

INSTALLATION INSTRUCTIONS FOR: (HDHB & LPHDHB)
LOW PROFILE HEAVY DUTY HINGED BOLLARD

1. Verify that all Low Profile Heavy Duty Hinged Bollard parts are in the shipment package as shown on the "Bill of Material".
 2. Provide Low Profile Heavy Duty Hinged Bollard Anchor System (see Included Anchor System Drawing-BAS) of your choice at a location to suit your specific needs.
 3. Install LPHDHB Base (Item 2) true and level on your selected Anchor System using the flat washers and hex nuts included in your Anchor System Kit. Use S.S. shims to level if needed. Torque hex nuts to Minimum 100 ft-lbs for Anchor Systems CPAS and ESAS. Torque hex nuts for other Anchor Systems to Manufacturer's Specification.
 4. Install LPHDHB Post (Item 1) to LPHDHB Base (Item 2) using Hinge Bolt (Item 3), Flat Washer (Item 5), and Hex Nut (Item 4) as shown. Tack Weld Hex Nut to Hinge Bolt or Chisel Hinge Bolt Threads such that Hex Nut cannot be easily removed.
 5. Install Locking Pin thru UP Position Bollard Post, and Install Padlock where shown. A Hex Nut (Item 4) is included in case a padlock is not available.
 6. Install the four Labels at the locations shown.
 7. Check the functional operation of the Low Profile Heavy Duty Hinged Bollard.
- Note: S.S. shims, tools, grease, and padlocks are not provided.

LOW PROFILE HEAVY DUTY HINGED BOLLARD		TrafficGuard®	
ASSEMBLY DRAWING	DATE: 03/21/11	REVISED	03/21/11
ZABEL ENGINEERING	PROJECT NO: 098993-MIS-DETALS.sht	SCALE: 1" = 1'-0"	PROJECT: RIDGEFIELD TRACE EXTENSION
DESIGNED BY: AEB	DRAWN BY: RKM	CHECKED BY: MDW	DATE: 1/26/11

TrafficGuard LOW PROFILE HEAVY DUTY HINGED BOLLARD (LPHDHB) & HEAVY DUTY HINGED BOLLARD (HDHB)

"The Original Multifunction Bollard"
Standard Features Include

Ease of use in 5 easy steps

1. Remove padlock
2. Remove locking pin
3. Lower bollard post
4. Replace padlock and locking pin to locking pin hole in Bollard Post.
5. Allows vehicle access

Safety
30" overall height and "Safety Yellow" finish are standard for high visibility. Custom colors available upon request.

Heavy Duty
Closed Steel Tube Construction
Stainless Steel Locking Pin

Proven Performance
References Available Upon Request

Low Maintenance

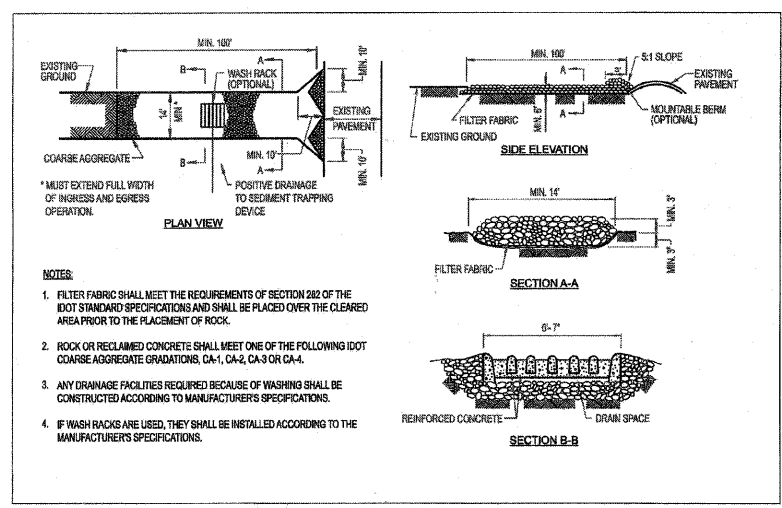
Warranty
\$1,000,000 Liability Coverage

Orders for "Safety Yellow"
shipped in 48 hours.

PRODUCT HIGHLIGHTS

- Locking Pin at Base
- Clearance Height 4" in lowered position
- Single Post design with 3" x 6" x 3/8" steel tube

