



**TOMINGLEY**  
GOLD OPERATIONS PTY LTD  
(A wholly owned subsidiary of Alkane Resources Ltd)

# Tomingley Gold Operations

## Traffic Management Plan



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**TABLE OF REVISIONS**

<b>Revision Number</b>	<b>Revision Date</b>	<b>Prepared By</b>	<b>Approved by</b>	<b>Comments</b>
Revision 1	August 2012	Geolyse	Colleen Measday	Submitted for Approval
Revision 2	October 2012	Colleen Measday	Michael Sutherland	Updated following consultation with RMS and NSC
Revision 3	February 2015	Mark Williams	Sean Buxton	Annual Review
Revision 3	February 2015	Mark Williams	Sean Buxton	Annual Review
Revision 4	September 2016	Mark Williams	Sean Buxton	Review following Mod 3

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# 1. INTRODUCTION AND SCOPE

## 1.1 BACKGROUND

The Traffic Management Plan has been prepared as a tool to manage traffic related issues during the construction and operation of the Tomingley Gold Operations (TGO). It will be used by TGO personnel as the first point of reference for traffic management related issues.

The Traffic Management Plan sits under the overarching Environmental Management Strategy for the project. The other Environmental Management Plans include:

- Air Quality and Greenhouse Gas Management Plan;
- Blast Management Plan;
- Biodiversity Management Plan;
- Cultural Heritage Management Plan;
- Rehabilitation Management Plan;
- Hazardous Materials Management Plan; and
- Water Management Plan.

## 1.2 PROJECT APPROVAL

The Tomingley Gold Project was granted Project Approval by the NSW Department of Planning and Infrastructure on 24<sup>th</sup> July 2012 (Approval Reference 09\_0155). Tomingley Gold Operations Pty Ltd has developed the Tomingley Gold Mine at Tomingley in Central West NSW.

Schedule 3, Condition No. 44 of the Project Approval states:

***“Traffic Management Plan***

*The Proponent shall prepare and implement a Traffic Management Plan to the satisfaction of the Secretary. The plan shall:*

*(a) focus on traffic management along Tomingley West Road and through the village of Tomingley to minimise the potential for conflicts between project-related traffic and other road users;*

*(b) describe the measures to be implemented to ensure the effective operation of the intersections between the project site and the Newell Highway, including the site access road and Tomingley West Road intersection and the Tomingley-Narromine Road and Newell Highway intersection; and*

*(c) be developed in consultation with Council and RMS, and must be submitted for the approval of the Secretary prior to the commencement of construction.”*

It should be noted that whilst Condition No. 44 (b) requires traffic measures to be implemented at specific intersections, Tomingley West Road does not intersect the Newell Highway directly. The Tomingley West Road intersects the Tomingley-Narromine Road which then intersects with the Newell Highway.

### **1.3 PURPOSE OF REPORT**

This Traffic Management Plan has been prepared to document the off-site traffic management measures that are to be implemented during the operational of the TGO in order to minimise traffic associated risks for traffic accessing the mine facility and general traffic interacting with mine generated traffic.

It will also ensure that traffic generated as a result of the TGO will move in a safe manner with least impact to Tomingley Village.

The implementation of the Traffic Management Plan will minimise the traffic related risks for the TGO employees, contractors, the general public and other vehicle operators on the wider road network surrounding the TGO.

### **1.4 LEGISLATION**

In NSW the *Road Transport (Safety and Traffic Management) Act 1999*, governs the safe management of road transport and will be complied with and referred to during the operation of TGO.

In addition to this act, the following Standards and Guidelines will also guide traffic management for the project.

- Austroads Guide to Road Design
- RMS Supplements to Austroads Guide to Road Design
- Australian Standard AS1742- Manual of Uniform Traffic Control Devices

### **1.5 CONSULTATION**

#### **1.5.1 Roads and Maritime Safety and Narromine Shire Council**

This plan has been developed in consultation with NSW Transport, Roads and Maritime Services (RMS) and Narromine Shire Council (NSC).

Revision 1 of the TMP was presented to both parties and Revision 2 was prepared following feedback from both agencies.

Revision 1 was presented to NSC on 15/08/2012 at a meeting held in their offices. They had very few comments and deemed the plan to be adequate. A copy of the minutes from this meeting is included in Appendix A

Revision 1 of the TMP was presented to RMS on 17/08/2012 at a meeting held in their office. RMS distributed the plan to parties within the agency and formal comments were issued to TGO via email on 18/09/2012. These minutes and comments are included in Appendix A of this plan.

#### **1.5.2 NSC Traffic Committee**

Proposed details of the Traffic Management signage to be installed as part of this plan will be forwarded to the NSC Traffic Committee for discussion.

## **2. EXTERNAL ROAD NETWORK**

The Main Site Access Road to the TGO has been constructed off Tomingley West Road. Vehicle traffic access TGO via three (3) main routes:

- i) To/from Dubbo via the Newell Highway, Tomingley-Narromine Road and Tomingley West Road;
- ii) To/from Peak Hill and Parkes via the Newell Highway, Tomingley-Narromine Road and Tomingley West Road; and

iii) To/from Narromine via Tomingley-Narromine Road and Tomingley West Road.

A fourth route that may be used at some time is access from the Newell Highway via Bulgandramine Road, however very few vehicles will use this route. This route would only be used in the event of a traffic accident on the Newell Highway blocking traffic attempting to access the site from the south. This scenario would be very rare and in the event of its occurrence the existing route can adequately accommodate existing traffic and any mine generated traffic.

The Newell Highway (State Highway No. 17) under the control of RMS, the Tomingley-Narromine Road (Main Road No. 89) is a state road under the control of the NSC and the Tomingley West Road is a local road under the control of NSC.

Tomingley West Road is a two lane, two way undivided corridor. The current sealed pavement along the carriageway is approximately 3.5m to 4m wide. The road is not centreline or edge line marked and there are minimal guideposts along the road.

The initial section of Tomingley West Road, for approximately 260m west from its intersection with the Tomingley-Narromine Road is speed limited to 60km/h, whilst the remainder of Tomingley West Road is speed limited to 100km/h.

As part of the development of the TGO, the Tomingley West Road has been upgraded by widening and strengthening the road pavement to cater for the traffic loads generated by the proposed mine.

The Tomingley West Road and the Narromine-Tomingley Road intersection currently complies with an Auxiliary Right Turn (AUR) intersection in accordance with the RTA Road Design Guide.

The Narromine-Tomingley Road is a two lane two way bitumen sealed rural road with a sealed width of 6.5m with gravel shoulders varying from 1.0m to 2.0m wide. The Narromine-Tomingley Road is speed limited to 80km/h for approximately 460m from its intersection with the Newell Highway whilst the remainder of the Narromine-Tomingley Road is speed limited to 100km/h.

The Newell Highway and the Narromine-Tomingley Road intersection currently complies with an Auxiliary Right Turn (AUR) intersection combined with an Auxiliary Left Turn (AUL) lane in accordance with the RTA Road Design Guide.

The Newell Highway is a two lane two way State Highway with a sealed width of 11m comprising 2 x 3.5m wide travel lanes and 2 x 2m wide sealed shoulders. The Newell Highway is speed limited to 110km/h outside the village of Tomingley and 50km/h within Tomingley whilst at the intersection with the Narromine-Tomingley Road the Newell Highway is speed limited to 80km/h.

## **2.1 NEWELL HIGHWAY UNDERPASS**

A heavy mine vehicle underpass has been excavated and constructed under the Newell Highway south of Tomingley Village. The Newell Highway underpass has been designed and constructed in accordance with the RMS design criteria and standards. Screens have been installed adjacent to, and either side of, the underpass to prevent driver distraction.

Design drawings of the underpass and Newell Highway diversion are attached in Appendix B

## **3. TRAFFIC DETAILS**

### **3.1 VEHICLE TRAFFIC TYPES**

The vehicle types accessing the TGO would include:

- Light vehicles such as passenger vehicles and light delivery trucks;
- Heavy vehicles such as large rigid trucks and semi-trailers;
- Oversize and overweight vehicles used for the infrequent delivery of plant components and mine operation vehicles throughout the life of the mine.

### 3.2 TRAFFIC VOLUMES

The generation of traffic from the development of the TGO was assessed for the preparation of the Traffic Impact Assessment included in the Environmental Assessment for the project and was prepared by FJF Group Pty Ltd.

The anticipated traffic generated by the TGO for the operational phases determined in the FJF Group Report is summarised in Table 3.1.

**Table 3.1 – Anticipated Traffic Generation for the Tomingley Gold Operations**

Route	Daily Traffic Light Vehicle Volume	Daily Traffic Heavy Vehicle Volume
<b>Operations</b>		
Newell Highway	102 veh/day	6 veh/day
Narromine-Tomingley Road	34 veh/day	2 veh/day
Tomingley West Road	136 veh/day	8 veh/day

Traffic counts were also conducted on behalf of the FJF Group to determine the existing traffic volumes on the road network surrounding the TGO site. The existing traffic volumes and the traffic generated by the TGO were assessed to determine the increase in traffic volumes due to the construction and operation of the mine.

The assessment of the increase in traffic volume on the surrounding road network as determined in the FJF Group Report is summarised in Table 3.2.

**Table 3.2 – Increase in Traffic Volumes due to the Development of the Tomingley Gold Operations**

Road	Current Traffic		Project Generated Traffic		% Increase		
	Light Vehicle	Heavy Vehicle	Light Vehicle	Heavy Vehicle	Light Vehicle	Heavy Vehicle	All Traffic
<b>Operations</b>							
Newell Highway	2250 v/d	1125 v/d	102 v/d	6 v/d	4.5%	0.5%	3.2%
Narromine-Tomingley Road	349 v/d	149 v/d	34 v/d	2 v/d	9.7%	1.3%	7.2%
Tomingley West Road	49 v/d	25 v/d	136 v/d	8 v/d	377.6%	32.0%	294.6%
NOTES: Project Operation assumes estimated current existing traffic project to the Year 2020.							

The FJF Group Report concluded that increases to traffic flow on the:

- Newell Highway would be minimal (<6%) and would have no impact on traffic flows, which is currently well below the capacity of this road.
- Tomingley-Narromine Road and Tomingley West Road would be 16.5%, and the overall traffic volumes on this road would still be minor.
- Tomingley West Road would be 333%; however, the road will be adequate with upgrade to ensure pavement width and strength meet the required RMS engineering standard.

Intersection assessments were carried out for the intersections of:

- Newell Highway and Narromine-Tomingley Road; and
- Narromine-Tomingley Road and Tomingley West Road.

These assessments determined that both the intersections would operate efficiently following the development of the TGO and that no additional mitigation measures were required to be constructed.



However, additional signs have been provided at each intersection to assist in the management of traffic using these intersections and the various other components of the external road network servicing the TGO.

### **3.3 TRAFFIC THROUGH TOMINGLEY VILLAGE**

An assessment of traffic through Tomingley Village showed that the increase in traffic on the Newell Highway as a result of the project would be “negligible”. The assessment indicated increased movement along the Newell Highway would increase by 3.2% during operations. However the increase in traffic through Tomingley village will be dependent upon the direction from which the workforce and materials travel. The majority of the workforce and materials travelling to site will come from the north (Dubbo/Narromine) and increase in traffic through Tomingley Village will be less than 1.6%.

All on site movements between Wyoming and Caloma during operations are via the Newell Highway underpass and therefore will result in no increase in traffic through the Tomingley village.

## **4. MANAGEMENT MEASURES**

Traffic management measures to be implemented to manage external traffic movements associated with the TGO are outlined in the following sections of this report.

As a requirement of Project Approval, TGO will ensure that heavy vehicle movements associated with mining operations do not exceed 8 per day (4 in and 4 out) when measured as a daily average over any calendar month.

### **4.1 INTERSECTION OF THE NEWELL HIGHWAY AND THE NARROMINE-TOMINGLEY ROAD**

As the existing intersection layout caters for the mine increased volumes of light and heavy vehicle numbers using the Newell Highway and the initial section of the Narromine-Tomingley Road, it is not proposed to install any traffic mitigation measures at this intersection.

Advance intersection warning signs on the Narromine-Tomingley Road are installed on the approach to the intersection with the Newell Highway and a bi-directional chevron hazard marker is installed at the intersection.

Directional signage indicating the turn off from the Newell Highway to the TGO have been installed at the intersection in conjunction with the existing Narromine directional sign.

Details of the existing and proposed traffic management measures implemented for the Newell Highway and the Narromine-Tomingley intersection are indicated on Drawing 01G\_E19 included in Appendix B.

### **4.2 INTERSECTION OF TOMINGLEY WEST ROAD AND THE NARROMINE-TOMINGLEY ROAD**

The signage at the intersection of Tomingley West Road and the Narromine -Tomingley Road have been upgraded to include directional signage for the TGO, warning signs for turning truck movements and advance warning signs on the approach to the intersection.

The major box culvert on Tomingley West Road approximately 100m west of the intersection with the Narromine Tomingley Road has had a concrete lip installed on each side of the culvert.

Two new street lights were installed at the intersection of the Tomingley West Road and Narromine - Tomingley Road in accordance with the Planning Agreement between Narromine Shire Council and Tomingley Gold Operations.

Details of the existing and proposed traffic management measures implemented for the Tomingley West Road and the Narromine -Tomingley intersection are indicated on Drawing 01G\_E19 included in Appendix B of this Report.

### **4.3 UPGRADING OF TOMINGLEY WEST ROAD**

The eastern section of the Tomingley West Road (as far as TGO entrance road) has been upgraded and widened to a double lane, sealed road. The pavement has been strengthened so that it is capable of taking road trains. Detailed design drawings including signage and line marking are included in Appendix B of this report (Drawings 01G\_E01 – 01G\_E19).

### **4.4 INTERSECTION OF TOMINGLEY WEST ROAD AND THE MAIN SITE ACCESS ROAD**

The intersection of the Tomingley West Road and the Main Site Access Road has been designed to accommodate the safe movement of vehicles on and off site. The design also includes directional signage for the Tomingley Gold Project, warning signs for turning truck movements and advance warning signs on all approaches to the intersection.

Details of the proposed traffic management measures implemented for the Tomingley West Road and the Main Site Access Road intersection along with detailed design for the intersection are included in Appendix B of this report on drawings 01C\_E18 and 01C\_E19.

### **4.5 COMMUNITY INFORMATION**

The community of Tomingley and general road users are kept informed about traffic related issues via the following avenues:

- TGO information board within Tomingley Village;
- TGO information board at the truck rest station on the Newell Highway at Tomingley; and
- Information distributed through the Community Consultation Committee.
- Meetings with Narromine Shire Council during the project approval modification process where necessary.

The Information Notice Boards will indicate progress on the construction of the various components of the road infrastructure, expected completion dates and any delays that might be experienced due to such construction works being carried out.

A copy of the Traffic Management Plan is available on the Project Website [www.alkane.com.au/tomingley](http://www.alkane.com.au/tomingley)

Other avenues for the local community and general road users to obtain information include;

- TGO Project Website,
- The 24-hour TGO Community Information Line Number : 02 6865 6116;
- The project email address is [info@tomingleygold.com.au](mailto:info@tomingleygold.com.au).

This phone number and email address allow the public to gain access to information, make an enquiry or a complaint at any time.

TGO will also operate an open door policy so that members of the public are welcome to come to the site office to get information, make an enquiry or a complaint if this method is preferable to the telephone or internet.

All complaints will be registered in a database and responded to verbally within 24 hours.

### **4.6 TRAFFIC INCIDENT MANAGEMENT**

Traffic incidents for mine related traffic on the external road network will be managed in accordance with the TGO Incident Response Management System.

The management of traffic related incidents will also include liaison with emergency authorities (police, ambulance, fire brigade etc) to ensure that such authorities are aware of the main site access road and emergency access routes available to the mine site.

#### **4.7 EMERGENCY ACCESS ROADS**

Two emergency access roads connect directly from the mine site to the Newell Highway, one on either side of the highway. These will only be used in the event of an on-site emergency.

The emergency access road security gates are locked and signage has been installed indicating the access is for emergency use only. In the event of an emergency site personnel will meet the necessary emergency vehicles at the gates and escort them through the site to the emergency thus ensuring the safety of the emergency vehicle through the site.

#### **4.8 RESTRICTED ACCESS VEHICLES**

Restricted Access Vehicles (RAVs) will need to deliver mine site components and large mining equipment to site.

A specific Traffic Control Plan (TCP) is required to be developed by the contractor in accordance with RMS requirements developed for each type of RAV delivery. The TCP will address the following issues:

- The TCP shall be prepared in accordance with the Road and Traffic Authority's Traffic Control at Worksites Manual – Issue 1:2000 and by suitably qualified and accredited personnel in accordance with Section 2.4 of the Traffic Control at Worksites Manual.
- Appropriate permits being issued by Roads & Maritime Services and the NSW Police Force.
- Use of escort vehicles as required.
- Provision of traffic controllers as required.
- Restriction of RAV deliveries to daylight hours.

## 5. TRAFFIC MANAGEMENT PLAN OPERATION

### 5.1 ROLES AND RESPONSIBILITIES

The roles and responsibilities for the implementation of the Traffic Management Plan are indicated in Table 5.1.

**Table 5.1 – Traffic Management Plan Implementation**

Role	Responsibility
TGO Operations Manager	Implementation of the Traffic Management Plan during mining operations
All personnel	Follow all guidelines and Project rules with respect to traffic management

### 5.2 TRAFFIC MANAGEMENT PLAN AUDIT

The Traffic Management Plan will be audited in accordance with the internal audit processes incorporated into the Environmental Management Strategy.

### 5.3 TRAFFIC MANAGEMENT PLAN REVIEW

Reviews of the Traffic Management Plan will be undertaken annually, following operational or regulatory modification, or as per the TGO Environmental Management Strategy.

## 6. COMPETENCE TRAINING AND AWARENESS

All personnel working on the TGO will undergo a project induction. This induction includes information on the management of traffic related issues while travelling to and from site, including the following points:

- Consideration and courtesy are essential when driving on public roads;
- Speed limits must be strictly adhered to;
- Formal entries and exits from site must be used;
- Emergency exits are just for emergencies.

After completing the induction workers will sign a statement of attendance and records of this will be kept in the site office.

## 7. REFERENCES

AUSTROADS. Guide to Traffic Engineering Practice – Local Area Traffic Management

FJF Group Pty Ltd. Tomingley Gold Project Traffic Impact Assessment September 2011

Roads and Traffic Authority of NSW

- Traffic Control at Worksites Manual - Issue 1:2000
- Signs and Marking Manual
- Road Design Guide

Guide to Traffic Generating Developments

R.W. Corkery &Co. Pty Limited. Tomingley Gold Project Environmental Assessment Major Project Application No. PA 09\_0155 May 2011,

# APPENDIX A

## Consultation with NSC and RMS

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Alistair Whittle  
Geolyse  
PO Box 1963  
154 Peisley St  
ORANGE NSW 2800

Dear Alistair

### PROPOSED TOMINGLEY WEST ROAD UPGRADE

Thank you for the detailed design plans for the above road improvement project, Drawing Sheets 01B\_E01 to 01B\_E20 Revision B and Pavement Investigation and Design Report from Geotech, Ref: 11/439.

Please be advised that the work shown on the plans is approved by Council subject to the requirements for signs, markings and traffic facilities mentioned below:

Please note that there is not sufficient detail on the plans for signage to be assessed and it is a matter for the applicant to ensure that all signage, road markings and traffic facilities installed as part of the works, meet the relevant Roads and Maritime Services design requirements or, in the absence of a Roads and Maritime Services requirement, the current Australian Standard 1742 for legend, symbols, colours, font, dimensions, location, etc.

If you require further information, please contact Council's Manager Technical Services, Mr Ross Bignell, on 02 6889 9940.

Yours faithfully



Les Simons  
Director of Engineering Services

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Please address all Correspondence to the General Manager, PO Box 115 Narromine NSW 2821  
Telephone: (02) 6889 9999 Facsimile: (02) 6889 9998 Office Address: 124 Dandaloo Street  
Email: mail@narromine.nsw.gov.au Web site: www.narromine.nsw.gov.au

<p><b>RMS Comments for consideration,                  taken from RMS email on 18                  September 2012 to Henry Kaye</b></p>	<p><b>TGO Response to comments</b></p>
<p>Condition 44 of the Major Project Approval requires a TMP to be submitted, however the content of the TMP (as detailed in condition 44) only needs to address traffic issues at Tomingley West Road, traffic through Tomingley, traffic at the intersection of Newell Highway/Tomingley-Narromine Road (89), 89/Tomingley West Road and site access road/Tomingley West Road. Condition 44 does not include the diversion of the highway and does not include the proposed emergency access to the highway (although it would seem appropriate that the latter is included in the TMP).</p>	<p>Comment Noted</p>
<p>In Appendix 7 to the Major Project Approval (Statement of Commitments) the proponent is required to submit two TMPs. The first TMP to address the matters detailed in condition 44. The second TMP being a Construction Road Traffic Management Plan (CRTMP), essentially a separate plan which addresses the underpass construction and diversion construction/operation process.</p>	<p>Comment Noted, this TMP addresses the requirements of Condition 44 of Project Approval</p>
<p>Emergency access road from site to Newell Highway. The TMP proposes that this access will only be used during flood events where the Tomingley West Road is unpassable. The TMP also proposes to provide flag men to regulate the movement of mine vehicles onto the highway to ensure safe movements. Access would only be available during daylight hours.</p> <p>Advice received from Alkane has been that the access from the highway would</p>	<p>The TMP has been updated to reflect that the Emergency Access Roads will only be used in the event of an emergency and not during flooding.</p> <p>Feedback on the use of flagmen in a 110km/hr zone has been noted and the use of flagmen was removed from the management measures within the TMP.</p>

<p>only be required in the event of an emergency on the mine site. The TMP is contrary to this advice. If the access is required for an on-site emergency only, no upgrading of the existing farm access is necessary. Should access to the highway be required for any event/use outside of this, a rural property access and BAR will be required. Flagmen/Traffic controllers may only operate in a 60km or less environment. The current speed zone in this locale is 110kmph. To provide traffic control on the highway would require the speed zone to be reduced to 60km during emergency events. This is not supported by RMS.</p>	
<p>TMP does not including sealing of Tomingley West Road (only refers to strengthening the road pavement). Major Project Approval requires sealing.</p>	<p>TMP has been updated to include details of the road upgrade including the sealing of the road.</p>
<p>Lighting of Tomingley West Rd/89 intersection - who pays for lighting operation costs?</p>	<p>Narromine Shire Council</p>
<p>Whilst traffic generation details have been provided in the TMP, no details of daily peak travel movements (eg shift changes). At the very least, it would appear that the 89/Tomingley West Rd intersection will require a BAR.</p>	<p>The TMP has been updated in section 3.2 Traffic Volume to provide further information. Please note that the 89/Tomingley West Road is currently a BAR intersection (as detailed within the Traffic Impact Assessment of the TGP EA).</p>
<p>TMP does not adequately address traffic through Tomingley</p>	<p>Comment is noted and further detail is provided in Section 2.1</p>
<p>TMP does not provide detail of how conflict between project related traffic and other road users will be minimised.</p>	<p>Comment is noted and further detail is provided in Section 2.1</p>
<p>TMP does not address movement of oversize vehicles to and from the site.</p>	<p>Section 4.9 has been updated.</p>
<p>Line marking at intersections needs to comply with RMS Delineation Guide.</p>	<p>Comment noted and design drawings amended accordingly</p>
<p>I wish to advise you that the formal acceptance of your Traffic Management Plan is undertaken at the "Construction Phase". The Project Management Plans as noted in the Checklist for Developers</p>	<p>Comment noted.</p>

<p>Section 5 - Construction Project Management Plans, the developer at that point is required to submit all project management plans to RMS for review. These plans must include: 1) A Construction Program, 2) Quality Plan, 3) Inspection and Test Plans, 4) Construction Traffic Management Plan (CTMP) including a Vehicle Movement Plan, 5) Traffic Control Plans, 6) A Construction Environment Management Plan including an Erosion and Sediment Control Plan</p>	
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# **APPENDIX B**

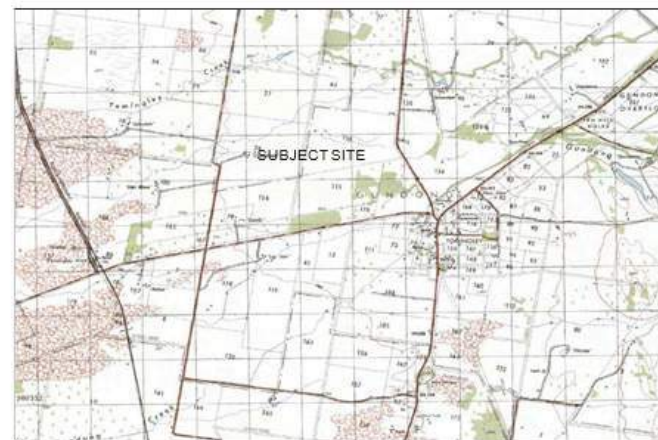
## **Design Drawings**

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# TOMINGLEY GOLD PROJECT TOMINGLEY TOMINGLEY GOLD OPERATIONS LTD. PROPOSED TOMINGLEY WEST ROAD UPGRADE

SCHEDULE OF DRAWINGS			
SHEET	TITLE	REV.	DATE
01G_E01	TITLE SHEET, DRAWING LIST, AND SITE LOCALITY	G	24/05/2013
01G_E02	ROAD TYPICAL CROSS SECTION AND DETAILS	G	24/05/2013
01G_E03	TOMINGLEY WEST ROAD PLAN AND LONG SECTION SHEET 1 OF 5	G	24/05/2013
01G_E04	TOMINGLEY WEST ROAD PLAN AND LONG SECTION SHEET 2 OF 5	G	24/05/2013
01G_E05	TOMINGLEY WEST ROAD PLAN AND LONG SECTION SHEET 3 OF 5	G	24/05/2013
01G_E06	TOMINGLEY WEST ROAD PLAN AND LONG SECTION SHEET 4 OF 5	G	24/05/2013
01G_E07	TOMINGLEY WEST ROAD PLAN AND LONG SECTION SHEET 5 OF 5	G	24/05/2013
01G_E08	TOMINGLEY WEST ROAD CROSS SECTIONS SHEET 1 OF 5	G	24/05/2013
01G_E09	TOMINGLEY WEST ROAD CROSS SECTIONS SHEET 2 OF 5	G	24/05/2013
01G_E10	TOMINGLEY WEST ROAD CROSS SECTIONS SHEET 3 OF 5	G	24/05/2013
01G_E11	TOMINGLEY WEST ROAD CROSS SECTIONS SHEET 4 OF 5	G	24/05/2013
01G_E12	TOMINGLEY WEST ROAD CROSS SECTIONS SHEET 5 OF 5	G	24/05/2013
01G_E13	TOMINGLEY WEST ROAD SETOUT TABLES	G	24/05/2013
01G_E14	GUNDONG CREEK CULVERT BARRIER KERB DETAILS	G	24/05/2013
01G_E15	TOMINGLEY WEST ROAD PIPE CULVERT EXTENSION DETAILS	G	24/05/2013
01G_E16	TOMINGLEY WEST ROAD AND MINE ACCESS ROAD INTERSECTION DETAIL	G	24/05/2013
01G_E17	TOMINGLEY WEST ROAD AND MINE ACCESS ROAD SIGNAGE PLAN	G	24/05/2013
01G_E18	NARROMINE - TOMINGLEY ROAD AND TOMINGLEY WEST ROAD SIGNAGE PLAN	G	24/05/2013
01G_E19	PRIVATE ACCESS REARRANGEMENTS	G	24/05/2013



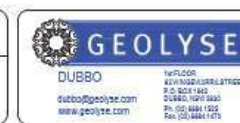
SITE LOCALITY  
1:1000 SCALE

NO	DATE	BY	CHKD	DESC
A	01/01/10	AM	AM	DRAFT ISSUE
B	01/01/10	AM	AM	ISSUED FOR APPROVAL
C	01/01/10	AM	AM	ISSUE PLANS APPROVED
D	01/01/10	AM	AM	ISSUED FOR CONSTRUCTION
E	01/01/10	AM	AM	ASSET OWNERS AGREEMENT
F	01/01/10	AM	AM	REVISION OF DESIGN CENTRELINE / ISSUES FOR APPROVAL
G	24/05/13	AM	AM	PRIVATE ACCESS REARRANGEMENTS & MINE ACCESS WAY DETAILS AGREED

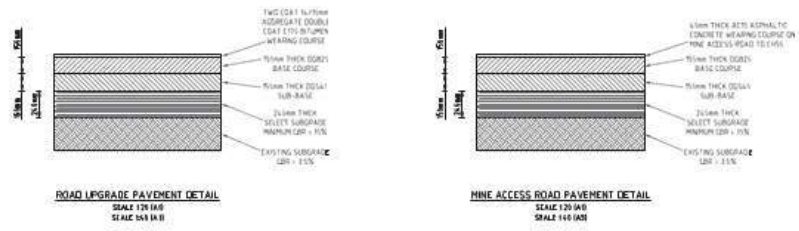
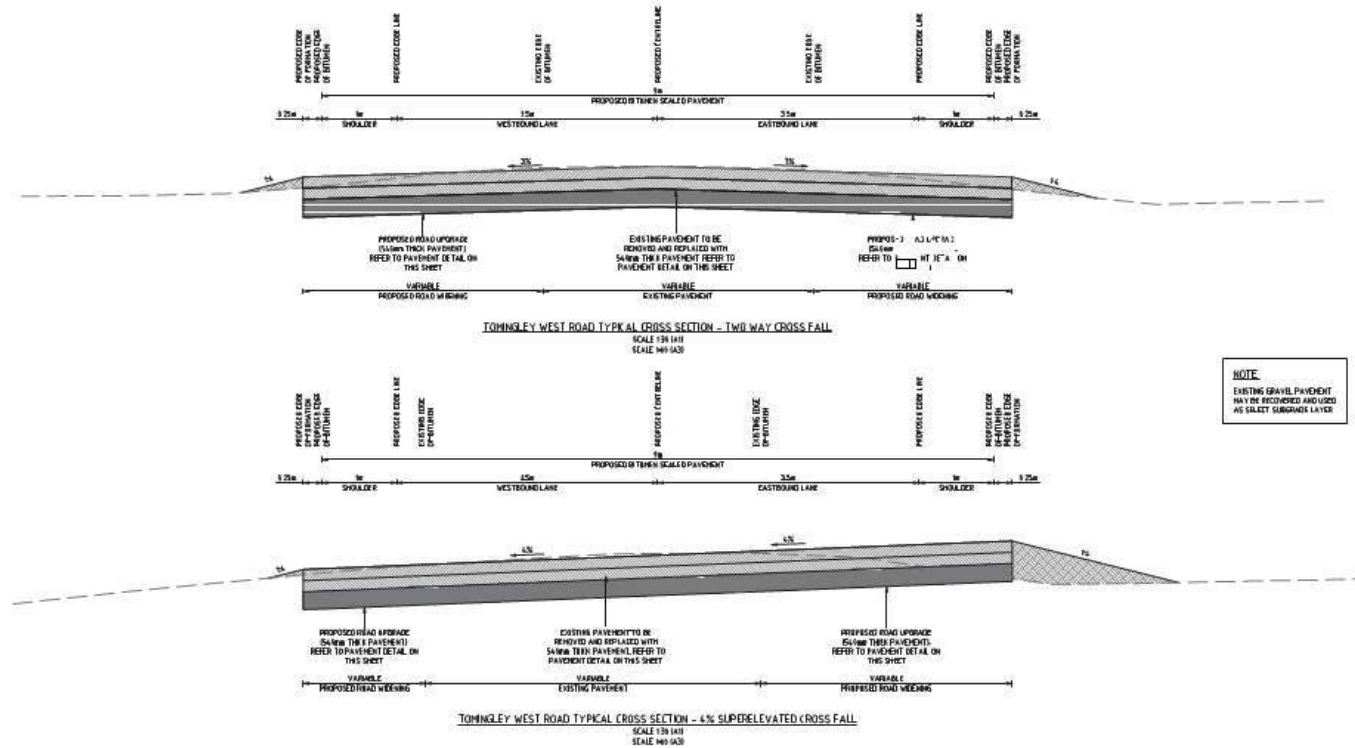
DESIGNED/APPROVED	ISSUED	DATE
APPROVED	S	24/05/13
SIGNED	H	25/05/13
DESIGNED	A / JLD	24/05/13
DRAWN	ALJ / SP/WH	24/05/13



CLIENT	TOMINGLEY GOLD OPERATIONS LTD.
PROJECT	TOMINGLEY WEST ROAD UPGRADE



DRAWN			
TITLE SHEET, DRAWING LIST, AND SITE LOCALITY			
PROJECT NUMBER	88M 82334	PL	277.195
PROJECT NAME	111185	DRAWN SHEET	01G_E01
DATE	24/05/13	SCALE	A1
DRAWN FOR APPROVAL		SHEET 001 OF 019	



- PAVEMENT NOTES**
1. THE PAVEMENT DESIGN SHOWN HAVE BEEN BASED ON A GEOTECHNICAL INVESTIGATION AND REPORT PREPARED BY MACQUEARIE GEOTECH REPORT 086-10-11-01 DATED 16 DECEMBER 2008. THE WEARING COURSE SHOWN HAS BEEN DESIGNED BY NARROMINE SHIRE COUNCIL.
  2. THE BASE AND SUB-BASE MATERIALS SHALL COMPLY WITH THE SPECIFICATION SET OUT AS APPROVED BY MACQUEARIE GEOTECH AND SHALL BE COMPACTED TO A MINIMUM DENSITY FACTOR OF 100% RELATIVE TO STANDARD COMPACTION AT A MOISTURE RATIO OF 95% WITH THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH THE REPORT PREPARED BY MACQUEARIE GEOTECH.
  3. THE SUBGRADE SHALL BE STABILIZED OF ALL SOFT, ORGANIC, OR MOISTURE AFFECTED MATERIALS AND ROLLED AND COMPACTED TO A MINIMUM DENSITY FACTOR OF 100% RELATIVE TO STANDARD COMPACTION AT A MOISTURE RATIO OF 95% OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH THE REPORT PREPARED BY MACQUEARIE GEOTECH.
  4. ALL FILL AREAS SHALL BE STABILIZED OF ALL SOFT, ORGANIC, OR MOISTURE AFFECTED MATERIALS. FILL MATERIAL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 200mm LOOSE THICKNESS AND COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS NOTED FOR THE SUBGRADE IN ACCORDANCE WITH THE REPORT PREPARED BY MACQUEARIE GEOTECH.

REV	DATE	BY	CHKD	DETAILS
A	09/05/10	AD	AM	DRAFT ISSUE
B	09/05/10	AD	AM	ISSUED FOR APPROVAL
C	04/06/10	LP	AM	SHOULDER PLANS AMENDED
D	04/06/10	LP	AM	ISSUED FOR CONSTRUCTION
E	09/05/10	LP	AM	ADD DRAIN OVERPOSTS AS NOTED
F	07/06/10	HR	AM	REVISION OF DESIGN CENTRELINE / ISSUED FOR APPROVAL
G	24/06/10	LP	SM	PRIVATE ADDRESS REARRANGEMENT & MINE ACCESS MAX DETAILS ADDED

DESIGNED / APPROVED	NAME	DATE
APPROVED	SM	24/06/10
SURVEY	HR	05/04/10
DESIGNER	AD/ALP/AM	24/06/10
DRAWING	AJL/ALP/HR	24/06/10

APPROVAL AUTHORITY

NARRAMINE SHIRE COUNCIL  
124 DANDA OOD STREET  
NARRAMINE, NSW, 2821

CLIENT  
**TOMINGLEY GOLD OPERATIONS LTD.**

PROJECT  
**TOMINGLEY WEST ROAD UPGRADE**

**GEOLYSE**

DUBBO  
www.geolyse.com.au  
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www.geolyse.com.au

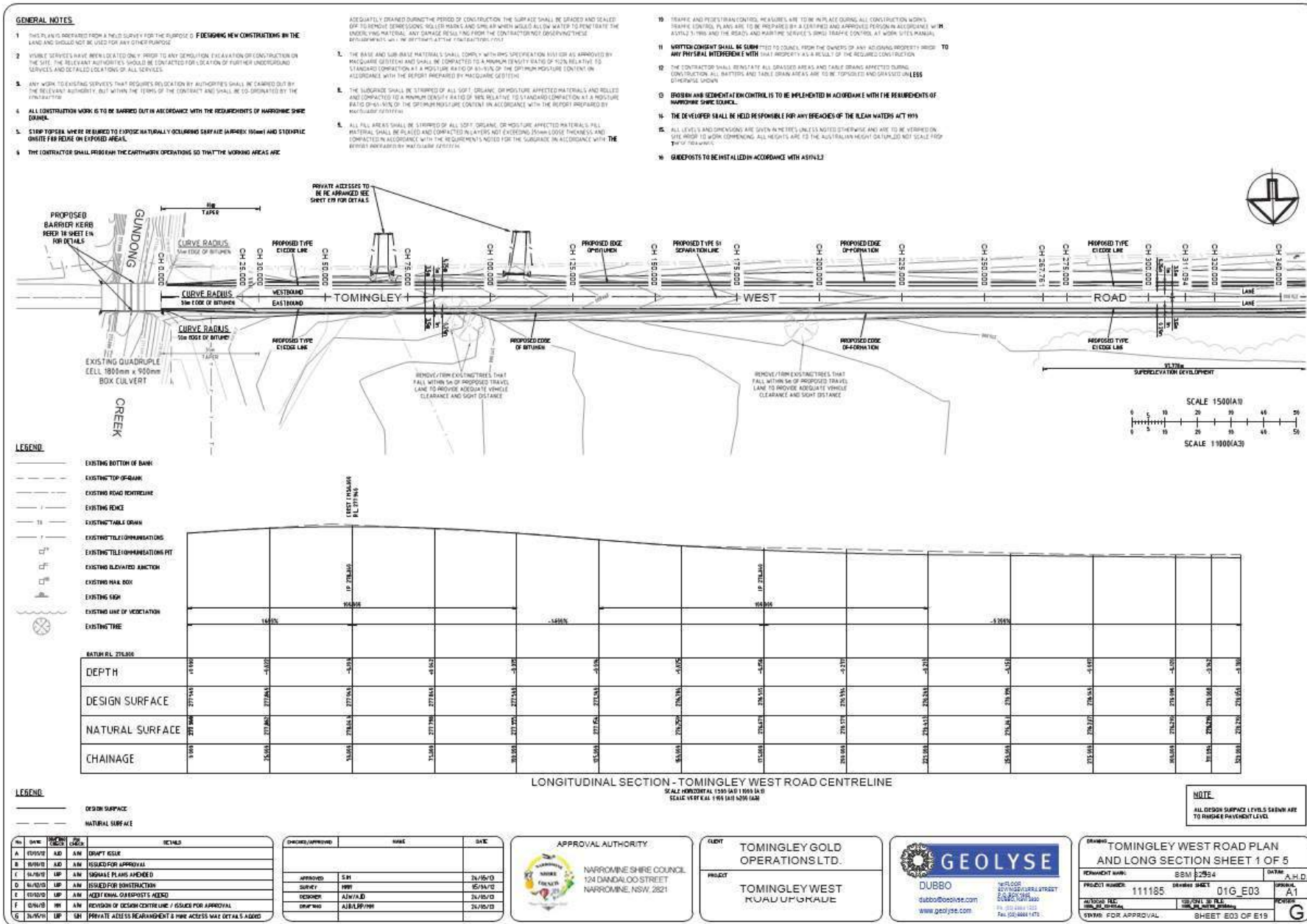
DRAWN  
**PROPOSED ROAD TYPICAL CROSS SECTIONS AND DETAILS**

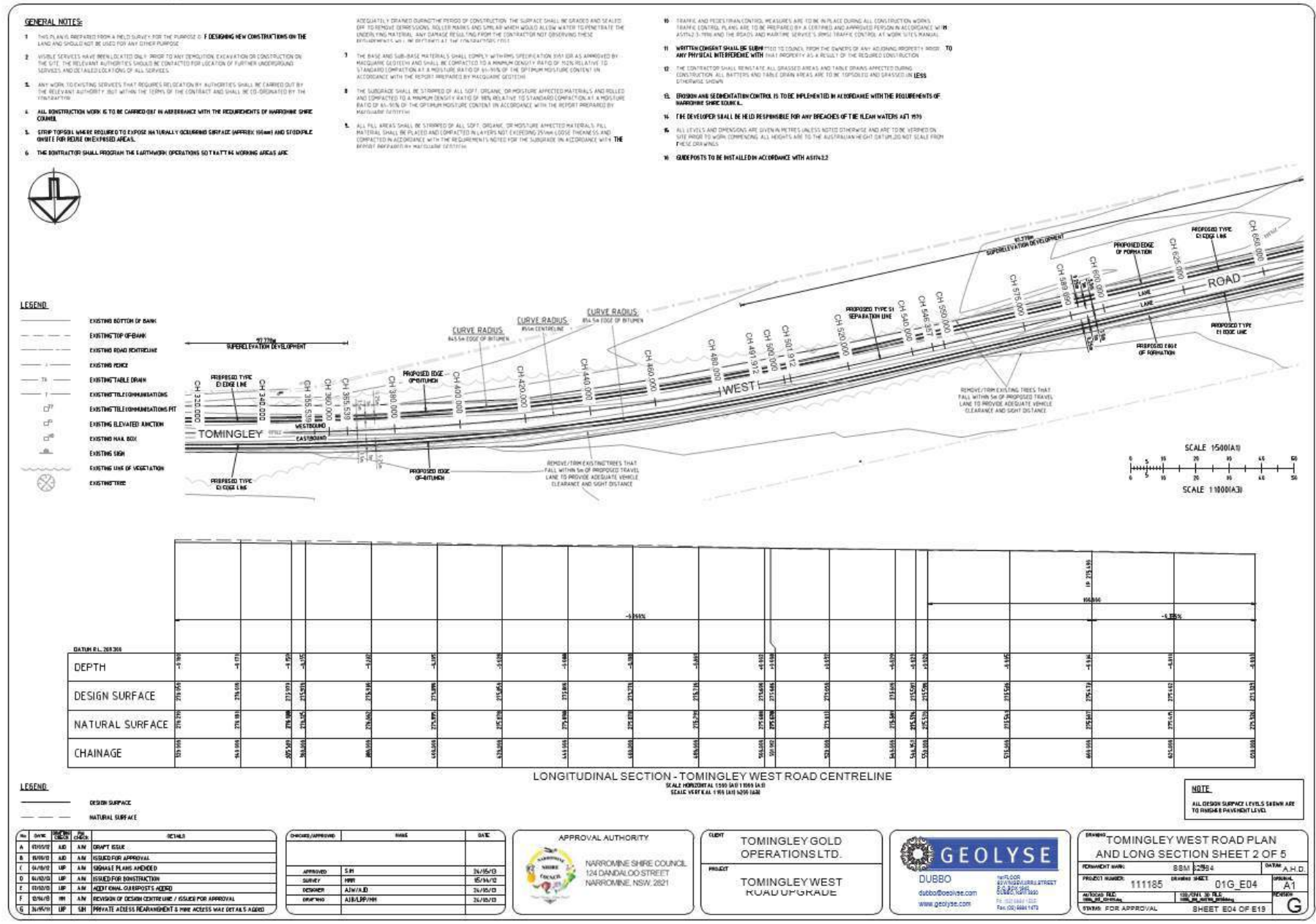
PROJECT NUMBER: **GBM 82334** | NO. **277.159** | DAYM | A.H.D.

PROJECT NUMBER: **111185** | DRAWING NAME: **01G E02** | ISSUE: **A1**

DATE OF ISSUE: **24/06/10** | DATE OF REVISION: **24/06/10** | DATE OF APPROVAL: **24/06/10**

STATUS: **FOR APPROVAL**







**GENERAL NOTES:**

- THIS PLAN IS PREPARED FROM A FIELD SURVEY FOR THE PURPOSE OF DESIGNING NEW CONSTRUCTIONS ON THE LAND AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
- VISIBLE SERVICES HAVE BEEN LOCATED ONLY PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE. THE RELEVANT AUTHORITIES SHOULD BE CONTACTED FOR LOCATION OF FURTHER UNDERGROUND SERVICES AND CABLES AT ALL STAGES.
- ANY WORK TO EXISTING SERVICES THAT REQUIRES RELOCATION BY AUTHORITIES SHALL BE CARRIED OUT BY THE RELEVANT AUTHORITY BUT WITHIN THE TERMS OF THE CONTRACT AND SHALL BE CO-ORDINATED BY THE CONSULTANT.
- ALL CONSTRUCTION WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF NARRONGINE SHIRE COUNCIL.
- STREET LIGHTS WHERE REQUIRED TO EXPOSE NATURALLY OCCURRING SERPENTINE (APPROX 100mm) AND STREPTIC ORNATE FOR REINFORCEMENT AREAL.
- THE CONTRACTOR SHALL PROGRAM THE EARTHWORK OPERATIONS SO THAT THE WORKING AREAS ARE

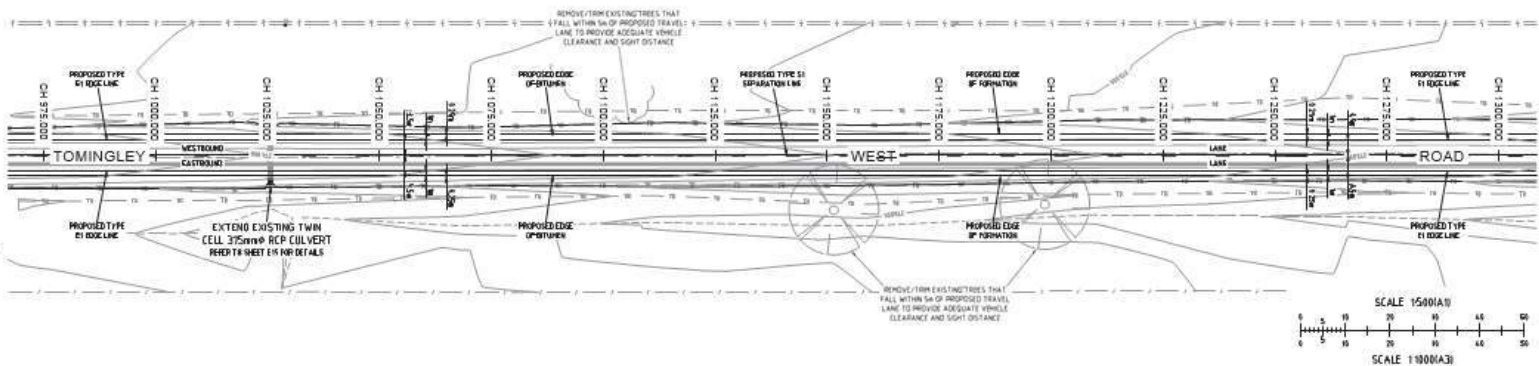
- ADEQUATELY DRAINED DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OR TO REMOVE DRAINAGE, ROLLER MARKS AND SPALLS WHICH WOULD ALLOW WATER TO PENETRATE THE UNDERLYING TYPICAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S COST.
- THE BASE AND SUB-BASE MATERIALS SHALL COMPLY WITH THE SPECIFICATION SYSTEM AS APPROVED BY MAGUIRE GUSTEIN AND SHALL BE COMPACTED TO A MINIMUM DENSITY RATIO OF 100% RELATIVE TO STANDARD COMPACTION AT A MOISTURE RATIO OF 95% OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH THE REPORT PREPARED BY MAGUIRE GUSTEIN.
- THE SUBGRADE SHALL BE STRIPPED OF ALL SOFT ORGANIC OR MOISTURE AFFECTED MATERIALS AND ROLLED AND COMPACTED TO A MINIMUM DENSITY RATIO OF 95% RELATIVE TO STANDARD COMPACTION AT A MOISTURE RATIO OF 95% OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH THE REPORT PREPARED BY MAGUIRE GUSTEIN.
- ALL FILL AREAS SHALL BE STRIPPED OF ALL SOFT ORGANIC OR MOISTURE AFFECTED MATERIALS, FILL MATERIAL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 200mm THICKNESS AND COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS NOTED FOR THE SURFACE OR IN ACCORDANCE WITH THE REPORT PREPARED BY MAGUIRE GUSTEIN.

- TRAFFIC AND PEDESTRIAN CONTROL MEASURES ARE TO BE IN PLACE DURING ALL CONSTRUCTION WORKS. TRAFFIC CONTROL PLANS ARE TO BE PREPARED BY A CERTIFIED AND APPROVED PERSON IN ACCORDANCE WITH SECTION 7.19 AND THE ROAD AND MAINTENANCE SERVICES TRAFFIC CONTROL AT WORK SITE MANUAL.
- WRITTEN CONSENT SHALL BE OBTAINED FROM THE OWNERS OF ANY ADJOINING PROPERTY PRIOR TO ANY PHYSICAL INTERFERENCE WITH THAT PROPERTY AS A RESULT OF THE REQUIRED CONSTRUCTION.
- THE CONTRACTOR SHALL REGRASS ALL GRASSED AREAS AND TABLE DRAINING AFFECTED DURING CONSTRUCTION. ALL BATTERS AND TABLE DRAIN AREAS ARE TO BE TOPSOILED AND GRASSED UNLESS OTHERWISE NOTED.
- EROSION AND SEDIMENTATION CONTROL IS TO BE IMPLEMENTED IN ACCORDANCE WITH THE REQUIREMENTS OF NARRONGINE SHIRE COUNCIL.
- THE DEVELOPER SHALL BE HELD RESPONSIBLE FOR ANY BREACHES OF THE CLEAN WATERS ACT 1999.
- ALL LEVELS AND DIMENSIONS ARE GIVEN IN METRES UNLESS NOTED OTHERWISE AND ARE TO BE REFERRED ON SITE PRIOR TO WORK COMMENCING. ALL HEIGHTS ARE TO THE AUSTRALIAN HEIGHT DATUM (AHD) UNLESS NOTED OTHERWISE.
- GUIDE POSTS TO BE INSTALLED IN ACCORDANCE WITH AS19422.



