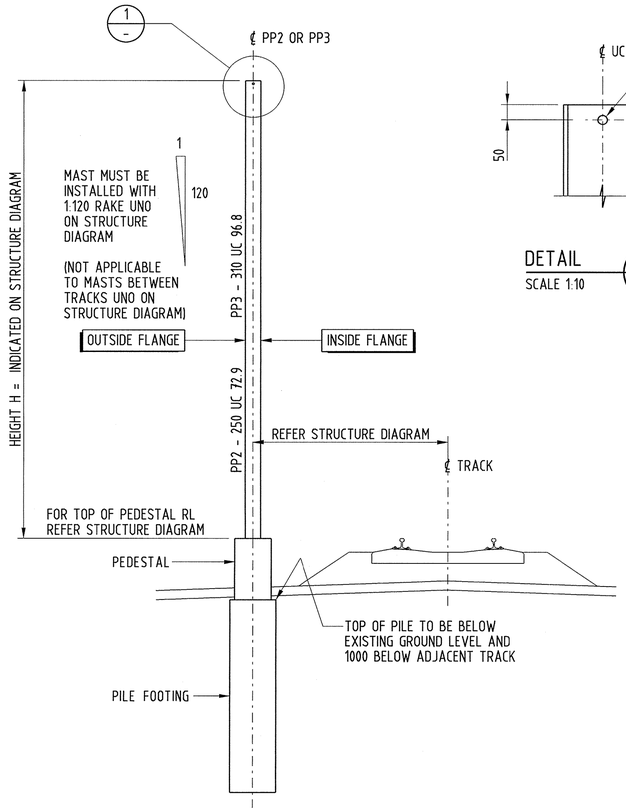
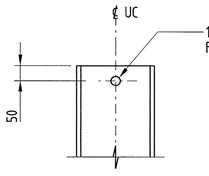


