

ISOMETRIC VIEW

EXAMPLE FENCING INSTALLATION

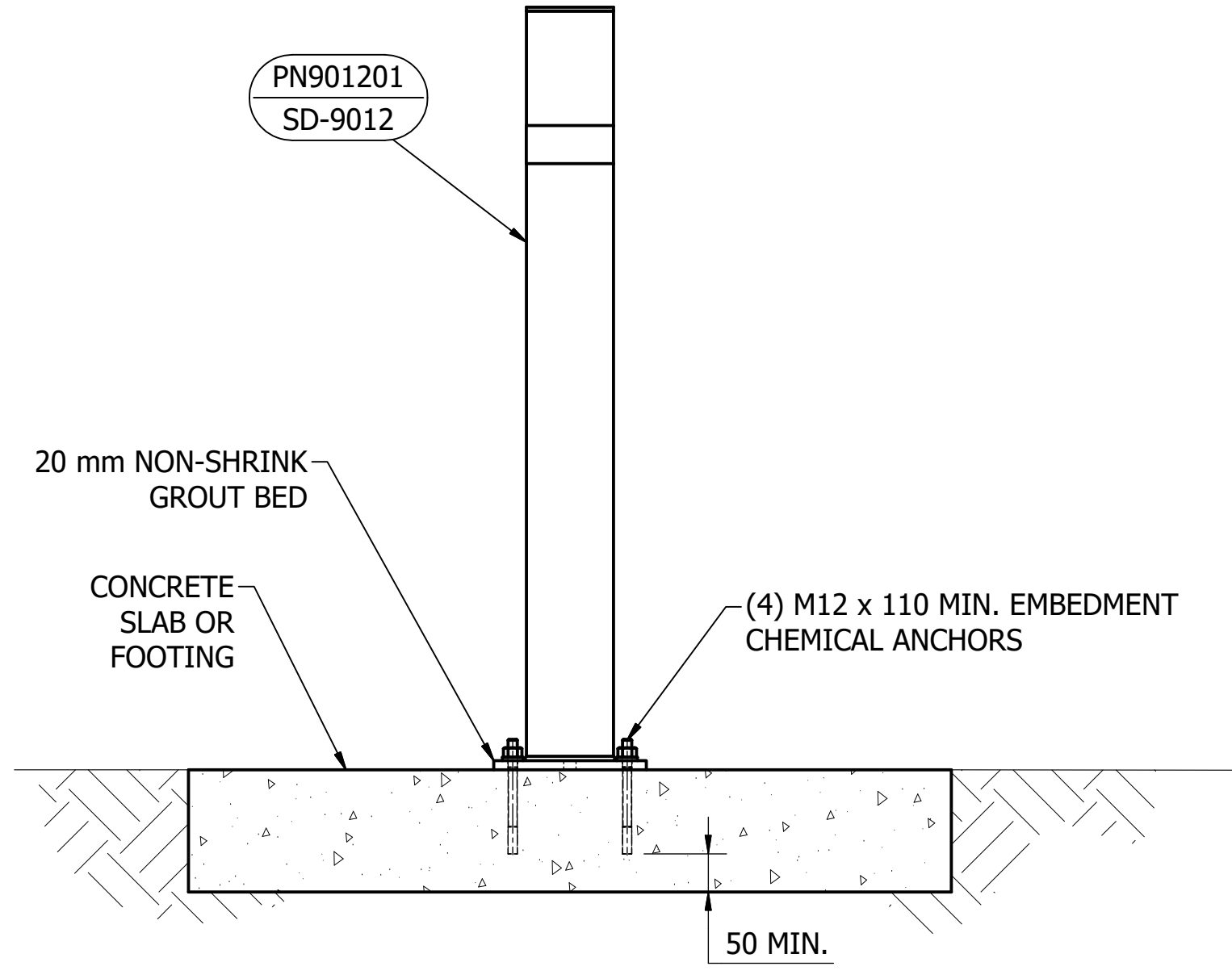
SCALE: NTS

NOTES:

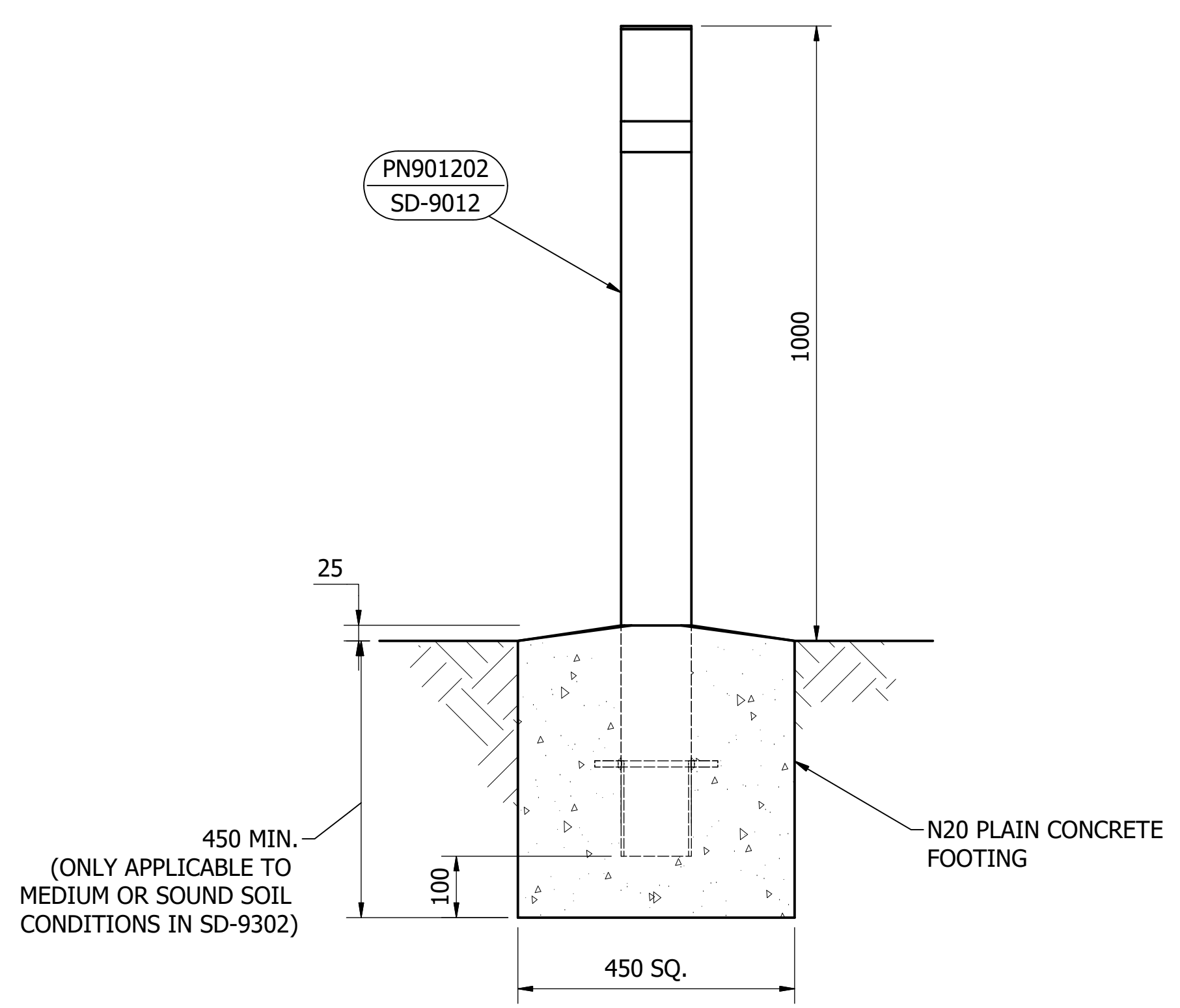
- FOR ALL SECTIONS AND DETAILS, REFER TO DRAWING SD-9001.
- THE FENCING SYSTEM SHALL BE INSTALLED AS PER AS 1725 AND THE MANUFACTURER'S SPECIFICATIONS UNLESS NOTED OTHERWISE BY ICON WATER ON PROJECT SPECIFIC DRAWINGS.
- GATE CONFIGURATION AND DESIGN SHALL BE AS PER AS 1725, SPECIFICALLY TABLE E1.
- DAMAGE TO THE FINISHED COATING OF ANY MATERIALS SHALL BE REPAIRED IN ACCORDANCE WITH WSA 201, OR THE DAMAGED ITEM SHALL BE REPLACED AS APPROPRIATE.
- CONCRETE POST FOOTINGS SHALL BE SIZED AS PER AS 1725, SPECIFICALLY TABLE B2 FOR GATE POSTS, AND TABLE B3 FOR END POSTS, INTERMEDIATE POSTS, AND CORNER POSTS, UNLESS SHOWN OTHERWISE ON PROJECT SPECIFIC DRAWINGS.
- THE TOP OF ALL FOOTINGS SHALL BE GRADED TO ALLOW WATER TO RUN OFF, EXCEPT FOR GATE FOOTINGS WHERE APPLICABLE. IF THERE IS A POTENTIAL FOR POOLING, CONDUIT SHALL BE INSTALLED TO ALLOW DRAINAGE.
- PLINTHS SHALL BE PROVIDED UNLESS NOTED OTHERWISE BY ICON WATER ON PROJECT SPECIFIC DRAWINGS.
- THE HEIGHT OF THE PLINTH CAN VARY DEPENDING ON VARIATIONS IN THE NATURAL GROUND LEVEL. CONDUITS ARE TO BE INSTALLED IN THE PLINTH TO ALLOW DRAINAGE IF THE PLINTH HEIGHT IS GREATER THAN 50 mm ABOVE FINISHED GROUND LEVEL IF DEEMED NECESSARY BY ICON WATER.
- INSTALL EXPANSION JOINTS AS REQUIRED, NOMINALLY ONE PER POST, 150 mm - 200 mm FROM THE POST, FULL DEPTH JOINTEX OR EQUIVALENT.
- PLINTHS UNDER PEDESTRIAN GATES ARE TO BE STEPPED DOWN AND FLUSH WITH GROUND LEVEL TO AVOID TRIP HAZARDS.
- FOR SIGN DETAILS, REFER TO DRAWING SD-1305.
- FOR GOOGONG CATCHMENT SITES, MAIN GATE SIGN TO BE PN130501. FOR ALL OTHER SITES, MAIN GATE SIGN TO BE PN130502.
- SIGN PN130503 (RESTRICTED ACCES) TO BE PLACED AT NO GREATER THAN 25 m INTERVALS AND MUST BE VISIBLE FROM ALL PERIMETER SIDES.
- SIGN PN130504 (CCTV) WHEN REQUIRED, TO BE PLACED AT NO GREATER THAN 25 m INTERVALS, ALTERNATING WITH SIGN PN130503.
- SIGNS SHALL BE ATTACHED WITH STAINLESS OR GALVANISED TIE WIRE OR STAINLESS STEEL CABLE TIES, AND SHALL BE AFFIXED TO THE OUTSIDE OF THE FENCE.
- WHERE FENCING CROSSES A STORMWATER DRAIN, REFER TO DETAIL 1. WHERE FENCING CROSSES A GULLY OR DEPRESSION, REFER TO DETAIL 2.
- FOR KEEPER BOLT AND KEEPER BOLT FOOTING DETAILS, REFER TO AS 1725, SPECIFICALLY APPENDIX K.

COMPONENT	DETAILS	
FENCE HEIGHT	2400 mm NOMINAL PLUS 3 ROWS OF BARBED WIRE FOR A FINISHED HEIGHT OF 2850 mm NOMINAL	
FENCE DESIGN	TYPE 2-T-B/BT, CRANKED EXTENSIONS, AS PER AS 1725 - APPENDIX K	
POST TUBE	CLASS 1 MEDIUM AS PER AS/NZS 1163	
TUBE AND FITTING COATING	HOT DIP GALVANISED AS PER AS 4792 AND AS 4534	
TUBE AND FITTING FINISH	BLACK LOW SHEEN POWDER COATING FINISH AS PER AS/NZS 4506. DRY FILM THICKNESS 60 - 100 µm UNLESS OTHERWISE INDICATED	
BARBED WIRE	MANUFACTURED TO AS 2423. HIGH TENSILE 1.6 mm DIA. WIRE. BARB SPACING ≤ 150 mm	
CHAIN LINK	GRADE	HEAVY DUTY AS PER AS 2423
	PITCH	50 mm NOMINAL
	SELVEDGE	KNUCKLE - BARB (KB)
	COATING	BLACK PVC COMPLYING WITH AS 2423. BASE METALIC COATING NOT LESS THAN W02Z

<table border="1"> <tr> <td>DAM</td><td>RES</td><td>SPS</td><td></td><td></td> </tr> <tr> <td>BWS</td><td>WAT</td><td>STP</td><td></td><td></td> </tr> <tr> <td>WTP</td><td>SEW</td><td></td><td></td><td></td> </tr> <tr> <td>WPS</td><td>REC</td><td></td><td></td><td></td> </tr> </table>					DAM	RES	SPS			BWS	WAT	STP			WTP	SEW				WPS	REC							STANDARD DRAWING SITE SECURITY AND PROTECTION CHAINLINK FENCE GENERAL ARRANGEMENT AND NOTES			DRAWING STATUS Current	
DAM	RES	SPS																														
BWS	WAT	STP																														
WTP	SEW																															
WPS	REC																															
<table border="1"> <tr> <td>No.</td><td>ISSUE</td><td>DATE</td><td>DRAWN</td><td>CHECKED</td><td>AUTHORISED</td> </tr> <tr> <td>A</td><td>INITIAL ISSUE</td><td>15/06/2018</td><td>S. Essery</td><td>K. Danenbergsons</td><td>D. Eager</td> </tr> </table>					No.	ISSUE	DATE	DRAWN	CHECKED	AUTHORISED	A	INITIAL ISSUE	15/06/2018	S. Essery	K. Danenbergsons	D. Eager				SD-9000-D			ISSUE A <small>© Icon Water 2017</small>									
No.	ISSUE	DATE	DRAWN	CHECKED	AUTHORISED																											
A	INITIAL ISSUE	15/06/2018	S. Essery	K. Danenbergsons	D. Eager																											