**LEGEND**

- EXISTING BOTTOM OF DRAIN
- EXISTING TOP OF DRAIN
- EXISTING ROAD CENTRELINE
- EXISTING FENCE
- EXISTING TABLE DRAIN
- EXISTING TILE COMMUNICATIONS
- EXISTING TILE COMMUNICATIONS PIT
- EXISTING ELEVATED ANCHOR
- EXISTING MAIL BOX
- EXISTING SIGN
- EXISTING LINE OF VEGETATION
- EXISTING TREE



DEPTH	11.81	11.82	11.83	11.84	11.85	11.86	11.87	11.88	11.89	11.90	11.91	11.92	11.93	11.94	11.95	11.96	11.97	11.98	11.99	12.00	12.01	12.02	12.03	12.04	12.05	12.06	12.07	12.08	12.09	12.10	12.11	12.12	12.13	12.14	12.15	12.16	12.17	12.18	12.19	12.20	12.21	12.22	12.23	12.24	12.25	12.26	12.27	12.28	12.29	12.30	12.31	12.32	12.33	12.34	12.35	12.36	12.37	12.38	12.39	12.40	12.41	12.42	12.43	12.44	12.45	12.46	12.47	12.48	12.49	12.50	12.51	12.52	12.53	12.54	12.55	12.56	12.57	12.58	12.59	12.60	12.61	12.62	12.63	12.64	12.65	12.66	12.67	12.68	12.69	12.70	12.71	12.72	12.73	12.74	12.75	12.76	12.77	12.78	12.79	12.80	12.81	12.82	12.83	12.84	12.85	12.86	12.87	12.88	12.89	12.90	12.91	12.92	12.93	12.94	12.95	12.96	12.97	12.98	12.99	13.00	13.01	13.02	13.03	13.04	13.05	13.06	13.07	13.08	13.09	13.10	13.11	13.12	13.13	13.14	13.15	13.16	13.17	13.18	13.19	13.20	13.21	13.22	13.23	13.24	13.25	13.26	13.27	13.28	13.29	13.30	13.31	13.32	13.33	13.34	13.35	13.36	13.37	13.38	13.39	13.40	13.41	13.42	13.43	13.44	13.45	13.46	13.47	13.48	13.49	13.50	13.51	13.52	13.53	13.54	13.55	13.56	13.57	13.58	13.59	13.60	13.61	13.62	13.63	13.64	13.65	13.66	13.67	13.68	13.69	13.70	13.71	13.72	13.73	13.74	13.75	13.76	13.77	13.78	13.79	13.80	13.81	13.82	13.83	13.84	13.85	13.86	13.87	13.88	13.89	13.90	13.91	13.92	13.93	13.94	13.95	13.96	13.97	13.98	13.99	14.00	14.01	14.02	14.03	14.04	14.05	14.06	14.07	14.08	14.09	14.10	14.11	14.12	14.13	14.14	14.15	14.16	14.17	14.18	14.19	14.20	14.21	14.22	14.23	14.24	14.25	14.26	14.27	14.28	14.29	14.30	14.31	14.32	14.33	14.34	14.35	14.36	14.37	14.38	14.39	14.40	14.41	14.42	14.43	14.44	14.45	14.46	14.47	14.48	14.49	14.50	14.51	14.52	14.53	14.54	14.55	14.56	14.57	14.58	14.59	14.60	14.61	14.62	14.63	14.64	14.65	14.66	14.67	14.68	14.69	14.70	14.71	14.72	14.73	14.74	14.75	14.76	14.77	14.78	14.79	14.80	14.81	14.82	14.83	14.84	14.85	14.86	14.87	14.88	14.89	14.90	14.91	14.92	14.93	14.94	14.95	14.96	14.97	14.98	14.99	15.00	15.01	15.02	15.03	15.04	15.05	15.06	15.07	15.08	15.09	15.10	15.11	15.12	15.13	15.14	15.15	15.16	15.17	15.18	15.19	15.20	15.21	15.22	15.23	15.24	15.25	15.26	15.27	15.28	15.29	15.30	15.31	15.32	15.33	15.34	15.35	15.36	15.37	15.38	15.39	15.40	15.41	15.42	15.43	15.44	15.45	15.46	15.47	15.48	15.49	15.50	15.51	15.52	15.53	15.54	15.55	15.56	15.57	15.58	15.59	15.60	15.61	15.62	15.63	15.64	15.65	15.66	15.67	15.68	15.69	15.70	15.71	15.72	15.73	15.74	15.75	15.76	15.77	15.78	15.79	15.80	15.81	15.82	15.83	15.84	15.85	15.86	15.87	15.88	15.89	15.90	15.91	15.92	15.93	15.94	15.95	15.96	15.97	15.98	15.99	16.00	16.01	16.02	16.03	16.04	16.05	16.06	16.07	16.08	16.09	16.10	16.11	16.12	16.13	16.14	16.15	16.16	16.17	16.18	16.19	16.20	16.21	16.22	16.23	16.24	16.25	16.26	16.27	16.28	16.29	16.30	16.31	16.32	16.33	16.34	16.35	16.36	16.37	16.38	16.39	16.40	16.41	16.42	16.43	16.44	16.45	16.46	16.47	16.48	16.49	16.50	16.51	16.52	16.53	16.54	16.55	16.56	16.57	16.58	16.59	16.60	16.61	16.62	16.63	16.64	16.65	16.66	16.67	16.68	16.69	16.70	16.71	16.72	16.73	16.74	16.75	16.76	16.77	16.78	16.79	16.80	16.81	16.82	16.83	16.84	16.85	16.86	16.87	16.88	16.89	16.90	16.91	16.92	16.93	16.94	16.95	16.96	16.97	16.98	16.99	17.00	17.01	17.02	17.03	17.04	17.05	17.06	17.07	17.08	17.09	17.10	17.11	17.12	17.13	17.14	17.15	17.16	17.17	17.18	17.19	17.20	17.21	17.22	17.23	17.24	17.25	17.26	17.27	17.28	17.29	17.30	17.31	17.32	17.33	17.34	17.35	17.36	17.37	17.38	17.39	17.40	17.41	17.42	17.43	17.44	17.45	17.46	17.47	17.48	17.49	17.50	17.51	17.52	17.53	17.54	17.55	17.56	17.57	17.58	17.59	17.60	17.61	17.62	17.63	17.64	17.65	17.66	17.67	17.68	17.69	17.70	17.71	17.72	17.73	17.74	17.75	17.76	17.77	17.78	17.79	17.80	17.81	17.82	17.83	17.84	17.85	17.86	17.87	17.88	17.89	17.90	17.91	17.92	17.93	17.94	17.95	17.96	17.97	17.98	17.99	18.00	18.01	18.02	18.03	18.04	18.05	18.06	18.07	18.08	18.09	18.10	18.11	18.12	18.13	18.14	18.15	18.16	18.17	18.18	18.19	18.20	18.21	18.22	18.23	18.24	18.25	18.26	18.27	18.28	18.29	18.30	18.31	18.32	18.33	18.34	18.35	18.36	18.37	18.38	18.39	18.40	18.41	18.42	18.43	18.44	18.45	18.46	18.47	18.48	18.49	18.50	18.51	18.52	18.53	18.54	18.55	18.56	18.57	18.58	18.59	18.60	18.61	18.62	18.63	18.64	18.65	18.66	18.67	18.68	18.69	18.70	18.71	18.72	18.73	18.74	18.75	18.76	18.77	18.78	18.79	18.80	18.81	18.82	18.83	18.84	18.85	18.86	18.87	18.88	18.89	18.90	18.91	18.92	18.93	18.94	18.95	18.96	18.97	18.98	18.99	19.00	19.01	19.02	19.03	19.04	19.05	19.06	19.07	19.08	19.09	19.10	19.11	19.12	19.13	19.14	19.15	19.16	19.17	19.18	19.19	19.20	19.21	19.22	19.23	19.24	19.25	19.26	19.27	19.28	19.29	19.30	19.31	19.32	19.33	19.34	19.35	19.36	19.37	19.38	19.39	19.40	19.41	19.42	19.43	19.44	19.45	19.46	19.47	19.48	19.49	19.50	19.51	19.52	19.53	19.54	19.55	19.56	19.57	19.58	19.59	19.60	19.61	19.62	19.63	19.64	19.65	19.66	19.67	19.68	19.69	19.70	19.71	19.72	19.73	19.74	19.75	19.76	19.77	19.78	19.79	19.80	19.81	19.82	19.83	19.84	19.85	19.86	19.87	19.88	19.89	19.90	19.91	19.92	19.93	19.94	19.95	19.96	19.97	19.98	19.99	20.00	20.01	20.02	20.03	20.04	20.05	20.06	20.07	20.08	20.09	20.10	20.11	20.12	20.13	20.14	20.15	20.16	20.17	20.18	20.19	20.20	20.21	20.22	20.23	20.24	20.25	20.26	20.27	20.28	20.29	20.30	20.31	20.32	20.33	20.34	20.35	20.36	20.37	20.38	20.39	20.40	20.41	20.42	20.43	20.44	20.45	20.46	20.47	20.48	20.49	20.50	20.51	20.52	20.53	20.54	20.55	20.56	20.57	20.58	20.59	20.60	20.61	20.62	20.63	20.64	20.65	20.66	20.67	20.68	20.69	20.70	20.71	20.72	20.73	20.74	20.75	20.76	20.77	20.78	20.79	20.80	20.81	20.82	20.83	20.84	20.85	20.86	20.87	20.88	20.89	20.90	20.91	20.92	20.93	20.94	20.95	20.96	20.97	20.98	20.99	21.00	21.01	21.02	21.03	21.04	21.05	21.06	21.07	21.08	21.09	21.10	21.11	21.12	21.13	21.14	21.15	21.16	21.17	21.18	21.19	21.20	21.21	21.22	21.23	21.24	21.25	21.26	21.27	21.28	21.29	21.30	21.31	21.32	21.33	21.34	21.35	21.36	21.37	21.38	21.39	21.40	21.41	21.42	21.43	21.44	21.
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**GENERAL NOTES:**

- THIS PLAN IS PREPARED FROM A FIELD SURVEY FOR THE PURPOSE OF DESIGNING NEW CONSTRUCTION ON THE LAND AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
- VISUAL SERVICES HAVE BEEN LOCATED ONLY IN RESPONSE TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE. THE RELEVANT AUTHORITIES SHOULD BE CONTACTED FOR LOCATION OF FURTHER UNDERGROUND SERVICES AND LOCATED LOCATIONS OF ALL SERVICES.
- ANY WORK TO EXISTING SERVICES THAT REQUIRES RELIEFATION BY AUTHORITY'S SHALL BE CARRIED OUT BY THE RELEVANT AUTHORITY BUT WITHIN THE TERMS OF THE CONTRACT AND SHALL BE CO-ORDINATED BY THE CONTRACTOR.
- ALL CONSTRUCTION WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF NARROMINE SHIRE COUNCIL.
- STAMP TOPSOIL WHERE REQUIRED TO EXPOSE NATURALLY OCCURRING SURFACE (APPROX 100mm) AND STABILISE ON SITE FOR REUSE ON EXPOSED AREAS.
- THE CONTRACTOR SHALL PROGRAM THE EARTHWORK OPERATIONS SO THAT THE WORKING AREAS ARE

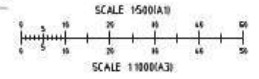
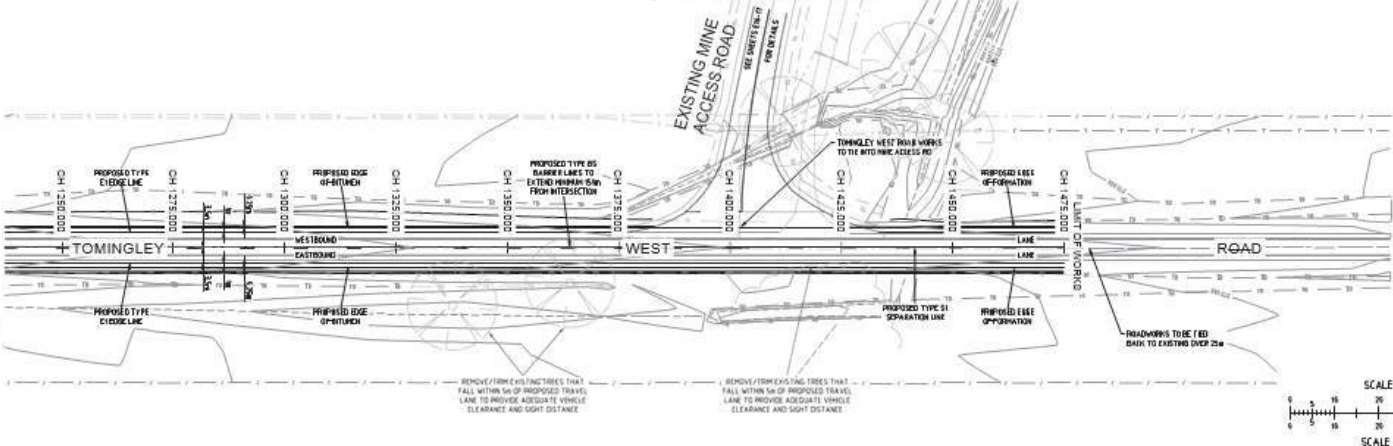
- ADEQUATELY DRAINED DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRAZED AND SEALED OFF TO REMOVE DEBRIS (ROCKS, ROLLER MARKS AND SPHERS WHICH WOULD ALLOW WATER TO PENETRATE THE UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT BE COVERING THESE REQUIREMENTS WILL BE AT CONTRACTOR'S RISK.
- THE BASE AND SUB-BASE MATERIALS SHALL COMPLY WITH NSW SPECIFICATION 803 (OR AS APPROVED BY MAGUIRE GEOTECH) AND SHALL BE COMPACTED TO A MINIMUM DENSITY RATIO OF 10% RELATIVE TO STANDARD COMPACTION AT A MOISTURE RATIO OF 6% OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH THE REPORT PREPARED BY MAGUIRE GEOTECH.
- THE SUBGRADE SHALL BE STORMED OF ALL SOFT ORGANIC OR FERTILE AFFECTED MATERIALS AND ROLLED AND COMPACTED TO A MINIMUM DENSITY RATIO OF 10% RELATIVE TO STANDARD COMPACTION AT A MOISTURE RATIO OF 6% OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH THE REPORT PREPARED BY MAGUIRE GEOTECH.
- ALL FILL AREAS SHALL BE STORMED OF ALL SOFT ORGANIC OR FERTILE AFFECTED MATERIALS. FILL MATERIAL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 250mm GROSS THICKNESS AND COMPACTED IN ACCORDANCE WITH THE REQUIREMENTS NOTED FOR THE SUBGRADE IN ACCORDANCE WITH THE REPORT PREPARED BY MAGUIRE GEOTECH.

- TRAFFIC AND PEDESTRIAN CONTROL MEASURES ARE TO BE IN PLACE DURING ALL CONSTRUCTION WORKS. TRAFFIC CONTROL PLANS ARE TO BE PREPARED BY A CERTIFIED AND APPROVED PERSON IN ACCORDANCE WITH AS/TRAFFIC-1996 AND THE ROAD AND HIGHWAY SERVICE'S TRAFFIC CONTROL AT WORK SITES MANUAL.
- WRITTEN CONSENT SHALL BE SUBMITTED TO COUNCIL FROM THE OWNERS OF ANY ADJOINING PROPERTY PRIOR TO ANY PHYSICAL INTERFERENCE WITH THAT PROPERTY AS A RESULT OF THE REQUIRED CONSTRUCTION.
- THE CONTRACTOR SHALL MINIMIZE ALL UNDESIRABLE AREAS AND TABLE DRAINING AFFECTED DURING CONSTRUCTION. ALL MATTERS AND TABLE DRAIN AREAS ARE TO BE TOPSOILED AND GRAZED ON LESS OTHERWISE URGENT.
- EROSION AND SEDIMENTATION CONTROL IS TO BE IMPLEMENTED IN ACCORDANCE WITH THE REQUIREMENTS OF NARROMINE SHIRE COUNCIL.
- THE DEVELOPER SHALL BE HELD RESPONSIBLE FOR ANY BREACHES OF THE CLEAN WATERS ACT 1995.
- ALL LEVELS AND DIMENSIONS ARE GIVEN IN METRES UNLESS NOTED OTHERWISE AND ARE TO BE VERIFIED ON SITE PRIOR TO WORK COMMENCING. ALL HEIGHTS ARE TO THE AUSTRALIAN HEIGHT DATUM UNLESS NOTED OTHERWISE.
- GUIDEPOTS TO BE INSTALLED IN ACCORDANCE WITH AS1913.3.



**LEGEND**

- EXISTING BOTTOM OF BANK
- EXISTING TOP OF BANK
- EXISTING ROAD CENTRELINE
- EXISTING FENCE
- EXISTING TABLE DRAIN
- EXISTING TELECOMMUNICATIONS
- EXISTING TELECOMMUNICATIONS PIT
- EXISTING ELEVATED ANCHOR
- EXISTING MAIL BOX
- EXISTING SIGN
- EXISTING LINE OF VEGETATION
- EXISTING TREE



DEPTH	CHAINAGE	DEPTH	CHAINAGE	DEPTH	CHAINAGE	DEPTH	CHAINAGE	DEPTH	CHAINAGE	DEPTH	CHAINAGE
DESIGN SURFACE	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000
NATURAL SURFACE	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000	100.000

LONGITUDINAL SECTION - DESIGN TOMINGLEY WEST ROAD CENTRELINE  
SCALE HORIZONTAL 1:500 (A1) 1:1000 (A3)  
SCALE VERTICAL 1:100 (A1) 1:200 (A3)

**LEGEND**

- DESIGN SURFACE
- NATURAL SURFACE

**NOTE**  
ALL DESIGN SURFACE LEVELS GIVEN ARE TO FINISHED PAVEMENT LEVEL.

NO	DATE	ISSUE	BY	CHKD	DETAILS
A	01/10/10	AD	AM	AM	DRAFT ISSUE
B	01/10/10	AD	AM	AM	ISSUED FOR APPROVAL
C	01/10/10	UP	AM	AM	SIGNAGE PLANS AMENDED
D	01/10/10	UP	AM	AM	ISSUED FOR CONSTRUCTION
E	01/10/10	UP	AM	AM	ASBESTOS SURVEY REPORT ADDED
F	01/10/10	UP	AM	AM	REVISION OF DESIGN CENTRELINE / ISSUES FOR APPROVAL
G	21/01/11	UP	AM	AM	PRIVATE ACCESS REVISIONS & FINE ACCESS WAY DETAILS ADDED

DESIGNED/APPROVED	NAME	DATE
APPROVED	SFH	21/10/10
SURVEY	MHW	05/09/10
DESIGNER	AJW/AD	21/10/10
DRAWING	AJW/AM	21/10/10

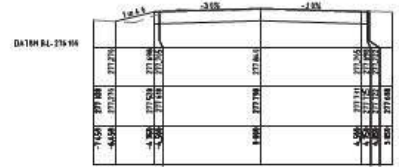
APPROVAL AUTHORITY  
NARROMINE SHIRE COUNCIL  
124 DANDALOO STREET  
NARROMINE, NSW, 2821

CLIENT  
TOMINGLEY GOLD OPERATIONS LTD.  
PROJECT  
TOMINGLEY WEST ROAD UPGRADE

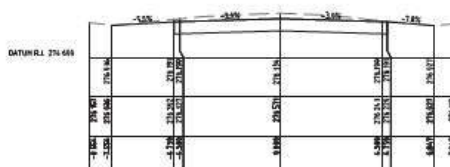
GEOLYSE  
DUBBO  
dubbo@geolyse.com  
www.geolyse.com

DRAWING  
TOMINGLEY WEST ROAD PLAN AND LONG SECTION SHEET 5 OF 5  
PROJECT NUMBER: 111185  
DRAWING NUMBER: 01G\_E07  
DATE: A.H.D.  
SCALE: A1  
REVISION: G

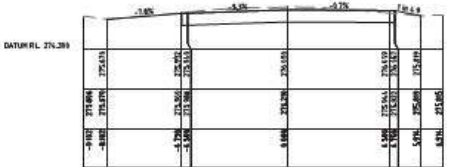
**NOTE:**  
ALL DESIGN SURFACE LEVELS SHOWN ARE  
TO FINISHED PAVEMENT LEVEL.



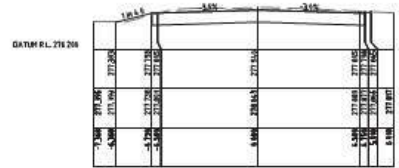
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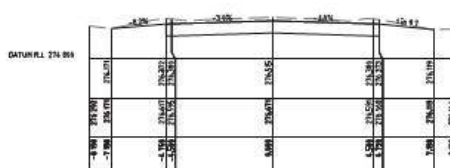
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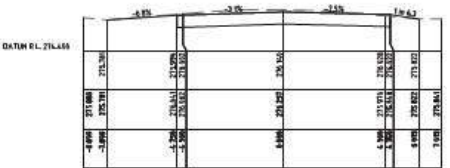
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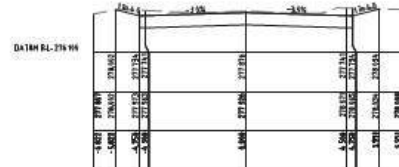
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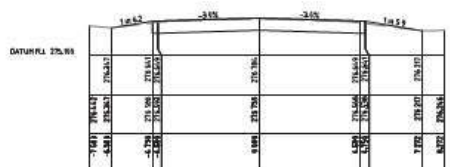
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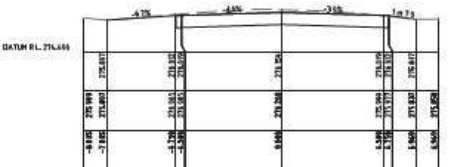
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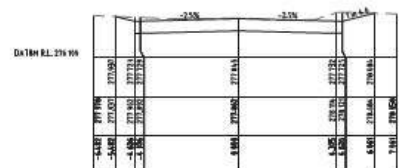
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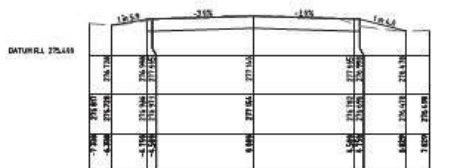
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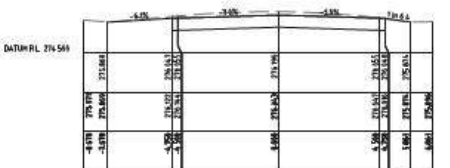
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CH 25.000



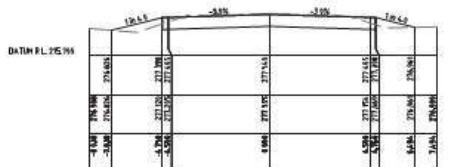
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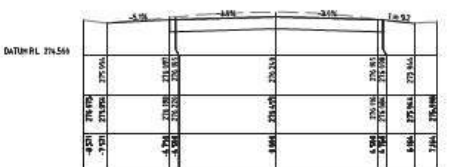
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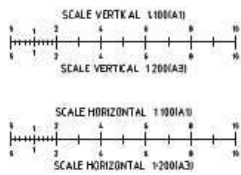
CH 0.000



CH 100.000



CH 225.000



**LEGEND**  
—— DESIGN SURFACE  
- - - - NATURAL SURFACE

NO	DATE	ISSUE	BY	CHKD	DETAILS
A	03/10/10	AD	AJM	AM	DRAFT ISSUE
B	04/10/10	AD	AJM	AM	ISSUED FOR APPROVAL
C	04/10/10	UP	AJM	AM	URGENT PLANS AMENDED
D	04/10/10	UP	AJM	AM	ISSUED FOR CONSTRUCTION
E	03/10/10	UP	AJM	AM	ADJUST FINAL OVERPOSTS ADDED
F	04/10/10	UP	AJM	AM	REVISION OF DESIGN CENTRELINE / ISSUES FOR APPROVAL
G	24/04/10	UP	SH	AM	PRIVATE ACCESS REVISIONS & FIRE ACCESS WAY DETAILS ADDED

CHKD/APPROVE	NAME	DATE
APPROVED	SH	24/05/10
SURVEY	MPF	05/04/10
DESIGNED	AJM/AJD	24/05/10
DRAWING	AJL/BJP/WH	24/05/10

APPROVAL AUTHORITY  

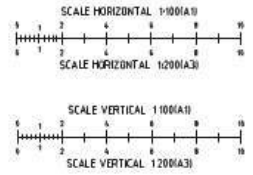
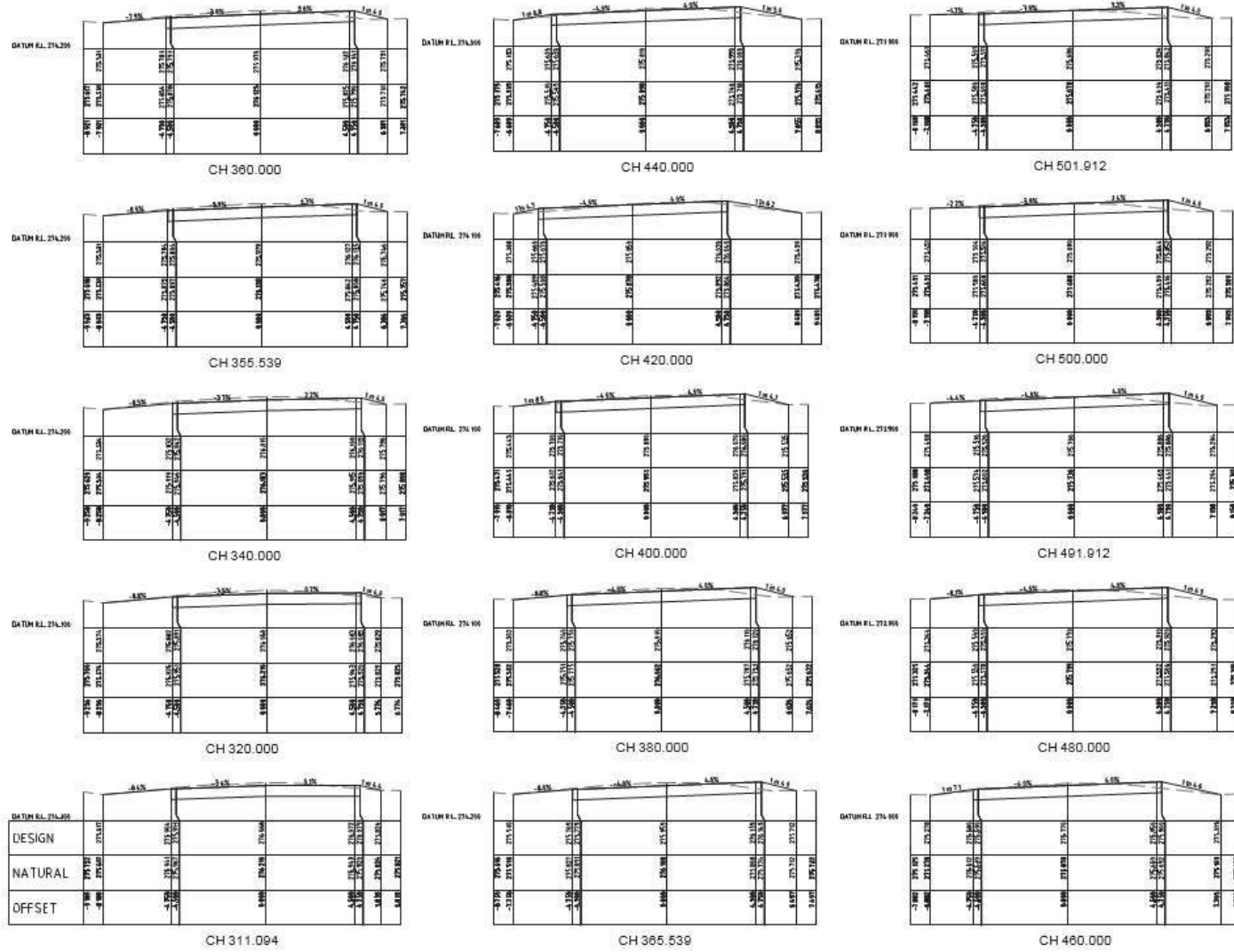
 NARROMINE SHIRE COUNCIL  
 124 DANIELLOO STREET  
 NARROMINE, NSW, 2821

CLIENT  
 TOMINGLEY GOLD OPERATIONS LTD.  
 PROJECT  
 TOMINGLEY WEST KUALUPUKAUE

**GEOLYSE**  
 DUBBO  
 dubbo@geolyse.com  
 www.geolyse.com

DRAWN BY  
 TOMINGLEY WEST ROAD  
 CROSS SECTIONS SHEET 1 OF 5  
 REVISION NO: 01  
 PROJECT NUMBER: 111185  
 DRAWING SCALE: 1:100  
 SHEET NO: 1 OF 5  
 SHEET EDS OF E19

NOTE:  
ALL DESIGN SURFACE LEVELS SHOWN ARE  
TOPFINISHED PAVEMENT LEVEL.



