

G1. THESE DRAWING SHALL BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED.

G2. ANY DISCREPANCIES OR OMISSION CONTAINED WITHIN THESE DRAWINGS SHALL BE REFERRED TO THE DESIGNER (CIVIL CONSULT) FOR CLARIFICATION PRIOR TO PROCEEDING

G3. ALL WORKMAN SHIP AND MATERIALS SHALL COMPLY WITH THE APPROPRIATE CURRENT AUSTRALIAN STANDARDS, EXCEPT WHERE MODIFIED BY THE DRAWINGS

G4. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE

G5. ALL DIMENSIONS SHOWN ON THESE DRAWINGS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION OR FABRICATION

G6. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED

G7. UND DENOTES UNLESS NOTED OTHERWISE

G8. ALL CODES REFERRED TO IN THESE NOTES ARE THE LATEST EDITIONS WITH AMENDMENTS

SN1. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK, AND REPORT ANY DISCREPANCIES TO THE DESIGNER (CIVIL CONSULT)

SN2. ALL EXISTING SERVICES (INCLUDING ANY NOT SHOWN ON THESE PLANS) MUST BE ACCURATELY LOCATED IN POSITION AND LEVEL PRIOR TO ANY EXCAVATION. MINIMUM SERVICE CLEARANCE SHALL BE MAINTAINED FROM RELEVANT SERVICE AUTHORITY

SN3. THE CONTRACTOR SHALL ARRANGE FOR ALL SETTING OUT BY A SURVEYOR FAMILIAR WITH THIS TYPE OF WORK

A1. THE DESIGN INCORPORATES THE USE OF POST INSTALLED ANCHORS. THE CONTRACTOR IS TO INSTALL ANY ANCHORS IN ACCORDANCE WITH THE ANCHOR'S SUPPLIER'S INSTALLATION INSTRUCTIONS

A2. THE EMBEDMENT DEPTH OF ANY POST INSTALLED FIXINGS SHALL BE IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATION UND

A3. TENSIONING OF ANY POST INSTALLED FIXINGS SHALL BE IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATION UND

GT1. GEOTECHNICAL PARAMETERS USED IN DESIGN HAVE BEEN  
REFERENCES FROM THE PROVIDED GEOTECHNICAL REPORT:  
- GEOTECH INVESTIGATIONS PTY LTD: REPORT NO: GI 4985-A

GT2. EXPECTED GROUND CONDITIONS ARE LOOSE TO MEDIUM  
DENSE SANDS OVERLYING FIRM ALLUVIAL CLAYS. IF  
UNEXPECTED GROUND CONDITIONS ARE ENCOUNTERED, REFER TO  
DESIGNER FOR REVIEW OF PROPOSED DESIGN.

W1. ALL WELDING SHALL BE IN ACCORDANCE WITH AS 1554 PART 1

W2. ALL WELDS ARE CATEGORY SP

W3. ALL WELDS TO VISUALLY INSPECTED.

W4. ANY DEFECTIVE WELDS ARE TO BE REMOVED, REINSTATED AND INSPECTED IN ACCORDANCE WITH AS1554.

S1. ALL WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH AS4100 AND AS1554 EXCEPT WHERE VARIED BY THE DESIGN CONTAINED WITHIN THESE DRAWINGS

S2. STEEL COMPONENTS SHALL CONFORM TO THE FOLLOWING TABLE UND.

STEEL GRADE SUMMARY TABLE		
COMPONENT	AUSTRALIAN STANDARD	GRADE
PLATE	AS/NZS 3678	250
HOT ROLLED SECTION	AS/NZS 3679	300
RHS AND SHS	AS 1163	c350
WELDED BEAMS, COLUMNS	AS/NZS 3679	300
FLAT BARS, RODS	AS/NZS 3679	300
THREADED ROD/BOLT	-	GRADE 8.8

S3. BOLT DESIGNATION  
4.6/S COMMERCIALLY TIGHTENED BOLTS OF GRADE 4.6 TO AS1111 SNUG TIGHTENED  
8.8/S HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 SNUG TIGHTENED  
8.8/TB HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A BEARING JOINT  
8.8/TF HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A FRICTION JOINT WITH CONTACT SURFACES LEFT UNCOATED

S4. ALL WELDS TO BE 6MM CONTINUOUS FILLET WELDS UND. ALL BUTT WELDS TO BE COMPLETE PENETRATION BUTT WELDS. ELECTRODES TO BE E49XX OR EQUAL UND. WELD CATEGORY SP.

S5. ALL PLATES SHALL BE 12mm UND

C1. REINFORCED CONCRETE DESIGN IN ACCORDANCE WITH AS3600.

C2. CONCRETE EXPOSURE CLASSIFICATION FOR ALL CONCRETE ELEMENTS - B2.

C3. MINIMUM COMPRESSIVE STRENGTH OF ALL CONCRETE ELEMENTS AT 28-DAYS IS 40MPa.

C4. ALL EDGES OF CONCRETE ELEMENTS TO HAVE 20x20mm CHAMFER UNLESS SPECIFIED OTHERWISE.

C5. FORMED INTERIOR/EXTERIOR TO BE CLASS 2, FINISHED SURFACES AS FOLLOWS UND:

- SLABS: FINE BROOM FINISH
- WATER SERVICE PITS: TROWELLED.

R1. ALL REINFORCEMENT GRADE D500N TO AS4671.

R2. NO LAPS OR SPLICES PERMITTED UND.

R3. ALL REINFORCEMENT TO BE LOCATED AS SHOWN ON THE  
STRUCTURAL DRAWINGS UNI.

R4. REINFORCEMENT IN WALLS/BASE OF WATER SERVICES PITS  
TO BE CENTRALLY LOCATED.

R5. MINIMUM COVER TO ALL REINFORCEMENT IS 45mm UND.

R6. MINIMUM LAP/SPLICE LENGTHS WHERE INDICATED ARE TO BE  
CALCULATED IN ACCORDANCE WITH AS3600, OR SHALL BE EQUAL  
TO 39 BAR DIAMETERS.

D1. ADOPTED DESIGN LIFE FOR ALL STRUCTURAL ELEMENTS:  
- 50 YEARS.

D2. DESIGN LOADS FOR EACH STRUCTURAL ELEMENT ARE IN ACCORDANCE WITH THE RESPECTIVE AUSTRALIAN STANDARD UND.  
DESIGN LOADS FOR EACH ELEMENT ARE AS FOLLOWS:

WALKWAY STRUCTURE LOADS & DESIGN IN ACCORDANCE WITH AS1657 & AS5100:

- LIVE DISTRIBUTED LOAD: 3.0KPa
- LIVE POINT LOAD: 11kN
- DEAD LOADS: (50kg/m<sup>2</sup> ALLOWED FOR WEBFORGE GRATING)
- LATERAL STREAM LOAD (ASSUMED MAX. VELOCITY OF 2.0m/s) TO AS5100.
- DOWNWARD/UPWARD STREAM LOAD (ASSUMED MAX. VELOCITY OF 2.0m/s) TO AS5100.
- HANDRAIL DESIGN LOADS AS PER WEBFORGE LOAD RATING (BUT NOT LESS THAN REQUIRED IN AS1657).

HYDRAULIC JUMP BRACE LOADS AND DESIGN IN ACCORDANCE WITH AS4100:

- 10kN STRUCTURAL ROBUSTNESS LOAD PLACED AT HEIGHT OF PIPE CLAMP.
- CLAMPES FROM WATER FLOW THROUGH PIPES HAVE BEEN IDENTIFIED AS NEGLIGIBLE BY PLANIT CONSULTING AND THEREFORE HAVE NOT BEEN CONSIDERED.



CONCRETE HARDSTAND/SWALE FOUNDATION LOADS AND DESIGN IN ACCORDANCE WITH AS1170, AS3600:

- INDUSTRIAL FLOOR USAGE LOADS – 700kPa TYRE PRESSURE FOR SLAB TYPE 1 (W80 WHEEL LOAD PRESSURE).
- FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 75kPa, PROVIDING A 200mm LAYER OF COMPACTED GRANULAR MATERIAL IS PLACED AS PER THE DESIGN DETAILS PROVIDED IN THIS DRAWING SET.

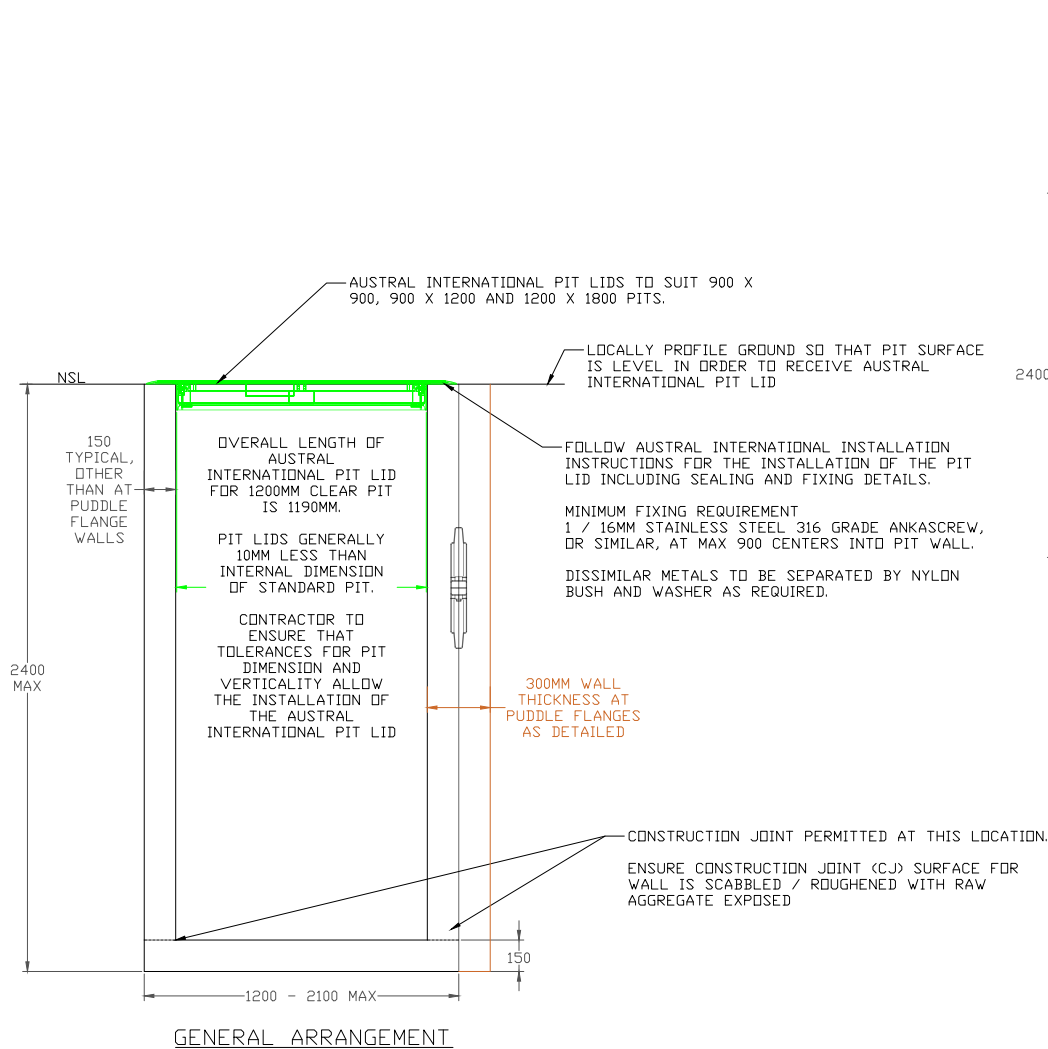
– CONCRETE WATER SERVICE PIT LOADS AND DESIGN TO AS3600, AS1170 & AS3996:

- DESIGN LOADS ON PIT WALLS FROM VEHICLES (CLASS B) IN ACCORDANCE WITH AS3996.
- LOADS ON PIT WALLS FROM EARTH PRESSURE IN ACCORDANCE WITH AS1170.
- FOUNDATIONS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 75kPa.
- MAXIMUM ALLOWABLE LOAD PERPENDICULAR TO CONCRETE PIT WALL AT PUDDLE FLANGE LOCATIONS IS AS SHOWN ON THE DRAWING SHEET. IF THE FACTORED DESIGN LOAD IS EXPECTED TO BE IN EXCESS OF THESE DETAILS, CONTACT ENGINEER FOR ALTERNATIVE DETAILS.