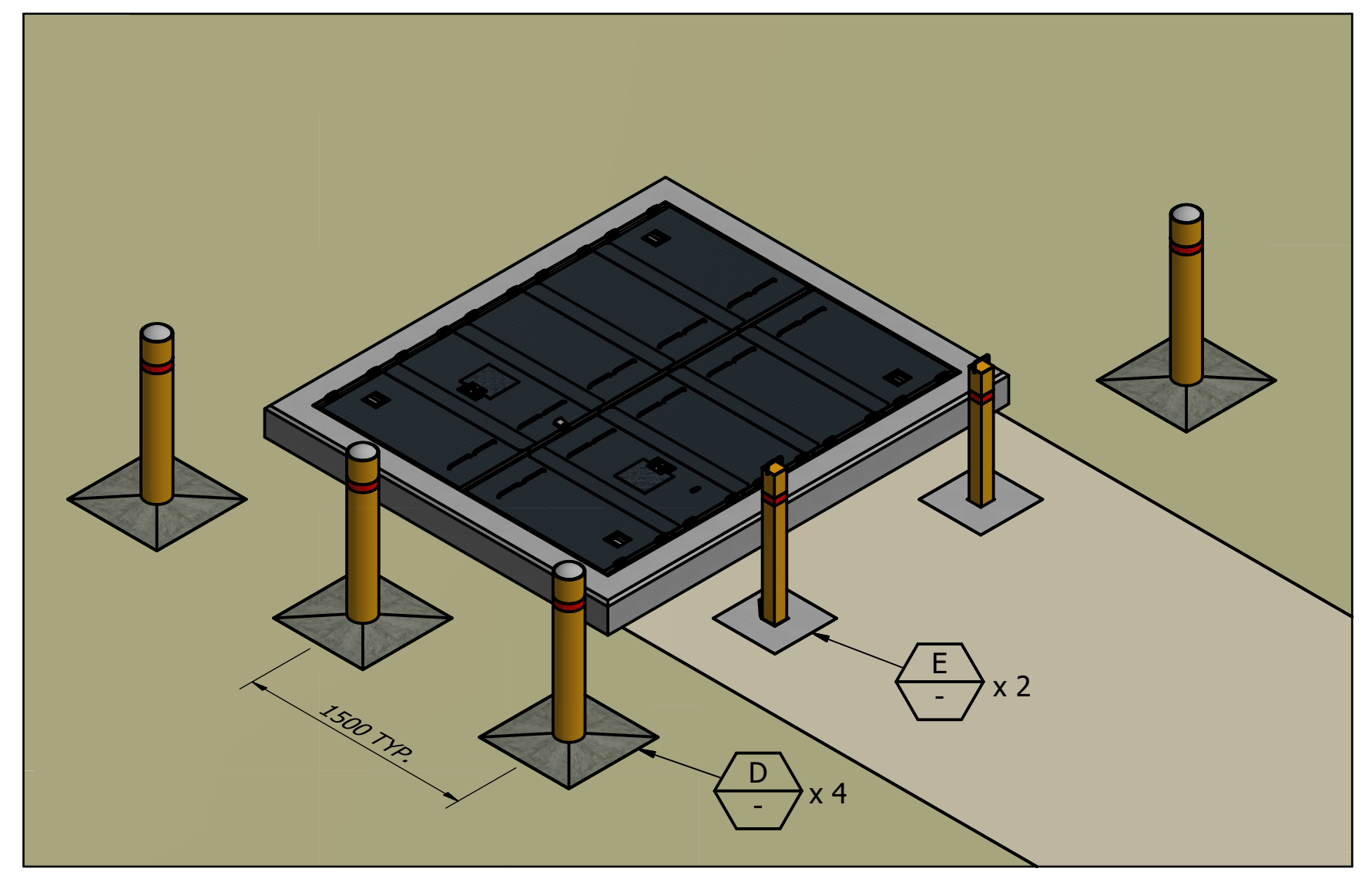


DETAIL A
STANDARD DUTY BOLLARD
BOLT-IN TYPE

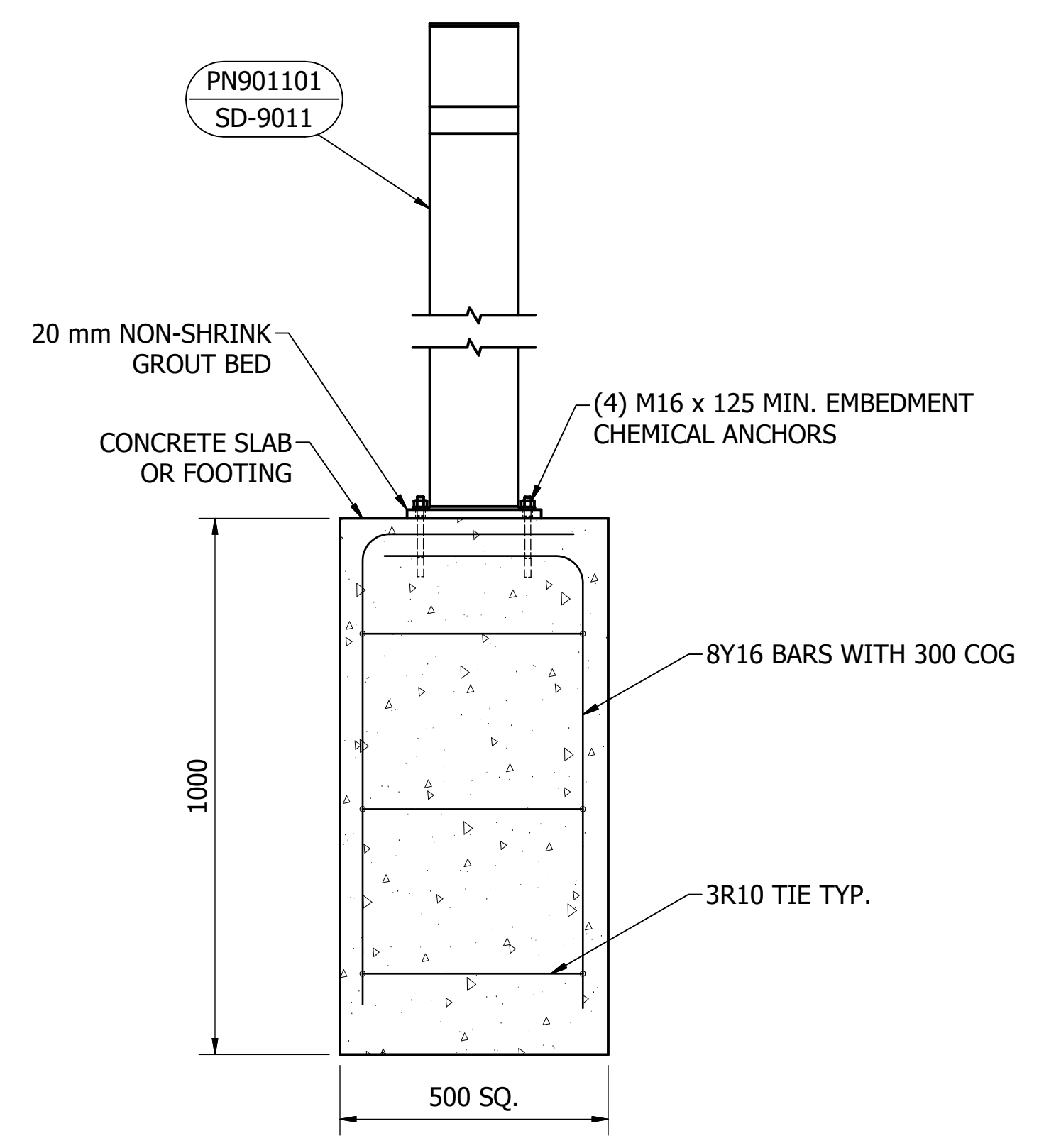


DETAIL B
STANDARD DUTY BOLLARD
IN-GROUND TYPE

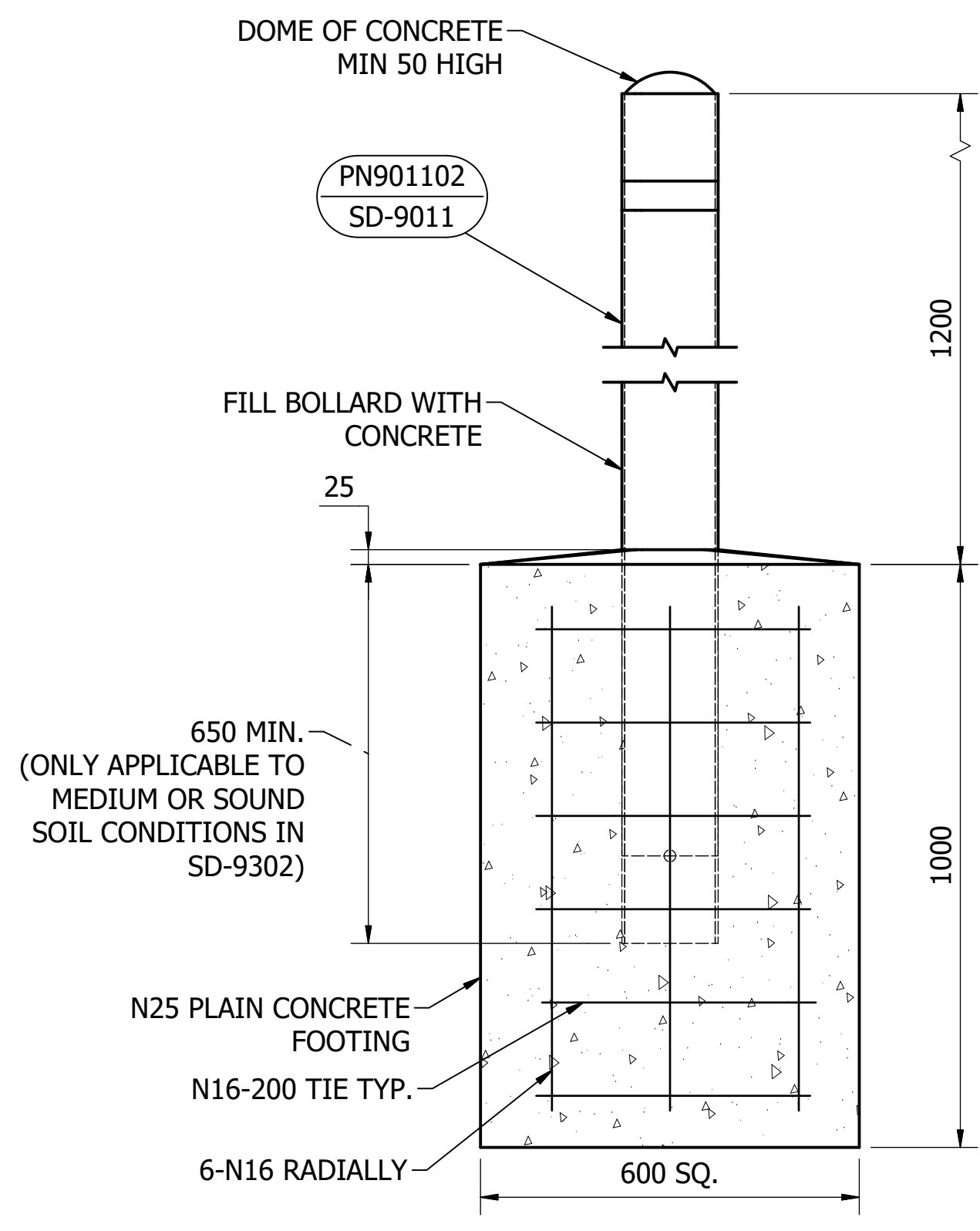
NOTES:
1. HEAVY DUTY BOLLARDS ARE TO BE USED TO PREVENT VEHICLE ACCESS. LIGHT OR