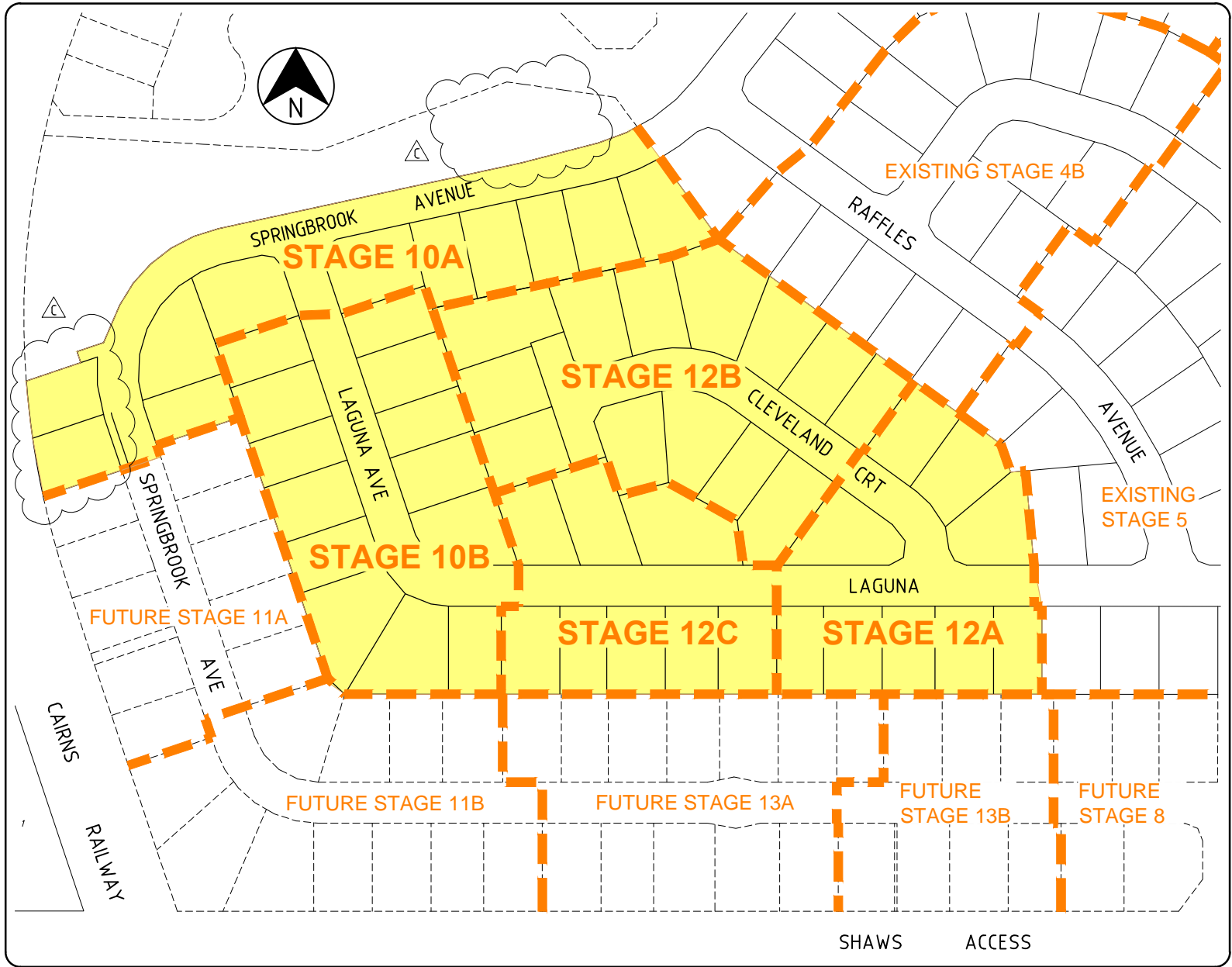


# SPRINGBROOK - STAGE 10 & 12



LOCALITY PLAN  
N.T.S.

## DRAWING INDEX

DRAWING No.	DRAWING TITLE
CF21309-C-01	NOTES
CF21309-C-02	GENERAL ARRANGEMENT
CF21309-C-03	EARTHWORKS
CF21309-C-04	MISCELLANEOUS SECTIONS AND DETAILS
CF21309-C-05	ROAD LONGITUDINAL SECTIONS - SHEET 1 OF 3
CF21309-C-06	ROAD LONGITUDINAL SECTIONS - SHEET 2 OF 3
CF21309-C-07	ROAD LONGITUDINAL SECTIONS - SHEET 3 OF 3
CF21309-C-08	ROAD CROSS SECTIONS - SHEET 1 OF 2
CF21309-C-09	ROAD CROSS SECTIONS - SHEET 2 OF 2
CF21309-C-10	INTERSECTION DETAILS
CF21309-C-11	CONCRETE BANDING SETOUT DETAILS
CF21309-C-12	STORMWATER DRAINAGE
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CF21309-C-15	SEWERAGE
CF21309-C-16	SEWERAGE LONGITUDINAL SECTIONS - SHEET 1 OF 2
CF21309-C-17	SEWERAGE LONGITUDINAL SECTIONS - SHEET 2 OF 2
CF21309-C-18	WATER RETICULATION
CF21309-C-19	EROSION AND SEDIMENT CONTROL STRATEGY - PHASE 1
CF21309-C-20	EROSION AND SEDIMENT CONTROL STRATEGY - PHASE 2
CF21309-C-21	EROSION AND SEDIMENT CONTROL STRATEGY - PHASE 3

## FNQROC STANDARD DRAWINGS

DRAWING No.	DRAWING TITLE
S1000 - S1110	ROADWORKS AND DRAINAGE
S2000 - S2025	WATER
S3000 - S3015	SEWERAGE
S5000 - S5015	SEDIMENT CONTROL MEASURES

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LOCATION: I:\CFRA\Projects\CF21309\Deliverables\Drawings\Civil\DWG\CF21309-C-00.dwg

No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
C	27.08.14	RJB	RJB	RJC	DAH	LOT BOUNDARIES REVISED
B	01.11.13	RJB	RJB	RJC	DAH	LOT BOUNDARIES AMENDED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE



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CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGE 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR: D.A.HILL 18.09.07
DESIGNED: GCP	DESIGN REVIEW: RJB		

TITLE: LOCALITY PLAN AND DRAWING INDEX			
SCALE: N.T.S.	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-00	AMDT: C



**GENERAL ARRANGMENT**

**GENERAL**

- FOR EARTHWORKS DETAILS REFER DWG. C-03.
- FOR TYPICAL CROSS SECTIONS AND CONTROL LINE SETOUT DETAILS REFER DWG. C-04.
- FOR ROAD LONGITUDINAL SECTIONS REFER DWGS. C-05 TO C-07.
- FOR KERB PROFILE DETAILS REFER FNQROC STD. DWG. S1000.
- FOR KERB RAMP DETAILS REFER FNQROC STD. DWG. S1016.
- FOR STREET NAME POST DETAILS REFER FNQROC STD. DWG. S1040.
- CONTRACTOR TO PROVIDE PUBLIC NOTIFICATION/SIGNS (REFER FNQROC DEVELOPMENT MANUAL CP1.11).
- CLEARED VEGETATION SHALL BE MULCHED ON SITE BY THE CONTRACTOR.
- FOR CONCRETE PATHWAY DETAILS REFER FNQROC STD. DWG. S1035.
- FOR PARKING BAY SETOUT DETAILS REFER DWG. C-10.
- JOIN NEATLY TO EXISTING ROADS. REFER DETAIL ON DWG. C-04.
- KERB RAMPS TO BE FITTED WITH TACTILE GROUND SURFACE INDICATORS IN ACCORDANCE WITH AUSTRALIAN STANDARD AS1428.4:2002 DESIGN FOR ACCESS AND MOBILITY PART 4: TACTILE INDICATORS.

**EXISTING SERVICES**

- EXISTING SERVICES ARE PLOTTED FROM THE BEST INFORMATION AVAILABLE. NO RESPONSIBILITY IS TAKEN BY THE PRINCIPAL OR SUPERINTENDENT FOR THE ACCURACY AND COMPLETENESS OF THE INFORMATION SHOWN.
- PRIOR TO THE COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR IS TO ESTABLISH ON SITE THE EXACT POSITION OF ALL UNDERGROUND SERVICES IN THE PROPOSED WORKS AREA. METHODS FOR ACHIEVING THIS WILL INCLUDE BUT NOT BE LIMITED TO--
  - CAREFUL EXAMINATION OF THE CONTRACT DRAWINGS.
  - CONSULTATION WITH THE RELEVANT SERVICE AUTHORITIES.
  - COMPREHENSIVELY SCANNING THE AFFECTED AREAS WITH A CABLE DETECTOR AND MARKING ON THE GROUND THE POSITION OF ALL SERVICES.
  - HAND EXCAVATING TO EXPOSE ALL SUCH SERVICES WHICH MAY BE AFFECTED BY THE PROPOSED WORKS UNDER THE DIRECTION OF THE RELEVANT SERVICE AUTHORITY.
- THE CONTRACTOR IS TO BRING TO THE SUPERINTENDENT'S ATTENTION ANY DISCREPANCIES BETWEEN THE EXISTING SERVICES THUS IDENTIFIED AND DOCUMENTED SERVICES WHICH MIGHT AFFECT THE PROPOSED WORKS. APPROPRIATE MEASURES TO RESOLVE ANY CONFLICTS WILL BE DOCUMENTED BY THE SUPERINTENDENT.

**EARTHWORKS**

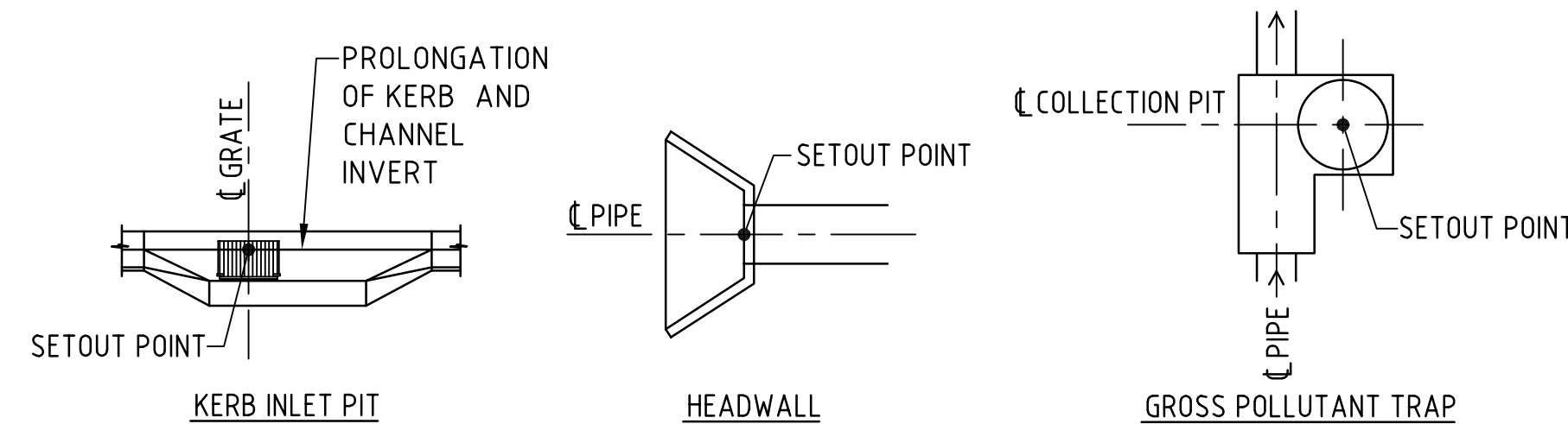
- FOR NOTES REGARDING EXISTING SERVICES REFER DWG. C-01.
- ALL BATTERS TO ROAD FRONTAGES ARE NOMINALLY 5m BACK FROM THE PROPERTY BOUNDARY AND ARE 1 ON 4 OR FLATTER. ALL OTHER BATTERS ARE 1 ON 2 U.N.O.
- FOR STORMWATER PIT LOCATIONS REFER DWG. C-12.
- FINAL BATTER SLOPES TO BE APPROVED ON SITE BY GEOTECHNICAL CONSULTANT DURING CONSTRUCTION.
- BATTERS TO BE ADJUSTED LOCALLY AROUND SEWER MANHOLES. REFER DWG. C-15 FOR DETAILS.

**INTERSECTION DETAILS**

- ALL KERB SETOUT DETAILS REFER TO THE SETOUT LINE OF KERB AND CHANNEL OR FACE OF KERB AS APPLICABLE.
- FOR KERB PROFILE DETAILS REFER FNQROC STD. DWG. S1000.
- CONCRETE HARDSTAND PARKING TO BE IN ACCORDANCE WITH FNQROC STD. DWG. S1015.

**STORMWATER**

- FOR STANDARD STORMWATER DRAINAGE DETAILS REFER FNQROC STD. DWGS. S1045-S1100 INCLUSIVE.
- THE CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES IN THE WORKS AREA PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. FOR NOTES REGARDING EXISTING SERVICES REFER DWG. C-01.
- SUBSURFACE DRAINS TO BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATION, FLUSHING POINTS IN ACCORDANCE WITH FNQROC STD. DWG. S1095.
- SETOUT OF STORMWATER DRAINAGE STRUCTURES REFER TO:
  - CENTRE OF GRATE ON FIELD INLET PIT OR KERB INLET LINE FOR KERB INLET PITS
  - CENTRELINE OF PIPE AT TOP OF HEADWALL FOR HEADWALLS
  - CENTRE OF COLLECTION PIT FOR GROSS POLLUTANT TRAP
- FOR STORMWATER LONGITUDINAL SECTIONS REFER DWGS. C-13 & C-14.
- ALL STORMWATER PIPES ARE TO BE CLASS 2 FJ, RCP'S U.N.O.
- PRIOR TO ORDERING THE GPT, THE CONTRACTOR SHALL CONFIRM THE FINISHED SURFACE LEVEL TAKING INTO ACCOUNT VERGE CROSS FALL AND ADVISE THE SUPERINTENDENT OF ANY DISCREPANCIES.
- PRIOR TO COMMENCEMENT OF PIPEWORK, THE CONTRACTOR IS TO CONFIRM THE INVERT LEVEL OF DOWNSTREAM DRAINAGE AND REFER ANY DISCREPANCY TO THE SUPERINTENDENT.



**STORMWATER STRUCTURE SETOUT POINTS**

N.T.S.

**SEWER**

- ALL SEWER PIPES SHALL BE 150φ uPVC CLASS 'S.N.8.' (U.N.O.).
- FOR STANDARD DETAILS OF SEWER MAINS, ETC. REFER FNQROC STD. DWGS. S3000-CCC TO S3015-CCC INCLUSIVE.
- MANHOLES ADJACENT ROAD BOUNDARIES SHALL BE ON A 1.5m ALIGNMENT U.N.O. ALL OTHER MANHOLES SHALL BE ON A 0.8m ALIGNMENT U.N.O.
- SEWER MANHOLES SHALL BE FINISHED 25mm ABOVE FINISHED SURFACE LEVEL IN ALLOTMENTS AND FLUSH IN ROAD RESERVES.
- HCB'S ARE TO BE CONSTRUCTED 1.0m CLEAR OF ANY EARTHWORKS BATTER THAT IS STEEPER THAN 1V:2H.
- FOR SEWER LONGITUDINAL SECTIONS REFER DWGS. C-16 & C-17.
- THE CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES IN THE WORKS AREA PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. FOR NOTES REGARDING EXISTING SERVICES REFER DWG. C-01.
- CONSTRUCTION OF SEWER TO EXISTING MANHOLE SHALL BE IN ACCORDANCE WITH FNQROC'S REQUIREMENTS. CONNECTION TO MANHOLE TO BE MADE WITH SAND-SOCKETED PIPES (TO BE CONFIRMED WITH CAIRNS WATER PRIOR TO CONSTRUCTION).
- EXISTING LOTS TO BE REINSTATED AFTER CONSTRUCTION OF THE SEWER.
- ALL HOUSE CONNECTION BRANCHES ARE REQUIRED TO BE BROUGHT TO WITHIN A MAXIMUM OF 300mm OF THE FINISHED SURFACE LEVEL AND A GLUED CAP INSTALLED. THE RISER MUST BE CONNECTED TO A MARKER PEG WITH PLASTIC COATED WIRE. THE MARKER PEG IS TO BE OF HARDWOOD MATERIAL, PROTRUDING 20mm ABOVE THE GROUND AND SHALL BE INSTALLED IMMEDIATELY ADJACENT TO THE RISER IN ACCORDANCE WITH FNQROC DRAWING S3005-CCC.
- ALL VERTICAL DROPS SHALL BE CONSTRUCTED USING FIBREGLASS HEAVY DUTY DEEP SEWER DROPS.

**WATER**

- ALL WATER MAINS ARE ON 2.7m ALIGNMENTS FROM R.P. BOUNDARY U.N.O.
- FOR STANDARD DETAILS REFER FNQROC STD. DWGS. S2000-CCC TO S2035-CCC INCLUSIVE.
- CONNECTIONS TO EXISTING COUNCIL MAINS TO BE MADE UNDER THE DIRECTION OF THE LOCAL AUTHORITY.
- THE CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES IN THE WORKS AREA PRIOR TO COMMENCEMENT OF CONSTRUCTION. REFER DWG. C-01 FOR NOTES REGARDING EXISTING SERVICES.
- PROVIDE 80mm uPVC CLASS 6 CONDUITS WITH 300mm COVER UNDER CONCRETE FOOTPATH FOR WATER SERVICES AS PER FNQROC D6-20. EXTEND CONDUITS 300 PAST THE EDGE OF FOOTPATH. FINAL LOCATION OF CONDUITS TO BE CONFIRMED ONCE ERGON PILLAR BOX LOCATIONS ARE AVAILABLE.
- ALL φ50 WATER MAINS LOCATED UNDER HARD STAND PARKING TO HAVE A uPVC ENVELOPING PIPE.

**EROSION AND SEDIMENT CONTROL**

- SEQUENCING OF CONTROL MEASURES**
  - INSTALL STABLE POINT OF ENTRY
  - INSTALL SILT FENCES
  - PROTECT TOPSOIL STOCKPILES
  - INSTALL STORMWATER PIPES
  - CONSTRUCT TEMPORARY SEDIMENT BASINS
  - IMPLEMENT PROTECTION MEASURES TO STORMWATER PITS
  - REVEGETATE BARE AREAS UPON COMPLETION OF EARTHWORKS
  - THE SEDIMENT CONTROL STRUCTURES ARE TO BE CLEANED & MAINTAINED AFTER EVERY STORM EVENT. ERODED SOILS SHALL BE STOCKPILED AS DIRECTED.
- THE AMOUNT OF DISTURBANCE TO EXISTING VEGETATION BE KEPT TO A MINIMUM.
- EXACT LOCATION OF SEDIMENT CONTROL STRUCTURES TO BE DETERMINED ON SITE BY COUNCIL & SUPERINTENDENT.
- STOCKPILE LOCATIONS TO BE AGREED WITH COUNCIL & THE SUPERINTENDENT. STOCKPILES TO BE PROTECTED VIA DIVERSION DRAIN ON THE UPSLOPE & SILT FENCE ON THE DOWNSLOPE.
- STORMWATER PIPES TO HAVE PIT PROTECTION MEASURES AS DETAILED IN FNQROC DEVELOPMENT MANUAL.
- ALL SEDIMENT CONTROL MEASURES TO BE IN ACCORDANCE WITH FNQROC STD. DWGS. S5000 - S5015 INCLUSIVE AND THE ENGINEER CERTIFIED CONTRACTORS ESC PLAN.
- THE FOLLOWING REVEGETATION MEASURES ARE TO BE UNDERTAKEN IMMEDIATELY UPON COMPLETION OF EARTHWORKS.
  - CUT & FILL BATTERS TO BE HYDROMULCHED.
  - VERGES & ALLOTMENTS TO BE GRASS SEEDDED.
  - PLACE TURF STRIPS BEHIND ALL KERB LINES.
- REVEGETATION IS TO BE WATERED & MAINTAINED UNTIL GROWTH IS ESTABLISHED.
- SEDIMENT BASIN**
  - INLET PROTECTION TO MINIMISE SCOUR & EVENLY DISTRIBUTE FLOW THROUGH BASIN.
  - A MARKER PEG SHOULD BE INSTALLED TO SHOW THE STORAGE DEPTH. SEDIMENT SHALL BE REMOVED FROM BASIN WHEN 30% STORAGE DEPTH IS ENCLOSED & APPROPRIATELY DISPOSED ON SITE BY RESPREADING IN AREAS OF NON-EROSIVE FLOWS.
- WATER QUALITY MONITORING SHOULD BE UNDERTAKEN DURING SIGNIFICANT RAINFALL EVENTS (I.E. > 10mm). MONITORING SHOULD INVOLVE MEASUREMENT OF TURBIDITY. TURBIDITY AT A POINT 50m BELOW THE LAST SITE DISCHARGE LOCATION SHOULD BE NO MORE THAN 10% ABOVE THAT AT A POINT IMMEDIATELY ABOVE THE SITE, AS MEASURED BY A TURBIDITY METER OR TURBIDITY TUBE. IF THIS IS EXCEEDED A SAMPLE AT EACH LOCATION SHOULD BE TAKEN AND ANALYSED FOR TOTAL SUSPENDED SOLIDS (TSS). DOWNSTREAM TSS SHOULD NOT EXCEED UPSTREAM TSS PLUS 10%.
- DESIGN CRITERIA FOR CONTRACTOR'S EROSION & SEDIMENT CONTROL PLAN TO BE IN ACCORDANCE WITH THE FNQROC DEVELOPMENT MANUAL.

**SEDIMENT BASIN CALCS**

EXPECTED LIFE OF EROSION CONTROL MEASURES 0-6 MONTHS.

