GENERAL

- G1. DIMENSIONS ARE IN MILL IMETERS.
- G2. STATIONS AND REDUCED LEVELS A
- G3. REDUCED LEVELS ARE RELATED TO
- - DENOTES EXPANSION BEARIL
 - DENOTES FIXED BEARING
 - DENOTES RESTRAINED BEAR SOP DENOTES SETTING OUT POIN

 - DENOTES LENGTH VARIES. EJ DENOTES EXPANSION JOINT
 - CJ DENOTES CONSTRUCTION IC
 - DENOTES BARRIER JOINT. BJ
 - ARR ALTERNATE BARS REVERSED

 - ABS ALTERNATIVE BARS STAGGE
 - STAGGERED LAPS.
- NSOP NOTSHOWN ON PLAN
- NCE NO CHAMFER OR FILLET
- HFL HIGH FLOOD LEVEL.
- NWL NORMAL WATER LEVEL G5. INFORMATION OF EXISTING SERVICES AND UTILITIES SHOWN ARE BASED ON SURVEY DATA

UNO UNI ESS NOTED OTHERWISE.

MISSING INFORMATION SHOULD BE VERIFIED BEFORE WORK COMMENCES ON SITE G6. OPTIONAL CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL DESIGN REPRESENTATIVE FOR APPROVAL.

AVAILABLE AT TIME OF DESIGN AS SUCH THE ACCURACY AND EXISTENCE OF OTHER

Central Darling Shire Council

D02/2022-PAN-200600¶

Section-4.16-(1)-(a)-of-the-¶

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REINFORCEMENT - ABUTMENTS. PIERS. FOOTINGS & SUPERSTRUCTURES

- R1. NOMINAL COVER TO REINFORCEMENT NEAREST TO THE CONCRETE SURFACE SHALL BE IN ACCORDANCE WITH TABLE 2 UNO.
- R2. UNLESS NOTED OTHERWISE ON THE DRAWINGS, LAPS ON ADJACENT BARS ON ANY FACE SHALL BE STAGGERED BY NO LESS THAN THE LAP LENGTH
- R3. UNLESS OTHERWISE SPECIFIED, THE MINIMUM DEVELOPMENT LENGTHS AND LENGHTS OF LAPS SHALL BE AS GIVEN IN TABLE 1 BELOW.

TABLE 1

BAR SIZE	N12	N16	N20	N24	N28	N32	N36
HORIZONTAL BARS WITH >300mm OF CONCRETE CAST BELOW THE BAR	400	650	750	900	1150	1500	1750
OTHER BARS	300	500	600	700	900	1200	1400

- R4. WHERE MORE THAN 50% OF BARS ARE LAPPED IN ANY ONE CROSS SECTION ON ANY FACE, THE LAPS SHOWN IN THE TABLE ABOVE SHALL BE INCREASE BY A FACTOR OF 1.3.
- R5. REINFORCEMENT MAY BE DISPLACED SLIGHTLY WHERE NECESSARY TO CLEAR STEEL DOWELS, ANCHOR BOLTS, DRAINAGE PIPES, FORMED HOLES AND RECESSES.
- R6. MECHANICAL COUPLERS SHALL BE CAPABLE OF DEVELOPING A STRESS IN TENSION OR COMPRESSION OF NO LESS THAN 1 1fsv. AS APPROPRIATE TO THE WEAKER BAR AT THE SPLICE. THE COUPLER SHALL BE SUBMITTED TO THE SITE SUPERINTENDENT FOR
- R7. WHERE HELICAL REINFORCEMENT IS SHOWN: THE HELIX SHALL BE ANCHORED AT ITS ENDS BY ONE AND ONE HALF EXTRA TURNS OF THE HELIX AT 50mm PITCH, IT MAY BE SPLICED WITHIN ITS LENGTH FITHER BY WELDING OR BY MECHANICAL MEANS
- R8. WHERE PRACTICABLE BARS ARE NUMBERED STARTING WITH '1' AS THE FIRST BAR PLACED. AT THE BOTTOM OF EACH STRUCTURAL FLEMENT
- R10. FOR REINFORCEMENT BAR SHAPES REFER TO STANDARD BAR SHAPES DRAWINGS.

CONCRETE - ABUTMENTS. PIERS. FOOTINGS & SUPERSTRUCTURES

- C1. ALL CONCRETE SHALL BE CONSTRUCTED IN ACCORDANCE WITH RTA SPECIFICATION B80.
- C2 FDGES SHALL BE CHAMFERED 20x20 AND REENTRANT ANGLES FILLETED 20x20 LINLESS SPECIFIED OTHERWISE.
- C3. GAP BETWEEN PLANK/GIRDER TOP FLANGES SHALL BE FILLED WITH SEALANT COMPRESSIVE BACKING ROD OR PROPRIETARY SEAL.
- C4. BLINDING AND MASS CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH EQUAL TO THE STRUCTURAL MEMBER.
- C5. MINIMUM THICKNESS OF BLINDING SHALL BE 50mm UNLESS NOTED OTHERWISE.
- C6. MINIMUM COMPRESSIVE STRENGTH OF MORTAR AT 28 DAYS TO BE 40MPa UNO.