LEGEND:  
—— DESIGN SURFACE  
- - - - NATURAL SURFACE

No.	Date	Issue	By	Check	Details
A	05/07/10	ISSUE	AM	AM	DRAFT ISSUE
B	04/01/10	ISSUE	AM	AM	ISSUED FOR APPROVAL
C	04/01/10	ISSUE	AM	AM	SIGNAL PLANS ATTACHED
D	04/01/10	ISSUE	AM	AM	ISSUED FOR CONSTRUCTION
E	04/01/10	ISSUE	AM	AM	ASSET OWNER COMMENTS ADDED
F	07/01/10	ISSUE	AM	AM	REVISION OF DESIGN CENTRELINE / ISSUES FOR APPROVAL
G	04/01/10	ISSUE	AM	AM	PRIVATE ACCESS REARRANGEMENT & FIRE ACCESS WAY DETAILS ADDED

CHOKER/APPROVED	NAME	DATE
APPROVED	SR	24/05/10
SURVEY	MM	05/10/10
DESIGNER	AM/ALD	24/05/10
DRAWING	AM/ALP/VM	24/05/10

APPROVAL AUTHORITY  

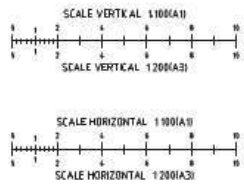
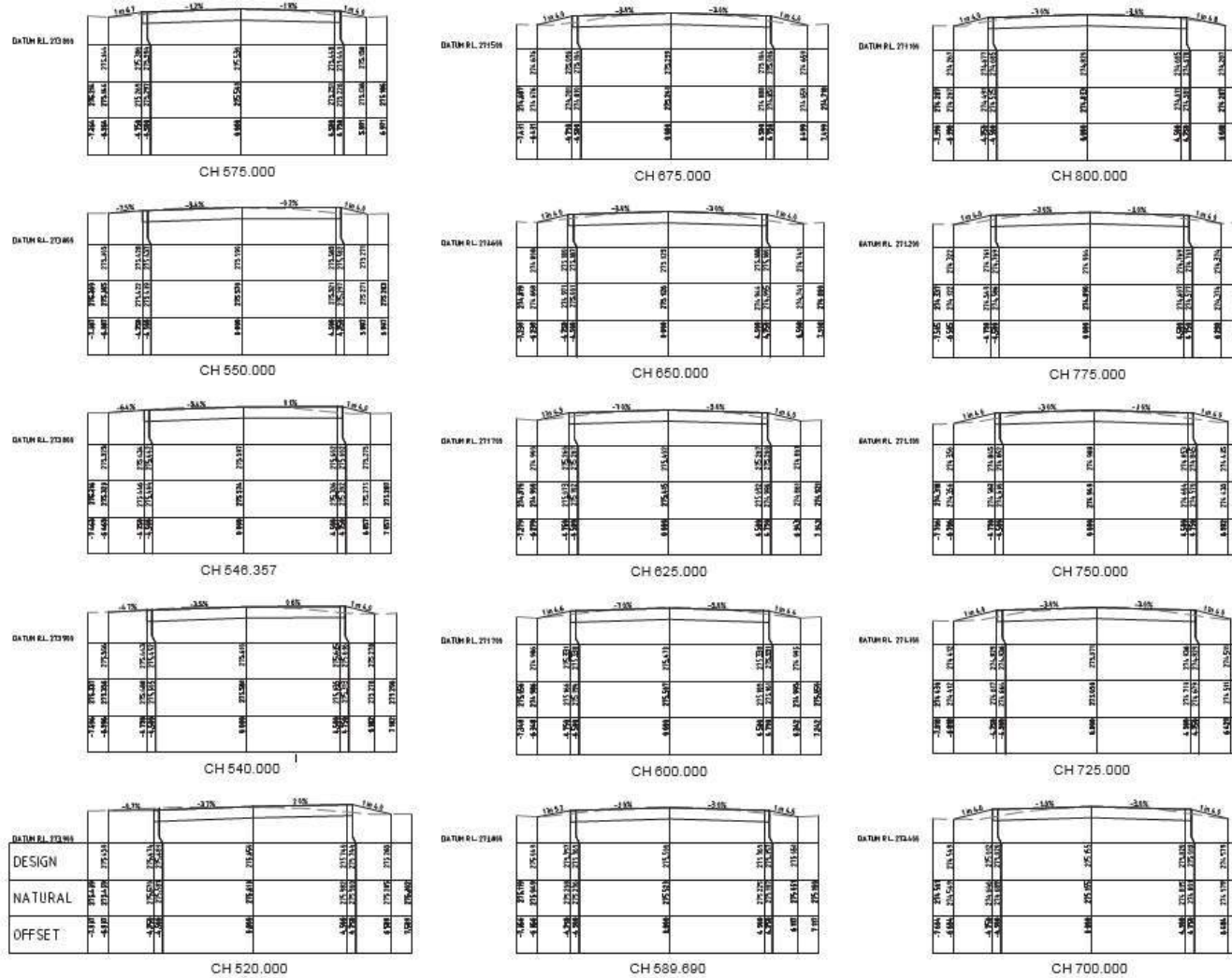
 NARROMINE SHIRE COUNCIL  
 124 DANIEL GOO STREET  
 NARROMINE, NSW, 2821

CLIENT  
**TOMINGLEY GOLD OPERATIONS LTD.**  
 PROJECT  
**TOMINGLEY WEST ROAD UPGRADE**

  
**GEOLYSE**  
 DUBBO  
 dubbo@geolyse.com  
 www.geolyse.com  
 65/70/80/90/100/110/120/130/140/150/160/170/180/190/200/210/220/230/240/250/260/270/280/290/300/310/320/330/340/350/360/370/380/390/400/410/420/430/440/450/460/470/480/490/500/510/520/530/540/550/560/570/580/590/600/610/620/630/640/650/660/670/680/690/700/710/720/730/740/750/760/770/780/790/800/810/820/830/840/850/860/870/880/890/900/910/920/930/940/950/960/970/980/990/1000  
 Ph: 02 6884 1202  
 Fax: 02 6884 1676

DRAWING  
**TOMINGLEY WEST ROAD  
 CROSS SECTIONS SHEET 2 OF 5**  
 REVISION NUMBER: 88M 82334 AL: 277,159  
 PROJECT NUMBER: 111185 DRAWING SCALE: 01G\_E09  
 SHEET NO. 21 OF 21 SHEET TOTAL: 21  
 DATE: 24/05/10  
 DRAWN BY: SR  
 CHECKED BY: AM  
 APPROVED BY: AM  
 DATE: 24/05/10  
 SHEET 2 OF 5  
 SHEET 2 OF 5

**NOTE:**  
ALL DESIGN SURFACE LEVELS SHOWN ARE  
TO FINISHED PAVEMENT LEVEL.



**LEGEND**

- DESIGN SURFACE
- NATURAL SURFACE

REV	DATE	BY	CHKD	DESCRIPTION
A	01/10/10	AM	AM	DRAFT ISSUE
B	01/10/10	AM	AM	ISSUED FOR APPROVAL
C	01/10/10	UP	AM	ISSUANCE PLANS AMENDED
D	01/10/10	UP	AM	ISSUED FOR CONSTRUCTION
E	01/10/10	UP	AM	ASSET OWNER COMMENTS ACKED
F	01/10/10	AM	AM	REVISION OF DESIGN CENTRELINE / ISSUE FOR APPROVAL
G	01/10/10	UP	AM	PRIVATE ACCESS REMOVAL AND FIRE ACCESS WAS DETAIL 5 ADDED

DESIGNED/APPROVED	NAME	DATE
APPROVED	S.M.	26/10/10
SURVEY	MM	05/11/10
DESIGNER	AM/AM	26/10/10
DRAWN	AL/ALP/PM	26/10/10

**APPROVAL AUTHORITY**

NARRAMINE SHIRE COUNCIL  
124 DANIEL O'D STREET  
NARRAMINE, NSW, 2821

**CLIENT**  
TOMINGLEY GOLD OPERATIONS LTD.

**PROJECT**  
TOMINGLEY WEST ROAD UPGRADE

**GEOLYSE**

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dubbo@geolyse.com  
www.geolyse.com

02 92 00 00 00  
02 92 00 00 00  
02 92 00 00 00

**DRAWN**  
TOMINGLEY WEST ROAD  
CROSS SECTIONS SHEET 3 OF 5

FORMWATER MARK: 89M 82334 RL: 277.155 DATUM: A.H.D.

PROJECT NUMBER: 111185 DRAWING SHEET: 01G\_E10

ISSUED FOR APPROVAL

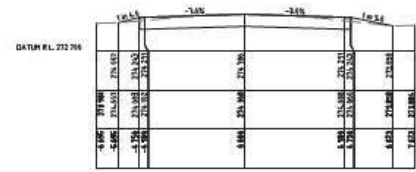
DATE: 27/10/10

SCALE: 1:100

REVISION: A1

STATUS: FOR APPROVAL SHEET E10 OF E19

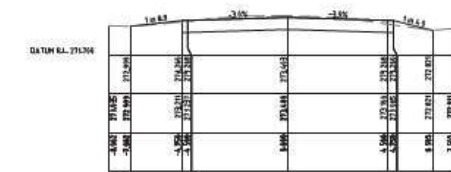
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ALL DESIGN SURFACE LEVELS SHOWN ARE TO FINISHED PAVEMENT LEVEL.



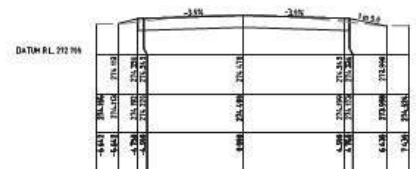
CH 925.000



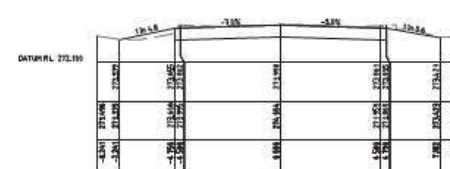
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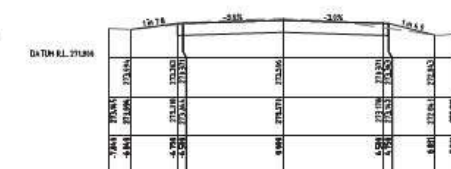
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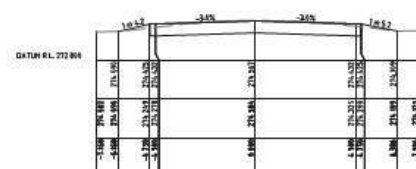
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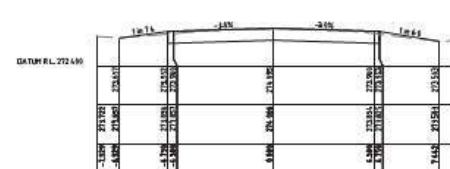
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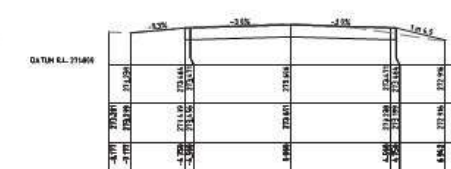
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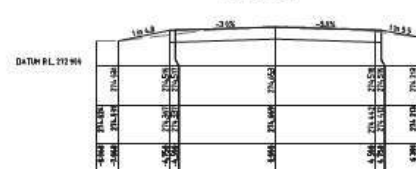
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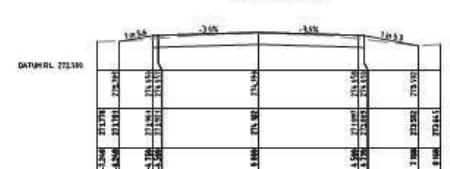
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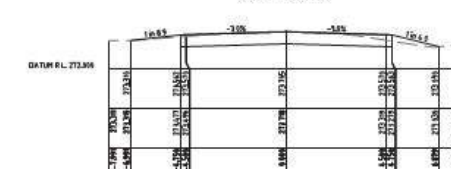
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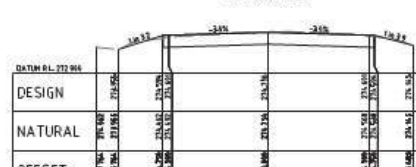
CH 850.000



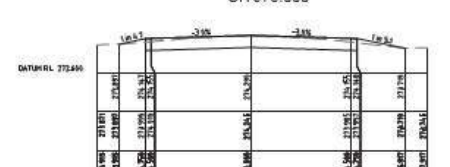
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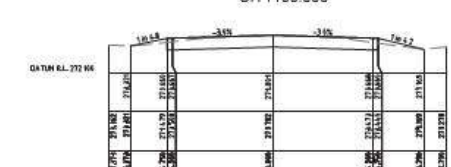
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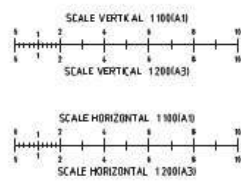
CH 825.000



CH 950.000



CH 1075.000



**LEGEND:**  
—— DESIGN SURFACE  
- - - - NATURAL SURFACE

NO.	DATE	BY	CHKD	DESC
A	20/05/12	AM	AM	DRAFT ISSUE
B	20/05/12	AM	AM	ISSUED FOR APPROVAL
C	21/05/12	UP	AM	SIGNAGE PLANS AMENDED
D	21/05/12	UP	AM	ISSUED FOR CONSTRUCTION
E	20/05/12	UP	AM	ASSET MAINT. OPERATIONS ASSESS
F	20/05/12	PH	AM	DECISION ON DESIGN CONTINGENCY / ISSUES FOR APPROVAL
G	21/05/12	UP	SM	PRIVATE ACCESS REARRANGEMENT & TRUCK ACCESS WAY DETAILS ASSESS

CHKD/APPV'D	NAME	DATE
APPROVED	SM	26/05/12
SURVEY	PH	05/04/12
DESIGNER	ALM/PAJ	26/05/12
DRAWING	ALM/PAJ/PH	26/05/12

APPROVAL AUTHORITY

NARROWME SHIRE COUNCIL  
124 DANDALOO STREET  
NARROWME, NSW, 2821

CLIENT  
**TOMINGLEY GOLD OPERATIONS LTD.**

PROJECT  
**TOMINGLEY WEST ROAD UPGRADE**

**GEOLYSE**

DUBBO  
dubbo@geolyse.com  
www.geolyse.com

40/5/2008  
27/02/2008 10:00:27  
2/02/2012 12:11:50  
Ph: 02 4681 1022  
Fax: 02 4681 1022

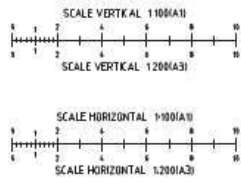
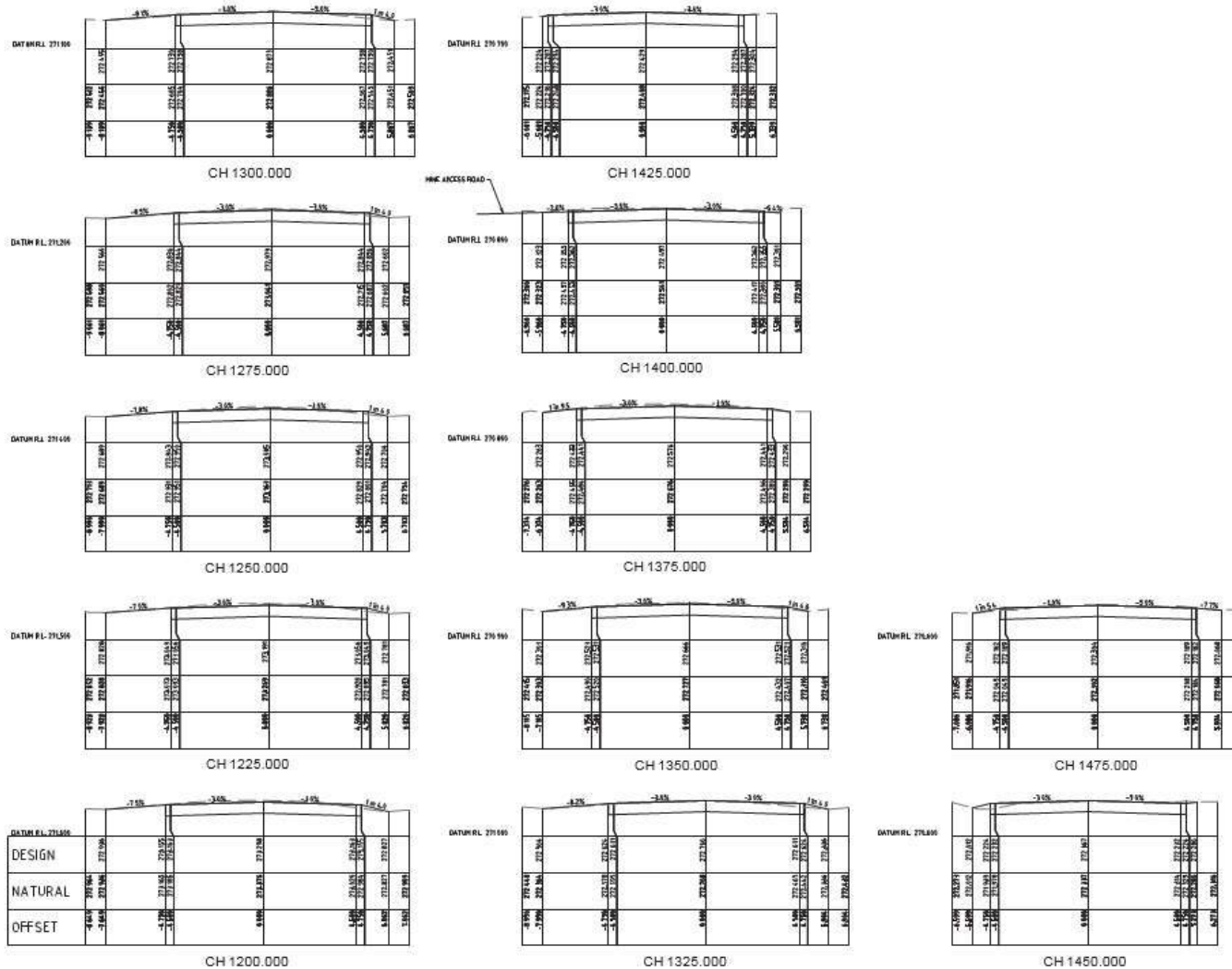
DRAWING  
**TOMINGLEY WEST ROAD  
CROSS SECTIONS SHEET 4 OF 5**

PROJECT NUMBER: 88M 82334  
DRAWING SHEET: 111185  
SHEET: 01G\_E11

DATE: 27/1/12  
SCALE: A1

FOR APPROVAL  
SHEET E11 OF E15

**NOTE:**  
ALL DESIGN SURFACE LEVELS SHOWN ARE TO FORMED PAVEMENT LEVEL.



**LEGEND**  
 DESIGN SURFACE  
 NATURAL SURFACE

NO.	DATE	BY	CHKD BY	DESCRIPTION
A	01/10/10	AD	AM	DRAFT ISSUE
B	01/10/10	AD	AM	ISSUED FOR APPROVAL
C	01/10/10	UP	AM	SIGNAL PLANS AMENDED
D	01/10/10	UP	AM	ISSUED FOR CONSTRUCTION
E	01/10/10	UP	AM	ADDED SIGNALS TO AHEAD
F	01/10/10	UP	AM	REVISION OF DESIGN CENTRE LINE / ISSUE FOR APPROVAL
G	26/10/10	UP	SH	PRIVATE ACCESS REARRANGEMENT & PINK ACCESS WAY DETAILS ADDED

CHGKED/APPROVED	NAME	DATE
APPROVED	SH	26/10/10
SURVEY	HPH	16/10/10
DESIGNER	AJM/ALD	26/10/10
DRAWN	ALD/HPH	26/10/10

APPROVAL AUTHORITY  
  
 NARROMINE SHIRE COUNCIL  
 101 DANIELA DO STREET  
 NARROMINE, NSW, 2821

CLIENT  
 TOMINGLEY GOLD OPERATIONS LTD.  
 PROJECT  
 TOMINGLEY WEST ROAD UPGRADE

DUBBO  
 dubbo@geolyse.com  
 www.geolyse.com

DRAWN  
 TOMINGLEY WEST ROAD  
 CROSS SECTIONS SHEET 5 OF 5  
 PROJECT NUMBER: 88M 82334  
 PROJECT NAME: 111185  
 SHEET NO: 01G E12  
 DATE: 27/10/10  
 SCALE: 1:100  
 DRAWN BY: TJS  
 CHECKED BY: TJS  
 APPROVED BY: TJS  
 SHEET E12 OF E19

**NOTE:**  
ALL DESIGN CURVE LEVELS SHOWN ARE TO FINISHED PAVEMENT LEVEL.

**TABLE OF SURVEY MARKS**

MARK	EASTING	NORTHING	R.L.
88M 82334	814732.014	836652.281	277.199
88M 82336	819717.262	836676.743	276.207
PM 3000	814882.811	836697.024	279.763
STAKE POINT	813669.361	836693.488	278.697

**TOMINGLEY WEST ROAD CENTRELINE SETOUT TABLE**

CHAINAGE	EASTING	NORTHING	R.L.	DESCRIPTION
0.000	814535.976	836641.011	277.540	
25.000	814495.946	836640.738	277.840	
50.000	814450.948	836640.879	277.876	
75.000	814410.956	836641.445	277.940	
100.000	814445.966	836643.132	277.940	
125.000	814420.976	836642.879	277.540	
150.000	814395.988	836643.566	277.140	
175.000	814370.996	836644.273	276.784	
200.000	814346.006	836644.980	276.515	
225.000	814321.018	836645.787	276.334	
250.000	814296.026	836646.594	276.240	
275.000	814271.036	836647.301	276.200	
300.000	814246.046	836648.008	276.215	SUPERELEVATION START
325.000	814221.056	836648.715	276.200	
350.000	814196.066	836649.422	276.208	TANGENT SPIRAL POINT
375.000	814171.076	836650.129	276.010	
400.000	814146.086	836650.836	275.829	SPIRAL CURVE POINT
425.000	814121.096	836651.543	275.670	
450.000	814096.106	836652.250	275.559	FULL SUPERELEVATION
475.000	814071.116	836652.957	275.500	
500.000	814046.126	836653.664	275.480	
525.000	814021.136	836654.371	275.480	
550.000	813996.146	836655.078	275.510	
575.000	813971.156	836655.785	275.570	
600.000	813946.166	836656.492	275.650	
625.000	813921.176	836657.199	275.750	
650.000	813896.186	836657.906	275.870	
675.000	813871.196	836658.613	275.990	
700.000	813846.206	836659.320	276.120	
725.000	813821.216	836660.027	276.250	
750.000	813796.226	836660.734	276.380	
775.000	813771.236	836661.441	276.510	
800.000	813746.246	836662.148	276.640	
825.000	813721.256	836662.855	276.770	
850.000	813696.266	836663.562	276.900	
875.000	813671.276	836664.269	277.030	
900.000	813646.286	836664.976	277.160	
925.000	813621.296	836665.683	277.290	
950.000	813596.306	836666.390	277.420	
975.000	813571.316	836667.097	277.550	
1000.000	813546.326	836667.804	277.680	
1025.000	813521.336	836668.511	277.810	
1050.000	813496.346	836669.218	277.940	
1075.000	813471.356	836669.925	278.070	
1100.000	813446.366	836670.632	278.200	
1125.000	813421.376	836671.339	278.330	
1150.000	813396.386	836672.046	278.460	
1175.000	813371.396	836672.753	278.590	
1200.000	813346.406	836673.460	278.720	
1225.000	813321.416	836674.167	278.850	
1250.000	813296.426	836674.874	278.980	
1275.000	813271.436	836675.581	279.110	
1300.000	813246.446	836676.288	279.240	
1325.000	813221.456	836676.995	279.370	
1350.000	813196.466	836677.702	279.500	
1375.000	813171.476	836678.409	279.630	
1400.000	813146.486	836679.116	279.760	
1425.000	813121.496	836679.823	279.890	
1450.000	813096.506	836680.530	279.980	
1475.000	813071.516	836681.237	280.070	
1500.000	813046.526	836681.944	280.160	

