Bollard 3

Metal Bollard

The metal bollard was designed to be compatible with the architecture and streetscape in more urban areas of campus. It has been used mainly at the edges of the Pedestrian Safety Zone and can be found on either end of Serra Mall, as well as in the SEQ. The design is custom to Stanford University, developed by the University Architect/Planning Office in collaboration with Grounds Services and the bollard supplier, Creative Pipe. As with wooden bollards, two designs are available: fixed, or removable with locking capabilities. Finished in flat black, it conforms to the campus standard flat black metal finishing spec, and is circled with high visibility reflectorized white tape to be seen at night.

Specifications:

- 6″ Sch. 40 pipe 6.625 X .280 wall.
- Installed approximately 3’ above ground
- Facility Operations to supply lock and record lock information
- Black thermoplastic powder coat finish

Manufacturer / Model:
Bollard CBR-6-RB-RF-T-D, Creative Pipe, Inc., Rancho Mirage, CA 92270,
www.creativepipe.com,
(800) 644-8467/(760) 340-5555

Bollard 5

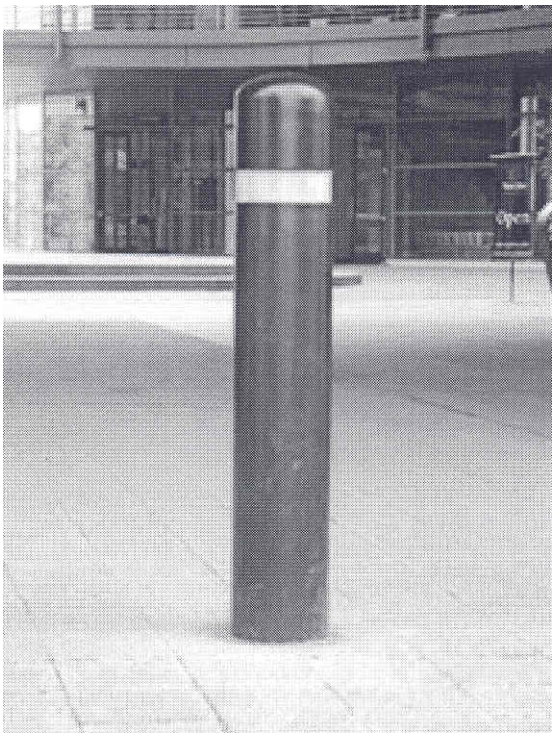
Metal Bollard

This bollard is a revision to the original metal bollard design, allowing both the removable and the fixed bollards to be installed without base plates. Instead of a locking mechanism on the base plate, the locking mechanism is on the inside of this bollard. Examples of use are at the Clark Center, Lokey Labs, and the North/South Axis.

Specifications:

- Material: Round Steel Pipe.
- Size: 36" standard height, 6" diameter.
- Color: Black, thermoplastic coated
- Domed cap, inset reveal, and mounted as removable-embedded.

Model/Manufacturer:
Creative Pipe, Inc., Model Series S-CBR-6--RE-T-DT(removable) or S-CBR-6-E-T-DT (embedded), available through Creative Pipe, Inc., 1 (800) 644-8467, (760) 340-5555Rancho Mirage, CA 92270, http://www.creativepipe.com.



Clark Center and Lokey Labs, Stanford Campus

Quad Bollard

Cast Iron Bollard

This metal bollard is in place to restrict vehicle access to the main quad. Keys to operate this type of bollard are kept in the fire department's Knox box, to allow access only to emergency response vehicles. This automatic retractable model was chosen instead of the removable model to provide simple and quick bollard removal for emergency response teams. {This model also eliminates possible loss of the bollard, which can occur if it is removed and unattached, and the hazard of storing a displaced bollard on the ground in a highly used pedestrian and bike circulation area.} The bollard's design and materials match the quality and character of the historic main quad buildings. These bollards are currently used exclusively at the main quad gates.