TABLE 2 - CONSTRUCTION REQUIREMENTS

		CONCRETE S	NOMINAL COVER	
CONCRETE ELEMENT	LOCATION	EXPOSURE CATEGORY	CONCRETE f*c MPa	TO NEAREST REINFORCEMENT mm
SUPERSTRUCTURE	DECK SLAB	А	40	30 – BOTTOM
	PRECAST PLANKS	А	50	35 – TYPICAL UND
SUBSTRUCTURE	ABUTMENT	B1	40	40 – TYPICAL UND
	PIER HEADSTOCK	B1	40	40 – TYPICAL UND
	PSC PILES	B1	40	70 – TYPICAL UND
MISCELLANEOUS	TRAFFIC BARRIER	А	50	55 – STITCH BEAM
	APPROACH SLABS	B1	40	40-TYPICAL UND
	WING WALL	B1	40	40 – TYPICAL UND

PRECAST CONCRETE FOR STRUCTURES OTHER THAN PSC **GIRDERS & PLANKS**

- PC1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS5100 AND THE RTA SPECIFICATION B115
- PC2. DIMENSIONS SHOWN ARE FINAL STRUCTURAL SIZES AND ADDITIONAL CONCRETE MUST BE PROVIDED TO ALLOW FOR LOSS OF STRUCTURAL THICKNESS DUE TO THE USE OF RETARDING AGENTS AND SURFACE TREATMENT.
- PC3 PANEL STRUCTURAL THICKNESS SHALL BE AS NOTED.
- PC4. ALL METAL WORK AND CAST-IN FIXING SHALL BE HOT DIP GALVANISED IN ACCORDANCE WITH AS1650 UND. TOP SURFACE LIFTING FERRULES LEFT FINALLY EXPOSED SHALL BE
- PC5. ALL CAST-IN FERRULES SHOWN ON THE DRAWINGS ARE TO REMAIN SEALED UNTIL THE ERECTION OF THE UNIT, THEY ARE NOT TO BE USED FOR LIFTING PURPOSES.
- PC6. NO INSERTS SHALL BE 'SHOT' |FIRED| OR DRILLED INTO THE UNITS WITHOUT APPROVAL BE TH FNGINFER.
- PC7. FABRIC IN PANELS SHALL BE OF ONE SHEET NO LAPPING IS PERMITTED UNLESS SHOWN ON STRUCTURAL DRAWINGS.
- PC8. PENETRATIONS FOR SERVICES SHALL BE NEAT FORMED HOLES. HOLE BORING THROUGH PANELS WILL NOT BE PERMETTED.
- PC9. TEMPORARY STEEL PACKERS TO BE USED FOR LEVELLING MAY BE LEFT PERMANENTLY PROVIDED THEY HAVE A MINIMUM OF 50mm GROUT COVER AND ENSURE BEARING PRESSURE LESS THAN 7MPa.
- PC10. ALL SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL DESIGN REPRESENTATIVE FOR APPROVAL BEFORE FABRICATION COMMENCES. SHOP DRAWINGS SHALL SHOW ALL CAST-IN INSERTS.
- PC11. EXTRA REINFORCEMENT TO THE PRECAST UNITS, SHALL BE ADDED WHERE REQUIRED BY THE LIFTING METHODS.

- PC12. LIFTING DEVICES/HOOKS SHALL BE DESIGNED BY THE PRECAST MANUFACTURER
- PC13. ALL LIFTING DEVICES/HOOKS SHALL BE CUT BACK TO PROVIDE NOMINAL COVER TO THE CONCRETE SURFACE AND PATCHED WITH A CEMENTIYIOUS MORTAR TO NATCH THE PRECAST UNIT SURFACE.
- PC14. HANDLING PROCEDURES INCLUDING STRIPPING, LIFTING, STACKING, TRANSPORTATION AND ERECTION OF PRECAST LINITS SHALL BE SUPPLIED TO THE ENGINEER FOR APPROVAL STRESSES THROUGHOUT HANDLING SHALL NOT CAUSE CRACKING

