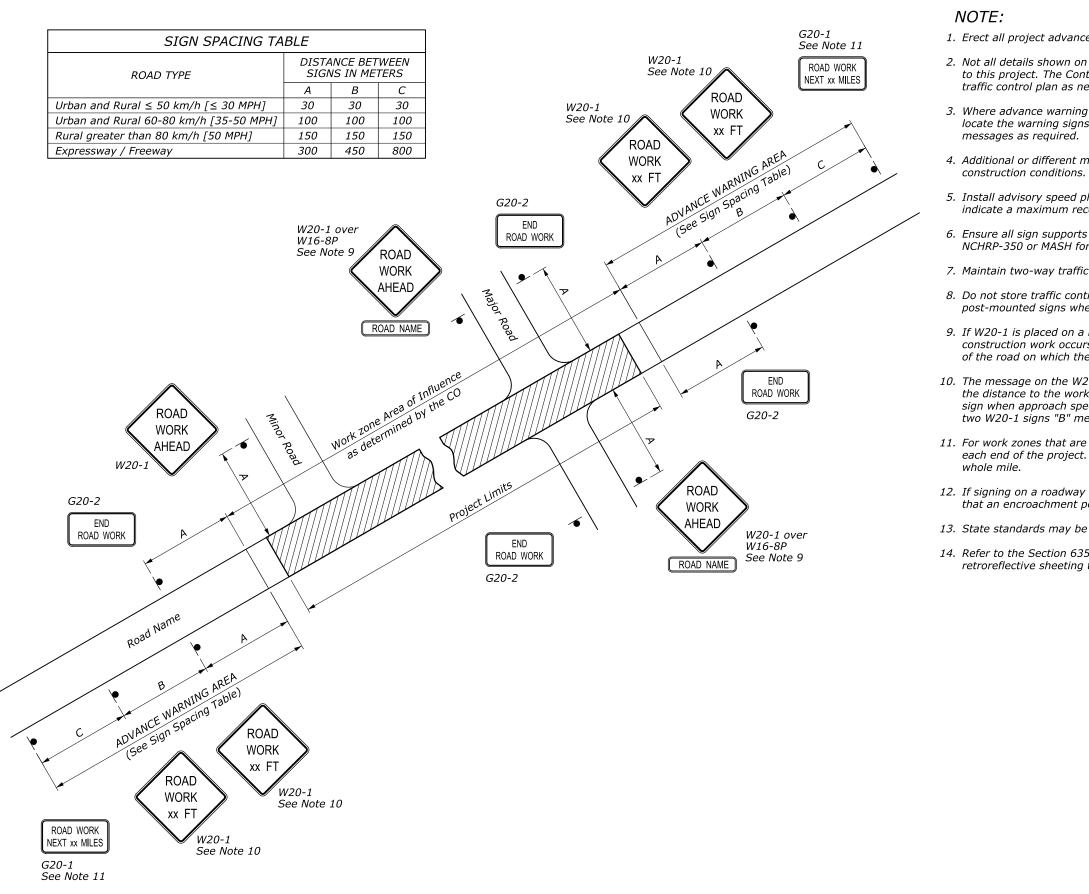


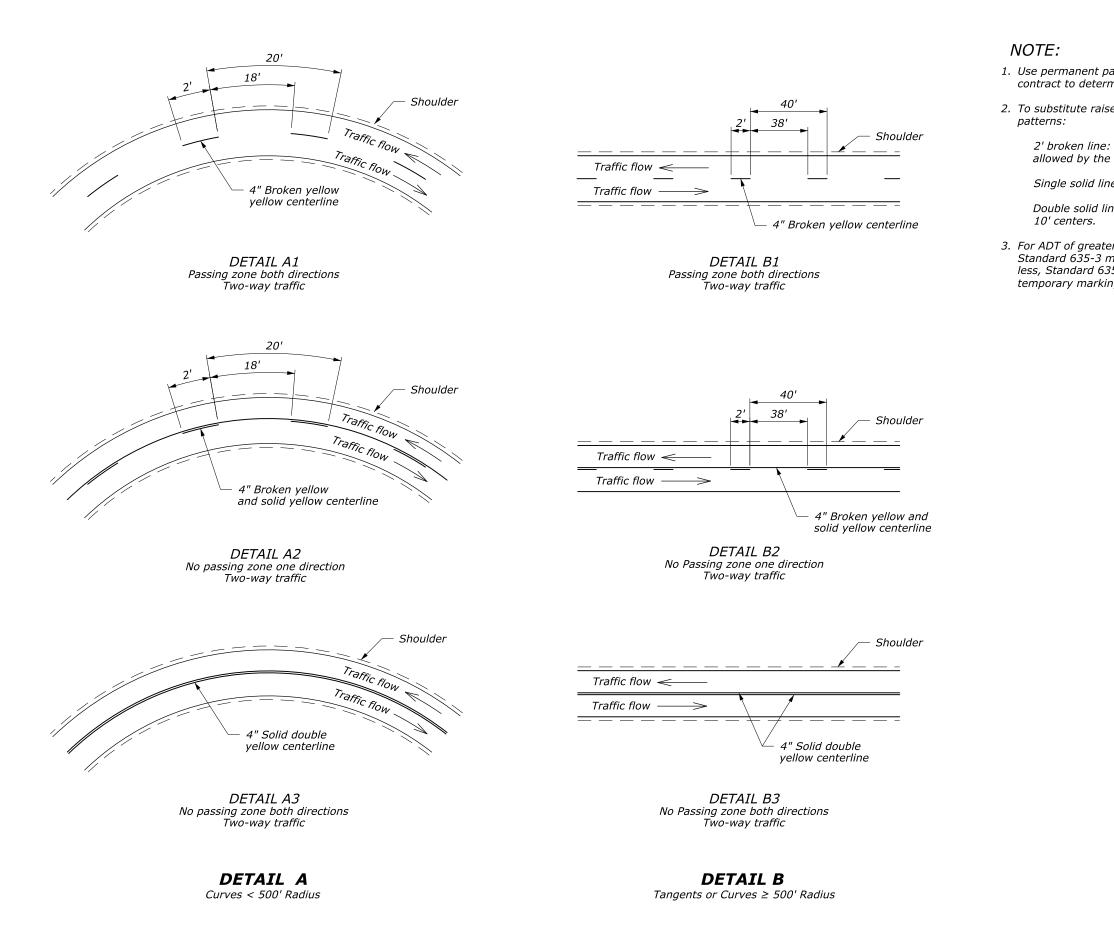
NC

	I I		
	STATE	PROJECT	SHEET NUMBER
	L		l
ance warning signs before starti	ng constru	iction work.	
on the temporary traffic contro Contractor may add or delete inf s necessary to accommodate acc	formation a	and details ii	
ning signs, placed as shown, inte igns as determined by the CO fo d.			signs,
nt message signs may be require ns.	ed to fit th	e actual	
d plates under the W20 series w recommended speed through th			ed to
orts exposed to impact by traffic I for crashworthiness.	: meet the	requiremen	ts of
affic during all non-work hours e	except as a	approved by	the CO.
control devices along the roadwa when not applicable.	iy when no	ot in use. Co	over
n a roadway other than that on curs, include a supplementary p the construction does occur (ap	olaque indi	icating the n	
W20-1 signs may be "ROAD WC vork area in feet or in miles. Ins speeds exceed 50 MPH. When a according to the Sign Spacing Ta	stall an ad used place	ditional W20	-1
are 2 miles or more in length, ir ect. Show the distance on the C			est
vay under a jurisdiction other th nt permit has been obtained.	an the clie	ent agency, v	verify
v be used as an alternative if app	proved by	the CO.	
635 of the Special Contract Req ing types.	uirements	for allowabl	'e
FEDER		TRANSPORTAT: ADMINISTRATIC S HIGHWAY	
		RY STANDAR	RD
TEMPORA	RY TR/	AFFIC C	ONTROL
ADV	ANCE	SIGNIN	IG
STANDARD APPRO	OVED FOR USE	6/2005	STANDARD
O SCALE REVISED: DRAFT: 9/2010			635-1

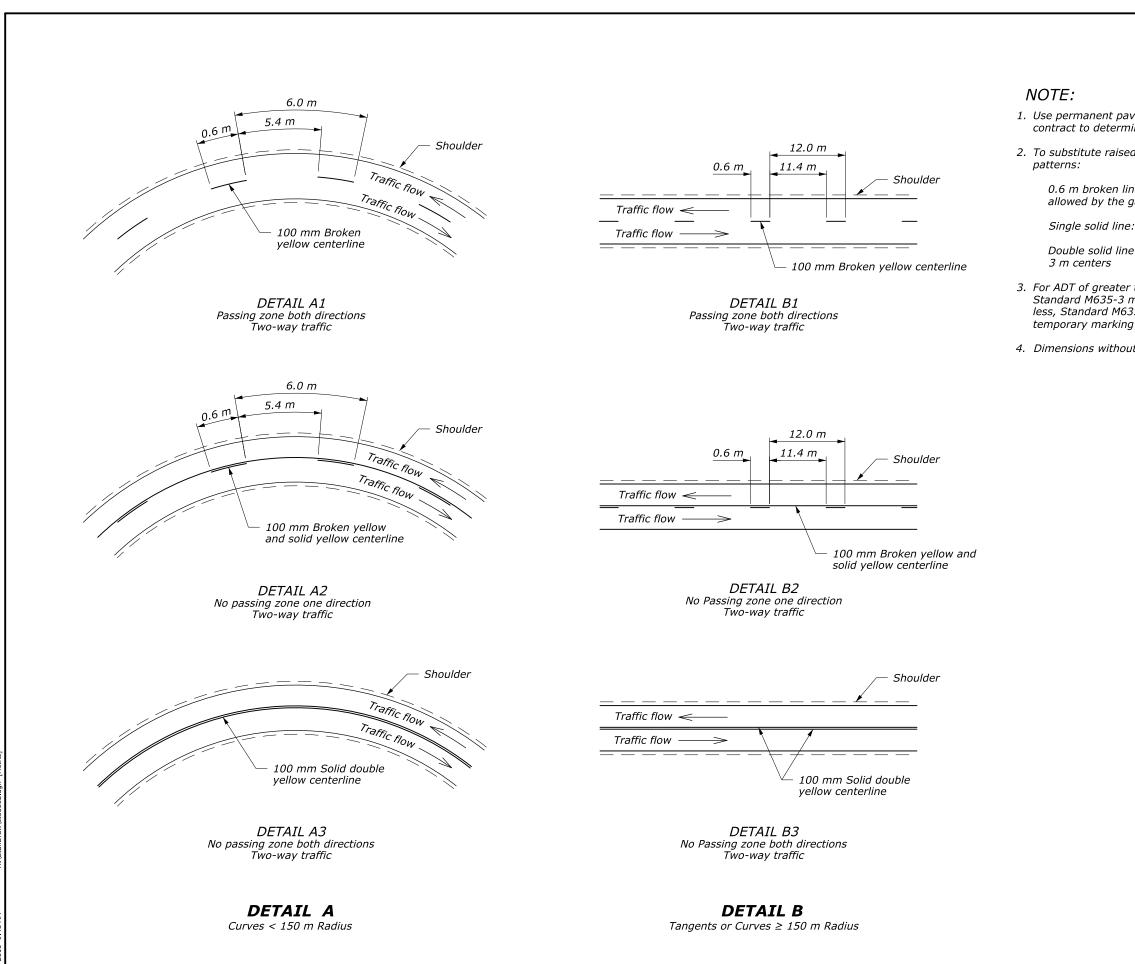


NC

	STATE	PROJECT	SHEET NUMBER
	L		1
nce warning signs before starti	na constru	iction work	
on the temporary traffic contro	-		able
Contractor may add or delete ini concessary to accommodate ac	formation a	and details in	
ing signs, placed as shown, inte gns as determined by the CO fo d.			signs,
t message signs may be require ns.	ed to fit th	e actual	
d plates under the W20 series v recommended speed through t			d to
orts exposed to impact by traffic for crashworthiness.	: meet the	requirement	s of
ffic during all non-work hours e	except as a	approved by t	he CO.
ontrol devices along the roadwa when not applicable.	iy when no	ot in use. Co	ver
n a roadway other than that on curs, include a supplementary p the construction does occur (ap	olaque indi	icating the na	
W20-1 signs may be "ROAD W0 ork area in feet or in miles. Ins speeds exceed 80 km/h [50 MP meters apart according to the s	stall an ad H]. When	ditional W20- used place th	-1
are greater than 3 km in length ect. Show the distance on the (st
ay under a jurisdiction other th t permit has been obtained.	an the clie	ent agency, v	erify
be used as an alternative if ap _l	proved by	the CO.	
635 of the Special Contract Req ng types.	uirements	for allowable	2
FEDER		F TRANSPORTATIO ADMINISTRATIO	
	METRIC ST		
TEMPORA		AFFIC CO SIGNIN	
D SCALE STANDARD APPRI	_		STANDARD

