SECTION 34 71 13

BOLLARDS

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* Camp Logan Cement Works, Inc.; bollards.  
This section is based on the products of Camp Logan Cement Works, Inc., which is located at:  
1212 Asbury St.  
Houston, TX 77007-3194  
Toll Free Tel: 800-445-9062  
Tel: 713-869-3385  
Fax: 713-869-3362  
Email: [request info (clcw@camplogancement.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Camp+Logan+Cement+Works,+Inc.&coid=42168&rep=&fax=713-869-3362&message=RE:%20Spec%20Question%20(02840clc):%20%20&mf=)  
Web: <http://www.camplogancement.com>   
 [ [Click Here](https://www.arcat.com/arcatcos/cos42/arc42168.html) ] for additional information.  
Camp Logan Cement Works, Inc. is one of the largest producers of precast concrete step treads in the United States. Our precast cement steps fit both wood and steel stringers. We offer bolt-on and weld-on precast step treads. We have been producing precast treads for over forty years. We have shipped our precast treads all over the United States. We have production facilities in Houston, Texas, and Pearland, Texas. We keep plenty of precast cement steps in stock. Let Camp Logan Cement Works quote your next job

1. GENERAL
   1. SECTION INCLUDES
      1. Steel bollards.
   2. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 03 30 00 - Cast-in-Place Concrete.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Storage and handling requirements and recommendations.
  2. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
     2. Installer Qualifications: Minimum 2 year experience installing similar products.

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship is approved by Architect.
       3. Rework mock-up area as required to produce acceptable work.
  1. PRE-INSTALLATION MEETINGS
     1. Convene minimum two weeks prior to starting work of this section.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
     2. Handling: Handle materials to avoid damage.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  4. SEQUENCING
     1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Camp Logan Cement Works, Inc., which is located at: 1212 Asbury St.; Houston, TX 77007-3194; Toll Free Tel: 800-445-9062; Tel: 713-869-3385; Fax: 713-869-3362; Email: [request info (clcw@camplogancement.com)](https://admin.arcat.com/users.pl?action=UserEmail&company=Camp+Logan+Cement+Works,+Inc.&coid=42168&rep=&fax=713-869-3362&message=RE:%20Spec%20Question%20(02840clc):%20%20&mf=); Web: <http://www.camplogancement.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
  1. METAL BOLLARDS
     1. Material: Fabricate metal bollards from Schedule 40 round steel pipe 1/4-inch (6.4-mm) wall-thickness round steel tubing.
        1. Cap bollards with dome cap.

\*\* NOTE TO SPECIFIER \*\* Delete bollard type not required.

* + 1. 4 Inch Standard Bollard:
       1. Bollard: 4" STD PIPE BOLLARD as manufactured by Camp Logan Cement Works, Inc.
       2. Size: 4 inches (102 mm) outside diameter by 7 feet (2134 mm) long.
    2. 6-5/8 Inch Standard Bollard:
       1. Bollard: 6-5/8" STD PIPE BOLLARD as manufactured by Camp Logan Cement Works, Inc.
       2. Size: 6-5/8 inches (168 mm) outside diameter by 7 feet (2134 mm) long.
    3. 4 Inch Bollard on Plate:
       1. Bollard: 4" Bollard On Plate as manufactured by Camp Logan Cement Works, Inc.
       2. Fabricate bollards with 1/2 inch (13 mm) thick by 11 inches (279 mm) round steel baseplates for bolting to concrete slab. Drill baseplates with three equally spaced holes for 3/4-inch (19 mm) anchor bolts. Seal baseplate to pipe. Provide three 5/8 inch by 6 inches (16 mm by 152 mm) expansion bolts per bollard.
       3. Size: 4 inches (102 mm) outside diameter by 4 feet (1219 mm) long.
    4. 6-5/8 Inch Bollard on Plate:
       1. Bollard: 6-5/8" Bollard On Plate as manufactured by Camp Logan Cement Works, Inc.
       2. Fabricate bollards with 1/2 inch (13 mm) thick by 13 inches (330 mm) round steel baseplates for bolting to concrete slab. Drill baseplates with three equally spaced holes for 3/4-inch (19 mm) anchor bolts. Seal baseplate to pipe. Provide three 5/8 inch by 6 inches (16 mm by 152 mm) expansion bolts per bollard.
       3. Size: 6-5/8 inches (168 mm) outside diameter by 4 feet (1219 mm) long.
    5. Finish bollards with safety yellow powder coated factory applied paint finish.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until substrates have been properly prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install in accordance with manufacturer's instructions.
      2. Installation: Anchor bollards to existing construction with expansion anchors. Provide three 3/4-inch (19-mm) by 6 inches (152 mm) bolts at each bollard unless otherwise indicated.

\*\* NOTE TO SPECIFIER \*\* Delete installation not required.

* + 1. Installation: Anchor bollards in concrete in formed or core-drilled holes not less than 8 inches (200 mm) deep and 3/4 inch (19 mm) larger than OD of bollard. Fill annular space around bollard solidly with nonshrink grout; mixed and placed to comply with grout manufacturer's written instructions. Slope grout up approximately 1/8 inch (3 mm) toward bollard.

\*\* NOTE TO SPECIFIER \*\* Installation can be used for bollards located in landscaping or unit pavers.

* + 1. Installation: Anchor bollards in place with concrete footings. Center and align bollards in holes 3 inches (75 mm) above bottom of excavation. Place concrete and vibrate or tamp for consolidation. Support and brace bollards in position until concrete has cured.

\*\* NOTE TO SPECIFIER \*\* Anchoring removable bollards. Delete if not required.

* + 1. Installation: Anchor internal sleeves for removable bollards in concrete by inserting in pipe sleeves preset into concrete. Fill annular space around internal sleeves solidly with nonshrink grout; mixed and placed to comply with grout manufacturer's written instructions. Slope grout up approximately 1/8 inch (3 mm) toward internal sleeve.
       1. Place removable bollards over internal sleeves and secure with 3/4-inch (19-mm) machine bolts and nuts. After tightening nuts, drill holes in bolts for inserting padlocks. Owner furnishes padlocks.

\*\* NOTE TO SPECIFIER \*\* Anchoring removable bollards. Delete if not required.

* + 1. Installation: Anchor internal sleeves for removable bollards in place with concrete footings. Center and align sleeves in holes 3 inches (75 mm) above bottom of excavation. Place concrete and vibrate or tamp for consolidation. Support and brace sleeves in position until concrete has cured.
       1. Place removable bollards over internal sleeves and secure with 3/4-inch (19-mm) machine bolts and nuts. After tightening nuts, drill holes in bolts for inserting padlocks. Owner furnishes padlocks.
  1. PROTECTION
     1. Protect installed products until completion of project.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION