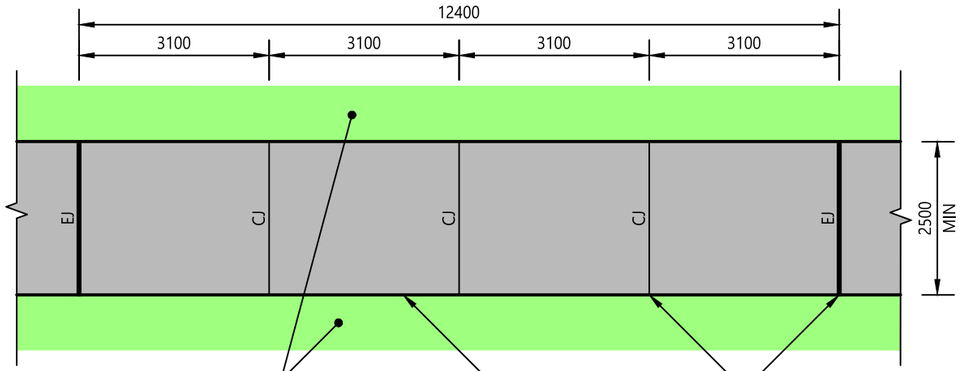
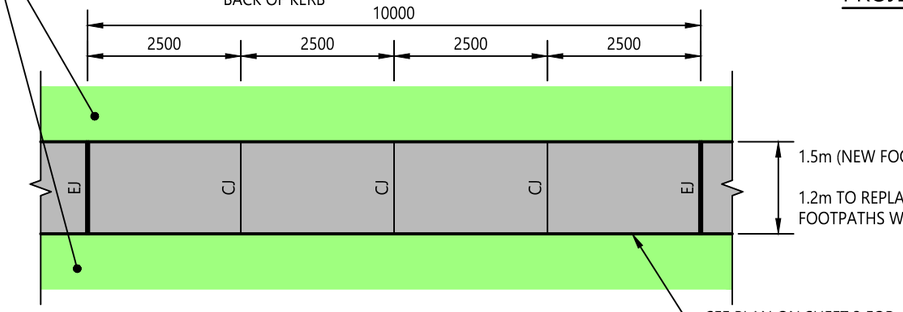


PROVIDE TWO COUCH TURF STRIPS (900mm WIDE MINIMUM) EACH SIDE FLUSH WITH CONSTRUCTED PATHS. RESIDUAL FOOTWAY/VERGE WIDTH EACH SIDE OF CONSTRUCTED OR EXISTING PATHS SHALL BE TOPSOILED AND TURFED FOR SUBDIVISION DEVELOPMENT WORKS AND WHERE THESE AREAS (BACK OF KERB TO PROPERTY BOUNDARY) ARE OTHERWISE COMPLETELY DISTURBED BY ROAD AND/OR PATH WORKS

SEE PLAN ON SHEET 3 FOR JOINT SPACING WHERE PATH IS ADJACENT TO BACK OF KERB

CONTROL JOINT (CJ) / EXPANSION JOINT (EJ) SEE DETAILS BELOW AND NOTES ON SHEET 4

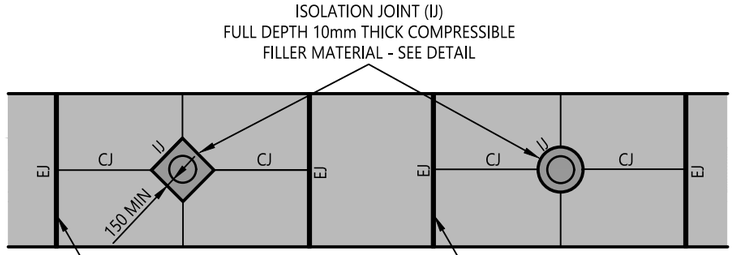
PLAN
SHARED PATH
SCALE 1:100



1.5m (NEW FOOTPATHS)

1.2m TO REPLACE EXISTING FOOTPATHS WHERE REQUIRED

SEE PLAN ON SHEET 3 FOR JOINT SPACING WHERE PATH IS ADJACENT TO BACK OF KERB



WHERE CJs ARE REQUIRED TO PROJECT FROM SERVICE PIT SURROUNDS LONGITUDINALLY, THE NEXT TRANSVERSE JOINT SHALL BE AN EXPANSION JOINT AS SHOWN, IRRESPECTIVE OF THE ABOVE DETAILS

JOINT LAYOUTS MAY BE VARIED TO SUIT SLAB. SIZES NOT TO BE LESS THAN 1.0m AND NOT MORE THAN LENGTH-TO-WIDTH RATIO OF 1:5 TO 1. JOINT LAYOUT SHALL BE SUBJECT TO THE APPROVAL OF COUNCIL'S REPRESENTATIVE

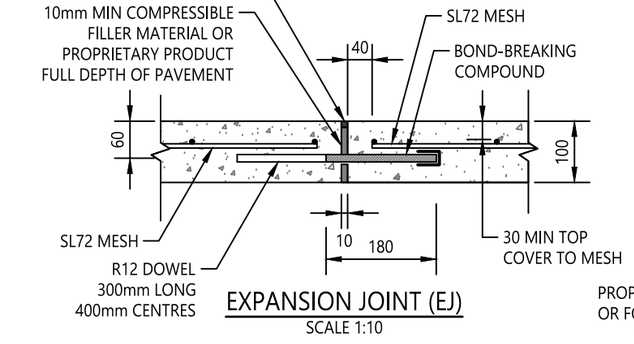
PROJECTION INTO SHARED PATHS
SCALE 1:100

GENERAL NOTES:

1. WHEN REPLACING EXISTING FOOTPATHS, ADOPT 1.5m WIDE 100mm MINIMUM THICK REINFORCED PATH.
2. ALL NEW FOOTPATHS AND SHARED PATHS SHALL BE 100mm MINIMUM THICK REINFORCED CONCRETE.
3. AVOID SERVICE PITS AND VALVES LOCATED WITHIN PATHS, WHERE PRACTICABLE.
4. SHARED PATH WIDTHS SHALL BE DETERMINED BY REFERRING TO THE TABLE BELOW AND THE ASSOCIATED AUSTROADS GUIDE TO ROAD DESIGN. JOINT SPACINGS FOR SHARED PATHS >2.5m WIDE SHALL BE ADJUSTED ACCORDINGLY.
5. WHERE PATHS ARE LOCATED WITHIN AREAS SUBJECT TO FLOODING, CONSIDER AN APPROPRIATE DESIGN STORM FLOOD LEVEL AND THE POTENTIAL NEED FOR FLOOD WARNING AND DEPTH MARKER SIGNS.
6. THE MAXIMUM JOINT SPACINGS ARE BASED ON A STANDARD MESH SIZE OF 6 x 2.4m, WITH MESH ORIENTATED ACCORDINGLY.

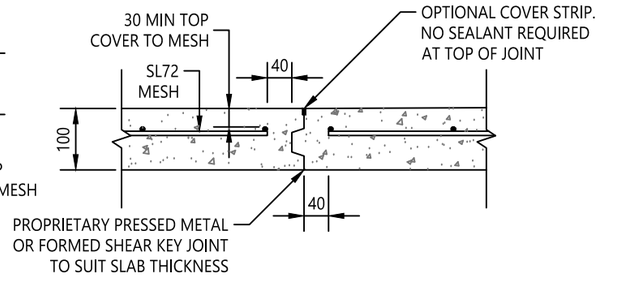
SHARED PATH WIDTH			
	LOCAL ACCESS PATH	REGIONAL PATH	RECREATIONAL PATH
DESIRABLE WIDTH	2.5	3.0	3.5
ACCEPTABLE WIDTH RANGE	2.0 - 3.0	2.5 - 4.0	3.0 - 4.0

SOURCE: AUSTROADS GUIDE TO ROAD DESIGN PART 6A

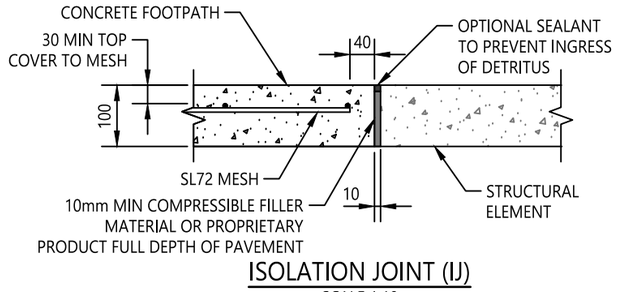


EXPANSION JOINT (EJ)
SCALE 1:10

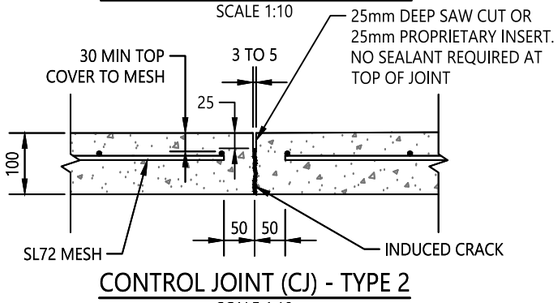
PLAN
FOOTPATH
SCALE 1:100



CONTROL JOINT (CJ) - TYPE 1
SCALE 1:10



ISOLATION JOINT (IJ)
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10

FOOTPATH AND SHARED PATH GRADIENTS							
PATHS IN ROAD RESERVES				PATHS NOT IN ROAD RESERVES			
CROSSFALL		LONGITUDINAL GRADE		CROSSFALL		LONGITUDINAL GRADE	
MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
1%	2.5%	NEW ROADS		1%	2.5%	1%	5%[1]
		1%	5%				LANDING SPACING
		EXISTING ESTABLISHED ROADS (ADOPT GRADE OF EXISTING ROAD)					<3% N/A
							3% 25m MAX
		1% DESIRABLE MIN 0.3% ABSOLUTE MIN	10% DESIRABLE MAX 15% ABSOLUTE MAX				5% 15m MAX
							7%+ 9m MAX
							3% - 7% BY INTERPOLATION

PATH GRADIENT NOTES:

1. PATHS WITH GRADIENTS STEEPER THAN 5% ARE TO BE CONSIDERED AS RAMPS FOR DESIGN PURPOSES.
2. PROVIDE PATH GRADIENTS AND FLAT LANDINGS AS REQUIRED IN ACCORDANCE WITH AS 1428.1 AND THE ABOVE TABLE, WHERE CONSIDERED APPROPRIATE AND PRACTICABLE.
3. WHERE SHARED PATHS WITH GRADIENTS THAT REQUIRE FLAT LANDINGS FOR PEDESTRIANS UNDER AS 1428.1 AND RAMPS WHICH ARE GREATER THAN 200m LONG, THESE LANDINGS SHOULD BE PROVIDED ON BOTH SIDES ADJACENT TO THE SHARED PATH.
4. PATHS NOT IN ROAD RESERVES AND ON STEEP TERRAIN SHOULD BE MEANDERED TO MINIMISE LONGITUDINAL GRADIENTS, WHERE PRACTICABLE.
5. CONSIDER THE USE OF HANDRAILS ON BOTH SIDES OF SHARED PATHS NOT IN ROAD RESERVES, WHICH ARE CONSIDERED AS RAMPS, IN ACCORDANCE WITH AS 1428.1, WHERE PRACTICABLE.

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500 1:10

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

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CHECKED	M BAMBER
DATE	28/4/20

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PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

DRAWING NUMBER SD0601

REV -

SHEET 1 OF 7

A3

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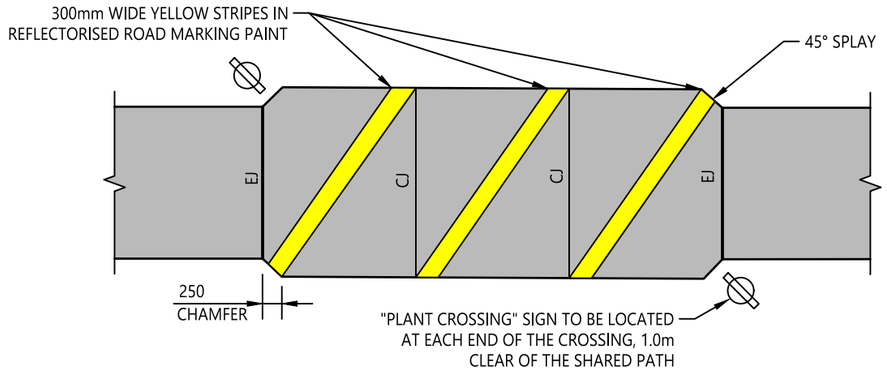
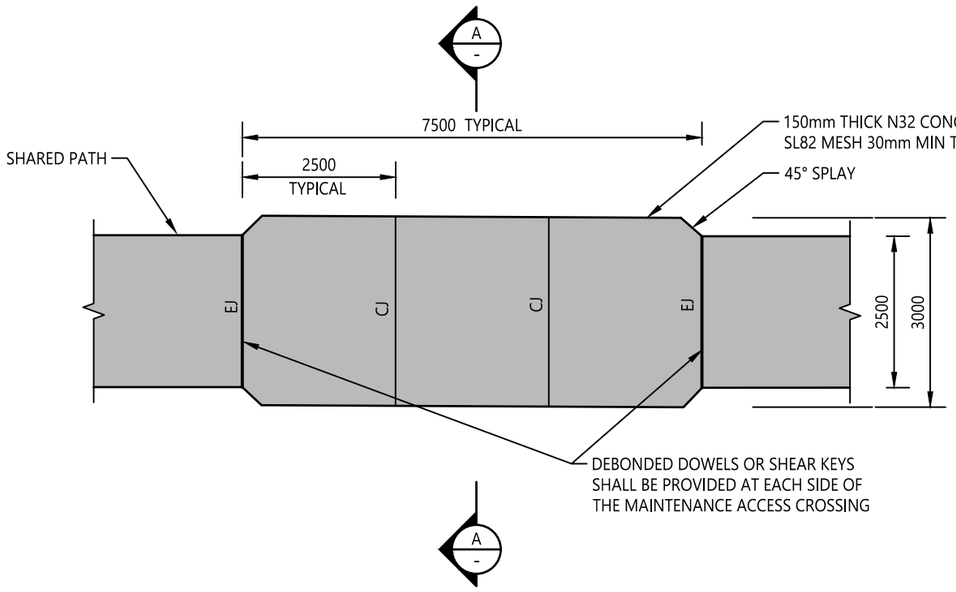


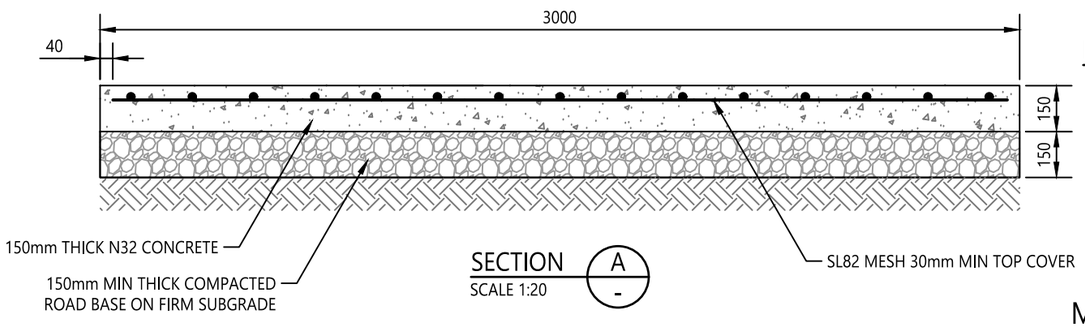
CROSSING MARKING PLAN
SCALE 1:100

MAINTENANCE ACCESS CROSSING NOTES:

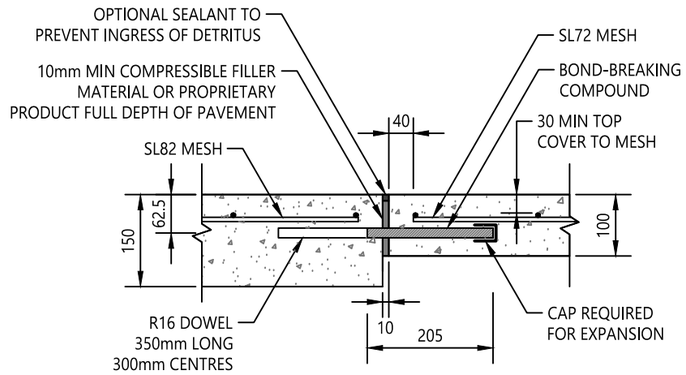
1. THE ALIGNMENT OF THE SHARED PATH IS TO BE IN ACCORDANCE WITH THE APPROVED ENGINEERING PLANS OR AS NOMINATED BY COUNCIL'S REPRESENTATIVE.
2. NON-STANDARD TREATMENTS WILL BE SUBJECT TO APPROVAL BY COUNCIL'S REPRESENTATIVE.
3. CROSSFALL ON ALL PATHS TO SUIT NATURAL GROUND SLOPE WHERE POSSIBLE. CROSSFALL SHALL BE 1% MINIMUM AND 2.5% MAXIMUM WHERE LOCATED IN FOOTWAYS AND VERGES. PATHS MAY BE SUPERELEVATED WHERE REQUIRED TO 6% MAXIMUM.
4. CONCRETE STRENGTH GRADE SHALL BE N32 UNLESS OTHERWISE SPECIFIED.
5. CONCRETE TO HAVE SLIP-RESISTANT BROOM FINISH WITH SMOOTH TROWELLED EDGES.
6. ALL JOINTS TO BE SMOOTH WITH MINIMUM IRREGULARITIES: FINISHED PATH SURFACES ARE TO BE EVEN TO WITHIN 5mm ON A 3m STRAIGHTEDGE.
7. TOP COVER TO ALL STEEL REINFORCEMENT SHALL BE 30mm MINIMUM.
8. SLIGHT VARIATIONS TO TYPICAL LENGTH, WIDTH AND PAVEMENT TYPE OF PLANT CROSSINGS MAY BE REQUIRED DUE TO SITE CONDITIONS.
9. THE ORIENTATION OF THE STRIPES SHALL GENERALLY BE AS SHOWN.
10. SHARED PATH SIGNS SHALL BE PROVIDED AND LOCATED GENERALLY IN ACCORDANCE WITH AUSTROADS GUIDELINES AND SHALL INCLUDE SIGNS FOR PEDESTRIANS, CYCLISTS AND ALL APPROACHING VEHICULAR TRAFFIC.



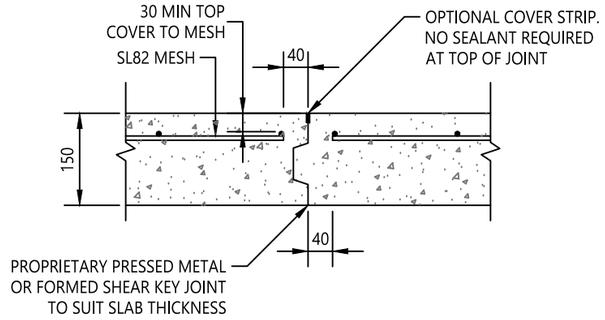
CROSSING JOINT PLAN
SCALE 1:100



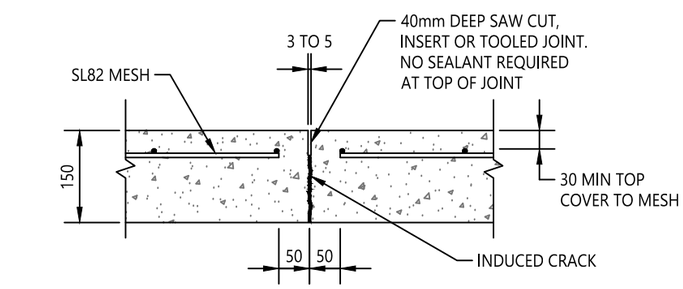
SECTION A-A
SCALE 1:20



EXPANSION JOINT (EJ) 150mm TO 100mm MAINTENANCE ACCESS CROSSING TO SHARED PATH
SCALE 1:10



CONTROL JOINT (CJ) 150mm - TYPE 1
SCALE 1:10



CONTROL JOINT (CJ 150mm - TYPE 2
SCALE 1:10

MAINTENANCE ACCESS CROSSING

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ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

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DATE	28/4/20

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PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

STANDARD DRAWING

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SD0601	-
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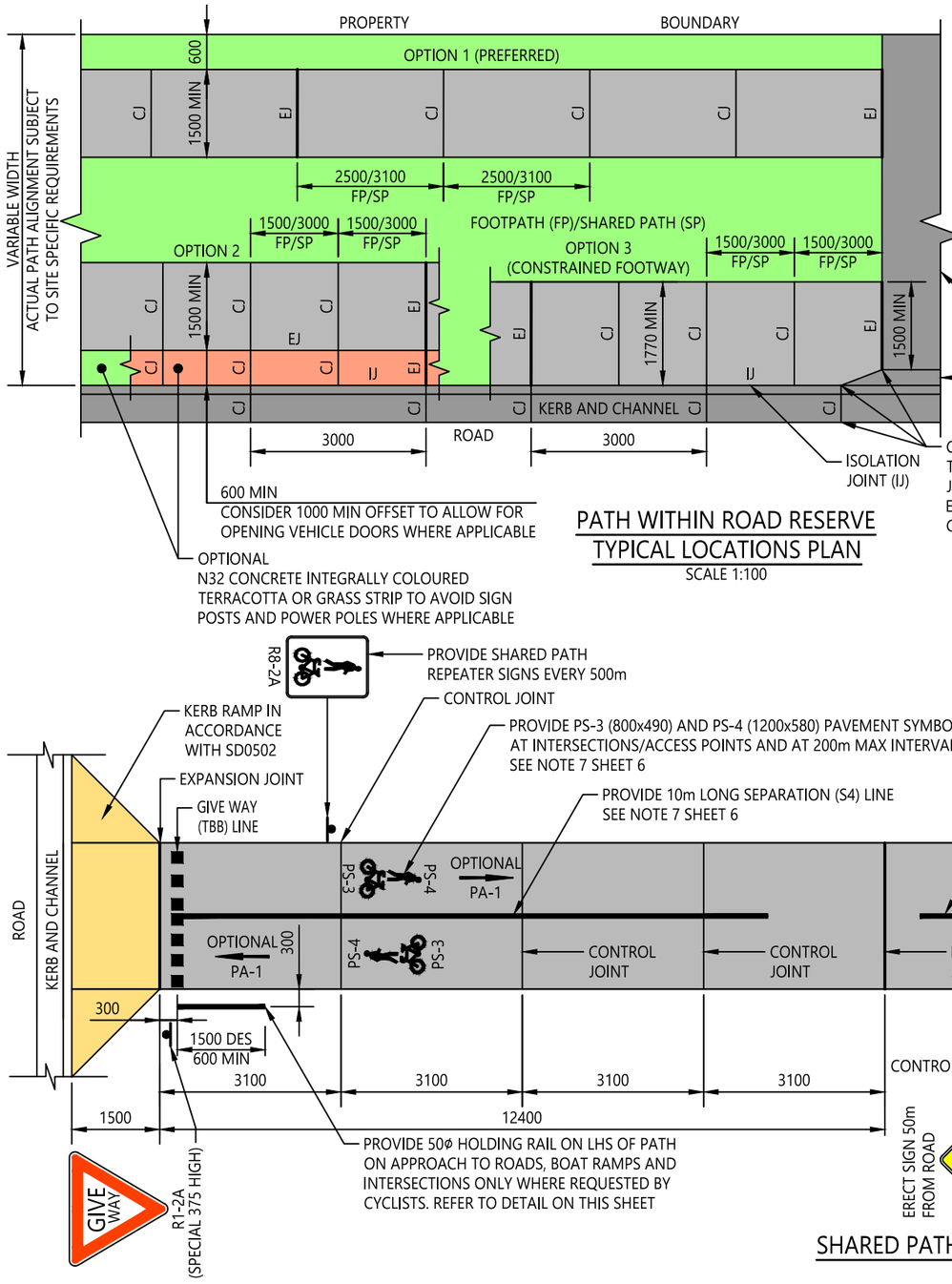
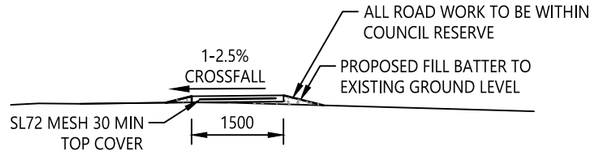
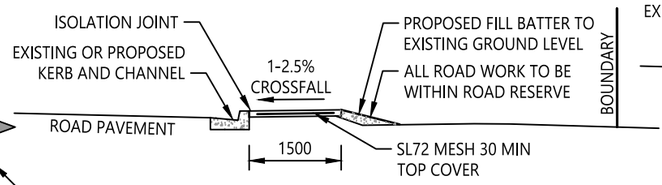


PATH WITHIN ROAD RESERVE
TYPICAL LOCATIONS PLAN
SCALE 1:100



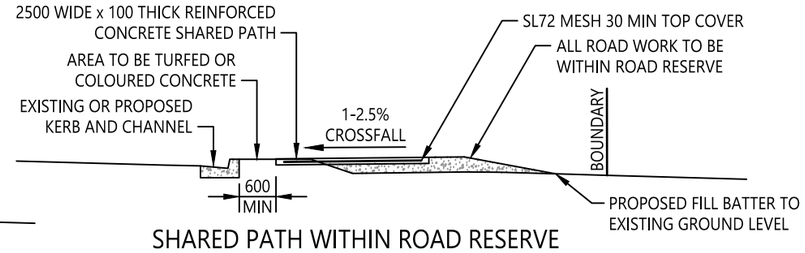
FOOTPATH WITHIN COUNCIL RESERVE
TYPICAL CROSS SECTION
SCALE 1:100



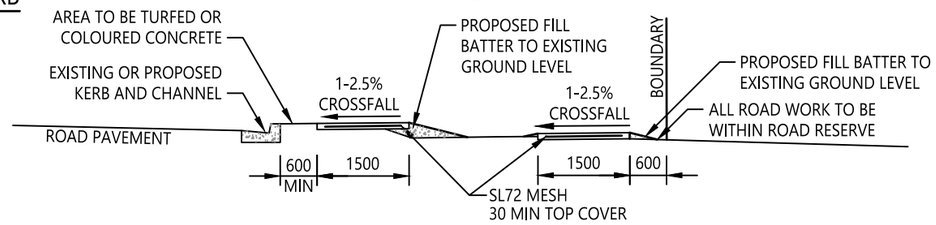
FOOTPATH ADJOINING BACK OF KERB
TYPICAL CROSS SECTION
SCALE 1:100

NOTE:

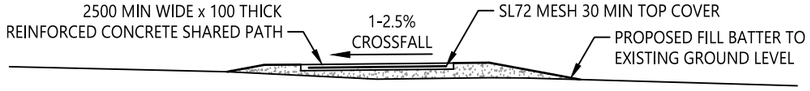
PROPOSED SHARED PATHS AND BICYCLE PATHS MUST BE REFERRED TO THE LOCAL AREA TRAFFIC COMMITTEE BEFORE IMPLEMENTATION DUE TO THE ASSOCIATED REGULATORY CONTROLS (SIGNS AND PAVEMENT MARKINGS).



SHARED PATH WITHIN ROAD RESERVE
TYPICAL CROSS SECTION
SCALE 1:100



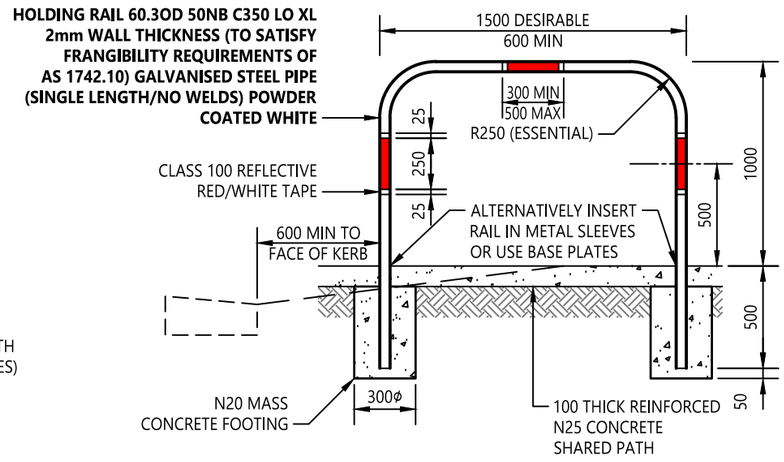
FOOTPATH WITHIN ROAD RESERVE
TYPICAL CROSS SECTION
SCALE 1:100



SHARED PATH WITHIN COUNCIL RESERVE
TYPICAL CROSS SECTION
SCALE 1:100

SHARED PATH TYPICAL PLAN AND CROSS SECTIONS
SCALE 1:100

HOLDING RAIL 60.3OD 50NB C350 LO XL 2mm WALL THICKNESS (TO SATISFY FRANGIBILITY REQUIREMENTS OF AS 1742.10) GALVANISED STEEL PIPE (SINGLE LENGTH/NO WELDS) POWDER COATED WHITE



HOLDING RAIL
SCALE 1:30

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SCALE ON ORIGINAL A3 SIZE DRAWING

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0 1000 2000 3000 4000 5000 1:100

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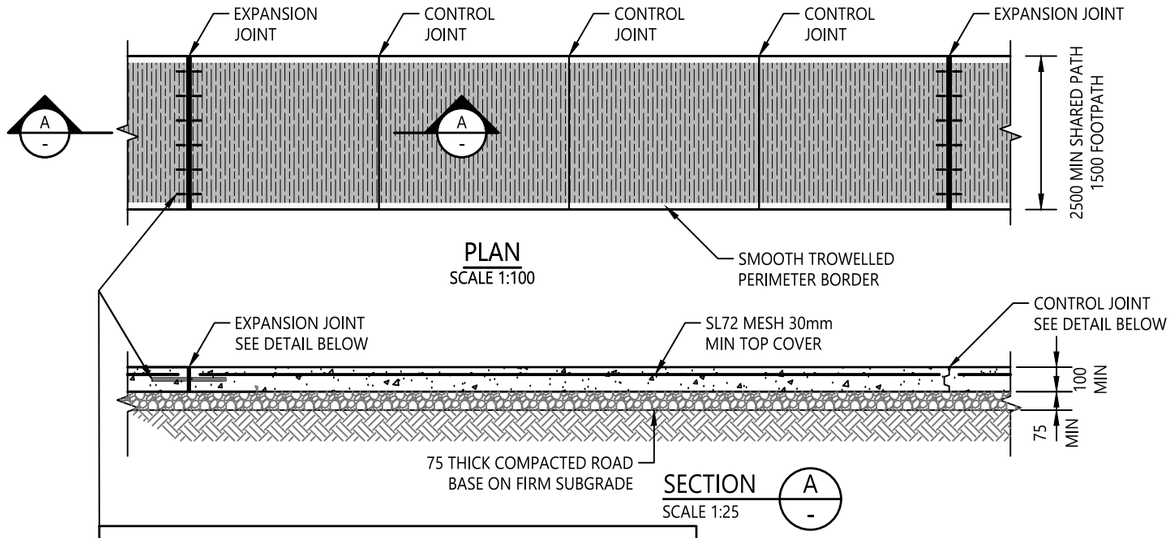
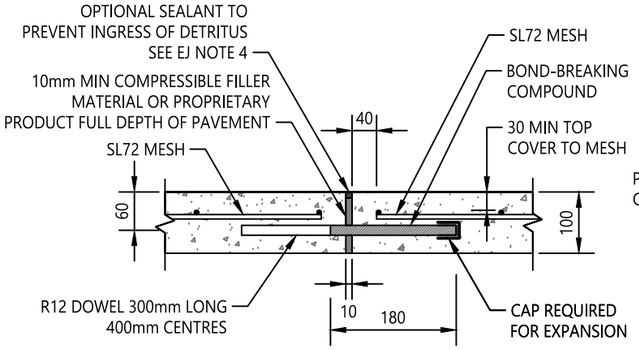


PLAN
SCALE 1:100

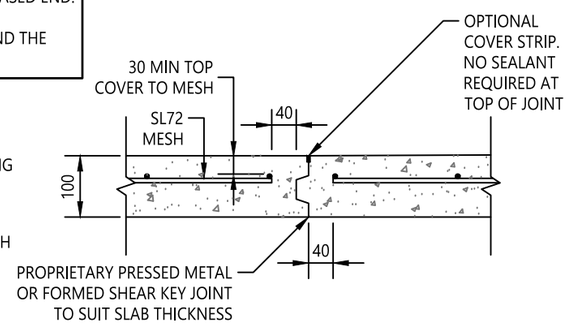
SECTION A-A
SCALE 1:25

DOWELS SHALL BE:
1. SMOOTH BAR R12 MIN 300 LONG.
2. INSTALLED WITH 150mm UNIVERSAL ROUND DOWEL SLEEVE.
3. GREASED AT ONE END OR APPROVED SLIP JOINT.
4. INSTALLED WITH 10mm MINIMUM FREE MOVEMENT GAP AT GREASED END.
5. EQUALLY SPACED AT 400 MAXIMUM CENTRES.
6. INSTALLED SQUARE TO JOINT AND PARALLEL TO EACH OTHER AND THE FINISHED PATH SURFACE.

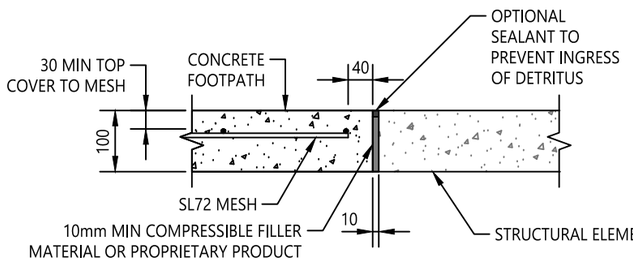
REINFORCED CONCRETE PATH



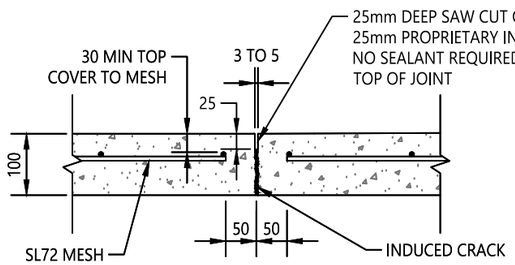
EXPANSION JOINT (EJ) 100mm PATH
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 1
SCALE 1:10



ISOLATION JOINT (IJ)
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10

CONCRETE JOINT DETAILS

GENERAL PATH NOTES:

1. ALL FOOTPATHS AND SHARED PATHS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE RELEVANT AUSTROADS GUIDELINES, TfNSW SUPPLEMENTS AND BICYCLE GUIDELINES AND AS 3727.1.
2. MINIMUM RADIUS FOR CURVES ON THE CENTRE LINE SHALL BE 10m ON PATH AND SHOULD BE 5m FOR CURVES AT INTERSECTIONS.
3. CONCRETE FOOTPATHS SHALL BE 1.5m WIDE AND SHARED PATHS SHALL BE 2.5m MINIMUM WIDE.
4. CONCRETE PATHS SHALL HAVE A THICKNESS OF 100mm MINIMUM; AND 150mm MINIMUM THICKNESS AT MAINTENANCE VEHICLE CROSSINGS.
5. CROSSFALL SHALL BE 1 TO 2.5% DOWN IN THE DIRECTION OF THE ROAD OR NATURAL WATER COURSE/WATERWAY.
6. ALL SERVICE COVERS SHALL BE INCORPORATED IN THE CONCRETE AT THE APPROPRIATE LEVEL.
7. PROVIDE 225ø PVC DRAINAGE LINES WITH GRATED INLET PITS OR SIMILAR TREATMENT UNDER PATH AT LOCALISED DEPRESSIONS OR WHERE OTHERWISE NECESSARY.
8. ALL VEGETATION SHALL BE CLEARED FROM THE PATH 500mm MINIMUM HORIZONTALLY AND 2.5m MINIMUM VERTICALLY. TREES TO BE REMOVED SHALL BE REPLACED WITH SIMILAR NATIVE TREE SPECIES AND PLANTED IN THE VICINITY OF THE ORIGINAL TREES WITH A REPLACEMENT RATIO OF 2:1, WHERE PRACTICABLE.
9. PROVIDE SUITABLE ACCESS FOR PEDESTRIANS PAST THE WORK AREA AT ALL TIMES.