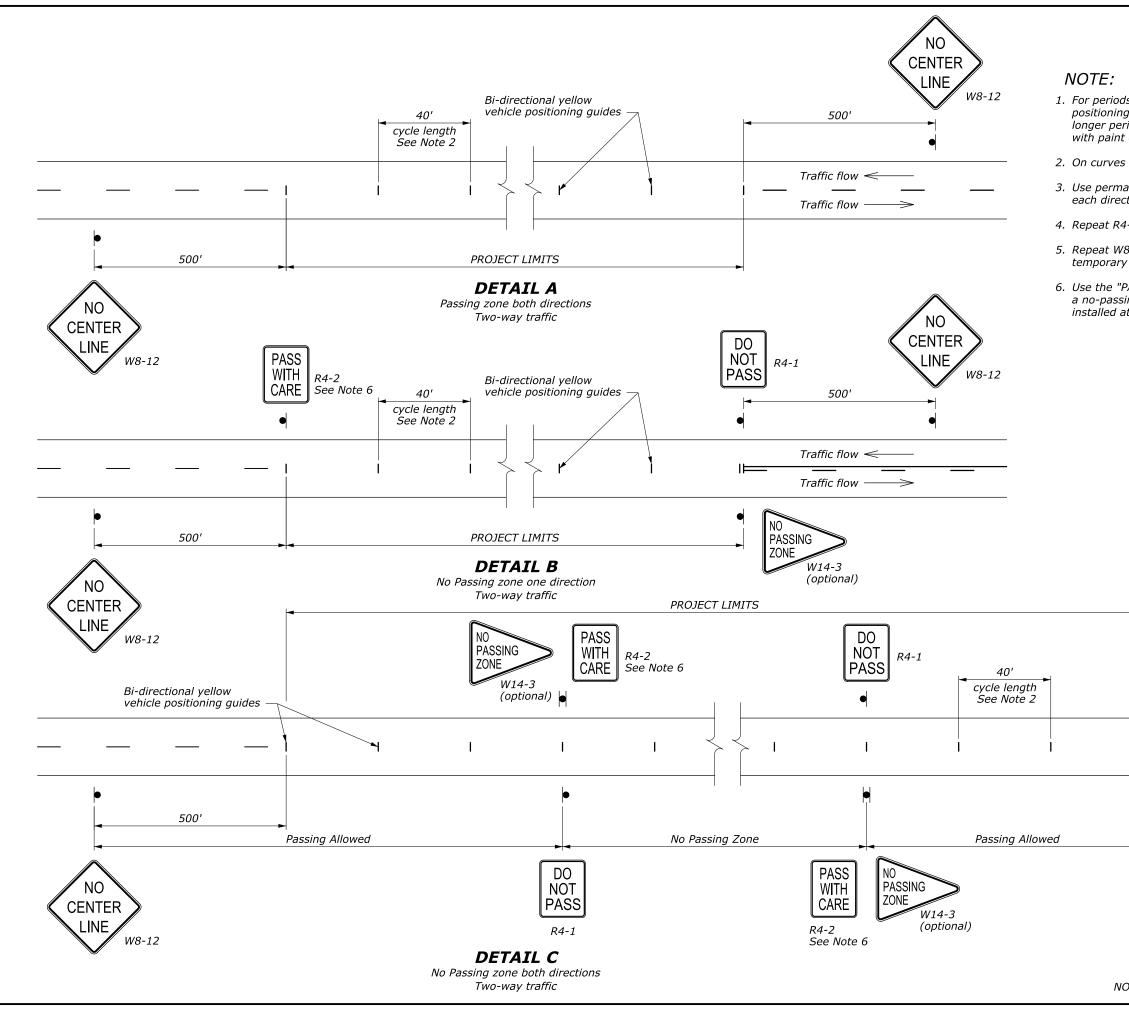


	STATE	PROJECT	SHEET NUMBER
nt pavement marking layout as des termine no passing zones for each			
raised pavement markers for lines,	use the	following	
ine: two pavement markers space the gap shown based on curvature	d 2' apa.	rt	
l line: pavement markers spaced		enters.	
d line: two pavement markers, sig			
eater than 1000 and periods of 3 d. -3 may be used as an alternate. Fo 1635-3 may be used as an alternat rking period.	or ADT c	of 1000 or	
FEDER	AL HIGHW	OF TRANSPORTAT AY ADMINISTRATI	
		IARY STANDA	۲D
		ORARY	
	MENT		NGS
NO SCALE REVISED:	OVED FOR US	GE 6/2005	standard 635-2
DRAFT: 9/2010			000-2

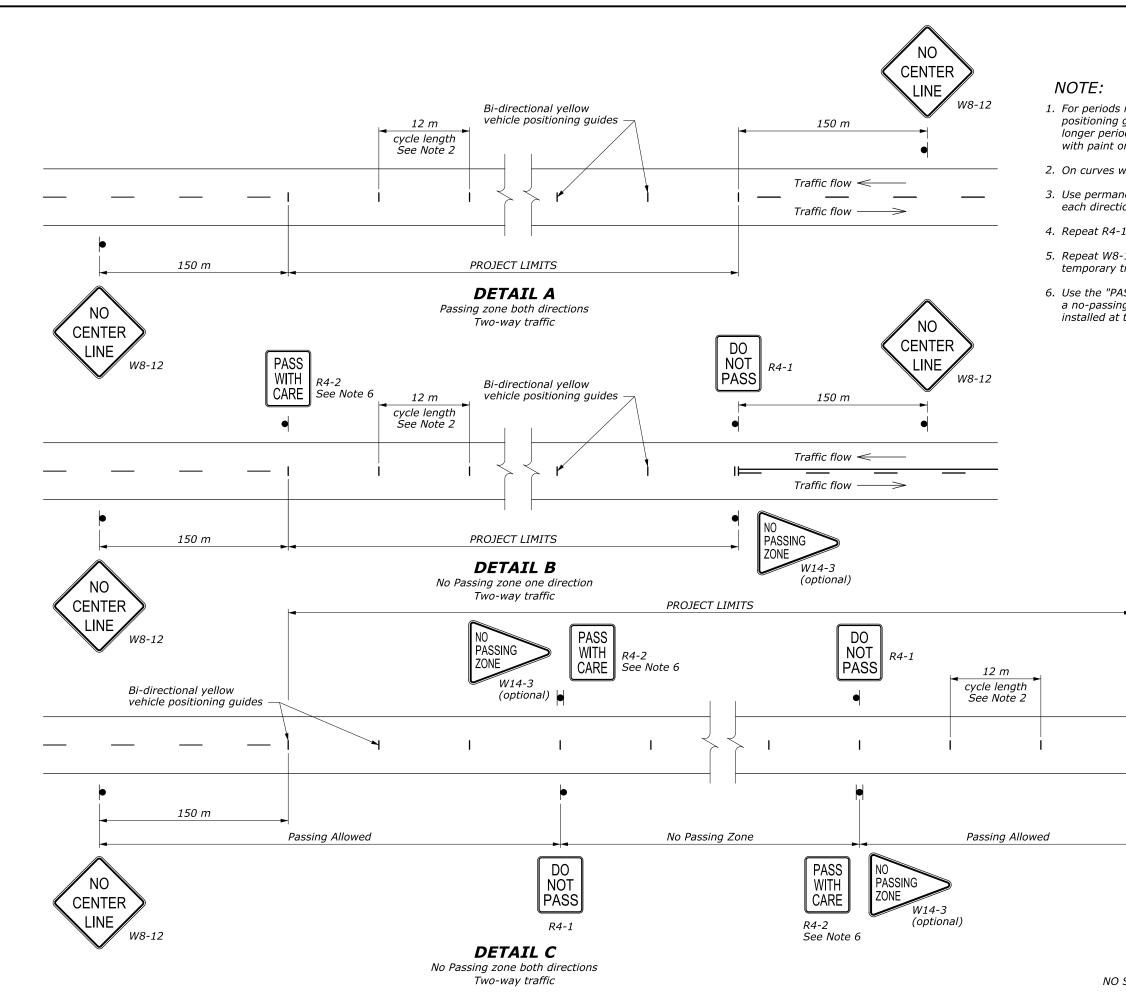


NO

		STATE	PROJECT	SHEET NUMBER
			·	
vement marking layout on nine no passing zones for				
ed pavement markers for	r lines,	use the	e following	
ne: two pavement mark	are en	acad 0	6 m anart	
gap shown based on cur	vature		o mapart	
e: pavement markers sp	aced o	on 3 m d	centers.	
e: two pavement marke	ers, sia	le by sic	le, spaced on	
r than 1000 and periods may be used as an alten 35-3 may be used as an g period.	nate.	For ADT	of 1000 or	
ut units are millimeters.				
[OF TRANSPORTAT	
	FEDER. F	AL HIGHW EDERAL L/	AY ADMINISTRATIO	
			STANDARD	
			ORARY MARKII	
SCALE STANDA REVISED: DRAFT: 9/		OVED FOR U	<u> </u>	standard M635-2
•				



			T 1		SHEET
			STATE	PROJECT	NUMBER
			·		
ng g eriod	uides and s ds/higher A	ble A, pavement n signing are provid DT or for applicati Standard 635-2.	ed per th	is detail. For	
s w	ith radius le	ess than 500', red	uce cycle	length to 20'.	
nane ectio	ent marking on of travel.	gs plan to determi	ne no pas	ssing zones for	-
24-1	at 1 mile i	ntervals.			
		ch major intersecti I zones greater th			or
sing	zone only	ARE" (R4-2) sign a if a "DO NOT PAS. m end of the zone	S" (R4-1)	vnstream end o sign has beer	วf เ
		TABLE A			
		Maximum Dura	ation Befo	ore	
	ADT	Markings Are	e Require		
	≤ 1000 > 1000	14 Da 3 Da	•		
	/ 1000	5 Da	ys		
•	-	500'		TER 🔪	
		Traffic flow <			
	I —	Traffic flow ——	\rightarrow		
	**				
			PARTMENT	OF TRANSPORTATIO	
		FEDER	AL HIGHWA	Y ADMINISTRATIO	
				ARY STANDARI	<u> </u>
		FOR UNM	IAKK	U PAVE	12113
റ	SCALE		OVED FOR USE	6/2005	STANDARD
		REVISED: DRAFT: 9/2010			635-3



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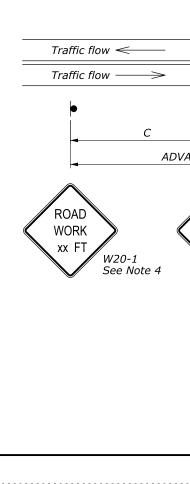
			STATE	PROJECT	SHEET NUMBER
g g riod	uides and s Is/higher Al	ole A, pavement m signing are provide DT or for application Standard M635-2.	ed per th	nis detail. For	
s wi	th radius le	ess than 150 m, re	educe cy	cle length to 6	; <i>m</i> .
	ent marking n of travel.	is plan to determii	<i>пе по ра</i>	ssing zones fo	or
4-1	at 1.5 km i	intervals.			
		h major intersecti I zones greater th			-
ing	zone only	RE" (R4-2) sign a if a "DO NOT PASS m end of the zone.	S" (R4-1		
		TABLE A			
	ADT	Maximum Dura			
	ADT ≤ 1000	Markings Are		ed	
	> 1000	14 Da 3 Day	,		
₽	-	150 m		TER 🔪	
		Traffic flow <			
	I —	Traffic flow ——	 →		
		-			—
		FEDER	AL HIGHW	OF TRANSPORTAT	
				NDS HIGHWAY	
		DELINEA			GNING
		FOR UNM			
. -	<u></u>				_
ר S	CALE	STANDARD APPRC REVISED: 6/2005	OVED FOR US	E 6/1998	standard M635-3
		DRAFT: 9/2010			C-CCON

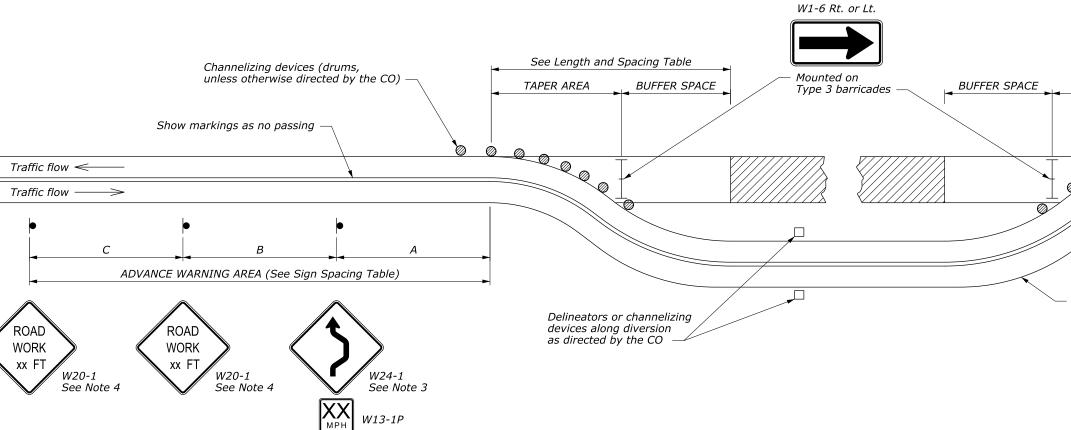
LENGTH AND SPACING TABLE						
APPROACH	BUFFER SPACE	CHANI	VELIZING D	DEVICE		
SPEED*	LENGTH	TAPER	BUFFER	WORK		
МРН	FEET	AREA	SPACE	SPACE		
	, , , , , , , , , , , , , , , , , , , ,	SPA	CING IN F	EET		
20	115	20	40	40		
25	155	20	50	50		
30	200	20	60	60		
35	250	20	70	70		
40	305	20	80	80		
45	360	20	90	90		
50	425	20	100	100		
55	495	20	110	110		
60	570	20	120	120		
65	645	20	130	130		
70	730	20	140	140		

SIGN SPACING TABLE				
ROAD TYPE		NCE BET GNS IN FL		
	A	В	С	
Urban and Rural 30 MPH and less	100	100	100	
Urban and Rural 35 MPH to 50 MPH	350	350	350	
Rural greater than 50 MPH	500	500	500	
Expressway / Freeway	1000	1500	2640	

NOTE:

- 1. Signs are shown those depicted fo
- 2. If the area appro no passing zone, conflicting paver
- 3. If the tangent di use an appropria Reverse Curve" Curve" sign (W1 original alignmer diversion has sh
- 4. If the diversion is "ROAD WORK AF
- 5. Place channelizir
- 6. Do not allow equ the buffer space.





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				CT SHEET
		STAT	E PROJE	CT NUMBER
				I
for one direct or the opposit			e devices simila	ar to
	and/or mar		l and marked a priate. Remov	
ite "Reverse C sign (W24-1). -4) in advance nt. Use "Reve	Curve" sign Install a s e of the sec erse Turn" s	(W1-4) instea second, oppos cond reverse o signs (W1-3) i	is more than 6 ad of the "Dou ite hand "Reve curve back to t instead when t of 30 mph or .	ble erse the he
			eliminate the K" (G20-2) sigi	ns.
g devices out	tside tempo	orary roadway		
ipment, mate	erials, or ve	hicles to be p	arked or store	d in
TAPER AR	EA			
	\bigcirc	\oslash		
0000				
Ø – /				
// /				
"//)
	-	Α		
	·			
· Use at least	the minim	Im	ENI ROAD V	
radius for th	e signed sp		G20-2	
for all divers	oon curves		See No	
		FEDERAL HIG	NT OF TRANSPORT HWAY ADMINISTRA LANDS HIGHWAY	
	1		OMARY STAND	ARD
		U.S. CUST	JUNKI SUAND	
	TEMP			CONTRO
	ТЕМР	ORARY	TRAFFIC	CONTROL
	ТЕМР	ORARY		
O SCALE		ORARY		

	LENGTH AND SPACING TABLE					
APPR	ОАСН	BUFFER SPACE	CHANN	IELIZING D	EVICE	
SPE	ED*	LENGTH	TAPER	BUFFER	WORK	
MPH	km/h	METER	AREA	SPACE	SPACE	
	Kinyn	METER	SPAC	ING IN ME	TERS	
20	30	35	6	12	12	
25	40	45	6	15	15	
30	50	60	6	18	18	
35	55	75	6	21	21	
40	65	95	6	24	24	
45	70	110	6	27	27	
50	80	130	6	30	30	
55	90	150	6	34	34	
60	95	175	6	37	37	
65	105	195	6	40	40	
70	115	225	6	43	43	

* Approach speed based on the regulatory posted speed,

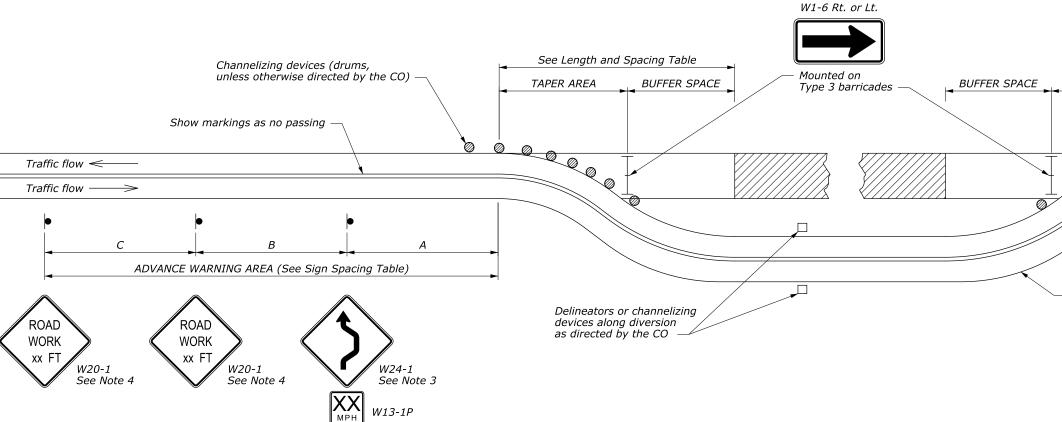
not the advisory speed.