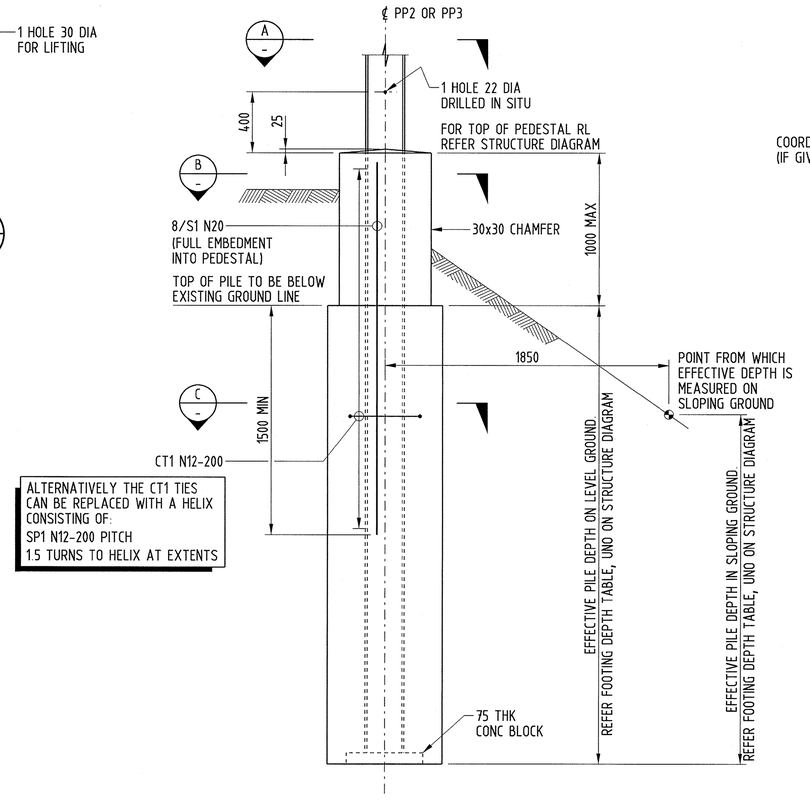
PP2 OR PP3 MAST

SCALE 1:50



DETAIL 1

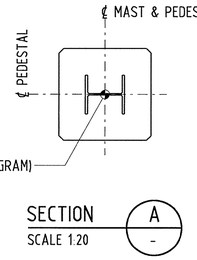
SCALE 1:10



SECTION PERPENDICULAR TO TRACK

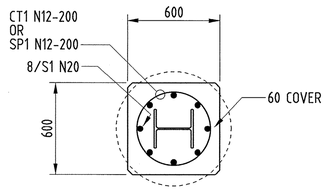
PILE FOOTING

SCALE 1:20



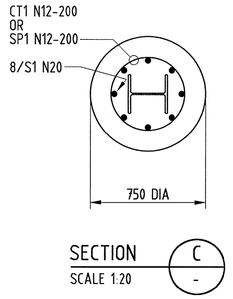
SECTION A

SCALE 1:20



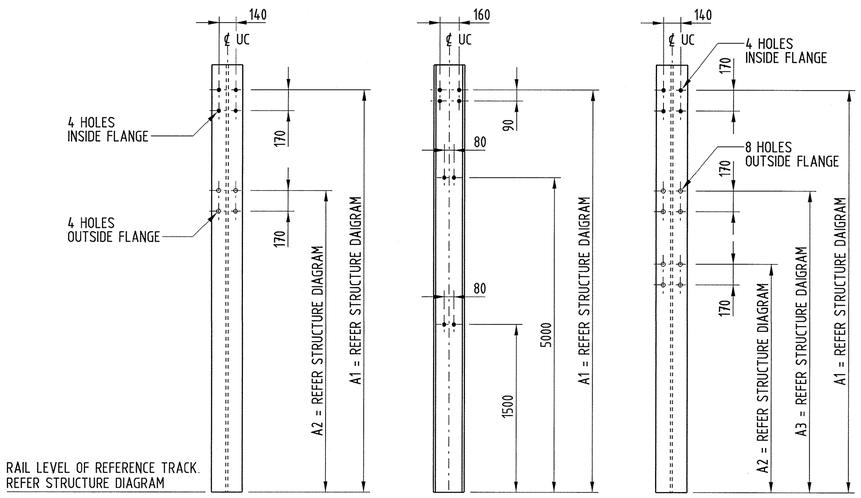
SECTION B

SCALE 1:20



SECTION C

SCALE 1:20



DRILLING TYPE D1 DRILLING TYPE D2 DRILLING TYPE D3

NOTE:
DRILLING HEIGHTS A1, A2 OR A3 SHOWN ON THE STRUCTURE DIAGRAM ARE MEASURED FROM THE REFERENCE TRACK AND ARE TO BE DRILLED ON SITE

DRILLING TYPES

NTS

EFFECTIVE FOOTING DEPTH TABLE

UNLESS NOTED OTHERWISE ON STRUCTURE DIAGRAM, EFFECTIVE FOOTING DEPTH SHOULD BE DETERMINED ACCORDING TO THE TYPE OF FOUNDING MATERIAL ENCOUNTERED ON SITE, IN CONJUNCTION WITH THE TABLE BELOW. THE APPROPRIATE PARAMETERS USE SHALL BE CONFIRMED ON SITE BY A QUALIFIED GEOTECHNICAL ENGINEER. FOR SITE CONDITIONS NOT COVERED BELOW REFER TO PRINCIPAL DESIGN ENGINEER. EFFECTIVE FOOTING DEPTH DOES NOT INCLUDE PEDESTAL OR, IN THE CASE OF SLOPING GROUND, THE TOP PORTION OF THE PILE FOOTING.

FOUNDATION MATERIAL	SOIL/ROCK PARAMETERS	EFFECTIVE FOOTING DEPTH OR MIN ROCK EMBEDMENT LENGTH (mm)	
		PP2 MAST	PP3 MAST
CLAY - FIRM	Cu = 50kPa	2 700	3 200
CLAY - STIFF	Cu = 75kPa	2 300	2 800
SAND - LOOSE TO MEDIUM DENSE	Φ = 30°	2 500	2 900
SAND - MEDIUM DENSE TO DENSE	Φ = 35°	2 300	2 700
SHALE - CLASS V	ALLOW END BEARING PRESSURE = 700kPa ALLOW SIDE BEARING PRESSURE = 350kPa	1 500	1 800
SANDSTONE - CLASS V	ALLOW END BEARING PRESSURE = 900kPa ALLOW SIDE BEARING PRESSURE = 450kPa	1 300	1 600

NOTES

GENERAL

1. DIMENSIONS SHALL NOT BE SCALED FROM THIS DRAWING.
2. UNO = UNLESS NOTED OTHERWISE ON THIS DRAWING.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE RELEVANT STRUCTURE DIAGRAM DRAWINGS.