STEEL REINFORCEMENT NOTES:

1. STEEL REINFORCEMENT SHALL BE PROVIDED WITH A MINIMUM COVER OF 30mm TO THE TOP SURFACE OF THE PAVEMENT AND 40mm TO THE SLAB EDGE OR A FORMED JOINT. AN ALTERNATIVE FIBRE REINFORCEMENT SYSTEM MAY BE USED WHERE APPROVED BY COUNCIL'S REPRESENTATIVE. NYLON OR OTHER MATERIAL FIBRES MAY BE USED AS AN ALTERNATIVE CONCRETE REINFORCEMENT FOR SHRINKAGE CRACK CONTROL, SUBJECT TO THE APPROVAL OF COUNCIL'S REPRESENTATIVE.
2. STEEL REINFORCEMENT SHALL BE SUPPORTED BY BAR CHAIRS IN ACCORDANCE WITH AS/NZS 2425, AT A MAXIMUM OF 600mm CENTRES.
3. STEEL REINFORCEMENT SHALL BE LAPPED SO THAT A MINIMUM OF 2 CROSS BARS SHALL BE OVERLAPPED.
4. RE-ENTRANT CORNERS SHALL BE REINFORCED WITH TRIMMING STEEL REINFORCEMENT NOT LESS THAN 2xN12 BARS 1m MINIMUM LONG.
5. STEEL REINFORCING MESH SHALL BE TERMINATED EITHER SIDE OF THE CONTROL JOINT OR EXPANSION JOINT.

CONCRETE NOTES:

1. CONCRETE STRENGTH GRADE SHALL BE N25 UNLESS OTHERWISE SPECIFIED.
2. CONCRETE SHALL BE CONTINUOUSLY CURED FOR A MINIMUM 7 DAYS USING AN APPROVED CURING COMPOUND OR COVERED WITH PLASTIC SHEETING.
3. CONCRETE SHALL BE PROTECTED FROM TRAFFIC FOR A MINIMUM 7 DAYS. UNPLANNED CRACKING SHALL NOT BE ACCEPTED.
4. ALL EXPOSED CONCRETE EDGES SHALL BE ROUNDED TO A 10mm RADIUS.
5. CONCRETE TO BE BROOM FINISHED TO PROVIDE A SLIP-RESISTANT TEXTURE AND SHALL HAVE A SMOOTH PERIMETER BORDER WITH 10mm RADIUS EDGES.

CONTROL JOINT (CJ) NOTES:

1. CONTROL JOINTS SHALL BE FORMED BY SHEAR KEY JOINT (TYPE 1) OR WEAKENED PLANE JOINT (TYPE 2), AS DIRECTED BY COUNCIL'S REPRESENTATIVE. CONTROL JOINTS SHALL BE INSTALLED WITHOUT A SMOOTH BORDER ON EACH SIDE OF THE JOINT. TRIP STOPS OR EQUIVALENT SHOULD BE INSTALLED AT ALL CONTROL JOINTS IN VICINITY OF TREES - REFER TO SD1001 FOR FURTHER DETAILS.
2. WEAKENED PLANE CONTROL JOINTS (TYPE 2) SHALL BE FORMED BY A PROPRIETARY INSERT 25mm DEEP OR A SAW CUT 25mm DEEP, 3 TO 5mm WIDE. SAW CUT AS SOON AS THE CONCRETE WILL SUPPORT THE SAW CUTTING EQUIPMENT, WITHIN 24 HOURS OF CONCRETE PLACEMENT, TO INDUCE CRACKS AT A PLANNED LOCATION. UNPLANNED CRACKS IN SLABS WILL NOT BE ACCEPTED.
3. CONTROL JOINT SPACING SHALL BE 2.5m IN FOOTPATH SLABS; AND 3.1m IN SHARED PATH SLABS, UNLESS PATH IS ADJACENT TO KERB.
4. GENERALLY THE MAXIMUM CONTROL JOINT SPACING SHOULD BE NO GREATER THAN 1.5 TIMES THE WIDTH OF THE SLAB PANEL.

EXPANSION JOINT (EJ) NOTES:

1. EXPANSION JOINT SPACING SHALL BE 10m IN FOOTPATH; AND 12.4m IN SHARED PATH SLABS.
2. A SYSTEM TO CORRECTLY ALIGN DOWELS SHALL BE PROVIDED.
3. BOND-BREAKING COMPOUND AND END CAP MAY BE REPLACED WITH A PURPOSE-MADE DOWEL SLEEVE.
4. WHEN USING PREFORMED COMPRESSIBLE FILLER MATERIAL, SEALANT SHALL BE PLACED FLUSH WITH THE FINISHED SURFACE ONCE THE CONCRETE HAS BEEN CURED TO PREVENT INGRESS OF DETRITUS. CONCRETE SHALL INITIALLY BE SMOOTH TROWELLED EACH SIDE OF ALL EXPANSION JOINTS FOLLOWED BY BROOM FINISHING UP TO EACH SIDE OF THE JOINT.

ISOLATION JOINT (IJ) NOTES:

1. ISOLATION JOINTS SHALL BE PROVIDED WHERE PATHS ABUT ANOTHER STRUCTURAL ELEMENT.

REV	AMENDMENT	DATE	DRAWN	APRVD

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SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

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FOOTPATH AND SHARED PATH

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DRAWING NUMBER	REV
SD0601	-
SHEET 4 OF 7	A3

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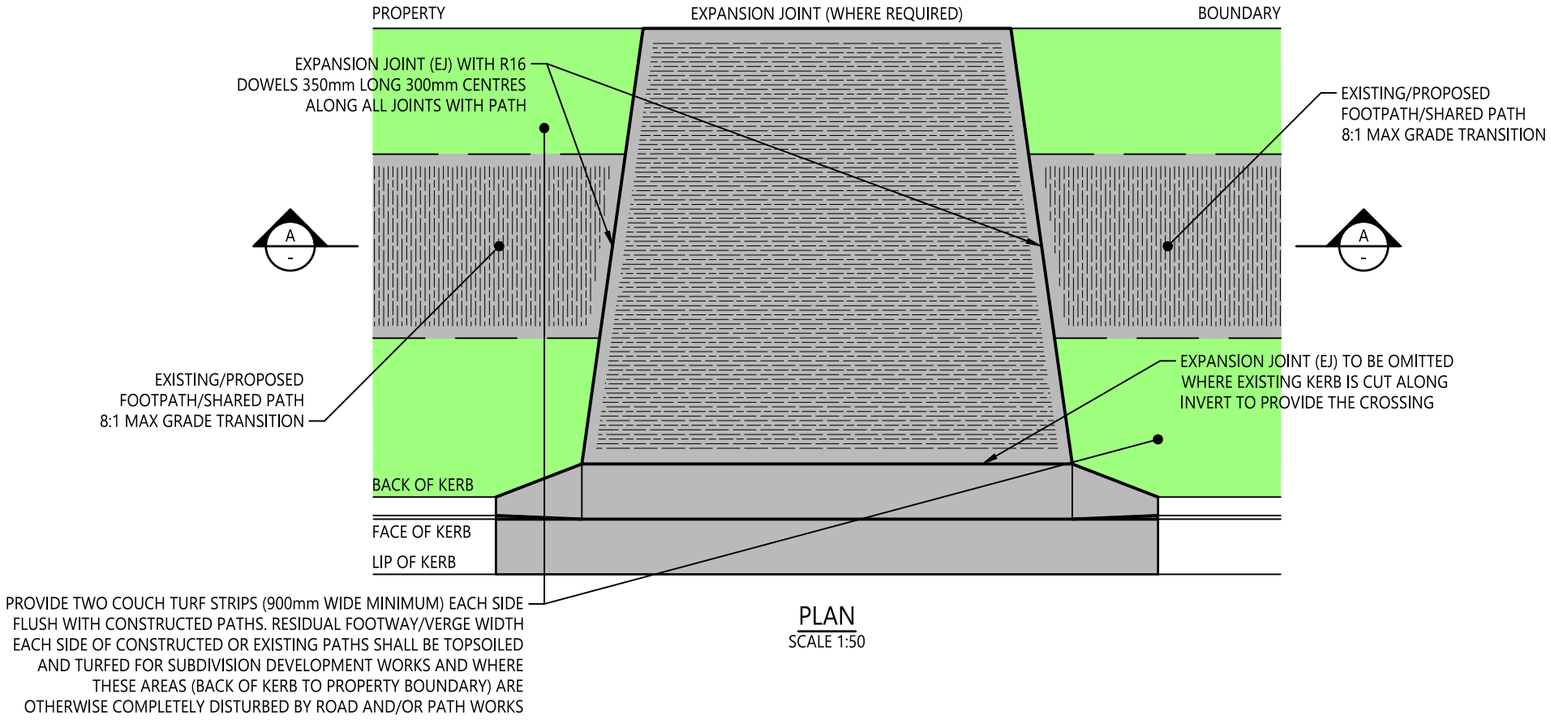
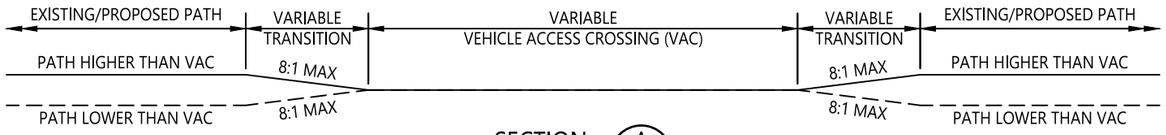
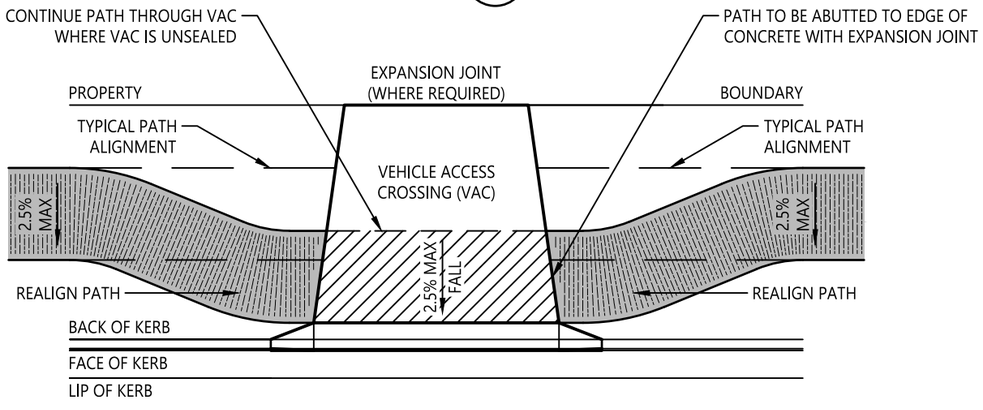


PLAN
SCALE 1:50



SECTION A
NOT TO SCALE

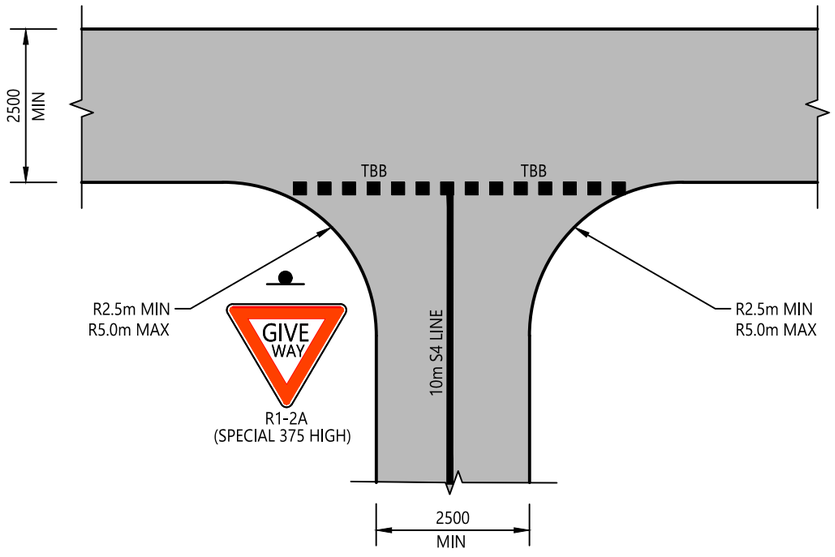


CONCRETE PATH LOCATION AT HIGH AND LOW LEVEL ACCESSES
SCALE 1:100

PATH CONNECTION DETAILS AT VEHICLE ACCESS CROSSINGS

INTERSECTION NOTES:

1. REFER TO AUSTROADS GUIDE TO ROAD DESIGN PART 6A FOR OTHER PATH INTERSECTION TREATMENTS.
2. CONCRETE JOINTS SHALL BE PROVIDED AS DETAILED ON SHEET 4 OF THIS STANDARD DRAWING.
3. PATH PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH COUNCIL'S CIVIL WORKS SPECIFICATION.



INTERSECTION OF SHARED PATHS
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
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0 1000 2000 3000 4000 5000 1:100
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

STANDARD DRAWING

DRAWING NUMBER	REV
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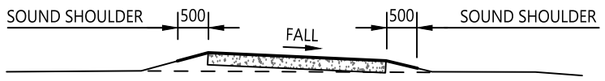
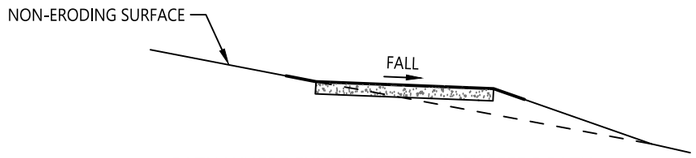
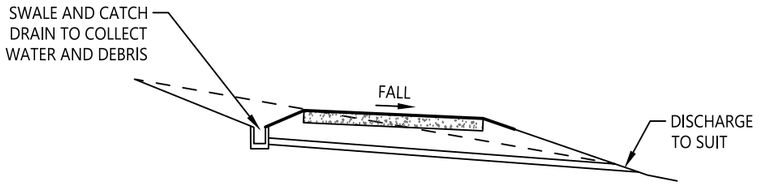


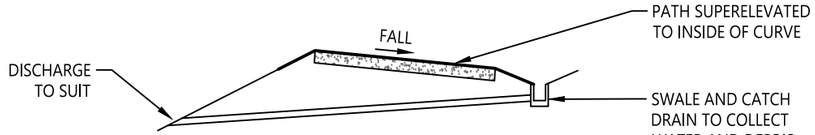
ELEVATED PATH IN FLAT TERRAIN



PATH WHERE EXISTING TERRAIN EXCEEDS PATH CROSSFALL



PATH WHERE EXISTING TERRAIN EXCEEDS PATH CROSSFALL (WITH SWALE)



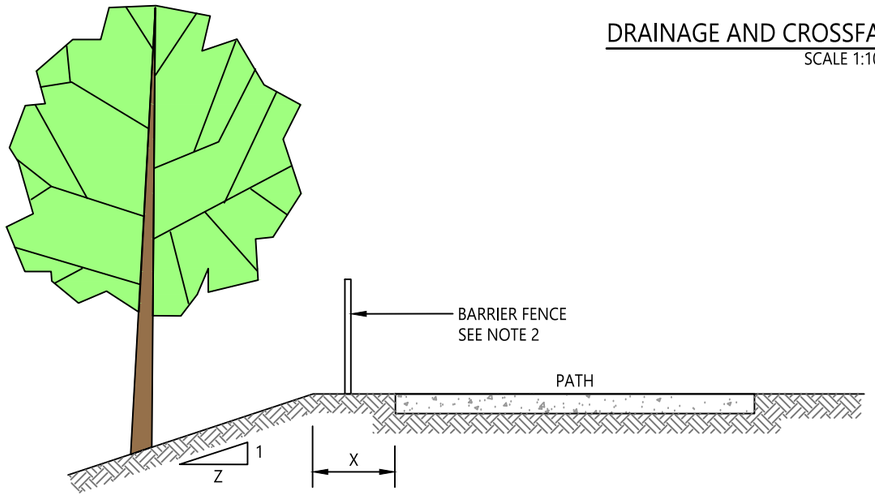
PATH ON A CURVE

PATH FENCE BARRIERS AND DELINEATION NOTES:

1. ALL BARRIER FENCE DETAILS ON THIS SHEET WERE SOURCED FROM AUSTROADS GUIDE TO ROAD DESIGN PART 6A: PATHS FOR WALKING AND CYCLING.
2. REFER TO COUNCIL'S STANDARD DRAWING SD0701 AND SD0702 FOR BARRIER FENCE DETAILS.
3. BOLLARDS AT ENTRANCES AND EXITS WHERE REQUIRED SHALL BE 1m MINIMUM HIGH REMOVABLE OR FOLD DOWN TYPE, 200mm DIAMETER AND POWDER COATED GOLDEN YELLOW WITH 300mm OF CLASS 100 REFLECTIVE TAPE (RED AND WHITE) DOWN STEM.
4. ALL DRAINAGE GRATES SHALL BE BICYCLE SAFE (WELDLOCK 9978-16 OR SIMILAR DIAMOND PATTERN).
5. PROVIDE 10m OF SEPARATION (S4) LINE APPROACHING ALL INTERSECTIONS, OR WHERE NECESSARY ON PATH SECTIONS WITH RESTRICTED VISIBILITY.
6. PROVIDE SHARED PATH REGULATORY SIGNS AT THE START OF ALL SHARED PATHS AND PROVIDE REPEATER SIGNS EVERY 500 METRES AND SHARED PATH PAVEMENT MARKINGS AT 200m MAXIMUM INTERVALS.
7. ALL PATH PAVEMENT MARKINGS SHALL BE APPLIED IN WHITE REFLECTORISED ROAD MARKING PAINT UNLESS OTHERWISE SPECIFIED OR DIRECTED BY COUNCIL'S REPRESENTATIVE. WHERE THERMOPLASTIC PAVEMENT MARKINGS ARE SPECIFIED, THE CONCRETE SURFACE SHALL BE PRIMED PRIOR TO APPLYING ANY PAVEMENT MARKINGS.

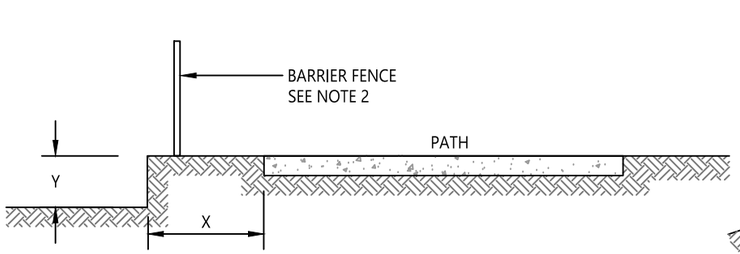
DRAINAGE AND CROSSFALL REQUIREMENTS

SCALE 1:10



	X (m)	Z (m)
FENCE NOT REQUIRED	<1 1 to 5	>8 >4
PARTIAL BARRIER FENCE REQUIRED	<5	3 to 4
FULL BARRIER FENCE REQUIRED	<5	<3

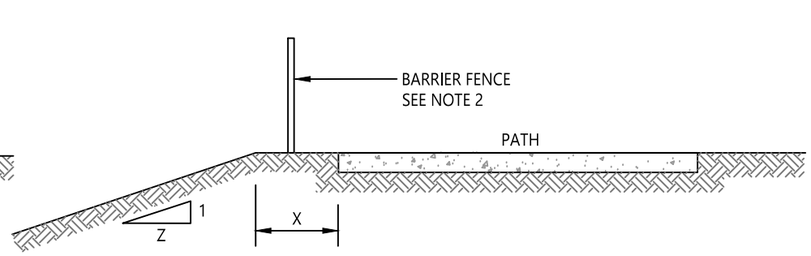
BATTER SLOPE WITH OBSTACLES



	X (m)	Y (m)
FENCE NOT REQUIRED*	<2	<0.25
PARTIAL BARRIER FENCE REQUIRED	<5	0.25 to 2
FULL BARRIER FENCE REQUIRED	<5	>2

*BATTER OFF THE SURFACE WHERE FALL IS WITHIN 1m OF PATH

VERTICAL FALL



	X (m)	Z (m)
FENCE NOT REQUIRED	<1 1 to 5	>8 >3
PARTIAL BARRIER FENCE REQUIRED	<5	1 to 3
FULL BARRIER FENCE REQUIRED	<5	<1

BATTER SLOPE WITHOUT OBSTACLES

REQUIREMENTS FOR FENCE BARRIERS AT BATTERS AND VERTICAL DROPS

NOT TO SCALE

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500

1:10

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

STANDARD DRAWING

DRAWING NUMBER	REV
SD0601	-
SHEET 6 OF 7	A3

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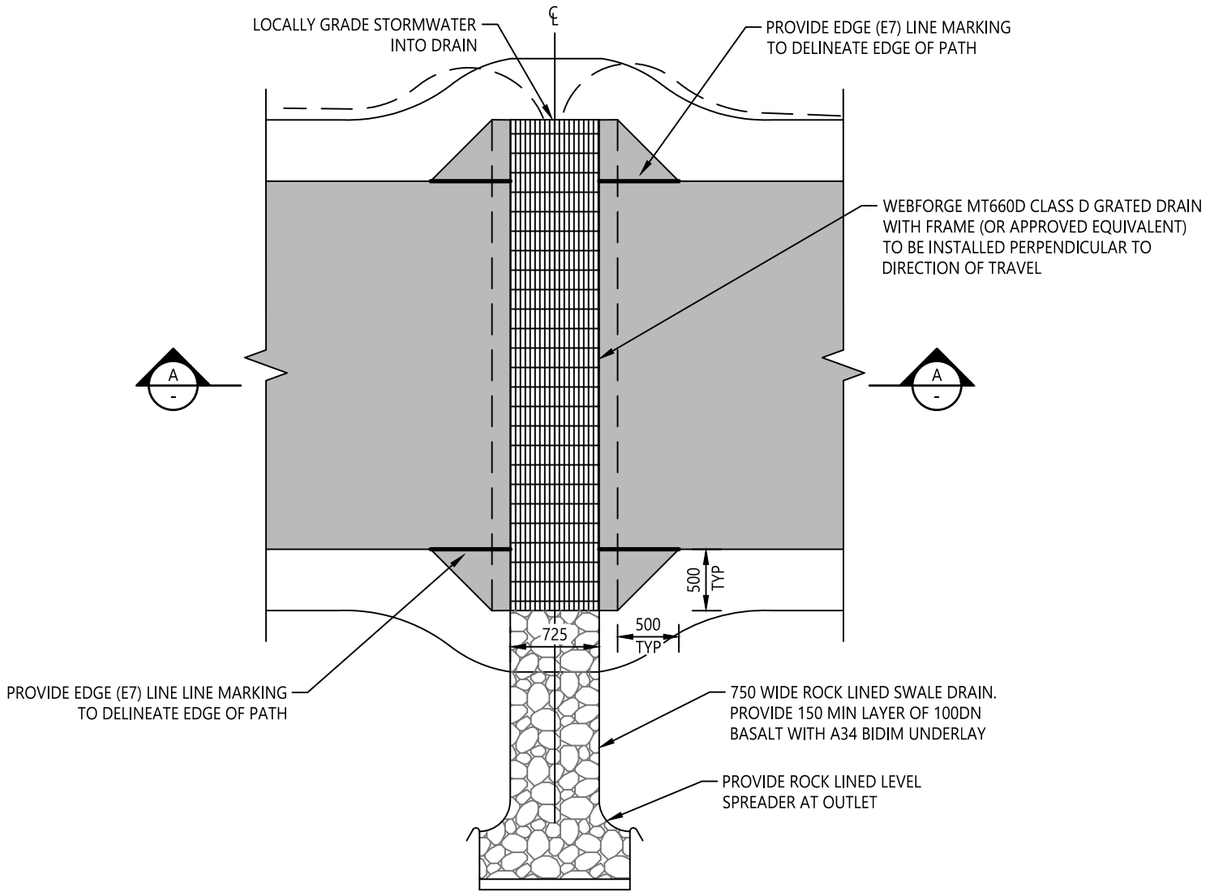
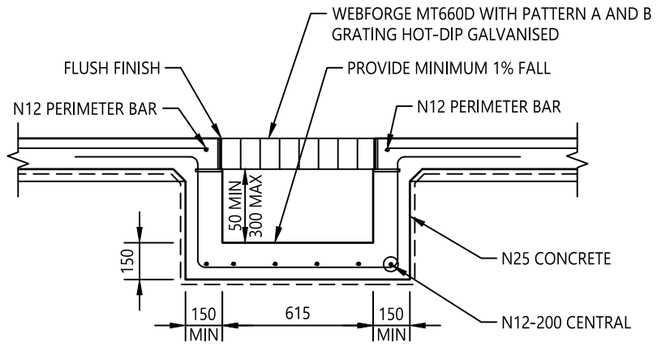
DRAIN NOTES:

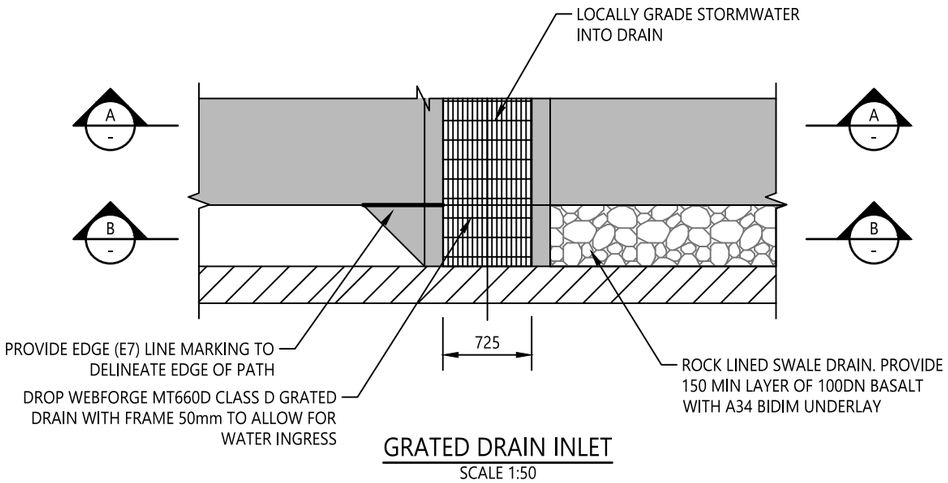
1. DETAILS ON THIS STANDARD DRAWING ARE BASED ON GHD's DRAWING 22-17579-C006 DATED 27/7/2015.
2. ALTERNATIVE PATH DRAINAGE TREATMENTS MAY BE SPECIFIED AND CONSTRUCTED IN CONSULTATION WITH COUNCIL'S REPRESENTATIVE.
3. PROVIDE A 1m DESIRABLE MINIMUM OFFSET FROM EDGE OF PATH TO INLET AND OUTLET STRUCTURES.



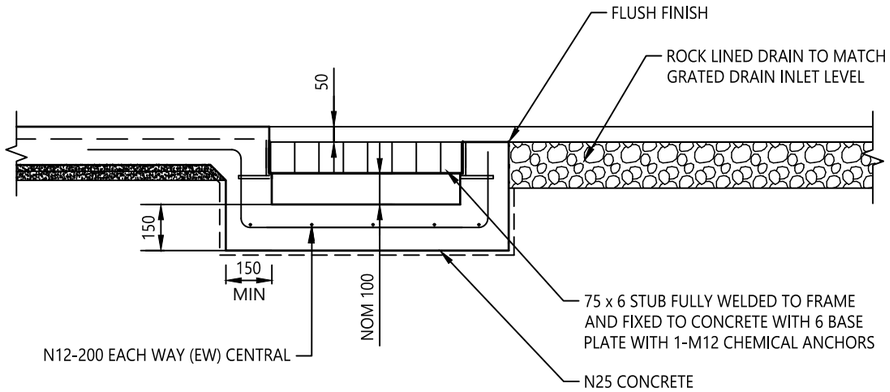
TYPICAL GRATED DRAIN
SCALE 1:50



SECTION A -
SCALE 1:25



GRATED DRAIN INLET
SCALE 1:50



SECTION B -
SCALE 1:20

TYPICAL GRATED DRAIN DETAILS

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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PEDESTRIAN AND CYCLIST SERIES
FOOTPATH AND SHARED PATH

STANDARD DRAWING

DRAWING NUMBER	REV
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SHEET 7 OF 7	A3

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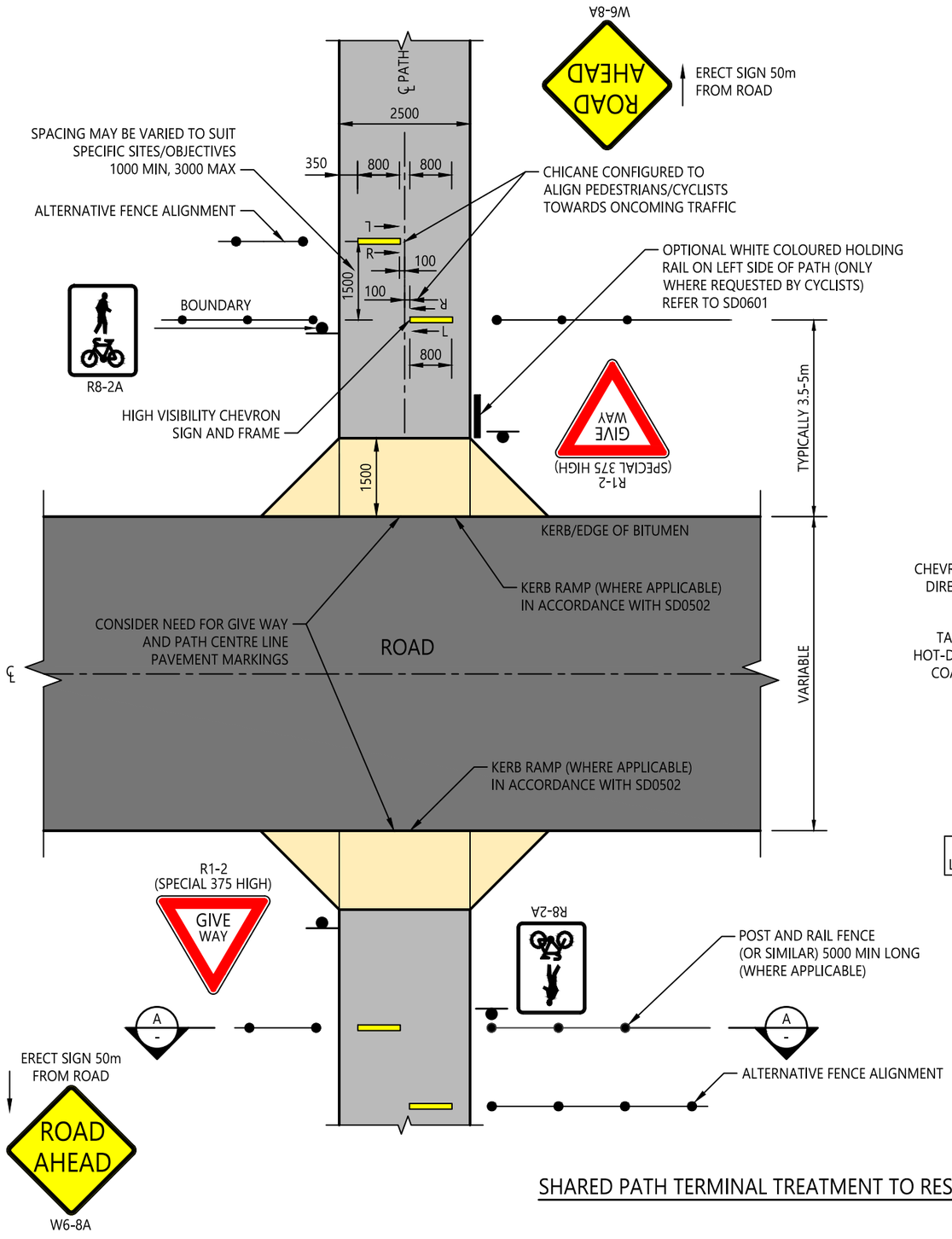
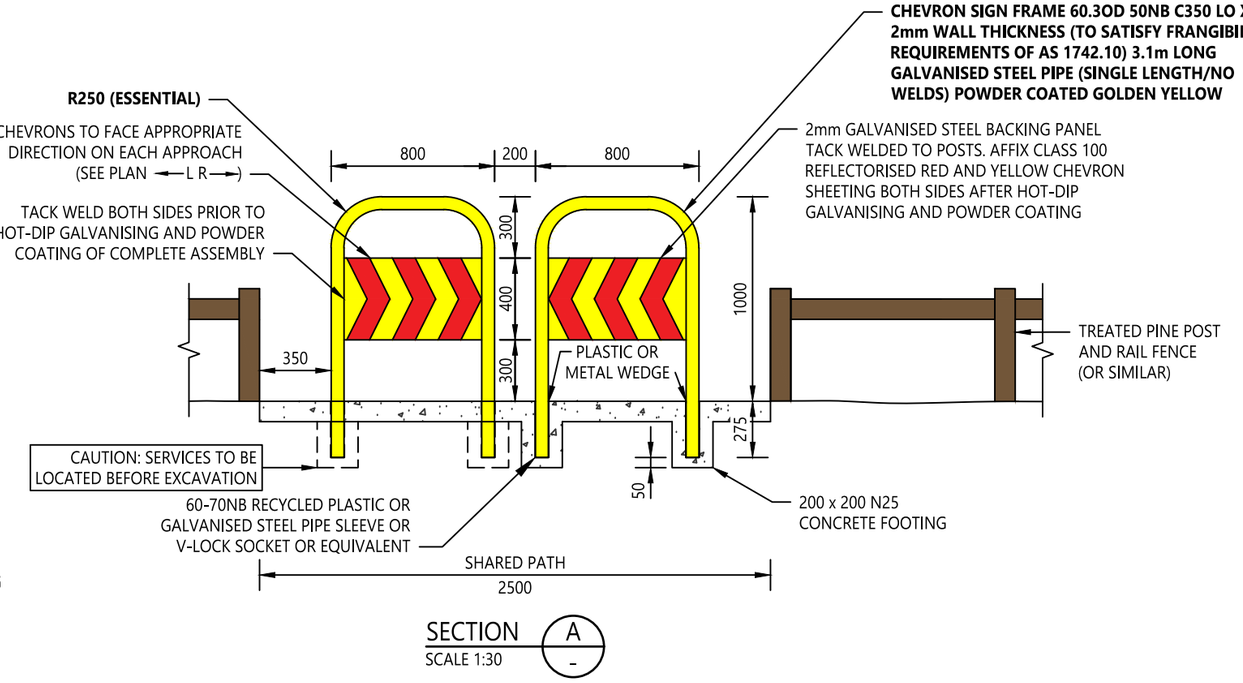


NOTES:

1. INCLUSION OF CHICANES OR BOLLARDS AT PATH TERMINALS NEEDS TO BE CAREFULLY CONSIDERED AND JUSTIFIED TO AVOID THEIR UNNECESSARY PROLIFERATION AND POTENTIAL HAZARD TO PATH USERS.
2. MEANDER PATH ON APPROACHES WHERE PRACTICABLE (SEVERE MEANDER MAY OBVIATE NEED FOR CHICANE).
3. WHERE VEHICLE ACCESS IS REQUIRED FOR MAINTENANCE PURPOSES, IT IS PREFERABLE TO PROVIDE ACCESS ADJACENT TO THE PATH, RATHER THAN BY INSTALLING REMOVABLE/COLLAPSIBLE POSTS, WHICH POSE A HAZARD TO PEDESTRIANS AND CYCLISTS.
4. CONSIDER NEED FOR PATH LIGHTING IN AREAS OF POOR ILLUMINATION.
5. INSTALL SHARED PATH (R8-2A) AND END (R7-4A) SIGNS IN PLACE OF 'ROAD AHEAD' SIGN WHERE TERMINAL IS AT END OF PATH.
6. ISOLATION JOINTS SHALL BE PROVIDED AROUND THE BASE OF EACH BOLLARD.



SECTION A-A
SCALE 1:30

SHARED PATH TERMINAL TREATMENT TO RESTRICT CYCLIST SPEEDS AT PATH/ROAD INTERSECTIONS
TYPE 1
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 300 600 900 1200 1500 1:30
0 1000 2000 3000 4000 5000 1:100
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

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PEDESTRIAN AND CYCLIST SERIES
SHARED PATH TERMINAL TREATMENT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0602	-
SHEET 1 OF 5	A3

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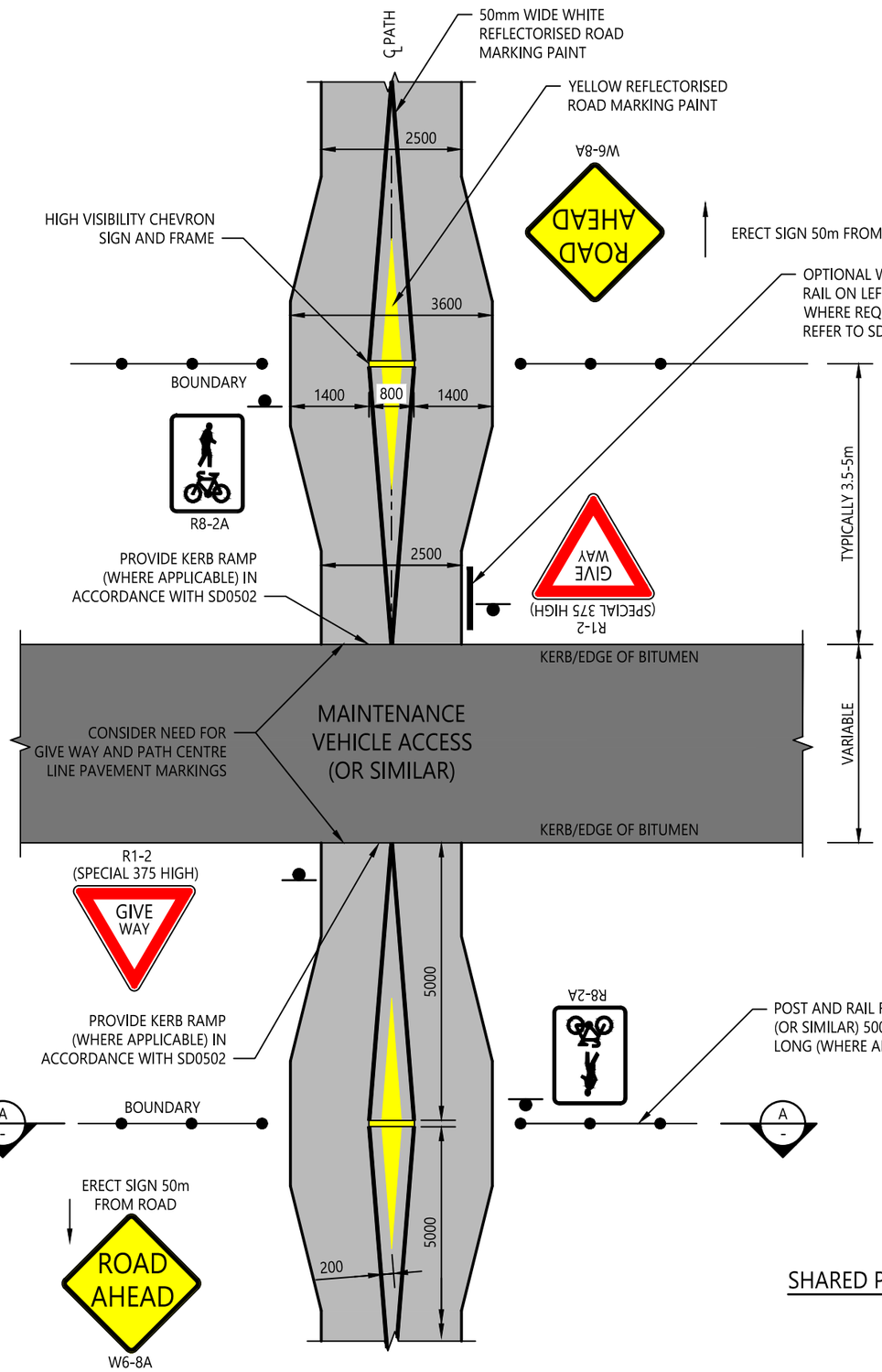
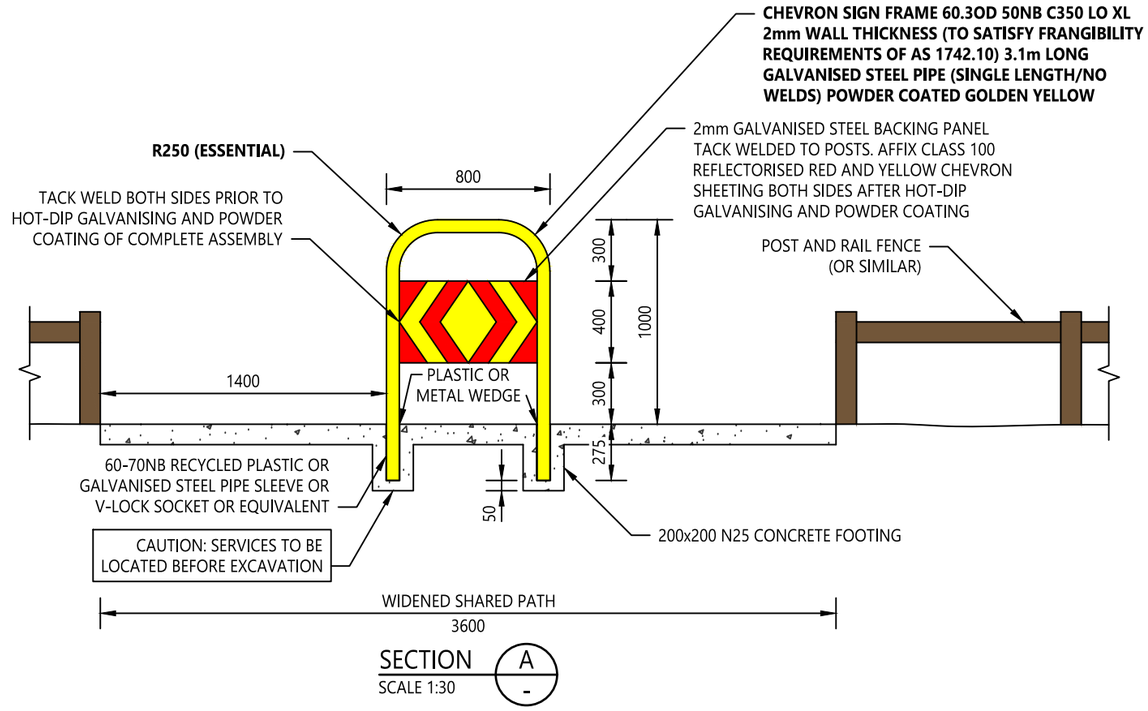


NOTES:

1. INCLUSION OF CHICANES OR BOLLARDS AT PATH TERMINALS NEEDS TO BE CAREFULLY CONSIDERED AND JUSTIFIED TO AVOID THEIR UNNECESSARY PROLIFERATION AND POTENTIAL HAZARD TO PATH USERS.
2. MEANDER PATH ON APPROACHES WHERE PRACTICABLE (SEVERE MEANDER MAY OBVIATE NEED FOR CHICANE).
3. WHERE VEHICLE ACCESS IS REQUIRED FOR MAINTENANCE PURPOSES, IT IS PREFERABLE TO PROVIDE ACCESS ADJACENT TO THE PATH, RATHER THAN BY INSTALLING REMOVABLE/COLLAPSIBLE POSTS, WHICH POSE A HAZARD TO PEDESTRIANS AND CYCLISTS.
4. CONSIDER NEED FOR PATH LIGHTING IN AREAS OF POOR ILLUMINATION.
5. INSTALL SHARED PATH (R8-2A) AND END (R7-4A) SIGNS IN PLACE OF 'ROAD AHEAD' SIGN WHERE TERMINAL IS AT END OF PATH.
6. ISOLATION JOINTS SHALL BE PROVIDED AROUND THE BASE OF EACH BOLLARD.



SHARED PATH TERMINAL TREATMENT ON WIDENED PATH
TYPE 2
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 300 600 900 1200 1500 1:30

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

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STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH TERMINAL TREATMENT

DRAWING NUMBER	REV
SD0602	-
SHEET 2 OF 5	A3

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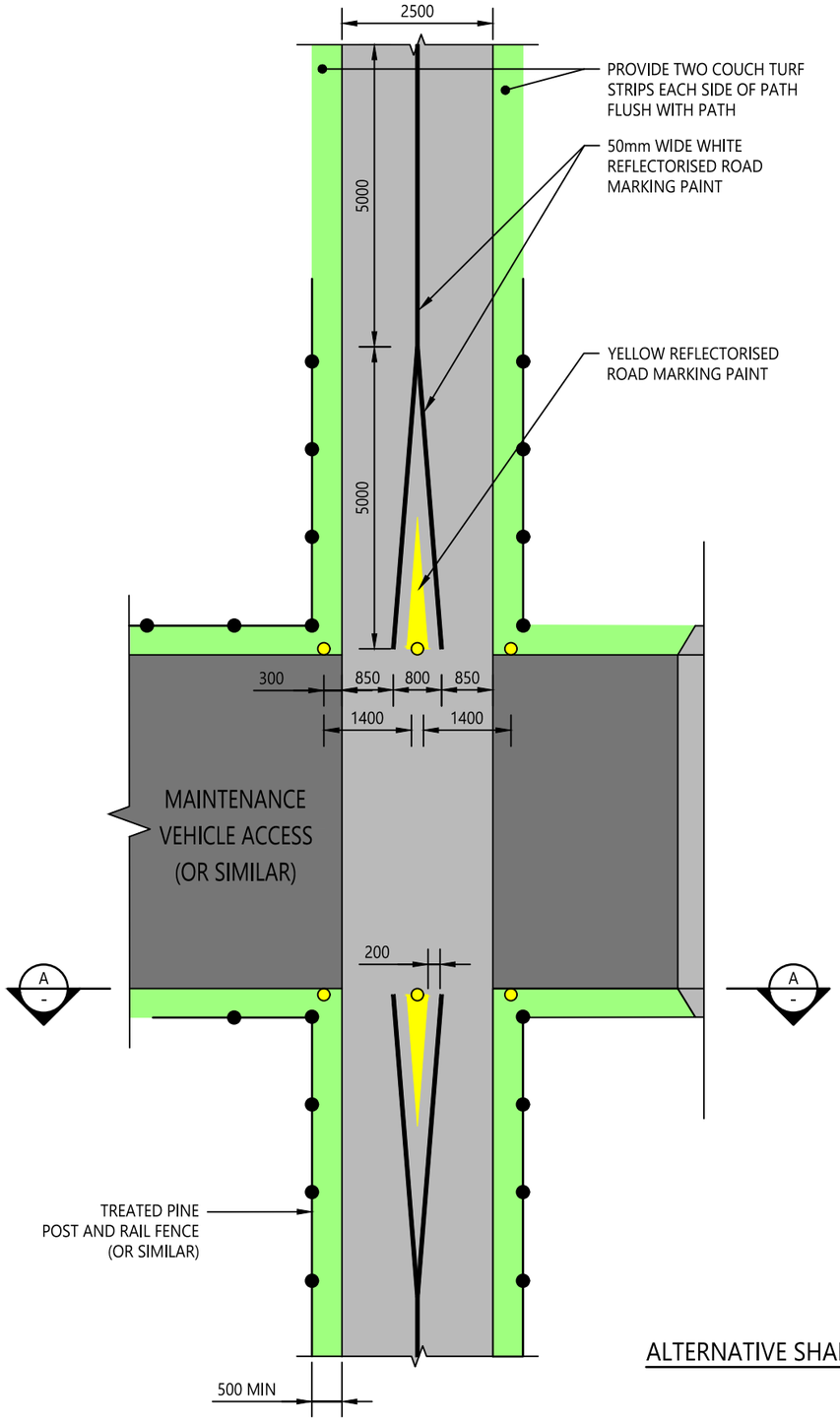
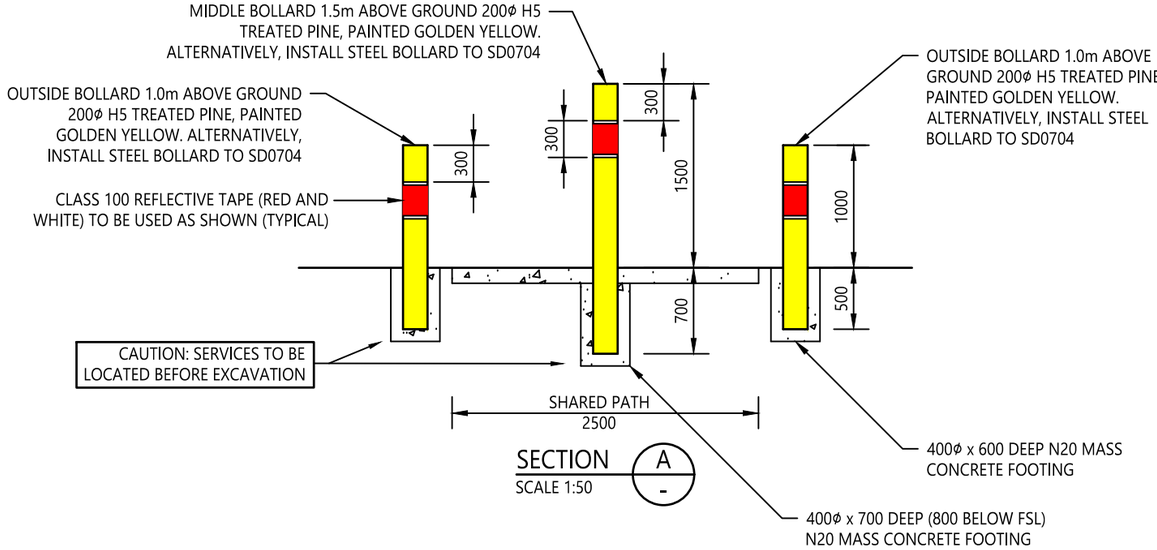


NOTES:

1. INCLUSION OF CHICANES OR BOLLARDS AT PATH TERMINALS NEEDS TO BE CAREFULLY CONSIDERED AND JUSTIFIED TO AVOID THEIR UNNECESSARY PROLIFERATION AND POTENTIAL HAZARD TO PATH USERS.
2. MEANDER PATH ON APPROACHES WHERE PRACTICABLE (SEVERE MEANDER MAY OBVIATE NEED FOR CHICANE).
3. WHERE VEHICLE ACCESS IS REQUIRED FOR MAINTENANCE PURPOSES, IT IS PREFERABLE TO PROVIDE ACCESS ADJACENT TO THE PATH, RATHER THAN BY INSTALLING REMOVABLE/COLLAPSIBLE POSTS, WHICH POSE A HAZARD TO PEDESTRIANS AND CYCLISTS.
4. CONSIDER NEED FOR PATH LIGHTING IN AREAS OF POOR ILLUMINATION.
5. INSTALL SHARED PATH (R8-2A) AND END (R7-4A) SIGNS IN PLACE OF 'ROAD AHEAD' SIGN WHERE TERMINAL IS AT END OF PATH.
6. ISOLATION JOINTS SHALL BE PROVIDED AROUND THE BASE OF EACH BOLLARD.



ALTERNATIVE SHARED PATH TERMINAL TREATMENT TO PREVENT VEHICLE ACCESS ONLY

TYPE 3

SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500 1:50

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

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CHECKED	M BAMBER
DATE	28/4/20

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STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH TERMINAL TREATMENT

DRAWING NUMBER	REV
SD0602	-
SHEET 3 OF 5	A3

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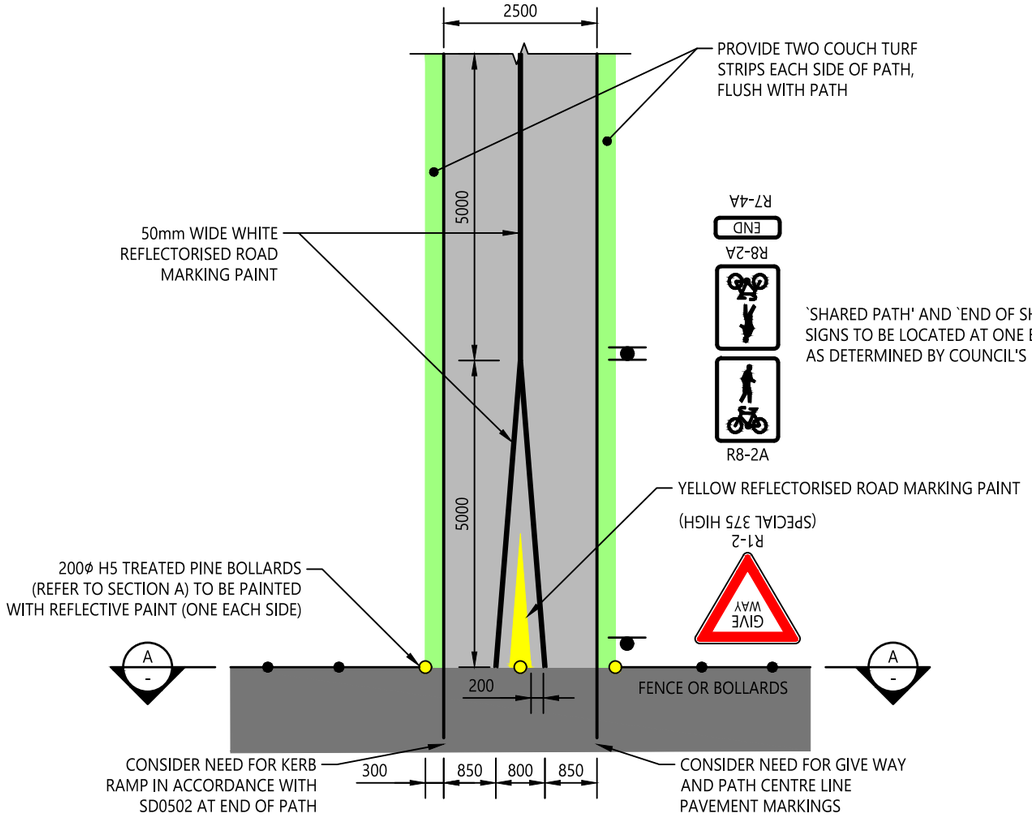
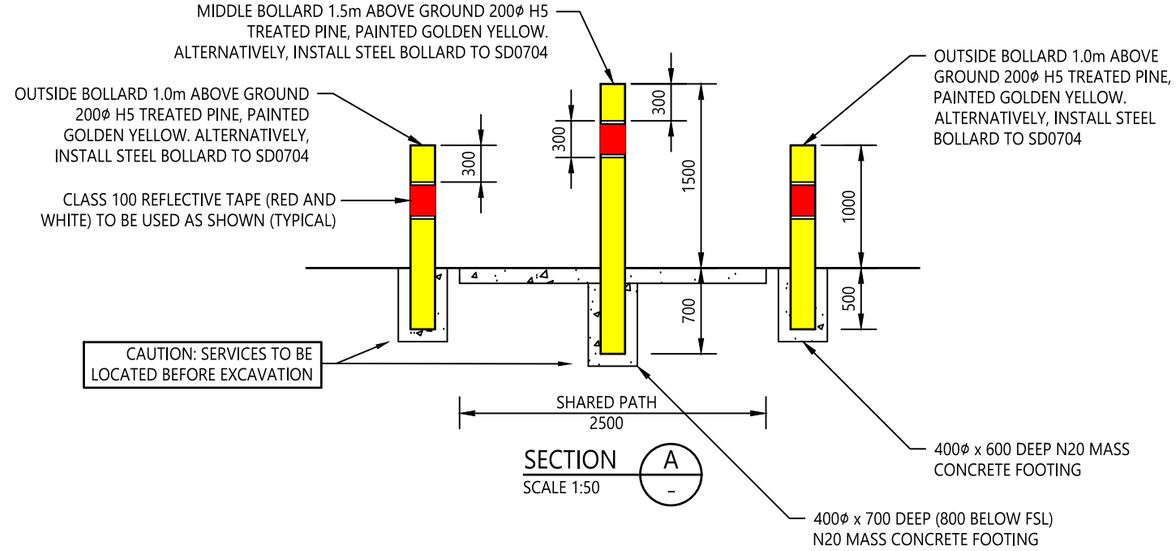
NOTES:

1. INCLUSION OF CHICANES OR BOLLARDS AT PATH TERMINALS NEEDS TO BE CAREFULLY CONSIDERED AND JUSTIFIED TO AVOID THEIR UNNECESSARY PROLIFERATION AND POTENTIAL HAZARD TO PATH USERS.
2. MEANDER PATH ON APPROACHES WHERE PRACTICABLE (SEVERE MEANDER MAY OBVIATE NEED FOR CHICANE).
3. WHERE VEHICLE ACCESS IS REQUIRED FOR MAINTENANCE PURPOSES, IT IS PREFERABLE TO PROVIDE ACCESS ADJACENT TO THE PATH, RATHER THAN BY INSTALLING REMOVABLE/COLLAPSIBLE POSTS, WHICH POSE A HAZARD TO PEDESTRIANS AND CYCLISTS.
4. CONSIDER NEED FOR PATH LIGHTING IN AREAS OF POOR ILLUMINATION.
5. INSTALL SHARED PATH (R8-2A) AND END (R7-4A) SIGNS IN PLACE OF 'ROAD AHEAD' SIGN WHERE TERMINAL IS AT END OF PATH.
6. ISOLATION JOINTS SHALL BE PROVIDED AROUND THE BASE OF EACH BOLLARD.





ALTERNATIVE SHARED PATH CONTROL
(STANDARD PATH WIDTH WHERE SHARED PATH ENDS AT ROAD, FOOTPATH, CAR PARK OR SIMILAR)
TYPE 4
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500 1:50

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH TERMINAL TREATMENT

DRAWING NUMBER	REV
SD0602	-
SHEET 4 OF 5	A3

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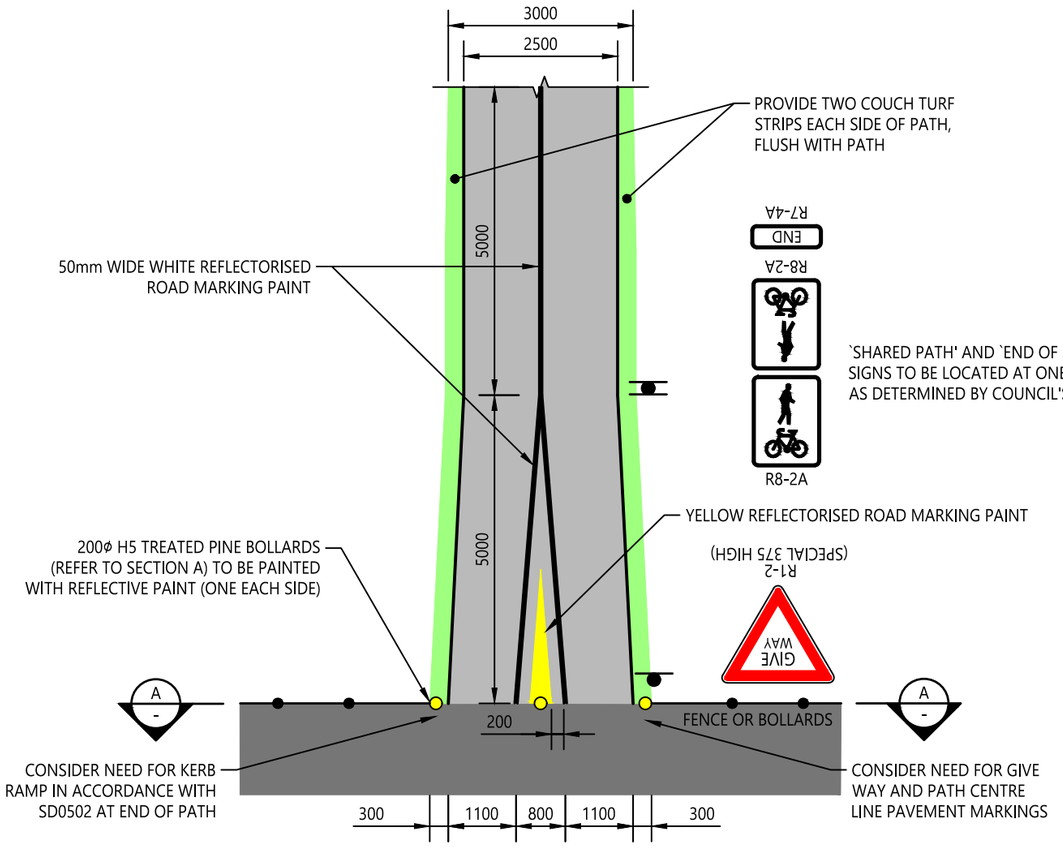
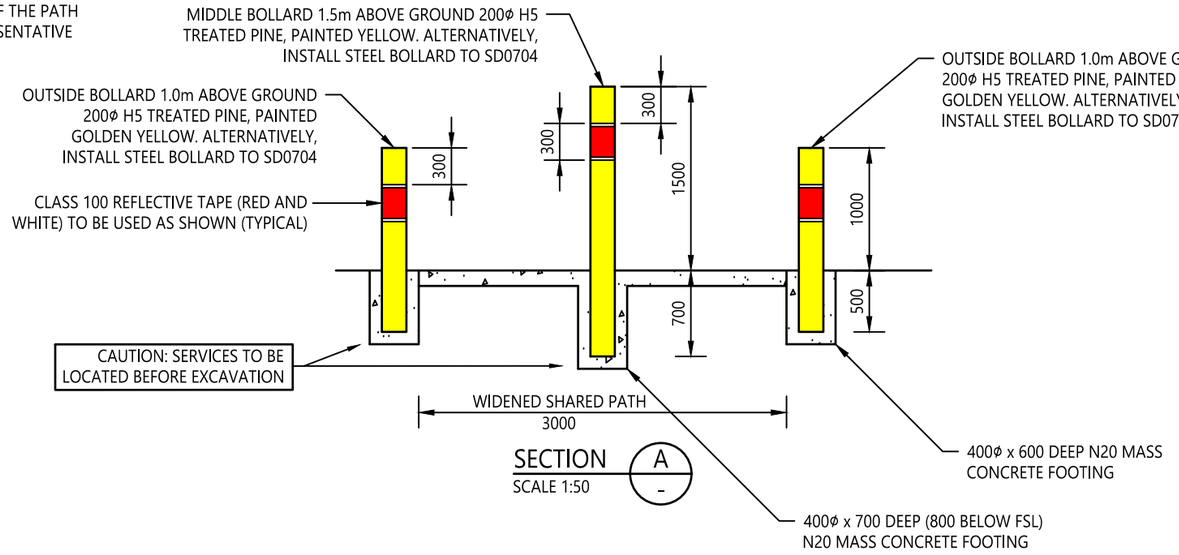
NOTES:

1. INCLUSION OF CHICANES OR BOLLARDS AT PATH TERMINALS NEEDS TO BE CAREFULLY CONSIDERED AND JUSTIFIED TO AVOID THEIR UNNECESSARY PROLIFERATION AND POTENTIAL HAZARD TO PATH USERS.
2. MEANDER PATH ON APPROACHES WHERE PRACTICABLE (SEVERE MEANDER MAY OBVIATE NEED FOR CHICANE).
3. WHERE VEHICLE ACCESS IS REQUIRED FOR MAINTENANCE PURPOSES, IT IS PREFERABLE TO PROVIDE ACCESS ADJACENT TO THE PATH, RATHER THAN BY INSTALLING REMOVABLE/COLLAPSIBLE POSTS, WHICH POSE A HAZARD TO PEDESTRIANS AND CYCLISTS.
4. CONSIDER NEED FOR PATH LIGHTING IN AREAS OF POOR ILLUMINATION.
5. INSTALL 'PATH ENDS' SIGN IN PLACE OF 'ROAD AHEAD' SIGN WHERE TERMINAL IS AT END OF PATH.
6. INSTALL SHARED PATH (R8-2A) AND END (R7-4A) SIGNS IN PLACE OF 'ROAD AHEAD' SIGN WHERE TERMINAL IS AT END OF PATH.
7. ISOLATION JOINTS SHALL BE PROVIDED AROUND THE BASE OF EACH BOLLARD.





ALTERNATIVE SHARED PATH CONTROL
(WIDENED PATH WIDTH WHERE SHARED PATH ENDS AT ROAD, FOOTPATH, CAR PARK OR SIMILAR)
TYPE 5

SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500 1:50

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH TERMINAL TREATMENT

STANDARD DRAWING

DRAWING NUMBER	REV
SD0602	-
SHEET 5 OF 5	A3

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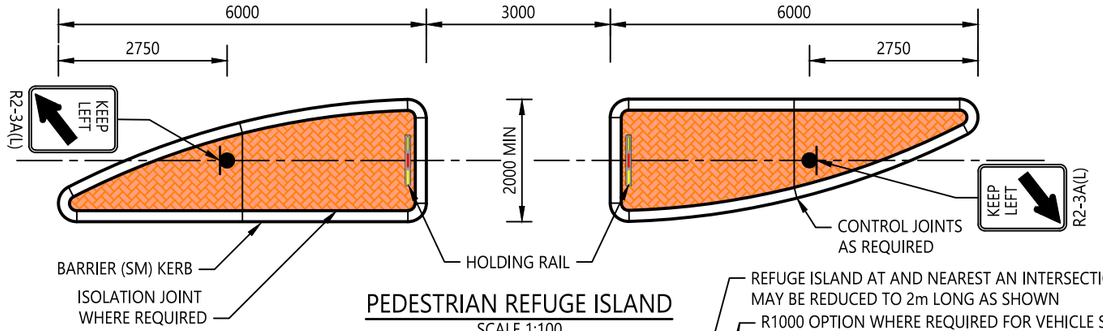
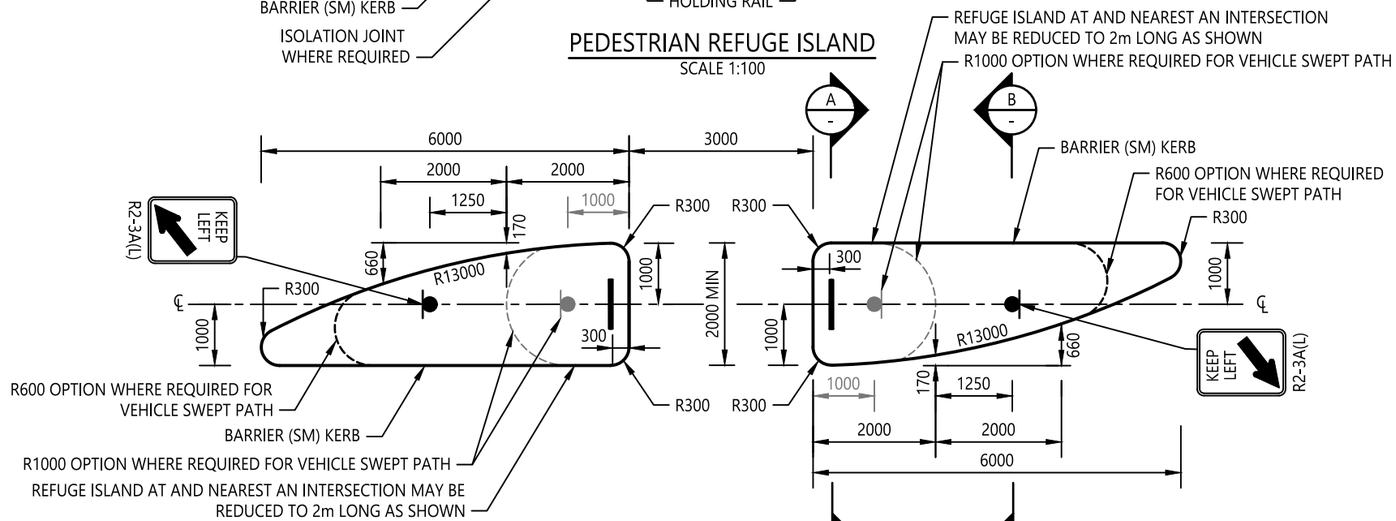
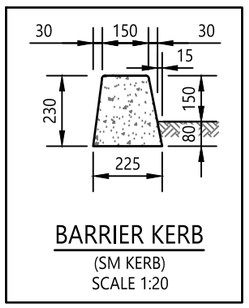


PEDESTRIAN REFUGE ISLAND
SCALE 1:100



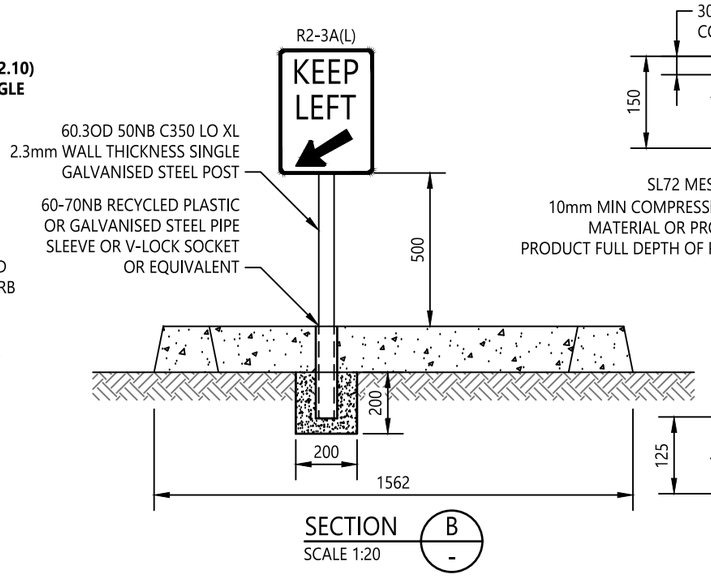
PEDESTRIAN REFUGE ISLAND DETAILS
SCALE 1:100



BARRIER KERB
(SM KERB)
SCALE 1:20

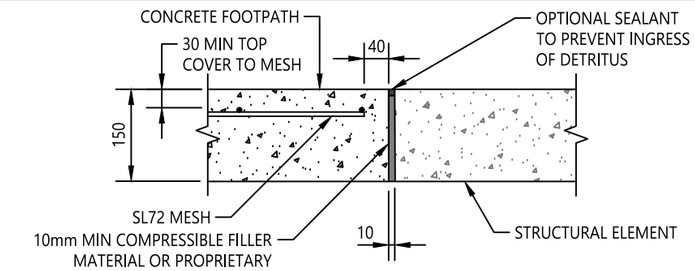
SECTION A
SCALE 1:20

HOLDING RAIL DETAILS

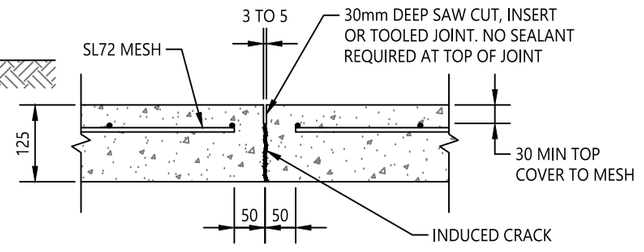


SECTION B
SCALE 1:20

KEEP LEFT SIGN AT PEDESTRIAN REFUGE ISLANDS



ISOLATION JOINT (IJ)
SCALE 1:10



CONTROL JOINT (CJ) 125mm
SCALE 1:10

NOTES:

1. PEDESTRIAN REFUGE CONFIGURATIONS ARE BASED ON TfNSW TECHNICAL DIRECTION TDT 2011/01 AND AS 1742.10. GENERALLY, FOR NON-ARTERIAL ROADS WITH V_{85} = 50 TO 60km/h. RECOMMENDED FOR ROADS WITH ADT > 3,000. REFER TO TDT 2011/01 FOR 4-LANE 2-WAY ROADS.
2. WHEREVER PROVISION IS MADE FOR PEDESTRIANS/CYCLISTS TO CROSS AT TRAFFIC ISLANDS, BARRIER (SM) KERB MUST BE USED. AT MEDIAN REFUGE LOCATIONS, TRANSITION SF KERB TO SM KERB OVER 5m ON APPROACH AND DEPARTURE SIDES AND INSTALL HOLDING RAILS EACH SIDE OF THE MEDIAN.
3. ROAD WIDENING OR KERB EXTENSIONS SHOULD BE CONSIDERED IN ACCORDANCE WITH TDT 2011/01. PROVISION FOR CYCLISTS AND ROAD DRAINAGE MAY DICTATE THE REFUGE CONFIGURATION. ANY KERB EXTENSIONS MUST HAVE APPROPRIATE APPROACH DELINEATION, PREFERABLY E1/C4 TAPERS AND HAZARD SIGNS.
4. REFUGE ISLAND 2m MINIMUM WIDE AT CROSSING.
5. CROSSING GAP 3m MINIMUM OR 3.6m AT PEDESTRIAN (ZEBRA) CROSSINGS.
6. MINIMUM LANE WIDTH AT CROSSING TO BE 3.5m. MAY NEED WIDENING ON HORIZONTAL CURVES. ENSURE VEHICLE TURNING PATHS ARE CHECKED FOR APPROPRIATE DESIGN VEHICLE, ESPECIALLY ON BUS ROUTES.
7. HOLDING RAILS TO BE FRANGIBLE IN ACCORDANCE WITH AS 1742.10.
8. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
9. CONTROL JOINTS SHALL BE PROVIDED MIDWAY ALONG THE 6m LONG REFUGE ISLANDS AND AT 3m INTERVALS IN BARRIER (SM) KERB WHERE APPLICABLE.
10. ISOLATION JOINTS SHALL BE PROVIDED BETWEEN KERB AND CONCRETE INFILL WHERE REQUIRED.
11. TRAFFIC ISLAND KERB TO BE PAINTED WITH WHITE REFLECTORISED ROAD MARKING PAINT.
12. EDGE LINES TO BE MARKED ON ROADS ≥ 11m WIDE.
13. C3 LINES TO BE MARKED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT. ALL OTHER PAVEMENT MARKINGS TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT.
14. ALL OBSOLETE PAVEMENT MARKINGS TO BE COMPLETELY REMOVED.
15. STOP OR GIVE WAY INTERSECTION CONTROL MAY BE REQUIRED ON TERMINATING SIDE ROADS.
16. ENSURE CROSSING SIGHT DISTANCE REQUIREMENTS ARE ACHIEVED IN ACCORDANCE WITH AUSTROADS GUIDELINES:

DISTANCE 4m:	46m AT V_{85} = 50km/h	56m AT V_{85} = 60km/h
DISTANCE 5m:	58m AT V_{85} = 50km/h	69m AT V_{85} = 60km/h

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	D MILLER/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

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ROADS TRANSPORT DRAINAGE AND WASTE

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PEDESTRIAN AND CYCLIST SERIES
PEDESTRIAN REFUGE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0603	-
SHEET 1 OF 5	A3

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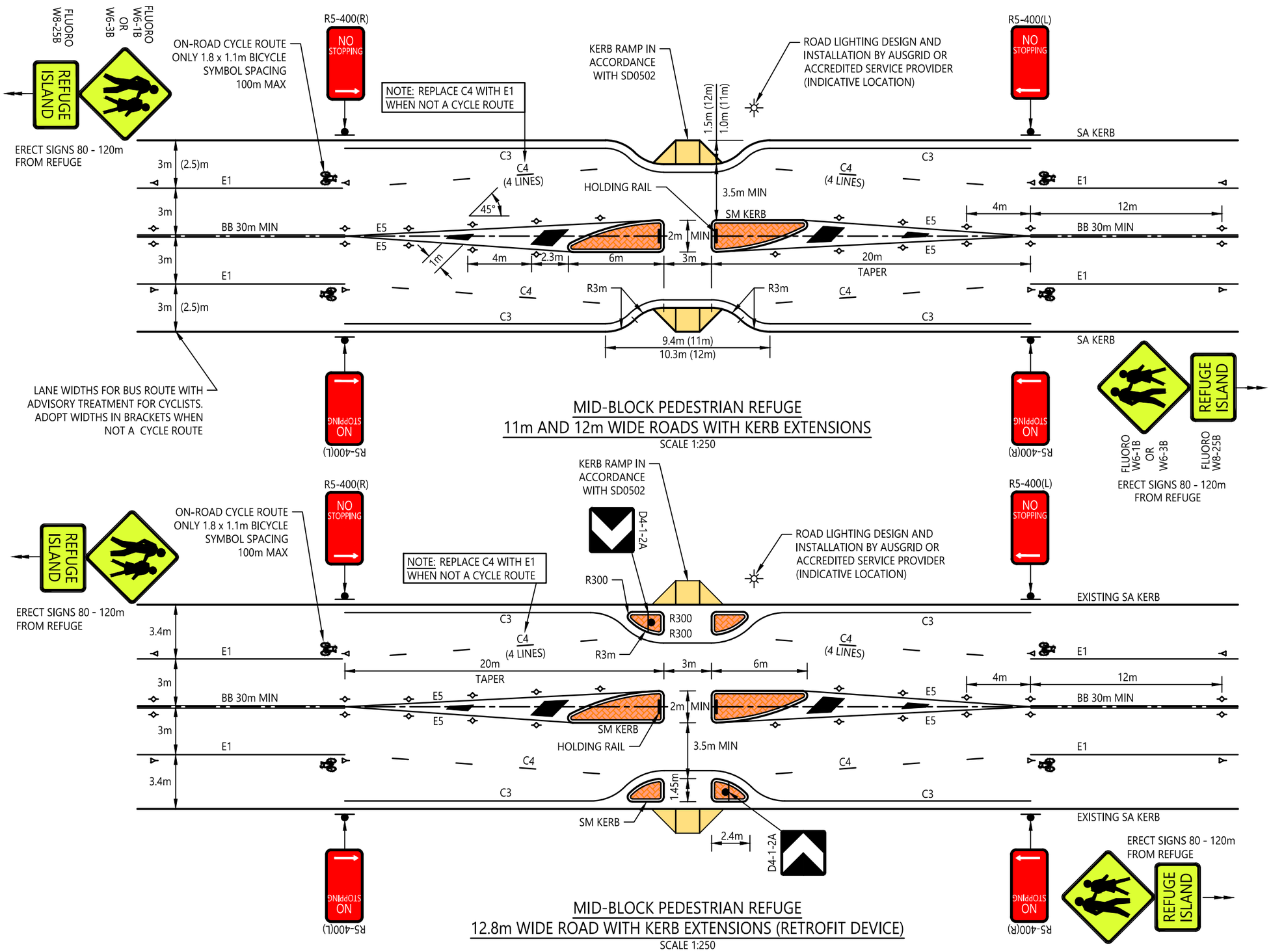

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000 1:20

0 2500 5000 7500 10000 12500 1:250

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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PEDESTRIAN AND CYCLIST SERIES
PEDESTRIAN REFUGE

DRAWING NUMBER	REV
SD0603	-
SHEET 2 OF 5	A3

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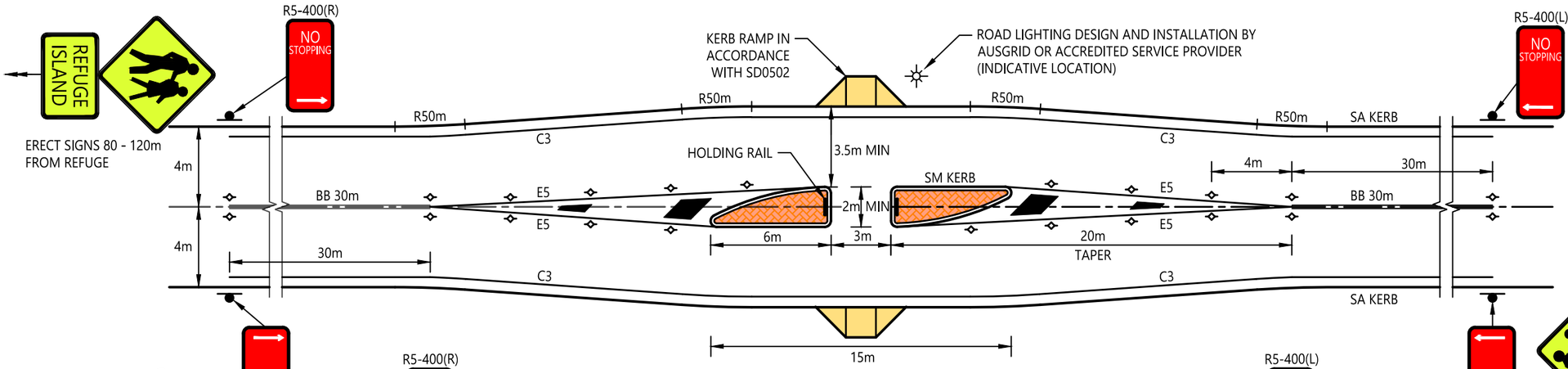
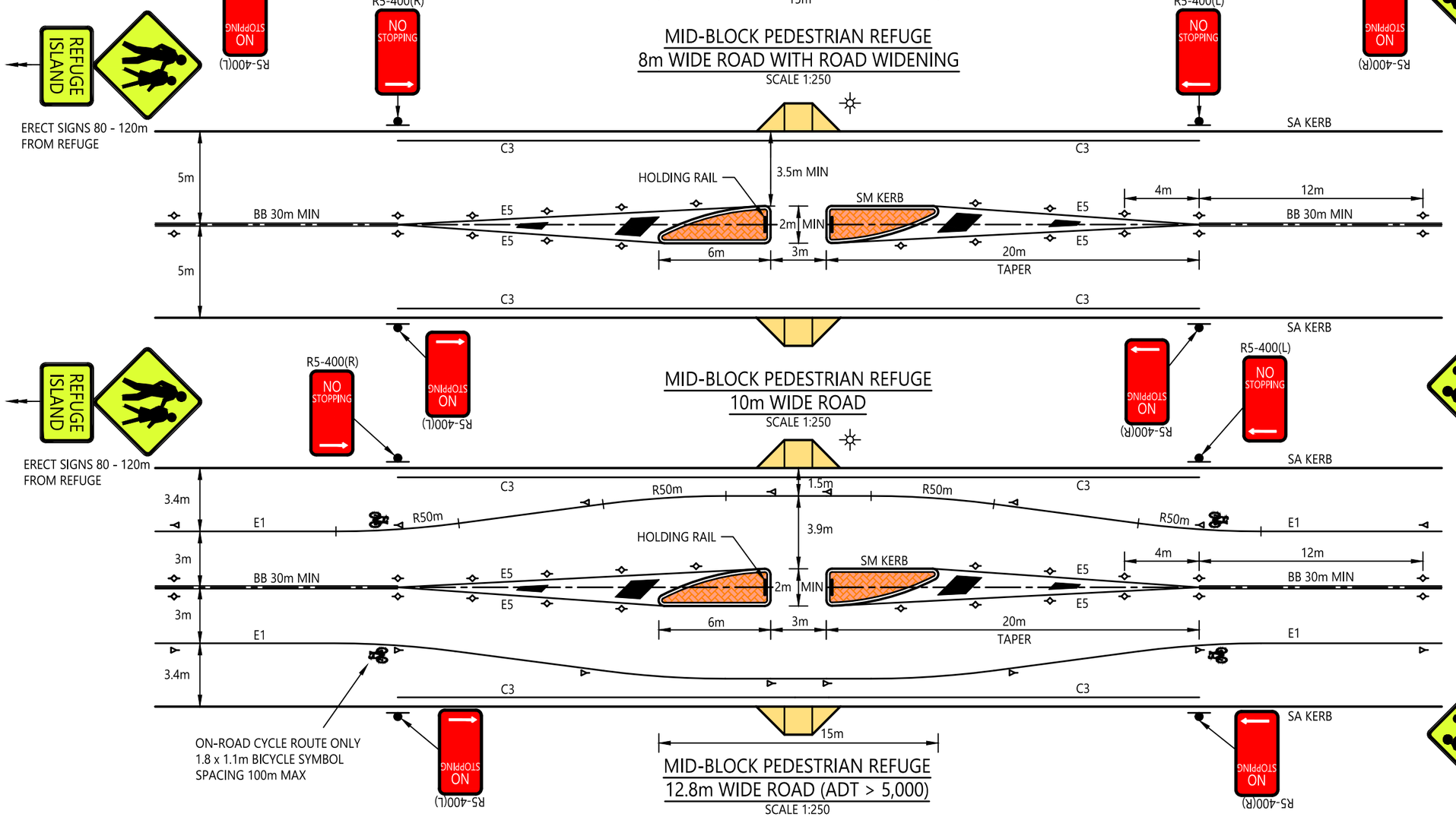


MID-BLOCK PEDESTRIAN REFUGE
8m WIDE ROAD WITH ROAD WIDENING
SCALE 1:250

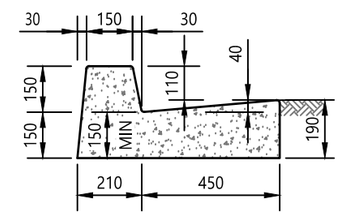


MID-BLOCK PEDESTRIAN REFUGE
10m WIDE ROAD
SCALE 1:250

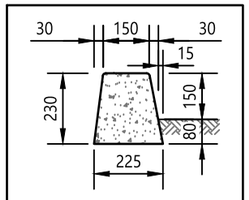
MID-BLOCK PEDESTRIAN REFUGE
12.8m WIDE ROAD (ADT > 5,000)
SCALE 1:250

LEGEND

- Centre line
- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign and post
- Road light
- Terracotta coloured stamped concrete infill



BARRIER KERB AND CHANNEL
(MODIFIED SA KERB)
SCALE 1:20



BARRIER KERB
(SM KERB)
SCALE 1:20

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 200 400 600 800 1000 1:20

0 2500 5000 7500 10000 12500 1:250

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

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STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
PEDESTRIAN REFUGE

DRAWING NUMBER	REV
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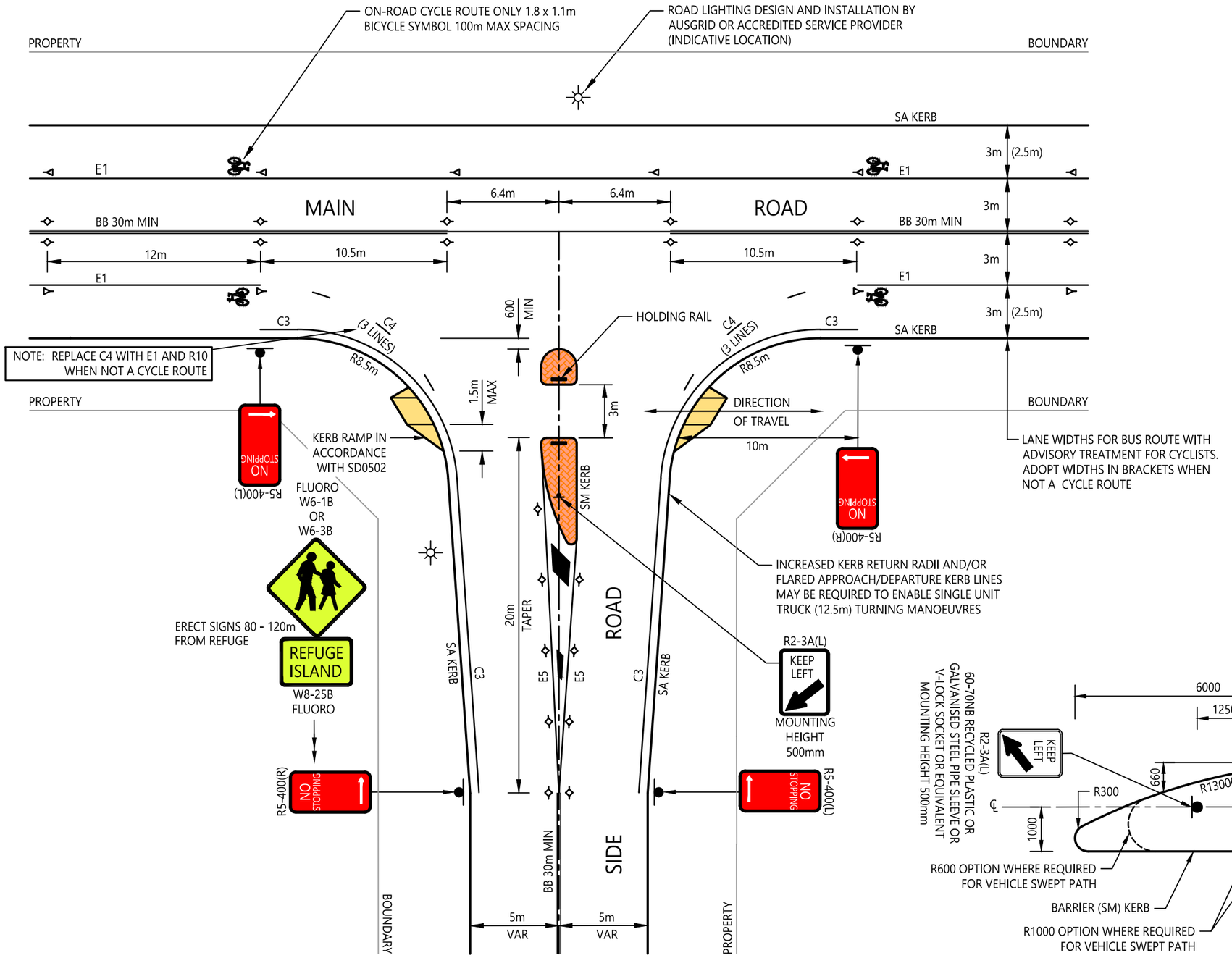


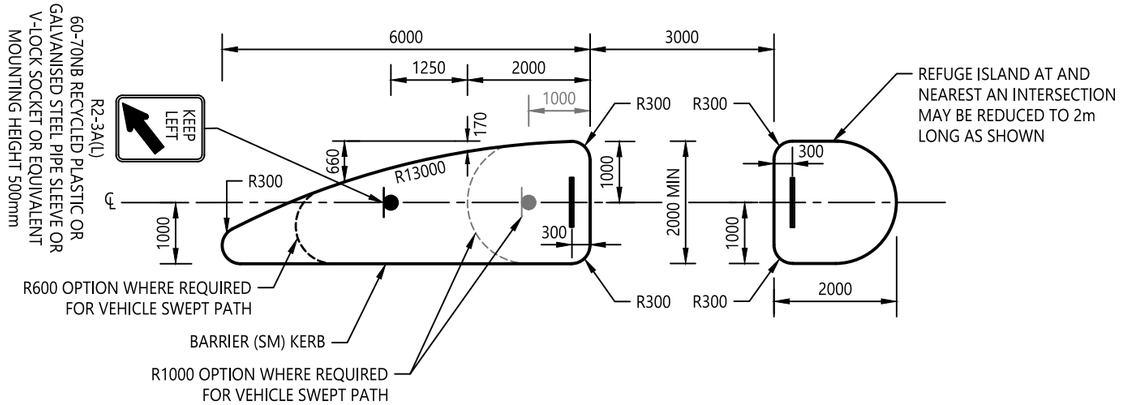
PEDESTRIAN REFUGE AT T-INTERSECTION
SCALE 1:250

NOTES:

1. TRAFFIC SIGNS TO BE ERECTED AS FOLLOWS:
   - MOUNTING HEIGHT: 2.5m (UNLESS OTHERWISE SHOWN)
   - LATERAL CLEARANCE: 0.6m (0.3 MIN) FROM EDGE OF SIGN TO KERB/EDGE OF BITUMEN
2. PAVEMENT MARKINGS TO BE APPLIED IN ACCORDANCE WITH COUNCIL'S PAVEMENT MARKING SPECIFICATIONS.
3. BB, E1, E5 AND C4 LINES TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT. DIAGONALS AND SYMBOLS TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. C3 LINES TO BE MARKED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT.
4. TRAFFIC ISLAND KERB TO BE PAINTED WITH WHITE REFLECTORISED ROAD MARKING PAINT.
5. HOLDING RAILS TO BE FRANGIBLE IN ACCORDANCE WITH AS 1742.10.
6. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
7. LOCATION AND ALIGNMENT OF FOOTPATH(S) AND SHARED PATH(S) TO BE DETERMINED BASED ON SITE SPECIFIC REQUIREMENTS.

LEGEND

- Centre line
- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign and post
- Road light
- Terracotta coloured stamped concrete infill or equivalent
- Bicycle symbol (advisory treatment)



PEDESTRIAN REFUGE ISLAND DETAILS
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING
0 1000 2000 3000 4000 5000 1:100
0 2500 5000 7500 10000 12500 1:250

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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PEDESTRIAN AND CYCLIST SERIES
PEDESTRIAN REFUGE

DRAWING NUMBER	REV
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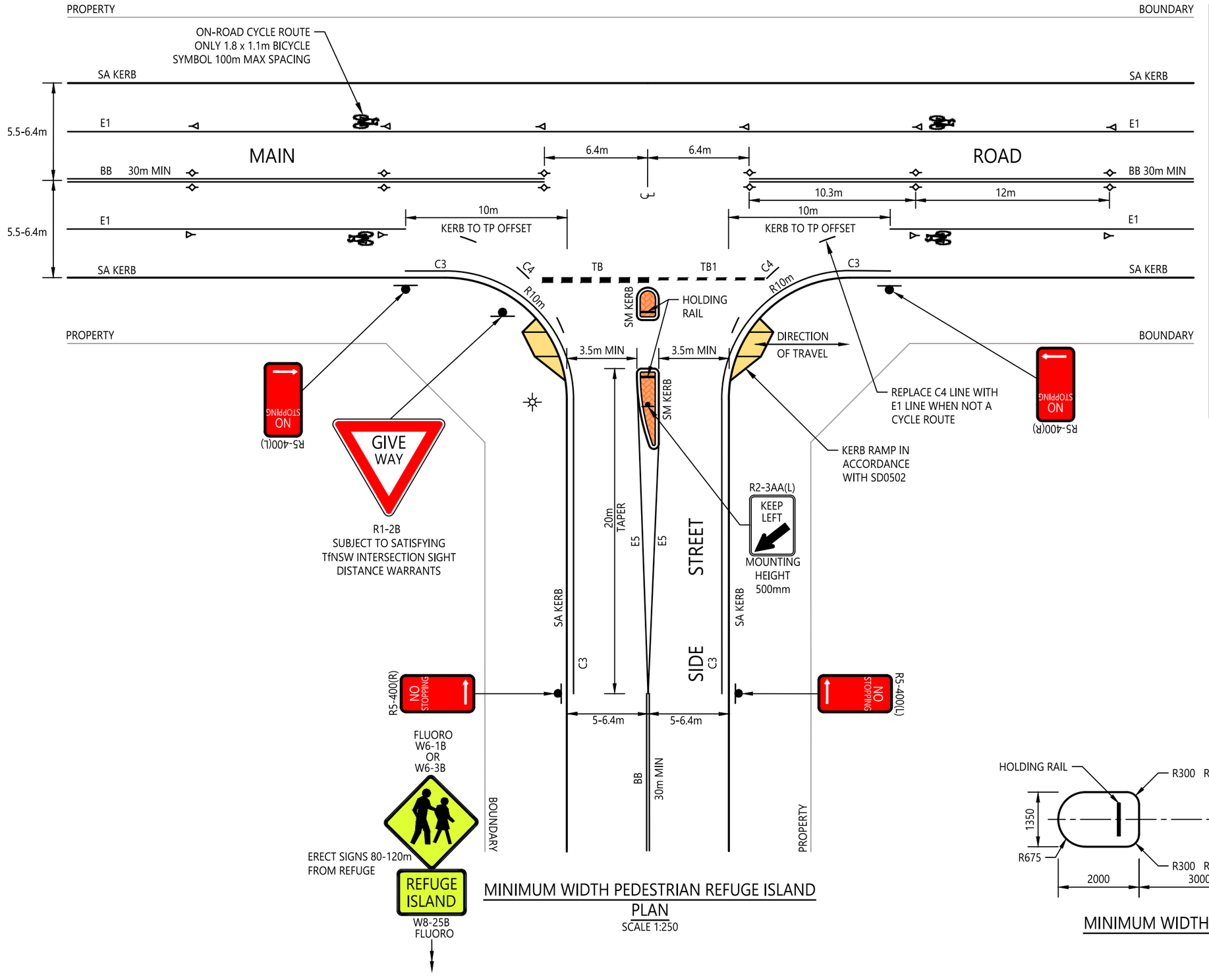


MINIMUM WIDTH PEDESTRIAN REFUGE ISLAND
PLAN
SCALE 1:250

NOTES:

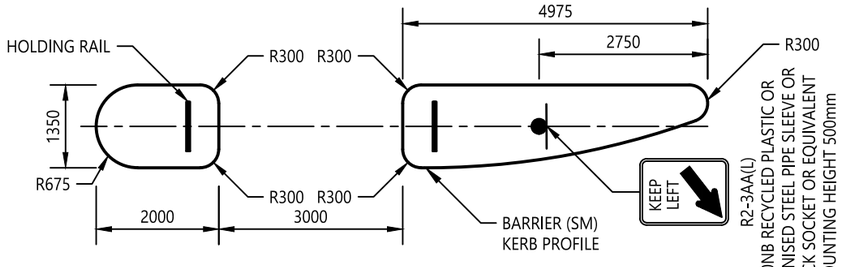
1. MINIMUM WIDTH PEDESTRIAN REFUGE ISLAND (1.35m WIDE) ONLY TO BE INSTALLED AT CONSTRAINED LOCATIONS TO ENABLE APPROPRIATE DESIGN VEHICLE TURNING PATHS, IN CONSULTATION WITH COUNCIL'S REPRESENTATIVE.
2. TRAFFIC SIGNS TO BE ERECTED AS FOLLOWS:

   MOUNTING HEIGHT: 2.5m (UNLESS OTHERWISE SPECIFIED)

   LATERAL CLEARANCE: 0.6m (0.3m MIN) FROM EDGE OF SIGN TO KERB/EDGE OF BITUMEN.
3. PAVEMENT MARKINGS TO BE APPLIED IN ACCORDANCE WITH COUNCIL'S PAVEMENT MARKING SPECIFICATION.
4. BB, E1, E5 AND C4 LINES TO BE APPLIED IN WHITE REFLECTORISED THERMOPLASTIC PAINT. TB, TB1 LINES AND SYMBOLS TO BE APPLIED IN WHITE REFLECTORISED PREFORMED THERMOPLASTIC MATERIAL. C3 LINES TO BE MARKED IN YELLOW REFLECTORISED THERMOPLASTIC PAINT.
5. TRAFFIC ISLAND KERB TO BE PAINTED WITH WHITE REFLECTORISED ROAD MARKING PAINT.
6. HOLDING RAILS TO BE FRANGIBLE IN ACCORDANCE WITH AS1742.10.
7. ROAD LIGHTING TO BE PROVIDED IN ACCORDANCE WITH AS/NZS 1158.
8. LOCATION AND ALIGNMENT OF FOOTPATH(S) AND SHARED PATH(S) TO BE DETERMINED BASED ON SITE SPECIFIC REQUIREMENTS.

LEGEND

- Centre line
- Proposed kerb (invert alignment)
- Yellow bidirectional RRPM
- Red unidirectional RRPM
- Proposed sign and post
- Road light
- Terracotta coloured stamped concrete infill or equivalent
- Bicycle symbol (advisory treatment)



MINIMUM WIDTH PEDESTRIAN REFUGE ISLAND DETAILS
SCALE 1:100

REV	AMENDMENT	DATE	DRAWN	APRVD
A	CHANGE TO ISLAND SHAPE	23/3/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 1000 2000 3000 4000 5000 1:100

0 2500 5000 7500 10000 12500 1:250

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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ROADS TRANSPORT DRAINAGE AND WASTE

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STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
PEDESTRIAN REFUGE

DRAWING NUMBER	REV
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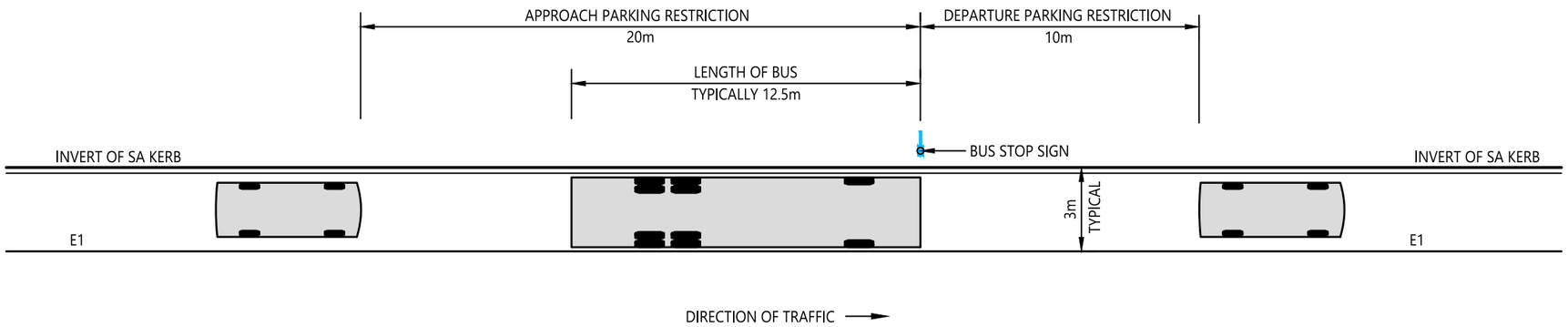


KERBSIDE BUS STOP

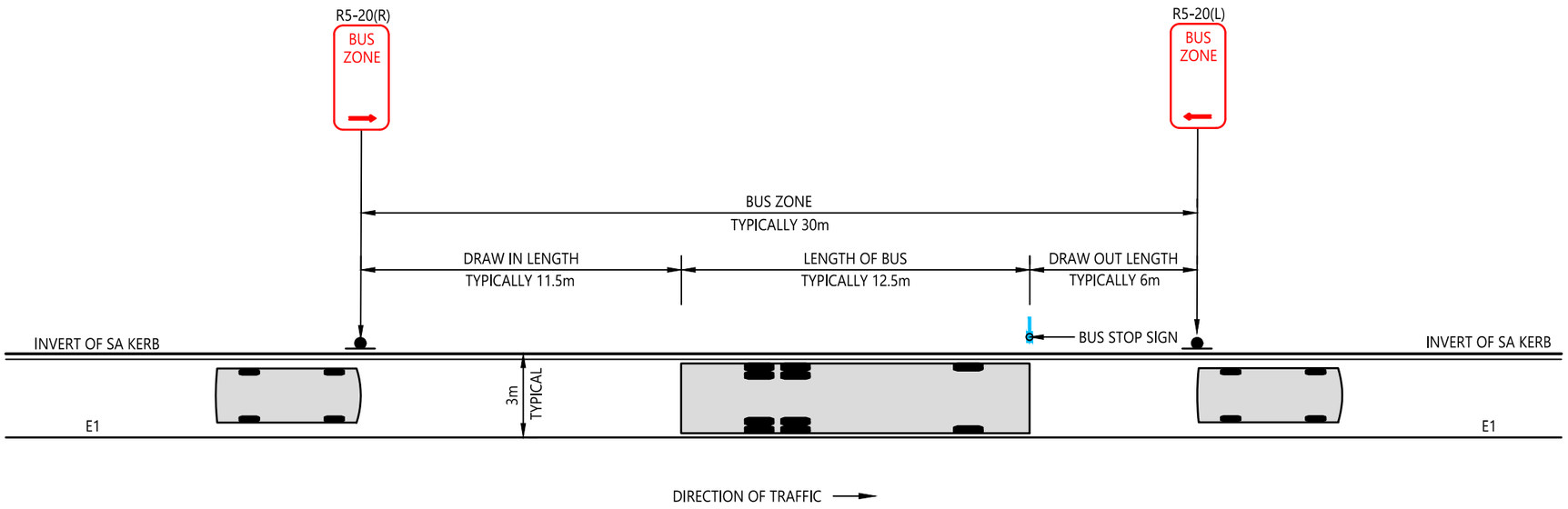
SCALE 1:200

NOTES:

1. BUS STOPS MAY BE LOCATED IN RESIDENTIAL AREAS WHERE INFREQUENT STOPPED BUSES TEMPORARILY BLOCK VEHICLE ACCESS CROSSINGS.
2. BUS STOPS SHOULD BE LOCATED ON THE DEPARTURE SIDE OF SIGNALISED INTERSECTIONS AND PEDESTRIAN CROSSING FACILITIES. BUS STOPS MAY BE LOCATED ON THE APPROACH OR DEPARTURE SIDE OF OTHER INTERSECTIONS. NO STOPPING RESTRICTIONS MAY BE UTILISED FOR REQUIRED DRAW IN/OUT LENGTHS.
3. BUS ZONES SHOULD BE INSTALLED AT BUS STOPS WHERE THE STATUTORY PARKING RESTRICTIONS (20m APPROACH AND 10m DEPARTURE) ARE CONSIDERED INEFFECTIVE AND REQUIRE REINFORCEMENT.
4. BUS ZONE LENGTHS SHOULD BE BASED ON THE FOLLOWING TABLE (ADAPTED FROM NSW STATE TRANSIT BUS INFRASTRUCTURE GUIDE):

BUS STOP DIMENSIONS (m)	STANDARD BUS	LONG RIGID BUS
LENGTH OF BUS	12.5	14.5
DRAW OUT LENGTH (MIN)	6.0	6.5
DRAW IN LENGTH (MIN)	11.5	14.0
BUS ZONE LENGTH (1 BUS)	30.0	35.0

5. BUS ZONE LENGTH FOR MULTIPLE BUS OPERATIONS SHALL BE CALCULATED BY THE ADDITION OF LENGTH OF BUSES + DRAW IN/OUT LENGTHS + REQUIRED GAP BETWEEN BUSES OF 1 TO 6m.



KERBSIDE BUS STOP WITH BUS ZONE

SCALE 1:200

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2000 4000 6000 8000 10000

1:200

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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PEDESTRIAN AND CYCLIST SERIES
BUS STOP

STANDARD DRAWING

DRAWING NUMBER	REV
SD0604	A
SHEET 1 OF 9	A3

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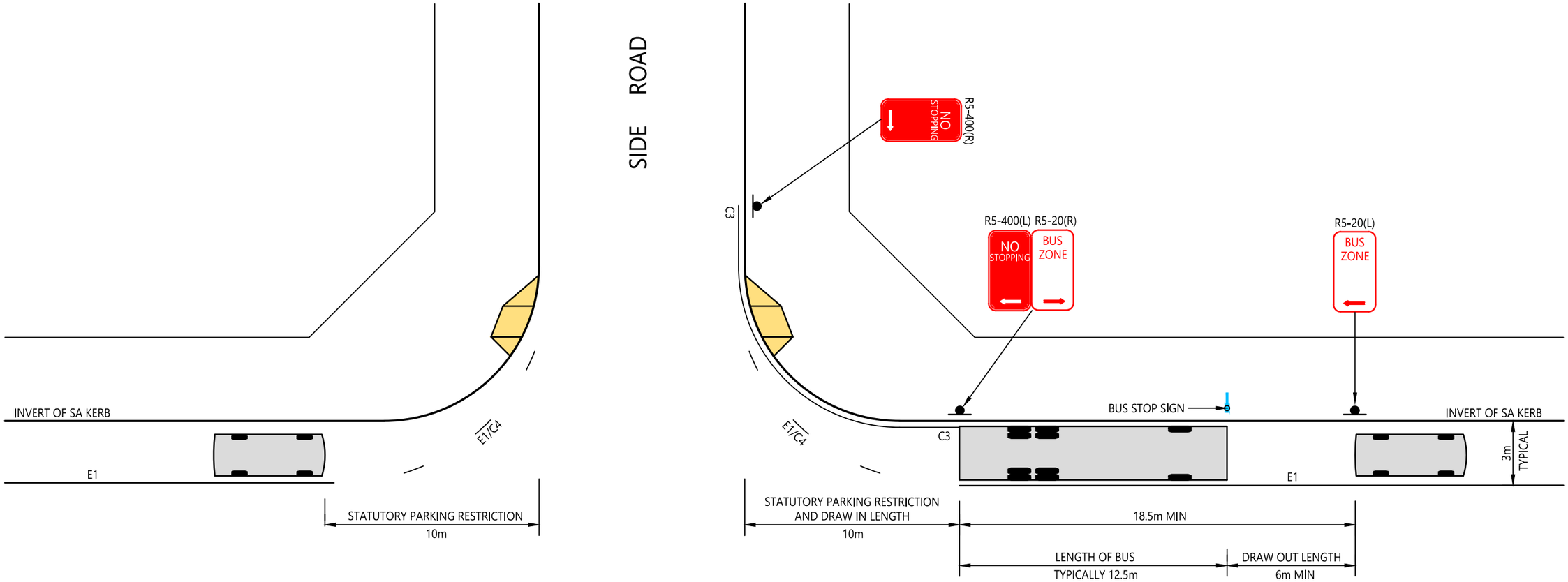
NOTE:

BUS STOP/BUS ZONE MAY BE LOCATED ON APPROACH SIDE OF INTERSECTION EXCEPT WHERE THERE IS A HIGH VOLUME OF LEFT TURNING VEHICLES. DRAW OUT LENGTH MAY BE SUBSTITUTED BY STATUTORY PARKING RESTRICTION.