Specifications:

- Model: Chateauneuf
- Material: Cast Iron
- Size: 29.5" height, 4.7" diameter
- Color: Black
- Options: Flat top; removable, automatic retractable and embedded

Manufacturer:

URBACO USA, Inc.
135 West Oxmoor Road, Suite 307
Birmingham, AL 35209

tel: 205-942-5333
fax: 205-942-5776
http://www.urbaco.com

East Main Quad entrance, Stanford Campus

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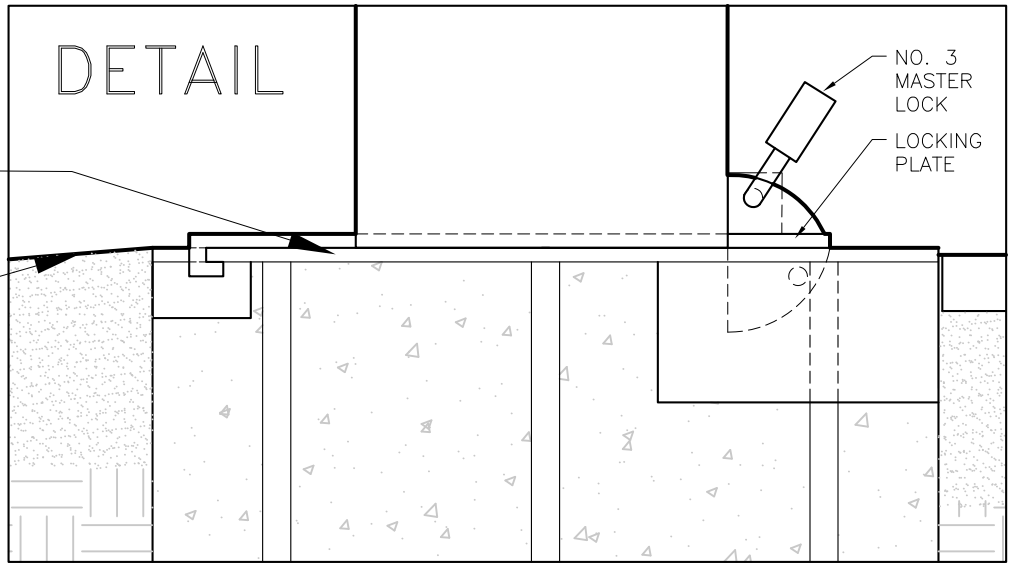
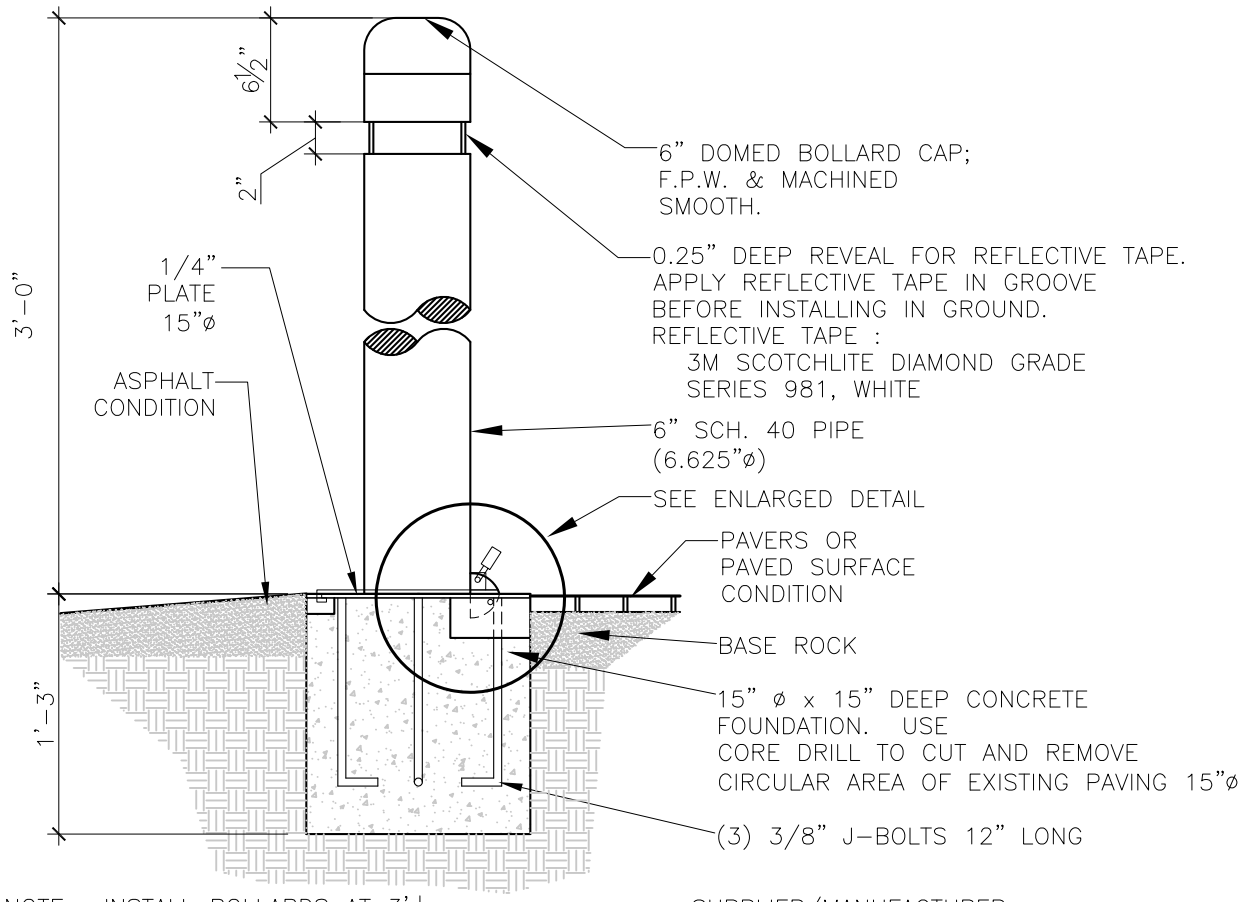
ENLARGED DETAIL





