

Traffic Control

TC

Traffic Control

NO.	DATE	TITLE
Two-Lane and Multi-Lane Roadways		
TC-1	04-16-13	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-61	04-21-15	Two-Lane, Two-way Operation
TC-62	10-18-16	Permanent Two-Lane to Four-Lane Divided Transition
TC-63	04-16-13	Lane Closure at Two-Lane to Four-Lane Transition.
TC-64	04-16-13	Lane Closure at Two-Lane to Four-Lane Transition with Flagger
TC-81	04-20-10	Restricted Width Signing (Less Than 14.5 Feet)
Two-Lane Roadways		
TC-202	04-21-15	Work Within 15 ft of Traveled Way
TC-203	10-16-12	Aerial Seeding Operations
TC-211	04-17-12	Lane Closure on Low Volume Roadway
TC-212	04-16-13	Spot Location Lane Closure with Flaggers
TC-213	04-17-12	Lane Closure with Flaggers
TC-214	04-16-13	Lane Closure with Flaggers for use with Pilot Car
TC-215	10-21-14	Lane Closure with Signals (Up to Three Days)
TC-216	10-18-16	Lane Closure with Signals
TC-217	10-18-16	Lane Closure with Signals and TBR
TC-218	10-20-15	Lane Closure with Pilot Car and Flagger Operated Signals
TC-228	10-15-13	Lane Closure Involving TWLTL
TC-231	10-15-13	Slow Moving Vehicle Operating in the Traffic Lane
TC-232	10-21-14	Shoulder Rumble Strip Operations
TC-233	04-18-17	Pavement Marking Operations Two-Lane
TC-234	04-18-17	Strip Sealing Operations
TC-235	10-15-13	Edge Rut Repair
TC-251	04-17-12	Temporary Road Closure
TC-252	04-19-16	Routes Closed to Traffic

Traffic Control

NO.	DATE	TITLE
TC-253	10-18-16	Paved On-Site Detour
TC-271	10-18-16	Signalized Equipment Crossing
TC-272	10-18-16	Unsignalized Equipment Crossing
TC-273	04-20-10	Construction Site Entrance
TC-282	04-19-11	Uneven Lanes
TC-283	10-18-11	Surveying Operations
TC-284	10-15-13	No Centerline Markings on Non-Primary Roadways
Multi-Lane Roadways		
TC-402	04-21-15	Work Within 15 ft of Traveled Way
TC-403	10-16-12	Aerial Seeding Operations
TC-416	04-17-12	Partial Lane Closure on Ramps
TC-417	04-16-13	Ramp Closure
TC-418	10-15-13	Lane Closure on Divided Highway
TC-419	04-19-16	Lane Closure on Undivided Highway
TC-420	04-21-15	Lane Closure at Ramps
TC-421	10-21-14	Lane Closure with TBR
TC-422	10-15-13	Closure of Two Adjacent Lanes on Divided Highway
TC-423	04-15-14	Closure of Two Adjacent Lanes on Undivided Highway
TC-429	10-16-12	Closure of Continuous Two-Way Left Turn Lane and Adjacent Lane
TC-431	04-18-17	Slow Moving Vehicle Operating in the Traffic Lane
TC-432	04-18-17	Shoulder Rumble Strip Operations
TC-433	04-18-17	Pavement Marking Operations
TC-451	04-21-15	Temporary Road Closure on Divided Highway
TC-454	10-16-12	Temporary Detour Using Ramps on Divided Highway
TC-482	04-19-11	Uneven Lanes

Traffic Control

SECTION
TC

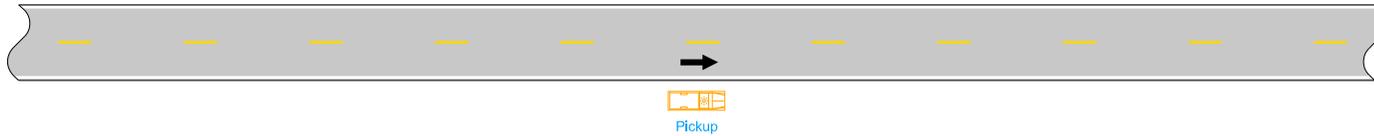
NO.	DATE	TITLE
TC-601	10-18-11	Pedestrian Detour
TC-602	10-18-11	Sidewalk Diversion

Do not allow work to interfere with the flow of traffic.

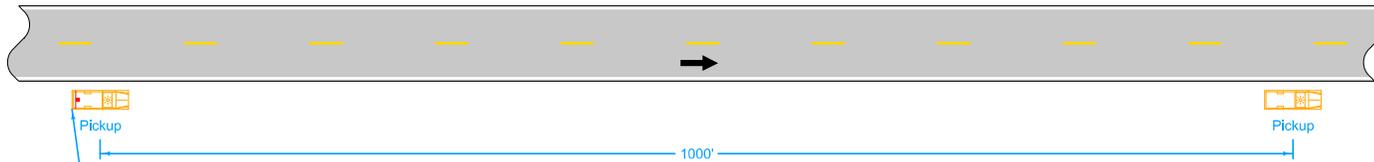
When parked, locate vehicles as far from the open traffic lane as possible. Entrances and driveways should be used whenever appropriate.

Equip all vehicles with an amber revolving light or amber strobe light.

① For work lasting longer than one hour, refer to [TC-202](#) or [TC-402](#).



VEHICLE STOPPED ON SHOULDER FOR LESS THAN ONE HOUR ①



SLOW-MOVING OPERATION



LEGEND	
	Traffic Sign
	Direction of Traffic

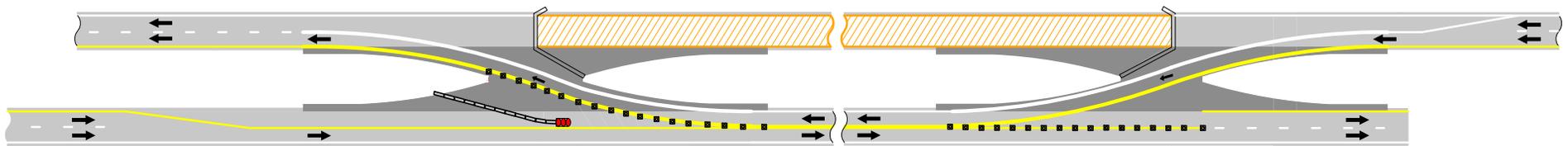
Possible Contract Item:
Traffic Control

	REVISION
	2 04-16-13
STANDARD ROAD PLAN	TC-1
	SHEET 1 of 1

REVISIONS: Modified note concerning amber Vehicle Warning Light.

Deanna Maifield
APPROVED BY DESIGN METHODS ENGINEER

**WORK NOT AFFECTING TRAFFIC
(TWO-LANE OR MULTI-LANE)**



See Sheets 2 and 4 for Details

See Sheets 3 and 4 for Details

OVERVIEW OF CROSSOVER

Place Two-Way Traffic symbol and DO NOT PASS signs alternately on both sides of the roadway at a maximum of one-half mile intervals for both directions of travel. Always have signs in sight of motorists.

When the Average Daily Traffic (ADT) exceeds 20,000 vehicles per day or when a traffic queue extends beyond the advanced signing, place RIGHT/LEFT LANE CLOSED 4 MILES and RIGHT/LEFT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, respectively, as appropriate.

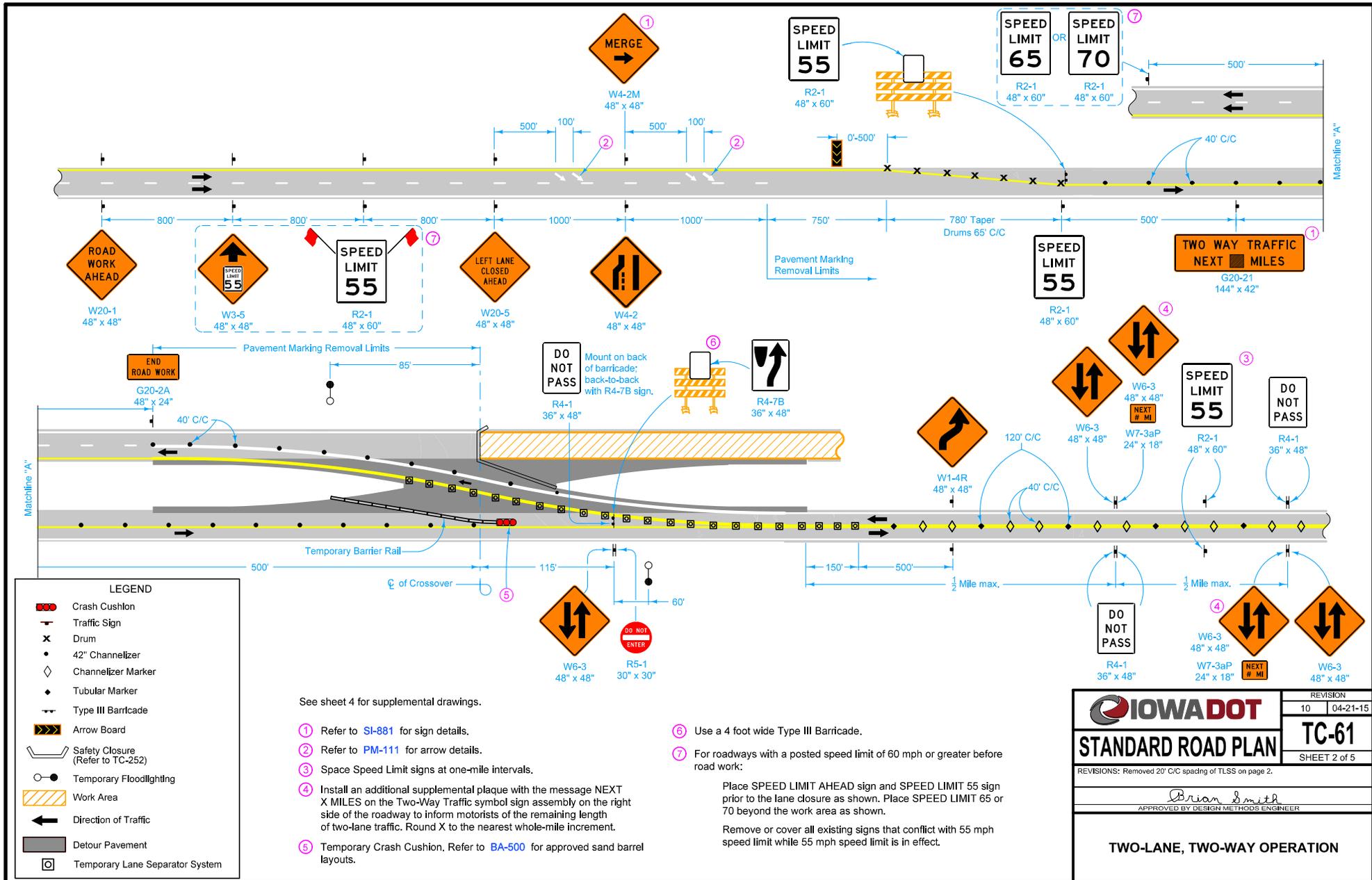
Possible Contract Items:

- | | |
|-----------------------------|---------------------------------|
| Painted Symbols and Legends | Temporary Barrier Rail |
| Pavement Marking Items | Temporary Crash Cushions |
| Pavement Marking Removed | Temporary Floodlighting |
| Safety Closures | Temporary Lane Separator System |
| | Traffic Control |

Possible Tabulations:

- 108-13A, 108-22, 108-27, 108-29, 108-30, 108-33, 108-35

	REVISION
	10 04-21-15
STANDARD ROAD PLAN	TC-61
REVISIONS: Removed 20' C/C spacing of TLSS on page 2.	SHEET 1 of 5
 APPROVED BY DESIGN METHODS ENGINEER	
TWO-LANE, TWO-WAY OPERATION	



LEGEND

- Crash Cushion
- Traffic Sign
- Drum
- 42" Channelizer
- Channelizer Marker
- Tubular Marker
- Type III Barricade
- Arrow Board
- Safety Closure (Refer to TC-252)
- Temporary Floodlighting
- Work Area
- Direction of Traffic
- Detour Pavement
- Temporary Lane Separator System

See sheet 4 for supplemental drawings.

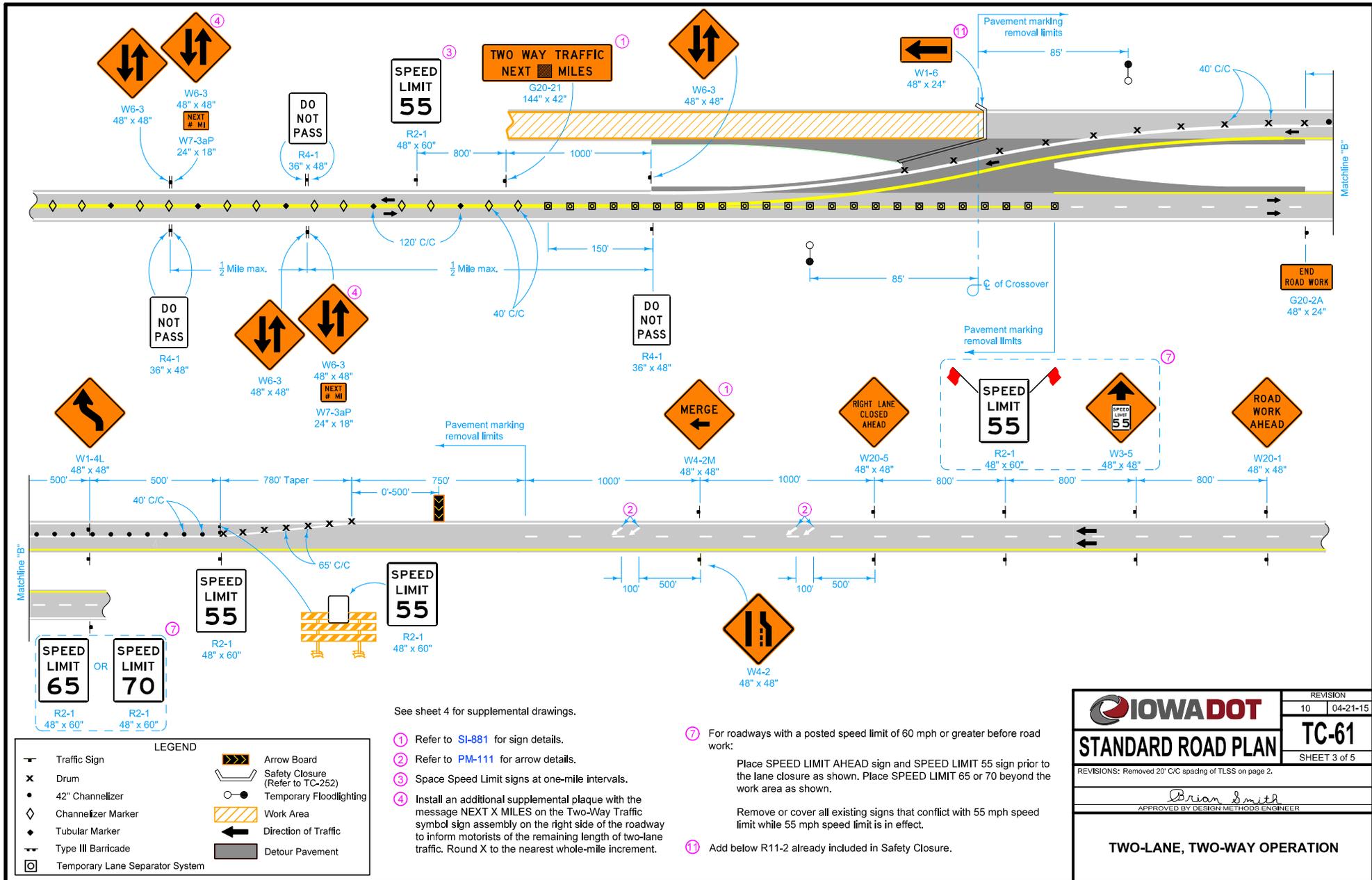
- ① Refer to **SI-881** for sign details.
- ② Refer to **PM-111** for arrow details.
- ③ Space Speed Limit signs at one-mile intervals.
- ④ Install an additional supplemental plaque with the message NEXT X MILES on the Two-Way Traffic symbol sign assembly on the right side of the roadway to inform motorists of the remaining length of two-lane traffic. Round X to the nearest whole-mile increment.
- ⑤ Temporary Crash Cushion. Refer to **BA-500** for approved sand barrel layouts.

- ⑥ Use a 4 foot wide Type III Barricade.
- ⑦ For roadways with a posted speed limit of 60 mph or greater before road work:

Place **SPEED LIMIT AHEAD** sign and **SPEED LIMIT 55** sign prior to the lane closure as shown. Place **SPEED LIMIT 65** or **70** beyond the work area as shown.

Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.

	REVISION 10 04-21-15
	SHEET 2 OF 5
STANDARD ROAD PLAN	
REVISIONS: Removed 20' C/C spacing of TLSS on page 2.	
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>	
TWO-LANE, TWO-WAY OPERATION	

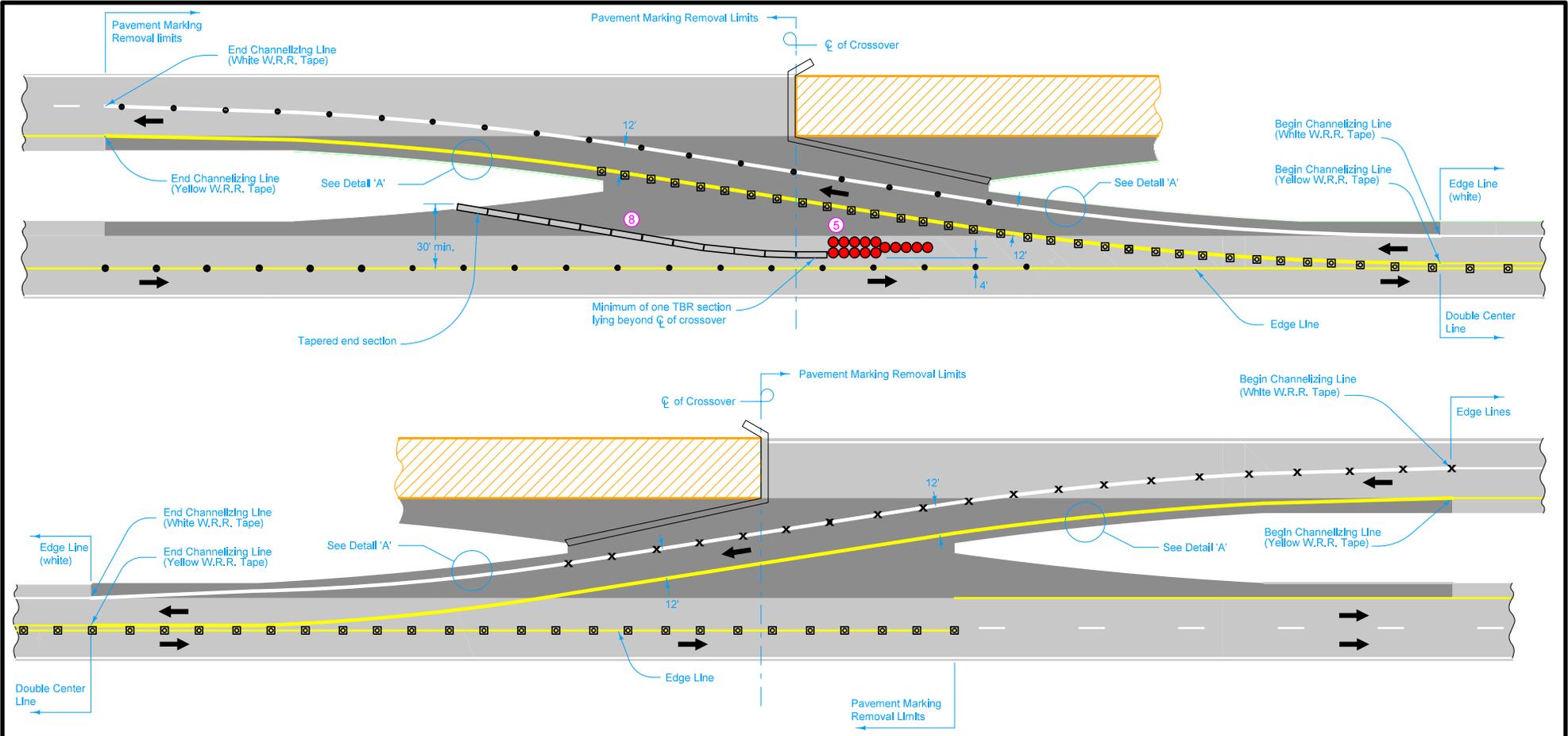


See sheet 4 for supplemental drawings.

- ① Refer to **SI-881** for sign details.
- ② Refer to **PM-111** for arrow details.
- ③ Space Speed Limit signs at one-mile intervals.
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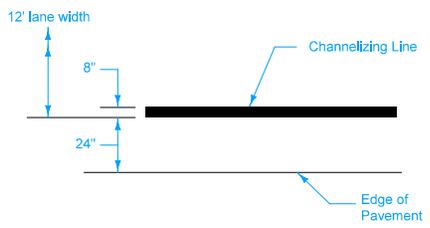
- ⑦ For roadways with a posted speed limit of 60 mph or greater before road work:
Place **SPEED LIMIT AHEAD** sign and **SPEED LIMIT 55** sign prior to the lane closure as shown. Place **SPEED LIMIT 65** or **70** beyond the work area as shown.
- ⑩ Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.
- ⑪ Add below R11-2 already included in Safety Closure.

 STANDARD ROAD PLAN	REVISION 10 04-21-15
	TC-61
	SHEET 3 of 5
REVISIONS: Removed 20' C/C spacing of TLSS on page 2.	
 APPROVED BY DESIGN METHODS ENGINEER	
TWO-LANE, TWO-WAY OPERATION	



LEGEND

- ✕ Drum
- 42" Channelizer
- Crash Cushion
- ▨ Work Area
- ← Direction of Traffic
- ▬ Detour Pavement
- ⌒ Safety Closure (Refer to TC-252)
- ⊠ Temporary Lane Separator System

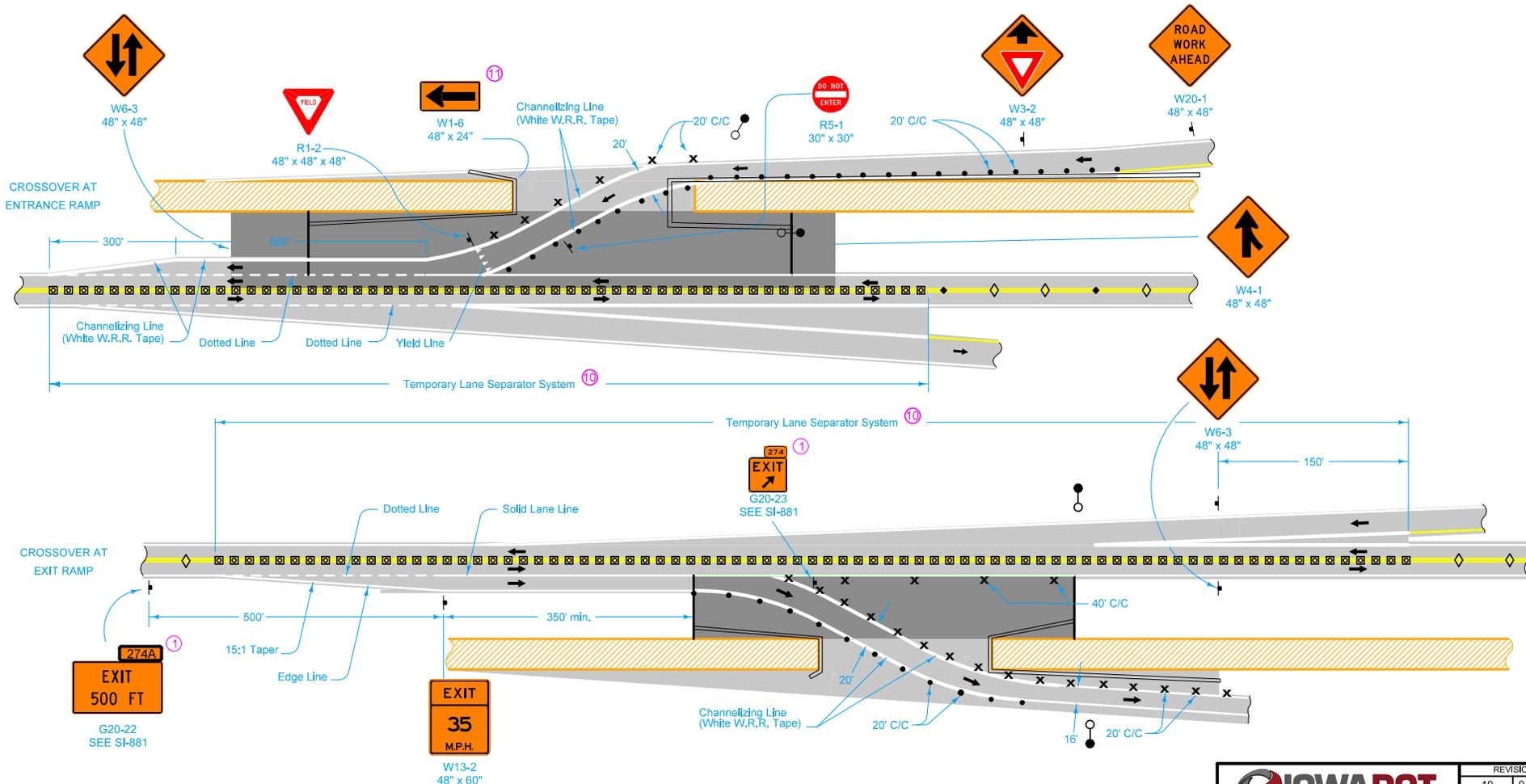


DETAIL 'A'
SUPPLEMENTAL CROSSOVER DRAWINGS ⑨

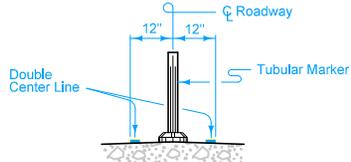
- ⑤ Temporary Crash Cushion. Refer to BA-500 for approved sand barrel layouts.
- ⑧ Number of TBR sections varies based on dimensions of Detour Pavement. Refer to BA-401 and 108-33 for TBR information.
- ⑨ Details shown hereon are intended to provide additional information to the requirements shown on sheets 2 and 3.

<p>STANDARD ROAD PLAN</p> <p>REVISIONS: Removed 20' C/C spacing of TLSS on page 2.</p> <p style="text-align: right;"><i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER</p>	REVISION
	10 04-21-15
	TC-61
SHEET 4 of 5	
TWO-LANE, TWO-WAY OPERATION	

RAMP LOCATIONS



LEGEND	
	Traffic Sign
	42" Channelizer
	Drum
	Channelizer Marker
	Tubular Marker
	Temporary Floodlighting
	Temporary Lane Separator System
	Work Area
	Detour Pavement
	Direction of Traffic
	Safety Closure (Refer to TC-252)

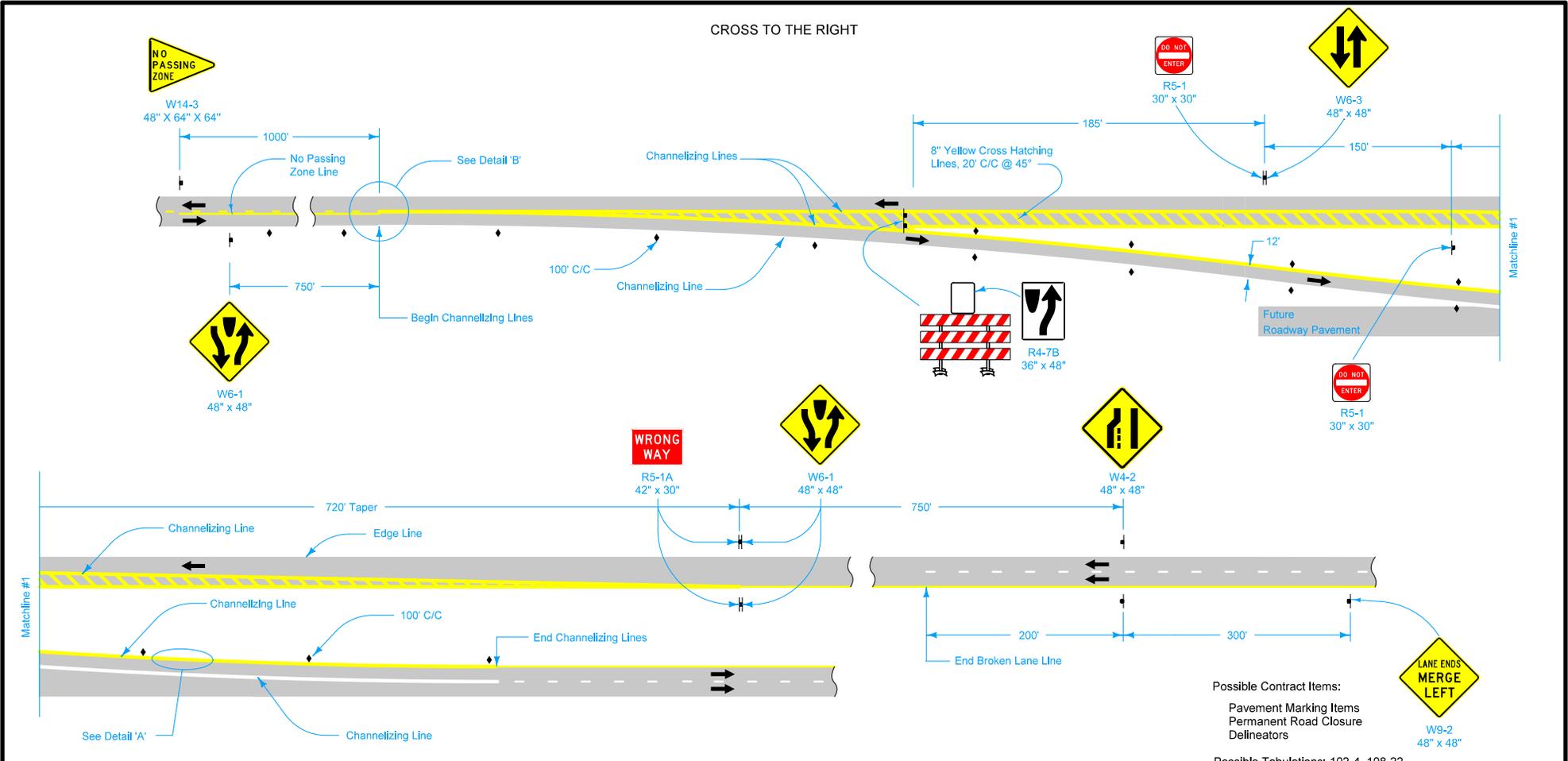


PLACEMENT OF DOUBLE YELLOW CENTERLINE

- ① Refer to SI-881 for sign details.
- ⑩ Place TLSS from start of ramp gore or start of full width decel lane to end of temporary ramp crossover pavement or end of ramp gore.
- ⑪ Add below R11-2 already included in Safety Closure.

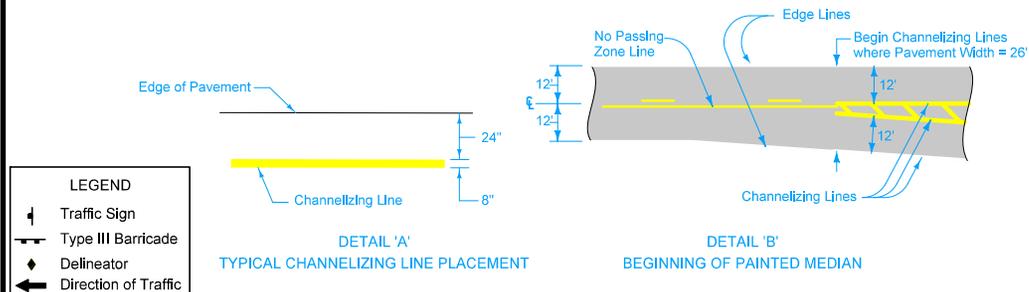
	REVISION
	10 04-21-15
STANDARD ROAD PLAN	TC-61
REVISIONS: Removed 20' C/C spacing of TLSS on page 2.	
 APPROVED BY DESIGN METHODS ENGINEER	
TWO-LANE, TWO-WAY OPERATION	

CROSS TO THE RIGHT



Possible Contract Items:
 Pavement Marking Items
 Permanent Road Closure
 Delineators

Possible Tabulations: 102-4, 108-22



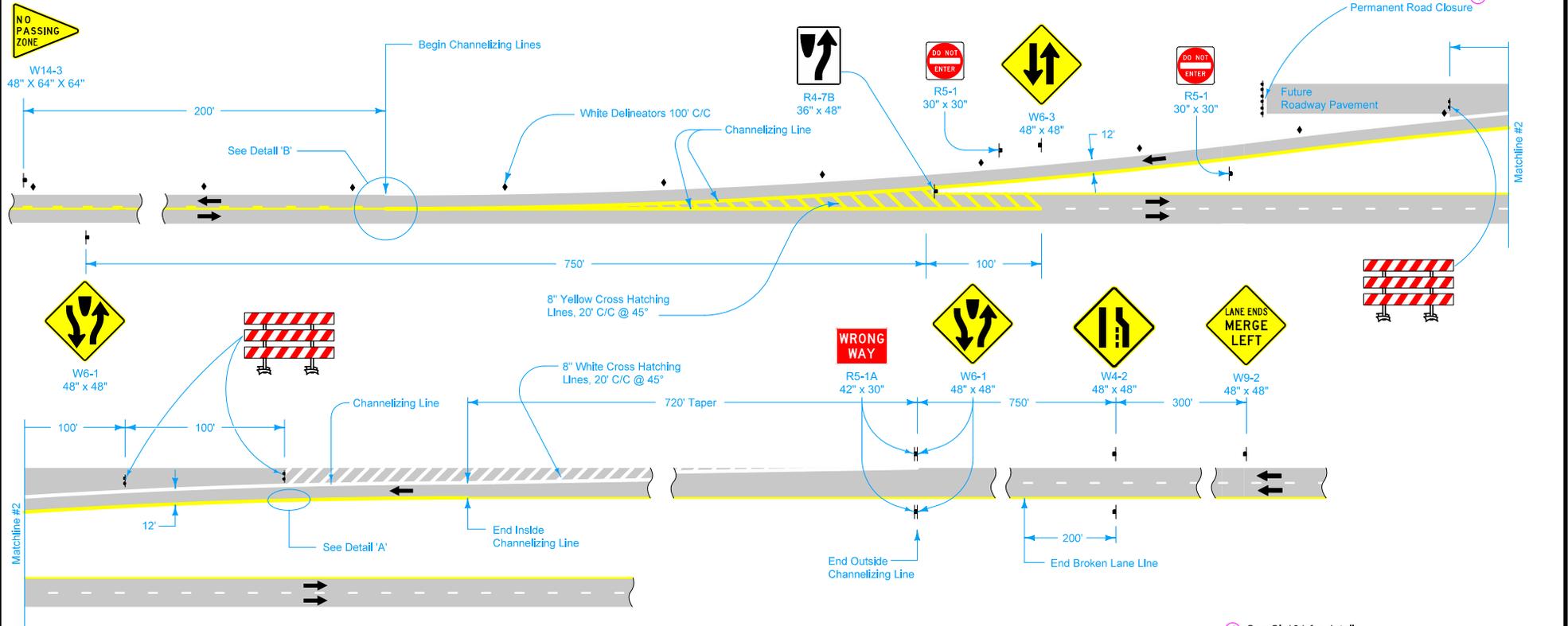
LEGEND

- Traffic Sign
- Type III Barricade
- Delineator
- Direction of Traffic

Warning signs shall be yellow with black legend and symbols.
 Type III barricades shall conform to Section 3F.01 of the MUTCD.

<p>STANDARD ROAD PLAN</p> <p>REVISIONS: Changed No Passing Zone sign size from 48" x 60" x 64" to 48" x 64" x 64". Replaced old DOT logo with new DOT logo.</p> <p style="text-align: right;"><i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER</p>	REVISION 5 10-18-16
	TC-62
	SHEET 1 of 2
PERMANENT TWO-LANE TO FOUR-LANE DIVIDED TRANSITION	

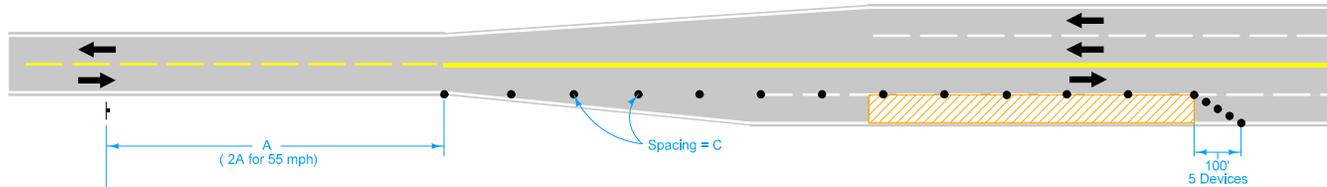
CROSS TO THE LEFT



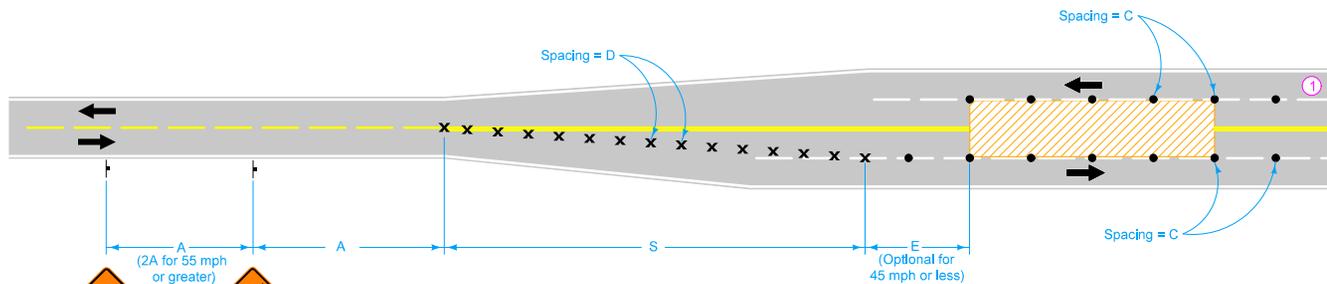
① See SI-181 for details.

LEGEND	
	Traffic Sign
	Type III Barricade
	Delineator
	Direction of Traffic

 STANDARD ROAD PLAN	REVISION
	5 10-18-16
	TC-62
SHEET 2 of 2	
<small>REVISIONS: Changed No Passing Zone sign size from 48" x 60" x 60" to 48" x 64" x 64". Replaced old DOT logo with new DOT logo.</small>	
APPROVED BY DESIGN METHODS ENGINEER 	
PERMANENT TWO-LANE TO FOUR-LANE DIVIDED TRANSITION	



ROAD WORK AHEAD
W20-1
48" x 48"



ROAD WORK AHEAD
W20-1
48" x 48"

LANE CLOSED AHEAD
W1-4R
48" x 48"

LEGEND

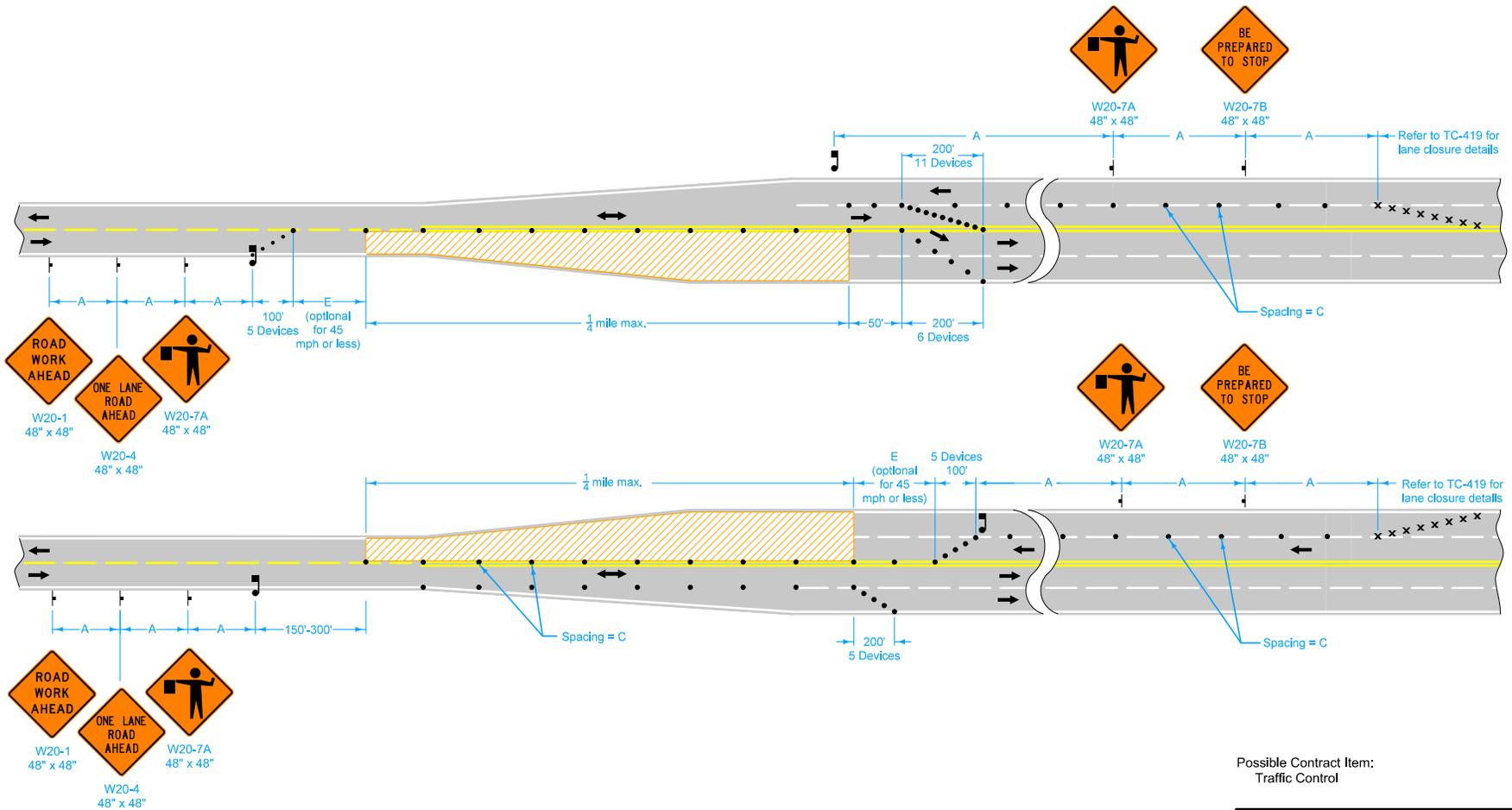
- † Traffic Sign
- 42" Channelizer
- ✕ Drum
- ▨ Work Area
- ← Direction of Traffic

SPEED LIMIT	A	C	D	E	S
25 or less	100'	40'	25'	0' - 200'	100'
30 - 35	250'	40'	30'	0' - 200'	120'
40 - 45	350'	80'	40'	0' - 400'	280'
50 - 55	500'	100'	50'	200' - 400'	350'

① Refer to TC-419 for lane closure details.

Possible Contract Item:
Traffic Control

<p>Iowa Department of Transportation</p> <p>STANDARD ROAD PLAN</p> <p>REVISIONS: Changed title.</p> <p><i>Deanna Macfield</i> APPROVED BY DESIGN METHODS ENGINEER</p> <p>LANE CLOSURE AT TWO-LANE TO FOUR-LANE TRANSITION</p>	<p>REVISION</p> <p>2 04-16-13</p>
	<p>TC-63</p> <p>SHEET 1 of 1</p>



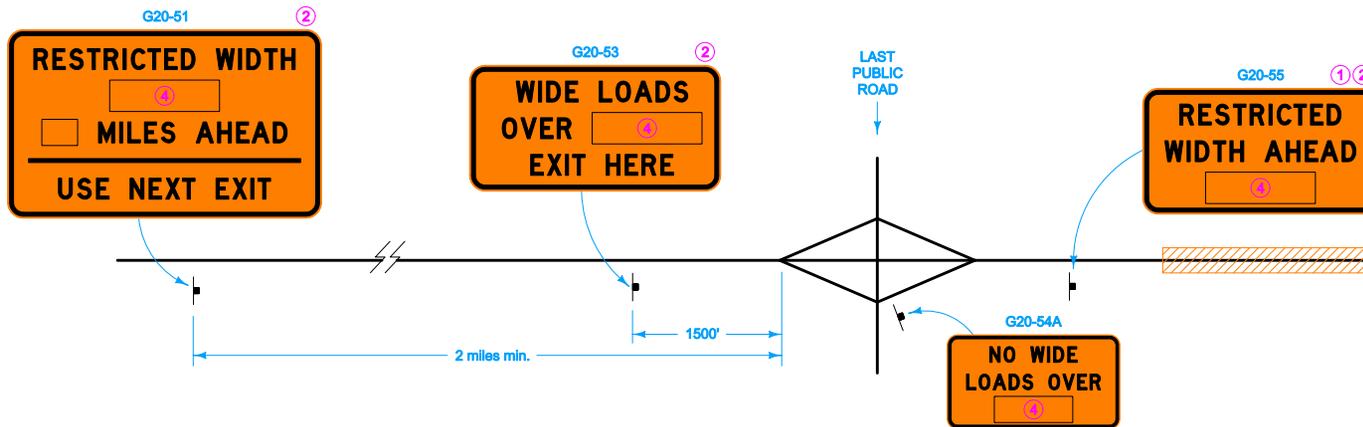
LEGEND

- ⌋ Flagger
- ⌋ Traffic Sign
- 42' Channelizer
- × Drum
- ▨ Work Area
- ← Direction of Traffic

SPEED LIMIT	A	C	E
25 or less	100'	40'	0' - 200'
30 - 35	250'	40'	0' - 200'
40 - 45	350'	80'	0' - 200'
50 - 55	500'	100'	200' - 300'

Possible Contract Item:
Traffic Control

<p>Iowa Department of Transportation</p> <p>STANDARD ROAD PLAN</p> <p>REVISIONS: Added flagger symbol to Legend.</p> <p><i>Deanna Macfild</i> APPROVED BY DESIGN METHODS ENGINEER</p> <p>LANE CLOSURE AT TWO-LANE TO FOUR-LANE TRANSITION WITH FLAGGER</p>	<p>REVISION</p> <p>1 04-16-13</p>
	<p>TC-64</p> <p>SHEET 1 of 1</p>



WHERE AN INTERCHANGE IS LOCATED AT THE LAST PUBLIC ROAD PRIOR TO AREA OF RESTRICTED WIDTH

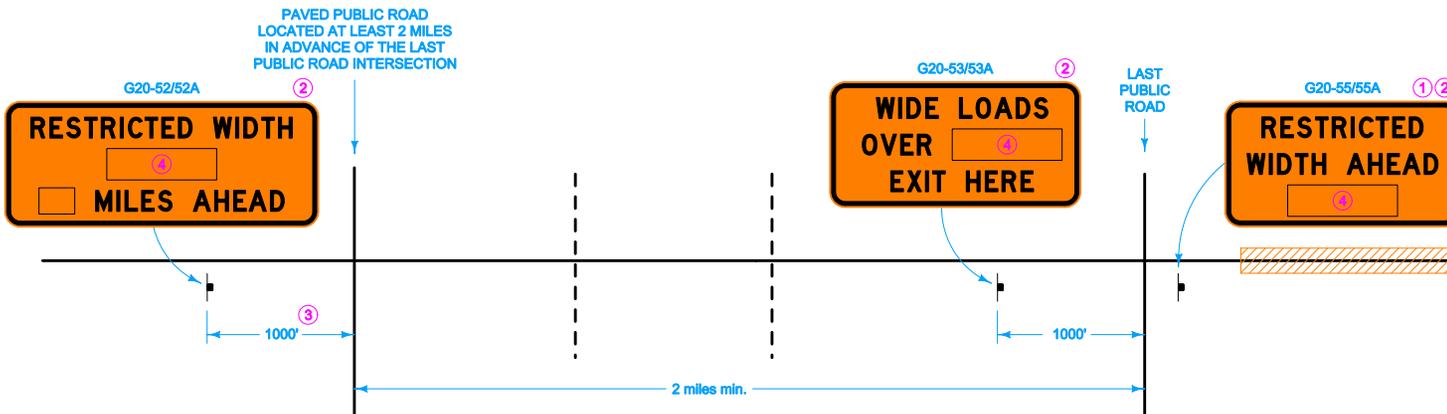
Coordinate signing in conjunction with other traffic control in the area.

Exact sign locations will be as approved by the Engineer.

For multi-lane divided roadways, use larger sign sizes. For two-lane highways, use small sign sizes.

See SI-882 for sign details.

- ① Place after ROAD WORK AHEAD sign.
- ② For divided highways, two signs shall be installed at each location: One each on right and left shoulders.
- ③ When this paved road intersection has an interchange, the distance shall be measured from the beginning of the exit ramp taper.
- ④ Dimension on G20-58/58A panel equals 1 foot less than narrowest measurement.



WHERE AN AT-GRADE INTERSECTION IS LOCATED AT THE LAST PUBLIC ROAD PRIOR TO AREA OF RESTRICTED WIDTH

Possible Contract Item:
Traffic Control

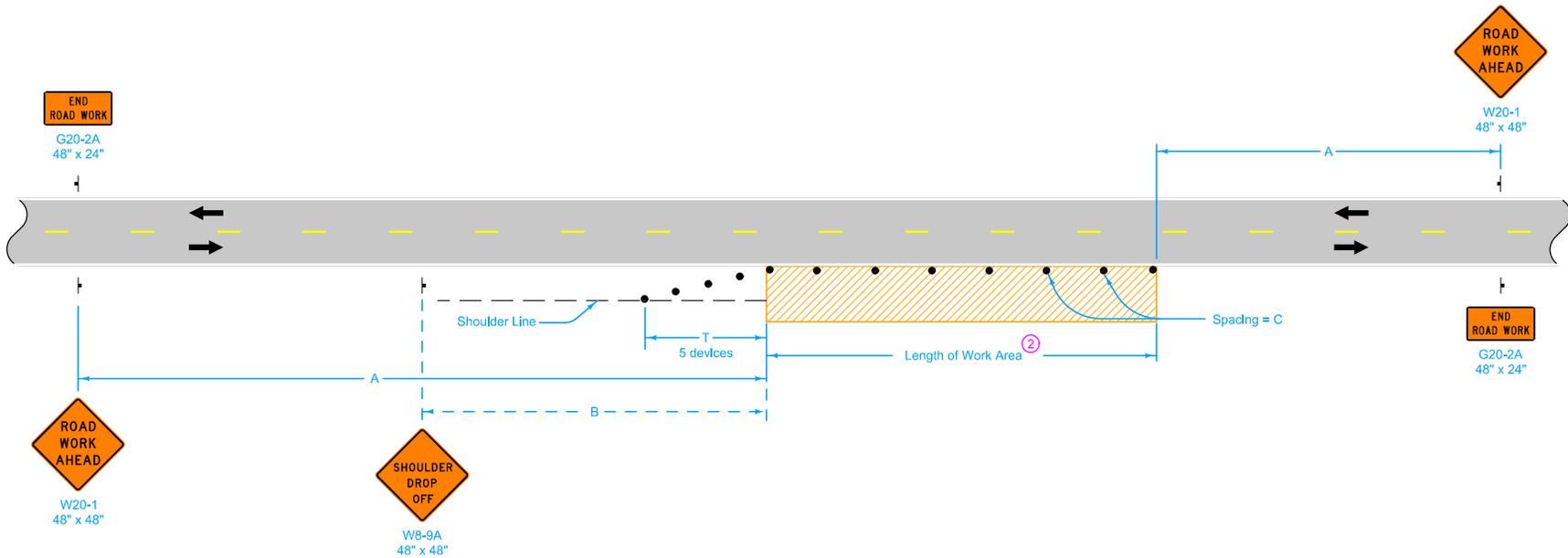
LEGEND	
	Area of Restricted Width
	Traffic Sign

 Iowa Department of Transportation	REVISION
	1 04-20-10
	STANDARD ROAD PLAN
	TC-81
	SHEET 1 of 1

REVISIONS: Updated references to renamed standards. Updated signs. Added circle note 4.

Deanna McFalls
APPROVED BY DESIGN METHODS ENGINEER

**RESTRICTED WIDTH SIGNING
(LESS THAN 14.5 FEET)**



LEGEND	
	Traffic Sign
	42" Channelizer
	Work Area
	Direction of Traffic

SPEED LIMIT (mph)	A	B	C ^②	T
35 or less	500'	250'	40'	100'
40 - 45	700'	350'	80' ^①	200'
50 or greater	1000'	500'	100' ^①	200'

When a pavement edge drop-off exists, install a SHOULDER DROP-OFF sign.

No pavement edge drop-offs greater than pavement depth will be allowed during non-working hours.

Shoulder edge drop-offs shall be mitigated according to Article 1107.08.L2 of the Standard Specifications.

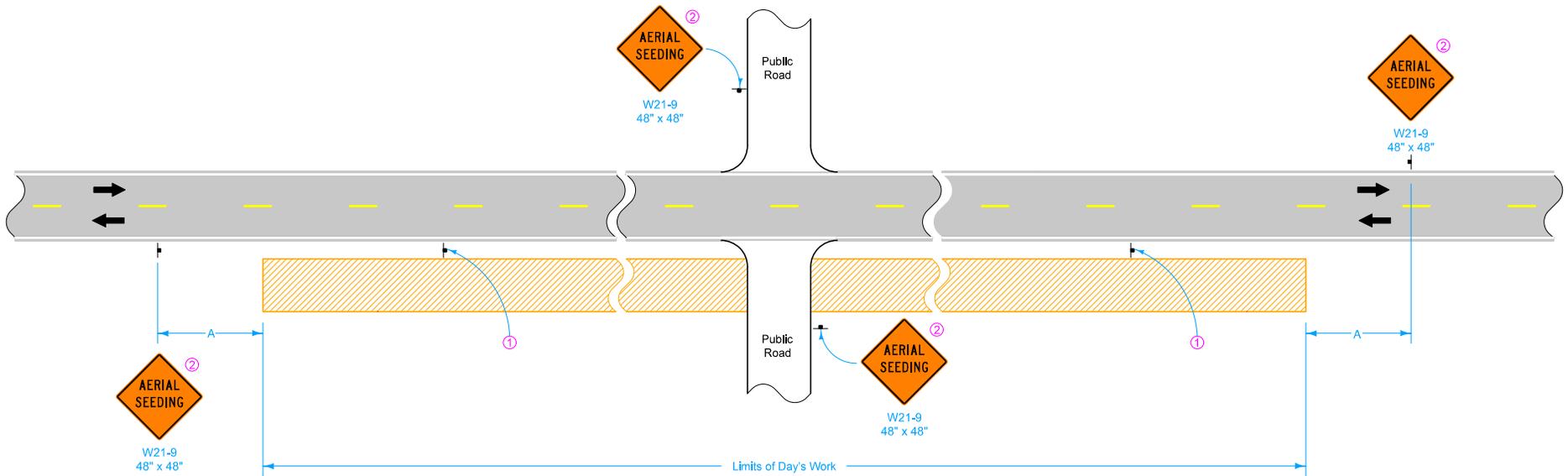
For work lasting less than one hour, refer to TC-1.

^① When the length of a pavement edge drop-off is 1000 feet or less, the temporary fillet requirement of Article 1107.08 of the Standard Specifications does not apply. Reduce channelizer spacing to 40 feet.

^② For work areas less than 200 feet long, use channelizers spaced at 20 foot centers or use a vehicle with an amber revolving light or amber strobe light.

Possible Contract Item:
Traffic Control

	REVISION
	8 04-21-15
	TC-202
STANDARD ROAD PLAN	
SHEET 1 of 1	
<small>REVISIONS: Modified general notes, changed title and replaced the DOT logo in the title block with the new version.</small>	
<small>APPROVED BY DESIGN METHODS ENGINEER</small>	
WORK WITHIN 15 FT OF TRAVELED WAY	



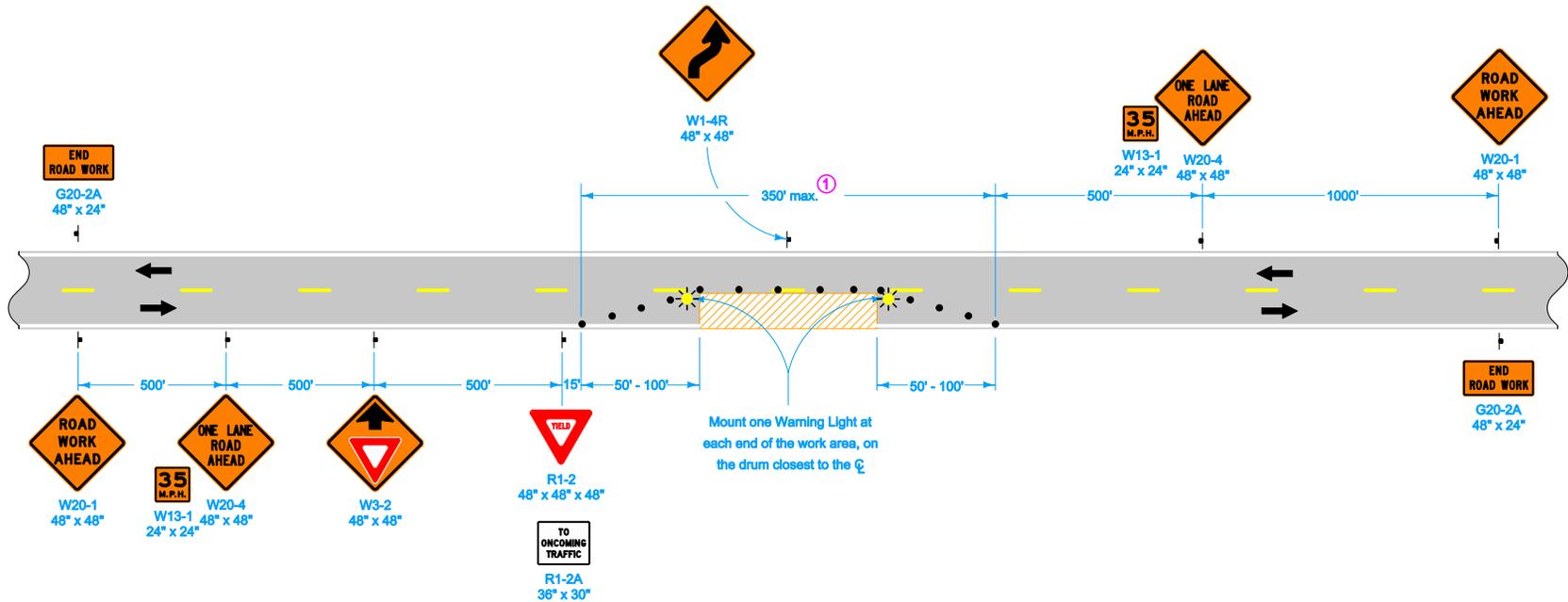
- ① Place AERIAL SEEDING signs along the mainline at a maximum spacing of 3 miles.
- ② Refer to [SI-881](#) for sign details.

Possible Contract Item:
Traffic Control

LEGEND	
	Traffic Sign
	Work Area
	Direction of Traffic

SPEED LIMIT (mph)	A
35 or less	250'
40 - 45	350'
50 or greater	500'

 Iowa Department of Transportation	REVISION	
	3	10-16-12
STANDARD ROAD PLAN	TC-203	
SHEET 1 of 1		
<small>REVISIONS: Changed AERIAL SEEDING sign information and added circle note 2.</small>		
 APPROVED BY DESIGN METHODS ENGINEER		
AERIAL SEEDING OPERATIONS		



LEGEND	
	Type 'A' Warning Light
	Traffic Sign
	Work Area
	Direction of Traffic
	42" Channelizer

Do not use this layout when ADT exceeds 2000 vehicles.

Locate this layout at least 2,500 feet from any other work site layout.

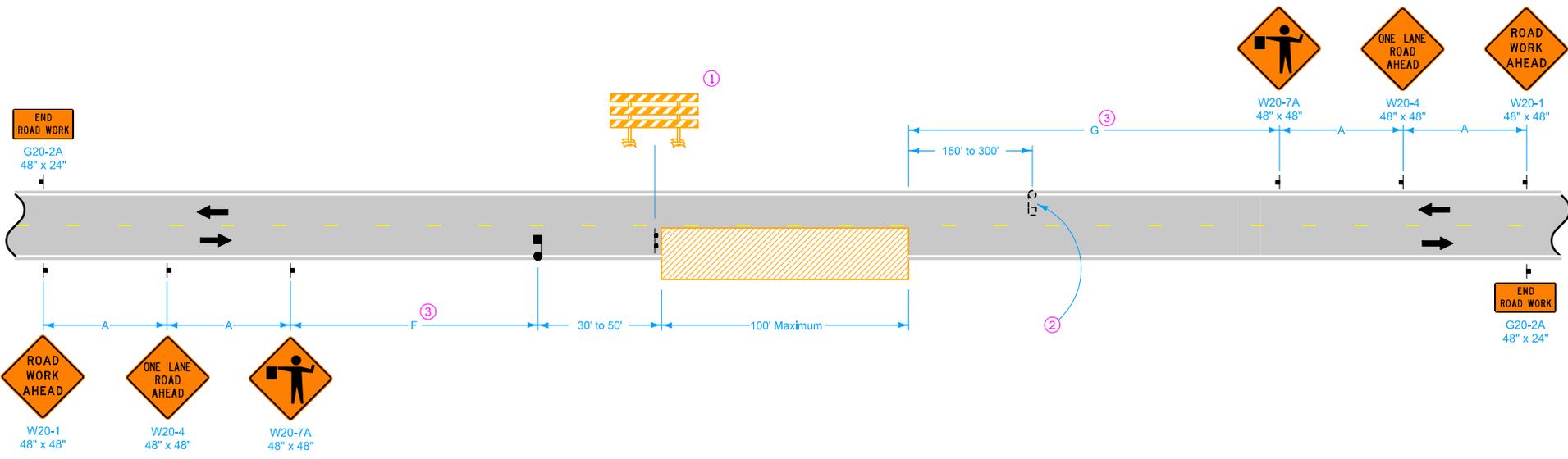
Full-depth openings during non-working hours will not be allowed. Temporary plating, plank or filling may be necessary. Vehicles, unattended equipment, materials or stock-piled waste are not permitted between the shoulder lines during non-working hours.

For bridge deck overlay projects: The night before overlay operations begin, a bridge deck finishing machine and necessary materials may be placed on the roadway.

① Do not use this layout if a No Passing Zone for the closed lane is located within this area.

Possible Contract Item:
Traffic Control

 Iowa Department of Transportation	REVISION
	2 04-17-12
	STANDARD ROAD PLAN
TC-211	
SHEET 1 of 1	
<small>REVISIONS: Removed "or Vertical Panel" from 42" Channelizer In Legend. Removed Drum Information already in the specifications.</small>	
 APPROVED BY DESIGN METHODS ENGINEER	
LANE CLOSURE ON LOW VOLUME ROADWAY	



LEGEND

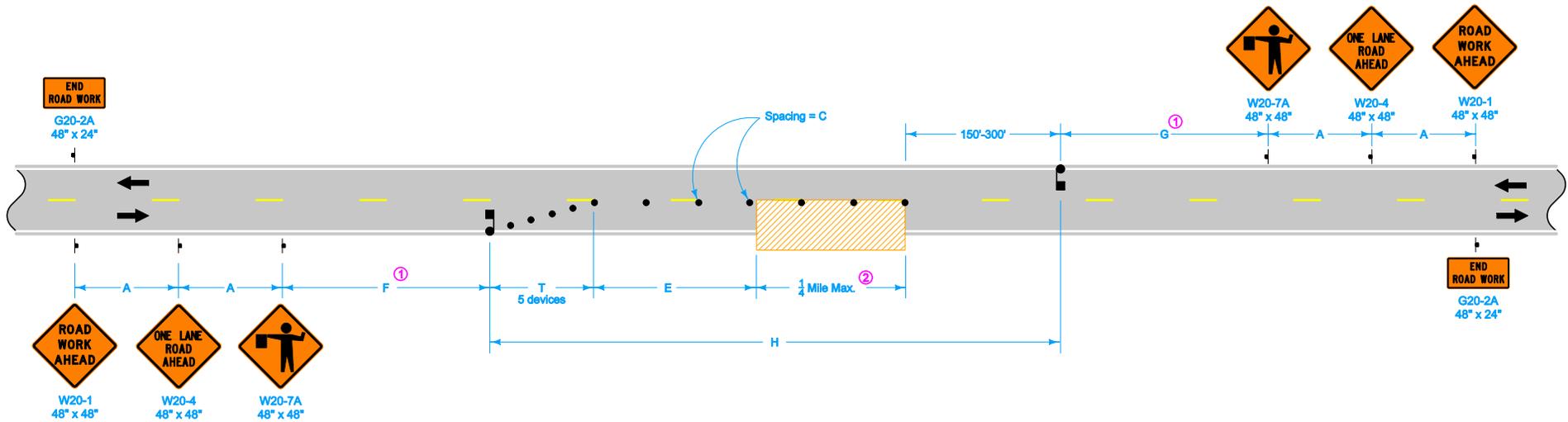
- Traffic Sign
- Flagger
- Work Area
- Type III Barricade
- Direction of Traffic

SPEED LIMIT (mph)	A	F and G Range ^③	F + G Max.
35 or less	250'	250'-3250'	3500'
40 - 45	350'	350'-3350'	3700'
50 or greater	500'	500'-3500'	4000'

- ① A vehicle with an amber revolving light or amber strobe light may be substituted for the Type III barricade.
- ② Provide a second flagger if:
 The flagger's view of approaching traffic in the open lane is less than 1/4 mile or the work site is in an area of restricted sight distance (such as a "No Passing" zone); or
 Excessive traffic delays are encountered.
- ③ F and G distances are to remain as near minimum values as work permits. However, to be able to move the work area without moving the advance signing, F and G distances may be varied within the limits of the table. Maximum movement can be achieved by setting one F or G value at the minimum and the other value at its maximum.

Possible Contract Items:
 Flaggers
 Traffic Control

	REVISION
	4 04-16-13
STANDARD ROAD PLAN	TC-212
REVISIONS: Modified circle note 1.	SHEET 1 of 1
<i>Deanna Muford</i> APPROVED BY DESIGN METHODS ENGINEER	
SPOT LOCATION LANE CLOSURE WITH FLAGGERS	



LEGEND

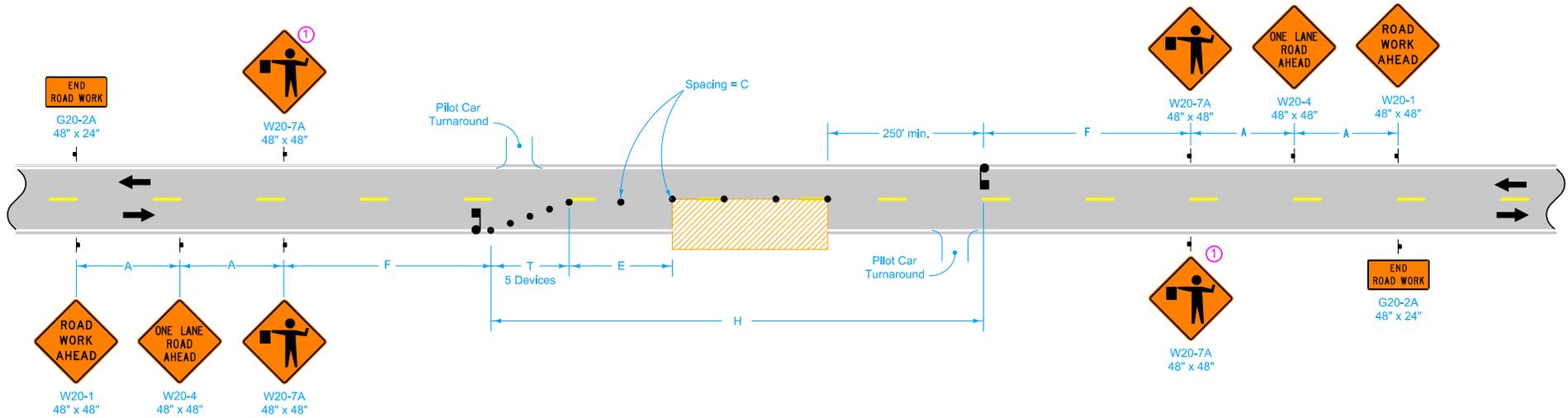
- Traffic Sign
- Flagger
- 42° Channelizer
- Work Area
- Direction of Traffic

SPEED LIMIT (mph)	A	C	E	F and G Range ^①	F + G Max.	H Max.	T
35 or less	250'	40'	0'-200'	500'-3000'	3500'	2000'	50'
40 - 45	350'	80'	0'-200'	700'-3000'	3700'	2000'	100'
50 or greater	500'	100'	200'-300'	1000'-3000'	4000'	2000'	100'

- ① Keep F and G distances as near to minimum values as work permits. However, to allow advancement of the work area without moving signs, F and G distances may be varied within the limits of the table. Maximum movement can be achieved by setting one F or G value at the minimum and the other value at its maximum.
- ② If length of work area exceeds 1/4 mile, use TC-214.

Possible Contract Items:
 Flaggers
 Traffic Control

Iowa Department of Transportation STANDARD ROAD PLAN	REVISION
	3 04-17-12
	TC-213
SHEET 1 of 1	
REVISIONS: Removed "or Vertical Panel" from 42° Channelizer In Legend.	
 APPROVED BY DESIGN METHODS ENGINEER	
LANE CLOSURE WITH FLAGGERS	



LEGEND

- Traffic Sign
- Flagger
- 42" Channelizer
- Work Area
- Direction of Traffic

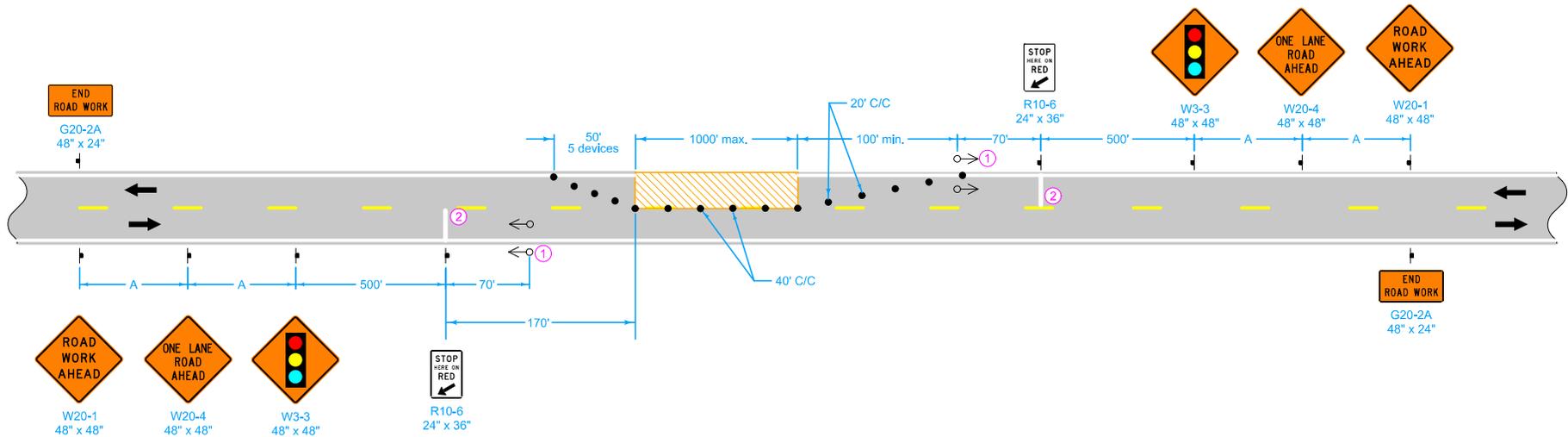
SPEED LIMIT (mph)	ADT	A	C	E	F	H max. ^②	T
35 or less	up to 2,500	250'	40'	0'-200'	500'	2.5 mi.	50'
	2,500 - 5,000	250'	40'	0'-200'	500'	2.0 mi.	50'
	more than 5,000	500'	40'	0'-200'	1000'	1.5 mi.	50'
40 - 45	up to 2,500	350'	80'	0'-200'	700'	2.5 mi.	100'
	2,500 - 5,000	350'	80'	0'-200'	700'	2.0 mi.	100'
	more than 5,000	700'	80'	0'-200'	1400'	1.5 ml.	100'
50 or greater	up to 2,500	500'	160'	200'-300'	1000'	2.5 mi.	100'
	2,500 - 5,000	500'	160'	200'-300'	1000'	2.0 mi.	100'
	more than 5,000	1000'	160'	200'-300'	2000'	1.5 ml.	100'

^① Sign optional for ADT less than 5,000.

^② In rural areas, as work activity nears the downstream limits of dimension H, the lane closure may be extended up to 1.0 mile beyond the maximum distance, H, shown in the table. After the traffic control devices have been placed to extend the closure and after work activity has progressed, the advanced signing and devices at the beginning of the traffic control zone should be moved downstream so that the H distance is once again within the limits shown in the table. This one-mile extension will not be allowed during any peak traffic hours listed in the contract documents.

Possible Contract Items:
 Flagger
 Pilot Car
 Traffic Control

 STANDARD ROAD PLAN	REVISION
	5 04-16-13
TC-214	
SHEET 1 of 1	
REVISIONS: Modified note 2 and changed the centerline device spacing from 100' to 160' in column C of the table.	
<i>Deanna Mufson</i> APPROVED BY DESIGN METHODS ENGINEER	
LANE CLOSURE WITH FLAGGERS FOR USE WITH PILOT CAR	



SPEED LIMIT (mph)	A
35 or less	250'
40-45	350'
50 or greater	500'

TIMING FOR ACTUATED SIGNALS Recommended Settings (secs)	Distance between stop lines	All Red* (secs)	Distance between stop lines	All Red* (secs)
	Initial = 12.0 Extension = 2.5 Max. Green = 45.0 Yellow = 4.0 All Red = (see table)	450'	9 - 15	950'
	550'	11 - 19	1050'	21 - 36
	650'	13 - 22	1150'	23 - 39
	750'	15 - 26	1250'	25 - 43
	850'	17 - 29	1350'	27 - 46

* All Red values based on operating speeds between 20 mph and 35 mph

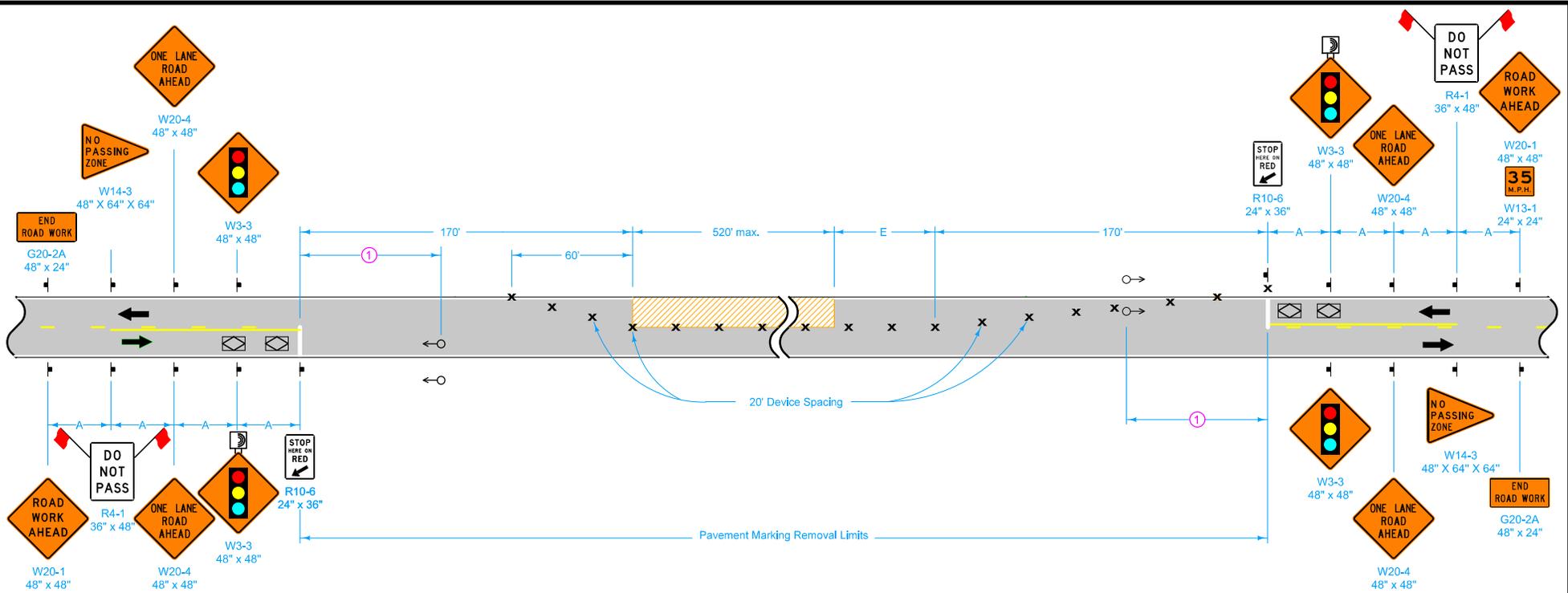
This layout is for conditions lasting up to three calendar days. For situations lasting longer than three days refer to TC-216.

- ① For Temporary Traffic Signals, meet the requirements of Section 2528.03 of the Standard Specifications except for the following:
In lieu of a trailer or span-wire mounted system, signal heads may be located on the shoulders, one on each side of the roadway. Mount shoulder signal heads a minimum of 8 feet from the bottom of the signal head to the top of the ground surface.
- ② 24-inch stop lines required during nighttime operation.

Possible Contract Items:
 Pavement Marking Items
 Pavement Markings Removed
 Temporary Traffic Signals
 Traffic Control

Possible Tabulations:
 108-22
 108-28

IOWA DOT	REVISION
	3 10-21-14
	STANDARD ROAD PLAN
TC-215	
SHEET 1 of 1	
REVISIONS: Moved second standard note into circle note 1. Moved END ROAD WORK to match other standards.	
<i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER	
LANE CLOSURE WITH SIGNALS (UP TO THREE DAYS)	



No drop-offs greater than pavement depth will be allowed during non-working hours.

No vehicles, unattended equipment, materials or stock-piled waste are permitted between the shoulder lines during non-working hours.

① Locate signal heads 70 to 100 feet beyond stop bar. Adjust location of signal heads as field conditions warrant.

LEGEND

- Vehicle Detection Area
- Traffic Sign
- Drum
- Type 'B' High-Intensity Flashing Warning Light
- Work Area
- Temporary Traffic Signal
- Direction of Traffic

TIMING FOR ACTUATED SIGNALS

Recommended Settings, secs.

Initial = 12.0
 Extension = 2.5
 Maximum Green = 45.0
 Yellow = 5.0
 All Red = (see table)

Distance Between Stop Lines	All Red (secs.)*
1050'	20.4-35.7
950'	18.5-32.3
850'	17-30
750'	15-27
650'	14-23
550'	12-20

* Range of values are based on operating speeds between 20 and 35 mph

SPEED LIMIT (mph)	A	E
35 or less	250'	0'-50'
40 - 45	350'	0'-100'
50 or greater	500'	100'

Possible Contract Items:
 Pavement Marking Items
 Pavement Markings Removed
 Temporary Traffic Signals
 Traffic Control

Possible Tabulations:
 108-22
 108-28

IOWA DOT

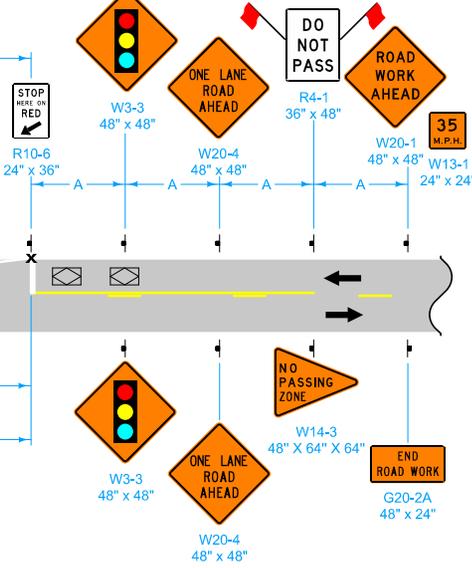
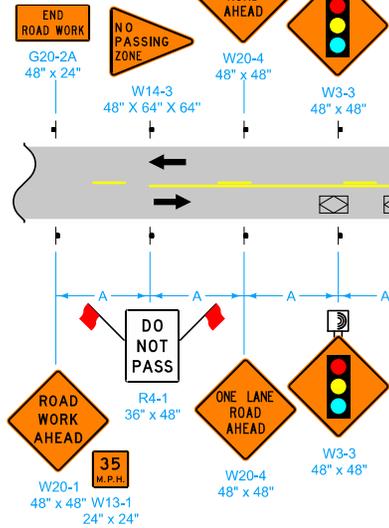
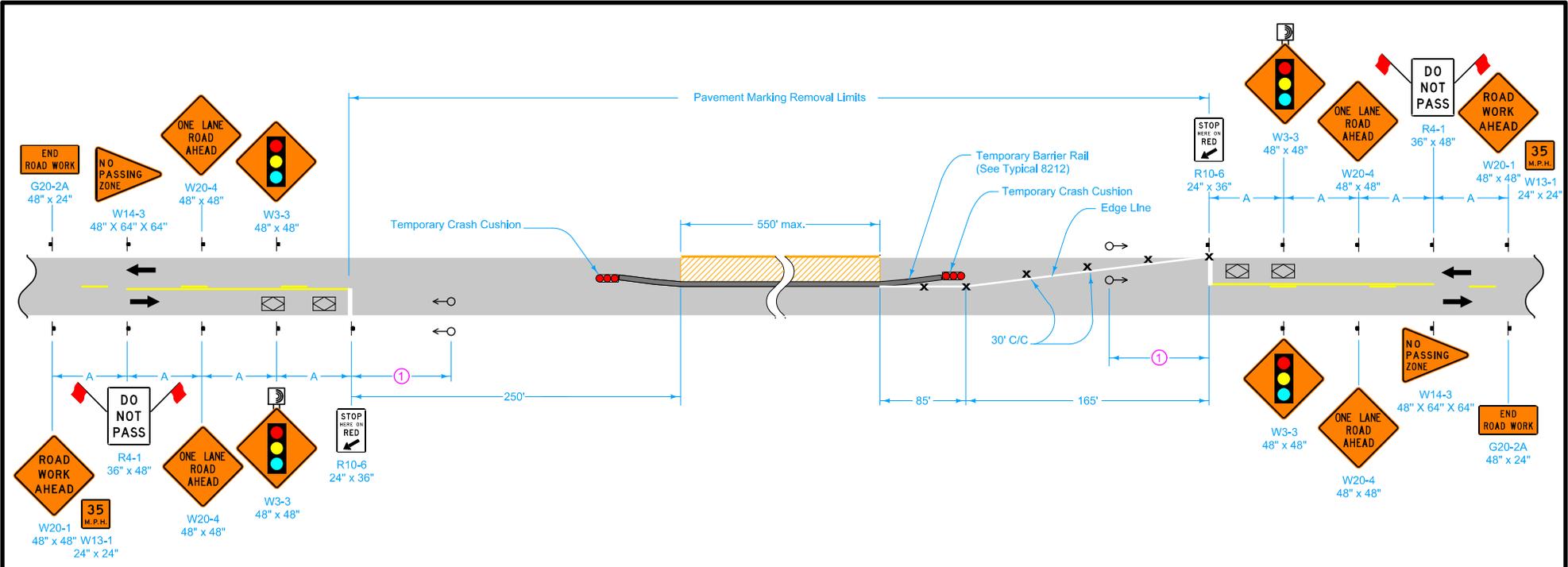
STANDARD ROAD PLAN

REVISIONS: Changed No Passing Zone sign size from 48" x 60" x 60" to 48" x 64" x 64".

Brian Smith
 APPROVED BY DESIGN METHODS ENGINEER

REVISION	7	10-18-16
TC-216		
SHEET 1 of 1		

LANE CLOSURE WITH SIGNALS



LEGEND

- Vehicle Detection Area
- Temporary Crash Cushion
- Direction of Traffic
- Traffic Sign
- Drum
- Type 'B' High-Intensity Flashing Warning Light
- Work Area
- Temporary Traffic Signal

TIMING FOR ACTUATED SIGNALS
Recommended Settings, secs.

Distance Between Stop Lines	All Red (secs.)*
1050'	20.4-35.7
950'	18.5-32.3
850'	17-30
750'	15-27
650'	14-23
550'	12-20

* Range of values are based on operating speeds between 20 and 35 mph

SPEED LIMIT (mph)	A
35 or less	250'
40 - 45	350'
50 or greater	500'

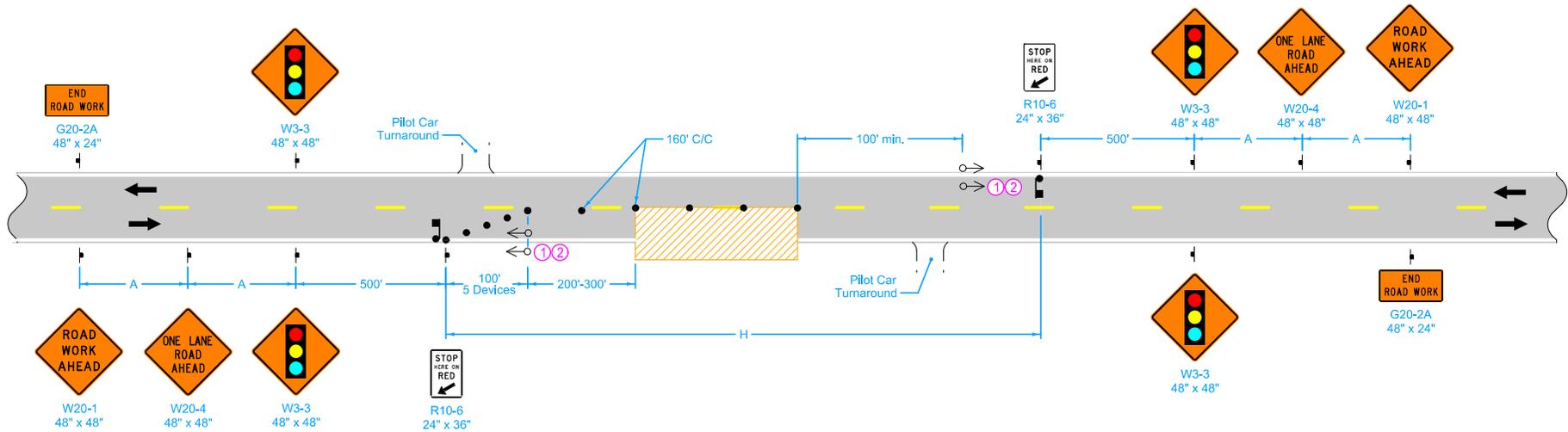
Possible Contract Items:
 Pavement Marking Items
 Pavement Markings Removed
 Temporary Barrier Rail
 Temporary Crash Cushions
 Temporary Traffic Signals
 Traffic Control

Possible Tabulations:
 108-22
 108-28
 108-30
 108-33

Place Concrete Barrier Markers at 10 ft C/C on bridge rail.

① Locate signal heads 70 to 100 feet beyond stop bar. Adjust location of signal heads as field conditions warrant.

 STANDARD ROAD PLAN	REVISION 8 10-18-16
	TC-217
	SHEET 1 of 1
REVISIONS: Changed No Passing Zone sign size from 48" x 60" x 60" to 48" x 64" x 64".	
 APPROVED BY DESIGN METHODS ENGINEER	
LANE CLOSURE WITH SIGNALS AND TBR	



LEGEND

- ♩ Flagger
- Temporary Traffic Signal
- ↑ Traffic Sign
- 42" Channelizer
- ▨ Work Area
- ← Direction of Traffic

SPEED LIMIT (mph)	ADT	A	H
50 or greater	up to 2,500	500'	2.5 mi.
	2,500 - 5,000	500'	2.0 mi.
	more than 5,000	1000'	1.5 mi.

No detection area required.

Timing for Push-button Actuated Signals
 Initial Green = 15 sec.
 Green Ext. = 2.5 sec.
 Yellow = 4.0 sec.

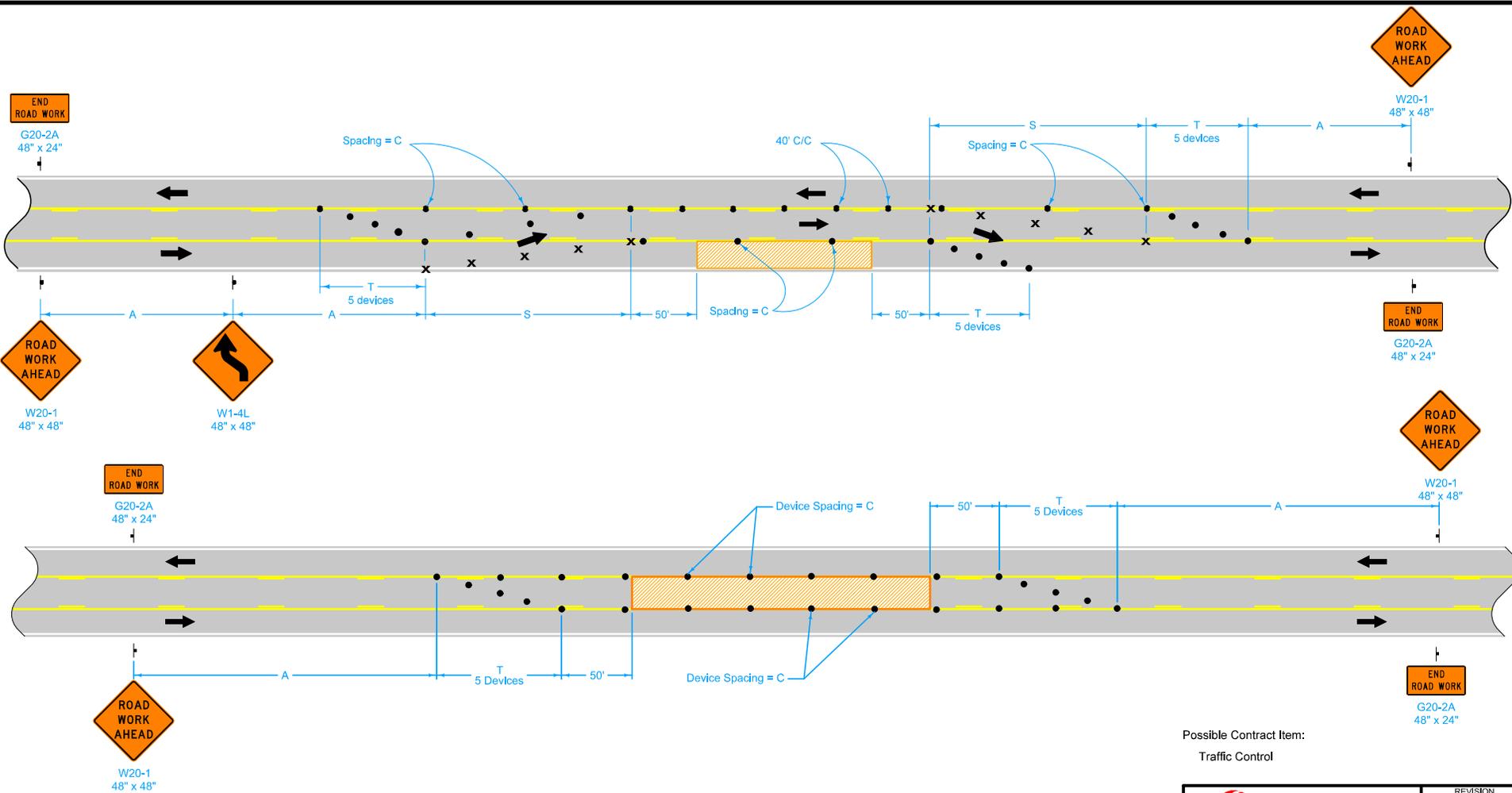
Install push-button actuated traffic signals.
 Program signals to rest in RED.
 GREEN and GREEN EXTENSION only are initiated by flagger.

- ① For Temporary Traffic Signals, meet the requirements of Section 2528.03 of the Standard Specifications except for the following:
 In lieu of a trailer or span-wire mounted system, signal heads may be located on the shoulders, one on each side of the roadway. Mount shoulder signal heads a minimum of 8 feet from the bottom of the signal head to the top of the ground surface.
- ② Locate signal heads 70 to 100 feet beyond "STOP HERE ON RED" sign. Adjust location of signal heads as field conditions warrant.

Possible Contract Items:
 Flagger
 Pilot Car
 Temporary Traffic Signal
 Traffic Control

Possible Tabulations:
 108-27
 108-28

	REVISION
	4 10-20-15
STANDARD ROAD PLAN	TC-218
SHEET 1 of 1	
<small>REVISIONS: Added Flagger symbols, channelizer taper distance, and designer info button.</small>	
<small>APPROVED BY DESIGN METHODS ENGINEER</small>	
LANE CLOSURE WITH PILOT CAR AND FLAGGER OPERATED SIGNALS	



LEGEND

- 42" Channelizer
- ⊗ Drum
- ⊣ Traffic Sign
- ▨ Work Area
- ← Direction of Traffic

SPEED LIMIT (mph)	A	C	D	S	T
25 or less	100'	40'	25'	100'	50'
30 - 35	250'	40'	30'	120'	50'
40 - 45	350'	80'	40'	280'	100'
50 or greater	500'	100'	50'	350'	100'

① Spacing = D for all drums.

Possible Contract Item:
Traffic Control

Iowa Department of Transportation

STANDARD ROAD PLAN

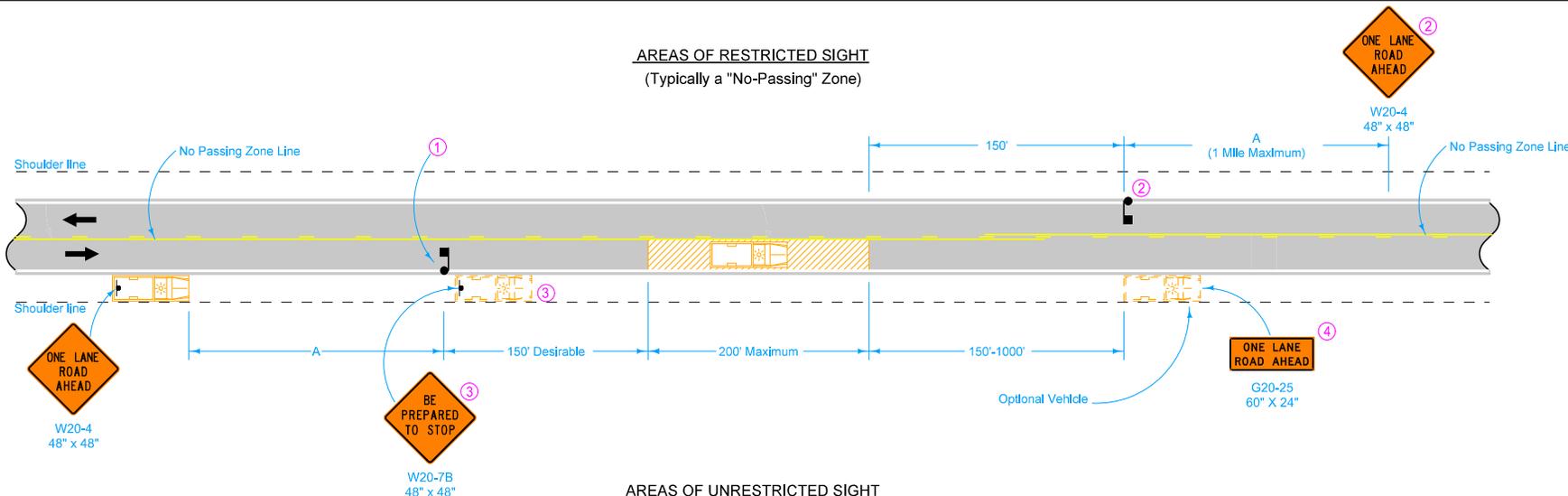
REVISIONS: Added Information from TC-030 and changed title.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

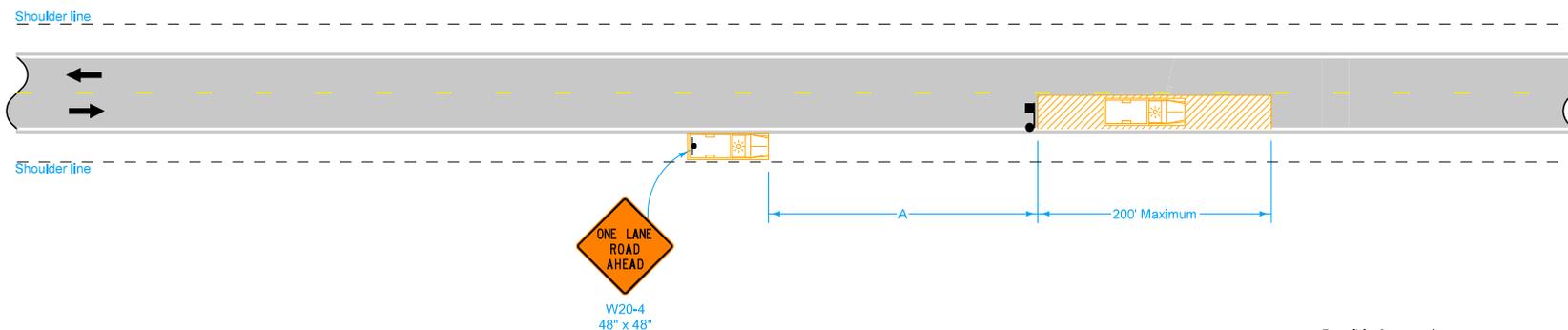
LANE CLOSURE INVOLVING TWLTL

REVISION	4	10-15-13
TC-228		
SHEET 1 of 1		

AREAS OF RESTRICTED SIGHT
(Typically a "No-Passing" Zone)



AREAS OF UNRESTRICTED SIGHT



This layout is intended for use with slow-moving operations or with operations involving stops not to exceed 15 minutes. For stops exceeding 15 minutes or in heavy traffic situations, use TC-213.

Equip all vehicles with an amber revolving light or an amber strobe light.

- ① When a stop is made in an area of restricted sight distance, use a flagger to hold traffic in the closed lane and allow traffic to pass when conditions are safe.
- ② When a stop is made or work proceeds in an area where sight distance is restricted from either direction and is anticipated to be more than 5 minutes, a second flagger and ONE LANE ROAD AHEAD sign is required.
- ③ This vehicle and sign may be used in lieu of a flagger for Falling Weight Deflectometer tests.
- ④ Refer to SI-881 for sign details.

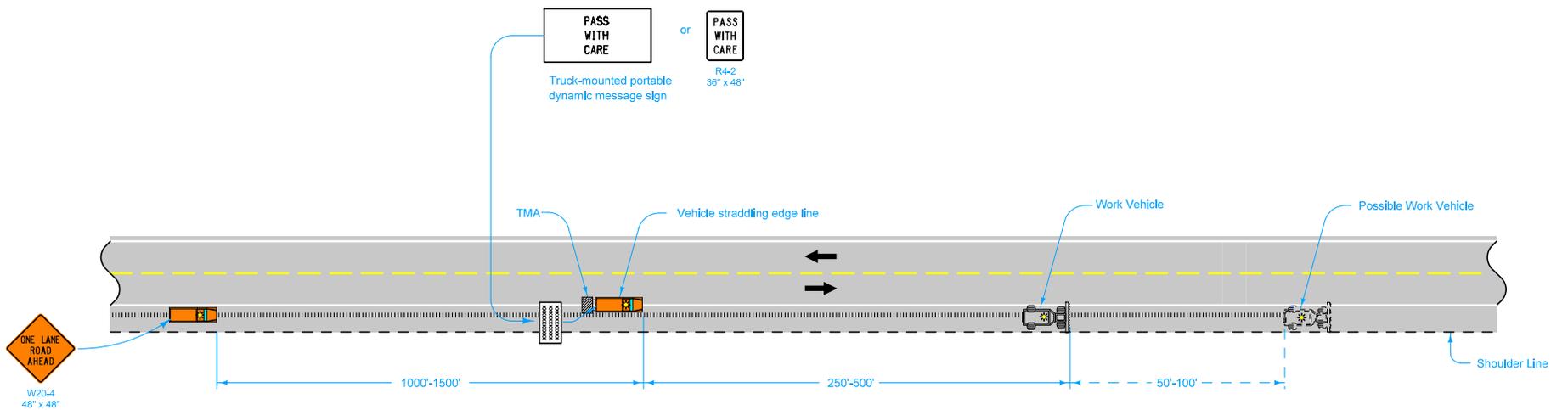
Possible Contract Items:
Flaggers
Traffic Control

LEGEND

- Direction of Traffic
- Flagger
- Traffic Sign
- Work Area
- Work Vehicle

Speed Limit (mph)	A min.
25 or less	200'
30-35	300'
40-45	500'
50 or greater	1000'

 STANDARD ROAD PLAN	REVISION
	2 10-15-13
TC-231	
SHEET 1 of 1	
<small>REVISIONS: Added circle note 4. Changed ONE LANE ROAD AHEAD sign. Adjusted wording in general note and in circle notes 1 and 3. Changed to color.</small>	
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>	
SLOW MOVING VEHICLE OPERATING IN THE TRAFFIC LANE	



Possible Contract Item:
Traffic Control

When fog sealing the milled rumble strips, place a 48" X 48" FRESH OIL sign (W21-2) at the beginning of the work area. Place additional FRESH OIL signs after each intersection and periodically through the work area so that signs are no more than 2 miles apart.

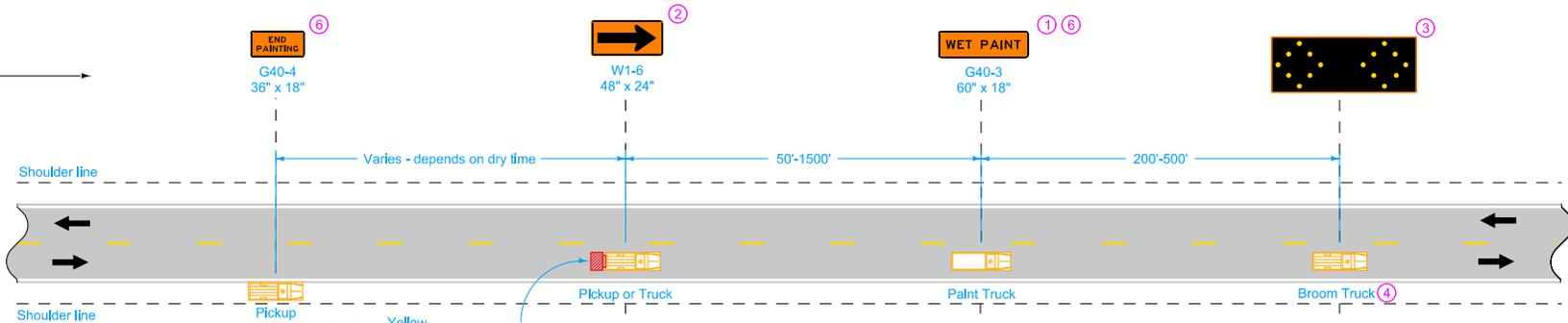
Operators should adjust their spacing, as necessary, to keep adjacent vehicles within view.

Equip all vehicles with an amber revolving light or amber strobe light.

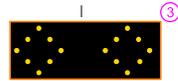
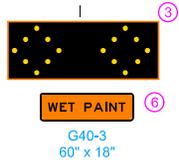
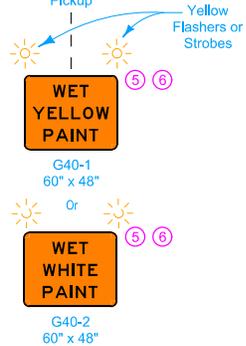
LEGEND	
	Traffic Sign
	Truck Mounted Attenuator (TMA)
	Direction of Traffic

	REVISION
	4 10-21-14
STANDARD ROAD PLAN	TC-232
SHEET 1 of 1	
REVISIONS: Changed "changeable message sign" to "portable dynamic message sign".	
 APPROVED BY DESIGN METHODS ENGINEER	
SHOULDER RUMBLE STRIP OPERATIONS	

SIGNS FACING
OPPOSING TRAFFIC



SIGNS FACING TRAFFIC
APPROACHING FROM
THE REAR



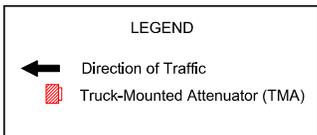
VEHICLES NOT STRADDLING CENTERLINE

This layout may be used when painting edgeline or centerline markings.

Equip all vehicles with an amber revolving light or amber strobe light.

- ① Use this sign when painting centerline markings.
- ② Optional Fluorescent Yellow Green (FYG) sign background may be used.
- ③ This arrow board may be operated in a four-corner caution mode.
- ④ Move this vehicle to the shoulder to accommodate passing traffic.
- ⑤ A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.
- ⑥ Refer to [SI-881](#) for sign details.

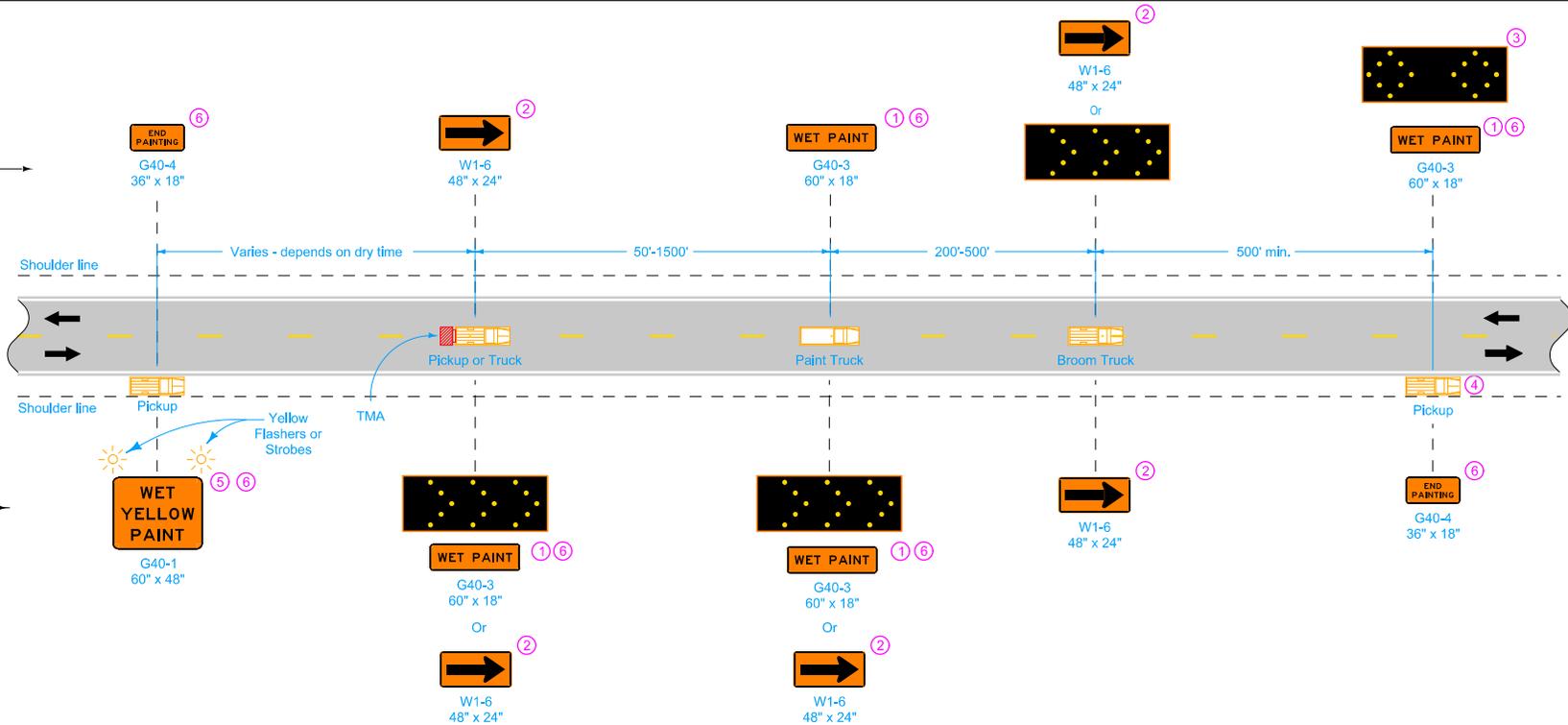
Possible Contract Item:
Traffic Control



	REVISION
	6 04-18-17
	TC-233
STANDARD ROAD PLAN	
SHEET 1 of 2	
REVISIONS: Removed the word "optional" from the TMA Optional call out.	
 APPROVED BY DESIGN METHODS ENGINEER	
PAVEMENT MARKING OPERATIONS TWO-LANE	

SIGNS FACING OPPOSING TRAFFIC

SIGNS FACING TRAFFIC APPROACHING FROM THE REAR



VEHICLES STRADDLING CENTERLINE

LEGEND

← Direction of Traffic

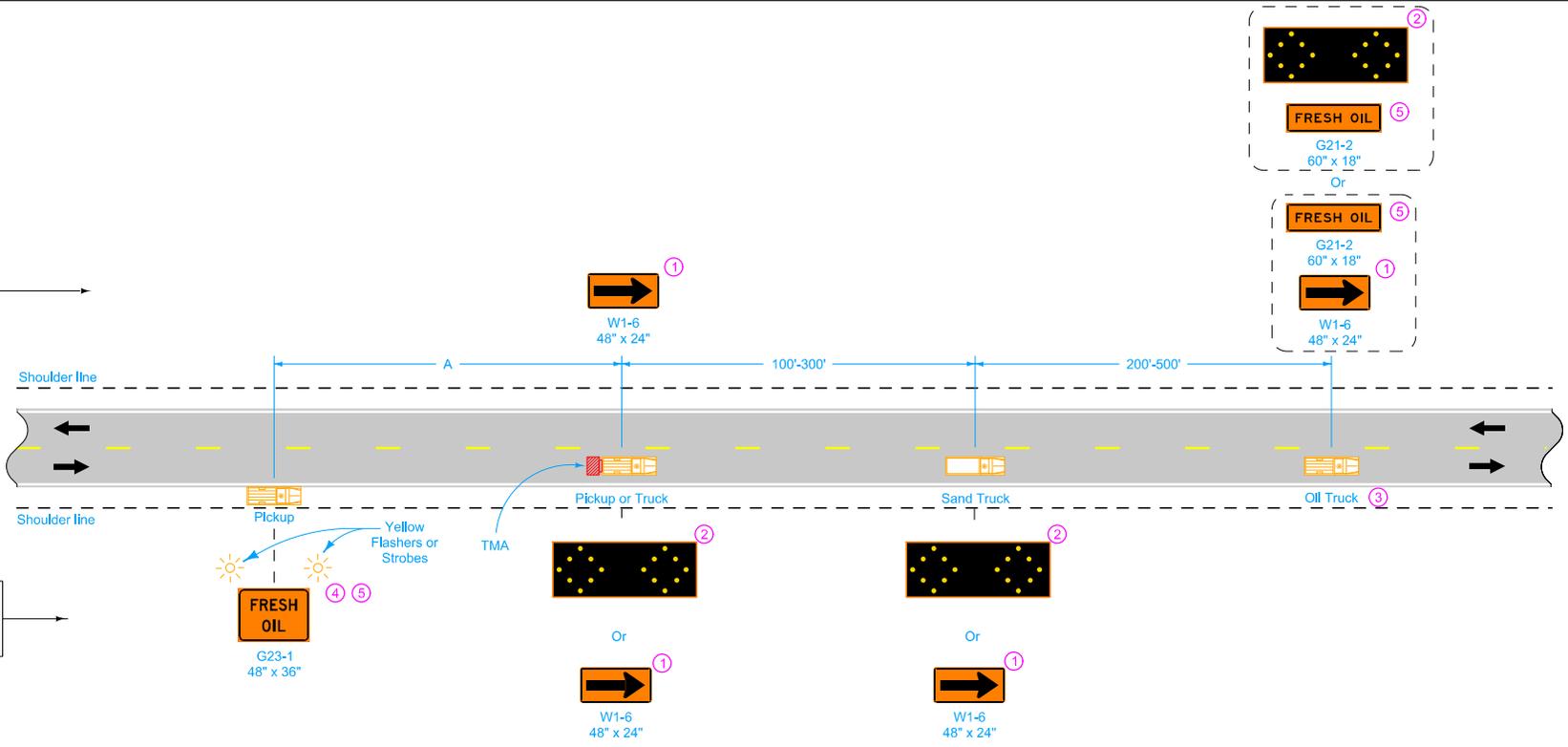
▧ Truck-Mounted Attenuator (TMA)

- ① Use this sign when painting centerline markings.
- ② Optional Fluorescent Yellow Green (FYG) sign background may be used.
- ③ This arrow board may be operated in a four-corner caution mode.
- ④ Move this vehicle to the shoulder to accommodate passing traffic.
- ⑤ A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.
- ⑥ Refer to SI-881 for sign details.

