

Our Ref Q174188  
Contact Michael Lancini

25 October 2018



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Mareeba Shire Council  
65 Rankin Street, Mareeba, Qld, 4880

Attention Sam Wakeford

Dear Sam,

**RE: OPERATIONAL WORKS APPLICATION FOR HILLTOP CLOSE  
SUBDIVISION – LOT 84 ON SP237138, HILLTOP CLOSE, KURANDA.**

This letter encloses the relevant information and application form for an Operational Works approval to undertake the subdivisional works associated with the above development.

DILGP form enclosed is as follows:

- DA form 1 – Development Application Details

Cardno's analysis indicates that the proposed development does not trigger any Referral Agencies.

As you are aware there has already been an approval for Operational Works for clearing which has been completed some time ago.

Also enclosed are the civil works drawings Q174188-CI-1001 Rev 03, 1002 Rev 03, 1003 Rev 05, 1004 Rev 04, 1005 Rev 04, 1006 Rev 04, 1007 Rev 04, 1008 Rev 04, 1009 Rev 02 and 1010 Rev 01 (2 X A3 hard copies and one electronic copy on CD).

## PREVIOUS APPROVALS

A Negotiated Decision Notice (NDN) for RoL was established with Council for this development on the 10<sup>th</sup> August 2010 (File Ref. REC/06/0108). Council's Decision Notice for this application has been attached. This was extended on 9/5/2014 by Council. Refer copy attached.

In addition to the above Council approved Operational Works for Clearing in their decision notice REC/06/0108 dated 19/12/2017 copy attached.

## COMPLIANCE

As you are aware Cardno and the Developer have had some meetings with Council in order to negotiate a suitable interpretation of the NDN for the subdivisional works.

In particular it has been agreed that a road reserve corridor of 15.5m is acceptable and that a one way road crossfall with kerb and channel on the low side is also acceptable.

### Maintenance

You have advised concern with wear and tear on the uphill side of the bitumen pavement and we have considered this and suggest that Council condition the approval and in particular Building applications for each lot to require driveways to be concrete up to the edge of bitumen. This will overcome the majority

of traffic wear and tear. As there are only 5 lots the uphill verge which will be grassed will cater for any balance activity.

#### Geotechnical

The original approval encompassed the geotechnical report by MEC. The author of that report now works for GEO design and they have prepared an additional report assessment dated 28/9/2018 attached based on preliminary drawings (in principle the same as those enclosed) with appropriate recommendations covering Council's concerns. In addition they have followed this up with a further assessment elaborating on erosion and fill construction dated 11/10/2018 also attached. The final design is based on that assessment.

#### Water pressure

As Council is aware, and based on our meetings with the Town planner, it was agreed that a pumping station was inappropriate for the area and in particular for the 4 new lots created. An extension of the existing 100mm diameter water main has been proposed on the submitted drawings with a single hydrant at the end of the new cul-de-sac. This is further from the last hydrant on the existing cul-de-sac than normal FNQROC requirements, however as there is insufficient pressure for fire trucks to use to fight a fire and also to draw from the main there is no point in providing more.

The single hydrant at the end of the close is the best for pressure from the Council reservoir and will supply greater than 15 l/s albeit at a lower outlet pressure than FNQROC guidelines. Similarly water pressure for domestic purposes, as for existing lots on Hilltop Close, is less than the normally required 22m head and domestic pressure pumps will be required. This would be conditioned on any building application for each lot.

As suggested we have spoken to the QFES in regards to improving the firefighting situation on Hilltop Close and they have advised that a fire truck filling point at the reservoir would be a good idea. They have suggested that fire trucks would otherwise have to return to Kuranda to refill.

We can document such a filling point if Council concurs. Some email correspondence with QFES is attached.

#### Cut and fill batters

It was agreed to move the property boundaries generally to minimise fill batters in the road reserve. This is possible entirely along the north eastern side of the road but not on the south western side owing to the narrow road reserve width available. This area also includes a low retaining wall to minimise the extent of fill batter in this section of road.

Generally there will not be any cut batters in the road reserve.

#### Road water ponding

There is a sag kerb inlet pit at the low point in the cul-de-sac. In the ARI 100 year event most of the water will flow down the pipe, however in the event of blockage an overflow has been provided to ensure that any flow is not over fill batters but down the drainage easement. The overflow path will be erosion protected with Enkamat similar to fill batters.

#### Erosion protection

All fill batters will be protected as per the geotechnical consultant's recommendations. The stormwater outlet will have rock protection on geotextile. The extent will be finalised on site during construction with the agreement of Council officers.

#### Connection to existing cul-de-sac

The details of the necessary transition have been detailed on the attached drawings. Some modification is necessary to even out the grade changes which are now all minimal to allow continuing turn around in the existing cul-de-sac and also continuation along the new road.

The FNQROC Compliance certificate is enclosed.

## APPLICATION FEE

The Application fee will be paid on receipt of an invoice from Council by Roger McLeod by credit card. (Mob 0418 75 2343)

Roger McLeod email: [rog@pottsvillebeachrealestate.com.au](mailto:rog@pottsvillebeachrealestate.com.au)

Please find below a breakdown of estimated fees to be paid to Mareeba Shire Council:

ESTIMATE OF AUTHORITY CONTRIBUTIONS AND CONSULTANCY FEES	<i>Estimate (Including GST)</i>
<b>Fees</b>	
<b>Operational Works Application</b>	
Fee for Application for Subdivisional Operational Works approval	<b>\$2090.00</b>
Construction Monitoring Fee to be paid prior to prestart meeting	<b>\$2790.00</b>
<b>Total</b>	<b>\$4880.00</b>

We trust the above, together with the enclosed drawings are sufficient for Council to provide its approval for the Operational Works for the proposed subdivisional works.

Our client is very keen to commence works as soon as possible to minimise delays and damage from the forth coming wet season. If there are any queries or clarifications required we would appreciate your contacting this office as soon as possible to assist in this regards.

Yours faithfully



Bevan Clayton  
 Principal and Senior Civil Engineer  
 for **Cardno**

Email: [Michael.lancini@cardno.com.au](mailto:Michael.lancini@cardno.com.au)

Enclosures:

DA form 1 – Development Application Details  
 TRC Negotiated Decision Notice File Ref: REC/06/0108  
 MSC letter dated 9/5/14 extending the original decision notice  
 MSC decision notice for Operational Works for Clearing dated 19/12/2017  
 Original MEC report  
 GEO design Assessment dated 28/9/2018  
 GEO design Assessment dated 11/10/2018  
 FNQROC compliance Certificate  
 Email from QFES dated 17/9/2018 and trailing emails

# DA Form 1 – Development application details

Approved form (version 1.1 effective 22 JUNE 2018) made under section 282 of the Planning Act 2016.

This form **must** be used to make a development application **involving code assessment or impact assessment**, except when applying for development involving building work.

For a development application involving **building work only**, use *DA Form 2 – Building work details*.

For a development application involving **building work associated with any other type of assessable development (i.e. material change of use, operational work or reconfiguring a lot)**, use this form (*DA Form 1*) and parts 4 to 6 of *DA Form 2 – Building work details*.

Unless stated otherwise, all parts of this form **must** be completed in full and all required supporting information **must** accompany the development application.

One or more additional pages may be attached as a schedule to this development application if there is insufficient space on the form to include all the necessary information.

This form and any other form relevant to the development application must be used to make a development application relating to strategic port land and Brisbane core port land under the *Transport Infrastructure Act 1994*, and airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*. For the purpose of assessing a development application relating to strategic port land and Brisbane core port land, any reference to a planning scheme is taken to mean a land use plan for the strategic port land, Brisbane port land use plan for Brisbane core port land, or a land use plan for airport land.

**Note:** All terms used in this form have the meaning given under the Planning Act 2016, the Planning Regulation 2017, or the Development Assessment Rules (DA Rules).

## PART 1 – APPLICANT DETAILS

1) Applicant details	
Applicant name(s) <i>(individual or company full name)</i>	Colin Emery
Contact name <i>(only applicable for companies)</i>	Michael Lancini
Postal address <i>(P.O. Box or street address)</i>	C/- Cardno (Qld) Pty Ltd
Suburb	PO Box 1619
State	QLD
Postcode	4870
Country	Australia
Contact number	07 4034 0500
Email address <i>(non-mandatory)</i>	<a href="mailto:Michael.lancini@cardno.com.au">Michael.lancini@cardno.com.au</a>
Mobile number <i>(non-mandatory)</i>	
Fax number <i>(non-mandatory)</i>	
Applicant's reference number(s) <i>(if applicable)</i>	Q174188

2) Owner's consent	
2.1) Is written consent of the owner required for this development application?	
<input type="checkbox"/> Yes – the written consent of the owner(s) is attached to this development application	
<input checked="" type="checkbox"/> No – proceed to 3)	

## PART 2 – LOCATION DETAILS

### 3) Location of the premises (complete 3.1) or 3.2), and 3.3) as applicable)

**Note:** Provide details below and attach a site plan for any or all premises part of the development application. For further information, see [DA Forms Guide: Relevant plans](#).

#### 3.1) Street address and lot on plan

Street address **AND** lot on plan (all lots must be listed), **or**

Street address **AND** lot on plan for an adjoining or adjacent property of the premises (appropriate for development in water but adjoining or adjacent to land e.g. jetty, pontoon; all lots must be listed).

a)	Unit No.	Street No.	Street Name and Type	Suburb
		3	Hilltop Close	Kuranda
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)
	4881	84	SP237138	Mareeba Shire
b)	Unit No.	Street No.	Street Name and Type	Suburb
		-		
	Postcode	Lot No.	Plan Type and Number (e.g. RP, SP)	Local Government Area(s)

#### 3.2) Coordinates of premises (appropriate for development in remote areas, over part of a lot or in water not adjoining or adjacent to land e.g. channel dredging in Moreton Bay)

**Note:** Place each set of coordinates in a separate row. Only one set of coordinates is required for this part.

Coordinates of premises by longitude and latitude

Longitude(s)	Latitude(s)	Datum	Local Government Area(s) (if applicable)
145.6130	-16.8330	<input type="checkbox"/> WGS84 <input checked="" type="checkbox"/> GDA94 <input type="checkbox"/> Other:	Mareeba Shire

Coordinates of premises by easting and northing

Easting(s)	Northing(s)	Zone Ref.	Datum	Local Government Area(s) (if applicable)
		<input type="checkbox"/> 54 <input type="checkbox"/> 55 <input type="checkbox"/> 56	<input type="checkbox"/> WGS84 <input type="checkbox"/> GDA94 <input type="checkbox"/> Other:	

#### 3.3) Additional premises

Additional premises are relevant to this development application and their details have been attached in a schedule to this application

Not required

#### 4) Identify any of the following that apply to the premises and provide any relevant details

In or adjacent to a water body or watercourse or in or above an aquifer

Name of water body, watercourse or aquifer:

On strategic port land under the *Transport Infrastructure Act 1994*

Lot on plan description of strategic port land:

Name of port authority for the lot:

In a tidal area

Name of local government for the tidal area (if applicable):

Name of port authority for tidal area (if applicable):

On airport land under the *Airport Assets (Restructuring and Disposal) Act 2008*

Name of airport:

<input type="checkbox"/> Listed on the Environmental Management Register (EMR) under the <i>Environmental Protection Act 1994</i>	
EMR site identification:	
<input type="checkbox"/> Listed on the Contaminated Land Register (CLR) under the <i>Environmental Protection Act 1994</i>	
CLR site identification:	

**5) Are there any existing easements over the premises?**  
*Note: Easement uses vary throughout Queensland and are to be identified correctly and accurately. For further information on easements and how they may affect the proposed development, see [DA Forms Guide](#).*

Yes – All easement locations, types and dimensions are included in plans submitted with this development application

No

## PART 3 – DEVELOPMENT DETAILS

### Section 1 – Aspects of development

<b>6.1) Provide details about the first development aspect</b>	
a) What is the type of development? <i>(tick only one box)</i>	
<input type="checkbox"/> Material change of use	<input type="checkbox"/> Reconfiguring a lot
<input checked="" type="checkbox"/> Operational work	<input type="checkbox"/> Building work
b) What is the approval type? <i>(tick only one box)</i>	
<input checked="" type="checkbox"/> Development permit	<input type="checkbox"/> Preliminary approval
	<input type="checkbox"/> Preliminary approval that includes a variation approval
c) What is the level of assessment?	
<input checked="" type="checkbox"/> Code assessment	<input type="checkbox"/> Impact assessment <i>(requires public notification)</i>
d) Provide a brief description of the proposal <i>(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):</i>	
Subdivisional Works	
e) Relevant plans	
<b>Note:</b> <i>Relevant plans are required to be submitted for all aspects of this development application. For further information, see <a href="#">DA Forms guide: Relevant plans</a>.</i>	
<input checked="" type="checkbox"/> Relevant plans of the proposed development are attached to the development application	
<b>6.2) Provide details about the second development aspect</b>	
a) What is the type of development? <i>(tick only one box)</i>	
<input type="checkbox"/> Material change of use	<input type="checkbox"/> Reconfiguring a lot
<input type="checkbox"/> Operational work	<input type="checkbox"/> Building work
b) What is the approval type? <i>(tick only one box)</i>	
<input type="checkbox"/> Development permit	<input type="checkbox"/> Preliminary approval
	<input type="checkbox"/> Preliminary approval that includes a variation approval
c) What is the level of assessment?	
<input type="checkbox"/> Code assessment	<input type="checkbox"/> Impact assessment <i>(requires public notification)</i>
d) Provide a brief description of the proposal <i>(e.g. 6 unit apartment building defined as multi-unit dwelling, reconfiguration of 1 lot into 3 lots):</i>	
e) Relevant plans	
<b>Note:</b> <i>Relevant plans are required to be submitted for all aspects of this development application. For further information, see <a href="#">DA Forms Guide: Relevant plans</a>.</i>	
<input type="checkbox"/> Relevant plans of the proposed development are attached to the development application	

**6.3) Additional aspects of development**

- Additional aspects of development are relevant to this development application and the details for these aspects that would be required under Part 3 Section 1 of this form have been attached to this development application
- Not required

**Section 2 – Further development details****7) Does the proposed development application involve any of the following?**

Material change of use  Yes – complete division 1 if assessable against a local planning instrument

Reconfiguring a lot  Yes – complete division 2

Operational work  Yes – complete division 3

Building work  Yes – complete *DA Form 2 – Building work details*

**Division 1 – Material change of use**

**Note:** This division is only required to be completed if any part of the development application involves a material change of use assessable against a local planning instrument.

**8.1) Describe the proposed material change of use**

Provide a general description of the proposed use	Provide the planning scheme definition (include each definition in a new row)	Number of dwelling units (if applicable)	Gross floor area (m <sup>2</sup> ) (if applicable)

**8.2) Does the proposed use involve the use of existing buildings on the premises?**

Yes

No

**Division 2 – Reconfiguring a lot**

**Note:** This division is only required to be completed if any part of the development application involves reconfiguring a lot.

**9.1) What is the total number of existing lots making up the premises?****9.2) What is the nature of the lot reconfiguration? (tick all applicable boxes)**

Subdivision (complete 10))

Dividing land into parts by agreement (complete 11))

Boundary realignment (complete 12))

Creating or changing an easement giving access to a lot from a construction road (complete 13))

**10) Subdivision****10.1) For this development, how many lots are being created and what is the intended use of those lots:**

Intended use of lots created	Residential	Commercial	Industrial	Other, please specify:
Number of lots created				

**10.2) Will the subdivision be staged?**

Yes – provide additional details below

No

How many stages will the works include?