NOTE: INSTALL BOLLARDS AT 3'± ABOVE GROUND, LEVEL WITH ADJACENT BOLLARD(S)

STANDARD SPACING: 5'–4" O.C.
FIRE ACCESS SPACING: see separate detail

SUPPLIER/MANUFACTURER:
Bollards and tape:
STANFORD UNIVERSITY
FACILITIES OPERATIONS, METAL SHOP
315 BONAIR SIDING
TEL. (650) 725–3172

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	REMOVABLE METAL BOLLARD	Scale: NTS
	Stanford University Architect/Planning Office Standard Campus Site Furnishings Guidelines	Updated: 04/08/08 Superseded: 10/20/2004

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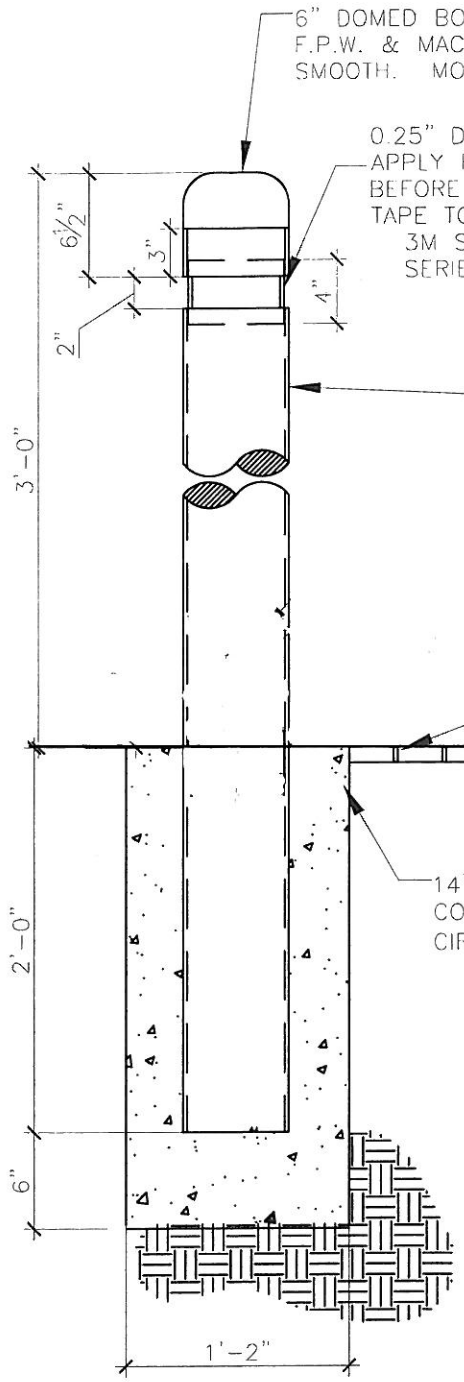

NOTE: INSTALL BOLLARDS AT 3'± ABOVE GROUND, LEVEL WITH ADJACENT BOLLARD(S) OR EVENLY SLOPED WITH GRADE.

STANDARD SPACING: 5'-4" O.C.

FIRE ACCESS SPACING: see separate detail

SUPPLIER/MANUFACTURER:
Bollards and tape:
CREATIVE PIPE, INC., RANCHO MIRAGE, CA.
TEL. (760) 340-5555

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FIXED METAL BOLLARD

Scale: 1"=1'-0"

Stanford University Architect/Planning Office

Standard Campus Site Furnishings Guidelines

Updated: 10/20/04

Superseded: 2/2/2004

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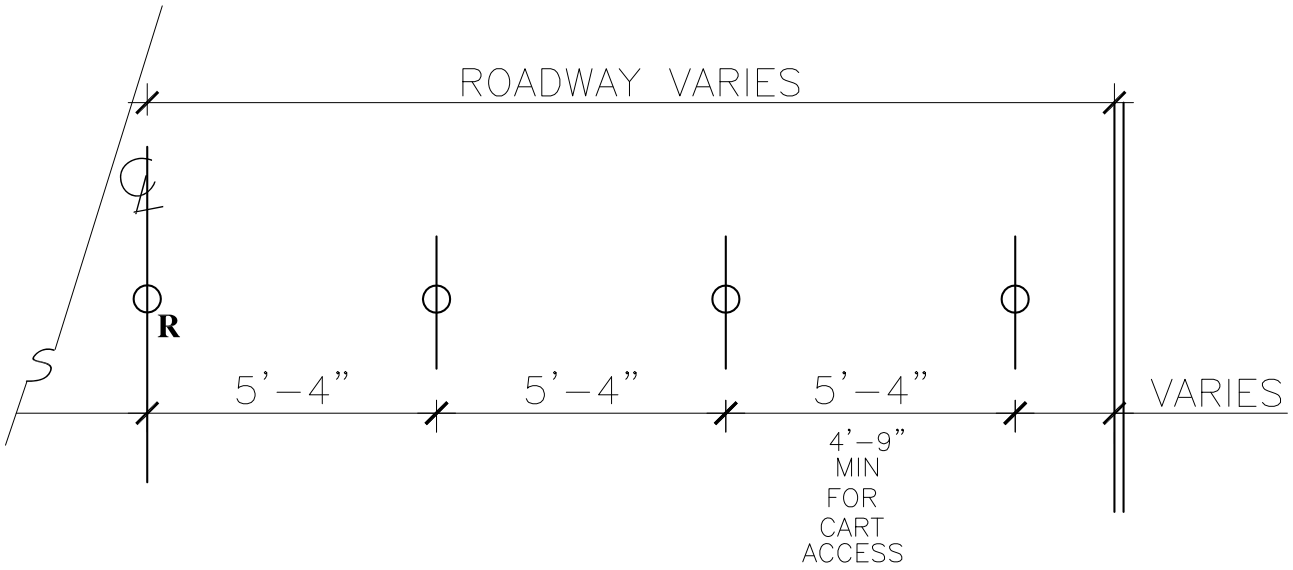

STANDARD INSTALL

USED WHERE NO FIRE ACCESS IS REQUIRED.

CENTER BOLLARD IS FIXED OR REMOVABLE, DEPENDENT ON ACCESS REQUIREMENTS FOR SERVICE OR DELIVERY VEHICLES.

INSTALL SYMMETRICALLY AROUND CENTERLINE.

"R" DESIGNATES REMOVABLE BOLLARD

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STANDARD METAL BOLLARD SPACING

