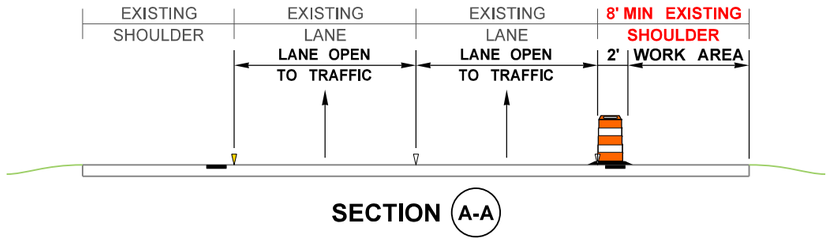


SECTION A-A

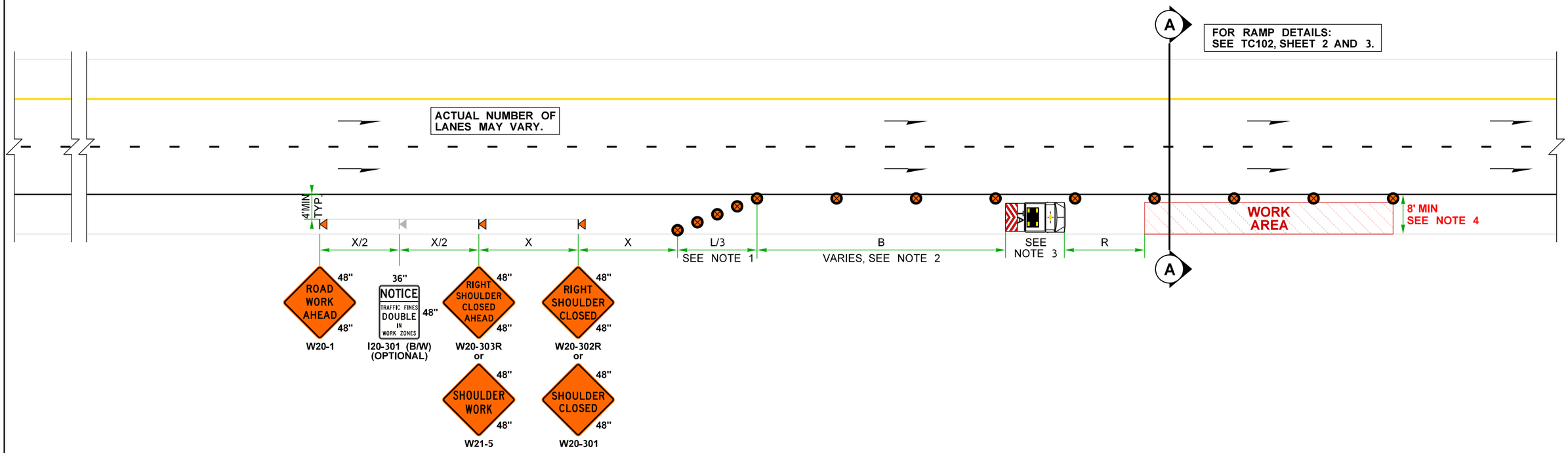
RECOMMENDED SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	50-75 MPH	1500'±
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.		

SHOULDER CLOSURE TAPER LENGTH = L/3								
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65	70	75
< 8'	L/3 (feet)	USE LANE CLOSURE INSTEAD						
8'		120	160	160	160	200	200	200
10'		150	200	200	200	240	240	280

LONGITUDINAL BUFFER SPACE = B							
SPEED (MPH)	45	50	55	60	65	70	75
B (feet)	360	425	495	570	645	730	820
Buffer space may be adjusted (±) based on field conditions.							

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 75	40	80
45	30	60

STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R					
HOST VEHICLE WEIGHT LESS THAN 22,000 lbs.			HOST VEHICLE WEIGHT 22,000+ lbs.		
UP TO 40 MPH	45-55 MPH	60+ MPH	UP TO 40 MPH	45-55 MPH	60+ MPH
100'	123'	172'	74'	100'	150'



LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- TEMPORARY SIGN LOCATION (5' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- TRANSPORTABLE ATTENUATOR (TL-3)

NOTES:

1. IF FEASIBLE, AVOID PLACING SHOULDER CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES.
2. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
3. RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
4. IF PAVED SHOULDER IS LESS THAN 8 FEET WIDE AT TRANSPORTABLE ATTENUATOR AND WORK AREA, THEN A LANE CLOSURE SHALL BE IMPLEMENTED.
5. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
6. PLAN IS APPLICABLE TO SHOULDER CLOSURES OF 7 DAYS OR LESS.
7. BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
   (A) BICYCLES PROHIBITED VIA R5-601 & R5-6 SIGNS. PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
   (B) BICYCLES PROHIBITED VIA R5-6 SIGN(S). PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION/PHONE BOX/LABORER.
   (C) STOP WORK OPS. & AND ESCORT BICYCLISTS THROUGH SHLDR. CLOSURE.
   (D) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

24" 3C 4C MUST EXIT ¼ MILE 24"
R5-601 (B/W) AT EXIT-RAMP PRIOR TO SHLDR CLOSURE

24" 24"
R5-6 (R/B/W) AT PRIOR EXIT-RAMP + ON-RAMPS WITHIN SHLDR CLOSURE

FREEWAY (2+ LANES): RIGHT SHOULDER CLOSURE (MAINTAIN EXISTING SPEED LIMIT)

NOT TO SCALE

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REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER		
CONTRACT NO.		LOCATION NO.