What stage(s) will this development application apply to?

11) Dividing land into parts by agreement – how many parts are being created and what is the intended use of the parts?

Intended use of parts created	Residential	Commercial	Industrial	Other, please specify:
Number of parts created				

12) Boundary realignment

12.1) What are the current and proposed areas for each lot comprising the premises?

Current lot		Proposed lot	
Lot on plan description	Area (m <sup>2</sup> )	Lot on plan description	Area (m <sup>2</sup> )

12.2) What is the reason for the boundary realignment?

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13) What are the dimensions and nature of any existing easements being changed and/or any proposed easement? (attach schedule if there are more than two easements)

Existing or proposed?	Width (m)	Length (m)	Purpose of the easement? (e.g. pedestrian access)	Identify the land/lot(s) benefitted by the easement

### Division 3 – Operational work

**Note:** This division is only required to be completed if any part of the development application involves operational work.

14.1) What is the nature of the operational work?

- |   |  |  |
|---|--|--|
| <input checked="" type="checkbox"/> Road work   | <input checked="" type="checkbox"/> Stormwater | <input checked="" type="checkbox"/> Water infrastructure |
| <input checked="" type="checkbox"/> Drainage work   | <input checked="" type="checkbox"/> Earthworks | <input type="checkbox"/> Sewage infrastructure           |
| <input type="checkbox"/> Landscaping  | <input type="checkbox"/> Signage               | <input checked="" type="checkbox"/> Clearing vegetation  |
| <input type="checkbox"/> Other – please specify: <input style="width: 300px;" type="text"/> |  |  |

14.2) Is the operational work necessary to facilitate the creation of new lots? (e.g. subdivision)

- |   |          |
|---|----------|
| <input checked="" type="checkbox"/> Yes – specify number of new lots: | 1 into 5 |
| <input type="checkbox"/> No   |          |

14.3) What is the monetary value of the proposed operational work? (include GST, materials and labour)

\$500,000

## PART 4 – ASSESSMENT MANAGER DETAILS

15) Identify the assessment manager(s) who will be assessing this development application

Mareeba Shire Council

16) Has the local government agreed to apply a superseded planning scheme for this development application?

- Yes – a copy of the decision notice is attached to this development application
- Local government is taken to have agreed to the superseded planning scheme request – relevant documents attached
- No



## PART 5 – REFERRAL DETAILS

### 17) Do any aspects of the proposed development require referral for any referral requirements?

**Note:** A development application will require referral if prescribed by the Planning Regulation 2017.

No, there are no referral requirements relevant to any development aspects identified in this development application – proceed to Part 6

#### Matters requiring referral to the **Chief Executive of the Planning Regulation 2017:**

- Clearing native vegetation
- Contaminated land (*unexploded ordnance*)
- Environmentally relevant activities (ERA) (*only if the ERA have not been devolved to a local government*)
- Fisheries – aquaculture
- Fisheries – declared fish habitat area
- Fisheries – marine plants
- Fisheries – waterway barrier works
- Hazardous chemical facilities
- Queensland heritage place (*on or near a Queensland heritage place*)
- Infrastructure – designated premises
- Infrastructure – state transport infrastructure
- Infrastructure – state transport corridors and future state transport corridors
- Infrastructure – state-controlled transport tunnels and future state-controlled transport tunnels
- Infrastructure – near a state-controlled road intersection
- On Brisbane core port land near a State transport corridor or future State transport corridor
- On Brisbane core port land – ERA
- On Brisbane core port land – tidal works or work in a coastal management district
- On Brisbane core port land – hazardous chemical facility
- On Brisbane core port land – taking or interfering with water
- On Brisbane core port land – referable dams
- On Brisbane core port land - fisheries
- Land within Port of Brisbane's port limits
- SEQ development area
- SEQ regional landscape and rural production area or SEQ rural living area – tourist activity or sport and recreation activity
- SEQ regional landscape and rural production area or SEQ rural living area – community activity
- SEQ regional landscape and rural production area or SEQ rural living area – indoor recreation
- SEQ regional landscape and rural production area or SEQ rural living area – urban activity
- SEQ regional landscape and rural production area or SEQ rural living area – combined use
- Tidal works or works in a coastal management district
- Reconfiguring a lot in a coastal management district or for a canal
- Erosion prone area in a coastal management district
- Urban design
- Water-related development – taking or interfering with water
- Water-related development – removing quarry material (*from a watercourse or lake*)
- Water-related development – referable dams
- Water-related development – construction of new levees or modification of existing levees (*category 3 levees only*)
- Wetland protection area

#### Matters requiring referral to the **local government:**

- Airport land
- Environmentally relevant activities (ERA) (*only if the ERA have been devolved to local government*)
- Local heritage places

Matters requiring referral to the <b>chief executive of the distribution entity or transmission entity:</b> <input type="checkbox"/> Electricity infrastructure
Matters requiring referral to: <ul style="list-style-type: none"> <li>• The <b>Chief executive of the holder of the licence</b>, if not an individual</li> <li>• The <b>holder of the licence</b>, if the holder of the licence is an individual</li> </ul> <input type="checkbox"/> Oil and gas infrastructure
Matters requiring referral to the <b>Brisbane City Council:</b> <input type="checkbox"/> Brisbane core port land
Matters requiring referral to the <b>Minister under the <i>Transport Infrastructure Act 1994</i>:</b> <input type="checkbox"/> Brisbane core port land (inconsistent with Brisbane port LUP for transport reasons) <input type="checkbox"/> Strategic port land
Matters requiring referral to the <b>relevant port operator:</b> <input type="checkbox"/> Land within Port of Brisbane's port limits (below high-water mark)
Matters requiring referral to the <b>Chief Executive of the relevant port authority:</b> <input type="checkbox"/> Land within limits of another port (below high-water mark)
Matters requiring referral to the <b>Gold Coast Waterways Authority:</b> <input type="checkbox"/> Tidal works, or work in a coastal management district in Gold Coast waters
Matters requiring referral to the <b>Queensland Fire and Emergency Service:</b> <input type="checkbox"/> Tidal works marina ( <i>more than six vessel berths</i> )

<b>18) Has any referral agency provided a referral response for this development application?</b>		
<input type="checkbox"/> Yes – referral response(s) received and listed below are attached to this development application		
<input checked="" type="checkbox"/> No		
Referral requirement	Referral agency	Date of referral response
Identify and describe any changes made to the proposed development application that was the subject of the referral response and the development application the subject of this form, or include details in a schedule to this development application ( <i>if applicable</i> ).		

## PART 6 – INFORMATION REQUEST

<b>19) Information request under Part 3 of the DA Rules</b>
<input checked="" type="checkbox"/> I agree to receive an information request if determined necessary for this development application
<input type="checkbox"/> I do not agree to accept an information request for this development application
<b>Note:</b> <i>By not agreeing to accept an information request I, the applicant, acknowledge:</i>
<ul style="list-style-type: none"> <li>• that this development application will be assessed and decided based on the information provided when making this development application and the assessment manager and any referral agencies relevant to the development application are not obligated under the DA Rules to accept any additional information provided by the applicant for the development application unless agreed to by the relevant parties</li> <li>• Part 3 of the DA Rules will still apply if the application is an application listed under section 11.3 of the DA Rules.</li> </ul>
<i>Further advice about information requests is contained in the <a href="#">DA Forms Guide</a>.</i>

## PART 7 – FURTHER DETAILS

20) Are there any associated development applications or current approvals? (e.g. a preliminary approval)			
<input checked="" type="checkbox"/> Yes – provide details below or include details in a schedule to this development application <input type="checkbox"/> No			
List of approval/development application references	Reference number	Date	Assessment manager
<input checked="" type="checkbox"/> Approval <input type="checkbox"/> Development application	REC/06/0108	10/8/2010	Tablelands Regional Council
<input type="checkbox"/> Approval <input checked="" type="checkbox"/> Development application	REC/06/0108	19/12/2017	Mareeba Shire Council

21) Has the portable long service leave levy been paid? (only applicable to development applications involving building work or operational work)		
<input type="checkbox"/> Yes – a copy of the receipted QLeave form is attached to this development application <input checked="" type="checkbox"/> No – I, the applicant will provide evidence that the portable long service leave levy has been paid before the assessment manager decides the development application. I acknowledge that the assessment manager may give a development approval only if I provide evidence that the portable long service leave levy has been paid <input type="checkbox"/> Not applicable (e.g. building and construction work is less than \$150,000 excluding GST)		
Amount paid	Date paid (dd/mm/yy)	QLeave levy number
\$		

22) Is this development application in response to a show cause notice or required as a result of an enforcement notice?
<input type="checkbox"/> Yes – show cause or enforcement notice is attached <input checked="" type="checkbox"/> No

23) Further legislative requirements			
<b><u>Environmentally relevant activities</u></b>			
23.1) Is this development application also taken to be an application for an environmental authority for an <b>Environmentally Relevant Activity (ERA)</b> under section 115 of the <i>Environmental Protection Act 1994</i> ?			
<input type="checkbox"/> Yes – the required attachment (form ESR/2015/1791) for an application for an environmental authority accompanies this development application, and details are provided in the table below <input checked="" type="checkbox"/> No <i>Note: Application for an environmental authority can be found by searching “ESR/2015/1791” as a search term at <a href="http://www.qld.gov.au">www.qld.gov.au</a>. An ERA requires an environmental authority to operate. See <a href="http://www.business.qld.gov.au">www.business.qld.gov.au</a> for further information.</i>			
Proposed ERA number:		Proposed ERA threshold:	
Proposed ERA name:			
<input type="checkbox"/> Multiple ERAs are applicable to this development application and the details have been attached in a schedule to this development application.			
<b><u>Hazardous chemical facilities</u></b>			
23.2) Is this development application for a <b>hazardous chemical facility</b> ?			
<input type="checkbox"/> Yes – Form 69: Notification of a facility exceeding 10% of schedule 15 threshold is attached to this development application <input checked="" type="checkbox"/> No <i>Note: See <a href="http://www.business.qld.gov.au">www.business.qld.gov.au</a> for further information about hazardous chemical notifications.</i>			
<b><u>Clearing native vegetation</u></b>			

23.3) Does this development application involve **clearing native vegetation** that requires written confirmation that the chief executive of the *Vegetation Management Act 1999* is satisfied the clearing is for a relevant purpose under section 22A of the *Vegetation Management Act 1999*?

Yes – this development application includes written confirmation from the chief executive of the *Vegetation Management Act 1999* (s22A determination)

No

**Note:** 1. Where a development application for operational work or material change of use requires a s22A determination and this is not included, the development application is prohibited development.  
2. See <https://www.qld.gov.au/environment/land/vegetation/applying> for further information on how to obtain a s22A determination.

### **Environmental offsets**

23.4) Is this development application taken to be a prescribed activity that may have a significant residual impact on a **prescribed environmental matter** under the *Environmental Offsets Act 2014*?

Yes – I acknowledge that an environmental offset must be provided for any prescribed activity assessed as having a significant residual impact on a prescribed environmental matter

No

**Note:** The environmental offset section of the Queensland Government's website can be accessed at [www.qld.gov.au](http://www.qld.gov.au) for further information on environmental offsets.

### **Koala conservation**

23.5) Does this development application involve a material change of use, reconfiguring a lot or operational work within an assessable development area under Schedule 10, Part 10 of the Planning Regulation 2017?

Yes

No

**Note:** See guidance materials at [www.des.qld.gov.au](http://www.des.qld.gov.au) for further information.

### **Water resources**

23.6) Does this development application involve **taking or interfering with underground water through an artesian or subartesian bore, taking or interfering with water in a watercourse, lake or spring, or taking overland flow water under the Water Act 2000**?

Yes – the relevant template is completed and attached to this development application and I acknowledge that a relevant authorisation or licence under the *Water Act 2000* may be required prior to commencing development

No

**Note:** Contact the Department of Natural Resources, Mines and Energy at [www.dnrme.qld.gov.au](http://www.dnrme.qld.gov.au) for further information.

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. If the development application involves:

- Taking or interfering with underground water through an artesian or subartesian bore: complete DA Form 1 Template 1
- Taking or interfering with water in a watercourse, lake or spring: complete DA Form 1 Template 2
- Taking overland flow water: complete DA Form 1 Template 3.

### **Waterway barrier works**

23.7) Does this application involve **waterway barrier works**?

Yes – the relevant template is completed and attached to this development application

No

DA templates are available from <https://planning.dsdmip.qld.gov.au/>. For a development application involving waterway barrier works, complete DA Form 1 Template 4.

### **Marine activities**

23.8) Does this development application involve **aquaculture, works within a declared fish habitat area or removal, disturbance or destruction of marine plants**?

Yes – an associated resource allocation authority is attached to this development application, if required under the *Fisheries Act 1994*

No

**Note:** See guidance materials at [www.daf.qld.gov.au](http://www.daf.qld.gov.au) for further information.

### **Quarry materials from a watercourse or lake**

23.9) Does this development application involve the **removal of quarry materials from a watercourse or lake** under the *Water Act 2000*?

- Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development  
 No

**Note:** Contact the Department of Natural Resources, Mines and Energy at [www.dnrme.qld.gov.au](http://www.dnrme.qld.gov.au) and [www.business.qld.gov.au](http://www.business.qld.gov.au) for further information.

#### **Quarry materials from land under tidal waters**

23.10) Does this development application involve the **removal of quarry materials from land under tidal water** under the *Coastal Protection and Management Act 1995*?

- Yes – I acknowledge that a quarry material allocation notice must be obtained prior to commencing development  
 No

**Note:** Contact the Department of Environment and Science at [www.des.qld.gov.au](http://www.des.qld.gov.au) for further information.

#### **Referable dams**

23.11) Does this development application involve a **referable dam** required to be failure impact assessed under section 343 of the *Water Supply (Safety and Reliability) Act 2008* (the Water Supply Act)?

- Yes – the 'Notice Accepting a Failure Impact Assessment' from the chief executive administering the Water Supply Act is attached to this development application  
 No

**Note:** See guidance materials at [www.dnrme.qld.gov.au](http://www.dnrme.qld.gov.au) for further information.

#### **Tidal work or development within a coastal management district**

23.12) Does this development application involve **tidal work or development in a coastal management district**?

- Yes – the following is included with this development application:  
 Evidence the proposal meets the code for assessable development that is prescribed tidal work (*only required if application involves prescribed tidal work*)  
 A certificate of title  
 No

**Note:** See guidance materials at [www.des.qld.gov.au](http://www.des.qld.gov.au) for further information.

#### **Queensland and local heritage places**

23.13) Does this development application propose development on or adjoining a place entered in the **Queensland heritage register** or on a place entered in a local government's **Local Heritage Register**?

- Yes – details of the heritage place are provided in the table below  
 No

**Note:** See guidance materials at [www.des.qld.gov.au](http://www.des.qld.gov.au) for information requirements regarding development of Queensland heritage places.

Name of the heritage place:

Place ID:

#### **Brothels**

23.14) Does this development application involve a **material change of use for a brothel**?

- Yes – this development application demonstrates how the proposal meets the code for a development application for a brothel under Schedule 3 of the *Prostitution Regulation 2014*  
 No

#### **Decision under section 62 of the Transport Infrastructure Act 1994**

23.15) Does this development application involve new or changed access to a state-controlled road?

