

GRAY STREET, MT COLAH ROAD RECONSTRUCTION - STAGE 1 BEROWRA ROAD TO COLAH ROAD

DRAWING SCHEDULE		
SHEET No.	TITLE	ISSUE
1	DRAWING SCHEDULE, LOCALITY PLAN, LEGEND & GENERAL NOTES.	1
2	TYPICAL SECTION & PAVEMENT DETAILS.	1
3	CONTROL LINE 1 SETOUT DETAILS.	1
4	GENERAL WORKS & SERVICES PLAN.	1
5	CL1 CROSS SECTIONS CH19.000 TO CH104.063	1
6	KERB RETURN & FOOTPATH SETOUT DETAILS.	1
7	DRIVEWAY PROFILES.	1
8	STORMWATER DRAINAGE CATCHMENT PLAN.	1
9	STORMWATER DRAINAGE LONG SECTIONS - LINE 1 & 1a.	1
10	STORMWATER DRAINAGE CALCULATION TABLES.	1
11	SPECIAL PIT DETAILS.	1

LEGEND

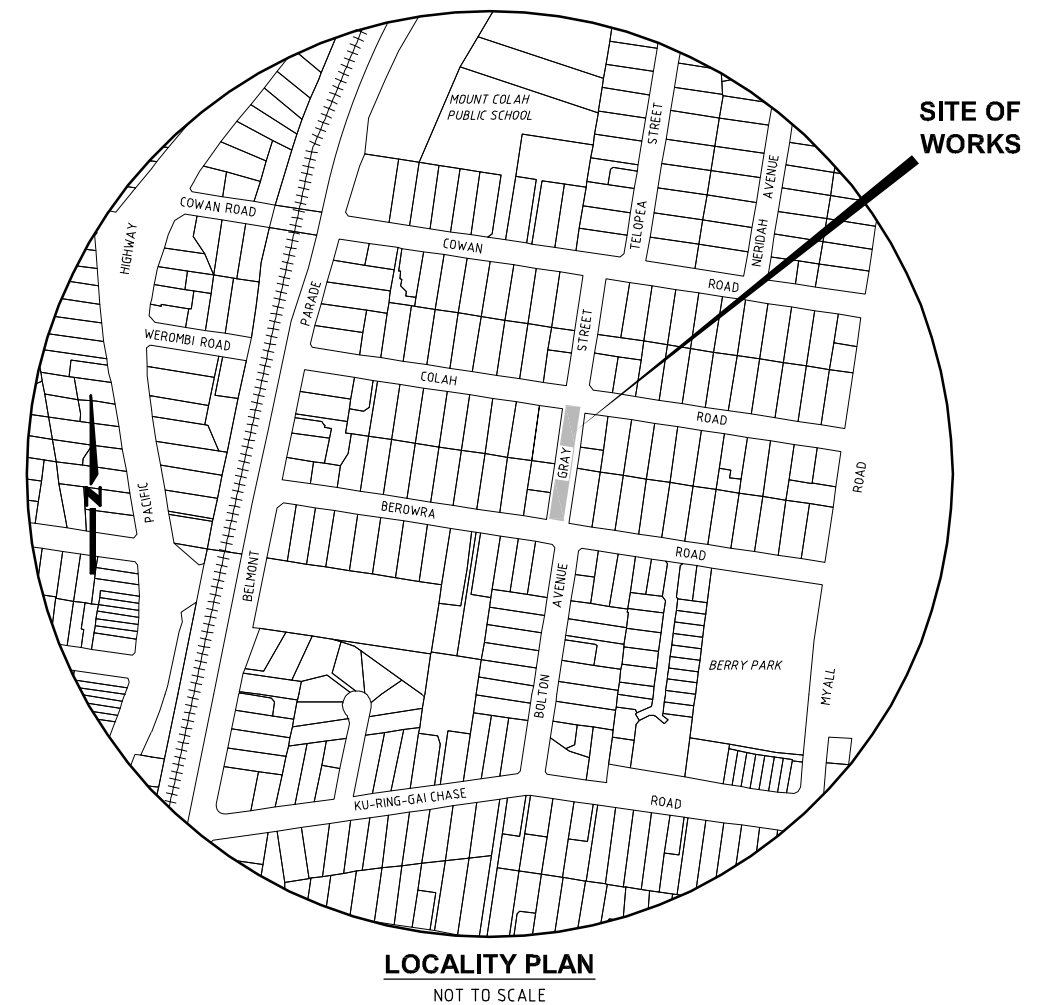
	EXISTING KERB & GUTTER.
	EXISTING FENCE.
	EXISTING CONCRETE PATH EDGE.
	EXISTING STORMWATER PIPE.
	EXISTING POWER POLE.
	EXISTING SIGN.
	EXISTING TREE.
	SURVEY TRAVERSE STATION.
	STATE SURVEY MARK.
	SURVEY REFERENCE MARKS - DRILL HOLE & WING/GALVANISED IRON PIPE.
	EXISTING SEWER MANHOLE.
	EXISTING FIRE HYDRANT.
	EXISTING WATER STOP VALVE.
	EXISTING TELSTRA PIT.
	EXISTING SEWER MAIN.
	EXISTING U/G TELSTRA CABLES.
	EXISTING U/G OPTUS CABLES.
	EXISTING U/G ELECTRICAL CABLES.
	EXISTING OVERHEAD ELECTRICAL CABLES.
	EXISTING WATER MAIN.
	PROPOSED KERB & GUTTER.
	PROPOSED STORMWATER PIPE.
	PROPOSED STORMWATER INLET PIT.
	STORMWATER PIT LABEL (LINE No./PIT No.).
	EXTENT OF NEW PAVEMENT CONSTRUCTION (REFER TO TYPICAL SECTION ON SHEET No.2 FOR DETAILS).
	EXTENT OF DRIVEWAY RECONSTRUCTION REINSTATED WITH EXISTING OR MATCHING MATERIALS UNLESS NOTED OTHERWISE.
	EXTENT OF NEW FOOTPATH CONSTRUCTION. ALL PATHS N25 CONCRETE 80mm THICK (COLOUR: PLAIN CONCRETE)

GENERAL NOTES:

- ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS & SPECIFICATIONS OF HORNSBY SHIRE COUNCIL.
- LEVELS SHALL BE OBTAINED FROM ESTABLISHED BENCH MARKS & NOT FROM SURVEY PEGS.
- PROVIDE TRAFFIC MANAGEMENT, LINEMARKING & SIGNAGE IN ACCORDANCE WITH "THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" / AS1742 REQUIREMENTS.
- SERVICES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM INFORMATION SUPPLIED FROM THE RELEVANT AUTHORITIES VIA A "DIAL BEFORE YOU DIG" ENQUIRY. THE LOCATION OF SERVICES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED AS ACCURATELY AS POSSIBLE FROM DIAGRAMS PROVIDED BY SERVICE AUTHORITIES & FIELD INVESTIGATIONS & ARE TO BE VERIFIED PRIOR TO CONSTRUCTION.
- EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IN ACCORDANCE WITH THE LANDCOM PUBLICATION:- "MANAGING URBAN STORMWATER, SOILS & CONSTRUCTION" Vol. 1, 4th EDITION.
- ALL DISTURBED AREAS OF THE SITE ARE TO BE REINSTATED WITH EXISTING OR MATCHING MATERIALS UNLESS NOTED OTHERWISE AT THE COMPLETION OF THE WORKS.
- ARRANGE SET-OUT BY HORNSBY SHIRE COUNCIL DESIGN & CONSTRUCTION BRANCH SURVEYORS. NOTIFY SENIOR ENGINEERING SURVEYOR A MINIMUM OF 24 HOURS IN ADVANCE.
- WHERE PAVEMENT RESURFACING IS UNDERTAKEN ENSURE ALL BLUE HYDRANT MARKER RRPMS ARE REINSTATED AT THE COMPLETION OF WORKS.

SUBSOIL DRAINAGE NOTES:

- SUBSOIL DRAINAGE TO BE INSTALLED AS DIRECTED BY SUPERVISING CONSTRUCTION ENGINEER.
- SUBSOIL FLUSHING POINTS TO BE INSTALLED AT ALL U/S ENDS OF LINES & AT 60m MAXIMUM CENTRES. CONNECT SUBSOIL PIPES TO STORMWATER PITS & MANHOLES.



**ROAD CLASSIFICATION : 2 LANE URBAN
DESIGN SPEED : 50km/h**

ASSET MANAGEMENT & MAINTENANCE BRANCH

Senior Asset Engineer
Name: A. BOYD Telephone: 9847 6672
Accepted as complying with the general intent of the design brief

Signed: _____ Date: _____

Project Number
12163

Sheet of Issue
1 11 1

HSC Drawing Number
1149.1

Hornsby Shire Council Design & Construction Branch

TELEPHONE: (02) 9847 6666
FACSIMILE: (02) 9847 6999
Authorised for release - Manager Design & Construction
Name: R. RAJCA Signed: _____ Date: _____

Designer J.ZHU	Design Checked-Design Team Leader		
Drawn J.ZHU	Signed: _____		
Surveyor R.TERTELI	NA	NA	AHD
	Field Book	Level Book	Datum
Project Identifier \ CAD File Name H:\Gray St_LR_12163\Design\CAD\Gray St stage 1 design.dwg			
TRIM Document Number D07689145			

Issue	Description	Name	Initial	Date
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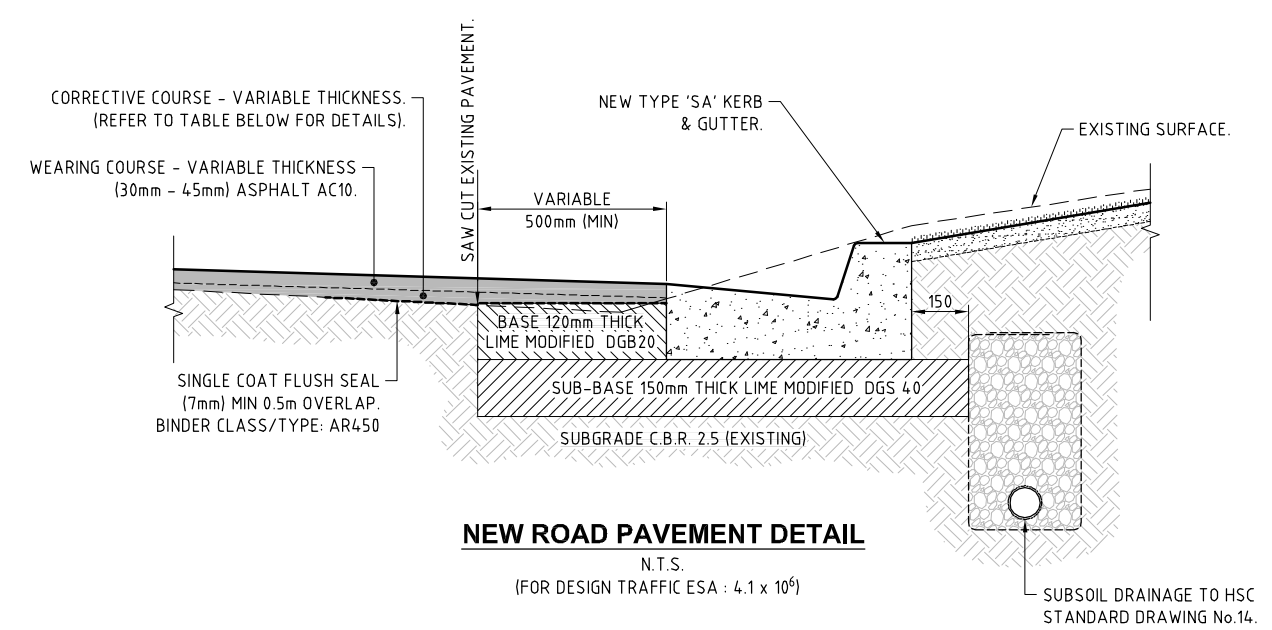
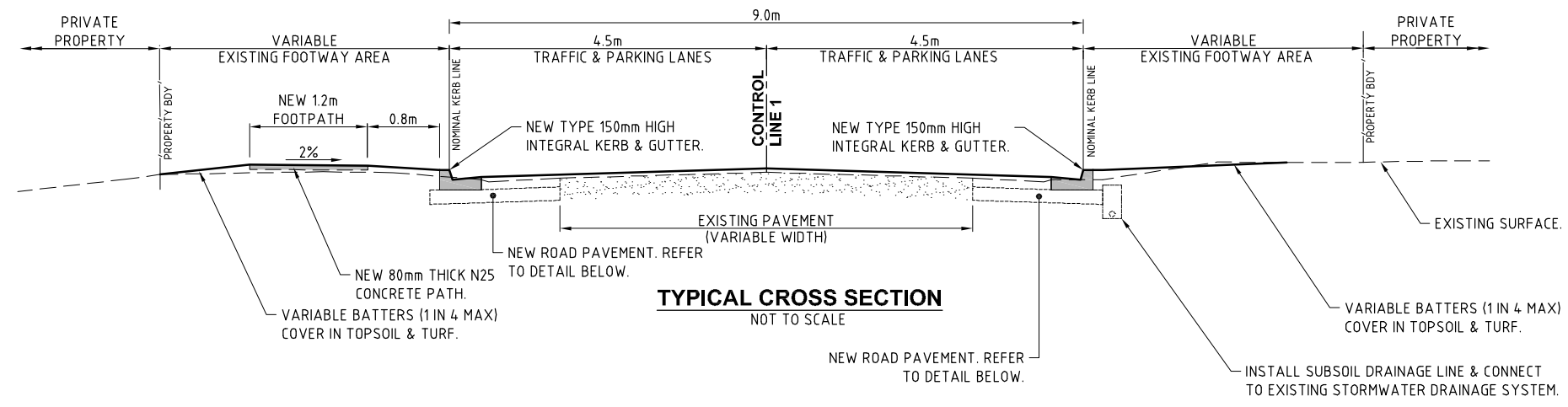
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Bar Scales
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GRAY STREET, MT COLAH ROAD RECONSTRUCTION - STAGE 1 BEROWRA ROAD TO COLAH ROAD

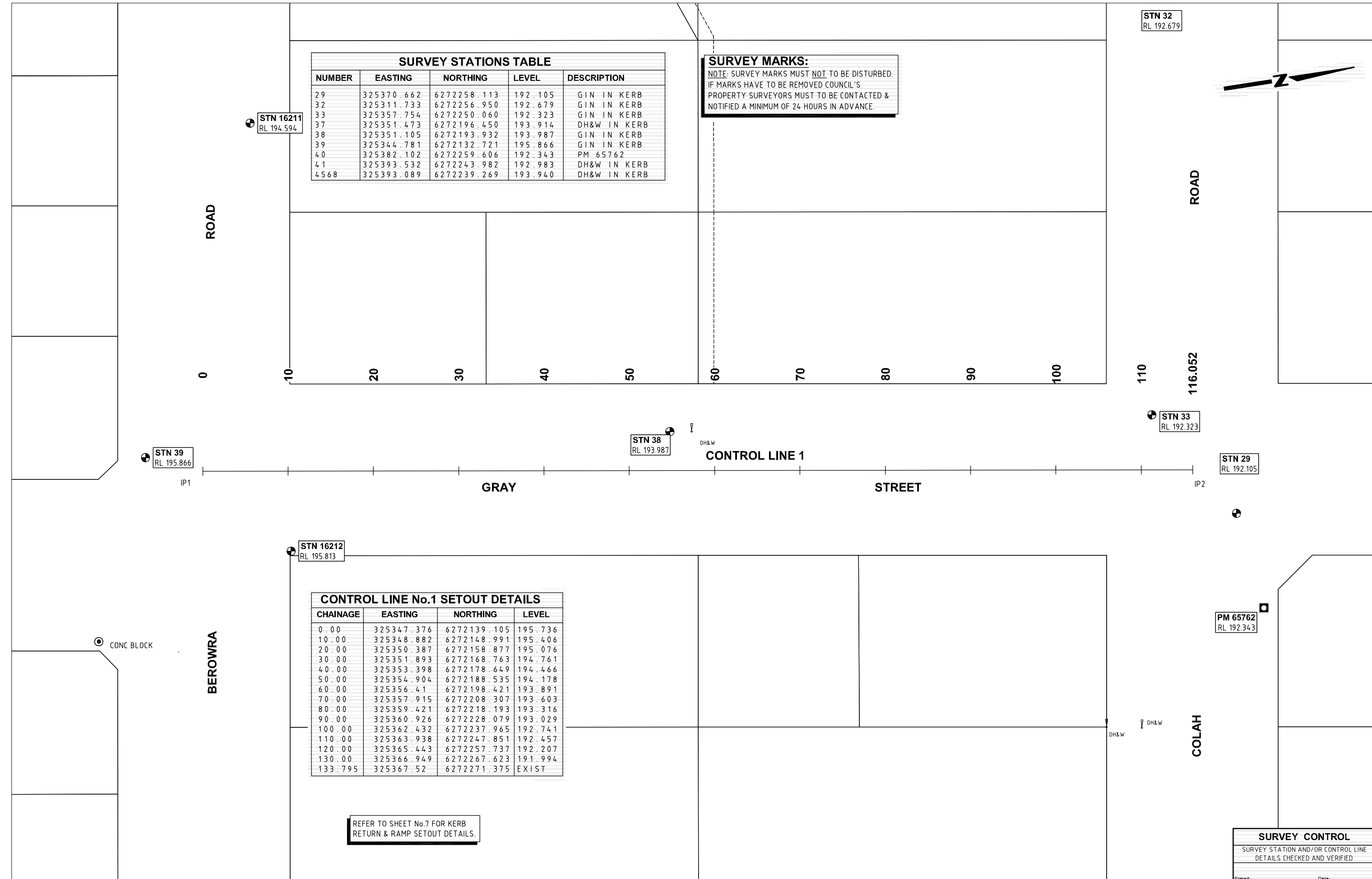
DRAWING SCHEDULE, LOCALITY PLAN, LEGEND & GENERAL NOTES



ASPHALT COURSE & LAYER THICKNESS TABLE

NOMINAL SIZE OF ASPHALT (mm)	COMPACTED LAYER THICKNESS (mm)	TYPE OF WORK
10	30 TO 45	WEARING COURSE
10	20 TO 45	CORRECTIVE COURSE
14	30 TO 55	CORRECTIVE COURSE
20	40 TO 90	CORRECTIVE COURSE

Hornsby Shire Council Design & Construction Branch <small>TELEPHONE: (02) 9847 6666 FACSIMILE: (02) 9847 6999</small>	Designer J.ZHU Signed:	Design Checked-Design Team Leader Signed:				Bar Scales NOT TO SCALE	 HORNSBY SHIRE COUNCIL <small>PO BOX 37, HORNSBY NSW 1630 DX 9855 HORNSBY</small>	GRAY STREET, MT COLAH ROAD RECONSTRUCTION - STAGE 1 BEROWRA ROAD TO COLAH ROAD TYPICAL SECTION & PAVEMENT DETAILS	Project Number 12163							
	Drawn J.ZHU Signed:	Drawing Checked Signed:	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">NA</td> <td style="width:33%;">NA</td> <td style="width:33%;">AHD</td> </tr> <tr> <td style="font-size: 8px;">Field Book</td> <td style="font-size: 8px;">Level Book</td> <td style="font-size: 8px;">Datum</td> </tr> </table>	NA	NA				AHD	Field Book	Level Book	Datum	Project Identifier-\\CAD File Name H:\Gray St_LR_12163\Design\ACAD\Gray St stage 1 design.dwg	TRIM Document Number D07689145	Issue 1	Description ISSUED FOR CONSTRUCTION
NA	NA	AHD														
Field Book	Level Book	Datum														
Authorised for release - Manager Design & Construction Name: R. RAJCA Signed: Date:	Design not to be amended without authorisation by Manager Design & Construction							DO NOT SCALE, USE FIGURED DIMENSIONS ONLY								



SURVEY STATIONS TABLE				
NUMBER	EASTING	NORTHING	LEVEL	DESCRIPTION
29	325370.662	6272258.113	192.105	GIN IN KERB
32	325311.733	6272256.950	192.679	GIN IN KERB
33	325357.754	6272250.060	192.323	GIN IN KERB
37	325351.473	6272196.450	193.914	DH&W IN KERB
38	325351.105	6272193.932	193.987	GIN IN KERB
39	325344.781	6272132.721	195.866	GIN IN KERB
40	325382.102	6272259.606	192.343	PM 65762
41	325393.532	6272243.982	192.983	DH&W IN KERB
4568	325393.089	6272239.269	193.940	DH&W IN KERB

SURVEY MARKS:
 NOTE: SURVEY MARKS MUST NOT BE DISTURBED.
 IF MARKS HAVE TO BE REMOVED COUNCIL'S
 PROPERTY SURVEYORS MUST TO BE CONTACTED &
 NOTIFIED A MINIMUM OF 24 HOURS IN ADVANCE.

CONTROL LINE No.1 SETOUT DETAILS			
CHAINAGE	EASTING	NORTHING	LEVEL
0.00	325347.376	6272139.105	195.736
10.00	325348.882	6272148.991	195.406
20.00	325350.387	6272158.877	195.076
30.00	325351.893	6272168.763	194.746
40.00	325353.398	6272178.649	194.416
50.00	325354.904	6272188.535	194.086
60.00	325356.410	6272198.421	193.756
70.00	325357.915	6272208.307	193.426
80.00	325359.421	6272218.193	193.096
90.00	325360.926	6272228.079	192.766
100.00	325362.432	6272237.965	192.436
110.00	325363.938	6272247.851	192.106
120.00	325365.443	6272257.737	191.776
130.00	325366.949	6272267.623	191.446
133.795	325367.52	6272271.375	EXIST

REFER TO SHEET No.7 FOR KERB
 RETURN & RAMP SETOUT DETAILS.