GEOTECHNICAL

- G1. PILES SHALL BE CONSTRUCTED IN ACCORDANCE TO RTA SPECIFICATION B59.
- THE DESIGN FOR PILES AND FOOTINGS HAS BEEN UNDERTAKEN BASED ON A SITE EVALUATION FROM DISCRETE TEST BORE HOLE DATA RECORDED. GENERALISED OR IDEALISED SUBSURFACE CONDITIONS INCLUDING THE INDICATED SOIL STRATUM LEVELS SHOWN OMN THE DRAWINGS HAVE BEEN ASSUMED OR PREPARED BY INTERPOLATION/EXTRAPOLATION OF THIS DATA, LOCAL VARIATIONS OR ANOMALIES IN THE GENERALISED GROUND CONDITIONS CAN OCCUR AS SUCH, THESE CONDITIONS ARE AN INTERPRETATION AND MUST BE CONSIDERED AS A GUIDE ONLY.
- G3. WHERE REFERRED TO IN THE DRAWINGS. THE ESTIMATED DEPTH OF ANY FOOTING IPILES, ETCL IS AN ENGINEERING ESTIMATE OF THE DEPTH TO WHICH THEY SHOULD BE CONSTRUCTED. THE DEPTH REMAINS, HOWEVER, AN ESTIMATE AND THEREFORE LIABLE TO VARIATION. VERIFICATION INSPECTION AND MAPPING DURING CONSTRUCTION IS REQUIRED
- G4. ANY CHANGE IN DESIGN, CONSTRUCTION METHOD OR IN GROUND CONDITION AS NOTED DURING CONSTRUCTION, FROM THOSE ASSUMED IN THIS REPORT SHOULD BE REFERRED TO THE GEOTECHNICAL DESIGN REPRESENTATIVE
- BACKFILL MATERIAL TO STRUCTURAL ELEMENTS SHALL BE IN ACCORDANCE WITH RTA SPECIFICATION B30. BACKFILL MATERIAL SHALL BE NON-AGGRESSIVE SUCH THAT THE LOCAL ENVIRONMENT DOES NOT EXCEED AN EXPOSURE CLASSIFICATION OF B1 IN ACCORDANCE WITH AS5100.4.

STEELWORK - MINOR STEEL ITEMS

- SS1. STEEL PLATES SHALL BE GRADE 250 TO AS/NZS 3678 U.N.D
- SS2, STEEL SECTIONS SHALL BE GRADE 300 TO AS/NZS 3679.1 U.N.D.
- SS3. STEEL DOWELS SHALL BE GRADE 250R TO AS4671 U.N.D.
- SS4. RECTANGULAR AND SQUARE HOLLOW SECTIONS SHALL BE GRADE C350L0 TO AS 1163 U.N.D.
- SS5. BOLTING CATEGOR FOR HIGH-STRENGTH STEEL BOLTS SHALL BE 8.8/S IN ACCORDANCE
- SS6. ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF AS/NZS1554.1 WITH ADDITIONAL REQUIREMENTS AS GIVEN IN ALLIANCE SPECIFICATION B204. THE WELD CATEGORY SHALL BE SP IN ACCORDANCE WITH AS/NZS 1554.1.
- SS7. WELDING SYMBOLS COMPLY WITH AS 1101 PART 3.
- SS8, EDGES TO BE PROTECTIVE TREATED SHALL BE ROUNDED TO A RAIDUS OF 1.5mm UNLESS SPECIFIED OTHERWISE.
- SS9. ALL COMPONENTS EXCEPTS STAINLESS STEEL ITEMS SHALL BE HOT-DIP GALVANISED
- SS10. DAMAGED GALVANISED SURFACES SHALL BE RENOVATED WITH A TWO PACK ORGANIC ZINC-RICH PRIMER IN ACCORDANCE WITH RTA SPECIFICATION B220.
- SS11. BOLTS, NUTS AND WASHERS SHALL BE HOT-DIP GALVANISED IN ACCORDANCE WITH RTA SPECIFICATION B240
- SS12. EXPOSED BUTT WELDS SHALL BE GROUND FLUSH.
- SS13. THE LONGITUDINAL SEAM IN RHS SECTIONS SHALL BE ON THE UNDERSIDE OF HORIZONTAL SECTIONS AND INSIDE OF VERTICAL SECTIONS.

SEALANT JOINTS

- SJ1. SEALANT SHALL CONFORM TO RTA SPECIFICATION B312.
- SJ2. SEALANT IN CONTACT WITH ASPHALT SHALL BE COMPATIBLE WITH ASPHALT.
- SJ3, COLOUR CODED, SELF ADHESIVE PRESSURE SENSITIVE TAPE MADE FROM NON-STICK MATERIAL SUCH AS TEELON OR POLYETHYLENE SHALL BE USED AS BOND BREAKERS.
- SI4. BACKER ROD SHALL BE NON-ABSORBENT CLOSED CELL POLYTHEN OR NEOPRENE IPARBURY'S EXPANDAFOAM BACKER ROD OR APPROVED FOUIVALENT INSTALLED WITH 25% COMPRESSION.
- SJ5. SEALANTS SHALL BE APPLIED BETWEEN 7.00AM AND 11.00AM AT TEMPERATURES NOT LESS THAN 10°C OR NOT MORE THAN 35°C.
- SJ6, JOINT WIDTH AT INSTALLATION SHALL NOT EXCEED THE SPECIFIED WIDTH ± MOVEMENT RANGE SPECIFIED.

BRIDGE OVER TALYAWALKA CREEK AT TINTINALLOGY STATION

NEW BRIDGE:

PROJECT NUMBER: 6283

DESIGN SPEED 10km/h

DESIGN STANDARDS: AS 5100, 1-5 BRIDGE DESIGN

DESIGN LOADING: SM1600

BARRIER PERFORMANCE LEVEL: LOW - FALL FROM HEIGHT PROTECTION ONLY PEDESTRIAN LOADING: 5KPa

REFERENCE DESIGN REPORTS:

GEOTECHNICAL /SOIL INVESTIGATION & DESIGN REPORT BY METALINE ENGINEERING GROUP PROJECT NUMBER 6283.