STANDARD DUTY BOLLARDS WILL NOT NECESSARILY PREVENT VEHICLES ACCESS BUT WILL ACT AS A DETERENT.



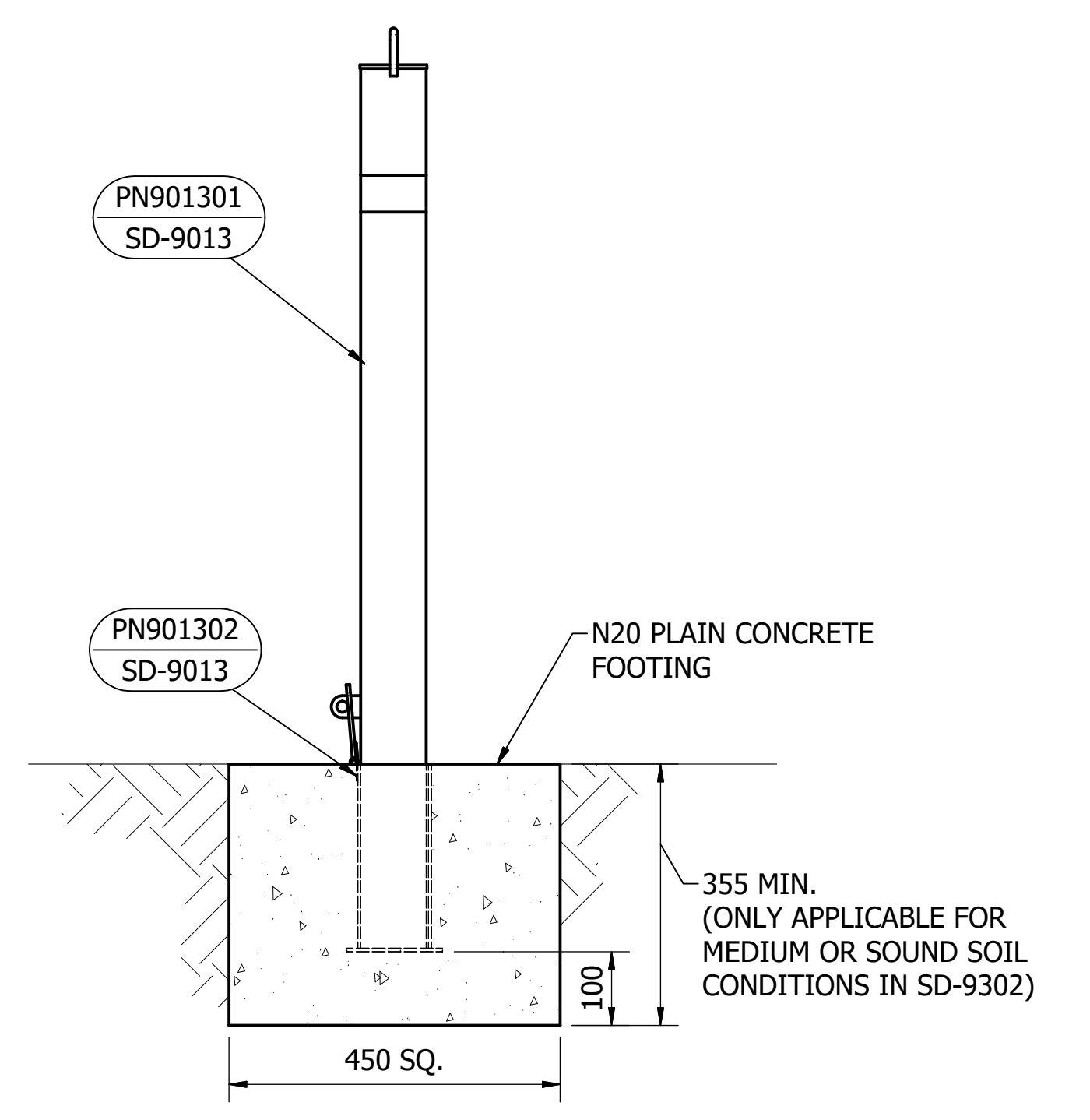
ISOMETRIC VIEW
EXAMPLE APPLICATION
BURIED MAINTENANCE STRUCTURE WITH NON-TRAFFICABLE COVERS BEING PROTECTED BY HEAVY DUTY (IN-GROUND TYPE) AND REMOVABLE BOLLARDS