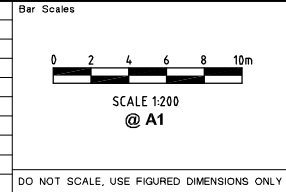
SURVEY CONTROL		
SURVEY STATION AND/OR CONTROL LINE DETAILS CHECKED AND VERIFIED		
Signed:	Date:	
Project Number	12163	
Sheet of	3 11	Issue 1
HSC Drawing Number	1149.1	

**Hornsby Shire Council
 Design & Construction
 Branch**
 TELEPHONE: (02) 9847 6666
 FACSIMILE: (02) 9847 6999

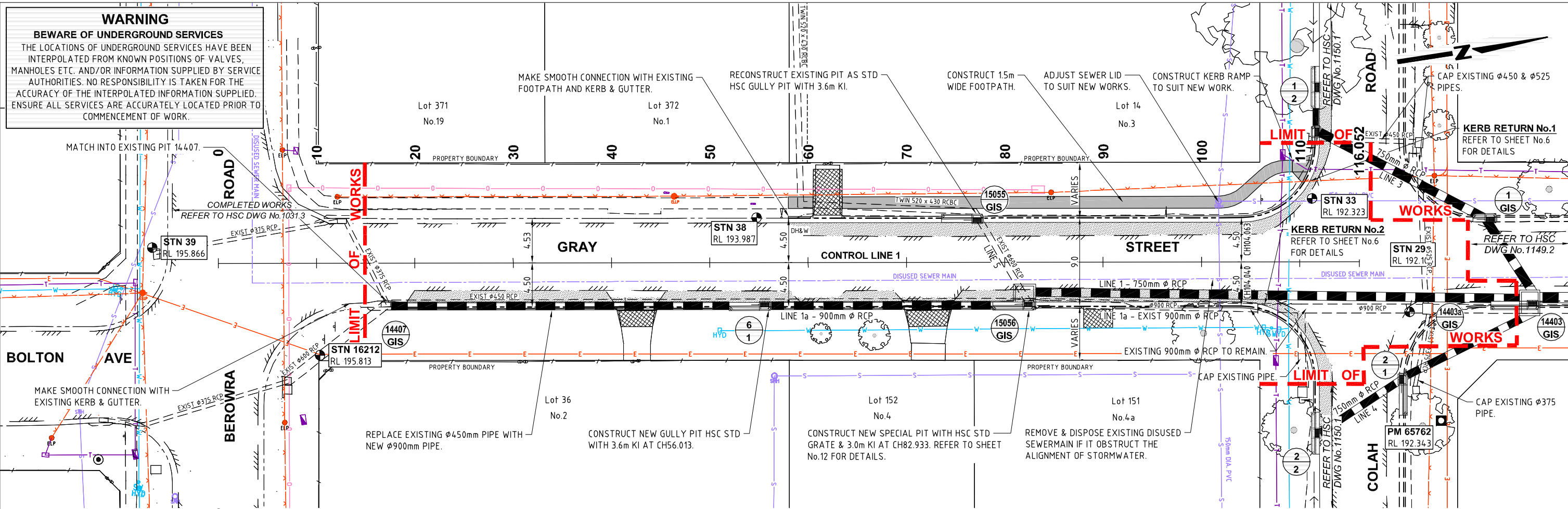
Designer: J.ZHU
 Design Checked-Design Team Leader: J.ZHU
 Drawn: J.ZHU
 Surveyor: R.TERTELI
 Project Identifier\ACAD File Name: H:\Gray St_LR_12163\Design\ACAD\Gray St stage 1 design.dwg
 TRIM Document Number: D07689145

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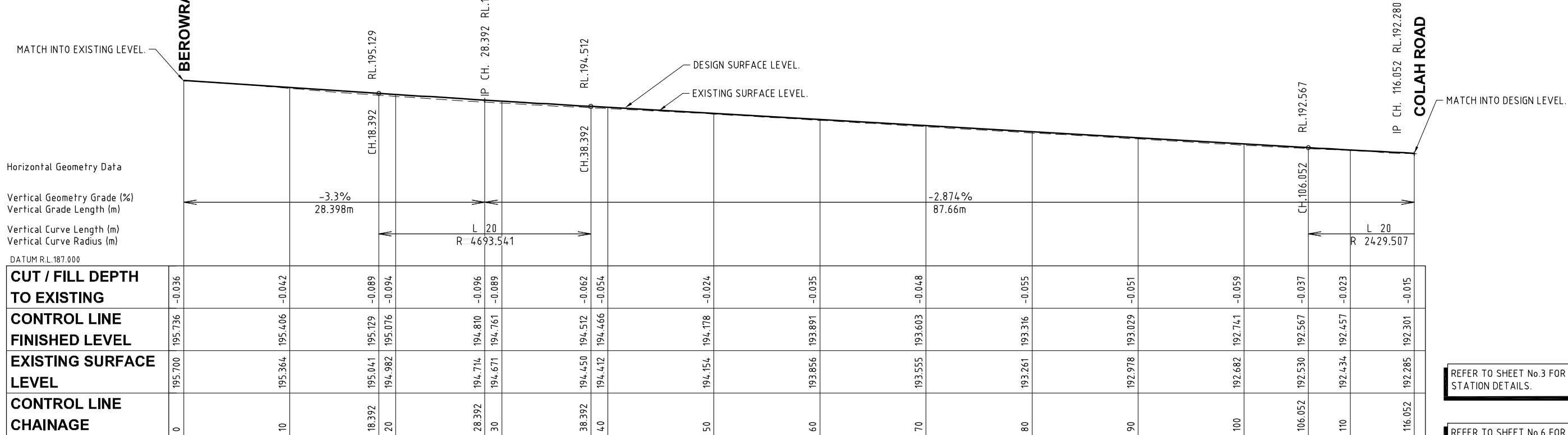
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**GRAY STREET, MT COLAH
 ROAD RECONSTRUCTION - STAGE 1
 BEROWRA ROAD TO COLAH ROAD**
CONTROL LINE 1 SETOUT DETAILS



PLAN
 SCALE 1:200



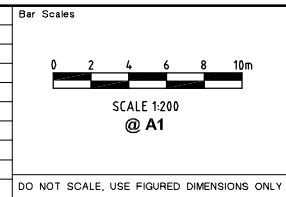
LONGITUDINAL SECTION - CL1
 SCALE 1:200 HOR
 1:100 VERT

Hornsby Shire Council
Design & Construction
Branch
 TELEPHONE: 021 9847 6666
 FACSIMILE: 021 9847 6999
 Authorised for release - Manager Design & Construction
 Name: R. RAJCA Signed: Date:

Designer: J.ZHU
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 Surveyor: R.TERTELI
 Project Identifier: \\CAD File Name: H:\Gray St_LR_12163\Design\ACAD\Gray St stage 1 design.dwg
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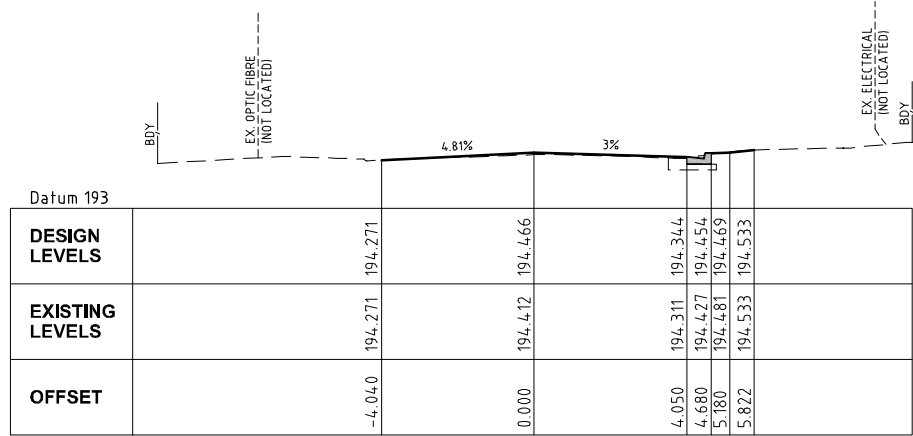


GRAY STREET, MT COLAH
ROAD RECONSTRUCTION - STAGE 1
BEROWRA ROAD TO COLAH ROAD
GENERAL WORKS & SERVICES PLAN

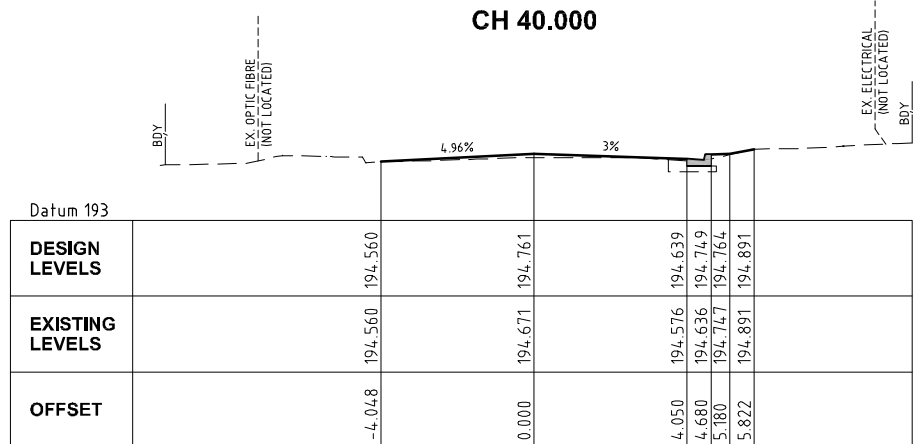
Project Number	12163		
Sheet	of	Issue	
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HSC Drawing Number	1149.1		

REFER TO SHEET No.3 FOR SURVEY STATION DETAILS.