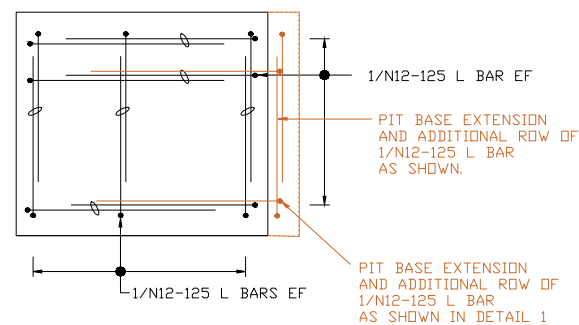
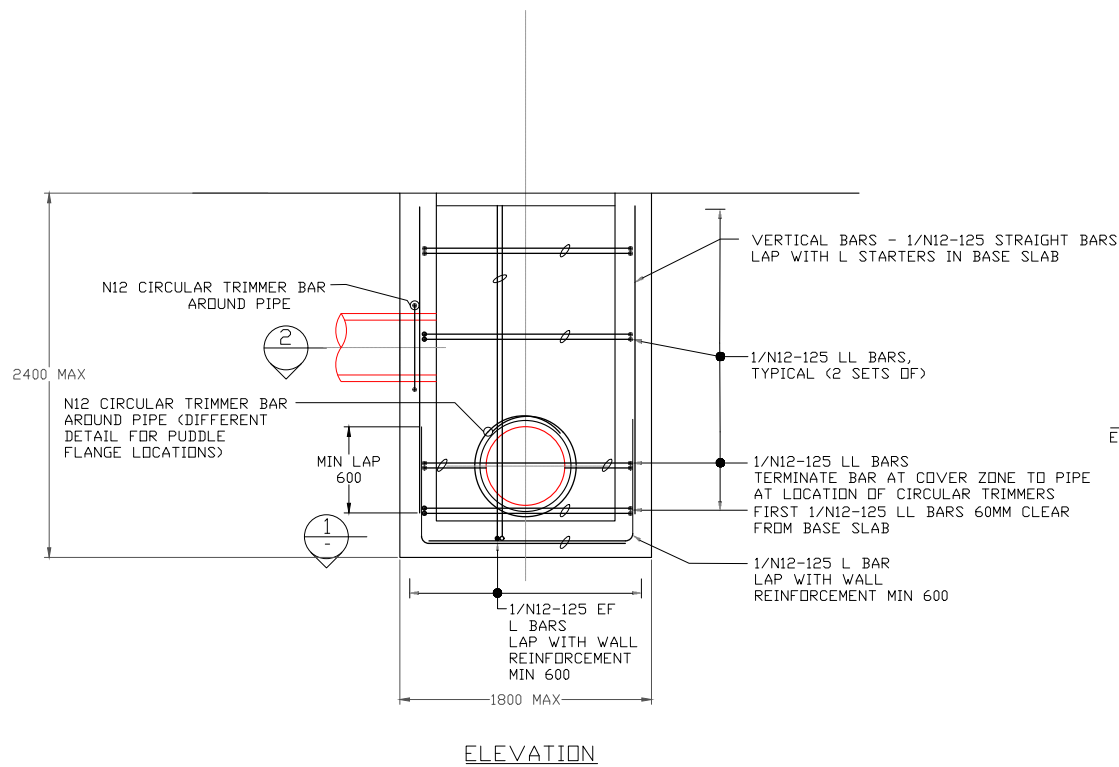
1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ANY EXCAVATIONS ARE COMPLETED IN A SAFE MANNER. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE EXCAVATION AT ALL TIMES DURING THE WORKS, AND THEY SHALL MAINTAIN STABLE AS REQUIRED UNDER VARYING ENVIRONMENTAL CONDITIONS.

				SCALE				<div> <div>STATUS</div> <div>IFC</div> </div>				<div>BYRON SHIRE COUNCIL</div> <div>BYRON BAY STP - ADDITIONAL FLOW PATH DESIGN</div> <div>GENERAL NOTES</div> <div>BYRON BAY</div> <div>BYRON SHIRE COUNCIL</div>				
						<div>21 CLARK STREET, BALLINA, NSW, 2478</div> <div>ABN:12591694943</div> <div>PH: (02) 6686 9036</div> <div>E: info@civilconsult.com.au</div>		<div>ORIGINAL SIZE</div> <div>A3</div> <div>DRAWN</div> <div>J.L/N.S</div>								
								<div>COORDINATE SYSTEM</div> <div>N/A</div> <div>DESIGNED</div> <div>J.L/N.S</div>								
								<div>HEIGHT DATUM</div> <div>N/A</div> <div>DATE PRINTED</div> <div>19 Feb 2020 - 09:29AM</div>								
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A ISSUED FOR CONSTRUCTION				19/02/2020		N.SAENGER										
ISSUE DESCRIPTION				DATE		APPROVAL										

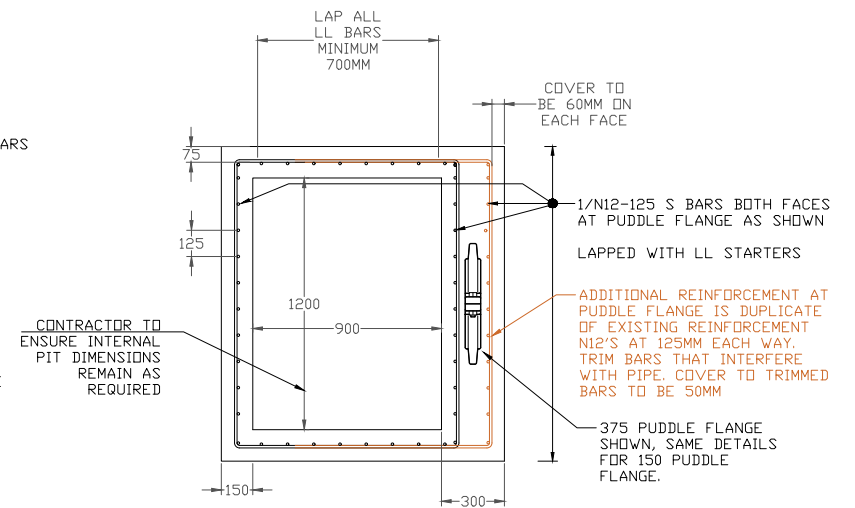
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GEOMETRIC DETAILS FOR PIT 1500 - 2100MM OVERALL LENGTH



CAST-IN-PLACE PIT @ BASE  
REINFORCEMENT PLAN ALL PITS, GEOMETRY VARIES

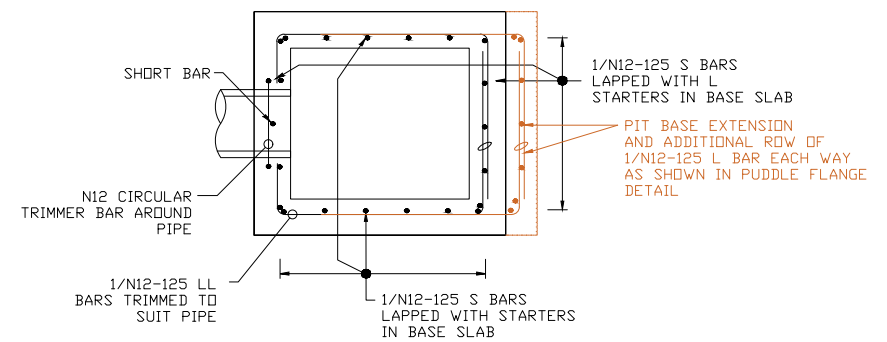


DETAILS - PUDDLE FLANGE

DETAIL AT PUDDLE FLANGE

CAST-IN-PLACE PIT @ 375 / 150 PIPE  
REINFORCEMENT PLAN ALL PITS, GEOMETRY VARIES  
PUDDLE FLANGE TO BE INSTALLED / MOUNTED IN ACCORDANCE WITH MANUFACTURES RECOMENDATIONS

PUDDLE FLANGE CAPACITY AS DESIGNED	
PUDDLE FLANGE TYPE	SHEAR CAPACITY AT ULTIMATE STRENGTH (kN)
DN150	162
DN375	259



CAST-IN-PLACE PIT @ 375 / 150 PIPE  
REINFORCEMENT PLAN ALL PITS, GEOMETRY VARIES

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BYRON SHIRE COUNCIL				
BYRON BAY STP - ADDITIONAL FLOW PATH DESIGN				
STRUCTURAL DETAILS - WATER SERVICE PITS				
BYRON BAY				
BYRON SHIRE COUNCIL				
ZONE	LOT CODE	PROJECT NO.	SHEET No	ISSUE
-	-	20008	S-02	A

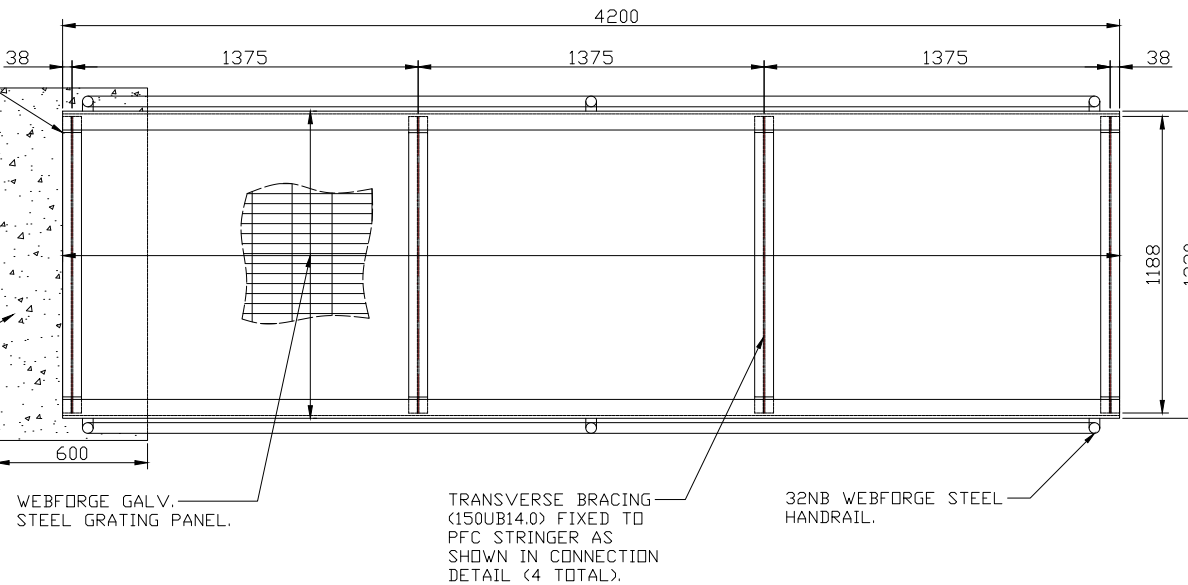
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WEBFORGE T5 ABRASIVE NOSING  
(BOLTED FIXING TO GALV. STEEL  
GRATING) TO EACH END OF  
WALKWAY, INSTALLED TO  
MANUFACTURERS SPECIFICATION.

600Wx600Dx1400L 40MPA CONCRETE  
PAD FOOTING TO SUPPORT  
WALKWAY ON EXISTING SUBGRADE.

SEE TYPICAL SECTION FOR  
CONCRETE REINFORCEMENT DETAILS.

SEE TYPICAL DETAIL FOR FIXING  
WALKWAY BASEPLATE TO FOOTING.



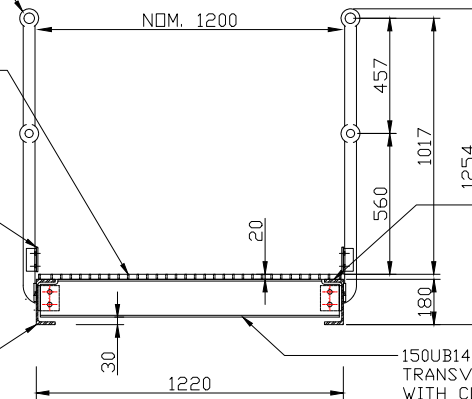
SWALE WALKWAY - PLAN  
NTS

32NB WEBFORGE  
STEEL HANDRAIL.

WEBFORGE GALV.  
STEEL GRATING  
PANELS (C205MPG) CUT  
TO SUIT LENGTH OF  
WALKWAY

OPTIONAL 100x6.0  
GALV. STEEL  
TOEBOARD FIXED TO  
HANDRAILING TO  
MANUFACTURERS  
SPECIFICATION.