- Yes - this application will be taken to be an application for a decision under section 62 of the *Transport Infrastructure Act 1994* (subject to the conditions in section 75 of the *Transport Infrastructure Act 1994* being satisfied)  
 No

## PART 8 – CHECKLIST AND APPLICANT DECLARATION

24) Development application checklist	
I have identified the assessment manager in question 15 and all relevant referral requirement(s) in question 17 <i>Note: See the Planning Regulation 2017 for referral requirements</i>	<input checked="" type="checkbox"/> Yes
If building work is associated with the proposed development, Parts 4 to 6 of <i>DA Form 2 – Building work details</i> have been completed and attached to this development application	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
Supporting information addressing any applicable assessment benchmarks is with development application <i>Note: This is a mandatory requirement and includes any relevant templates under question 23, a planning report and any technical reports required by the relevant categorising instruments (e.g. local government planning schemes, State Planning Policy, State Development Assessment Provisions). For further information, see <a href="#">DA Forms Guide: Planning Report Template</a>.</i>	<input checked="" type="checkbox"/> Yes
Relevant plans of the development are attached to this development application <i>Note: Relevant plans are required to be submitted for all aspects of this development application. For further information, see <a href="#">DA Forms Guide: Relevant plans</a>.</i>	<input checked="" type="checkbox"/> Yes
The portable long service leave levy for QLeave has been paid, or will be paid before a development permit is issued ( <i>see 21</i> )	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Not applicable

25) Applicant declaration	
<input checked="" type="checkbox"/> By making this development application, I declare that all information in this development application is true and correct <input checked="" type="checkbox"/> Where an email address is provided in Part 1 of this form, I consent to receive future electronic communications from the assessment manager and any referral agency for the development application where written information is required or permitted pursuant to sections 11 and 12 of the <i>Electronic Transactions Act 2001</i> <i>Note: It is unlawful to intentionally provide false or misleading information.</i>	
<p><b>Privacy</b> – Personal information collected in this form will be used by the assessment manager and/or chosen assessment manager, any relevant referral agency and/or building certifier (including any professional advisers which may be engaged by those entities) while processing, assessing and deciding the development application. All information relating to this development application may be available for inspection and purchase, and/or published on the assessment manager's and/or referral agency's website. Personal information will not be disclosed for a purpose unrelated to the <i>Planning Act 2016</i>, <i>Planning Regulation 2017</i> and the <i>DA Rules</i> except where:</p> <ul style="list-style-type: none"> <li>• such disclosure is in accordance with the provisions about public access to documents contained in the <i>Planning Act 2016</i> and the <i>Planning Regulation 2017</i>, and the access rules made under the <i>Planning Act 2016</i> and <i>Planning Regulation 2017</i>; or</li> <li>• required by other legislation (including the <i>Right to Information Act 2009</i>); or</li> <li>• otherwise required by law.</li> </ul> <p>This information may be stored in relevant databases. The information collected will be retained as required by the <i>Public Records Act 2002</i>.</p>	

## PART 9 – FOR OFFICE USE ONLY

Date received:  Reference number(s):

Notification of engagement of alternative assessment manager	
Prescribed assessment manager	
Name of chosen assessment manager	
Date chosen assessment manager engaged	
Contact number of chosen assessment manager	

Relevant licence number(s) of chosen assessment manager	
---	--

<b>QLeave notification and payment</b>	
<i>Note: For completion by assessment manager if applicable</i>	
Description of the work	
QLeave project number	
Amount paid (\$)	
Date paid	
Date received form sighted by assessment manager	
Name of officer who sighted the form	

COLIN EMERY

# HILLTOP CLOSE SUBDIVISION KURANDA LOT 84 ON SP237138 SUBDIVISION WORKS

## DRAWING SCHEDULE

DRAWING NUMBER	DESCRIPTION
Q174188-CI-1001	COVER PAGE
Q174188-CI-1002	NOTES
Q174188-CI-1003	SITE PLAN
Q174188-CI-1004	ROADWORKS AND STORMWATER - LONGITUDINAL SECTIONS AND DETAILS
Q174188-CI-1005	ROADWORKS - TYPICAL ROAD SECTIONS
Q174188-CI-1006	ROADWORKS - CROSS SECTIONS - SHEET 1 OF 3
Q174188-CI-1007	ROADWORKS - CROSS SECTIONS - SHEET 2 OF 3
Q174188-CI-1008	ROADWORKS CROSS SECTIONS - SHEET 3 OF 3
Q174188-CI-1009	ROADWORKS - CUL-DE-SAC DETAILS
Q174188-CI-1010	EROSION AND SEDIMENT CONTROL STRATEGY



**GENERAL**

- G1 IF IN DOUBT ASK.
- G2 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS INCLUDING FNQROC AND ALL INFORMATION ISSUED BY THE SUPERINTENDENT DURING THE COURSE OF THE CONTRACT AND INCLUDES THE CRC DECISION NOTICE.
- G3 ORIGIN OF LEVELS IS PM114552 (MSC43) RL448.446. AHD DERIVED AS DETERMINED FROM INFORMATION SUPPLIED BY MAREEBA SHIRE COUNCIL
- G4 ALL CO-ORDINATES ARE TO GDA94 / WIDE SMARTNET AUS CORS NETWORK
- G5 ALL SET OUT SHALL BE RELATED TO ROAD CENTRE LINES.
- G6 ALL DIMENSIONS AND RADII ARE EXPRESSED IN METRES (UNO).
- G7 DRAWINGS SHALL NOT BE SCALED.
- G8 EXISTING CONTOURS, LEVELS AND FEATURES SHOWN ON THE DRAWINGS ARE INDICATIVE ONLY AND ARE BASED ON SURVEY DRAWINGS AND DATA PROVIDED BY CARDNO (QLD) PTY LTD CONSULTING SURVEYORS.
- G9 ALL DIMENSIONS RELEVANT TO SETTING OUT, SURFACE LEVELS AND INVERT LEVELS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE SUPERINTENDENT.
- G10 THE CONTRACTOR SHALL ENSURE THAT ALL WORKS ARE MAINTAINED IN A SAFE AND STABLE CONDITION AND THAT ADEQUATE PROTECTION AGAINST EROSION AND SILTATION IS IN PLACE.
- G11 WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT STANDARDS AND THE REQUIREMENTS OF CAIRNS REGIONAL COUNCIL AND OTHER AUTHORITIES SHALL BE MAINTAINED.
- G12 GRADE EVENLY BETWEEN LEVELS SHOWN EXCEPT WHERE LEVELS INDICATE VERTICAL CURVES.
- G13 THE CONTRACTOR SHALL BE RESPONSIBLE FOR EROSION PROTECTION AND SEDIMENT CONTROL FOR THE WORKS AS SPECIFIED AND TO THE SATISFACTION OF CAIRNS REGIONAL COUNCIL.
- G14 REFER TO AND COMPLY WITH FNQROC DEVELOPMENT MANUAL

**SITE CLEARANCE**

- C1 THE SITE SHALL BE CLEARED ONLY TO THE EXTENT NECESSARY TO PERMIT CONSTRUCTION OF THE PERMANENT WORKS U.N.O. CONTRACTOR TO APPLY CAUTION TO AREAS OF WORKS WITHIN CLOSE PROXIMITY TO VEGETATION. ANY WORKS WITHIN AREAS OF VEGETATION ARE TO BE REPORTED TO SITE SUPERINTENDENT AND INDEPENDENTLY REVIEWED PRIOR TO CONSTRUCTION.
- C2 AREAS TO BE USED FOR STOCKPILING EXCESS EXCAVATED MATERIALS SHALL BE CLEARED AND STRIPPED OF TOPSOIL AND OTHER UNSUITABLE MATERIAL.
- C3 ALL ITEMS NOMINATED ON THE DRAWINGS TO BE REMOVED ARE TO BE DISPOSED OF OFF SITE. REMOVED VEGETATION IS TO HAVE ALL ROOTS GRUBBED OUT AND DISPOSED OF OFF SITE. ALL OFFSITE DISPOSAL IS AT CONTRACTORS EXPENSE.

**EARTHWORKS**

- E1 DRY DENSITY RATIO AS REFERRED TO IN THESE NOTES IS THE RATIO DETERMINED IN ACCORDANCE WITH AS1289.5.4.1 OF COMPACTED DRY DENSITY IN ACCORDANCE WITH AS1289.5.3.1 OR AS1289.5.8.1 TO THE STANDARD MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH AS1259.5.1.11 (STANDARD COMPACTION). REFER FNQROC FOR MINIMUM COMPACTION STANDARDS
- E2 STRIP ALL VEGETAL MATTER, TOPSOIL AND OTHER UNSUITABLE MATERIAL FROM AREAS TO BE EXCAVATED OR FILLED. STOCKPILE SUITABLE TOPSOIL MATERIAL IN APPROVED LOCATIONS FOR SUBSEQUENT RE-USE.
- E3 EXCAVATE AS REQUIRED AND DEPOSIT EXCAVATED MATERIAL AS NECESSARY. COMPACT SURFACES EXPOSED BY STRIPPING OR EXCAVATION TO 98% DRY DENSITY RATIO TO A DEPTH OF AT LEAST 250mm, SHOULD ANY SOFT OR UNSUITABLE MATERIAL BE IDENTIFIED SEEK THE ADVICE OF THE SUPERINTENDENT.
- E4 COMPACT FILL TO 95% DRY DENSITY RATIO GENERALLY AND 98% DDR IN TOP 1m. LAY IN LAYERS OF THICKNESS APPROPRIATE TO THE COMPACTION PLANT EMPLOYED BUT NOT EXCEEDING 200mm.
- E5 ALL MATERIALS WITHIN 300mm BELOW ROAD PAVEMENT/SUBGRADE INTERFACE SHALL BE COMPACTED TO 98% DRY DENSITY RATIO.
- E6 IN PLACING FILL IN AND AROUND FOOTPATHS AND BATTERS ALLOW FOR TOPSOIL THICKNESS AS DETERMINED ON BASIS OF ACTUAL TOPSOIL MATERIALS BALANCE.
- E7 ALL AREAS EXPOSED BY EARTHWORKS SHALL BE TOPSOILED AND GRASSED BY DRILL SEEDING EXCEPT THAT HYDROMULCHING IS REQUIRED ON CUT BATTERS STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL. REFER TO GEOTECHNICAL REPORT FOR FILL BATTERS STEEPER THAN 1 IN 4.
- E8 ALL AREAS TO BE GRASSED WILL HAVE 80% ROOT MAT AT THE END OF DEFECTS LIABILITY PERIOD AND SHALL BE FREE OF ROCK AND LOOSE STONE WHEN WORKS ARE TAKEN "ON MAINTENANCE".
- E9 VERGES ARE TO BE DRILL SEEDED EXCEPT FOR TURFED EDGES.

**ROADWORKS**

- R1 PAVEMENT DESIGN IS BASED ON ASSUMED CBR VALUES AND IS TO BE IMMEDIATELY TESTED BY A GEOTECHNICAL ENGINEER TO CONFIRM. ENGINEER TO BE NOTIFIED OF RESULTS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE 5 No. CONFIRMATORY SUBGRADE SOAKED CBR TESTING TO THE SUPERINTENDENT AS SOON AS POSSIBLE LOCATIONS TO BE AGREED WITH THE SUPERINTENDENT.
- R2 EXCAVATE OR FILL AS NECESSARY TO PAVEMENT/SUBGRADE INTERFACE AS DESCRIBED IN THE SPECIFICATION AND EARTHWORKS NOTES.
- R3 PRIOR TO PLACING ROAD PAVEMENT MATERIAL THE SUBGRADE SHALL BE TESTED AND PROOF ROLLED IN THE PRESENCE OF THE SUPERINTENDENT AND MAREEBA SHIRE COUNCIL'S INSPECTING OFFICER.
- R4 PAVEMENT DESIGN SHALL BE AS SHOWN ON DRAWINGS
- R5 ROAD SUBBASE MATERIAL SHALL BE 150mm THICK TYPE 2 SUBTYPE 2.3, UNBOUND PAVEMENT MATERIAL WITH GRADING B OR C AND MINIMUM SOAKED CBR OF 45 AT 98% DRY DENSITY RATIO AND OTHER QUALITIES AS SPECIFIED, COMPACTED TO 100% DRY DENSITY RATIO. SUBBASE AND SUBGRADE MATERIAL SHALL EXTEND UNDER THE KERB AND CHANNEL TO 150mm PAST THE BACK OF THE KERB AND CHANNEL.
- R7 ROAD BASE COURSE MATERIAL SHALL BE 100 THICK TYPE 2 SUBTYPE 2.2 UNBOUND PAVEMENT MATERIAL WITH GRADING B OR C AND MINIMUM SOAKED CBR OF 60 AT 98% DRY DENSITY RATIO AND OTHER QUALITIES AS SPECIFIED, COMPACTED TO 100% DRY DENSITY RATIO.
- R9 PRIME AND SEAL WITH 30mm MINIMUM THICK LAYER OF DENSE GRADED (DG10) ASPHALTIC CONCRETE AS SPECIFIED. EXCEPT AT NEW AND OLD INTERSECTIONS, CUL-DE-SACS AND T-HEADS WHICH SHALL BE 50mm BETWEEN TANGENT POINTS
- R10 NEATLY JOIN NEW ROADWORKS TO EXISTING WORKS. SAW CUT EXISTING PAVEMENT TO PROVIDE NEAT JOINT AS NECESSARY.

**DRAINAGE**

- D1 STORMWATER DRAINAGE PIPE SHALL BE RCP FJ CLASS 2 PIPE UNO. JOINTS TO HAVE MANUFACTURER APPROVED BANDS AT ALL JOINTS TO PREVENT MOVEMENT OF FINE MATERIAL THROUGH JOINT e.g. ROCLA SAND BANDS
- D2 BEDDING SHALL BE TYPE HS2 AS SPECIFIED IN AS3725.
- D3 PIPE LAYING SHALL COMMENCE AT THE DOWNSTREAM END OF THE WORKS AT ALL TIMES.
- D4 STORMWATER HEADWALLS TO BE CONSTRUCTED AS DETAILED ON FNQROC STANDARD DRAWING S1085. SKEW ANGLE - 45°, W1=W2=1.0m OUTLET INVERT LEVEL MAY BE VARIED TO BETTER SUIT EXISTING SURFACE LEVELS. SEEK SUPERINTENDENTS APPROVAL OF VARIATION PRIOR TO CONSTRUCTION. LIDS SHALL BE CAST AFTER COMPLETION OF ALL EARTHWORKS
- D5 ALL DRAINAGE OUTLETS ARE TO BE ROCK LINED WITH MIN 200 - 300 AGGREGATE ROCK 450mm THICK ON GEOTEXTILE FOR EROSION PROTECTION
- D6 STORMWATER KERB INLET PITS TO BE CONSTRUCTED AS DETAILED ON FNQROC STANDARD DRAWINGS S1050, S1055 AND S1060 U.N.O.
- D7 ALL "FINISHED SURFACE LEVELS" ON STORMWATER LONG SECTIONS ARE BASED ON A PROJECTION OF THE KERB INVERT AT THE SETOUT CO-ORDINATE
- D8 SUBSOIL DRAIN MIN GRADE 0.5%. REFER FNQROC STD DWG S1095 FOR DETAILS
- D9 ALL STORMWATER DRAINAGE LINES SHALL HAVE CCTV SURVEY COMPLETED IN ACCORDANCE WITH THE FNQROC DEVELOPMENT MANUAL.
- D10 ALL TOP OF PIT, INLETS AND GPT UNITS TO BE CONFIRMED BY CONTRACTOR ON SITE PRIOR TO ORDERING. ANY VARIATION IN LEVELS FROM THE DESIGN PLANS TO BE REPORTED TO THE SUPERINTENDENT
- D11 ALL DRAINAGE SWALES (EXCLUDING CONCRETE LINED SECTIONS) ARE BE ROCK LINED WITH MIN. 200mm AGGREGATE ROCK 300mm THICK FOR EROSION PROTECTION

**WATER**

- W1 CONTRACTOR SHALL ADVISE MAREEBA SHIRE COUNCIL PRIOR TO UNDERTAKING ANY WATER RELATED WORK.
- W2 COMPLY WITH FNQROC - STANDARD DRAWINGS S2000 TO S2020
- W3 POTABLE WATER MAINS TO BE INSTALLED 1.70m FROM KERB AND CHANNEL INVERT GENERALLY IN ACCORDANCE WITH FNQROC STD. DWG S1010.
- W4 CONNECTION TO EXISTING MAINS TO BE CARRIED OUT BY MAREEBA SHIRE COUNCIL AT THE CONTRACTOR'S EXPENSE.
- W5 ALL PVC WATER MAINS SHALL BE CLASS 16 PVC-M RUBBER RING JOINTED U.N.O. ALL DICL WATER MAINS SHALL BE PN35 DICL RUBBER RING JOINTED U.N.O.
- W6 WATER MAINS 225Ø OR GREATER SHALL HAVE 900mm MINIMUM COVER.
- W7 BEDDING AND SURROUND TO PIPES AND FITTINGS SHALL BE IN IN ACCORDANCE WITH FNQROC STANDARD DRAWING S2016
- W8 ANCHORAGE/THRUST BLOCK LOCATIONS NOT SHOWN ON THE DRAWINGS AND SHALL BE DESIGNED BY THE CONTRACTOR IN ACCORDANCE WITH FNQROC STANDARD DRAWING S2015 TO THE WRITTEN APPROVAL OF THE SUPERINTENDENT (ALLOWABLE BEARING PRESSURE OF SOIL TO BE CONFIRMED ON SITE).
- W9 HYDRANTS AND VALVES ARE TO BE NYLON POWDER COATED OR EQUIVALENT AND HYDRANTS ARE TO BE OF THE MAXI-FLOW TYPE.
- W10 HYDRANTS TO BE IDENTIFIED BY KERB MARKER PLATE AND BLUE RETRO-REFLECTIVE MARKER IN ACCORDANCE WITH FNQROC STANDARD DRAWING S2010
- W11 VALVES TO BE IDENTIFIED BY KERB MARKER PLATE AND YELLOW RETRO-REFLECTIVE MARKER IN ACCORDANCE WITH FNQROC STANDARD DRAWING S2010
- W12 WATER MAINS CROSSING ROADS SHALL BE PN35 DICL FOR THE FULL ROAD CROSSING WIDTH, FINISHING 100mm BEHIND THE BACK OF KERB AND CHANNEL AT A MINIMUM AND AS SHOWN ON THE DRAWINGS.
- W13 MINIMUM TEST PRESSURE OF WATER MAINS SHALL BE 1200kpa. IN ACCORDANCE WITH CAIRNS REGIONAL COUNCIL AND FNQROC SPECIFICATIONS.
- W14 EXISTING HYDRANTS OR VALVES SHALL BE PROVIDED WITH NEW COVER BOXES AND SURROUNDS AS PER FNQROC STD. DWGS. S2000 AND S2005.
- W15 WHERE VALVE SURROUNDS ARE TO BE SET IN CONCRETE, A COMPRESSIBLE LAYER IS TO BE PROVIDED TO ALLOW FOR MAINTENANCE
- W16 LOWER WATER MAIN UNDER ROADS AS NECESSARY TO AVOID SUBGRADE IMPROVEMENT LAYER IF APPLICABLE

**GEOTECHNICAL**

- GE1 COMPLY WITH GEOTECHNICAL REPORT BY MFC DATED DEC 2009 & GEOTECHNICAL ASSESSMENT BY GEO DESIGN DATED 11/10/2018
- GE2 ALL EARTHWORKS ARE TO BE CONTROLLED BY LEVEL 1 INSPECTION AND TESTING BY A QUALIFIED GEOTECHNICAL, TESTING AND INSPECTION AUTHORITY WHICH SHALL SUPPLY A SUITABLE CERTIFICATION TO COUNCIL AT PRACTICAL COMPLETION

**SAFETY IN CONSTRUCTION**

CONSTRUCTION ACTIVITY CAN BE HAZARDOUS. POTENTIAL SAFETY HAZARDS CONSIDERED BY THE DESIGNERS TO HAVE A HIGHER RISK THAN NORMAL CONSTRUCTION ACTIVITY ARE IDENTIFIED WITH APPROPRIATE NOTES ON THESE DRAWINGS. IT SHOULD BE NOTED THAT DESIGNERS HAVE A LOWER UNDERSTANDING OF THE RISKS INVOLVED IN CONSTRUCTION COMPARED WITH THAT OF A COMPETENT CONTRACTOR. IT IS THEREFORE ESSENTIAL THAT AN ADEQUATE SAFETY PLAN FOR THE WORKS IS PREPARED BY THE CONTRACTOR. SAFETY PLANS ARE TO BE PREPARED IN COMPLIANCE WITH THE STATUTORY REQUIREMENTS. THE DESIGNERS MAY NOT BE AWARE OF ALL SAFETY RISKS AND HAZARDS INVOLVED IN THIS PROJECT AND THE ABSENCE OF COMMENT DOES NOT IMPLY THAT THERE ARE ONLY LOW LEVEL RISKS OF HAZARDS INVOLVED IN THE PROJECT. APPROPRIATE WORK METHOD STATEMENTS ARE TO BE PREPARED FOR ANY HIGH RISK ACTIVITY BY THE CONTRACTOR. THE DESIGNERS ARE AVAILABLE TO BE CONSULTED WHEN REQUIRED CONCERNING THEIR AREA OF CONTROL WITH REGARD TO SAFETY PLANS.

Rev.	Date	Description	Des.	Verif.	Appd.
03	19/10/2018	ISSUED FOR APPROVAL		ALH	BNC
02	20/09/2018	80% DESIGN		ALH	BNC
01	14/08/2018	PRELIMINARY ISSUE		MJT	

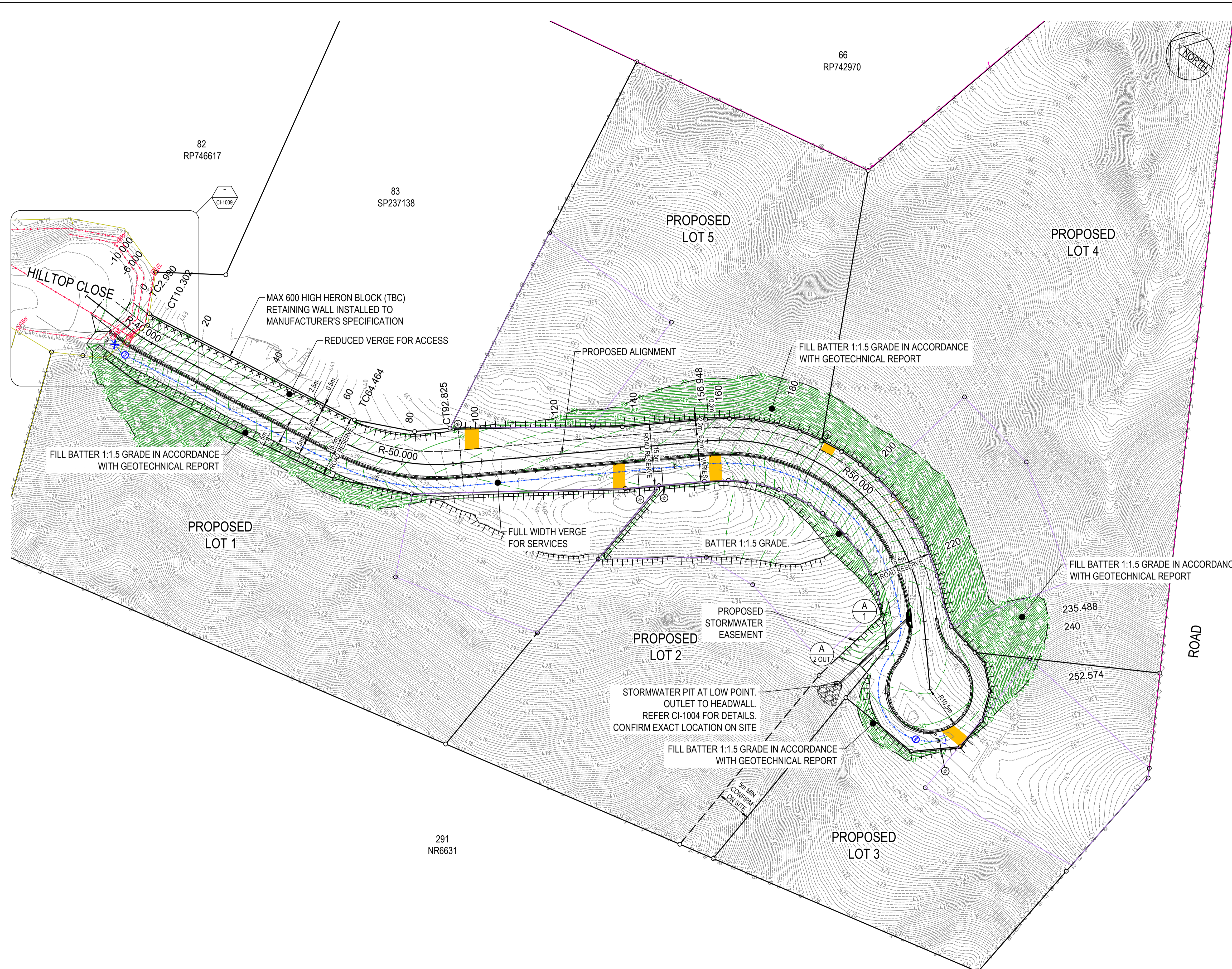
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Drawn	MJT	Date	6/08/2018
Checked	BNC	Date	20/09/2018
Designed	MJT	Date	6/08/2018
Verified		Date	
Approved		RPEQ. No.	776

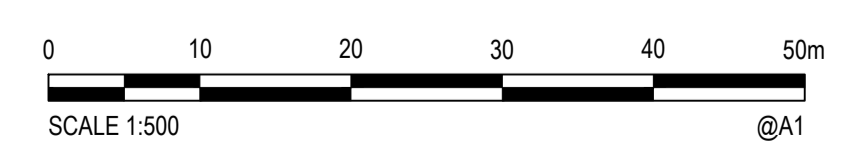
Client		COLIN EMERY	
Project HILLTOP CLOSE SUBDIVISION			
KURANDA LOT 84 ON SP237138			
SUBDIVISION WORKS			
Title			
NOTES			

Status				<b>FOR APPROVAL</b>			
NOT TO BE USED FOR CONSTRUCTION PURPOSES							
Datum	GRID	Scale	Size				
AHD		AS SHOWN	A1				
Drawing Number							Revision
Q174188-CI-1002							03



- LEGEND:**
- 456.00 DESIGN MAJOR CONTOURS (INTERVAL 1m)
  - - - DESIGN MINOR CONTOURS (INTERVAL 0.25m)
  - 456.00 EXISTING MAJOR CONTOURS (INTERVAL 1m)
  - - - EXISTING MINOR CONTOURS (INTERVAL 0.25m)
  - PROPOSED STORMWATER INFRASTRUCTURE
  - PROPOSED SUBSOIL DRAINAGE. REFER FNQROC STD. DWG. S1095
  - PROPERTY BOUNDARY
  - PROPOSED BUILDING ENVELOPE (MAX 1500m<sup>2</sup>)
  - PROPOSED DRIVEWAY LOCATION
  - PROPOSED 1000 PVC-M PN16 WATER MAIN. 2.5m OFFSET FROM KERB INVERT (TYPICAL)
  - PROPOSED HYDRANT. REFER FNQROC STD. DWG. S2005 FOR DETAILS
  - PROPOSED SLUICE VALVE. REFER FNQROC STD. DWG. S2000 FOR DETAILS
  - PROPOSED HOUSE CONNECTION BY COUNCIL. REFER FNQROC STD. DWG. S2020 (MSC SPECIFIC) FOR DETAILS
  - PROPOSED HOUSE CONNECTION UNDER ROAD. REFER FNQROC STD. DWG. S2025 FOR DETAILS

**SITE PLAN**  
SCALE 1:500



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Drawn	MJT	Date	6/08/2018
Checked	BNC	Date	20/09/2018
Designed	MJT	Date	6/08/2018
Verified		Date	
Approved	RPEQ. No. 776		

Client	COLIN EMERY
Project	HILLTOP CLOSE SUBDIVISION KURANDA LOT 84 ON SP237138 SUBDIVISION WORKS
Title	SITE PLAN

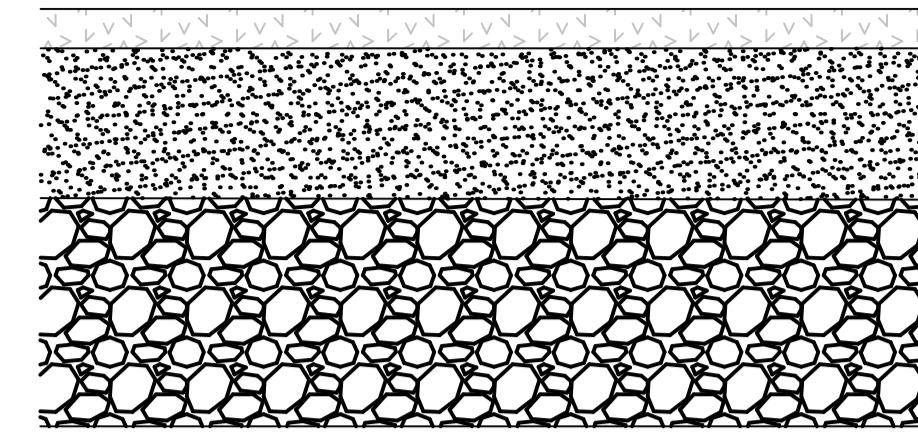
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<b>PRELIMINARY</b>			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum	GRID	Scale	Size
AHD		AS SHOWN	A1
Drawing Number	Revision		
Q174188-CI-1003			05

Rev.	Date	Description	Des.	Verif.	Appd.
05	24/10/2018	ISSUED FOR APPROVAL	ALH	BNC	
04	20/09/2018	80% DESIGN	ALH	BNC	
03	06/09/2018	REVISED ROAD GEOMETRY AND STORMWATER	ALH	BNC	
02	28/08/2018	REVISED ROAD RESERVE WIDTH	ALH	BNC	
01	14/08/2018	PRELIMINARY ISSUE	MJT		

30mm DG10 ASPHALTIC CONCRETE  
(50mm ASPHALTIC CONCRETE TO CUL-DE-SACS AND INTERSECTIONS)