DETAIL C
HEAVY DUTY BOLLARD
BOLT-IN TYPE



DETAIL D
HEAVY DUTY BOLLARD
IN-GROUND TYPE



DETAIL E
REMOVABLE BOLLARD

No.	ISSUE	DATE	DRAWN	CHECKED	AUTHORISED
A	INITIAL ISSUE	15/06/2018	S.Essey	K. Danenbergs	D. Eager

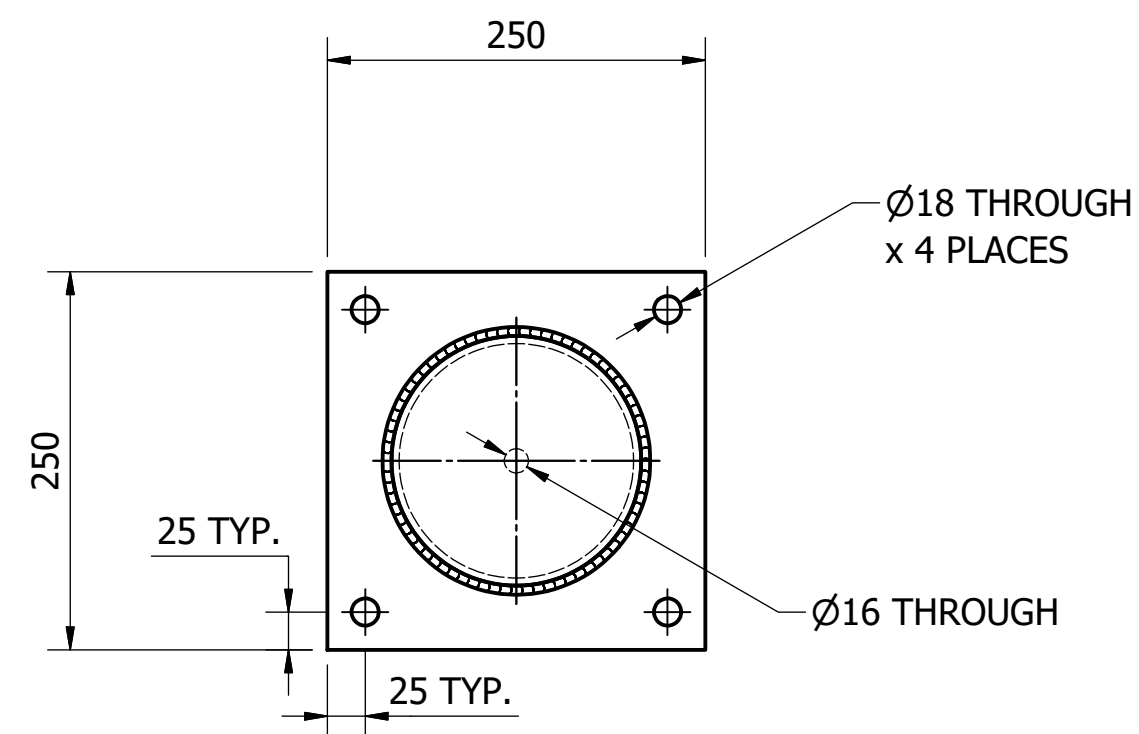
ASSET AREA APPLICABILITY				
DAM	RES	SPS		
BWS	WAT	STP		
WTP	SEW			
WPS	REC			



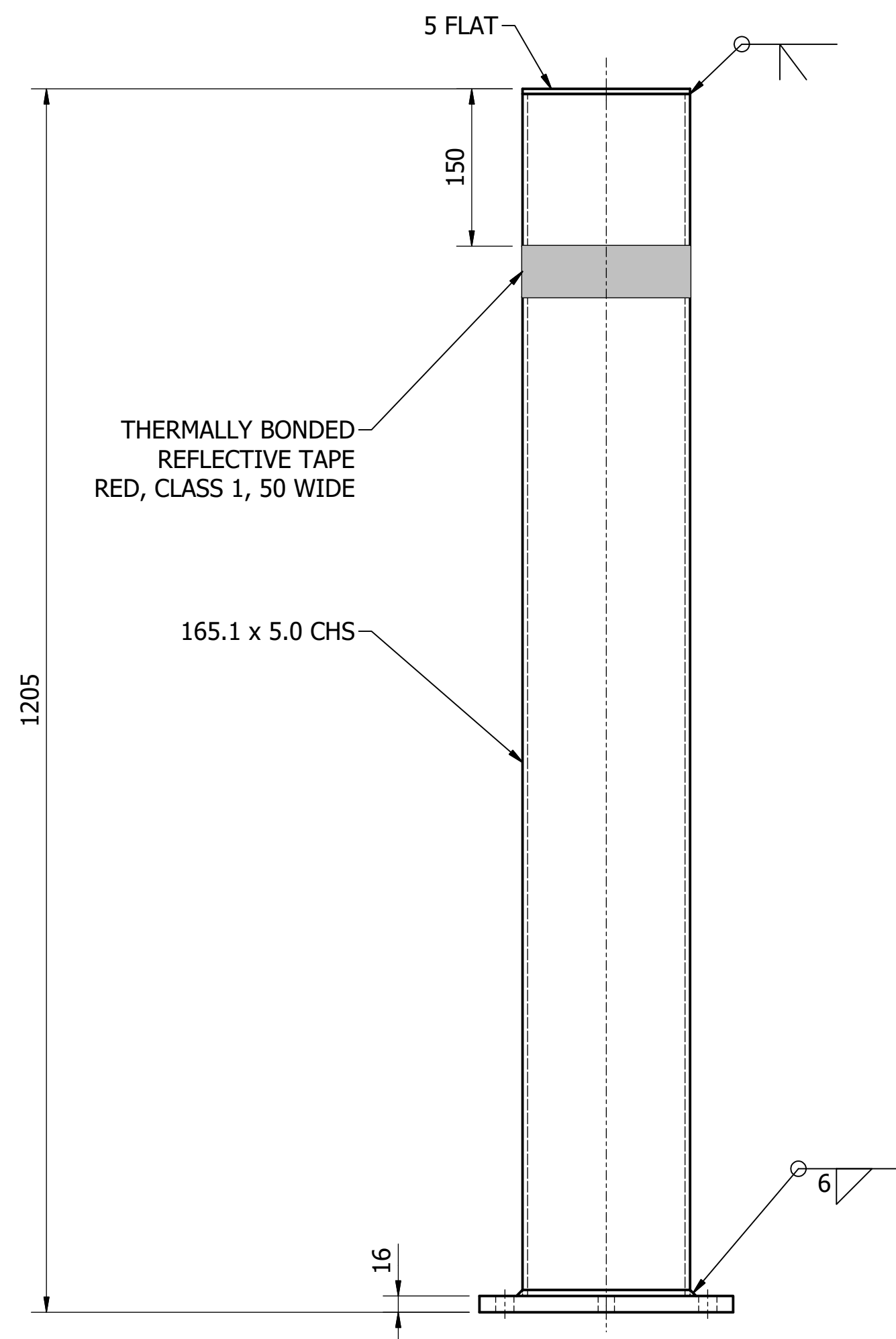
STANDARD DRAWING
SITE SECURITY AND PROTECTION
BOLLARDS
TYPICAL INSTALLATION

DRAWING STATUS	
Current	
SD-9010-D	
A1	ISSUE A

© Icon Water 2017



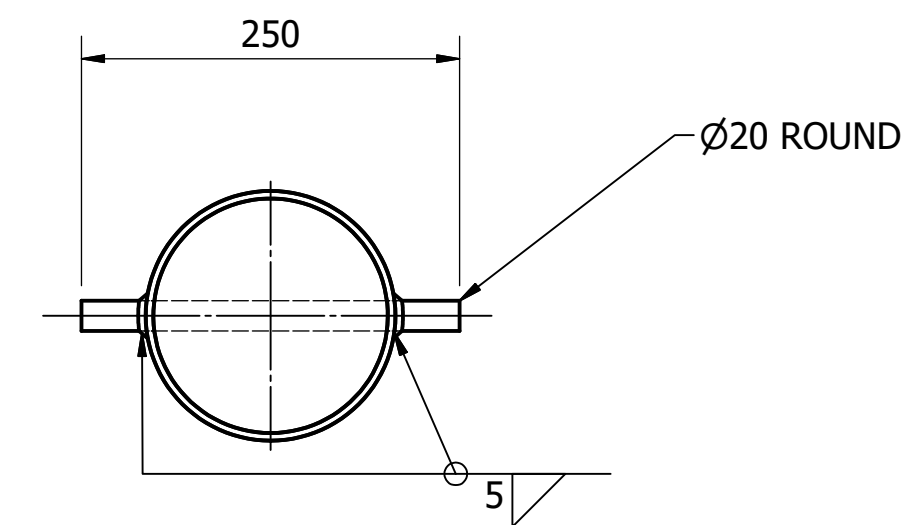
PLAN



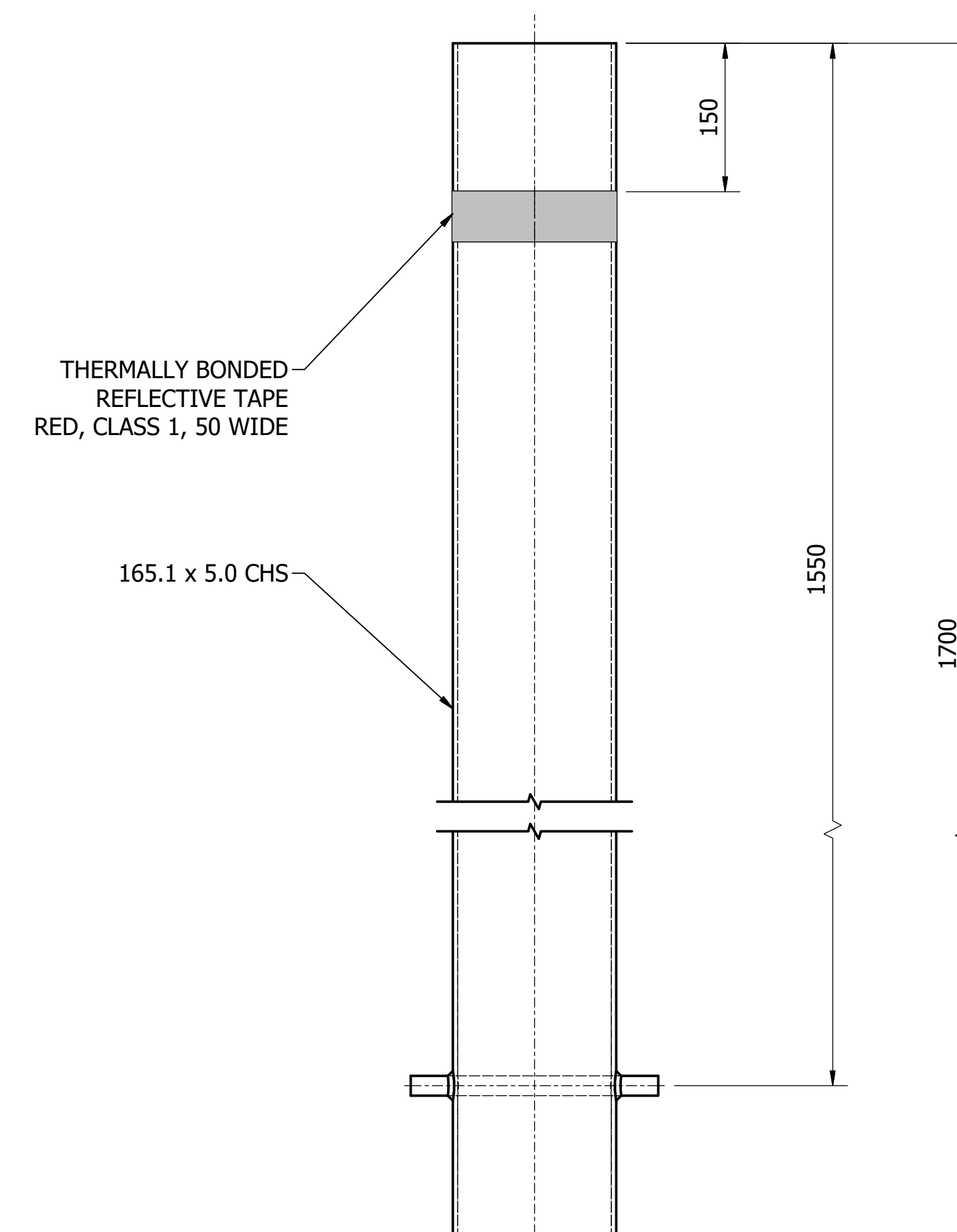
ELEVATION

HEAVY DUTY BOLLARD - BOLT-IN TYPE

MATERIAL: CARBON STEEL
 COATING: "GAL" & "POW" TO WSA 201
 FINISH COLOUR: "Y14" GOLDEN YELLOW
 MASS: 25 kg



PLAN



ELEVATION

HEAVY DUTY BOLLARD - IN-GROUND TYPE

MATERIAL: CARBON STEEL
 COATING: "GAL" & "POW" TO WSA 201
 FINISH COLOUR: "Y14" GOLDEN YELLOW
 MASS: 34 kg

NOTES:

- REFER TO DRAWING SD-9010 FOR TYPICAL INSTALLATION DETAILS.
- REFER TO DRAWING SD-9100 FOR STEELWORK AND GENERAL FABRICATION NOTES.
- THE HEAVY DUTY BOLLARDS INCLUDED IN THE ICON WATER APPROVED PRODUCTS LIST MAY BE SUBSTITUTED IN LIEU OF THE FABRICATED BOLLARD TYPES SHOWN ON THIS DRAWING.
- HOT DIP GALVANISING TO OCCUR AFTER FABRICATION.

