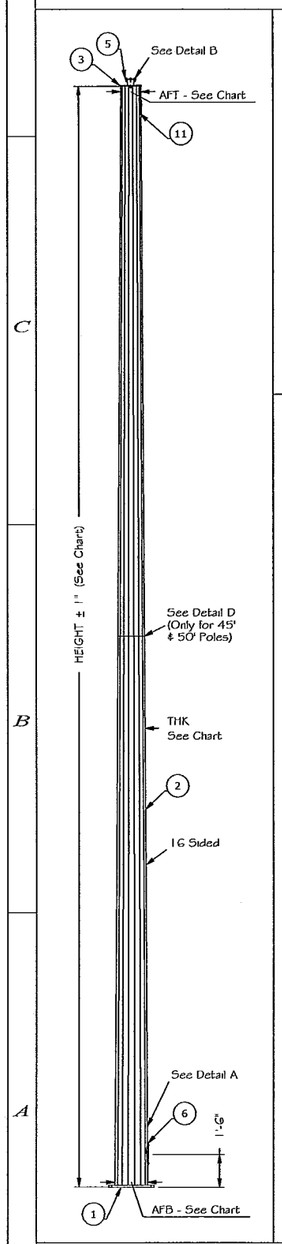
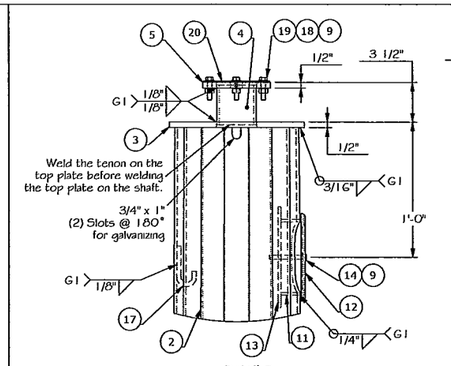
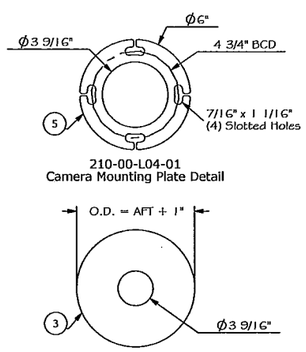
Pole Part No.	HEIGHT	Weight (Lbs)	Calculated Deflection @ 70 mph	Calculated Deflection @ 35 mph	Calculated Deflection @ 30 mph	Shaft								Base plate		Top plate Part No.
						Part No.	Length (ft)	AFB (in)	AFT (in)	THK** (in)	DWB (in)	DBT (in)	Material	Part No.	"B" Thk.	
9013-16-0001-25	25 Ft	551	0.6"	0.2"	0.1"	200-16-01-001-25	25'	12.5	9	0.1345"	39.05	27.91	A1011 Gr.50	211-16-01-001-25	1"	210-00-L04-013-25
9013-16-0001-30	30 Ft	637	1.0"	0.3"	0.3"	200-16-01-001-30	30'	13	9	0.1345"	40.63	27.91	A1011 Gr.50	211-16-01-001-30	1"	210-00-L04-013-25
9013-16-0001-35	35 Ft	776	1.4"	0.4"	0.3"	200-16-01-001-35	35'	14.5	9	0.1345"	45.41	27.91	A1011 Gr.50	211-16-01-001-35	1 1/4"	210-00-L04-013-25
9013-16-0001-40	40 Ft	1199	1.3"	0.4"	0.3"	200-16-01-001-40	40'	15.5	10	3/16"	48.31	30.81	A572 Gr.50	211-16-01-001-40	1 1/4"	210-00-L04-013-40
9013-16-0001-45	45 Ft	1431	1.4"	0.5"	0.4"	200-16-01-001-45	* 45'	17	11	3/16"	53.08	33.99	A572 Gr.50	211-16-01-001-45	1 1/4"	210-00-L04-013-45
9013-16-0001-50	50 Ft	2091	1.4"	0.5"	0.4"	200-16-01-001-50	* 50'	18	11	1/4"	55.93	33.66	A572 Gr.50	211-16-01-001-50	1 1/4"	210-00-L04-013-45

