEAR THE ROADWAY.

W21-4 "ROAD/WORK/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF MAINTENANCE FOR MINDR RECONSTRUCTION OPERATIONS IN THE ROADWAY. W21-5 "SHOULDER/WORK" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE PROJECT INVOLVING THE SHOULDER, WHERE THE TRAVELED WAY REMAINS UNOBSTRUCTED. W21-6 "SURVEY/CREW" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE A SURVEYING CREW IS WORKING IN OR ADJACENT TO THE ROADWAY.* W21-20 "HIGHWAY PAINTING AHEAD" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE A PAINT CREW IS WORKING IN OR ADJACENT TO THE ROADWAY.	W21-2	"FRESH/OIL" - THIS SIGN IS INTENDED FOR USE WHERE RE-SURFACING OPERATIONS HAVE RENDERED THE SURFACE OF THE PAVEMENT TEMPORARILY WET, AND OBJECTIONABLE SPLASHING ON VEHICLES MAY OCCUR.*
MAINTÉNANCÉ FOR MINOR RECONSTRUCTION OPERATIONS IN THE ROADWAY. W21-5 "SHOULDER/WORK" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE PROJECT INVOLVING THE SHOULDER, WHERE THE TRAVELED WAY REMAINS UNOBSTRUCTED. W21-6 "SURVEY/CREW" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE A SURVEYING CREW IS WORKING IN OR ADJACENT TO THE ROADWAY. ★ W21-20 "HIGHWAY PAINTING AHEAD" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE A PAINT CREW IS WORKING IN OR ADJACENT TO THE ROADWAY. W21-20 "HIGHWAY PAINTING NEXT X MILES" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF PAINT CREW WORKING IN OR ADJACENT TO THE ROADWAY. W22-1 "BLASTING/ZONE/OIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF ANY POINT OR WORK SITE WHERE THERE ARE EXPLOSIVES BEING USED. THE W22-2 AND W22-3 SIGNS MUST BE USED IN SEQUENCE WITH THIS SIGN. W22-2 "TURN OFF/2-WAY RADIOS/AND/CELLULAR/PHONES" - THIS SIGN IS TO BE USED IN SEQUENCE WITH THE W22-1 AND W22-3 SIGNS AND PLACED AT LEAST 1000 FEET FROM THE BEGINNING OF THE BLASTING ZONE. W22-3 "END/BLASTING/ZONE" - THIS SIGN IS TO BE USED TO DENOTE THE END OF THE RADIO INFLUENCE AREA AND SHALL BE PLACED A MINIMUM OF 1000 FEET FROM THE BLASTING ZONE, EITHER WITH OR PRECEDING THE END	W21-3	"ROAD/MACHINERY/AHEAD" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF THE AREAS WHERE HEAVY EQUIPMENT IS OPERATING IN OR ADJACENT TO THE ROADWAY.*
PROJECT INVOLVING THE SHOULDER, WHERE THE TRAVELED WAY REMAINS UNDBSTRUCTED. W21-6 "SURVEY/CREW" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE A SURVEYING CREW IS WORKING IN OR ADJACENT TO THE ROADWAY. * W21-20 "HIGHWAY PAINTING AHEAD" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE A PAINT CREW IS WORKING IN OR ADJACENT TO THE ROADWAY. W21-20 "HIGHWAY PAINTING NEXT X MILES" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF PAINT CREW WORKING IN OR ADJACENT TO THE ROADWAY. "BLASTING/ZONE/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF ANY POINT OR WORK SITE WHERE THERE ARE EXPLOSIVES BEING USED. THE W22-2 AND W22-3 SIGNS MUST BE USED IN SEQUENCE WITH THIS SIGN. W22-2 "TURN DFF/2-WAY RADIOS/AND/CELLULAR/PHONES" - THIS SIGN IS TO BE USED IN SEQUENCE WITH THE W22-1 AND W22-3 SIGNS AND PLACED AT LEAST 1000 FEET FROM THE BEGINNING OF THE BLASTING ZONE. W22-3 "END/BLASTING/ZONE" - THIS SIGN IS TO BE USED TO DENOTE THE END OF THE RADIO INFLUENCE AREA AND SHALL BE PLACED A MINIMUM OF 1000 FEET FROM THE BLASTING ZONE, EITHER WITH OR PRECEDING THE END	W21-4	