DESIGN ARI = 10 YEAR, 6 HOUR STORM

**SEDIMENT BASIN 1**

AREA = 1.56ha

I = 32.24mm/hr

C = 0.7

Q = 100L/s

TARGET PARTICLE SIZE = 0.05mm

SETTLING VELOCITY = 0.0019m/s

THEREFORE, BASIN AREA = 635m<sup>2</sup>/m<sup>3</sup>/s

BASIN AREA = 62.10m<sup>2</sup>

LENGTH:WIDTH RATIO = 3:1

13.65m LONG X 4.55m WIDE X 0.81m DEEP

**SEDIMENT BASIN CALCS**

EXPECTED LIFE OF EROSION CONTROL MEASURES 0-6 MONTHS.

DESIGN ARI = 10 YEAR, 6 HOUR STORM

**SEDIMENT BASIN 2**

AREA = 2.78ha

I = 32.24mm/hr

C = 0.7

Q = 100L/s

TARGET PARTICLE SIZE = 0.05mm

SETTLING VELOCITY = 0.0019m/s

THEREFORE, BASIN AREA = 635m<sup>2</sup>/m<sup>3</sup>/s

BASIN AREA = 110.66m<sup>2</sup>

LENGTH:WIDTH RATIO = 3:1

18.22m LONG X 6.07m WIDE X 0.81m DEEP

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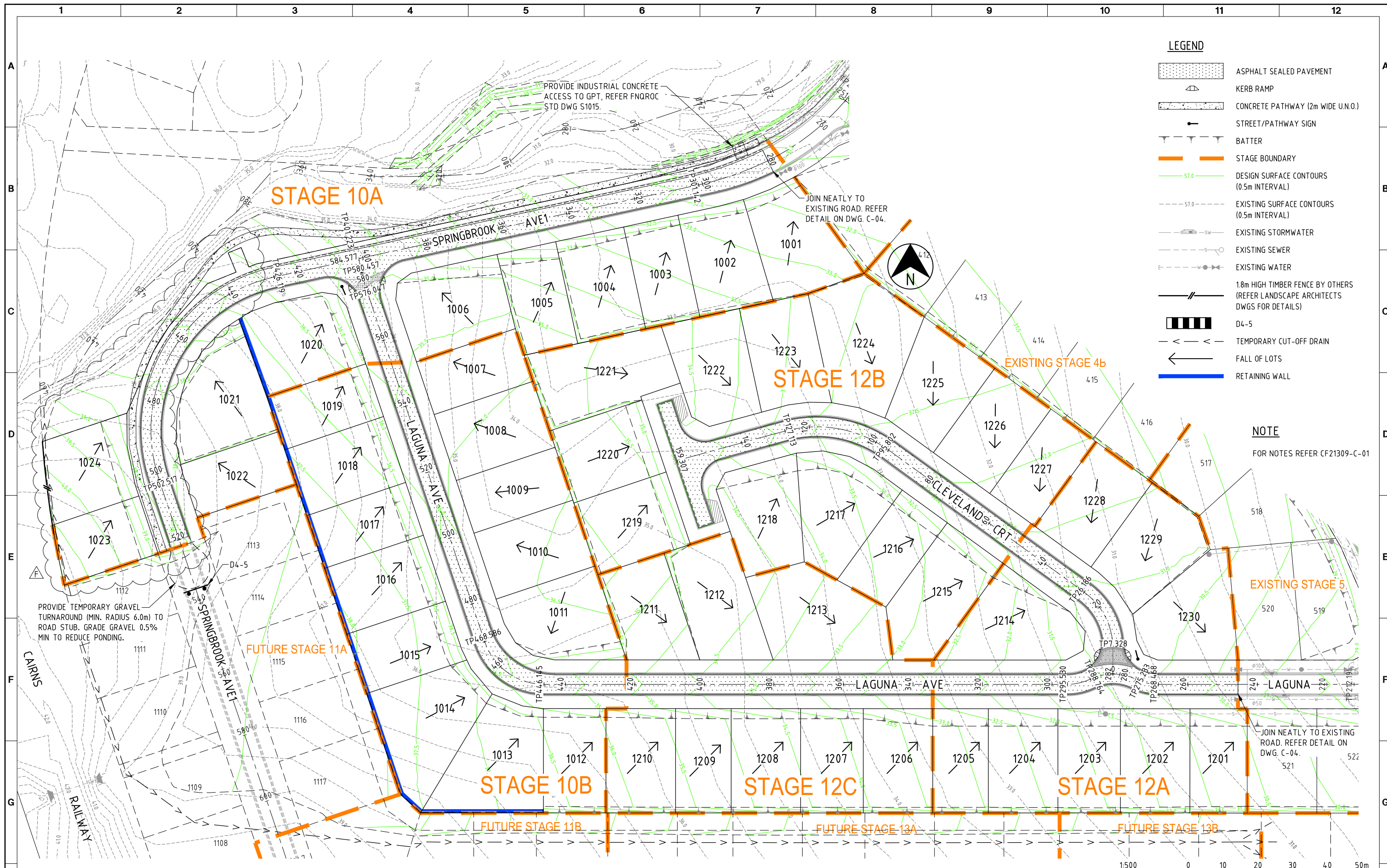
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CLIENT EASTERLY PROJECTS			
PROJECT SPRINGBROOK - STAGES 10 & 12			
DRAFTER SAB	DRAFTING CHECK GCP	REVIEWED PROJECT MANAGER R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR D.H.HILL 18.09.07
DESIGNED GCP	DESIGN REVIEW RJB		

TITLE NOTES			
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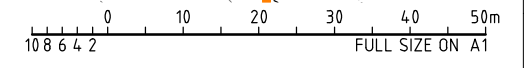




### LEGEND

- ASPHALT SEALED PAVEMENT
- KERB RAMP
- CONCRETE PATHWAY (2m WIDE U.N.O.)
- STREET/PATHWAY SIGN
- BATTER
- STAGE BOUNDARY
- DESIGN SURFACE CONTOURS (0.5m INTERVAL)
- EXISTING SURFACE CONTOURS (0.5m INTERVAL)
- EXISTING STORMWATER
- EXISTING SEWER
- EXISTING WATER
- 1.8m HIGH TIMBER FENCE BY OTHERS (REFER LANDSCAPE ARCHITECTS DWGS FOR DETAILS)
- D4-5
- TEMPORARY CUT-OFF DRAIN
- FALL OF LOTS
- RETAINING WALL

**NOTE**  
FOR NOTES REFER CF21309-C-01



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F	14.11.14	PAM	RJB	RJC	CJC	LOTS 1023, 1024 & PADMOUNT BODY UPDATED
E	27.08.14	RJB	RJB	RJC	DAH	ROAD H REMOVED, LOT BOUNDARIES REVISED & BARRIER K&C ADDED
D	07.05.14	RJB	RJB	RJC	DAH	EARTHWORKS REVISED
C	01.11.13	RJB	RJB	RJC	DAH	LOT BOUNDARIES AMENDED
B	26.11.07	RJB	RJB	RJC	DAH	ACCESS TO GPT ADDED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE



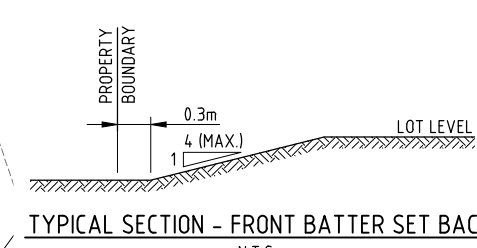
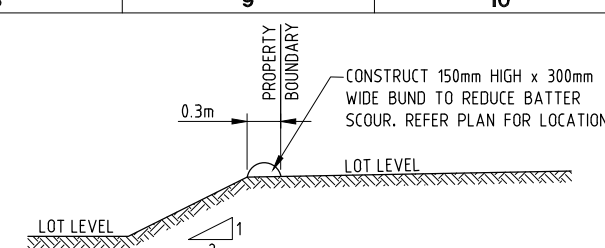
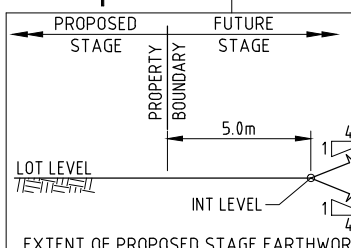
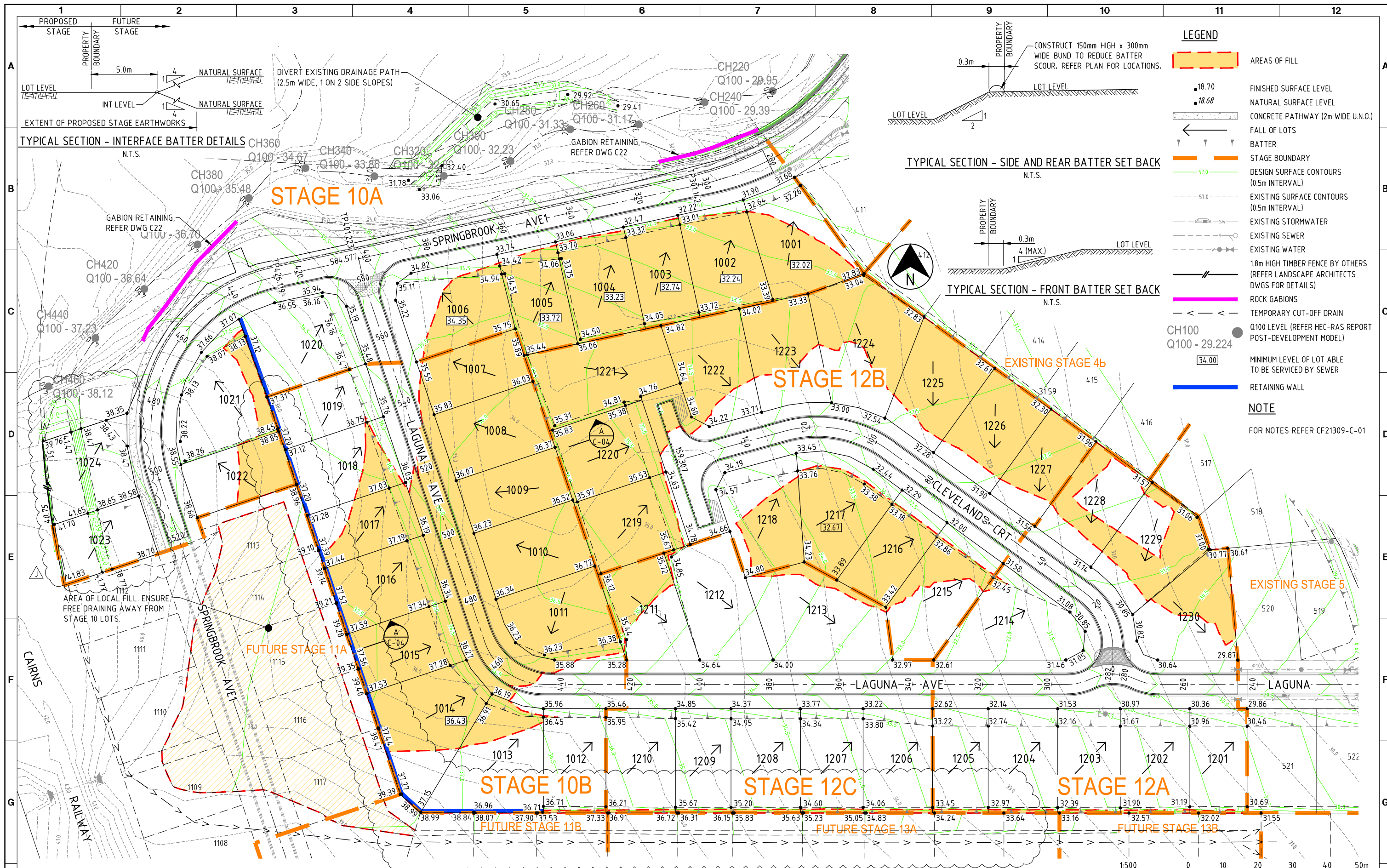
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CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGES 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR: D.A.HILL 18.09.07
DESIGNED: GCP	DESIGN REVIEW: RJB		

TITLE: GENERAL ARRANGEMENT			
SCALE: 1:500(A1)	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-02	AMDT: F





- LEGEND**
- AREAS OF FILL
  - 18.70 FINISHED SURFACE LEVEL
  - 18.68 NATURAL SURFACE LEVEL
  - CONCRETE PATHWAY (2m WIDE U.O.)
  - FALL OF LOTS
  - BATTER
  - STAGE BOUNDARY
  - DESIGN SURFACE CONTOURS (0.5m INTERVAL)
  - EXISTING SURFACE CONTOURS (0.5m INTERVAL)
  - EXISTING STORMWATER
  - EXISTING SEWER
  - EXISTING WATER
  - 1.8m HIGH TIMBER FENCE BY OTHERS (REFER LANDSCAPE ARCHITECTS DWGS FOR DETAILS)
  - ROCK GABIONS
  - TEMPORARY CUT-OFF DRAIN
  - CH100 Q100 - 29.224 Q100 LEVEL (REFER HEC-RAS REPORT POST-DEVELOPMENT MODEL)
  - 34.00 MINIMUM LEVEL OF LOT ABLE TO BE SERVICED BY SEWER
  - RETAINING WALL

**NOTE**  
FOR NOTES REFER CF21309-C-01

DATE: 02.12.2016@13:44:35 LOGIN NAME: pmasford  
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J	02.12.16	RJB	RJB	RJC	DMC	LEVELS REVISED
I	14.11.14	PAM	RJB	RJC	CJC	LOTS 1023, 1024 & PADMOUNT BOY UPDATED
H	15.10.14	PAM	RJB	RJC	CJC	GABIONS AND DIVERSION ADDED
G	27.08.14	RJB	RJB	RJC	DAH	ROAD H REMOVED, LOT BOUNDARIES REVISED & BARRIER K&C ADDED

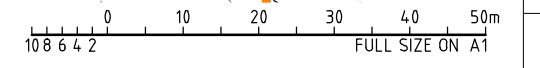


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CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGES 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J. CARMAN 18/09/07	APPROVED PROJECT DIRECTOR: D.A. HELL 18/09/07
DESIGNED: GCP	DESIGN REVIEW: RJB		

TITLE: EARTHWORKS			
SCALE: 1:500(A1)	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-03	AMDT: J



**CONTROL LINE SETOUT - SPRINGBROOK AVE1**

CHAINAGE	COORDINATES		BEARING DEG MIN SEC	RADIUS OF CURVATURE	TANGENT LENGTH	ARC LENGTH
	EASTING	NORTHING				
24.8530	4838.382	9863.185	218° 4' 47"	70.000		
IP 264.265	4828.511	9850.586	-	70.000	16.006	31.470
280.000	4814.145	9843.529	243° 50' 19"	87.028		
IP 290.571	4804.610	9838.845	-	87.028	10.623	21.142
301.142	4794.228	9836.593	257° 45' 26"	STRAIGHT		
426.119	4672.093	9810.091	257° 45' 26"	-45.000		
IP 463.943	4622.980	9799.433	-	-45.000	50.256	75.647
501.766	4638.976	9751.791	161° 26' 25"	STRAIGHT		
619.596	4676.480	9640.089	161° 26' 25"	-31.000		
IP 638.920	4683.575	9618.959	-	-31.000	22.289	38.649
658.245	4705.864	9618.956	90° 0' 25"	STRAIGHT		
954.282	5001.901	9618.921	90° 0' 25"	15.000		
IP 957.665	5005.343	9618.920	-	15.000	3.441	6.765
961.048	5008.440	9617.420	115° 50' 56"	-15.000		
IP 964.430	5011.537	9615.919	-	-15.000	3.441	6.765
967.813	5014.978	9615.919	90° 0' 25"	STRAIGHT		

**CONTROL LINE SETOUT - LAGUNA AVE**

CHAINAGE	COORDINATES		BEARING DEG MIN SEC	RADIUS OF CURVATURE	TANGENT LENGTH	ARC LENGTH
	EASTING	NORTHING				
212.195	4982.775	9692.923	270° 0' 25"	STRAIGHT		
268.468	4926.501	9692.930	270° 0' 25"	15.000		
IP 271.851	4923.060	9692.930	-	15.000	3.441	6.765
275.233	4919.963	9694.430	295° 50' 56"	-15.000		
IP 278.617	4916.866	9695.931	-	-15.000	3.442	6.767
282.000	4913.424	9695.931	270° 0' 5"	-15.000		
IP 285.382	4909.983	9695.931	-	-15.000	3.440	6.764
288.764	4906.886	9694.432	244° 9' 54"	15.000		
IP 292.147	4903.789	9692.932	-	15.000	3.441	6.765
295.530	4900.348	9692.933	270° 0' 25"	STRAIGHT		
44.6145	4749.733	9692.951	270° 0' 25"	18.000		
IP 457.365	4736.791	9692.953	-	18.000	12.942	22.441
468.586	4732.671	9705.222	341° 26' 25"	STRAIGHT		
576.047	4698.467	9807.094	341° 26' 25"	40.000		
IP 578.252	4697.765	9809.186	-	40.000	2.207	4.410
580.457	4697.297	9811.343	347° 45' 26"	STRAIGHT		
584.577	4696.423	9815.370	347° 45' 26"	STRAIGHT		

**CONTROL LINE SETOUT - CLEVELAND CRT**

CHAINAGE	COORDINATES		BEARING DEG MIN SEC	RADIUS OF CURVATURE	TANGENT LENGTH	ARC LENGTH
	EASTING	NORTHING				
0.000	4913.424	9695.931	360° 0' 24"	STRAIGHT		
7.328	4913.424	9703.260	360° 0' 24"	-20.000		
IP 16.757	4913.426	9713.455	-	-20.000	10.196	18.858
26.186	4905.175	9719.446	305° 58' 54"	STRAIGHT		
95.803	4848.841	9760.348	305° 58' 54"	-35.000		
IP 111.458	4835.254	9770.212	-	-35.000	16.790	31.311
127.114	4819.057	9765.789	254° 43' 31"	STRAIGHT		
159.308	4788.000	9757.308	254° 43' 31"	STRAIGHT		

**TABLE OF WIDTHS**

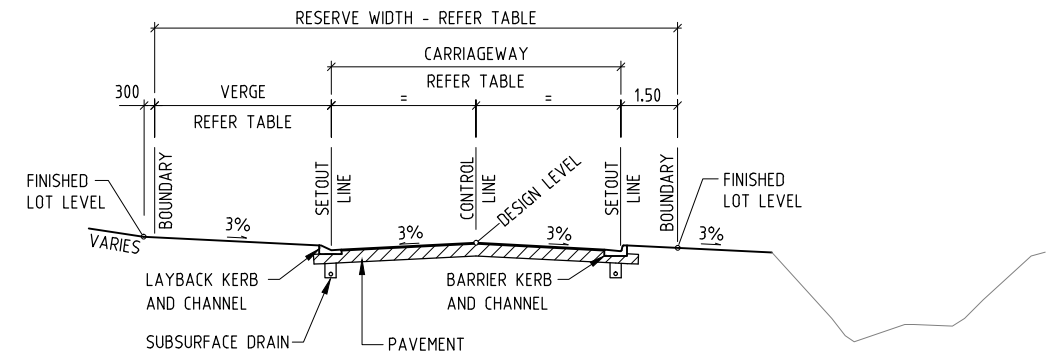
ROAD	CARRIAGEWAY WIDTH (m)	VERGE WIDTH (m)		RESERVE WIDTH (m)
		LHS	RHS	
<b>SPRINGBROOK AVE 1</b>				
CH 280 - 294.581	7.50	4.00	1.50	13
CH 320.883 - 426.870	6.50	4.00	1.50	12
CH 502.517 - 514.999	6.00	4.00	4.00	14
<b>LAGUNA AVE</b>				
CH 245.574-END	6.00	4.00	4.00	14
<b>CLEVELAND CRT</b>				
	6.00	4.00	4.00	14

**PROVISIONAL PAVEMENT DETAILS**

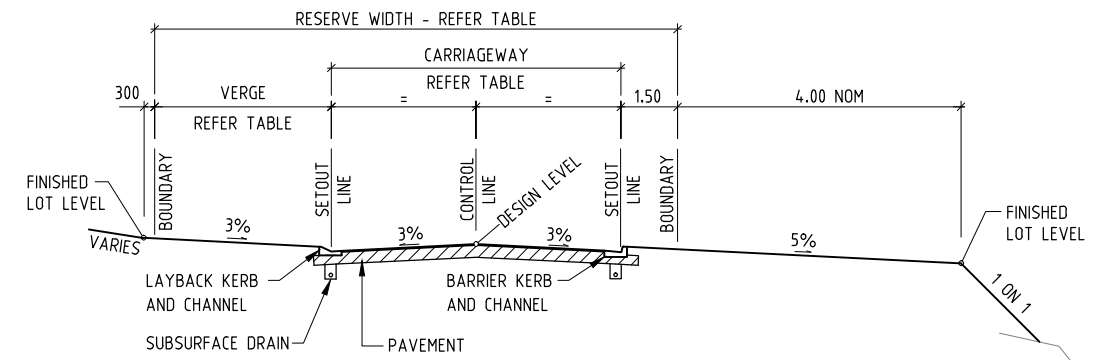
ROAD	SURFACING	SUBBASE CBR 45 (mm)	BASE CBR 60 (mm)
SPRINGBROOK AVE1 (CH280-300)	30mm ASPHALT	125	125
(CH300-END)	30mm ASPHALT	100	100
CLEVELAND CRT	30mm ASPHALT	100	100
LAGUNA AVE	30mm ASPHALT	100	100

**NOTES**  
 PROVISIONAL PAVEMENT DESIGN IS BASED ON AN ASSUMED SUBGRADE SOAKED CBR OF 10. THE CONTRACTOR IS TO CONFIRM SUBGRADE CBR DURING CONSTRUCTION AND THE PAVEMENT DESIGN MAY BE AMENDED ACCORDINGLY BY THE CAIRNS CITY COUNCIL.