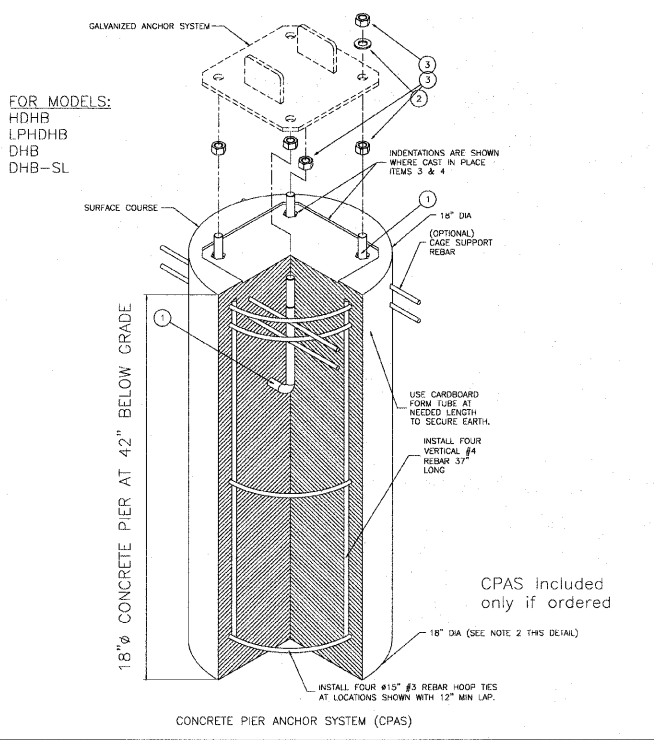
LOW PROFILE HEAVY DUTY HINGED BOLLARD		TrafficGuard®	
ISOMETRIC DISPLAY DRAWING	DATE: 03/21/11	REVISED	03/21/11
ZABEL ENGINEERING	PROJECT NO: 098993-MIS-DETALS.sht	SCALE: 1" = 1'-0"	PROJECT: RIDGEFIELD TRACE EXTENSION
DESIGNED BY: AEB	DRAWN BY: RKM	CHECKED BY: MDW	DATE: 1/26/11



THE FOLLOWING SHALL BE PROVIDED AT ALL LOCATIONS REQUIRING ACCESS WITHIN THE CITY OF CRYSTAL LAKE RIGHT-OF-WAY. THIS WILL BE INCLUDED IN THE TEMPORARY ACCESS (COMMERCIAL ENTRANCE) PAY ITEM.

BILL OF MATERIAL		
ITEM PART #	DESCRIPTION	QTY.
1	0001 CPAS KIT - INCLUDES THE FOLLOWING PART NUMBERS	1
2	0002 #3/4" x 12" TYPE L ANCHOR BOLT - H.D.G.	4
3	0003 #3/4" TYPE L FLAT WASHER GALVANIZED STEEL	4
4	0004 #3/4" HEX NUT GALVANIZED STEEL	8

- NOTES:
1. CONCRETE, FORM AND REBAR PROVIDED BY OTHERS
 2. WHERE UNSUITABLE SOILS ARE ENCOUNTERED, INCREASE CONCRETE PIER BASE TO 24" DIA. 42" BELOW GRADE, CREATING A CONICAL SHAPE. IF REQUIRED, THIS WORK SHALL BE INCLUDED IN THE FOLD DOWN BOLLARD PAY ITEM.



LPHDHB & HDHB

INSTALL PADLOCK HERE (Provided by Customer)

APPLY A THIN COAT OF POLYURETHANE GREASE TO WASH BOLT AND LOCK PIN

ANCHOR SYSTEM

INSTALL HERE (Provided by Customer)

APPROACHING TRAFFIC FLOW

BILL OF MATERIAL		
ITEM PART #	DESCRIPTION	QTY.
1	0001 ANCHOR POST	1
2	0002 ANCHOR SYSTEM	1
3	0003 #3/4" x 12" HEX HEAD HINGE BOLT - 18" L SS	1
4	0004 #3/4" x 12" FLAT WASHER - 18" L SS	1
5	0005 #3/4" x 12" FLAT WASHER - TOP & BOTTOM - 18" L SS	2
6	0006 #3/4" x 12" HEX HEAD LOCKING PIN - 18" L SS	1
7	0007 4" x 6" x 3/8" ANCHOR LABEL	4
8	0008 4" x 6" x 3/8" ANCHOR LABEL	4

LOW PROFILE HEAVY DUTY HINGED BOLLARD		TrafficGuard®	
ASSEMBLY DRAWING	DATE: 03/21/11	REVISED	03/21/11
ZABEL ENGINEERING	PROJECT NO: 098993-MIS-DETALS.sht	SCALE: 1" = 1'-0"	PROJECT: RIDGEFIELD TRACE EXTENSION
DESIGNED BY: AEB	DRAWN BY: RKM	CHECKED BY: MDW	DATE: 1/26/11

THE LOW PROFILE HEAVY DUTY HINGED BOLLARD (LPHDHB) SHALL BE FURNISHED AND INSTALLED. THIS WILL BE INCLUDED IN THE FOLD DOWN BOLLARDS PAY ITEM.

COPYRIGHT © 2010 BY BAXTER & WOODMAN, INC. ALL RIGHTS RESERVED. LICENSE NO. 184-00027 - EXPIRES 12/31/2013. 1/16/10 PM 3/31/2011



USER NAME = 418eje	DESIGNED - AEB	REVISED - PER IDOT 3/25/11
FILE NAME = 098993-MIS-DETALS.sht	DRAWN - RKM	REVISED -
PLOT DATE = 3/31/2011	CHECKED - MDW	REVISED -
	DATE - 1/26/11	REVISED -

McHENRY COUNTY CONSERVATION DISTRICT
RIDGEFIELD TRACE EXTENSION
BICYCLE PATH

SCALE:	STA.	TO STA.
--------	------	---------

MISCELLANEOUS DETAILS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N/A	00-C2000-03-BT	McHENRY	25	18
JOB NO: C-91-711-10		CONTRACT NO. 63578		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT NO. CMM-9003 (680)				

McHENRY COUNTY CONSERVATION DISTRICT BID #0311.09.01