Scale: NTS

Stanford University Architect/Planning Office

Standard Campus Site Furnishings Guidelines

Updated: 12/12/06

Superseded: 9/2/2004

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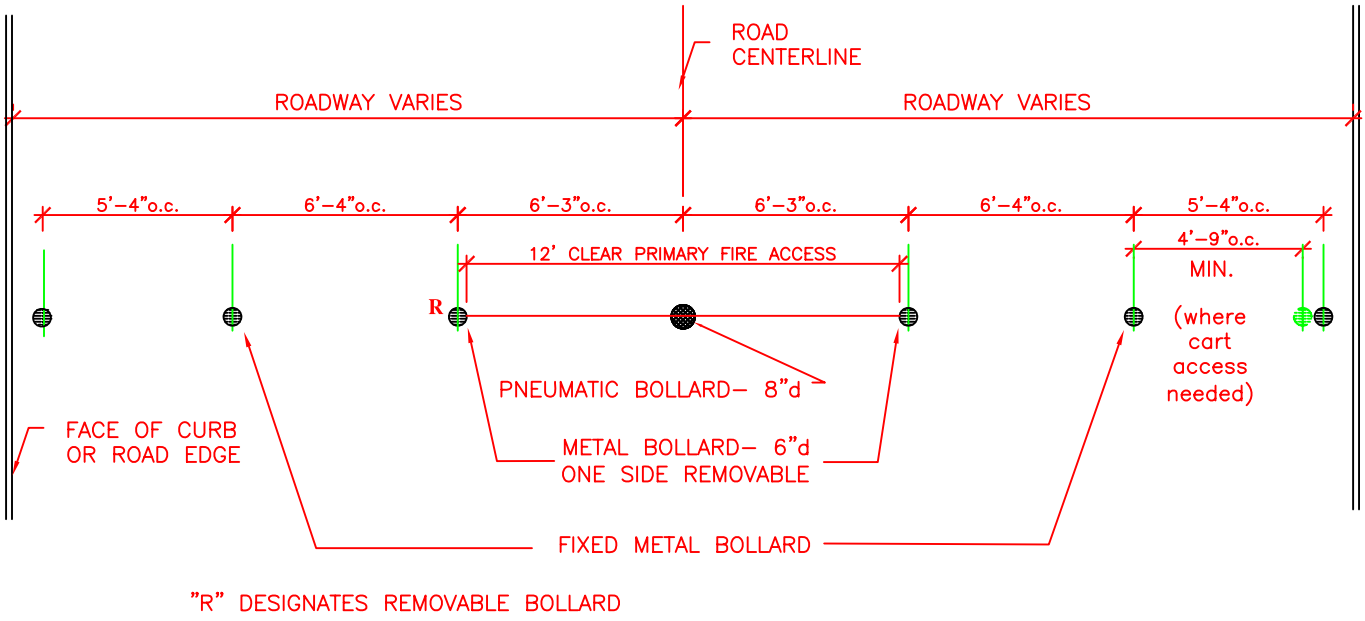
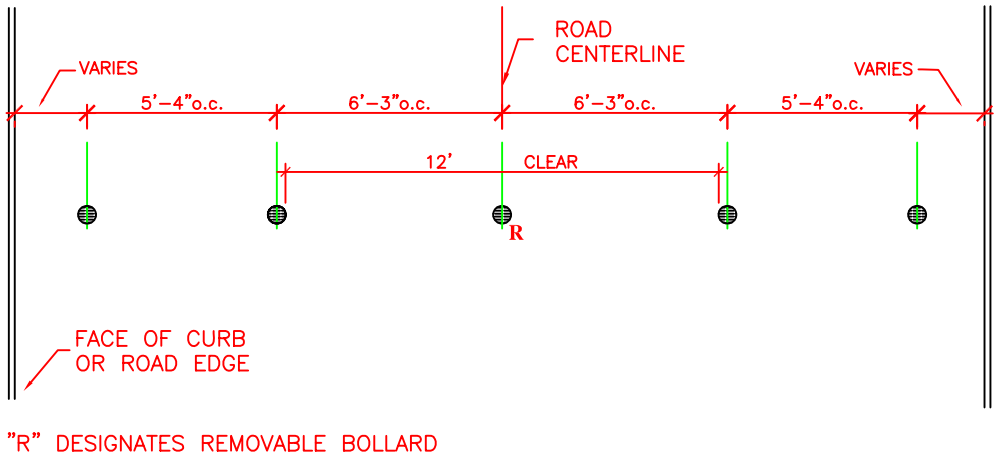


PRIMARY ACCESS FIRE ROUTE (ENTRY)

METAL BOLLARDS ADJACENT TO PNEUMATIC BOLLARDS



SECONDARY FIRE ACCESS ROUTE (EXIT)

PRIMARY FIRE ACCESS route satisfies ideal criteria for fire truck access to buildings, and should be the preferred route to a location.

SECONDARY ACCESS routes have less desirable criterial but still function as access to and from a location.

	METAL BOLLARD FIRE ACCESS SPACING	Scale: NTS
	Stanford University Architect/Planning Office Standard Campus Site Furnishings Guidelines	Updated: 2/27/08 Superseded: 12/12/06

Bollard 1

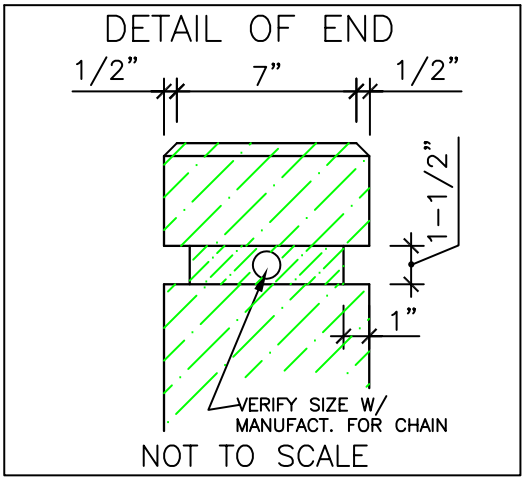
Wooden Bollard

The wooden bollard is the primary standard for campus. Where emergency access is required, hydraulic bollards or removable bollards are used. When connected by a chain, they are used along the sides of primary roads, including Campus Drive Loop Road and Palm Drive.

