



NOTES:

- REFER TO DRG. No. SE-101 FOR GENERAL NOTES.
- PERMANENT STEEL PILE CASING SHALL EXTEND TO DEPTH WHERE MANGAHEIA SANDSTONE IS STABLE UNCASED AND TO GIVE ADEQUATE SEAL TO ALLOW FOR DEWATERING.
- PERMANENT STEEL CASING SHALL BE GRADE 250MPa. ALL CASING WELDS AND JOINTS SHALL BE CAPABLE OF DEVELOPING THE FULL STRENGTH OF THE CASING.
- THIS DRAWING SHOWS THE MINIMUM CASING THICKNESS AND GRADE FOR THE PERMANENT WORKS. CONSTRUCTION LOAD CASE EFFECTS SHALL BE CONSIDERED BY THE CONTRACTOR. IF CASING THICKNESS OR GRADE IS REVISED TO SUIT CONSTRUCTION REQUIREMENTS, THE CONTRACTOR SHALL SEEK APPROVAL FROM THE ENGINEER PRIOR TO INSTALLATION.
- EXISTING REVETMENT ARMOUR ROCK MAY BE ENCOUNTERED AT ANY WHARF PILE LOCATION.
- SPLICING OF ADJACENT LENGTHS OF SPIRAL SHALL BE EITHER BY PROVIDING 135° STIRRUP HOOKS OR BY WELDED LAP SPLICES. REFER TO GENERAL NOTES DRAWING FOR ANCHORAGE REQUIREMENTS FOR SPIRAL.
- COVER TO PILE REINFORCEMENT SHALL BE 70mm MINIMUM.
- ALL PILE REINFORCEMENT IS TO BE GRADE 500MPa.
- PILE REINFORCEMENT CAGES ARE TO BE SUSPENDED FOR A MINIMUM OF 24 HOURS AFTER PLACEMENT OF CONCRETE. THE CONTRACTOR SHALL MONITOR THE REINFORCEMENT CAGE FOR SIGNS OF COLLAPSE DURING CONCRETING.
- PILE CONCRETE TO BE OVER-POURED AND BROKEN DOWN TO PROVIDE SOUND CONCRETE AT THE UNDERSIDE OF THE DECK OR A SIMILAR METHOD AS APPROVED BY THE ENGINEER.
- NO MORE THAN 50% OF THE TOTAL AREA OF VERTICAL PILE REINFORCEMENT SHALL BE SPLICED AT ANY ONE LOCATION. ADJACENT LAP SPLICES SHALL BE STAGGERED BY THE DEVELOPMENT LENGTH. NO LAPS ARE PERMITTED IN THE FOLLOWING LOCATIONS:
 - WITHIN 5.0m BELOW THE DECK SOFFIT
 - WITHIN +/-4.0m OF THE PERMANENT STEEL CASING TOE LEVEL
- GROUND AND STRATA LEVELS INCLUDING THE TOP OF COMPETENT MANGAHEIA SANDSTONE ARE ESTIMATES INFERRED FROM AVAILABLE BOREHOLE INFORMATION. NOMINATED PILE AND CASING LENGTHS ARE ESTIMATES AND SHALL BE CONFIRMED BY THE CONTRACTOR ONSITE BASED ON ENCOUNTERED CONDITIONS.
- TOP OF MANGAHEIA SANDSTONE LEVELS ON ALL PILES SHALL BE INSPECTED AND APPROVED BY ENGINEER PRIOR TO CONCRETING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE REQUIREMENTS FOR PROOF BORES.
- VIDEO CONFIRMATION OF THE FIRST 6 PILES AND EVERY SUBSEQUENT 5TH PILE IS TO BE CARRIED OUT BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATION.

INSTALLATION METHOD:

- INSTALL PERMANENT STEEL CASING TO THE NOMINATED TOE LEVEL.
- BORE THROUGH THE PERMANENT STEEL CASING TO THE NOMINATED PILE FOUNDING LEVEL. THE CONTRACTOR SHALL INFORM THE ENGINEER WHERE THE TOP OF COMPETENT MANGAHEIA SANDSTONE (N>50) VARIES BY MORE THAN +/-1.0m OF THE TABULATED LEVELS. THE CONTRACTOR SHALL SEEK APPROVAL FROM THE ENGINEER OF ANY MODIFICATIONS TO PILE LEVELS, LENGTHS AND ANY CHANGES REQUIRED TO PILE REINFORCEMENT PRIOR TO PROCEEDING.
- PILE SOCKET TO BE DELIBERATELY ROUGHENED TO AN AVERAGE 10-15mm OVER THE PILE SOCKET LENGTH. REFER TO THE PROJECT SPECIFICATION FOR INSPECTION REQUIREMENTS. THE PILE SOCKET SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO ANY CONCRETE POURS.
- INSTALL PILE REINFORCEMENT CAGE AND CONCRETE INFILL WITHIN THE PERMANENT STEEL CASING.

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Beca

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Reduced Scale (A3)	Design Check	S.LEE	14.07.16	Date
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* Refer to Revision 1 for Original Signature

Client:
NAPIER PORT

Project:
6 WHARF DEVELOPMENT

Title:
PILE DETAILS SHEET 1

RESOURCE CONSENT
NOT FOR CONSTRUCTION

Discipline	STRUCTURAL
Drawing No.	3124410-SE-123
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