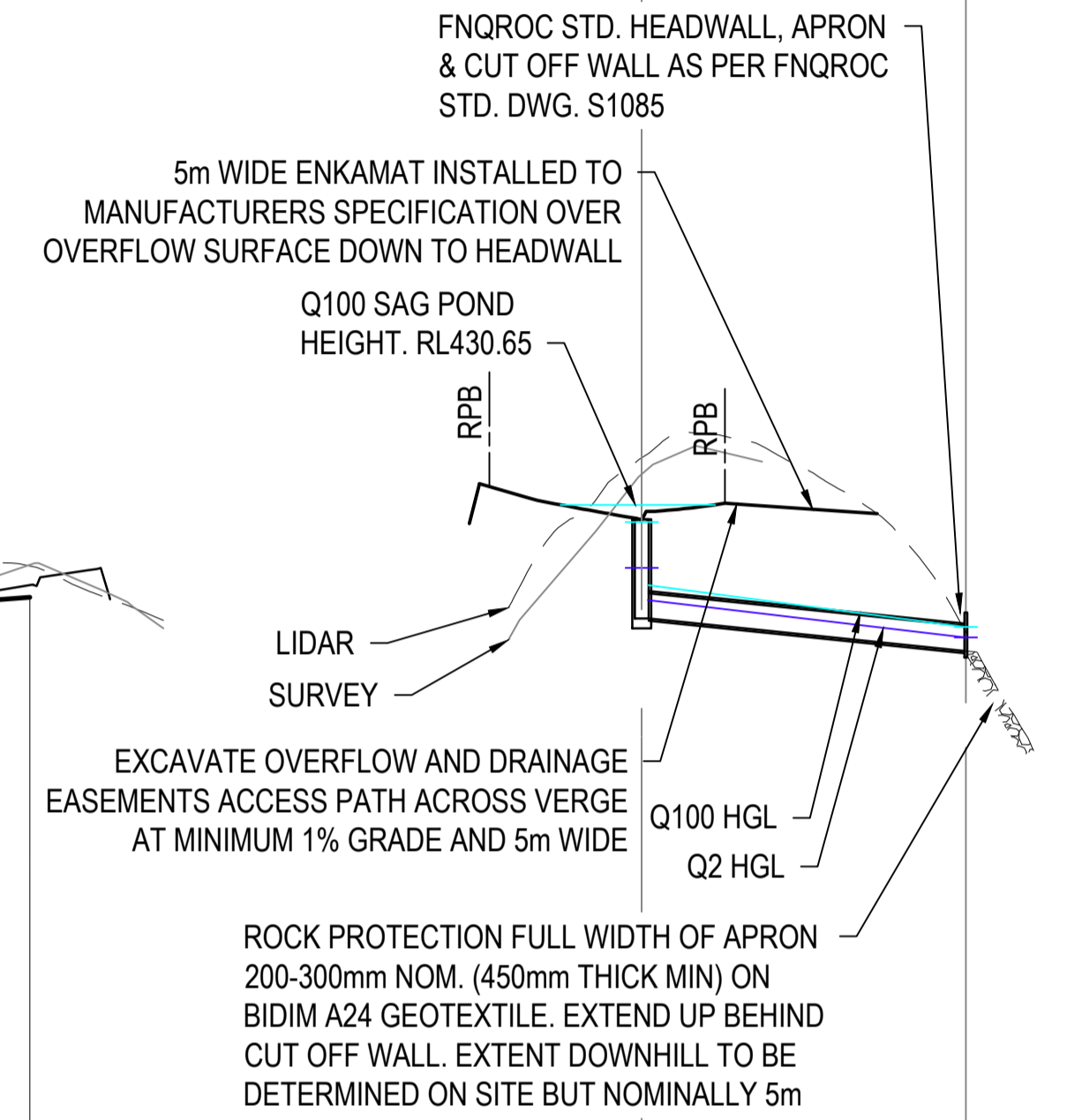
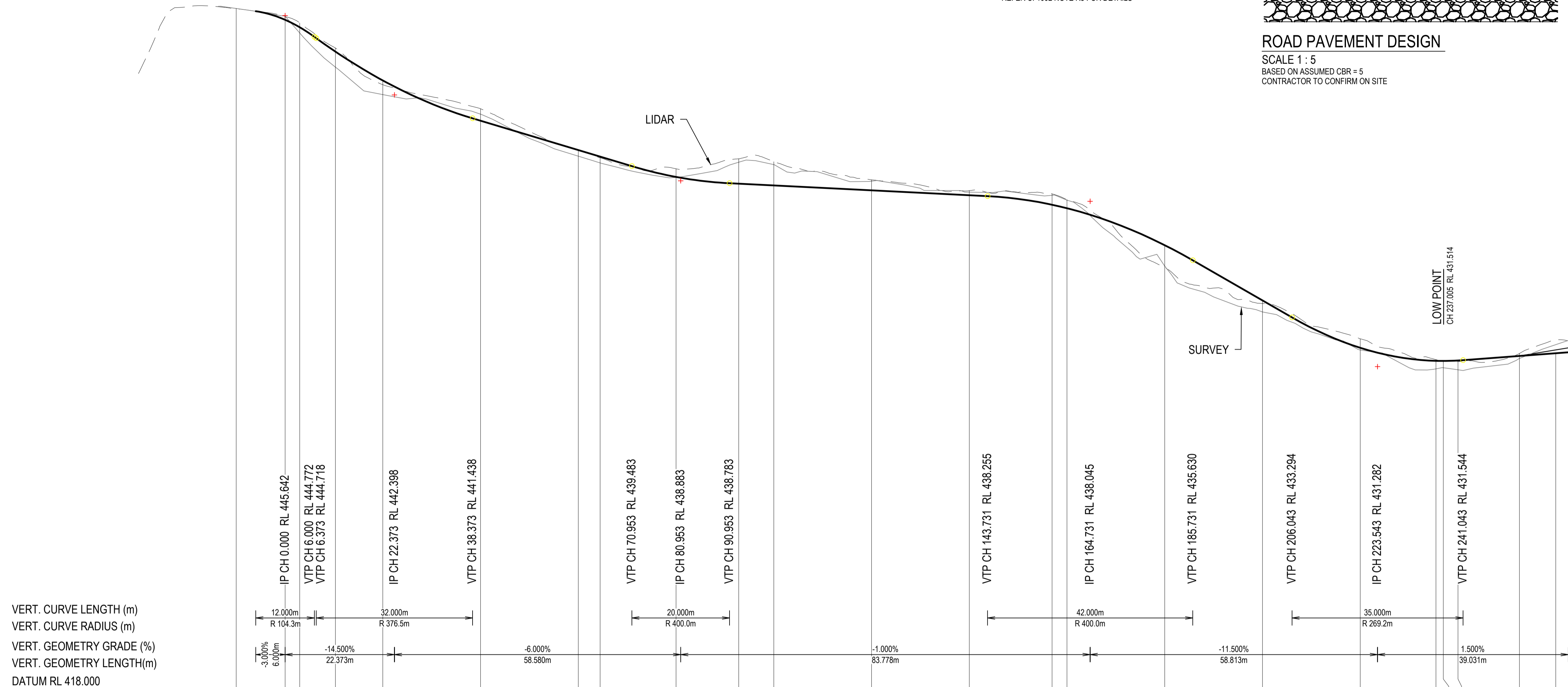
BASE  
100mm TYPE 2 SUBTYPE 2.2 CBR 60  
REFER CI-1002 NOTE R6 FOR DETAILS

SUBBASE  
150mm TYPE 2 SUBTYPE 2.3, CBR 45  
REFER CI-1002 NOTE R5 FOR DETAILS



**ROAD PAVEMENT DESIGN**  
SCALE 1 : 5  
BASED ON ASSUMED CBR = 5  
CONTRACTOR TO CONFIRM ON SITE

STRUCTURE NAME	A1	A2 OUT
STRUCTURE DESCRIPTION	FNQROC STANDARD SAG INLET PIT LARGE INLET HEADWALL	



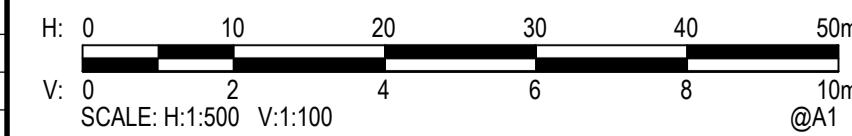
PIPE SIZE (mm)	375
PIPE CLASS	2
PIPE GRADE (%)	2.00%
PIPE SLOPE (1 in X)	50.0
Q2 PIPE FLOW (cumecs)	0.141
CAPACITY FLOW (cumecs)	0.248
FULL PIPE VELOCITY (m/s)	1.27
NORMAL DEPTH VELOCITY (m/s)	2.32

HORZ. CURVE LENGTH (m)	HORZ. CURVE RADIUS (m)	LIDAR LEVELS	CUT / FILL DEPTH TO DETAIL SURVEY	DETAIL SURVEY LEVELS	DESIGN LEVELS ROAD CENTRELINE	CONTROL LINE CHAINAGE ROAD CENTRELINE
12.000m R 104.3m		445.920		445.933		-10.000
32.000m R 376.5m		445.606 445.343 444.316 442.815	-0.155 0.234 0.633 0.579	445.624 444.931 443.536 442.409	445.469 445.165 444.169 442.989	0.000 2.990 10.302 20.000
20.000m R 400.0m		439.374 439.783 439.667	0.021 -0.880 -0.855	439.021 439.644 439.547	439.043 438.764 438.693	80.000 92.825 100.000
42.000m R 400.0m		438.350 438.115	-0.383 -0.329	438.287 438.091	438.905 437.762	156.948 160.000
35.000m R 269.2m		435.323 433.860	0.855 0.473	435.393 433.516	436.248 433.989	180.000 200.000
78.540m R 50.000m		432.419 431.567 431.507 431.495	0.090 0.328 0.278 0.380	431.961 431.191 431.236 431.151	432.051 431.425 431.358 431.151	220.000 235.488 237.005 240.000
		431.821	0.103	431.615	431.717	252.574
		429.666	0.675	429.464	431.829	260.000
		429.364	0.675	429.364	431.867	262.574

**RS01**  
SCALE: H 1:500  
V 1:100

A1 SCALE: H 1:500, V 1:100  
**STORMWATER LINE A**

Rev.	Date	Description	Des.	Verif.	Appd.
04	24/10/2018	ISSUED FOR APPROVAL	ALH	BNC	
03	20/09/2018	80% DESIGN	ALH	BNC	
02	30/08/2018	REVISED ROAD RESERVE WIDTH	ALH	BNC	
01	14/08/2018	PRELIMINARY ISSUE	MJT		



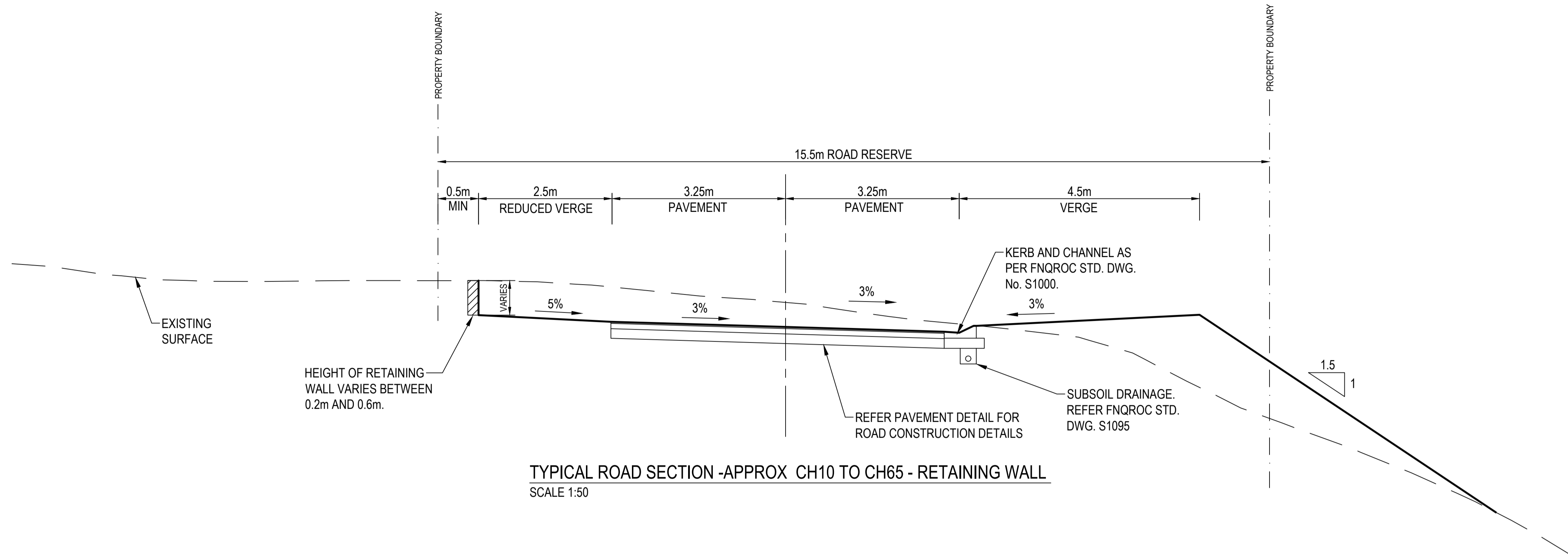
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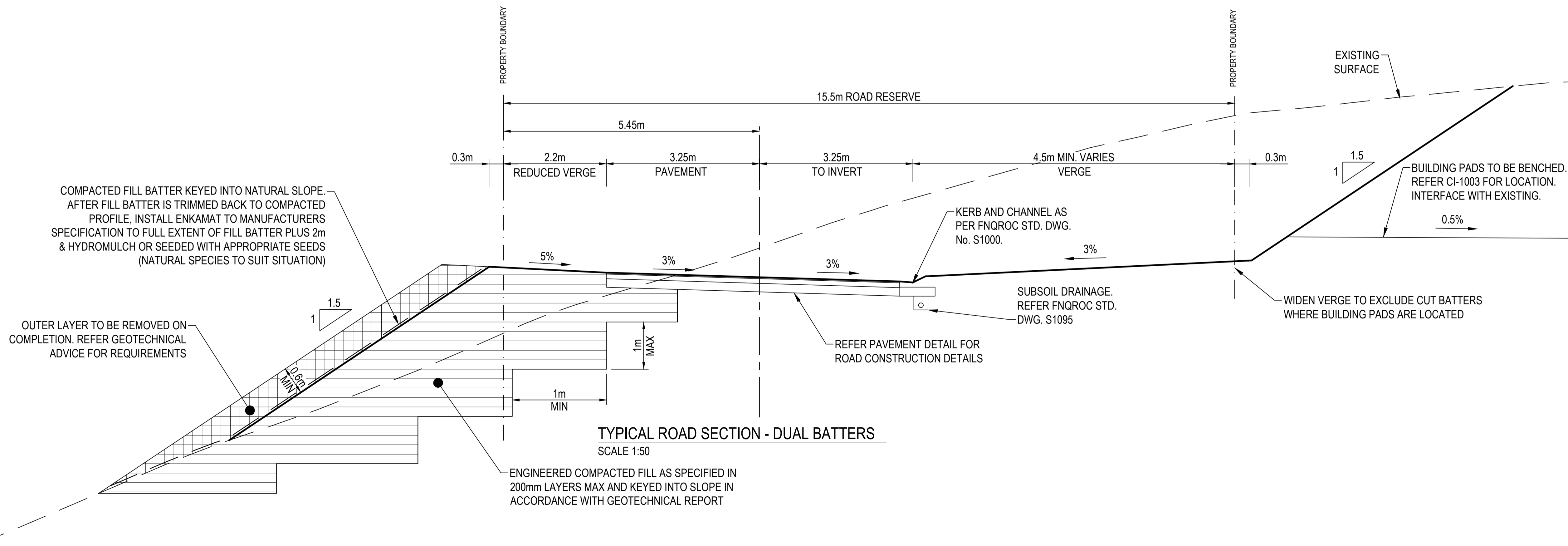
Drawn	MJT	Date	6/08/2018
Checked	BNC	Date	20/09/2018
Designed	MJT	Date	6/08/2018
Verified		Date	
Approved		RPEQ. No.	776