Specifications:

- Pressure-treated Lodgepole Pine, 8" diameter.
- Installed with height of 3 feet above grade, 2-3 feet embedment, 5'-6" o.c.
- Install removable wooden bollards in the bollard rows on fire access and service routes to provide a 12' minimum opening when removed.
- With chain, spacing should be 12' o.c. maximum; 5'-6" gaps for pedestrians.
- Detail of bollard and chain available from the Planning Office.

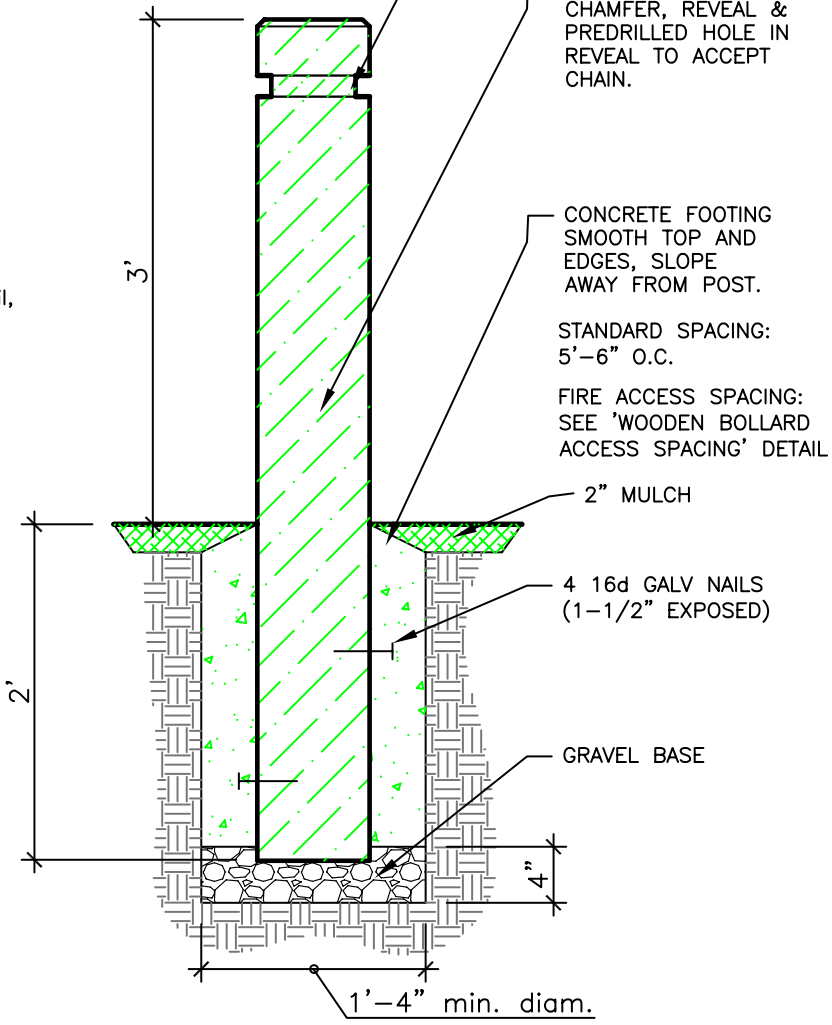
Model/Manufacturer:
M & M Builder's Supply (Tracy, CA [209] 835-4172) model: "Stanford Bollard", or exact equivalent.



COPPER NAPTHALATE TREATED POSTS:
supplied by
M&M Builders Supply
8111 East 11th St.
Tracy, CA 95378
(209) 835-4172

CHAIN:
3/8" Galvanized Proof Coil,
supplied by
ALLIED ROPES
BRISBANE, CA
(415) 468-8100