STEELWORK

1. ALL STRUCTURAL STEELWORK SHALL COMPLY WITH AS 4100.
2. ALL ROLLED STEEL SECTIONS SHALL COMPLY WITH AS 3679 GRADE 300.
3. ALL IMPORTED STEEL SHALL HAVE NATA CERTIFIED TESTING TO VERIFY COMPLIANCE WITH AS 3679 FOR CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES.
4. ALL HOLES SHALL BE DRILLED 22 DIA FOR M20 8.8/S BOLTS UNO.

BOLTING

1. ALL STRUCTURAL BOLTS AND NUTS SHALL BE M20 CLASS 8.8/S TO AS 1252 AND NUTS SHALL BE CLASS 10 TO AS 1252 UNO.
2. PROVIDE HD GALVANIZED SPRING WASHERS UNDER 8.8/S NUTS.

GALVANIZING

1. ALL STEELWORK SHALL BE HOT DIP GALVANIZED TO AS/NZS 4680.
2. ALL BOLTS, NUTS & WASHERS SHALL BE GALVANIZED TO AS 1214.
3. ALL VENT HOLES FOR GALVANIZING SHALL BE DRILLED.

CONCRETE

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3600.
2. CONCRETE: f'c = 40MPa
3. EXPOSURE CLASSIFICATION: B2
4. MAXIMUM AGGREGATE SIZE: 20mm
5. MAXIMUM SLUMP: 80mm.
6. CLEAR COVER TO REINFORCEMENT: 60mm
7. CHAMFERS: 30mm x 30mm ON ALL CORNERS, UNO.
8. PRIOR TO LOADING OF STRUCTURE THE FOOTING SHALL HAVE REACHED A MINIMUM STRENGTH OF 20MPa.

REINFORCEMENT

1. ALL REINFORCEMENT BARS SHALL BE IN ACCORDANCE WITH AS/NZS 4671, WHERE ALL BARS, INCLUDING WELDED MESH, ARE GRADE 500 DEFORMED RIBBED BARS, UNO
2. DESIGNATION OF REINFORCING BARS : 10/S1 N24-200 EF
   - No OF BARS
   - BAR SHAPE NOTATION
   - DUCTILITY CLASS AND DIA
   - SPACING OF BARS
   - LOCATION COMMENT
3. COGS AND HOOKS SHALL BE IN ACCORDANCE WITH AS 3600.
4. ALL PIN DIAMETERS SHALL BE 4 TIMES THE BAR DIAMETER (4D).
5. BAR SHAPES ARE IN ACCORDANCE WITH AS/NZS 1100.501.

EXCAVATION

1. FOOTING EXCAVATIONS SHALL BE SHORED, AS REQUIRED, BACKFILLED AND COMPACTED ON COMPLETION TO ENSURE SUPPORT OF ADJACENT STRUCTURES AND TRACK AND PREVENT LOSS OF BALLAST PROFILE AT ALL TIMES.
2. WHERE NECESSARY PERMANENT RETAINING STRUCTURES SHALL BE PROVIDED TO RESTORE CUTTING PROFILE AND PROTECT BASEPLATE FROM LOOSE MATERIAL.

WARNING SCANNED IMAGE

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Phone: 8922 1401
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AMD	REFERENCE	DESCRIPTION	VERIFIED SIGN./DATE	APPROVED SIGN./DATE

NSW Transport RailCorp
ENGINEERING & PROJECTS GROUP
Professional Services Division
CIVIL DESIGN

DRAWN T.Watson
DESIGNED
DRG CHECK Paul Horan
DESIGN CHECK Paul Horan
APPROVED 24.11.10

NSW Transport RailCorp Design accepted for use by RailCorp 25/11/10

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OVERHEAD WIRING STRUCTURES

ELECTRIFIED LINES

PP2 MAST AND PP3 MAST STEELWORK AND FOOTING

MISCELLANEOUS DETAILS ©

FILE No.	SHEET 1 OF 1	A1
STATUS: FOR CONSTRUCTION		
	CV 0373001	A

DF 801+554

File Plotted N:\Groups\Civ_des\Online\OHWS Drgs\pp2 mast and pp3 mast steelwork and footing.dgn
Plot Date & Time 22-NOV-2010 15:18
Plotted by TWATSON