



ELEVATION - SIGN STRUCTURE
N.T.S.

SIDE ELEVATION
N.T.S.

SPAN LENGTH (FT)	MAX. PROVISIONAL SIGN PANEL AREA	COLUMN SIZE (IN)	CHORD SIZE (IN) HSS"A"x"B"x"T"	VERTICAL STRUT (IN) HSS"A"x"B"x"T"
< 38 TO 42 MAX.	445	*HSS32x32x3/8	16x16x3/8	14x6x1/2
< 32 TO ≤ 38	648	*HSS32x32x3/8	14x14x3/8	12x6x1/2
< 32 TO ≤ 38	445	*HSS30x30x3/8	14x14x3/8	12x6x1/2
20 ≤ TO ≤ 32	540	*HSS28x28x3/8	14x14x1/2	12x6x1/2
20 ≤ TO ≤ 32	300	*HSS24x24x3/8	14x14x1/2	12x6x1/2

*CONCRETE PEDESTAL REQUIRED ON DRILLED SHAFT, SEE STANDARD DRAWING SI-41.
 **CONCRETE PEDESTAL NOT REQUIRED ON DRILLED SHAFT, SEE STANDARD DRAWING SI-22B.

GENERAL NOTES:

1. DESIGN SPECIFICATIONS:
 - (A) 2009 AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 5TH EDITION WITH ALL CURRENT INTERIMS.
2. CONSTRUCTION SPECIFICATIONS:
 - (A) 2004 NJTA STANDARD SPECIFICATIONS, 6TH EDITION, AS MODIFIED BY THE SUPPLEMENTAL SPECIFICATIONS AND THESE STANDARD DRAWINGS.
3. DESIGN CRITERIA:

DESIGN WIND SPEED	110 MPH
DESIGN ICE LOAD	3 PSF
4. STRUCTURAL STEEL:
 - (A) STRUCTURAL STEEL HSS SECTIONS SHALL BE ASTM A847 GR. 50 WITH PROPERTIES OF ASTM DESIGNATION A709 GR. 50W. TS SECTIONS OF EQUIVALENT STRENGTH CAN BE USED AS AN ALTERNATIVE TO THE HSS SECTIONS. AS AN ALTERNATE, TUBING PRODUCED BY FORMING AND LONGITUDINALLY SEAM WELDING STEEL PLATE CONFORMING TO ASTM A709, GRADE 50W OR ASTM A242 MAY BE USED. FOR OPTIONAL FABRICATION DETAILS, SEE STANDARD DRAWING SI-37.
 - (B) STRUCTURAL STEEL SHAPES AND PLATES SHALL BE: ASTM A709 GR. 50W.
 - (C) WELDING SHALL CONFORM TO THE LATEST ANSI/AASHTO/AWS STRUCTURAL WELDING CODE D1.1 WITH NJTA AMENDMENTS. WELDING AND NONDESTRUCTIVE TESTING SYMBOLS SHALL CONFORM TO STANDARD SYMBOLS FOR WELDING AND BRAZING AND NONDESTRUCTIVE EXAMINATIONS AWS A2.4.
5. BOLTS:
 - (A) ALL BOLTS SHALL BE ASTM A449 HOT-DIP GALVANIZED OR ASTM A325 (TYPE 3) HIGH STRENGTH BOLTS, AS NOTED. NUTS SHALL CONFORM TO ASTM A563 AND PLATE WASHERS SHALL CONFORM TO ASTM F436. BOLTS, NUTS AND PLATE WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.
 - (B) ANCHORS RODS SHALL BE ASTM F1554, GRADE 55 HOT-DIP GALVANIZED WITH MINIMUM Fy = 55 KSI AND MINIMUM Fu = 75 KSI. NUTS SHALL CONFORM TO ASTM A563 AND PLATE WASHERS SHALL CONFORM TO ASTM A709, GRADE 50. BOLTS, NUTS AND PLATE WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.

NOTES:

1. ELEVATION SHOWN IS ORIENTED NORMAL TO THE DIRECTION OF TRAFFIC.
2. ALL MEMBERS MARKED (TM) ARE MAIN LOAD CARRYING MEMBERS SUBJECT TO TENSILE STRESS AND SHALL MEET SUPPLEMENTARY REQUIREMENTS FOR TOUGHNESS.
3. BOTTOM OF BASE PLATE (ELEVATION "A") SHALL BE A MINIMUM OF 4'-0" ABOVE THE HIGH POINT OF THE ROADWAY CROSS SECTION.
4. ANY CANTILEVER SIGN STRUCTURE EXCEEDING THESE LIMITATIONS SHALL BE DESIGNED BY THE ENGINEER.
5. FOR SIGN ATTACHMENT SECTIONS AND DETAILS, SEE STANDARD DRAWING SI-42.
6. FOR REINFORCED CONCRETE PEDESTAL AND DRILLED SHAFT DETAILS FOR HSS32 TO HSS28 COLUMN SIZES, SEE STANDARD DRAWING SI-41. FOR DRILLED SHAFT DETAILS WITHOUT CONCRETE PEDESTAL FOR HSS24 COLUMN SIZE, SEE STANDARD DRAWING SI-22B.
7. FOR HANDHOLE AND PIPE NIPPLE DETAILS, SEE STANDARD DRAWING SI-36.

ABBREVIATIONS:

H.S. = HIGH STRENGTH
 HSS = HOLLOW STRUCTURAL SECTIONS
 TS = TUBULAR SECTION
 TM = MAIN LOAD CARRYING MEMBER
 S.S. = STAINLESS STEEL
 UT = ULTRASONIC TESTING



NEW JERSEY TURNPIKE AUTHORITY	
GARDEN STATE PARKWAY	
VIERENDEEL CANTILEVER TYPE SIGN STRUCTURE (SPANS FROM 20 TO 42 FEET) ELEVATIONS AND GENERAL NOTES	
OFFICE OF THE CHIEF ENGINEER NEW JERSEY TURNPIKE AUTHORITY	2010 STANDARD DRAWING SI-35
WOODBRIDGE NEW JERSEY	

APP.	NO.	DATE	REVISION
	2	09/12	ADDED ELECTRICAL PROVISIONS
	1	01/11	REVISED PROVISIONAL SIGN AREA
	0	10/10	ORIGINAL DRAWING

CONTRACT NO.

SHEET NO. OF