KERBSIDE BUS STOP WITH BUS ZONE ON DEPARTURE SIDE OF T-INTERSECTION

SCALE 1:200

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2000 4000 6000 8000 10000

1:200

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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PEDESTRIAN AND CYCLIST SERIES BUS STOP

STANDARD DRAWING

DRAWING NUMBER	REV
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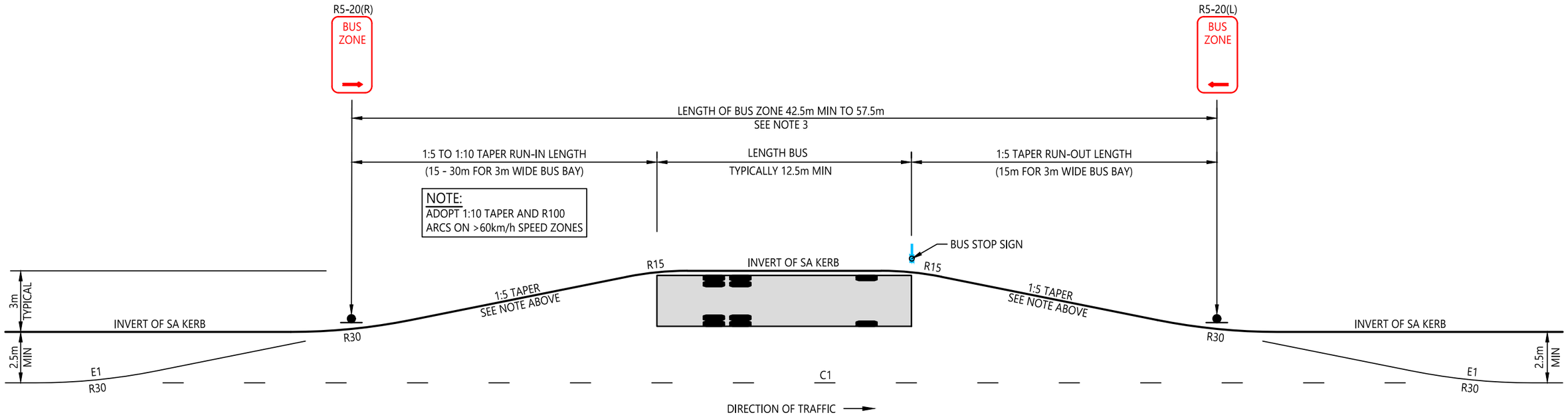
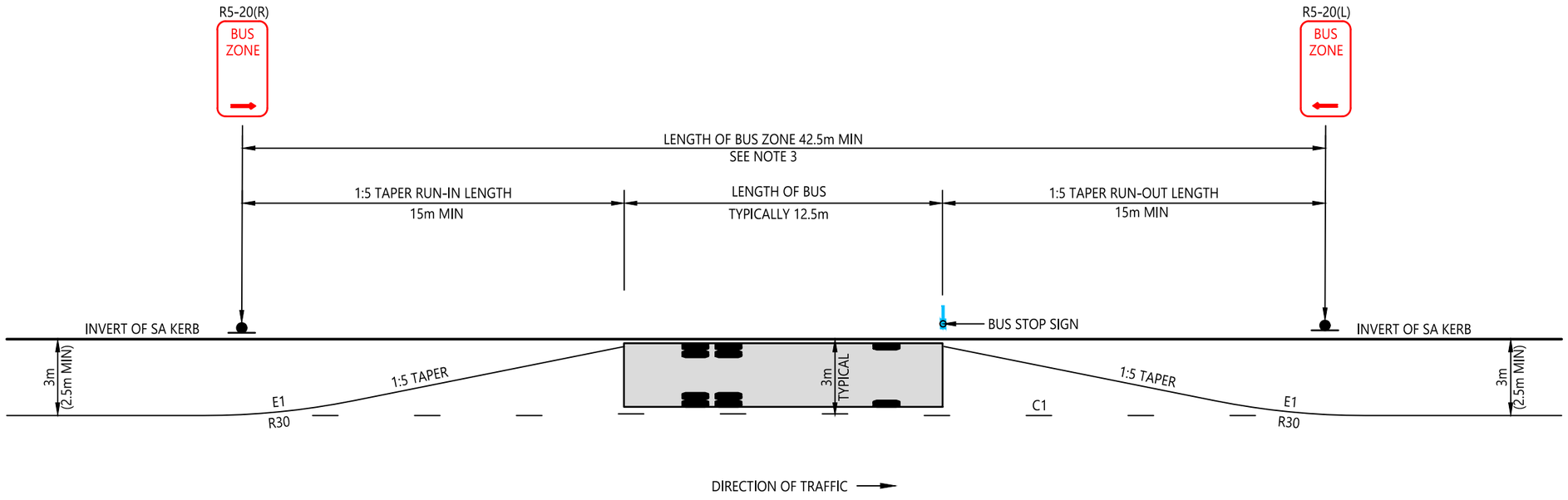


BUS ZONE WITH INDENTED BUS BAY
SCALE 1:200



BUS ZONE WITH KERBSIDE BUS BAY
SCALE 1:200

NOTES:

1. REFER TO BUS STOP INSTALLATION GUIDE FOR LOCAL COUNCILS: PART 1 - DESIGN MANUAL AND TfNSW SUPPLEMENT TO AUSTROADS GUIDE TO ROAD DESIGN PART 3 FOR FURTHER INFORMATION.
2. BUS BAYS IDEALLY SHOULD BE INSTALLED WHERE THE BUS STOP IS ADJACENT TO BUS OR BUS ONLY LANES.
3. THE BUS ZONE WITH INDENTED BUS BAY AND KERBSIDE BUS BAY LAYOUTS ARE INTENDED FOR ROADS WITH RELATIVELY HIGH TRAFFIC VOLUME AND FREQUENT BUS STOPPING MANOEUVRES. OTHERWISE, THE BUS STOP CONFIGURATION ON SHEETS 1 AND 2 SHOULD BE USED.
4. BUS BAY LAYOUTS SHOWN IN THIS STANDARD DRAWING SHALL ONLY BE PROVIDED IN LOW SPEED ENVIRONMENTS (TYPICALLY 50-60km/h SPEED ZONES) ON TWO-LANE, TWO-WAY ROADS.
5. ACCELERATION AND DECELERATION TAPERS SHALL BE INCLUDED WHERE THE POSTED SPEED LIMIT IS >60km/h.
6. BUS BAY LAYOUTS ON CYCLE ROUTES REQUIRE AN ALTERNATIVE LANE WIDTH AND PAVEMENT MARKING CONFIGURATION.

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 2000 4000 6000 8000 10000

1:200

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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ROADS TRANSPORT DRAINAGE AND WASTE

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PEDESTRIAN AND CYCLIST SERIES
BUS STOP

STANDARD DRAWING

DRAWING NUMBER	REV
SD0604	A
SHEET 3 OF 9	A3

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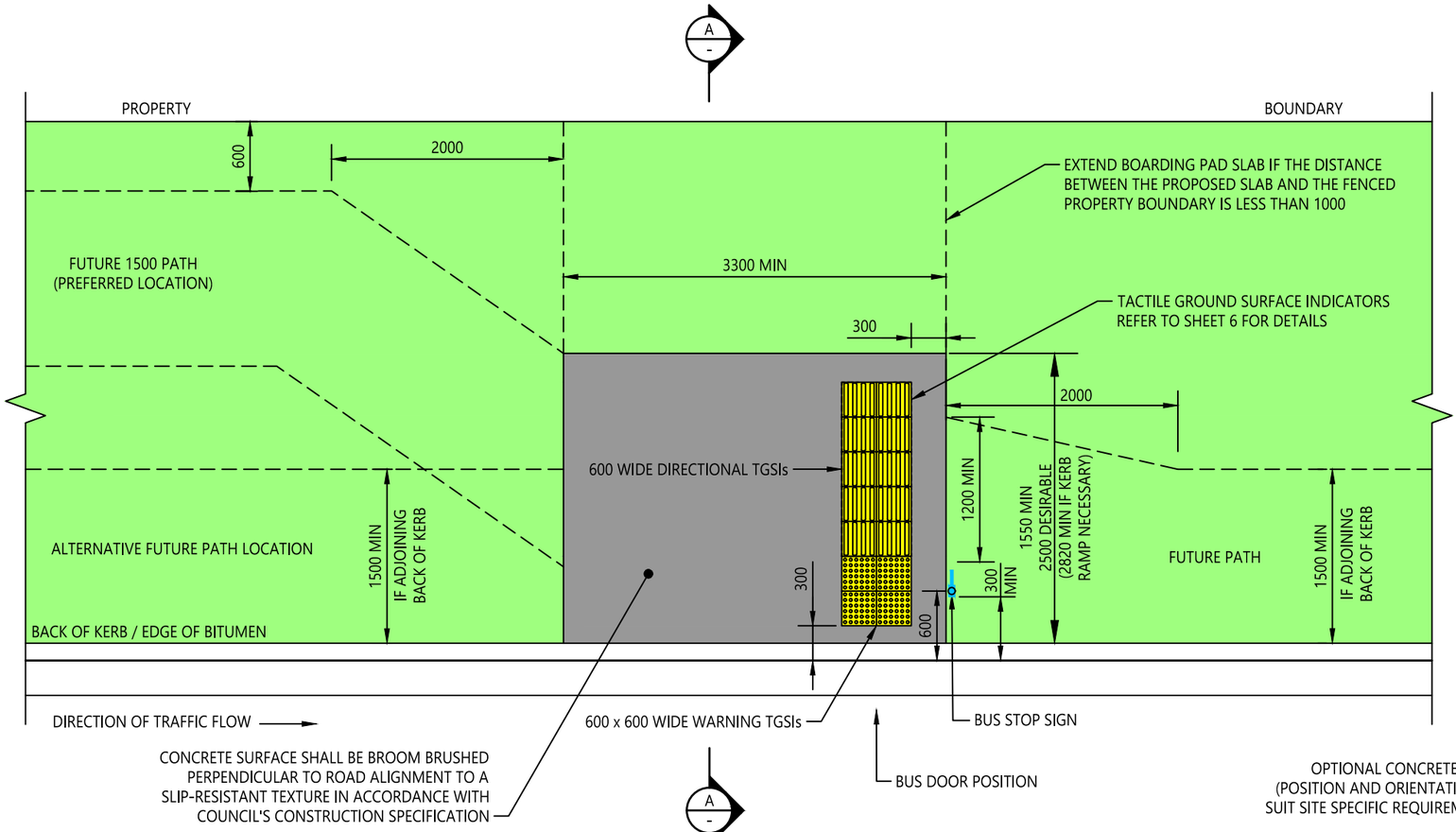
GENERAL NOTES:

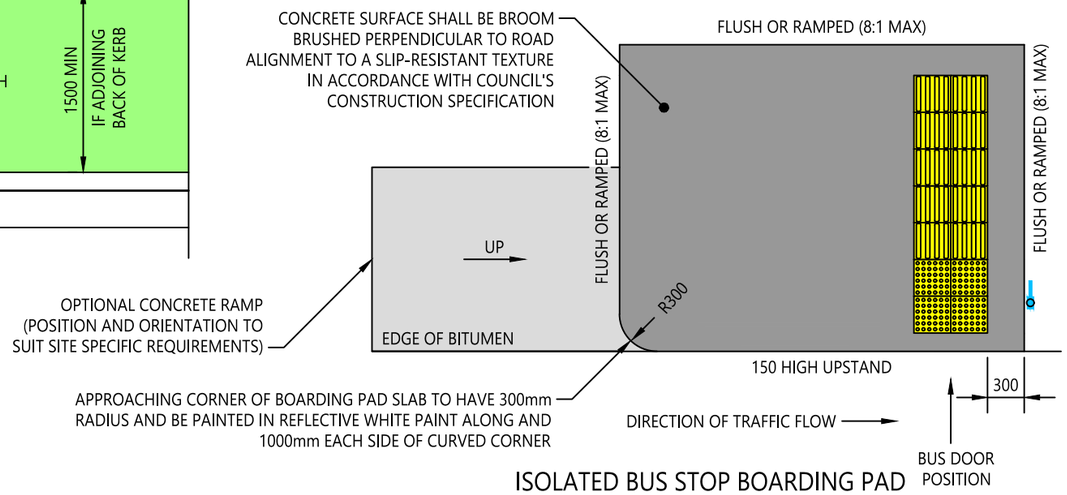
1. THE REQUIREMENTS OUTLINED ON THIS DRAWING APPLY TO THE DESIGN AND CONSTRUCTION OF NEW BUS STOPS WITH OR WITHOUT A SEAT OR SHELTER.
2. WHEN UPGRADING EXISTING BUS STOPS, SOME OF THESE REQUIREMENTS MAY NOT BE ACHIEVABLE, OR ECONOMICALLY JUSTIFIABLE, DUE TO THE CONFIGURATION OF THE EXISTING BUS STOP PADS AND OTHER FEATURES. TO ENSURE THE INTENT OF DISABILITY REQUIREMENTS ARE ACHIEVED, ANY MODIFICATIONS TO THIS DRAWING FOR THE PURPOSE OF UPGRADING EXISTING BUS STOPS MUST BE FIRST APPROVED BY THE ROADS AUTHORITY.



PLAN

ISOLATED BUS STOP BOARDING PAD (WITHOUT PATH)

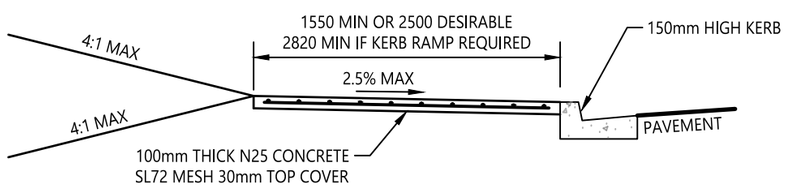
SCALE 1:50



ISOLATED BUS STOP BOARDING PAD (NO KERB AND CHANNEL)

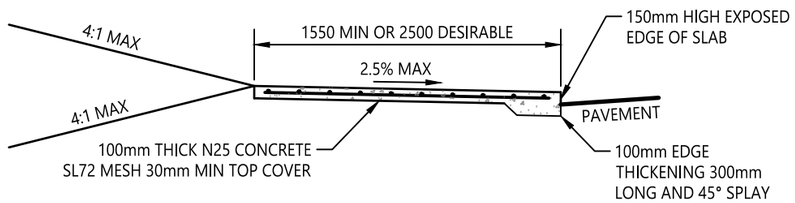
PLAN

SCALE 1:50



SECTION A - SCALE 1:50

WITH KERB AND CHANNEL



SECTION A - SCALE 1:50

WITHOUT KERB AND CHANNEL

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

DRAWN	M GREENWOOD/D MILLER
CHECKED	M BAMBER
DATE	28/4/20

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STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
BUS STOP

DRAWING NUMBER	REV
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SHEET 4 OF 9	A3

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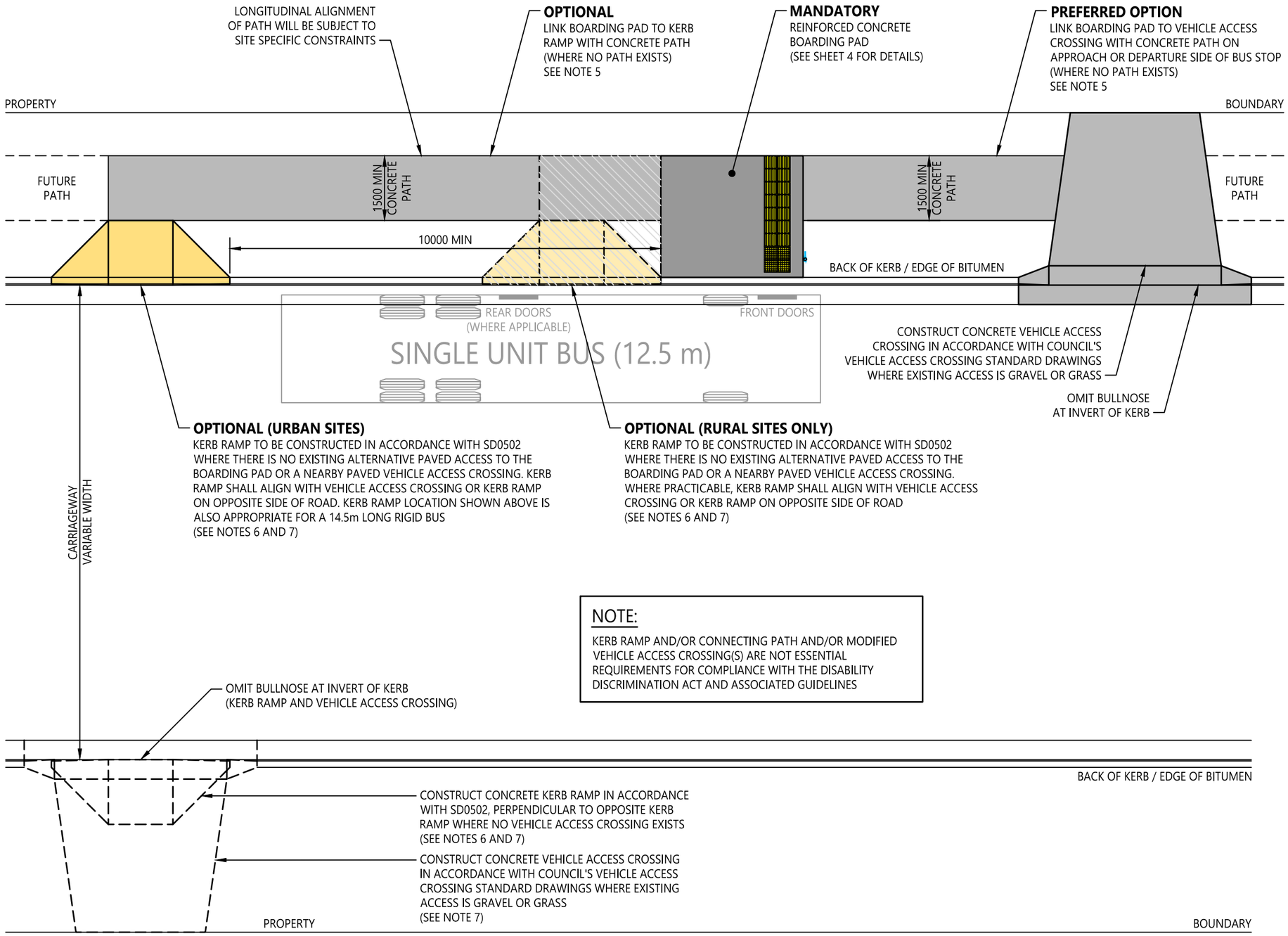

NOTE:

KERB RAMP AND/OR CONNECTING PATH AND/OR MODIFIED VEHICLE ACCESS CROSSING(S) ARE NOT ESSENTIAL REQUIREMENTS FOR COMPLIANCE WITH THE DISABILITY DISCRIMINATION ACT AND ASSOCIATED GUIDELINES

ISOLATED BUS STOP BOARDING PAD WITH OPTIONAL PATH CONNECTIVITY

SCALE 1:100

GENERAL NOTES:

1. THE REQUIREMENTS OUTLINED ON THIS DRAWING APPLY TO THE DESIGN AND CONSTRUCTION OF NEW BUS STOP BOARDING PADS WITH OR WITHOUT A SEAT OR SHELTER.
2. WHEN UPGRADING EXISTING BUS STOPS, SOME OF THESE REQUIREMENTS MAY NOT BE ACHIEVABLE, OR ECONOMICALLY JUSTIFIABLE, DUE TO THE CONFIGURATION OF THE EXISTING BUS STOP PADS AND OTHER FEATURES. TO ENSURE THE INTENT OF DISABILITY REQUIREMENTS ARE ACHIEVED, ANY MODIFICATIONS TO THIS DRAWING FOR THE PURPOSE OF UPGRADING EXISTING BUS STOPS MUST BE FIRST APPROVED BY THE ROADS AUTHORITY.

INSTALLATION NOTES:

1. LONGITUDINAL GRADE OF BOARDING PAD SHALL MATCH THE GRADE OF THE KERB OR EDGE OF BITUMEN AND CROSSFALL SHALL BE 2.5% MAXIMUM.
2. BUS STOP BOARDING PAD SHALL BE POSITIONED CLEAR OF UTILITY COVERS.
3. IF THE LOCATION IS LIKELY TO HAVE A BUS STOP SHELTER AT A FUTURE STAGE, THE BOARDING PAD SHALL BE CONSTRUCTED AS SHOWN ON SD0605.
4. IF NO PATH ADJOINS THE BOARDING PAD AND THERE IS AN EXISTING PATH WITHIN 50m, CONSTRUCT PATH TO LINK THE BOARDING PAD TO THE EXISTING PATH.
5. IF NO PATH ADJOINS THE BOARDING PAD AND THERE IS NO EXISTING PATH WITHIN 50m, A PATH MAY BE CONSTRUCTED LINKING THE BOARDING PAD TO A NEARBY PAVED VEHICLE ACCESS CROSSING.
6. IF A PATH EXISTS ON THE OPPOSITE SIDE OF THE ROAD, PROVIDE A PAIR OF KERB RAMPS UPSTREAM OF THE BOARDING PAD (AS SHOWN ON THIS DRAWING) ALIGNED WITH EACH OTHER ACROSS THE ROAD PAVEMENT AND CONNECT THE EXISTING PATH TO THE KERB RAMP.
7. KERB RAMPS SHALL ONLY BE INSTALLED OPPOSITE A VEHICLE ACCESS CROSSING OR ANOTHER KERB RAMP.
8. WHEN THE EXISTING PATH DOES NOT ADJOIN THE BACK OF KERB, THE PATH SHALL BE ALTERED TO LINK TO THE BOARDING PAD. PATH CHANGE IN DIRECTION SHALL BE DISABILITY DISCRIMINATION ACT COMPLIANT AND IN ACCORDANCE WITH AS 1428.1.
9. TACTILE GROUND SURFACE INDICATORS (TGSIs) SHALL HAVE A LUMINANCE CONTRAST TO THE SURROUNDING SURFACE. REFER TO AS/NZS 1428.4.1 FOR REQUIREMENTS.
10. WHEN THE BOARDING PAD IS AMENDED TO INCORPORATE A BUS STOP SHELTER, THE NEW SLAB SHALL BE DOWEL JOINTED TO THE EXISTING SLAB, PROVIDED THAT THE SLAB IS 200mm MINIMUM THICK TO ACCOMMODATE THE MOUNTING BOLT EMBEDMENT DEPTH OF 150mm.

KERB RAMP NOTES:

1. KERB RAMP SHALL BE 8:1 MAXIMUM SLOPE.
2. WIDEN KERB RAMP TO 2500mm FOR SHARED PATH RAMPS; AND TO 3600mm AT PEDESTRIAN (ZEBRA) CROSSINGS.
3. KERB RAMPS SHALL BE 125mm THICK N32 COLOURED CONCRETE REINFORCED WITH SL72 MESH 30mm MIN TOP COVER. REFER TO KERB RAMP STANDARD DRAWING SD0502 FOR DETAILS.
4. PROVIDE CONTROL JOINTS IN KERB EACH SIDE OF THE KERB RAMP AND OTHERWISE AT 3m INTERVALS.

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 1000 2000 3000 4000 5000

1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE OTHERWISE

DRAWN	MG/DM/TW
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

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STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
BUS STOP

DRAWING NUMBER	REV
SD0604	A
SHEET 5 OF 9	A3

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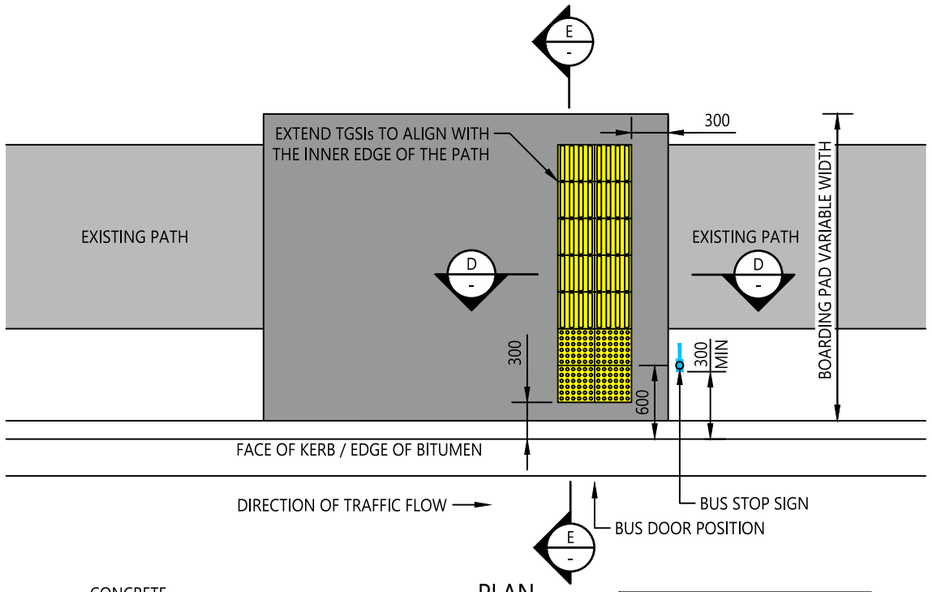
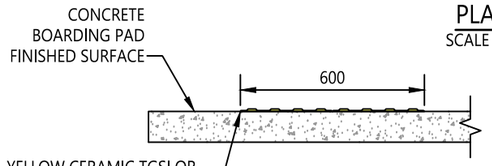
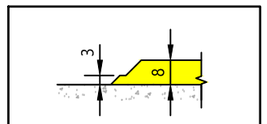


PLAN
SCALE 1:50

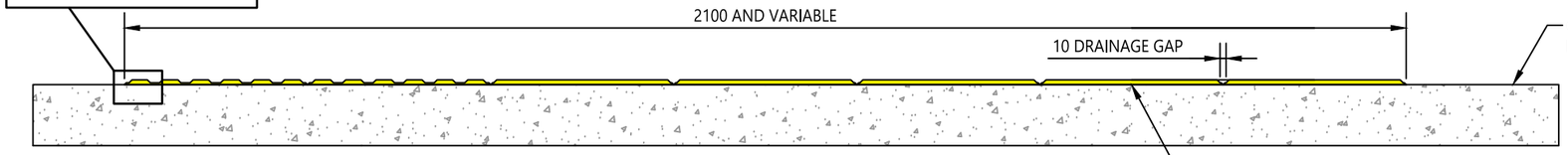


SECTION D
SCALE 1:20

(TWO TILES)



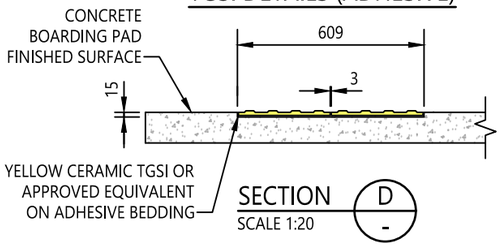
TYPICAL EDGE DETAIL
SCALE 1:2



SECTION E
SCALE 1:10

(SEVEN TILES)

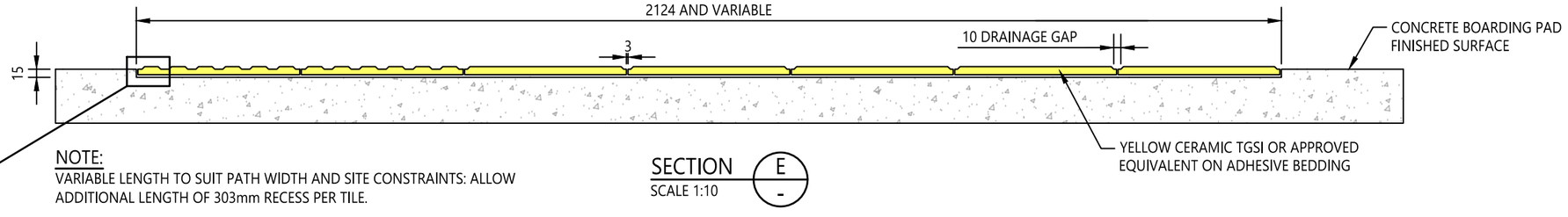
TGSI DETAILS (ADHESIVE)



SECTION D
SCALE 1:20

(TWO TILES)

TACTILE GROUND SURFACE INDICATOR (TGSI) DETAILS (ADHESIVE)

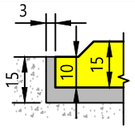


NOTE:
VARIABLE LENGTH TO SUIT PATH WIDTH AND SITE CONSTRAINTS: ALLOW ADDITIONAL LENGTH OF 303mm RECESS PER TILE.

SECTION E
SCALE 1:10

(SEVEN TILES)

TGSI DETAILS (RECESSED)



TYPICAL RECESS EDGE DETAIL
SCALE 1:2

TACTILE GROUND SURFACE INDICATOR (TGSI) DETAILS (RECESSED)

TACTILE GROUND SURFACE INDICATOR (TGSI) SPECIFICATION
BUS STOP BOARDING PADS

LOCATION	MATERIAL	COLOUR	LUMINANCE CONTRAST[2]	EXAMPLE PHOTO
URBAN AND RURAL NEW CONCRETE SLABS OR RETROFITTING TO EXISTING CONCRETE SLABS	INTEGRATED FIBRE-REINFORCED POLYMER SHEETS ON ADHESIVE MATERIAL	YELLOW	≥ 30%	
URBAN AND RURAL NEW CONCRETE SLABS OR RETROFITTING TO EXISTING CONCRETE SLABS	INTEGRATED CERAMIC/PORCELAIN TILES CAST IN PLACE ON ADHESIVE MATERIAL	YELLOW	≥ 30%	
CENTRAL BUSINESS DISTRICT OR COMMERCIAL AREAS[1]	DISCRETE OR INTEGRATED POLYURETHANE OR STAINLESS STEEL[2]	BLACK/SILVER	≥ 45%	
CENTRAL BUSINESS DISTRICTS OR COMMERCIAL AREAS[1]	COMPOSITE DISCRETE OR INTEGRATED STAINLESS STEEL WITH CARBORUNDUM OR POLYURETHANE INFILL[2]	SILVER AND BLACK	RAISED SURFACE ≥ 60% FOR ⌀24-25mm	

TABLE NOTES:

1. YELLOW IS THE STANDARD COLOUR FOR TGSIs FOR USE ACROSS THE CENTRAL COAST LGA. ALTERNATIVE TGSI COLOURS AND MATERIALS MAY BE USED IN CBD OR COMMERCIAL AREAS WHERE ARCHITECTURAL REQUIREMENTS MIGHT DICTATE THEIR USE.
2. TGSI LUMINANCE-CONTRAST TO THE BASE SURFACE SHALL BE IN ACCORDANCE WITH AS/NZS 1428.4.1. IF USED IN CBD AREAS, STAINLESS STEEL TGSI PLATES SHALL HAVE A LUMINANCE-CONTRAST OF ≥ 30%.
3. ALL TGSIs SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.

LEGEND

- WARNING TACTILE GROUND SURFACE INDICATOR (TGSI) 300 x 300mm
- DIRECTIONAL TACTILE GROUND SURFACE INDICATOR (TGSI) 300 x 300mm

NOTES:

1. TACTILE GROUND SURFACE INDICATORS (TGSIs) SHALL BE SELECTED BASED ON THE TGSI SPECIFICATION TABLE ON THIS SHEET.
2. TGSIs SHALL BE SLIP-RESISTANT AND COMPLY WITH TESTING REQUIREMENTS SET OUT IN AS 4586.
3. CERAMIC TGSIs SHALL BE LAID LEVEL WITH THE SURROUNDING SURFACE TO ENSURE TACTILE STUDS STAND PROUD.
4. PROVIDE 15mm RECESS IN CONCRETE 609mm WIDE BY A VARIABLE LENGTH AS CALCULATED USING THE BELOW FORMULA:

   TGSI RECESS LENGTH = (3 + (N x 303))mm

   WHERE N = NUMBER OF TGSIs IN A SINGLE ROW.
5. TGSIs SHALL BE LAID IN THE RECESS ON AN ADHESIVE APPROVED BY THE TGSI MANUFACTURER APPLIED WITH A SUITABLE SQUARE NOTCHED TROWEL.
6. PEDESTRIAN TRAFFIC SHALL BE AVOIDED FOR A MINIMUM OF 24 HOURS AFTER INSTALLATION.

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 100 200 300 400 500 1:10

0 500 1000 1500 2000 2500 1:50

DRAWN	MG/DM/TW
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

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ROADS TRANSPORT DRAINAGE AND WASTE

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PEDESTRIAN AND CYCLIST SERIES
BUS STOP

STANDARD DRAWING

DRAWING NUMBER	REV
SD0604	A
SHEET 6 OF 9	A3

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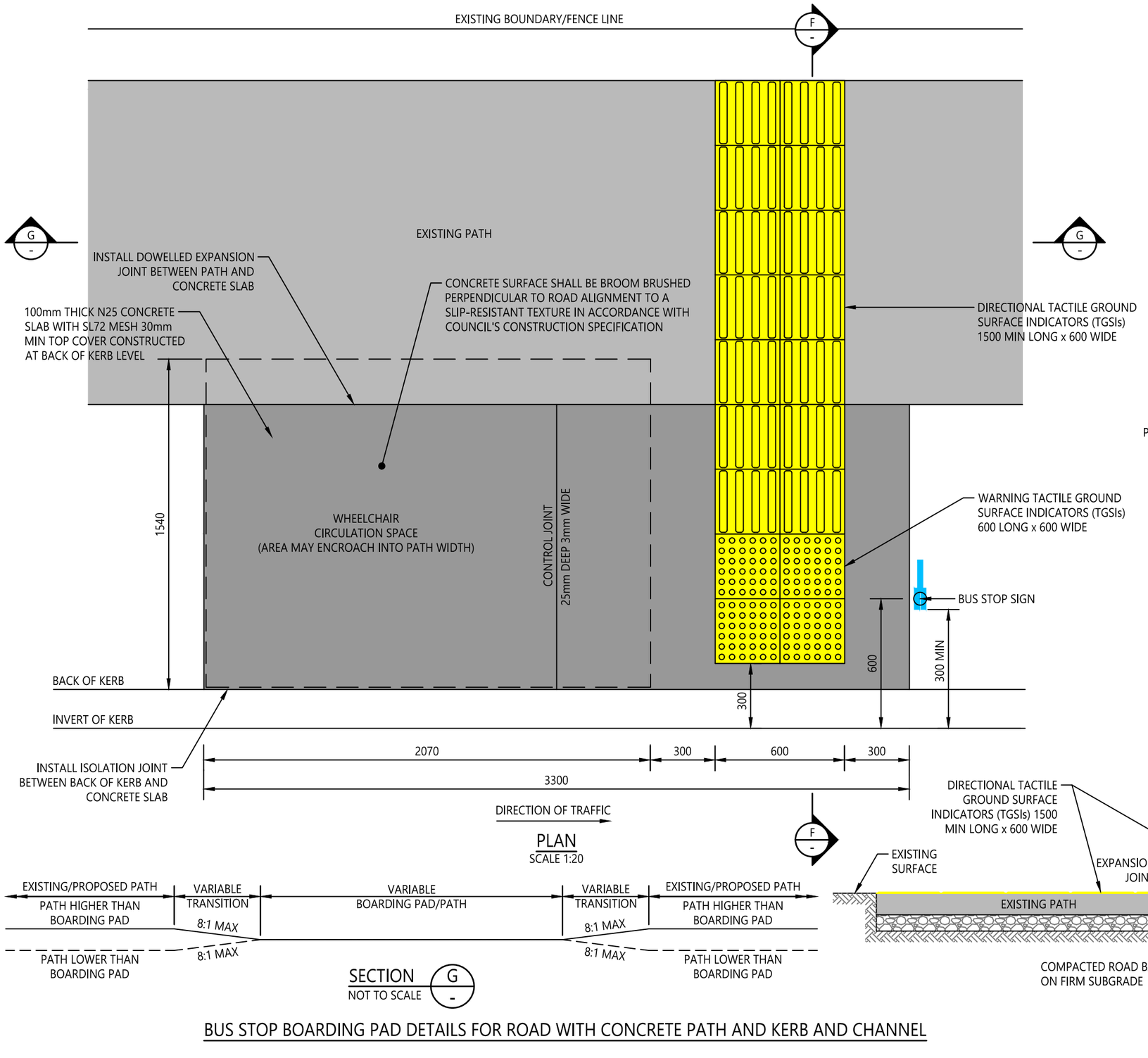
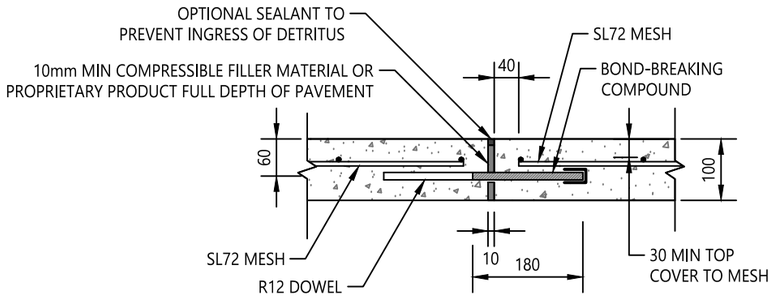
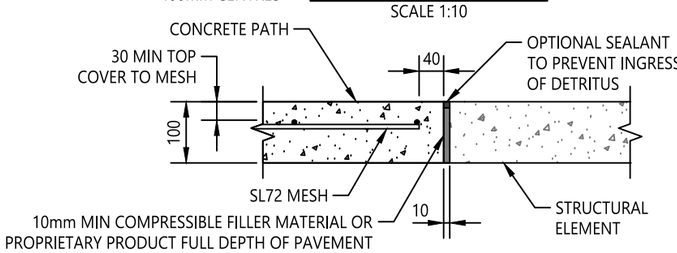


NOTES:

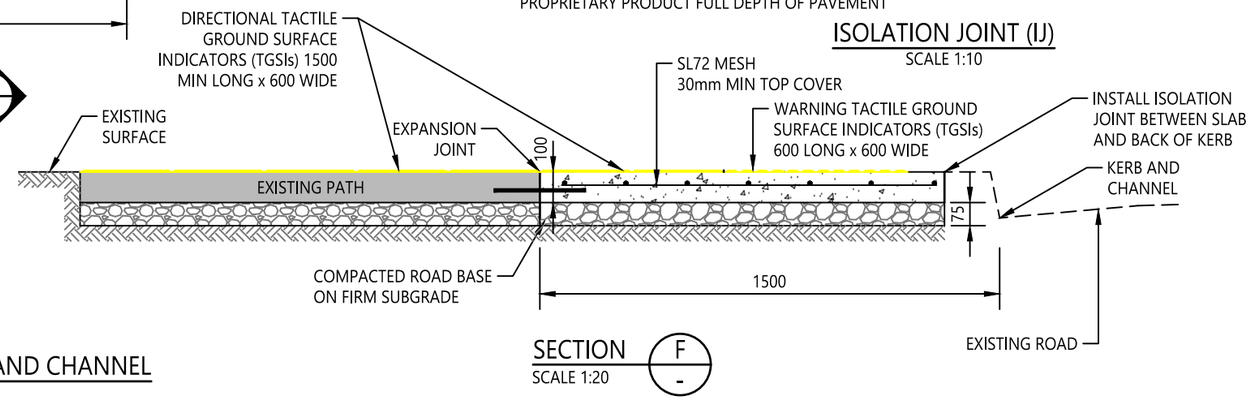
1. THIS CONFIGURATION IS DISABILITY DISCRIMINATION ACT (DDA) COMPLIANT ONLY IF THE ROAD HAS KERB AND CHANNEL OR A RAISED SLAB INSTALLED ADJACENT TO THE BUS STOP AS A RAISED PLATFORM FOR WHEELCHAIR ACCESS.
2. REFER TO SHEET 8 FOR DDA COMPLIANT BUS STOP WITH OPTIONAL CONFIGURATION FOR ROADS WITHOUT KERB AND CHANNEL.
3. BUS STOP BOARDING PAD SHALL BE POSITIONED CLEAR OF UTILITY COVERS.
4. SIZE AND ORIENTATION OF CONCRETE SLAB MAY BE VARIED TO SUIT SITE CONSTRAINTS AS LONG AS THE WHEELCHAIR CIRCULATION SPACE IS PROVIDED.
5. CROSSFALL OF CONCRETE SLAB SHALL BE 2.5% MAXIMUM.
6. CONCRETE SLAB TO BE BROOM FINISHED PERPENDICULAR TO ROAD ALIGNMENT WITH SMOOTH TROWELLED EDGES.
7. REFER TO SHEET 6 FOR DETAILS ON THE TACTILE GROUND SURFACE INDICATORS.
8. WHERE RETROFITTING BOARDING PADS AT EXISTING BUS STOPS, ANY EXISTING PATHS, OR FOOTWAY AREAS, MAY NEED RE-GRADING TO ACHIEVE THE BOARDING PAD 2.5% MAXIMUM CROSSFALL. LONGITUDINAL PATH/FOOTWAY GRADIENTS CONNECTING TO THE BOARDING PAD SHALL NOT EXCEED 8:1 (12.5%). REFER TO SECTION G ON THIS SHEET.



