STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) & 200(1)	Q1	Q24

R4-1
24"x30"
R4-1-A
48"x60"

R4-2
24"x30"
R4-2-A
48"x60"

R11-2
48"x30"

W1-6
48"x24"

W3-4
48"x48"

W5-1
36"x36"
W5-1-A
48"x48"

W8-12
48"x48"

W13-1(25)
18"x18"
W13-1(25)-A
24"x24"

W14-3
36"x48"x48"
W14-3-A
48"x64"x64"

W20-1
36"x36"

W20-2
36"x36"

W20-3
36"x36"

W20-4
36"x36"

W20-5(L)
36"x36"

W20-7a
36"x36"
W16-2
24"x18"

W21-1
36"x36"

W21-1a
36"x36"

W21-2
30"x30"

W21-3
36"x36"

W21-5
30"x30"

W21-6
30"x30"

W22-1
48"x48"

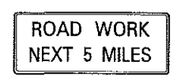
W22-2
42"x36"

W22-3
42"x36"

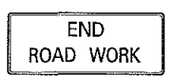
W8-6
30"x30"

GENERAL NOTES

1. Sign details shall conform to the latest editions of FHWA publications "Manual on Uniform Traffic Control Devices for Streets and Highways," "Standard Alphabets for Highway Signs," and "Standard Highway Signs," and as amended.
2. All construction signs shall be reflectorized.
3. All construction signs shall have 3/8" bolt holes drilled at appropriate loactions.
4. Numerals in ( ) indicate numerals to be inserted for sign message. (R) or (L) indicates right or left.
5. At the beginning of the project and at the end of the project, the Contractor erects advance construction warning signs as indicated on the plans or as directed by the Contracting Officer for the duration of the highway project and is maintained by the Contractor. These signs are placed in addition to the required traffic control signs called for in Section 635-Traffic Control. The advance construction warning signs are new and become the property of the State. The Contractor removes, cleans, and delivers the signs and posts to the Hilo District Baseyard or as directed by the Contracting Officer at the end of the project.



G20-1(5)
36"x18"



G20-2
36"x18"

G20-4
36"x18"

M4-9(R)
30"x24"

M4-10(R)
48"x18"

7/1/87	Revised Sign CW21-1	
DATE	REVISION	APP'D.

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The work was prepared by me or under my supervision and construction of this project will be under my supervision.

Expiration Date of License 4/06

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

SPECIAL 635 (HDOT STD TE-08)

CONSTRUCTION SIGNS

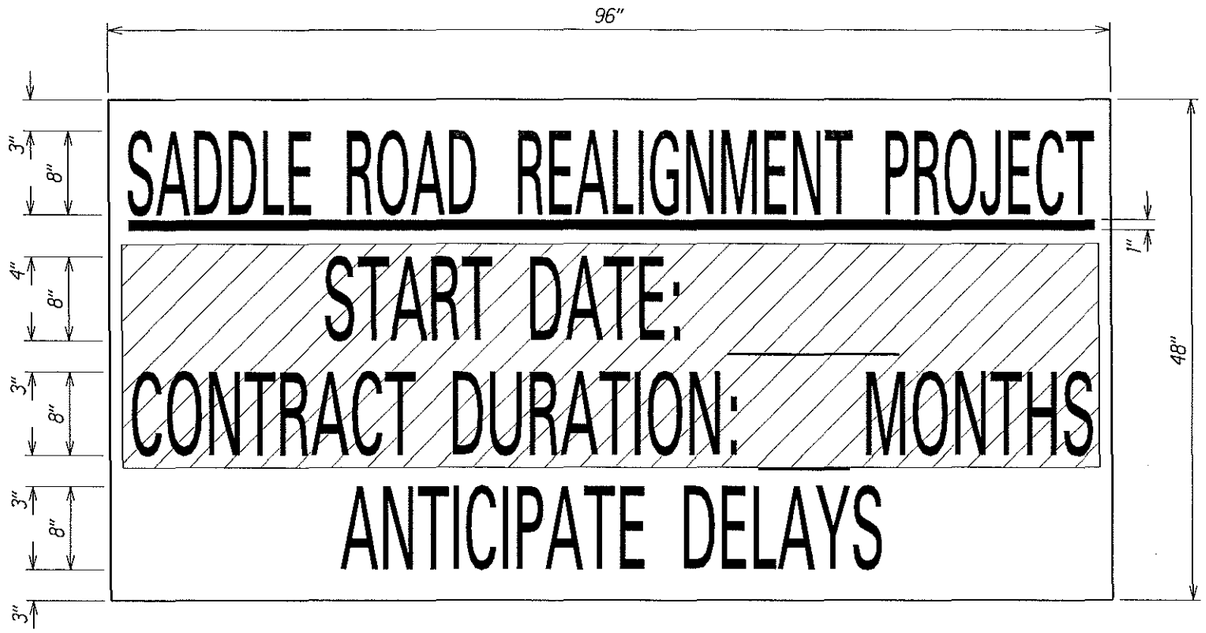
Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

Q1

M:/Mproj/Lennie/205009/sheets/shtq001.dgn

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) # 200(1)	Q2	Q24



M.P. 18.9 TO M.P. 37

PLAQUE

Sign will be existing.
Use plaques to modify sign.

Width	Height	Material	Corner Radius	Border Width	Single/Dbl Sided
96"	48"	J0 Aluminum	STD		Single Sided
Font Type	Font Size	Font Color	Background	Quantity	Sign Type
HWYGOTHIC "D"	8"	NR Black	HI Orange	2	

NOTE:

Confirm with CO before sign modification. Post one sign at the Saddle Road-Hwy 190 junction and one sign at MP7 of the Saddle Road. Face both signs to warn Mauna Kea-bound traffic. Work paid for under item number 63542.

SADDLE ROAD REALIGNMENT PROJECT CONSTRUCTION SIGN

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FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

SPECIAL 635
SADDLE ROAD CONSTRUCTION SIGN

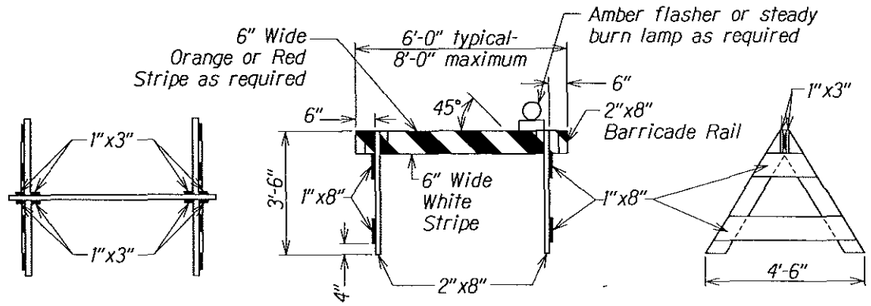
Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

M:/Mproj/Lennie/205009/sheets/shtq002.dgn

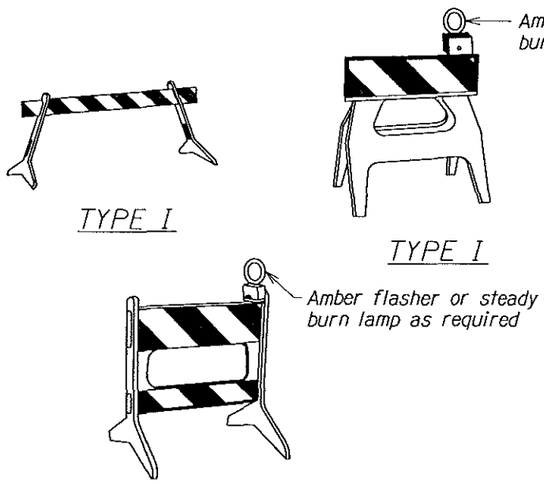
Q2

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 8(3) # 200(1)	Q3	Q24



TYPE I BARRICADE

Scale: ½"=1'-0"



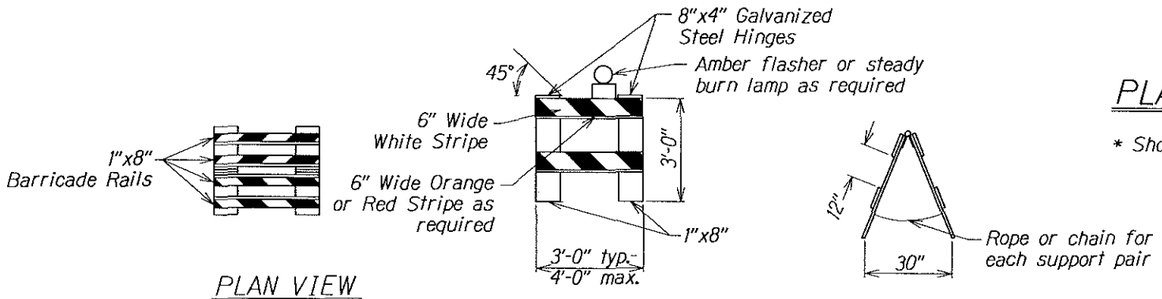
PLASTIC MOLDED BARRICADE OPTIONS*

Not to Scale

* Shop Drawings must be submitted for approval.

