STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	54-87 K-8258-01	2007	456	556

ALUMINUM ALTERNATE

GENERAL

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 1994 Edition and subsequent revisions.

SHOP DRAWINGS: Submit prints of the complete shop drawings to the Engineer for approval. Summit these shop drawings before beginning any fabrication. Submit three copies of these shop drawings for checking and submit seven copies for final approval and distribution, unless more copies are requested. The Contractor shall still be responsible for the correctness of the drawings, for shop fit-ups and field connections, after the Engineer approves the drawings.

DIMENSIONAL TOLERANCE: Use material conforming to the appropriate ASTM requirements listed, which does not vary from the plan dimensions by more than +/- 2%.

PIPE: Use pipe, for members ① and ②, which conforms to ASTM B241/B241M, or B429, alloy 6061-T6. Do not splice any pipe except as noted below.

FIELD SPLICES: Splice member ①, in the truss and end supports, only as necessary due to the limitations of standard stock lengths, handling or transportation requirements. Make splices using Slip-On Aluminum Welding Flanges, 2 MPa ASA, ASTM B247M, alloy 6061-T6, flat faced or flanges made from aluminum plate, ASTM B209M, alloy 6061-T6.

PLATE: Use aluminum plates which conform to ASTM B209M, alloy 6061-T6, T62, or T651.

CAP: Use Gustin-Bacon No. 70 or other approved steel or aluminum flat caps with the end supports and trusses. Hot-dip galvanize steel caps according to ASTM A123. Install caps with set screws.

BOLTS: Use high strength bolts, nuts, and washers which conform to ASTM A325M, wherever high strength is called for. Galvanize these to meet the requirements of ASTM A153 Class C. Use one washer under the turned element. At all other bolted connections, use regular hex bolts, nuts and washers which conform to ASTM A307 Grade A and to the "Standard Specifications for State Road and Bridge Construction". Either coat these bolts, nuts and washers or use stainless steel. Fasten these bolts with either single self-locking nuts or double nuts. Use beveled washers where bearing faces have a slope of more than 1:20 with respect to a plane normal to the bolt axis. Clip these beveled washers wherever necessary.

WELDING AND FABRICATION: Fabricate and weld all connections in accordance with the latest edition of the American Welding Society Specification D1.2 Structural Welding Code - Aluminum and with the "Standard Specifications for State Road and Bridge Construction". Use ER5556 electrode filler metal.

SIGN MOUNTING and WALKWAY

ALUMINUM GRATE: Use grating which conforms to ASTM B221M, alloy 6061-T6 and which is either a pressure locked or welded design. Use grating whose bearing bars are 40 x 5 mm at 30 mm centers and whose cross bars are 12 x 5 mm at 100 mm centers. Use of an equivalent reticulated grating system is an acceptable alternate.

ALUMINUM PIPE: Use pipe which conforms to ASTM B241/B241M or B429, alloy 6061-T6 or alloy 6063-T6.

ALUMINUM SHAPES: Use shapes which conform to ASTM B308/B308M, alloy 6061-T6.

LADDER

ALUMINUM BARS AND RODS: Use bars and rods which conform to ASTM B211M, alloy 6061-T6 or alloy 6063-T6.

STEEL ALTERNATE

GENERAL

DESIGN: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, 1994 Edition and subsequent revisions.

SHOP DRAWINGS: Submit prints of the complete shop drawings to the Engineer for approval. Summit these shop drawings before beginning any fabrication. Submit three copies of these shop drawings for checking and submit seven copies for final approval and distribution, unless more copies are requested. The Contractor shall still be responsible for the correctness of the drawings, for shop fit-ups and field connections, after the Engineer approves the drawings.

DIMENSIONAL TOLERANCE: Use material conforming to the appropriate ASTM requirements listed, which does not vary from the plan dimensions by more than +/- 2%.

PIPE: Use pipe, for members ① and ②, which conforms to ASTM A53, Type E or S, Grade B. Do not splice any pipe except as noted below.

FIELD SPLICES: Splice member ①, in the truss and end supports, only as necessary due to the limitations of standard stock lengths, handling or transportation requirements. Make splices using Slip-On Steel Welding Flanges, 1 MPa ASA, ASTM A181/A181M, grade I or II flat faced.

STRUCTURAL STEEL: Use shapes, bars, and plates which conform to ASTM A709M Grade 250.

CAP: Use Gustin-Bacon No. 70 or other approved flat caps with the end supports and trusses. Galvanize the caps separately and install with set screws.

BOLTS: Use high strength bolts, nuts, and washers which conform to ASTM A325M, wherever high strength is called for. Galvanize these to meet the requirements of ASTM A153 Class C. Use one washer under the turned element. At all other bolted connections, use regular hex bolts, nuts and washers which conform to ASTM A307 Grade A and to the "Standard Specifications for State Road and Bridge Construction". Either coat these bolts, nuts and washers or use stainless steel. Fasten these bolts with either single self-locking nuts or double nuts. Use beveled washers where bearing faces have a slope of more than 1:20 with respect to a plane normal to the bolt axis. Clip these beveled washers wherever necessary.

WELDING AND FABRICATION: Fabricate and weld all connections in accordance with the latest edition of the American Welding Society Specification D1.1 Structural Welding Code -Steel and with the "Standard Specifications for State Road and Bridge Construction". Use Grade 70 electrode filler metal.

GALVANIZING: Hot dip galvanize all material according to ASTM A123 after fabrication, unless otherwise noted. Repair any damage to the coating after erection.

SIGN MOUNTING and WALKWAY

STEEL GRATE: Use grating which conforms to ASTM A709M Grade 250 and which is either a pressure locked or welded design. Use grating whose bearing bars are 30 x 3 mm at 30 mm centers and whose cross bars are 12 x 3 mm at 100 mm centers. Use of an equivalent reticulated grating system is an acceptable alternate.

STEEL PIPE FOR HANDRAIL: Use pipe which conforms to ASTM A53, Type F, E, or S. The hydrostatic test, flattening test, and chemical test are not required for these pipes.

STEEL TUBE: Use steel tube which conforms to ASTM A501.

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

STANDARD STRUCTURAL SIGN SUPPORTS
SPAN TYPE OVERHEAD
GENERAL NOTES AND SPECIFICATIONS

SL151A-01 SI

FHWA APPROVAL			4-10-97	APP'D	Kenneth F. Hurst		
DESIGNED	BFM	DETAILED	RDH	QUANTITIES		CADD	DJE
DESIGN CK.	RDH	DETAIL CK.	LES	QUAN.CK.		CADD CK.	DCD

Std. Base File: sl151asi.dgn - Plot 1
Plotted By: $$USERNAME$$ Plot Location: $UNIT$
File: $$$$$$$$$$$$DGNSPEC$$$$$$$$$$$$$$$
Plot Date: $$$$$$STTIME$$$$$$