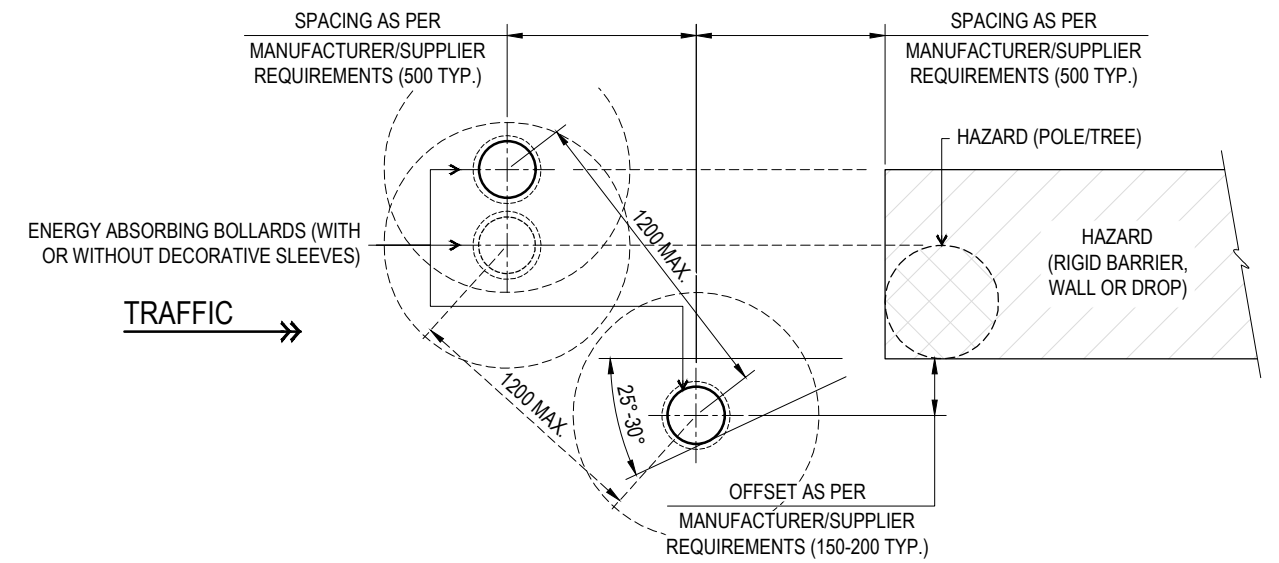
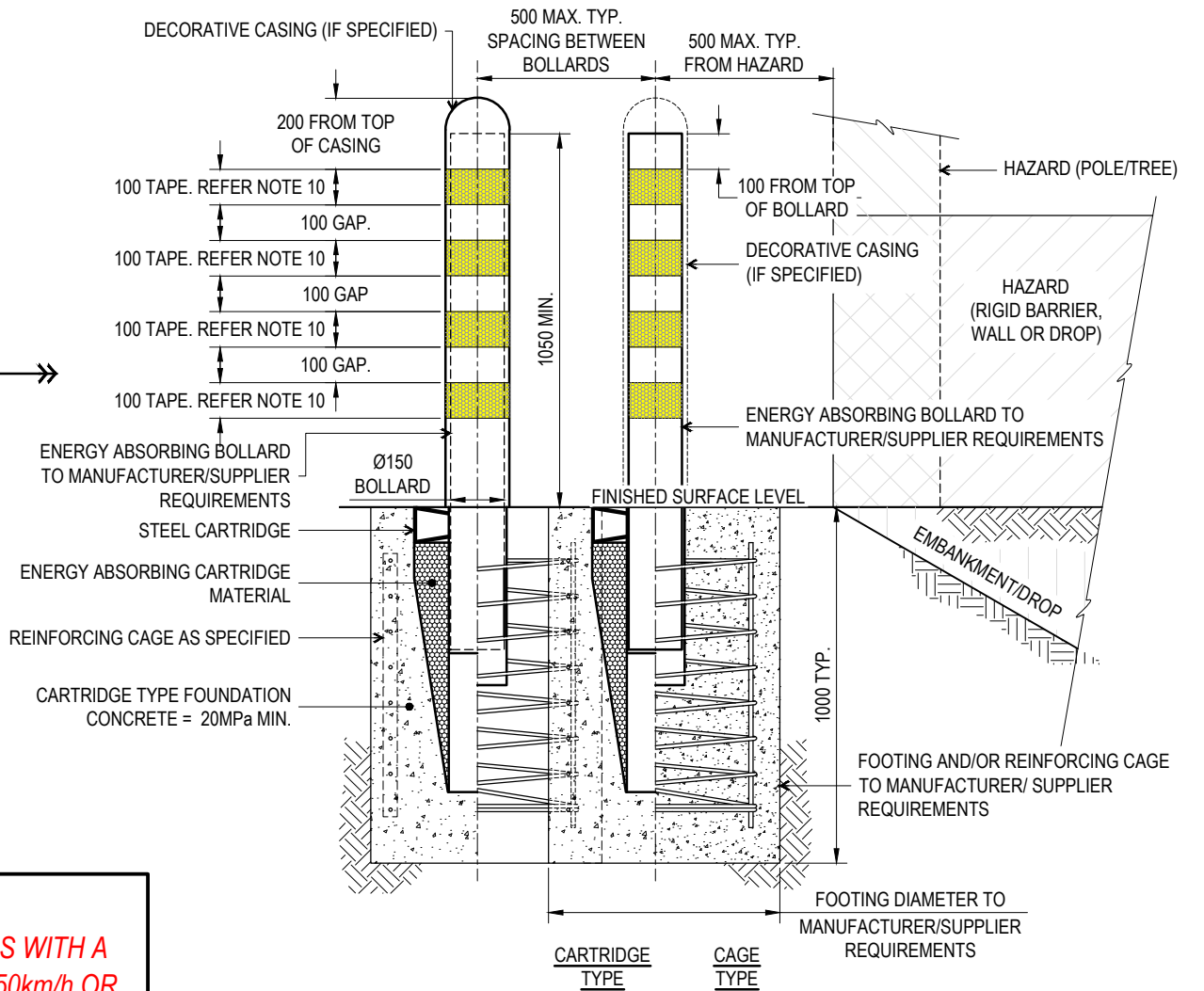