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Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

Plot 1

PLAN REF NO TC102

SHEET 1 OF 3 SHEETS

NOTES:

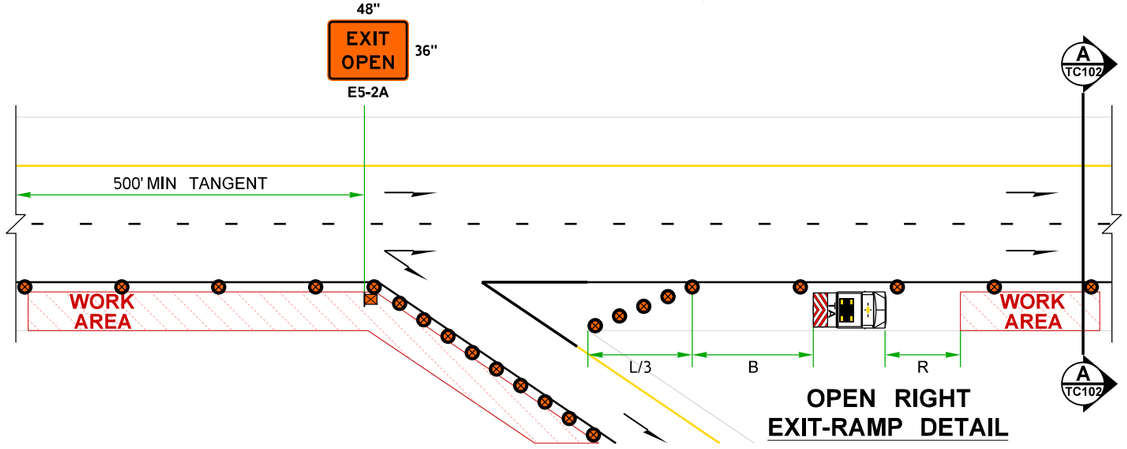
8. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC102, SHEET 1.

9. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

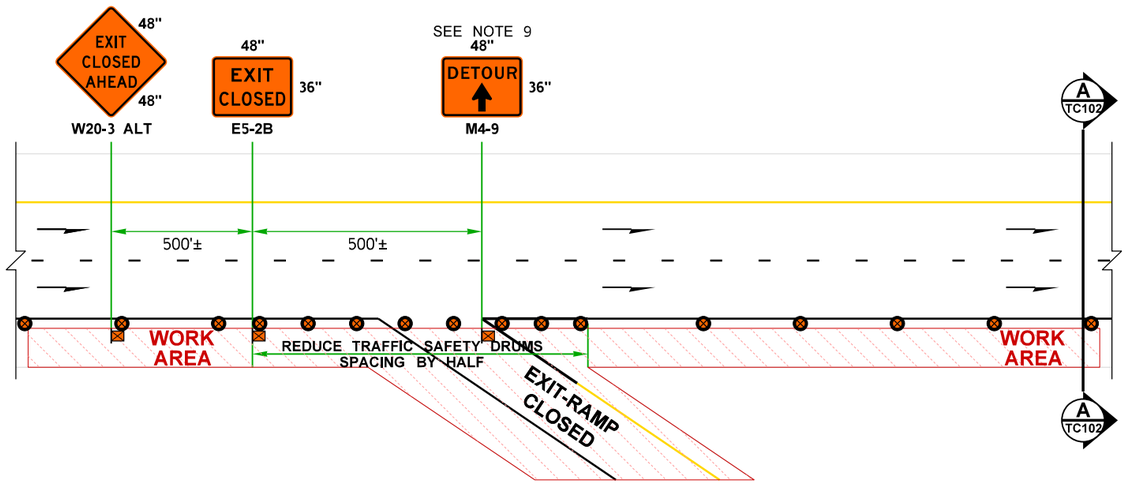
10. BUFFER SPACE BASED ON PREVAILING SPEED OF MOTORISTS PASSING TRANSPORTABLE ATTENUATOR, TYPICALLY VARIES FROM 20 MPH AT TOP OF ON-RAMP TO POSTED SPEED LIMIT AT GORE TIP.

11. PROTECTIVE VEHICLE PERMITTED IF PREVAILING SPEED OF MOTORISTS PASSING IS 40 MPH OR LESS. 40'-80' ROLL AHEAD RECOMMENDED FOR PROTECTIVE VEHICLES ROLL AHEAD (R).

LONGITUDINAL BUFFER SPACE = B												
SPEED (MPH)	20	25	30	35	40	45	50	55	60	65	70	75
LENGTH (feet)	115	155	200	250	305	360	425	495	570	645	730	820
Buffer space may be adjusted (±) based on field conditions.												



