



GENERAL WARNINGS AND CAUTIONARY STATEMENTS FOR REMOVABLE BOLLARDS

In order to safely and effectively use any TrafficGuard® product, please read and understand the General Warnings and Cautionary Statements contained below. If you have any questions about any of these General Warnings and Cautionary Statements, or about any aspect of TrafficGuard®'s products or literature, please contact TrafficGuard® at 877-727-7347, or email sales@trafficguard.net.



BOLLARD SELECTION AND PLACEMENT

based on vehicle weight, speed and other site specific factors to be determined by owner.



FAILURE TO UTILIZE TRAFFICGUARD® AUTHORIZED PARTS, OR MODIFICATIONS

to the TrafficGuard® products, or failure to follow the recommended installation procedures, will result in your warranty being null and void.



READ AND FULLY UNDERSTAND THE INSTALLATION INSTRUCTIONS

before attempting to install any TrafficGuard® bollard product.



SUBSTITUTION OF COMPONENTS MAY IMPAIR THE PROPER FUNCTION

of TrafficGuard® bollards products. If you need replacement parts, please contact TrafficGuard® at the number and email above.



WARNING: FAILURE TO FILL/COVER AN OPEN GROUND SLEEVE ON ALL REMOVABLE BOLLARDS MAY RESULT IS DAMAGE TO VEHICLES OR INJURY TO PEDESTRIANS. ALWAYS FILL/COVER THE GROUND SLEEVE PER TRAFFICGUARD® INSTRUCTIONS.



REPLACEMENT GROUND SLEEVE FILLER PIECES ARE AVAILABLE

for purchase at TrafficGuard®. For purchase of replacement ground sleeve filler pieces or other components, please contact TrafficGuard® at the number or email above.



CAUTION: BOLLARD MUST ALWAYS BE SECURED WITH LOCK MECHANISM WHEN BOLLARD IS IN THE GROUND SLEEVE TO AVOID MISUSE.



FOR MAXIMUM EFFECTIVENESS

of TrafficGuard® bollard products, be sure to properly maintain bollards by replacing any damaged, corroded or missing components, and reapply paint as required to maximize visibility. Failure to properly maintain product can negatively impact the bollards performance over time.



TO ENSURE VISIBILITY

of bollards, be sure to apply all decals that are provided with the product, and in the manner recommended by TrafficGuard®.

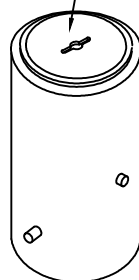
IF IN DOUBT CALL TRAFFICGUARD® 877-727-7347

A line drawing of a bollard post and its anchor sleeve cover. The bollard post is a long, vertical cylinder with a small circular cap at the top and a small, rectangular, flange-like detail near the bottom. A leader line points from the text "BOLLARD POST POWDER COATED" to the side of the post. Below the post is a circular anchor sleeve cover with a central bolt. A leader line points from the text "ANCHOR SLEEVE COVER (HDG)" to the center of the cover.

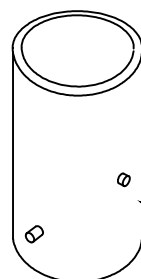
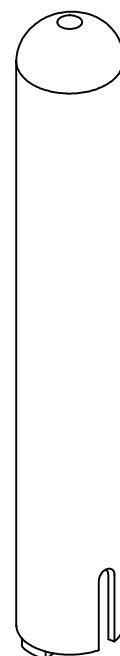
BOLLARD POST POWDER COATED

ANCHOR SLEEVE COVER (HDG)

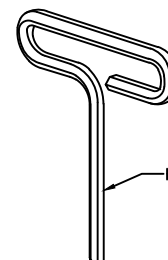
—ANCHOR SLEEVE
COVER (HDG)



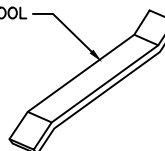
BOLLARD REMOVED POSITION



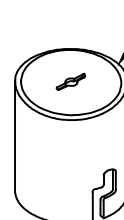
ATTACH REFLECTIVE WARNING
LABELS PROVIDED TO THE
FRONT & BACK OF BOLLARD
AFTER INSTALLATION



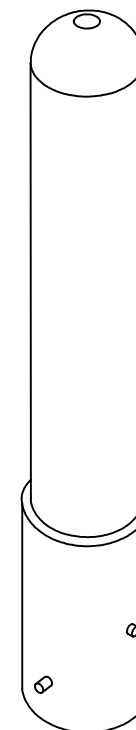
—HEX T-HANDLE WRENCH



COVER UNLOCKING TOOL



—ANCHOR SLEEVE COVER (HDG)



— FINISHED GRADE

BOLLARD INSTALLED POSITION

7			
6			
5			
4			
3			
2			
1	--	--	--

ITEM PART NUMBER	QTY.	DESCRIPTION
BILL OF MATERIAL		

This Drawing shall not be used nor reproduced except when authorized in writing by TrafficGuard Direct.