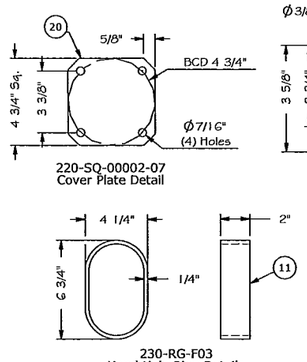
* Poles with 45' & 50' heights have two sections

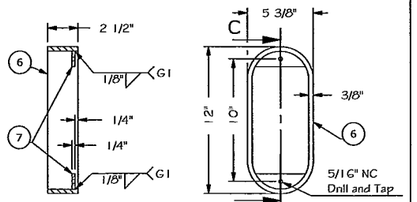
#	QTY	PART NUMBER	Description	MATERIAL
1	1	See Chart	Base plate, 25" SQ., 25 1/2" BCD, Thickness - See Chart	A572 GR.50
2	1	See Chart	16 Sided Shaft, See Chart	See Chart
3	1	See Chart	Top plate, 3 9/16" I.D., 1/2" Thk.	A36 / A572 GR.50
4	1	121-3.00-0010	3" Sch.40 Pipe, 3 1/2" OD, Length 3 1/2"	A53 GR.B
5	1	210-00-L04-01	Camera Mounting Plate, 6" O.D., 4 3/4" BCD., 1/2" Thk.	A36 / A572 GR.50
6	1	230-RG-FL04	Hand Hole Ring, 5 3/8" x 12" x 2 1/2", 3/8" Thk.	ASTM A36
7	2	230-TA-F03	Hand Hole Tab, 1/4" Thk.	ASTM A36
8	1	230-CO-FL01	Hand Hole Cover, 5 7/8" x 12 1/2", 10GA Thk.	A1011-50
9	14	154-FWN-S011	3/8" Flat Washer Narrow	18-8 SS
10	2	151-HRS-0.375-08	3/8"-16 Hex Head Regular Bolt, Length 1 1/4", Full Thread	18-8 SS
11	1	230-RG-F03	Hand Hole Ring, 4 1/4" x 6 3/4" x 2", 1/4" Thk.	ASTM A36
12	1	230-CO-F01	Hand Hole Cover, 10GA Thk.	A1011-50 or A36
13	1	230-CB-00001	Cover Bar, 1/4"x1 1/2" Flat Bar, Length 9"	ASTM A36
14	1	151-HRS-0.375-23	3/8"-16 Hex Head Regular Bolt, Length 3"	18-8 SS
15	1	151-HRS-0.375-10	3/8"-16 Hex Head Regular Bolt, Length 1 1/2", Full Thread	18-8 SS
16	2	153-HRN-S005	3/8"-16 Hex Regular Nut	18-8 SS
17	1	245-JH-00001	J-Hook, 3/8" Dia. Hot Rolled Round, Length 5 7/16"	ASTM A36
18	4	153-HL-S005	3/8"-16 Hex Nylon-Insert Locknut	18-8 SS
19	4	151-HRS-0.375-13S	3/8"-16 Hex Head Regular Bolt, Length 1 3/4", Stainless Steel	ASTM F593
20	1	220-SQ-00002-07	Cover Plate, 4 3/4" SQ., 4 3/4" BCD, 1/8" or 10GA Thk.	A36 / A607 GR.50