OPEN RIGHT EXIT-RAMP DETAIL



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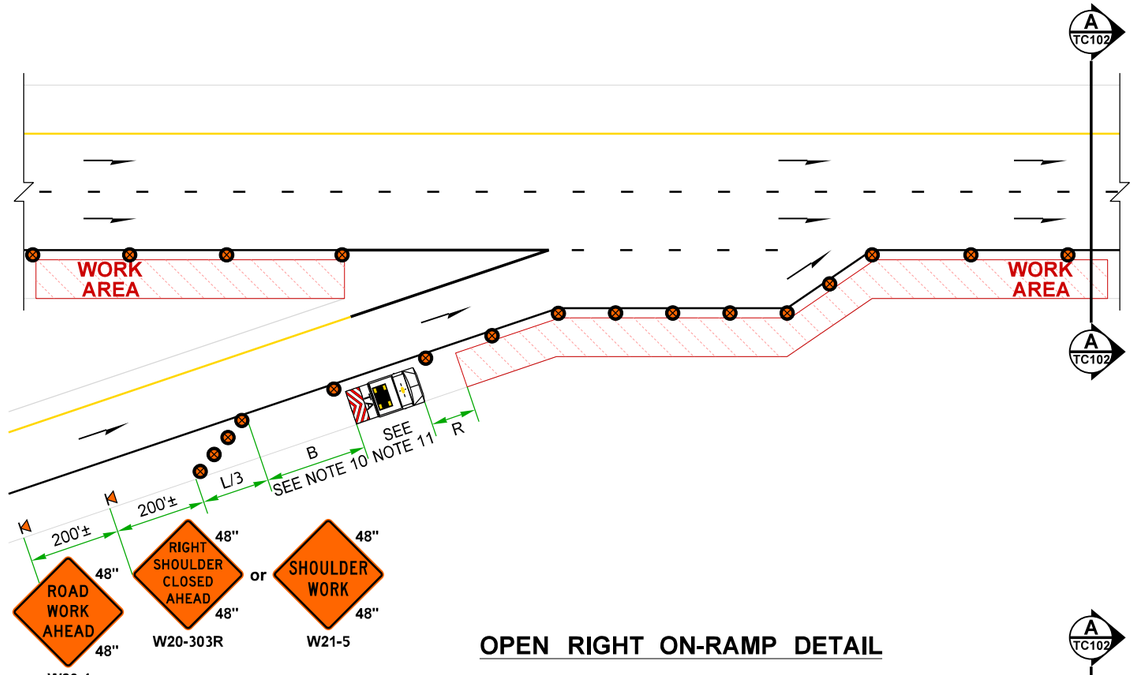
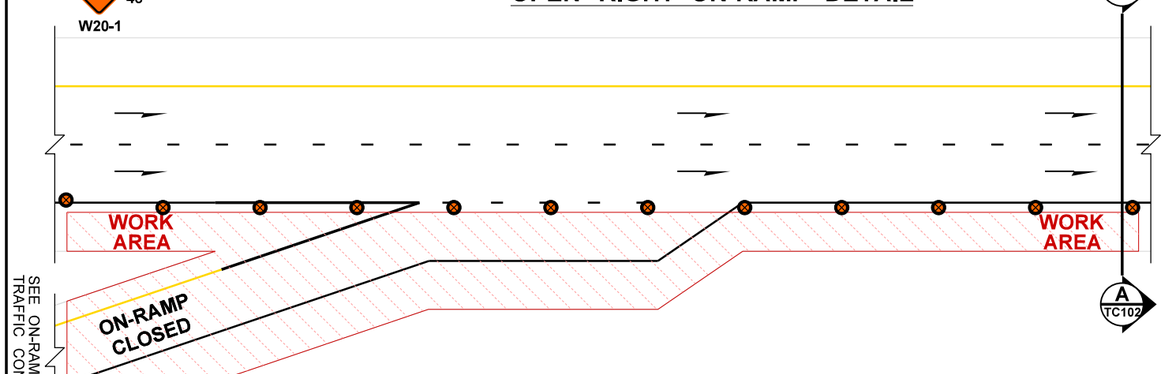


OPEN RIGHT ON-RAMP DETAIL



CLOSED RIGHT ON-RAMP DETAIL

FREEWAY (2+ LANES): RIGHT SHOULDER CLOSURE (MAINTAIN EXISTING SPEED LIMIT)

NOT TO SCALE

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TYPICAL TRAFFIC CONTROL PLANS

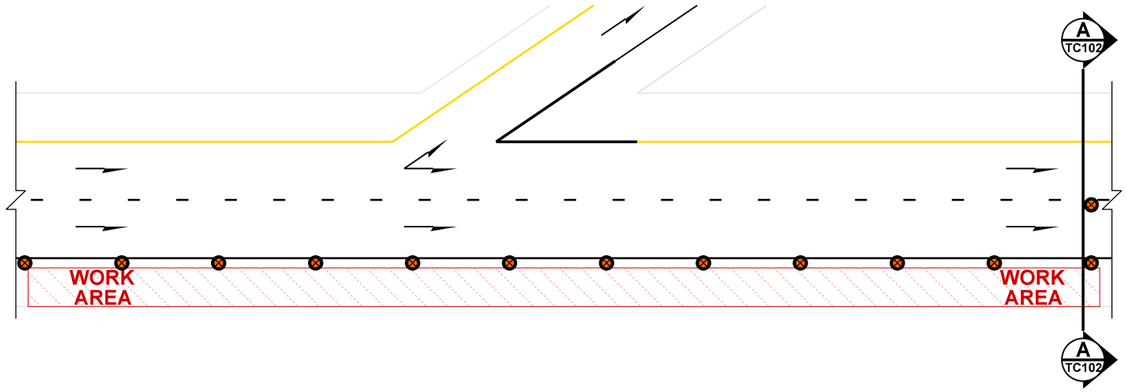
Plot 2

PLAN REF NO TC102

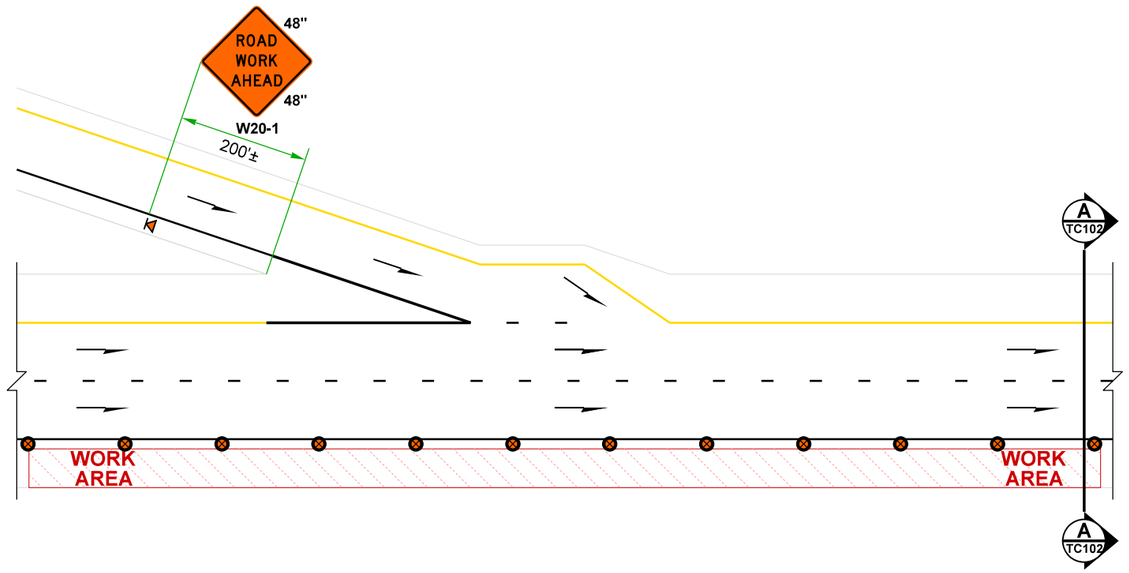
SHEET 2 OF 3 SHEETS

NOTES:

8. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC102, SHEET 1.

