

Appendix A

List of Standard Drawings and Specifications

Table A1: List of Standard Drawings

Drawing No.	Description	Part No. ¹
CONCRETE PILE FOUNDATIONS		
F1	Light Series Foundation: a) 610 mm Dia. Pile b) 610 mm Dia. Pile for Breakaway Base	F-L F-L(BR)
F2	Medium Series Foundation – 762 mm Dia. Pile	F-M
F3	Heavy Series Foundation – 915 mm Dia. Pile	F-H
F4	Extra Heavy Series Foundation – 1220 mm Dia. Pile	F-EH
A1	Anchor Bolts: a) 32 mm (1 1/4") Dia. Anchor Bolt b) 38 mm (1 1/2") Dia. Anchor Bolt c) 51 mm (2") Dia. Anchor Bolt	AB1 AB2 AB3
STRUCTURES		
S1	Light Series – 3.5 m Straight Pole	P-L-S35
S2	Light Series – 5.0 m Straight Pole	P-L-S50
S3	Light Series Cantilever - 6.5 m Vertical Shaft	P-L-C65
S4	Light Series Cantilever: a) 2.5 m Signal Arm b) 5.0 m Signal Arm c) 3.0 m Corridor Arm d) 5.0 m Corridor Arm	A-L-S25 A-L-S50 A-L-C30 A-L-C50
S5	Light Series Davit – 6.4 m Shaft	P-L-D64/25
S6	Light Series Davit: a) 2.5 m Signal Extension Arm b) 2.5 m Corridor Extension Arm	A-L-DS25 A-L-DC25
S7	Medium Series Double Cantilever – 6.5 m Vertical Shaft	P-M-DC65
S8	Medium Series Cantilever – 6.5 m Vertical Shaft	P-M-C65
S9	Medium Series Cantilever: a) 5.0 m Signal Arm b) 6.0 m Signal Arm c) 7.5 m Signal Arm d) 3.0 m Corridor Arm e) 5.0 m Corridor Arm f) 6.0 m Corridor Arm g) 7.5 m Corridor Arm	A-M-S50 A-M-S60 A-M-S75 A-M-C30 A-M-C50 A-M-C60 A-M-C75
S10	Heavy Series Cantilever – 6.8 m Vertical Shaft	P-H-C68

¹ See Figure A1 for Legend.

Drawing No.	Description	Part No. ¹
S11	Heavy Series Cantilever: a) 7.5 m Signal Arm b) 9.0 m Signal Arm c) 10.5 m Signal Arm d) 12.8 m Signal Arm e) 15.0 m Signal Arm	A-H-S75 A-H-S90 A-H-S105 A-H-S128 A-H-S150
S12	Heavy Series Cantilever: a) 7.5 m Advance Warning Sign Arm b) 9.0 m Advance Warning Sign Arm	A-H-AW75 A-H-AW90
S13	Extra Heavy Series Cantilever – 6.8 m Vertical Shaft	P-EH-C68
S14	Extra Heavy Series Cantilever: a) 17.0 m Signal Arm b) 18.5 m Signal Arm	A-EH-S170 A-EH-S185
S15	Extra Heavy Series Cantilever: a) 10.5 m Advance Warning Sign Arm b) 15.0 m Advance Warning Sign Arm	A-EH-AW105 A-EH-AW150
S16	Luminaire Davit Extension	E-D38/30
S17	Tenon Extension Shafts: a) 5.4 m Extension Shaft b) 6.9 m Extension Shaft c) 8.4 m Extension Shaft	E-S54 E-S69 E-S84
S18	Stub Extension Shafts: a) 1.5 m Stub Extension Shaft b) 3.0 m Stub Extension Shaft c) 4.5 m Stub Extension Shaft d) 6.1 m Stub Extension Shaft	E-STUB15 E-STUB30 E-STUB45 E-STUB61
S19	Hydro Luminaire Adaptor	HLA
S20	Shaft Access Details: a) Access Panel and Non-Metallic Access Panel Cover b) Handhole	AP1 H1
S21	Wind Deflector Assembly	WD1
S22	Rotating Base Assembly	

¹ See Figure A1 for Legend

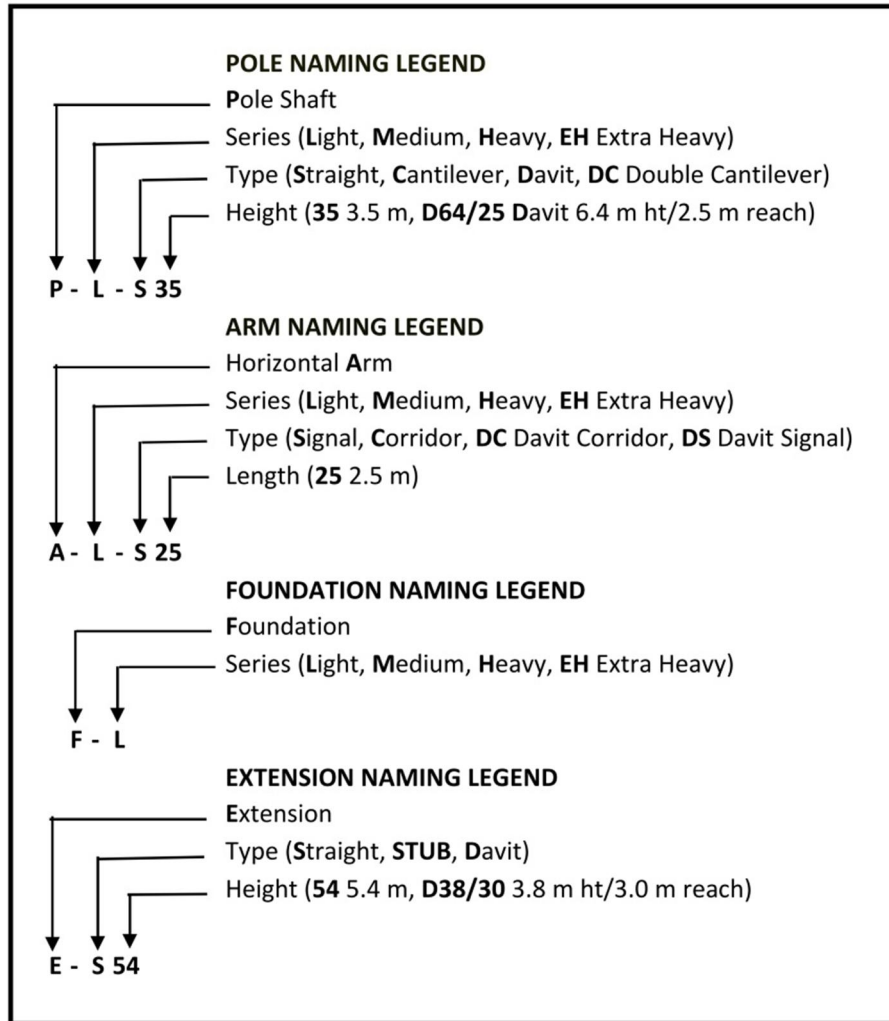


Figure A1: Component Naming Convention

Table A2: List of Standard Specifications

Specification No.	Description
230	Supply of Steel Traffic Signal and Pedestrian Corridor Structures
231	Erection of Steel Traffic Signal and Pedestrian Corridor Structures
232	Concrete Foundations for Traffic Signal and Pedestrian Corridor Structures
233	Supply of Breakaway Bases for Traffic Signal and Pedestrian Corridor Structures
234	<i>Not provided for this version of this document</i>

Appendix B

Description of Attachments

Table B1: Description of Attachments

Item	Description	Size (mm) w x h x d	Mass (kg)
A	3 section LED signal head, mounted on arm, with knuckle	610 x 1320 x 350	21
B	3 section LED signal head, mounted on pole	610 x 1320 x 350	16
C	4 section LED signal head, mounted on arm, with knuckle	610 x 1700 x 350	26
D	4 section LED signal head, mounted on pole	610 x 1700 x 350	23
E	Bi-modal Pedestrian Head c/w Countdown Timer	350 x 800 x 330	9
F	Pedestrian Corridor RA-4 overhead sign	914 x 1194 x 476	50
G	3 metre luminaire arm	3000	10
H	Panel sign – 1500 (Type 1)1	1500 x 305 x 40	7
I	Panel sign – 2500	2500 x 305 x 40	11
J	Double Panel sign - two 2500 panels ((Type 2)	2500 x 610 x 40	22
K	Sheet Sign - 300 x 900 ((Type 3)	300 x 900	1.5
L	Sheet Sign - 400 x 900 (Type 4)	400 x 900	2
M	Sheet Sign - 600 x 750 (Type 6, 9, 10, 13)	600 x 750	2.5
N	Sheet Sign - 600 x 900 (Type 7, 8, 12)	600 x 900	3
O	Sheet Sign - 900 x 900 (Type 11)	900 x 900	4.5
P	Sheet Sign - 900 x 1200 (Type 14)	900 x 1200	6
Q	Advance Warning Sign Panel	2800 x 2135 x 40	101
R	Advance Warning Sign Panel	2400 x 1830 x 40	67

NOTES

1. The structures can be assembled for various combinations of attachments given in Table B1.
2. Total number of attachments on the structure must not exceed the maximum number shown on the assembly drawings.
3. The sizes of various types of sheet signs is provided in Table B2.

Table B2: Sizes of Sheet Signs

Type	Description	Size (mm) w x h	Mass (kg)
1	IDM-3 (Single Name Panel Sign)	1500 x 305	7
2	IDM-3 (Double Name Panel Sign)	2500 x 610	22
3	WA-36 L (Hazard Marker)	300 x 900	1.5
4	WA-36 (Double Hazard Marker)	400 x 900	2
5	WA-36 R (Hazard Marker)	300 x 900	1.5
6	RC-4 R (Stop Line)	600 x 750	2.5
7	RC-4 L B (Stop Line - Bilingual)	600 x 900	3
8	RB-17 R (No Right on Red)	600 x 900	3
9	MR-100 (Left Turn Signal)	600 x 750	2.5
10	MR-100 B (Left Turn Signal - Bilingual)	600 x 750	2.5
11	RB-11 L (No Left Turn)	900 x 900	4.5
12	RB-41 (Left Lane)	600 x 900	3
13	RA-4 (Pedestrian Crossing - 2 Lane Roadway)	600 x 750	2.5
14	RA-4 (Pedestrian Crossing - 4 Lane Roadway)	900 x 1200	6

NOTES

1. The structures can be assembled for various combinations of sheet signs given in Table B2.
2. Total number of attachments on the structure must not exceed the maximum number shown on the assembly drawings.

Appendix C

Light Series Structures Component Assembly

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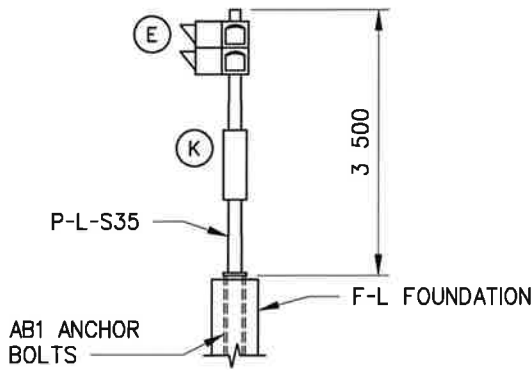


FIG. 1a: 3.5m LIGHT SERIES STRAIGHT STANDARD

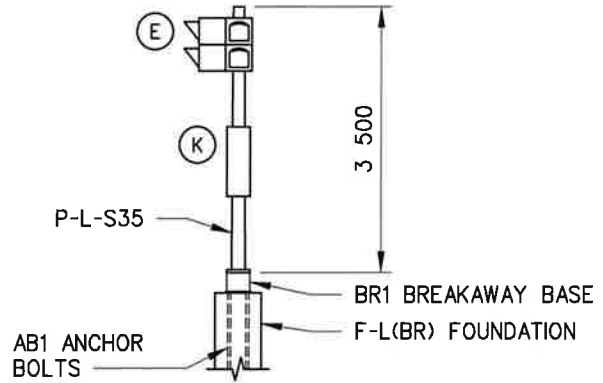


FIG. 1b: 3.5m LIGHT SERIES STRAIGHT STANDARD

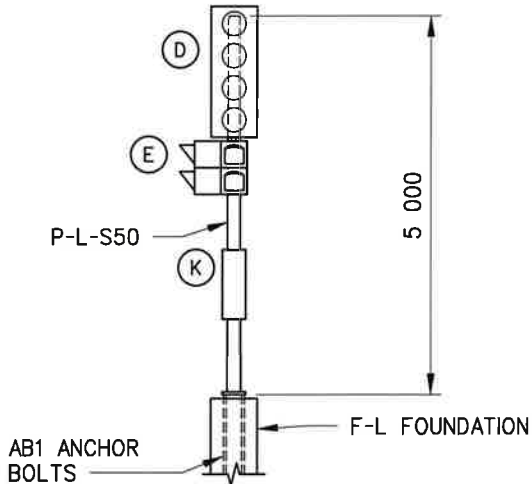


FIG. 1c: 5.0m LIGHT SERIES STRAIGHT STANDARD

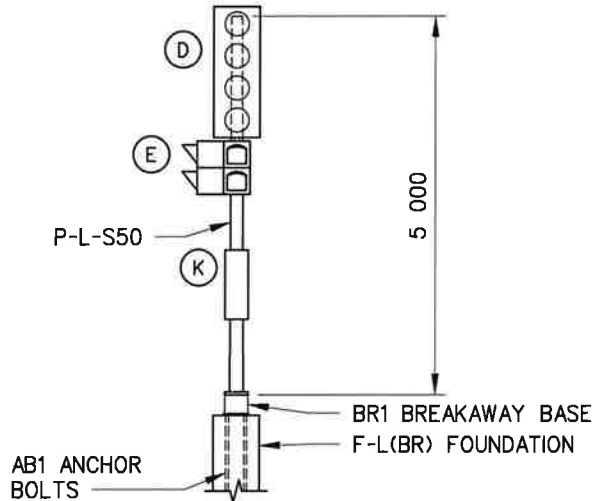


FIG. 1d: 5.0m LIGHT SERIES STRAIGHT STANDARD

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LIGHT SERIES STRAIGHT POLE 1 OF 1
TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES



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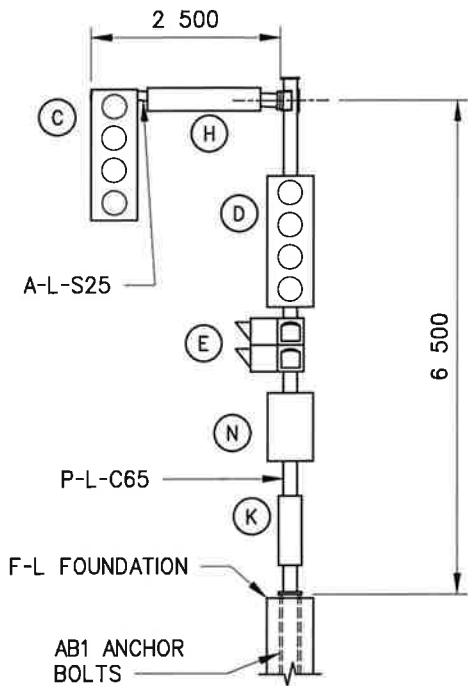


