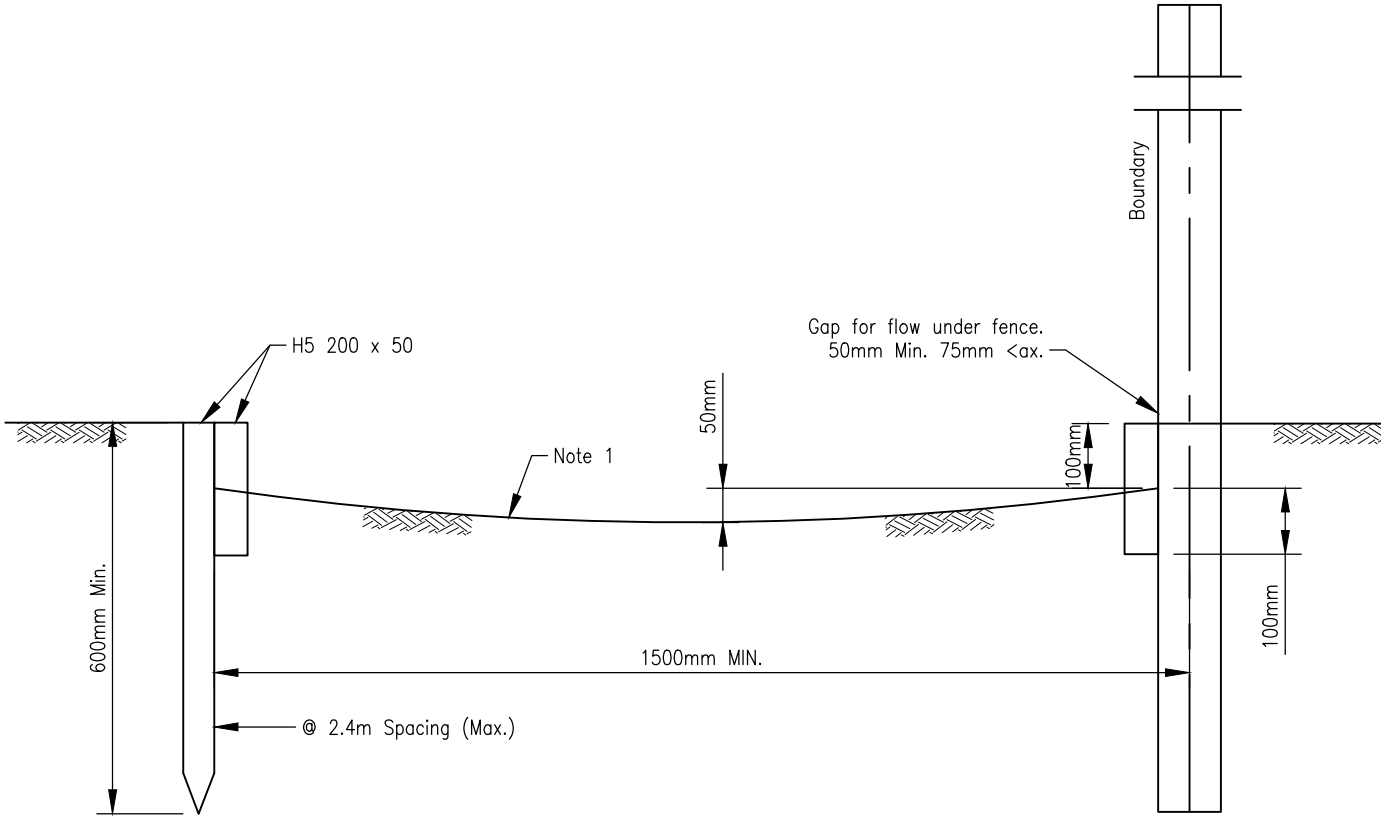


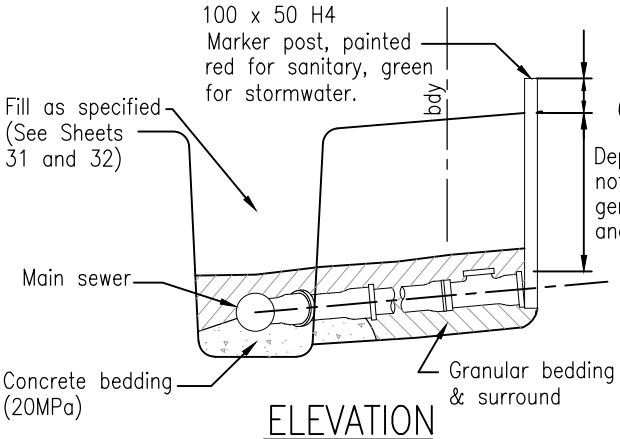
NOTE:

1. For 10 year ARI flow velocities :<1.0m/s grass cover is sufficient.
:1.0 – 1.5m/s reinforcing is required.
:>1.5m/s Hardening is required.

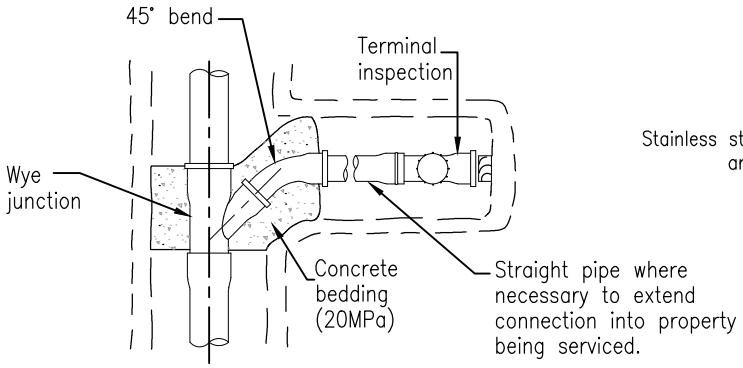
STORMWATER SECONDARY FLOW PATH TREATMENT – PRIVATE PROPERTY

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

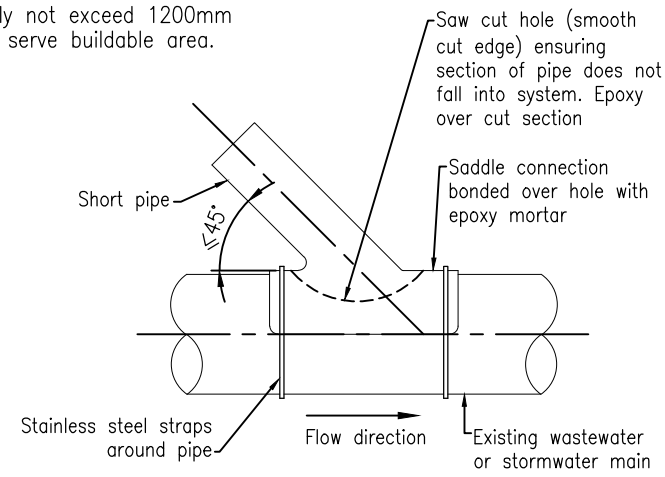
Date:	JAN 2021
Revision:	0.1
Scale:	AS SHOWN
SHEET No.	36



ELEVATION



PLAN STANDARD CONNECTION

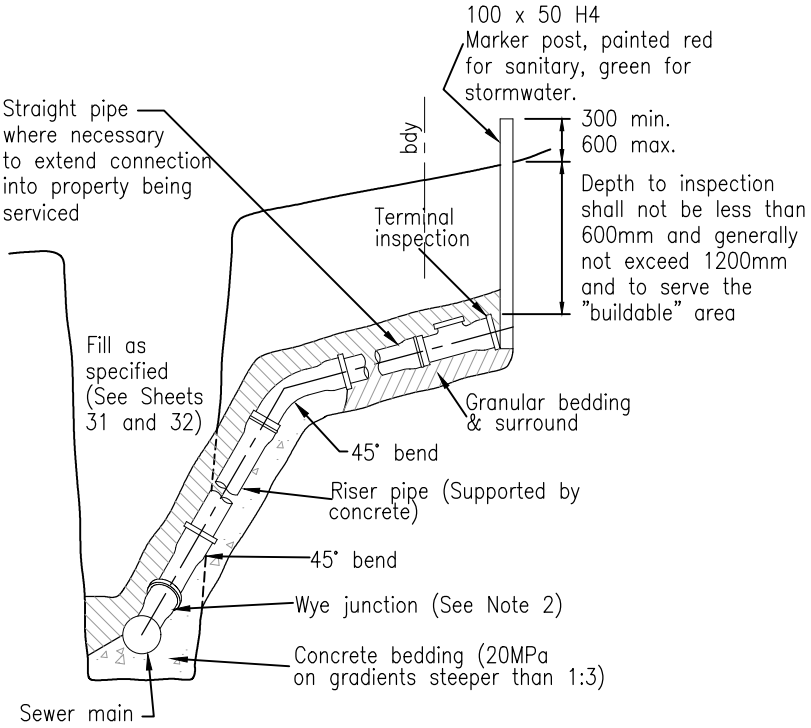


SADDLE CONNECTION

If main > 225mm

NOTES:

1. The terminal inspection shall be located not less than 300mm inside the property being serviced and be free of obstructions
2. For stormwater connections, junctions to be: (in order of preference)
   a. Prefabricated standard wye junctions,
   b. Prefabricated factory special connection, epoxy mortared saddled flange connection with appropriate insert adapter > DN 225.
3. Terminal blank end required for stormwater connections.
4. Pipes and fittings are to be sewer grade uPVC, or concrete to relevant NZ Standard
5. Pipelines that are likely to carry commercial or industrial waste are to satisfy the manufacturers requirements.
6. Specific design may be required in potentially unstable areas.
7. Joint flexibility is to be maintained where pipelines are in contact with concrete. Pipes shall be separated from concrete using DPC.
8. AS–BUILT plans are required for all connections.

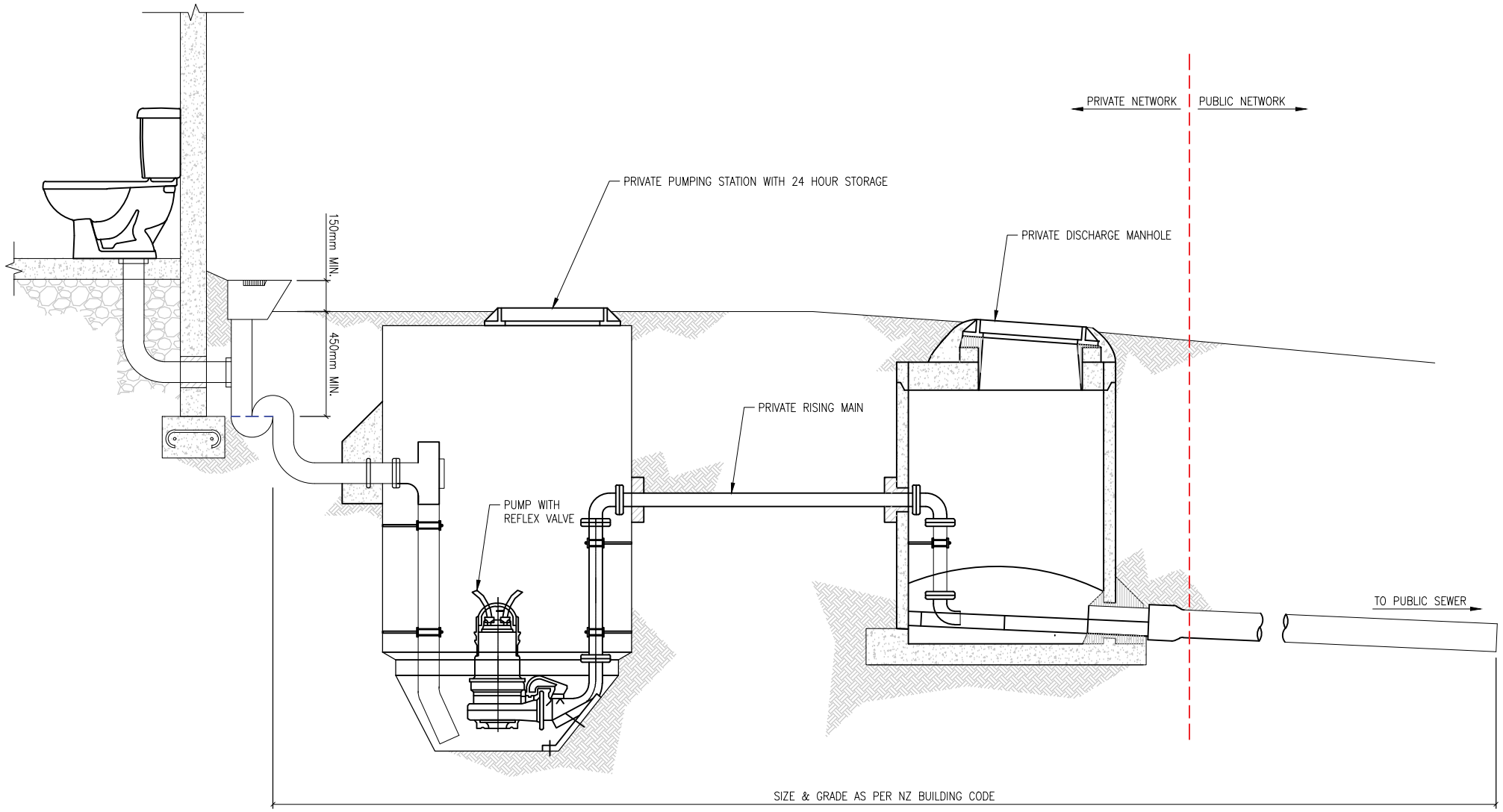


RAMPED RISER CONNECTION

STORMWATER AND SEWER CONNECTIONS
FOR ALL ENVIRONMENTS

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

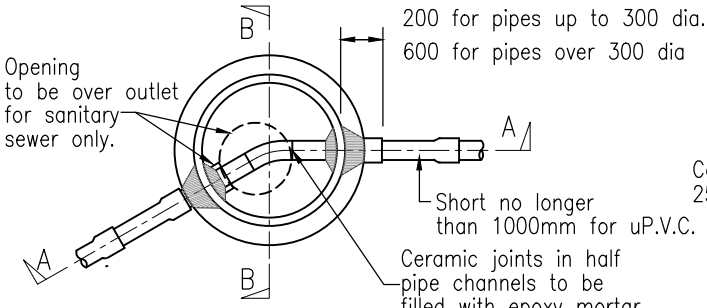
Date:	JAN 2021
Revision:	0.1
Scale:	AS SHOWN
SHEET No.	37



PRIVATE WASTEWATER PUMPING STATION CONNECTION TO PUBLIC NETWORK

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

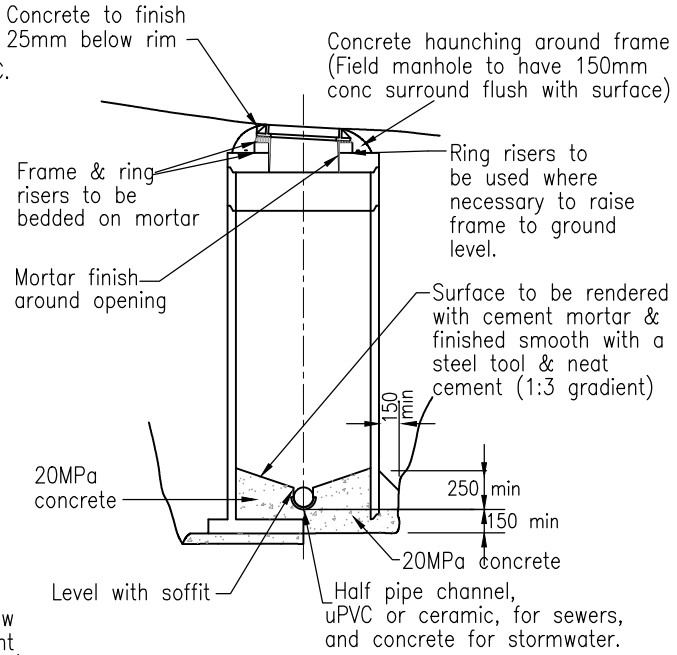
Date: JAN 2021
Revision: 0.1
SHEET No. 38



SECTION CC

NOTES:

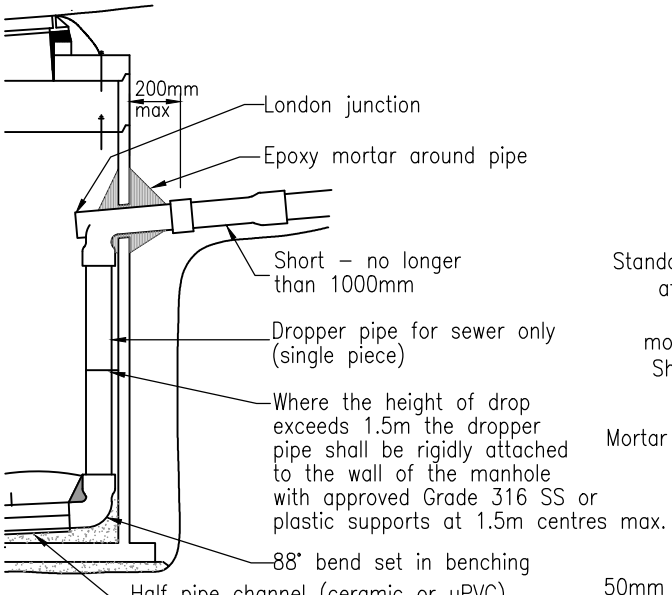
1. This detail is applicable for pipe diameters up to 600mm & for manhole depths up to 5.0m.
2. 150mm thick reinforced concrete lids with heavy duty ductile iron frames & covers to be used in driveways, carriageways & berms. 100mm thick concrete lids with light duty cast iron frames & covers may be used elsewhere.
3. Precast manhole bases shall be used in all instances with minimum sized holes cut for pipe entry.
4. No additional thin plastering of benching or benching of inverts is permitted.
5. All concrete to be 20MPa.
7. Where non-concrete pipe connections are made to concrete manholes, then a gritted starter pipe shall be installed to allow bond between manhole and pipe material. Also, a 3flexible joint should be specified as part of gritted starter pipe (as standard).
8. All manholes >1.2m in depth shall be provided with manhole step rungs. These shall follow the requirements on sheet 40



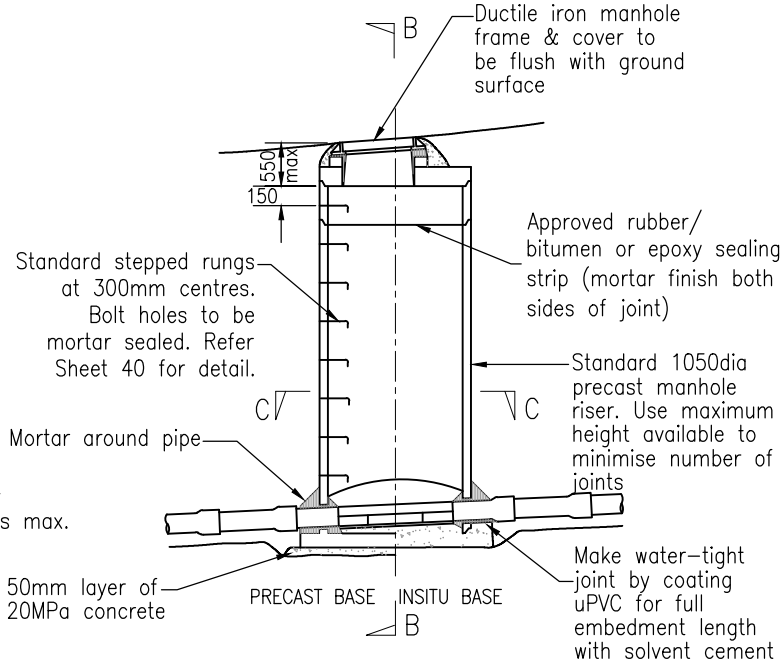
PRECAST BASE

INSITU BASE
(only permitted for pipes larger than 600mm)

SECTION BB



SECTION A–A INTERNAL DROP



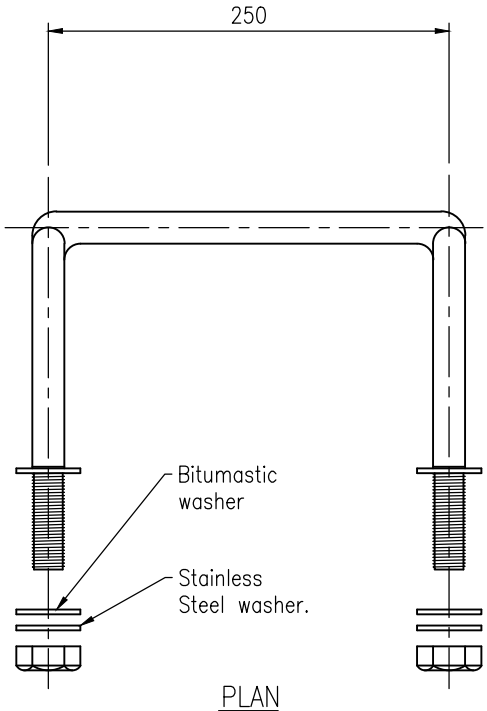
SECTION AA

Note:
1. This detail is applicable for pipe diameters up to 250mm & for manhole depth up to 5.0m & for manhole diameters ⩾ 1200mm.
2. External drops shall not be used