Client	COLIN EMERY
Project	HILLTOP CLOSE SUBDIVISION KURANDA LOT 84 ON SP237138 SUBDIVISION WORKS
Title	ROADWORKS AND STORMWATER LONGITUDINAL SECTIONS AND DETAILS

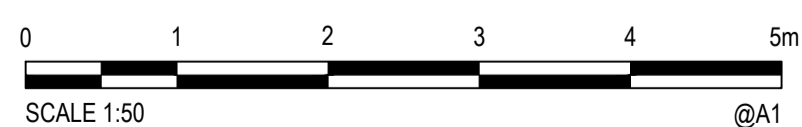
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NOT TO BE USED FOR CONSTRUCTION PURPOSES				
Datum	AHD	Scale	AS SHOWN	Size
Grid				A1
Drawing Number	Q174188-CI-1004			Revision
				04



TYPICAL ROAD SECTION - APPROX CH10 TO CH65 - RETAINING WALL  
SCALE 1:50



TYPICAL ROAD SECTION - DUAL BATTERS  
SCALE 1:50



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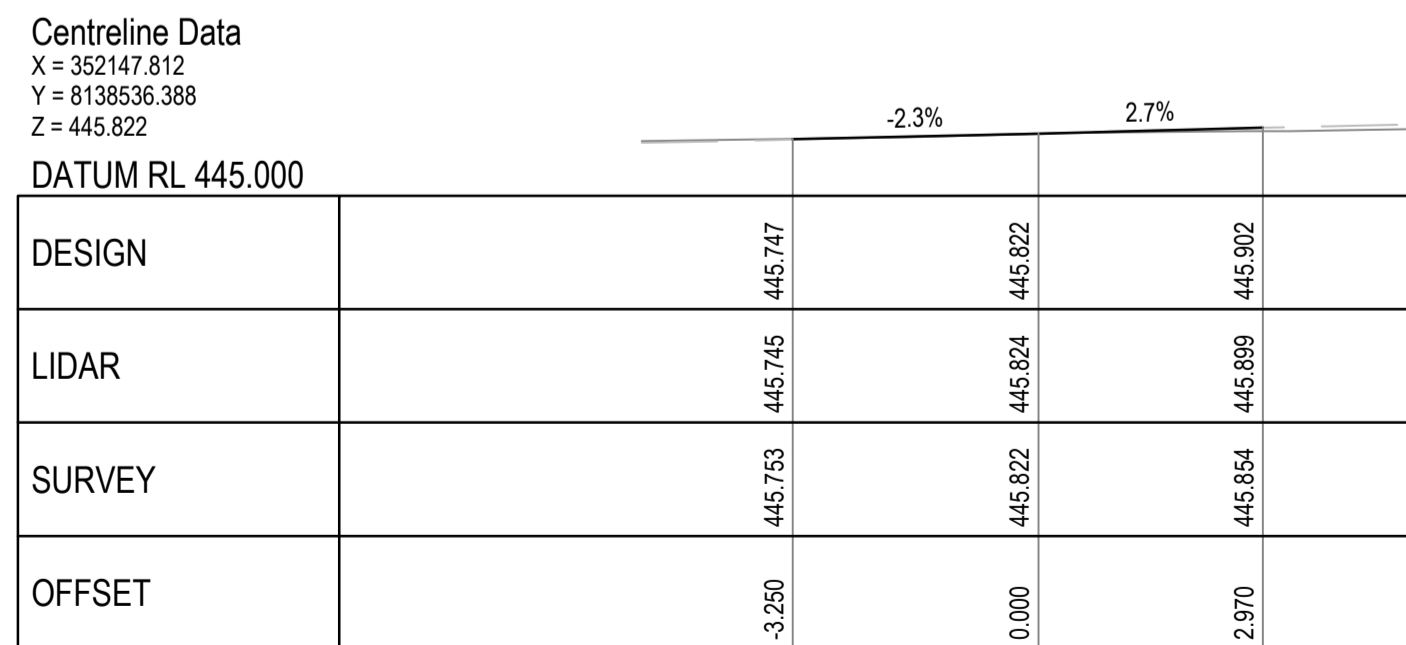
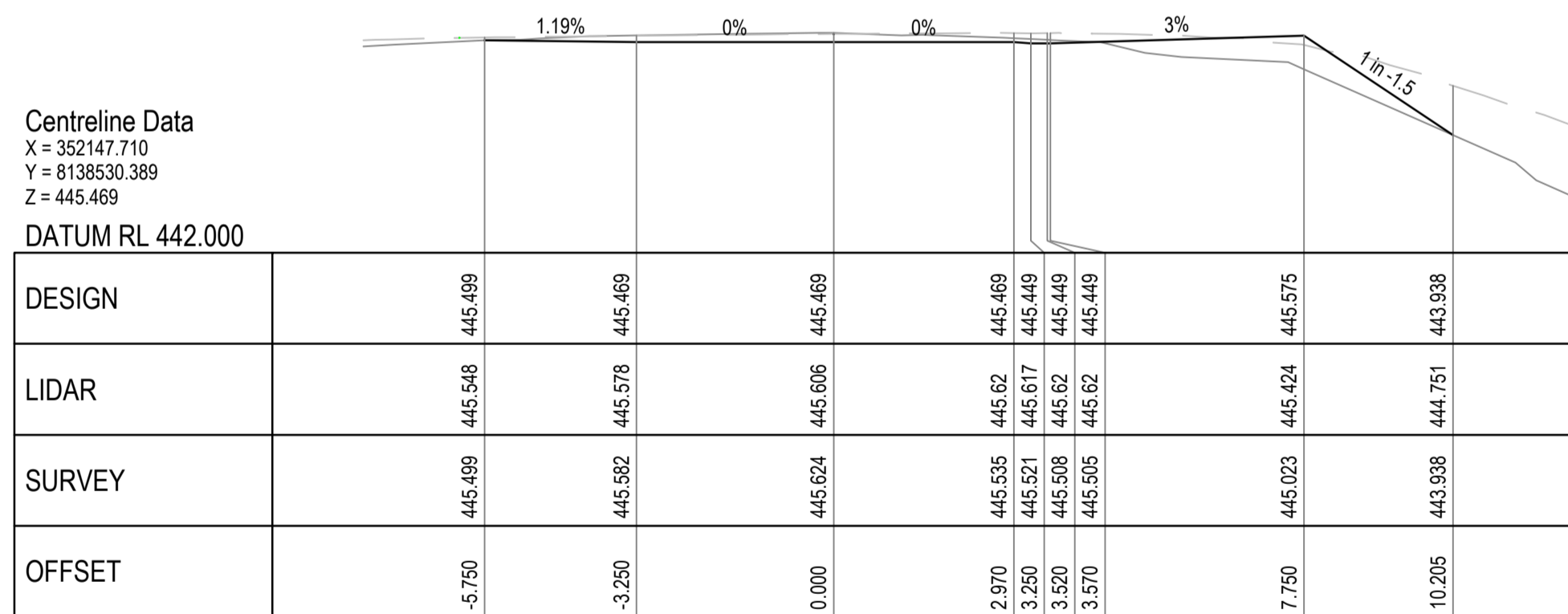
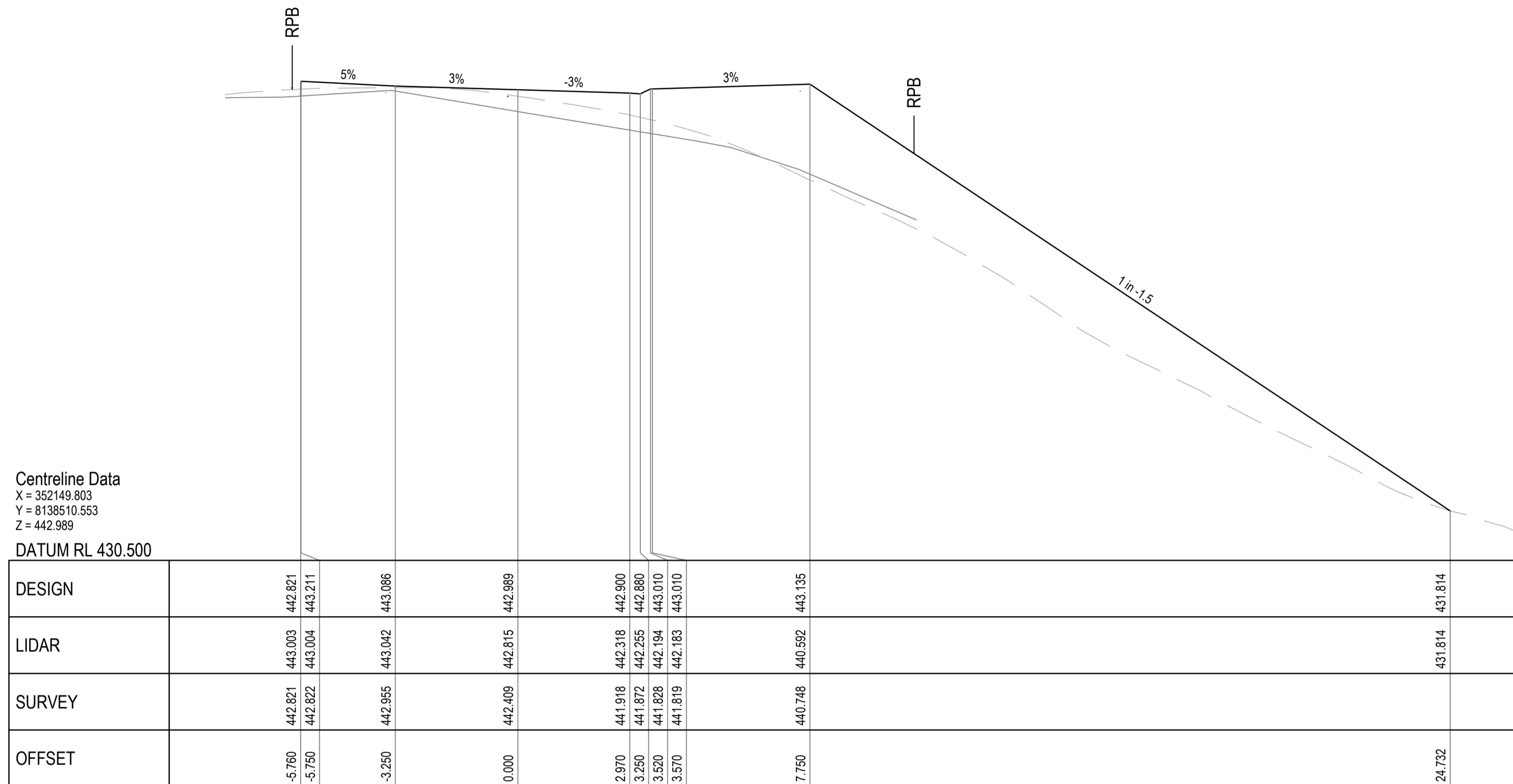
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Drawn	MJT	Date	6/08/2018
Checked	BNC	Date	20/09/2018
Designed	MJT	Date	6/08/2018
Verified		Date	
Approved	RPEQ No. 776		

Client	COLIN EMERY
Project	HILLTOP CLOSE SUBDIVISION KURANDA LOT 84 ON SP237138 SUBDIVISION WORKS
Title	ROADWORKS TYPICAL CROSS SECTIONS