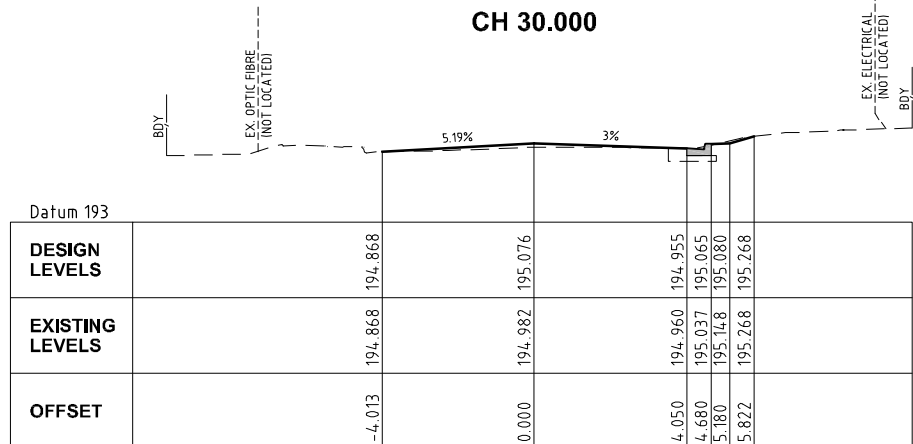
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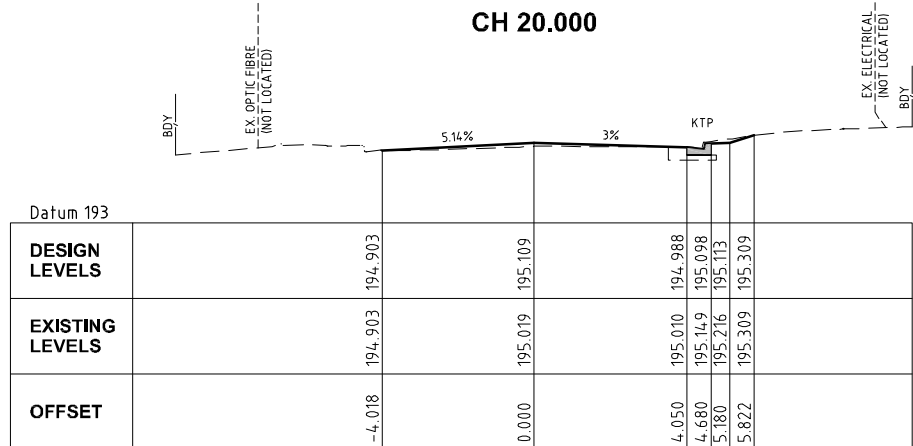
CH 40.000



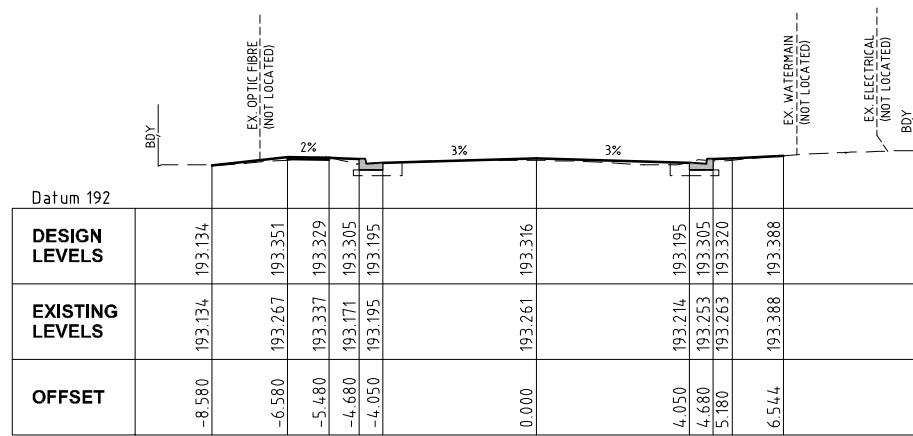
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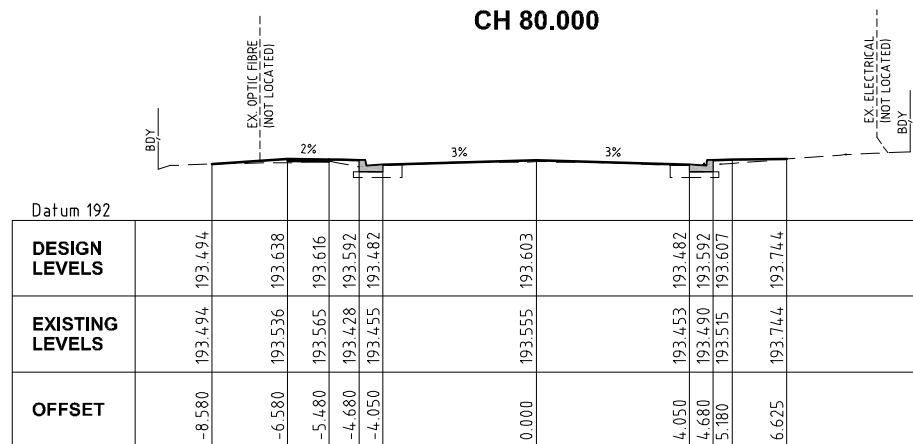
CH 20.000



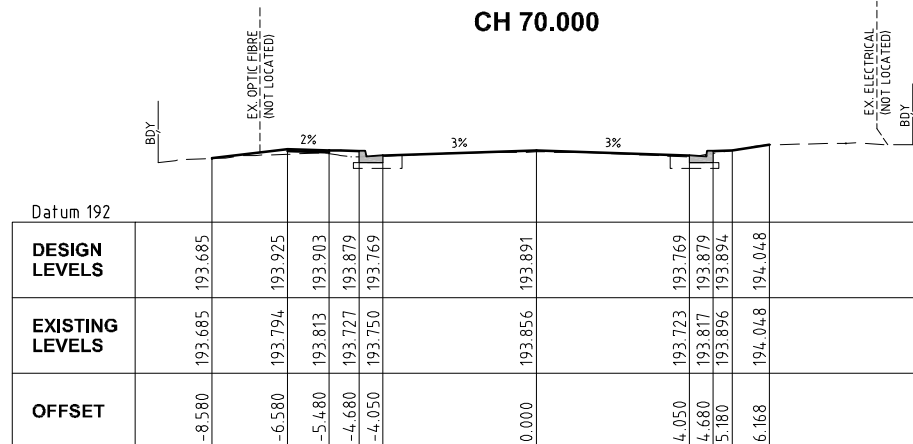
CH 19.000



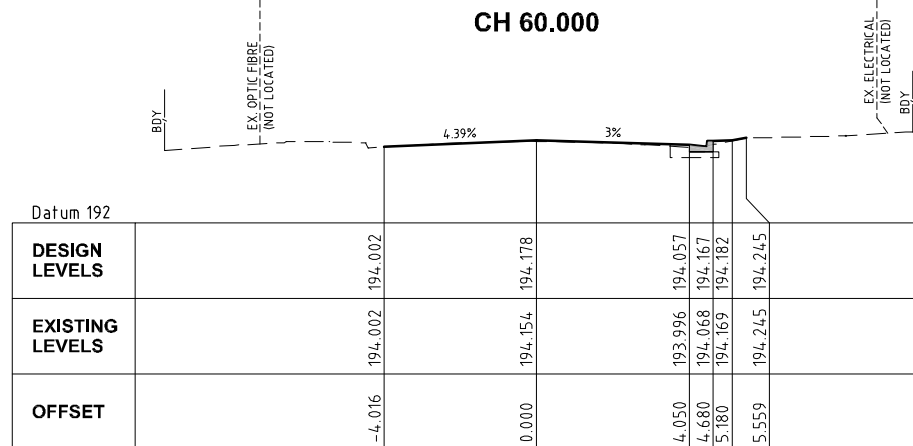
CH 80.000



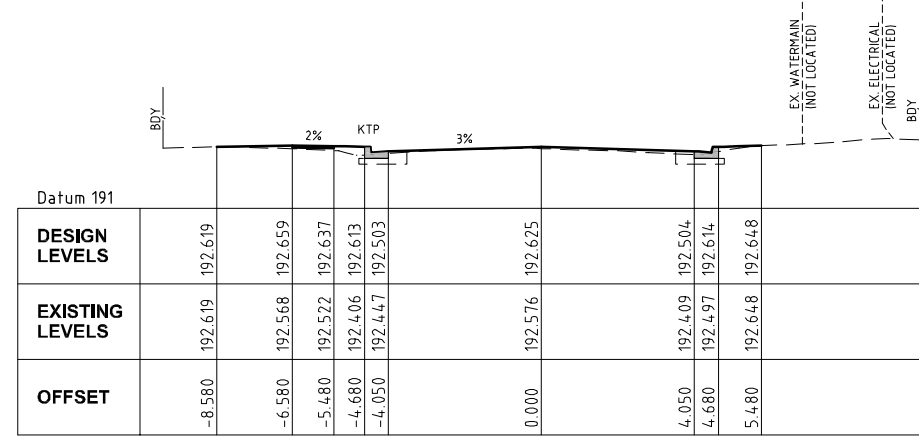
CH 70.000



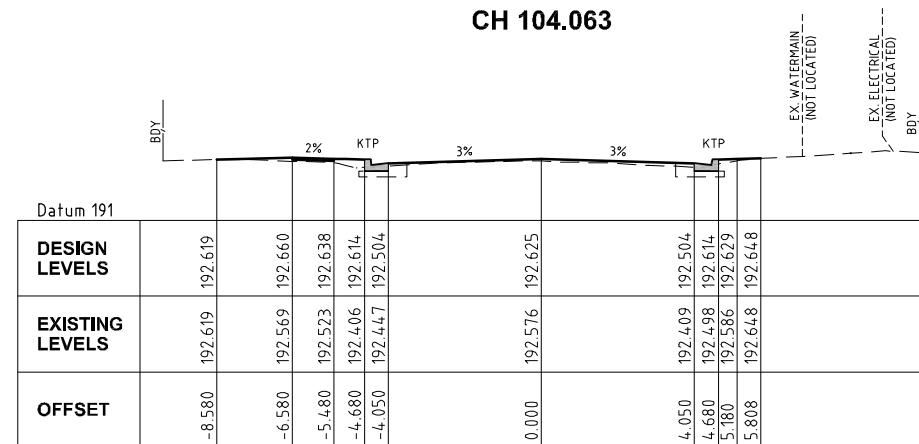
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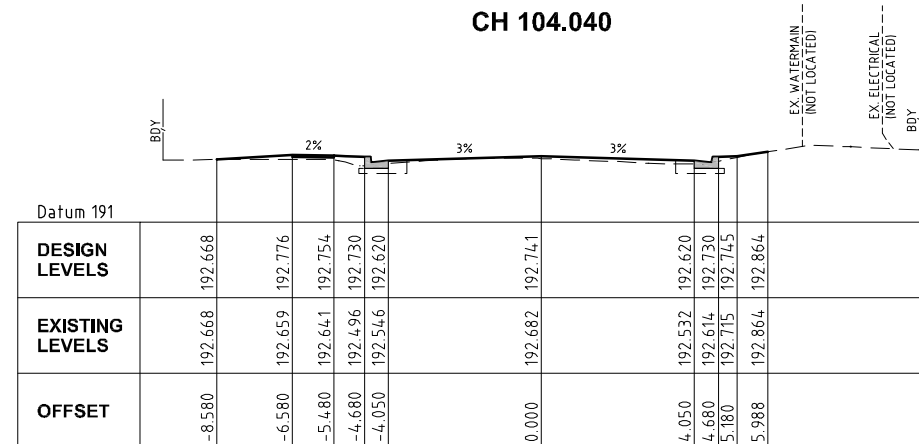
CH 50.000



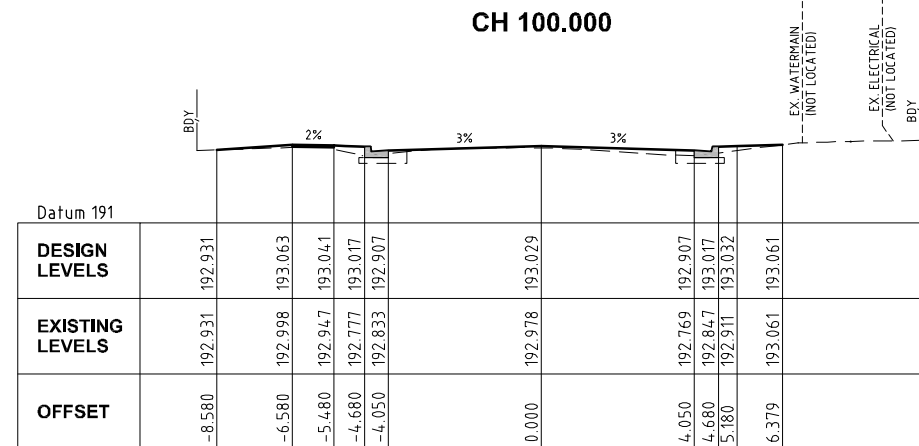
CH 104.063



CH 104.040



CH 100.000



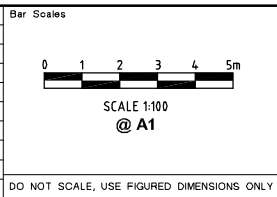
CH 90.000

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Design & Construction
Branch**