	REVISION
	6 04-18-17
STANDARD ROAD PLAN	TC-233
	SHEET 2 of 2
<small>REVISIONS: Removed the word "optional" from the TMA Optional call out.</small>	
<small>APPROVED BY DESIGN METHODS ENGINEER</small>	
PAVEMENT MARKING OPERATIONS TWO-LANE	

SIGNS FACING OPPOSING TRAFFIC

SIGNS FACING TRAFFIC APPROACHING FROM THE REAR



VEHICLES NOT STRADDLING CENTERLINE

Equip all vehicles with an amber revolving light or amber strobe light.

- ① Optional Fluorescent Yellow Green (FYG) sign background may be used.
- ② This arrow display may be operated in a four-corner caution mode.
- ③ Move this vehicle to the shoulder to accommodate passing traffic.
- ④ A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.
- ⑤ Refer to SI-881 for sign details.

Possible Contract Item:
Traffic Control

LEGEND

← Direction of Traffic

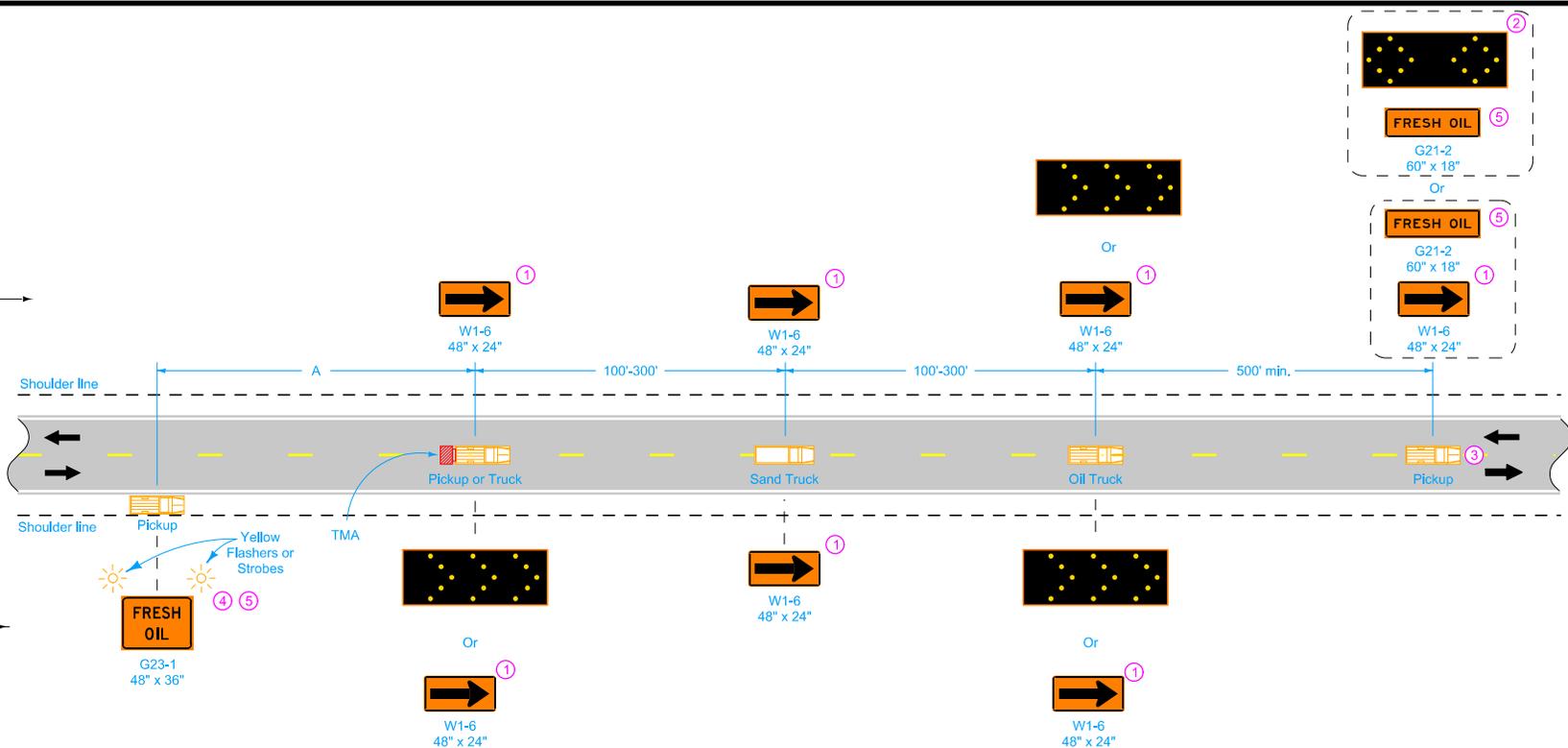
▭ Truck-Mounted Attenuator (TMA)

SPEED LIMIT (mph)	A min.
25 or less	200'
30 - 35	300'
40 - 45	500'
50 or greater	1000'

<p>STANDARD ROAD PLAN</p> <p>REVISIONS: Removed the word "optional" from the TMA Optional call out.</p> <p><i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER</p> <p>STRIP SEALING OPERATIONS</p>	<p>REVISION</p> <p>2 04-18-17</p>
	<p>TC-234</p> <p>SHEET 1 of 2</p>

SIGNS FACING OPPOSING TRAFFIC

SIGNS FACING TRAFFIC APPROACHING FROM THE REAR



VEHICLES STRADDLING CENTERLINE

- ① Optional Fluorescent Yellow Green (FYG) sign background may be used.
- ② This arrow display may be operated in a four-corner caution mode.
- ③ Move this vehicle to the shoulder to accommodate passing traffic.
- ④ A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.
- ⑤ Refer to SI-881 for sign details.

LEGEND

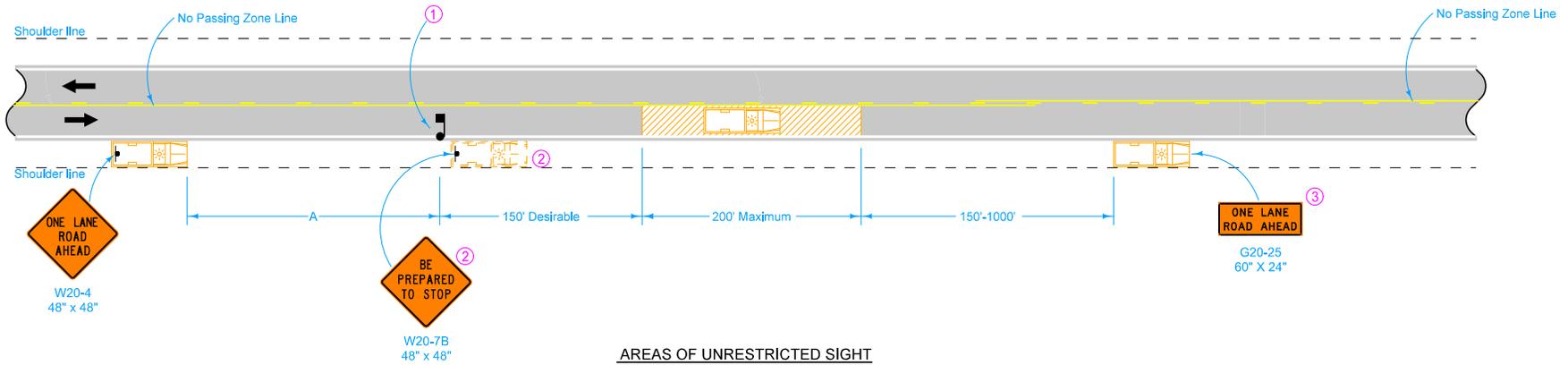
← Direction of Traffic

▭ Truck-Mounted Attenuator (TMA)

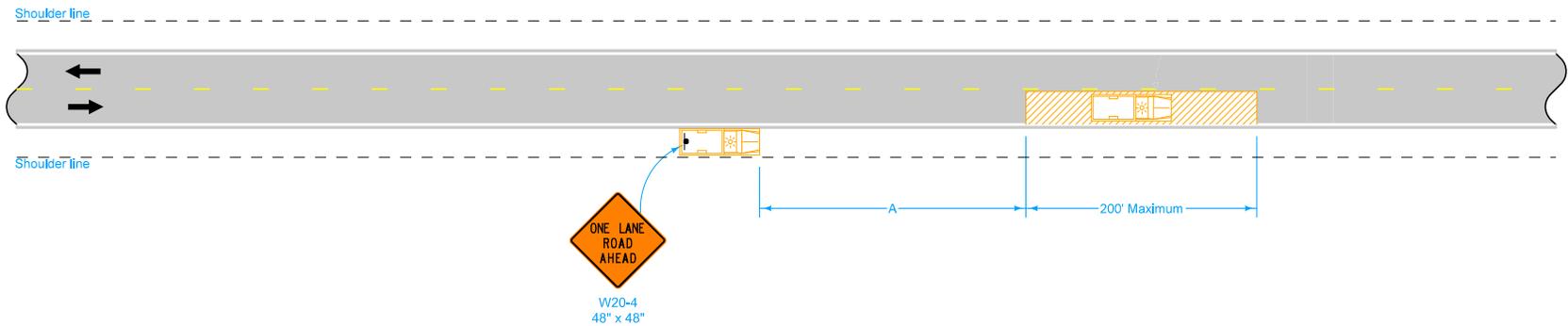
SPEED LIMIT (mph)	A min.
25 or less	200'
30 - 35	300'
40 - 45	500'
50 or greater	1000'

<p>STANDARD ROAD PLAN</p> <p>REVISIONS: Removed the word "optional" from the TMA Optional call out.</p> <p><i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER</p> <p>STRIP SEALING OPERATIONS</p>	REVISION 2 04-18-17
	TC-234
	SHEET 2 of 2

AREAS OF RESTRICTED SIGHT
(Typically a "No-Passing" Zone)



AREAS OF UNRESTRICTED SIGHT



LEGEND

- Direction of Traffic
- Flagger
- Traffic Sign
- Work Area
- Work Vehicle

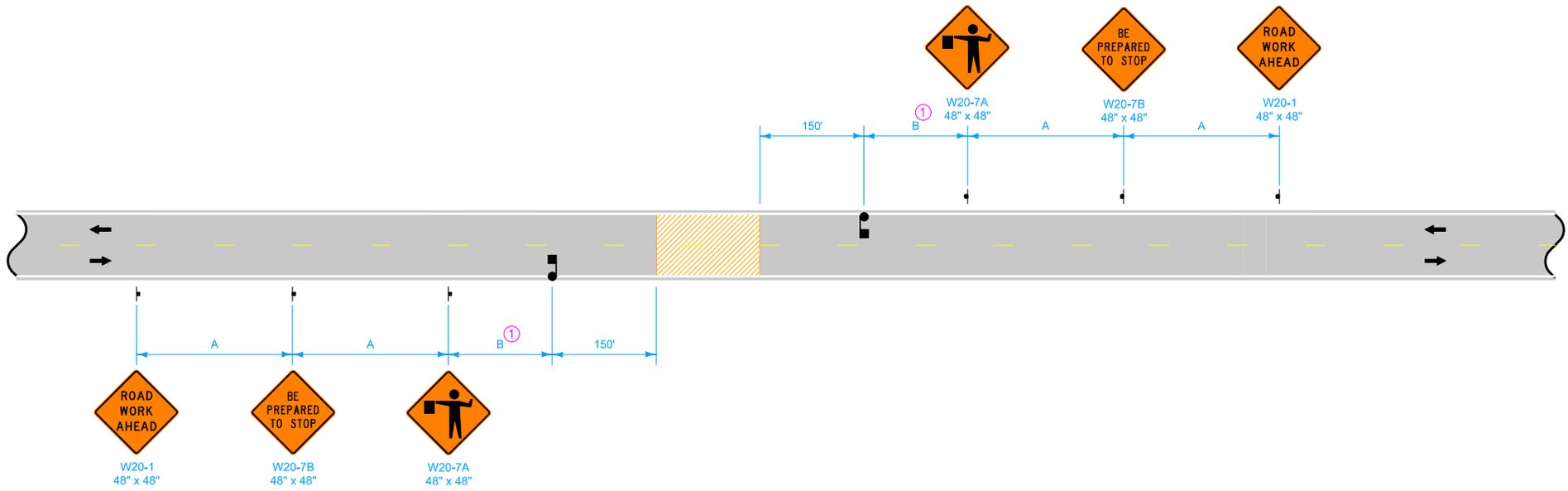
Speed Limit (mph)	A min.
25 or less	200'
30-35	300'
40-45	500'
50 or greater	1000'

For stops exceeding 15 minutes or in heavy traffic situations, use TC-213.

Equip all vehicles with an amber revolving light or an amber strobe light.

- ① When a stop is made in an area of restricted sight distance, use a flagger to hold traffic in the closed lane and allow to pass when conditions are safe.
- ② This vehicle and sign may be used in lieu of a flagger.
- ③ Refer to SI-881 for sign details.

	REVISION
	New 10-15-13
STANDARD ROAD PLAN	TC-235
REVISIONS: New.	SHEET 1 of 1
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>	
EDGE RUT REPAIR	



LEGEND

- Traffic Sign
- Work Area
- Flagger
- Direction of Traffic

SPEED LIMIT (mph)	A	B ^① (minimum)
35 or less	250'	250'
40 - 45	350'	350'
50 or greater	500'	500'

This layout is intended for a preplanned closure of 20 minutes or less.

^① The Engineer will determine the storage length, B, necessary to accommodate stopped traffic during the closure.

Possible Contract Item:
Traffic Control
Flaggers

	REVISION
	2 04-17-12
STANDARD ROAD PLAN	TC-251
SHEET 1 of 1	
REVISIONS: No significant changes. Changed to color.	
 APPROVED BY DESIGN METHODS ENGINEER	
TEMPORARY ROAD CLOSURE	

SIGN PLACEMENT ON
TYPE III BARRICADES



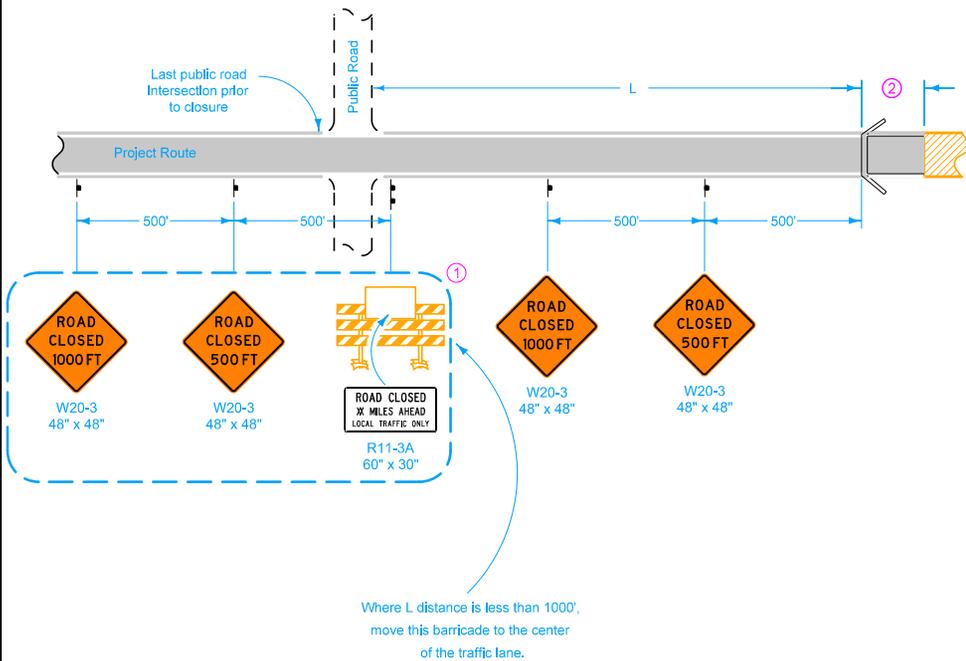
Typical Sign Placement



Sign Placement with
Supplemental Sign

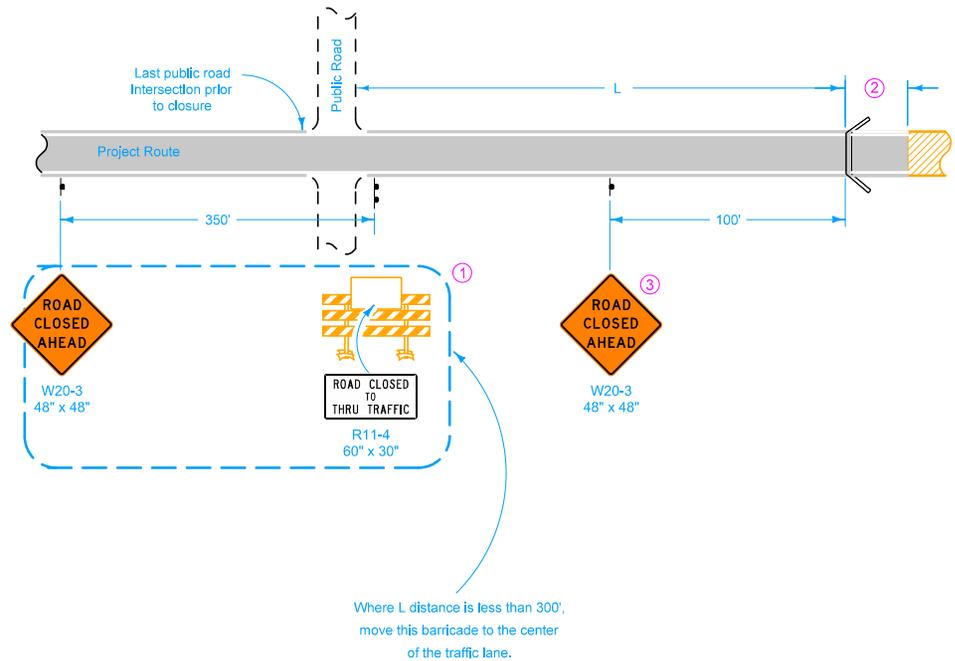
	REVISION	
	6	04-19-16
STANDARD ROAD PLAN	TC-252	
	SHEET 1 of 3	
<small>REVISIONS: Added circle note 3 to page 2 and changed circle note 3 to 4 on page 3. Modified the SITUATION 1 (URBAN) detail on page 2.</small>		
<i>Brian Smith</i> <small>APPROVED BY DESIGN METHODS ENGINEER</small>		
ROUTES CLOSED TO TRAFFIC		

SITUATION 1 (RURAL)
Project Route Closure



Where L distance is less than 1000',
move this barricade to the center
of the traffic lane.

SITUATION 1 (URBAN)
Project Route Closure



Where L distance is less than 300',
move this barricade to the center
of the traffic lane.

LEGEND	
	Traffic Sign
	Type III Barricade
	Work Area
	Road Closure

- ① In situation 1, if the intersection is the point of detour these signs and barricade will become the responsibility of the contracting authority and may be modified by the contracting authority to fit detour signing.
- ② When possible, a 100' buffer is desirable.
- ③ When L is less than 300 feet, omit the ROAD CLOSED AHEAD sign.

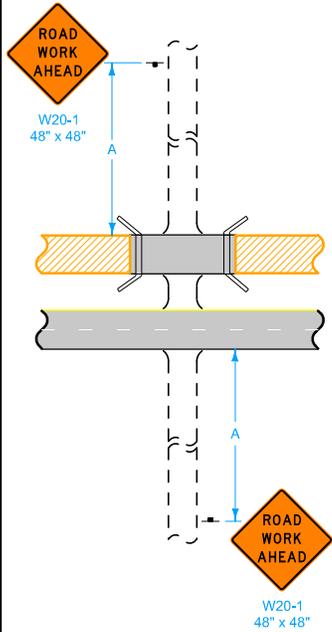
Possible Contract Items:
Traffic Control
Safety Closures

Possible Tabulation:
108-13A

 STANDARD ROAD PLAN	REVISION 6 04-19-16
	TC-252
	SHEET 2 of 3
REVISIONS: Added circle note 3 to page 2 and changed circle note 3 to 4 on page 3. Modified the SITUATION 1 (URBAN) detail on page 2.	
 APPROVED BY DESIGN METHODS ENGINEER	
ROUTES CLOSED TO TRAFFIC	

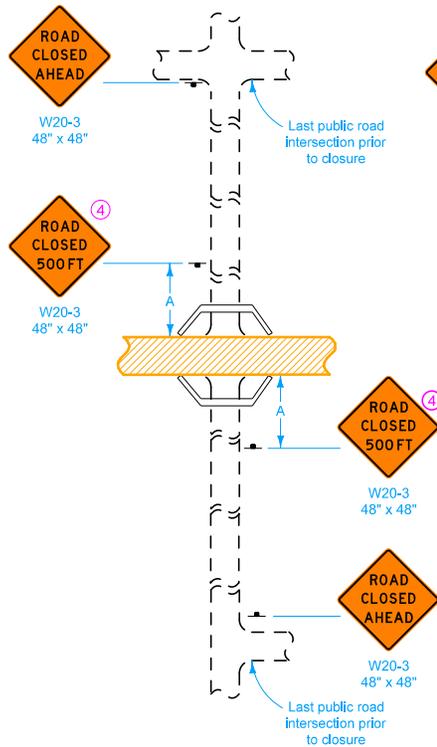
SITUATION 2

Public cross-traffic maintained.
No access to project.



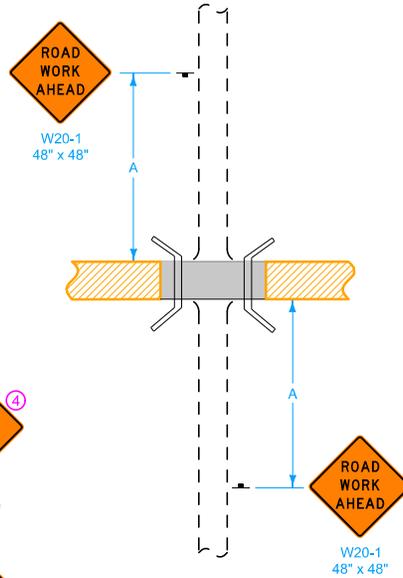
SITUATION 3

No access to project
(Applicable to T-Intersections)



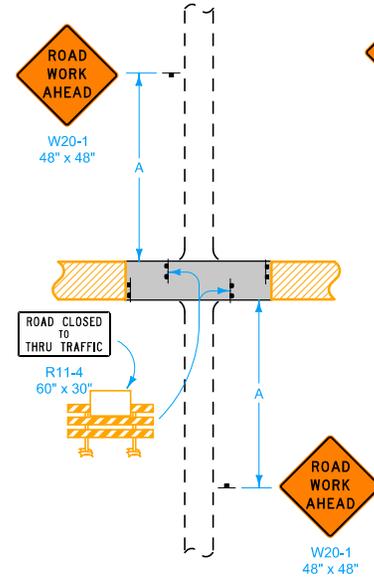
SITUATION 4

Public cross-traffic maintained.
No access to project.



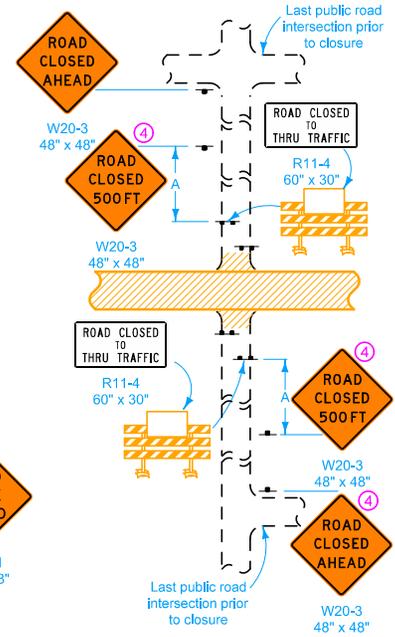
SITUATION 5

Public cross-traffic maintained.
Contractor and resident access.



SITUATION 6

No public access. Contractor and resident
access only. (Applicable to T-Intersections)



LEGEND

- Traffic Sign
- Type III Barricade
- Work Area
- Road Closure

Location	A
Urban	200'
Rural	500'

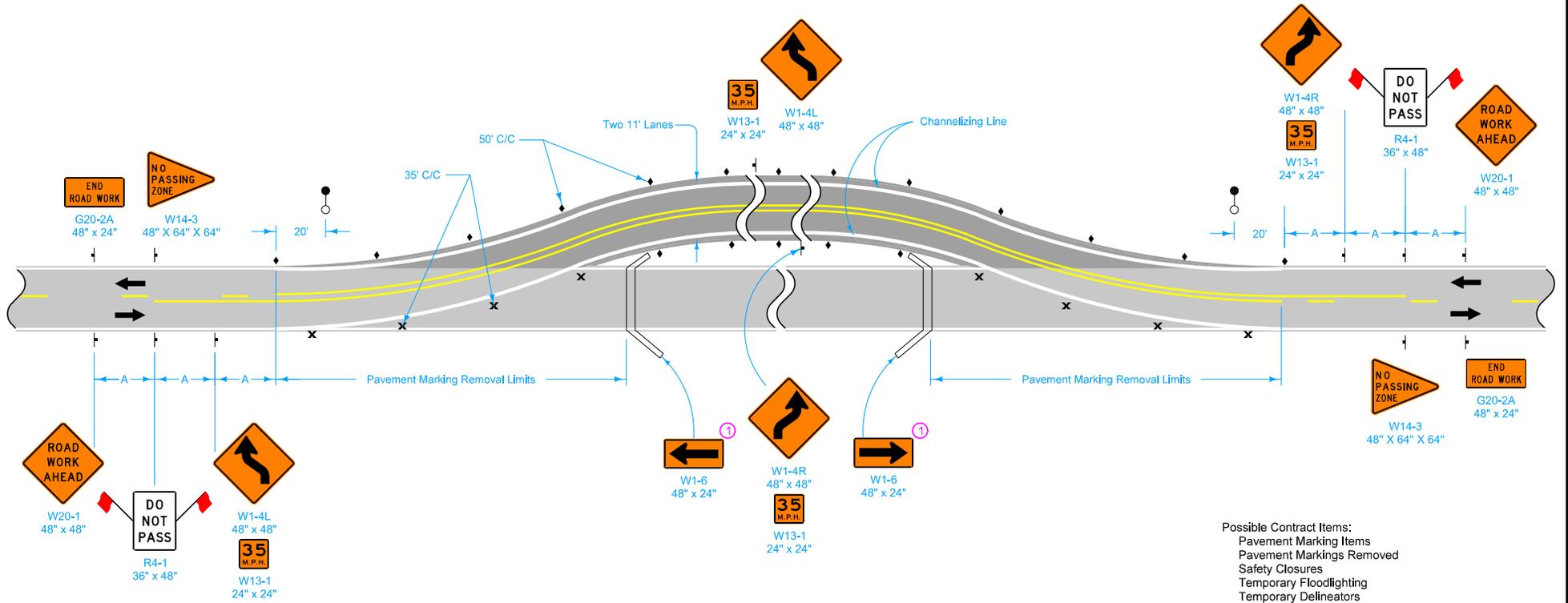
During suspension of work, (such as over winter):

- Use Situation 2 on two-lane to four-lane projects.
- Situation 5 is preferred where cross-traffic is maintained.

④ When the distance between the last public road intersection and the ROAD CLOSED or ROAD CLOSED TO THRU TRAFFIC barricade is less than 1,000 feet, omit the ROAD CLOSED 500 FT sign.

 STANDARD ROAD PLAN	REVISION 6 04-19-16
	TC-252
	SHEET 3 of 3
REVISIONS: Added circle note 3 to page 2 and changed circle note 3 to 4 on page 3. Modified the SITUATION 1 (URBAN) detail on page 2.	
 APPROVED BY DESIGN METHODS ENGINEER	
ROUTES CLOSED TO TRAFFIC	

TWO-LANE DETOUR



- Possible Contract Items:
 Pavement Marking Items
 Pavement Markings Removed
 Safety Closures
 Temporary Floodlighting
 Temporary Delineators
 Temporary Traffic Signal
 Traffic Control
- Possible Tabulations:
 108-13A
 108-22
 108-27
 108-28

LEGEND

- ← Direction of Traffic
- x Drum
- ◆ Single White Delineators (mount back to back)
- ⎓ Road Closure
- Temporary Floodlighting
- ⊥ Traffic Sign

SPEED LIMIT (mph)	A
35 or less	250'
40 - 45	350'
50 or greater	500'

The Engineer may change the advisory speed. If reduced below 35 mph, the Reverse Curve signs (W1-4L and W1-4R) change to Reverse Turn signs (W1-3La and W1-3Ra).

① Add below ROAD CLOSED (R11-2) sign already included in Safety Closure.

IOWA DOT

STANDARD ROAD PLAN

REVISIONS: Changed No Passing Zone sign size from 48" x 60" x 60" to 48" x 64" x 64".

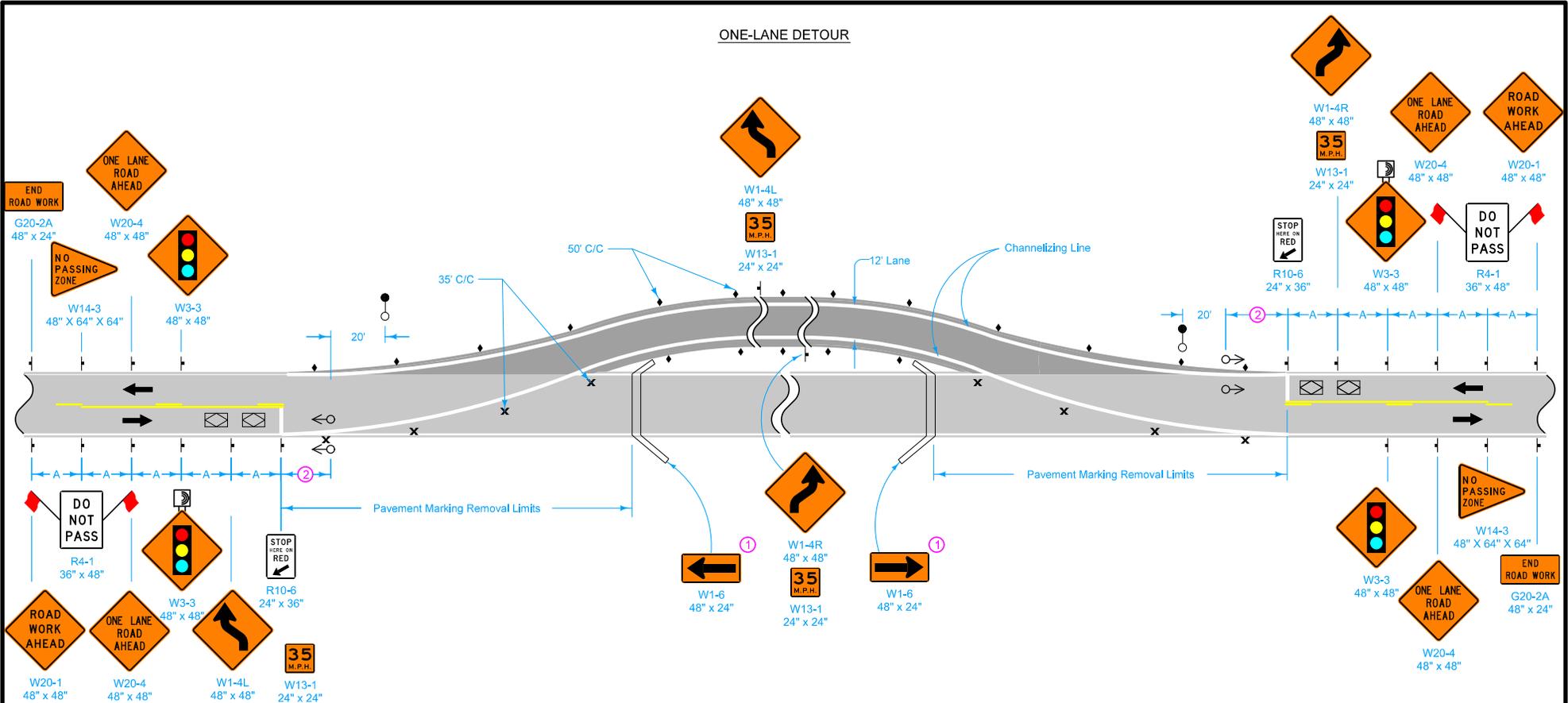
APPROVED BY DESIGN METHODS ENGINEER

Brian Smith

PAVED ON-SITE DETOUR

REVISION	10	10-18-16
TC-253		
SHEET 1 of 2		

ONE-LANE DETOUR



LEGEND

- Direction of Traffic
- Drum
- Single White Delineators (mount back to back)
- Road Closure
- Temporary Floodlighting
- Temporary Traffic Signal
- Traffic Sign
- Type 'B' High-Intensity Flashing Warning Light
- Vehicle Detection Area

TIMING FOR ACTUATED SIGNALS

Recommended Settings, secs.

Initial = 12.0
 Extension = 2.5
 Maximum Green = 45.0
 Yellow = 3.0
 All Red = (see table)

Distance Between Stop Lines	All Red (secs.)*	Distance Between Stop Lines	All Red (secs.)*
400'	10	900'	21
500'	12	1000'	23
600'	14	1100'	25
700'	16	1200'	28
800'	19	1300'	30

* Range of values are based on an operating speed of 30 mph

- ① Add below ROAD CLOSED (R11-2) sign already included in Safety Closure.
- ② Locate signal heads 70 to 100 feet beyond stop bar. Adjust location of signal heads as field conditions warrant.

SPEED LIMIT (mph)	A
35 or less	250'
40 - 45	350'
50 or greater	500'

STANDARD ROAD PLAN

REVISIONS: Changed No Passing Zone sign size from 48" x 60" x 60" to 48" x 64" x 64".