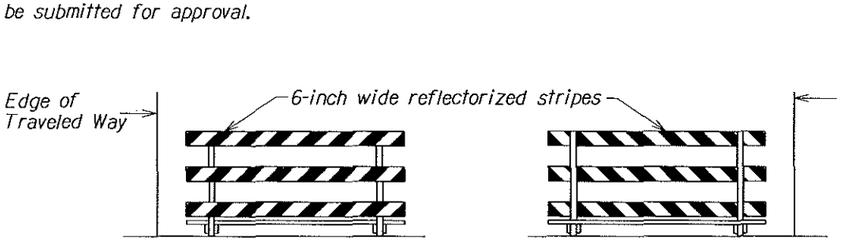
GENERAL NOTES

1. The front and back faces of each barricade rail shall be reflectorized with stripes sloping downward toward the same side (traveled way) of each barricade.
2. Contractor may submit alternate barricade designs for approval.
3. Sandbags or other approved weights shall not be placed on top of any striped rail.
4. The Contractor is directed to Section 635.



TYPE II BARRICADE

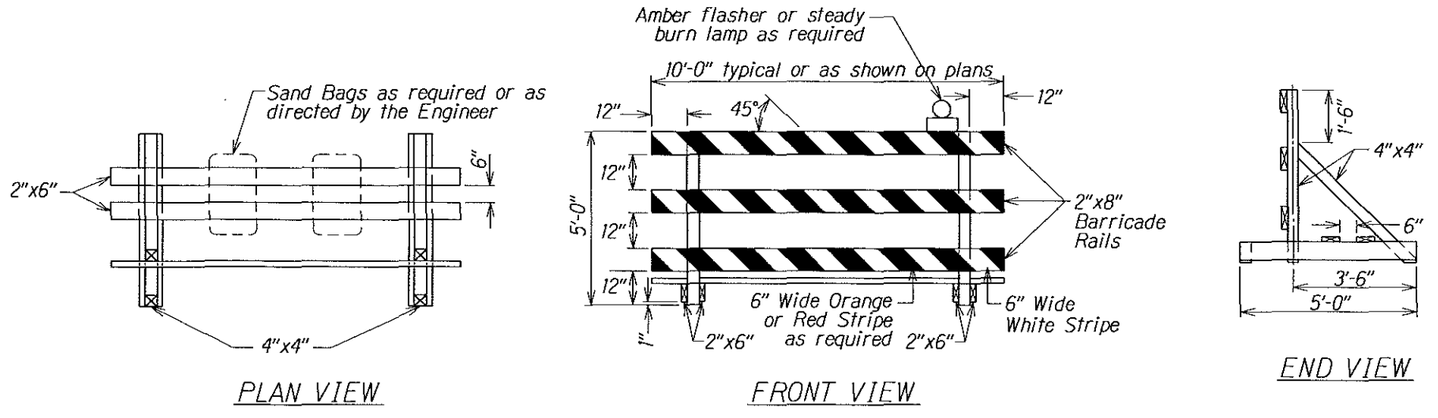
Scale: ½"=1'-0"



TYPICAL BARRICADE STRIPING DETAILS**

Not to Scale

** Similar for Types I & II



TYPE III BARRICADE

Scale: ½"=1'-0"

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FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

SPECIAL 635 (HDOT STD TE-66)

BARRICADES

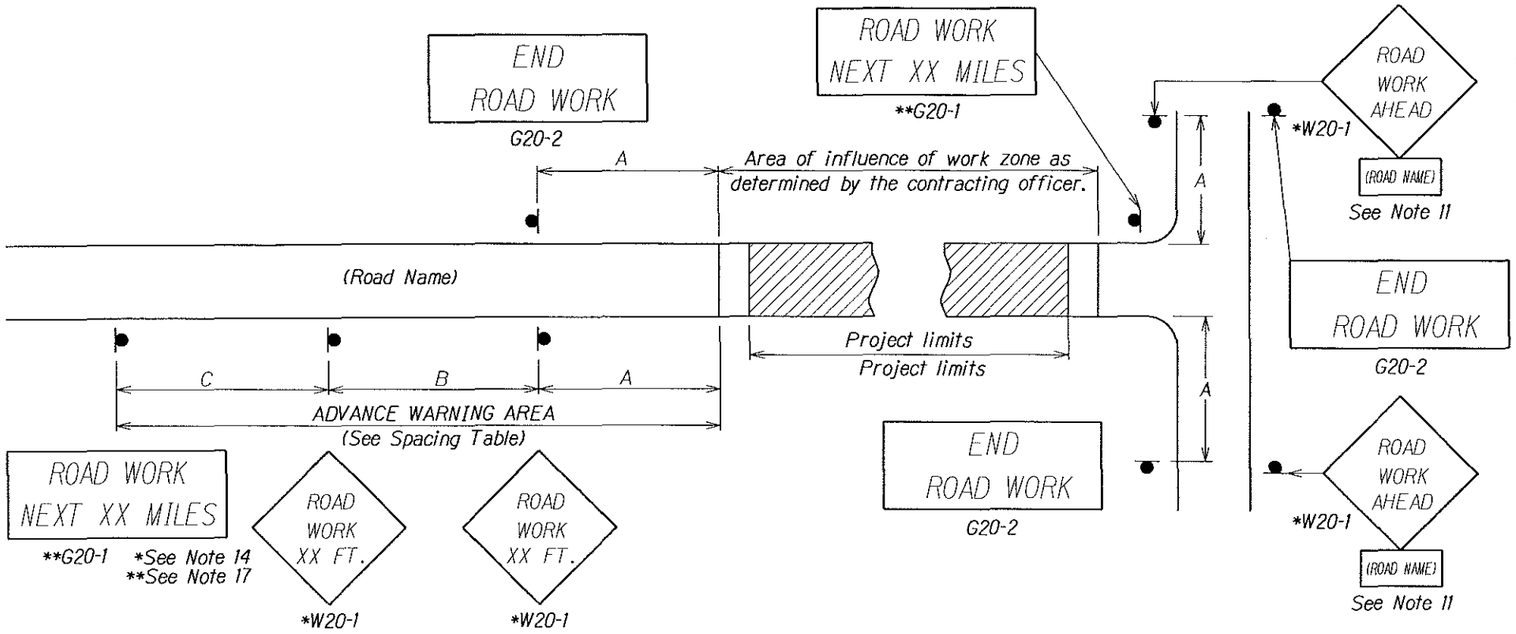
Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