**TOMINGLEY WEST ROAD SOUTHERN EDGE OF BITUMEN SETOUT TABLE**

CHAINAGE	EASTING	NORTHING	R.L.	DESCRIPTION
0.000	814535.976	836641.011	277.540	TAPER TANGENT POINT
25.000	814495.946	836640.738	277.840	
50.000	814450.948	836640.879	277.876	TAPER TANGENT POINT
75.000	814410.956	836641.445	277.940	
100.000	814445.966	836643.132	277.940	
125.000	814420.976	836642.879	277.540	
150.000	814395.988	836643.566	277.140	
175.000	814370.996	836644.273	276.784	
200.000	814346.006	836644.980	276.515	
225.000	814321.018	836645.787	276.334	
250.000	814296.026	836646.594	276.240	
275.000	814271.036	836647.301	276.200	
300.000	814246.046	836648.008	276.215	TANGENT SPIRAL POINT
325.000	814221.056	836648.715	276.200	
350.000	814196.066	836649.422	276.208	SPIRAL CURVE POINT
375.000	814171.076	836650.129	276.010	FULL SUPERELEVATION
400.000	814146.086	836650.836	275.829	
425.000	814121.096	836651.543	275.670	
450.000	814096.106	836652.250	275.559	
475.000	814071.116	836652.957	275.500	FULL SUPERELEVATION
500.000	814046.126	836653.664	275.480	
525.000	814021.136	836654.371	275.480	
550.000	813996.146	836655.078	275.510	
575.000	813971.156	836655.785	275.570	
600.000	813946.166	836656.492	275.650	
625.000	813921.176	836657.199	275.750	
650.000	813896.186	836657.906	275.870	
675.000	813871.196	836658.613	275.990	
700.000	813846.206	836659.320	276.120	FULL SUPERELEVATION
725.000	813821.216	836660.027	276.250	
750.000	813796.226	836660.734	276.380	
775.000	813771.236	836661.441	276.510	
800.000	813746.246	836662.148	276.640	
825.000	813721.256	836662.855	276.770	
850.000	813696.266	836663.562	276.900	
875.000	813671.276	836664.269	277.030	
900.000	813646.286	836664.976	277.160	
925.000	813621.296	836665.683	277.290	
950.000	813596.306	836666.390	277.420	
975.000	813571.316	836667.097	277.550	
1000.000	813546.326	836667.804	277.680	
1025.000	813521.336	836668.511	277.810	
1050.000	813496.346	836669.218	277.940	
1075.000	813471.356	836669.925	278.070	
1100.000	813446.366	836670.632	278.200	
1125.000	813421.376	836671.339	278.330	
1150.000	813396.386	836672.046	278.460	
1175.000	813371.396	836672.753	278.590	
1200.000	813346.406	836673.460	278.720	
1225.000	813321.416	836674.167	278.850	
1250.000	813296.426	836674.874	278.980	
1275.000	813271.436	836675.581	279.110	
1300.000	813246.446	836676.288	279.240	
1325.000	813221.456	836676.995	279.370	
1350.000	813196.466	836677.702	279.500	
1375.000	813171.476	836678.409	279.630	
1400.000	813146.486	836679.116	279.760	
1425.000	813121.496	836679.823	279.890	
1450.000	813096.506	836680.530	279.980	
1475.000	813071.516	836681.237	280.070	
1500.000	813046.526	836681.944	280.160	

**TOMINGLEY WEST ROAD NORTHERN EDGE OF BITUMEN SETOUT TABLE**

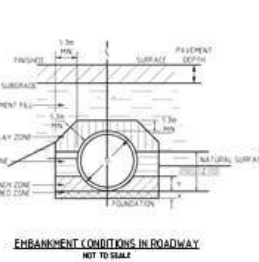
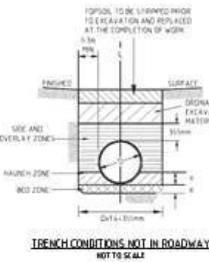
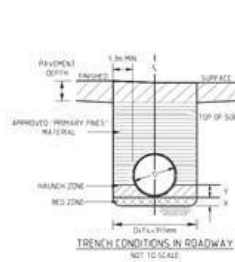
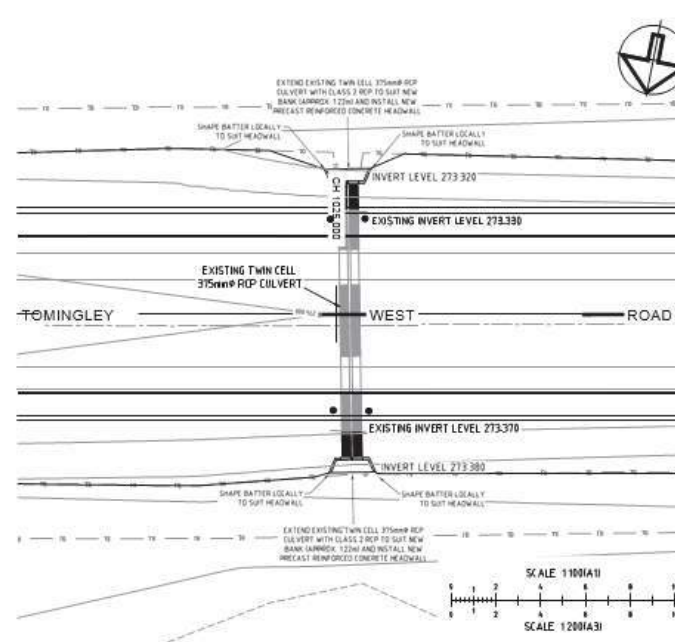
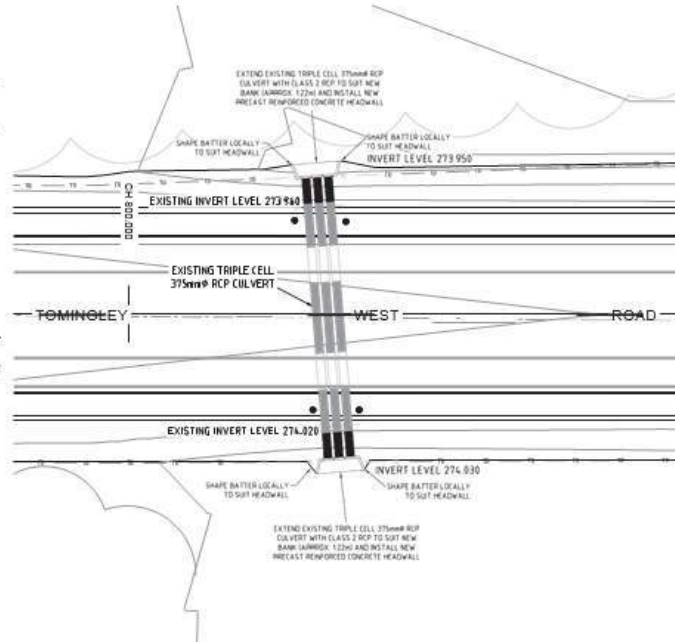
CHAINAGE	EASTING	NORTHING	R.L.	DESCRIPTION
0.000	814535.976	836641.011	277.540	
25.000	814495.946	836640.738	277.840	
50.000	814450.948	836640.879	277.876	TAPER TANGENT POINT
75.000	814410.956	836641.445	277.940	
100.000	814445.966	836643.132	277.940	
125.000	814420.976	836642.879	277.540	
150.000	814395.988	836643.566	277.140	
175.000	814370.996	836644.273	276.784	
200.000	814346.006	836644.980	276.515	
225.000	814321.018	836645.787	276.334	
250.000	814296.026	836646.594	276.240	
275.000	814271.036	836647.301	276.200	
300.000	814246.046	836648.008	276.215	TANGENT SPIRAL POINT
325.000	814221.056	836648.715	276.200	
350.000	814196.066	836649.422	276.208	SPIRAL CURVE POINT
375.000	814171.076	836650.129	276.010	FULL SUPERELEVATION
400.000	814146.086	836650.836	275.829	
425.000	814121.096	836651.543	275.670	
450.000	814096.106	836652.250	275.559	
475.000	814071.116	836652.957	275.500	FULL SUPERELEVATION
500.000	814046.126	836653.664	275.480	
525.000	814021.136	836654.371	275.480	
550.000	813996.146	836655.078	275.510	
575.000	813971.156	836655.785	275.570	
600.000	813946.166	836656.492	275.650	
625.000	813921.176	836657.199	275.750	
650.000	813896.186	836657.906	275.870	
675.000	813871.196	836658.613	275.990	
700.000	813846.206	836659.320	276.120	FULL SUPERELEVATION
725.000	813821.216	836660.027	276.250	
750.000	813796.226	836660.734	276.380	
775.000	813771.236	836661.441	276.510	
800.000	813746.246	836662.148	276.640	
825.000	813721.256	836662.855	276.770	
850.000	813696.266	836663.562	276.900	
875.000	813671.276	836664.269	277.030	
900.000	813646.286	836664.976	277.160	
925.000	813621.296	836665.683	277.290	
950.000	813596.306	836666.390	277.420	
975.000	813571.316	836667.097	277.550	
1000.000	813546.326	836667.804	277.680	
1025.000	813521.336	836668.511	277.810	
1050.000	813496.346	836669.218	277.940	
1075.000	813471.356	836669.925	278.070	
1100.000	813446.366	836670.632	278.200	
1125.000	813421.376	836671.339	278.330	
1150.000	813396.386	836672.046	278.460	
1175.000	813371.396	836672.753	278.590	
1200.000	813346.406	836673.460	278.720	
1225.000	813321.416	836674.167	278.850	
1250.000	813296.426	836674.874	278.980	
1275.000	813271.436	836675.581	279.110	
1300.000	813246.446	836676.288	279.240	
1325.000	813221.456	836676.995	279.370	
1350.000	813196.466	836677.702	279.500	
1375.000	813171.476	836678.409	279.630	
1400.000	813146.486	836679.116	279.760	





**GENERAL NOTES**

- THIS PLAN IS PREPARED FROM A PHOTO SURVEY FOR THE PURPOSE OF DESIGNING NEW CONSTRUCTION ON THE LAND AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
- WHERE SERVICES HAVE BEEN LAYED OUT ONLY PRIOR TO ANY DEVELOPMENT, ELEVATION OR CONSTRUCTION ON THE SITE, THE RELEVANT AUTHORITIES SHOULD BE CONTACTED FOR LOCATION OF FURTHER UNDERGROUND SERVICES AND DETAILED LOCATIONS OF ALL SERVICES.
- ANY WORK TO EXISTING SERVICES THAT REQUIRES RELOCATION BY AUTHORITIES SHALL BE CARRIED OUT BY THE RELEVANT AUTHORITY, BUT WITHIN THE TERMS OF THE CONTRACT AND (A)11 OF THE STATUTE IN ITS ENTIRETY.
- ALL CONSTRUCTION WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF **NARRAMIE CURB CODE**.
- STOP SIGNALS, WHERE REQUIRED, TO EXPOSE NATURALLY OCCURRING SURFACE BARRIERS, SHALL BE STORED IN SIGHT FOR VISUAL ON FURTHER ADVAL.
- TRAFFIC AND PEDESTRIAN CONTROL MEASURES ARE TO BE IN PLACE DURING ALL CONSTRUCTION WORK. TRAFFIC CONTROL PLANS ARE TO BE PREPARED BY A CERTIFIED AND APPROVED PERSON IN ACCORDANCE WITH AUSTROADS 2.19 AND THE ROADS AND TRAFFIC SERVICE 3.0005 TRAFFIC CONTROL AT WORK SITES MANUAL.
- WRITTEN CONSENT SHALL BE SUBMITTED TO COUNCIL FROM THE OWNERS OF ANY ADJOINING PROPERTY PRIOR TO ANY PHYSICAL INTERFERENCE WITH THAT PROPERTY AS A RESULT OF THE PROPOSED CONSTRUCTION.
- THE CONTRACTOR SHALL REINSTATE ALL SERVICES AREAS AND TABLE DRAINS AFFECTED DURING CONSTRUCTION. ALL BATTERS AND TABLE DRAIN AREAS ARE TO BE TOPSOILED AND REVEGETATED TO MATCH EXISTING SURFACE.
- EROSION AND SEDIMENTATION CONTROL IS TO BE IMPLEMENTED IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLAN.
- THE DEVELOPER SHALL BE HELD RESPONSIBLE FOR ANY BREACHES OF THE CLEAN WATERS ACT 1992.
- ALL LEVELS AND DIMENSIONS ARE GIVEN IN METRES UNLESS NOTED OTHERWISE AND ARE TO BE VERIFIED ON SITE PRIOR TO WORK COMMENCING. ALL HEIGHTS ARE TO THE AUSTRALIAN HEIGHT DATUM UNLESS NOTED OTHERWISE.



WHERE  
Z = STD  
Y = C30  
X = 10% FOR D <math>D\_{1.0} </math>  
X = 10% FOR D <math>D\_{1.0} </math>  
D = INTERNAL DIAMETER OF PIPE

**TABLE 1  
BEDDING MATERIAL GRADING LIMITS**

SECT SIZE (mm)	WEIGHT PASSING (%)
75	95
2.0	65-75
1.50	25-30
1.1	10-15
0.75	5-25
0.575	1-5

**LEGEND**

- EXISTING BOTTOM OF BANK
- EXISTING TOP OF BANK
- EXISTING ROAD CENTERLINE
- EXISTING FENCE
- EXISTING TABLE DRAIN
- EXISTING TILE/DRAINAGE DMS
- EXISTING TILE/DRAINAGE DMS PIT
- EXISTING BLENDED JUNCTION
- EXISTING ROAD BOOK
- EXISTING SIGN
- EXISTING LINE OF VEGETATION
- EXISTING TREE
- PROPOSED ADDITIONAL LANDKEEPER

**NOTES**

- PIPES SHALL BE Laid IN EITHER TRENCH OR EMBANKMENT CONDITIONS. PIPES Laid IN EITHER TRENCH OR EMBANKMENT CONDITIONS SHALL BE DESIGNED TO BE EMBANKMENT CONDITIONS, UNLESS OTHERWISE SPECIFIED. THE WIDTH OF TRENCH SHALL BE GREATER THAN OR EQUAL TO  $D + 1$  METRE, WHERE  $D =$  PIPE DIAMETER IN METRES.
- PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE DRAWING AND AS FITS FOR TYPE & SIZE SUPPORT.
- FOR ALL TRENCH AND EMBANKMENT CONDITIONS:
  - THE BEDDING MATERIAL, TOP BOTH THE BED AND HAUNCH ZONES SHALL CONSIST OF GRANULAR MATERIAL WITH PP-1 BEDDING COMPILING WITH TABLE 1. THE MATERIAL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 150mm THICK TO ACHIEVE RELATIVE COMPACTION OF 95% PER 1.5m SIZE P. (UNLESS OTHERWISE SPECIFIED).
  - FOR TRENCH CONDITIONS IN ROADWAY:
    - THE TRENCH-BOTTOM MATERIAL SHALL BE A GRANULAR MATERIAL TO EXCEED 10% FINE, (CRUSHED ROCK MATERIAL OR EQUIVALENT) APPROVED BY THE SUPERINTENDENT.
    - THE MATERIAL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 150mm THICK AS APPROPRIATE TO THE SIZE AND TYPE OF MACHINERY USED.
  - FOR EMBANKMENT CONDITIONS ONLY IN ROADWAY:
    - SIZE AND OVERLAY ZONE SHALL CONSIST OF SELECT BACKFILL AND SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 150mm THICK AS APPROPRIATE TO THE SIZE AND TYPE OF MACHINERY USED.
    - THE MOISTURE CONTENT OF THE MATERIAL SHALL BE NOT MORE THAN 2% ABOVE THE OPTIMUM MOISTURE CONTENT.

- FOR TRENCH CONDITIONS NOT IN ROADWAY:
  - SIZE AND OVERLAY ZONE SHALL CONSIST OF A GRANULAR MATERIAL TO EXCEED 10% FINE, (CRUSHED ROCK MATERIAL OR EQUIVALENT) APPROVED BY THE SUPERINTENDENT.
  - THE MATERIAL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 150mm THICK AS APPROPRIATE TO THE SIZE AND TYPE OF MACHINERY USED.
  - GRANULAR EXCAVATED MATERIAL IS EXCAVATED FRESH MATERIAL THAT IS FREE OF VEGETATION MATTER, LARGE CLAY LUMPS AND ROCK BOULDERS. THIS MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 150mm THICK AS APPROPRIATE TO THE SIZE AND TYPE OF MACHINERY USED.
  - THE MOISTURE CONTENT OF THE MATERIAL SHALL BE NOT MORE THAN 2% ABOVE THE OPTIMUM MOISTURE CONTENT.

NO	DATE	BY	CHKD	DETAILS
A	09/05/10	A.D.	A.M.	DRAFT ISSUE
B	09/05/10	A.D.	A.M.	ISSUED FOR APPROVAL
C	09/05/10	U.P.	A.M.	DESIGN PLANS AMENDED
D	09/05/10	U.P.	A.M.	ISSUED FOR CONSTRUCTION
E	09/05/10	U.P.	A.M.	ASSET MANAGER COMMENTS ADDED
F	09/05/10	U.P.	A.M.	REVISION OF DESIGN CENTRE LINE / ISSUED FOR APPROVAL
G	09/05/10	U.P.	A.M.	PRIVATE ACCESS REVISIONS & FIRE ACCESS WAY DETAILS ADDED

CHKD/APPV	NAME	DATE
APPROVED	SM	26/05/10
SURVEY	U.P.	05/05/10
DESIGNER	AJW/JLD	26/05/10
DRAWN	ALB/LUP/PH	26/05/10

**APPROVAL AUTHORITY**

NARROMINE SHIRE COUNCIL  
124 DANIEL GO STREET  
NARROMINE, NSW, 2821

**CLIENT**  
TOMINGLEY GOLD OPERATIONS LTD.

**PROJECT**  
TOMINGLEY WEST ROAD UPGRADE

**GEOLYSE**

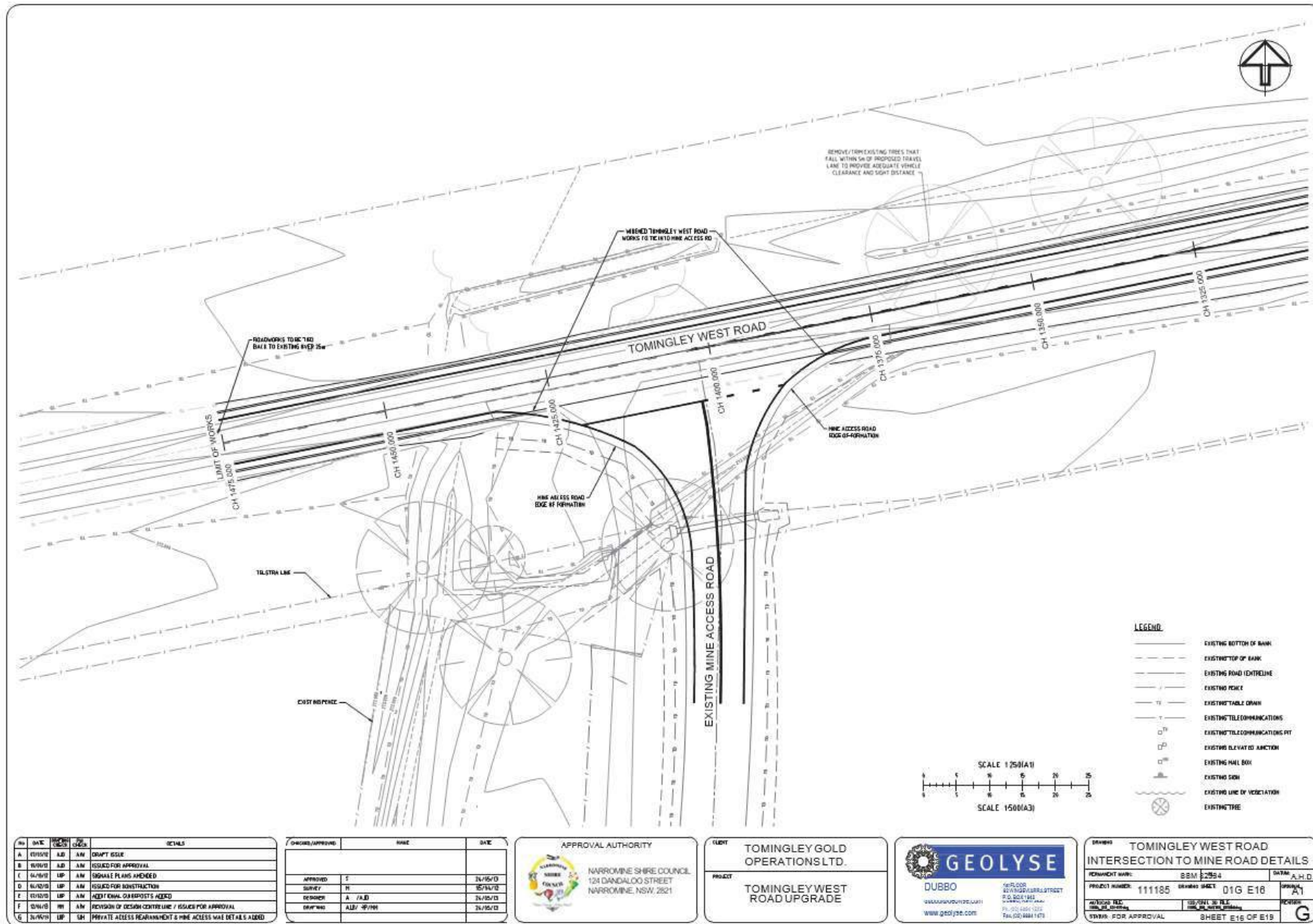
DUBBO

www.geolyse.com.au  
www.geolyse.com

SEVILLE  
26/05/2010  
S.O. 6011/1015  
www.geolyse.com.au  
P.O. BOX 684/1015  
TEL: 02 68441475

**DRAWN** TOMINGLEY WEST ROAD PIPE CULVERT EXTENSION DETAILS

PERMANENT NO:	SBM 82334	PL: 277.159	DRAWN A.H.D.
PROJECT NUMBER:	111185	DRAWING SHEET	DIG E15
AUTOCAD FILE:	111185.dwg	DATE SENT TO FILE:	08/05/10
VERSION:	FOR APPROVAL	SHEET	E15 OF E19



REV	DATE	BY	CHKD	DETAILS
A	15/10/15	AJD	AM	DRAFT ISSUE
B	16/10/15	AJD	AM	ISSUED FOR APPROVAL
C	16/10/15	LP	AM	SIGNAL PLANS AMENDED
D	16/10/15	LP	AM	ISSUED FOR INSTRUCTIONS
E	15/11/15	AM	AM	ASSET EVAL. ON REPORTS'S ALEAD
F	15/11/15	AM	AM	REVISION OF DESIGN CENTRELINE / ISSUES FOR APPROVAL
G	16/11/15	LP	AM	PRIVATE ACCESS REFINEMENT & MINE ACCESS WALK DETAILS ALEAD

DESIGNER/APPROVER	NAME	DATE
APPROVED	E	15/10/15
SURVEY	SI	15/10/15
DESIGNED	A / AJD	15/10/15
DRAWN	AJD / SP/WH	15/10/15

APPROVAL AUTHORITY



NARROWME SHIRE COUNCIL  
124 DANDALOO STREET  
NARROWME, NSW, 2821

CLIENT  
TOMINGLEY GOLD OPERATIONS LTD.