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

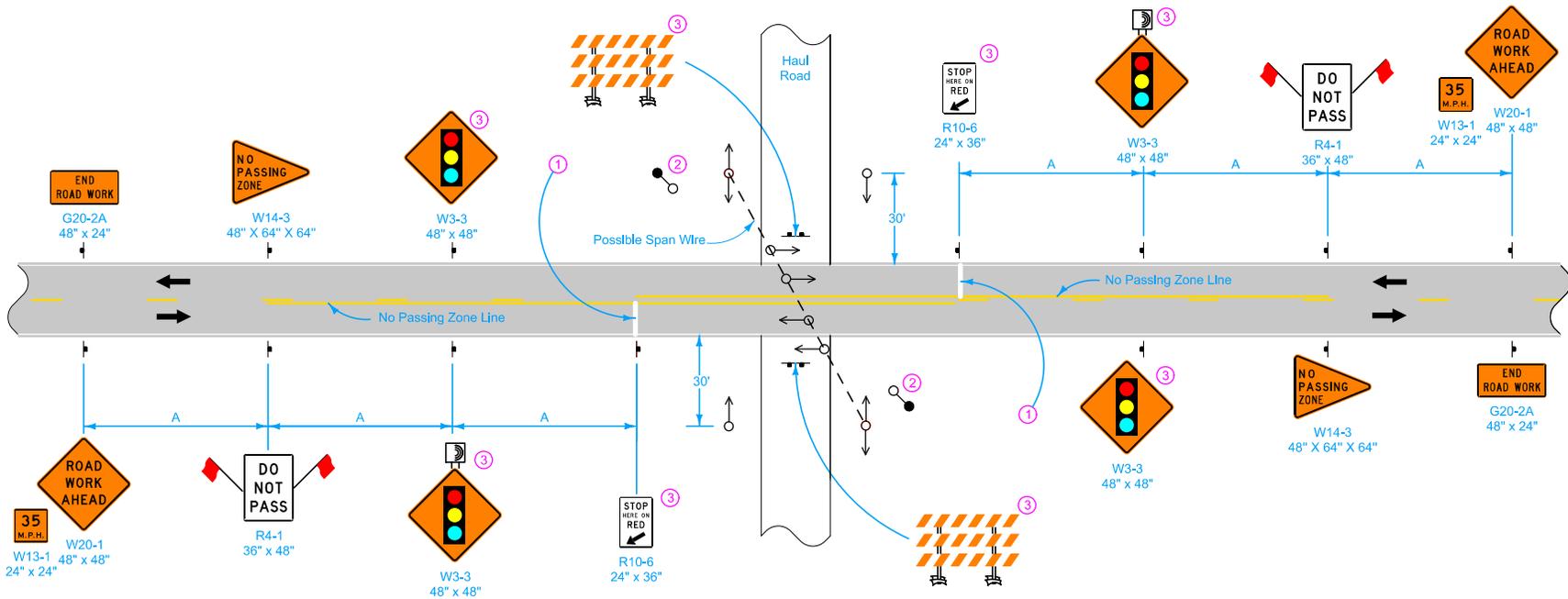
PAVED ON-SITE DETOUR

REVISION

10	10-18-16
----	----------

TC-253

SHEET 2 of 2



LEGEND

- Traffic Sign
- Type III Barricade
- Temporary Floodlighting
- Type 'B' Warning Light
- Temporary Traffic Signal
- Direction of Traffic

SPEED LIMIT (mph)	A
35 or less	250'
40 - 45	350'
50 or greater	500'

No detection area required.

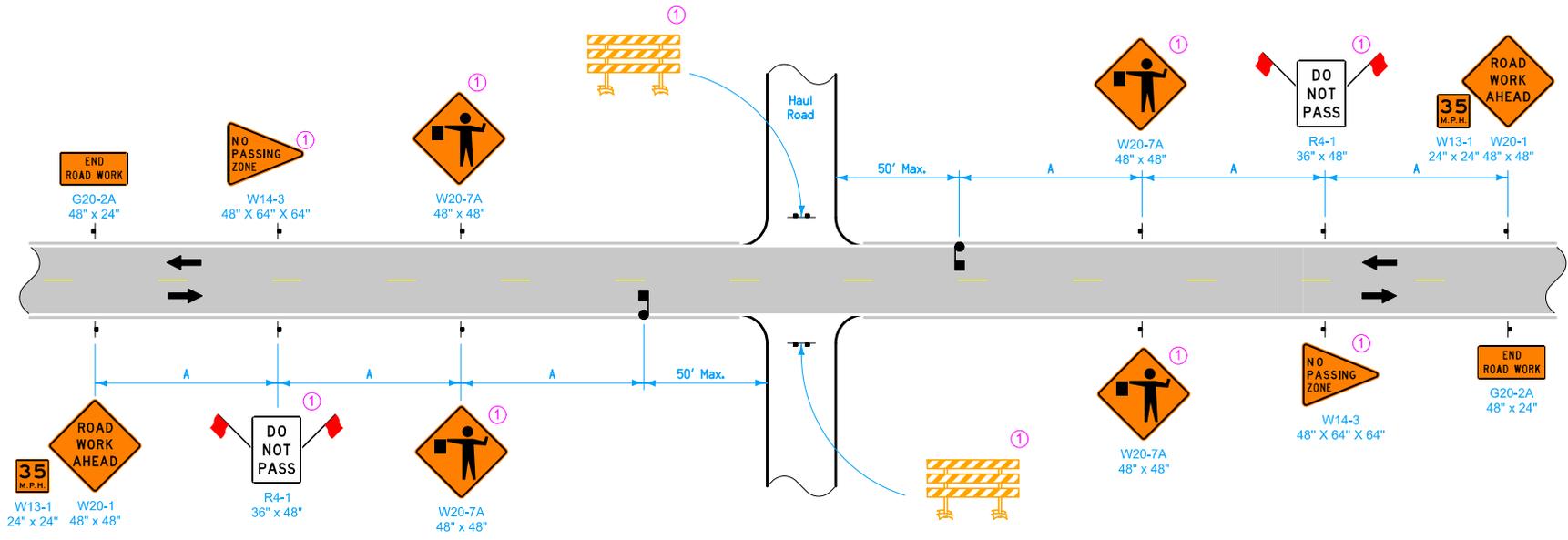
Set signal timing as follows: For traffic from all directions, set the yellow indication at approximately 5 seconds and the all-red clearance interval at approximately 2 seconds. Set the minimum green interval on the main road at 20 seconds. Set the green interval for haul road traffic at 12 seconds but may be extended up to a maximum of 30 seconds.

- ① Locate the stop bars 70 feet in advance of each lane's nearest signal head.
- ② Required only if haul road is used during nighttime hours.
- ③ When the equipment crossing is not in use, place Type III Barricades as shown, and cover SIGNAL AHEAD and STOP HERE ON RED signs.

Possible Contract Items:
 Pavement Marking Items
 Pavement Markings Removed
 Traffic Control
 Temporary Floodlighting
 Temporary Traffic Signals

Possible Tabulations:
 108-22
 108-27
 108-28

IOWA DOT	REVISION	
	6	10-18-16
STANDARD ROAD PLAN		TC-271
REVISIONS: Changed No Passing Zone sign size from 48" x 60" x 60" to 48" x 64" x 64".		SHEET 1 of 1
<i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER		
SIGNALIZED EQUIPMENT CROSSING		



Possible Contract Items:
 Traffic Control
 Flaggers

① During nighttime hours or when the haul road is not in use, Type III Barricades shall be placed as shown and DO NOT PASS, NO PASSING ZONE and Flagger Symbol signs shall be covered or removed.

LEGEND

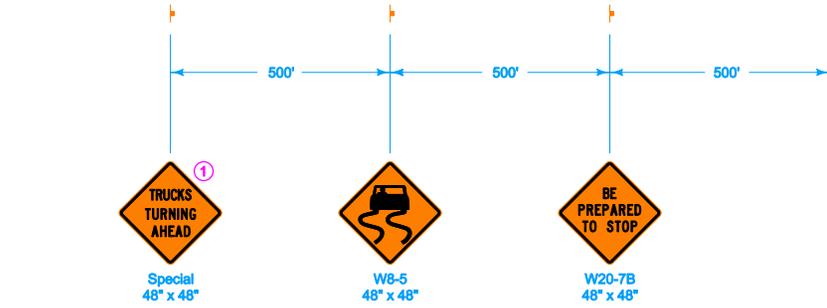
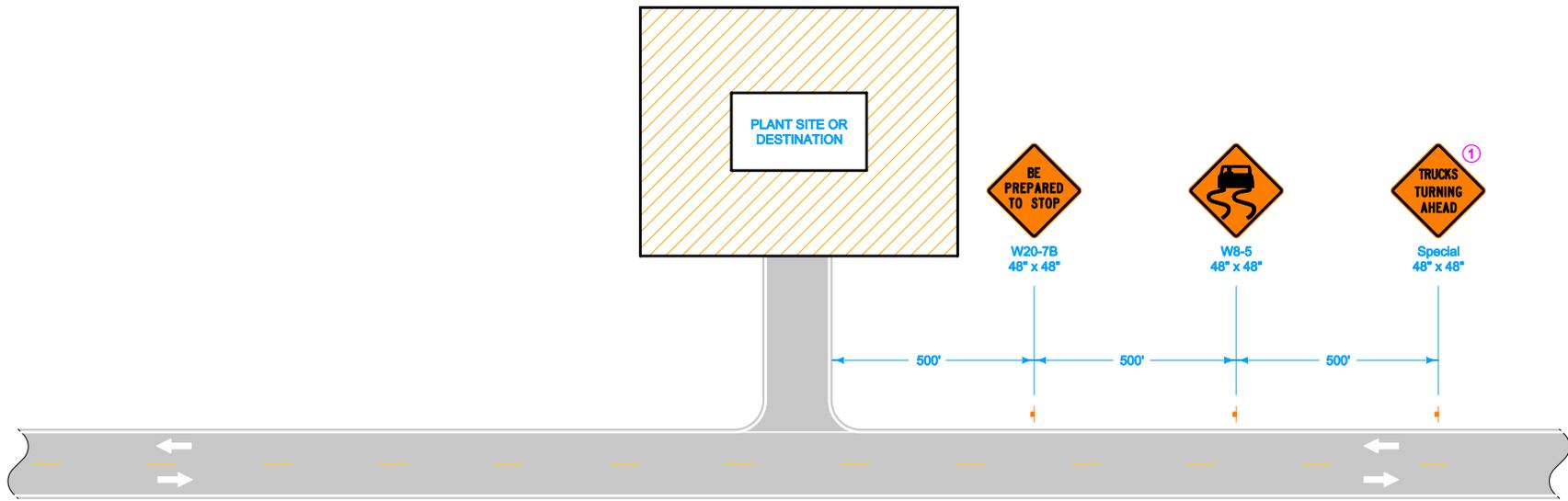
- Traffic Sign
- Type III Barricade
- Flagger
- Direction of Traffic

SPEED LIMIT (mph)	A
35 or less	250'
40 - 45	350'
50 or greater	500'

	REVISION
	3 10-18-16
	STANDARD ROAD PLAN
TC-272	
SHEET 1 of 1	
REVISIONS: Changed No Passing Zone sign size from 48" x 60" x 60" to 48" x 64" x 64". Replaced old DOT logo with new DOT logo.	
APPROVED BY DESIGN METHODS ENGINEER	
UNSIGNALIZED EQUIPMENT CROSSING	

Construction traffic shall yield the right-of-way to mainline traffic.

① Refer to SI-881 for details.



LEGEND

 Traffic Sign

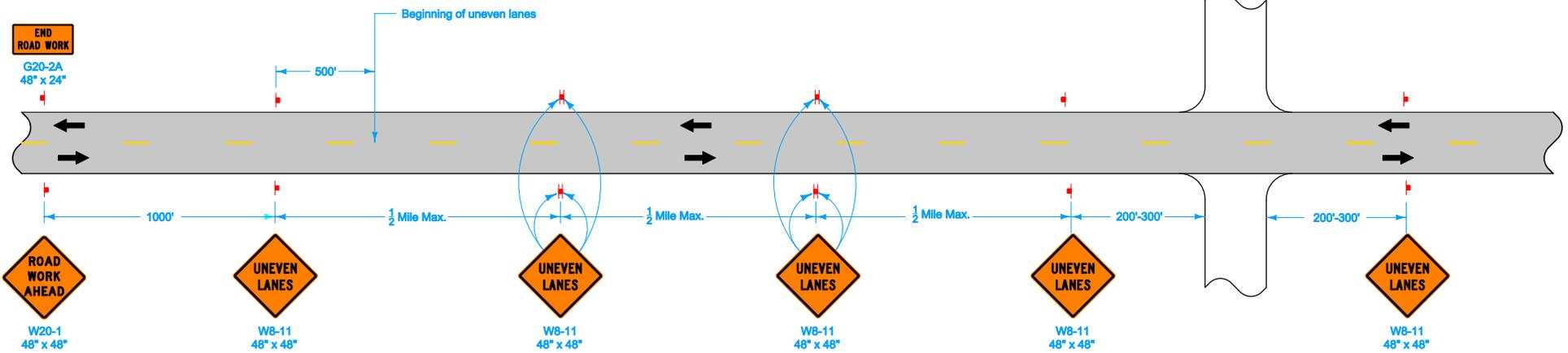
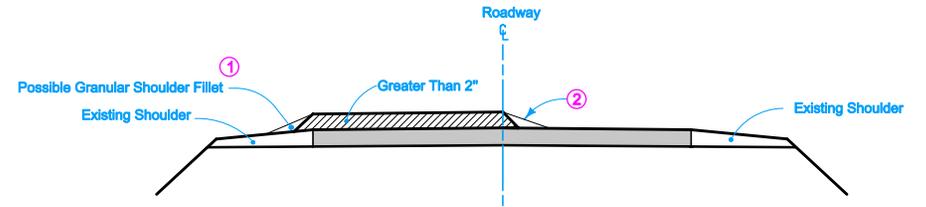
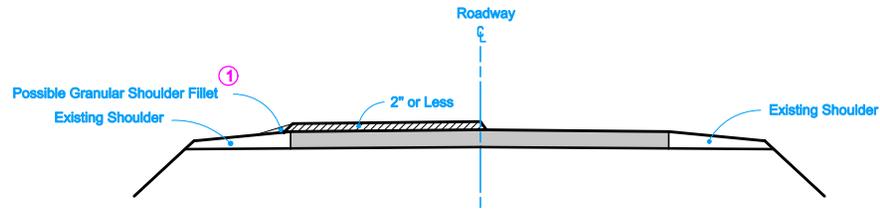
 Direction of Traffic

Possible Contract Item:
Traffic Control

 Iowa Department of Transportation	REVISION
	1 04-20-10
STANDARD ROAD PLAN	TC-273
SHEET 1 of 1	
<small>REVISIONS: Updated references to renamed standards.</small>	
<i>Deanna Maifield</i> <small>APPROVED BY DESIGN METHODS ENGINEER</small>	
CONSTRUCTION SITE ENTRANCE	

DESIGN LIFT THICKNESSES 2" OR LESS

DESIGN LIFT THICKNESSES GREATER THAN 2" (WITH $\frac{1}{2}$ " FILLET)



LEGEND

← Direction of Traffic

↑ Traffic Sign

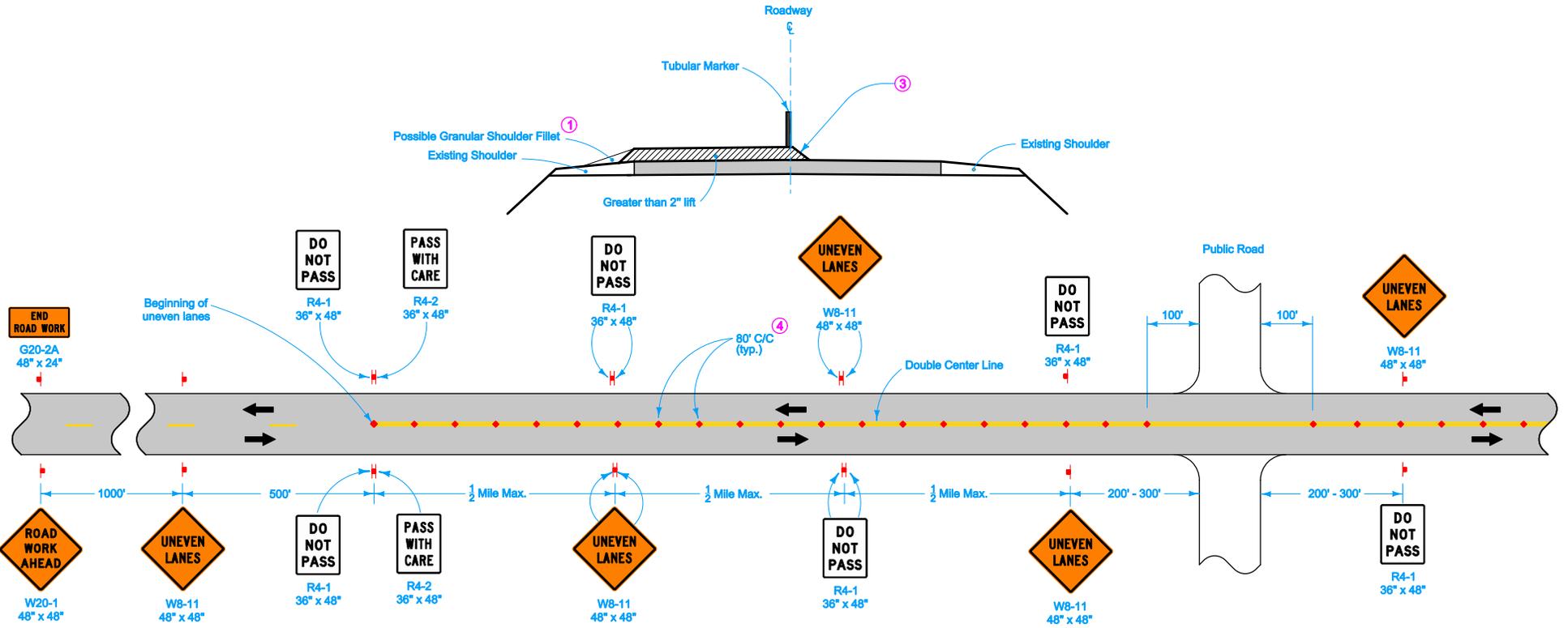
- ① Shoulder Fillet: Refer to Standard Specification 1107 and Safety Edge specifications.
- ② Centerline fillet may be notched wedge, Safety Edge, or a temporary 3:1 HMA fillet.

Possible Contract Items:
Pavement Marking Items
Traffic Control

Possible Tabulation:
108-22

<p>Iowa Department of Transportation</p>	REVISION
	3 04-19-11
STANDARD ROAD PLAN	TC-282
SHEET 1 of 3	
REVISIONS: Added Detail 9018 to new page 3.	
<i>Deanna Mifflin</i> APPROVED BY DESIGN METHODS ENGINEER	
UNEVEN LANES	

DESIGN LIFT THICKNESSES GREATER THAN 2" (WITHOUT ϕ FILLET)



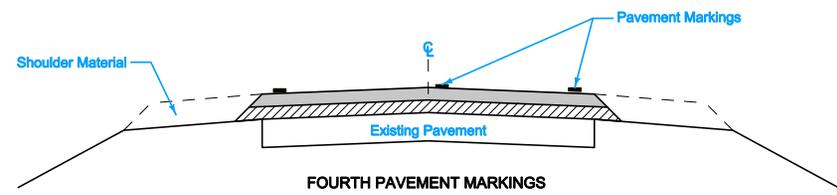
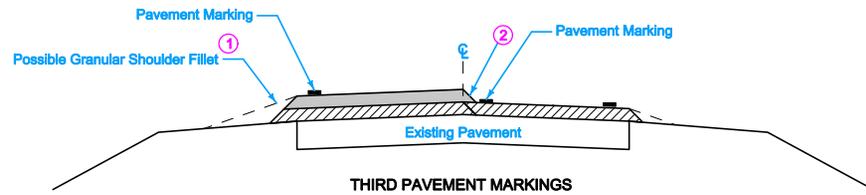
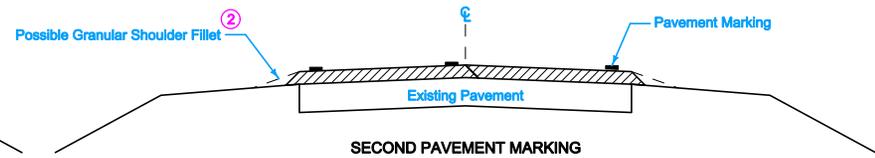
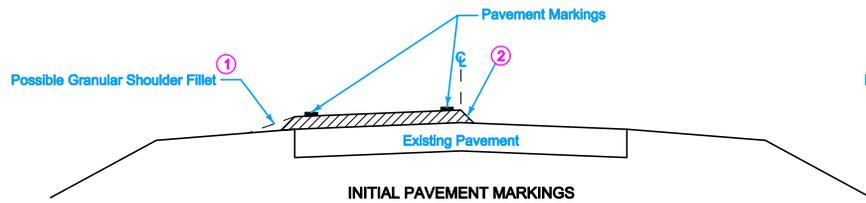
"No-Passing" zones shall not exceed 2.5 miles for ADT less than 2500 vpd or 2.0 miles for ADT from 2500 to 5000 vpd.

- ① Shoulder Fillet: Refer to Standard Specification 1107 and Safety Edge specifications.
- ③ Typical 1:1 taper.
- ④ Spacing = 40 feet where horizontal curve radius is less than 1000 feet.

LEGEND

- ← Direction of Traffic
- ↑ Traffic Sign
- ♦ Tubular Marker

<p>Iowa Department of Transportation</p>	REVISION
	3 04-19-11
STANDARD ROAD PLAN	TC-282
SHEET 2 of 3	
REVISIONS: Added Detail 9018 to new page 3. <i>Deanna Mifflin</i> APPROVED BY DESIGN METHODS ENGINEER	
UNEVEN LANES	

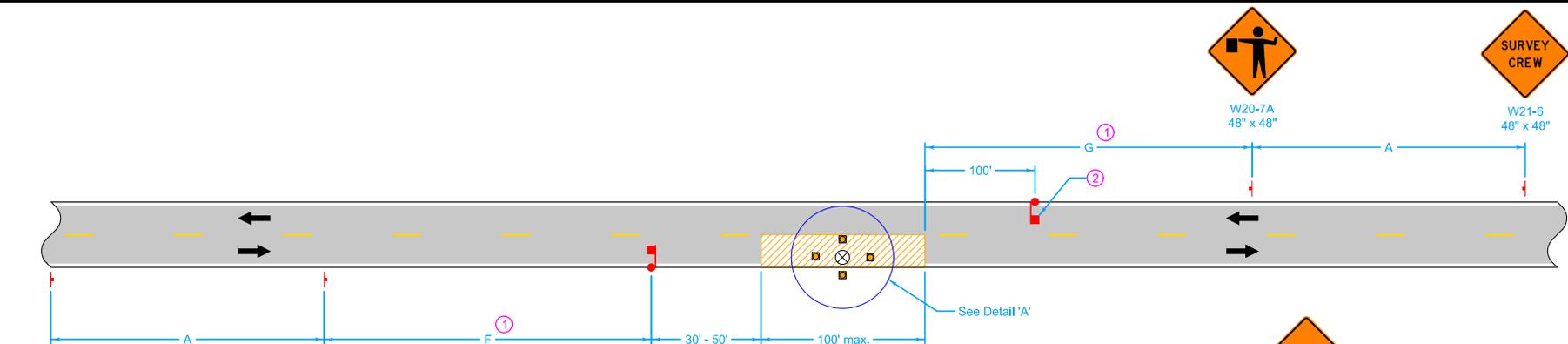


PAVEMENT MARKING SEQUENCE

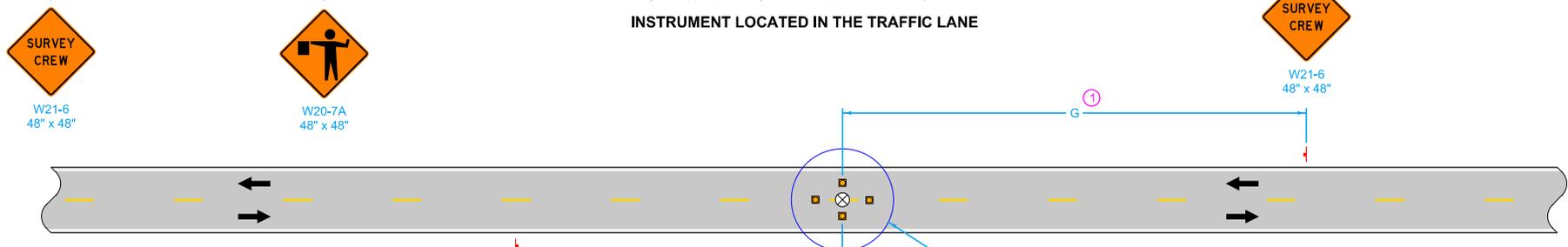
- ① Shoulder Fillet: Refer to Standard Specification 1107 and Safety Edge specifications.
- ② Centerline fillet may be notched wedge, Safety Edge, or a temporary 3:1 HMA fillet.

LEGEND	
	Surface Course
	Intermediate Course

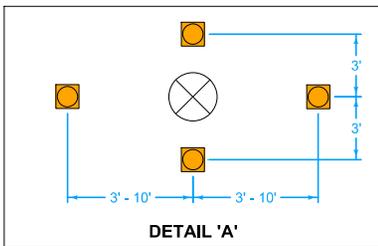
	REVISION
	3 04-19-11
STANDARD ROAD PLAN	TC-282
REVISIONS: Added Detail 9018 to new page 3.	SHEET 3 of 3
<i>Deanna Mifflin</i> APPROVED BY DESIGN METHODS ENGINEER	
UNEVEN LANES	



INSTRUMENT LOCATED IN THE TRAFFIC LANE



INSTRUMENT LOCATED NEAR THE CENTERLINE



DETAIL 'A'

LEGEND

- Traffic Sign
- Instrument Person
- Cone
- Work Area
- Flagger
- Direction of Traffic

SPEED LIMIT (mph)	A	WITH LANE CLOSURE	WITHOUT LANE CLOSURE	F + G MAXIMUM
		F and G ①	F and G ①	
35 or less	250'	250' - 3250'	500' - 3000'	3500'
40 - 45	350'	350' - 3350'	700' - 3000'	3700'
50 or greater	500'	500' - 3500'	1000' - 3000'	4000'

When another person is required outside of the signing setup (e.g. for a survey target), a separate signing setup may be necessary unless the traffic lane can be vacated to accommodate traffic.

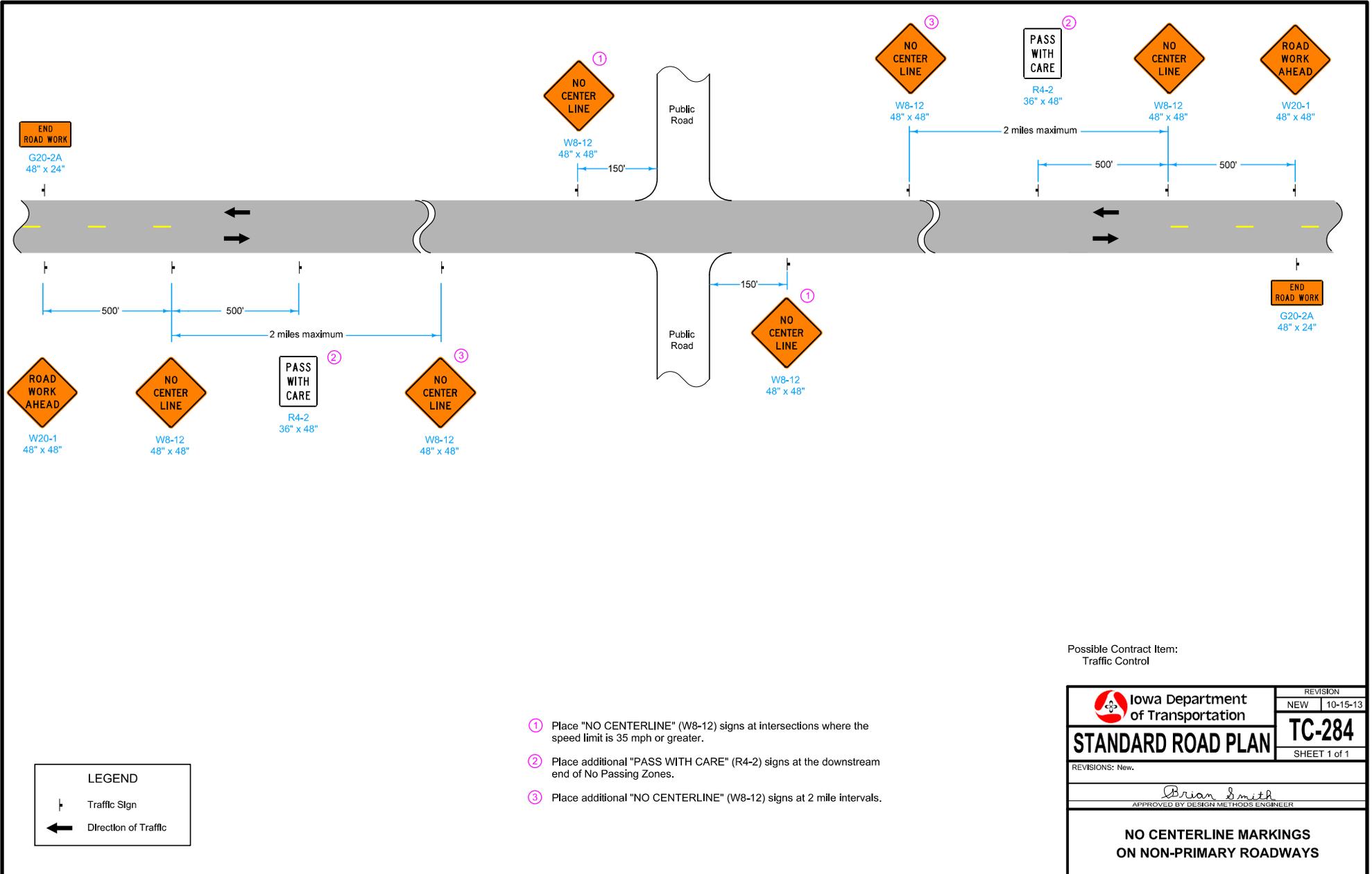
- ① Keep F and G distances as near to minimum values as work permits. However, to be able to move the work area without moving the advance signing, F and G values may be varied within the limits of the table. Maximum movement can be achieved by setting one F or G value at the minimum and the other value at its maximum.

- ② Use a second flagger if:
 - The flagger's view of approaching traffic in the open lane is less than a quarter mile or the work site is in an area of restricted sight distance (such as a "No-Passing" zone); or
 - Excessive traffic delays are encountered.

Possible Contract Items:
 Flaggers
 Traffic Control

 STANDARD ROAD PLAN	REVISION	2	10-18-11
	TC-283		
REVISIONS: Made into color standard. Changed size of signs to 48" X 48".			
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>			
SURVEYING OPERATIONS			

DO NOT USE ON PRIMARY ROADWAYS

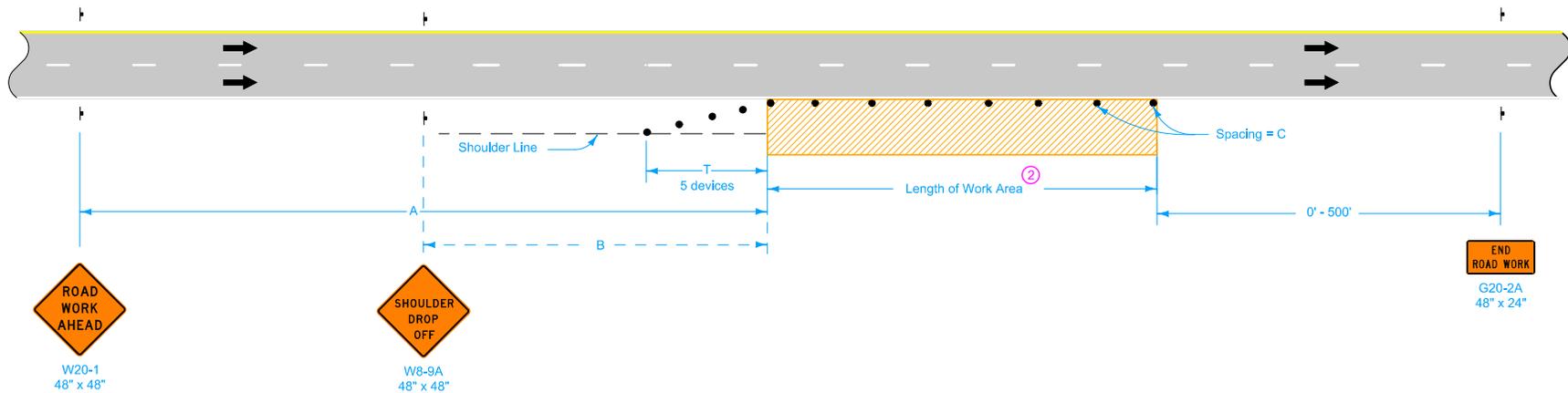


LEGEND	
	Traffic Sign
	Direction of Traffic

- ① Place "NO CENTERLINE" (W8-12) signs at intersections where the speed limit is 35 mph or greater.
- ② Place additional "PASS WITH CARE" (R4-2) signs at the downstream end of No Passing Zones.
- ③ Place additional "NO CENTERLINE" (W8-12) signs at 2 mile intervals.

Possible Contract Item:
Traffic Control

	REVISION
	NEW 10-15-13
STANDARD ROAD PLAN	TC-284
REVISIONS: New.	SHEET 1 of 1
 APPROVED BY DESIGN METHODS ENGINEER	
NO CENTERLINE MARKINGS ON NON-PRIMARY ROADWAYS	



When a pavement edge drop-off exists, install a SHOULDER DROP-OFF sign.

No pavement edge drop-offs greater than pavement depth will be allowed during non-working hours.

Shoulder edge drop-offs shall be mitigated according to Article 1107.08.L2 of the Standard Specifications.

For work lasting less than one hour, refer to TC-1.

Possible Contract Item:
Traffic Control

LEGEND

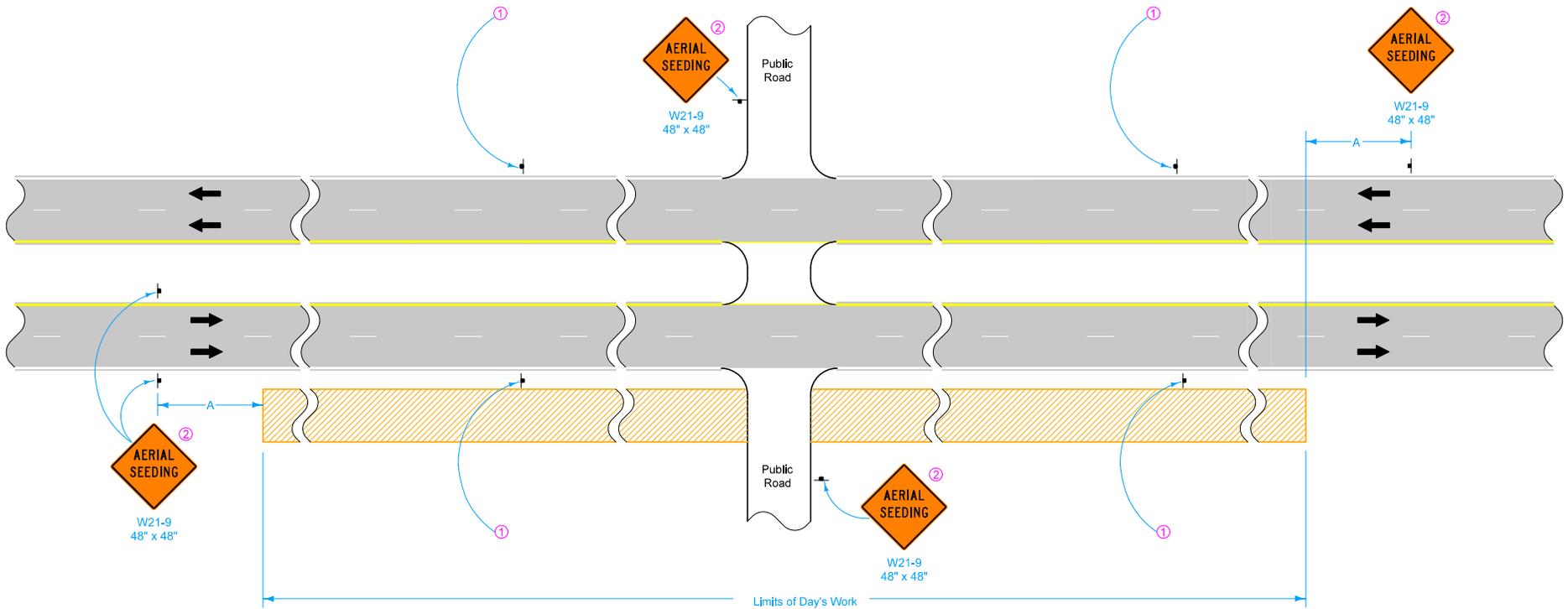
- Traffic Sign
- 42" Channelizer
- Work Area
- Direction of Traffic

SPEED LIMIT (mph)	A	B	C ^②	T
40 or less	500'	250'	40'	100'
45 - 50	700'	350'	80' ^①	200'
55 - 60	1500'	500'	100' ^①	200'
65 - 70	1500'	500'	100' ^①	230'

^① When the length of a pavement edge drop-off is 1000 feet or less, the temporary fillet requirement of Article 1107.08 of the Standard Specifications does not apply. Reduce channelizer spacing to 40 feet.