SURVEY STUDY: GRAHAM HOWE SURVEYING



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MOB: 0484 770 945 A.C.N. 63 7312951 STRUCTURAL COMMERCIAL RESIDENTIAL BUILDING SERVICES PROJECT MANAGEMENT RAIL/ROLLINGSTOCK AUTOMOTIVE

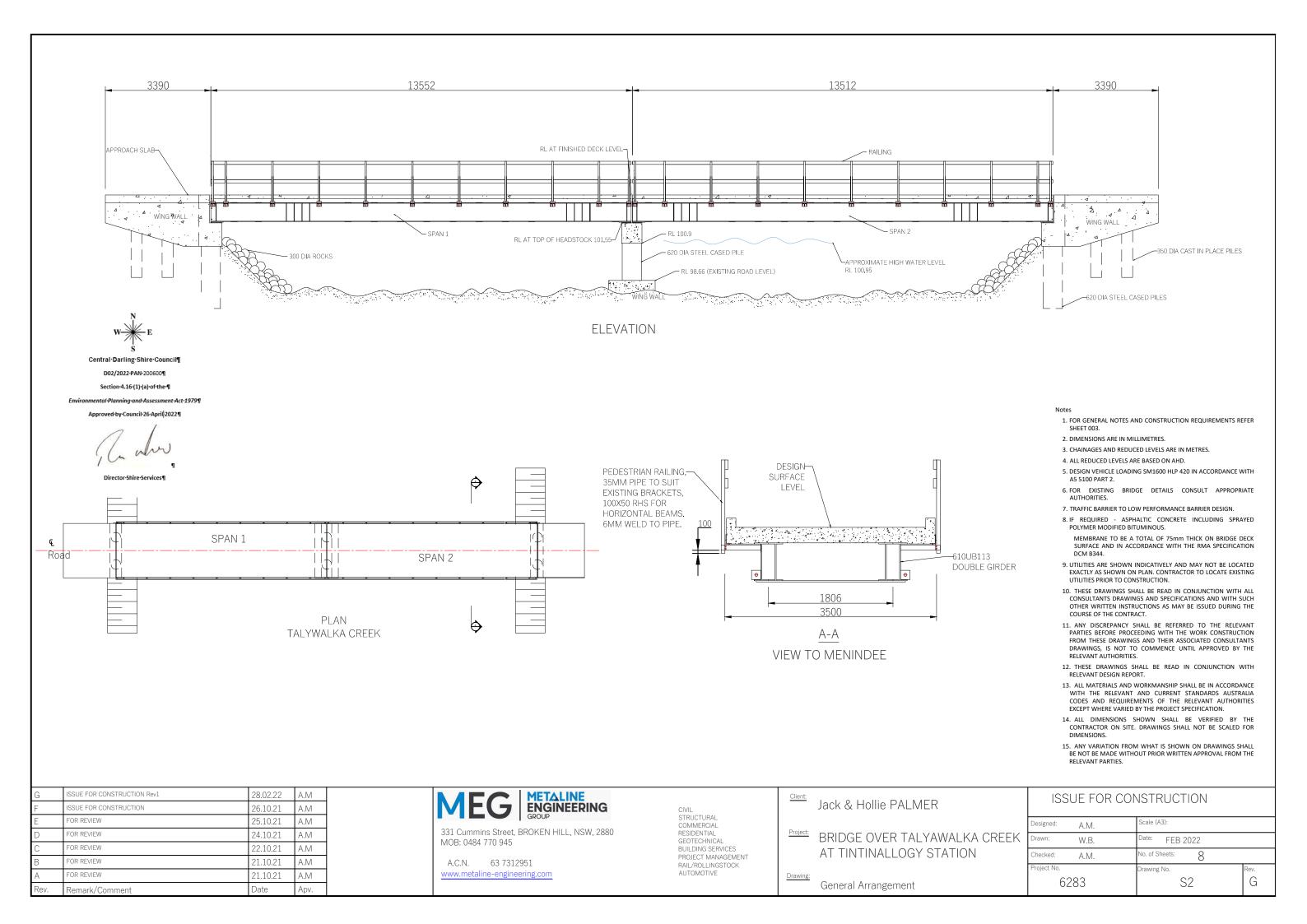
Jack & Hollie PALMER

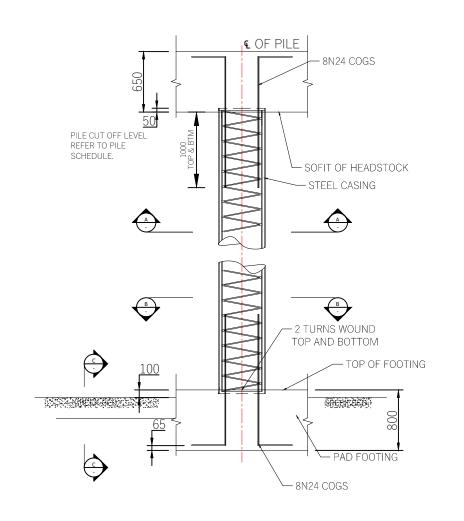
BRIDGE OVER TALYAWALKA CREEK AT TINTINALLOGY STATION

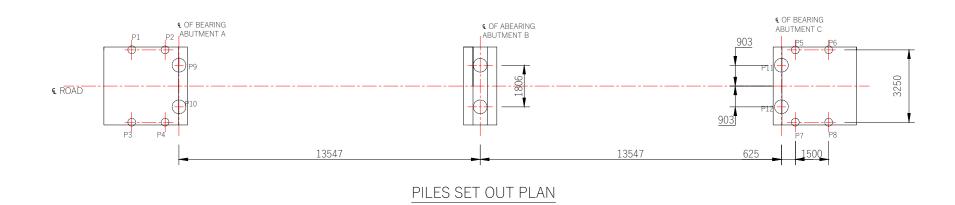
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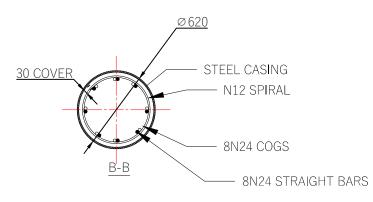
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ISSUE FOR CONSTRUCTION











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- 1. MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 40MPa.
- 2. CONCRETE EXPOSURE CLASSIFICATION A.
- 3. CLEAR COVER TO REINFORCEMENT NEAREST TO THE CONCRETE SHALL BE 75mm.
- 4. LONGITUDINAL BARS AND SPIRALS SHALL BE DEFORMED BARS TO AS/NZ4671 GRADE D500N.
- 5. SPLICING OF SPIRAL SHALL BE WELDED.
- 6. THE WELD CATEGORY FOR ALL OTHER WELDS SHALL BE GP IN ACCORDANCE WITH 1554 PART1.
- 7. CALCULATED ULTIMATE PILE 1000 kN COMPRESSION DESIGN AXIAL LOAD 0 kN TENSION

CALCULATED ULTIMATE PILE

DESIGN MOMENT

- 8. MINIMUM ALLOWABLE END BEARING CAPACITY SHALL BE 1 MPa.
- 9. MINIMUM ULTIMATE END BEARING CAPACITY SHALL BE 4 MPa.
- 10.THE END BEARING CAPACITY OF THE ROCK AT FOUNDING LEVEL SHALL BE VERIFIED BY AN EXPERIENCED GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF CONCRETE.