SIGN SPACING TABLE DISTANCE BETWEEN SIGNS IN METERS ROAD TYPE Α В С Urban and Rural \leq 50 km/h [\leq 30 MPH] 30 30 30 Urban and Rural 60-80 km/h [35-50 MPH] 100 100 100 Rural greater than 80 km/h [50 MPH] 150 150 150 Expressway / Freeway 300 450 800

NOTE:

- 1. Signs are shown those depicted for
- 2. If the area approa no passing zone, a conflicting pavem
- 3. If the tangent dist use an appropriate Reverse Curve" sig Curve" sign (W1-4 original alignment diversion has sha
- 4. If the diversion is "ROAD WORK AH
- 5. Place channelizing
- 6. Do not allow equi the buffer space.

Traffic flow < Traffic flow \rightarrow С ROAD WORK xx FT W20-1 See Note 4

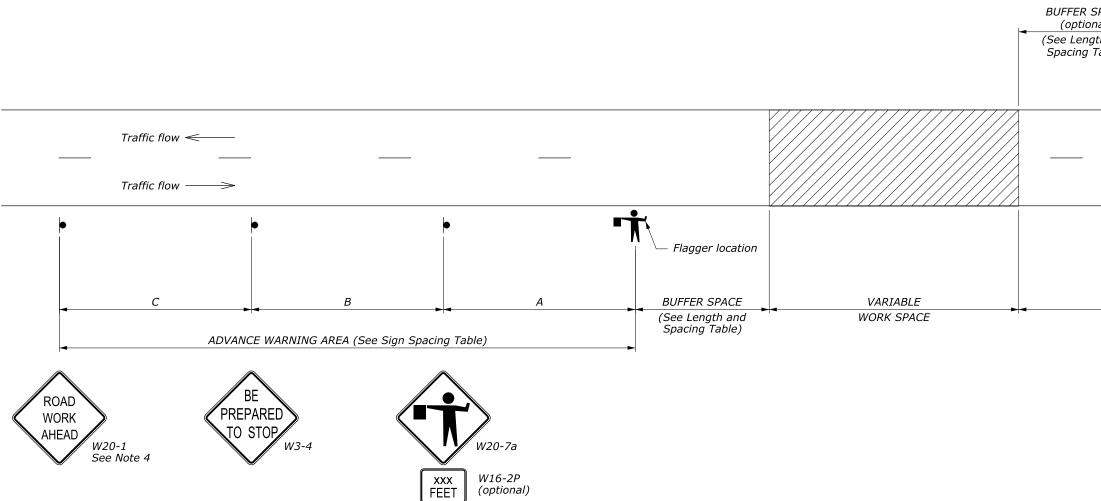


	STATE	PROJECT	SHEET
			NUMBER
for one direction of the state	DI	viene -i'!-	to
for one direction of travel only r the opposite direction of trav		vices similar i	to
aching diversion is not already add signing and/or marking a: ent markings.			a
tance along the temporary div te "Reverse Curve" sign (W1-4 ign (W24-1). Install a second 4) in advance of the second re t. Use "Reverse Turn" signs (irp curves with recommended	!) instead o , opposite l everse curv W1-3) inste	f the "Double hand "Revers e back to the ead when the	e
completely within the project EAD" (W20-1) and "END ROAL			
g devices outside temporary ro	oadway.		
ipment, materials, or vehicles	to be parke	ed or stored i	n
TAPER AREA			
		•	
	A		
Use at least the minimum		END ROAD WOF	ek
radius for the signed speed for all diversion curves		G20-2	
tor all ulversion curves		See Note	4
		F TRANSPORTATI	
	EPARTMENT O	ADMINISTRATIC	// 1
	RAL HIGHWAY FEDERAL LAN	ADMINISTRATIC	
FEDE	FEDERAL LAN	ADMINISTRATIC	
TEMPORA	RAL HIGHWAY FEDERAL LAN METRIC S	ADMINISTRATIC DS HIGHWAY TANDARD AFFIC CO	ONTROL
TEMPORA	RAL HIGHWAY FEDERAL LAN METRIC S	ADMINISTRATIC	ONTROL
TEMPORA	RAL HIGHWAY FEDERAL LAN METRIC S	ADMINISTRATIC DS HIGHWAY TANDARD AFFIC CO VERSION	ONTROL

LENGTH AND SPACING TABLE			
APPROACH SPEED*	BUFFER SPACE LENGTH		
МРН	FEET		
20	115		
25	155		
30	200		
35	250		
40	305		
45	360		
50	425		
55	495		
60	570		
65	645		
70	730		

SIGN SPACING TABLE							
ROAD TYPE		NCE BET GNS IN FL					
	A	В	С				
Urban and Rural 30 MPH and less	100	100	100				
Urban and Rural 35 MPH to 50 MPH	350	350	350				
Rural greater than 50 MPH	500	500	500				
Expressway / Freeway	1000	1500	2640				

- 1. Signs are shown those depicted fo
- 2. Final location and conditions as app
- *3. For pilot car oper at a conspicuous name of the Cont*
- 4. If closure is com WORK AHEAD" (
- 5. For night time fla
- 6. Do not allow equation the buffer space.

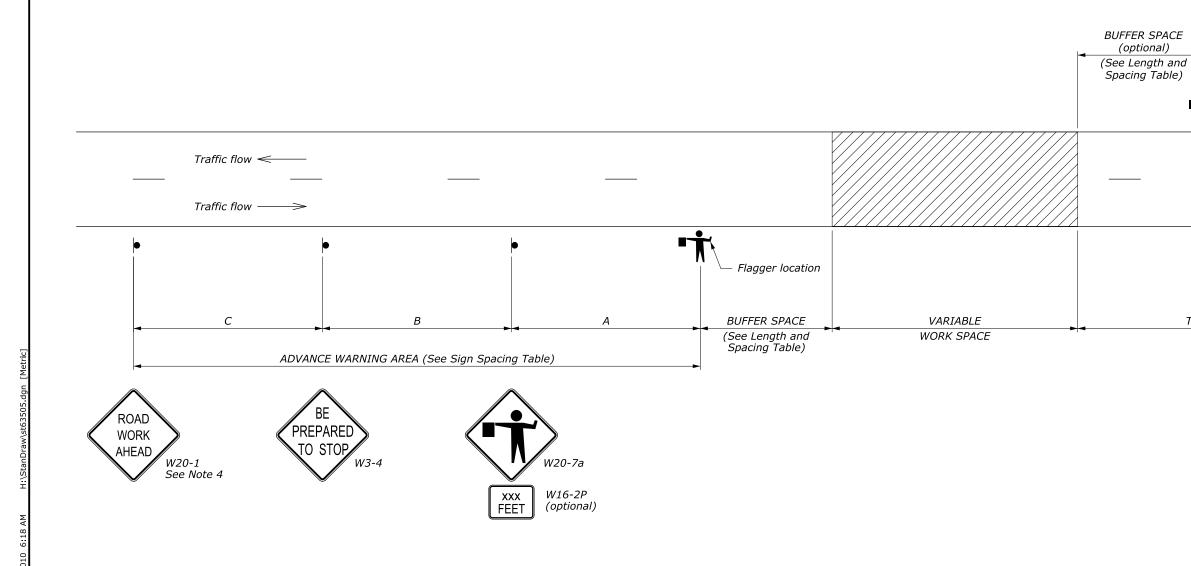


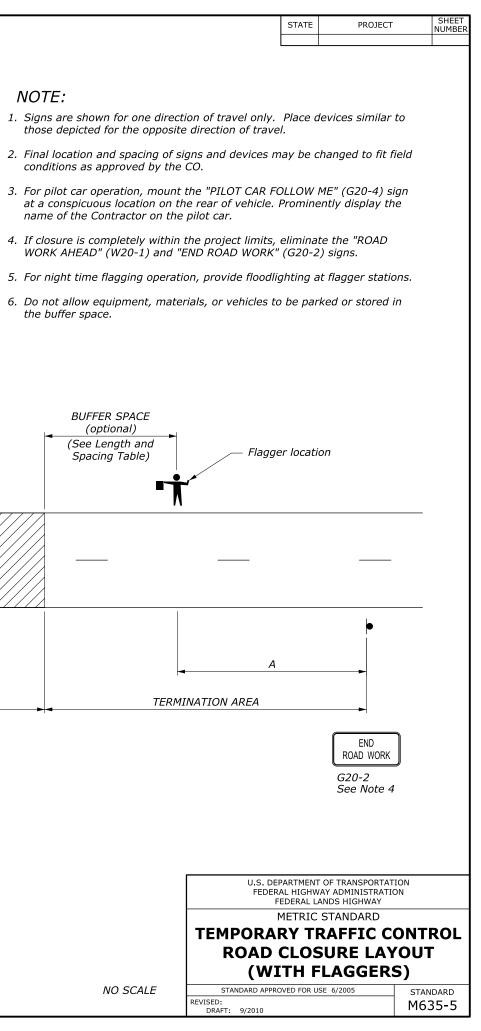
	STATE	PROJECT	SHEET
			NUMBER
for one direction of travel only. or the opposite direction of trave		levices similar	to
d spacing of signs and devices m proved by the CO.	ay be c	hanged to fit f	ïeld
ration, mount the "PILOT CAR FC location on the rear of vehicle. tractor on the pilot car.			
pletely within the project limits, W20-1) and "END ROAD WORK"			
agging operation, provide floodlig	ghting a	t flagger statio	ons.
ipment, materials, or vehicles to) be par	ked or stored i	in
SPACE			
ngth and	ar locati	0.0	
g Table) — Flagge	er locati	UII	
F			
Ν			
		•	
- A			
TERMINATION AREA			
			ר
		END ROAD WORK	
		G20-2	.
		See Note 4	
		OF TRANSPORTAT	
F	EDERAL L	ANDS HIGHWAY	
		IARY STANDAR	
		SURE LAY	
STANDARD APPRO			STANDARD
O SCALE REVISED: DRAFT: 9/2010			635 - 5
•			

LENGT	LENGTH AND SPACING TABLE							
	OACH ED*	BUFFER SPACE LENGTH						
MPH	km/h	METER						
20	30	35						
25	40	45						
30	50	60						
35	55	75						
40	65	95						
45	70	110						
50	80	130						
55	90	150						
60	95	175						
65	105	195						
70	115	225						

SIGN SPACING TABLE						
DISTANCE BETWEEN SIGNS IN METERS						
Α	В	С				
30	30	30				
100	100	100				
150	150	150				
300	450	800				
	DISTA SIGN A 30 100 150	DISTANCE BET SIGNS IN ME A B 30 100 150				

- the buffer space.





LENGTH AND SPACING TABLE							
APPROACH	BUFFER SPACE	CHANI	VELIZING E	DEVICE			
SPEED*	LENGTH	TAPER	BUFFER	WORK			
MPH	FEET	AREA	SPACE	SPACE			
, , , , ,	,,	SPA	CING IN F	EET			
20	115	20	40	40			
25	155	20	50	50			
30	200	20	60	60			
35	250	20	70	70			
40	305	20	80	80			
45	360	20	90	90			
50	425	20	100	100			
55	495	20	110	110			
60	570	20	120	120			
65	645	20	130	130			
70	730	20	140	140			

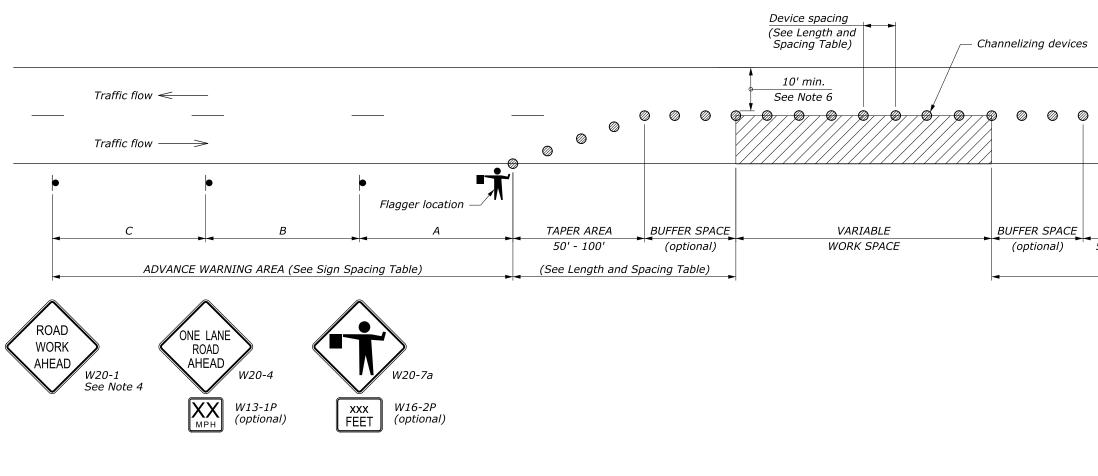
* Approach speed based on the regulatory posted speed,

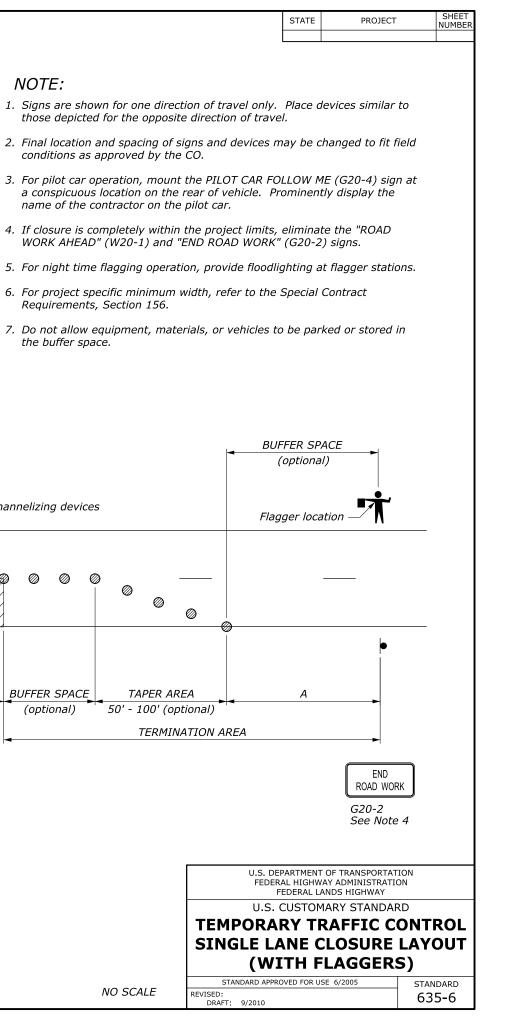
not the advisory speed.