PROJECT  
TOMINGLEY WEST ROAD UPGRADE



DUBBO  
56/200B  
20/10/2015  
www.geolyse.com

DRAWN  
TOMINGLEY WEST ROAD  
INTERSECTION TO MINE ROAD DETAILS

PERMANENT NUMBER: 88M 82954

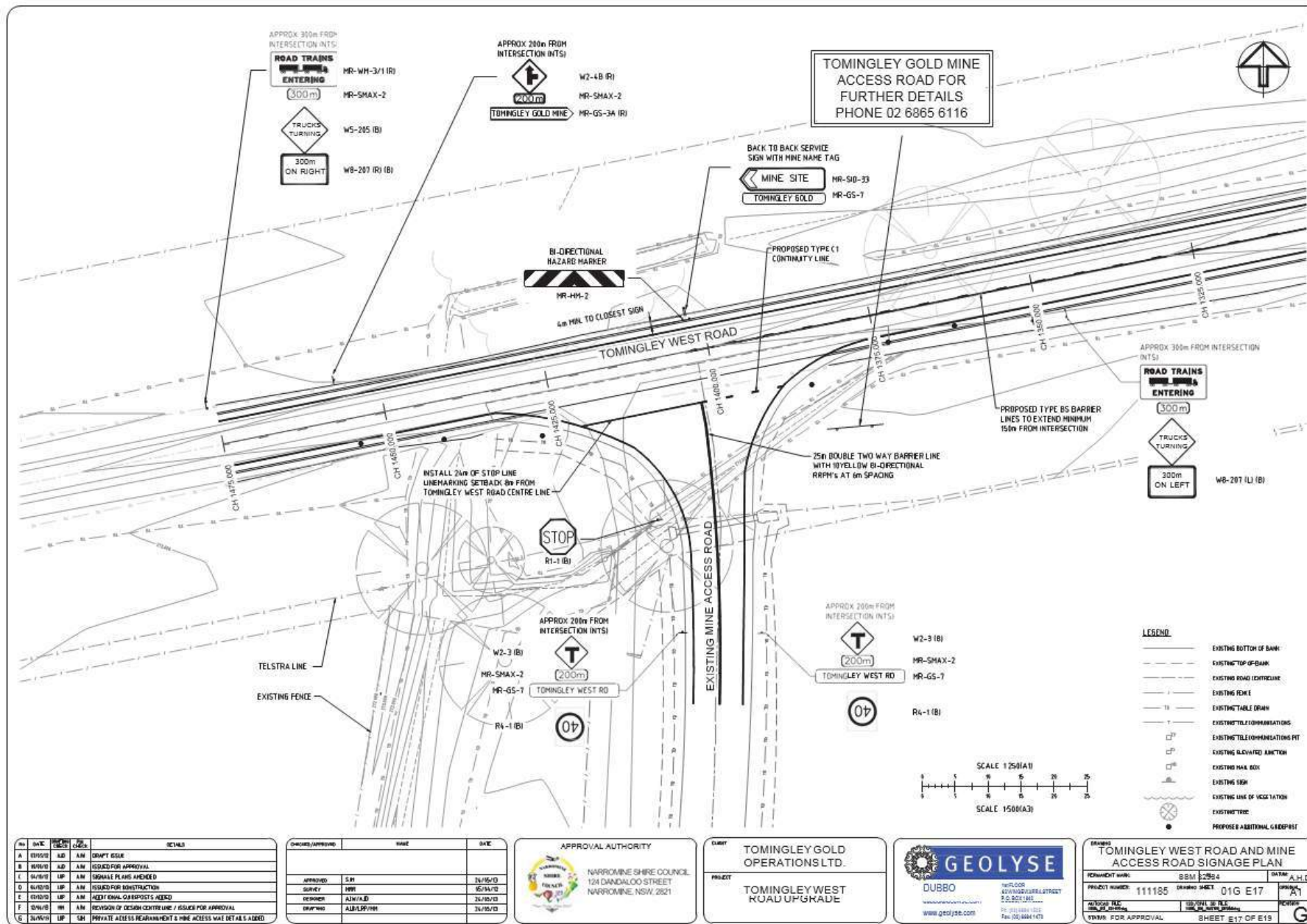
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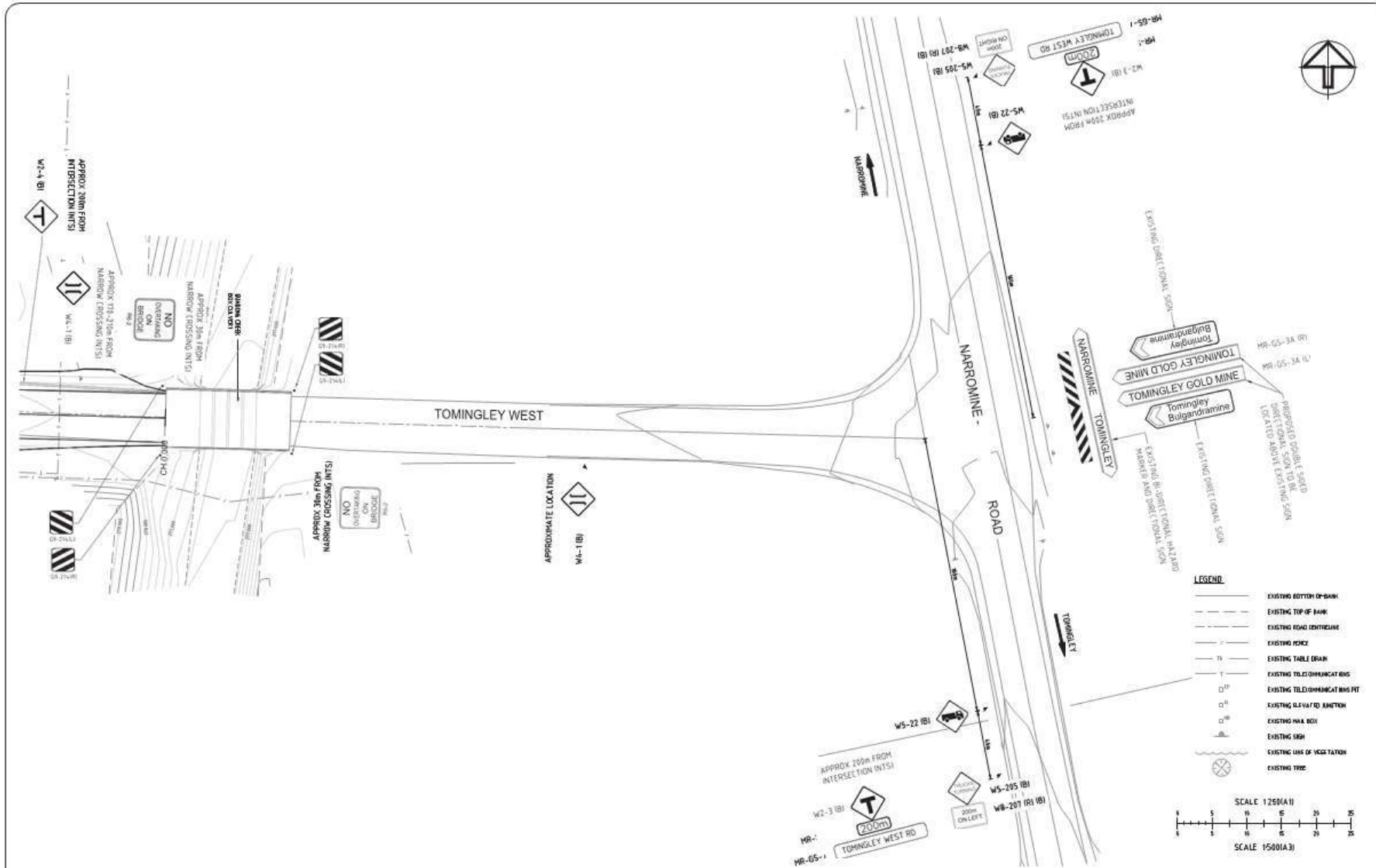
DRAWN SHEET: 01G E18

DATE: 15/10/15

SCALE: 1:50 (MA3)

APPROVAL: SHEET E16 OF E18





NO	DATE	SCALE	REV	DETAIL
A	10/05/10	A3	AM	DRAFT ISSUE
B	16/06/10	A3	AM	ISSUED FOR APPROVAL
C	16/06/10	UP	AM	SIGNAL PLANS AMENDED
D	16/06/10	UP	AM	ISSUED FOR RESTRUCTION
E	10/07/10	UP	AM	ACCT ENAL CHANGES MADE
F	10/07/10	UP	AM	REVISION OF DESIGN CENTRELINE / ISSUES FOR APPROVAL
G	20/07/10	UP	SM	PRIVATE ACCESS REARRANGEMENT & WIRE ACCESS WARE DETAILS ADDED

CHECKED/APPROVED	NAME	DATE
APPROVED	SM	24/05/10
SURVEY	REI	05/05/10
DESIGNER	ALM/AJD	24/05/10
DRAWING	ALM / P/WH	24/05/10

APPROVAL AUTHORITY

NARROMINE SHIRE COUNCIL  
124 DANDALOO STREET  
NARROMINE, NSW, 2821

CLIENT  
TOMINGLEY GOLD OPERATIONS LTD.

PROJECT  
TOMINGLEY WEST ROAD UPGRADE

GEOLYSE  
DUBBO  
24/06/2010  
www.geolyse.com

DRAWING  
NARROMINE - TOMINGLEY ROAD AND TOMINGLEY WEST ROAD SIGNAGE PLAN

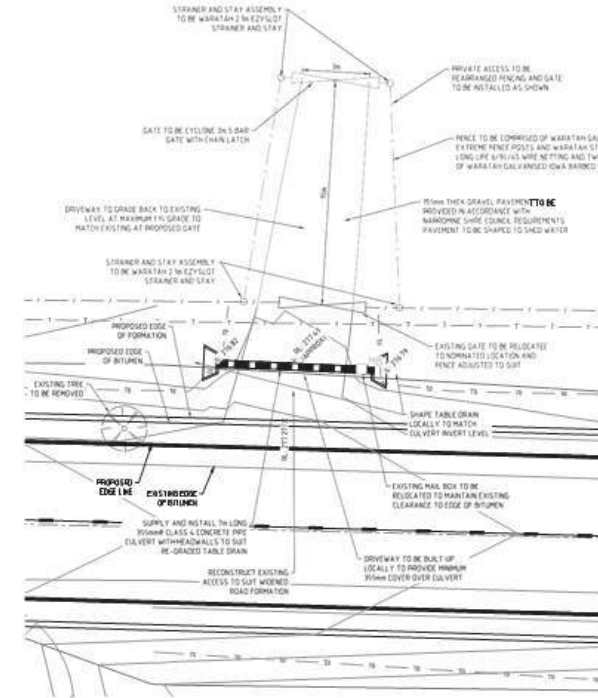
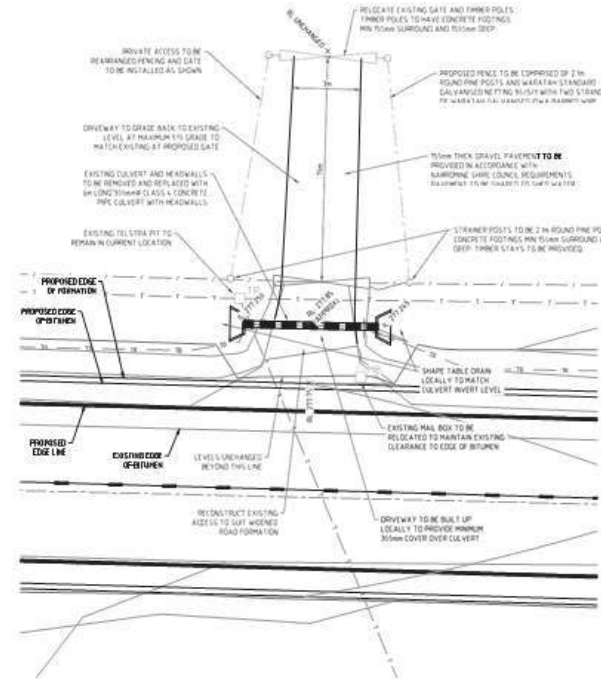
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PROJECT NUMBER	111185	DRAWING SHEET	01G_E18	SCALE	A1

DATE FOR APPROVAL SHEET E18 OF E19



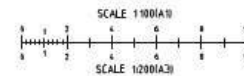
**GENERAL NOTES**

- 1 THIS PLAN IS PREPARED FROM A FIELD SURVEY FOR THE PURPOSE OF DESIGNING NEW CONSTRUCTION ON THE LAND AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.
- 2 WHERE SERVICES HAVE BEEN LOCATED ONLY PRIOR TO ANY DEVELOPMENT, EXCAVATION OR CONSTRUCTION ON THE SITE, THE RELEVANT AUTHORITIES SHOULD BE CONTACTED FOR LOCATION OF FURTHER UNDERGROUND SERVICES AND DETAILED LOCATION OF ALL SERVICES.
- 3 ANY WORK TO EXISTING SERVICES THAT REQUIRES RELOCATION BY AUTHORITIES SHALL BE CARRIED OUT BY THE RELEVANT AUTHORITY, BUT WITHIN THE TERMS OF THE CONTRACT AND SUBJECT TO THE RESPONSIBILITY OF THE CONTRACTOR.
- 4 ALL CONSTRUCTION WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF NARROMINE SHIRE COUNCIL.
- 5 STOP SIGNS, WHERE REQUIRED TO EXPOSE NATURALLY OCCURRING SUPPORTED BARRED WILDLIFE TO EXPOSE INDIVIDUAL PRODUCE ON FARMROAD ADJACENT.
- 6 TRAFFIC AND PEDESTRIAN CONTROL MEASURES ARE TO BE IN PLACE DURING ALL CONSTRUCTION WORKS. TRAFFIC CONTROL PLANS ARE TO BE PREPARED BY A CERTIFIED AND APPROVED PERSON IN ACCORDANCE WITH AUSTROADS 2010 AND THE ROAD AND TRAFFIC SERVICES TRAFFIC CONTROL AT WORK SITES MANUAL.
- 7 WRITTEN CONSENT SHALL BE SUBMITTED TO COUNCIL FROM THE OWNERS OF ANY ADJACENT PROPERTY PRIOR TO ANY PHYSICAL INTERFERENCE WITH THAT PROPERTY AS A RESULT OF THE DEVELOPMENT OR CONSTRUCTION.
- 8 THE CONTRACTOR SHALL REINSTATE ALL SERVICES AREAS AND TABLE DRAIN AREAS DURING CONSTRUCTION. ALL BATTERS AND TABLE DRAIN AREAS ARE TO BE TOPSOILED AND REVEGETATED TO MATCH EXISTING SURFACE FINISH.
- 9 PROSOD AND SETTLEMENT CONTROL IS TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF NARROMINE SHIRE COUNCIL.
- 10 THE DEVELOPER SHALL BE HELD RESPONSIBLE FOR ANY BREACHES OF THE CLEAN WATERS ACT 2013.
- 11 ALL LEVELS AND DIMENSIONS ARE GIVEN UNLESS OTHERWISE NOTED OTHERWISE AND ARE TO BE VERIFIED ON SITE PRIOR TO WORK COMMENCING. ALL HEIGHTS ARE TO THE AUSTRALIAN HEIGHT DATUM UNLESS OTHERWISE NOTED OTHERWISE.



**LEGEND**

- EXISTING BOTTOM OF BANK
- EXISTING TOP OF BANK
- EXISTING ROAD CENTRELINE
- EXISTING FENCE
- EXISTING GATE
- PROPOSED FENCE
- PROPOSED GATE LOCATION
- EXISTING TABLE DRAIN
- EXISTING TELECOMMUNICATIONS
- EXISTING TELECOMMUNICATIONS PIT
- EXISTING MAIL BOX
- EXISTING TREE



NO.	DATE	BY	CHKD.	APPD.	DETAILS
A	05/08/20	AJD	AJM		DRAFT ISSUE
B	05/08/20	AJD	AJM		ISSUED FOR APPROVAL
C	04/09/20	UP	AJM		DESIGN PLANS AMENDED
D	04/09/20	UP	AJM		ISSUED FOR CONSTRUCTION
E	01/10/20	UP	AJM		ASSET REGISTRATION REPORTS ADDED
F	01/10/20	UP	AJM		REVISION OF DESIGN CENTRELINE / ISSUES FOR APPROVAL
G	04/09/20	UP	UH		PRIVATE ACCESS REARRANGEMENTS & PIPE ACCESS WALK DETAILS ADDED

CHKD./APPROVED	NAME	DATE
APPROVED	SM	14/10/20
SURVEY	TRH	10/08/20
DESIGNER	AJM/AJD	04/08/20
DRAWING	ALB/UP/UPH	24/08/20

**APPROVAL AUTHORITY**  
NARROMINE SHIRE COUNCIL  
129 DANDALOO STREET  
NARROMINE, NSW, 2821

**CLIENT**  
TOMINGLEY GOLD OPERATIONS LTD.  
**PROJECT**  
TOMINGLEY WEST ROAD UPGRADE

**GEOLYSE**  
DUBBO  
56 FLOOR 65 FERGUSON STREET  
P.O. BOX 183  
DUBBO NSW 2880  
PH: 02 9481 1212  
WWW.GEOLYSE.COM.AU

**PRIVATE ACCESS REARRANGEMENTS**  
PROJECT NUMBER: 111185  
DRAWING SHEET: 01G E19  
DATE: 05/08/20  
SHEET E19 OF E19



# **APPENDIX C**

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## **Intersection Sensitivity Analysis (reproduced from EA)**

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SIDRA  
INTERSECTION

## Movement Summary

### SH17 and MR89

#### 2017 Base+Sen PM - Parkes

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	21	28.6	0.014	9.3	LOS A	0	0.00	0.67	49.0
2	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>211</b>	<b>32.7</b>	<b>0.118</b>	<b>0.9</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.07</b>	<b>58.7</b>
<b>SH17 - North</b>										
8	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
9	R	11	30.0	0.012	11.3	LOS A	1	0.39	0.66	46.9
<b>Approach</b>		<b>200</b>	<b>33.0</b>	<b>0.118</b>	<b>0.6</b>	<b>LOS A</b>	<b>1</b>	<b>0.02</b>	<b>0.03</b>	<b>59.2</b>
<b>MR89 - West</b>										
10	L	11	30.0	0.500	26.7	LOS B	30	0.75	1.01	35.2
12	R	127	29.9	0.494	26.9	LOS B	30	0.75	1.05	35.0
<b>Approach</b>		<b>137</b>	<b>29.9</b>	<b>0.495</b>	<b>26.9</b>	<b>LOS B</b>	<b>30</b>	<b>0.75</b>	<b>1.05</b>	<b>35.1</b>
<b>All Vehicles</b>		<b>548</b>	<b>32.1</b>	<b>0.500</b>	<b>7.3</b>	<b>Not Applicable</b>	<b>30</b>	<b>0.19</b>	<b>0.30</b>	<b>50.4</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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## Movement Summary

### SH17 and MR89

#### 2017 Base+Sen AM - Parkes

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	127	29.9	0.083	9.3	LOS A	0	0.00	0.67	49.0
2	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>317</b>	<b>31.9</b>	<b>0.118</b>	<b>3.7</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.27</b>	<b>55.0</b>
<b>SH17 - North</b>										
8	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
9	R	11	30.0	0.014	12.4	LOS A	1	0.47	0.70	45.8
<b>Approach</b>		<b>200</b>	<b>33.0</b>	<b>0.118</b>	<b>0.6</b>	<b>LOS A</b>	<b>1</b>	<b>0.02</b>	<b>0.03</b>	<b>59.1</b>
<b>MR89 - West</b>										
10	L	11	30.0	0.105	19.4	LOS B	4	0.62	0.76	39.9
12	R	21	28.6	0.106	19.6	LOS B	4	0.62	0.88	39.8
<b>Approach</b>		<b>31</b>	<b>29.0</b>	<b>0.106</b>	<b>19.5</b>	<b>LOS B</b>	<b>4</b>	<b>0.62</b>	<b>0.84</b>	<b>39.8</b>
<b>All Vehicles</b>		<b>548</b>	<b>32.1</b>	<b>0.118</b>	<b>3.5</b>	<b>Not Applicable</b>	<b>4</b>	<b>0.04</b>	<b>0.22</b>	<b>55.2</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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## Movement Summary

### SH17 and MR89

#### 2017 Base+Sen PM - Dubbo

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	21	28.6	0.014	9.3	LOS A	0	0.00	0.67	49.0
2	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>211</b>	<b>32.7</b>	<b>0.118</b>	<b>0.9</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.07</b>	<b>58.7</b>
<b>SH17 - North</b>										
8	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
9	R	11	30.0	0.012	11.3	LOS A	1	0.39	0.66	46.9
<b>Approach</b>		<b>200</b>	<b>33.0</b>	<b>0.118</b>	<b>0.6</b>	<b>LOS A</b>	<b>1</b>	<b>0.02</b>	<b>0.03</b>	<b>59.2</b>
<b>MR89 - West</b>										
10	L	117	29.9	0.248	13.3	LOS A	11	0.49	0.74	44.9
12	R	21	28.6	0.247	13.5	LOS A	11	0.49	0.84	44.7
<b>Approach</b>		<b>138</b>	<b>29.7</b>	<b>0.248</b>	<b>13.4</b>	<b>LOS A</b>	<b>11</b>	<b>0.49</b>	<b>0.76</b>	<b>44.8</b>
<b>All Vehicles</b>		<b>549</b>	<b>32.1</b>	<b>0.248</b>	<b>3.9</b>	<b>Not Applicable</b>	<b>11</b>	<b>0.13</b>	<b>0.23</b>	<b>54.6</b>

Symbols which may appear in this table:

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\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

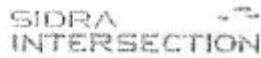
Following Queue  
# - Density for continuous movement



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## Movement Summary

### SH17 and MR89

#### 2017 Base+Sen AM - Dubbo

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	21	28.6	0.014	9.3	LOS A	0	0.00	0.67	49.0
2	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>211</b>	<b>32.7</b>	<b>0.118</b>	<b>0.9</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.07</b>	<b>58.7</b>
<b>SH17 - North</b>										
8	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
9	R	117	29.9	0.141	11.6	LOS A	7	0.42	0.72	46.6
<b>Approach</b>		<b>307</b>	<b>31.9</b>	<b>0.141</b>	<b>4.4</b>	<b>LOS A</b>	<b>7</b>	<b>0.16</b>	<b>0.27</b>	<b>54.1</b>
<b>MR89 - West</b>										
10	L	11	30.0	0.119	21.2	LOS B	5	0.63	0.73	38.6
12	R	21	28.6	0.119	21.4	LOS B	5	0.63	0.88	38.5
<b>Approach</b>		<b>31</b>	<b>29.0</b>	<b>0.119</b>	<b>21.3</b>	<b>LOS B</b>	<b>5</b>	<b>0.63</b>	<b>0.83</b>	<b>38.5</b>
<b>All Vehicles</b>		<b>549</b>	<b>32.1</b>	<b>0.141</b>	<b>4.0</b>	<b>Not Applicable</b>	<b>7</b>	<b>0.13</b>	<b>0.23</b>	<b>54.5</b>

Symbols which may appear in this table:

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Following Queue  
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## Movement Summary

### SH17 and MR89

#### 2017 Base+Dev PM

Give-way

#### Vehicle Movements

Nov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	21	26.6	0.014	9.3	LOS A	0	0.00	0.67	49.0
2	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>211</b>	<b>32.7</b>	<b>0.118</b>	<b>0.9</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.07</b>	<b>58.7</b>
<b>SH17 - North</b>										
8	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
9	R	11	30.0	0.012	11.3	LOS A	1	0.39	0.66	46.9
<b>Approach</b>		<b>200</b>	<b>33.0</b>	<b>0.118</b>	<b>0.6</b>	<b>LOS A</b>	<b>1</b>	<b>0.02</b>	<b>0.03</b>	<b>59.2</b>
<b>MR89 - West</b>										
10	L	49	30.0	0.286	18.0	LOS B	14	0.59	0.80	40.9
12	R	56	30.4	0.286	18.1	LOS B	14	0.59	0.90	40.8
<b>Approach</b>		<b>106</b>	<b>30.2</b>	<b>0.286</b>	<b>18.1</b>	<b>LOS B</b>	<b>14</b>	<b>0.59</b>	<b>0.85</b>	<b>40.9</b>
<b>All Vehicles</b>		<b>517</b>	<b>32.3</b>	<b>0.286</b>	<b>4.3</b>	<b>Not Applicable</b>	<b>14</b>	<b>0.13</b>	<b>0.21</b>	<b>54.1</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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## Movement Summary

### SH17 and MR89

#### 2017 Base+Dev AM

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	56	30.4	0.037	9.3	LOS A	0	0.00	0.67	49.0
2	T	169	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>246</b>	<b>32.5</b>	<b>0.118</b>	<b>2.1</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.15</b>	<b>57.1</b>
<b>SH17 - North</b>										
8	T	169	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
9	R	49	30.0	0.064	11.8	LOS A	3	0.43	0.71	46.4
<b>Approach</b>		<b>240</b>	<b>32.5</b>	<b>0.118</b>	<b>2.5</b>	<b>LOS A</b>	<b>3</b>	<b>0.09</b>	<b>0.15</b>	<b>56.6</b>
<b>MR89 - West</b>										
10	L	11	30.0	0.106	19.4	LOS B	4	0.60	0.73	39.9
12	R	21	28.6	0.106	19.6	LOS B	4	0.60	0.88	39.8
<b>Approach</b>		<b>31</b>	<b>29.0</b>	<b>0.106</b>	<b>19.5</b>	<b>LOS B</b>	<b>4</b>	<b>0.60</b>	<b>0.83</b>	<b>39.8</b>
<b>All Vehicles</b>		<b>517</b>	<b>32.3</b>	<b>0.118</b>	<b>3.3</b>	<b>Not Applicable</b>	<b>4</b>	<b>0.08</b>	<b>0.19</b>	<b>55.4</b>

Symbols which may appear in this table:

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Following Queue  
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## Movement Summary

### SH17 and MR89

#### 2017 Base

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	21	28.6	0.014	9.3	LOS A	0	0.00	0.67	49.0
2	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>211</b>	<b>32.7</b>	<b>0.118</b>	<b>0.9</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.07</b>	<b>58.7</b>
<b>SH17 - North</b>										
8	T	189	33.2	0.118	0.0	LOS A	0	0.00	0.00	60.0
9	R	11	30.0	0.012	11.3	LOS A	1	0.39	0.66	46.9
<b>Approach</b>		<b>200</b>	<b>33.0</b>	<b>0.118</b>	<b>0.6</b>	<b>LOS A</b>	<b>1</b>	<b>0.02</b>	<b>0.03</b>	<b>59.2</b>
<b>MR89 - West</b>										
10	L	11	30.0	0.093	17.5	LOS B	4	0.57	0.71	41.4
12	R	21	28.6	0.092	17.6	LOS B	4	0.57	0.86	41.2
<b>Approach</b>		<b>31</b>	<b>29.0</b>	<b>0.092</b>	<b>17.6</b>	<b>LOS B</b>	<b>4</b>	<b>0.57</b>	<b>0.81</b>	<b>41.3</b>
<b>All Vehicles</b>		<b>442</b>	<b>32.6</b>	<b>0.118</b>	<b>1.9</b>	<b>Not Applicable</b>	<b>4</b>	<b>0.05</b>	<b>0.10</b>	<b>57.2</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
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Following Queue  
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Approach	Turn	Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
SH17 - South	L	16	31.2	0.011	9.3	LOS A	0	0.00	0.67	49.0
SH17 - South	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>174</b>	<b>32.8</b>	<b>0.098</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.06</b>	<b>58.8</b>
SH17 - North	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
SH17 - North	R	11	30.0	0.011	11.0	LOS A	0	0.35	0.65	47.2
<b>Approach</b>		<b>168</b>	<b>32.7</b>	<b>0.098</b>	<b>0.7</b>	<b>LOS A</b>	<b>0</b>	<b>0.02</b>	<b>0.04</b>	<b>59.1</b>
MR89 - West	L	11	30.0	0.400	21.0	LOS B	23	0.66	0.87	38.7
MR89 - West	R	121	29.8	0.394	21.2	LOS B	23	0.66	0.97	38.6
<b>Approach</b>		<b>131</b>	<b>29.8</b>	<b>0.394</b>	<b>21.2</b>	<b>LOS B</b>	<b>23</b>	<b>0.66</b>	<b>0.96</b>	<b>38.6</b>
<b>All Vehicles</b>		<b>473</b>	<b>31.9</b>	<b>0.400</b>	<b>6.4</b>	<b>Not Applicable</b>	<b>23</b>	<b>0.19</b>	<b>0.30</b>	<b>51.5</b>