FIG. 2a: 6.5m LIGHT SERIES CANTILEVER WITH 2.5m SIGNAL ARM

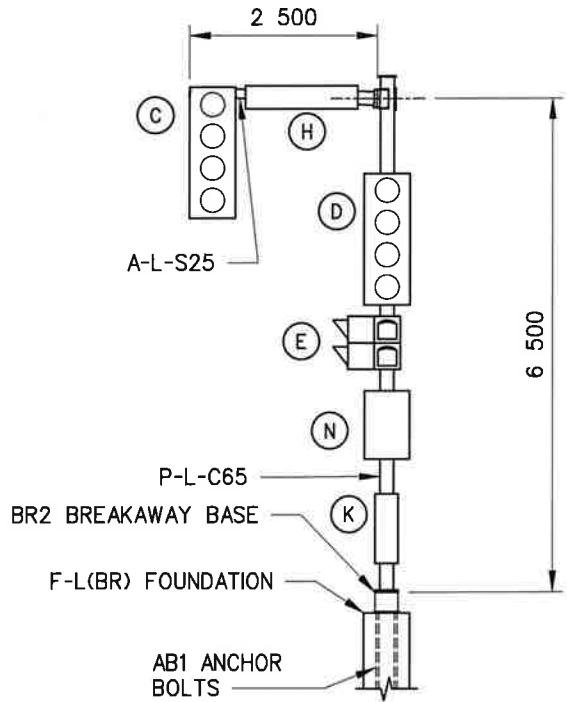


FIG. 2b: 6.5m LIGHT SERIES CANTILEVER WITH 2.5m SIGNAL ARM

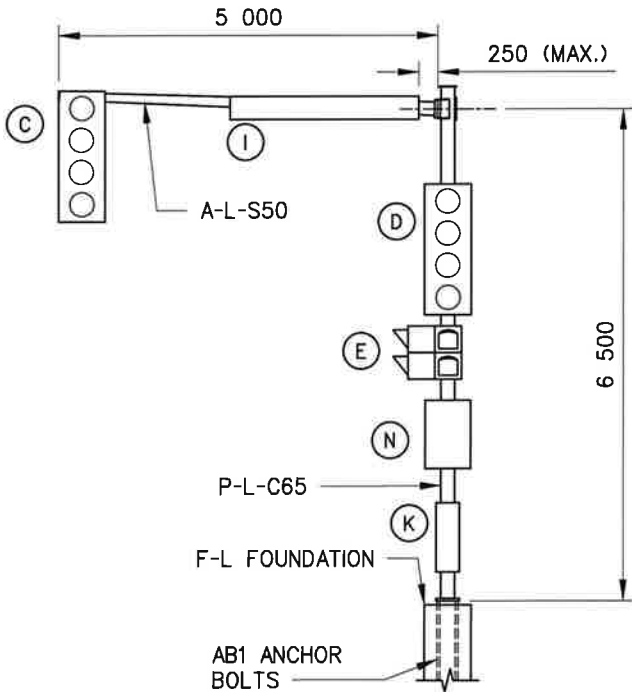


FIG. 2c: 6.5m LIGHT SERIES CANTILEVER WITH 5.0m SIGNAL ARM

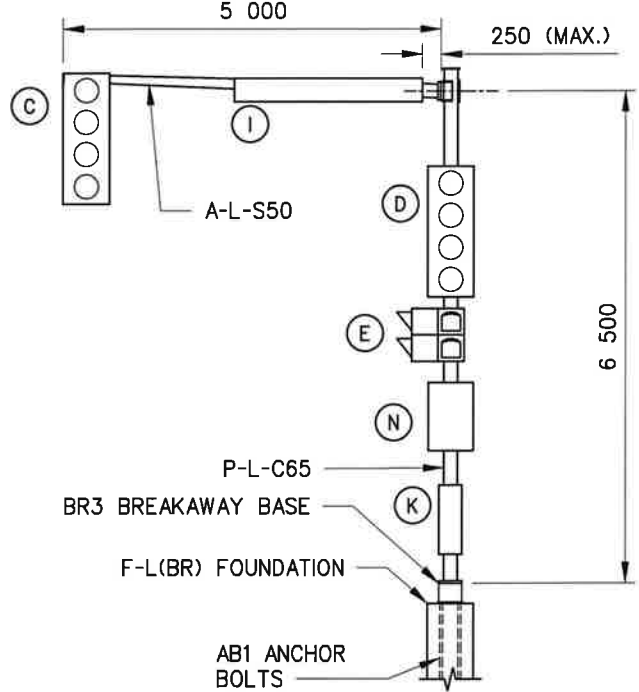


FIG. 2d: 6.5m LIGHT SERIES CANTILEVER WITH 5.0m SIGNAL ARM

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LIGHT SERIES CANTILEVER 1 OF 1
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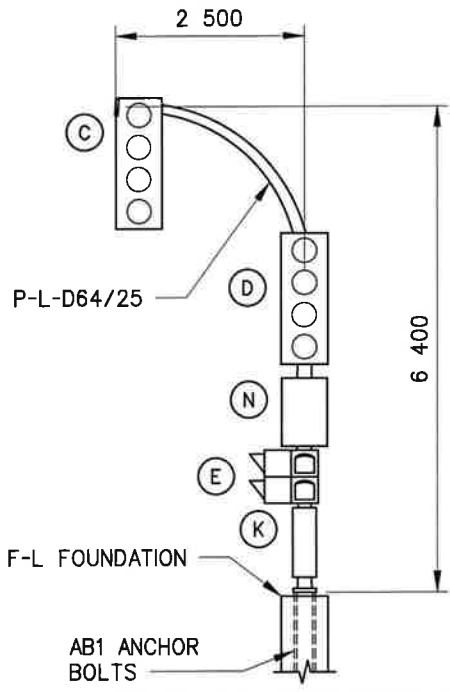


FIG. 3a: 6.4m LIGHT SERIES DAVIT

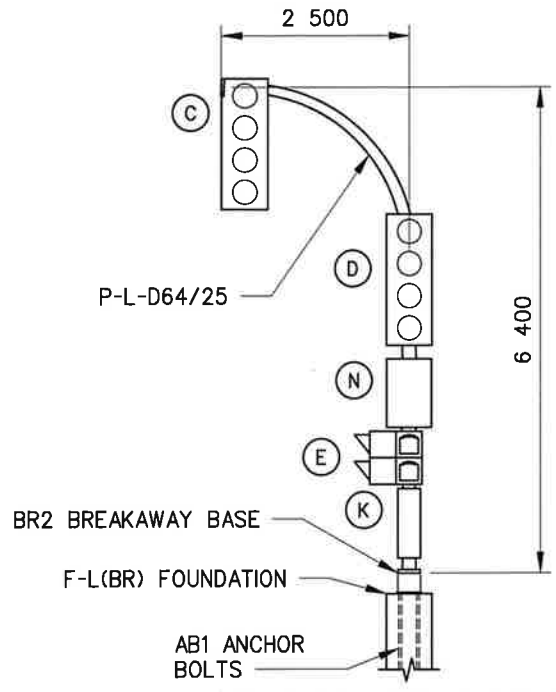


FIG. 3b: 6.4m LIGHT SERIES DAVIT

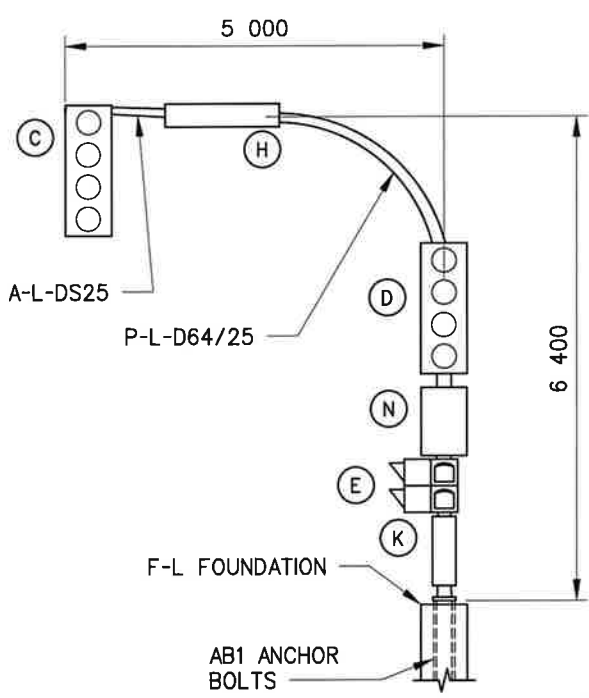


FIG. 3c: 6.4m LIGHT SERIES DAVIT WITH 2.5m SIGNAL ARM

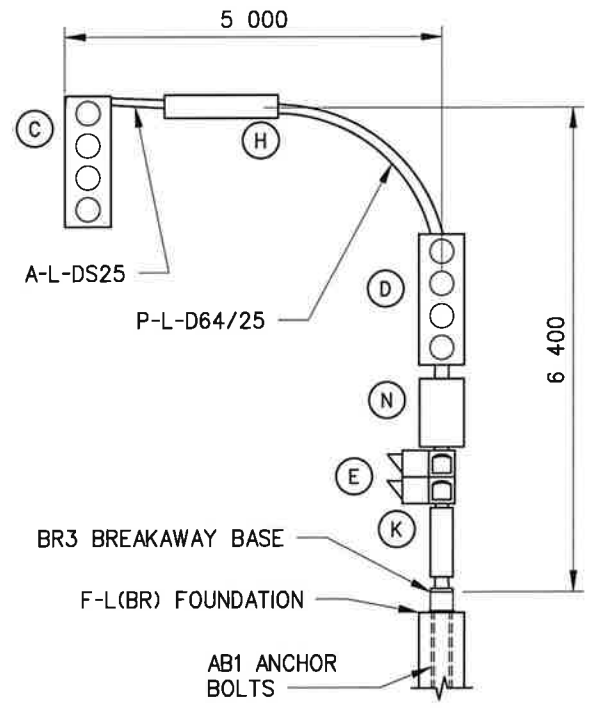


FIG. 3d: 6.4m LIGHT SERIES DAVIT WITH 2.5m SIGNAL ARM

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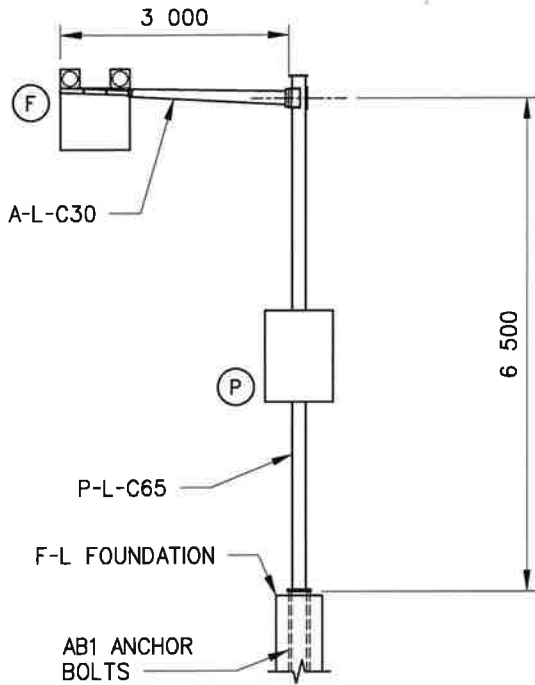


FIG. 4a: 6.5m LIGHT SERIES CANTILEVER WITH 3.0m CORRIDOR ARM

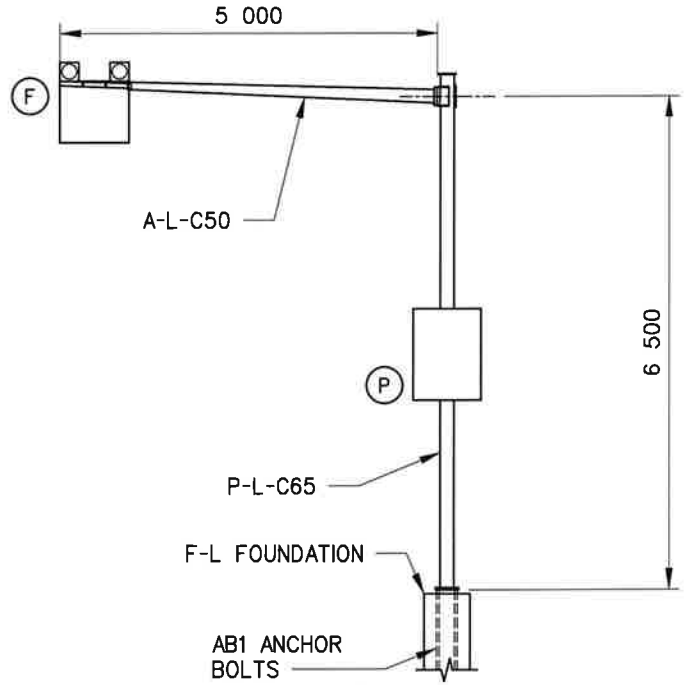


FIG. 4b: 6.5m LIGHT SERIES CANTILEVER WITH 5.0m CORRIDOR ARM

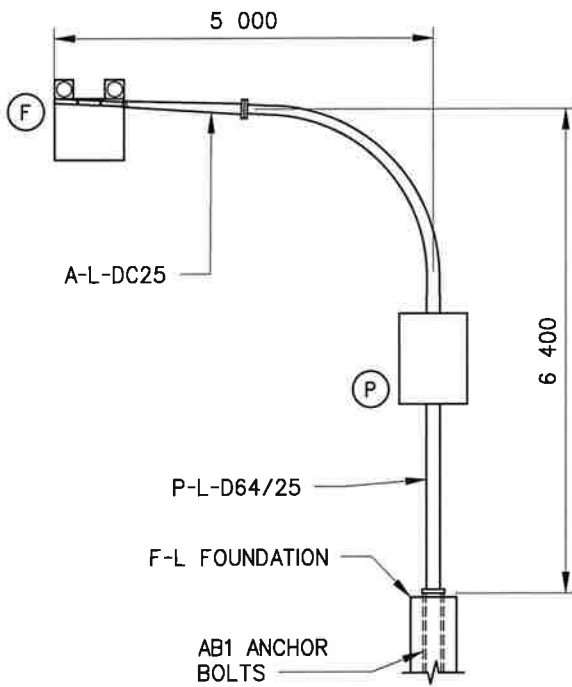


FIG. 4c: 6.4m LIGHT SERIES DAVIT WITH 2.5m CORRIDOR ARM

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TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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Appendix D

Medium Series Structures Component Assembly

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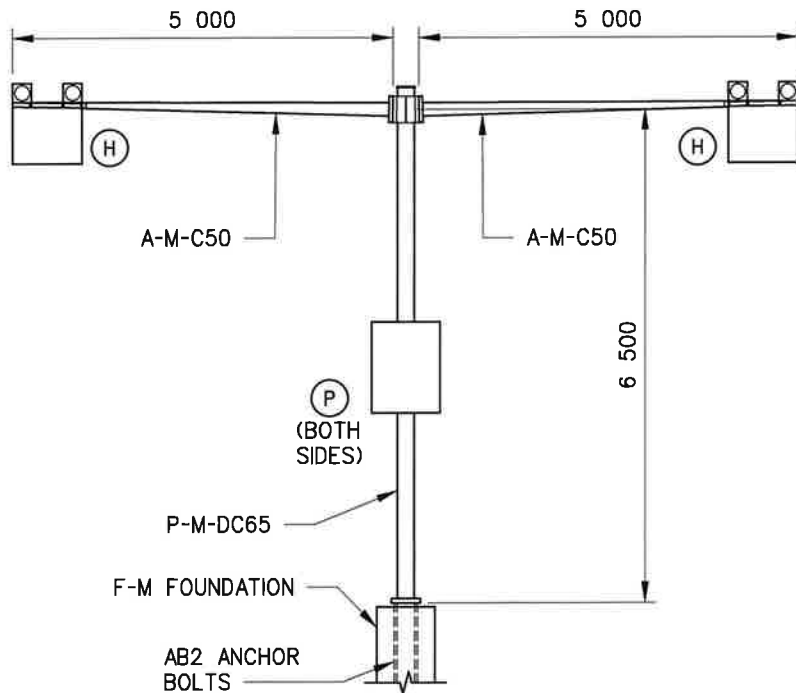