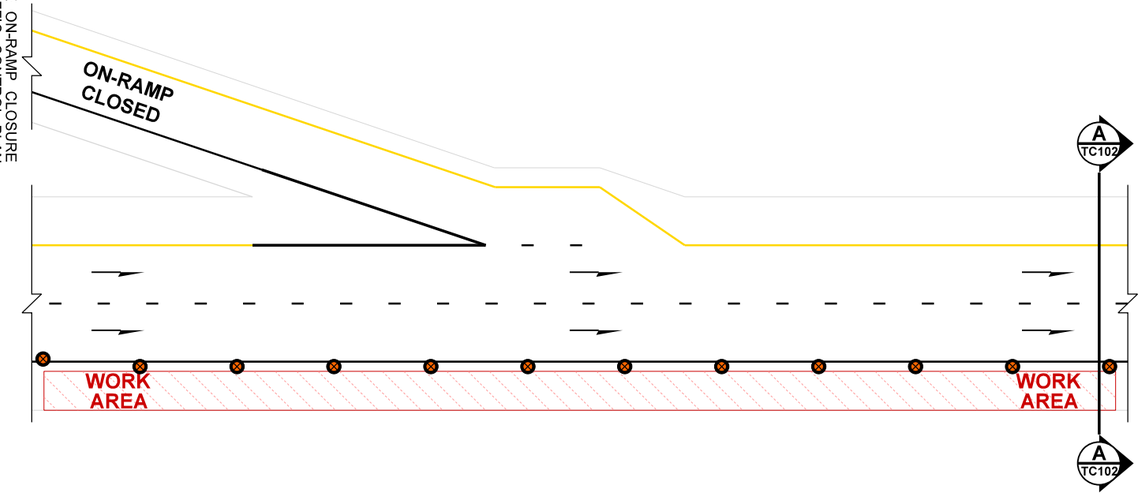


OPEN LEFT EXIT-RAMP DETAIL



OPEN LEFT ON-RAMP DETAIL

SEE ON-RAMP CLOSURE TRAFFIC CONTROL PLAN



CLOSED LEFT EXIT-RAMP DETAIL

LEFT EXIT-RAMPS ARE TO REMAIN OPEN

CLOSED LEFT ON-RAMP DETAIL

FREEWAY (2+ LANES): RIGHT SHOULDER CLOSURE (MAINTAIN EXISTING SPEED LIMIT)

NOT TO SCALE

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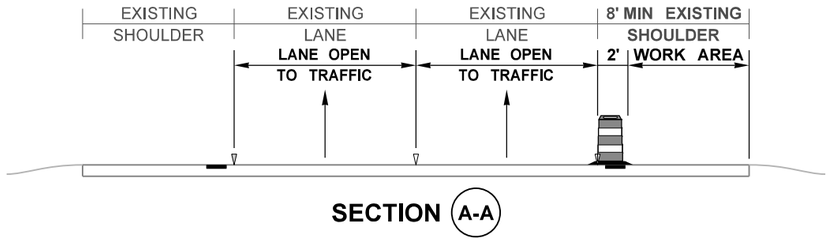
Washington State
Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

Plot 3
PLAN REF NO
TC102
SHEET
3
OF
3
SHEETS



SECTION A-A

RECOMMENDED SIGN SPACING = X (1)		
FREEWAYS & EXPRESSWAYS	50-75 MPH	1500'±
(1) ALL SPACING MAY BE ADJUSTED TO ACCOMMODATE INTERCHANGE RAMPS, AT-GRADE INTERSECTIONS AND DRIVEWAYS.		

SHOULDER CLOSURE TAPER LENGTH = L/3								
SHOULDER WIDTH	SPEED (MPH)	45	50	55	60	65	70	75
< 8'	L/3 (feet)	USE LANE CLOSURE INSTEAD						
8'		120	160	160	160	200	200	200
10'		150	200	200	200	240	240	280

LONGITUDINAL BUFFER SPACE = B							
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B (feet)	360	425	495	570	645	730	820
Buffer space may be adjusted (±) based on field conditions.							

MAXIMUM CHANNELIZATION DEVICE SPACING (feet)		
MPH	TAPER	TANGENT
50 - 75	40	80
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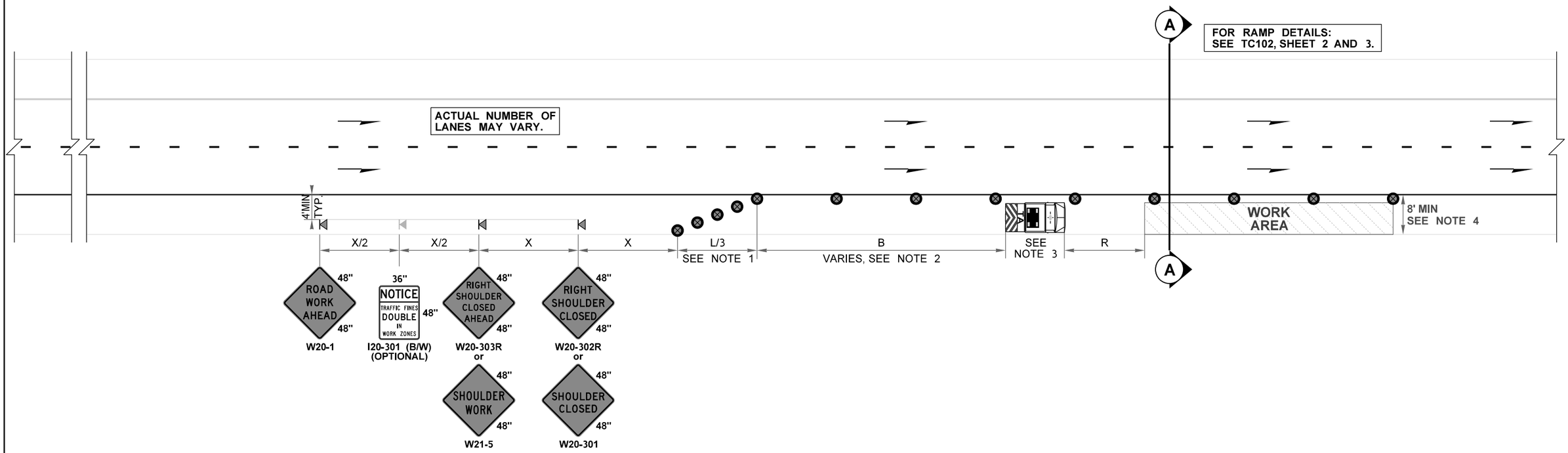
STATIONARY TRANSPORTABLE ATTENUATOR ROLL AHEAD DISTANCE = R					
HOST VEHICLE WEIGHT LESS THAN 22,000 lbs.			HOST VEHICLE WEIGHT 22,000+ lbs.		
UP TO 40 MPH	45-55 MPH	60+ MPH	UP TO 40 MPH	45-55 MPH	60+ MPH
100'	123'	172'	74'	100'	150'