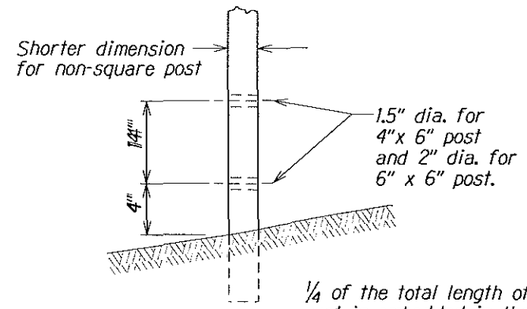
Q3

M:/Mproj/Lennie/205009/sheets/shtq003.dgn

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) # 200(1)	Q4	Q24

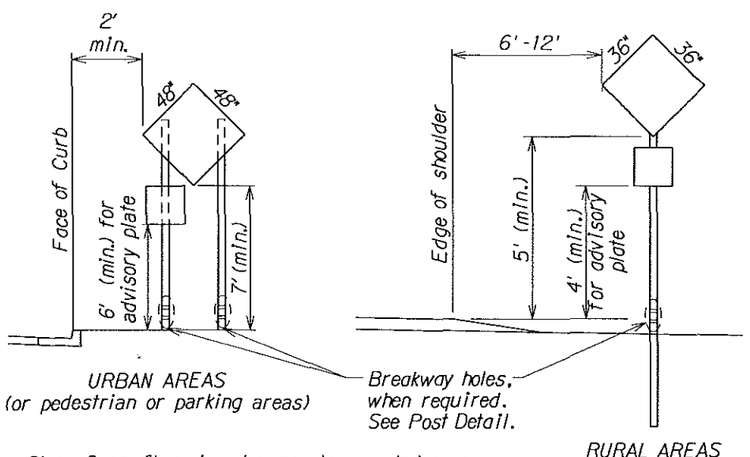


SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 mph and less	100	100	100
Urban 45 mph and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640



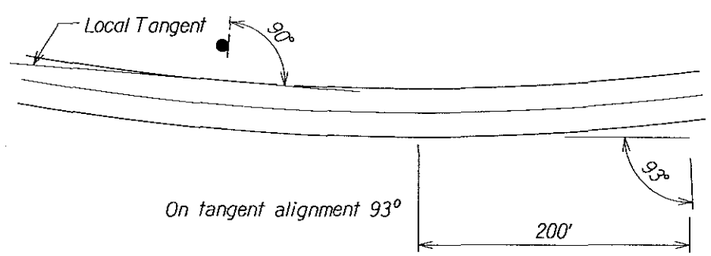
¼ of the total length of the sign post is embedded in the ground.

POST DETAILS



Signs 9 sq. ft. and under may be mounted on a single 4" x 4" wooden post. Signs wider than 36" or signs with an area over 9 sq. ft., use double wooden posts. Steel may be used in lieu of wooden posts (see note #8)

SIGN PLACEMENT



SIGN INSTALLATION ANGLE

NOTE:

1. Erect all advance warning signs before construction work is started.
2. Where advance warning signs, placed as shown, interfere with permanent signs, locate the warning signs as determined by the CO for best results. Vary messages as required.
3. Use Type III or higher type sheeting on all signs and channelizing devices. Warning lights are not normally needed on devices with Type III or higher type sheeting, but may be beneficial to attract the driver's attention in fog or other special conditions. When used, apply the appropriate type of warning light (Type A, B, C, or D) per the MUTCD Section.
4. When established in contract, furnish beacons with appropriate lens color as specified in the MUTCD, Section 4K.
5. Additional or different message signs may be required to fit the actual construction conditions.
6. Install advisory speed plates under the W-20 series warning signs as needed to indicate a maximum recommended speed through the construction area.
7. Ensure all wooden sign posts larger than 4" x 4" have breakaway holes as shown.
8. Ensure all sign supports exposed to impact by traffic meet the requirements of NCHRP-350 for crash worthiness.
9. Maintain two-way traffic during all non-work hours except as approved by the CO.
10. Do not store traffic control devices along the roadway when not in use. Cover post-mounted signs when not applicable.
11. If W20-1 is on a roadway other than that on which the actual construction work occurs, include a supplementary plaque indicating the name of the road the work is on.
12. If signing on a roadway under a jurisdiction other than the client agency, verify that an encroachment permit has been obtained.
13. Not all details shown on the traffic control plan sheets may be applicable to this project. The contractor may add or delete information and details in his traffic control plan as necessary to accommodate actual operations.
14. The message on the W20-1 signs may be 'ROAD WORK AHEAD' or may specify the distance to the work area in feet or in miles. Install at least two W20-1 signs in series for each main road approach.
15. When flagger warning sign series extend into project advance warning area, the second and third signs in the flagger series may be placed over the second and third signs in project advance warning series.
16. State standards may be used as an alternative if approved by the CO.
17. For work zones that are more than two miles in length, install the G20-1 sign. Show the distance on the G20-1 sign to the nearest whole mile. For work zones two miles or less in length, install a W20-1 sign in place of the G20-1.
18. If signs will be in place more than 72 consecutive hours, use ground-mounted post as shown.

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Licensed Professional Engineer
No. 8336-C
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Expiration Date of License 4/06

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

DETAIL C635-01
WORK ZONE TRAFFIC CONTROL ADVANCE SIGNING

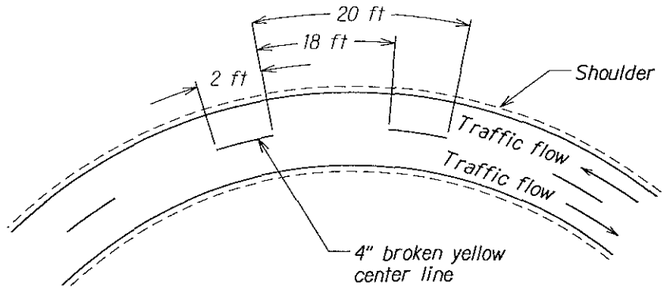
Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

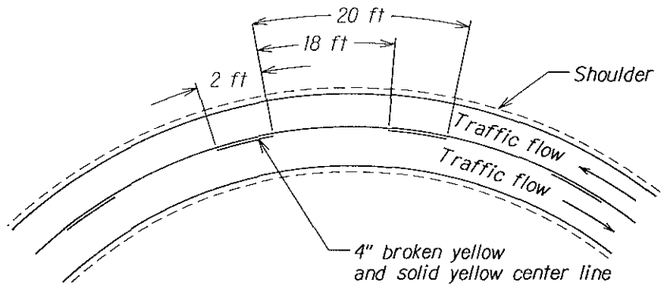
Q4

M:/Mproj/Lennie/205009/sheets/shtq004.dgn

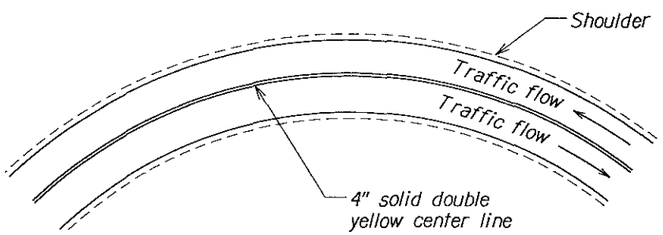
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) # 200(1)	Q5	Q24



DETAIL A1
Passing zone both directions
Two-way traffic

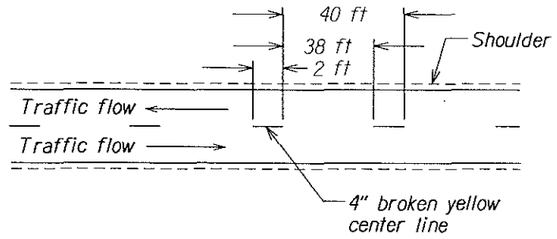


DETAIL A2
No passing zone one direction
Two-way traffic

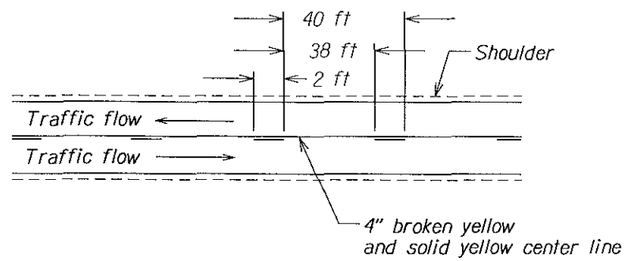


DETAIL A3
No passing zone both directions
Two-way traffic

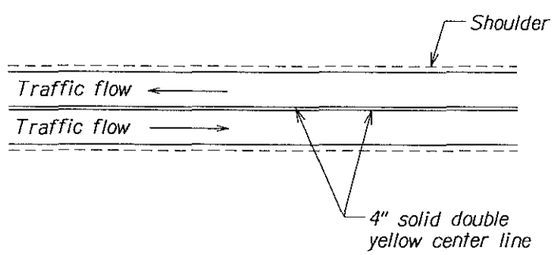
DETAIL A
Curves of <500 ft Radius



DETAIL B1
Passing zone both directions
Two-way traffic



DETAIL B2
No Passing zone one direction
Two-way traffic



DETAIL B3
No Passing zone both directions
Two-way traffic

DETAIL B
Tangents or Curves of ≥500 ft Radius

NOTE:

1. Use permanent striping layout as designated in the contract to determine no passing zones for each direction of travel.