^② For work areas less than 200 feet long, use channelizers spaced at 20 foot centers or use a vehicle with an amber revolving light or amber strobe light.

STANDARD ROAD PLAN	REVISION 8 04-21-15
	TC-402
	SHEET 1 of 1
REVISIONS: Modified general notes, changed title and replaced the DOT logo in the title block with the new version.	
<small>APPROVED BY DESIGN METHODS ENGINEER</small>	
WORK WITHIN 15 FT OF TRAVELED WAY	



- ① Place AERIAL SEEDING signs along the mainline at a maximum spacing of 3 miles.
- ② Refer to SI-881 for sign details.

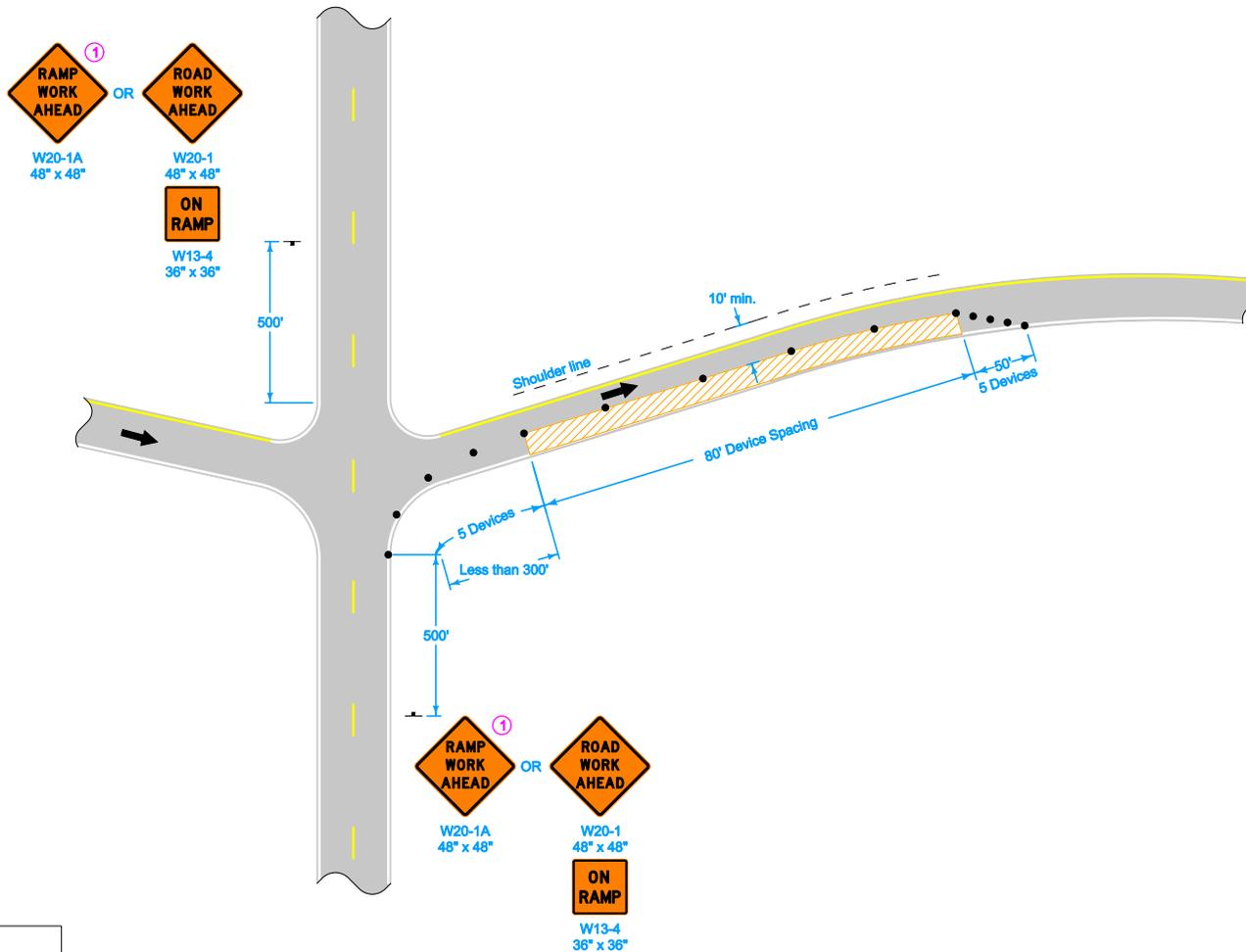
Possible Contract Item:
Traffic Control

LEGEND	
	Traffic Sign
	Work Area
	Direction of Traffic

SPEED LIMIT (mph)	A
35 or less	250'
40 - 45	500'
50 or greater	500'

	REVISION
	3 10-16-12
STANDARD ROAD PLAN	TC-403
SHEET 1 of 1	
REVISIONS: Changed AERIAL SEEDING sign information and added circle note 2.	
 APPROVED BY DESIGN METHODS ENGINEER	
AERIAL SEEDING OPERATIONS	

① Refer to SI-881 for sign details.

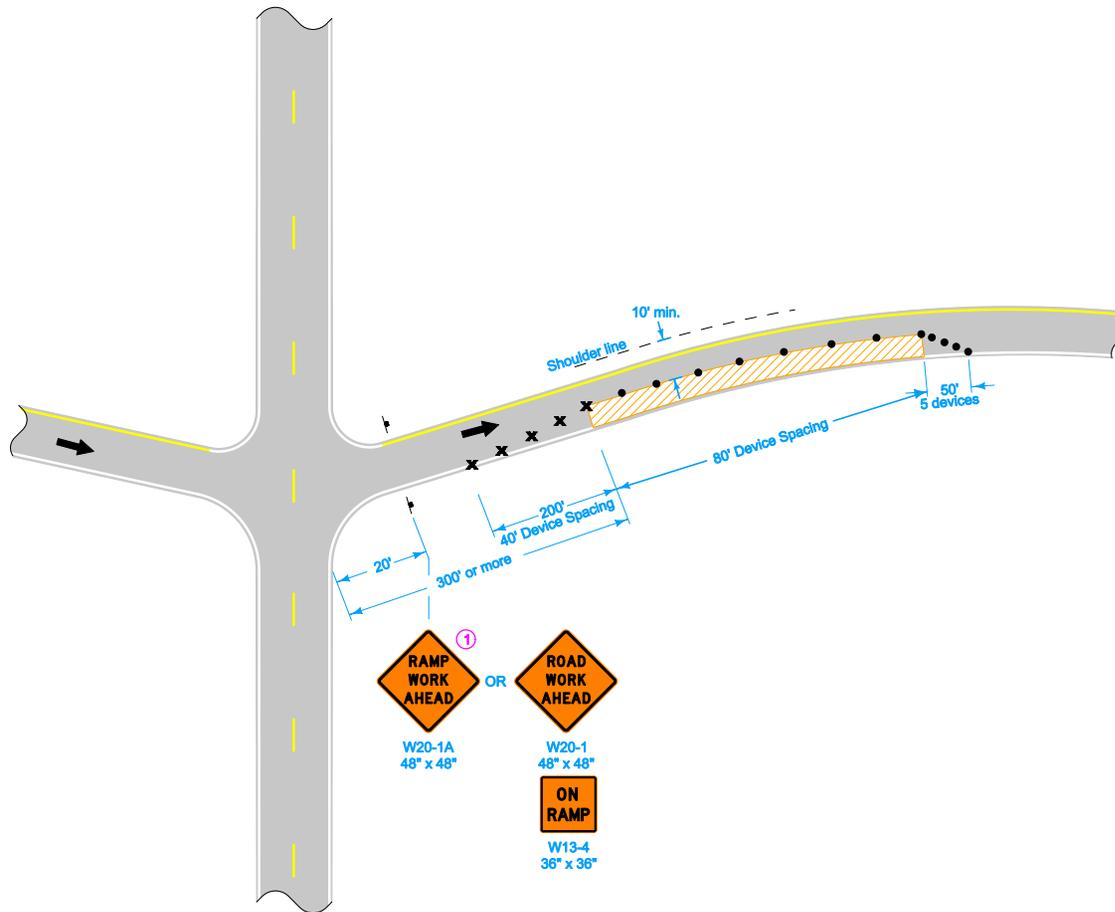


LEGEND	
	Traffic Sign
	42" Channelizer
	Direction of Traffic
	Work Area

Possible Contract Item:
Traffic Control

	REVISION 2 04-17-12	
	STANDARD ROAD PLAN TC-416 SHEET 1 of 4	
REVISIONS: Removed "or Vertical Panel" from 42" Channelizer In Legend.		
<i>Deanna Maifeld</i> APPROVED BY DESIGN METHODS ENGINEER		
PARTIAL LANE CLOSURE ON RAMP		

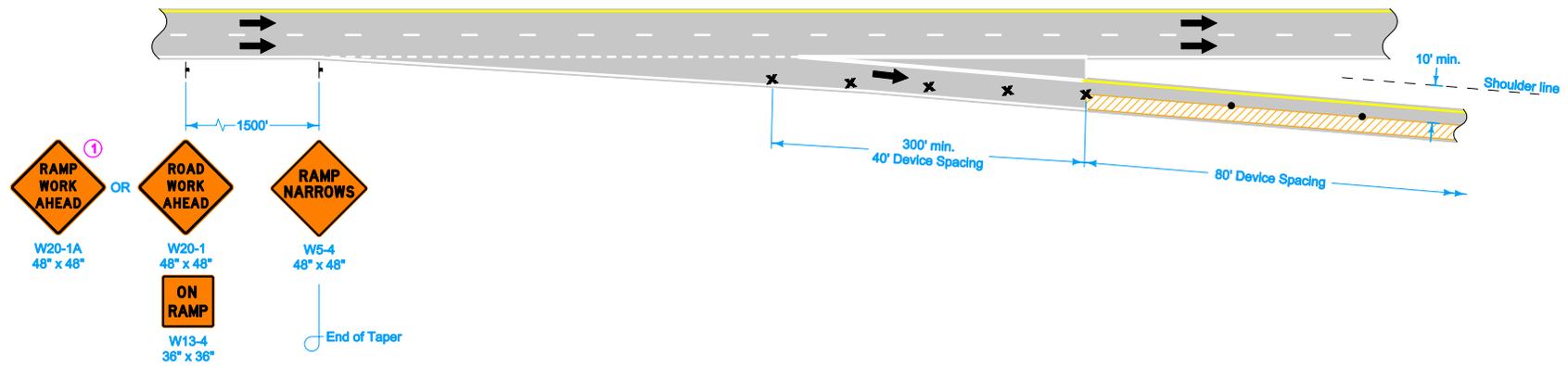
① Refer to SI-881 for sign details.



LEGEND	
x	Drum
⊢	Traffic Sign
•	42" Channelizer
←	Direction of Traffic
	Work Area

	REVISION
	2 04-17-12
STANDARD ROAD PLAN	TC-416
SHEET 2 of 4	
REVISIONS: Removed "or Vertical Panel" from 42" Channelizer In Legend.	
<i>Deanna Maifeld</i> APPROVED BY DESIGN METHODS ENGINEER	
PARTIAL LANE CLOSURE ON RAMP	

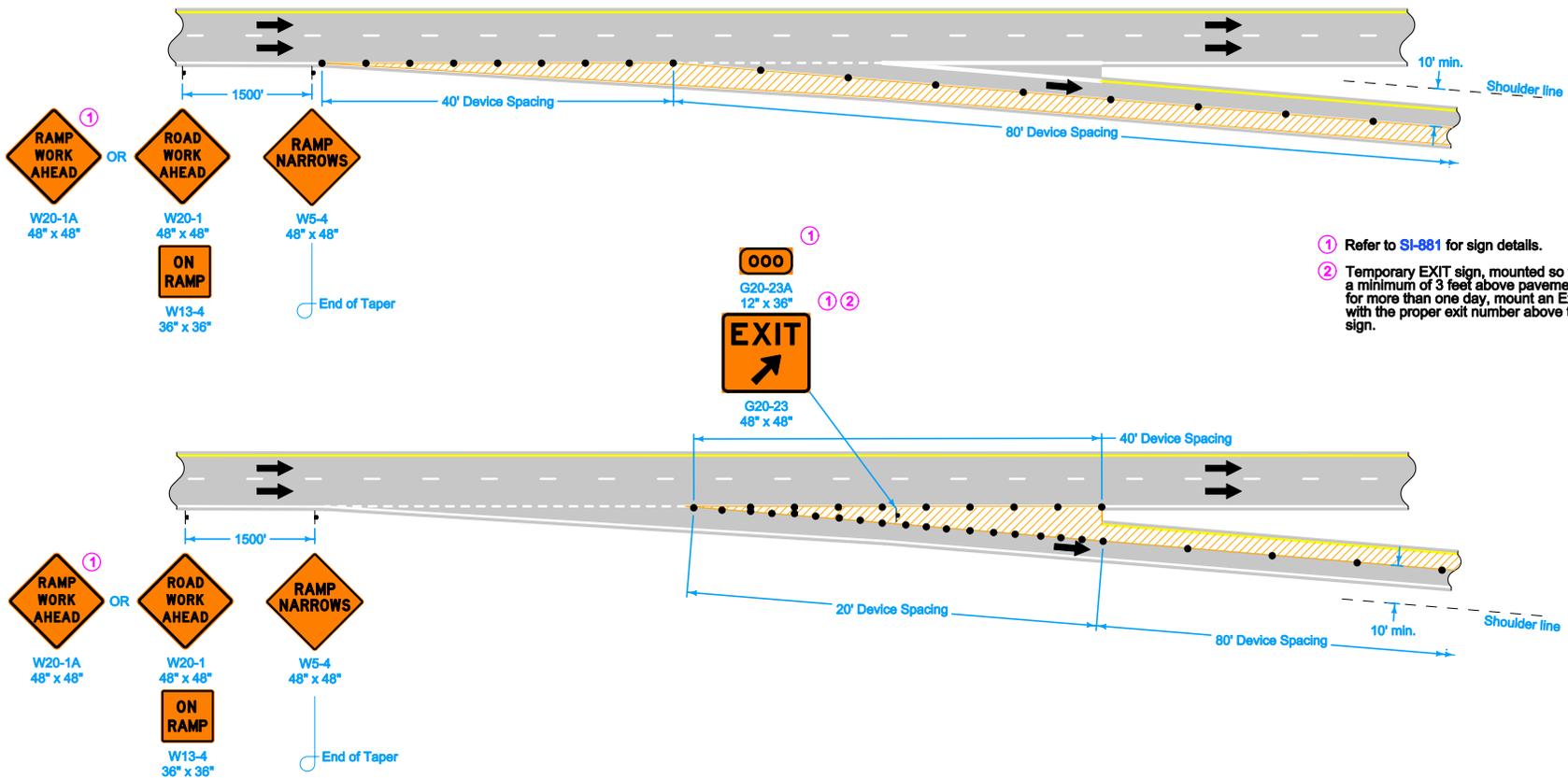
① Refer to SI-881 for sign details.



- ① RAMP WORK AHEAD
W20-1A
48" x 48"
- OR
- ROAD WORK AHEAD
W20-1
48" x 48"
- ON RAMP
W13-4
36" x 36"
- RAMP NARROWS
W5-4
48" x 48"
- End of Taper

LEGEND	
x	Drum
↑	Traffic Sign
•	42" Channelizer
←	Direction of Traffic
	Work Area

	REVISION
	2 04-17-12
STANDARD ROAD PLAN	TC-416
SHEET 3 of 4	
REVISIONS: Removed "or Vertical Panel" from 42" Channelizer In Legend.	
<i>Deanna Maifeld</i> APPROVED BY DESIGN METHODS ENGINEER	
PARTIAL LANE CLOSURE ON RAMPS	

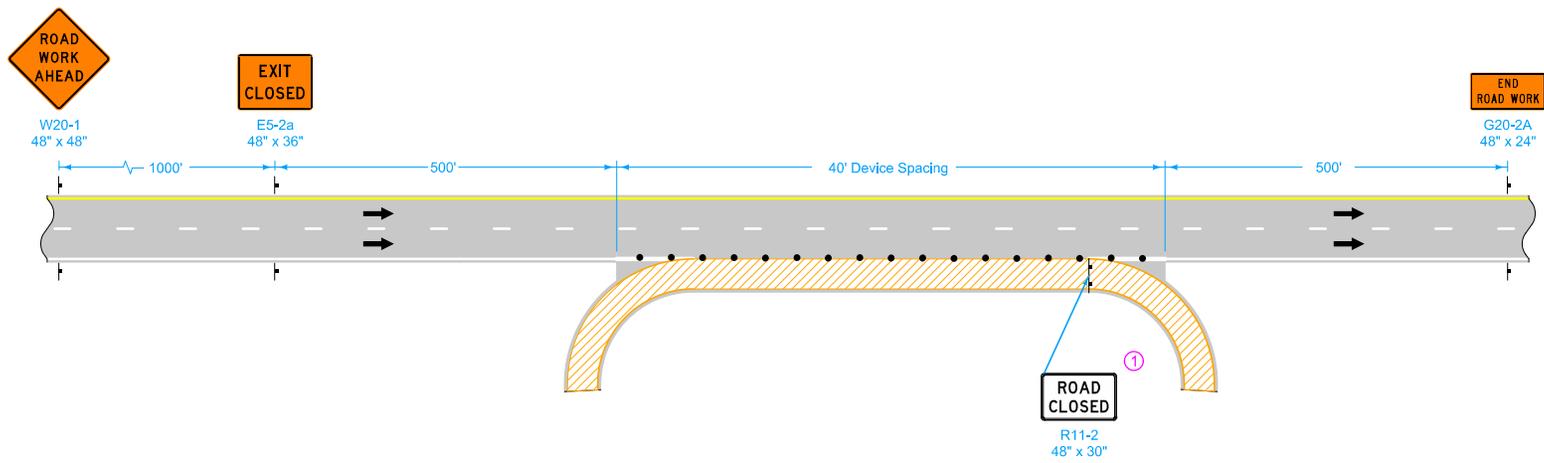


- (1) Refer to SI-881 for sign details.
- (2) Temporary EXIT sign, mounted so that bottom of sign is a minimum of 3 feet above pavement surface. If in place for more than one day, mount an Exit Number Panel with the proper exit number above the temporary EXIT sign.

LEGEND	
	Traffic Sign
	42" Channelizer
	Direction of Traffic
	Work Area

 Iowa Department of Transportation	REVISION
	2 04-17-12
STANDARD ROAD PLAN	TC-416
SHEET 4 of 4	
REVISIONS: Removed "or Vertical Panel" from 42" Channelizer In Legend.	
<i>Deanna Maifield</i> APPROVED BY DESIGN METHODS ENGINEER	
PARTIAL LANE CLOSURE ON RAMPS	

① A vehicle with an amber revolving light or amber strobe light may be substituted for the Type III barricade.



EXIT RAMP CLOSURE

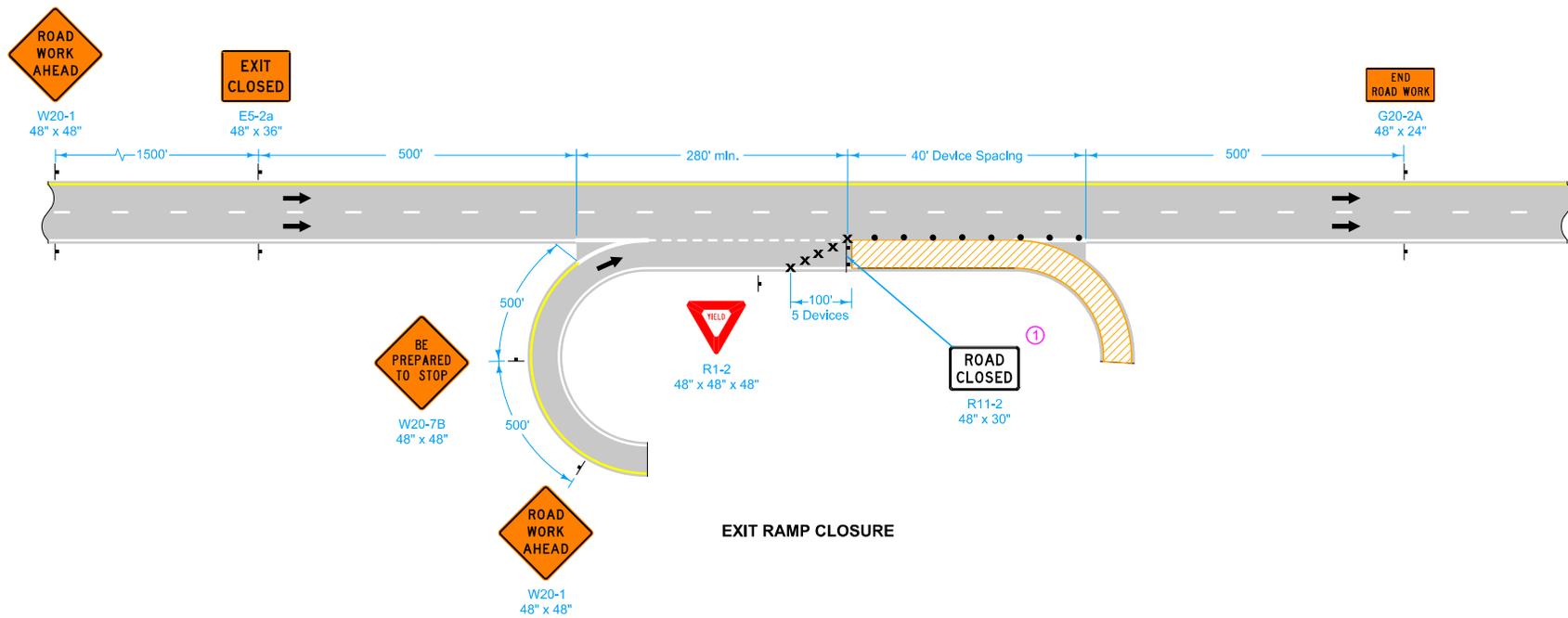
LEGEND	
	Type III Barricade
	Traffic Sign
	42" Channelizer
	Direction of Traffic
	Work Area

Possible Contract Items:
 Safety Closure
 Traffic Control

Possible Tabulation:
 108-13A

	Iowa Department of Transportation	REVISION 3 04-16-13
	STANDARD ROAD PLAN	TC-417 SHEET 1 of 3
REVISIONS: Modified circle note 1.		
<i>Deanna Maifield</i> APPROVED BY DESIGN METHODS ENGINEER		
RAMP CLOSURE		

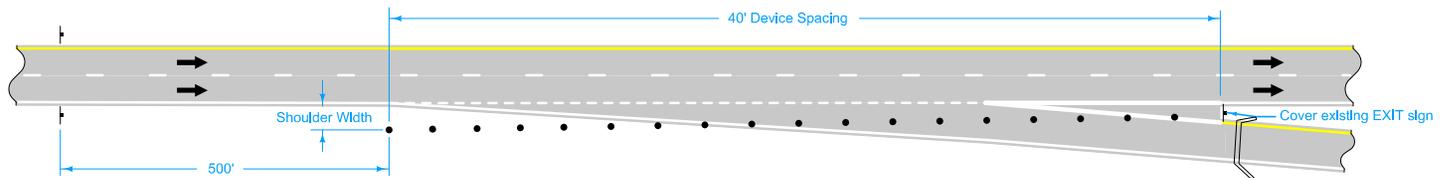
① A vehicle with an amber revolving light or amber strobe light may be substituted for the Type III barricade.



EXIT RAMP CLOSURE

LEGEND	
	Type III Barricade
	Traffic Sign
	Drum
	42" Channelizer
	Direction of Traffic
	Work Area

	REVISION
	3 04-16-13
STANDARD ROAD PLAN	TC-417
SHEET 2 of 3	
REVISIONS: Modified circle note 1.	
<i>Deanna Maifield</i> APPROVED BY DESIGN METHODS ENGINEER	
RAMP CLOSURE	



**EXIT
CLOSED**

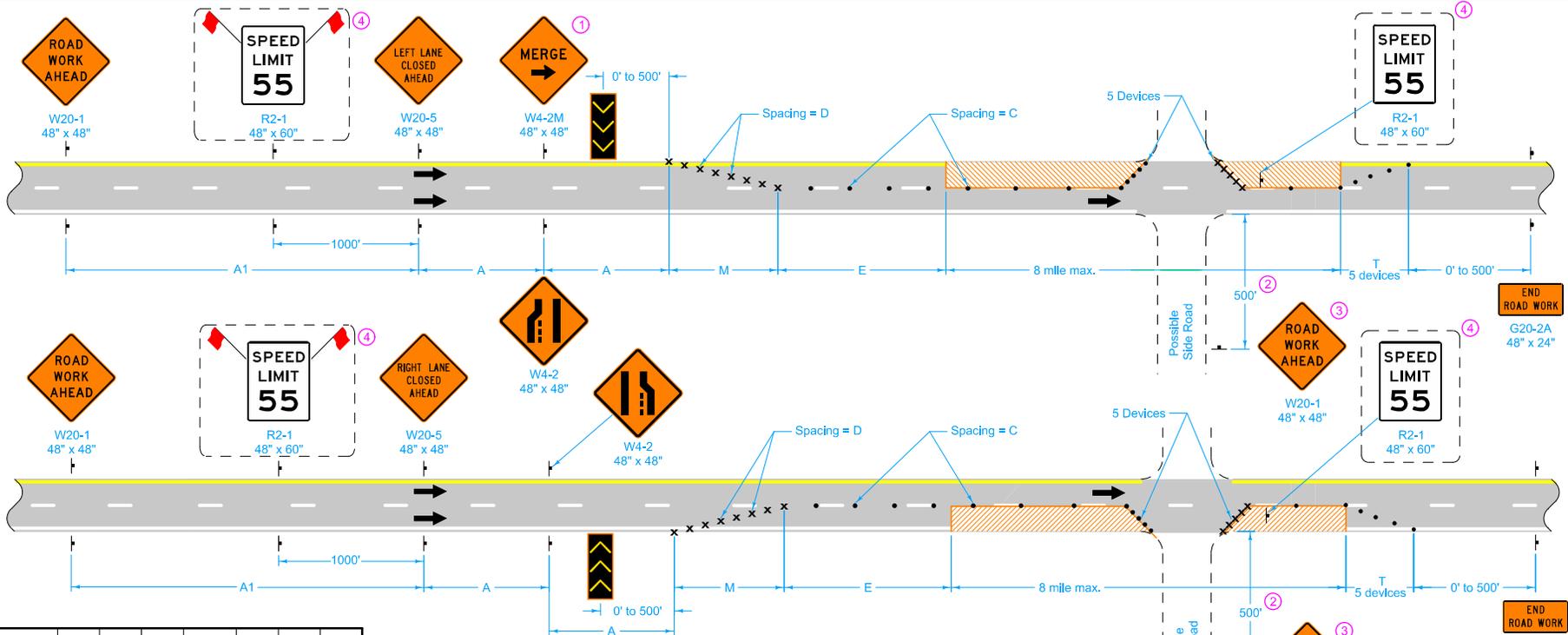
E5-2a
48" x 36"

EXIT RAMP CLOSURE

LEGEND

	Road Closure
	Traffic Sign
	42" Channelizer
	Direction of Traffic

	Iowa Department of Transportation	
	REVISION 3 04-16-13	TC-417
STANDARD ROAD PLAN		SHEET 3 of 3
REVISIONS: Modified circle note 1.		
<i>Deanna Maifield</i> APPROVED BY DESIGN METHODS ENGINEER		
RAMP CLOSURE		



SPEED LIMIT (mph)	A	C	D	E	M	T	A1
35 or less	250'	40'	35'	0'-200'	245'	50'	250'
40	500'	80'	40'	0'-300'	320'	50'	500'
45	700'	80'	45'	0'-400'	630'	100'	700'
50	700'	80'	45'	400'	630'	100'	700'
55 - 60	1000'	100'	55'	600'	770'	100'	2000'
65 - 70	1000'	100'	65'	700'	910'	100'	2000'

LEGEND

- Direction Of Traffic
- Traffic Sign
- Drum
- 42" Channelizer
- Arrow Board
- Work Area

When the Average Daily Traffic (ADT) exceeds 20,000 vehicles per day or when a traffic queue extends beyond the advanced signing, place RIGHT/LEFT LANE CLOSED 4 MILES and RIGHT/LEFT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, respectively, as appropriate.

Where there is a lane line drop-off or rise, do not allow traffic to cross over the drop-off or rise, except for ramp locations where a BUMP (W8-1) sign is placed.

Lane line drop-offs greater than a nominal 4 inches are not allowed during non-working hours.

- ① Refer to SI-881 for sign details.
- ② Where side road speed limit is 40 mph or less, a distance of 200 feet is allowed.
- ③ Place a ROAD WORK AHEAD sign on the opposite side of the intersection in a similar location.
- ④ For roadways with a posted speed limit of 60 mph or greater before road work:
 - Place SPEED LIMIT 55 signs prior to the lane closure as shown.
 - When the length of closure is greater than 1 mile, install SPEED LIMIT 55 signs in the closed lane at 1-mile intervals.
 - Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.

Possible Contract Item:
Traffic Control

STANDARD ROAD PLAN

REVISIONS: Clarified lane line drop-off in the general notes.

Brian Smith
APPROVED BY DESIGN METHODS ENGINEER

LANE CLOSURE ON DIVIDED HIGHWAY

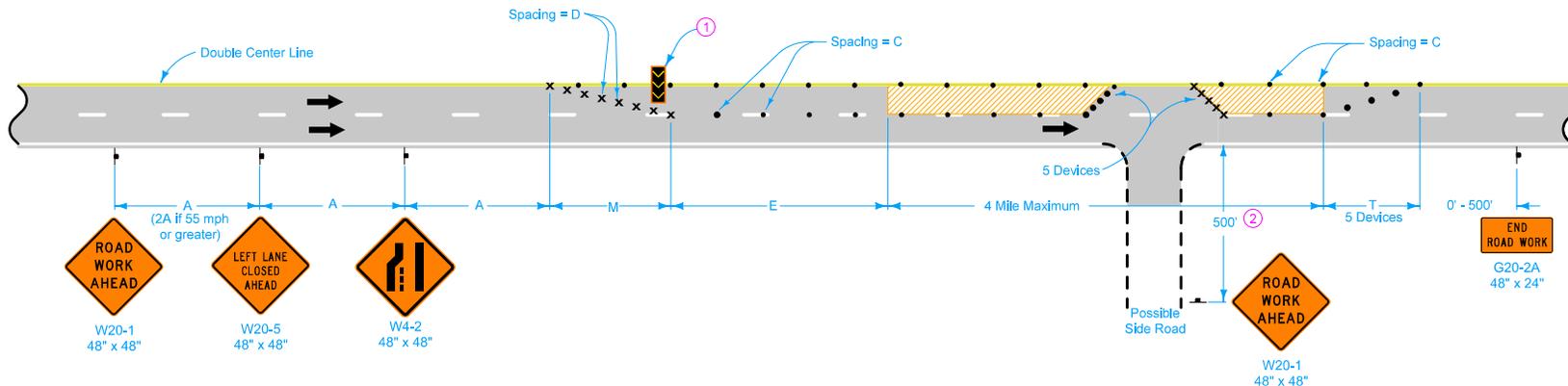
REVISION

8	10-15-13
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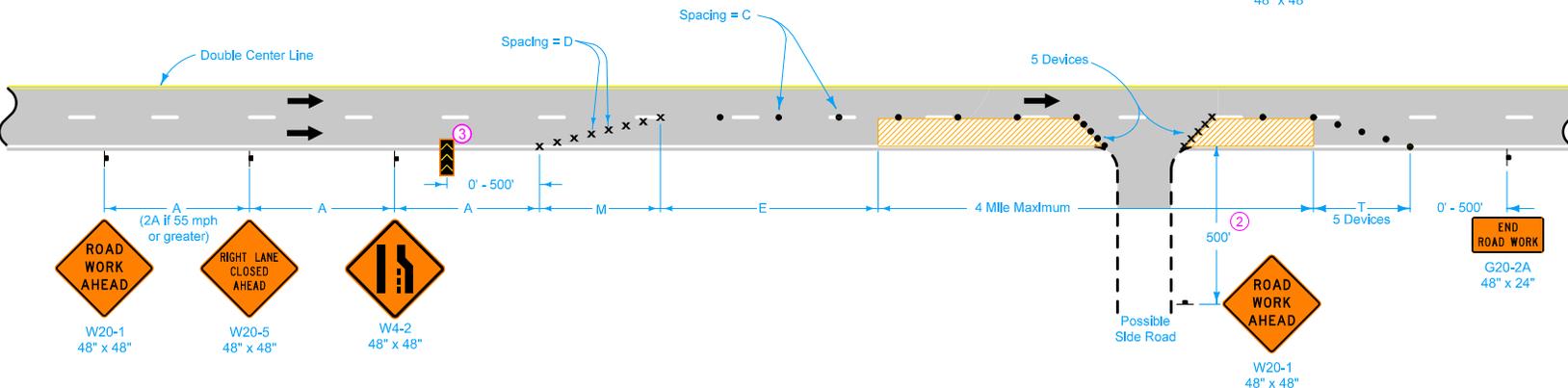
TC-418

SHEET 1 of 1

LEFT LANE CLOSURE



RIGHT LANE CLOSURE



LEGEND

- Traffic Sign
- Drum
- 42" Channelizer
- Arrow Board
- Work Area
- Direction of Traffic

SPEED LIMIT (mph)	A	C	D	E	M	T
35 or less	250'	40'	35'	0'-200'	245'	50'
40	500'	80'	40'	0'-300'	320'	50'
45	700'	80'	45'	0'-400'	630'	100'
50	700'	80'	45'	400'	630'	100'
55 - 60	1000'	100'	55'	600'	770'	100'

Where there is a lane line drop-off or rise, do not allow traffic to cross over the drop-off or rise, except for ramp locations where a BUMP (W8-1) sign is placed.

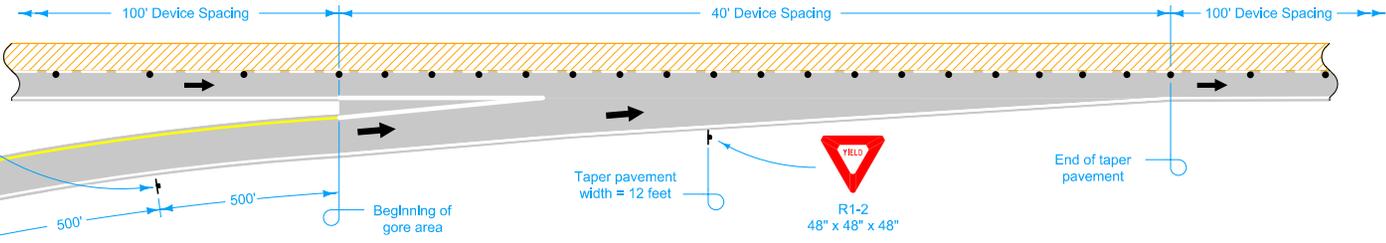
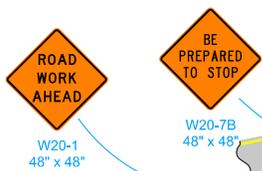
Lane line drop-offs greater than a nominal 4 inches are not allowed during non-working hours.

- ① Place arrow board within the closed lane behind the drums and as close to the beginning of the taper as practical.
- ② Where side road speed limit is 40 mph or less, a distance of 200 feet is allowed.
- ③ When there is no shoulder, place arrow board within the closed lane behind the drums and as close to the beginning of the taper as practical.