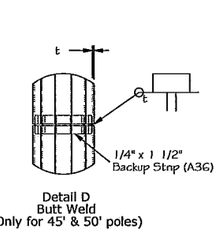


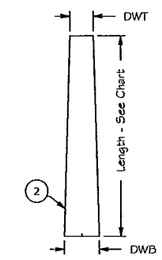


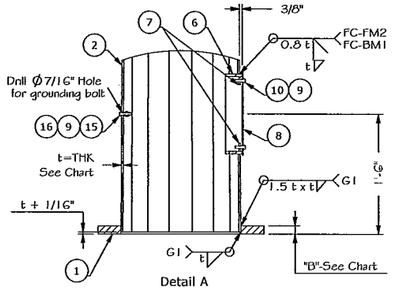


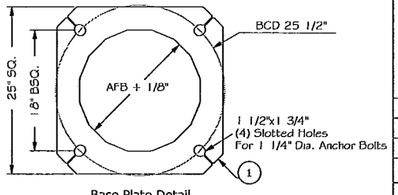


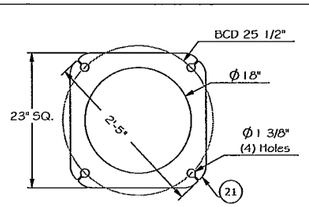


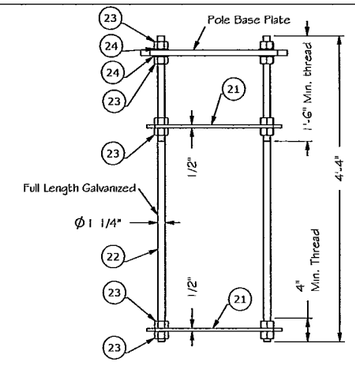












Bill of materials for anchor bolt cage - Supplied only if required				
#	QTY	PART NUMBER	Description	MATERIAL
21	2	211-TP-0017	Anchor Plate, 23" SQ., 25 1/2" BCD, Thk.=1/2"	A36 / A572 GR.50
22	4	160-1.25-0007	Anchor Bolt, 1 1/4" Dia., 52" Long, Galv.	F1554 GR.105 or AASHTO M164
23	24	153-H2H-G010	1 1/4"-7 Heavy Hex Nut	ASTM A194 Gr.2H Galv.
24	8	154-FWN-G014	1 1/4" Flat Washer Narrow, Galv.	ASTM F436

NOTES:
1. DESIGN STANDARDS: AASHTO 2001 – Standard Specifications for Structural Support for Highway, Signs, Luminaires and Traffic Signals.
- Design wind speed – 90 mph
- Design life / recurrence interval – 50 years
- Loading: (1) Camera – EPA 4 sq. ft. @ 2 ft above top of pole and (1) Dish – EPA 1 sq. ft. @ top of the pole.
2. WELDING: All welding per latest edition of AWS Structural Welding Code D1.1-Steel.
3. FINISH: All steel shall be hot dip galvanized after fabrication as per ASTM A123 / A153. The silicon content of the galvanized steel shall be Si <= 0.04% or 0.15% <= Si <= 0.25%
4. Anchor bolt plates and anchor bolts are supplied only if required.
5. Maximum allowed deflection: 1.4" @ 70 mph and 0.7" @ 30 mph.
6. Customer to confirm the dimensions of the camera mounting plate (bolt circle diameter, bolt holes & thickness) and the connection bolt size prior fabrication.
7. ** 0.1345" is nominal thickness. Minimum thickness is 0.1265".

APPROVED
Manufacturer's Pole Plan
Approved For Listing As A
Pre-Approved Drawing
WSDOT Bridge & Structures Office
By GB Date 3/5/08

REV.	DESCRIPTION	DATE	BY	APPRD
3	Modified the design criteria, the anchor bolt cage & material for shafts with 0.1345" thk.	1/8/2008	LB	TB
2	Modified the dimensions of the shaft and base plate	5/7/2007	LB	TB
1	Modified the loading note	03/21/2007	LB	TB

DESIGNED: TED BROCKMAN
DRAWN: LUISS BARCAN
APPROVED: TED BROCKMAN
DATE: 21-Mar-2007

PROFESSIONAL ENGINEER SEAL
PROFESSIONAL ENGINEER — STATE OF WASHINGTON — T. A. BROCKMAN — COLUMBIA
Feb. 18, 2008

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www.wceng.com

PROJECT: *CAMERA POLES*
STATE OF WASHINGTON
Assembly Details
PART #: 9013-16-0001
DWG. #: AP-WSDOT-CP-01
SCALE: NTS
QTY: -
SHEET 1 OF 1
REV. 3

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