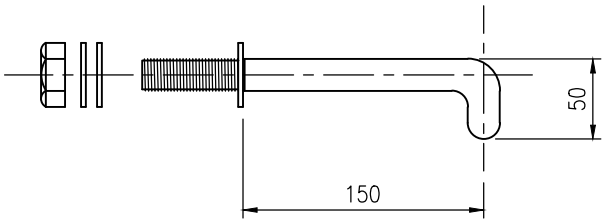
STANDARD PRECAST MANHOLE SEWER AND STORMWATER
FOR ALL ENVIRONMENTS

Date:	FEB 2022
Revision:	0.2
Scale:	AS SHOWN
SHEET No.	39

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS



PLAN



ELEVATION
STEPPED RUNG DETAIL

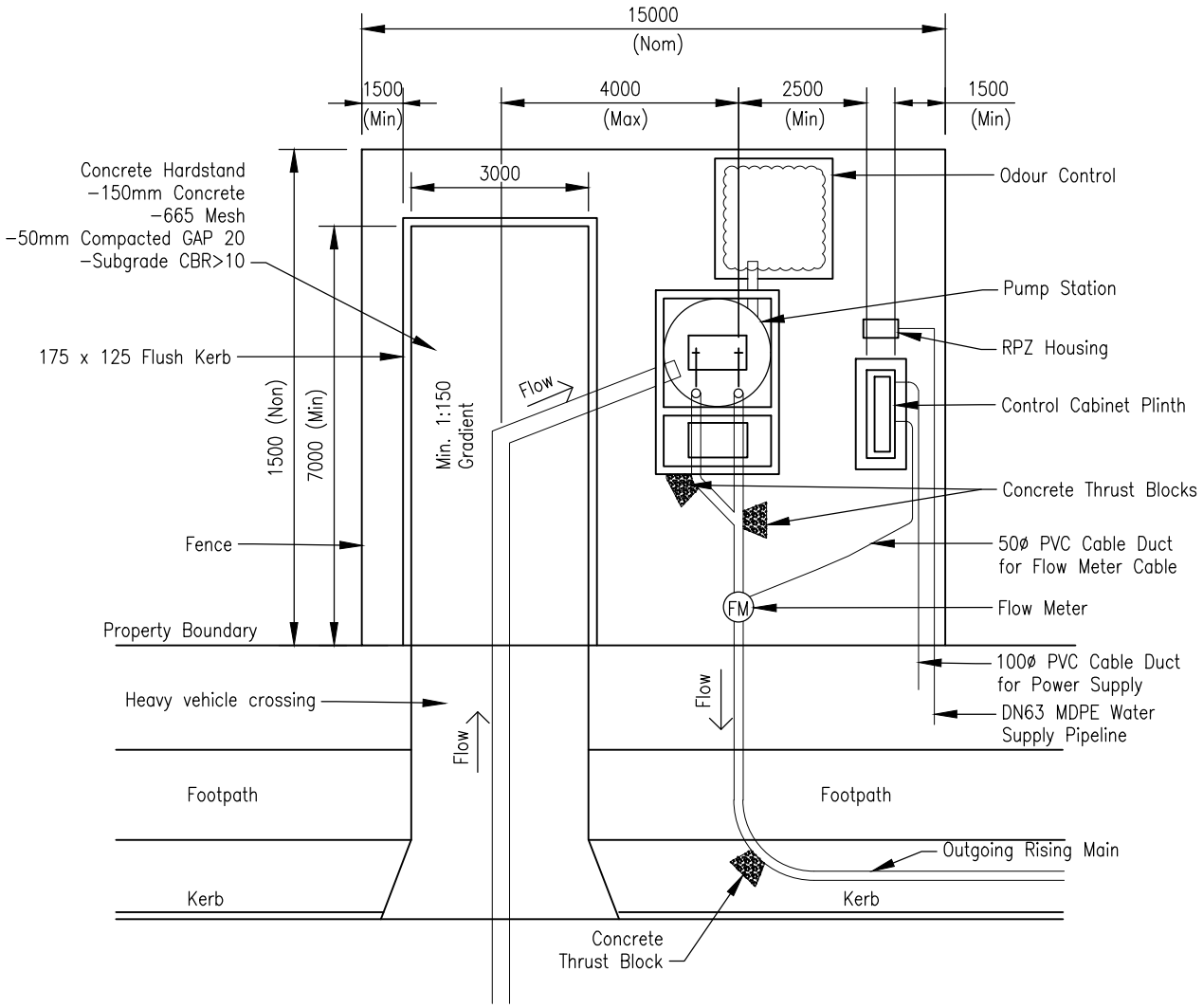
NOTE:

1. Step rungs shall be stainless steel.
2. Encapsulated rungs with galvanized steel or a stainless steel core shall be fully coated with an industrial grade PA or an approved alternative may be used.

STANDARD PRECAST MANHOLE – STEP RUNG
SEWER & STORMWATER – FOR ALL ENVIRONMENTS

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

Date:	FEB 2022
Revision:	0.2
Scale:	NOT TO SCALE
SHEET No.	40



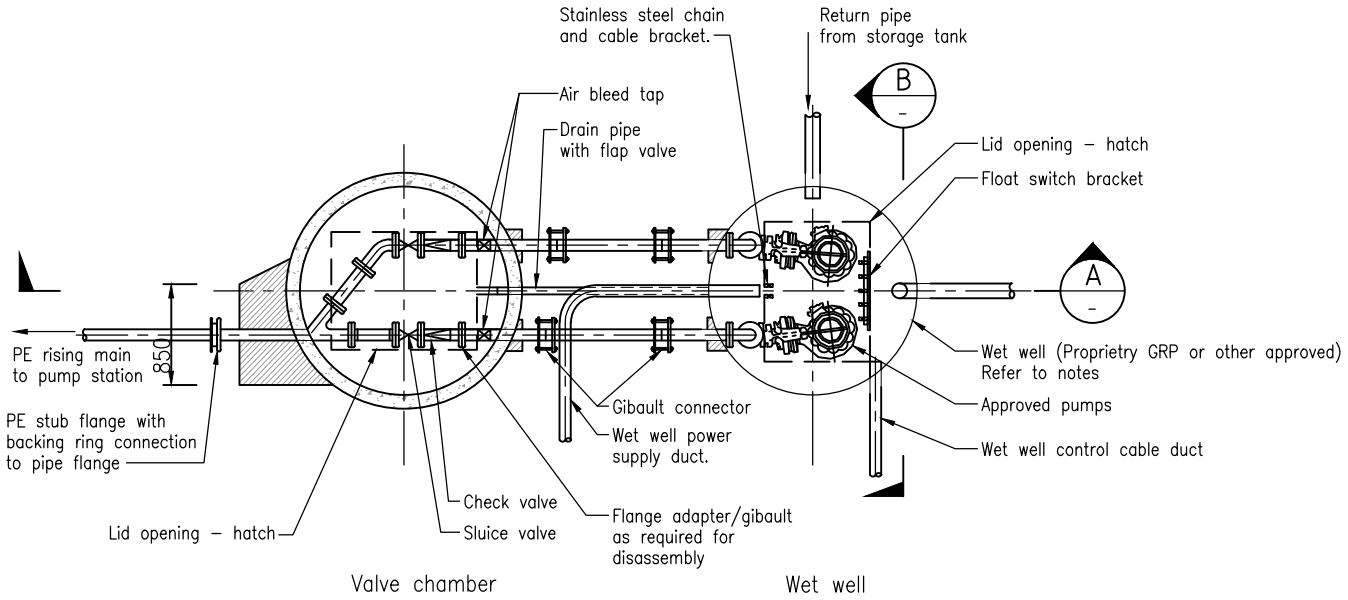
NOTES::

1. The detail on this drawing is typical only.
2. Pump Station Offset is measured from the driveway centreline to the centreline of the furthest pump.
3. Area around pump station shall be graded to prevent surface water flowing onto or over pump station cover slabs

WASTEWATER PUMPING STATION – SITE LAYOUT PLAN

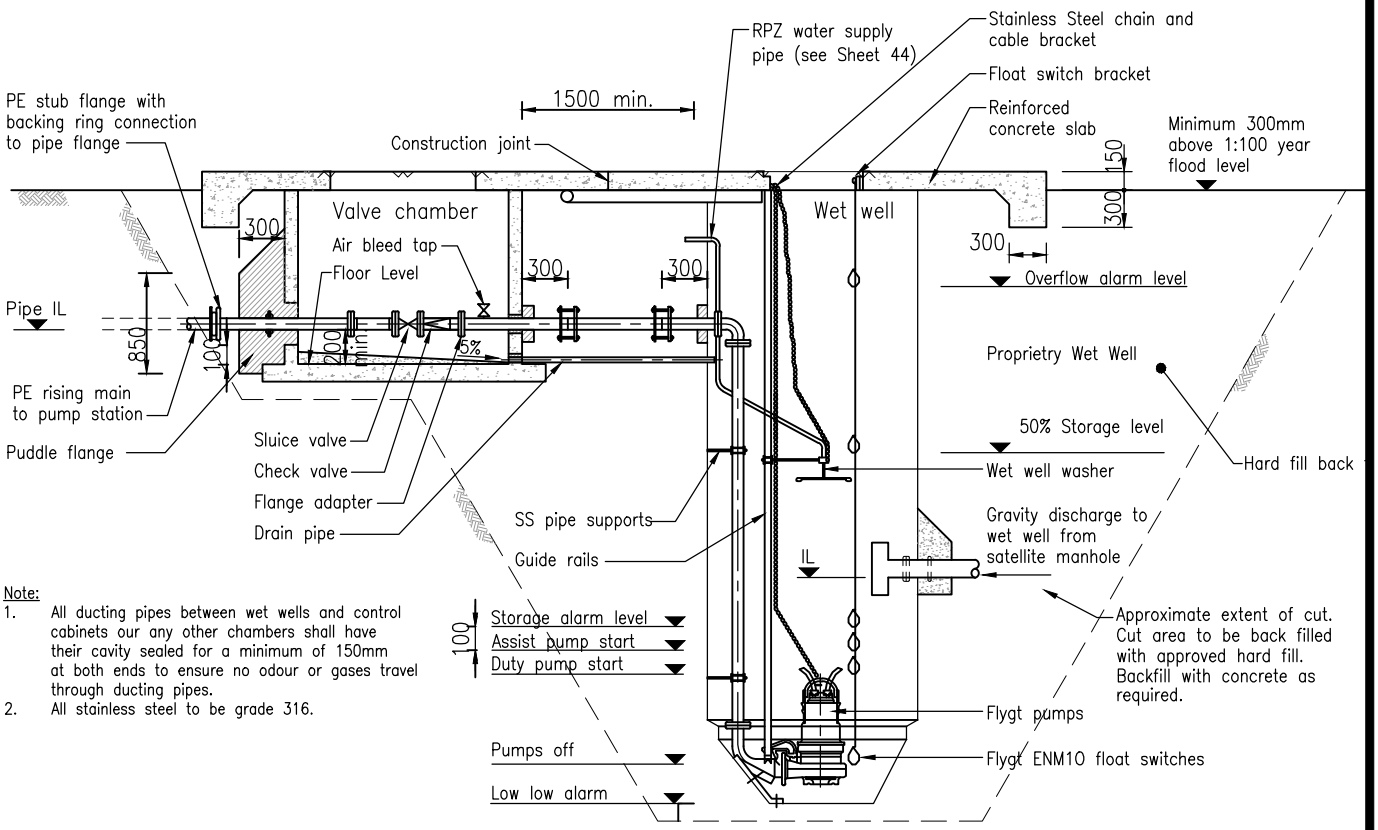
FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

Date:	JAN 2021
Revision:	0.1
Scale:	AS SHOWN
SHEET No.	41



WET WELL AND VALVE CHAMBER PLAN

N.T.S.



Note:
1. All ducting pipes between wet wells and control cabinets our any other chambers shall have their cavity sealed for a minimum of 150mm at both ends to ensure no odour or gases travel through ducting pipes.
2. All stainless steel to be grade 316.

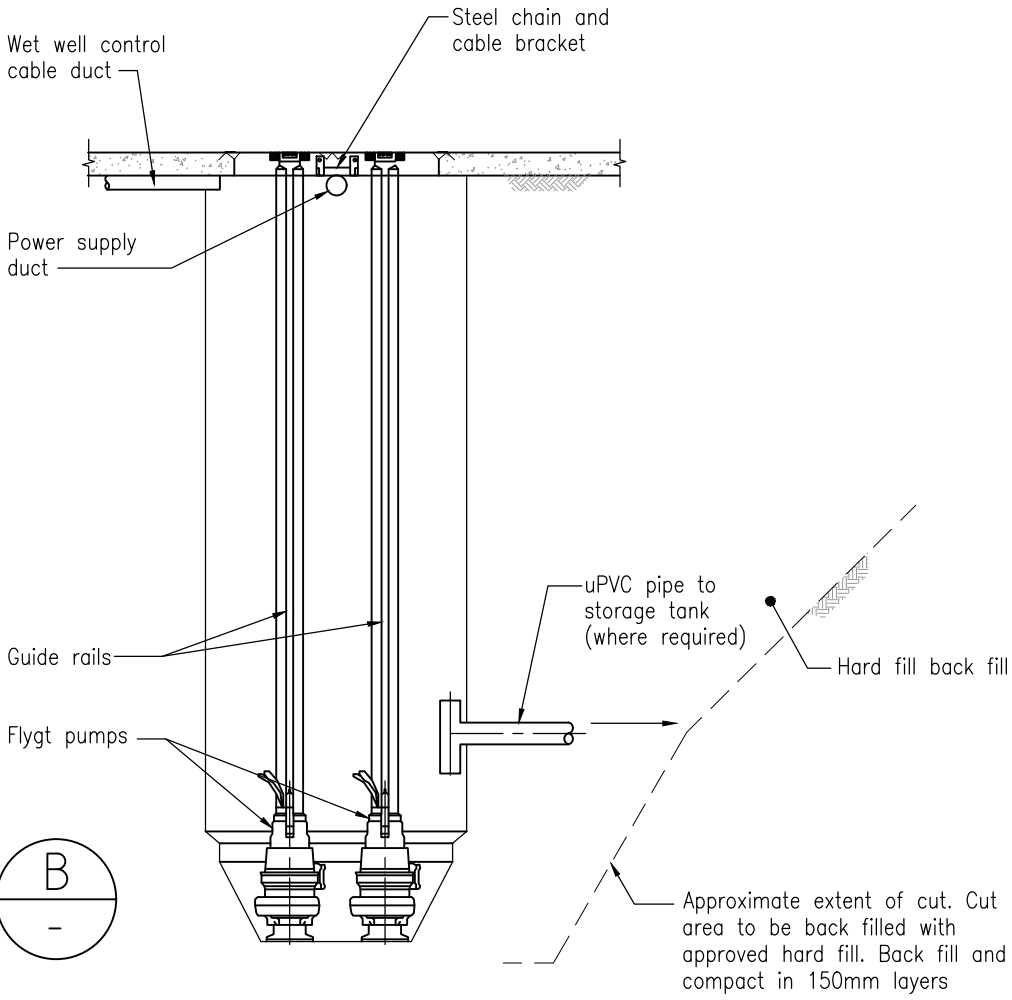
SEWER PUMP STATION TYPICAL DETAILS (1)

Date:	JAN 2021
Revision:	0.1
Scale:	AS SHOWN
SHEET No.	42

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

Notes:

1. Emergency storage tank to be at least sufficient for 4 hours design average dry weatherflow(ADWF)above standby pump on level.
2. Pumps to be in accordance with Approved Materials List.
3. Pump configuration is to be duty/assist with operator selectable duty.
4. All pumps 5 kw or greater to have variable speed drive.
5. Power supply to include generator connection.
6. IP55 single phase connection to be included in power supply unit.
7. Telemetry unit to include backup 24 hr power supply.
8. Pump station PLC to have 20% redundant I/O.
9. The following alarms are to be available via telemetry: overflow, high level, low level, pump run fault.
10. On site indication shall be available for: cumulative pump run hours, amps (each pump), volts (phase selectable).
11. Pump run signal and current to be available via telemetry.
12. All tanks/ chambers to include buoyancy control based on groundwater being at ground level.
13. All fittings within pump well to be 316 stainless steel including guide rails, lifting chains and safety grids.
14. Float or probe controls for pump and alarm operations.
15. Access to be minimum 900mm x 900mm.
16. Lids shall be in accordance with Approved Material List – Wastewater and Stormwater.
17. Pump stations to be provided with lighting.
18. Odour control to be provided as required.
19. Refer to Sections 5.2.12 & 5.3.8 for further details.

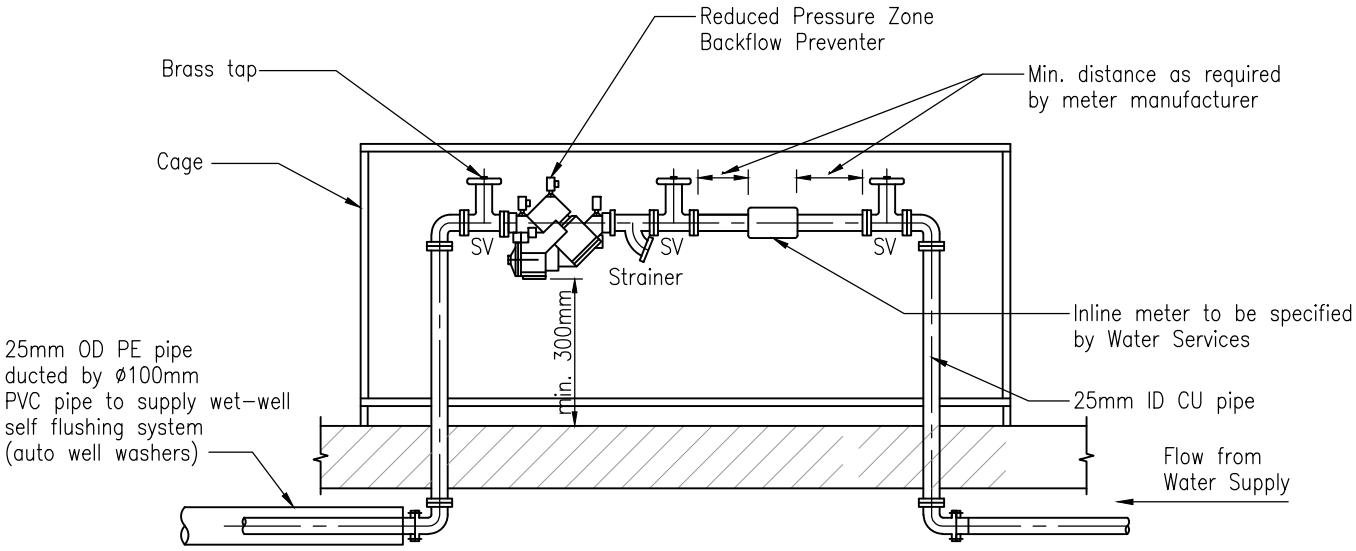


SECTION B
N.T.S.

SEWER PUMP STATION TYPICAL DETAILS (2)

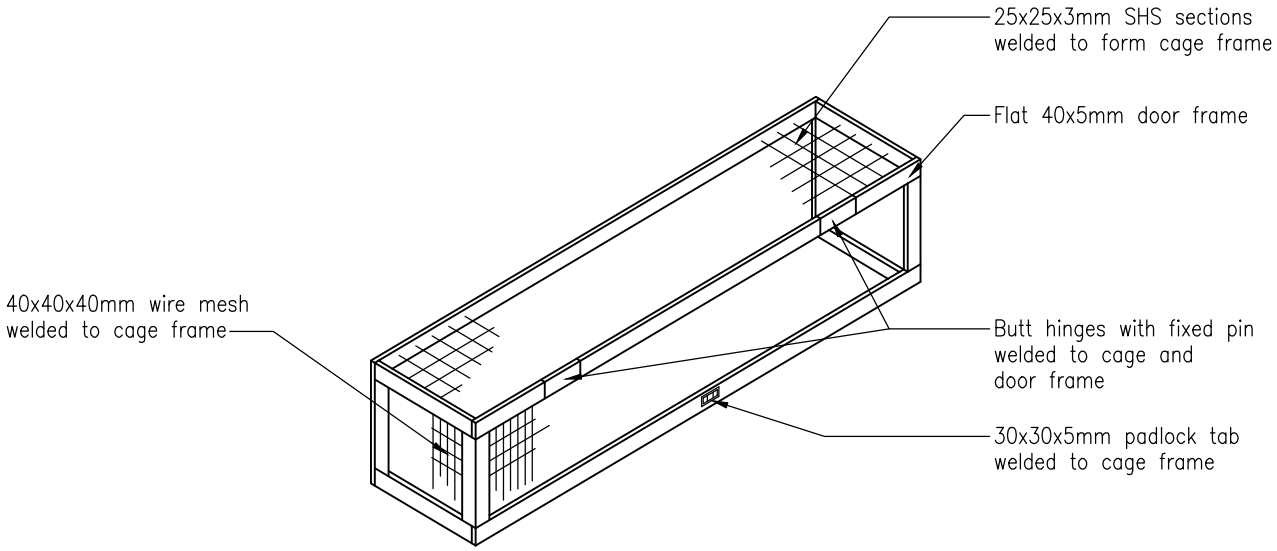
Date:	FEB 2022
Revision:	0.2
Scale:	AS SHOWN
SHEET No.	43

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS



TYPICAL PIPE DETAIL N.T.S.