LEGEND:

- TEMPORARY SIGN LOCATION (1' MIN HEIGHT)
- TEMPORARY SIGN LOCATION (5' MIN HEIGHT)
- TRAFFIC SAFETY DRUM
- TRANSPORTABLE ATTENUATOR (TL-3)

NOTES:

1. IF FEASIBLE, AVOID PLACING SHOULDER CLOSURE TAPER WITHIN OR IMMEDIATELY FOLLOWING HORIZONTAL CURVES.
2. DISTANCE INCREASES AS WORK AREA MOVES DOWNSTREAM.
3. RED/WHITE OR BLACK/YELLOW CHEVRON PATTERN OK. ADDITIONAL TRANSPORTABLE ATTENUATORS MAY BE ADDED BEHIND EACH WORK CREW.
4. IF PAVED SHOULDER IS LESS THAN 8 FEET WIDE AT TRANSPORTABLE ATTENUATOR AND WORK AREA, THEN A LANE CLOSURE SHALL BE IMPLEMENTED.
5. SIGNS ARE BLACK ON ORANGE UNLESS OTHERWISE INDICATED.
6. PLAN IS APPLICABLE TO SHOULDER CLOSURES OF 7 DAYS OR LESS.
7. BICYCLIST ACCOMMODATIONS, WHERE FACILITY OPEN TO BICYCLES:
   (A) BICYCLES PROHIBITED VIA R5-601 & R5-6 SIGNS. PROVIDE SIGNED DETOUR OR ALTERNATIVE ROUTE.
   (B) BICYCLES PROHIBITED VIA R5-6 SIGN(S). PROVIDE FREE SHUTTLE (WORK TRUCK, VAN, OR BUS OK) + CONTACT INFORMATION/PHONE BOX/LABORER.
   (C) STOP WORK OPS. & AND ESCORT BICYCLISTS THROUGH SHLDR. CLOSURE.
   (D) ENGINEER TO ACCEPT ANY ALTERNATIVE STRATEGIES.

R5-601 (B/W) AT EXIT-RAMP PRIOR TO SHLDR CLOSURE

R5-6 (R/B/W) AT PRIOR EXIT-RAMP + ON-RAMPS WITHIN SHLDR CLOSURE

FREEWAY (2+ LANES): RIGHT SHOULDER CLOSURE (MAINTAIN EXISTING SPEED LIMIT)

NOT TO SCALE

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REGION NO.	STATE	FED.AID PROJ.NO.
10	WASH	
JOB NUMBER		
CONTRACT NO.		LOCATION NO.

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Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

Plot 1

PLAN REF NO TC102

SHEET 1 OF 3 SHEETS

NOTES:

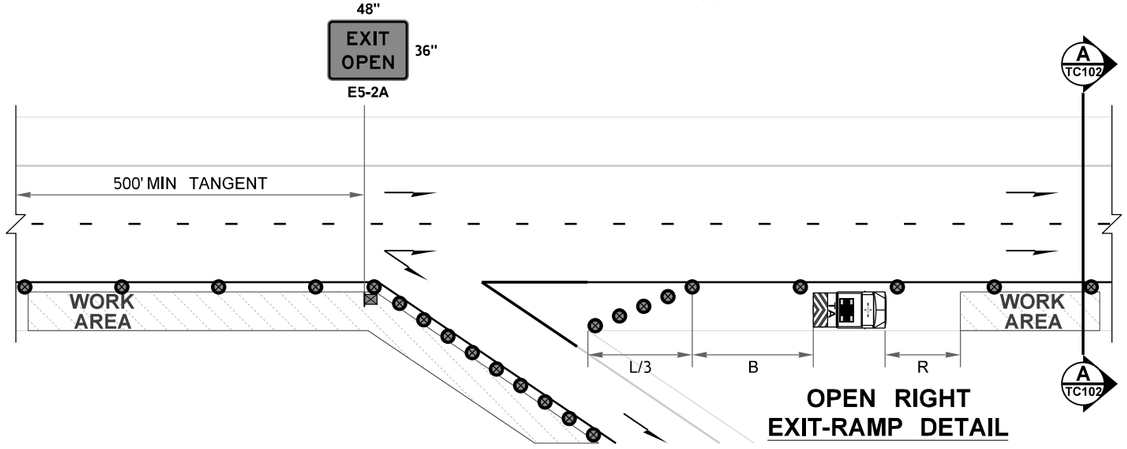
8. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC102, SHEET 1.

