

FOR PLAN SECTION LOCATION DRAWING REFER  
TO DRAWING: C011




P1	DA ISSUE	16.01.18	DB	-
Rev	Description	Date	By	App

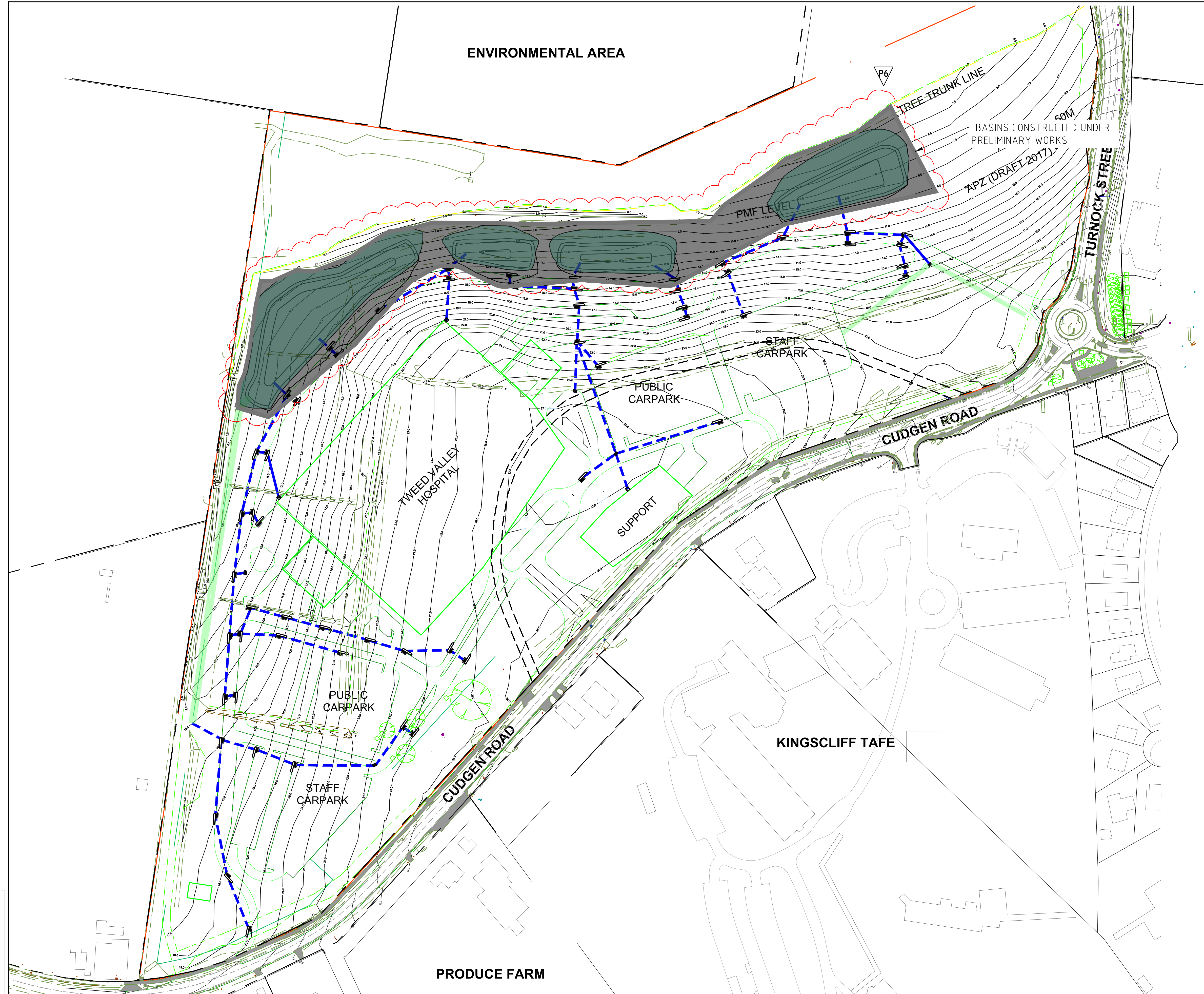
Rev	Description	Date	By	App	



Project Name	TWEED VALLEY HOSPITAL PRELIMINARY CIVIL WORKS
Drawing Title	BULK EARTH WORKS SECTIONS SHEET 4

CONSTRUCTION			
Designed	C.G.S.	Project Director Approved	Date 
Drawn	C.G.S.		
Scale	1:1000		
Date	16.01.19	Project Ref	Drawing No
Sheet	A1	20 10748 01	C023 P1





LEGEND

- SITE BOUNDARY
- SEDIMENT FENCE
- BIO RETENTION SWALE
- RETENTION BASINS
- JUNCTION PIT
- STORMWATER DRAINAGE LINE
- Ex S EXISTING SEWER
- Ex OH EXISTING OVERHEAD LINES
- Ex T EXISTING TELSTRA
- Ex SW EXISTING STORMWATER
- Ex W EXISTING WATER

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P5	DA ISSUE	16.01.18	DB	-
P4	ISSUED FOR EARLY AND ENABLING WORKS	16.10.18	PN	-
P3	ISSUED FOR EARLY WORKS DA	04.10.18	PN	-
P2	ISSUED FOR EARLY WORKS DA	06.09.18	PA	-
P1	ISSUED FOR EARLY WORKS DA	03.09.18	PA	-

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P6	RESPONSE TO SUBMISSIONS	22.01.19	DB	-
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Rev	Description	Date	By	App	Rev	Description	Date	By	App
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25 0 10 20 30 40 50m  
PLAN SCALE 1:1250 A1 SHEET

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Project Name  
**TWEED VALLEY HOSPITAL  
DEVELOPMENT, CUDGEN  
STAGE 1 EARLY WORKS**

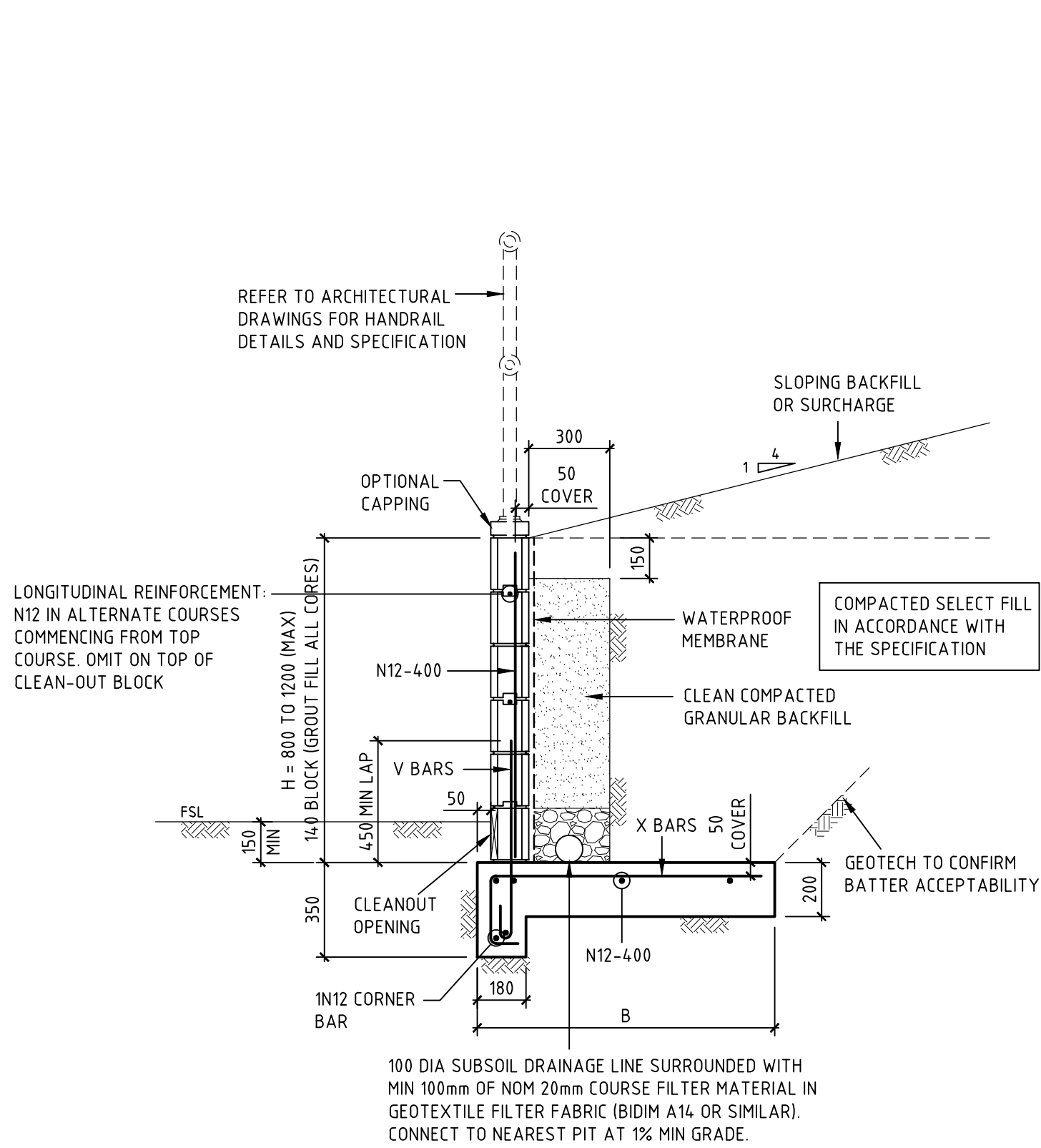
Drawing Title  
**CONCEPT STORMWATER  
MANAGEMENT PLAN**

DEVELOPMENT APPLICATION

Designed	PA	Project Director Approved	Date	North
Drawn	PA			
Scale	1:1250	Project Ref	Drawing No	Rev
Date	03.09.18	20 10748 01	C030	P6
Sheet	A1			



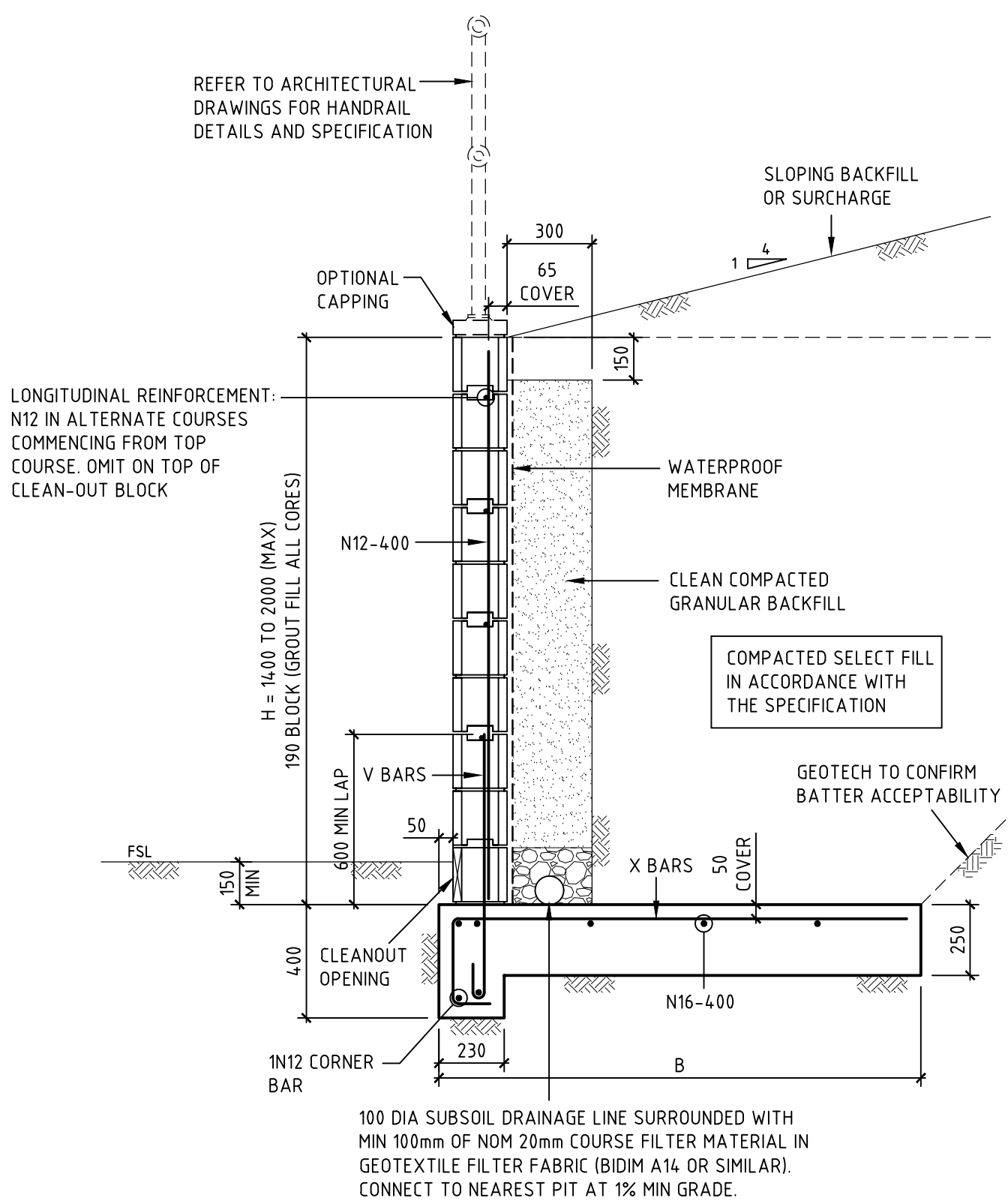
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BLOCK RETAINING WALL (MAX 1200 HIGH)