WHERE A SURVEYING CREW IS WORKING IN OR ADJACENT TO THE ROADWAY. ★ W21-20 "HIGHWAY PAINTING AHEAD" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE A PAINT CREW IS WORKING IN OR ADJACENT TO THE ROADWAY. W21-200 "HIGHWAY PAINTING NEXT X MILES" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF PAINT CREW WORKING IN OR ADJACENT TO THE ROADWAY. W22-1 "BLASTING/ZONE/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF ANY POINT OR WORK SITE WHERE THERE ARE EXPLOSIVES BEING USED. THE W22-2 AND W22-3 SIGNS MUST BE USED IN SEQUENCE WITH THIS SIGN. W22-2 "TURN OFF/2-WAY RADIOS/AND/CELLULAR/PHONES" - THIS SIGN IS TO BE USED IN SEQUENCE WITH THE W22-1 AND W22-3 SIGNS AND PLACED AT LEAST 1000 FEET FROM THE BEGINNING OF THE BLASTING ZONE. W22-3 "END/BLASTING/ZONE" - THIS SIGN IS TO BE USED TO DENOTE THE END OF THE RADIO INFLUENCE AREA AND SHALL BE PLACED A MINIMUM OF 1000 FEET FROM THE BLASTING ZONE, EITHER WITH OR PRECEDING THE END	W21-5	PROJECT INVOLVING THE SHOULDER, WHERE THE TRAVELED WAY REMAINS
POINT WHERE A PAINT CREW IS WORKING IN OR ADJACENT TO THE ROADWAY. W21-200 "HIGHWAY PAINTING NEXT X MILES" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OPAINT CREW WORKING IN OR ADJACENT TO THE ROADWAY. W22-1 "BLASTING/ZDNE/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF ANY POINT OR WORK SITE WHERE THERE ARE EXPLOSIVES BEING USED. THE W22-2 AND W22-3 SIGNS MUST BE USED IN SEQUENCE WITH THIS SIGN. W22-2 "TURN OFF/2-WAY RADIOS/AND/CELLULAR/PHONES" - THIS SIGN IS TO BE USED IN SEQUENCE WITH THE W22-1 AND W22-3 SIGNS AND PLACED AT LEAST 1000 FEET FROM THE BEGINNING OF THE BLASTING ZONE. W22-3 "END/BLASTING/ZONE" - THIS SIGN IS TO BE USED TO DENOTE THE END OF THE RADIO INFLUENCE AREA AND SHALL BE PLACED A MINIMUM OF 1000 FEET FROM THE BLASTING ZONE, EITHER WITH OR PRECEDING THE END	W21-6	"SURVEY/CREW" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF A POINT WHERE A SURVEYING CREW IS WORKING IN OR ADJACENT TO THE ROADWAY.
PAINT CREW WORKING IN OR ADJACENT TO THE ROADWAY. W22-1 "BLASTING/ZONE/(DIST.)" - THIS SIGN IS INTENDED FOR USE IN ADVANCE OF ANY POINT OR WORK SITE WHERE THERE ARE EXPLOSIVES BEING USED. THE W22-2 AND W22-3 SIGNS MUST BE USED IN SEQUENCE WITH THIS SIGN. W22-2 "TURN DFF/2-WAY RADIOS/AND/CELLULAR/PHONES" - THIS SIGN IS TO BE USED IN SEQUENCE WITH THE W22-1 AND W22-3 SIGNS AND PLACED AT LEAST 1000 FEET FROM THE BEGINNING OF THE BLASTING ZONE. W22-3 "END/BLASTING/ZONE" - THIS SIGN IS TO BE USED TO DENOTE THE END OF THE RADIO INFLUENCE AREA AND SHALL BE PLACED A MINIMUM OF 1000 FEET FROM THE BLASTING ZONE, EITHER WITH OR PRECEDING THE END	W21-20	
ANY POINT OR WORK SITE WHERE THERE ARE EXPLOSIVES BEING USED. THE W22-2 AND W22-3 SIGNS MUST BE USED IN SEQUENCE WITH THIS SIGN. W22-2 "TURN OFF/2-WAY RADIOS/AND/CELLULAR/PHONES" - THIS SIGN IS TO BE USED IN SEQUENCE WITH THE W22-1 AND W22-3 SIGNS AND PLACED AT LEAST 1000 FEET FROM THE BEIGNNING OF THE BLASTING ZONE. W22-3 "END/BLASTING/ZONE" - THIS SIGN IS TO BE USED TO DENDTE THE END OF THE RADIO INFLUENCE AREA AND SHALL BE PLACED A MINIMUM OF 1000 FEET FROM THE BLASTING ZONE, EITHER WITH OR PRECEDING THE END	W21-20a	"HIGHWAY PAINTING NEXT X MILES" - THIS SIGN IS INTENDED FOR USE IN ADVANCE DIPAINT CREW WORKING IN OR ADJACENT TO THE ROADWAY.
USED IN SEQUENCE WITH THE W22-1 AND W22-3 SIGNS AND PLACED AT LEAST 1000 FEET FROM THE BEGINNING OF THE BLASTING ZONE. W22-3 "END/BLASTING/ZONE" - THIS SIGN IS TO BE USED TO DENOTE THE END OF THE RADIO INFLUENCE AREA AND SHALL BE PLACED A MINIMUM OF 1000 FEET FROM THE BLASTING ZONE, EITHER WITH OR PRECEDING THE END	W22-1	ANY POINT OR WORK SITE WHERE THERE ARE EXPLOSIVES BEING USED. THE
THE RADIO INFLUENCE AREA AND SHALL BE PLACED A MINIMUM OF 1000 FEET FROM THE BLASTING ZONE, EITHER WITH OR PRECEDING THE END	W22-2	USED IN SEQUENCE WITH THE W22-1 AND W22-3 SIGNS AND PLACED AT LEAST
	W22-3	THE RADIO INFLUENCE AREA AND SHALL BE PLACED A MINIMUM OF 1000 FEET FROM THE BLASTING ZONE, EITHER WITH OR PRECEDING THE END