- 11.LAPS SHALL BE STAGGERED SO THAT NO MORE THAN 50% OF BARS ARE LAPPED IN ANY ONE CROSS
- 12.PILE FOUNDING LEVELS SHALL NOT BE LIFTED WITOUT WRITTEN APPROVAL OF THE DESIGN ENGINEER.
- 13.UNLESS NOTED OTHER WISE, THE MINIMUM DEVELOPMENT LENGTHS AND LENGTHS OF LAPS SHALL BE

BAR SIZE	N12	N16	N20	N24	N28	N32
al HORIZONTAL BARS WITH 300mm OF CONCRETE CAST BELOW THE BAR	375	500	750	950	1250	1575
b OTHER	300	400	600	750	1000	1250

14.PILE CONSTRUCTION TOLERANCE IS 75mm

15.BASE OF DRILLED SHATS SHALL BE CLEANED TO REMOVE DEBRIS PRIOR TO PLACEMENT OF CONCRETE. 16.PILES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE RTA SPECIFICATIONS B59

<u>∅620</u>
30 COVER STEEL CASING
N12 SPIRAL
8N24 COGS
<u>A'-A</u> 8N24 STRAIGHT BARS

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A.C.N. 63 7312951

CIVIL STRUCTURAL COMMERCIAL RESIDENTIAL GEOTECHNICAL RUIL DIME SERVICES
GEOTECHNICAL BUILDING SERVICES PROJECT MANAGEMENT
RAIL/ROLLINGSTOCK AUTOMOTIVE

Client:	Jack & Hollie PALMER
Project:	

Project: BRIDGE OVER TALYAWALKA CREEK AT TINTINALLOGY STATION

yout and	Deta
	yout and

P10	2200	-	-	-	-
P11	2200	-	-	-	-
P12	2200				

PILE SCHEDULE

NORTHING

LEVEL |RL|

LEVEL |RL|

FASTING

LENGTH OF PILI FROM BASE OF ABUTMENT/WIN

1500

1500

1500

1500

1500

1500

1500

1500

2200

PILE No.

