



FREEDOM OF INFORMATION COVERSHEET

The following information is provided pursuant to section 28 of the *Freedom of Information Act 2016*.

FOI reference: 21-093/21-099

Information to be published	Status
1. Access application	Published
2. Decision notice and schedule	Published
3. Documents	Published
4. Additional information identified	n/a
5. Fees	waived
6. Processing time (in working days)	20 days
7. Decision made by Ombudsman	n/a
8. Additional information identified by Ombudsman	n/a
9. Decision made by ACAT	n/a
10. Additional information identified by ACAT	n/a

From: [Paliaga, Nicolas](#) on behalf of [CMTEDD FOI](#)
To: [TCCS_FreedomOfInformation](#)
Subject: FW: Freedom of Information request - CMTEDDFOI2021-242
Date: Sunday, 12 September 2021 12:01:09 PM

OFFICIAL

Good morning team,
Can you please advise CMTEDDFOI if you accept full carriage of the below.
Kind regards,
Nic

Nicolas Paliaga | Freedom of Information, Reporting and Privacy Administrator | Information Access Team
Phone: 620 79267 | Email: Nicolas.Paliaga@act.gov.au
Corporate Management | Chief Minister, Treasury and Economic Development Directorate | ACT Government
Level 5, 220 London Circuit, Canberra City | GPO Box 158 Canberra ACT 2601 | act.gov.au



Please consider our environment before printing this e-mail.

From: [REDACTED]
Sent: Sunday, 12 September 2021 5:02 AM
To: CMTEDD FOI <CMTEDDFOI@act.gov.au>
Subject: Freedom of Information request

CAUTION: This email originated from outside of the ACT Government. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Please find online enquiry details below. Please ensure this enquiry is responded to within fourteen working days.

Your details

All fields are optional, however an email address OR full postal address must be provided for us to process your request. An email address and telephone contact number will assist us to contact you quickly if we need to discuss your request.

Title: Miss

First Name:

Last Name:

Business/Organisation:

Address:

Suburb:

Postcode:

State/Territory: ACT

Phone/mobile: [REDACTED]

Email address: [REDACTED]

Request for information

(Please provide as much detail as possible, for example subject matter and relevant dates, and also provide details of documents that you are not interested in.)

Under the Freedom of Information Act 2016 I want to access the following document/s (*required field): Any consultancy report/s, if it/they exist/s, delivered to the government resulting from the contract "Delivering ANRAM-Reducing risk of fatal and serious injury crashes on arterial roads" (Contract number 30490-NCT-301-)

I do not want to access the following documents in Any other documentation related to this contract. relation to my request::

Thank you.
Freedom of Information Coordinator

Attention: [REDACTED]

By Email: [REDACTED]

Dear [REDACTED]

Freedom of Information Request - Reference 21-093 and 21-099

I refer to the access applications you made under the *Freedom of Information Act 2016* (FOI Act) received by the Chief Minister, Treasury and Economic Development Directorate (CMTEDD) on 12 September 2021, reference 21-093, and 5 October 2021, reference 21-099. It is my understanding that you are seeking access to the following government information:

- 21-093: *“Any consultancy report/s, if it/they exist/s, delivered to the government resulting from the contract “Delivering ANRAM- Reducing risk of fatal and serious injury crashes on arterial roads” (Contract number 30490-NCT-301-)”;* and
- 21-099: *“Any pages on design work that has been delivered to the ACT government or is currently ongoing pertaining to the Brindabella and Paddys River roads, stemming from the original report (or recommendations therein) of the ‘Delivering ANRAM’ project”.*

Timeframes

A decision on your application was due on application 21-093 on 12 October 2021. I thank you for agreeing to an extension to 22 October 2021.

A decision is due on application 21-099 by 1 November 2021.

I am providing a singular notice of decision as the information you are seeking in both applications are contained within the same documentation.

Authority

I am an Information Officer appointed by the Director-General under section 18 of the Act to deal with access applications made under Part 5 of the FOI Act.

Decision on access

A search for documents has been completed and a total of 5 reports, including attachments, have been identified as relevant to your request. I have found that some of the information within these documents is, on balance, contrary to the public interest to disclose. As such, I have decided to provide you with partial access to all reports. My decision is detailed further in the following statement of reasons.

I have included a schedule of the documents at Attachment A. The documents are enclosed at Attachment B with deletions applied to information which is contrary to the public interest to disclose.

Statement of Reasons

In making my decision on disclosing government information, I must identify all relevant factors in schedule 2 of the FOI Act and determine, on balance, where the public interest lies. In reaching my access decision, I have taken the following into account:

Factors favouring disclosure (Schedule 2.1)

- Section 2.1 (a)(i) - promote open discussion of public affairs and enhance the government's accountability;
- Section 2.1(a)(ii) - inform the community of the government's operations, including the policies, guidelines and codes of conduct followed by the government in its dealings with members of the community;
- Section 2.1 (a)(iv) - ensure effective oversight of expenditure of public funds; and
- Section 2.1 (a)(viii) reveal the reason for a government decision and any background or contextual information that informed the decision.

Factors favouring non-disclosure (Schedule 2.2)

- Section 2.2 (a)(ii) – prejudice the protection of an individual's right to privacy or any other right under the *Human Rights Act 2004*; and
- Schedule 2(a)(xii) - prejudice the competitive commercial activities of an agency.

I find that it is in the public interest to release most of this information. However, I have found some information within the relevant documents to be contrary to the public interest to disclose.

Personal information and privacy

Information relating to third parties have been identified within the records in scope of your request. Personal information means information or an opinion whether true or not about an individual whose identity is apparent or can be ascertained from the information or opinion. The Information Privacy Act 2014 prescribes how government collects, uses, shares, and stores this information. I have considered the reason that TCCS has come into the possession of the personal or sensitive information together with the Territory Privacy Principles. As a general rule an agency that holds personal or sensitive information about an individual that has been collected for a particular purpose must not disclose the information to a third party without consent (Information Privacy Act 2014 - Territory Privacy Principle 6).

I have further found that disclosing this information is likely to prejudice an individual's right to privacy or any other right under the Human Rights Act 2004. In this instance I have found that, on balance, the disclosure of the personal or sensitive information is contrary to the public interest.

Competitive Commercial Activities

In reviewing the information sound in scope of the information you are seeking, I have identified details about estimated costing. This information, if disclosed, is likely to prejudice the competitive commercial activities of the ACT Government in future procurement processes. In this instance I have found that the disclosure of this type of information is, on balance, contrary to the public interest.

Charges

In this instance I have decided to waive any fees that may have applied to your application.

Online publishing – disclosure log

Under section 28 of the Act, TCCS maintains an online record of access applications called a disclosure log. Your original access application, my decision and documents will be published in the TCCS disclosure log from 3 days after the date of this decision. Your personal contact details will not be published. You may view the TCCS' disclosure log at http://www.tccs.act.gov.au/about-us/freedom_of_information.

Ombudsman review

My decision on your access request is a reviewable decision as identified in Schedule 3 of the Act. You have the right to seek an Ombudsman review of this outcome under section 73 of the Act within 20 working days from the day that my decision is published in TCCS' disclosure log or a longer period allowed by the Ombudsman. If you wish to request a review of my decision, you may write to the Ombudsman at:

The ACT Ombudsman
GPO Box 442
CANBERRA ACT 2601
Via email: actfoi@ombudsman.gov.au

ACT Civil and Administrative Tribunal (ACAT) review

Under section 84 of the Act, if a decision is made under section 82 on an Ombudsman review, you may apply to the ACAT for review of the Ombudsman decision. Further information may be obtained from ACAT at:

ACT Civil and Administrative Tribunal
Level 4, 1 Moore Street
GPO Box 370
CANBERRA CITY ACT 2601
Telephone: (02) 6207 1740
www.acat.act.gov.au

If you have any queries concerning the directorate's processing of your request, or would like further information, please contact the TCCS FOI team on (02) 6207 2987 or email to tccs.foi@act.gov.au.

Yours sincerely



Kristine Scheul
Information Officer

21 October 2021

TCCS.FOI@act.gov.au | phone: (02) 620 72987 | www.act.gov.au

FREEDOM OF INFORMATION REQUEST SCHEDULE

Please be aware that under the *Freedom of Information Act 2016*, some of the information provided to you will be released to the public through the ACT Government's Open Access Scheme. The Open Access release status column of the table below indicates what documents are intended for release online through open access. Personal information or business affairs information will not be made available under this policy. If you think the content of your request would contain such information, please inform the contact officer immediately. Information about what is published on open access is available online at: https://www.tccs.act.gov.au/about-us/freedom_of_information/disclosure-log

Factors favouring non-disclosure:

- Schedule 2(a)(ii) - prejudice the protection of an individual's right to privacy or any other right under the *Human Rights Act 2004*
- Schedule 2(a)(xii) - prejudice the competitive commercial activities of an agency

File number			WHAT ARE THE PARAMETERS OF THE REQUEST			
FOI – 21-093 and 21-099			Reports relating to contract number 30490-NCT-301			
Document number	Page	Description	Date	Status	Reason for non-release or deferral	Open Access release status
1	1 - 149	01_Feasibility Design Study_RG 20110 ANRAM_Rural Roads Design Option Study_FINAL	1 September 2021	Partial Disclosure	Schedule 2(a)(ii) Schedule 2(a)(xii)	Documents to be published online with redactions applied to the applicants personal information.
2	150 - 207	02_Feasibility Design Study_RG 20110 ANRAM_Rural Roads Design Option Study_Additional Roads_FINAL	1 September 2021	Partial Disclosure	Schedule 2(a)(ii) Schedule 2(a)(xii)	
3	208 - 314	03_RG20110 Delivering ANRAM - Rural Roads DR Submission Report 210908_FINAL	8 September 2021	Partial Disclosure	Schedule 2(a)(ii) Schedule 2(a)(xii)	
4	315-502	04_RG20110 Delivering ANRAM - Additional Rural Roads DR Submission Report- RevB	24 September 2021	Partial Disclosure	Schedule 2(a)(ii) Schedule 2(a)(xii)	
5	503 - 737	05_RG20110 Delivering ANRAM - Rural Roads DR Submission Report ATLM sites	23 September 2021	Partial Disclosure	Schedule 2(a)(ii) Schedule 2(a)(xii)	



ACT
Government

Transport Canberra and City Services

**DELIVERING ANRAM – REDUCING RISK OF
FATAL AND SERIOUS INJURY CRASHES ON
ARTERIAL ROADS**

RURAL ROADS DESIGN OPTION STUDY

TRANSPORT CANBERRA AND CITY SERVICES

FINAL

RG 20110-3/ 2

01 SEPTEMBER 2021



Consulting Engineers

DELIVERING ANRAM – REDUCING RISK OF FATAL AND SERIOUS INJURY CRASHES ON ARTERIAL ROADS

RURAL ROADS DESIGN OPTION STUDY

Prepared for Transport Canberra and City Services

Document Register

Revision	Date	Details	Author	Verifier	Reviewed
0	2/03/21	Draft report	█	█	█
1	23/04/21	Amended Draft report	█	█	█
2	1/09/21	Final	█	█	█

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1. INTRODUCTION

1.1 Objective

RD Gossip (RDG) was commissioned by Infrastructure Delivery Partners Group (IDP) on behalf of Transport Canberra and City Services (TCCS) to undertake the Delivering ANRAM – Reducing Risk of Fatal and Serious Injury Crashes on Arterial Roads project.

ARRB completed the ACT Arterial Roads AusRAP and ANRAM Assessment in May 2019. The study was based on an inspection of the arterial roads in June 2018 and the review of collision data from 2013 to 2017. The study separated the rural roads into sections to evaluate and allocated the International Road Assessment Program (iRAP) star ratings (ranging between 1 (low) and 5 (high) stars). A target of 3 stars or greater is the goal for providing a safe rural arterial road network. The study identified that 77% of the rural arterial roads surveyed achieved a score of 1 or 2 stars.

The Objectives of the project are:

- “To undertake further detailed investigation, prioritisation and documentation of road safety improvement works for implementation in stages on the basis of AusRAP and ANRAM assessments undertaken in 2019.
- To improve and facilitate road safety by developing practical measures to reduce the risk of fatalities and serious injuries;
- To review the prioritisation order proposed by Roads ACT for the Urban roads to achieve the long-term goal of having all arterial roads in the ACT 3-star rated or higher;
- To study the feasibility of implementing the proposed safety improvements in the Rural roads; and
- To prepare detailed designs and document readiness documents for the prioritised Urban road sites and selected rural road sites in packages as will be agreed with Roads ACT during the course of the study.”

These objectives are to improve the arterial road network safety throughout the ACT. The project comprises two key components, an assessment of urban arterial roads and an assessment of rural arterial roads.

This report covers the selected rural arterial roads.

2. SELECTED SITES

The following roads were identified for this study for the rural component of this project:

2.1 Kings Highway

The Kings Highway is a rural arterial road providing a connection between the ACT and the NSW South Coast. The majority of the Kings Highway is located in NSW, with a short section located in the ACT.

The majority of the road is a two way two lane undivided road. A section of the road was upgraded circa 10 years ago (between Sparrow Hill Road and Hibernian Road). This section includes overtaking lanes in both directions. The roundabout with HQJOC was constructed circa 15 years ago.

The current speed limit on the Kings Highway is 100 km/h, with 80 km/h on the approaches to the roundabout with HQJOC.

The ARRB ANRAM study separated the Kings Highway into five sections, of which, three sections were selected for investigation as part of this study. Four of the five sections are in sequence in an eastbound direction along the length of the road. The remaining section represented the divided road at the HQJOC roundabout. Due to the extent of the selected three areas of the Kings Highway, the full length within the ACT was reviewed.

The Kings Highway will be referred to as **Rural Site 1**. Note that three sections (1, 2 and 3) of Kings Highway were identified for review and have been combined into one site.

The ARRB report proposed the following treatments:

- Reduced speed limit;
- Roadside barriers;
- Median barriers, and
- Audio Tactile Line Marking (ATLM).

The review and assessment of the Kings Highway component of this study is provided in a separate report (RG 20110 ANRAM_Kings Highway Design Option Study).

2.2 Monaro Highway

The Monaro Highway is a rural arterial road providing a connection between the ACT and Southern NSW and Victoria. The majority of the Monaro Highway is located in NSW.

The road within the ACT can be separated into two segments. The northern segments starting from the roundabout with Johnson Drive is a two way four lane divided road with characteristics of a motorway towards the northern end. Current designs are being prepared to provide future upgrades on this section of the road. The southern segment between the Johnson Drive roundabout and the NSW border is mostly a two way two lane undivided road. An overtaking lane is provided in the southbound direction for the climb of Mount Rob Roy (southbound from Tuggeranong). An overtaking was recently constructed (2020) in the northbound direction near Lobb Hill (between Williamsdale and Royalla). There are several priority controlled T-intersections in both segments, including Old Cooma Road which was upgraded to include a channelised left turn lane to account for the growth in traffic associated with the expansion of Googong and the surrounding area in NSW.

The current speed limit on the southern segment of the Monaro Highway is 100 km/h, with 80 km/h on the approaches to the Johnson Drive roundabout. The northern segment has a mixture of 80 km/h, 90 km/h and 100 km/h speed zones.

The ARRB ANRAM study separated the Monaro Highway into 16 sections. 10 of these sections are located in the northern segment of the Monaro Highway with five sections in each direction to account for the divided carriageway. The selected section for this study commences at the NSW border and continues north for circa 3.5 km. As part of this study, the southern segment of the Monaro Highway from the NSW border to the Johnson Drive roundabout was reviewed.

The Monaro Highway will be referred to as **Rural Site 4**.

The ARRB report proposed the following treatments:

- Reduced speed limit;
- Median barriers, and
- Audio Tactile Line Marking (ATLM).

2.3 Boboyan Road

Boboyan Road is a rural arterial road providing a connection between the ACT and the Monaro. The name of the road changes to Bobeyan Road at the NSW border, however, when combined, circa half the road is located in the ACT.

The road can be separated into two segments. The northern segment is a two way two lane undivided road for circa 13.5 km from Orroral Road where it then becomes an unsealed road (southern segment). It comprises mostly mountainous terrain with short undulating sections. There are several priority controlled T-intersections and car park/ property driveways.

The current speed limit on the sealed section is 100 km/h.

The ARRB ANRAM study separated Boboyan Road into 12 sections (including Boboyan Road A between Orroral Road and Naas Road). The selected section of road commences circa 5.5 km from the NSW border, however, this section is unsealed with the brief identifying recommendations for the sealed sections only. Therefore, only the sealed section of Boboyan Road (13.7 km of 32.5 km) was reviewed.

Boboyan Road will be referred to as **Rural Site 5**.

The ARRB report proposed the following treatments:

- Reduced speed limit;
- Roadside barriers, and
- Audio Tactile Line Marking (ATLM).

2.4 Tharwa Drive

Tharwa Drive is an arterial road with a combination of rural and urban segments.

The road can be further separated into the following segments based on the road and surrounding characteristics:

1. Between Monaro Highway and Drakeford Drive – two way two lane undivided road with an 80 km/h speed limit. Includes a signalised intersection with Were Street and Lawrence Wackett Crescent;
2. Between Drakeford Drive and Box Hill Avenue/ Woodcock Drive – two way four lane divided road with an 80 km/h speed limit.
3. Between Box Hill Avenue/ Woodcock Drive and Norman Lindsay Street – two way two lane divided road with a 60 km/h speed limit. This segment passes the Lanyon Market Place and includes a signalised pedestrians crossing.
4. Between Norman Lindsay Street and Pockett Avenue/ Knoke Avenue – two way two lane undivided road with an 80 km/h speed limit.
5. Between Pockett Avenue/ Knoke Avenue and Naas Road – two way two lane undivided road with speed limits of 20 km/h (crossing the single lane Tharwa Bridge, 50 km/h through Tharwa), 80 km/h and 100 km/h speed limits.

The ARRB ANRAM study separated Tharwa Drive into 10 sections. Six of the sections represent the direction of travel where Tharwa Drive is divided. The selected sections from the ARRB ANRAM report are located in Segments 1 and 5 and were reviewed as part of this study.

Segment 5 of Tharwa Drive will be referred to as **Rural Site 6** and Segment 1 of Tharwa Drive will be referred to as **Rural Site 12**.

The ARRB report proposed the following treatments:

- Median barrier, and
- ATLM.

2.5 Brindabella Road

Brindabella Road is a rural arterial road providing a connection between the ACT from Cotter Road to the NSW Riverina, it also provides access to Uriarra Village and is used as a prominent on-road cycling route. The majority of Brindabella Road is located in NSW.

The road can be separated into two segments. The eastern segment is a two way two lane undivided sealed road for circa 16.7 km from Cotter Road where it then becomes an unsealed road (western segment). It comprises mostly mountainous terrain with short undulating sections. There are several priority controlled T-intersections (including access to Uriarra Village) and property driveways/ fire trails.

The current speed limit is a mixture of 80 km/h and 100 km/h.

The ARRB ANRAM study separated Brindabella Road into seven sections. The selected section for this study commences after the sealed section finishes, however, this section is unsealed with the brief identifying recommendations for the sealed sections only. Therefore, only the sealed section of Brindabella Road was reviewed.

Brindabella Road will be referred to as **Rural Site 7**.

The ARRB report proposed the following treatments:

- Reduced speed limit;
- Roadside barriers;
- Median barrier;

- Appropriate treatments to improve safety for cyclists, and
- Audio Tactile Line Marking (ATLM).

2.6 Apollo Road

Apollo Road is a rural arterial road providing a connection from Naas Road to the demolished Honeysuckle Creek Tracking Station site.

The road is a narrow two way two lane undivided road. It has a short undulating section with access to rural properties then changes to mountainous terrain. A section of the road is in the Namadgi National Park.

The current speed limit is the default rural speed limit of 100 km/h.

The ARRB ANRAM study separated Apollo Road into three sections, with the middle section identified for this study, therefore, all of Apollo Road was reviewed.

Apollo Road will be referred to as **Rural Site 8**.

The ARRB report proposed the following treatments:

- Reduced speed limit;
- Roadside barriers;
- Median barriers, and
- Audio Tactile Line Marking (ATLM).

2.7 Corin Road

Corin Road is a rural arterial road providing a connection from Tidbinbilla Road to Corin Dam, providing access to Corin Forest Mountain Resort and Gibraltar Creek Forest.

The road is a two way two lane undivided road. It has a short hilly section with access to rural properties then changes to mountainous terrain. The majority of the road is in the Namadgi National Park.

The current speed limit is the default rural speed limit of 100 km/h.

The ARRB ANRAM study separated Corin Road into eight sections, with one of the middle sections identified for this study, therefore, all of Corin Road was reviewed.

Corin Road will be referred to as **Rural Site 9**.

The ARRB report proposed the following treatments:

- Reduced speed limit;
- Roadside barriers, and
- Audio Tactile Line Marking (ATLM).

2.8 Orroral Road

Orroral Road is a rural arterial road providing a connection from Boboyan Road to the demolished Orroral Tracking Station.

The road is a narrow two way two lane undivided road. It has a short undulating section with access to rural properties then changes to mountainous terrain. A section of the road is in the Namadgi National Park.

The current speed limit is the default rural speed limit of 100 km/h.

The ARRB ANRAM study separated Orroral Road into three sections, with the first section identified for this study. Due to the length of the road, all of Orroral Road was reviewed.

Orroral Road will be referred to as **Rural Site 10**.

The ARRB report proposed the following treatments:

- Reduced speed limit;
- Roadside barriers, and
- Audio Tactile Line Marking (ATLM).

2.9 Uriarra Road

Uriarra Road is a rural arterial road providing a connection between Opperman Avenue and Brindabella Road and is used as a prominent on-road cycling route.

The road is a two way two lane undivided road. The majority of the road terrain is undulating to hilly, with a short mountainous section near the Murrumbidgee River. There several priority controlled T-intersections and multiple accesses to rural properties. The crossing at the Murrumbidgee River is subject to flooding and the bridge closed (multiple advanced warning signs provided).

The current speed limit is a mixture of 60 km/h, 80 km/h and 100 km/h.

The ARRB ANRAM study separated Uriarra Road into ten sections, with one of the middle sections identified for this study, therefore, all of Uriarra Road was reviewed.

Uriarra Road will be referred to as **Rural Site 11**.

The ARRB report proposed the following treatments:

- Reduced speed limit;
- Roadside barriers;
- Appropriate treatments to improve safety for cyclists, and
- Audio Tactile Line Marking (ATLM).

2.10 Cotter Road

Cotter Road is an arterial road with a combination of rural and urban segments.

The road can be further separated into the following segments based on the road and surrounding characteristics:

1. Between Paddys River Road and Eucumbene Drive – two way two lane undivided rural road with 40 km/h, 60 km/h, 70 km/h and 80 km/h speed limits. Includes a signalised bidirectional crossing of Murrumbidgee River bridge and a one lane bridge crossing over Cotter River. The road is a prominent on-road cycling route. The majority of the road terrain is undulating to hilly, with a short

mountainous section near the Murrumbidgee River and Cotter River. There several priority controlled T-intersections and multiple accesses to rural properties;

2. Between Eucumbene Drive and John Gorton Drive – two way two lane undivided urban road with a 70 km/h speed limit.
3. Between John Gorton Drive and Yarra Glen – two way four lane divided urban road with 70 km/h and 80 km/h speed limits. Includes several signalised intersection.

The ARRB ANRAM study separated Cotter Road into 6 sections, with two sections representing the direction of travel where Cotter Road Drive is divided. The selected sections from the ARRB ANRAM report are located in Segment 1 and was reviewed as part of this study.

Cotter Road will be referred to as **Rural Site 13**.

The ARRB report proposed the following treatments:

- Reduced speed limit;
- Appropriate treatments to improve safety for cyclists, and
- Audio Tactile Line Marking (ATLM).

3. REVIEW OF AVAILABLE INFORMATION

3.1 ARRB Study

ARRB completed the ACT Arterial Roads AusRAP and ANRAM Assessment in May 2019. The study was based on a video inspection of the arterial roads in June 2018 and the review of collision data from 2013 to 2017. The study separated the rural roads into sections to evaluate and allocated International Road Assessment Program (iRAP) star ratings (ranging between 1 (low) and 5 (high) stars). A target of 3 stars or greater is the goal for providing a safe rural arterial road network. The study identified that 77% of the rural arterial roads surveyed achieved a score of 1 or 2 stars.

The study identified the following road attributes that contributed to the allocated 1 and 2 star ratings:

- Speed limit – 80 km/h or higher;
- Roadside objects – non frangible objects and unrecoverable verges;
- Distance to the roadside object – roadside objects in the clear zone (5 m was used in the study), and
- Carriageway – undivided carriageway, increasing the risk of crashes such as head-on collisions.

To counter and improve the star rating, the following treatment options were assessed:

- Reduced speed limit – 42.9% reduction in total Fatal and Serious Injury (FSI) crashes expected over the next five years.
- ATLM – 36.7% reduction in total FSI crashes expected over the next five years.
- ATLM plus roadside barriers – 72.9% reduction in total FSI crashes expected over the next five years.
- ATLM plus roadside and median barriers – 73.1% reduction in total FSI crashes expected for the next five years.

Improvements to intersections (signalise selected seagull intersections) were also assessed, however, these improvements are proposed to be assessed in a separate project and are not associated with this study.

3.2 Traffic and Speed data

Traffic data that was collected from mid-March 2020 would have been influenced by changes in travel patterns associated with COVID-19. The ACT shutdown period started 23 March 2020, with other states and territories undertaking similar precautionary measures. Although the shutdown has ended and there are no more restrictions in the ACT and NSW travel patterns have changed.

A review of traffic volumes of historical traffic data, traffic volumes reduced during the initial stages of the COVID shutdown period by circa 10% to 30% (depending on location and shutdown period). It is not expected that the reduction in traffic would have significantly impacted the mean and 85th percentile speed of road users during the shutdown period.

3.2.1 Rural Site 4 – Monaro Highway

Traffic data was provided for the Monaro Highway for the section of road between Old Cooma Road and Angle Crossing Road for a week starting 10 June 2020. This data was collected during the COVID-19 shutdown period. The available traffic data is provided in **Table 3-1**.

Table 3-1 Rural Site 4 – Monaro Highway Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Old Cooma Road (NB)	2,677	86.3	95.3
Angle Crossing Road (SB)	2,809	96.3	102.4
Total Volume	5,486		

The data indicates under 6,000 vpd used Monaro Highway. However, a review of traffic volumes from a permanent classifier counter on the northern side of Bredbo from the Transport for NSW Traffic Volume Viewer indicated that 2019 traffic volumes were circa 10% than the 2020 traffic volumes during the June period. Adjusting the provided traffic volumes to account for the influence of COVID-19 would increase the traffic volume above 6,000 vpd during this period.

Additionally, the Monaro Highway experiences significant seasonal fluctuations where traffic volumes nearly double during winter when compared to other seasons.

The speed data indicates that the average road user complies with the 100 km/h speed limit.

3.2.2 Rural Site 5 – Boboyan Road

No traffic and speed data was provided for Boboyan Road.

Given the location, it is anticipated that daily traffic volumes would be less than 500 vpd.

It is expected that the speed would vary depending on the location. However, it is anticipated that the travel speed would be lower than the default 100 km/h rural speed limit due to the geometry of the road.

Traffic and speed data has been arranged for collection for this road to verify these assumptions. A short addendum to this report will be issued when the information is received.

3.2.3 Rural Site 6 – Tharwa Drive

Traffic data was provided for Tharwa Drive for this site between Pockett Avenue and the Tharwa Bridge for a week starting 22 March 2020. This data was collected during the first week of the COVID-19 shutdown period. The available traffic data is provided in **Table 3-2**.

Table 3-2 Rural Site 6 – Tharwa Drive (Rural Site 6) Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Pockett Avenue (NB)	380	89.6	100.8
Tharwa Bridge (SB)	406	87.6	100.4
Total Volume	786		

The data indicates under 6,000 vpd used this section of Tharwa Drive, even with the 30% adjustment to account for the impacts associated with COVID-19.

The speed data indicates that the average road user complies with the 100 km/h speed limit.

3.2.4 Rural Site 7 – Brindabella Road

Traffic data was provided for Brindabella Road north of the intersection with Cotter Road for a week starting 3 August 2014. Although the data is over 5 years old, travel patterns on this road are not anticipated to have significantly changed over the 5 plus year period as no changes to the attractions/destinations in that areas have occurred since the data was collected that would have influenced traffic movements. The available traffic data is provided in **Table 3-3**.

Table 3-3 Rural Site 7 – Brindabella Road Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Away from Cotter Road (NB)	217	62.6	75.9
Cotter Road (SB)	218	68.5	80.9
Total Volume	435		

The data indicates under 6,000 vpd used this section of Brindabella Road.

The speed data indicates that the average and 85th percentile speed is significantly lower than the 100 km/h posted.

3.2.5 Rural Site 8 – Apollo Road

No traffic and speed data was provided for Apollo Road.

Given the location, it is anticipated that daily traffic volumes would be less than 500 vpd.

It is expected that the speed would vary depending on the location. However, it is anticipated that the travel speed would be lower than the default 100 km/h rural speed limit due to the geometry of the road.

3.2.6 Rural Site 9 – Corin Road

Traffic data was provided for two sections Corin Road between Tidbinbilla Road and Woods Reserve and Woods Reserve and Gibraltar Falls for a week starting 9 November 2017. The available traffic data is provided in **Table 3-4**.

Table 3-4 Rural Site 9 – Corin Road Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Between Tidbinbilla Road and Woods Reserve			
Tidbinbilla Road (EB)	57	63.2	71.9
Woods Reserve (WB)	62	61.3	67.3
Total Volume	119		
Between Woods Reserve and Gibraltar Falls			
Woods Reserve (NB)	58	60.9	67.2
Gibraltar Falls (SB)	46	59.8	63.9

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Total Volume	104		

The data indicates under 6,000 vpd used Corin Road. Note that traffic volumes are slightly higher on weekends and the road would experience seasonal fluctuations due to activities at the Corin Forest Mountain Resort and Gibraltar Falls.

The speed data indicates that the average and 85th percentile speed is significantly lower than the 100 km/h default rural speed limit.

3.2.7 Rural Site 10 – Orroral Road

No traffic and speed data was provided for Orroral Road.

Given the location, it is anticipated that daily traffic volumes would be less than 500 vpd.

It is expected that the speed would vary depending on the location. However, it is anticipated that the travel speed would be lower than the default 100 km/h rural speed limit due to the geometry of the road.

3.2.8 Rural Site 11 – Uriarra Road

Traffic data was provided for Uriarra Road north of the intersection with Brindabella Road for a week starting 14 August 2013. Although the data is over 5 years old, travel patterns on this road are not anticipated to have changed over the 5 plus year period as no changes to the attractions/ destinations in that areas have occurred since the data was collected that would have influenced traffic movements. The available traffic data is provided in Table 3-5.

Table 3-5 Rural Site 11 – Uriarra Road Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Away from Brindabella Road (NB)	330	74.3	86.9
Brindabella Road (SB)	306	78.9	93.5
Total Volume	636		

The data indicates under 6,000 vpd used this section of Uriarra Road.

The speed data indicates that the average and 85th percentile speed is lower than the 100 km/h posted.

3.2.9 Rural Site 12 – Tharwa Drive

Traffic data was provided for Tharwa Drive for this site between Lawrence Wackett Crescent (east and west) for a week starting 23 March 2020. This data was collected during the first week of the COVID-19 shutdown period. The provided traffic data is provided in Table 3-6.

Table 3-6 Rural Site 12 – Tharwa Drive (Rural Site 12) Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Lawrence Wackett Crescent (EB)	6,070	79.6	86.2
Lawrence Wackett Crescent (WB)	5,964	77.7	84.1
Total Volume	12,034		

The data indicates over 6,000 vehicles per day use Tharwa Drive. These traffic volumes are typical to the assigned arterial road (greater than 6,000 daily vehicles) classification within an urban environment. It is noted that this section of Tharwa Drive dissects Theodore and part of Calwell and provides a connection for the southern section of Tuggeranong to the Monaro Highway.

The speed data indicates that the average road user complies with the current 80 km/h speed limit. However, the 85th percentile speed is over the 80 km/h speed limit by circa 5% to 7.5%.

3.2.10 Rural Site 13 – Cotter Road

No speed data was provided for Cotter Road.

Traffic volumes were obtained from the traffic signals at the Murrumbidgee Bridge. Weekday volumes are circa 1,090 vpd.

It is expected that the speed would vary depending on the location. It is anticipated that the average travel speed in the 80 km/h zone would be close to 80 km/h, however, would have an 85th percentile speed above 80 km/h. It is anticipated that speed would align with the posted 40 km/h and 60 km/h areas due to the road geometry for these locations.

3.3 Collision data

Collision data was provided for the five year period from 1 January 2015 to 31 December 2019 inclusive. A summary of the collisions for each road section is provided in Table 3-7.

Table 3-7 Collision Data Summary

ARRB Section	Collisions						
	Run-off-road	Head-on	Intersection	Other	Pedestrian	Cyclists	Motorcyclists
Rural Site 4 – Monaro Highway							
466	1		1	17		1 (607)	
467	5	3 (1 Fatal)		3		1 (301)	
468	1	1	3	4			
469	1(Fatal)		2	2			1 (201 - Fatal)
470	1			9			
471	2	1 (Fatal)		5		1 (301 - Fatal)	1 (609)
Subtotal	11	4	6	40		3	2
Total	66						
Rural Site 5 – Boboyan Road							
98				1			
99	4						
88	1						
89	1						
90	1			1			
91							2(802 & 606)
92							
Subtotal	7	0		2			2
Total	11						
Rural Site 6 – Tharwa Drive							
396	2	2	15	10			7 (104*4, 301*2, 107)
397	8	1	6	5			4 (101, 105, 705, 805)
Subtotal	10	3	21	15			11

ARRB Section	Collisions						
	Run-off-road	Head-on	Intersection	Other	Pedestrian	Cyclists	Motorcyclists
Total	60						
Rural Site 7 – Brindabella Road							
102	4			3			18 (201, 506, 705, 801*3, 802*2, 803*2,804, 805*7)
103				2			2 (706, 801)
104							2 (805*2)
105							2 (605, 805)
106	1						4 (609, 803, 805*2)
Subtotal	5			5			28
Total	38						
Rural Site 8 – Apollo Road							
17	2			1			
18							1 (705)
19							2 (701, 802)
Subtotal	2			1			3
Total	6						
Rural Site 9 – Corin Road							
157	1						
158	3			1			
159	1			1			1 (805)
160	1	1					
161				2			
162							
163							
164							
Subtotal	6	1		4			1

ARRB Section	Collisions						
	Run-off-road	Head-on	Intersection	Other	Pedestrian	Cyclists	Motorcyclists
Total	12						
Rural Site 10 – Orroral Road							
525							
526							
527							
Subtotal							
Total	0						
Rural Site 11 – Uriarra Road							
627	3			1			1 (706)
628							
629	2						
630							1 (707)
631				1			
632	1						1 (609)
633	1						
634	4			7			
635	2						
636							
Subtotal	13			9			3
Total	25						
Rural Site 12 – Tharwa Drive							
597				2			
598			2	11			
599	5	1	16	22			3 (301, 104, 706)
604	Covered in Sections 597, 598 and 599						
605	Covered in Sections 597, 598 and 599						
606	Covered in Sections 597, 598 and 599						
Subtotal	5	1	18	35			3

ARRB Section	Collisions						
	Run-off-road	Head-on	Intersection	Other	Pedestrian	Cyclists	Motorcyclists
Total	62						
Rural Site 13 – Cotter Road							
167	3	5	1	4			6 (201, 303, 308, 803*2, 804)
168	3						2 (803(Fatal), 805)
169	2		1	9		1 (305)	3 (303, 705, 803)
Subtotal	8	5	2	13		1	11
Total	40						

Key points identified from the collision data are provided below:

- The majority of the collisions classified as “other” involved single vehicle collisions with animals.
- A cluster of loss of control collisions occurred on the southern side of Fitz’s Hill within the Boboyan Road A section. A safety barrier was installed at this location in 2020.
- The majority of the motorcycle collisions on Rural Site 6 – Tharwa Drive occurred at intersections.
- Over half the collisions on Brindabella Road involved motorcyclists. The majority of the collisions involving motorcyclist were loss of control single vehicle collisions. Barriers installed on this road should consider including motorcycle protection.
- No collisions were recorded on Orroral Road.
- Three head on collisions occurred on Cotter Road at the turn in the road circa 150 m from the Cotter River Bridge. Widening of this curve and improving visibility around the curve should be considered in future projects.

4. SAFETY IMPROVEMENT TREATMENTS

The ARRB report recommended and assessed the following treatments:

- Speed limit reduction;
- Audio Tactile Line Marking (ATLM), and
- Safety barrier (Roadside and Median).

In addition to the above treatments, the following alternative treatments can also be considered for several of the locations:

- Provide additional clearing within the clear zone;
- Bicycle activated warning signs;
- Perceptual countermeasure, and
- Widening pavement and provision of a shoulder.

4.1 Speed Limit Reduction

The reduction of speed has the potential to:

- Reduce the number of loss of control crashes;
- Decrease the stopping distance of a vehicle after the driver reacts to a situation, reducing the chance for a collision to occur;
- The ability to convert a merge of an overtaking lane to a “FORM ONE LANE” arrangement where the new speed limit is less than or equal to 80 km/h;
- Decrease the clear zone distance; and
- Reduce crash severity.

Austrroads Guide to Traffic Management Part 5: Link Management (2020) provides some consideration to the selection of speed limits. Table 7.5 of this guide provides the applicable considerations for the selection of speed for rural roads with undeveloped roadside environments. There are no considerations applicable for a 100 km/h speed limit.

However, in road sections where the road alignment does not provide enough factors to encourage conformance to the speed limit, there would be a high rate of non-compliance. Regular enforcement would be required.

4.1.1 Advantages

- Decrease clear zone distance.
- Reduces the severity of collisions.
- Decreases stopping distance and sight distance requirements.
- Low cost to implement.

4.1.2 Disadvantages

- Driver non-conformance to the reduced speed limit.
- Public compliance to reduced speed limits.

4.1.3 Potential Constraints and Opportunities

- Opportunities to implement different speed limits for various lengths of roads.
- Opportunities to implement speed limits consistent with speed limits on adjoining roads.

4.2 Audio Tactile Line Marking

ATLM assists with advising road users through an audio and vibration prompt that the vehicle wheels have crossed the edge or centre line. The purpose of ATLM is to reduce the likelihood of a run-off-road or a head on collision either through the result of distraction, fatigue or poor visibility (rain/ fog).

ATLM can be installed over existing linemarking (continuous) or offset to the line (discontinuous) (refer Transport for NSW Technical Direction TTTD 2020/04 Installation of Audio Tactile Linemarking). A key consideration with the installation of ATLM is the potential impact it could have to on-road cyclists. The design of the ATLM treatment will need to consider road sections with on-road cycling presence and decide the best location of the ATLM to minimise the impact on cyclists.

4.2.1 Advantages

- Provides an audio and vibration warning to road users.
- Cost effective solution that can be installed without civil works.
- Can include perceptual countermeasures (refer to section 4.6).

4.2.2 Disadvantages

- Could impact on on-road cyclists.

4.2.3 Potential Constraints and Opportunities

- The design will need to consider the available shoulder width for on-road cyclists.
- Various options available for installation (refer to NSW RMS Technical Direction TTD 2020/04).

4.3 Safety Barriers

Safety barriers can be considered for locations where there are roadside hazards in the clear zone. Note that the installation of a barrier for an individual hazard may not be beneficial as a safety barrier is a potential hazard itself.

The selection of the safety barrier type will need to consider the applicable MASH compliant system based on the location, length of protection and barrier deflection.

The design of the safety barrier will need to consider the approach and departure 'point of need' and the deflection zone behind the safety barrier. In some instances, clearing behind the barrier would be required to allow for barrier deflection.

The installation of median barriers needs to consider the available space for the safety barrier, including offset to the traffic lanes. Typically for rural roads, the pavement width is inadequate for the installation without the need to widen the pavement significantly increasing the cost for median barrier installation. Additionally, the installation of a median barrier on undivided roads introduces a hazard within the road carriageway. An alternative treatment would be to widen the road and install a wide centreline (BB2). This treatment was recently implemented on the upgraded section of the Monaro Highway between

Royalla Drive and Williamsdale Road and is used on numerous other rural arterial roads throughout Australia. A study was undertaken by ARRB (2018) on the effectiveness of wide centrelines in Queensland and identified a 22% reduction in fatal and serious injury collisions and a 33% reduction of all injury collisions.

4.3.1 Advantages

- Protection from hazards in the clear zone, including verges.
- Provides long term protection.

4.3.2 Disadvantages

- Introduction of new hazards.
- Potential that a verge side barrier could redirect an errant vehicle back onto the roadway into another vehicle.

4.3.3 Potential Constraints and Opportunities

- May require the removal of trees or other hazards behind the barrier to account for the installation and safety barrier deflection.
- Median barriers require additional pavement and removal of trees, further increasing the cost of design and construction.
- Different barrier types are available to treat different situations.
- Motorcycle protection rub rail can be installed with safety barriers to provide added protection to motorcyclists, however, can result in trapping debris.

4.4 Provide additional clearing within the clear zone

The installation of safety barriers and the reduction of the speed limit is a “reduction” approach to improving the safety of the road. The removal of the hazard from the road environment is the “elimination” approach.

The clearing of hazards in the clear zone should include trees (including low branches overhanging the road where the tree is located outside the clear zone) and shrubs. Removal of shrubs is desirable for potential fire reduction and to improve the visibility of wildlife.

4.4.1 Advantages

- Reduces the extent/ number of safety barriers required.
- Improve road user awareness of roadside/ verge activity, enabling road users to observe and identify animals on the side of the road easier and increase the likelihood of the vehicle stopping before colliding with an animal. This option has the potential to reduce the number of collisions involving animals.
- Provide a bushfire containment line and maximises the ability for the public to escape from an approaching bushfire (The Royal Commission into National Natural Disaster Arrangements Report, October 2020, Recommendation 12.1 Roadside vegetation management).
- Improve visibility of cyclists on curved sections of the road.

- Reduce the likelihood of trees/ branches falling on the road (becoming hazards or blocking traffic).

4.4.2 Disadvantages

- Requires ongoing maintenance and management of the clear zone after the initial clearing has been undertaken.
- Perceived or actual environmental impacts associated with the removal of vegetation from the clear zone.

4.4.3 Potential Constraints and Opportunities

- It is acknowledged that some hazards may not be able to be removed due to their significance to the area. This will require consultation with key stakeholders to identify which hazards are to remain and how each section should be treated.
- The removal of trees and disturbance due to construction activities may require an Environmental Significant Option (ESO) which can take circa three months or an Environmental Impact Statement (EIS) which can take circa 1 year for approvals.

4.5 Bicycle Activated Warning Signs

The use of dynamic warning systems to warn other road users of a cyclists' presence on the road has been implemented on roads in Victoria on Deans Marsh-Lorne Road (2016) and in Queensland, predominately at roundabouts and narrow bridges. Similar treatments to the Victorian sign have been implemented in America and parts of Europe as an advanced warning system to warn approaching road users of the presence of cyclists on rural roads.

The system used in Victoria was installed at the start of the climb of a hill and circa at the halfway mark. The 'Cyclists Ahead' warning signs are triggered by passing cyclists and go into 'standby mode' for the time it takes for a cyclist to reach the next sign. The signs are then activated by motorists road users, warning them that there are cyclists on the climb. Deans Marsh-Lorne Road has similar characteristics to the climbing sections of the Brindabella/ Uriarra and Cotter Road loop. Recent reports on these signs indicate that there are some technical issues with the signs, however, the cause of these issues are unknown and may come down to maintenance.

The Victorian and European signs operated with nonintrusive detector systems while the American system used detector loops. Further investigation of the preferred system would be required.



https://www.epcgroup.com/wp-content/uploads/hea_0916_03_cyclists-signs.jpg

4.5.1 Advantages

- Advises road users of cyclists within a section of road.
- The detection system can be implemented with minimal disruption to the existing road surface (similar to the temporary speed monitoring detection systems).
- Low cost when compared to providing additional pavement width/ cycling shoulder.

4.5.2 Disadvantages

- Potential for road users to become complacent towards the sign.
- Potential for road users to become reliant on the signs with safety issues if the sign stops working.

4.5.3 Potential Constraints and Opportunities

- There is potential that a trial could be undertaken to evaluate the effectiveness of this treatment, particularly for locations where sight distances are limited by the geometry of the road.

4.6 Perceptual countermeasure

The perceptual reduction of the transversable space of a road has the ability to “trick” a road user to respond to the road conditions with more caution. The installation of narrower traffic lanes through linemarking, including the option of additional pavement marking features, can portray a message to the road user to take more caution and drive/ride to the conditions. A narrower traffic lane can subjectively slow the speed of vehicles on both straight and curved road sections.

This treatment has been used in NSW and WA on rural roads



<https://motorbikewriter.com/wp-content/uploads/2014/05/Lane-markings.jpg>

4.6.1 Advantages

- Opportunity to provide a shoulder or a wide centre line treatment, providing separation from passing vehicles.
- Slows vehicles.
- Implementation of additional pavement marking features could be used to highlight high risk locations.

4.6.2 Disadvantages

- Can increase the likelihood of head-on, run-off-road crashes and side-swipes if the lane becomes too narrow.
- Narrowing the shoulder can increase the likelihood of motorcyclist collisions.

4.6.3 Potential Constraints and Opportunities

- The width of the pavement of the road may limit the ability to apply this treatment.
- The selection of additional pavement marking features need to consider how they could be perceived by road users (the example shown in the photo could be mistaken as an unbroken line, permitting overtaking)

4.7 Widening pavement and provision of shoulder

The widening of the pavement and provision of a sealed shoulder can provide road users with additional space within the road to recover should they lose control. It also provides additional separation for on-road cyclists. This treatment requires long sections of the road to be widened to be effective.

4.7.1 Advantages

- Upgrades the width of the road, including shoulders, to align with current standard and guidelines and provides an area for vehicles to recover if they inadvertently leave the traffic lane.
- Removes edge drop on the edge of the traffic lane.
- Has the ability to reduce the number of collisions associated with motorcycles.
- Provides a sealed shoulder for cyclists, removing them from the trafficable lane.

4.7.2 Disadvantages

- High cost.
- Potential to increase the speed of vehicles.
- Impact on vegetation.

4.7.3 Potential Constraints and Opportunities

- The verge of the road in some locations will prohibit the widening of the road without significant design and construction costs (e.g. rock cuttings/ fill stabilisation).
- Potential to obtain funding based on the improvement of rural roads to accommodate large commercial vehicles (e.g. B-doubles).
- Potential block boundary and environmental constraints in the design, including the extension of culverts and headwalls.
- The removal of trees and disturbance due to construction activities may require an ESO or an EIS.

5. RECOMMENDATION FOR SAFETY IMPROVEMENT TREATMENTS

The selection of the safety improvement options for each road is provided in Table 5-1. The yellow highlighted cells are the recommendations from the ARRB report.

Table 5-1 Recommendation for Safety Improvement Treatments

Site	Road	Safety Improvement Treatments							
		Reduced Speed Limit	ATLM	Roadside Safety Barrier	Median Safety Barrier	Clearing clear zone	Bicycle activated warning signs	Perceptual countermeasures	Pavement Widening
4	Monaro Highway	No	Y	Y	No	Y	No	No	Consideration for future Capital Works.
5	Boboyan Road	Y	Y	Y	No	Y	No	Y	
6	Tharwa Drive	No	Y	Y	No	Y	Y	No	
7	Brindabella Road	Y	Y	Y	No	Y	Y	Y	
8	Apollo Road	Y	Y	Y	No	Y	No	Y	
9	Corin Road	Y	Y	Y	No	Y	Y	Y	
10	Orroral Road	Y	Y	Y	No	Y	No	Y	
11	Uriarra Road	Y	Y	Y	No	Y	Y	Y	
12	Tharwa Drive	Y	No	No	No	No	No	No	
13	Cotter Road	No	Y	Y	No	Y	Y	Y	

A brief description of each option is provided below.

5.1 Speed Limit Reduction

A review of the speed limit on the selected sites was undertaken based on Austroads Guide to Traffic Management Part 5: Link Management (2020). Table 7.5 of this guide has the applicable considerations for the selection of speed for rural roads with undeveloped roadside environments. There are no considerations applicable for a 100 km/h speed limit. The following tables provide an assessment for each road based on the allocated ARRB sections for 80 km/h, and 60 km/h where warranted. The text in red indicates factors to support a speed limit reduction.

Table 5-2 Rural Site 4 – Monaro Highway Speed Limit Considerations

Consideration	Comment					
	466	467	468	469	470	471
80 km/h Speed limit considerations						
Severe crash rate/100 million VKT <i>Severe crash rate is high, provided minimum AADT is exceeded.</i>	The severity collision rate is 0.22 for fatal collisions in the ACT. Monaro Highway has a rate of 0.499. This is high compared to the ACT rate.					
Road use and users <i>High AADT, e.g. over approximately 12,000 vpd</i>	Traffic volume from 2020. Total 4,486 vpd. Therefore, not considered high.					
Road features <i>At least two of: Lane width \leq 3.0 m \leq 0.5 m sealed shoulders and effective unsealed shoulders $<$ 1 m \leq 2 m clear zone, or 2–4 m clear zone with high density/continuous roadside hazards Generally curving and/or undulating road alignment (e.g. 2–4 higher-risk curves per km) 1–2 standard access points per 100 m (includes intersections) A rural hamlet/settlement</i>	Lane widths are greater than 3.5 m in this section Shoulders are sealed with 0.5 m width or greater Unsealed shoulders vary, may not be able to achieve 1 m in some areas. However, the overall shoulder width totals 1.5 m or greater. Sections of the road have safety barriers. Clear zone clear of obstructions, Clearing behind safety barriers required Sections of the road have safety barriers. No high risk curves 1-2 access per 100 m No settlements Some settlement, including a former petrol station.					
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	Provided mean speed close to the posted speed limit.					

The current speed limits on the Monaro Highway are considered applicable based on the above review.

Table 5-3 Rural Site 5 – Boboyan Road Speed Limit Considerations

Consideration	Comments						
	98	99	88	89	90	91	92
80 km/h Speed limit considerations							
Severe crash rate/100 million VKT <i>Severe crash rate is high, provided minimum AADT is exceeded.</i>	The severity collision rate is 0.22 for fatal collisions in the ACT. No fatal collision occurred on Boboyan Road within the collected collision data set						
Road use and users <i>High AADT, e.g. over approximately 12,000 vpd</i>	No traffic volumes provided. Given the location, it is anticipated that daily traffic volumes would be less than 500 vpd. Therefore not considered high.						
Road features <i>At least two of: Lane width ≤ 3.0 m ≤ 0.5 m sealed shoulders and effective unsealed shoulders < 1 m ≤ 2 m clear zone, or 2–4 m clear zone with high density/continuous roadside hazards Generally curving and/or undulating road alignment (e.g. 2–4 higher-risk curves per km) 1–2 standard access points per 100 m (includes intersections) A rural hamlet/settlement</i>	<p>Lane widths are generally greater than 3 m. Some sections of the road have localised narrowing at bridge crossings.</p> <p>Limited sealed shoulder (<0.5 m)</p> <p>Limited unsealed shoulder (<1.0 m)</p> <p>Nonfragile hazards (trees, rocks, culverts) within the clear zone.</p> <p>Existing safety barriers, although additional safety barriers are required, including the extensions of some safety barriers.</p> <p>Some non-standard end terminals</p> <p>2 – 4 high risk curves within 1 km.</p> <p>1-2 access per 100 m. Note that some access points are located on curves</p> <p>No settlements</p>						
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	No speed data provided. Expected that mean speed would be below the posted speed limit due to the road geometry						

A speed limit reduction from 100 km/h to 80 km/h is supported for Boboyan Road, including Boboyan Road A.

Note that there are hazards in the clear zone based on an 80 km/h speed limit.

Although speed data was not provided, it is expected that the majority of the road users would comply with the reduced speed limit due to the geometry of the road.

Table 5-4 Rural Site 6 –Tharwa Drive Speed Limit Considerations

Consideration	Comment	
	602	603
80 km/h Speed limit considerations		
Severe crash rate/100 million VKT <i>Severe crash rate is high, provided minimum AADT is exceeded.</i>	The severity collision rate is 0.22 for fatal collisions in the ACT. No fatal collision occurred on this section of Tharwa Dr within the collected collision data set	
Road use and users <i>High AADT, e.g. over approximately 12,000 vpd</i>	Traffic volume from 2020. Total of 786 vpd. Considered low.	
Road features <i>At least two of:</i> <i>Lane width ≤ 3.0 m</i> <i>≤ 0.5 m sealed shoulders and effective unsealed shoulders < 1 m</i> <i>≤ 2 m clear zone, or 2–4 m clear zone with high density/continuous roadside hazards</i> <i>Generally curving and/or undulating road alignment (e.g. 2–4 higher-risk curves per km)</i> <i>1–2 standard access points per 100 m (includes intersections)</i> <i>A rural hamlet/settlement</i>	Lane widths are greater than 3.5 m in this section	
	Shoulders are sealed with 0.5 m width or greater	No sealed shoulder
	Section of the road is kerbed	Unsealed shoulders vary, on average achieves 1 m to 1.5 m
	Clear zone clear of obstructions	Nonfragile hazards (trees, rocks) within the clear zone.
	The existing barrier at Box Hill Ave has a non-standard end terminals	
	No high risk curves	
	1-2 access per 100 m	
	Passing through Banks/ Gordon	No settlements
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	No speed data. Expected that the mean speed is close to the posted speed limit.	Provided mean speed close to the posted speed limit.

The current speed limits on the rural section of Tharwa Drive is considered applicable based on the above review.

A speed reduction on the approach to the Tharwa Bridge is considered appropriate to provide a transition between the 100 km/h and 20 km/h speed zones.

The reduction of the speed limit for the urban section of Tharwa Drive from 80 km/h to 70 km/h should be considered based on Safe Systems Principals due to the reduction of kinetic energy transferred in a collision. It is noted that the survivable impact speed for a head on collision is considered to be 70 km/h. It is considered that undivided roads in an urban setting should have a maximum speed limit of 70 km/h based on this principle due to the higher vehicular and vulnerable road user activity. This is also applicable to Rural Site 12. Due to the road alignment for these road sections, enforcement of the reduced speed limit would be required.

A feasibility study is being undertaken for the duplication of Tharwa Drive between the Woodcock Drive/Box Hill Avenue roundabout and Pockett Avenue. A speed assessment of this section of Tharwa Drive should be undertaken as part of the feasibility study.

Table 5-5 Rural Site 7 – Brindabella Road Speed Limit Considerations

Consideration	Comments				
	102	103	104	105	106
80 km/h Speed limit considerations					
Severe crash rate/100 million VKT <i>Severe crash rate is high, provided minimum AADT is exceeded.</i>	The severity collision rate is 0.22 for fatal collisions in the ACT. No fatal collision occurred on Brindabella Road within the collected collision data set				
Road use and users <i>High AADT, e.g. over approximately 12,000 vpd</i>	Traffic volumes provided from 2014. Data considered old, however, not significant growth to influence demand. Provided volumes indicate 435 vpd, it is anticipated that current daily traffic volumes would be similar. Therefore not considered high.				
Road features <i>At least two of: Lane width ≤ 3.0 m ≤ 0.5 m sealed shoulders and effective unsealed shoulders < 1 m ≤ 2 m clear zone, or 2–4 m clear zone with high density/continuous roadside hazards</i>	Lane widths are generally greater than 3 m. Limited sealed shoulder (<0.5 m) Limited unsealed shoulder (<1.0 m) Nonfragile hazards (trees, rocks) within the clear zone. Existing safety barriers, although additional safety barriers are required, including the extensions of some safety barriers. Some non-standard end terminals				
<i>Generally curving and/or undulating road alignment (e.g. 2–4 higher-risk curves per km)</i>	5+ high risk curves per km	No high risk curves	2 - 4 high risk curves within 1 km.	5+ high risk curves per km	
<i>1–2 standard access points per 100 m (includes intersections)</i>	1-2 access per 100 m. Note that some access points are located on curves				
<i>A rural hamlet/settlement</i>	No settlements	Settlement of Uriarra Village	No settlements		
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	Provided speed data indicates that the travel speed is well below the posted speed limit due to the road geometry				
60 km/h Speed limit considerations (in addition to 80 km/h)					
Road features <i>and/or hilly road alignment (e.g. > 4 higher-risk curves per km)</i>	Mountainous section of road. 5+ high risk curves per km	undulating road		Mountainous section of road. 5+ high risk curves per km	
<i>> 2 standard access points per 100 m (includes intersections)</i>	No more than 2 access point per 100 m				
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	Curves and gradient inhibit the speed	Straight section of road, does no inhibit speed	Curves and gradient inhibit the speed		

A speed limit reduction to 80 km/h and 60 km/h for various sections of the road is supported.

Note that there are hazards in the clear zone based on a 60 km/h and 80 km/h speed limit.

Table 5-6 Rural Site 8 – Apollo Road Speed Limit Considerations

Consideration	Comments		
	17	18	19
80 km/h Speed limit considerations			
Severe crash rate/100 million VKT <i>Severe crash rate is high, provided minimum AADT is exceeded.</i>	The severity collision rate is 0.22 for fatal collisions in the ACT. No fatal collision occurred on Apollo Road within the collected collision data set		
Road use and users <i>High AADT, e.g. over approximately 12,000 vpd</i>	No traffic volumes provided. Given the location, it is anticipated that daily traffic volumes would be less than 500 vpd. Therefore not considered high.		
Road features <i>At least two of: Lane width ≤ 3.0 m ≤ 0.5 m sealed shoulders and effective unsealed shoulders < 1 m ≤ 2 m clear zone, or 2–4 m clear zone with high density/continuous roadside hazards Generally curving and/or undulating road alignment (e.g. 2–4 higher-risk curves per km) 1–2 standard access points per 100 m (includes intersections) A rural hamlet/settlement</i>	<p>Lane widths are generally less than 3 m.</p> <p>Limited sealed shoulder (<0.5 m)</p> <p>Limited unsealed shoulder (<1.0 m)</p> <p>Nonfragile hazards (trees, rocks) within the clear zone.</p> <p>Existing safety barriers, although additional safety barriers are required, including the extensions of some safety barriers.</p> <p>Some non-standard end terminals</p>		
	2+ high risk curves per km	5+ high risk curves per km	
	1-2 access per 100 m. Note that some access points are located on curves		
	No settlements	Campsite at end of the road	
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	No speed data provided. Expected that mean speed would be well below the posted speed limit due to the road geometry		
60 km/h Speed limit considerations (in addition to 80 km/h)			
Road features <i>and/or hilly road alignment (e.g. > 4 higher-risk curves per km) > 2 standard access points per 100 m (includes intersections)</i>	undulating road	Mountainous section of road. 5+ high risk curves per km	
	No more than 2 access point per 100 m		
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	Curves and gradient inhibit speed. Does have straight sections of road	Curves and gradient inhibit the speed	

A speed limit reduction to 80 km/h is supported. Note that the road is unsigned and therefore has a default speed limit of 100 km/h.

A 60 km/h speed limit at the campground should be considered for improved safety due to additional activity.

Note that there are hazards in the clear zone based on a 60 km/h and 80 km/h speed limit.

Although speed data was not provided, it is expected that the majority of the road users would comply with the reduced speed limit due to the geometry of the road.

Table 5-7 Rural Site 9 – Corin Road Speed Limit Considerations

Consideration	Comments							
	157	158	159	160	161	162	163	164
80 km/h Speed limit considerations								
Severe crash rate/100 million VKT <i>Severe crash rate is high, provided minimum AADT is exceeded.</i>	The severity collision rate is 0.22 for fatal collisions in the ACT. No fatal collision occurred on Corin Road within the collected collision data set							
Road use and users <i>High AADT, e.g. over approximately 12,000 vpd</i>	Traffic volumes provided from 2017. Provided volumes indicate 339 vpd. Therefore not considered high.							
Road features <i>At least two of: Lane width ≤ 3.0 m ≤ 0.5 m sealed shoulders and effective unsealed shoulders < 1 m ≤ 2 m clear zone, or 2–4 m clear zone with high density/continuous roadside hazards</i>	Lane widths are generally 3 m, however, there is no sufficient widening for the curves to account for large vehicles. Limited sealed shoulder (<0.5 m) Generally limited unsealed shoulder (<1.0 m) Nonfragile hazards (e.g. trees, rocks) within the clear zone. Existing safety barriers, although additional safety barriers are required, including the extensions of some safety barriers. Some non-standard end terminals							
<i>Generally curving and/or undulating road alignment (e.g. 2–4 higher-risk curves per km)</i>	2-4 high risk curves per km		5+ high risk curves per km		2-4 high risk curves per km		5+ high risk curves per km	
<i>1–2 standard access points per 100 m (includes intersections)</i>	1-2 access per 100 m. Note that some access points are located on curves.							
<i>A rural hamlet/settlement</i>	No settlements				Corin Forest		No settlements	
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	Provided speed data indicates that the travel speed is well below the posted speed limit due to the road geometry							
60 km/h Speed limit considerations (in addition to 80 km/h)								
Road features <i>and/or hilly road alignment (e.g. > 4 higher-risk curves per km)</i>	Mountainous section of road.		Mountainous section of road. 5+ high risk curves per km		Mountainous section of road.		Mountainous section of road. 5+ high risk curves per km	
<i>> 2 standard access points per 100 m (includes intersections)</i>	No more than 2 access point per 100 m							
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	Curves and gradient inhibit the speed							

A speed limit reduction to 80 km/h is supported for the majority of the road. Note that the road is unsigned and therefore has a default speed limit of 100 km/h.

Note that there are hazards in the clear zone based on a 60 km/h and 80 km/h speed limit. A 60 km/h speed limit for sections of the road should also be considered based on the road geometry. This includes the section of the road passing the Corin Forest Mountain Resort for improved safety due to additional activity.

Table 5-8 Rural Site 10 – Orroral Road Speed Limit Considerations

Consideration	Comments		
	525	526	527
80 km/h Speed limit considerations			
Severe crash rate/100 million VKT <i>Severe crash rate is high, provided minimum AADT is exceeded.</i>	The severity collision rate is 0.22 for fatal collisions in the ACT. No fatal collision occurred on Apollo Road within the collected collision data set		
Road use and users <i>High AADT, e.g. over approximately 12,000 vpd</i>	No traffic volumes provided. Given the location, it is anticipated that daily traffic volumes would be less than 500 vpd. Therefore not considered high.		
Road features <i>At least two of: Lane width ≤ 3.0 m ≤ 0.5 m sealed shoulders and effective unsealed shoulders < 1 m ≤ 2 m clear zone, or 2–4 m clear zone with high density/continuous roadside hazards Generally curving and/or undulating road alignment (e.g. 2–4 higher-risk curves per km) 1–2 standard access points per 100 m (includes intersections) A rural hamlet/settlement</i>	<p>Lane widths are generally less than 3 m.</p> <p>Limited sealed shoulder (<0.5 m)</p> <p>Limited unsealed shoulder (<1.0 m)</p> <p>Nonfragile hazards (trees, rocks) within the clear zone.</p> <p>Existing safety barriers, although additional safety barriers are required, including the extensions of some safety barriers.</p> <p>Some non-standard end terminals. Multiple sections of road where drainage is inadequate (slit over the road, washing of verge)</p> <p>circa 2 high risk curves per km</p> <p>1-2 access per 100 m. Note that some access points are located on curves</p>		
	Campgrounds at end of section	No settlements	Campgrounds at end of section
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	No speed data provided. Expected that mean speed would be well below the posted speed limit due to the road geometry		
60 km/h Speed limit considerations (in addition to 80 km/h)			
Road features <i>and/or hilly road alignment (e.g. > 4 higher-risk curves per km) > 2 standard access points per 100 m (includes intersections)</i>	<p>Undulating road</p> <p>No more than 2 access point per 100 m</p>		
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	Curves and gradient inhibit speed. Does have straight sections of the road.		

A speed limit reduction to 80 km/h is supported. Note that the road is unsigned and therefore has a default speed limit of 100 km/h.

A 60 km/h speed limit at the campground should be considered for improved safety due to additional activity.

Note that there are hazards in the clear zone based on a 60 km/h and 80 km/h speed limit.

Although speed data was not provided, it is expected that the majority of the road users would comply with the reduced speed limit due to the geometry of the road.

Table 5-9 Rural Site 11 – Uriarra Road Speed Limit Considerations

Consideration	Comments										
	627	628	629	630	631	632	633	634	635	636	
80 km/h Speed limit considerations											
Severe crash rate/100 million VKT <i>Severe crash rate is high, provided minimum AADT is exceeded.</i>	The severity collision rate is 0.22 for fatal collisions in the ACT. No fatal collision occurred on Uriarra Road within the collected collision data set										
Road use and users <i>High AADT, e.g. over approximately 12,000 vpd</i>	Traffic volumes provided. Provided volumes indicate 839 vpd. Therefore not considered high.										
Road features <i>At least two of: Lane width ≤ 3.0 m</i>	Lane widths are generally greater than 3 m. Limited sealed shoulder (<0.5 m)										
<i>≤ 0.5 m sealed shoulders and effective unsealed shoulders < 1 m</i>	Unsealed shoulder circa 1.0 m	Limited unsealed shoulder (<1.0 m)				Unsealed shoulder circa 1.0 m					
<i>≤ 2 m clear zone, or 2–4 m clear zone with high density/continuous roadside hazards</i>	Nonfragile hazards (trees, rocks) within the clear zone. Existing safety barriers, although additional safety barriers are required, including the extensions of some safety barriers.										
<i>Generally curving and/or undulating road alignment (e.g. 2–4 higher-risk curves per km)</i>	No high risk curves	No high risk curves	5+ curves within 1 km.			Circa 2 curves within 1 km.			No high risk curves		
<i>1–2 standard access points per 100 m (includes intersections)</i>	1-2 access per 100 m. Note that some access points are located on curves										
<i>A rural hamlet/settlement</i>	No settlements			Camp area at the river			No settlements			Entry to the Molonglo Valley	
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	Provided speed data indicates that the travel speed is close to the posted speed limit. Sections of speed reduction compared to the posted speed limit										
60 km/h Speed limit considerations (in addition to 80 km/h)											
Road features <i>and/or hilly road alignment (e.g. > 4 higher-risk curves per km)</i>	flat road		Mountainous section of road. 5+ high risk curves per km			Undulating road					
<i>> 2 standard access points per 100 m (includes intersections)</i>	No more than 2 access point per 100 m										
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	Straight section of road, does not inhibit		Curves and gradient inhibit the speed			No inhibiting factors					

The current speed limit on Uriarra Road is considered applicable based on the above review. However, the adjustment to the transition between speed limits is considered required for the section west of the Murrumbidgee River. It is not anticipated that this adjustment would impact road user conformance to the adjusted speed limit.

Table 5-10 Rural Site 13 – Cotter Road Speed Limit Considerations

Consideration	Comment				
	167	168	169	170	171
80 km/h Speed limit considerations					
Severe crash rate/100 million VKT <i>Severe crash rate is high, provided minimum AADT is exceeded.</i>	The severity collision rate is 0.22 for fatal collisions in the ACT. Cotter Road has a rate of 0.548. This rate for Cotter Road is high compared to the ACT rate.				
Road use and users <i>High AADT, e.g. over approximately 12,000 vpd</i>	Signal loop data from Murrumbidgee River is circa 1000 vpd. Therefore not considered high.				
Road features <i>At least two of: Lane width ≤ 3.0 m ≤ 0.5 m sealed shoulders and effective unsealed shoulders < 1 m ≤ 2 m clear zone, or 2–4 m clear zone with high density/continuous roadside hazards Generally curving and/or undulating road alignment (e.g. 2–4 higher-risk curves per km) 1–2 standard access points per 100 m (includes intersections) A rural hamlet/settlement</i>	Lane widths are generally greater than 3 m. Limited sealed shoulder (<0.5 m) Limited unsealed shoulder (<1.0 m) Nonfragile hazards (trees, rocks) within the clear zone. Existing safety barriers, although additional safety barriers are required, including the extensions of some safety barriers. 2 - 4 curves within 1 km.				
	1-2 access per 100 m. Note that some access points are located on curves				
	Camp area at the river	No settlements	No settlements	No settlements	Entry to the Molonglo Valley
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	No provided speed data. Anticipated that mean speed would be well near the posted speed limit, however, it is expected to have a high 85 th percentile speed.				
60 km/h Speed limit considerations (in addition to 80 km/h)					
Road features <i>and/or hilly road alignment (e.g. > 4 higher-risk curves per km)</i>	Mountainous section of road	Undulating road			
<i>> 2 standard access points per 100 m (includes intersections)</i>	No more than 2 access point per 100 m				
Speeds <i>Mean speed is well below the existing speed limit due to geometric design of the road</i>	Curves and gradient inhibit the speed	No inhibiting factors			

The current 60 km/h and 80 km/h speed limits on Cotter Road are considered applicable based on the above review.

5.2 Audio Tactile Line Marking

The implementation of ATLM for the edge and centre lines are supported for all the rural roads away from residential areas. This treatment could be implemented as part of resealing projects or over existing pavement markings.

Although the ARRB report recommended ATLM for the road with speed limits 80 km/h or greater, sections of the rural road where the speed limit is below 80 km/h should be considered for ATLM to provide consistency for the full length of the rural road.

Consultation with Transport for NSW should be undertaken regarding the provision of a continuous treatment on the Monaro Highway in NSW.

Consultation with other stakeholders, including cyclists, should be undertaken to discuss whether there are any concerns with this treatment.

5.3 Safety Barriers

There are several locations identified where safety barriers, including the extension of existing safety barriers, should be considered. Note there are some locations where vegetation would need to be removed for the construction and to account for the deflection zone behind the safety barrier (regardless of the type of safety barrier). The removal of trees from the deflection zone of the safety barriers and disturbance due to construction activities will need to be assessed to determine whether their removal would require an ESO or an EIS.

It was identified during the site inspections that the maintenance replacement of safety barriers appeared to replace damaged safety barriers based on the former location rather than assessing the extent of the safety barrier based on the point of need. In some instances, the extension of the safety barrier by 10 m to 15 m would have covered the point of need [REDACTED]

It was also identified in some locations that gaps between barriers were provided, with new end terminals provided at some locations. Due to the cost of an end terminal [REDACTED], the length of the safety barrier to connect the two barrier systems would have resulted in a cost saving and provide a safer outcome.

It is recommended that for future safety barrier repairs, where the end terminal requires replacement, an assessment of the point of need is undertaken.

The section of the roads identified for the installation of median barriers in the ARRB report would require pavement widening to support the required offset to the barrier and barrier deflection. This would result in the removal of vegetation, with some locations requiring extensive verge cutting/ stabilisation. Median barriers are not recommended.

5.4 Provide additional clearing within the clear zone

The clearing of vegetation and other hazards from the clear zone would provide a safe alternative to installing safety barriers. Due to the benefits associated with this option, it should be highly considered where possible to remove or reduce roadside hazards.

This option will require an assessment of which trees are significant and cannot be removed. These locations will need to be assessed to determine whether the remaining hazards require safety barrier protection.

The removal of trees from the clear zone and disturbance due to construction activities will need to be assessed to determine whether the tree removal would require an ESO or an EIS. The assessment of the ESO or EIS will need to consider the safety advantages of this option (refer Section 4.4).

The clearing of hazards is the preferred option due to the elimination of the hazard.

5.5 Bicycle activated warning signs

The installation of bicycle activated warning signs is considered a suitable treatment for locations where there is a high cycling presence. The installation of these systems would provide benefit at locations where the approach sight distance is limited.

It is recommended that this treatment be installed as a trial to evaluate the effectiveness on roads in the ACT. The installation on the Brindabella – Uriarra – Cotter loop should be selected as the first locations for the trial, with future consideration for Tharwa Drive and Corin Road.

The selection of a suitable warning system would require further investigation.

5.6 Perceptual countermeasures

The installation of perceptual countermeasures, such as lane narrowing is considered a suitable treatment for locations where there is evidence of vehicles travelling at a speed above that suitable for the road geometry (e.g. high risk curves).

It is recommended that this treatment be installed as a trial to evaluate the effectiveness on roads in the ACT. The installation of these treatments should be selected for one or more of the roads identified in **Table 5-1**. If this treatment provides beneficial results it should be implemented on the remaining identified roads.

5.7 Pavement widening

Pavement widening, including the provision of a sealed and unsealed shoulder, should be provided with all road upgrades. Pavement widening of these roads should align with the requirements of Austroads Guide to Road Design Part 3 Geometric Design, Table 4.5, provided below.

Table 4.5: Single carriageway rural road widths (m)

Element	Design AADT				
	1–150	150–500	500–1000	1000–3000	> 3000
Traffic lanes ⁽¹⁾	3.7 (1 x 3.7)	6.2 (2 x 3.1)	6.2–7.0 (2 x 3.1/3.5)	7.0 (2 x 3.5)	7.0 (2 x 3.5)
Total shoulder	2.5	1.5	1.5	2.0	2.5
Minimum shoulder seal ^{(2),(3),(4),(5),(6)}	0	0.5	0.5	1.0	1.5
Total carriageway	8.7	9.2	9.2–10.0	11.0	12.0

The full width of the shoulders should be sealed on roads with high cyclist volume (e.g. Cotter Road/ Brindabella Road/ Uriarra Road cycle loop), the full width of the shoulder should be sealed.

Although the lane widths for the majority of the roads are close to compliant on the straight sections, the following have limited compliance:

- Pavement width on curves does not account for commercial vehicles.
- Width of the sealed and unsealed shoulders due to the roadside environment (drainage, embankment, etc).
- Verge/ batter provisions

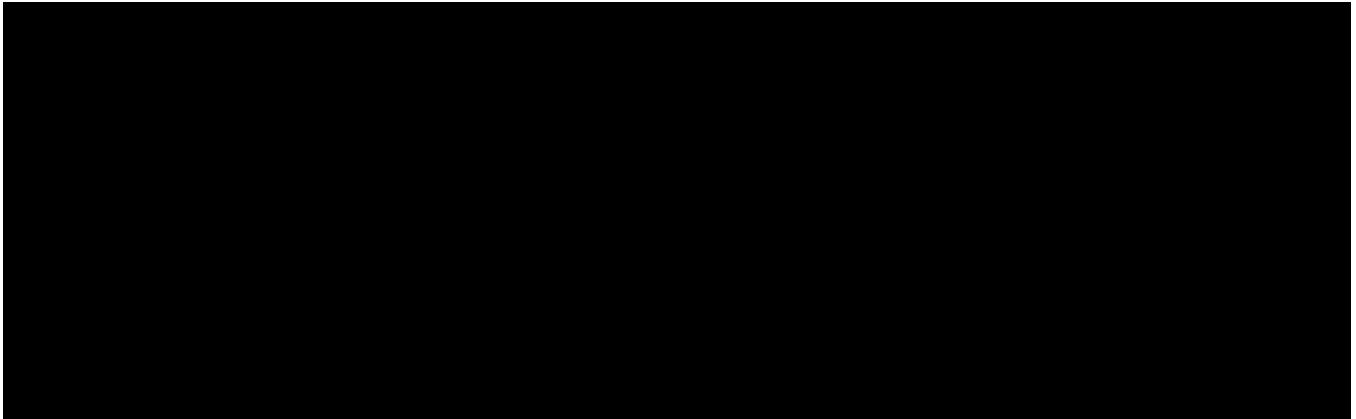
Due to the rural environment, pavement widening would likely require an ESO or an EIS. The assessment of the ESO or EIS will need to consider the road safety advantages associated with widening to comply with current guidelines.

It should be acknowledged that the cost to upgrade this section of road can greatly differ depending on how the road is widened (e.g. widen on both sides or one side) and with other factors (e.g. geotechnical, environmental, etc.) influencing the extent of work and associated costs. An indicative estimation of the cost of widening on one side of the road is [REDACTED] per meter.

Note that sections of the Monaro Highway where fatal collisions have occurred have been recently upgraded (between Royalla Drive and Williamsdale Road, intersections of Monaro Highway with Old Cooma Road and Williamsdale Road).

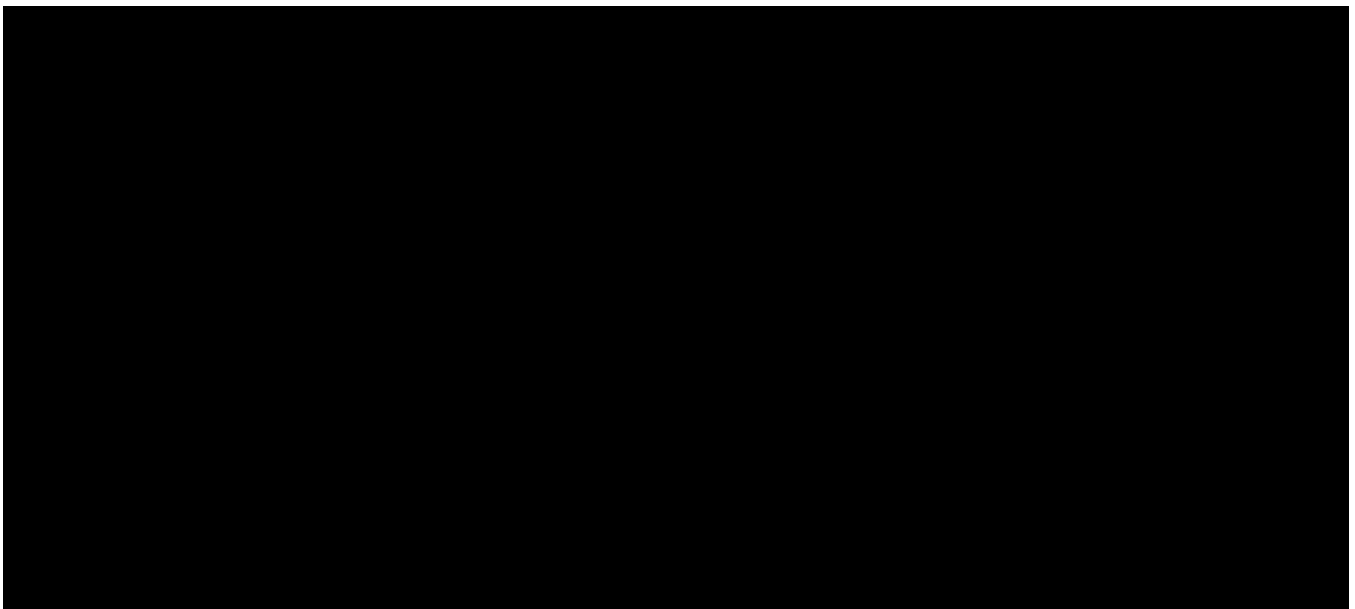
6. ESTIMATED INDICATIVE PRELIMINARY COSTING

Table 6-1 Rural Site 4 – Monaro Highway Indicative Estimated Costs



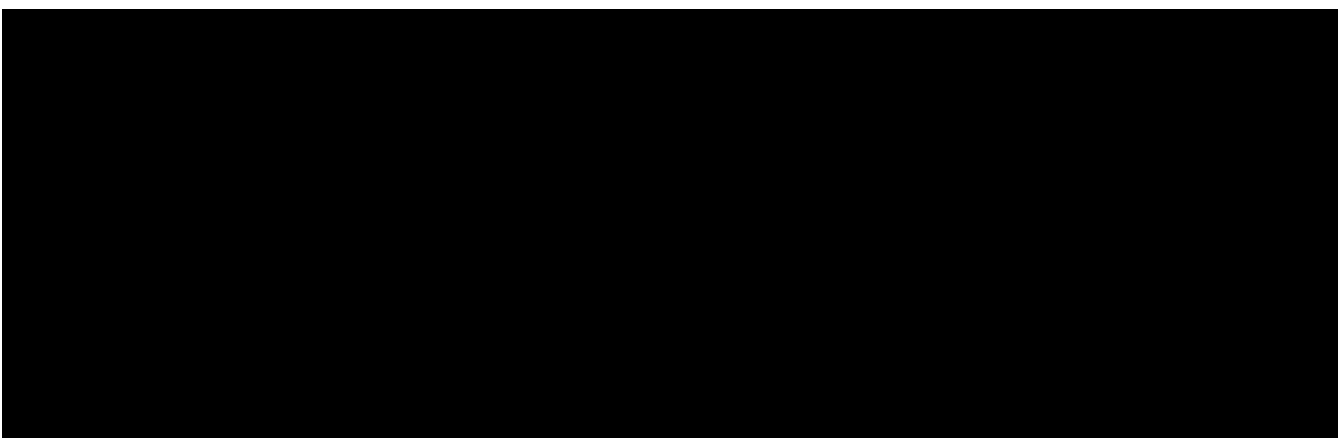
NCA Works Approval required for the safety barrier. No Development Application Submission required.

Table 6-2 Rural Site 5 – Boboyan Road (including Boboyan Road A) Indicative Estimated Costs



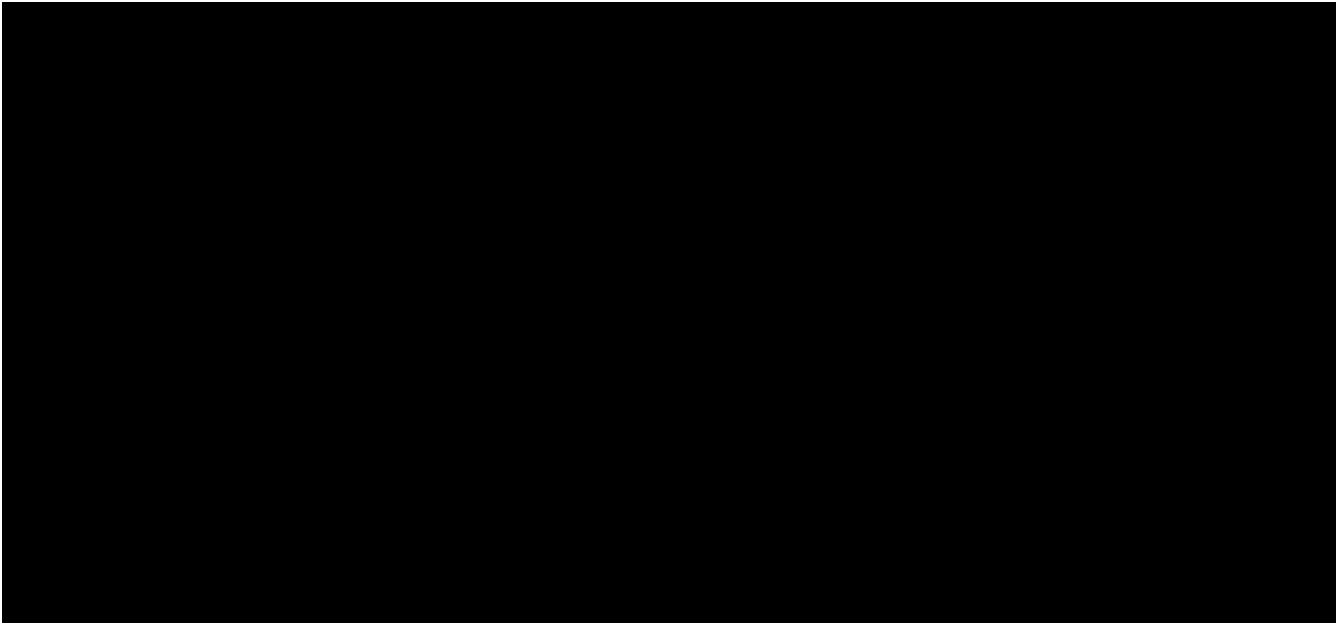
No NCA Works Approval/ Development Application Submission required.

Table 6-3 Rural Site 6 – Tharwa Drive Indicative Estimated Costs



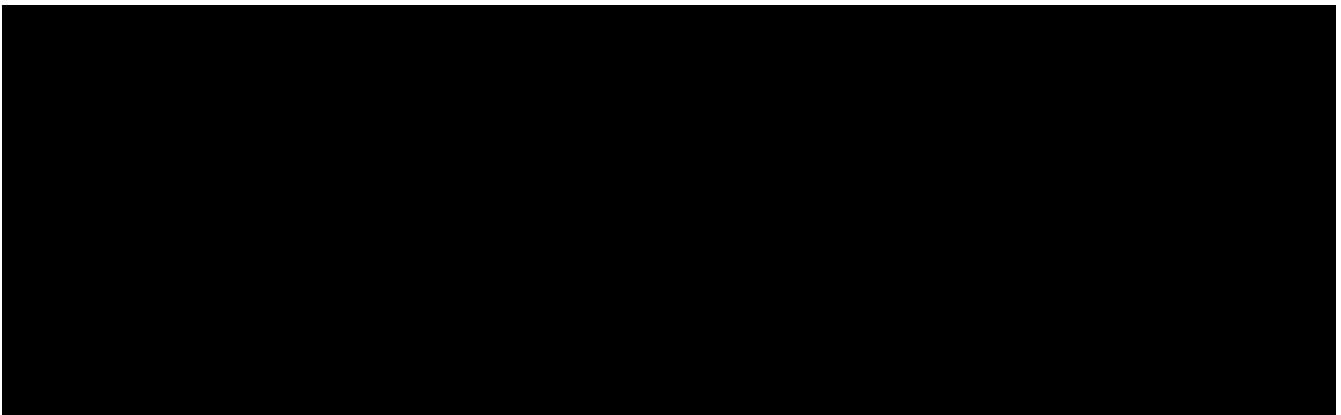
No NCA Works Approval/ Development Application Submission required.

Table 6-4 Rural Site 7 – Brindabella Road Indicative Estimated Costs



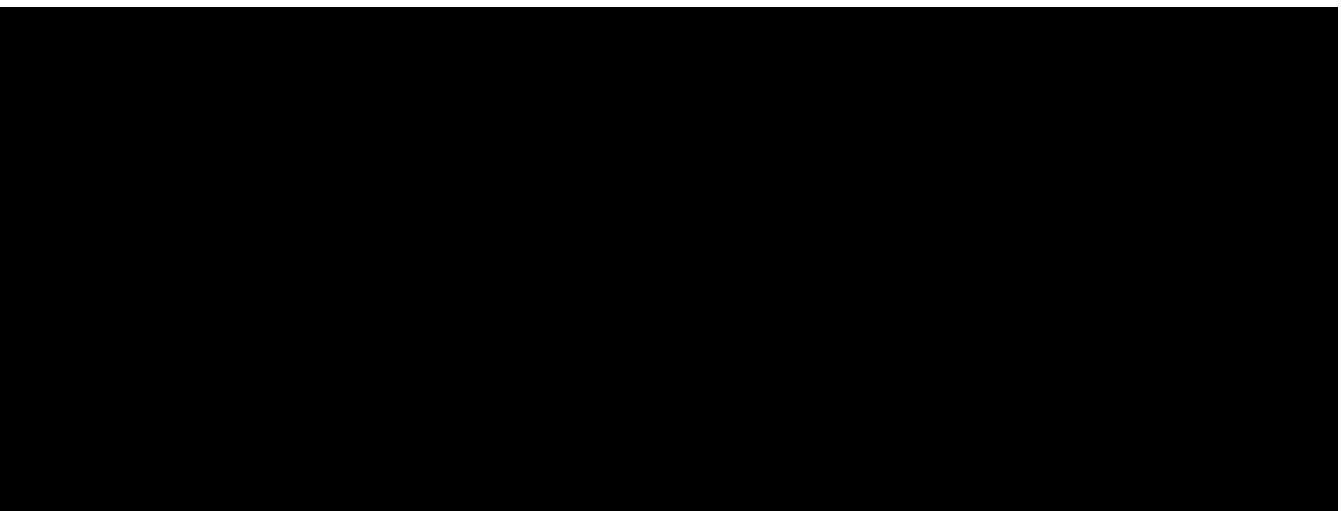
No NCA Works Approval/ Development Application Submission required.

Table 6-5 Rural Site 8 – Apollo Road Indicative Estimated Costs



No NCA Works Approval/ Development Application Submission required.

Table 6-6 Rural Site 9 – Corin Road Indicative Estimated Costs



No NCA Works Approval/ Development Application Submission required.

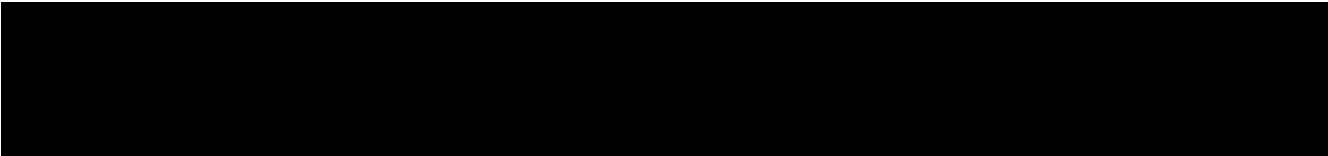
Table 6-7 Rural Site 10 – Orroral Road Indicative Estimated Costs

No NCA Works Approval/ Development Application Submission required.

Table 6-8 Rural Site 11 – Uriarra Road Indicative Estimated Costs

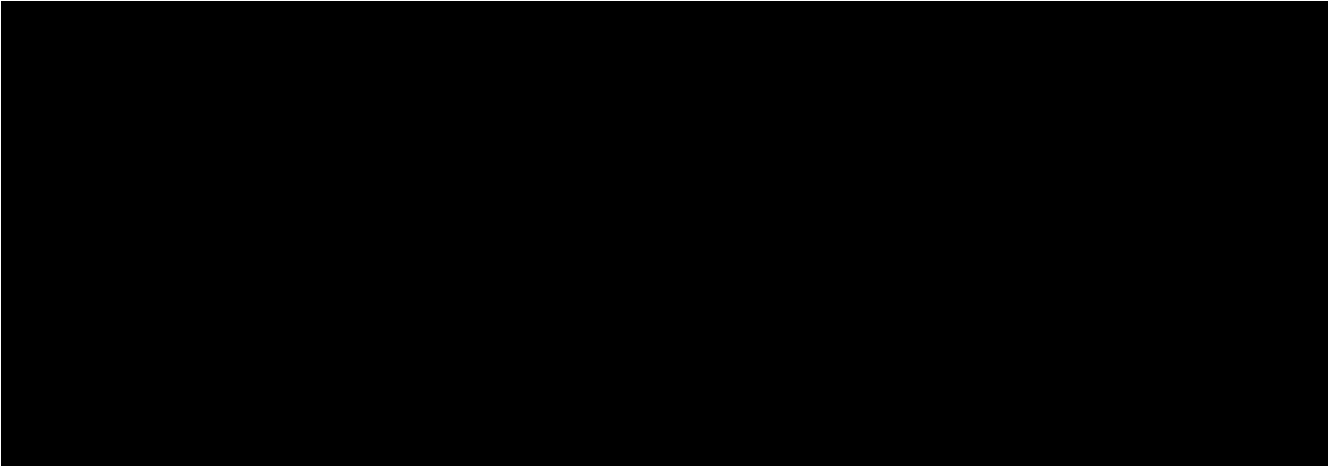
No NCA Works Approval/ Development Application Submission required.

Table 6-9 Rural Site 12 – Tharwa Drive Indicative Estimated Costs



No NCA Works Approval/ Development Application Submission required.

Table 6-10 Rural Site 13 – Cotter Road Indicative Estimated Costs



No NCA Works Approval/ Development Application Submission required.

APPENDIX 1 KINGS HIGHWAY DESIGN OPTION STUDY

APPENDIX 2 CONCEPT SKETCHES

Project: Delivering ANRAM – Reducing Risk of Fatal and Serious Injury Crashes on Arterial Roads

Addendum to: RG 20110 ANRAM_Kings Highway Design Option Study
RG 20110 ANRAM_Rural Roads Design Option Study
RG 20110 ANRAM_Urban Road Design Option Report



Consulting Engineers

Addendum Title: Collection Of Additional Traffic Data

Document No: RG 20110-9/1 **Date:** 01/09/2021

The collection of new traffic data, comprising volumes and speed data, was undertaken as part of the ANRAM – Reducing Risk of Fatal and Serious Injury Crashes on Arterial Roads project. The information was collected for roads where the data was considered out of date (either old or significant change in the area) or where data was missing and was required to support the recommendations of the feasibility option studies for the selected urban and rural arterial roads.

Traffic data was collected at the following sites:

- Urban Sites
 - Site 2 – Streeton Drive
 - Site 11 – Well Station Drive
 - Site 12 – Baldwin Drive
 - Site 13 – Woodcock Drive
 - Site 15 – Horse Park Drive
 - Site 17 – Long Gully Road
- Rural Sites
 - Site 1 – Kings Highway
 - Site 5 – Boboyan Road

The following section provides a summary of the collected traffic data and is to be read in conjunction with the associated reports with commentary regarding the proposed improvement treatment.

1. TRAFFIC AND SPEED DATA

1.1 Urban Roads

1.1.1 Urban Site2 – Streeeton Drive

Traffic data provided for Streeeton Drive by Roads ACT was collected in January 2015 and was considered old due to the traffic growth contributed by the development of the Molonglo Valley.

New traffic data was collected for Streeeton Drive for the section of the road between Hindmarsh Drive and Namatjira Drive for the week starting 18 July 2021. The traffic data is provided in **Table 1-1**.

Table 1-1 Urban Site 2 – Streeeton Drive Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Namatjira Drive (NB)	6,122	74.0	80.3
Hindmarsh (SB)	7,118	69.6	76.3
Total Volume	13,240		

The data indicates that over 6,000 vpd used Streeeton Drive. These traffic volumes are within the threshold for an urban arterial road.

The speed reduction from 80 km/h to 60 km/h would influence road user behaviour. It is noted that there are multiple instances where road users significantly exceeded the existing 80 km/h speed limit, with a maximum speed of 122.8 km/h in the northbound direction (recorded between 12:00 pm and 1:00 am) and 122.7 km/h in the southbound direction (recorded between 10:00 pm and 11:00 pm) was recorded. Regular enforcement of the speed limit is recommended.

1.1.2 Urban Site 11 – Well Station Drive

Traffic data provided for Well Station Drive by the Roads ACT was collected in July 2016 and was considered old due to the significant developmental changes in the area.

New traffic data was collected for Well Station Drive for the section of the road between Albatross Crescent (North) and Nullabor Avenue for the week starting 1 May 2021. The traffic data is provided in **Table 1-2**.

Table 1-2 Urban Site 11 – Well Station Drive Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Nullabor Avenue (NB)	3,729	68.1	75.2
Albatross Crescent (North) (SB)	3,877	72.2	78.5
Total Volume	7,606		

The data indicates that over 6,000 vpd used Well Station Drive. These traffic volumes are within the threshold for an urban arterial road.

The speed data indicates that the average road user complies with the 80 km/h speed limit.

The speed reduction from 80 km/h to 70 km/h would have minimal impact on the average road user. It is noted that there are multiple instances where road users significantly exceeded the existing 80 km/h, with a maximum speed of 118.1 km/h in the northbound direction (recorded between 5:00 pm and 6:00 pm) and 124.9 km/h in the southbound direction (recorded between 10:00 am and 11:00 am) was recorded. Regular enforcement of the speed limit is recommended.

1.1.3 Urban Site 12 – Baldwin Drive

Traffic data provided for Baldwin Drive by Roads ACT was collected in September 2013 and was considered old due to the significant developmental changes in Gungahlin.

New traffic data was collected for Baldwin Drive for the section of the road between William Slim Drive and Gum Street for the week starting 19 June 2021. The traffic data is provided in **Table 1-3**.

Table 1-3 Urban Site 12 – Baldwin Drive Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Gum Street (EB)	4,111	70.4	77.8
William Slim Drive (WB)	3,935	71.3	77.8
Total Volume	8,046		

The data indicates that over 6,000 vpd used Baldwin Drive. These traffic volumes are within the threshold for an urban arterial road.

The speed data indicates that the average road user complies with the 80 km/h speed limit.

The reduction of the traffic lanes from two to one in each direction is supported based on the peak hour volume (circa less than 700 vehicles in one direction). This is within the capacity of a midblock traffic lane.

The speed reduction from 80 km/h to 60 km/h would influence road user behaviour. The reduction of the traffic lanes from two to one in each direction would assist in reducing traffic speeds, however, enforcement is recommended.

It is noted that there are multiple instances where road users significantly exceeded the existing 80 km/h, with a maximum speed of 122.9 km/h in the eastbound direction (recorded between 6:00 am and 7:00 am) and 119.2 km/h in the westbound direction (recorded between 9:00 pm and 10:00 pm) was recorded.

1.1.4 Urban Site 13 – Woodcock Drive

Traffic data provided for Woodcock Drive by Roads ACT was collected in January 2015 and was considered old and traffic patterns are likely to have changed.

New traffic data was collected for Woodcock Drive for the section of the road between Clare Dennis Avenue and Drakeford Drive for the week starting 2 May 2021. The traffic data is provided in **Table 1-4**.

Table 1-4 Urban Site 13 – Woodcock Drive Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Drakeford Drive (EB)	5,959	72.4	79.2
Clare Dennis Avenue (WB)	5,606	71.9	78.8
Total Volume	11,565		

The data indicates that over 6,000 vpd used Woodcock Drive. These traffic volumes are within the threshold for an urban arterial road.

The speed data indicates that the average road user complies with the 80 km/h speed limit.

The speed reduction from 80 km/h to 70 km/h would have minimal impact on the average road user. It is noted that there are multiple instances where road users significantly exceeded the existing 80 km/h, with a maximum speed of 142.2 km/h in the eastbound direction (recorded between 2:00 am and 3:00 am) and 145.0 km/h in the westbound direction (recorded between 10:00 pm and 11:00 pm) was recorded. Enforcement of the speed limit is recommended.

1.1.5 Urban Site 15 – Horse Park Drive

Traffic data provided for Horse Park Drive by Roads ACT was collected in 2015 and was considered old due to the significant developmental changes in Gungahlin.

New traffic data was collected for Horse Park Drive for the section of the road between Gungahlin Drive and Overall Avenue and between Yeend Avenue and Burrumarra Avenue for the week starting 3 May 2021. The traffic data is provided in **Table 1-5**.

Table 1-5 Urban Site 15 – Horse Park Drive Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Overall Avenue (NB)	6,495	63.0	69.5
Gungahlin Drive (SB)	6,504	66.2	72.4
Total Volume	12,999		
Burrumarra Avenue (NB)	5,878	73.7	80.3
Yeend Avenue (SB)	6,149	77.1	83.5
Total Volume	12,027		

The data indicates that over 6,000 vpd used Horse Park Drive. These traffic volumes are within the threshold for an urban arterial road.

The speed data indicates that the average road user complies with the 80 km/h speed limit.

The speed reduction from 80 km/h to 70 km/h would have minimal impact on the average road user between Gungahlin Drive and Overall Avenue, however, indicates that there would be some disbenefit to the average road user between Yeend Avenue and Burrumarra Avenue. It is noted that there are multiple instances where road users significantly exceeded the existing 80 km/h speed limit. Between Gungahlin Drive and Overall Avenue a maximum speed of 110.1 km/h in the northbound direction (recorded between 2:00 pm and 3:00 pm) and 112.5 km/h in the southbound direction (recorded between 8:00 pm and 9:00 pm) was recorded. Between Burrumarra Avenue and Yeend Avenue a maximum speed of 149.9 km/h in the northbound direction (recorded between 1:00 am and 2:00 am) and 158.6 km/h in the southbound direction (recorded between 1:00 am and 2:00 am) was recorded. Regular enforcement of the speed limit is recommended.

1.1.6 Urban Site 17 – Long Gully Road

Traffic data provided for Long Gully Road by Roads ACT was collected in September 2012 and was considered old due and traffic patterns are likely to have changed.

New traffic data was collected for Long Gully Road for the section of the road between Erindale Drive and Mugga Lane for the week starting 18 June 2021. The traffic data is provided in **Table 1-6**.

Table 1-6 Urban Site 13 – Woodcock Drive Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Mugga Lane (EB)	7,035	82.3	88.9
Erindale Drive (WB)	6,354	81.1	89.6
Total Volume	13,389		

The data indicates that over 6,000 vpd used Long Gully Road. These traffic volumes are within the threshold for an urban arterial road.

The speed data indicates that the average road user does not comply with the 80 km/h speed limit. It is noted that there are multiple instances where road users significantly exceeded the 100 km/h speed limit, with a maximum speed of 131.9 km/h in the eastbound direction (recorded between 12:00 am and 1:00 am) and 158.7 km/h in the westbound direction (recorded between 3:00 pm and 4:00 pm) was recorded. Regular enforcement of this road is highly recommended.

1.2 Rural Sites

1.2.1 Rural Site 1 – Kings Highway

Traffic data was collected for Kings Highway between the HQJOC roundabout and the eastern NSW border in the 100 km/h speed zone for a week starting 22 March 2021. The collected traffic data was provided in the Kings Highway Design Option Study report.

1.2.2 Rural Site 5 – Boboyan Road

No traffic data was available for Boboyan Road at the time of the Rural Roads Design Option Study.

Traffic data was collected for Boboyan Road near the Glendale Picnic Area and near the Rendezvous Creek Car Park for the week starting 2 May 2021. The traffic data is provided in **Table 1-7**.

Table 1-7 Rural Site 5 – Boboyan Road Traffic Volumes and Speed Data

Towards	Weekday Average (vpd)	Weekday Average Speed (km/h)	Weekday 85 %ile Speed (km/h)
Near Glendale Picnic Area			
To Tharwa (NB)	52	78.0	92.2
To NSW (SB)	58	80.5	93.6
Total Volume	110		
Near Rendezvous Creek Car Park			
To Tharwa (NB)	50	77.1	91.8
To NSW (SB)	58	86.1	96.5
Total Volume	108		

The data indicates that under 6,000 vpd used Boboyan Road.

The speed data indicates that the average road user complies with the default 100 km/h rural road speed limit.

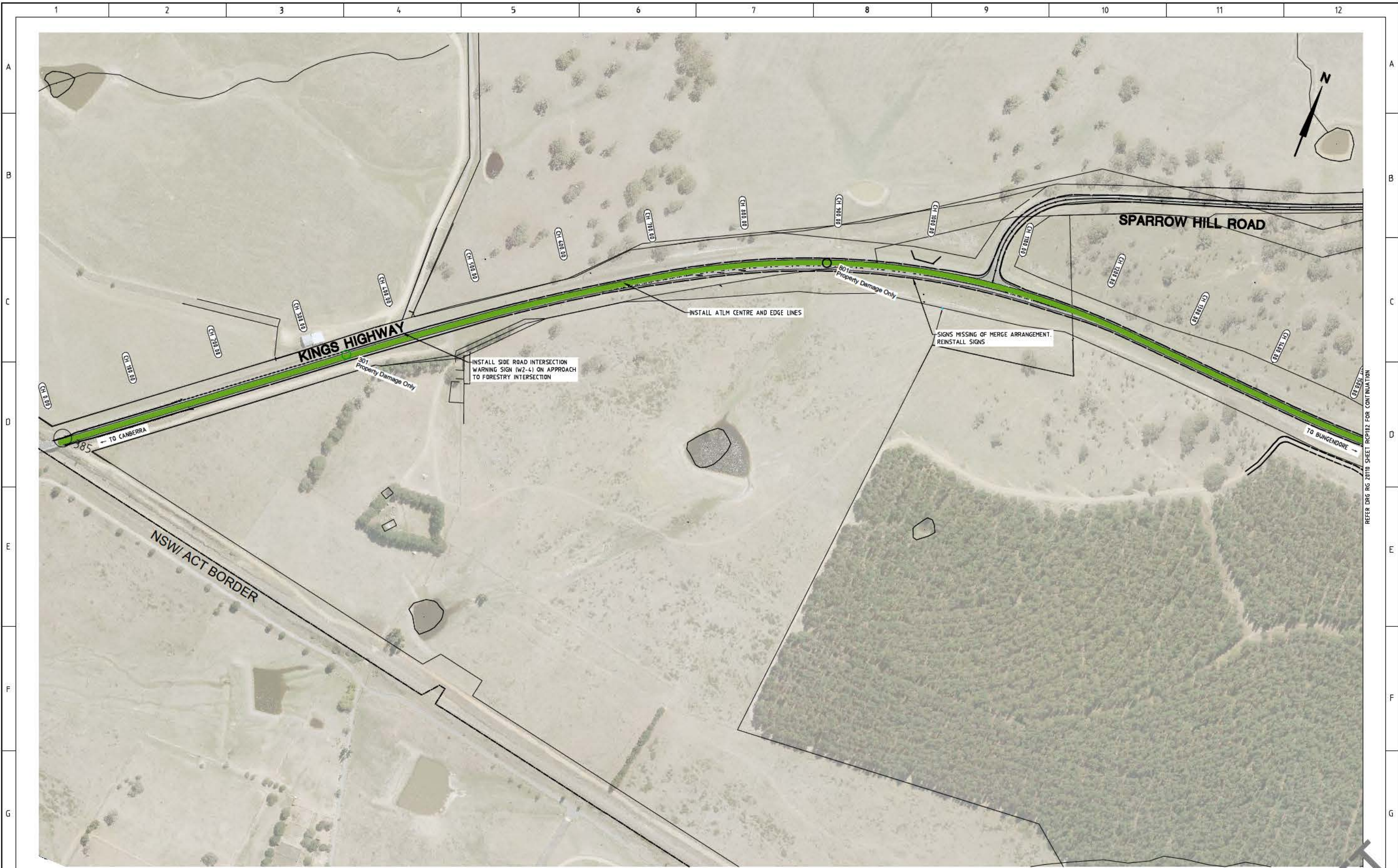
The speed reduction from 100 km/h to 80 km/h would have minimal impact on the average road user.

It is noted that there are multiple instances where road users significantly exceeded the existing default rural 100 km/h speed limit. At the Glendale Picnic Area a maximum speed of 134.3 km/h in the northbound direction (recorded between 2:00 pm and 3:00 pm) and 149.0 km/h in the southbound direction (recorded between 12:00 pm and 1:00 pm) was recorded. At the Rendezvous Creek Car Park a maximum speed of 150.0 km/h in the northbound direction (recorded between 1:00 pm and 2:00 pm) and 133.0 km/h in the southbound direction (recorded between 4:00 pm and 5:00 pm) was recorded. Regular enforcement of the speed limit is recommended.

Please contact the undersigned if you have any questions regarding the observed conditions and recommendations.

