

NOTES

- ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH CURRENT BRISBANE CITY COUNCIL AND PORT OF BRISBANE STANDARD DRAWINGS AND METHODS (U.N.O.).
- ALL UNITS ARE IN METERS UNO.
- NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE DRAWINGS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT DURING CONSTRUCTION AND SIMILARLY THE FINISHED SURFACE CONTOURS MAY BE ADJUSTED BY WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION.
- THE CONTRACTOR IS TO ASCERTAIN THE EXACT LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE COST OF RECTIFICATION OF ANY DAMAGES TO EXISTING SERVICES WHICH MAY OCCUR.
- SUBGRADE TEST RESULTS TO BE FORWARDED TO SUPERINTENDENT FOR DETERMINATION OF BOX DEPTHS PRIOR TO EXCAVATION. TESTS SHALL INCLUDE SOAKED CBR AND/OR OTHER TESTS AS REQUESTED BY THE SUPERINTENDENT.
- LEVELS AND GRADIENTS AT JUNCTIONS WITH EXISTING WORKS MAY BE VARIED AS APPROVED BY THE SUPERINTENDENT TO ACHIEVE SATISFACTORY CONNECTION TO THE EXISTING WORKS.
- PAVEMENT DESIGN HAS BEEN BASED ON ACHIEVING A SITE CBR VALUE OF 3% IN THE IN SITU SUBGRADE CONDITIONS. SITE CBR VALUE AND PAVEMENT DESIGN AND DEPTHS TO BE VERIFIED WITH CBR TESTS PRIOR TO CONSTRUCTION.
- LOCATION & LEVELS OF ALL EXISTING SERVICES TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- CURING OF PAVEMENT SHALL BE PERFORMED FOR A MINIMUM OF 7 DAYS AFTER POURING. UTILISING AN APPROVED, NON-OIL BASED CURING COMPOUND IN ACCORDANCE WITH AS3799.
- ALL EARTHWORKS SHALL BE IN ACCORDANCE WITH AS3798.
- ALL CONCRETE SHALL BE SUBJECT TO PROJECT CONTROL SAMPLE AND TESTING TO AS3600.

PAVEMENT NOTES

- GEOTECHNICAL TESTING FOR PAVEMENT CONSTRUCTION IS TO BE CARRIED OUT TO CONFIRM SOIL PROPERTIES MEET SUBGRADE STRENGTH REQUIREMENTS DETAILED IN THE HEAVY VEHICLE PAVEMENT DESIGN BASIS ON DRAWING No. 136651. TEST CERTIFICATES ARE TO BE PREPARED BY A REGISTERED N.A.T.A. LABORATORY AT THE CONTRACTORS COST AND SHALL BE PROVIDED TO THE ENGINEER PROGRESSIVELY THROUGH THE WORKS. THE CONTRACTOR IS TO NOTIFY THE ENGINEER OF ANY NON-CONFORMANCES. ALL NON CONFORMING WORK IS TO BE RECTIFIED AS DIRECTED BY THE ENGINEER.
- FULL DEPTH PAVEMENT CONSTRUCTION SHALL EXTEND BEHIND ALL KERB AND KERB AND CHANNEL FOR A DISTANCE OF 150mm FROM THE BACK OF KERB.
- REPAIR ANY DAMAGE TO EXISTING KERB AND CHANNEL, FOOTPATH OR ROADWAY (INCLUDING REMOVAL OF CONCRETE SLURRY FROM FOOTPATHS, ROADS, KERB AND CHANNEL AND STORMWATER GULLIES AND SIDE DRAINS) THAT MAY OCCUR DURING ANY WORKS CARRIED OUT.
- ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH AS3600 CURRENT EDITIONS WITH AMENDMENTS.
- NO 'BRECCIA' TYPE AGGREGATE IS TO BE USED.
- CEMENT TO BE TYPE GP TO AS3972 U.N.O. MAX CONCRETE SHRINKAGE TO BE 750 MICRONS TO AS1012.
- FOR GENERAL BLENDED CEMENT (GB) CONTAINING ORDINARY PORTLAND CEMENT PLUS AT LEAST 5% SUPPLEMENTARY CEMENTITIOUS MATERIALS:
 - SILICA FUME TO BE LESS THAN 10%, OR
 - FLYASH TO BE LESS THAN 25%, OR
 - GROUND GRANULATED BLAST FURNACE SLAG TO BE LESS THAN 40%.
 FOR DOUBLE BLENDED CEMENT TOTAL SUPPLEMENTARY CEMENTITIOUS MATERIAL MUST BE LESS THAN SMALLER OF PERCENTAGES GIVEN ABOVE FOR CONSTITUENTS INCLUDED. FOR TRIPLE BLENDED CEMENT TOTAL SUPPLEMENTARY CEMENTITIOUS MATERIAL MUST BE LESS THAN 40%.
- NO ADMIXTURES ARE TO BE USED WITHOUT THE APPROVAL OF THE ENGINEERS.
- A VIBRATOR IS TO BE USED FOR THE COMPACTION OF ALL CONCRETE.
- ALL CONCRETE PLACEMENT TO UTILISE ALPHALTIC ALCOHOL APPLIED TO THE CONCRETE AFTER THE INITIAL SCREED. CONCRETE SHALL BE CURED IN ACCORDANCE WITH AS3600
- ALL CONCRETE TO BE BROOM FINISHED FOR NON SLIP RESISTANCE AS PER AUSTRALIAN STANDARDS.
- PAVEMENT SUBGRADE TO ACHIEVE THE FOLLOWING MINIMUM COMPACTION VALUES.