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## Movement Summary

### SH17 and MR89

#### 2009 Base+Sen PM - Parkes

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	16	31.2	0.011	9.3	LOS A	0	0.00	0.67	49.0
2	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>174</b>	<b>32.8</b>	<b>0.098</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.06</b>	<b>58.8</b>
<b>SH17 - North</b>										
8	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
9	R	11	30.0	0.011	11.0	LOS A	0	0.35	0.65	47.2
<b>Approach</b>		<b>168</b>	<b>32.7</b>	<b>0.098</b>	<b>0.7</b>	<b>LOS A</b>	<b>0</b>	<b>0.02</b>	<b>0.04</b>	<b>59.1</b>
<b>MR89 - West</b>										
10	L	11	30.0	0.400	21.0	LOS B	23	0.66	0.87	38.7
12	R	121	29.8	0.394	21.2	LOS B	23	0.66	0.97	38.6
<b>Approach</b>		<b>131</b>	<b>29.8</b>	<b>0.394</b>	<b>21.2</b>	<b>LOS B</b>	<b>23</b>	<b>0.66</b>	<b>0.96</b>	<b>38.6</b>
<b>All Vehicles</b>		<b>473</b>	<b>31.9</b>	<b>0.400</b>	<b>6.4</b>	<b>Not Applicable</b>	<b>23</b>	<b>0.19</b>	<b>0.30</b>	<b>51.5</b>

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SIDRA  
INTERSECTION

## Movement Summary

### SH17 and MR89

#### 2009 Base+Sen AM - Parkes

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	121	29.8	0.079	9.3	LOS A	0	0.00	0.67	49.0
2	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>279</b>	<b>31.5</b>	<b>0.098</b>	<b>4.0</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.29</b>	<b>54.7</b>
<b>SH17 - North</b>										
8	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
9	R	11	30.0	0.013	12.0	LOS A	1	0.44	0.68	46.2
<b>Approach</b>		<b>168</b>	<b>32.7</b>	<b>0.098</b>	<b>0.7</b>	<b>LOS A</b>	<b>1</b>	<b>0.03</b>	<b>0.04</b>	<b>59.0</b>
<b>MR89 - West</b>										
10	L	11	30.0	0.074	16.8	LOS B	3	0.56	0.71	41.9
12	R	16	31.2	0.074	17.0	LOS B	3	0.56	0.86	41.7
<b>Approach</b>		<b>26</b>	<b>30.8</b>	<b>0.074</b>	<b>16.9</b>	<b>LOS B</b>	<b>3</b>	<b>0.56</b>	<b>0.80</b>	<b>41.8</b>
<b>All Vehicles</b>		<b>473</b>	<b>31.9</b>	<b>0.098</b>	<b>3.6</b>	<b>Not Applicable</b>	<b>3</b>	<b>0.04</b>	<b>0.23</b>	<b>55.2</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
174	158	116	16	11	16	116	16	116	16

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## Movement Summary

### SH17 and MR89

#### 2009 Base+Sen PM - Dubbo

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	16	31.2	0.011	9.3	LOS A	0	0.00	0.67	49.0
2	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>174</b>	<b>32.8</b>	<b>0.098</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.06</b>	<b>58.8</b>
<b>SH17 - North</b>										
8	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
9	R	11	30.0	0.011	11.0	LOS A	0	0.35	0.65	47.2
<b>Approach</b>		<b>168</b>	<b>32.7</b>	<b>0.098</b>	<b>0.7</b>	<b>LOS A</b>	<b>0</b>	<b>0.02</b>	<b>0.04</b>	<b>59.1</b>
<b>MR89 - West</b>										
10	L	116	30.2	0.211	12.2	LOS A	10	0.43	0.70	45.9
12	R	16	31.2	0.211	12.4	LOS A	10	0.43	0.82	45.8
<b>Approach</b>		<b>132</b>	<b>30.3</b>	<b>0.211</b>	<b>12.2</b>	<b>LOS A</b>	<b>10</b>	<b>0.43</b>	<b>0.72</b>	<b>45.9</b>
<b>All Vehicles</b>		<b>474</b>	<b>32.1</b>	<b>0.211</b>	<b>4.0</b>	<b>Not Applicable</b>	<b>10</b>	<b>0.13</b>	<b>0.24</b>	<b>54.6</b>

Symbols which may appear in this table:

Following Degree of Saturation

- # x = 1.00 for Short Lane with resulting Excess Flow
- \* x = 1.00 due to minimum capacity

Following LOS

- # - Based on density for continuous movements

Following Queue

- # - Density for continuous movement



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Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow
174	158	116	16	11	16	116	16	116	16

Scenario	Year	Time	Direction	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2009 Base+Sen AM - Dubbo	2009	AM	SH17 - South	174	0.9	LOS A	0.06	58.8	
2009 Base+Sen AM - Dubbo	2009	AM	SH17 - North	274	4.7	LOS A	0.30	53.7	
2009 Base+Sen AM - Dubbo	2009	AM	MR89 - West	26	18.3	LOS B	0.79	40.7	
2009 Base+Sen AM - Dubbo	2009	AM	All Vehicles	474	4.1	Not Applicable	0.24	54.5	

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## Movement Summary

### SH17 and MR89

#### 2009 Base+Sen AM - Dubbo

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	16	31.2	0.011	9.3	LOS A	0	0.00	0.67	49.0
2	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>174</b>	<b>32.8</b>	<b>0.098</b>	<b>0.9</b>	<b>LOS A</b>	<b>0.00</b>	<b>0.06</b>	<b>58.8</b>	
<b>SH17 - North</b>										
8	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
9	R	116	30.2	0.132	11.2	LOS A	6	0.38	0.70	47.0
<b>Approach</b>		<b>274</b>	<b>31.8</b>	<b>0.132</b>	<b>4.7</b>	<b>LOS A</b>	<b>6</b>	<b>0.16</b>	<b>0.30</b>	<b>53.7</b>
<b>MR89 - West</b>										
10	L	11	30.0	0.083	18.2	LOS B	3	0.55	0.68	40.8
12	R	16	31.2	0.082	18.3	LOS B	3	0.55	0.86	40.7
<b>Approach</b>		<b>26</b>	<b>30.8</b>	<b>0.082</b>	<b>18.3</b>	<b>LOS B</b>	<b>3</b>	<b>0.55</b>	<b>0.79</b>	<b>40.7</b>
<b>All Vehicles</b>		<b>474</b>	<b>32.1</b>	<b>0.132</b>	<b>4.1</b>	<b>Not Applicable</b>	<b>6</b>	<b>0.12</b>	<b>0.24</b>	<b>54.5</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.60 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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Scenario	Year	Time	Direction	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2009 Base+Sen AM - Dubbo	2009	AM	SH17 - South	174	0.9	LOS A	0.06	58.8	
2009 Base+Sen AM - Dubbo	2009	AM	SH17 - North	274	4.7	LOS A	0.30	53.7	
2009 Base+Sen AM - Dubbo	2009	AM	MR89 - West	26	18.3	LOS B	0.79	40.7	
2009 Base+Sen AM - Dubbo	2009	AM	All Vehicles	474	4.1	Not Applicable	0.24	54.5	

Scenario	Year	Time	Direction	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2009 Base+Sen AM - Dubbo	2009	AM	SH17 - South	174	0.9	LOS A	0.06	58.8	
2009 Base+Sen AM - Dubbo	2009	AM	SH17 - North	274	4.7	LOS A	0.30	53.7	
2009 Base+Sen AM - Dubbo	2009	AM	MR89 - West	26	18.3	LOS B	0.79	40.7	
2009 Base+Sen AM - Dubbo	2009	AM	All Vehicles	474	4.1	Not Applicable	0.24	54.5	

Flow	Volume	Capacity	Ratio	Delay	Queue	Speed
SH17 - South	174	174	1.00	0.9	0	58.8
SH17 - North	168	168	1.00	0.7	0	59.1
MR89 - West	97	97	1.00	15.0	10	43.4
All Vehicles	439	439	1.00	3.9	10	54.6

SIDRA  
INTERSECTION

## Movement Summary

### SH17 and MR89

#### 2009 Base+Dev PM

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	16	31.2	0.011	9.3	LOS A	0	0.00	0.67	49.0
2	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>174</b>	<b>32.8</b>	<b>0.098</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.06</b>	<b>58.8</b>
<b>SH17 - North</b>										
8	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
9	R	11	30.0	0.011	11.0	LOS A	0	0.35	0.65	47.2
<b>Approach</b>		<b>168</b>	<b>32.7</b>	<b>0.098</b>	<b>0.7</b>	<b>LOS A</b>	<b>0</b>	<b>0.02</b>	<b>0.04</b>	<b>59.1</b>
<b>MR89 - West</b>										
10	L	49	30.0	0.216	14.9	LOS B	10	0.51	0.71	43.5
12	R	47	29.8	0.217	15.1	LOS B	10	0.51	0.85	43.3
<b>Approach</b>		<b>97</b>	<b>29.9</b>	<b>0.216</b>	<b>15.0</b>	<b>LOS B</b>	<b>10</b>	<b>0.51</b>	<b>0.78</b>	<b>43.4</b>
<b>All Vehicles</b>		<b>439</b>	<b>32.1</b>	<b>0.217</b>	<b>3.9</b>	<b>Not Applicable</b>	<b>10</b>	<b>0.12</b>	<b>0.21</b>	<b>54.6</b>

Symbols which may appear in this table:

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Following Queue  
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Flow	Volume	Capacity	Ratio	Delay	Queue	Speed
SH17 - South	174	174	1.00	0.9	0	58.8
SH17 - North	168	168	1.00	0.7	0	59.1
MR89 - West	97	97	1.00	15.0	10	43.4
All Vehicles	439	439	1.00	3.9	10	54.6

Flow	Volume	Capacity	Ratio	Delay	Queue	Speed
SH17 - South	174	174	1.00	0.9	0	58.8
SH17 - North	168	168	1.00	0.7	0	59.1
MR89 - West	97	97	1.00	15.0	10	43.4
All Vehicles	439	439	1.00	3.9	10	54.6

Scenario	Year	Time	Flow	Delay	Queue	Level of Service	95% Queue	Prop. Queued	Eff. Stop Rate	Aver Speed
SH17 - South	2009	AM	205	2.1	0.098	LOS A	2	0.09	0.16	56.4
SH17 - North	2009	AM	205	2.6	0.098	LOS A	2	0.09	0.16	56.4
MR89 - West	2009	AM	26	16.7	0.073	LOS B	3	0.54	0.79	41.9
All Vehicles	2009	AM	436	3.2	0.098	Not Applicable	3	0.07	0.19	55.6

SIDRA  
INTERSECTION

## Movement Summary

### SH17 and MR89

#### 2009 Base+Dev AM

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	47	29.8	0.031	9.3	LOS A	0	0.00	0.67	49.0
2	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>205</b>	<b>32.2</b>	<b>0.098</b>	<b>2.1</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.15</b>	<b>57.1</b>
<b>SH17 - North</b>										
8	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
9	R	47	29.8	0.056	11.3	LOS A	2	0.39	0.69	46.8
<b>Approach</b>		<b>205</b>	<b>32.2</b>	<b>0.098</b>	<b>2.6</b>	<b>LOS A</b>	<b>2</b>	<b>0.09</b>	<b>0.16</b>	<b>56.4</b>
<b>MR89 - West</b>										
10	L	11	30.0	0.073	16.6	LOS B	3	0.54	0.69	42.0
12	R	16	31.2	0.073	16.8	LOS B	3	0.54	0.85	41.9
<b>Approach</b>		<b>26</b>	<b>30.8</b>	<b>0.073</b>	<b>16.7</b>	<b>LOS B</b>	<b>3</b>	<b>0.54</b>	<b>0.79</b>	<b>41.9</b>
<b>All Vehicles</b>		<b>436</b>	<b>32.1</b>	<b>0.098</b>	<b>3.2</b>	<b>Not Applicable</b>	<b>3</b>	<b>0.07</b>	<b>0.19</b>	<b>55.6</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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Scenario	Year	Time	Flow	Delay	Queue	Level of Service	95% Queue	Prop. Queued	Eff. Stop Rate	Aver Speed
SH17 - South	2009	AM	205	2.1	0.098	LOS A	2	0.09	0.16	56.4
SH17 - North	2009	AM	205	2.6	0.098	LOS A	2	0.09	0.16	56.4
MR89 - West	2009	AM	26	16.7	0.073	LOS B	3	0.54	0.79	41.9
All Vehicles	2009	AM	436	3.2	0.098	Not Applicable	3	0.07	0.19	55.6

Scenario	Year	Time	Flow	Delay	Queue	Level of Service	95% Queue	Prop. Queued	Eff. Stop Rate	Aver Speed
SH17 - South	2009	AM	205	2.1	0.098	LOS A	2	0.09	0.16	56.4
SH17 - North	2009	AM	205	2.6	0.098	LOS A	2	0.09	0.16	56.4
MR89 - West	2009	AM	26	16.7	0.073	LOS B	3	0.54	0.79	41.9
All Vehicles	2009	AM	436	3.2	0.098	Not Applicable	3	0.07	0.19	55.6

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INTERSECTION

## Movement Summary

### SH17 and MR89

#### 2009 Base

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>SH17 - South</b>										
1	L	16	31.2	0.011	9.3	LOS A	0	0.00	0.67	49.0
2	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>174</b>	<b>32.8</b>	<b>0.098</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.06</b>	<b>58.8</b>
<b>SH17 - North</b>										
8	T	158	32.9	0.098	0.0	LOS A	0	0.00	0.00	60.0
9	R	11	30.0	0.011	11.0	LOS A	0	0.35	0.65	47.2
<b>Approach</b>		<b>168</b>	<b>32.7</b>	<b>0.098</b>	<b>0.7</b>	<b>LOS A</b>	<b>0</b>	<b>0.02</b>	<b>0.04</b>	<b>59.1</b>
<b>MR89 - West</b>										
10	L	11	30.0	0.065	15.2	LOS B	3	0.50	0.67	43.2
12	R	16	31.2	0.065	15.4	LOS B	3	0.50	0.81	43.0
<b>Approach</b>		<b>26</b>	<b>30.8</b>	<b>0.065</b>	<b>15.4</b>	<b>LOS B</b>	<b>3</b>	<b>0.50</b>	<b>0.76</b>	<b>43.1</b>
<b>All Vehicles</b>		<b>368</b>	<b>32.6</b>	<b>0.098</b>	<b>1.8</b>	<b>Not Applicable</b>	<b>3</b>	<b>0.05</b>	<b>0.10</b>	<b>57.4</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement

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Scenario	Year	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2017 Base+Sen PM Tomingley	2017	PM	115	11.6	LOS A	11	0.67	47.0

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INTERSECTION

## Movement Summary

### MR89 and Tomingley West Road

#### 2017 Base+Sen PM Tomingley

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	4	40.0	0.200	11.2	LOS A	11	0.30	0.59	47.3
3	R	109	40.0	0.200	11.7	LOS A	11	0.30	0.68	46.9
<b>Approach</b>		<b>115</b>	<b>40.0</b>	<b>0.199</b>	<b>11.6</b>	<b>LOS A</b>	<b>11</b>	<b>0.30</b>	<b>0.67</b>	<b>47.0</b>
<b>MR89 - East</b>										
4	L	4	0.0	0.021	8.2	LOS A	0	0.00	0.67	49.0
5	T	32	29.0	0.021	6.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.021</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.08</b>	<b>58.5</b>
<b>MR89 - West</b>										
11	T	32	29.0	0.022	0.1	LOS A	1	0.12	0.00	58.3
12	R	4	0.0	0.022	8.6	LOS A	1	0.12	0.65	48.1
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.022</b>	<b>1.1</b>	<b>LOS A</b>	<b>1</b>	<b>0.12</b>	<b>0.07</b>	<b>56.9</b>
<b>All Vehicles</b>		<b>195</b>	<b>34.6</b>	<b>0.200</b>	<b>7.6</b>	<b>Not Applicable</b>	<b>11</b>	<b>0.21</b>	<b>0.45</b>	<b>50.5</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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Scenario	Year	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2017 Base+Sen PM Tomingley	2017	PM	115	11.6	LOS A	11	0.67	47.0

Scenario	Year	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2017 Base+Sen PM Tomingley	2017	PM	115	11.6	LOS A	11	0.67	47.0

Scenario	Phase	Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Tomingley West Road	1 L	4	40.0	0.016	11.1	LOS A	1	0.28	0.60	47.4
Tomingley West Road	3 R	4	40.0	0.016	11.5	LOS A	1	0.28	0.67	47.1
<b>Approach</b>		<b>10</b>	<b>40.0</b>	<b>0.016</b>	<b>11.3</b>	<b>LOS A</b>	<b>1</b>	<b>0.28</b>	<b>0.64</b>	<b>47.2</b>
MR89 - East	4 L	109	0.0	0.078	8.2	LOS A	0	0.00	0.67	49.0
MR89 - East	5 T	32	29.0	0.078	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>140</b>	<b>6.4</b>	<b>0.078</b>	<b>6.4</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.52</b>	<b>51.0</b>
MR89 - West	11 T	32	29.0	0.022	0.5	LOS A	1	0.25	0.00	56.6
MR89 - West	12 R	4	0.0	0.022	9.0	LOS A	1	0.25	0.64	47.6
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.022</b>	<b>1.5</b>	<b>LOS A</b>	<b>1</b>	<b>0.25</b>	<b>0.07</b>	<b>55.4</b>
<b>All Vehicles</b>		<b>185</b>	<b>11.9</b>	<b>0.078</b>	<b>5.7</b>	<b>Not Applicable</b>	<b>1</b>	<b>0.06</b>	<b>0.44</b>	<b>51.6</b>

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INTERSECTION

**Movement Summary**

**MR89 and Tomingley West Road**

**2017 Base+Sen AM Tomingley**

Give-way

**Vehicle Movements**

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	4	40.0	0.016	11.1	LOS A	1	0.28	0.60	47.4
3	R	4	40.0	0.016	11.5	LOS A	1	0.28	0.67	47.1
<b>Approach</b>		<b>10</b>	<b>40.0</b>	<b>0.016</b>	<b>11.3</b>	<b>LOS A</b>	<b>1</b>	<b>0.28</b>	<b>0.64</b>	<b>47.2</b>
<b>MR89 - East</b>										
4	L	109	0.0	0.078	8.2	LOS A	0	0.00	0.67	49.0
5	T	32	29.0	0.078	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>140</b>	<b>6.4</b>	<b>0.078</b>	<b>6.4</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.52</b>	<b>51.0</b>
<b>MR89 - West</b>										
11	T	32	29.0	0.022	0.5	LOS A	1	0.25	0.00	56.6
12	R	4	0.0	0.022	9.0	LOS A	1	0.25	0.64	47.6
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.022</b>	<b>1.5</b>	<b>LOS A</b>	<b>1</b>	<b>0.25</b>	<b>0.07</b>	<b>55.4</b>
<b>All Vehicles</b>		<b>185</b>	<b>11.9</b>	<b>0.078</b>	<b>5.7</b>	<b>Not Applicable</b>	<b>1</b>	<b>0.06</b>	<b>0.44</b>	<b>51.6</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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Scenario	Phase	Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Tomingley West Road	1 L	4	40.0	0.016	11.1	LOS A	1	0.28	0.60	47.4
Tomingley West Road	3 R	4	40.0	0.016	11.5	LOS A	1	0.28	0.67	47.1
<b>Approach</b>		<b>10</b>	<b>40.0</b>	<b>0.016</b>	<b>11.3</b>	<b>LOS A</b>	<b>1</b>	<b>0.28</b>	<b>0.64</b>	<b>47.2</b>
MR89 - East	4 L	109	0.0	0.078	8.2	LOS A	0	0.00	0.67	49.0
MR89 - East	5 T	32	29.0	0.078	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>140</b>	<b>6.4</b>	<b>0.078</b>	<b>6.4</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.52</b>	<b>51.0</b>
MR89 - West	11 T	32	29.0	0.022	0.5	LOS A	1	0.25	0.00	56.6
MR89 - West	12 R	4	0.0	0.022	9.0	LOS A	1	0.25	0.64	47.6
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.022</b>	<b>1.5</b>	<b>LOS A</b>	<b>1</b>	<b>0.25</b>	<b>0.07</b>	<b>55.4</b>
<b>All Vehicles</b>		<b>185</b>	<b>11.9</b>	<b>0.078</b>	<b>5.7</b>	<b>Not Applicable</b>	<b>1</b>	<b>0.06</b>	<b>0.44</b>	<b>51.6</b>

Scenario	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
...	...	...	...	...	...	...	...

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INTERSECTION

## Movement Summary

### MR89 and Tomingley West Road

#### 2017 Base+Sen PM Narromine

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	109	40.0	0.139	10.1	LOS A	7	0.16	0.63	48.3
3	R	4	40.0	0.139	10.5	LOS A	7	0.16	0.69	48.0
<b>Approach</b>		<b>115</b>	<b>40.0</b>	<b>0.139</b>	<b>10.1</b>	<b>LOS A</b>	<b>7</b>	<b>0.16</b>	<b>0.63</b>	<b>48.2</b>
<b>MR89 - East</b>										
4	L	4	0.0	0.021	8.2	LOS A	0	0.00	0.67	49.0
5	T	32	29.0	0.021	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.021</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.08</b>	<b>58.5</b>
<b>MR89 - West</b>										
11	T	32	29.0	0.022	0.1	LOS A	1	0.12	0.00	58.3
12	R	4	0.0	0.022	8.6	LOS A	1	0.12	0.65	48.1
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.022</b>	<b>1.1</b>	<b>LOS A</b>	<b>1</b>	<b>0.12</b>	<b>0.07</b>	<b>56.9</b>
<b>All Vehicles</b>		<b>185</b>	<b>34.6</b>	<b>0.139</b>	<b>6.7</b>	<b>Not Applicable</b>	<b>7</b>	<b>0.12</b>	<b>0.42</b>	<b>51.4</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

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# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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Scenario	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
...	...	...	...	...	...	...	...

Scenario	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
...	...	...	...	...	...	...	...