FOR 50mm + ID BFP



CAGE DETAIL

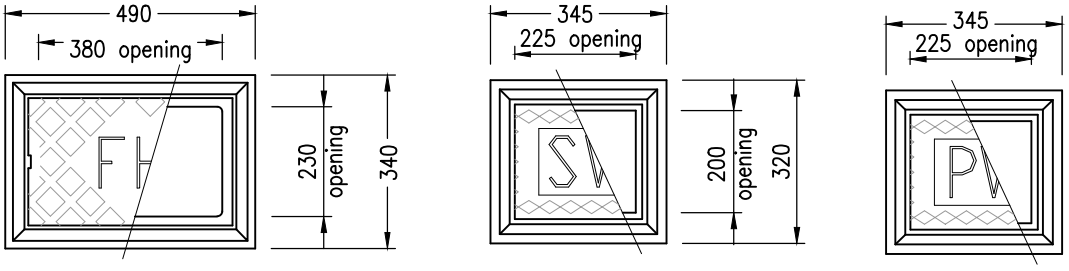
N.T.S.

RPZ WATER CONNECTION
REQUIRED FOR SEWER PUMP STATIONS

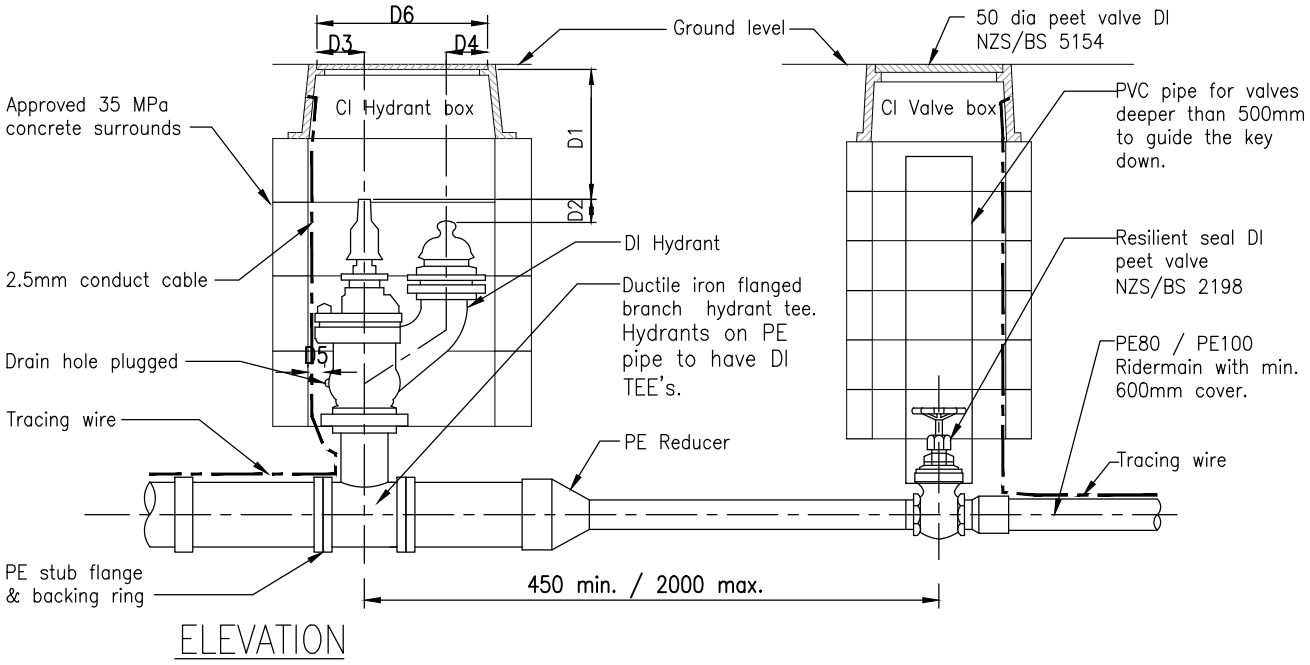
FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

Date:	JAN 2021
Revision:	0.1
Scale:	AS SHOWN
SHEET No.	44

"TALL TYPE"screw down DI hydrant to NZS 4522:2010. To close clockwise when viewed from above.



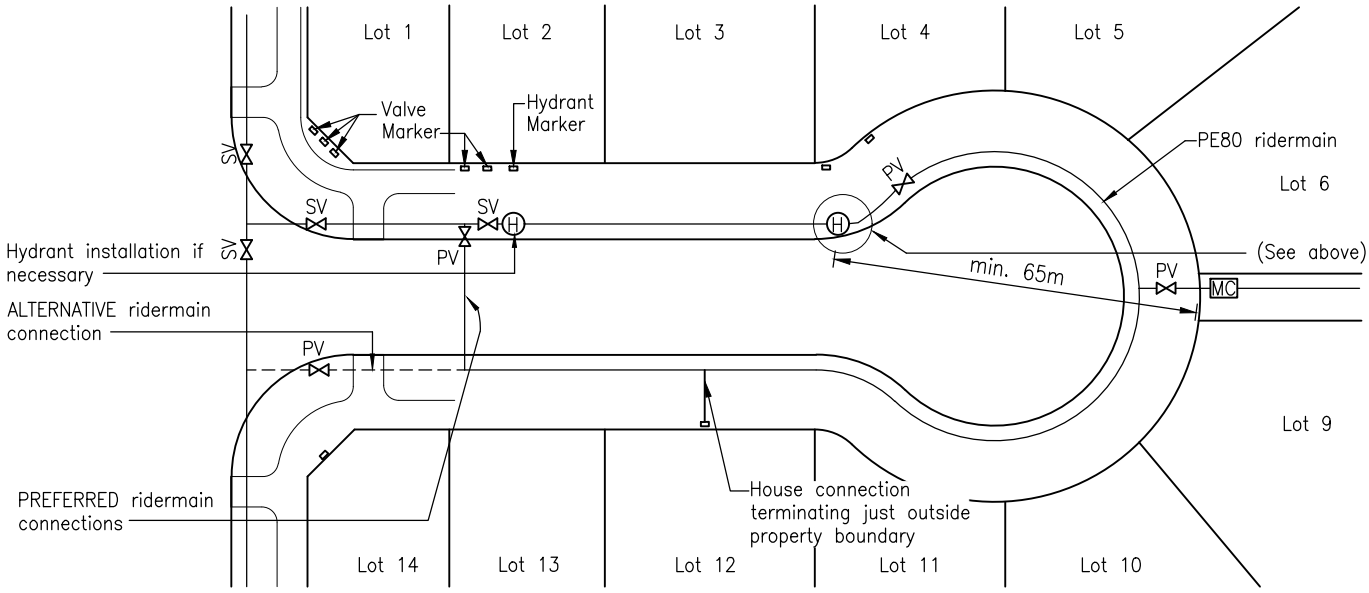
PLAN CAST IRON HYDRANT BOX PLAN CAST IRON VALVE BOX



ELEVATION

Notes

1. Deflection of joints is not to exceed the manufacturers recommendation.
2. Where there are more than 15 connections from a rider main, an isolating peet valve should be provided in the middle of the rider main.
3. All underground bolts to be stainless steel and wrapped with denso tape, mastic and polytape.
4. Service connections to terminate just outside from boundary with an approved manifold, meter box (including base) and diaphragm valve including dual check valve.
5. Allowable dimensions (D1 to D6) in accordance with Table 1 of NZS 4522:2010. Dimensions to be supplied with as–builts.



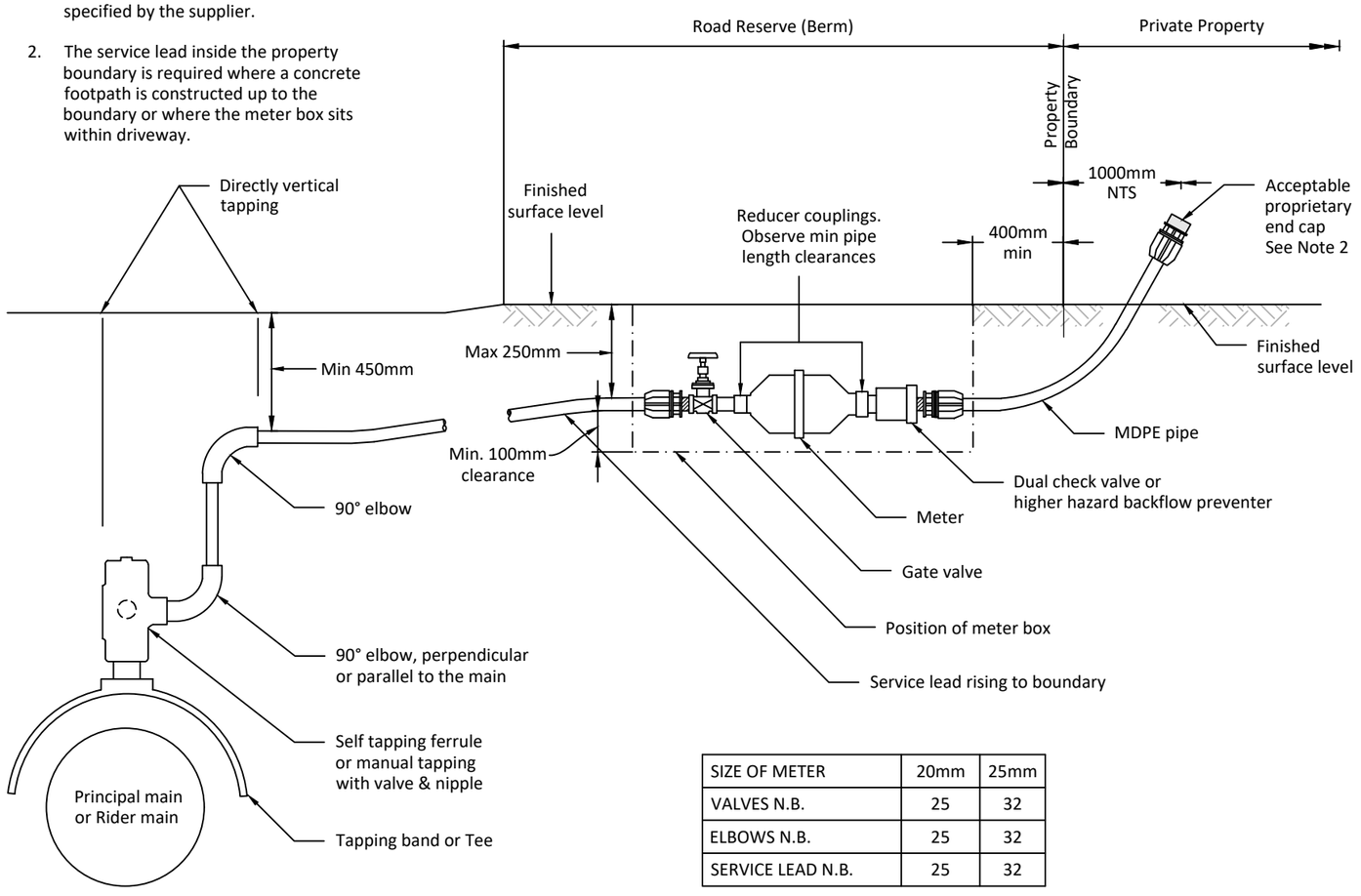
WATER PIPELINE DETAILS
(FOR ALL ENVIRONMENTS)

Date:	JAN 2021
Revision:	0.1
Scale:	AS SHOWN
SHEET No.	45

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

Note:
1. Water meter pipe length clearances as specified by the supplier.

2. The service lead inside the property boundary is required where a concrete footpath is constructed up to the boundary or where the meter box sits within driveway.



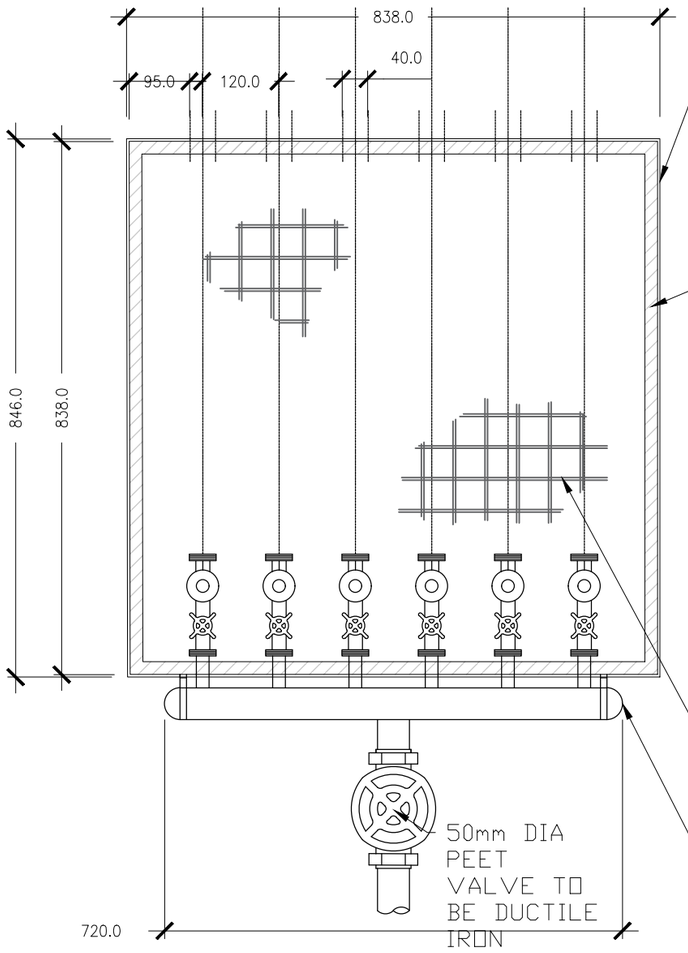
SIZE OF METER	20mm	25mm
VALVES N.B.	25	32
ELBOWS N.B.	25	32
SERVICE LEAD N.B.	25	32

NOTE:
1. All fittings to be in accordance with FNDC Water Services Approved Materials List.
2. Backflow preventers shall be provided.
3. Box to bedded on stable material (compacted metal/fines) below pipe work as not to put pressure on pipe work.
4. In high traffic areas, cast iron box and cover is to be used.
5. Meter boxes cast into paved areas shall have cast iron framed lids, mounted on minimum of 2 x concrete surrounds if the meter are outside the property boundary but in an area that is likely to be concreted e.g. may become a footpath then the same shall apply.

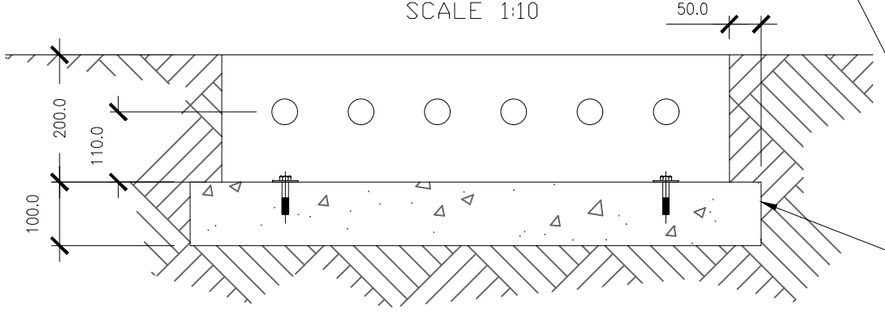
SINGLE METER BOX CONNECTION
(FOR ALL ENVIRONMENTS)

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

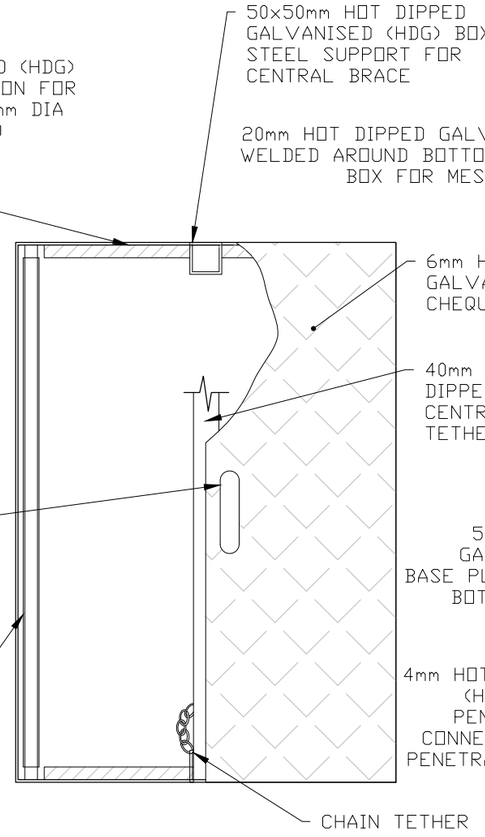
Date:	FEB 2022
Revision:	0.2
SHEET No.	46



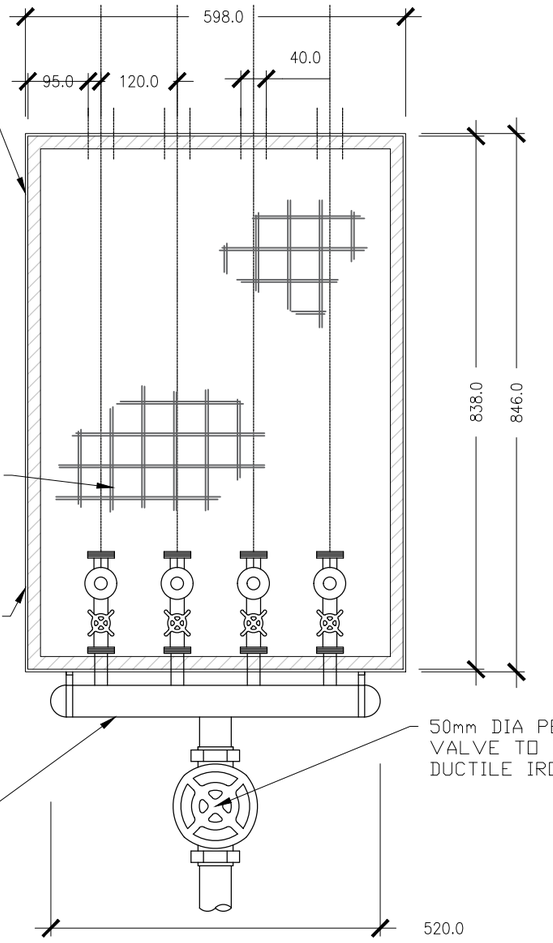
6 WAY MANIFOLD - TYPICAL PLAN
SCALE 1:10



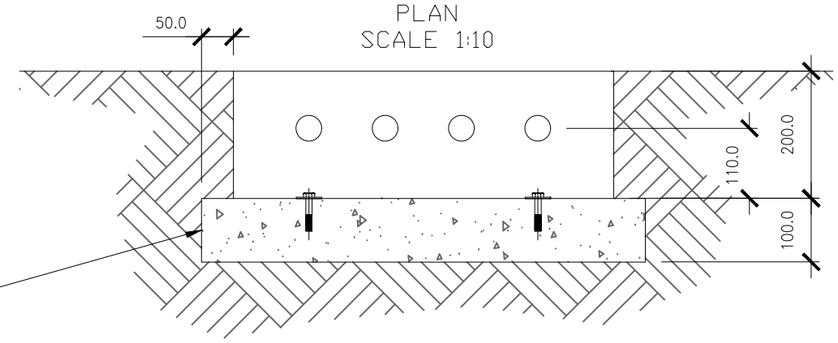
6 WAY MANIFOLD - TYPICAL FRONT ELEVATION
SCALE 1:10



CHAMBER BOX - TYPICAL LID DETAIL
SCALE 1:10



4 WAY MANIFOLD - TYPICAL PLAN
SCALE 1:10



4 WAY MANIFOLD - TYPICAL FRONT ELEVATION
SCALE 1:10

20mm JAM WELDED AROUND TOP LIP OF CHAMBER BOX FOR DOORS TO CLOSE FLUSH

20mm HOT DIPPED GALVANISED (HDG) JAM WELDED AROUND BOTTOM LIP OF CHAMBER BOX FOR MESH TO BE FIXED TO

100x30mm PENETRATION FOR HANDLE ALTERNATIVELY 'HOBSONVILLE BOLT' TO BE USED

20mm DIA HOT DIPPED GALVANISED (HDG) ROD WELDED TO EITHER END OF BOX WITH 25mm DIA HDG SLEEVE. SLEEVE TO BE FIXED TO LID TO PROVIDE HINGE

50x50x4mm HOT DIPPED GALVANISED (HDG) MESH BASE PLATE TO BE FIXED TO BOTTOM OF CHAMBER BOX

50mm DIA STAINLESS STEEL (SS) MANIFOLD FIXED TO BOX EXTERIOR. 6/4x30mm DIA PENETRATIONS FOR INDIVIDUAL MANIFOLD FEED

100mm CONCRETE BASE POURED ON GOOD GROUND. CHAMBER BOX TO BE FIXED TO BASE BY 4 CHEMSETS OR CAST INSITU RAG END BOLTS. MIN OF 50mm EMBEDMENT. MINIMUM 75x75mm HOT DIPPED GALVANISED (HDG) WASHER OR PLATE TO BE USED TO SPAN GAP IN MESH.