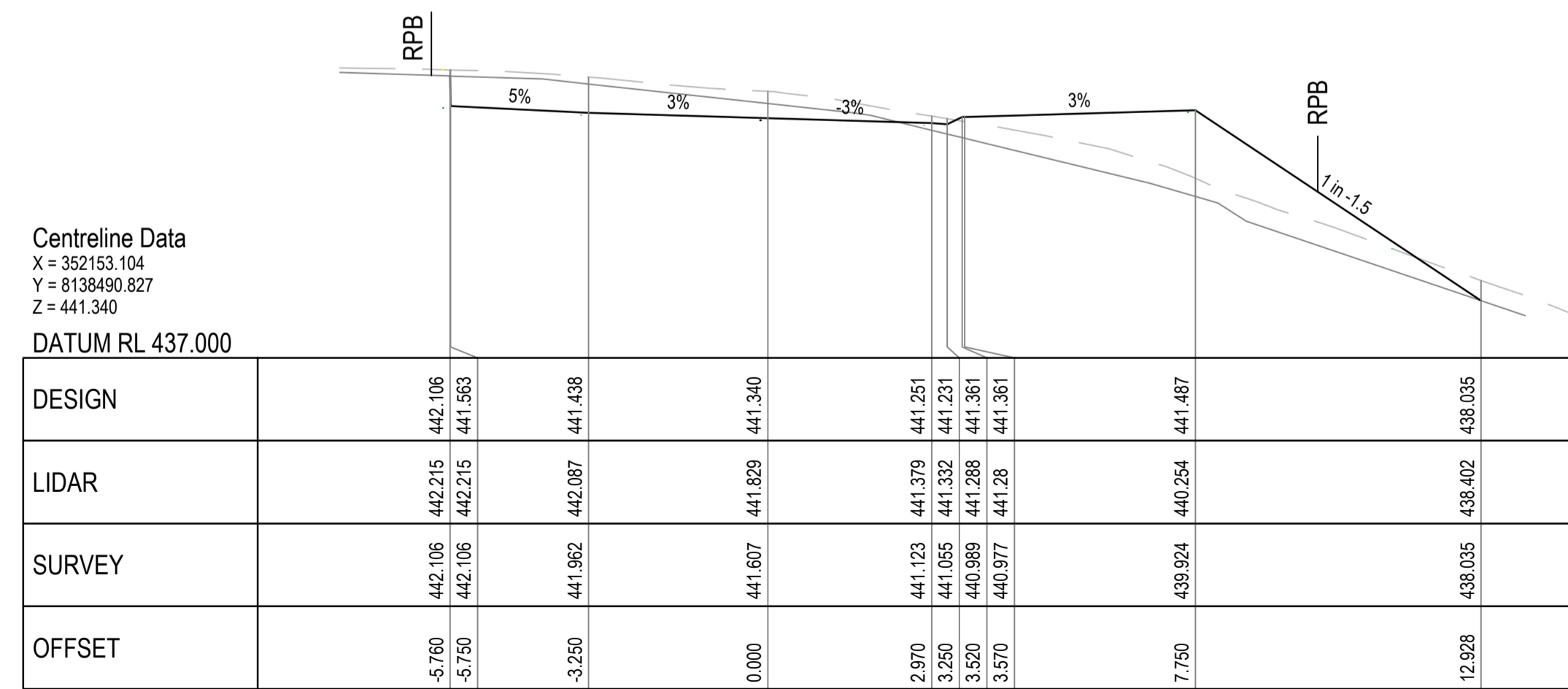
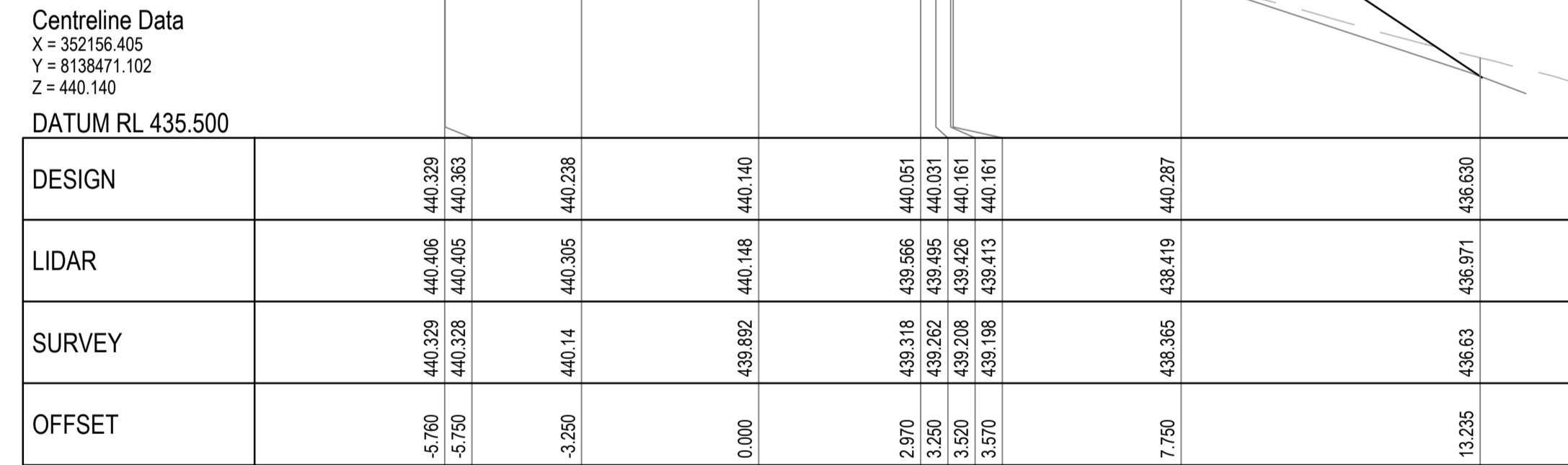
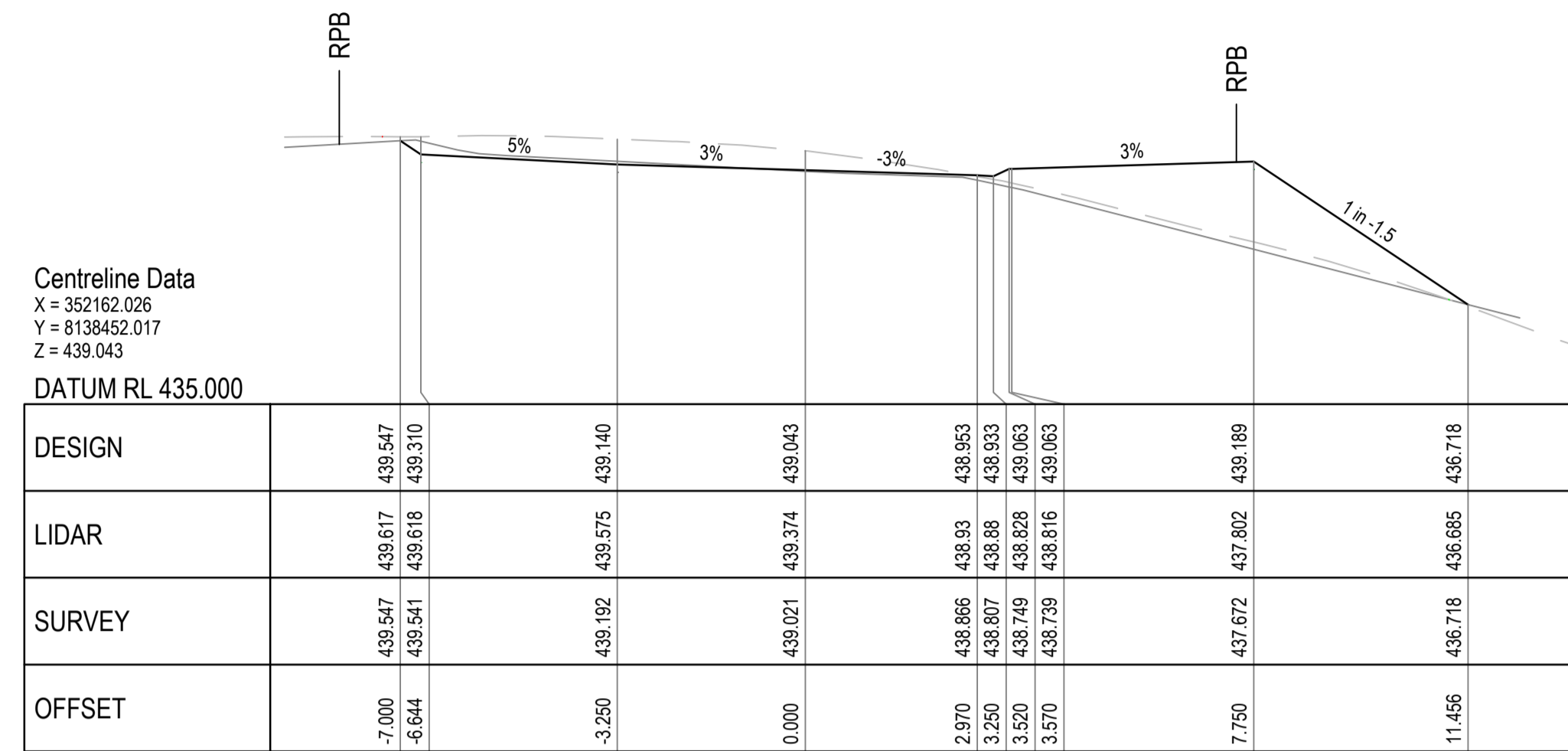
Status			
<b>FOR APPROVAL</b>			
NOT TO BE USED FOR CONSTRUCTION PURPOSES			
Datum	GRID	Scale	Size
AHD		AS SHOWN	A1
Drawing Number			Revision
Q174188-CI-1005			04

Rev.	Date	Description	Des.	Verif.	Appd.
04	24/10/2018	ISSUED FOR APPROVAL	ALH	BNC	
03	20/09/2018	80% DESIGN	ALH	BNC	
02	28/08/2018	REVISED ROAD RESERVE WIDTH	ALH	BNC	
01	14/08/2018	PRELIMINARY ISSUE	MJT		



TRANSITION CROSSFALL FROM 0% AND 3% BETWEEN CH0.000 AND CH6.000

TRANSITION CROSSFALL FROM EXISTING TO 0% BETWEEN CH-6.000 AND CH0.000



Rev.	Date	Description	Des.	Verif.	Appd.
04	24/10/2018	ISSUED FOR APPROVAL	ALH	BNC	
03	20/09/2018	80% DESIGN	ALH	BNC	
02	28/08/2018	REVISED ROAD RESERVE WIDTH	ALH	BNC	
01	14/08/2018	PRELIMINARY ISSUE	MJT		



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Checked	BNC	Date	20/09/2018
Designed	MJT	Date	6/08/2018
Verified		Date	
Approved	RPEQ. No. 776		

Client	COLIN EMERY
Project	HILLTOP CLOSE SUBDIVISION KURANDA LOT 84 ON SP237138 SUBDIVISION WORKS
Title	ROADWORKS CROSS SECTIONS SHEET 1 OF 3

Status	FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES				
Datum	GRID	Scale	Size	Revision
AHD		AS SHOWN	A1	04
Drawing Number	Q174188-CI-1006			

Centreline Data  
X = 352214.177  
Y = 8138391.514  
Z = 437.762

DATUM RL 430.000

DESIGN	LIDAR	SURVEY	OFFSET
431.404	431.582	431.404	-15.620
437.984	436.844	436.016	-5.750
437.969	436.003	435.204	-5.450
437.889	437.023	437.093	-3.250
437.762	438.115	438.091	0.000
437.673	439.189	438.929	2.970
437.653	439.281	439.004	3.250
437.783	439.389	439.076	3.520
437.783	439.386	439.09	3.570
437.980	440.812	440.589	10.147
437.989	440.837	440.628	10.147
437.852	440.845	440.695	11.313
437.762	437.762	437.762	29.304

CHAINAGE 160

Centreline Data  
X = 352200.865  
Y = 8138406.438  
Z = 438.293

DATUM RL 432.500

DESIGN	LIDAR	SURVEY	OFFSET
434.274	434.469	434.274	-12.112
438.515	436.775	436.605	-5.750
438.500	436.628	436.696	-5.450
438.300	437.428	437.364	-3.250
438.293	438.482	438.419	0.000
438.204	439.534	439.444	2.970
438.184	439.633	439.54	3.250
438.314	439.729	439.632	3.520
438.314	439.746	439.649	3.570
438.508	441.036	441.019	10.050
438.517	441.056	441.042	10.350
438.500	441.056	441.056	11.042
438.483	441.174	441.174	14.430
437.983	441.066	441.066	15.844
437.923	437.923	437.923	27.860

CHAINAGE 140

Centreline Data  
X = 352187.482  
Y = 8138421.300  
Z = 438.493

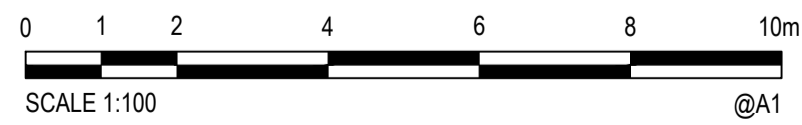
DATUM RL 436.000

DESIGN	LIDAR	SURVEY	OFFSET
437.057	437.251	437.057	-9.381
438.768	437.708	437.665	-6.814
438.753	437.764	437.724	-6.514
438.590	438.364	438.361	-3.250
438.493	438.924	438.867	0.000
438.404	439.35	439.378	2.970
438.384	439.389	439.423	3.250
438.514	439.424	439.454	3.520
438.514	439.43	439.459	3.570
438.678	440.1	440.083	9.061
438.687	440.123	440.117	9.361
438.500	440.193	440.216	10.220
438.423	438.423	438.423	25.711

CHAINAGE 120

DESIGN	LIDAR	SURVEY	OFFSET
438.465	438.465	438.465	16.218
438.557	439.388	439.379	9.139
438.500	439.647	439.647	8.069
438.839	438.839	439.377	7.769
438.899	439.662	439.662	439.377
438.899	439.647	439.647	439.379
438.714	439.714	439.714	439.714
438.714	439.714	439.714	439.714
438.604	439.77	439.77	439.393
438.604	439.774	439.774	439.406
438.604	439.774	439.774	439.406
438.693	439.667	439.667	0.000
438.790	439.344	439.344	-3.250
438.790	439.344	439.344	-3.250
438.701	438.701	438.701	-7.849
438.020	439.020	439.020	-8.149
438.035	439.035	439.035	-8.149
438.561	438.561	438.561	-8.961
438.561	438.561	438.561	-8.961
438.561	438.561	438.561	-8.961

CHAINAGE 100



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Checked	BNC	Date	20/09/2018
Designed	MJT	Date	6/08/2018
Verified		Date	
Approved	RPEQ. No. 776		

Client	COLIN EMERY
Project	HILLTOP CLOSE SUBDIVISION KURANDA LOT 84 ON SP237138 SUBDIVISION WORKS
Title	ROADWORKS CROSS SECTIONS SHEET 2 OF 3

Status	FOR APPROVAL
NOT TO BE USED FOR CONSTRUCTION PURPOSES	
Datum	AHD
Scale	AS SHOWN
Size	A1
Drawing Number	Q174188-CI-1007
Revision	04

Rev.	Date	Description	Des.	Verif.	Appd.
04	24/10/2018	ISSUED FOR APPROVAL		ALH	BNC
03	20/09/2018	80% DESIGN		ALH	BNC
02	28/08/2018	REVISED ROAD RESERVE WIDTH		ALH	BNC
01	14/08/2018	PRELIMINARY ISSUE			MJT

Centreline Data  
 X = 352224.639  
 Y = 8138354.004  
 Z = 433.989

DATUM RL 425.500

DESIGN	426.936	434.212	434.197	434.087	433.899	433.900	434.206	434.219	436.898	436.915
LIDAR	427.451	431.654	431.732	432.603	433.886	434.806	437.105	437.193	437.72	436.915
SURVEY	426.936	431.348	431.464	432.313	433.516	434.525	436.458	436.499	437.183	436.915
OFFSET	-16.665	-5.750	-5.450	-3.250	0.000	2.970	3.250	3.570	10.091	23.743

CHAINAGE 200

Centreline Data  
 X = 352223.210  
 Y = 8138373.819  
 Z = 436.248

DATUM RL 427.500

DESIGN	429.139	436.471	436.456	436.346	436.248	436.159	436.466	437.401	437.319
LIDAR	429.318	433.169	433.277	434.137	435.323	436.102	438.166	438.61	437.319
SURVEY	429.139	432.847	433.047	433.907	435.393	436.222	437.911	438.351	437.319
OFFSET	-16.748	-5.750	-5.450	-3.250	0.000	2.970	3.250	10.118	28.617

CHAINAGE 180

DESIGN	432.216	432.225	433.333	433.321	432.072	433.189	431.962	432.051	432.149	432.299	432.274	425.133
LIDAR	434.893	434.893	433.054	433.039	432.072	433.189	431.962	432.051	432.149	430.009	430.222	425.133
SURVEY	434.893	434.893	433.054	433.039	432.072	433.189	431.962	432.051	432.149	430.009	430.222	425.133
OFFSET	12.666	8.669	3.570	3.250	3.250	4.297	3.250	0.000	-3.250	-5.450	-5.750	-16.461

Centreline Data  
 X = 35216.239  
 Y = 8135.196  
 Z = 432.051

DATUM RL 423.500

CHAINAGE 220

Rev.	Date	Description	Des.	Verif.	Appd.
04	24/10/2018	ISSUED FOR APPROVAL		ALH	BNC
03	20/09/2018	80% DESIGN		ALH	BNC
02	28/08/2018	REVISED ROAD RESERVE WIDTH		ALH	BNC
01	14/08/2018	PRELIMINARY ISSUE			MJT