9. SEE DETOUR PLAN FOR ADDITIONAL RAMP CLOSURE DETOUR SIGNAGE.

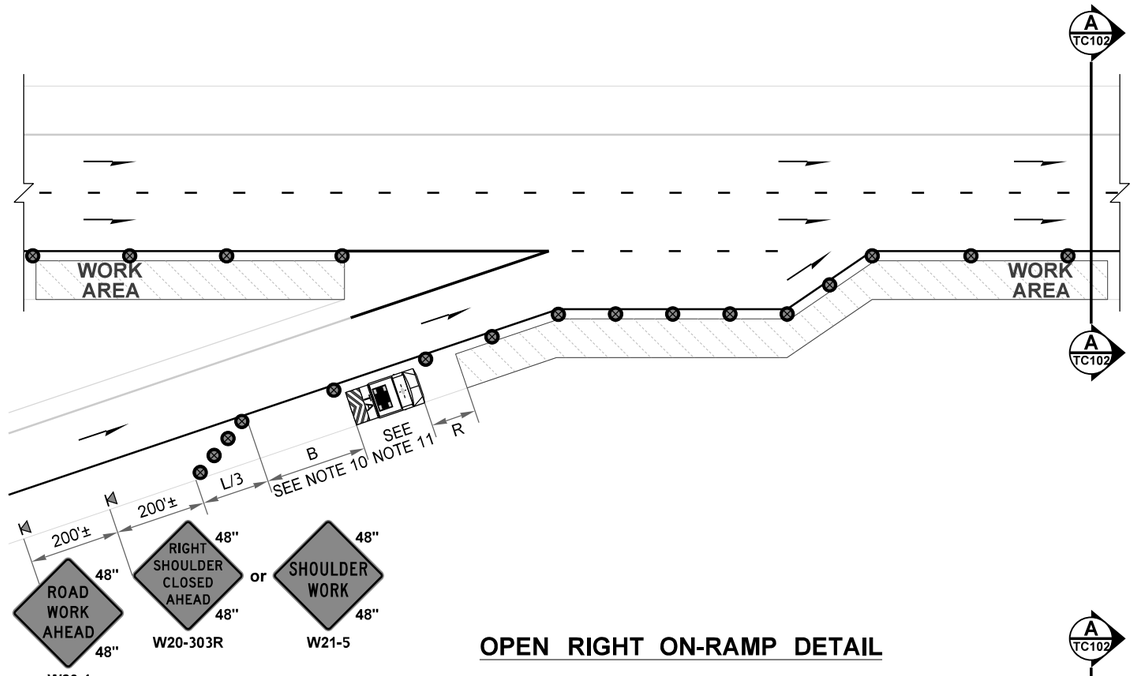
10. BUFFER SPACE BASED ON PREVAILING SPEED OF MOTORISTS PASSING TRANSPORTABLE ATTENUATOR, TYPICALLY VARIES FROM 20 MPH AT TOP OF ON-RAMP TO POSTED SPEED LIMIT AT GORE TIP.

11. PROTECTIVE VEHICLE PERMITTED IF PREVAILING SPEED OF MOTORISTS PASSING IS 40 MPH OR LESS. 40'-80' ROLL AHEAD RECOMMENDED FOR PROTECTIVE VEHICLES ROLL AHEAD (R).

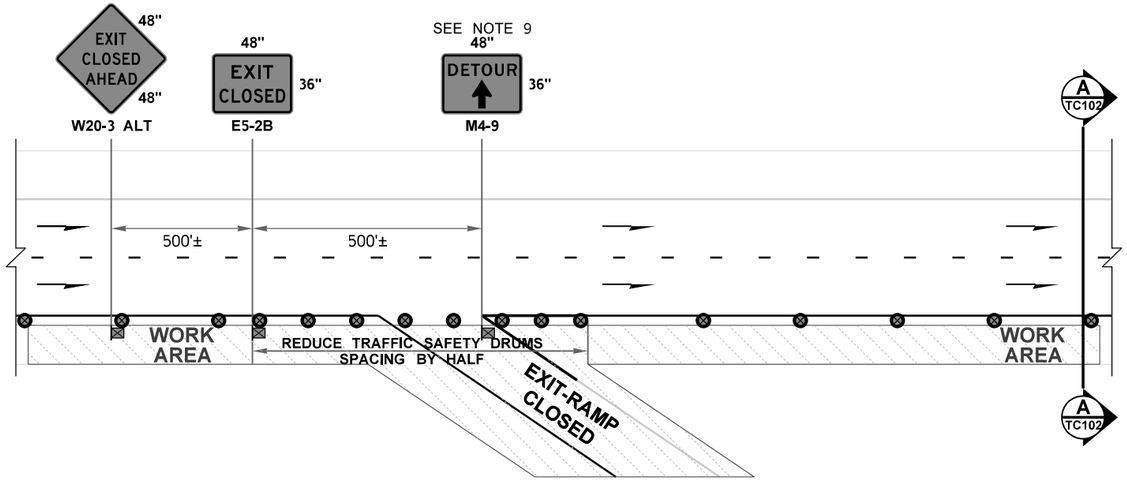
LONGITUDINAL BUFFER SPACE = B												
SPEED (MPH)	20	25	30	35	40	45	50	55	60	65	70	75
LENGTH (feet)	115	155	200	250	305	360	425	495	570	645	730	820
Buffer space may be adjusted (±) based on field conditions.												



