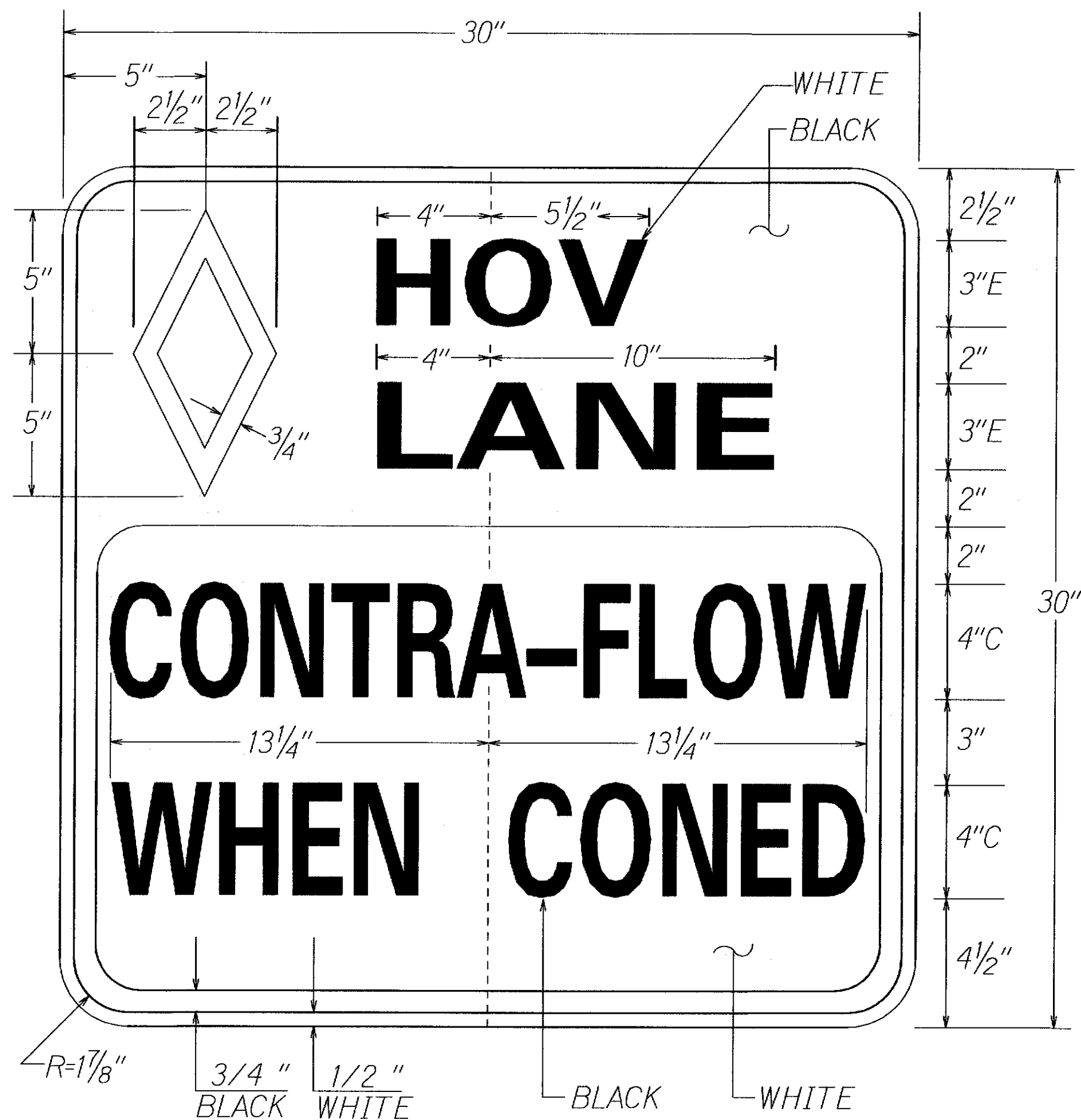
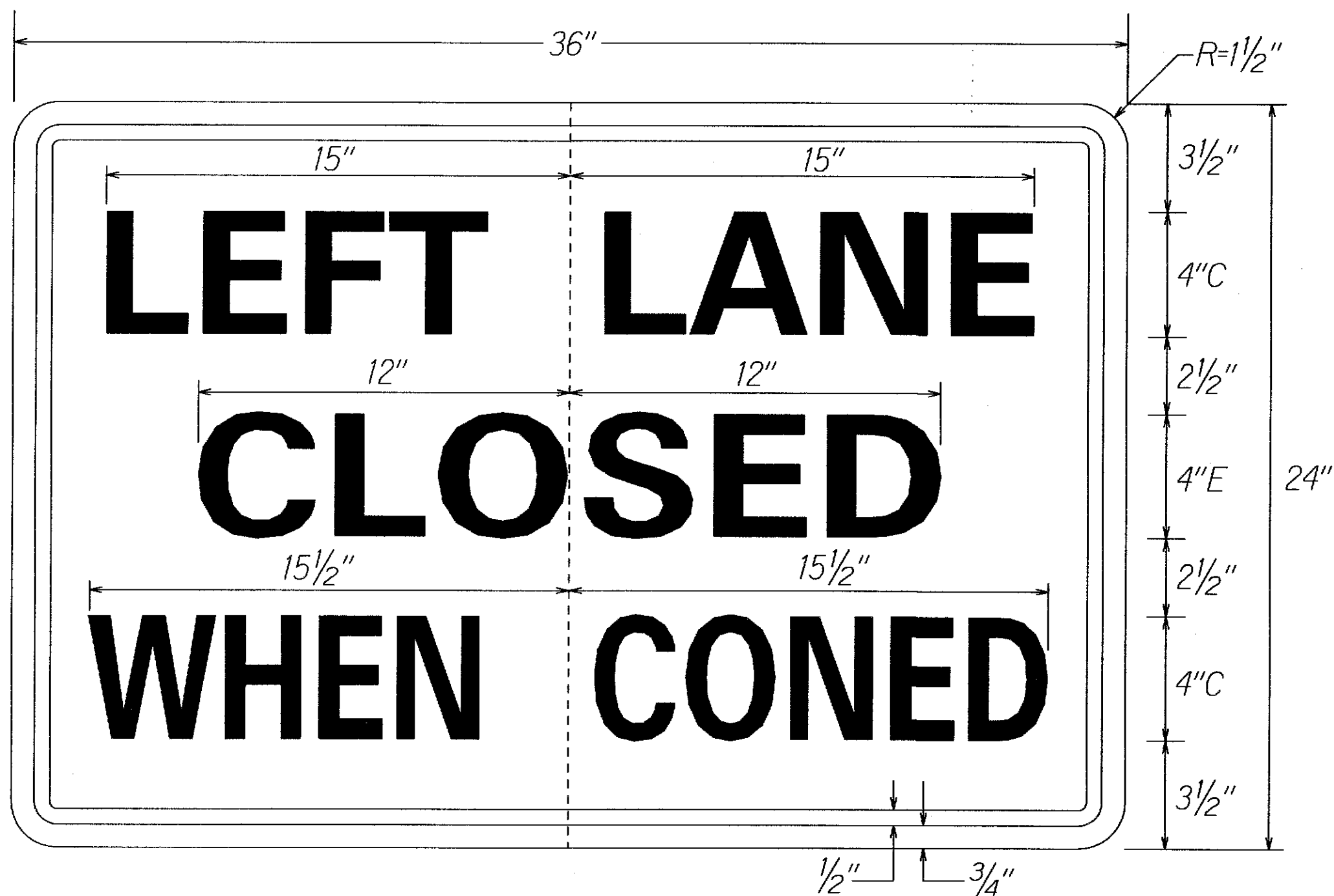