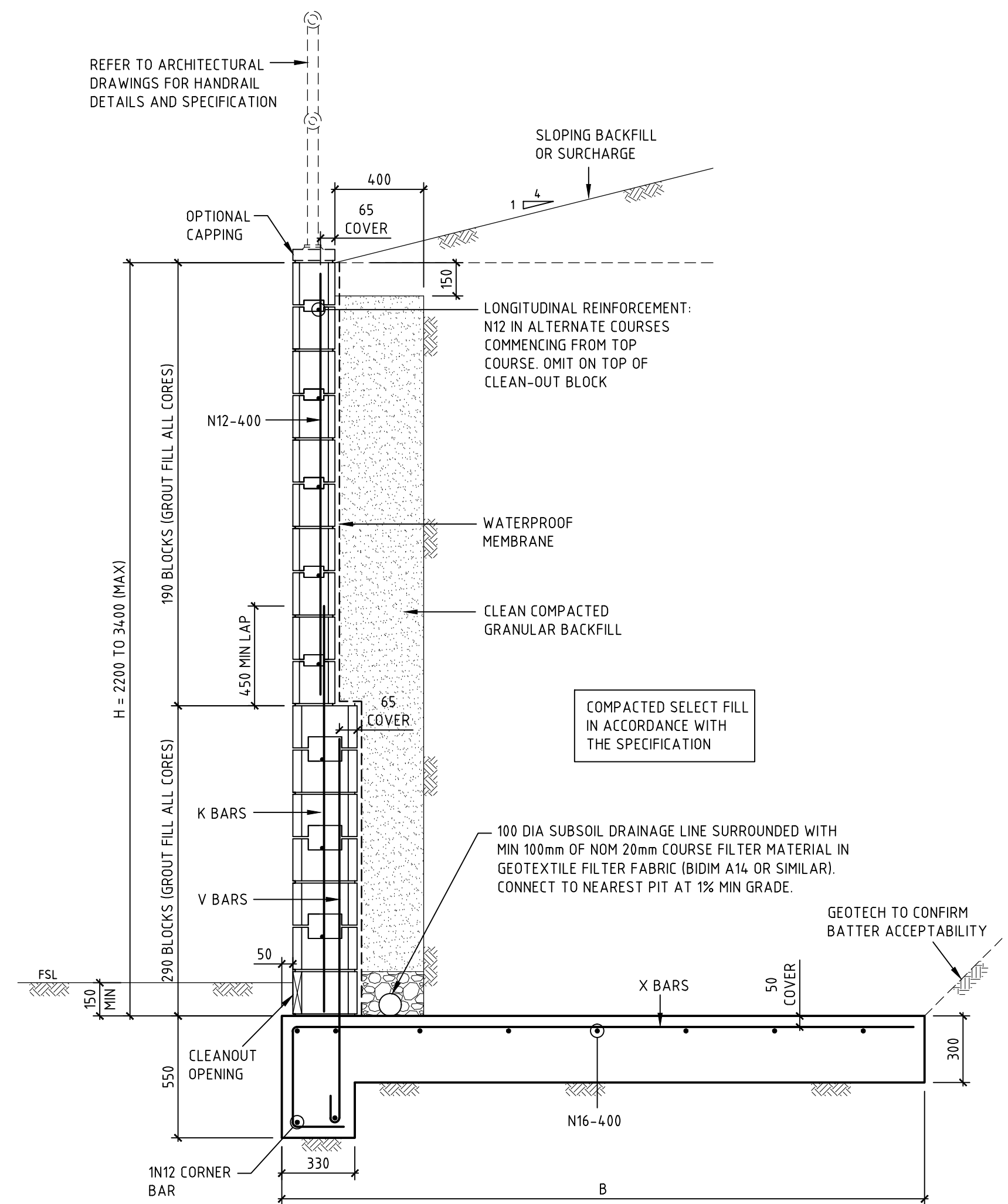
SCALE 1:20

NOTE: DESIGNER TO CHECK THE NEED FOR SHEAR KEY



BLOCK RETAINING WALL (MAX 2000 HIGH)

SCALE 1:20



BLOCK RETAINING WALL (MAX 3400 HIGH)

SCALE 1:20

BLOCK RETAINING WALL BASE TYPE 1

BLOCK RETAINING WALL BASE TYPE 1							
WALL HEIGHT				REINFORCEMENT		BASE DIMENSIONS	
TOTAL HEIGHT (mm) H	HEIGHT OF BLOCKWORK			X-BARS AND V-BARS	K-BARS	WIDTH, B (mm) WITH FOLLOWING BACKFILL CONDITIONS	
	150 SERIES	200 SERIES	300 SERIES			LEVEL	MAX 1:4 SLOPE
800	800	-	-	N12-400	-	800	1000
1000	1000	-	-	N12-400	-	1000	1200
1200	1200	-	-	N12-400	-	1100	1500
1400	-	1400	-	N12-400	-	1300	1700
1600	-	1600	-	N16-400	-	1400	2000
1800	-	1800	-	N16-400	-	1600	2200
2000	-	2000	-	N16-200	-	1700	2500
2200	-	1400	800	N16-400	N16-400	1900	2800
2400	-	1600	800	N16-400	N16-400	2000	3100
2600	-	1600	1000	N20-400	N20-400	2200	3300
2800	-	1800	1000	N20-400	N20-400	2400	3600
3000	-	2000	1000	N16-200	N16-200	2600	3900
3200	-	2000	1200	N20-200	N16-200	2800	4200
3400	-	2000	1400	N20-200	N16-200	2900	4500

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Rev Description Date By App

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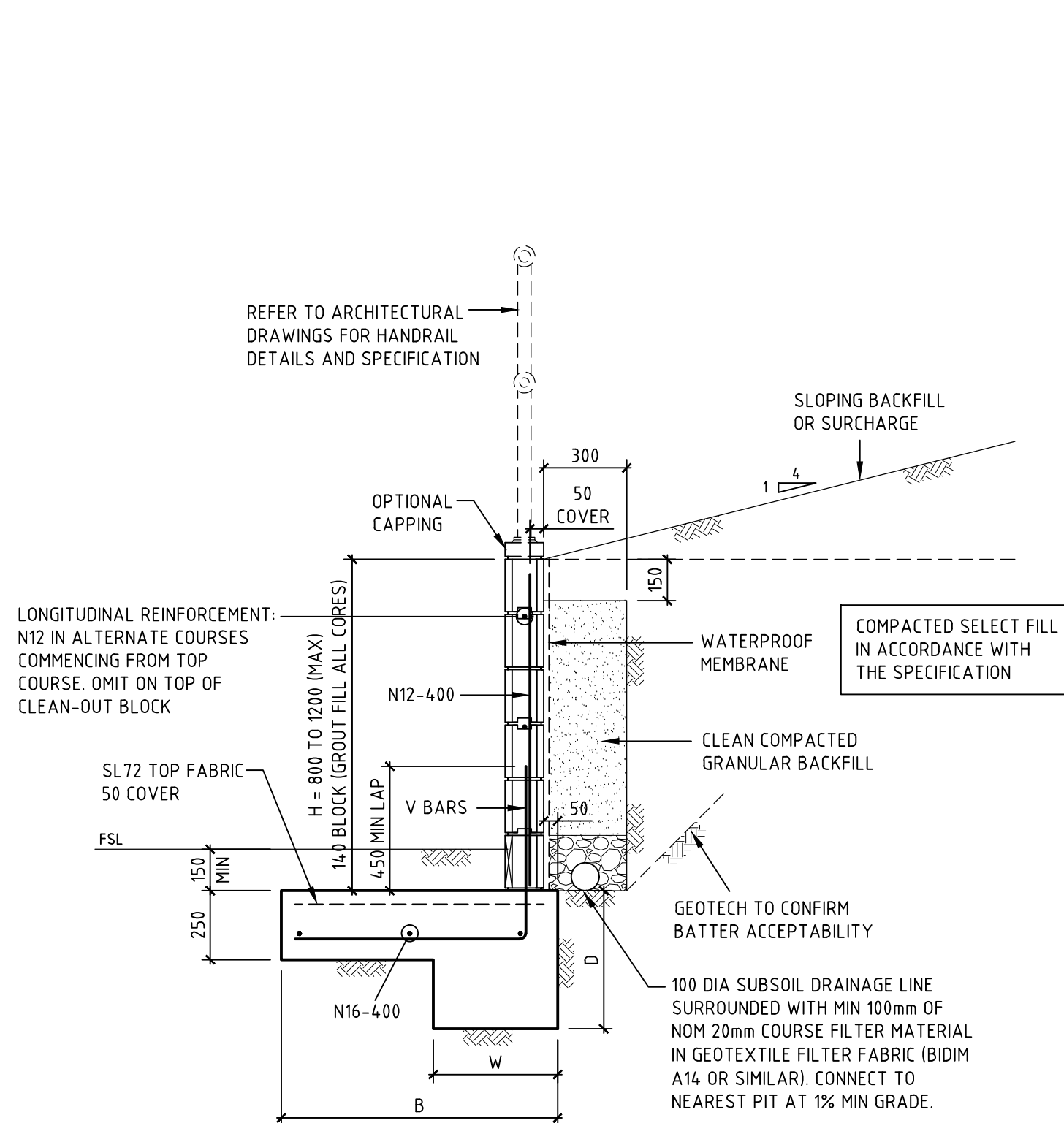
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Project Name  
TWEED VALLEY HOSPITAL  
DEVELOPMENT, CUDGEN  
STAGE 1 EARLY WORKS  
Drawing Title  
RETAINING WALL  
DETAILS SHEET 1