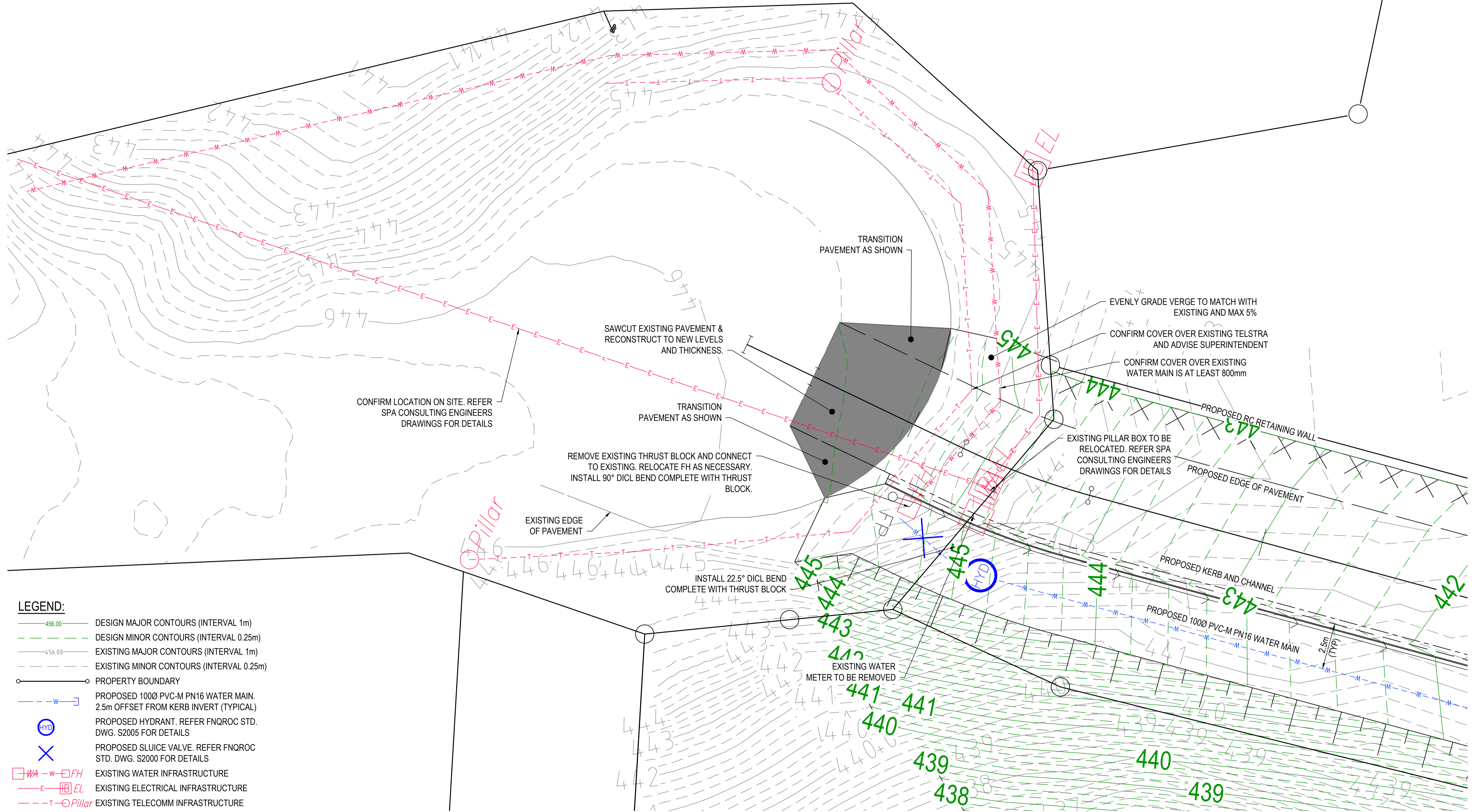
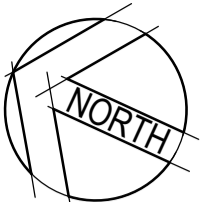
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Checked	BNC	Date	20/09/2018
Designed	MJT	Date	6/08/2018
Verified		Date	
Approved	RPEQ. No. 776		

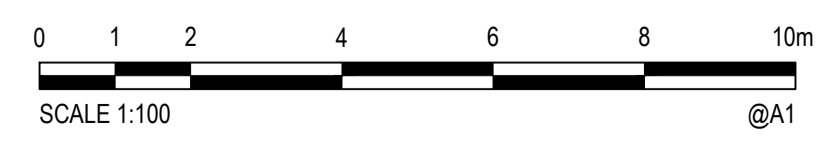
Client	COLIN EMERY
Project	HILLTOP CLOSE SUBDIVISION KURANDA LOT 84 ON SP237138 SUBDIVISION WORKS
Title	ROADWORKS CROSS SECTIONS SHEET 3 OF 3

Status	<b>FOR APPROVAL</b>				
NOT TO BE USED FOR CONSTRUCTION PURPOSES					
Datum	AHD	Scale	AS SHOWN	Size	A1
Drawing Number	Q174188-CI-1008			Revision	04



**LEGEND:**

	DESIGN MAJOR CONTOURS (INTERVAL 1m)
	DESIGN MINOR CONTOURS (INTERVAL 0.25m)
	EXISTING MAJOR CONTOURS (INTERVAL 1m)
	EXISTING MINOR CONTOURS (INTERVAL 0.25m)
	PROPERTY BOUNDARY
	PROPOSED 1000 PVC-M PN16 WATER MAIN. 2.5m OFFSET FROM KERB INVERT (TYPICAL)
	PROPOSED HYDRANT. REFER FNQROC STD. DWG. S2005 FOR DETAILS
	PROPOSED SLUICE VALVE. REFER FNQROC STD. DWG. S2000 FOR DETAILS
	EXISTING WATER INFRASTRUCTURE
	EXISTING ELECTRICAL INFRASTRUCTURE
	EXISTING TELECOMM INFRASTRUCTURE



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Checked	BNC	Date	20/09/2018
Designed	ALH	Date	19/09/2018
Verified		Date	
Approved		RPEQ. No.	776

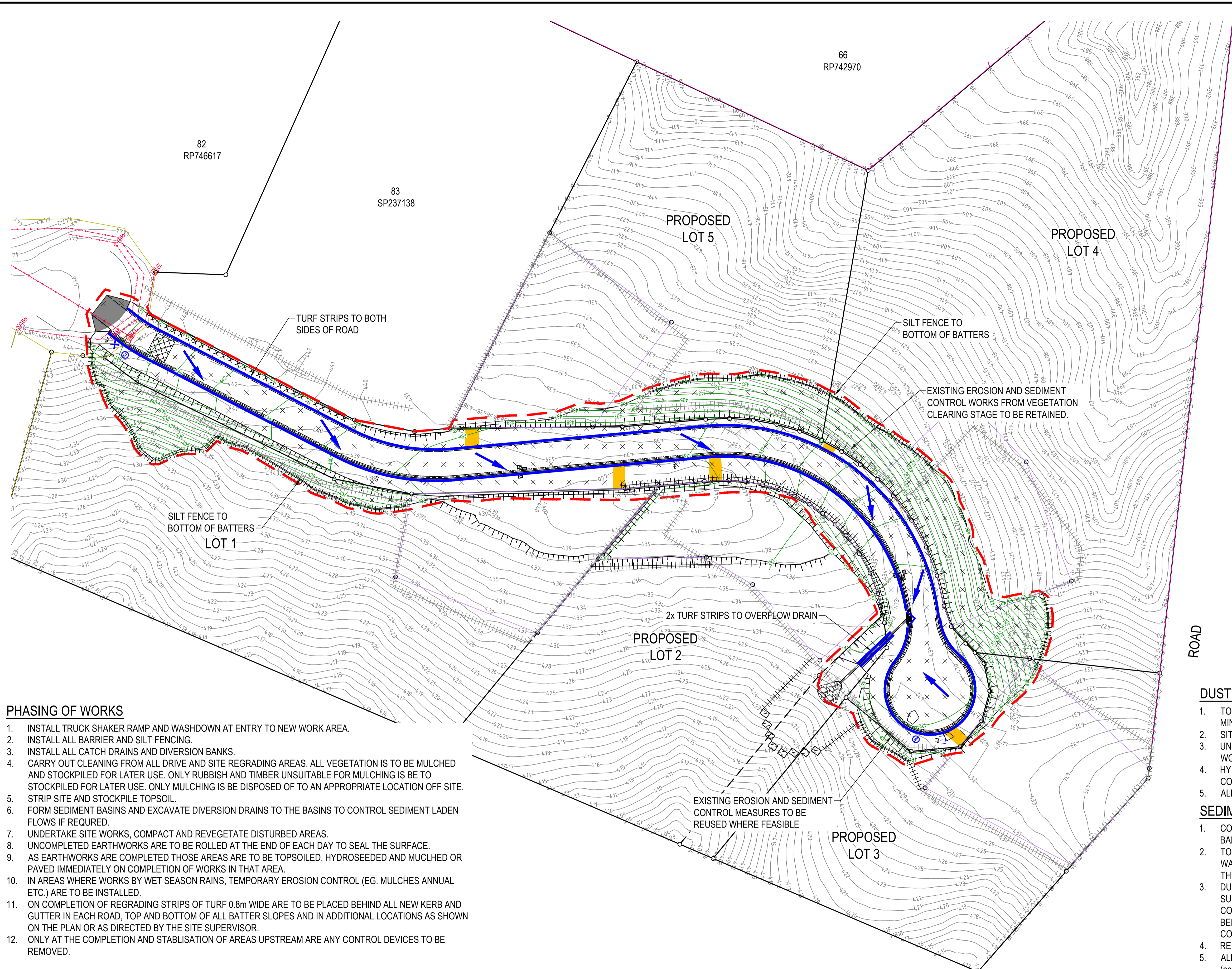
Client	COLIN EMERY
Project	HILLTOP CLOSE SUBDIVISION KURANDA LOT 84 ON SP237138 SUBDIVISION WORKS
Title	ROADWORKS CUL-DE-SAC-DETAILS

Status	<b>PRELIMINARY</b>				
NOT TO BE USED FOR CONSTRUCTION PURPOSES					
Datum	AHD	Scale	AS SHOWN	Size	A1
Drawing Number	Q174188-CI-1009			Revision	02

XREFs: x\_DESN:6.5m PAVE; x\_DESN\_CONTS:0174188-SURV; x\_EXIST\_CONTS:0174188\_Lots\_MGA (2018\_08\_28)  
 CAD File: H:\2017\174188 - Hilltop CI Subdivision\005 - Civil Engineering\Design\CAD & Models\Acad\Civil\Q174188-CI-1009.dwg

Rev.	Date	Description	Des.	Verif.	Appd.
02	24/10/2018	ISSUED FOR APPROVAL	ALH	BNC	
01	20/09/2018	80% DESIGN	ALH	BNC	





**LEGEND:**

- 456 DESIGN CONTOURS (INTERVAL 1m)
- 456 EXISTING CONTOURS (INTERVAL 1m)
- PROPOSED STORMWATER INFRASTRUCTURE
- PROPERTY BOUNDARY
- PROPOSED BUILDING ENVELOPE (MAX 1500m<sup>2</sup>)
- PROPOSED DRIVEWAY LOCATION
- PROPOSED HAY BALES
- PROPOSED SILT EXCLUDER
- PROPOSED SILT FENCING
- PROPOSED 0.6m WIDE TURF STRIPS
- DIRECTION OF SURFACE FLOW
- PROPOSED SHAKE DOWN PADS
- PROPOSED AREA OF CLEAR AND STRIP
- LIMIT OF WORKS

**NOTE:**

- ALL EXISTING EROSION AND SEDIMENT CONTROL WORKS ARE TO BE REUSED WHERE FEASIBLE

**PHASING OF WORKS**

- INSTALL TRUCK SHAKER RAMP AND WASHDOWN AT ENTRY TO NEW WORK AREA.
- INSTALL ALL BARRIER AND SILT FENCING.
- INSTALL ALL CATCH DRAINS AND DIVERSION BANKS.
- CARRY OUT CLEANING FROM ALL DRIVE AND SITE REGRADING AREAS. ALL VEGETATION IS TO BE MULCHED AND STOCKPILED FOR LATER USE. ONLY RUBBISH AND TIMBER UNSUITABLE FOR MULCHING IS BE TO STOCKPILED FOR LATER USE. ONLY MULCHING IS BE DISPOSED OF TO AN APPROPRIATE LOCATION OFF SITE. STRIP SITE AND STOCKPILE TOPSOIL.
- FORM SEDIMENT BASINS AND EXCAVATE DIVERSION DRAINS TO THE BASINS TO CONTROL SEDIMENT LADEN FLOWS IF REQUIRED.
- UNDERTAKE SITE WORKS, COMPACT AND REVEGETATE DISTURBED AREAS.
- UNCOMPLETED EARTHWORKS ARE TO BE ROLLED AT THE END OF EACH DAY TO SEAL THE SURFACE.
- AS EARTHWORKS ARE COMPLETED THOSE AREAS ARE TO BE TOPSOILED, HYDROSEEDDED AND MULCHED OR PAVED IMMEDIATELY ON COMPLETION OF WORKS IN THAT AREA.
- IN AREAS WHERE WORKS BY WET SEASON RAINS, TEMPORARY EROSION CONTROL (EG. MULCHES ANNUAL ETC.) ARE TO BE INSTALLED.
- ON COMPLETION OF REGRADING STRIPS OF TURF 0.8m WIDE ARE TO BE PLACED BEHIND ALL NEW KERB AND GUTTER IN EACH ROAD, TOP AND BOTTOM OF ALL BATTER SLOPES AND IN ADDITIONAL LOCATIONS AS SHOWN ON THE PLAN OR AS DIRECTED BY THE SITE SUPERVISOR.
- ONLY AT THE COMPLETION AND STABILISATION OF AREAS UPSTREAM ARE ANY CONTROL DEVICES TO BE REMOVED.

**NOTE:**  
REFER IPWEAQ STANDARD DRAWINGS D-0040 AND D-0041 FOR TYPICAL DETAILS

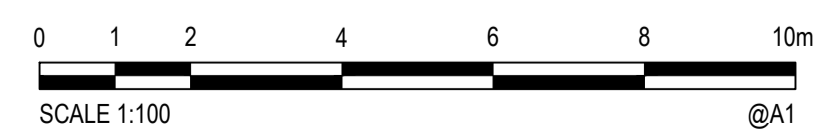
**DUST CONTROL**

- TOPSOIL STOCKPILES ARE TO BE WATERED AND LIGHTLY COMPACTED TO ENSURE MINIMAL DUST DISTURBANCE PRIOR TO RESPREADING.
- SITE TO BE KEEP MOIST AT ALL TIMES TO ENSURE DUST CONTROL.
- UNCOMPLETED WORKS ARE TO BE WATERED AND ROLLED AT THE END OF EACH WORKING DAY TO ENSURE A FIRM SEALED SURFACE TO CONTROL DUST.
- HYDROSEEDING IS REQUIRED TO BE MAINTAINED THROUGH THE REMAINDER OF THE CONSTRUCTION PERIOD TO ENSURE DUST AND EROSION CONTROL.
- ALL OPEN DRAINS TO BE FULLY TURFED IMMEDIATELY UPON COMPLETION.

**SEDIMENT CONTROL**

- CONTROL WILL BE VIA THE INSTALLATION OF SILT FENCING, CATCH DRAINS, HAYBALE BARRIERS AND SEDIMENT PONDS.
- TOPSOIL STOCK-PILES ARE TO BE LOCATED IN AREAS CLEAR OF SERVICING, WATERCOURSES, ROAD AND DRAINAGE WORKS AND PROVIDED WITH SILT FENCING ON THEIR DOWNSTREAM SIDE.
- DURING THE PROJECTS CONSTRUCTION, ALL PITS ARE TO BE BLOCKED OFF AT THE SURFACE AND RUNOFF FLOWS ARE TO BE DIRECTED TO THE SEDIMENT PONDS WHERE CONTAMINATED WATERS CAN BE TREATED UNTIL THE SURROUNDING LANDSCAPE HAS BEEN STABILISED TO THE SATISFACTION OF THE SITE SUPERINTENDENT. ONLY ON THE COMPLETION OF WORKS ARE THE SEDIMENT PONDS ARE TO BE REMOVED, REFER TO IPWEAQ STD DWG No. D-0040 AND D-0041 FOR FURTHER DETAILS.
- ALL BATTERS TO BE STABILISED WITHIN 10 DAYS OF COMPLETION OF BULK EARTHWORKS (eg. HYDROMULCHING, TURFING etc.).
- SURROUNDING CARRIAGEWAYS TO BE KEPT CLEAN OF ANY MATERIAL CARRIED ONTO ROADWAY BY CONSTRUCTION VEHICLES FROM SITE.

Rev.	Date	Description	ALH	BNC
01	24/10/2018	ISSUED FOR APPROVAL	ALH	BNC



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Client	COLIN EMERY
Project	HILLTOP CLOSE SUBDIVISION KURANDA LOT 84 ON SP237138 SUBDIVISION WORKS
Title	EROSION AND SEDIMENT CONTROL STRATEGY

Status	FOR APPROVAL			
NOT TO BE USED FOR CONSTRUCTION PURPOSES				
Datum	AHD	Scale	AS SHOWN	Size
Grid				A1
Drawing Number	Q174188-CI-1010			Revision
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