Regards



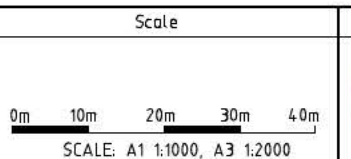


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- CLEAR VEGETATION

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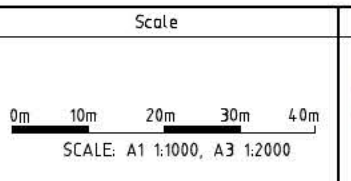
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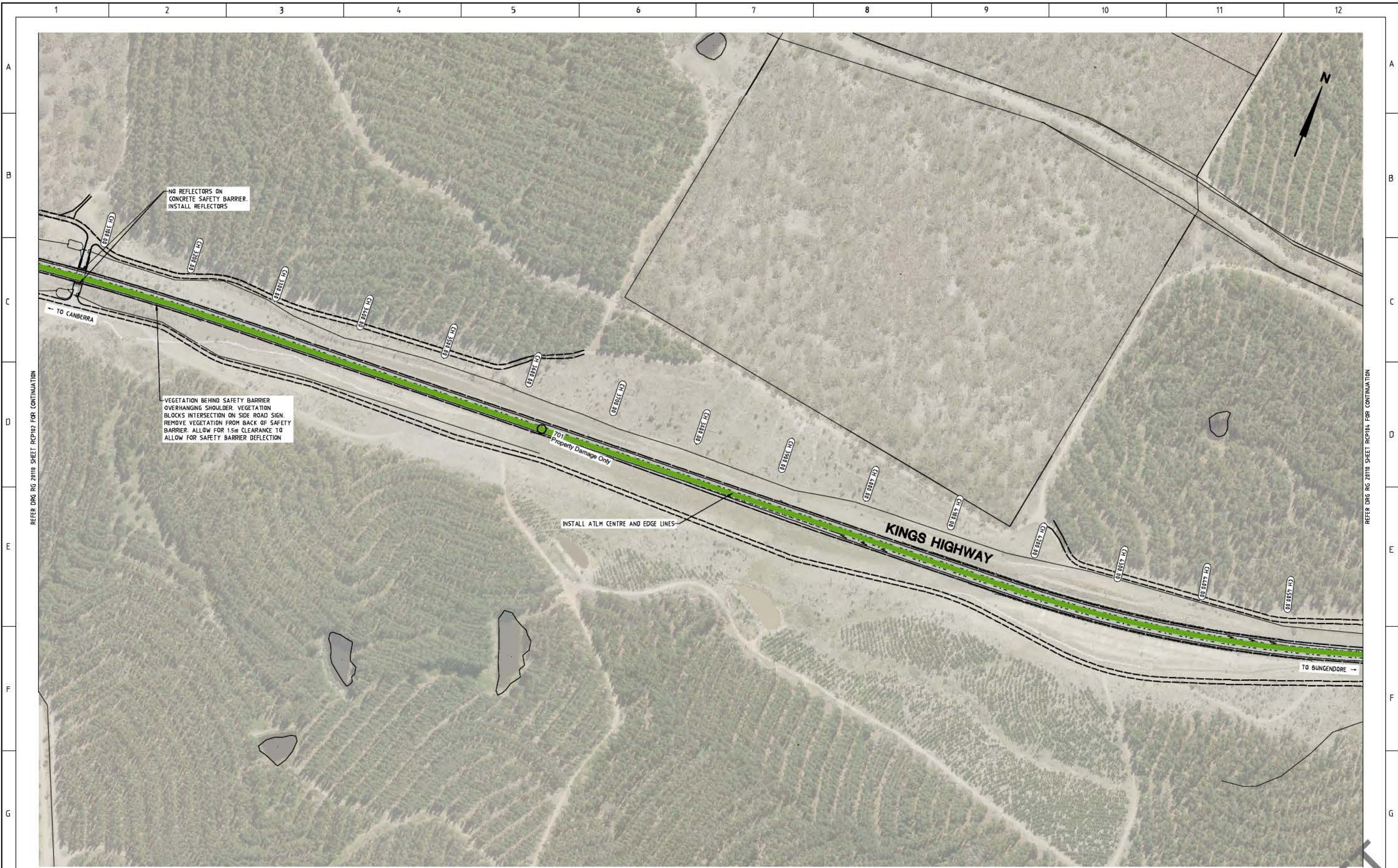
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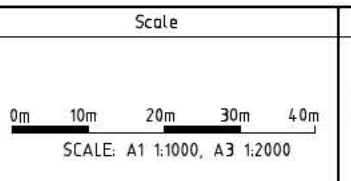
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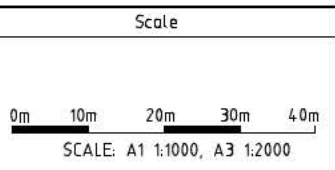
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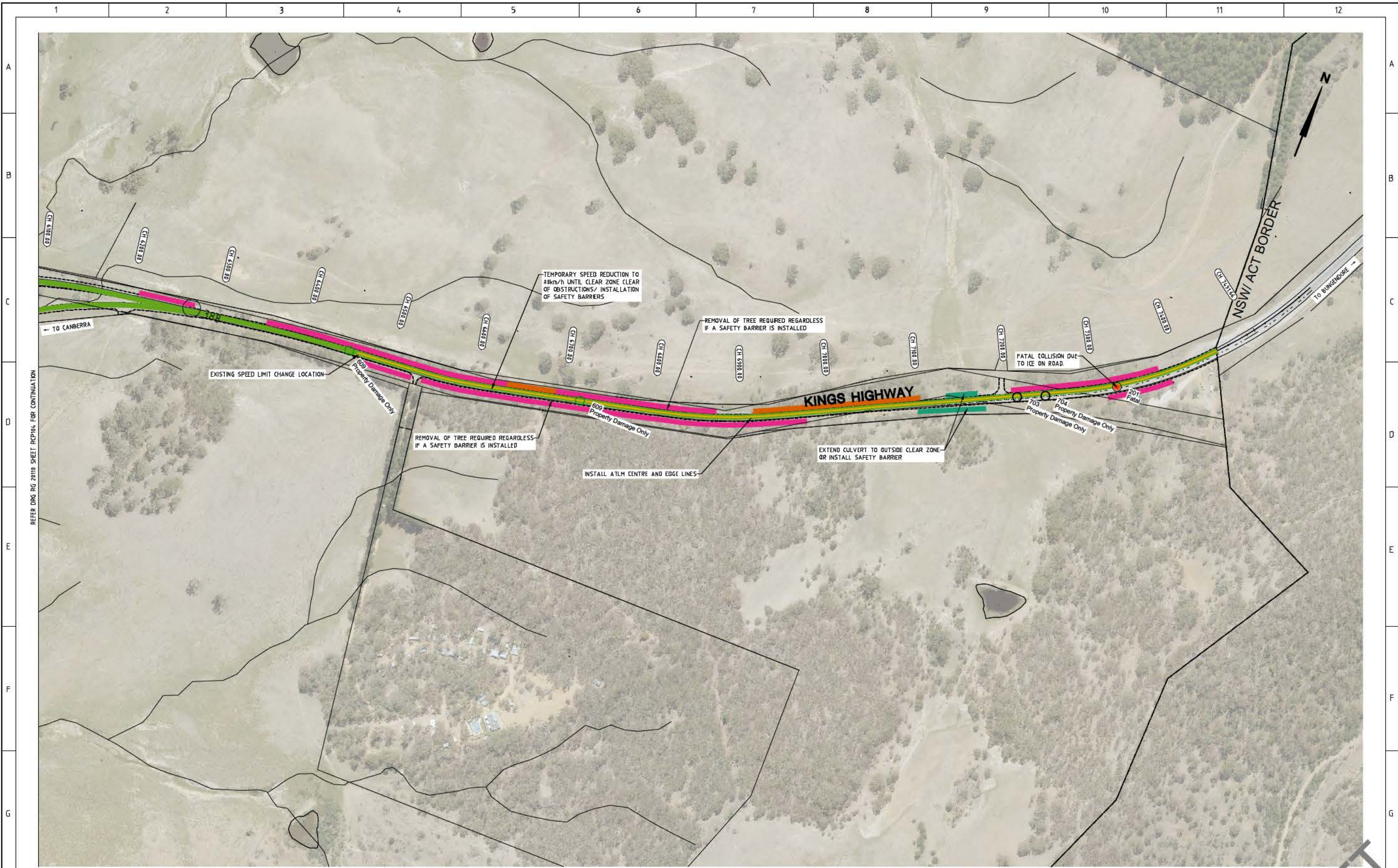
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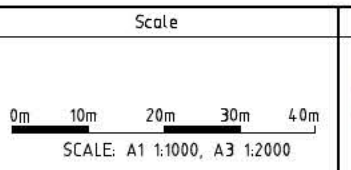
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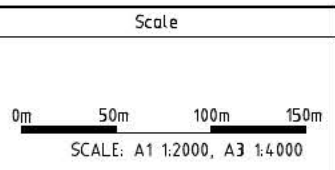
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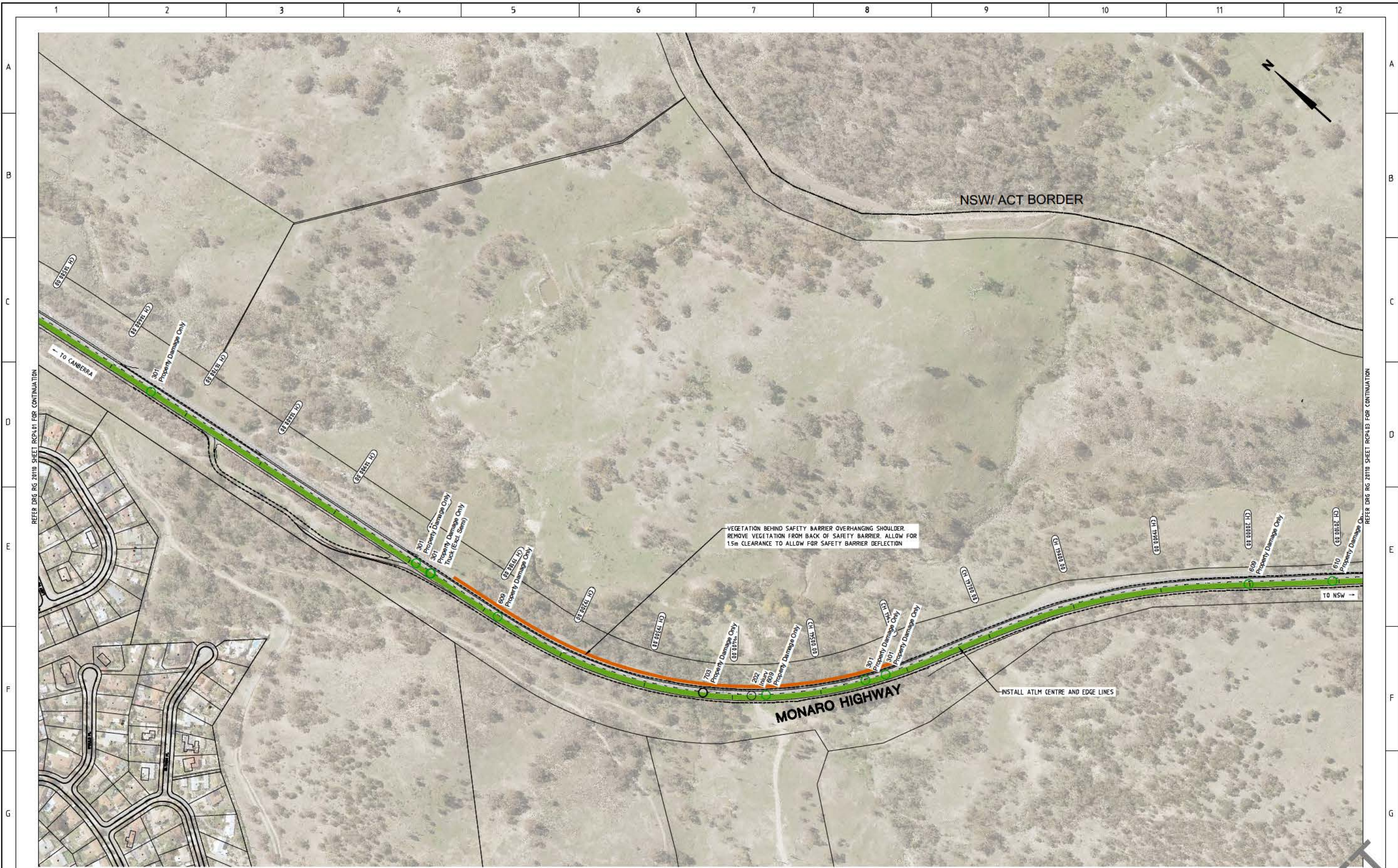
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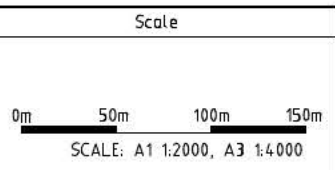
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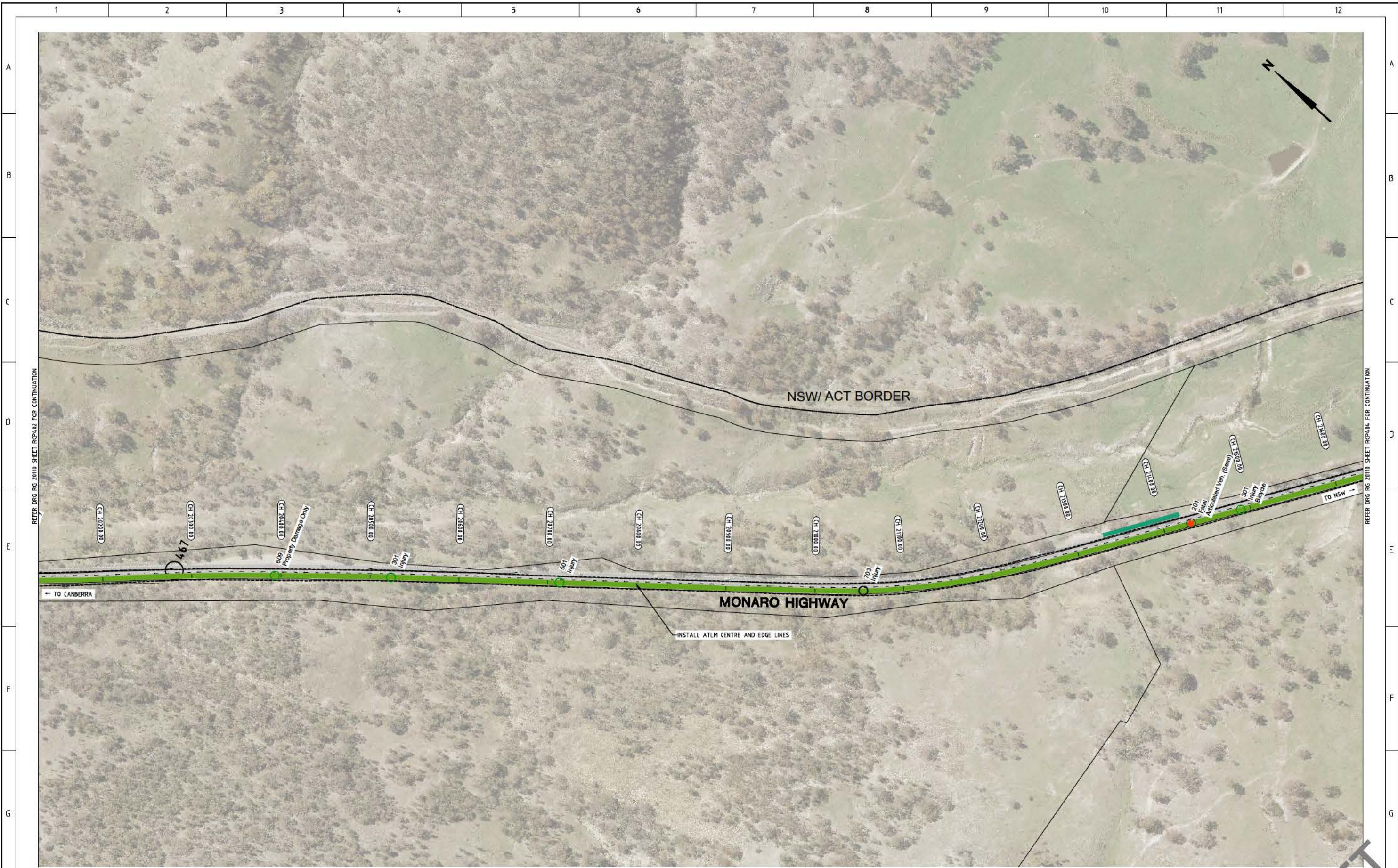
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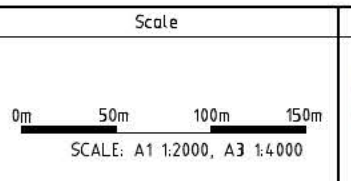
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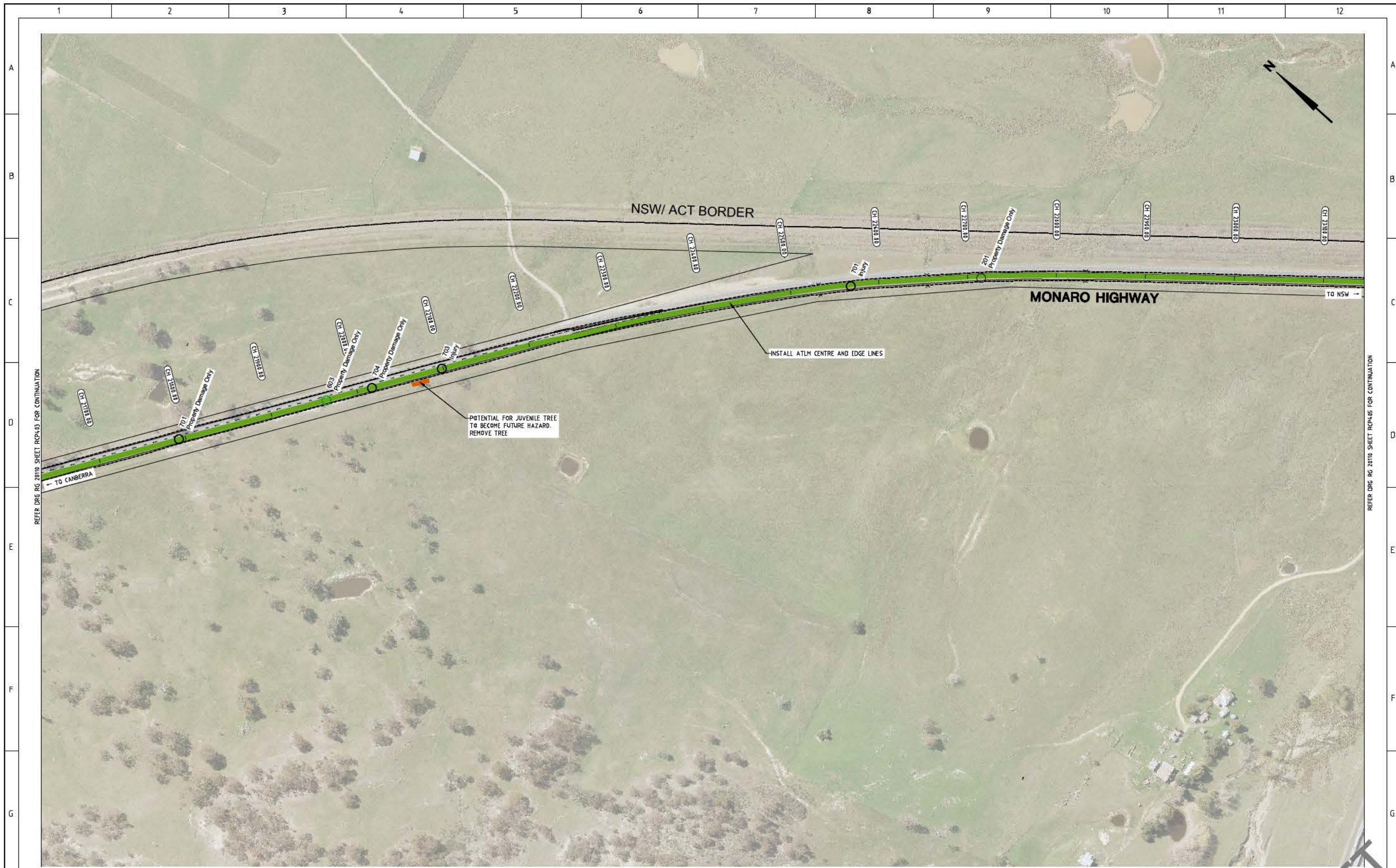
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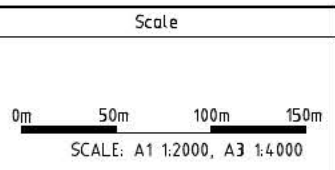
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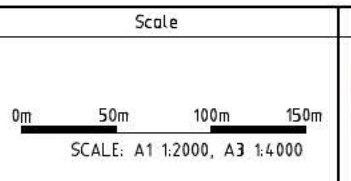
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Drawn by:

Checked by:

Approved by:

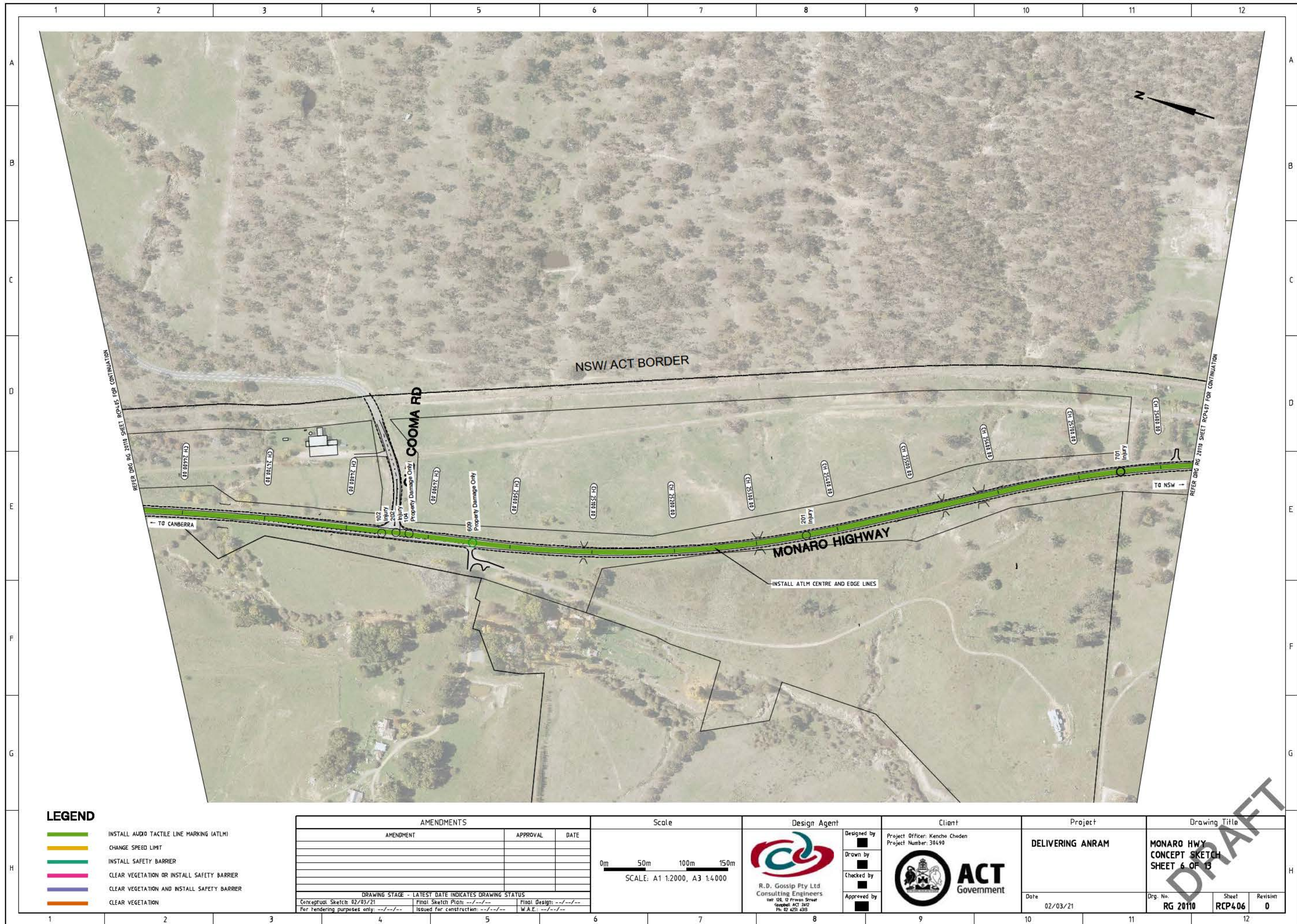
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	MONARO HWY CONCEPT SKETCH SHEET 5 OF 13
Date: 02/03/21	Org. No: RG 20110

Sheet: RCP405	Revision: 0
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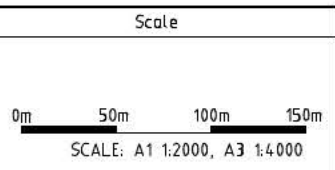


LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



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R.D. Gossip Pty Ltd
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Ph: 02 423 435

Designed by:

Drawn by:

Checked by:

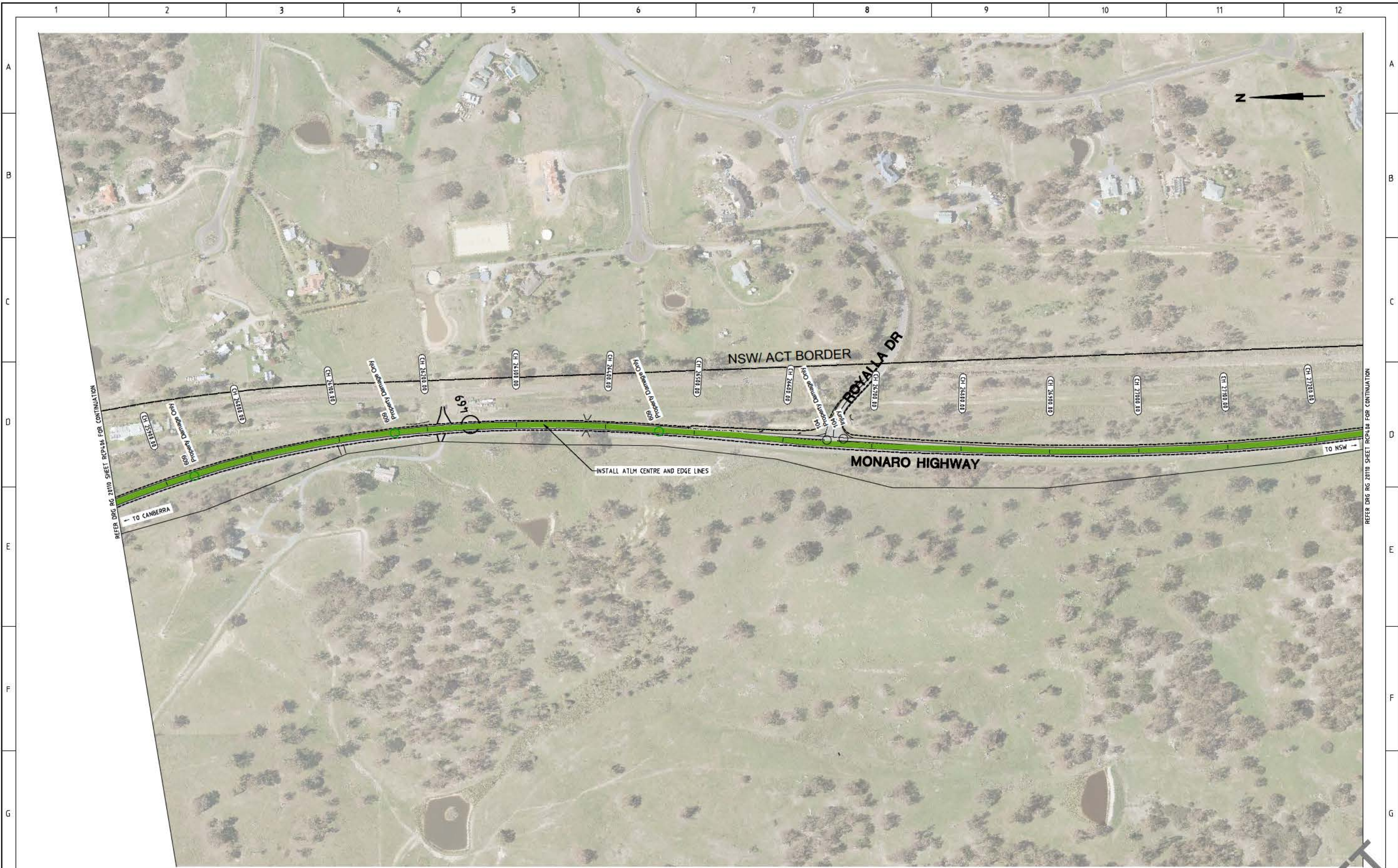
Approved by:

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	MONARO HWY CONCEPT SKETCH SHEET 6 OF 13
Date: 02/03/21	Drg. No. RG 20110
	Sheet RCP406
	Revision 0



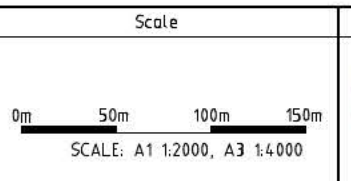
REFER DDC RG 2010 SHEET RCP406 FOR CONTINUATION

REFER DDC RG 2010 SHEET RCP408 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

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Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	MONARO HWY CONCEPT SKETCH SHEET 7 OF 13
Date: 02/03/21	Dwg. No: RG 20110 Sheet: RCP407 Revision: 0

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--

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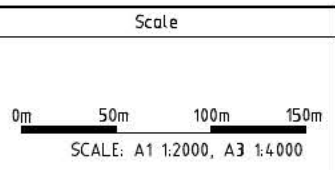
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REFER DRG RG 2010 SHEET RCP409 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

R.D. Gossip Pty Ltd
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Client

Project Officer: Kencho Choden
Project Number: 30490

Project	Drawing Title
DELIVERING ANRAM	MONARO HWY CONCEPT SKETCH SHEET 8 OF 13
Date 02/03/21	Drg. No. RG 2010
Sheet RCP408	Revision 0

DRAFT



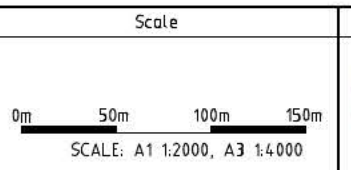
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REFER DRG RG 20110 SHEET RCP410 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

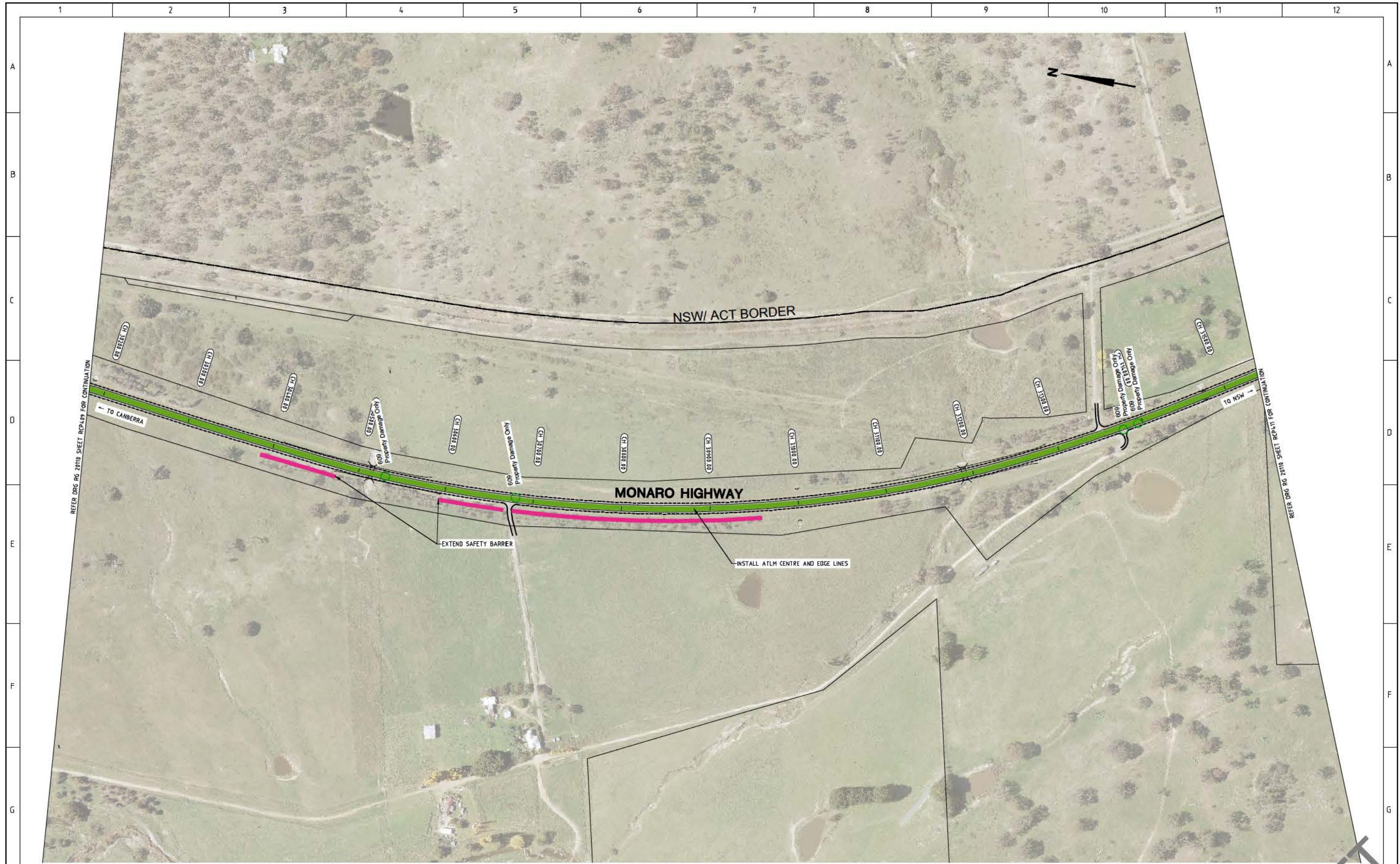
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 106, 12 Frowen Street
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Ph: 02 423 4335

Client

Project Officer: Kencho Choden
Project Number: 30490

Project	Drawing Title
DELIVERING ANRAM	MONARO HWY CONCEPT SKETCH SHEET 9 OF 13
Date 02/03/21	Drg. No. RG 20110
Sheet RCP409	Revision 0

DRAFT

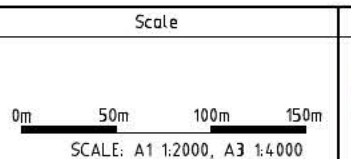


LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



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Designed by	█
Drawn by	█
Checked by	█
Approved by	█

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project

DELIVERING ANRAM

Date: 02/03/21

Drawing Title

**MONARO HWY
CONCEPT SKETCH
SHEET 10 OF 13**

Org. No.	Sheet	Revision
RG 20110	RCP410	0



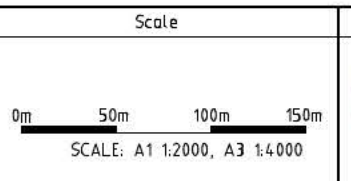
REFER DRG RG 2010 SHEET RCP410 FOR CONTINUATION

REFER DRG RG 2010 SHEET RCP412 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

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Client

Project Officer: Kencho Choden
Project Number: 30490

Project	Drawing Title
DELIVERING ANRAM	MONARO HWY CONCEPT SKETCH SHEET 11 OF 13
Date: 02/03/21	Drg. No: RG 20110 Sheet: RCP411 Revision: 0

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
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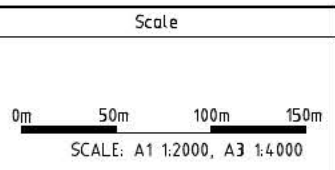
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

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Unit 106, 12 Frewin Street
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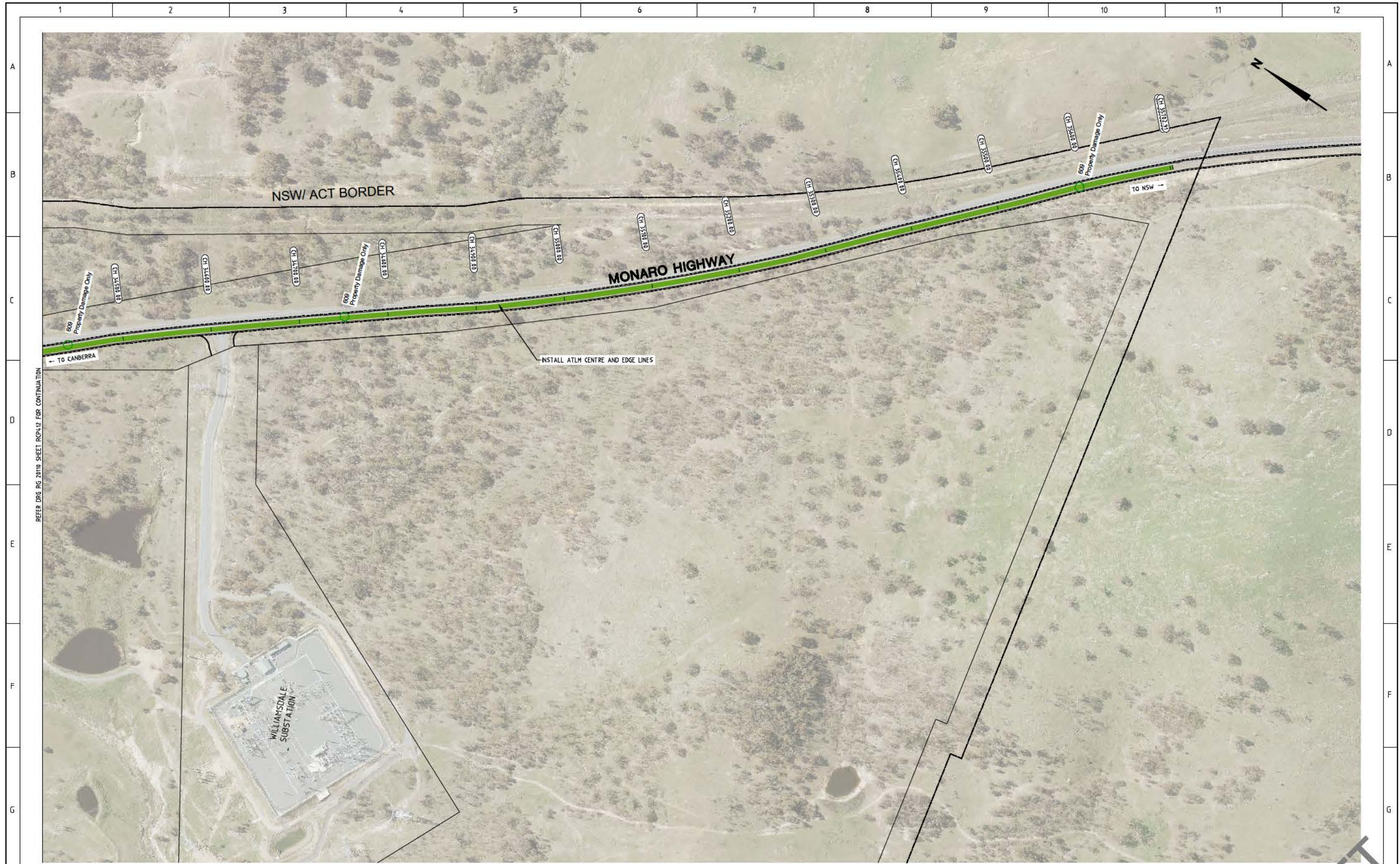
Designed by:
 Drawn by:
 Checked by:
 Approved by:

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title
DELIVERING ANRAM	MONARO HWY CONCEPT SKETCH SHEET 12 OF 13
Date: 02/03/21	Drg. No.: RG 20110
	Sheet: RCP412
	Revision: 0

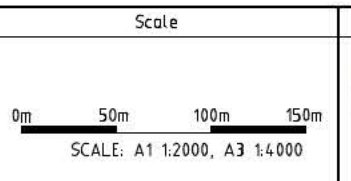


REFER DRG RG 20110 SHEET RCP412 FOR CONTINUATION

LEGEND

	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



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Designed by:

Drawn by:

Checked by:

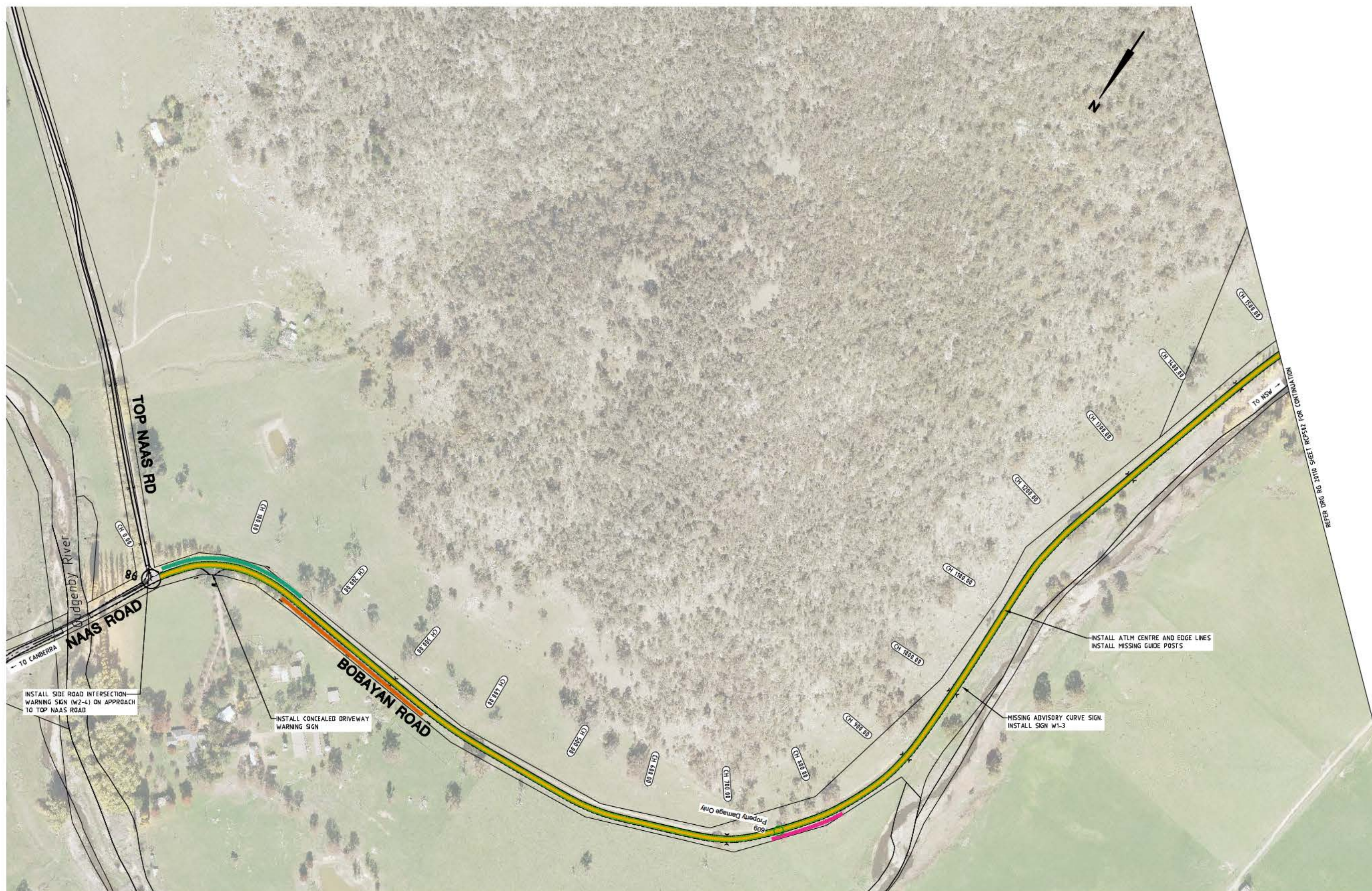
Approved by:

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title						
DELIVERING ANRAM	MONARO HWY CONCEPT SKETCH SHEET 13 OF 13						
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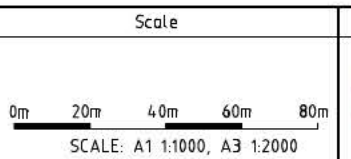


LEGEND

	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: ---/---/---	Final Design: ---/---/---
For tendering purposes only: ---/---/---	Issued for construction: ---/---/---	W.A.E.: ---/---/---



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Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title
DELIVERING ANRAM	BOBIYAN ROAD CONCEPT SKETCH SHEET 1 OF 13
Date: 02/03/21	Org. No: RG 20110
	Sheet: RCP501
	Revision: 0

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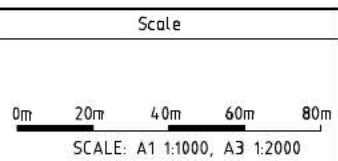


LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

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Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project

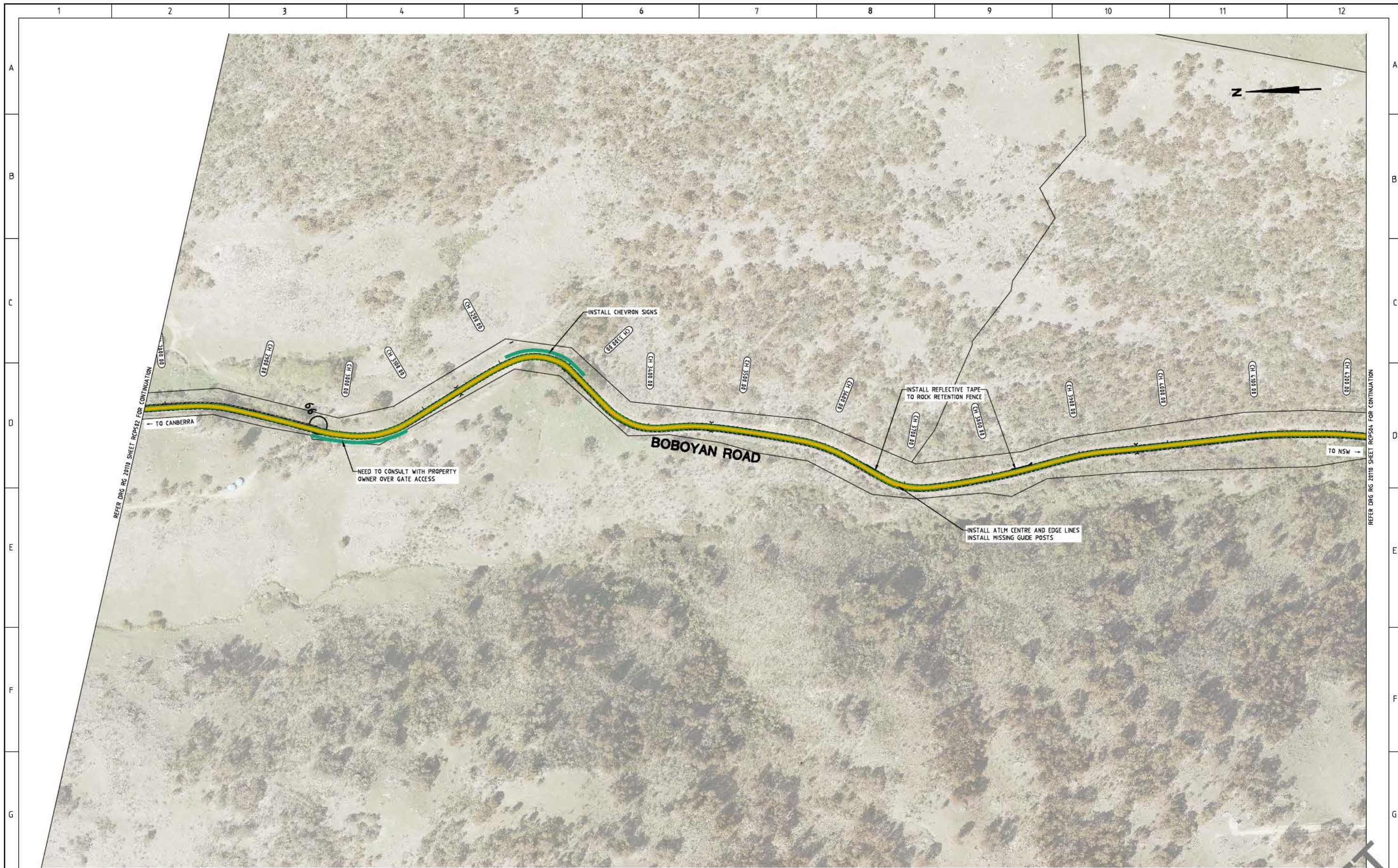
DELIVERING ANRAM

Date: 02/03/21

Drawing Title

**BOBIYAN ROAD
CONCEPT SKETCH
SHEET 2 OF 13**

Drg. No. RG 20110	Sheet RCP502	Revision 0	
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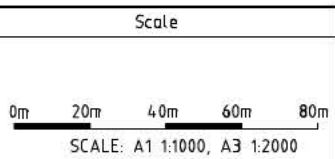
REFER DRG RG 20110 SHEET RCP502 FOR CONTINUATION

REFER DRG RG 20110 SHEET RCP504 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

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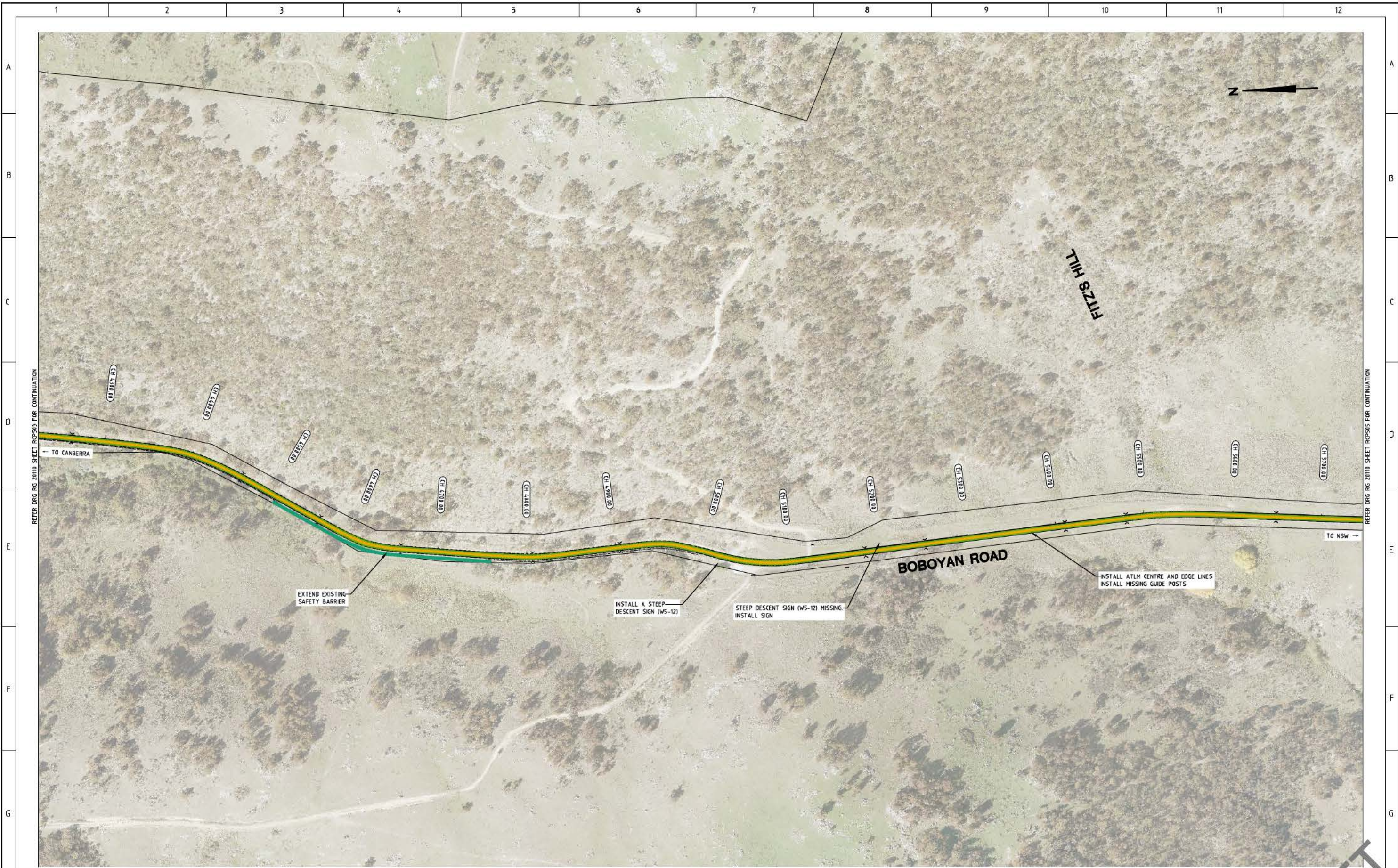
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title			
DELIVERING ANRAM	BOBIYAN ROAD CONCEPT SKETCH SHEET 3 OF 13			
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Drg. No. RG 20110	Sheet RCP503	Revision 0		

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REFER DRG RG 20110 SHEET RCPS04S FOR CONTINUATION