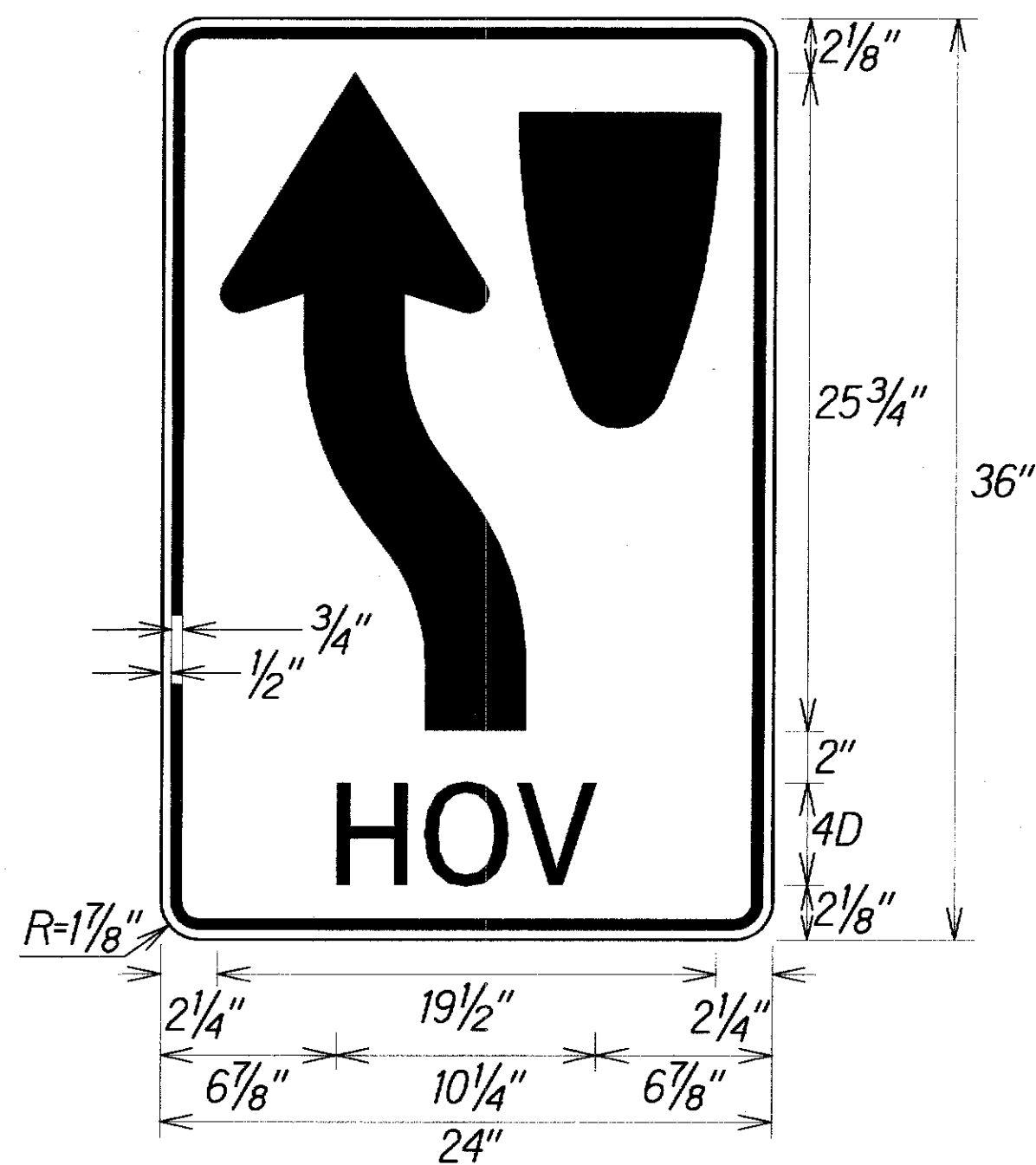
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(056)	2013	ADD. 58	85