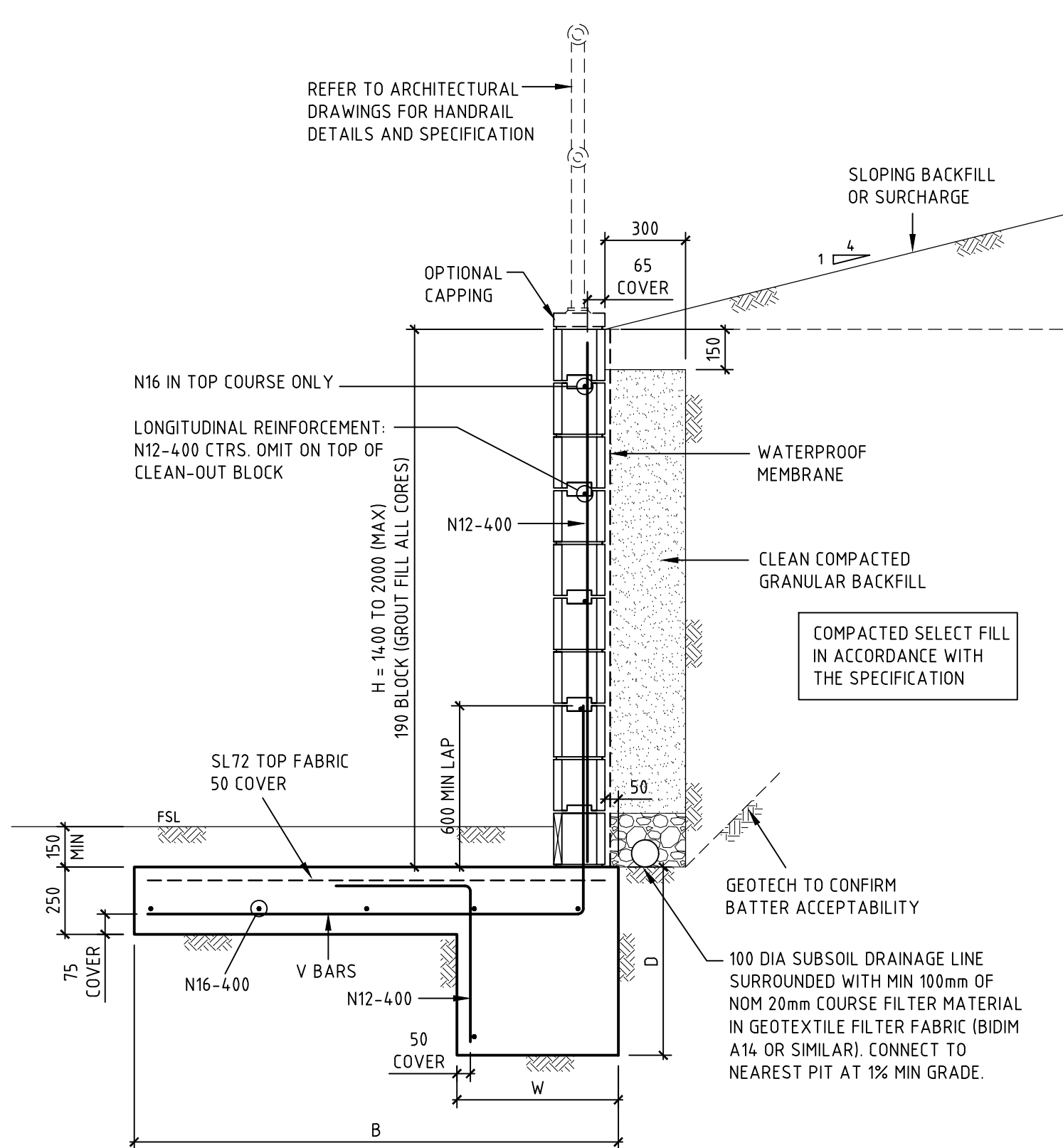
DEVELOPMENT APPLICATION

Designed PA  
Drawn PA  
Scale -  
Date 03.09.18  
Sheet A1  
Project Director Approved Date  
Project Ref 20 10748 01  
Drawing No C055  
Rev P2

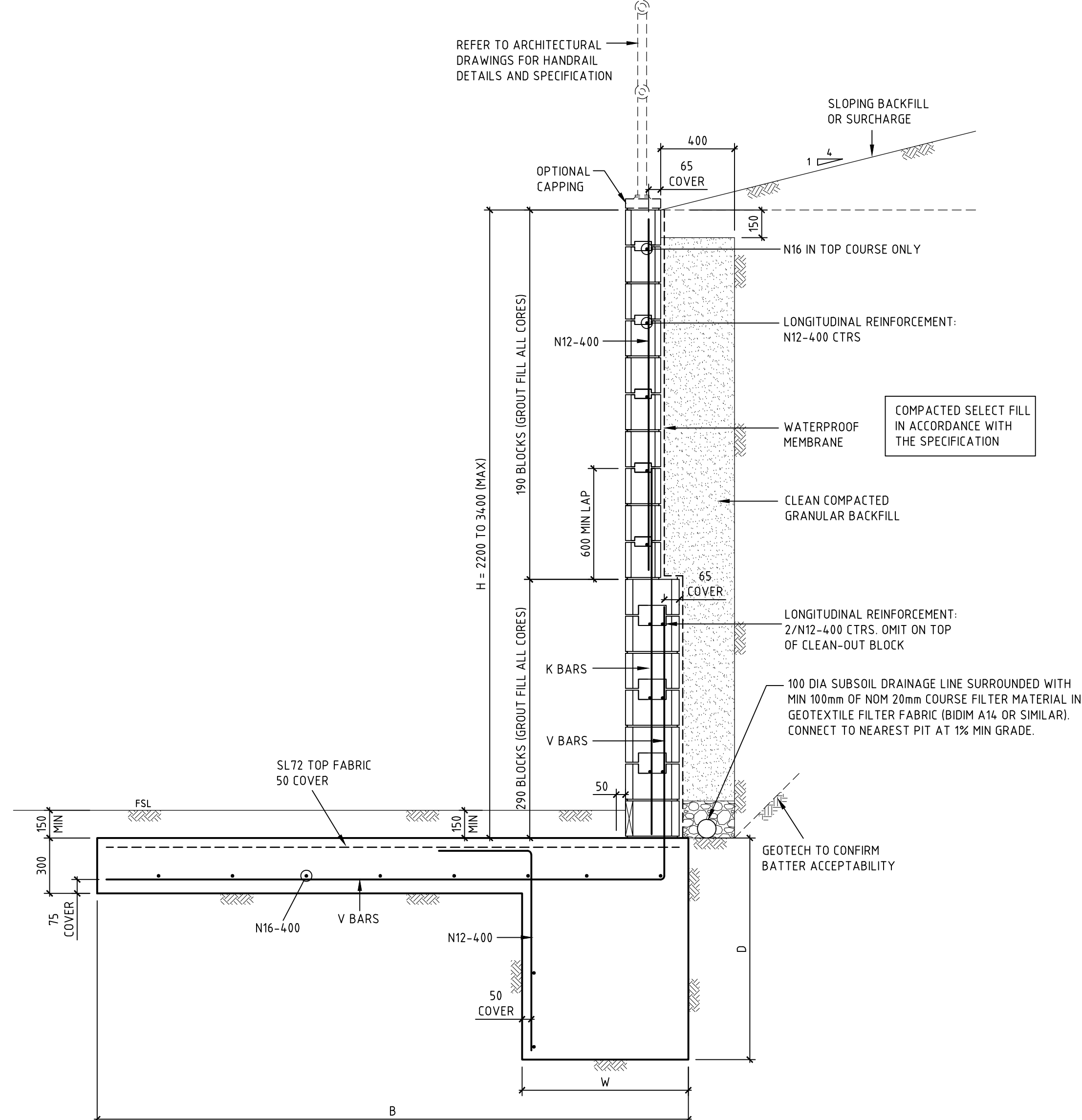




BLOCK RETAINING WALL (MAX 1200 HIGH)  
SCALE 1:20



BLOCK RETAINING WALL (MAX 2000 HIGH)  
SCALE 1:20



BLOCK RETAINING WALL (MAX 3400 HIGH)  
SCALE 1:20

### BLOCK RETAINING WALL BASE TYPE 2

WALL HEIGHT				REINFORCEMENT		BASE DIMENSIONS				
TOTAL HEIGHT (mm) H	HEIGHT OF BLOCKWORK			X-BARS AND V-BARS	K-BARS	HEEL WIDTH (mm) W	LEVEL BACKFILL		MAX 1:4 SLOPING BACKFILL	
	150 SERIES	200 SERIES	300 SERIES				BASE WIDTH (mm) B	HEEL DEPTH (mm) D	BASE WIDTH (mm) B	HEEL DEPTH (mm) D
800	800	-	-	N12-400	-	450	600	500	800	500
1000	1000	-	-	N12-400	-	450	800	500	1000	500
1200	1200	-	-	N12-400	-	450	1000	500	1200	600
1400	-	1400	-	N16-400	-	450	1200	500	1400	600
1600	-	1600	-	N16-400	-	450	1400	600	1600	700
1800	-	1800	-	N16-400	-	450	1600	700	1800	800
2000	-	2000	-	N16-200	-	600	1800	700	2000	800
2200	-	1400	800	N16-400	N16-400	600	2000	800	2200	900
2400	-	1600	800	N16-400	N16-400	600	2200	900	2400	1000
2600	-	1600	1000	N20-400	N20-400	900	2400	900	2600	1000
2800	-	1800	1000	N20-400	N20-400	900	2600	900	2800	1100
3000	-	2000	1000	N16-200	N16-200	900	2800	1000	3000	1200
3200	-	2000	1200	N20-200	N16-200	900	3000	1100	3200	1300
3400	-	2000	1400	N20-200	N16-200	900	3200	1200	3400	1500

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Rev Description Date By App

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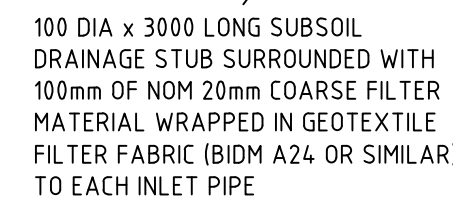
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Project Name  
TWEED VALLEY HOSPITAL  
DEVELOPMENT, CUDGEN  
STAGE 1 EARLY WORKS  
Drawing Title  
RETAINING WALL  
DETAILS SHEET 2

### DEVELOPMENT APPLICATION

Designed PA	Project Director Approved	Date	North
Drawn PN			
Scale -	Project Ref	Drawing No	Rev
Date 03.09.18	20 10748 01	C056	P2
Sheet A1			





## SCALE 1:20

1. CONCRETE TO HAVE A MIN COMPRESSIVE STRENGTH  $F'_c$  OF 25 MPa AT 28 DAYS.
2. REINFORCEMENT NOT REQUIRED IF DEPTH OF PIT IS LESS THAN 100mm. PIT'S GREATER THAN 300mm DEEP TO HAVE WALL AND BASE 200mm THICK REINFORCED WITH N12-250 EACH WAY EACH FACE WITH CONCRETE STRENGTH  $F'_c = 40$  MPa.
3. PROVIDE STEEL IRONS AT MAX 350mm CTRS IF DEPTH OF PIT EXCEEDS 1200mm.
4. IF REINFORCING FABRIC IS TO BE USED REFER TO WALL AND CORNER DETAILS.
5. PRECAST PITS ARE TO GENERALLY COMPLY WITH THESE DETAILS.
6. PRECAST PIT MAY BE USED SUBJECT TO ENGINEERS APPROVAL.
7. ALL PIT'S TO BE LOCKABLE.
8. FINAL INTERNAL PIT DIMENSIONS ARE TO COMPLY WITH AS 3500.