EXPANSION JOINT (EJ)
SCALE 1:10



ISOLATION JOINT (IJ)
SCALE 1:10



SECTION F
SCALE 1:20

BUS STOP BOARDING PAD DETAILS FOR ROAD WITH CONCRETE PATH AND KERB AND CHANNEL

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000
1:20

DRAWN	C SHEPPEARD/D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

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ROADS TRANSPORT DRAINAGE AND WASTE

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PEDESTRIAN AND CYCLIST SERIES
BUS STOP

STANDARD DRAWING

DRAWING NUMBER	REV
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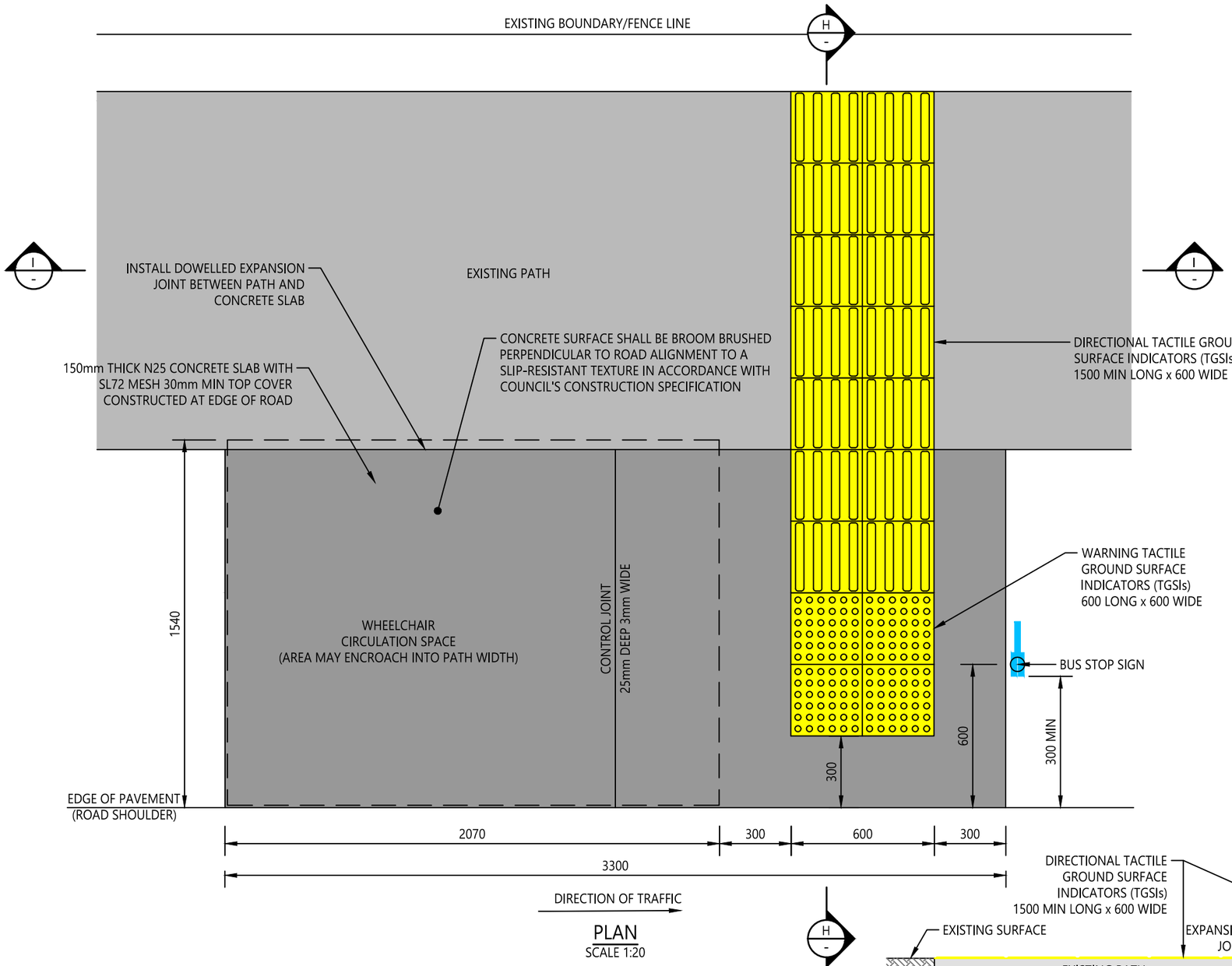
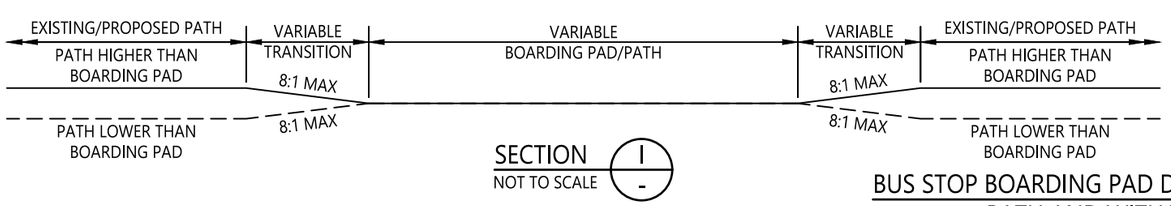


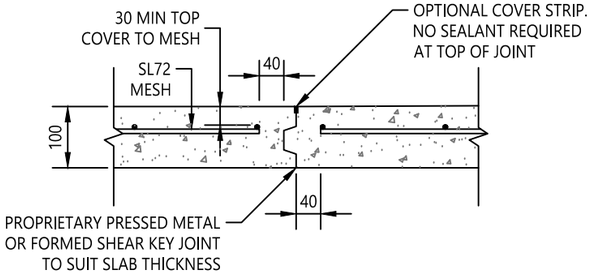
PLAN
SCALE 1:20



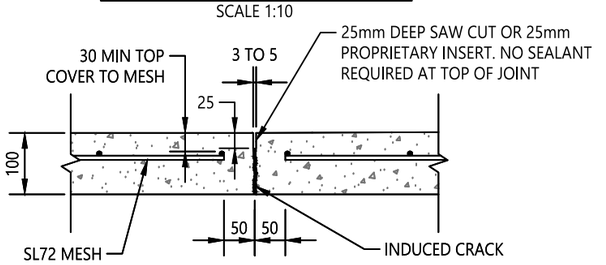
SECTION I
NOT TO SCALE

NOTES:

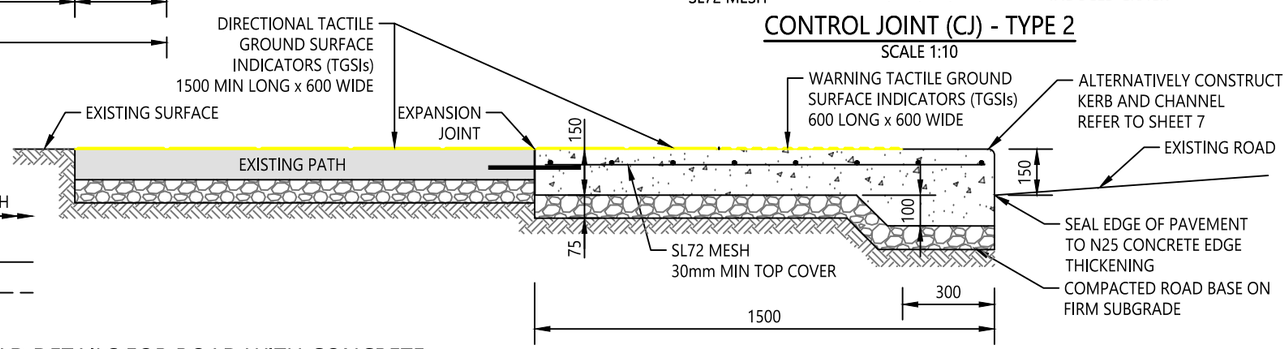
1. THIS CONFIGURATION IS DISABILITY DISCRIMINATION ACT (DDA) COMPLIANT ONLY IF THE ROAD HAS KERB AND CHANNEL OR A RAISED SLAB INSTALLED ADJACENT TO THE BUS STOP AS A RAISED PLATFORM FOR WHEELCHAIR ACCESS.
2. REFER TO SHEET 7 FOR DDA COMPLIANT BUS STOP WITH OPTIONAL CONFIGURATION FOR ROADS WITH KERB AND CHANNEL.
3. BUS STOP BOARDING PAD SHALL BE POSITIONED CLEAR OF UTILITY COVERS.
4. SIZE AND ORIENTATION OF CONCRETE SLAB MAY BE VARIED TO SUIT SITE CONSTRAINTS AS LONG AS THE WHEELCHAIR CIRCULATION SPACE IS PROVIDED.
5. CROSSFALL OF CONCRETE SLAB SHALL BE 2.5% MAXIMUM.
6. CONCRETE SLAB TO BE BROOM FINISHED PERPENDICULAR TO ROAD ALIGNMENT WITH SMOOTH TROWELLED EDGES.
7. REFER TO SHEET 6 FOR DETAILS ON THE TACTILE GROUND SURFACE INDICATORS.
8. WHERE RETROFITTING BOARDING PADS AT EXISTING BUS STOPS, ANY EXISTING PATHS, OR FOOTWAY AREAS, MAY NEED RE-GRADING TO ACHIEVE THE BOARDING PAD 2.5% MAXIMUM CROSSFALL. LONGITUDINAL PATH/FOOTWAY GRADIENTS CONNECTING TO THE BOARDING PAD SHALL NOT EXCEED 8:1 (12.5%). REFER TO SECTION I ON THIS SHEET.



CONTROL JOINT (CJ) - TYPE 1
SCALE 1:10



CONTROL JOINT (CJ) - TYPE 2
SCALE 1:10



SECTION H
SCALE 1:20

BUS STOP BOARDING PAD DETAILS FOR ROAD WITH CONCRETE PATH AND WITHOUT KERB AND CHANNEL

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000
1:20

DRAWN	C SHEPPEARD/D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
BUS STOP

STANDARD DRAWING

DRAWING NUMBER	REV
SD0604	A
SHEET 8 OF 9	A3

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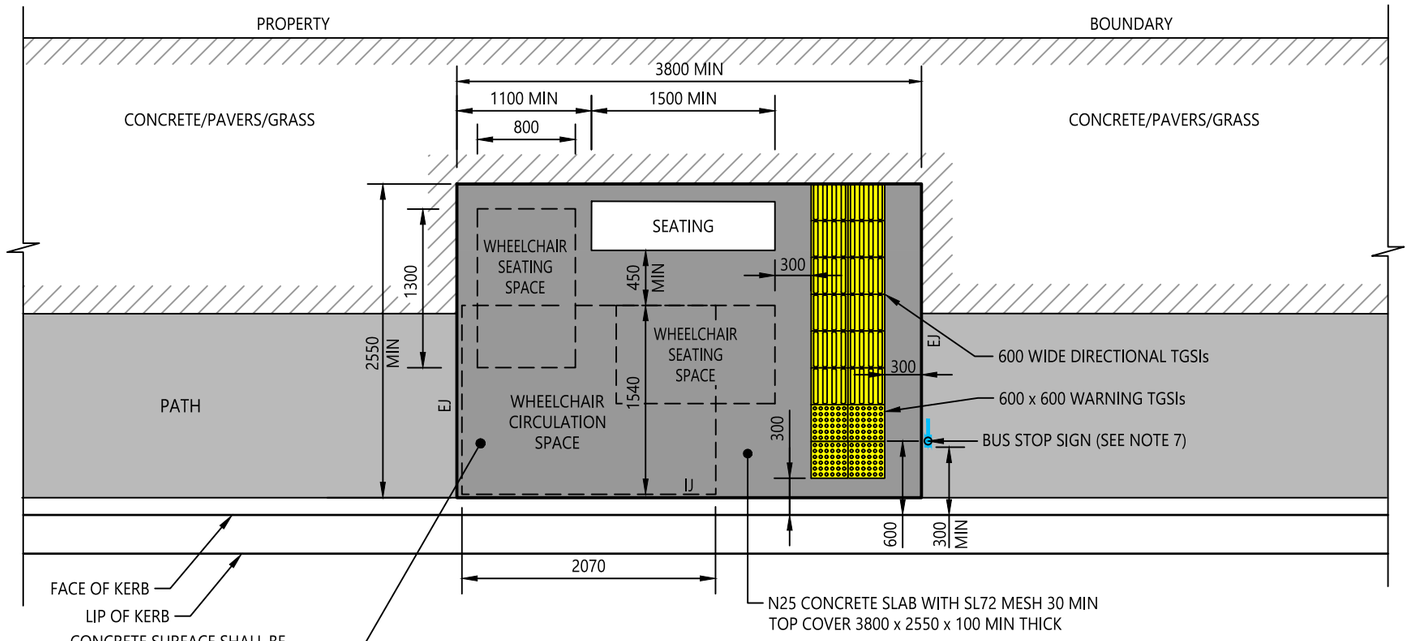
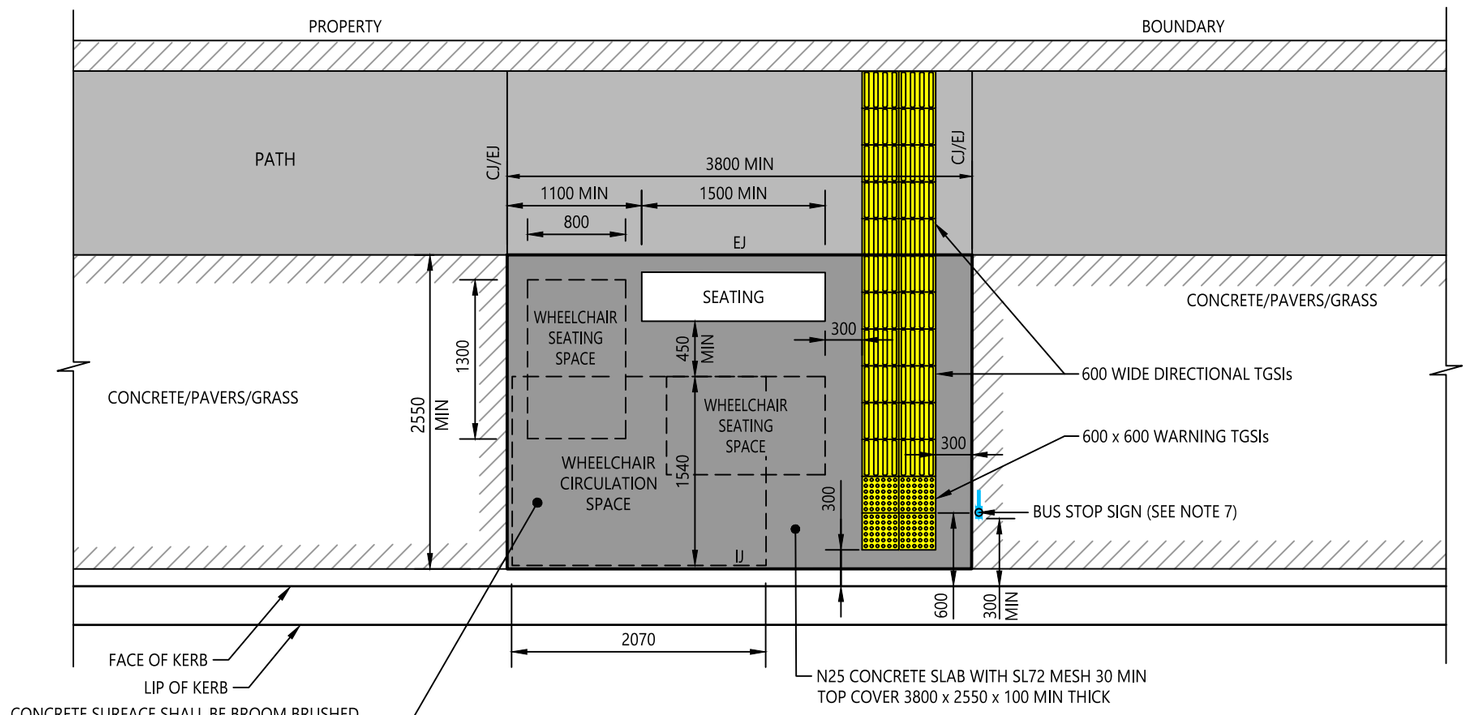


TYPE 1 - BUS STOP BOARDING PAD WITH SEAT SET BACK FROM FOOTPATH

SCALE 1:50

NOTES

1. THIS DRAWING IS BASED ON FIGURE D1 IN AS/NZS 1428.4.1:2009.
2. BUS STOP BOARDING PAD SHALL BE POSITIONED CLEAR OF UTILITY COVERS.
3. WHERE NO KERB AND CHANNEL EXISTS, THE SLAB SHALL BE 150mm ABOVE THE ADJOINING ROAD SURFACE.
4. THE SLAB MUST CONNECT TO THE ADJACENT PATH, FOOTWAY OR VERGE AREA AT A GRADIENT NO STEEPER THAN 14:1. NO STEPS ARE PERMITTED.
5. CONCRETE STRENGTH GRADE SHALL BE N25 WITH SL72 MESH 30mm MINIMUM TOP COVER.
6. SEAT MAY BE INSTALLED IN ALTERNATIVE LOCATIONS, SUBJECT TO THE APPROVAL OF COUNCIL'S REPRESENTATIVE AND THE REQUIREMENTS OF AS/NZS 1428.4.1.
7. BUS STOP SIGN POLE (B-POLE) FOR TfNSW UTILISED BUS STOPS SHALL BE DESIGNED AND INSTALLED TO TfNSW STANDARD T BU WS 90002 ST.
8. REFER TO SD0604 SHEETS 4 TO 8 FOR BUS STOP BOARDING PAD SLAB AND TGSI DETAILS.
9. PATH JOINTS TO BE CONSTRUCTED IN ACCORDANCE WITH SD0601.



TYPE 2 - BUS STOP BOARDING PAD WITH SEAT IN FRONT OF FOOTPATH

SCALE 1:50

REV	AMENDMENT	DATE	DRAWN	APRVD
A	BOARDING PAD CONFIGURATION AND TGSIs	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

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STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
BUS STOP

DRAWING NUMBER	REV
SD0604	A
SHEET 9 OF 9	A3

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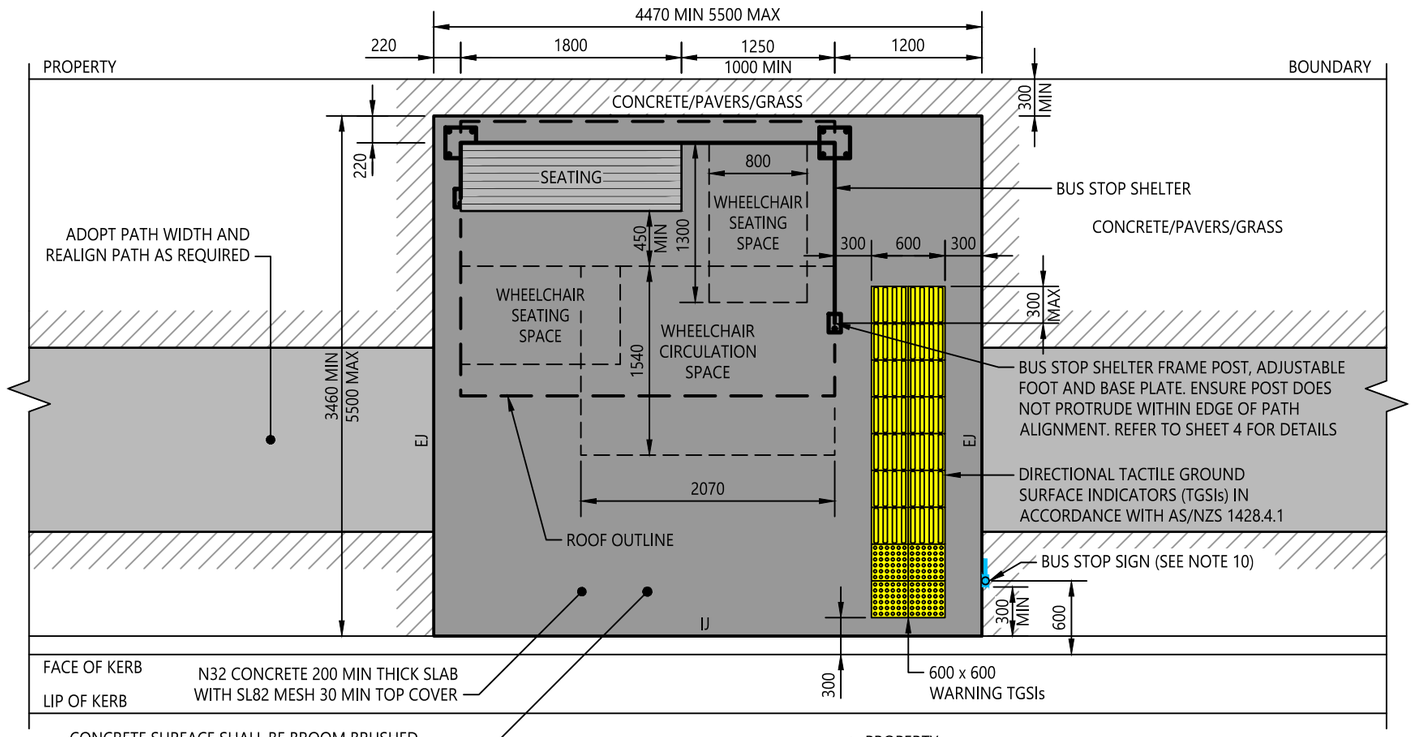
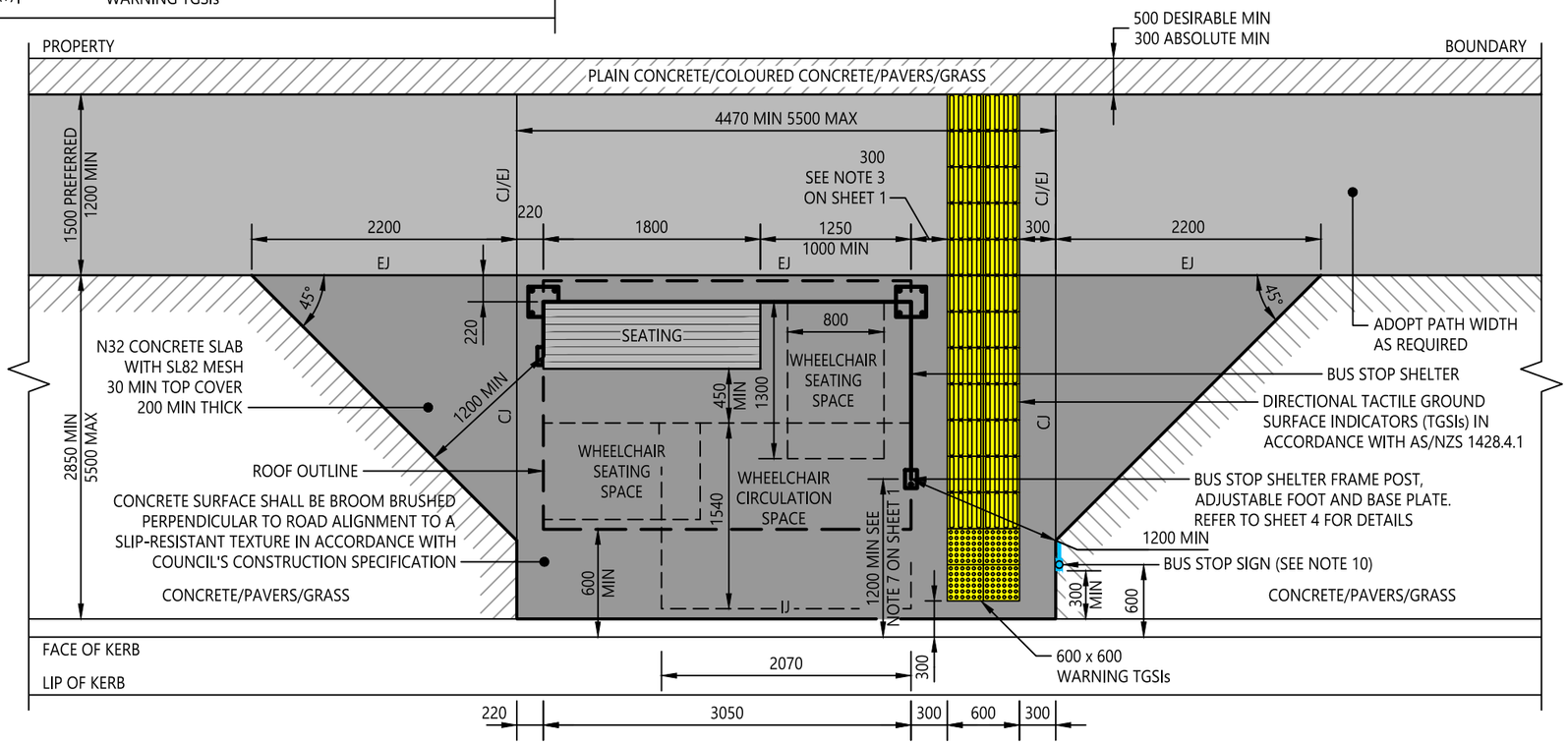


TYPE 1 - BUS STOP WITH SHELTER SET BACK FROM PATH

SCALE 1:50

NOTES:

1. THIS DRAWING IS BASED ON CLAUDE GROUP'S FORBES SHELTER DETAILS AND APPENDIX D OF AS/NZS 1428.4.1:2009.
2. VERTICAL CLEARANCE FROM PATH TO UNDERSIDE OF BUS STOP SHELTER ROOF SHALL BE 2.4m (PREFERRED) OR 2m (ABSOLUTE MINIMUM).
3. WHERE 2.2m SPLAY IS NOT PROVIDED ADJACENT TO BOARDING PAD AS SHOWN BELOW, THIS DIMENSION SHALL BE INCREASED FROM 300mm TO 1200mm, TO PROVIDE A TGSI-FREE ACCESS PATH FOR WHEELCHAIR USERS.
4. BUS STOP BOARDING PAD SHALL BE POSITIONED CLEAR OF UTILITY COVERS.
5. WHERE NO KERB AND CHANNEL EXISTS, THE SLAB SHALL BE 150mm ABOVE THE ADJOINING ROAD SURFACE.
6. THE SLAB MUST CONNECT TO THE ADJACENT PATH, FOOTWAY OR VERGE AREA AT A GRADIENT NO STEEPER THAN 14:1. NO STEPS ARE PERMITTED.
7. SHELTER MAY BE INSTALLED NEAR KERB (600mm MINIMUM OFFSET FROM INVERT OF KERB TO ROOF) IN COMMERCIAL AREAS WHERE AWNINGS ARE LOCATED AND SHALL BE CONFIGURED IN ACCORDANCE WITH AS/NZS 1428.4.1 AND DDA/DSAPT REQUIREMENTS.
8. CONCRETE STRENGTH GRADE SHALL BE N32 WITH STEEL REINFORCEMENT AS SHOWN ON SHEET 2.
9. OPTIONAL ADVERTISING PANEL MAY BE USED, SUBJECT TO THE APPROVAL OF COUNCIL'S REPRESENTATIVE.
10. BUS STOP SIGN POLE (B-POLE) FOR TfNSW UTILISED BUS STOPS SHALL BE DESIGNED AND INSTALLED TO TfNSW STANDARD T BU WS 90002 ST.
11. BOARDING PAD CONTROL JOINTS AND EXPANSION JOINTS SHALL BE CONSTRUCTED AS REQUIRED IN ACCORDANCE WITH COUNCIL'S CIVIL WORKS SPECIFICATION - CONSTRUCTION SPECIFICATION.
12. CONCRETE PATHS SHALL BE CONSTRUCTED IN ACCORDANCE WITH WITH SD0601.



TYPE 2 - BUS STOP WITH SHELTER IN FRONT OF PATH

SCALE 1:50

REV	AMENDMENT	DATE	DRAWN	APRVD
A	SHELTER AND STRUCTURAL DETAILS	22/1/20	TW	MB

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
BUS STOP SHELTER

DRAWING NUMBER	REV
SD0605	A
SHEET 1 OF 5	A3

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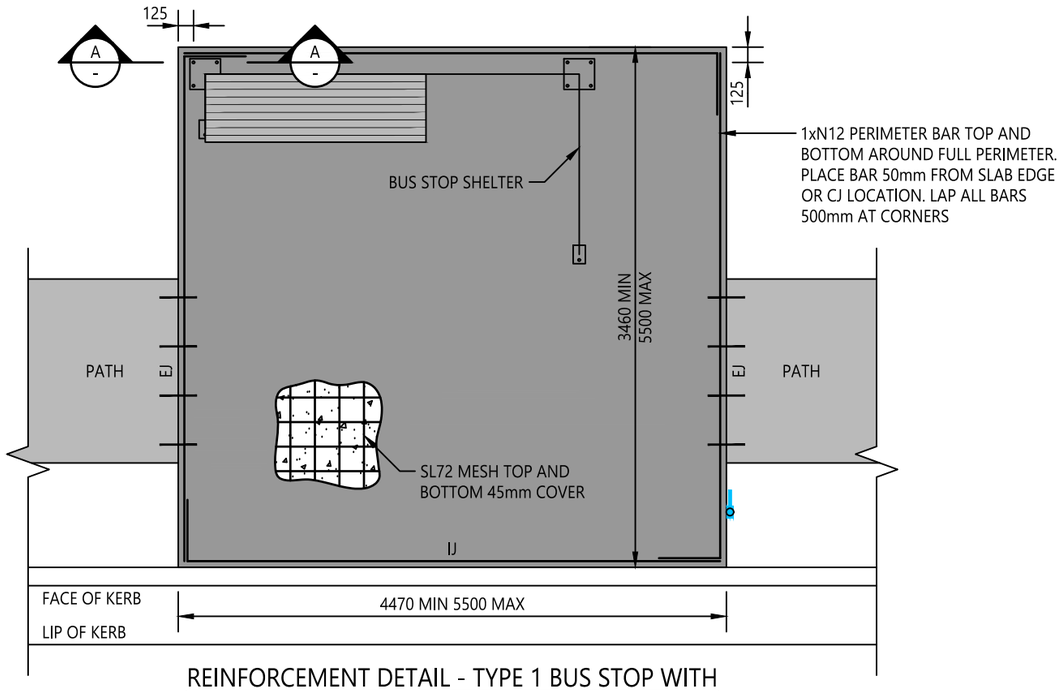
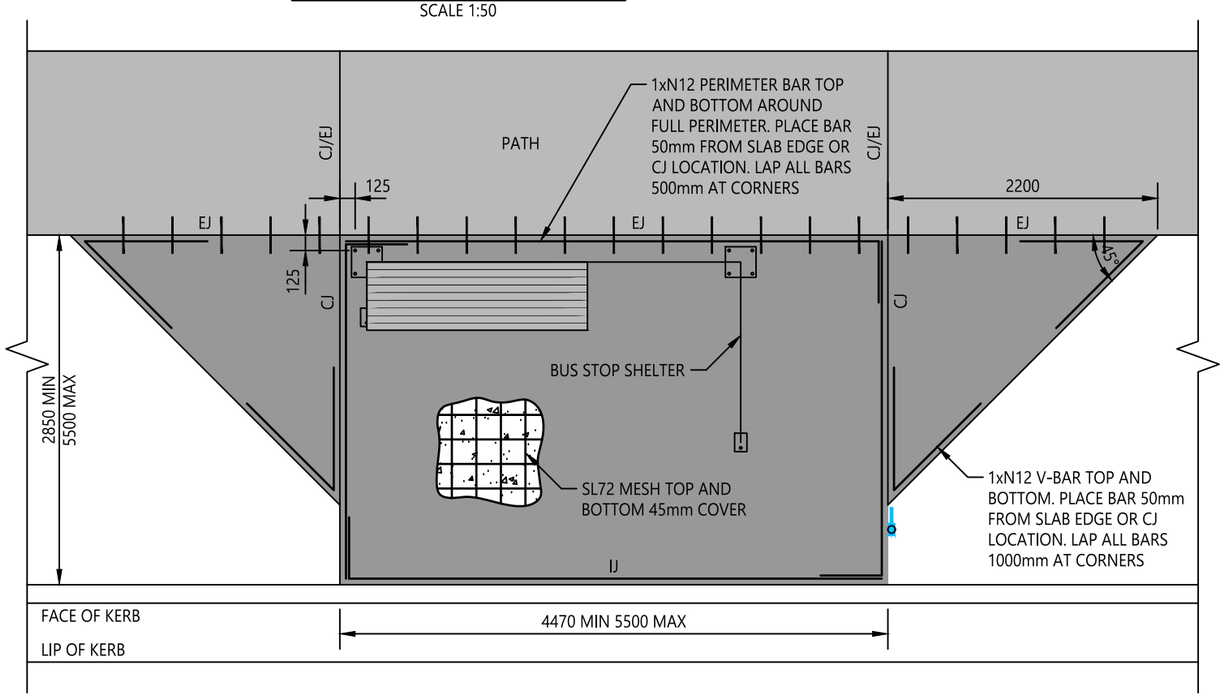


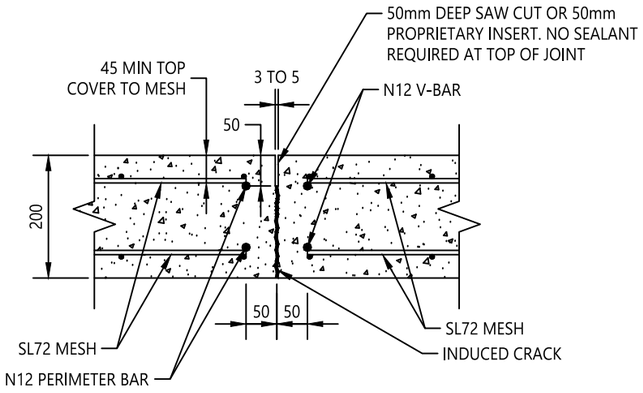
REINFORCEMENT DETAIL - TYPE 1 BUS STOP WITH SHELTER SET BACK FROM PATH

SCALE 1:50



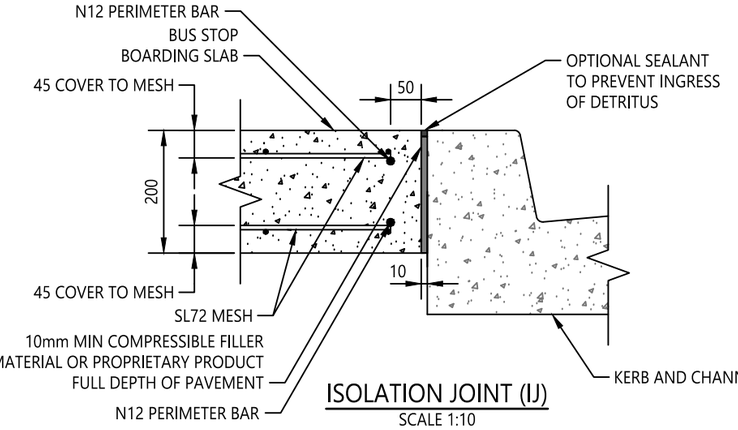
REINFORCEMENT DETAIL - TYPE 2 BUS STOP WITH SHELTER IN FRONT OF PATH

SCALE 1:50



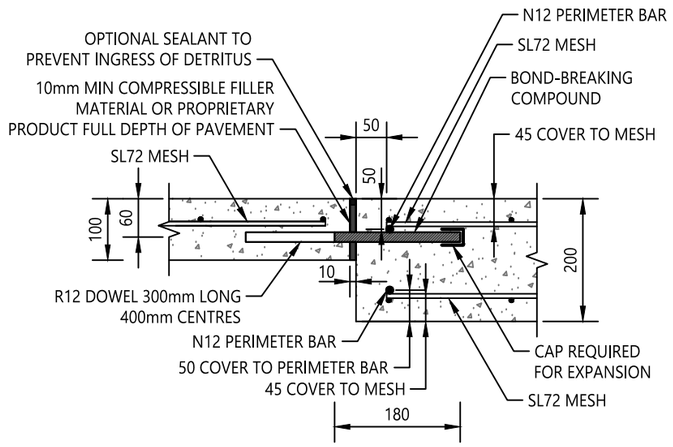
CONTROL JOINT (CJ)

SCALE 1:10



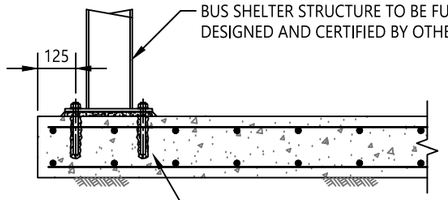
ISOLATION JOINT (IJ)

SCALE 1:10



EXPANSION JOINT (EJ) 100mm PATH TO 200mm BUS STOP SHELTER BOARDING SLAB

SCALE 1:10



SECTION A - A

SCALE 1:20

NOTES:

1. THE BUS SHELTER SLAB AND ANCHOR FIXINGS HAVE BEEN PREPARED BY NORTHROP CONSULTING ENGINEERING SERVICES BASED ON CENTRAL COAST COUNCIL STANDARD DRAWING SD0605. IF SD0605 CHANGES FOR ANY REASON, FURTHER ADVICE SHALL BE SOUGHT FROM A SUITABLY QUALIFIED STRUCTURAL ENGINEER.
2. ALL SLABS (UNLESS OTHERWISE NOTED) TO BE 200mm THICK, REINFORCED WITH SL72 MESH TOP AND BOTTOM. ENSURE FULL AND CONTINUOUS BEARING ON 100kPa (ALLOWABLE) FIRM NATURAL GROUND OR COMPACTED FILL WITH A COMPACTION OF 100% STANDARD DRY DENSITY.
3. THE CONCRETE SLAB AND ANCHOR FIXINGS ARE DESIGNED BASED ON SITE CONDITIONS DETAILED IN THE NOTES ON SHEET 3 AND THROUGHOUT THE DRAWING. IF ANY OF THE SITE CONDITIONS DIFFER FROM THOSE DESCRIBED ON THESE DRAWINGS, FURTHER ADVICE WILL BE REQUIRED FROM A QUALIFIED STRUCTURAL ENGINEER PRIOR TO CONSTRUCTION COMMENCING.