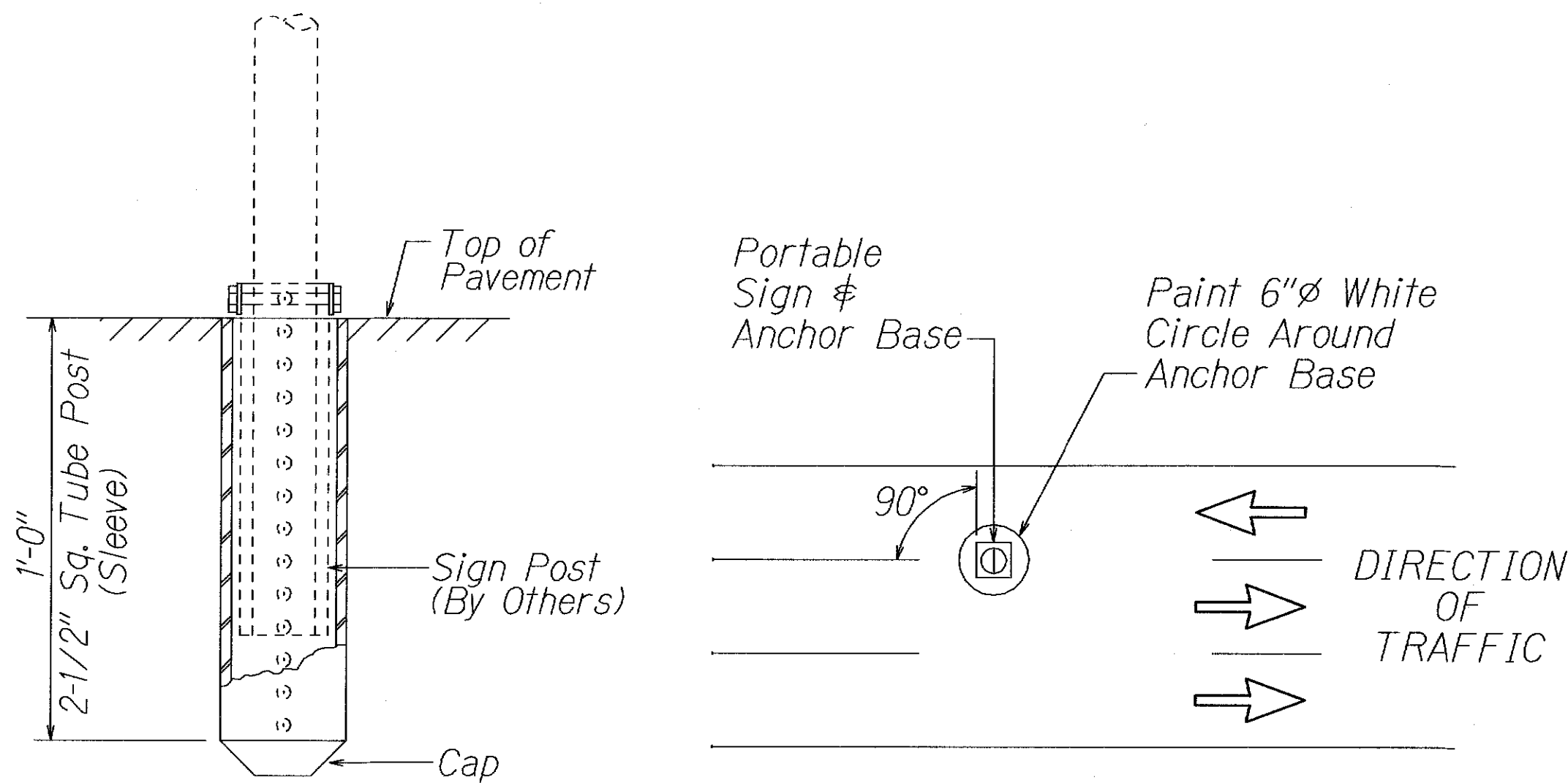
R3-11b  
Not to Scale



R11-20  
Not to Scale



R4-7 (HOV)  
Not to Scale



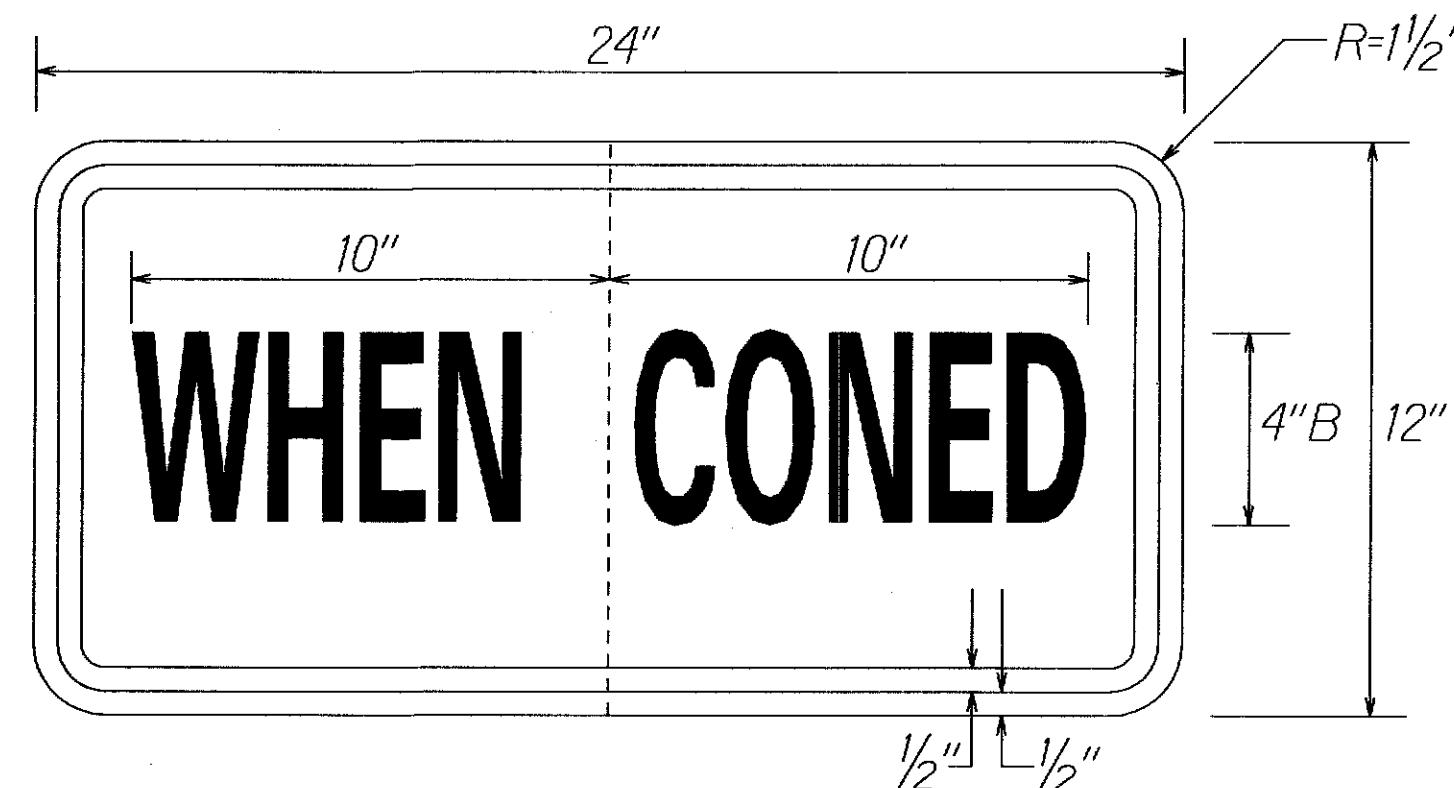
ELEVATION  
Scale: 3"=1'-0"

PLAN  
N.T.S.