## REINFORCEMENT

## SCALE 1:20

NOTE: DESIGNER TO VERIFY EXTENT OF DETAILING



SCALE 1:20



SECTION C -C

DRILL 30mm DIA HOLE x 120mm DEEP  
AND EPOXY INTO WALL WITH EPOXY  
MORTAR EQUAL TO EPIREZ 633 (NON  
SAGE) - IN PRECAST PITS, DEPTH OF  
EMBEDMENT IS TO BE IN ACCORDANCE  
WITH PIT MANUFACTURER'S DETAILS



FRONT ELEVATION



## SCALE 1:10



## SCALE 1:10



SCALE 1:10



SCALE 1:10

NOTE: SLOTTED RIGID PVC PIPE  
AND FITTINGS WITHIN  
DRAINAGE LAYER ONLY



SCALE 1:10

NOTE: SLOTTED RIGID PVC PIPE  
AND FITTINGS MAY BE USED



SCALE 1:10



SCALE 1:10

**NOTE:** AVOID RUNNING CONSTRUCTION EQUIPMENT OVER THE PIPES  
UNTIL BACKFILL MATERIAL IS 300mm MIN. ABOVE CROWN OF PIPE

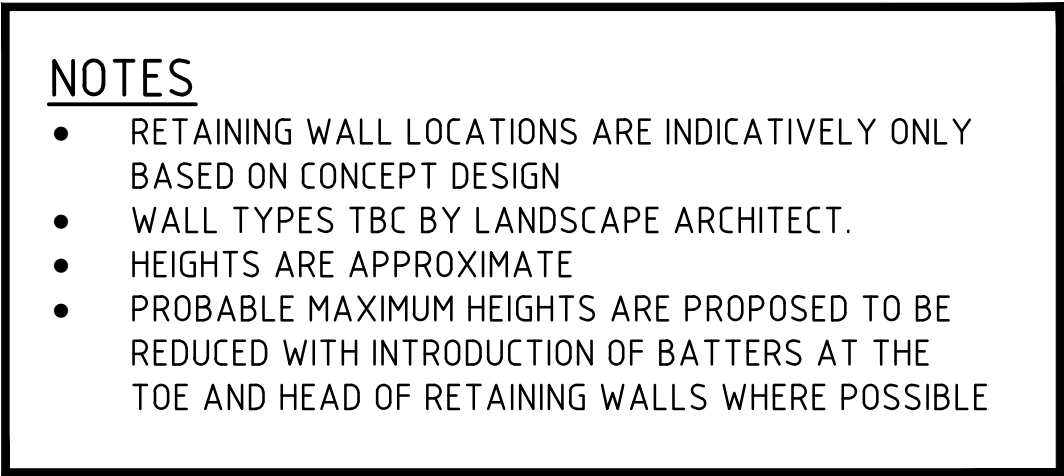


SCALE 1:10



SCALE 1:10





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P1	ISSUED FOR RESPONSE TO SUBMISSION	07.02.19	JF	-
Rev	Description	Date	By	App

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Rev	Description	Date	By	App
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Designed	JF	Project Director Approved	Date	North
Drawn	JF			
Scale	1:1000			
Date	FEB 2019	Project Ref	Drawing No	Rev
Sheet	A1	20 10748 01	SK13	P1



# **TWEED VALLEY HOSPITAL DEVELOPMENT CUDGEN AND TWEED COAST ROAD INTERSECTION WORKS**

<u>DRAWING No.</u>	<u>DESCRIPTION</u>
20 10748 C300	DRAWING REGISTER AND CONSTRUCTION NOTES
20 10748 C330	GENERAL ARRANGEMENT AND KEY PLAN
20 10748 C331	CONCEPT INTERSECTION WORKS PLAN SHEET 1 OF 2
20 10748 C332	CONCEPT INTERSECTION WORKS PLAN SHEET 2 OF 2

## GENERAL NOTES

- G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS OR SKETCHES AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE SUPERINTENDENT BEFORE PROCEEDING WITH WORK.
- G2 MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATION, CURRENT SAA CODES, BUILDING REGULATIONS AND THE REQUIREMENTS OF ANY OTHER RELEVANT STATUTORY AUTHORITIES.
- G3 THESE DRAWINGS MUST NOT BE SCALED. ALL DIMENSIONS ARE IN METERS. ALL SET OUT DIMENSIONS AND LEVELS, INCLUDING THOSE SHOWN ON THESE DRAWINGS SHALL BE IN ACCORDANCE WITH THE ARCHITECT'S DRAWINGS AND VERIFIED ON SITE.
- G4 ALL SETOUT AND DIMENSIONS OF THE STRUCTURE INCLUDING KERBS AND RETAINING WALLS, AND BULK EARTHWORKS MUST BE TAKEN FROM THE ARCHITECT'S DRAWINGS. SETOUT OF THE STORMWATER PITS BY OTHERS. CONTRACTOR TO CONFIRM SETOUT OF SERVICE TRANCHING INCLUDING SUBSOIL ON SITE.
- G5 THE CONTRACTOR SHALL COMPLY WITH ALL REGULATIONS OF AUTHORITIES HAVING JURISDICTION OVER THE WORKS. REFER TO GEOTECHNICAL REPORT BY MORRISON GEOTECHNICAL PTY LTD, REFERENCE: GE18/144, DATED AUGUST 2018.
- G6 ALL DIMENSIONS AND REDUCED LEVELS MUST BE VERIFIED ON SITE BEFORE THE COMMENCEMENT OF ANY WORK.
- G7 THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE SUPERINTENDENT BUT IS NOT AN AUTHORISATION OF A COST VARIATION. THE SUPERINTENDENT MUST APPROVE ANY COST VARIATION INVOLVED BEFORE ANY WORK STARTS.
- G8 ALL LEVELS SHOWN ARE TO THE AUSTRALIAN HEIGHT DATUM.
- G9 SERVICE INFORMATION SHOWN IS APPROXIMATE ONLY. PRIOR TO COMMENCEMENT OF ANY WORKS, THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND SERVICES AND COMPLY WITH ALL REQUIREMENTS OF THOSE AUTHORITIES.
- G10 EXISTING SURFACE CONTOURS, WHERE SHOWN, ARE INTERPOLATED AND MAY NOT BE ACCURATE.
- G11 UNLESS NOTED OTHERWISE, ALL VEGETATION SHALL BE STRIPPED TO A MINIMUM DEPTH OF 150mm UNDER ALL PROPOSED PAVEMENT AND BUILDING AREAS.
- G12 MAKE SMOOTH CONNECTION WITH ALL EXISTING WORKS.

## SITWORKS NOTES

- PRIOR TO THE PLACEMENT OF ANY PAVEMENTS, BUILDINGS OR DRAINS THE EXPOSED SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 98% STANDARD COMPACTION IN ACCORDANCE WITH TEST 'E11' OF A.S. 1289 FOR THE TOP 300mm. ANY SOFT SPOTS SHALL BE REMOVED AND REPLACED WITH GRANULAR FILL TO THE ENGINEERS APPROVAL AND COMPACTED IN ACCORDANCE WITH THE COMPACTION REQUIREMENTS SET OUT BELOW. ON HIGHLY REACTIVE CLAY AREAS SITE EXCAVATED MATERIAL MAY BE USED WITH THE PRIOR AUTHORISATION OF THE ENGINEER.
- S2 ALL FILL AND PAVEMENT MATERIALS SHALL BE COMPACTED IN ACCORDANCE WITH GEOTECHNICAL REPORT BY MORRISON GEOTECHNIC PTY LTD REFERENCE: GE18/144. DATED AUGUST 2018 MOISTURE CONTENT TO BE MAINTAINED AT +/- 2% OMC. MINIMUM COMPACTION REQUIREMENTS ARE DETAILED BELOW FOR (ALL REQUIREMENTS ARE TO BE VERIFIED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER):
- LANDSCAPED AREAS 95% STD.
  - FILL UNDER ANY FOOTINGS AND FLOOR SLABS FOR ANY STRUCTURE TO SUBGRADE LEVEL;
    - FINE CRUSHED ROCK 98% STD.
    - SELECTED FILL WITHOUT CONSPICUOUS CLAY CONTENT 98% STD.
  - BUILDING BASECOURSE 98% MOD
  - FILL UNDER ROAD PAVEMENTS;
    - TO WITHIN 500mm OF FINISHED SUBGRADE LEVEL 98% STD.
    - UP TO FINISHED SUBGRADE LEVEL 98% STD.
  - ROAD PAVEMENT MATERIALS;
    - SUB BASE 98% MOD.
    - BASE COURSE 98% MOD.
- THE MAXIMUM COMPACTION IS TO BE NO GREAT THAN 4% ON TOP OF THE ABOVE MENTION VALUES.
- S3 GRADE EVENLY BETWEEN FINISHED SURFACE SPOT LEVELS. FINISHED SURFACE CONTOURS ARE SHOWN FOR CLARITY. WHERE FINISHED SURFACE LEVELS ARE NOT SHOWN, THE SURFACE SHALL BE GRADED SMOOTHLY SO THAT IT WILL DRAIN AND MATCH ADJACENT SURFACES OR STRUCTURES.
- S4 ALL DIMENSIONS GIVEN ARE TO FACE OF KERB, CENTER OF PIPE OR EXTERIOR FACE OF BUILDING UNLESS NOTED OTHERWISE.
- S5 ANY STRUCTURES, PAVEMENTS OR SURFACES DAMAGED, DIRTIED OR MADE UNSERVICABLE DUE TO CONSTRUCTION WORK SHALL BE REINSTATED TO THE SATISFACTION OF THE ENGINEER.
- S6 ANY FILL REQUIRED SHALL BE APPROVED BY THE ENGINEER / GEOTECHNICAL CONSULTANT
- S7 CONTRACTOR IS TO ENSURE THAT ALL EXCAVATIONS ARE MAINTAINED IN A DRY CONDITION WITH NO WATER ALLOWED TO REMAIN IN THE EXCAVATIONS.
- S8 ALL FINISHES AND COLOURS TO BE IN ACCORDANCE WITH ARCHITECTURAL SPECIFICATIONS.
- S9 REFER TO STRUCTURAL DRAWINGS FOR CONCRETE, REINFORCEMENT AND RETAINING WALL DETAILS.
- S10 GENERALLY FOR TRENCHING WORKS THE CONTRACTOR MUST:
- A) COMPLY WITH THE GENERAL PROVISIONS OF PART 3.1 "MANAGING RISKS TO HEALTH AND SAFETY" OF NSW WORK HEALTH AND SAFETY REGULATION 2011
- B) COMPLY PART 6.3 DIVISION 3 "EXCAVATION WORK" OF NSW WORK HEALTH AND SAFETY REGULATION NSW 2011
- S11 PRIOR TO THE EXCAVATION OF ANY TRENCH DEEPER THAN 1.5 METRES THE CONTRACTOR MUST:
- A) NOTIFY THE OCCUPATIONAL HEALTH AND SAFETY AUTHORITY ON THE APPROPRIATE FORM.

## STORMWATER DRAINAGE NOTES

- |      |  |
|------|--|
| SW1  | UNLESS NOTED OTHERWISE BY HYDRAULIC ENGINEERS DRAWINGS, ALL DOWNPIPES & GRATED INLETS SHALL BE CONNECTED TO PITS OR MAIN STORMWATER DRAINS WITH 150 DIA. UPVC PIPES LAID AT A MINIMUM GRADE OF 1 IN 100. FOR SYPHONIC ROOF DRAINAGE SYSTEMS ALL DOWNPIPES CONNECTION DRAIN SIZES TO BE CONNECTED INTO MAIN STORMWATER DRAINS SHALL BE IN ACCORDANCE WITH HYDRAULIC ENGINEERS DRAWINGS. |
| SW2  | ALL MAIN STORMWATER DRAINS SHALL BE CONSTRUCTED USING MATERIALS AS SPECIFIED ON THE DRAWINGS IN ACCORDANCE WITH THE APPROPRIATE A.S. IF NOT SPECIFIED THEN CLASS 2 RRJ RCP SHALL BE USED FOR DIAMETERS > 225mm. SEWER CLASS SEH UPVC IN ACCORDANCE WITH AS1260 SHALL BE USED FOR Ø225mm OR SMALLER.  |
| SW3  | ALL PIPEWORK TO BE INSTALLED IN ACCORDANCE WITH AS3725 FOR RCP AND AS2032 FOR PVC. ALL BEDDING TO BE TYPE H2 UNLESS NOTED OTHERWISE.   |
| SW4  | FOR ALL PITS > 12m DEEP, STEP IRONS SHALL BE INSTALLED.  |
| SW5  | PRECAST PITS MAY BE USED EXTERNAL TO THE BUILDING SUBJECT TO APPROVAL BY BONACCI GROUP.  |
| SW6  | ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.   |
| SW7  | WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED uPVC SEWER GRADE PIPE IS TO BE USED.  |
| SW8  | GRATES AND COVERS SHALL CONFORM WITH AS 3996 AND AS 1428.1 FOR ACCESS REQUIREMENTS.  |
| SW9  | CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES ARE NOT TO BE REDUCED WITHOUT APPROVAL.  |
| SW10 | AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.   |
| SW11 | ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.  |