DISTANCE BETWEEN SIGNS IN FEET ROAD TYPE Α В С Urban and Rural 30 MPH and less 100 100 100 Urban and Rural 35 MPH to 50 MPH 350 350 350 Rural greater than 50 MPH 500 500 500 Expressway / Freeway 1000 1500 2640

SIGN SPACING TABLE

- Requirements, Section 156.
- the buffer space.





LENGTH AND SPACING TABLE								
APPR	ОАСН	BUFFER SPACE	CHANNELIZING DEVICE					
SPE	ED*	LENGTH	TAPER	BUFFER	WORK			
MPH	km/h	METER	AREA	SPACE	SPACE			
	Kinyn	METER	SPAC	ING IN ME	TERS			
20	30	35	6	12	12			
25	40	45	6	15	15			
30	50	60	6	18	18			
35	55	75	6	21	21			
40	65	95	6	24	24			
45	70	110	6	27	27			
50	80	130	6	30	30			
55	90	150	6	34	34			
60	95	175	6	37	37			
65	105	195	6	40	40			
70	115	225	6	43	43			

* Approach speed based on the regulatory posted speed,

AHEAD

XX MPH

W20-4

W13-1P

(optional)

W20-7a

W16-2P

(optional)

ххх

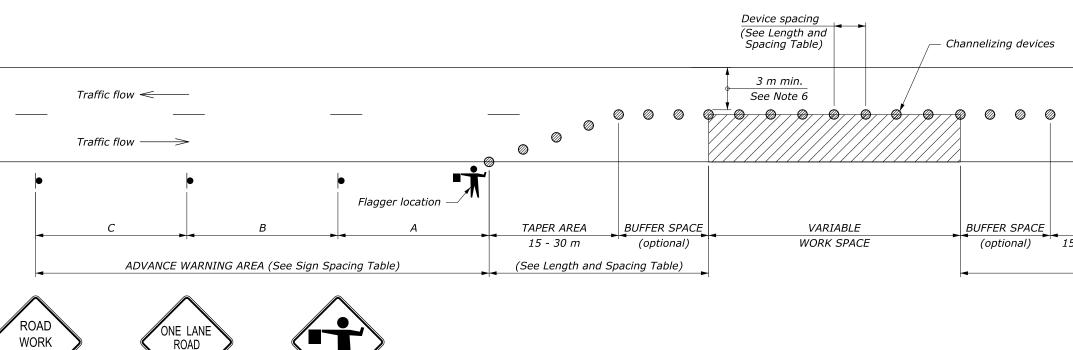
FEET

not the advisory speed.

SIGN SPACING TABLE						
ROAD TYPE	DISTANCE BETWEEN SIGNS IN METERS					
	А	В	С			
Urban and Rural \leq 50 km/h [\leq 30 MPH]	30	30	30			
Urban and Rural 60-80 km/h [35-50 MPH]	100	100	100			
Rural greater than 80 km/h [50 MPH]	150	150	150			
Expressway / Freeway	300	450	800			

NOTE:

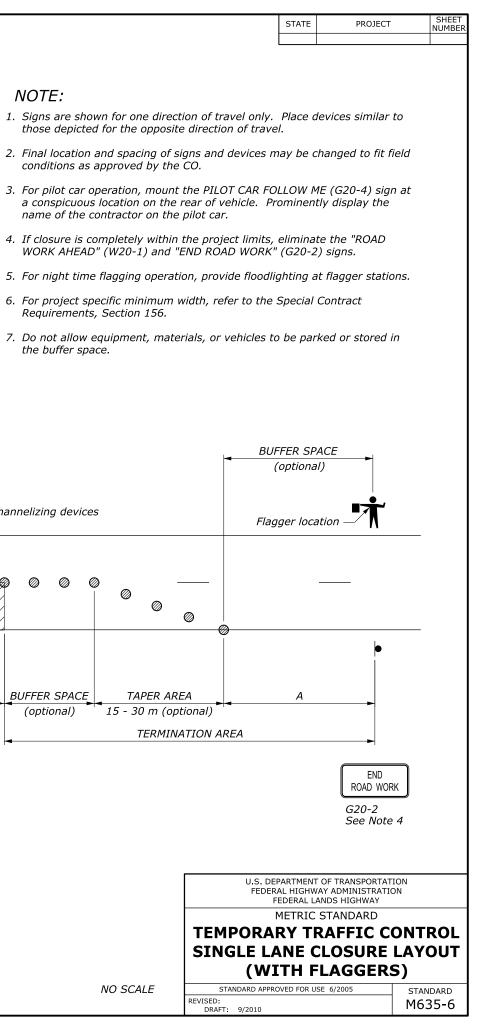
- Requirements, Section 156.
- the buffer space.

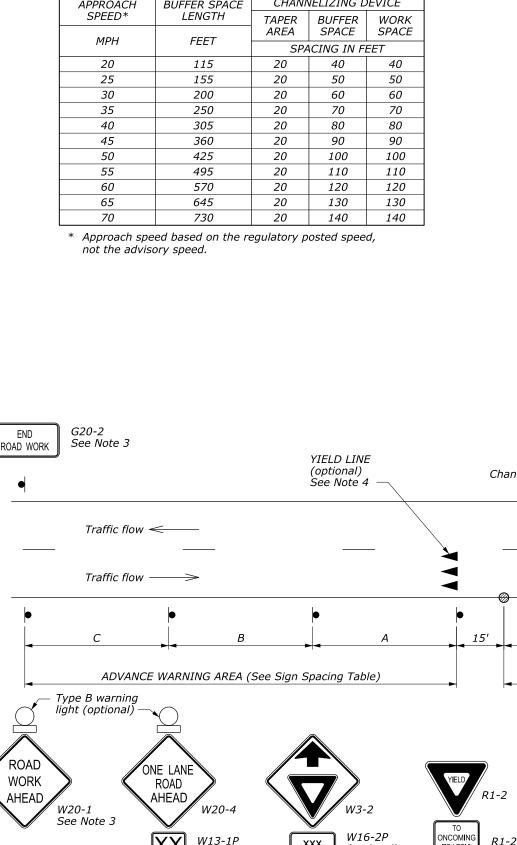


AHEAD

W20-1

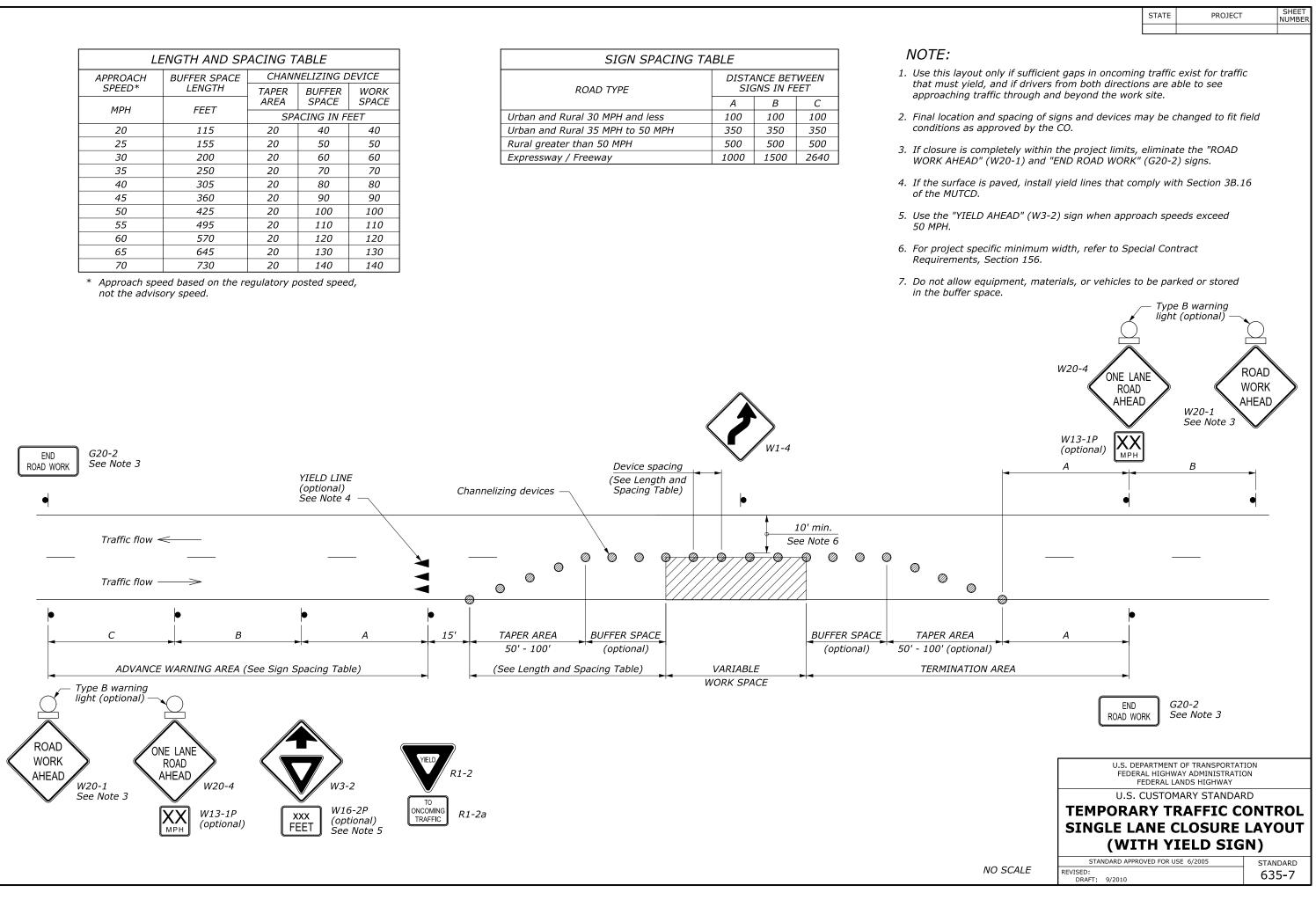
See Note 4





SIGN SPACING TA	ABLE				
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET				
	Α	В	С		
Urban and Rural 30 MPH and less	100	100	100		
Urban and Rural 35 MPH to 50 MPH	350	350	350		
Rural greater than 50 MPH	500	500	500		
Expressway / Freeway	1000	1500	2640		

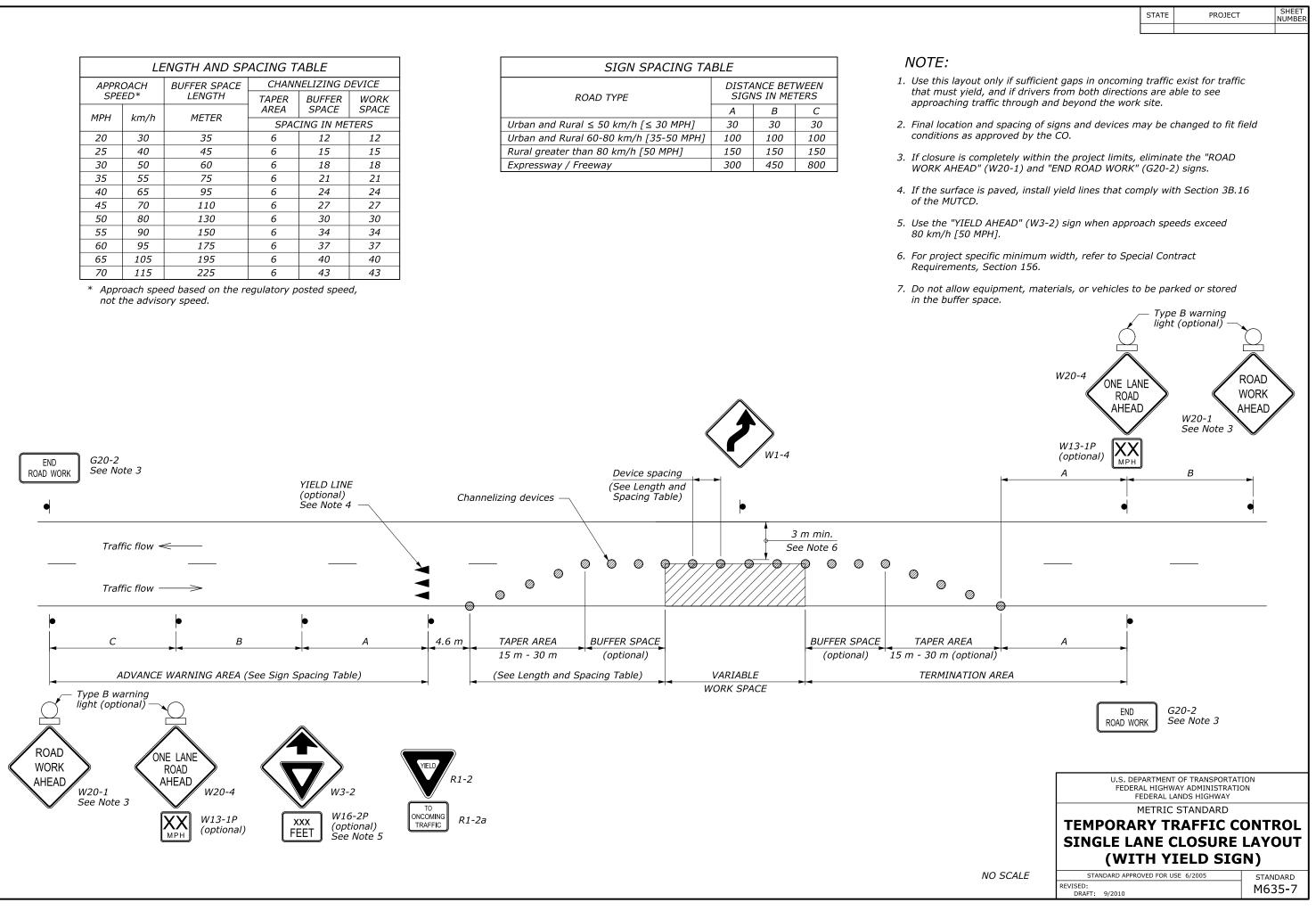
- of the MUTCD.
- 50 MPH.