ANCHOR BASE FOR PORTABLE CONTRA-FLOW SIGN



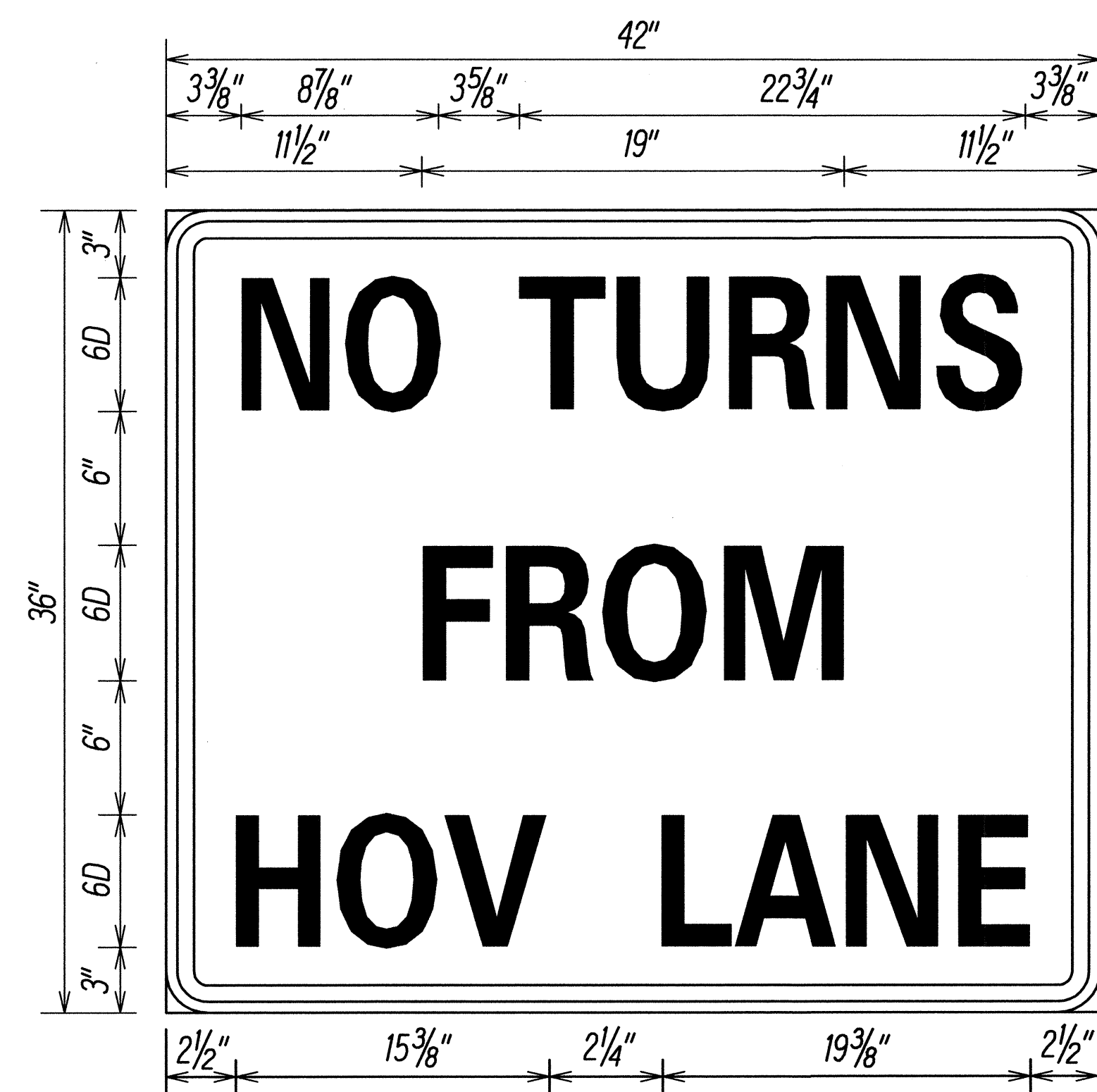
R10-7a  
Not to Scale



R16-21  
Not to Scale

11/05/13	Added Sign Detail
DATE	REVISION
STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>MISCELLANEOUS SIGN DETAILS</b>	
KALANIANA'OLE HIGHWAY RESURFACING West Hind Drive to Vicinity of Hanauma Bay Road Federal Aid Project No. NH-072-1(056)	
Scale: As Noted	Date: April 2013
SHEET No. T16 OF 35 SHEETS	