FIG. 5a: 6.5m MEDIUM SERIES DOUBLE CANTILEVER WITH TWO 5.0m CORRIDOR ARMS

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 CORRIDOR 1 OF 1
 TRAFFIC SIGNAL AND PEDESTRIAN
 CORRIDOR STRUCTURES**

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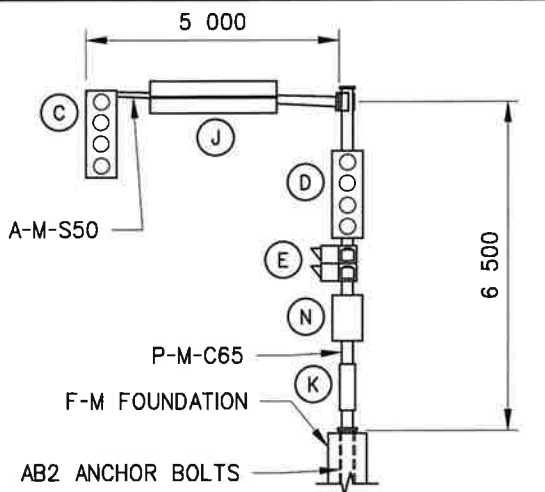


FIG. 6a: 6.5m MEDIUM SERIES CANTILEVER WITH 5.0m SIGNAL ARM

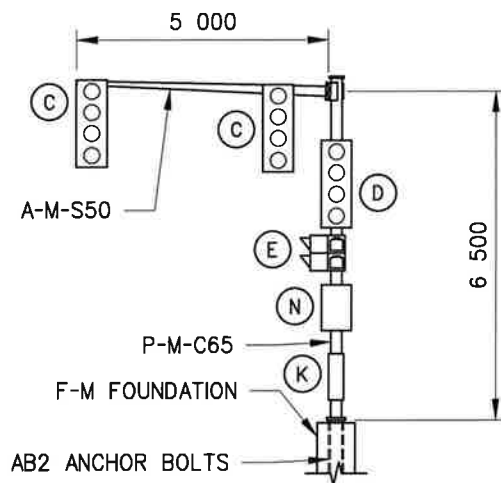


FIG. 6b: 6.5m MEDIUM SERIES CANTILEVER WITH 5.0m SIGNAL ARM

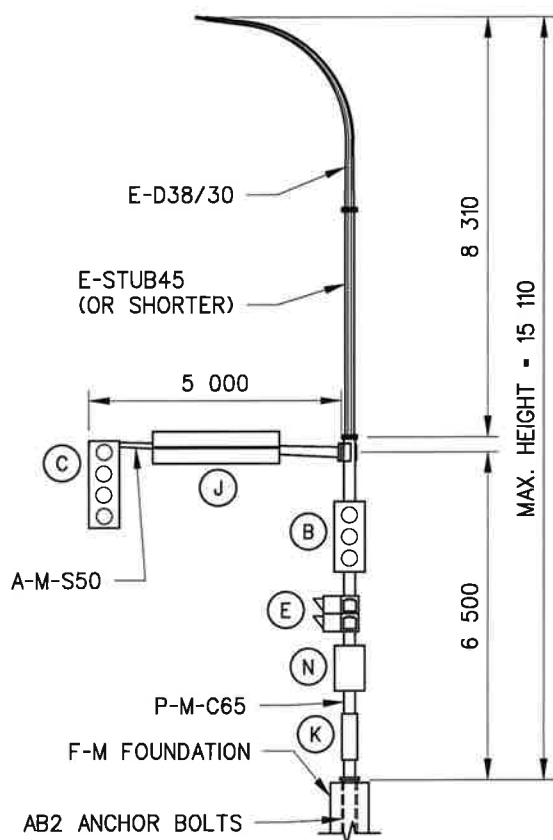


FIG. 6c: 6.5m MEDIUM SERIES CANTILEVER WITH 5.0m SIGNAL ARM, AND EXTENSIONS FOR DAVIT LUMINAIRE

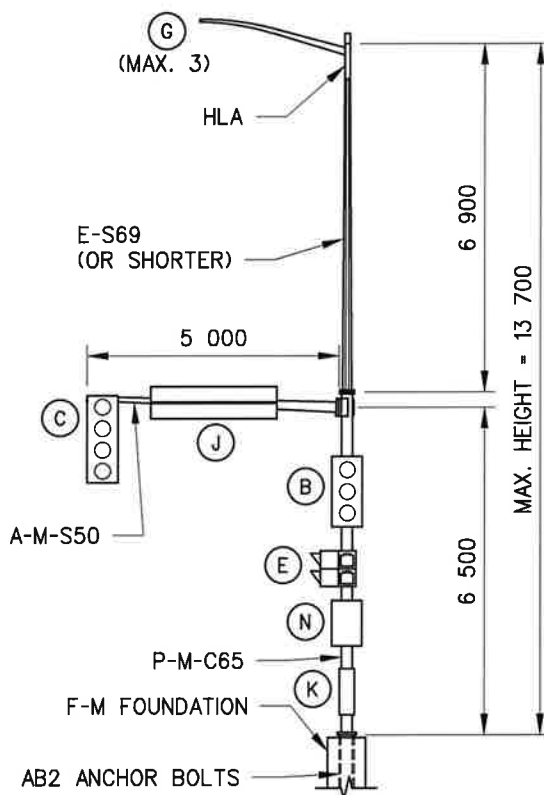


FIG. 6d: 6.5m MEDIUM SERIES CANTILEVER WITH 5.0m SIGNAL ARM, AND EXTENSIONS FOR HYDRO LUMINAIRE

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MEDIUM SERIES CANTILEVER 1 OF 3

TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES



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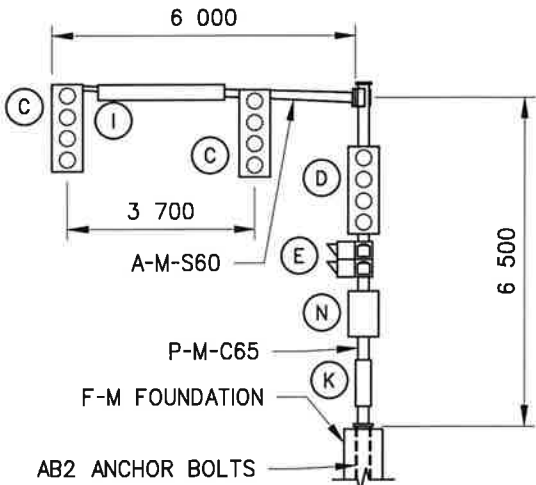


FIG. 7a: 6.5m MEDIUM SERIES CANTILEVER WITH 6.0m SIGNAL ARM

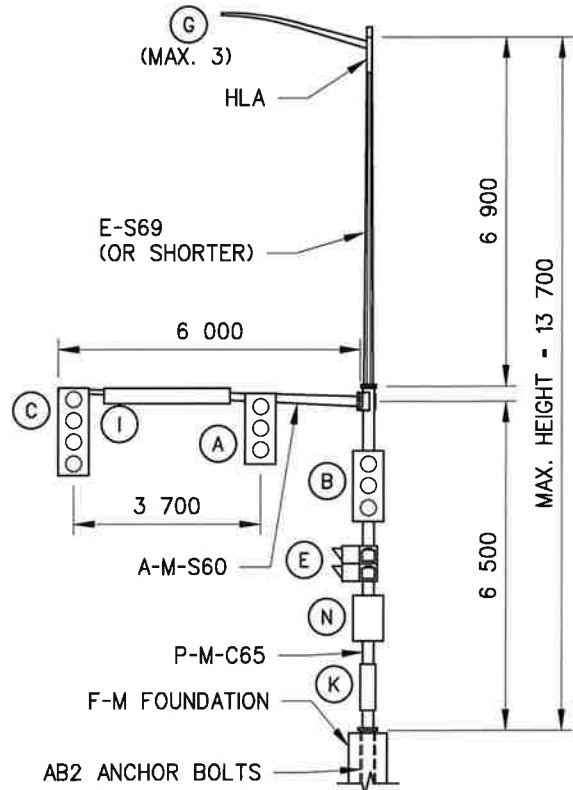


FIG. 7b: 6.5m MEDIUM SERIES CANTILEVER WITH 6.0m SIGNAL ARM, AND EXTENSIONS FOR HYDRO LUMINAIRE

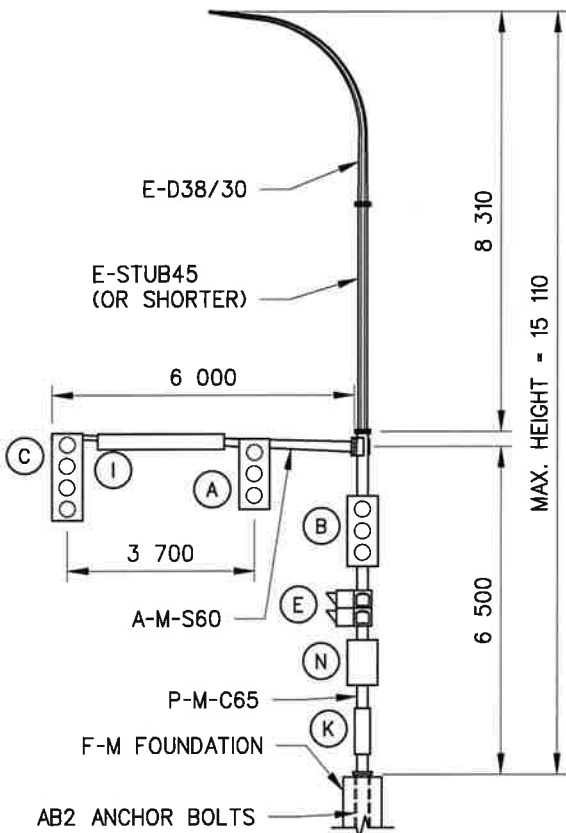


FIG. 7c: 6.5m MEDIUM SERIES CANTILEVER WITH 6.0m SIGNAL ARM, AND EXTENSIONS FOR DAVIT LUMINAIRE

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MEDIUM SERIES CANTILEVER 2 OF 3

TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES



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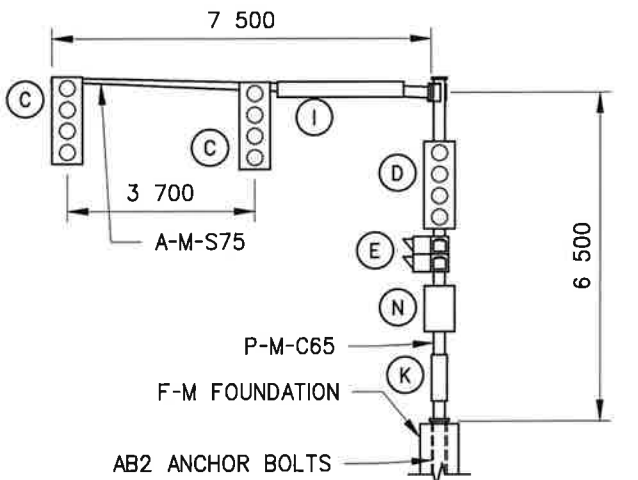


FIG. 8a: 6.5m MEDIUM SERIES CANTILEVER WITH 7.5m SIGNAL ARM

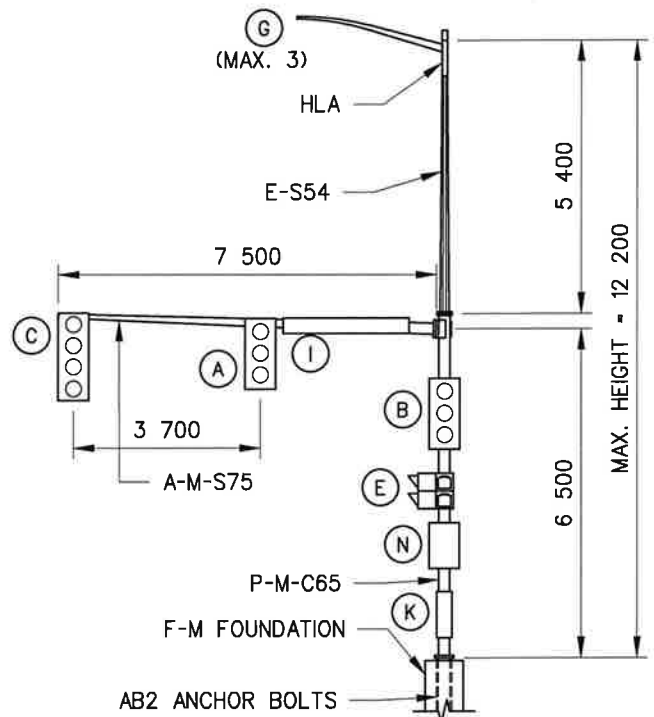


FIG. 8b: 6.5m MEDIUM SERIES CANTILEVER WITH 7.5m SIGNAL ARM, AND EXTENSIONS FOR HYDRO LUMINAIRE

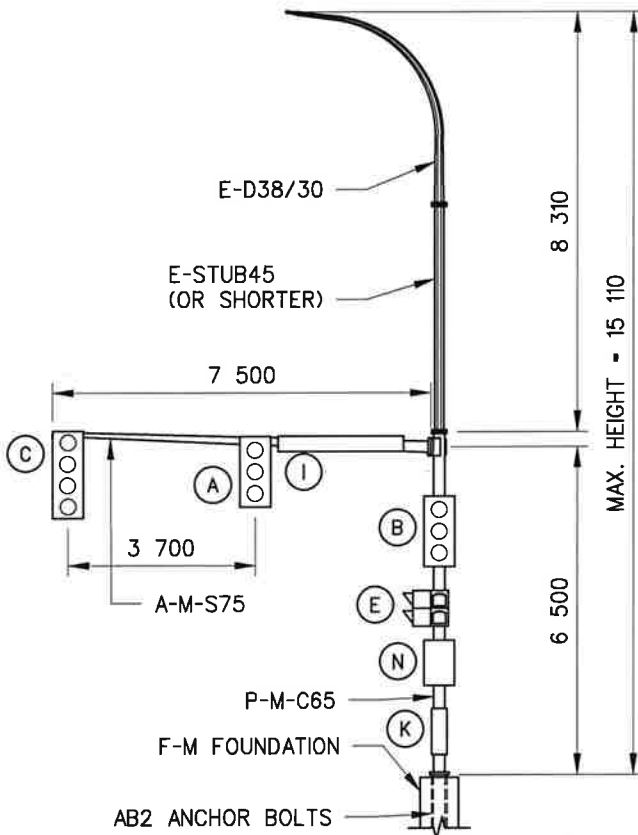


FIG. 8c: 6.5m MEDIUM SERIES CANTILEVER WITH 7.5m SIGNAL ARM, AND EXTENSIONS FOR DAVIT LUMINAIRE

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MEDIUM SERIES CANTILEVER 3 OF 3
TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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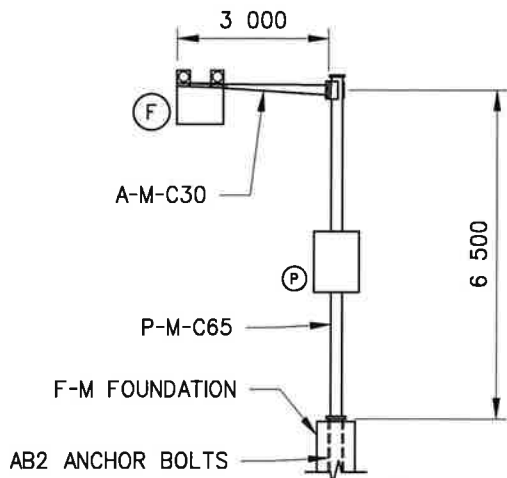