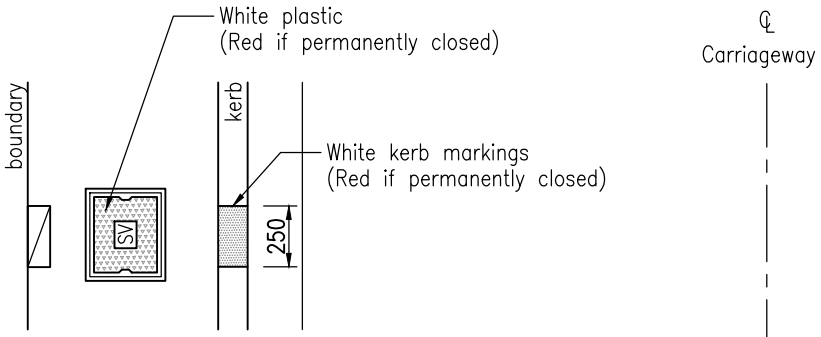
50x50x4mm HOT DIPPED GALVANISED (HDG) MESH BASE PLATE TO BE FIXED TO BOTTOM OF CHAMBER BOX

4mm HOT DIPPED GALVANISED (HDG) WITH 4x40mm DIA PENETRATION FOR HOUSE CONNECTIONS & 4x30mm DIA PENETRATIONS FOR MANIFOLD

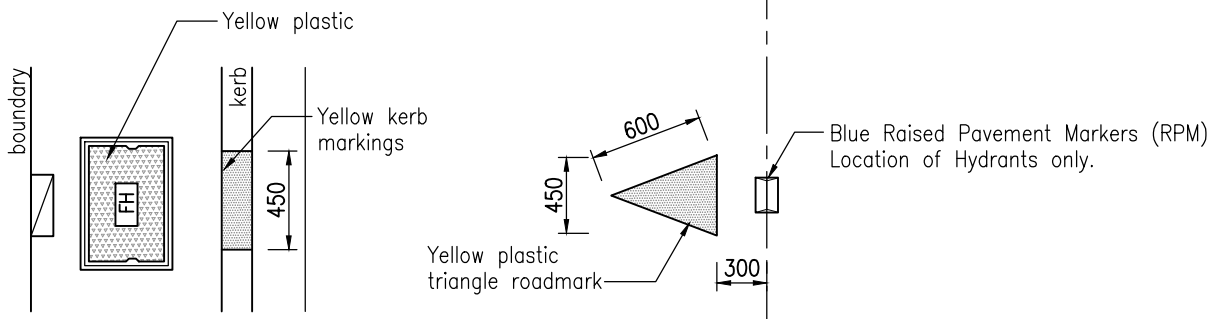
MULTIPLE WATER CONNECTIONS
FOR ALL ENVIRONMENTS

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

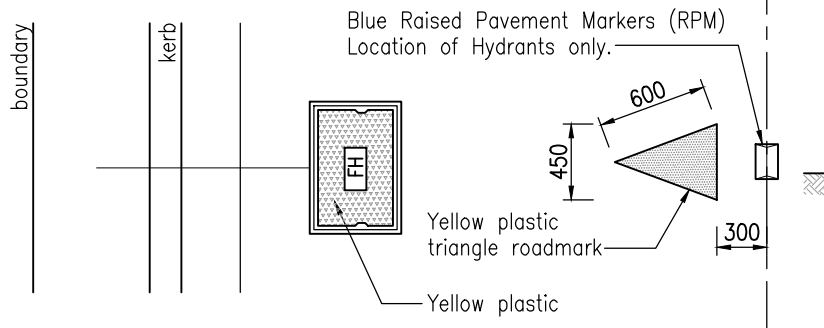
Date: FEB 2022
Revision: 0.2
SHEET No. 47



SLUICE VALVE MARKING

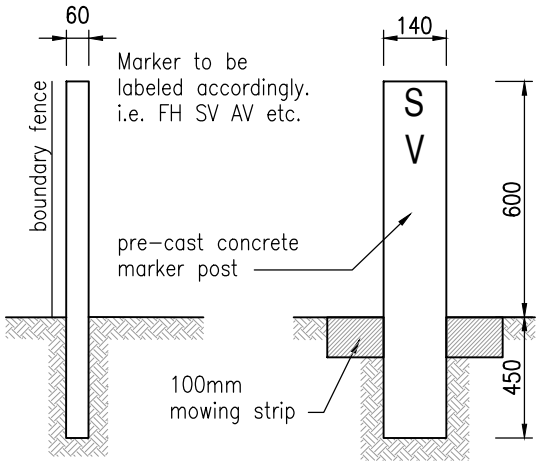


Hydrant located in Berm area



Hydrant located in Carriageway

HYDRANT MARKINGS

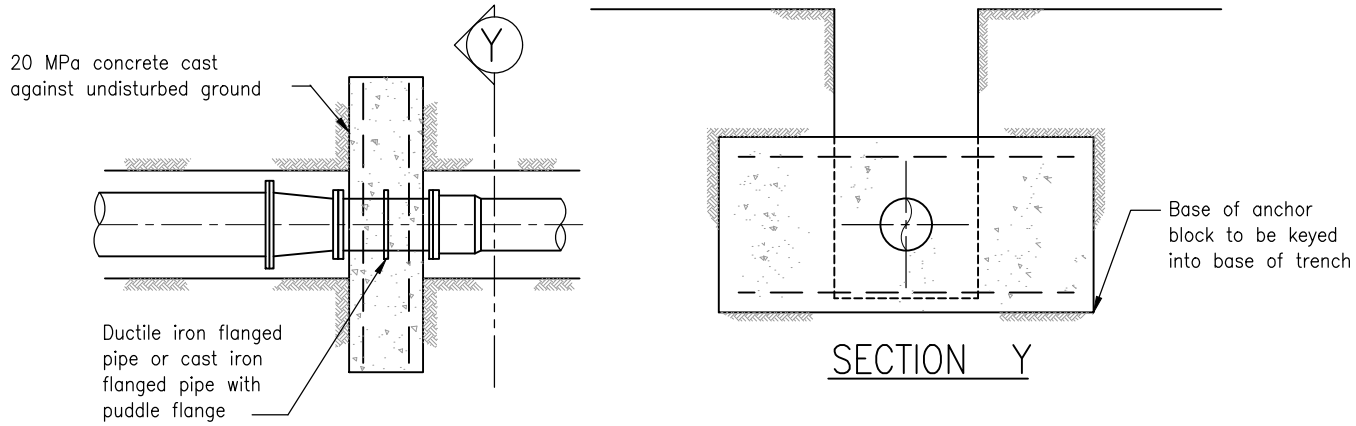


HYDRANT / SLUICE VALVE MARKER POSTS

Note:

1. Pre-cast concrete marker post to be painted white for valves and yellow for hydrants, using NZTA M7:2009 Class B Paint, or at the discretion of the District Council Asset Manager.
2. Surface box lids shall meet AS3996:2019, and shall be painted in accordance to this Drawing Sheet using NZIA M7:2009 Class B Paint or at the discretion of the District Council's Asset Manager.
3. Surface box lids shall be trafficable in carriageways.

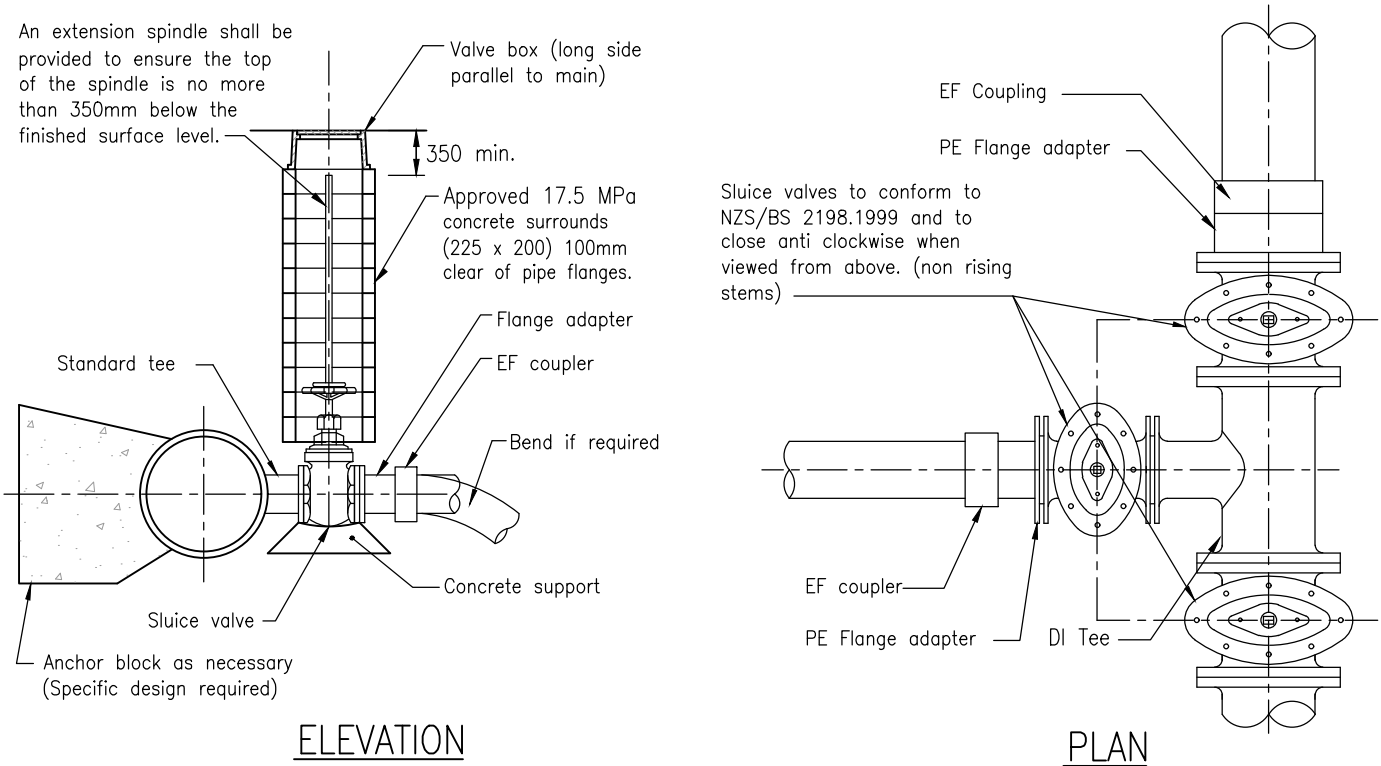
VALVE AND HYDRANT MARKERS	Date: FEB 2022
	Revision: 0.2
FAR NORTH DISTRICT COUNCIL ENGINEERING STANDARDS	Scale: AS SHOWN
	SHEET No. 48



ANCHOR BLOCKS AT REDUCERS

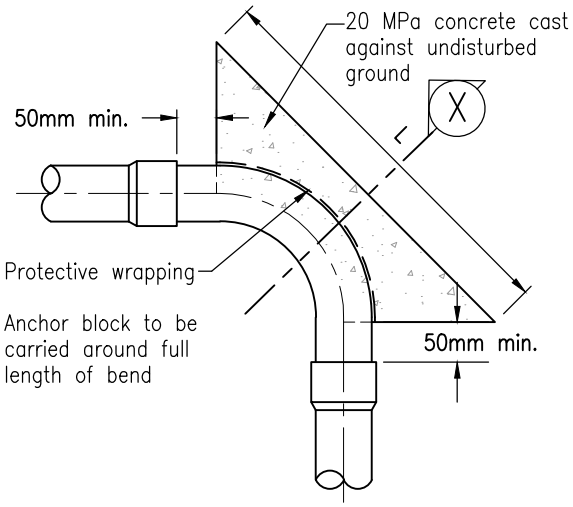
NOTES:

1. Calculations for anchor blocks at reducers and vertical curves must be shown with Engineering drawings.
2. Refer to Sheet 50 for anchor block dimensions.

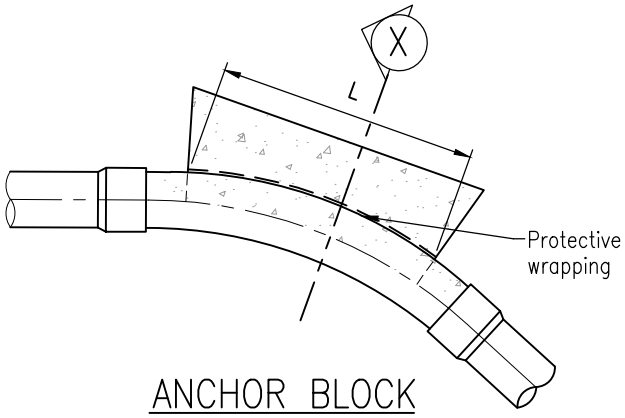


VALVE INSTALLATION DETAILS

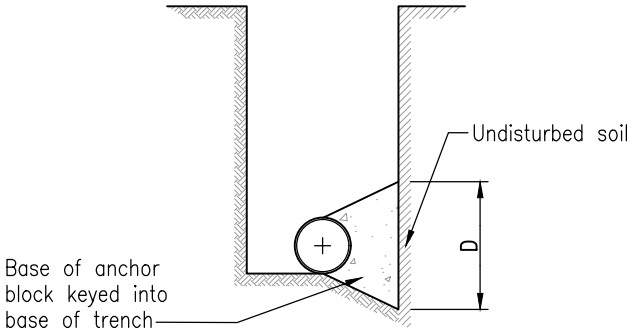
ANCHOR BLOCK AND VALVE INSTALLATION DETAILS (FOR ALL ENVIRONMENTS)	Date: JAN 2021
	Revision: 0.1
FAR NORTH DISTRICT COUNCIL ENGINEERING STANDARDS	Scale: AS SHOWN
	SHEET No. 49



ANCHOR BLOCK
FOR 90° BENDS



ANCHOR BLOCK
FOR 45° BENDS



SECTION X

Nom Pipe Diameter	90° Bend L	90° Bend D	45° Bend L	45° Bend D	Tee or Closed End L	Tee or Closed End D	22.5° Bend L	22.5° Bend D	11.25° Bend L	11.25° Bend D
100	740	400	500	320	520	400	300	300	300	300
150	1340	460	700	470	870	500	500	340	300	300
200	1610	660	960	600	1150	650	740	400	490	300
250	2000	800	1250	700	1420	800	890	500	640	350
300	2330	1000	1560	800	1650	1000	1080	600	810	400

NOTES:

1) Anchor block dimensions for firm soil conditions. (≥ CBR of 5)
2) The dimensions to be increased or decreased for variation in soil conditions.
3) Allowable bearing stress used – 100 KPa.
4) Internal pipe test pressure up to 1800 KPa (18Bar).
5) All underground bolts to be wrapped with denso tape.
6) Protective membrane to be bitumised paper, thin roofing felt or polythene film applied to a thickness of 2.5mm.
7) If an anchor block is to be supported by engineered fill material, it shall be specifically designed, taking into account all design actions, including the weight of the concrete, with allowance for safety factors.

ANCHOR BLOCK DETAILS
(FOR ALL ENVIRONMENTS)

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Date:	JAN 2021
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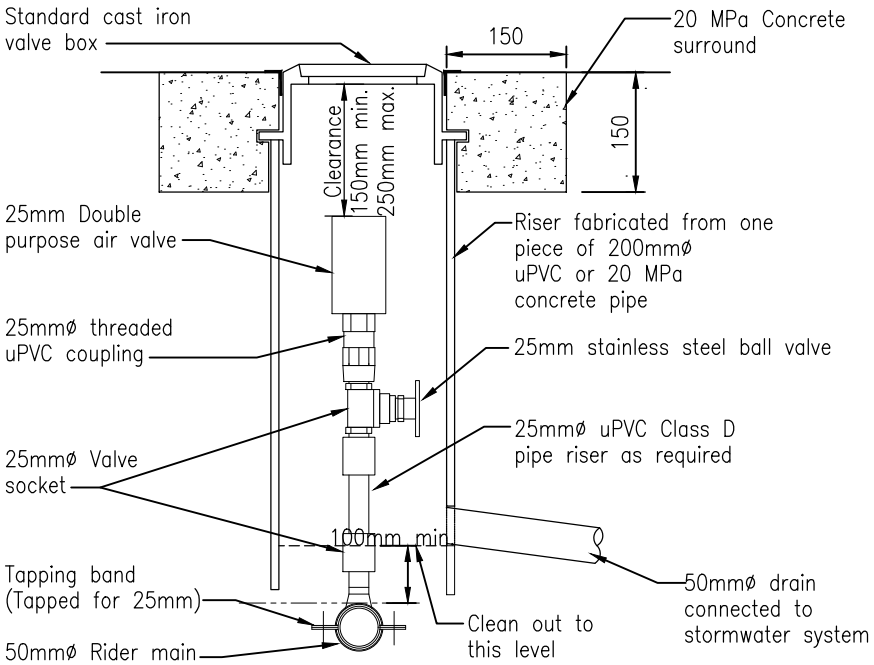
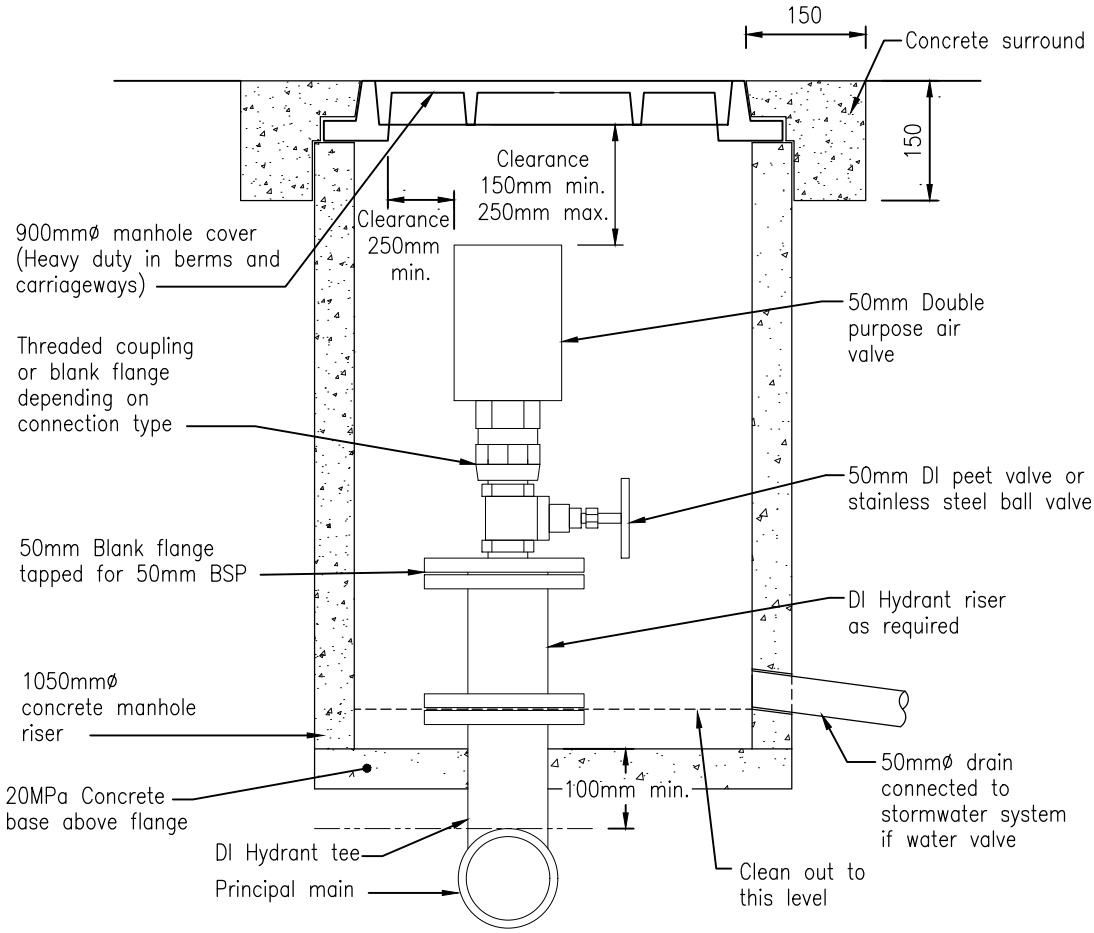