180PFC STRINGERS

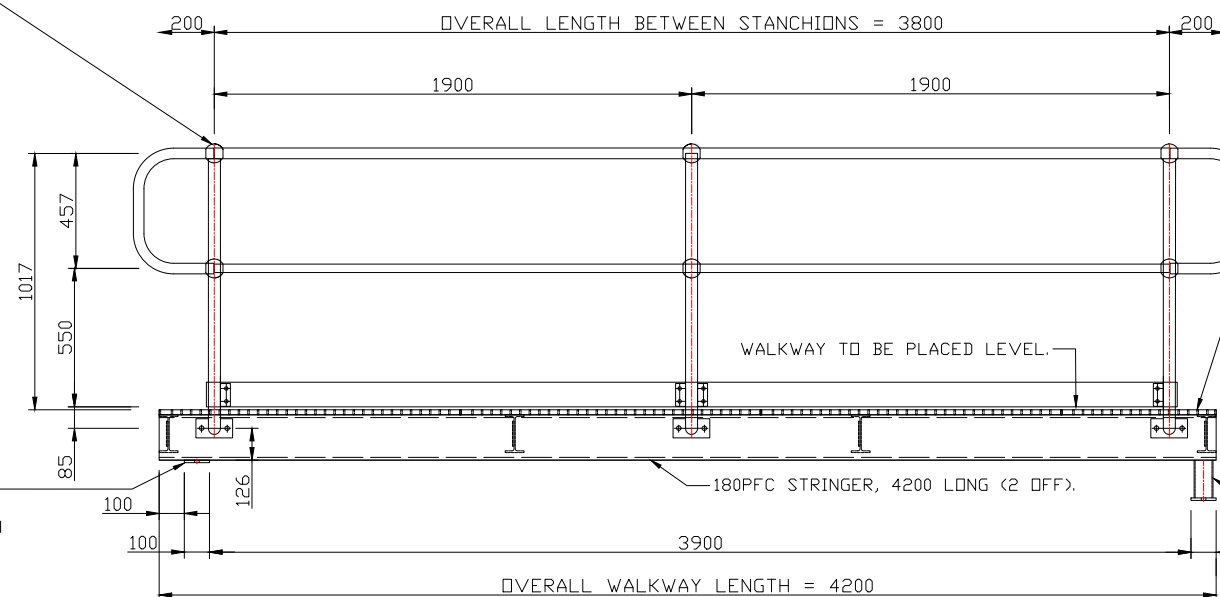


SWALE WALKWAY  
TYPICAL CROSS SECTION  
NTS

SEE CONNECTION DETAIL A FOR PFC  
TO TRANSVERSE BRACE CONNECTION

32NB WEBFORGE STEEL HANDRAIL  
MOUNTED OFF FACE OF PFC STRINGER  
WITH 2/M16 G8.8 GALV. BOLTS AT EACH  
STANCHION LOCATION AS PER  
MANUFACTURERS RECOMMENDATION (2/M18  
HOLES REQUIRED THROUGH PFC WEB AT  
EACH STANCHION LOCATION).

STANDARD WEBFORGE 32NB GALVANISED  
HORIZONTAL CLOSURE (HCB) TO EACH  
END, FABRICATED AND INSTALLED AS PER  
MANUFACTURERS RECOMMENDATIONS.



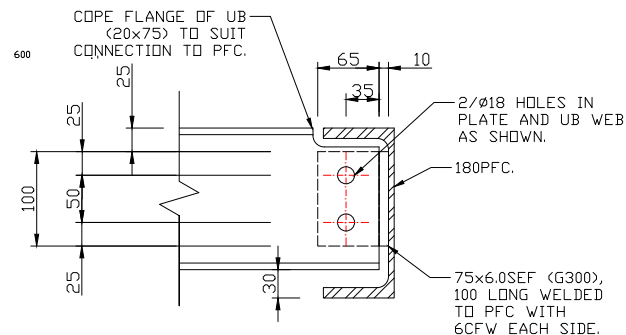
SWALE WALKWAY  
ELEVATION  
NTS

WEBFORGE GALV. STEEL GRATING  
ATTACHED TO TOP FLANGE OF PFC AND  
UB TRANSVERSE BRACES WITH  
WEBFORGE CLIP (C001MG) AND CAPTIVE  
BOLT (M8x65) AT NOM. 400 CTRS (MIN.  
5 FIXINGS PER M<sup>2</sup>).

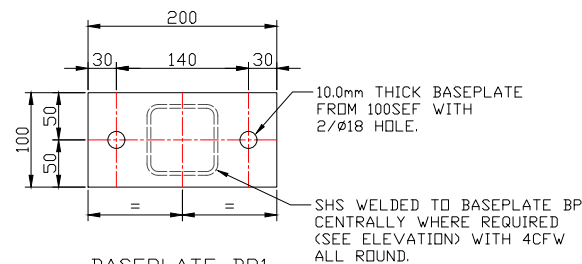
75x4.0 SHS FOOT WELDED TO BOTTOM  
FLANGE OF PFC AS SHOWN WITH 6CFW  
ALL ROUND. MAX. HEIGHT OF FOOT 250mm  
TO SUIT SWALE EARTHWORKS.

BASEPLATE (BP1) 100x10.0 SEF, 200 LONG  
WELDED CENTRALLY TO UNDERSIDE OF  
75x4.0 SHS FOOT WITH 6CFW ALL ROUND  
BASEPLATE FIXED TO EXISTING APRON  
SLAB.

TOP OF FOOTING  
LEVEL WITH  
NATURAL SURFACE.

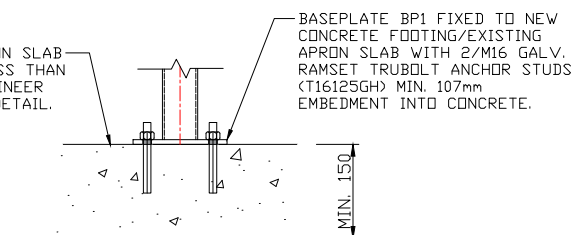


PFC TO TRANSVERSE BRACE  
TYPICAL CONNECTION DETAIL



BASEPLATE BP1

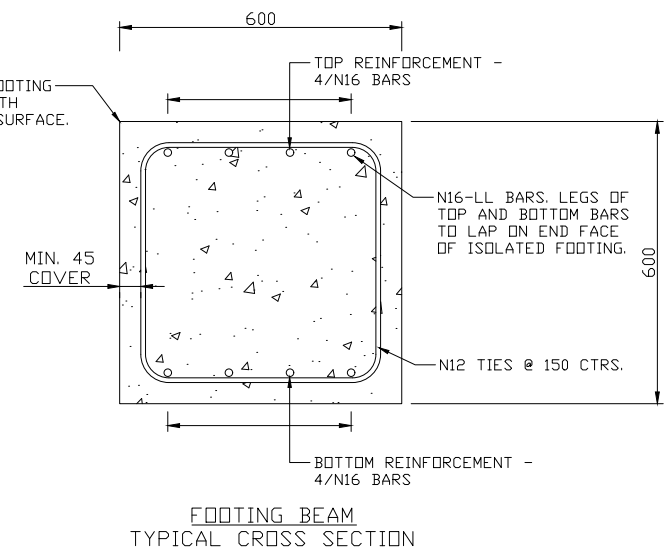
IF EXISTING APRON SLAB  
THICKNESS IS LESS THAN  
150mm REFER ENGINEER  
FOR ALTERNATE DETAIL.



BASEPLATE TO FOUNDATION  
TYPICAL FIXING DETAIL

ALL STEEL ELEMENTS TO BE  
HDG600 GALVANISED TO  
AS2312.2 AFTER FABRICATION.