REFER DRG RG 20110 SHEET RCPS04S FOR CONTINUATION

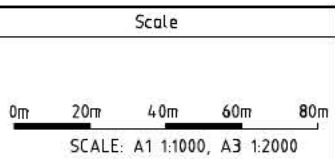
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- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

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Ph: 02 423 4335

Client

Project Officer: Kencho Choden
Project Number: 30490

Project	Drawing Title
DELIVERING ANRAM	BOBIYAN ROAD CONCEPT SKETCH SHEET 4 OF 13
Date 02/03/21	Drg. No. RG 20110 Sheet RCPS04 Revision 0



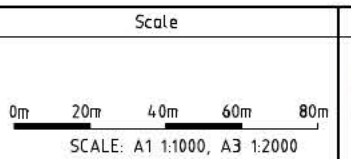
REFER DRG RG 20110 SHEET RCP504 FOR CONTINUATION

REFER DRG RG 20110 SHEET RCP506 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

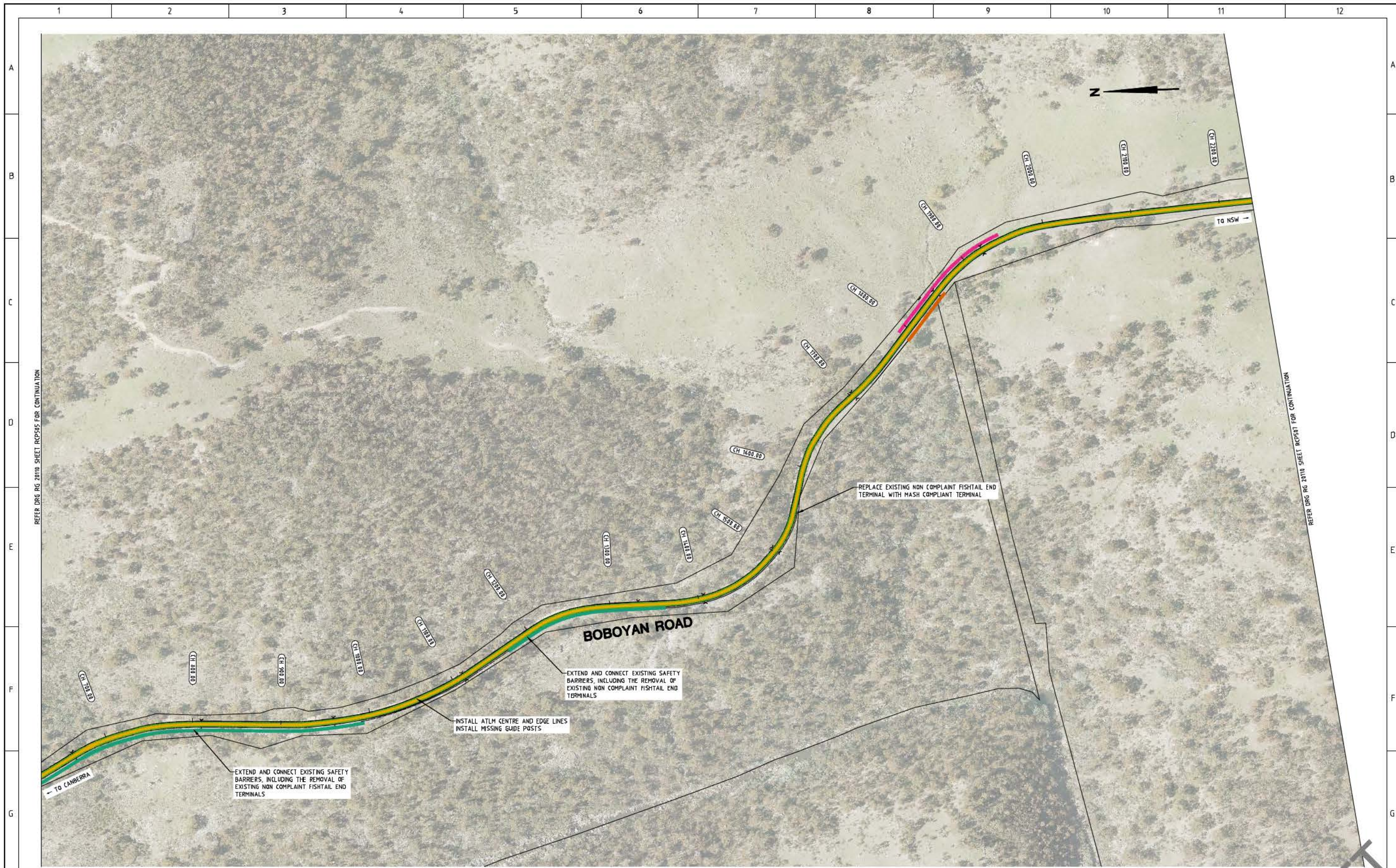
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 106, 12 Fowen Street
Campbell ACT 2602
Ph: 02 4231 4335

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	BOBIYAN ROAD CONCEPT SKETCH SHEET 5 OF 13
Date: 02/03/21	Drg. No. RG 20110 Sheet RCP505 Revision 0



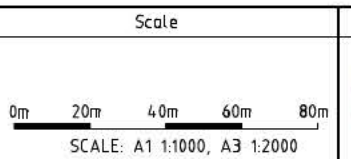
REFER DRG RG 20110 SHEET RCP505 FOR CONTINUATION

REFER DRG RG 20110 SHEET RCP507 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE




Design Agent



R.D. Gossip Pty Ltd
Consulting Engineers
Unit 106, 12 Frewin Street
Canberra ACT 2602
Ph: 02 423 4335

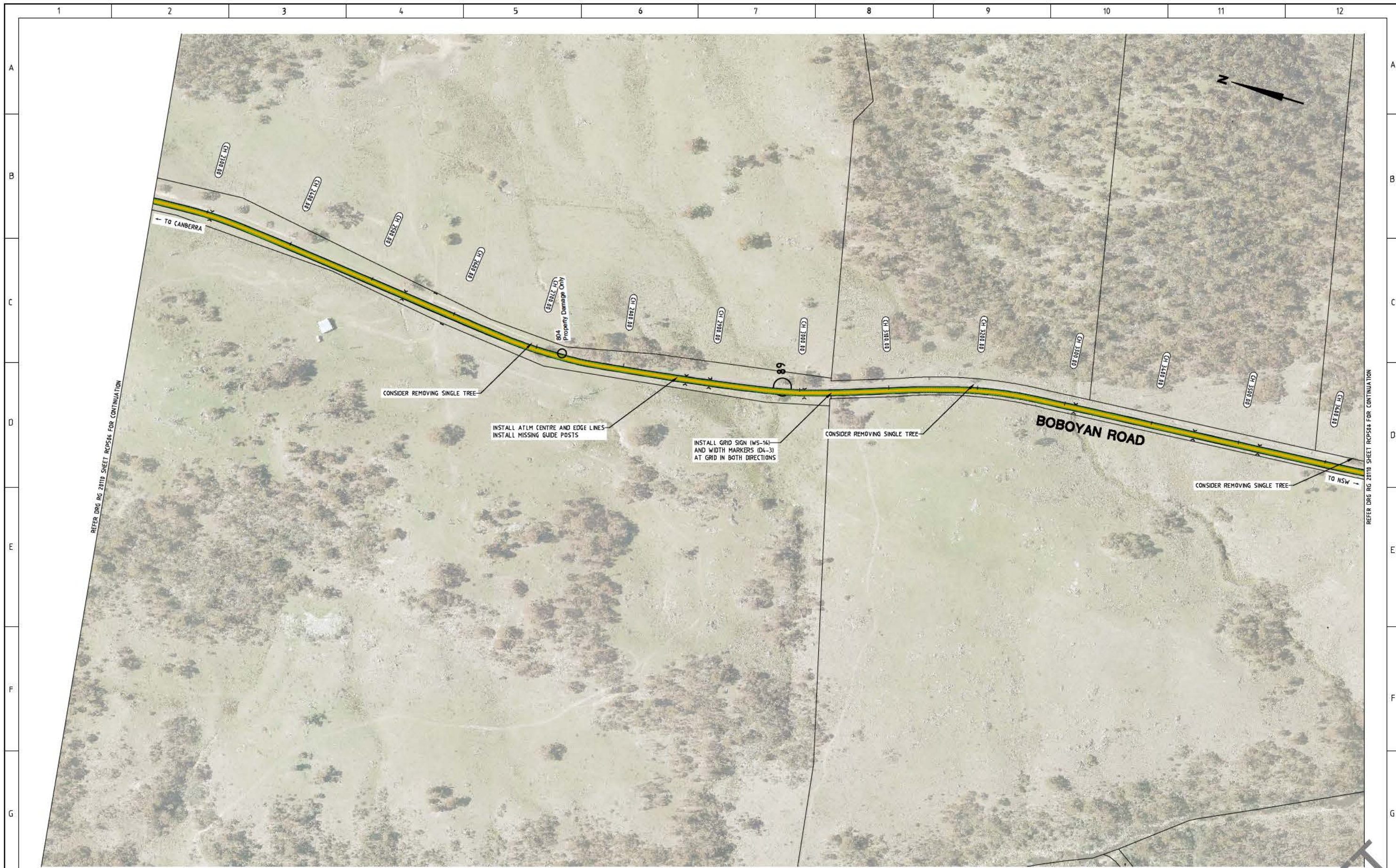
Client

Project Officer: Kencho Choden
Project Number: 30490



ACT Government

Project	Drawing Title
DELIVERING ANRAM	BOBIYAN ROAD CONCEPT SKETCH SHEET 6 OF 13
Date: 02/03/21	Dwg. No: RG 20110 Sheet: RCP506 Revision: 0



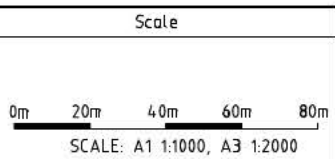
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REFER DRG RG 2010 SHEET RCP504 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
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- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

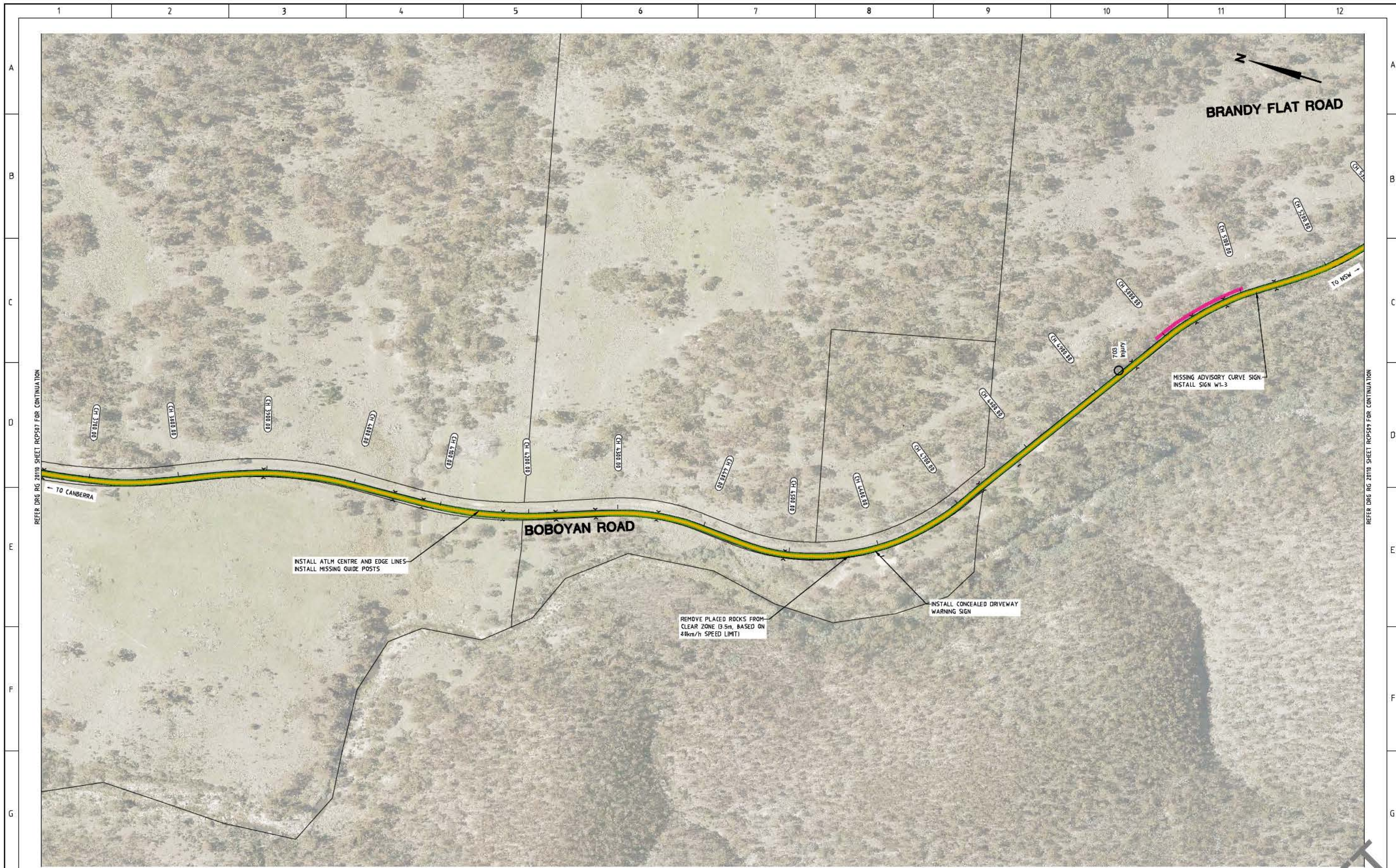
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Frewin Street
Canberra ACT 2602
Ph: 02 423 4335

Client

Project Officer: Kencho Choden
Project Number: 30490

Project	Drawing Title
DELIVERING ANRAM	BOBIYAN ROAD CONCEPT SKETCH SHEET 7 OF 13
Date 02/03/21	Drg. No. RG 20110
	Sheet RCP507
	Revision 0

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REFER DRG RG 20110 SHEET RCP507 FOR CONTINUATION

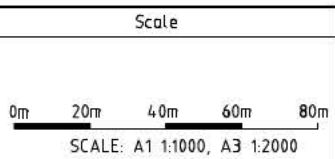
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

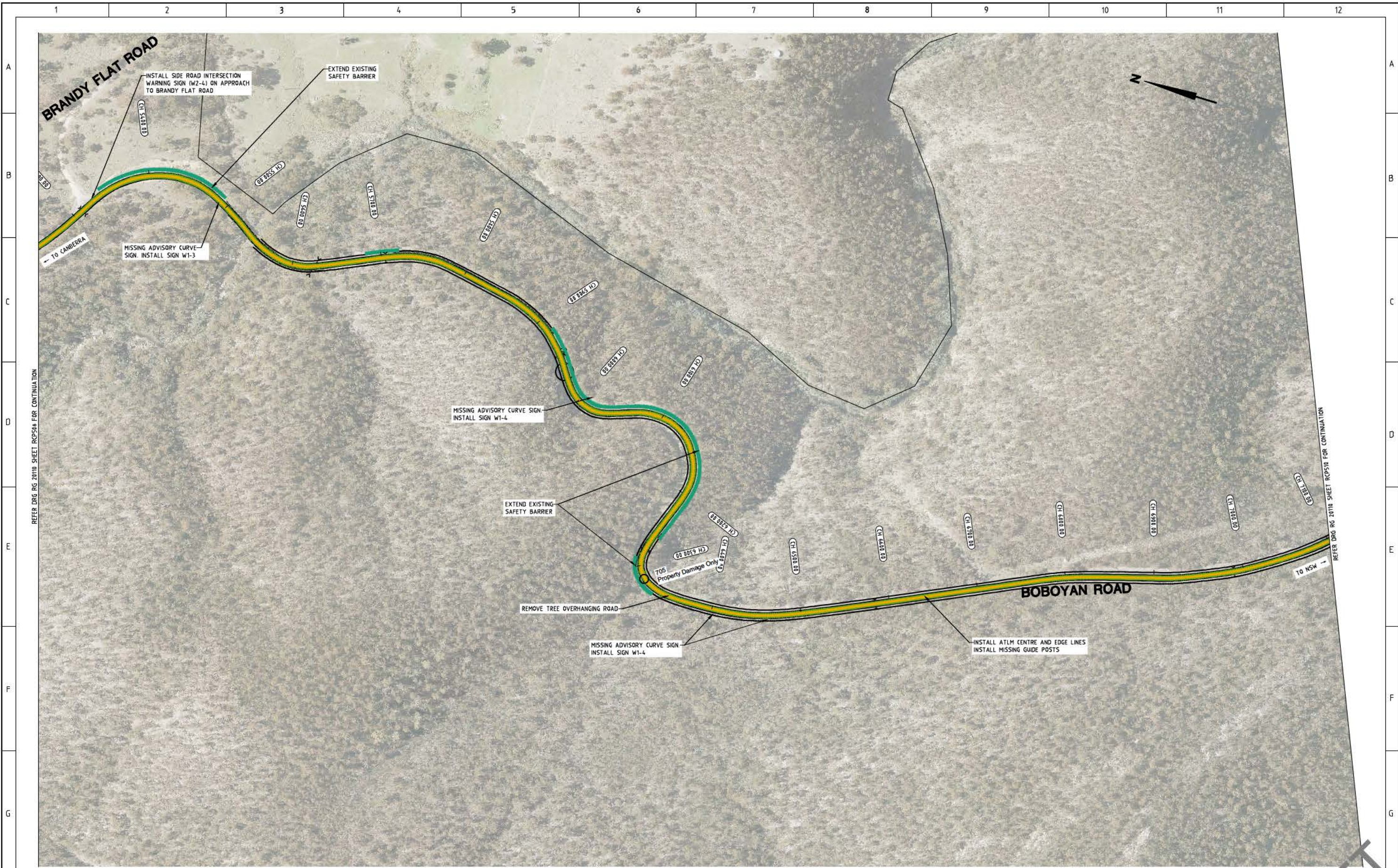
R.D. Gossip Pty Ltd
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Canberra ACT 2602
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Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	BOBIYAN ROAD CONCEPT SKETCH SHEET 8 OF 13
Date: 02/03/21	Drg. No. RG 20110 Sheet RCP508 Revision 0



REFER DRG RG 20110 SHEET RCP506 FOR CONTINUATION

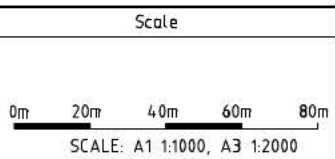
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

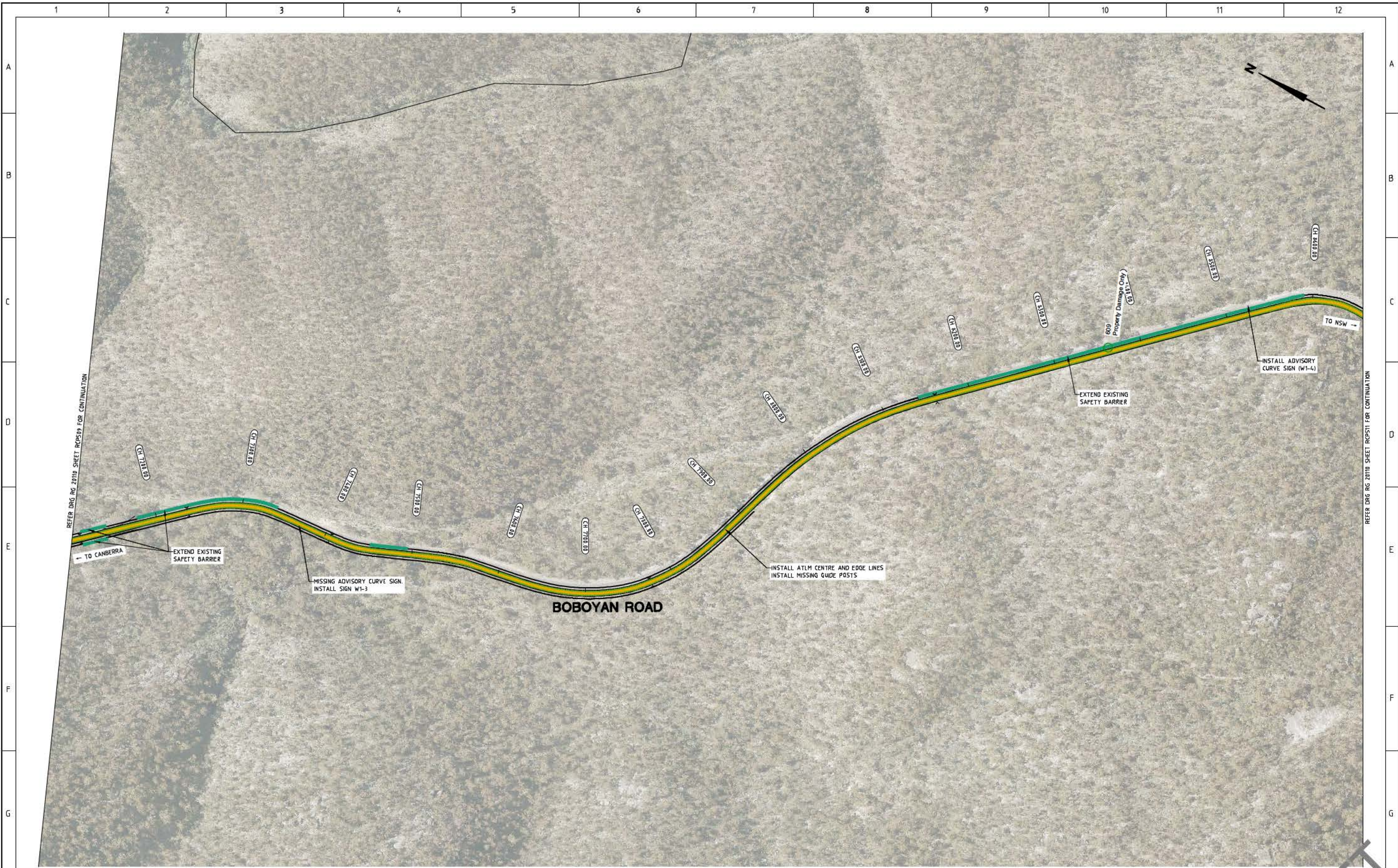
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 106, 12 Frowen Street
Canberra ACT 2602
Ph: 02 423 4335

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

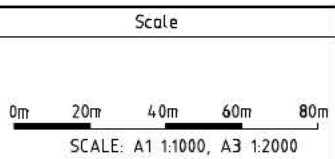
Project	Drawing Title
DELIVERING ANRAM	BOBIYAN ROAD CONCEPT SKETCH SHEET 9 OF 13
Date: 02/03/21	Org. No: RG 20110
Sheet: RCP509	Revision: 0



LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



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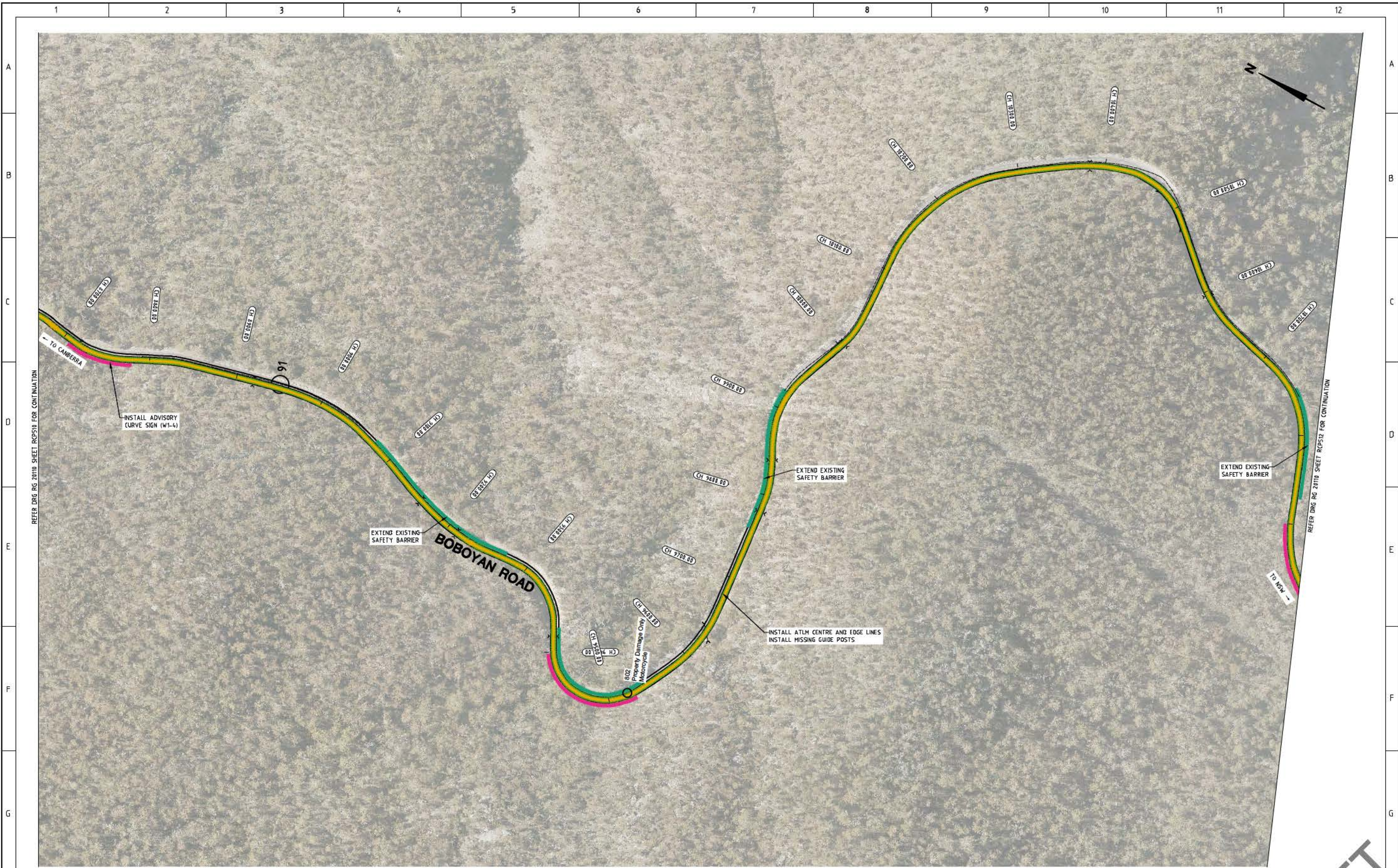
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 106, 12 Frewin Street
Canberra ACT 2602
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Client

Project Officer: Kencho Choden
Project Number: 30490

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Project	Drawing Title
DELIVERING ANRAM	BOBIYAN ROAD CONCEPT SKETCH SHEET 10 OF 13
Date 02/03/21	Drg. No. RG 20110
	Sheet RCP510
	Revision 0



REFER Dwg RG 20110 SHEET RCP510 FOR CONTINUATION

REFER Dwg RG 20110 SHEET RCP512 FOR CONTINUATION

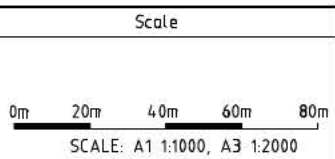
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- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



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Designed by: [Signature]
Drawn by: [Signature]
Checked by: [Signature]
Approved by: [Signature]

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Project Officer: Kencho Choden
Project Number: 30490

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Project

DELIVERING ANRAM

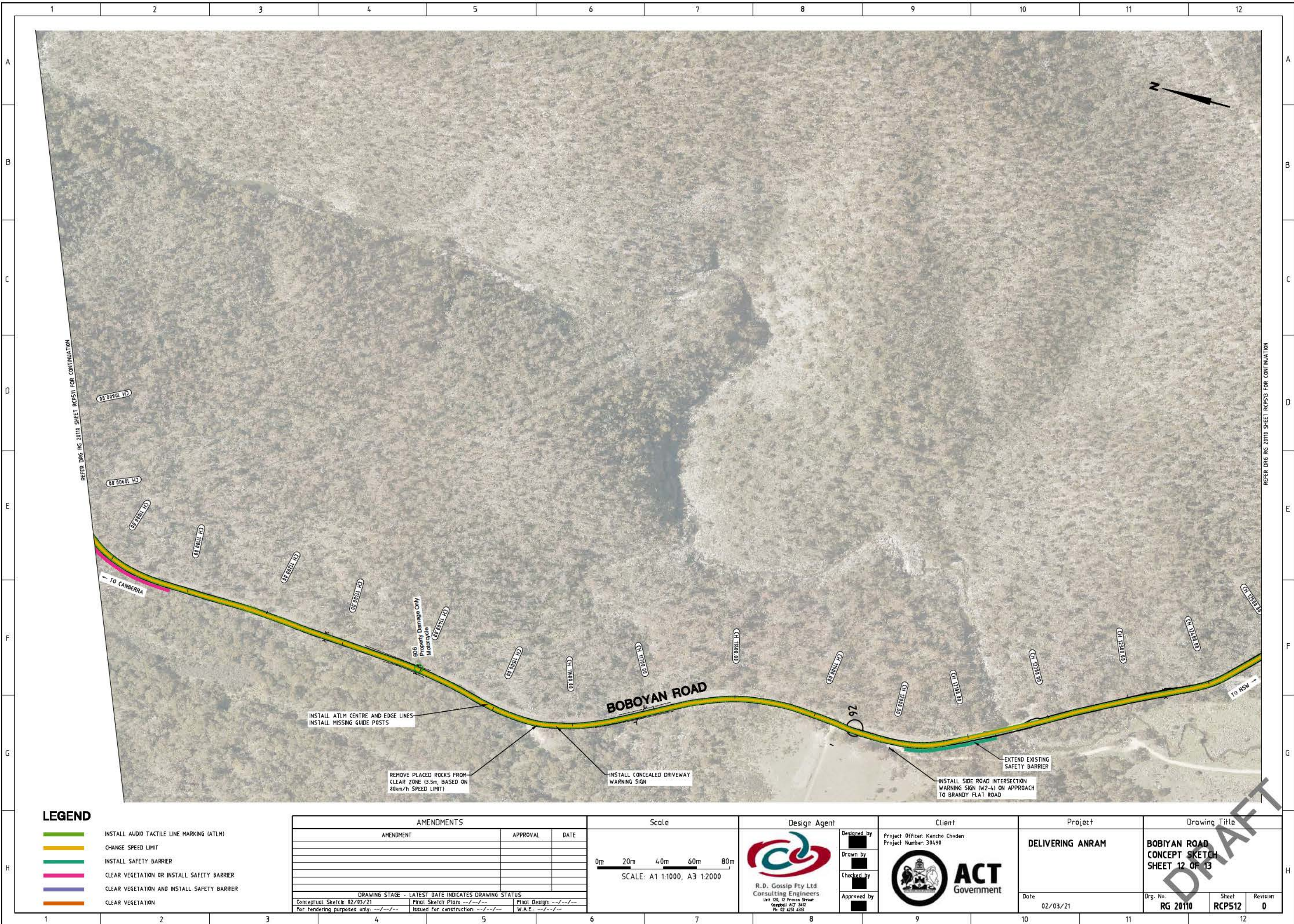
Date: 02/03/21

Drawing Title

BOBIYAN ROAD
CONCEPT SKETCH
SHEET 11 OF 13

Org. No. RG 20110	Sheet RCP511	Revision 0
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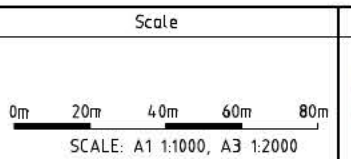
REFER DRG RG 2010 SHEET RCP51 FOR CONTINUATION

REFER DRG RG 2010 SHEET RCP53 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

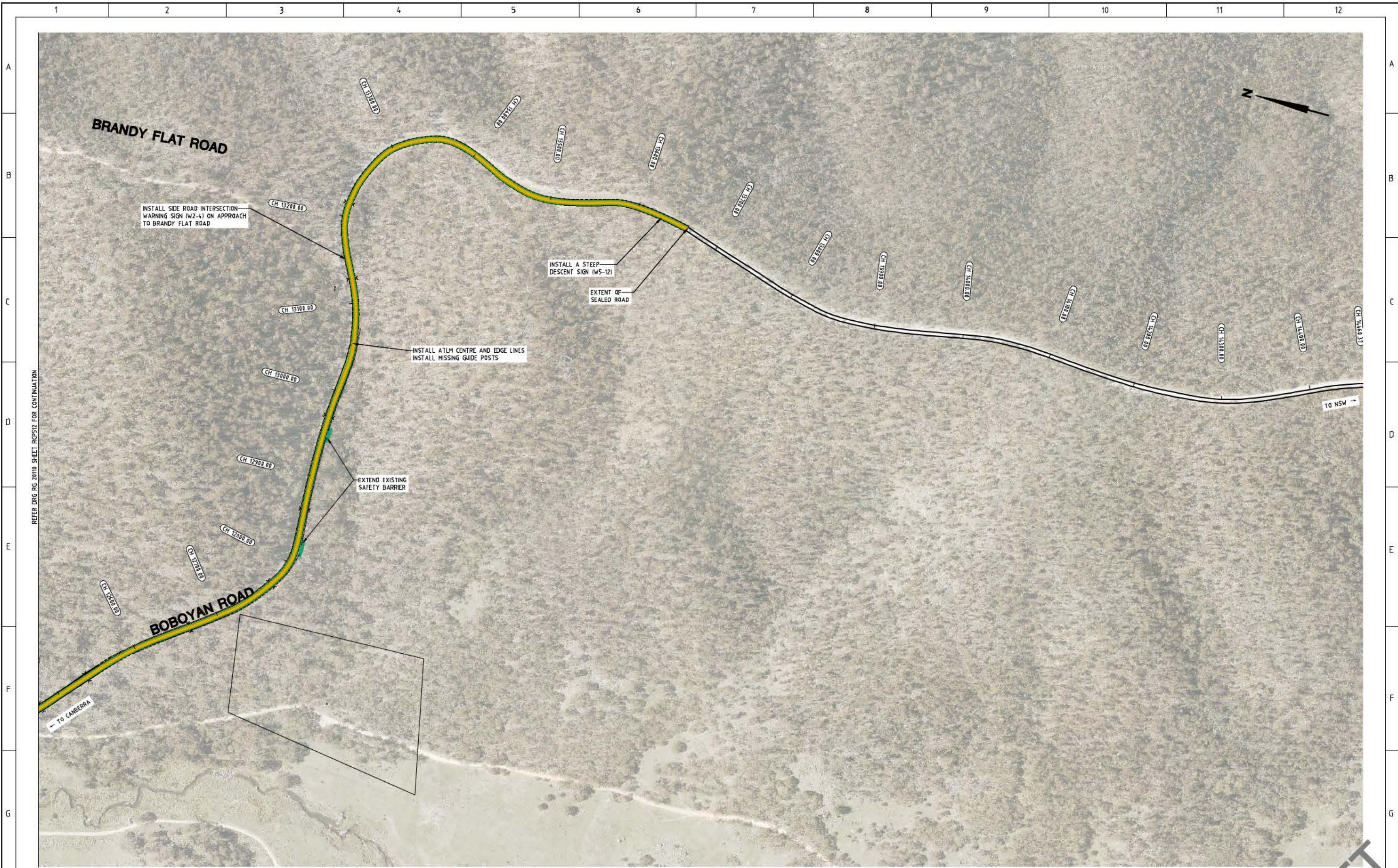
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Frowen Street
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Client

Project Officer: Kencho Choden
Project Number: 30490

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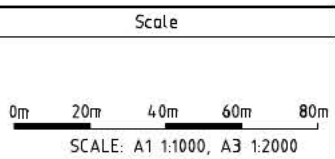
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DELIVERING ANRAM	BOBIYAN ROAD CONCEPT SKETCH SHEET 12 OF 13
Date: 02/03/21	Drg. No. RG 20110
	Sheet RCP512
	Revision 0



REFER DRG RG 20110 SHEET RCP512 FOR CONTINUATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
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Design Agent

R.D. Gossip Pty Ltd
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Ph: 02 429 435

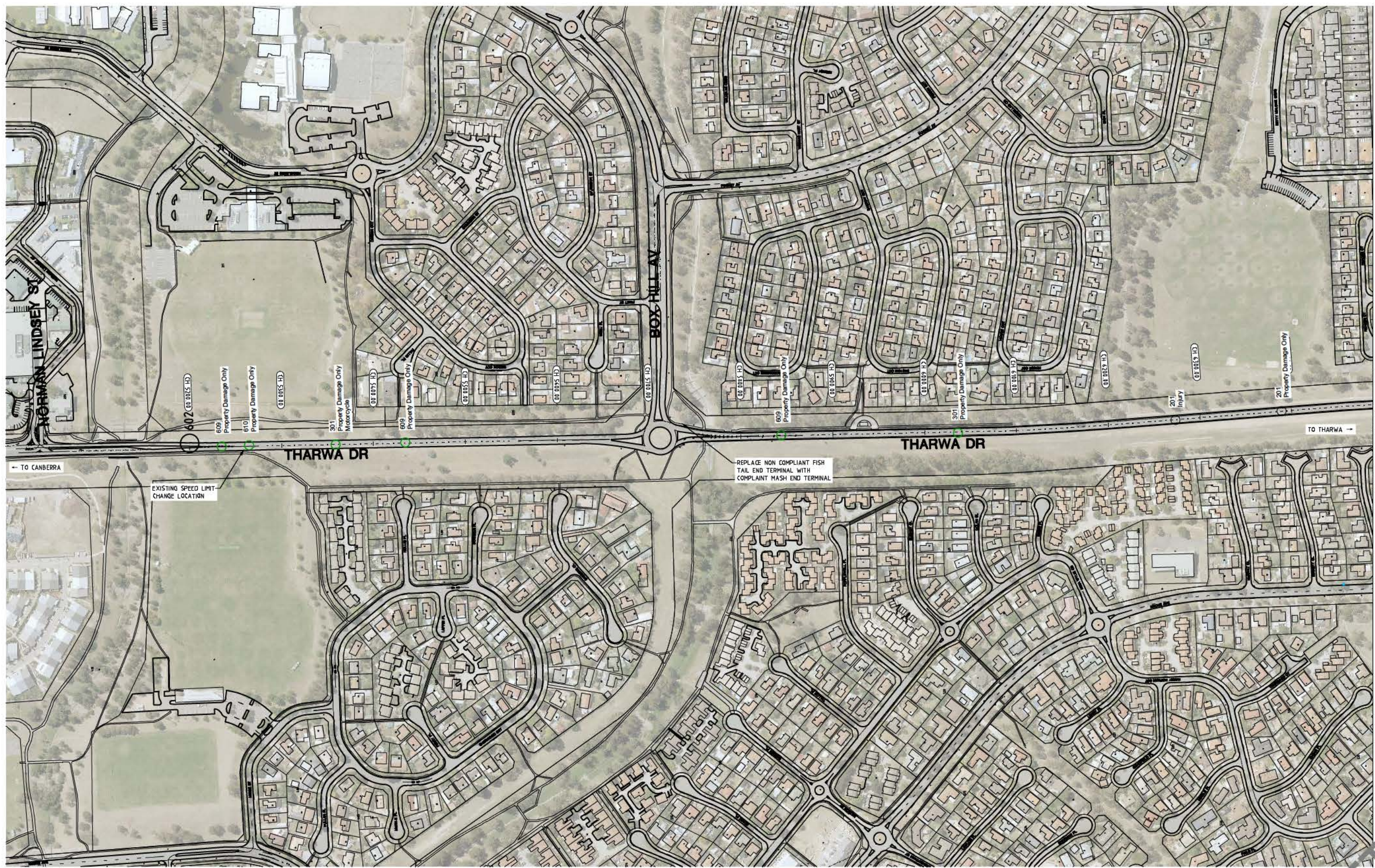
Designed by:
 Drawn by:
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 Approved by:

Client

Project Officer: Kencho Choden
Project Number: 30490

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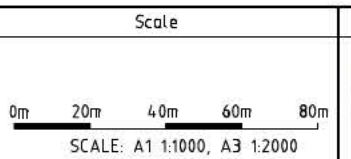
Project	Drawing Title
DELIVERING ANRAM	BOBIYAN ROAD CONCEPT SKETCH SHEET 13 OF 13
Date: 02/03/21	Dwg. No.: RG 20110 Sheet: RCP513 Revision: 0



LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

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Canberra ACT 2602
Ph: 02 423 4335

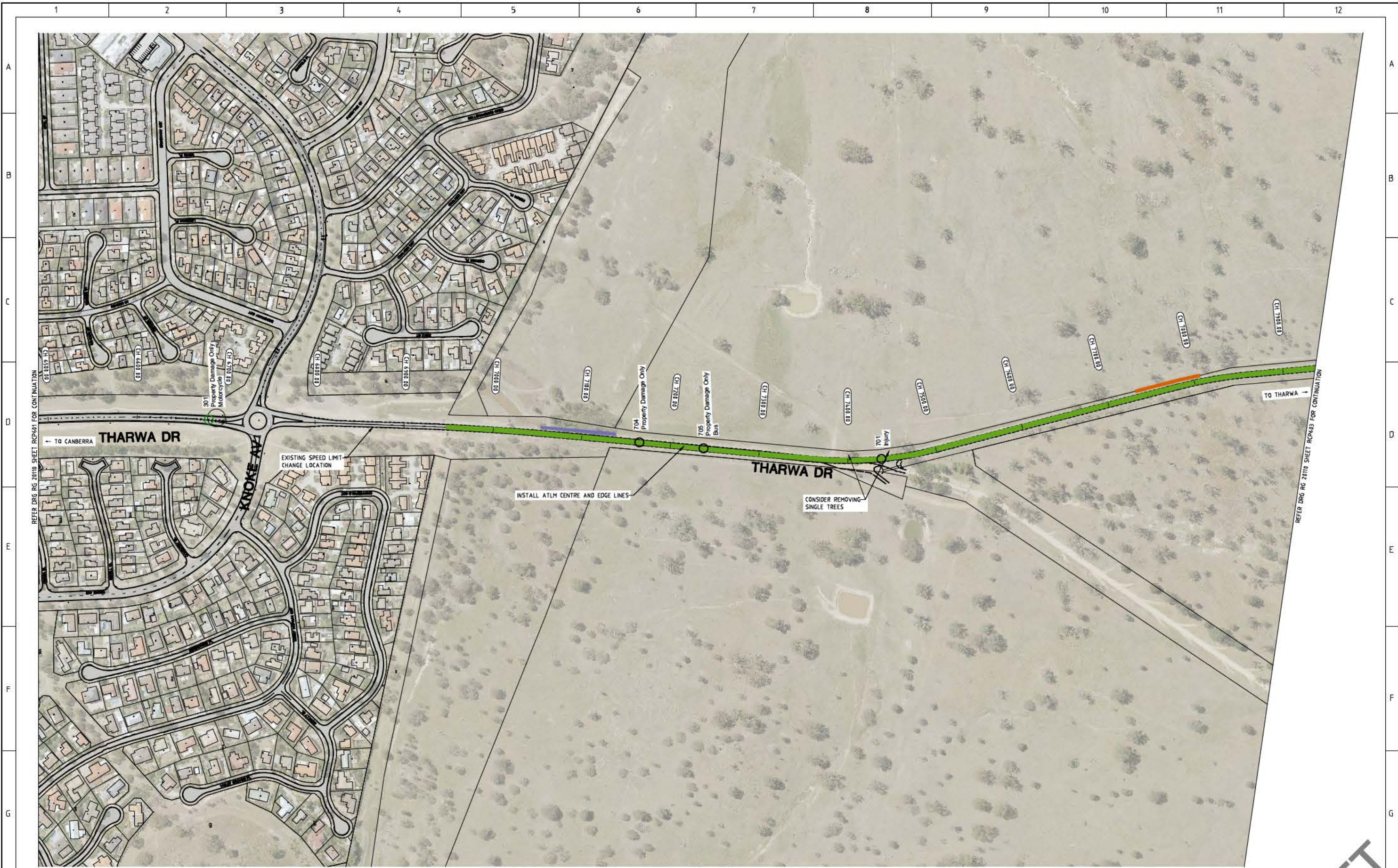
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	THARWA DR - SITE 6 CONCEPT SKETCH SHEET 1 OF 5
Date 02/03/21	Drg. No. RG 20110
	Sheet RCP601
	Revision 0

REFER DRG RG 2010 SHEET RCP602 FOR CONTINUATION



REFER DRG RG 20110 SHEET RCP601 FOR CONTINUATION

REFER DRG RG 20110 SHEET RCP603 FOR CONTINUATION

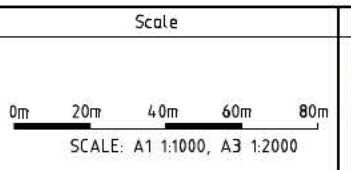
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	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
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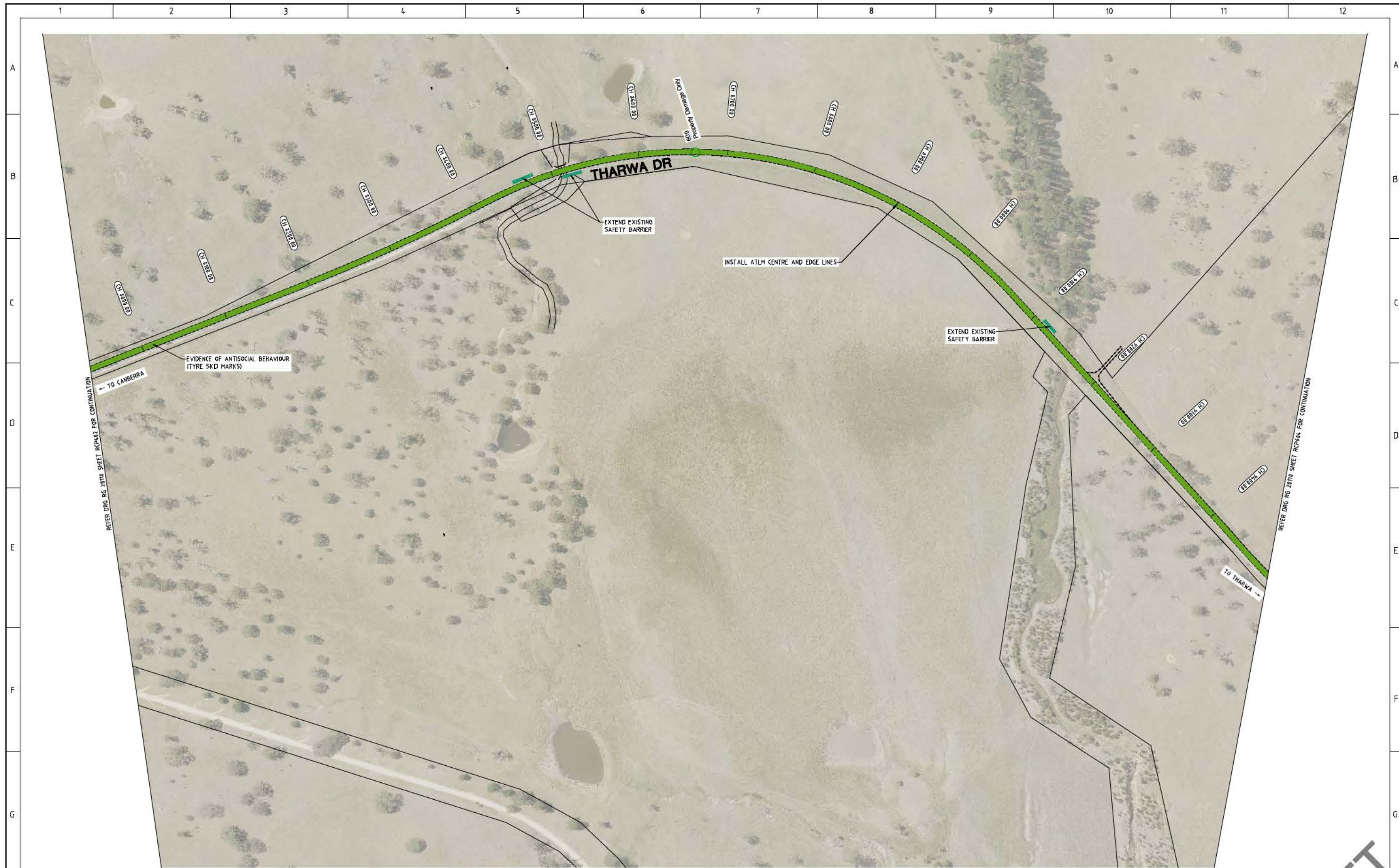
Client

Project Officer: Kencho Choden
Project Number: 30490

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Project		Drawing Title		
DELIVERING ANRAM		THARWA DR - SITE 6 CONCEPT SKETCH SHEET 2 OF 5		
Date	02/03/21	Drg. No.	RG 20110	Sheet
			RCP602	Revision
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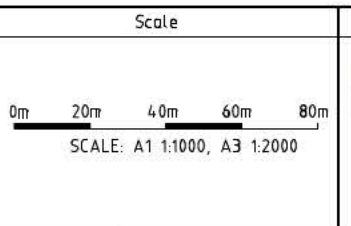


LEGEND

- ▬ INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- ▬ CHANGE SPEED LIMIT
- ▬ INSTALL SAFETY BARRIER
- ▬ CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- ▬ CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- ▬ CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

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Designed by:
 Drawn by:
 Checked by:
 Approved by:

Client

Project Officer: Kencho Choden
Project Number: 30490

Project

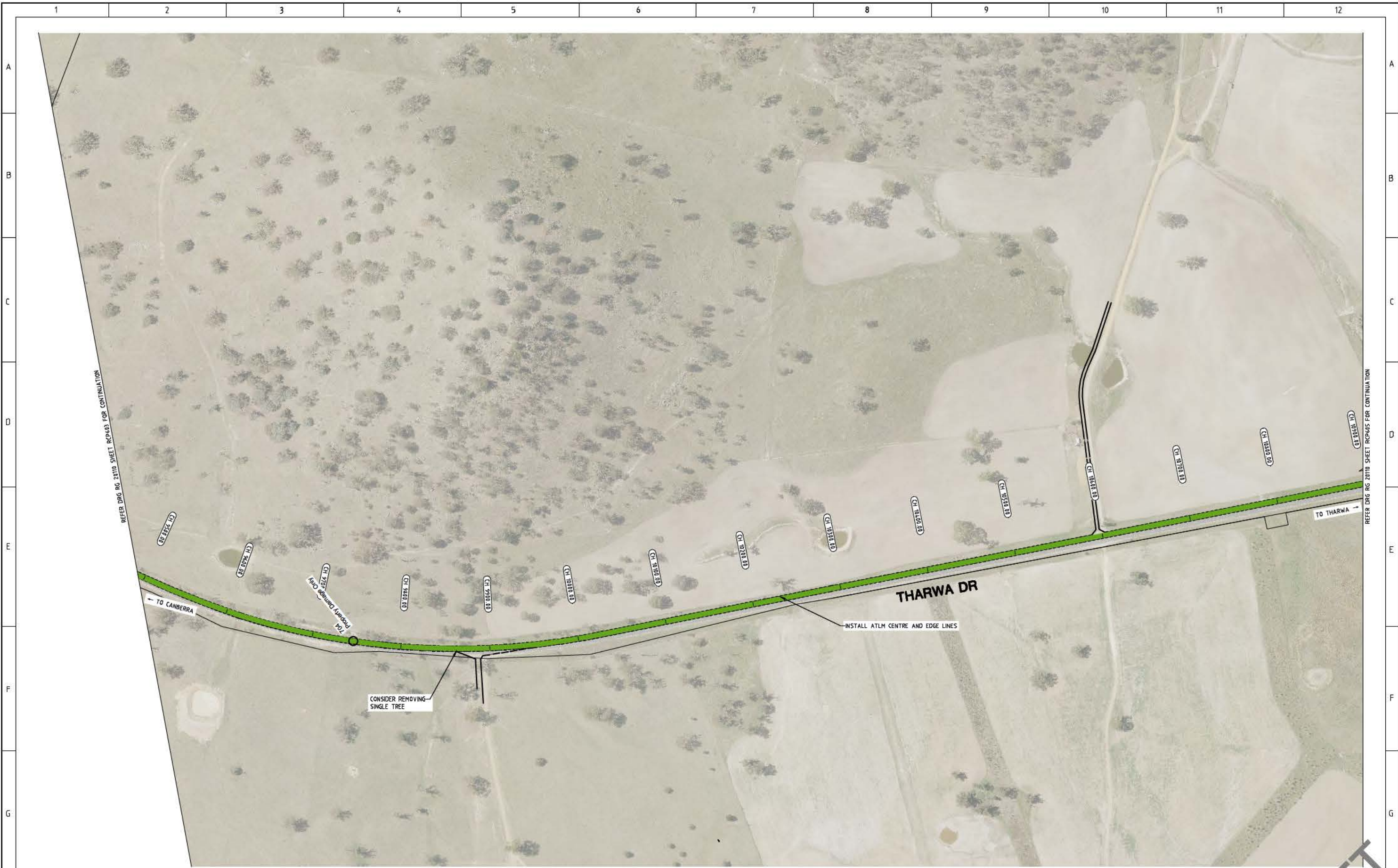
DELIVERING ANRAM

Date: 02/03/21

Drawing Title

THARWA DR - SITE 6
CONCEPT SKETCH
SHEET 3 OF 5

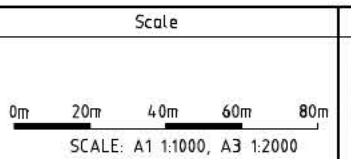
Org. No. RG 20110	Sheet RCP603	Revision 0
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