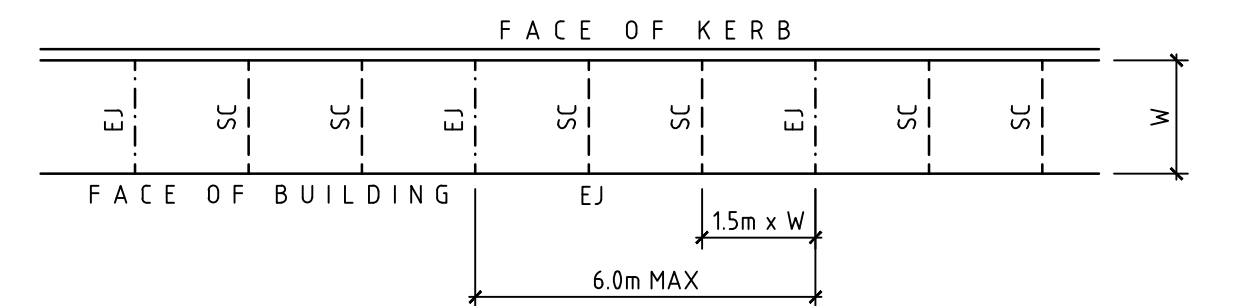
## KERBING NOTES

- K1 ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 32 MPa U.N.O.
- K2 ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON 75mm GRANULAR BASECOURSE COMPACTED TO A MINIMUM 98% MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289 5.2.1.
- K3 EXPANSION JOINTS (EJ) TO BE FORMED FROM 10mm COMPRESSIBLE CORK FILLER BOARD FOR THE FULL DEPTH OF THE SECTION AND CUT TO PROFILE. EXPANSION JOINTS TO BE LAGGED AT DRAINAGE PITTS ON TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX 12m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE EXPANSION JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLAB.
- K4 WEAKENED PLANE JOINTS TO BE MIN 3mm WIDE AND LOCATED AT 3m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE WEAKENED PLANE JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLAB.
- K5 BROOMED FINISH TO ALL RAMPED AND VEHICULAR CROSSINGS. ALL OTHER KERBING OR DISH DRAINS TO BE STEEL FLOAT FINISHED.
- K6 IN THE REPLACEMENT OF KERBS -  
- EXISTING ROAD PAVEMENT IS TO BE SAWCUT 900mm U.N.O. FROM THE LIP OF GUTTER, UPON COMPLETION OF THE NEW KERB AND GUTTER, NEW BASECOURSE AND SURFACE TO BE LAID 600mm WIDE U.N.O.  
- EXISTING KERBS ARE TO BE COMPLETELY REMOVED WHERE NEW KERBS ARE SHOWN.

## JOINTING NOTES

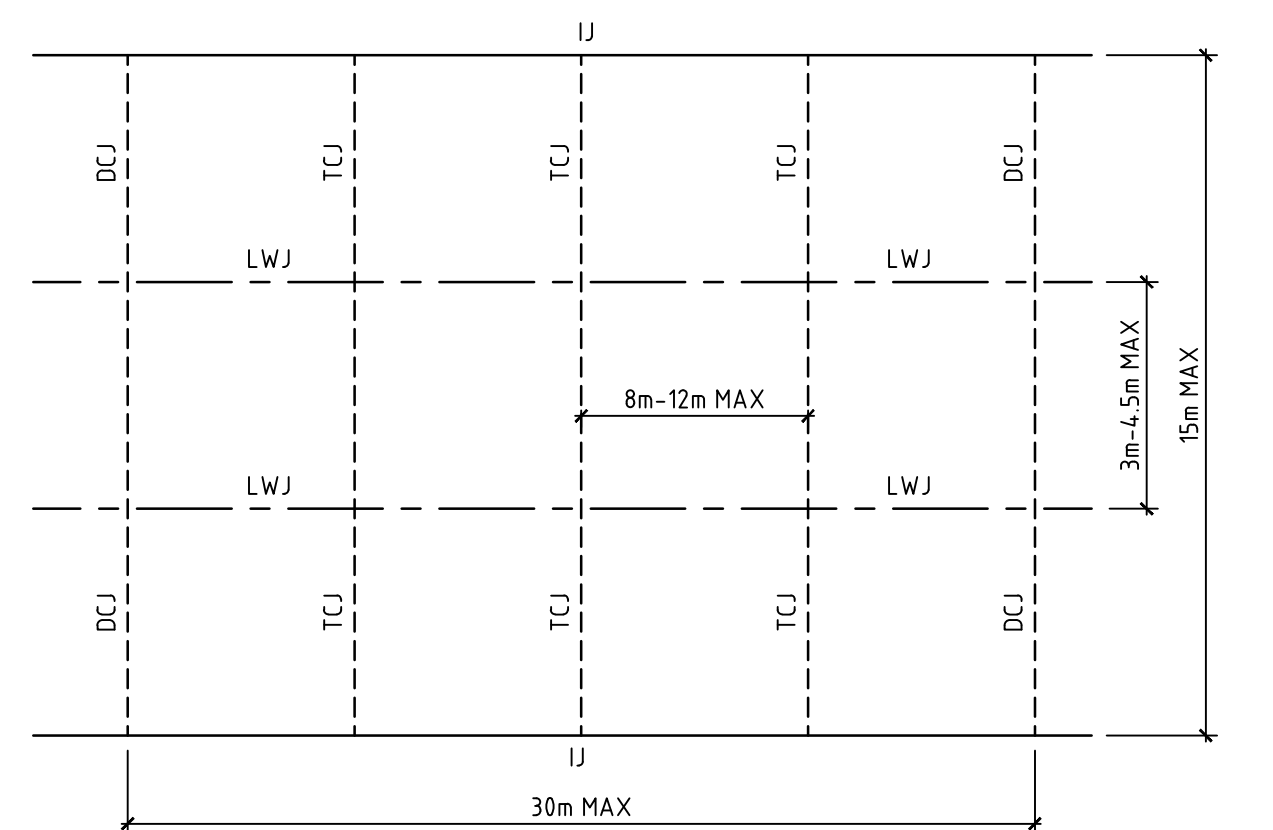
## PEDESTRIAN FOOTPATH JOINTS

- |    |  |
|----|--|
| J1 | EXPANSION JOINTS (EJ) ARE TO BE LOCATED WHERE POSSIBLE AT TANGENT POINTS OF CURVES AND ELSEWHERE AT 6m CENTRES.  |
| J2 | SAWCUT JOINTS (SC) ARE TO BE LOCATED AT A MAX 15m x WIDTH OF PAVEMENT. THE TIMING OF THE SAWCUT IS TO BE CONFIRMED BY THE CONTRACTOR ON SITE. SITE CONDITIONS WILL DETERMINE HOW MANY HOURS AFTER THE CONCRETE POUR BEFORE THE SAW CUTS ARE COMMENCED. |
| J3 | WHERE POSSIBLE JOINTS SHOULD BE LOCATED TO MATCH KERBING AND / OR ADJACENT PAVEMENT JOINTS.  |
| J4 | PROVIDE 10mm WIDE FULL DEPTH EXPANSION JOINTS (EJ) BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVERS   |
| J5 | ALL PEDESTRIAN FOOTPATH JOINTINGS AS FOLLOWS (U.N.O.).   |



## VEHICULAR PAVEMENT JOINTS

- |     |  |
|-----|--|
| J6  | ALL VEHICULAR PAVEMENTS TO BE JOINTED AS SHOWN ON DRAWINGS.  |
| J7  | LONGITUDINAL WARPING JOINTS (LWJ) SHOULD GENERALLY BE LOCATED AT A MAXIMUM OF 3m TO 4.5m MAX CENTERS. ALL LWJ'S SHOULD BE TIED UP TO A MAXIMUM TOTAL WIDTH OF 30m.   |
| J8  | TRANSVERSE CONTRACTION JOINTS (TCJ) SHOULD GENERALLY BE LOCATED AT A MAXIMUM OF 8m TO 12m MAX CENTERS. TCJ'S CAN BE SPACED AT SUITABLE INTERVALS UP TO A RECOMMENDED MAXIMUM LENGTH OF 15m.  |
| J9  | TRANSVERSE DOWELLED CONSTRUCTION JOINTS (DCJ) TO BE PROVIDED FOR PLANNED INTERRUPTIONS SUCH AS AT THE END OF EACH DAY'S OPERATIONS (POUR BREAK), AT BLOCK OUTS FOR BRIDGES AND INTERSECTIONS OR FOR UNEXPECTED DELAYS WHEN THE SUSPENSION OF OPERATIONS IS LIKELY TO CREATE A JOINT. |
| J10 | ISOLATION JOINTS WITH SUB-GRADE BEAM (IJ) TO BE PROVIDED AT INTERSECTIONS OR AT THE JUNCTION OF A POUR BREAK.  |
| J11 | ALL VEHICULAR PAVEMENTS TO BE JOINTED IN ACCORDANCE WITH AUSTRROADS AGPT02-12 GUIDE TO PAVEMENT TECHNOLOGY PART 2 STRUCTURAL PAVEMENT DESIGN AND SUPPLEMENT AP-T36-06 PAVEMENT DESIGN FOR LIGHT TRAFFIC  |
| J12 | VEHICULAR PAVEMENT JOINTING AS FOLLOWS (U.N.O.)  |



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<p><b>Drawing Title</b> DRAWING REGISTER AND CONSTRUCTION NOTES</p>										<p><b>Project Ref</b> 20 10748 01</p>										<p><b>Drawing No</b> C300</p>										<p><b>Rev</b> P1</p>									
<p><b>Scale</b> NTS</p>										<p><b>Project Ref</b> 20 10748 01</p>										<p><b>Drawing No</b> C300</p>										<p><b>Rev</b> P1</p>									
<p><b>Date</b> 3.10.2018</p>										<p><b>Project Ref</b> 20 10748 01</p>										<p><b>Drawing No</b> C300</p>										<p><b>Rev</b> P1</p>									
<p><b>Sheet</b> A1</p>										<p><b>Project Ref</b> 20 10748 01</p>										<p><b>Drawing No</b> C300</p>										<p><b>Rev</b> P1</p>									



LEGEND:

- SITE BOUNDARY
- ROAD PAVEMENT
- 100 YR FLOODING
- PMF FLOODING
- EXTENT OF WETLAND

2 LANES NORTHBOUND  
TO END OF RAISED  
MEDIANS THEN 120m  
LONG TAPER

NEW LEFT LANE  
ROAD PAVEMENT EXTENSION

PORTION OF EXISTING  
MEDIAN TO BE REMOVED AND  
INFILLED WITH ROAD  
PAVEMENT (EXTENSION)

NEW LEFT LANE  
ROAD PAVEMENT EXTENSION

NEW LEFT LANE  
ROAD PAVEMENT EXTENSION

NEW KERB LINE 2.64m  
OFFSET FROM BOUNDARY

3.50m  
TURN LANE  
NEW KERB LINE 2.50m  
OFFSET FROM BOUNDARY

PEDESTRIAN CROSSING TO BE  
ADJUSTED AND MEDIAN SHORTENED

GENERAL NOTES:

1. SERVICE LOCATIONS TO BE DETERMINED IN CONJUNCTION WITH SERVICE PROVIDERS.

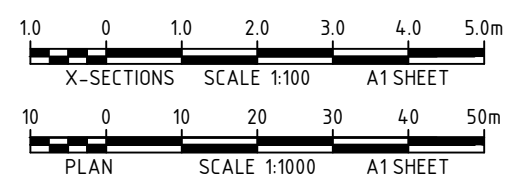
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P2	ISSUED FOR REF. APPROVAL	31.10.18	PA	-
P1	ISSUED FOR REF. APPROVAL	30.10.18	PA	-

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Project Name  
**TWEED VALLEY HOSPITAL  
CUDGEN AND TWEED COAST  
ROAD INTERSECTION WORKS**