STANDARD AIR VALVE DETAIL FOR 50mmø RIDER MAINS

NB: Underground bolts to be wrapped with DENSO tape



STANDARD AIR VALVE DETAIL FOR PRINCIPAL MAINS & PRESSURE SEWER SYSTEMS

NB: Underground bolts to be wrapped with DENSO tape

AIR VALVE DETAILS

FOR ALL ENVIRONMENTS

FAR NORTH DISTRICT COUNCIL

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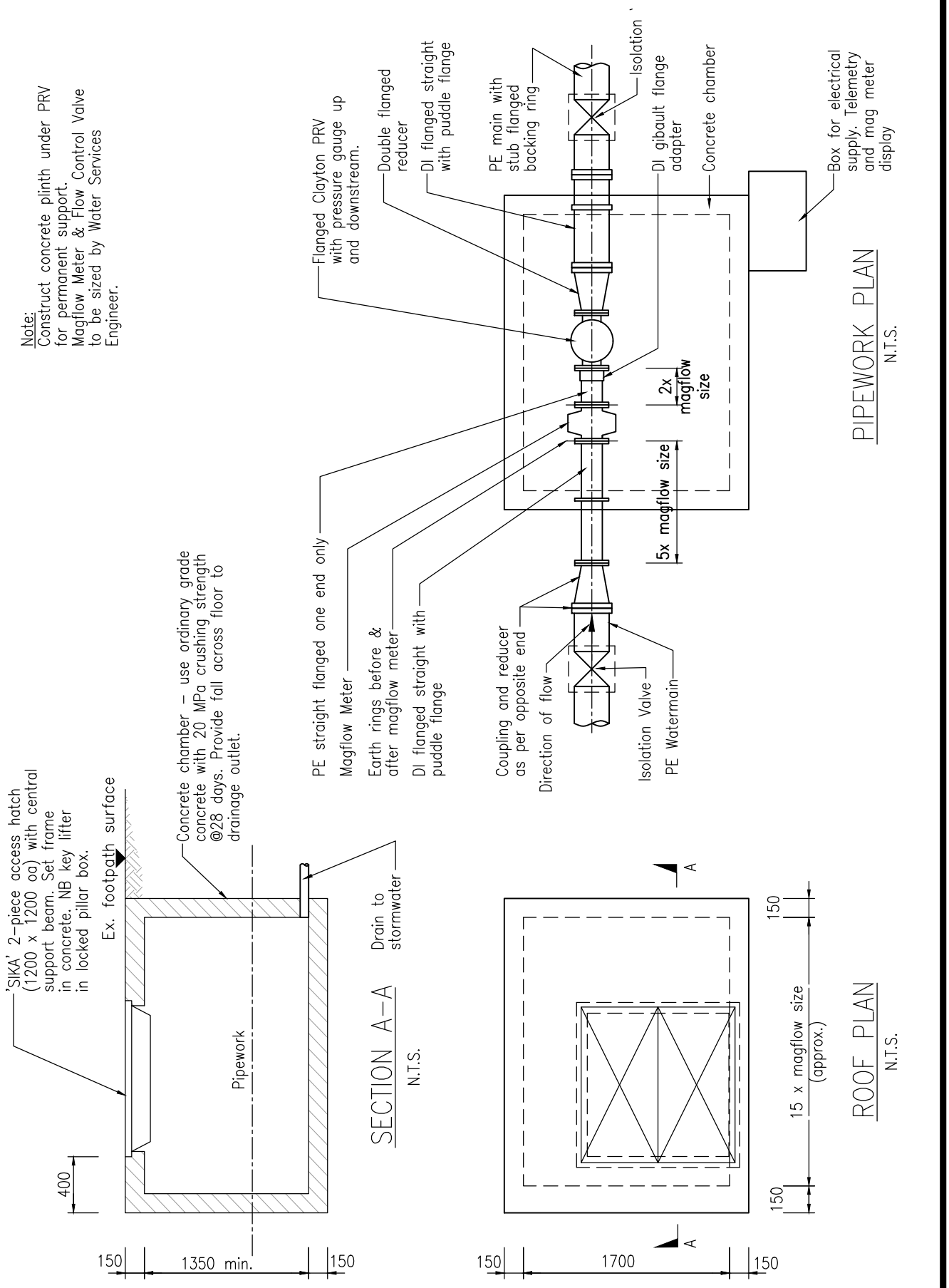
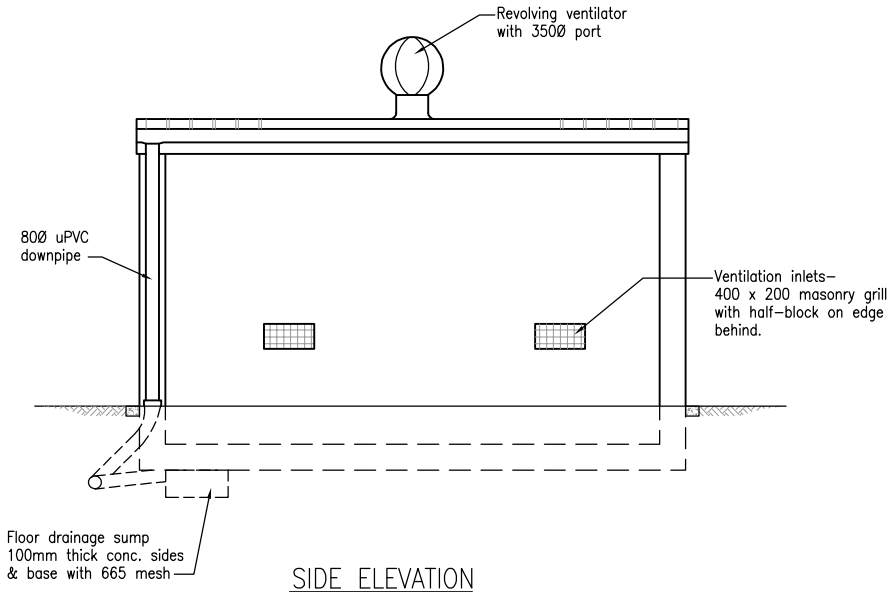
Date:	JAN 2021
Revision:	0.1
Scale:	AS SHOWN
SHEET No.	51



MAGFLOW & FLOW CONTROL VALVE INSTALLATION
FOR ALL ENVIRONMENTS

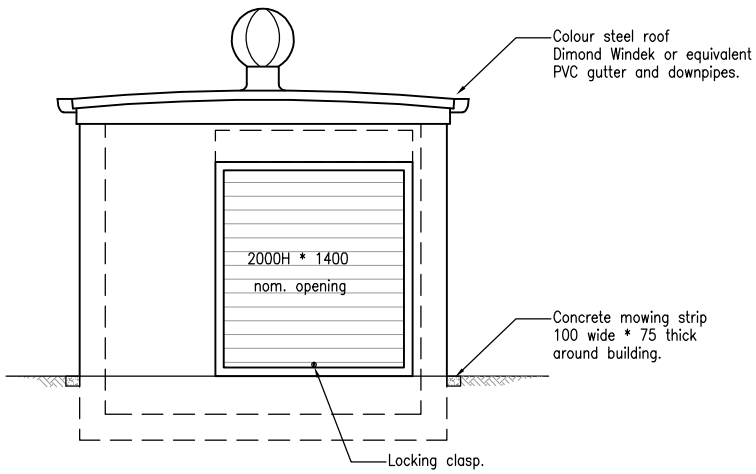
FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

Date:	JAN 2021
Revision:	0.1
Scale:	NTS
SHEET No.	52



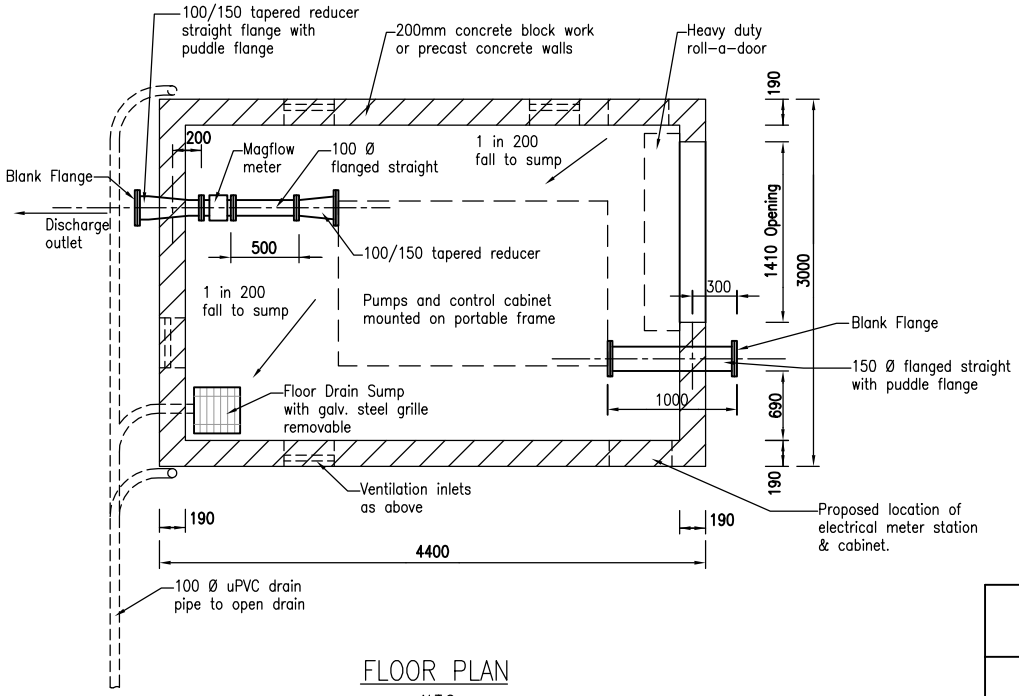
SIDE ELEVATION

N.T.S.



FRONT ELEVATION

N.T.S.



FLOOR PLAN

N.T.S.

NOTES:

1) The details & dimensions shown are for guidance only and may need to be changed for particular situations.
2) All fabricated pipework to be "Class K9 cement mortar lined ductile iron pipe in accordance with AS/NZS 2280.
3) Jointing to be with "Tyton" rubber rings.
4) Pump set to be as per Approved Materials List.
5) The details shown are based on 150mm dia pipework and should be used for guidance only.
6) All details including structure, access etc. shall comply with the New Zealand Building Code and related documents.
7) Steps shall be provided as required between the doorway and floor level.
8) A minimum space of 800mm should be provided around pumps and electrical/ control cabinets for maintenance access.
9) The building shall be provided with internal lighting and power points.
10) The pump house shall be located on a separate lot, or within the road reserve where approved by the water manager.
11) Provision shall be made for parking and access to the doorway by maintenance vehicles.
12) Details of power & telemetry required to be obtained from Water Services Manager.

WATER SUPPLY PUMP STATION DETAILS

FOR ALL ENVIRONMENTS

FAR NORTH DISTRICT COUNCIL

ENGINEERING STANDARDS

Date:	JAN 2021
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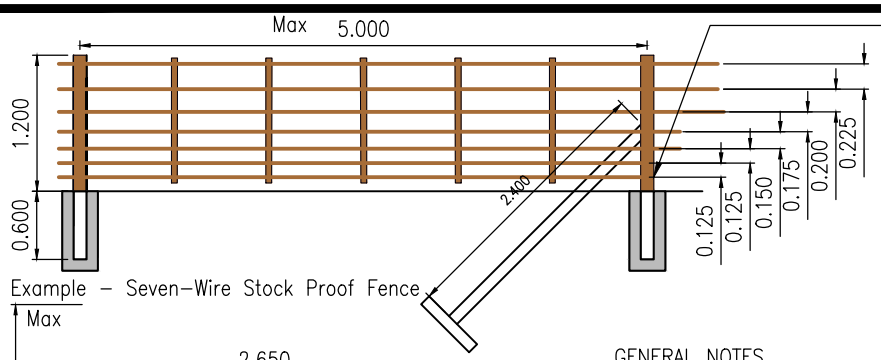
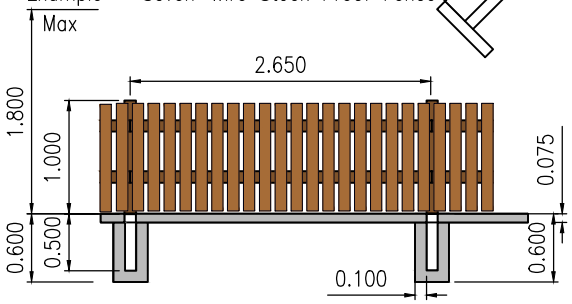
SHEET No.	53



Example – Seven–Wire Stock Proof Fence

2.5mm (12 gauge) high tensile wire or 4mm mild steel. In normal conditions gavl. is acceptable but in coastal settings use zinc/aluminium for durability.

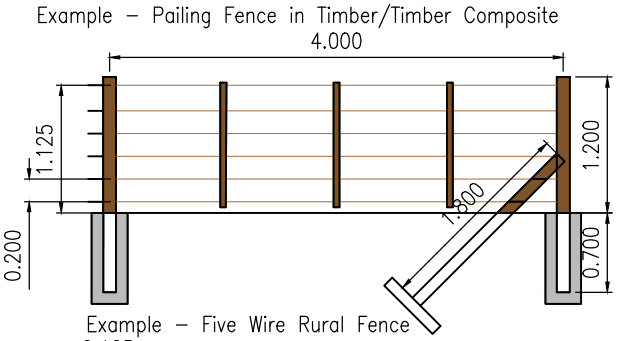
Note: These drawings are indicative standard design only Actual design must be adapted to specific site conditions



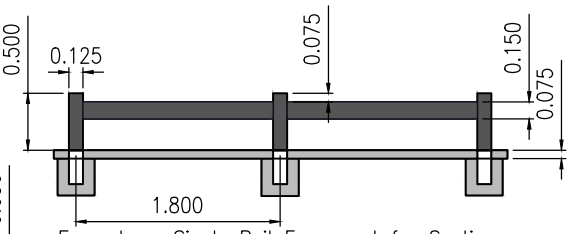
Example – Pailing Fence in Timber/Timber Composite

GENERAL NOTES

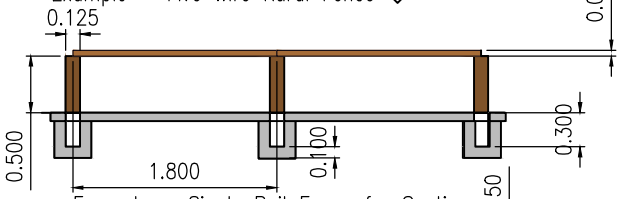
All inground timber posts and stays H4 treated min.
Out of ground timber rails and pailings min H3.2.
Fixings must be min galvanised, or if coastal – stainless steel.
M12 coach bolts recommended for fixing rails to posts.
Timber composite (and other alternatives) acceptable with specific design.
Concrete footings required min 1/3 in ground (2/3 out of ground)
Concrete must have minimum 100mm coverage around all posts.
Concrete mowing strips 300mm wide x 75mm deep.
Mowing strips required on all fences except rural.
All concrete must be min 20Mpa.
Painted timber with Council approved colours only.



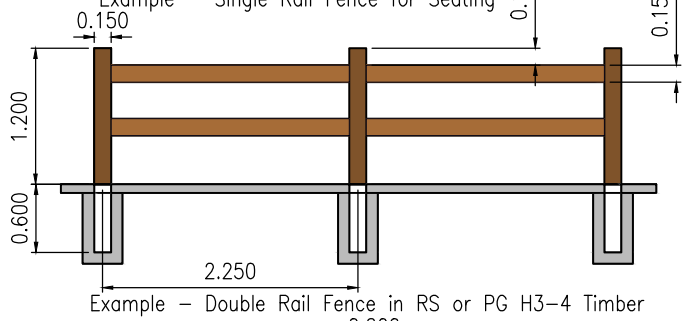
Example – Five Wire Rural Fence



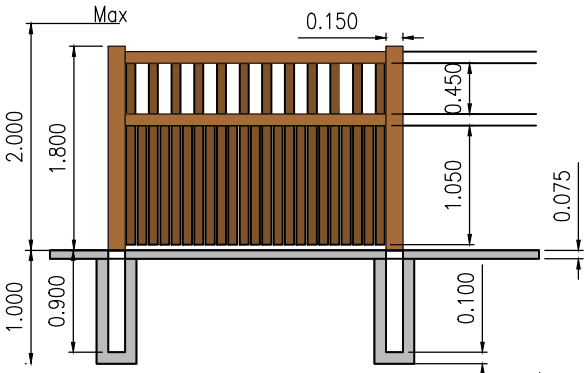
Example – Single Rail Fence not for Seating



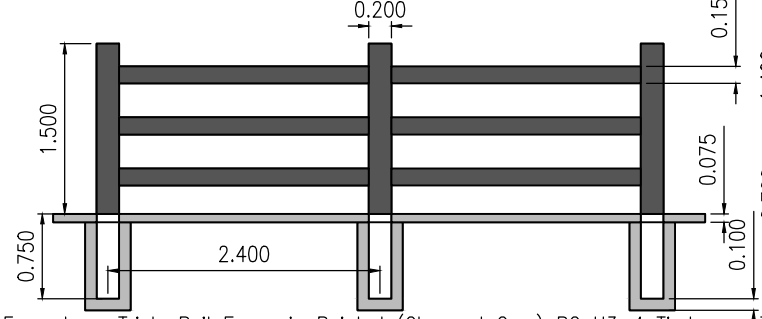
Example – Single Rail Fence for Seating



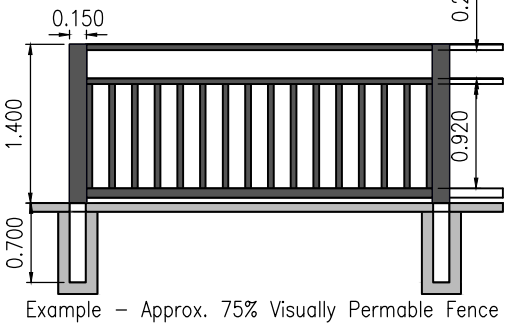
Example – Double Rail Fence in RS or PG H3–4 Timber



Example – Min 25% Visually Permable Fence



Example – Triple Rail Fence in Painted (Charcoal Grey) PG H3–4 Timber or Timber Composite