ITEM	AMDT.
PN901101	

ITEM	AMDT.
PN901102	

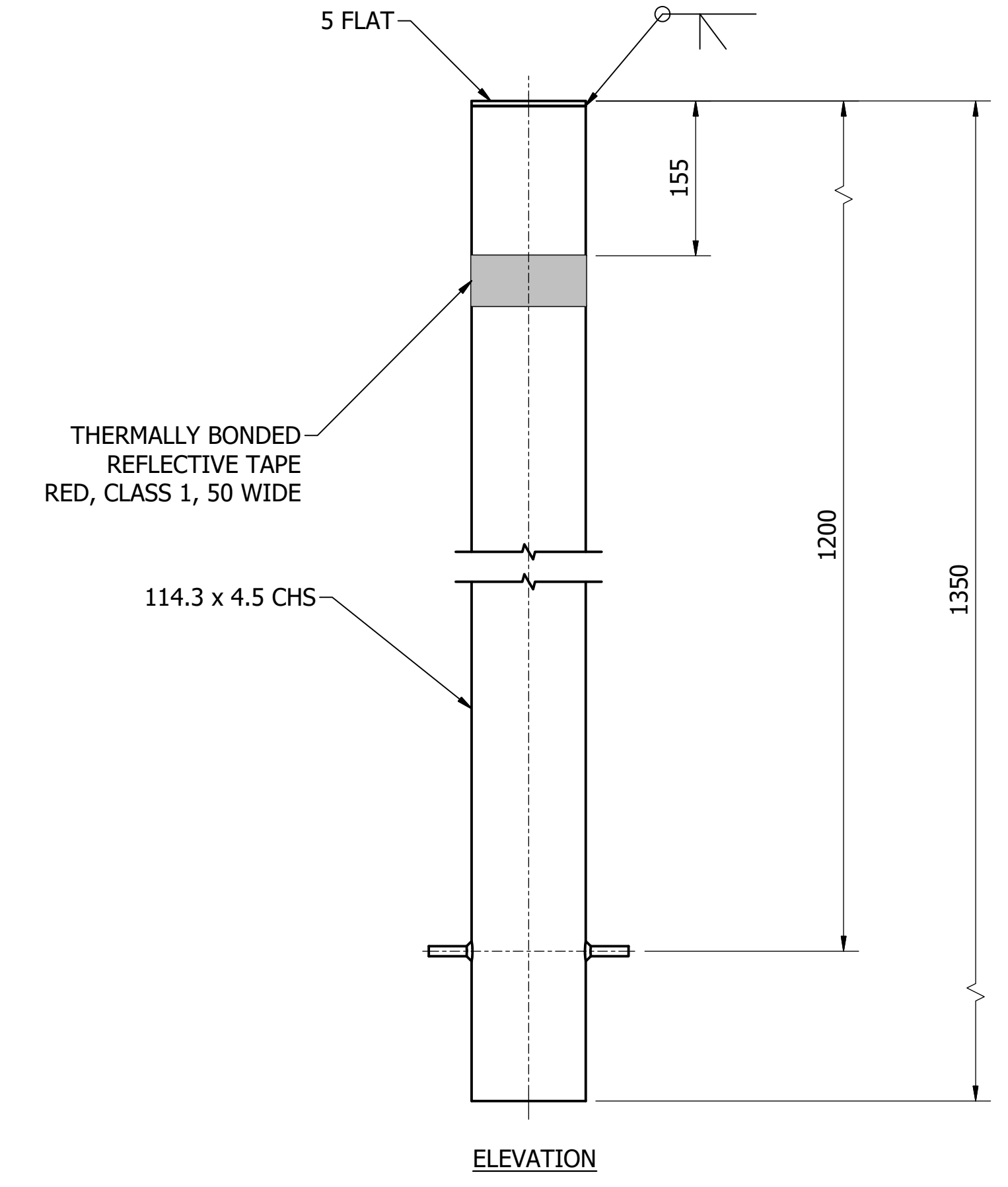
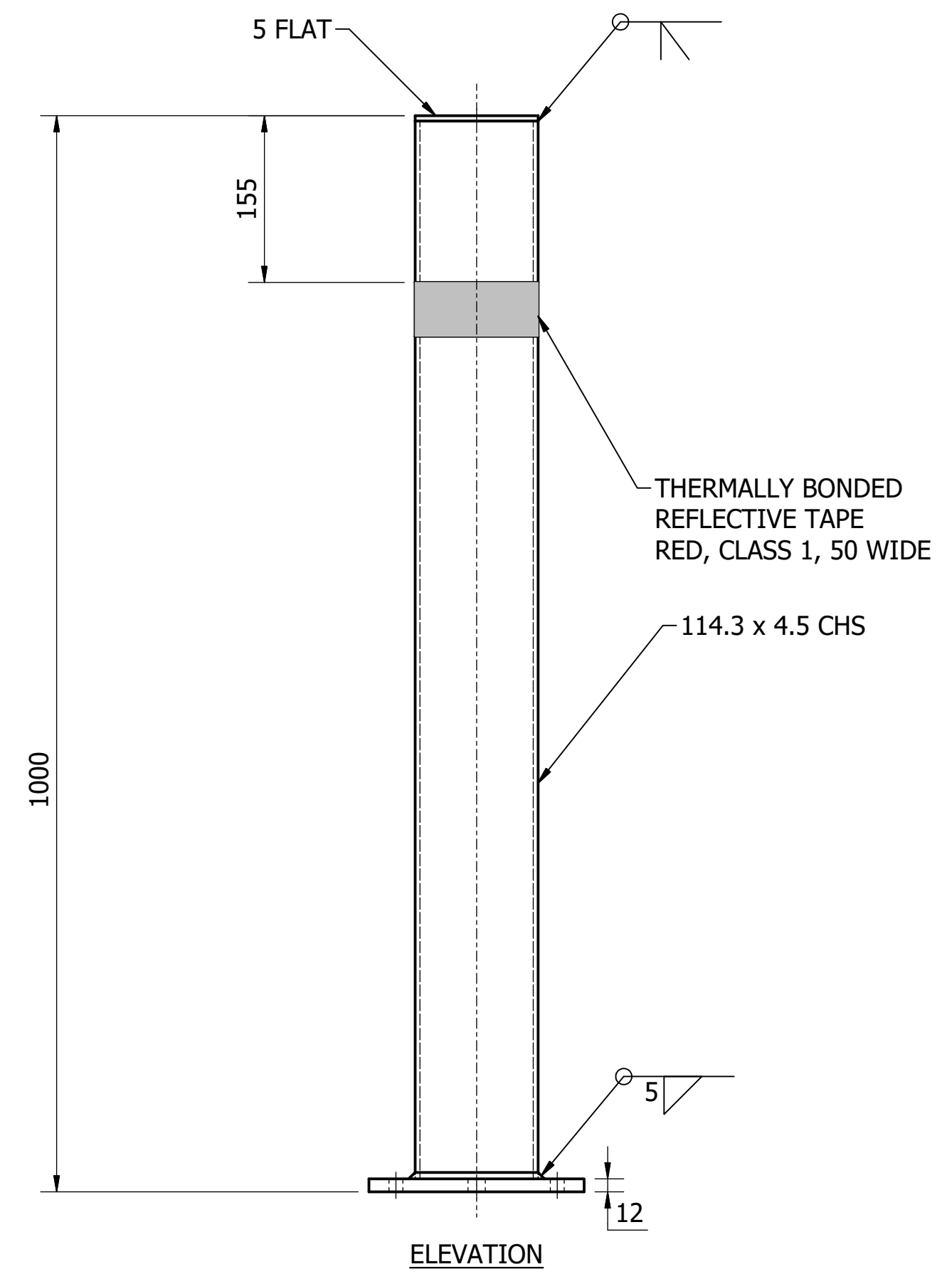
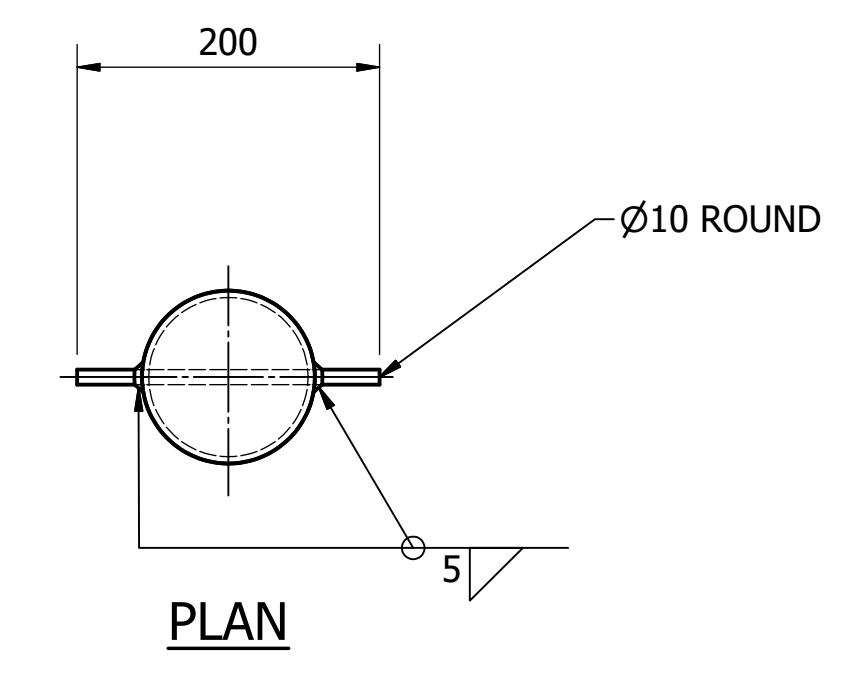
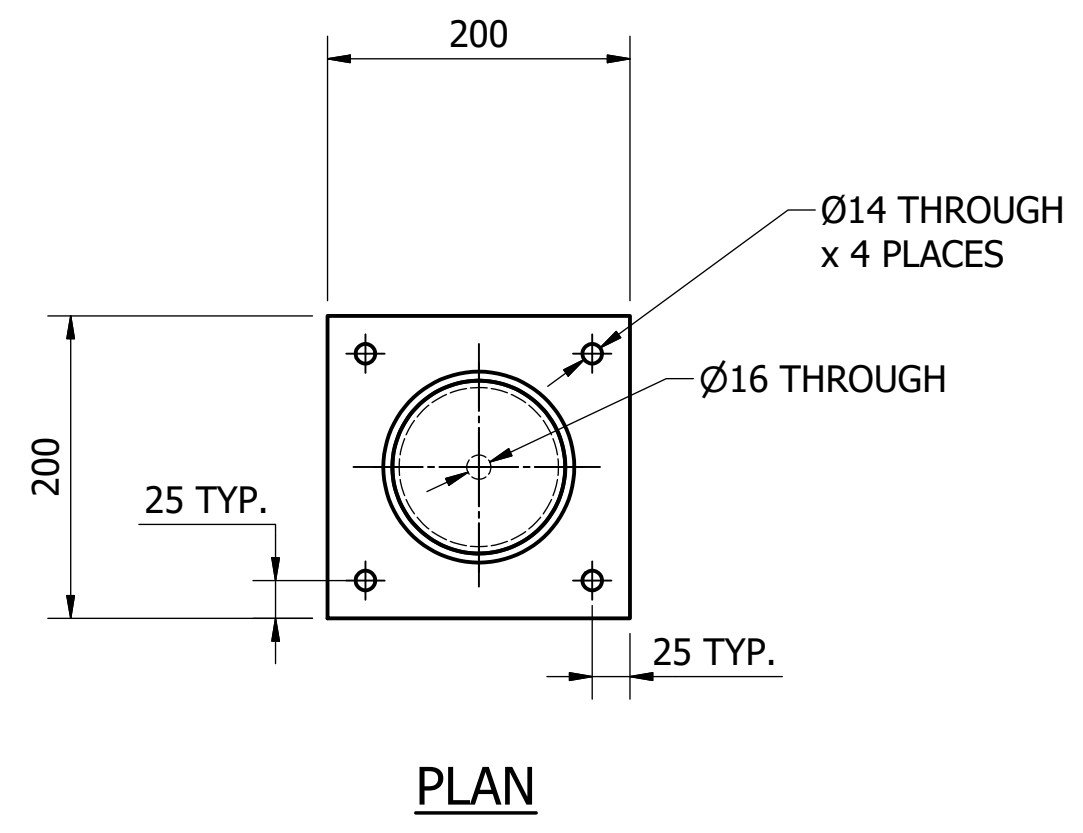
No.	ISSUE	DATE	DRAWN	CHECKED	AUTHORISED
A	INITIAL ISSUE	15/06/2018	K. Patel	K. Danenbergson	D. Eager

ASSET AREA APPLICABILITY				
DAM	RES	SPS	WAT	STP
BWS	WAT	STP	WTP	SEW
WPS	REC			



STANDARD DRAWING
 SITE SECURITY AND PROTECTION
 BOLLARDS
 HEAVY DUTY BOLLARDS
 GALVANISED MILD STEEL

DRAWING STATUS	
Current	
SD-9011-D	
A1	ISSUE A



STANDARD DUTY BOLLARD - BOLT-IN TYPE

STANDARD DUTY BOLLARD - IN-GROUND TYPE

MATERIAL: CARBON STEEL
 COATING: "GAL" & "POW" TO WSA 201
 FINISH COLOUR: "Y14" GOLDEN YELLOW
 MASS: 14 kg

MATERIAL: CARBON STEEL
 COATING: "GAL" & "POW" TO WSA 201
 FINISH COLOUR: "Y14" GOLDEN YELLOW
 MASS: 17 kg

- NOTES:**
- REFER TO DRAWING SD-9010 FOR TYPICAL INSTALLATION DETAILS.
 - REFER TO DRAWING SD-9100 FOR STEELWORK AND GENERAL FABRICATION NOTES.
 - THE STANDARD DUTY BOLLARDS INCLUDED IN THE ICON WATER APPROVED PRODUCTS LIST MAY BE SUBSTITUTED IN LIEU OF THE FABRICATED BOLLARD TYPES SHOWN ON THIS DRAWING.
 - HOT DIP GALVANISING TO OCCUR AFTER FABRICATION.