Drawing Title  
**GENERAL ARRANGEMENT  
AND KEY PLAN**

**PRELIMINARY**

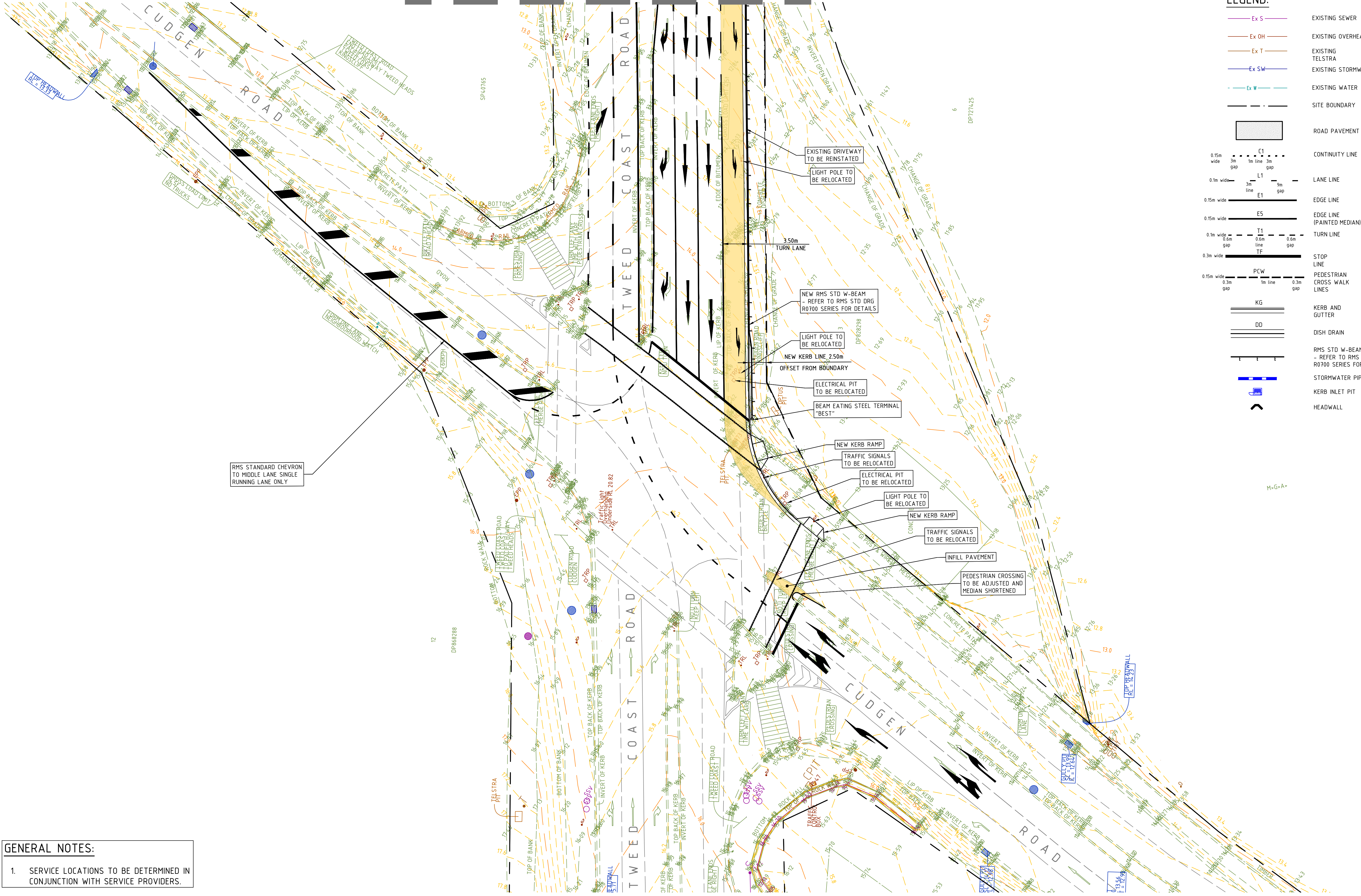
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Date 02.10.18	20 10748 01	C330	P3
Sheet A1			



REFER TO DRAWING C332 FOR CONTINUATION

LEGEND:

- Ex S — EXISTING SEWER  
— Ex OH — EXISTING OVERHEAD LINES  
— Ex T — EXISTING TELSTRA  
— Ex SW — EXISTING STORMWATER  
— Ex W — EXISTING WATER  
--- SITE BOUNDARY  
ROAD PAVEMENT  
CONTINUITY LINE  
LANE LINE  
EDGE LINE  
EDGE LINE (PAINTED MEDIAN)  
TURN LINE  
STOP LINE  
PEDESTRIAN CROSS WALK LINES  
KERB AND GUTTER  
DISH DRAIN  
RMS STD W-BEAM - REFER TO RMS STD DRG R0700 SERIES FOR DETAILS  
STORMWATER PIPE  
KERB INLET PIT  
HEADWALL



GENERAL NOTES:

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P2	ISSUED FOR REF. APPROVAL	31.10.18	PA	-
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5.0 0 2.5 5.0 7.5 10.0m  
PLAN SCALE 1:250 A1 SHEET



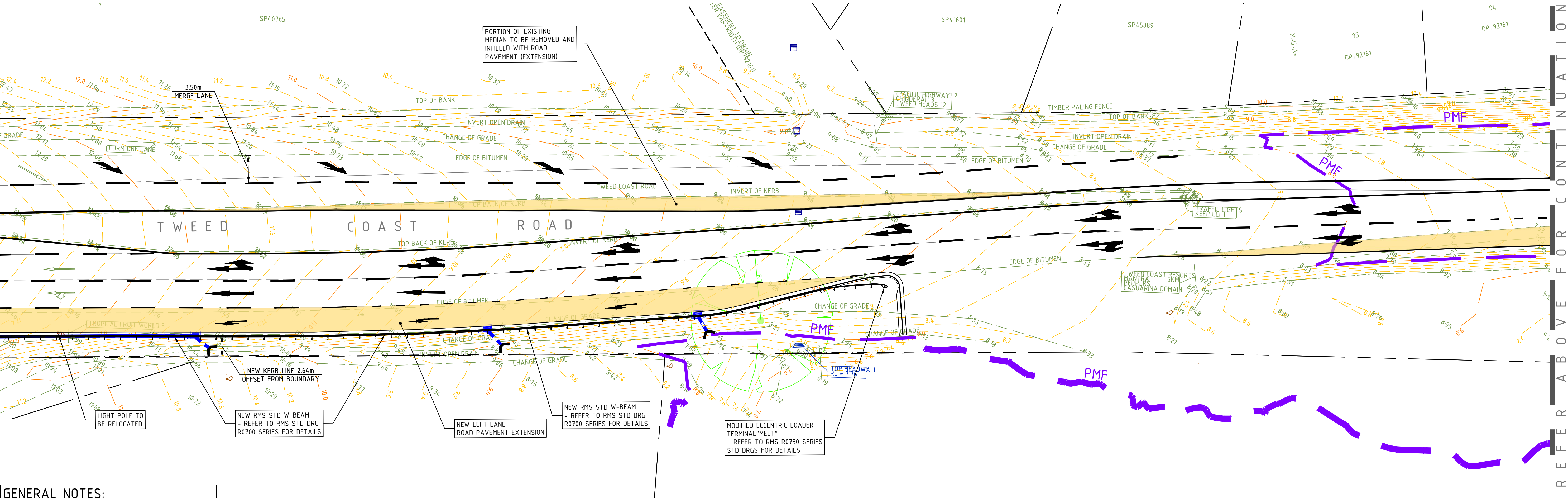
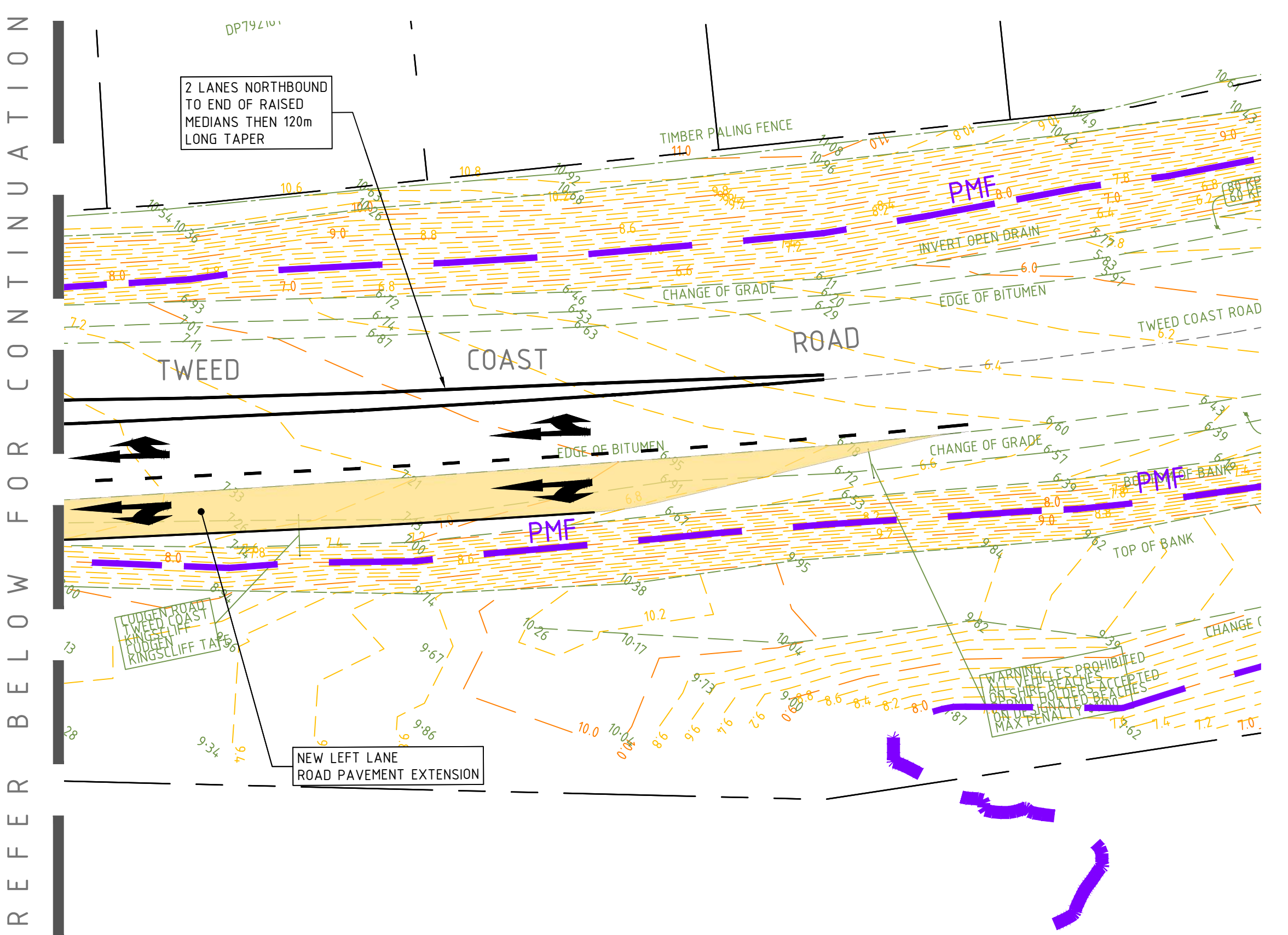
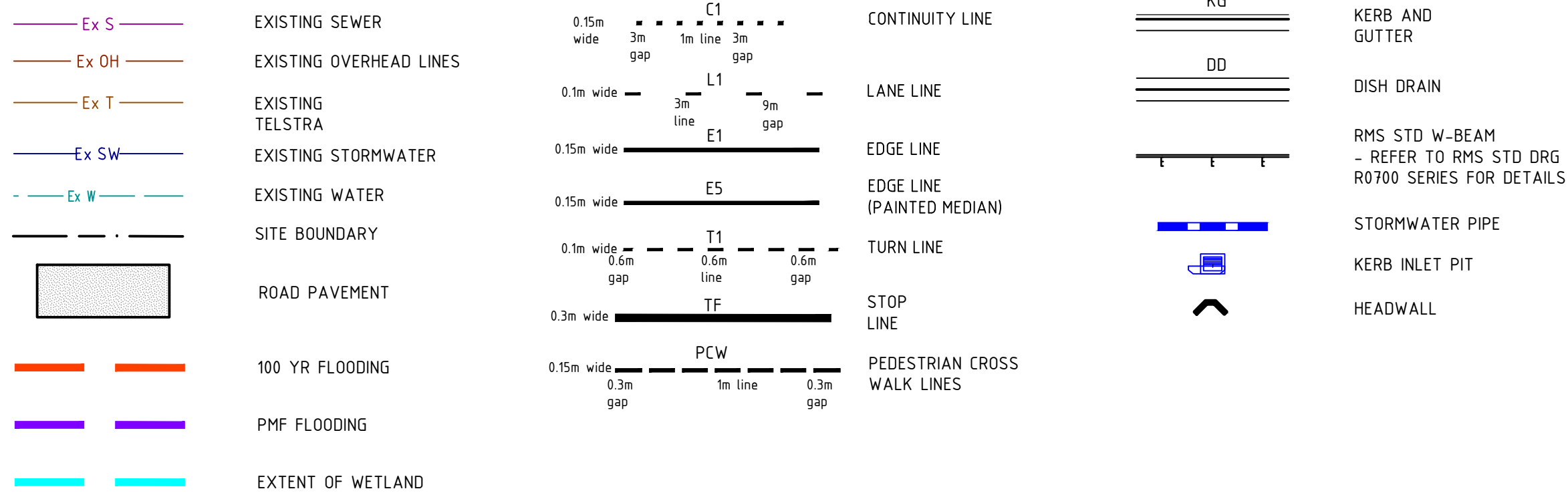
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Project Name  
TWEED VALLEY HOSPITAL  
DEVELOPMENT, KINGSCLIFF,  
NSW  
Drawing Title  
CONCEPT INTERSECTION WORKS  
PLAN SHEET 1 OF 2