2. To substitute raised pavement markers for lines, use the following patterns:
   2 ft broken line: two pavement markers spaced 2 ft apart followed by the gap shown based on curvature.
   Single solid line: pavement markers spaced on 10 ft centers.
   Double solid line: two pavement markers, side by side, spaced on 10 ft centers.

3. For ADT's of greater than 1000 and periods of 3 days or less, C635-03 may be used as an alternate to this detail. For ADT's of 1000 or less, C635-03 may be used as an alternate to this detail for the full 14 day temporary marking period.

4. If sections of severe curvature or restricted visibility dominate the construction area such that passing is inappropriate throughout the project, include Two-Way Traffic Sign (W6-3) with a supplemental plaque bearing the legend 'NO PASSING NEXT __ MILES' in the advance warning series at the beginning of the project.

BRUCE K. MEYERS
Licensed Professional Engineer
No. 8336-C
HAWAII, U.S.A.

The work was prepared by me or under my supervision and construction of this project will be under my supervision.

Expiration Date of License 4/06

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

DETAIL C635-02

TEMPORARY PAVEMENT MARKINGS

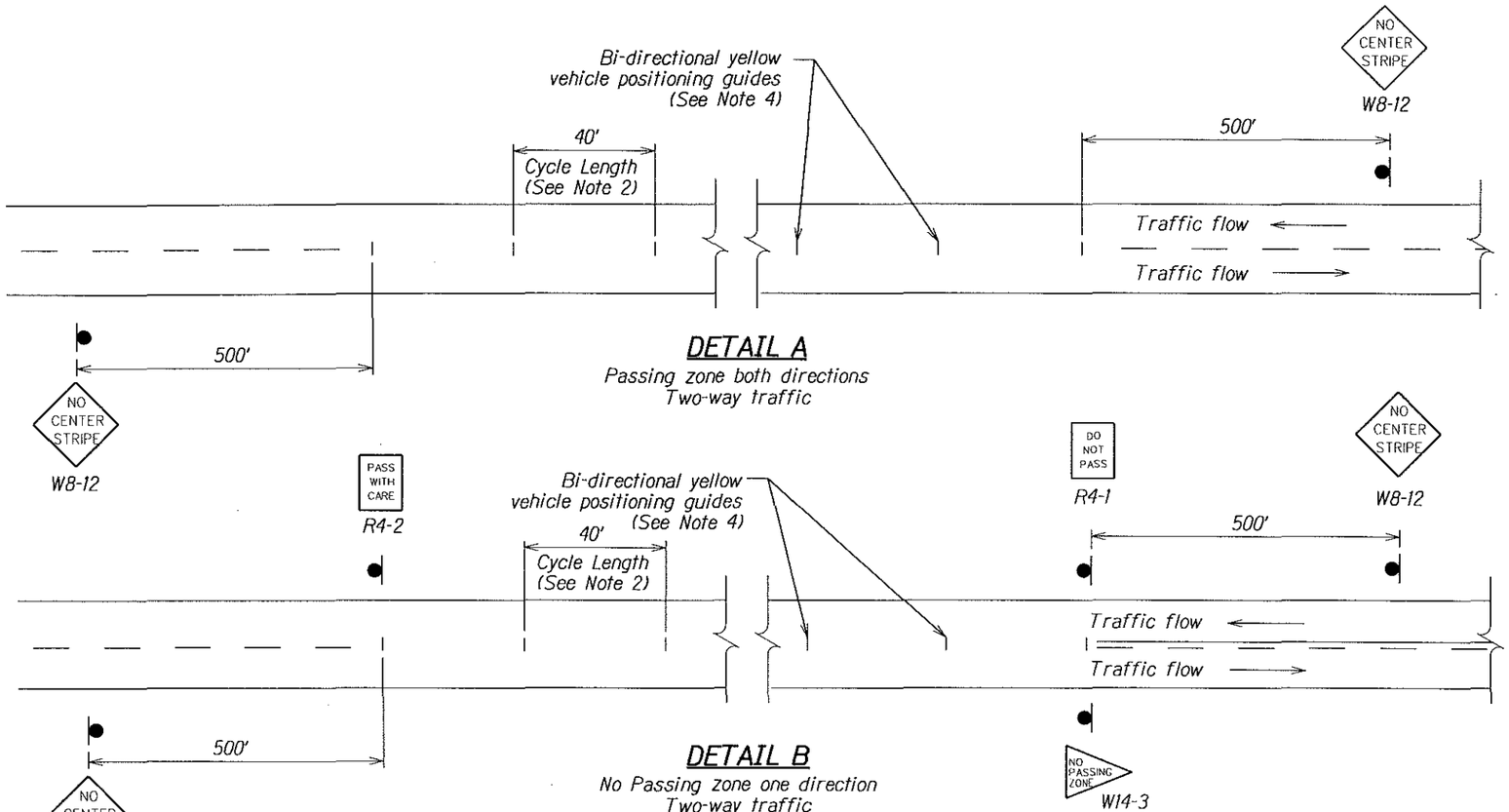
Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

Q5

M:/Mproj/Lennie/205009/sheets/shtq005.dgn

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) & 200(1)	Q6	Q24

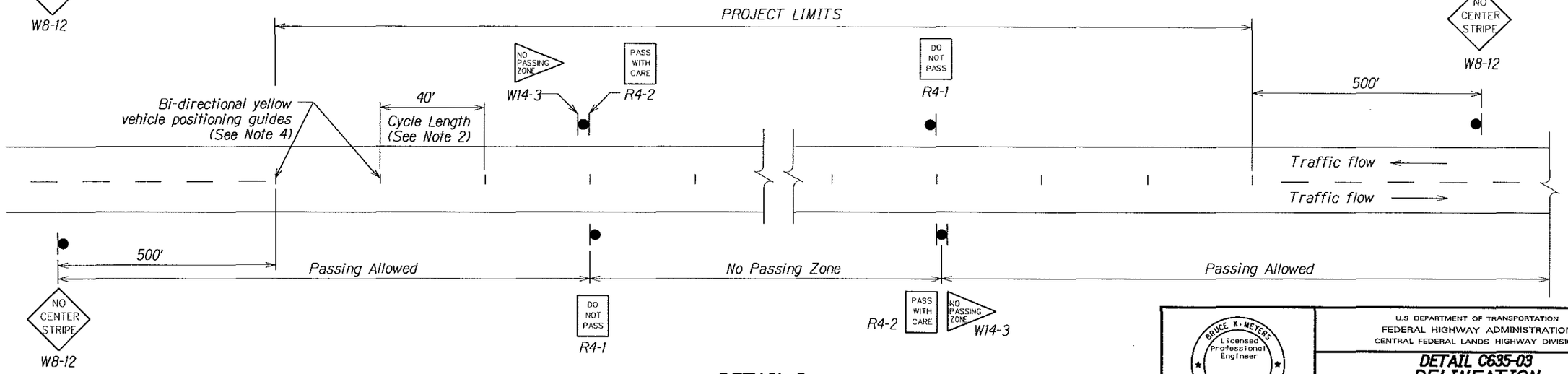


DETAIL A

Passing zone both directions
Two-way traffic

DETAIL B

No Passing zone one direction
Two-way traffic



DETAIL C

No Passing zone both directions
Two-way traffic

NOTE:

1. For periods noted in table A, pavement may be unmarked if vehicle positioning guides and signing are provided per this detail. For longer periods/higher ADT'S or for application of temporary markings with paint or tape, use C635-02.
2. On curves with radius less than 500', reduce cycle length to 20'.
3. Use permanent markings plan to determine no passing zones for each direction of travel.
4. Ensure vehicle positioning guides meet the requirements of Section 718.21(b), raised pavement markers.
5. Repeat R4-1 at 1 mile intervals.
6. Repeat W8-12 after each major intersection.
7. If sections of severe curvature or restricted visibility dominate the construction area such that passing is inappropriate throughout the project, include Two-Way Traffic Sign (W6-3) with supplemental plaque bearing the legend "NO PASSING NEXT __ MILES" in advance warning series at the beginning of the project.
8. If signs will be in place more than 72 consecutive hours, use ground-mounted post as shown on C635-01.