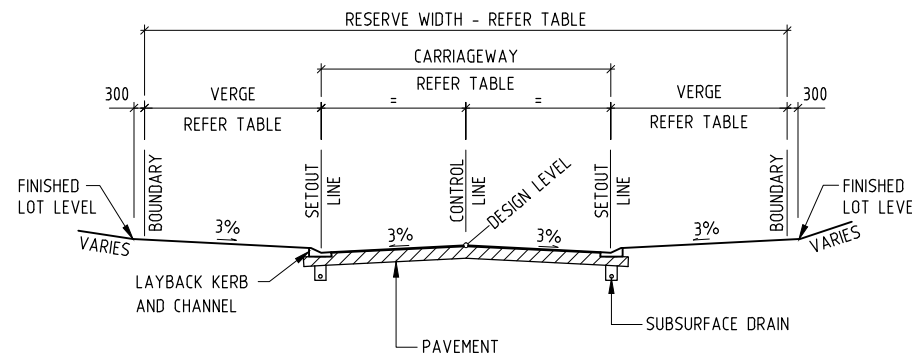
ASPHALT SURFACING TO BE INCREASED TO 50mm AT INTERSECTIONS. REFER DWG. C-10 FOR LOCATIONS.



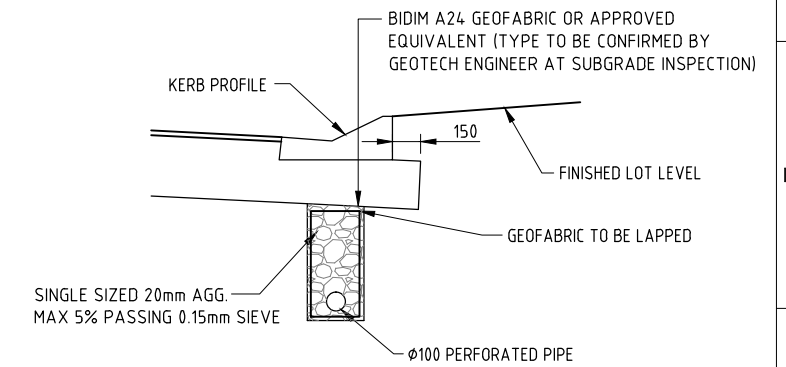
**TYPICAL ROAD CROSS SECTION  
 SPRINGBROOK AVENUE 1 (CH320-480)**  
 N.T.S.



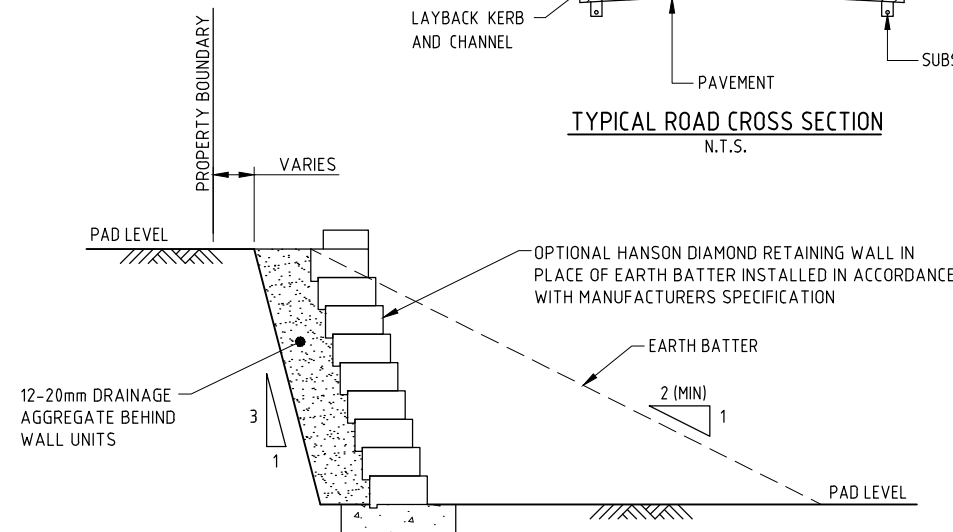
**TYPICAL ROAD CROSS SECTION  
 SPRINGBROOK AVENUE 1 (CH280-320)**  
 N.T.S.



**TYPICAL ROAD CROSS SECTION**  
 N.T.S.



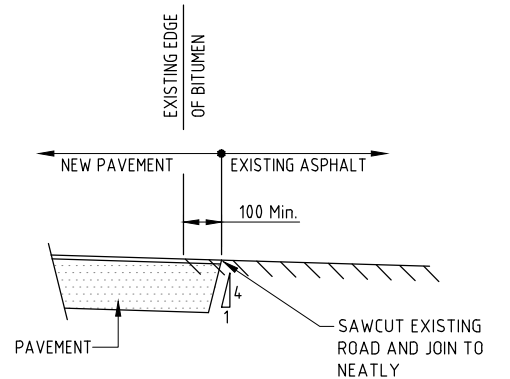
**SUB SURFACE DRAINAGE DETAIL**  
 N.T.S.



**SECTION A-C-03**  
 N.T.S.

**NOTE**

- FOR FURTHER RETAINING WALL DETAILS REFER HANSON TECHNICAL SPECIFICATIONS.



**TYPICAL JOIN TO EXISTING ROAD**  
 N.T.S.

DATE: 10.09.2014@09:05:17 LOGIN NAME: sbest  
 XREF: X-21309-DESIGN  
 LOCATION: I:\CFRA\Projects\CF21309\Deliverables\Drawings\Civil\Dwg\CF21309-C-04.dwg

No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
E	10.09.14	RJB	RJB	RJC	DAH	PAVEMENT DETAILS REVISED
D	27.08.14	RJB	RJB	RJC	DAH	ROAD H REMOVED & SPRINGBROOK AVE1 UPDATED
C	01.11.13	RJB	RJB	RJC	DAH	CLEVELAND CRT CONTROL LINE SETOUT AMENDED
B	26.11.07	RJB	RJB	RJC	DAH	GABIONS REMOVED, NOTE REVISED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE



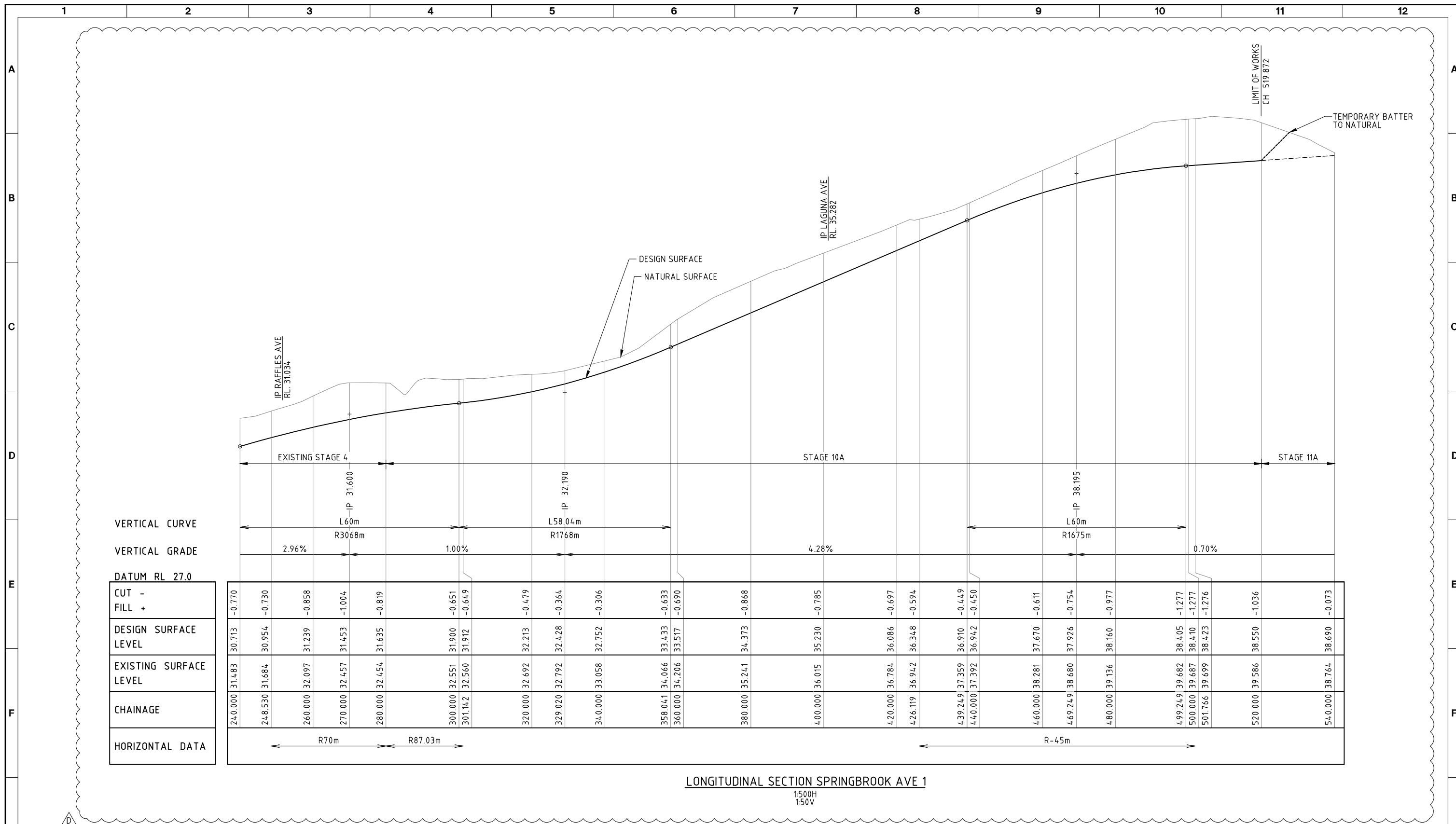
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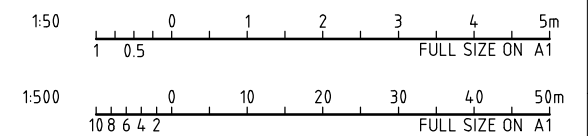
CLIENT EASTERLY PROJECTS			
PROJECT SPRINGBROOK - STAGES 10 & 12			
DRAFTER SAB	DRAFTING CHECK GCP	REVIEWED PROJECT MANAGER R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR D.A.HILL 18.09.07
DESIGNED GCP	DESIGN REVIEW RJB		

TITLE MISCELLANEOUS SECTIONS AND DETAILS			
SCALE N.T.S.	SKM PROJECT No CF21309	DRAWING No CF21309-C-04	AMDT E





**LONGITUDINAL SECTION SPRINGBROOK AVE 1**  
 1:500H  
 1:50V



DATE: 20.10.2014@10:31:07 LOGIN NAME: pmashford  
 XREF:  
 LOCATION: I:\CFRA\Projects\CF21309\Deliverables\Drawings\Civil\Dwg\CF21309-C-05-07.dwg

No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
D	20.10.14	PAM	RJB	RJC	CJC	SECTION REVISED
C	27.08.14	RJB	RJB	RJC	DAH	LONGITUDINAL SECTION REVISED
B	01.11.13	RJB	RJB	RJC	DAH	LONGITUDINAL SECTION REVISED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE

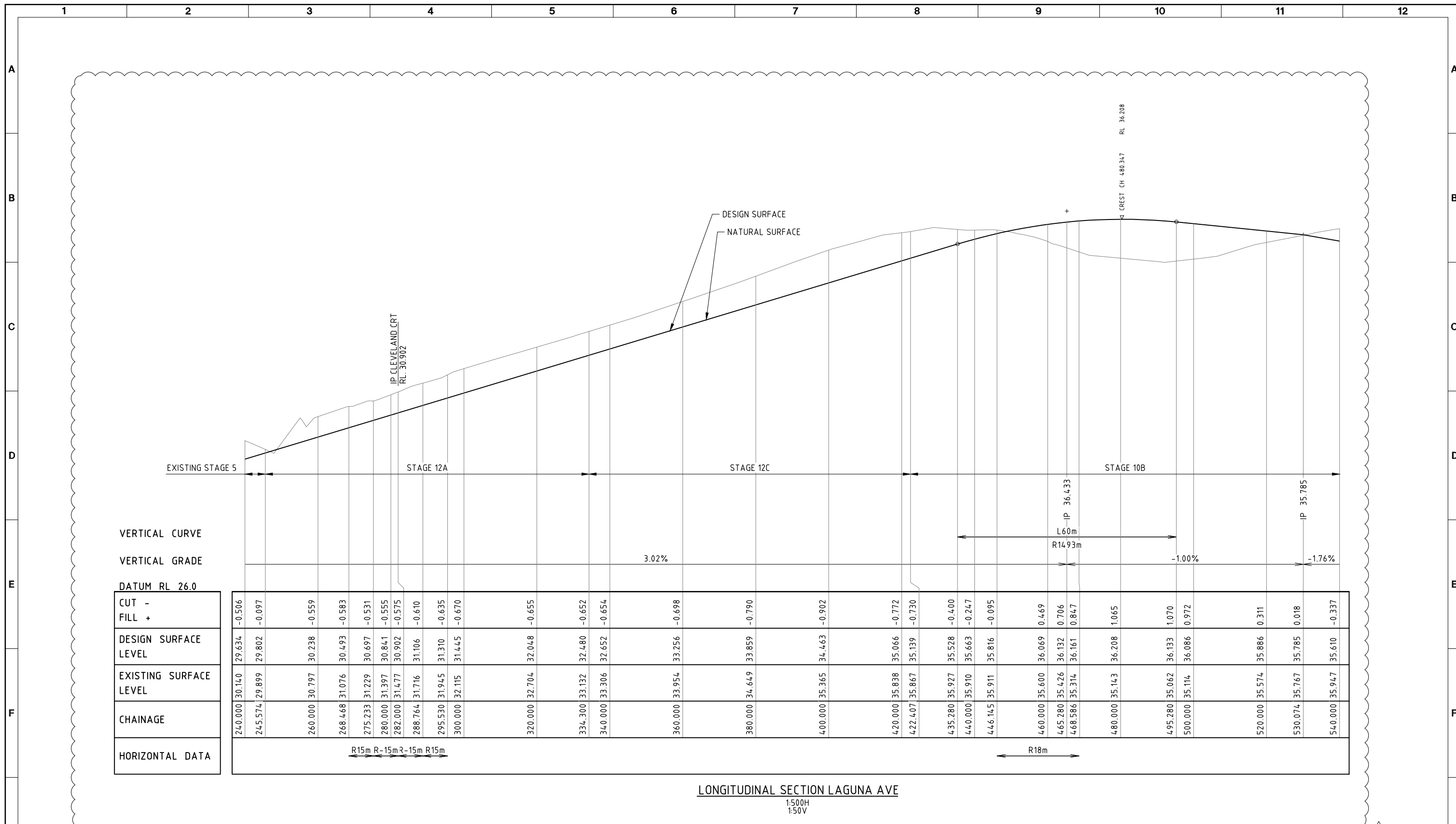


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CLIENT EASTERLY PROJECTS			
PROJECT SPRINGBROOK - STAGES 10 & 12			
DRAFTER SAB	DRAFTING CHECK GCP	REVIEWED PROJECT MANAGER R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR D.A.WELL 18.09.07
DESIGNED GCP	DESIGN REVIEW RJB		

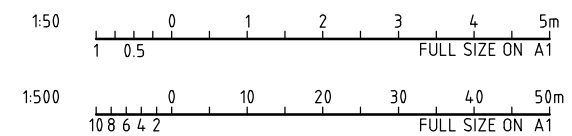
TITLE ROAD LONGITUDINAL SECTIONS SHEET 1 OF 3			
SCALE 1:500H, 1:50V (A1)	SKM PROJECT No CF21309	DRAWING No CF21309-C-05	AMDT D



VERTICAL CURVE  
VERTICAL GRADE  
DATUM RL 26.0

CUT - FILL +	-0.506	-0.097	-0.559	-0.583	-0.531	-0.555	-0.575	-0.610	-0.635	-0.670	-0.655	-0.652	-0.654	-0.698	-0.790	-0.902	-0.772	-0.730	-0.400	-0.247	-0.095	0.469	0.706	0.847	1.065	1.070	0.972	0.311	0.018	-0.337
DESIGN SURFACE LEVEL	29.634	29.802	30.238	30.493	30.697	30.841	30.902	31.106	31.310	31.445	32.048	32.480	32.652	33.256	33.859	34.463	35.066	35.139	35.528	35.663	35.816	36.069	36.132	36.161	36.208	36.133	36.086	35.886	35.785	35.610
EXISTING SURFACE LEVEL	30.140	29.899	30.797	31.076	31.229	31.397	31.477	31.716	31.945	32.115	32.704	33.132	33.306	33.954	34.649	35.365	35.838	35.867	35.927	35.910	35.911	35.600	35.426	35.314	35.143	35.062	35.114	35.574	35.767	35.947
CHAINAGE	240.000	245.574	260.000	268.468	275.233	280.000	282.000	288.764	295.530	300.000	320.000	334.300	340.000	360.000	380.000	400.000	420.000	422.407	435.280	440.000	446.145	460.000	465.280	468.586	480.000	495.280	500.000	520.000	530.074	540.000
HORIZONTAL DATA	R15m R-15m R-15m R15m															R18m														

LONGITUDINAL SECTION LAGUNA AVE  
1:500H  
1:50V



DATE: 20.10.2014@10:31:08 LOGIN NAME: pmashford  
XREF:  
LOCATION: I:\CFRA\Projects\CF21309\Deliverables\Drawings\Civil\Dwg\CF21309-C-05-07.dwg

No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
D	20.10.14	PAM	RJB	RJC	CJC	SECTION REVISED
C	27.08.14	RJB	RJB	RJC	DAH	LONGITUDINAL SECTION REVISED
B	01.11.13	RJB	RJB	RJC	DAH	LONGITUDINAL SECTION REVISED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE

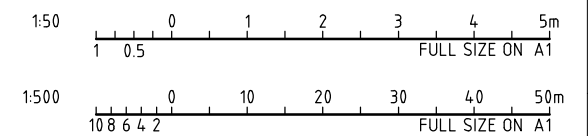
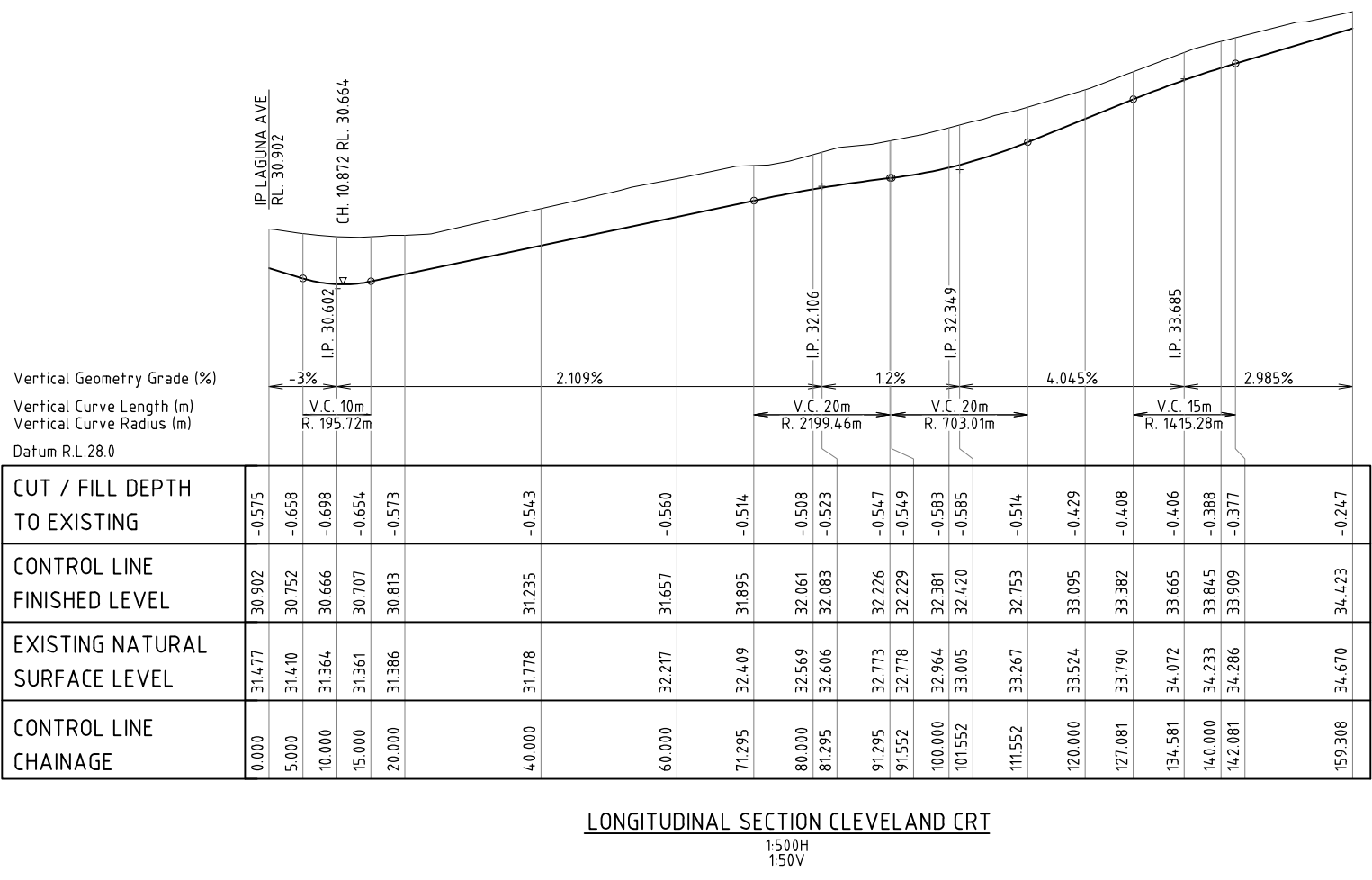
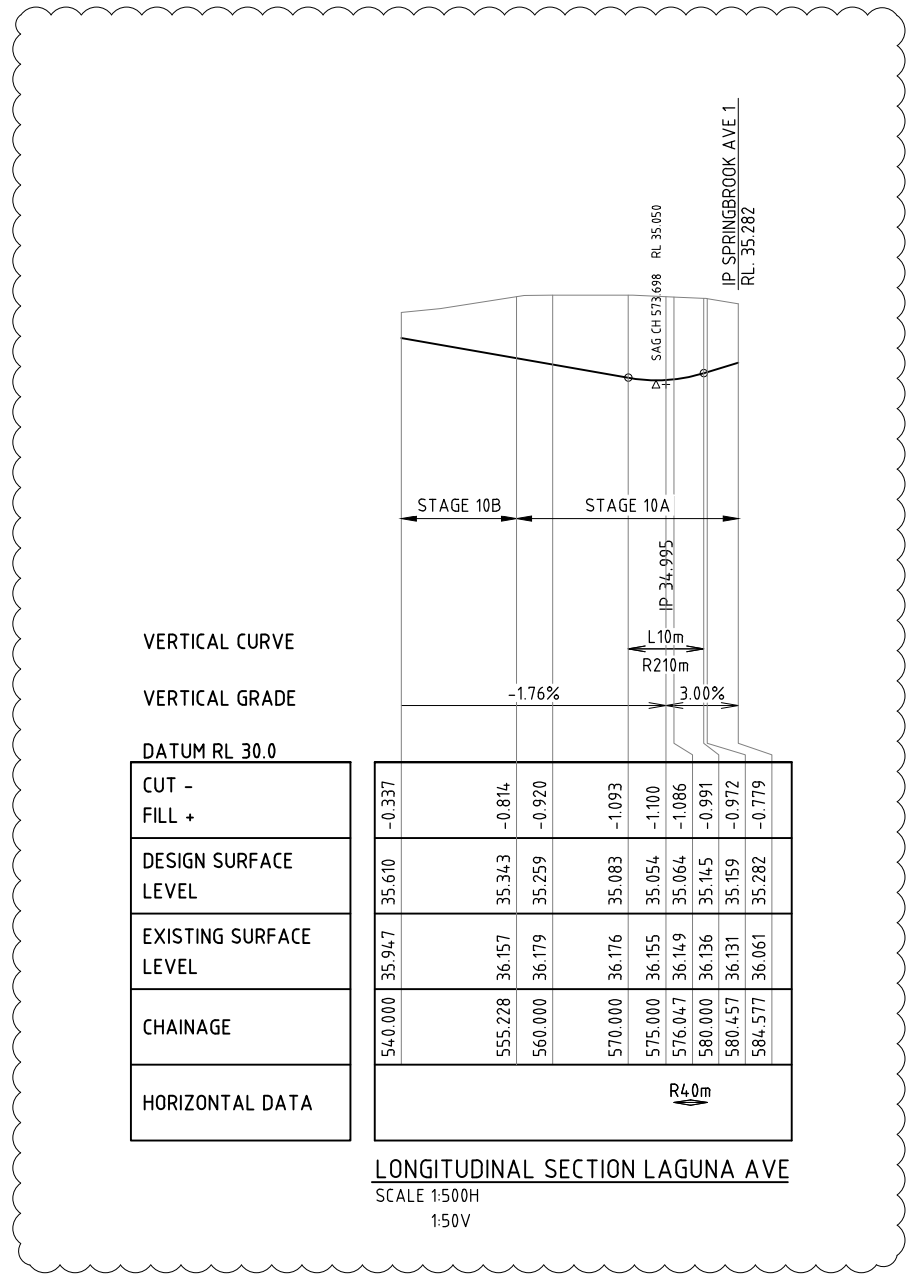