IF TACK WELDING IS  
REQUIRED ON HANDRAIL  
ELEMENTS, WELDS ARE TO BE  
PROTECTED WITH A ZINC  
RICH PAINT.



FOOTING BEAM  
TYPICAL CROSS SECTION

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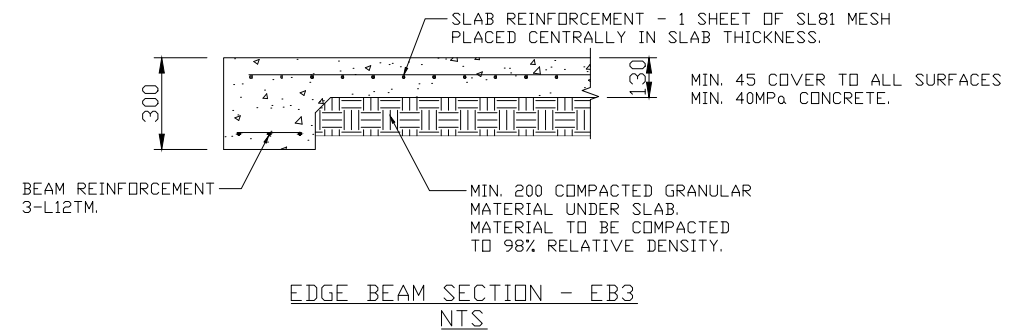
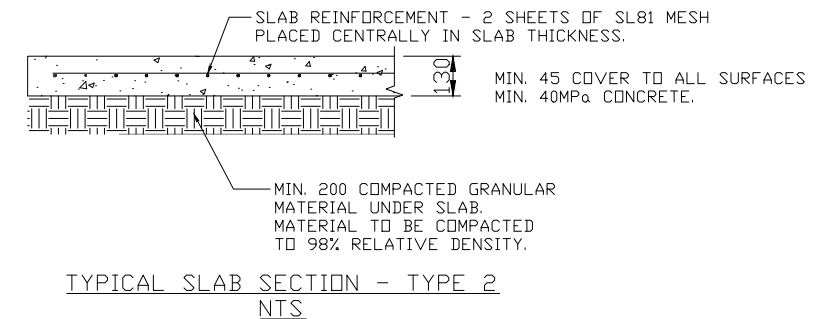
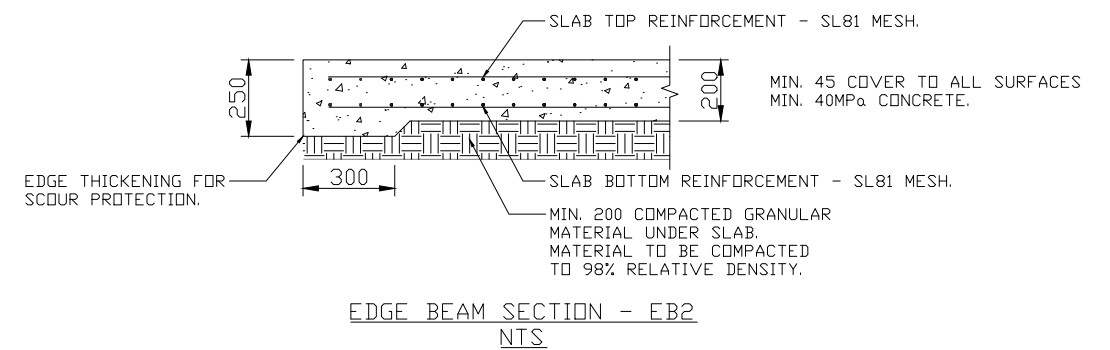
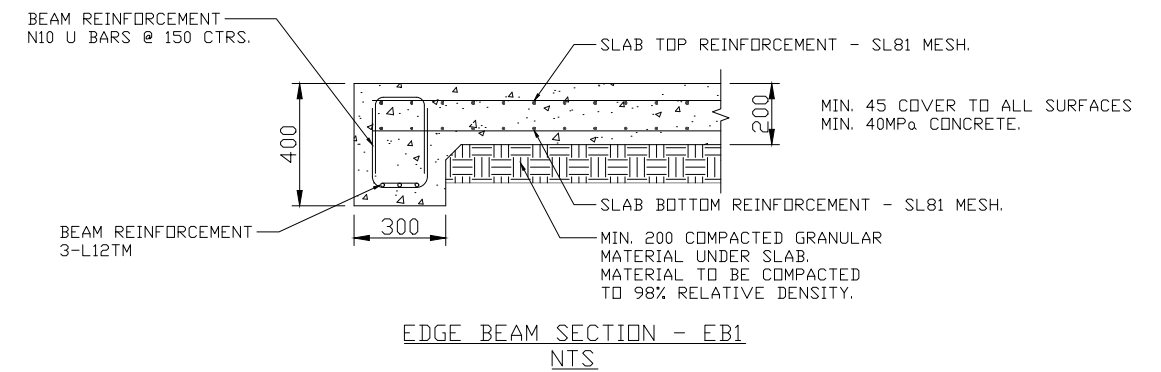
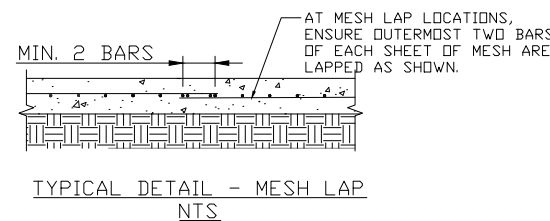
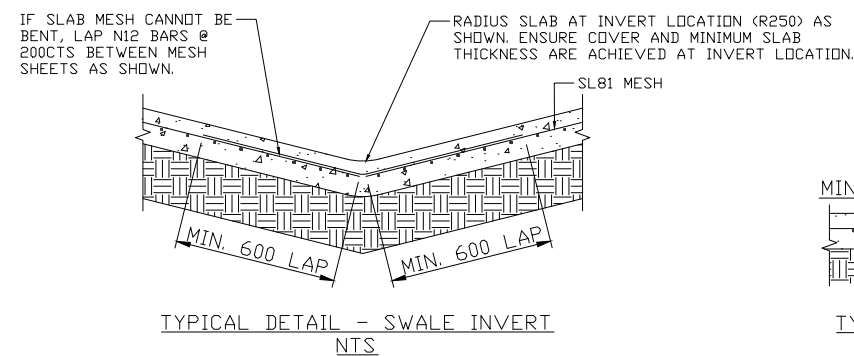
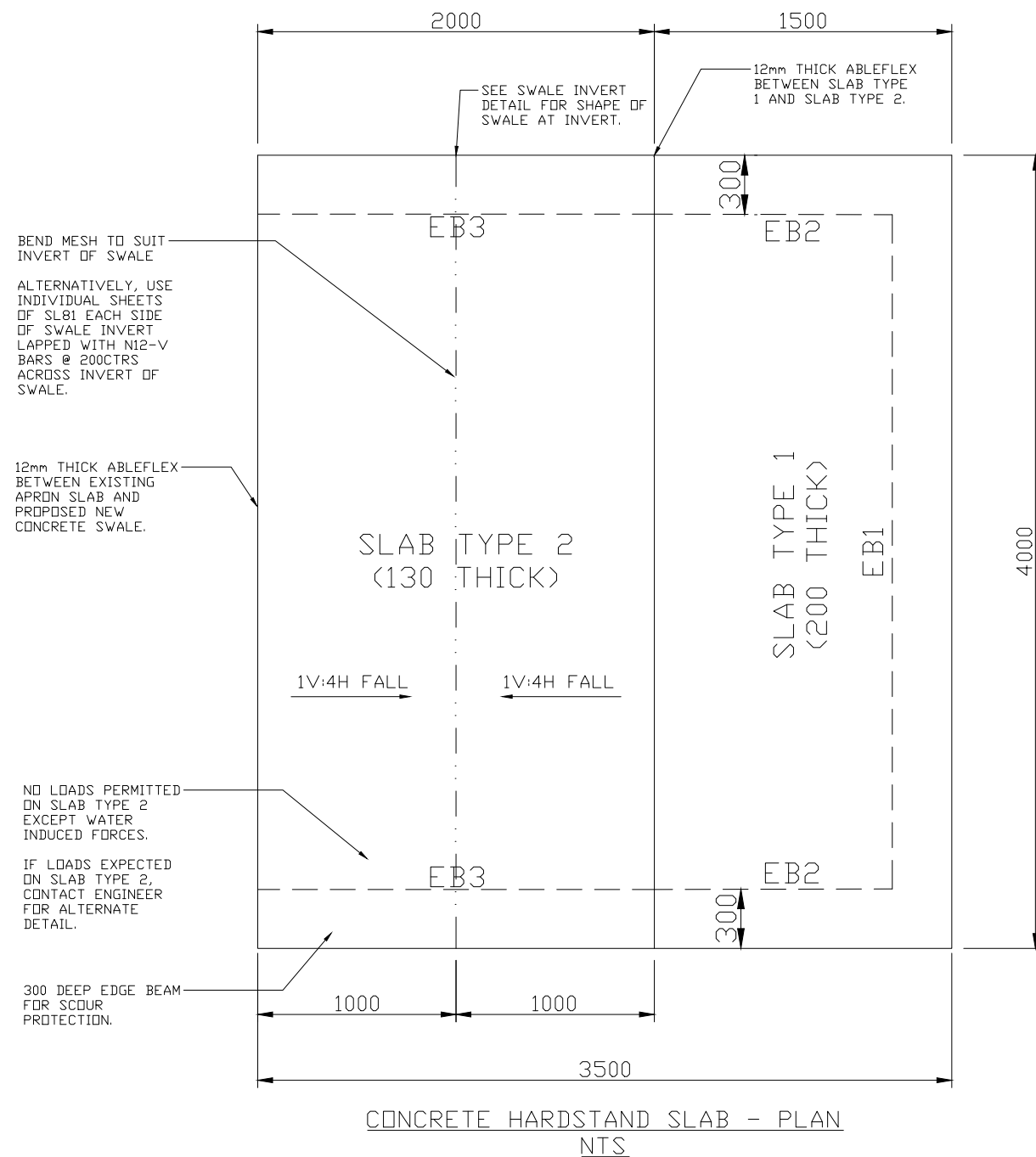
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BYRON SHIRE COUNCIL				
BYRON BAY STP - ADDITIONAL FLOW PATH DESIGN				
STRUCTURAL DETAILS - WALKWAY				
BYRON BAY				
BYRON SHIRE COUNCIL				
ZONE	LOT CODE	PROJECT NO.	SHEET No	ISSUE
-	-	20008	S-03	A