TABLE A

ADT	Maximum Duration Before Markings Are Required
≤ 1000	14 Days
> 1000	3 Days

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U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

DETAIL C635-03
DELINEATION AND SIGNING FOR UNMARKED PAVEMENTS

Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

M:/Mproj/Lennie/205009/sheets/shtq006.dgn

Q6

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) # 200(1)	Q7	Q24

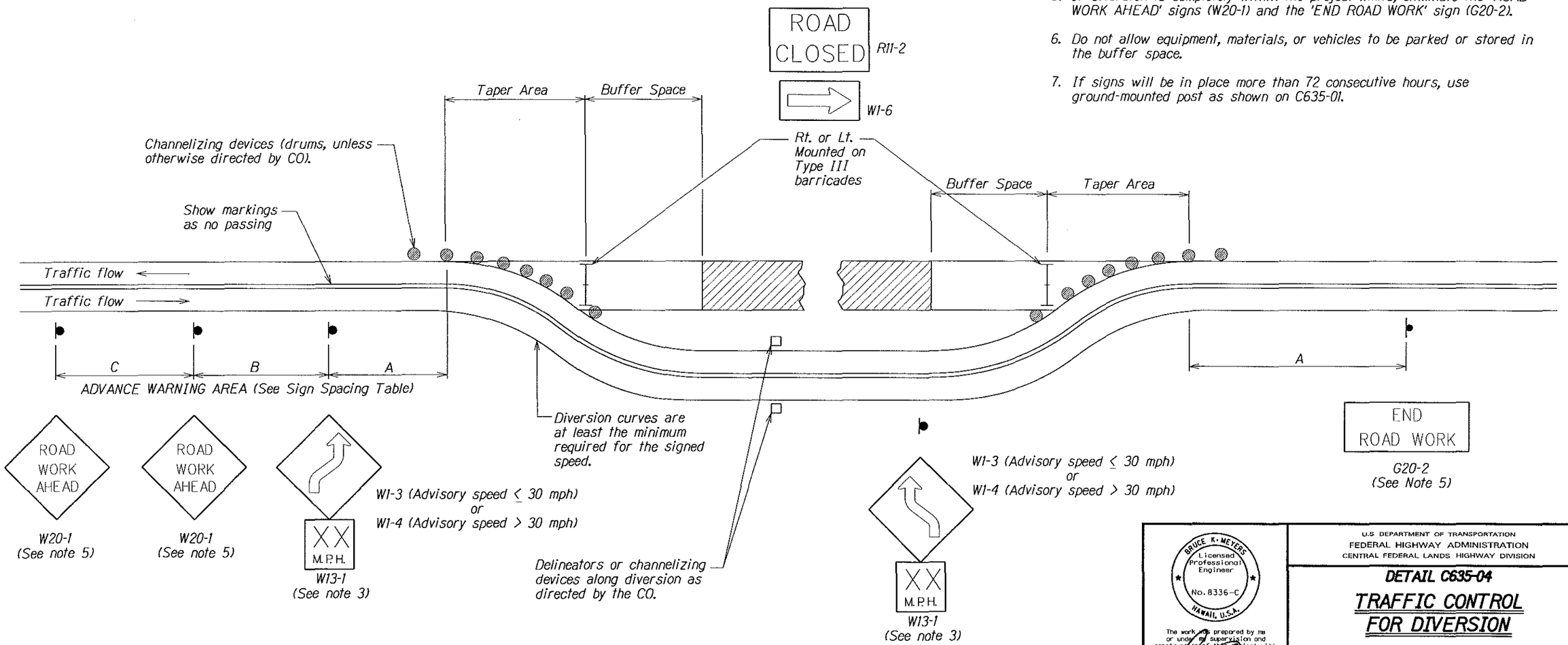
LENGTH AND SPACING TABLE				
APPROACH SPEED * MILES PER HOUR	LENGTH OF BUFFER SPACE IN FEET	DEVICE SPACING		
		TAPER AREA	BUFFER SPACE	WORK SPACE
		SPACING IN FEET		
25	155	25	50	50
30	200	30	60	60
35	250	35	70	70
40	305	40	80	80
45	360	45	90	90
50	425	50	100	100
55	495	55	110	110

*Speed is based on the regulatory posted speed, not the advisory speed.

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 mph and less	100	100	100
Urban 45 mph and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. If the area approaching diversion is not already signed and marked as a no passing zone, add signing and/or marking as appropriate. Remove conflicting pavement markings.
3. If the tangent distance along the temporary diversion is less than 600', use the 'DOUBLE REVERSE CURVE' sign (W24-1) at the location of the first Reverse Curve sign and eliminate the second Reverse Curve sign.
4. Place channelizing devices outside temporary roadway.
5. If diversion is completely within the project limits, eliminate the 'ROAD WORK AHEAD' signs (W20-1) and the 'END ROAD WORK' sign (G20-2).
6. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
7. If signs will be in place more than 72 consecutive hours, use ground-mounted post as shown on C635-01.



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HAWAII, U.S.A.

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Expiration Date of License 4/06

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

DETAIL C635-04

TRAFFIC CONTROL FOR DIVERSION

Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

Q7

M:/Mproj/Lennie/205009/sheets/shtq007.dgn

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) # 200(1)	Q8	Q24

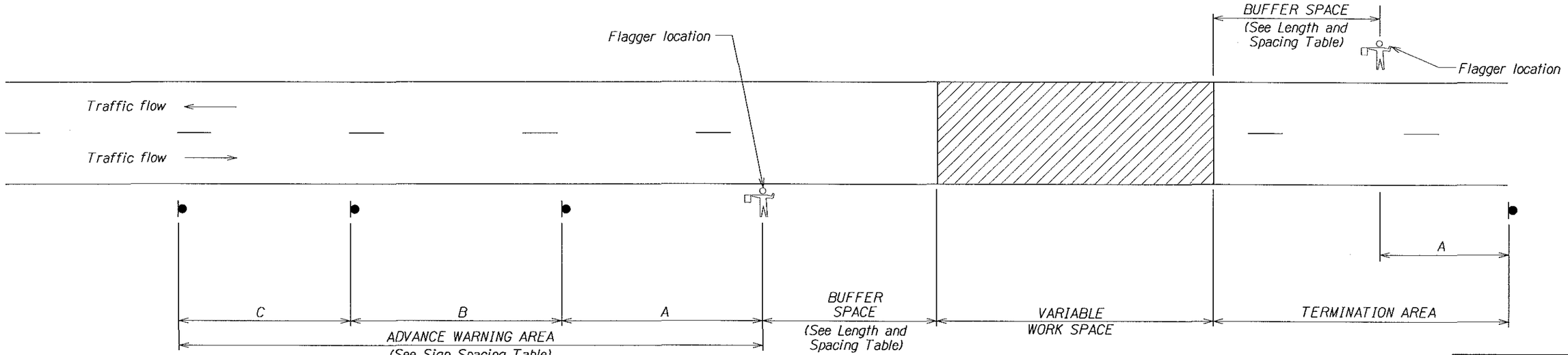
LENGTH AND SPACING TABLE	
APPROACH SPEED * MILES PER HOUR	LENGTH OF BUFFER SPACE IN FEET
25	155
30	200
35	250
40	305
45	360
50	425
55	495

* Speed is based on the regulatory posted speed, not the advisory speed.

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 mph and less	100	100	100
Urban 45 mph and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
3. For pilot car operation, mount the 'PILOT CAR FOLLOW ME' (G20-4) sign at a conspicuous location on the rear of vehicle. Prominently display the name of the contractor on the pilot car.
4. If closure is completely within the project limits, eliminate the 'ROAD WORK AHEAD' sign (W20-1) and 'END ROAD WORK' sign (G20-2).
5. For night time flagging operation, provide floodlighting at flagger stations.
6. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
7. If signs will be in place more than 72 consecutive hours, use ground-mounted post as shown on C635-01.