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CLIENT EASTERLY PROJECTS			
PROJECT SPRINGBROOK - STAGES 10 & 12			
DRAFTER SAB	DRAFTING CHECK GCP	REVIEWED PROJECT MANAGER R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR D.A.HILL 18.09.07
DESIGNED GCP	DESIGN REVIEW RJB		

TITLE ROAD LONGITUDINAL SECTIONS SHEET 2 OF 3			
SCALE 1:500H, 1:50V (A1)	SKM PROJECT No CF21309	DRAWING No CF21309-C-06	AMDT D



DATE: 20.10.2014@10:31:08 LOGIN NAME: pmashford  
XREF:  
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E	20.10.14	PAM	RJB	RJC	CJC	SECTION REVISED
D	27.08.14	RJB	RJB	RJC	DAH	ROAD H REMOVED
C	18.11.13	RJB	RJB	RJC	DAH	CLEVELAND CRT REVISED
B	01.11.13	RJB	RJB	RJC	DAH	LONGITUDINAL SECTION REVISED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE
No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT



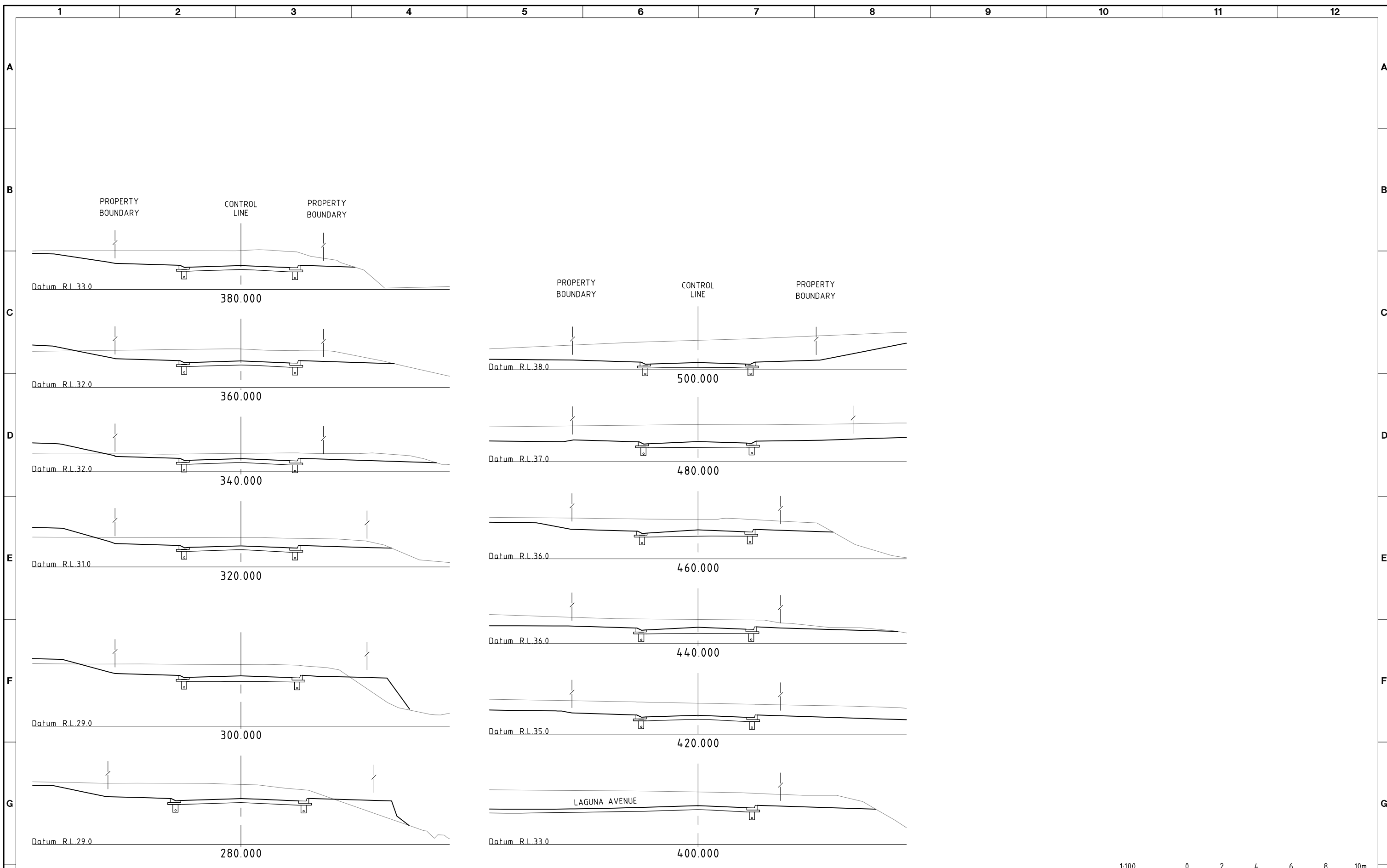
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CLIENT EASTERLY PROJECTS			
PROJECT SPRINGBROOK - STAGES 10 & 12			
DRAFTER SAB	DRAFTING CHECK GCP	REVIEWED PROJECT MANAGER R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR D.A.HILL 18.09.07
DESIGNED GCP	DESIGN REVIEW RJB		ISSUED BY

TITLE ROAD LONGITUDINAL SECTIONS SHEET 3 OF 3			
SCALE 1:500H, 1:50V (A1)	SKM PROJECT No CF21309	DRAWING No CF21309-C-07	AMDT E

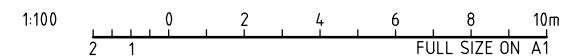




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**SPRINGBROOK AVENUE 1**

**SPRINGBROOK AVENUE 1**



No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
C	27.08.14	RJB	RJB	RJC	DAH	CROSS SECTIONS REVISED TO SHOW NEW BARRIER K&C
B	01.11.13	RJB	RJB	RJC	DAH	CROSS SECTION AMENDED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE

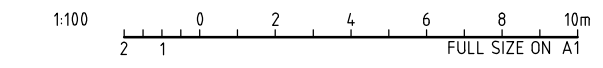
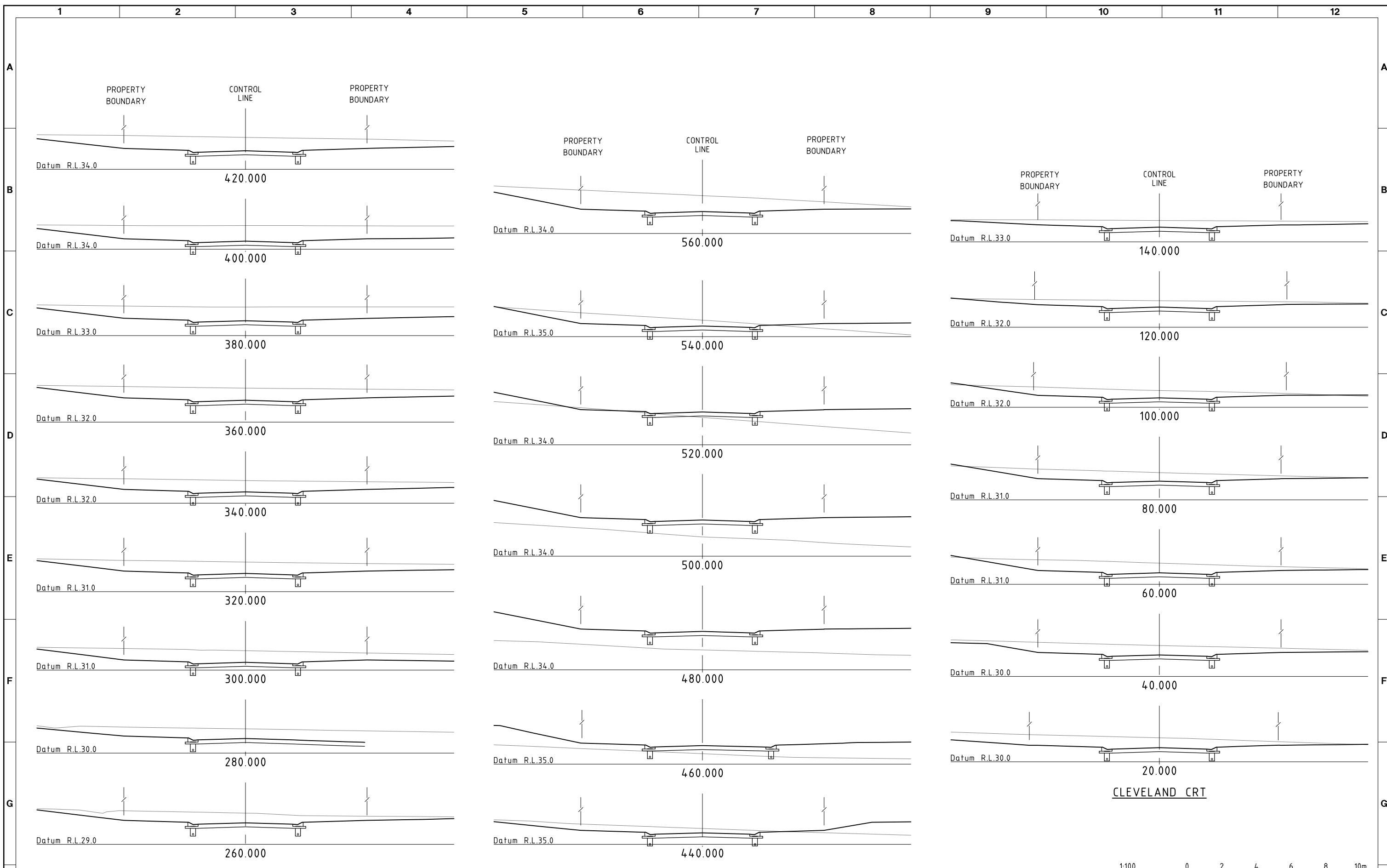


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PROJECT SPRINGBROOK - STAGES 10 & 12			
DRAFTER SAB	DRAFTING CHECK GCP	REVIEWED PROJECT MANAGER R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR D.A.HILL 18.09.07
DESIGNED GCP	DESIGN REVIEW RJB		APPROVED No. CF21309-C-08

TITLE ROAD CROSS SECTIONS SHEET 1 OF 2			
SCALE 1:100(A1)	SKM PROJECT No. CF21309	DRAWING No. CF21309-C-08	AMDT C



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No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
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A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE



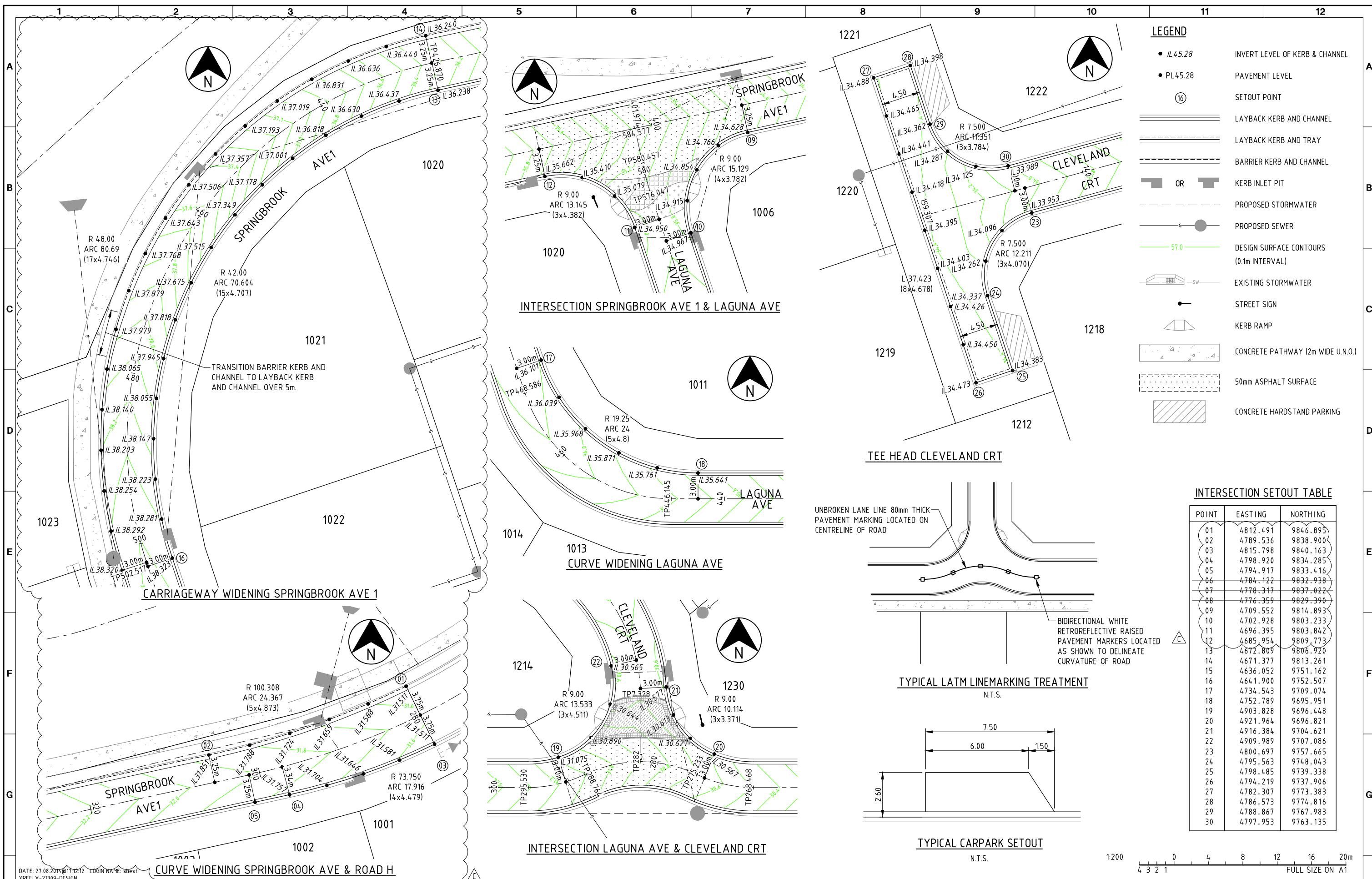
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PROJECT SPRINGBROOK - STAGES 10 & 12			
DRAFTER SAB	DRAFTING CHECK GCP	REVIEWED PROJECT MANAGER R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR D.A.HILL 18.09.07
DESIGNED GCP	DESIGN REVIEW RJB		ISSUED No.

TITLE ROAD CROSS SECTIONS SHEET 2 OF 2			
SCALE 1:100(A1)	SKM PROJECT No CF21309	DRAWING No CF21309-C-09	AMDT B



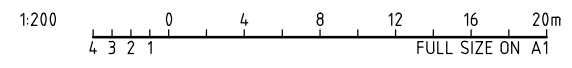
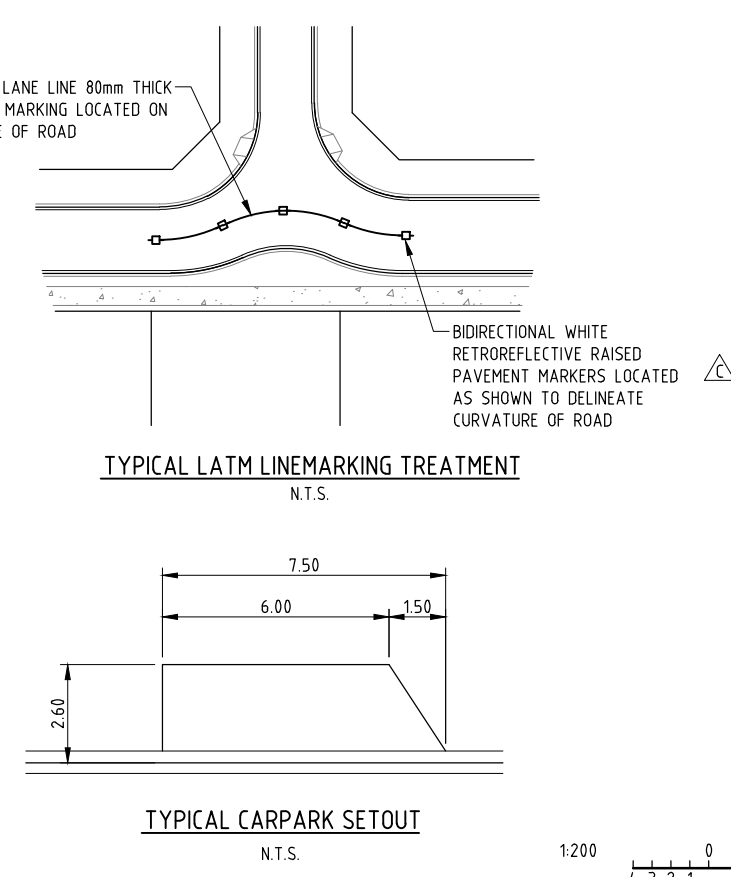


**LEGEND**

- IL 45.28 INVERT LEVEL OF KERB & CHANNEL
- PL 45.28 PAVEMENT LEVEL
- Ⓟ SETOUT POINT
- ==== LAYBACK KERB AND CHANNEL
- ==== LAYBACK KERB AND TRAY
- ==== BARRIER KERB AND CHANNEL
- OR KERB INLET PIT
- - - - PROPOSED STORMWATER
- - - - PROPOSED SEWER
- 57.0 DESIGN SURFACE CONTOURS (0.1m INTERVAL)
- EXISTING STORMWATER
- STREET SIGN
- KERB RAMP
- CONCRETE PATHWAY (2m WIDE U.N.O.)
- 50mm ASPHALT SURFACE
- CONCRETE HARDSTAND PARKING

**INTERSECTION SETOUT TABLE**

POINT	EASTING	NORTHING
01	4812.491	9846.895
02	4789.536	9838.900
03	4815.798	9840.163
04	4798.920	9834.285
05	4794.917	9833.416
06	4784.122	9832.938
07	4778.317	9837.022
08	4776.359	9829.390
09	4709.552	9814.893
10	4702.928	9803.233
11	4696.395	9803.842
12	4685.954	9809.773
13	4672.809	9806.920
14	4671.377	9813.261
15	4636.052	9751.162
16	4641.900	9752.507
17	4734.543	9709.074
18	4752.789	9695.951
19	4903.828	9696.448
20	4921.964	9696.821
21	4916.384	9704.621
22	4909.989	9707.086
23	4800.697	9757.665
24	4795.563	9748.043
25	4798.485	9739.338
26	4794.219	9737.906
27	4782.307	9773.383
28	4786.573	9774.816
29	4788.867	9767.983
30	4797.953	9763.135



DATE: 27.08.2014 @ 17:12 LOGIN NAME: sdes1  
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 LOCATION: I:\CFRA\Projects\CF21309\Deliverables\Drawings\Civil\DWG\CF21309-C-10-11.dwg