LOCATION	COHESIVE	COHESIONLESS
TOP 300 BELOW SUBGRADE LEVEL	98%	80%
BELOW THE TOP 300mm	95%	75%

THE ABOVE VALUES ARE TO BE DETERMINED IN ACCORDANCE WITH AS1289.5.1.1 (STANDARD COMPACTION) FOR COHESIVE SOILS AND AS1289.5.6.1 (STANDARD METHOD) FOR COHESIONLESS SOILS.

- ALL SUB-BASE MATERIALS SHALL BE COMPACTED AT OPTIMUM MOISTURE CONTENT OF (+ OR - 2%) TO ACHIEVE A DRY DENSITY IN ACCORDANCE WITH AS1289.5.2.1 OF NOT LESS THAN THE FOLLOWING

LAYER	MODIFIED DRY DENSITY
SUB-BASE COURSE	95% MODIFIED (AS 1289.5.2.1)

- DESIGN IS BASED UPON THE TOP 1m DEPTH OF SUBGRADE MATERIAL ACHIEVING A MINIMUM EQUIVALENT STRENGTH OF CBR3%. GEOTECHNICAL ENGINEER, ENGAGED AT CONTRACTOR'S EXPENSE, TO CERTIFY THE SUBGRADE STRENGTH IS CBR3%.
- VARIATIONS TO THE DESIGNS SHOWN ARE SUBJECT TO APPROVAL FROM THE PORT OF BRISBANE CORPORATION'S ENGINEERING MANAGER OR DELEGATE.
- KERB TAPER TREATMENTS ARE TO BE USED ON ALL STANDARD CROSSINGS. THE 600MM KERB TAPER TREATMENTS ARE TO BE ADDED TO THE EXTENT OF CROSSOVERS SHOWN ON LAYOUT DETAILS.

MINIMUM CONCRETE REQUIREMENTS

CONCRETE TABLE					
ELEMENT	EXP. CLASS	CLASS & GRADE (CONCRETE)	CLEAR COVER TO REINF'T (mm)	MAX AGG. SIZE (mm)	MAX SLUMP (mm)
SLAB ON GROUND					
- EXTERNAL	B2	N40	45	20	100

FOR CONSTRUCTION

REV.	DESCRIPTION	INIT.	APP.	DATE
D	FOR CONSTRUCTION	DS	BL	23.09.19
C	APPROVAL ISSUE	DS	BL	19.09.19
B	FINAL PRELIMINARY ISSUE	DS	BL	16.05.19
A	PRELIMINARY ISSUE	DS	BL	26.04.19

REINFORCEMENT:

- SYMBOLS ON DRAWINGS FOR GRADE AND TYPE OF REINFORCEMENT ARE AS FOLLOWS:
 - R.1.1. R: DENOTES STRUCTURAL GRADE 250 PLAIN ROUND BAR TO AS4671
 - R.1.2. N: DENOTES HOT ROLLED GRADE 500 DEFORMED BAR DUCTILITY CLASS N TO AS4671
 - R.1.3. L: DENOTES HARD DRAWN WIRE GRADE 500 SQUARE REINFORCING MESH DUCTILITY CLASS L TO AS4671
 - R.1.4. RL: DENOTES HARD DRAWN WIRE GRADE 500 RECTANGULAR REINFORCING MESH DUCTILITY CLASS L TO AS4671
- ALL N BARS TO BE GRADE 500.
- FOLLOWING ABBREVIATIONS APPLY TO LOCATION OF REINFORCEMENT:

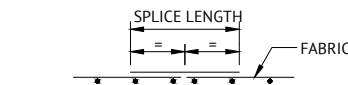
EW: EACH WAY	FF: FAR FACE	BB: BOTTOM BOTTOM (LAID FIRST)
EF: EACH FACE	B: BOTTOM	TT: TOP TOP (LAID LAST)
NF: NEAR FACE	T: TOP	CP: CENTRALLY PLACED
- CLEAR COVER TO REINFORCEMENT SHALL BE PROVIDED BY COMPLIANT CHAIRS, SPACERS OR TIES AS REQUIRED TO PROVIDE ADEQUATE SUPPORT IN ACCORDANCE WITH AS3600 AND AS FOLLOWS:
 - R.4.1. BARS 16mm AND LESS AND FABRIC - 1000mm CENTRES
- USE MESH SUPPLIED IN FLAT SHEETS UNLESS APPROVED OTHERWISE.
- WELDING AND BENDING OF REINFORCEMENT IS NOT PERMITTED UNLESS SHOWN ON THE DRAWINGS OR APPROVED BY AN RPEQ ENGINEER.
- ALL REINFORCEMENT LAPS AS PER REINFORCEMENT LAP TABLE.

REINFORCEMENT NOMINATIONS:

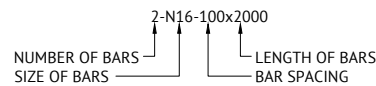
- EXTENT OF BARS SHOWN THUS:



- SPLICE REINFORCEMENT ONLY AT LOCATIONS SHOWN ON DRAWINGS OR AS APPROVED BY SUPERINTENDENT. LAP LENGTHS TO COMPLY WITH AS3600, OR FOR SLAB AND WALL REINFORCEMENT WITH BARS AT > 150mm CENTRES WITH THE FOLLOWING UNO:



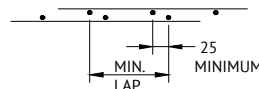
- NOMINATION CALL OUT DESCRIPTION:



- LAP LENGTHS TO COMPLY WITH AS3600, OR FOR SLAB AND WALL REINFORCEMENT WITH BARS AT > 150MM CENTRES WITH THE FOLLOWING UNO: REFER TO TABLE BELOW:

REINFORCEMENT LAP TABLE						
LOCATION	f _c	BAR SIZE AND LAP LENGTH (mm)				
		N12	N16	N20	N24	N28
HORIZONTAL BARS WITH ≤ 300mm CONCRETE BELOW	40+	450	625	775	1050	1250

- PROVIDE MINIMUM MESH LAPS TO CROSS WIRES OF REINFORCING MESH, SO THAT TWO OUTERMOST WIRES OF ONE SHEET OVERLAP TWO OUTERMOST WIRES OF ADJACENT SHEET BY AT LEAST 25mm, THUS:



INSPECTION AND CERTIFICATION REQUIREMENTS:

- FOR FINAL ENGINEERING CERTIFICATION TO BE PROVIDED BY AN RPEQ ENGINEER, ALL THE APPLICABLE STRUCTURAL ELEMENTS SHALL BE INSPECTED BY AN RPEQ ENGINEER. TYPICAL HOLD POINTS:
 - a - FOOTINGS AND SLABS ON GROUND
 ALL CONCRETE ELEMENTS MUST BE INSPECTED AFTER PLACEMENT OF REINFORCEMENT AND PRIOR TO CONCRETE POUR.
- ALL HOLD POINT INSPECTIONS TO BE CONDUCTED BY THE CLIENTS REPRESENTATIVE.
- IF IN DOUBT OF REQUIREMENT OF INSPECTION, REQUEST CLARIFICATION FROM AN RPEQ ENGINEER.
- OBTAIN GEOTECHNICAL ENGINEERS'S WRITTEN INSTRUCTION AT PREPARATION OF FOUNDING MATERIAL AND FORWARD TO STRUCTURAL ENGINEER FOR APPROVAL, AT BUILDER'S COST.



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HORIZ DATUM	FIG	VERT DATUM	PORT
Based on		Based on	
PREPARED by D. SADEK	Date: 23.09.19	CHECKED by K. KOLARSKI	Date: 23.09.19
APPROVED by B. LANCINI	Date: 23.09.19	RPEQ No: 16031	

PROJECT: STANDARD VEHICLE CROSSING DETAILS
 LOCATION: PORT OF BRISBANE
 SHEET TITLE: STRUCTURAL NOTES
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