FIG. 9a: 6.5m MEDIUM SERIES CANTILEVER WITH 3.0m CORRIDOR ARM

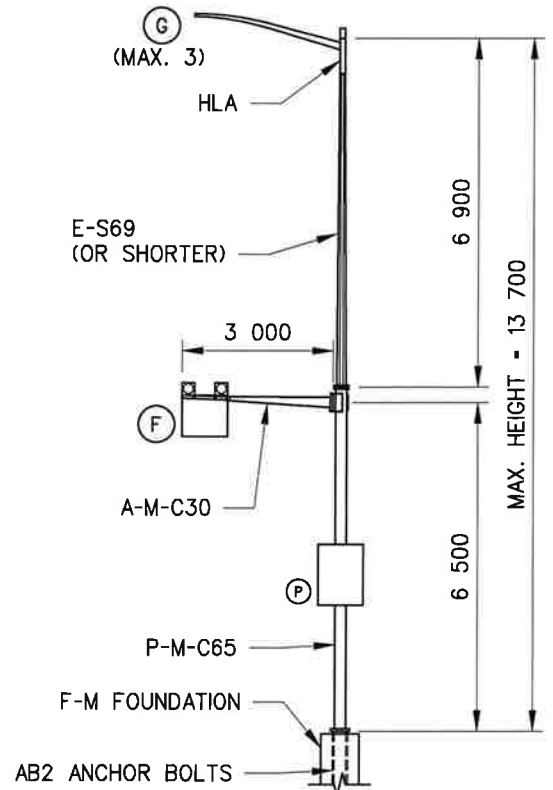


FIG. 9b: 6.5m MEDIUM SERIES CANTILEVER WITH 3.0m CORRIDOR ARM, AND EXTENSIONS FOR HYDRO LUMINAIRE

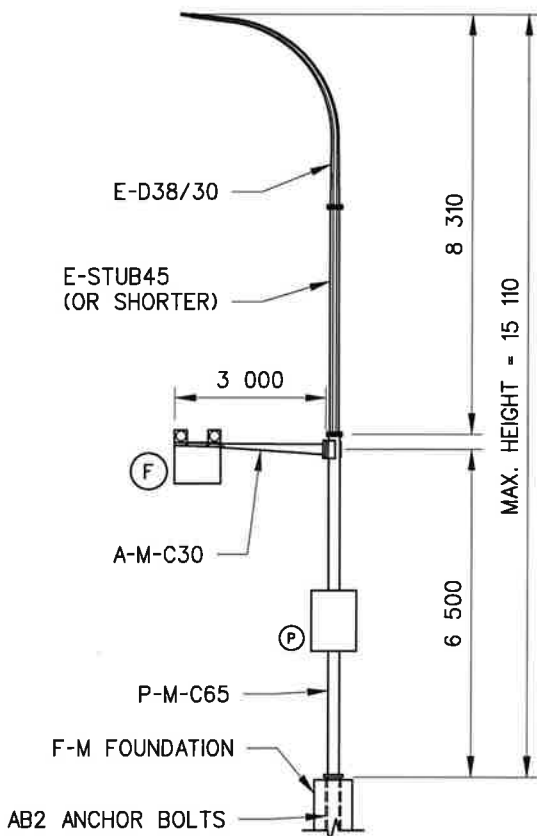


FIG. 9c: 6.5m MEDIUM SERIES CANTILEVER WITH 3.0m CORRIDOR ARM, AND EXTENSIONS FOR DAVIT LUMINAIRE

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MEDIUM SERIES CORRORIDOR 1 OF 4

TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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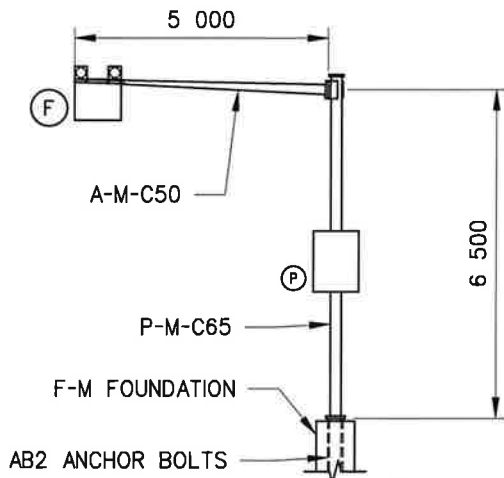


FIG. 10a: 6.5m MEDIUM SERIES CANTILEVER WITH 5.0m CORRIDOR ARM

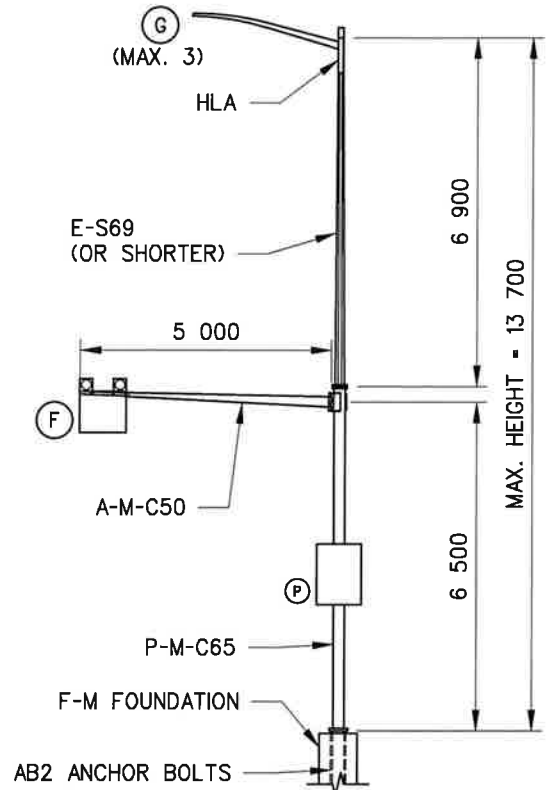


FIG. 10b: 6.5m MEDIUM SERIES CANTILEVER WITH 5.0m CORRIDOR ARM, AND EXTENSIONS FOR HYDRO LUMINAIRE

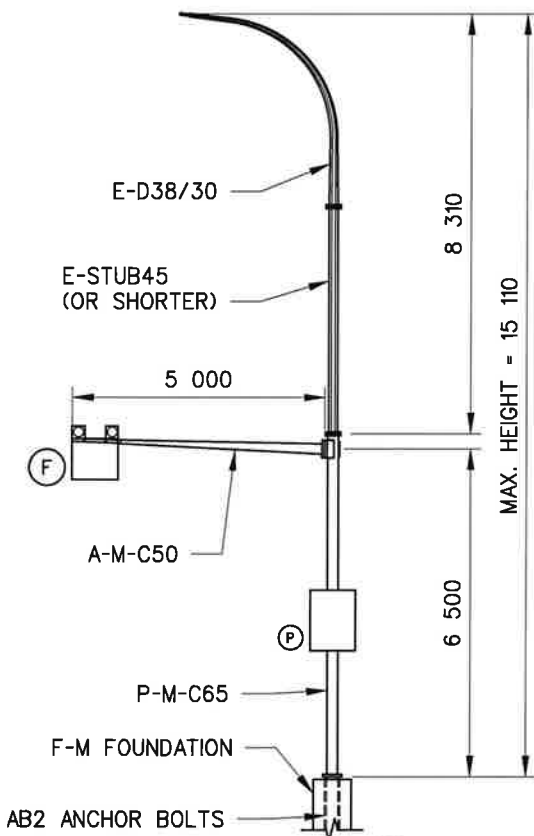


FIG. 10c: 6.5m MEDIUM SERIES CANTILEVER WITH 5.0m CORRIDOR ARM, AND EXTENSIONS FOR DAVIT LUMINAIRE

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MEDIUM SERIES CORRRIDOR 2 OF 4

TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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PROVINCE OF MANITOBA
13/19
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REGISTERED PROFESSIONAL ENGINEER

Manitoba
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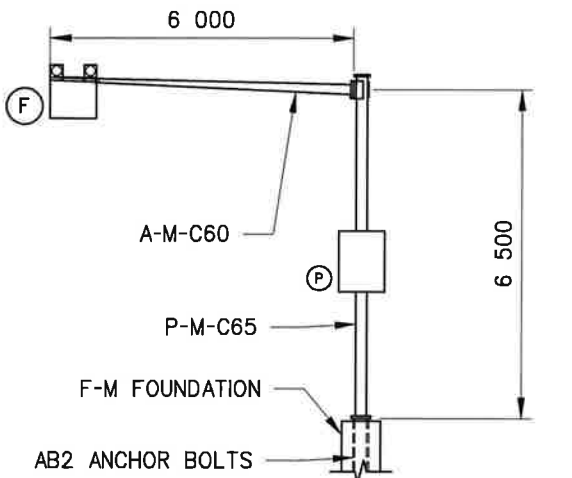


FIG. 11a: 6.5m MEDIUM SERIES CANTILEVER WITH 6.0m CORRIDOR ARM

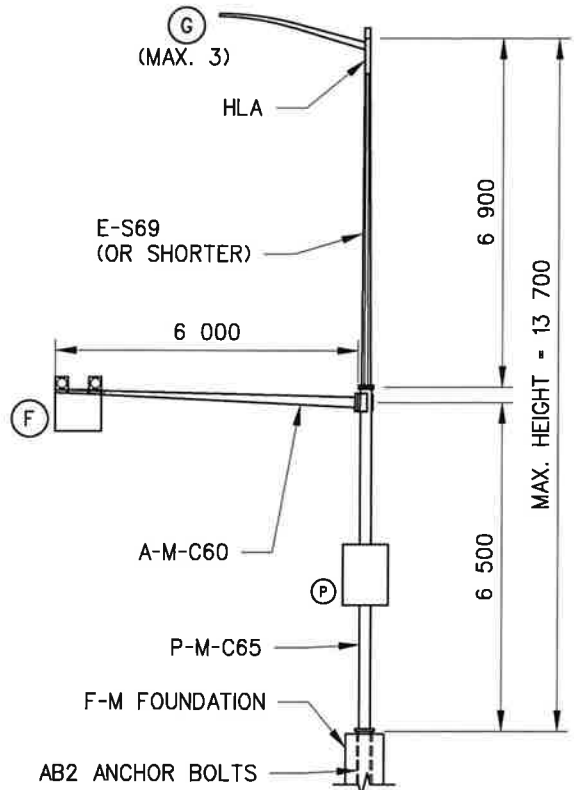


FIG. 11b: 6.5m MEDIUM SERIES CANTILEVER WITH 6.0m CORRIDOR ARM, AND EXTENSIONS FOR HYDRO LUMINAIRE

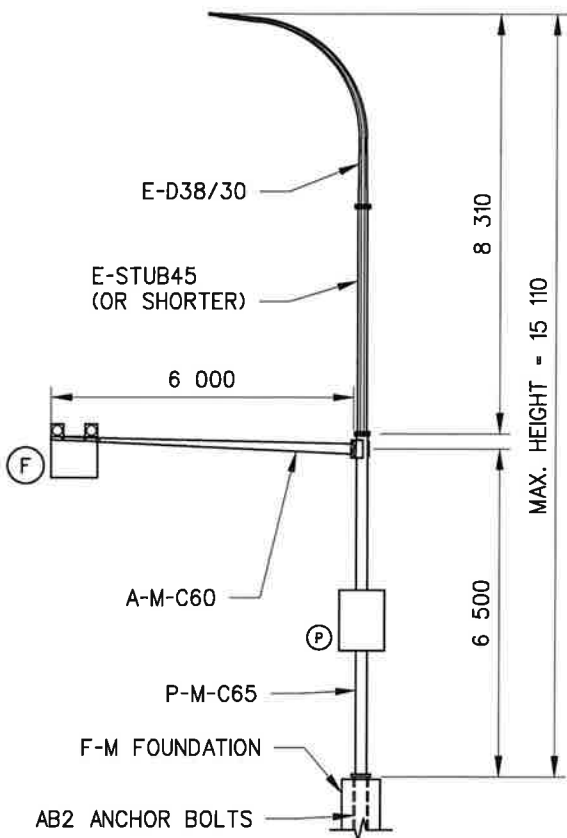


FIG. 11c: 6.5m MEDIUM SERIES CANTILEVER WITH 6.0m CORRIDOR ARM, AND EXTENSIONS FOR DAVIT LUMINAIRE

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PROVINCE OF MANITOBA
 Nov 13/19
 S.S.
 RIHAL
 REGISTERED PROFESSIONAL ENGINEER

MEDIUM SERIES CORRRIDOR 3 OF 4

TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

Manitoba
 Infrastructure
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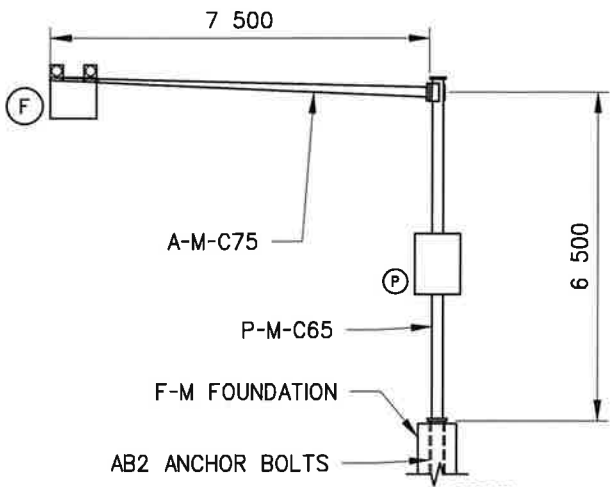