No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
C	27.08.14	RJB	RJB	RJC	DAH	ROAD H AND SPRINGBROOK AVE INTERSECTION REMOVED, CURVE WIDENING & BARRIER K&C ADDED
B	01.11.13	RJB	RJB	RJC	DAH	LOT BOUNDARIES AMENDED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE

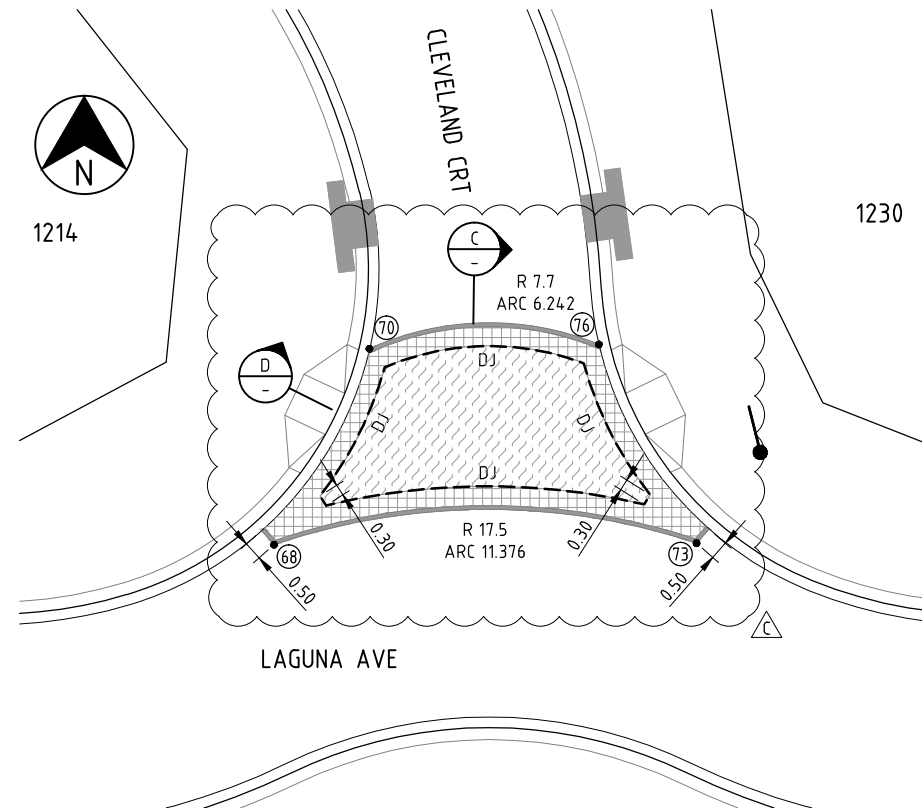
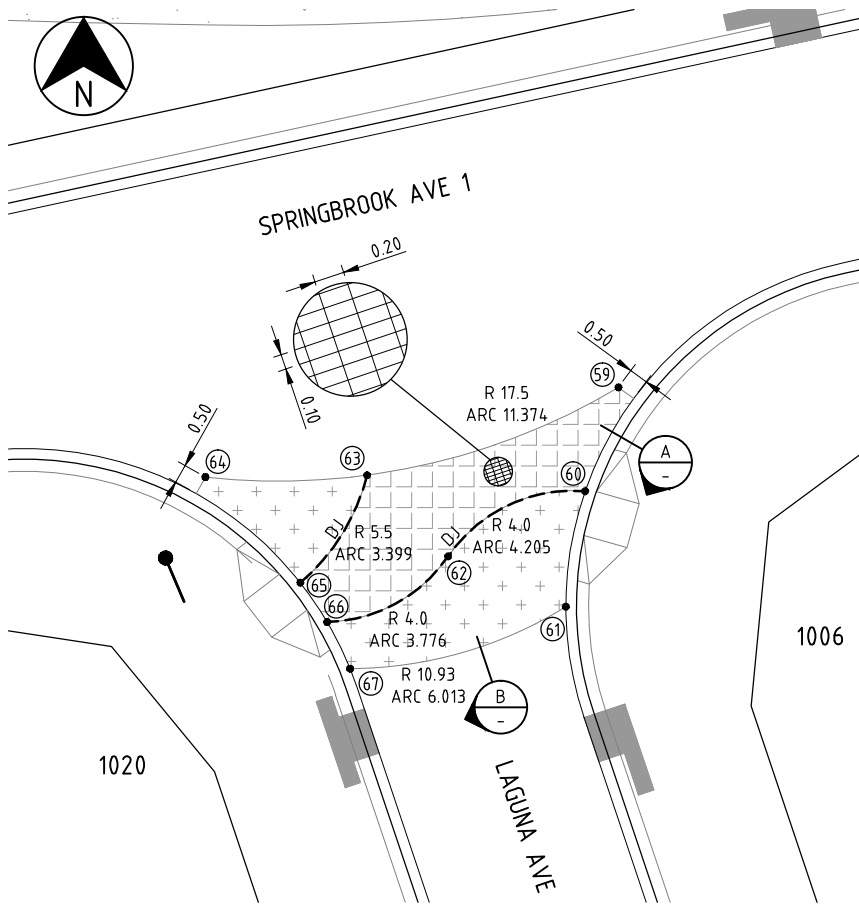


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CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGES 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR: D.A.HILL 18.09.07
DESIGNED: GCP	DESIGN REVIEW: RJB		

TITLE: INTERSECTION DETAILS			
SCALE: 1:200(A1)	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-10	AMDT: C

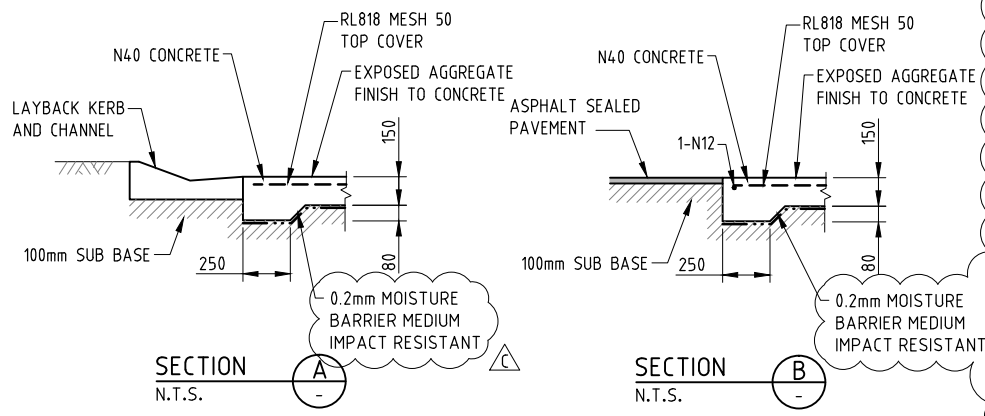
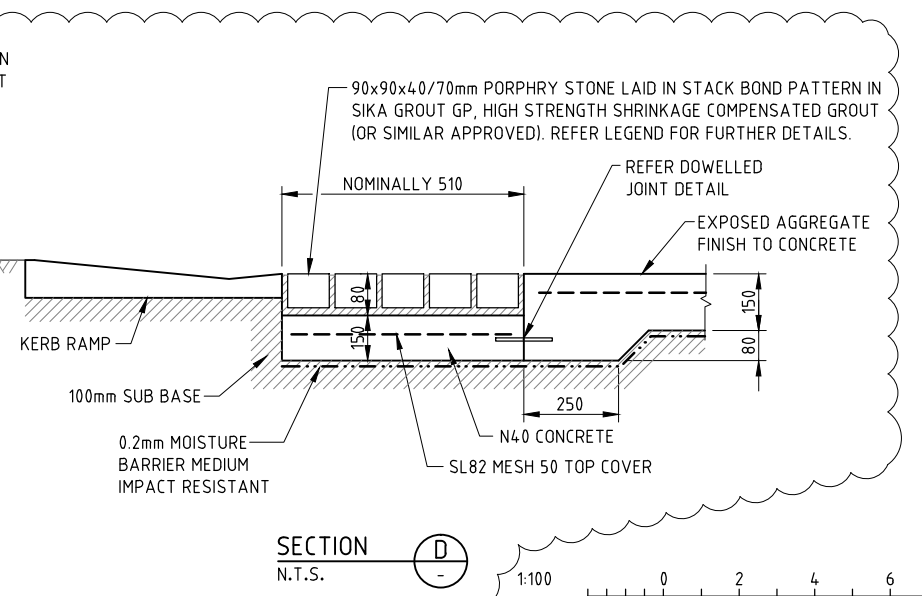
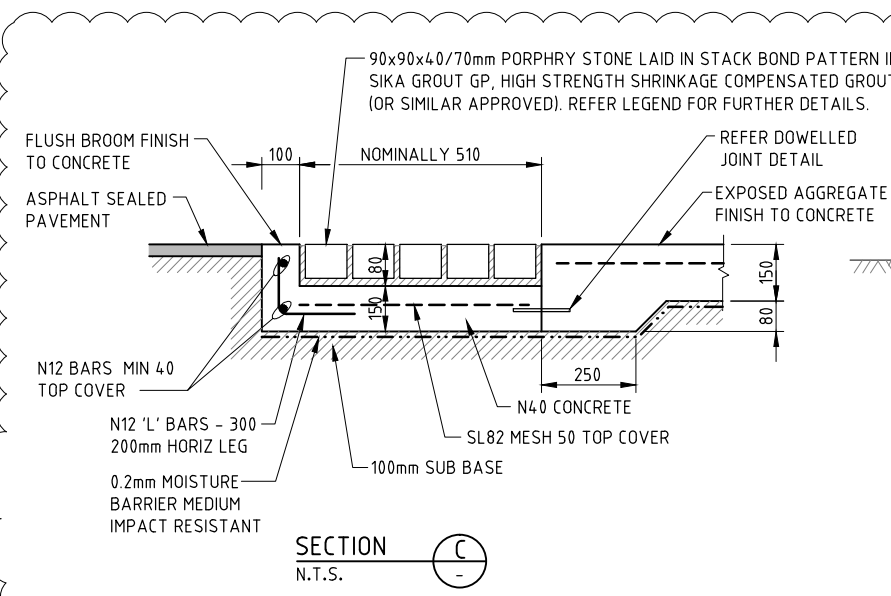
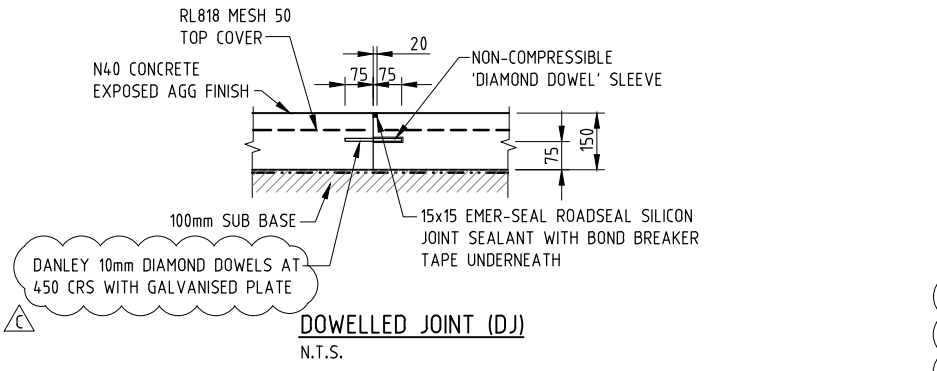


**LEGEND**

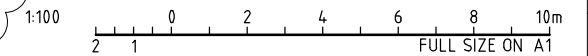
- ② SETOUT POINT
- LAYBACK KERB AND CHANNEL
- EXPOSED AGGREGATE CONCRETE TYPE 1 (GOLD BLEND).  
150mm THICK WITH RL818 MESH  
50mm TOP COVER  
100mm SUB-BASE CBR 45  
BURDEKIN (MEDIUM EXPOSURE WITH A REGULAR COLOUR BASE)
- EXPOSED AGGREGATE CONCRETE TYPE 2 (WHITE BLEND).  
150mm THICK WITH RL818 MESH  
50mm TOP COVER  
100mm SUB-BASE CBR 45  
EMERALD HONEY (MEDIUM EXPOSURE WITH A REGULAR COLOUR BASE)
- EXPOSED AGGREGATE CONCRETE TYPE 3  
150mm THICK WITH RL82 MESH  
50mm TOP COVER  
100mm SUB-BASE CBR 45  
TERRACOTA COLOUR WITH GREY RIVER GRAVEL.
- PORPHYRY STONE COBBLES 90x90x40/70mm (SPLIT FACES TO ALL SIDES)  
SUPPLIER - AUSTRALIAN PORPHYRY STONE.  
COLOUR GREY.  
GROUT TO BE SET DOWN 2mm BELOW FINISHED PAVING LEVEL AND 10mm THICK MINIMUM.

CONCRETE BANDING SETOUT TABL

POINT	EASTING	NORTHING
59	4703.570	9811.876
60	4702.690	9809.131
61	4702.180	9806.078
62	4699.064	9807.408
63	4696.924	9809.554
64	4692.649	9809.506
65	4695.158	9806.712
66	4695.867	9805.672
67	4696.473	9804.439
68	4907.733	9697.766
69	4909.329	9700.551
70	4910.256	9702.949
71	4913.249	9701.146
72	4914.874	9698.640
73	4918.910	9697.809
74	4917.360	9700.463
75	4916.679	9701.894
76	4916.327	9703.083



SECTION B  
N.T.S.



DATE: 20.05.2014@09:43:21 LOGIN NAME: rbimrose  
XREF: X-21309-DESIGN  
LOCATION: I:\CFRA\Projects\CF21309\Deliverables\Drawings\Civil\DWG\CF21309-C-10-11.dwg

No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
C	20.05.14	RJB	RJB	RJC	DAH	INTERSECTION PAVEMENT DESIGN REVISED AND DETAILS ADDED
B	01.11.13	RJB	RJB	RJC	DAH	LOT BOUNDARIES AMENDED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE



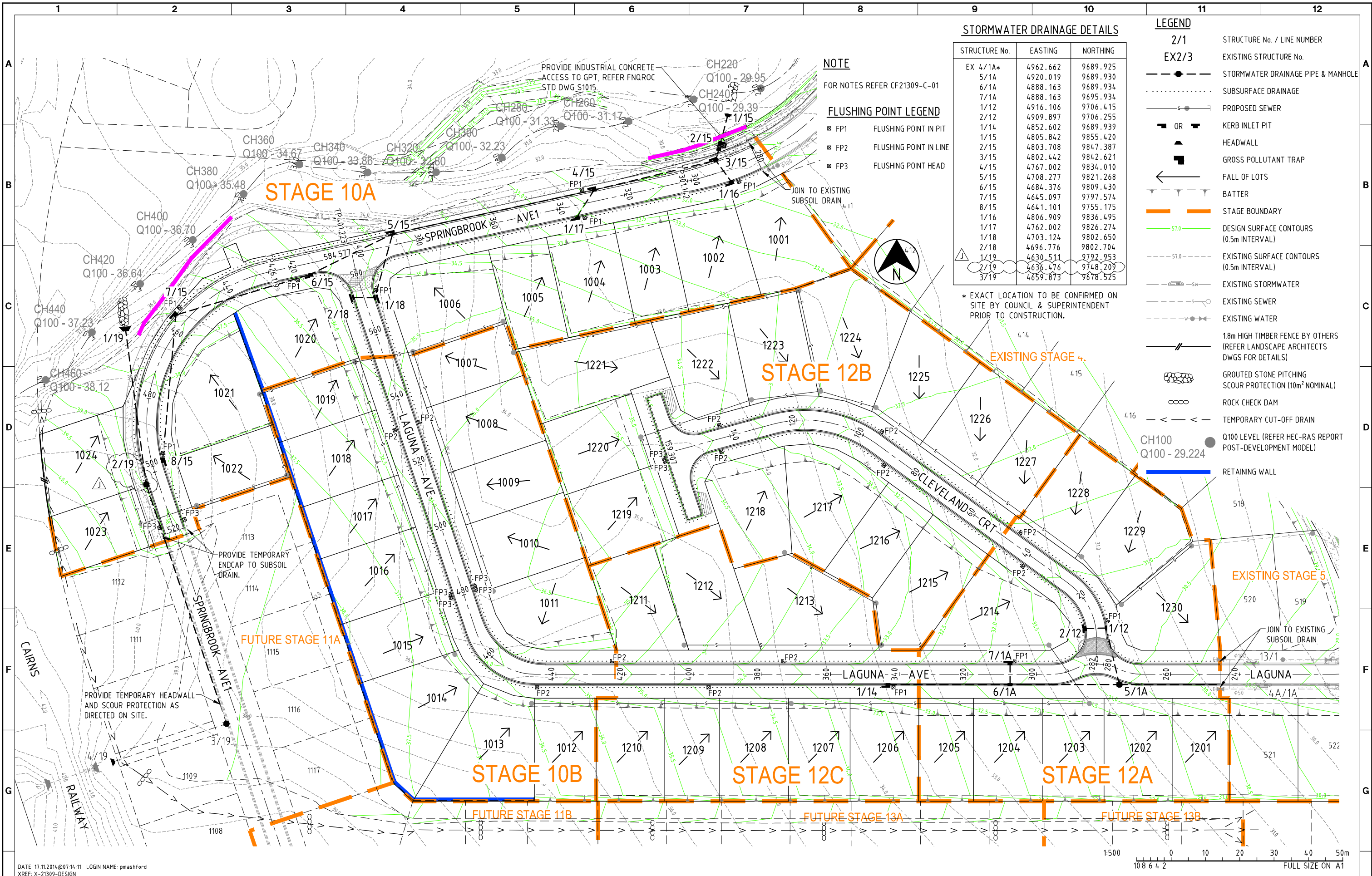
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Facsimile (07) 4031 3967

CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGES 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR: D.A.HILL 18.09.07
DESIGNED: GCP	DESIGN REVIEW: RJB		

TITLE: CONCRETE BANDING SETOUT DETAILS			
SCALE: 1:100(A1)	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-11	AMDT: C





STORMWATER DRAINAGE DETAILS

STRUCTURE No.	EASTING	NORTHING
EX 4/1A*	4962.662	9689.925
5/1A	4920.019	9689.930
6/1A	4888.163	9689.934
7/1A	4888.163	9695.934
1/12	4916.106	9706.415
2/12	4909.897	9706.255
1/14	4852.602	9689.939
1/15	4805.842	9855.420
2/15	4803.708	9847.387
3/15	4802.442	9842.621
4/15	4767.002	9834.010
5/15	4708.277	9821.268
6/15	4684.376	9809.430
7/15	4645.097	9797.574
8/15	4641.101	9755.175
1/16	4806.909	9836.495
1/17	4762.002	9826.274
1/18	4703.124	9802.650
2/18	4696.776	9802.704
1/19	4630.511	9792.953
2/19	4636.476	9748.209
3/19	4659.873	9678.525

- LEGEND**
- 2/1 STRUCTURE No. / LINE NUMBER
  - EX2/3 EXISTING STRUCTURE No.
  - STORMWATER DRAINAGE PIPE & MANHOLE
  - ..... SUBSURFACE DRAINAGE
  - PROPOSED SEWER
  - OR KERB INLET PIT
  - ▲ HEADWALL
  - GROSS POLLUTANT TRAP
  - ← FALL OF LOTS
  - BATTER
  - STAGE BOUNDARY
  - 57.0 DESIGN SURFACE CONTOURS (0.5m INTERVAL)
  - 57.0--- EXISTING SURFACE CONTOURS (0.5m INTERVAL)
  - SW EXISTING STORMWATER
  - S EXISTING SEWER
  - W EXISTING WATER
  - 1.8m HIGH TIMBER FENCE BY OTHERS (REFER LANDSCAPE ARCHITECTS DWGS FOR DETAILS)
  - GROUDED STONE PITCHING SCOUR PROTECTION (10m<sup>2</sup> NOMINAL)
  - ROCK CHECK DAM
  - <--- TEMPORARY CUT-OFF DRAIN
  - Q100 LEVEL (REFER HEC-RAS REPORT POST-DEVELOPMENT MODEL)
  - RETAINING WALL

**NOTE**

FOR NOTES REFER CF21309-C-01

**FLUSHING POINT LEGEND**

- FP1 FLUSHING POINT IN PIT
- FP2 FLUSHING POINT IN LINE
- FP3 FLUSHING POINT HEAD

\* EXACT LOCATION TO BE CONFIRMED ON SITE BY COUNCIL & SUPERINTENDENT PRIOR TO CONSTRUCTION.

