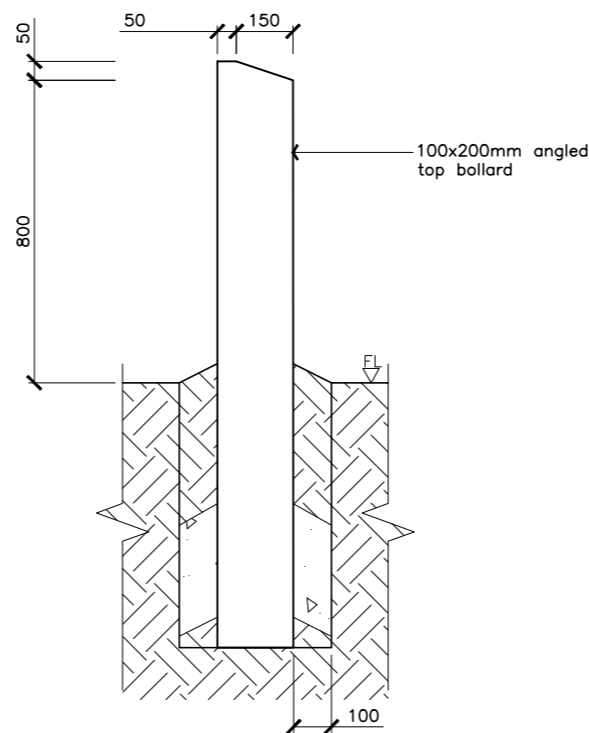
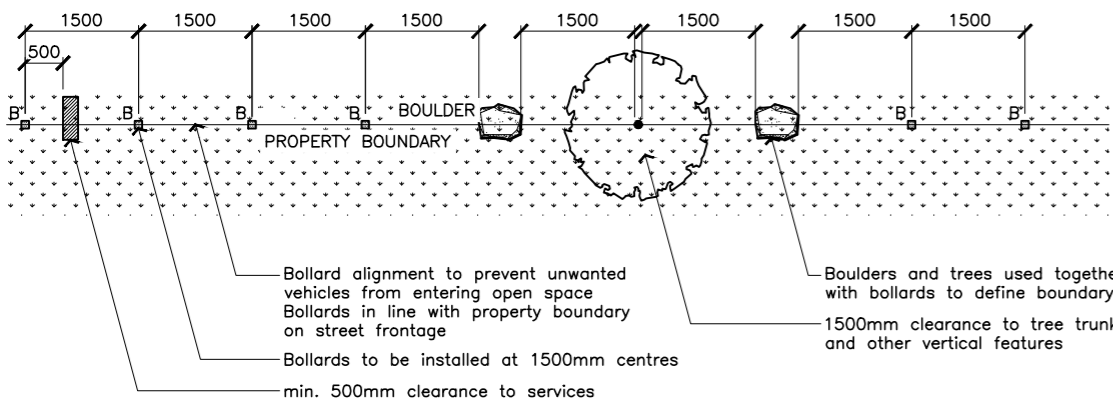


TYPICAL BOLLARD



BEVELLED TOP BOLLARD

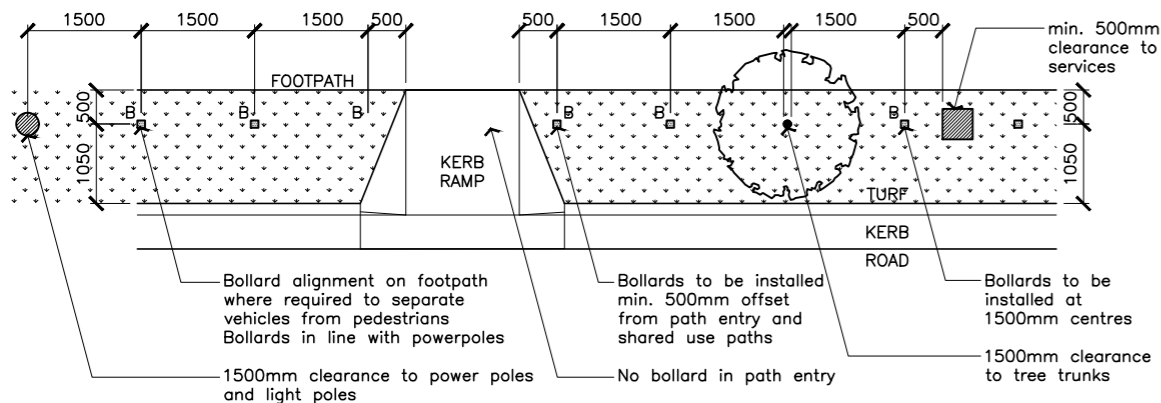
TYPICAL BOLLARD DETAIL



Bollard alignment to prevent unwanted vehicles from entering open space
 Bollards in line with property boundary on street frontage
 Bollards to be installed at 1500mm centres
 min. 500mm clearance to services

Boulders and trees used together with bollards to define boundary
 1500mm clearance to tree trunks and other vertical features

PARK BOLLARD LAYOUT



Bollard alignment on footpath where required to separate vehicles from pedestrians
 Bollards in line with powerpoles
 1500mm clearance to power poles and light poles

Bollards to be installed min. 500mm offset from path entry and shared use paths
 No bollard in path entry
 1500mm clearance to tree trunks