HOLIXLOCK BOLLARD INSTALL

NOT SCALE FROM DRAWING
ALL UNITS ARE IN INCHES UN
UNLESS NOTED OTHERWISE

DIMENSIONING BASED ON
FRACTION=1/16"

USED IN	ACTION	BY	DRAWING NUMBER
---	DESIGN		---
BX = 4.81 D.O.W = 0.06 ANGLE ARE 1° FRACTION=1/16"	CHECKER	DTN	EXP/REVISION SHY

SCALE: _____ **DATE:** 01/16/12 **SHEET:** _____
 1 of 1

[U.S. Patent 8,297,873]

TrafficGuard® Direct
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DESIGN AND CONSTRUCTION DATA SCHEDULE RPAS

1. THE DESIGN LOAD IS A STATIC LOAD "P" LOCATED AT 27 INCHES ABOVE GRADE THAT SHOULD CAUSE FAILURE OF THE BOLLARD.
2. THE EARTH PRESSURE VALUE IS SHOWN AT DESIGN LOAD AND THE OWNER SHOULD VERIFY THAT THE EARTH IS ADEQUATE TO WITHSTAND THE NOTED EARTH DESIGN PRESSURE.
3. ANCHORAGE SYSTEMS BY OTHERS THAN TRAFFICGUARD MAY CAUSE PREMATURE FAILURE OF THE BOLLARD BY ROTATION OF ANCHORAGE AT DESIGN LOAD.

DESIGN FORMULA: EARTH PRESSURE MAXIMUM $Q_{max} = 3888 P / DB(A+B)$

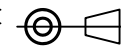
NOTE: CONCRETE, FORM, ROCK, PVC DRAIN AND REBAR PROVIDED BY OTHERS

DESIGN LOAD P	BOLLARD			EARTH "Q" MAX.	PIER HT. "C" MIN.	VERT. REBAR LENGTH	QTY	HOOP TIES	PIER CONCRETE	FRENCH DRAIN	PIER "D"	LOAD DIM	
	Out Dia.	Ins Dia.	Fb PSI									"A"	"B"
600 #	1.910"	1.620"	49090	992 PSF	42 INCH	38 INCH	3	6 EA.	6 Cu Ft	1.2 CF	8"	7"	14"
1200 #	2.440"	2.064"	46552	1984 PSF	42 INCH	38 INCH	3	6 EA.	6 Cu Ft	1.2 CF	8"	7"	14"
3000 #	3.500"	3.068"	47093	2204 PSF	42 INCH	38 INCH	4	6 EA.	6 Cu Ft	0.5 CF	18"	7"	14"
6000 #	4.500"	4.026"	50467	4408 PSF	42 INCH	38 INCH	4	6 EA.	6 Cu Ft	0.5 CF	18"	7"	14"
6000 #	4.500"	4.026"	50467	2667 PSF	54 INCH	50 INCH	4	7 EA.	8 Cu Ft	0.5 CF	18"	9"	18"
10000#	5.563"	5.047"	49541	4444 PSF	54 INCH	50 INCH	4	7 EA.	8 Cu Ft	0.5 CF	18"	9"	18"
10000#	5.563"	5.047"	49541	3600 PSF	60 INCH	56 INCH	4	8 EA.	9 Cu Ft	0.5 CF	18"	10"	20"
10000#	5.563"	5.047"	49541	2975 PSF	66 INCH	62 INCH	4	8 EA.	10 Cu Ft	0.5 CF	18"	11"	22"
15000#	6.625"	6.065"	47647	3750 PSF	72 INCH	68 INCH	4	9 EA.	11 Cu Ft	0.5 CF	18"	12"	24"
15000#	6.625"	6.065"	47647	3195 PSF	78 INCH	72 INCH	4	9 EA.	12 Cu Ft	0.5 CF	18"	13"	26"
15000#	6.625"	6.065"	47647	3240 PSF	60 INCH	56 INCH	8	8 EA.	25 Cu Ft	1.6 CF	30"	10"	20"
15000#	6.625"	6.065"	47647	3333 PSF	54 INCH	50 INCH	8	7 EA.	32 Cu Ft	1.8 CF	36"	9"	18"