FIG. 12a: 6.5m MEDIUM SERIES CANTILEVER WITH 7.5m CORRIDOR ARM

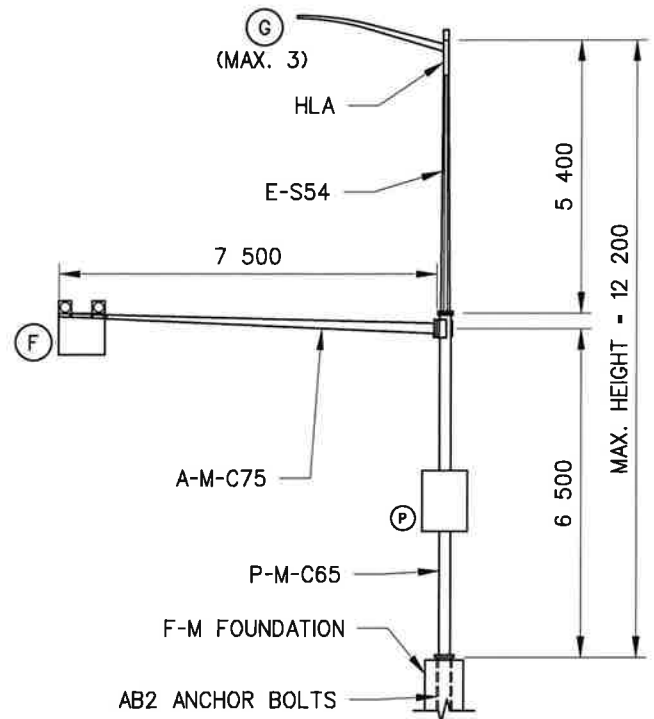


FIG. 12b: 6.5m MEDIUM SERIES CANTILEVER WITH 7.5m CORRIDOR ARM, AND EXTENSIONS FOR HYDRO LUMINAIRE

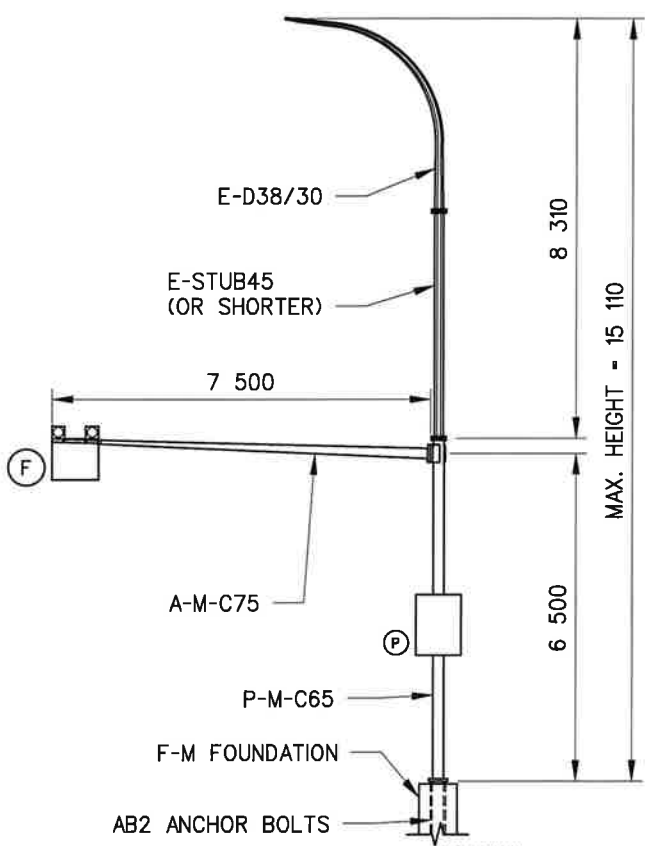


FIG. 12c: 6.5m MEDIUM SERIES CANTILEVER WITH 7.5m CORRIDOR ARM, AND EXTENSIONS FOR DAVIT LUMINAIRE

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Appendix E

Heavy Series Structures Component Assembly

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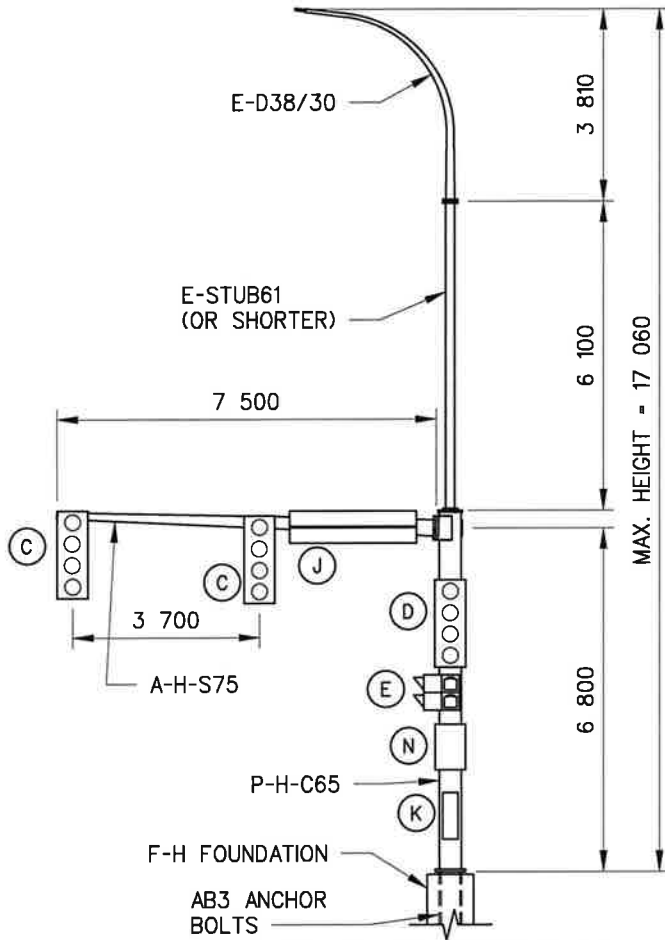


FIG. 13a: 6.8m HEAVY SERIES CANTILEVER WITH 7.5m SIGNAL ARM

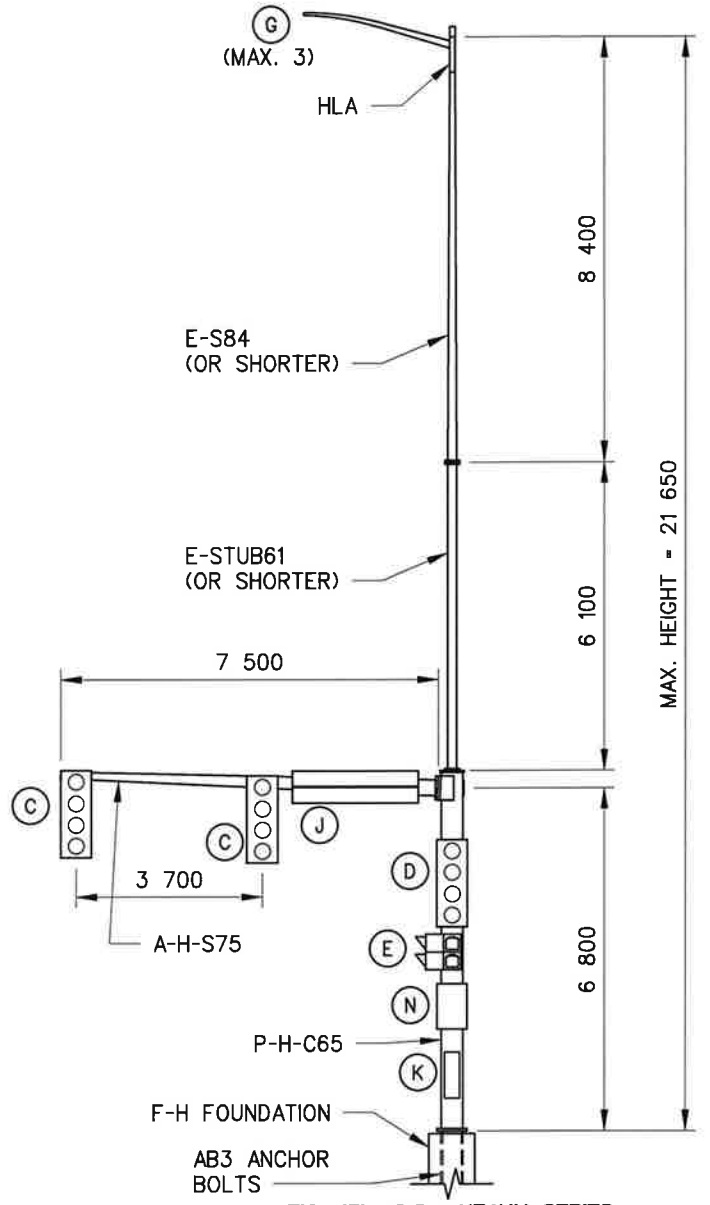


FIG. 13b: 6.8m HEAVY SERIES CANTILEVER WITH 7.5m SIGNAL ARM

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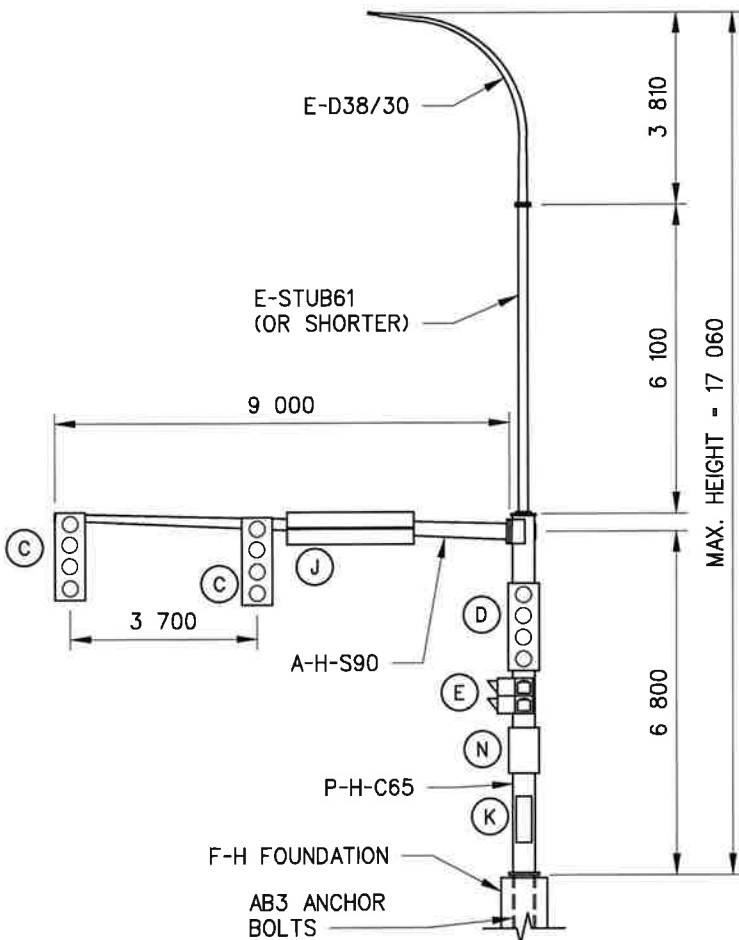


FIG. 14a: 6.8m HEAVY SERIES CANTILEVER WITH 9.0m SIGNAL ARM

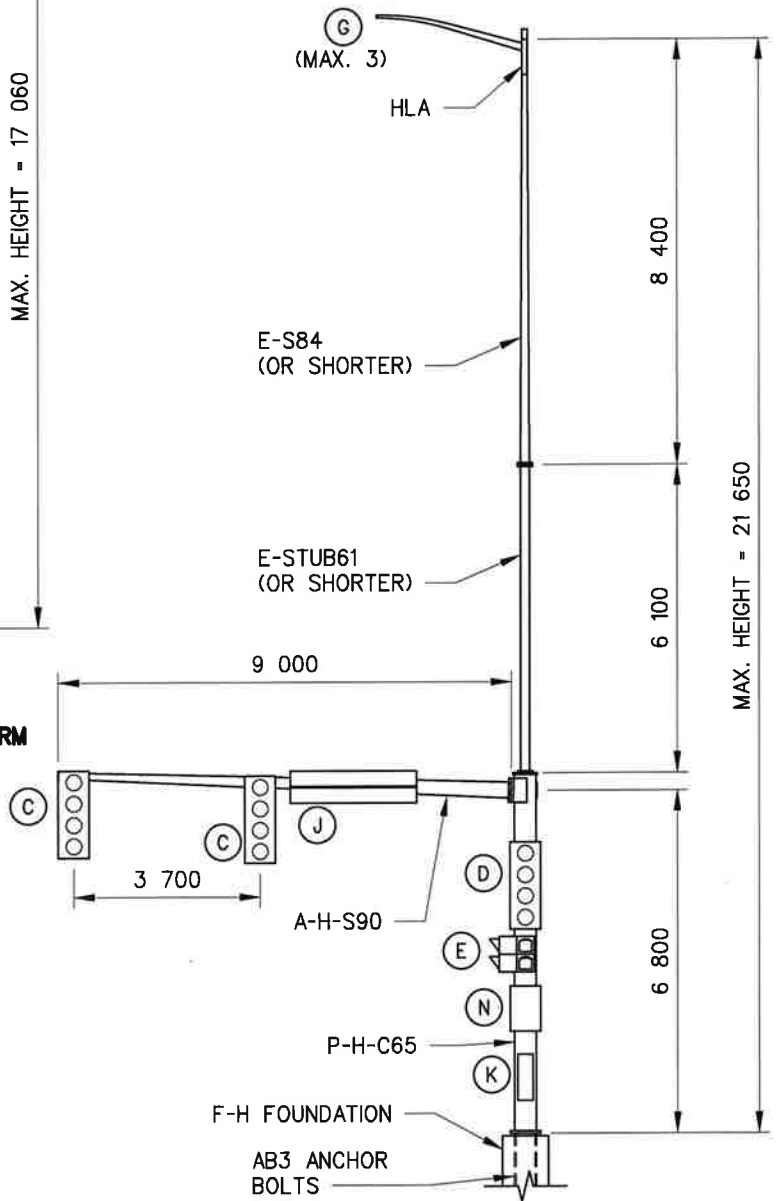


FIG. 14b: 6.8m HEAVY SERIES CANTILEVER WITH 9.0m SIGNAL ARM

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HEAVY SERIES CANTILEVER 2 OF 6

TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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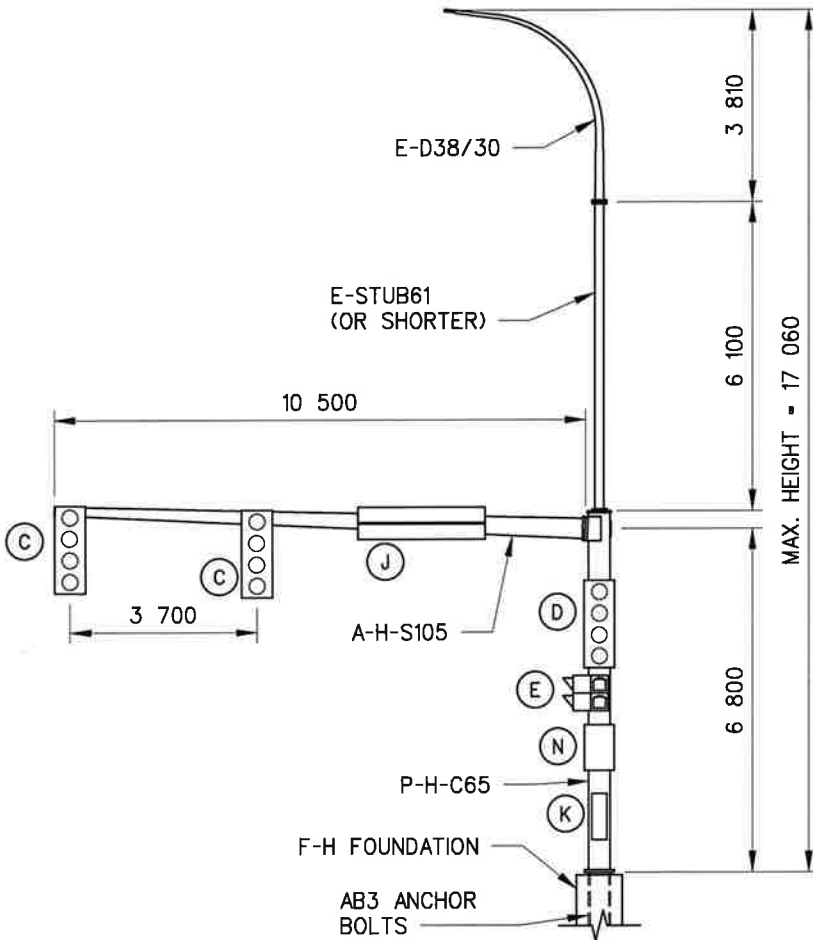