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HAWAII, U.S.A.

The work was prepared by me or under my supervision and construction of this project will be overseen by a person.

Expiration Date of License 4/06

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

DETAIL C635-05
CONSTRUCTION TRAFFIC CONTROL
ROAD CLOSURE LAYOUT
(WITH FLAGGERS)

Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

M:/Mproj/Lennie/205009/sheets/shtq008.dgn

Q8

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) # 200(1)	Q9	Q24

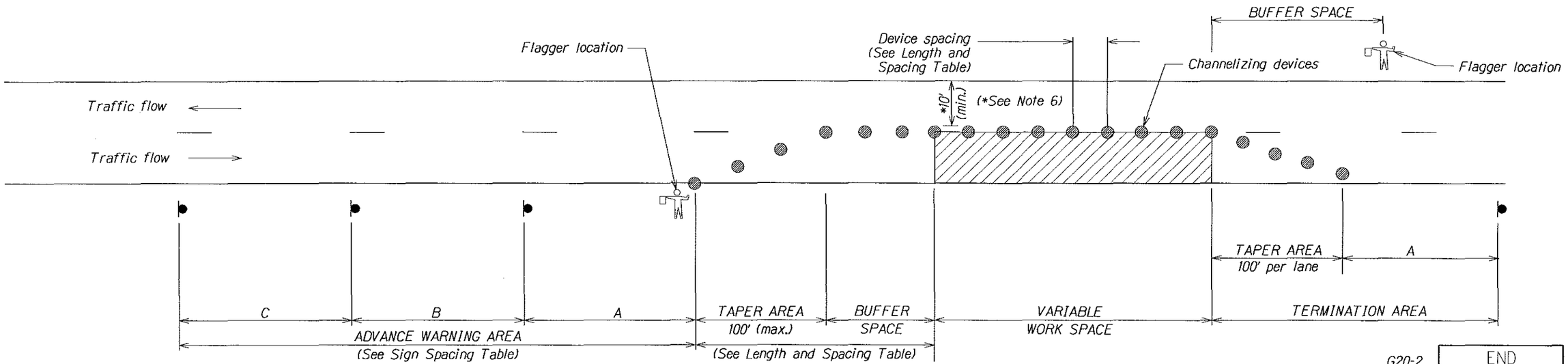
LENGTH AND SPACING TABLE				
APPROACH SPEED * MILES PER HOUR	LENGTH OF BUFFER SPACE IN FEET	CHANNELIZING DEVICE SPACING		
		TAPER AREA	BUFFER SPACE	WORK SPACE
		SPACING IN FEET		
25	155	20	50	50
30	200	20	60	60
35	250	20	70	70
40	305	20	80	80
45	360	20	90	90
50	425	20	100	100
55	495	20	110	110

* Speed is based on the regulatory posted speed, not the advisory speed.

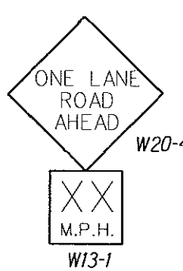
SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 mph and less	100	100	100
Urban 45 mph and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
3. For pilot car operation, mount the 'PILOT CAR FOLLOW ME' (G20-4) sign at a conspicuous location on the rear of vehicle. Prominently display the name of the contractor on the pilot car.
4. If closure is completely within the project limits, eliminate the 'ROAD WORK AHEAD' sign (W20-1) and 'END ROAD WORK' sign (G20-2).
5. For night time flagging operation, provide floodlighting at flagger stations.
6. Refer to Special Contract Requirements, Section 156, for project specific minimum width.
7. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
8. If signs will be in place more than 72 consecutive hours, use ground-mounted post as shown on C635-01.

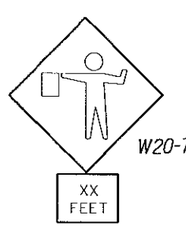


W20-1 (See Note 4)



W20-4

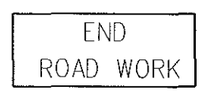
W13-1



W20-7a

W16-2

G20-2 (See Note 4)



BRUCE K. MEYERS Licensed Professional Engineer No. 8336-C HAWAII, U.S.A.

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Expiration Date of License 4/06

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

DETAIL C635-06

CONSTRUCTION TRAFFIC CONTROL SINGLE LANE CLOSURE LAYOUT (WITH FLAGGERS)

Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

Q9

H:/Mproj/Lennie/205009/sheets/shtq009.dgn

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) & 200(1)	Q10	Q24

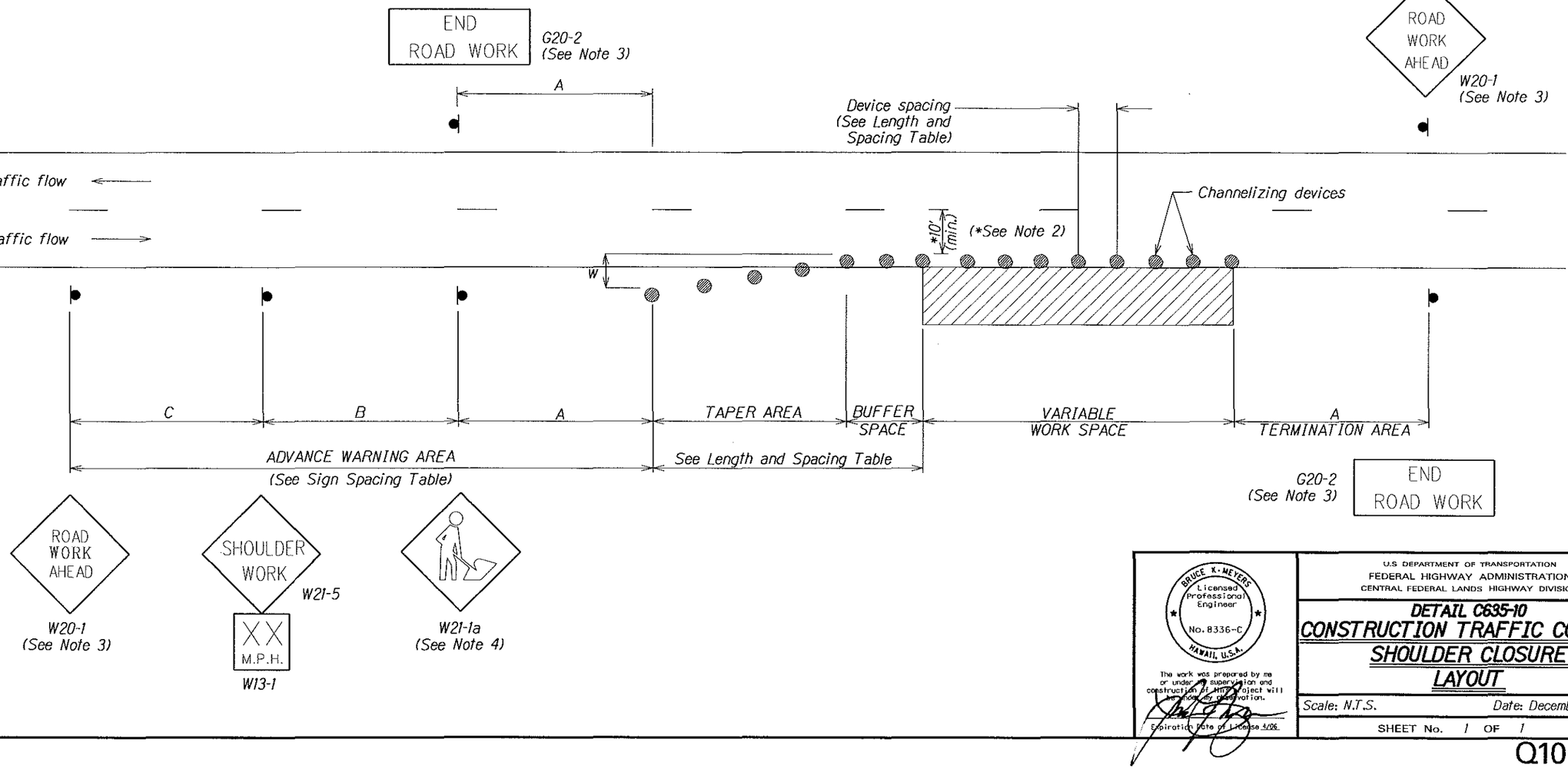
LENGTH AND SPACING TABLE					
APPROACH SPEED * MILES PER HOUR	** MINIMUM TAPER LENGTH IN FEET	LENGTH OF BUFFER SPACE IN FEET	CHANNELIZING DEVICE SPACING		
			** TAPER AREA	BUFFER SPACE	WORK SPACE
			SPACING IN FEET		
25	Shoulder taper formula:	155	25	50	50
30	$L=\frac{WS^2}{180}$ for speeds of 40 mph or less	200	30	60	60
35	$L=\frac{WS}{3}$ for speeds of 45 mph or greater	250	35	70	70
40	Where:	305	40	80	80
45	L= Minimum length of taper W= Width of offset in feet	360	45	90	90
50	S= Numerical value of posted speed limit or 85 percentile speed prior to work in miles per hour.	425	50	100	100
55		495	55	110	110