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Client

Project Officer: Kencho Choden
Project Number: 30490

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Project	Drawing Title
DELIVERING ANRAM	THARWA DR - SITE 6 CONCEPT SKETCH SHEET 4 OF 5
Date 02/03/21	Drg. No. RG 20110
	Sheet RCP604
	Revision 0

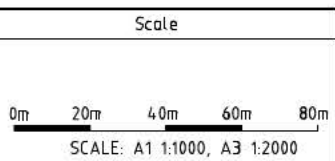


REFER DRG RG 20110 SHEET RCP604 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

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Consulting Engineers
Unit 108, 12 Frewin Street
Canberra ACT 2602
Ph: 02 423 4335

Designed by	█
Drawn by	█
Checked by	█
Approved by	█

Client

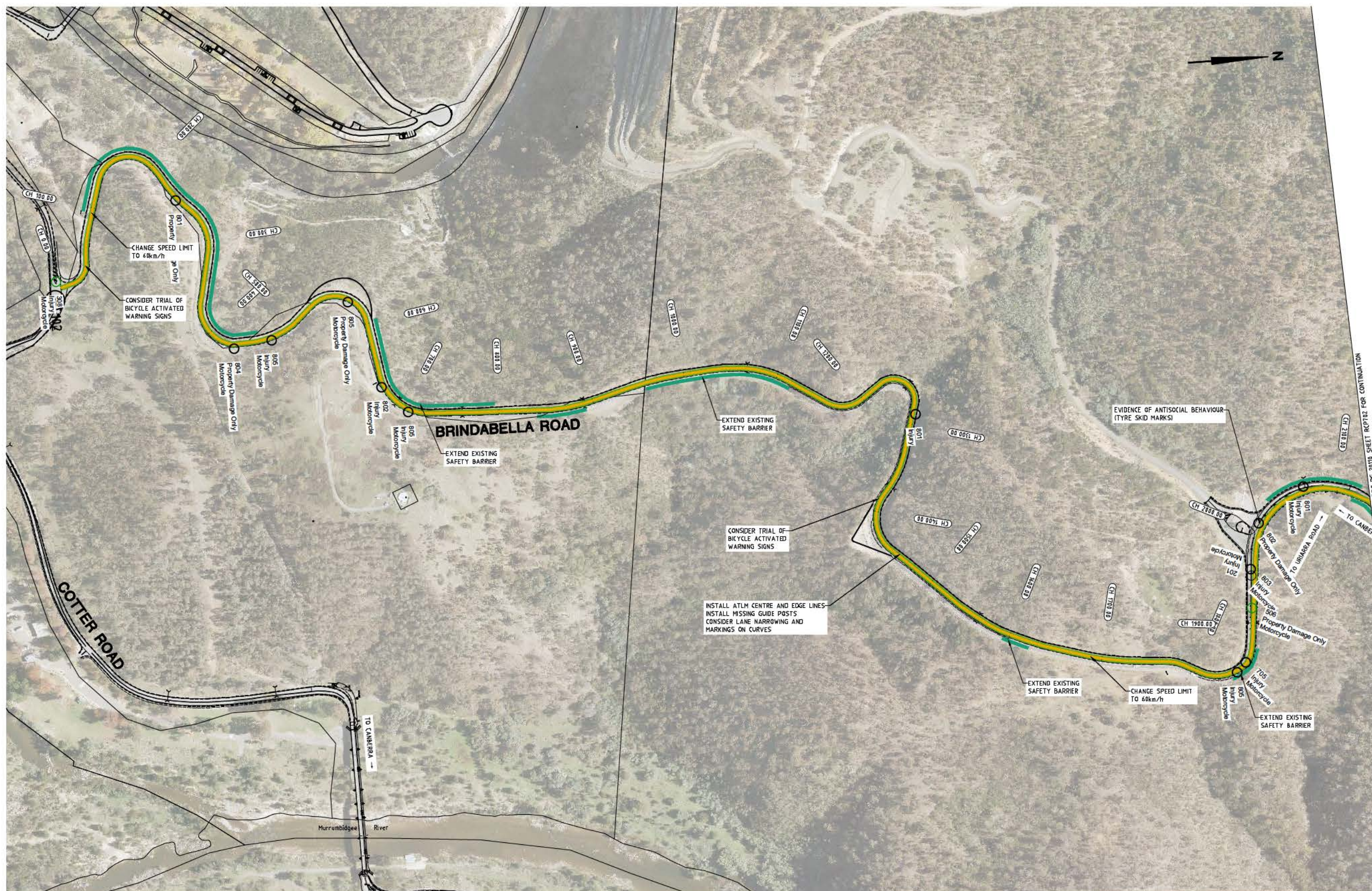
Project Officer: Kencho Choden
Project Number: 30490

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Project	
DELIVERING ANRAM	
Date	02/03/21

Drawing Title		
THARWA DR - SITE 6 CONCEPT SKETCH SHEET 5 OF 5		
Drg. No.	Sheet	Revision
RG 20110	RCP605	0

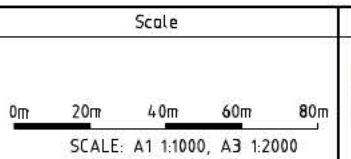
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/-- Issued for construction: --/--/-- W.A.E.: --/--/--		



Design Agent

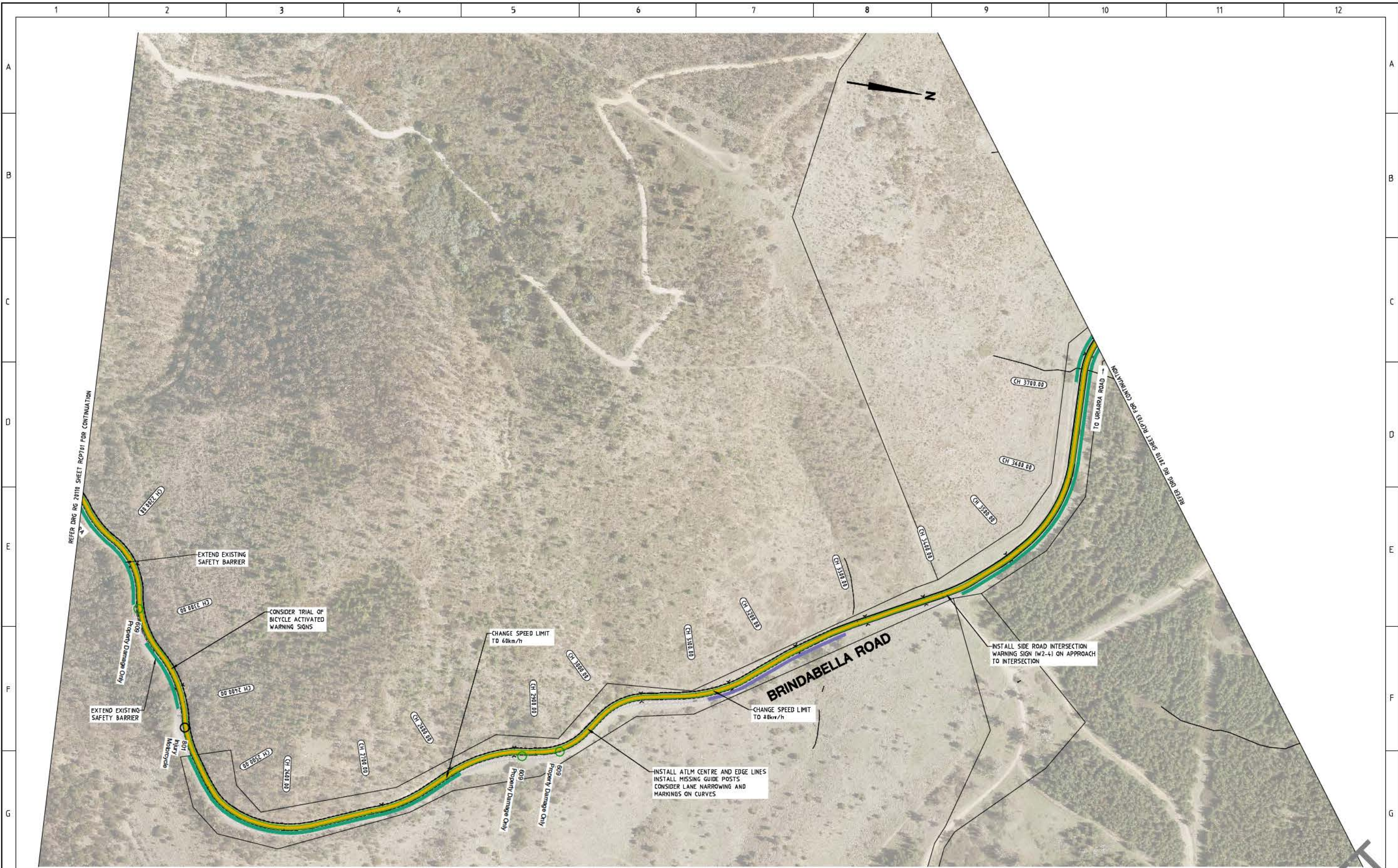
R.D. Gossip Pty Ltd
Consulting Engineers
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Canberra ACT 2602
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Client

Project Officer: Kencho Choden
Project Number: 30490

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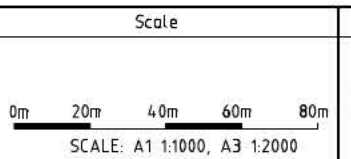
Project	Drawing Title
DELIVERING ANRAM	BRINDABELLA RD CONCEPT SKETCH SHEET 1 OF 11
Date: 02/03/21	Drg. No.: RG 20110
	Sheet: RCP701
	Revision: 0



LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

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Designed by	█
Drawn by	█
Checked by	█
Approved by	█

Client

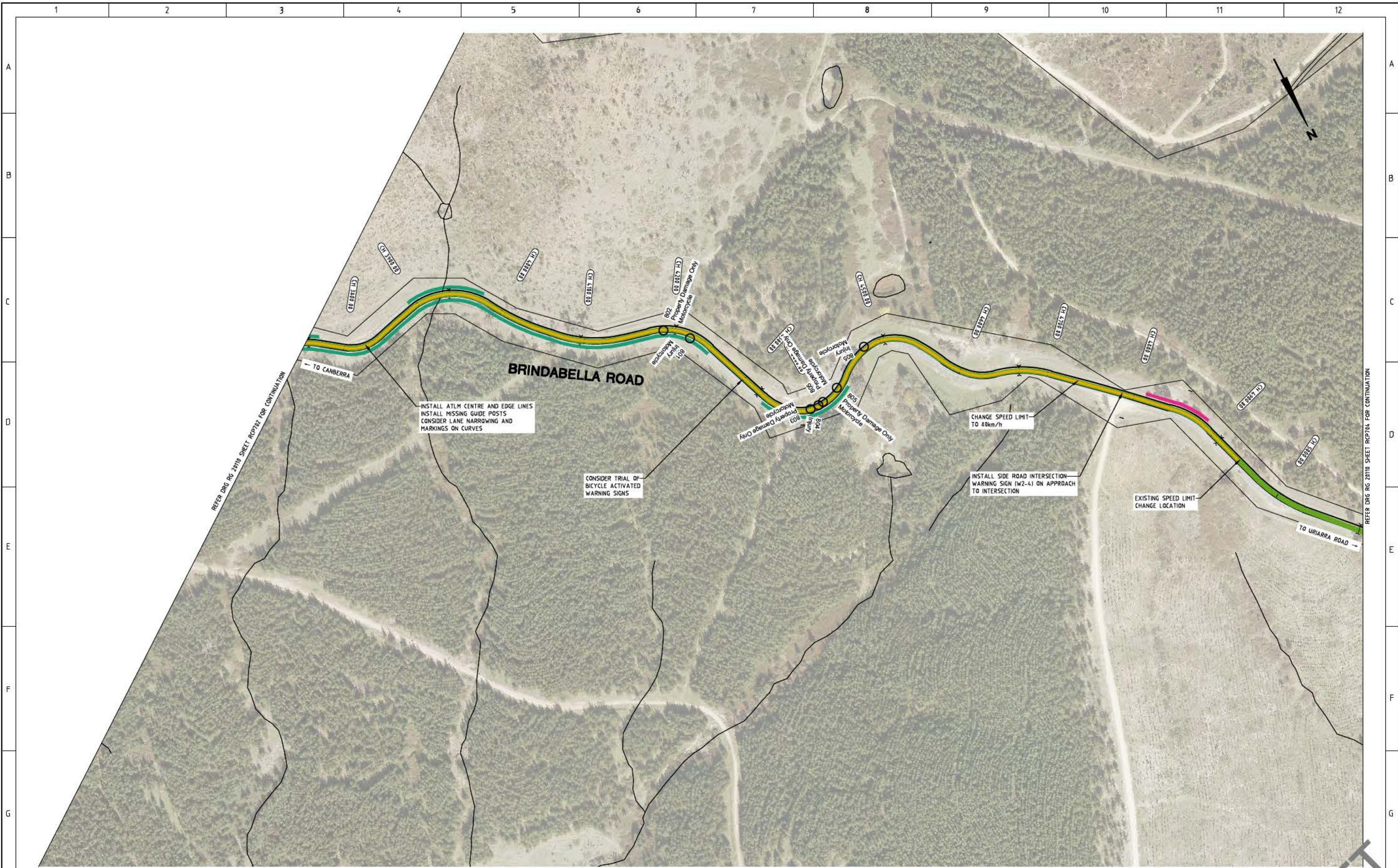
Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title
DELIVERING ANRAM	BRINDABELLA RD CONCEPT SKETCH SHEET 2 OF 11
Date	Drg. No.
02/03/21	RG 20110

Sheet	Revision
RCP702	0

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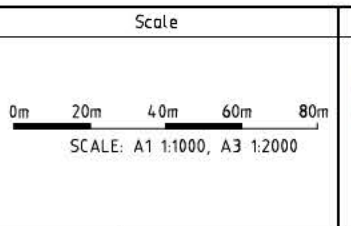


LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--		
Issued for construction: --/--/--	W.A.E.: --/--/--	



Design Agent

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Client

Project Officer: Kencho Choden
Project Number: 30490

Project	Drawing Title
DELIVERING ANRAM	BRINDABELLA RD CONCEPT SKETCH SHEET 3 OF 11
Date: 02/03/21	Drg. No.: RG 20110 Sheet: RCP703 Revision: 0



REFER DRG RG 20110 SHEET RCP703 FOR CONTINUATION

REFER DRG RG 20110 SHEET RCP705 FOR CONTINUATION

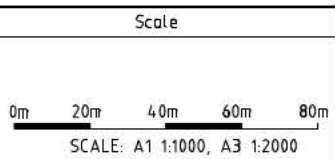
LEGEND

	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



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Project Officer: Kencho Choden
Project Number: 30490

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Project	Drawing Title
DELIVERING ANRAM	BRINDABELLA RD CONCEPT SKETCH SHEET 4 OF 11
Date: 02/03/21	Drg. No.: RG 20110 Sheet: RCP704 Revision: 0

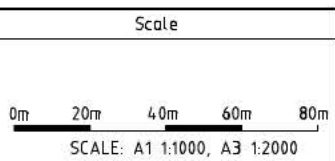


INSTALL ATLM CENTRE AND EDGE LINES
 INSTALL MISSING GUIDE POSTS
 CONSIDER LANE NARROWING AND MARKINGS ON CURVES

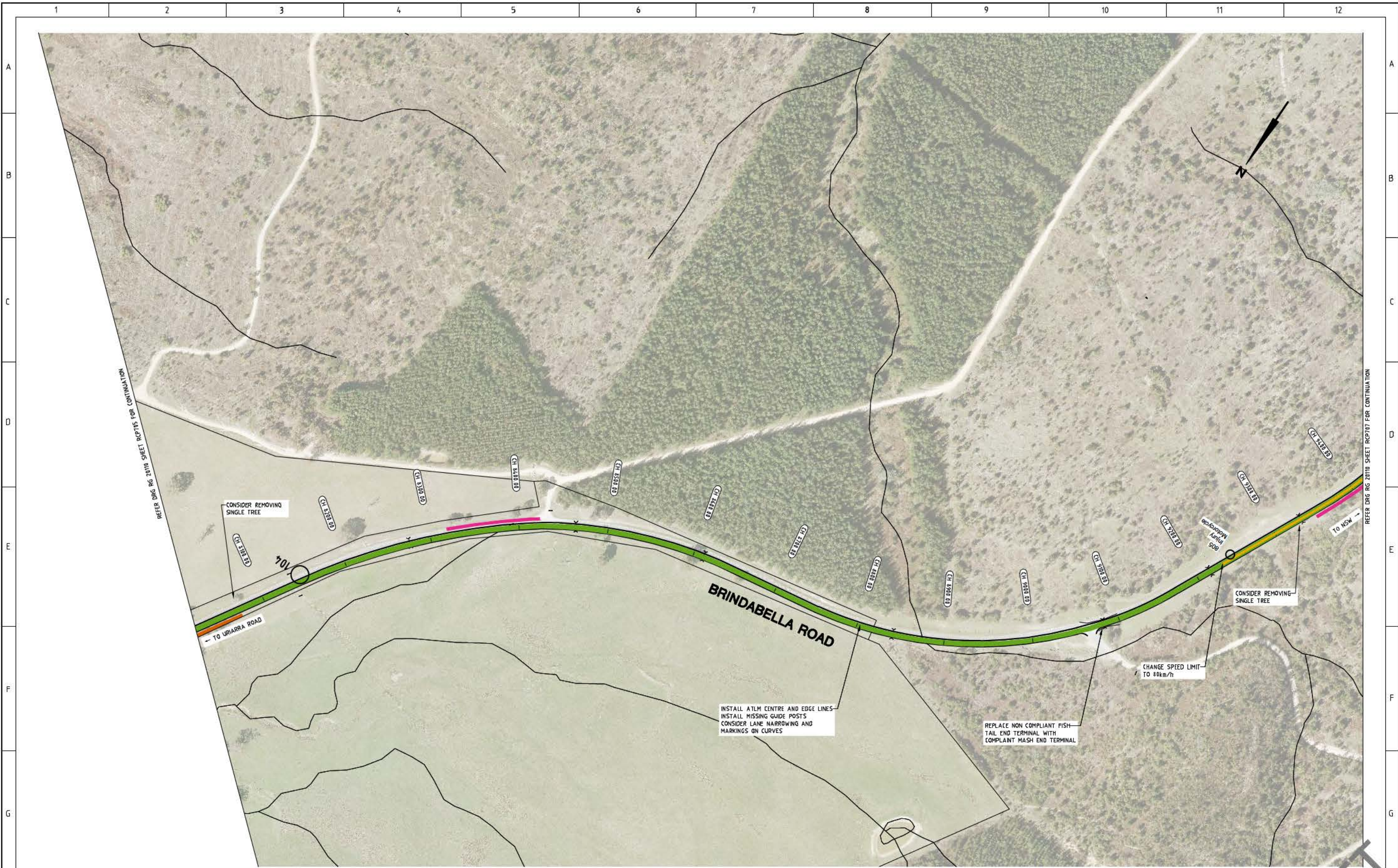
LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



 R.D. Gossip Pty Ltd Consulting Engineers Unit 106, 12 Frewin Street Campbell ACT 2602 Ph: 02 423 4335	Design Agent Designed by Drawn by Checked by Approved by	Client Project Officer: Kencho Choden Project Number: 30490 	Project DELIVERING ANRAM Date: 02/03/21	Drawing Title BRINDABELLA RD CONCEPT SKETCH SHEET 5 OF 11 Drg. No. RG 20110 Sheet RCP705 Revision 0
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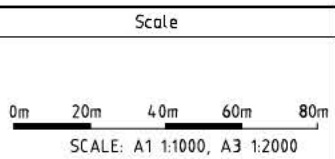
REFER DRG RG 2010 SHEET RCP705 FOR CONTINUATION

REFER DRG RG 2010 SHEET RCP707 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

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Consulting Engineers
Unit 106, 12 Crown Street
Canberra ACT 2602
Ph: 02 423 435

Client

Project Officer: Kencho Choden
Project Number: 30490

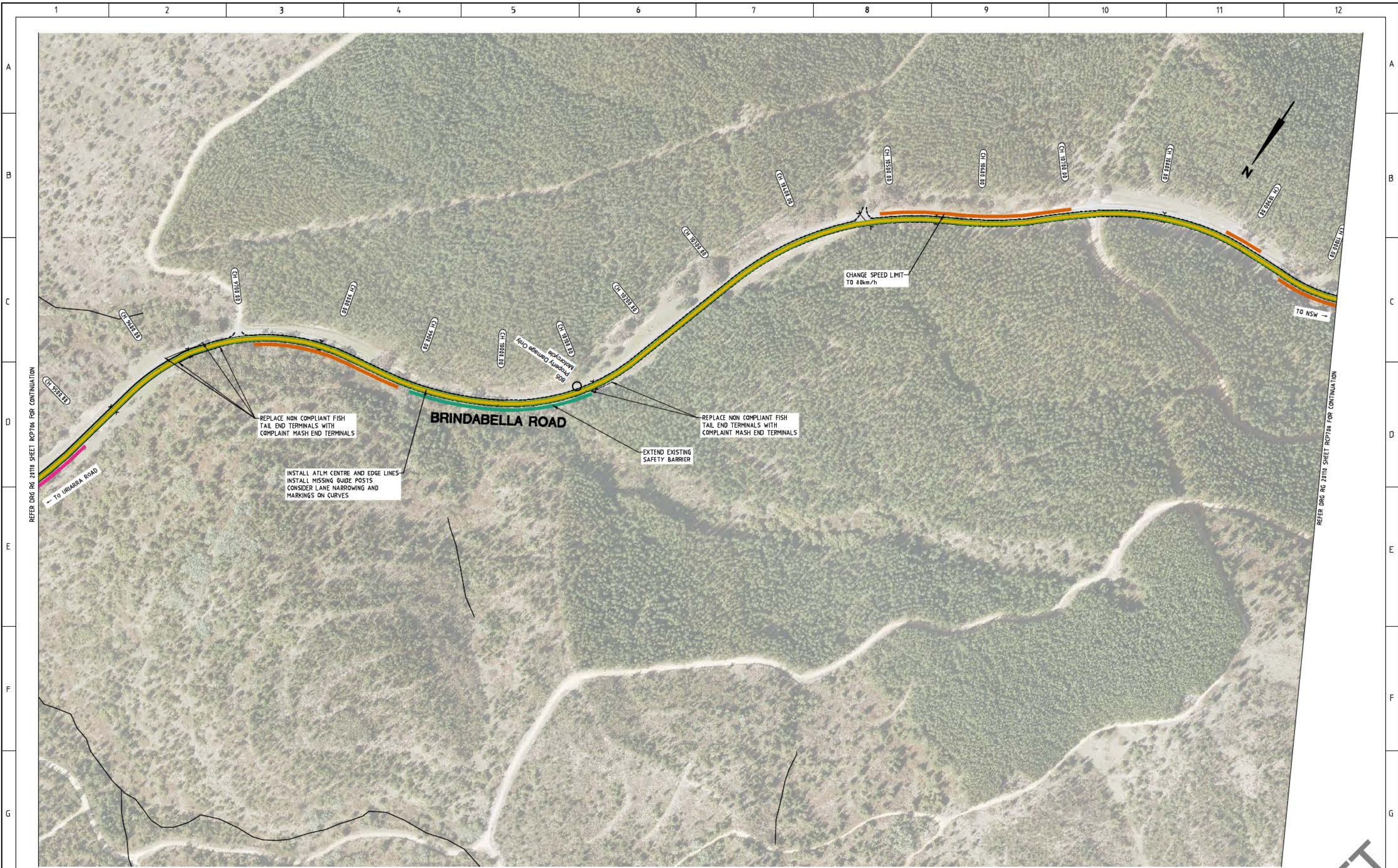
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Project	Drawing Title
DELIVERING ANRAM	BRINDABELLA RD CONCEPT SKETCH SHEET 6 OF 11
Date: 02/03/21	Drg. No.: RG 20110 Sheet: RCP706 Revision: 0

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--

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REFER DRG RG 20110 SHEET RCP706 FOR CONTINUATION

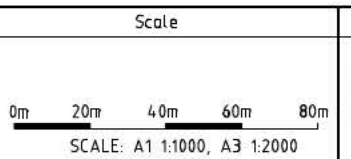
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

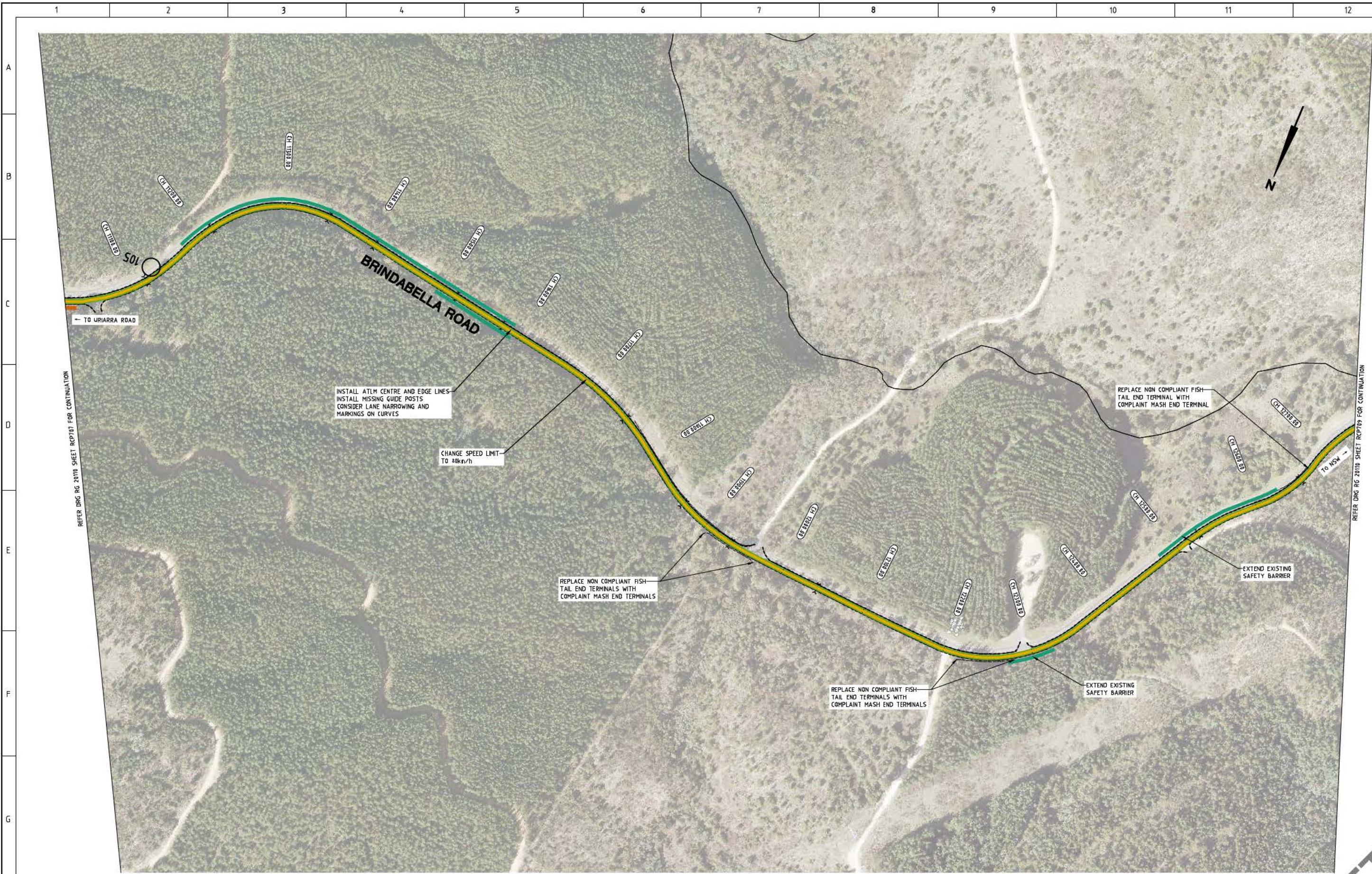
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Prawn Street
Canberra ACT 2602
Ph: 02 423 435

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title						
DELIVERING ANRAM	BRINDABELLA RD CONCEPT SKETCH SHEET 7 OF 11						
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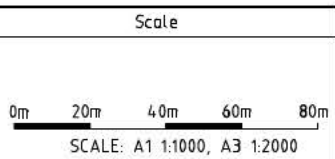
REFER DRG RG 2010 SHEET RCP707 FOR CONTINUATION

REFER DRG RG 2010 SHEET RCP709 FOR CONTINUATION

LEGEND

-  INSTALL AUDIO TACTILE LINE MARKING (ATLM)
-  CHANGE SPEED LIMIT
-  INSTALL SAFETY BARRIER
-  CLEAR VEGETATION OR INSTALL SAFETY BARRIER
-  CLEAR VEGETATION AND INSTALL SAFETY BARRIER
-  CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent



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Ph: 02 4231 4335

Designed by


Drawn by

Checked by

Approved by

Client

Project Officer: Kencho Choden
Project Number: 30490



Project

DELIVERING ANRAM

Date: 02/03/21

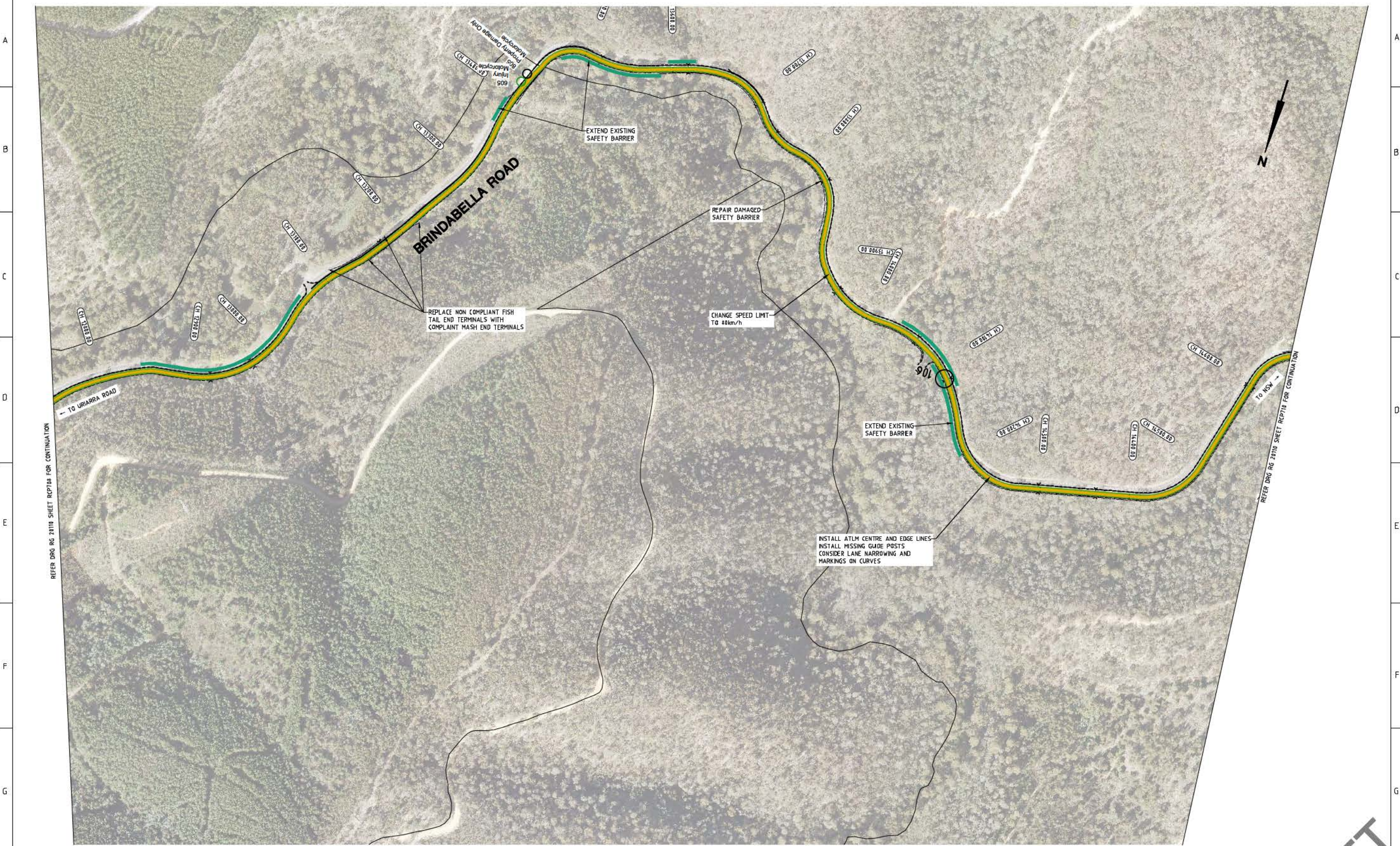
Drawing Title

BRINDABELLA RD
CONCEPT SKETCH
SHEET 8 OF 11

Drg. No. RG 20110

Sheet RCP708

Revision 0



REFER DRG RG 20110 SHEET RCP708 FOR CONTINUATION

REFER DRG RG 20110 SHEET RCP710 FOR CONTINUATION

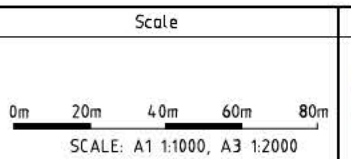
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	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
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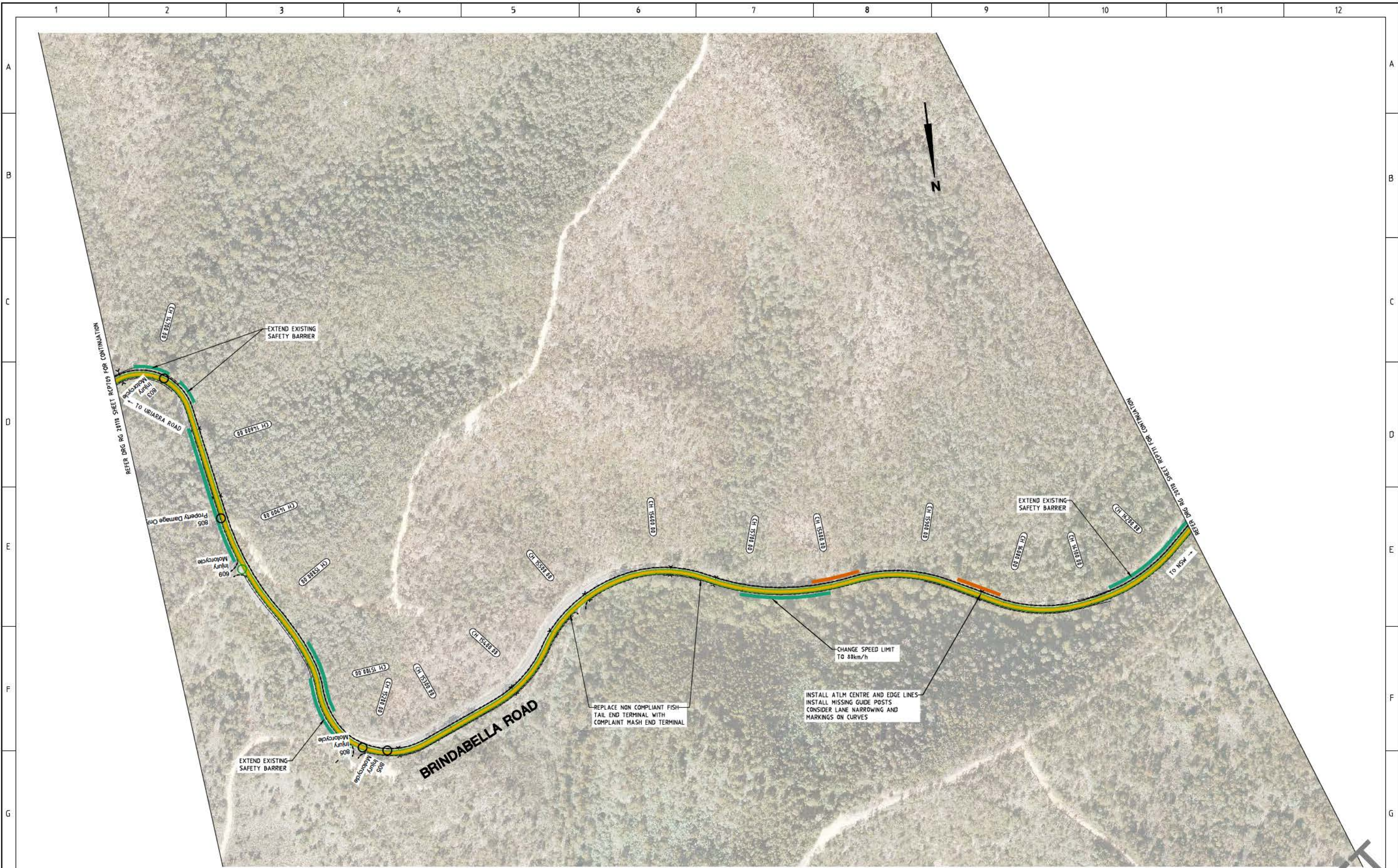
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	BRINDABELLA RD CONCEPT SKETCH SHEET 9 OF 11
Date: 02/03/21	Drg. No.: RG 20110
	Sheet: RCP709
	Revision: 0

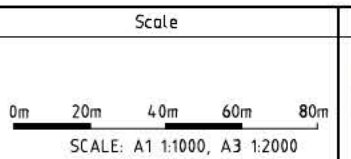
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

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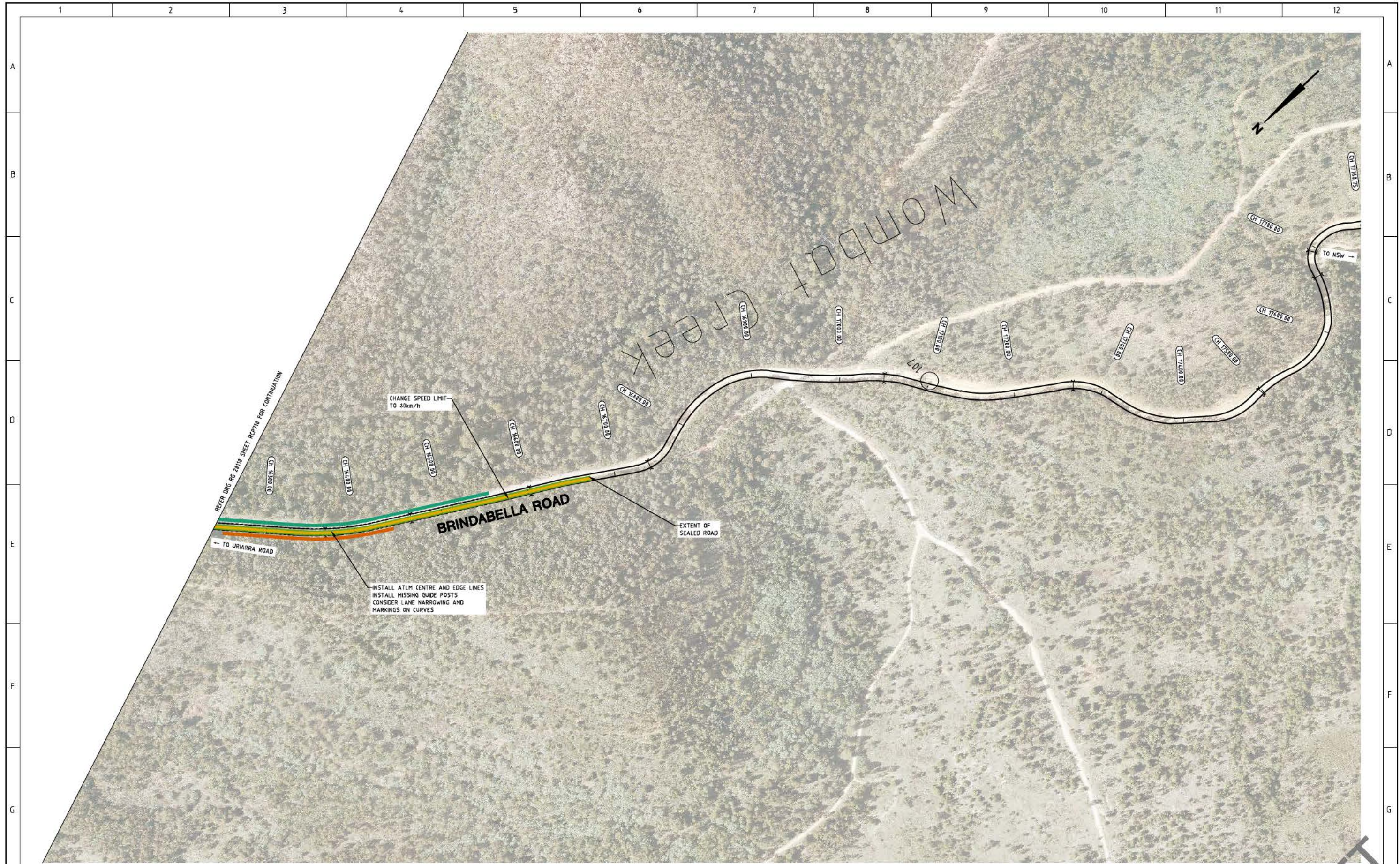
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title			
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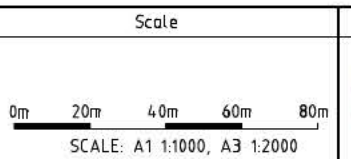


LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



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Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title			
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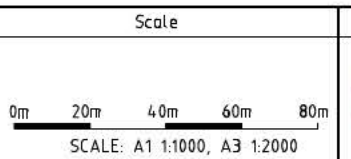
REFER DRG RG 2010 SHEET RCP802 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
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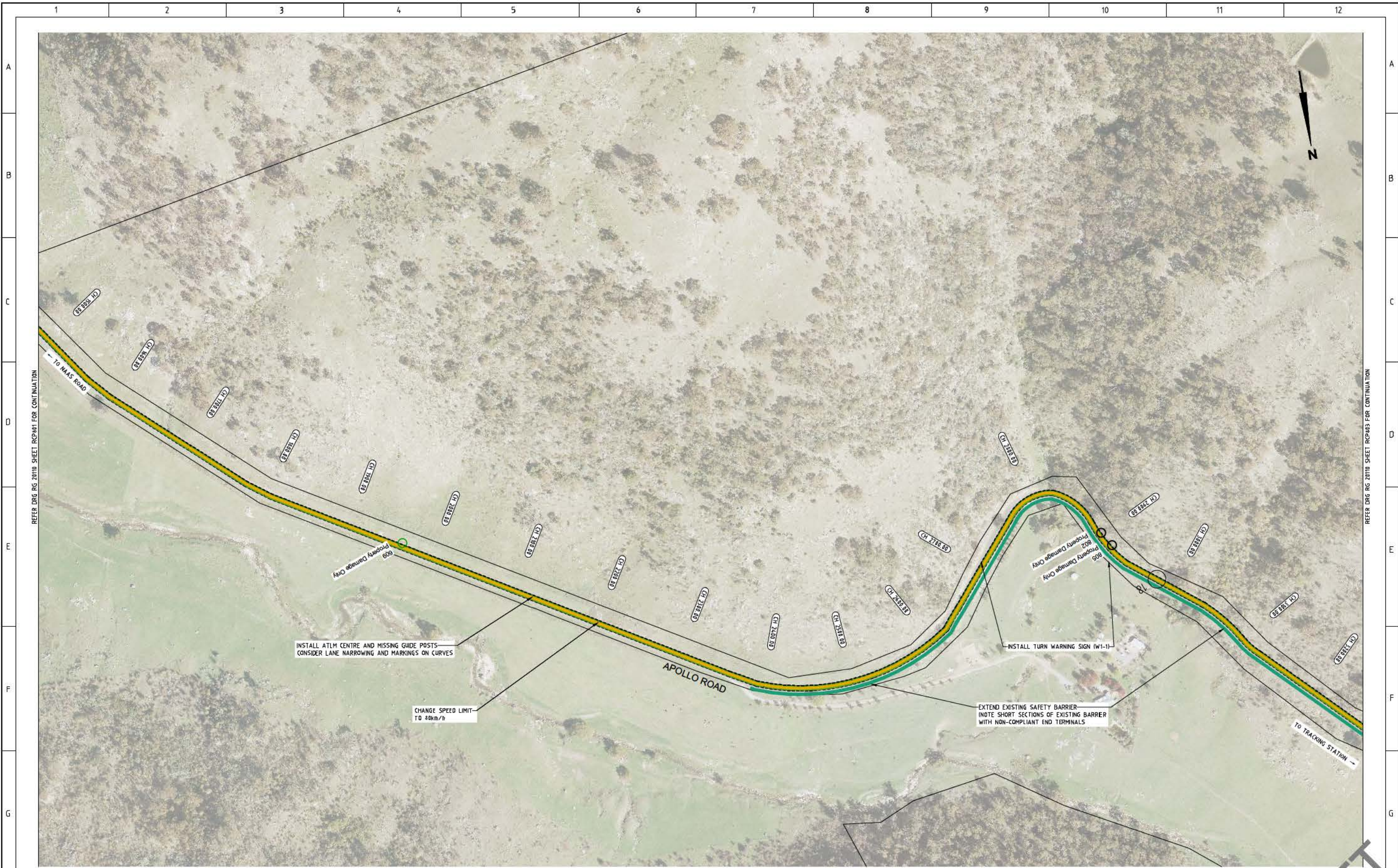
Client

Project Officer: Kencho Choden
Project Number: 30490

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Government

Project	Drawing Title
DELIVERING ANRAM	APOLLO RD CONCEPT SKETCH SHEET 1 OF 6
Date: 02/03/21	Drg. No: RG 2010

Sheet	Revision
RCP801	0



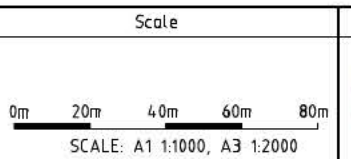
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REFER DRG RG 20110 SHEET RCP803 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
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AMENDMENTS		
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Design Agent

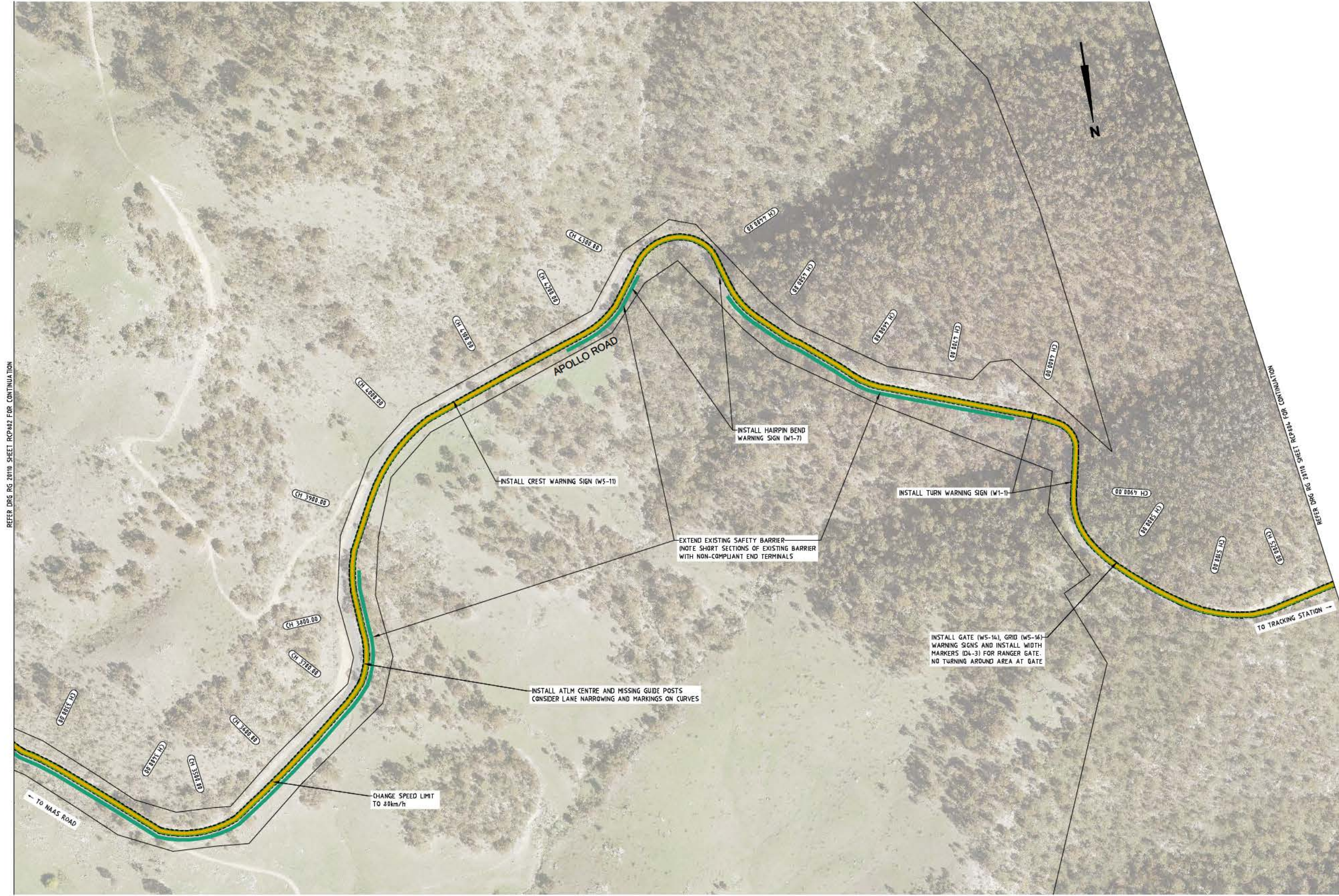
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Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	APOLLO RD CONCEPT SKETCH SHEET 2 OF 6
Date: 02/03/21	Drg. No.: RG 20110
	Sheet: RCP802
	Revision: 0



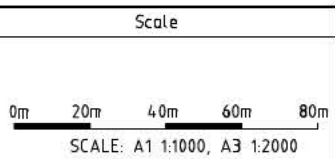
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REFER DRG RG 20110 SHEET RCP804 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

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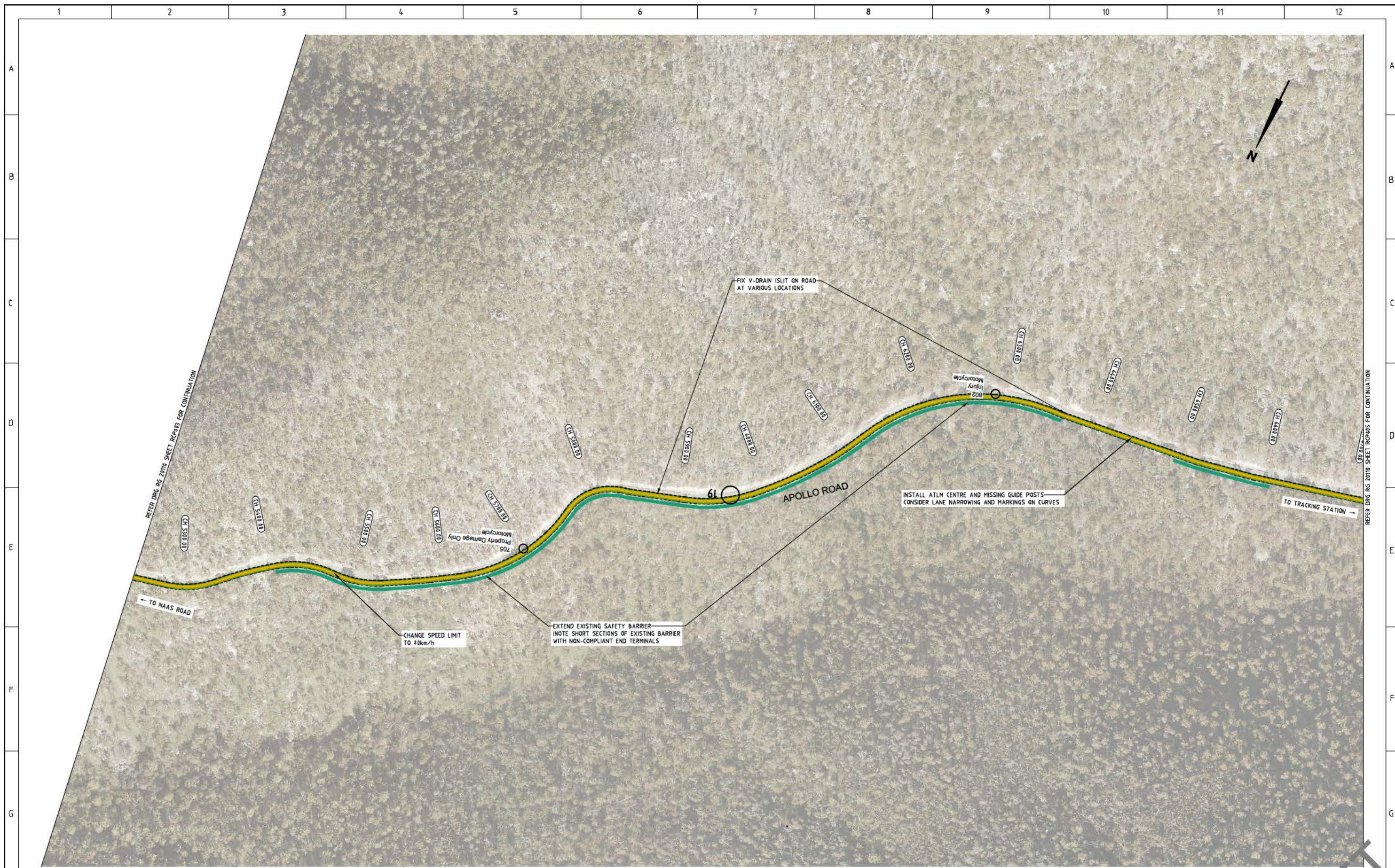
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	APOLLO RD CONCEPT SKETCH SHEET 3 OF 6
Date 02/03/21	Dwg. No. RG 20110
	Sheet RCP803
	Revision 0