TELEPHONE: 021 9847 6666
FACSIMILE: 021 9847 6919
Authorised for release - Manager Design & Construction
Name: R. RAJCA Signed: Date:

Designer J.ZHU	Design Checked-Design Team Leader		
Drawn J.ZHU	Signed:		
Surveyor R.TERTELI	NA	NA	AHD
	Field Book	Level Book	Datum
Project Identifier-\\CAD File Name			
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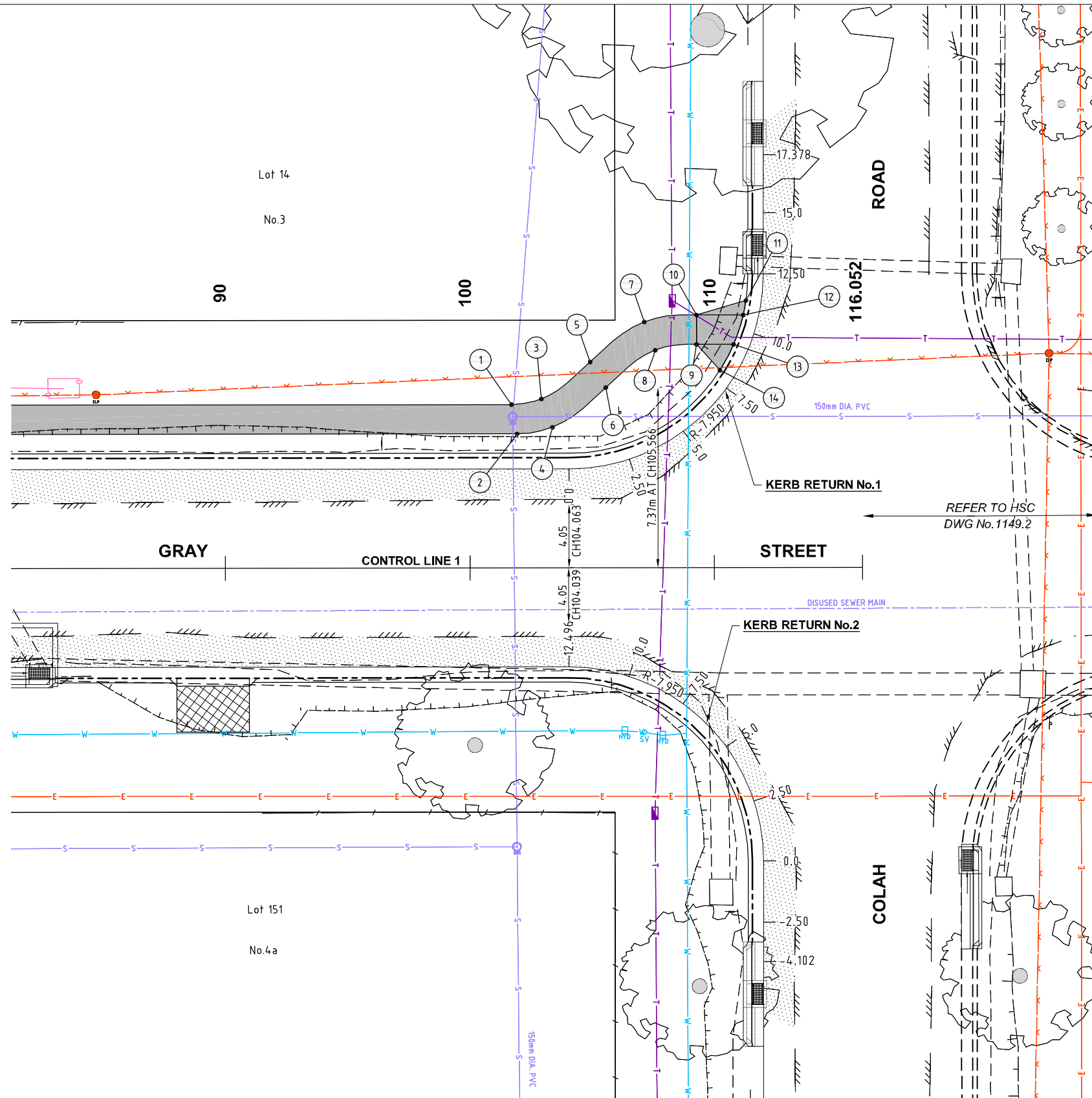
1	ISSUED FOR CONSTRUCTION	MNOBLO		
Issue	Description	Name	Initial	Date
Design not to be amended without authorisation by Manager Design & Construction				



**GRAY STREET, MT COLAH
ROAD RECONSTRUCTION - STAGE 1
BEROWRA ROAD TO COLAH ROAD**

CL1 CROSS SECTIONS CH19.000 TO CH104.063

Project Number	12163		
Sheet	of	Issue	
5	11	1	
HSC Drawing Number			1149.1



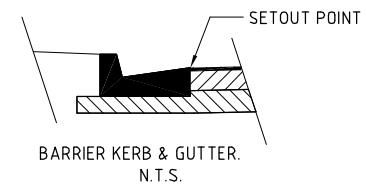
KERB RETURN SETOUT PLAN
SCALE 1:100

KERB RETURN No.1 SETOUT DETAILS				
CHAINAGE	EASTING	NORTHING	LEVEL	RAD/SPIRAL
0.00	325359.040	6272242.592	192.503	-7.95
2.50	325359.025	6272245.081	192.450	-7.95
5.00	325358.240	6272247.444	192.397	-7.95
7.50	325356.763	6272249.448	192.344	-7.95
10.00	325354.739	6272250.898	192.291	-7.95
12.50	325352.366	6272251.650	192.258	-7.95
15.00	325349.894	6272252.029	192.264	-7.95
17.378	325347.544	6272252.389	192.286	-7.95

KERB RETURN No.2 SETOUT DETAILS				
CHAINAGE	EASTING	NORTHING	LEVEL	RAD/SPIRAL
-4.102	325380.163	6272247.389	192.301	-7.95
-2.50	325378.579	6272247.631	192.280	-7.95
0.00	325376.108	6272248.010	192.276	-7.95
2.50	325373.618	6272247.997	192.312	-7.95
5.00	325371.255	6272247.215	192.360	-7.95
7.50	325369.249	6272245.740	192.408	-7.95
10.00	325367.798	6272243.717	192.456	-7.95
12.496	325367.044	6272241.349	192.504	-7.95

KERB RAMP & FOOTPATH SETOUT DETAILS			
POINT	EASTING	NORTHING	REMARKS
1	325356.085	6272240.658	EDGE OF FOOTPATH
2	325357.306	6272240.707	EDGE OF FOOTPATH
3	325356.043	6272241.905	EDGE OF FOOTPATH
4	325357.257	6272242.174	EDGE OF FOOTPATH
5	325354.855	6272244.106	EDGE OF FOOTPATH
6	325355.983	6272244.577	EDGE OF FOOTPATH
7	325353.566	6272246.543	EDGE OF FOOTPATH
8	325354.780	6272246.812	EDGE OF FOOTPATH
9	325354.801	6272248.512	TOP OF RAMP
10	325353.614	6272248.693	TOP OF RAMP
11	325353.903	6272250.584	CORNER OF RAMP
12	325353.998	6272250.545	BOTTOM OF RAMP
13	325355.030	6272250.015	BOTTOM OF RAMP
14	325355.995	6272249.302	CORNER OF RAMP

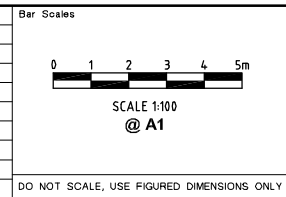
REFER TO SHEET No.3 FOR SURVEY STATION SETOUT DETAILS.



KERB SETOUT POINT DETAIL

**Hornsby Shire Council
Design & Construction
Branch**
TELEPHONE: (02) 9847 6666
FACSIMILE: (02) 9847 6999

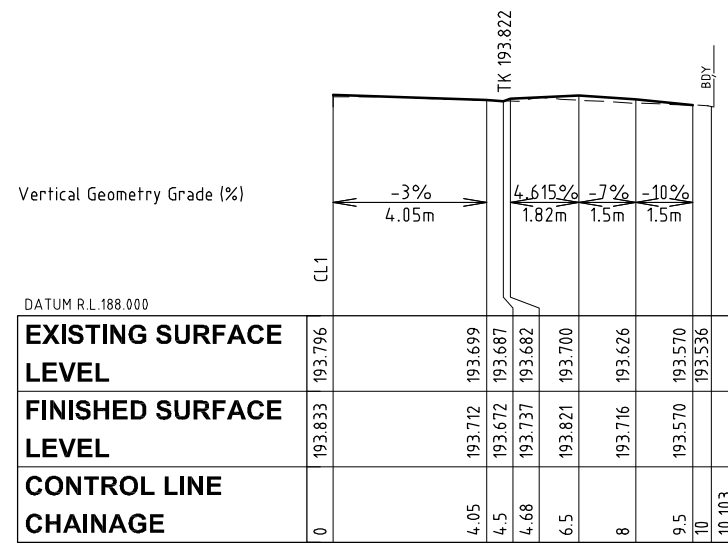
Designer J.ZHU	Design Checked-Design Team Leader Signed:				
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Surveyor R.TERTELI	NA Field Book	NA Level Book	AHD Datum		
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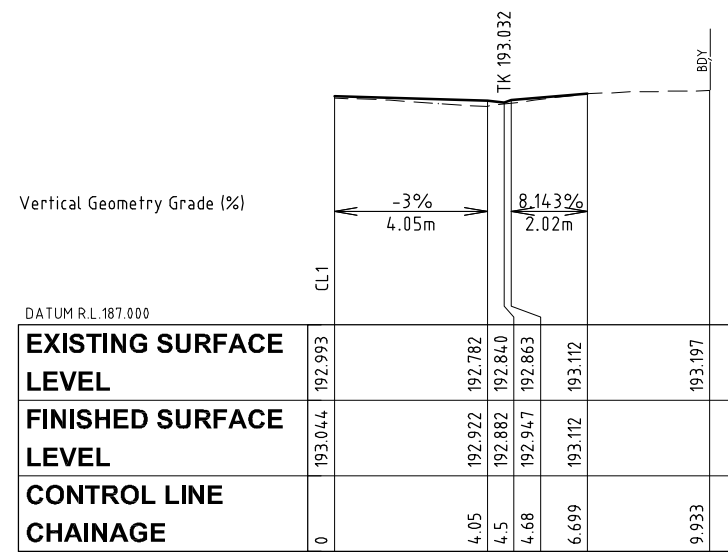
**GRAY STREET, MT COLAH
ROAD RECONSTRUCTION - STAGE 1
BEROWRA ROAD TO COLAH ROAD**