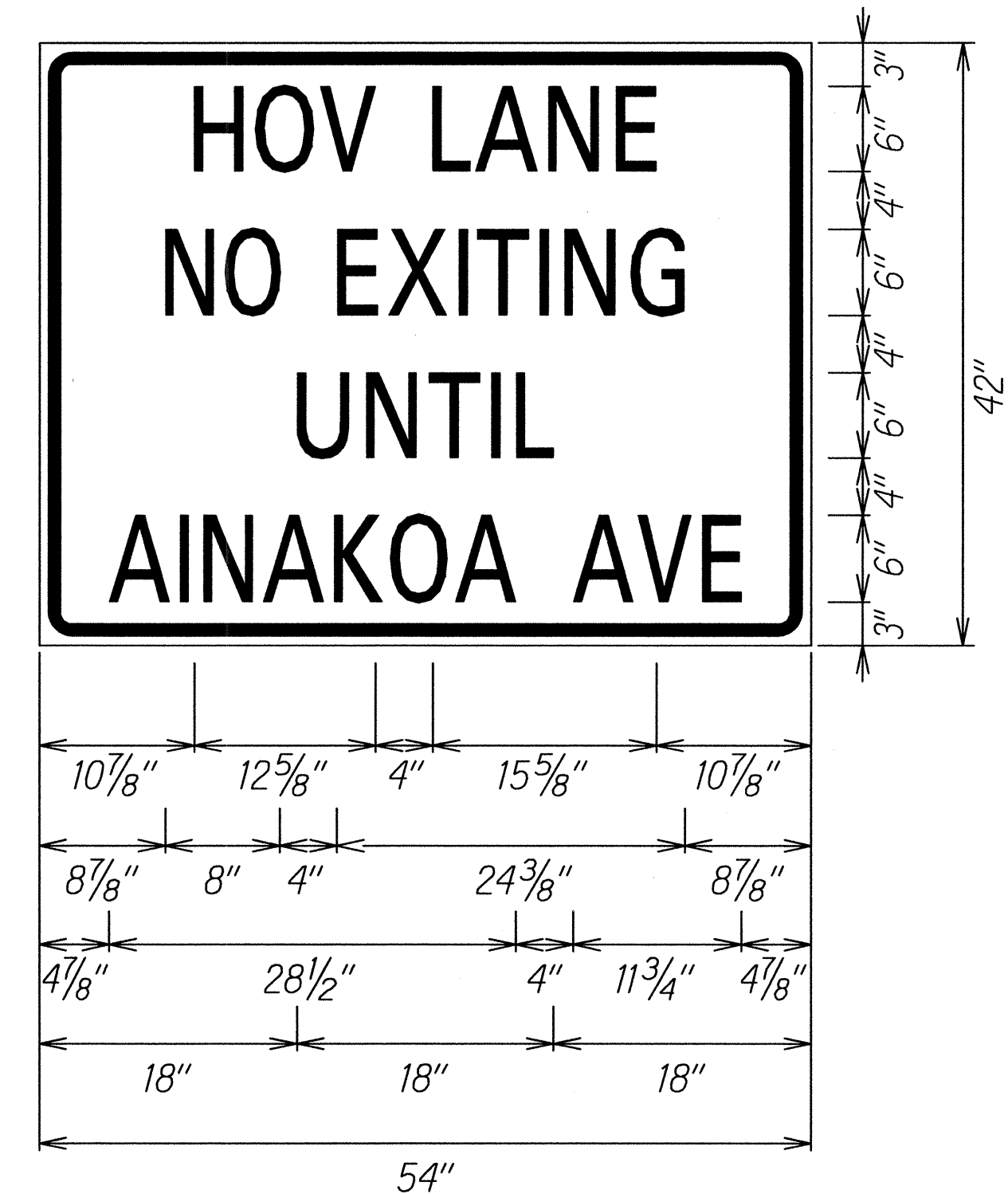
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(056)	2013	59	85



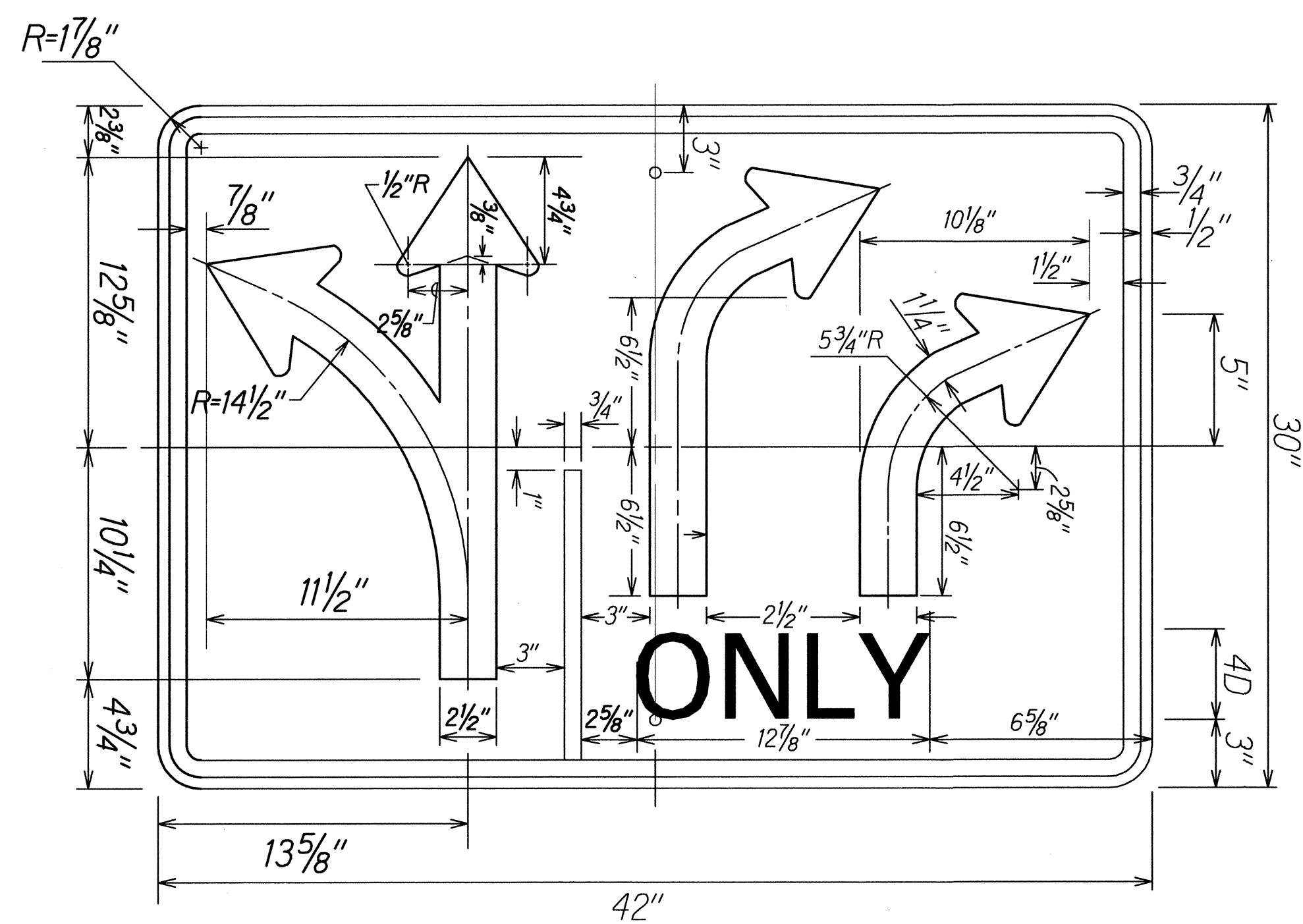
**R3-21**  
Not to Scale  
Colors: Black on White