REV	AMENDMENT	DATE	DRAWN	APRVD
A	SHELTER AND STRUCTURAL DETAILS	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500

1:50

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER / T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
BUS STOP SHELTER

STANDARD DRAWING

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GENERAL

1. ALL WORKMANSHIP, TESTING, MATERIALS AND SUPERVISION ARE TO BE IN ACCORDANCE WITH THESE SPECIFICATIONS, THE WORK HEALTH AND SAFETY ACT 2011 AND CURRENT RELEVANT AUSTRALIAN STANDARDS.
2. PROPRIETARY ITEMS SPECIFIED SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS. DO NOT VARY SPECIFIED PROPRIETARY PRODUCTS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
3. NOTES ON ANY DRAWING APPLY TO ALL DRAWINGS IN THE SET UNLESS OTHERWISE NOTED.
4. THE BUILDER SHALL PROVIDE CERTIFICATION ON ANY DESIGN AND CONSTRUCT COMPONENT BY A CHARTERED PROFESSIONAL ENGINEER (NPER).
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL SERVICES IN THE VICINITY OF THE WORKS. ANY SERVICES SHOWN ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL SERVICES PRIOR TO COMMENCING AND SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED TO SERVICES, AS WELL AS ANY LOSS INCURRED AS A RESULT OF THE DAMAGE TO ANY SERVICE.
6. THE STRUCTURAL COMPONENTS DETAILED ON THESE STRUCTURAL DRAWINGS ARE JOB SPECIFIC AND HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AND BUILDING CODE OF AUSTRALIA FOR THE FOLLOWING FIRE RATINGS, WIND LOADS, FLOOR USAGE AND EARTHQUAKE LOADS.

WIND LOADS:

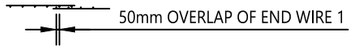
- IMPORTANCE LEVEL = 1
- REGION = A2
- ANNUAL PROBABILITY OF EXCEDENCE = 1:100
- REGIONAL WIND SPEED V = 41 m/s
- TERRAIN CATEGORY = 2
- TERRAIN MULTIPLIER Mz ,cat = 0.91
- WIND DIRECTION MULTIPLIER Md = 1.0
- SHIELDING MULTIPLIER Ms = 1.0
- TOPOGRAPHIC MULTIPLIER Mt = 1.0
- SITE WIND SPEED = 37.4 m/s

FOUNDATIONS

7. ASSUMED ALLOWABLE BEARING CAPACITY:
   - SLABS ON GROUND = 100 kPa.
8. THE SLAB AND FOOTINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS 2870 FOR CLASS M SITE. ENSURE STABILITY OF ADJACENT BUILDINGS AND PATHS IS MAINTAINED DURING ALL STAGES OF CONSTRUCTION.
9. DO NOT ALLOW EXCAVATED MATERIAL TO BE STOCKPILED WITHIN 1500mm OF FOOTING TRENCHES OR PITS. NO EARTH OR DETRITUS IS TO FALL INTO THE FOOTING TRENCHES BEFORE OR DURING CONCRETE PLACEMENT.
10. THE BASE OF ALL EXCAVATIONS SHALL BE FREE OF WATER AND CLEANED OF LOOSE MATERIAL OR DEBRIS PRIOR TO PLACEMENT OF CONCRETE.

SLAB ON GROUND

11. UNLESS OTHERWISE NOTED, SLABS TO BE 200mm THICK WITH SL72 FABRIC THROUGHOUT TOP AND BOTTOM. CONTRACTOR TO ENSURE FULL AND CONTINUOUS BEARING ON 100kPa (ALLOWABLE) FIRM NATURAL GROUND OR COMPACTED FILL, WITH A COMPACTION OF 100% STANDARD DRY DENSITY.
12. THE TWO OUTERMOST TRANSVERSE WIRES OF ONE SHEET OF MESH MUST OVERLAP THE TWO OUTERMOST TRANSVERSE WIRES OF SHEET BEING LAPPED, AS SHOWN BELOW:



13. PROVIDE 2-N12 TRIMMER BARS 2000mm LONG TIED TO UNDERSIDE OF FABRIC AT ALL RE-ENTRANT CORNERS.
14. ALL CONCRETE IS TO BE COMPACTED USING A MECHANICAL VIBRATOR.

CONCRETE (ELAPSED DELIVERY TIMES)

15. ELAPSED TIME BETWEEN THE WETTING OF THE MIX AND THE DISCHARGE OF THE MIX AT THE SITE MUST NOT EXCEED THE CRITERIA IN THE ELAPSED DELIVERY TIMETABLE BELOW:

ELAPSED DELIVERY TIME TABLE

CONCRETE TEMPERATURE AT TIME OF DISCHARGE (°C)	MAXIMUM ELAPSED TIME (HOURS)
< 24	2.00
24 to 27	1.50
27 to 30	1.00
30 to 32	0.75
32 to 35	0.50

CONCRETE PLACEMENT CONDITIONS SHALL BE IN ACCORDANCE WITH COUNCIL'S CIVIL WORKS SPECIFICATION.

CONCRETE AND REINFORCEMENT

16. CARRY OUT ALL CONCRETE WORK IN ACCORDANCE WITH AS 3600 AND NATSPEC CONCRETE STANDARDS.
17. CONCRETE PROPERTIES AND COVER TO REINFORCING:

COVER TO REINFORCEMENT

ELEMENT	EXPOSURE CLASSIFICATION	CONCRETE STRENGTH GRADE	MAXIMUM 56 DAY DRY SHRINKAGE	COVER (mm)
SLABS ON GROUND	A2 (>50km TO COASTLINE)	N25	650μm	45
	B1 (1-50km TO COASTLINE)	N32	650μm	45
	B2 (<1km TO COASTLINE)	N40	650μm	45

MAXIMUM AGGREGATE SIZE = 20mm UNLESS OTHERWISE NOTED

SLUMP DURING PLACING = 80mm ±10mm.

NO ADMIXTURES SHALL BE USED IN THE CONCRETE MIX UNLESS APPROVED IN WRITING BY COUNCIL'S REPRESENTATIVE.

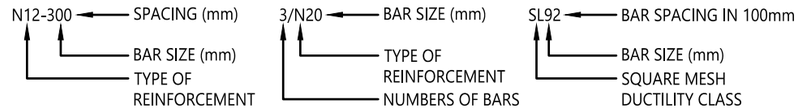
18. CONCRETE PROPERTIES FOR SLABS AND BEAMS SHALL BE VARIED FROM NORMAL CLASS AS FOLLOWS:
   - MINIMUM CEMENT CONTENT 250kg/m^3
   - MAXIMUM 56 DAY SHRINKAGE STRAIN = AS NOMINATED ABOVE
   - PRIOR TO COMMENCEMENT CONCRETE SUPPLIER TO PROVIDE DRYING SHRINKAGE TEST RESULTS FROM PRODUCTION ASSESSMENT AS EVIDENCE THAT SPECIFIED DRYING SHRINKAGE LIMITS CAN BE ACHIEVED USING NORMAL MIX DESIGN
20. PERCENTAGE OF ENTRAPPED AIR TO BE AS FOLLOWS:
   - FOR AGGREGATE 10mm-20mm NORMAL SIZE 8-4% IN ACCORDANCE WITH AS 3600 AND AS 1012.4 (SUBMIT TEST RESULTS) FOR ALPINE OR SUB-ALPINE AREAS.
21. SURFACE FINISHES:
   - SLABS (UNLESS OTHERWISE NOTED) - BROOM FINISH.
22. PLACE CONCRETE CONTINUOUSLY BETWEEN CONSTRUCTION JOINTS SHOWN ON PLAN. DO NOT BREAK OR INTERRUPT SUCCESSIVE POURS SUCH THAT COLD JOINTS OCCUR. ANY REVISIONS OR ADDITIONS TO CONSTRUCTION JOINTS SHOWN ON PLAN REQUIRE APPROVAL FROM COUNCIL'S REPRESENTATIVE.
23. REINFORCEMENT QUALITY AND NOTATION:

REINFORCEMENT NOTATION

SYMBOL	BAR TYPE	STRENGTH GRADE (MPa)	DUCTILITY CLASS	TO COMPLY WITH AUSTRALIAN STANDARD
N	HOT ROLLED DEFORMED RIB BAR	500	NORMAL	AS/NZS 4671
SL	SQUARE MESH OF DEFORMED RIB BAR	500	LOW	AS/NZS 4671

ALL REINFORCING BARS SHALL BE GRADE D500N TO AS/NZS 4671 AND ALL MESH SHALL BE GRADE 500L TO AS/NZS 4671. UNLESS OTHERWISE NOTED CLASS L REINFORCEMENT SHALL NOT BE USED.

REINFORCEMENT LABELS:



24. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY, AND NOT NECESSARILY IN TRUE PROJECTION. BARS SHOWN ARE INDICATIVE ONLY AND LENGTHS MAY VARY. BEAM ELEVATIONS TAKE PRECEDENCE OVER SECTIONS. SLAB PLANS TAKE PRECEDENCE OVER SECTIONS. REFER TO SECTIONS FOR EXTRA BARS THAT MAY BE REQUIRED.
25. USE ONLY PLASTIC OR CONCRETE CHAIRS AT EXTERNAL SURFACES.
26. SITE BENDING OF REINFORCEMENT BARS SHALL BE DONE WITHOUT HEATING USING A RE-BENDING TOOL. THE BARS SHALL BE RE-BENT AGAINST A FLAT SURFACE OR A PIN WITH A DIAMETER NOT LESS THAN THE MINIMUM PIN SIZE PRESCRIBED IN AS 3600.
27. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN ON THE STRUCTURAL DRAWINGS. LAPS SHALL NOT BE LESS THAN THE DEVELOPMENT LENGTH FOR EACH BAR AND IN ACCORDANCE WITH AS 3600.
28. LAPS IN MESH SHALL BE IN ACCORDANCE WITH AS 3600.
29. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS.
30. AT EXTERNALLY EXPOSED SURFACES NO METALLIC ITEMS INCLUDING FORM BOLTS, FORM SPACERS, METALLIC BAR CHAIRS AND TIE-WIRE ARE TO BE PLACED IN THE COVER ZONE.
31. ALL REINFORCEMENT, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION AND INSPECTED BY COUNCIL'S REPRESENTATIVE PRIOR TO PLACING CONCRETE.
32. HOLD DOWN BOLTS SHALL BE HOT-DIP GALVANISED.
33. CURING OF ALL CONCRETE IS TO BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 7 DAYS, UNLESS OTHERWISE SPECIFIED. APPROVED SPRAY ON CURING COMPOUNDS THAT COMPLY WITH AS 3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED. POLYTHENE SHEETING OR WET HESSIAN MAY BE USED TO RETAIN CONCRETE MOISTURE WHERE PROTECTED FROM WIND AND TRAFFIC. CURING IS TO COMMENCE IMMEDIATELY AFTER CONCRETE PLACEMENT.
34. FOR ELAPSED TIME BETWEEN THE WETTING OF THE MIX AND THE DISCHARGE OF THE MIX, REFER TO CONCRETE - ELAPSED DELIVERY TIMES NOTE.

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SCALE ON ORIGINAL A3 SIZE DRAWING

NOT TO SCALE

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

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STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
BUS STOP SHELTER

DRAWING NUMBER SD0605

REV A

SHEET 3 OF 5

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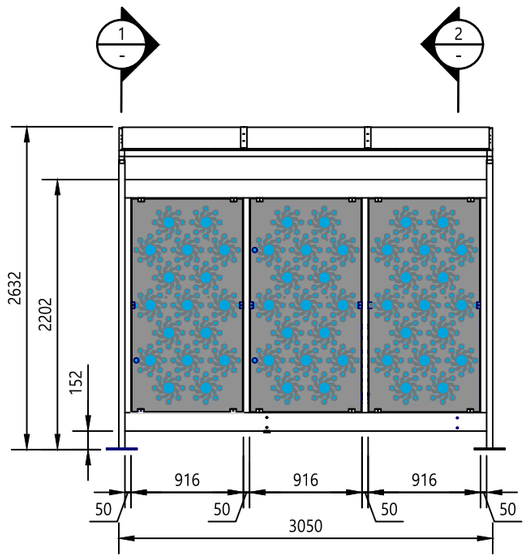
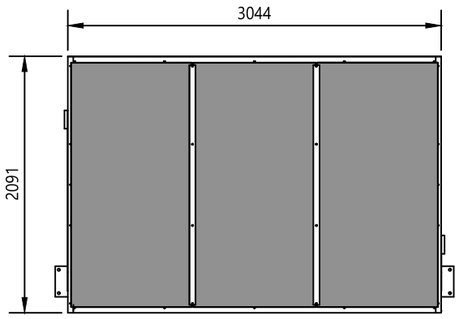
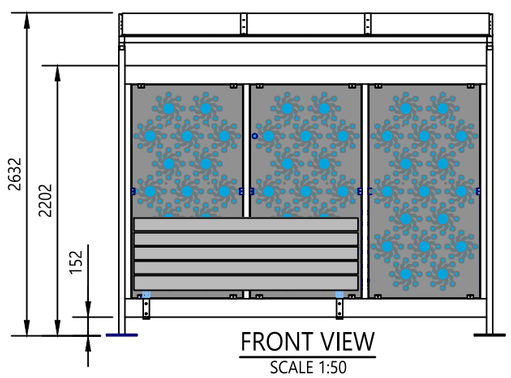


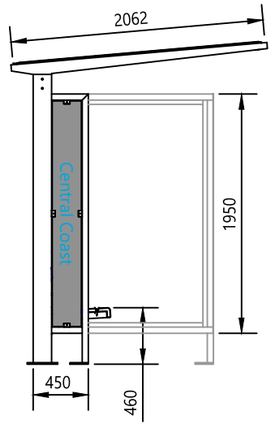
REAR VIEW
SCALE 1:50



TOP VIEW
SCALE 1:50



FRONT VIEW
SCALE 1:50



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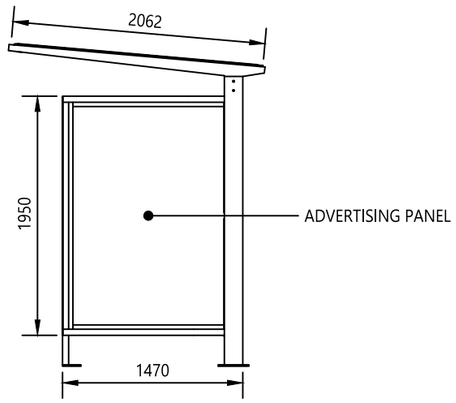

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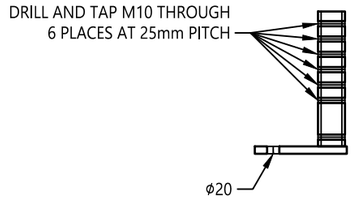
SCALE 1:50



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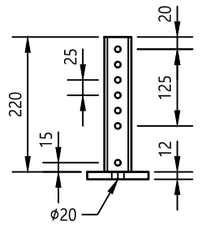

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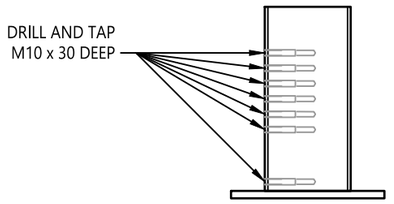
SCALE 1:100



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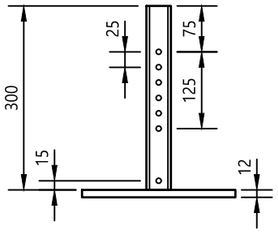
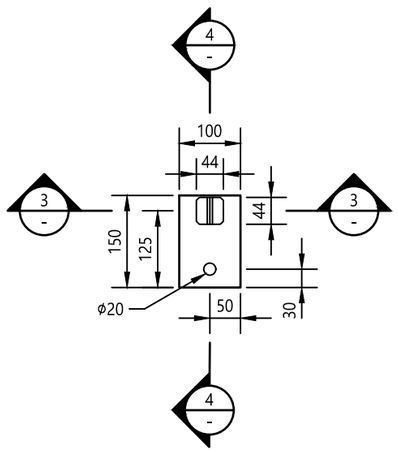
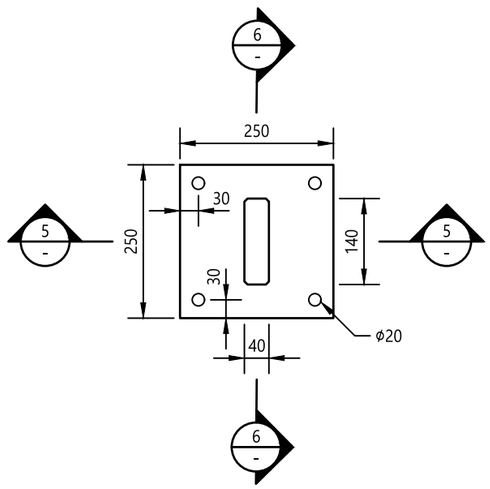
SCALE 1:100



SECTION 5
SCALE 1:100



FRONT LEG ADJUSTABLE FEET
SCALE 1:100



REAR LEG ADJUSTABLE FEET
SCALE 1:100

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SCALE ON ORIGINAL A3 SIZE DRAWING

0 500 1000 1500 2000 2500 1:50

0 1000 2000 3000 4000 5000 1:100

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

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DATE	28/4/20

UNIT MANAGER APPROVAL

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BUS STOP SHELTER

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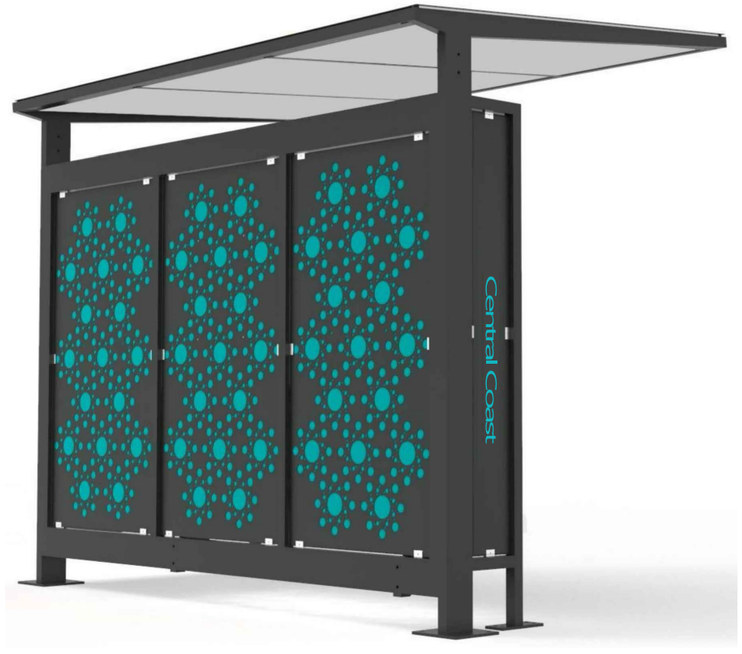

BUS STOP SHELTER
NOT TO SCALE

(EXAMPLE ADVERTISING ONLY)

REV	AMENDMENT	DATE	DRAWN	APRVD
A	SHELTER AND STRUCTURAL DETAILS	22/1/20	TW	MB

SCALE ON ORIGINAL A3 SIZE DRAWING

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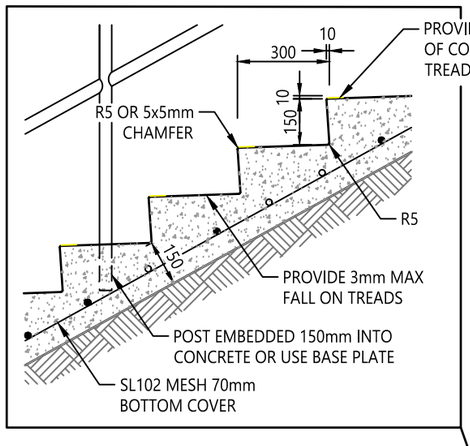
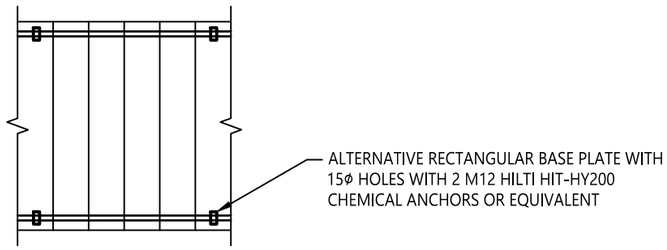
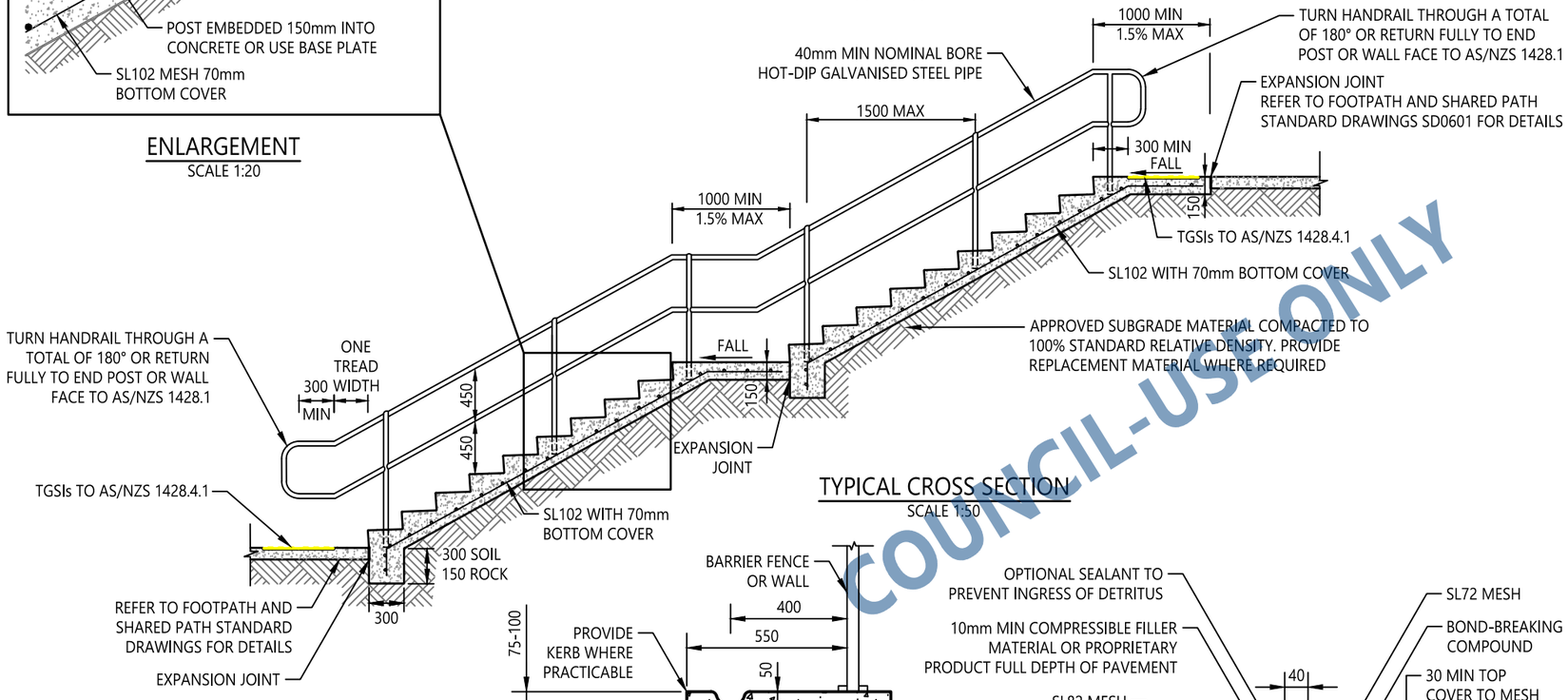


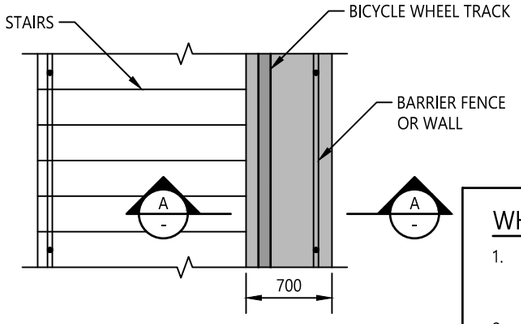
ENLARGEMENT
SCALE 1:20



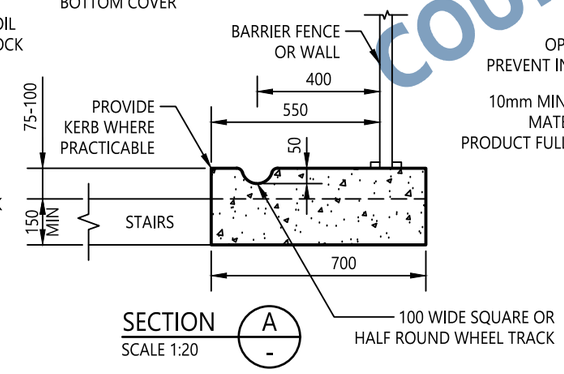
ORIENTATION OF RECTANGULAR BASE PLATE
SCALE 1:50



TYPICAL CROSS SECTION
SCALE 1:50



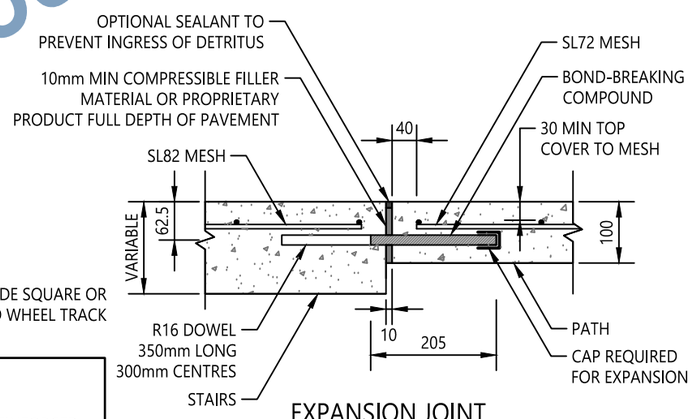
BICYCLE WHEEL TRACK ON REINFORCED CONCRETE STAIRS
SCALE 1:50



SECTION A -
SCALE 1:20

WHEEL TRACK NOTES:

1. BICYCLE WHEEL TRACKS MAY BE PROVIDED ADJACENT TO REINFORCED CONCRETE STAIRS AT LOCATIONS WHICH LINK SHARED PATHS OR BICYCLE PATHS OR OTHER LOCATIONS FREQUENTED BY CYCLISTS.
2. GRADIENT OF RAMP SHOULD NOT EXCEED 25°.
3. ALTERNATIVE WHEEL TRACK SYSTEMS MAY BE RETROFITTED TO EXISTING STAIRS.



EXPANSION JOINT REINFORCED CONCRETE STAIRS TO PATH
SCALE 1:10

NOTES:

1. NOT TO BE USED AS A DESIGN OR FOR CONSTRUCTION PURPOSES.
2. STAIRS SHALL BE DESIGNED AND BUILT IN ACCORDANCE WITH AS/NZS 1428.1 AND AS 3600.
3. STAIRS SHALL BE DESIGNED TO ENSURE THE HANDRAIL AND TACTILE GROUND SURFACE INDICATORS (TGSIs) DO NOT ENCROACH INTO THE TRANSVERSE TRAVEL PATH.
4. WHERE STAIRS LINK SHARED PATHS, PROVISION SHALL BE MADE FOR WALKING CYCLES UP AND DOWN ADJACENT TO THE STAIRS IN ACCORDANCE WITH CURRENT AUSTROADS GUIDELINES. DETAILS SHALL BE SUBMITTED FOR APPROVAL TO COUNCIL'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
5. CONCRETE STRENGTH GRADE TO BE N32 MINIMUM. REFER TO AS 3600 CONCRETE STRUCTURES FOR RELEVANT EXPOSURE CLASSIFICATION.
6. NATURAL GROUND OR FILL MATERIAL ON WHICH THE CONCRETE STAIRS ARE FOUNDED SHALL BE COMPACTED TO 100% STANDARD RELATIVE DENSITY.
7. FULL DEPTH EXPANSION OR ISOLATION JOINTS SHALL BE PROVIDED AT THE INTERFACE BETWEEN STEPS AND OTHER CONCRETE FORMATIONS.
8. CONCRETE STEPS SHALL BE FINISHED WITH A:
   - SLIP-RESISTANT FINISH OR
   - NON-SKID STRIP OR
   - TREATMENT NEAR THE EDGE OF THE NOSING.
8. WHERE SMALL BANKS OF STEPS ARE LOCATED IN ISOLATION, ADVANCE WARNING SIGNS SHALL BE PROVIDED.
9. THE FOLLOWING DIMENSIONS SHALL BE ADHERED TO UNLESS OTHERWISE SHOWN ON THE APPROVED DRAWINGS OR INSTRUCTED BY COUNCIL'S REPRESENTATIVE:

	NUMBER OF STEPS PER FLIGHT	STAIR WIDTH (UNOBSTRUCTED)	RISER (R)	GOING (G)	SLOPE RELATIONSHIP (2R+G)
MINIMUM	2	1000	130	250	585
MAXIMUM	10	-	190	355	630
PREFERRED	-	-	150	300	600

10. THE NUMBER OF STAIRS PER FLIGHT AND THE LANDING DISTANCE SHALL NOT CHANGE WHERE THERE ARE MULTIPLE FLIGHTS OF STAIRS.
11. STAIRS SHALL NOT BE MADE AVAILABLE FOR PEDESTRIAN USE UNTIL HANDRAIL HAS BEEN INSTALLED.
12. THE SERVICE PROVIDER SHALL SUBMIT TO COUNCIL'S REPRESENTATIVE DETAILS OF THE HANDRAIL SYSTEM TO BE USED AT LEAST 14 DAYS PRIOR TO INSTALLATION.
13. HANDRAILS, UNLESS OTHERWISE SHOWN ON THE APPROVED DRAWINGS, SHALL BE:
    - INSTALLED WHERE THERE ARE MORE THAN 4 RISERS IN 1 FLIGHT
    - 40mm NOMINAL DIAMETER
    - HOT-DIP GALVANISED TO AS/NZS 4792 AFTER FABRICATION. CONSIDER USING STAINLESS STEEL COMPONENTS IN A MARINE ENVIRONMENT
    - MANUFACTURED IN ACCORDANCE WITH AS 1657
14. ALL WELDS OR CUTS MADE ON SITE SHALL BE:
    - APPROVED BY COUNCIL'S REPRESENTATIVE AND
    - TREATED WITH AN APPROVED EPOXY ZINC RICH TWO-PACK EPOXY PRIMER TO 125-150µm DRY FILM THICKNESS WITH A TOPCOAT OF SILVER ENAMEL
15. TGSIs SHALL BE:
    - "COBBLETAC" INLAID PORCELAIN TACTILE INDICATORS OR SIMILAR
    - YELLOW IN COLOUR WITH A MINIMUM LUMINANCE CONTRAST OF 30% TO THE BACKGROUND IN ACCORDANCE WITH AS/NZS 1428.4.1
    - LAID IN CONCRETE RECESS 609mm BY PATH WIDTH
    - LAID IN THE RECESS ON AN ADHESIVE APPROVED BY THE TGSI MANUFACTURER
    - APPLIED WITH A SUITABLE SQUARE NOTCHED TROWEL
    - LAID LEVEL WITH THE SURROUNDING SURFACE TO ENSURE TACTILE STUDS STAND PROUD
16. TRAFFIC SHALL BE AVOIDED FOR A MINIMUM OF 24 HOURS AFTER TGSI INSTALLATION.
17. INSTALL OVERLAND FLOW CONCRETE CHANNEL ADJACENT TO STAIRS WHERE REQUIRED TO PREVENT SCOURING BESIDE THE STAIRS.