* Speed is based on the regulatory posted speed and not the advisory speed.
** Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 mph and less	100	100	100
Urban 45 mph and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
2. Refer to Special Contract Requirements, Section 156, for minimum width.
3. If shoulder closure is completely within the project limits, eliminate the 'ROAD WORK AHEAD' sign (W20-1) and the 'END ROAD WORK' sign (G20-2).
4. Remove or cover Worker Symbol sign (W21-1a) when workers are not present.
5. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
6. If signs will be in place more than 72 consecutive hours, use ground-mounted post as shown on C635-01.



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Expiration Date of License 4/06

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

DETAIL C635-10
CONSTRUCTION TRAFFIC CONTROL
SHOULDER CLOSURE LAYOUT

Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

Q10

M:/Mproj/Lennie/205009/sheets/shtq010.dgn

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) # 200(1)	Q11	Q24

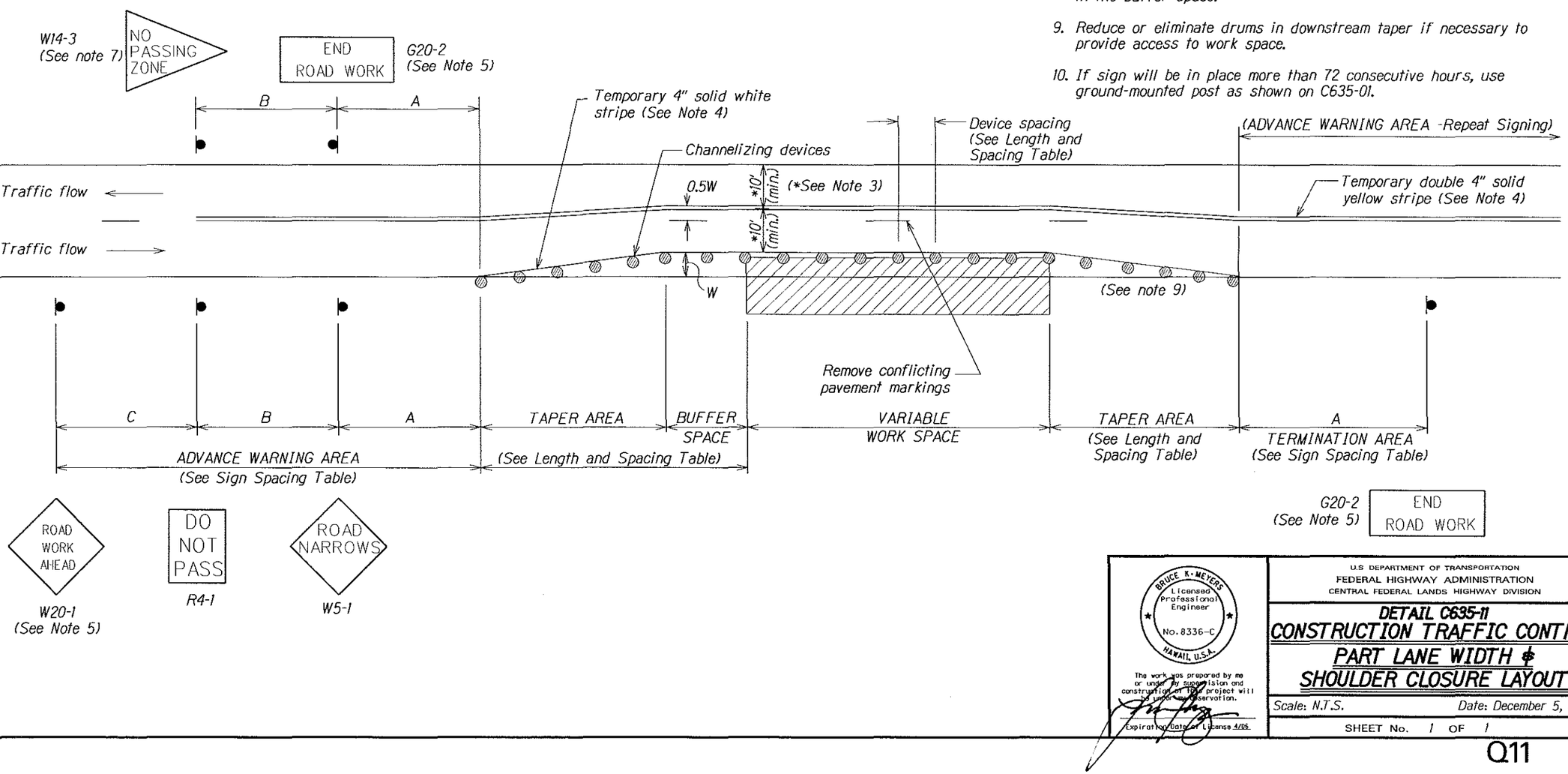
LENGTH AND SPACING TABLE					
APPROACH SPEED *MILES PER HOUR	**MINIMUM TAPER LENGTH IN FEET	LENGTH OF BUFFER SPACE IN FEET	CHANNELIZING DEVICE SPACING		
			**TAPER AREA	BUFFER SPACE	WORK SPACE
			SPACING IN FEET		
25	Shifting taper formula:	155	25	50	50
30	$L=\frac{WS^2}{120}$ for speeds of 40 mph or less	200	30	60	60
35	$L=\frac{WxS}{2}$ for speeds of 45mph or greater	250	35	70	70
40	Where:	305	40	80	80
45	L= Minmum length of taper W= Width of offset in feet	360	45	90	90
50	S= Numerical value of posted speed limit or 85 percentile speed prior to work in miles per hour	425	50	100	100
55		495	55	110	110

* Speed is based on the regulatory posted speed and not the advisory speed.
** Lengthen taper as needed to provide minimum of three channalizing devices in taper at required spacing.

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 mph and less	100	100	100
Urban 45 mph and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
3. Refer to Special Contract Requirements, Section 156, for minimum width.
4. Install temporary pavement markings if roadway surface is paved. Remove conflicting pavement markings. If nearest no-passing zone is within 400', extend markings to connect zones.
5. If closure is completely within the project limits, eliminate the 'END ROAD WORK' sign (G20-2).
6. Install 'PASS WITH CARE' sign (R4-2) at ends of no-passing zone if directed by the CO.
7. Omit the W14-3 sign if already within a no-passing zone.
8. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
9. Reduce or eliminate drums in downstream taper if necessary to provide access to work space.
10. If sign will be in place more than 72 consecutive hours, use ground-mounted post as shown on C635-01.