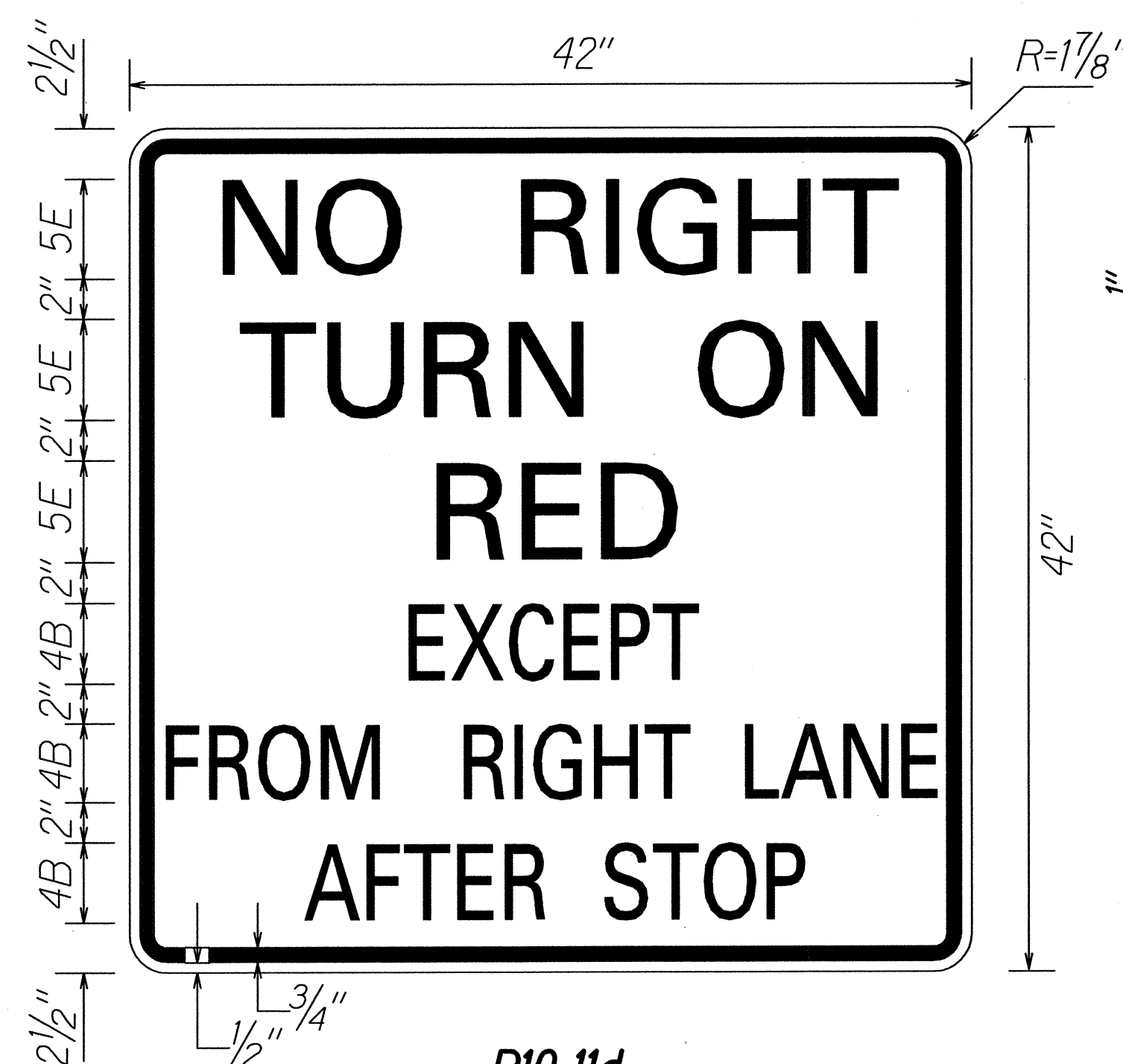
**R10-15M**  
Not to Scale  
Colors: Black on White



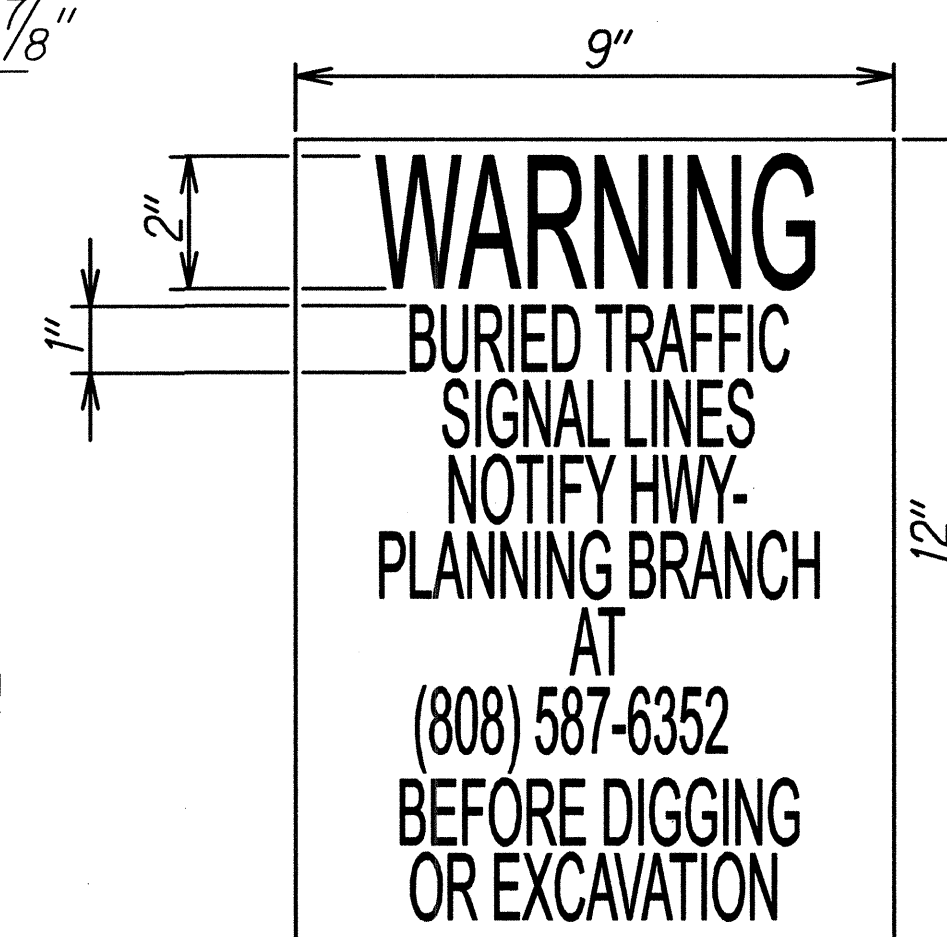
**R3-11h**  
Not to Scale  
Colors: Black on White