KERB RETURN & FOOTPATH SETOUT DETAILS

Project Number 12163	Sheet 6	of 11	Issue 1
HSC Drawing Number 1149.1			

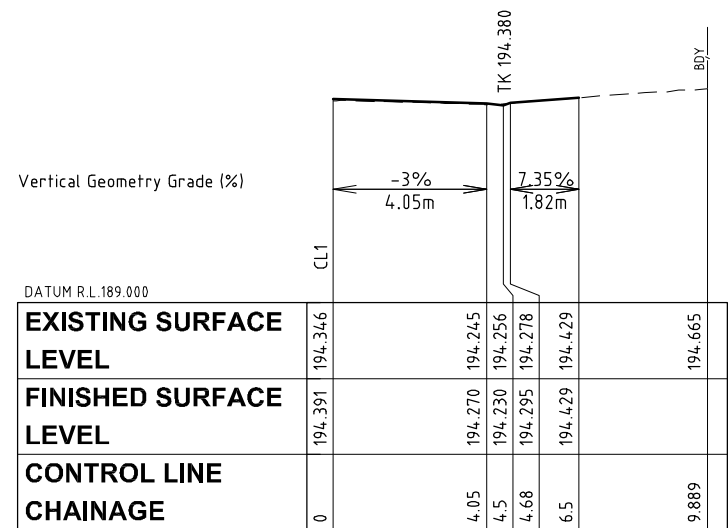


DRIVEWAY HOUSE No.3 - CH62.006

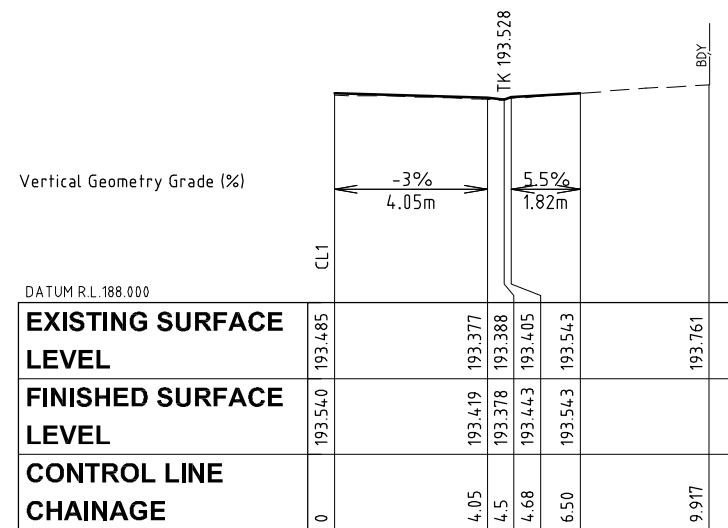


DRIVEWAY HOUSE No.4a - CH89.487

SCALE 1:100 HOR
1:100 VERT



DRIVEWAY HOUSE No.2 - CH42.576



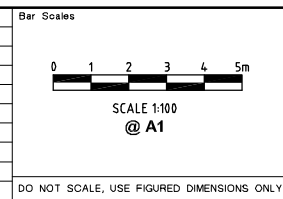
DRIVEWAY HOUSE No. 4 - CH72.215

**Hornsby Shire Council
Design & Construction
Branch**

TELEPHONE: (02) 9847 6666
FACSIMILE: (02) 9847 6999
Authorised for release - Manager Design & Construction
Name: R. RAJCA Signed: Date:

Designer
J.ZHU
Signed:
Drawn
J.ZHU
Signed:
Surveyor
R.TERTELI
Project Identifier \ CAD File Name
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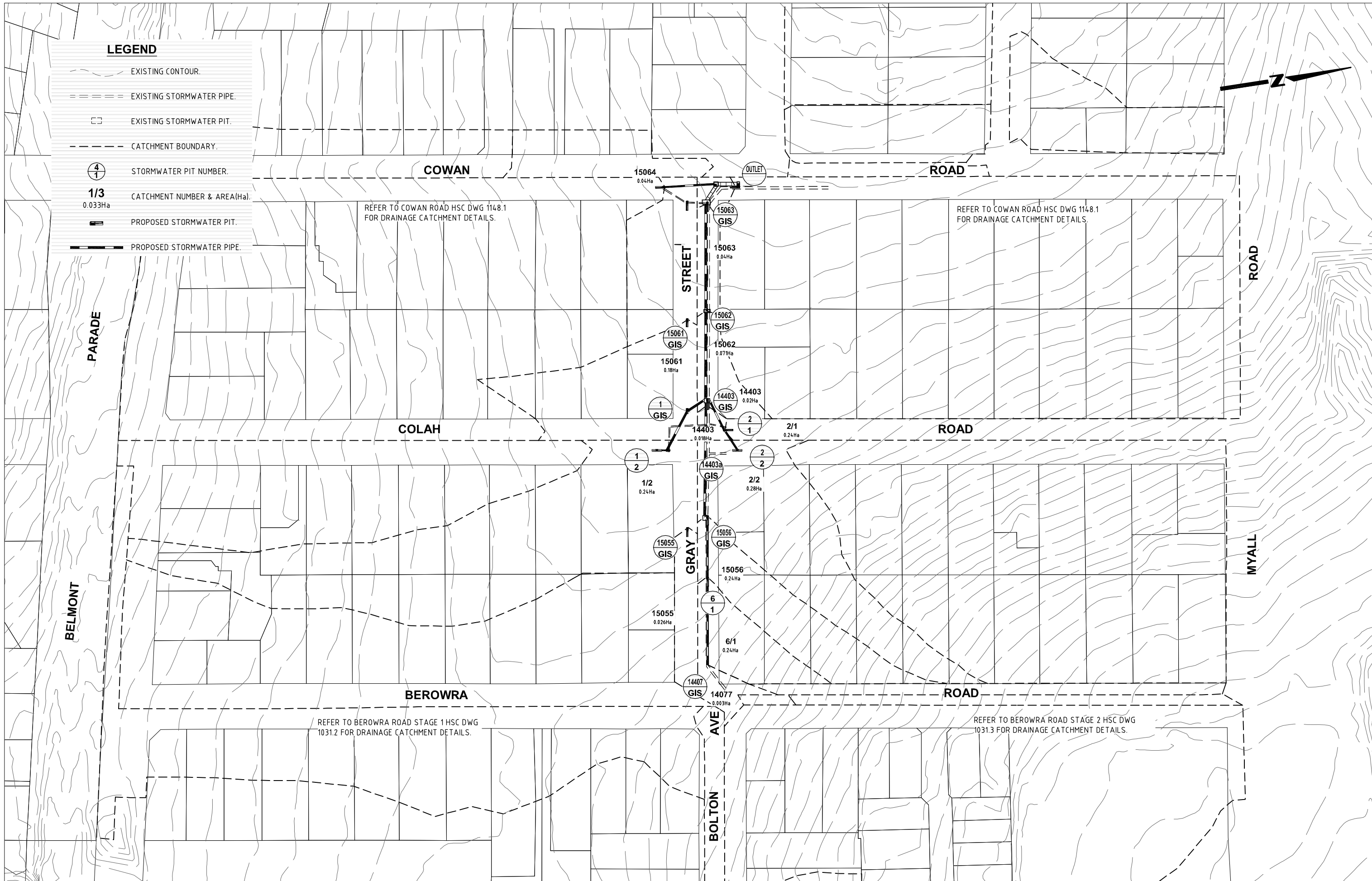
Design Checked-Design Team Leader			
Field Book	NA	NA	AHD
Level Book			
Datum			
ISSUED FOR CONSTRUCTION		MNOBLO	
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**GRAY STREET, MT COLAH
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DRIVEWAY PROFILES

Project Number	12163	
Sheet of	7	11
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Design & Construction
Branch**

TELEPHONE: (02) 9847 6666
FACSIMILE: (02) 9847 6999

Authorised for release - Manager Design & Construction
Name: R. RAJCA Signed: Date:

Designer
J.ZHU
Signed:

Drawn
J.ZHU
Signed:

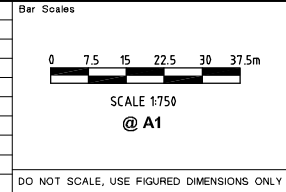
Surveyor
R.TERTELI

Project Identifier \ CAD File Name
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TRIM Document Number
D07689145