P1

P2

P3

P4

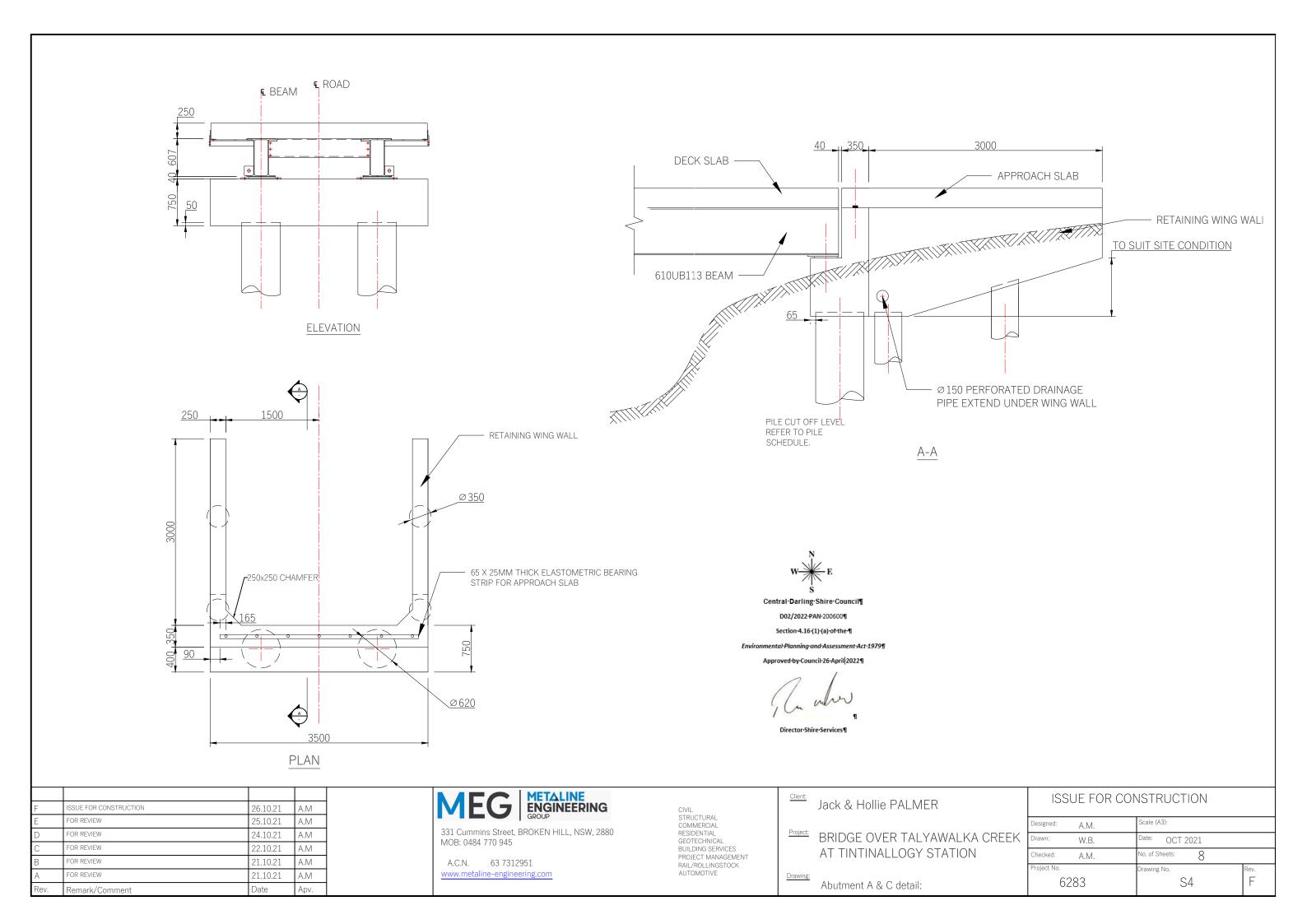
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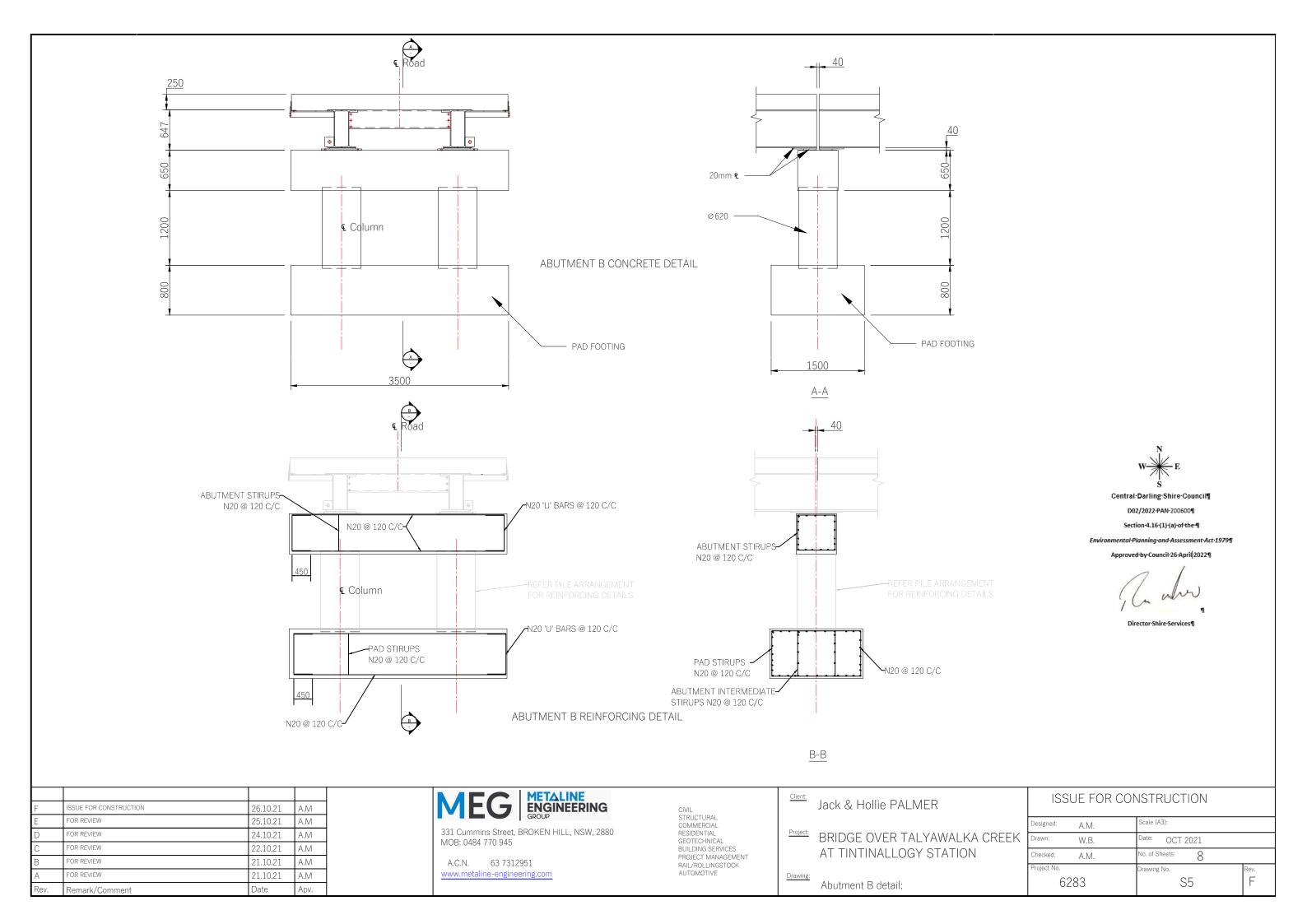
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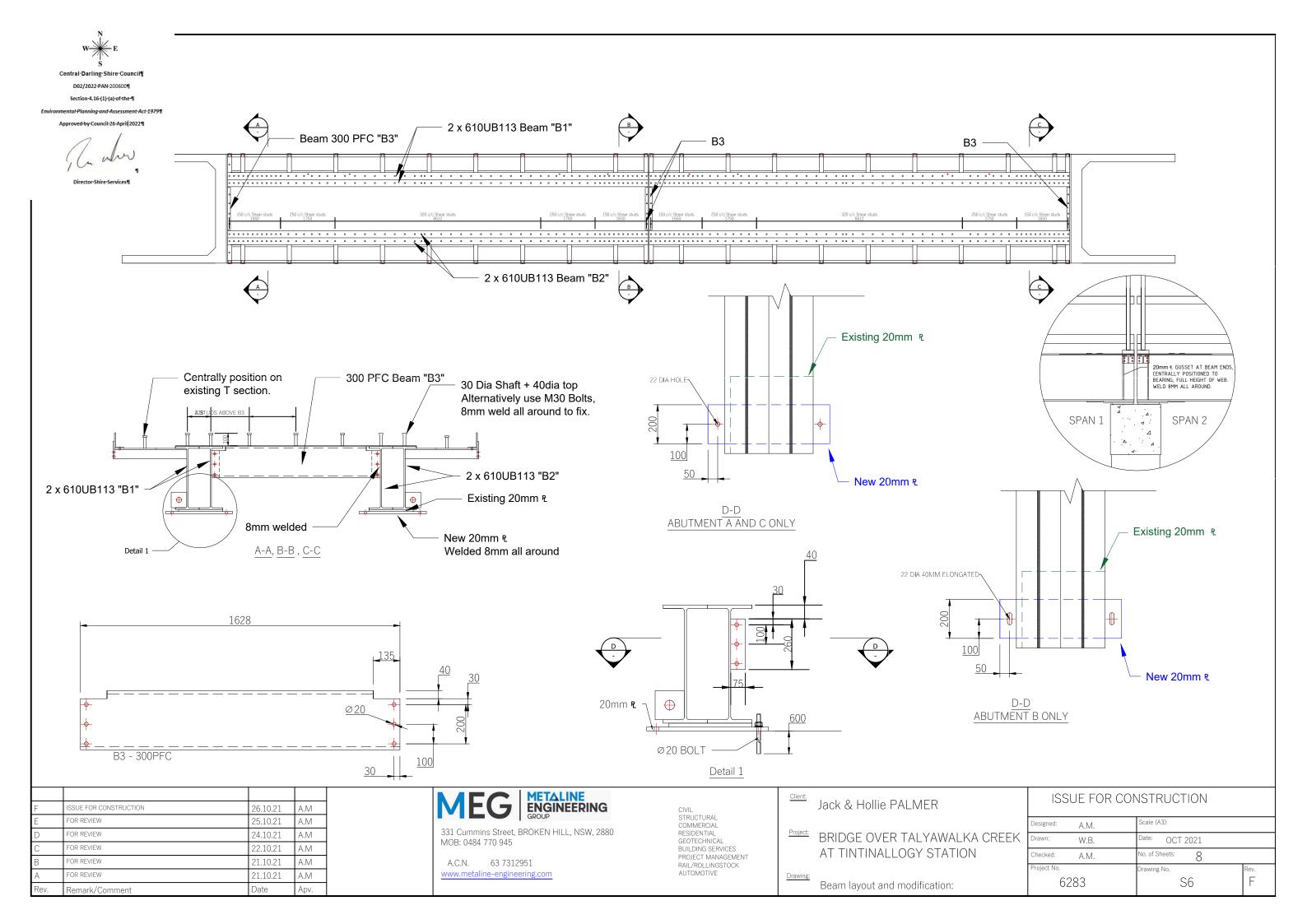
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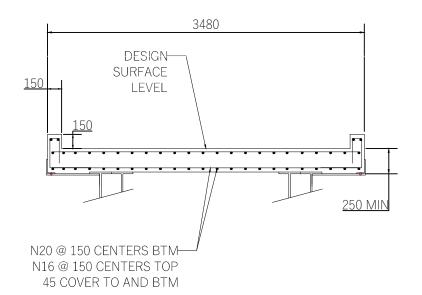
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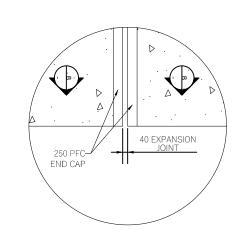
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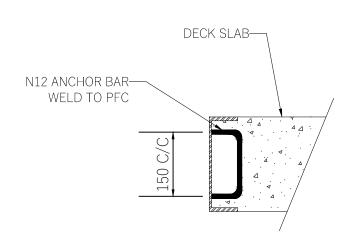
Road