Example – Approx. 75% Visually Permable Fence

SPECIFICATIONS AND DETAILS – RESERVE FENCING – STANDARD RESERVE FENCING DESIGNS

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

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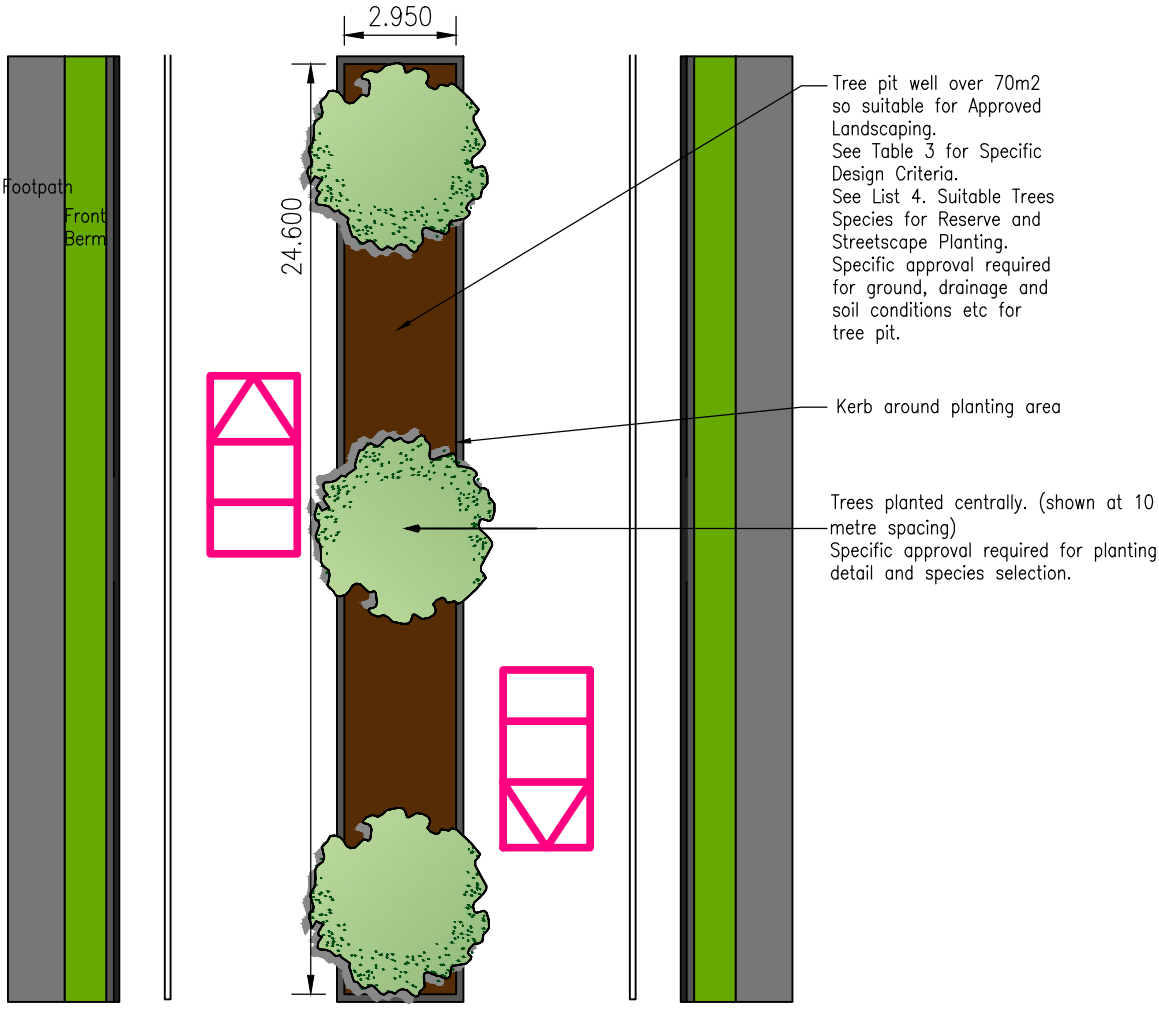
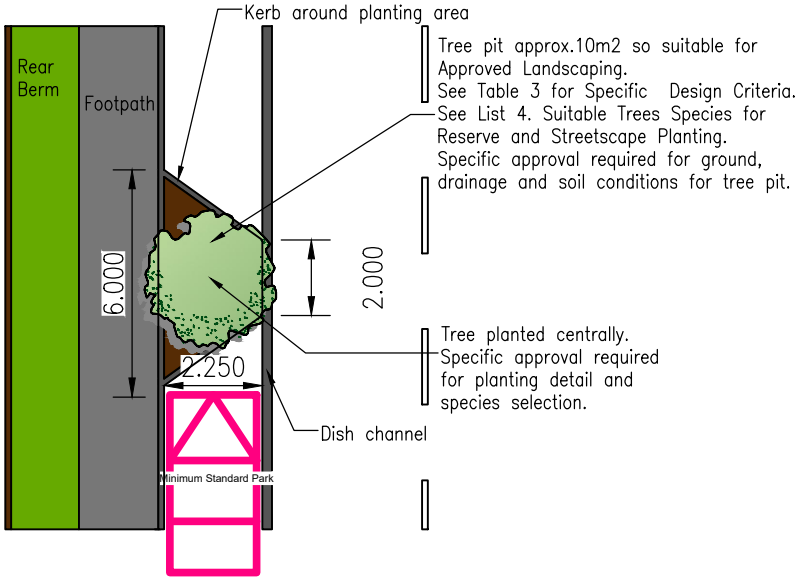
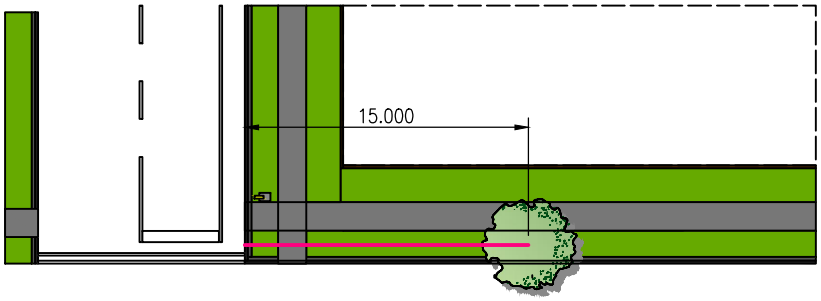


Example of Street Tree Planting in Tree Pit within Centralised Traffic Island
See Drawing Sheet 7 for further details on Landscape Planting Areas.



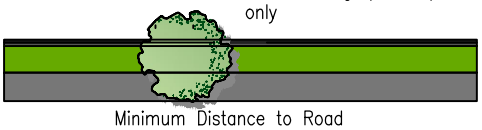
Example of Street Tree Planting in Tree Pit within Recessed Parking Bay
See Drawing Sheet 7 for further details on Landscape Planting Areas.

SPECIFICATIONS AND DETAILS – STREETSCAPES – TREE PITS AND TREE PLANTING WITHIN THE ROAD CORRIDOR	Date: April 2022
	Revision: 0.2
FAR NORTH DISTRICT COUNCIL ENGINEERING STANDARDS	Scale: NTS
	SHEET No. 55

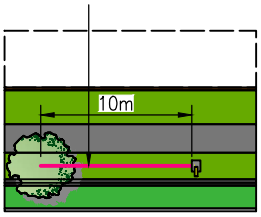


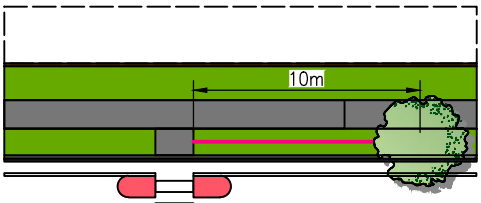
Note – Any street trees planted under existing power lines must be species that reach less than 4 metres at maturity. It is not good practice to top trees to avoid contact with overhead power lines. Power lines should be at standard 6.5–8 metres minimum from ground depending on their voltage.

Note: General sreet layouts shown are graphic repesentations only

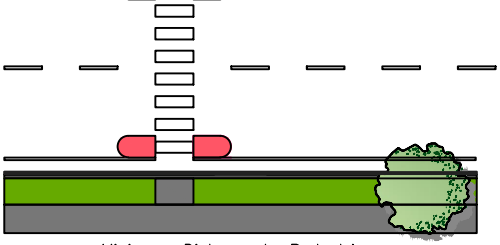


Minimum Distance to Road Intersections

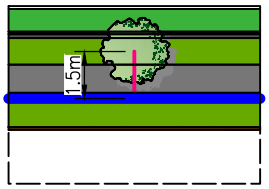




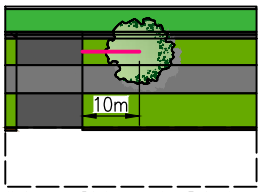
Minimum Distance to Existing Srreet Light Standards or Power Poles



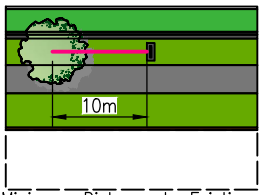
Minimum Distance to Pedestrian Crossing Facilities



Minimum Distance to Underground Services (2.5m shown)



Minimum Distance to Private Driveway Access (Note: Existing trees have priority over new driveway development)



Minimum Distance to Existing Bus Stops, School Speed Signs or Catch/Cess Pits.

SPECIFICATION/DETAILS – STREETSCAPES – STREET TREE PLANTING CLEARANCES

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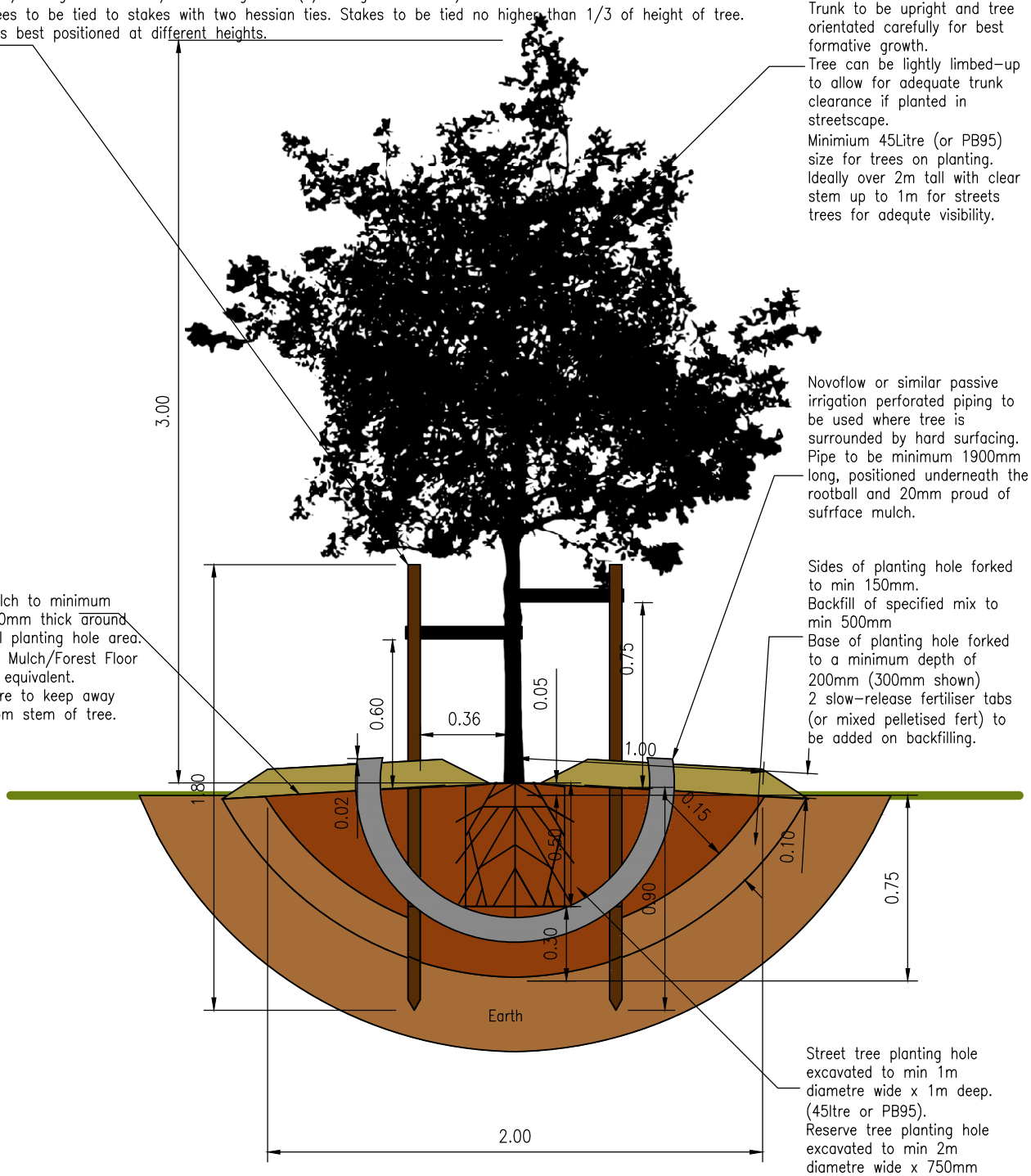
ENGINEERING STANDARDS

Two min 50 x 50mm x 1.8m hardwood or H4 RS radiata pine stakes to be driven in to hard ground either side of root ball.
Should be more than 350mm and no more than 500mm from trunk.
Best to be located uniform parallel to road in streetscape or north and south in reserve opposite one another.
Min1/3 in ground. Max 2/3 out of ground. (1/2 in ground shown)
Trees to be tied to stakes with two hessian ties. Stakes to be tied no higher than 1/3 of height of tree.
Ties best positioned at different heights.

Tree centred in berm of located specifically as approved.
Trunk to be upright and tree orientated carefully for best formative growth.
Tree can be lightly limbed-up to allow for adequate trunk clearance if planted in streetscape.
Minimum 45Litre (or PB95) size for trees on planting. Ideally over 2m tall with clear stem up to 1m for streets trees for adequte visibility.



Novoflow or similar passive irrigation perforated piping to be used where tree is surrounded by hard surfacing. Pipe to be minimum 1900mm long, positioned underneath the rootball and 20mm proud of sufrface mulch.

Mulch to minimum 100mm thick around full planting hole area. 5B Mulch/Forest Floor or equivalent.
Care to keep away from stem of tree.

Sides of planting hole forked to min 150mm.
Backfill of specified mix to min 500mm
Base of planting hole forked to a minimum depth of 200mm (300mm shown)
2 slow-release fertiliser tabs (or mixed pelletised fert) to be added on backfilling.

Street tree planting hole excavated to min 1m diametre wide x 1m deep. (45ltre or PB95).
Reserve tree planting hole excavated to min 2m diametre wide x 750mm deep(45 litre or PB95).
Larger Reserve tree planting hole at min 2.5m diametre wide x 1m deep (e.g 90 litre).

SPECIFICATIONS AND DETAILS – RESERVES AND STREETSCAPES – TREE PLANTING METHODS.

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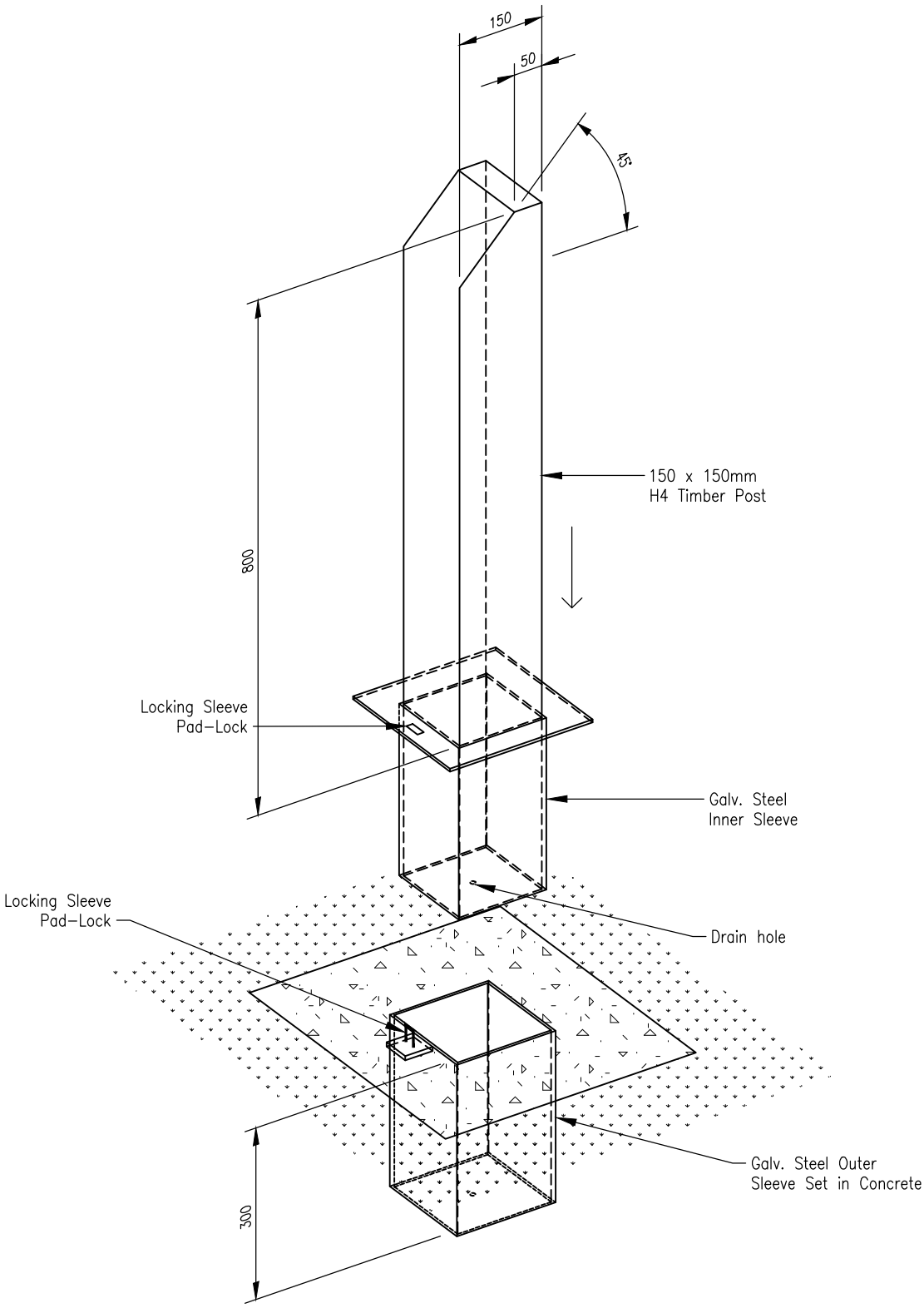
ENGINEERING STANDARDS



REMOVABLE BOLLARD DETAIL

Date:	JAN 2021
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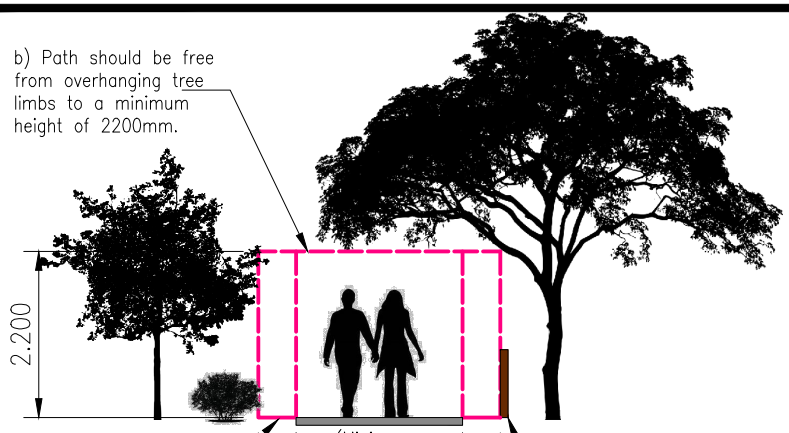
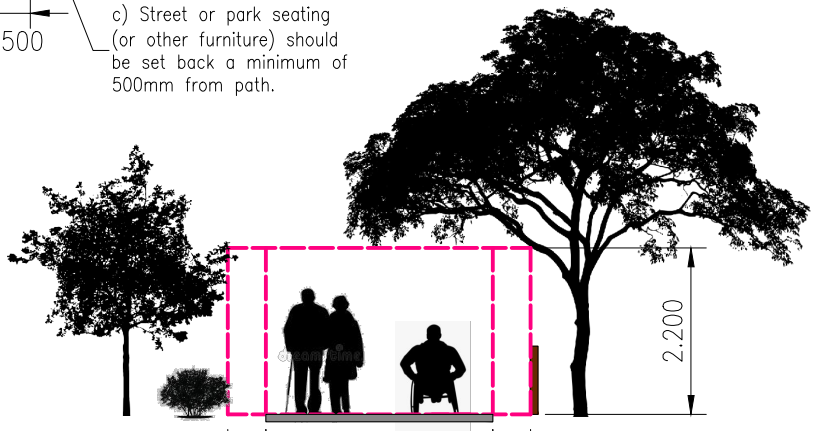
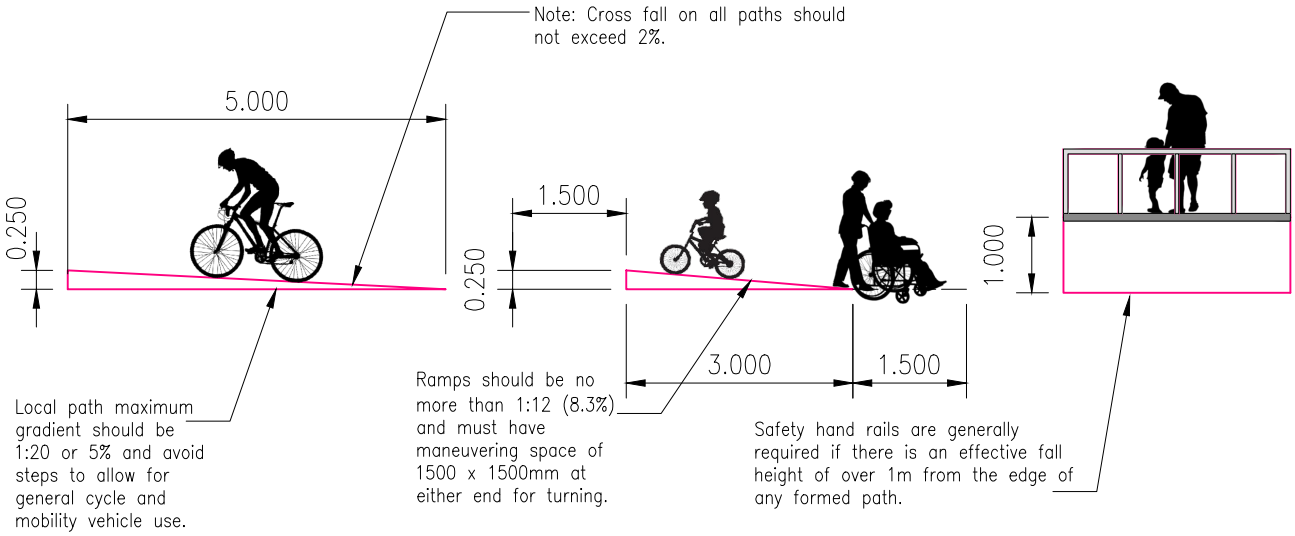


Pedestrian Path – Section



General Notes
1. a) – c) also apply.