**R3-26**  
Not to Scale  
Colors: Black on White



**R10-11d**  
Not to Scale  
Colors: Black on White

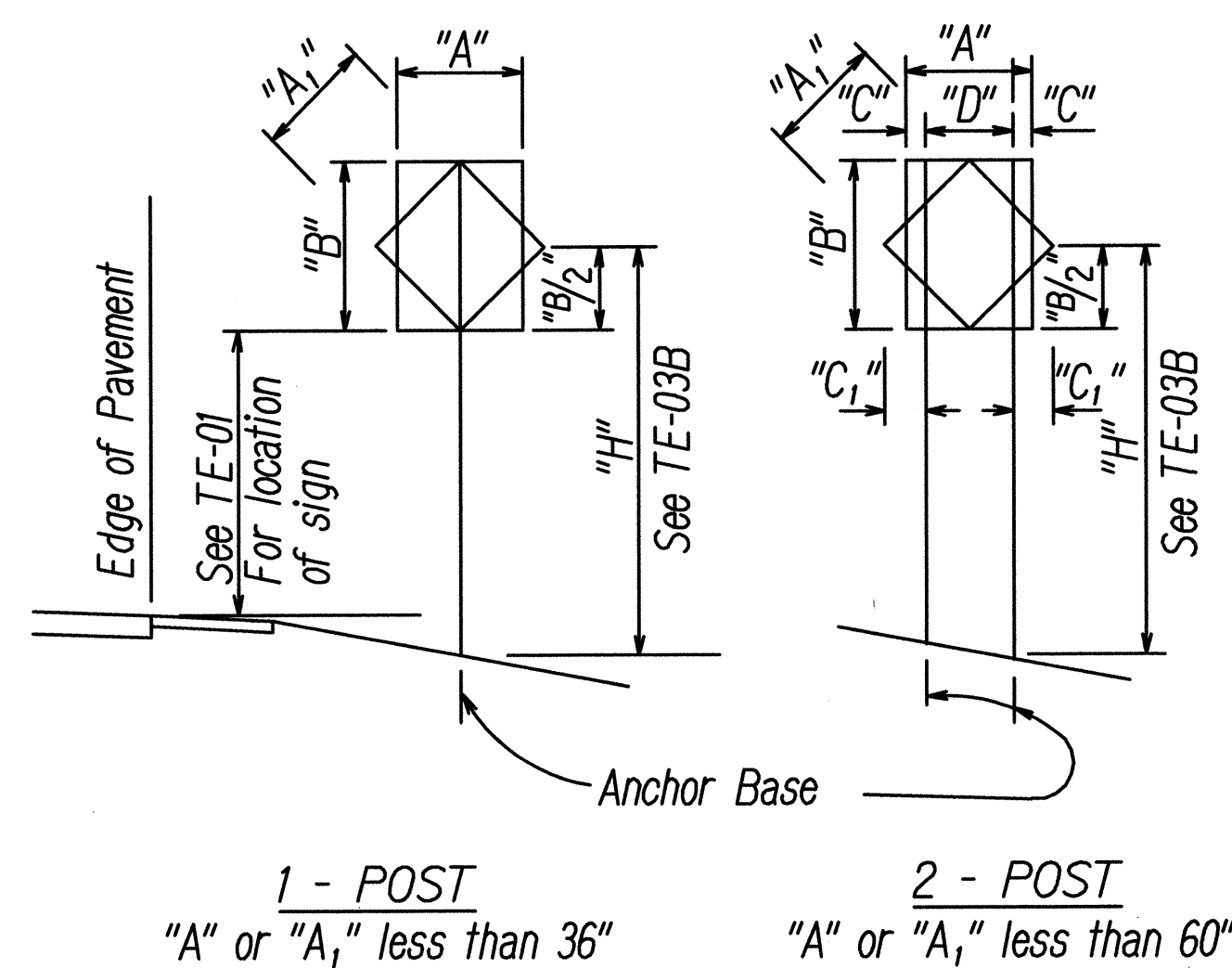


- Notes:**
- For Sign Post Detail, see State Standard Plans TE-01 thru TE-04.
  - Two (2) Warning Signs shall be placed on each Sign Post Back-To-Back.
  - Text on sign shall be centered both ways.

**WARNING SIGN DETAIL**  
Not to Scale

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION	
<b>MISCELLANEOUS SIGN DETAILS</b>	
KALANIANA'OLE HIGHWAY RESURFACING	
West Hind Drive to	
Vicinity of Hanauma Bay Road	
Federal Aid Project No. NH-072-1(056)	
Scale: As Noted	Date: April 2013
SHEET No. 717 OF 35 SHEETS	