Issue	Description	MNOBLO	Name	Initial	Date
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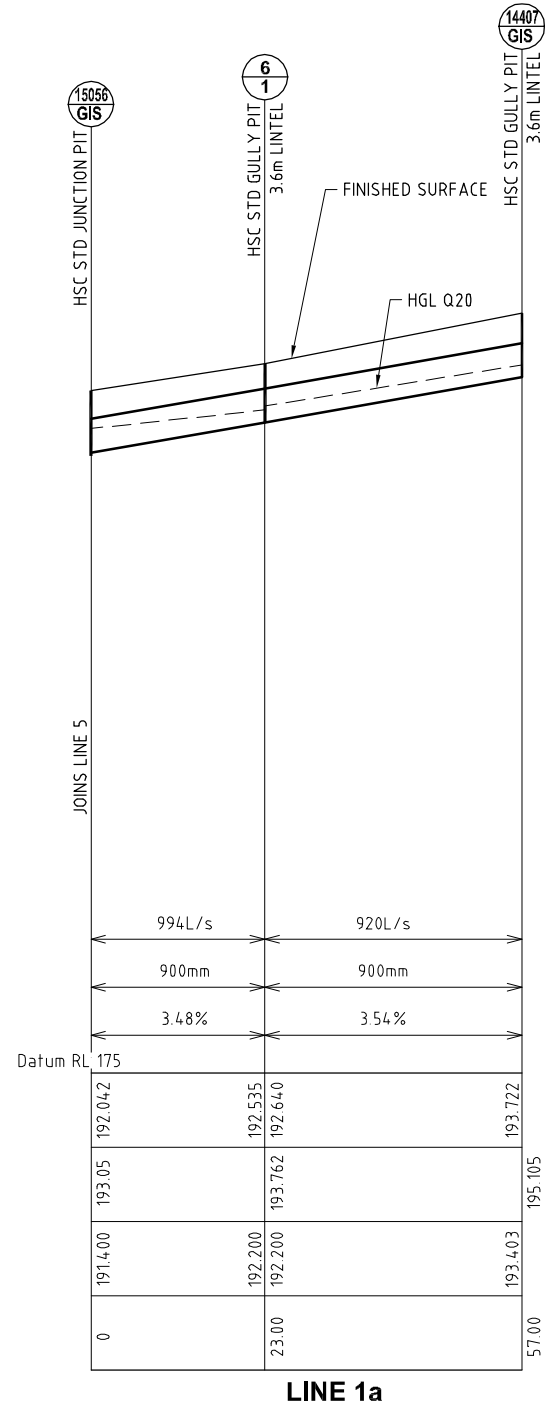
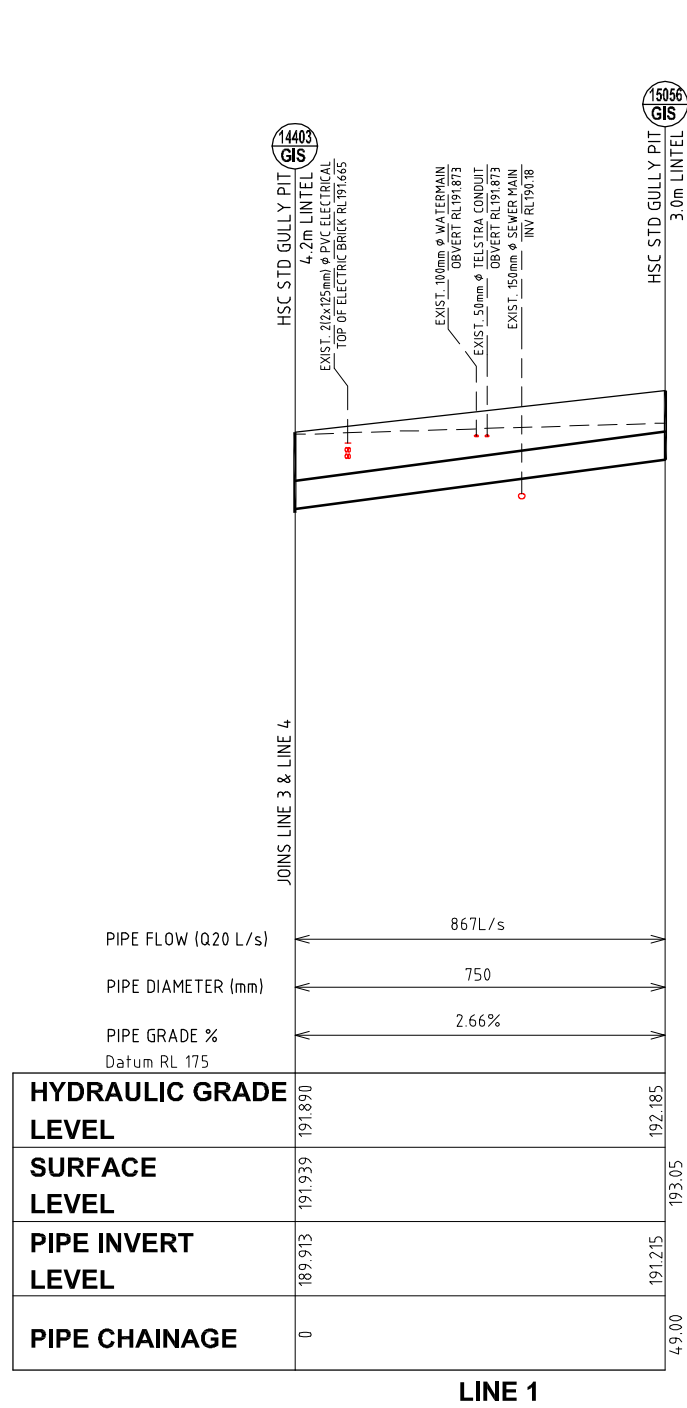
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**GRAY STREET, MT COLAH
ROAD RECONSTRUCTION - STAGE 1
BEROWRA ROAD TO COLAH ROAD**

STORMWATER DRAINAGE CATCHMENT PLAN

Project Number	12163	
Sheet of	8	11
Issue	1	
HSC Drawing Number	1149.1	

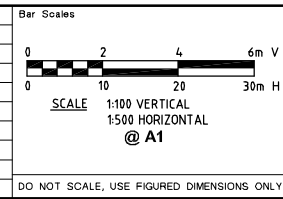


**Hornsby Shire Council
Design & Construction
Branch**

TELEPHONE: (02) 9847 6666
FACSIMILE: (02) 9847 6999
Authorised for release - Manager Design & Construction
Name: R. RAJCA Signed: Date:

Designer J.ZHU	Design Checked-Design Team Leader		
Drawn J.ZHU	Signed:		
Surveyor R.TERTELI	NA Field Book	NA Level Book	AHD Datum
Project Identifier\VCAD File Name			
H:\Gray St_LR_12163\Design\ACAD\Gray St stage 1 design.dwg			
TRIM Document Number			
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1	ISSUED FOR CONSTRUCTION	MNOBLO		
Issue	Description	Name	Initial	Date
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**GRAY STREET, MT COLAH
ROAD RECONSTRUCTION - STAGE 1
BEROWRA ROAD TO COLAH ROAD**

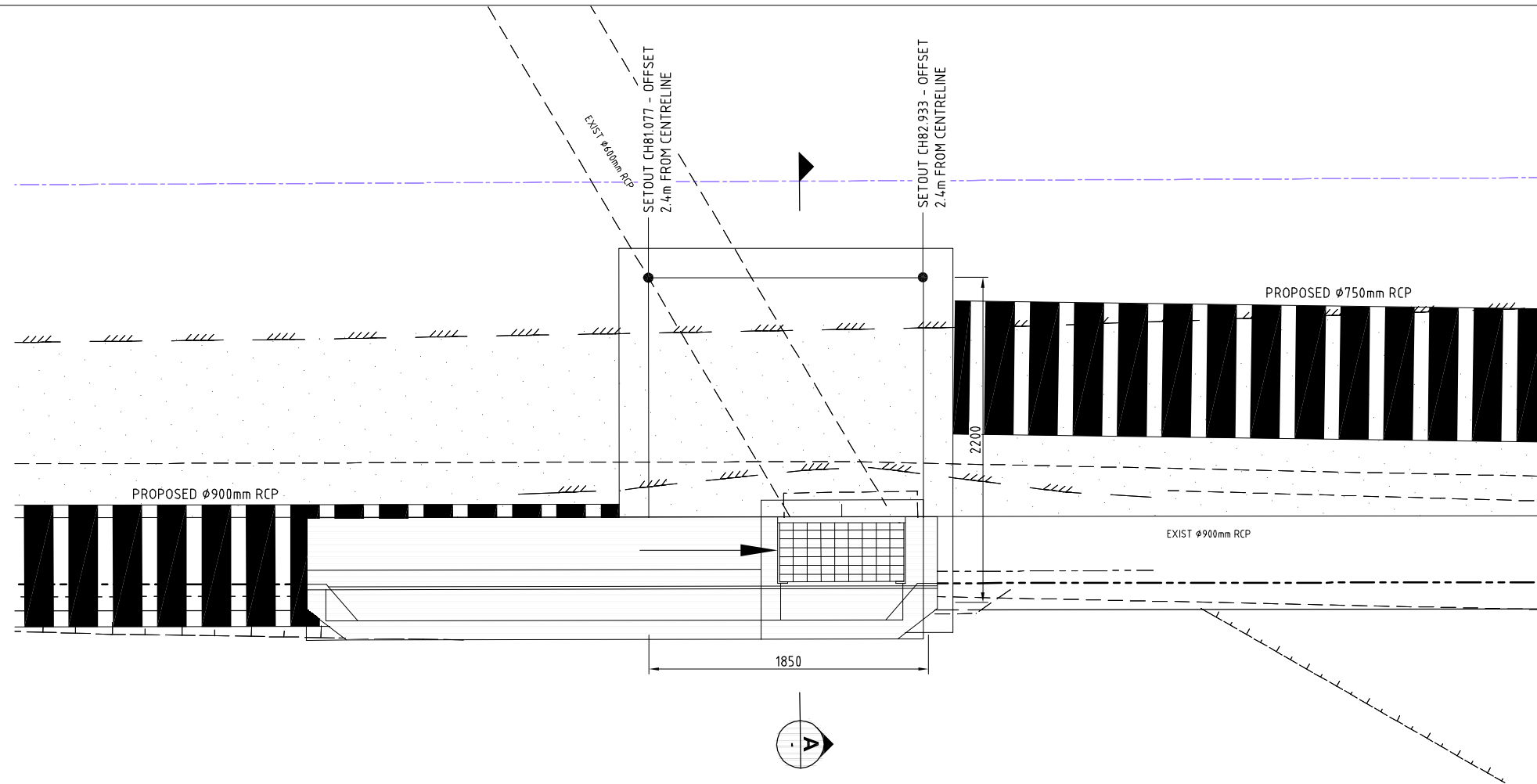
STORMWATER DRAINAGE LONG SECTION
LINE 1 & 1a