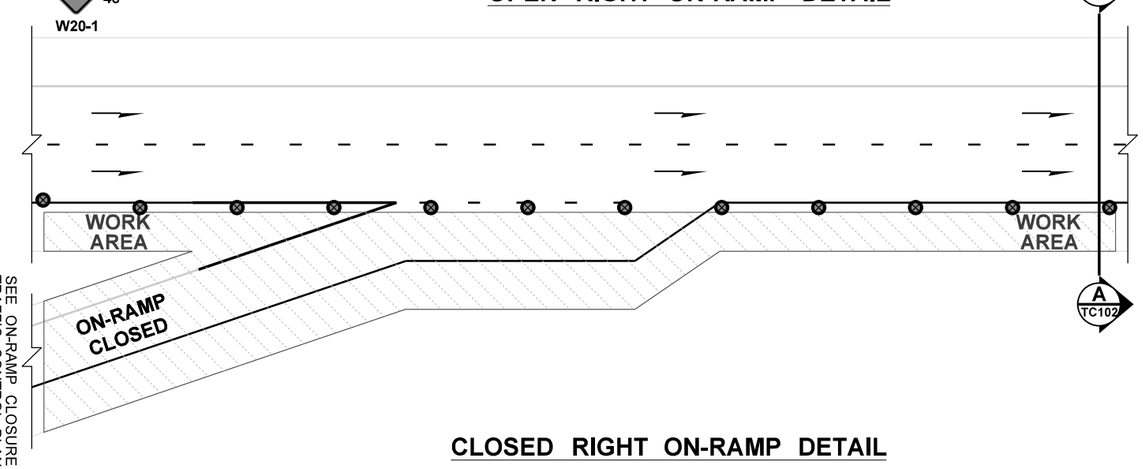
OPEN RIGHT EXIT-RAMP DETAIL



OPEN RIGHT ON-RAMP DETAIL



CLOSED RIGHT EXIT-RAMP DETAIL



CLOSED RIGHT ON-RAMP DETAIL

FREEWAY (2+ LANES): RIGHT SHOULDER CLOSURE (MAINTAIN EXISTING SPEED LIMIT)

NOT TO SCALE

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Washington State Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

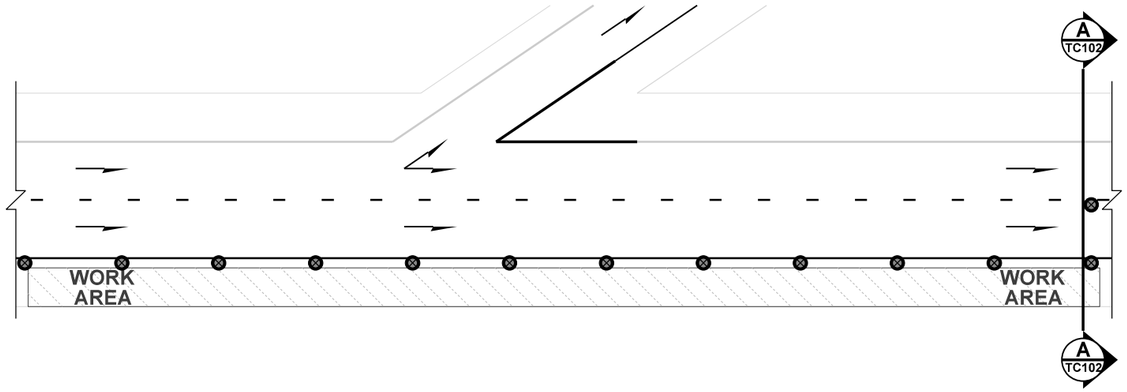
Plot 2

PLAN REF NO TC102

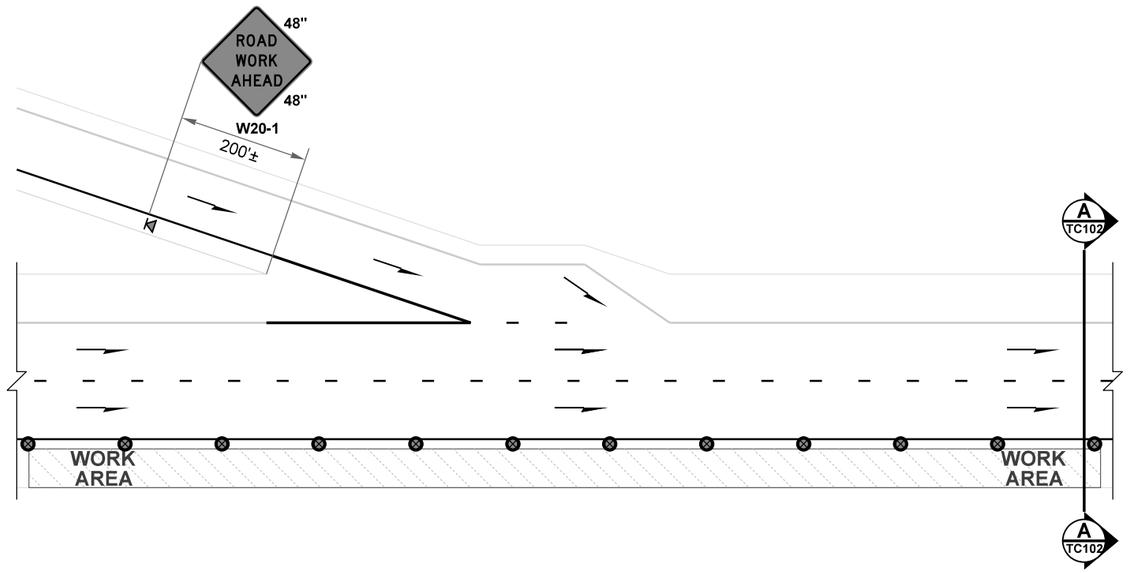
SHEET 2 OF 3 SHEETS

NOTES:

8. FOR LEGEND, TABLES, AND ADDITIONAL NOTES: SEE TC102, SHEET 1.

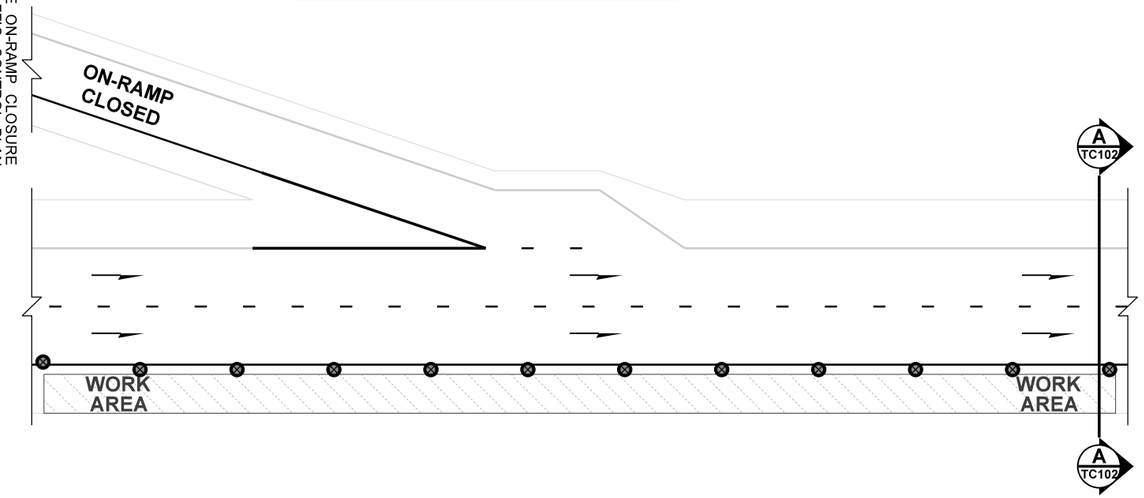


OPEN LEFT EXIT-RAMP DETAIL



OPEN LEFT ON-RAMP DETAIL

SEE ON-RAMP CLOSURE TRAFFIC CONTROL PLAN



CLOSED LEFT EXIT-RAMP DETAIL

LEFT EXIT-RAMPS ARE TO REMAIN OPEN

CLOSED LEFT ON-RAMP DETAIL

FREEWAY (2+ LANES): RIGHT SHOULDER CLOSURE (MAINTAIN EXISTING SPEED LIMIT)

NOT TO SCALE

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TIME	12:48:27 PM				10	WASH			PLAN REF NO TC102
DATE	3/29/2024				JOB NUMBER				
PLOTTED BY	LintzF								SHEET 3 OF 3 SHEETS
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Washington State
Department of Transportation

TYPICAL TRAFFIC CONTROL PLANS

WORK ZONE MICROSTATION CELLS: Updated work zone cells incorporated (March 2024).

WSDOT CAE automatically updates cell libraries on WSDOT and on-site consultant staff computers (no action needed); however, external users or off-site consultants must manually install them. For additional information e-mail HQCAEHelpDesk@wsdot.wa.gov.

Division 4 in WSDOT Plans Preparation Manual, Section 400.06(29), provides updated work zone cell library policy and information for PS&Es. See https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/manuals/plans-preparation-manual

PLOT USAGE EXPLANATION:

Plot 1: Right shoulder closure maintaining existing speed limit on freeways.

Plot 2: Right ramp details for right shoulder closure maintaining existing speed limit on freeways.

Plot 3: Left ramp details for right shoulder closure maintaining existing speed limit on freeways.

DESIGNER NOTES:

A. These typical traffic control plans (Typical TCPs) may be modified for project-specific, site-specific situations, and/or WSDOT Region Transportation Operations standard practices. **Typical TCPs are not "Standard Plans".**

B. Because of the minimal traffic impacts of shoulder closures, Portable Changeable Message Signs (PCMSs) are avoided. PCMSs are optional per MUTCD Section 6F.60 and Section 6H and are used to supplement signage and inform motorists of unexpected situations.

C. 48"x48" diamond-shaped work zone signs used on freeway mainlines and ramps. For shoulder closures, temporary signs are only placed on one shoulder (does not need to be gated). If signs are barrier-mounted, a special rectangular-shaped 24"x48" sign should be used. See MUTCD Table 6F-1 for additional temporary sign size information.

D. Freeway mainline sign spacing may be reduced down to 1000' +/- based on engineering judgement and down to 500' +/- if near interchanges. Along ramps, 200' +/- sign spacing typical but may be reduced farther.

E. When positioned behind channelizing devices, temporary signs should be mounted at 5' minimum.

F. Work zone traffic control layout is based on the posted speed limit; for split speed limits (SPEED LIMIT 70 TRUCKS 60), use the higher 70 mph.

G. This Typical TCP uses traffic safety drums on freeway shoulder tapers and tangents. On tangents 42" tall channelizing devices, 36" traffic cones, & 28" traffic cones may be used with Region Transportation Operations acceptance (vertical panel channelizing devices prohibited). Warning lights on channelizing devices being phased out in Washington. Contact Region Transportation Operations for information regarding their standard practices.

H. Maximum channelizing device spacing table for tangents is based on WAC 468-95-301 and may ALWAYS be reduced.

I. It is WSDOT standard practice not to use sequential arrow signs (arrow boards) for shoulder closure tapers. Per MUTCD TA-6, sequential arrow signs (arrow boards) should not be used.

J. Longitudinal buffer spaces (B) are optional per MUTCD Section 6C.06 but is desired when practical. Longitudinal buffers are the most adjustable component that may be increased/decreased to move lane closure tapers away from horizontal/vertical curves and from on-ramp merges.

K. The lateral buffer (transverse distance between adjacent open travel lane & work area) is typically 2 feet on freeways but may be reduced to 1-foot on shoulder closures when more lateral work space is needed (change traffic safety drums to either 42-inch tall channelization devices, 36-inch traffic cones, or 28-inch traffi cones). Note the paved shoulder still needs to be at least 8 feet wide for shoulder closures on freeways. Per MUTCD Section 6C.06 P14, lateral buffer spaces are optional. Actual work area limits may be modified.

L. Per MUTCD TA-6, the downstream taper not used. Eliminating it allows construction vehicles to accelerate out of work area into reopened lane to minimize traffic impacts and increase safety.

M. Ramp detour signage is recommended by MUTCD 6C.09, but using alternative routes is acceptable. Contact Region Transportation Operations for their standard practice. Recommended to use route-specific detour signage for significant ramp closures.

FREEWAY (2+ LANES): RIGHT SHOULDER CLOSURE (MAINTAIN EXISTING SPEED LIMIT)

INFORMATIONAL USE ONLY

DO NOT INCLUDE THIS SHEET IN CONTRACT PS&Es or TCP SUBMITTALs.

DESIGNER GUIDANCE

Plot 4

TC102