RED REFLECTORIZED TAPE:
supplied by
CALIFORNIA SAFETY AND
SUPPLY COMPANY
SANTA CLARA
(408) 727-8530
PART XRL#RF-5RD RFL



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WOODEN BOLLARD

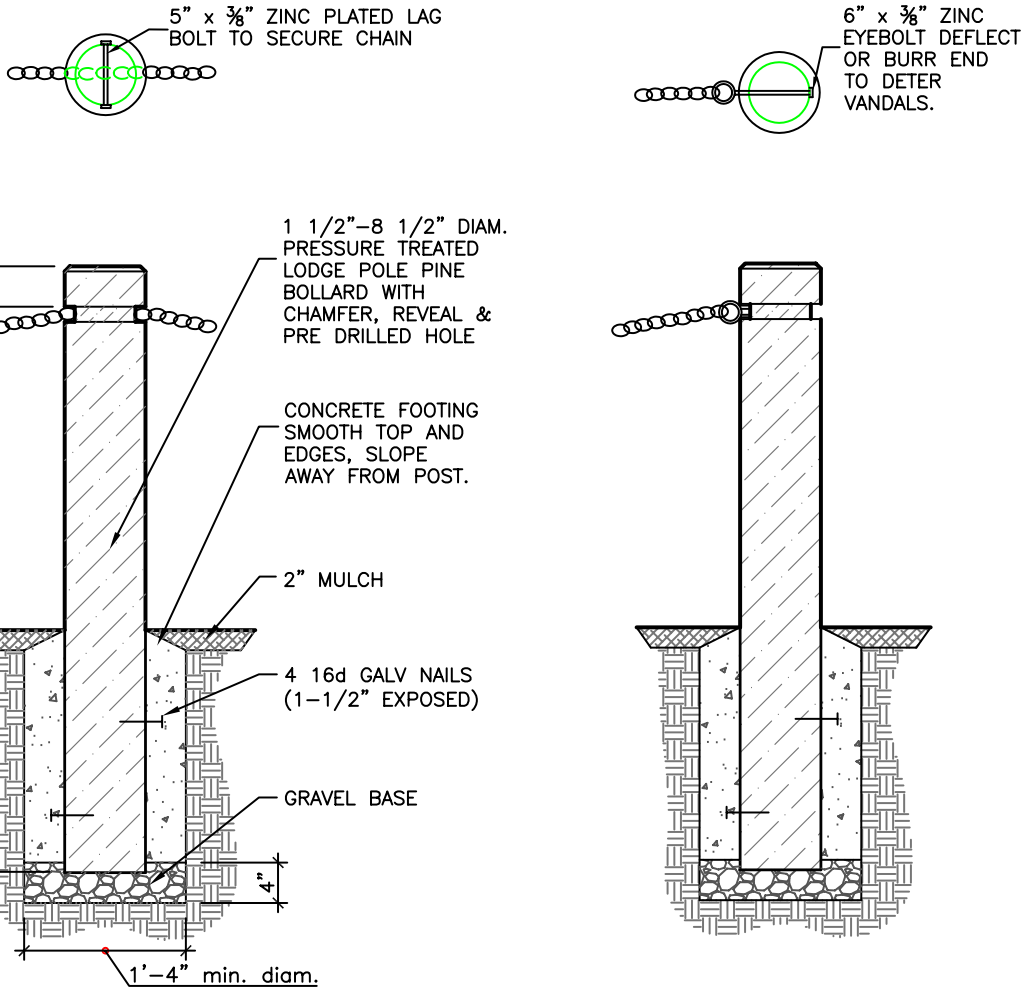
Scale: 1"=1'-0"

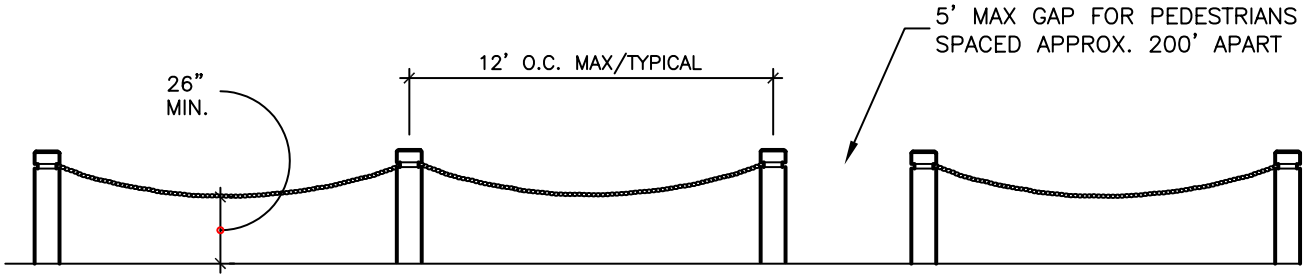
Stanford University Architect/Planning Office

Standard Campus Site Furnishings Guidelines

Updated: 4/25/2003

Superseded: 2/13/2002





SUPPLIERS:

BOLLARDS: M&M Builders Supply, Tracy, CA (209) 835–4172
CHAIN: Allied Ropes, Brisbane, CA (415) 468–8100
REFLECTIVE TAPE: California Safety and Supply Company, Santa Clara (408) 727–8530