ADVANCE PLACEMENT OF WARNING SIGNS

"ROCK SCALING X MILE(S)" - THIS SIGN IS INTENDED TO BE USED IN ADVANCE OF A FLAGGER IN ADVANCED OF THE WORK ZONE AREA.

H G3:	ADVANCE PLACEMENT DISTANCE (FEET)									
POSTED OR 85TH PERCENTILE SPEED	+CONDITION A	++ CONDITION B: DECLARATION TO THE LISTED ADVISORY SPEED (MPH) FOR THE CONDITION								
STE		MPH								
88		0	10	20	30	40	50	60	70	
20	225	•	•							
25	325	•	•	•						
30	450	•	•	•						
35	550	•	•	•	•					
40	650	125	•	•	•					
45	750	175	125	•	•	•				
50	850	250	200	150	100	•				
55	950	325	275	225	175	100	•			
60	1100	400	350	300	250	175	•			
65	1200	475	425	400	350	275	175	•		
70	1250	550	525	500	425	350	250	150		
75	1350	650	625	600	525	450	350	250	100	

- igspace Condition a: Speed reduction and lane changing in Heavy Traffic. Typical Signs are "MERGE" AND "RIGHT LANE ENDS".
- + + CONDITION B: TYPICAL CONDITIONS ARE THE WARNING OF A POTENTIAL STOP SITUATION AND LOCATIONS WHERE THE ROAD USER MUST DECREASE SPEED TO MANEUVER THROUGH THE WARNED CONDITION. TYPICAL SIGNS ARE "STOP AHEAD", "SIGNAL AHEAD", "YIELD AHEAD", "CURVE", "REVERSE CURVE", "TURN".
 - NO SUGGESTED DISTANCES ARE PROVIDED AT THESE SPEEDS, AS THE PLACEMENT IS DEPENDENT ON SITE CONDITIONS AND OTHER SIGNING.

A SUPPLEMENTAL PLAQUE MAY BE USED WITH WARNING SIGNS SPECIFYING THE DISTANCE TO THE CONDITION IF THERE IS AN IN-BETWEEN INTERSECTION THAT MIGHT CONFUSE THE MOTORIST.

flaor placement should be in accordance with warning sign placement table.

Computer File Information		Sheet Revisions		
Creation Date: 07/04/12		Date:	Comments	
Created By: Nakao			REVISED G20-11 LEGEND	
Last Modification Date: 04/30/24		01/20/23	Replaced R52-6a(b) with R2-10(11) Updated W3-4 and R11-3	
Last Modified By: NRIVERA			Updated W3-4 and R11-3	
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English				

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Traffic Safety & Engineering

TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

W22-50(X)

STANDARD PLAN NO. S-630-1

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