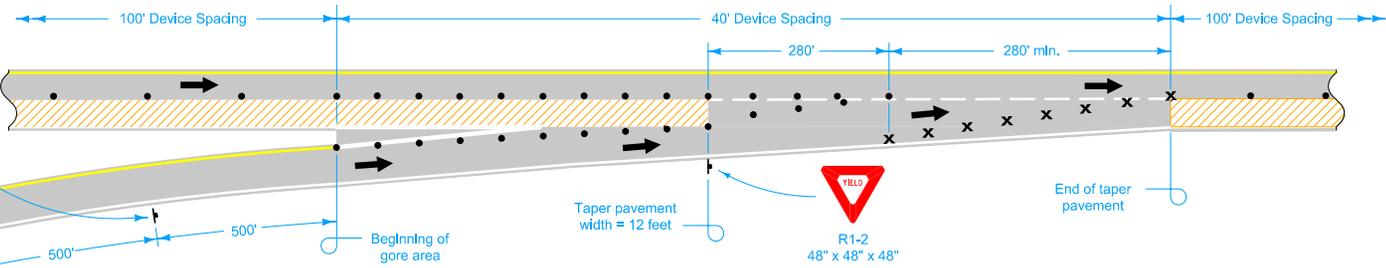
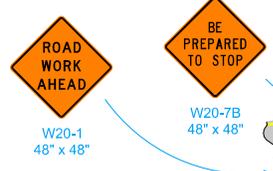
Possible Contract Item:

Traffic Control

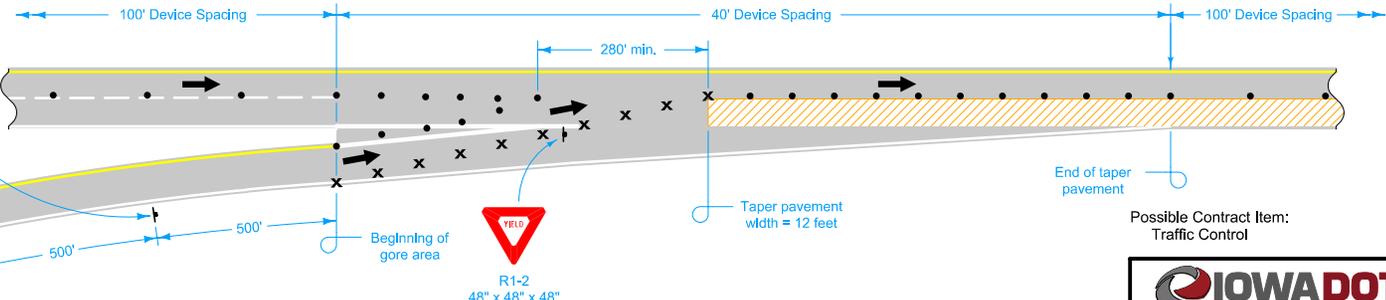
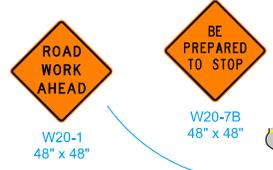
	REVISION
	7 04-19-16
STANDARD ROAD PLAN	TC-419
REVISIONS: Added circle note 3.	SHEET 1 of 1
 APPROVED BY DESIGN METHODS ENGINEER	
LANE CLOSURE ON UNDIVIDED HIGHWAY	



LEFT LANE CLOSURE THROUGH ENTRANCE RAMP



RIGHT LANE CLOSURE THROUGH ENTRANCE RAMP



STAGING THROUGH ENTRANCE RAMP

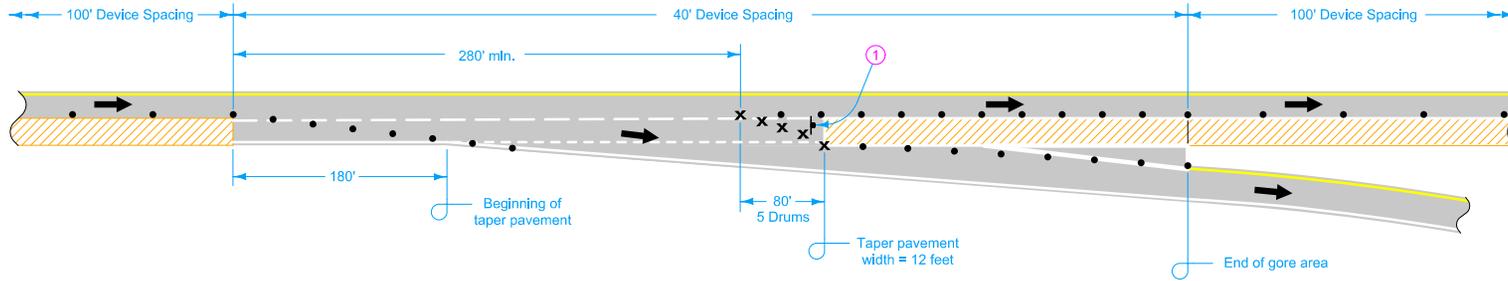
LEGEND

- x Drum
- † Traffic Sign
- 42" Channellizer
- ← Direction of Traffic
- ▨ Work Area

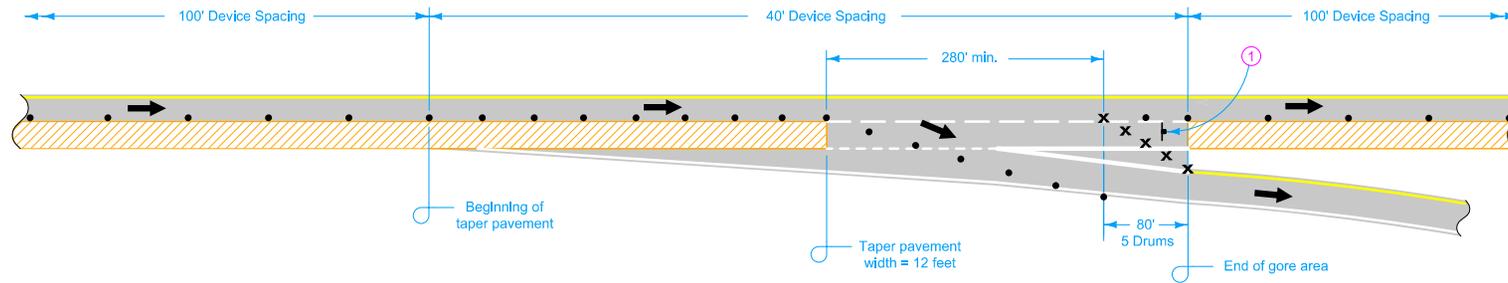
Possible Contract Item:
Traffic Control

 STANDARD ROAD PLAN	REVISION 6 04-21-15
	TC-420
	SHEET 1 of 5
REVISIONS: Added 500' dimensions and corrected Auxiliary spelling on page 3. Replaced the DOT logo in the title block with the new version.	
APPROVED BY DESIGN METHODS ENGINEER 	

LANE CLOSURE AT RAMPS



RIGHT LANE CLOSURE THROUGH EXIT RAMP

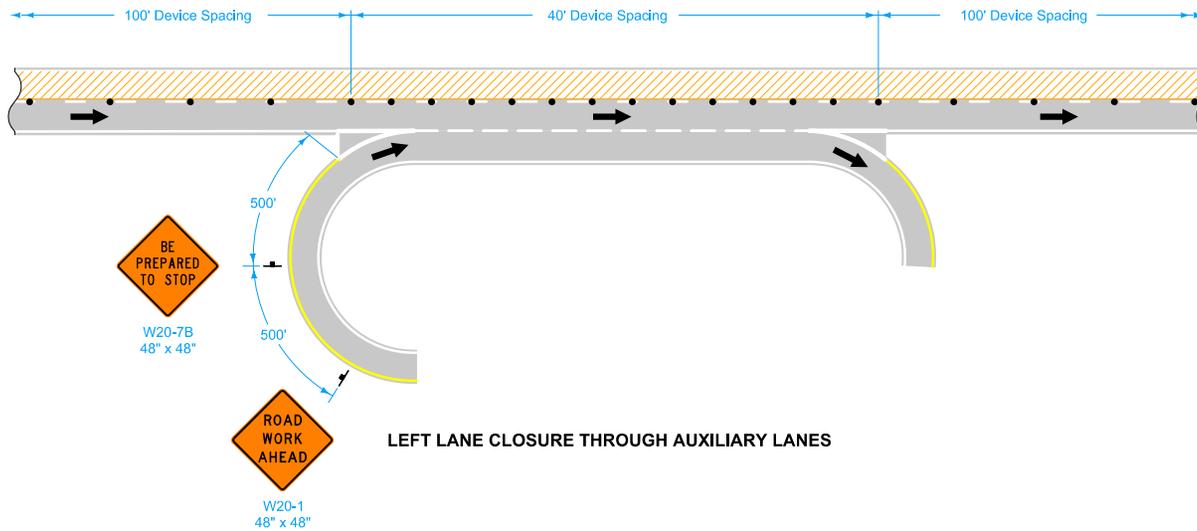


STAGING THROUGH EXIT RAMP

LEGEND	
x	Drum
T	Traffic Sign
•	42" Channellizer
←	Direction of Traffic
▨	Work Area

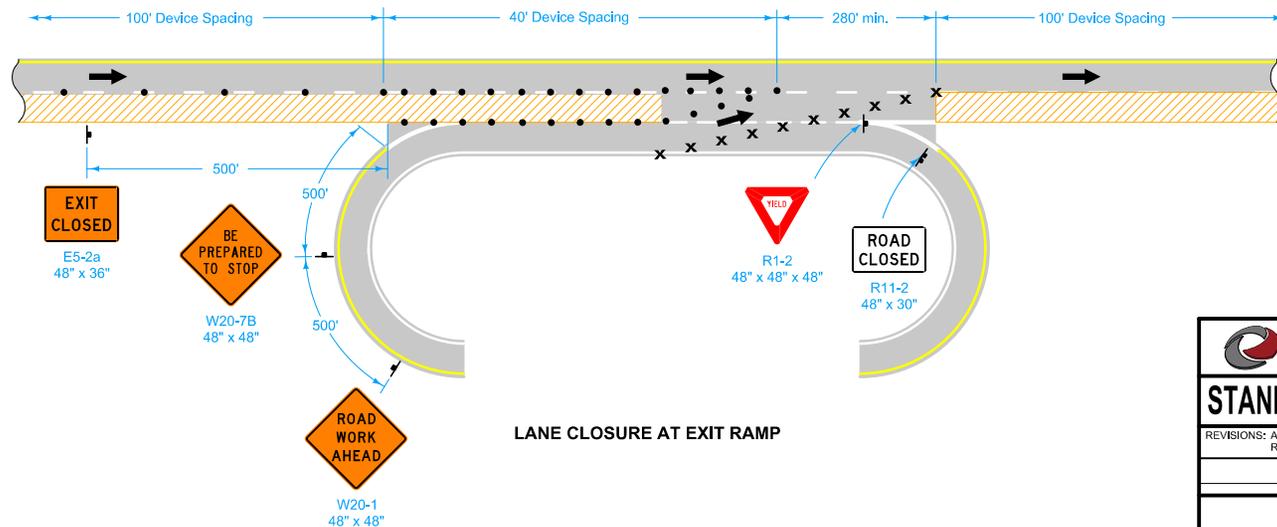
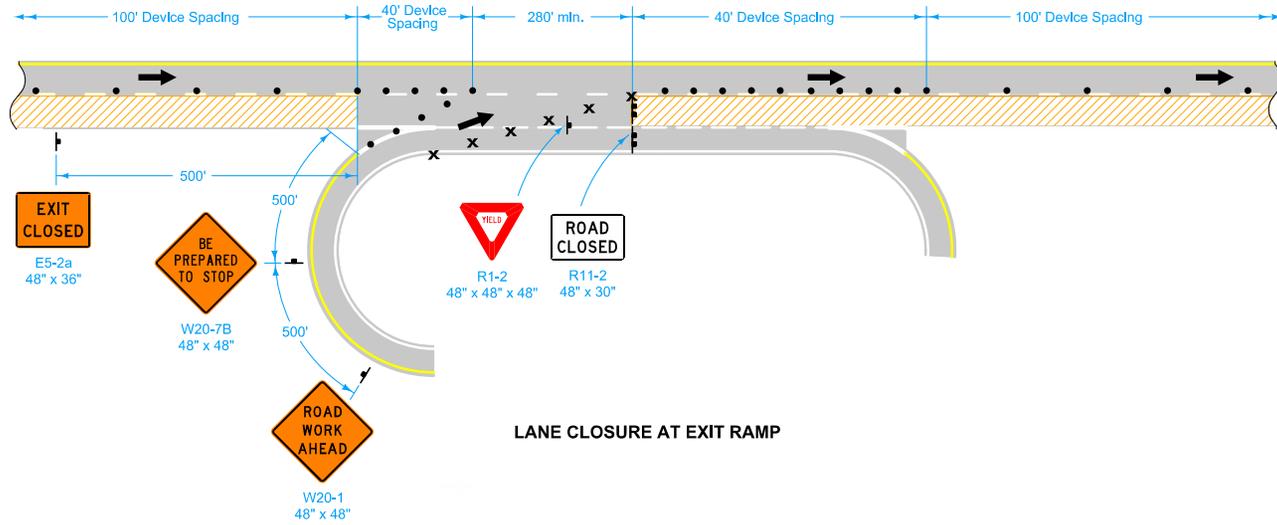
① Temporary EXIT sign, mounted so that bottom of sign is a minimum of 3 feet above pavement surface. If in place for more than one day, mount an Exit Number Panel with the proper exit number above the temporary EXIT sign. See [SI-881](#) for details.

	REVISION
	6 04-21-15
	STANDARD ROAD PLAN
TC-420 SHEET 2 of 5	
REVISIONS: Added 500' dimensions and corrected Auxiliary spelling on page 3. Replaced the DOT logo in the title block with the new version.	
<i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER	
LANE CLOSURE AT RAMPS	



LEGEND	
x	Drum
†	Traffic Sign
•	42" Channellizer
←	Direction of Traffic
	Work Area

	REVISION
	6 04-21-15
STANDARD ROAD PLAN	TC-420
	SHEET 3 of 5
<small>REVISIONS: Added 500' dimensions and corrected Auxiliary spelling on page 3. Replaced the DOT logo in the title block with the new version.</small>	
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>	
LANE CLOSURE AT RAMPS	



LEGEND	
x	Drum
†	Traffic Sign
•	42" Channellizer
←	Direction of Traffic
▨	Work Area

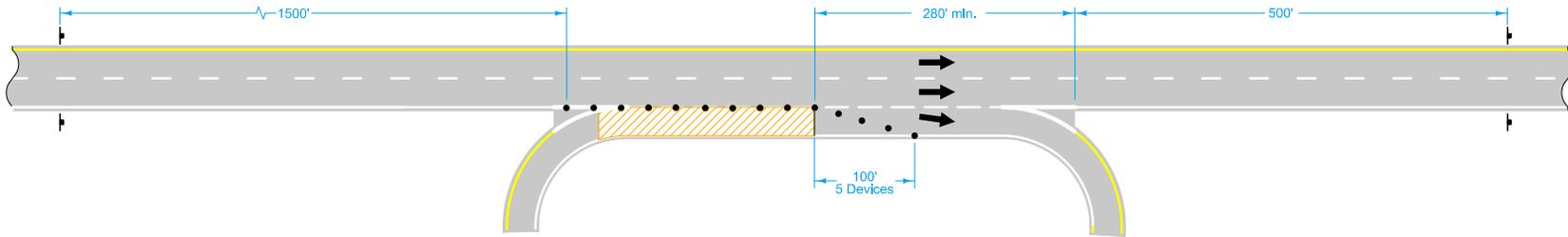
	REVISION
	6 04-21-15
	STANDARD ROAD PLAN
	TC-420
	SHEET 4 of 5
<small>REVISIONS: Added 500' dimensions and corrected Auxiliary spelling on page 3. Replaced the DOT logo in the title block with the new version.</small>	
<small>APPROVED BY DESIGN METHODS ENGINEER</small> 	
LANE CLOSURE AT RAMPS	



W20-1
48" x 48"



END
ROAD WORK
G20-2A
48" x 24"

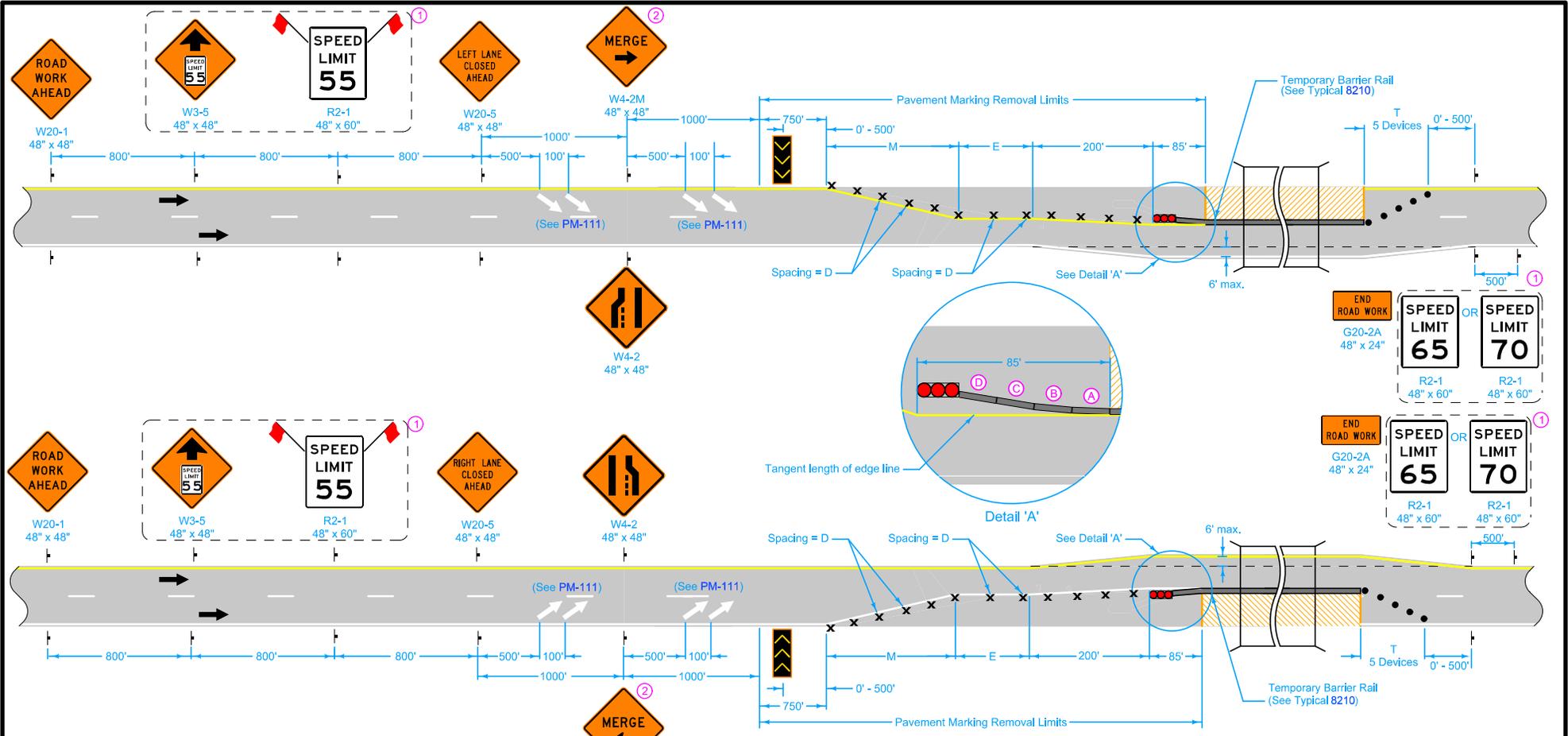


LANE CLOSURE AT EXIT RAMP

LEGEND

- x Drum
- † Traffic Sign
- 42" Channellizer
- ← Direction of Traffic
- ▨ Work Area

	REVISION	
	6	04-21-15
STANDARD ROAD PLAN	TC-420	
	SHEET 5 of 5	
<small>REVISIONS: Added 500' dimensions and corrected Auxiliary spelling on page 3. Replaced the DOT logo in the title block with the new version.</small>		
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>		
LANE CLOSURE AT RAMPS		



LEGEND

- ⊥ Traffic Sign
- × Drum
- 42" Channelizer
- ▬▬▬ Arrow Board
- Temporary Crash Cushion
- ▨ Work Area
- Direction of Traffic

SPEED LIMIT (mph)	D	E	M	T
45 - 50	45'	300'	630'	100'
55 - 60	55'	400'	770'	100'
65 - 70	65'	500'	910'	100'

When the Average Daily Traffic (ADT) exceeds 20,000 vehicles per day or when a traffic queue extends beyond the advanced signing, place RIGHT LANE CLOSED 4 MILES and RIGHT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, respectively.

Place Concrete Barrier Markers at 10 ft C/C on bridge rail.

① For roadways with a posted speed limit of 60 mph or greater before road work: Place SPEED LIMIT AHEAD sign and SPEED LIMIT 55 sign prior to the lane closure as shown. Place SPEED LIMIT 65 or 70 beyond the work area as shown.

② Refer to SI-881 for sign details.

Possible Contract Items:
 Painted Symbols and Legends
 Pavement Marking Items
 Pavement Markings Removed
 Symbols and Legends Removed
 Temporary Barrier Rail
 Temporary Crash Cushions

Possible Tabulations:
 108-22
 108-29
 108-30
 108-33

IOWA DOT

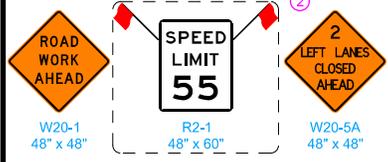
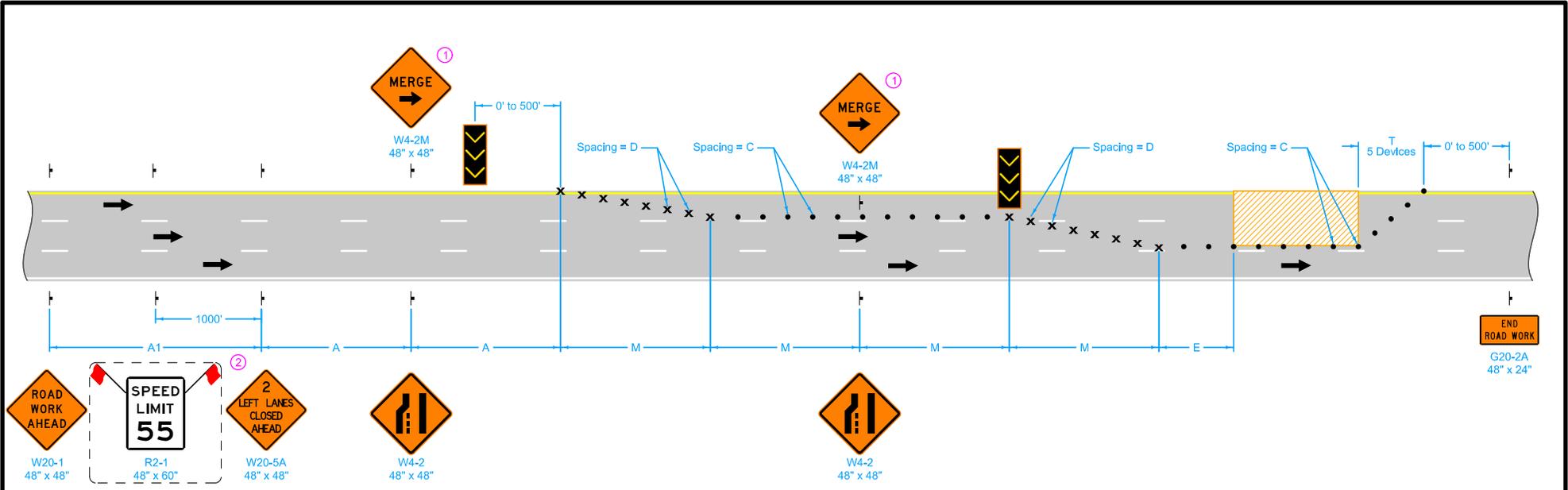
STANDARD ROAD PLAN

REVISIONS: Added 85' tangent section at beginning of TBR flare and added Detail 'A'.

REVISION	12	10-21-14
TC-421		
SHEET 1 of 1		

Brian Smith
 APPROVED BY DESIGN METHODS ENGINEER

LANE CLOSURE WITH TBR



LEGEND

- Direction Of Traffic
- Traffic Sign
- Drum
- 42" Channelizer
- Arrow Board
- Work Area

SPEED LIMIT (mph)	A	C	D	E	M	T	A1
35 or less	250'	40'	35'	0'-200'	245'	50'	250'
40	500'	80'	40'	0'-300'	320'	50'	500'
45	700'	80'	45'	0'-400'	630'	100'	700'
50	700'	80'	45'	400'	630'	100'	700'
55 - 60	1000'	100'	55'	600'	770'	100'	2000'
65 - 70	1000'	100'	65'	700'	910'	100'	2000'

When the Average Daily Traffic (ADT) exceeds 20,000 vehicles per day or when a traffic queue extends beyond the advanced signing, place RIGHT/LEFT LANE CLOSED 4 MILES and RIGHT/LEFT LANE CLOSED 2 MILES signs (W20-5) on both sides of the roadway 4 miles and 2 miles in advance of the lane closure, respectively, as appropriate.

Where there is a lane line drop-off or rise, do not allow traffic to cross over the drop-off or rise, except for ramp locations where a BUMP (W8-1) sign is placed.

Lane line drop-offs greater than a nominal 4 inches are not allowed during non-working hours.

- ① Refer to SI-881 for sign details.
- ② For roadways with a posted speed limit of 60 mph or greater before road work:

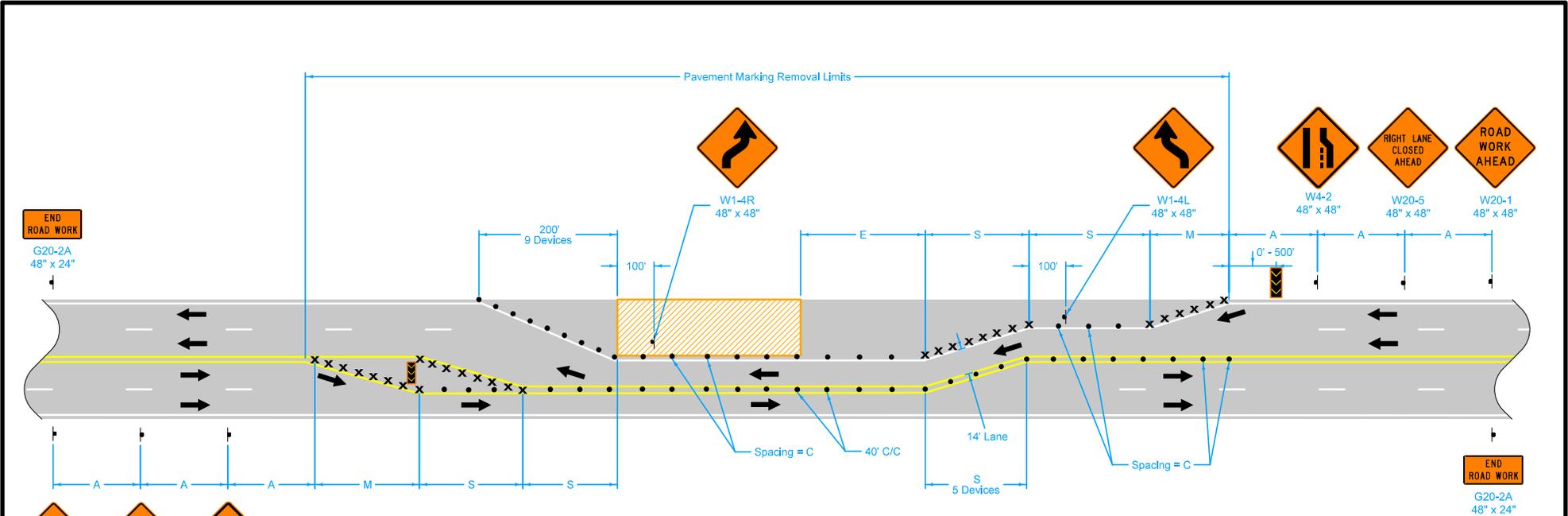
Place SPEED LIMIT 55 signs prior to the lane closure as shown.

When the length of closure is greater than 1 mile, install SPEED LIMIT 55 signs in the closed lane at 1-mile intervals.

Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.

Possible Contract Item:
Traffic Control

	REVISION
	8 10-15-13
	STANDARD ROAD PLAN
TC-422	
REVISIONS: Clarified lane line drop-off in the general notes.	
 APPROVED BY DESIGN METHODS ENGINEER	
CLOSURE OF TWO ADJACENT LANES ON DIVIDED HIGHWAY	
SHEET 1 of 1	



LEGEND

- Traffic Sign
- Drum ①
- 42" Channelizer
- Arrow Board
- Work Area
- Direction of Traffic

SPEED LIMIT (mph)	A	C	D	E	M	S
35 or less	250'	40'	35'	0'-200'	245'	140'
40	500'	80'	40'	0'-300'	320'	160'
45	700'	80'	45'	0'-400'	630'	315'
50	700'	80'	45'	400'	630'	315'
55 - 60	1000'	100'	55'	600'	770'	385'

For traffic control zones in place for 3 calendar days or less, place arrow boards, devices and signs as shown. For traffic control zones in place for 4 calendar days or more, also remove permanent pavement markings and place temporary pavement markings as shown.

When this layout is used during nighttime hours and the width of existing traffic lanes is 11 feet or less, use tubular markers to separate two-way two-lane traffic.

① Spacing = D for all drums.

Possible Contract Items:
 Pavement Marking Items
 Pavement Markings Removed
 Traffic Control

Possible Tabulation:
 108-22

Iowa Department of Transportation

REVISION
6 04-15-14

STANDARD ROAD PLAN

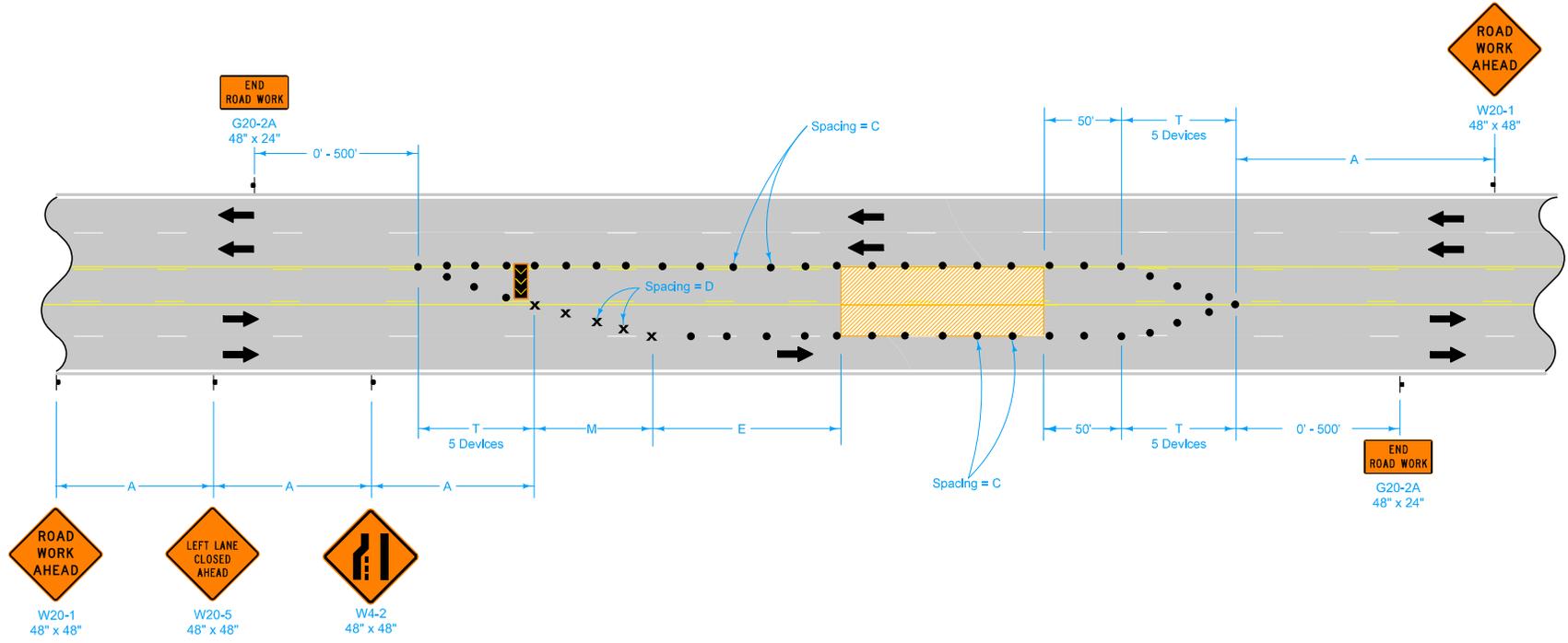
TC-423

SHEET 1 of 1

REVISIONS: Added channelizers and adjusted Pavement Markings. Modified standard note. Added Contract and Tabulation Items.

Brian Smith
 APPROVED BY DESIGN METHODS ENGINEER

**CLOSURE OF TWO ADJACENT LANES
 ON UNDIVIDED HIGHWAY**



LEGEND

- 42" Channellizer
- ✕ Drum
- † Traffic Stgn
- ▨ Work Area
- ← Direction of Traffic
- ◀▶▶ Arrow Board

SPEED LIMIT (mph)	A	C	D	E	M	T
35 or less	250'	40'	35'	0'-200'	245'	50'
40	500'	80'	40'	0'-300'	320'	50'
45	700'	80'	45'	0'-400'	630'	100'
50	700'	80'	45'	400'	630'	100'
55 - 60	1000'	100'	55'	600'	770'	100'

Possible Contract Item:
Traffic Control

<p style="margin: 0;">Iowa Department of Transportation</p> <p style="margin: 0; font-size: 1.2em; font-weight: bold;">STANDARD ROAD PLAN</p> <p style="margin: 0; font-size: 0.8em;">REVISIONS: Changed Arrow Panel to Arrow Board to comply with changes to MUTCD.</p> <p style="margin: 0; font-size: 0.8em; text-align: center;"><i>Deanna Mufield</i> APPROVED BY DESIGN METHODS ENGINEER</p> <p style="margin: 0; font-weight: bold; text-align: center;">CLOSURE OF CONTINUOUS TWO-WAY LEFT-TURN LANE AND ADJACENT LANE</p>	REVISION
	5 10-16-12
TC-429	SHEET 1 of 1

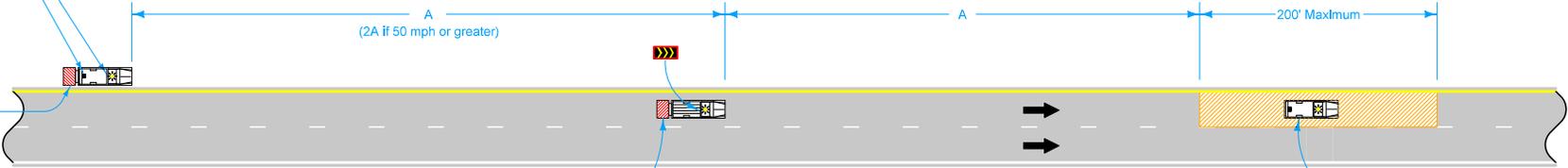


W20-5
48" x 48"



(Optional)

TMA



LEFT LANE CLOSURE

A
(2A if 50 mph or greater)

A

200' Maximum

Work Vehicle

RIGHT LANE CLOSURE

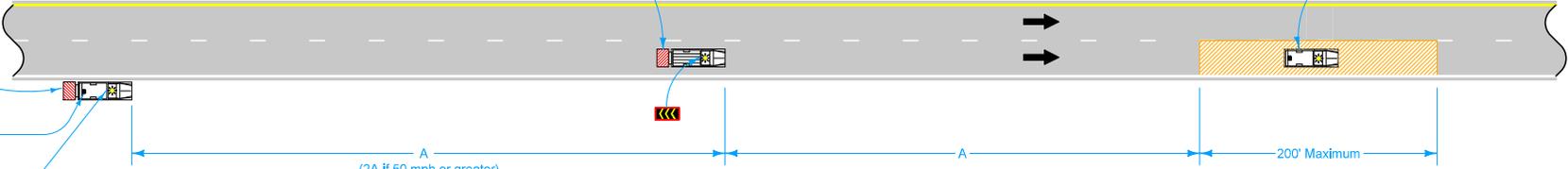


W20-5
48" x 48"



(Optional)

TMA



Work Vehicle

A
(2A if 50 mph or greater)

A

200' Maximum



LEGEND

- Traffic Sign
- Work Area
- Arrow Board
- Direction of Traffic
- Truck-Mounted Attenuator (TMA)

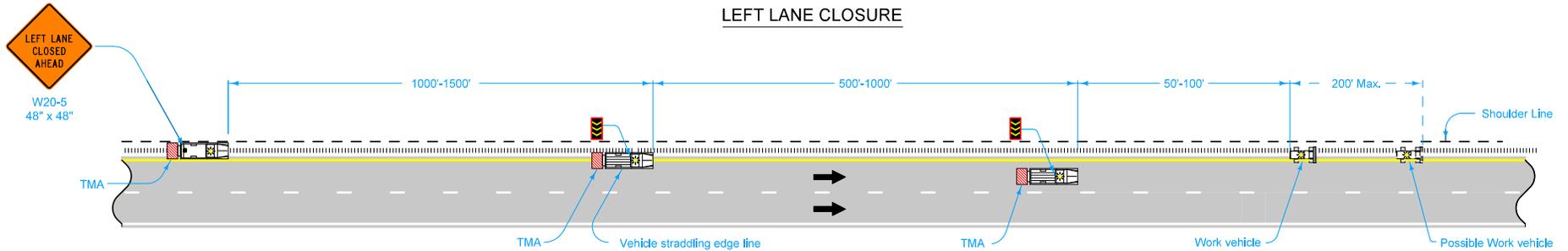
SPEED LIMIT (mph)	A
35 or less	300'
40 - 45	500'
50 - 55	500'
60 or greater	1000'

Equip all vehicles with an amber revolving light or amber strobe light.
This layout is intended for use with slow-moving operations involving stops not to exceed 30 minutes. For stops exceeding 30 minutes, use TC-418 or TC-419.