FIG. 15a: 6.8m HEAVY SERIES CANTILEVER WITH 10.5m SIGNAL ARM

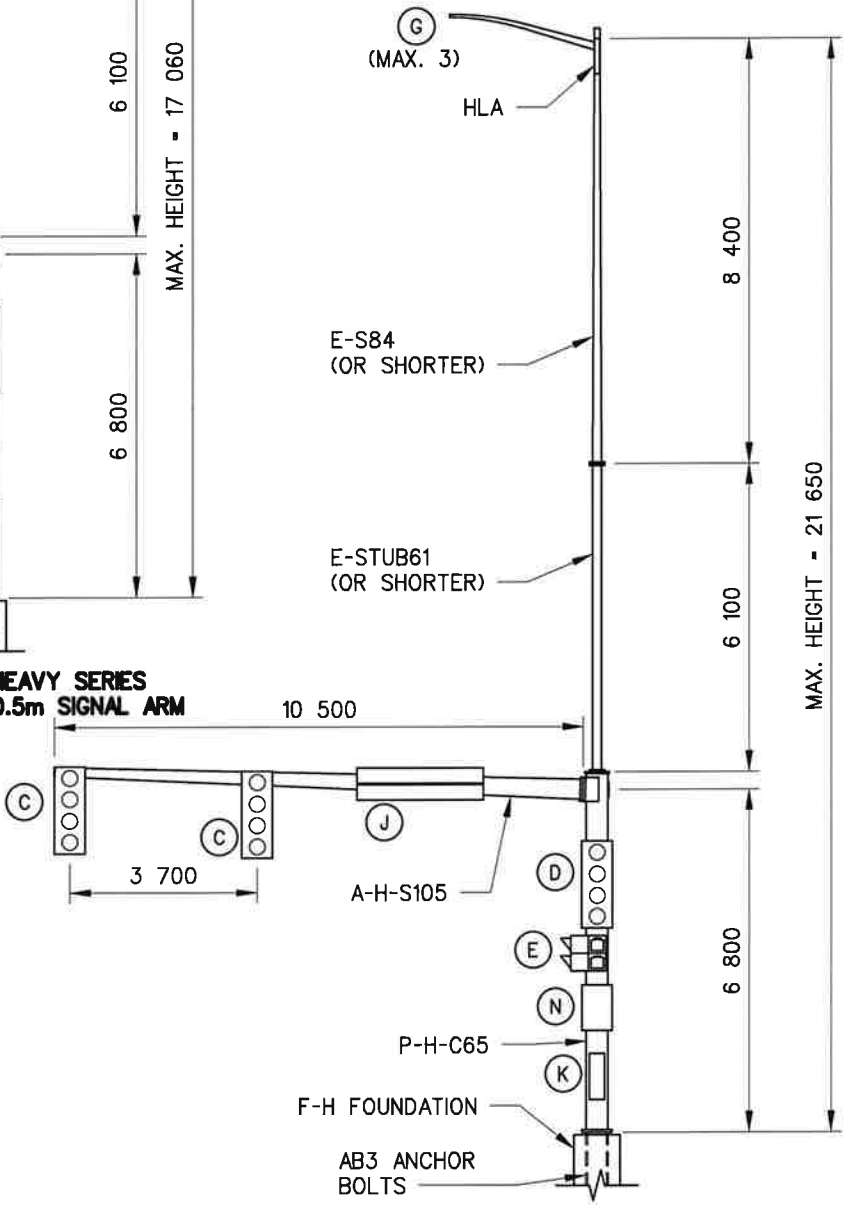


FIG. 15b: 6.8m HEAVY SERIES CANTILEVER WITH 10.5m SIGNAL ARM

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TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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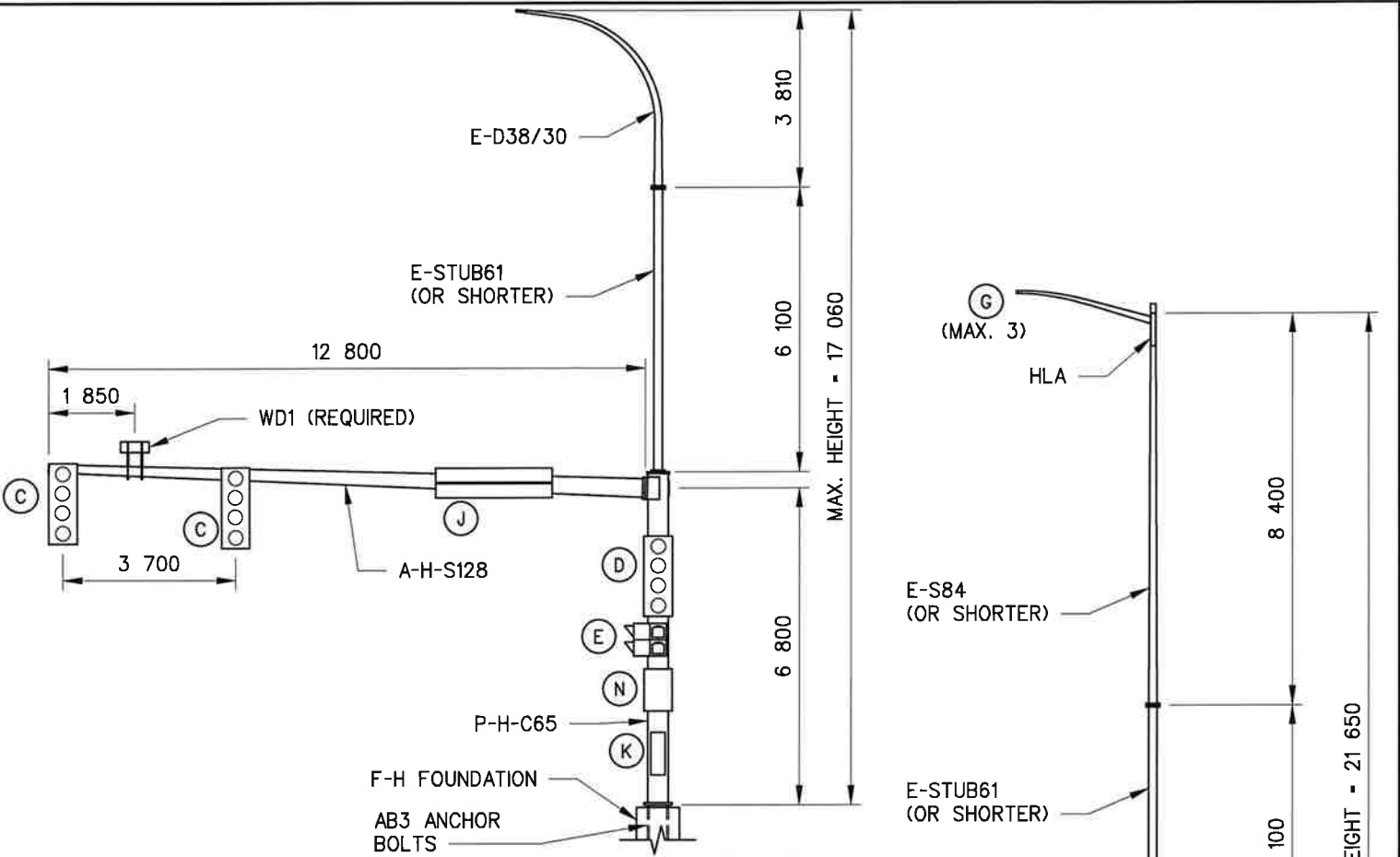


FIG. 16a: 6.8m HEAVY SERIES CANTILEVER WITH 12.8m SIGNAL ARM

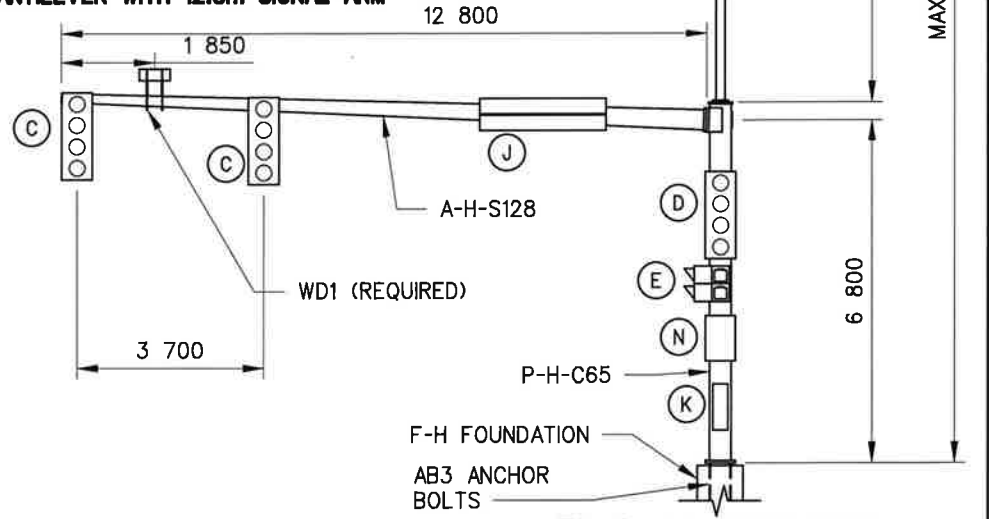


FIG. 16a: 6.8m HEAVY SERIES CANTILEVER WITH 12.8m SIGNAL ARM

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HEAVY SERIES CANTILEVER 4 OF 6
TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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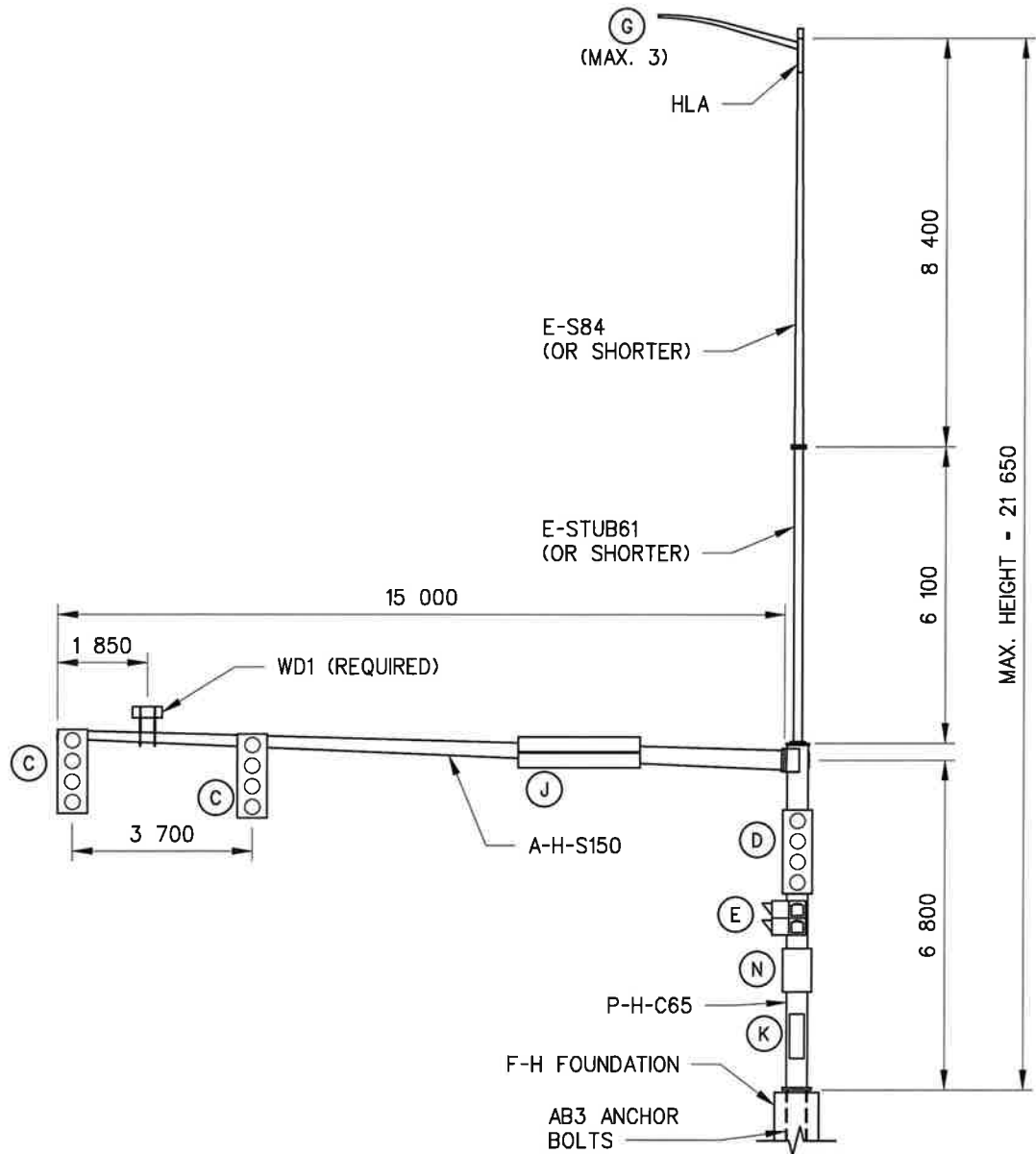


FIG. 17a: 6.8m HEAVY SERIES CANTILEVER WITH 15.0m SIGNAL ARM

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HEAVY SERIES CANTILEVER 5 OF 6

TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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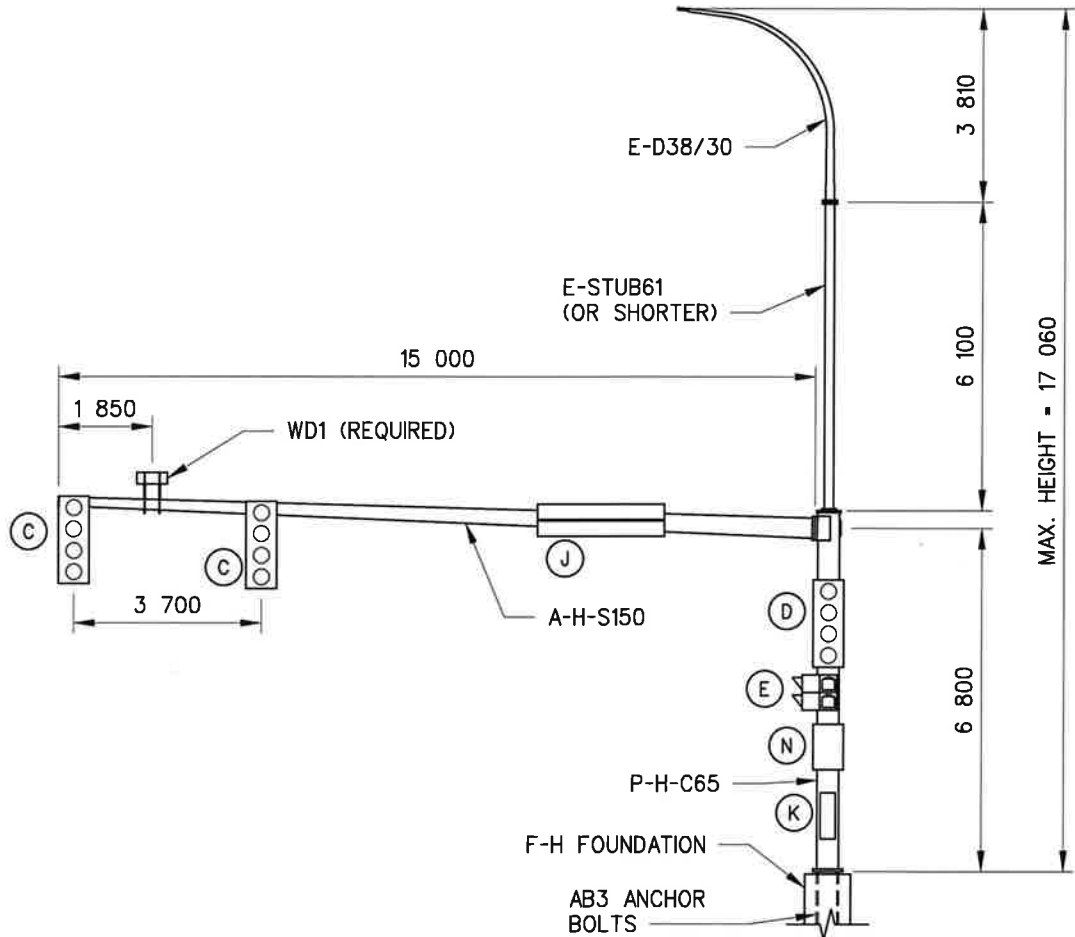