**ELEVATION  
ENERGY ABSORBING BOLLARD  
GUARDRAIL END TREATMENT**



**PLAN VIEW - STAGGERED SETOUT**



**ELEVATION  
ENERGY ABSORBING BOLLARD  
HAZARD PROTECTION TREATMENT**

**NOTE:**  
ONLY FOR USE ON ROADS WITH A  
POSTED SPEED LIMIT OF 50km/h OR  
LOWER

**NOTES:**

- THE GUARDRAIL END TERMINAL SHALL BE (OR APPROVED EQUIVALENT):
  - ENERGY ABSORBING END TERMINAL, DISTRIBUTED BY ROADSIDE SERVICES & SOLUTIONS ((03) 9722 9075, ops@roadsideservices.net.au, http://www.roadsideservices.net.au).
- HAZARD PROTECTION ENERGY ABSORBING BOLLARD SHALL BE (OR APPROVED EQUIVALENT):
  - ENERGY ABSORBING BOLLARD, DISTRIBUTED BY ROADSIDE SERVICES & SOLUTIONS ((03) 9722 9075, ops@roadsideservices.net.au, http://www.roadsideservices.net.au)
  - OMNI STOP™ SUPER DUTY SECURITY BOLLARD, DISTRIBUTED BY SAFEROADS AUSTRALIA (1800 060 672, https://www.saferoads.com.au)
- NONFLARED TERMINAL SHALL INCLUDE ALL POST, RAIL AND HARDWARE ITEMS REQUIRED FOR A COMPLETE UNIT. THE END TREATMENT SHALL BE INSTALLED TO MANUFACTURERS AND/OR DISTRIBUTORS REQUIREMENTS.
- DESIGN TO BE IN ACCORDANCE WITH DESIGN MANUALS AS PROVIDED BY MANUFACTURER/DISTRIBUTOR.
- FOR URBAN SITUATIONS, BOLLARDS TO BE RATED TO 60km/h. APPROPRIATE DOCUMENTATION SHOWING LEVEL OF TESTING TO BE PROVIDED BEFORE BOLLARD/SYSTEM INSTALLATION.
- SYSTEM TO BE INSTALLED PARALLEL TO TRAVEL WAY.
- DELINEATOR ON GUARDRAIL END TREATMENT END BUFFER TO HAVE CLASS 1 RETROREFLECTIVE BACKGROUND WITH BLACK NONREFLECTIVE PATTERN. DELINEATOR TO MATCH AS1742 SIGN D4-1-2 AND BE MODIFIED TO 380 MAX. SQUARE TO FIT END OF GUARDRAIL.
- ENERGY ABSORBING BOLLARD FOR HAZARD PROTECTION EITHER TO BE LEFT PLAIN (GALVANISED FINISHED), PAINTED OR POWDERCOATED, OR INSTALLED WITH SECURED DECORATIVE COVER AS SUPPLIED BY MANUFACTURER.
- WHERE BOLLARD INSTALLED WITH PAINTED OR POWDERCOATED FINISH OR WITH DECORATIVE COVER, COLOUR IS TO COMPLEMENT SURROUNDING STREETScape. COLOUR SELECTION IN ACCORDANCE WITH STANDARD BRISBANE CITY COUNCIL CORPORATE COLOUR PALETTE - REFER BSD-1003 FOR DETAILS.
- ENERGY ABSORBING BOLLARDS FOR HAZARD PROTECTION TO HAVE FOUR (4) 100mm WIDE BANDS OF CLASS 1 YELLOW RETROREFLECTIVE TAPE AT 100mm SPACING.
- ALL DIMENSIONS IN MILLIMETRES (U.N.O.).

THE PURPOSE OF THIS STANDARD DRAWING IS TO PROVIDE TYPICAL DETAILS THAT SUPPORT THE DESIRED OUTCOMES OF THE BRISBANE CITY PLAN 2014 AND ASSOCIATED PLANNING SCHEME POLICIES. THE FITNESS FOR PURPOSE OF THIS STANDARD DRAWING FOR A SPECIFIC PROJECT SHOULD BE ASSESSED AND ACCEPTED BY AN APPROPRIATELY QUALIFIED DESIGNER AND/OR REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND (RPEQ).



BRISBANE CITY COUNCIL STANDARD DRAWING

**ENERGY ABSORBING BOLLARD  
GUARDRAIL END TERMINAL  
& HAZARD PROTECTION**

PUBLISH DATE		DEC 2023
SCALE		NOT TO SCALE
DRAWING NUMBER		BSD-7091
ORIGINAL SIZE	REVISION	
A3	D	