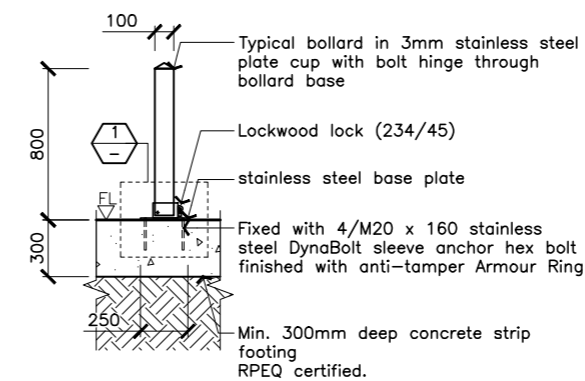
Bollards to be installed at 1500mm centres
 1500mm clearance to tree trunks

VERGE BOLLARD LAYOUT

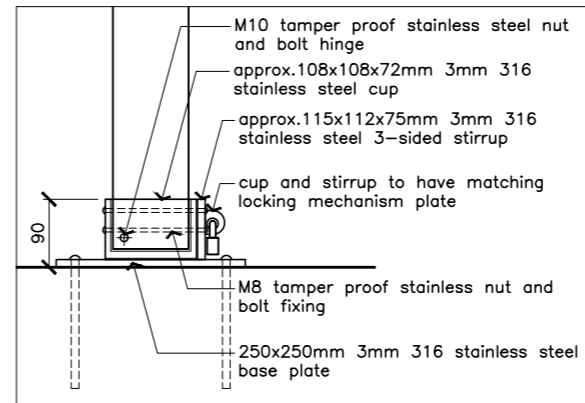
BEVELLED TOP BOLLARD DETAIL



PARK APPLICATION



FOLD DOWN BOLLARD DETAIL



BASEPLATE DETAIL 1



VERGE APPLICATION

NOTES

GENERAL

- All dimensions are in millimetres, unless otherwise noted.
- Do not scale these drawings. Use figured dimensions.
- The Contractor shall check, verify on site and be responsible for the correctness of all dimensions shown on the drawings and discrepancies shall be reported immediately to the Project Manager before any work proceeds.
- These drawings shall be read in conjunction with all other drawings and specifications and with such other written instructions as may be issued during the course of construction. All discrepancies shall be reported immediately for decision before proceeding with the project.
- Any potential interference with existing trees is to be identified by the Contractor and reported to the Project Manager and Council's Arborist prior to commencement of construction.
- All workmanship and materials shall be in accordance with the requirements of the Landscape Policy and Construction Standards, Standards Australia Codes and the by-laws and ordinances of the relevant authorities.
- During construction any structure and neighbouring structures shall be maintained in a stable condition, ensuring no parts are overstressed.
- The contractor is to confirm the location and depth of services within the construction limits prior to commencement of construction. Services to be noted on As Constructed drawings.
- The Contractor shall rectify any damage to existing hard and soft infrastructure and/or services, caused through carrying out the works, at the Contractor's expense.
- It is the contractors responsibility to ensure that the project is carried out in accordance with the drawings and specifications.

CITY PLAN REFERENCES

Part 9.3.3	Landscape Code
SC6.4.12.1	Policy Intent
SC6.4.23	Construction Management
SC6.4.23.1	Construction (Protection of Trees and Vegetation)
SC6.4.10.3	Construction Standards
SC6.4.18	Concrete Works
SC6.4.6.17	Control of Traffic

TYPICAL/BEVELLED TOP BOLLARD

- Use and location of this fence type to be submitted for approval.
- Where the proposed bollard alignment is adjacent shared use paths, clearance from the path edge is to comply with:
 - Austrroads Guide to Road Design Part 6A – Paths for Walking and Cycling
- Bollard alignment around path entries shall ensure that bollards are not located in the middle of pathways. Refer to terminal design principles of Austrroads Guide to Road Design Part 6A
- Maintenance Access Gate/s to be provided to permit controlled vehicle access.
- Where bollards in the middle of paths are assessed as necessary, fold down bollards are preferred.
- Exact locations and alignment of bollards and Maintenance Access Gate/s shall be confirmed on site with the Project Manager.
- Fence footings within dripline of tree canopy shall be excavated by hydrovac/by hand. Refer City Plan SC6.4.23.1 Construction (Protection of Trees and Vegetation)

FOLD DOWN BOLLARD

- Use and location of this fence type to be submitted for approval.
- Prior to fold down bollard fabrication, provide shop drawings for approval.
- Bollard to be installed strictly in accordance with approved drawings.
- Materials:
 - Posts 800mmH Typical/Bevelled Top
 - Fixing plate 250x250x3mm 316 plate stainless steel
 - Hinged sleeve 115x112x75x3mm 316 plate stainless steel
 - Lock Townsville City Council standard 'F' series lock

BOLLARD SCHEDULE

TYPE	APPLICATION
100x100x1500 Typical recycled plastic or composite material	All parks and streetscape
100x100x1500 Typical composite plastic, Green	Where it is the existing precinct character and dominant fencing type
200x100x1500 Rectangle chamfered top composite plastic	Where it is the existing precinct character and dominant fencing type, e.g. beach suburbs
Fold Down Bollard Typical or Rectangle	Maintenance or emergency vehicle access point where a gate is not suitable

NOTES :
 REFERENCE DRAWINGS
 SD-657 – Fencing Maintenance Access Gate

No.	DATE	DESCRIPTION	AP'D
B	26/07/2023	CITY PLAN REFERENCE UPDATE	PM
A		ORIGINAL ISSUE	
REVISIONS			

Full Size A1

DRAWN: DESIGN OFFICE

CHECKED: HB

Senior Open Space Planner Approved: *Has El Bitar*

Date: Jun 17, 2024

Team Manager EAIP Approved: *Zdenko Krcok*

Date: Jun 17, 2024



Ph: (07) 4727 9000
 www.townsville.qld.gov.au

**FENCING
 OPEN SPACE BOLLARD**

**STANDARD
 DRAWING**

OPEN SPACE

SD-654

B