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ROUND POST BOLLARD RPAS ANCHORAGE SYSTEM DETAILS

THIRD ANGLE
PROJECTION



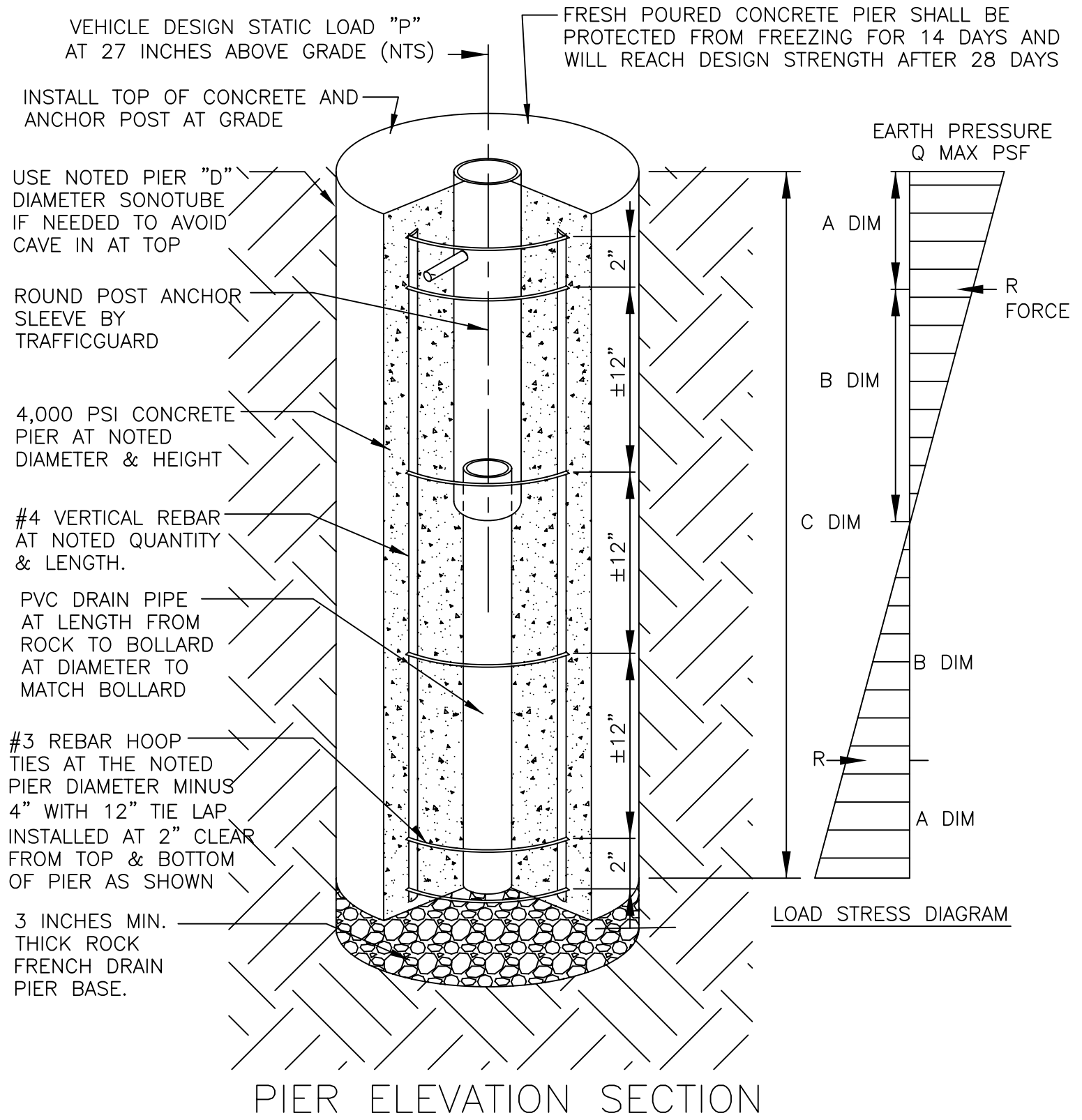
Do not scale from drawing

Toll
Free

TrafficGuard®

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3	-	-	-		Action	by			
2	-	-	-		Design	wkz	Dwg. Scale: nts	Assembly Shipping Weight	Drawing Number:
1	-	-	-		Drawn	wkz	Copywrite: 2010	Varies per Model	RPAS-2
Rev.	Date	by		Description	Checked	wkz	Dwg. Size: Letter	Drawing Date: 12.10.10	Sheet: 2 of 2



NOTE REFER TO RPAS-2 FOR THE ANCHORAGE SYSTEM DIMENSIONS, DESIGN LOADS, REBAR SIZE, QUANTITIES, AND OTHER DESIGN DATA.

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ROUND POST BOLLARD RPAS ANCHORAGE SYSTEM ASSEMBLY				THIRD ANGLE PROJECTION		Toll Free TrafficGuard® P.O. Box 201, Geneva, IL. 60134 Bus: 1.877.727.7347 Fax: 1.800.814.7194			
Do not scale from drawing									
3	-	-	-	Action	by	Dwg. Scale:	nts	Assembly Shipping Weight	Drawing Number:
2	-	-	-	Design	wkz	Copywrite:	2010	Varies per Model	RPAS-1
1	-	-	-	Drawn	wkz	Dwg. Size:	Letter	Drawing Date:	12.10.10
Rev.	Date	by	Description	Checked	wkz	Sheet: 1 of 2			