DATE: 17.11.2014@07:14:11 LOGIN NAME: pmashford  
 XREF: X-21309-DESIGN  
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No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
J	14.11.14	PAM	RJB	RJC	CJC	2/19 REVISED, LOTS 1023, 1024 & PADMOUNT BDY UPDATED
I	15.10.14	PAM	RJB	RJC	CJC	GPT REISED TO RH CONFIGURATION
H	10.09.14	RJB	RJB	RJC	DAH	FLUSHING POINTS REVISED
G	27.08.14	RJB	RJB	RJC	DAH	ROAD H REMOVED, LOT BOUNDARIES REVISED, BARRIER K&C ADDED & SETOUT DETAILS UPDATED



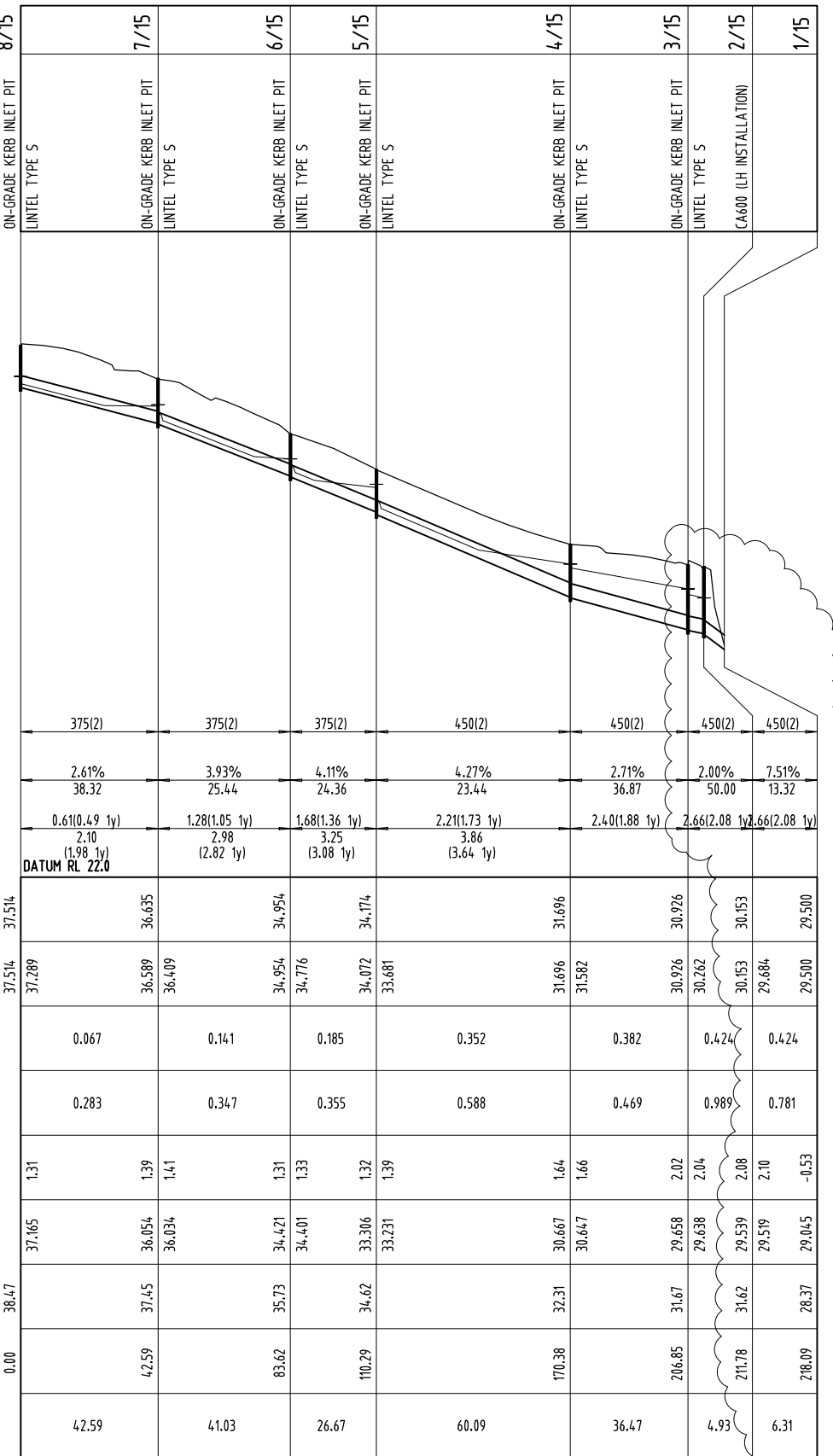
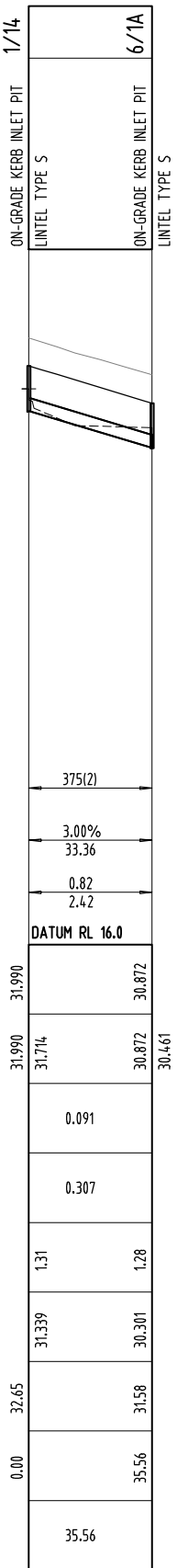
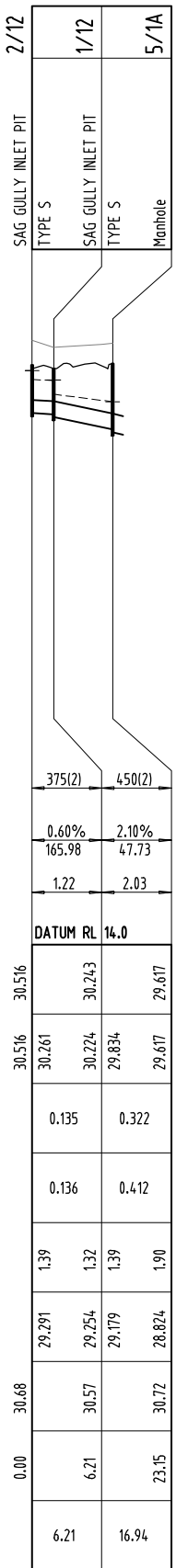
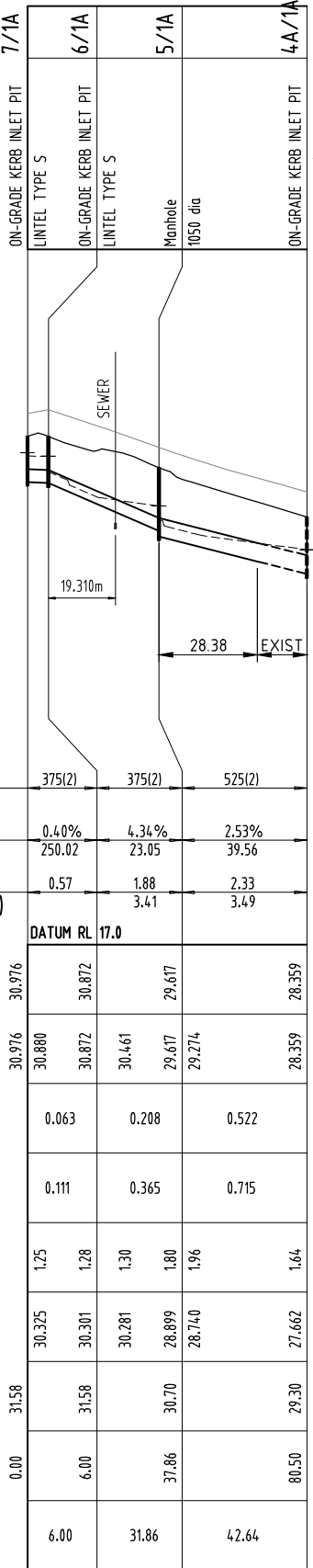
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CLIENT EASTERLY PROJECTS			
PROJECT SPRINGBROOK - STAGES 10 & 12			
DRAFTER SAB	DRAFTING CHECK GCP	REVIEWED PROJECT MANAGER R.J.CARMAN 18/09/17	APPROVED PROJECT DIRECTOR D.A.WEIL 18/09/17
DESIGNED GCP	DESIGN REVIEW RJB		

TITLE STORMWATER DRAINAGE			
SCALE 1:500(A1)	SKM PROJECT No CF21309	DRAWING No CF21309-C-12	AMDT J

STRUCTURE NAME
STRUCTURE DESCRIPTION



PIPE SIZEmm (Class)	375(2)	375(2)	525(2)
PIPE GRADE %	0.40%	4.34%	2.53%
PIPE SLOPE 1 in X	250.02	23.05	39.56
FULL PIPE FLOW VELOCITY (m/s)	0.57	1.88	2.33
PART FULL FLOW VELOCITY (m/s)		3.41	3.49

WATER LEVEL IN STRUCTURE	30.976	30.872	29.617	28.359				
HYDRAULIC GRADE LEVEL	30.976	30.880	30.461	29.274	28.359	28.252		
PIPE FLOW (Cumecs)		0.063	0.208	0.522				
PIPE CAPACITY AT GRADE (Cumecs)		0.111	0.365	0.715				
DEPTH TO INVERT		1.25	1.28	1.30	1.80	1.96		
INVERT LEVEL OF DRAIN		30.325	30.301	30.281	28.899	28.740	27.662	27.642
DESIGN SURFACE LEVEL		31.58	31.58	30.70		29.30		29.30
CHAINAGE		0.00	6.00	37.86		80.50		
LENGTH		6.00	31.86	42.64				

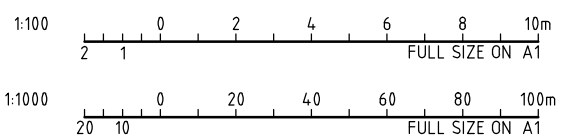
LINE

1A

12

14

15



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E	10.10.14	PAM	RJB	RJC	DAH	GPT RAISED 495mm TO REDUCE UPSTREAM GRADE
D	27.08.14	RJB	RJB	RJC	DAH	LINE 15 REVISED
C	20.01.14	RJB	RJB	RJC	CJC	LINE 15 REVISED
B	01.11.13	RJB	RJB	RJC	DAH	LOT BOUNDARIES AMENDED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE
No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT



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CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGES 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR: D.A.HILL 18.09.07
DESIGNED: GCP	DESIGN REVIEW: RJB		

TITLE: STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 1 OF 2			
SCALE: 1:1000H, 1:100V (A1)	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-13	AMDT: E

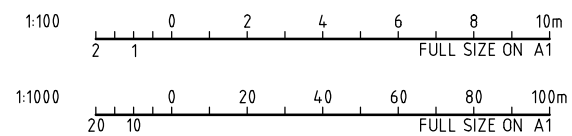
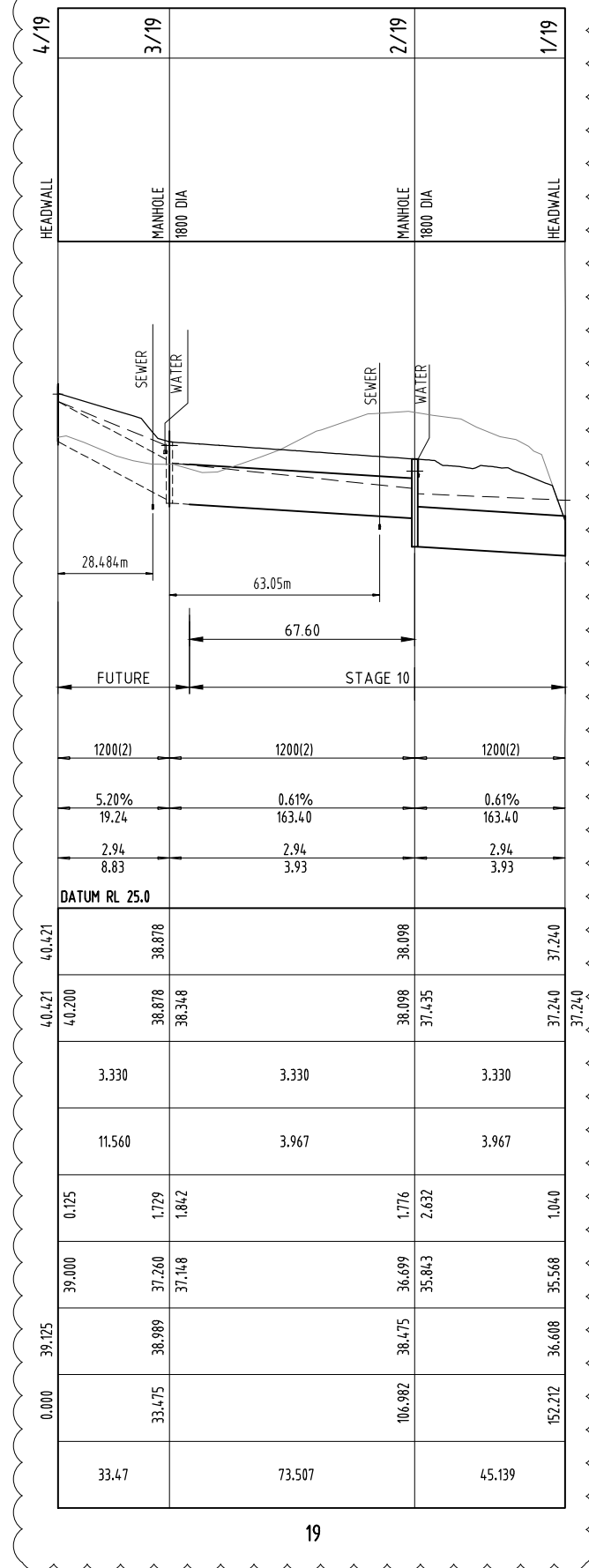
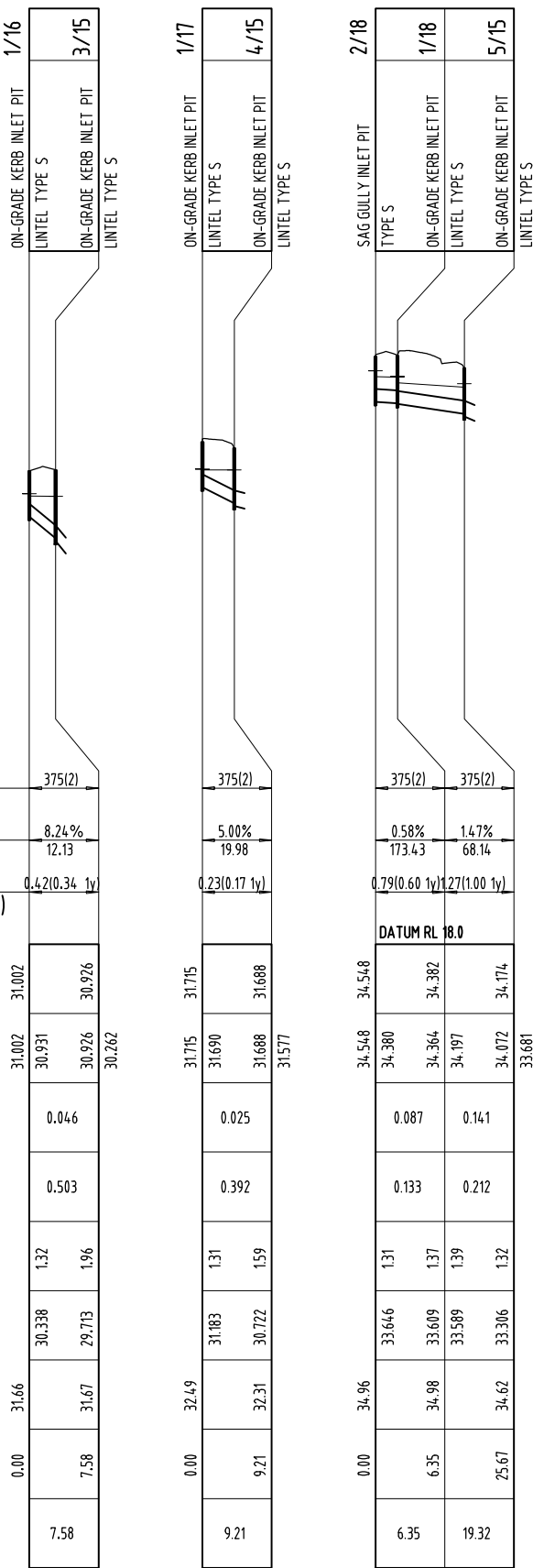


STRUCTURE NAME
STRUCTURE DESCRIPTION

PIPE SIZEmm (Class)	375(2)	375(2)	375(2)	375(2)
PIPE GRADE %	8.24%	5.00%	0.58%	1.47%
PIPE SLOPE 1 in X	12.13	19.98	173.43	68.14
FULL PIPE FLOW VELOCITY (m/s)	0.42(0.34 1v)	0.23(0.17 1v)	0.79(0.60 1v)	1.27(1.00 1v)
PART FULL FLOW VELOCITY (m/s)				

WATER LEVEL IN STRUCTURE	31.002	31.715	34.548	34.174
HYDRAULIC GRADE LEVEL	31.002	31.715	34.548	34.174
PIPE FLOW (Cumecs)	0.046	0.025	0.087	0.141
PIPE CAPACITY AT GRADE (Cumecs)	0.503	0.392	0.133	0.212
DEPTH TO INVERT	1.32	1.31	1.31	1.32
INVERT LEVEL OF DRAIN	30.338	31.183	33.046	33.306
DESIGN SURFACE LEVEL	31.66	32.49	34.96	34.62
CHAINAGE	0.00	9.21	6.35	25.67
LENGTH	7.58	9.21	6.35	19.32

LINE 16 17 18 19



DATE: 17.11.2014@07:14:13 LOGIN NAME: pmashford  
 XREF:  
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F	14.11.14	PAM	RJB	RJC	CJC	2/19 REVISED, LOTS 1023, 1024 & PADMOUNT BDY UPDATED
E	27.08.14	RJB	RJB	RJC	DAH	LINE 16 REVISED
D	20.01.14	RJB	RJB	DJC	CJC	LINES 17 & 18 REVISED
C	18.10.10	RJB	RJB	RJC	DAH	LINE 19 REVISED
B	26.11.07	RJB	RJB	RJC	DAH	REVISED LINE 19 IL'S
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE
No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT

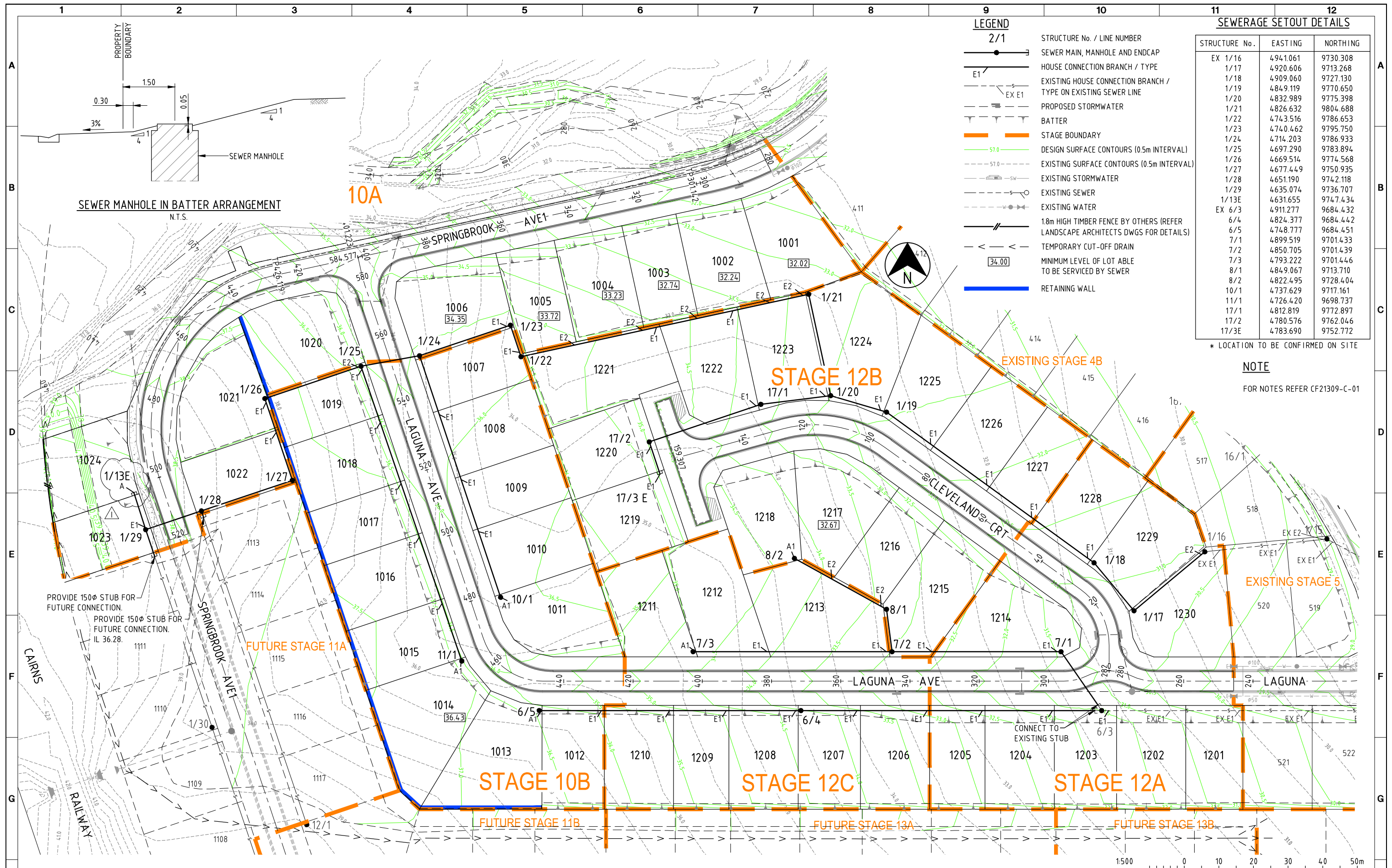


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CLIENT EASTERLY PROJECTS			
PROJECT SPRINGBROOK - STAGES 10 & 12			
DRAFTER SAB	DRAFTING CHECK GCP	REVIEWED PROJECT MANAGER R.J. CARMAN 18.09.07	APPROVED PROJECT DIRECTOR DAH 18.09.07
DESIGNED GCP	DESIGN REVIEW RJB		

TITLE STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 2 OF 2			
SCALE 1:1000H, 1:100V (A1)	SKM PROJECT No CF21309	DRAWING No CF21309-C-14	AMDT F



**LEGEND**

- 2/1 STRUCTURE No. / LINE NUMBER
- SEWER MAIN, MANHOLE AND ENDCAP
- HOUSE CONNECTION BRANCH / TYPE
- EXISTING HOUSE CONNECTION BRANCH / TYPE ON EXISTING SEWER LINE
- PROPOSED STORMWATER
- BATTER
- STAGE BOUNDARY
- DESIGN SURFACE CONTOURS (0.5m INTERVAL)
- EXISTING SURFACE CONTOURS (0.5m INTERVAL)
- EXISTING STORMWATER
- EXISTING SEWER
- EXISTING WATER
- 1.8m HIGH TIMBER FENCE BY OTHERS (REFER LANDSCAPE ARCHITECTS DWGS FOR DETAILS)
- TEMPORARY CUT-OFF DRAIN
- MINIMUM LEVEL OF LOT ABLE TO BE SERVICED BY SEWER
- RETAINING WALL