FIG. 18a: 6.8m HEAVY SERIES CANTILEVER WITH 15.0m SIGNAL ARM

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HEAVY SERIES CANTILEVER 6 OF 6
TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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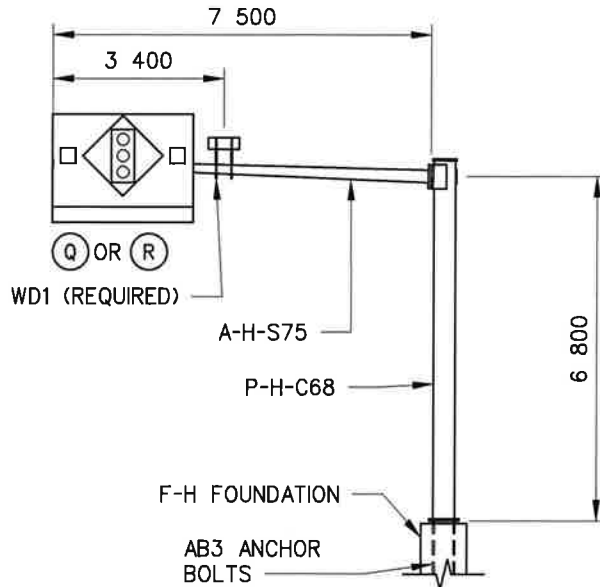


FIG. 19g: 6.8m HEAVY SERIES CANTILEVER WITH 7.5m ADVANCE WARNING SIGN ARM

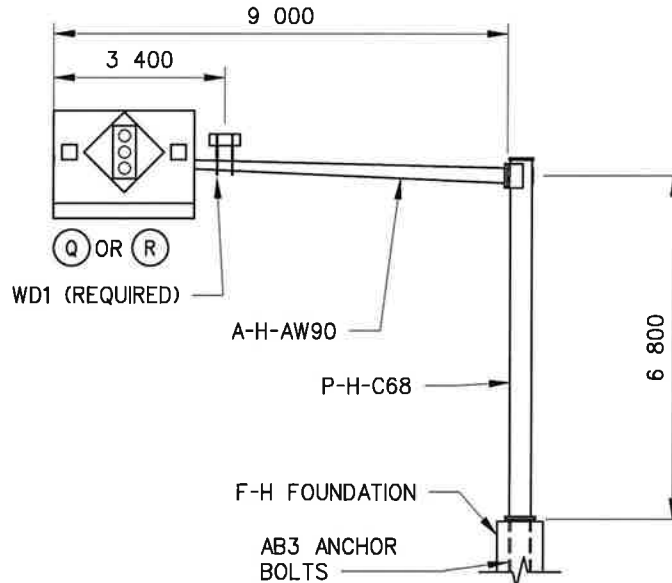


FIG. 19g: 6.8m HEAVY SERIES CANTILEVER WITH 9.0m ADVANCE WARNING SIGN ARM

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HEAVY SERIES ADVANCE WARNING SIGN ARMS 1 OF 1
TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES



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Appendix F

Extra Heavy Series Structures Component Assembly

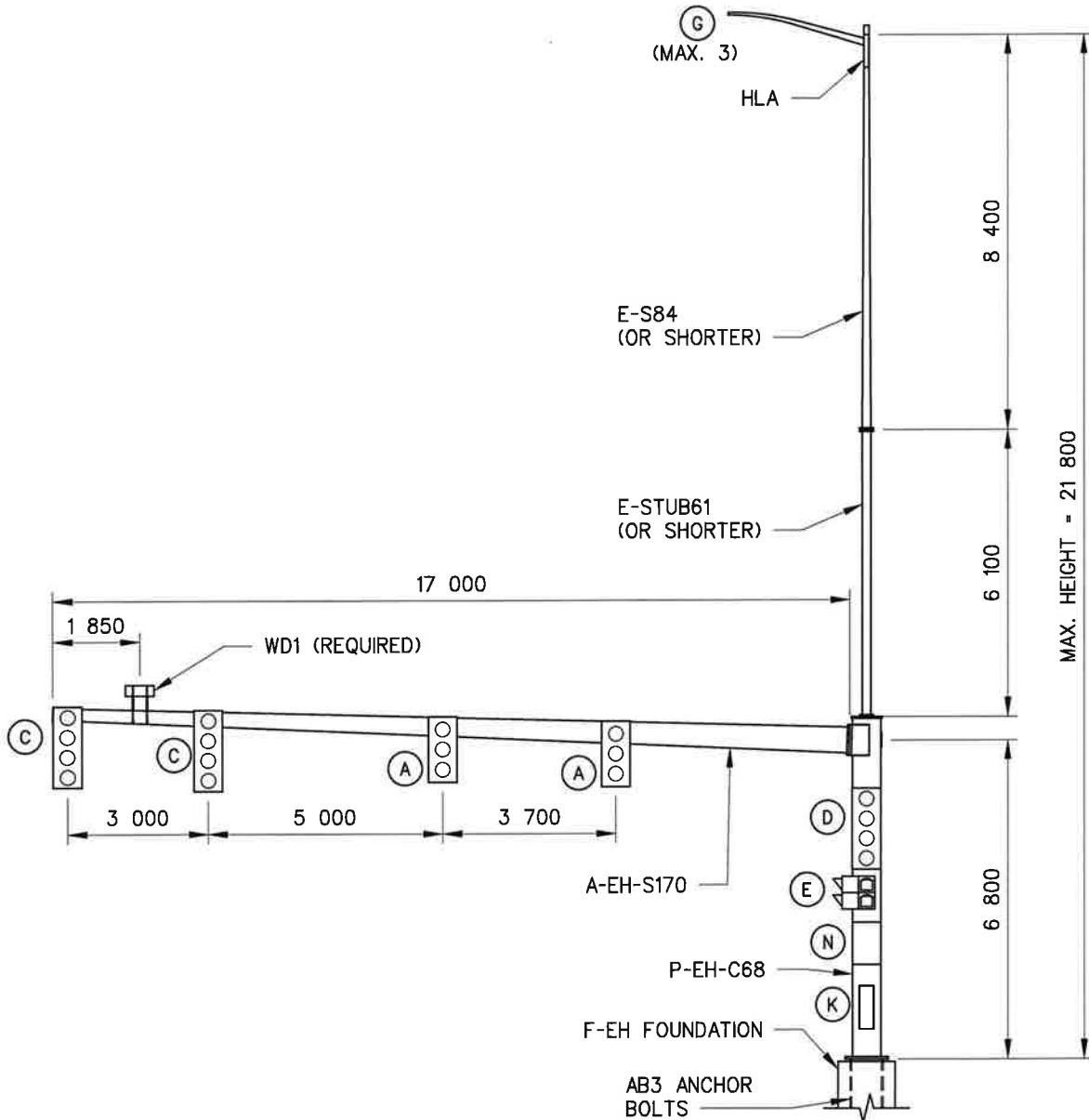


FIG. 21a: 6.8m EXTRA HEAVY SERIES CANTILEVER WITH 17.0m SIGNAL ARM, AND EXTENSIONS FOR HYDRO LUMINAIRE

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TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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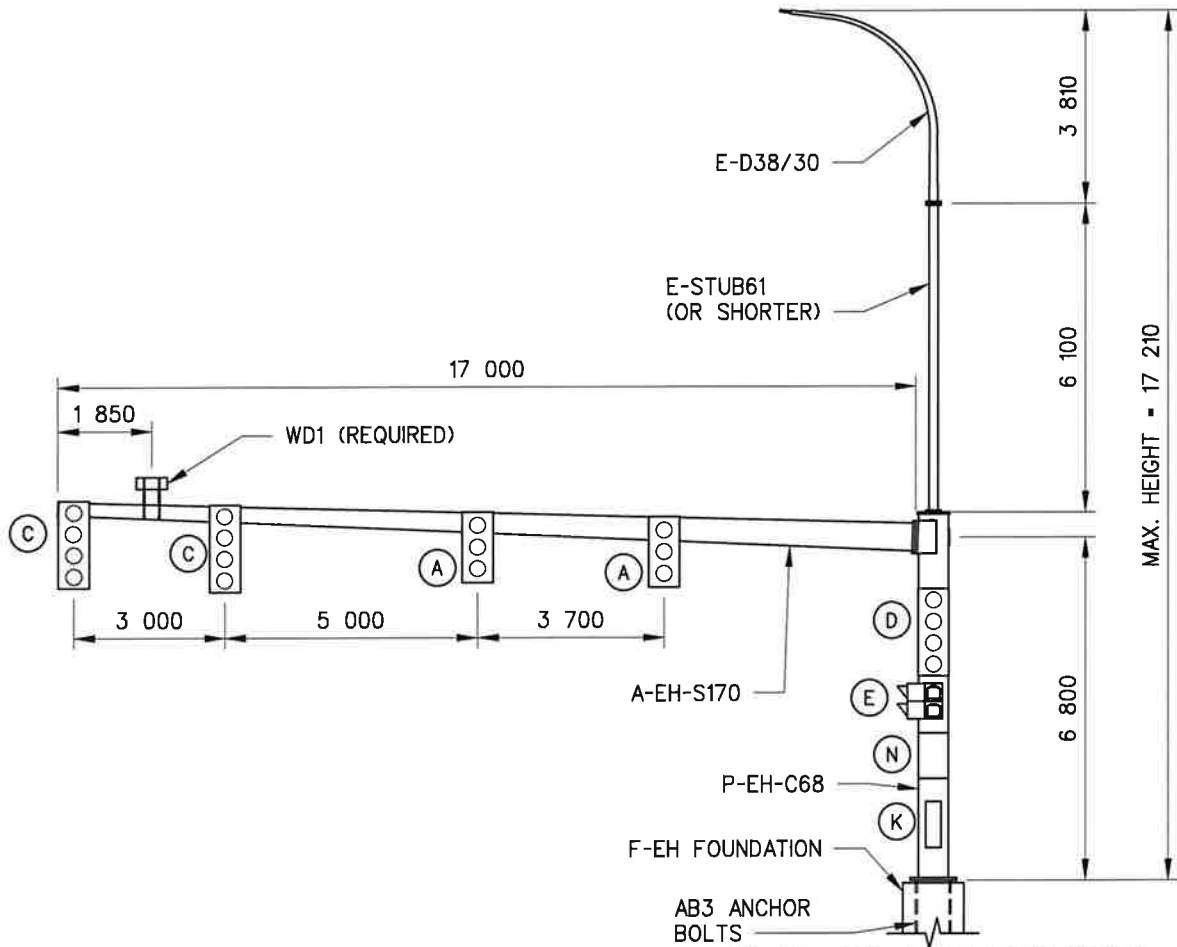


FIG. 22a: 6.8m EXTRA HEAVY SERIES CANTILEVER WITH 17.0m SIGNAL ARM, AND EXTENSIONS FOR DAVIT LUMINAIRE

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EXTRA HEAVY SERIES CANTILEVER 2 OF 4
TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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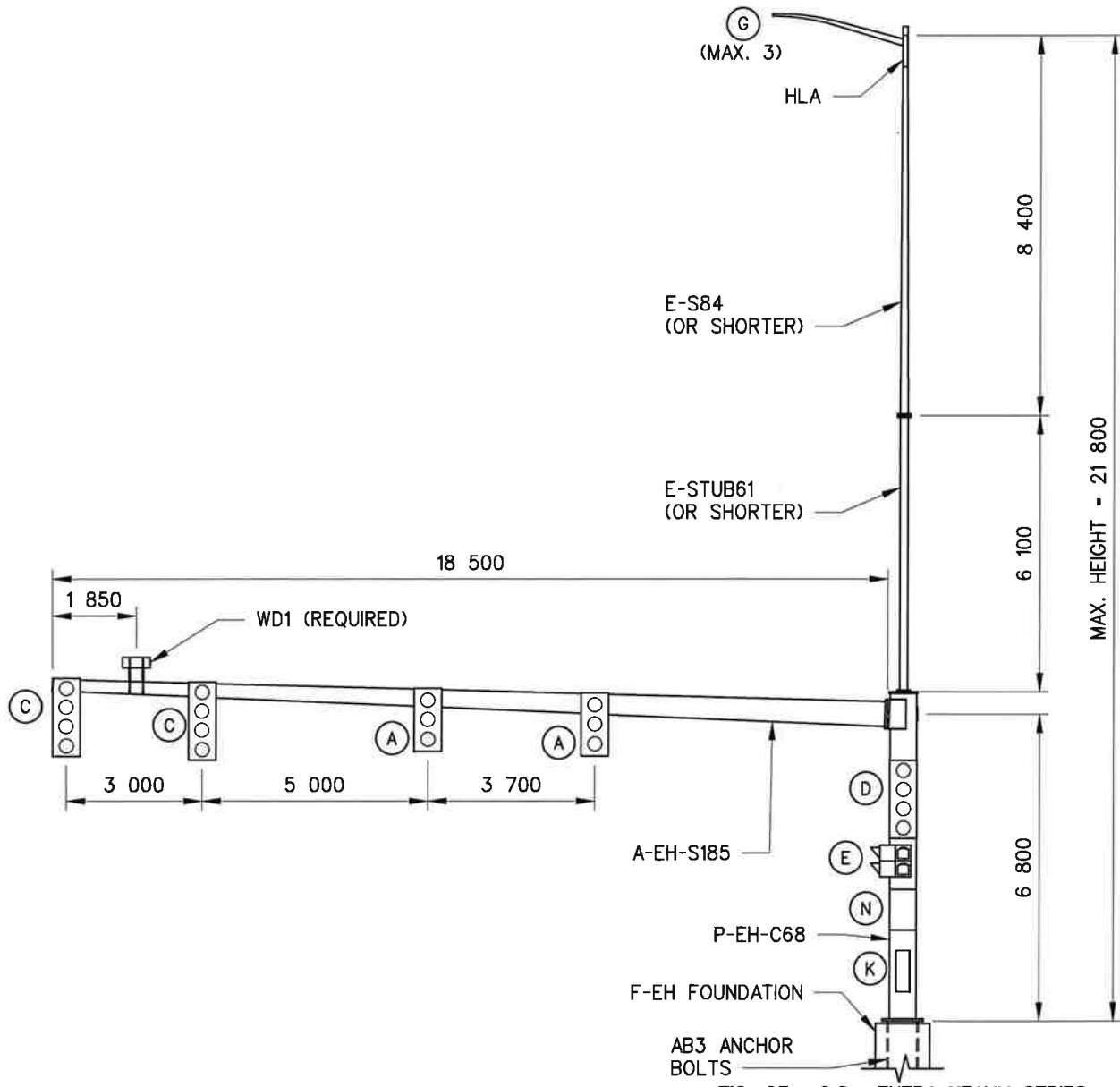