ITEM	AMDT.
PN901201	

ITEM	AMDT.
PN901202	

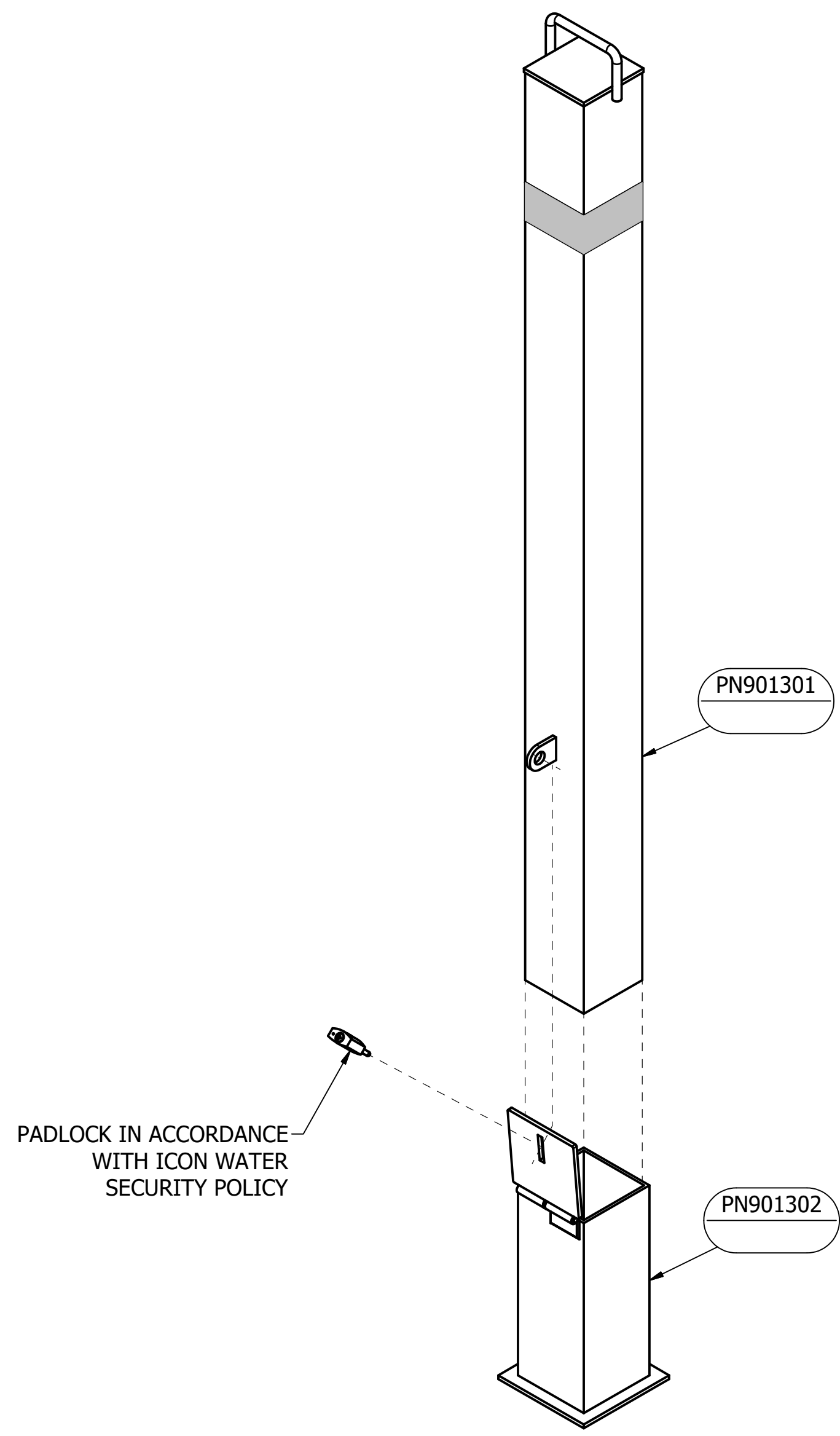
A	INITIAL ISSUE	15/06/2018	K. Patel	K. Danenbergsons	D. Eager
No.	ISSUE	DATE	DRAWN	CHECKED	AUTHORISED

DAM	RES	SPS
BWS	WAT	STP
WTP	SEW	
WPS	REC	
ASSET AREA APPLICABILITY		



STANDARD DRAWING
 SITE SECURITY AND PROTECTION
 BOLLARDS
 STANDARD DUTY BOLLARDS
 GALVANISED MILD STEEL

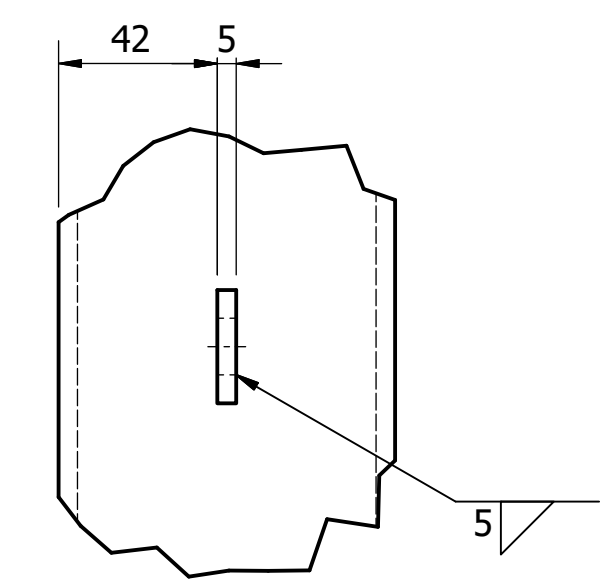
DRAWING STATUS	
Current	
SD-9012-D	
A1	ISSUE A
© Icon Water 2017	



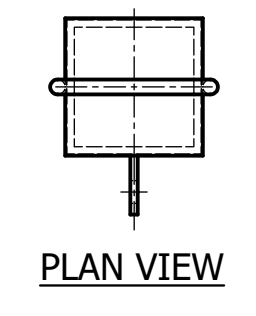
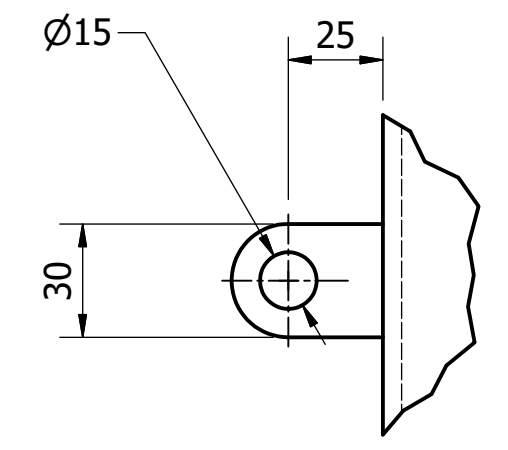
EXPLODED ASSEMBLY
REMOVABLE BOLLARD

NOTES:

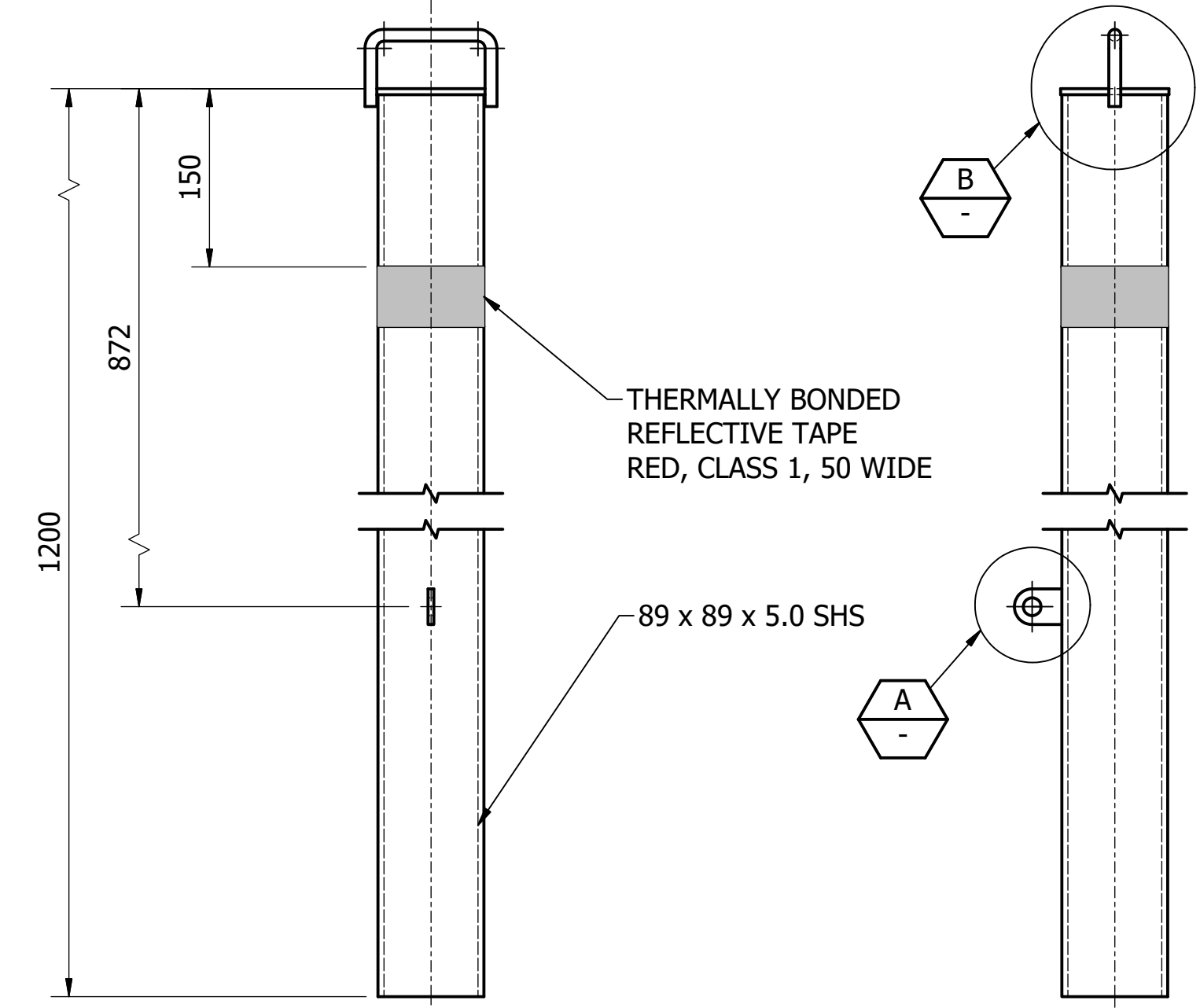
1. REFER TO DRAWING SD-9010 FOR TYPICAL INSTALLATION DETAILS.
2. REFER TO DRAWING SD-9100 FOR STEELWORK & GENERAL FABRICATION NOTES.
3. THE REMOVABLE BOLLARDS INCLUDED IN THE ICON WATER APPROVED PRODUCTS LIST MAY BE SUBSTITUTED IN LIEU OF THE FABRICATED BOLLARD SHOWN ON THIS DRAWING.
4. HOP DIP GALVANISING TO OCCUR AFTER FABRICATION.