Project Number 12163		
Sheet 9	of 11	Issue 1
HSC Drawing Number 1149.1		

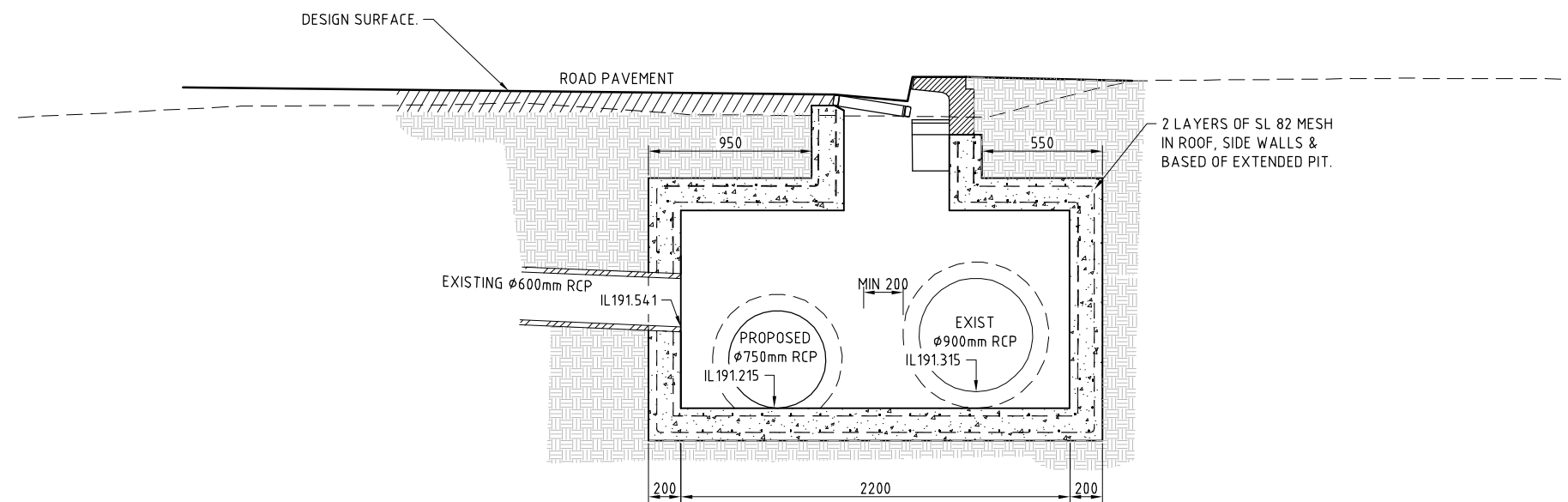
1 IN 20 YEAR HYDROLOGY DATA & RESULTS																									
LOCATION & LAND USE						INLET DESIGN								PIPE SYSTEM DESIGN				PIT RESULTS				REMARKS			
PIT NAME	SUB-CATCHMENT AREA	LAND USE				PEAK SUB-CATCHMENT FLOW RATE	OVERFLOWS APPROACHING PIT				TOTAL APPROACH FLOW	OVERFLOW LEAVING PIT			PEAK FLOW IN PIPE	REACH LENGTH	PIPE SLOPE	PIPE DIAMETER	PRESSURE CHANGE COEFFICIENT	WATER SURFACE ELEVATION	SURFACE LEVEL		FREEBOARD	PIT NAME	
		PAVED		GRASSED			ORIGIN OF APPROACH FLOWS	FLOWRATE	FLOW WIDTH	DEPTHxVELOCITY		INLET SIZE	BYPASS FLOW	FLOW WIDTH											DEPTHxVELOCITY
		PERCENTAGE	TOTAL TIME, tc	PERCENTAGE	TOTAL TIME, tc																				
pit 14403	0.018	60.0	5	40.0	10	0.009	pit 21	0.024	0.820	0.080	Hornsby 4.2 m lintel	0.033	0.000	0.000	0.000	1.641	40.000	1.63	900	1.5	191.890	191.939	0.050	pit 14403	
pit 14403a	0.000					0.000		0.000	0.000	0.000	Junction	0.000	0.000	0.000	0.000	1.801	94.000	1.56	900	1.0	191.800	192.350	0.550	pit 14403a	
pit 14407	0.003	95.0	5	5.0	5	0.002	43106.000	0.000	0.000	0.000	Hornsby 3.6 m lintel	0.002	0.000	0.000	0.000	0.920	34.000	3.54	900	1.5	194.020	195.105	1.080	pit 14407	
pit 15055	0.026	95.0	5	5.0	13	0.014	14402.000	0.241	1.830	0.260	Hornsby 3.6 m lintel	0.261	0.123	2.520	0.140	0.768	12.677	2.00	600	1.5	193.030	193.190	0.160	pit 15055	
pit 15056	0.240	40.0	5	60.0	13	0.093	pit 61	0.000	0.000	0.000	Hornsby 3.0 m lintel	0.093	0.000	0.000	0.000	0.859	49.000	2.66	750	1.0	192.360	193.050	0.690	pit 15056	
pit 15062	0.071	60.0	5	40.0	10	0.034	pit 14403	0.000	0.000	0.000	Hornsby 1.2 m lintel	0.034	0.006	0.350	0.030	1.723	44.000	1.06	900	0.5	191.060	191.130	0.070	pit 15062	
pit 15063	0.040	85.0	5	15.0	5	0.021	pit 15062	0.006	0.350	0.030	Hornsby 3.6 m lintel	0.027	0.000	0.000	0.000	1.521	8.400	0.93	1050	2.0	190.470	190.540	0.070	pit 15063	
pit 61	0.240	40.0	5	60.0	10	0.106	pit 14407	0.000	0.000	0.000	Hornsby 3.6 m lintel	0.106	0.000	0.000	0.000	0.994	23.000	3.48	900	0.2	192.640	193.762	1.120	pit 61	
pit 15061	0.180	40.0	5	60.0	13	0.070	pit 1GIS	0.061	2.130	0.090	Hornsby 2.4 m lintel	0.131	0.038	1.150	0.100	0.090	9.500	1.85	375	4.0	191.120	191.130	0.010	pit 15061	
pit 1GIS	0.030	60.0	5	40.0	13	0.013	pit 112	0.135	10.910	0.020	Hornsby 1.8 m lintel	0.151	0.061	2.130	0.090	0.823	9.000	2.22	750	1.0	192.110	192.200	0.090	pit 1GIS	
pit 112	0.240	40.0	5	60.0	13	0.093	pit 15055	0.123	2.520	0.140	Hornsby 4.2 m lintel	0.216	0.135	10.910	0.020	0.793	22.000	1.20	750	1.0	192.350	192.290	0.000	pit 112	
pit 212	0.280	40.0	5	60.0	13	0.109	pit 15056	0.000	0.000	0.000	Hornsby 4.2 m lintel	0.203	0.083	8.830	0.020	0.790	9.000	1.84	750	2.3	192.320	192.273	0.000	pit 212	
pit 21	0.240	40.0	5	60.0	13	0.093	pit 212	0.083	8.830	0.020	Hornsby 4.2 m lintel	0.176	0.024	0.820	0.080	0.984	3.000	18.07	750	1.0	192.000	192.202	0.200	pit 21	
pit 15056a	0.000					0.000		0.000	0.000	0.000	Hornsby 3.0 m lintel	0.000	0.000	0.000	0.000	1.041	39.000	2.97	900	1.0	192.040	193.050	1.010	pit 15056a	

1 IN 20 YEAR HYDRAULIC DATA & RESULTS																								
PIPE NAME	U/S NODE NAME	D/S NODE NAME	RETURN PERIOD	CONDUIT SHAPE	CONDUIT DATA											INLET INFORMATION						REMARKS		
					NUMBER OF BARRELS	TOTAL LENGTH	COLEBROOK WHITE (k)	PIPE MANNINGS "N"	DIAMETER OR HEIGHT	PIPE CLASS	U/S PIPE INVERT LEVEL	D/S PIPE INVERT LEVEL	CONDUIT GRADE	U/S HGL	D/S HGL	FLOW	VELOCITY	MANHOLE OR PIT	ku	PIT COVER LEVEL	WATER SURFACE LEVEL		FREEBOARD	OVERFLOW
Pipe940956	pit 14407	pit 61	20	CIRCULAR	1	34	0.6	0.013	900	2	193.403	192.200	3.54	193.722	192.640	0.920	4.550	pit 14407	1.5	195.105	194.020	1.080	0.000	Concrete, under roads
P956234	pit 15056a	pit 14403a	20	CIRCULAR	1	39	0.6	0.013	900	2	191.315	190.158	2.97	191.891	191.799	1.041	2.420	pit 15056a	1.0	193.050	192.040	1.010	0.000	Concrete, under roads
Pipe104	pit 15056	pit 14403	20	CIRCULAR	1	49	0.6	0.013	750	2	191.215	189.913	2.66	192.185	191.890	0.859	1.940	pit 15056	1.0	193.050	192.360	0.690	0.000	Concrete, under roads
Pipe1364883	pit 14403	pit 15062	20	CIRCULAR	1	40	0.6	0.013	900	2	189.807	189.155	1.63	191.393	191.060	1.641	2.580	pit 14403	1.5	191.939	191.890	0.050	0.000	Concrete, under roads
Pipe1364906	pit 15062	pit 15063	20	CIRCULAR	1	44	0.6	0.013	900	2	189.155	188.690	1.06	190.879	190.467	1.723	2.710	pit 15062	0.5	191.130	191.060	0.070	0.006	Concrete, under roads
Pipe59007	pit 15061	pit 15062	20	CIRCULAR	1	9.5	0.6	0.013	375	2	190.116	189.940	1.85	191.065	191.060	0.090	0.820	pit 15061	4.0	191.130	191.120	0.010	0.038	Concrete, under roads
Pipe17	pit 15055	pit 15056	20	CIRCULAR	1	12.677	0.6	0.013	600	2	191.795	191.541	2.00	192.534	192.360	0.768	2.710	pit 15055	1.5	193.190	193.030	0.160	0.123	Concrete, under roads
Pipe15469	pit 112	pit 1GIS	20	CIRCULAR	1	22	0.6	0.013	750	2	190.271	190.007	1.20	192.201	192.111	0.793	1.790	pit 112	1.0	192.290	192.350	0.000	0.135	Concrete, under roads
Pipe15400	pit 212	pit 21	20	CIRCULAR	1	9	0.6	0.013	750	2	190.866	190.700	1.84	192.033	192.001	0.790	1.790	pit 212	2.3	192.273	192.320	0.000	0.083	Concrete, under roads
Pipe15454	pit 21	pit 14403a	20	CIRCULAR	1	3	0.6	0.013	750	2	190.700	190.158	18.07	191.817	191.799	0.984	2.230	pit 21	1.0	192.202	192.000	0.200	0.024	Concrete, under roads
P1807697	pit 61	pit 15056a	20	CIRCULAR	1	23	0.6	0.013	900	2	192.200	191.400	3.48	192.535	192.042	0.994	4.610	pit 61	0.2	193.762	192.640	1.120	0.000	Concrete, under roads
Pipe15535	pit 14403a	pit 15063	20	CIRCULAR	1	94	0.6	0.013	900	2	190.158	188.690	1.56	191.394	190.467	1.801	2.830	pit 14403a	1.0	192.350	191.800	0.550	0.000	Concrete, under roads
Pipe236933	pit 1GIS	pit 14403	20	CIRCULAR	1	9	0.6	0.013	750	2	190.007	189.807	2.22	191.939	191.890	0.823	1.860	pit 1GIS	1.0	192.200	192.110	0.090	0.061	Concrete, under roads

Hornsby Shire Council Design & Construction Branch TELEPHONE: (02) 9847 6666 FACSIMILE: (02) 9847 6999 Authorised for release - Manager Design & Construction Name: R. RAJCA Signed: Date:	Designer J.ZHU Signed:	Design Checked-Design Team Leader Signed:				Bar Scales  SCALE 1:200 @ A1 DO NOT SCALE, USE FIGURED DIMENSIONS ONLY	 HORNSBY SHIRE COUNCIL PO BOX 37, HORNSBY NSW 1630 DX 9855 HORNSBY	GRAY STREET, MT COLAH ROAD RECONSTRUCTION - STAGE 1 BEROWRA ROAD TO COLAH ROAD STORMWATER DRAINAGE CALCULATIONS TABLES	Project Number 12163
	Drawn J.ZHU Signed:	Surveyor R.TERTELI NA Field Book NA Level Book AHD Datum	Project Identifier\\CAD File Name H:\Gray St_LR_12163\Design\ACAD\Gray St stage 1 design.dwg	TRIM Document Number D07689145	ISSUED FOR CONSTRUCTION Description MNOBLO Name Initial Date Design not to be amended without authorisation by Manager Design & Construction				Sheet of 10 11 Issue 1



DETAILED PLAN OF PIT 15056/GIS
SCALE 1:20



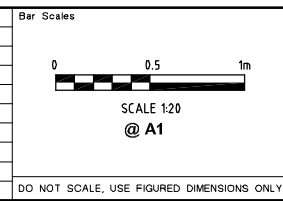
SECTION A
NTS

**Hornsby Shire Council
Design & Construction
Branch**

TELEPHONE: (02) 9847 6666
FACSIMILE: (02) 9847 6999
Authorised for release - Manager Design & Construction
Name: R. RAJCA Signed: Date:

Designer
J.ZHU
Signed:
Drawn
J.ZHU
Signed:
Surveyor
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**GRAY STREET, MT COLAH
ROAD RECONSTRUCTION - STAGE 1
BEROWRA ROAD TO COLAH ROAD**

SPECIAL PIT DETAILS

Project Number	12163		
Sheet	of	Issue	
11	11	1	
HSC Drawing Number	1149.1		