**SEWERAGE SETOUT DETAILS**

STRUCTURE No.	EASTING	NORTHING
EX 1/16	494.1061	9730.308
1/17	4920.606	9713.268
1/18	4909.060	9727.130
1/19	4849.119	9770.650
1/20	4832.989	9775.398
1/21	4826.632	9804.688
1/22	4743.516	9786.653
1/23	4740.462	9795.750
1/24	4714.203	9786.933
1/25	4697.290	9783.894
1/26	4669.514	9774.568
1/27	4677.449	9750.935
1/28	4651.190	9742.118
1/29	4635.074	9736.707
1/13E	4631.655	9747.434
EX 6/3	4911.277	9684.432
6/4	4824.377	9684.442
6/5	4748.777	9684.451
7/1	4899.519	9701.433
7/2	4850.705	9701.439
7/3	4793.222	9701.446
8/1	4849.067	9713.710
8/2	4822.495	9728.404
10/1	4737.629	9717.161
11/1	4726.420	9698.737
17/1	4812.819	9772.897
17/2	4780.576	9762.046
17/3E	4783.690	9752.772

\* LOCATION TO BE CONFIRMED ON SITE

**NOTE**  
FOR NOTES REFER CF21309-C-01

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No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
I	02.12.16	RJB	RJB	RJC	Dmc	A TYPE HCB FOR LOT 1024
H	14.11.14	PAM	RJB	RJC	CJC	13/1E REVISED, LOTS 1023, 1024 & PADMOUNT BDY UPDATED
G	27.08.14	RJB	RJB	RJC	DAH	ROAD H REMOVED, LOT BOUNDARIES REVISED, BARRIER K&C ADDED & SETOUT DETAILS UPDATED



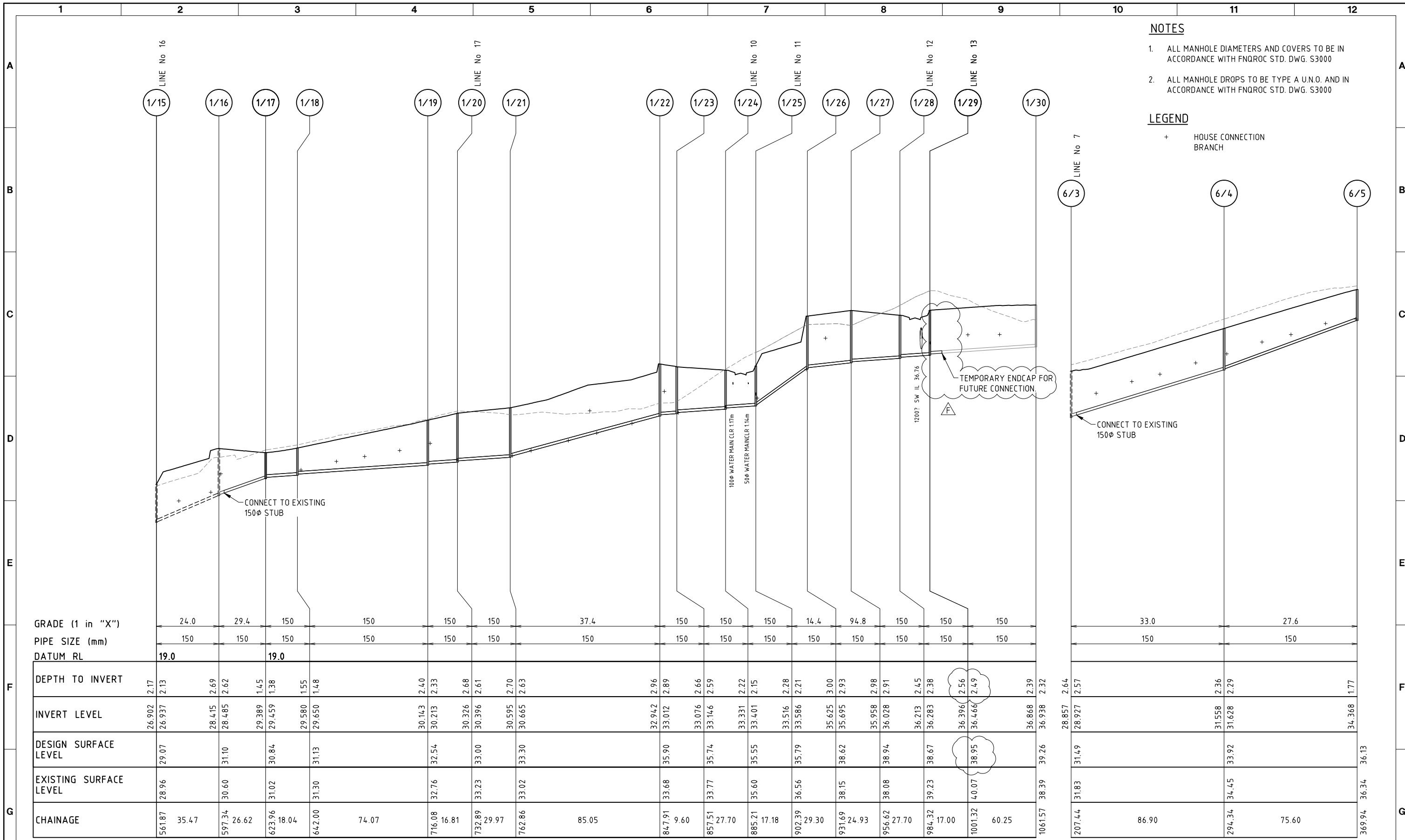
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CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGES 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR: D.A.HALL 18.09.07
DESIGNED: GCP	DESIGN REVIEW: RJB		

TITLE: SEWERAGE			
SCALE: 1:500(A1)	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-15	AMDT: 1

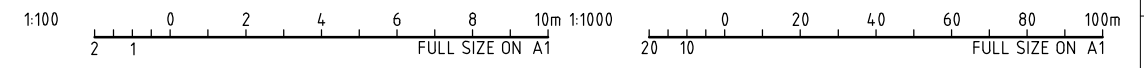




- NOTES**
- ALL MANHOLE DIAMETERS AND COVERS TO BE IN ACCORDANCE WITH FNQROC STD. DWG. S3000
  - ALL MANHOLE DROPS TO BE TYPE A U.N.O. AND IN ACCORDANCE WITH FNQROC STD. DWG. S3000

- LEGEND**
- + HOUSE CONNECTION BRANCH

GRADE (1 in "X")	LINE 1															LINE 6																				
PIPE SIZE (mm)	150															150																				
DATUM RL	19.0															19.0																				
DEPTH TO INVERT	2.17	2.13	2.69	2.62	1.45	1.38	1.55	1.48	2.40	2.33	2.68	2.61	2.70	2.63	2.96	2.89	2.66	2.59	2.22	2.15	2.28	2.21	3.00	2.93	2.98	2.91	2.45	2.38	2.56	2.49	2.39	2.32				
INVERT LEVEL	26.902	26.937	28.415	28.485	29.389	29.459	29.580	29.650	30.143	30.213	30.326	30.396	30.595	30.665	32.942	33.012	33.076	33.146	33.331	33.401	33.516	33.586	35.625	35.695	35.958	36.028	36.213	36.283	36.396	36.466	36.868	36.938				
DESIGN SURFACE LEVEL	29.07	31.10	30.84	31.13	32.54	33.00	33.30	33.30	35.90	35.74	35.55	35.79	38.62	38.94	38.94	38.67	38.95	39.26	31.49	31.58	31.628	34.368														
EXISTING SURFACE LEVEL	28.96	30.60	31.02	31.30	32.76	33.23	33.02	33.68	33.77	35.60	36.56	38.15	38.08	39.23	40.07	38.39	31.83	34.45	36.34																	
CHAINAGE	561.87	35.47	597.34	26.62	623.96	18.04	642.00	74.07	716.08	16.81	732.89	29.97	762.86	85.05	847.91	9.60	857.51	27.70	885.21	17.18	902.39	29.30	931.69	24.93	956.62	27.70	984.32	17.00	1001.32	60.25	1061.57	207.44	86.90	294.34	75.60	369.94



DATE: 27.08.2014@17:12:55 LOGIN NAME: sbest  
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No	DATE	DRAFTING	DESIGN	REV'D	APP'D	AMENDMENT
		CHECK	REVIEW	P.MGR	P.DIR	
F	27.08.14	RJB	RJB	RJC	DAH	LINE 1 REVISED
E	20.01.14	RJB	RJB	RJC	CJC	SEWERAGE LONGITUDINAL SECTIONS REVISED
D	01.11.13	RJB	RJB	RJC	DAH	SEWERAGE LONGITUDINAL SECTIONS REVISED
C	18.10.10	RJB	RJB	RJC	DAH	LINES 1 & 12 REVISED
B	26.11.07	RJB	RJB	RJC	DAH	SEWR IL'S REVISED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE

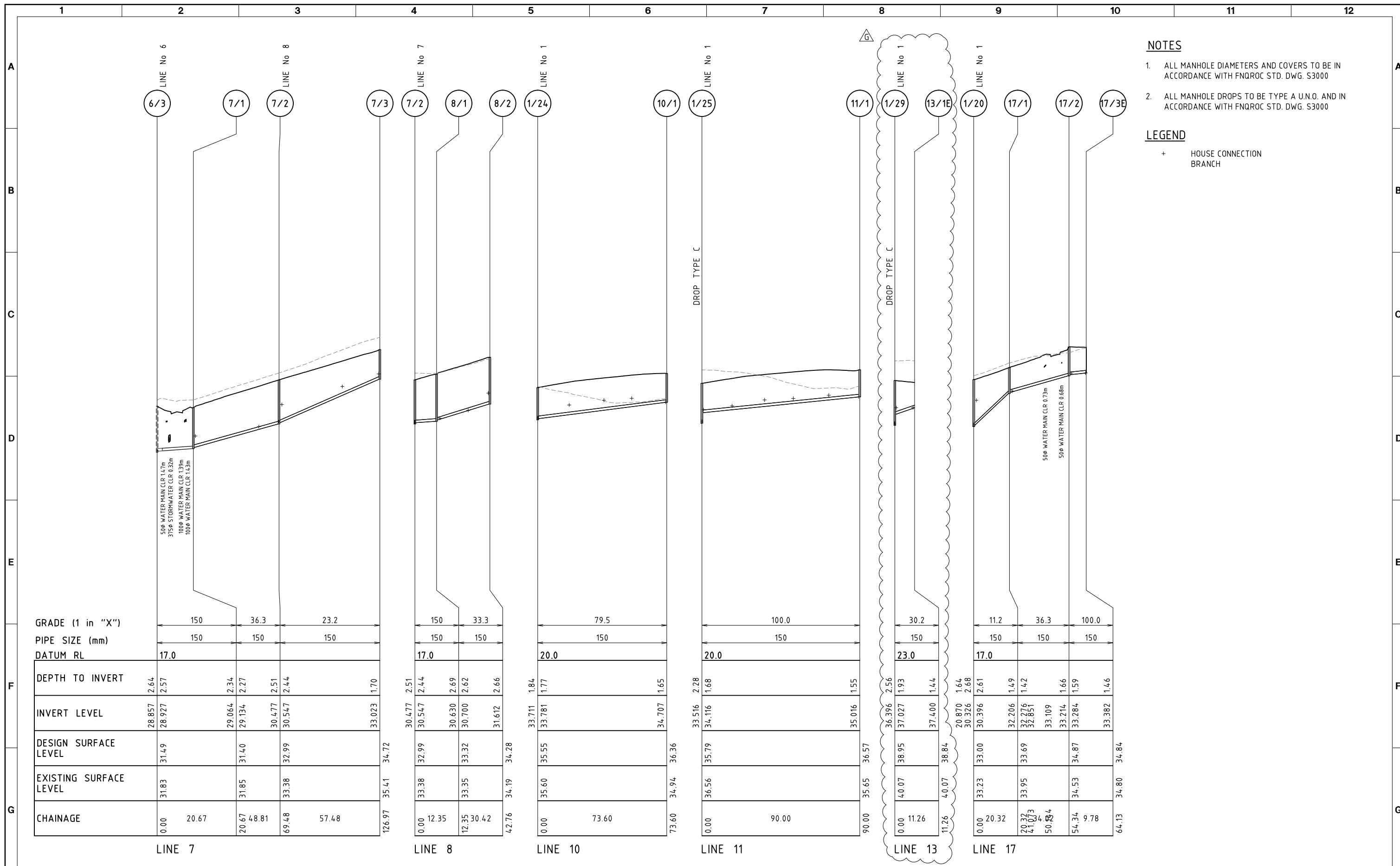


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CLIENT EASTERLY PROJECTS			
PROJECT SPRINGBROOK - STAGES 10 & 12			
DRAFTER SAB	DRAFTING CHECK GCP	REVIEWED PROJECT MANAGER R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR D.A.HILL 18.09.07
DESIGNED GCP	DESIGN REVIEW RJB		APPROVED DATE 18.09.07

TITLE SEWERAGE LONGITUDINAL SECTIONS SHEET 1 OF 2			
SCALE 1:1000H, 1:100V (A1)	SKM PROJECT No CF21309	DRAWING No CF21309-C-16	AMDT F



- NOTES**
1. ALL MANHOLE DIAMETERS AND COVERS TO BE IN ACCORDANCE WITH FNQROC STD. DWG. S3000
  2. ALL MANHOLE DROPS TO BE TYPE A U.N.O. AND IN ACCORDANCE WITH FNQROC STD. DWG. S3000

**LEGEND**

+ HOUSE CONNECTION BRANCH

GRADE (1 in "X")	PIPE SIZE (mm)	DATUM RL
150	150	17.0
36.3	150	17.0
23.2	150	17.0

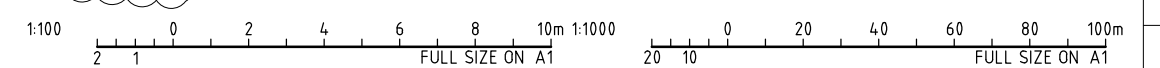
  

DEPTH TO INVERT	INVERT LEVEL	DESIGN SURFACE LEVEL	EXISTING SURFACE LEVEL	CHAINAGE
2.64	28.857	31.49	31.83	0.00
2.57	28.927	31.49	31.83	20.67
2.34	29.064	31.40	31.85	20.67
2.27	29.134	31.40	31.85	48.81
2.51	30.477	32.99	33.38	69.48
2.44	30.547	32.99	33.38	57.48
1.70	33.023	34.72	35.41	126.97

DEPTH TO INVERT	INVERT LEVEL	DESIGN SURFACE LEVEL	EXISTING SURFACE LEVEL	CHAINAGE
2.51	30.477	32.99	33.38	0.00
2.44	30.547	32.99	33.38	12.35
2.69	30.630	33.32	33.35	12.35
2.62	30.700	33.32	33.35	30.42
2.66	31.612	34.28	34.19	42.76
1.84	33.711	35.55	35.60	0.00
1.77	33.781	35.55	35.60	73.60
1.65	34.707	36.36	34.94	73.60

DEPTH TO INVERT	INVERT LEVEL	DESIGN SURFACE LEVEL	EXISTING SURFACE LEVEL	CHAINAGE
2.28	33.516	35.79	36.56	0.00
1.68	34.116	35.79	36.56	90.00
1.55	35.016	36.57	35.65	90.00

DEPTH TO INVERT	INVERT LEVEL	DESIGN SURFACE LEVEL	EXISTING SURFACE LEVEL	CHAINAGE
2.56	36.396	38.95	40.07	0.00
1.93	37.027	38.95	40.07	11.26
1.44	37.400	38.84	40.07	11.26
1.64	20.870	30.326	33.23	0.00
2.68	30.326	33.00	33.23	20.32
2.61	30.396	33.00	33.23	20.32
1.49	32.206	33.69	33.95	20.32
1.42	32.276	33.69	33.95	41.07
1.66	33.109	34.87	34.53	50.84
1.59	33.214	34.87	34.53	54.34
1.46	33.284	34.87	34.53	64.13



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No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
G	14.11.14	PAM	RJB	RJC	CJC	13/1E REVISED

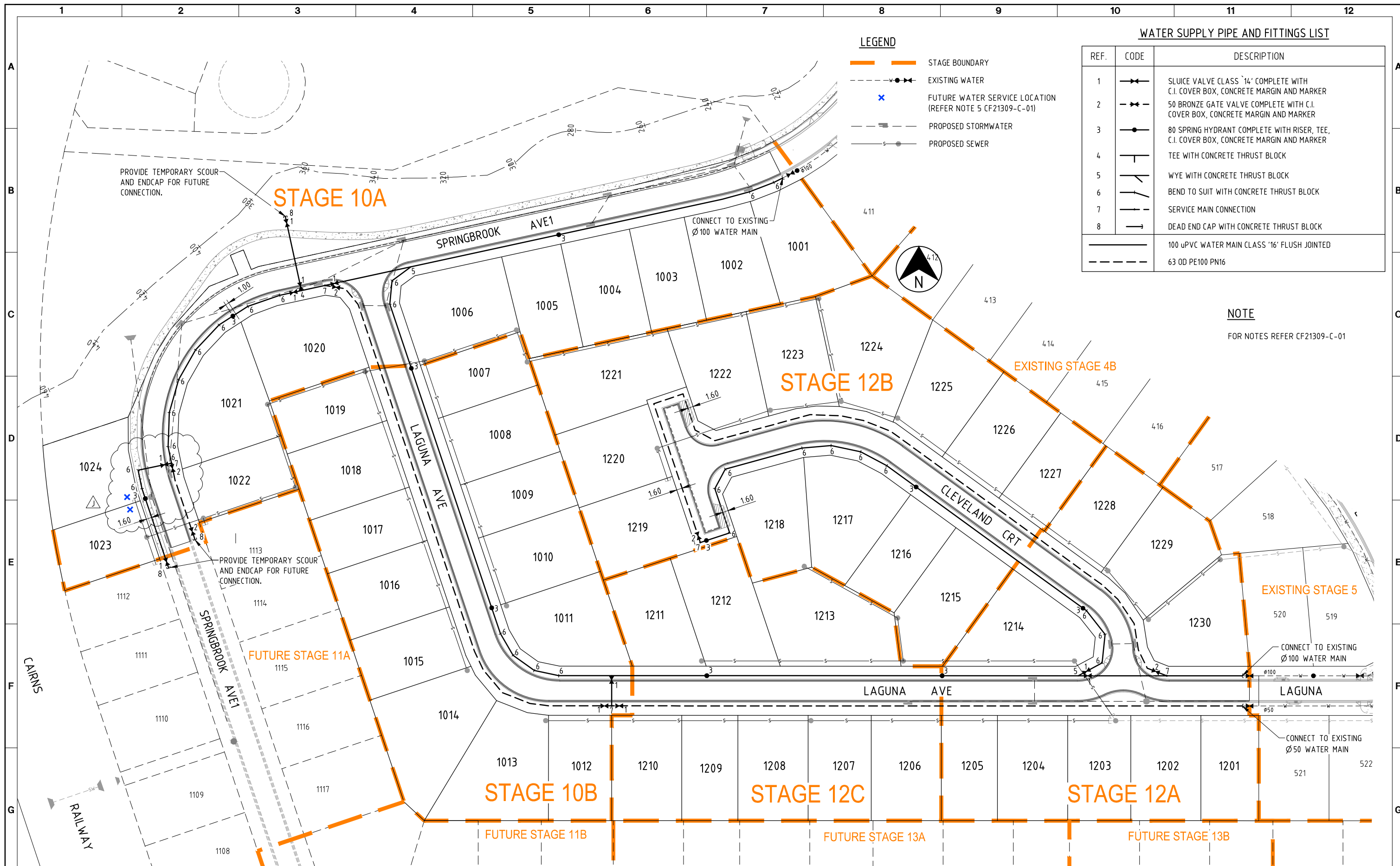


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CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGES 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J.CARMAN 18/09/17	APPROVED PROJECT DIRECTOR: P.A.WEEL 18/09/17
DESIGNED: GCP	DESIGN REVIEW: RJB		

TITLE: SEWERAGE LONGITUDINAL SECTIONS SHEET 2 OF 2			
SCALE: 1:1000H, 1:100V (A1)	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-17	AMDT: G



**LEGEND**

- STAGE BOUNDARY
- EXISTING WATER
- FUTURE WATER SERVICE LOCATION (REFER NOTE 5 CF21309-C-01)
- PROPOSED STORMWATER
- PROPOSED SEWER

**WATER SUPPLY PIPE AND FITTINGS LIST**

REF.	CODE	DESCRIPTION
1	1	SLUICE VALVE CLASS '14' COMPLETE WITH C.I. COVER BOX, CONCRETE MARGIN AND MARKER
2	2	50 BRONZE GATE VALVE COMPLETE WITH C.I. COVER BOX, CONCRETE MARGIN AND MARKER
3	3	80 SPRING HYDRANT COMPLETE WITH RISER, TEE, C.I. COVER BOX, CONCRETE MARGIN AND MARKER
4	4	TEE WITH CONCRETE THRUST BLOCK
5	5	WYE WITH CONCRETE THRUST BLOCK
6	6	BEND TO SUIT WITH CONCRETE THRUST BLOCK
7	7	SERVICE MAIN CONNECTION
8	8	DEAD END CAP WITH CONCRETE THRUST BLOCK
		100 uPVC WATER MAIN CLASS '16' FLUSH JOINTED
		63 OD PE100 PN16

**NOTE**  
FOR NOTES REFER CF21309-C-01

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LOCATION: I:\CFRA\Projects\CF21309\Deliverables\Drawings\Civil\DWG\CF21309-C-18.dwg

No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
J	14.11.14	PAM	RJB	RJC	CJC	WATER ALIGNMENT REVISED, LOTS 1023, 1024 & PADMOUNT BDYS
I	29.09.14	RJB	RJB	RJC	DAH	HYDRANT MOVED OFF PROPERTY BOUNDARY
H	10.09.14	RJB	RJB	RJC	DAH	VALVES ADDED
G	27.08.14	RJB	RJB	RJC	DAH	ROAD H REMOVED, LOT BOUNDARIES REVISED, BARRIER K&C ADDED & CROSSING MOVED