PRELIMINARY			
Designed	CS	Project Director Approved	Date
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Date	3.10.2018		
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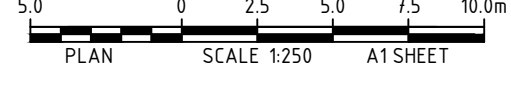
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P2	ISSUED FOR REF. APPROVAL	31.10.18	PA	-
P1	ISSUED FOR REF. APPROVAL	30.10.18	PA	-

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Project Name  
TWEED VALLEY HOSPITAL DEVELOPMENT, KINGSCLIFF, NSW

Drawing Title  
CONCEPT INTERSECTION WORKS  
PLAN SHEET 2 OF 2

PRELIMINARY

Designed	CS	Project Director Approved	Date	North
Drawn	PA			
Scale	1:250	Project Ref	Drawing No	Rev
Date	27.09.18	20 10748 01	C332	P4
Sheet	A1			



# TWEED VALLEY HOSPITAL DEVELOPMENT

## CUDGEN ROAD AUXILIARY LANE WORKS

### DRAWING No.

### DESCRIPTION

20 10748 C400

DRAWING REGISTER AND CONSTRUCTION NOTES

20 10748 C405

SEDIMENT AND EROSION CONTROL PLAN

20 10748 C441  
20 10748 C442  
20 10748 C450  
20 10748 C460

AUXILIARY LANE CIVIL WORKS PLAN  
AUXILIARY LANE STORMWATER DRAINAGE PLAN  
AUXILIARY LANE STORMWATER DRAINAGE LONGITUDINAL SECTION  
CIVIL WORKS AND STORMWATER DRAINAGE DETAILS

20 10748 C480  
20 10748 C485

AUXILIARY LANE KERB CROSS SECTIONS  
AUXILIARY LANE KERB LONGITUDINAL SECTIONS

### GENERAL NOTES

- G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS OR SKETCHES AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE SUPERINTENDENT BEFORE PROCEEDING WITH WORK.
- G2 MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATION, CURRENT SAA CODES, BUILDING REGULATIONS AND THE REQUIREMENTS OF ANY OTHER RELEVANT STATUTORY AUTHORITIES.
- G3 THESE DRAWINGS MUST NOT BE SCALED. ALL DIMENSIONS ARE IN METERS. ALL SET OUT DIMENSIONS AND LEVELS, INCLUDING THOSE SHOWN ON THESE DRAWINGS SHALL BE IN ACCORDANCE WITH THE ARCHITECT'S DRAWINGS AND VERIFIED ON SITE.
- G4 ALL SETOUT AND DIMENSIONS OF THE STRUCTURE INCLUDING KERBS AND RETAINING WALLS, AND BULK EARTHWORKS MUST BE TAKEN FROM THE ARCHITECT'S DRAWINGS, SETOUT OF THE STORMWATER PITS BY OTHERS. CONTRACTOR TO CONFIRM SETOUT OF SERVICE TRENCHING INCLUDING SUBSOIL ON SITE.
- G5 THE CONTRACTOR SHALL COMPLY WITH ALL REGULATIONS OF AUTHORITIES HAVING JURISDICTION OVER THE WORKS. REFER TO GEOTECHNICAL REPORT BY MORRISON GEOTECHNIC PTY LTD, REFERENCE: GE18/144 REV 2, DATED 28<sup>th</sup> SEPTEMBER 2018.
- G6 ALL DIMENSIONS AND REDUCED LEVELS MUST BE VERIFIED ON SITE BEFORE THE COMMENCEMENT OF ANY WORK.
- G7 THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE SUPERINTENDENT BUT IS NOT AN AUTHORISATION OF A COST VARIATION. THE SUPERINTENDENT MUST APPROVE ANY COST VARIATION INVOLVED BEFORE ANY WORK STARTS.
- G8 ALL LEVELS SHOWN ARE TO THE AUSTRALIAN HEIGHT DATUM.
- G9 SERVICE INFORMATION SHOWN IS APPROXIMATE ONLY. PRIOR TO COMMENCEMENT OF ANY WORKS, THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND SERVICES AND COMPLY WITH ALL REQUIREMENTS OF THOSE AUTHORITIES.
- G10 EXISTING SURFACE CONTOURS, WHERE SHOWN, ARE INTERPOLATED AND MAY NOT BE ACCURATE.
- G11 UNLESS NOTED OTHERWISE, ALL VEGETATION SHALL BE STRIPPED TO A MINIMUM DEPTH OF 150mm UNDER ALL PROPOSED PAVEMENT AND BUILDING AREAS.
- G12 MAKE SMOOTH CONNECTION WITH ALL EXISTING WORKS.

### SITEWORKS NOTES

- S1 PRIOR TO THE PLACEMENT OF ANY PAVEMENTS, BUILDINGS OR DRAINS THE EXPOSED SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 98% STANDARD COMPACTION IN ACCORDANCE WITH TEST 'F11' OF A.S. 1289 FOR THE TOP 300mm. ANY SOFT SPOTS SHALL BE REMOVED AND REPLACED WITH GRANULAR FILL TO THE ENGINEERS APPROVAL AND COMPACTED IN ACCORDANCE WITH THE COMPACTION REQUIREMENTS SET OUT BELOW. ON HIGHLY REACTIVE CLAY AREAS SITE EXCAVATED MATERIAL MAY BE USED WITH THE PRIOR AUTHORISATION OF THE ENGINEER.
- S2 ALL FILL AND PAVEMENT MATERIALS SHALL BE COMPACTED IN ACCORDANCE WITH GEOTECHNICAL REPORT BY MORRISON GEOTECHNIC PTY LTD REFERENCE: GE18/144 REV 2 DATED 28<sup>th</sup> SEPTEMBER 2018. MOISTURE CONTENT TO BE MAINTAINED AT +/- 2% OMC. MINIMUM COMPACTION REQUIREMENTS ARE DETAILED BELOW FOR (ALL REQUIREMENTS ARE TO BE VERIFIED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER):
- LANDSCAPED AREAS 95% STD.
  - FILL UNDER ANY FOOTINGS AND FLOOR SLABS FOR ANY STRUCTURE TO SUBGRADE LEVEL:
    - FINE CRUSHED ROCK 98% STD.
    - SELECTED FILL WITHOUT CONSPICUOUS CLAY CONTENT 98% STD.
  - BUILDING BASECOURSE 98% MOD
  - FILL UNDER ROAD PAVEMENTS:
    - TO WITHIN 500mm OF FINISHED SUBGRADE LEVEL 98% STD.
    - UP TO FINISHED SUBGRADE LEVEL 98% STD.
  - ROAD PAVEMENT MATERIALS:
    - SUB BASE 98% MOD.
    - BASE COURSE 98% MOD.
- THE MAXIMUM COMPACTION IS TO BE NO GREATER THAN 4% ON TOP OF THE ABOVE MENTION VALUES.
- S3 GRADE EVENLY BETWEEN FINISHED SURFACE SPOT LEVELS. FINISHED SURFACE CONTOURS ARE SHOWN FOR CLARITY. WHERE FINISHED SURFACE LEVELS ARE NOT SHOWN, THE SURFACE SHALL BE GRADED SMOOTHLY SO THAT IT WILL DRAIN AND MATCH ADJACENT SURFACES OR STRUCTURES.
- S4 ALL DIMENSIONS GIVEN ARE TO FACE OF KERB, CENTER OF PIPE OR EXTERIOR FACE OF BUILDING UNLESS NOTED OTHERWISE.
- S5 ANY STRUCTURES, PAVEMENTS OR SURFACES DAMAGED, DIRTIED OR MADE UNSERVICABLE DUE TO CONSTRUCTION WORK SHALL BE REINSTATED TO THE SATISFACTION OF THE ENGINEER.
- S6 ANY FILL REQUIRED SHALL BE APPROVED BY THE ENGINEER / GEOTECHNICAL CONSULTANT
- S7 CONTRACTOR IS TO ENSURE THAT ALL EXCAVATIONS ARE MAINTAINED IN A DRY CONDITION WITH NO WATER ALLOWED TO REMAIN IN THE EXCAVATIONS.
- S8 ALL FINISHES AND COLOURS TO BE IN ACCORDANCE WITH ARCHITECTURAL SPECIFICATIONS.
- S9 REFER TO STRUCTURAL DRAWINGS FOR CONCRETE, REINFORCEMENT AND RETAINING WALL DETAILS.
- S10 GENERALLY FOR TRENCHING WORKS THE CONTRACTOR MUST:  
A) COMPLY WITH THE GENERAL PROVISIONS OF PART 3.1 "MANAGING RISKS TO HEALTH AND SAFETY" OF NSW WORK AND HEALTH AND SAFETY REGULATION 2011  
B) COMPLY PART 6.3 DIVISION 3 "EXCAVATION WORK" OF NSW WORK HEALTH AND SAFETY REGULATION NSW 2011
- S11 PRIOR TO THE EXCAVATION OF ANY TRENCH DEEPER THAN 15 METRES THE CONTRACTOR MUST:  
A) NOTIFY THE OCCUPATIONAL HEALTH AND SAFETY AUTHORITY ON THE APPROPRIATE FORM.

### STORMWATER DRAINAGE NOTES

- SW1 UNLESS NOTED OTHERWISE BY HYDRAULIC ENGINEERS DRAWINGS, ALL DOWNPIPES & GRATED INLETS SHALL BE CONNECTED TO PITS OR MAIN STORMWATER DRAINS WITH 150 DIA. UPVC PIPES LAID AT A MINIMUM GRADE OF 1 IN 100. FOR SYPHONIC ROOF DRAINAGE SYSTEMS ALL DOWNPIPES CONNECTION DRAIN SIZES TO BE CONNECTED INTO MAIN STORMWATER DRAINS SHALL BE IN ACCORDANCE WITH HYDRAULIC ENGINEERS DRAWINGS.
- SW2 ALL MAIN STORMWATER DRAINS SHALL BE CONSTRUCTED USING MATERIALS AS SPECIFIED ON THE DRAWINGS IN ACCORDANCE WITH THE APPROPRIATE A.S. IF NOT SPECIFIED THEN CLASS 4 RRJ RCP SHALL BE USED FOR DIAMETERS > 225mm. SEWER CLASS SEH UPVC IN ACCORDANCE WITH AS1260 SHALL BE USED FOR Ø225mm OR SMALLER.
- SW3 ALL PIPEWORK TO BE INSTALLED IN ACCORDANCE WITH AS3725 FOR RCP AND AS2032 FOR PVC. ALL BEDDING TO BE TYPE H2 UNLESS NOTED OTHERWISE.
- SW4 FOR ALL PITS > 12m DEEP, STEP IRONS SHALL BE INSTALLED.
- SW5 PRECAST PITS MAY BE USED EXTERNAL TO THE BUILDING SUBJECT TO APPROVAL BY BONACCI GROUP.
- SW6 ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
- SW7 WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED UPVC SEWER GRADE PIPE IS TO BE USED.
- SW8 GRATES AND COVERS SHALL CONFORM WITH AS 3996 AND AS 1428.1 FOR ACCESS REQUIREMENTS.
- SW9 CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES ARE NOT TO BE REDUCED WITHOUT APPROVAL.
- SW10 AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS, ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINST THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
- SW11 ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.