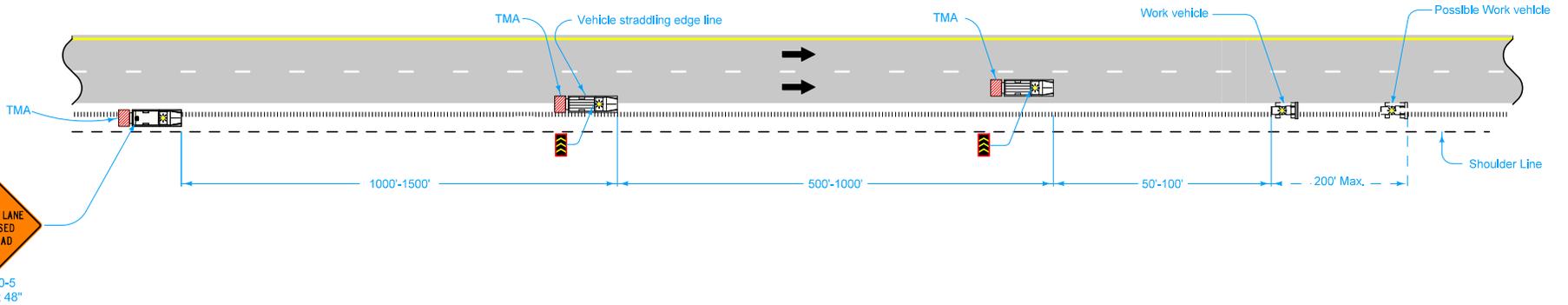
Possible Contract Item:
Traffic Control

	REVISION
	6 04-18-17
	TC-431
STANDARD ROAD PLAN	
SHEET 1 of 1	
<small>REVISIONS: Removed the word "optional" from the TMA Optional call out. Added TMA to trailing vehicle. Replaced the DOT logo in the title block with the new version.</small>	
<small>APPROVED BY DESIGN METHODS ENGINEER</small>	
SLOW MOVING VEHICLE OPERATING IN THE TRAFFIC LANE	

LEFT LANE CLOSURE



RIGHT LANE CLOSURE



LEGEND	
	Traffic Sign
	Arrow Board
	Truck Mounted Attenuator (TMA)
	Direction of Traffic

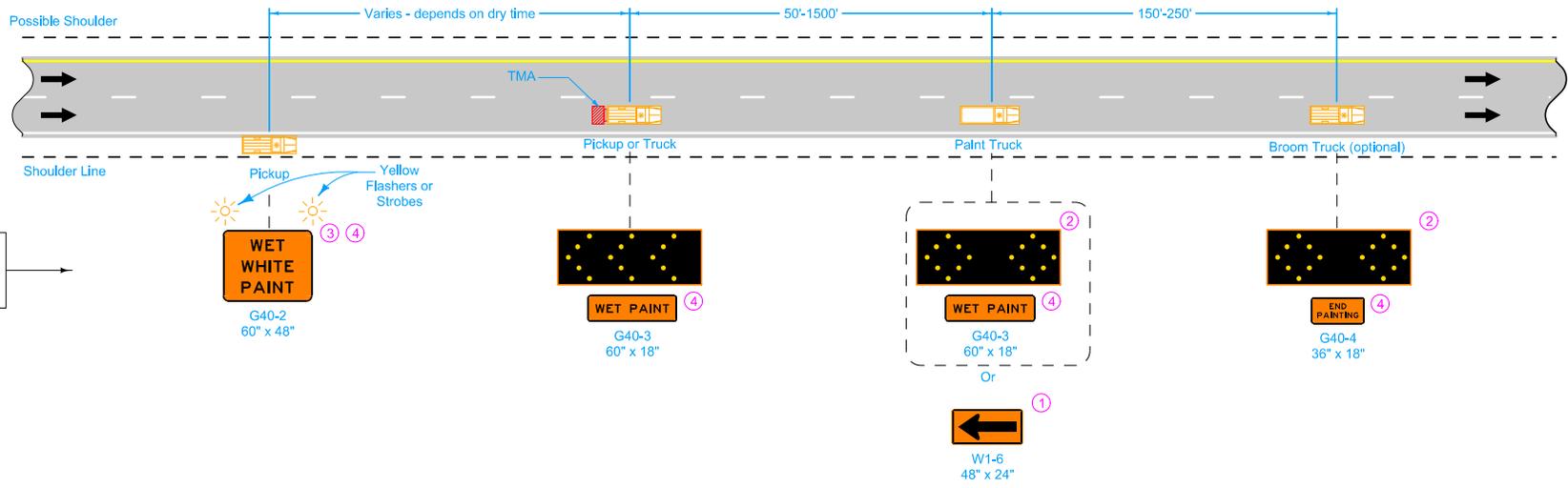
Equip all vehicles with an amber revolving light or amber strobe light.

When fog sealing the milled rumble strips, place a 48" X 48" FRESH OIL sign (W21-2) at the beginning of the work area. Place additional FRESH OIL signs after each intersection and periodically through the work area so that signs are no more than 2 miles apart.

Operators should adjust their spacing, as necessary, to keep adjacent vehicles within view.

Possible Contract Item:
Traffic Control

	REVISION
	4 04-18-17
	TC-432
STANDARD ROAD PLAN	SHEET 1 of 1
<small>REVISIONS: Removed the word "optional" from the TMA Optional call out. Replaced the DOT logo in the title block with the new version.</small>	
<small>APPROVED BY DESIGN METHODS ENGINEER</small>	
SHOULDER RUMBLE STRIP OPERATIONS	



SIGNS FACING TRAFFIC APPROACHING FROM THE REAR

OUTSIDE EDGELINE OR LANELINE - DIVIDED OR UNDIVIDED

Equip all vehicles with an amber revolving light or amber strobe light.

Possible Contract Item:
Traffic Control

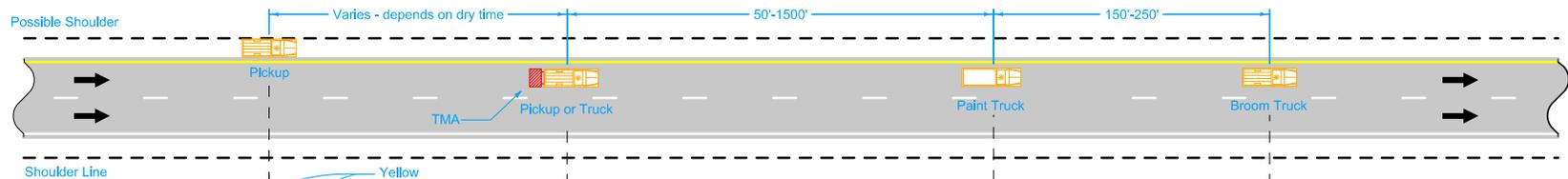
- ① Optional Fluorescent Yellow Green (FYG) sign background may be used.
- ② This arrow board may be operated in a four-corner caution mode.
- ③ A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.
- ④ Refer to [SI-881](#) for sign details.

LEGEND

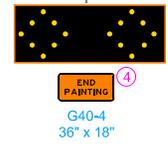
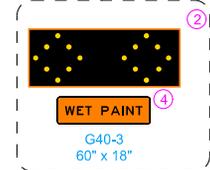
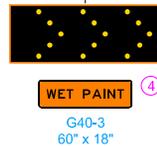
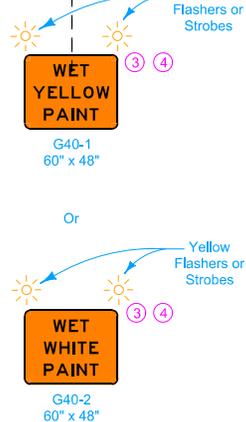
← Direction of Traffic

▨ Truck-Mounted Attenuator (TMA)

	REVISION
	6 04-18-17
	TC-433
STANDARD ROAD PLAN	
SHEET 1 of 3	
<small>REVISIONS: Removed the word "optional" from the TMA Optional call out. Updated line work colors to maintain uniformity with other TC standards.</small>	
APPROVED BY DESIGN METHODS ENGINEER	
<p align="center">PAVEMENT MARKING OPERATIONS</p>	



SIGNS FACING TRAFFIC
APPROACHING FROM
THE REAR



INSIDE EDGE LINE OR LANE LINE - DIVIDED

LEGEND

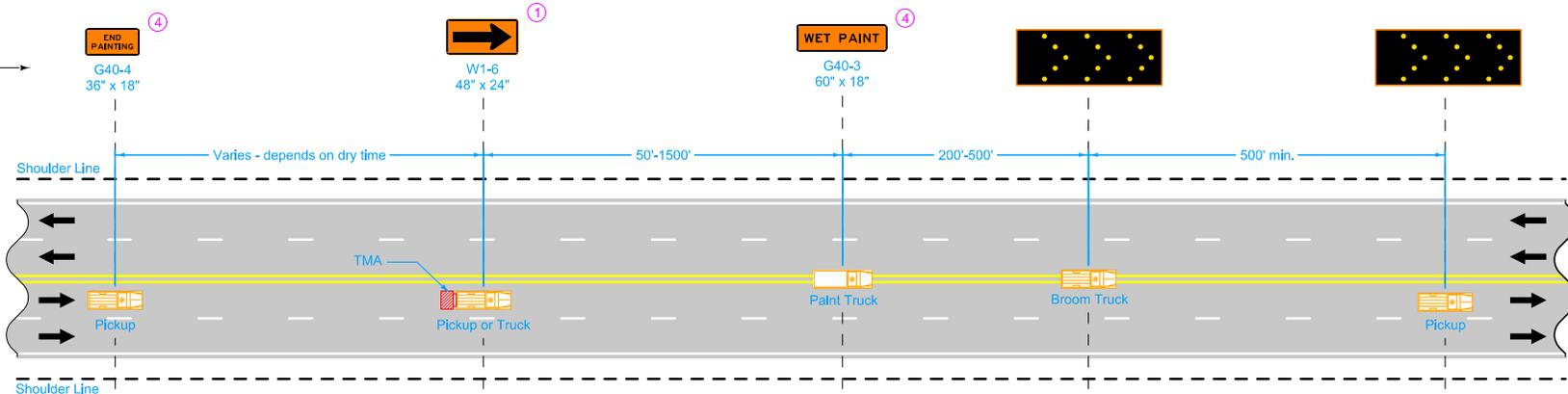
← Direction of Traffic

Truck-Mounted Attenuator (TMA)

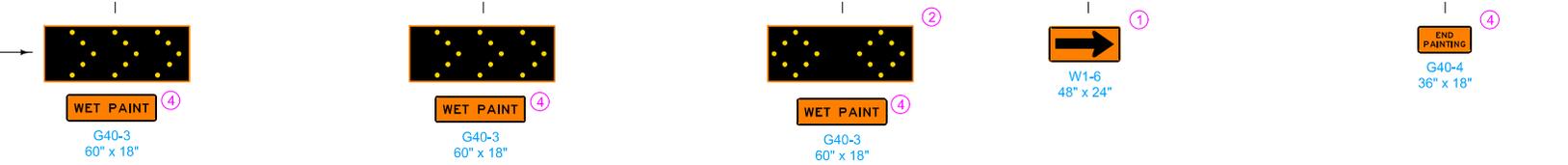
- ① Optional Fluorescent Yellow Green (FYG) sign background may be used.
- ② This arrow board may be operated in a four-corner caution mode.
- ③ A vehicle mounted Portable Dynamic Message Sign (PDMS) may be used in lieu of this sign.
- ④ Refer to [SI-881](#) for sign details.

	REVISION 6 04-18-17
	STANDARD ROAD PLAN TC-433
	SHEET 2 of 3
REVISIONS: Removed the word "optional" from the TMA Optional call out. Updated linework colors to maintain uniformity with other TC standards.	
<i>Brian Smith</i> APPROVED BY DESIGN METHODS ENGINEER	
PAVEMENT MARKING OPERATIONS	

SIGNS FACING
OPPOSING TRAFFIC



SIGNS FACING TRAFFIC
APPROACHING FROM
THE REAR



CENTERLINE - UNDIVIDED ONLY

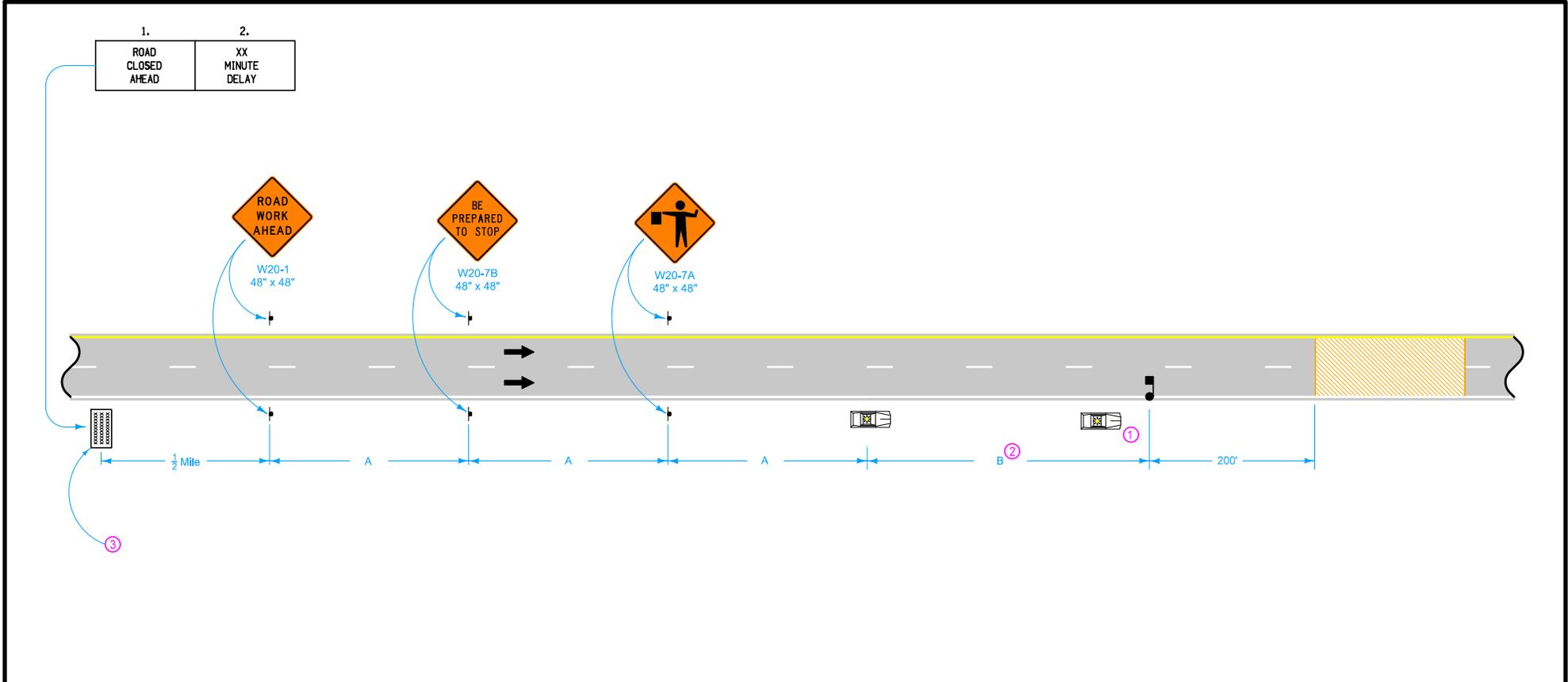
LEGEND

← Direction of Traffic

 Truck-Mounted Attenuator (TMA)

- ① Optional Fluorescent Yellow Green (FYG) sign background may be used.
- ② This arrow board may be operated in a four-corner caution mode.
- ④ Refer to [SI-881](#) for sign details.

	REVISION
	6 04-18-17
	STANDARD ROAD PLAN
	TC-433
	SHEET 3 of 3
<small>REVISIONS: Removed the word "optional" from the TMA Optional call out. Updated linework colors to maintain uniformity with other TC standards.</small>	
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>	
PAVEMENT MARKING OPERATIONS	



1. ROAD CLOSED AHEAD	2. XX MINUTE DELAY
-------------------------------	-----------------------------

ROAD
WORK
AHEAD
W20-1
48" x 48"

BE
PREPARED
TO STOP
W20-7B
48" x 48"

W20-7A
48" x 48"

1/2 Mile

A

A

A

B ②

①

200'

③

LEGEND

- Traffic Sign
- Law Enforcement Vehicle
- Flagger
- Portable Dynamic Message Sign
- Work Area
- Direction of Traffic

SPEED LIMIT (mph)	A	B
35 or less	250'	250'
40 - 45	350'	350'
50 or greater	1000'	2500'

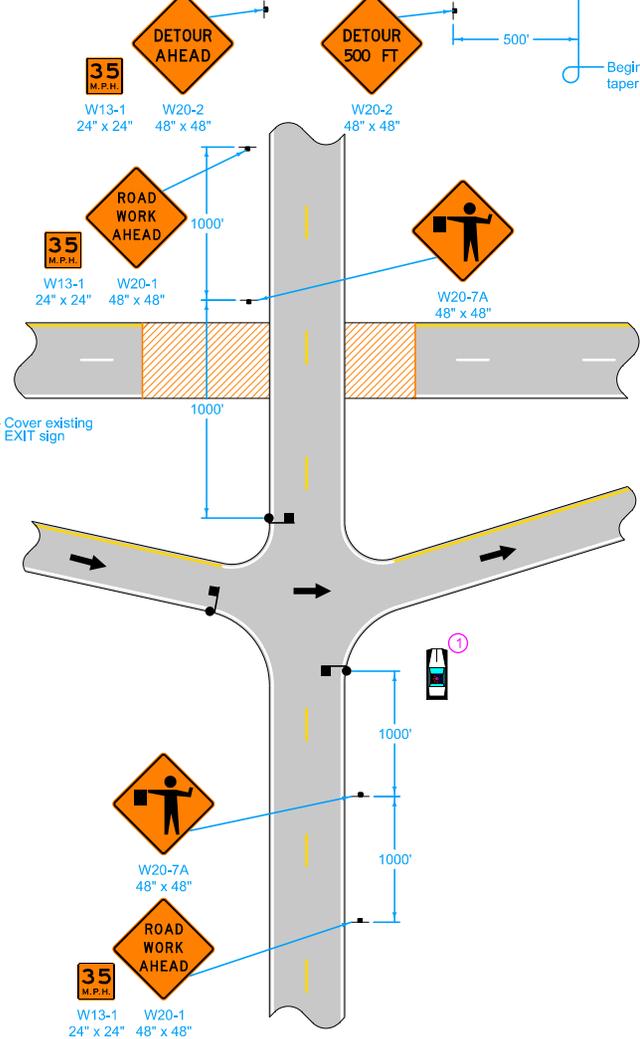
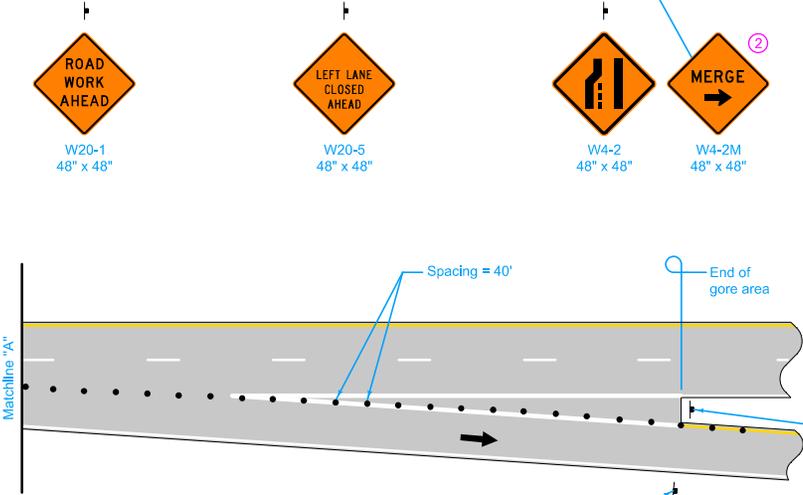
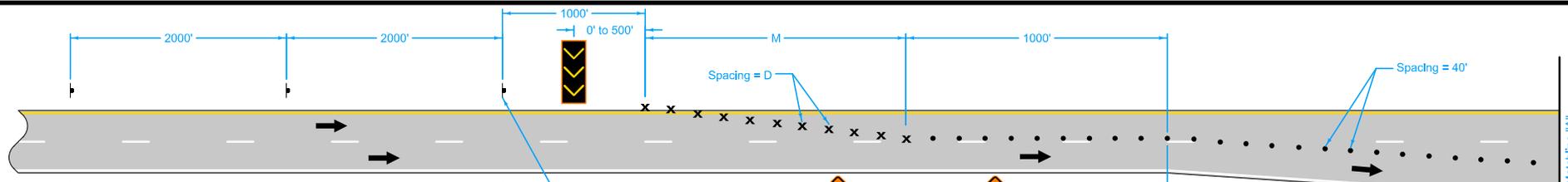
This layout is intended for a preplanned closure of 20 minutes or less.

- ① A vehicle with an amber revolving light or amber strobe light may be substituted for leading law enforcement vehicle.
- ② This distance may be increased to provide adequate storage for stopped vehicles.
- ③ Optional for speed limits less than 55 mph.

Possible Contract Items:

- Flaggers
- Portable Dynamic Message Sign
- Traffic Control

	REVISION
	7 04-21-15
STANDARD ROAD PLAN	TC-451
REVISIONS: Corrected typo in title.	SHEET 1 of 1
 APPROVED BY DESIGN METHODS ENGINEER	
TEMPORARY ROAD CLOSURE ON DIVIDED HIGHWAY	



SPEED LIMIT (mph)	M	D
55 - 60	770'	55'
65 - 70	910'	65'

LEGEND

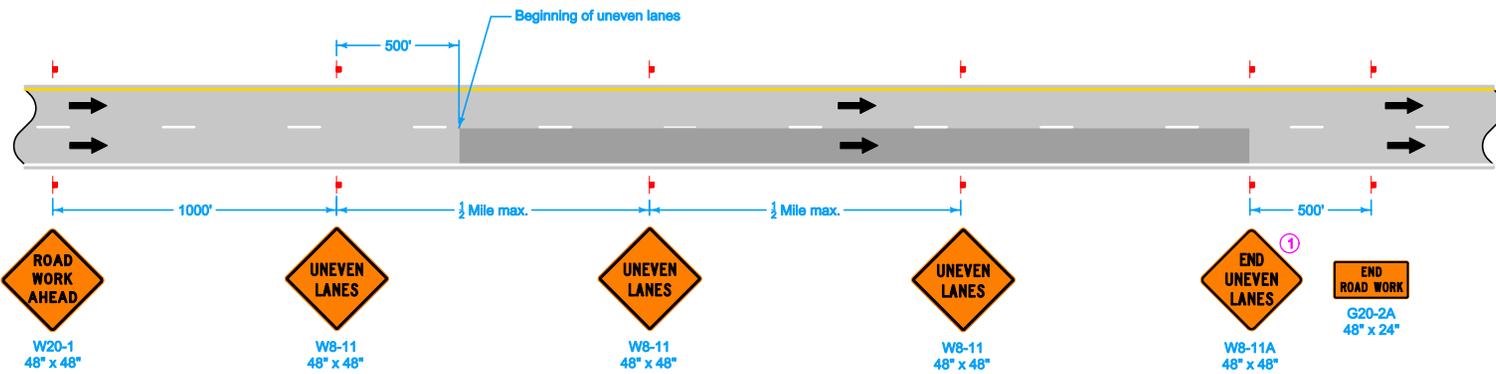
- x Drum
- ⊢ Traffic Sign
- 42" Channelizer
- Law Enforcement Vehicle
- Arrow Board
- Flagger
- Work Area
- Direction of Traffic

Give priority to mainline traffic on the ramp.
 Stop side road traffic before mainline traffic is rerouted onto ramp.

- ① For ADT less than 2000, a Contractor vehicle may be substituted for the Enforcement vehicle.
- ② Refer to SI-881 for sign details.

Possible Contract Items:
 Flaggers
 Traffic Control

 STANDARD ROAD PLAN	REVISION
	6 10-16-12
	TC-454
SHEET 1 of 1	
REVISIONS: Changed Arrow Display to Arrow Board to comply with changes to MUTCD.	
<i>Deanna Macfadyen</i> APPROVED BY DESIGN METHODS ENGINEER	
TEMPORARY DETOUR USING RAMPS ON DIVIDED HIGHWAY	



① Refer to SI-881 for sign details.

Possible Contract Items:
 Pavement Marking Items
 Traffic Control

Possible Tabulation:
 108-22

LEGEND

← Direction of Traffic

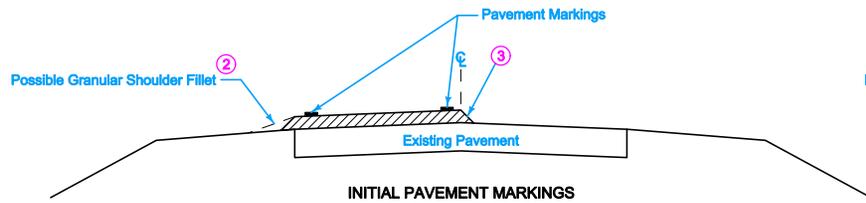
⊕ Traffic Sign

	REVISION
	New 04-19-11
STANDARD ROAD PLAN	TC-482
SHEET 1 of 2	

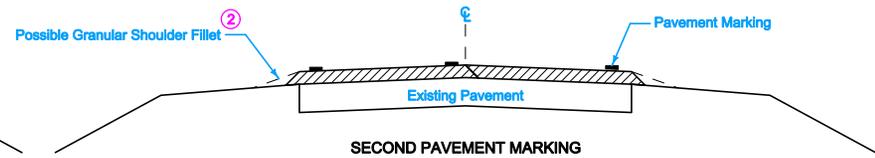
REVISIONS: New. Partial Inclusion of Detail 9018.

Deanna Mifflin
 APPROVED BY DESIGN METHODS ENGINEER

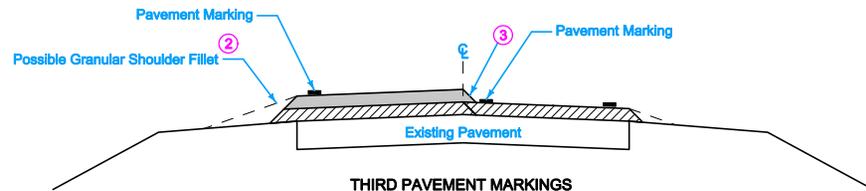
UNEVEN LANES



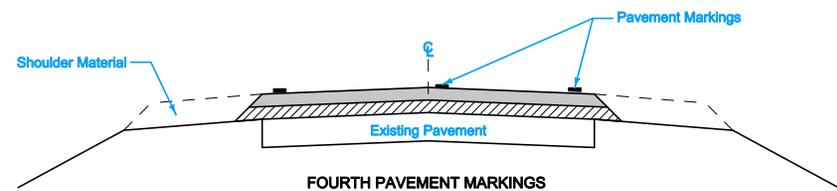
INITIAL PAVEMENT MARKINGS



SECOND PAVEMENT MARKING



THIRD PAVEMENT MARKINGS



FOURTH PAVEMENT MARKINGS

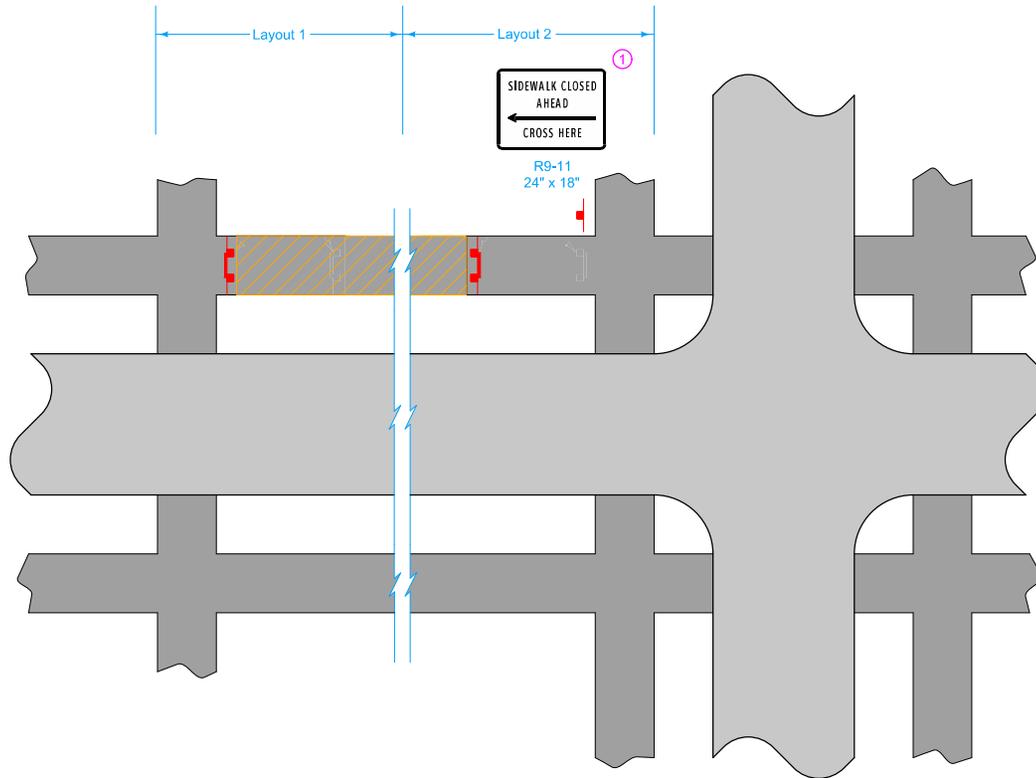
PAVEMENT MARKING SEQUENCE

- ② Shoulder Fillet: Refer to Standard Specification 1107 and Safety Edge specifications.
- ③ Centerline fillet may be notched wedge, Safety Edge, or a temporary 3:1 HMA fillet.

LEGEND	
	Surface Course
	Intermediate Course

 Iowa Department of Transportation	REVISION
	New 04-19-11
STANDARD ROAD PLAN	TC-482
REVISIONS: New. Partial Inclusion of Detail 9018.	SHEET 2 of 2
 APPROVED BY DESIGN METHODS ENGINEER	
UNEVEN LANES	

① Omit "SIDEWALK CLOSED AHEAD CROSS HERE" (R9-11) sign when closure is at sidewalk intersection as shown in layout 1.



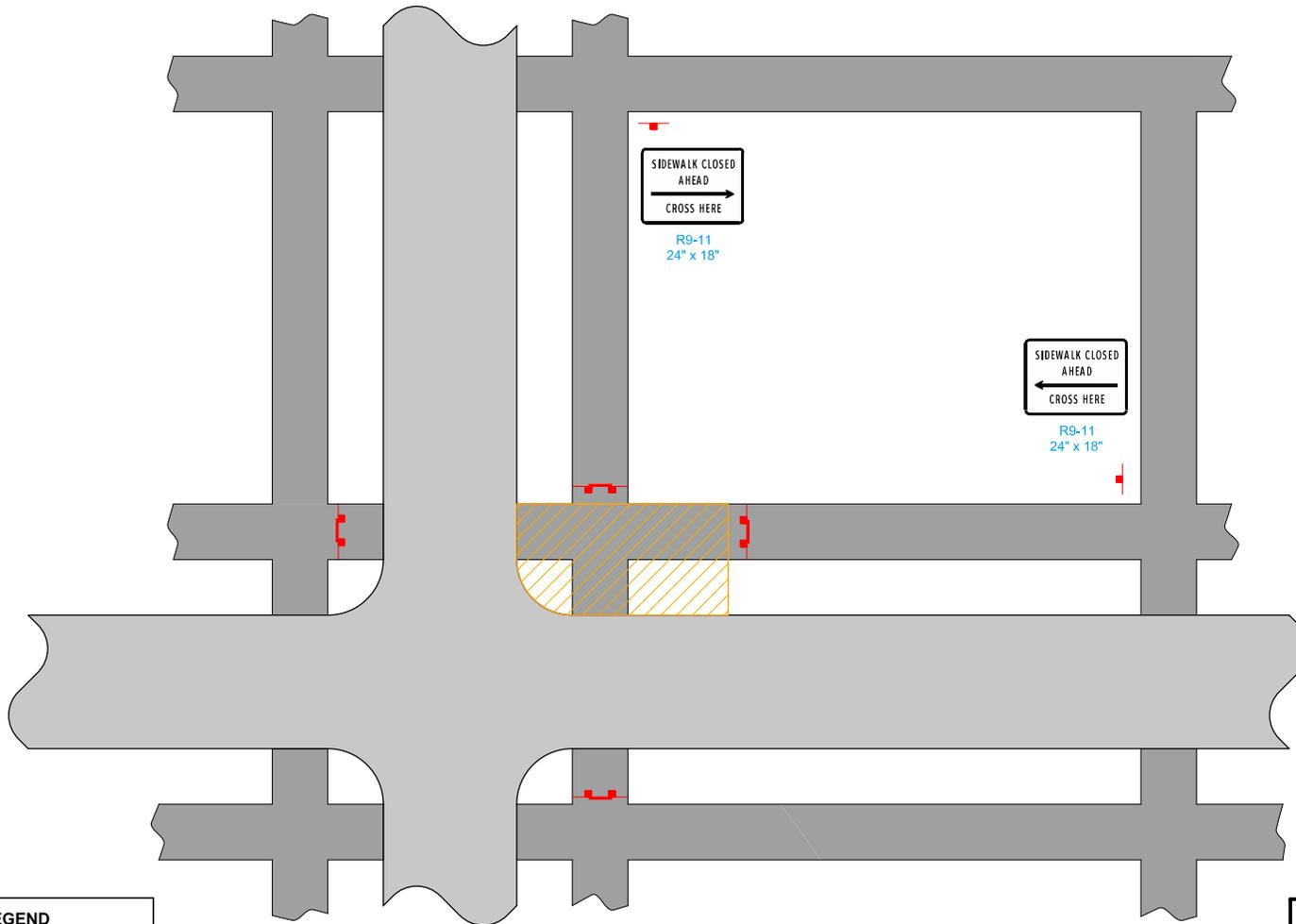
MID-BLOCK CLOSURE

LEGEND	
	Roadway
	Sidewalk
	Sign
	Pedestrian Path Closure
	Work Area

Possible Contract Item:
Traffic Control

Possible Tabulation:
113-2

	REVISION
	NEW 10-18-11
STANDARD ROAD PLAN	TC-601
REVISIONS: New	SHEET 1 of 2
 <small>APPROVED BY DESIGN METHODS ENGINEER</small>	
PEDESTRIAN DETOUR	

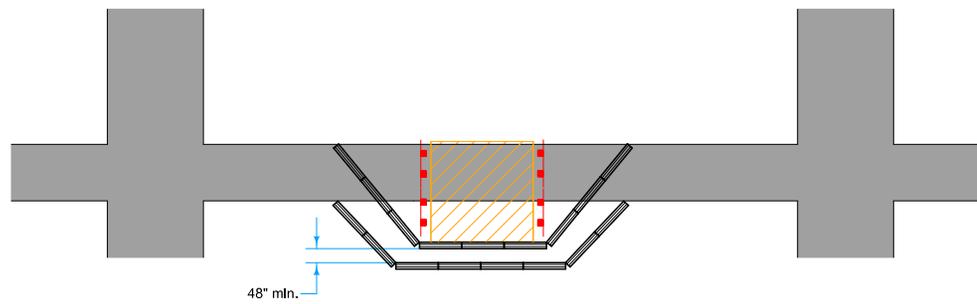


LEGEND	
	Roadway
	Sidewalk
	Sign
	Pedestrian Path Closure
	Work Area

CLOSURE AT INTERSECTION

	REVISION
	NEW 10-18-11
STANDARD ROAD PLAN	TC-601
REVISIONS: New	SHEET 2 of 2
<i>Deanna Mifflin</i> APPROVED BY DESIGN METHODS ENGINEER	
PEDESTRIAN DETOUR	

Acceptable materials and construction method for Pedestrian Channelizer will be defined in the contract documents. When Temporary Barrier Rail is specified as the Pedestrian Channelizer, Section 2528 of the Standard Specifications applies. For other types of Pedestrian Channelizers, the length of Pedestrian Channelizers installed will be measured in feet. Payment will be at the contract price per linear foot.



Possible Contract Items:
 Pedestrian Channelizer
 Temporary Barrier Rail
 Maintenance of Pedestrian Traffic

Possible Tabulation:
 113-3

LEGEND	
	Sidewalk
	Direction of Traffic
	Work Area
	Type III Barricade
	Pedestrian Channelizer

 Iowa Department of Transportation	REVISION	
	NEW	10-18-11
STANDARD ROAD PLAN	TC-602	
	SHEET 1 of 1	
REVISIONS: New		
 APPROVED BY DESIGN METHODS ENGINEER		
SIDEWALK DIVERSION		