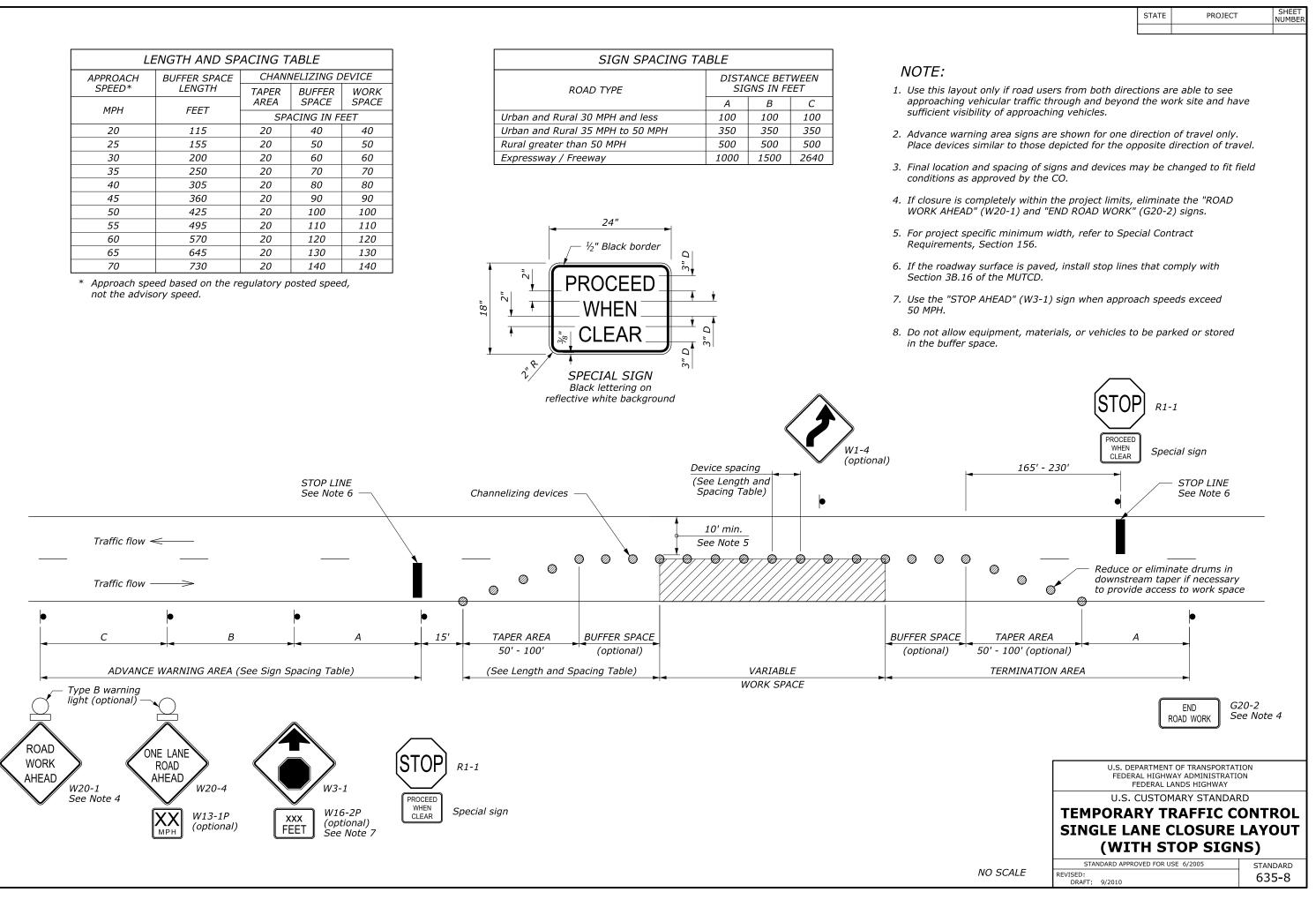


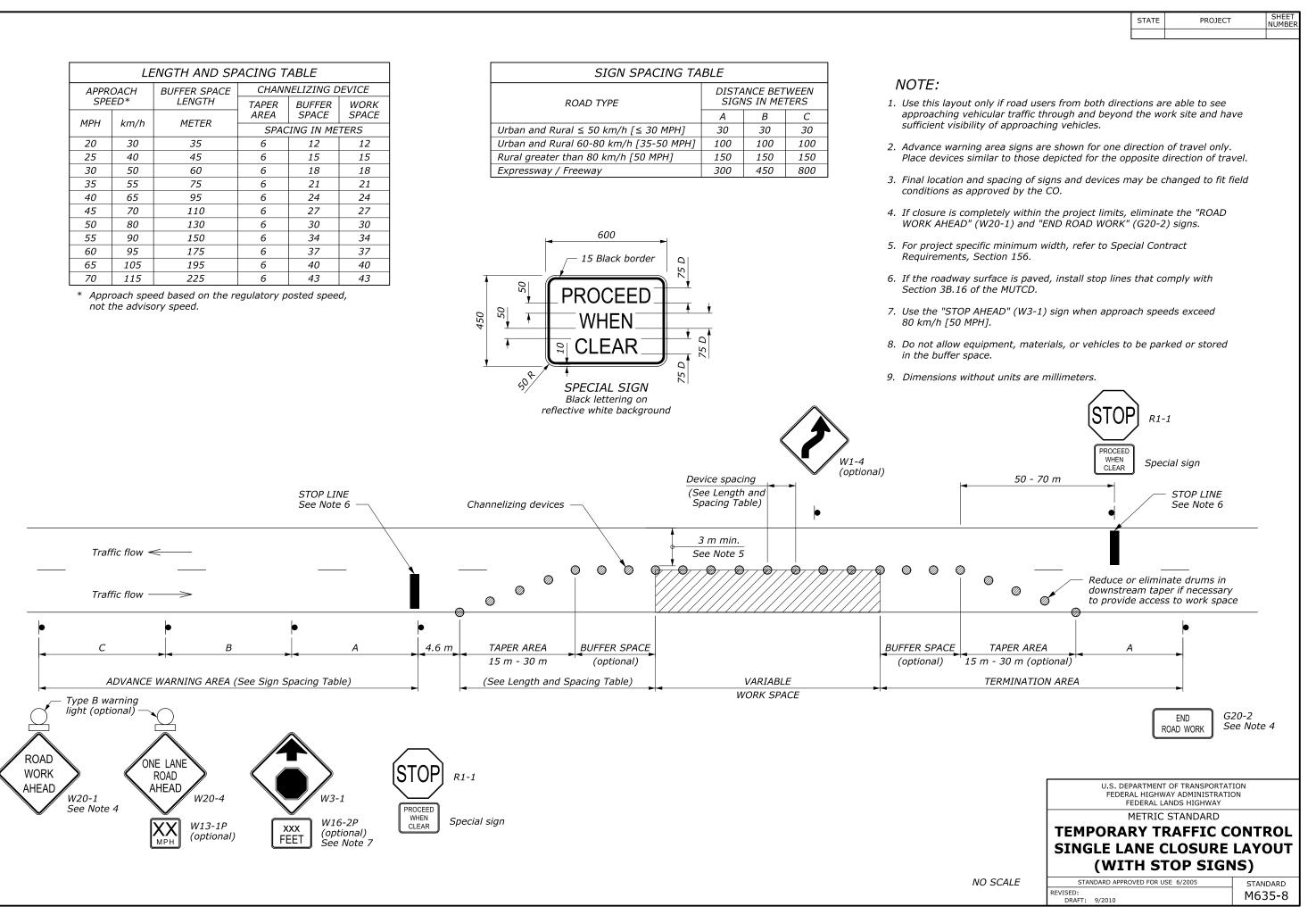
LENGTH AND SPACING TABLE								
APPR	ОАСН	BUFFER SPACE	CHANNELIZING DEVICE					
SPE	ED*	LENGTH	TAPER	BUFFER	WORK			
MPH	km/h	METER	AREA	SPACE	SPACE			
		TIETER	SPAC	ING IN ME	TERS			
20	30	35	6	12	12			
25	40	45	6	15	15			
30	50	60	6	18	18			
35	55	75	6	21	21			
40	65	95	6	24	24			
45	70	110	6	27	27			
50	80	130	6	30	30			
55	90	150	6	34	34			
60	95	175	6	37	37			
65	105	195	6	40	40			
70	115	225	6	43	43			

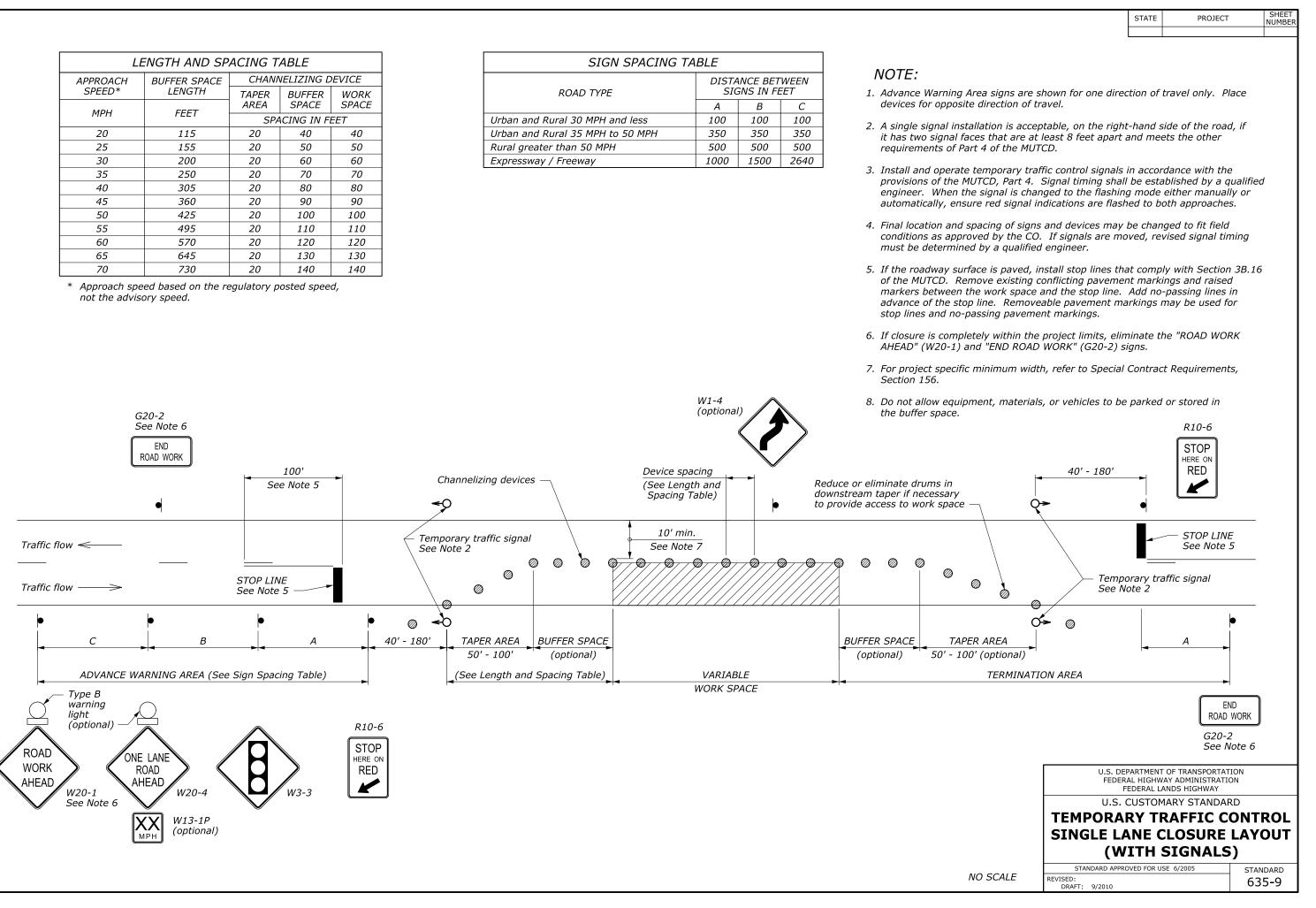
	BLE					
ROAL) TYPE		NCE BET NS IN ME			
Urban and Rural ≤ !	50 km/h [≤ 30 MPH]	30	30	30		
Urban and Rural 60	-80 km/h [35-50 MPH]	100	100	100		
Rural greater than 8	30 km/h [50 MPH]	150	150	150		
Expressway / Freew	'ay	300	450	800		

- of the MUTCD.

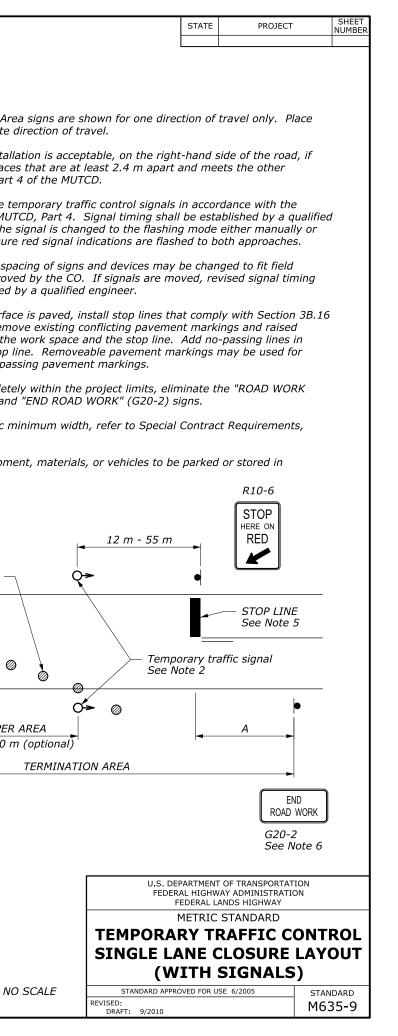








Г		1.6	ENGTH AND SP		ABIE		SIGN SPACING TABL	F			
-	APPR		BUFFER SPACE		NELIZING E	DEVICE		DISTAN	NCE BET	WEEN	NOTE:
-	SPE	ED*	LENGTH	TAPER AREA	BUFFER SPACE	WORK SPACE	ROAD TYPE		S IN ME B		1. Advance Warning Area sig devices for opposite direct
	MPH	km/h	METER		CING IN ME			30	30	30	
	20	30	35	6	12	12	Urban and Rural 60-80 km/h [35-50 MPH] 1	100	100	100	2. A single signal installation it has two signal faces tha
	25	40	45	6	15	15		150	150	150	requirements of Part 4 of
-	30	50	60	6	18	18	Expressway / Freeway 3	300	450	800	3. Install and operate tempo
-	35 40	55 65	75 95	6 6	21 24	21 24					provisions of the MUTCD,
-	40	70	110	6	24	24					engineer. When the signa automatically, ensure red
-	50	80	130	6	30	30					
	55	90	150	6	34	34					4. Final location and spacing
	60	95	175	6	37	37					conditions as approved by must be determined by a
_	65 70	105 115	195 225	6	40 43	40 43					<i>5. If the roadway surface is </i>
		pach spe he adviso G. So	ed based on the ro ory speed. 20-2 ee Note 6 END ROAD WORK			d,	W1 (op Device spacing	otional)			of the MUTCD. Remove e markers between the work advance of the stop line. stop lines and no-passing 6. If closure is completely wi AHEAD" (W20-1) and "EN 7. For project specific minim Section 156. 8. Do not allow equipment, r the buffer space.
			•	-	e Note 5	-	ing devices (See Length an Spacing Table)	nd	•	do	educe or eliminate drums in ownstream taper if necessary o provide access to work space
<i>Traffic flo Traffic flo</i>				STOP LIN See Note	lE 5	-	affic signal		Ø) 	
•	C ADV/	ANCE WA	B RNING AREA (See	• • Sign Spac	A ing Table)			ARIABLI			BUFFER SPACE TAPER ARE (optional) 15 m - 30 m (op
ROAD WORK AHEAD	Type B warning light (option) W20-1 See Not		LANE DAD IEAD W20-4 W13-1P (optional)	B	W3-3	R10-6 STOP HERE ON RED	WO	DRK SPA			