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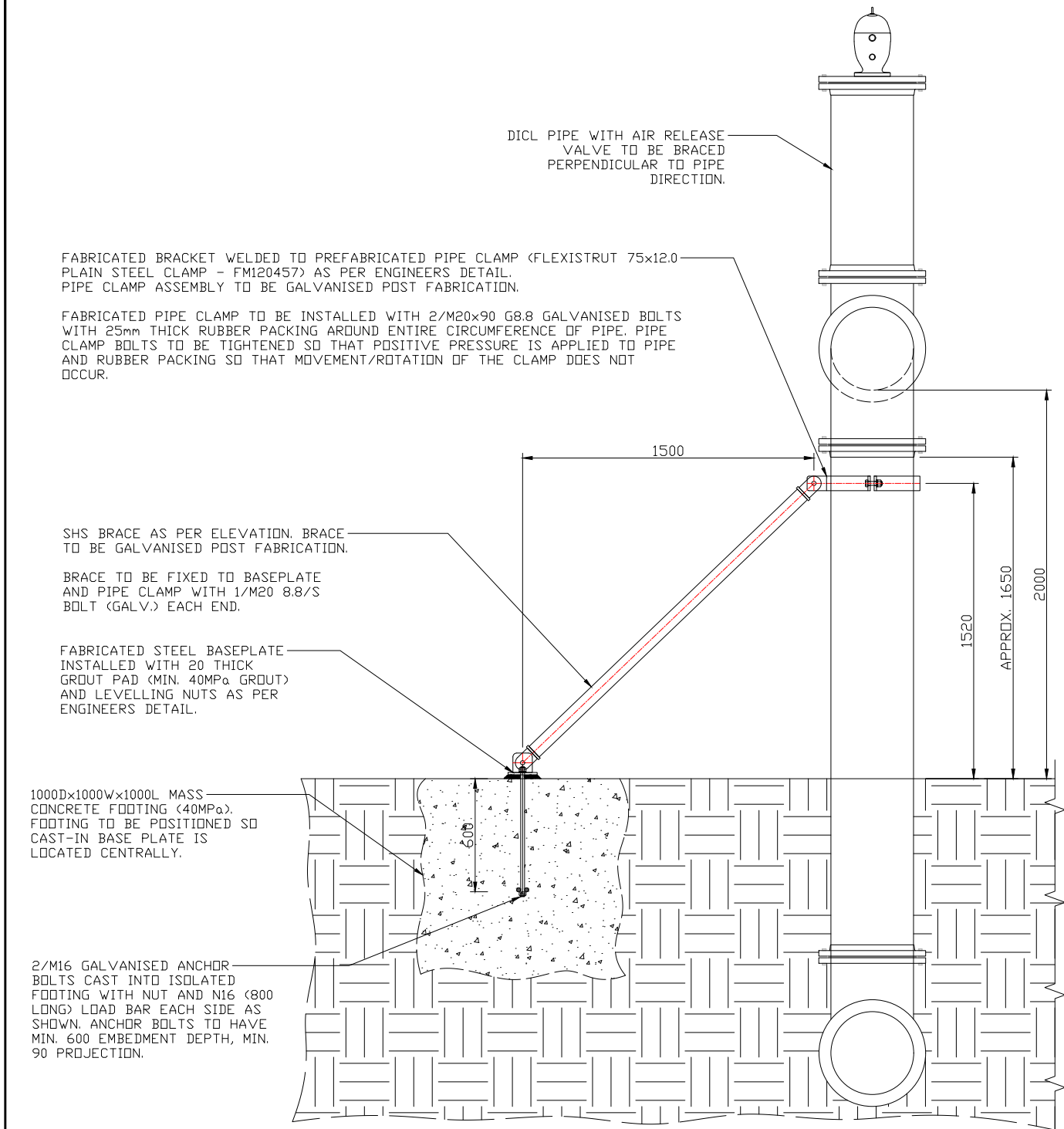
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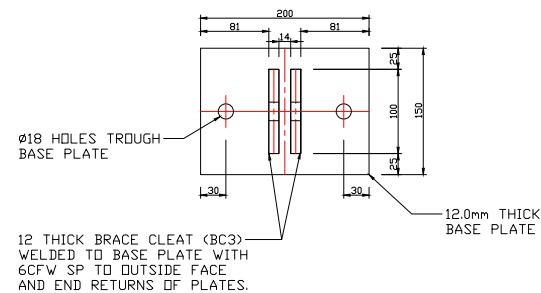