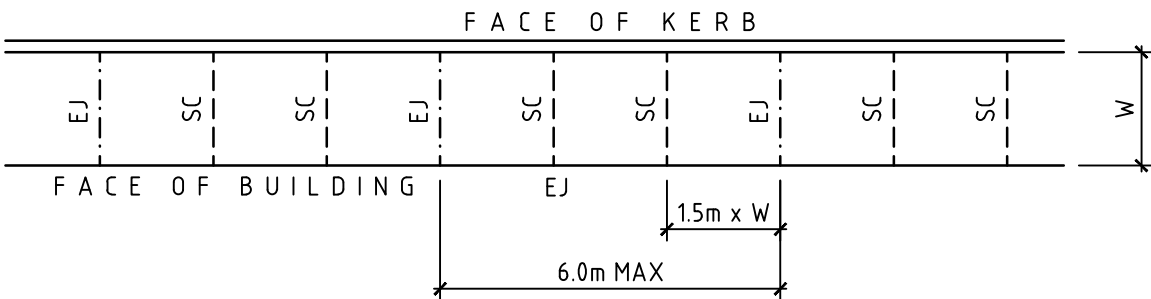
### KERBING NOTES

- K1 ALL CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 32 MPa U.N.O.
- K2 ALL KERBS, GUTTERS, DISH DRAINS AND CROSSINGS TO BE CONSTRUCTED ON 75mm GRANULAR BASECOURSE COMPACTED TO A MINIMUM 98% MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289 5.2.1.
- K3 EXPANSION JOINTS (EJ) TO BE FORMED FROM 10mm COMPRESSIBLE CORK FILLER BOARD FOR THE FULL DEPTH OF THE SECTION AND CUT TO PROFILE. EXPANSION JOINTS TO BE LOCATED AT DRAINAGE PITS, ON TANGENT POINTS OF CURVES AND ELSEWHERE AT MAX 12m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE EXPANSION JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLAB.
- K4 WEAKENED PLANE JOINTS TO BE MIN 3mm WIDE AND LOCATED AT 3m CENTRES EXCEPT FOR INTEGRAL KERBS WHERE THE WEAKENED PLANE JOINTS ARE TO MATCH THE JOINT LOCATIONS IN THE SLAB.
- K5 BROOMED FINISH TO ALL RAMPED AND VEHICULAR CROSSINGS. ALL OTHER KERBING OR DISH DRAINS TO BE STEEL FLOAT FINISHED.
- K6 IN THE REPLACEMENT OF KERBS:-  
- EXISTING ROAD PAVEMENT IS TO BE SAWCUT 900mm U.N.O. FROM THE LIP OF GUTTER. UPON COMPLETION OF THE NEW KERB AND GUTTER, NEW BASECOURSE AND SURFACE TO BE LAID 600mm WIDE U.N.O.  
- EXISTING KERBS ARE TO BE COMPLETELY REMOVED WHERE NEW KERBS ARE SHOWN.

### JOINTING NOTES

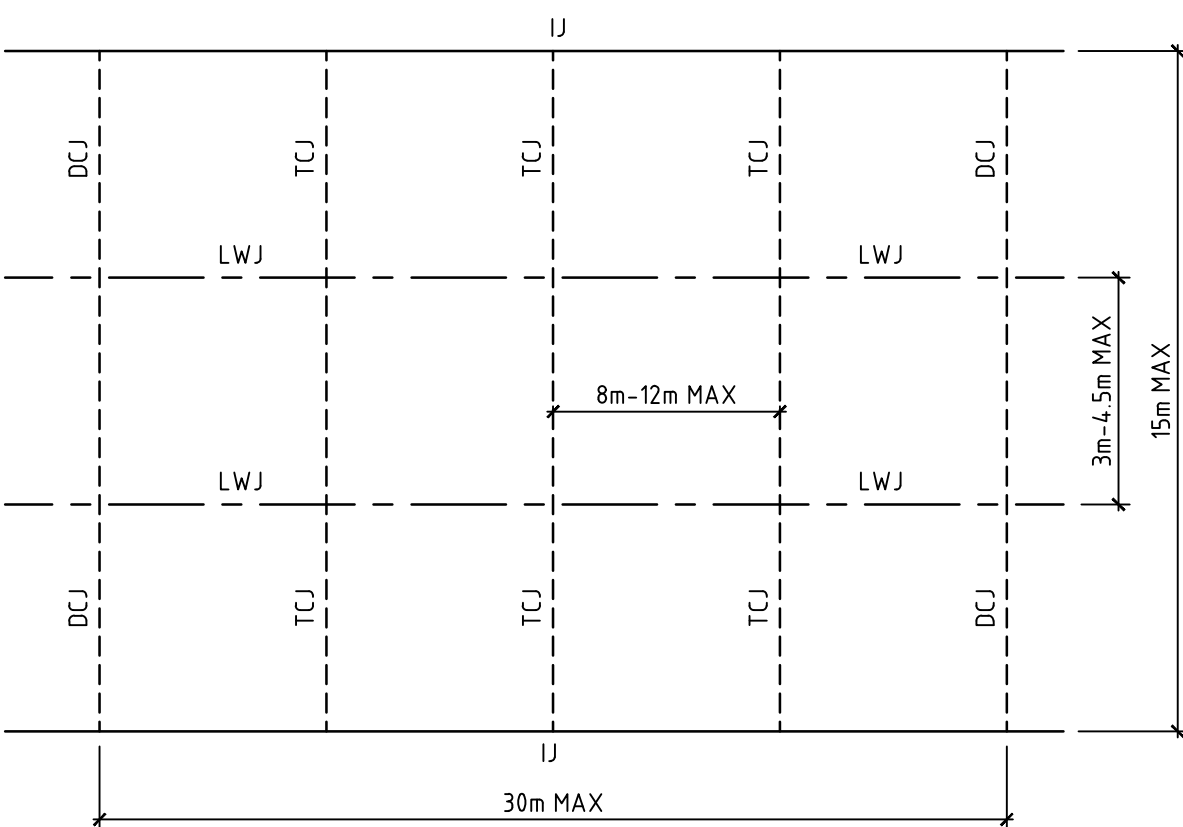
#### PEDESTRIAN FOOTPATH JOINTS

- J1 EXPANSION JOINTS (EJ) ARE TO BE LOCATED WHERE POSSIBLE AT TANGENT POINTS OF CURVES AND ELSEWHERE AT 6m CENTRES.
- J2 SAWCUT JOINTS (SC) ARE TO BE LOCATED AT A MAX 15m x WIDTH OF PAVEMENT. THE TIMING OF THE SAWCUT IS TO BE CONFIRMED BY THE CONTRACTOR ON SITE. SITE CONDITIONS WILL DETERMINE HOW MANY HOURS AFTER THE CONCRETE POUR BEFORE THE SAW CUTS ARE COMMENCED.
- J3 WHERE POSSIBLE JOINTS SHOULD BE LOCATED TO MATCH KERBING AND / OR ADJACENT PAVEMENT JOINTS.
- J4 PROVIDE 10mm WIDE FULL DEPTH EXPANSION JOINTS (EJ) BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVERS
- J5 ALL PEDESTRIAN FOOTPATH JOINTINGS AS FOLLOWS (U.N.O.).



#### VEHICULAR PAVEMENT JOINTS

- J6 ALL VEHICULAR PAVEMENTS TO BE JOINTED AS SHOWN ON DRAWINGS.
- J7 LONGITUDINAL WARPING JOINTS (LWJ) SHOULD GENERALLY BE LOCATED AT A MAXIMUM OF 3m TO 4.5m MAX CENTERS. ALL LWJ's SHOULD BE TIED UP TO A MAXIMUM TOTAL WIDTH OF 30m.
- J8 TRANSVERSE CONTRACTION JOINTS (TCJ) SHOULD GENERALLY BE LOCATED AT A MAXIMUM OF 8m TO 12m MAX CENTERS. TCJ's CAN BE SPACED AT SUITABLE INTERVALS UP TO A RECOMMENDED MAXIMUM LENGTH OF 15m.
- J9 TRANSVERSE DOWELED CONSTRUCTION JOINTS (DCJ) TO BE PROVIDED FOR PLANNED INTERRUPTIONS SUCH AS AT THE END OF EACH DAY'S OPERATIONS (POUR BREAK), AT BLOCK OUTS FOR BRIDGES AND INTERSECTIONS OR FOR UNEXPECTED DELAYS WHEN THE SUSPENSION OF OPERATIONS IS LIKELY TO CREATE A JOINT.
- J10 ISOLATION JOINTS WITH SUB-GRADE BEAM (IJ) TO BE PROVIDED AT INTERSECTIONS OR AT THE JUNCTION OF A POUR BREAK.
- J11 ALL VEHICULAR PAVEMENTS TO BE JOINTED IN ACCORDANCE WITH AUSTRROADS AGPT02-12 GUIDE TO PAVEMENT TECHNOLOGY PART 2 STRUCTURAL PAVEMENT DESIGN AND SUPPLEMENT AP-136-06 PAVEMENT DESIGN FOR LIGHT TRAFFIC
- J12 VEHICULAR PAVEMENT JOINTING AS FOLLOWS (U.N.O.)



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Project Name  
**TWEED VALLEY HOSPITAL  
CUDGEN ROAD AUXILIARY  
LANE WORKS**

Drawing Title  
**DRAWING REGISTER AND  
CONSTRUCTION NOTES**

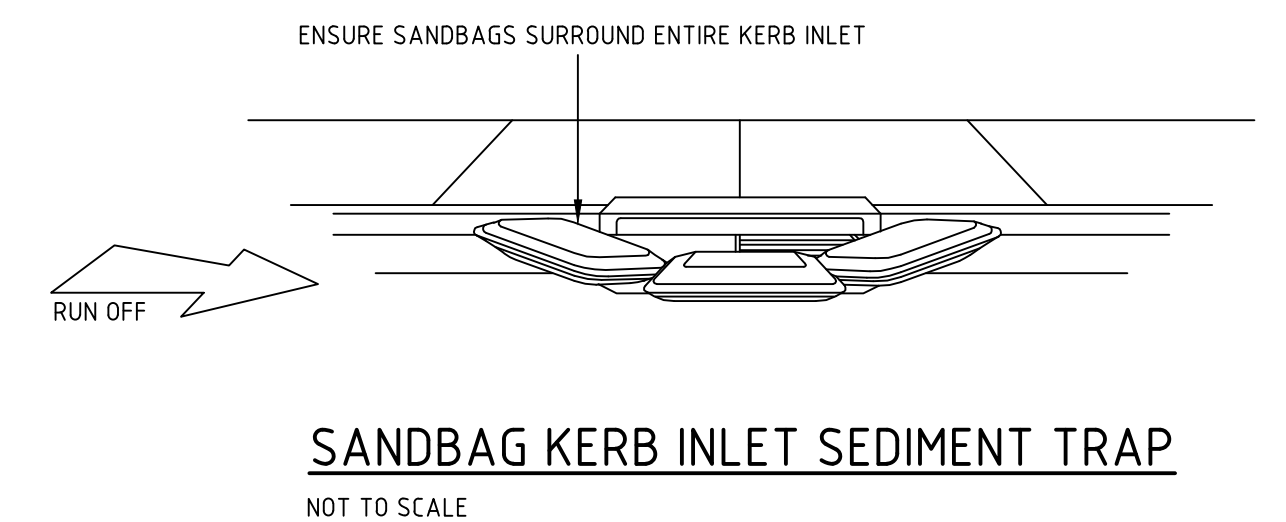
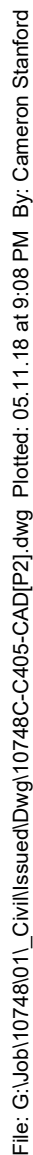
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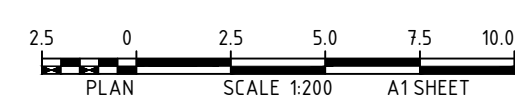







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Project Name	TWEED VALLEY HOSPITAL CUDGEN ROAD AUXILIARY LANE WORKS		TENDER		
	Designed CS	Project Director Approved	Date	 North	
Drawing Title	Drawn PA				
	Scale 1:200				
	Date 3.10.2018				
	Sheet A1	Project Ref	Drawing No	Rev	
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