COUNCIL-USE ONLY

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING: AS SHOWN

DRAWN	M GREENWOOD/T WILLIS
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
REINFORCED CONCRETE STAIRS

DRAWING NUMBER	REV
SD0606	-
SHEET 1 OF 1	A3

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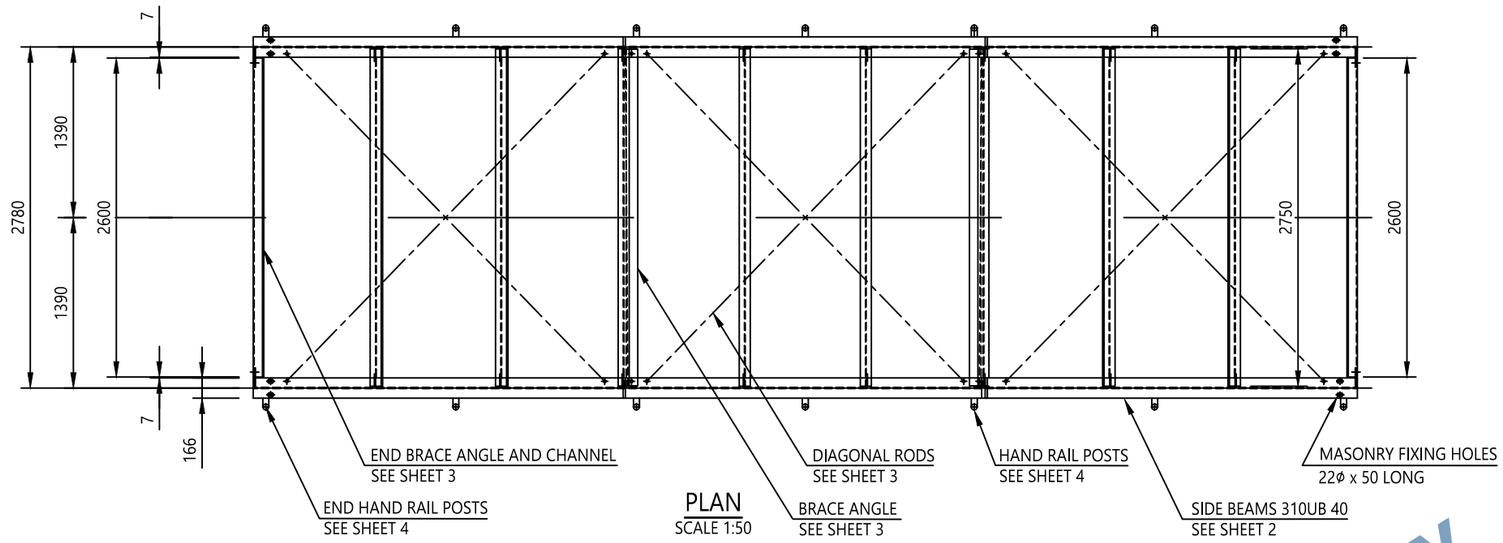


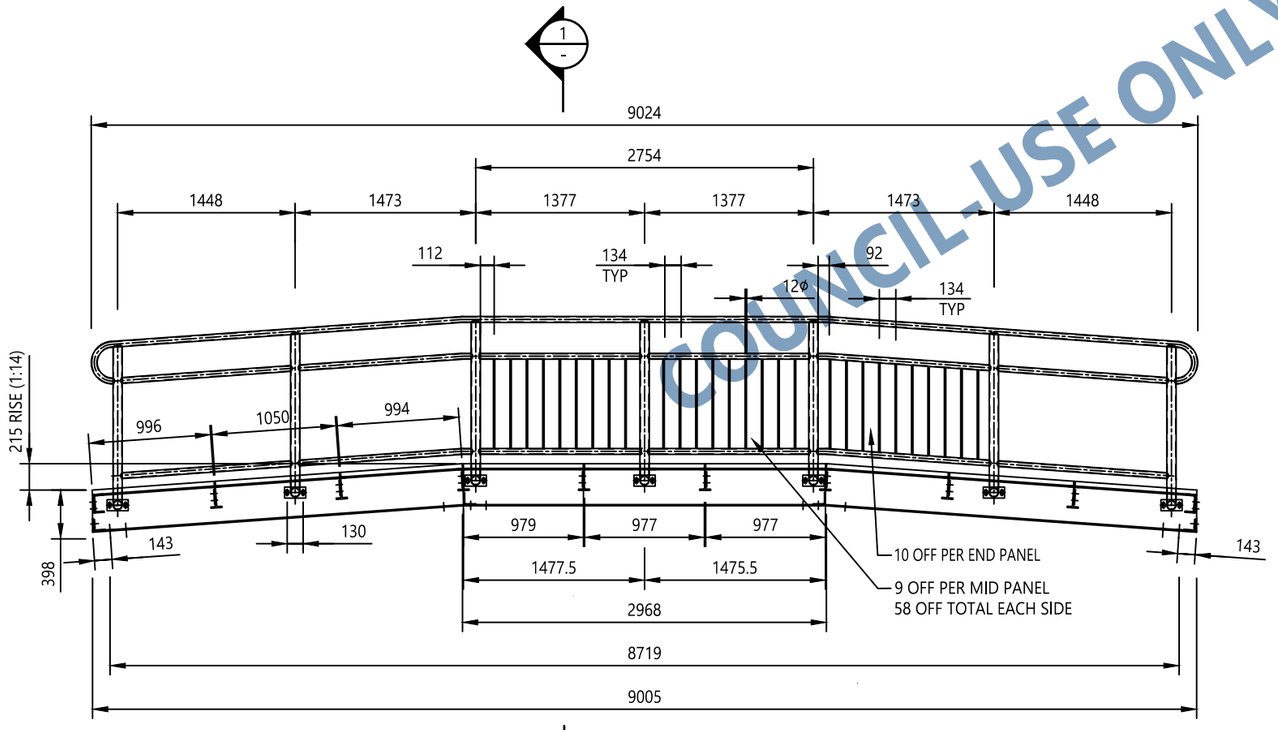
PLAN
SCALE 1:50

NOTES:

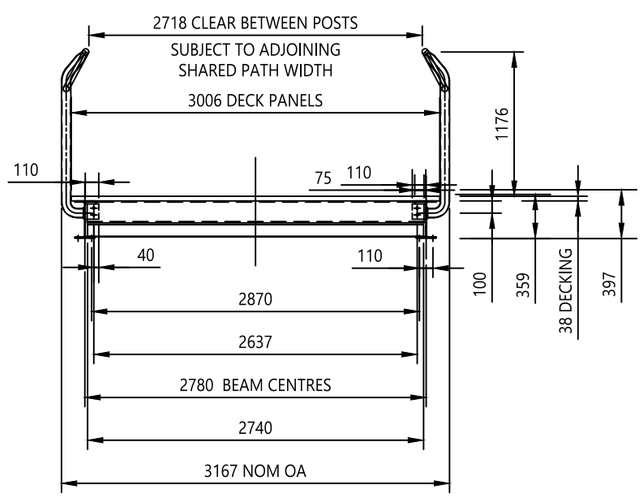
1. THIS STANDARD DRAWING IS BASED ON STEELWORKS ENGINEERING'S DRAWING SWE-1637 DATED 5/9/16.
2. THIS STANDARD DRAWING IS TO BE USED FOR GUIDANCE ONLY AND SHALL NOT BE USED AS A DESIGN OR FOR CONSTRUCTION PURPOSES.
3. SHARED PATH BRIDGES SHALL BE DESIGNED BY A SUITABLY QUALIFIED AND EXPERIENCED ENGINEER, TAKING INTO ACCOUNT PREVAILING GROUND CONDITIONS AND STRUCTURAL LOADINGS.
4. ALL WELDS TO BE 6mm CONTINUOUS FILLET USING E41XX ELECTRODES. ALL SLAG ETC TO BE CLEANED OFF IN PREPARATION FOR FULL HOT-DIP GALVANISING.
5. ALL HOLES 18ø FOR M16 8.8 BOLTS UNLESS OTHERWISE NOTED.
6. WIDTH OF SHARED PATH BRIDGE SHALL BE BASED ON FUTURE SHARED PATH WIDTH REQUIREMENTS. REFER TO SHARED PATH WIDTH TABLE ON SHEET 1 IN SD0601.

PANEL SIZES:

1015 x 3006 - 2
996 x 3006 - 4
977 x 3006 - 3



ELEVATION
SCALE 1:50



SECTION
SCALE 1:50

COUNCIL-USE ONLY

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GENERAL ASSEMBLY

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 500 1000 1500 2000 2500
1:50
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH BRIDGE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0607	-
SHEET 1 OF 5	A3

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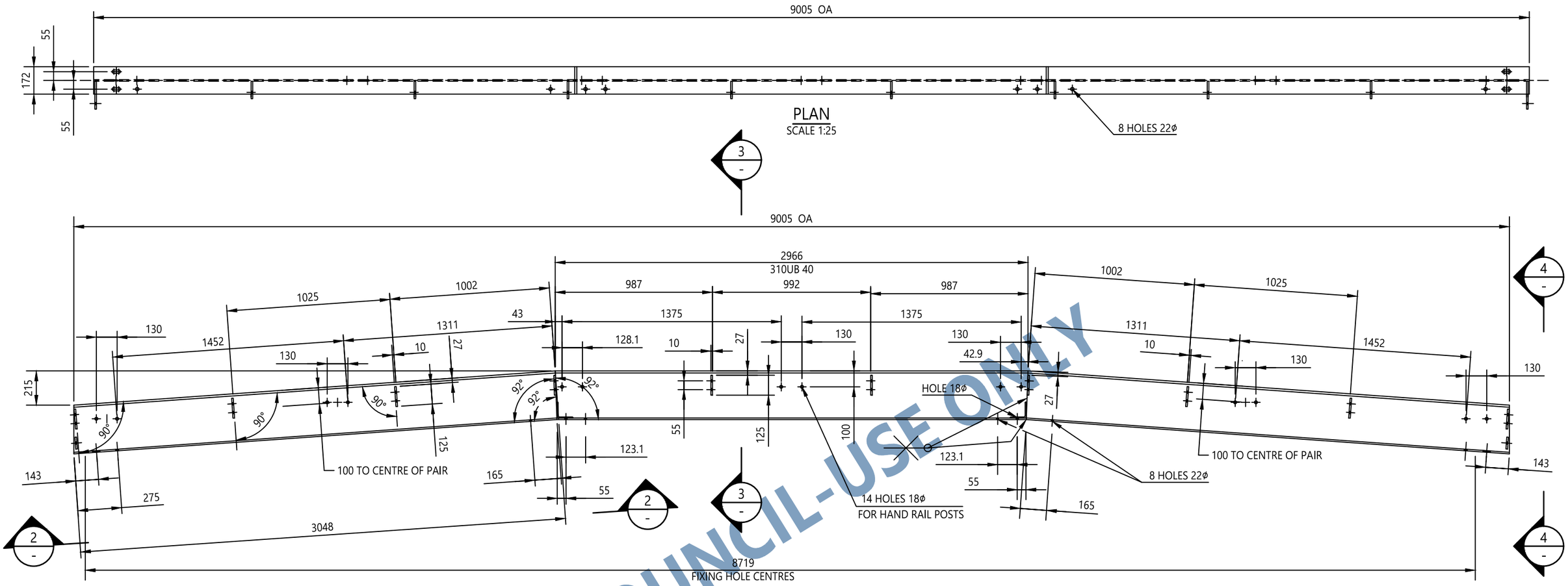
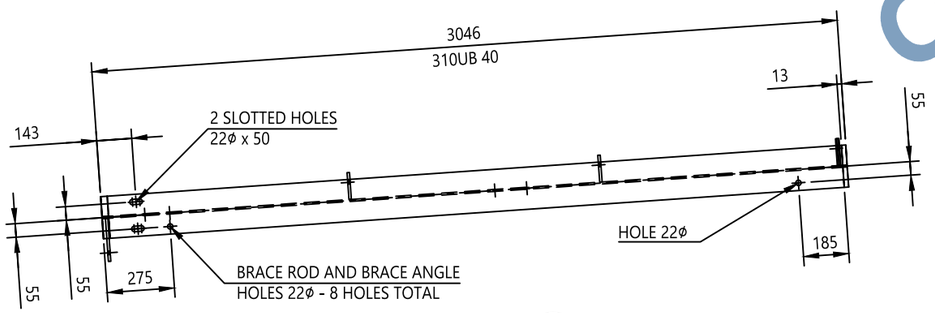
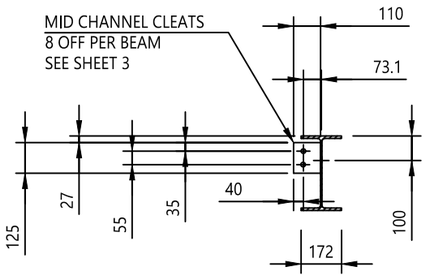


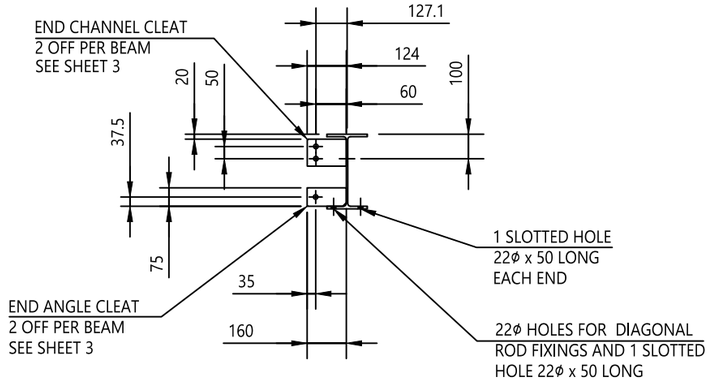


SECTION 2
SCALE 1:25

(UNDERSIDE)



SECTION 3
SCALE 1:25



SECTION 4
SCALE 1:25

ELEVATION
SCALE 1:25

MAIN BEAM DETAILS

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COUNCIL-USE ONLY

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING

0 250 500 750 1000 1250 1:25

0 500 1000 1500 2000 2500 1:50

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

ASSETS PLANNING AND DESIGN

Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

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PEDESTRIAN AND CYCLIST SERIES SHARED PATH BRIDGE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0607	-
SHEET 2 OF 5	A3

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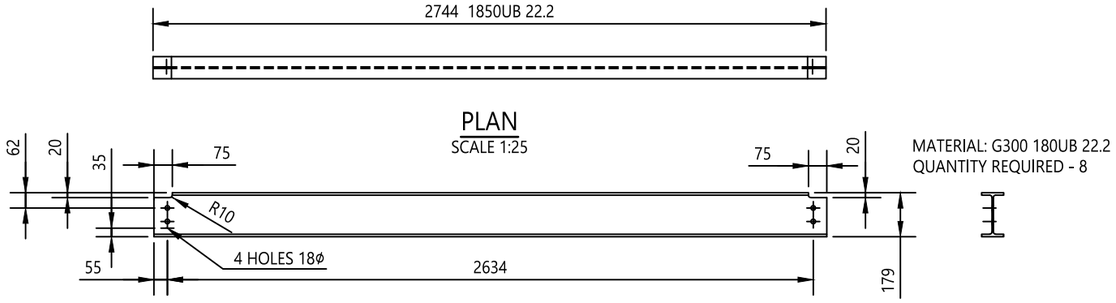
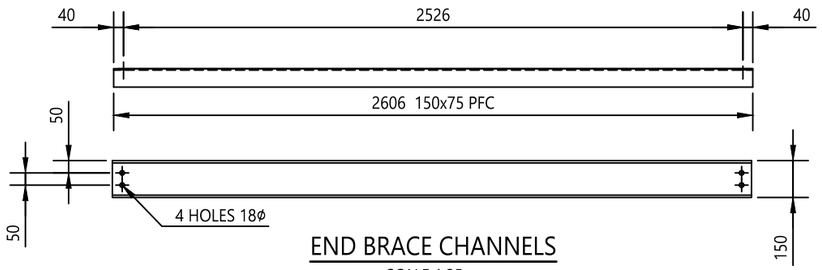


PLAN
SCALE 1:25

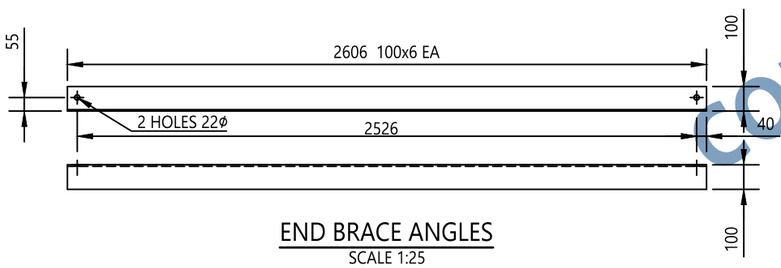
MATERIAL: G300 180UB 22.2
QUANTITY REQUIRED - 8

MID CROSS BRACE BEAMS
SCALE 1:25



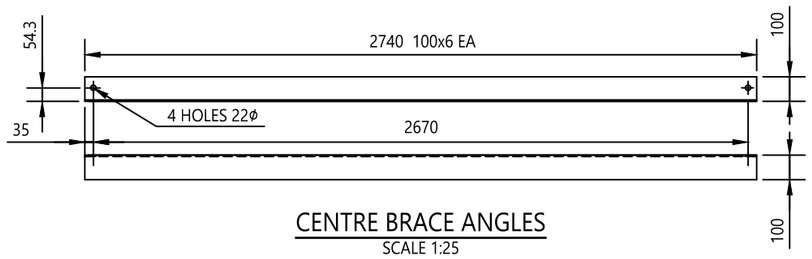
MATERIAL: G300 150x75 PFC
QUANTITY REQUIRED - 2

END BRACE CHANNELS
SCALE 1:25



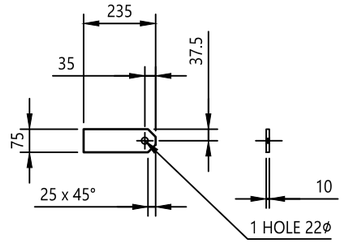
MATERIAL: G300 100x6 EA
QUANTITY REQUIRED - 2

END BRACE ANGLES
SCALE 1:25

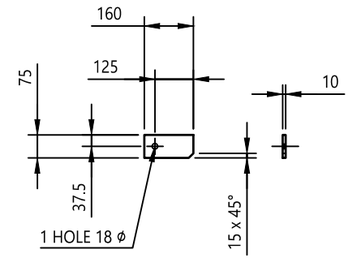


MATERIAL: G300 100x6 EA
QUANTITY REQUIRED - 2

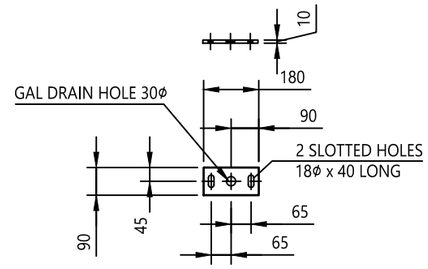
CENTRE BRACE ANGLES
SCALE 1:25



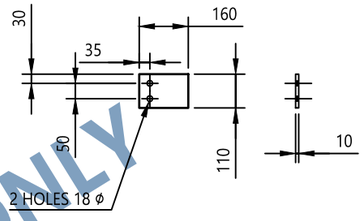
DIAGONAL ROD END PLATES
MATERIAL: G250 PLATE 10 x 75 x 235
12 OFF
SCALE 1:20



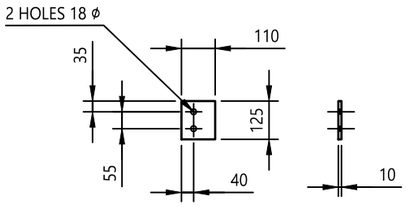
END ANGLE CLEATS
MATERIAL: G250 PLATE 10 x 75 x 160
4 OFF
SCALE 1:20



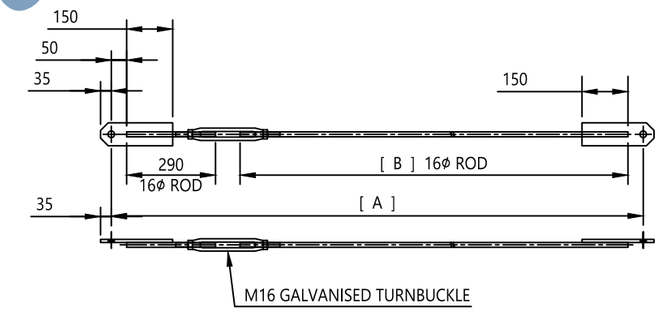
HANDRAIL POST FIXING PLATE
MATERIAL: G250 PLATE 10 x 90 x 180
14 OFF
SCALE 1:20

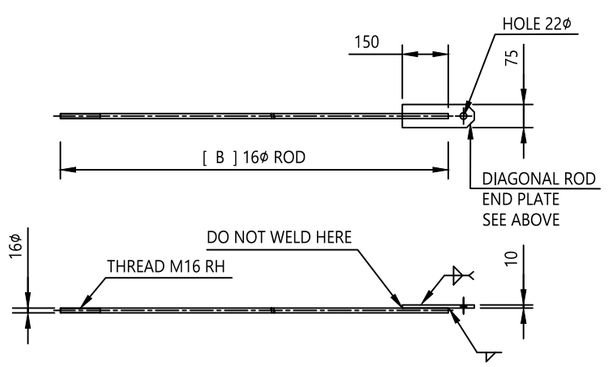


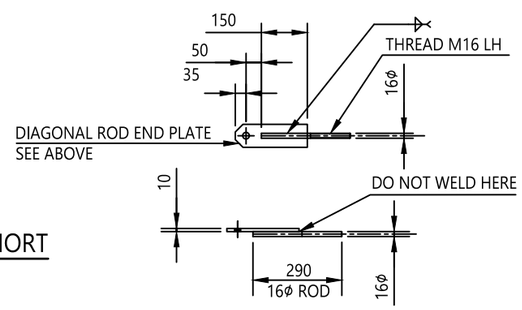
END CROSS BRACE CHANNELS CLEATS
4 OFF
MATERIAL: PLATE 10 x 110 x 160
SCALE 1:20



MID CROSS BRACE CHANNELS CLEATS
16 OFF
MATERIAL: G250 PLATE 10 x 110 x 125
SCALE 1:20







DIAGONAL ROD END - SHORT
18 OFF
SCALE 1:20

BRACE ROD LENGTH TABLE			
LOCATION	DIM. A CENTRES	DIM. B 16ø ROD	QUANTITY
END	3723	3303	4
MID	3715	3294	2

FINISHING:
ALL PARTS TO BE CLEANED UP IN PREPARATION FOR FULL HOT-DIP GALVANISING.

COUNCIL-USE ONLY

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CROSS CHANNELS AND ANGLES AND DIAGONAL BRACE RODS DETAILS AND SMALL COMPONENT PROFILES

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000 1:20
0 250 500 750 1000 1250 1:25
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

Central Coast Council
ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH BRIDGE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0607	-
SHEET 3 OF 5	A3

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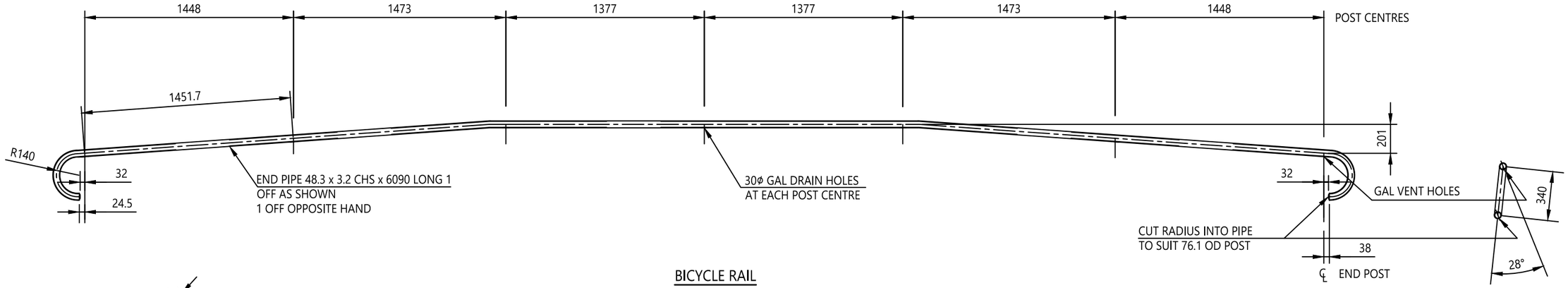
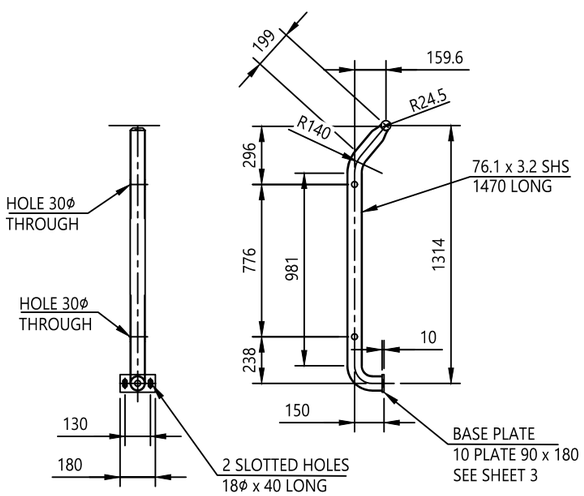


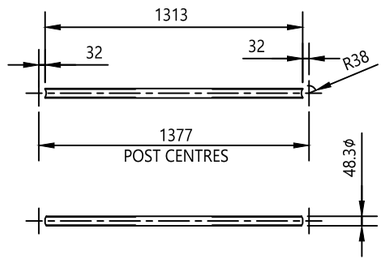
BICYCLE RAIL

1 OFF AS SHOWN
1 OFF OPPOSITE HAND
SCALE 1:30



INTERMEDIATE POSTS

76.1 OD x 3.2 CHS
10 OFF AS SHOWN



LEVEL HAND AND FOOT RAILS

48.3 OD x 3.5 CHS x 1313
4 OFF

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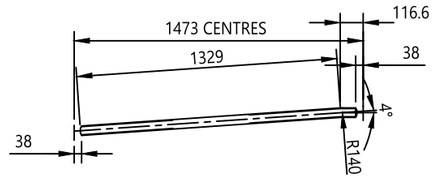
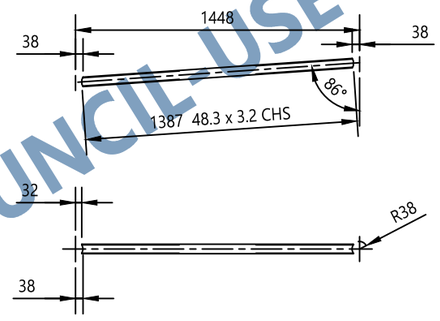


GRADED INNER HAND AND FOOT RAILS

48.3 OD x 3.5 CHS x 1412 LONG
4 OFF

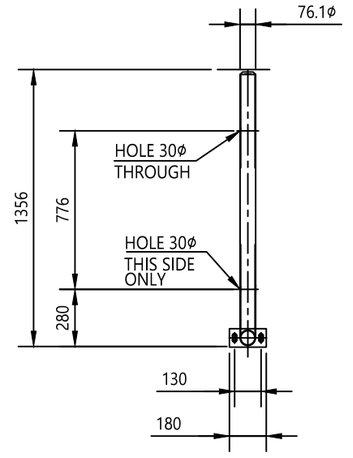


GRADED OUTER HAND AND FOOT RAILS

48.3 OD x 3.5 CHS x 1387 LONG
4 OFF

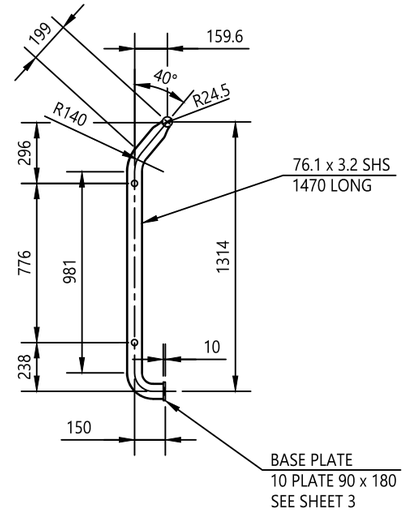
HANDRAIL AND COMPONENTS DETAILS

COUNCIL USE ONLY



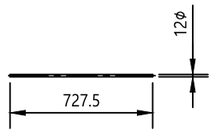
END POSTS

76.1 OD x 3.5 CHS
2 OFF AS SHOWN
2 OFF OPPOSITE HAND



WELDING AND FINISHING NOTE:

ALL WELDS TO BE 6mm CONTINUOUS FILLET UNLESS OTHERWISE NOTED USING E41XX ELECTRODES. ALL SLAG ETC TO BE CLEANED OFF IN PREPARATION FOR FULL HOT-DIP GALVANISING.



VERTICAL RAILS

12ø STEEL ROD
116 OFF AS SHOWN

REV	AMENDMENT	DATE	DRAWN	APRVD

ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

SCALE ON ORIGINAL A3 SIZE DRAWING

0 300 600 900 1200 1500 1:30

0 3000 6000 9000 12000 25000 1:300

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL

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Central Coast Council

ROADS TRANSPORT DRAINAGE AND WASTE

Central Coast Council

STANDARD DRAWING

PEDESTRIAN AND CYCLIST SERIES
SHARED PATH BRIDGE

DRAWING NUMBER	REV
SD0607	-
SHEET 4 OF 5	A3

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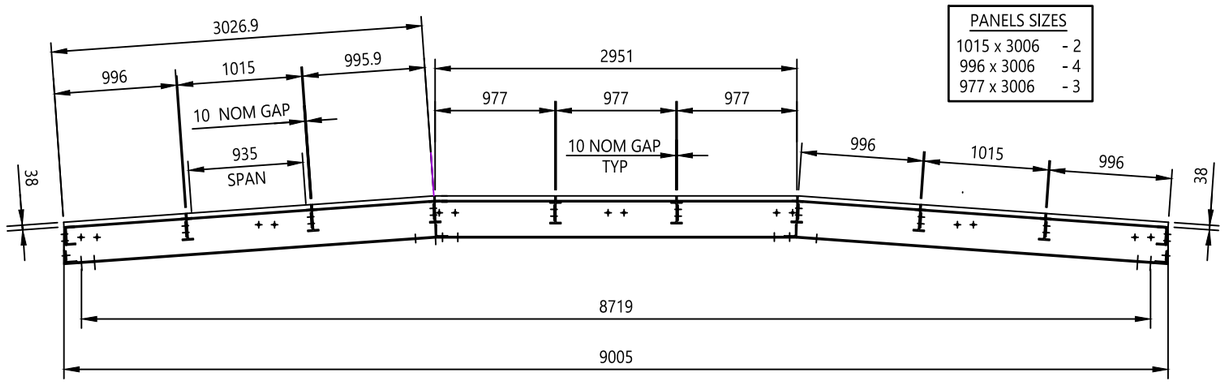
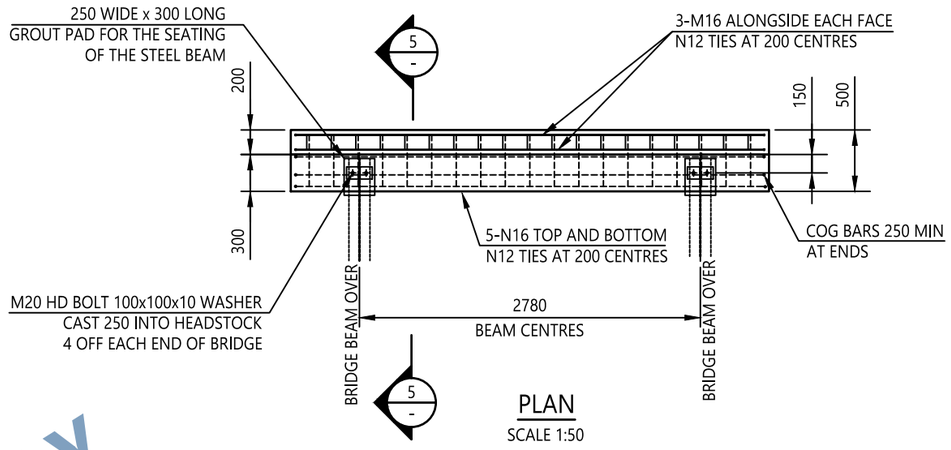
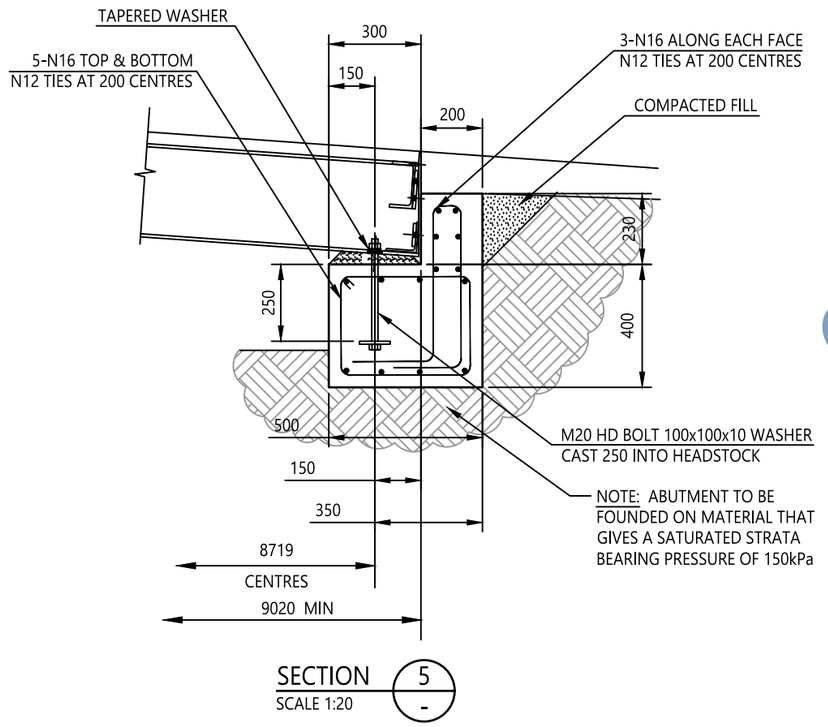


PANELS SIZES	
1015 x 3006	- 2
996 x 3006	- 4
977 x 3006	- 3

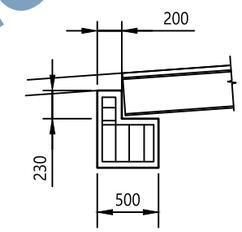
FRP GRATING
SCALE 1:50



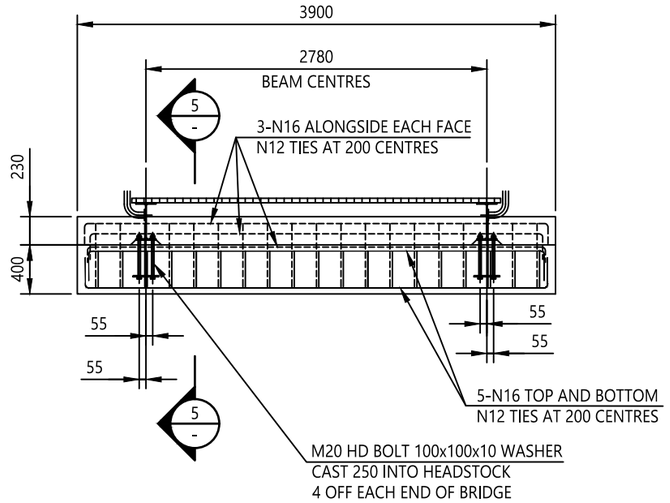
PLAN
SCALE 1:50



SECTION 5 -
SCALE 1:20



END VIEW
SCALE 1:50



ELEVATION
SCALE 1:50

COUNCIL-USE ONLY

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DECKING PANEL SETOUT AND HEADSTOCK DETAILS

REV	AMENDMENT	DATE	DRAWN	APRVD

SCALE ON ORIGINAL A3 SIZE DRAWING
0 200 400 600 800 1000 1:20
0 500 1000 1500 2000 2500 1:50
ALL DIMENSIONS IN mm UNLESS OTHERWISE SHOWN

DRAWN	D MILLER
CHECKED	M BAMBER
DATE	28/4/20

UNIT MANAGER APPROVAL
ASSETS PLANNING AND DESIGN

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ROADS TRANSPORT DRAINAGE AND WASTE

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PEDESTRIAN AND CYCLIST SERIES
SHARED PATH BRIDGE

STANDARD DRAWING

DRAWING NUMBER	REV
SD0607	-
SHEET 5 OF 5	A3

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