



**TRAFFIC SIGNAL LIGHT DUTY DAVIT POLE SHAFT DESIGN CRITERIA.**

DESIGN AS PER THE 2001 4th EDITION OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. THE TRAFFIC SIGNAL LIGHT DUTY DAVIT POLE SHAFT IS DESIGNED TO SUPPORT LOADS AS SHOWN ON THIS DRAWING AND DESCRIBED IN THE TECHNICAL SPECIFICATION, FOR AASHTO GROUP LOAD COMBINATION I, II, AND III. FATIGUE STRESS RANGE AT CRITICAL FATIGUE LOCATIONS WERE CALCULATED FOR TRAFFIC SIGNAL FATIGUE CATEGORY III AS PER AASHTO TABLE 11-1. ALL RESULTS ARE LISTED IN DESIGN RESULT REPORT. THE DESIGN WIND PRESSURE  $P_z = 0.00256KzGV^2IrCd$  psf WHERE  $(0.00256GV^2) = 25.6$  psf,  $Kz$  AS PER AASHTO TABLE 3-5 EXCEPT NOT LESS THAN 1.0,  $Ir = 1.0$  FOR 50 YEAR DESIGN LIFE AND  $Cd$  AS PER AASHTO TABLE 3-6.

**PROPERTIES OF SIGNALS AND SIGNS**

FACE AREAS LISTED BELOW DO NOT INCLUDE DRAG COEFFICIENT

- A 5 SECTION 12" SIGNAL HEAD PLUMBIZER ATTACHMENT  
FACE AREA 7.0 sq. ft. (14" x 72")  
END AREA 1.34 sq. ft.  
WEIGHT 80 lb.
- B 5 SECTION 12" SIGNAL HEAD SIDE MOUNTED  
FACE AREA 6.8 sq. ft. (14" x 70")  
END AREA 1.34 sq. ft.  
WEIGHT 80 lb.
- C 3 SECTION 12" SIGNAL HEAD HANGER ATTACHMENT  
FACE AREA 4.08 sq. ft. (14" x 42")  
END AREA 1.34 sq. ft.  
WEIGHT 50 lb.
- D PEDESTRIAN CORRIDOR UNIT WITH FOUR FLASHING LIGHTS  
TOTAL FACE AREA 9.63 sq. ft. (36½"W x 32½"H, EACH LIGHT 10" SQ.)  
BOTTOM AREA 4.56 sq. ft. (36½"W x 18"D)  
TOTAL WEIGHT 100 lb.
- E TRAFFIC SIGN  
FACE AREA 6.0 sq. ft. (24" W x 36" H)  
WEIGHT 14 lb.
- F TRAFFIC SIGN  
FACE AREA 3.0 sq. ft. (36" W x 12" H)  
WEIGHT 10 lb.
- G TRAFFIC SIGN  
FACE AREA 2.0 sq. ft. (24" W x 12" H)  
WEIGHT 8 lb.
- H TWO PEDESTRIAN HEADS AT 90°  
TOTAL EFFECTIVE PROJECTED AREA 3.3 sq. ft. (EACH 13½" W x 13½" H)  
TOTAL WEIGHT 50 lb.
- I TRAFFIC SIGN  
FACE AREA 0.28 sq. ft. (5" W x 8" H)  
WEIGHT 5 lb.
- J STREET NAME SIGN  
FACE AREA 7.0 sq. ft. (84" W x 12" H)  
WEIGHT 17 lb.

3	APRIL 26, 2004	REDRAWN AND ADDED SHEET 2	
REV. No.	DATE	REVISIONS	APPROVED

**THE CITY OF WINNIPEG**  
PUBLIC WORKS DEPARTMENT  
TRANSPORTATION DIVISION

**GES ENGINEERING INC.**  
CALGARY, AB. PHONE (403) 240-2921 FAX (403) 240-3713

TRAFFIC SIGNAL LIGHT DUTY DAVIT POLE SHAFT



DESIGNED AND APPROVED <i>D. Selme</i> DATE GES Engineering Inc July 23, 2004	DRAWN G.G. DATE MARCH 12, 2004	DWG No. ST-161	SCALE NTS	SHEET 2 OF 2	REV. No. 3
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