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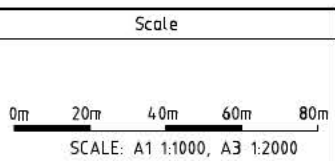


LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
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AMENDMENTS		
AMENDMENT	APPROVAL	DATE

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Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



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 Approved by:

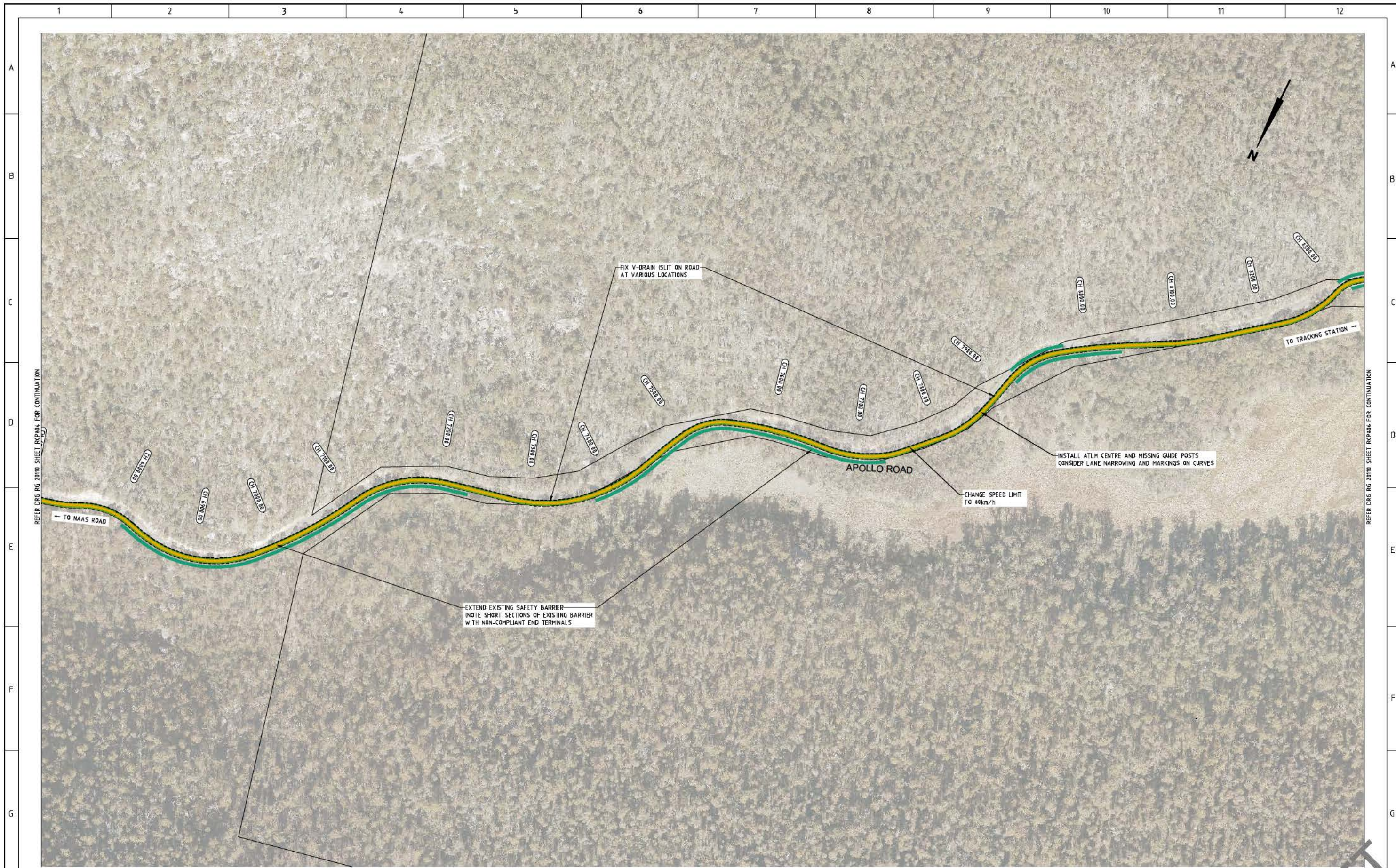
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title			
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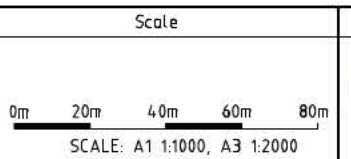
REFER DRG RG 20110 SHEET RCP806 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
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Design Agent

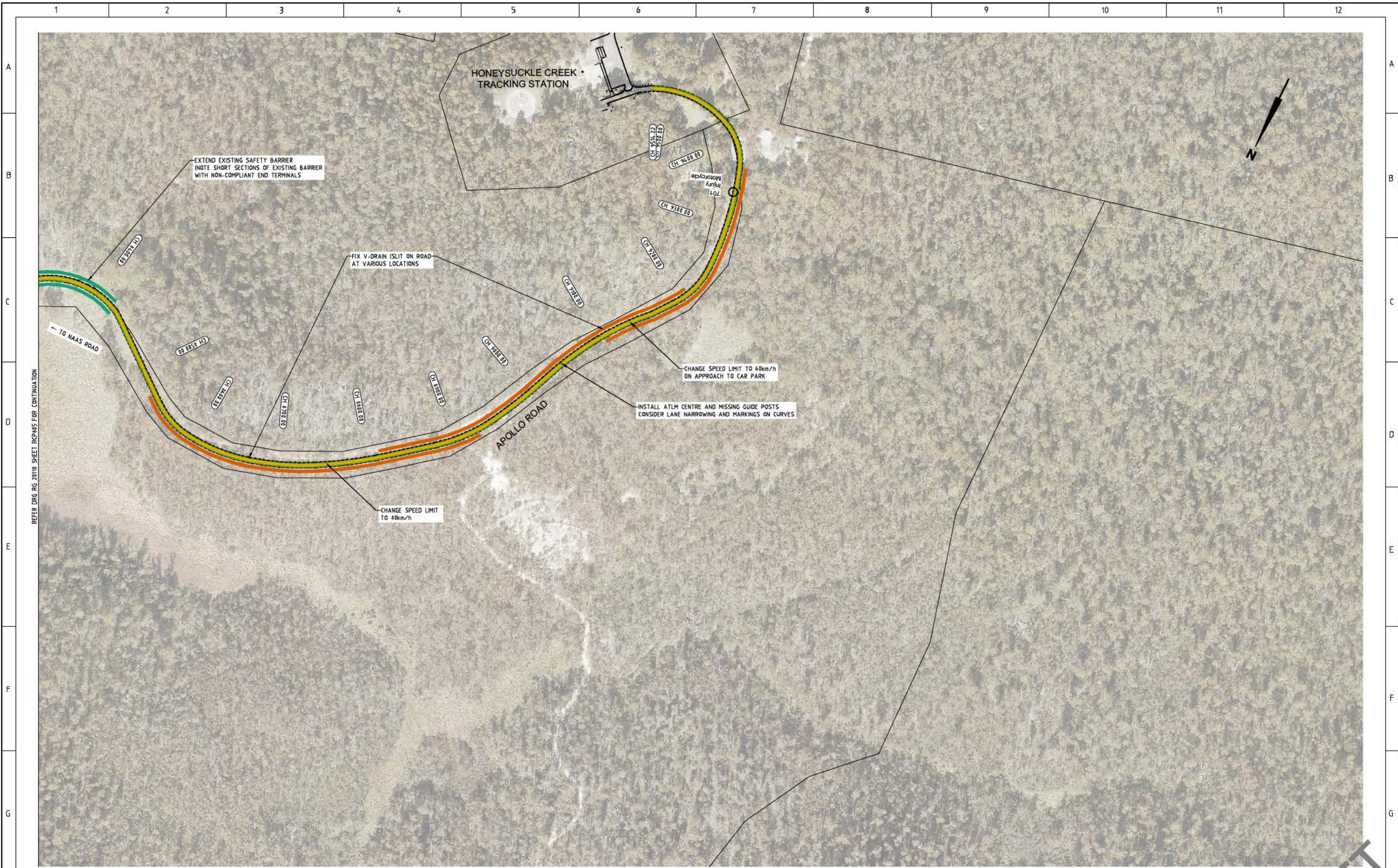
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 106, 12 Frowen Street
Campbell ACT 2602
Ph: 02 4231 4335

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	APOLLO RD CONCEPT SKETCH SHEET 5 OF 6
Date: 02/03/21	Dwg. No.: RG 20110 Sheet: RCP805 Revision: 0

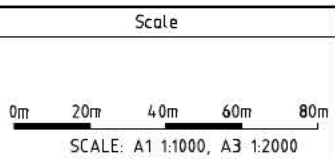


REFER DRG RG 20110 SHEET RCP806 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

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Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	APOLLO RD CONCEPT SKETCH SHEET 6 OF 6
Date 02/03/21	Drg. No. RG 20110
Sheet RCP806	Revision 0

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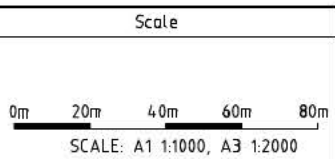


REFER DRG RG 2010 SHEET RCP902 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



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Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project

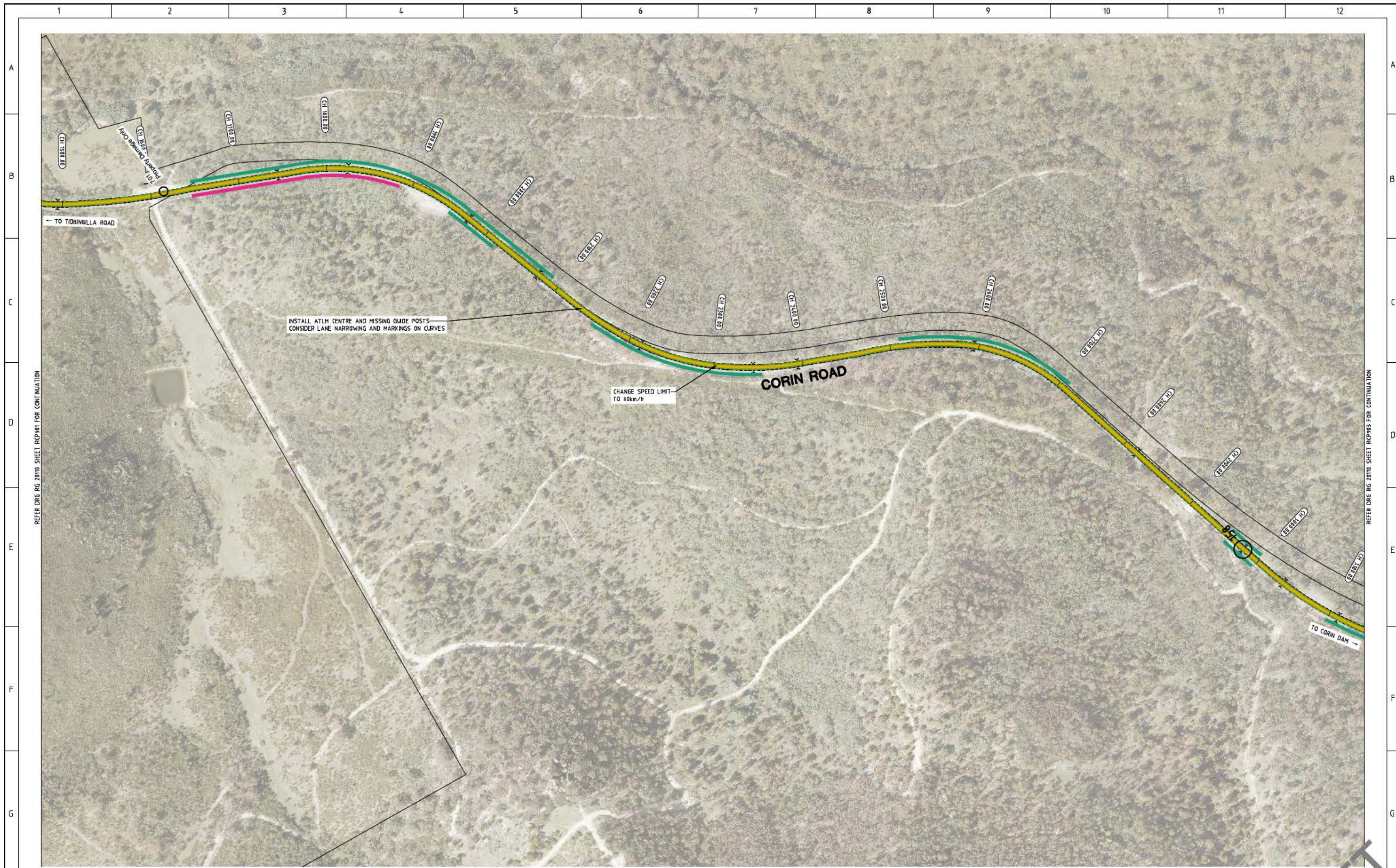
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Date: 02/03/21

Drawing Title

CORIN ROAD
CONCEPT SKETCH
SHEET 1 OF 14

Drg. No. RG 20110
Sheet RCP901
Revision 0



REFER DRG RG 20110 SHEET RCP901 FOR CONTINUATION

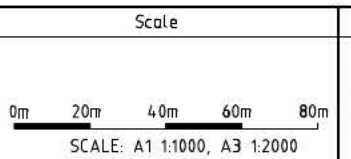
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

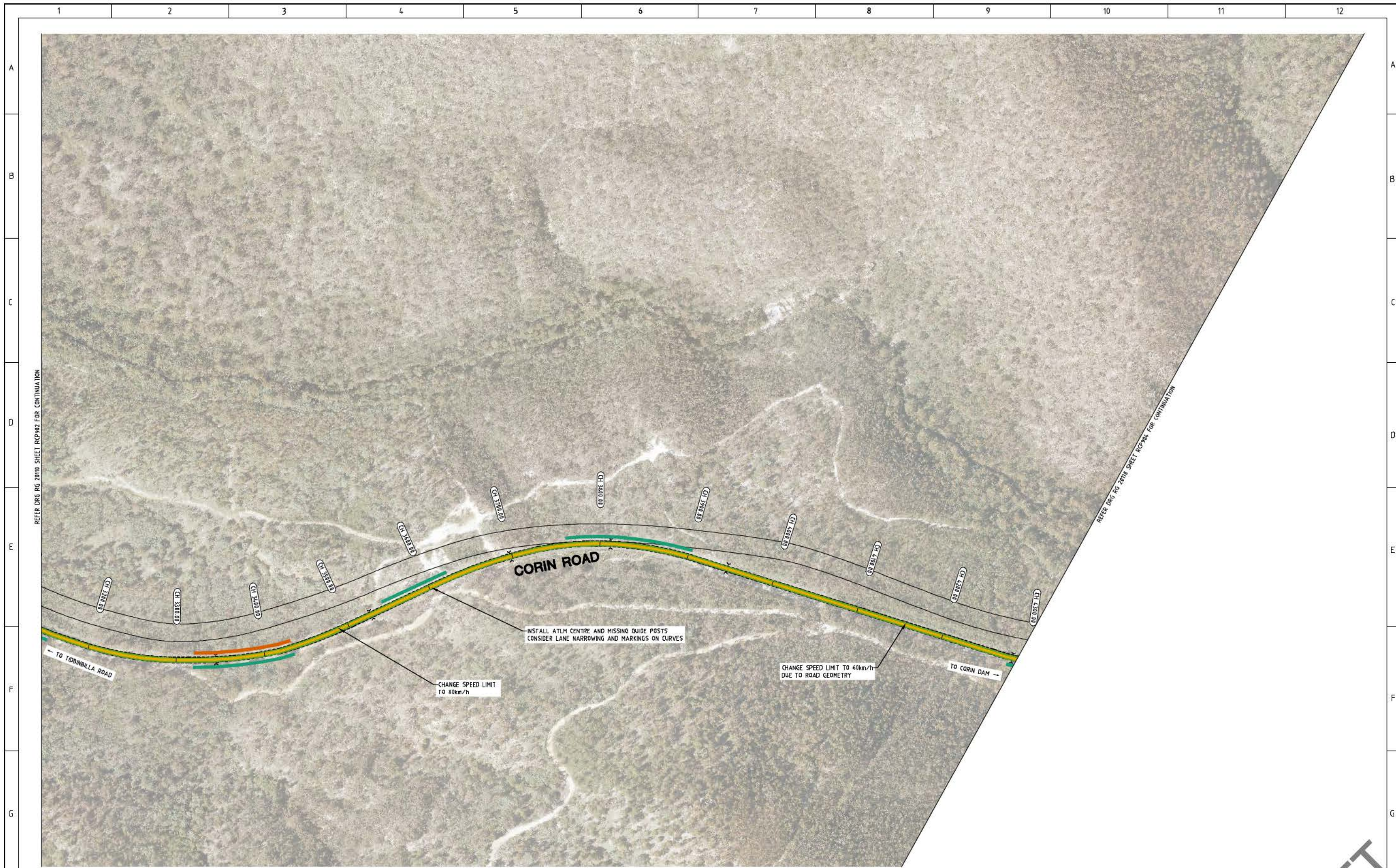
R.D. Gossip Pty Ltd
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Unit 106, 12 Frowen Street
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Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	CORIN ROAD CONCEPT SKETCH SHEET 2 OF 14
Date: 02/03/21	Dwg. No.: RG 20110 Sheet: RCP902 Revision: 0



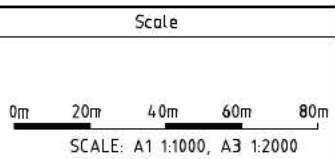
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REFER DRG RG 20110 SHEET RCP904 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
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AMENDMENTS		
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Design Agent

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Project Number: 30490

ACT
Government

Project	Drawing Title
DELIVERING ANRAM	CORIN ROAD CONCEPT SKETCH SHEET 3 OF 14
Date 02/03/21	Drg. No. RG 20110
Sheet RCP903	Revision 0

DRAFT

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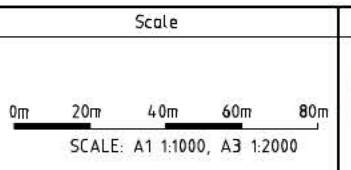


LEGEND

	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

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Design Agent

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 Drawn by:
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Client

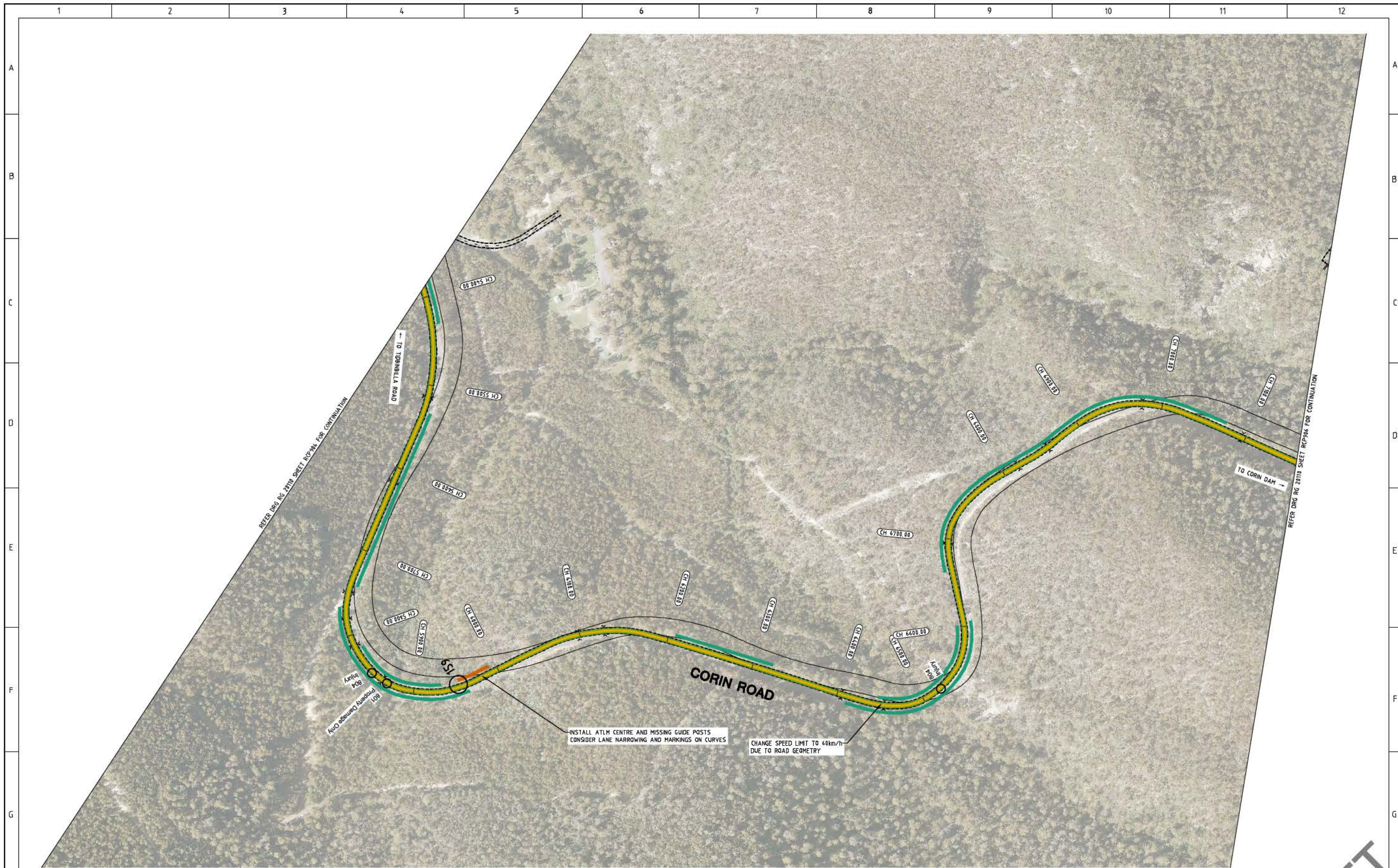
Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project		Drawing Title	
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Date	02/03/21	Dwg. No.	RG 20110
		Sheet	RCP904
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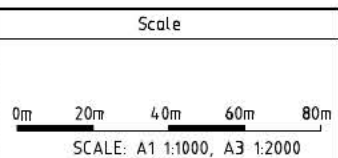
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
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Designed by	
Drawn by	
Checked by	
Approved by	

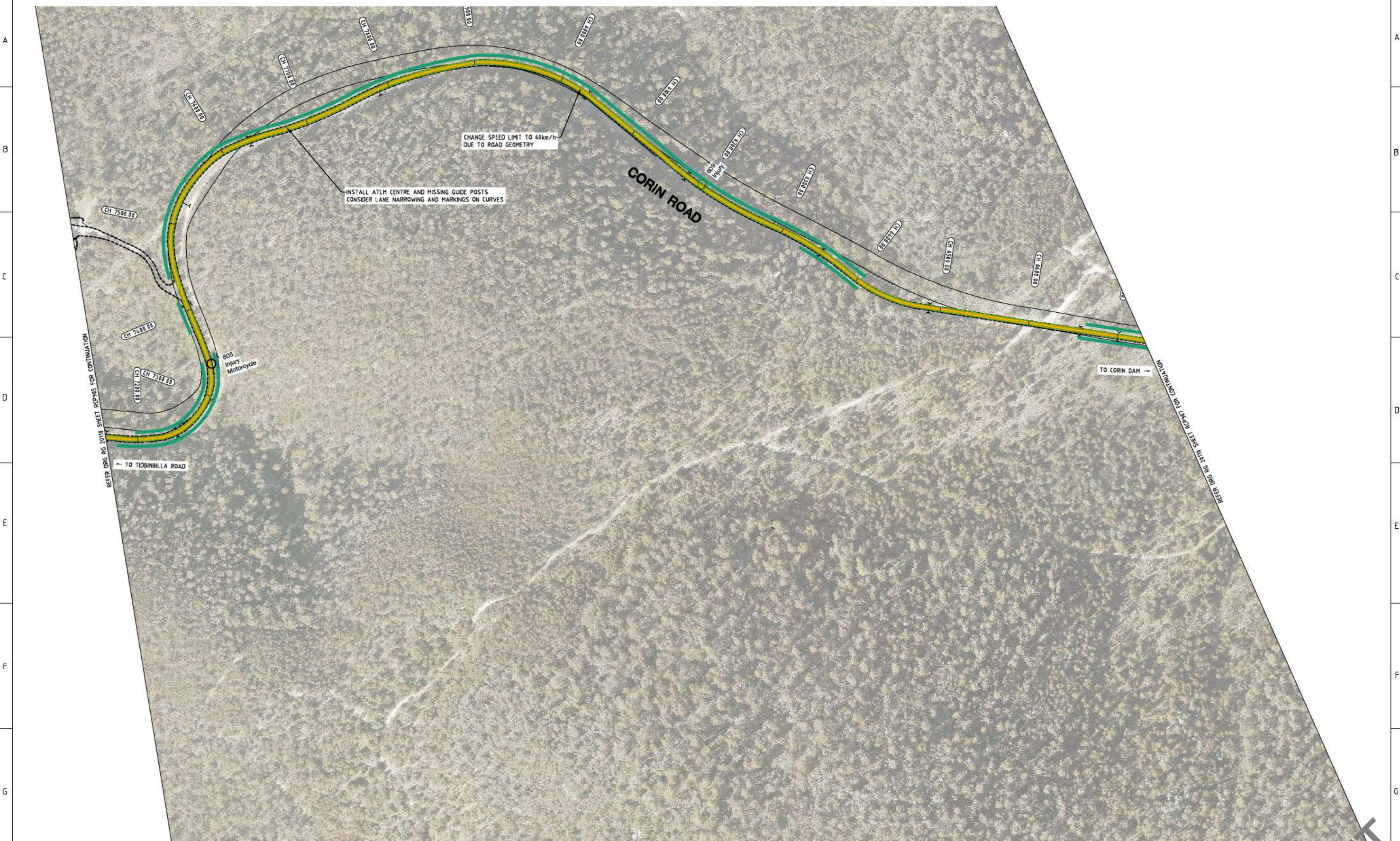
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project		Drawing Title	
DELIVERING ANRAM		CORIN ROAD CONCEPT SKETCH SHEET 5 OF 14	
Date	02/03/21	Dwg. No.	RG 20110
		Sheet	RCP905
		Revision	0

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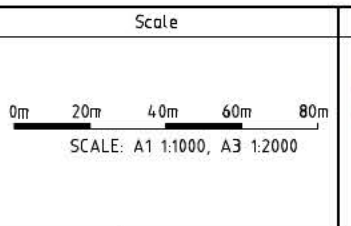
LEGEND

	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

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Design Agent

R.D. Gossip Pty Ltd
Consulting Engineers
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Geelong ACT 2602
Ph: 02 4231 4355

Designed by:

Drawn by:

Checked by:

Approved by:

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project

DELIVERING ANRAM

Date: 02/03/21

Drawing Title

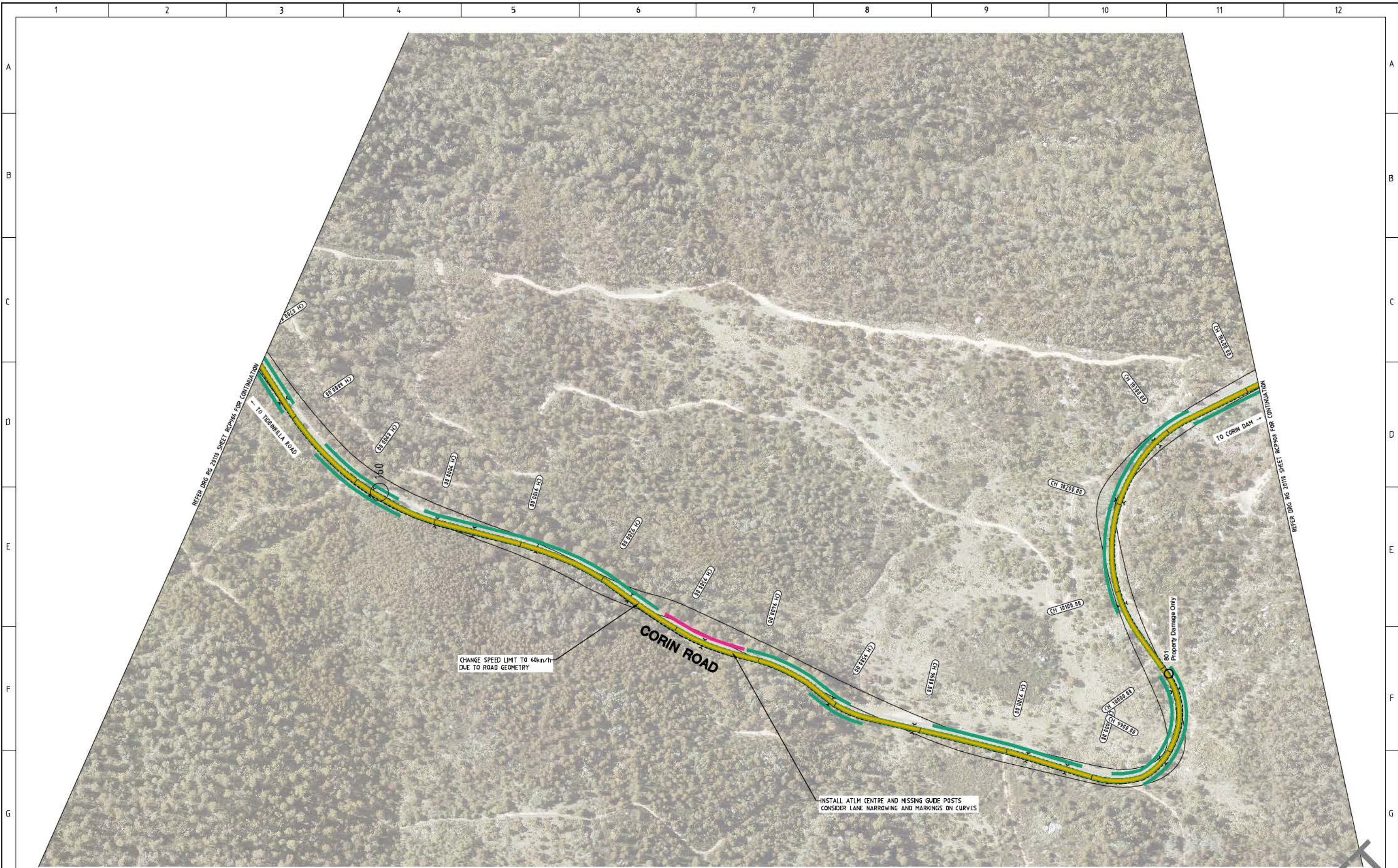
CORIN ROAD
CONCEPT SKETCH
SHEET 6 OF 14

Drg. No. RG 20110

Sheet RCP906

Revision 0

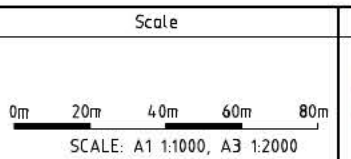
DRAFT



LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

R.D. Gossip Pty Ltd
Consulting Engineers
Unit 106, 12 Frowen Street
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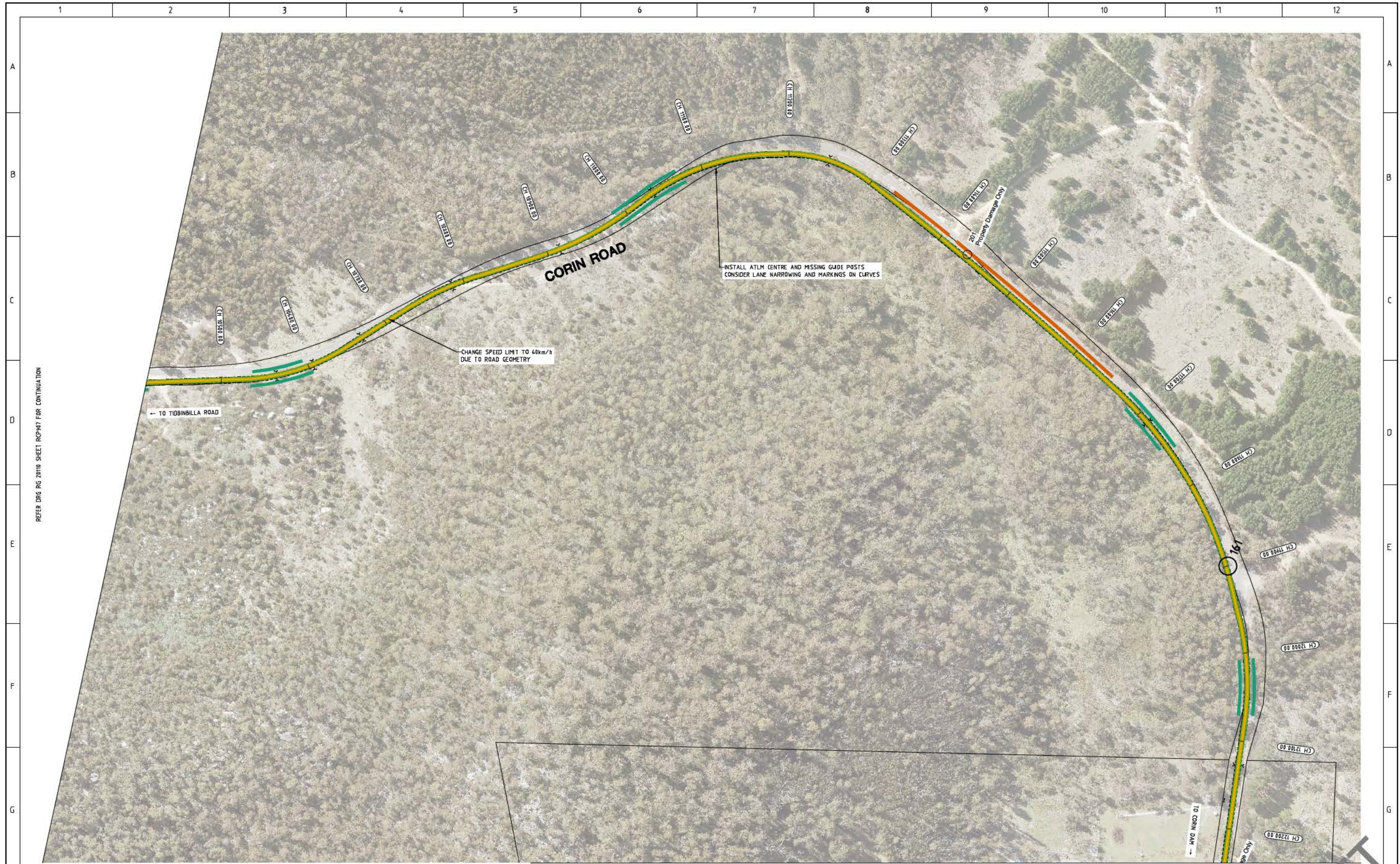
Client

Designed by: [Redacted]
 Drawn by: [Redacted]
 Checked by: [Redacted]
 Approved by: [Redacted]

Project Officer: Kencho Choden
Project Number: 30490

Project	Drawing Title
DELIVERING ANRAM	CORIN ROAD CONCEPT SKETCH SHEET 7 OF 14
Date: 02/03/21	Org. No. RG 20110
	Sheet RCP907
	Revision 0

DRAFT



REFER DRG RG 20110 SHEET RCP947 FOR CONTINUATION

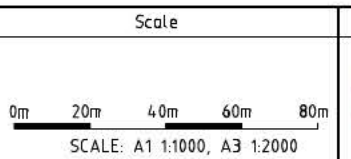
REFER DRG RG 20110 SHEET RCP909 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
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Design Agent

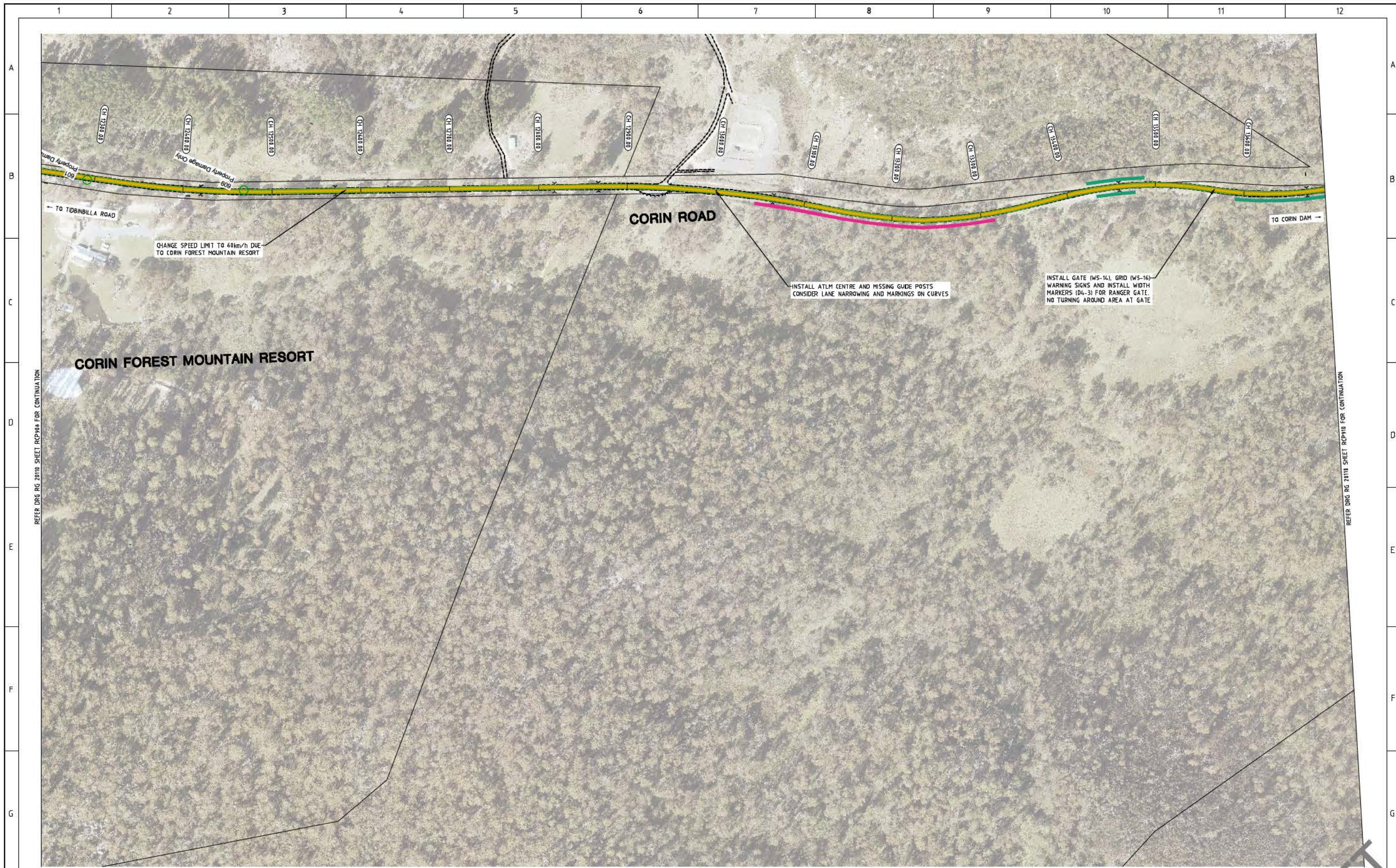
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Frewin Street
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Ph: 02 423 435

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title
DELIVERING ANRAM	CORIN ROAD CONCEPT SKETCH SHEET 8 OF 14
Date: 02/03/21	Drg. No.: RG 20110 Sheet: RCP908 Revision: 0



REFER DRG RG 20110 SHEET RCP909 FOR CONTINUATION

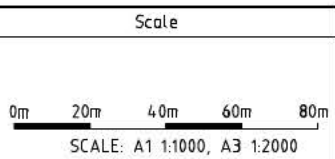
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LEGEND

	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

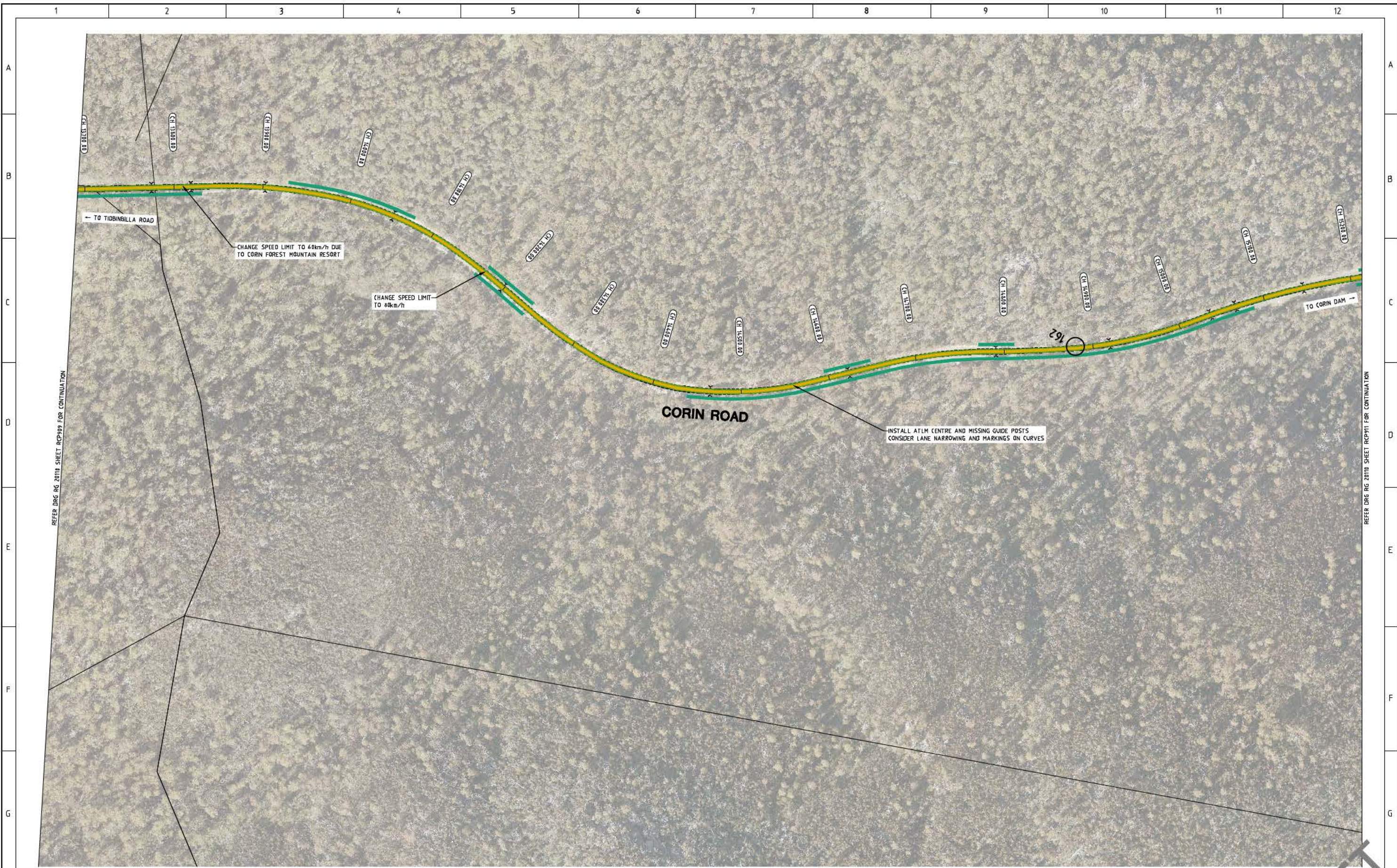
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 106, 12 Frewin Street
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Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	CORIN ROAD CONCEPT SKETCH SHEET 9 OF 14
Date: 02/03/21	Org. No. RG 20110 Sheet RCP909 Revision 0



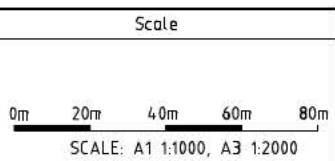
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REFER DRG RG 2010 SHEET RCP911 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

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Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title						
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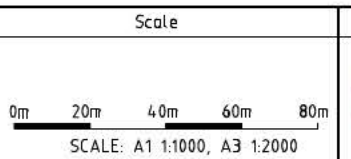
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REFER DRG RG 20110 SHEET RCP912 FOR CONTINUATION

LEGEND

-  INSTALL AUDIO TACTILE LINE MARKING (ATLM)
-  CHANGE SPEED LIMIT
-  INSTALL SAFETY BARRIER
-  CLEAR VEGETATION OR INSTALL SAFETY BARRIER
-  CLEAR VEGETATION AND INSTALL SAFETY BARRIER
-  CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--




Design Agent



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Project Officer: Kencho Choden
Project Number: 30490



ACT Government

Project	Drawing Title
DELIVERING ANRAM	CORIN ROAD CONCEPT SKETCH SHEET 11 OF 14
Date: 02/03/21	Drg. No.: RG 20110 Sheet: RCP911 Revision: 0



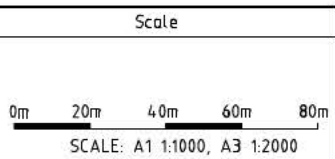
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REFER DRG RG 20110 SHEET RCP910 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

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Client

Project Officer: Kencho Choden
Project Number: 30490

Project	Drawing Title
DELIVERING ANRAM	CORIN ROAD CONCEPT SKETCH SHEET 12 OF 14
Date: 02/03/21	Drg. No.: RG 20110
	Sheet: RCP912
	Revision: 0

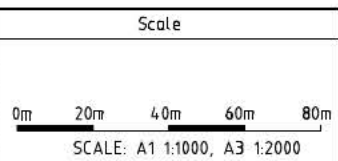
DRAFT



LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

R.D. Gossip Pty Ltd
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Unit 106, 12 Frowen Street
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Ph: 02 423 435

Client

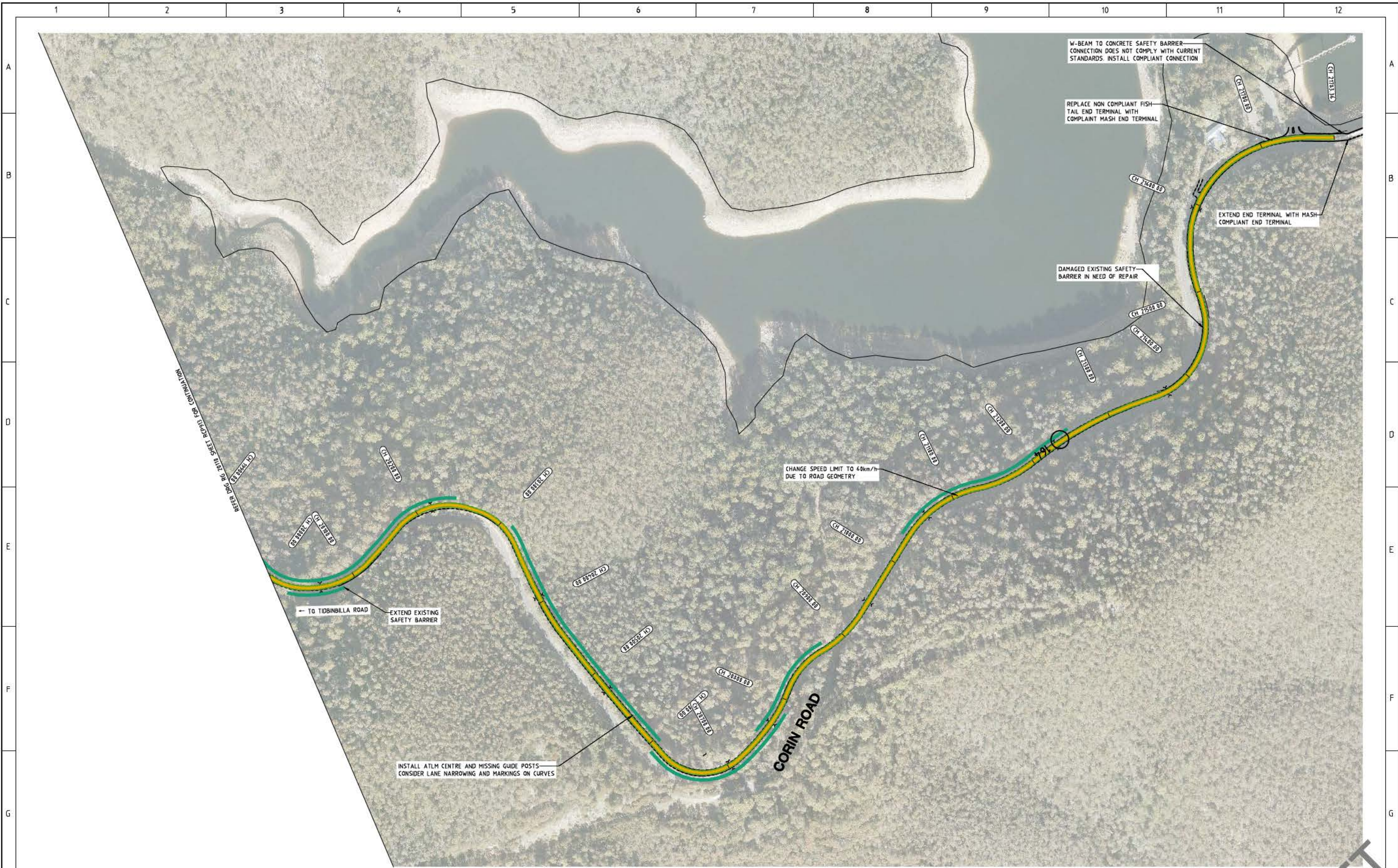
Project Officer: Kencho Choden
Project Number: 30490

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Project	Drawing Title
DELIVERING ANRAM	CORIN ROAD CONCEPT SKETCH SHEET 13 OF 14
Date: 02/03/21	Drg. No.: RG 20110

Sheet	Revision
RCP913	0

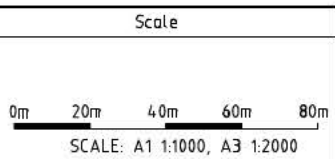
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
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Design Agent

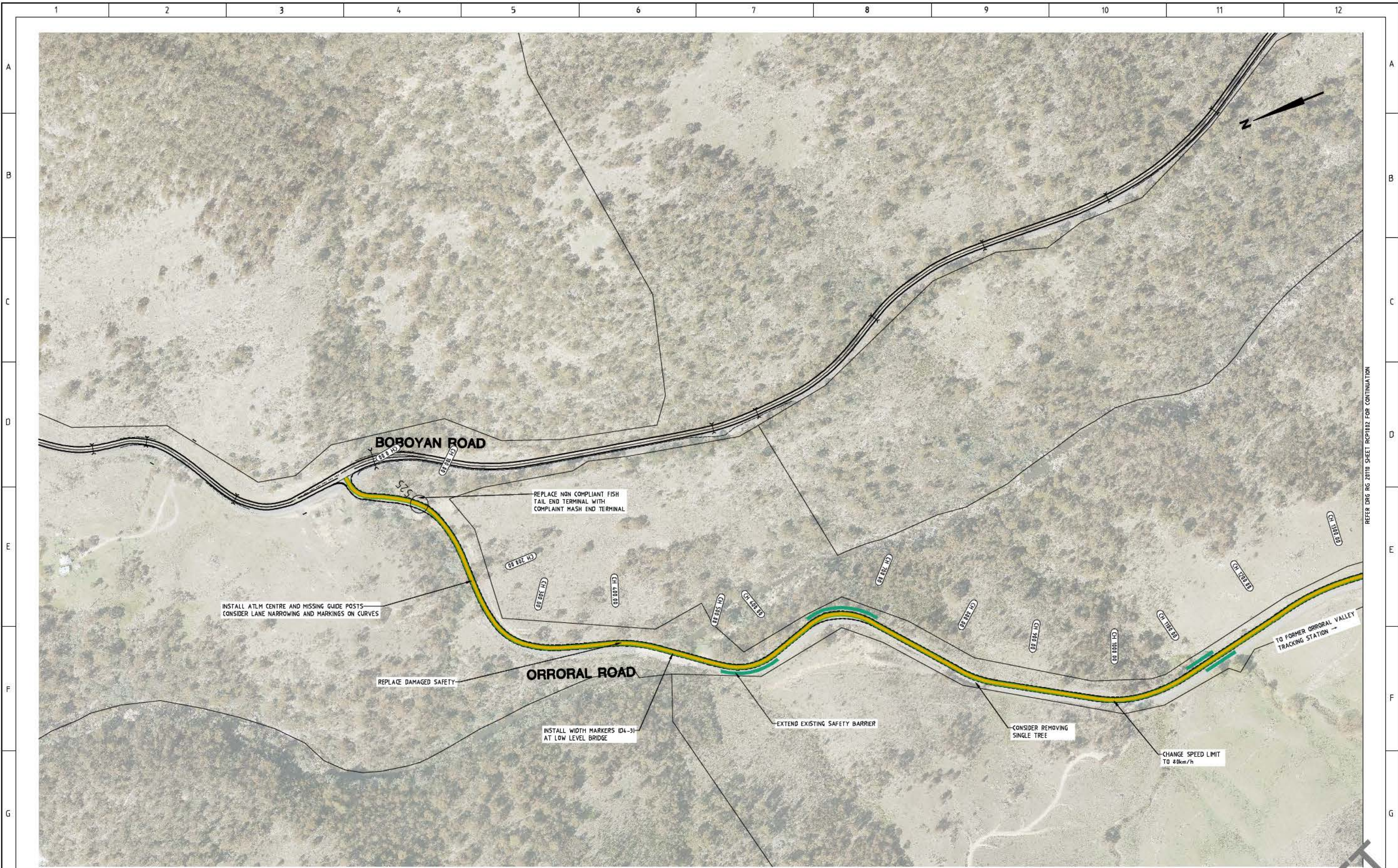
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Frowen Street
Corin ACT 2842
Ph: 02 4231 4335