BYRON SHIRE COUNCIL				
BYRON BAY STP - ADDITIONAL FLOW PATH DESIGN				
STRUCTURAL DETAILS - CONCRETE HARDSTAND AREA				
BYRON BAY				
BYRON SHIRE COUNCIL				
ZONE	LOT CODE	PROJECT NO.	SHEET No	ISSUE
-	-	20008	S-04	A

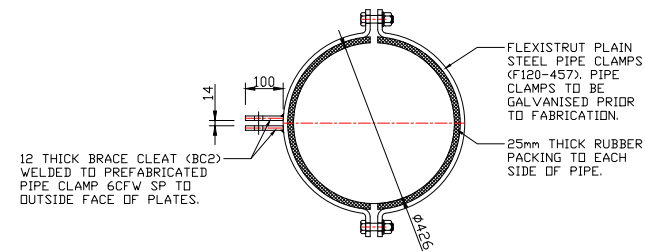
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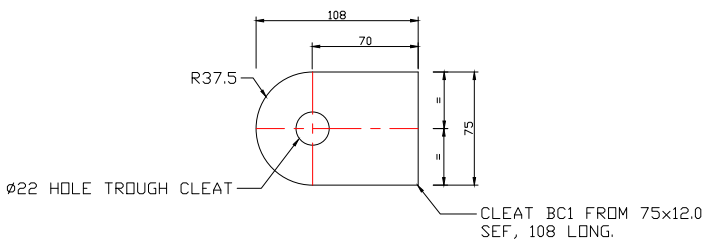
BRACE GENERAL ARRANGEMENT  
NTS



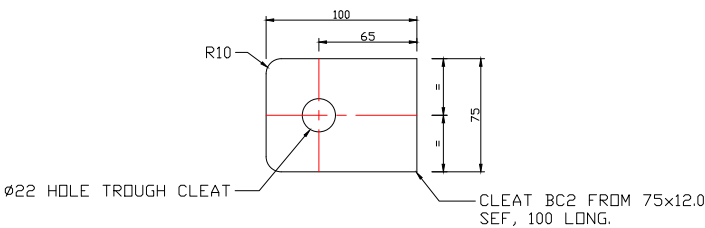
PLAN - BASEPLATE  
NTS



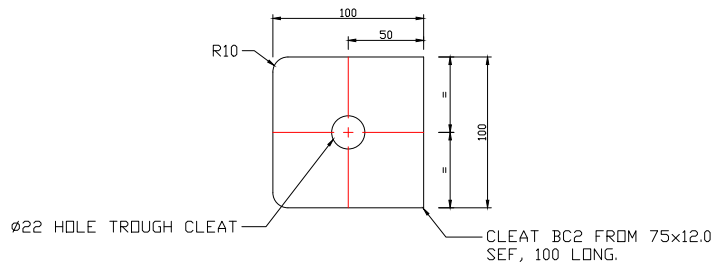
PIPE CLAMP ASSEMBLY  
NTS



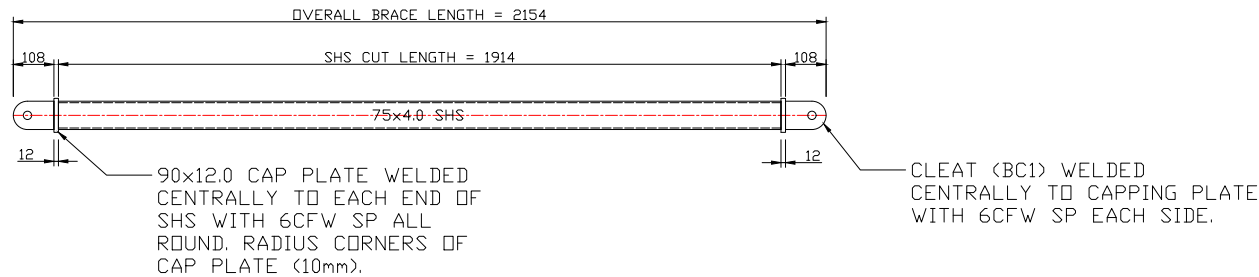
DETAIL - CLEAT BC1  
NTS



DETAIL - CLEAT BC2  
NTS



DETAIL - CLEAT BC3  
NTS



BRACE ELEVATION  
NTS

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BYRON SHIRE COUNCIL				
BYRON BAY STP - ADDITIONAL FLOW PATH DESIGN STRUCTURAL DETAILS - HYDRAULIC JUMP BRACE				
BYRON BAY				
BYRON SHIRE COUNCIL				
ZONE	LOT CODE	PROJECT NO.	SHEET No	ISSUE
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