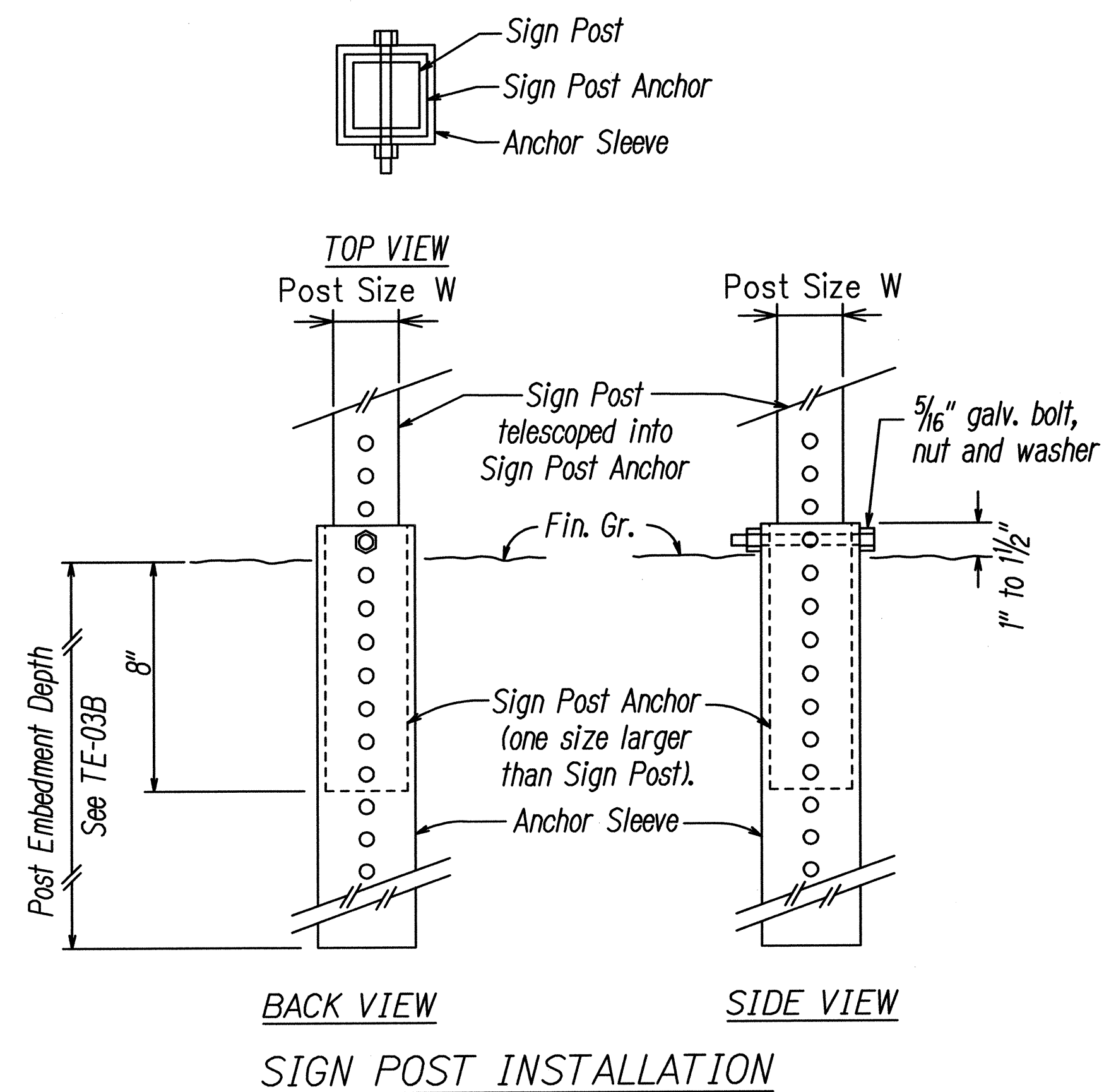
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	NH-072-1(056)	2013	60	85



"A" or "A <sub>1</sub> "	"C"	"C <sub>1</sub> "
Less than 36"	6"	-
Greater than 36" and less than 48"	9"	19"
Greater than 48"	12"	24"

NOTE: Frame stiffeners are required when D is greater than 24"  
See General Notes.

### TYPICAL INSTALLATION FOR GALVANIZED SQUARE TUBE SIGN POST



### ANCHOR BASE DETAIL FOR GALVANIZED SQUARE TUBE SIGN POST

#### GENERAL NOTES

##### 1. Design Specifications:

- (A) Design shall conform w/ the latest AASHTO Standard Specifications for the Structural Supports for Highway Signs, Luminaires & Traffic Signals and its interim supplements and modifications by the Highways Division, Department of Transportation State of Hawaii.
- (B) Latest HDOT Memorandum with subject title "Design Criteria for Bridges and Structures."

##### 2. Loads:

- (A) Basic Wind Speed: 105 mph.
- (B) Recurrence Interval of 10 years.

##### 3. Materials:

- (A) Post shall conform to the Standard Specifications.
- (B) All connection bolts shall be AASHTO M164 bolts and anchor bolts shall be AASHTO M314-105 bolt.
- (C) Lap splice nuts and bolts shall be M180, with an ultimate tensile strength of 180 ksi, min.
- (D) Aluminum members and surfaces in contact with structural steel shall be isolated with neoprene material as approved by the Engineer.

##### 4. General:

- (A) See General Notes on B-01, TE-01, and TE-03B for additional information.
- (B) All posts shall be 12 gage unless otherwise specified or shown on the plans.
- (C) Square tube posts shall be perforated with 7/16"  $\phi$  holes, 1" o.c., 4 sides, along entire length of post.
- (D) All accessories, fittings and stiffener details (as required) shall be submitted to the Engineer for approval 20 days prior to installation.
- (E) Alternate designs in accordance with the plans and specifications shall use the Service Load Design Method and shall be stamped by a registered structural engineer of the State of Hawaii and submitted to the Engineer for approval.
- (F) All sign support posts shall be outside of the clear zone or shielded by an appropriate traffic barrier system. The traffic barrier system shall be submitted to the Engineer for his approval.
- (G) The Contractor shall use templates while installing the anchor bolts. Anchor bolts shall be vertical.
- (H) Excavation and backfill shall be considered incidental to the cost of the sign foundation.

DESIGNED BY	DATE
DRAWN BY	
CHECKED BY	
IN CHARGE	
NOTED BY	
QUANTITY BY	
CHECKED BY	

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HIGHWAYS DIVISION

**MISCELLANEOUS SIGN DETAILS**

**KALANIANA'OLE HIGHWAY RESURFACING**

West Hind Drive to  
Vicinity of Hanauma Bay Road  
Federal Aid Project No. NH-072-1(056)

Scale: As Noted      Date: Sept. 2013

SHEET No. 718 OF 35 SHEETS