DETAIL A
REMOVABLE BOLLARD LOCKING LUG



PLAN VIEW

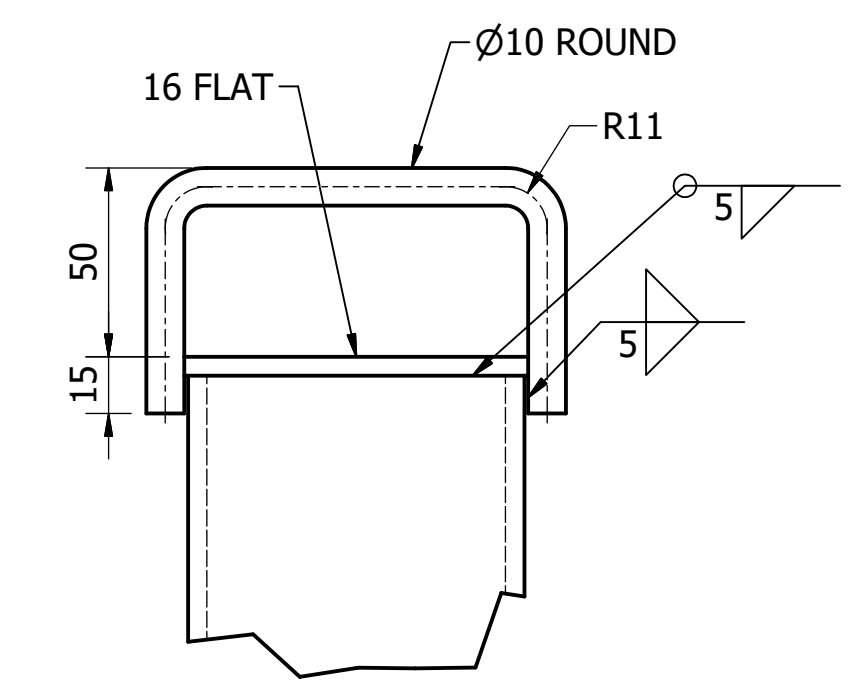


FRONT VIEW SIDE VIEW

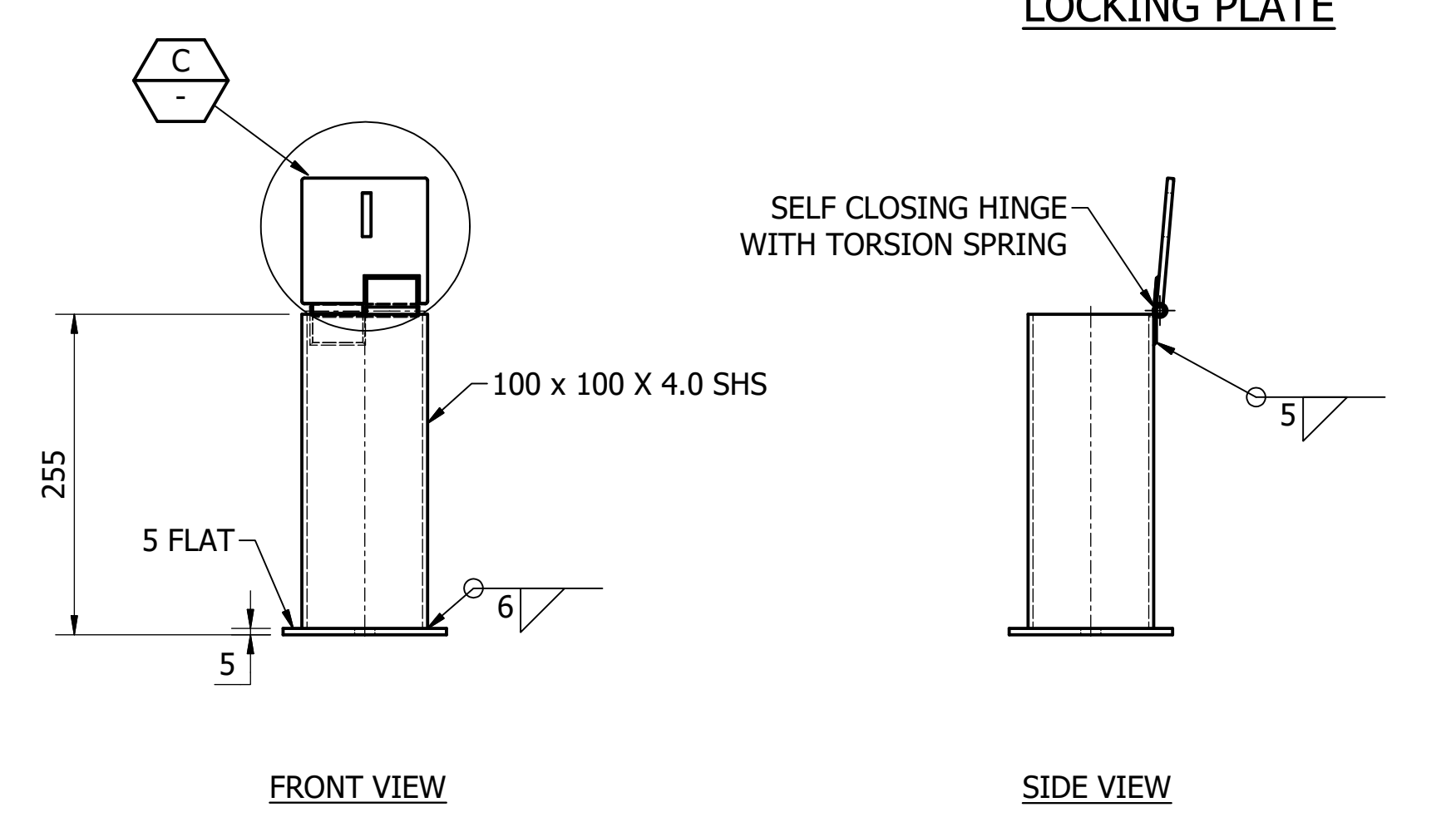
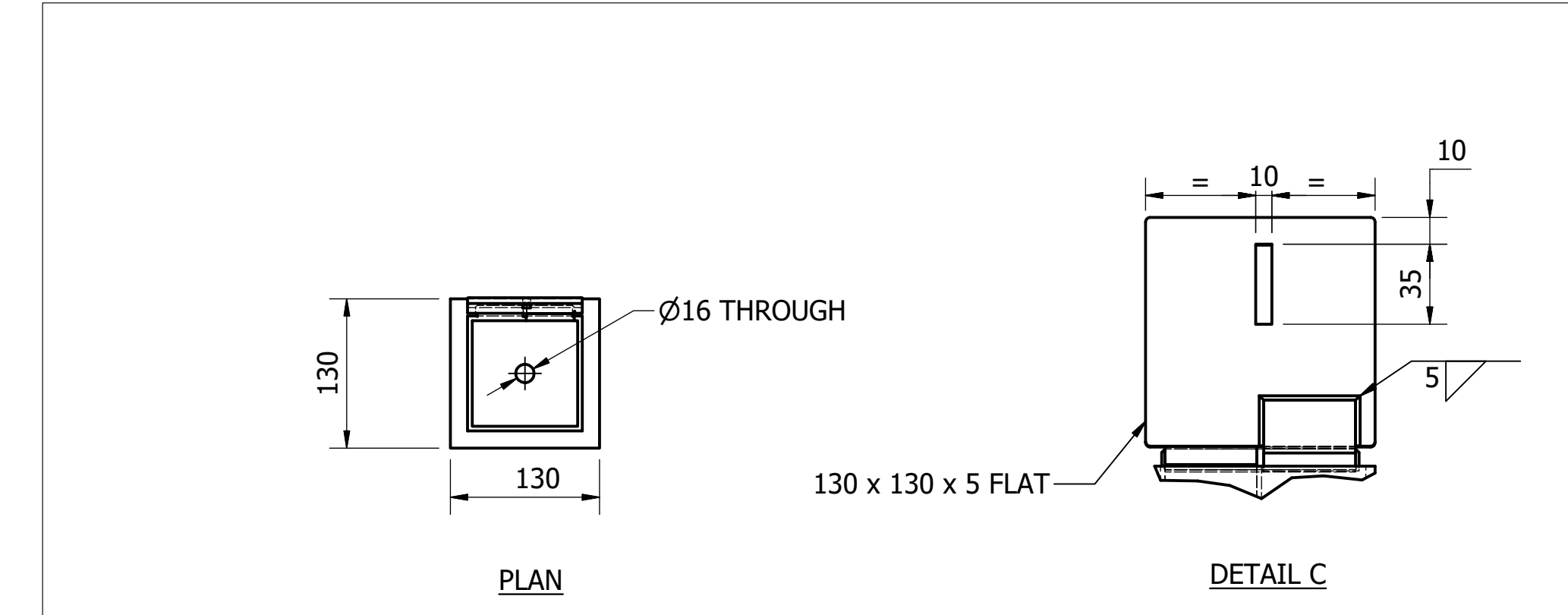
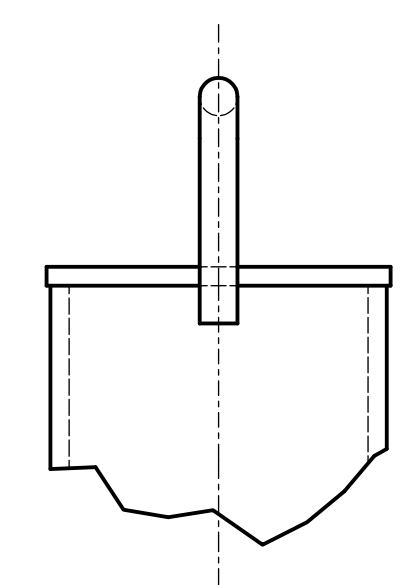
REMOVABLE BOLLARD - REMOVABLE SECTION

MATERIAL: CARBON STEEL
COATING: "GAL" & "POW" TO WSA 201
FINISH COLOUR: "Y14" GOLDEN YELLOW
MASS: 15 kg

ITEM	AMDT.
PN901301	



DETAIL B
REMOVABLE BOLLARD HANDLE & TOP PLATE



REMOVABLE BOLLARD - BASE SECTION

MATERIAL: CARBON STEEL
COATING: "GAL" & "POW" TO WSA 201
FINISH COLOUR: "Y14" GOLDEN YELLOW
MASS: 5 kg

ITEM	AMDT.
PN901302	

DAM	RES	SPS
X	X	X
BWS	WAT	STP
X	X	X
WTP	SEW	
X	X	
WPS	REC	
X	X	



STANDARD DRAWING
SITE SECURITY AND PROTECTION
BOLLARDS
REMOVABLE BOLLARDS
GALVANISED MILD STEEL

DRAWING STATUS	
Current	
SD-9013-D	
A1	ISSUE A

No.	ISSUE	DATE	DRAWN	CHECKED	AUTHORISED
A	INITIAL ISSUE	15/06/2018	K. Patel	K. Danenbergsons	D. Eager