Client

ACT
Government

Project	Drawing Title
DELIVERING ANRAM	CORIN ROAD CONCEPT SKETCH SHEET 14 OF 14
Date: 02/03/21	Drg. No.: RG 20110
	Sheet: RCP914
	Revision: 0

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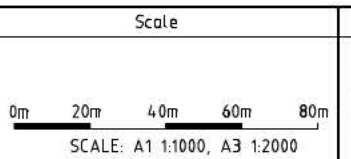


REFER DRG RG 2010 SHEET RCP1001 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

R.D. Gossip Pty Ltd
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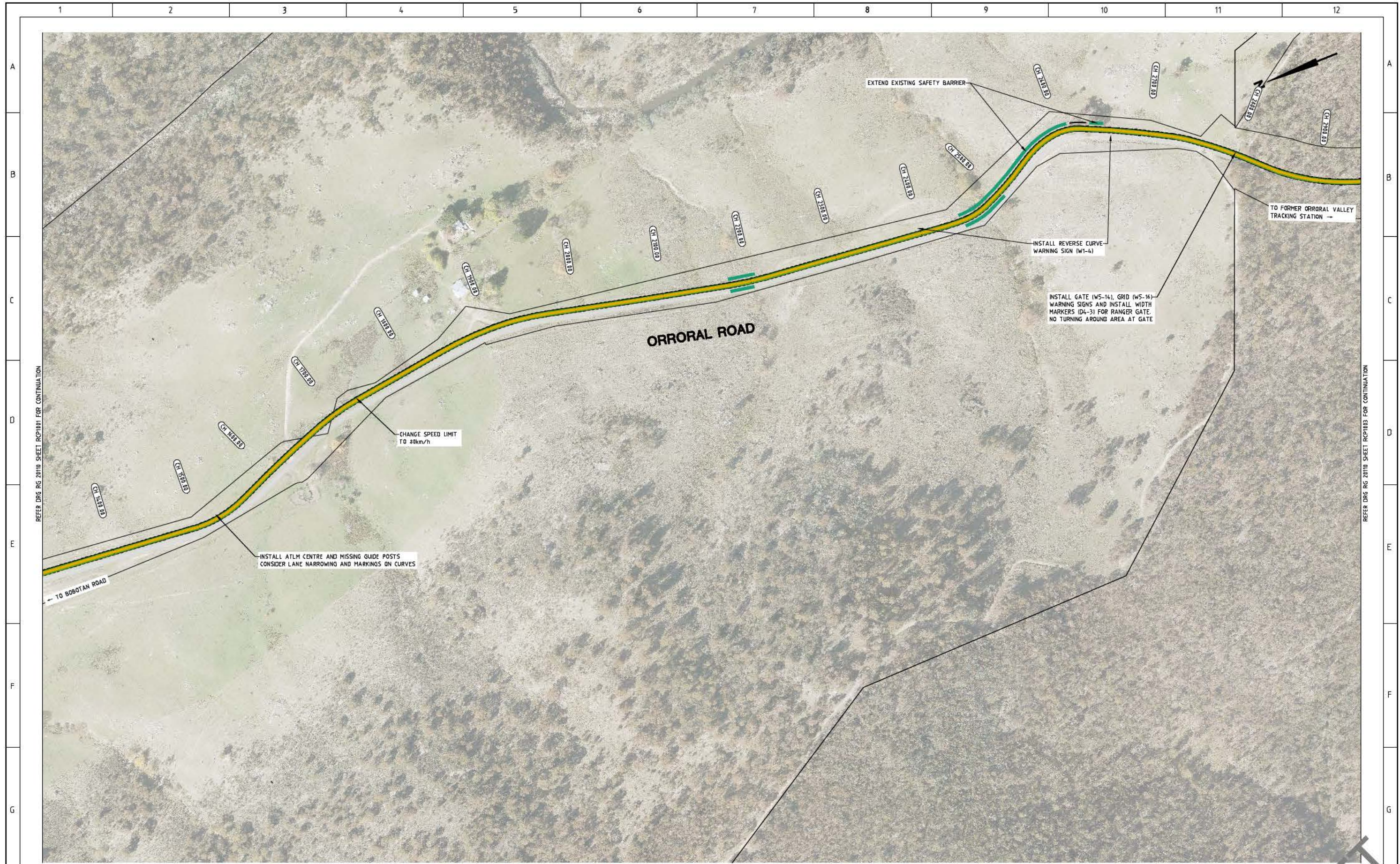
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title
DELIVERING ANRAM	ORRORAL RD CONCEPT SKETCH SHEET 1 OF 7
Date: 02/03/21	Drg. No.: RG 20110
	Sheet: RCP1001
	Revision: 0

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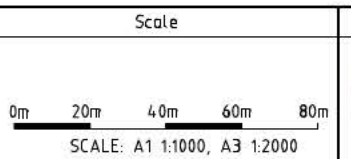
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REFER DRG RG 20110 SHEET RCP1003 FOR CONTINUATION

LEGEND

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- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/-- Issued for construction: --/--/-- W.A.E.: --/--/--		



Design Agent

R.D. Gossip Pty Ltd
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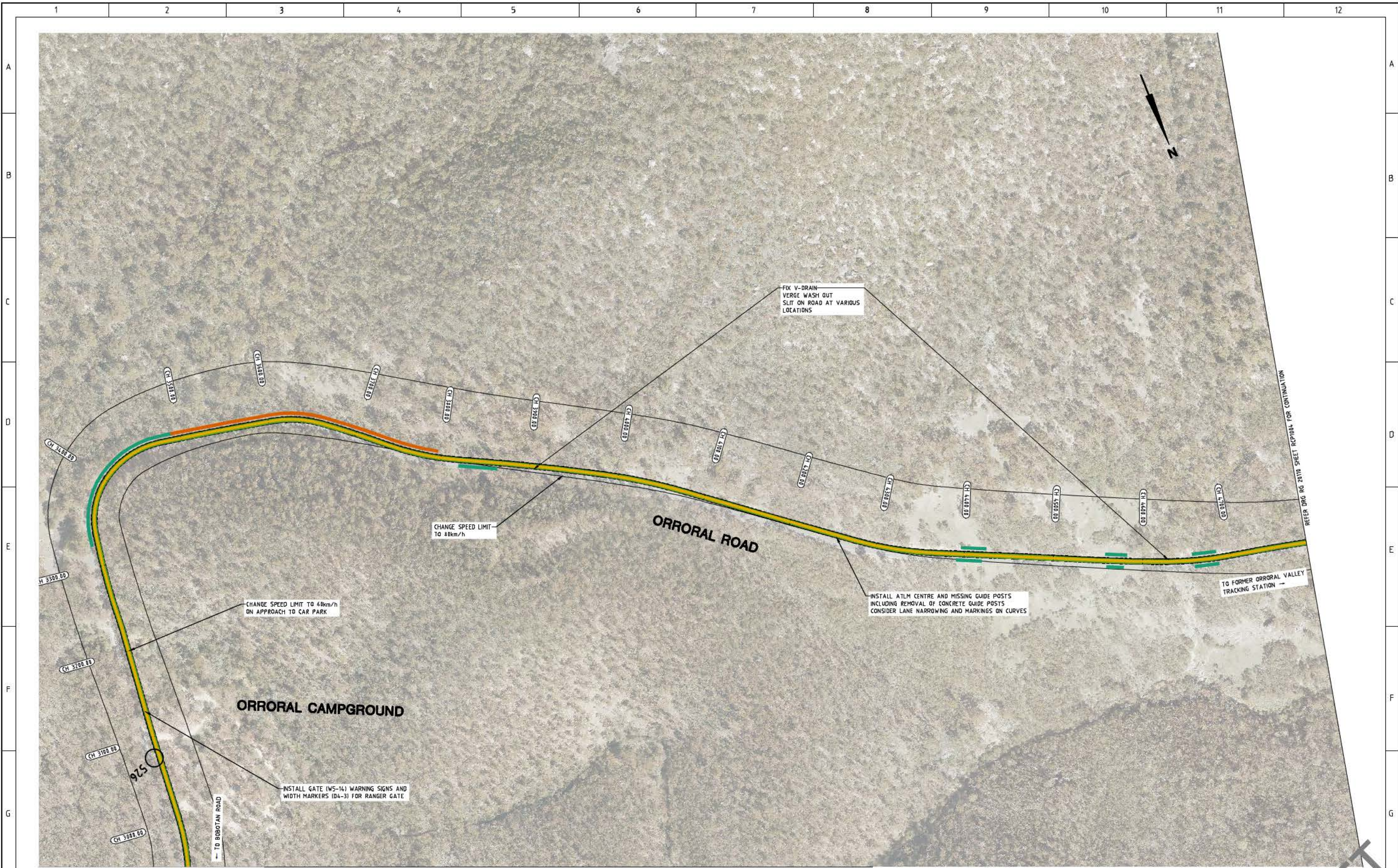
Client

Project Officer: Kencho Choden
Project Number: 30490

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Project	Drawing Title
DELIVERING ANRAM	ORRORAL RD CONCEPT SKETCH SHEET 2 OF 7
Date 02/03/21	Drg. No. RG 20110 Sheet RCP1002 Revision 0

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LEGEND

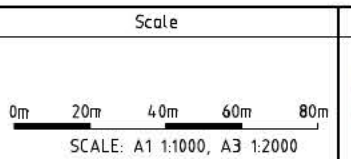
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- CHANGE SPEED LIMIT
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- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

REFER DRG RG 20110 SHEET RCP1002 FOR CONTINUATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

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Design Agent

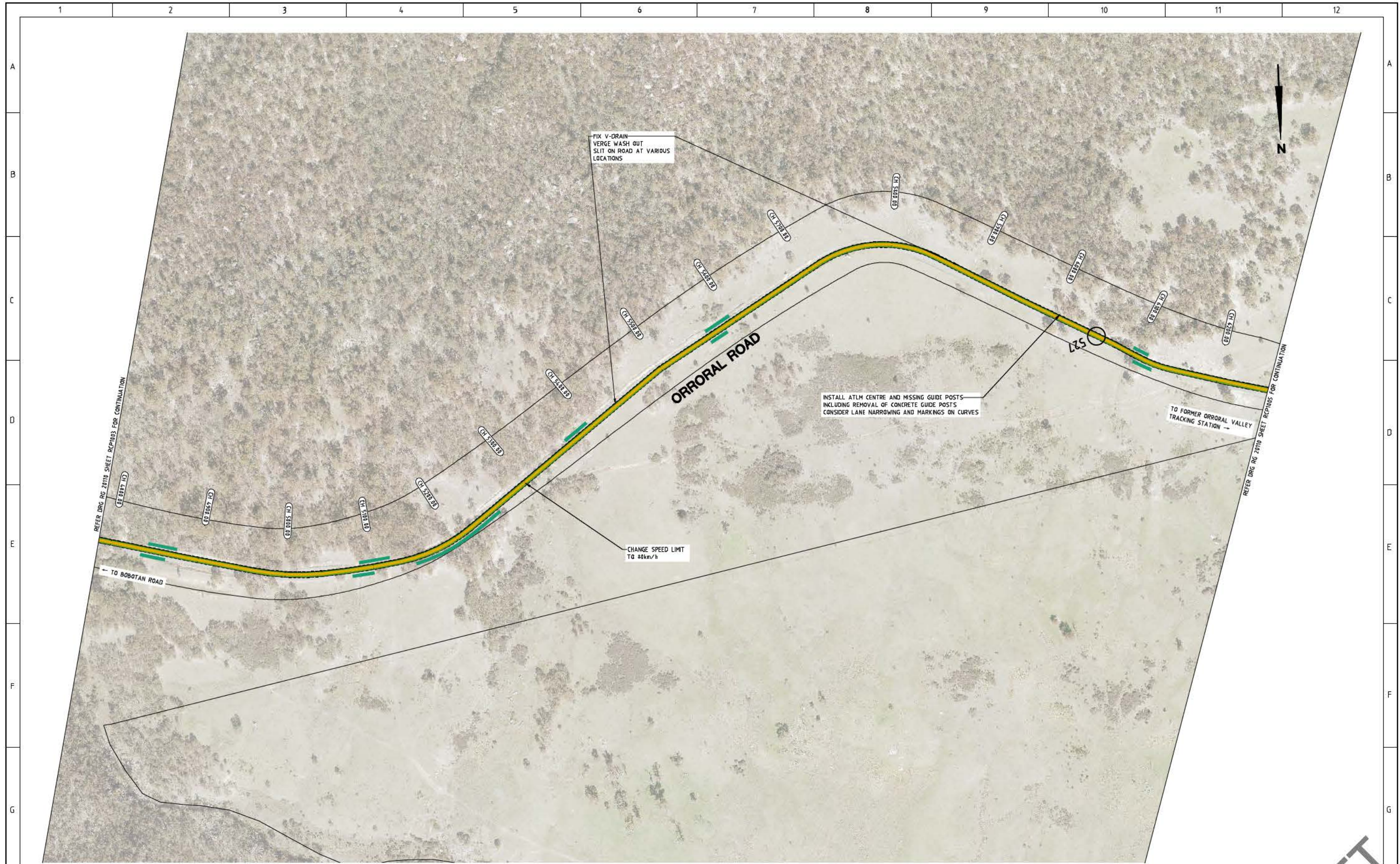
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Frewin Street
Geppah ACT 2842
Ph: 02 429 4395

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

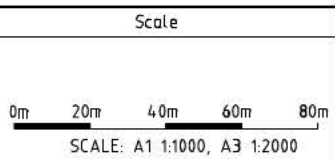
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DELIVERING ANRAM	ORRORAL RD CONCEPT SKETCH SHEET 3 OF 7
Date: 02/03/21	Org. No: RG 20110
Sheet: RCP1003	Revision: 0



LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

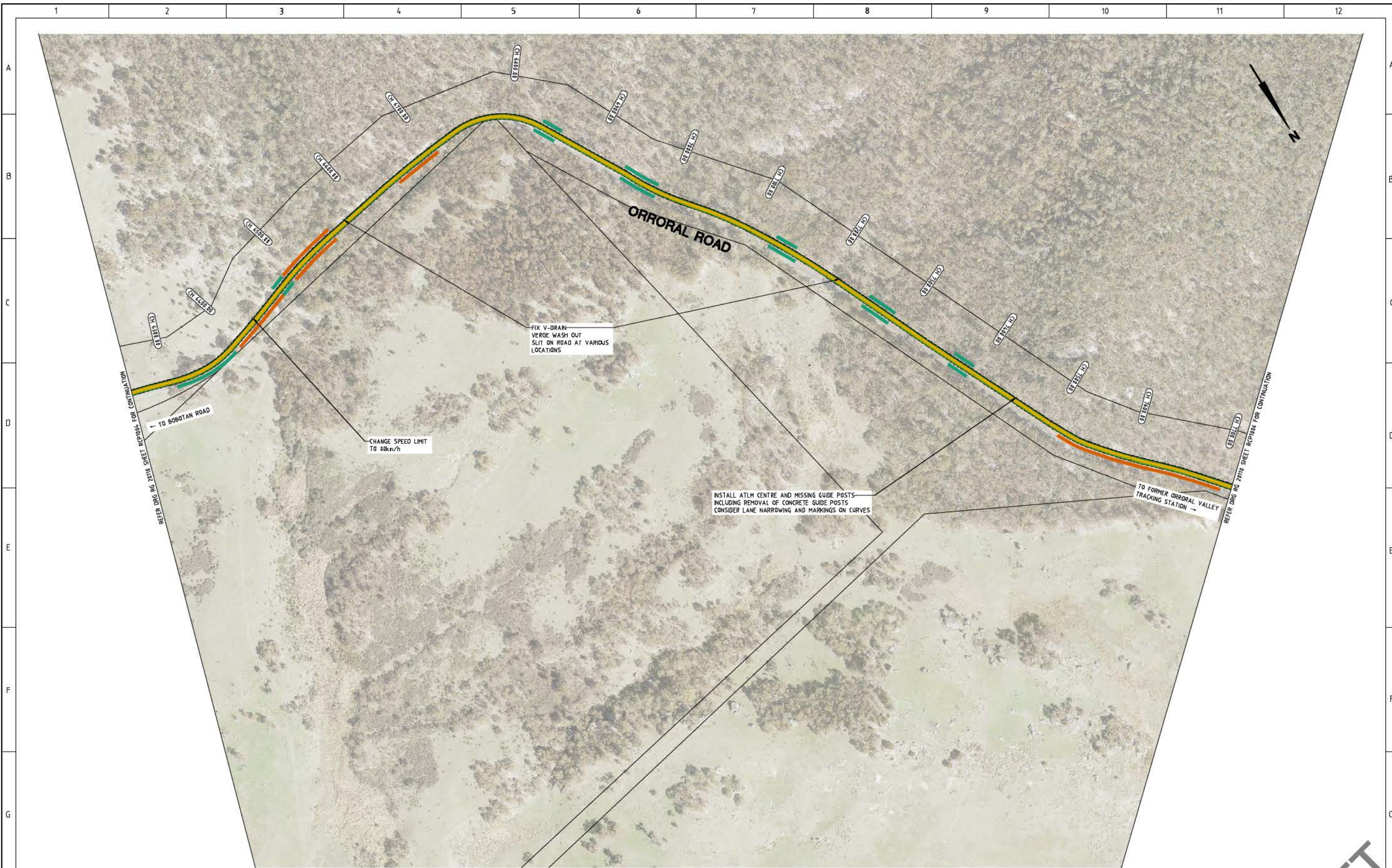
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Prawn Street
Orororo ACT 2842
Ph: 02 423 4335

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

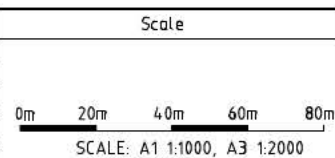
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DELIVERING ANRAM	ORRORAL RD CONCEPT SKETCH SHEET 4 OF 7
Date 02/03/21	Drg. No. RG 20110
	Sheet RCP1004
	Revision 0



LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/-- Issued for construction: --/--/-- W.A.E.: --/--/--		



Design Agent

R.D. Gossip Pty Ltd
Consulting Engineers
Unit 106, 12 Power Street
Gungahlin ACT 2607
Ph: 02 4281 4358

Designed by	█
Drawn by	█
Checked by	█
Approved by	█

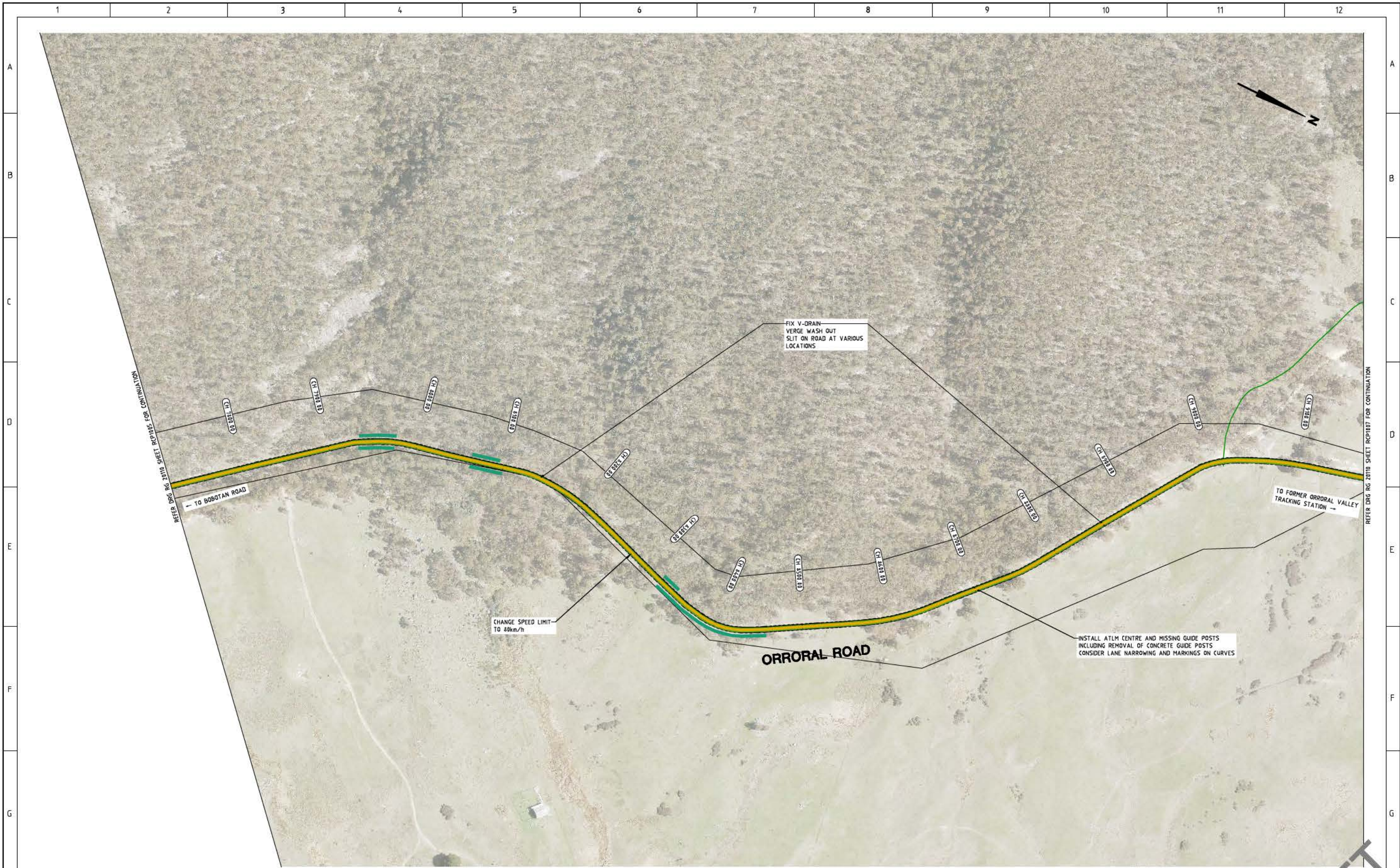
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title
DELIVERING ANRAM	ORRORAL RD CONCEPT SKETCH SHEET 5 OF 7
Date 02/03/21	Drg. No. RG 20110

Sheet RCP1005	Revision 0
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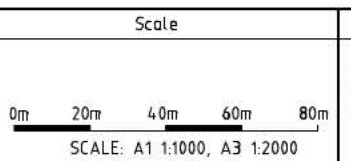


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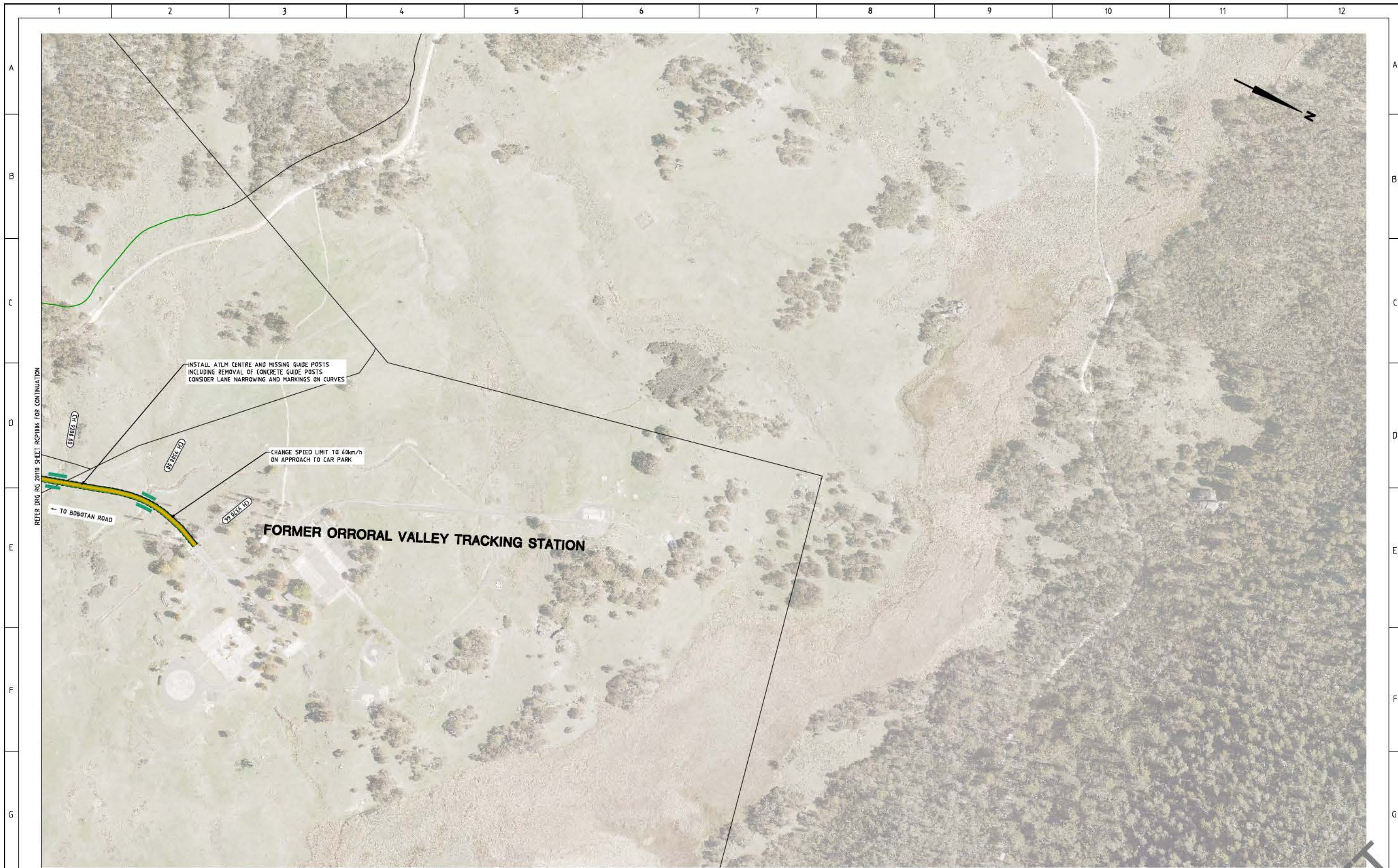
- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
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- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent	Client	Project	Drawing Title
 R.D. Gossip Pty Ltd <small>Consulting Engineers</small> <small>Unit 106, 12 Fowkes Street</small> <small>Canberra ACT 2602</small> <small>Ph: 02 4291 4335</small>	 ACT <small>Government</small>	DELIVERING ANRAM Date: 02/03/21	ORRORAL RD CONCEPT SKETCH SHEET 6 OF 7 Drg. No. RG 20110 Sheet RCP1006 Revision 0

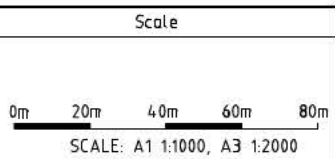


REFER DRG RG 20110 SHEET RCP1004 FOR CONTINUATION

LEGEND

-  INSTALL AUDIO TACTILE LINE MARKING (ATLM)
-  CHANGE SPEED LIMIT
-  INSTALL SAFETY BARRIER
-  CLEAR VEGETATION OR INSTALL SAFETY BARRIER
-  CLEAR VEGETATION AND INSTALL SAFETY BARRIER
-  CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent



R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Frowen Street
Garrulih ACT 2842
Ph: 02 429 435

Designed by: 
 Drawn by: 
 Checked by: 
 Approved by: 

Client

Project Officer: Kencho Choden
Project Number: 30490



Project

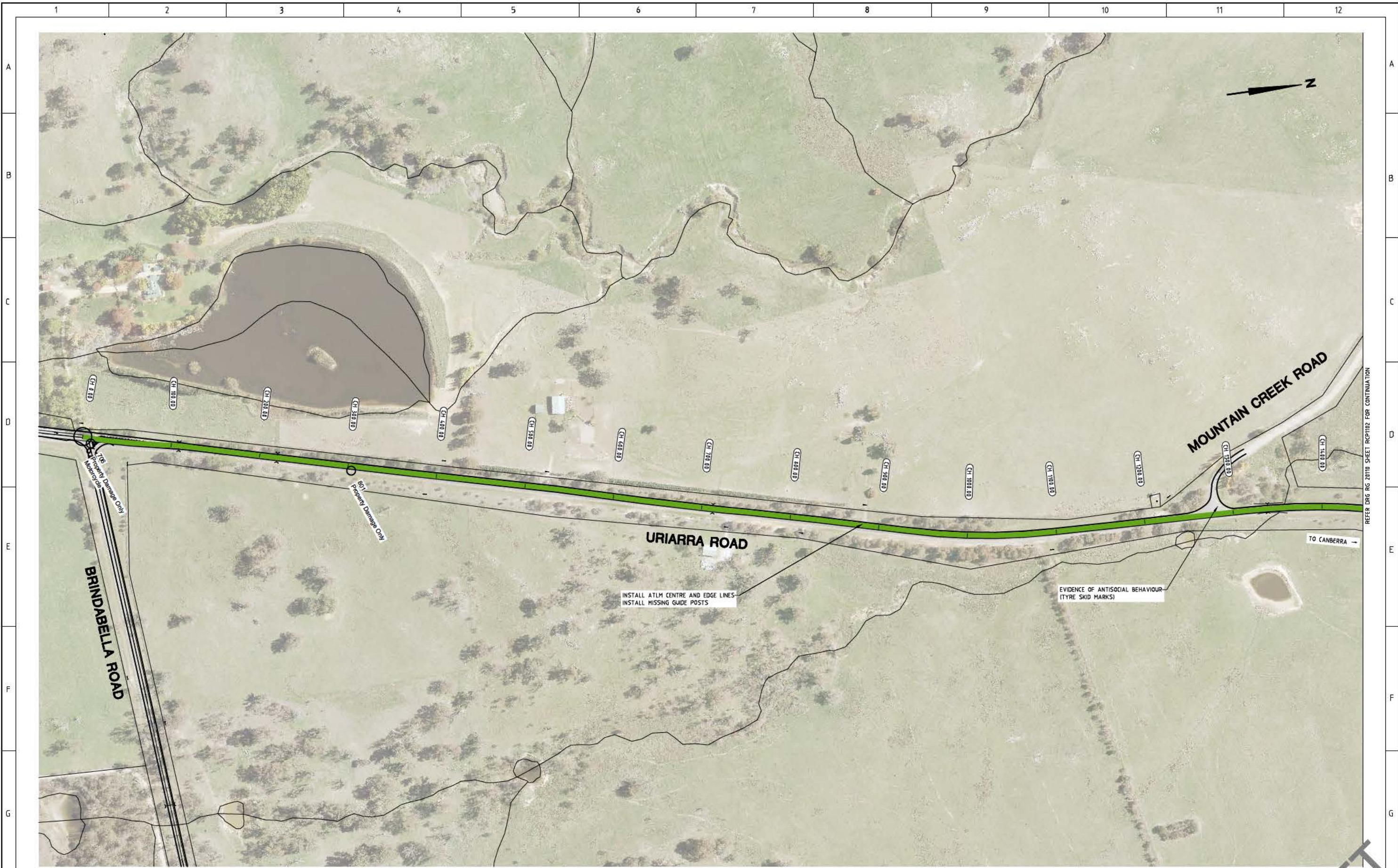
DELIVERING ANRAM

Date: 02/03/21

Drawing Title

ORRORAL RD
CONCEPT SKETCH
SHEET 7 OF 7

Drg. No. RG 20110
Sheet RCP1007
Revision 0



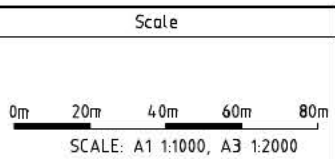
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

R.D. Gossip Pty Ltd
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Unit 106, 12 Frowen Street
Gungahlin ACT 2902
Ph: 02 429 4395

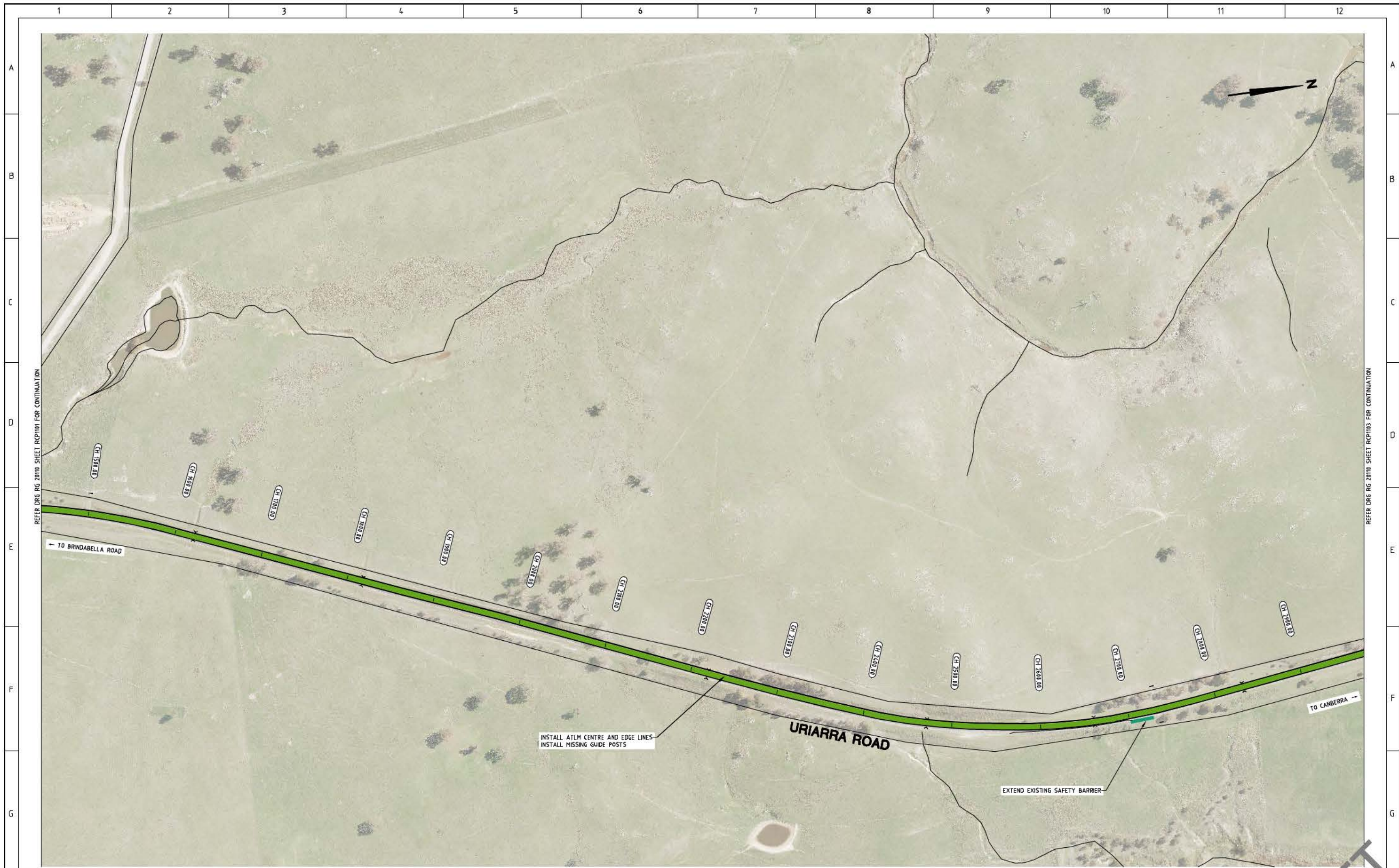
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title
DELIVERING ANRAM	URIARRA RD CONCEPT SKETCH SHEET 1 OF 12
Date: 02/03/21	Dwg. No.: RG 20110
	Sheet: RCP1101
	Revision: 0

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REFER DRG RG 20110 SHEET RCP1101 FOR CONTINUATION

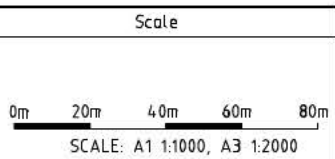
REFER DRG RG 20110 SHEET RCP1103 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

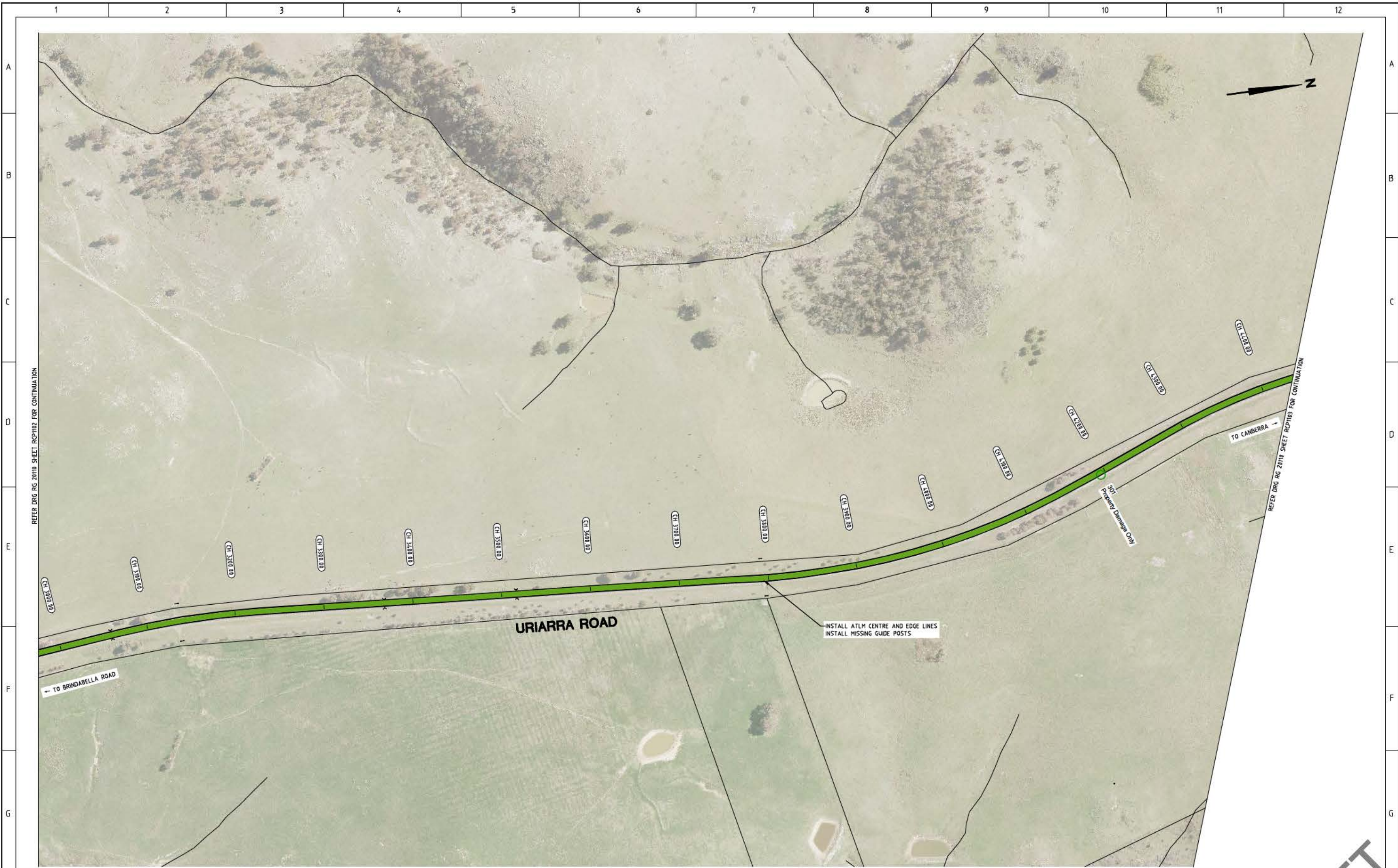
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 106, 12 Frewin Street
Canberra ACT 2602
Ph: 02 429 4395

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	URIARRA RD CONCEPT SKETCH SHEET 2 OF 12
Date: 02/03/21	Dwg. No.: RG 20110
	Sheet: RCP1102
	Revision: 0



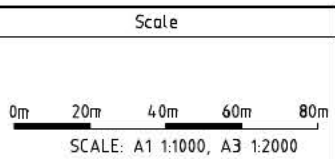
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REFER DRG RG 20110 SHEET RCP1103 FOR CONTINUATION

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	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

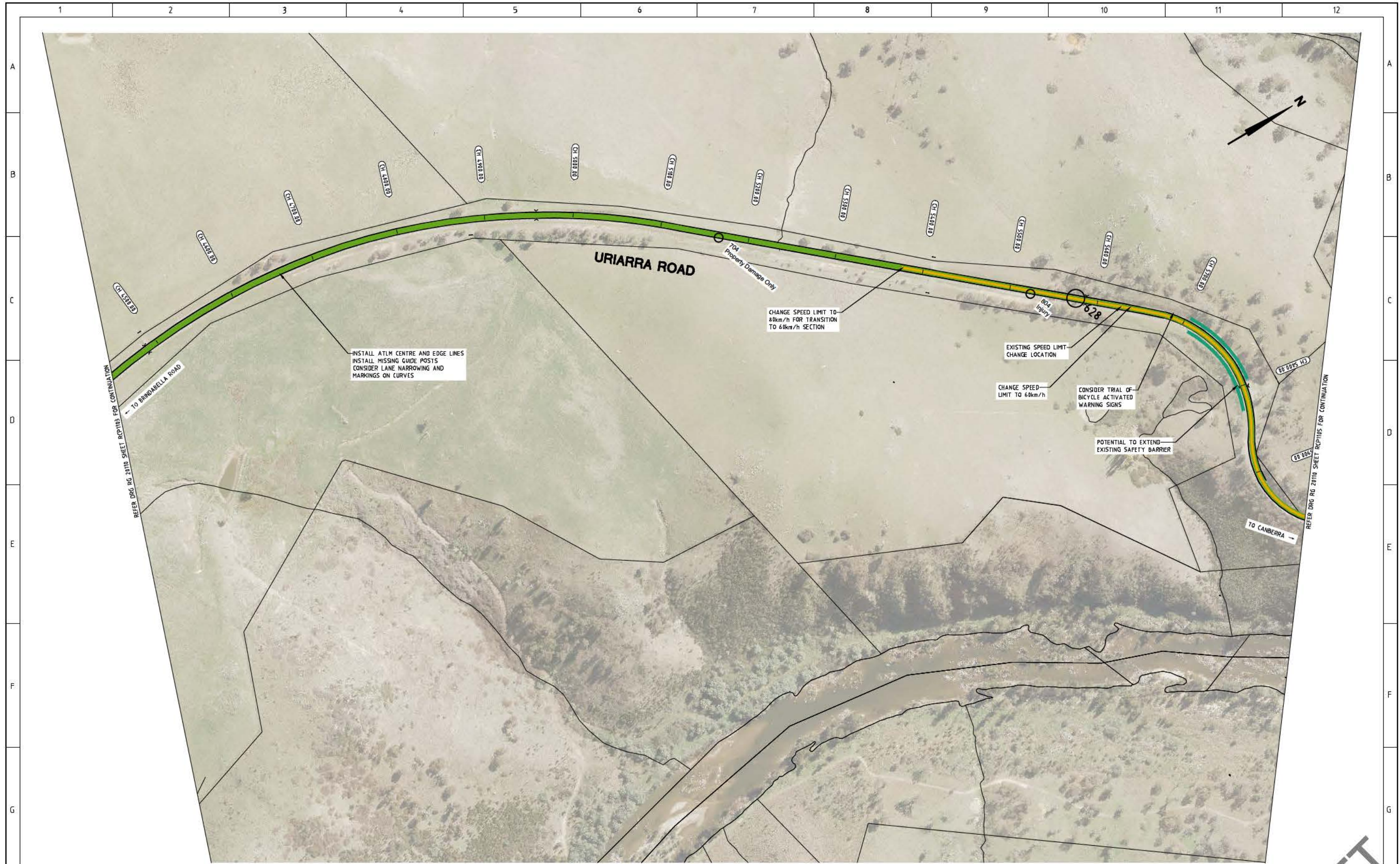
R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Frewin Street
Canberra ACT 2602
Ph: 02 429 4395

Client

Project Officer: Kencho Choden
Project Number: 30490

Project	Drawing Title						
DELIVERING ANRAM	URIARRA RD CONCEPT SKETCH SHEET 3 OF 12						
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DRAFT



REFER DRG RG 2010 SHEET RCP105 FOR CONTINUATION

TO BIRABABELLA ROAD

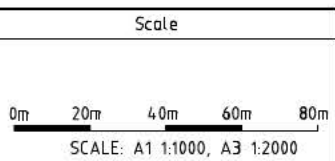
REFER DRG RG 2010 SHEET RCP105 FOR CONTINUATION

TO CANBERRA

LEGEND

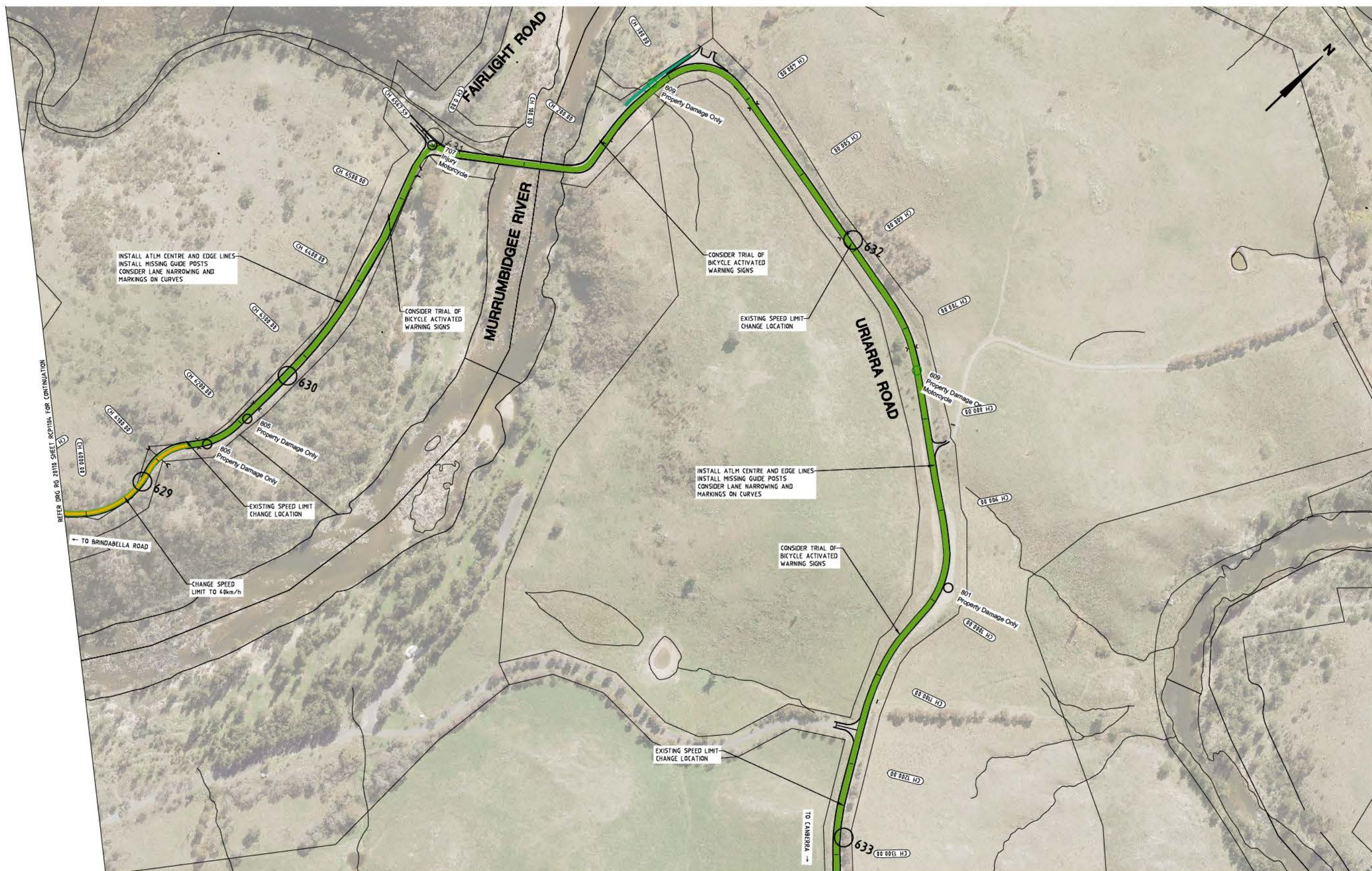
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- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/-- Issued for construction: --/--/-- W.A.E.: --/--/--		



<p>Design Agent</p>  <p>R.D. Gossip Pty Ltd Consulting Engineers Unit 108, 12 Power Street Canberra ACT 2602 Ph: 02 423 4355</p>	<p>Client</p> <p>Project Officer: Kencho Choden Project Number: 30490</p>  <p>ACT Government</p>	<p>Project</p> <p>DELIVERING ANRAM</p>	<p>Drawing Title</p> <p>URIARRA RD CONCEPT SKETCH SHEET 4 OF 12</p>
<p>Designed by: </p> <p>Drawn by: </p> <p>Checked by: </p> <p>Approved by: </p>		<p>Date: 02/03/21</p>	<p>Drg. No. RG 20110 Sheet RCP1104 Revision 0</p>

DRAFT



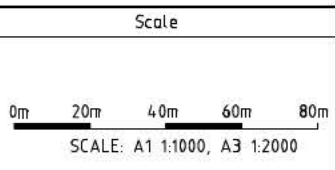
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- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

R.D. Gossip Pty Ltd
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Unit 106, 12 Frewin Street
Canberra ACT 2602
Ph: 02 423 4335

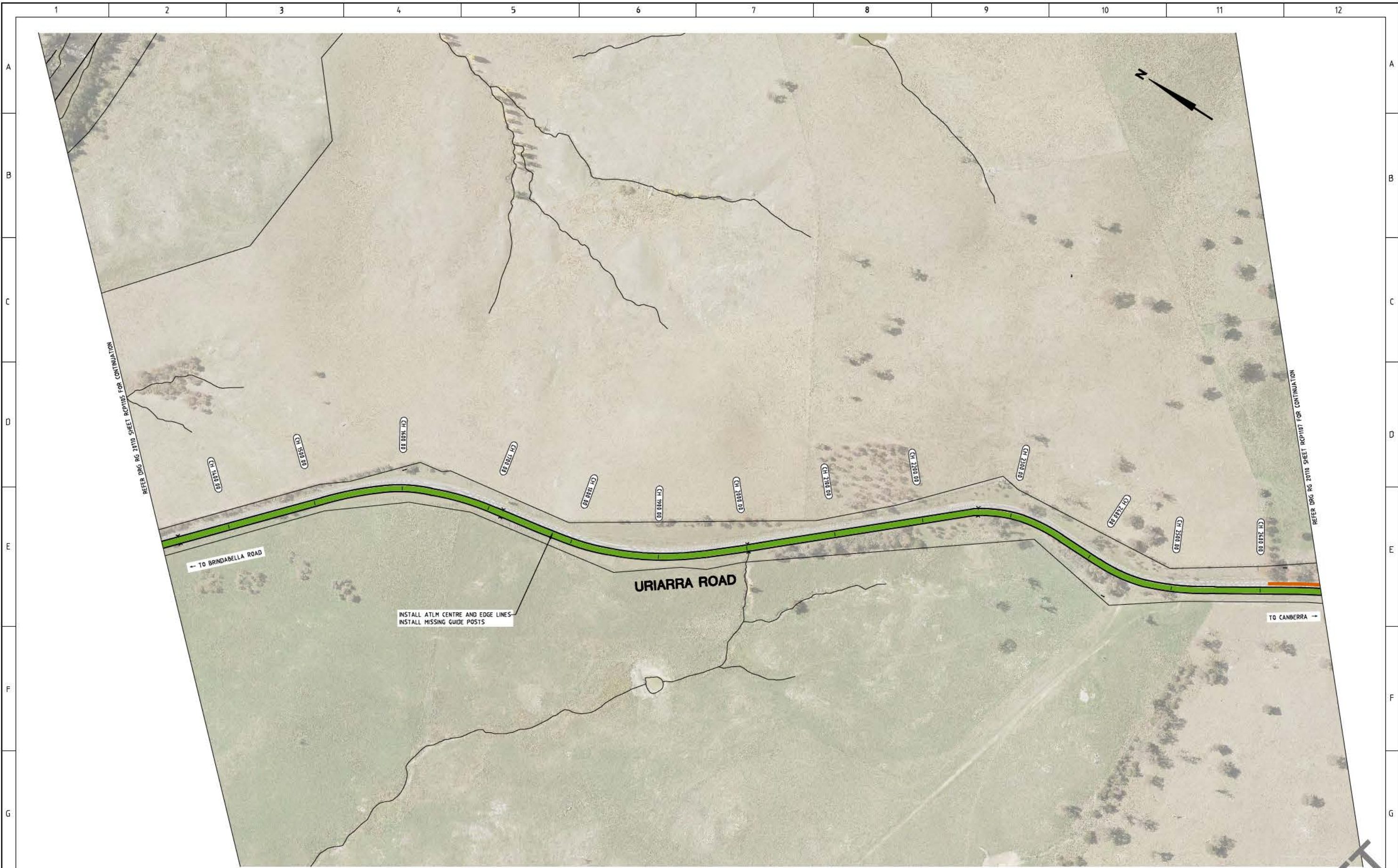
Designed by: []
Drawn by: []
Checked by: []
Approved by: []