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Expiration Date of License 4/06

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

DETAIL C635-11
CONSTRUCTION TRAFFIC CONTROL
PART LANE WIDTH & SHOULDER CLOSURE LAYOUT

Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

Q11

M:/Mproj/Lennie/205009/sheets/shtq011.dgn

STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) # 200(1)	Q12	Q24

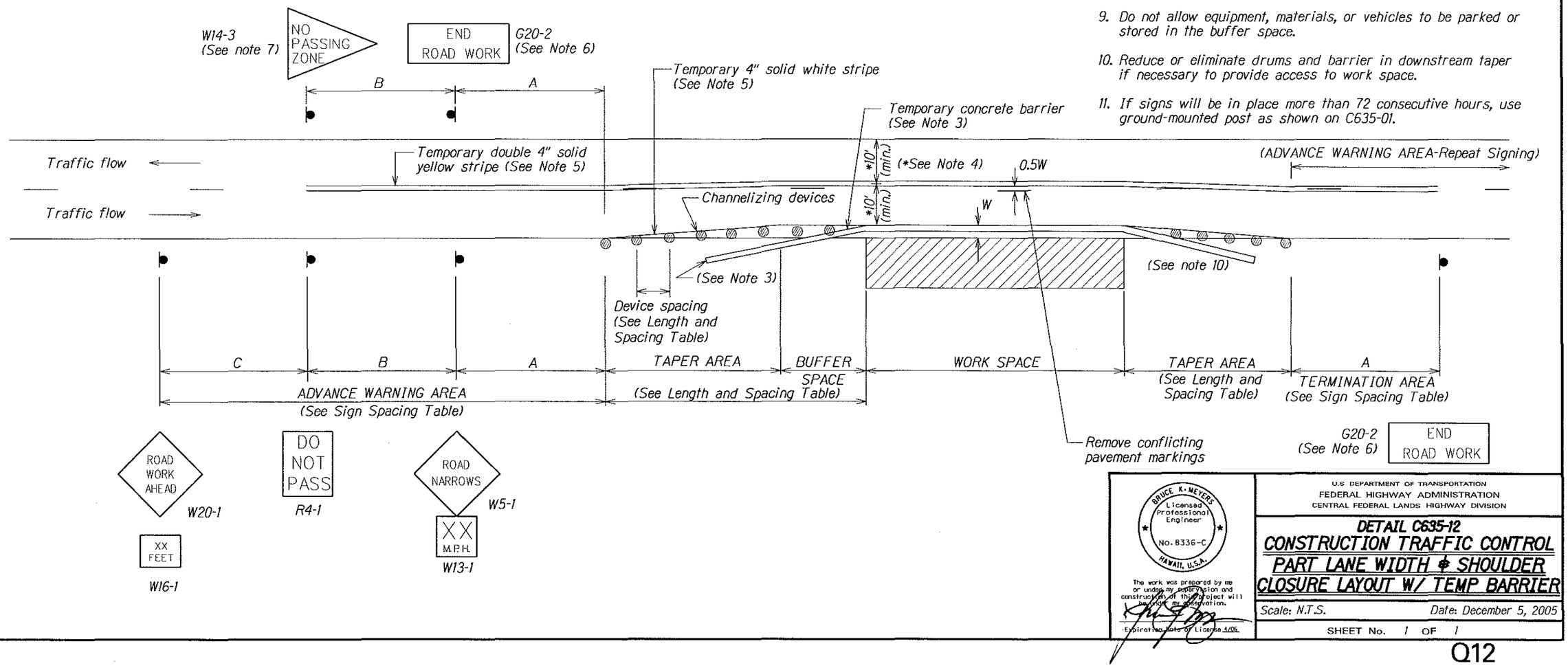
LENGTH AND SPACING TABLE						
APPROACH SPEED *MILES PER HOUR	** MINIMUM TAPER LENGTH IN FEET	LENGTH OF BUFFER SPACE IN FEET	CHANNELIZING DEVICE SPACING			CONCRETE BARRIER FLARE RATE
			**TAPER AREA	BUFFER SPACE	WORK SPACE	
			SPACING IN FEET			
25	Shifting taper formula: $L=\frac{WS^2}{120}$ for speeds of 40 mph or less; $L=\frac{WxS}{2}$ for speeds of 45 mph or greater. Where: L = Minimum length of taper, W = Width of offset in feet, S = Numerical value of posted speed limit or 85 percentile speed prior to work in miles per hour	155	25	50	50	1:8
30		200	30	60	60	1:8
35		250	35	70	70	1:9
40		305	40	80	80	1:10
45		360	45	90	90	1:12
50		425	50	100	100	1:14
55		495	55	110	110	1:16

* Speed is based on the regulatory posted speed and not the advisory speed.
** Lengthen taper as needed to provide minimum of three channelizing devices in taper at required spacing.

SIGN SPACING TABLE			
ROAD TYPE	DISTANCE BETWEEN SIGNS IN FEET		
	A	B	C
Urban 40 mph and less	100	100	100
Urban 45 mph and greater	350	350	350
Rural	500	500	500
Expressway/Freeway	1000	1500	2640

NOTE:

1. Signs are shown for one direction of travel only. Place devices similar to those depicted for the opposite direction of travel.
2. Final location and spacing of signs and devices may be changed to fit field conditions as approved by the CO.
3. Place the barrier according to the Roadside Design Guide by the American Association of State Highway and Transportation Officials (AASHTO). Terminate barrier ends outside the clear zone or protect the ends of the barrier with a crash cushion.
4. Refer to Special Contract Requirements, Section 156, for minimum width.
5. Install temporary pavement markings if roadway surface is paved. Remove conflicting pavement markings.
6. If closure is completely within the project limits, eliminate the 'END ROAD WORK' sign (G20-2).
7. Install 'PASS WITH CARE' signs (R4-2) at ends of no-passing zones if directed by CO.
8. Omit the W14-3 sign if already within a no-passing zone.
9. Do not allow equipment, materials, or vehicles to be parked or stored in the buffer space.
10. Reduce or eliminate drums and barrier in downstream taper if necessary to provide access to work space.
11. If signs will be in place more than 72 consecutive hours, use ground-mounted post as shown on C635-01.



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Expiration Date of License 4/06

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

DETAIL C635-12
CONSTRUCTION TRAFFIC CONTROL PART LANE WIDTH @ SHOULDER CLOSURE LAYOUT W/ TEMP BARRIER

Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

Q12

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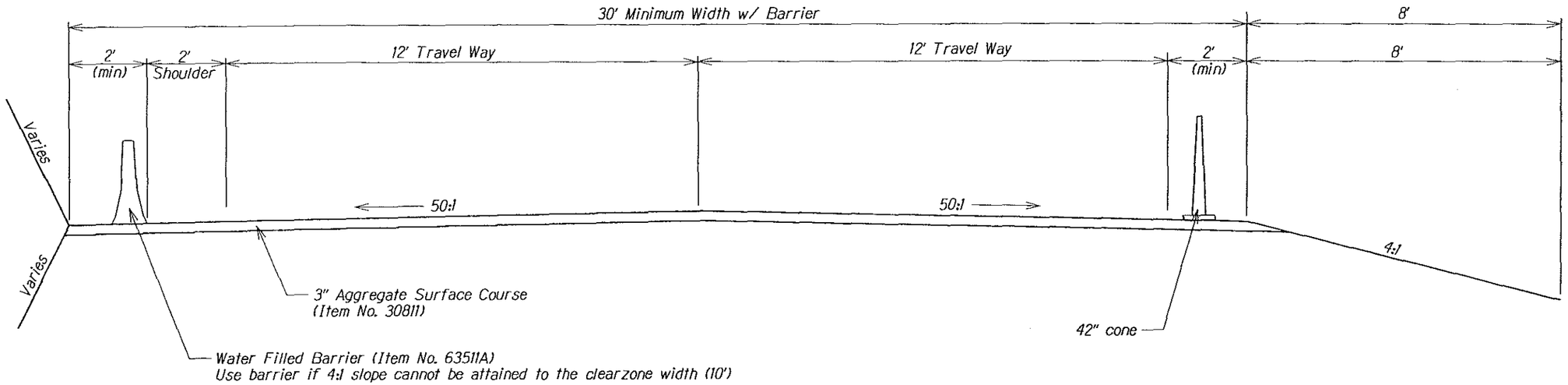
STATE	SADDLE ROAD PROJECT	SHEET NO.	TOTAL SHEETS
HI	HI A-AD/STP 6(3) ϕ 200(1)	Q13	Q24

REVISED
02/15/2006



WORK ZONE TYPICAL SECTION

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Expiration Date of License 4/06

U.S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

TRAFFIC CONTROL
WORK ZONE TYPICAL SECTION

Scale: N.T.S. Date: December 5, 2005

SHEET No. 1 OF 1

Q13