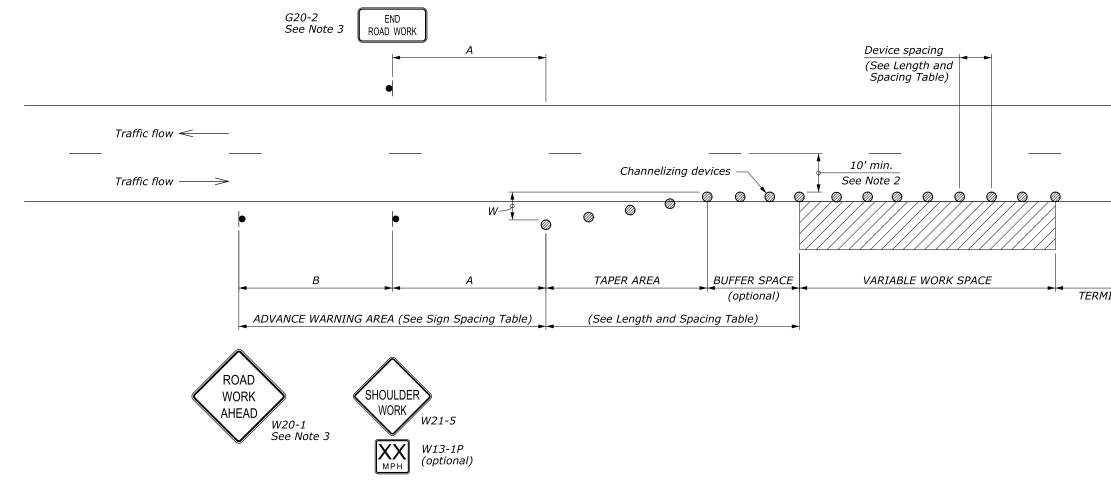


	LENGTH AND SPACING TABLE									
APPROACH	MINIMUM TAPER LENGTH**	BUFFER SPACE	CHANN	ELIZING	DEVICE					
SPEED*	PHINIPION TAPER LENGTH	LENGTH	TAPER	BUFFER	WORK					
мрн	FEET	FEET	AREA	SPACE	SPACE					
		1221	SPA	CING IN I	EET					
20	Shoulder taper formula:	115	20	40	40					
25	$L = \frac{WS^2}{180} \text{for } S \le 40 \text{ MPH}$	155	25	50	50					
30	$L = \frac{1}{180}$ 101 3 ≤ 40 MPH	200	30	60	60					
35	$L = \frac{WS}{2}$ for $S \ge 45$ MPH	250	35	70	70					
40	$L = \frac{1}{3}$ 101 3 2 43 MPH	305	40	80	80					
45	Where:	360	45	90	90					
50	L = Minimum length of taper	425	50	100	100					
55	W = Width of offset in feet	495	55	110	110					
60	S = Numerical value of posted speed	570	60	120	120					
65	limit or 85 percentile speed prior	645	65	130	130					
70	to work in miles per hour	730	70	140	140					

SIGN SPACING TABLE				
ROAD TYPE		ANCE BET GNS IN FL		
	A	В	С	
Urban and Rural 30 MPH and less	100	100	100	
Urban and Rural 35 MPH to 50 MPH	350	350	350	
Rural greater than 50 MPH	500	500	500	
Expressway / Freeway	1000	1500	2640	

* Approach speed based on the regulatory posted speed, not the advisory speed.

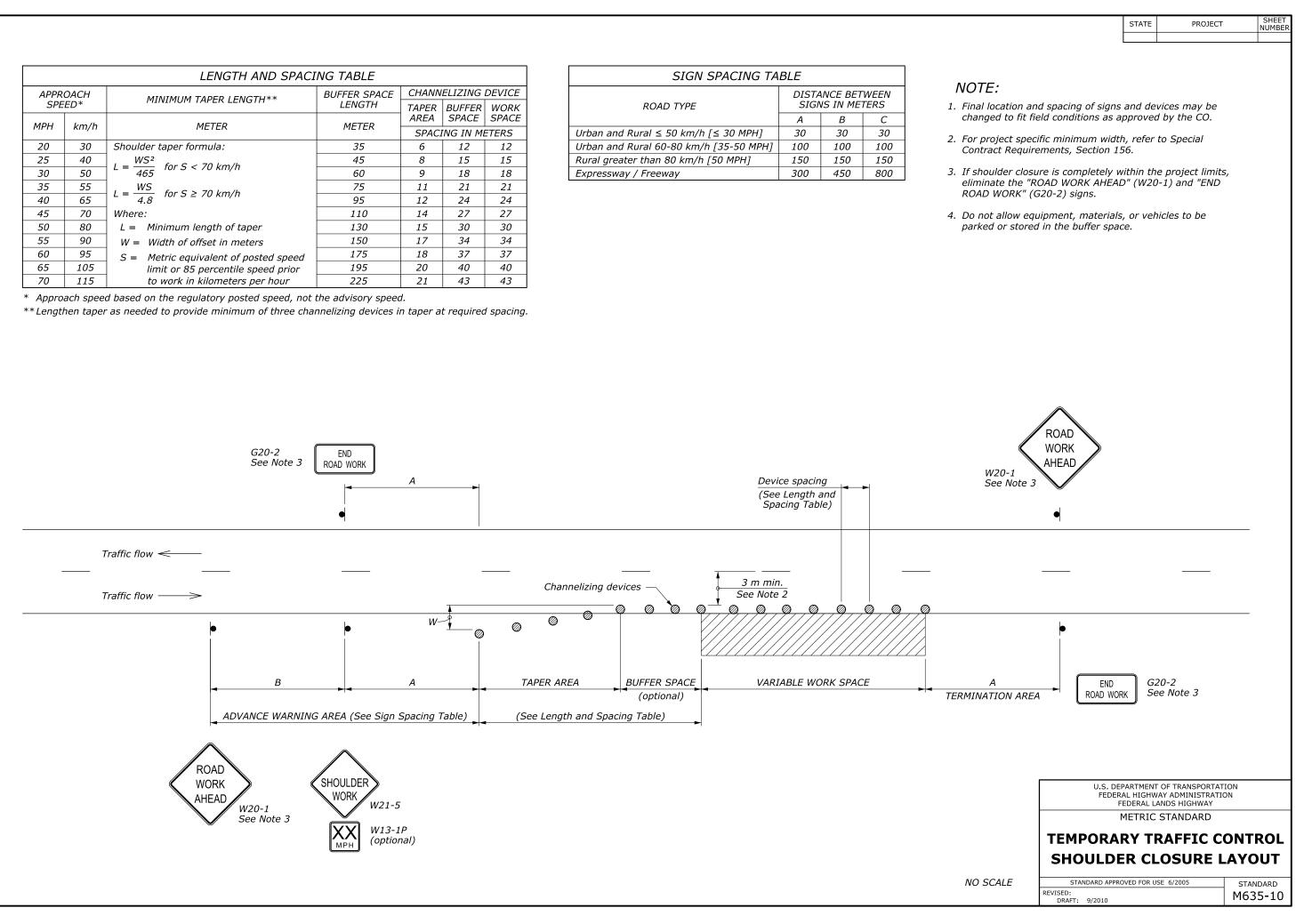
**Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing.



	STATE	PROJECT	SHEET
			NUMBER
NOTE:			
1. Final location and spacing of signs changed to fit field conditions as a			
2. For project specific minimum widt Contract Requirements, Section 1		to Special	
3. If shoulder closure is completely v eliminate the "ROAD WORK AHEA ROAD WORK" (G20-2) signs.			,
4. Do not allow equipment, materials parked or stored in the buffer spa		icles to be	
\wedge			
ROAD			
WORK AHEAD			
W20-1 See Note 3			
•			
•			
A END TERMINATION AREA ROAD WO	-	0-2 e Note 3	
		OF TRANSPORTATI	ON
FEDEF	RAL HIGHW	AY ADMINISTRATIO	
		ARY STANDAR	D
TEMPORA	RY TF	RAFFIC CO	ONTROL
TEMPORA SHOULDI			
	ER CL	OSURE L	

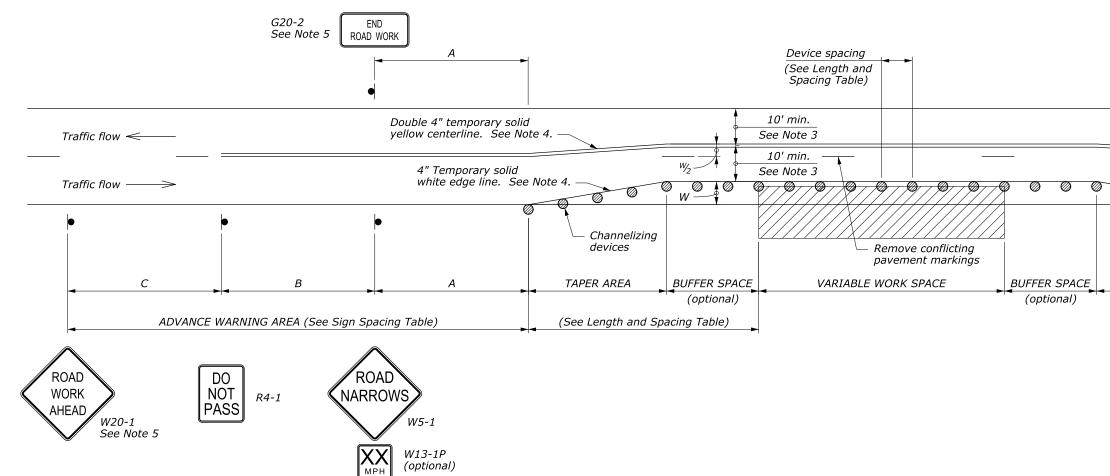
	LENGTH AND SPACING TABLE							
APPR	ОАСН	MINIMUM TAPER LENGTH**	BUFFER SPACE	CHANN	ELIZING	DEVICE		
SPE	ED*	MINIMUM TAPER LENGT	LENGTH	TAPER	BUFFER	WORK		
MPH	km/h	METER	METER	AREA	SPACE	SPACE		
				SPAC	ING IN MI	ETERS		
20	30	Shoulder taper formula:	35	6	12	12		
25	40	WS^2 for C < 70 km/b	45	8	15	15		
30	50	$L = \frac{WS^2}{465}$ for S < 70 km/h	60	9	18	18		
35	55	$L = \frac{WS}{4.8} \text{for } S \ge 70 \text{ km/h}$	75	11	21	21		
40	65	$L = \frac{1}{4.8} \text{for } S \ge 70 \text{ km/m}$	95	12	24	24		
45	70	Where:	110	14	27	27		
50	80	L = Minimum length of taper	130	15	30	30		
55	90	W = Width of offset in meters	150	17	34	34		
60	95	S = Metric equivalent of posted speed	175	18	37	37		
65	105	limit or 85 percentile speed prior	195	20	40	40		
70	115	to work in kilometers per hour	225	21	43	43		

SIGN SPACING TA	BLE		
ROAD TYPE		NCE BET NS IN ME	
	А	В	С
Urban and Rural ≤ 50 km/h [≤ 30 MPH]	30	30	30
Urban and Rural 60-80 km/h [35-50 MPH]	100	100	100
Rural greater than 80 km/h [50 MPH]	150	150	150
Expressway / Freeway	300	450	800



	LENGTH AND SPACE	NG TABLE			
APPROACH	MINIMUM TAPER LENGTH	BUFFER SPACE	CHANN	ELIZING	DEVICE
SPEED*		LENGTH	TAPER	BUFFER	
МРН	FEET		AREA	SPACE	SPACE
ויירו		FEET	SPACING IN FEET		
20	Shifting taper formula:	115	20	40	40
25	$L = \frac{WS^2}{120} \text{for } S \le 40 \text{ MPH}$	155	25	50	50
30	120 101 3 ≤ 40 MPH	200	30	60	60
35	$L = \frac{WS}{2}$ for $S \ge 45$ MPH	250	35	70	70
40	$\begin{bmatrix} L - \frac{1}{2} \end{bmatrix}$ 101 3 2 43 MPH	305	40	80	80
45	Where:	360	45	90	90
50	L = Minimum length of taper	425	50	100	100
55	W = Width of offset in feet	495	55	110	110
60	S = Numerical value of posted speed	570	60	120	120
65	limit or 85 percentile speed prior	645	65	130	130
70	to work in miles per hour	730	70	140	140