FIG. 23a: 6.8m EXTRA HEAVY SERIES CANTILEVER WITH 18.5m SIGNAL ARM, AND EXTENSIONS FOR HYDRO LUMINAIRE

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EXTRA HEAVY SERIES CANTILEVER 3 OF 4
TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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 REGISTERED PROFESSIONAL ENGINEER

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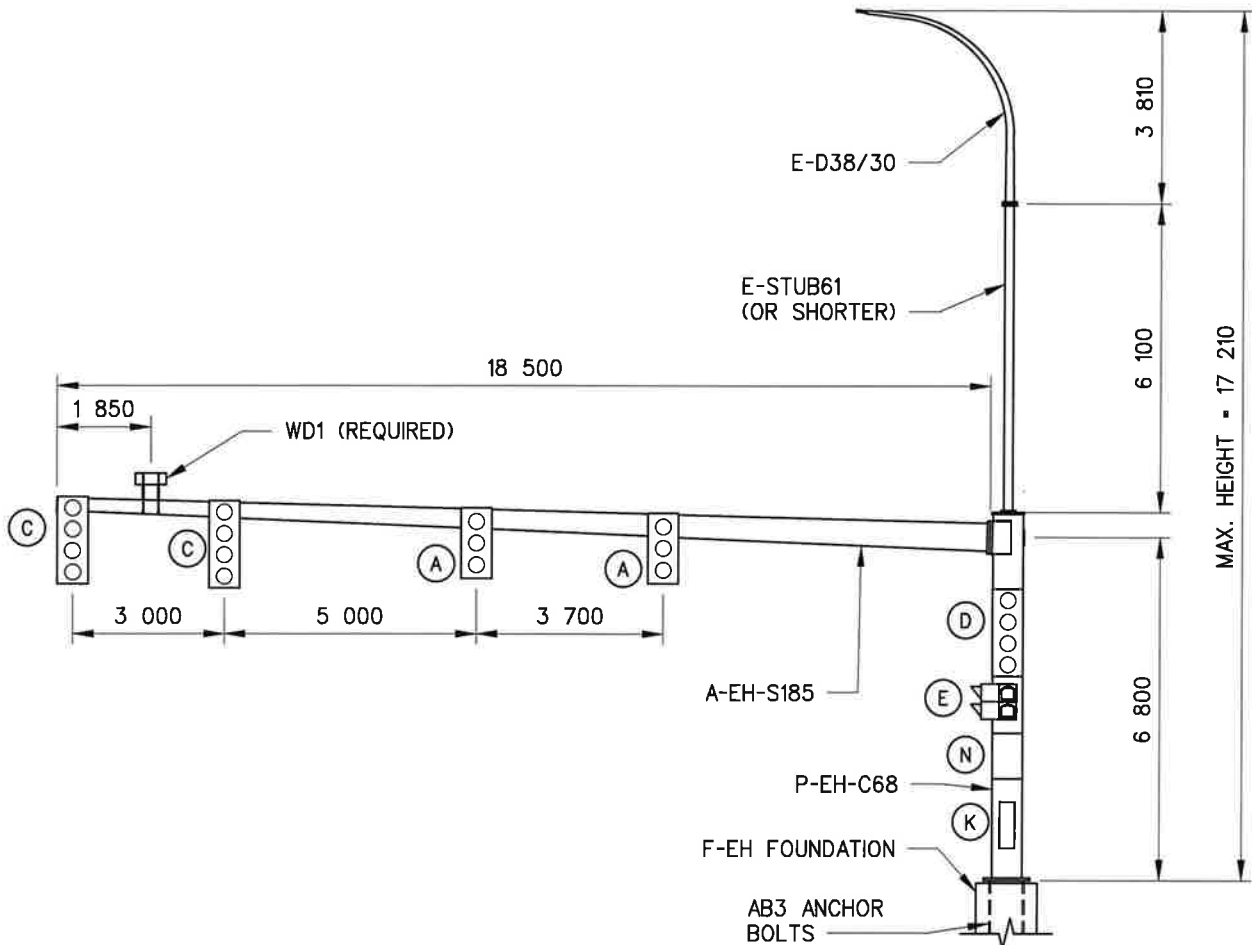


FIG. 24a: 6.8m EXTRA HEAVY SERIES CANTILEVER WITH 18.5m SIGNAL ARM, AND EXTENSIONS FOR DAVIT LUMINAIRE

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TRAFFIC SIGNAL AND PEDESTRIAN CORRIDOR STRUCTURES

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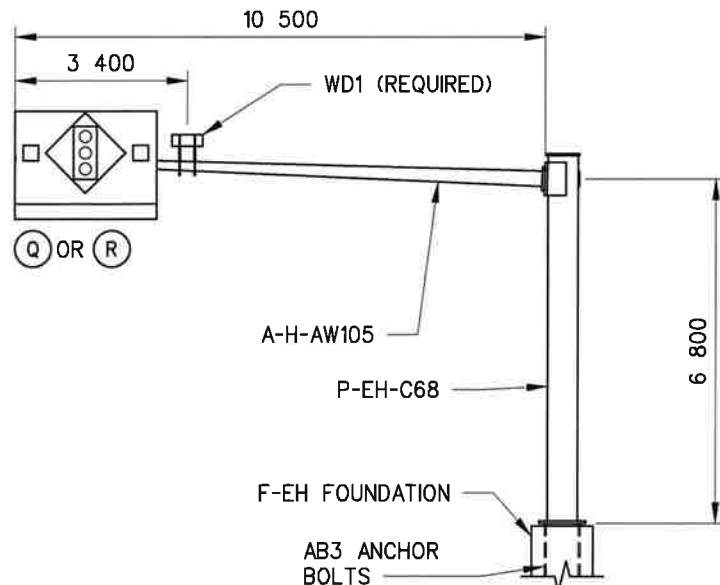


FIG. 20g: 6.8m EXTRA HEAVY SERIES CANTILEVER WITH 10.5m ADVANCE WARNING SIGN ARM

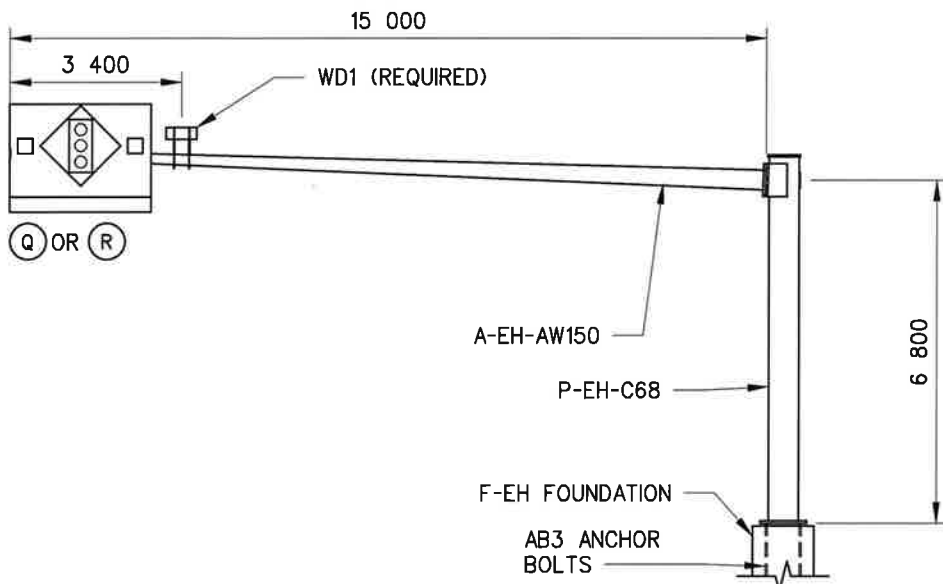


FIG. 20g: 6.8m EXTRA HEAVY SERIES CANTILEVER WITH 15.0m ADVANCE WARNING SIGN ARM

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Appendix H

Breakaway Bases

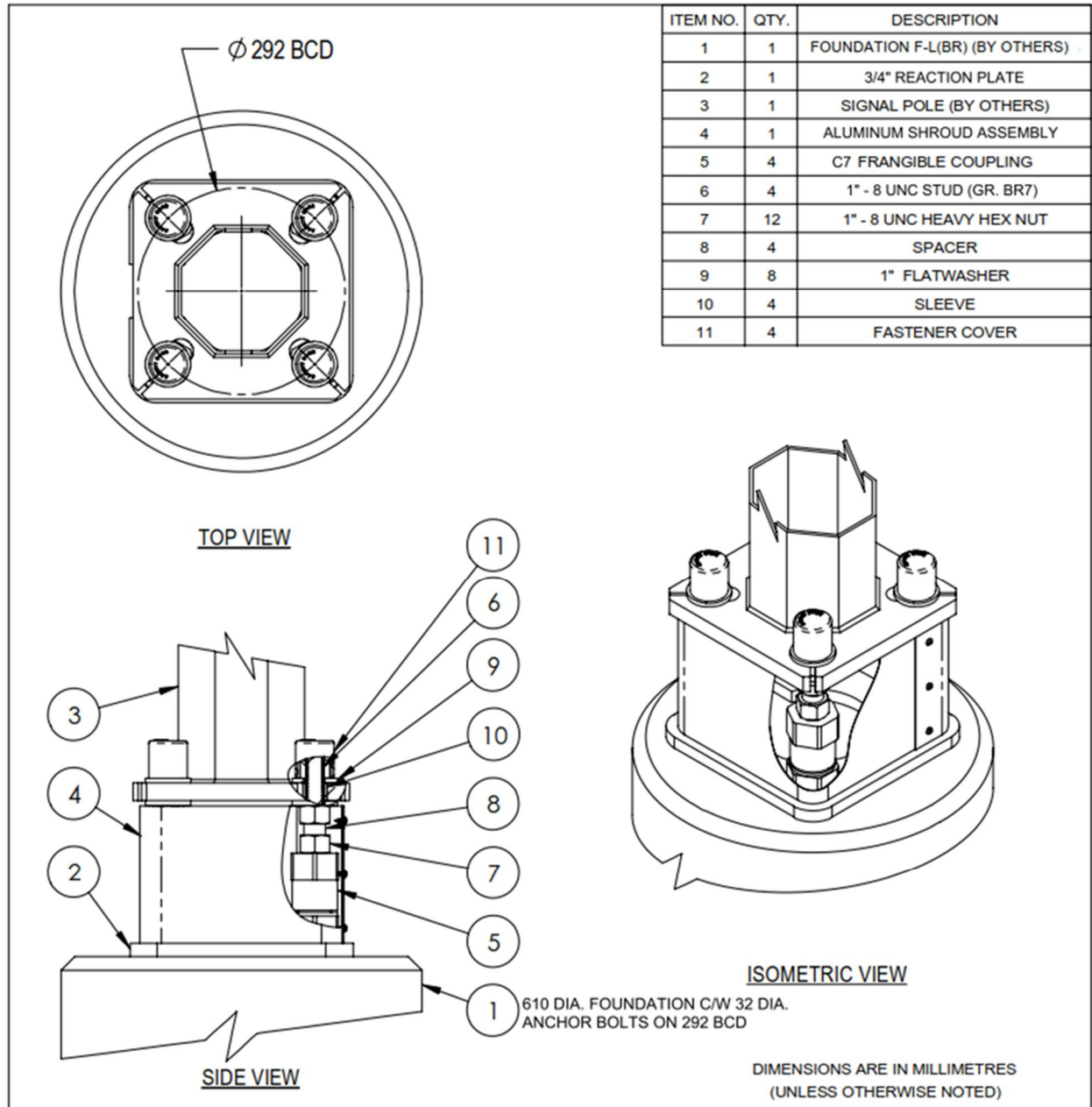
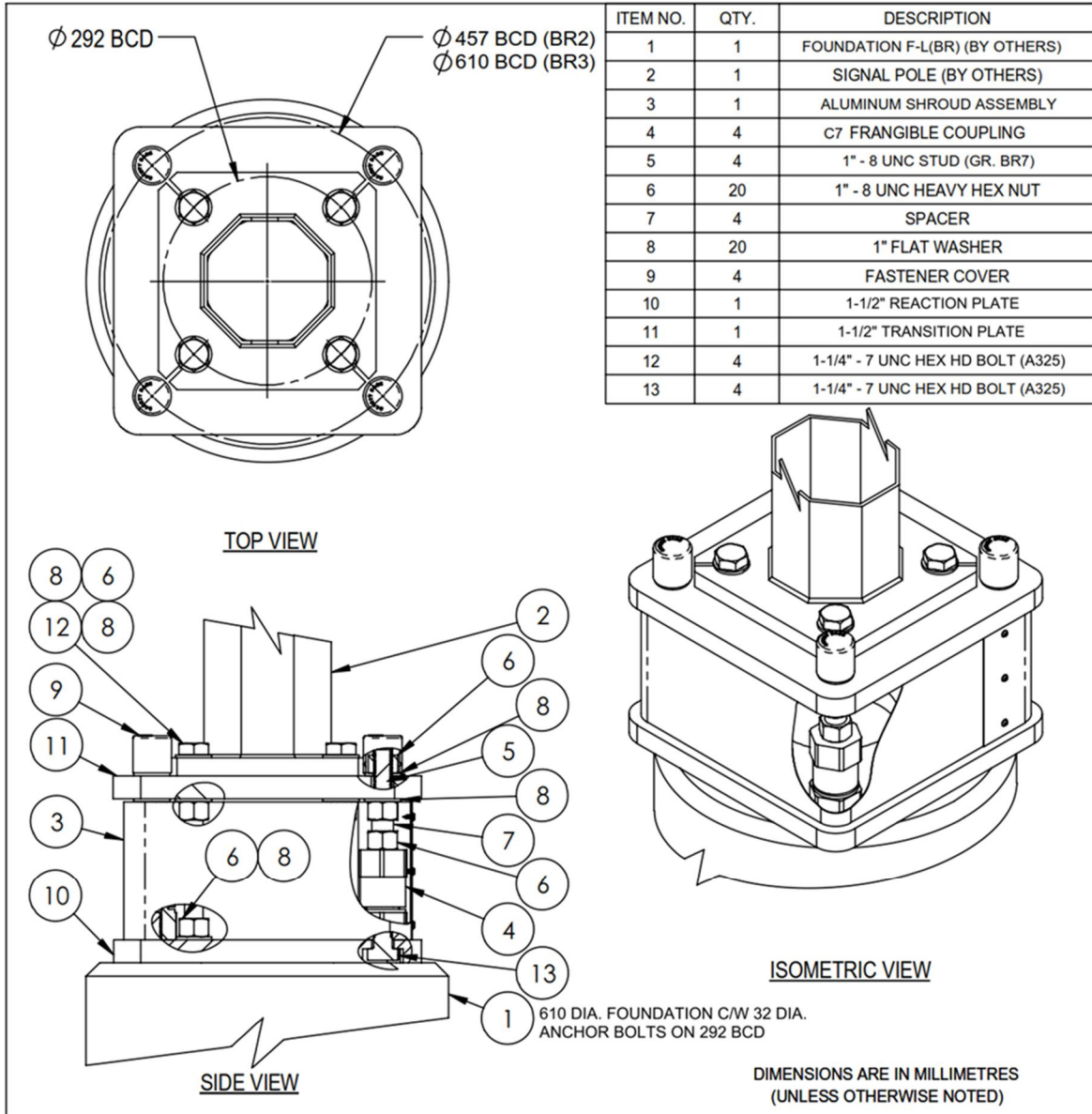


Figure H1: Type BR1 Breakaway Base – Assembly Components



NOTES:

1. COMPONENTS SHOWN ARE FOR THE APPROVED SAFETY BASE PRODUCTS, MANUFACTURED BY SAFETY BASE LTD.

Figure H2: Type BR2 and BR3 Breakaway Bases – Assembly Components