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LELAND STANFORD JUNIOR UNIVERSITY ★ ORGANIZED 1891 ★	WOODEN BOLLARD & CHAIN	Scale: not to scale
	Stanford University Architect/Planning Office Standard Campus Site Furnishings Guidelines	Updated: 7/25/2001 Superseded: 00/00/0000

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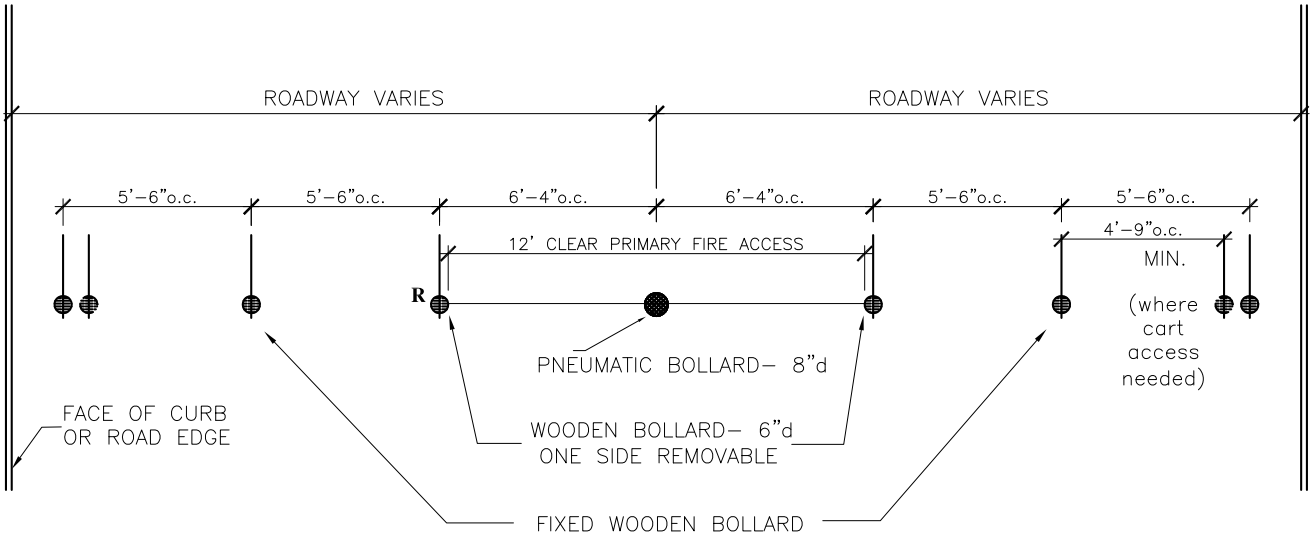
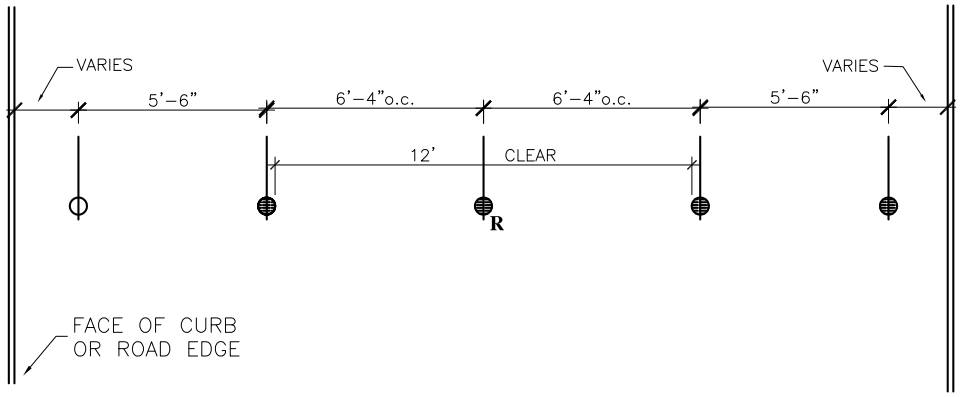


PRIMARY ACCESS FIRE ROUTE (ENTRY)

WOODEN BOLLARDS ADJACENT TO PNEUMATIC BOLLARDS



SECONDARY FIRE ACCESS ROUTE (EXIT)

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	WOOD BOLLARD FIRE ACCESS SPACING	Scale: 1/6"=1'0"
	Stanford University Architect/Planning Office	Updated: 8/22/2003
	Standard Campus Site Furnishings Guidelines	Superseded: 05/08/2002