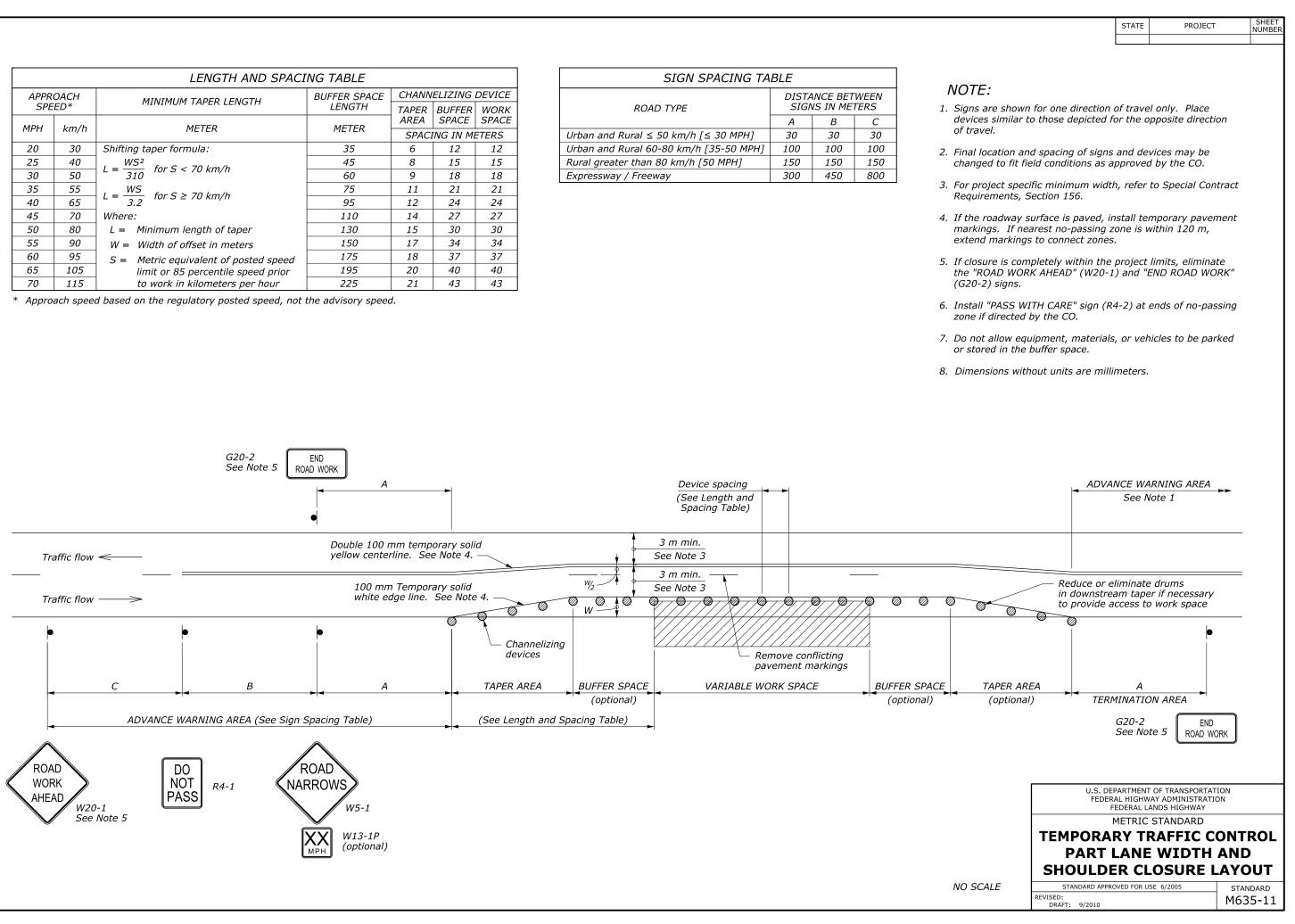
ROAD TYPEDISTANCE BETWEEN SIGNS IN FEETABCUrban and Rural 30 MPH and less100100Urban and Rural 35 MPH to 50 MPH350350Rural greater than 50 MPH500500Expressway / Freeway10001500	ROAD TYPESIGNS IN FEEABUrban and Rural 30 MPH and less100Urban and Rural 35 MPH to 50 MPH350Rural greater than 50 MPH500	SIGN SPACING TA	ABLE			
Urban and Rural 30 MPH and less 100 100 100 Urban and Rural 35 MPH to 50 MPH 350 350 350 Rural greater than 50 MPH 500 500 500	Urban and Rural 30 MPH and less 100 100 Urban and Rural 35 MPH to 50 MPH 350 350 Rural greater than 50 MPH 500 500	ROAD TYPE				
Urban and Rural 35 MPH to 50 MPH 350 350 350 Rural greater than 50 MPH 500 500 500	Urban and Rural 35 MPH to 50 MPH 350 350 Rural greater than 50 MPH 500 500		A	В	С	
Rural greater than 50 MPH500500500500	Rural greater than 50 MPH500500	n and Rural 30 MPH and less	100	100	100	
	5	n and Rural 35 MPH to 50 MPH	350	350	350	
Expressway / Freeway 1000 1500 2640	Expressway / Freeway 1000 1500	l greater than 50 MPH	500	500	500	
		essway / Freeway	1000	1500	2640	



			STATE	PROJECT	SHEET NUMBER
NOTE	:				
	s similar to	for one direction those depicted			n
		l spacing of sign Id conditions as			
		ic minimum wid ection 156.	th, refer t	o Special Conti	ract
markin	gs. If nea	Irface is paved, i rest no-passing to connect zone	zone is w		ent
the "RC		oletely within the (AHEAD" (W20-			
	"PASS WI" directed b	TH CARE" sign (F y the CO.	R4-2) at e	nds of no-pass	ing
		ipment, material uffer space.	's, or vehi	cles to be park	ed
		ADVA	See No	RNING AREA	*
00			eam tapei	drums f necessary work space	
				•	
	APER ARE	A	A		
	(optional)	TER	MINATIO	N AREA	
			G20-2 See Not	e 5 ROAD WOR	RK
	-				
		FEDE	RAL HIGHWA	OF TRANSPORTATION Y ADMINISTRATION NDS HIGHWAY	
		U.S. TEMPORA		ARY STANDARI	
		PART	LANE	WIDTH /	AND
		STANDARD APPI			STANDARD
NO SCA	1LE	REVISED: DRAFT: 9/2010			635-11

	LENGTH AND SPACING TABLE									
APPR	OACH	MINIMUM TAPER LENGTH	BUFFER SPACE	CHANN	ELIZING	DEVICE				
SPE	ED*	MINIMON TAPER LENGTH	LENGTH	TAPER	BUFFER	WORK				
MPH	km/h	METER	METER	AREA	SPACE	SPACE				
	KIIIJII	METER		SPAC	ING IN MI	ETERS				
20	30	Shifting taper formula:	35	6	12	12				
25	40	$L = \frac{WS^2}{310} \text{for } S < 70 \text{ km/h}$	45	8	15	15				
30	50	$L = \frac{1}{310} 1013 < 70 \text{ km/m}$	60	9	18	18				
35	55	$L = \frac{WS}{3.2} \text{for } S \ge 70 \text{ km/h}$	75	11	21	21				
40	65	$L = \frac{1}{3.2} \text{IOF } S \ge 70 \text{ km/m}$	95	12	24	24				
45	70	Where:	110	14	27	27				
50	80	L = Minimum length of taper	130	15	30	30				
55	90	W = Width of offset in meters	150	17	34	34				
60	95	S = Metric equivalent of posted speed	175	18	37	37				
65	105	limit or 85 percentile speed prior	195	20	40	40				
70	115	to work in kilometers per hour	225	21	43	43				

SIGN SPACING TA	RIF		
ROAD TYPE	DISTA	ANCE BET	
	A	В	С
Urban and Rural ≤ 50 km/h [≤ 30 MPH]	30	30	30
Urban and Rural 60-80 km/h [35-50 MPH]	100	100	100
Rural greater than 80 km/h [50 MPH]	150	150	150
Expressway / Freeway	300	450	800

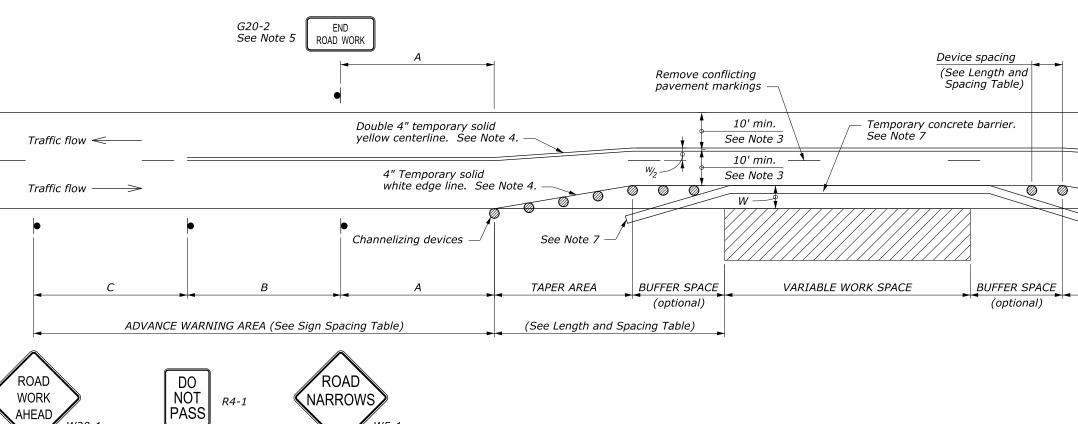


	LENGTH AND SPACE	ING TABLE			
APPROACH	MINIMUM TAPER LENGTH	BUFFER SPACE	CHANN	ELIZING	DEVICE
SPEED*	MINIMOM TAPER LENGTT	LENGTH	TAPER	BUFFER	
МРН	FEET	FEET	AREA	SPACE	SPACE
PIETI			SPACING IN FEET		
20	Shifting taper formula:	115	20	40	40
25	$L = \frac{WS^2}{120} \text{for } S \le 40 \text{ MPH}$	155	25	50	50
30	$L = \frac{120}{120}$ 101 3 ≤ 40 MPH	200	30	60	60
35	$L = \frac{WS}{2}$ for $S \ge 45$ MPH	250	35	70	70
40	$\begin{bmatrix} L - \frac{1}{2} \end{bmatrix}$ 101 3 2 43 MPH	305	40	80	80
45	Where:	360	45	90	90
50	L = Minimum length of taper	425	50	100	100
55	W = Width of offset in feet	495	55	110	110
60	S = Numerical value of posted speed	570	60	120	120
65	limit or 85 percentile speed prior	645	65	130	130
70	to work in miles per hour	730	70	140	140

ROAD TYPEDISTANCE BETWEEN SIGNS IN FETABCUrban and Rural 30 MPH and less100100Urban and Rural 35 MPH to 50 MPH350350Rural greater than 50 MPH500500Expressway / Freeway10001500	ROAD TYPE SIGNS IN FET A B C Urban and Rural 30 MPH and less 100 100 Urban and Rural 35 MPH to 50 MPH 350 350 Rural greater than 50 MPH 500 500 500	SIGN SPACING TA	ABLE		
Urban and Rural 30 MPH and less 100 100 100 Urban and Rural 35 MPH to 50 MPH 350 350 350 Rural greater than 50 MPH 500 500 500	Urban and Rural 30 MPH and less 100 100 100 Urban and Rural 35 MPH to 50 MPH 350 350 350 Rural greater than 50 MPH 500 500 500	ROAD TYPE			
Urban and Rural 35 MPH to 50 MPH 350 350 350 Rural greater than 50 MPH 500 500 500	Urban and Rural 35 MPH to 50 MPH 350 350 350 Rural greater than 50 MPH 500 500 500		A	В	С
Rural greater than 50 MPH500500500	Rural greater than 50 MPH500500500	Urban and Rural 30 MPH and less	100	100	100
5	5	Urban and Rural 35 MPH to 50 MPH	350	350	350
Expressway / Freeway 1000 1500 2640	Expressway / Freeway 1000 1500 2640	Rural greater than 50 MPH	500 500 500		
		Expressway / Freeway	1000	1500	2640

W20-1 See Note 5





W5-1

W13-1P (optional)

XX MPH

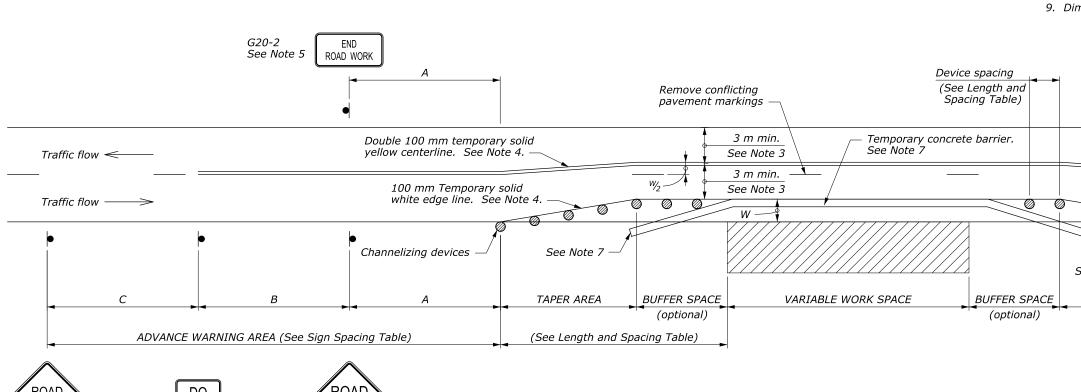
			STATE	PROJECT	SHEET NUMBER
	NOTE:				
1.	Signs are shown for one did devices similar to those dep of travel.				n
2.	Final location and spacing of changed to fit field condition				
З.	For project specific minimu Requirements, Section 156		, refer	to Special Cont	tract
4.	If the roadway surface is p markings. If nearest no-pa extend markings to connec	assing zo	one is v		ient
5.	<i>If closure is completely wit. the "ROAD WORK AHEAD" (G20-2) signs.</i>				
6.	Install "PASS WITH CARE" zone if directed by the CO.	sign (R4	4-2) at (ends of no-pass	sing
7.	<i>Place the barrier according Guide. Terminate barrier e protect the ends of the bar Include reflectors on barrie</i>	ends out rier with	side the n a cras	e clear zone or h cushion.	ign
8.	Do not allow equipment, m or stored in the buffer spac		, or veh	icles to be parl	<ed< td=""></ed<>
->		ADVAI	NCE WA See N	RNING AREA	••
-(in do		am tape	o drums er if necessary o work space	
/				•	
	See Note 7				
CE	TAPER AREA	TFRN	A	N AREA	
	(optional)		G20-2 See No	END	
				te 5 ROAD WO	
		FEDERA	AL HIGHW	OF TRANSPORTATI AY ADMINISTRATIO	
	ТЕМР	U.S. (CUSTON	ARY STANDAR	
	SHO		R CL	WIDTH A OSURE L RARY BA	AND AYOUT BRIER
		DARD APPRO			STANDARD
		9/2010			055-12

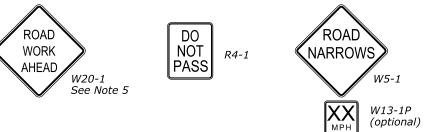
r									
	LENGTH AND SPACING TABLE								
APPR	ОАСН	MINIMUM TAPER LENGTH	BUFFER SPACE	CHANN	ELIZING	DEVICE			
SPE	ED*		LENGTH	TAPER	BUFFER	WORK			
МРН	km/h	METER	METER	AREA	SPACE	SPACE			
1.11.11	Killyll	METER	HETER	SPAC	ING IN MI	ETERS			
20	30	Shifting taper formula:	35	6	12	12			
25	40	$L = \frac{WS^2}{310} \text{for } S < 70 \text{ km/h}$	45	8	15	15			
30	50	$L = \frac{1}{310} 1013 < 70 \text{ km/m}$	60	9	18	18			
35	55	$L = \frac{WS}{3.2} \text{for } S \ge 70 \text{ km/h}$	75	11	21	21			
40	65	$L = \frac{1}{3.2} \text{for } S \ge 70 \text{ km/m}$	95	12	24	24			
45	70	Where:	110	14	27	27			
50	80	L = Minimum length of taper	130	15	30	30			
55	90	W = Width of offset in meters	150	17	34	34			
60	95	S = Metric equivalent of posted speed	175	18	37	37			
65	105	limit or 85 percentile speed prior	195	20	40	40			
70	115	to work in kilometers per hour	225	21	43	43			

				_
SIGN SPACING TA	BLE			
ROAD TYPE	WEEN TERS	1. Sig		
	Α	В	С	dei
Urban and Rural ≤ 50 km/h [≤ 30 MPH]	30	30	30	ofi
Urban and Rural 60-80 km/h [35-50 MPH]	100	100	100] 2. Fin
Rural greater than 80 km/h [50 MPH]	150	150	150	cha
Expressway / Freeway	300	450	800	
				3. For Red
				4. If t ma ext
				5. If c