Shared Path – Section



General Reserve Paths – Section

General Reserve Paths – Fall Heights

SPECIFICATIONS AND DETAILS – RESERVE PATHS WIDTHS, GRADIENTS AND FALL HEIGHTS

FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS

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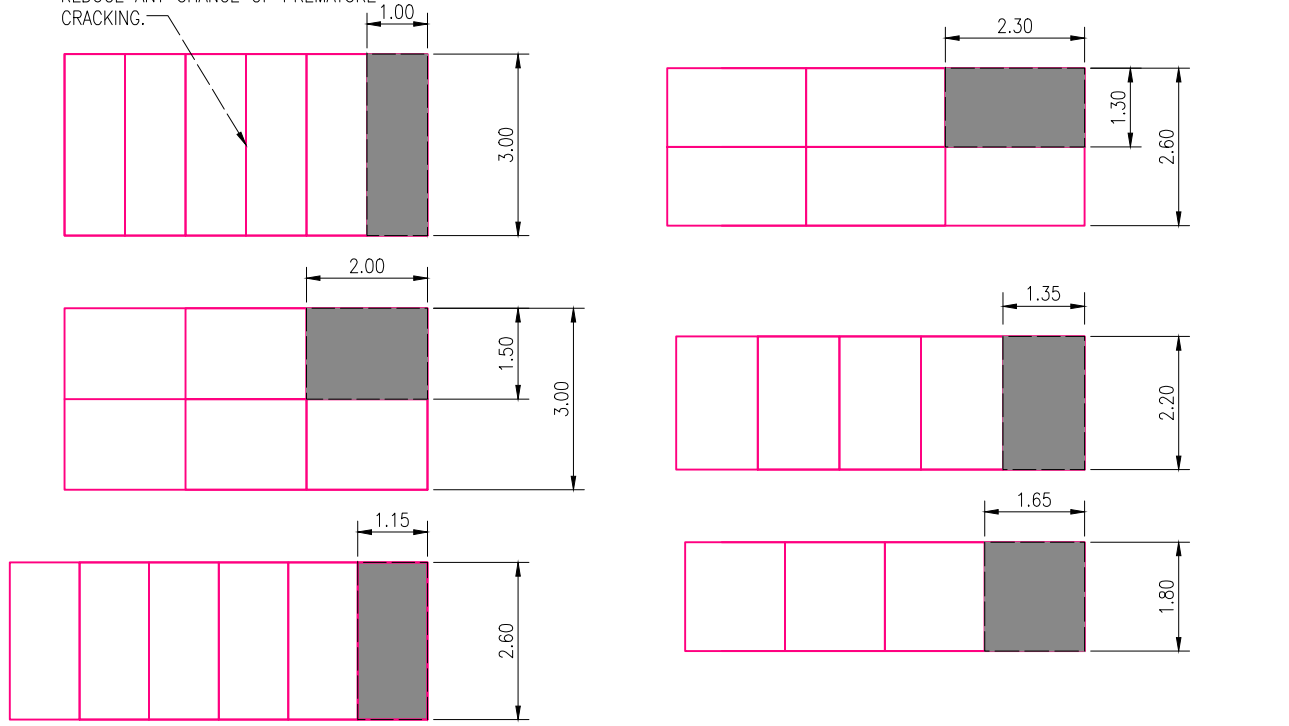
CONCRETE CUTS FOR ALL CONCRETE PATHS TO BE AT A MAXIMUM 3m². MAY REQUIRE ADDITIONAL CUTS AT PATH JUNCTIONS OR LEVEL CHANGES AS APPROPRIATE TO REDUCE ANY CHANCE OF PREMATURE CRACKING.



TYPICAL CONCRETE PATH WIDTHS AND CONCRETE CUTTING AT 3M2 MAXIMUM.

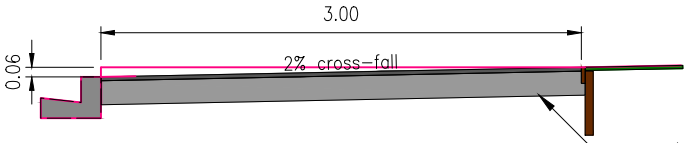
ALL CONCRETE RESERVE PATHS SHOULD CONTAIN AT MINIMUM 2KG BLACK OXIDE PER M3 TO REDUCE GLARE. OTHER TREATMENT OPTIONS INCLUDE EXPOSING OR TEXTURIZING FOR ADDITIONAL TRACTION – PARTICULARLY NECESSARY IN DAMP OR SHADED AREAS.

NOTE: SCALES NOT SPECIFIED

GENERAL NOTES
1. WHERE USED – GROUNT TREATED TANALISED H3 100X25mm EDGING AND 50X50X400mm POSTS AT 750mm CENTRES.
2. WHERE USED – 25MPa CONCRETE – RECOMMENDED 100mm THICK. REINFORCING REQUIRED IF VEHICLES WILL BE ACCESSING. ALL CONCRETE TO BE CURED FOR 5 DAYS AND PROTECTED FROM TRAFFIC FOR 28 DAYS.
3. 2% MAXIMUM CROSS–FALL ON ALL PATHS.

CONCRETE PATH – NEXT TO CONCRETE EDGE/KERB

a) 25mm COMPACTED GAP20 BASECOURSE RECOMMENDED UNDER CONCRETE MINIMUM 25MPA AND 100MM THICK. REINFORCING REQUIRED IF VEHICLES WILL BE ACCESSING.



COMPACTED PATH MATERIAL OR ASPHALT PATH – NEXT TO CONCRETE EDGE/KERB

a) 150mm COMPACTED GAP40 BASECOURSE RECOMMENDED UNDER ASPHALT (OR SIMILAR DURABLE) PATH SURFACING.

COMPACTED PATH MATERIAL OR ASPHALT – AWAY FROM CONCRETE EDGE/KERB

b) 25mm MINIMUM MIX 10 ASPHALTIC CONCRETE (OR SIMILAR DURABLE) PATH SURFACING ON GAP40 BASECOURSE.

SPECIFICATION AND DETAILS – RESERVE PATHS MATERIAL SPECIFICATIONS AND CONCRETE CUTTING

Date:	JAN 2021
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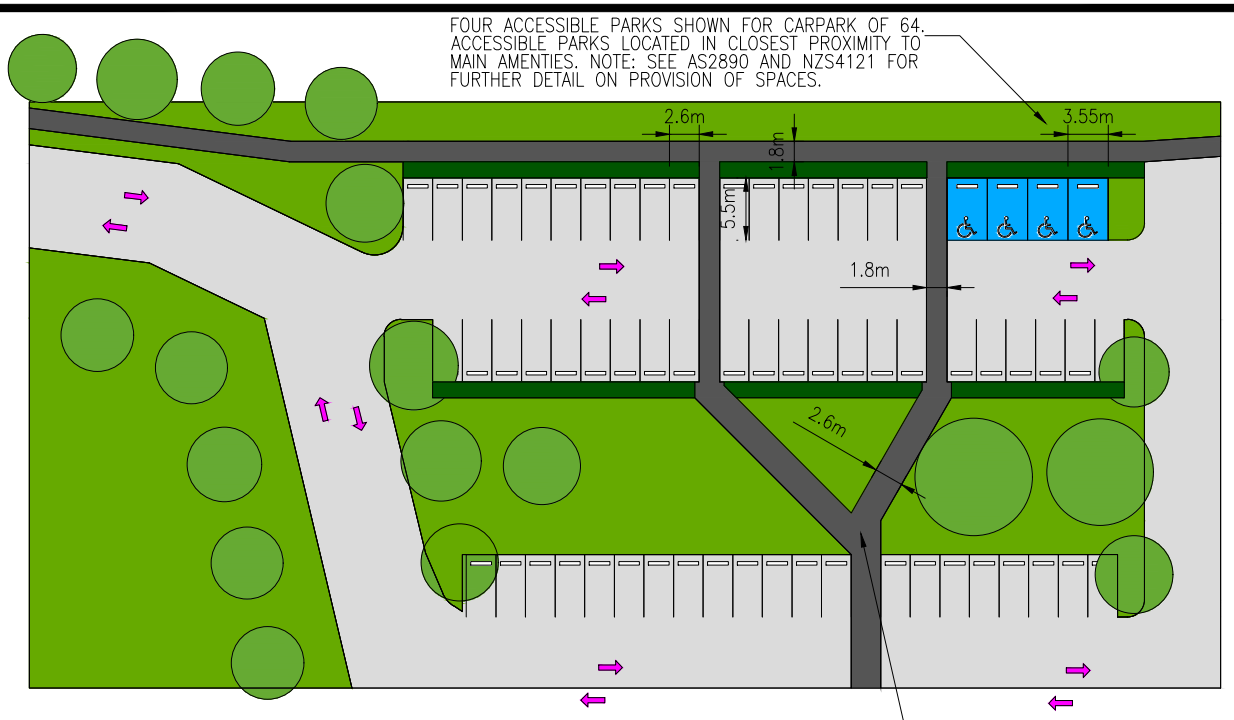
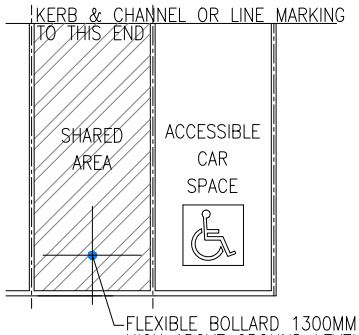
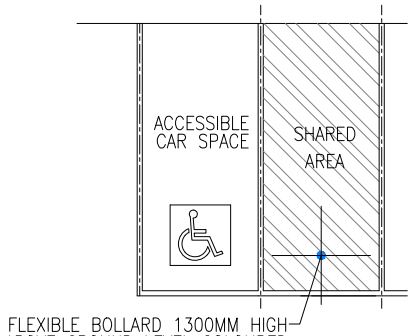
FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS



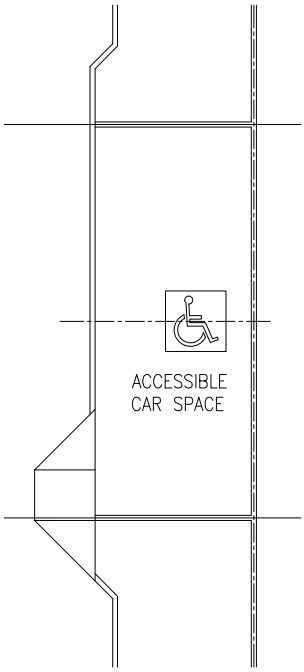
MAIN AMENITY AREA



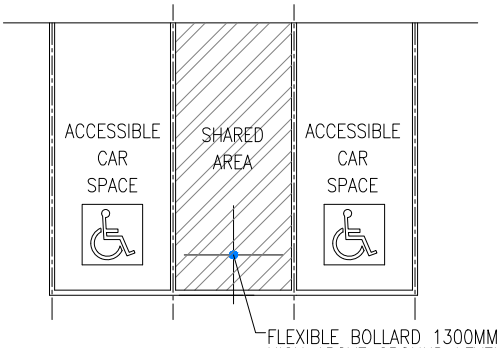
RIGHT HAND ACCESSIBLE CAR PARKING SPACES IN ACCORDANCE WITH AS2890.6



LEFT HAND ACCESSIBLE CAR PARKING SPACES IN ACCORDANCE WITH AS2890.6



PARALLEL ACCESSIBLE CAR PARKING SPACE IN ACCORDANCE WITH AS2890.6



DOUBLE ACCESSIBLE CAR PARKING SPACES IN ACCORDANCE WITH AS2890.6

EXAMPLES OF ACCESSIBLE CARPARKING SPACES AND CONFIGURATIONS

SPECIFICATIONS AND DETAILS – RESERVE PATHS CONNECTIONS TO ACCESSIBLE CARPARKING AND AMENITIES

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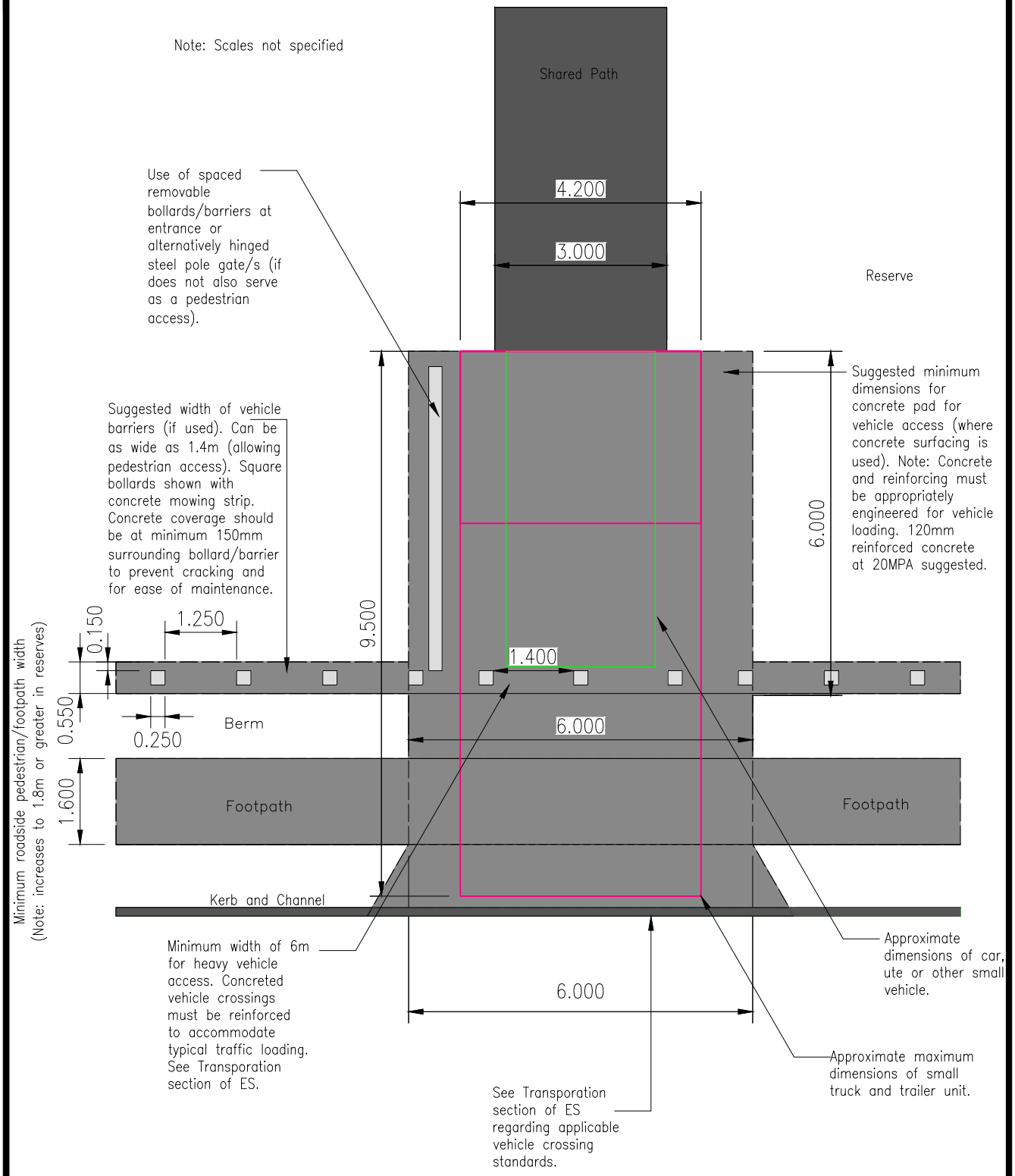

PLAN – CONCRETED HEAVY MAINTENANCE VEHICLE ACCESS OFF ROAD CARRIAGEWAY AND BOLLARD/BARRIER SPACING AND MOWING STRIP

SPECIFICATIONS AND DETAILS RESERVE PATHS – PATHS AND VEHICLE ACCESSES IN TO RESERVES	Date: JAN 2021
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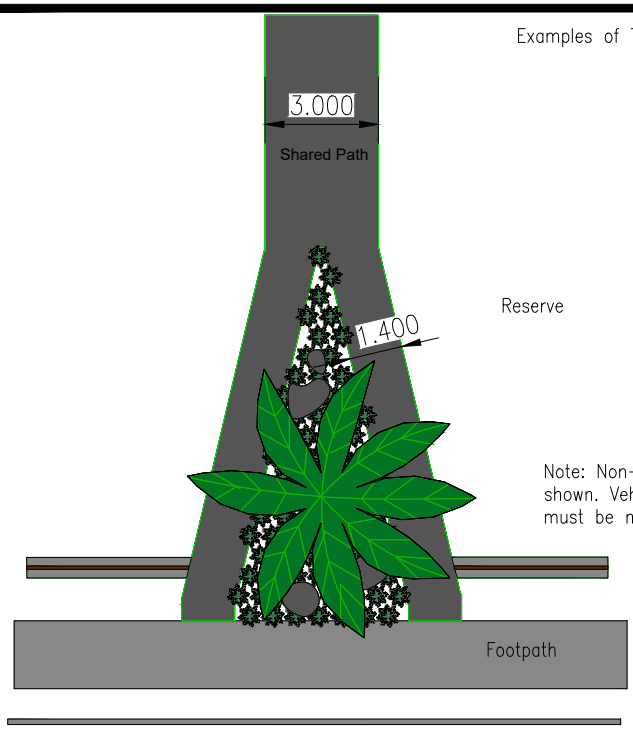
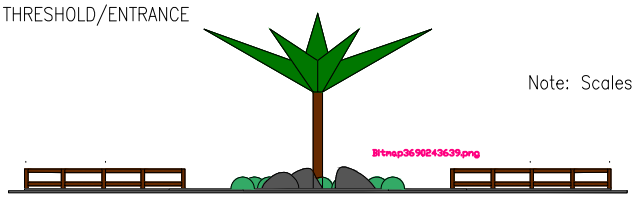
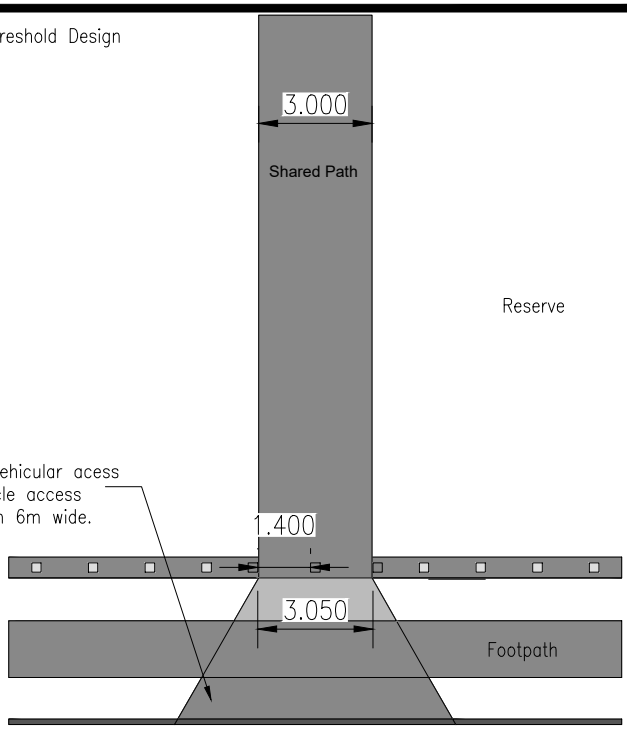
Examples of Threshold Design