Scenario	Phase	Flow (veh/h)	%HV	Deg Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Tomingley West Road	1 L	4	40.0	0.017	11.4	LOS A	1	0.19	0.60	47.1
	3 R	4	40.0	0.017	11.8	LOS A	1	0.19	0.69	46.8
	<b>Approach</b>	<b>10</b>	<b>40.0</b>	<b>0.017</b>	<b>11.6</b>	<b>LOS A</b>	<b>1</b>	<b>0.19</b>	<b>0.65</b>	<b>46.9</b>
MR89 - East	4 L	4	0.0	0.021	8.2	LOS A	0	0.00	0.67	49.0
	5 T	32	29.0	0.021	0.0	LOS A	0	0.00	0.00	60.0
	<b>Approach</b>	<b>35</b>	<b>25.7</b>	<b>0.021</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.08</b>	<b>58.5</b>
MR89 - West	11 T	32	29.0	0.097	0.2	LOS A	4	0.13	0.00	58.3
	12 R	109	0.0	0.098	8.6	LOS A	4	0.13	0.65	48.1
	<b>Approach</b>	<b>140</b>	<b>6.4</b>	<b>0.098</b>	<b>6.7</b>	<b>LOS A</b>	<b>4</b>	<b>0.13</b>	<b>0.51</b>	<b>50.1</b>
<b>All Vehicles</b>	<b>185</b>	<b>11.9</b>	<b>0.090</b>	<b>5.9</b>	<b>Not Applicable</b>	<b>4</b>	<b>0.11</b>	<b>0.43</b>	<b>51.3</b>	

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INTERSECTION

**Movement Summary**

**MR89 and Tomingley West Road**

**2017 Base+Sen AM Narromine**

Give-way

**Vehicle Movements**

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	4	40.0	0.017	11.4	LOS A	1	0.19	0.60	47.1
3	R	4	40.0	0.017	11.8	LOS A	1	0.19	0.69	46.8
<b>Approach</b>		<b>10</b>	<b>40.0</b>	<b>0.017</b>	<b>11.6</b>	<b>LOS A</b>	<b>1</b>	<b>0.19</b>	<b>0.65</b>	<b>46.9</b>
<b>MR89 - East</b>										
4	L	4	0.0	0.021	8.2	LOS A	0	0.00	0.67	49.0
5	T	32	29.0	0.021	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.021</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.08</b>	<b>58.5</b>
<b>MR89 - West</b>										
11	T	32	29.0	0.097	0.2	LOS A	4	0.13	0.00	58.3
12	R	109	0.0	0.098	8.6	LOS A	4	0.13	0.65	48.1
<b>Approach</b>		<b>140</b>	<b>6.4</b>	<b>0.098</b>	<b>6.7</b>	<b>LOS A</b>	<b>4</b>	<b>0.13</b>	<b>0.51</b>	<b>50.1</b>
<b>All Vehicles</b>		<b>185</b>	<b>11.9</b>	<b>0.090</b>	<b>5.9</b>	<b>Not Applicable</b>	<b>4</b>	<b>0.11</b>	<b>0.43</b>	<b>51.3</b>

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# - Density for continuous movement



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Scenario	Phase	Flow (veh/h)	%HV	Deg Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Tomingley West Road	1 L	4	40.0	0.017	11.4	LOS A	1	0.19	0.60	47.1
	3 R	4	40.0	0.017	11.8	LOS A	1	0.19	0.69	46.8
	<b>Approach</b>	<b>10</b>	<b>40.0</b>	<b>0.017</b>	<b>11.6</b>	<b>LOS A</b>	<b>1</b>	<b>0.19</b>	<b>0.65</b>	<b>46.9</b>
MR89 - East	4 L	4	0.0	0.021	8.2	LOS A	0	0.00	0.67	49.0
	5 T	32	29.0	0.021	0.0	LOS A	0	0.00	0.00	60.0
	<b>Approach</b>	<b>35</b>	<b>25.7</b>	<b>0.021</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.08</b>	<b>58.5</b>
MR89 - West	11 T	32	29.0	0.097	0.2	LOS A	4	0.13	0.00	58.3
	12 R	109	0.0	0.098	8.6	LOS A	4	0.13	0.65	48.1
	<b>Approach</b>	<b>140</b>	<b>6.4</b>	<b>0.098</b>	<b>6.7</b>	<b>LOS A</b>	<b>4</b>	<b>0.13</b>	<b>0.51</b>	<b>50.1</b>
<b>All Vehicles</b>		<b>185</b>	<b>11.9</b>	<b>0.090</b>	<b>5.9</b>	<b>Not Applicable</b>	<b>4</b>	<b>0.11</b>	<b>0.43</b>	<b>51.3</b>

Scenario	Phase	Flow (veh/h)	%HV	Deg Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Tomingley West Road	1 L	4	40.0	0.017	11.4	LOS A	1	0.19	0.60	47.1
	3 R	4	40.0	0.017	11.8	LOS A	1	0.19	0.69	46.8
	<b>Approach</b>	<b>10</b>	<b>40.0</b>	<b>0.017</b>	<b>11.6</b>	<b>LOS A</b>	<b>1</b>	<b>0.19</b>	<b>0.65</b>	<b>46.9</b>
MR89 - East	4 L	4	0.0	0.021	8.2	LOS A	0	0.00	0.67	49.0
	5 T	32	29.0	0.021	0.0	LOS A	0	0.00	0.00	60.0
	<b>Approach</b>	<b>35</b>	<b>25.7</b>	<b>0.021</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.08</b>	<b>58.5</b>
MR89 - West	11 T	32	29.0	0.097	0.2	LOS A	4	0.13	0.00	58.3
	12 R	109	0.0	0.098	8.6	LOS A	4	0.13	0.65	48.1
	<b>Approach</b>	<b>140</b>	<b>6.4</b>	<b>0.098</b>	<b>6.7</b>	<b>LOS A</b>	<b>4</b>	<b>0.13</b>	<b>0.51</b>	<b>50.1</b>
<b>All Vehicles</b>		<b>185</b>	<b>11.9</b>	<b>0.090</b>	<b>5.9</b>	<b>Not Applicable</b>	<b>4</b>	<b>0.11</b>	<b>0.43</b>	<b>51.3</b>

SIDRA  
INTERSECTION

## Movement Summary

### MR89 and Tomingley West Road

#### 2017 Base+ Dev PM

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	39	41.0	0.179	10.8	LOS A	9	0.23	0.61	47.7
3	R	75	40.0	0.179	11.3	LOS A	9	0.23	0.68	47.3
<b>Approach</b>		<b>114</b>	<b>40.4</b>	<b>0.179</b>	<b>11.1</b>	<b>LOS A</b>	<b>9</b>	<b>0.23</b>	<b>0.66</b>	<b>47.5</b>
<b>MR89 - East</b>										
4	L	4	0.0	0.021	8.2	LOS A	0	0.00	0.57	49.0
5	T	32	29.0	0.021	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.021</b>	<b>0.9</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.08</b>	<b>58.5</b>
<b>MR89 - West</b>										
11	T	32	29.0	0.022	0.1	LOS A	1	0.12	0.00	58.3
12	R	4	0.0	0.022	8.6	LOS A	1	0.12	0.65	48.1
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.022</b>	<b>1.1</b>	<b>LOS A</b>	<b>1</b>	<b>0.12</b>	<b>0.07</b>	<b>56.9</b>
<b>All Vehicles</b>		<b>184</b>	<b>34.8</b>	<b>0.179</b>	<b>7.3</b>	<b>Not Applicable</b>	<b>9</b>	<b>0.17</b>	<b>0.44</b>	<b>50.9</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement

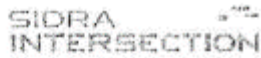


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1	L	39	41.0	0.179	10.8	LOS A	9	0.23	0.61	47.7
3	R	75	40.0	0.179	11.3	LOS A	9	0.23	0.68	47.3
<b>Approach</b>		<b>114</b>	<b>40.4</b>	<b>0.179</b>	<b>11.1</b>	<b>LOS A</b>	<b>9</b>	<b>0.23</b>	<b>0.66</b>	<b>47.5</b>
<b>MR89 - East</b>										
4	L	4	0.0	0.021	8.2	LOS A	0	0.00	0.57	49.0
5	T	32	29.0	0.021	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.021</b>	<b>0.9</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.08</b>	<b>58.5</b>
<b>MR89 - West</b>										
11	T	32	29.0	0.022	0.1	LOS A	1	0.12	0.00	58.3
12	R	4	0.0	0.022	8.6	LOS A	1	0.12	0.65	48.1
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.022</b>	<b>1.1</b>	<b>LOS A</b>	<b>1</b>	<b>0.12</b>	<b>0.07</b>	<b>56.9</b>
<b>All Vehicles</b>		<b>184</b>	<b>34.8</b>	<b>0.179</b>	<b>7.3</b>	<b>Not Applicable</b>	<b>9</b>	<b>0.17</b>	<b>0.44</b>	<b>50.9</b>



## Movement Summary

### MR89 and Tomingley West Road

#### 2017 Base+Dev AM

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	4	40.0	0.016	11.2	LOS A	1	0.26	0.60	47.3
3	R	4	40.0	0.016	11.6	LOS A	1	0.26	0.58	47.0
<b>Approach</b>		<b>10</b>	<b>40.0</b>	<b>0.016</b>	<b>11.4</b>	<b>LOS A</b>	<b>1</b>	<b>0.26</b>	<b>0.64</b>	<b>47.1</b>
<b>MR89 - East</b>										
4	L	75	0.0	0.059	8.2	LOS A	0	0.00	0.57	49.0
5	T	32	29.0	0.059	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>106</b>	<b>8.5</b>	<b>0.059</b>	<b>5.8</b>	<b>LOS A</b>		<b>0.00</b>	<b>0.47</b>	<b>51.7</b>
<b>MR89 - West</b>										
11	T	32	29.0	0.049	0.4	LOS A	2	0.21	0.00	57.1
12	R	39	0.0	0.049	8.9	LOS A	2	0.21	0.64	47.8
<b>Approach</b>		<b>70</b>	<b>12.9</b>	<b>0.049</b>	<b>5.1</b>	<b>LOS A</b>	<b>2</b>	<b>0.21</b>	<b>0.36</b>	<b>51.5</b>
<b>All Vehicles</b>		<b>186</b>	<b>11.0</b>	<b>0.059</b>	<b>5.0</b>	<b>Not Applicable</b>	<b>2</b>	<b>0.09</b>	<b>0.44</b>	<b>51.4</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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Vehicle	Flow	%HV	Deg Satn	Aver Delay	Level of Service	95% Back of Queue	Prop. Queued	Eff. Stop Rate	Aver Speed
1	4	40.0	0.016	11.2	LOS A	1	0.26	0.60	47.3
3	4	40.0	0.016	11.6	LOS A	1	0.26	0.58	47.0
Approach	10	40.0	0.016	11.4	LOS A	1	0.26	0.64	47.1
4	75	0.0	0.059	8.2	LOS A	0	0.00	0.57	49.0
5	32	29.0	0.059	0.0	LOS A	0	0.00	0.00	60.0
Approach	106	8.5	0.059	5.8	LOS A		0.00	0.47	51.7
11	32	29.0	0.049	0.4	LOS A	2	0.21	0.00	57.1
12	39	0.0	0.049	8.9	LOS A	2	0.21	0.64	47.8
Approach	70	12.9	0.049	5.1	LOS A	2	0.21	0.36	51.5
All Vehicles	186	11.0	0.059	5.0	Not Applicable	2	0.09	0.44	51.4

Scenario	Year	Phase	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2017 Base	2017	Base	80	2.2	Not Applicable	1	0.08	56.3

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INTERSECTION

## Movement Summary

### MR89 and Tomingley West Road

#### 2017 Base

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	4	40.0	0.015	10.5	LOS A	1	0.18	0.61	48.1
3	R	4	40.0	0.015	10.9	LOS A	1	0.18	0.66	47.8
<b>Approach</b>		<b>10</b>	<b>40.0</b>	<b>0.015</b>	<b>10.7</b>	<b>LOS A</b>	<b>1</b>	<b>0.18</b>	<b>0.64</b>	<b>47.9</b>
<b>MR89 - East</b>										
4	L	4	0.0	0.021	8.2	LOS A	0	0.00	0.67	49.0
5	T	32	29.0	0.021	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.021</b>	<b>0.9</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.08</b>	<b>58.5</b>
<b>MR89 - West</b>										
11	T	32	29.0	0.022	0.1	LOS A	1	0.12	0.00	58.3
12	R	4	0.0	0.022	8.6	LOS A	1	0.12	0.65	48.1
<b>Approach</b>		<b>35</b>	<b>25.7</b>	<b>0.022</b>	<b>1.1</b>	<b>LOS A</b>	<b>1</b>	<b>0.12</b>	<b>0.07</b>	<b>56.9</b>
<b>All Vehicles</b>		<b>80</b>	<b>27.5</b>	<b>0.022</b>	<b>2.2</b>	<b>Not Applicable</b>	<b>1</b>	<b>0.08</b>	<b>0.15</b>	<b>56.3</b>

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Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
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Following Queue  
# - Density for continuous movement



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Scenario	Year	Phase	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2017 Base	2017	Base	80	2.2	Not Applicable	1	0.08	56.3

Scenario	Year	Phase	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2017 Base	2017	Base	80	2.2	Not Applicable	1	0.08	56.3

Scenario	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
...	...	...	...	...	...	...

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INTERSECTION

## Movement Summary

### MR89 and Tomingley West Road

#### 2009 Base+Sen PM Tomingley

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	3	33.3	0.188	11.0	LOS A	10	0.27	0.59	47.5
3	R	108	39.8	0.188	11.4	LOS A	10	0.27	0.67	47.2
<b>Approach</b>		<b>111</b>	<b>39.6</b>	<b>0.188</b>	<b>11.4</b>	<b>LOS A</b>	<b>10</b>	<b>0.27</b>	<b>0.67</b>	<b>47.2</b>
<b>MR89 - East</b>										
4	L	3	0.0	0.018	8.2	LOS A	0	0.00	0.67	49.0
5	T	26	30.8	0.018	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>29</b>	<b>27.6</b>	<b>0.018</b>	<b>0.8</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.07</b>	<b>58.6</b>
<b>MR89 - West</b>										
11	T	26	30.8	0.018	0.1	LOS A	1	0.11	0.00	58.5
12	R	3	0.0	0.018	8.6	LOS A	1	0.11	0.65	48.2
<b>Approach</b>		<b>29</b>	<b>27.6</b>	<b>0.018</b>	<b>1.0</b>	<b>LOS A</b>	<b>1</b>	<b>0.11</b>	<b>0.07</b>	<b>57.2</b>
<b>All Vehicles</b>		<b>169</b>	<b>35.5</b>	<b>0.188</b>	<b>7.8</b>	<b>Not Applicable</b>	<b>10</b>	<b>0.20</b>	<b>0.46</b>	<b>50.4</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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Scenario	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
...	...	...	...	...	...	...

Scenario	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
...	...	...	...	...	...	...

Scenario	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2009 Base+Sen AM Tomingley	07:00-09:00	169	5.9	LOS A	1	0.46	51.4

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INTERSECTION

## Movement Summary

### MR89 and Tomingley West Road

#### 2009 Base+Sen AM Tomingley

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	3	33.3	0.009	10.8	LOS A	0	0.25	0.60	47.7
3	R	3	33.3	0.009	11.2	LOS A	0	0.25	0.55	47.4
<b>Approach</b>		<b>6</b>	<b>33.3</b>	<b>0.009</b>	<b>11.0</b>	<b>LOS A</b>	<b>0</b>	<b>0.25</b>	<b>0.63</b>	<b>47.6</b>
<b>MR89 - East</b>										
4	L	108	0.0	0.074	8.2	LOS A	0	0.00	0.57	49.0
5	T	26	30.8	0.074	9.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>134</b>	<b>6.0</b>	<b>0.074</b>	<b>6.6</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.54</b>	<b>50.8</b>
<b>MR89 - West</b>										
11	T	26	30.8	0.018	0.5	LOS A	1	0.24	0.00	56.7
12	R	3	0.0	0.018	8.9	LOS A	1	0.24	0.64	47.7
<b>Approach</b>		<b>29</b>	<b>27.6</b>	<b>0.018</b>	<b>1.4</b>	<b>LOS A</b>	<b>1</b>	<b>0.24</b>	<b>0.07</b>	<b>55.6</b>
<b>All Vehicles</b>		<b>169</b>	<b>10.7</b>	<b>0.074</b>	<b>5.9</b>	<b>Not Applicable</b>	<b>1</b>	<b>0.05</b>	<b>0.46</b>	<b>51.4</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
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Following Queue  
# - Density for continuous movement



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Scenario	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2009 Base+Sen AM Tomingley	07:00-09:00	169	5.9	LOS A	1	0.46	51.4

Scenario	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Speed
2009 Base+Sen AM Tomingley	07:00-09:00	169	5.9	LOS A	1	0.46	51.4

Scenario	Flow	Delay	Queue	LOS	Speed
...	...	...	...	...	...

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INTERSECTION

## Movement Summary

### MR89 and Tomingley West Road

#### 2009 Base+Sen PM Narromine

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	108	39.8	0.132	10.0	LOS A	6	0.14	0.63	48.3
3	R	3	33.3	0.130	10.4	LOS A	6	0.14	0.68	48.1
<b>Approach</b>		<b>111</b>	<b>39.6</b>	<b>0.132</b>	<b>10.0</b>	<b>LOS A</b>	<b>6</b>	<b>0.14</b>	<b>0.63</b>	<b>48.3</b>
<b>MR89 - East</b>										
4	L	3	0.0	0.018	8.2	LOS A	0	0.00	0.67	49.0
5	T	26	30.8	0.018	0.0	LOS A	0	0.00	0.00	50.0
<b>Approach</b>		<b>29</b>	<b>27.6</b>	<b>0.018</b>	<b>0.8</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.07</b>	<b>58.6</b>
<b>MR89 - West</b>										
11	T	26	30.8	0.018	0.1	LOS A	1	0.11	0.00	58.5
12	R	3	0.0	0.018	8.6	LOS A	1	0.11	0.65	46.2
<b>Approach</b>		<b>29</b>	<b>27.6</b>	<b>0.018</b>	<b>1.0</b>	<b>LOS A</b>	<b>1</b>	<b>0.11</b>	<b>0.07</b>	<b>57.2</b>
<b>All Vehicles</b>		<b>169</b>	<b>35.5</b>	<b>0.132</b>	<b>6.9</b>	<b>Not Applicable</b>	<b>6</b>	<b>0.11</b>	<b>0.44</b>	<b>51.2</b>

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Following LOS  
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Following Queue  
# - Density for continuous movement



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Scenario	Flow	Delay	Queue	LOS	Speed
...	...	...	...	...	...

Scenario	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Aver Speed
2009 Base+Sen AM Narromine	07:00-09:00	169	6.0	LOS A	4	0.45	51.1

SIDRA  
INTERSECTION

## Movement Summary

### MR89 and Tomingley West Road

#### 2009 Base+Sen AM Narromine

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	3	33.3	0.009	11.1	LOS A	0	0.16	0.61	47.5
3	R	3	33.3	0.009	11.5	LOS A	0	0.16	0.69	47.1
<b>Approach</b>		<b>6</b>	<b>33.3</b>	<b>0.009</b>	<b>11.3</b>	<b>LOS A</b>	<b>0</b>	<b>0.16</b>	<b>0.65</b>	<b>47.3</b>
<b>MR89 - East</b>										
4	L	3	0.0	0.018	8.2	LOS A	0	0.00	0.67	49.0
5	T	26	30.8	0.018	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>29</b>	<b>27.6</b>	<b>0.018</b>	<b>0.8</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.07</b>	<b>58.6</b>
<b>MR89 - West</b>										
11	T	26	30.8	0.094	0.1	LOS A	4	0.11	0.00	58.4
12	R	106	0.0	0.094	8.6	LOS A	4	0.11	0.55	48.2
<b>Approach</b>		<b>134</b>	<b>6.0</b>	<b>0.093</b>	<b>6.9</b>	<b>LOS A</b>	<b>4</b>	<b>0.11</b>	<b>0.53</b>	<b>49.9</b>
<b>All Vehicles</b>		<b>169</b>	<b>10.7</b>	<b>0.094</b>	<b>6.0</b>	<b>Not Applicable</b>	<b>4</b>	<b>0.10</b>	<b>0.45</b>	<b>51.1</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



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Scenario	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Aver Speed
2009 Base+Sen AM Narromine	07:00-09:00	169	6.0	LOS A	4	0.45	51.1

Scenario	Time	Flow	Delay	Level of Service	Queue	Stop Rate	Aver Speed
2009 Base+Sen AM Narromine	07:00-09:00	169	6.0	LOS A	4	0.45	51.1



Scenario	Year	Time of Day	Flow (veh/h)	%HV	Deg Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Tomingley West Road	2009	Base+ Dev PM	111	39.6	0.169	10.9	LOS A	9	0.21	0.65	47.7
MR89 - East	2009	Base+ Dev PM	29	27.6	0.018	0.8	LOS A	0	0.00	0.07	58.6
MR89 - West	2009	Base+ Dev PM	29	27.6	0.018	1.0	LOS A	1	0.11	0.07	57.2
<b>All Vehicles</b>			<b>169</b>	<b>35.5</b>	<b>0.170</b>	<b>7.5</b>	<b>Not Applicable</b>	<b>9</b>	<b>0.16</b>	<b>0.45</b>	<b>50.8</b>

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INTERSECTION

## Movement Summary

### MR89 and Tomingley West Road

#### 2009 Base+ Dev PM

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	38	39.5	0.170	10.6	LOS A	9	0.21	0.61	47.9
3	R	74	39.7	0.169	11.1	LOS A	9	0.21	0.68	47.6
<b>Approach</b>		<b>111</b>	<b>39.6</b>	<b>0.169</b>	<b>10.9</b>	<b>LOS A</b>	<b>9</b>	<b>0.21</b>	<b>0.65</b>	<b>47.7</b>
<b>MR89 - East</b>										
4	L	3	0.0	0.018	8.2	LOS A	0	0.00	0.67	49.0
5	T	26	30.8	0.018	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>29</b>	<b>27.6</b>	<b>0.018</b>	<b>0.8</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.07</b>	<b>58.6</b>
<b>MR89 - West</b>										
11	T	26	30.8	0.018	0.1	LOS A	1	0.11	0.00	56.5
12	R	3	0.0	0.018	8.6	LOS A	1	0.11	0.65	48.2
<b>Approach</b>		<b>29</b>	<b>27.6</b>	<b>0.018</b>	<b>1.0</b>	<b>LOS A</b>	<b>1</b>	<b>0.11</b>	<b>0.07</b>	<b>57.2</b>
<b>All Vehicles</b>		<b>169</b>	<b>35.5</b>	<b>0.170</b>	<b>7.5</b>	<b>Not Applicable</b>	<b>9</b>	<b>0.16</b>	<b>0.45</b>	<b>50.8</b>

Symbols which may appear in this table:

Following Degree of Saturation  
# x = 1.00 for Short Lane with resulting Excess Flow  
\* x = 1.00 due to minimum capacity

Following LOS  
# - Based on density for continuous movements

Following Queue  
# - Density for continuous movement



Site: 2009 Base+ Dev PM  
D:\Modelling\FJF\09-April-Sidra\20100115-revise\MR89 and Tomingley West.aap  
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Scenario	Year	Time of Day	Flow (veh/h)	%HV	Deg Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
Tomingley West Road	2009	Base+ Dev PM	111	39.6	0.169	10.9	LOS A	9	0.21	0.65	47.7
MR89 - East	2009	Base+ Dev PM	29	27.6	0.018	0.8	LOS A	0	0.00	0.07	58.6
MR89 - West	2009	Base+ Dev PM	29	27.6	0.018	1.0	LOS A	1	0.11	0.07	57.2
<b>All Vehicles</b>			<b>169</b>	<b>35.5</b>	<b>0.170</b>	<b>7.5</b>	<b>Not Applicable</b>	<b>9</b>	<b>0.16</b>	<b>0.45</b>	<b>50.8</b>

Scenario	Time	Flow	Delay	Queue	Level of Service
2009 Base+Dev AM	07:00-09:00	170	6.0	2	LOS A

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INTERSECTION

## Movement Summary

### MR89 and Tomingley West Road

#### 2009 Base+Dev AM

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	3	33.3	0.009	10.9	LOS A	0	0.24	0.60	47.6
3	R	3	33.3	0.009	11.3	LOS A	0	0.24	0.66	47.3
<b>Approach</b>		<b>6</b>	<b>33.3</b>	<b>0.009</b>	<b>11.1</b>	<b>LOS A</b>	<b>0</b>	<b>0.24</b>	<b>0.63</b>	<b>47.5</b>
<b>MR89 - East</b>										
4	L	74	0.0	0.056	8.2	LOS A	0	0.00	0.67	49.0
5	T	26	30.8	0.056	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>100</b>	<b>8.0</b>	<b>0.056</b>	<b>6.1</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.49</b>	<b>51.4</b>
<b>MR89 - West</b>										
11	T	26	30.8	0.045	0.4	LOS A	2	0.21	0.00	57.2
12	R	38	0.0	0.045	8.8	LOS A	2	0.21	0.64	47.8
<b>Approach</b>		<b>64</b>	<b>12.5</b>	<b>0.045</b>	<b>5.4</b>	<b>LOS A</b>	<b>2</b>	<b>0.21</b>	<b>0.38</b>	<b>51.3</b>
<b>All Vehicles</b>		<b>170</b>	<b>10.6</b>	<b>0.056</b>	<b>6.0</b>	<b>Not Applicable</b>	<b>2</b>	<b>0.09</b>	<b>0.46</b>	<b>51.2</b>

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Scenario	Time	Flow	Delay	Queue	Level of Service
2009 Base+Dev AM	07:00-09:00	170	6.0	2	LOS A

Scenario	Time	Flow	Delay	Queue	Level of Service
2009 Base+Dev AM	07:00-09:00	170	6.0	2	LOS A

Scenario	Year	Time of Day	Flow (veh/h)	Delay (sec)	Level of Service	Queue (m)	Stop Rate	Aver Speed (km/h)
2009 Base	2009	AM	...	...	...	...	...	...
2009 Base	2009	PM	...	...	...	...	...	...

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INTERSECTION

## Movement Summary

### MR89 and Tomingley West Road

#### 2009 Base

Give-way

#### Vehicle Movements

Mov ID	Turn	Dem Flow (veh/h)	%HV	Deg of Satn (v/c)	Aver Delay (sec)	Level of Service	95% Back of Queue (m)	Prop. Queued	Eff. Stop Rate	Aver Speed (km/h)
<b>Tomingley West Road</b>										
1	L	3	33.3	0.008	10.2	LOS A	0	0.16	0.61	48.3
3	R	3	33.3	0.008	10.7	LOS A	0	0.16	0.66	48.0
<b>Approach</b>		<b>6</b>	<b>33.3</b>	<b>0.008</b>	<b>10.5</b>	<b>LOS A</b>	<b>0</b>	<b>0.16</b>	<b>0.63</b>	<b>48.1</b>
<b>MR89 - East</b>										
4	L	3	0.0	0.018	8.2	LOS A	0	0.00	0.67	49.0
5	T	26	30.8	0.018	0.0	LOS A	0	0.00	0.00	60.0
<b>Approach</b>		<b>29</b>	<b>27.6</b>	<b>0.018</b>	<b>0.8</b>	<b>LOS A</b>	<b>0</b>	<b>0.00</b>	<b>0.07</b>	<b>58.6</b>
<b>MR89 - West</b>										
11	T	26	30.8	0.018	0.1	LOS A	1	0.11	0.00	58.5
12	R	3	0.0	0.018	8.8	LOS A	1	0.11	0.65	48.2
<b>Approach</b>		<b>29</b>	<b>27.6</b>	<b>0.018</b>	<b>1.0</b>	<b>LOS A</b>	<b>1</b>	<b>0.11</b>	<b>0.07</b>	<b>57.2</b>
<b>All Vehicles</b>		<b>64</b>	<b>28.1</b>	<b>0.018</b>	<b>1.8</b>	<b>Not Applicable</b>	<b>1</b>	<b>0.06</b>	<b>0.12</b>	<b>56.8</b>

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Following LOS  
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Scenario	Year	Time of Day	Flow (veh/h)	Delay (sec)	Level of Service	Queue (m)	Stop Rate	Aver Speed (km/h)
2009 Base	2009	AM	...	...	...	...	...	...
2009 Base	2009	PM	...	...	...	...	...	...

Scenario	Year	Time of Day	Flow (veh/h)	Delay (sec)	Level of Service	Queue (m)	Stop Rate	Aver Speed (km/h)
2009 Base	2009	AM	...	...	...	...	...	...
2009 Base	2009	PM	...	...	...	...	...	...