7. Pla Gui pro

8. Do or

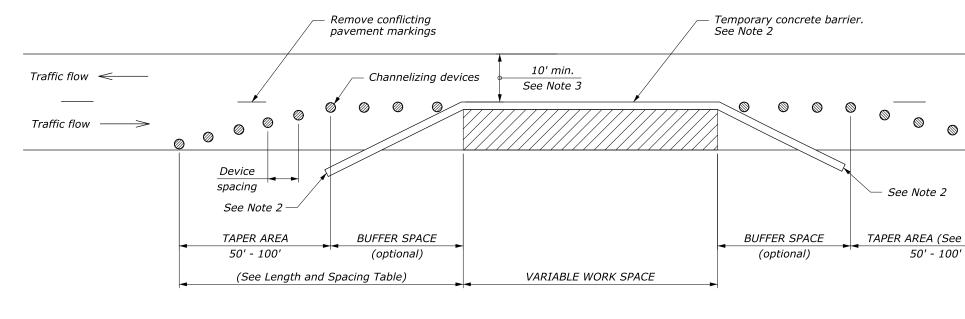




				STATE	PROJECT	SHEE
						NUMBE
I	NOTE:					
1.	Signs are shown devices similar to of travel.					on
2.	Final location and changed to fit fie					
3.	For project speci Requirements, S			n, refer	to Special Con	itract
4.	<i>If the roadway su markings. If nea extend markings</i>	rest no-	passing z	one is v		ment
5.	If closure is com the "ROAD WORI (G20-2) signs.					
6.	Install "PASS WI zone if directed b			4-2) at (ends of no-pas	ssing
7.	Place the barrier Guide. Terminat protect the ends Include reflectors	e barrier of the ba	ends out arrier with	side the h a cras	e clear zone or h cushion.	
8.	Do not allow equ or stored in the b	• •		, or veh	iicles to be par	rked
9.	Dimensions with	out units	are millii	neters.		
			ADVA	NCE WA See N	RNING AREA lote 1	
6		in		am tape	e drums er if necessary o work space	
/)		Þ	
	See Note 7					
CE	TAPER ARE	A	۹	A		
-	(optional)) -	TERM	1INATIC	ON AREA	
				G20-2 See No	te 5 ROAD WO	DRK
	[OF TRANSPORTAT	
					ANDS HIGHWAY	
		F SHC	PORAI PART I DULDE	RY TI _ANE R CL	RAFFIC C WIDTH OSURE L RARY BA	AND AYOUT
	NO SCALE		ANDARD APPRO			standard M635-12

LENGTH AND SPACING TABLE							
APPROACH	APPROACH BUFFER SPACE CHANNELIZING DEVICE						
SPEED*	LENGTH	TAPER AREA	BUFFER SPACE	WORK SPACE	CONCRETE BARRIER FLARE		
MPH	FEET	SPA	ACING IN F	EET	RATE		
20	115	20	40	40	1:8		
25	155	20	50	50	1:8		
30	200	20	60	60	1:8		
35	250	20	70	70	1:9		
40	305	20	80	80	1:10		
45	360	20	90	90	1:12		
50	425	20	100	100	1:14		
55	495	20	110	110	1:16		
60	570	20	120	120	1:16		
65	645	20	130	130	1:16		
70	730	20	140	140	1:16		

- 1. Install signs and Standard 635-6, devices may be c
- 2. Place barrier acco barrier ends outsi a crash cushion.
- 3. For project specif Section 156.
- 4. Place channelizing when access is no
- 5. Do not allow equi the buffer space.
- 6. Reduce or elimina provide access to

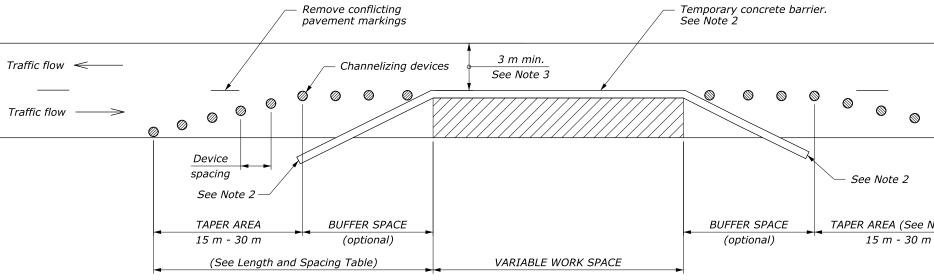


	STATE	DROJECT	SHEET
	STATE	PROJECT	NUMBER
other devices for single lane clo 7, 8, or 9. Final location and sp changed to fit field conditions as	bacing o	f signs and	
ording to the AASHTO Roadside ide the clear zone or protect the Include reflectors on barrier at	e ends o	of the barrier w	
fic minimum width, refer to Spec	cial Con	tract Requirem	ients,
g devices at downstream taper o ot needed.	during r	non-work hours	s or
ipment, materials, or vehicles to) be par	ked or stored i	'n
ate drums and barrier in downst work space.	ream ta	aper if necessa	ry to
Note 4)			
FEDER	AL HIGHW	OF TRANSPORTAT: AY ADMINISTRATIC ANDS HIGHWAY	
U.S. (CUSTOM	1ARY STANDAR	
TEMPORA SINGLE LA (WITH TE	ANE C	CLOSURE	LAYOUT
O SCALE REVISED:			standard 635-13
DRAFT: 9/2010			000-10

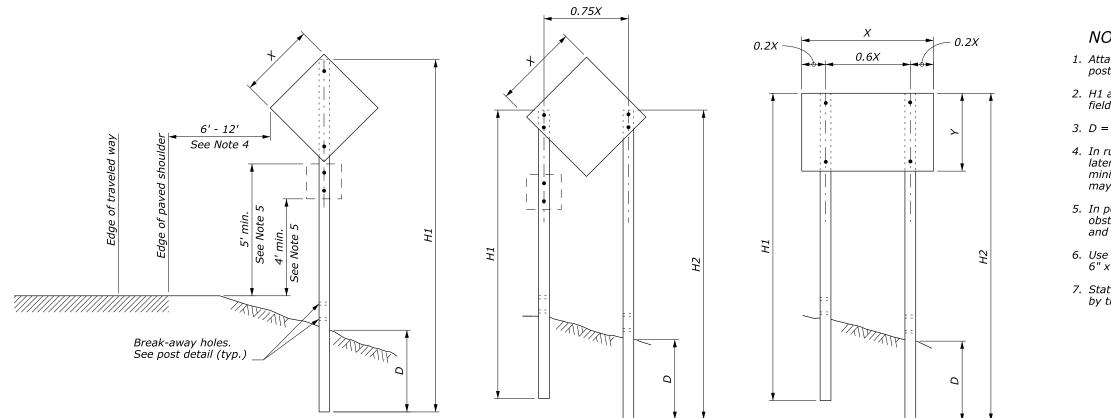
	LENGTH AND SPACING TABLE								
APPR		BUFFER SPACE	CHANI	VELIZING D	DEVICE	CONCRETE			
SPE	ED*	LENGTH	TAPER AREA	BUFFER SPACE	WORK SPACE	BARRIER FLARE			
MPH	km/h	METER		SPACE		RATE			
20	30	35	6	12	12	1:8			
25	40	45	6	15	15	1:8			
30	50	60	6	18	18	1:8			
35	55	75	6	21	21	1:9			
40	65	95	6	24	24	1:10			
45	70	110	6	27	27	1:12			
50	80	130	6	30	30	1:14			
55	90	150	6	34	34	1:16			
60	95	175	6	37	37	1:16			
65	105	195	6	40	40	1:16			
70	115	225	6	43	43	1:16			

NOTE: 1. Install signs and o Standard M635-6, devices may be ch

- 2. Place barrier acco barrier ends outsi a crash cushion.
- *3. For project specifi* Section 156.
- *4. Place channelizing when access is no*
- 5. Do not allow equip the buffer space.
- *6. Reduce or elimina provide access to*



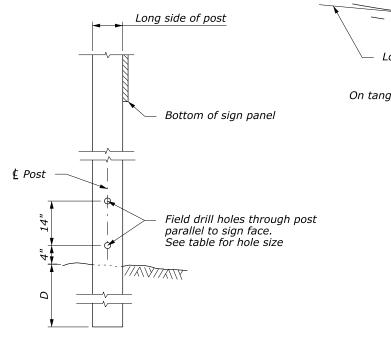
		STATE	PROJECT	SHEET NUMBER
7, 8, or 9.	for single lane Final location a field conditions	nd spacing of	signs and	
e the clear .	AASHTO Roads zone or protect ctors on barrie	the ends of the		
minimum v	width, refer to s	Special Contra	ct Requirement	s,
devices at o needed.	downstream tap	per during non	-work hours or	
nent, mate	rials, or vehicle	es to be parked	d or stored in	
e drums an vork space.	d barrier in dov	vnstream tape	r if necessary t	o
©				
ote 4)				
		DEPARTMENT OF DERAL HIGHWAY FEDERAL LAND		
	TEMPOP	METRIC ST		
			VFFIC CON	
			ARY BARI	
	1 (
SCALE	STANDARD	APPROVED FOR USE	5/2005	TANDARD



SINGLE POST SIGN

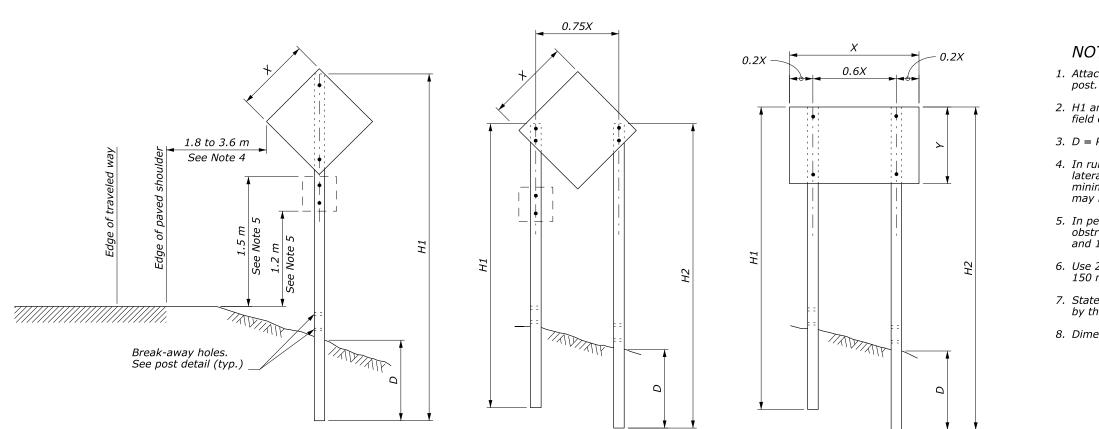
TWO POST SIGN

WOOD POST SELECTION TABLE							
WIDTH "X"	AREA (SQFT)	NUMBER OF POSTS	POST SIZE (INCH)	D (INCH)	HOLE SIZE (INCH)		
Diamond ≤ 36"	< 10	1	4 x 4	36	0		
Other Shapes $\leq 48''$		1	4 x 6	48	1.5		
Diamond ≤ 48"	10 - 20	1	6 x 6	48	2		
Diamond ≤ 48"	10 - 20	2	4 x 4	36	0		
Other Shapes $\leq 12'$	20 - 50	2	4 x 6	48	1.5		
> 13'	50 - 65	2	6 x 6	48	2		
12' - 16'	50 - 65	3	4 x 6	48	1.5		
> 17'	65 - 95	4	4 x 6	48	2		
> 30'	65 - 95	3	6 x 6	48	2		



POST DETAIL

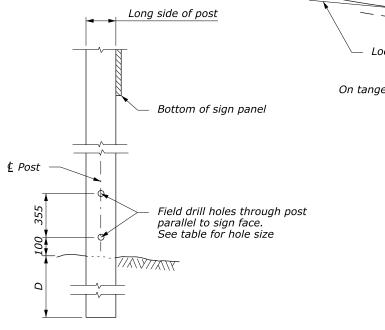
		STATE	PROJECT	SHEET NUMBER
				I
TE.				
TE:	c with a minin	num of 2 - $\frac{1}{4}$ " c	lia holts por	
in sign panels	s wiui a iiiiiiii		na. Donts per	
nd H2 = Ove conditions.	rall post lengt	h. Select post	lengths to fi	t
Post embedn	ent depth for	average soil co	onditions.	
al offset of 2'	' may be used	tance is limited, '. In urban area hind the face of	as, a	
ructed, use 7	' minİmum ma	reas where the ounting height i iht for secondai	for main sign	1
7' minimum s 6" or larger.	pacing betwe	en posts for sig	n posts	
e standards n ne CO.	nay be used a	s an alternative	e if approved	1
	90°			
•				
				-
cal tangent			93°	
nt alignment	93°	200'		
STON T	NCTALL	ATION AN		
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		S. DEPARTMENT OF	ADMINISTRATIO	
	i	FEDERAL LAND		 D
		RARY TRA		
		GN INST		
	31	WOOD		713
	STANDAP			CTANDARD
O SCALE	REVISED:		,	standard 635-14
	DRAFT: 9/20	11		000 II



SINGLE POST SIGN

TWO POST SIGN

WOOD POST SELECTION TABLE							
WIDTH "X"	AREA (m2)	NUMBER OF POSTS	POST SIZE (mm)	D (mm)	HOLE SIZE (mm)		
Diamond ≤ 915 mm	< 0.9	1	100 x 100	900	0		
Other Shapes ≤ 1220 mm	< 0.5	1	100 x 150	1200	40		
Diamond ≤ 1220 mm	0.9 - 1.9	1	150 x 150	1200	50		
Diamond ≤ 1220 mm	0.9 - 1.9	2	100 x 100	900	0		
Other Shapes $\leq 3.7 \text{ m}$	1.9 - 4.6	2	100 x 150	1200	40		
> 4 m	4.6 - 6.0	2	150 x 150	1200	50		
3.7 m - 4.9 m	4.6 - 6.0	3	100 x 150	1200	40		
> 5 m	6.0 - 8.9	4	100 x 150	1200	50		
> 9 m	6.0 - 8.9	3	150 x 150	1200	50		



POST DETAIL

		STATE	PROJECT	SHEET NUMBER
				I
TE:				
ch sign panels	with a minimum	of 2 - 6	25 mm Ø bolt	s per
nd H2 = Overa conditions.	all post length. S	Select pos	st lengths to f	ĩt
Post embedme	ent depth for ave	rage soil	conditions.	
al offset of 600	re lateral distance 0 mm may be use fset of 300 mm l	ed. In ui	rban areas, a	
ructed, use 2.1	ions, or in areas 1 m minimum mo m mounting heig	ounting h	eight for mair	ı sign
2.1 m minimui mm x 150 mm	m spacing betwee n or larger.	en posts	for sign posts	:
e standards ma ne CO.	ay be used as an	alternati	ive if approve	d
ensions withou	t units are millim	ieters.		
-				
9	0°			
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cal tangent				
			93°	
ent alignment s	93°	60 m		
SIGN TA	ISTALLATI	ΟΝ Δ	NGLE	
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			AY ADMINISTRATION NDS HIGHWAY	אור
			STANDARD	
	TEMPORA			
				UN
			POSTS	
D SCALE	STANDARD APPR	UVED FOR US	E 6/2005	standard M635-14
	DRAFT: 9/2011			11033-14