

Job:  
Type:  
Location:  
Notes:

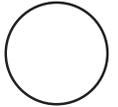
Date:

# POLES

P1

## ornamental muffler steel

The shaft is fabricated using hollow structural steel conforming to CSA G40.21-13 50W. The anchor base flange is fabricated from structural steel conforming to G40.21-44W and is circumferentially welded for a complete joint penetration. The hand hole access in cast aluminum provides an opening 4" x 7" large. One grounding stud is welded inside the pole shaft on centre across from the hand hole opening. The standard finish is paint compiled by 2-Component polyurethane applied over a cured epoxy primer.



PREFIX	HEIGHT	SECTION	MATERIAL	DRILL/ TENON	FINISH	OPTIONS
<input type="text"/>						

*If you are aware of the project requirements, please fill out as best you can the above boxes to configure the pole geometry, required finish and interface/ fixture mount options.*

PREFIX	HEIGHT	SECTION	MATERIAL	DRILL/ TENON		
CE ORN20	6m / 20'	6.625"	5mm/0.188"	D1	1x Drill 90	Loc "C"
CE ORN30	9m / 30'	6.625"	6.4mm/0.250"	D2	2x Drill 180	Loc "B & D"
				D290	2x Drill 90	Loc "C" & "D"
				D3	3x Drill	Loc "B", "C" & "D"
				D4	4x Drill	
				T2	2" Tenon x 5" Lg. (2.375" O.D.)	Post Top
				T2H	2" Tenon x 9" Lg. (2.375" O.D.)	Loc "C"
				T2H2	2" Tenon x 9" Lg. (2.375" O.D.)	Loc "B" & "D"
				T2H3	2" Tenon x 9" Lg. (2.375" O.D.)	Loc "B", "C" & "D"
				T2H4	2" Tenon x 9" Lg. (2.375" O.D.)	
				TC	Custom diameter & length	(please specify location)

FINISH		OPTIONS	
PP	Prime Paint Only	FST	Festoon Hook
BLP	Black Paint	D/R/B	Duplex Receptacle Base
BRP	Bronze Paint	D/R/T	Duplex Receptacle Top
DBRP	Dark Bronze Paint	A/H/H	Additional Hand Hole Top
WP	White Paint	CPL500	1/2" 3000lb Coupling
IMSP	Intermix Metallic Silver Paint	CPL750	3/4" 3000lb Coupling
GP	Grey Paint	CPL100	1" 3000lb Coupling
CP	Custom Paint (RAL or Paint Chip req.)	CPL125	1-1/4" 3000lb Coupling
		CCTV	3/4" Drill hole de-burred
HDG	Hot Dipped Galvanized Only	CEB-1-90°	Single bullhorn bracket, mounts to T2
FPHDG	Finish Paint over HDG	CEB-2-180°	2 bullhorn bracket, mounts to T2
		CE BANNER	Set-of-two removable banner arms

CE PTA (Require a post top bracket adaptor only? Please describe existing pole geometry with a quick sketch).



Base Moments calculated for 161Km/h, 1/50yr gust & pole model max. E.P.A.,  $q=0.5kPa$

MODEL	SECTION/ MATERIAL	OVERTURNING MOMENT & Estimated E.P.A		SHEAR
CE ORN20	6" X .250" X 20'	11 kN m/	11 sq.ft.	2.5 kN
CE ORN30	6" X .250" X 30'	32 kN m/	22 sq.ft.	5 kN

The AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) identify Special Wind Regions that suggest that classic regional wind values may need to be increased when considering the pole geometry for your specific project. Flat open terrain, foothills and mountain passes where a funnel effect may be created, would all be considered Special Wind Regions.

# POLES

## ornamental muffler steel

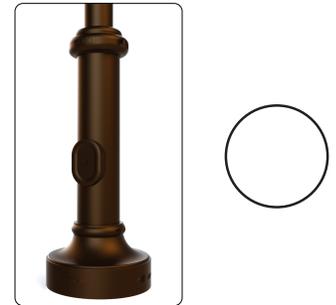
### P2

CECO POLES & STRUCTURES INC. is not responsible for site preparation & footings. The information here below provides general guidelines for data in calculating a proper footing size considering variables such as the specific fixture E.P.A., effective projected area, number of fixtures per specified light pole for your project.