PLAN





DETAIL 1 DECK SLAB TYPICAL END DETAIL



SECTION B-B

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METALINE ENGINEERING GROUP 331 Cummins Street, BROKEN HILL, NSW, 2880 MOB: 0484 770 945

A.C.N. 63 7312951

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GEOTECHNICAL
BUILDING SERVICES
PROJECT MANAGEMENT
RAIL/ROLLINGSTOCK
AUTOMOTIVE

Client:	Jack	8

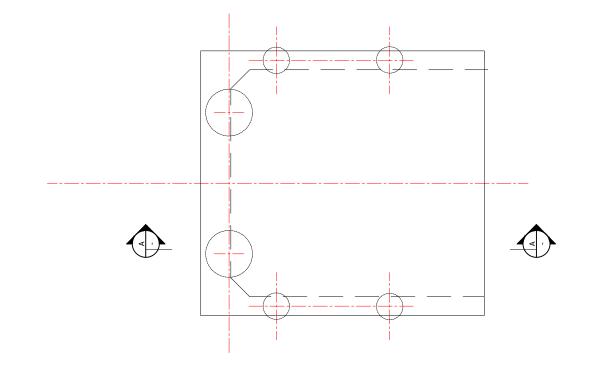
& Hollie PALMER

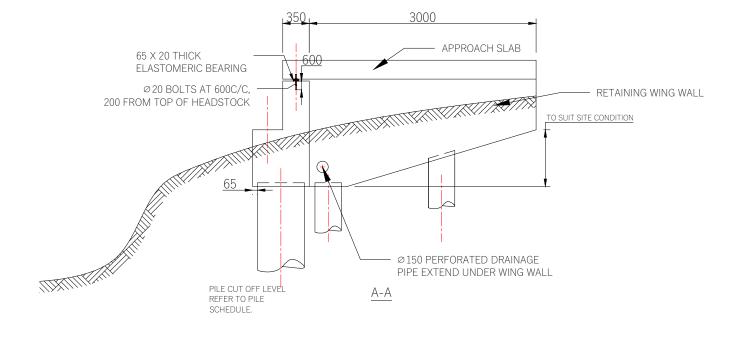
Project: BRIDGE OVER TALYAWALKA CREEK AT TINTINALLOGY STATION

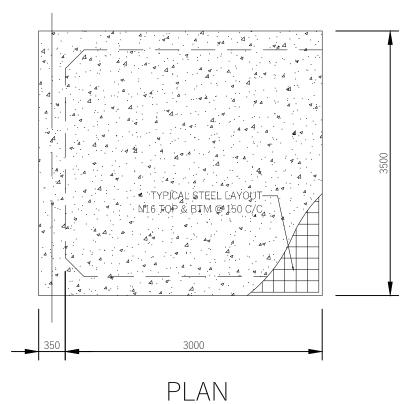
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AUTOMOTIVE

Client:	
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Jack & Hollie PALMER

BRIDGE OVER TALYAWALKA CREEK AT TINTINALLOGY STATION

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Approach slab detail:

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