PLAN VIEW – SHOWING OPTION FOR VEGETATED SPLIT THRESHOLD/ENTRANCE

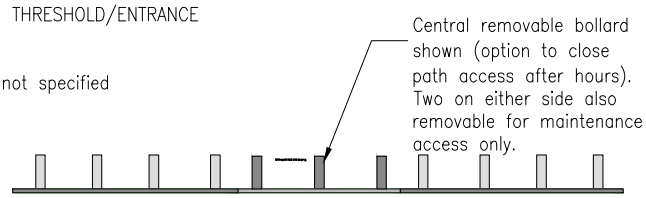


SECTION – SHOWING OPTION FOR VEGETATED SPLIT THRESHOLD/ENTRANCE

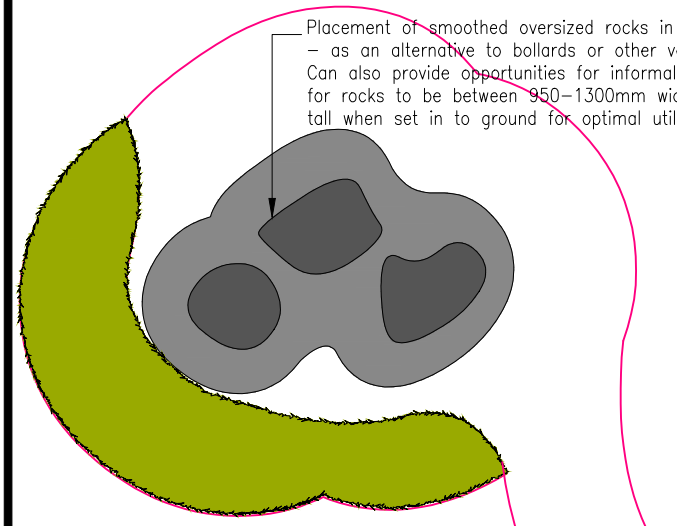


PLAN VIEW – SHOWING OPTION FOR BOLLARDED CENTRAL THRESHOLD/ENTRANCE

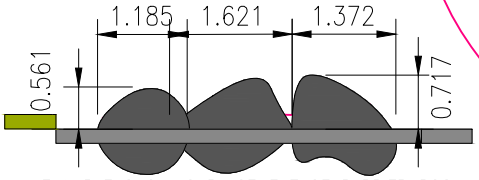
Note: Scales not specified



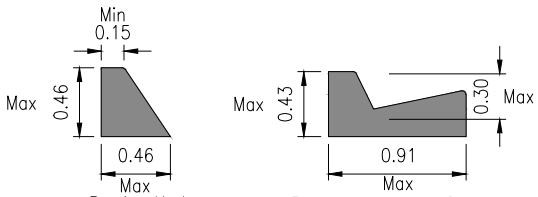
SECTION – SHOWING OPTION FOR BOLLARDED CENTRAL THRESHOLD/ENTRANCE



PLAN VIEW – EXAMPLE SHOWING PLACEMENT OF BARRIER ROCK ALTERNATIVE



SECTION – EXAMPLE SHOWING PLACEMENT OF BARRIER ROCK ALTERNATIVE



DETAIL – SHOWING NON–MOUNTABLE/BARRIER KERB TYPES

SPECIFICATIONS AND DETAILS RESERVE PATHS – PATHS AND VEHICLE ACCESSES IN TO RESERVES

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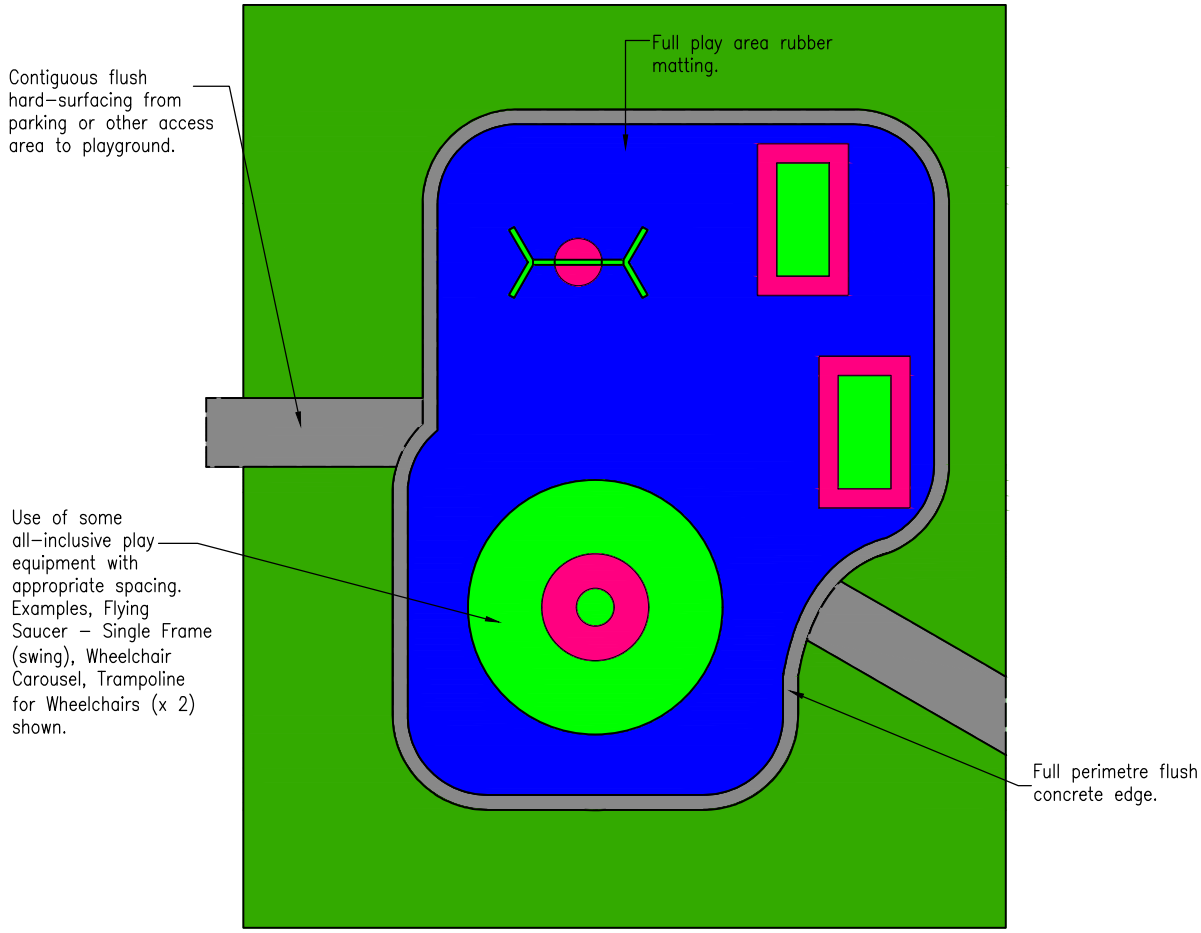
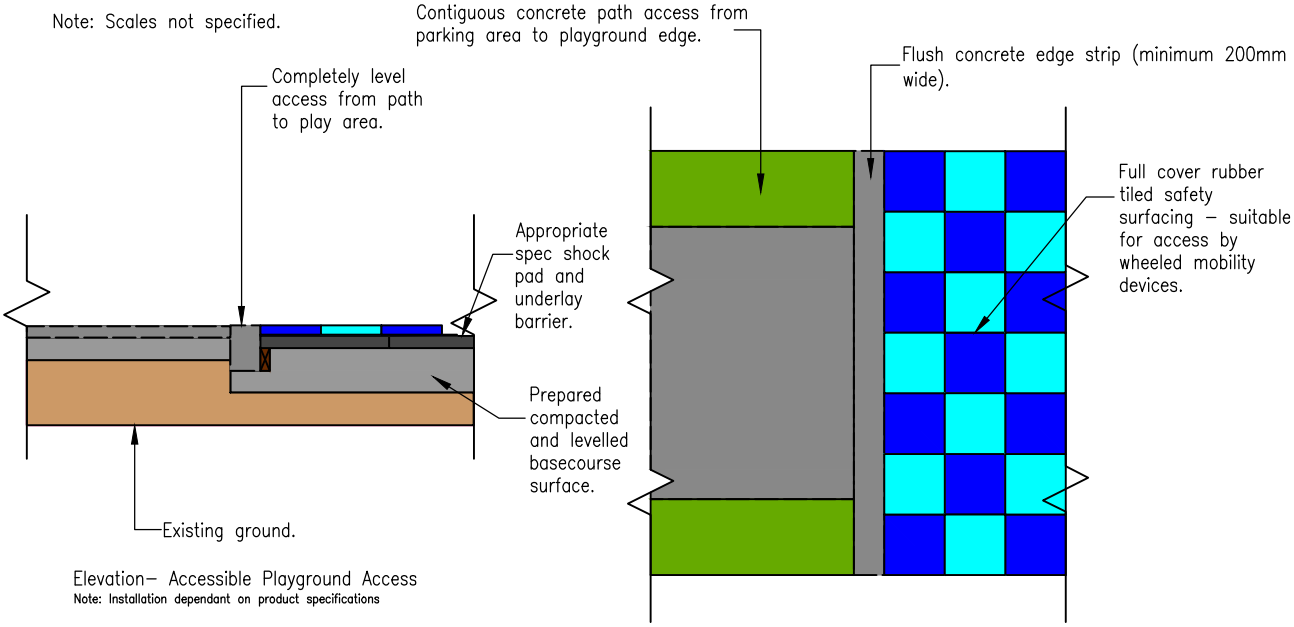


Plan view – Basic Example of Fully Accessible Playground Layout

Note: Scales not specified.



Elevation– Accessible Playground Access

Note: Installation dependant on product specifications

Plan view – Accessible Playground Access

SPECIFICATIONS AND DETAILS – RESERVE PLAYGROUNDS – SAFETY SURFACING AND EDGING DETAILS FOR ACCESSIBLE PLAYGROUNDS

Date:	April 2022
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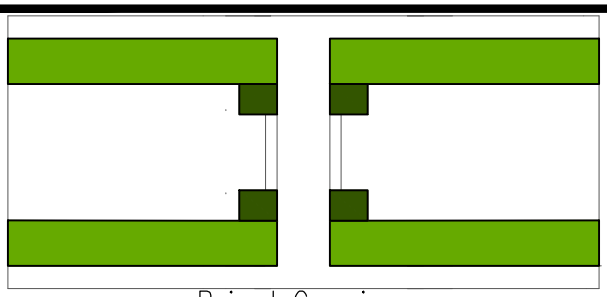
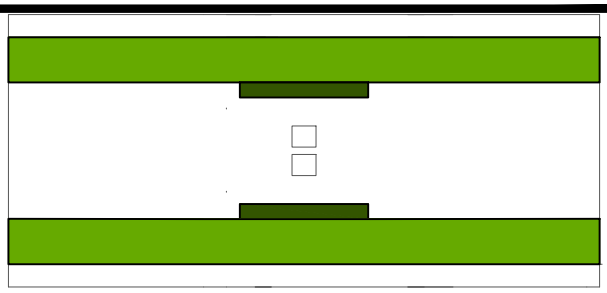
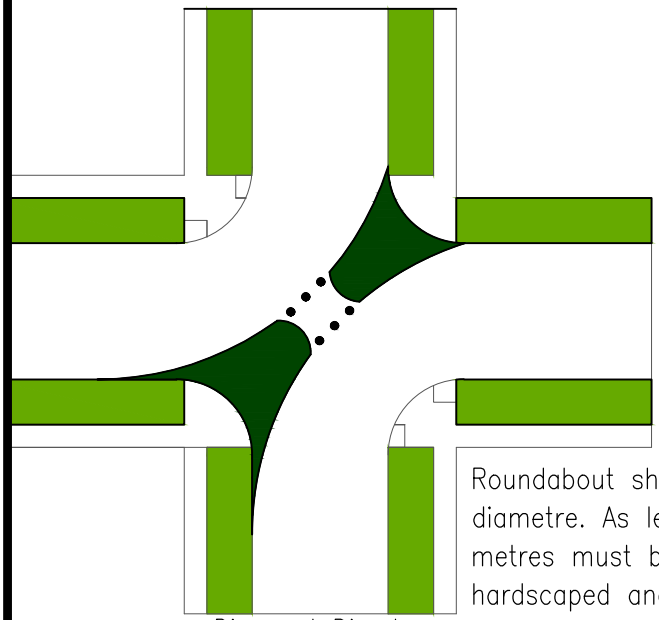
FAR NORTH DISTRICT COUNCIL
ENGINEERING STANDARDS



Raised Crossing

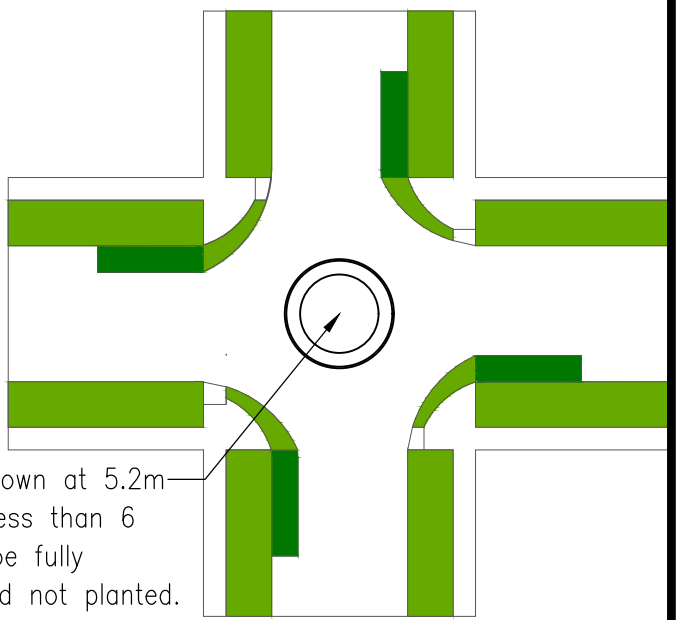


Speed Cushions

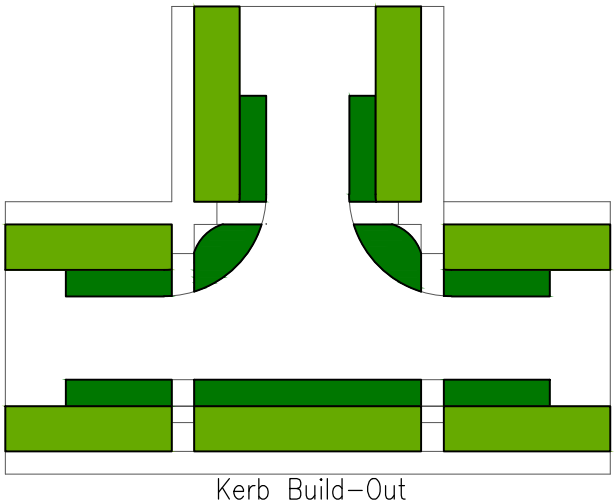


Diagonal Diverter

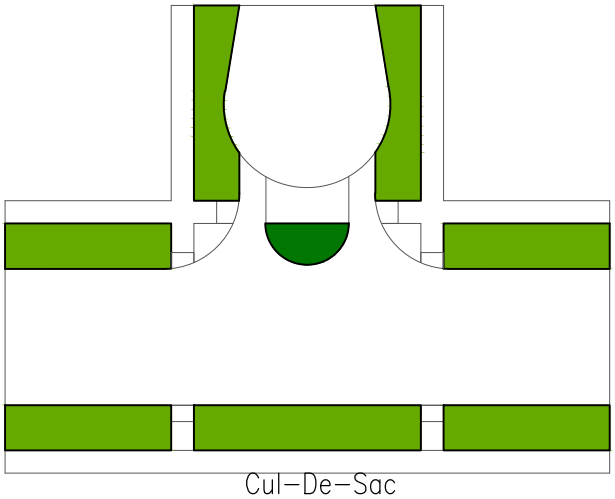
Roundabout shown at 5.2m diametre. As less than 6 metres must be fully hardscaped and not planted. See Table 4 for more details.



Roundabout Build-Outs



Kerb Build-Out



Cul-De-Sac

Examples of Various Configurations for WSD in the Streetscape
Preferred green thresholds shown – i.e impervious surfacing at less than 70%
May contribute to alternative planting areas in lieu of some street trees
– ie 1.0m2 (of alternative planting) per metre of street length – on agreement with Council only.
To Note: Ligher green indicates planting up to 400mm tall.
Darker green planting of ground covers (up to 300mm) for adequate visibillity.
Site specific design to be completed – with planting in conjuction with specific WSD devices.
See List 3. For Suitable Shrub and Groundcover Species.

SPECIFICATIONS AND DETAILS STREETSCAPES – PLANTING FOR WATER SENSITIVE DESIGN IN THE STREETSCAPE.	Date: April 2022
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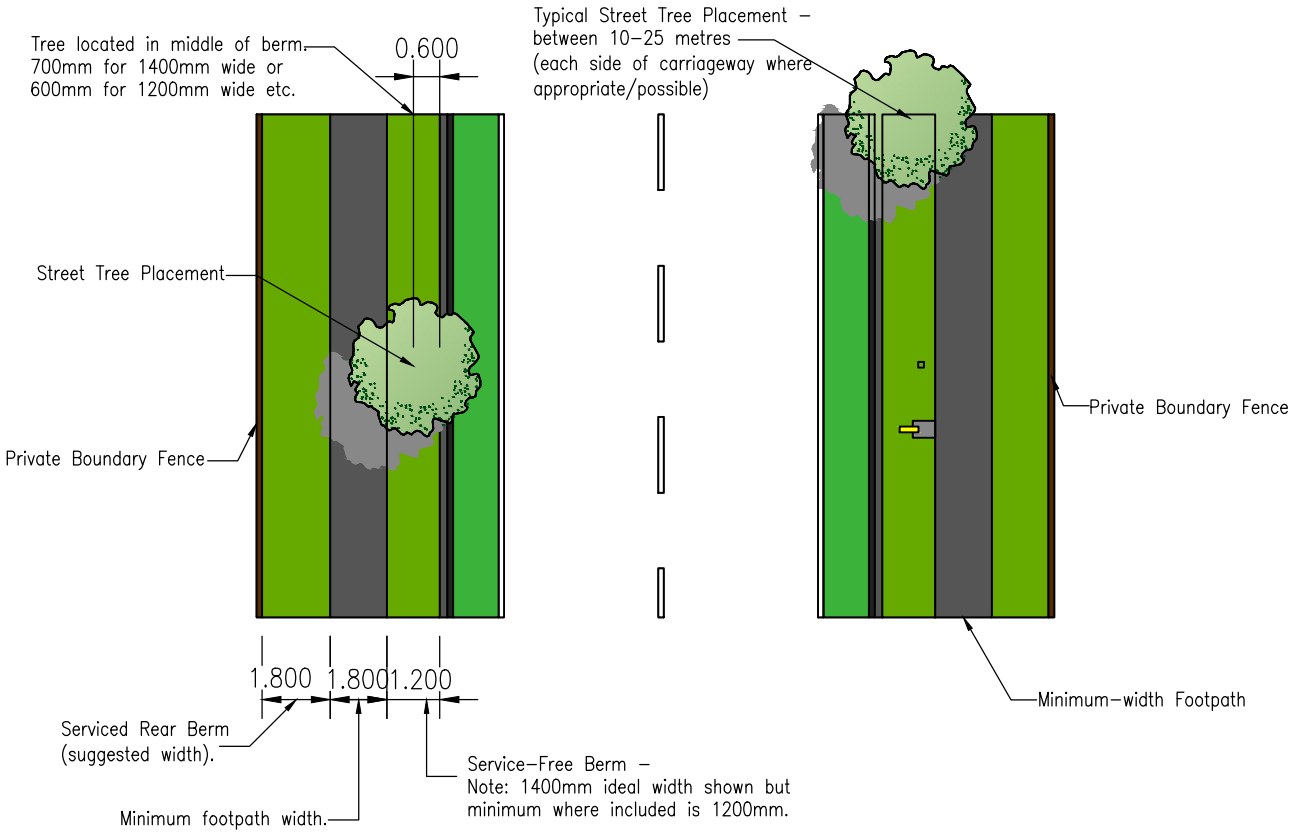
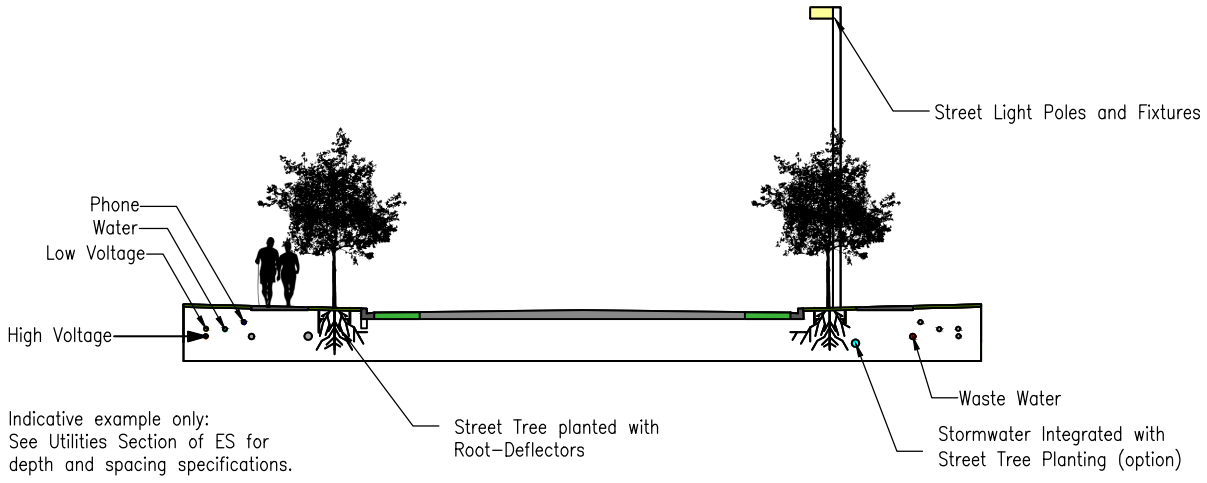


Plan view – Example of Street Tree Placement on Typical Urban Collector Road – with Separate Service–Free Berm and Seriviced Rear Berm



Elevation – Example Showing Typical Placement of Utilties in Service–Free Berm and Street Tree Planting

SPECIFICATIONS AND DETAILS – STREETSCAPES – SERVICE FREE BERM FOR LANDSCAPING PURPOSES, AND UTILITY PLACEMENT.	Date: April 2022
	Revision: 0.2
FAR NORTH DISTRICT COUNCIL ENGINEERING STANDARDS	Scale: NTS
	SHEET No. 66