For moment calculations on your specific project please contact us via email or telephone, [info@cecopoles.ca](mailto:info@cecopoles.ca) and at 403 279 0530.

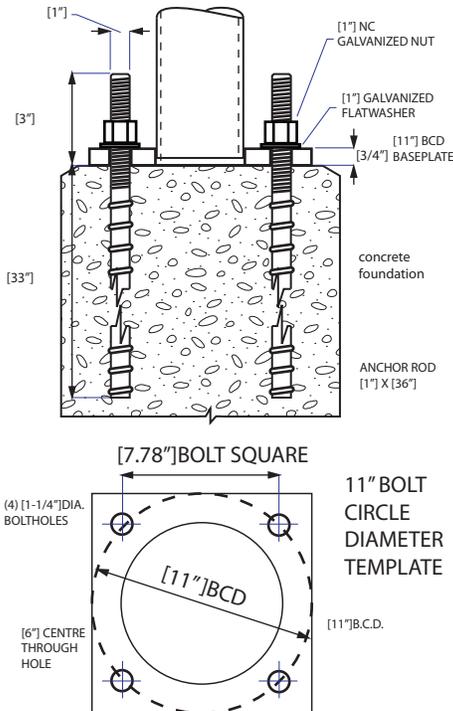
#### Installation Procedure for Anchor Rods:

- 1). Prepare footing area as required by local code.
- 2). Apply steel template in accordance to the anchor rod template illustration provided.
- 3). Install anchor rods with flatwasher and nut to accommodate the projection illustrated in your provided anchor rod template.
- 4). CECO POLES & STRUCTURES light standards are designed for this method of installation. All other methods of light standard installation must be approved by CECO POLES & STRUCTURES INC..



### Anchor Rod Layout

ie: Configuration for CE ORN20, round steel pole complete with (2) ornamental 2-pc cast transition & base covers.



### Glossary

#### Bolt Circle Diameter, B.C.D.

When measuring an array of bolt holes located on a given diameter where each bolt hole is equally distant from centre of the circle generating a diameter.

#### Anchor Rod/ Anchor Bolt, A/R

A structural bolt made from temper-quenched steel or high-tensile strength re-bar of a determined length with a national course thread for a nut application. This item is coated in hot zinc, H.D.G or hot dipped galvanize.

#### Base Template

A 14 gage laser cut pattern matching the specific bolt circle diameter for your project, and used to properly space and set (4) anchor rods into the rebar cage where concrete will be poured to achieve a level footing with properly projecting anchor rods as well as a conduit run to bring power up to the pre-determined light standard.

#### Projection

The defined distance of threaded anchor rod exposed out of the concrete to properly receive the pre-determined light standard.

#### Levelling Shim

A 3mm thick u-shaped steel plate specifically designed to straddle the anchor rod diameter and used between the bottom of the pole baseplate and top of the concrete footing when installing and levelling the pole. \*note: Any gap present beyond 3mm between bottom of baseplate to the top of the concrete footing must be grouted. Do not apply more than one levelling shim per corner.

#### APPENDIX A.

This glossary functions as an example of common terminology used in the installation of structural items in or part of a construction site. For any clarification on terms or symbols used on this installation guide call 403 279 0530 for technical assistance or write to [info@cecopoles.ca](mailto:info@cecopoles.ca).

#### APPENDIX B.

Bolt torque provides only an indirect approximation of material stress. It is estimated that only about 10% of the tightening torque actually results in useful bolt tensioning. A common rule-of-thumb is to provide a minimum length of thread engagement equal to the diameter of the anchor. A more conservative rule-of-thumb is to use a thread engagement length of 1-1/2 times the diameter.

#### REMEMBER, AS INSTALLER OF THIS LIGHT STANDARD:

Recheck the torque of the anchor bolts as the nut connections may loosen slightly after the pole has been subjected to wind loading.

1" UNC 8tpi plain - dry condition sae j429 Gr.2 250 Ft. Lb