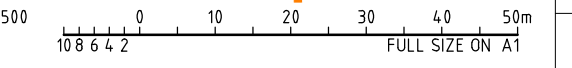


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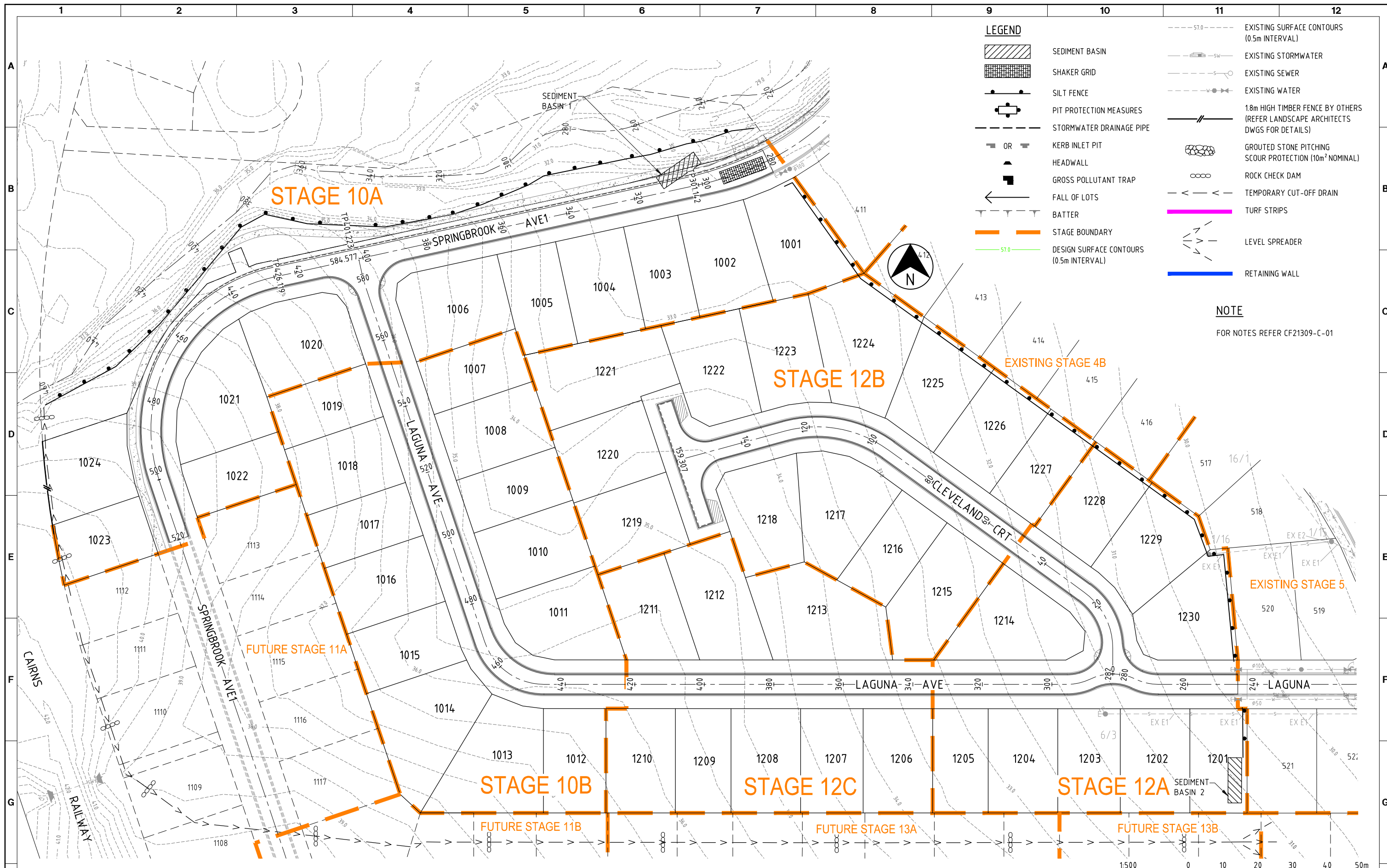
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CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGES 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J.CARMAN 18.09.17	APPROVED PROJECT DIRECTOR: [Signature]
DESIGNED: GCP	DESIGN REVIEW: RJB		

TITLE: WATER RETICULATION			
SCALE: 1:500(A1)	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-18	AMDT: J







**LEGEND**

- SEDIMENT BASIN
- SHAKER GRID
- SILT FENCE
- PIT PROTECTION MEASURES
- STORMWATER DRAINAGE PIPE
- KERB INLET PIT
- HEADWALL
- GROSS POLLUTANT TRAP
- FALL OF LOTS
- BATTER
- STAGE BOUNDARY
- DESIGN SURFACE CONTOURS (0.5m INTERVAL)
- EXISTING SURFACE CONTOURS (0.5m INTERVAL)
- EXISTING STORMWATER
- EXISTING SEWER
- EXISTING WATER
- 1.8m HIGH TIMBER FENCE BY OTHERS (REFER LANDSCAPE ARCHITECTS DWGS FOR DETAILS)
- GROUDED STONE PITCHING SCOUR PROTECTION (10m<sup>2</sup> NOMINAL)
- ROCK CHECK DAM
- TEMPORARY CUT-OFF DRAIN
- TURF STRIPS
- LEVEL SPREADER
- RETAINING WALL

**NOTE**

FOR NOTES REFER CF21309-C-01

DATE: 17.11.2014@07:14:32 LOGIN NAME: pmashford  
 XREF: X-21309-DESIGN  
 LOCATION: I:\CFRA\Projects\CF21309\Deliverables\Drawings\Civil\DWG\CF21309-C-19-21.dwg

E	14.11.14	PAM	RJB	RJC	CJC	LOTS 1023, 1024 & PADMOUNT BDY UPDATED
D	27.08.14	RJB	RJB	RJC	DAH	ROAD H REMOVED, LOT BOUNDARIES REVISED & BARRIER K&C ADDED
C	07.05.14	RJB	RJB	RJC	DAH	RETAINING WALL ADDED TO LEGEND
B	01.11.13	RJB	RJB	RJC	DAH	LOT BOUNDARIES AMENDED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE
No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT

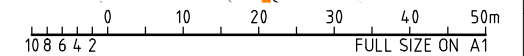


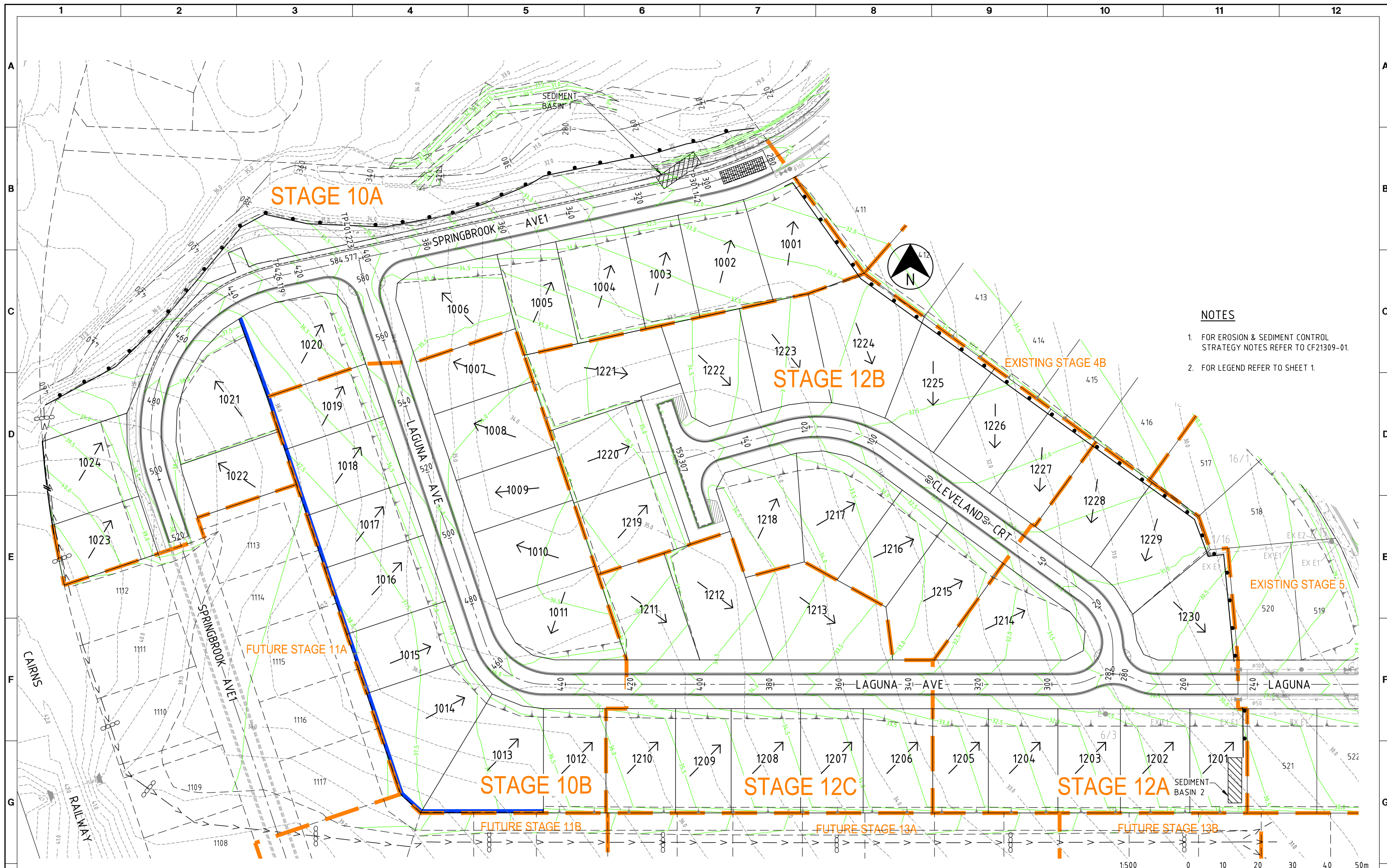
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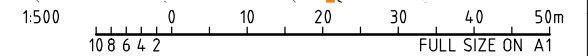
CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGES 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J. CARMAN 18.09.07	APPROVED PROJECT DIRECTOR: D.A. HELL 18.09.07
DESIGNED: GCP	DESIGN REVIEW: RJB		

TITLE: EROSION AND SEDIMENT CONTROL STRATEGY PHASE 1 - TOPSOIL STRIPPING SHEET 1 OF 3			
SCALE: 1:500(A1)	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-19	AMDT: E





- NOTES**
1. FOR EROSION & SEDIMENT CONTROL STRATEGY NOTES REFER TO CF21309-01.
  2. FOR LEGEND REFER TO SHEET 1.



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E	14.11.14	PAM	RJB	RJC	CJC	LOTS 1023, 1024 & PADMOUNT BDY UPDATED
D	27.08.14	RJB	RJB	RJC	DAH	ROAD H REMOVED, LOT BOUNDARIES REVISED & BARRIER K&C ADDED
C	07.05.14	RJB	RJB	RJC	DAH	EARTHWORKS REVISED
B	01.11.13	RJB	RJB	RJC	DAH	LOT BOUNDARIES AMENDED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE
No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT



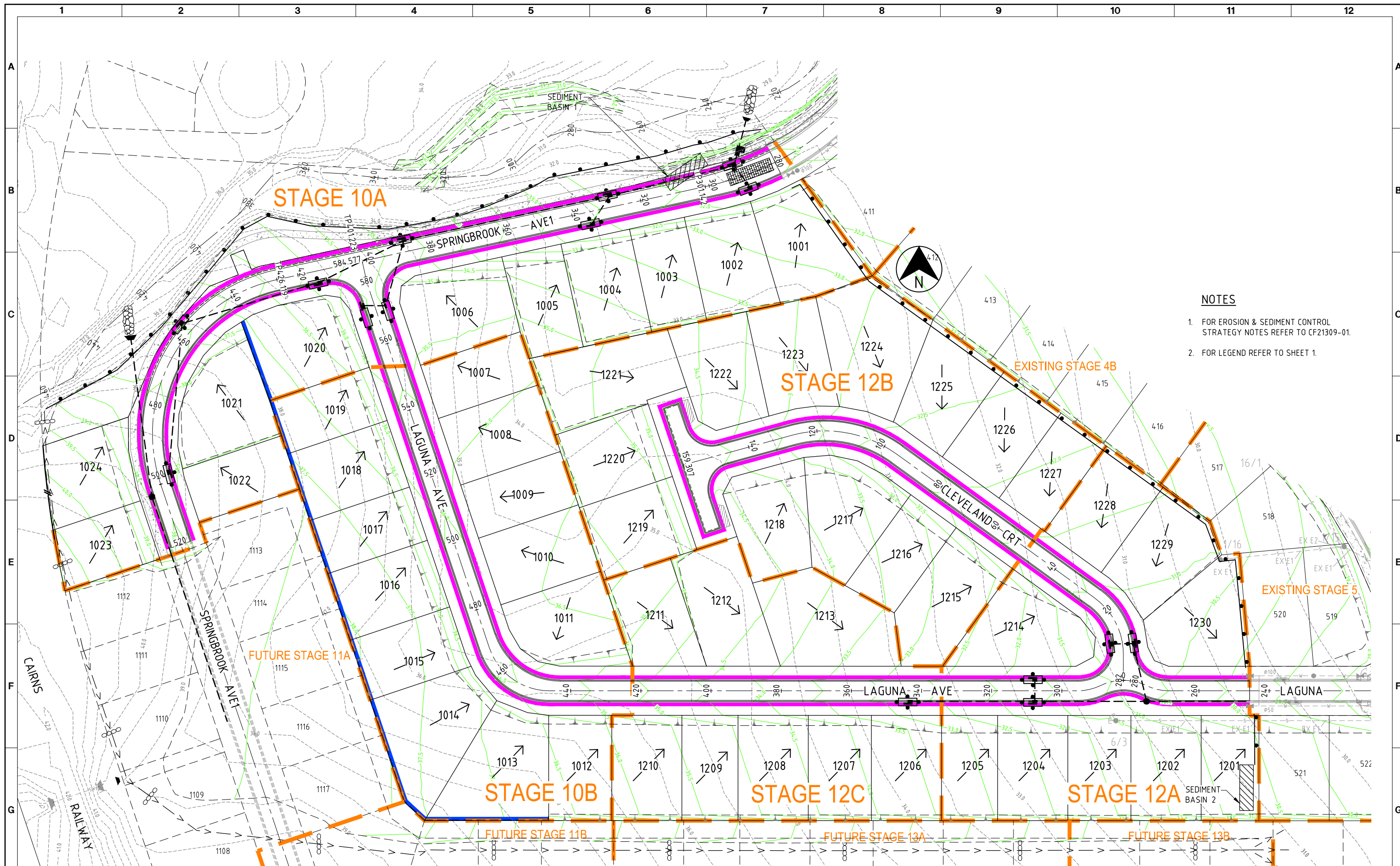
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CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGES 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J. CARMAN 18.09.07	APPROVED PROJECT DIRECTOR: D.A. HILL 18.09.07
DESIGNED: GCP	DESIGN REVIEW: RJB	APPROVED PROJECT DIRECTOR: D.A. HILL 18.09.07	

TITLE: EROSION AND SEDIMENT CONTROL STRATEGY PHASE 2 - EARTHWORKS SHEET 2 OF 3			
SCALE: 1:500(A1)	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-20	AMDT: E





- NOTES**
1. FOR EROSION & SEDIMENT CONTROL STRATEGY NOTES REFER TO CF21309-01.
  2. FOR LEGEND REFER TO SHEET 1.

DATE: 17.11.2014@07:14:36 LOGIN NAME: pmashford  
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No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	AMENDMENT
F	14.11.14	PAM	RJB	RJC	CJC	LOTS 1023, 1024 & PADMOUNT BDY UPDATED
E	27.08.14	RJB	RJB	RJC	DAH	ROAD H REMOVED, LOT BOUNDARIES REVISED & BARRIER K&C ADDED
D	07.05.14	RJB	RJB	RJC	DAH	EARTHWORKS REVISED
C	01.11.13	RJB	RJB	RJC	DAH	LOT BOUNDARIES AMENDED
B	18.10.10	RJB	RJB	RJC	DAH	STORMWATER MANHOLE ADDED
A	18.09.07	GCP	RJB	RJC	DAH	INITIAL ISSUE

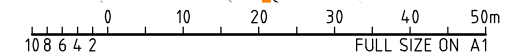


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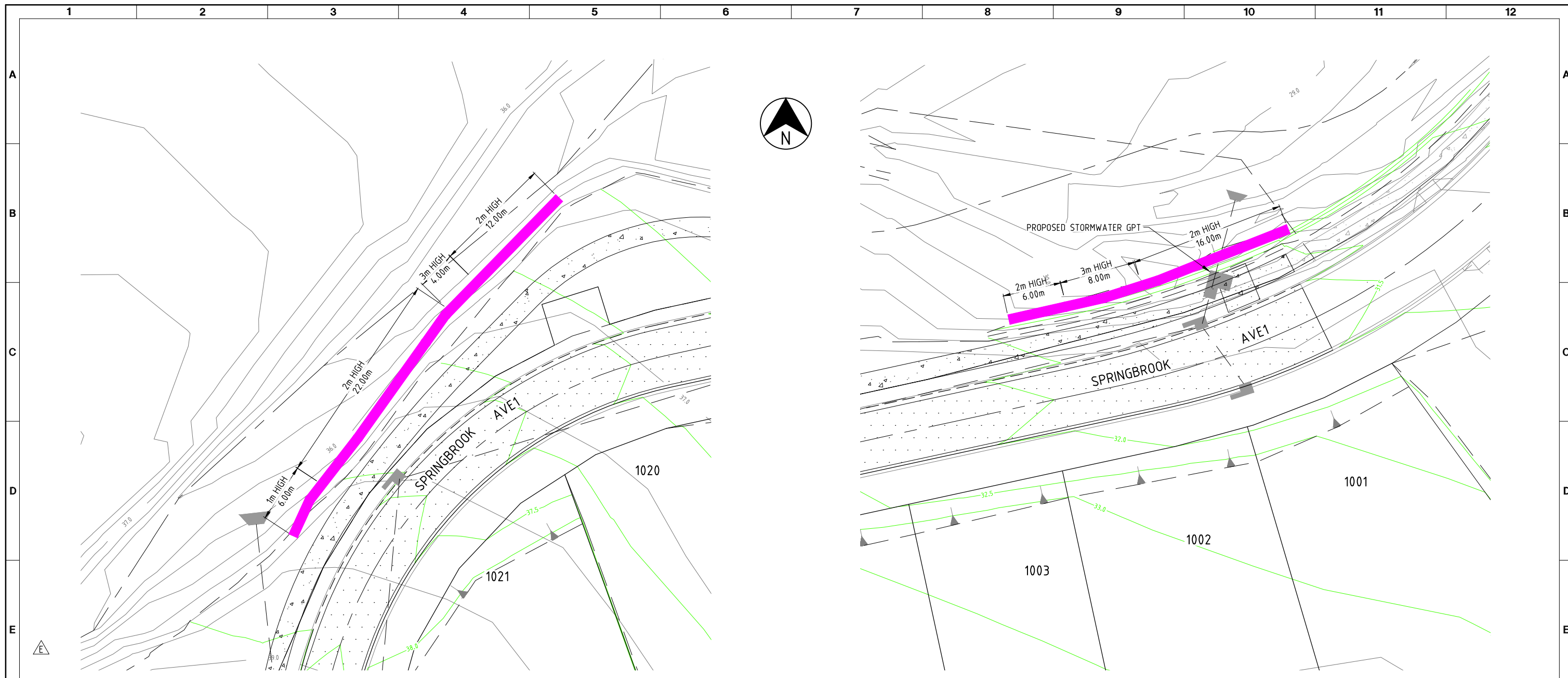
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CLIENT: EASTERLY PROJECTS			
PROJECT: SPRINGBROOK - STAGES 10 & 12			
DRAFTER: SAB	DRAFTING CHECK: GCP	REVIEWED PROJECT MANAGER: R.J.CARMAN 18.09.07	APPROVED PROJECT DIRECTOR: D.A.WEEL 18.09.07
DESIGNED: GCP	DESIGN REVIEW: RJB	APP'D No.	




TITLE: EROSION AND SEDIMENT CONTROL STRATEGY PHASE 3 - ROAD WORKS SHEET 3 OF 3			
SCALE: 1:500(A1)	SKM PROJECT No: CF21309	DRAWING No: CF21309-C-21	AMDT: F







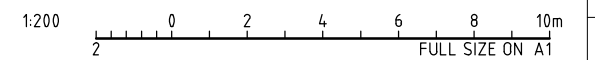
**LEGEND**

-  GABION RETAINING WALL
-  DESIGN SURFACE CONTOURS (0.5m INTERVAL)
-  EXISTING SURFACE CONTOURS (0.5m INTERVAL)

**NOTES**

1. EXACT LENGTH AND HEIGHT OF GABION STRUCTURES ARE TO BE CONFIRMED ON SITE

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 LOCATION: I:\CFRA\Projects\CF21309\Deliverables\Drawings\Civil\Dwg\CF21309-C-22.dwg



No	DATE	DRAFTING CHECK	DESIGN REVIEW	REV'D P.MGR	APP'D P.DIR	INITIAL ISSUE	AMENDMENT
A	15.10.14	PAM	RJB	RJC	CJC	INITIAL ISSUE	



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CLIENT EASTERLY PROJECTS			
PROJECT SPRINGBROOK - STAGES 10 & 12			
DRAFTER SAB	DRAFTING CHECK RJB	REVIEWED PROJECT MANAGER R.J.CARMAN 15.10.14	APPROVED PROJECT DIRECTOR C.J.CAPLEK 15.10.14
DESIGNED PAM	DESIGN REVIEW RJB		REGD No.

TITLE GABION RETAINING WALL			
SCALE 1:200(A1)	SKM PROJECT No CF21309	DRAWING No CF21309-C-22	AMDT A