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	URIARRA RD CONCEPT SKETCH SHEET 5 OF 12
Date: 02/03/21	Drg. No.: RG 20110
	Sheet: RCP1105
	Revision: 0



REFER DRG RG 2010 SHEET RCP1075 FOR CONTINUATION

REFER DRG RG 2010 SHEET RCP1107 FOR CONTINUATION

TO BRINDABELLA ROAD

URIARRA ROAD

TO CANBERRA

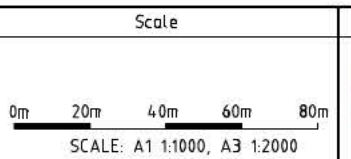
INSTALL ATLM CENTRE AND EDGE LINES
INSTALL MISSING GUIDE POSTS

LEGEND

-  INSTALL AUDIO TACTILE LINE MARKING (ATLM)
-  CHANGE SPEED LIMIT
-  INSTALL SAFETY BARRIER
-  CLEAR VEGETATION OR INSTALL SAFETY BARRIER
-  CLEAR VEGETATION AND INSTALL SAFETY BARRIER
-  CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent




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Designed by: 
 Drawn by: 
 Checked by: 
 Approved by: 

Client

Project Officer: Kencho Choden
Project Number: 30490



Project

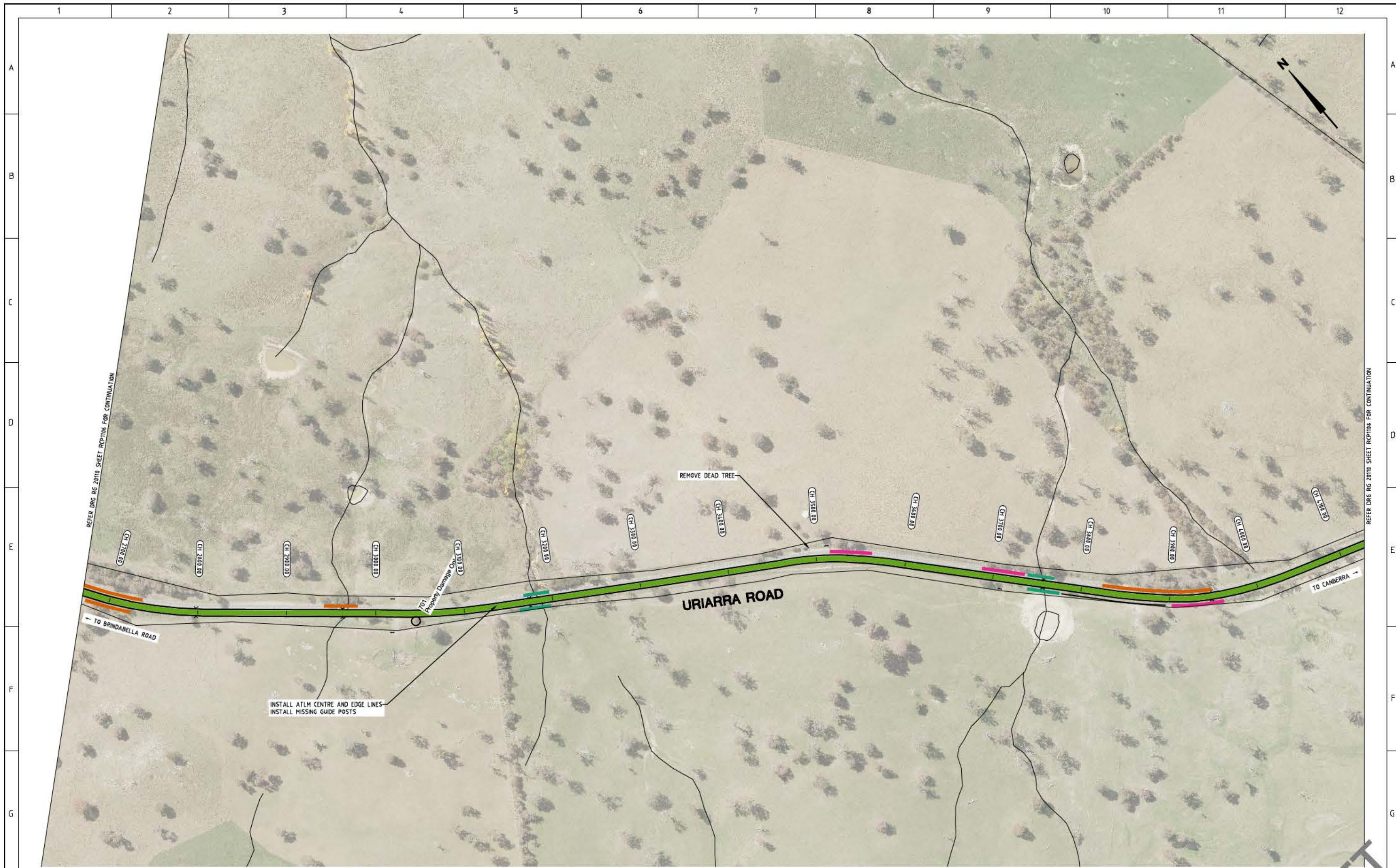
DELIVERING ANRAM

Date: 02/03/21

Drawing Title

URIARRA RD
CONCEPT SKETCH
SHEET 6 OF 12

Drg. No: RG 20110
Sheet: RCP1106
Revision: 0



REFER DRG RG 20110 SHEET RCP1108 FOR CONTINUATION

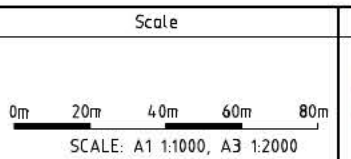
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

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Unit 106, 12 Frewin Street
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Designed by:
 Drawn by:
 Checked by:
 Approved by:

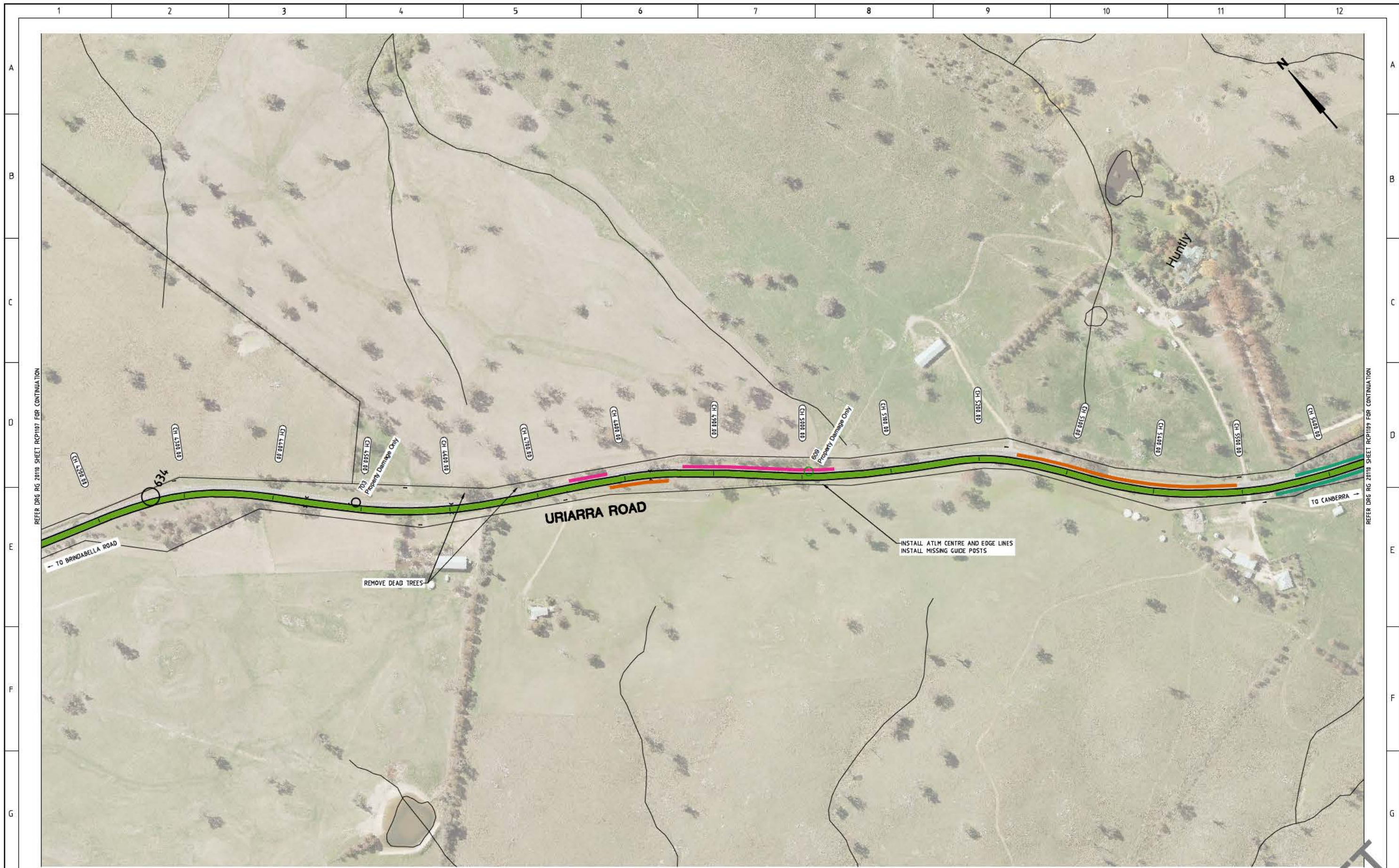
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	URIARRA RD CONCEPT SKETCH SHEET 7 OF 12
Date: 02/03/21	Drg. No: RG 20110 Sheet: RCP1107 Revision: 0

DRAFT



REFER DRG RG 20110 SHEET RCP1017 FOR CONTINUATION

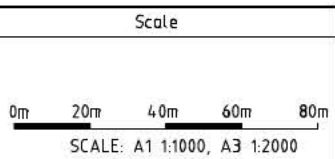
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LEGEND

	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Frewin Street
Canberra ACT 2602
Ph: 02 423 435

Designed by:

Drawn by:

Checked by:

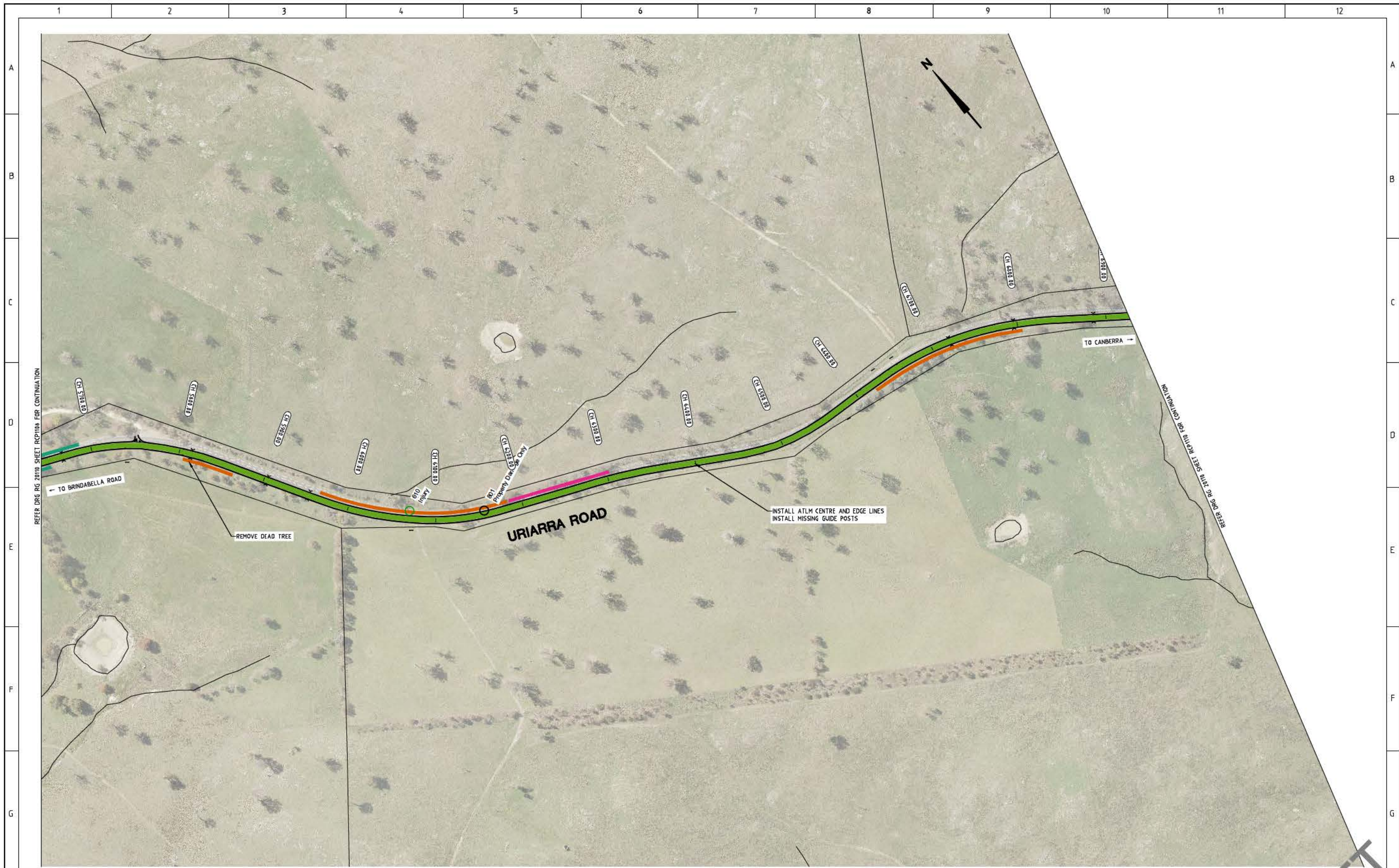
Approved by:

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

Project	Drawing Title
DELIVERING ANRAM	URIARRA RD CONCEPT SKETCH SHEET 8 OF 12
Date: 02/03/21	Dwg. No. RG 20110 Sheet R1108 Revision 0

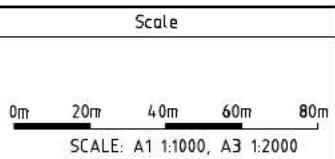


REFER DRG RG 20110 SHEET RCP108 FOR CONTINUATION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Prawn Street
Canberra ACT 2602
Ph: 02 423 4335

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project

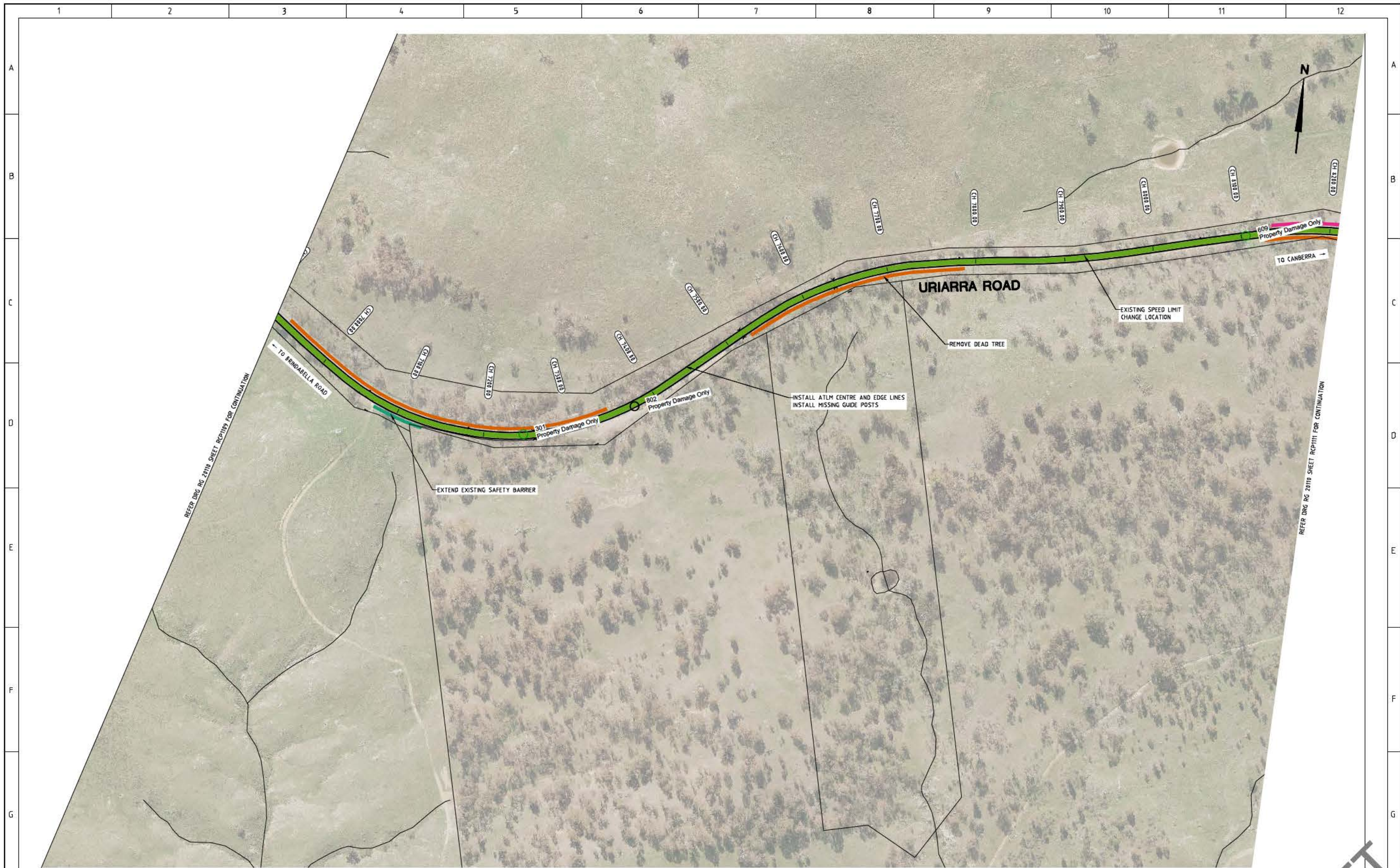
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Date: 02/03/21

Drawing Title

**URIARRA RD
CONCEPT SKETCH
SHEET 9 OF 12**

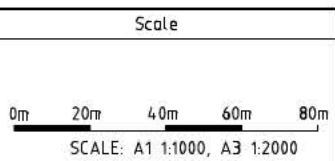
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LEGEND

	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

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Consulting Engineers
Unit 108, 12 Frewin Street
Canberra ACT 2602
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Designed by:

Drawn by:

Checked by:

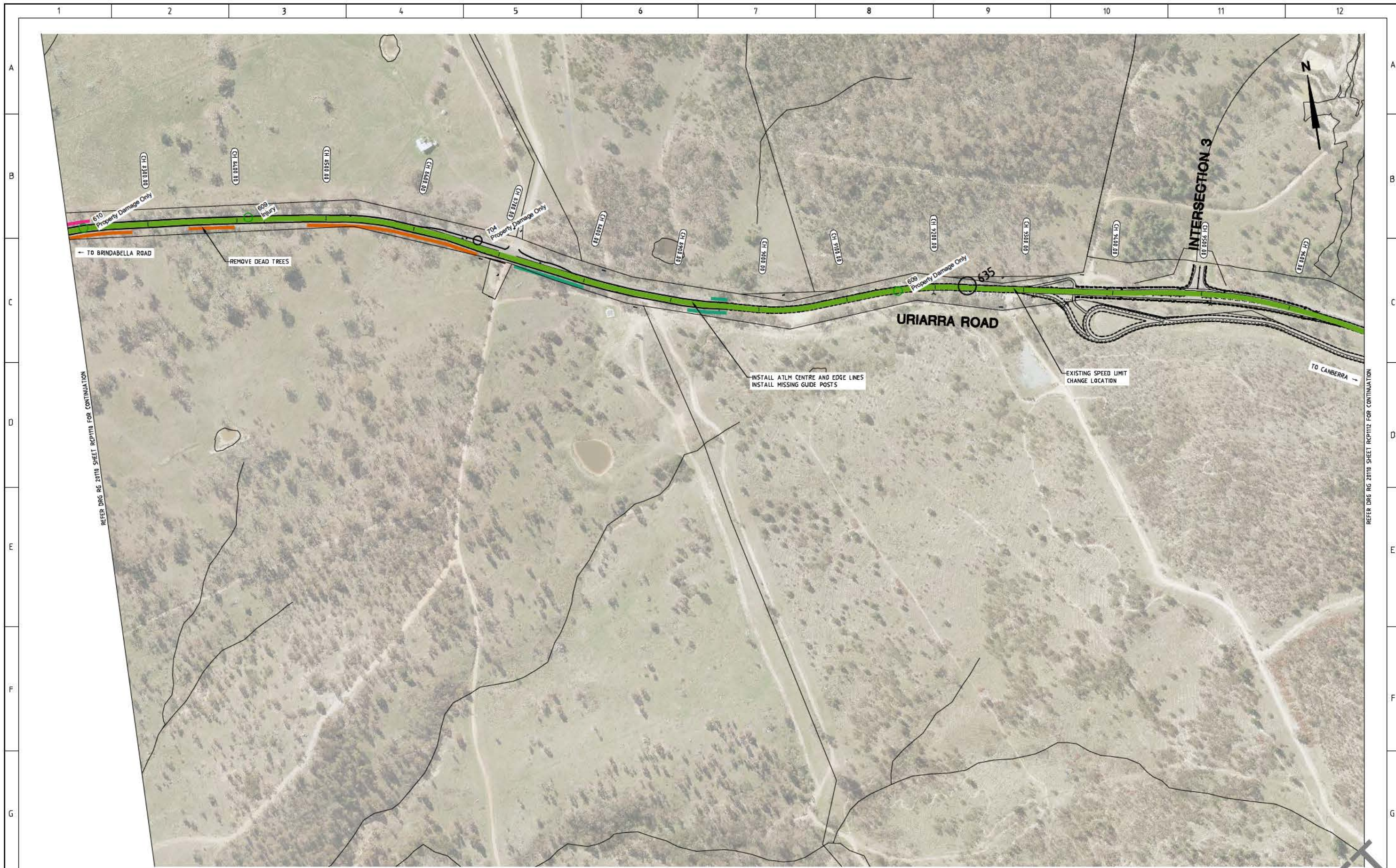
Approved by:

Client

Project Officer: Kencho Choden
Project Number: 30490

Project	Drawing Title
DELIVERING ANRAM	URIARRA RD CONCEPT SKETCH SHEET 10 OF 12
Date: 02/03/21	Org. No. RG 20110 Sheet RCP1110 Revision 0

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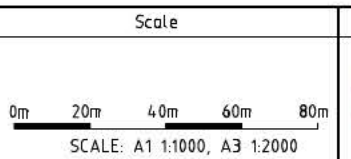
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LEGEND

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- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

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Canberra ACT 2602
Ph: 02 423 435

Client

Project Officer: Kencho Choden
Project Number: 30490

Project	Drawing Title
DELIVERING ANRAM	URIARRA RD CONCEPT SKETCH SHEET 11 OF 12
Date 02/03/21	Dwg. No. RG 20110
Sheet RCP1111	Revision 0



REFER DRG RG 20110 SHEET RCP1112 FOR CONTINUATION

REFER SECTION A-A

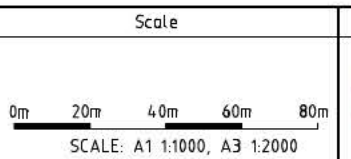
REFER SECTION A-A

LEGEND

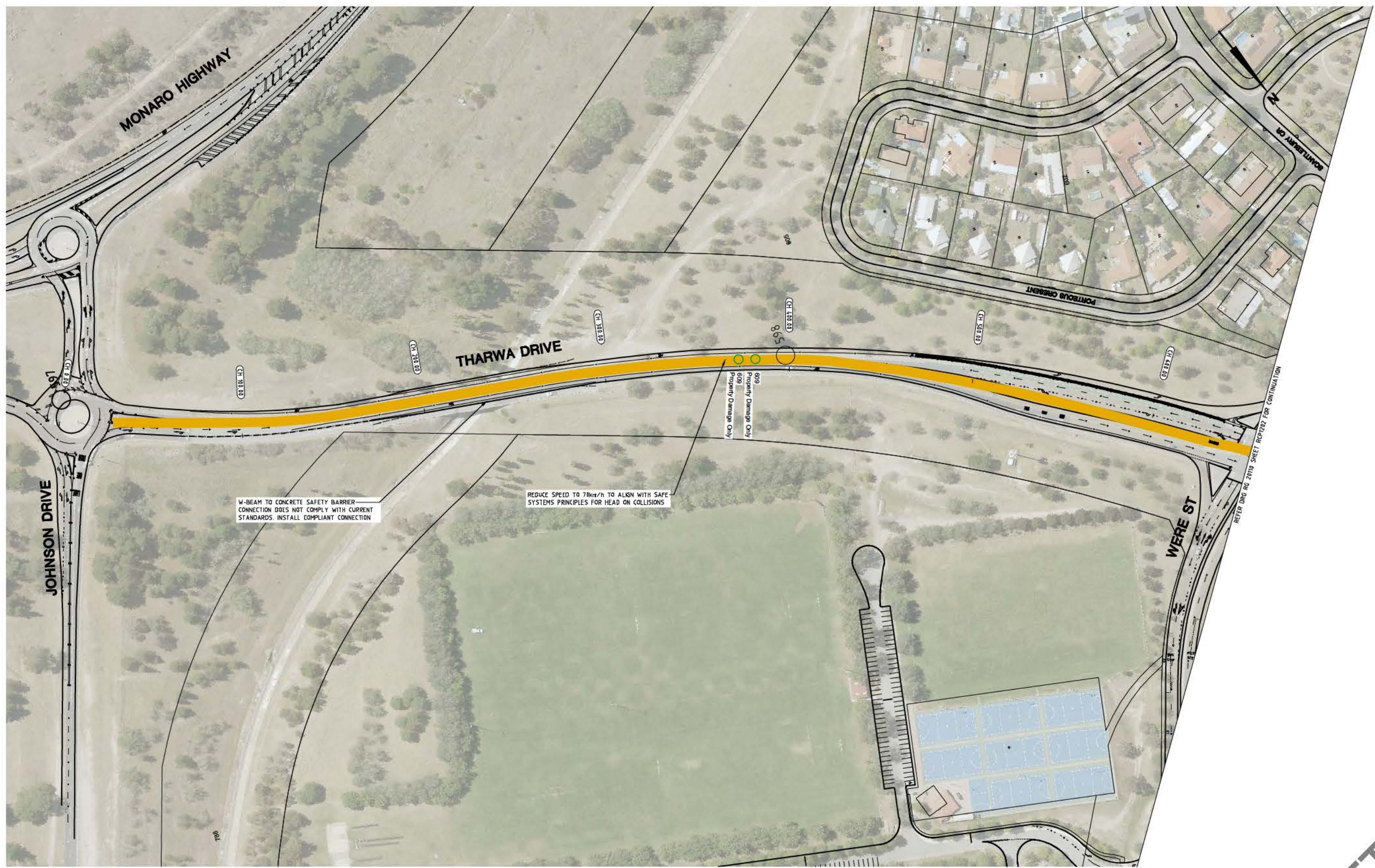
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- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
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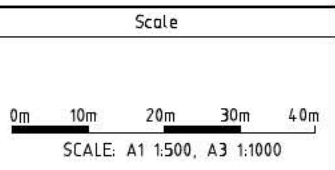
<p>Design Agent</p> <p>R.D. Gossip Pty Ltd Consulting Engineers Unit 108, 12 Frewin Street Canberra ACT 2602 Ph: 02 423 4335</p>	<p>Client</p> <p>Project Officer: Kencho Choden Project Number: 30490</p> <p>ACT Government</p>	<p>Project</p> <p>DELIVERING ANRAM</p>	<p>Drawing Title</p> <p>URIARRA RD CONCEPT SKETCH SHEET 12 OF 12</p>						
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LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE



Design Agent

R.D. Gossip Pty Ltd
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Unit 108, 12 Princes Street
Geelong ACT 2602
Ph: 02 423 4335

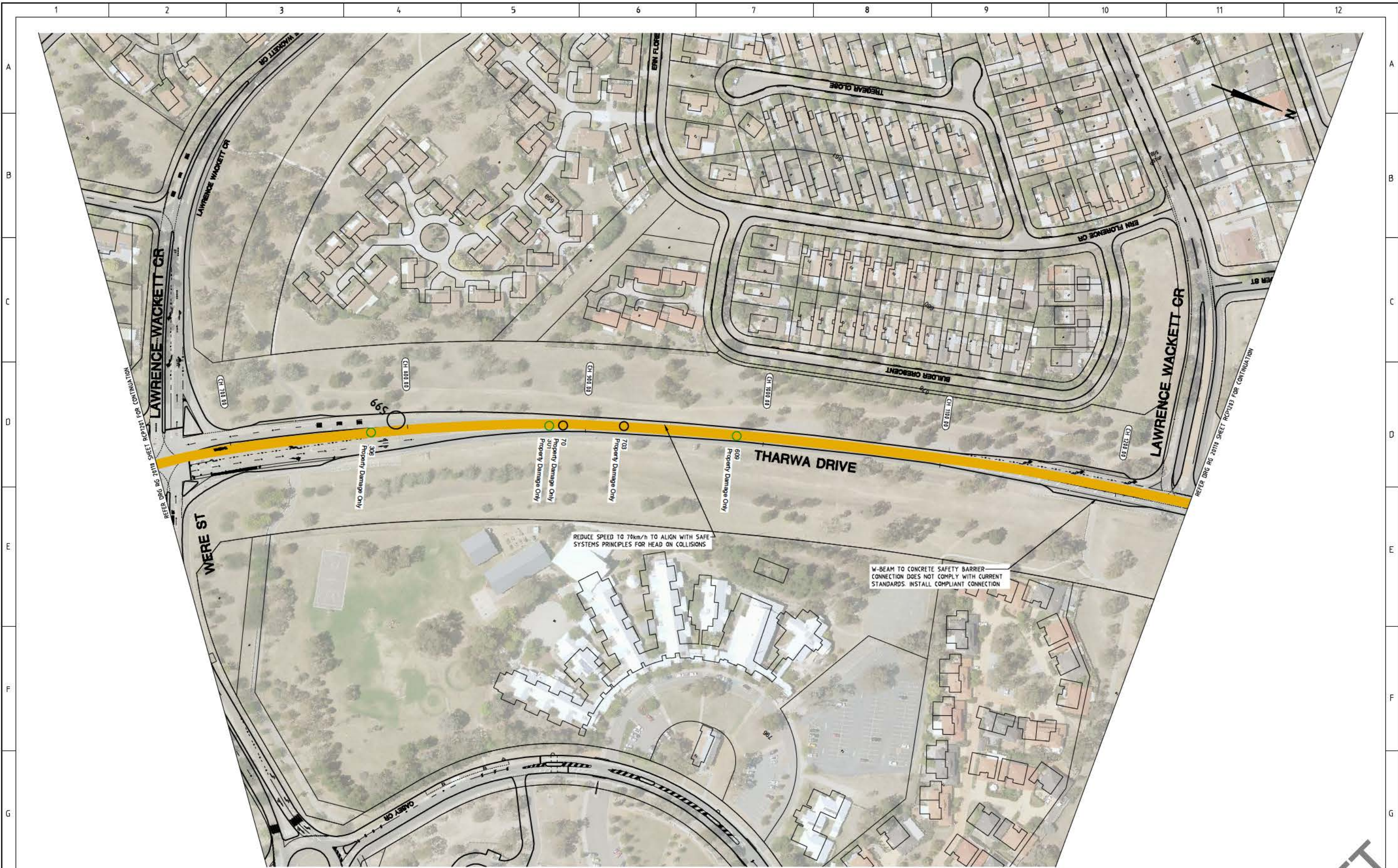
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title			
DELIVERING ANRAM	THARWA DR CONCEPT SKETCH SHEET 1 OF 5			
Date: 02/03/21	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Drw. No. RG 20110</td> <td>Sheet RCP1201</td> <td>Revision 0</td> </tr> </table>	Drw. No. RG 20110	Sheet RCP1201	Revision 0
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DRAFT



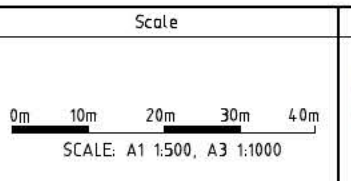
REDUCE SPEED TO 70km/h TO ALIGN WITH SAFE SYSTEMS PRINCIPLES FOR HEAD ON COLLISIONS

W-BEAM TO CONCRETE SAFETY BARRIER— CONNECTION DOES NOT COMPLY WITH CURRENT STANDARDS. INSTALL COMPLIANT CONNECTION

LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Frowen Street
Corrumbell ACT 2842
Ph: 02 423 4335

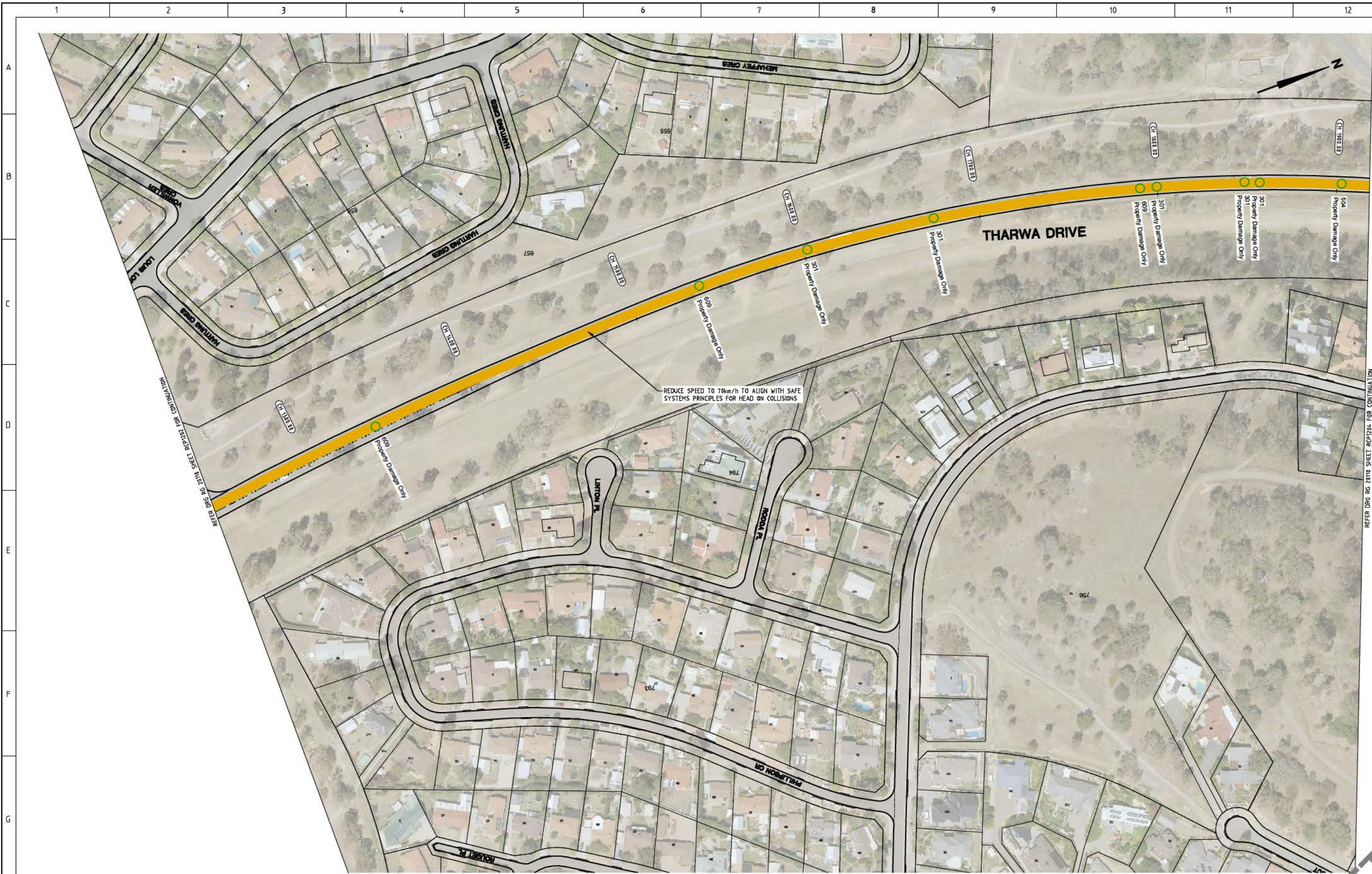
Client

Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title			
DELIVERING ANRAM	THARWA DR CONCEPT SKETCH SHEET 2 OF 5			
Date: 02/03/21	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Drg. No. RG 20110</td> <td>Sheet RCP1202</td> <td>Revision 0</td> </tr> </table>	Drg. No. RG 20110	Sheet RCP1202	Revision 0
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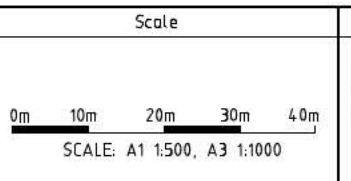
DRAFT



LEGEND

- INSTALL AUDIO TACTILE LINE MARKING (ATLM)
- CHANGE SPEED LIMIT
- INSTALL SAFETY BARRIER
- CLEAR VEGETATION OR INSTALL SAFETY BARRIER
- CLEAR VEGETATION AND INSTALL SAFETY BARRIER
- CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
For tendering purposes only: --/--/--	Issued for construction: --/--/--	W.A.E.: --/--/--



Design Agent

R.D. Gossip Pty Ltd
Consulting Engineers
Unit 108, 12 Frowen Street
Campbell ACT 2602
Ph: 02 4231 4335

Client

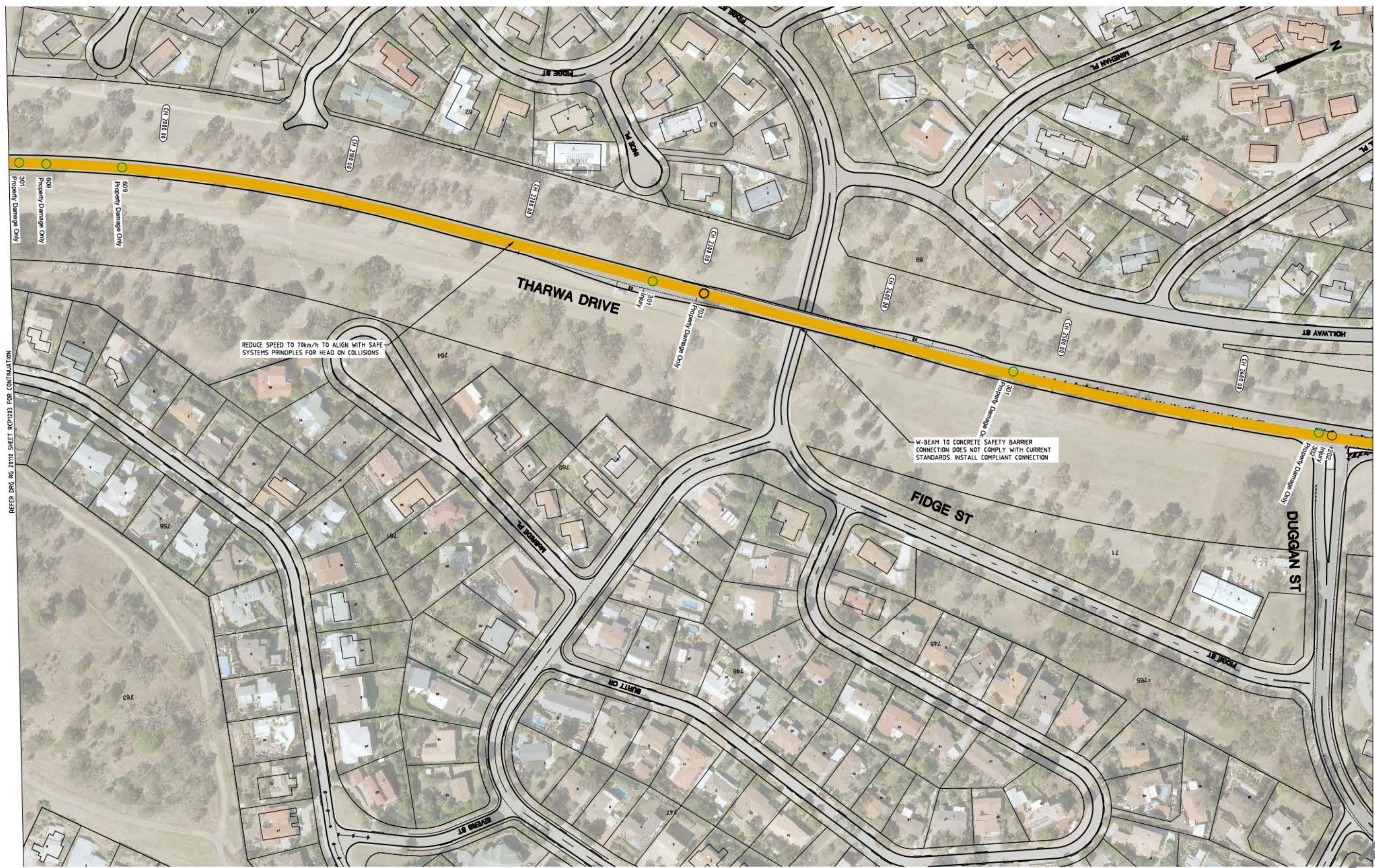
Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title
DELIVERING ANRAM	THARWA DR CONCEPT SKETCH SHEET 3 OF 5
Date: 02/03/21	Drg. No.: RG 20110
	Sheet: RCP1203
	Revision: 0

REFER DRG RG 20110 SHEET RCP1204 FOR CONTINUATION

DRAFT



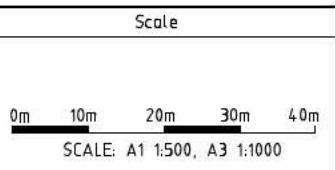
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	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS

Conceptual Sketch: 02/03/21	Final Sketch Plan: ---/---/---	Final Design: ---/---/---
For tendering purposes only: ---/---/---	Issued for construction: ---/---/---	W.A.E.: ---/---/---



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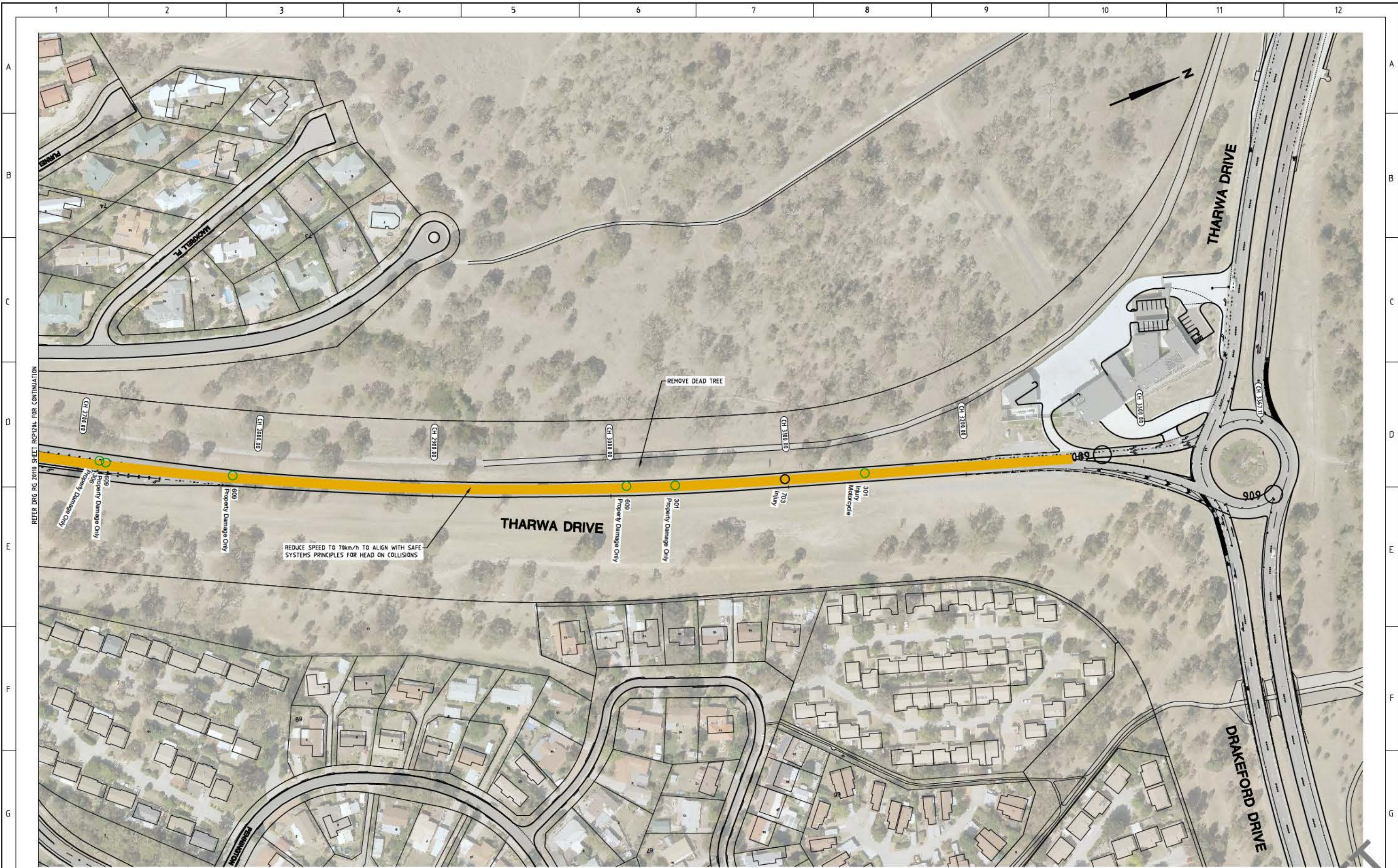
Project Officer: Kencho Choden
Project Number: 30490

ACT
Government

Project	Drawing Title
DELIVERING ANRAM	THARWA DR CONCEPT SKETCH SHEET 4 OF 5
Date: 02/03/21	Drg. No.: RG 20110
	Sheet: RCP1204
	Revision: 0

REFER DRG RG 20110 SHEET RCP1203 FOR CONTINUATION

REFER DRG RG 20110 SHEET RCP1205 FOR CONTINUATION



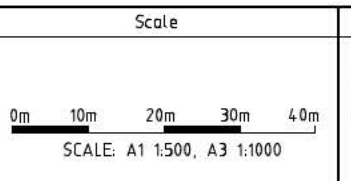
REFER DRG RG 20110 SHEET RCP1204 FOR CONTINUATION

LEGEND

	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE

DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
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Drawn by:

Checked by:

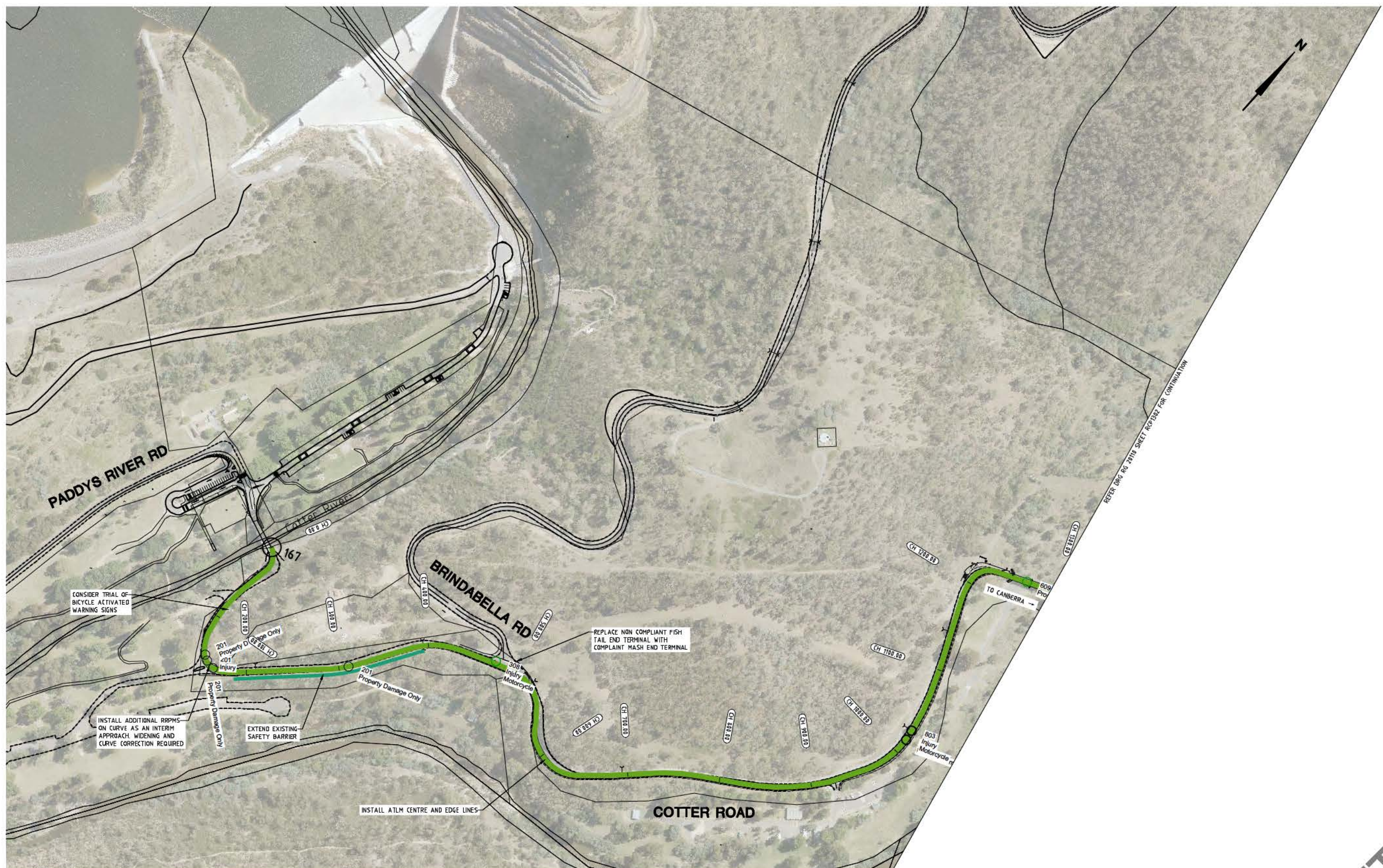
Approved by:

Client

Project Officer: Kencho Choden
Project Number: 30490

ACT Government

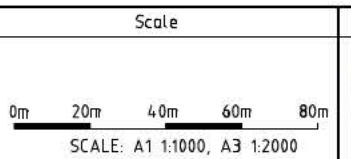
Project	Drawing Title
DELIVERING ANRAM	THARWA DR CONCEPT SKETCH SHEET 5 OF 5
Date: 02/03/21	Drg. No.: RG 20110
Sheet: RCP1205	Revision: 0



LEGEND

	INSTALL AUDIO TACTILE LINE MARKING (ATLM)
	CHANGE SPEED LIMIT
	INSTALL SAFETY BARRIER
	CLEAR VEGETATION OR INSTALL SAFETY BARRIER
	CLEAR VEGETATION AND INSTALL SAFETY BARRIER
	CLEAR VEGETATION

AMENDMENTS		
AMENDMENT	APPROVAL	DATE
DRAWING STAGE - LATEST DATE INDICATES DRAWING STATUS		
Conceptual Sketch: 02/03/21	Final Sketch Plan: --/--/--	Final Design: --/--/--
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Client

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Project Number: 30490

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Project

DELIVERING ANRAM

Date: 02/03/21

Drawing Title

COTTER ROAD
CONCEPT SKETCH
SHEET 1 OF 7

Org. No. RG 20110
Sheet RCP1301
Revision 0